Ontario International Airport Connector Project

ONTCONNECTOR

APPENDIX H

AIR QUALITY TECHNICAL REPORT

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TABLE OF CONTENTS

APPENDIX

FIGURES

TABLES

ACRONYMS AND ABBREVIATIONS

%	percent
—	Not applicable
°F	degrees Fahrenheit
µg/m^3	micrograms per cubic meter
AQMP	Air Quality Management Plan
AQS	Air Quality System
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CalEEMod	California Emissions Estimator Model
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CCAA	California Clean Air Act
CFR	Code of Federal Regulations
CO	carbon monoxide
EPA	Environmental Protection Agency
FFY	Federal Fiscal Year
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
FTIP	Federal Transportation Improvement Program
GHG	Greenhouse Gas
HAP	Hazardous Air Pollutant
ID	Identification
lbs/day	pounds per day
LOS	Level-of-Service
LSTs	localized significance threshold
MEP	Mechanical, electrical, and plumbing
MM	Mitigation Measure
MPO	Metropolitan Planning Organization
MSAT	mobile source air toxics
MSF	maintenance and storage facility
N/A	Not Applicable
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NO	nitrogen oxide
NO_2	nitrogen dioxide
NO_X	oxides of nitrogen

O^3	ozone
ONT	Ontario International Airport
Pb	lead
PM	particulate matter
PM_{10}	particulate matter sized 10 microns or less in diameter
$PM_{2.5}$	particulate matter sized 2.5 microns or less in diameter
Ppb	Parts per billion
ppm	parts per million
Project	Ontario International Airport Connector Project
ROW	right-of-way
RTP/SCS	Regional Transportation Plan / Sustainable Communities Strategy
RTSs	regional thresholds of significance
SBCTA	San Bernardino County Transportation Authority
SCAB	South Coast Air Basin
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SIP	State Implementation Plan
SO^2	sulfur dioxide
TAC	Toxic Air Contaminant
TBM	tunnel boring machine
TCM	Transportation Control Measures
TCR	Transportation Conformity Rule
U.S. DOT	United States Department of Transportation
U.S. EPA	United States Environmental Protection Agency
USC	United States Code
VMT	Vehicle Miles Traveled
VOC	volatile organic compound

1 INTRODUCTION

San Bernardino County Transportation Authority (SBCTA) is proposing the Ontario International Airport (ONT) Connector Project (Project) in the City of Ontario and the City of Rancho Cucamonga. The purpose of this technical report is to describe the existing air quality setting, applicable regulations, methodology for the analysis, and potential impacts from construction and operation of the Build Alternative and the No Build Alternative. The information contained in this technical report will be used to support the environmental review process pursuant to National Environmental Policy Act (NEPA).

1.1 NO BUILD ALTERNATIVE

The No Build Alternative would not result in a new direct electrically powered, on-demand fixed transit guideway connection from the Cucamonga Metrolink Station to ONT. Existing roads, highways, and transit services, such as Omnitrans' limited-service bus route to ONT, known as ONT Connect or Route 380, would be the primary transportation options for access to ONT. As such, the No Build Alternative would not result in reduced air quality emissions and would not contribute to improved air quality. Some highway improvements may be undertaken by other agencies as part of separate planned projects, which would take place with either the No Build or Build Alternative associated with this project.

1.2 BUILD ALTERNATIVE

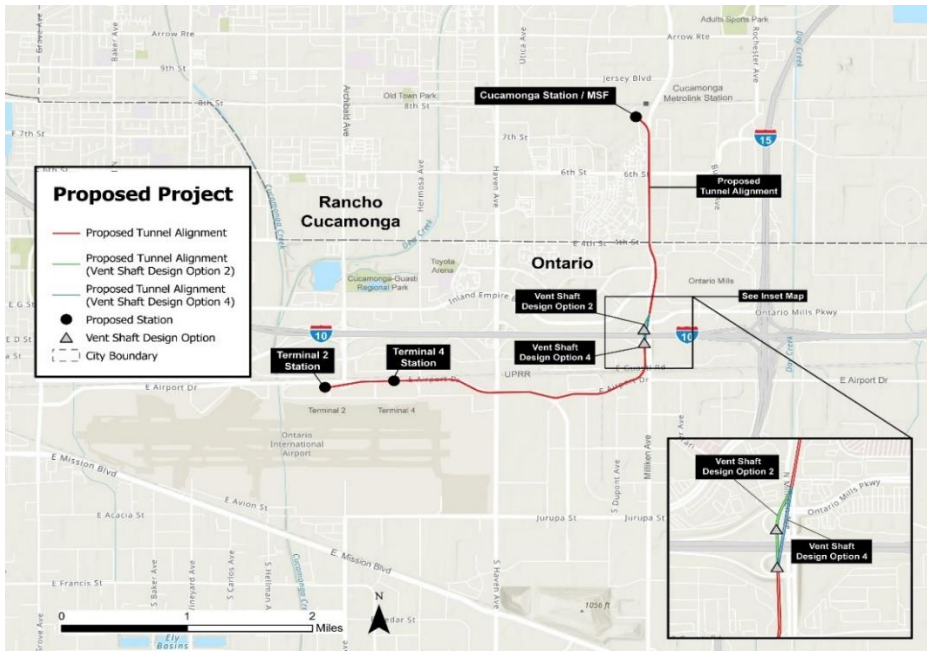
The Build Alternative includes a 4.2-mile tunnel alignment, three passenger stations, a maintenance and storage facility (MSF), and an access and ventilation shaft in the cities of Rancho Cucamonga and Ontario within the County of San Bernardino (see Figure 1 and Figure 2). The Build Alternative would include autonomous electric vehicles that would be grouped and queued at their origin station and depart toward the destination station once boarded with passengers. The Build Alternative would provide a peak one-way passenger throughput of approximately a minimum of 100 per hour. Operations would be managed by Omnitrans, with on-demand service provided daily from 4:00 a.m. to 11:30 p.m., including weekends and holidays.

Overall construction of the Build Alternative would last approximately 56 months, with project elements varying in their specific construction duration (see Table 1). Construction is projected to start in 2025 and is anticipated to be completed in 2031.

Figure 1: Regional Location Map

Source: AECOM 2024

Figure 2: Build Alternative Site



Source: AECOM 2024

Table 1: Typical Sequencing of Transit Construction Activities

Activity	Location of Construction Activities	Typical Duration (Total Months)	Description
Utility Relocation	At Grade	7-14	Relocate utilities from temporary and permanent elements related to the construction and/or operation of the Project.
Construction Staging Laydown Yard	At Grade	3-6	Prepare existing lots to store construction equipment and materials, including the tunnel boring machine (TBM), office space.
Roadway	At Grade	6-18	Reconfigure roadway, demolition of existing roadway installation of curb and gutter and other public right-of-way (ROW) improvements.
At-grade Guideway	At Grade	6-18	Install asphalt and striping for guideway.
Station Construction (overall)	At Grade	24-48	Install maintenance and storage facility (MEP), canopies, faregates, ticketing, finishes, stairs, and walkways.
Parking	At Grade	3-6	Restoring existing parking stalls temporarily unavailable due to construction, as applicable.
MSF	At Grade	8-12	Install MEP, fencing, enclosed bays, specialized washing equipment, and rebar installation, and concrete pours.
Utility Relocation	Underground	7-14	Relocate and hang underground utilities from temporary and permanent elements related to the construction and operation of the Project.
Open Cut and Cut and Cover Construction	Underground	18-24	Supports the construction of the TBM launching and receiving pit, and of the access ramps connecting the tunnel with the at-grade stations. Install soldier piles for beam and lag support of excavation (SOE) and excavation. Cover excavation with temporary decking.
Bored Tunnel	Underground	16-24	Underground guideway construction.
Ventilation and Emergency Access Shaft	Underground	6-8	Install ventilation and emergency access shaft.
Underground Guideway	Underground	12-18	Install asphalt and striping for guideway.

2 REGULATORY SETTING

2.1 FEDERAL

The following sections describe applicable federal policies and regulations.

2.1.1 Federal Transportation Improvement Program

Federal Transportation Improvement Program (FTIP) is a federal document that details programs and projects listed in the Regional Transportation Plan / Sustainable Communities Strategy (RTP/SCS) and ensures compliance with federal and state requirements. The FTIP lists multi-modal transportation projects, including the Southern California Association of Governments' (SCAG) Federal Transit Administration (FTA)-funding projects, which are required to be included in the FTIP. Projects included in the FTIP relate to transit, bus and rail, highway improvements, active transportation, intersection improvements, among other transportation-related projects. SCAG completed their FTIP in 2023 and passed all five of the transportation conformity requirements tests, required by U.S. Department of Transportation (U.S. DOT) Metropolitan Transportation Regulation and United States Environmental Protection Agency (U.S. EPA) Transportation Conformity Regulations. The 2023 SCAG FTIP passed the consistency with the 2020 RTP/SCS test, regional emissions tests, timely implementation of Transportation Control Measures (TCM) test, inter-agency consultation and public involvement test, and the financial constraint test.

2.1.2 National Environmental Policy Act [42 United States Code (USC) Section 4321 et seq.]

NEPA requires consideration of potential environmental effects, including Air Quality effects, in the evaluation of any proposed federal agency action. NEPA also obligates federal agencies to consider the environmental consequences and costs in their projects and programs as part of the planning process. General NEPA procedures are set forth in the Council on Environmental Quality regulations 42 USC 4332 Section 102.

2.1.3 Clean Air Act and National Ambient Air Quality Standards

U.S. EPA under Clean Air Act (CAA) of 1970, 42 United States Code (USC) Section 7401, et seq., amended in 1977 and 1990, has developed National Ambient Air Quality Standards (NAAQS) to protect human health and welfare. NAAQS, codified in 40 CFR Part 50, include primary standards, which are designed to protect human health, including sensitive subpopulations, such as children, the elderly, and those with chronic respiratory problems. The secondary standards are designed to protect public welfare, including economic interests, visibility, vegetation, animal species, and other concerns not related to human health.

NAAQS apply to the following criteria pollutants:

- Particulate matter (PM) including PM sized 10 microns or less in diameter (PM_{10}),

- PM sized 2.5 microns or less in diameter ($PM_{2.5}$),
- Carbon monoxide (CO),
- Sulfur dioxide (SO_2),
- Nitrogen dioxide (NO_2),
- Lead (Pb), and
- Ground-level ozone (O_3).

O_3 is not emitted directly from emission sources but is created near the ground level by a chemical reaction between oxides of nitrogen (NO_X) and volatile organic compounds (VOCs) in the presence of sunlight. As a result, NO_X and VOCs are referred to as ozone precursors and are regulated as a means to prevent O_3 formation. NO_X is composed primarily of NO_2 and nitrogen oxide (NO). SO_2 and NO_X are also precursors to secondary PM formation (in particular, $PM_{2.5}$).

NAAQS are expressed in terms of a concentration level and an associated averaging period. The concentration levels may be expressed as parts per million (ppm), parts per billion (ppb), or micrograms per cubic meter ($\mu g/m^3$). States and municipalities are able to adopt standards more stringent than NAAQS. Current NAAQS for criteria pollutants and the Federal Register references are included in the Federal and State Air Quality Standards, sourced from the California Air Resources Board and summarized in Table 2.

CAA requires geographic areas to be designated according to their ability to attain NAAQS, and these areas are categorized for each criteria pollutant as:

- Attainment Area: Areas where no exceedance of NAAQS for a specific criteria pollutant occurred.
- Nonattainment Area: Areas where exceedance of NAAQS for a specific criteria pollutant occurred.
- Maintenance Area: Areas that have previously been designated as nonattainment areas but are still in need of efforts to maintain the improved conditions in the future. Most of the CAA rules for nonattainment areas are still applicable to a maintenance area.
- Unclassified Area: Areas where EPA is unable to determine attainment status after evaluating available information.

If an area is designated as nonattainment for a criteria pollutant under NAAQS, state governments must develop a specific State Implementation Plan (SIP) and implement control plans to reduce the emission level of that pollutant.

Per CAA Section 176(c), federal agencies are required to ensure that their actions conform to the SIP in nonattainment or maintenance areas for purposes of reducing the severity and number of violations of NAAQS in an effort to achieve attainment of these standards. There are two sections of the conformity regulations in CAA that are applicable to federal actions:

Table 2: Federal and State Air Quality Standards

Criteria Pollutant	Averaging Time	California Ambient Air Quality Standards (CAAQS)	NAAQS
O_3	1-Hour	0.09 ppm	—
O_3	8-Hour	0.070 ppm	0.070 ppm
PM_{10}	24-hour	50 µg/m^3	150 µg/m^3
PM_{10}	Annual	20 µg/m^3	—
$PM_{2.5}$	24-Hour	—	35 µg/m^3
$PM_{2.5}$	Annual	12.0 µg/m^3	12.0 µg/m^3
CO	1-Hour	20 ppm	35 ppm
CO	8-Hour	9 ppm	9 ppm
NO_2	1-Hour	0.18 ppm	0.10 ppm
NO_2	Annual	0.030 ppm	0.053 ppm
SO_2	1-Hour	0.25 ppm	75 ppb
SO_2	24-Hour	0.04 ppm	0.14 ppm
SO_2	Annual Arithmetic Mean	—	0.03 ppm
Pb	30-Day Average	1.5 µg/m^3	—
Pb	Rolling 3-Month Average, 24-Hour	—	1.5 µg/m^3
Sulfates	24-Hour	25 µg/m^3	—
Hydrogen Sulfides	1-Hour	0.03 ppm (42 µg/m^3)	—
Vinyl Chloride	24-Hour	0.01 ppm (26 µg/m^3)	—

Source: California Air Resources Board 2016
— = not applicable
ppb = parts per billion
ppm = parts per million

- Transportation projects funded or approved by Federal Highway Administration (FHWA) or FTA are governed by the CAA's Transportation Conformity Rule (TCR). The TCR is enforced on both a regional level and project level.
- Non-FHWA/FTA projects or components of a FHWA/FTA transportation project requiring actions by other federal agencies such as Federal Aviation Administration, which are governed by the CAA's General Conformity Rule. This rule does not apply to the proposed Project because no federal agencies other than FTA are lead or corporate agencies for this federal action.

2.1.4 Mobile Source Air Toxics

In addition to the criteria pollutants, CAA also lists 187 air toxins, known as hazardous air pollutants (HAPs). CAA authorizes EPA to characterize and control emissions of these pollutants. However, unlike the criteria pollutants, the majority of air toxics do not have ambient air quality standards. Of the 187 HAPs, 93 have been identified as mobile source air toxics (MSAT), and the following nine MSATs are priority pollutants:

- Acetaldehyde;
- Acrolein;
- Benzene
- 1,3-butadiene;
- Diesel PM plus diesel exhaust organic gases (diesel PM);
- Ethylbenzene;
- Formaldehyde;
- Naphthalene; and
- Polycyclic organic matter.

To reduce emissions of MSATs, EPA has issued various regulations, including the following:

- March 2001: Regulation targeting 21 HAPs from motor vehicles and their fuel. The goal of regulation was to reduce on-highway emissions of benzene, formaldehyde, 1,3-butadiene, and acetaldehyde by 67 to 76 percent (%), and reduce on-highway diesel PM emissions by 90%.
- February 2007: Regulation limiting the benzene content of gasoline and reducing toxic emissions from passenger vehicles and gasoline cans. EPA estimates that, in 2030, this rule will reduce total emissions of MSATs by 330,000 tons and VOC emissions by over 1 million tons.
- April 2014: Regulation requiring Tier 3 standards for motor vehicles. The standards will reduce both tailpipe and evaporative emissions from all passenger vehicles and provide more stringent gasoline sulfur standards.

2.2 STATE

2.2.1 California Clean Air Act

Along with the federal CAA regulations, enforced by EPA, California must also comply with the air quality regulations under California Clean Air Act (CCAA). CCAA was adopted in 1988 and requires California Air Resources Board (CARB) to establish CAAQS. These standards are also included in Table 2. In most cases, CAAQS are more stringent than NAAQS. California has also established standards for sulfates, visibility-reducing particles, hydrogen sulfide, and vinyl chloride. Other CARB responsibilities include, but are not

limited to, overseeing local air district compliance with state and federal laws; approving local air quality plans; submitting SIPs to EPA; monitoring air quality; determining and updating area designations and maps; and setting emission standards for new mobile sources, consumer products, small utility engines, off-road vehicles, and fuels. In addition to CARB, Regional Air Quality Management Districts and Air Pollution Control Districts administer CCAA on the regional and local levels.

CCAA requires that each area exceeding CAAQS for O_3, CO, SO_2, and NO_2 develop a plan aimed at achieving those standards. California Health and Safety Code Section 40914 requires air districts to design a plan that achieves an annual reduction in district-wide emissions of 5% or more, averaged every consecutive 3-year period. To satisfy this requirement, the local air districts have to develop and implement air pollution reduction measures, which are described in their air quality attainment plans, and outline strategies for achieving CAAQS for any criteria pollutants for which the region is classified as nonattainment.

2.2.2 Tanner Toxics Act

Toxic air contaminants (TACs) in California are regulated primarily through Tanner Air Toxics Act (Chapter 1047, Statutes of 1983) and Air Toxics Hot Spots Information and Assessment Act (Chapter 1252, Statutes of 1987). Assembly Bill 1807 sets forth a formal procedure for CARB to designate substances as TACs. Research, public participation, and scientific peer review must occur before CARB can designate a substance as a Toxic Air Contaminant (TAC). Air Toxics Hot Spots Information and Assessment Act requires that TAC emissions from stationary sources be quantified and compiled into an inventory according to criteria and guidelines developed by CARB, and, if directed to do so by the local air district, a health risk assessment must be prepared to determine the potential health impacts of such emissions.

2.3 REGIONAL AND LOCAL

2.3.1 South Coast Air Quality Management District

The local Air Quality Management or Air Pollution Control Districts are responsible for preparing the portion of the California SIP applicable within their boundaries, adoption of air quality control regulations for stationary sources, and implementation of indirect source and transportation air quality control measures. South Coast Air Quality Management District (SCAQMD) is the regulatory agency responsible for improving air quality for large areas of Los Angeles, Orange, Riverside and San Bernardino counties, including the Coachella Valley. The region is home to more than 17 million people—about half the population of the entire state of California. Significance criteria established by the applicable air quality management board or air pollution control district may be relied on to make the impact determinations for specific program elements.

2.3.1.1 Regional Thresholds of Significance

SCAQMD has established recommended screening level thresholds of significance for regional emissions. The SCAQMD regional thresholds of significance (RTSs) are shown in Table 3. The RTSs were designed to identify those projects that would result in significant levels of air pollution and to assist the region in attaining the applicable state and federal ambient air quality standards, which were established using health-based criteria to protect the public with a margin of safety from adverse health impacts due to exposure to air pollution. Because regional air quality standards have been established for these criteria pollutants to protect the public with a margin of safety from adverse health impacts due to exposure to air pollution, these RTSs can also be used to assess the proposed Project emissions and inform the proposed Project's impacts to regional air quality and health risks.

2.3.1.2 Localized Significance Thresholds

In order to assess local air quality impacts, SCAQMD has developed Localized Significance Thresholds (LSTs) and supporting LST Methodology to assess the proposed Project-related emissions in the proposed Project vicinity (SCAQMD 2008). The LST Methodology found that the primary emissions of concern are NO_2, CO, PM_{10}, and $PM_{2.5}$.

The LSTs represent the maximum emissions from a project that will not cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standards and are developed based on the ambient concentrations of that pollutant for each source receptor area. Because the LSTs consider the ambient air quality, LSTs can also be used to identify those projects that would result in significant levels of air pollution and impact sensitive receptors.

Table 3: SCAQMD Regional Thresholds of Significance for Select Criteria Pollutants

Pollutant	Daily Emissions in lbs/day (Construction)	Daily Emissions in lbs/day (Operation)
NO_X	100	55
PM_{10}	150	150
$PM_{2.5}$	55	55
CO	550	550
VOC	75	55
SO_X	150	150
Pb[1]	3	3

Notes: lbs/day = pounds per day

[1] This analysis does not directly evaluate Pb because little to no quantifiable and foreseeable emissions of this substance would be generated by the Build Alternative. Pb emissions have significantly decreased due to the near elimination of leaded fuel use.

Source: SCAQMD 2023

The LST Methodology provides Look-Up Tables with different thresholds based on the location and size of a project site and distance to the nearest sensitive receptors. The Look-Up Tables provide thresholds for 1-, 2-, and 5-acre project sites.

2.3.1.3 Air Quality Management Plan

Under CCAA, SCAQMD is required to develop an air quality attainment plan for nonattainment criteria pollutants within the air district. The most recent air quality plan developed by SCAQMD are the 2016 Air Quality Management Plan (AQMP; SCQAMD 2017) to address the 1997 8-hour O_3 standards and $PM_{2.5}$ standards and the 2022 AQMP that is focused on attaining the 2015 8-hour O_3 standard of 70 ppb (SCAQMD 2022). The 2016 and 2022 AQMPs are the legally enforceable blueprint for how the region will meet and maintain NAAQS and CAAQS. These AQMPs identify strategies and control measures needed to achieve attainment of the 8-hour O_3 standard and federal annual and 24-hour standard for $PM_{2.5}$ in the South Coast Air Basin (SCAB) (SCAQMD 2017; 2022). The future emission forecasts are primarily based on demographic and economic growth projections provided by Southern California Association of Governments.

2.3.1.4 Southern California Air Quality Management District Rule 402

Rule 402 (Nuisance), adopted by SCAQMD on May 7, 1976, states a person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property. The provisions of this rule shall not apply to odors emanating from agricultural operations necessary for the growing of crops or the raising of fowl or animals.

2.3.1.5 Southern California Air Quality Management District Rule 403

Rule 403 (Fugitive Dust), adopted by SCAQMD on February 7, 1976, and amended on April 20, 2010, has the purpose of reducing the amount of PM entrained in the ambient air as a result of anthropogenic (man-made) fugitive dust sources by requiring actions to prevent, reduce, or mitigate fugitive dust emissions.

2.3.1.6 2020-2045 Regional Transportation Plan/Sustainable Community Strategies (Connect SoCal)

The 2020-2045 RTP/SCS, also known as Connect SoCal, was adopted by the Regional Council on September 3, 2020, and replaces the 2016-2040 RTP/SCS. The RTP/SCS serves as a long-range regional transportation planning tool through the year 2045. The core vision of the 2020-2045 RTP/SCS is to build upon and expand land use and transportation strategies to increase mobility options, reduce Vehicle Miles Travelled (VMT), and achieve a more sustainable growth pattern (SCAG 2020). The 2020-2045 RTP/SCS lists ten goals that were used to develop the plan and its guiding policies. These goals include the following:

1. Encourage regional economic prosperity and global competitiveness.
2. Improve mobility, accessibility, reliability, and travel safety for people and goods.
3. Enhance the preservation, security, and resilience of the regional transportation system.
4. Increase person and goods movement and travel choices within the transportation system.
5. Reduce Greenhouse Gas (GHG) emissions and improve air quality.
6. Support healthy and equitable communities.
7. Adapt to changing climate and support an integrated regional development pattern and transportation network.
8. Leverage new transportation technologies and data-driven solutions that result in more efficient travel.
9. Encourage development of diverse housing types in areas that are supported by multiple transportation options.
10. Promote conservation of natural and agricultural lands and restoration of habitats.

2.3.2 County of San Bernardino

The County of San Bernardino General Plan (County of San Bernardino 2020) is a collection of planning tools intended to guide future decisions, investments, and improvements throughout the County of San Bernardino. The County of San Bernardino General Plan, Natural Resources Element contains the following policy related to air quality that is applicable to the Build Alternative:

- **Policy NR-1.8: Construction and Operations.** Invest in County facilities and fleet vehicles to improve energy efficiency and reduce emissions. Encourage County contractors and other builders and developers to use low emission construction vehicles and equipment to improve air quality and reduce emissions.

2.3.3 City of Rancho Cucamonga

PlanRC is City of Rancho Cucamonga's General Plan, with long-term goals, objectives, and policies to guide land use planning decisions. Policies included in PlanRC that discuss air quality are detailed below:

- **Goal RC-5: Local Air Quality**. Healthy air quality for all residents.
- **Policy RC-5.1: Pollutant Sources.** Minimize increases of new air pollutant emissions in the city and encourage the use of advance control technologies and clean manufacturing techniques.
- **Policy RC-5.4: Health Risk Assessment.** Consider the health impacts of development of sensitive receptors within 500 feet of a freeway, rail line, arterial, collector or transit corridor sources using health risk assessments to understand potential impacts.
- **Policy RC-5.10: Clean and Green Industry.** Prioritize non-polluting industries and companies using zero or low air pollution technologies.

- **Policy RC-5.11: Dust and Odor.** Require new construction to include measures to minimize dust and odor during construction and operation.

2.3.4 City of Ontario General Plan

City of Ontario's Policy Plan act as the General Plan, detailing long-term planning and policy goals to guide the City of Ontario's growth and development. Policies related to air quality include the following:

- **Goal ER-4:** Improved indoor and outdoor air quality and reduced locally generated pollutant emissions.
- **Policy ER4-5: Transportation.** Promote mass transit and non-motorized mobility options (e.g., walking, biking) to reduce air pollutant emissions.
- **Policy ER4-6: Particulate Matter.** Support efforts to reduce PM to meet State and Federal Clean Air Standards.
- **Policy ER4-7: Other Agency Collaboration.** Collaborate with other agencies within the SCAB to improve regional air quality at the emission source, with a particular focus on sources that affect environmental justice areas in Ontario.

3 METHODOLOGY

3.1 RESOURCE STUDY AREA

The regional study area encompasses the SCAB, where SCAQMD is the agency responsible for attaining state and federal clean air standards, and the local study area includes areas along: 1) the roadway network affected with potential impacts analyzed and 2) the areas immediately adjacent to new stations and tunnel portals.

3.1.1 Construction

Temporary on-road vehicle and off-road equipment emissions associated with the new stations, MSF, Vent Shaft Design Option, and tunnel construction were estimated using the CARB EMFAC2021 and OFFROAD2021 models to estimate emissions factors using construction resource input data from SCAQMD regional information and local sources at construction sites. Construction off-road equipment, size and operating schedule was provided in the technical memo, Air Quality Exercise – Conceptual Construction Support, prepared by HNTB (HNTB 2022). Fugitive emissions were based on total size (in acres) of land disturbed, which was also provided by HNTB. The number of on-road trucks and employees were based on the conceptual construction trucking schedule for excavation, conceptual number of construction employees, arrival, and departure times. Further calculation methodology details are provided in Section 5.3 and Transportation Technical Study dated November 2022. Localized construction emissions include those emissions only generated within the construction sites such as the new off-airport stations, MSF, tunnel portals, haul trucks, and vent shaft, and will be estimated using the same modeling tools described above. Sensitive receptors closest to the proposed Project footprint include commercial properties within 0.01 mile to 0.09 mile of all four construction locations (MSF, stations and Vent Shaft Design Option), an apartment community within 0.23 mile of the Cucamonga Metrolink Station site, a restaurant within 0.07 mile northwest of Vent Shaft Design Option 2, a restaurant within 0.11 mile southwest of Vent Shaft Design Option 4, airport terminals within 0.7 mile of the proposed ONT T2 Station and airport terminals within 0.11 mile of the proposed ONT T4 Station.

The estimated site-specific emissions, the size of source area, and the distance from sensitive receptors to the site boundary were compared with the applicable SCAQMD-established significance thresholds to determine potential localized construction period impacts and whether mitigation measures would be warranted. Distance to sensitive receptors was based on aerial review of construction area and nearby sensitive locations. Distance to the closest sensitive receptor for NO_X and CO were often shorter than $PM_{2.5}$ and PM_{10} because NO_X and CO also must consider commercial and industrialized locations.

3.1.2 Operation

The operational emissions analysis addressed sources of direct air pollutant emissions and potential impacts on local and regional air quality under existing conditions, the No Project Alternative, and the proposed Project. CARB (EMFAC2021) model was used to predict both local and regional emissions, if necessary, based on the VMT data established through the transportation impact analysis along the corridor and sub traffic network affected by the proposed Project. This analysis included a CO hot spot analysis that followed the most recent EPA guideline.

3.2 METHODS FOR NEPA EVALUATION

3.2.1 Localized Construction Emissions

With respect to localized criteria pollutants, the proposed Project area is in a nonattainment or maintenance area for O_3, CO, and PM (PM_{10} and $PM_{2.5}$). To satisfy the NEPA requirements on assessing potential mobile source air quality impacts, the analysis followed the guidelines and procedures established for nonattainment pollutants in 40 CFR Section 93.123 through an analysis addressing localized mobile source-related NO_X (O_3 precursor), CO, PM_{10}, and $PM_{2.5}$ concentrations.

3.2.2 Mesoscale (Regional) Construction Emissions

The purpose of conducting a mesoscale emission-burden analysis is to provide a comparison of regional pollutant emission levels for the proposed Build Alternative to the No Project Alternative providing the decision-maker with a resource measure with respect to the emission burden on a mesoscale or regional level among studied alternatives. The mesoscale analysis network established for this Project, is the area affected by the proposed Project on a regional level within which VMT will be predicted for existing and future conditions.

The CARB EMFAC2021 and OFFROAD2021 models were used to estimate emission factors for on-road and off-road criteria pollutants. For on-road emissions, the annual VMT within this mesoscale were multiplied with EMFAC2021-predicted emission factors to predict daily emission levels for each considered pollutant. The average daily VMT per vehicle was taken from the California Emissions Estimator Model (CalEEMod) guidance (CalEEMod 2021a) and default data tables (CalEEMod, 2021b) for SCAQMD. For each piece of off-road equipment, horsepower and hours of operation per day were multiplied with the OFFROAD2021-predicted emission factors to generate daily emission levels. For all off-road equipment, besides power generators, continuous hours of operation per day assumes a usage factor of 70%, as equipment will not be continuously operated for the full potential workday hours. The factor of 70% is conservative, as it is unlikely any equipment, besides the power generators, will be operating at that high percentage. However, power generators are assumed to operate for the full potential hours.

To account for fugitive dust emissions at the construction sites, factors and methodology discussed in the WRAP Fugitive Dust Handbook (Western Governors' Association 2006) for construction and demolition activities were applied. Based on PM_{10} and $PM_{2.5}$ fugitive dust mitigation measures through best management practice, a 50% control were applied.

3.2.3 Clean Air Act Transportation Conformity

The TCR is enforced on both regional level and project level. On a regional level, demonstration of regional transportation conformity is through the development of a Transportation Improvement Program (TIP) which is the responsibility of the metropolitan planning organization (MPO). On a project level analysis, the conformity determination must show that the individual project is included in the TIP to be consistent with the SIP conformity determination (i.e., to be exempt from a regional emissions analysis and to be in compliance with the NAAQS on a local level). Potential localized emission impacts should be addressed through a hot spot analysis for localized nonattainment or maintenance pollutants to ensure that the transportation project with its activities would not:

- Cause or contribute to any new violation of any NAAQS;
- Increase the frequency or severity of any existing violation of any NAAQS; or
- Delay timely attainment of any NAAQS or any required interim emission reduction or other milestones in any area.

The Federal Statewide Transportation Improvement Program (FSTIP) (Caltrans 2022) is a programming document prepared by California Department of Transportation (Caltrans) in cooperation with the state's MPOs and Regional Transportation Planning Agencies. Federal law requires that the FSTIP be updated at least once every 4 years, cover a programming period of 4 years, be financially constrained, and contain a priority list of projects grouped by Federal Fiscal Year (FFY). In California, the FSTIP is updated every 2 years.

The current 2023 FSTIP is a 4-year (FFY 2023 to 2026) federally mandated document that includes a statewide multimodal program of transportation projects proposed for federal funding under Titles 23 and USC Title 49. It also includes projects that are regionally significant, regardless of the funding source. The FSTIP contains references to the 18 MPOs' Federal Transportation Improvement Programs and a list of rural non-MPO projects. The FSTIP is required to be consistent with the State's transportation vision and goals laid out in local and regional long-range transportation plans. Projects in air quality nonattainment and maintenance areas must be consistent with the SIP for air quality.

As part of the federal TCR project-level conformity requirements, the mobile and stationary source impact assessment for the proposed Project is focused on: 1) potential air quality effects of CO and PM emissions on localized congested intersections around the proposed new stations and tunnel portals where ventilation equipment will operate and where the source pollutant concentrations are the worst; 2) the

corridor and mesoscale roadway including tunnel network emissions from all concerned pollutants as a result of the proposed Project; 3) TCR compliance determination; and 4) construction period emissions.

To satisfy the TCR requirements on assessing potential mobile source air quality impacts of CO emissions, the analysis followed the guidelines and procedures established for nonattainment pollutants in 40 CFR Section 93.123 through an analysis addressing localized mobile source-related CO concentrations.

The guideline identifies four categories of projects to be considered for a CO hot-spot analysis (40 CFR Section 93.123[b][1]), which were used for the CO microscale analysis:

- For projects in or affecting locations, areas, or categories of sites which are identified in the applicable implementation plan as sites of violation or possible violation;
- For projects affecting intersections that are at Level-of-Service (LOS) D, E, or F, or those intersections that will change to LOS D, E, or F because of increased traffic volumes related to the proposed Project;
- For any project affecting one or more of the top three intersections in the nonattainment or maintenance area with highest traffic volumes, as identified in the applicable implementation plan; and
- For any project affecting one or more of the top three intersections in the nonattainment or maintenance area with the worst LOS, as identified in the applicable implementation plan.

A screening analysis was performed at a set number of intersections for which LOS and traffic volume forecasts were made for a future Build Year. It is assumed that the proposed Project would not worsen the congestion around new stations, and further microscale analysis for CO is unlikely warranted.

For temporary on-road vehicle and off-road equipment emissions associated with the new stations, MSF, Vent Shaft Design Option, and tunnel construction estimated were also considered under NEPA. Although not directly applicable for an FTA project which is governed by the transportation conformity rule, the de minimis thresholds in terms of annual nonattainment or maintenance pollutant emissions established in the Clean Air Act General Conformity Rule (40 CFR Parts 51 and 93) were used to determine the effects of construction emissions under the Build Alternative. According to the nonattainment and maintenance status for San Bernardino County where the proposed Project is located, the applicable de minimis thresholds were used to compare the maximum annual pollutant emissions to assess the air quality effects associated with construction activities under the Build Alternative.

4 EXISTING CONDITIONS

Air quality is defined by the concentration of pollutants in relation to their impact on human health. Concentrations of air pollutants are determined by the rate and location of pollutant emissions released by pollution sources, and the atmosphere's ability to transport and dilute such emissions. Natural factors that affect transport and dilution include terrain, wind, and sunlight. Therefore, ambient air quality conditions within the local air basin are influenced by such natural factors as topography, meteorology, and climate, in addition to the amount of air pollutant emissions released by existing air pollutant sources.

4.1 GENERAL CLIMATIC CONDITIONS

Climate, topography, and meteorology influence regional and local ambient air quality. Southern California is characterized as a semiarid climate, although it contains three distinct zones of rainfall that coincide with the coast, mountain, and desert. The proposed Project is located within the SCAB. The SCAB is bounded by the Pacific Ocean to the west, the San Gabriel Mountains, San Bernardino Mountains, and San Jacinto Mountains to the north and east, and the San Diego County line to the south.

The topography and climate of Southern California combine to make the SCAB an area of high air-pollution potential. A warm air mass frequently descends over the cool, moist marine layer produced by the interaction between the ocean's surface and the lowest layer of the atmosphere. The warm upper layer forms a cap over the cooler surface layer, which traps the pollutants near the ground. Light winds can further limit ventilation. Additionally, abundant sunlight triggers the photochemical reactions that produce O_3 and the majority of PM (SCAQMD 2017).

The meteorological monitoring station at ONT has climatological data (1991 through 2020 monthly normal) tabulated by National Centers for Environmental Information (2022). The mean daily temperature ranges from 55.2 degrees Fahrenheit (°F) in December to 80.1°F in August. Precipitation peaks between December and March, while it is infrequent during the rest of the year, especially during summer months. The monthly variability of temperature and precipitation for ONT is shown in Table 4.

Table 4: Summary of General Climatic Conditions at Ontario International Airport

Month	Mean Maximum Temperature (°F)	Mean Minimum Temperature (°F)	Mean Daily Temperature (°F)	Mean Precipitation (inches)
January	67.7	44.6	56.1	2.57
February	68.1	46.2	57.1	3.07
March	71.7	48.7	60.2	1.64
April	75.7	51.1	63.4	0.76
May	79.8	55.6	67.7	0.30
June	86.4	60.0	73.2	0.02
July	93.8	64.7	79.2	0.05
August	94.9	65.2	80.1	0.03
September	91.3	63.8	77.6	0.10
October	82.6	57.1	69.8	0.41
November	74.7	49.0	61.9	0.80
December	66.9	43.6	55.2	1.89
Annual	**79.5 (average)**	**54.1 (average)**	**66.8 (average)**	**11.64 (total)**

Source: National Centers for Environmental Information 2022

4.2 EXISTING AIR QUALITY AND ATTAINMENT STATUS

4.2.1 Attainment Status

Both EPA and CARB use ambient air quality monitoring data to designate areas according to their attainment status for criteria air pollutants. The purpose of these designations is to identify the areas with air quality problems and initiate planning efforts for improvement. The three basic designation categories are nonattainment, attainment, and unclassified. An “attainment” designation for an area signifies that pollutant concentrations did not exceed the established standard. In most cases, areas designated or re-designated as attainment (i.e., an area that was previously in nonattainment but now attains the standard) must develop and implement maintenance plans. These areas are designated as maintenance areas and are currently under a maintenance plan to ensure continued compliance with the standard.

In contrast to attainment, a “nonattainment” designation indicates that a pollutant concentration has exceeded the established standard. Nonattainment may differ in severity. To identify the severity of the problem and the extent of planning and actions required to meet the standard, nonattainment areas are assigned a classification that is commensurate with the severity of their air quality problem (e.g., moderate, serious, severe, extreme).

Finally, an unclassified designation indicates that insufficient data exist to determine attainment or nonattainment. In addition, the California designations include a subcategory of nonattainment-transitional, which is given to nonattainment areas that are progressing and nearing attainment.

As shown in Table 5, the SCAB is designated as an attainment area for all criteria air pollutants except O_3, PM_{10}, and $PM_{2.5}$ under CAAQS. San Bernardino County is designated as attainment, or maintenance, for all criteria pollutants except O_3, PM_{10}, and $PM_{2.5}$ under NAAQS.

Table 5: CAAQS/NAAQS Attainment Status

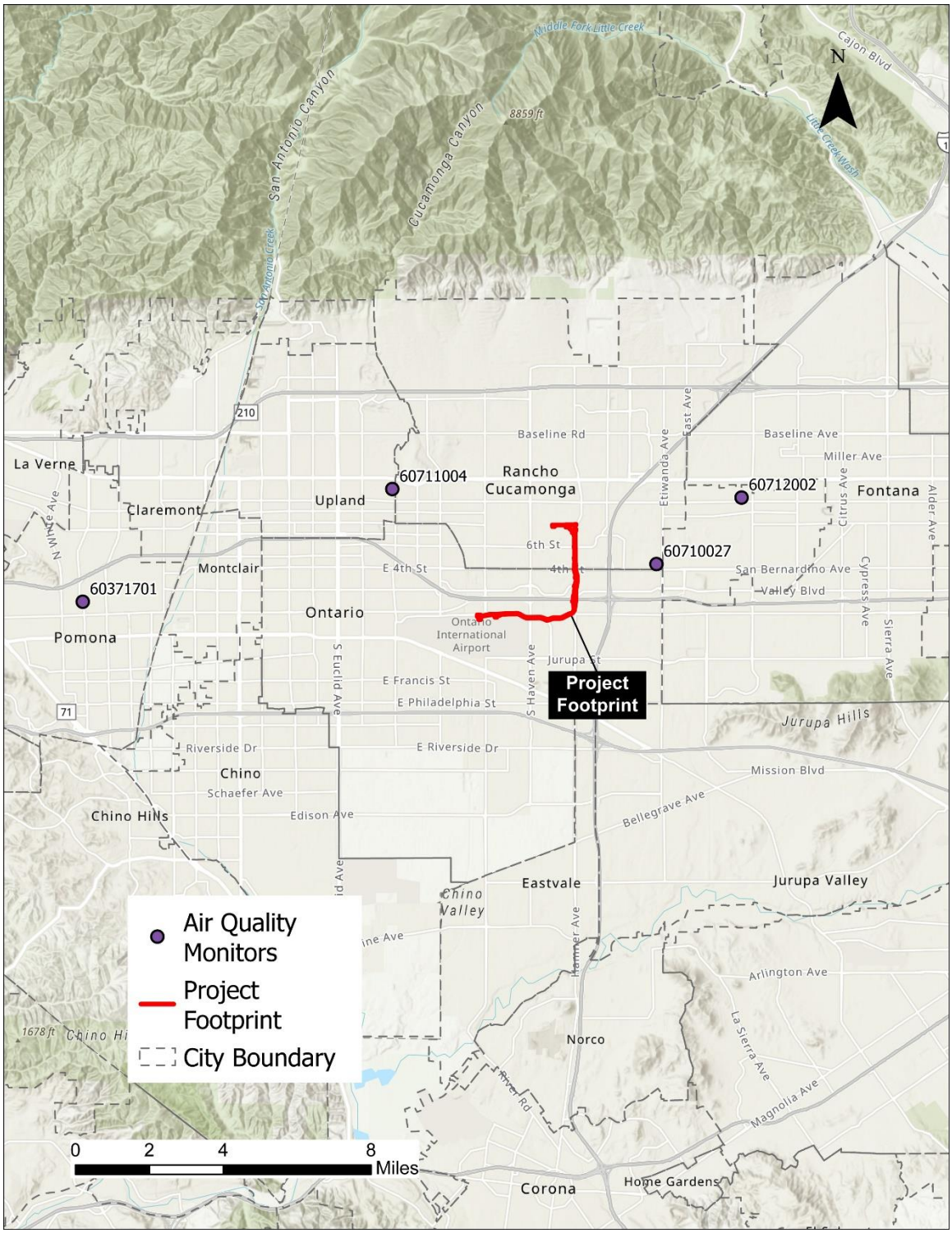
Criteria Pollutant	Averaging Time	CAAQS Designation (SCAB)[1]	NAAQS Designation (San Bernardino County)[2]
O_3	1-Hour	Nonattainment	—
O_3	8-Hour	Nonattainment	Nonattainment (Severe)
PM_{10}	24-hour	Nonattainment	Nonattainment (Moderate)
PM_{10}	Annual	Nonattainment	—
$PM_{2.5}$	24-Hour	Nonattainment	Nonattainment (Serious)
$PM_{2.5}$	Annual	—	Nonattainment (Serious)
CO	1-Hour	Attainment	Attainment (Maintenance)
CO	8-Hour	—	—
NO_2	1-Hour	Attainment	Unclassifiable/Attainment
NO_2	Annual	—	Attainment
SO_2	1-Hour	—	Unclassifiable/Attainment
SO_2	24-Hour	—	Unclassifiable/Attainment
SO_2	Annual Arithmetic Mean	—	Unclassifiable/Attainment
Pb	30-Day Average	Attainment	—
Pb	Rolling 3-Month Average 24 Hour	—	Unclassifiable/Attainment
Sulfates	24-Hour	Attainment	—
Hydrogen Sulfides	1-Hour	Attainment	—
Vinyl Chloride	24-Hour	Attainment	—

[1] SCAQMD 2016
[2] EPA 2024a Air Quality Monitoring Stations

SCAQMD is responsible for enforcing the rules and regulations protecting air quality in the SCAB. Ambient air pollutant concentrations in the SCAB are measured at air quality monitoring stations operated by CARB and SCAQMD. As shown in Figure 3, the closest active air quality monitoring stations to the proposed Project are the following:

- Pomona, Air Quality System (AQS) Site Identification (ID) 06-037-1701. Located: 924 North Garey Avenue, Pomona;
- Upland, AQS Site ID 06-071-1004. Located: 1350 San Bernardino Road, Upland;

Figure 3: Air Monitoring Station Locations



Source: EPA 2024b

- Fontana, AQS Site ID 06-071-2002. Located: 14360 Arrow Boulevard, Fontana; and
- Ontario Route 60–Near Road, AQS Site ID 06-071-0027. Located: 2330 South Castle Harbour Place, Ontario.

The most recent monitor values (for 2019 through 2021) for these monitoring stations were taken from the EPA's Air Quality Database (EPA 2024b) and are presented in Table 6.

As shown in Table 6, monitoring stations closest to the proposed Project were showing compliance with CO, NO2, and SO2 NAAQS and CAAQS standards. Exceedances were measured for O3, PM2.5 and PM10 (CAAQS only).

Table 6: Air Quality Monitoring Concentrations

Pollutant	Averaging Period	Standard	Monitoring Station	Design Concentration (2019-2021)	Exceed Standard?
CO	1-hour	NAAQS: 35 ppm CAAQS: 20 ppm	Pomona, ID 06-037-1701	2.1 ppm	No
CO	1-hour	NAAQS: 35 ppm CAAQS: 20 ppm	Upland, ID 06-071-1004	1.6 ppm	No
CO	1-hour	NAAQS: 35 ppm CAAQS: 20 ppm	Fontana, ID 06-071-2002	2.2 ppm	No
CO	8-hour	NAAQS: 9 ppm CAAQS: 9 ppm	Pomona, ID 06-037-1701	1.4 ppm	No
CO	8-hour	NAAQS: 9 ppm CAAQS: 9 ppm	Upland, ID 06-071-1004	1.2 ppm	No
CO	8-hour	NAAQS: 9 ppm CAAQS: 9 ppm	Fontana, ID 06-071-2002	1.2 ppm	No
NO_2	1-hour	NAAQS: 100 ppb CAAQS: 180 ppb	Pomona, ID 06-037-1701	58 ppb	No
NO_2	1-hour	NAAQS: 100 ppb CAAQS: 180 ppb	Ontario Route 60–Near Road, ID 06-071-0027	75 ppb	No
NO_2	1-hour	NAAQS: 100 ppb CAAQS: 180 ppb	Upland, ID 06-071-1004	47 ppb	No
NO_2	1-hour	NAAQS: 100 ppb CAAQS: 180 ppb	Fontana, ID 06-071-2002	59 ppb	No
NO_2	Annual	NAAQS: 53 ppb CAAQS: 30 ppb	Pomona, ID 06-037-1701	18 ppb	No
NO_2	Annual	NAAQS: 53 ppb CAAQS: 30 ppb	Ontario Route 60–Near Road, ID 06-071-0027	30 ppb	No (but at CAAQS)
NO_2	Annual	NAAQS: 53 ppb CAAQS: 30 ppb	Upland, ID 06-071-1004	15 ppb	No

Pollutant	Averaging Period	Standard	Monitoring Station	Design Concentration (2019-2021)	Exceed Standard?
NO_2	Annual	NAAQS: 53 ppb CAAQS: 30 ppb	Fontana, ID 06-071-2002	19 ppb	No
O_3	8-hour	NAAQS – 0.070 ppm (2015) CAAQS: 0.070 ppm	Pomona, ID 06-037-1701	0.090 ppm	Yes
O_3	8-hour	NAAQS – 0.070 ppm (2015) CAAQS: 0.070 ppm	Upland, ID 06-071-1004	0.103 ppm	Yes
SO_2	1-hour	NAAQS: 75 ppb CAAQS: 250 ppb	Fontana, ID 06-071-2002	2 ppb	No
SO_2	24-hour	CAAQS: 0.04 ppm	Fontana, ID 06-071-2002	0.001 ppm	No
$PM_{2.5}$	24-hour	NAAQS: 35 µg/m^3	Ontario Route 60–Near Road, ID 06-071-0027	41 µg/m^3	Yes
			Fontana, ID 06-071-2002	37 µg/m^3	Yes
$PM_{2.5}$	Annual	NAAQS: 12 µg/m^3 CAAQS: 12 µg/m^3	Ontario Route 60–Near Road, ID 06-071-0027	14.2 µg/m^3	Yes
$PM_{2.5}$	Annual	NAAQS: 12 µg/m^3 CAAQS: 12 µg/m^3	Fontana, ID 06-071-2002	12.1 µg/m^3	Yes
PM_{10}	24-hour	NAAQS: 150 µg/m^3 CAAQS: 50 µg/m^3	Upland, ID 06-071-1004	117 µg/m^3	No for NAAQS Yes for CAAQS
PM_{10}	24-hour	NAAQS: 150 µg/m^3 CAAQS: 50 µg/m^3	Fontana, ID 06-071-2002	83 µg/m^3	No for NAAQS Yes for CAAQS
PM_{10}	Annual	CAAQS: 20 µg/m^3	Upland, ID 06-071-1004	33 µg/m^3	Yes
PM_{10}	Annual	CAAQS: 20 µg/m^3	Fontana, ID 06-071-2002	37 µg/m^3	Yes

Source: EPA 2024b

5 IMPACT EVALUATION

5.1 IMPACT EVALUATION UNDER NEPA

5.1.1 No Build Alternative

5.1.1.1 Construction Impacts

The No Build Alternative would not involve any construction activities and would not result in construction in a new direct electrically powered, on-demand fixed transit guideway connection from the Cucamonga Metrolink Station to ONT. The No Build Alternative would not involve construction-related temporary adverse impacts on air quality. However, the No Build Alternative would not contribute to improving emissions and as such would not result in air quality improvements.

5.1.1.2 Operational Impacts

The No Build Alternative would not result in a net decrease in GHG emissions associated with the proposed Project because the GHG-emitting vehicles driving the last portion of their route would not be replaced with electric shuttles between the Cucamonga Metrolink Station and ONT. Combustion emissions is linked to VMT; higher VMT leads to more emissions. The regional VMT difference between the No Build Alternative and Build Alternative is presented in Table 7, and shows an increase in VMT with the No Build Alternative.

Table 7: San Bernardino County Wide Net Change in Operational VMT

Year	Existing VMT	No Project Alternative VMT	Build Alternative VMT	VMT Difference between Build Alternative and No Project Alternative
2016	330,113,226	---	---	---
2031	---	376,199,889	376,178,116	-21,773
2051	---	437,648,772	437,603,538	-45,234

Source: SBCTA 2024

5.1.2 Build Alternative

5.1.2.1 Construction Impacts

This section discusses the environmental impacts of the Build Alternative in accordance with NEPA and the CAA, with a focus on temporary construction emissions, regional operational emissions, and TCR. The Build Alternative does not require a PM hot spot analysis because it would involve operation of electrically powered vehicles in an underground tunnel. It is also considered an exempt project with respect to potential mobile-source air toxics per the FHWA guideline and does not require an air toxic analysis. Construction Impacts

Construction of the Build Alternative would result in PM_{10}, $PM_{2.5}$, NO_X, and VOC emissions from the diesel exhaust associated with operation of construction equipment and construction worker vehicles that generate exhaust emissions from fuel combustion. Construction equipment would include the following: excavators, backhoess, cranes, concrete trucks, haul trucks, muck trucks, a wheel loader, Foamplant, cooling towers, a tunnel fan grout plant, segment cars, flatcars, a piling rig, a drill rig, a wheel loader, a compressor, and a ventilation fan. Overall construction of the Build Alternative would last approximately 56 months, with Project elements varying in their specific construction duration.

Fugitive dust emissions would be generated from earth disturbance during site grading for aboveground features, as well as from construction vehicles operating on dirt roadways within or adjacent to construction sites. Additionally, worker automobiles, trucks, and various non-road vehicles (e.g., construction equipment) would emit NO_X and VOC emissions.

Construction is usually of short duration and produces temporary air quality effects. However, the effects of construction vehicle and equipment emissions from large-scale construction occurring over many years (typically beyond over 5 years) at a specific local site could cause adverse air quality effects that may require construction scenario modeling to quantitatively analyze the long-term air quality effects. Since the construction would last for 56 months that also include several months with no air emissions to be generated during contract procurement phase at the beginning and testing phase at the end of construction, the hot-spot concentration modeling is not required.

However, temporary on-road vehicle and off-road equipment emissions associated with the new stations, shaft, and tunnel construction (employing a TBM) were estimated and summarized in Table 8 using the CARB EMFAC2021 and OFFROAD 2021 emissions databases. Table 8 shows the maximum annual construction emissions by tons over the full construction period. These maximum annual emissions were compared with the general conformity rule-established nonattainment or maintenance pollutant emission de minimis thresholds that are applicable to San Bernardino County where the proposed Project is located. For San Bernardino County, the de minimis thresholds for each nonattainment or maintenance pollutant under the status summarized in Table 5 were used to determine whether the maximum annual

construction emissions are considered de minimis and result in minimal potential air quality impacts. As depicted in Table 8, all applicable de minimis thresholds would not be exceeded.

Table 8: Maximum Construction Annual Emissions (ton/year)

Construction Area	NO_X	PM_{10}	$PM_{2.5}$	CO	VOC	SO_x
Cucamonga Metrolink Station and TBM Retrieval	2.67.8	514.2	0.61.7	3.18.7	0.39	0.025
Vent Shaft Design Option	1.73.0	12.67	0.24	2.03.4	0.23	0.012
ONT Terminal 4 Station	1.43.0	36.0	0.47	1.73.5	0.23	0.012
ONT Terminal 2 Station	1.94.3	11.89	01.3	2.35.2	0.35	0.013
Maximum Annual Emissions from Build Alternative Construction	**7.618.1**	**11.534.9**	**1.44.1**	**9.120.8**	**0.92.0**	**0.0512**
General Conformity Rule De Minimis Threshold	25	100	70	100	25	N/A
Exceed Threshold?	**No**	**No**	**No**	**No**	**No**	**N/A**

Source: AECOM 2024
Note: N/A: not applicable

5.1.2.2 Operational Impacts

Implementation of the Build Alternative would result in a net decrease in GHG emissions compared to the No Build Alternative, as the Build Alternative would replace a portion of the GHG-emitting vehicles driving the last portion of their route with electric shuttles between the Cucamonga Metrolink Station and ONT. The Build Alternative aims to encourage a shift from single-occupancy vehicles using the surrounding road network to travel to and from ONT to the use of mass transit, thereby supporting regional air quality and global climate change goals to reduce mobile-source emissions. The Build Alternative under the operational condition would result in a net air quality benefit, as a reduction in VMT would reduce combustion emissions, as the use of the proposed electric mass transit option replaces combustion vehicle miles with no meaningful effects on traffic volumes or vehicle mix. In combination with a reduction of VMT within the study area, as shown in Table 7, the proposed Project would result in a net reduction of local and/or regional level emissions. Therefore, the proposed Project would result in a beneficial effect on local and/or regional level emissions.

5.1.2.3 Clean Air Act Transportation Conformity Rule

5.1.2.3.1 Regional Conformity

CAA TCR transportation conformity is enforced at both the regional level and the project level. On a regional level, the Build Alternative, TIP ID: 20192720, is currently included in the 2023 FSTIP. Therefore, a separate regional-level emissions analysis for the nonattainment pollutants of NO_X and VOC (O_3 precursors), PM_{10}, and $PM_{2.5}$ is not required. Furthermore, based on the reduction in VMT, as shown in Table 9, the Build Alternative would result in a net air quality benefit, as reduced VMT results in reduced combustion emissions on a regional level. Consequently, the Build Alternative is in compliance with the transportation conformity rule requirements on the regional level.

5.1.2.3.2 Project-Level Conformity

On a project level because the Build Alternative construction is unlikely to extend beyond 5 years at an individual site, potential air quality impacts from construction are considered temporary. In order to determine whether the Build Alternative would potentially cause substantial effect of CO during operation, traffic impact during the 2031 opening year and 2051 design years at a total of six intersections within the study area were analyzed in terms of level of service (LOS), as shown in Table 9 and Table 10, respectively (SBCTA 2024). Among these six intersections, two intersections are along off-airport roadways where sensitive receptors are in close proximity and four on-airport intersections along Airport Drive with no sensitive receptors around. Traffic conditions would be improved at all four on-airport intersections under the Build Alternative. While sensitive receptors are present at two off-airport intersections (Milliken Avenue/Azusa Court and Milliken Avenue/7th Street), and these two intersections would experience LOS B conditions during the 2031 opening year and 2051 design year, no CO Hot-Spot Analysis is warranted per the 40 CFR Section 93.123. Therefore, the Build Alternative would not result in any potential CO concerns and would be in compliance with the transportation conformity rule requirements on a local level.

Table 9: Opening Year (2031) Traffic Conditions at Analyzed Intersections

Intersections	No Project Alternative A.M. – P.M. LOS	Build Alternative A.M. – P.M. LOS	LOS Change from No Build Alternative and Build Alternative	Delay Change in Second from No Build Alternative to Build Alternative
East Terminal Way/Airport Drive [West]	D-E	C-E	Improved	-2.4
Archibald Avenue - Terminal Way/Airport Drive	F-F	E-F	Improved	-4.9 - -7.8
East Terminal Way/Airport Drive [East]	C-C	C-C	Same	0 - -10.3
Rental Car Road/Airport Drive	C-C	C-C	Same	-0.1 - -1.1
Milliken Avenue/Azusa Court	B-B	B-B	Same	0 - 0.1
Milliken Avenue/7th Street	B-B	B-B	Same	No change

Source: SBCTA 2024

Table 10: Opening Year (2051) Traffic Conditions at Analyzed Intersections

Intersections	No Project Alternative A.M. – P.M. LOS	Build Alternative A.M. – P.M. LOS	LOS Change from No Project Alternative and Project Alternative	Delay in Second Change From No Project Alternative to Project Alternative
East Terminal Way/Airport Drive [West]	D-F	D-E	Improved	-1.2 - -8.0
Archibald Avenue - Terminal Way/Airport Drive	F-F	F-F	Same	-0.2 - -4.6
East Terminal Way/Airport Drive [East]	F-C	F-C	Same	-0.3 - -1.5
Rental Car Road/Airport Drive	C-C	C-C	Same	-0.3 - -1.4
Off-airport Milliken Off-airport Azusa Court	C-B	C-B	Same	0 - 0.1
Milliken Avenue/7th Street	B-C	B-C	Same	0.1

Source: SBCTA 2024

6 MITIGATION MEASURES AND NEPA SUMMARY

6.1 MITIGATION MEASURES, AVOIDANCE, AND/OR MINIMIZATION

The following mitigation measure (MM) for dust control shall be implemented to further reduce potential impacts for PM_{10} and $PM_{2.5}$ fugitive emissions associated with the Build Alternative.

MM-AQ-1 Implement Basic Construction Emission Control Practices

MM-AQ-1: The following construction measures to limit and reduce air emissions from the construction sites will be implemented:

(A) Control fugitive dust as required by South Coast Air Quality Management District Rule 403 and enforced by South Coast Air Quality Management District staff.

(B) Water all exposed surfaces two times daily. Exposed surfaces include, but are not limited to soil piles, graded areas, unpaved parking areas, staging areas, and access roads.

(C) All haul trucks transporting soil, sand, or other loose material off site shall be covered.

(D) Cover or maintain at least two feet of free board space on haul trucks transporting soil, sand, or other loose material on the site. Any haul trucks that would be traveling along freeways or major roadways should be covered.

(E) Use wet power vacuum street sweepers to remove any visible trackout mud or dirt onto adjacent public roads at least once a day. Use of dry power sweeping is prohibited.

(F) Limit vehicle speeds on unpaved roads to 15 miles per hour (mph).

(G) All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. In addition, building pads shall be laid as soon as possible after grading, unless seeding or soil binders are used.

(H) Idling times shall be minimized either by shutting equipment off when not in use or by reducing the maximum idling time to 5 minutes (as required by California airborne toxics control measure Title 13, Section 2485 of the California Code of Regulations). Provide clear signage that posts this requirement for workers at the entrances to the site.

(I) Provide current certificate(s) of compliance for California Air Resources Board's In-Use Off-Road Diesel-Fueled Fleets Regulation (California Code of Regulations, Title 13, sections 2449 and 2449.1).

(J) Maintain all construction equipment in proper working condition according to manufacturer's specifications. The equipment must be checked by a certified mechanic and determined to be running in proper condition prior to operation.

6.2 NEPA SUMMARY

6.2.1 No Build Alternative

With compliance with the CAA TCR, existing GHG regulations, and CAFE standards requirements, the No Build Alternative would have no adverse effects.

6.2.2 Build Alternative

6.2.2.1 Clean Air Act Transportation Conformity Rule

Since construction is unlikely to extend beyond 5 years at an individual site, potential air quality impacts from construction activities are considered temporary, and a construction-related hot-spot analysis is not warranted under the transportation conformity rule requirement. The operation of the Build Alternative would result in a net air quality benefit, as reduced vehicle miles travelled results in reduced combustion emissions. With improved roadway traffic congestion within the study area, no localized hot-spot analysis is warranted, having minimal localized effects during operation. Therefore, construction and operation of the Build Alternative would meet the transportation conformity rule requirements and have no adverse effects.

6.2.2.2 MSATs

The Build Alternative would result in a net reduction of VMT along the corridor, as the use of proposed electric mass transit option replaces combustion vehicle miles with no meaningful effects on traffic volumes or vehicle mix. Therefore, the Build Alternative is considered an exempt project with respect to potential mobile source air toxins effects and would not result in a potential substantial effect for localized MSATs. Therefore, the Build Alternative would have no adverse effects.

6.2.2.3 Project Emissions

According to 40 CFR Section 93.123(c)(5), hot-spot analysis is not warranted for air quality impacts because construction-related activities would not last longer than 5 years at any individual site. However, the total construction emissions were estimated for NEPA disclosure purposes and would have minimal effects given the temporary nature of these emissions. Because the Build Alternative would not result in a net increase of local or regional emissions, the Build Alternative would result have no adverse effects.

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