

Appendix I

CEQA Transportation Impact Study

Arrow Commerce Center CEQA Transportation Impact Study

Prepared for:
City of Rancho Cucamonga

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OC23-0990

FEHR  PEERS

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Executive Summary

Fehr & Peers prepared this transportation study for the proposed Arrow Commerce Center (Project) in Rancho Cucamonga, California. The proposed Project will construct industrial and warehouse space at the southwest corner of Arrow Route and Juneberry Drive. This analysis quantifies Vehicle Miles Traveled (VMT) for the Project and is consistent with requirements of Senate Bill 743 (SB 743) and the *City of Rancho Cucamonga Traffic Impact Analysis Guidelines (2020)*. A Level of Service (LOS) analysis was also conducted and is included in a separate report.

Project Description

The project will construct a total of 1,830,729 square feet of industrial and warehouse uses consisting of the following:

- 219,687 square feet of general warehousing
- 1,427,969 square feet of high cube fulfillment, non-sorting warehousing
- 183,073 square feet of high cube cold storage warehousing

The Project is anticipated to generate a net total of 4,388 Passenger Car Equivalent (PCE) trips daily (355 AM and 380 PM).

Vehicle Miles Traveled (VMT) Analysis

A summary of the VMT assessment is provided below:

- The Base Year and Future Year Project commute VMT per employee exceeds the General Plan buildout commute VMT per employee. Mitigation measures can be implemented so that VMT per employee does not exceed the General Plan buildout commute VMT per employee.
- Within a 30-mile radius of the Project site, the Future Year total VMT per service population with the Project is greater than the total VMT per service population without the Project. Mitigation measures can be implemented but will not reduce VMT per service population below no Project conditions.

Mitigation Measures

Mitigation measures were identified to reduce project generated commute VMT below the city level of significance.

- Implement Commute Trip Reduction Marketing
- Provide Employer Sponsored Rideshare Program
- Provide End-of-Trip Bike Facilities for Commuters
- Provide Employer-Sponsored Vanpool Program

1. Introduction

Project Description

The Project is bounded by Arrow Route to the north, industrial land uses to the east, the Atchison Topeka and Santa Fe Railway (AT/SF Railway) to the south, and industrial manufacturing and undeveloped land uses to the west. **Figure 1** shows the Project site plan and its proposed internal vehicle circulation network, which includes the following five Project access driveways:

- One Full Access Unsignalized Driveway on Arrow Route (Driveway One in **Figure 1**)
- Two Right In/Out Only Unsignalized Driveways on Arrow Route (Driveways Two and Three in **Figure 1**)
- One Full Access Signalized Driveway on Arrow Route (Driveway Four in **Figure 1**)
- One Full Access Signalized Driveway on Etiwanda Avenue (Driveway Five in **Figure 1**)

The Project proposes the construction of five warehouse buildings totaling 1,830,729 square feet (SF). The tenants of the proposed buildings are not known currently, but the buildings are planned to operate as high-cube fulfillment non-sorting space (approximately 1,427,969 SF), general warehouse space (approximately 219,687 SF), and high-cube cold storage space (approximately 183,073 SF).

Report Organization

The report is divided into the chapters described below:

Chapter 1 – Introduction provides information on the Project.

Chapter 2 – Existing Conditions describes the current transportation system in the project vicinity, including the surrounding roadway network, bicycle, pedestrian, and transit facilities.

Chapter 3 – Significance Criteria and Analysis Methodologies describes the thresholds and approach used to determine transportation impacts in accordance with the California Environmental Quality Act (CEQA) and the *Rancho Cucamonga Traffic Impact Analysis Guidelines (2020)*.

Chapter 4 – Analysis describes the analysis findings and quantifies Project-generated and Project-effect VMT. Additional review of project characteristics are provided in this section.

Chapter 5 – Mitigation Measures identifies Project VMT mitigation measures that can be implemented to reduce Project VMT.

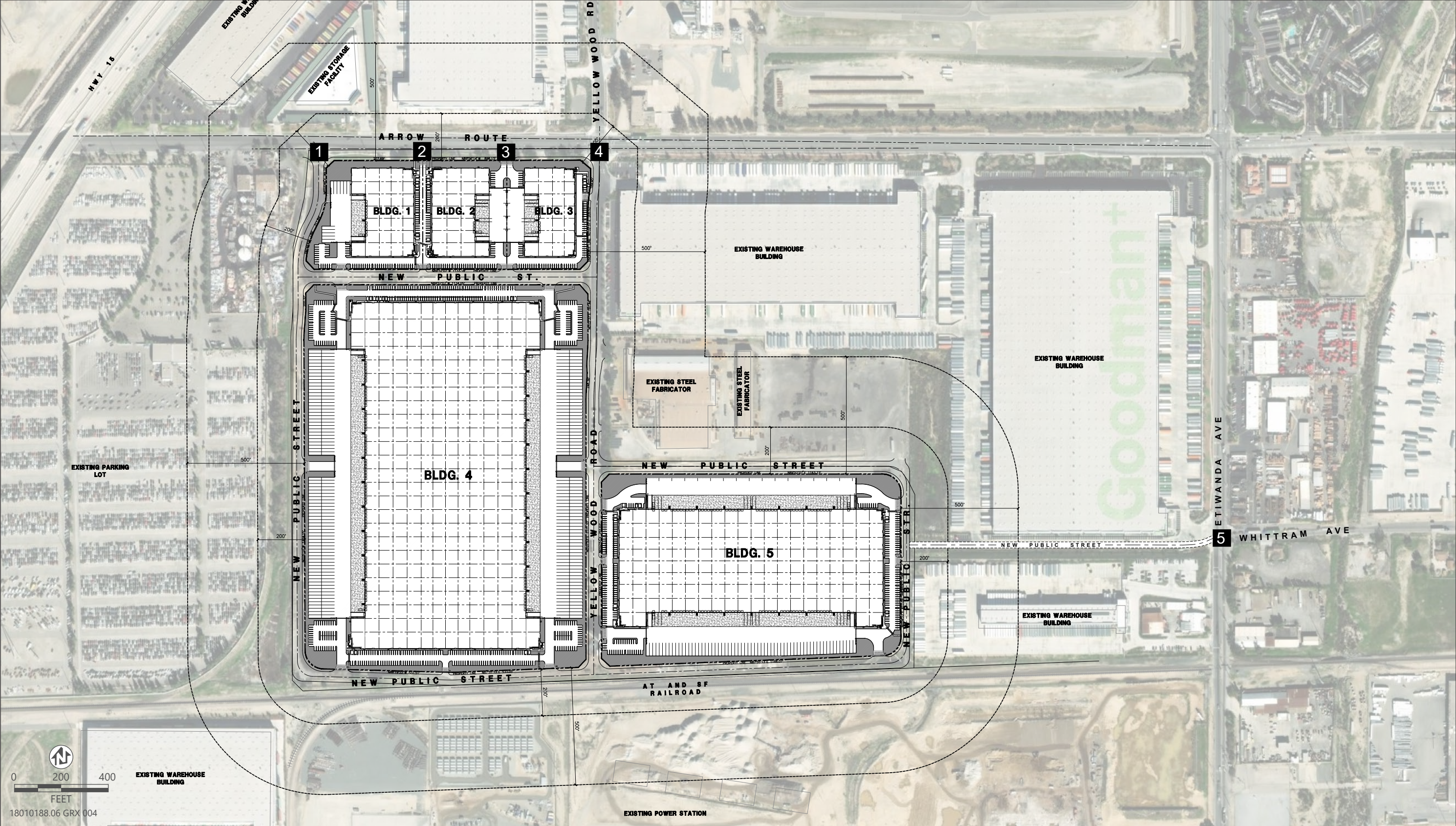


Figure 1
Project Site Plan

Legend
X Driveway

2. Existing Conditions

This chapter describes transportation facilities in the Project study area, including the surrounding roadway network, transit, pedestrian, and bicycle facilities in the project site vicinity.

Existing Roadway Facilities

Regional access to the site is provided by Interstate 10 and 15 (I-10 and I-15). Local access to the site is provided by Foothill Boulevard, Arrow Route, 6th Street, Fourth Street/San Bernardino Avenue, Milliken Avenue, Rochester Avenue, and Etiwanda Avenue. The section below discusses the roadways that would provide access to the site and are most likely to be affected by the proposed Project.

Regional Access Facilities

- Interstate 10 Freeway (I-10): I-10 is the main east-west facility through San Bernardino County. It extends the entire length of San Bernardino County, from its western border with Los Angeles County to its eastern border with Riverside County. I-10 is an eight- to ten-lane divided freeway near the Project and provides access to the Project at the Etiwanda Avenue interchange.
- Interstate 15 Freeway (I-15): I-15 is the main north-south facility through San Bernardino County. It extends the entire length of San Bernardino County, from its southern border with Riverside County to the California-Nevada State Line. I-15 is an eight- to twelve-lane divided freeway near the Project and provides access to the Project via the Foothill Boulevard and Fourth Street interchanges.

Local Access Roads

- Foothill Boulevard: Foothill Boulevard is a six-lane east-west facility to the North of the Project site that provides access to I-15. Foothill Boulevard is designated as a Transit Corridor by the City of Rancho Cucamonga's Adopted General Plan, *Plan RC (2021)*.
- Arrow Route: Arrow Route is a three- to four-lane east-west facility immediately North of the Project site. It is designated as an Arterial Roadway by *Plan RC*.
- 6th Street: 6th Street is a four- to six-lane east-west facility to the South of the Project site. It is currently not a through street, with a gap closure planned for after the Project opening date. 6th Street is designated as a Bicycle Corridor by *Plan RC*.
- Fourth Street/San Bernardino Avenue: Fourth Street is a four- to six-lane east-west facility to the South of the Project site that provides access to I-15. To the east of the Rancho Cucamonga City Limits, the road is known as San Bernardino Avenue. Fourth Street is designated as an Arterial Highway by *Plan RC*.
- Milliken Avenue: Milliken Avenue is a six- to eight- lane north-south facility to the West of the Project site. It is designated as an Arterial Roadway by *Plan RC*.

- Rochester Avenue: Rochester Avenue is a four-lane north-south facility to the West of the Project site. It is designated as an Arterial Roadway by *Plan RC*.
- Etiwanda Avenue: Etiwanda Avenue is a three- to four-lane north-south facility immediately East of the Project Site. It includes an at-grade rail crossing with the BNSF and Metrolink railroad. Etiwanda Avenue is designated as an Arterial Roadway by *Plan RC*.

Bicycle Facilities

According to the Community Mobility chapter of *Plan RC (2021)*, the City's existing bicycle network is comprised of 34.5 miles of bike paths/trails (Class I), 31.75 miles of bike lanes (Class II), and 34.25 miles of bike routes (Class III). California Manual on Uniform Traffic Control Devices (CA MUTCD) also permits cycle tracks (Class IV), which are currently not part of the City's bicycle network. These facilities are described below.

Existing Class II bicycle facilities are provided within the study area along Foothill Boulevard, Arrow Route, Milliken Avenue, Rochester Avenue, and portions of Etiwanda Avenue. The Community Mobility chapter identifies future enhanced bicycle infrastructure along Foothill Boulevard and 6th Street.

Class I Bikeways (Bike Paths)

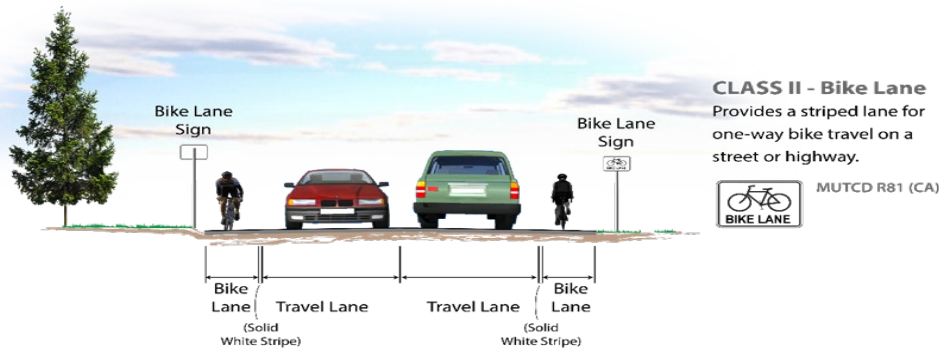
Class I bicycle facilities are bicycle trails or paths that are off-street and separated from automobiles. They are a minimum of eight feet in width for two-way travel and include bike lane signage and designated street crossings where needed. A Class I Bike Path may parallel a roadway (within the parkway) or may be a separate right-of-way that meanders through a neighborhood or along a flood control channel or utility right-of-way.



Class II Bikeways (Bike Lanes)

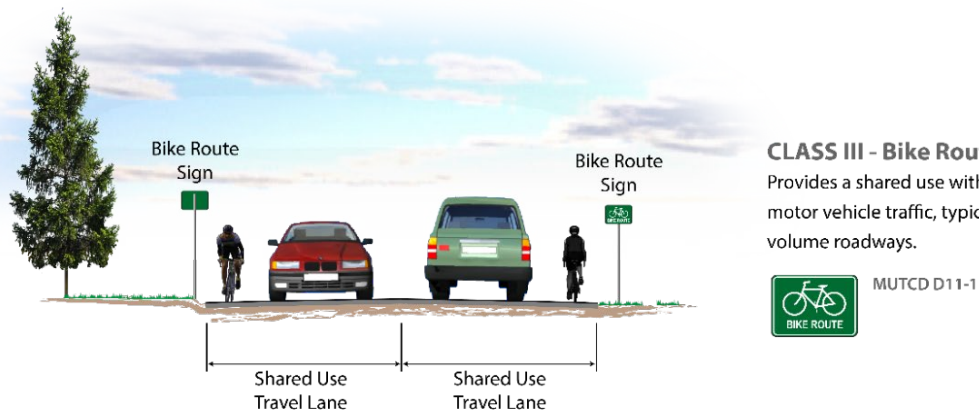
Class II bicycle facilities are striped lanes that provide bike travel and can be either located next to a curb or parking lane. If located next to a curb, a minimum width of five feet is recommended. However, a bike

lane adjacent to a parking lane can be four feet in width. Bike lanes are exclusively for the use of bicycles and include bike lane signage, special lane lines, and pavement markings.



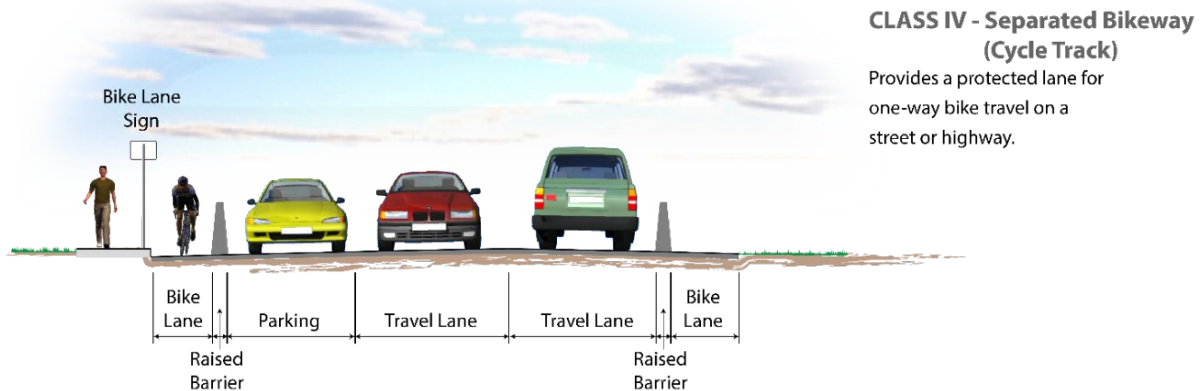
Class III Bikeways (Bike Routes)

Class III Bikeways are streets providing for shared use by motor vehicles and bicyclists. While bicyclists have no exclusive use or priority, signage by the side of the street and sometimes stenciled on the roadway surface alerts motorists to bicyclists sharing the roadway space and denotes that the street is an official bike route.



Class IV Bikeways (Cycle Tracks)

Class IV bicycle facilities, sometimes called cycle tracks or separated bikeways, provide a right-of-way designated exclusively for bicycle travel adjacent to a roadway and are protected from vehicular traffic via separations (e.g., grade separation, flexible posts, inflexible physical barriers, on-street parking). California Assembly Bill 1193 (AB 1193) legalized and established design standards for Class IV bikeways in 2015.



Pedestrian Facilities

Within the study area, sidewalk facilities are provided along Foothill Boulevard, Milliken Avenue, Rochester Avenue, Arrow Route and Etiwanda Avenue north of the BNSF/Metrolink. Sidewalks are intermittent or non-existent along Etiwanda Avenue south of the BNSF/Metrolink railroad, 6th Street, and Fourth Street.

At existing signalized intersections, adjacent to the Project, crosswalks and pedestrian push-button actuated signals are provided. Mid-block crosswalks and crosswalks at unsignalized intersections are not provided.

Existing Transit Service

Transit service in the area is offered by Metrolink and Omnitrans. The Project site is not adjacent to any existing public transit services, with the closest bus stop located approximately one mile to the North along Foothill Boulevard. Detailed transit information is described below.

Metrolink

Commuter train service in the City of Rancho Cucamonga is provided by Metrolink, which operates six commuter rail lines throughout Southern California. The Rancho Cucamonga Metrolink Station is located approximately 2.5 miles west of the Project site along 8th Street, west of Milliken Avenue, where passenger trains run daily from downtown Los Angeles to downtown San Bernardino. Rancho Cucamonga is served by the San Bernardino Line, which links San Bernardino to Union Station in downtown Los Angeles. The Metrolink railroad runs east-west through the southern section of the city. This same rail line is occasionally used by freight trains when the Union Pacific Railroad line (running east-west south of the I-10 freeway) is closed or restricted for limited periods. Local freight train traffic in the city includes switches on various spur lines serving the industrial areas at the southern section of the City.

Omnitrans

OmniTrans Transit Agency provides local transit service throughout San Bernardino County, including the City of Rancho Cucamonga. Bus transit services are available in the city through fixed-route and demand-

response services. Bus routes that run through the city connect to the neighboring cities of Fontana, Upland, Ontario, Montclair, Eastvale and Chino. Within Rancho Cucamonga, bus routes run on major roadways, including Fourth Street, Milliken Avenue, and Foothill Boulevard.

The following transit routes operate within the study area:

- Route 66: Route 66 follows Foothill Boulevard from the Montclair Transit Center to the Fontana Transit Center, serving key destinations in the City of Rancho Cucamonga including the Epicenter Stadium and Victoria Gardens. Bus stops are provided at Milliken Avenue, Rochester Avenue, Day Creek Boulevard, and Etiwanda Avenue. The route operates Monday through Friday between 4 AM and 11:30 PM, Saturdays between 6 AM and 10 PM, and Sundays between 7 AM and 8 PM. Typical headways are every 20 minutes during peak hours, every 30 minutes during off-peak hours, and every 30-50 minutes on weekends.
- Route 82: Route 82 within the City of Rancho Cucamonga follows Milliken Avenue from Victoria Gardens. The route continues along Jurupa Avenue, Sierra Avenue, Citrus Avenue, and Sierra Lakes Parkway in Fontana. Service is provided to the Rancho Cucamonga Metrolink Station. The route operates approximately every 60 minutes on weekdays between 4:30 AM and 10:30 PM and every 65 minutes on weekends between 7 AM and 8 PM.
- Route 61: Route 61 connects Pomona with Ontario International Airport, Ontario Mills Mall and the South Fontana Transit Center along Holt Boulevard, Fourth Street, and San Bernardino Avenue. Bus stops within the study area are provided at Fourth Street and Etiwanda Avenue. Service runs every 20 to 30 minutes from 4 AM to 10:30 PM on weekdays, 5:30 AM to 10:30 PM on Saturdays, and 5:30 AM to 8 PM on Sundays.

3. Significance Criteria and Analysis Methodologies

The transportation impact analysis methodology includes a combination of quantitative and qualitative evaluations of the roadway, bicycle, pedestrian, and transit components of the transportation system. All analysis presumes that future travel conditions remain relatively constant and do not account for potential changes associated with disruptive trends such as increased use of transportation networking companies (TNCs) such as Uber and Lyft, internet shopping, other internet related activities, automated vehicles (AVs), and micro-transit services.

VMT Analysis Methodology

As required in the City's TIA guidelines, this transportation impact analysis presents 'project-generated VMT' and evaluates the 'project effect on VMT.' Project-generated VMT in this assessment presents trips and trip distances of specific trips associated with the project. The Project's effect on VMT is an estimate of how VMT within the region will change once a project is built.

Production/Attraction (PA) VMT

Through discussions with City staff, the PA methodology was chosen to estimate project-generated VMT. This methodology is consistent with the City's guidelines and calculates VMT by summing all weekday VMT with at least one trip end in the study area. The PA method tracks these trips to/from their ultimate destination unless that destination is outside of the model boundary area. Productions are land use types that generate trips (residences), and attractions are land use types that attract trips (employment). Productions and attractions are converted from person trips to vehicle trips for the purposes of calculating VMT.

The PA method allows project VMT to be evaluated based on trip purpose which is consistent with OPR recommendations in the Technical Advisory and consistent with the City's VMT methodology requirements. For example, a single-use project, such as an office building, could be analyzed based only on the commute VMT, or home-based-work (HBW) attraction VMT per employee; and a residential project could be analyzed based on the home-based (HB) production VMT per resident. Since the Project is an industrial development, HBW attraction VMT per employee (commute VMT) have been quantified in project's VMT analysis, under both Base and Cumulative conditions.

Due to the structure of the SBTAM model, PA VMT can only be isolated by trip purpose before final traffic assignment in which all trip types are aggregated together. PA trip matrices include internal (I) trips that have both trip ends (i.e., origin and destination) inside the model boundary and do not include external (X) trips that have one trip end outside of the model boundary (IX-XI trips) or truck trips, and therefore do not include those trips in the VMT estimates.

Boundary VMT

The boundary method is utilized to measure the project's effect on VMT. The boundary method is the sum of all weekday VMT on a roadway network within a designated boundary. Boundary method VMT estimates VMT by multiplying the number of trips on each roadway segment by the length of that segment. This approach includes all trips, including those trips that do not begin or end in the designated boundary. This is the only VMT method that captures the effect of cut-through and/or displaced traffic.

The City's TIA guidelines state that the City boundary should be used for Boundary VMT analysis, unless the Project is located near the City limit. Since the Project is located near the southern City limit, Fehr & Peers analyzed project effect on VMT using a 30-Mile radius from the Project site. The 30-mile boundary was selected by estimating the average project trip length, 15 miles, and doubling it to ensure the area affected by project trips was captured in the assessment.

Thresholds of Significance

The City's TIA guidelines state the Project would result in a significance project-generated VMT impact if either of the following conditions are met:

1. The baseline project generated VMT per service population exceeds the City of Rancho Cucamonga General Plan Buildout VMT per service population, or
2. The cumulative project generated VMT per service population exceeds the City of Rancho Cucamonga General Plan Buildout VMT per service population.

The latest version of SBTAM available at the time of this analysis, SBTAM+, was used to determine the appropriate threshold of significance. The threshold of significance used for this assessment is **22.3 VMT per Employee**, which is the average commute VMT in the City of Rancho Cucamonga under Plan RC buildout conditions.

The City's TIA Guidelines also state the Project would result in a significant impact if the following condition is met:

3. The cumulative link-level boundary VMT per service population within City of Rancho Cucamonga increases under the plus project condition compared to the no project condition.

At a 30-mile boundary, the threshold of significance used for this assessment is **24.01 VMT per Service Population**¹, which is the total VMT in the 30-mile boundary divided by the service population in that area under Plan RC buildout conditions. Please note, the City's guidelines also identify that, for the project effect assessment, if a project is consistent with the regional RTP/SCS (i.e. the adopted General Plan, *Plan RC*), then the cumulative impacts shall be considered less than significant subject to consideration of other substantial evidence.

¹ Service Population = Residents + Employees

If any of the three above conditions are met, the Project would have a significant impact.

4. Analysis

Vehicle Miles Traveled

Travel Demand Model

Consistent with the City’s TIA Guidelines, the latest version of the San Bernardino Transportation Analysis Model, SBTAM+, was utilized to estimate VMT in the study area. SBTAM+ is based off the SCAG regional travel demand model (which utilizes the 2024 SCAG RTP/SCS and forecasts traffic volumes on roadway segments for the entire six-county SCAG region). The SCAG model was refined to provide additional detail for San Bernardino County and was calibrated for use in San Bernardino County by ensuring that the model can replicate existing traffic volumes on County roadways after refinement. The SBTAM+ Base Year model is validated to 2019 with a Future Year model of 2050 and is considered the most appropriate tool for testing changes in land use and roadway network in San Bernardino County.

The Project was isolated in TAZ 53702201. SBTAM+ land use inputs are referred to as Socioeconomic Data (SED). SED includes population demographics like numbers of residents, age of residents, vehicle ownership, and income, and employment categories like retail, manufacturing, public administration, and agriculture. The SED employment categories used in SBTAM+ are based on the employment descriptions documented in the North American Industry Classification System (NAICS). We used our understanding of Project land uses (general warehouse, high-cube fulfillment center (non-sort), and high-cube cold storage warehouse) and their associated operations to determine which NAICS code and which corresponding SED employment categories best represent the Project.

Table 1 shows the SED that was utilized to represent the Project.

Table 1: Project SED Information

TAZ	Total Square Feet	Total Employment	Total Manufacturing Square Feet	Manufacturing Employment	Total Transportation Square Feet	Transportation Employment
53702201	1,830,729	1,408	1,611,042	1,239	219,687	169

Notes:

- 1. TAZs in SBTAM+ generate additional truck trips using low and high warehouse employment. The number of warehouse employees is proportional to the amount of transportation employment in a TAZ. The Project TAZ’s low and high warehouse employees were estimated using ratios of transportation to low/high warehouse employment in adjacent TAZs.
- 2. The number of employees were estimated using an employment factor of 1,300 square feet per employee.

Source: Fehr & Peers, 2024.

Analysis Scenarios

As recommended in the City's TIA guidelines, the VMT estimates were prepared under the following scenarios:

- Base Year (2019) No Project Conditions
- Base Year (2019) Plus Project Conditions
- Future Year (2050) No Project Conditions
- Future Year (2050) Plus Project Conditions

The No Project Conditions model runs were used to determine the project-generated thresholds of significance documented in the City's TIA Guidelines and estimate 30-mile Boundary VMT. The Plus Project Conditions model runs were used to determine VMT associated with the Project.

VMT Results

This section summarizes the results of the project-generated (PA method) VMT and project-effect on VMT (boundary method) modeling for the four study scenarios.

Project-Generated VMT

Project-generated VMT estimates were prepared using the PA method for the Base Year and Future Year Plus Project scenarios. PA project-generated VMT estimates are presented in **Table 2**. For this analysis, PA VMT represents VMT per employee (commute VMT). Under Base Year and future year scenarios the VMT per employee exceeds the City threshold.

Table 2: Project-Generated PA VMT Estimates

Scenario	Project TAZ	Project Total Employment	PA VMT (Attraction) for Project TAZ	VMT per Employee	VMT per Employee Threshold	Threshold Exceeded
Base Year Plus Project	53702201	1,408	33,542	23.8	22.3	YES
Future Year Plus Project	53702201	1,408	31,951	22.7		YES

Note: VMT per Employee = Commute (Attraction Home-Based-Work) VMT for Project.

Source: *Fehr & Peers, 2024*

Note, VMT per employee is higher under Base Year conditions than future year conditions. This is expected as Future Year conditions represent the build-out of Plan RC, which includes new residential developments within the City. Since there are more residents living in the surrounding area under Future Year conditions, commute trips, on average, are shorter relative to Base Year conditions.

Project Effect on VMT

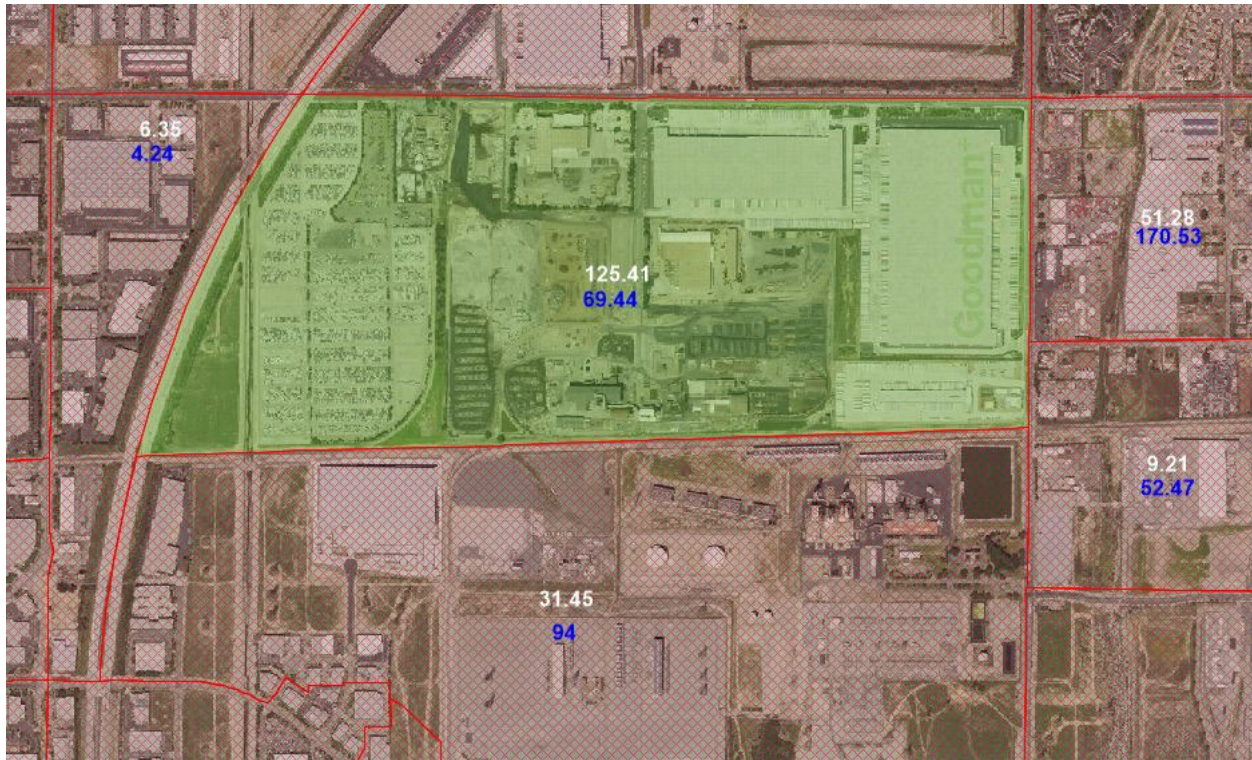
The Project was determined to be inconsistent with the land use growth assumptions in *Plan RC* and in the RTP/SCS by reviewing the regional travel model, SBTAM+. As shown in **Table 3** and **Figures 2** and **3**, the manufacturing and transportation employment growth generated by the Project is more than the total growth assumed in SBTAM+.

Table 3: SBTAM+ and Project Employment Growth

Employment Type	Model Change (Base Year to Future Year)	Project Employment	Growth Accounted in Model?
Manufacturing Employment	-56	+1,239	NO
Transportation Employment	+641	+169	YES

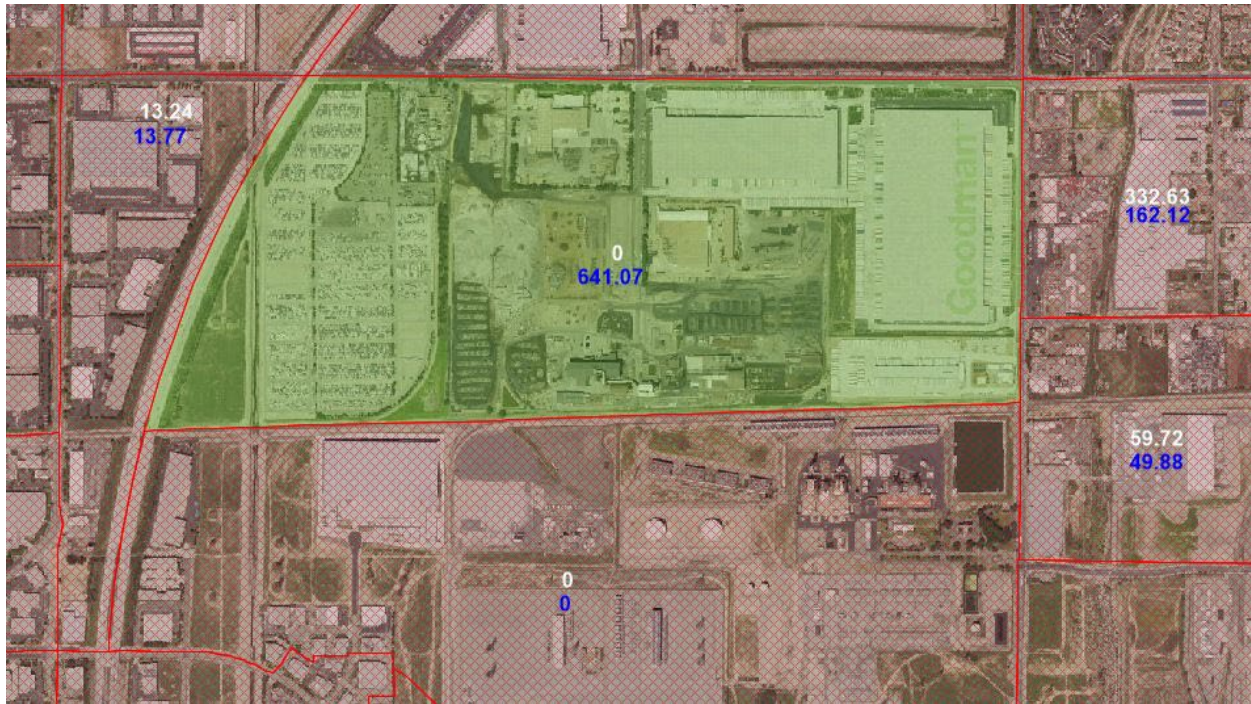
Source: Fehr & Peers, 2024.

Figure 2: Base Year and Future Year Manufacturing Employment Assumed in RTP/SCS



White Text indicates Base Year Manufacturing Employment
Blue Text indicates Future Year Manufacturing Employment

Figure 3: Base Year and Future Year Transportation Employment Assumed in RTP/SCS



White Text indicates Base Year Transportation Employment
Blue Text indicates Future Year Transportation Employment

Therefore, the project effect on VMT was estimated using the boundary method for the Future Year with and without Project scenarios at a 30-mile radius from the Project. Project-effect on VMT estimates for the Future Year with and without Project scenarios are shown in **Table 4**. As shown in **Table 4**, the addition of the Project results in VMT per service population increasing within a 30-mile radius around the Project site.

Table 4: Future Year Project Effect on VMT Estimates

	Without Project	With Project	Threshold Exceeded
30-Mile Boundary VMT	180,184,395	180,307,039	YES
30-Mile Service Population	7,505,811	7,507,219	
30-Mile Boundary VMT per Service Population	24.01	24.02	

Note: Service Population = Total Employment + Population.
Source: *Fehr & Peers, 2024*

CEQA Appendix G Checklist Items

CEQA Guidelines identify additional considerations that should be evaluated to determine overall Project environmental impact. These considerations are outlined in the *CEQA Appendix G Environmental Checklist Form*. For transportation, the following are to be considered for this Project:

1. Would the project conflict with an applicable plan, ordinance, or policy addressing the circulation system including transit, roadway, bicycle, and pedestrian facilities?
2. Would the project conflict or be inconsistent with CEQA Guidelines Section 15603.3, subdivision (b)?
3. Would the project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g. farm equipment)?
4. Would the project result in inadequate emergency access?

Consistency With Plans, Ordinances and Policies

The Project is consistent with City of Rancho Cucamonga transportation policies and plans pertaining to pedestrians, bicyclists, and transit. The Project will maintain existing sidewalks and Class II bike lanes along Arrow Route and Juneberry Drive. Internal roadways will include new sidewalks and be designed according to City specifications and design standards. Transportation demand management measures implemented to reduce Project generated VMT will promote mode shift to walking, biking, or carpool/vanpool. The Project will not affect transit services as no changes to bus stops or transit headways are proposed.

The Project includes parking for 922 automobiles and 424 trucks, exceeding the required number of spaces by four and 201, respectively. Compliance with other development code requirements will be reviewed during the Project approval process.

Consistency with CEQA Guidelines

As described above, Project commute VMT per employee exceeds the city-threshold commute VMT per employee. The Project will also increase overall VMT within a 30-mile radius of the project. Potentially feasible mitigation strategies were identified in Chapter 5 that would lower VMT per employee below the city-threshold. The VMT per service population within a 30-mile radius of the project under plus project conditions is expected to exceed the VMT per service population under no project conditions even with feasible mitigation.

Geometric Design Hazards

The Project is not expected to generate any design hazards. Roadways will be designed according to City specifications and design standards and will be reviewed by City engineering staff prior to construction. Intersections are planned to meet at near right angles, and signalized access to the Project site will be provided. Clear sight distance will be maintained at all intersections in accordance with City standards. The Project is consistent with the existing land use context and vehicle fleet mix is expected to be similar to existing adjacent industrial developments.

Emergency Access

Emergency access was reviewed for consistency with the *2022 California Fire Code*. The Fire Code states that:

- Buildings or facilities having a gross building area of more than 62,000 square feet shall be provided with two separate and approved fire apparatus access roads.
- Fire apparatus access roads shall not be less than 20 feet in width.
- Where two fire apparatus access roads are required, they shall be placed a distance apart equal to not less than one-half of the length of the maximum overall diagonal dimension of the property or area to be served, measured in a straight line between accesses.

The Project provides five vehicle access points to the site along Arrow Route and Etiwanda Avenue. This provides adequate and distributed emergency vehicle access to the Project site. City engineering staff will review final Project designs to ensure compliance with the Fire Code.

5. Mitigation

Fehr & Peers reviewed potential mitigation strategies that can be adopted for this project, recognizing that the most effective strategies will target Project employees and commute VMT. Quantification of VMT mitigation measures is based on the methods described in the *Handbook for Analyzing Greenhouse Gas Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity* published by the California Air Pollution Control Officers Association. Adjustments were made based on Project site context and Project features. Measures were analyzed together, and a multiplicative dampening reduction was applied to mitigation measures that address the same trip types.

Table 5 describes the mitigation measures that can be incorporated into the Project and the maximum VMT reduction available to this Project.

Table 5: VMT Mitigation Measures

Strategy	Description	Maximum VMT Reduction
Implement Commute Trip Reduction Marketing	This measure will implement a marketing strategy to promote the project site employer's commute trip reduction program. Information sharing and marketing promote and educate employees about their travel choices to the employment location beyond driving such as carpooling, taking transit, walking, and biking, thereby reducing VMT and GHG emissions.	4% of HBW VMT
Provide Employee Rideshare Program	This measure will implement a ridesharing program for employees with similar commutes with funding requirements for employers. Ridesharing encourages carpooled vehicle trips in place of single-occupied vehicle trips, thereby reducing the number of trips, VMT, and GHG emissions. Existing programs including IE Commuter can be leveraged for this measure.	4% of HBW VMT
Provide End-of-Trip Bicycle Facilities	This measure will install and maintain end-of-trip facilities for employee use. End-of-trip facilities include bike parking, bike lockers, showers, and personal lockers. The provision and maintenance of secure bike parking and related facilities encourages commuting by bicycle, thereby reducing VMT and GHG emissions.	0.3% of HBW VMT

Strategy	Description	Maximum VMT Reduction
Provide Employer-Sponsored Vanpool	This measure will implement an employer-sponsored vanpool service. Vanpooling is a flexible form of public transportation that provides groups of 5 to 15 people with a cost-effective and convenient rideshare option for commuting. The mode shift from long-distance, single-occupied vehicles to shared vehicles reduces overall commute VMT, thereby reducing GHG emissions. It was assumed that up to 2% of employees would participate in the vanpool program.	1.6% of HBW VMT
<i>Multiplicative Dampening</i>	<i>Adjustment to overall VMT reduction as measures overlap and target the same type of trips.</i>	-0.6%
TOTAL:		9.9% of HBW VMT

Source: California Air Pollution Control Officers Association, 2021. Fehr & Peers, 2024.

Implementation of these measures will be detailed and monitored in the Project's Mitigation Monitoring and Reporting Plan (MMRP). The developer shall coordinate implementation of these measures and can leverage existing regional programs that provide employer services for commute trip reduction programs.

Table 6 shows the Project generated total daily VMT and VMT per employee and with mitigation measures in place. As shown below, the proposed measures are anticipated to reduce VMT per employee below the City's threshold of significance for both Base and Future Year scenarios.

Table 6: Project Generated VMT Estimates per Service Population with Mitigation

	Base Year Average Daily Weekday	Future Year Average Daily Weekday
Pre-Mitigation Project PA VMT	33,542	31,951
Reduction in Project PA VMT from Mitigation	(3,321)	(3,163)
Post-Mitigation Project PA VMT	30,221	28,788
Pre-Mitigation VMT per Employee	23.8	22.7
Post-Mitigation VMT per Employee	21.5	20.4
Citywide Threshold of Significance (VMT per Employee)	22.3	-

Note: **Bolded** text indicates VMT estimate exceeds city threshold.

Source: Fehr & Peers, 2024.

Table 7 shows the Project’s effect on total VMT with and without mitigation measures in place. As shown below, the mitigation measures are not expected to reduce with project VMT per service population below without project VMT per service population within the 30-mile boundary.

Table 7: Future Year Project Effect on VMT Estimates with Mitigation

	Without Project	With Project	With Project and Mitigation
30-Mile Boundary VMT	180,184,395	180,307,039	180,303,876
30-Mile Service Population	7,505,811	7,507,219	7,507,219
30-Mile Boundary VMT per Service Population	24.01	24.02	24.02

Note: Service Population = Total Employment + Population.

Source: *Fehr & Peers, 2024*