Gravina Access Project

Record of Decision

DOT&PF Project No: 67698
Federal Project No: ACHP-0922(5)

Prepared for:

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1. Decision

1.1 The Selected Alternative

This Record of Decision (ROD) for the Gravina Access Project was developed pursuant to 40 Code of Federal Regulations (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) proposes to improve surface transportation between Revillagigedo Island and Gravina Island in the Ketchikan Gateway Borough (Borough) located in Southeast Alaska. The primary public access to Gravina Island from Revillagigedo Island is a Borough-operated ferry that transports vehicles, bicyclists, and pedestrians from a terminal on Revillagigedo Island, located approximately 2.6 miles north of downtown Ketchikan, to a terminal on Gravina Island at Ketchikan International Airport.

Based on the attached Final Supplemental Environmental Impact Statement (incorporated by reference), input from public and agency stakeholders, and in balancing the transportation need and the potential effects on the social, economic, and natural environments, the FHWA has selected Alternative G4v for design and construction.

Alternative G4v includes the reconstruction of existing airport ferry berths to meet current design standards, upgrades and improvements to pedestrian facilities at the airport ferry terminals, a new heavy freight mooring facility and new ferry layup dock on Gravina Island, shuttle vans to carry pedestrians and their luggage to/from the airport, and new toll facilities. It also includes replacement of the bridge over Airport Creek and reconstruction of Seley Road from Lewis Reef Road to approximately the end of the Airport Reserve.

The purpose of the Gravina Access Project is to improve surface transportation between Revillagigedo Island and Gravina Island. There are three needs this project will address:

- **Need 1: Improved Access to Developable Land**

The Borough and its residents need 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. The lack of efficient, convenient vehicular access to developable lands on Gravina Island, combined with the geographic constraints of the region, have limited the base of developable land to a narrow strip along Tongass Narrows on Revillagigedo Island. Gravina Island has a suitable land base for expansion. Improved access to non-waterfront property on Gravina Island is needed to provide greater opportunities for non-water-dependent development to locate inland, at more

economical sites, thereby freeing up waterfront land for water-related and water-dependent uses.

- **Need 2: Need for Improved Access to the Airport**

Improved convenience and reliability of access to Ketchikan International Airport is needed for passengers, airport tenants, emergency personnel and equipment, and shipment of freight. The airport is a primary transportation link into and out of the Borough, and the ferry is the only public access to the airport for passengers in vehicles and the primary means of airport access for passengers on foot. Improved access to Gravina Island is needed to help airport tenants conduct their business competitively and efficiently; provide timely transport of emergency personnel and equipment to the airport; and support the movement of cargo, fuel, and other products to and/or from the airport.

- **Need 3: Need for Economic Development**

Improved access is needed to promote environmentally sound and planned long-term economic development on Gravina Island. The lack of efficient, convenient access to developable land on Gravina Island limits development of the economy in the Borough. Improved access will increase opportunities for development of additional ports; harbors; and industrial, commercial, and residential properties on Gravina Island. Businesses need improved access to the airport to raise productivity levels and expand operations, which would enhance the local economy. Improvements to freight movement across Tongass Narrows will facilitate construction of needed infrastructure, such as power and other utilities, necessary to promote and sustain economic development. Tourism is a major component of the Borough's economy and will continue to play an important role. Improvements to the transportation link between Ketchikan International Airport and Revillagigedo Island is needed to increase opportunities for independent travelers, support cruise and touring operators who use Ketchikan as a point of departure, and expand tourism on Gravina Island.

Additional information regarding project purpose and need is described in Section 1.4 of the Gravina Access Project Final Supplemental Environmental Impact Statement (SEIS).

To address these needs, FHWA has selected Alternative G4v for design and construction.

1.2 Project Background

On March 4, 2016, DOT&PF and FHWA issued a public notice identifying Alternative G4v as their preferred alternative. The two agencies also announced their intent to prepare a combined Final SEIS and ROD. The Final SEIS provides additional information on the preferred alternative and explains why it was selected; documents and responds to all substantive comments on the Draft SEIS; describes findings, including any on wetlands, floodplains, and Section 106 effects, as applicable; provides a list of commitments for mitigation measures for the preferred alternative; and identifies any other findings to be made in compliance with all environmental laws, regulations, Executive Orders, and other related requirements with associated agency consultation documentation. DOT&PF and FHWA completed the Final SEIS

in compliance with the National Environmental Policy Act of 1969, as amended (NEPA; 40 CFR Parts 1500-1508), and related FHWA regulations (23 CFR Parts 771, 772, and 777).

2. Alternatives Considered

Consistent with the intent of NEPA, FHWA and DOT&PF examined a range of alternatives for the Gravina Access Project. A screening process was used to identify reasonable alternatives for evaluation in the SEIS. FHWA and DOT&PF, with input from stakeholder agencies and the public, developed and utilized this screening process to eliminate alternatives that would not be reasonable and did not warrant detailed examination in the Gravina Access Project SEIS.

Fifteen build alternatives were examined in the screening process, including one tunnel and two moveable bridge alternatives, three bridge alternatives crossing Pennock Island, five bridge alternatives near the airport, and four ferry alternatives. Additional information on the screening of alternatives is provided in Section 2.2.3 of the Gravina Access Project Final SEIS. The information developed in the alternatives screening process narrowed the potential build alternatives from 15 to six, with two bridge Alternatives (C3-4 and F3) and four ferry alternatives (G2. G3, G4, and G4v). These six alternatives and the No Action Alternative were evaluated in detail in the Final SEIS. All of the action alternatives include roadway improvements on Gravina Island to enhance the transportation links to developable land.

The Final SEIS provides a detailed discussion of each reasonable alternative's direct, indirect, and cumulative impacts on the natural and human environment. All reasonable alternatives under consideration (including the No Action Alternative) were developed to a comparable level of detail in the Final SEIS and their comparative merits were evaluated. The following sections present a summary of the distinguishing characteristics of the reasonable alternatives; their environmental, economic, social, and cultural impacts; and the balancing of these values on which the selection of the G4v Alternative was based.

2.1 No Action Alternative – Continued Operation of Existing Airport Ferry

Under the No Action Alternative, no bridge would be constructed and no additional ferry service would be provided between Revillagigedo Island and Gravina Island. The existing airport ferry service across Tongass Narrows would continue to be the only public access between the islands, supplemented by private boats and floatplanes. There would be no improvements to the existing ferry terminals or amenities for pedestrians traveling between Revillagigedo Island and Ketchikan International Airport. There would be no new heavy freight mooring facility and the ferry layup dock would not be replaced. The ferry service would continue to operate 16 hours per day, and the frequency of service would remain the same, with departures every 30 minutes during the winter and every 15 minutes during the peak hours (8:00 a.m. to 4:00 p.m.) in summer.

2.2 Alternative C3-4: Airport Bridge

Alternative Description

Alternative C3-4 crosses Tongass Narrows near the airport. On Revillagigedo Island, the bridge would be accessed at the intersection of Don King Drive with Rex Allen Drive. Alternative C3-4 would follow the alignment of Rex Allen Drive around the Walmart store and continue to traverse the hillside southward along an existing topographic bench, gain elevation, and then make a right angle turn southwest, toward Gravina Island. The roadway would transition onto the bridge, cross over the North Tongass Highway and Tongass Narrows, and turn southward parallel to the airport runway. The bridge would cross over the seaplane facilities adjacent to the airport and ultimately touch down (i.e., reach the ground surface) on Gravina Island north of the airport terminal at the existing parking lot. The bridge would be supported by piers and would not require fill in Tongass Narrows other than the pier footings. Bridge abutments would be constructed on fill in uplands. The total length of the Alternative C3-4 alignment is 1.9 miles. Alternative C3-4 includes the following roadway improvements on Gravina Island: the bridge over Airport Creek would be replaced, and Seley Road would be reconstructed to 36 feet wide from Lewis Reef Road to approximately the end of the Airport Reserve.

The maximum height of the bridge over the navigational channel would be approximately 280 feet above mean higher high water (MHHW). The vertical navigational clearance would be 200 feet above MHHW. The horizontal navigational clearance would be 550 feet. These navigational clearances would accommodate one-way passage of cruise ships and two-way passage of most other ships, including AMHS ferries.

Comparison

Alternative C3-4 would have a construction and project development cost of $305 million and a life-cycle cost of $322 million. This alternative would affect the Part 77 airspace. FAA determined this bridge would be a hazard, adversely affecting the air navigational facility at Ketchikan International Airport and creating an obstacle for seaplane operations in Tongass Narrows. Safety concerns for large ships navigating under the bridge were noted by cruise ship lines and marine pilots in scoping comments and comments on the Draft SEIS. Longer ships would have an increased risk of allision with bridge piers, and taller ships would have to schedule transiting under the bridge with lower tides to have clearance under the bridge deck. No dredging would be required for this alternative. Wetland habitat loss with this alternative was estimated as 6.0 acres; 1.9 acres of marine Essential Fish Habitat (EFH) would be lost.

2.3 Alternative F3: Pennock Island Bridges

Alternative Description

Alternative F3 consists of two bridges crossing the East and West Channels of Tongass Narrows and a road across Pennock Island connecting the two bridges. On Revillagigedo Island, the alternative would begin at an intersection with South Tongass Highway approximately 1.5 miles south of downtown Ketchikan between the USCG Station and the Forest Park subdivision. From that terminus, the East Channel bridge would connect to Pennock Island. The roadway would cross Pennock Island, climbing in elevation to the West

Channel bridge. The roadway on Pennock Island would be approximately 4,500 feet long between the East Channel and West Channel bridge abutments. From Pennock Island, the West Channel bridge would connect to the Gravina Island Highway, approximately 3 miles south of the airport on Gravina Island. The total road distance between Revillagigedo Island and the airport passenger terminal is 5.87 miles.

The East Channel bridge would be approximately 1,985 feet long and have a maximum height of approximately 115 feet. The bridge would have a vertical navigational clearance of 60 feet above MHHW and a horizontal navigational clearance of approximately 350 feet. The main span of the bridge would be over water depths in excess of 40 feet (at low tide); however, the vertical and horizontal clearances would not accommodate cruise ships or most ferries. The primary waterway users of the East Channel under Alternative F3 would be tugs and barges, USCG vessels, charter boats, and local private craft.

The West Channel bridge would be approximately 2,470 feet long and have a maximum height of approximately 270 feet. The bridge would have a vertical navigational clearance of 200 feet above MHHW and a horizontal navigational clearance of approximately 550 feet. The main span would be located over water depths in excess of 40 feet (at low tide). These clearances would accommodate one-way passage of cruise ships and two-way passage of most other ships, including AMHS ferries, which typically use the West Channel. The bridge crossing of the West Channel would be perpendicular to the main navigational channel. To improve the navigational characteristics for cruise ships transiting the West Channel, the narrowest portion of the channel would be widened. The deepest part of the widened channel would be centered on the navigational opening of the West Channel bridge. These modifications would require dredging approximately 213,000 cubic yards over 14.8 acres.

Alternative F3 includes the following roadway improvements on Gravina Island: widening and paving the Gravina Island Highway and its bridges over Gravina and Government Creeks to 40 feet, widening and paving the Airport Access Road to 40 feet, creating a T-intersection at the Airport Access Road/Gravina Island Highway intersection, replacing the bridge over Airport Creek, and reconstructing Seley road to 36 feet wide from Lewis Reef Road to approximately the end of the Airport Reserve.

Comparison

Alternative F3 would have a construction and project development cost of $354 million and a life-cycle cost of $385 million. The bridges would not affect the Part 77 airspace associated with Ketchikan International Airport, but would create an obstacle for seaplanes.

The navigational clearance of the East Channel bridge would not accommodate cruise ships, AMHS ferries, or tall freight barges that currently use the East Channel. The West Channel bridge would have navigational clearance to accommodate one-way passage of cruise ships and two-way passage of most other ships, including AMHS ferries. The modifications to West Channel to improve its navigational characteristics would require dredging approximately 213,000 cubic yards over 14.8 acres.

The USCG has indicated this alternative would not meet the reasonable needs of navigation in Tongass Narrows. It would have an adverse effect on cruise ship operations because it would require additional maneuvering and increased sailing time. Safety concerns for large ships navigating under the West Channel bridge were also noted by cruise ship lines and marine pilots in scoping comments and comments on the 2013 Draft SEIS. Wetland habitat loss with this alternative was estimated as 26.0 acres, and 15.7 acres of marine EFH would be lost.

2.4 Ferry Alternatives

Four reasonable ferry alternatives were evaluated for the Gravina Access Project:

- Alternative G2: Peninsula Point to Lewis Point Ferry
- Alternative G3: Downtown to South of Airport Ferry
- Alternative G4: New Ferry Adjacent to Existing Ferry
- Alternative G4v: Lower Cost Variant of Alternative G4 Ferry

Alternatives G2, G3, and G4 include purchase of two new ferry vessels and construction of a new ferry terminal on each side of Tongass Narrows, as well as continued operation and maintenance of the existing airport ferry service under its current schedule and along its existing route.

All ferry alternatives include:

- A new passenger waiting facility with restrooms at the existing ferry terminal on Revillagigedo Island and other improvements to the terminal site, including:
  - Expansion of paved parking areas[1]
  - Lighting
  - Security (including security cameras)
  - Water
  - Sewer
  - Covered walkways
  - Fencing and landscaping
  - Parking meter system
  - Sidewalks
  - Tongass Highway access improvements
- Two shuttle vans to carry both pedestrians and their luggage from the existing ferry terminal on Revillagigedo Island to the airport terminal on Gravina Island.
- A new heavy freight mooring facility near the airport, to the south of the existing airport ferry layup dock, to provide heavy freight access to Gravina Island for highway loads that cannot be accommodated by the shuttle ferry

[1] DOT&PF does not assume property will be purchased and developed for parking facilities.

- Reconstruction of the existing airport ferry transfer bridges and ramps to meet current design standards
- Upgrades and improvements to all sidewalks and wheelchair ramps associated with the airport ferry facilities to meet applicable standards
- Construction of new toll facilities: Toll collection would continue at the existing rate for all ferry routes and toll revenue would be used to offset the costs of operation and maintenance of the ferry system. The cost estimates assume annual revenue of $1.5 million per year from ferry tolls.
- Replacement of the existing ferry layup dock and transfer bridge[2] to support layup and maintenance of the airport ferry system

2.4.1 Alternative G2: Peninsula Point to Lewis Point Ferry

Alternative Description

Alternative G2 would be a new ferry service that would complement the existing airport ferry for vehicles and passengers between Peninsula Point on Revillagigedo Island and Lewis Point on Gravina Island. This alternative would cross Tongass Narrows approximately 2.0 miles north of the airport passenger terminal and would have a sailing distance of approximately 0.8 mile. Two new ferry vessels and construction of a new ferry terminal on each side of Tongass Narrows would be required for this alternative. A 0.8-mile-long road would be constructed on Gravina Island to connect the ferry terminal at Lewis Point with Seley Road. Alternative G2 includes the following roadway improvements on Gravina Island: replacement of the bridge over Airport Creek, reconstruction and paving of Lewis Reef Road and Seley Road to 40 feet wide to the ferry terminal access road, reconstruction of Seley Road as 36-foot-wide gravel road to approximately the end of the Airport Reserve, creating a T-intersection at the Airport Access Road/Gravina Island Highway intersection, and widening and paving the Airport Access Road to 40 feet.

Comparison

Alternative G2 would have a construction and project development cost of $122 million and a life-cycle cost of $338 million. This alternative would have no impacts to aviation and, although it would introduce a new cross-channel ferry route in Tongass Narrows, it would not substantially affect marine navigation. Alternative G2 would require dredging of approximately 1,400 cubic yards over approximately 0.25 acre. Wetland habitat loss with this alternative was estimated at 17.2 acres, and 2.2 acres of marine EFH would be lost.

[2] The existing layup dock was originally a segment of the State of Washington I-90 floating bridge. It was recycled for use as the Borough's dock. It has always had a slight list that cannot be corrected with ballasting, and it is not long enough to tie up the new ferries. The transfer bridge between the shore and dock has been regularly inspected by DOT&PF and is in such a state of disrepair that its load-carrying capabilities have been steadily downgraded and is now closed to public access.

2.4.2 Alternative G3: Downtown to South of Airport Ferry

Alternative Description

Alternative G3 would be new ferry service that would complement the existing airport ferry for vehicles and passengers between downtown Ketchikan at Jefferson Street (near the Plaza Mall at Bar Point) on Revillagigedo Island and a location approximately 1.3 miles south of the airport passenger terminal on Gravina Island near Clump Cove. The crossing distance would be approximately 1.3 miles. This alternative would require construction of a new ferry terminal on each side of Tongass Narrows and two new ferry vessels. Dredging may be required to provide adequate navigational depth for the ferry terminal on Revillagigedo Island. The existing breakwater could also be widened and extended for use as the ferry terminal pier. A paved road would be constructed on Gravina Island from the ferry terminal past the new Runway 11/29 extension and approximately 0.2 mile to the Gravina Island Highway. Alternative G3 includes the following roadway improvements on Gravina Island: widening and paving the Gravina Island Highway and its bridge over Government Creek to 40 feet, widening and paving the Airport Access Road to 40 feet, creating a T-intersection at the Airport Access Road/Gravina Island Highway intersection, replacing the bridge over Airport Creek, and reconstructing Seley road to 36 feet wide from Lewis Reef Road to approximately the end of the Airport Reserve.

Comparison

Alternative G3 would have a construction and project development cost of $107 million and a life-cycle cost of $316 million. This alternative would have no impacts to aviation and, although it would introduce a new cross-channel ferry route in Tongass Narrows, it would not substantially affect marine navigation. Alternative G2 would require dredging of approximately 18,600 cubic yards over approximately 2.2 acres. Wetland habitat loss with this alternative was estimated at 11.9 acres, and 5.1 acres of marine EFH would be lost.

2.4.3 Alternative G4: New Ferry Adjacent to Existing Ferry

Alternative Description

Alternative G4 would be new ferry service for vehicles and passengers adjacent to the existing airport ferry route between Charcoal Point on Revillagigedo Island and the existing ferry lay-up berth on Gravina Island on a quarter-mile crossing of Tongass Narrows, approximately 2.8 miles north of downtown. This alternative would require two new ferry vessels and construction of a new ferry berth on each side of Tongass Narrows adjacent to the existing airport ferry terminals. Alternative G4 includes the following roadway improvements on Gravina Island: the bridge over Airport Creek would be replaced and Seley Road would be reconstructed to 36 feet wide from Lewis Reef Road to approximately the end of the Airport Reserve.

Comparison

Alternative G4 would have a construction and project development cost of $91 million and a life-cycle cost of $294 million. This alternative would have no impacts to aviation and, although it would introduce a new cross-channel ferry route in Tongass Narrows, it would not substantially affect marine navigation. Alternative G4 would not require any dredging. Wetland habitat loss with this alternative was estimated at 6.0 acres, and 1.4 acres of marine EFH would be lost.

2.4.4 Alternative G4v: Lower Cost Variant of Alternative G4

Alternative Description

Alternative G4v is a lower cost variant of Alternative G4. It provides shoreside facilities to improve the convenience of airport travelers and heavy freight movement, but does not add new ferries or ferry berths. Like the other ferry alternatives, Alternative G4v includes the passenger waiting facility, shuttle vans, new heavy freight mooring facility, reconstructed airport ferry transfer bridges, upgraded sidewalks and ramps, continued toll collection, and replacement of the ferry layup dock. Improved access would only relate to the benefits provided by shoreside amenities. This alternative would cross Tongass Narrows approximately 2.8 miles north of downtown. The crossing distance is approximately 0.25 mile. Alternative G4v includes the following roadway improvements on Gravina Island: the bridge over Airport Creek would be replaced and Seley Road would be reconstructed to 36 feet wide from Lewis Reef Road to approximately the end of the Airport Reserve.

Comparison

Alternative G4v would have a construction and project development cost of $46 million and a life-cycle cost of $171 million. This alternative would have no impacts to aviation or marine navigation. Alternative G4v would not require any dredging. Wetland habitat loss with this alternative, attributable to the road and bridge improvements on Gravina Island, was estimated at 6.0 acres, and 1.1 acres of marine EFH would be lost.

2.5 Environmentally Preferred Alternative

Alternative G4v is the Environmentally Preferred Alternative and the Selected Alternative. Alternative G4v would have the least impact on the natural environment as compared with other build alternatives; in addition, it would have no effect on historic resources, and would not require relocation of any residences or businesses.

3. Basis for Decision

FHWA selected Alternative G4v based on the analyses in the attached Final SEIS and public agency input. Alternative G4v addresses the immediate needs for improving access to Ketchikan International Airport and developable land on Gravina Island with improvements to the existing ferry system, freight transportation facilities, and Gravina Island roads. Alternative G4v provides improvements to the existing ferry system with new and reconstructed shoreside facilities (i.e., without adding ferry vessels or changing ferry operations). The selected alternative partially meets the need of promoting environmentally sound, planned long-term economic development on Gravina Island by providing new and improved roads to developable lands (i.e., Gravina Island Highway as constructed and Seley Road/Airport Creek Bridge Improvements). Alternative G4v would have the least impact on natural habitat as compared with other build alternatives, would not affect historic properties, and would not require relocation of any residences or businesses.

FHWA determined that the SEIS bridge alternatives, C3-4 and F3, would have the highest construction costs of all reasonable alternatives evaluated in the SEIS, with costs in excess of $300 million. Alternatives C3-4 and F3 also would result in adverse impacts to existing air and water navigation routes as stated by the U.S. Coast Guard (USCG) and Federal Aviation Administration (FAA):

- Under the provisions of 14 CFR Part 77, FAA filed a determination that Alternative C3-4 would have substantial adverse effect on the safe and efficient utilization of the Ketchikan International Airport's navigable airspace.
- The USCG indicated that Alternative F3 would not meet the reasonable needs of navigation in Tongass Narrows because vessels requiring more than 60 feet of vertical clearance would need to transit under the West Channel bridge or enter and exit Tongass Narrows from the north. Either option would have an adverse effect on cruise ship operations because it would require additional maneuvering and increased sailing time. Safety concerns for large ships navigating under either proposed bridge alternative (C3-4 or F3) were also noted by cruise ship lines and marine pilots in scoping comments and comments on the Draft SEIS. Longer ships would have an increased risk of allision with bridge piers and taller ships would have to schedule transiting under the bridge with lower tides to have clearance under the bridge deck.

When considering all ferry alternatives, FHWA found Alternative G4v preferable because it provides a similar benefit of induced growth at a lower cost than the other ferry alternatives. Project capital cost was the primary reason DOT&PF was directed by then-Governor Sarah Palin in 2007 to identify the most fiscally responsible alternative for the Gravina Access Project. Alternative G4v is the most fiscally responsible alternative for the Gravina Access Project. While G4v will not increase capacity of the ferry system, it will improve convenience and reliability of access to Gravina and Ketchikan International Airport and improve the movement of freight between Gravina and Revillagigedo Islands. Alternative G4v sufficiently meets the purpose of and need for the project.

4. Section 4(f)

FHWA determined no alternative evaluated in the Gravina Access Project SEIS would require land from any park, recreation area, wildlife refuge, or historic site subject to protection under Section 4(f) of the Department of Transportation Act of 1966 (as amended), 49 United States Code (USC) § 303(c).

5. Measures to Minimize Harm

Mitigation measures related to all alternatives evaluated in the SEIS are described in each section of Chapter 4 and compiled at the end of Chapter 4 in Section 4.30. The following presents DOT&PF's and FHWA's commitment to mitigate impacts that result from the development of Alternative G4v. All practicable means to avoid or minimize environmental harm have been adopted and incorporated into this Record of Decision pursuant to 40 CFR §

1505.2(c). In many cases, the construction contractor would implement the mitigation measures. Other mitigation measures would be incorporated during final design of Alternative G4v. Reports that provide additional background and detail are in the SEIS appendices.

5.1 Land Ownership Mitigation Measures

The movement of construction vehicles and equipment could temporarily affect access to properties and lands adjacent to the construction areas. These effects will be limited to a small corridor immediately adjacent to the construction activity. The construction contractor will identify temporary construction easements in a fashion that minimizes disturbance. Construction limits will be staked and clearly demarcated to prevent encroachment into adjacent areas.

5.2 Social Environmental Mitigation Measures

Vehicle access to all community and public safety facilities will be maintained throughout construction. The construction contractor will be required to work with the businesses and local residents to maintain property access throughout the construction phase. Properties and land uses will be returned to preconstruction conditions to the maximum extent practicable.

5.3 Transportation Mitigation Measures

Construction in the vicinity of the airport could require temporary changes to the airport circulation road and temporary elimination of adjacent parking to accommodate construction vehicles. The construction contractor will develop a Traffic Control Plan (TCP) to describe how traffic will be maintained and parking will be managed to minimize impacts to vehicle travel on Ketchikan roadways and at the airport. 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. The construction contractor will also develop a plan to address marine transportation and identify measures to divert small boats and watercraft using nearshore areas around construction areas.

5.4 Pedestrian and Bicyclists Mitigation Measures

The TCP will include provisions for maintaining pedestrian and bicycle traffic and safety through construction areas. The construction contractor will avoid obstructing or affecting roads, sidewalks, and bike paths whenever possible to maintain access. If obstructing access is unavoidable, the construction contractor will establish temporary detour routes.

5.5 Geology Topography and Wind Mitigation Measures

DOT&PF will develop an erosion and sediment control plan (ESCP). The ESCP will describe the methods to restore disturbed areas within the construction easement to preconstruction conditions to the extent possible.

5.6 Air Quality Mitigation Measures

The construction contractor will be required to implement measures to control dust at construction sites and minimize emissions from construction equipment. The construction

contractor will implement measures to minimize emissions from construction equipment and minimize construction-related traffic delays as part of the TCP to reduce greenhouse gas emissions. To the extent practicable, Alternative G4v facilities will be designed using materials with the longest available life. These choices will result in new facilities that have a longer life before needing to be replaced than those built without such considerations, which in turn will reduce overall emissions for reconstruction and replacing materials.

- To reduce impacts associated with construction delays and changes in traffic flow, the construction contractor will execute its TCP, which will minimize construction-related congestion and maintain traffic flow throughout the construction site.
- To reduce impacts associated with construction equipment, unnecessary idling of construction vehicles, trucks, and heavy equipment will be prohibited.
- The construction contractor will be required to routinely maintain and service all construction vehicles, trucks, and equipment to ensure they are in proper working condition and running as efficiently as possible.
- To reduce energy use to retrieve construction materials, construction equipment and material will be located as close to project construction sites as possible to reduce hauling distances and energy consumption.

5.7 Noise and Vibration Mitigation Measures

In accordance with City of Ketchikan noise regulations, construction activities will be prohibited between the hours of 11:00 p.m. and 6:00 a.m. to minimize disruption to residents. The construction contractor may request from the City some exceptions to the noise regulations during special construction activities. In-water pile driving and/or drilling will be controlled to ensure that the pressure waves generated will not pose a consistent, adverse threat to fish and other marine resources. The construction contractor will adhere to permit conditions for in-water work during construction.

5.8 Water Quality Mitigation Measures

Final roadway design will include culverts or bridges along existing drainages and across streams on Gravina Island. The roadway design will incorporate a stormwater management system to minimize the effects of runoff.

The construction contractor will adhere to applicable state and federal permit conditions for all water body and wetland crossings. Best management practices (BMPs) will be implemented as part of the ESCP to control runoff from construction areas to minimize erosion and transport of sediment, to prevent any accidental leaks of oil or fuel from equipment from contaminating creeks or Tongass Narrows, and to contain any such leaks**.** DOT&PF will hold meetings at the beginning of construction with the construction contractor and agencies to emphasize the importance of implementing BMPs and other mitigation commitments.

Construction-related BMPs will include:

- Limiting clearing and grubbing outside of the fill footprint to the extent practicable to control physical disturbance of wetlands and habitats
- Installing sediment barriers 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
- Locating all staging, fueling, and equipment-servicing operations at least 100 feet away from all streams and wetlands
- 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

5.9 Wetlands and Vegetation Mitigation Measures

5.9.1 Wetlands

Impacts to wetlands were avoided wherever practicable in the preliminary design phase of the project alternatives. Avoidance measures include designing roadways with a minimum-width fill footprint, maximizing use of the existing roadway, increasing the angle of fill slopes, maintaining natural flow patterns by installing culverts through the fill, minimizing the use of wetlands for staging and storage areas, minimizing the area of allowable disturbance during construction, minimizing all temporary fill in wetlands, and restoring wetlands that are temporarily disturbed.

The use of wetlands for construction activities will be minimized to the extent practicable. DOT&PF requirements to operate construction equipment on geotextile mats will allow complete removal of the mat without further soil disturbance upon completion of construction, which will protect wetland soils in the construction easement.

After construction activities, shrubs and herbaceous plants likely will recover naturally, but the disturbed areas will be reseeded after construction to minimize erosion. Seeding of the disturbed areas will conform to Section 618 of the DOT&PF Standard Specifications for Seeding. No natural earthen material will be removed from under the geotextile mat (or equivalent materials) when the temporary fill is removed. Wetlands will be stabilized against erosion once construction equipment and protective mats are removed. DOT&PF will restore the 0.1 acre wetland that that will be temporarily filled by reseeding and revegetating the disturbed areas. Detailed mitigation measures will be developed and followed as conditions of the required federal permits.

In addition to the BMPs to mitigate water quality impacts, construction-related BMPs concerning wetlands mitigation will include:

- Limiting clearing and grubbing outside of the fill footprint to the extent practicable to control physical disturbance of wetlands and habitats
- Employing erosion control BMPs to reduce or eliminate sedimentation of adjacent wetlands and other waters and habitats

Using appropriate erosion control practices (including the installation of sediment barriers and sedimentation traps, and seeding and stabilizing road slopes) and implementing a SWPPP will minimize water quality impacts to wetlands.

DOT&PF proposes to compensate for unavoidable adverse impacts to wetlands through the creation of a Compensatory Mitigation Plan developed during the Section 404/10 permitting process in coordination with the USACE. The Compensatory Mitigation Plan will likely involve an in-lieu-fee and/or permittee-responsible enhancement, restoration, and preservation mitigation projects developed using a watershed approach.

Detailed mitigation measures will be developed and followed as conditions of the required federal permits.

5.9.2 Vegetation

Final design for Alternative G4v will avoid and minimize direct impacts to vegetation by reducing clearing limits and using previously disturbed areas for staging wherever feasible. Temporarily disturbed areas will be planted or reseeded.

5.10 Water Body Modification and Wildlife Mitigation Measures

5.10.1 Water Bodies

Final roadway design for Alternative G4v will provide for maintenance of natural water flow conditions. Culvert design will accommodate stormwater flow, not result in scour, and allow fish passage. In addition, gravels and streambed material will be used in the bottoms of culverts. The replacement bridge over Airport Creek will be a clear-span bridge, avoiding potential impacts to the creek.

Construction activity in any water body will adhere to applicable state and federal permit conditions. Temporary diversions will be designed so that the flow of the water body is not impeded. Any creek banks or beds affected by diversion structure placement will be restored to preconstruction conditions to the maximum extent practicable. Recontoured stream banks will be reseeded with native seed and annual rye to minimize erosion, as recommended in the DNR *Coastal Revegetation and Erosion Control Guide*[3]*.*

5.10.2 Marine Mammals, Anadromous Fish, Marine Fish, and Essential Fish Habitat Impacts

All fish stream crossings will be designed to minimize impacts to proper stream function. Fish stream crossings will be designed to provide passage to both anadromous and resident fish. At all stream crossings (culvert and Airport Creek bridge crossings), stream banks will be recontoured to approximate original conditions and reseeded to minimize erosion. To mitigate the effects of placing new dolphins in nearshore areas, structures will be located in a manner that will leave a nearshore migration corridor (down to at least -5 feet mean lower low water [MLLW]) clear of obstruction to the extent practicable.

[3] Wright, Stoney J., and Philip K. Czapla. 2011. *Alaska Coastal Revegetation and Erosion Control Guide*. Palmer, Alaska: Alaska Department of Natural Resources, Division of Agriculture, Plant Materials Center.

Construction of this project will require a Title 16 Fish Habitat Permit and a USACE Section 404/10 Permit for fill in waters of the United States. Coordination with the National Marine Fisheries Service (NMFS) has been ongoing during the planning of this project. The following conservation measures will be incorporated to avoid, minimize, and mitigate impacts to marine species and EFH:

- In-water work in Tongass Narrows will be restricted as follows:
  - General use of boats and barges can occur year round for general survey work
  - Except for pile driving, work in marine waters can occur between July 1 and February 28
  - Pile driving will occur only November 1 through February 28.
- When pile driving in Tongass Narrows, a vibratory hammer will be used to drive steel pilings instead of an impact hammer; pile driving in intertidal and subtidal areas will occur during low tide
- All construction in and around anadromous fish streams will be conducted when stream disturbances have the least impact on anadromous fish species:
  - In-stream construction work in the Ketchikan area is June 15 through August 7
  - Isolate in-water work areas, except for stream crossings by construction equipment, from flowing waters of all anadromous fish streams
- Gravels and streambed material used in the bottoms of fish passage culverts will emulate natural streambed conditions
- Stream bank stabilization will be provided as necessary to maintain stream bank integrity, and will include the use of bioengineering techniques to improve habitat value of the riprap, by incorporation of willow stakes or other locally available vegetation

5.10.3 Amphibians, Birds, and Land Mammals Mitigation

To mitigate for construction impacts to wildlife, temporary areas of vegetation removal will be minimized to the extent practical. Throughout construction, BMPs will be utilized to minimize sedimentation, erosion, or other impacts to wildlife. Clearing of nests for species protected under the Migratory Bird Treaty Act will be conducted prior to construction and outside of nesting season (typically March through July). The construction contractor will be required to comply with the U.S. Fish and Wildlife Service (USFWS) construction advisory for protection of migratory birds.[4]

5.10.4 Bald Eagles Mitigation

If Alternative G4v were to come within 660 feet of a bald eagle nest, DOT&PF will be required to obtain a Bald Eagle Take Permit. This permit may require development of mitigation measures with USFWS. This permit may require development of mitigation measures with USFWS. Mitigation measures may require biologists to monitor construction activities around the area that will potentially affect eagle nests, and will limit certain construction activities during the nesting season (typically February through August).

[4] Titled *Land Clearing Timing Guidance for Alaska*, the document is available at https://www.fws.gov/alaska/fisheries/fieldoffice/anchorage/pdf/vegetation_clearing.pdf and was accessed January 24, 2017.

5.11 Threatened and Endangered Species Mitigation Measures

To avoid injury to or harassment of humpback whales, or other marine mammals, DOT&PF and FHWA are committed to the measures listed below:

- Requiring the construction contractor to use trained and NMFS-approved observers to indicate when marine mammals were within a 164-foot (50-meter) zone around pier work or other in-water work, and delaying or ceasing work until the animals moved out of the area
- Acquiring all necessary permits prior to construction and incorporating stipulations into contract specifications
- Obtaining any necessary incidental harassment authorization from NMFS
- Finalizing mitigation measures with input from the Alaska Department of Fish and Game (ADF&G), NMFS, USACE, and USFWS

These mitigation measures are designed to be compatible with EFH mitigation measures for the project. All project-related activities will conform to the pertinent provisions of the Marine Mammal Protection Act and the Endangered Species Act.

5.12 Historic and Archaeological Preservation Mitigation Measures

Historic and archaeological sites in the vicinity of construction areas will be identified for the construction contractor to avoid. DOT&PF will continue coordination with the State Historic Preservation Officer (SHPO) through the design process, if necessary. If cultural resources or human remains are discovered during construction, construction at that location will be prohibited until the site is evaluated.

5.13 Hazardous Waste Mitigation Measures

The construction contractor will be required to meet all federal, state, and local regulatory requirements regarding the discovery and use of hazardous materials. Construction contractors on site must be trained to meet federal, state, and local regulatory requirements in recognizing and reporting discovery of unknown contamination, and proper use and handling of hazardous materials during construction. If unknown hazardous materials are encountered during construction, the contractor will be expected to isolate the area and prevent migration of any contaminants.

The construction contractor will develop a spill prevention and response plan. Hazardous materials used during project construction will be stored and handled according to state and federal regulations. Construction vehicles will contain spill prevention kits in case of minor hazardous materials or chemical spills during construction.

5.14 Visual Environment Mitigation Measures

All construction equipment and debris will be removed after construction is completed. Reseeding will repair bare soil areas. These efforts will repair the visual impacts of construction after the construction process is finished.

5.15 Utilities Mitigation Measures

Affected customers will be given advance notice of any service interruptions. For longer outages, temporary facilities will be provided to maintain service to affected customers.

6. Monitoring or Enforcement Program

In accordance with 40 CFR 1505.2(c): "A monitoring and enforcement program shall be adopted and summarized where applicable for any mitigation."

No monitoring or enforcement plan has been developed specifically for this project.

Both FHWA and DOT&PF will monitor this project to verify that mitigation measures contained in the ROD (and subsequent permits) are implemented. FHWA will continue to be involved in further review of project development and construction. DOT&PF procedures for design and construction include public outreach program.

Copies of this ROD will be provided to responsible public agencies and DOT&PF project personnel. Commitments within this document will be implemented through the inclusion of these measures in the construction plans for the project and the acquisition of necessary local, state, and federal permits.

7. Conclusion

The Gravina Access Project Final SEIS is in conformance with applicable provisions of 23 CFR 771 and 40 CFR 1505.2 and satisfactorily addresses the anticipated environmental impacts that will result from construction of Alternative G4v. All correspondence received on the Draft SEIS has been reviewed and considered (see Section 7.3 and Appendix I of the attached Final SEIS for substantive comments received and responses to those comments). Based on this review, we find that there were no substantive issues or impacts not addressed.

Based on the analysis and evaluation contained in this project's Final SEIS and after careful consideration of all social, economic and natural environmental factors and input from state and local governments, Tribes, and the public, it is my decision to select Alternative G4v for this project.

6/15/17
Date

Sandra A. Garcia-Aline, FHWA Alaska Division Administrator