Air Quality Report

Poplar Way Extension Bridge

Lynnwood, Washington

April, 2014

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EXECUTIVE SUMMARY

This report evaluates the potential air quality impacts for the Poplar Way Extension Bridge project. It was prepared in compliance with the Clean Air Act (CAA) and its amendments, related Federal regulations, Federal Highway Administration (FHWA) and Washington State Department of Transportation (WSDOT) Guidance, and addresses regional and project level conformity in accordance with 40 CFR Part 93. The report presents the results of a carbon monoxide (CO) hot-spot analysis comparing the results to the National Ambient Air Quality Standards (NAAQS) along with information on Mobile Source Air Toxics (MSATs).

The Poplar Way Extension Bridge is a key transportation improvement identified within the "Interstate 5 (I-5) to Lynnwood City Center Access Study," developed by the City in cooperation with the Washington State Department of Transportation (WSDOT), the Federal Highway Administration (FHWA), and Snohomish County. The City proposes to construct a new bridge across I-5 between Poplar Way and 33rd Avenue W at approximately 196th Street SW. The study area consists primarily of commercial, retail and office uses. Additionally, there is one place of worship (Alderwood Community Church) in the project area. Major elements of the Poplar Way Extension Bridge project are a new multi-lane bridge structure, approximately 500 feet long, with six vehicle lanes, and sidewalks and bike lanes on both sides.

The Poplar Way Extension Bridge project is located within the Puget Sound Air Quality Control Region (AQCR) #229. This AQCR includes King, Snohomish, Pierce and Kitsap counties. Snohomish County is currently in attainment status for 5 of the 6 criteria pollutants: lead (Pb); nitrogen dioxide (NO_2); ozone (O_3); particulate matter ($PM_{2.5}$ & PM_{10}); and sulfur dioxide (SO_2). Snohomish County was re-designated from nonattainment to maintenance for CO in 1996.

Regional level transportation conformity is addressed through the approval of the Transportation Improvement Program (TIP). The FHWA and the Federal Transit Administration (FTA) found that the *2013-2016 Regional Transportation Improvement Program* prepared by the Puget Sound Regional Council (PSRC) "conforms with the State Implementation Plan to reduce the severity and number of NAAQS violations, insuring expeditious attainment of standards." The Poplar Way Extension project is project number LYN-38 in the TIP.

The results of the CO microscale air quality modeling indicate that none of the concentrations at the 54 receptors modeled around four intersections exceed the 1-hour 35 parts per million (ppm) NAAQS.

Ozone project level conformity is addressed through the approval of the TIP which was approved by the FHWA and FTA on November 29, 2012.

The project meets the FHWA's definition of a project with no meaningful potential MSAT effects, as this project will not result in changes in traffic volumes, vehicle mix, basic project location, or any other factor that would cause an increase in MSAT impacts of the project from that of the no-build alternative.

Based on the air quality analysis completed for the proposed improvements, this project has met the 40 CFR Part 93 requirements for project level transportation conformity for CO and will not contribute to any violation of the NAAQS or result in any increase in MSAT emissions.

Air Quality Report

Table of Contents

Tables

Figures

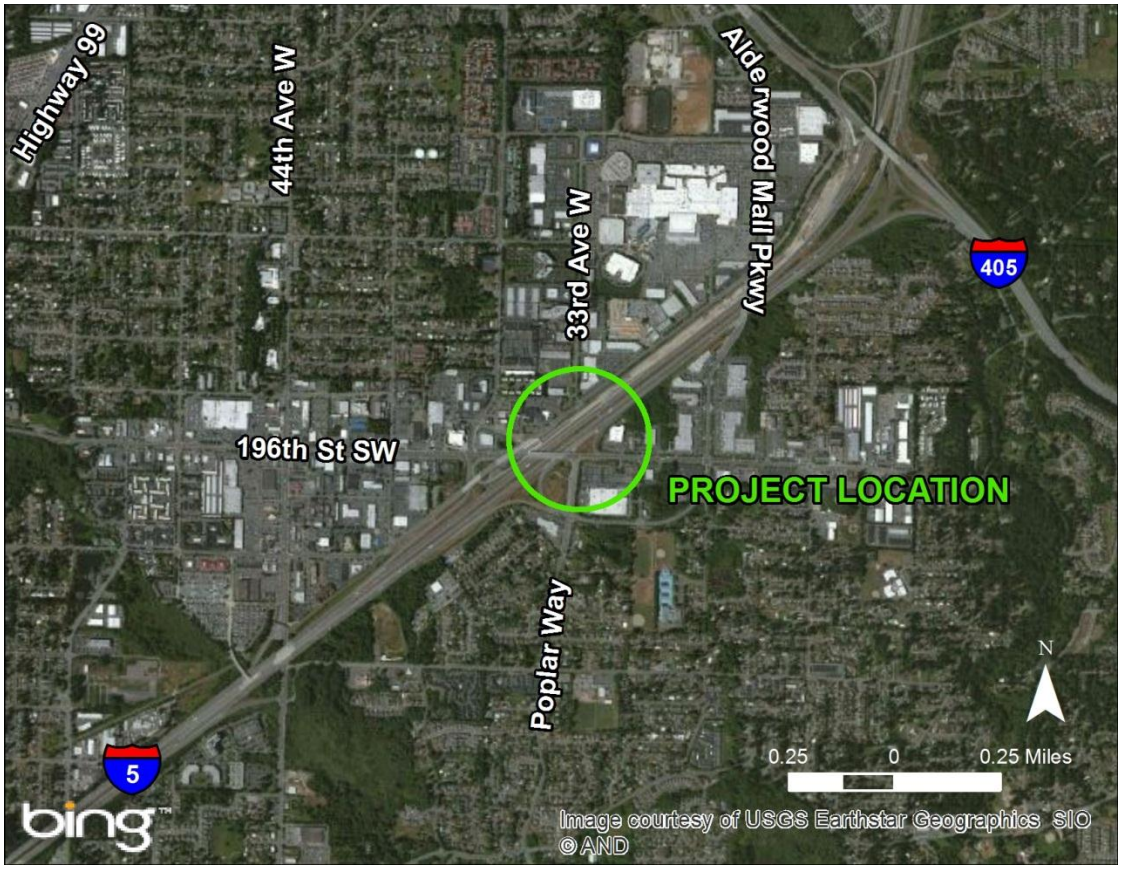
Air Quality Report

1.0 PROJECT DESCRIPTION

The Poplar Way Extension Bridge is a key transportation improvement identified within the "Interstate 5 (I-5) to Lynnwood City Center Access Study," developed by the City in cooperation with the Washington State Department of Transportation (WSDOT), the Federal Highway Administration (FHWA), and Snohomish County. The City proposes to construct a new bridge across I-5 between Poplar Way and 33rd Avenue W at approximately 196th Street SW. The proposed project is located in Lynnwood, Snohomish County, Washington. The project is in Township 27N, Range 04E, Sections 15 and 22. On I-5, the project crossing is at Milepost 180. See **Figure 1 – Project Location Map**.

Major elements of the Poplar Way Extension Bridge project will include a new multi-lane bridge structure, approximately 600 feet long, with six vehicle lanes, and sidewalks and bike lanes on both sides. Intersection modifications will be made at Alderwood Mall Parkway/Poplar Way, 196th Street SW/Poplar Way, and Alderwood Mall Boulevard/33rd Avenue W. As part of the bridge span, new approach legs will be added to the 196th Street SW/Poplar Way and Alderwood Mall Boulevard/33rd Avenue W intersections. The project will also accommodate the Interurban Trail which runs along Alderwood Mall Parkway on the west/northwest side of I-5. This trail is a regional, multi-use paved facility which connects communities from Shoreline to Everett.

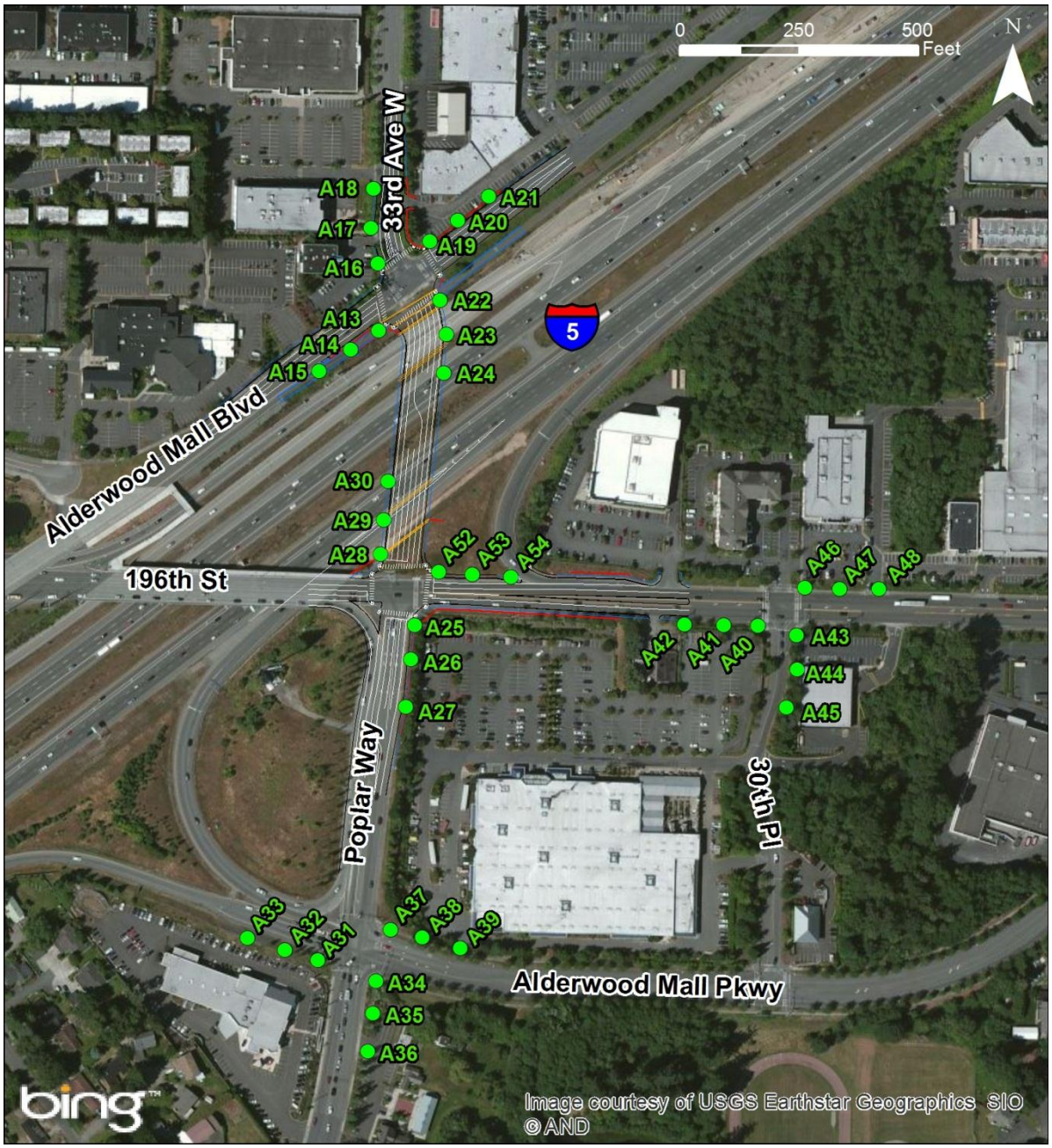
Figure 1 - Project Location Map



The study area, shown in **Figure 2** and **Figure 3**, consists primarily of commercial, retail and office uses. Additionally, there is one place of worship (Alderwood Community Church) in the project area. The proposed bridge would extend Poplar Way across I-5 to 33rd Avenue W.

Figure 2 – CO Hotspot Analysis – Existing Conditions/No Build

Figure 3 – CO Hotspot Analysis – Build



2.0 PURPOSE OF THE REPORT

This report evaluates the potential air quality impacts of the proposed Poplar Way Extension Bridge project. It was prepared in compliance with the Clean Air Act (CAA) and its amendments, related Federal regulations, FHWA and WSDOT Guidance and addresses regional and project level conformity in accordance with 40 CFR Part 93. The report presents the results of a CO-hot-spot analysis for the existing condition (2011), No-Build (2015 and 2040) and Build Alternatives (2015 and 2040) comparing the results to the National Ambient Air Quality Standards (NAAQS). The proposed opening year is 2015 and the design year is 2040. The report also presents information on Mobile Source Air Toxics (MSATs). The document serves as the supporting technical data for the Poplar Way Extension Bridge Environmental Assessment.

3.0 AIR QUALITY – BACKGROUND INFORMATION

3.1 Criteria Pollutants

The Federal Clean Air Act of 1970 established the NAAQS (**Table 1**). These standards were established by the United States Environmental Protection Agency (EPA) to protect public health, safety, and welfare from known or anticipated effects of carbon monoxide (CO), lead (Pb), nitrogen dioxide (NO_2), ozone (O_3), particulate matter (PM_{10}, 10-micron in diameter and smaller along with $PM_{2.5}$, 2.5 micron in diameter and smaller) and sulfur dioxide (SO_2). EPA refers to these pollutants as the “criteria” pollutants.

TABLE 1
National Ambient Air Quality Standards (NAAQS)

Pollutant		Primary/ Secondary	Averaging Time	Level	Form
Carbon Monoxide (CO)		Primary	8 – Hour	9 ppm	Not to be exceeded more than once per year
			1 – Hour	35 ppm	
Lead (Pb)		Primary and secondary	Rolling 3-Month Average	0.15 µg/m^3 (1)	Not to be exceeded
Nitrogen Dioxide (NO_2)		Primary	1 – Hour	100 ppb 5)	98th percentile, averaged over 3 years
		Primary and secondary	Annual Mean	53 ppb (2)	Annual Mean
Ozone (O_3)		Primary and secondary	8 – Hour	0.075 ppm (3)	Annual fourth-highest daily maximum 8-hr concentration, averaged over 3 years
Particulate Pollution	Particulate Matter ($PM_{2.5}$)	Primary	Annual	12 µg/m^3	annual mean, averaged over 3 years
		Secondary	Annual	15 µg/m^3	annual mean, averaged over 3 years
		Primary and secondary	24-hour	35 µg/m^3	98th percentile, averaged over 3 years
	Particulate Matter (PM_{10})	Primary and secondary	24-hour	150 µg/m^3	Not to be exceeded more than once per year on average over 3 years
Sulfur Dioxides (SO_2)		Primary	1-hour	75 ppb (4)	99th percentile of 1-hour daily maximum concentrations, averaged over 3 years
		Secondary	3-hour	0.5 ppm	Not to be exceeded more than once per year

(1) Final rule signed October 15, 2008. The 1978 lead standard (1.5 µg/m3 as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.

(2) The official level of the annual NO2 standard is 0.053 ppm, equal to 53 ppb, which is shown here for the purpose of clearer comparison to the 1-hour standard.

(3) Final rule signed March 12, 2008. The 1997 ozone standard (0.08 ppm, annual fourth-highest daily maximum 8-hour concentration, averaged over 3 years) and related implementation rules remain in place. In 1997, EPA revoked the 1-hour ozone standard (0.12 ppm, not to be exceeded more than once per year) in all areas, although some areas have continued obligations under that standard ("anti-backsliding"). The 1-hour ozone standard is attained when the expected number of days per calendar year with maximum hourly average concentrations above 0.12 ppm is less than or equal to 1.

(4) Final rule signed June 2, 2010. The 1971 annual and 24-hour SO2 standards were revoked in that same rulemaking. However, these standards remain in effect until one year after an area is designated for the 2010 standard, except in areas designated nonattainment for the 1971 standards, where the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standard are approved.

Source: http://www.epa.gov/air/criteria.html, accessed January 2, 2014

The primary pollutants from motor vehicles are unburned hydrocarbons, NOx, CO, and particulates. Hydrocarbons (HC) and nitrogen oxides (NOx) can combine in a complex series of reactions catalyzed by sunlight to produce photochemical oxidants such as ozone (O_3) and NO_2. Because these reactions take place over a period of several hours, maximum concentrations of photochemical oxidants are often found far downwind of the precursor sources. Ozone and NO_2 are regional problems.

Carbon monoxide is a colorless and odorless gas which is the product of incomplete combustion, and is the major pollutant from gasoline fueled motor vehicles. CO is a localized air quality issue.

Particulate matter includes both airborne solid particles and liquid droplets. These liquid particles come in a wide range of sizes. PM_{10} particulates are coarse particles, such as windblown dust from fields and unpaved roads. $PM_{2.5}$ particulates are fine particles generally emitted from activities such as industrial and residential combustion and from vehicle exhaust. Particulates from transportation can be a localized issue when a project is determined to be a project of air quality concern for either PM_{10} or $PM_{2.5}$ emissions in a particulate nonattainment area.

An exceedance of the NAAQS pollutant level does not necessarily constitute a violation of the standard. Some of the criteria pollutants (including CO) are allowed one exceedance of the maximum level per year, while criteria levels for other pollutants cannot be exceeded. Violation criteria for other pollutants are based on past recorded exceedances. **Table 1** lists the allowable exceedances for the EPA criteria pollutants.

3.1.1 Attainment Designation

The Clean Air Act Amendments (CAAA) of 1977 and 1990 required all states to submit to the EPA a list identifying those air quality regions, or portions thereof, which meet or exceed the NAAQS or cannot be classified because of insufficient data. Portions of air quality control regions which are shown by monitored data or air quality modeling to exceed the NAAQS for any criteria pollutant are designated “nonattainment” areas for that pollutant. The CAAA also established time schedules for the states to attain the NAAQS.

States that have nonattainment areas are required to prepare State Implementation Plans (SIP) that lay out a plan to show how the state will improve the air quality to attain the NAAQS. Both new and improvement highway projects must be contained in the area’s Transportation Improvement Program (TIP). The TIP is prepared by the Metropolitan Planning Organization (MPO). Once the MPO has completed the TIP, it is submitted to the FHWA for review and approval according to the requirements of the CAAA and related implementation regulations.

The Poplar Way Extension Bridge project is located within the Puget Sound Air Quality Control Region (AQCR) #229. This AQCR includes King, Snohomish, Pierce, and Kitsap counties. Snohomish County is currently in attainment status for 5 of the 6 criteria pollutants, Pb, NO_2, O_3, particulate matter ($PM_{2.5}$ & PM_{10}), and SO_2 and was re-designated from nonattainment to maintenance for CO in 1996.

4.0 REGIONAL CONFORMITY

Regional level transportation conformity is addressed through the approval of the TIP. The FHWA and the Federal Transit Administration (FTA) found that the *2013-2016 Regional Transportation Improvement Program*[1] prepared by the Puget Sound Regional Council (PSRC) “conforms with the State Implementation Plan to reduce the severity and number of

[1] *2013-2016 Regional Transportation Improvement Program:* http://www.psrc.org/transportation/tip/current/1316tip

NAAQS violations, insuring expeditious attainment of standards."[2] The Poplar Way Extension project is project number LYN-38 in the TIP.

WSDOT approved 11 MPO TIPs for 2013 through 2016 on December 11, 2012. The PSRC 2013-2016 TIP was one of the 11.[3] The FHWA and Federal Transit Administration (FTA) approved the 2013-2016 STIP and found that the "2013-2016 STIP is based on a transportation planning process that substantially meets the requirements of 23 U.S.C. Sections 134 and 135, 49 U.S.C. Sections 5303-5304, and 23 CFR 450 Subparts A, B, and C."[4]

5.0 PROJECT LEVEL CONFORMITY

Project level conformity analysis evaluate whether there are air quality impacts on a smaller scale than an entire nonattainment or maintenance area. It relates a project to the NAAQS on a more localized basis. The project level analysis addresses the results of a CO hot-spot analysis for the existing condition (2011) and No-Build (2015 and 2040) along with the Build Alternatives (2015 and 2040), comparing the results to the NAAQS. The proposed opening year is 2015 and the design year is 2040. The analysis also presents a discussion on ozone, and $PM_{2.5}$.

5.1 CO Hot-Spot (Microscale) Analysis

CO emissions are greatest from vehicles operating at low speeds and prior to complete engine warm-up (within approximately eight minutes of starting). Congested urban roads, therefore, tend to be the principal problem areas for CO. Because the averaging times associated with the CO standards are relatively short (1 and 8 hours), CO concentrations can be modeled using simplified "worst-case" meteorological assumptions. Modeling is also simplified considerably by the stable, non-reactive nature of CO.

5.1.1 Methodology

The CO hot-spot analysis followed the modeling guidelines presented in EPA's "Guideline for Modeling Carbon Monoxide from Roadway Intersections"[5] and EPA's "Using MOVES in Project-Level Carbon Monoxide Analyses"[6]. The EPA's MOVES2010b (MOVES) and EPA's

[2] Daniel M. Mathis and R.F. Krochalis, "Air Quality Conformity Determination Puget Sound Regional Planning Council (PSRD) 2012-2016 Transportation Improvement Program (TIP)" letter addressed to Bob Drewel, November 29, 2012. In Appendix J of *2013-2016 Regional TIP* (http://www.psrc.org/assets/8606/J-_Approvals.pdf).
[3] Judy Lorenzo, "2013-2016 Metropolitan Transportation Improvement Programs (TIPs) for Approval", letter, addressed to Paula Hammond, December 7, 2012, January 7, 2013. In Appendix J of *2013-2016 Regional TIP* (http://www.psrc.org/assets/8606/J-_Approvals.pdf).
[4] Daniel M. Mathis and R.F. Krochalis, "2013-2016 Statewide Transportation Improvement Program (STIP) Federal Approval", letter, addressed to Paula Hammond, January 7, 2013. In Appendix J of *2013-2016 Regional TIP* (http://www.psrc.org/assets/8606/J-_Approvals.pdf).
[5] "Guidelines for Modeling Carbon Monoxide from Roadway Intersections", U.S. Environmental Protection Agency, EPA-454/R-92-005, November 1992.
[6] "Using MOVES in Project-Level Carbon Monoxide Analyses", U.S. Environmental Protection Agency, EPA-420-B-10-041, December 2010.

approved CAL3QHC 2.0 (CAL3QHC)[7] computer models were used to analyze vehicular emissions and the hourly dispersion of CO at four intersections in the Poplar Way Extension Bridge study area. Traffic and emissions for the existing (2011) condition, No-Build (2015 and 2040), and the anticipated first year of operation (2015) and design year (2040) for the Build alternative were modeled. EPA's MOVES2010b was used to develop vehicular emission rates. PSRC provided study area-specific input variables for MOVES.[8]

CAL3QHC is a pollutant dispersion modeling program for predicting pollutant concentrations from motor vehicles under free-flow conditions, or in the vicinity of roadway intersections. Peak traffic volumes and average operating speeds from VISUM and Synchro7 traffic models were used to analyze the intersections.[9] Fifty-four air quality model receptors, numbered A1 through A54, were placed 10 feet away from the edge of pavement, at the stop line paralleling the traffic lanes, and at 82-foot intervals as shown in **Figure 2** and **Figure 3**. In accordance with EPA procedure, average speeds for each link were used to develop the CO emission factors with MOVES. Worst-case meteorological variables and an urban background CO concentration obtained from WSDOT were used for the analysis. The 8-hour CO concentrations were not analyzed because the 1-hour does not exceed the 8-hour concentration standard.[10]

- Meteorological conditions:
  Wind speed: 1 m/s (2.2 mph), worst case.
  Wind direction: Worst case for each receptor location, calculated every 10 degrees.
  Atmospheric stability class: Pasquill Class "E"

- Surface roughness: 175 cm (68.9 in.), study area is a mixture of retail and commercial land use.

- Mixing height: 1,000 m (3280.8 ft).

- Background CO concentration: 3.0 ppm 1-hour.[11]

- 2011, 2015 and 2040 CO emission factors from MOVES2010b.

5.1.2 Results

The results of the CO microscale air quality modeling are presented in **Table 2** (1-hour concentrations). The maximum 1-hour CO concentrations were 4.9 ppm for existing conditions (2011), 3.7 ppm for the 2015 No-Build, 3.9 ppm for the 2015 Build, 4.3 ppm for the 2040 No-Build, and 4.1 ppm for the 2040 Build Alternative. The 1-hour concentrations include a background concentration of 3.0 ppm. None of these concentrations exceed the

[7] "User's Guide to CAL3QHC Version 2.0: A Modeling Methodology for Predicting Pollutant Concentrations Near Roadway Intersections", U.S. Environmental Protection Agency, Office of Air Quality Planning and Standards, Research Triangle Park, NC, September 1995.
[8] Rebecca Frohning (rfrohning@psrc.org), "RE: Poplar Way Extension Bridge, Lynnwood, WA", e-mail message, December 2, 2013.
[9] Min Luo (mxlu@deainc.com), "Poplar Way Traffic Volumes", e-mail message, December 4, 2013. Carl Enfield (carle@perteet.com) "Poplar Way Traffic Data", e-mail message, November 25, 2013.
[10] Jim Laughlin (WSDOT), telephone conversation with John Jaeckel (HNTB), November 12, 2013.
[11] Ibid.

1-hour (35 ppm) NAAQS. Therefore, the project meets the project level conformity requirements in 40 CFR Part 93.

TABLE 2

MICROSCALE AIR QUALITY ANALYSIS
MAXIMUM 1-HOUR CO CONCENTRATIONS (ppm)*

Air Quality Receptor ID	2011	2015		2040	
	Existing	No-Build	Build	No-Build	Build
	1 hour	1 hour	1 hour	1 hour	1 hour
A1	3.7	3.2	-	3.4	-
A2	3.6	3.2	-	3.4	-
A3	3.8	3.2	-	3.4	-
A4	3.7	3.3	-	3.4	-
A5	3.4	3.1	-	3.3	-
A6	3.4	3.1	-	3.4	-
A7	3.6	3.2	-	3.5	-
A8	3.6	3.2	-	3.5	-
A9	3.6	3.2	-	3.4	-
A10	4.7	**3.7**	-	**4.3**	-
A11	4.5	**3.7**	-	3.8	-
A12	4.3	3.5	-	3.8	-
A13	-	-	3.3	-	3.5
A14	-	-	3.4	-	3.5
A15	-	-	3.3	-	3.6
A16	-	-	3.6	-	3.7
A17	-	-	3.4	-	3.4
A18	-	-	3.3	-	3.5
A19	-	-	3.6	-	3.7
A20	-	-	3.3	-	3.5
A21	-	-	3.3	-	3.2
A22	-	-	3.4	-	3.6
A23	-	-	3.3	-	3.5
A24	-	-	3.3	-	3.4
A25	-	-	3.8	-	4.0
A26	-	-	3.6	-	3.7
A27	-	-	3.5	-	3.6
A28	-	-	**3.9**	-	**4.1**
A29	-	-	3.6	-	3.9
A30	-	-	3.4	-	3.7
A31	3.6	3.2	3.3	3.3	3.6
A32	3.7	3.2	3.4	3.3	3.5
A33	3.5	3.2	3.2	3.2	3.4
A34	3.6	3.4	3.3	3.3	3.5

Air Quality Receptor ID	2011	2015		2040	
	Existing	No-Build	Build	No-Build	Build
	1 hour	1 hour	1 hour	1 hour	1 hour
A35	3.6	3.3	3.3	3.3	3.6
A36	3.6	3.3	3.3	3.3	3.5
A37	3.7	3.3	3.3	3.3	3.4
A38	3.3	3.2	3.2	3.2	3.4
A39	3.3	3.1	3.1	3.1	3.3
A40	3.8	3.5	3.5	3.7	3.7
A41	3.7	3.5	3.6	3.5	3.8
A42	4.0	3.5	3.6	3.6	3.8
A43	3.7	3.5	3.4	3.5	3.5
A44	3.6	3.2	3.2	3.3	3.3
A45	3.5	3.2	3.2	3.2	3.4
A46	4.2	3.6	3.6	3.7	3.6
A47	4.3	3.6	3.6	3.8	3.7
A48	4.3	3.6	3.6	3.7	3.6
A49	**4.9**	**3.7**	-	3.9	-
A50	4.5	3.6	-	4.0	-
A51	4.5	**3.7**	-	4.0	-
A52	4.7	**3.7**	3.7	**4.3**	4.0
A53	-	-	3.8	-	3.9
A54	-	-	3.7	-	3.8

*The National Ambient Air Quality Standard for CO is 35 ppm for a one hour average.
Concentrations include an ambient background level of 3.0 ppm (1 hour)
Indicates maximum concentration for each alternative and year of analysis.
Source: HNTB Corporation, January 2014

5.2 Ozone

Ozone project level conformity is addressed through the approval of the TIP. As stated in section **4.0 Regional Conformity**, *The 2013-2016 Regional Transportation Improvement Program* for the Puget Sound Region was approved by the FHWA and FTA. Therefore, the Poplar Way Extension Bridge project meets the project level conformity requirements in 40 CFR Part 93.

6.0 MSAT

In addition to the criteria air pollutants presented in **Table 1**, EPA also regulates air toxics. Most air toxics originate from human-made sources, including on-road mobile sources, non-road mobile sources (e.g., airplanes), area sources (e.g., dry cleaners) and stationary sources (e.g., factories or refineries).

“Controlling air toxic emissions became a national priority with the passage of the Clean Air Act Amendments (CAAA) of 1990, whereby Congress mandated that the U.S. Environmental

Protection Agency (EPA) regulate 188 air toxics, also known as hazardous air pollutants. The EPA has assessed this expansive list in their latest rule on the Control of Hazardous Air Pollutants from Mobile Sources (Federal Register, Vol. 72, No. 37, page 8430, February 26, 2007) and identified a group of 93 compounds emitted from mobile sources that are listed in their Integrated Risk Information System (IRIS) (http://cfpub.epa.gov/ncea/iris/index.cfm). In addition, EPA identified seven compounds with significant contributions from mobile sources that are among the national and regional-scale cancer risk drivers from their 1999 National Air Toxics Assessment (NATA) (http://www.epa.gov/ttn/atw/nata1999/). These are acrolein, benzene, 1,3-butidiene, diesel particulate matter plus diesel exhaust organic gases (diesel PM), formaldehyde, naphthalene, and polycyclic organic matter. While FHWA considers these the priority mobile source air toxics, the list is subject to change and may be adjusted in consideration of future EPA rules. The 2007 EPA rule mentioned above requires controls that will dramatically decrease MSAT emissions through cleaner fuels and cleaner engines. According to an FHWA analysis using EPA's MOBILE6.2 model, even if vehicle activity (vehicle-miles travelled, VMT) increases by 145 percent as assumed, a combined reduction of 72 percent in the total annual emission rate for the priority MSAT is projected from 1999 to 2050…."[12]

"The FHWA developed a tiered approach for analyzing MSAT in NEPA documents, depending on specific project circumstances:

1. No analysis for projects with no potential for meaningful MSAT effects;
2. Qualitative analysis for projects with low potential MSAT effects; or
3. Quantitative analysis to differentiate alternatives for projects with higher potential MSAT effects…

(1) Projects with No Meaningful Potential MSAT Effects or Exempt Projects.

"The types of projects included in this category are:

> Projects qualifying as a categorical exclusion under 23 CFR 771.117(c) (subject to consideration whether unusual circumstances exist under 23 CFR 771.117(b));
>
> Projects exempt under the Clean Air Act conformity rule under 40 CFR 93.126; or
>
> Other projects with no meaningful impacts on traffic volumes or vehicle mix."[13]

"The purpose of this project is to improve access to and circulation within the Lynnwood City Center. This project has been determined to generate minimal air quality impacts for CAAA criteria pollutants and has not been linked with any special MSAT concerns. As such, this project will not result in changes in traffic volumes, vehicle mix, basic project location, or any other factor that would cause an increase in MSAT impacts of the project from that of the no-build alternative.

"Moreover, EPA regulations for vehicle engines and fuels will cause overall MSAT emissions to decline significantly over the next several decades. Based on regulations now in effect, an

[12] April Marchese, "Interim Guidance Update on Mobile Source Air Toxic Analysis in NEPA Documents", Memorandum, addressed to FHWA Division Administrators, December 6, 2012, p. 2.
[13] "Interim Guidance Update on Mobile Source Air Toxic Analysis in NEPA Documents", p. 4.

analysis of national trends with EPA's MOVES model forecasts a combined reduction of over 80 percent in the total annual emission rate for the priority MSAT from 2010 to 2050 while vehicle-miles of travel are projected to increase by 100 percent. This will both reduce the background level of MSAT as well as the possibility of even minor MSAT emissions from this project."[14]

5.0 CONSTRUCTION MITIGATION

The Poplar Way Extension Bridge project construction will take place over two years. Over this time there would be localized increased emissions from construction equipment and particulate emissions from construction activities. Particulate emissions, whether from construction equipment, diesel exhaust or dust from the construction activities, should be controlled as well as possible. Contractors should follow all WSDOT *Standard Specifications for Road, Bridge, and Municipal Construction*[15] sections that address the control of construction equipment exhaust or dust during construction.

Even though construction mitigation measures are not required, there are several measures that could be considered to reduce engine activity or reduce emissions per unit of operating time. Operational agreements that reduce or redirect work or shift times to avoid community exposures can have positive benefits. Also, technological adjustments to construction equipment, such as off-road dump trucks and bulldozers, could be an appropriate strategy. The EPA recommends Best Available Diesel Retrofit Control Technology (BACT) to reduce diesel emissions. Typically, BACT requirements can be met through the retrofit of all diesel powered equipment with diesel oxidation catalysts or diesel particulate filters, and other devices that provide an after-treatment of exhaust emissions.

6.0 CONCLUSION

Based on the air quality analysis completed for the proposed improvements, this project has met the 40 CFR Part 93 requirements for project level transportation conformity for CO and will not contribute to any violation of the NAAQS or result in any increase in MSAT emissions.

[14] Ibid, Appendix A – Prototype Language for Exempt Projects. Underlined text has been inserted in the prototype text.
[15] *Specifications for Road, Bridge, and Municipal Construction*: http://www.wsdot.wa.gov/Publications/Manuals/M41-10.htm

7.0 REFERENCES

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