Gravina Access Project*
Record of Decision

U.S. Department of Transportation
Federal Highway Administration

Ketchikan, Alaska

FHWA-AK-EIS-03-01-F
DOT&PF Project 67698
Federal Project ACHP-0922(5)

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***This document was originally signed on September 10, 2004. Corrections for grammatical and formatting errors (non-substantive) were made. This version supersedes the original document.**

I. Decision

This Record of Decision (ROD) was developed pursuant to 40 CFR 1505.2 and 23 CFR 771.127. The Alaska Department of Transportation and Public Facilities (DOT&PF), in cooperation with the Federal Highway Administration (FHWA), has identified a need to improve access between Revillagigedo Island and Gravina Island in Southeast Alaska. The project purpose and need are described in Chapter 1 of the *Gravina Access Project Final Environmental Impact Statement* (Final EIS) dated July 26, 2004. The Notice of Availability, for the Final EIS, was published in the *Federal Register* on August 6, 2004. The selected alternative for the Gravina Access Project is Alternative F1, which would consist of two bridges across Tongass Narrows connecting Revillagigedo Island and Gravina Island via Pennock Island.

Numerous issues were identified by the public, tribal entities, and responsible agencies during scoping and the review of the Draft EIS which circulated for two months (62 days) starting on August 6, 2003. The primary concerns that have been voiced about the project are:

- Cost of construction.
- Impacts to cruise ship schedules and visits, and potential negative economic effects on the community due to shortened or reduced numbers of port calls.
- Changes to aviation patterns and uses, particularly for floatplanes.
- Impacts to wetlands and other natural resources on Gravina Island.
- Impacts of construction in Tongass Narrows, and in creeks and streams on Gravina Island.

All of these concerns were addressed in the Final EIS. All reasonable alternatives under consideration (including the No Action Alternative) have been developed to a comparable level of detail in the Final EIS, and their comparative merits have been evaluated. All of the adverse impacts were weighed against the project's projected beneficial impacts, particularly those related to meeting the purpose and need, for improved access to the airport and other lands on Gravina Island. Based on the analyses of alternatives presented in the EIS, public, tribal, and agency input, and the beneficial and adverse impacts on the natural, social, and economic environments, DOT&PF and FHWA have selected Alternative F1 (see Section 2.1.4 of the Final EIS) for design and construction for the following reasons (see Section II of this Record of Decision for more detail on all of the alternatives considered in the EIS):

- **Improved Access to Gravina Island:** Alternative F1 improves convenience and reliability of access to Ketchikan International Airport and developable and recreation lands on Gravina Island by providing a hard link between Revillagigedo Island and Gravina Island. The travel time between the airport and downtown Ketchikan using Alternative F1 will be approximately 14 minutes faster than the travel time using the existing airport ferry. Although the travel times for the existing ferry and Alternative F1 between the airport and areas north of downtown Ketchikan are essentially the same, Alternative F1 will provide unlimited access for travel between the islands 24 hours per day, whereas ferry access is limited to a 16-hour-per-day schedule with two to four transits per hour, depending on the season and time of day.
- **Economic Impacts:** Because Alternative F1 will allow the continued safe passage of large cruise ships northbound and southbound through Tongass Narrows and East Channel, there should be no reduction in cruise ship port calls in Ketchikan and,

therefore, no reductions in cruise-related spending, which is a major component of Ketchikan's economy.

- **Navigational Requirements for Tongass Narrows:** Alternative F1 will allow the continued passage of large cruise ships northbound and southbound through Tongass Narrows and East Channel, and the continued separation of cruise ship traffic (East Channel) from the Alaska Marine Highway System and other marine traffic (West Channel). Alternative F1 is preferable to the other bridge alternatives from a navigation safety standpoint because it will not contribute to conflicts at the navigational choke point next to Ketchikan International Airport and Alaska Ship and Drydock [as would Alternatives C3(a), C3(b), C4, and D1] and it will not require additional ship maneuvers for cruise ships transiting West Channel (as would Alternative F3).
- **Aviation Impacts:** Alternative F1 will not penetrate any airspace surfaces associated with Ketchikan International Airport. Alternative F1 will not hinder any future growth or improvements to the Ketchikan International Airport. Alternative 1 will not affect floatplane facilities at Ketchikan International Airport and waterways designated for floatplane take-offs; nor will it affect landings in Tongass Narrows.
- **Consistency with the Borough's Long-Term Plans for Gravina Island:** Alternative F1 will be consistent with the Borough's plans for long-term development on Gravina Island. Projections for development on Gravina Island are highest for Alternatives F1 and F3, as compared with the other project alternatives. Alternative F1 will promote development of Gravina Island, thereby enhancing economic development in the Borough.
- **Access to Borough Land on Pennock Island:** Alternative F1 provides the additional benefit of access to Pennock Island, which contains a substantial amount of the Ketchikan Gateway Borough's land base suitable for development.
- **Marine Habitat Impacts:** Pier placement for Alternative F1 would potentially affect kelp and/or eelgrass beds at one pier location in West Channel; however, there will be no requirements for channel modification (dredging), as there would be with Alternative F3. Alternative F1 will have the least impact of all the build alternatives on Essential Fish Habitat (EFH).

In compliance with the National Environmental Policy Act (NEPA) of 1969 (as amended), 40 CFR Parts 1500-1508, and FHWA regulations (23 CFR Parts 771, 772, and 777), a Draft EIS was approved on July 31, 2003, and circulated for comment from August 6, 2003 until October 6, 2003. The DOT&PF and FHWA held a Public Hearing on September 17-18, 2003. A Final EIS that addressed all substantive comments received on the Draft EIS was approved on July 26, 2004, and a notice of its availability was published in the Federal Register on August 6, 2004. The Final EIS identified Alternative F1 as DOT&PF's and FHWA's Preferred Alternative and was distributed to the public and federal and state agencies on July 30, 2004. Excerpts of comments received on the Final EIS are provided in Section V of this ROD. The complete text of each letter and e-mail received is provided in Appendix A. For more detailed information on topics presented in this ROD, please refer to the *Gravina Access Project Final Environmental Impact Statement* (July 26, 2004).

II. Alternatives Considered

The Gravina Access Project is one of 17 high priority projects funded in the state by the

"Transportation Equity Act for the 21st Century." The project involves examining ways to link Revillagigedo Island, home of Ketchikan, Saxman, and other communities, to Gravina Island, the location of the Ketchikan International Airport and adjoining lands that offer recreational and development potential. Currently, a small ferry across Tongass Narrows provides the only regular access to Gravina Island and it is dedicated solely to airport use. Access to the remainder of the island is not available except by watercraft. Improved transportation access to Gravina Island would provide better service to the airport and allow for the development of the large tracts of land situated on the island. As discussed in Chapter 1 of the Final EIS, the purpose of this project is to improve surface transportation between Revillagigedo Island and Gravina Island. The need for improving access is threefold:

- 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 recreation lands on Gravina Island in support of the Borough's adopted land use plans.
- To improve the convenience and reliability of access to Ketchikan International Airport for passengers, airport tenants, emergency personnel and equipment, and shipment of freight.
- To promote environmentally sound, planned long-term economic development on Gravina Island.

Consistent with NEPA, a full range of reasonable alternatives was identified and evaluated for the Gravina Access Project. During the spring of 2000, the DOT&PF developed 18 build concepts for crossing Tongass Narrows. These concepts were based on previous studies, input from agencies and the public, engineering analysis, and the objectives in the purpose and need statement for the project. The build concepts consisted of 11 bridge options, two (2) tunnel options, one (1) tunnel-and-bridge option, four (4) supplemental ferry options, and a No Action Option. These initial options were reviewed with input from the Ketchikan community, local, state, and federal agencies, and Tribes and other Native organizations, to identify reasonable alternatives for the Gravina Access Project. Factors related to the ability to meet the project purpose and need, cost, environmental impacts, impacts to Section 4(f) properties, and transportation impacts were examined for each of the initial options. Those alternatives that were not considered practical or feasible from a technical and economic standpoint were eliminated from further consideration (see Section 2.3 of the Final EIS for more information on alternatives that were eliminated from further consideration).

The Gravina Access Project EIS evaluated nine reasonable build alternatives to improve access between Revillagigedo Island and Gravina Island, and the No Action Alternative. The ten alternatives presented in the Final EIS are summarized below. All build alternatives included a parking structure and access improvements to accommodate additional traffic to the airport. Each build alternative also included a spine road to access other developable lands on Gravina Island (see Section 2.4.4 of the Final EIS). For more information on the alternatives presented here, please refer to Chapter 2 of the Final EIS.

A. No Action Alternative

Under the No Action Alternative (see Section 2.1.1 of the Final EIS), ferry service to Gravina

Island would have continued at the same location and under the current schedule and hours of operation. Under this alternative, no bridge would be constructed, and no additional ferry service would be provided between Revillagigedo Island and Gravina Island. The only public access between the islands would have been provided by the existing airport ferry service across Tongass Narrows, private boats and water taxis, and floatplanes.

Although this alternative would have had no new construction costs, the estimated life-cycle cost would have been approximately $10 million, and the estimated average annual Operation and Maintenance (O&M) costs for the life-cycle would have been approximately $2.1 million. The cost estimates assumed that the ferries would have their engines replaced or significantly overhauled after 25 years and that the vessels would be replaced after 50 years.

The No Action Alternative would not affect airport property, existing airport or floatplane facilities, or Part 77 (see Section 3.7.11. of the Final EIS) airspace in the vicinity of Ketchikan International Airport. Existing problems associated with access, convenience and reliability for passengers, airport tenants, emergency personnel and equipment, and shipment of freight, would continue (see Section 4.7.1.1 of the Final EIS). Also, the No Action Alternative would have had no impact on cruise ship operations, on the Ketchikan docking and berthing areas and facilities used by the cruise ships, or on those used by the Alaska Marine Highway System. There would be no traffic improvements that would change vehicular access to Ketchikan International Airport. No wetlands or EFH would have been lost to the construction of new facilities. Development would have continued at the existing rate, with approximately 20 acres developed on Gravina Island by 2025.

B. Alternative C3(a): 200-foot Bridge Between Signal Road and South of Airport Terminal

Alternative C3(a) (see Section 2.1.2.1 of the Final EIS) would have included a bridge across Tongass Narrows approximately 1,600 feet north of the airport terminal. The bridge would have been 5,690 feet long, and had a maximum height of approximately 250 feet. The main span of this bridge would have had a vertical navigational clearance of 200 feet above high tide and a horizontal navigational clearance of approximately 550 feet.

On Revillagigedo Island, the alternative would have connected to Signal Road at North Tongass Avenue. From this terminus, the alternative alignment would have traversed the hillside southward, gained elevation and turned southwestward to cross Tongass Avenue and Tongass Narrows, and then turned southward to parallel the airport runway and touched down (reach the ground surface) on Gravina Island south of the terminal. A 0.4-mile-long airport return loop road would have connected the airport terminal and the bridge terminus. The main road would have continued around the southern end of the airport runway and then arced northward, extending parallel to and west of the airport runway approximately 2.2 miles to the northern end of the Airport Reserve Zone. At the southern end of the runway, the road would have been constructed at a grade low enough to accommodate the planned future expansion of the runway, with the runway extended as an overpass of the road.

Alternative C3(a) was estimated to have a $200 million construction and project development cost and a $160 million life-cycle cost. Project development costs included mobilization costs,

contingency costs, mitigation costs, design engineering costs, construction management costs, and right-of-way acquisition costs. The bridge associated with this alternative would have intruded into the Part 77 airspace for Ketchikan International Airport and was projected to reduce floatplane operations under special visual flight rules (SVFR) by approximately 1,800 flights (90 percent) per year (see Section 4.7.1.2 of the Final EIS). Cruise ship passage would have continued unhindered (see Section 4.7.2.2 of the Final EIS). Wetland habitat loss was estimated at 44 acres (see Table 4-11 of the Final EIS) and 6.3 acres of EFH would have been lost (see Table 4-14 of the Final EIS). Development on Gravina Island was projected to be about 300 acres by 2025, i.e., the same level of development as the other bridge alternatives near the airport [C3(b), C4, and D1], but greater than the ferry alternatives (G2, G3, and G4) and less than the Pennock Island bridge alternatives (F1 and F3) (see Section 4.26.1 of the Final EIS).

C. Alternative C3(b): 120-foot Bridge Between Signal Road and Airport Terminal

The Alternative C3(b) bridge (see Section 2.1.2.2 of the Final EIS) would have been approximately 4,250 feet long, and had a maximum height of approximately 195 feet. The main span of this bridge would have had a vertical navigational clearance of 120 feet above high tide and a horizontal navigational clearance of approximately 500 feet.

Alternative C3(b) would have had the same general alignment on Revillagigedo and Gravina Islands as Alternative C3(a); however, with a lower bridge profile, the position of the C3(b) bridge over Tongass Narrows, at its touchdown on Gravina Island (near the airport terminal), would have been north of the C3(a) alignment. This alternative would not have needed an airport return loop road because the bridge would have touched down in front of the airport terminal. The main road would have continued around the southern end of the airport runway and then arced northward, extending parallel to and west of the airport runway approximately 2.2 miles to the northern end of the Airport Reserve Zone. At the southern end of the runway, the road would have been constructed at a grade low enough to accommodate the planned future expansion of the runway, with the runway extended as an overpass of the road.

Alternative C3(b) was estimated to have a $170 million construction and project development cost and a $135 million life-cycle cost. The bridge associated with this alternative intruded into the Part 77 airspace for Ketchikan International Airport and was projected to reduce SVFR floatplane operations by approximately 1,800 flights (90 percent) per year (see Section 4.7.1.2 of the Final EIS). The Alternative C3(b) bridge would have impeded the passage of cruise ships, requiring them to approach and depart the cruise ship docks from the south end of Tongass Narrows (see Section 4.7.2.3 of the Final EIS). This rerouting was projected to result in a reduction in port calls by cruise ships, which, in turn, would have resulted in a decrease in tourism-related expenditures in the Borough (see Section 4.26.3.4 of the Final EIS). Wetland habitat loss was estimated as 42.3 acres (see Table 4-11 of the Final EIS); and 7.1 acres of EFH were expected to be lost (see Table 4-14 of the Final EIS). Development on Gravina Island was projected to be about 300 acres by 2025, i.e., the same level of development as the other bridge alternatives near the airport [C3(a), C4, and D1] but greater than the ferry alternatives (G2, G3, and G4) and less than the Pennock Island bridge alternatives (F1 and F3) (see Section 4.26.1 of the Final EIS).

D. Alternative C4: 200-foot Bridge Between Tongass Avenue North of Cambria Drive and South of Airport Terminal

The Alternative C4 bridge (see Section 2.1.2.3 of the Final EIS) would have been approximately 4,980 feet long and had a maximum height of approximately 250 feet. The main span of this bridge would have had a vertical navigational clearance of 200 feet above high tide and a horizontal navigational clearance of approximately 550 feet.

On Revillagigedo Island, the alternative alignment would have connected to Tongass Avenue north of Cambria Drive, across from the access to the existing ferry terminal. From this terminus, it would have extended northward and traversed the hillside around the quarry. The bridge would have crossed over Tongass Avenue and Tongass Narrows, turned southward to parallel the airport runway, and then touched down on Gravina Island south of the airport terminal. A 0.4-mile-long airport return loop road would have connected the airport terminal and the bridge terminus. The main road would have continued around the southern end of the airport runway and then arced northward, extending parallel to and west of the airport runway approximately 2.2 miles to the northern end of the Airport Reserve Zone. At the southern end of the runway, the road would have been constructed at a grade low enough to accommodate the planned future expansion of the runway, with the runway extended as an overpass of the road.

Alternative C4 was estimated to have a $195 million construction and project development cost and a $160 million life-cycle cost. The bridge associated with this alternative intruded into the Part 77 airspace for Ketchikan International Airport and was projected to reduce SVFR floatplane operations by approximately 1,800 flights (90 percent) per year (see Section 4.7.1.2 of the Final EIS). Cruise ship passage would have continued unhindered (see Section 4.7.2.2 of the Final EIS). Wetland habitat loss was estimated as 38.9 acres (see Table 4-11); and 6.9 acres of EFH were expected to be lost (see Table 4-14 of the Final EIS). Development on Gravina Island was projected to be about 300 acres by 2025, i.e., the same level of development as the other bridge alternatives near the airport [C3(a), C3(b), and D1], but greater than the ferry alternatives (G2, G3, and G4) and less than the Pennock Island bridge alternatives (F1 and F3) (see Section 4.26.1 of the Final EIS).

E. Alternative D1: 120-foot Bridge Between Tongass Avenue at Cambria Drive and Airport Terminals

The Alternative D1 bridge (see Section 2.1.2.4 of the Final EIS) would have crossed Tongass Narrows directly east of the airport terminal. The bridge would have been approximately 3,220 feet long and had a maximum height of approximately 160 feet. The main span of this bridge would have had a vertical navigational clearance of 120 feet above high tide and a horizontal navigational clearance of 500 feet.

On Revillagigedo Island, the alternative alignment would have connected to Tongass Avenue at Cambria Drive near the existing airport ferry terminal and rose along the hillside. The bridge would have crossed over Tongass Avenue and Tongass Narrows, and then turned southward to parallel the shoreline on Gravina Island and touched down south of the airport terminal. A 0.4-mile-long airport return loop road would have connected the airport terminal and the bridge terminus. The main road would have continued around the southern end of the airport runway and then arced northward, extending parallel to and west of the airport runway approximately 2.2

miles to the northern end of the Airport Reserve Zone. At the southern end of the runway, the road would have been constructed at a grade low enough to accommodate the planned future expansion of the runway, with the runway extended as an overpass of the road.

Alternative D1 was estimated to have a $135 million construction and project development cost and a $105 million life-cycle cost, which is the lowest cost of all of the bridge alternatives [C3(a), C3(b), C4, F1, and F3]. The bridge associated with this alternative intruded into the Part 77 airspace for Ketchikan International Airport and was projected to reduce SVFR floatplane operations by approximately 1,800 flights (90 percent) per year (see Section 4.7.1.2 of the Final EIS). The Alternative D1 bridge would have impeded the passage of cruise ships, requiring them to approach and depart the cruise ship docks from the south end of Tongass Narrows (see Section 4.7.2.3 of the Final EIS). This rerouting was projected to result in a reduction in the number of port calls by cruise ships, which, in turn, would have resulted in a decrease in tourism-related expenditures in the Borough (see Section 4.26.3.4 of the Final EIS). Wetland habitat loss was estimated as 36.2 acres (see Table 4-11 of the Final EIS); 4.3 acres of EFH were expected to be lost (see Table 4-14 of the Final EIS). Development on Gravina Island was projected to be about 300 acres by 2025; i.e., the same level of development as other bridge alternatives near the airport [C3(a), C3(b), and C4], but greater than the ferry alternatives (G2, G3, and G4) and less than the Pennock Island bridge alternatives (F1 and F3) (see Section 4.26.1 of the Final EIS).

F. Alternative F1 (Selected Alternative): Bridges (200-foot East and 120-foot West) Between Tongass Avenue and Airport, via Pennock Island

Alternative F1 will cross Tongass Narrows via Pennock Island with two bridges (see Section 2.1.2.5 of the Final EIS). One bridge will cross the East Channel and the other will cross the West Channel. The East Channel bridge will be approximately 3,610 feet long and have a maximum height of approximately 250 feet. The bridge will have a vertical navigational clearance of 200 feet above high tide and a horizontal navigational clearance of approximately 550 feet. The West Channel bridge will be approximately 2,690 feet long and have a maximum height of approximately 160 feet. The bridge will have a vertical navigational clearance of 120 feet above high tide and a horizontal navigational clearance of approximately 500 feet.

Bridge heights over East and West Channels are designed to allow existing vessel traffic in Tongass Narrows to continue as it does today: cruise ships would use East Channel and other large vessels, such as AMHS ferries and barge traffic, would continue to predominantly use the West Channel.

On Revillagigedo Island, Alternative F1 will connect to Tongass Avenue south of Tatsuda's grocery store and near the southern end of the rock quarry. From this terminus, the alignment will rise to the southeast along the hillside (east of the tank farm, the cemetery, and the the U.S. Coast Guard (USCG) Station property), turn westward (skirting the southern end of the USCG Station property, north of the Forest Park Subdivision) and cross over Tongass Avenue approximately 1.4 miles south of downtown Ketchikan, then cross the East Channel to Pennock Island. The roadway will cross Pennock Island at grade. From Pennock Island, the West Channel bridge will cross to Gravina Island, touching down approximately 2.7 miles south of the airport runway. The road will continue northward approximately 5.4 miles to the northern end of

the Airport Reserve Zone. A 1.2-mile airport access road will be constructed at the southern end of the airport runway. The airport access roadway will be constructed at a grade low enough to accommodate the planned future expansion of the runway, with the runway extended as an overpass of the road.

Alternative F1 is estimated to have a $230 million construction and project development cost and a $190 million life-cycle cost, which is the highest cost of all of the project alternatives. The bridges will not affect the Part 77 airspace associated with Ketchikan International Airport and the alternative is projected to reduce SVFR floatplane operations by approximately 200 flights per year (10 percent) (see Section 4.7.1.3 of the Final EIS). Cruise ships would continue to access Ketchikan via the East Channel and navigate through Tongass Narrows unimpeded (see Section 4.7.2.4 of the Final EIS). With longer roads, this alternative will have greater wetland impacts (96.5 acres; 0.2 acres of EFH) than the bridge alternatives closer to the airport and the ferry alternatives (see Section 4.14 and Table 4-11 of the Final EIS). However, the longer road associated with this alternative will provide access to more developable land and recreation lands on Gravina Island than the bridge alternatives closer to the airport, as well as to developable and recreation lands on Pennock Island. Development on Gravina Island with this alternative is projected to be about 500 acres by 2025 (see Section 4.26.1 of the Final EIS).

G. Alternative F3: Bridges (60-foot East and 200-foot West) Between Tongass Avenue and Airport, via Pennock Island

Similar to Alternative F1, Alternative F3 (see Section 2.1.2.6 of the Final EIS) would have had two bridges that crossed Tongass Narrows via Pennock Island. One bridge would have crossed the East Channel and the other bridge would have crossed the West Channel. The East Channel bridge would have been approximately 2,065 feet long and had a maximum height of approximately 140 feet. The bridge would have had a vertical navigational clearance of 60 feet above high tide (lower than any of the other bridge alternatives), and a horizontal clearance of approximately 500 feet. The East Channel bridge height was designed to approach Revillagigedo Island at the approximate grade of South Tongass Avenue (at a T-intersection) while allowing smaller vessels and USCG vessels to transit the East Channel. The West Channel bridge would have been approximately 3,270 feet long and have had a maximum height of approximately 250 feet. The bridge would have had a vertical navigational clearance of 200 feet above high tide and a horizontal navigational clearance of approximately 550 feet.

On Revillagigedo Island, the East Channel bridge would have connected to Tongass Avenue, approximately 1.5 miles south of downtown Ketchikan between the USCG Station and the Forest Park subdivision. From this terminus, the bridge would have crossed the East Channel to Pennock Island. The roadway would have crossed Pennock Island at grade. From Pennock Island, the West Channel bridge would have crossed to Gravina Island, touching down approximately 2.7 miles south of the airport runway. The road would have continued northward approximately 5.1 miles to the northern end of the Airport Reserve Zone. A 1.2-mile airport access road would have been constructed at the southern end of the airport runway. The airport access roadway would have been constructed at a grade low enough to accommodate the planned future expansion of the runway, with the runway extended as an overpass of the road.

Alternative F3 was estimated to have a $205 million construction and project development cost

and a $170 million life-cycle cost. This alternative would not have affected the Part 77 airspace associated with Ketchikan International Airport and was projected to reduce SVFR floatplane operations by approximately 100 flights per year (5 percent) (see Section 4.7.1.3 of the Final EIS). The East Channel bridge would have required large vessels, those with an air draft (height of the vessel above the water line) of greater than 60 feet, to use the West Channel of Tongass Narrows. Cruise ships, AMHS ferries, and other large vessels would have had to use the West Channel to make through transits of Tongass Narrows. Cruise ships would have had to approach and depart the cruise ship dock using north Tongass Narrows or through the West Channel of Tongass Narrows to the south. However, marine pilots and others had expressed concern over navigational hazards associated with transiting West Channel, particularly with a bridge across the channel (see Section 4.7.2.5 of the Final EIS).

The DOT&PF had committed to dredging approximately 184,000 cubic yards of material in the West Channel in order to improve navigational safety for large vessels if this alternative had been selected. Because the West Channel would have been widened if Alternative F3 were selected (see Section 2.1.2.6 of the Final EIS), no reduction in cruise ship stops was anticipated. However, channel widening would have meant much greater in-water habitat impact (16.2 acres of EFH) than other alternatives (see Section 4.15.4.4 of the Final EIS). Also, with longer roads, this alternative would have had greater wetland impacts (85.1 acres) than the bridge alternatives closer to the airport [C3(a), C3(b), and C4] or the ferry alternatives (G2, G3, and G4) (see Section 4.14 of the Final EIS). The longer road associated with this alternative would have provided access to more developable land and recreation lands on Gravina Island than the bridge alternatives closer to the airport, as well as to developable and recreation lands on Pennock Island. Development on Gravina Island was projected to be about 500 acres by 2025 (see Section 4.26.1 of the Final EIS).

H. Alternative G2: Ferry Between Peninsula Point and Lewis Point

Alternative G2 (see Section 2.1.3.1 of the Final EIS) would have been a new ferry service for vehicles and passengers between Peninsula Point on Revillagigedo Island and Lewis Point on Gravina Island, crossing Tongass Narrows approximately 2 miles north of the airport. The existing airport ferry would have remained operational under Alternative G2.

This alternative would have required construction of a new ferry terminal on each side of Tongass Narrows and two new ferry vessels. A 4.3-mile road would have been constructed on Gravina Island that would have extended from the ferry terminal southward approximately 2.6 miles, wrapped around the southern end of the airport runway, and then turned northward to the airport terminal. The road at the southern end of the runway would have been constructed at a grade low enough to allow for planned future expansion of the runway, with the runway extended as an overpass of the road. Approximately 1,400 cubic yards of material would have been removed from Tongass Narrows to provide proper navigational clearance for ferries.

The hours of operation (16 hours a day) and crossing frequency for the new ferry would have been similar to the existing airport ferry schedule, with one vessel operating every 30 minutes in the winter months and two vessels operating in the summer (with crossings every 15 minutes).

Alternative G2 would have had lower construction and project development costs ($60 million)

and lower life-cycle costs ($90 million) than the bridge alternatives, and no impacts to aviation or marine navigation, though they would have increased the amount of cross-channel traffic. This alternative would not have provided the convenience and reliability of access to the airport and other lands on Gravina Island as well as the bridge alternatives. Wetland habitat loss with this alternative was estimated as 42.5 acres (see Table 4-11 of the Final EIS), and 0.7 acres of EFH were expected to be lost (see Table 4-14 of the Final EIS). Projected development on Gravina Island, at approximately 70 acres by 2025, was about three times the amount of development projected under the No Action Alternative, but less than one-fourth of what any of the bridge alternatives [C3(a), C3(b), C4, D1, F1, and F3] would have provided.

I. Alternative G3: Ferry Between Downtown and South of Airport

Alternative G3 (see Section 2.1.3.2 of the Final EIS) would have been a new ferry service for vehicles and passengers between Ketchikan (near the Plaza Mall at the intersection of Tongass Avenue and Jefferson Street) on Revillagigedo Island and a location approximately 0.6 miles south of the airport runway on Gravina Island. The existing airport ferry would have remained operational under Alternative G3.

This alternative would have required construction of a new ferry terminal on each side of Tongass Narrows and two new ferry vessels. A road would have been constructed on Gravina Island from the ferry terminal northward approximately 3.0 miles to the northern end of the Airport Reserve property. A 1.2-mile airport access road would have been constructed around the southern end of the airport. The road at the southern end of the runway would have been constructed at a grade low enough to allow for future planned expansion of the runway, with the runway extended as an overpass of the road. Approximately 18,600 cubic yards of material would have been removed from Tongass Narrows to provide proper navigational clearance for ferries.

The hours of operation (16 hours a day) and crossing frequency for the new ferry would have been similar to the existing airport ferry schedule, with one vessel operating every 30 minutes in the winter months and two vessels operating in the summer (with crossings every 15 minutes).

Alternative G3 would have had lower construction and project development costs ($70 million) and lower life-cycle costs ($100 million) than the bridge alternatives, and no impacts to aviation or marine navigation, though they would have increased the amount of cross-channel traffic. This alternative would not have provided the convenience and reliability of access to the airport and other lands on Gravina Island as well as the bridge alternatives. Wetland habitat loss with this alternative was estimated as 47.5 acres (see Table 4-11 of the Final EIS), and 3.8 acres of EFH were expected to be lost (see Table 4-14 of the Final EIS). Projected development on Gravina Island, at approximately 70 acres by 2025, was about three times the amount of development projected under the No Action Alternative, but less than one-fourth of what any of the bridge alternatives [C3(a), C3(b), C4, D1, F1, and F3] would have provided.

J. Alternative G4 (Environmentally Preferable Alternative): Ferry Between New Terminals Adjacent to Existing Terminals

Alternative G4 (see Section 2.1.3.3 of the Final EIS) would have been new ferry service for vehicles and passengers adjacent to the existing airport ferry route, crossing Tongass Narrows

2.8 miles north of downtown. The existing airport ferry would have remained operational under Alternative G4. This alternative would have required construction of a new ferry terminal on each side of Tongass Narrows, adjacent to the existing airport ferry terminals, and two new ferry vessels. A 3.2-mile road would have been constructed on Gravina Island that extended southward from the airport ferry terminals; the roadway would have wrapped around the southern end of the airport runway, and then turned northward, extending parallel to and west of the airport runway approximately 2.2 miles to the northern end of the Airport Reserve property. The road at the southern end of the runway would have been constructed at a grade low enough to allow for future planned expansion of the runway, with the runway extended as an overpass of the road. Approximately 15,200 cubic yards of material would have been removed from Tongass Narrows to provide proper navigational clearance for ferries.

The hours of operation (16 hours a day) and crossing frequency for the new ferry would have been similar to the existing airport ferry schedule, with one vessel operating every 30 minutes in the winter months and two vessels operating in the summer (with crossings every 15 minutes).

Alternative G4 would have had lower construction and project development costs ($60 million) and lower life-cycle costs ($90 million) than the bridge alternatives, and no impacts to aviation or marine navigation, though they would have increased the amount of cross-channel traffic. This alternative would not have provided the convenience and reliability of access to the airport and other lands on Gravina Island as well as the bridge alternatives. Wetland habitat loss with this alternative was estimated as 35.3 acres (see Table 4-11 of the Final EIS), and 1.6 acres of EFH were expected to be lost (see Table 4-14 of the Final EIS). Projected development on Gravina Island, at approximately 70 acres by 2025, was about three times the amount of development projected under the No Action Alternative, but less than one-fourth of what any of the bridge alternatives [C3(a), C3(b), C4, D1, F1, and F3] would have provided.

Pursuant to 40 CFR 1505.2, the DOT&PF and FHWA have determined that Alternative G4 (the ferry alternative most closely associated with the existing ferry service and terminal locations) is the environmentally preferable build alternative, having the least impact to the physical and biological environment. Alternative G4 is environmentally preferable because it has a small footprint compared to other build alternatives, makes the fewest changes to existing conditions, and has the least impact on terrestrial or marine habitat. However, DOT&PF and FHWA weighed the social, economic, and natural environmental impacts and benefits of each reasonable alternative in selecting Alternative F1. Alternative G4 was not selected because it would have provided substantially less reliable, less efficient, less convenient, and less cost effective access to Gravina Island for the citizens of Ketchikan. Specifically, Alternative G4 provides less social and economic benefit than Alternative F1. While Alternative G4 improves access to Ketchikan Gateway Borough lands and other developable or recreation lands on Gravina Island, it does not improve access as much as Alternative F1. Further, Alternative G4 would not substantially improve the existing convenience and reliability of access to Ketchikan International Airport for passengers, airport tenants, emergency personnel and equipment, and shipment of freight. Additionally, Alternative G4 would limit the Ketchikan Gateway Borough's ability to promote economic development on Gravina Island.

III. Section 4(f)

The proposed action will not result in the direct or constructive use of land from any public park, recreation area, wildlife or waterfowl refuge, or significant historic site protected by Section 4(f) of the United States Department of Transportation Act of 1966, as amended.

IV. Summary of Proposed Mitigation Commitments

The following presents DOT&PF's and FHWA's commitments to mitigate impacts that will result from the construction of Alternative F1. In many cases, the construction contractor will implement the mitigation measures. Other mitigation measures will be implemented during final design of Alternative F1. Ultimately, DOT&PF and FHWA are responsible to ensure implementation of the mitigation measures described below and more completely in Chapter 4 of the Final EIS.

Land Use—Affected private property and established land uses will be protected. This will include maintaining access during construction. Careful coordination with the U.S. Coast Guard (USCG) will occur throughout construction on and adjacent to USCG property. DOT&PF will build fencing along the roadway embankment adjacent to the USCG Station and enclose the firing range on the USCG property so that safe use of the range can continue.

Private Property—All property owners will be compensated for any loss of their property at fair market value. All displaced persons will be provided relocation assistance. Any necessary relocation will comply with the "Uniform Relocation Assistance and Real Property Acquisition Policies act of 1970," as amended. At this time no relocations are anticipated to result from the construction of Alternative F1.

Water Quality—Water quality protection features and management practices will be incorporated into the design of the bridges and roadway, including measures to minimize the fill footprint and to prevent erosion by use of erosion-resistant materials and subsequent revegetation. Storm water treatment will be included in the road and bridge design. See also "Wetlands" and "Water Bodies and Wildlife" below for commitments related to water quality.

- Where practicable, the angle of fill slopes will be increased to reduce encroachment into adjacent wetlands.
- The roadway will be designed and constructed with a low-profile embankment to minimize the fill footprint.
- Rock will be used to stabilize toes of slopes at pond and stream crossings to limit the erosion of fine-grained material into adjacent waters and wetlands.
- To protect the integrity of the natural plant communities, plant species indigenous to the area will be used for vegetating road slopes, except that nonnative, non-invasive annual grasses may be used to provide rapid, initial soil cover to prevent runoff of fine-grained material into adjacent wetlands. Topsoil will be applied to the surface of road slopes to aid in the reseeding process.
- Roadside swales will be designed to keep surface water within the natural drainage basins to allow sediment-laden water to clear before its discharge to adjacent wetlands and waters.
- At all stream crossings (both culverts and bridges), stream banks will be re-contoured to

approximate original conditions and re-seeded with native vegetation to minimize erosion.

An erosion and sediment control plan will be prepared by the construction contractor that will outline measures to minimize contamination via construction runoff. Runoff from the construction area will be controlled by best management practices (BMP) to minimize erosion and transport of sediment, to avoid any accidental leaking of oil or fuel from equipment into creeks or Tongass Narrows, and to contain any such leaks, if any occur. A Storm Water Pollution Prevention Plan (SWPPP) will be required of the construction contractor to define BMPs that will be used on the project. The plan will be based on DOT&PF's SWPPP Guide. The SWPPP will incorporate BMPs, including limiting the construction staging area, using silt fences, fueling away from water, and ensuring spill cleanup material is readily available. Some of the BMPs that will be used include:

- DOT&PF will hold meetings at the beginning of construction with the construction contractor and agencies to ensure implementation of mitigation commitments.
- Staking the planned outside limits of disturbance prior to construction to limit construction equipment encroachment into that area.
- Limiting clearing and grubbing outside of the fill footprint to the extent practicable to control physical disturbance of wetlands.
- Installing silt fences adjacent to waterways just beyond the estimated toe of fill to capture fine-grained material contained in runoff.
- Installing ditch checks to reduce bank erosion.
- Using sedimentation basins, as necessary (based on the potential volume of storm water runoff) to limit sedimentation of adjacent wetlands and other waters.
- Fueling and servicing of construction vehicles at least 100 feet away from water bodies. Staging and storage of fuel and related products will occur at least 100 feet from wetlands as well as water bodies.
- Having spill response equipment readily available and ensuring that construction personnel are trained in spill response to contain accidental leaks of oil or fuel from construction equipment.

Wetlands—Wetlands were avoided to the extent practicable during preliminary design and such consideration will continue in final design. The design features and management practices outlined for "Water Quality" (above) also protect wetlands. Temporary impacts to wetlands will be minimized by placing equipment and temporary fill on mats.

The DOT&PF and the FHWA have proposed to the U.S. Army Corps of Engineers (COE) to compensate for unavoidable adverse impacts to wetlands by paying $248,400.00 as a fee in lieu of wetland restoration, enhancement, or preservation. The monetary value has been determined using historical values for DOT&PF Southeast Alaska projects. The per-acre costs used are $2,800 for forested, shrub/scrub, and muskeg wetlands; $50,000 for fresh water bodies; and $20,000 for marine waters. This fee will be provided to a land trust and is to be directed to

wetland creation, restoration, enhancement, and preservation or land acquisition.

The fee includes a reduction of $30,800 in anticipation that the Ketchikan Gateway Borough's proposed "Lewis Reef Road" (see Section 4.14.1 of the Final EIS) will be realigned to match the alignment shown in this EIS. The Borough has already resolved compensation for wetland impact and holds a permit, but has not begun construction. The Borough, with support from DOT&PF, is applying to modify its permit to account for the alignment shift. Therefore, the 11 acres of impact anticipated under the Borough's Lewis Reef Road project were removed from the 96.5 acres anticipated in this EIS.

Water Bodies and Wildlife—Clear-span bridges and fish passage culverts sized for expected flood flows will avoid and minimize impact to freshwater bodies and the fish within them. For Essential Fish Habitat (EFH), including marine habitat and anadromous fish habitat, the following conservation measures will be implemented:

- Stream banks will be recontoured and reseeded to minimize erosion.
- The SWPPP will outline BMPs that will be employed to minimize the introduction of sediment and siltation during construction and fill placement. The contractor will be required to include the BMPs listed under "Water Quality" above and listed below
- All anadromous fish stream crossings will be designed to provide passage for the salmon present in any given stream, per DOT&PF's Memorandum of Agreement with the Alaska Department of Fish and Game (dated August 3, 2001).
- In-water work in Tongass Narrows will be restricted, as follows. General use of boats and barges could occur year round for general survey and work on bridge structures above water. Except for blasting (in-water blasting is not anticipated at this time), dredging, and pile driving, other work in marine waters will occur July 1 to February 28. Blasting, dredging, and pile driving could occur only November 1 to February 28, with the possible exception of mid-channel locations, based on further consultation with the Alaska Department of Natural Resources (DNR), NOAA Fisheries, COE, and U.S. Fish and Wildlife Service (USFWS).
- A vibratory hammer will be used for pile driving.
- Construction at anadromous fish streams will take place June 15 to August 7 and will avoid the period from August 8 to June 14.
- No blasting is anticipated at this time. If in-water blasting is necessary, it will be performed such that ground vibration (particle velocity) will not exceed 2.0 inches per second and peak water overpressure (instantaneous pressure change) will not exceed 2.7 pounds per square inch.
- If in-water blasting is required, the contractor will be required to prepare a blasting plan prior to any blasting activities. The plans will include a pre-blasting survey for fish schools and monitoring for fish kills. Measures will be used to dampen blast impact.
- Blasting, if required, within half a mile of a eagle nest, and other construction activity within 100 meters (approximately 328 feet), of an eagle nest, will not take place during nesting season. The USFWS will be consulted about active nest sites and to review

construction plans and to help establish a construction activity buffer surrounding active bald eagle nests that could be affected by construction activities.

- Dredged debris will be disposed of on land.
- All necessary permits and agency approvals will be obtained prior to construction, and any permit stipulations will be incorporated into the contract specifications.
- Perimeter staking will be required on the outside of the disturbance area prior to construction to ensure no additional impact from construction activities.
- Silt fences will be used adjacent to EFH stream channels, just beyond the estimated toe of fill.
- Gravels and streambed material will be used in the bottoms of fish-passage culverts, per Tier I design guidance provided in the existing Memorandum of Agreement between ADF&G and DOT&PF (dated August 3, 2001).
- Riprap and bioengineering will be used along disturbed stream banks to maintain stream bank integrity and improve habitat.

For EFH, including marine habitat and anadromous fish habitat, and marine mammal habitat, the following conservation measures will be implemented:

- The EFH work window for in-water work in Tongass Narrows will be followed for marine mammals as well.
- If blasting is necessary, the project will ensure use of trained and NOAA Fisheries-approved observers to indicate when mammals are within a 50-meter zone.
- An in-water warning sound will be issued prior to any blasting to allow marine mammals to move to a comfortable distance.
- If design should change, an incidental harassment authorization might need to be obtained from NOAA Fisheries.

Aviation Transportation—Access to the airport terminal will be maintained during construction, including construction of a new parking garage at the airport. Measures will be taken to minimize service disruption for helicopter and floatplane operators.

Marine Transportation—Bridge construction will be timed to minimize disruption of marine traffic during the busy summer season and focus major activities in the off-season to the extent practical. Advance notice of temporary closures of portions of Tongass Narrows while placing bridge components will be provided.

Vehicular Transportation—Construction that might cause lane closures will be timed for low-traffic periods. Temporary roads and driveways will be employed where necessary to ensure continued mobility during construction.

Pedestrians and Bicyclists—A traffic maintenance and parking plan will include provisions for maintaining pedestrian and bicycle traffic and safety through construction areas. To the maximum extent possible, access will remain available.

Air Quality—Measures such as watering of areas likely to produce dust will be implemented to control dust at construction sites, as needed.

Noise and Vibration—Construction activities near residences will be prohibited between 11:00 p.m. and 6:00 a.m. Some exceptions might be requested from the City of Ketchikan during special construction activities. Blasting, if required, will be controlled to avoid damage of nearby structures and to meet the requirements of the local noise ordinance. In-water blasting, pile driving, and/or drilling will be controlled to ensure that the pressure waves generated do not pose a consistent, adverse threat to fish and other marine resources.

Historic and Archaeological Resources—Prior to construction, a qualified archaeologist will conduct a reconnaissance level survey of the alignment once it is staked to make sure no historic or archeological resources were overlooked. Consultation with the State Historic Preservation Officer and tribal entities will continue during design and construction as needed.

Hazardous Materials—A spill prevention and response plan will be prepared.

I. Comment on the Final EIS

The table in Appendix A lists public, nonprofit groups, and agency comments that have been excerpted from letters and e-mails submitted on or before September 7, 2004. The responses are from DOT&PF and FHWA. The complete text of each comment letter and e-mail follows the table.

II. Conclusion

The Gravina Access Project Final EIS is in conformance with applicable provisions of 23 CFR 771 and satisfactorily addresses the anticipated environmental impacts that will result from construction of Alternative F1. All correspondence received by the Final EIS comment due date of September 7, 2004 has been reviewed (see Appendix A for copies of the comments on the Final EIS). Based on this review, we find that there were no new substantive issues or impacts identified; therefore, the Final EIS remains valid.

Based on the analysis and evaluation contained in this project's Final EIS and after careful consideration of all social, economic, and environmental factors and input from the public, tribal entities, and agencies, it is my decision to select Alternative F1 as the proposed action for this project.

15 SEP 2004
Date

Karen A. Schmidt

David C. Miller, Division Administrator
Federal Highway Administration

Appendix A

Comments Received on the Final EIS by September 7, 2004, and FHWA and DOT&PF Responses.

GRAVINA ACCESS PROJECT FINAL EIS COMMENT	RESPONSE
Sitka Conservation Society—Comment received via mailed letter 9/07/04 Sitka Conservation Society is wholly opposed to the Gravina Bridge Project, and request that the plan be withdrawn for the below reasons.	
1. By limiting the project scope to improving surface transportation. the FEIS eliminates the ability to look at alternative forms of transportation including the easiest one of upgrading existing ferry service between the airport and Ketchikan.	1. The Final EIS did consider three ferry alternatives, including one ferry alternative located at the existing ferry terminal (i.e., Alternative G4), which essentially would upgrade existing ferry service. Alternative G4 would not adequately meet the need to promote environmentally sound, planned long-term economic development on Gravina Island.
2. The bridge crossing point is not central to Ketchikan's population center, and will lengthen airport commute times for many residents. Traffic will be routed through the already congested downtown core, which supports heavy foot traffic during summer months.	2. DOT&PF determined that the travel time from Ward Cove to the airport would be two minutes longer with Alternative F1 as compared to using the existing ferry. Travel time from downtown to the airport would be cut in half (see Section 4.7.3 and Table 4-7 in the Final EIS).
3. The FEIS fails to disclose the Gravina Project will cost taxpayers millions	3. As stated in Section 2.1 of the Final EIS, funding for the complete project construction cost has not been identified.
4. The FEIS fails to take a hard look at the cumulative impacts of this Project	4. The Final EIS states, "With most of the land owned by the USFS and DNR, it is likely that most of the island would be maintained as undeveloped lands. Therefore, the physical changes in overall land use on Gravina Island would be very small." Section 4.27 specifically identifies the Gravina Island Timber Sale as a future action in the assessment of cumulative impacts. In Section 4.27.9.2 of the Final EIS we talk about how improved access to Gravina would increase human activities, such as logging, which would adversely affect wildlife.
5. We are very concerned about the cumulative impacts of this project and related development on wildlife and in turn the people who use the island	5. Cumulative impacts to subsistence resources are described in Section 4.27.2.1 of the Final EIS. The Federal Subsistence Board, the

GRAVINA ACCESS PROJECT FINAL EIS COMMENT	RESPONSE
wildlife and in turn the people who use the island for subsistence purposes.	Alaska Board of Game and Department of Fish and Game have the authority and responsibility to set hunting regulations to manage wildlife populations (see Section 4.26.10.2 of Final EIS).
6. This project will only exacerbate concerns about water quality by increasing non-point source pollution from surface traffic and the risk of large-scale marine pollution from boat accident or grounding	6. As stated in Section 4.12.2, bridge design will incorporate storm water treatment systems to minimize the effects of runoff. Alternative F1 was selected in part because it would minimize the potential for boat accidents and groundings.
7. The Bridge poses risks to human safety and the environment	7. See response 6 above.
National Oceanic and Atmospheric Administration, National Marine Fisheries Service—Comment received via faxed draft letter 9/07/04 For NMFS to conclude that the FEIS adequately protects EFH, the following comments/questions should be addressed: 1. In the March 2004 response to NMFS' comments, Item 21, it states "All eight build alternatives will require fill in the edge of the lowermost segment of Government Creek estuary." As far as we can determine, this fill is not addressed anywhere in the FEIS. We assume that this fill is associated with the road, which is a component of all alternatives, but it does not appear to have been included in the evaluation of the impacts to EFH. On Figure 3.16, this area is identified as Intertidal Marsh or Meadow; however Table 4-11 indicates that Alternative FI will not impact any intertidal marsh or meadow habitat. This inconsistency should be explained. 2. The amount of marine EFH impacted by Alternative Fl in the FEIS has been substantially reduced from the amount presented in Table 1-1 of the EFH Assessment in the DEIS. NMFS strongly	1. In response to NMFS comments on the Draft EIS and in order to minimize impacts to Essential Fish Habitat, the DOT&PF refined the alignment of the roadway to avoid intertidal marsh and meadow wetlands at Government Creek. No impact on this resource was reported in the Final EIS because no impact is expected to occur. Mitigation of impacts to intertidal marsh and meadow wetlands is not warranted. 2. See response 1 above.

GRAVINA ACCESS PROJECT FINAL EIS COMMENT	RESPONSE
supports this reduction in impact, but the text does not explain what was done to bring about this change (e.g. a change in the placement of the bridge footings). Since the potential impacts from several of the other alternatives increased between the DEIS and the FEIS, we would be interested in knowing how the reduction was achieved.	
3. ...as the Corps letter acknowledges, intertidal marshes and meadows are relatively rare in southeast Alaska and eelgrass is a habitat area of particular concern. NMFS has not seen evidence that in-lieu fee mitigation adequately compensates for the loss of these habitat types. Furthermore, one of the stated purposes of the Gravina Access project is to increase access to, and presumably development of, Gravina Island. This will result in additional loss of wetlands in the vicinity of the project.	3. DOT&PF and FHWA have worked closely with the COE to develop compensatory mitigation that corresponds to the level of anticipated adverse impacts to wetlands and aquatic resources. The in-lieu fee proposal is the best option that serves to adequately compensate for the loss of wetlands. Further, DOT&PF and FHWA have worked with the COE to identify mitigation opportunities in the greater Ketchikan area. Very few specific opportunities for mitigation exist, including restoration and enhancement and acquisition options.
4. Therefore, instead of in-lieu fee compensation, NMFS recommends that ADOT&PF consider options to acquire intertidal meadow/marsh and eelgrass areas that could be set aside for protection from future development. NMFS recommend[s] that the compensation ratio for this mitigation be set at a minimum of 3 acres preserved for each acre impacted.	4. See response to 3 above.
5. Table 4-14 in the FEIS indicates that eelgrass is likely to be adversely affected by the preferred alternative and it appears possible that potential impacts to estuarine habitat in Government Creek may also need to be added to the total impact habitat. Under the Clean Water Act, eelgrass and intertidal meadows/marshes are special aquatic sites and therefore high value aquatic habitat.	5. See response to 1 above.
6. ADOT&PF is proposing an in-lieu fee of $20,000 per acre for all marine habitat, which is the amount it has proposed under previous projects for moderate value intertidal rocky coastline habitats. High value aquatic habitat has previously been compensated for at $50,000 per acre. If in-lieu fee mitigation is to occur, the fee should be $50,000/acre for all eelgrass and intertidal meadows/marshes.	6. The DOT&PF and FHWA will consider in-lieu fee mitigation for eelgrass and kelp at $50,000 per acre. Note that impacts to eelgrass and kelp were avoided for the most part; the amount of eelgrass and kelp affected by Alternative F1, from Table 4-14, would be .04 acres (compensation at a rate of $50,000 per acre for Alternative F1 would amount to $2,000, an increase of $1,200 over the proposed amount).

GRAVINA ACCESS PROJECT FINAL EIS COMMENT	RESPONSE
Southeast Alaska Conservation Council—Comment received via faxed letter 9/07/04	
1. The FEIS fails to fully disclose the costs and benefits of the alternatives. It is unclear to the reader how much the preferred alternative will actually cost taxpayers. On page 2-8 of the FEIS, the Department of Transportation and Public Facilities (DOT) states that the cost of the preferred alternative is approximately $190 million, yet Table 21 cites $230 as the total cost for alternative Fl. The table breaks down the costs between construction ($170 million) and program development ($60) million. So what is the total price taxpayers should expect to pay?	1. The project costs cited are lifecycle costs, construction costs, and program development costs. Costs of the alternatives in these three categories are provided in Chapter 2 of the FEIS for each of the alternatives for comparison. As stated in Section 2.1 of the Final EIS, funding for the complete project construction cost has not been identified.
2. ...DOT states that the annual average life-cycle operation and maintenance (O&M) costs for the city-run shuttle ferry is $2.1 million. See FEIS at 2-4. After careful review of the FEIS, however, we could not determine whether DOT had incorporated the revenues brought in by the $4 per ferry passenger into its calculations or not.	2. The O&M cost factor was used to provide an equitable comparison of project economic impacts. The ferry fees are intended to generate the revenue needed to operate and maintain the ferry service. If the ferry were to generate positive income in any given year, it is anticipated to be small enough that it would not affect the outcome of the economic analysis.
3. ...the Preliminary Quantities and Cost Estimate Technical Memorandum from July 2003 contained in Appendix A of the FEIS, fails to reference the No Action alternative as the baseline for the many cost estimate tables. .... DOT fails to disclose complete data related to the current costs and benefits of the existing ferry system in Appendix A. Consideration of this information is essential for a reasoned choice by the public and decision makers among this project's alternatives.	3. Although costs of the No Action Alternative were not presented in Appendix A, they are presented in Section 2.1.1 of the Final EIS for comparison. Consideration of the existing ferry system's costs and benefits were considered under the No Action Alternative (see Final EIS Section 4.5.1).
4. .... One of the strongest arguments for the proposed bridge, as stated in the FEIS at 1-2, is "to improve the convenience and reliability of access to Ketchikan International Airport". Yet, Alaska's Congressman and bridge-supporter Don Young stated that to access the airport "it may actually be a little shorter (trip) for some people to use the ferry." Representative Young also suggests in the same article that the ferry might remain in place. These statements from the project's primary Congressional promoter undermine one of the principal stated needs for this project.	4. The FEIS (see Section 4.7.3) describes the way Alternative F1 will improve the convenience and reliability of access to the Ketchikan International Airport. The document also states clearly that the ferry will not remain operational once Alternative F1 is constructed and operational.

GRAVINA ACCESS PROJECT FINAL EIS COMMENT	RESPONSE
5. According to the FEIS, one of the chief needs of the community is access to developable land away from waterfronts. "Without access to expansion areas, development will continue to crowd the waterfronts of Revillagigedo and Gravina Islands." See FEIS at 1-3. If this is the real issue, why didn't DOT consider alternatives building roads farther into Revillagigedo or Gravina Islands rather than a bridge that only serves to connect the two waterfronts.	5. The Gravina Access Project discussed the need to access developable lands on Gravina Island, not necessarily those on the waterfront. In particular, the need was to provide access to Borough lands, of which there is little remaining on Revilla Island. All build alternatives were developed to provide access to developable lands away from the waterfront. Chapter 2 of the Final EIS discusses the spine road that is part of all alternatives that does provide access to lands inland from the airport and well removed from the waterfront.
6. It is questionable whether developable land is still a primary concern for the Ketchikan Gateway Borough. To satisfy NEPA, DOT must update the analysis of land needs before issuing the ROD. For example, along the existing road system several sites available for industrial development are now vacant, including Ketchikan Pulp Corporation pulp mill site and the Gateway Veneer Plant at Ward Cove.	6. Future development of Gravina Island is a major component of future planning for the Borough Planning Department. The Borough has expressed no change to the need for access to developable land. Coordination with local planning authorities was continuous throughout project development.
7. The FEIS does not adequately address the impacts of cumulative actions on the environment. ... TheFEIS identifies some but not all reasonably foreseeable actions in the FEIS. See FEIS at 4-181. For example, this section of the FEIS makes no mention of DNR's logging and road building plans on State land or the effects of those activities on island resources and users. See Office of the Governor, State Help is on the Way for SE Timber Industry (August 13, 2004) (attached Exhibit 3). Likewise, no mention is made of the Alaska Mental Health Trust Authority's proposal to dispose of its timber on Gravina Island or the cumulative effect to the environment of this proposed action. See Public Notice of Decision to Dispose of Alaska Mental Health Trust Timber (March 13, 2004) (attached as Exhibit 4). The analysis given of those reasonably foreseeable actions identified by DOT, such as the Forest Service's Gravina Island Timber Sale, is too general and imprecise to satisfy the hard look requirement under NEPA. In order to satisfy NEPA, an EIS must evaluate in detail the "cumulative effects of a proposed action	7. The Final EIS identifies all the proposed logging activities referenced in the commenter's letter (See the Final EIS Section 4.26.1.3). Anticipated timber sales and associated logging on Gravina Island on land owned by agencies other than the U.S. Forest Service (USFS) is addressed in this section of the Final EIS, including the Department of Natural Resources (DNR) and Alaska Mental Health Trust. DNR's logging is expected to be simultaneous with USFS logging and would make use of USFS roads to minimize impacts and therefore was considered cumulatively with the USFS timber sale. The only other anticipated logging activity would occur on Mental Health Trust Land in a relatively small area, which does not factor substantially into overall cumulative impacts. Each agency has stated (Final EIS page 4-134) that the Gravina Access Project road would not be adjacent to areas of commercial quality timber. The Final EIS states, "With most of the land owned by the USFS and DNR, it is likely that most of the island would be maintained as undeveloped lands. Therefore, the physical changes in overall land use on Gravina Island would be

GRAVINA ACCESS PROJECT FINAL EIS COMMENT	RESPONSE
with other proposed actions." See Muckleshoot Indian Tribe v. U.S. Forest Service, 177 F.3d (9th Cir 1999). The FEIS fails to adequately analyze cumulative and similar actions affecting lands within or adjacent to the Gravina Access project area. 8. Given that the Forest Service is the largest landowner on Gravina Island, and the direct, indirect and cumulative effect of any alternative considered in its timber sale planning process when combined with the proposed Gravina Access project and other reasonably foreseeable actions, the Forest Service should have been a. cooperating agency in this NEPA process.	very small." In Section 4.27.9.2 of the Final EIS we talk about how improved access to Gravina would increase human activities, such as logging, which would adversely affect wildlife. 8. Comment noted.
Peter Rice—Comment received via e-mail 9/07/04 I would like to enter my comments into the record. I am against the bridge solution to Gravina Access at this time. I think a better solution is to enhance the current ferry service, and to expedite development of the road system on Gravina. The current proposal is too expensive to both federal and state budgets for the proposed benefits, especially the current budget crises.	Comments noted.
Paul Hovik—Comment received via e-mail 9/07/04 1. Logistically, the F1 option would ironically make the airport less, not more, accessible - it would more than double the commute time from North Tongass and Pennock, exacerbate downtown traffic, and close the airport in times of high wind, ice, and/or snow... 2. Economically, building F1 would have numerous foreseen and countless unforeseen negative consequences. The Cruise ship industry has already registered its opposition; several air taxis would most likely have to relocate - especially with our abundance of sub-vfr-minima weather; the existing ferry infrastructure would have to be maintained as	1. DOT&PF determined that the travel time from Ward Cove to the airport would be two minutes longer with Alternative F1 as compared to using the existing ferry. Travel time from downtown to the airport would be cut in half (see Section 4.7.3 and Table 4-7 in the Final EIS). Alternative F1 will provide access to Gravina 24 hours per day. DOT&PF does not anticipate closures of Alternative F1 due to weather. 2. The cruise ship industry has not commented on the project. We do not anticipate that any air taxis would have to relocate. Any improvements to airport property would be coordinated with the airport's Airport Security Program, which was developed in compliance with Transportation Security Regulations (49 CFR Part 1542).

GRAVINA ACCESS PROJECT FINAL EIS COMMENT	RESPONSE
a backup; roaded connection would increase security risks at the airport, etc.	
Gerry Knasiak—Comment received via letter 9/07/04 As a longtime resident of Ketchikan (I became a Pioneer last year!) the purpose of this letter is to lodge my personal protest concerning the proposed Gravina Bridge project.	Comment noted.
Marvin Scott—Comment received via e-mail 9/07/04 I have been a resident of Ketchikan my whole life. I see your No Action Alternative as the only realistic alternative. I am in agreement with better access to Gravina Island by ferry, but not by a bridge. I believe in projects that enhance the quality of life among the people whom live in this community. I ask you not to build the bridge.	Comments noted.
Donna Gellings—Comment received via e-mail 9/07/04 Please consider this submittal as POSITIVE SUPPORT for Alternative F1 as depicted in detail in the Gravina Access Final Environmental Impact Statement.	Comment noted.
Kathleen Ford—Comment received via e-mail 9/07/04 1. I feel that there are many issues that are not being discussed openly and honestly in regard to the true cost of a project of this magnitude. There are many points to consider: The airport ferry is revenue-producing, whereas the bridge will not generate profits.	1. The current ferry fees are intended to generate the revenue needed to operate and maintain the ferry service. The best information available at the time of the economic analysis indicated that the ferry service required a small public subsidy. Although the airport ferry could now be operating without the need for a subsidy or even at a profit, variations in ridership levels or costs of operation and maintenance in any given year could result in the need for a public-funded subsidy to meet costs. As an element of the overall economic analysis of the project alternatives, the ferry subsidy is relatively small and does not affect the outcome of the analysis. Further, Alternative F1 will eliminate the out-of-pocket expense to the traveling public

GRAVINA ACCESS PROJECT FINAL EIS COMMENT	RESPONSE
	crossing Tongass Narrows because there will be no toll.
2. …an elevated roadway like the bridge will require constant deicing during winter; building the bridge in the name of efficiency, convenience, and cost-effectiveness is not borne out when considering the ease of taking a ferry and arriving at the terminal a few minutes later;	2.The Gravina Access project, if constructed, will be part of the National Highway System, and as such, will receive highest priority for winter maintenance. The DOT&PF has committed to owning and operating this facility, including covering the annual maintenance costs (Final EIS, page 2-2).
3. …the issue of parking at the airport has not been addressed…. I urge responsible and sound judgment and addressing unanswered questions before proceeding further. Thank you.	3. A parking structure at the airport is included in each of the build alternatives (Final EIS, page 2-1 and Figure 2.4).
Margaret Clabby—Comment received via letter 9/06/04 …The preferred alternative (F1) has numerous unacceptable consequences:	
1. The bridge over West Channel will impinge on the width of the channel, thus increasing the risk of accidents…	1. The bridge piers will be outside of the main West Channel navigation lane.
2. The negative consequences to existing biological resources are substantial, and certainly not justified by the degree of benefit of the project…	2. Please refer to Chapter 4 of the Final EIS which discusses impacts resulting from the preferred alternative in considerable detail.
3. The cost of a project of this scale is outrageous (and of course it would probably double by the time it is finished)….	3. See comment 2 above.
4. The road will … result in constant road traffic noise and pollution … affect the water quality in a small stream … cut off transit routes for the deer, bear, etc. which travel from the uplands to the cove on which my property is situated.	4. See comment 2 above.
5. We have many undeveloped residential and industrial properties going unused already. Flooding the market with additional property will only cause a reduction in the value of existing properties (and environmental harm in unnecessary pristine places.)	5. See comment 2 above. According to the Borough, the availability of residential and industrial lands on Revilla is limited. The Borough's Gravina Island Development Plan, contained in Appendix S of the Final EIS, talks about the development of Gravina Island as being a stepwise process that would not likely result in the market being flooded with additional property. Planned land development will depend on the provision of infrastructure, which is typically a gradual process.

GRAVINA ACCESS PROJECT FINAL EIS COMMENT	RESPONSE
6. The summary section of the EIS regarding "Areas of Controversy" completely ignores the concern of many for the biological and subsistence resources, which will be harmed by the proposed project (e.g. wetlands, wildlife).... 7. How are high winds going to be dealt with for traffic on the bridge and will the plans be sufficient to address 145 mph wind gusts?... 8. The issue of maintenance is still being largely ignored... 9. The proposed monetary mitigation for the removal of wetlands is insufficient. 10. Cumulative environmental consequences have not been sufficiently addressed. 11. The F3 proposed blasting and dredging in west channel are very unacceptable... 12. Walking trails and bike trails should be more adequately addressed.	6. See comment 2 above. 7. Bridge design will take into account historic high winds in the area (see Section 4.7.3.7 of the Final EIS). 8. The DOT&PF has committed to owning and operating this facility, including covering the annual maintenance costs (Final EIS, page 2-2). 9. The wetland mitigation was developed in coordination with the U.S. Army Corps of Engineers. 10. See comment 2 above. 11. Comment noted. F3 is not the selected alternative. 12. See comment 2 above.
Susan E. Walsh for the Tongass Conservation Society—Comment received via e-mail 9/06/04 Please consider these comments on behalf of Tongass Conservation Society. 1. The present airport access does not require any change as far as reliability and efficiency is concerned when dealing with medical evacuations....	1. The need for improved convenience and reliability of access to Gravina Island for emergency personnel is just one facet of the purpose and need statement. The travel time analysis presented in Sections 4.3.3 and 4.7.3 of the Final EIS indicates that, under most circumstances, access to Ketchikan International Airport would be faster under Alternative F1 than under the No Action Alternative. Although the helipad at Wolff Point was not planned when the need for the project was developed, its availability now does not alleviate the need for improved emergency access to the airport and Gravina Island.

GRAVINA ACCESS PROJECT FINAL EIS COMMENT	RESPONSE
2. The need to improve access for bicycles is ludicrous-how can one improve on something that does not exist? DOT has failed in its assertion that the no action alternative will reap a "no economic benefit" for our community. The demand for "wilderness" experiences is increasing i.e. fly-fishing, rock climbing, bird watching or guided hikes are a viable possibility for locals along with prolonged stays at local bed and breakfast establishments.	2. Bicycle access to Gravina Island is possible via the existing ferry; it would be improved with road access provided by Alternative F1. The economic analysis considered tourism as a major factor affecting economic conditions in Ketchikan, including eco-tourism such as hiking and fishing. The tourism economy is dominated, however, by the cruise ship industry. The No Action Alternative would have no impact on this major sector of the tourism economy.
3. When expending federal dollars I believe that NEPA has to be taken into consideration.	3. The National Environmental Policy Act (NEPA) requires federal agencies to consider the consequences of their actions on the environment. The EIS is a decision-making tool used by the federal agencies to decide how or whether a project should be implemented. The Gravina Access Project EIS was prepared in accordance with Council on Environmental Quality regulations implementing NEPA and FHWA guidance on the preparation of an EIS.
4. Please explain how building a bridge that proposes impacting over 86 acres of wetlands with 1,734,900 cubic meters of fill and seriously impacting essential fish habitat satisfies the intent of this Act?	4. The intent of NEPA is not satisfied through the development of any project, rather it is the intent of NEPA to require federal agencies to assess the environmental impacts of their actions.
5. Gravina's deer population sustains black bears and a wolf pack. The island is a popular hunting and trapping place for area residents. Over 96% of the Metlakatla and Saxman residents get food from Gravina, and the island's resources are vital to the communities' economic and cultural health. With the building of the bridge and subsequent roads Fish and Game has asserted that deer hunting will become limited to those subsistence residents of Saxman only. We have reviewed the FEIS and cannot find any data to refute this significant impact.	5. Impacts to subsistence are described in Sections 4.3.7 and 4.26.2 of the Final EIS. Input from federal, state, and local agencies, Tribal entities, and the public has been ongoing since the Gravina Access Project began in 1999. See Sections 7.3 and 7.4 of the Final EIS for a description of agency involvement. The Alaska Department of Fish and Game did not assert that they would limit deer hunting solely to residents of Saxman as a result of the project.
6. We believe that there are specific statutory obligations to coordinate or consult with appropriate agencies. In the final EIS report recommendations from different agencies such as the State Marine Highway Administration, Department of Fish and Game, United States Coast Guard, Federal Aviation Administration and the	6. See comment 5 above.

GRAVINA ACCESS PROJECT FINAL EIS COMMENT	RESPONSE
Army Corps of Engineers are sadly lacking.	
7. What economic impacts will there be regarding FAR waivers or changes for small plane operators?	7. The economic analysis considered impacts to floatplane operations (see Appendix D of the Draft EIS).
8....The Coast Guard's concerns regarding the Monte Carlo Simulation on cruise ship operations are lacking. That study states F3 will force cruise ships to use the west channel, which will result in a probability of a cruise ship grounding in 1 of 60 passages. The STAR study cites significant stress to ship pilots and proposed mitigations regarding such. What are the environmental as well as economic implications of such a scenario? DOT has not addressed the cost of the proposed mitigations. Hemming the port in with this cul-de-sac development is not in the long term best interests of Ketchikan.	8. DOT&PF and FHWA worked closely with the U.S. Coast Guard on navigational analyses to address their concerns relative to Alternative F3. As a result of these analyses and input from the marine pilots and the Borough, DOT&PF and FHWA did not select Alternative F3 as their preferred alternative.
9. We would like to see the cost-benefit study as required by the Federal Highway Administration. .... Accidents will occur with the increase in driving, how much and what are the costs associated with the projected fatalities, injuries and property damage?	9. FHWA does not require a cost benefit study. A user benefit analysis is provided in Appendix D of the Draft EIS. The costs associated with traffic accidents are included in that analysis.
10. ....The majority of citizens surveyed think that the present system is adequate but fails to address our inclement weather situations. We would like to propose a much less costly scenario. Baggage check-in on Revillagigedo side (Alaska Airlines responsible for some of the costs) and ferry service from its present location every 15minutes for the hour before and after flight arrival even during winter. I believe that would address the majority's concerns.	10. The comment is noted. However, the commenter's suggestion would not meet the overall purpose and need for the project.
11. The document supplied does not give the public the understanding as to parking at the Airport. .... It does bring up an interesting question regarding security for the Coast Guard base situated underneath the F3 Bridge creating a less secure area for our military base.	11. Figure 2.4 of the Final EIS shows circulation and location of the parking structure at the airport for all build alternatives. See Section 2.1 for a description of access to the airport and parking. Final design of the selected alternative, particularly with respect to the alignment adjacent to the U.S. Coast Guard base, will be developed in coordination with the U.S. Coast Guard to ensure continued security

GRAVINA ACCESS PROJECT FINAL EIS COMMENT	RESPONSE
12. We would respectfully disagree with the need to access more land. Currently there is a large area designated industrial use (Ward Cove) that is laying for the most part fallow-under borough ownership. Whipple Creek has been clear-cut with the argument at that time that it would be a viable area for expansion-to date there has been none. Numerous business and homes sit vacant while certain interests demand expansion.	of the base. Alternative F3 was not the preferred or the selected alternative 12. The Borough's Gravina Island Development Plan was developed concurrently with the Gravina Access Project. The plan is provided in Appendix S of the Final EIS.
Linda Hansen—Comment received via e-mail 9/05/04 We just spent so much money on new ferries that go to the airport. We do not have that much traffic to build a bridge to the airport, the airport doesn't even stay open all night. ...The ferry has worked great so far and well it just seems like there is a lot more that can be done with the money that people want to spend on a bridge to nowhere. .... We do not need a bridge.	Comments noted.
Don Hoff, Jr.—Comment received via e-mail 9/05/04 This letter is for the record opposing any funding or construction of the proposed Bridge to Gravina Island. Desecrating our Tribal Graves on Pennock Island.	The DOT&PF has made every effort to identify cultural properties for the Gravina Access Project, including a review of archeological and historical literature; three on-the-ground reconnaissance surveys; consultation with the Ketchikan city and borough governments; and consultation the Organized Village of Saxman, the Ketchikan Indian Corporation Tribal Council, and the Cape Fox Corporation. The DOT&PF and FHWA are aware of the traditional Tlingit cemetery at the southern end of Pennock Island and the scattered Euro-American and Native graves at the northern end of the island. The cemetery at the southern end of the island is well documented and its limits have been established by previous surveys. Less is known about the graves at the northern end, but these are on private property in areas that will not be impacted by the project. Neither the cemetery nor the gravesites on the northern end of Pennock Island would be affected by the selected alternative. Cultural resources, including sites of traditional importance to local Tribes, will continue to be considered through all phases of this project.

GRAVINA ACCESS PROJECT FINAL EIS COMMENT	RESPONSE
	Although the field surveys identified several historical sites in the project area, none will be adversely affected by the project. There are no known, reported, or suspected graves in the project's area of potential effect.
Lindley Gifford—Comment received via e-mail 9/05/04 I am writing to say that I also think that spending $200 million for a bridge from Ketchikan to Gravina is a bad decision.	Comments noted.
Carroll A. Mackie—Comment received via e-mail 9/03/04 Are you aware...How many people truly oppose "The Bridge" in Ketchikan? And for many different reasons....I had received an email, from a Soldier...and upon reading about "The Bridge" ....he wrote to me...."DO THEY KNOW WE ARE AT WAR"!!!!!	Comments noted.
Dan Winscot—Comment received via e-mail 9/03/04 I am a past resident of Ketchikan. People were talking about a bridge to the island even in the early 60's. It is not in the interest of the general population.	The history of the community's interest in having access to Gravina Island is provided in Section 1.4 of the Final EIS.
Gordon Steinhoff—Comment received via e-mail 9/02/04 1. The FEIS states that "none of the alternatives would have an environmental justice impact" (4-16). But the document acknowledges that the build alternatives will increase pressure on subsistence resources (4-15). The results could be dramatic. The FEIS indicates that a bridge to Gravina Island, together with the Forest Service's timber sale project and other reasonably foreseeable future actions, could lead to increased hunting of deer to the point that the deer population "is not sustainable" (4-183). The Alaska Native communities in Saxman and Metlakatla depend on deer and other subsistence resources. The FEIS describes their use of subsistence resources on 3-15 to 3-16. The Social Environment Technical Memorandum (2001) states that subsistence activities "provide needed food." Subsistence resources "enable residents to maintain a rich and varied diet" (8). Any of the bridge alternatives, together with the timber sale project and other reasonably foreseeable future actions, could seriously harm these Alaska Native communities by	1. DOT&PF and FHWA determined that no disproportionately high or adverse impacts on minority populations (Native groups) would occur as a result of the project (see Section 4.3.6 of the Final EIS). The Final EIS, in Section 4.27.2 (not 4.27.1 as cross-referenced in 4.3.6) does acknowledge the potential for impact to subsistence resources in the project area as a secondary and cumulative impact that could result from the combination of multiple projects, including those beyond the control of DOT&PF and FHWA. It is because there are many factors that affect wildlife populations (several harsh winters in a row, increased predation, many projects over a number of years that increase hunting, etc.) that the Federal Subsistence Board and Alaska Board of Game and Department of Fish and Game have the authority and responsibility to set hunting regulations to manage wildlife populations (see Section 4.26.10.2 of Final EIS), including hunts with a subsistence priority. The Federal Subsistence Board is mentioned because of

GRAVINA ACCESS PROJECT FINAL EIS COMMENT	RESPONSE
eliminating the deer population. With increased competition, all subsistence resources will be harder to find. Apparently this harm will be disproportionately placed upon Alaska Natives. I believe this is an environmental justice issue, and that the FEIS is too quick in concluding that "none of the alternatives would have an environmental justice impact."	their oversight responsibility for Federal Public Lands such as U.S. Forest Service lands on Gravina Island. Under both State and Federal law, subsistence hunts are the last to be restricted in times of scarcity. In the Gravina Access project area, wildlife managers should be able to provide subsistence hunts in perpetuity, even if it were to mean restrictions on non-subsistence hunts. The impact of any such restriction would either be equal to all hunters or would be disproportionately adverse toward non-subsistence (more likely to be non-minority) hunters. Executive Order 12898 indicates in section 4-4 that "Federal agencies shall communicate to the public the risks to (subsistence) consumption patterns." As indicated above, the FEIS does communicate the potential secondary risk. See also 4.26.10.2, secondary wildlife impacts, and 4.27.9.2, cumulative wildlife impacts,
2. The FEIS does not make clear why the bridge alternative F1 is preferred over the ferry alternatives. The FEIS states, "the ferry alternatives do not achieve the purpose and need objectives ... to the same level as the bridge alternatives" (2-17), and "these [ferry] alternatives would not ... provide the convenience and reliability of access ... as well as the bridge alternatives would" (2-20). But the declared need for the project is simply improved access to the airport and other lands on Gravina Island, which the ferry alternatives can provide. The FEIS does not indicate why the levels of convenience and reliability offered by the ferry alternatives are not sufficient.	2. The Final EIS does not suggest that the ferry alternatives would provide inadequate emergency response capabilities for the community; rather, that the travel time for emergency vehicles accessing Gravina Island is shorter under the bridge alternatives than it would be for the ferry alternatives. The need stated in the Final EIS is to provide more reliable, efficient, convenient, and cost-effective access to Gravina Island.
3. Finally, I am still concerned about wetlands. According to federal law, this project must avoid harm to wetlands unless there is "no practicable alternative." An improved ferry is expected to harm significantly fewer acres of wetlands than a new bridge. The FEIS has not demonstrated that the ferry alternatives are impractical. It seems these alternatives must be considered practicable since they would provide the need for the project. The ferry alternatives are more consistent with federal law designed to protect wetlands.	3. Regarding the concerns about wetland impacts and the determination that there is no practicable alternative, please review the Wetland Finding in Appendix L of the Final EIS, which presents the determination that there is no practicable alternative to Alternative F1. Ferry alternatives would not address the project purpose and need to the same degree as Alternative F1.

GRAVINA ACCESS PROJECT FINAL EIS COMMENT	RESPONSE
Greater Ketchikan Chamber of Commerce—Comment received via letter 9/01/04 In January 2002, we submitted comments to the Draft Alternative Evaluations Summary Report noting, amongst other ideals: • Necessity of a bridge vs. ferry and/or tunnel options • Future development opportunities on Gravina and Pennock Islands with hard link access • Public service access (police, fire and medical) for residents of these two neighboring island communities • Net losses to the community for consideration of any ferry or low bridge alternative • Hazards of high bridge (at C3) to local air taxi service • Support for Alternative F1, to mitigate any potential traffic hazards in either East or West Channels We are pleased to see that all of these considerations have been addressed in the final EIS and that in the end, the Department has moved forward with prioritizing Alternative F1.	Comments noted.
Mike Bethel—Comment received via e-mail 9/01/04 What a complete waste of taxpayer money!	Comment noted.
Bill Rotecki—Comment received via e-mail 8/29/04 .... I don't see any sensible justification for this bridge whatsoever. It is just tax and spend.	Comment noted.
Eric Youngstrom—Comment received via e-mail 8/27/04 On average, 485 Alaska Airline passengers pass through Ketchikan International Airport. If we assume about 50 employees commute to the airport per day, then the daily commuter count goes to 535. Does anyone really think it's worth $270,000,000 to transport these people by bridge instead of ferry?	Comments noted.
Paul Ripplinger—Comment received via e-mail 8/27/04 I had a short visit with Jim Elkins and he mentioned that if they did not approve the bridge to Gravina then they would build a bridge from Wrangell to Ketchikan in hopes to tie Ketchikan, Wrangell, Petersburg, and Juneau to the main road. I believe	Comments noted.

GRAVINA ACCESS PROJECT FINAL EIS COMMENT	RESPONSE
if people in Ketchikan had a choice of Gravina or Wrangell then Wrangell would be the choice for that would help bring more business here. I for one think the ferry ride from the airport to Ketchikan helps make Ketchikan more unique.	
Jessica Matthews—Comment received via e-mail 8/27/04 I do not want a bridge built to Gravina. It is a waste of money, would be an eye sore and is so out of place for this area.	Comment noted.
Eric Youngstrom—Comment received via e-mail 8/26/04 The cost of this project far exceeds the possible benefit to the community. Average air passengers per day cannot exceed 200 (and if you have exact numbers from Alaska Airlines I would love to see them). A $270,000,000 bridge for that level of use makes no sense.	Comment noted.
Tia Wilhelm—Comment received via e-mail 8/26/04 Don Young's recent Ketchikan Daily News comparison of the proposed Ketchikan bridge to the Chesapeake Bay bridge in Maryland is the crowning glory of all the illogical arguments I've heard in support of the proposed bridge. I hardly know where to start in my objections. Is the state going to take care of it like they do the South Tongass road?	The purpose of and need for the Gravina Access Project is outlined in Section 1.3 of the Final EIS. Under the DOT&PF and FHWA Selected Alternative, F1, the existing ferry would no longer be operational. The State has committed to fund operation and maintenance cost for the bridge (Final EIS page 2-2).
Charlotte Tanner—Comment received via e-mail 8/25/04 Just say NO to Mr. Young's outrageous use of millions of dollars to build a totally unneeded bridge to Gravina Island.	Comment noted.
Thomas Ferry—Comment received via e-mail 8/21/04 I want to make you aware of what will be a huge detriment for the traffic flow to the bridge for the average Ketchikan resident, as part of the third avenue bypass project to relieve congestion and bypass the tourist mess downtown, people will be taking the bypass only to be bottled up by the traffic light that the city wants to put at the bottom of Deermount Street, this light should be denied as it will interrupt the free flow of traffic, to the south end and to the bridge, the city wants to build 2 new	Impacts of the project's build alternatives on traffic are described in Section 4.7.3 and Section 4.26.4 of the Final EIS. As discussed in the Final EIS, Alternative F1 (DOT&PF and FHWA Selected Alternative) would have beneficial impacts for travel from downtown Ketchikan to the airport, but would not reduce travel times from Ward Cove. Travel time to the airport would be shorter than under existing conditions for vehicles originating in downtown Ketchikan and points south. However, vehicles originating in the Carlanna Creek area and

GRAVINA ACCESS PROJECT FINAL EIS COMMENT	RESPONSE
cruise ship docks south of the Thomas basin breakwater, there will be 60 busses that will also clog that intersection, this must not happen, traffic will be a mess-I would like to explain further -feel free to call me.	points north of that would have slightly longer travel times than under existing conditions. Alternative F1 would require a new intersection with Tongass Avenue south of downtown Ketchikan, resulting in a new traffic pattern in that area. By 2025, the intersection of Alternative F1 with South Tongass Highway would operate at unacceptable levels (i.e., level of service [LOS] F) for turning movements at the intersection with South Tongass Highway. Vehicle travel between the alignment and South Tongass Highway would be adversely affected by long delays. Ultimately, a traffic signal would be installed at the Alternative F1 access to South Tongass Highway to reduce traffic congestion and vehicle delays, and restore operating conditions to acceptable levels of service. Pedestrian signals would be required as part of the signal installation. The traffic signal itself would cause some off-peak traffic delays. However, if no signal were installed, the additional peak hour traffic expected by 2025 would delay traffic even more and exacerbate LOS problems. The LOS at the intersections of Tongass Avenue with Bawden Street, Main Street, Washington Street, and Bryant Street would be adversely affected for certain turning motions by 2025. These intersections would be closely monitored, and a corrective action (e.g., installation of traffic signals) would be taken to avoid any reduction in LOS.
Fred Greuter—Comment received via e-mail 8/18/04 It would need 2 HIGH BRIDGES!!!! In my opinion, I am still with a 2-lane tunnel, which could start right next to the airport ferry landing on that open empty property, going down to the tunnel across to the airport. This would be the shortest way to get over there and there would be NO INTERFERENCE for ship and airplane and barge traffic!!! The tunnel elements could be manufactured right there on that land and the gravel is available right across the street, right! This would be MUCH CHEAPER then all the other	Alternative F1 would cross Tongass Narrows via Pennock Island with two bridges--one across the East Channel and the other across the West Channel. The East Channel bridge would have a vertical navigational clearance of 200 feet above high tide and the West Channel bridge would have a vertical navigational clearance of 120 feet above high tide. The West Channel bridge is expected to be high enough to accommodate all marine traffic other than large cruise ships. Section 2.3 of the Final EIS discusses options

GRAVINA ACCESS PROJECT FINAL EIS COMMENT	RESPONSE
projects with all that wasted land and mile wide road systems. Anyway, I don't think I'll live that long to see this Monster Project!!!!	for crossing Tongass Narrows that were originally considered at one time, but eliminated as alternatives during the screening process. Three tunnel options (two tunnel options and one bridge-tunnel option) were initially developed for the Gravina Access Project, but were determined to be not reasonable and eliminated from further consideration based on cost factors.
Marya Tyler—Comment received via e-mail 8/17/04 I have seen the gravesites on Pennock, and it is shocking to think that the bridge will go so close to this one sacred place.	The DOT&PF has made every effort to identify cultural properties for the Gravina Access Project. Neither the south end of Pennock Island cemetery nor the gravesites on the northern end of Pennock Island would be affected by the selected alternative.
Grace Hasibar—Comment received via e-mail 8/17/04 I am not in favor of the proposed bridge linking Ketchikan (Revillagigedo Island) to the islands of Pennock and Gravina. It would seem to make more sense to improve ferry service, perhaps having ferries leaving for the airport from both south and north ends of Ketchikan, or having more frequent ferries -- even free ferry service would make more sense than the proposed bridge!	Improved ferry service was considered in the EIS under Alternatives G2, G3, and G4. While a new set of ferries would improve access, the operation and maintenance cost of ferries is substantially higher than for any bridge alternative assessed in the EIS. Further, improved ferry service would not meet the project purpose and need (i.e., to improve surface transportation between Revilla and Gravina Islands, and to improve the convenience and reliability of access [see Section 1.3 of the Final EIS]) as well as the bridge alternatives would.
Lew M. Williams, Jr.—Comment received via e-mail 8/08/04 One comment I have: I may have missed it in your volumes, but I believe you should design the bridge approach on the Ketchikan side to coordinate with the city planning department on how traffic will get efficiently from the Third Avenue bypass, across Bear Valley to the bridge approach.	A connection of Alternative F1 to the Third Avenue Bypass via a Bear Valley Bypass is beyond the scope of this study; however, such a connection should be considered as part of an alternatives analysis for the Bear Valley Bypass. Alternative F1 of the Gravina Access Project connects with Tongass Avenue approximately one mile south of the southern end of the Third Avenue Bypass (see Section 2.1 of the Final EIS for more information on the location of project alternatives).
Larry Droogs—Comment received via e-mail 8/07/04 If the bridges are ever built, what provisions will be made for snow removal during the winter months? Are the bridges wide enough to allow a berm separating traffic lanes or will the snow be plowed to each side of traffic lanes? Where will the snow be dumped should it be removed from the bridges? What will be the priority of snow removal from the	The Gravina Access project, if constructed, will be part of the National Highway System, and as such, will receive highest priority for winter maintenance. The DOT&PF has committed to owning and operating this facility, including covering the annual maintenance costs (Final EIS, page 2-2). During a typical snow removal operation, snow is pushed to the middle of the street, or side of the traffic lane immediately

GRAVINA ACCESS PROJECT FINAL EIS COMMENT	RESPONSE
bridges in relation to other roads? And what will be other alternatives to Gravina Island should the bridges be closed for whatever reason?	after the snow event just to make the roadway passable. The Gravina Access Project roadways and bridges have adequate shoulder width to accommodate this initial snow removal operation. In the next snow removal phase, the snow on the roadway on Revillagigedo Island and on the two East Channel bridges where they cross over developed land will probably be loaded and hauled away by the DOT&PF, and disposed of at a local snow dump -- similar to the DOT&PF's operations on the Gastineau Channel Bridge in Juneau. Where the bridges cross directly over water, the snow removal operator may plow the snow over the side, having checked for marine traffic below. On Pennock and Gravina Islands, snow will be pushed off the side of the road, as is typically the practice on rural roadways. At the present time, DOT&PF and FHWA do not envision a situation where the bridges will be closed, even for routine maintenance. Most significant maintenance will be accomplished under temporary one-lane closures.
Patricia Fordney—Comment received via letter 8/09/04 1. Rumor has it that there will be a parking lot south of the terminal and will then have to be taken by van or bus to the terminal. 2. Has anyone ever thought about a draw-bridge option if a bridge is so desperately needed and locate it in the general area the Ferry runs now?	 1. A parking structure at the airport, located northwest of the terminal, is included in each of the build alternatives (Final EIS, page 2-1 and Figure 2.4). 2. A draw bridge option was considered in early planning for the project. The initial construction cost and operating cost were well beyond the funding limits set by DOT&PF.
James Llanos—Comment received via Ketchikan Open House 8/04/04 1. Cumulative effect of landing with access to 3 BLM land sites covered under E.O. sacred sites and AIRPA. 2. Effect of sacred sites on the past Tsimpshian community of Port Gravina.	 1. Secondary effects on cultural resources on Gravina and Pennock islands could occur as a result of development spurred by the improved access to these areas (See Section 4.26.14.3 of the Final EIS). 2. The DOT&PF has made every effort to identify cultural properties for the Gravina Access Project, including a review of

GRAVINA ACCESS PROJECT FINAL EIS COMMENT	RESPONSE
	archeological and historical literature; three on-the-ground reconnaissance surveys; consultation with the Ketchikan city and borough governments; and consultation the Organized Village of Saxman, the Ketchikan Indian Corporation Tribal Council, and the Cape Fox Corporation. The DOT&PF and FHWA are aware of the traditional Tlingit cemetery at the southern end of Pennock Island and the scattered Euro-American and Native graves at the northern end of the island. The cemetery at the southern end of the island is well documented and its limits have been established by previous surveys. Less is known about the graves at the northern end, but these are on private property in areas that will not be impacted by the project. Neither the cemetery nor the gravesites on the northern end of Pennock Island would be affected by the selected alternative. Cultural resources, including sites of traditional importance to local Tribes, will continue to be considered through all phases of this project. Although the field surveys identified several historical sites in the project area, none will be adversely affected by the project. There are no known, reported, or suspected graves in the project's area of potential effect.
3. Full disclosure of the meaningful consultation done during and up to/and after the draft EIS.	3. Please see Chapter 7—Comments and Coordination—of the Final EIS for a complete list of public involvement and tribal consultation activities.
Alfred Greuter—Comment received via e-mail 8/03/04 Your project look just great, but feel there should be both sides HIGH Bridges. … I believe only 1-HIGH Bridge is too much traffic for in and out of Ketchikan with all the BIG Cruise Ships, Float Planes, Fishing Boats, Container Barges and the Cruise Ships getting bigger and bigger, higher and higher!!!	Alternative F1 would cross Tongass Narrows via Pennock Island with two bridges--one across the East Channel and the other across the West Channel. The East Channel bridge would have a vertical navigational clearance of 200 feet above high tide and the West Channel bridge would have a vertical navigational clearance of 120 feet above high tide. The West Channel bridge is expected to be high enough to accommodate all marine traffic other than large cruise ships. Considering that the marine pilots expressed reluctance at using the West Channel, there is no recognized need to have a higher bridge crossing of West Channel.