

**PUBLIC REVIEW DRAFT  
PROJECT CONFORMITY DOCUMENT  
APRIL 2004**

**O'Malley Road Reconstruction  
New Seward Highway to Hillside Drive  
State Project No. 53935  
Federal Project No. STP-0512(5)**

Introduction

Pursuant to 40 CFR 51.390(d), Federal Highway Administration (FHWA) funded projects must be found to conform to State or Federal air quality implementation plans. This action is required under section 176(c)(4) of the Clean Air Act, as amended in 1990. 40 CFR 93.105 requires that the state implementation plan for air quality include procedures for interagency consultation (Federal, State, and local) and resolution of comments. The implementation plan revision is also required to include procedures to be undertaken by Metropolitan Planning Organizations (MPO), State and Federal departments of transportation, with State and local air quality agencies and the U.S. Environmental Protection Agency (EPA) before making conformity determinations. With respect to project conformity determinations, inter-agency consultation is required in the evaluation and selection of a model (or models) and associated methods and assumptions to be used in hot-spot analyses and regional emissions analyses (40 CFR 51.402(c)(1)(i)).

The State of Alaska has developed procedures for inter-agency consultation (18 AAC 50.720). These procedures require that before issuing a final conformity determination, a local planning organization or local government entity, that is recipient of funds designated under the authority of Title 23 U.S.C. (Highways) or 49 U.S.C. 5301-5338 (Federal Transit Act), shall prepare a draft conformity determination. This conformity determination is to be prepared in consultation with the Alaska Department of Environmental Conservation (ADEC), local air quality planning agency, Alaska Department of Transportation and Public Facilities (ADOT&PF), local transportation agency, any agency created under state law that sponsors or approves transportation projects, the EPA, FHWA, and Federal Transit Agency (FTA). These regulations also require that the responsible agency shall consult with the staff of agencies listed above in evaluating and choosing methods and assumptions to be used in a hot-spot analysis. The responsible agency is also required to prepare a discussion draft of the conformity determination and provide a copy of the document to the consulting agencies.

Project Background

The ADOT&PF proposes to reconstruct O'Malley Road between New Seward Highway and Hillside Drive. The New Seward Highway to Lake Otis Parkway segment will be reconstructed to a four-lane roadway divided by a median. From Lake Otis Parkway to Hillside Drive, the road will be rebuilt to a two-lane roadway with a continuous two-way left turn lane.

Part of the proposed project is within the Anchorage non-attainment area for carbon monoxide (CO); consequently, a project level conformity determination is required by new State and

federal air quality regulations. To comply with these regulations, the ADOT&PF contracted Lounsbury and Associates Inc. to prepare a hot-spot analysis of the proposed project. Per the November 6, 2003 interagency teleconference, the participants agreed that only the Lake Otis Parkway/O'Malley Road intersection required a hot-spot analysis for CO because this was the only major intersection within the non-attainment zone and it would exceed level-of-service of D during the project life if not upgraded. The models used for the hot-spot analyses, model input and assumptions, and results are documented in the February 2004 draft Hot Spot Analysis of the Lake Otis/O'Malley Road Intersection, prepared by Travis/Peterson Environmental Consulting, Inc. (TPECI) as a subconsultant to Lounsbury and Associates Inc.

Project Conformity Criteria

40 CFR 93.109(b) sets forth the applicable project conformance criteria;

<u>Section</u>	<u>Criteria</u>
93.110	The conformity determination must be based on the latest planning assumptions
93.111	The conformity determination must be based on the latest emission estimation model available
93.112*	The MPO must make the conformity determination according to the consultation procedures of this rule and the implementation plan revision required by Section 51.390
93.114	There must be a currently conforming transportation plan and conforming TIP at the time of project approval
93.115	The project must come from a conforming transportation plan and program
93.116	The FHWA/FTA project must not cause or contribute to any new localized CO or PM10 violations or increase the frequency or severity of any existing CO or PM10 violations in CO or PM10 non-attainment and maintenance areas
93.117	The FHWA/FTA project must comply with PM10 control measures in the applicable implementation plan
93.121**	The FHWA/FTA project must eliminate or reduce the severity and number of localized CO violations in the are substantially affected by the project (in CO non-attainment areas)

\* Consultation procedures provide that the MPO makes the conformity determination for transportation plans and programs. Project level conformity determinations are made during the environmental phase of the project by the sponsoring agency.

\*\* This criteria only applies during the Transitional Period.

## Agency Review Comments

The ADOT&PF submitted a draft of the conformity analysis to pertinent agencies for their review and comment. The following summarizes these comments and their responses. Copies of all agency comments are attached.

On January 26, 2004, Steve Morris, Environmental Quality Program Supervisor for the Municipality of Anchorage (MOA) Department of Health and Human Services submitted comments on the conformity analysis. Mr. Morris believed the discussion analysis should have been more detailed and believed that the fundamental assumptions and modeling inputs should have been in the main body of the report. TPECI addressed this comment by documenting the model assumptions in the report. Additionally, Mr. Morris questioned the red times, approach speeds, and emissions factors used in the modeling. TPECI informed Mr. Morris all red times were determined by the Lounsbury and Associates traffic study. TPECI found an error in an input file for emission factors and corrected it. Mr. Morris recommended running MOBILE6 at 2.5 miles per hour (mph) to generate idle emission factors. TPECI ran the model with a vehicle speed of 2.5 mph to obtain the idle emission factors. Finally, Mr. Morris suggested the CO background value could be subject to revision. On January 29, 2004, Mr. Morris approved the CO background values for the conformity analysis.

On March 19, 2004, Mr. Morris submitted additional comments regarding the conformity analysis. Mr. Morris questioned why traffic volumes and queues were identical under the build and no build scenarios. Mr. Morris believed the queues should be reduced due to improvements and thus, the idle emission would reduce as a result. Moreover, Mr. Morris thought the CO concentrations estimates for the build scenario were higher than he would expect. TPECI corrected Table 4 and removed the references of queue length. The table should have reflected traffic volumes instead. The air quality modeling may have been conservative, but the future build scenario was still under the EPA 8-hour standard of 9.0 ppm for average CO concentrations.

On February 6, 2004, Ms. Barbara Shepherd, Environmental Specialist with the ADEC reviewed the hot-spot analysis and provided the following comments. Ms. Shepherd thought it would be helpful to include traffic approach speed, signal time, green/red time, and receptor locations in the body of the report. TPECI included this information in Tables 1 through 4 in the report. Additionally, Ms. Shepherd asked if the Lake Otis/O'Malley Road intersection was the only intersection within the non-attainment area that may fail within the design life of the project. Agencies that participated in the November 6, 2003, Pre-Modeling Interagency Consultation meeting decided that the only intersection within the CO non-attainment area that required a conformity analysis was the Lake Otis Parkway/O'Malley intersection. The New Seward intersection was outside the project boundaries.

Ms. Shepherd stated that the hot-spot analysis should include the base year and the year of highest emissions. The analysis included the base year (2006) and end year (2031). The 2031 is estimated to be the year of highest emissions. Ms. Shepard asked how the vehicle speeds were determined. TPECI used vehicle speeds determined by the Lounsbury traffic study. Ms.

Shepard asked for the present and future level of service values for the Lake Otis/O'Malley Road intersection. TPECI included these values in Table 5 of the report. Ms. Shepard asked if the projections were based on peak hour traffic projections. TPECI used afternoon peak hour traffic projections for the modeling. Ms. Shepard asked how the cycle lengths, red times, and intersection clearance times determined. In addition, Ms. Shepard asked why the clearance times stay the same over time as traffic increases and speeds decrease. TPECI obtained cycle lengths, red times, and clearance times from the O'Malley Road Reconstruction Preliminary Engineering Report, Appendix D: Operational Analysis. The clearance times correspond to the yellow times for the individual traffic lanes. Therefore, the clearance times will remain static for the actuated traffic signals. TPECI originally used the default of 2.0 seconds and replaced this value with actual yellow times. Tables 2 and 4 display the actual yellow times used in the model.

On March 22, 2004, Ms. Shepherd submitted additional comments regarding the hot-spot analysis. She thought it would be helpful if the report contained a project description. TPECI included a project description in the report. Ms. Shepherd was curious why the CO concentrations slightly increased under the build alternative. TPECI believes that the 0.1-ppm increase was probably due to the conservative modeling approach. Ms. Shepherd also wanted more information why the New Seward Highway intersection was not analyzed. This intersection was outside of the project limits.

Ms. Shepherd suggested that the analysis years of 2006 and 2031 were not sufficient enough to assure that the worst-case CO emissions were modeled. She wanted to know why the project years 2006 and 2031 were chosen. TPECI chose the year 2006 as the time when construction of the proposed project was complete and the facility was fully functional. The year 2031 is the end of the project design life. The FHWA normally selects these years as the critical periods to model and compare air quality impacts with the no-build alternative.

Ms. Shepherd had questions about the reductions in some of the 2031 traffic volumes. Traffic forecasts assume that the Bragaw Extension will be completed and some southbound traffic will be using another route. This will cause a reduction in some southbound Lake Otis traffic. Ms. Shepherd also thought the receptor locations may not be in compliance with the EPA procedures. The receptor locations represent site-specific locations such as a residence, church, ball field, and a school that surround the intersection. These receptors show realistic locations where the public may reside over the modeling periods.

On February 5, 2004, Mr. Wayne Elson, U.S. EPA was contacted to discuss the review of the Draft Project Conformity Document and Hot Spot Analysis. Mr. Elson informed TPECI that he had been unable to review the reports and would not be providing comments on the draft.

On February 5, 2004, Ms. Cynthia Heil of the ADEC was contacted to discuss the review of the Draft Project Conformity Document and Hot Spot Analysis. Ms. Heil informed TPECI that she had been unable to review the reports and would not be providing comments on the draft. However, she did concur with Mr. Steve Morris and his comments.

Mr. Michael Claggett and Mr. Jeff Houk of the FHWA Resource Center believed the hot spot analysis over-estimated the impacts of the proposed action. Mr. Claggett and Mr. Houk believed that the MOBILE6 modeling incorporated both start and running emission factors that may over-estimate actual vehicle emissions. TPECI used “soak” distribution inputs developed by the MOA for the Anchorage bowl. The MOA believes that these emission inputs accurately models conditions found in the project area. Mr. Claggett and Mr. Houk believe that the analysis should have used a persistence factor to develop 8-hour CO concentrations instead of using the CAL3QHC averaging mode. TPECI discussed this approach with Mr. Morris and determined that the CAL3QHC model essentially calculates the 8-hour CO concentrations are the same manner. Mr. Claggett and Jeff Houk were unclear if the background CO concentrations for the years 2006 and 2031 represented 1-hour, 8-hour, or both. The background CO values used in the analysis represent both 1-hour and 8-hour concentrations. The MOA supplied these values.

Mr. Claggett and Mr. Houk shared the same view as Ms. Shepard about the receptor locations. Mr. Claggett and Mr. Houk requested that Table 2 be renamed “Composite CO Emission Rate”. TPECI changed this table. Mr. Claggett and Mr. Houk asked to verify with Region 10 that the MOA project-level analysis procedures were acceptable to EPA Region X. Mr. Elson participated in the agency teleconference that discussed the project before the analysis began. Mr. Morris and Mr. Elson discussed the modeling procedures and were in agreement.

#### Public Involvement Process

In conformance with 18 AAC 050.715(f), after completing the interagency consultation process, the draft conformity document was revised based on changes made during the interagency review. The revised document will be called the public review draft conformity document, and will be available for public review. A notice of availability will be published in the Anchorage Daily News along with the notice of public meeting approximately 2 weeks before the ADOT&PF conducts the public meeting as required by 18 AAC 050.720. The purpose of the meeting will be to discuss the draft conformity determination and other project issues. A final conformity determination will not be made until public comments are reviewed and evaluated.

#### Project Conformity Determination

The O’Malley Road Reconstruction, New Seward Highway to Hillside Drive proposed project has been determined to conform to the State and federal implementation plans as required under section 176(c)(4) of the Clean Air Act, as amended in 1990. This conformity determination is based on the latest planning assumptions, and the use of the latest emission model available. Interagency consultation and public involvement has occurred according to procedures outlined in State and federal conformity regulations. A conforming transportation plan and TIP was in effect at the time of this project approval, and the project was identified in the conforming transportation plan and program. According to the hot-spot analyses, the proposed project would not cause or contribute to any new localized CO violations in the CO non-attainment area. The requirement to comply with all PM10 control measures does not apply to this project. The State implementation plan does not include PM10 control measures for project corridor as it is not designated as a non-attainment area for PM10.

