

Kake Access Purpose and Need

Prepared for

Western Federal Lands Highway Division

Prepared by

Robert Peccia and Associates, Inc. and Parametrix, Inc.

Under

Task Order No. DTFH7014F16004, Contract No. DTFH70-10-D-00016

TABLE OF CONTENTS

1. PURPOSE AND NEED	1-1
1.1 PURPOSE OF PROPOSED ACTION.....	1-1
1.2 NEED FOR PROPOSED ACTION.....	1-1
1.3 PROJECT BACKGROUND AND HISTORY.....	1-6
1.3.1 1984 Kake Comprehensive Policy Plan	1-6
1.3.2 2004 Southeast Alaska Transportation Plan	1-6
1.3.3 2004 Northern Panhandle Community Survey	1-7
1.3.4 2012 State Legislature Appropriation	1-7
1.3.5 2013 High Level Demand Analysis	1-7
1.3.6 2014 Draft Southeast Alaska Transportation Plan	1-7
1.3.7 Kake Access Transportation Survey Report (McDowell Group, 2014).....	1-7
1.3.8 2015 Kake Access Transportation Needs Assessment.....	1-8

LIST OF FIGURES

1-1 Vicinity Map.....	1-2
-----------------------	-----

LIST OF TABLES

1-1 Frequency of Surface Transportation (Ferry) Options to and from Kake	1-3
1-2 Northbound and Southbound Ferry Service from Kake and Petersburg to Juneau, October 2014 to September 2015, AMHS.....	1-4

1. PURPOSE AND NEED

1.1 Purpose of Proposed Action

The purpose of the proposed action is to provide Kake residents with more frequent, faster and cost effective surface transportation access to medical facilities, goods and services, education facilities, and economic opportunities not available in Kake.

1.2 Need for Proposed Action

Kake is an isolated community of just over 550 residents, mostly Alaska Native¹, located on the northwest coast of Kupreanof Island in Southeast Alaska (Figure 1). The city of Kake lacks a hospital, advanced medical facilities and education facilities, has limited access to commercial goods and services, and few employment and economic opportunities. Limited transportation options and poor connectivity also limit access to recreation and subsistence resources. Residents and community leaders have attributed a decline in their population (lost about 20 percent between the years 2000 and 2010)² to the isolation of the community, lack of economic opportunities, high cost of living, and lack of efficient access to regional transportation centers in Southeast Alaska. There are no road connections between Kake and any other communities, and Kake residents must travel via ferry or air to larger towns and regional hubs to access these facilities and services. Transportation access from Kake to essential services and resources is limited due to the following factors:

- Infrequent ferry and barge service.
- Poor connectivity and lengthy surface transportation (ferry) travel times between Kake and other communities.
- Overall high travel costs and high costs to transport goods and services.

These factors are described below.

Infrequent ferry and barge service.

No road access and infrequent ferry and barge service limit Kake residents' ability to access services, goods and economic opportunities. There is a need to increase the frequency of opportunities for Kake residents to access goods, services and economic opportunities not available in Kake.

Based on travel data and surveys, Juneau, followed by Sitka and Petersburg, are the three most common destinations for Kake residents seeking essential medical, educational, commercial, employment or recreational opportunities, goods or services not available in Kake³. Juneau and Sitka provide services and goods not available in either Kake or Petersburg, but Petersburg provides more services, goods and

¹ Source: US Census 2010.

² Source: Alaska Department of Commerce, Community, and Economic Development 2013.

³ Kake Access Transportation Needs Assessment, March 2015

economic opportunities than Kake. Lacking road connections to any of these other communities, Kake residents and businesses rely on ferry, air or barge service for access.

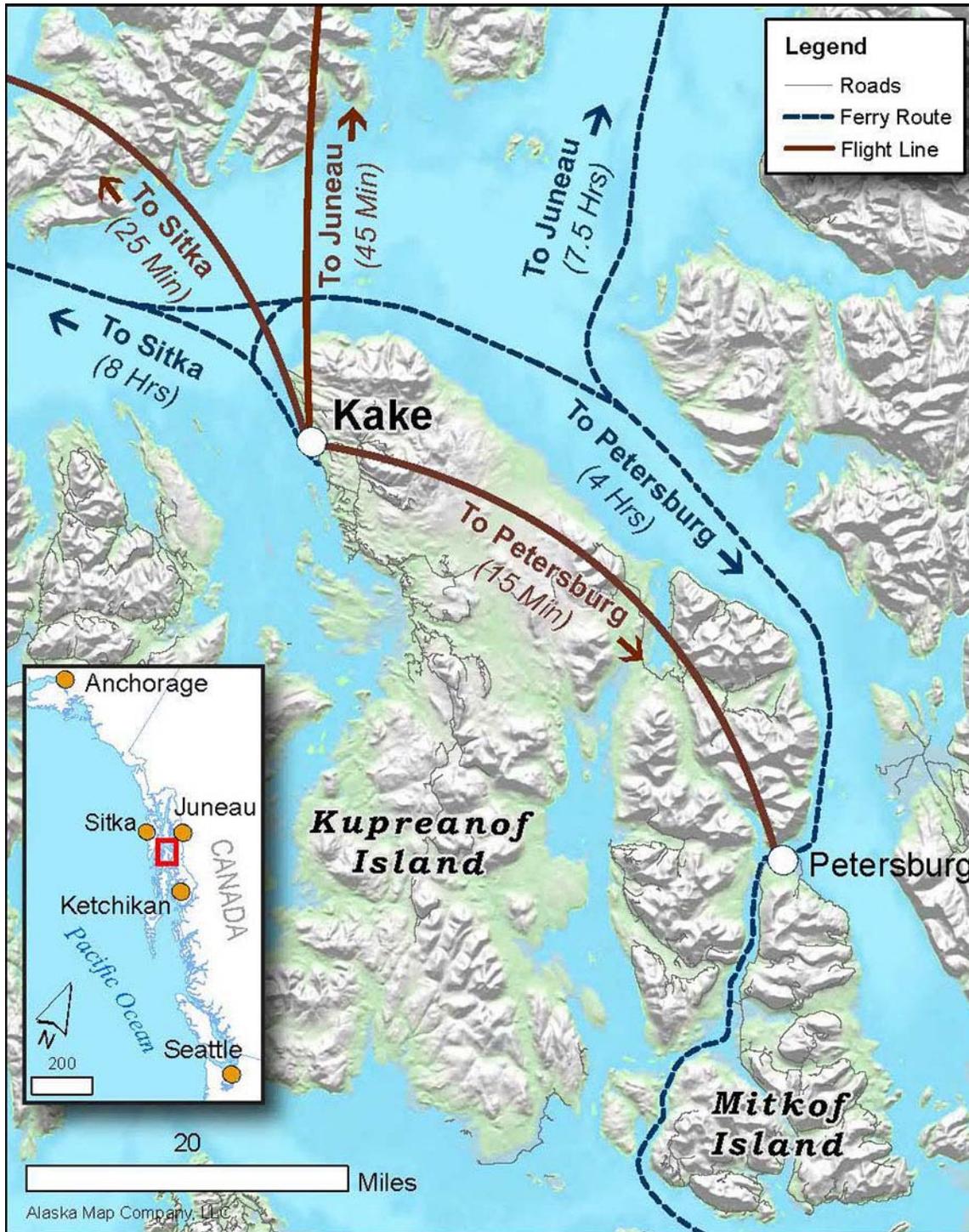


Figure 1-1 Vicinity Map

Table 1 shows ferry transportation options from and to Kake for the year 2014. The number of direct departures varies seasonally and trips must be carefully timed as the number of return trips from Juneau is limited in frequency compared to the number of departures from Kake. Indirect ferry trips exist but further extend travel times. In addition, service reductions could occur as a result of projected reductions in state revenues and operating budgets.⁴

Table 1-1. Frequency of Surface Transportation (Ferry) Options to and from Kake

Month	Direct Departures from Kake (per month)			Direct Arrivals to Kake (per month)		
	Petersburg	Juneau	Sitka	Petersburg	Juneau	Sitka
January	4	5	4	9	0	4
February	4	4	4	8	1	3
March	4	3	4	7	1	3
April	3	4	4	8	0	3
May	3	0	5	5	3	0
June	4	0	4	4	0	4
July	9	5	4	9	5	4
August	9	4	4	8	4	5
September	4	0	4	4	4	0
October	5	3	4	7	1	4
November	5	4	4	8	1	5
December	5	4	3	6	1	4
Average	4.9	3	4	6.9	1.8	3.3

Source: Adapted from Kake Access Transportation Needs Assessment, March 2015, Table 23.

In addition to ferry service, barge service is available once a week through Alaska Marine Lines from Kake to other communities in Southeastern Alaska including Petersburg, Juneau, and Sitka.

Poor connectivity and lengthy surface travel times between Kake and surrounding communities.

Current connections and schedules are inefficient and require lengthy round trip travel times for Kake residents to travel to and from Petersburg and regional hubs. There is a need to increase connectivity and decrease round trip travel time between Kake and communities that provide goods, services and opportunities not available in Kake.

Direct one-way travel times by ferry to Petersburg, Sitka, and Juneau are approximately 5 hours, 10 hours, and 8 hours⁵, respectively. Due to infrequent service and scheduling, the next scheduled return

⁴ Sources: *Alaska Ferry Rates Rising for Commercial Customers*. Alaska Public Media. March 23, 2015. *Transportation Department Proposes Ferry Service Reductions*. Becky Bohrer, The Associated Press. February 10, 2015.

⁵ Source: AMHS published ferry schedule, Southeast Alaska, May 10, 2015.

trip can be days or even weeks later, leading to lengthy roundtrip travel times. As an example, table 2 displays the number of trips by season published in AMHS’s 2014/2015 schedule, including the minimum and maximum time between same-direction departures.

Table 1-2. Northbound and Southbound Ferry Service from Kake and Petersburg to Juneau, October 2014 to September 2015, AMHS

Direction, Community	Trip Factor	Winter	Summer
Northbound, Kake to Juneau ¹	Number of trips	27	9
	Average Days to Next	7.82	7.00
	Minimum Days to Next	3.75	6.90
	Maximum Days to Next	14.00	7.23
Southbound, Juneau to Kake ¹	Number of trips	5	19
	Average Days to Next	36.66	7.39
	Minimum Days to Next	21.17	4.95
	Maximum Days to Next	54.42	13.98
Northbound, Kake to Sitka ²	Number of Trips	27	21
	Average Days to Next	7.8	6.29
	Minimum Days to Next	3.60	1.14
	Maximum Days to Next	21.00	14.14
Southbound, Sitka to Kake ²	Number of Trips	28	5
	Average Days to Next	7.80	24.94
	Minimum Days to Next	1.57	6.48
	Maximum Days to Next	14.71	89.54
Northbound, Petersburg to Juneau ¹	Number of trips	34	64
	Average Days to Next	6.29	2.48
	Minimum Days to Next	1.46	0.70
	Maximum Days to Next	8.68	4.65
Southbound, Juneau to Petersburg ¹	Number of trips	27	32
	Average Days to Next	8.07	4.85
	Minimum Days to Next	1.04	2.45
	Maximum Days to Next	21.00	11.55

Source: Adapted from Kake Access Transportation Needs Assessment, March 2015, Table 24.

¹ Trip information from AMHS schedule, January 2015

² Trip information from AMHS schedule, May 2015

Note: Winter is seven months, October to April; summer is five months, May through September. Trip segments are direct, running time only.

Roundtrip travelers from Kake to Juneau and from Kake to Sitka often experience extensive multi-day layovers before catching a return sail to Kake, and the delays are often longer than those experienced by travelers from other communities. For example, Petersburg, the nearest community to Kake, has more frequent ferry service to and from Juneau.

Table 1-3. Layover delays

		Kake -- Juneau	Kake -- Sitka	Petersburg -- Juneau	Petersburg -- Sitka
Winter	Average Layover Delay on Return trip (days)	2.6	4.0	1.0	3.9
	Minimum Layover Delay on Return trip (days)	0.2	3.4	0.2	2.6
	Maximum Layover Delay on Return trip (days)	4.3	4.4	3.6	6.2
Summer	Average Layover Delay on Return trip (days)	3.2	4.5	1.3	2.0
	Minimum Layover Delay on Return trip (days)	0.2	3.9	0.2	0.5
	Maximum Layover Delay on Return trip (days)	10.9	5.4	4.4	4.1

Source: Calculated from information published in the AMHS schedule, May 2015

Note: Winter is seven months, October to April; summer is five months, May through September. Trip segments include both direct and indirect trips.

High travel costs and high costs for transport of goods and services.

High costs of travel from Kake reduce the residents' ability to benefit from the goods, services and opportunities only available in larger communities. Lower than average household incomes in Kake further reduce the affordability of travel to access these goods, services and opportunities. Additionally, high freight shipping costs adversely impact the transportation of goods and services, which affects the Kake economy. There is a need to reduce the travel user costs and freight shipping costs from Kake to larger communities.

High travel costs: Round trip ferry costs per person between Kake and Juneau are \$138 (with an additional \$334 if bringing a vehicle). Round trip ferry costs per person between Kake and Sitka are \$78 (with an additional \$182 if bringing a vehicle). However, infrequent return ferry service can require multiday layovers (Table 2), which can add significant additional costs for meals, lodging and other travel expenses. As noted in the Kake Access Transportation Needs Assessment, total federal per diem rates in Juneau range from \$237 in the winter to \$263 in the summer (DOD 2015) and these federal maximums are likely less than what most non-government travelers would face. Added costs from multiday layovers could be avoided with more frequent travel options. Roundtrip air travel to Juneau or Sitka from Kake is around \$300 roundtrip plus potential added baggage fees and can allow for roundtrip travel in one day without the need to stay overnight, however limits on luggage and cargo are more restrictive than on ferries. Residents can avoid the long overlay due to ferry schedules by returning to Kake via air and having their vehicle transported days later via ferry back to Kake. This adds the cost of airfare but saves the cost of spending more days in Juneau or Sitka.

Lower incomes reduce travel affordability: The costs of travel, as described above, are not affordable for many residents of Kake, where the median household income is approximately \$40,800 and

19 percent of the population is below the poverty line. High travel costs reduce the ability of Kake residents to afford access to goods, services, and opportunities outside of the Kake community.

High freight costs: High freight shipping costs adversely impact the transportation of goods and services, which in turn affects the Kake economy. Fishing, mariculture, and retail industries face steep freight costs when shipping products to Petersburg or Juneau for processing or sale. In addition, high freight costs to bring products into Kake, such as food, fuel, and supplies for repair and maintenance services, result in a higher cost of living for Kake residents.

1.3 Project Background and History

Over the past half-century a considerable amount of planning and analysis has been directed toward attempting to improve transportation connections within Southeast Alaska as well as link Southeast Alaska to other parts of the state and the lower 48 states. Much of this effort is embodied in Southeast Alaska transportation plans and addenda that address local community access needs, including connectivity to Kake. Below is a summary of key plans and studies that address Kake and potential improved connectivity to surrounding regional hubs and other communities.

1.3.1 1984 Kake Comprehensive Policy Plan

- Plan prepared to supplement Kake Coastal Management Program to guide community growth and development.
- One of five goals was, “a comprehensive system of air, land, and marine transportation providing access for the people of Kake” and among the objectives for that goal is an “all-weather road to Petersburg” (Quadra and R.W. Pavitt & Assoc. 1984).
- Related transportation policies of the plan: more frequent and dependable freight service to Kake, increased ferry service by Alaska Marine Highway, construction of land route to Petersburg.

1.3.2 2004 Southeast Alaska Transportation Plan

- Mission Statement: “to increase system capacity and improve efficiency, shift from a surface network that is based on long-distance ferry runs to a surface network that relies on land highways to connect communities and other destinations. Land highways will dramatically expand activity and mobility by increasing traveler flexibility, choice, and speed while reducing or eliminating toll costs” (ADOT&PF 2004).
- Purpose: “to address the unique characteristics of the Southeast Alaska setting by calling for transportation improvements that lessen the isolation between communities, add or improve long-distance connections, increase mobility and lower costs to the user, and respond to financing concerns while providing transportation capacity that meets regional transportation needs” (ADOT&PF 2004).
- The plan proposed a road between Kake and Petersburg, coupled with another proposed road from Kake to Totem Bay and a shuttle ferry connection across Sumner strait that would connect to the Prince of Wales Island highway system. The roads were proposed to be part of the regional transportation system and classified as an “essential transportation and utility corridor” (ADOT&PF 2004).

- Kake residents did not support the proposed road but did want improved ferry service. Without local community support, this road connection was said to be “lower in importance than other transportation priorities” (ADOT&PF 2004).

1.3.3 2004 Northern Panhandle Community Survey

- A total of 304 randomly selected phone surveys were conducted with households in Kake with a focus on ferry and air transportation preferences to Juneau, Sitka, and Petersburg.
- 2004 survey and more recent 2014 Kake Access Transportation Survey conducted by McDowell Group produced similar results: Kake residents look to Juneau then Sitka for most important access to shopping, medical and work related goods and services not available in Kake.

1.3.4 2012 State Legislature Appropriation

- Legislature appropriated \$40M for a single lane, local access road between Kake and Petersburg and additional funding for an electrical transmission intertie to Kake. The legislative report also notes that “ultimate plans include upgrading to a paved two-lane road...to serve a significant volume of transient traffic”. (2012 AK Legislature TPS Report 59037v1)
- The appropriation states, “The objective of completing a road connection and electrical transmission line to Petersburg is to give the community access to low-cost hydroelectric power and the medical, transportation, and commercial services available at Petersburg while enhancing its ability to make the most of local economic potential.” (2012 AK Legislature TPS Report 59037v1).
- Road connection would also require a small shuttle ferry.
- Features benefits to Kake fishing industry (reduced costs and higher quality products to processors), tourism industry (increased market potential), subsistence (expanded activity range).

1.3.5 2013 High Level Demand Analysis

- Looked at population, current travel patterns, and the estimated travel times to develop travel demand estimates for potential corridors.
- Demand ranged from 28 AADT to <4 AADT on multiple corridors.
- Study noted that results likely overestimated due to methodology.

1.3.6 2014 Draft Southeast Alaska Transportation Plan

- One recommendation presented is construction of a road connecting the communities of Kake and Petersburg.
- In the 2004 SATP, the majority of residents surveyed did not support a road to Petersburg. However, by 2014, the City passed a resolution (No. 2008-010) supporting construction of a road and intertie between Kake and Petersburg.
- Plan notes that the proposed electric transmission intertie project is independent from the proposed road but co-location would lower construction costs.

1.3.7 Kake Access Transportation Survey Report (McDowell Group, 2014)

- Transportation data, interviews, and surveys reveal both Kake and Petersburg residents have higher demand and identified higher desirability to access Juneau, or Juneau and Sitka in the case of Kake, than to access each other.

1.3.8 2015 Kake Access Transportation Needs Assessment

The following conclusions were made:

1. “In the short run, the road is unlikely to substantially change regional travel patterns as measured by origin and destination.”
2. The road would greatly expand the number of opportunities Kake residents have to travel by ferry to Juneau and Sitka and greatly reduce the average duration of a round trip by ferry.
3. The road would modestly expand business opportunities and allow business in certain industries to reduce their costs.
4. The road’s initial effects are likely to be limited for many sectors of the local economy.
5. While the road will provide the opportunity for round-trips between Kake and Petersburg the primary source of activity on the road will be “partial use trips” for recreation and subsistence.
6. The minimum travel time necessary for a one-way trip will greatly influence usage.
7. A sizeable portion of both Kake and Petersburg residents said they would not use the road and this percentage was affected by estimated minimum travel time on the road.” (Northern Economics, McDowell Group, Robert Peccia & Associates, 2015)