



Juneau Access Improvements Project Draft Supplemental Environmental Impact Statement

2014 Update to Appendix T Air Quality Modeling Memorandum

Prepared for:

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Acronyms and Abbreviations

AADT	annual average daily traffic
ACF	Alaska Class Ferry
AMHS	Alaska Marine Highway System
CO	carbon monoxide
DEIS	Draft Environmental Impact Statement
DOT&PF	Alaska Department of Transportation and Public Facilities
EIS	Environmental Impact Statement
FEIS	Final Environmental Impact Statement
FHWA	Federal Highway Administration
FVF	Fast Vehicle Ferry
JAI	Juneau Access Improvements
µg/m ³	micrograms per cubic meter
MSAT	Mobile Source Air Toxic
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NHS	National Highway System
NO ₂	nitrogen dioxide
PM	particulate matter
PM _{2.5}	particulate matter with aerodynamic diameter equal to or less than 2.5 microns
PM ₁₀	particulate matter with aerodynamic diameter equal to or less than 10 microns
ppb	parts per billion
ppm	parts per million
PWADT	peak week average daily traffic
ROD	Record of Decision
SEIS	Supplemental Environmental Impact Statement
SO ₂	sulfur dioxide
USACE	U. S. Army Corps of Engineers
vmt	vehicle miles traveled

1. Introduction

This report updates the 2004 *Air Quality Modeling Memorandum* that was prepared by the Alaska Department of Transportation and Public Facilities (DOT&PF) and presented as Appendix T of the 2005 Juneau Access Improvements (JAI) Project Supplemental Draft Environmental Impact Statement (DEIS). The 2004 report analyzed air quality impacts of Alternatives 2, 2A, 2B, 2C, 3, 4B, and 4D. Simplified microscale dispersion modeling was conducted to evaluate carbon monoxide (CO) emissions for all of the build alternatives and the No Action alternative. Marine vessel CO levels were not modeled, but were qualitatively evaluated. A qualitative evaluation was also conducted for particulate matter (PM₁₀) emissions produced under all of the reasonable alternatives.

During the development of the JAI Project 2006 Final EIS (FEIS), the Federal Highway Administration (FHWA) and DOT&PF responded to comments on the 2005 Supplemental Draft EIS, incorporated new data and further analysis for some resources, and incorporated additional mitigation measures to reduce impacts to wildlife and habitat. The FHWA and DOT&PF also made some changes to Alternative 2B and eliminated Alternatives 2, 2A, and 2C from consideration as reasonable alternatives. Many of these changes required updates to supporting technical reports, which DOT&PF prepared and compiled in Appendix W of the 2006 Final EIS. However, changes made after submission of the DEIS did not warrant an updating of the 2004 *Air Quality Modeling Memorandum* at that time.

Seven years have passed since the 2006 FEIS and Record of Decision (ROD) were published and the FHWA and DOT&PF recognized the need to update previous technical reports as part of the JAI Project 2014 Draft Supplemental Environmental Impact Statement (SEIS). Updates were needed to reflect changes in regulations, new information related to the potentially affected environment or conditions, updated analysis, evaluation of the newly added Alternative 1B, and changes in the design or alignment for Alternatives 2B and 3. Three key components that affected changes to the design and alignment of Alternative 2B since the 2006 ROD are: changes during the U.S. Army Corps of Engineers (USACE) permitting process to further avoid and minimize impacts to wetlands and reduce the extent of rock sidecast areas, changes based on advanced geotechnical survey information, and recent changes in 2012 in response to updated bald eagle nest survey data. In addition, minor alignment shifts also were made to Alternative 3 in response to updated bald eagle nest survey data. Postponement of the anticipated project opening year, in addition to the introduction of a new alternative, warranted completion of an updated traffic study. This in turn required that air quality impacts be reassessed, taking into consideration updated traffic projections as well as changes made to air quality regulations.

Alterations to Alternatives 2B and 3 are minor and do not occur in areas with potential sensitive receptors; therefore, no new air quality evaluations are needed specifically to address these changes. This update to the 2004 *Air Quality Modeling Memorandum* provides a summary of the changes in the regulatory environment, a summary of the updated traffic forecasts, and a qualitative evaluation of the validity of the previous air quality evaluations based on new regulations and new traffic forecasts.

As described in the 2004 *Air Quality Modeling Memorandum*, under any build alternative (i.e., 2, 2A, 2B, 2C, 3, 4B, and 4D), the JAI Project would not have a noticeable impact on local air quality and no mitigation measures were necessary.

1.1 Project Description

As required by the National Environmental Policy Act (NEPA), this technical report considers the following reasonable alternatives.

1.1.1 Alternative 1 – No Action

The No Action Alternative (Alternative 1) includes a continuation of mainline ferry service in Lynn Canal and incorporates two Day Boat Alaska Class Ferries (ACFs). The Alaska Marine Highway System (AMHS) would continue to be the National Highway System (NHS) route from Juneau to Haines and Skagway, and no new roads or ferry terminals would be built. In addition to the Day Boat ACFs, programmed improvements include improved vehicle and passenger staging areas at the Auke Bay and Haines ferry terminals to optimize traffic flow on and off the Day Boat ACFs as well as expansion of the Haines Ferry Terminal to include a new double bow berth to accommodate the Day Boat ACFs. This alternative is based on the most likely AMHS operations in the absence of any capital improvements specific to the JAI Project.

Mainline service would include two round trips per week in the summer and one per week in the winter with Auke Bay-Haines-Skagway-Haines-Auke Bay routing. During the summer, one Day Boat ACF would make one round trip between Auke Bay and Haines six days per week, and one would make two round trips per day between Haines and Skagway six days per week. The Day Boat ACFs would not sail on the seventh day because the mainliner is on a similar schedule. In the winter, ferry service in Lynn Canal would be provided primarily by the Day Boat ACFs three times per week. The *M/V Malaspina* would no longer operate as a summer day boat in Lynn Canal.

1.1.2 Alternative 1B – Enhanced Service with Existing AMHS Assets

Alternative 1B includes all of the components of Alternative 1, No Action, but focuses on enhancing service using existing AMHS assets without major initial capital expenditures. Similar to Alternative 1, Alternative 1B includes a continuation of mainline ferry service in Lynn Canal; the AMHS would continue to be the NHS route from Juneau to Haines and Skagway; no new roads or ferry terminals would be built; and in addition to the Day Boat ACFs, programmed improvements include improved vehicle and passenger staging areas at the Auke Bay and Haines ferry terminals to optimize traffic flow on and off the Day Boat ACFs as well as expansion of the Haines Ferry Terminal to include a new double bow berth to accommodate the Day Boat ACFs. Service to other communities would remain the same as with the No Action Alternative.

Alternative 1B keeps the *M/V Malaspina* in service after the second Day Boat ACF is brought online to provide additional capacity in Lynn Canal. Enhanced services included as part of Alternative 1B are a 20 percent reduction in fares for trips in Lynn Canal and extended hours of operations for the reservation call center.

Mainline service would include two round trips per week in the summer and one per week in the winter with Auke Bay-Haines-Skagway-Haines-Auke Bay routing. During the summer, the *M/V*

Malaspina would make one round trip per day seven days per week on a Skagway-Auke Bay-Skagway route, while one Day Boat ACF would make one round trip between Auke Bay and Haines six days per week, and one would make two round trips per day between Haines and Skagway six days per week. The Day Boat ACFs would not sail on the seventh day because the mainliner would be on a similar schedule. In the winter, ferry service in Lynn Canal would be provided primarily by the Day Boat ACFs three times per week.

1.1.3 Alternative 2B – East Lynn Canal Highway to Katzehin, Shuttles to Haines and Skagway

Alternative 2B would construct the East Lynn Canal Highway (50.8 miles, including 47.9 miles of new highway and widening of 2.9 miles of the existing Glacier Highway) from Echo Cove around Berners Bay to a new ferry terminal 2 miles north of the Katzehin River. Ferry service would connect Katzehin to Haines and Skagway. In addition, this alternative includes modifications to the Skagway Ferry Terminal to include a new end berth and construction of a new conventional monohull ferry to operate between Haines and Skagway. Mainline ferry service would end at Auke Bay. This alternative assumes the following improvements will have been made independent of the JAI Project before Alternative 2B would come on-line: two Day Boat ACFs, improved vehicle and passenger staging areas at the Haines Ferry Terminal to optimize traffic flow on and off the Day Boat ACFs, and expansion of the Haines Ferry Terminal to include two new double bow berths.

During the summer months, one Day Boat ACF would make eight round trips per day between Haines and Katzehin, a second Day Boat ACF would make six round trips per day between Skagway and Katzehin, and the Haines-Skagway shuttle ferry would make two trips per day. During the winter, one Day Boat ACF would make six round trips per day between Haines and Katzehin, and a second Day Boat ACF would make four round trips per day between Skagway and Katzehin. The Haines-Skagway shuttle would not operate; travelers going between Haines and Skagway would travel to Katzehin and transfer ferries.

1.1.4 Alternative 3 – West Lynn Canal Highway

Alternative 3 would upgrade/extend the Glacier Highway (5.2 miles, including 2.3 miles of new highway and widening of 2.9 miles of the existing Glacier Highway) from Echo Cove to Sawmill Cove in Berners Bay. New ferry terminals would be constructed at Sawmill Cove in Berners Bay and at William Henry Bay on the west shore of Lynn Canal, and the Skagway Ferry Terminal would be modified to include a new end berth. A new 38.9-mile highway would be constructed from the William Henry Bay Ferry Terminal to Haines with a bridge across the Chilkat River/Inlet connecting into Mud Bay Road. A new conventional monohull ferry would be constructed and would operate between Haines and Skagway. Mainline ferry service would end at Auke Bay. This alternative assumes the following improvements will have been made independent of the JAI Project before Alternative 3 would come on-line: two Day Boat ACFs, improved vehicle and passenger staging areas at the Haines Ferry Terminal to optimize traffic flow on and off the Day Boat ACFs, and expansion of the Haines Ferry Terminal to include two new double bow berths.

During the summer, two Day Boat ACFs would make six round-trips per day between Sawmill Cove and William Henry Bay (total of 12 trips each direction), and the Haines-Skagway shuttle

ferry would make six round-trips per day. During the winter, one Day Boat ACF would make four round-trips per day between Sawmill Cove and William Henry Bay, and the Haines-Skagway shuttle ferry would make four round-trips per day.

1.1.5 Alternatives 4A through 4D – Marine Alternatives

All four marine alternatives would include continued mainline ferry service in Lynn Canal with a minimum of two trips per week in the summer and one per week in the winter with Auke Bay-Haines-Skagway-Haines-Auke Bay routing. Each marine alternative includes a new conventional monohull shuttle that would make two round trips per day between Haines and Skagway six days a week in the summer and a minimum of three round trips per week between Haines and Skagway in the winter. The AMHS would continue to be the NHS route from Juneau to Haines and Skagway. These alternatives assume the following improvements will have been made independent of the JAI Project before the alternative comes on-line: improved vehicle and passenger staging areas at the Auke Bay and Haines ferry terminals to optimize traffic flow on and off the Day Boat ACFs, and expansion of the Haines Ferry Terminal to include new double bow berths.

1.1.5.1 Alternative 4A – Fast Vehicle Ferry Service from Auke Bay

Alternative 4A would construct two new fast vehicle ferries (FVFs). No new roads would be built for this alternative, and the Auke Bay Ferry Terminal would be expanded to include a new double stern berth. A new conventional monohull ferry would be constructed and would operate between Haines and Skagway. The *M/V Malaspina* would no longer operate as a summer day boat in Lynn Canal, and the Day Boat ACFs would no longer operate in Lynn Canal. The FVFs would make two round trips between Auke Bay and Haines and two round trips between Auke Bay and Skagway per day in the summer. During the winter, one FVF would make one round trip between Auke Bay and Haines and one round trip between Auke Bay and Skagway each day.

1.1.5.2 Alternative 4B – Fast Vehicle Ferry Service from Berners Bay

Similar to Alternative 4A, Alternative 4B would construct two new FVFs. This alternative would upgrade/extend Glacier Highway (5.2 miles, including 2.3 miles of new highway and widening of 2.9 miles of the existing Glacier Highway) from Echo Cove to Sawmill Cove in Berners Bay, where a new ferry terminal would be constructed. The Auke Bay Ferry Terminal would be expanded to include a new double stern berth. A new conventional monohull ferry would be constructed and would operate between Haines and Skagway. The *M/V Malaspina* would no longer operate as a summer day boat in Lynn Canal, and the Day Boat ACFs would no longer operate in Lynn Canal. In the summer, the FVFs would make two round trips between Sawmill Cove and Haines and two round trips between Sawmill Cove and Skagway per day. During the winter, one FVF would make one round trip between Auke Bay and Haines and one round trip between Auke Bay and Skagway each day.

1.1.5.3 Alternative 4C – Conventional Monohull Service from Auke Bay

Alternative 4C would use Day Boat ACFs to provide additional ferry service in Lynn Canal. No new roads would be built for this alternative. The Auke Bay Ferry Terminal would be expanded to include a new double stern berth, and the Skagway Ferry Terminal would be expanded to

include a new end berth. A new conventional monohull ferry would be constructed and would operate between Haines and Skagway. In the summer, one Day Boat ACF would make one round trip per day between Auke Bay and Haines, and one Day Boat ACF would make one round trip per day between Auke Bay and Skagway. During the winter, one Day Boat ACF would alternate between a round trip to Haines one day and a round trip to Skagway the next day.

1.1.5.4 *Alternative 4D – Conventional Monohull Service from Berners Bay*

Alternative 4D would use Day Boat ACFs to provide additional ferry service in Lynn Canal. This alternative would upgrade/extend Glacier Highway (5.2 miles, including 2.3 miles of new highway and widening of 2.9 miles of the existing Glacier Highway) from Echo Cove to Sawmill Cove in Berners Bay, where a new ferry terminal would be constructed. The Auke Bay Ferry Terminal would be expanded to include a new double stern berth, and the Skagway Ferry Terminal would be expanded to include a new end berth. This alternative includes construction of a new conventional monohull ferry that would operate between Haines and Skagway. In the summer, the Day Boat ACFs would make two trips per day between Sawmill Cove and Haines and two trips per day between Sawmill Cove and Skagway. During the winter, a Day Boat ACF would operate from Auke Bay, alternating between a round trip to Haines one day and to Skagway the next day.

2. 2004 Air Quality Modeling

The 2004 *Air Quality Modeling Memorandum* provided a quantitative CO emission analysis based on dispersion modeling for the projected number of motor vehicles forecasted for the highway project. This analysis was completed for Alternative 2 traffic volumes only since this alternative had the highest traffic volumes relative to the other proposed alternatives for the project. The memorandum also provided a qualitative analysis of particulate emissions for the highway project. Air quality impacts were determined to be minor due to the low projected population within the Lynn Canal area and low traffic volumes estimated for the project.

3. Changes in Air Quality Standards

Since the FEIS and ROD were completed in 2006, numerous air quality regulations have changed, including more stringent National Ambient Air Quality Standards (NAAQS) for a number of pollutants. The NAAQS changes are summarized in Table 3-1.

Table 3-1: Previous and Current NAAQS

Pollutant	NAAQS used in 2006 FEIS	Updated NAAQS (year of update)
Lead	Quarterly average: 1.5 $\mu\text{g}/\text{m}^3$	Rolling 3-month average: 0.15 $\mu\text{g}/\text{m}^3$ (2008)
Nitrogen Dioxide (NO ₂)	Annual average: 53 ppb	1-hour average: 100 ppb (2010)
Ozone	1-hour average: 0.12ppm 8-hour average: 0.08 ppm	1-hour average eliminated 8-hour average: 0.075 ppm (2008)
Coarse particulate matter (PM ₁₀)	Annual average: 50 $\mu\text{g}/\text{m}^3$ 24-hour average: 150 $\mu\text{g}/\text{m}^3$	Annual average eliminated 24-hour average: 150 $\mu\text{g}/\text{m}^3$ (2012)
Fine particulate matter (PM _{2.5})	Annual average: 15 $\mu\text{g}/\text{m}^3$ 24-hour average: 65 $\mu\text{g}/\text{m}^3$	Annual average: 12 $\mu\text{g}/\text{m}^3$ 24-hour average: 35 $\mu\text{g}/\text{m}^3$ (2012)
Sulfur dioxide (SO ₂)	24-hour average: 0.14 ppm Annual average: 0.03 ppm	24-hour average eliminated Annual average eliminated 1-hour average at 75 ppb (2010)
Carbon Monoxide (CO)	1-hour average: 35 ppm 8-hour average: 9 ppm	No change

Units: $\mu\text{g}/\text{m}^3$ = micrograms per cubic meter
ppm = parts per million
ppb = part per billion

Note that there were no changes to NAAQS for CO: the 1-hour and 8-hour averages are 35 ppm and 9 ppm, respectively.

In addition, in 2012 the FHWA issued an update to their *Interim Guidance Update on Mobile Source Air Toxic Analysis in NEPA Documents* (FHWA, 2012), which provides guidance on including analyses of MSATs under the NEPA review process for highway projects. FHWA has developed a three-tiered approach for analyzing MSATs in NEPA documents, depending on specific project circumstances. The three levels of analysis are:

1. No analysis for projects with no potential for meaningful MSAT effects
2. A qualitative analysis for projects with a low potential for MSAT effects
3. A quantitative analysis to differentiate alternatives for projects with higher potential MSAT effects

The updated air quality impact assessment takes into account the regulatory changes discussed above and utilizes the *Interim Guidance Update on Mobile Source Air Toxic Analysis in NEPA Documents* to determine the MSAT potential associated with the JAI Project.

4. Updated Air Quality Impact Assessment

In determining potential impacts of the JAI Project on air quality, all factors considered in the 2004 dispersion modeling remain unchanged, with the exception of the projected traffic volumes. Traffic volumes used in the 2004 air quality analysis were derived from the 2004 *Traffic Forecast Report*. Due to the fact that air pollutant concentrations at a given location are directly related to traffic volumes and vehicle travel speeds (for example, a 20 percent increase in traffic volumes results in a 20 percent increase in pollutant concentrations, assuming travel speeds remain the same), a new analysis of projected air quality impacts had to be conducted that took into account updated traffic forecasts for the project. In addition, changes in air quality standards required that the potential for MSAT impacts be assessed. The revised projected air quality impacts and an MSAT impacts analysis are provided below.

4.1 Projected Air Quality Impacts

Opening year and 30-year projected traffic volumes have been revised for the JAI Project Draft SEIS (DOT&PF, 2014). The 2014 traffic forecasts relied on a different methodology than what was used for the 2005 Supplemental Draft EIS and 2006 FEIS. The opening year considered in the 2006 FEIS was 2008 and the opening year for the current Draft SEIS traffic forecast is projected to be 2020. In order to determine whether new dispersion modeling was needed to assess project impacts related to air quality for the current Draft SEIS, project analysts compared updated 2014 traffic forecast volumes to traffic volumes used in the 2004 dispersion modeling. The most conservative values were assumed for the 2004 dispersion model inputs so that a worst-case scenario for CO emissions could be developed.

The most conservative values calculated for traffic inputs were peak week average daily traffic (PWADT) volumes, which is average daily bidirectional traffic during the busiest week of the year. The PWADT volumes presented in the 2004 evaluation and updated 2014 traffic forecasts are shown in Table 4-1. As stated above in Section 2, the 2004 air quality modeling assessment was based on Alternative 2 traffic volumes because this alternative was projected to have the highest traffic volumes of any alternatives under consideration at that time. The Alternative 2 PWADT volumes used in the 2004 study were 1,800 for 2008 and 3,250 for 2038 (see Table 4-1).

Table 4-1: Opening Year and 30-Year PWADT Forecasts

Alternative	2006 FEIS Traffic Forecasts from 2004 Traffic Forecast Report		Current Draft SEIS Traffic Forecasts from 2014 Traffic Forecast Report	
	Opening Year: 2008	+ 30 years: 2038	Opening Year: 2020	+ 30 years: 2050
1	330	460	325	325
1B	NA	NA	440	440
2	1,800	3,250	NA	NA
2B	1,340	2,350	3,160	3,135
3	1,100	1,860	2,490	2,480
4A	490	780	635	630

Alternative	2006 FEIS Traffic Forecasts from 2004 Traffic Forecast Report		Current Draft SEIS Traffic Forecasts from 2014 Traffic Forecast Report	
	Opening Year: 2008	+ 30 years: 2038	Opening Year: 2020	+ 30 years: 2050
4B	580	940	1,010	1,000
4C	360	520	385	385
4D	460	690	945	935

All of the PWADT + 30-year (2050) volumes predicted in the 2014 *Traffic Forecast Report* are lower than the highest volume used in the 2004 + 30-year (2038) air quality modeling assessment for Alternative 2.

The maximum 1-hour CO concentrations in the 2004 analysis (based on the 30-year PWADT) were approximately 3.0 ppm, compared with an NAAQS of 35.0 ppm. Although Alternative 2 was dismissed as a reasonable alternative in the 2006 FEIS, traffic volumes specific to Alternative 2B (2006 FEIS preferred alternative), were 25 to 28 percent lower than the predicted peak traffic volumes for Alternative 2. Because the updated (2014) 30-year PWADT volumes are slightly lower than the Alternative 2 traffic volumes, CO emissions would be slightly lower or approximately equal to the 2004 modeled results. Therefore, the findings of the 2006 FEIS with respect to air quality impacts for Alternatives 1, 1B, 2B, 3, 4A, 4B, 4C, and 4D remain valid: these JAI Project alternatives would have no noticeable impact on local air quality based on updated traffic forecasts.

Alternative 1B was not evaluated in the 2006 FEIS. It is similar to Alternative 1 in that it would not include a new road or ferry construction. The 2014 traffic forecasts for Alternative 1B are similar to the 2006 FEIS traffic forecasts for Alternative 1, No Action; therefore, potential air quality impacts from Alternative 1B would be similar to those identified for Alternative 1 in the 2006 FEIS.

4.2 Mobile Source Air Toxics

In 2012, FHWA issued an update to their *Interim Guidance Update on Mobile Source Air Toxic Analysis in NEPA Documents* (FHWA, 2012), which provides guidance on including analyses of MSATs under the NEPA review process for highway projects. Based on this guidance, the JAI Project is classified as a project with a low potential for MSAT effects. Category 2 projects include those that serve to improve operations of highway, transit, or freight without adding substantial new capacity or without creating a facility that is likely to meaningfully increase MSAT emissions. This category includes projects where the design year traffic is projected to be less than 140,000 to 150,000 annual average daily traffic (AADT). Traffic volumes forecasted for JAI Project are highest for Alternative 2B: 835 AADT in 2020 and 825 AADT in 2050, both of which are well below the 150,000-AADT threshold that would potentially trigger the need for a quantitative MSAT analysis.

For each alternative, the amount of MSATs emitted would be proportional to the vehicle miles traveled, or VMT, assuming that other variables such as fleet mix are the same for each

alternative, as well as the type, travel distance, and travel speed of each marine vessel¹. Although the VMT between alternatives varies, the magnitude of those differences is small and would not result in meaningful or appreciable differences in MSAT emissions between the alternatives, especially when considering the low AADT associated with each alternative.

Under all build alternatives in the 2020 design year, it is expected that there would be the same or slightly higher MSAT emissions in the project area compared to the No Action Alternative. Motor vehicle emissions are virtually certain to be lower for all alternatives in the future as a result of the EPA's national control programs that are projected to reduce annual MSAT emissions by 72 percent from 1999 to 2050. Local conditions could differ from these national projections in terms of fleet mix and turnover, VMT growth rates, and local control measures; however, the magnitude of the EPA-projected reductions is so great (even after accounting for VMT growth) that MSAT emissions in the project area are likely to be lower in the future than they are today.

Information is incomplete or unavailable to credibly predict the project-specific health impacts due to changes in MSAT emissions associated with the build alternatives. This update to the 2004 *Air Quality Modeling Memorandum* reaffirms the conclusions that implementation of any of the build alternatives would not result in a noticeable impact on local air quality. Due to the limitations of methodologies for forecasting health impacts, any predicted difference in health impacts between alternatives is likely to be much smaller than the uncertainties associated with predicting the impacts. Consequently, the result of such an assessment is not useful in weighing this information against project benefits.

¹ Marine vessel emissions were not modeled in the 2004 *Air Quality Modeling Memorandum*, but rather were qualitatively compared. Based on the findings, no impacts to air quality were predicted and no mitigation measures were necessary.

5. Conclusions

Since the 2004 *Air Quality Modeling Memorandum* was issued as part of the 2006 FEIS, there have been changes to the NAAQS, changes to some of the project alternatives, and updated traffic volume forecasts for all alternatives, all of which could alter the assessment of impacts to air quality resulting from the JAI Project. The 2014 traffic forecasts are similar to traffic forecasts used in the 2004 air quality modeling and would generally result in similar projected emissions and pollutant concentrations to those presented in the 2006 FEIS, which were shown to have no noticeable impact on local air quality. No new air quality modeling or mitigation measures are necessary based on the findings of this evaluation for the current JAI Project Draft SEIS.

6. References

- Alaska Department of Transportation and Public Facilities (DOT&PF). 2004. *Appendix T, Air Quality Modeling Memorandum*. Prepared by the URS Corporation as part of the Juneau Access Improvements Project Supplemental Draft Environmental Impact Statement. Available online at http://dot.alaska.gov/sereg/projects/juneau_access/assets/SDEIS_JAN05/Appendix_T.pdf
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