Ontario International Airport Connector Project

ONTCONNECTOR

APPENDIX Q
TRANSPORTATION TECHNICAL REPORT

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ABBREVIATIONS AND ACRONYMS

>	greater than
<	less than
%	percent
$	United States dollars
AB	Assembly Bill
ADA	Americans with Disabilities Act
ARP	American Rescue Plan Act of 2021
BART	Bay Area Rapid Transit
BMPs	best managements practices
BRT	bus rapid transit
Caltrans	California Department of Transportation
CEQA	California Environmental Quality Act
CMP	Congestion Management Program
EIR	Environmental Impact Report
FAST	Fixing America's Surface Transportation
FTA	Federal Transit Administration
GHG	greenhouse gas
HBW	home-based work
HCM	Highway Capacity Manual
I-10	Interstate 10
1-15	Interstate 15
ISTEA	Intermodal Surface Transportation Efficiency Act of 1991
LOS	level(s) of service
LRTP	Long-Range Transit Plan
MAP	million annual passengers
MEP	Mechanical, electrical, and plumbing
MM	Mitigation Measure
MSF	Maintenance and Storage Facility
NCHRP	National Cooperative Highway Research Program
NEPA	National Environmental Policy Act
No.	Number
OIAA	Ontario International Airport Authority
ONT	Ontario International Airport
OPR	Office of Planning and Research
PCE	passenger car equivalents
PMT	passenger miles traveled

Project	Ontario International Airport Connector Project
QA/QC	quality assurance/quality control
ROW	Right-of-way
RTP	Regional Transportation Plan
SANBAG	San Bernardino Associated Governments
SB	Senate Bill
SBCTA	San Bernardino County Transportation Authority
SBTAM	San Bernardino Transportation Analysis Model
SCAG	Southern California Association of Governments
SCE	Southern California Edison
SCRRA	Southern California Regional Rail Authority
SCS	Sustainable Communities Strategy
STOPS	Simplified Trips-on-Project Software
TAC	Transportation Analysis under CEQA
TAF	Transportation Analysis Framework
TBM	tunnel boring machine
TDM	Transportation Demand Management
TISG	Transportation Impact Study Guide
TMP	Transportation Management Plan
TWSC	Two-Way Stop Control
TOA	traffic operations analysis
UPRR	Union Pacific Railroad
Vent Shaft	Ventilation shaft
VMT	vehicle miles traveled
WVC	West Valley Connector
YTD	year-to-date

1 INTRODUCTION

San Bernardino County Transportation Authority (SBCTA), in cooperation with the Federal Transit Administration (FTA), proposes to construct a 4.2-mile-long transit service tunnel directly connecting the Southern California Regional Rail Authority (SCRRA) Cucamonga Metrolink Station to the Ontario International Airport (ONT). The proposed ONT Connector Project (Project) is to expand access options to ONT by providing a direct transportation connection from Cucamonga Metrolink Station to ONT. The proposed Project is subject to federal and state environmental review requirements pursuant to National Environmental Policy Act (NEPA) and California Environmental Quality Act (CEQA). FTA is the lead agency for NEPA, while SBCTA is the lead agency under CEQA. Partner agencies include the Ontario International Airport Authority (OIAA), Omnitrans, the City of Ontario, and the City of Rancho Cucamonga.

ONT is located approximately 2 miles east of downtown Ontario in San Bernardino County. The airport services more than 25 major cities via 10 commercial carriers. ONT is owned and operated under a joint powers agreement between the City of Ontario and San Bernardino County. OIAA provides overall direction, management, operations, and marketing for ONT. In 2014, the San Bernardino Associated Governments (SANBAG), now SBCTA, prepared the Ontario Airport Rail Access Study (SANBAG 2014), which identified the need for a direct rail-to-airport connection to ONT to support its projected growth. ONT is one of the fastest growing commercial airports forecasted to serve 14 million annual passengers (MAP) by 2045 (OIAA 2019).

The purpose of this technical report is to evaluate potential environmental impacts/effects of transportation and traffic that the proposed Project may have within the proposed Project area. This technical report describes applicable regulatory settings, the existing setting, methodology, and potential impacts from construction and operation of the proposed Project and the No Project. The information contained in this technical report will be used to prepare the required environmental documents under CEQA.

2 PROJECT DESCRIPTION

2.1 PROJECT PURPOSE AND OBJECTIVES

The purpose of the Project is to expand access options to ONT by providing a direct transportation connection from Cucamonga Metrolink Station to ONT. This new connection would increase mobility and connectivity for transit patrons, improve access to existing transportation services, provide a connection to future Brightline West service to/from ONT, and support the use of clean, emerging technology for transit opportunities between Cucamonga Metrolink Station and ONT. More specifically, the Project's objectives are as follows:

- Expand access options to ONT by providing a convenient and direct connection between ONT and the Metrolink network, and other transportation services at the Cucamonga Station.
- Reduce roadway congestion by encouraging a mode shift to transit from single-occupancy vehicles and provide reliable trips to and from ONT.
- Support autonomous electric vehicle technology usage for transit projects.

2.2 PROJECT NEED

The proposed Project need includes:

- Lack of direct transit connection coinciding with Metrolink trains and peak airport arrival and departure schedules. The lack of a direct transit connection between Cucamonga Metrolink Station and ONT creates mobility challenges for air passengers accessing ONT. In many cases, the lack of a last-mile connection between the Metrolink system and ONT forces airport passengers to use rideshare services or private single-occupancy vehicles, adding congestion to the local roads between the Cucamonga Metrolink Station and ONT. This congestion results in delays for the public to reach their destination, community services, and facilities.
- Roadway congestion affecting trip reliability and causing traffic delays. ONT travelers using rideshare services or private single-occupancy vehicles adds traffic volumes and increasing congestion on the local roads between Cucamonga Metrolink Station and ONT. Increases in future traffic volumes and roadway congestion affects trip reliability for travelers and commuters to and from ONT.
- Increasing Vehicle Miles Traveled (VMT) resulting from ONT travelers and lack of a direct transit connection.
- Increased greenhouse gas (GHG) emissions within communities surrounding ONT from single-occupancy vehicle travel to and from ONT.

2.3 ALTERNATIVES EVALUATED

2.3.1 No Project Alternative

CEQA requires that existing conditions and the proposed Project be evaluated against a No Project Alternative in an Environmental Impact Report (EIR). The No Project Alternative represents the Project area if the proposed Project is not constructed, and additional municipal projects would still be developed in the area. The No Project Alternative is used for comparison purposes to assess the relative benefits and impacts of constructing a new transit project versus only constructing projects which are already funded and planned for in local and regional plans.

The No Project would result in no new direct electrically powered, on-demand fixed transit guideway connection from the Cucamonga Metrolink Station to ONT. Omnitrans currently operates a limited-service bus route to ONT, known as ONT Connect or Route 380, which would remain operational under the No Project. ONT Connect currently operates Monday through Sunday, with bidirectional (northbound and southbound) service frequencies ranging from 35-60 minutes. However, ONT Connect travels with general/mixed traffic on existing roadways. The No Project assumes that the existing roadway system near ONT (such as the Interstate 10 [I-10] and Interstate 15 [I-15]) will implement some planned expansion and improvement projects and undergo routine maintenance activities. The SBCTA and California Department of Transportation (Caltrans) propose to construct Express Lanes, including tolled facilities, in both directions of I-15. In addition, Caltrans is proposing to improve I-10 by constructing freeway lane(s) and other improvements through all or a portion of the 33-mile-long segment of I-10 from the Los Angeles/San Bernardino County line to Ford Street in San Bernardino County.

A detailed list of the planned projects included in the No Project is found in the Cumulative Impacts Technical Report (SBCTA 2024a).

2.3.2 Proposed Project

The proposed Project includes a 4.2-mile tunnel alignment, three passenger stations, a maintenance and storage facility (MSF), and an access and ventilation shaft (vent shaft) in the cities of Rancho Cucamonga and Ontario within San Bernardino County (see Figure 2-1). The proposed Project/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 following sections provide additional details on the proposed Project location and land uses, and on the proposed design, construction, and operation, as applicable, for these project elements.

2.3.2.1 Project Location

The proposed Project is located in the City of Rancho Cucamonga and in the City of Ontario within San Bernardino County. Figure 2-1 illustrates the proposed Project site's regional location and vicinity. The proposed Project alignment is a reversed L-shaped alignment consisting of the Cucamonga Metrolink Station, Milliken Avenue, East Airport Drive, and ONT. Figure 2-2 illustrates the proposed Project area. Cucamonga Metrolink Station is located at 11208 Azusa Court in the City of Rancho Cucamonga and serves the Metrolink San Bernardino Line commuter rail. ONT is located at 1923 East Aviation in the City of Ontario and provides international airport service with over 10 different airline partners. Information related to the proposed Project Design is found in Section 2.3.2.3.

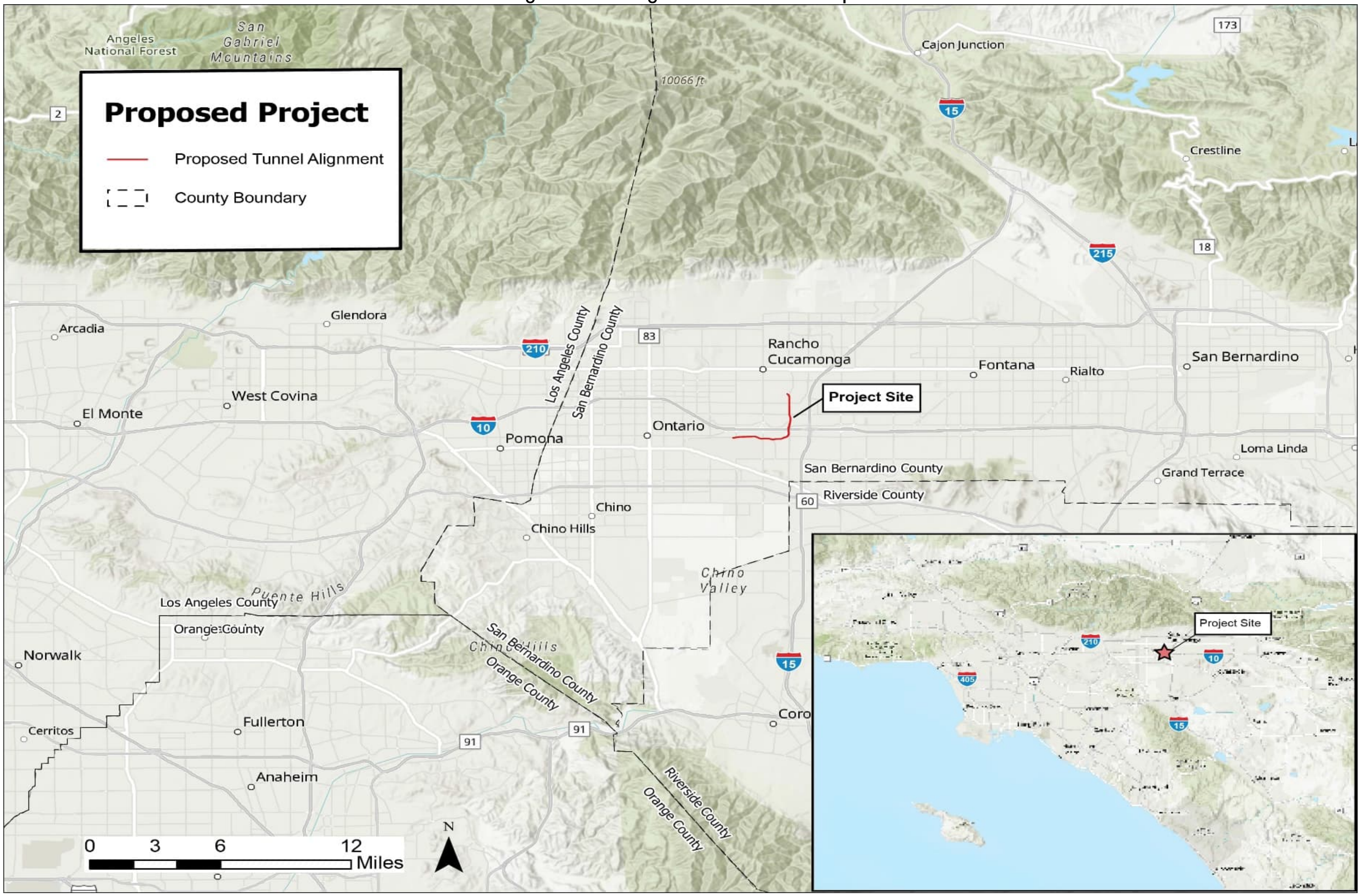
2.3.2.2 Existing Land Uses

The northwestern portion of the proposed Project alignment includes the Cucamonga Metrolink Station. There are 980 standard parking stalls, including 24 Americans with Disabilities Act (ADA) compliant stalls at the Cucamonga Metrolink Station.

From the northwestern portion of the proposed Project site, the tunnel alignment travels under Milliken Avenue, which is a major north-south arterial roadway. Milliken Avenue consists of three travel lanes north of Inland Empire Boulevard and four travel lanes south of Inland Empire Boulevard. From Milliken Avenue, the alignment travels south crossing under the existing I-10. I-10 is an east-west cross-country highway and has six lanes in each direction at the proposed Project site. The alignment eventually connects to East Airport Drive, which is an east-west arterial roadway with three travel lanes in each direction.

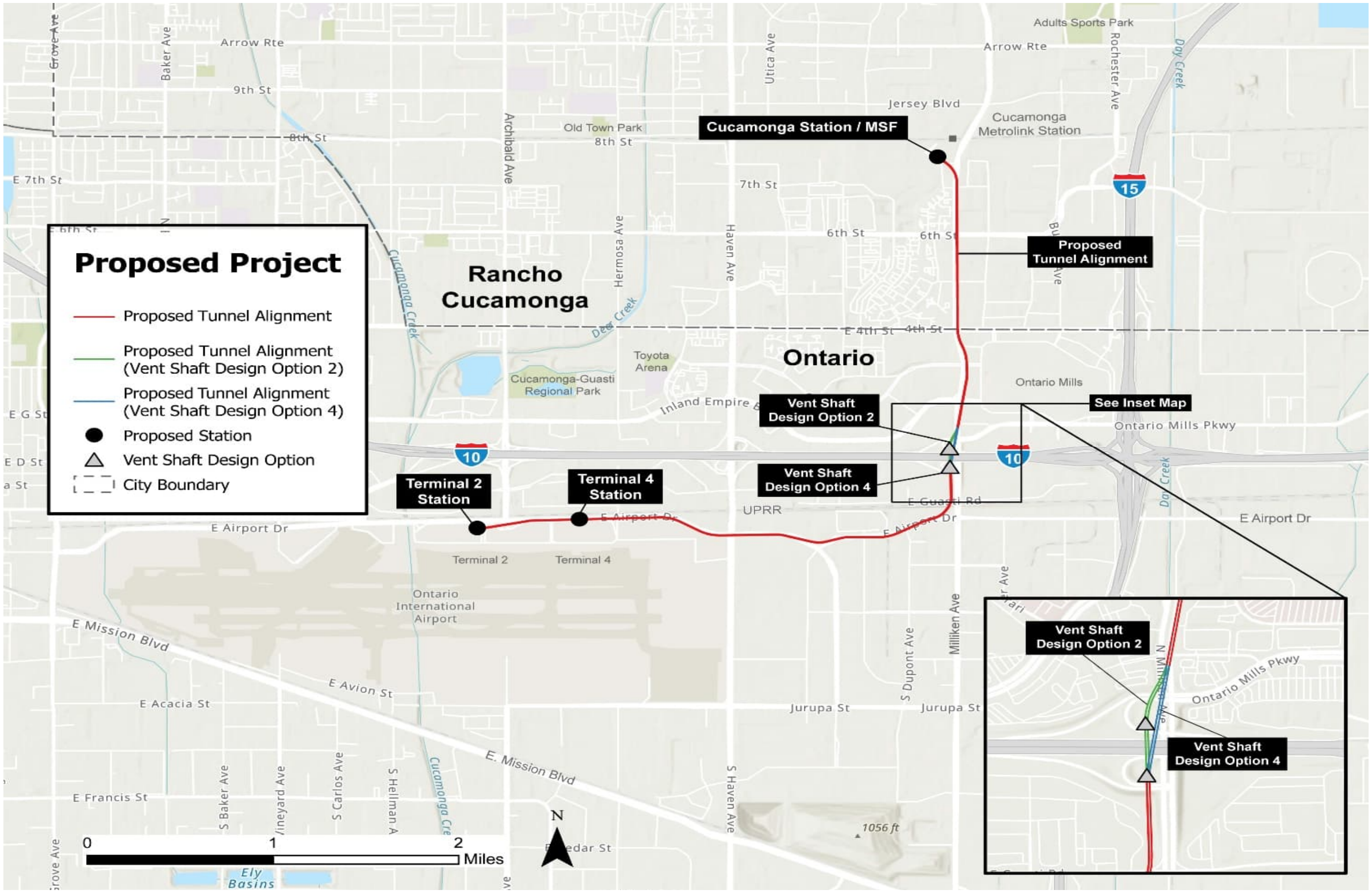
The southwestern portion of the proposed Project tunnel alignment terminates at ONT. Parking Lots 2 through 5 are located on the northern side of ONT. Parking Lots 2, 3, and 4 are surface lots that provide general parking and are a short walk away from the terminals at ONT. Parking Lot 5 is a surface economy lot at which a shuttle service is available.

Figure 2-1: Regional Location Map



Source: AECOM 2024

Figure 2-2: Proposed Project Site



Source: AECOM 2024

2.3.2.2.1 Surrounding Land Uses

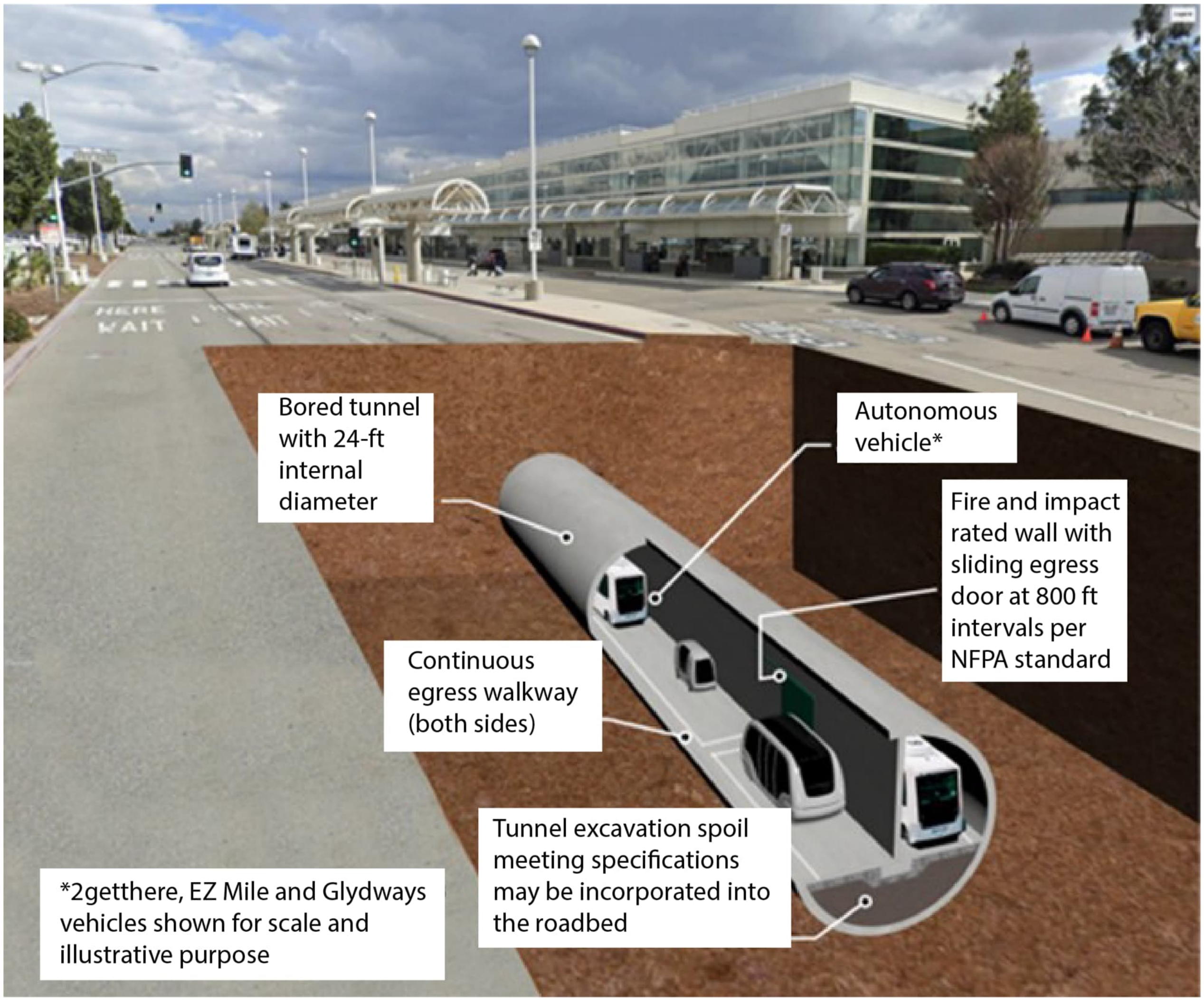
Development in the immediate vicinity of the proposed Project site includes a mix of industrial, commercial, manufacturing, transportation, office, multi-family residential, hotel, and airport related land uses. The proposed Project site's surrounding land uses are located within the City of Rancho Cucamonga and City of Ontario. Immediately adjacent uses include the following:

- North: Railroad tracks, industrial and manufacturing uses, trucking facilities, surface parking lots, Rancho Cucamonga Fire Station Number (No.) 174, and All Risk Training Center for the Rancho Cucamonga Fire Protection District.
- South: Industrial and manufacturing uses, along with trucking facilities, rental car facilities, parking lots, hotel uses, and other airport related uses. ONT includes two passenger terminals, general aviation facilities, air freight buildings, parking lots, and numerous airport and aircraft maintenance and support services.
- East: The eastern side of Milliken Avenue from 5th Street south to 4th Street consists primarily of hotel uses. Concentrated areas of commercial uses and restaurants are located along Milliken Avenue from 4th Street south to I-10, including Ontario Mills, which is a regional shopping mall complex. Hotel uses are also located adjacent to the Ontario Mills shopping mall.
- West: The western side of Milliken Avenue from approximately 7th Street south to 4th Street consists primarily of multi-family residential uses. Concentrated areas of large retail, commercial uses, restaurants, hotels, and the Toyota Arena are located along Milliken Avenue from 4th Street south to I-10.

2.3.2.3 Proposed Project Design

The proposed Project includes construction of transit facilities, including three at-grade passenger stations, one MSF, and one emergency access and vent shaft. The proposed alignment would run primarily within a 4.2-mile single underground tunnel (24-foot inner diameter bidirectional tunnel) alignment that begins at the Cucamonga Metrolink Station and travels south along Milliken Avenue and crosses beneath 6th Street and 4th Street, I-10, and the Union Pacific Railroad (UPRR), before traveling west beneath East Airport Drive to connect to Terminals 2 and 4 at ONT. A tunnel configuration has been identified as the proposed Project based on technical analysis, evaluation, and stakeholder input. Figure 2-3 depicts a typical transit tunnel section. Please see the Alternatives Considered Report for additional background on the development and refinement of the proposed Project design.

Figure 2-3: Typical Transit Tunnel Section View



Source: HNTB 2024

The three proposed at-grade stations would be constructed to serve Cucamonga Metrolink Station, ONT Terminal 2, and ONT Terminal 4. The MSF would be located adjacent to Cucamonga Metrolink Station and would support operations for the proposed Project by storing, maintaining, and cleaning autonomous electric transit vehicles, and it would also include employee amenities and parking. The access and vent shaft would be constructed to provide a means of emergency passenger egress and first responder access.

The proposed Project would include autonomous electric vehicles that would transport passengers on demand between Cucamonga Metrolink Station and ONT. The autonomous electric vehicles would run on rubber tires, and the vehicles are proposed to travel on a dedicated asphalt guideway within the proposed tunnel. The tunnel will include access ramps for the transit vehicles to surface to grade and provide access to the three proposed at-grade stations for passenger boarding and alighting.

2.3.2.3.1 Stations

The proposed Project includes three passenger stations. One station would be located in the northwestern corner of the existing Cucamonga Metrolink Station parking lot, which is owned and maintained by the City of Rancho Cucamonga. The other two proposed stations would be located within two of the existing parking lots at ONT, specifically Parking Lot 2 and Parking Lot 4, which are located across from Terminals 2 and 4. These proposed stations would be located at-grade and would connect to their associated tunnel portals along Terminal Way at ONT. Stations are proposed to be one to two stories and up to approximately 40 feet in height. All three stations would be connected to the bored tunnel via a cut-and-cover structure and an at-grade guideway. The guideway would be enclosed by fencing, and the walls would be buffered with landscaping. A pedestrian walkway would be provided bordering the outside of the guideway. Figure 2-4 and Figure 2-5 illustrate the overview of the proposed station footprint.

The proposed at-grade station Cucamonga Station would be approximately 8,000 square-feet and would be located at the northwest corner of the existing Cucamonga Metrolink Station parking lot. The existing Cucamonga Metrolink Station parking lot is owned and maintained by the City of Rancho Cucamonga. Approximately 180 parking stalls would be permanently removed from the existing Cucamonga Metrolink Station parking lot to accommodate the proposed Cucamonga Station. Two other stations, each approximately 10,000 square-feet, would be located at-grade within two of the existing parking lots at ONT Terminal 2 and Terminal 4. The Cucamonga Station also includes the proposed Project's MSF.

The two airport-serving stations would connect to their associated tunnel portals along Terminal Way via an at-grade connection. The proposed stations would be entirely located within the ONT right-of-way (ROW). Approximately 80 parking stalls would be permanently removed to accommodate the ONT Terminal 2 station, and approximately 115 spaces would be permanently removed to accommodate the ONT Terminal 4 station.

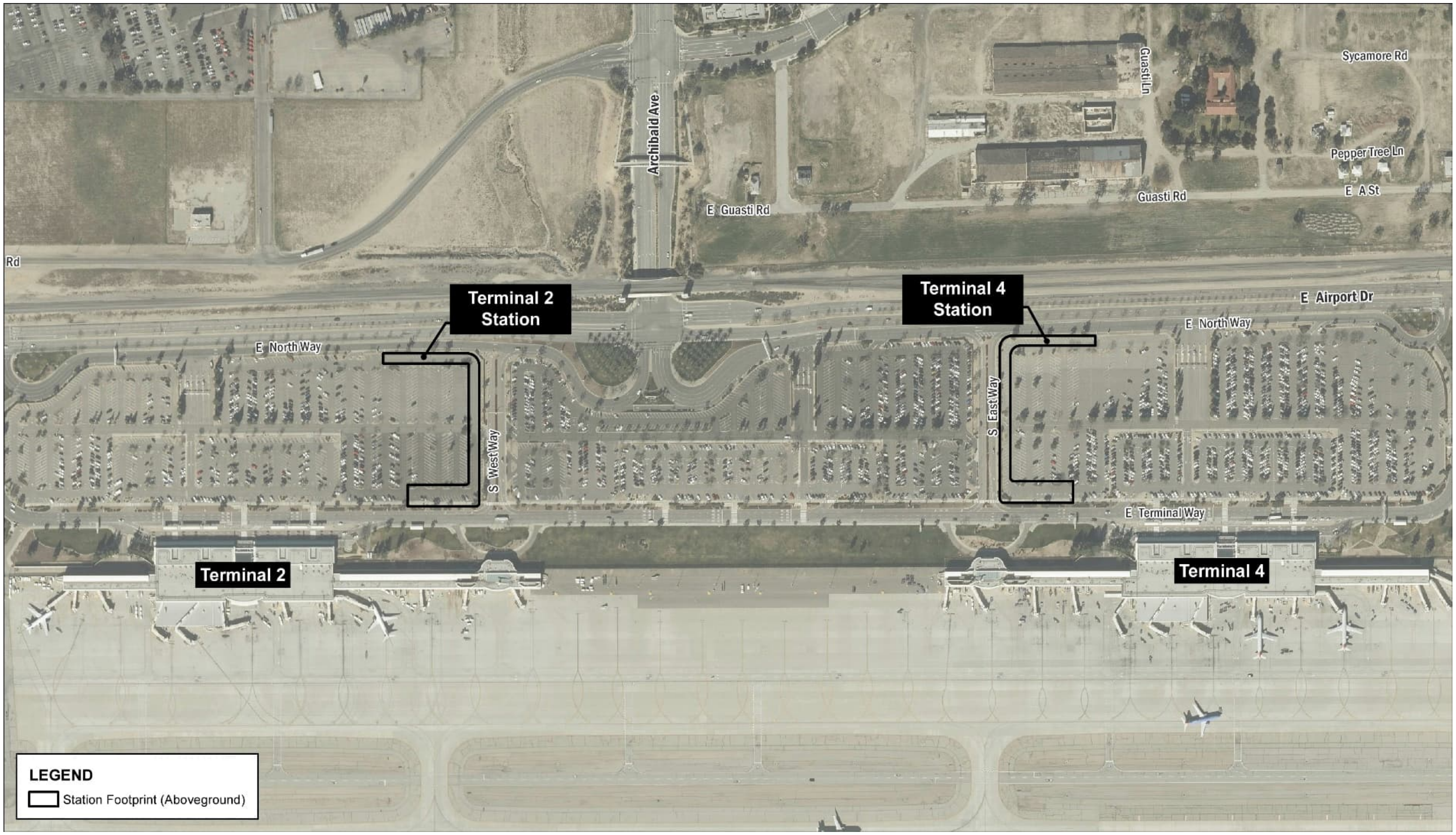
2.3.2.3.2 Maintenance and Storage Facility

The proposed Cucamonga Station would include an adjacent MSF with enclosed bays to store, clean, and maintain vehicles. The MSF would be approximately 11,000 square feet, with an additional 5,000 square feet second story and would contain an operations control center with lockers, breakrooms, and restrooms. Employee parking for the facility would be provided at the existing parking lot owned by SBCTA, in the southeastern quadrant of the Milliken Avenue/Azusa Court intersection.

Figure 2-4: Cucamonga Station

Source: HNTB 2024

Figure 2-5: Ontario International Airport – Terminal 2 Station and Terminal 4 Station



Source: HNTB 2024

2.3.2.3.3 Description of Vent Shaft Design Options

A vent shaft would be constructed to provide a means of emergency passenger egress and first responder access to and from the tunnel. Two locations are being considered west of Milliken Avenue on the north and south sides of I-10, as shown in Figure 2-6. A final decision about the location of the vent shaft would be made after the completion of the CEQA and NEPA environmental processes, and consideration of operational needs, environmental impacts, and stakeholder coordination.

The location option on the north side of I-10 would be in the ROW for the westbound off-ramp and would provide surface ground access from the Milliken Avenue/I-10 westbound off ramp intersection or from the westbound off ramp right lane near the ramp termini or directly from Milliken Avenue. The location option on the south side of I-10 would be in the ROW for the eastbound on-ramp and would provide surface ground access from Milliken Avenue near the eastbound on-ramp.

The vent shaft would consist of both underground and above ground structures. The underground shaft would extend to the tunnel level and the surface structures would consist of a one-(1) story structure above ground.

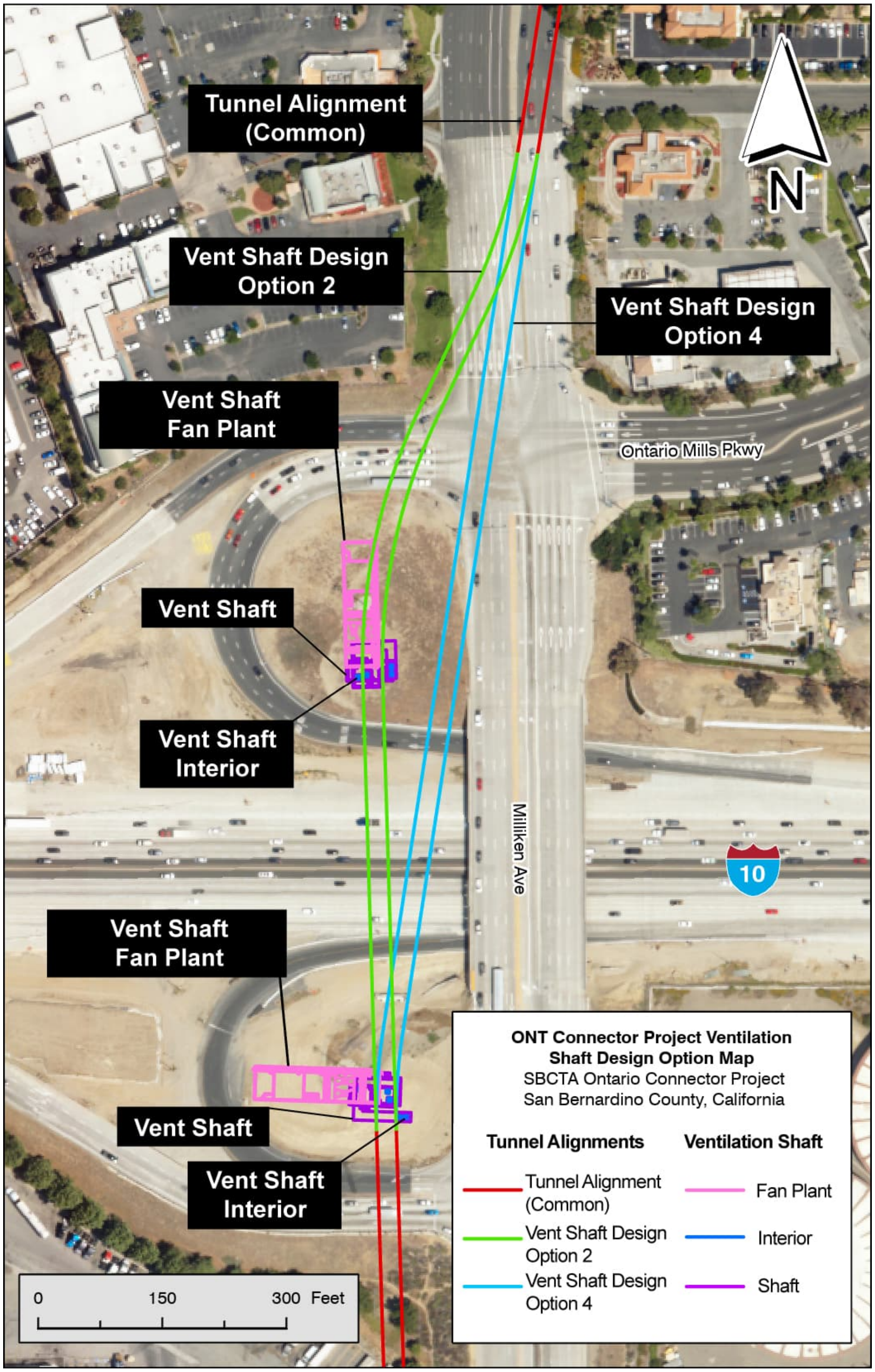
Access points would include underground, surface, and road access for emergencies to and from the tunnel. The proposed vent shaft would include associated electrical and ventilation equipment, and access would be controlled via a lock and key.

2.3.2.4 Proposed Operations

The proposed Project includes operation of autonomous electric vehicles to transport passengers to and from the proposed stations. The autonomous electric vehicles would be grouped and queued at their origin station and would depart toward the destination station once boarded with passengers. After the group of vehicles arrives at the destination station and passengers deboard, new passengers would board, and the group of vehicles would return to its origin station. If no new passengers are present, empty vehicles would be returned to the origin station to pick up new passengers. The proposed Project would provide a peak one-way passenger throughput of approximately a minimum of 100 passengers 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.

Fleet size and capacity of the vehicles will be up to the Operating System Provider and Design-Builder to determine to provide an initial operating system capable of transporting a minimum of 100 passengers per hour per direction and scalable to meet ridership demand. Based on the initial operating requirements and preliminary vehicle capacities, SBCTA is anticipating initial fleet sizes of between 7 and 60 vehicles to be required. Vehicles are rubber-tired electric autonomous vehicles.

Figure 2-6: Vent Shaft Design Option 2 and Vent Shaft Design Option 4



Source: HNTB 2024

2.3.2.5 Proposed Construction

This section describes the construction approach for the proposed Project. Overall construction of the proposed Project would last approximately 56 months, with project elements varying in their specific construction duration, as discussed in this section. Construction is projected to start in 2025 and is anticipated to be completed in 2031. The Construction Methods Technical Report provides additional details regarding the construction approach and process for the key project elements (stations, MSF, tunnel construction, and vent shaft) associated with the proposed Project (SBCTA 2024b).

2.3.2.5.1 Stations and Maintenance and Storage Facility Construction

A construction staging area would be required at each of the three proposed Project stations, which includes the MSF at Cucamonga Station, and at the vent shaft location. Construction staging areas would be used to store building materials and construction equipment, assemble the tunnel boring machine (TBM), temporarily store excavated materials, and serve as temporary field offices for the contractor. Heavy-duty, steel, track-out grates (i.e., rumble plates) would be staged at the entrance of the construction staging areas to capture dirt and soil debris from the wheels of trucks and construction equipment. Best management practices (BMPs) would minimize a public nuisance that can result from soil and mud tracks on the public roadway. For security purposes, construction staging areas would be equipped with fences, lighting, security cameras, and guards to prevent vandalism and theft.

Cut-and-cover sites would occur at each proposed station location. Cut-and-cover activities involve the excavation of a shallow underground guideway from the existing street surface. During the construction phase, the cut-and-cover sites at Cucamonga Metrolink Station and Terminal 2 at ONT would be used as the TBM launching and receiving pits. Ultimately, the station cut-and-cover sites would serve as the vehicle ramps for the proposed Project's operations where the underground guideway would transition to at-grade.

Following the mass excavation and grading, the stations would require the installation of the waterproof membrane around the station box. The construction sequence for the station structures would typically commence with construction of the foundation base slab, followed by installation of exterior walls any interior column elements, and pouring of the station roof. Once station structure work is complete, the station excavation would be backfilled, and the permanent roadway would be constructed. Decking removal and surface restoration would then occur. Stations are proposed to be 1 to 2 stories, up to approximately 40 feet in height.

Generally, stations would be built simultaneously with or following guideway construction. However, construction of the Cucamonga Station may need to occur after the completion of all excavation and in-tunnel work. Truck haul routes, described in Table 2-1 would be designated for each staging site to transport excavated material from the staging sites. Additional construction details for the proposed stations and MSF are described in Table 2-1, and in the Construction Methods Technical Report. Table 2-2 provides an overview of the typical sequencing for transit construction activities (SBCTA 2024b).

2.3.2.5.1.1 Construction Details for Cucamonga Station and Maintenance and Storage Facility

Construction at the proposed Cucamonga Station would require a mass excavation and the TBM would be launched from the invert of the Cucamonga Station and retrieved from the ONT Terminal 2 Station construction site. Construction at the proposed Cucamonga Station would require approximately 3.2 acres. Approximately 170 parking stalls would be temporarily unavailable at the Cucamonga Metrolink Station parking lot. Construction at the Cucamonga Station would occur for up to 37 months. No road closures are anticipated for staging at the Cucamonga Station. Equipment needs would include the following: excavators, backhoes, a vertical conveyor system, a gantry crane, a crawler crane, concrete trucks, haul trucks, a wheel loader, Foamplant, cooling towers, a tunnel fan grout plant, segment cars, and flatcars.

Additionally, construction would not interrupt Metrolink service at the Cucamonga Metrolink Station, as construction activities and staging would occur within the existing Cucamonga Station parking lot. SBCTA will coordinate construction at Cucamonga Station with SCRRA, prior to the start of construction and throughout the construction period, to maintain station access and to coordinate station parking, as needed.

The proposed Cucamonga Station includes a MSF to store, clean, and maintain vehicles. The MSF would be approximately 11,000 square feet, with an additional 5,000 square feet second story and would contain an operations control center with lockers, breakrooms, and restrooms. The MSF would be constructed adjacent to the Cucamonga Station and would include enclosed bays.

Table 2-1: Stations, Maintenance and Storage Facility Construction Details

Proposed	Construction Area	Duration	Haul Route
Cucamonga Station and MSF	Would require approximately 3.2 acres within the existing Cucamonga Metrolink Station parking lot. Approximately 170 parking stalls would be temporarily unavailable from the existing Metrolink parking lot.	Construction at the Cucamonga Station would occur for up to 37 months.	Haul trucks are needed to support removal and transport of materials from the mass excavation for each construction site (for the stations and vent shaft) and from tunnel boring activities. Haul trucks would collect excavated material from the construction sites and transport it away from the sites, utilizing designated haul routes. Haul trucks would exit the staging area, travel north along Milliken Avenue, and turn right on Foothill Boulevard to access I-15. No road closures are anticipated for staging at the Cucamonga Station.
ONT Terminal 2 Station	Would require approximately 3.4 acres within the existing ONT Terminal 2 parking lot. Approximately 300 parking stalls would be temporarily unavailable from the ONT parking lot.	Construction at ONT Terminal 2 would occur for up to 27 months.	Haul trucks are needed to support removal and transport of materials from the mass excavation for each construction site (for the stations and vent shaft) and from tunnel boring activities. Haul trucks would collect excavated material from the construction sites and transport it away from the sites, utilizing designated haul routes. Haul trucks would exit the staging area, travel east along Terminal Way, and turn left on Haven Avenue to access I-10. No road closures are anticipated for staging at the Terminal 2 Station.
ONT Terminal 4 Station	Would require approximately 3.2 acres within the existing ONT Terminal 4 parking lot. Approximately 300 parking stalls would be temporarily unavailable from the ONT parking lot.	Construction at ONT Terminal 4 would occur for up to 15 months.	Haul trucks are needed to support removal and transport of materials from the mass excavation for each construction site (for the stations and vent shaft) and from tunnel boring activities. Haul trucks would collect excavated material from the construction sites and transport it away from the sites, utilizing designated haul routes. Haul trucks would exit the staging area, travel east along Terminal Way, and turn left on Haven Avenue to access I-10. No road closures are anticipated for staging at the Terminal 4 Station.

Table 2-2: Typical Sequencing of Transit Construction Activities

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

2.3.2.5.1.2 Construction Details for ONT Terminal 2 Station

Construction staging at the proposed ONT Terminal 2 station would require approximately 3.4 acres within the existing ONT Terminal 2 parking lot. Approximately 300 parking stalls would be temporarily unavailable at the ONT Terminal 2 parking lot. Construction at the ONT Terminal 2 Station would occur for up to 27 months. No road closures are anticipated for staging at the ONT Terminal 2 Station. Equipment needs would include the following: a piling rig, a gantry crane, a crawler crane, excavators, concrete trucks, muck trucks, a wheel loader, Foamplant, cooling towers, a tunnel fan, a grout plant, segment cares, and flatcars.

2.3.2.5.1.3 Construction Details for ONT Terminal 4 Station

Construction Staging at the proposed ONT Terminal 4 station would require approximately 3.2 acres within the existing ONT Terminal 4 parking lot. Approximately 300 parking stalls would be temporarily unavailable at the ONT Terminal 4 parking lot. Construction at the ONT Terminal 4 Station would occur for up to 15 months. No road closures are anticipated for staging at the ONT Terminal 4 Station. Equipment needs would include the following: a piling rig, a crawler crane, concrete trucks, muck trucks, a compressor, a generator, a water treatment plant, a wheel wash, a wheel loader, backhoes, and excavators.

2.3.2.5.2 Tunnel Construction

The proposed Project will travel in a below grade tunnel configuration for most of its proposed alignment. A TBM will be utilized in the construction of the tunnel. TBM are typically used in the construction of infrastructure projects to build deep underground tunnels by boring, or excavating, through soil, rocks, and/or other subsurface materials. The TBM would be launched from the Cucamonga Metrolink Station to construct the tunnel. Additional details regarding the underground construction process for the proposed Project are included in the Construction Methods Technical Report (SBCTA 2024b).

The TBM would be launched from the Invert of the Cucamonga Station and retrieved from the ONT Terminal 2 Station construction site. A large crane would be used to assemble and disassemble the TBM from the excavation and receiving pits. OIAA height limits at ONT and Rancho Cucamonga, 135 feet and 160 feet, respectively, would restrict crane heights. The TBM would operate six days a week, with maintenance occurring each Sunday. Construction of the entire tunnel would take approximately 22 months. Both ends of the tunnel would need to be constructed via direct excavation (cut and cover) to launch or retrieve the TBM. After mining is completed and TBM logistics are demobilized, both ends of the tunnel would be utilized to build the invert roadway, walkways, center wall and MEP systems, etc.

Vehicle ramps connecting to the tunnel would be constructed via direct excavation, as well. Equipment at the TBM launch site would include trucks, a crane, excavators, a grout plant, a compressor plant, a tunnel fan, and cooling towers. The launch area would also store tunnel construction materials (rail, pipe, ducts, etc.) and stockpile excavated material.

Truck haul routes at the proposed launch site at Cucamonga Station and the proposed retrieval site at ONT Terminal 2 Station are described in Table 2-1. The Construction Methods Technical Report includes additional details on the overall construction approach for the proposed tunnel (SBCTA 2024b).

2.3.2.5.3 Vent Shaft Construction

Two vent shaft design options with different access points are being considered for the proposed Project. Vent shaft design option 2 would be located west of Milliken Avenue on the westbound off-ramp of the I-10. Vent shaft design option 4 would be located west of Milliken Avenue on the eastbound on-ramp of the I-10. The vent shaft will consist of both underground and above ground structures. The underground shaft will extend to the tunnel level and the surface structure will consist of a one-(1) story structure above ground. One vent shaft would be constructed along the tunnel alignment.

The vent shaft could be constructed before or after the construction of the tunnel and would be installed using a similar construction methodology to that of the tunnel and take approximately 6 months to complete. A drill rig would install up to 5 piles deep per day, each 70 feet deep. Piles would be drilled (i.e., no impact driving). The access shaft would then be excavated. The excavation would be supported by an internal bracing system. The vent shaft would require a construction staging area approximately 0.62-acres (27,000 square feet). Anticipated equipment at the location would include haul trucks, a drill rig, a crane, an excavator, a wheel loader, a compressor, and a ventilation fan. The staging area would include material storage, stockpiles of excavated material, water treatment, a workshop, a construction office, and an employee parking. Additional details regarding the construction process for the vent shaft are included in the Construction Methods Technical Report (SBCTA 2024b).

2.3.2.5.4 Utilities

Utility relocations are anticipated at the launch and retrieval locations at the Cucamonga Metrolink Station site, ONT, and ventilation/emergency access shaft. Multiple utilities would be relocated to allow for the construction of the access shaft, including: potential electric underground distribution cables owned and operated by Southern California Edison; landscape irrigation line owned and operated by the City of Ontario; and Caltrans fiber optic duct bank. In a future project phase, coordination with the existing utility service providers prior to utility relocation would be conducted to reduce potential impacts to utility service and minimize disruptions. Relocations of existing utilities would be coordinated with utility service providers and would be in previously disturbed areas or established ROW close to their existing locations and would stay within the evaluated Project footprint.

2.3.2.6 Proposed Project Easements

The proposed Project would require easements from 19 properties. This includes the need for 12 permanent subsurface easements, two permanent surface easements, and five parcel acquisitions for both subsurface and surface easements. Seven of the easements would be for the three stations and would total approximately 2 acres. SBCTA would require these easements for construction and/or operation of the proposed Project. There are two locations that are options for the location of the Vent Shaft, both belonging to Caltrans. This document evaluates the impacts for both options without selection of a preferred site. The decision of the preferred site will depend in part on the CEQA and NEPA processes, including any potential input from the public. The final decision as to which option is preferred may occur after the completion of the CEQA/NEPA process. Land uses for the parcels where these easements would be required include industrial, transportation facilities, utilities, and commercial. The owners of these parcels include SBCTA and City of Rancho Cucamonga (Cucamonga Metrolink Station west and east parking lots), OIAA, a utility service provider, and some private owners. No relocations of businesses and residences would be required to construct the proposed Project.

3 REGULATORY SETTING

3.1 FEDERAL

A project must comply with one or more federal regulations if: (1) the project involves land under the jurisdiction of a federal agency, (2) a federal agency has oversight on the project, and/or (3) a permit, a license, authorization, or funding from a federal agency is required to complete the project. Because this proposed Project is under the oversight of the FTA, a federal agency, and is federally funded, the following federal regulations apply to this proposed Project.

3.1.1 National Environmental Policy Act of 1969 (42 United States Code 4321–4375)

NEPA established a national policy for the protection, promotion, enhancement, and understanding of the environment and created the Council on Environmental Quality. As part of this act, Section 101(b)(5) (42 United States Code 4331) seeks to "…achieve a balance between population and resource use which will permit high standard of living and a wide sharing of life's amenities…" NEPA requires that the environmental effects of a proposed federal project or action be evaluated, and regulations for implementing this evaluation are found in 40 Code of Federal Regulations 1500–1508. Because the proposed Project is under the oversight of a federal agency (i.e., FTA) and federally funded, compliance with NEPA regulations is required for the proposed Project as a whole. Projects processed under federal environmental rules have traditionally included a traffic operational analysis and chapter in the environmental document detailing the affected modal network to meet the requirements of NEPA. Federal review is generally required if a project uses federal funding or involves federal lands. Additional safety evaluations may need to be conducted because some desirable safety improvements may be required as part of the proposed Project.

3.1.2 American Rescue Plan Act of 2021

The American Rescue Plan Act of 2021 (ARP), which took effect on March 11, 2021, includes 30.5 billion dollars ($) in federal funding to support the nation's public transportation systems as they continue to respond to the COVID-19 pandemic and provide transit services.

3.1.3 Intermodal Surface Transportation Efficiency Act of 1991

The Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) provides the foundation for the nation's surface transportation into the 2^{1s}t century. ISTEA commits to a national intermodal transportation system, and its empowerment of state and local officials to solve their specific transportation problems, flexibility in the use of funds by state and local governments, environmental enhancement, and planning and management systems that will enable the intermodal network to work more efficiently. The intermodal approach to transportation is taking hold at all levels throughout the transportation community in the way projects are conceived, developed, and completed. Roads and highways, railroads, transit, ports and shipping, aviation, bikes and walking not working separately but in coordination provide the best means to maximize the benefits that an intermodal transportation system can bring to our country and the world (Federal Highway Administration, 1994).

3.1.4 Fixing America's Surface Transportation Act (Public Law Number 114-94)

On December 4, 2015, President Barack Obama signed the Fixing America's Surface Transportation (FAST) Act (Public Law No. 114-94) into law—the first federal law in over a decade to provide long-term funding certainty for surface transportation infrastructure planning and investment. The FAST Act authorizes $305 billion over fiscal years 2016 through 2020 for highway, highway and motor vehicle safety, public transportation, motor carrier safety, hazardous materials safety, rail, and research, technology, and statistics programs. The FAST Act maintains our focus on safety, keeps intact the established structure of the various highway-related programs we manage, continues efforts to streamline project delivery and, for the first time, provides a dedicated source of federal funding for freight projects. With the enactment of the FAST Act, states and local governments are now moving forward with critical transportation projects with the confidence that they will have a federal partner over the long term.

3.2 STATE

Key state regulations that are most relevant to the proposed Project are summarized in this section.

3.2.1 California Environmental Quality Act (California Public Resources Code 21000 Et Seq.)

The purpose of CEQA is to provide a statewide policy of environmental protection. As part of this protection, state and local agencies are required to analyze, disclose, and, when feasible, mitigate the environmental impacts of, or find alternatives to the proposed Project.

The State CEQA Guidelines (California Code of Regulations 15000 et seq.) provide regulations for the implementation of CEQA and include more specific direction on the process of documenting, analyzing, disclosing, and mitigating the environmental impacts of a project. To assist in this process, Appendix G of the *State CEQA Guidelines* provides a sample checklist form that may be used to identify and explain the degree of impact a project will have on a variety of environmental aspects, including Transportation (Section 17).

As stated in Section 15002(b)(1-3) of the State CEQA Guidelines, CEQA applies to governmental action, including activities that are undertaken by, financed by, or require approval from a governmental agency. Because this proposed Project is undertaken by governmental agencies, CEQA regulations apply.

3.2.2 Assembly Bill 1358 (California Complete Streets Act)

Assembly Bill (AB) 1358, or the California Complete Streets Act, was signed into law on September 30, 2008. Since January 1, 2011, AB 1358 has required circulation element updates in the city and county

General Plans to address the transportation system from a multimodal perspective. The Act states that streets, roads, and highways must "meet the needs of all users in a manner suitable to the rural, suburban, or urban context of the General Plan." The Act requires a circulation element to plan for all modes of transportation where appropriate, including walking, biking, car travel, and transit. In addition, AB 1358 requires circulation elements to consider the multiple users of the transportation system, including children, adults, seniors, and the disabled.

3.2.3 Senate Bill 375 (Sustainable Communities and Climate Protection Act)

Senate Bill (SB) 375, or the Sustainable Communities and Climate Protection Act, provides incentives for cities and developers to bring housing and jobs closer together and to improve public transit. The goal is to reduce the number and length of automobile commuting trips, helping to meet the statewide targets for reducing GHG emissions set by AB 32. SB 375 requires each metropolitan planning organization to add a broader vision for growth to its transportation plan, called a Sustainable Communities Strategy (SCS). The SCS must lay out a plan to meet the region's transportation, housing, economic, and environmental needs in a way that enables the area to lower GHG emissions. The SCS should integrate transportation, land-use, and housing policies to plan for achievement of the emissions target for each region. The latest Southern California Association of Governments (SCAG) Regional Transportation Plan (RTP) and SCS were adopted in 2020.

3.2.4 Senate Bill 743

SB 743 was signed into law on September 27, 2013, and has changed the traditional transportation impact analyses conducted as part of the CEQA process. Under this bill, traffic impacts of a residential, mixed-use residential, or employment center project on an infill site within a transit priority area will not be considered significant. Also, residential, mixed-use, and employment center projects meeting specific criteria would be exempt from CEQA. Furthermore, for the CEQA process, SB 743 eliminates measures such as auto delay, levels of service (LOS), and other vehicle-based measures of capacity in California. Instead, other measurements, such as VMT, are to be utilized to measure impacts.

The purpose of SB 743 Is to balance the needs of congestion management, infill development, public health, GHG reductions, and other goals. The Office of Planning and Research (OPR) released the Technical Advisory on Evaluating Transportation Impacts in CEQA in December 2018 (OPR, 2018). The City of Rancho Cucamonga led the countywide effort to develop the SB 743 implementation study, a guiding document for VMT analysis methodology, thresholds, and mitigation strategies for transportation impact evaluation for SBCTA agencies.

SB 743 changed how traffic impacts are evaluated for CEQA purposes. The new rules supersede the LOS criteria for measuring traffic impacts, replacing them with VMT metrics. Section 15064.3 of the State CEQA Guidelines must be implemented statewide by July 1, 2020, and public agencies may elect to adopt VMT thresholds of significance.

3.2.5 California Department of Transportation Vehicle Miles Traveled-Focused Transportation Impact Study Guide

The Caltrans VMT-Focused Transportation Impact Study Guide (TISG) provides a starting point and a consistent basis on which Caltrans evaluates traffic impacts to state highway facilities. The TISG was adopted on May 20, 2020, and provides guidance to Caltrans districts, lead agencies, tribal governments, developers, and consultants regarding Caltrans review of a land use project or plan's transportation analysis using a VMT metric. This guidance is not binding on public agencies, and it is intended to be a reference and informational document.

3.3 REGIONAL AND LOCAL GUIDELINES

The proposed Project is within the City of Rancho Cucamonga and the City of Ontario, which are within San Bernardino County. SBCTA and the Cities provide guidance through various goals, policies, and programs, as described in more detail in this section.

3.3.1 San Bernardino County Transportation Authority Congestion Management Program

The passage of Proposition 111 in June 1990 established a process for each metropolitan county in California, including San Bernardino County, within which the City of Rancho Cucamonga and City of Ontario are located, to prepare a Congestion Management Program (CMP). California Government Code Section 65089 states the requirements for CMPs: "(a) A congestion management program shall be developed, adopted and updated biennially, consistent with the schedule for adopting and updating the regional transportation improvement program, for every county that includes an urbanized area and shall include every city and the county."

Updated by SBCTA in 2016, the CMP is an effort to align land use, transportation, and air quality management efforts in order to promote reasonable growth management programs that effectively use statewide transportation funds while ensuring that new development pays its fair share of needed transportation improvements.

The focus of the CMP is the development and coordination of a multimodal transportation system across jurisdictional boundaries, incorporating the goals from the SCAG RTP/SCS. Per the LOS standards adopted by SBCTA, when a CMP segment falls to "F," a deficiency plan must be prepared by the local agency where the deficiency is located. The plan must contain mitigation measures (MM), including Transportation Demand Management (TDM) strategies and transit alternatives, and a schedule of mitigating the deficiency. It is the responsibility of local agencies to consider the traffic impacts on the CMP when reviewing and approving development proposals. The SBCTA Congestion Management Plan, 2016 Update (SANBAG, 2016), outlines the following goals:

- Goal 1: Maintain or enhance the performance of the multimodal transportation system and minimize travel delay.

- Goal 2: Assist in focusing available transportation funding on cost-effective responses to subregional and regional transportation needs.
- Goal 4: Help to coordinate development and implementation of subregional transportation strategies across jurisdictional boundaries.
- Goal 6: Promote air quality and improve mobility through implementation of land use and transportation alternatives or incentives that reduce both vehicle trips and miles traveled and vehicle emissions.

3.3.2 Regional Transportation Plan

The Connect SoCal plan (also known as the 2024–2050 RTP/SCS) represents the vision for Southern California's future, including policies, strategies, and projects for advancing the region's mobility, economy, and sustainability through 2050. The plan details how the region will address its transportation and land use challenges and opportunities in order to achieve its regional emissions standards and GHG reduction targets.

The components of Connect SoCal are required by federal and state legislation, and the RTP/SCS is an important planning document for the region, allowing project sponsors to qualify for federal funding. SCAG is required to update this long-range planning document every 4 years. Connect SoCal 2024 is the current version and embodies a collective vision for the region's future based on input from local governments, county transportation commissions, tribal governments, nonprofit organizations, businesses, and local stakeholders within the counties of Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura.

This new connection will increase regional mobility and connectivity to ONT, improve access to existing Metrolink and Omnitrans services, and accommodate future growth of travel needs, which address the visions of the Connect SoCal Plan 2020.

3.3.3 Measure I 2010–2040 Strategic Plan

First approved in 1989 and extended in 2004 by voters, Measure I is the half-cent sales tax collected throughout San Bernardino County for transportation improvements. Administered by SBCTA, the Measure I 2010–2040 Strategic Plan is the official guide for the allocation and administration of the combination of local transportation sales tax, state and federal transportation revenues, and private fair-share contributions to regional transportation facilities to fund delivery of the Measure I 2010–2040 transportation programs. The strategic plan identifies funding categories, allocations, and planned transportation improvement projects in the county for freeways, major and local arterials, bus and rail transit, and traffic management systems. For fiscal years 2018-2019 through 2022-2023, the City of Rancho Cucamonga has identified improvements worth approximately $19 million in funding for pavement rehabilitation projects, citywide ADA of 1990 corrective measures, and signal and striping maintenance. These improvements are planned to be funded through the Measure I Local Streets Program. It is to be noted that the 5-year Capital Improvement Program is over-programmed to allow use of this funding source if additional funding is available during the 5-year planning period.

3.3.4 San Bernardino County Long-Range Transit Plan

SBCTA updates its Long-Range Transit Plan (LRTP) to address transit needs for an approximate 25-year horizon. The LRTP prioritizes goals and projects for transit growth. With the passage of SB 375 by the state legislature in 2008, the LRTP has been modified to more closely tie land use and transportation planning strategies. The LRTP addresses countywide travel challenges and creates a system aimed to increase the role of transit in future travel choices. The LRTP anticipates that a premium transit service, such as rapid buses and rail modes, will offer solutions to future travel demands by providing competitive travel times and increased reliability, mobility, and accessibility. Premium transit will reduce dependence on cars, encourage community revitalization, and encourage more balanced transit-oriented land use development.

3.3.5 SBCTA Non-Motorized Transportation Plan

SBCTA published its Non-Motorized Transportation Plan in 2011 and revised it in 2018, with the vision of creating a safe, interconnected cycling and walking system in San Bernardino County. Supplemented by local jurisdiction inventory data, the plan provides both regional and city-level recommendations, and the jurisdictions are responsible for the implementation of the plan.

3.3.6 City of Rancho Cucamonga Municipal Code

The City of Rancho Cucamonga Municipal Code includes regulations and standards that govern traffic, parking and loading, and development in the City of Rancho Cucamonga. Title 10, Vehicles and Traffic (City of Rancho Cucamonga, 2022), includes regulations on traffic enforcement regulations, pedestrian rights, electric vehicle parking, and truck routes.

3.3.7 City of Rancho Cucamonga General Plan

The City of Rancho Cucamonga General Plan (PlanRC 2040; City of Rancho Cucamonga, 2021) sets forth the goals, policies, and programs the City of Rancho Cucamonga uses to manage future growth and land use. The Mobility & Access chapter of this plan contains the following goals and policies relevant to the proposed Project:

- Goal MA-1: REGIONAL MOBILITY HUB. A multimodal transportation hub that connects regional and local destinations.
  - Policy MA-1.2: Cucamonga Station Redevelopment. Support redevelopment in and around the Cucamonga Station to support transit-oriented development.

- Policy MA-1.3: Funding. Support federal, statewide, and regional infrastructure funding for transit and transportation.
- Policy MA-1.4: Local Mobility Hub. Require new development at mobility hubs and key stops along the future bus rapid transit (BRT) and future transit circulator system to facilitate first mile/last mile connectivity to neighborhoods.

- Goal MA-2: ACCESS FOR ALL. A safe, efficient, accessible, and equitable transportation system that serves the mobility needs of all users.
  - Policy MA-2.8: Facility Service Levels. Maintain LOS D for priority modes on each street; LOS E or F may be acceptable at intersections or segments for modes that are not prioritized. The City will develop a list of intersections and roadways that are protected from this LOS policy where 1) maintaining the standard would be a disincentive to walking, biking or transit; 2) constructing facilities would prevent the City from VMT reduction goals or other priorities, and; 3) maintaining the standard would be incompatible with adjacent land uses and built forms.
  - Policy MA-2.9: High-Quality Pedestrian Environment. Enhance sidewalks to create a high-quality pedestrian environment, including wider sidewalks, improved pedestrian crossings, buffers between sidewalks and moving traffic, pedestrian lighting, wayfinding signage, shade trees, increased availability of benches, end of cul-de-sac access, etc.
  - Policy MA-2.13: Healthy Mobility. Provide pedestrian facilities and class II buffered bike lanes (or separated bikeways) on auto-priority streets where feasible to promote active transportation.
  - Policy MA-2.14: Bicycle Facilities. Enhance bicycle facilities by maintaining and expanding the bicycle network, providing end-of-trip facilities (bike parking, lockers, showers), improving bicycle/transit integration, wayfinding signage, etc.

- GOAL MA-3: SAFETY. A transportation network that adapts to changing mobility needs while preserving sustainable community values.
  - Policy MA-3.1: Pedestrian and Bicycle Networks. Maintain the Active Transportation Plan supporting safe routes to school, and a convenient network of identified pedestrian and bicycle routes with access to major employment centers, shopping districts, regional transit centers, and residential neighborhoods.
  - Policy MA-3.2: Traffic Safety. Prioritize transportation system improvements that help eliminate traffic-related fatalities and severe injury collisions.

  - Policy MA-3.4: Emergency Access. Prioritize development and infrastructure investments that work to implement, maintain, and enhance emergency access throughout the community.
- Goal MA-5: SUSTAINABLE TRANSPORTATION. A transportation network that adapts to changing mobility needs.
  - Policy MA-5.2: Emerging Technologies. Prioritize investments in critical infrastructure and pilot programs to leverage proven new transportation technology.

3.3.8 City of Ontario Municipal Code

The Ontario Municipal Code (City of Ontario, 2021) includes regulations and standards that govern traffic, parking and loading, and development in Ontario. Title 4, Public Safety, includes regulations on bicycles, traffic enforcement regulations, and off-street parking restrictions in Chapters 2, 6, and 13, respectively.

3.3.9 City of Ontario General Plan

The City of Ontario General Plan (Ontario Plan; City of Ontario, 2010) sets forth the goals, policies, and programs the City of Ontario uses to manage future growth, land use, and other community elements. The Mobility Element of this plan contains the following goals and policies relevant to the project:

- Goal M1: A system of roadways that meets the mobility needs of a dynamic and prosperous Ontario.
  - Policy M1-1: Roadway Design and Maintenance. We require our roadways to:
    - Handle the capacity envisioned in the Functional Roadway Classification Plan.
    - Maintain a peak hour LOS E or better at all intersections.
  - Policy M1-2: Mitigation of Impacts. We require development to mitigate its traffic impacts.
  - Policy M1-3: Roadway Improvements. We work with Caltrans, SANBAG and others to identify, fund and implement needed improvements to roadways identified in the Functional Roadway Classification Plan.
  - Policy M1-4: Adjacent Jurisdictions. We work with neighboring jurisdictions to meet our LOS standards at the City limits.
  - Policy M1-5: Complete Streets. We work to provide a balanced, context sensitive, multimodal transportation network that meets the needs of all users of streets, roads, and highways, including motorists, pedestrians, bicyclists, children, persons with disabilities, seniors, movers of commercial goods and users of public transportation.

- Goal M2: A system of trails and corridors that facilitates and encourages bicycling and walking.
  - Policy M2-1: Bikeway Plan. We maintain our Multipurpose Trails & Bikeway Corridor Plan to create a comprehensive system of on- and off-street bikeways that connect residential areas, businesses, schools, parks, and other key destination points.
  - Policy M2-2: Bicycle System. We provide off-street multipurpose trails and Class II bikeways as our primary paths of travel and use the Class III for connectivity in constrained circumstances.
  - Policy M2-3: Pedestrian Walkways. We require walkways that promote safe and convenient travel between residential areas, businesses, schools, parks, recreation areas, and other key destination points.
  - Policy M2-4: Network Opportunities. We explore opportunities to expand the pedestrian and bicycle networks. This includes consideration of utility easements, levees, drainage corridors, road rights-of-way, medians and other potential options.
- Goal M3: A public transit system that is a viable alternative to automobile travel and meets basic transportation needs of the transit dependent.
  - Policy M3-9: Ontario Airport Metro Center Circulator. We will explore development of a convenient mobility system, including but not limited to shuttle service, people mover, and shared car system, for the Ontario Airport Metro Center.
  - Policy M3-10: Multimodal Transit Center. We intend to ensure the development of a multimodal transit center near ONT airport to serve as a transit hub for local buses, BRT, the Gold Line, high-speed rail, the proposed Ontario Airport Metro Center circulator and other future transit modes.
  - Policy M3-11: Transit and Community Facilities. We require the future development of community-wide serving facilities to be sited in transit-ready areas that can be served and made accessible by public transit. Conversely, we plan (and coordinate with other transit agencies to plan) future transit routes to serve existing community facilities.

4 METHODOLOGY

4.1 TRAFFIC OPERATIONS ANALYSIS

The traffic operations analysis (TOA) has been prepared to meet the requirements of the City of Rancho Cucamonga and City of Ontario, and of SBCTA. As such, the TOA has been prepared consistent with the requirements established by the SBCTA CMP and the goals and policies included in PlanRC 2040 and the Ontario Plan. Additionally, the TOA meets the requirements for disclosure of project impacts pursuant to NEPA and CEQA.

4.1.1 Identification of the Study Intersections

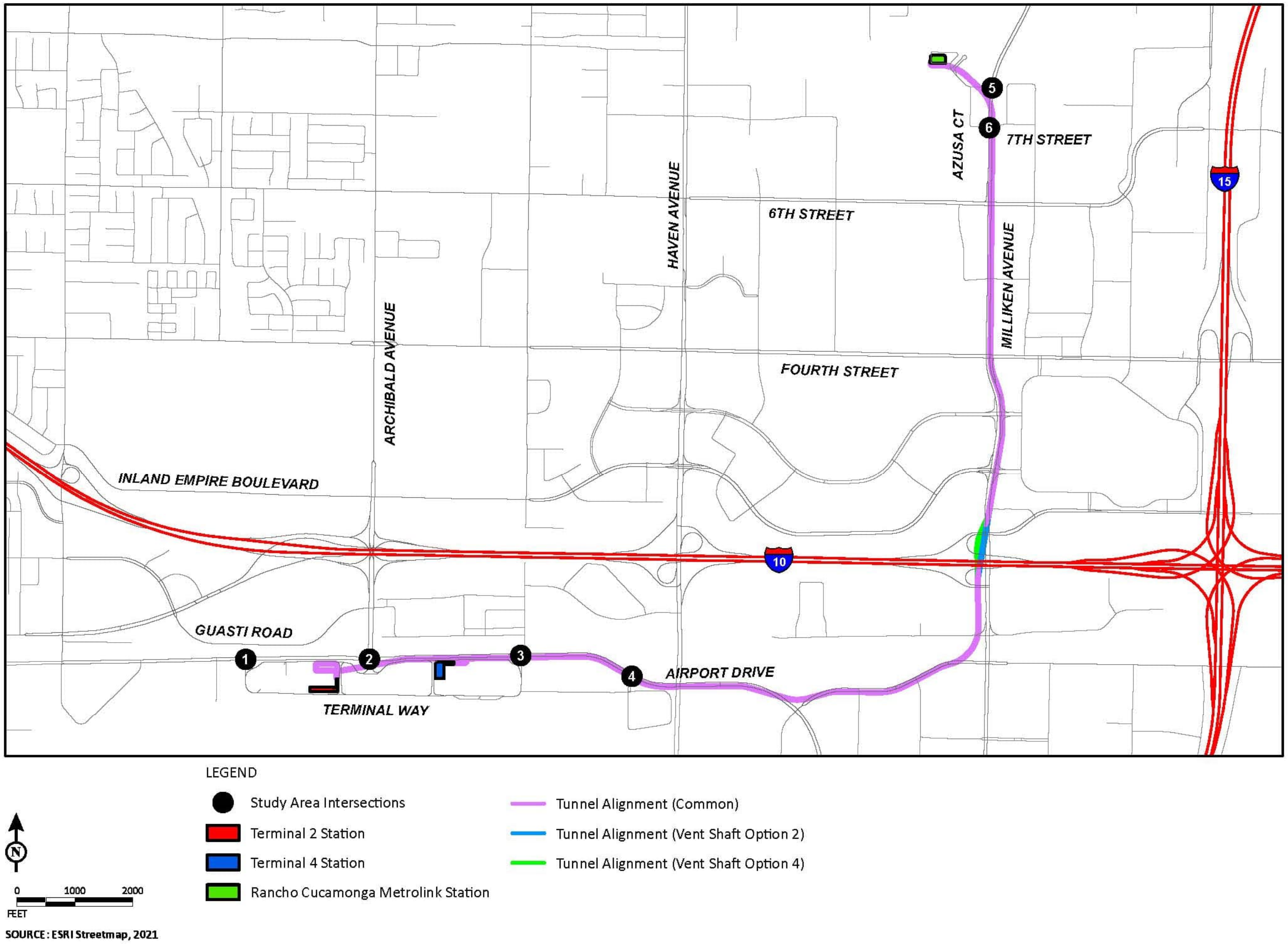
The proposed Project would include an underground tunnel for direct connection between the Cucamonga Metrolink Station and ONT. As such, the proposed Project is estimated to have a minimal effect on adjacent surface transportation and roadway systems, excluding the two termini of the proposed Project. Therefore, it is estimated that only the adjacent intersections of the two termini would be affected by the proposed Project. The following existing study area intersections have been approved by the City of Ontario and City of Rancho Cucamonga and were evaluated in Sections 5.3 and 5.4:

- Intersections Adjacent to ONT:
  1. East Terminal Way (West)/Airport Drive (City of Ontario)
  2. Archibald Avenue – Terminal Way/Airport Drive (City of Ontario)
  3. East Terminal Way (East)/Airport Drive (City of Ontario)
  4. Rental Car Road/Airport Drive (City of Ontario)
- Intersections Adjacent to the Cucamonga Metrolink Station:
  5. Milliken Avenue/Azusa Court (City of Rancho Cucamonga)
  6. Milliken Avenue/7th Street (City of Rancho Cucamonga)

Figure 4-1 (Traffic Operations Analysis Study Area Intersections) illustrates the study intersections for the TOA.

All study intersections have been analyzed during the a.m. and p.m. peak hours. The am peak hour is defined as the one hour of highest traffic volumes occurring between 7:00 a.m. and 9:00 a.m., while the pm peak hour is defined as the one hour of highest traffic volumes occurring between 4:00 p.m. and 6:00 p.m. for both the City of Rancho Cucamonga and the City of Ontario.

Figure 4-1: Traffic Operations Analysis Study Area Intersections



4.1.2 Identification of Analysis Scenarios

Sections 5, 6, and 7 of this technical report provide the evaluation of existing traffic conditions, Opening Year conditions, and Design Year conditions, respectively, for all the proposed Project. For the purposes of this analysis, the Opening Year is estimated to be 2031, and the Design Year is estimated to be 2051, based on the information obtained from SBCTA.

Several transportation projects within the region have been proposed and could be operational in conjunction with the Project. Major transportation projects and policies that are anticipated to affect the Project are included in the *ONTLoop – Autonomous, Zero-Emission Transit Tunnel to Ontario International Airport, 2022 Raise Application* (SBCTA, 2022). These projects include the future possibilities of construction of Brightline West, a proposed high-speed railway connecting Rancho Cucamonga and Las Vegas, and increasing the Metrolink San Bernardino Line frequency to 30 minutes headway. Additionally, alternative tunnel fare policies are also estimated to affect ridership. The ONTLoop evaluates the following transportation Project possibilities in different scenarios:

- Metrolink frequency: 60 minutes or 30 minutes headway,
- Completion of Brightline,
- Tunnel Fare Policy 1,
- Tunnel Fare Policy 2, and
- Tunnel Fare Policy 3.

All the Build scenarios analyzed in the Ridership Analysis estimate daily ridership for the proposed Project. From a traffic operations perspective, the ridership could be estimated as a proxy for the number of passenger vehicle trips that were previously using the surface roadway network system. As such, because of the proposed Project, patrons previously commuting using cars would now use this facility, thereby eliminating these passenger vehicle trips from the surface roadway network.

Consistent with the Opening Year and Design Year scenarios included in the *Ontario Loop Ridership Analysis* (SBCTA, 2022), the same Opening Year and Design Year scenarios have been evaluated as part of the TOA. The FTA's Simplified Trips-on-Project Software (STOPS) model was used to evaluate the same Project analysis scenarios, including the Opening Year Scenario 5 (OY-5 Scenario) and Horizon Year Scenario 3 (HY-3 Scenario) for the Build scenarios. As such, the TOA evaluates traffic operations under the following analysis scenarios:

- Existing conditions,
- Opening Year (2031) No Build conditions,
- Opening Year (2031) Build (OY-5 Scenario) conditions,
- Design Year (2051) No Build conditions, and
- Design Year (2051) Build (HY-3 Scenario) conditions.

4.1.3 Existing Conditions

Existing traffic conditions at the study area intersections have been determined through the analysis of weekday peak-hour intersection counts. A certified traffic counter collected traffic data at the study intersections listed in Section 4.1.1. This methodology for developing existing traffic volumes has been confirmed with the City of Rancho Cucamonga, the City of Ontario, and SBCTA. Heavy vehicle traffic, pedestrian, and bicycle data were collected along with vehicular traffic counts at study intersections for the TOA.

4.1.4 Opening Year (2031) and Design Year (2051) No Build Conditions Traffic Forecast Methodology

For the purposes of this analysis, the San Bernardino Transportation Analysis Model (SBTAM) has been used to analyze the proposed Project's Opening Year (2031), Design Year (2051), and No Build conditions. The current forecast year in the SBTAM is 2040. Therefore, the following methodology has been conducted to develop traffic volumes for each scenario using the data listed in Section 4.1.2:

- Opening Year (2031) No Build Conditions: Growth from the SBTAM base (2019) to the SBTAM future year (2040) has been applied to existing traffic volumes to develop Opening Year (2031) No Build traffic volumes.
- Design Year (2051) No Build Conditions: The SBTAM future year model (2040) data have been used to develop Design Year (2051) No Build traffic volumes. Consistent with SBCTA CMP procedures for developing future volumes, the SBTAM future year (2040) volumes have been developed by applying post-processing methodologies, per the National Cooperative Highway Research Program (NCHRP). The post-processed volumes from 2040 (SBTAM future year) have been extrapolated to 2051 (Project Design Year) using the model growth as a conservative approach.

4.1.5 Opening Year (2031) and Design Year (2051) Build Conditions Traffic Forecast Methodology

The following datasets have been used in the development of with proposed Project traffic volumes for different scenarios:

- Input and output data from FTA's STOPS model run scenarios used in the *Ontario Loop Ridership Analysis* (SBCTA, 2022);
- Disaggregated observed ridership for existing transit routes at the Cucamonga Metrolink Station (both pre-COVID-19 and post-COVID-19);
- Observed existing hourly passenger arrival and departure data at the ONT terminals (both pre-COVID-19 and post-COVID-19); and
- Forecast ridership for Metrolink, ONT, and the future Brightline West service.

The current forecast year in SBTAM is 2040. Therefore, the following methodology has been conducted to develop traffic volumes for each scenario using the data listed Section 4.1.2:

- Opening Year (2031) Build Conditions: Growth from the SBTAM base (2019) to the SBTAM future year (2040) has been applied to existing traffic volumes to develop Opening Year (2031) No Build and Build traffic volumes. Data from SBTAM, ridership results by district and time periods from the STOPS model, and No Build traffic volumes have been used to estimate with Project traffic volumes. The STOPS model runs are different than the proposed Project Opening Year, so the proposed Project-related traffic changes have been adjusted appropriately.
- Design Year (2051) Build Conditions: The SBTAM future year model (2040) data have been used to develop Design Year (2051) No Build and Build traffic volumes. Consistent with SBCTA CMP procedures for developing future volumes, the SBTAM future year (2040) volumes have been developed by applying post-processing methodologies, per the NCHRP. The post-processed volumes from 2040 (SBTAM future year) have been extrapolated to 2051 (Project Design Year) using the model growth as a conservative approach. With proposed Project trips have been estimated using methodology similar to the Opening Year scenario using No Build volumes from the SBTAM, ridership results from STOPS runs, and appropriate adjustment factors for differences in the Design Year and model Horizon Years.
- The detailed Project trip generation volume development methodology is included in Appendix .

4.1.6 Identification of Analysis Methodology and Measures of Effectiveness

The TOA has been prepared using *Highway Capacity Manual [HCM],* 6th Edition (Transportation Research Board, 2016) methodologies to analyze traffic operations at the study intersections. Intersection LOS has been calculated using the Synchro 11 software.

The HCM measures effectiveness through the metric of average delay in seconds per vehicle. The average delay of every vehicle is used when assessing the effectiveness of signalized intersections, whereas the average delay of the worst-performing movement is used when assessing the effectiveness of an unsignalized intersection where the major street is uncontrolled.

These delay values correspond to individual letter grades from A to F, with LOS A corresponding to lower-delay facilities and LOS F corresponding to the highest-delay facilities. Table 4-1 (Intersection Level of Service Definitions) describes the LOS grade criteria for intersections. Table 4-2 (Level of Service Criteria for Unsignalized and Signalized Intersections) provides the relationship between LOS and the HCM delay.

Table 4-1: Intersection Level of Service Definitions

LOS	Description
A	Traffic operations with a control delay of 10 seconds per vehicle or less and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is low and either progression is exceptionally favorable or the cycle length is very short. If LOS A is the result of favorable progression, most vehicles arrive during the green indication and travel through the intersection without stopping.
B	Traffic operations with control delay between 10 seconds per vehicle and 20 seconds per vehicle and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is low and either progression is highly favorable or the cycle length is short. More vehicles stop than with LOS A.
C	Traffic operations with control delay between 20 and 35 seconds per vehicle and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when progression is favorable or the cycle length is moderate. Individual cycle failures (i.e., one or more queued vehicles are not able to depart as a result of the insufficient capacity during the cycle) may begin to appear at this level. The number of vehicles stopping is significant, although many vehicles still pass through the intersection without stopping.
D	Traffic operations with control delay between 35 and 55 seconds per vehicle and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is high and either progression is ineffective or the cycle length is long. Many vehicles stop and individual cycle failures are noticeable.
E	Traffic operations with control delay between 55 and 80 seconds per vehicle and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when volume-to-capacity ratio is high, progression is unfavorable, and the cycle length is long. Individual cycle failures are frequent.
F	Traffic operations with control delay exceeding 80 seconds per vehicle or a volume-to-capacity ratio greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is very high, progression is very poor, and the cycle length is long. Most cycles fail to clear the queue.

Table 4-2: Level of Service Criteria for Unsignalized and Signalized Intersections

Level of Service	Unsignalized Intersection Average Delay per Vehicle (seconds)	Signalized Intersection Average Delay per Vehicle (seconds)
A	< 10	< 10
B	> 10 and < 15	> 10 and < 20
C	> 15 and < 25	> 20 and < 35
D	> 25 and < 35	> 35 and < 55
E	> 35 and < 50	> 55 and < 80
F	> 50	> 80

Notes:
< = less than; > = greater than

Study intersections analyzed in the TOA are under the jurisdictions of the City of Rancho Cucamonga and the City of Ontario. The City of Ontario uses LOS E as its minimum LOS criterion per its General Plan (Ontario Plan). The City of Rancho Cucamonga uses LOS D as its minimum LOS criterion per its General Plan (PlanRC, 2040). Caltrans uses LOS D as its minimum LOS criterion at all intersections under its jurisdiction. Operational improvements are required at study intersections within the cities where the intersection peak hour LOS degrade from a satisfactory to deficient levels based on the respective jurisdictions.

The TOA examines traffic operations based on the criteria set forth in the City of Ontario's Traffic Impact Analysis Guidelines, the City of Rancho Cucamonga's Traffic Impact Analysis Guidelines, and the SBCTA CMP Traffic Impact Analysis Guidelines. Study intersections under the jurisdiction of the City of Ontario have been analyzed consistent with the analysis methodologies as outlined in the SBCTA's *Recommended Traffic Impact Analysis Guidelines for Vehicle Miles Traveled and Level of Service Assessment* (SBCTA, 2020). Study intersections under the jurisdiction of the City of Rancho Cucamonga have been analyzed consistent with the analysis methodologies as outlined in the City of Rancho Cucamonga's *Traffic Impact Analysis Guidelines* (City of Rancho Cucamonga, 2020).

4.1.7 Build Operations Assessment

The TOA evaluates intersection LOS under the No Build and Build scenarios. Intersection LOS under Opening Year (2031) and Design Year (2051) No Build conditions have been compared to LOS under Build conditions to determine operational traffic improvements under each alternative. The TOA provides a summary of performance for the No Build scenario compared to the Build conditions.

4.2 VEHICLE MILES TRAVELED ANALYSIS

The proposed Project would provide first/last-mile access for patrons traveling between the Cucamonga Metrolink Station and ONT to enhance transit accessibility. The increase in transit trips would occur partly due to the mode shift that occurs due to the proposed Project.

Data sources utilized to develop the proposed Project's VMT include FTA's STOPS ridership forecasts, SBTAM data, and proposed Project trip generation. VMT for the proposed Project was estimated using Project trip generation and trip length information from the STOPS model outputs and information obtained from SBCTA, whereas VMT for existing and No Build conditions was developed using SBTAM data.

VMT for the proposed Project is estimated for the entire transit trip rather than just the portion of the trip via the tunnel. In other words, the estimate includes VMT reduction for the entire trip via automobiles that are being replaced by transit trips enabled by the Project. The reduction in VMT due to the proposed Project was calculated using proposed Project ridership from proposed Project trip generation. Trip generation for the proposed Project is included in a separate memorandum provided in Appendix A. Proposed Project ridership was converted to passenger miles traveled (PMT), which was then converted to VMT. Similar to the Project trip generation, the proposed Project PMT estimates are conducted using the four ridership market segments, as the trip lengths vary among these market segments.

4.2.1 Trips to and from the Airport by Passengers Who Previously Would Have Parked at ONT

In this case, a transit trip to and from the airport can replace two auto trips (one-for-one replacement). The STOPS model disaggregates the entire modeling region into different districts to track and understand the geographic distribution of trips due to the addition of the proposed transit project. ONT was modeled as a separate district, as the proposed Project would serve only the trips to/from the airport. The following steps were used to estimate proposed Project PMT for the market segment.

a. The STOPS outputs include a trip matrix (to/from) among the modeling districts. The outputs also include corresponding distances between the districts, similar to travel model skimming (travel distance) outputs. A percentage distribution/ratio was developed for all proposed Project trips destined to the airport from different districts in the region. This percentage distribution from the total ridership was applied to the market segment trips that were developed during the Project trip generation. This resulted in identifying trips within this market segment (passengers who previously parked at ONT) from the different districts of the model.

b. As previously indicated, the STOPS model also included the distances from different districts to the airport district, which were used as the trip lengths.

c. Trips from step “a” and trip lengths from step “b” were used to estimate proposed Project PMT by district. PMT from all the districts was aggregated to estimate the market segment PMT. Table 4-3 (Passenger Miles Traveled by Air Passengers Previously Parking) shows the 2031 and 2051 PMT for this market segment.

4.2.2 Trips to and from the Airport by Passengers Who Were Previously Dropped Off

In this case, a passenger transit trip to and from the airport can replace four one-way auto trips (two trips for each passenger drop-off/pickup). The same methodology/steps used for Market Segment 1 (passengers who previously parked at ONT) were used to estimate the PMT reduction due to this market segment. However, this market segment included two trips per direction (drop-off/pickup) instead of one trip. Table 4-4 (Passenger Miles Traveled by Air Passengers Previously Being Dropped Off) illustrates the 2031 and 2051 Project PMT for this market segment.

Table 4-3: Passenger Miles Traveled by Air Passengers Previously Parking

STOPS District IDs	Attraction to Airport from STOPS Districts	Distance from Skims Used in STOPS	2031 Ridership	2031 PMT	2051 Ridership	2051 PMT
District 1	0.0%	8	0	-	0	-
District 2	0.0%	4.8	0	-	0	-
District 3	0.0%	2.1	0	-	0	-
District 4	4.5%	5.7	5	31	12	66
District 5	0.0%	7.6	0	-	0	-
District 6	0.0%	5.9	0	-	0	-
District 7	15.1%	11.4	18	210	39	450
District 8	14.4%	19.5	18	342	38	735
District 9	11.6%	28.3	14	402	31	863
District 10	11.3%	48.1	14	663	30	1,424
District 11	32.5%	85.8	40	3,406	85	7,314
District 12	0.3%	18.4	0	8	1	17
District 13	3.8%	36.8	5	169	10	363
District 14	0.3%	51	0	21	1	46
District 15	0.0%	0	0	-	0	-
District 16	0.0%	33.6	0	-	0	-
District 17	4.1%	17	5	85	11	183
District 18	2.1%	41.9	3	105	5	226
District 19	0.0%	0	0	-	0	-
District 20	0.0%	0	0	-	0	-
District 21	0.0%	0.4	0	-	0	-
Other	0.0%	0	0	-	0	-
Total	100.0%		122	5,442	262	11,687

Notes:
Source: STOPS model
ID = Identification Number
PMT = Passenger Miles Traveled Trips
% = percentage

Table 4-4: Passenger Miles Traveled by Air Passengers Previously Being Dropped Off

STOPS District IDs	Attraction to Airport from STOPS Districts	Distance from Skims Used in STOPS	2031 Ridership	2031 PMT	2051 Ridership	2051 PMT
District 1	0.0%	8	0	-	-	-
District 2	0.0%	4.8	0	-	-	-
District 3	0.0%	2.1	0	-	-	-
District 4	4.5%	5.7	11	62	23	133
District 5	0.0%	7.6	0	-	-	-
District 6	0.0%	5.9	0	-	-	-
District 7	15.1%	11.4	37	421	79	898
District 8	14.4%	19.5	35	687	75	1,467
District 9	11.6%	28.3	29	807	61	1,723
District 10	11.3%	48.1	28	1,332	59	2,843
District 11	32.5%	85.8	80	6,839	170	14,599
District 12	0.3%	18.4	1	15	2	33
District 13	3.8%	36.8	9	340	20	725
District 14	0.3%	51	1	43	2	91
District 15	0.0%	0	0	-	-	-
District 16	0.0%	33.6	0	-	-	-
District 17	4.1%	17	10	171	21	365
District 18	2.1%	41.9	5	211	11	450
District 19	0.0%	0	0	-	-	-
District 20	0.0%	0	0	-	-	-
District 21	0.0%	0.4	0	-	-	-
Other	0.0%	0	0	-	-	-
Total	100.0%		245	10,925	523	23,323

Notes:
Source: STOPS model
ID = Identification Number
PMT = Passenger Miles Traveled Trips

Also, while all trips in this market segment were being dropped off/picked up at the airport for the No Build scenario, a very small portion (approximately 3 percent [%]) of trips were assumed to be dropped off/picked up at the Cucamonga Metrolink Station in the Build scenario, which is based on mode split forecasts from the STOPS model. Therefore, only 97% of the PMT reduction was used for this market segment. Table 4-5 (Passenger Miles Traveled Increase Due to Passengers Being Dropped Off at Cucamonga Metrolink Station) shows the 2031 and 2051 PMT increase due to the aforementioned drop-offs.

Table 4-5: Passenger Miles Traveled Increase Due to Passengers Being Dropped Off at Cucamonga Metrolink Station

	2031	2051
Total PMT	21,851	46,645
PMT Being Increased to Account for Trips Being Dropped Off at Cucamonga Metrolink Station (3% of Ridership)	656	1,399

Source: Metrolink 2024

However, for the 3% of trips that are being dropped off at the Cucamonga Metrolink Station, there is still some VMT reduction from the Cucamonga Metrolink station to the airport, as these trips would be dropped off/picked up at the airport under No Build conditions. To account for this PMT reduction, the distance from the Cucamonga Metrolink Station to ONT Terminals 2 and 4 was applied. The distance from Cucamonga Metrolink Station to ONT Terminal 2 is approximately 5.1 miles while the distance from Cucamonga Metrolink Staton to ONT Terminal 4 is approximately 4.1 miles. PMT for 3% of the trips, for the segment from the Cucamonga Metrolink Station to the terminals, was added back to the PMT reduction for the market segment. Table 4-6 (PMT Reduction for Cucamonga Metrolink Station to ONT Segment) shows the PMT reduction that is being added back.

Table 4-6: PMT Reduction for Cucamonga Metrolink Station to ONT Segment

	2031	2051
PMT to Terminal 2	25	53 47
PMT to Terminal 4	40	86 77
Total	65	139

Notes:
For 3% being dropped off at the Cucamonga Metrolink Station
Source: Metrolink 2024

4.2.3 Trips to and from the Airport by Employees Who Previously Drove and Parked at ONT

Ridership for this category was obtained from the proposed Project trip generation and home-based work (HBW) trip length for the airport traffic analysis zone obtained from the SBTAM. Ridership from Project trip generation and HBW trip length from the SBTAM were used to estimate Project PMT for this category.

4.2.4 Trips by Visitors and Business Travelers Who Would Previously Have Flown to ONT and Rented a Car and Now Instead Can Ride Transit Using The Proposed Project and Metrolink to Their Destinations, Such as Downtown Los Angeles or the City of Redlands

In this case, each round trip on transit would replace two auto trips. It would be similar to the case where a business traveler from Southern California would fly into Oakland International Airport, take the tram to the Bay Area Rapid Transit (BART) Coliseum Station, and then take BART to downtown San Francisco. Similar to other categories, ridership for this market segment was also obtained from the Project trip generation. The average trip length of 29 miles between ONT and the City of Redlands was applied based on data obtained from SBCTA.

PMT for all four market segments was developed as described in Section 4.2.1. Table 4-7 (Project Passenger Miles Traveled by Ridership Market Segments) shows the estimated Project PMT for all four market segments. PMT was converted to VMT using the average occupancy factor from the SBTAM. An average auto occupancy factor of 1.52 from the SBTAM was used, similar to Project trip generation, to convert PMT to VMT. As such, using the aforementioned steps provides the reduction in VMT due to the project. Project PMT and VMT are shown in Table 4-8 (Total Project Passenger Miles Traveled and Vehicle Miles Traveled).

Table 4-7: Project Passenger Miles Traveled by Ridership Market Segments

Market Segments	2031 Ridership	2051 Ridership	# of Trips Assumed	Average Trip Length	2031 PMT	2051 PMT
Air Passengers Previously Parking (1)	122	262	1	-	5,440	11,684
Air Passengers Previously Dropped Off (2)	245	523	2	-	21,851	46,645
Employees Previously Parking	186	262	1	15	2,755	3,880
Out-of-Region Visitors Renting Cars (3)	122	262	1	29	3,538	7,598
Total	675	1,309			33,584	69,807

Notes:
PMT for air passengers previously parking and previously being dropped off was obtained from Table 4-3 and Table 4-5.
(1) Trips to and from the airport by passengers who previously would have parked at ONT. In this case, a transit trip to and from the airport can replace two auto trips (one-for-one replacement).
(2) Trips to and from the airport by passengers who were previously dropped off. In this case, a passenger transit trip to and from the airport can replace four one-way auto trips (two trips for each passenger drop-off/pickup).
(3) Trips to and from the airport by employees who previously drove and parked at ONT. Ridership for this category was obtained from the Project trip generation and HBW trip length for the airport traffic analysis zone obtained from the SBTAM.

Table 4-8: Total Project Passenger Miles Traveled and Vehicle Miles Traveled

	2031	2051
Total PMT Due to Ridership (a)	33,584	69,807
PMT Being Increased to Account for Trips Being Dropped Off at Cucamonga Metrolink Station (3% of Ridership) (b)	656	1399
PMT Reduction for Cucamonga Metrolink Station ONT (c)	65	139
Total PMT (d = a + b + c)	32,994	68,547
Total VMT	21,773	45,234

Notes:
(a) The STOPS outputs include a trip matrix (to/from) among the modeling districts.
(b) The STOPS model also included the distances from different districts to the airport district, which were used as the trip lengths.
(c) Trips from step "a" and trip lengths from step "b" were used to estimate Project PMT by district.

4.3 CONSTRUCTION TRAFFIC ANALYSIS

Traffic operations at intersections during Project construction have been analyzed to determine the impacts and effects of construction traffic on the existing roadway circulation network. Project construction is projected to begin in the 2031 and culminate in 2051. As such, a LOS analysis was conducted on intersections affected during construction, including intersections along the construction route corridors, using forecasted traffic volumes to reflect traffic operation under year 2025 conditions. Specific information considered in performing the construction analysis includes (but is not limited to):

- Staging/Phasing: A description of staging area location(s), construction phases, and phase duration (including potential overlapping phases);
- Workers (for each phase): Approximate number of workers on a typical day, construction schedule/hours (i.e., estimated arrival/departure times), possible carpool/vanpool options, and access routes;
- Hauling/Deliveries (for each phase): Anticipated number of haul/delivery trucks for the delivery of construction material and removal of excavation material during tunneling on a typical day, truck schedule/hours, and designated truck routes;
- Machinery/Equipment (for each phase): A description of any heavy machinery/equipment that requires transport to/from the Project site (not included as part of staging or hauling/deliveries); and
- Lane Closures: A description of any anticipated lane closures by project phase.
- Error! Reference source not found. (Error! Reference source not found.) shows the typical durations for construction activities related to the proposed project.

4.3.1 Identification of the Study Area

The Project includes construction staging at the following four facilities:

- ONT Terminal 2;
- ONT Terminal 4;
- Cucamonga Metrolink Station (includes MSF); and
- Vent shaft area (for the proposed tunnel).
  - Vent shaft design option 2; or
  - Vent shaft design option 4.

Figure 4-2 (Construction Traffic Analysis Study Area Intersections) illustrates the locations of all four construction staging facilities, including both locations of the proposed vent shaft design option 2 and vent shaft design option 4. It should be noted that only one vent shaft draft option will be built as part of the proposed project. As such, Option 2 and Option 4 were analyzed as separate analysis scenarios.

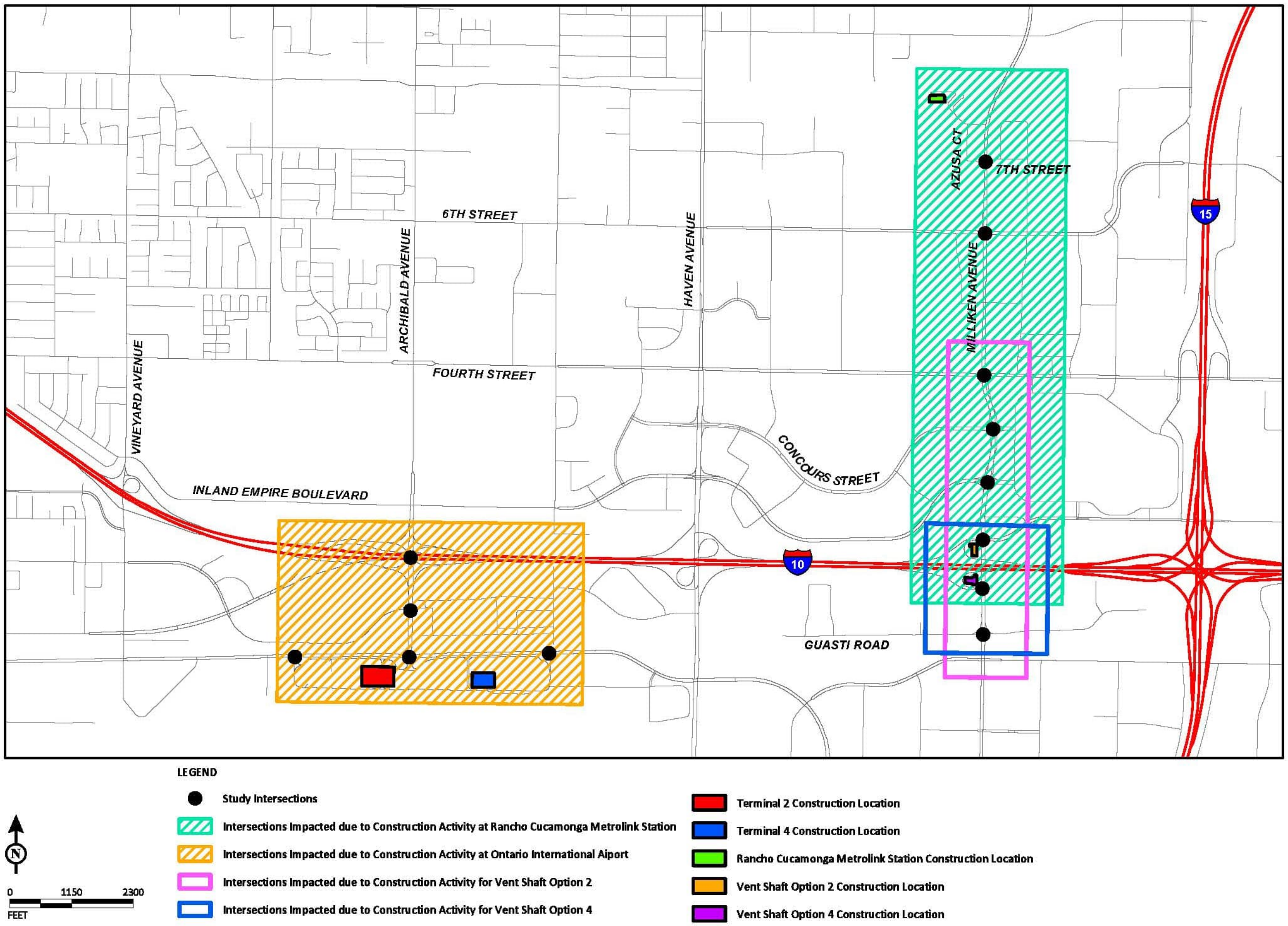
The intersections along the primary trucking and hauling routes for each construction staging area have been examined. Due to the locations of the construction staging, common intersections are shared among the evaluated construction hauling routes. Construction truck hauling routes are included in Appendix B.

The following list includes all the intersections that have been analyzed as part of the construction traffic analysis:

1. East Terminal Way/Airport Drive [West] (City of Ontario);
2. Archibald Avenue/Interstate (I) 10 Ramps (Caltrans);
3. Archibald Avenue/Guasti Road (City of Ontario);
4. Archibald Avenue–Terminal Way/Airport Drive (City of Ontario);
5. East Terminal Way/Airport Drive [East] (City of Ontario);
6. Milliken Avenue/7th Street (City of Ontario);
7. Milliken Avenue/6th Street (City of Ontario);
8. Milliken Avenue/4th Street (City of Ontario);
9. Milliken Avenue/Concours Street (City of Ontario);
10. Milliken Avenue/Inland Empire Boulevard–Mall Drive (City of Ontario);
11. Milliken Avenue/I-10 Westbound Ramps–Ontario Mills Parkway (Caltrans);
12. Milliken Avenue/I-10 Eastbound Ramps (Caltrans); and
13. Milliken Avenue/Guasti Road (City of Ontario).

Sections 4.3.1.1 through 4.3.1.4 provide a detailed breakdown of intersections by each staging area.

Figure 4-2: Construction Traffic Analysis Study Area Intersections



SOURCE: ESRI Streetmap, 2013.

4.3.1.1 Ontario International Airport Terminal 2

For this construction staging area, the following intersections have been examined:

1. East Terminal Way/Airport Drive [West] (City of Ontario);
2. Archibald Avenue/I-10 Ramps (Caltrans);
3. Archibald Avenue/Guasti Road (City of Ontario); and
4. Archibald Avenue–Terminal Way/Airport Drive (City of Ontario).

Figure 4-3 (Construction Traffic Analysis Study Area Intersections – Ontario International Airport Terminal 2 and Terminal 4 Stations) illustrates the study intersections for construction staging at Terminal 2.

4.3.1.2 Ontario International Airport Terminal 4

For this construction staging area, the following intersections have been examined:

2. Archibald Avenue/I-10 Ramps (Caltrans);
3. Archibald Avenue/Guasti Road (City of Ontario);
4. Archibald Avenue–Terminal Way/Airport Drive (City of Ontario); and
5. East Terminal Way/Airport Drive [East] (City of Ontario).

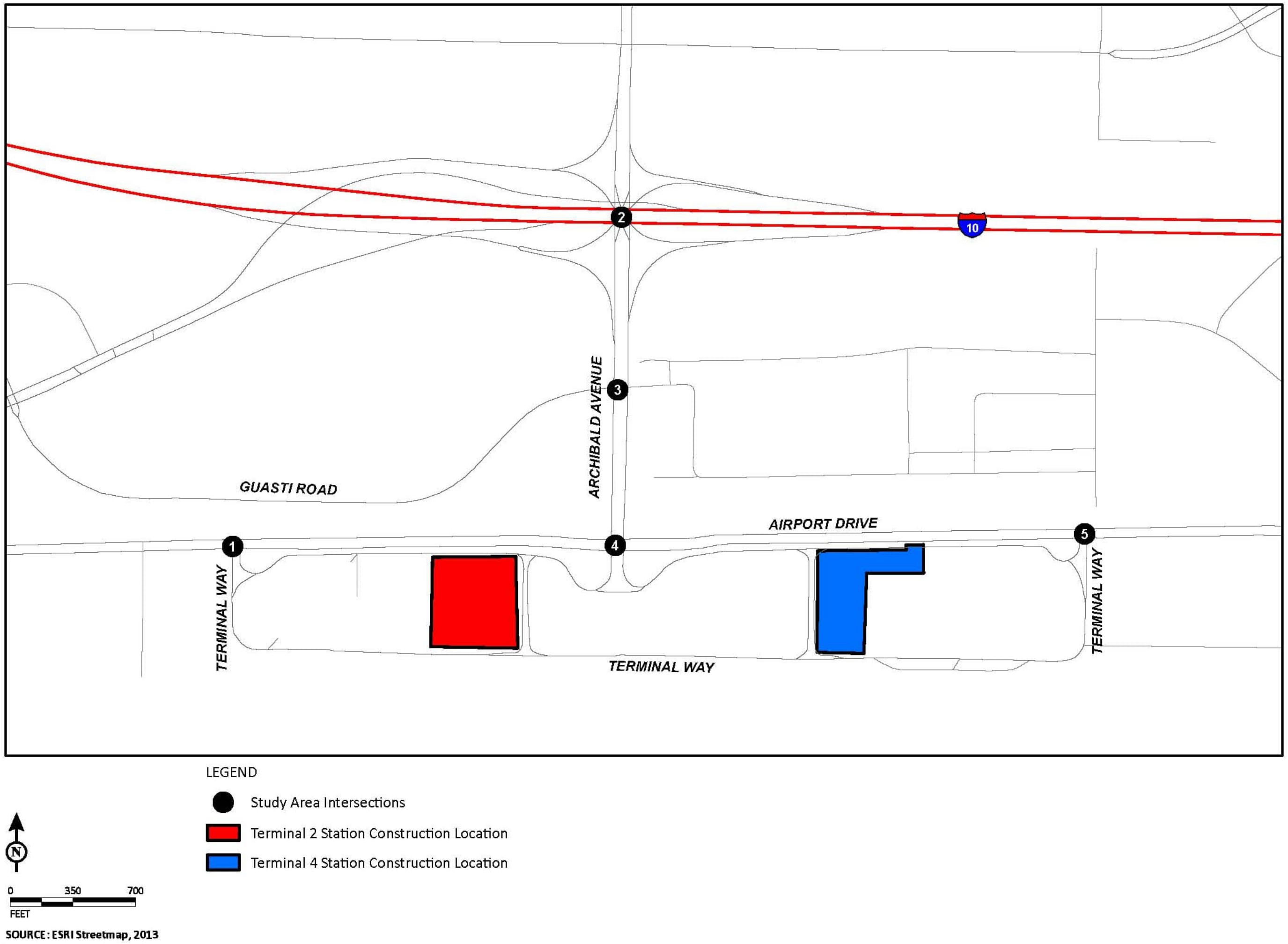
Previously referenced Figure 4-3 (Construction Traffic Analysis Study Area Intersections – Ontario International Airport Terminal 2 and Terminal 4 Stations) illustrates the study intersections for construction staging at Terminal 4.

4.3.1.3 Cucamonga Metrolink Station

For this construction staging area, the following intersections have been examined:

6. Milliken Avenue/7th Street (City of Rancho Cucamonga);
7. Milliken Avenue/6th Street (City of Rancho Cucamonga);
8. Milliken Avenue/4th Street (City of Rancho Cucamonga/City of Ontario);
9. Milliken Avenue/Concours Street (City of Ontario);
10. Milliken Avenue/Inland Empire Boulevard–Mall Drive (City of Ontario);

Figure 4-3: Construction Traffic Analysis Study Area Intersections – Ontario International Airport Terminal 2 and Terminal 4 Stations



11. Milliken Avenue/I-10 Westbound Ramps–Ontario Mills Parkway (Caltrans); and
12. Milliken Avenue/I-10 Eastbound Ramps (Caltrans).

Figure 4-4 (Construction Traffic Analysis Study Area Intersections – Cucamonga Station) illustrates the study intersections for construction staging at the Cucamonga Metrolink Station.

4.3.1.4 Tunnel Vent Shaft

For the construction staging area for vent shaft design option 2, the following intersections have been examined:

8. Milliken Avenue/4th Street (City of Rancho Cucamonga/City of Ontario);
9. Milliken Avenue/Concours Street (City of Ontario);
10. Milliken Avenue/Inland Empire Boulevard–Mall Drive (City of Ontario);
11. Milliken Avenue/I-10 Westbound Ramps–Ontario Mills Parkway (Caltrans);
12. Milliken Avenue/I-10 Eastbound Ramps (Caltrans); and
13. Milliken Avenue/Guasti Road (City of Ontario).

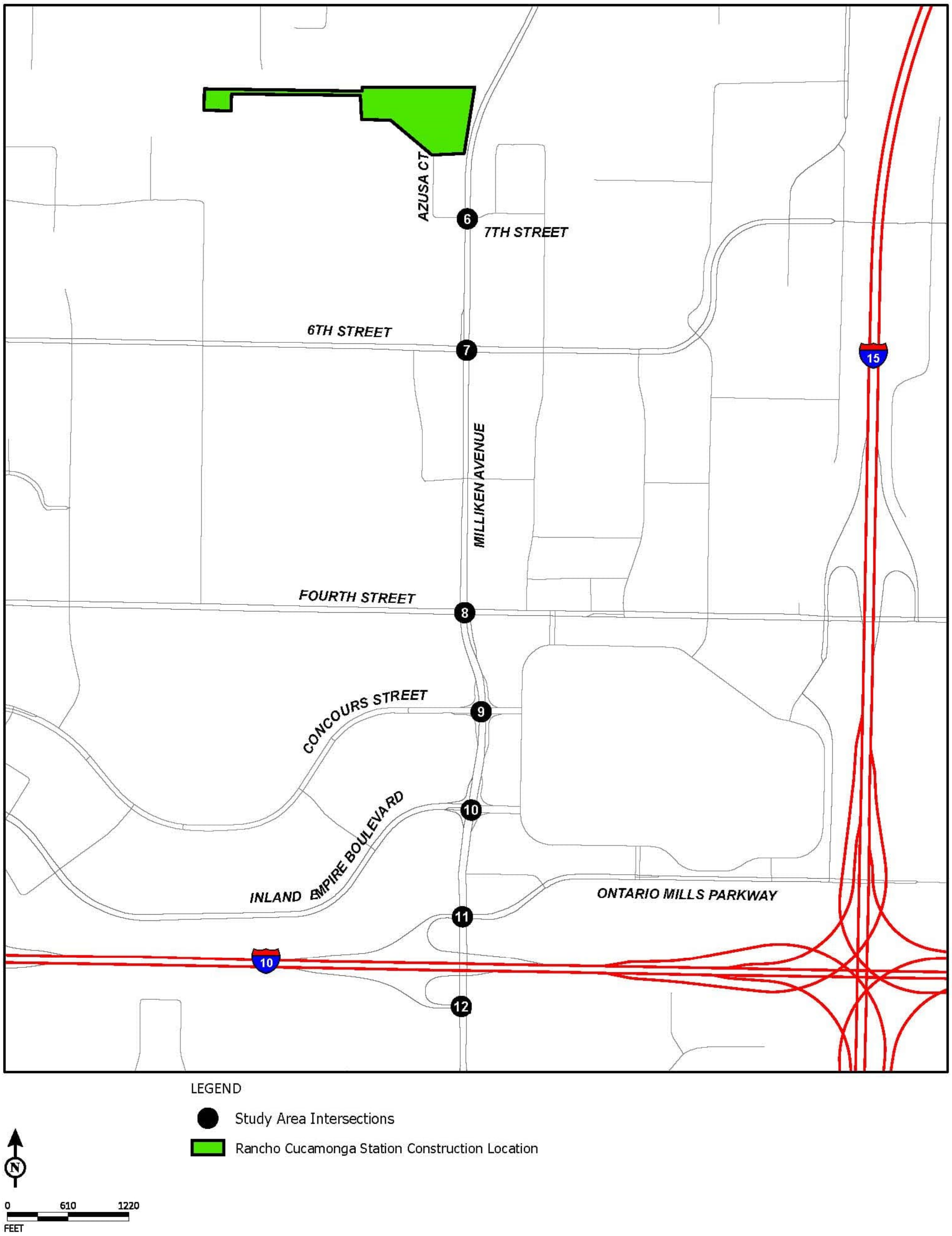
Figure 4-5 (Construction Traffic Analysis Study Area Intersections – Vent Shaft Design Option 2) illustrates the study intersections for construction staging for tunnel vent shaft design option 2.

For the construction staging area for vent shaft design option 4, the following intersections have been examined:

11. Milliken Avenue/I-10 Westbound Ramps–Ontario Mills Parkway (Caltrans);
12. Milliken Avenue/I-10 Eastbound Ramps (Caltrans); and
13. Milliken Avenue/Guasti Road (City of Ontario).

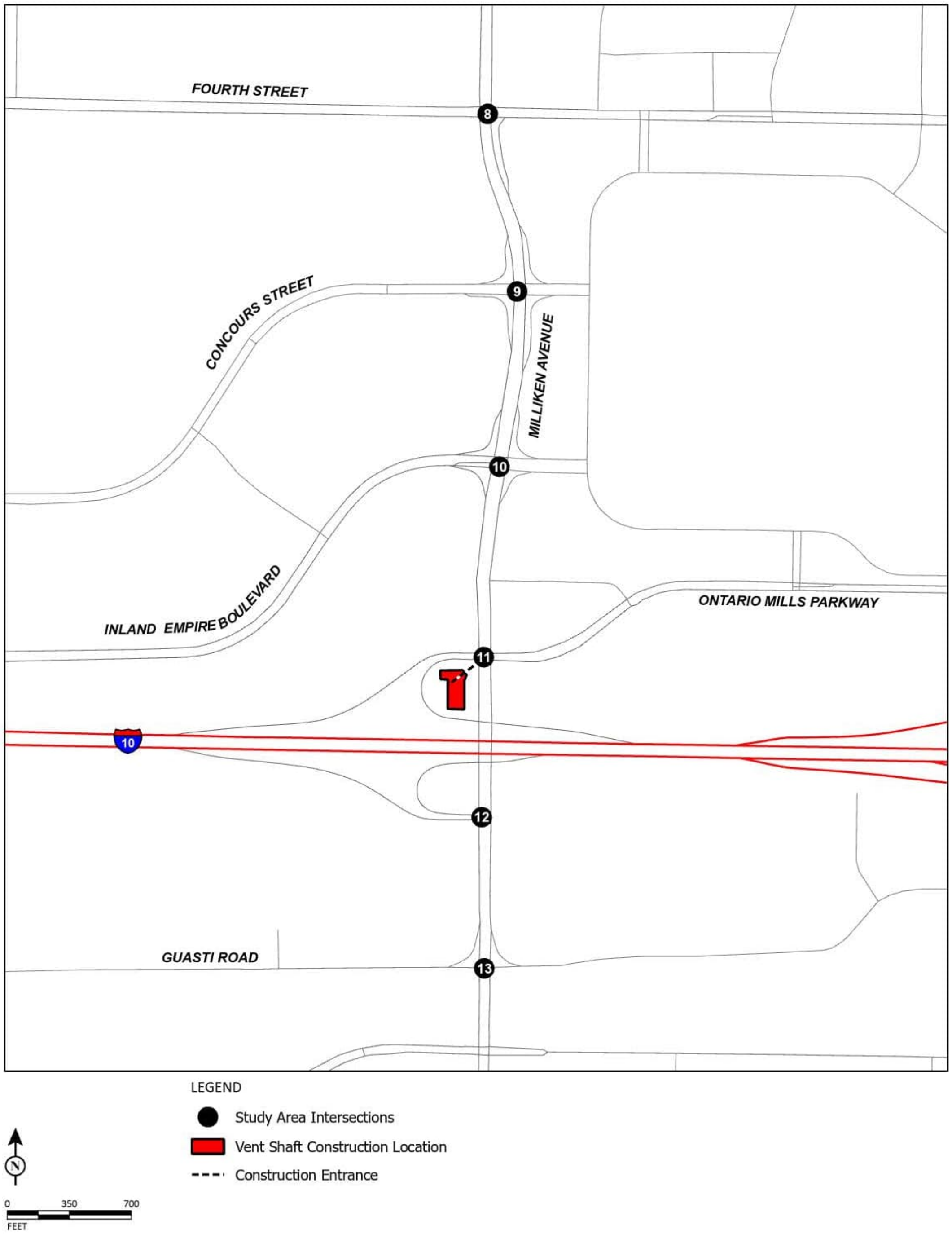
Figure 4-6 (Construction Traffic Analysis Study Area Intersections – Vent Shaft Design Option 4) illustrates the study intersections for construction staging for tunnel vent shaft design option 4.

Figure 4-4: Construction Traffic Analysis Study Area Intersections – Cucamonga Station



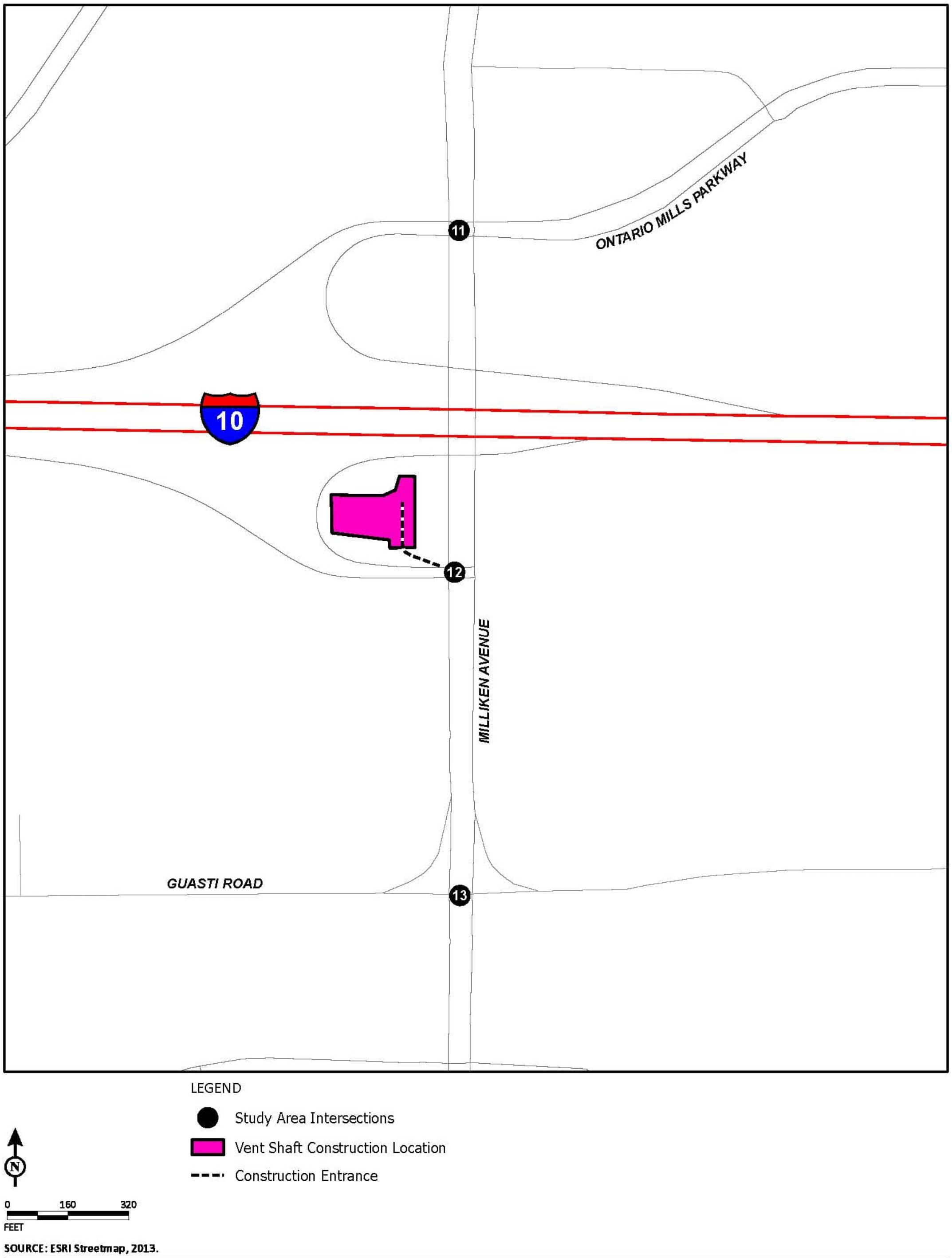
SOURCE: ESRI Streetmap, 2013.

Figure 4-5: Construction Traffic Analysis Study Area Intersections – Vent Shaft Design Option 2



SOURCE: ESRI Streetmap, 2013.

Figure 4-6: Construction Traffic Analysis Study Area Intersections – Vent Shaft Design Option 4



4.3.2 Identification of Analysis Scenarios

Based on the understanding of the proposed Project, construction would occur at two staging sites simultaneously during Scenario 1. Following completion of Scenario 1, construction would also occur at two staging sites simultaneously during Scenario 2. As such, the following scenarios have been analyzed:

- Scenario 1: ONT Terminal 2 and Terminal 4;
- Scenario 2A: Vent shaft design option 2 and Cucamonga Station (includes MSF); and
- Scenario 2B: Vent shaft design option 4 and Cucamonga Station (includes MSF).

4.3.3 Analysis Methodology and Methods of Effectiveness

Traffic operations at intersections have been evaluated for weekday a.m. and p.m. peak-hour traffic conditions for Scenarios 1, 2A, and 2B. Consistent with the TOA, the intersection LOS analysis has been prepared using HCM methodologies to analyze traffic operations at the identified study intersections. Intersection LOS was calculated using the Synchro 11 software.

Study intersections analyzed are under the jurisdictions of the City of Rancho Cucamonga, the City of Ontario, and Caltrans. The City of Ontario uses LOS E as its minimum LOS criterion per its General Plan. The City of Rancho Cucamonga uses LOS D as its minimum LOS criterion per its General Plan. Caltrans uses LOS D as its minimum LOS criterion at all intersections under its jurisdiction.

4.3.4 Year 2025 Conditions Traffic Forecast Methodology

Consistent with the TOA, existing traffic conditions at the study area intersections have been determined through the analysis of weekday peak-hour intersection counts. A certified traffic counter collected traffic data at the study intersections listed in Section 4.1.1. The appropriate methodology for developing existing traffic volumes has been confirmed with the City of Rancho Cucamonga, the City of Ontario, and SBCTA. Heavy vehicle traffic, pedestrian, and bicycle data were collected along with vehicular traffic counts at study intersections for the construction analysis.

The SBTAM has been used to analyze Year 2025 conditions. The current forecast year in the SBTAM is 2040. As such, growth from the SBTAM base (2019) to the SBTAM future year (2040) has been applied to existing traffic volumes to develop Year 2025 traffic volumes.

4.3.5 Construction Trip Generation

Trip generation calculations have been prepared for the proposed Project's temporary construction (accounting for passenger vehicle equivalents and the potential overlap of construction activities). The following summarizes the conceptual construction schedules at each construction staging area:

- Daily Construction Trucks/Equipment Arrival and Departure Schedule:

  - Working hours would be from 7:00 a.m. to 5:00 p.m.
  - Excavation cut/cover of stations would require 50 trucks per day at each location.
  - The permanent structure construction phase would require 10 concrete trucks per day.
  - Ancillary delivery trucks would require approximately one truck every 2 hours.
- Conceptual Construction Employees Scheduling:
  - Day Shift Miners: The day shift includes a total of 70 miners, including supervision. Day shift miners would arrive at the construction sites between 5:00 and 5:30 a.m. and depart between 4:00 and 4:30 p.m.
  - Day Shift Staff: The day shift also includes 30 staff (the contractor, the owner, and quality assurance/quality control [QA/QC] personnel). Day shift staff would arrive at the construction sites between 6:30 and 7:00 a.m. and depart between 4:30 and 5:00 p.m.
  - Night Shift Staff: The night shift consists of 30 miners and five staff (contractor, owner, and QA/QC). All night shift miners and staff would arrive at the construction sites between 3:00 and 3:30 p.m. and depart between 4:00 and 4:30 a.m.
  - 30 Additional Employees: It is anticipated that 30 employees would arrive at the construction sites during the a.m. peak hour and depart during the p.m. peak hour.

The construction trip generation summary table has been prepared based on the information listed daily construction trucks/equipment arrival and departure schedule, along with the conceptual construction employees scheduling. Table 4-9 (Construction Traffic Analysis Trip Generation) summarizes the construction trip generation. Because two sites would be developed simultaneously, each scenario accounts for the trip generation at both construction staging sites.

Construction trucks for excavation cut and cover, including those for tunnel boring construction, would require 50 trucks per day at each site, for a total of 200 truck trips per day (100 truck trips inbound and 100 truck trips outbound). Refer to Error! Reference source not found. for the durations of each construction phase. These trucks have been assumed to arrive uniformly throughout the day over a period of 10 hours (7:00 a.m. to 5:00 p.m.). Therefore, these construction trucks are estimated to generate approximately 10 inbound and 10 outbound truck trips during each peak hour. Concrete trucks required for the permanent structure construction phase would access the sites after the excavation phase is complete. There would be only 10 concrete trucks per day during the permanent structure construction phase. Therefore, the number of construction traffic trucks would be higher during the excavation phase of construction. Thus, the truck trip generation during the excavation phase is considered to be the more conservative and has been included to develop the construction traffic trip generation. For ancillary delivery trucks, all delivery trucks are assumed to be large two-axle trucks. The construction traffic trip generation would consist of 12 inbound trucks and 12 outbound trucks in each of the peak hours.

Table 4-9: Construction Traffic Analysis Trip Generation

Construction Staging Areas	Units		A.M. Peak Hour			P.M. Peak Hour			Daily
			In	Out	Total	In	Out	Total	
Scenario 1 Construction Traffic[1]									
Construction Sites: Ontario International Airport Terminals 2 and 4									
Construction Trucks Traffic									
Construction Trucks - Excavation Cut/Cover	100	TR	10	10	20	10	10	20	200
Ancillary Delivery Trucks	10	TR	2	2	4	2	2	4	20
Total Truck Trip Generation			12	12	24	12	12	24	220
Construction Trucks - Excavation Cut/Cover Trip Generation (in PCEs)[2,3]	100	TR	30	30	60	30	30	60	600
Ancillary Delivery Trucks Trip Generation (in PCEs)[2,3]	10	TR	3	3	6	3	3	6	30
Total PCE Trip Generation			33	33	66	33	33	66	630
Construction Employees Traffic									
Day Shift Miners	70	Miners	0	0	0	0	70	70	140
Day Shift Staff	30	Staff	0	0	0	0	30	30	60
Night Shift	70	Staff	0	0	0	0	0	0	140
Other Construction Employees	60	Emp	60	0	60	0	60	60	120
Total Construction Employees Trip Generation			60	0	60	0	160	160	460
Scenario 1 Construction Traffic Net Trip Generation (Total Vehicles)			72	12	84	12	172	184	680
Scenario 1 Construction Traffic Net Trip Generation (in PCEs)			93	33	126	33	193	226	1,090
Scenarios 2A and 2B Construction Traffic[1]									
Construction Sites: Rancho Cucamonga Metrolink Station and Vent Shaft (vent shaft design option 2 and vent shaft design option 4)									
Construction Trucks Traffic									
Construction Trucks - Excavation Cut/Cover	100	TR	10	10	20	10	10	20	200
Ancillary Delivery Trucks	10	TR	2	2	4	2	2	4	20
Total Truck Trip Generation			12	12	24	12	12	24	220
Construction Trucks - Excavation Cut/Cover Trip Generation (in PCEs)[2,3]	100	TR	30	30	60	30	30	60	600
Ancillary Delivery Trucks Trip Generation (in PCEs)[2,3]	10	TR	3	3	6	3	3	6	30
Total PCE Trip Generation			33	33	66	33	33	66	630
Construction Employees Traffic									
Day Shift Miners	70	Miners	0	0	0	0	70	70	140
Day Shift Staff	30	Staff	0	0	0	0	30	30	60
Night Shift	70	Staff	0	0	0	0	0	0	140
Other Construction Employees	60	Emp	60	0	60	0	60	60	120
Total Construction Employees Trip Generation			60	0	60	0	160	160	460

Construction Staging Areas	Units	A.M. Peak Hour			P.M. Peak Hour			Daily
		In	Out	Total	In	Out	Total	
Scenarios 2A and 2B Construction Traffic Net Trip Generation (Total Vehicles)		72	12	84	12	172	184	680
Scenarios 2A and 2B Construction Traffic Net Trip Generation (in PCEs)		93	33	126	33	193	226	1,090

Notes:

[1] Number of trucks and employees based on the conceptual construction trucking schedule for excavation, number of construction employees, arrival, and departure times provided by AECOM.

[2] Based on the City of Rancho Cucamonga's *Traffic Impact Analysis Guidelines (dated June 2020)*, all truck trips were converted to passenger car equivalents (PCEs) using a 1.5 PCE factor for 2-axle trucks, 2.0 for 3-axle trucks, and 3.0 for 4- and more axle trucks.

[3] The City of Ontario uses the same PCE factors.

Emp = Employees

TR = Trucks

Truck traffic was converted to passenger car equivalent (PCE) volumes. The concept of PCEs accounts for the effects of larger trucks on traffic operations by assigning each type of truck a PCE factor that represents the number of passenger vehicles that could travel through an intersection at the same time that a particular type of truck could. PCE volumes were developed using a factor of 1.5 for two-axle trucks, 2.0 for three-axle trucks, and 3.0 for trucks with four or more axles. As a conservative estimate, all construction truck trips were considered to be trucks with four or more axles. As previously stated, all ancillary delivery trucks have been considered as two-axle trucks. As such, the construction trucking schedule is estimated to generate 33 inbound PCE trips and 33 outbound PCE trips in each of the peak hours.

Each construction employee has been considered to generate one trip as a conservative estimate. Based on the construction employee schedule, construction employees are anticipated to generate 60 inbound trips in the a.m. peak hour and 160 outbound trips in the p.m. peak hour. Overall, each construction site is estimated to generate 126 net PCE trips in the a.m. peak hour and 226 net PCE trips in the p.m. peak hour.

4.4 PARKING ANALYSIS

The proposed Project would provide on-demand service using autonomous vehicles for passengers traveling to and from ONT from the Cucamonga Metrolink Station, within the Cities of Rancho Cucamonga and Ontario. As previously mentioned, the proposed Project includes the development of 3 passenger stations: one in the Cucamonga Metrolink Station western parking lot, one in the ONT Lot 2 General parking lot, and one in the ONT Lot 4 General parking lot. The parking analysis has analyzed the loss of parking under project construction and project operation to determine whether adequate parking would be available with implementation of the proposed Project.

4.4.1 Ontario International Airport Parking

During construction, the proposed Project is estimated to result in the temporary loss of 300 spaces in each of the ONT Lot 2 General and Lot 4 General parking lots. During operations, the proposed Project is estimated to result in the permanent loss of 85 spaces in the ONT Lot 2 General parking lot and the permanent loss of 115 spaces in the ONT Lot 4 General parking lot.

Existing parking demand data for ONT Lot 2 General, Lot 2 Premium, Lot 3, Lot 4 General, Lot 4 Premium, Lot 5, and Lot 6 were obtained from OIAA. Parking data provided by OIAA reflects the daily peak demand between June 1, 2024 and June 11, 2024 as well as the total number of available stalls for each of the applicable ONT parking lots. The peak parking demand at ONT during project construction is based on the existing parking demand data provided by OIAA. Terminal 2 and Terminal 4 project trips were added to the existing parking demand for each corresponding parking lot to determine the peak parking demand during project operations.

The parking analysis has analyzed the loss of parking under both operations and construction scenarios at ONT during a typical weekday and weekend day to determine whether adequate parking would be available on-site during construction and after implementation of the proposed Project.

4.4.2 Cucamonga Metrolink Station Parking

During construction, the proposed Project is estimated to result in the temporary loss of 170 spaces in the Cucamonga Metrolink Station western parking lot. During operations, the proposed Project is estimated to result in the permanent loss of 180 spaces in the Cucamonga Metrolink Station western parking lot.

Parking surveys were conducted at the Cucamonga Metrolink Station to determine the peak parking demand at this site. The parking surveys were conducted on two typical weekdays (June 25, 2024 [Tuesday] and June 27, 2024 [Thursday]) and typical weekend days (June 22, 2024 [Saturday] and June 29, 2024 [Saturday]) for a span of 24 consecutive hours for each of the surveyed days. The peak parking demand at the Cucamonga Metrolink Station during project construction is based on the parking demand data provided in the parking surveys.

Several transportation projects within the region have been proposed and are anticipated to be operational in conjunction with the proposed Project. Among these projects is the Brightline West High-Speed Rail Project that would connect to and operate in the existing Cucamonga Metrolink Station. According to the *Brightline West Cajon Pass High-Speed Rail Project Transportation Technical Report*, dated October 2022, the existing eastern lot of the Cucamonga Metrolink Station would be replaced with a parking structure that would provide a total of 4,100 parking stalls, including 650 reserved stalls for Metrolink passengers. Furthermore, the Brightline West Project estimates a peak demand of 4,025 parking stalls under their opening year scenario (2025) and 8,654 parking stalls under their horizon year scenario (2045) to be used for Brightline West passengers, intercity rail passengers, employees, and Metrolink passengers. It should be noted that all parking demand data provided by the Brightline West project reflects the peak daily demand during a typical week, which occurs between Friday and Saturday. Cucamonga Metrolink Station project trips and Brightline West parking demand data were added to the existing parking demand data to determine the peak demand during project operation. For purposes of this analysis, as a conservative approach, this peak demand has been applied to both weekday and weekend day parking analyses at the Cucamonga Metrolink Station.

The parking analysis has analyzed the loss of parking due to project construction at the Cucamonga Metrolink Station during a typical weekday and weekend day to determine whether adequate parking would be available on-site during project construction. Furthermore, the parking analysis has analyzed the change of available parking stalls during project operation on a typical weekday and weekend day to determine whether adequate parking would be available on-site during project operation in conjunction with Brightline West operations at Cucamonga Metrolink Station.

4.5 EVALUATION OF IMPACTS UNDER CALIFORNIA ENVIRONMENTAL QUALITY ACT

On December 28, 2018, the California Office of Administrative Law cleared the revised *State CEQA Guidelines* for use. Among the changes to the guidelines was the removal of vehicle delay and LOS from consideration under CEQA. With the adopted guidelines, transportation impacts are evaluated based on a Project's impact on VMT.

Because the proposed Project spans multiple jurisdictions and involves federal and state regulatory authorities, the VMT analysis must address requirements from SBCTA, Caltrans, the City of Rancho Cucamonga, and the City of Ontario. Therefore, the analysis addresses the requirements for preparation of a VMT analysis as established by the following guidelines:

- Caltrans' Transportation Analysis under CEQA (TAC) & Transportation Analysis Framework (TAF) (September 2020);
- SBCTA's Recommended Traffic Impact Analysis Guidelines for VMT and Level of Service Assessment (February 2020);
- The City of Ontario's *VMT Impact Thresholds* (June 2020); and
- The City of Rancho Cucamonga's *Traffic Impact Analysis Guidelines* (June 2020).

In accordance with the guidelines set forth by Caltrans, SBCTA, the City of Rancho Cucamonga, and the City of Ontario, the proposed Project would have a significant impact related to transportation if it would do the following:

- Increase capacities of the roadway network; or
- Induce vehicular travel via construction of new roadway facilities.

Although VMT is the transportation impact evaluation metric under CEQA, the City of Rancho Cucamonga and City of Ontario seek to maintain a certain LOS standard for their circulation network as summarized in their goals and policies under Section 3.3. As such, the General Plan goals and policies of the City of Rancho Cucamonga and the City of Ontario set forth the minimum LOS standards for their respective circulation networks. Therefore, an LOS analysis is also required to demonstrate consistency with the respective General Plan.

4.5.1 California Environmental Quality Act Significance Thresholds

According to Appendix G of the 2024 CEQA Guidelines implementation of the proposed Project may result in a potentially significant impact if it would:

- Conflict with a program plan, ordinance, or policy addressing the circulation system including transit, roadways, bicycle, and pedestrian facilities;
- Conflict or be inconsistent with State CEQA Guidelines Section 15064.3, subdivision (b);
- Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment); and
- Result in inadequate emergency access.

5 EXISTING CONDITIONS

The proposed Project would provide improved public transit, an alternative to the private automobile for trips along the proposed Project corridor, and increased connections to other transit opportunities serving the region.

5.1 BUS AND RAIL TRANSIT SERVICE

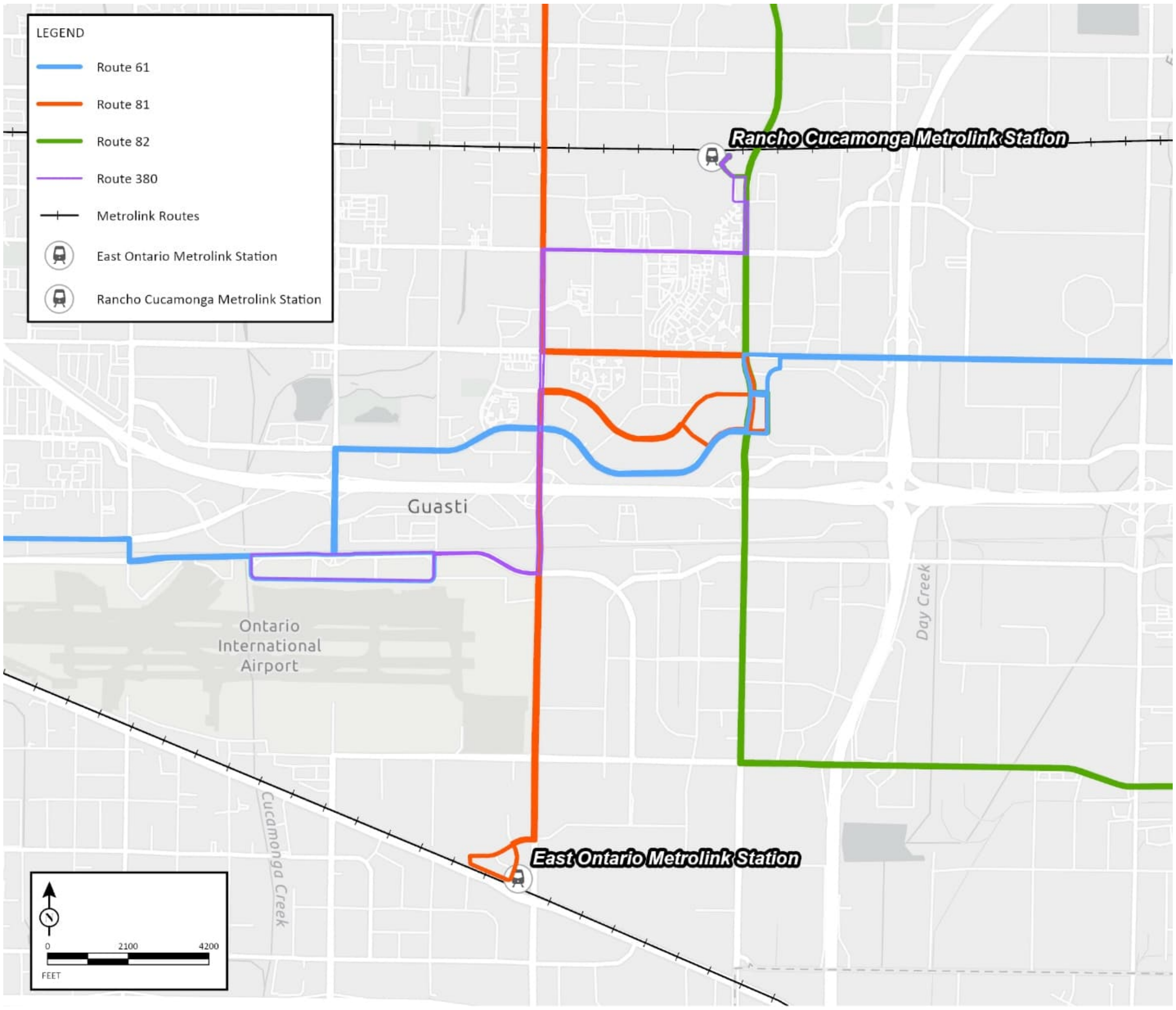
5.1.1 Existing Bus and Rail Services

Metrolink is a regional commuter train service that operates on seven regional lines serving the Antelope Valley and Los Angeles, Ventura, San Bernardino, Riverside, and Orange counties under the jurisdiction of SCRRA. Three routes serve San Bernardino County and include the San Bernardino, Riverside, and Inland Empire/Orange County lines. The San Bernardino route interfaces with the planned ONT connection corridor alignments and served an average of 9,336 average weekday riders in the second quarter of fiscal year 2018–2019 (Metrolink, 2021). The San Bernardino Line runs 7 days per week.

The San Bernardino Line is the busiest in the Metrolink commuter rail system, carrying approximately 12,000 passengers each weekday (SANBAG, 2015). Metrolink's Riverside Line carries approximately 5,000 passengers per day but does not provide weekend service (Metrolink, 2021). The closest stations in proximity to ONT are the Cucamonga Metrolink Station to the north and the East Ontario Station to the south as illustrated on Figure 5-1 (Omnitrans Route Within the Project Site). However, the lack of weekend service limits the line's use for connecting to ONT. While ONT is a key destination for travelers within the region, it is located outside of walking/biking distance from both stations. The 2014 rail access study evaluated potential connections between ONT and Metrolink and recommended a series of projects to address increased passenger capacity at ONT. Current and near-term ridership at ONT did not justify the costs of constructing a high-capacity rail system (SANBAG, 2014). While rail was identified as a long-term solution, bus shuttles were recommended to address near-term connectivity (SANBAG, 2014). However, bus shuttles would require programming both an interim project and a long-term project to meet these identified solutions.

Public transportation to ONT is limited to Omnitrans. As of April 2024, Omnitrans operates 28 fixed bus routes in the San Bernardino Valley, including 27 local bus routes and one BRT line, the sbX Green Line (Omnitrans, 2022). Route 380 directly connects ONT to the Cucamonga Metrolink Station. Furthermore, portions of three routes in particular—Routes 61, 81, and 82—traverse through the proposed Project corridor, as shown in Figure 5-1 (Omnitrans Route Within the Project Site).

Figure 5-1: Omnitrans Route Within the Project Site



Source: Omnitrans, 2024

5.1.1.1 Omnitrans Route 61

Route 61 has a total of 143 stops in both directions. The route length of Route 61 is 22 to 24 miles, depending on the direction. Route 61 runs every 20 to 30 minutes on weekdays and every 30 minutes on weekends but does not directly connect to either of the two nearby Metrolink stations. The route does connect to Metrolink stations more than 5 miles from ONT (the Riverside Line Downtown Pomona Station and the San Bernardino Line Fontana Station). It provides an east-west connection between the Pomona Transit Center and the Fontana Metrolink Station. Route 61 travels through Pomona, Montclair, Ontario, Rancho Cucamonga, and Fontana, providing easy connections to many other Omnitrans routes, neighboring transit bus operators, and Metrolink rail service in both Pomona and Fontana. As of January

2022, Route 61 accounts for 1.2 million riders per year, or about 12% of Omnitrans annual ridership, despite being only one of 28 systemwide routes. It is Omnitrans' highest ridership route (SBCTA, 2020).

5.1.1.2 Omnitrans Route 81

Route 81 has 57 stops in both directions, and its route length is 11 miles. Route 81 directly connects to the Ontario-East Station. However, Route 81 runs once per hour with no service on Sundays and does not enter the ONT terminal area. Passengers must walk after exiting the bus to reach the terminal area (SANBAG, 2014). Route 81 provides a north-south connection between Chaffey College and the East Ontario Metrolink Station. It serves the City of Ontario and the City of Rancho Cucamonga via the Ontario Mills mall, with a stop at the Chino Transit Center. It runs primarily on Haven Avenue but makes a detour on 4th Street to connect with the Ontario Mills mall. Route 81 then continues back to Haven Avenue via Concours Street.

5.1.1.3 Omnitrans Route 82

Route 82's weekday eastbound service has 82 stops, and its weekday westbound service has 78 stops. The route lengths are both approximately 26.6 miles. Route 82's weekend eastbound service has 54 stops, with a total length of 15.2 miles. The route's weekend westbound service has 59 stops, with a total length of 17.7 miles. Route 82 directly connects to the Cucamonga Metrolink Station. However, Route 82 runs every 60 minutes on weekdays and 65 minutes on weekends, with no direct connection with the ONT terminal area. Similar to Route 81, passengers would have to use another transportation option to reach the terminal area. None of the Omnitrans routes are timed to coincide with ONT flight arrivals and departures. Route 82's weekday service provides a critical connection between major destinations such as the Fontana Farmer's Market and the Aquatic Center in the north and Henry J. Kaiser High School and Southridge Village in the south. The weekend service provides a north-south connection between the Farmer's Market and Southridge Village.

5.1.1.4 Omnitrans Route 380

Route 380 provides nonstop travel between ONT and the Rancho Cucamonga Metrolink Station, with only three stops at ONT Terminal 2, ONT Terminal 4, and the Rancho Cucamonga Metrolink Station. Route 380 is approximately 9.5 miles long traveling both directions. Route 380 runs every 35 to 60 minutes for all days of the week, including the weekend.

According to the service plan of Omnitrans in fiscal year 2021, Route 61 has the highest annual revenue hours and accounts for 11.4% of all 27 fixed routes. The combined annual revenue hours of Routes 61, 81, and 82 account for 17.1% of all 27 fixed routes, as shown on Figure 5-2 (Revenue Hours by Omnitrans Service Current versus Proposed).

Figure 5-2: Revenue Hours by Omnitrans Service Current versus Proposed

Route	Total Annual Revenue Hours Current	Proposed	Δ	%Δ
1	42,941	42,962	21	0.0%
2	19,112	12,258	(6,854)	-35.9%
3	31,207	30,379	(828)	-2.7%
4	29,815	29,249	(566)	-1.9%
5	20,708	-	(20,708)	-100.0%
6	-	19,624	19,624	n/a
7	10,902	-	(10,902)	-100.0%
8	20,111	16,330	(3,782)	-18.8%
10	14,103	14,192	89	0.6%
12	16,021	-	(16,021)	-100.0%
14	34,481	32,418	(2,063)	-6.0%
15	35,153	35,152	(1)	0.0%
19	42,655	42,844	189	0.4%
20	4,279	-	(4,279)	-100.0%
22	18,456	12,919	(5,538)	-30.0%
29	3,017	-	(3,017)	-100.0%
215	12,485	12,713	228	1.8%
290	7,115	5,447	(1,668)	-23.4%
61	68,968	65,563	(3,405)	-4.9%
66	46,032	38,637	(7,395)	-16.1%
67	7,586	7,854	268	3.5%
80	10,223	-	(10,223)	-100.0%
81	15,181	9,218	(5,963)	-39.3%
82	19,274	19,464	190	1.0%
83	15,807	14,009	(1,798)	-11.4%
84	8,752	5,087	(3,664)	-41.9%
85	31,603	31,145	(457)	-1.4%
86	8,216	-	(8,216)	-100.0%
87	-	15,489	15,489	n/a
88	11,784	7,760	(4,025)	-34.2%
40' Total	605,988	520,713	(85,274)	-14.1%

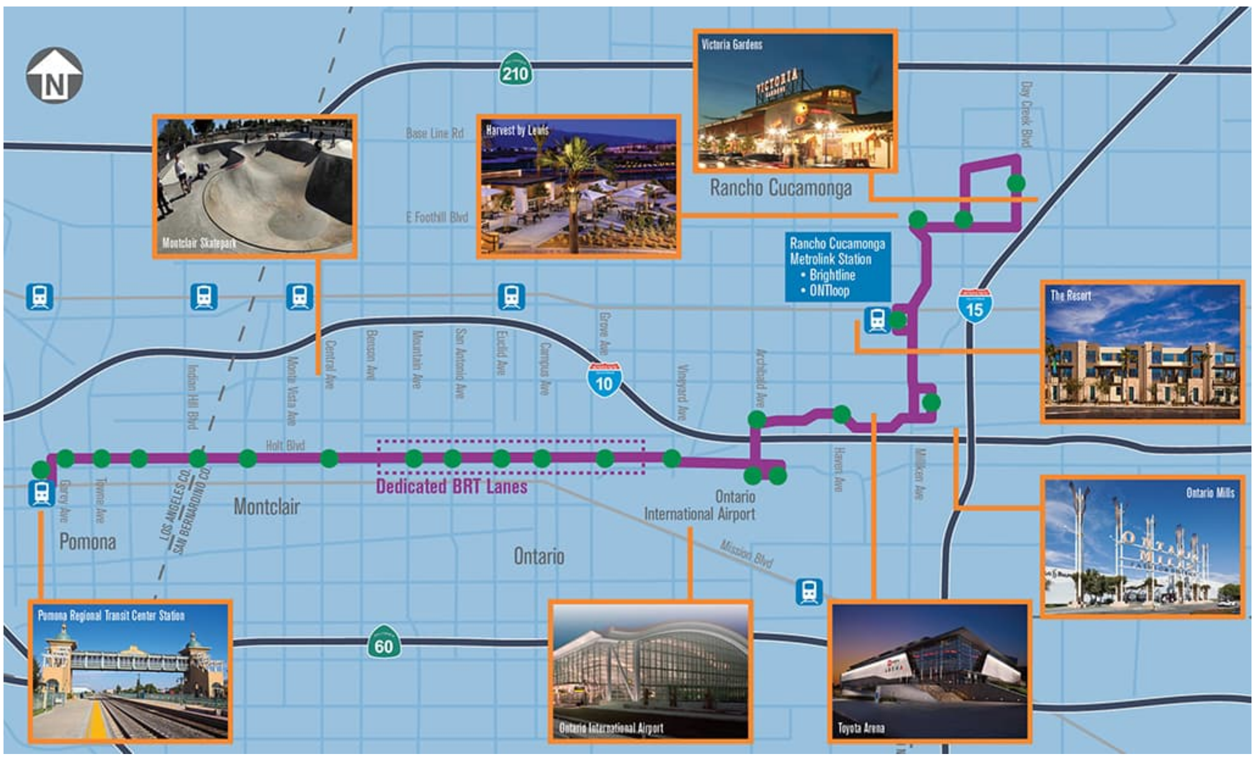
Source: Omnitrans, 2020
Notes: Δ = Delta, () = negative

5.1.2 Planned Bus and Rail Services

5.1.2.1 Omnitrans System Plan

The Omnitrans service plan for fiscal year 2021 proposed to increase the frequency of Route 61 to 15–20 minutes. The West Valley Connector (WVC) project is a zero-emission BRT project that would be the first stage of the San Bernardino County Zero-Emission Bus Initiative and the second BRT route in San Bernardino County. Phase I of the WVC will upgrade an existing portion of Route 61, along Holt Boulevard, by adding 3.5 miles of center-running, dedicated bus-only lanes. The WVC alignment is shown in Figure 5-3 (West Valley Connector Project Alignment Map).

Figure 5-3: West Valley Connector Project Alignment Map



Source: SBCTA, 2021

Phase 1 of the proposed Project is 19 miles in length and would upgrade a portion of existing Route 61 that runs along Holt Boulevard, adding approximately 3.5 miles as center-running, dedicated bus-only lanes. Phase 1 includes 21 stations that would provide a much-improved transit connection to ONT and help build transit connectivity by linking ONT, two Metrolink lines (San Bernardino and Riverside), and multiple major activity centers along the route, including Ontario Mills Mall and Victoria Gardens.

Headways would be 10 minutes in the peak commute period and 15 minutes off-peak, providing a high LOS to the community. The completion of the proposed Project would reduce transit trip time approximately 28%, from 75 to 54 minutes.

As of June 2022, the WVC proposed Project is in the process of completing the final design. The new service is anticipated to start in December 2024. SCAG included the WVC project in its 2020 RTP/SCS, the Connect SoCal Plan (SCAG, 2020).

5.2 EXISTING REGIONAL VEHICLE MILES TRAVELED

Transportation analysis for purposes of estimating VMT, such as Project trip generation and traffic analysis, primarily relied on data from the STOPS model and SBTAM. The STOPS model does not provide existing regional VMT; therefore, existing regional VMT was estimated using the SBTAM. A region should be defined to estimate regional VMT. The modeling area for the STOPS model was developed to capture all potential areas that would have trips to/from the proposed Project. Therefore, the modeling area from STOPS was considered as the region. VMT for all roadway links within the region was summarized as regional VMT. However, the base year for the SBTAM is 2016, with a horizon year of 2040, and no interim data were available from the model. Linear interpolation was applied to estimate existing (2022) regional VMT using 2016 and 2040 roadway VMT summaries from the SBTAM. Table 5-1 (Existing Regional Vehicle Miles Traveled) shows the SBTAM regional VMT for 2016, existing (2022), and 2040 conditions.

Table 5-1: Existing Regional Vehicle Miles Traveled

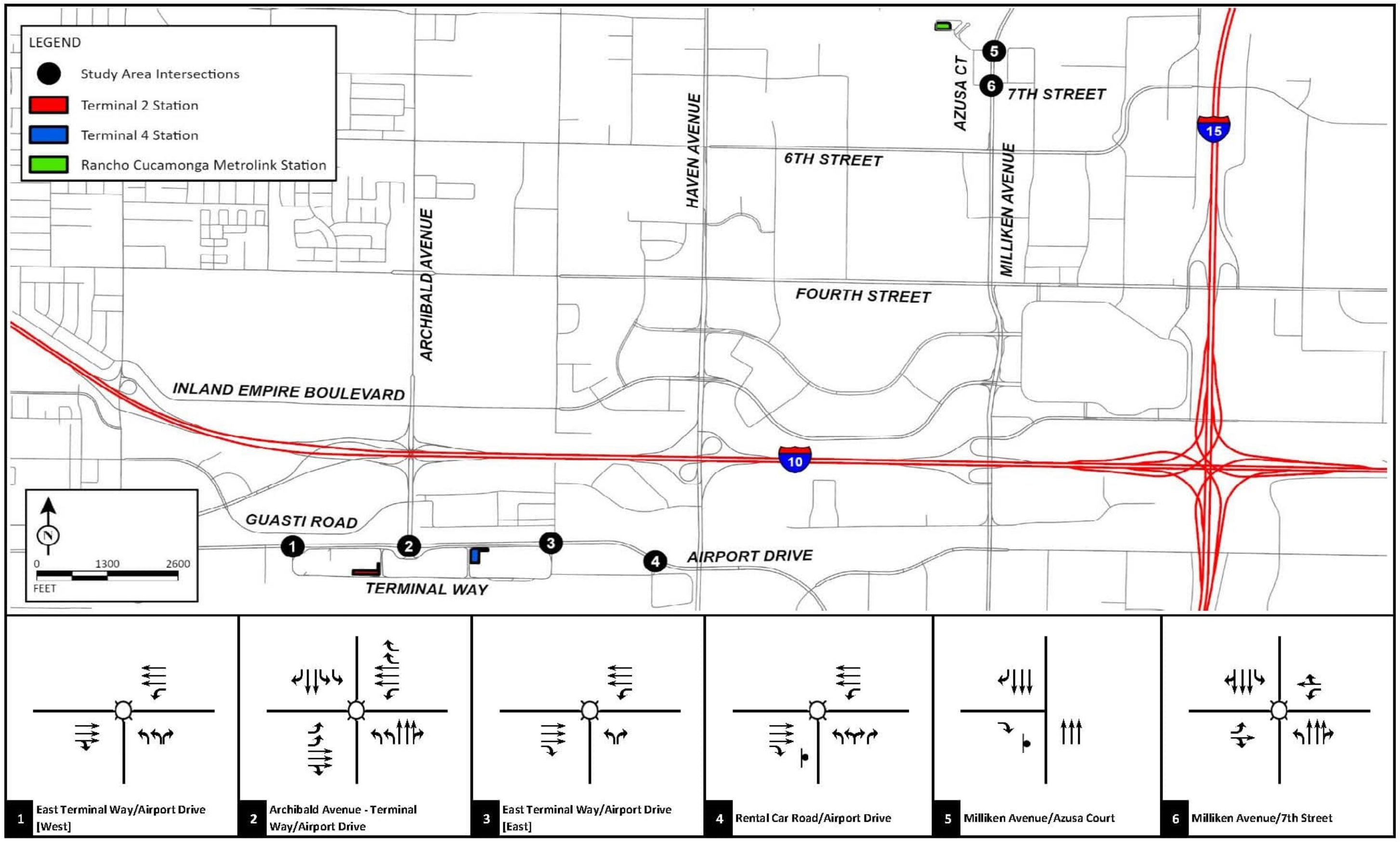
	2016	2040	2022 (Existing)
Daily Regional VMT (from SBTAM)	330,113,226	403,851,886	348,547,891

5.3 VEHICULAR TRAFFIC AND EXISTING (2022) TRAFFIC VOLUMES

Existing intersection counts were collected for the a.m. and p.m. peak hours at the study intersections in September 2022. Intersection volumes were collected during the a.m. and p.m. peak periods, from 7:00 to 9:00 a.m. and from 4:00 to 6:00 p.m., respectively. Volume development for the existing peak-hour volumes was based on the methodology documented in Section 4.1.3.

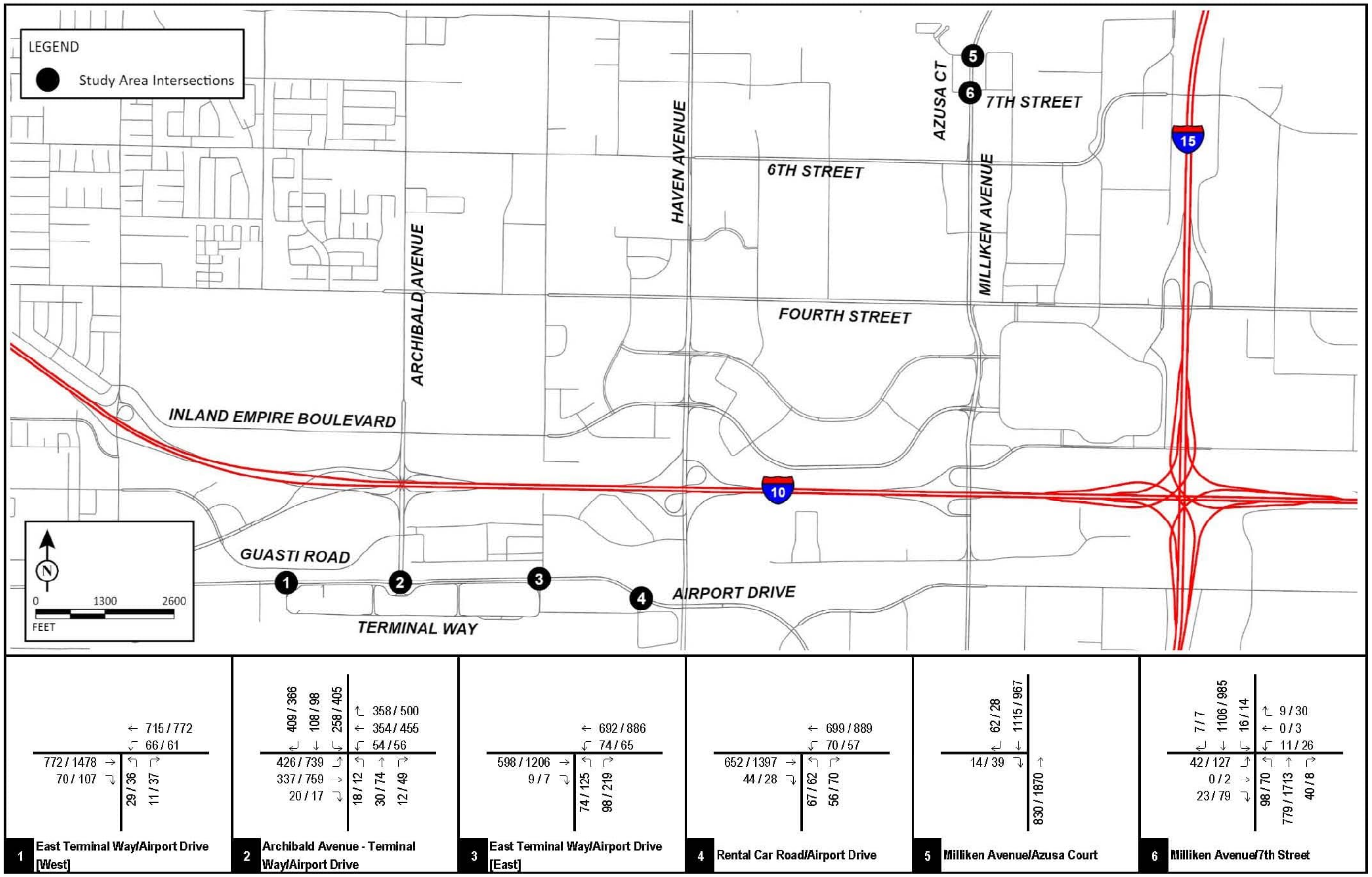
Figure 5-4 (Existing Lane Geometries and Traffic Control at Study Intersections) illustrates the existing lane geometries and traffic control at study intersections. Figure 5-5 (Existing Peak-Hour Turning Movement Volumes at the Study Intersections) illustrates the existing a.m. and p.m. peak-hour volumes at the study intersections. Detailed count sheets are included in Appendix C. Detailed volume development worksheets are included in Appendix D.

Figure 5-4: Existing Lane Geometries and Traffic Control at Study Intersections



Legend
Signal
Stop Sign

Figure 5-5: Existing Peak-Hour Turning Movement Volumes at the Study Intersections



XXXX / YYYY
AM / PM Peak Hour Traffic Volumes

5.4 EXISTING (2022) LEVELS OF SERVICE

The LOS standard refers to traffic operations during the peak hours, based on the assumption that facilities that operate adequately during the peak period would operate adequately at other times as well. Therefore, the LOS analysis examines the LOS during the a.m. and p.m. peak hours.

The LOS analysis was conducted based on the methodology documented in Section 4.1.6 using the Synchro 11 software and signal timing sheets provided by the City of Rancho Cucamonga, the City of Ontario, and Caltrans. Table 5-2 (Existing Intersection Levels of Service) summarizes the result of the LOS analysis and shows that all intersections under existing conditions operate at a satisfactory LOS except for:

2. Archibald Avenue – Terminal Way/Airport Drive (p.m. peak hour only).

Table 5-2: Existing Intersection Levels of Service

					No Build			
					A.M. Peak Hour		P.M. Peak Hour	
	Intersection	Jurisdiction	LOS Standard	Control	Delay (sec.)	LOS	Delay (sec.)	LOS
1	East Terminal Way/Airport Drive [West]	City of Ontario	E	Signal	36.2	D	48.3	D
2	Archibald Avenue - Terminal Way/ Airport Drive	City of Ontario	E	Signal	63.2	E	>100	F *
3	East Terminal Way/Airport Drive [East]	City of Ontario	E	Signal	31.3	C	26.8	C
4	Rental Car Road/Airport Drive	City of Ontario	E	Signal	24.1	C	19.9	B
5	Milliken Avenue/Azusa Court	City of Rancho Cucamonga	D	OWSC	14.4	B	14.0	B
6	Milliken Avenue/7th Street	City of Rancho Cucamonga	D	Signal	10.0	A	14.0	B

Notes:
OWSC = One-Way Stop Control; LOS = Level of Service
Delay (sec.) = Average control delay in seconds (For OWSC/TWSC [two-way stop control] intersections, reported delay is for worst-case movement).
*Exceeds LOS Standard

Signal timing sheets are included in Appendix E and detailed intersection LOS worksheets are included in Appendix F of this technical report.

5.5 PARKING

Most of the proposed Project area is designated as Urban Neighborhood, Commercial, Employment-Industrial, and Open Space adjacent to a major arterial (Milliken Avenue). Multifamily residential uses are primarily located on the west side of Milliken Avenue from approximately 7th Street south to 4th Street, and a mix of commercial and industrial businesses are located east of Milliken Avenue. There is no on-street parking along Milliken Avenue; however, plentiful off-street surface parking can be found at commercial lots. On-street parking can also be found in multifamily residential areas.

Parking stalls are also available at the Cucamonga Metrolink Station and at ONT. The parking areas at the Cucamonga Metrolink Station include 980 standard parking stalls, including 24 ADA-compliant spaces that are separated by landscaped pathways and seating areas (Metrolink, 2022). In addition, a Metrolink Charging Station is provided within the northeastern portion of the eastern parking lot. Azusa Court provides access to the various parking areas associated with the Cucamonga Metrolink Station from Milliken Avenue to the east. ONT offers short- and long-term parking in Lot 2 General, Lot 2 Premium, Lot 3, Lot 4 General, Lot 4 Premium, Lot 5, and Lot 6 parking lots. Parking lots 2 and 4 are within the Project footprint. Parking lot 5 has the highest parking capacity, with 2,316 parking stalls. Lot 2 General has a total of 1,234 parking stalls. Lot 2 Premium has a total of 347 parking stalls, which includes electric vehicle parking. Lot 3 has a total of 1,192 parking stalls. Lot 4 General has a total of 1,430 parking stalls. Lot 4 Premium has a total of 352 parking stalls, which includes electric vehicle parking. Lot 6 has a total of 1,337 parking stalls (OIAA, 2024).

5.6 ACTIVE TRANSPORTATION

The SBCTA Non-Motorized Transportation Plan (as of 2018) identifies bikeways that run adjacent to the proposed Project area. Table 5-3 (Existing Bikeways Within Project Footprint) summarizes the existing bikeways along the proposed Project footprint.

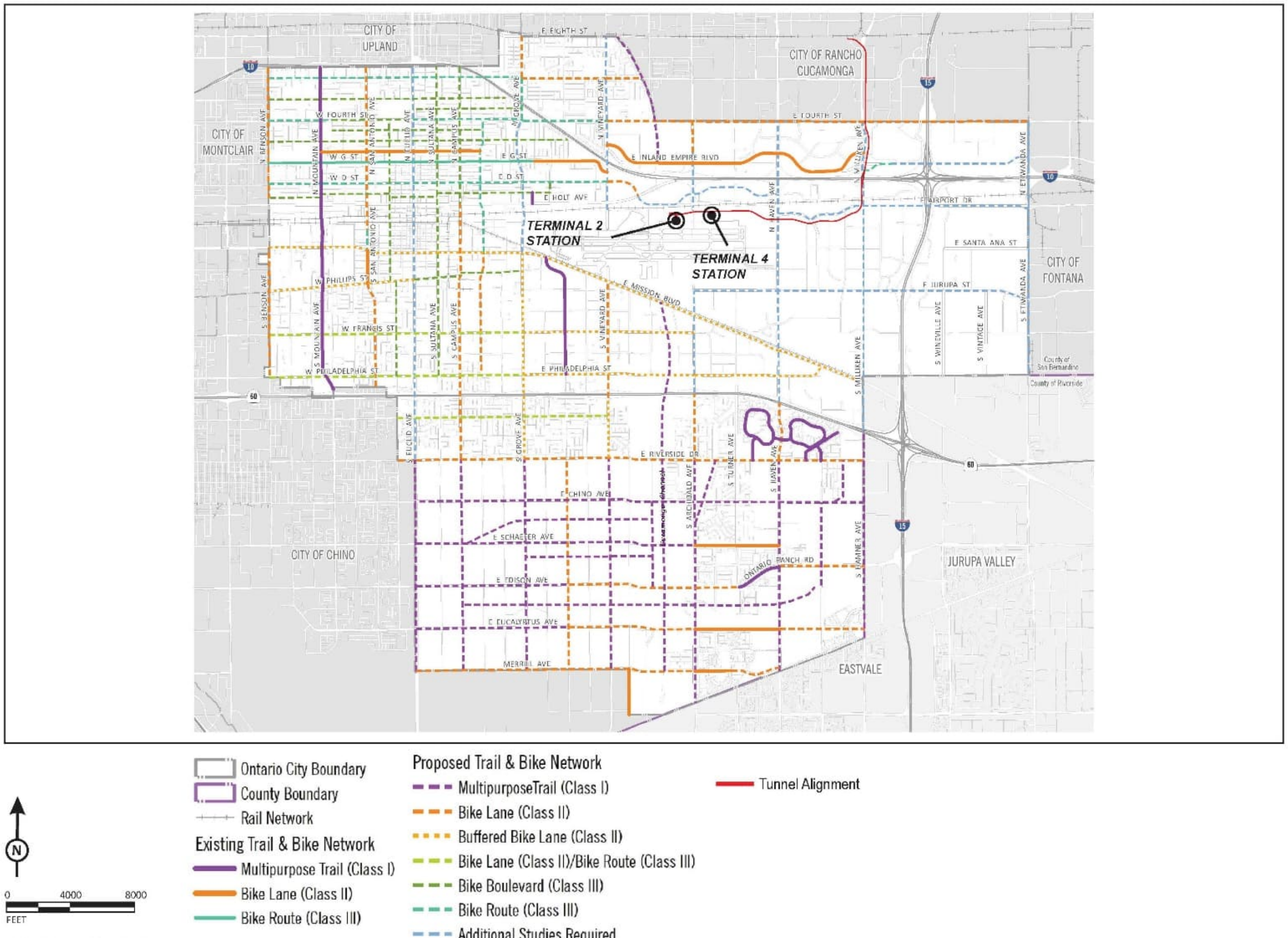
Table 5-3: Existing Bikeways Within Project Footprint

Jurisdiction	Existing Bikeways
Rancho Cucamonga	From Arr^{ow} Route to 6th Street along the Milliken Avenue existing Class II bike lane
Rancho Cucamonga	From 6t^{h} Street to 5th Street along the Milliken Avenue existing Class II bike lane.
Rancho Cucamonga	From 5t^{h} Street to 4th Street along the Milliken Avenue existing Class II bike lane
Ontario	From Vineyard Avenue to Milliken Avenue along the Inland Empire Boulevard existing Class II bike lane

Source: SBCTA, 2020b

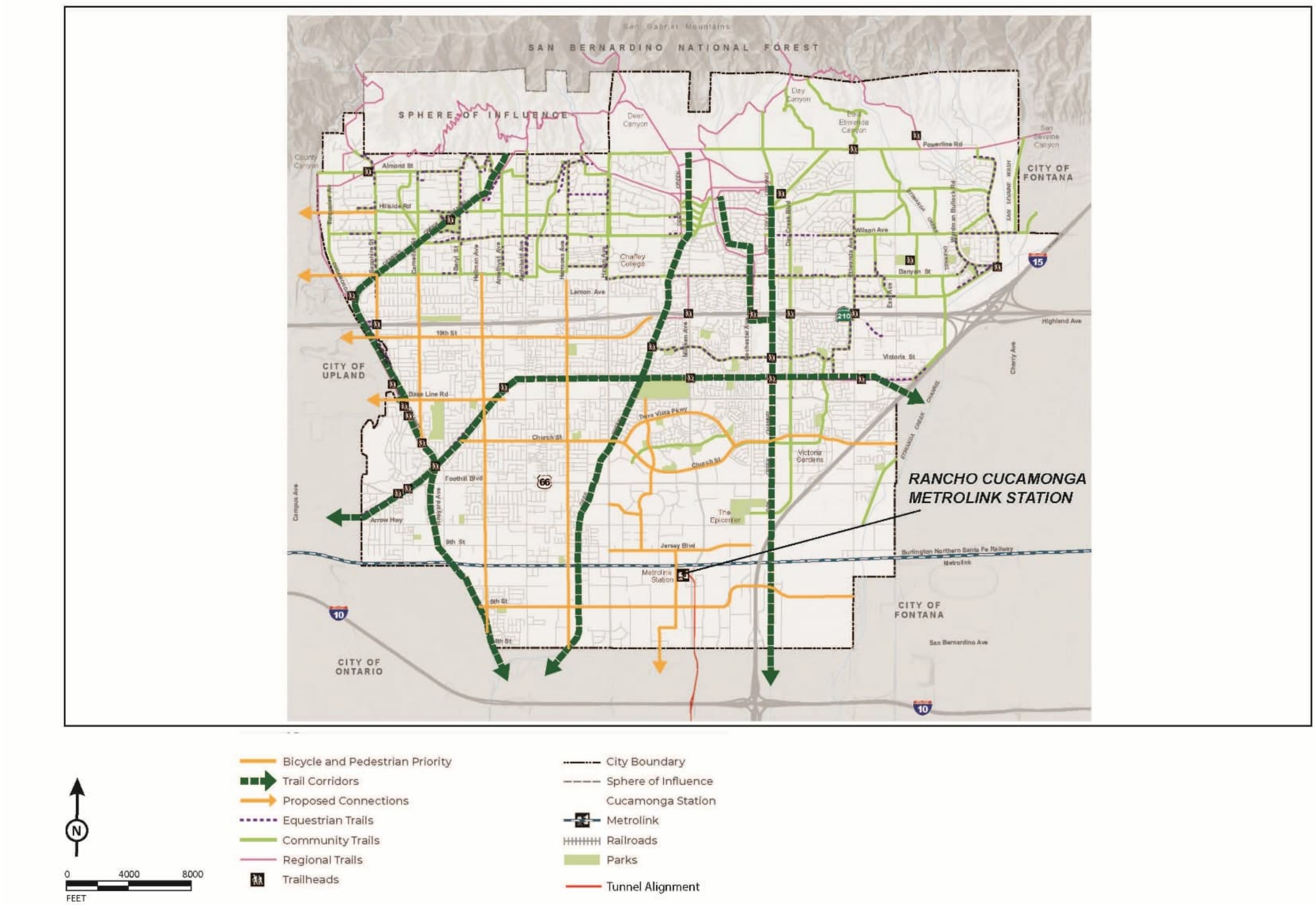
Future bikeways have been proposed on Guasti Road north of ONT, on Haven Avenue east of ONT, and on Archibald Avenue north of Airport Drive. However, the bikeway classifications have not yet been identified for these bikeways as of May 2022. Furthermore, a future bicycle and pedestrian path is proposed to run south of Jersey Boulevard towards the Cucamonga Metrolink Station and to continue past 4th Street into the City of Ontario. The City of Ontario's existing and proposed bikeways are illustrated in Figure 5-6 (Existing and Proposed Bikeways in City of Ontario). The City of Rancho Cucamonga's existing and proposed bicycle network is illustrated in Figure 5-7 (Existing and Proposed Bikeways in City of Rancho Cucamonga).

Figure 5-6: Existing and Proposed Bikeways in City of Ontario



SOURCE: City of Ontario, May 2022

Figure 5-7: Existing and Proposed Bikeways in City of Rancho Cucamonga



SOURCE: City of Rancho Cucamonga, December 2021

6 OPENING YEAR (2031) CONDITIONS

6.1 BUS AND RAIL TRANSIT SERVICE

As previously referenced in Section 5.1 the proposed Project serves to improve public transit and provide alternatives for travel to the airport along the Project corridor and regional-serving transit. The WVC project is anticipated to be in operation for service as an upgrade of the existing Omnibus Route 61 to a median-running BRT during the Opening Year of the proposed Project. The WVC project would provide improved bus service to ONT, improve connection to rail, and provide connectivity to major activity centers, as previously stated in Section 5.1.2.1. Commuter rail services are expected to continue to be provided by Metrolink's San Bernardino Line and Riverside Line. The proposed Project would provide a direct connection to the Cucamonga Metrolink Station, allowing for convenient transfers between ONT and the Metrolink San Bernardino Line. As previously stated in Section 4.2, it is anticipated that there will be approximately 675 passengers per day during the Opening Year (2031) and approximately 1,309 passengers per day during the Design Year (2051). These numbers of passengers include air passengers previously parking, air passengers previously dropped off, employees previously parking, and out-of-region visitors renting cars. Ridership data is estimated using the STOPS model as described in Section 4.2.

6.2 OPENING YEAR VEHICLE MILES TRAVELED

The proposed Project is anticipated to be open for operation in 2031. Similar to existing conditions, neither the SBTAM nor the STOPS model included an interim modeling year of 2031. Linear interpolation using 2016 and 2040 was conducted to calculate the Opening Year 2031 regional No Build VMT. The methodology to estimate the amount of VMT reduction in 2031 due to the proposed Project is described in detail in Section 4.2. Project VMT is the amount of reduction in VMT, as the proposed Project would encourage mode shift from automobiles to transit and can be interpreted as the VMT that would have been on the roadway network in the absence of the proposed Project. Therefore, 2031 Project VMT was subtracted from the 2031 No Build regional VMT to develop 2031 regional VMT for Project Build conditions. Table 6-1 (Opening Year (2031) Regional VMT – No Build) summarizes the Opening Year VMT for No Build conditions. Table 6-2 (Opening Year (2031) Regional VMT – No Build versus Build) summarizes the Opening Year Project VMT, No Build VMT, and Build VMT.

Table 6-1: Opening Year (2031) Regional VMT – No Build

	2016	2040	2031 (Opening Year)
Daily Regional VMT (from SBTAM)	330,113,226	403,851,886	376,199,889

Table 6-2: Opening Year (2031) Regional VMT – No Build versus Build

	2031 No-Build VMT	2031 Project VMT	2031 Build VMT
Daily VMT	376,199,889	(21,773)	376,178,116

6.3 VEHICULAR TRAFFIC AND OPENING YEAR (2031) TRAFFIC VOLUMES

Traffic volumes for the Opening Year were developed using the methodology outlined in Section 4.1.4. (Opening Year Peak-Hour Volumes at Study Intersections) illustrates the Opening Year a.m. and p.m. peak-hour volumes at the study intersections. Detailed volume development worksheets are included in Appendix D.

6.4 OPENING YEAR (2031) LEVELS OF SERVICE

Table 6-3 (Opening Year (2031) No Build Intersection Levels of Service) summarizes the results of the LOS analysis for the study intersections. Detailed intersection LOS worksheets are included in Appendix F. All intersections are forecasted to operate at a satisfactory LOS except for:

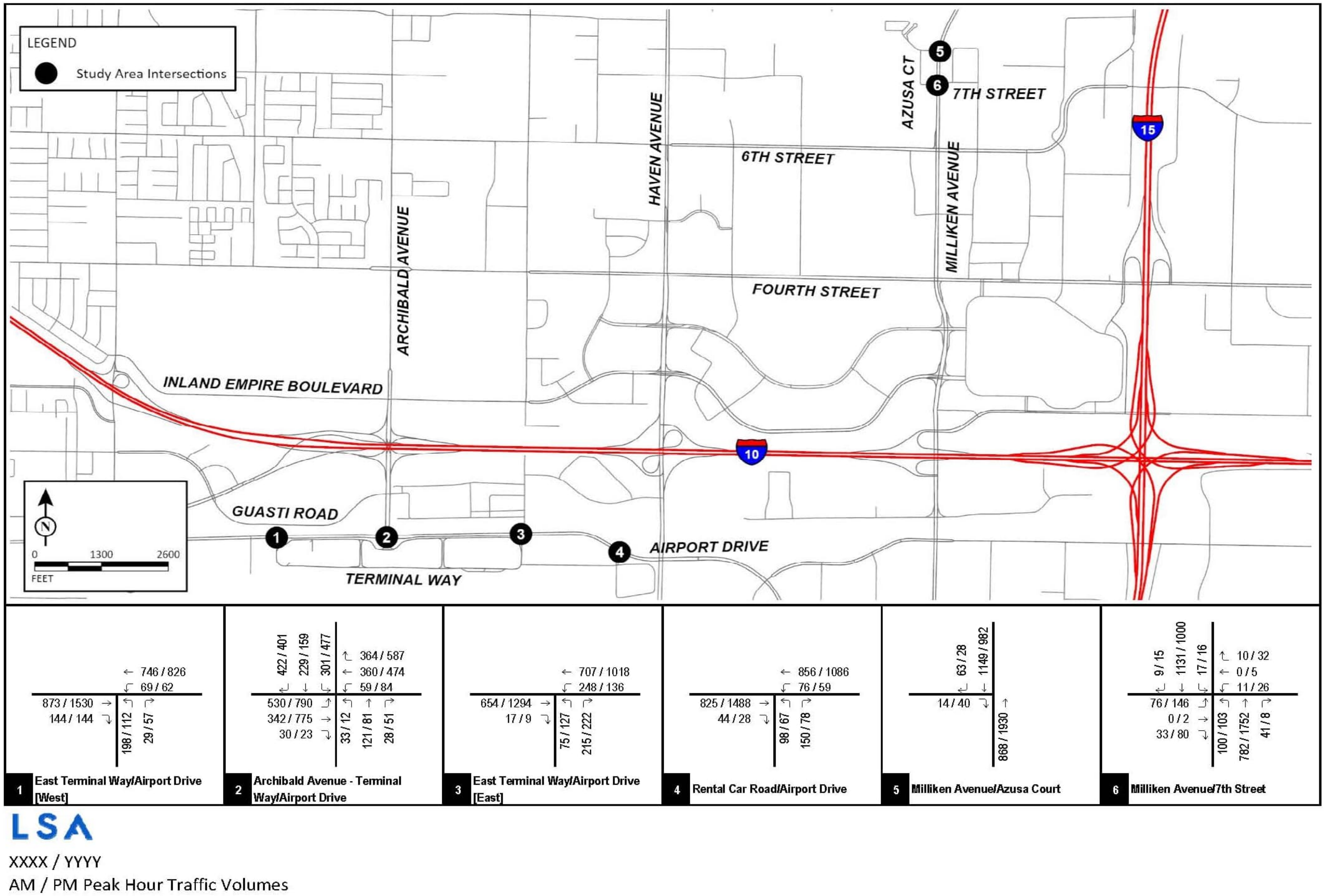
2. Archibald Avenue – Terminal Way/Airport Drive (p.m. peak hours)

Table 6-3: Opening Year (2031) No Build Intersection Levels of Service

					No Build				
					A.M. Peak Hour		P.M. Peak Hour		
	Intersection	Jurisdiction	LOS Standard	Control	Delay (sec.)	LOS	Delay (sec.)	LOS	Improvement Required?
1	East Terminal Way/ Airport Drive [West]	City of Ontario	E	Signal	36.2	D	56.9	E	No
2	Arch–bald Avenue - Terminal Way/ Airport Drive	City of Ontario	E	Signal	81.8	F*	>100	F*	Yes
3	East Terminal Way/ Airport Drive [East]	City of Ontario	E	Signal	32.8	C	27.0	C	No
4	Rental Car Road/ Airport Drive	City of Ontario	E	Signal	28.2	C	22.3	C	No
5	Milliken Avenue/ Azusa Court	City of Rancho Cucamonga	D	OWSC	14.6	B	14.2	B	No
6	Mill[ik]en Avenue/ 7th Street	City of Rancho Cucamonga	D	Signal	11.9	B	16.0	B	No

Notes:
OWSC = One-Way Stop Control; LOS = Level of Service
Delay = Average control delay in seconds (For OWSC/TWSC intersections, reported delay is for worst-case movement).
*Exceeds LOS Standard

Figure 6-1: Opening Year Peak-Hour Volumes at Study Intersections



7 DESIGN YEAR (2051) CONDITIONS

7.1 BUS AND RAIL TRANSIT SERVICE

As previously mentioned in Section 5.1, the proposed Project serves to improve public transit and provide an alternative for travel between ONT and the Cucamonga Metrolink Station. The Brightline West system is anticipated to be in operation at the existing Cucamonga Metrolink Station during the Design Year conditions. Brightline West is anticipated to provide a high-speed rail connection between Las Vegas, Nevada, and the City of Rancho Cucamonga, with a potential future expansion to downtown Los Angeles. Therefore, Brightline West is anticipated to provide an alternative mode to cars between Las Vegas and Southern California. The proposed Project would provide a direct connection to Brightline West, allowing for convenient transfers between ONT and the commuter/high-speed rail at the Cucamonga Metrolink Station.

7.2 DESIGN YEAR (2051) VMT

The Design Year of 2051 was established for the proposed Project (20 years from the Project opening). As with the Existing and Opening Year scenarios, 2051 data were not available from the SBTAM or the STOPS model. VMT estimates for 2051 included development of VMT for both No Build and Build conditions. Linear extrapolation using 2016 and 2040 data was utilized to calculate the 2051 regional VMT for No Build conditions. Methodology described in Section 4.2 and the 2051 ridership estimates were used to assess the 2051 Project VMT. Project VMT was subtracted from the regional No Build VMT to develop the 2051 regional VMT for Build conditions. Table 7-1 (Design Year (2051) Regional Vehicle Miles Traveled – No Build) shows the Design Year VMT for No Build conditions. Table 7-2 (Design Year (2051) Regional Vehicle Miles Traveled – No Build versus Build) shows the No Build and Build VMT for the Design Year.

Table 7-1: Design Year (2051) Regional Vehicle Miles Traveled – No Build

	2016	2040	2051 (Design Year)
Daily Regional VMT (from SBTAM)	330,113,226	403,851,886	437,648,772

Table 7-2: Design Year (2051) Regional Vehicle Miles Traveled – No Build versus Build

	2051 No-Build VMT	2051 Project VMT	2051 Build VMT
Daily VMT	437,648,772	(45,234)	437,603,538

7.3 VEHICULAR TRAFFIC AND DESIGN YEAR (2051) TRAFFIC VOLUMES

Figure 7-1 (Design Year Peak-Hour Volumes at Study Intersections) illustrates the Design Year peak-hour volumes at the study intersections. Detailed volume development worksheets are included in Appendix D.

7.4 DESIGN YEAR (2051) LEVELS OF SERVICE

Table 7-3 (Design Year (2051) No Build Intersection Levels of Service) summarizes the results of the LOS analysis for the study intersections. Detailed intersection LOS worksheets are included in Appendix F. All intersections are forecasted to operate at a satisfactory LOS except for the following:

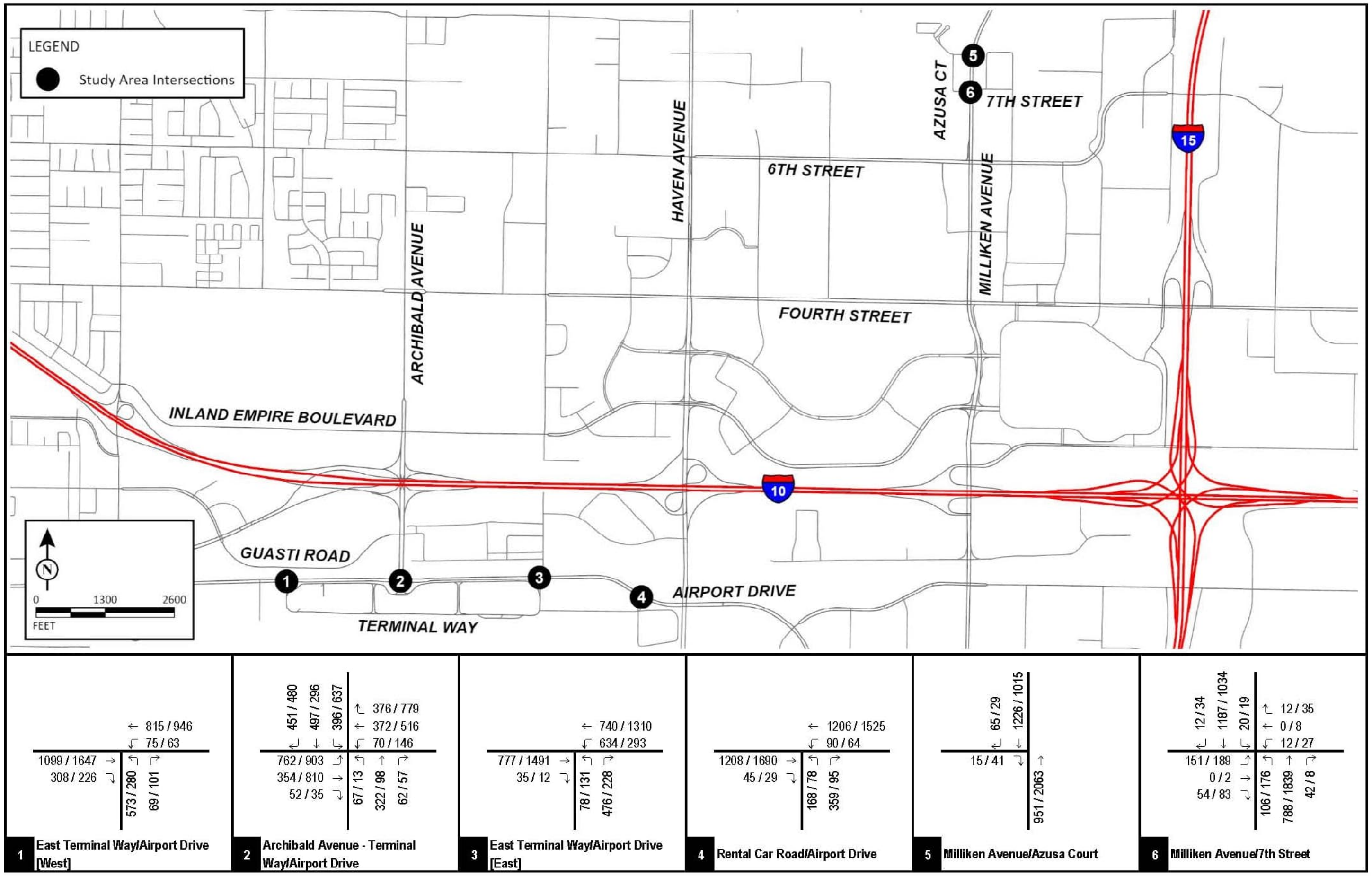
1. East Terminal Way/Airport Drive (West) (p.m. peak hour only);
2. Archibald Avenue – Terminal Way/Airport Drive (both a.m. and p.m. peak hours); and
3. East Terminal Way/Airport Drive (East) (a.m. peak hour only).

Table 7-3: Design Year (2051) No Build Intersection Levels of Service

					No Build						
					A.M. Peak Hour			P.M. Peak Hour			
	Intersection	Jurisdiction	LOS Standard	Control	Delay (sec.)	LOS		Delay (sec.)	LOS		Improvement Required?
1	East Terminal Way/ Airport Drive [West]	City of Ontario	E	Signal	40.5	D		81.9	F	*	Yes
2	Arch–bald Avenue - Terminal Way/ Airport Drive	City of Ontario	E	Signal	>100	F	*	>100	F	*	Yes
3	East Terminal Way/ Airport Drive [East]	City of Ontario	E	Signal	>100	F	*	30.8	C		Yes
4	Rental Car Road/ Airport Drive	City of Ontario	E	Signal	28.5	C		28.7	C		No
5	Milliken Avenue/ Azusa Court	City of Rancho Cucamonga	D	OWSC	15.2	C		14.5	B		No
6	Milliken Avenue/ 7th Street	City of Rancho Cucamonga	D	Signal	15.7	B		21.2	C		No

Notes:
OWSC = One-Way Stop Control; LOS = Level of Service
Delay = Average control delay in seconds (For OWSC/TWSC intersections, reported delay is for worst-case movement).
*Exceeds LOS Standard

Figure 7-1: Design Year Peak-Hour Volumes at Study Intersections



XXXX / YYYY
AM / PM Peak Hour Traffic Volumes

8 IMPACT EVALUATION

8.1 WOULD THE PROJECT CONFLICT WITH A PROGRAM PLAN, ORDINANCE OR POLICY ADDRESSING THE CIRCULATION SYSTEM, INCLUDING TRANSIT, ROADWAYS, BICYCLE, AND PEDESTRIAN FACILITIES

8.1.1 No Project Alternative

While the proposed Project would not be constructed under the No Project Alternative, the No Project includes planned expansion, improvement projects, and routine maintenance activities for the existing roadway system and transit facilities. Construction and operation of these projects may result in roadway impacts; however, these planned projects would be subject to separate environmental review and, in an effort to reduce construction-related effects, would be required to comply with existing regulations, similar to those listed in Section 3, Regulatory Setting. Therefore, under the No Project Alternative, construction and operation of these projects may result in conflicts with existing program plans, ordinances or policies addressing the circulation system, including transit, roadways, bicycle, and pedestrian facilities.

8.1.2 Proposed Project

8.1.2.1 Construction Impacts

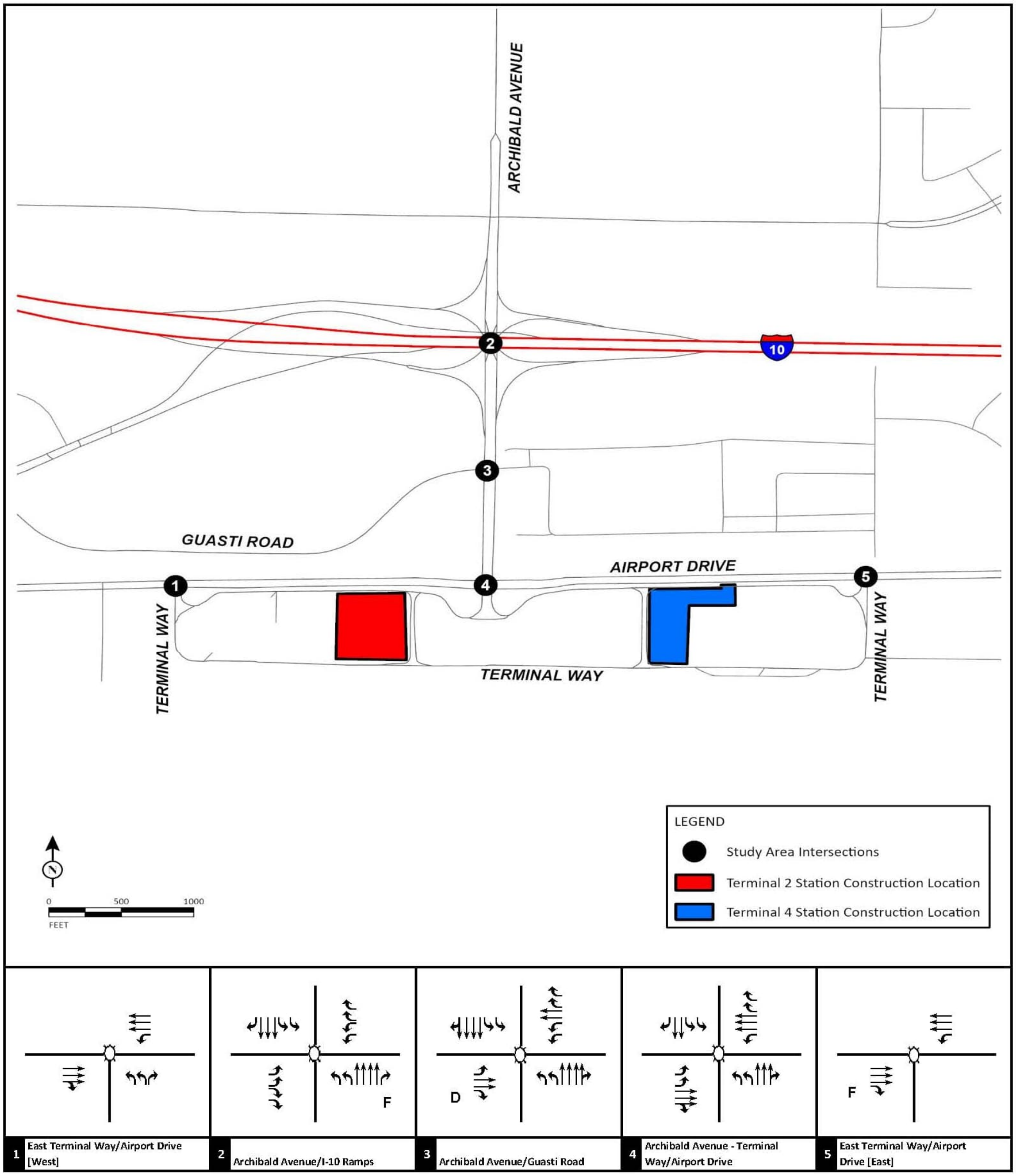
8.1.2.1.1 Vehicular Traffic and Year 2025 Traffic Volumes

Existing intersection counts were collected for the a.m. and p.m. peak hours at the study intersections in September 2022. Intersection volumes were collected during the a.m. and p.m. peak periods, from 7:00 to 9:00 a.m. and 4:00 to 6:00 p.m., respectively. Existing peak-hour volumes were developed based on the methodology outlined in Section 4.1.3.

As previously mentioned, the proposed Project's construction is planned to commence in the year 2025. As such, peak-hour traffic volumes for Year 2025 conditions were developed by applying a growth rate, based on SBTAM base (2019) and future year (2040) models, to existing intersection counts as described in the methodology outlined in Section 4.3.4.

Figure 8-1 (Existing Lane Geometries and Traffic Control at Study Intersections for Scenario 1) and Figure 8-2 (Existing Lane Geometries and Traffic Control at Study Intersections for Scenarios 2A and 2B) illustrate the existing lane geometries and traffic control at the study intersections for Scenario 1 and Scenarios 2A and 2B, respectively. Figure 8-3 (Existing Peak-Hour Turning Movement Volumes at Study Intersections for Scenario 1) and Figure 8-4 (Existing Peak-Hour Turning Movement Volumes at Study Intersections for Scenarios 2A and 2B) illustrate the existing peak-hour volumes at the study intersections for Scenario 1 and Scenarios 2A and 2B, respectively. Detailed count sheets are included in Appendix C. Detailed volume development worksheets are included in Appendix D.

Figure 8-1: Existing Lane Geometries and Traffic Control at Study Intersections for Scenario 1



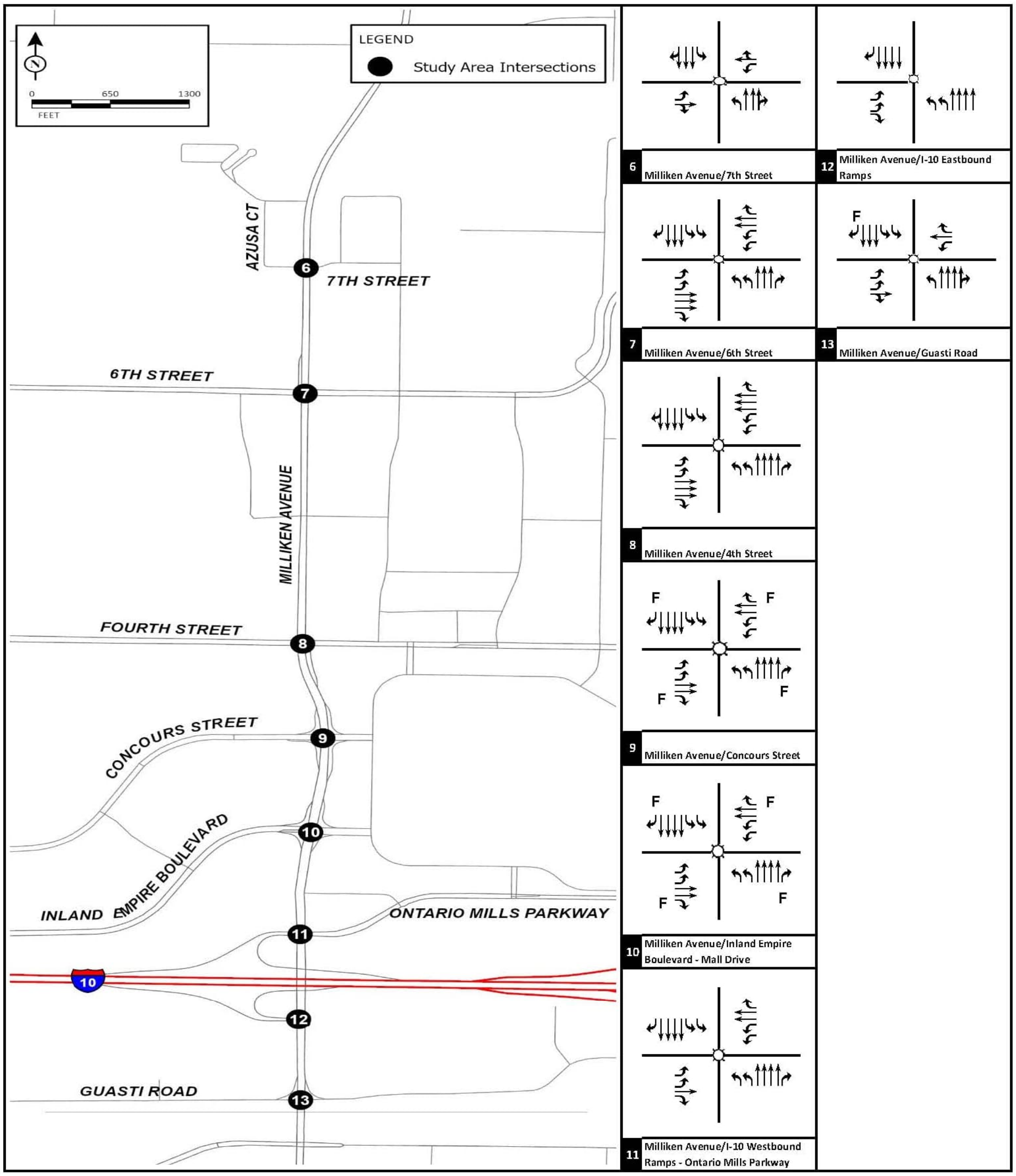
Legend

D De-Facto Right Turn

F Free Right Turn

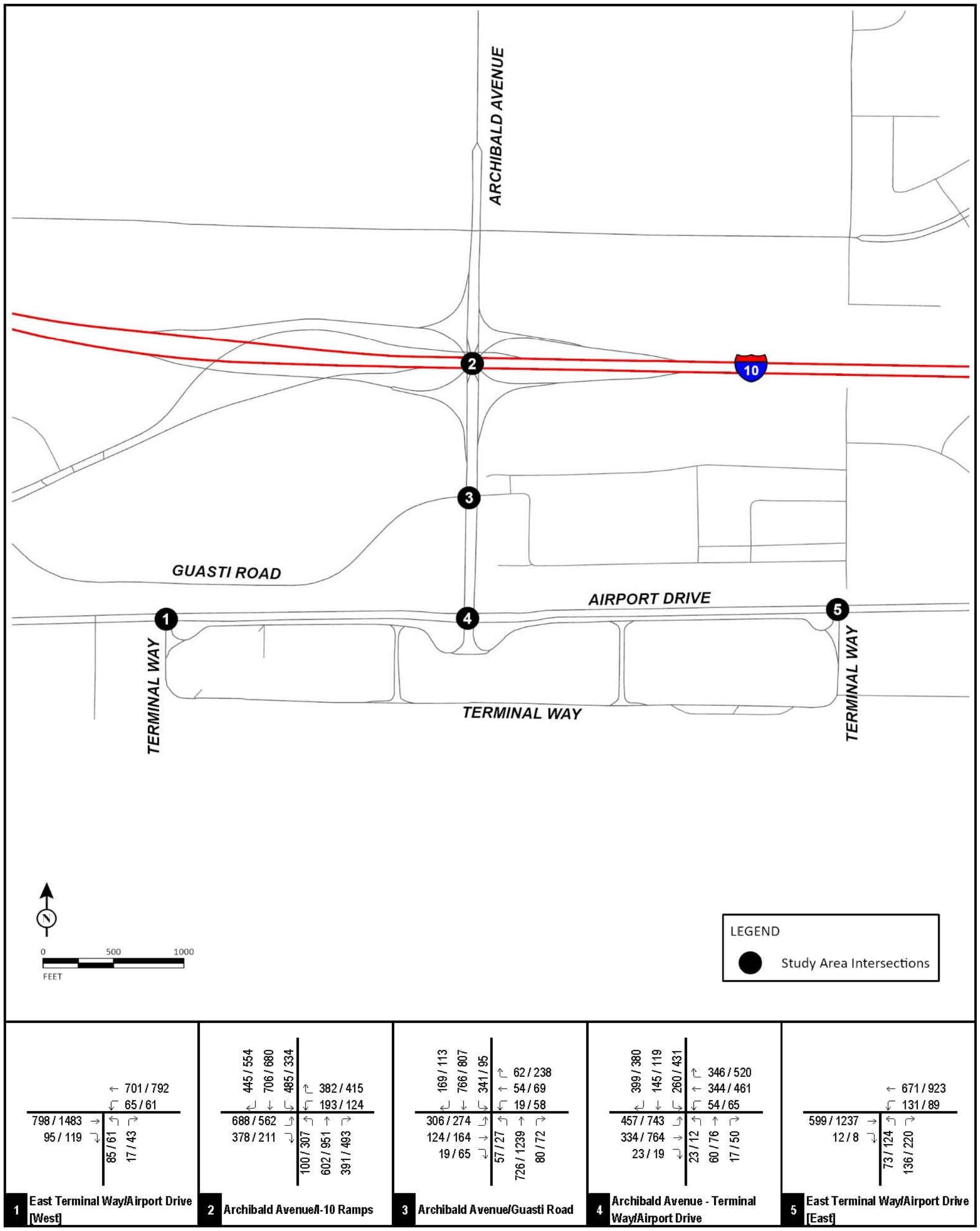
Signal

Figure 8-2: Existing Lane Geometries and Traffic Control at Study Intersections for Scenarios 2A and 2B



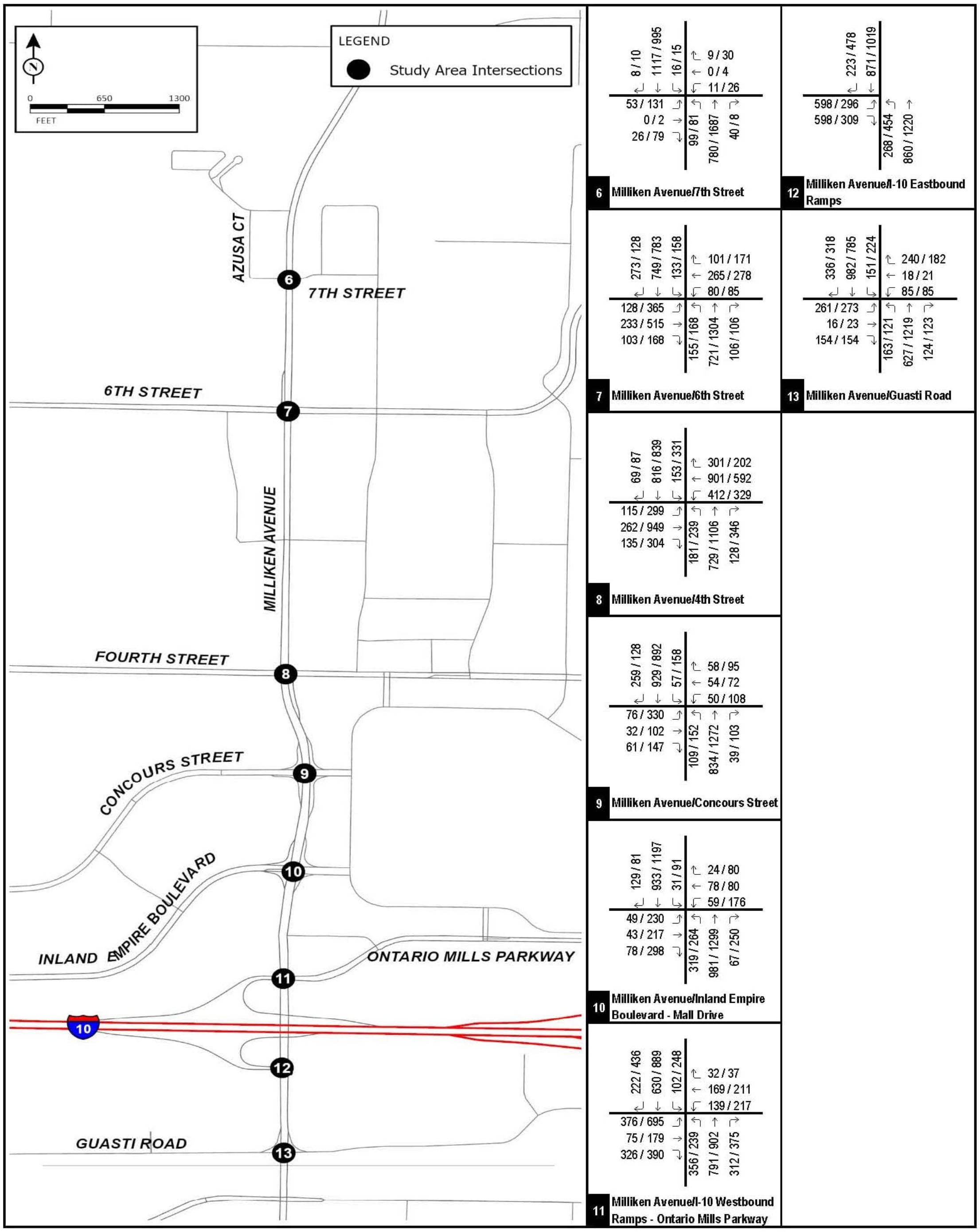
Legend
Signal
-- Driveway
F Free Right Turn

Figure 8-3: Existing Peak-Hour Turning Movement Volumes at Study Intersections for Scenario 1



XXX / YYY
AM / PM Peak Hour Trips
---- Driveway

Figure 8-4: Existing Peak-Hour Turning Movement Volumes at Study Intersections for Scenarios 2A and 2B



XXXX / YYYY
AM / PM Peak Hour Trips
---- Driveway

8.1.2.1.2 Year 2025 Levels of Service

The LOS analysis was conducted based on the methodology outlined in Section 4.3.3 using the Synchro 11 software. Table 8-1 (Year 2025 Construction Traffic Analysis Intersection Levels of Service) summarizes the LOS analysis at all study intersections in existing conditions for Scenario 1 and Scenarios 2A and 2B, respectively. Detailed intersection LOS worksheets are included in Appendix F. All intersections are currently operating at a satisfactory LOS, except for the following:

4. Archibald Avenue – Terminal Way/Airport Drive (p.m. peak hour only); and
8. Milliken Avenue/4th Street (a.m. and p.m. peak hours).

8.1.2.1.3 Construction Traffic

As the proposed Project is built, construction traffic would access the staging areas located at ONT Terminals 2 and 4, the Cucamonga Station, and at either vent shaft design option 2 or vent shaft design option 4. Trip generation for the construction traffic analysis was based on the methodology outlined in Section 4.3.5. Previously referenced Table 4-(Construction Traffic Analysis Trip Generation) summarizes the construction traffic trip generation.

Construction traffic occurs in two scenarios based on the methodology documented in Section 4.3.1 and Section 4.3.2. Scenario 1 consists of construction occurring at the staging areas of ONT Terminals 2 and 4. Scenarios 2A and 2B consists of construction occurring at the staging areas of the Cucamonga Station and vent shaft design option 2 or vent shaft design option 4 locations.

8.1.2.1.4 Construction Analysis – Scenario 1 Conditions

Figure 8-5 (Construction Traffic Distribution for Terminal 2) illustrates the construction traffic distribution for ONT Terminal 2. Figure 8-6 (Construction Traffic Distribution for Terminal 4) illustrates the construction traffic distribution for ONT Terminal 4. The construction traffic assignment is the product of the corresponding trip generation and trip distribution. Figure 8-7 (Construction Traffic Trip Assignment for Staging Areas at Terminal 2) illustrates the construction traffic trip assignment for the staging areas at Terminal 2.

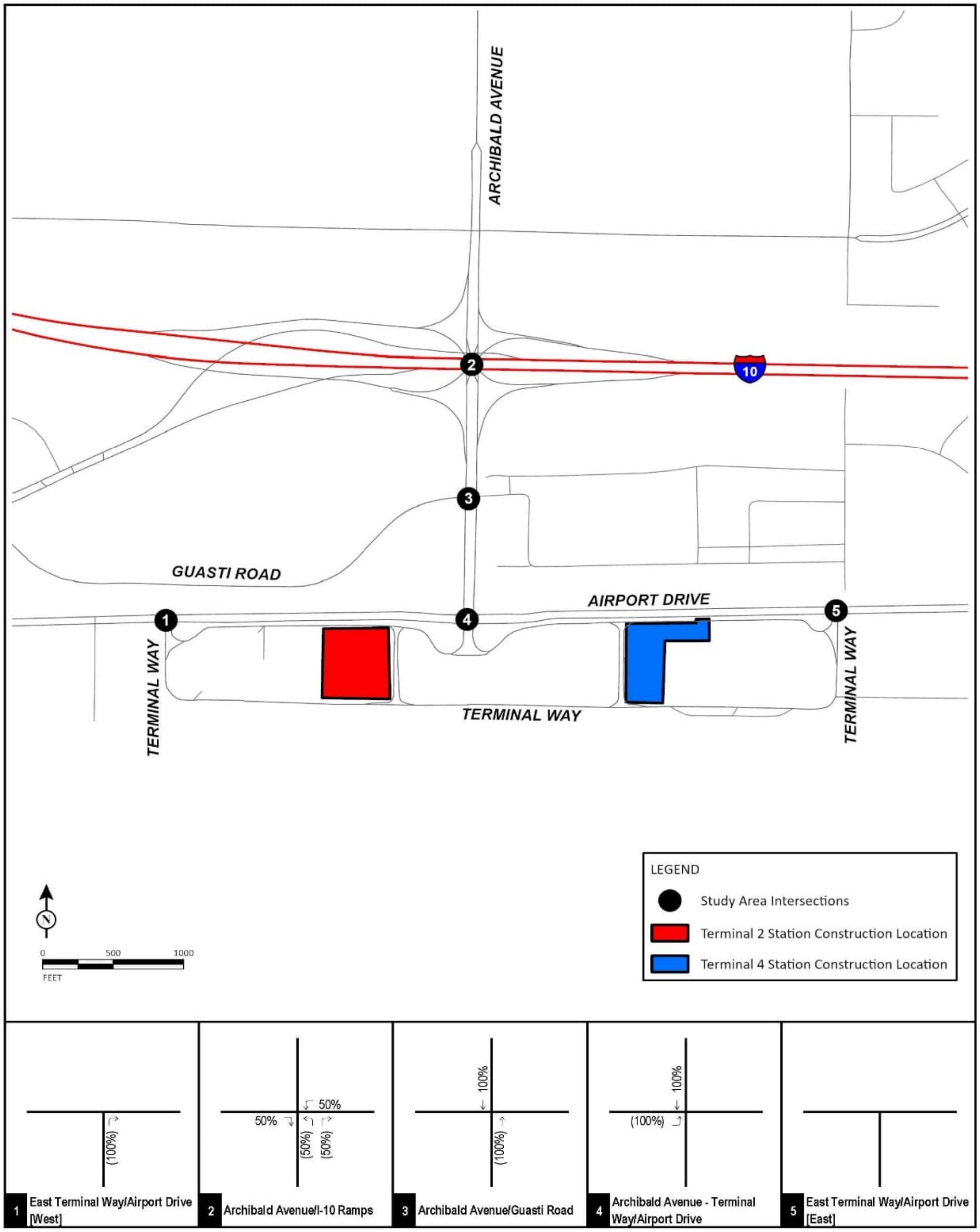
Figure 8-8 (Construction Traffic Trip Assignment for Staging Areas at Terminal 4) illustrates the construction traffic trip assignment for the staging areas at Terminal 4. Figure 8-9 (Net Construction Related Traffic of Ontario International Airport Terminal 2 and Terminal 4 Trip Assignment for Scenario 1) illustrates the net construction traffic trip assignment for Scenario 1.

Table 8-1: Year 2025 Construction Traffic Analysis Intersection Levels of Service

	Intersection	Jurisdiction	LOS Standard	Control	No Build A.M. Peak Hour Delay (sec.)	No Build A.M. Peak Hour LOS		No Build P.M. Peak Hour Delay (sec.)	No Build P.M. Peak Hour LOS		Exceeds LOS Standard
1	East Terminal Way/Airport Drive [West]	City of Ontario	E	Signal	35.1	D		49.7	D		No
2	Archibald Avenue/I-10 Ramps	Caltrans	D	Signal	39.1	D		32.4	C		No
3	Archibald Avenue/Guasti Road	City of Ontario	E	Signal	51.4	D		42.3	D		No
4	Archibald Avenue - Terminal Way/Airport Drive	City of Ontario	E	Signal	67.9	E		>100	F	*	Yes
5	East Terminal Way/Airport Drive [East]	City of Ontario	E	Signal	26.5	C		22.8	C		No
6	Milliken Avenue/7th Street	City of Rancho Cucamonga	D	Signal	10.6	B		13.9	B		No
7	Milliken Avenue/6th Street	City of Rancho Cucamonga	D	Signal	27.3	C		39.2	D		No
8	Milliken Avenue/4th Street	City of Ontario/ City of Rancho Cucamonga	D	Signal	56.1	E	*	58.9	E	*	Yes
9	Milliken Avenue/Concours Street	City of Ontario	E	Signal	21.3	C		34.4	C		No
10	Milliken Avenue/Inland Empire Boulevard - Mall Drive	City of Ontario	E	Signal	27.0	C		33.3	C		No
11	Milliken Avenue/I-10 Westbound Ramps - Ontario Mills Parkway	Caltrans	D	Signal	41.1	D		44.4	D		No
12	Milliken Avenue/I-10 Eastbound Ramps	Caltrans	D	Signal	26.7	C		24.1	C		No
13	Milliken Avenue/Guasti Road	City of Ontario	E	Signal	50.3	D		46.7	D		No

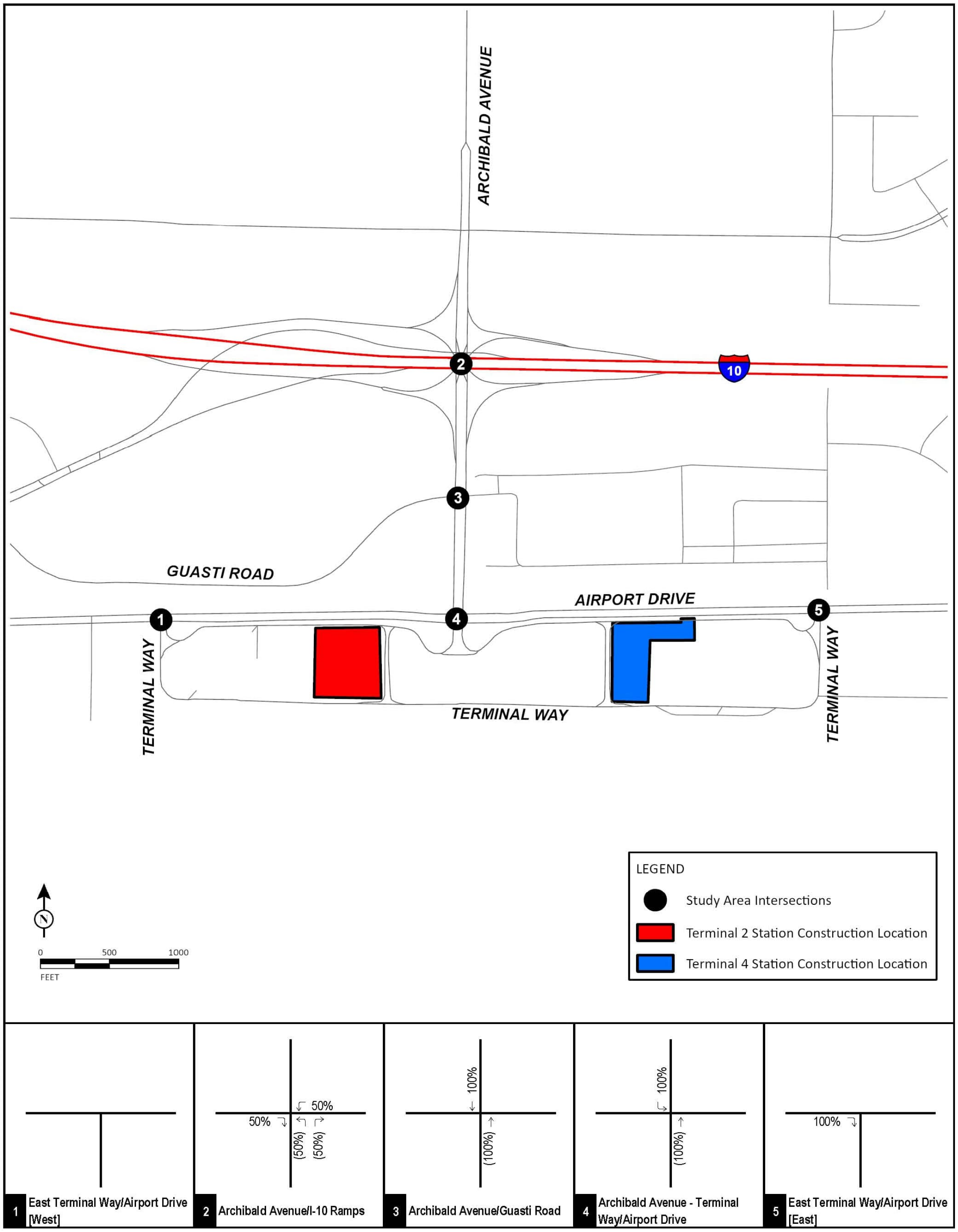
Notes:
LOS = Level of Service
Delay = Average control delay in seconds (For OWSC/TWSC intersections, reported delay is for worst-case movement).
*Exceeds LOS Standard

Figure 8-5: Construction Traffic Distribution for Terminal 2



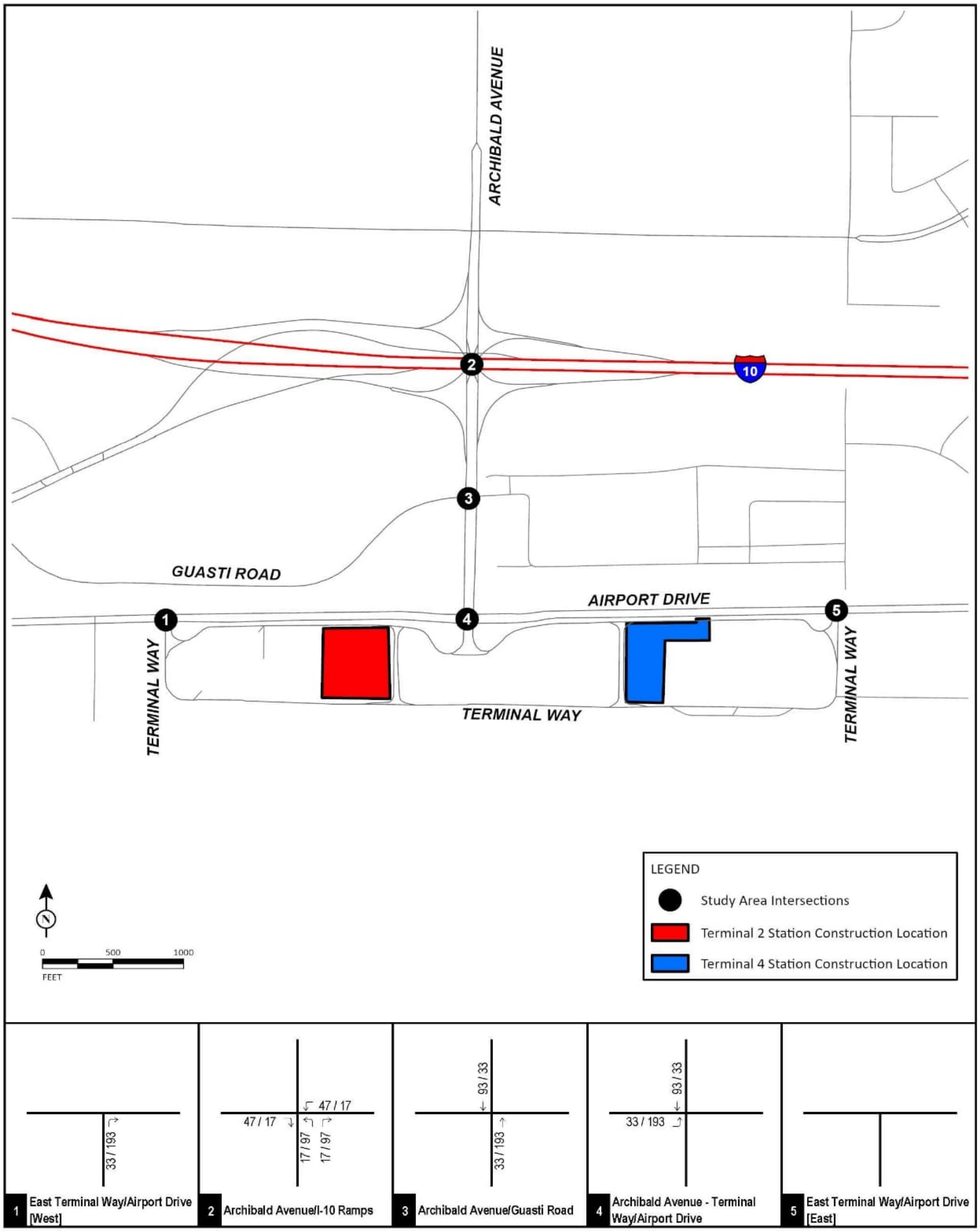
XXX% (YYY%)
Inbound (Outbound) Trip Distribution

Figure 8-6: Construction Traffic Distribution for Terminal 4



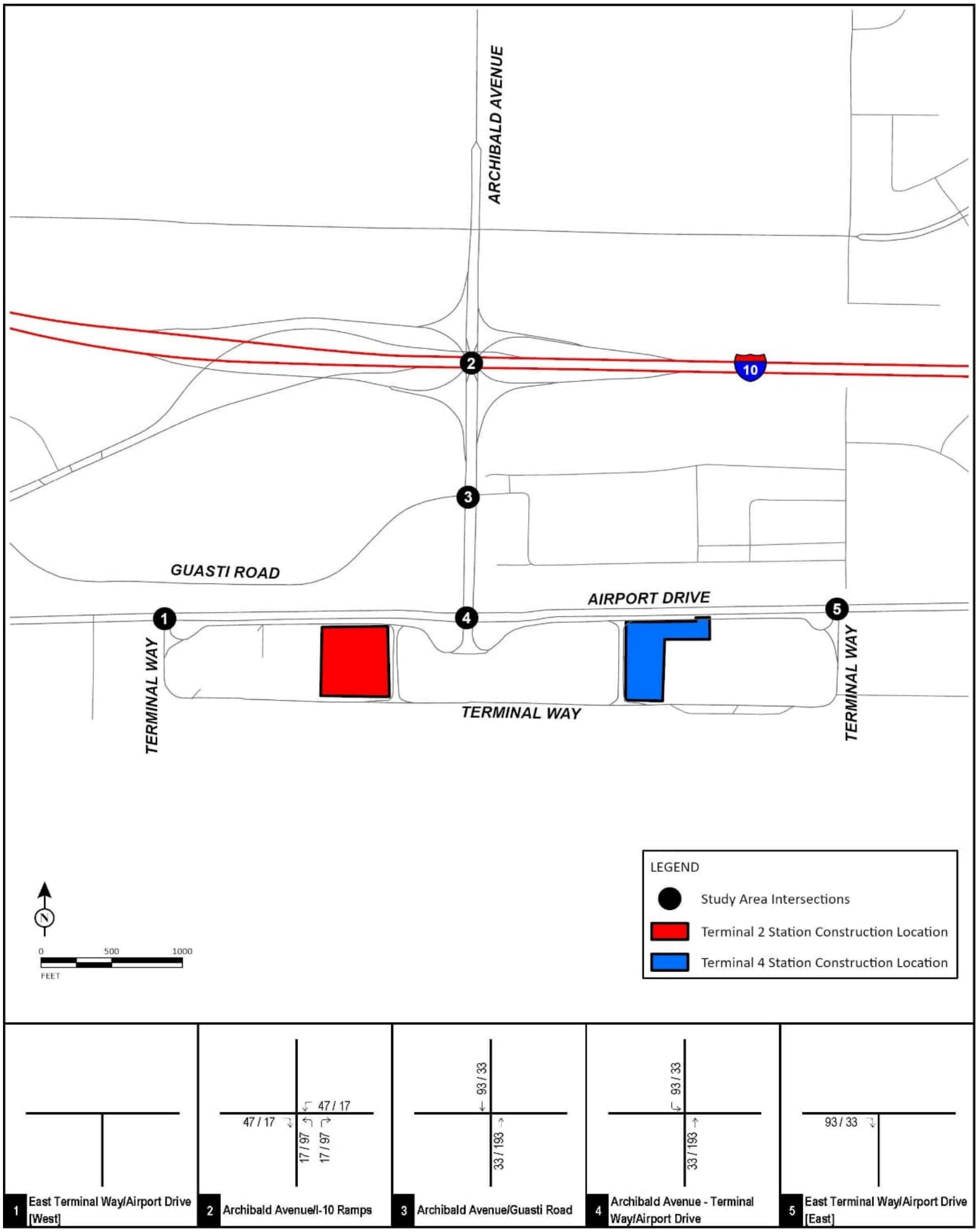
XXX% (YYY%)
Inbound (Outbound) Trip Distribution

Figure 8-7: Construction Traffic Trip Assignment for Staging Areas at Terminal 2



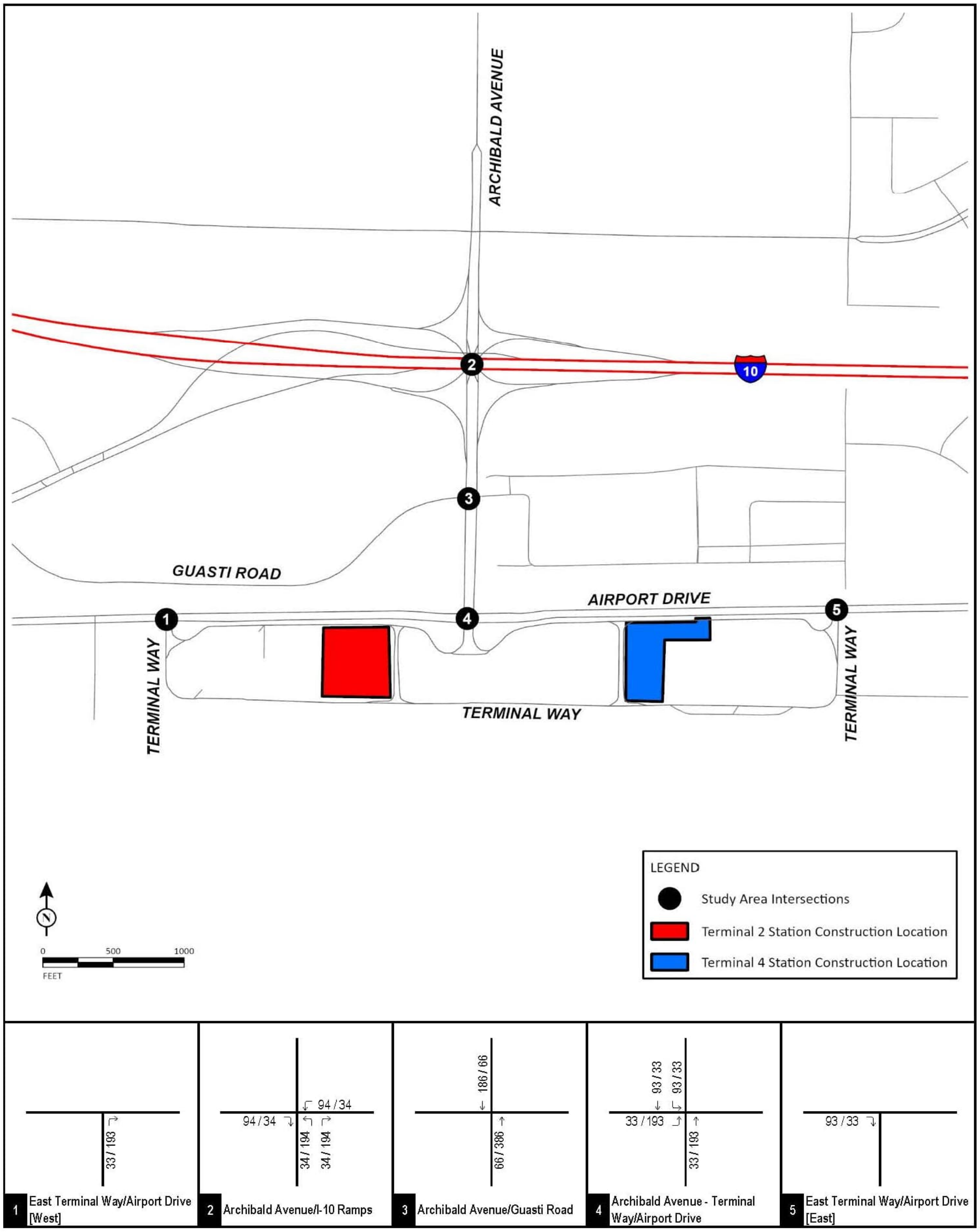
XXX / YYY
AM / PM Peak Hour Trips

Figure 8-8: Construction Traffic Trip Assignment for Staging Areas at Terminal 4



XXX / YYY
AM / PM Peak Hour Trips

Figure 8-9: Net Construction Related Traffic of Ontario International Airport Terminal 2 and Terminal 4 Trip Assignment for Scenario 1



XXX / YYY
AM / PM Peak Hour Trips
---- Driveway

Year 2025 with Scenario 1 construction traffic volumes were developed by adding the Scenario 1 construction traffic trip assignment to Year 2025 peak-hour traffic volumes at study intersections. Figure 8-10 (Year 2025 with Scenario 1 Construction Traffic Peak-Hour Turning Movement Volumes at Study Intersections) illustrates the existing with Scenario 1 construction traffic peak-hour volumes at the study intersections. Detailed volume development worksheets are included in Appendix D.

An intersection LOS analysis was conducted for Year 2025 with construction Scenario 1 conditions based on the methodology outlined in Section 4.3.3. Table 8-2 (Construction Traffic Scenario 1 Intersection Levels of Service) summarizes the results of the LOS analysis for the study intersections affected by construction traffic for Scenario 1. Detailed intersection LOS worksheets are included in Appendix F. All intersections are forecasted to operate at a satisfactory LOS under Year 2025 with Scenario 1 construction conditions except for the following:

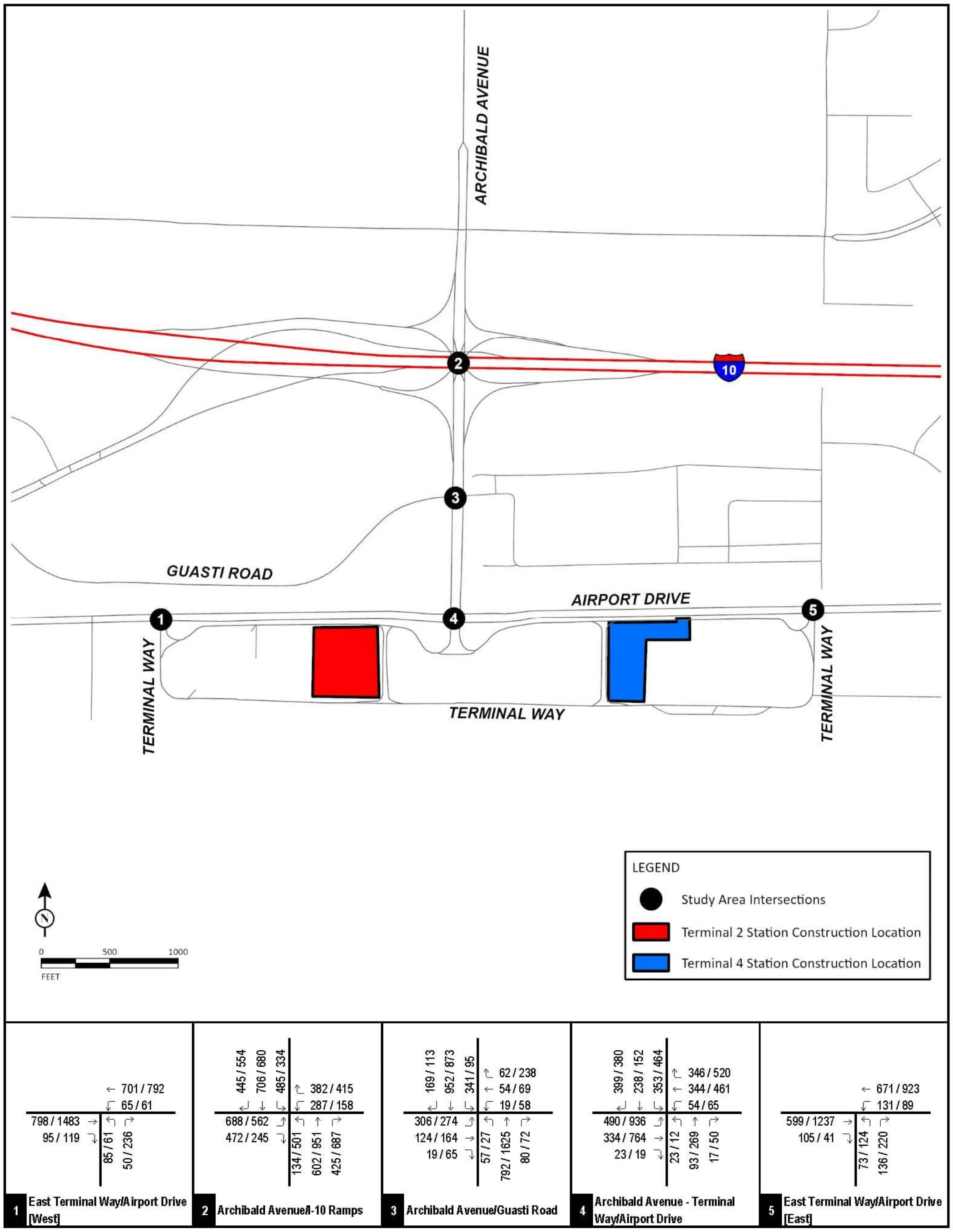
4. Archibald Avenue – Terminal Way/Airport Drive (p.m. peak hour only).

It should be noted that the intersection of Archibald Avenue – Terminal Way/Airport Drive is forecasted to operate at a deficient LOS even under Year 2025 conditions, and that increases in delay are temporary for the duration of the construction phase.

8.1.2.1.5 Construction Analysis – Scenarios 2A and 2B Conditions

Figure 8-11 (Construction Traffic Distribution for Cucamonga Station) illustrates the construction traffic distribution for the proposed Cucamonga Station. Figure 8-12 (Construction Traffic Distribution for Tunnel Vent Shaft Design Option 2 – Passenger Vehicles) illustrates the Scenario 2A construction traffic distribution for passenger vehicles for Tunnel vent shaft design option 2. Figure 8-13 (Construction Traffic Distribution for Tunnel Vent Shaft Design Option 2 – Haul Trucks) illustrates the Scenario 2A construction traffic distribution for haul trucks for tunnel vent shaft design option 2. Figure 8-14 (Construction Traffic Distribution for Tunnel Vent Shaft Design Option 4 –Passenger Vehicles) illustrates the Scenario 2B construction traffic distribution for passenger vehicles for tunnel vent shaft design option 4. Figure 8-15: Construction Traffic Distribution for Tunnel Vent Shaft Design Option 4 – Haul Trucks) illustrates the Scenario 2B construction traffic distribution for haul trucks for tunnel vent shaft design option 4.

Figure 8-10: Year 2025 with Scenario 1 Construction Traffic Peak-Hour Turning Movement Volumes at Study Intersections



XXX / YYY
AM / PM Peak Hour Trips
---- Driveway

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Table 8-2: Construction Traffic Scenario 1 Intersection Levels of Service

					No Build							Construction Scenario 1						A.M. Peak Hour	P.M. Peak Hour	
					A.M. Peak Hour			P.M. Peak Hour				A.M. Peak Hour			P.M. Peak Hour			Increase in	Increase in	Exceeds
	Intersection	Jurisdiction	LOS Standard	Control	Delay (sec.)	LOS		Delay (sec.)	LOS		Control	Delay (sec.)	LOS		Delay (sec.)	LOS		Delay (sec.)	Delay (sec.)	LOS Standard
1	East Terminal Way/Airport Drive [West]	City of Ontario	E	Signal	35.1	D		49.7	D		Signal	35.4	D		52.6	D		0.3	2.9	No
2	Archibald Avenue/I-10 Ramps	Caltrans	D	Signal	39.1	D		32.4	C		Signal	39.3	D		32.6	C		0.2	0.2	No
3	Archibald Avenue/Guasti Road	City of Ontario	E	Signal	51.4	D		42.3	D		Signal	52.9	D		43.4	D		1.5	1.1	No
4	Archibald Avenue - Terminal Way/Airport Drive	City of Ontario	E	Signal	67.9	E		>100	F	*	Signal	74.1	E		>100	F	*	6.2	57.2	Yes
5	East Terminal Way/Airport Drive [East]	City of Ontario	E	Signal	26.5	C		22.8	C		Signal	26.5	C		22.8	C		0.0	0.0	No

Notes:
LOS = Level of Service
Delay = Average control delay in seconds (For OWSC/TWSC intersections, reported delay is for worst-case movement).
*Exceeds LOS Standard

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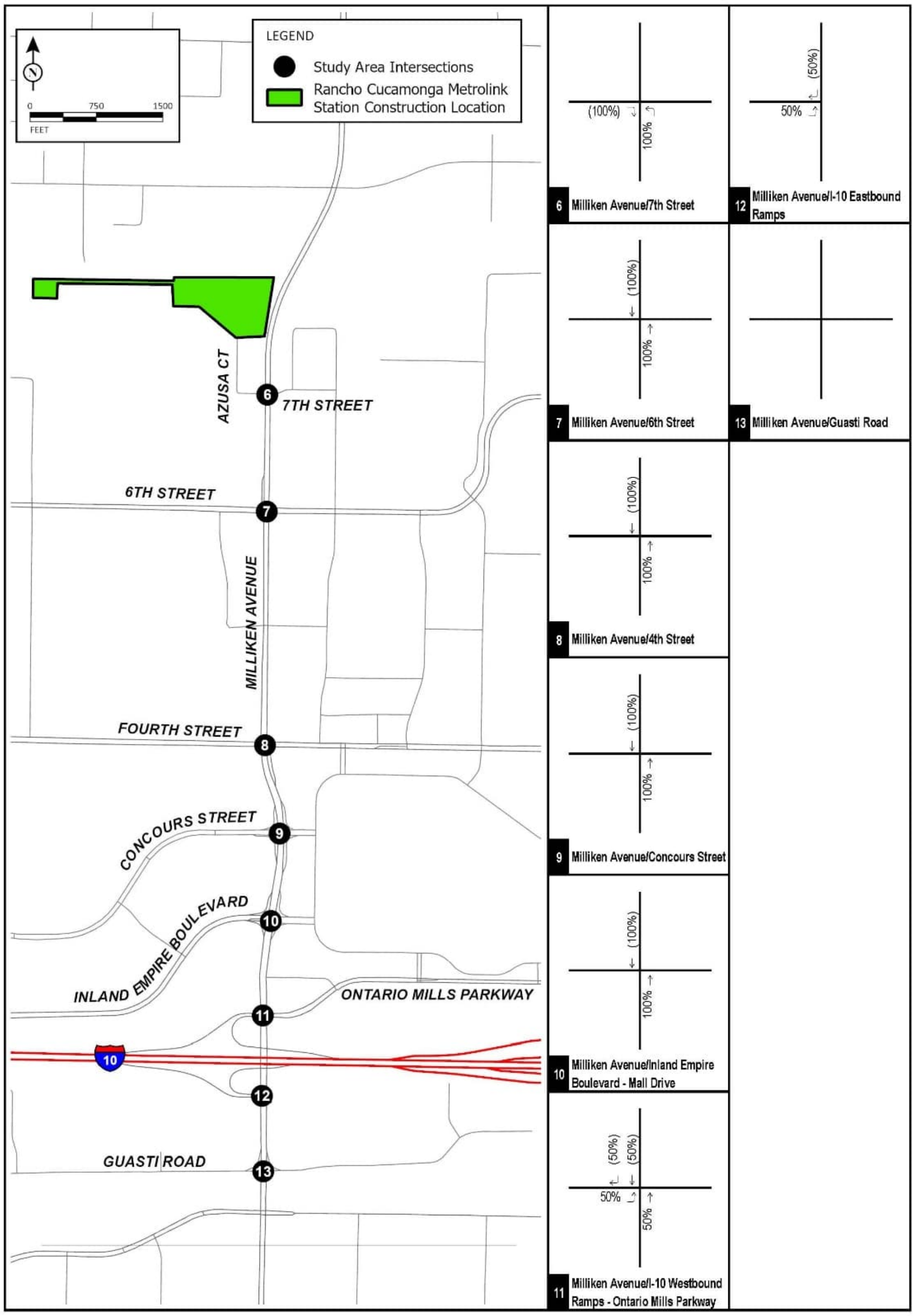
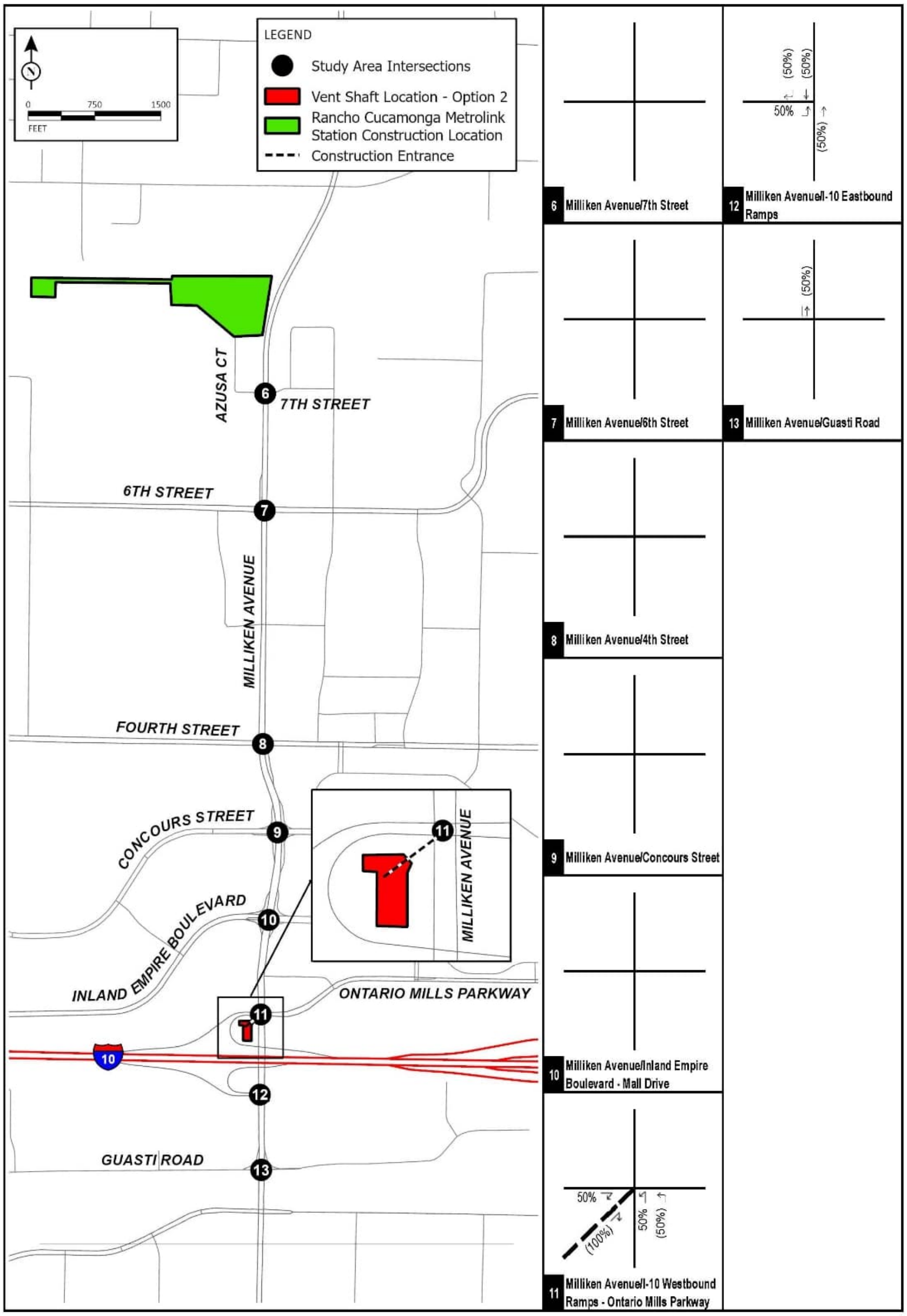
Figure 8-11: Construction Traffic Distribution for Cucamonga Station



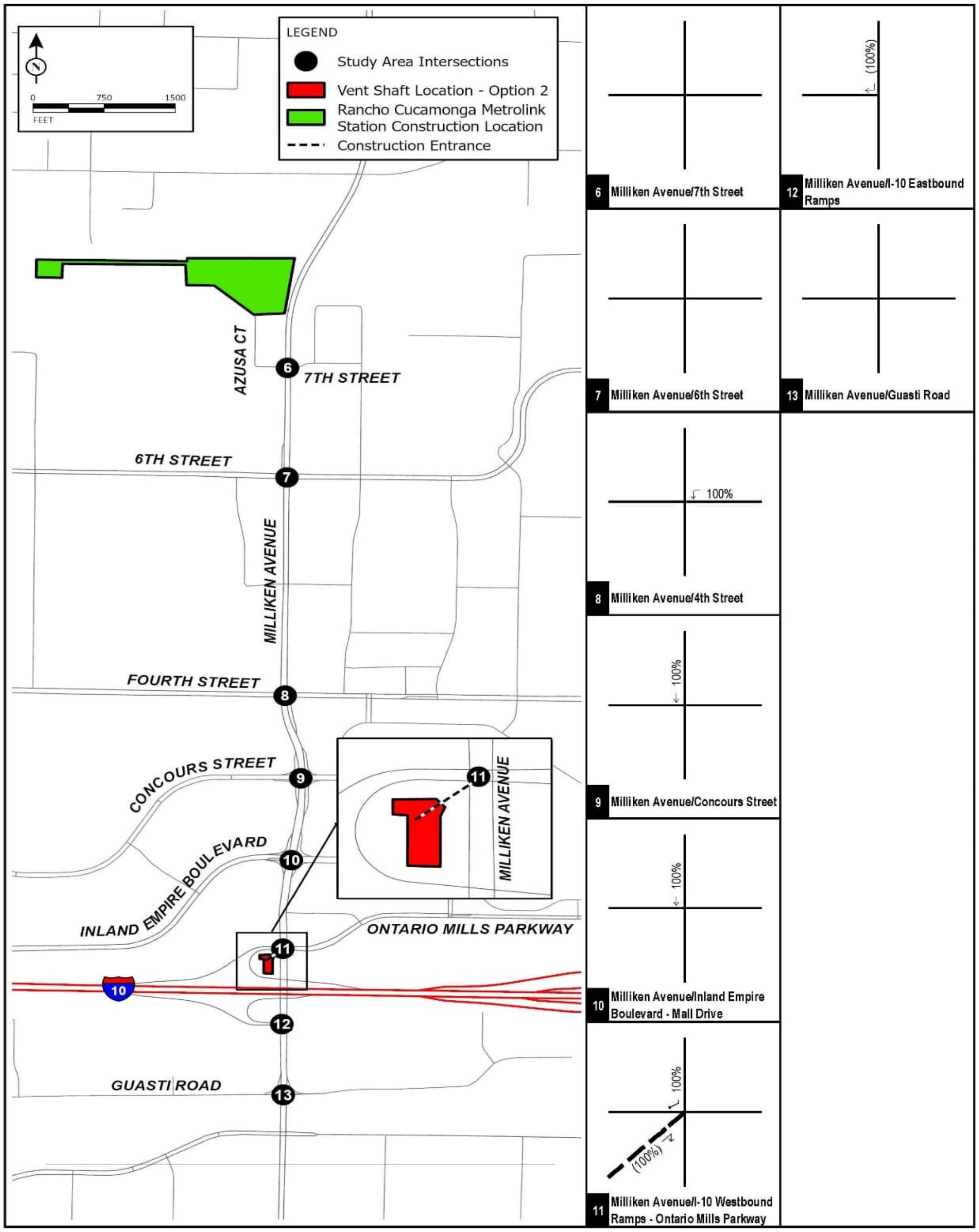
XXX% (YYY%)
Inbound (Outbound) Trip Distribution
---- Driveway

Figure 8-12: Construction Traffic Distribution for Tunnel Vent Shaft Design Option 2 – Passenger Vehicles



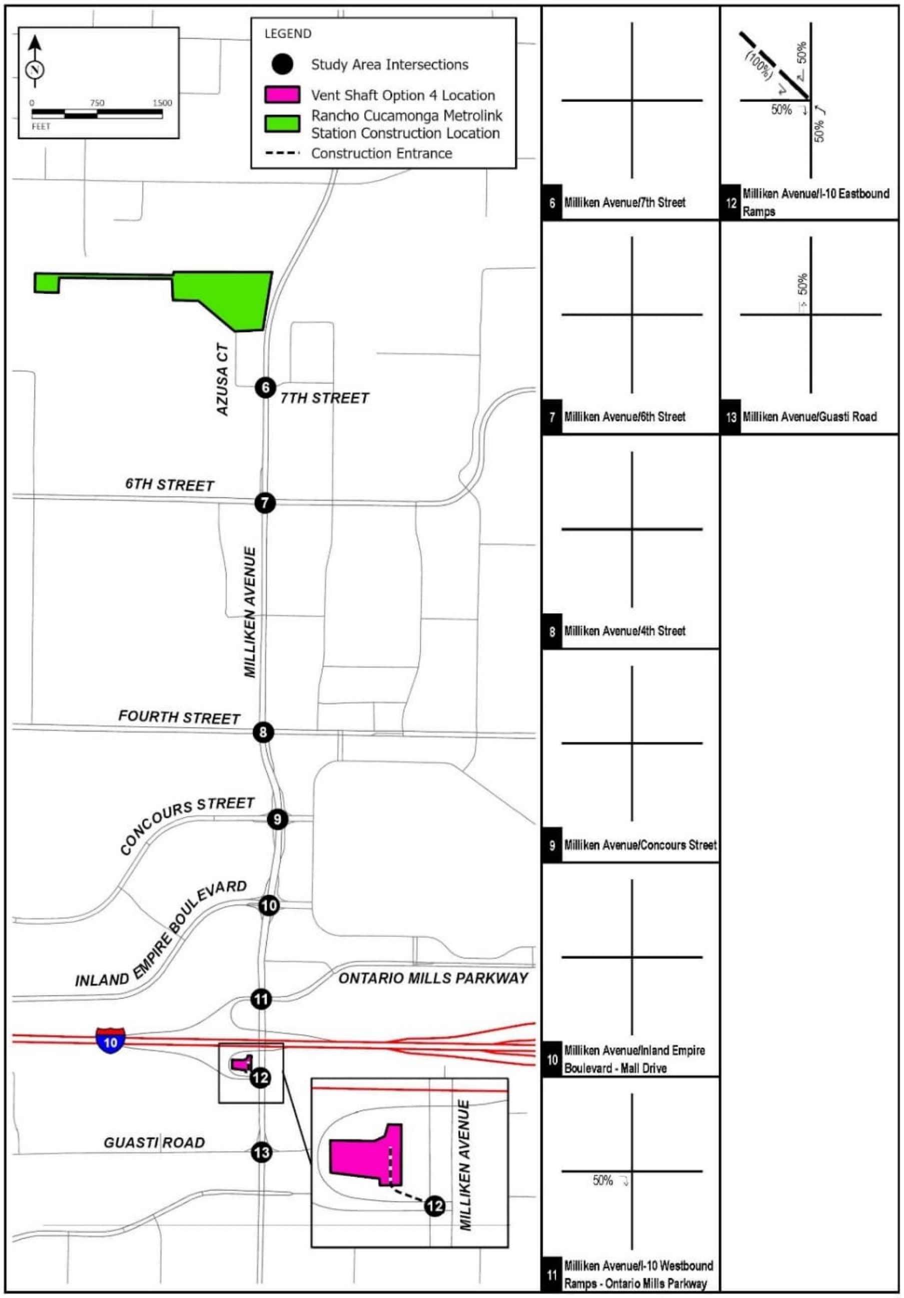
XXX% (YYY%)
Inbound (Outbound) Trip Distribution
---- Construction Entrance

Figure 8-13: Construction Traffic Distribution for Tunnel Vent Shaft Design Option 2 – Haul Trucks



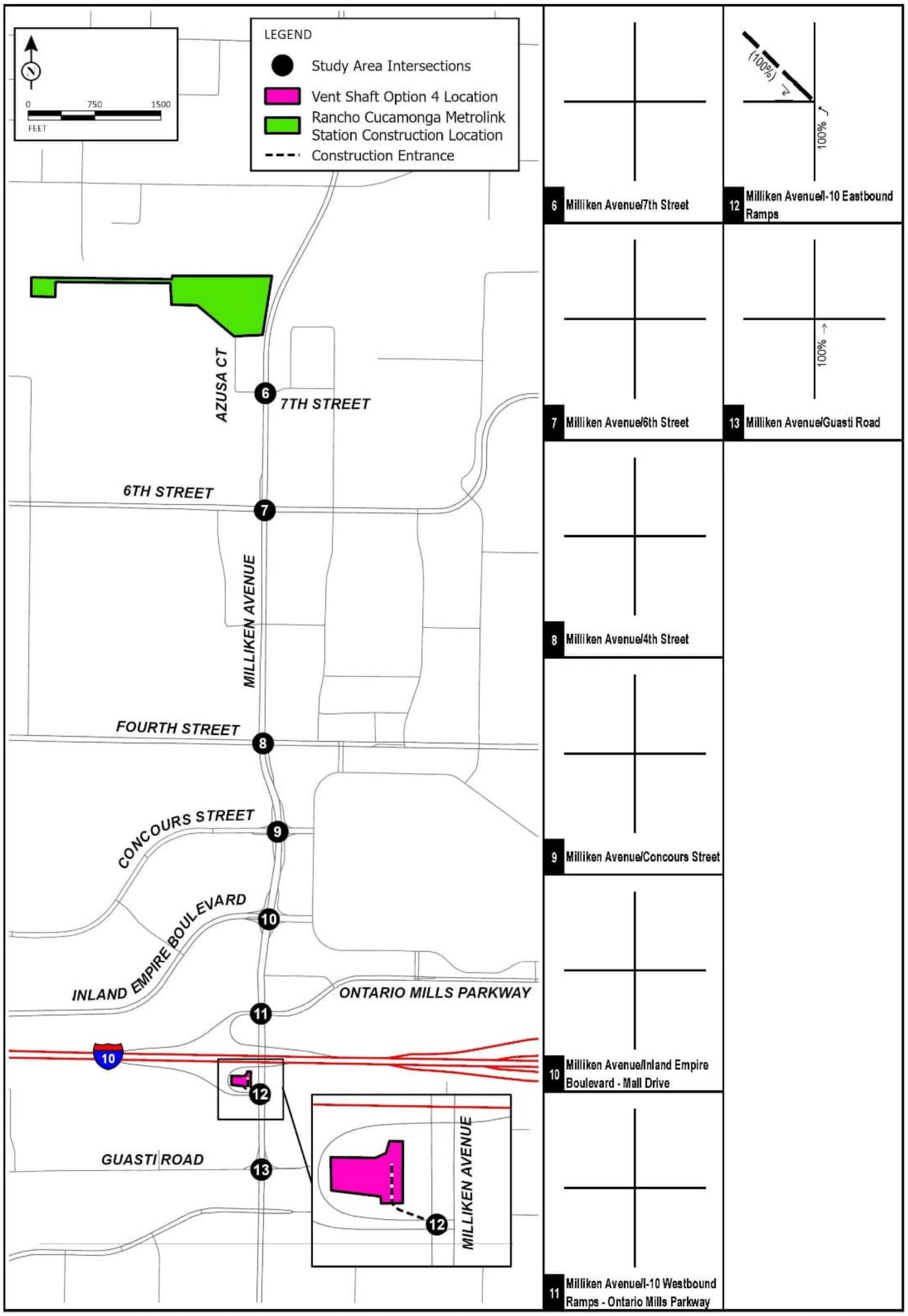
XXX% (YYY%)
Inbound (Outbound) Trip Distribution
---- Construction Entrance

Figure 8-14: Construction Traffic Distribution for
Tunnel Vent Shaft Design Option 4 –Passenger Vehicles



XXX% (YYY%)
Inbound (Outbound) Trip Distribution
Construction Entrance

Figure 8-15: Construction Traffic Distribution for Tunnel Vent Shaft Design Option 4 – Haul Trucks



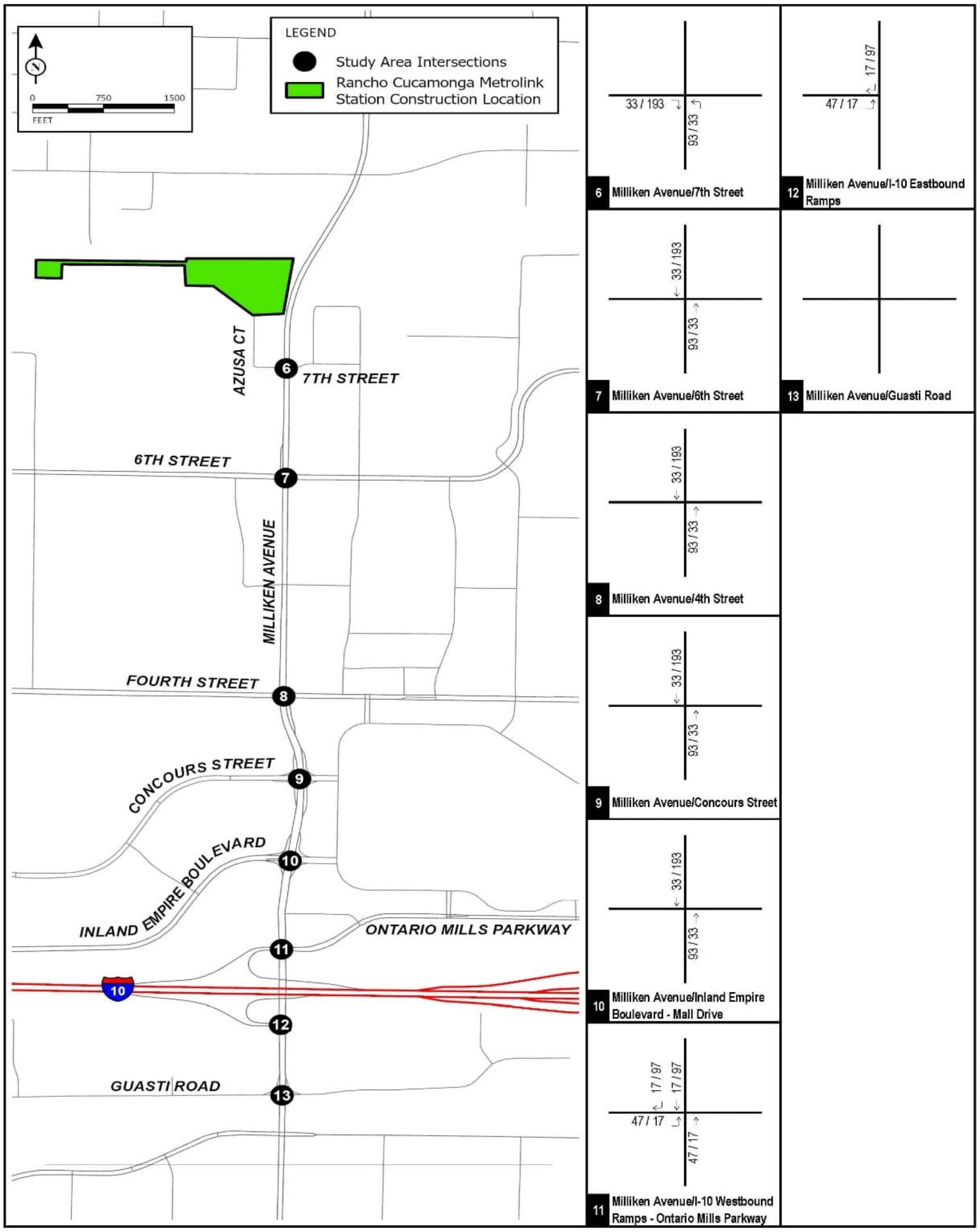
XXX% (YYY%)
Inbound (Outbound) Trip Distribution
---- Construction Entrance

The construction traffic assignment is the product of the corresponding trip generation and trip distribution percentages. Figure 8-16 (Construction Trip Assignment for Cucamonga Station) illustrates the construction trip assignment for the Cucamonga Station. Figure 8-17 (Construction Trip Assignment for Tunnel Vent Shaft Design Option 2 – Passenger Vehicles) illustrates the Scenario 2A construction trip assignment for passenger vehicles for tunnel vent shaft design option 2. Figure 8-18 (Construction Trip Assignment for Tunnel Vent Shaft Design Option 2 – Haul Trucks) illustrates the Scenario 2A construction trip assignment for haul trucks for tunnel vent shaft design option 2. Figure 8-19 (Construction Trip Assignment for Tunnel Vent Shaft Design Option 4 – Passenger Vehicles) illustrates the Scenario 2B construction trip assignment for passenger vehicles for tunnel vent shaft design option 4. Figure 8-20 (Construction Trip Assignment for Tunnel Vent Shaft Design Option 4 – Haul Trucks) illustrates the Scenario 2B construction trip assignment for haul trucks for tunnel vent shaft design option 4. Figure 8-21 (Total Construction-related Traffic Trip Assignment for Scenario 2A with Tunnel Vent Shaft Design Option 2) illustrates the net construction-related traffic trip assignment for Scenario 2A with the tunnel vent shaft design option 2. Figure 8-22 (Total Construction-related Traffic Trip Assignment for Scenario 2B with Tunnel Vent Shaft Design Option 4) illustrates the net construction-related traffic trip assignment for Scenario 2B with the tunnel vent shaft design option 4.

It should be noted that the construction staging area access points for both tunnel shaft vent options are located at existing intersections but do not have conventional access points for public use. The construction staging area entrance for tunnel vent shaft design option 2 is located at the southwest corner of the intersection of Milliken Avenue/I-10 Westbound Ramps – Ontario Mills Parkway. As described in Section 2.2.3, haul trucks would access the staging area by traveling southbound on Milliken Avenue, then turning bear-right at this intersection. Construction employees and staff are assumed to arrive by passenger vehicles and would access the staging area either by turning hard-right off the I-10 westbound off-ramp or by turning hard-left when traveling northbound on Milliken Avenue at this intersection. Haul trucks and passenger vehicles would exit the staging area by turning hard-right on Milliken Avenue.

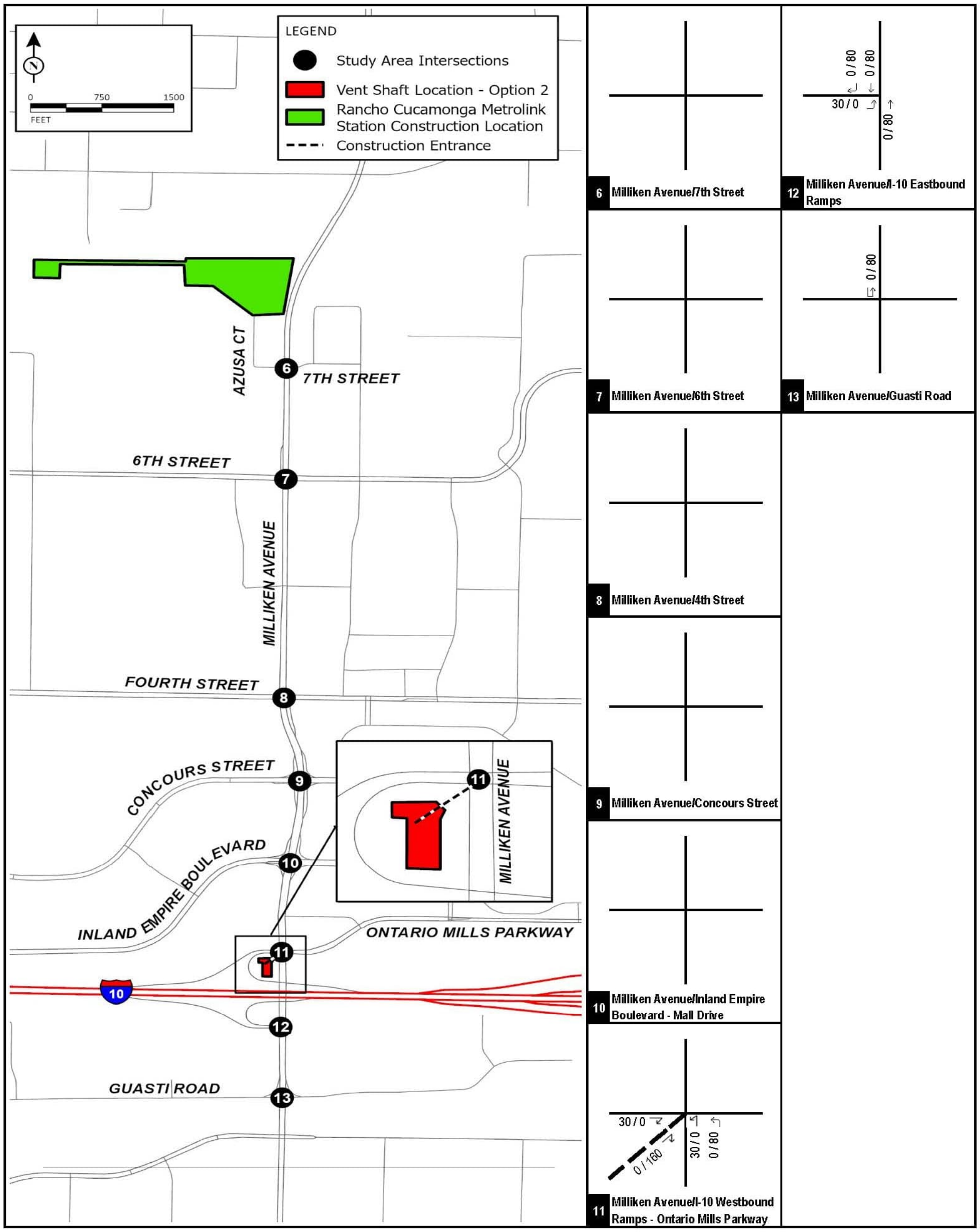
The construction staging area entrance for tunnel vent shaft design option 4 is located at the northwest corner of the intersection of Milliken Avenue/I-10 Eastbound Ramps. As described in Section 2.2.3, haul trucks would access the staging area by turning bear-left at this intersection. Similar to tunnel vent shaft design option 2, construction employees and staff are assumed to arrive by passenger vehicles and would access the staging area either by turning hard-right when traveling southbound on Milliken Avenue or by turning bear-left when traveling northbound on Milliken Avenue. Haul trucks and passenger vehicles would exit the staging area by turning right directly onto the I-10 eastbound on-ramp.

Figure 8-16: Construction Trip Assignment for Cucamonga Station



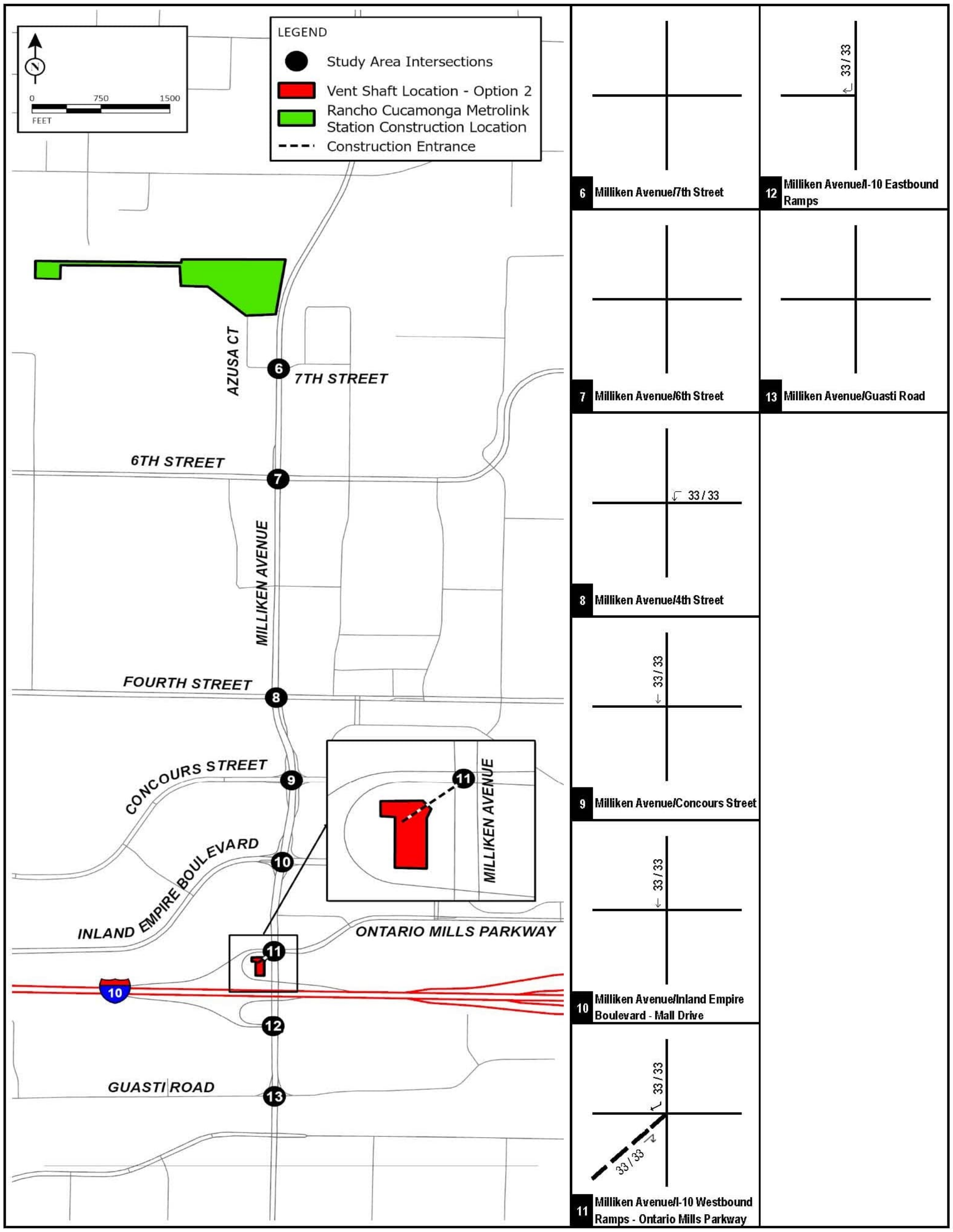
XXX / YYY
AM / PM Peak Hour Trips
---- Driveway

Figure 8-17: Construction Trip Assignment for
Tunnel Vent Shaft Design Option 2 – Passenger Vehicles



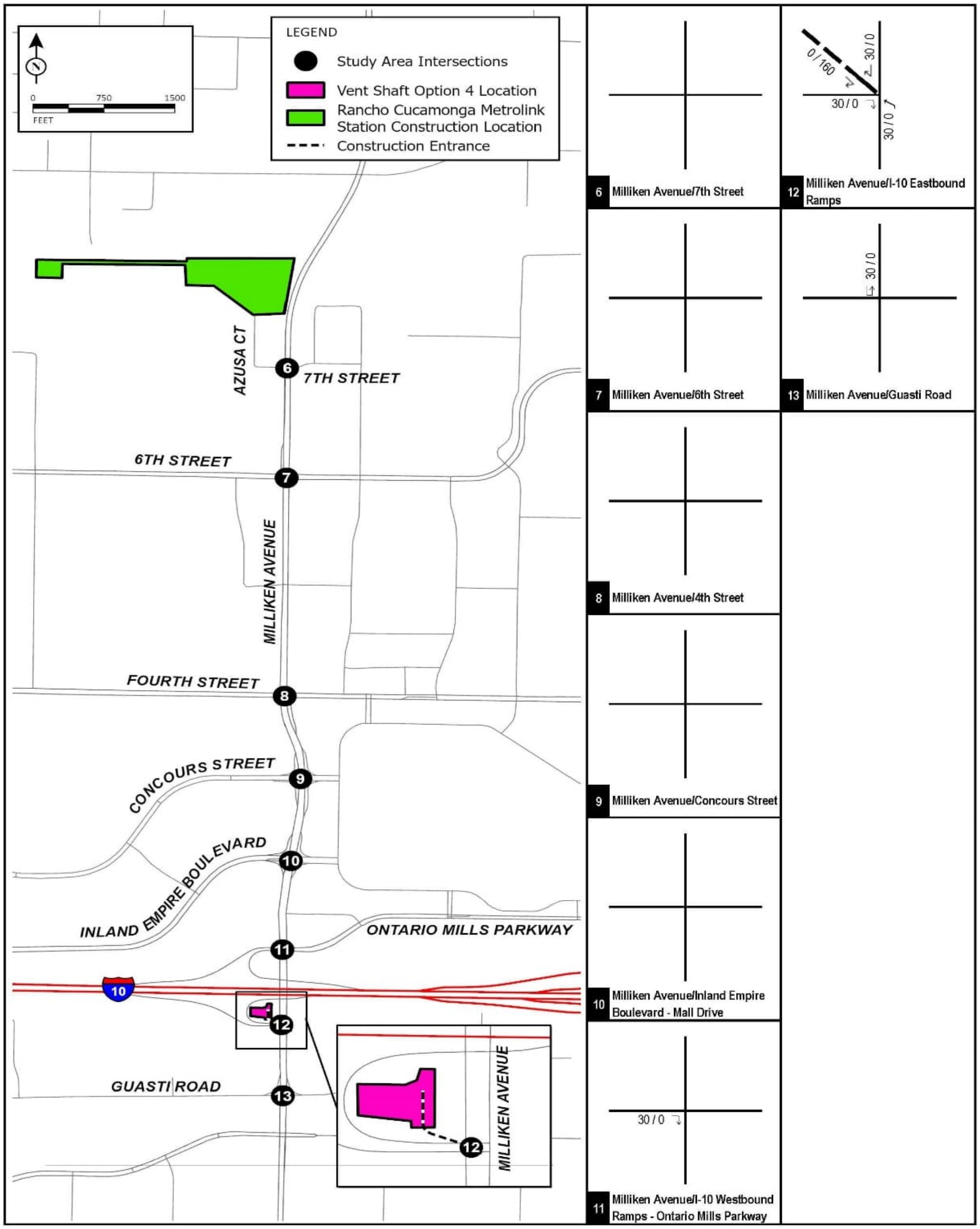
XXX / YYY
AM / PM Peak Hour Trips
---- Construction Entrance

Figure 8-18: Construction Trip Assignment for Tunnel Vent Shaft Design Option 2 – Haul Trucks



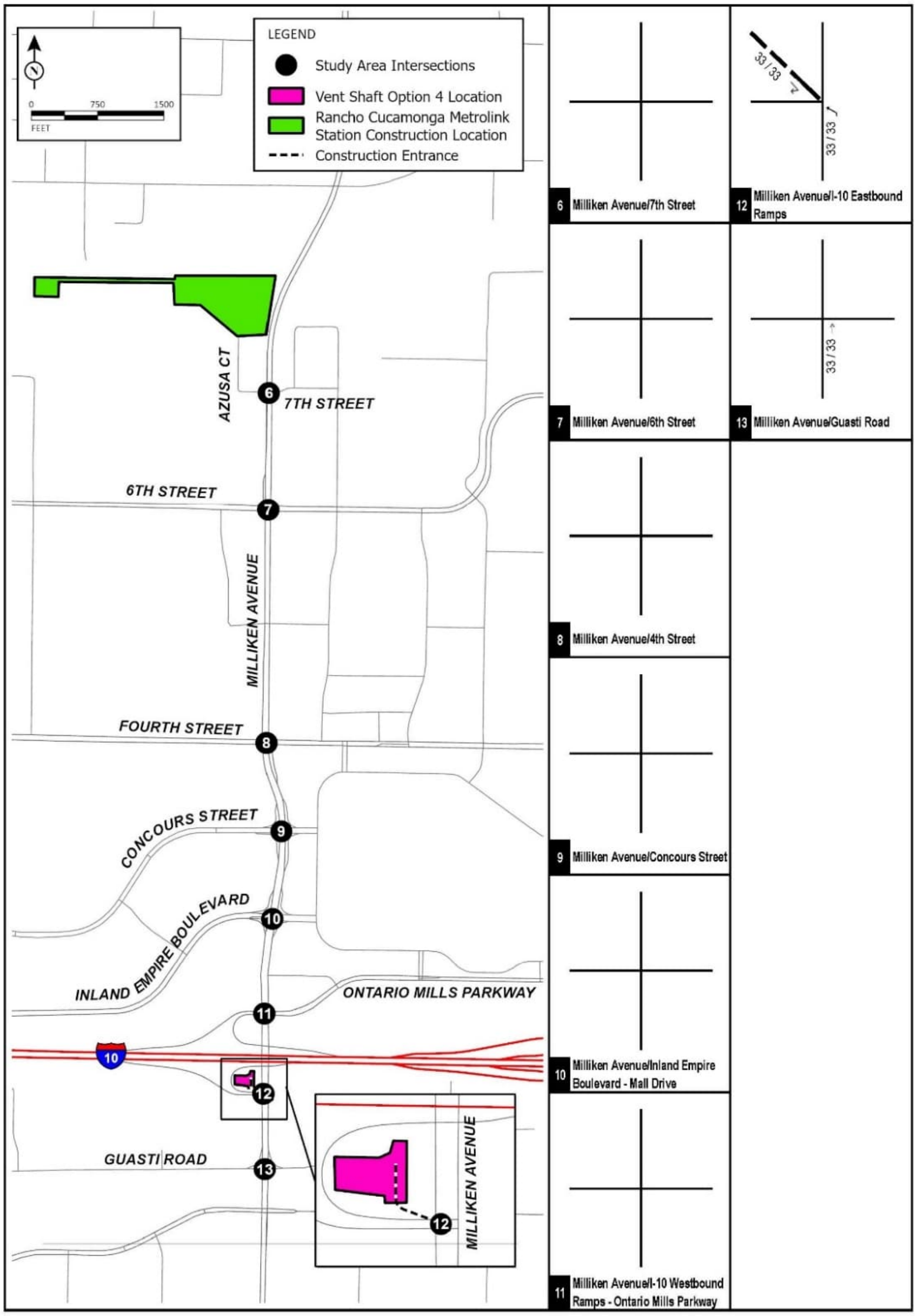
XX / YY
AM / PM Peak Hour Trips
---- Construction Entrance

Figure 8-19: Construction Trip Assignment for Tunnel Vent Shaft Design Option 4 – Passenger Vehicles



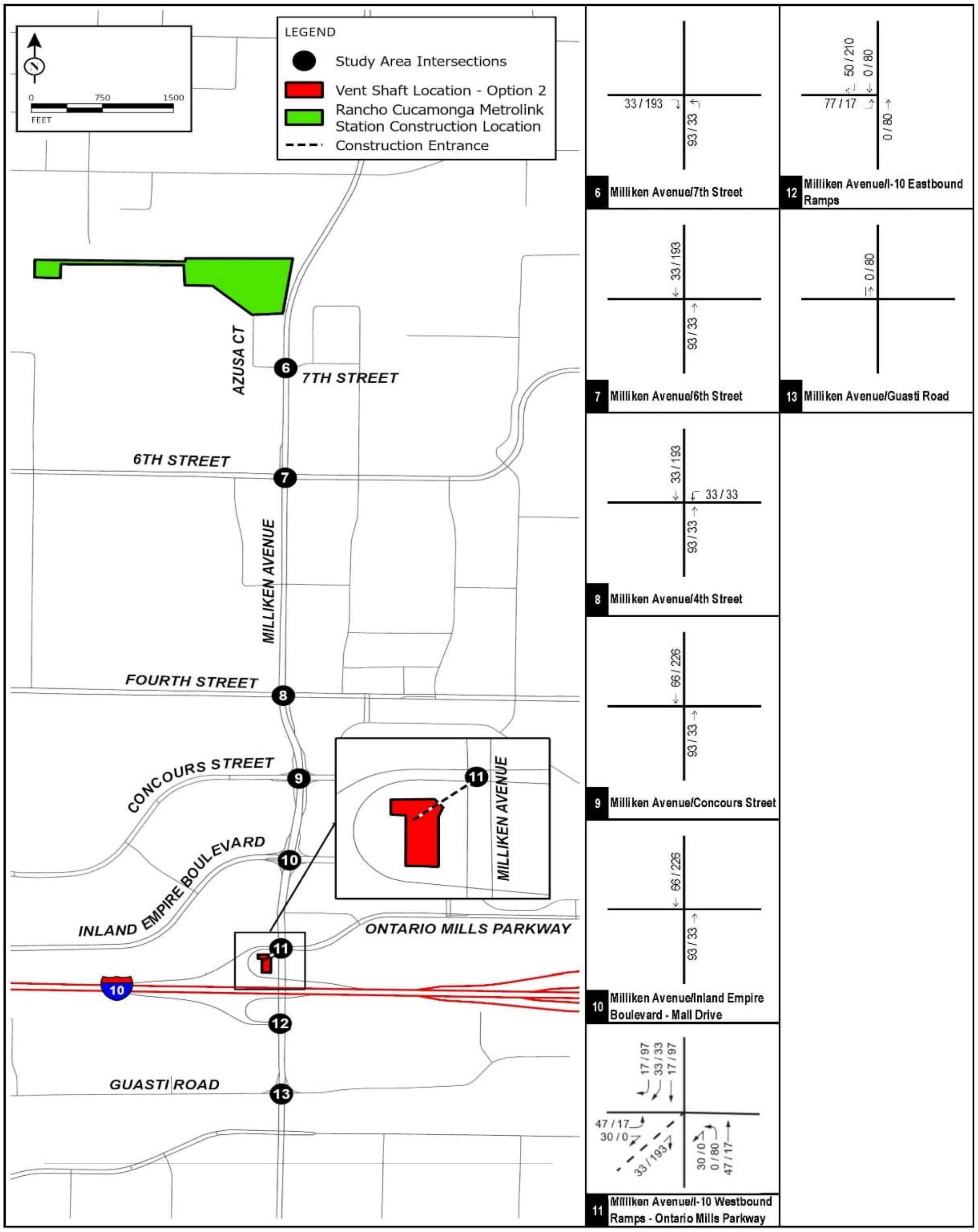
XXX / YYY
AM / PM Peak Hour Trips
---- Construction Entrance

Figure 8-20: Construction Trip Assignment for Tunnel Vent Shaft Design Option 4 – Haul Trucks



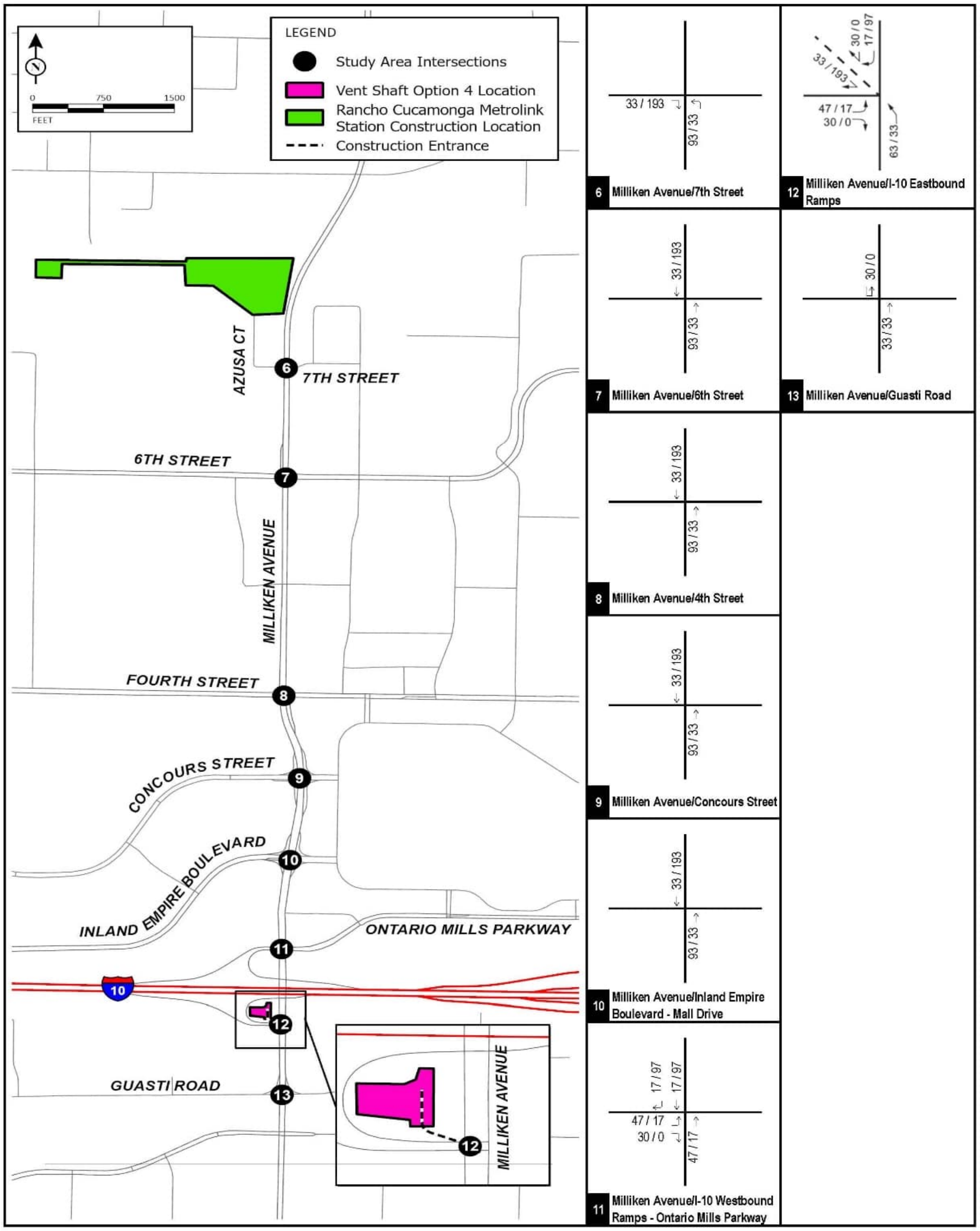
XX / YY
AM / PM Peak Hour Trips
---- Construction Entrance

Figure 8-21: Total Construction-related Traffic Trip Assignment for Scenario 2A with Tunnel Vent Shaft Design Option 2



XXX / YYY
AM / PM Peak Hour Trips
---- Construction Entrance

Figure 8-22: Total Construction-related Traffic Trip Assignment for Scenario 2B with Tunnel Vent Shaft Design Option 4



XXX / YYY
AM / PM Peak Hour Trips
---- Construction Entrance

Year 2025 with Scenarios 2A and 2B construction traffic volumes were developed by adding the respective Scenario 2A and 2B construction traffic trip assignment to Year 2025 peak-hour traffic volumes at the study intersections. Figure 8-23 (Year 2025 with Scenario 2A Construction Traffic Peak-hour Turning-movement Volumes at Study Intersections) illustrates the traffic peak-hour turning-movement volumes at the study intersections under Year 2025 with Scenario 2A with tunnel vent shaft design option 2 construction conditions. Figure 8-24 (Year 2025 with Scenario 2B Construction Traffic Peak-hour Turning movement Volumes at Study Intersections) illustrates the traffic peak-hour turning-movement volumes at the study intersections under Year 2025 with Scenario 2B with tunnel vent shaft design option 4 construction conditions. Detailed volume development worksheets are included in Appendix D.

An Intersection LOS analysis was conducted for Year 2025 with construction traffic Scenario 2A and 2B conditions based on the methodology outlined in Section 4.3.3. Table 8-3 (Construction Traffic Scenario 2A Intersection Levels of Service) summarizes the results of the LOS analysis for the study intersections affected by construction traffic for Scenario 2A with tunnel vent shaft design option 2.

Table 8-4 (Construction Traffic Scenario 2B Intersection Levels of Service) summarizes the results of the LOS analysis for the study intersections affected by construction traffic for Scenario 2B with tunnel vent shaft design option 4. Detailed intersection LOS worksheets are included in Appendix F.

All intersections are forecasted to operate at a satisfactory LOS under Year 2025 with Scenario 2A with tunnel vent shaft design option 2 construction conditions except for the following:

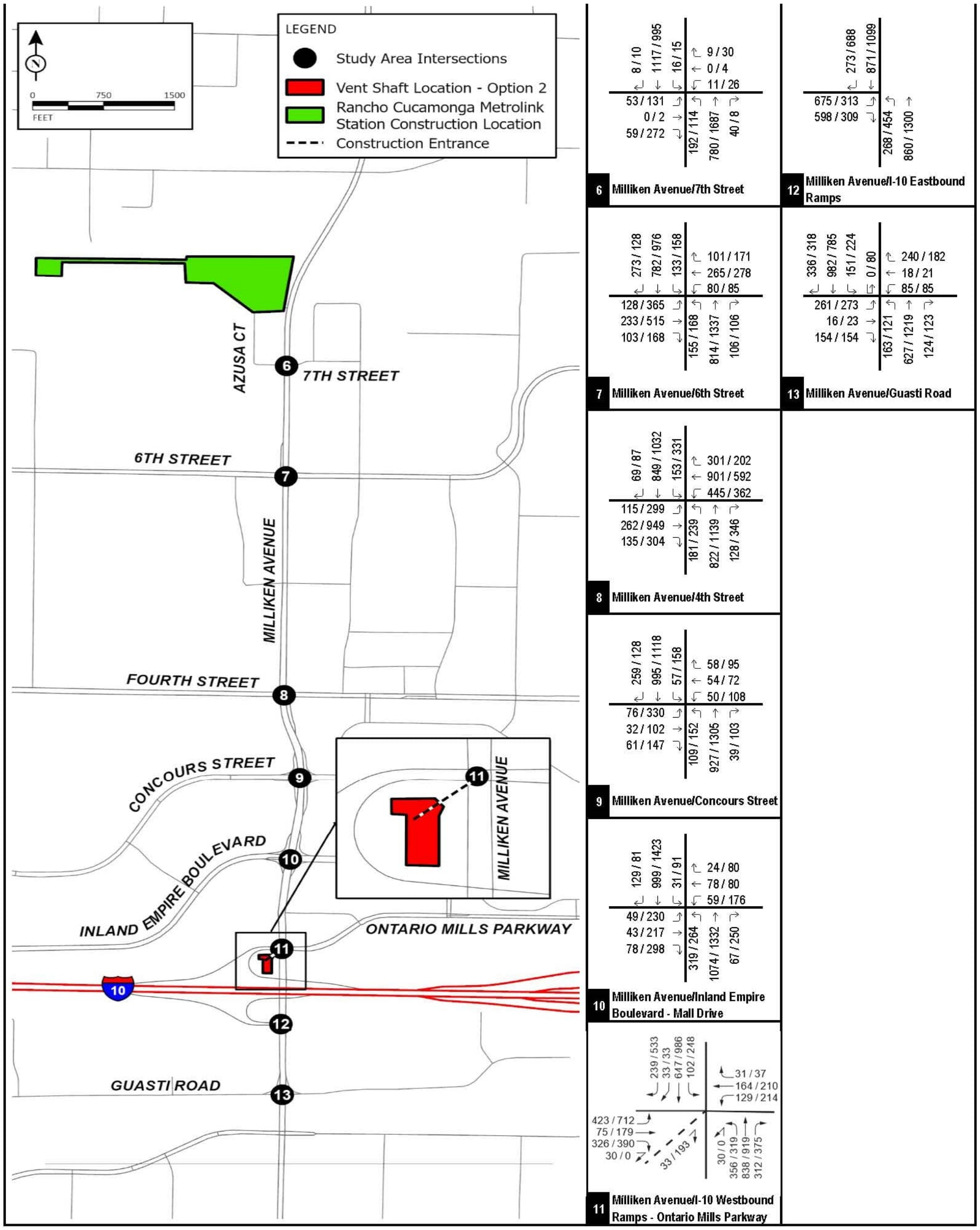
8. Milliken Avenue/4th Street (both a.m. and p.m. peak hours); and
11. Milliken Avenue/I-10 Westbound Ramps – Ontario Mills Parkway (p.m. peak hour only).

All intersections are forecasted to operate at a satisfactory LOS under Year 2025 with Scenario 2B with tunnel vent shaft design option 4 construction conditions except for the following:

8. Milliken Avenue/4th Street (both a.m. and p.m. peak hours).

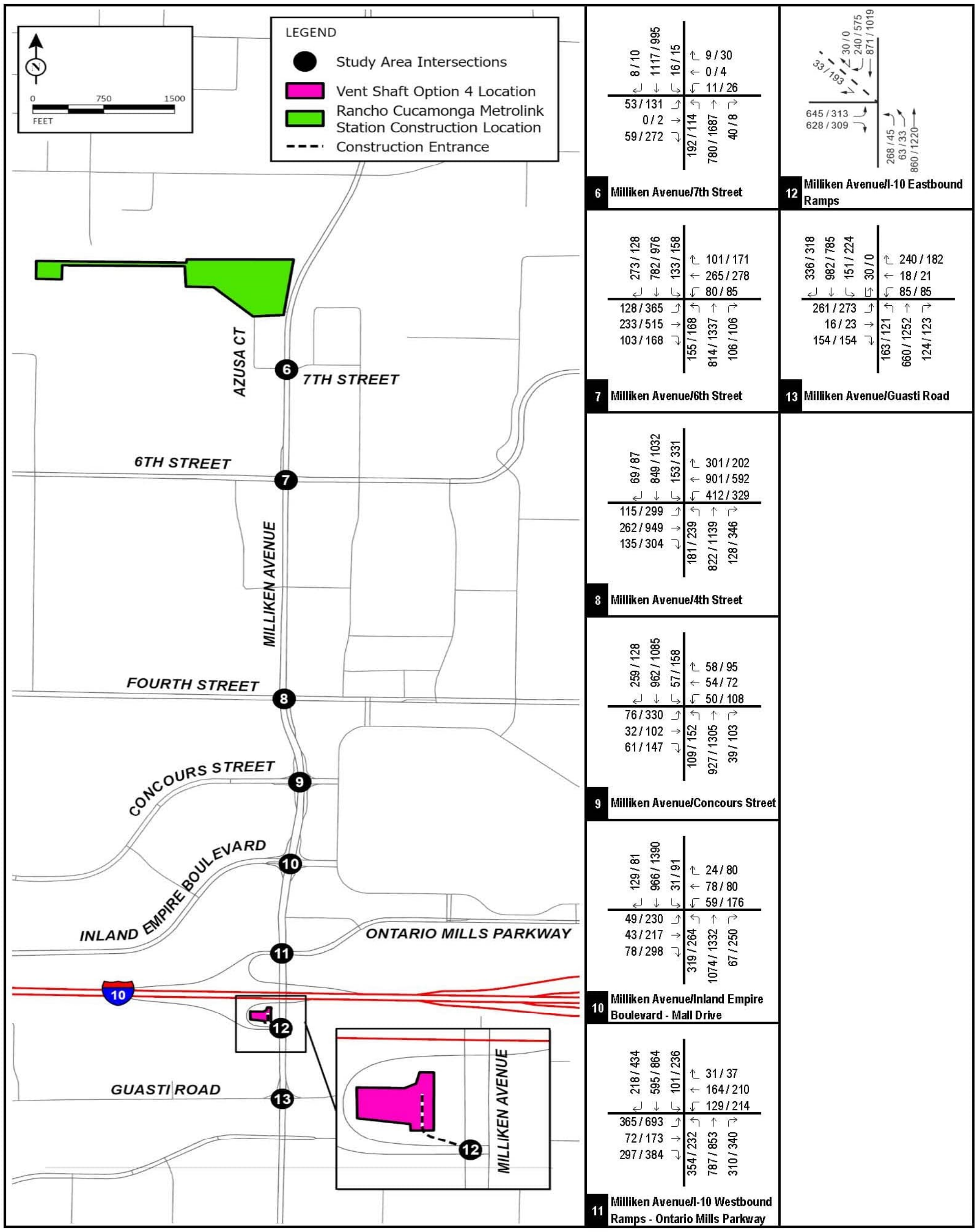
It should be noted that the intersection of Milliken Avenue/4th Street is forecasted to operate at a deficient LOS even under Year 2025 conditions. Furthermore, increases in delay for all intersections are temporary for the duration of the construction phase. As such, it is anticipated that the proposed Project's construction traffic would have a temporary CEQA impact on the existing circulation network. However, the impact of the proposed Project's construction traffic is anticipated to be less than significant with the implementation of mitigation measures as detailed in Section 9.1.2.

Figure 8-23: Year 2025 with Scenario 2A Construction Traffic Peak-hour Turning-movement Volumes at Study Intersections



XXXX / YYYY
AM / PM Peak Hour Trips
---- Driveway

Figure 8-24: Year 2025 with Scenario 2B Construction Traffic Peak-hour Turning-movement Volumes at Study Intersections



XXXX / YYYY
AM / PM Peak Hour Trips
---- Driveway

Table 8-3: Construction Traffic Scenario 2A Intersection Levels of Service

				No Build							Construction Scenario 2A							A.M. Peak Hour	P.M. Peak Hour	
					A.M. Peak Hour			P.M. Peak Hour				A.M. Peak Hour			P.M. Peak Hour					
	Intersection	Jurisdiction	LOS Standard	Control	Delay (sec.)	LOS		Delay (sec.)	LOS		Control	Delay (sec.)	LOS		Delay (sec.)	LOS		Increase in Delay (sec.)	Increase in Delay (sec.)	Exceeds LOS Standard
6	Milliken Avenue/7th Street	City of Rancho Cucamonga	D	Signal	10.6	B		13.9	B		Signal	16.2	B		20.0	B		5.6	6.1	No
7	Milliken Avenue/6th Street	City of Rancho Cucamonga	D	Signal	27.3	C		39.2	D		Signal	28.0	C		41.9	D		0.7	2.7	No
8	Milliken Avenue/4th Street	City of Ontario/City of Rancho Cucamonga	D	Signal	56.1	E	*	58.9	E	*	Signal	61.9	E	*	60.2	E	*	5.8	1.3	Yes
9	Milliken Avenue/Concours Street	City of Ontario	E	Signal	21.3	C		34.4	C		Signal	20.7	C		37.0	D		-0.6	2.6	No
10	Milliken Avenue/Inland Empire Boulevard – Mall Drive	City of Ontario	E	Signal	27.0	C		33.3	C		Signal	27.7	C		33.3	C		0.7	0.0	No
11	Milliken Avenue/I-10 Westbound Ramps – Ontario Mills Parkway	Caltrans	D	Signal	41.1	D		44.4	D		Signal	44.0	D		59.8	E	*	2.9	15.4	Yes
12	Milliken Avenue/I-10 Eastbound Ramps	Caltrans	D	Signal	26.7	C		24.1	C		Signal	26.6	C		23.9	C		-0.1	-0.2	No
13	Milliken Avenue/Guasti Road	City of Ontario	E	Signal	50.3	D		46.7	D		Signal	50.3	D		61.7	E		0.0	15.0	No

Notes:
LOS = Level of Service
Delay = Average control delay in seconds (For OWSC/TWSC intersections, reported delay is for worst-case movement).
*Exceeds LOS Standard

Table 8-4: Construction Traffic Scenario 2B Intersection Levels of Service

				No Build							Construction Scenario 2B							A.M. Peak Hour	P.M. Peak Hour	
					A.M. Peak Hour			P.M. Peak Hour				A.M. Peak Hour			P.M. Peak Hour					
	Intersection	Jurisdiction	LOS Standard	Control	Delay (sec.)	LOS		Delay (sec.)	LOS		Control	Delay (sec.)	LOS		Delay (sec.)	LOS		Increase in Delay (sec.)	Increase in Delay (sec.)	Exceeds LOS Standard
6	Milliken Avenue/7th Street	City of Rancho Cucamonga	D	Signal	10.6	B		13.9	B		Signal	16.2	B		20.0	B		5.6	6.1	No
7	Milliken Avenue/6th Street	City of Rancho Cucamonga	D	Signal	27.3	C		39.2	D		Signal	28.0	C		41.9	D		0.7	2.7	No
8	Milliken Avenue/4th Street	City of Ontario/City of Rancho Cucamonga	D	Signal	56.1	E	*	58.9	E	*	Signal	57.8	E	*	59.1	E	*	1.7	0.2	Yes
9	Milliken Avenue/Concours Street	City of Ontario	E	Signal	21.3	C		34.4	C		Signal	21.1	C		37.1	D		-0.2	2.7	No
10	Milliken Avenue/Inland Empire Boulevard – Mall Drive	City of Ontario	E	Signal	27.0	C		33.3	C		Signal	27.8	C		33.4	C		0.8	0.1	No
11	Milliken Avenue/I-10 Westbound Ramps – Ontario Mills Parkway	Caltrans	D	Signal	41.1	D		44.4	D		Signal	42.1	D		44.6	D		1.0	0.2	No
12	Milliken Avenue/I-10 Eastbound Ramps	Caltrans	D	Signal	26.7	C		24.1	C		Signal	27.1	C		24.4	C		0.4	0.3	No
13	Milliken Avenue/Guasti Road	City of Ontario	E	Signal	50.3	D		46.7	D		Signal	50.8	D		46.9	D		0.5	0.2	No

Notes:
LOS = Level of Service
Delay = Average control delay in seconds (For OWSC/TWSC intersections, reported delay is for worst-case movement).
*Exceeds LOS Standard

8.1.2.1.6 Transit Facilities

As previously described, construction of the proposed Project includes aboveground and belowground elements that would be designed in accordance with local and regional building requirements. Construction could result in a reduction of the number of travel lanes, or temporary closure of segments of adjacent roadways. Such impacts would be limited to the construction period of the proposed Project and would affect only adjacent streets or intersections. However, safety measures would be set in place in accordance with BMPs, including wayfinding and signage, alternative travel routes, and maintaining access to local businesses and residences.

8.1.2.1.7 Roadway, Bicycle, and Pedestrian Facilities

As previously described, construction of the proposed Project includes aboveground and belowground elements that would be designed in accordance with local and regional building requirements. Construction could result in a reduction of the number of travel lanes, or temporary closure of segments of adjacent roadways. Such impacts would be limited to the construction period of the proposed Project and would affect only adjacent streets or intersections. However, safety measures would be set in place in accordance with BMPs, including wayfinding and signage, alternative travel routes, and maintaining access to local businesses and residences. Implementation of MM-TRA-1 ensures a Transportation Management Plan (TMP) would be prepared by SBCTA to facilitate the flow of traffic in and around construction zones and would address any construction-related impacts to roadway, bicycle, and pedestrian facilities.

8.1.2.1.8 Vent Shaft Design Option 2 – Scenario 2A

Vent shaft design option 2 is located between Milliken Avenue and the I-10 westbound loop-on off-ramp. As such, construction for vent shaft design option 2 may result in temporary lane or freeway ramp closures due to the close proximity of the staging area to existing roadways such as Milliken Avenue and the I-10 westbound ramps. Such impacts would be limited to the construction period of the vent shaft design option 2. However, safety measures would be set in place in accordance with BMPs, including wayfinding and signage, alternative travel routes, and maintaining access to local businesses and residences. In such a case, as detailed staging and handling plans are developed for vent shaft design option 2, a TMP will need to be prepared to evaluate potential rerouting of traffic during partial or full closures of ramp intersections.

8.1.2.1.9 Vent Shaft Design Option 4 – Scenario 2B

Vent shaft design option 4 is located between Milliken Avenue and the I-10 eastbound loop-on on-ramp. As such, construction for vent shaft design option 4 may result in temporary lane or freeway ramp closures due to the close proximity of the staging area to existing roadways such as Milliken Avenue and the I-10 eastbound ramps. Such impacts would be limited to the construction period of the vent shaft design option 4. However, safety measures would be set in place in accordance with BMPs, including wayfinding and signage, alternative travel routes, and maintaining access to local businesses and residences. In such a case, as detailed staging and handling plans are developed for vent shaft design option 4, a TMP will need to be prepared to evaluate potential rerouting of traffic during partial or full closures of ramp intersections.

8.1.2.1.10 Parking

The proposed Project would provide on-demand service using autonomous vehicles for passengers traveling to and from ONT from the Cucamonga Metrolink Station, within the Cities of Rancho Cucamonga and Ontario. As previously mentioned, the proposed Project includes the development of 3 passenger stations: one in the Cucamonga Metrolink Station western parking lot, one in the ONT Lot 2 General parking lot, and one in the ONT Lot 4 General parking lot. During construction, the proposed Project is estimated to result in the temporary loss of 170 spaces in the Cucamonga Metrolink western parking lot and the temporary loss of 300 spaces in each of the ONT Lot 2 General and Lot 4 General parking lots.

Ontario International Airport Parking

Parking demand at ONT is based on the methodology outlined in Section 4.4.1. As previously mentioned, the proposed Project is estimated to result in the temporary loss of 300 spaces in each of the ONT Lot 2 General and Lot 4 General parking lots during project construction. Table 8-5 (Ontario International Airport Parking Analysis During Project Construction) summarizes the estimated peak daily demand during a typical weekday and weekend day as well as any surplus or deficit of parking stalls for each ONT parking lot during project construction.

As shown in Table 8-5 (Ontario International Airport Parking Analysis During Project Construction), ONT Lot 2 General and ONT Lot 4 General are forecast to operate with a deficit of parking stalls, with a total deficit of 295 parking stalls among the two parking lots, on a typical weekday during project construction. However, ONT Lot 2 Premium, ONT Lot 3, ONT Lot 4 Premium, ONT Lot 5, and ONT Lot 6 are forecast to operate with a surplus of parking stalls, with a total surplus of 2,341 parking stalls among the five parking lots, on a typical weekday during project construction. The total surplus among all ONT parking lots is estimated to be 2,046 parking stalls on a typical weekday during project construction.

Furthermore, ONT Lot 2 General and ONT Lot 4 General are forecast to operate with a deficit of parking stalls, with a total deficit of 99 parking stalls among the two parking lots, on a typical weekend day during project construction. However, ONT Lot 2 Premium, ONT Lot 3, ONT Lot 4 Premium, ONT Lot 5, and ONT Lot 6 are forecast to operate with a surplus of parking stalls, with a total surplus of 2,621 parking stalls among the five parking lots, on a typical weekend day during project construction. The total surplus among all ONT parking lots is estimated to be 2,522 parking stalls on a typical weekend day during project construction.

Table 8-5: Ontario International Airport Parking Analysis During Project Construction

Parking Lot	Current Parking Stalls	Parking Stall Adjustment[1]	Available Parking Stalls During Project Construction	Peak Demand[2]	Weekday Surplus/ (Deficit)	% Utilization[3]	Peak Demand[2]	Weekend Surplus/ (Deficit)	% Utilization[3]
Ontario International Airport									
Lot 2 - General	1,234	(300)	934	1,058	(124)	113%	1,033	(99)	111%
Lot 2 - Premium	347	0	347	311	36	90%	239	108	69%
Lot 3	1,192	0	1,192	829	363	70%	849	343	71%
Lot 4 - General	1,430	(300)	1,130	1,301	(171)	115%	924	206	82%
Lot 4 - Premium	352	0	352	340	12	97%	334	18	95%
Lot 5	2,316	0	2,316	1,019	1,297	44%	995	1,321	43%
Lot 6	1,337	0	1,337	704	633	53%	712	625	53%
		Total Observed Surplus			2,341			2,621	
		Total Observed Deficit			(295)			(99)	
		Remaining Surplus/(Deficit)[4]			2,046			2,522	

Notes:

1 Parking stall adjustment reflects either addition or loss of parking stalls due to construction.

2 Parking demand data obtained from OIAA. Parking demand includes disability and EV charging parking. Parking demand includes data from all days between June 1, 2024 and June 11, 2024.

3 Hourly utilization rates calculated as the percentage of occupied stalls versus the total amount of parking stalls available.

4 Reflects the total number of surplus or deficit parking stalls among all parking lots on-site.

The forecasted deficit of parking stalls observed among ONT Lot 2 General and ONT 4 General could be mitigated by temporarily rerouting vehicles to the other ONT parking lots that are forecast to have a surplus of parking stalls on a typical weekday and weekend day during project construction. As such, during project construction, no further parking avoidance, minimization, or mitigation measures are recommended at ONT.

Detailed parking survey and OIAA parking data sheets are included in Appendix G.

Cucamonga Metrolink Station Parking

Parking demand at the Cucamonga Metrolink Station is based on the methodology outlined in Section 4.4.2. As previously mentioned, the proposed Project is estimated to result in the temporary loss of 170 spaces in the Cucamonga Metrolink Station western parking lot during project construction. Table 8-6 (Cucamonga Metrolink Station Parking Analysis During Project Construction) summarizes the estimated peak daily demand during a typical weekday and weekend day as well as any surplus or deficit of parking stalls for each Cucamonga Metrolink Station parking lot during project construction.

As shown in Table 8-6 (Cucamonga Metrolink Station Parking Analysis During Project Construction), both west and east lots at Cucamonga Metrolink Station are forecast to operate with a surplus of parking stalls, with a total surplus of 555 parking stalls on a typical weekday and 777 parking stalls on a typical weekend day, during project construction. As such, the number of available parking stalls in both west and east lots is sufficient to service the parking demand at either lot on a typical weekday or weekend day during project construction. Therefore, during project construction, no parking avoidance, minimization, or mitigation measures are recommended at the Cucamonga Metrolink Station.

Detailed parking survey and OIAA parking data sheets are included in Appendix G.

Table 8-6: Cucamonga Metrolink Station Parking Analysis During Project Construction

Parking Lot	Current Parking Stalls	Parking Stall Adjustment[1]	Available Parking Stalls During Project Construction	Weekday Peak Demand[2]	Weekday Surplus/ (Deficit)	Weekday % Utilization[3]	Weekend Peak Demand[2]	Weekend Surplus/ (Deficit)	Weekend % Utilization[3]
Cucamonga Metrolink Station									
West Lot	330	(170)	160	87	73	54%	13	147	8%
East Lot	650	0	650	168	482	26%	20	630	3%
		Total Observed Surplus			555			777	
		Total Observed Deficit			0			0	
		Remaining Surplus/(Deficit)[4]			555			777	

Notes:

1 Parking stall adjustment reflects either addition or loss of parking stalls due to construction.

2 Parking demand data based on parking surveys conducted by Counts Unlimited. Parking demand includes disability and EV charging parking. Parking surveys were conducted on June 22, 2024 (Saturday), June 25, 2024 (Tuesday), June 26, 2024 (Wednesday), and June 29, 2024 (Saturday).

3 Hourly utilization rates calculated as the percentage of occupied stalls versus the total amount of parking stalls available.

4 Reflects the total number of surplus or deficit parking stalls among all parking lots on-site.

8.1.2.2 Operational Impacts

8.1.2.2.1 Project Traffic

As previously stated, the detailed proposed Project trip generation volume development methodology is included in Appendix A. Table 8-7 (Project Trip Generation (Traffic Operations Analysis)) summarizes the proposed Project trip generation. Opening Year (2031) Build and Design Year (2051) Build traffic volumes were developed by adding the proposed Project traffic to the Opening Year No Build traffic volumes and the Design Year No Build traffic volumes, respectively. The LOS analysis was conducted based on the methodology outlined in Section 4.1.7 for the study intersections in the Opening Year (2031) Build conditions and Design Year (2051) Build conditions.

Table 8-7: Project Trip Generation (Traffic Operations Analysis)

Trip Generation by Analysis Scenarios	A.M. Peak Hour			P.M. Peak Hour			Daily
	In	Out	Total	In	Out	Total	
Opening Year (2031) Trip Generation							
Terminal 2 Trips[1, 2]	(3)	(3)	(6)	(2)	(1)	(3)	-
Terminal 4 Trips[1, 2]	(7)	(2)	(9)	(3)	(6)	(9)	-
Out-of-Region Visitors Renting Cars[2]	(1)	(1)	(2)	(1)	(1)	(2)	-
Rancho Cucamonga Metrolink Station Trips[3]	1	1	2	1	1	2	-
Net Opening Year (2031) Trip Generation	(10)	(5)	(15)	(5)	(7)	(12)	0
Design Year (2051) Trip Generation							
Terminal 2 Trips[1, 2]	(13)	(11)	(24)	(6)	(5)	(11)	-
Terminal 4 Trips[1, 2]	(5)	(2)	(7)	(3)	(5)	(8)	-
Out-Of-Region Visitors Renting Cars[2]	(3)	(2)	(5)	(2)	(1)	(3)	-
Rancho Cucamonga Metrolink Station Trips[3]	1	1	2	1	1	2	-
Net Design Year (2051) Trip Generation	(20)	(14)	(34)	(10)	(10)	(20)	0

Notes:

[1] Trips for Terminals 2 and 4 include air passengers who previously parked at the self-parking lots, air passengers who were previously dropped off, and employees parking for work.

[2] Terminal 2 and 4 trips consist of 95% of the trips that are anticipated to utilize other rail connections that connect to Metrolink and will utilize the new tunnel connection.

[3] 5% of the trips will be air passengers dropped off at the Rancho Cucamonga Metrolink station instead of being dropped off at the airport.

The LOS analysis was conducted based on the methodology documented in Section 4.1.6 using the Synchro 11 software and signal timing sheets provided by the City of Rancho Cucamonga, the City of Ontario, and Caltrans. Table 5-2 (Existing Intersection Levels of Service) summarizes the result of the LOS analysis and shows that all intersections under existing conditions operate at a satisfactory LOS except for:

2. Archibald Avenue – Terminal Way/Airport Drive (a.m. and p.m. peak hours).

8.1.2.2.2 Opening Year (2031) Build Conditions

For the purposes of this analysis, all Project trips were considered to be regional trips, as these trips were considered to be traveling to ONT by utilizing the nearest freeways (I-10, I-15, and SR-60). Figure 8-25 (Opening Year Peak-Hour Project Trip Assignment at Study Intersections) illustrates the Opening Year peak-hour Project trip assignment at the study intersections. Figure 8-26 (Opening Year Peak-Hour Volumes at Study Intersections) illustrates the peak-hour traffic volumes at the study intersections under Opening Year Build conditions.

Table 8-8 (Opening Year (2031) Build Intersection Levels of Service) summarizes the results of the Opening Year LOS analysis for the study intersections. Detailed intersection LOS worksheets are included in Appendix F. All intersections are forecasted to operate at a satisfactory LOS except for:

2. Archibald Avenue – Terminal Way/Airport Drive (p.m. peak hour only).

It should be noted that the intersection of Archibald Avenue – Terminal Way/Airport Drive is forecast to operate at a deficient LOS under the No Build conditions. Furthermore, the Opening Year Build conditions would improve the delay to better than the corresponding delay under the No Build conditions during the p.m. peak hour. The Project would not create any new deficiencies or worsen existing deficiencies that would conflict with the respective jurisdictions' goals and policies.

8.1.2.2.3 Design Year (2051) Build Conditions

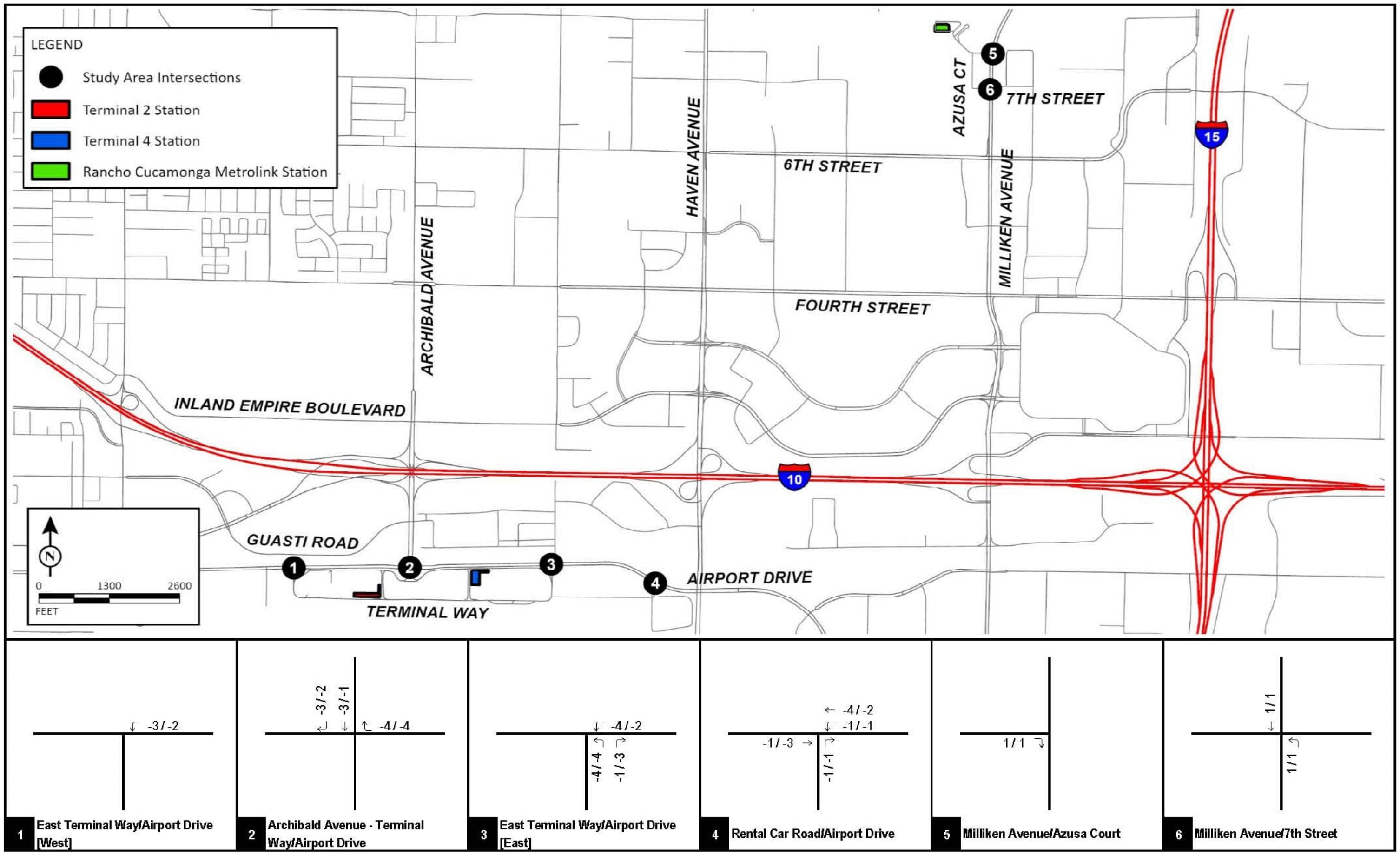
Figure 8-27 (Design Year Project Trip Assignment at All Study Intersections) illustrates the Design Year Project trip assignment at all study intersections. Figure 8-28 (Design Year Peak-Hour Volumes at Study Intersections) illustrates the peak-hour traffic volumes at the study intersections under Design Year Build conditions.

Table 8-9 (Design Year (2051) Build Intersection Levels of Service) summarizes the results of the Design Year LOS analysis for the study intersections. Detailed intersection LOS worksheets are included in Appendix F. All intersections are forecasted to operate at a satisfactory LOS except for the following:

2. Archibald Avenue – Terminal Way/Airport Drive (both a.m. and p.m. peak hours); and
3. East Terminal Way/Airport Drive (East) (a.m. peak hour only).

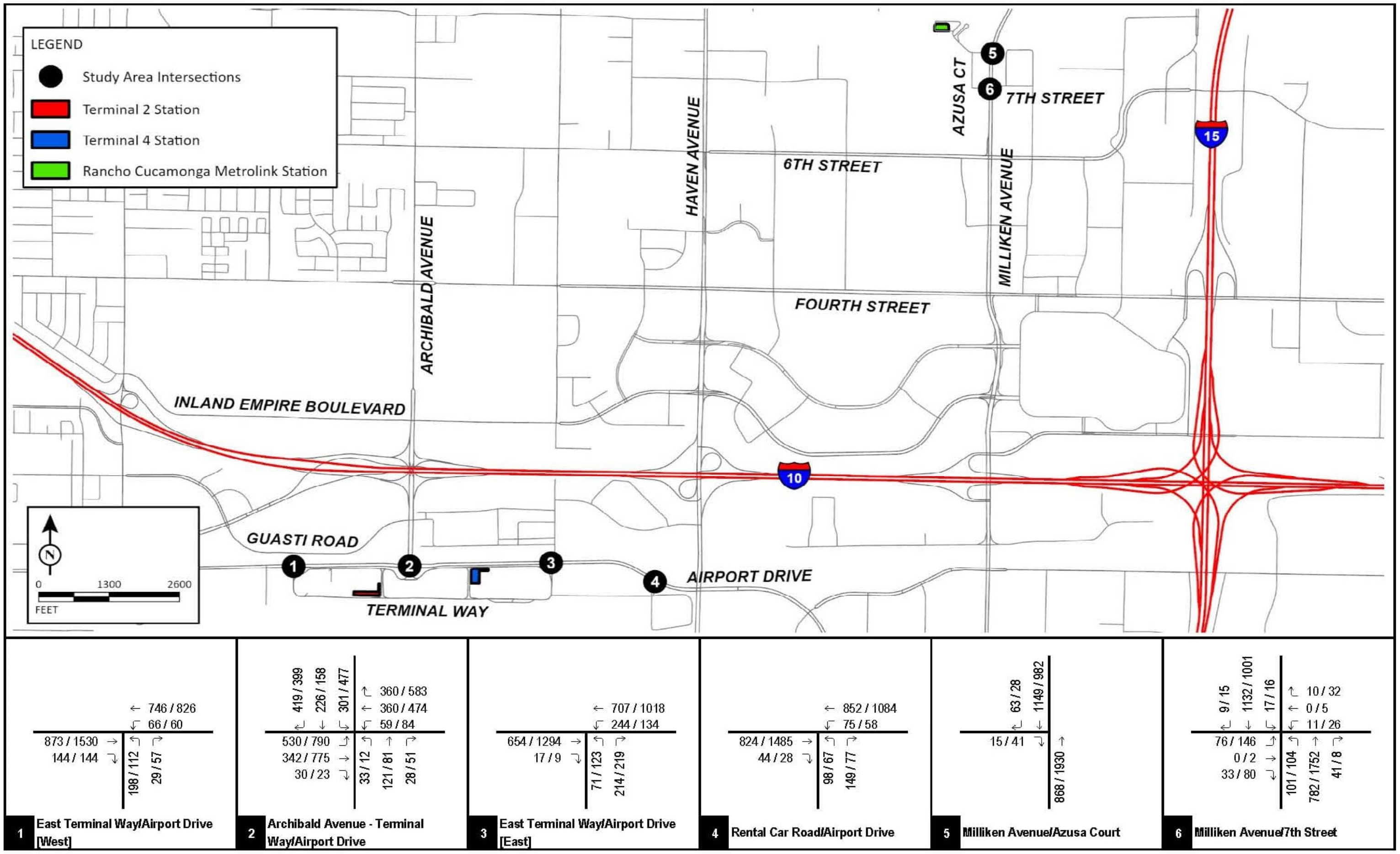
It should be noted that the intersections forecasted to operate at a deficient LOS under the Design Year Build conditions are also forecasted to operate at a deficient LOS under the Design Year No Build conditions. Furthermore, the Design Year Build conditions would improve the delay to better than the corresponding delay under the No Build conditions. The proposed Project would not create any new deficiencies or worsen existing deficiencies that would conflict with the respective jurisdictions' goals and policies.

Figure 8-25: Opening Year Peak-Hour Project Trip Assignment at Study Intersections



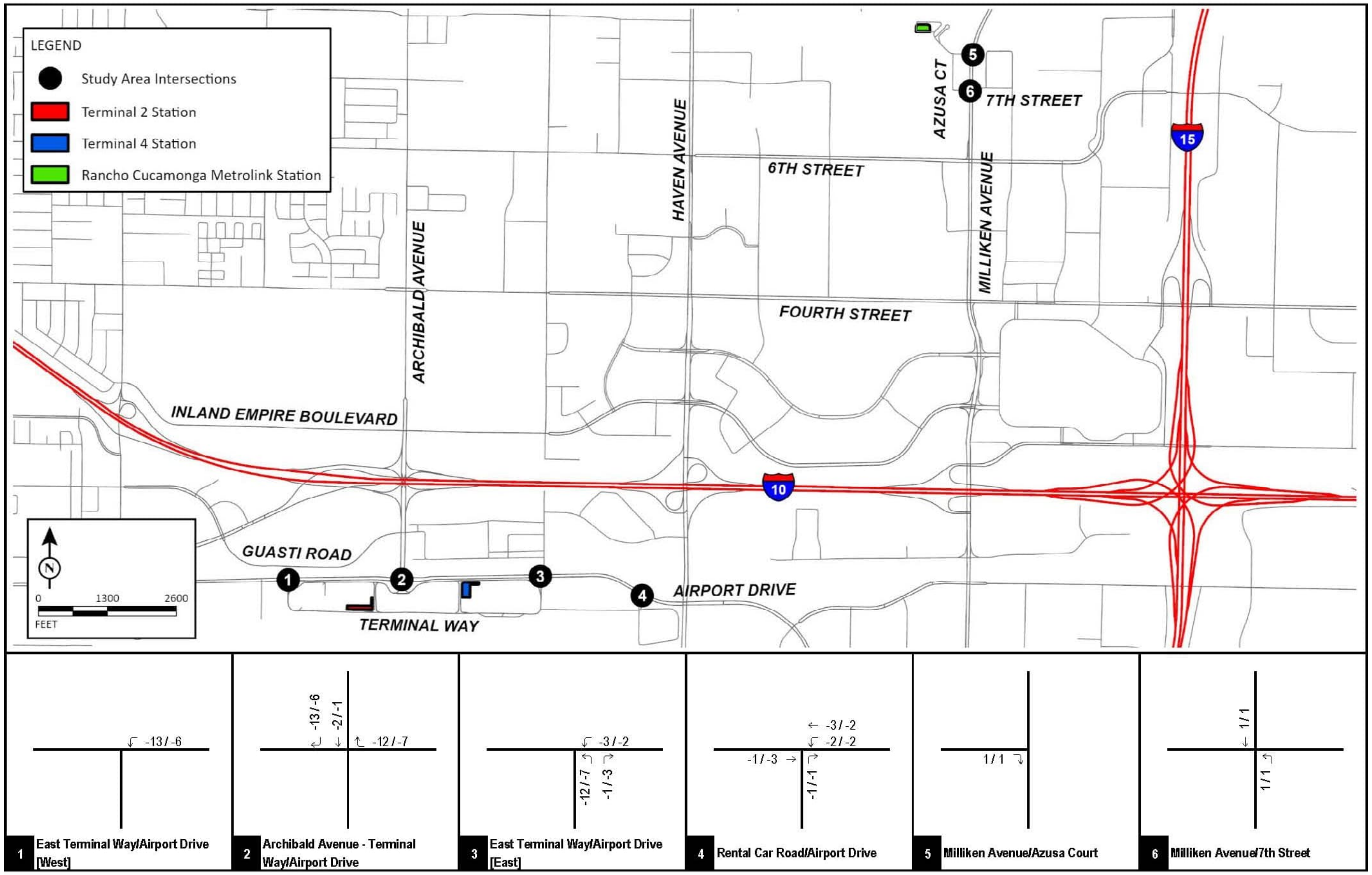
XX / YY
AM / PM Peak Hour Traffic Volumes

Figure 8-26: Opening Year Peak-Hour Volumes at Study Intersections



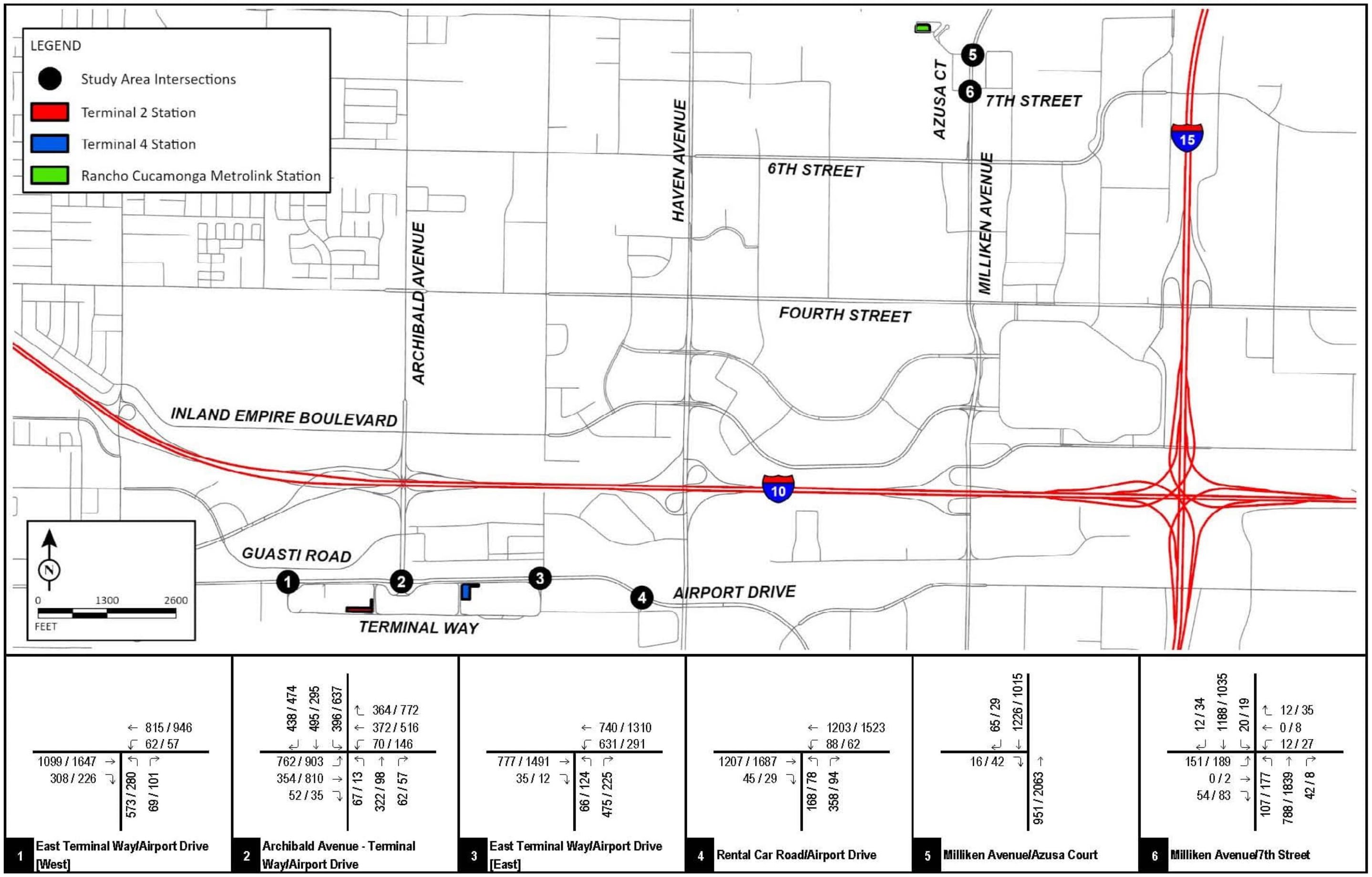
XXXX / YYYY
AM / PM Peak Hour Traffic Volumes

Figure 8-27: Design Year Project Trip Assignment at All Study Intersections



XXX / YYY
AM / PM Peak Hour Traffic Volumes

Figure 8-28: Design Year Peak-Hour Volumes at Study Intersections



XXXX / YYYY
AM / PM Peak Hour Traffic Volumes

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Table 8-8: Opening Year (2031) Build Intersection Levels of Service

				No Build							Build							A.M. Peak Hour	P.M. Peak Hour	
					A.M. Peak Hour			P.M. Peak Hour				A.M. Peak Hour			P.M. Peak Hour			Increase	Increase	
	Intersection	Jurisdiction	LOS Standard	Control	Delay (sec.)	LOS		Delay (sec.)	LOS		Control	Delay (sec.)	LOS		Delay (sec.)	LOS		in Delay (sec.)	in Delay (sec.)	Improvement Required?
1	East Terminal Way/Airport Drive [West]	City of Ontario	E	Signal	36.2	D		56.9	E		Signal	33.8	C		56.9	E		-2.4	0.0	No
2	Archibald Avenue - Terminal Way/Airport Drive	City of Ontario	E	Signal	81.8	F	*	>100	F	*	Signal	76.9	E		>100	F	*	-4.9	-7.8	Yes
3	East Terminal Way/Airport Drive [East]	City of Ontario	E	Signal	32.8	C		27.0	C		Signal	22.5	C		27.0	C		-10.3	0.0	No
4	Rental Car Road/Airport Drive	City of Ontario	E	Signal	28.2	C		22.3	C		Signal	27.1	C		22.2	C		-1.1	-0.1	No
5	Milliken Avenue/Azusa Court	City of Rancho Cucamonga	D	OWSC	14.6	B		14.2	B		OWSC	14.7	B		14.3	B		0.1	0.0	No
6	Milliken Avenue/7th Street	City of Rancho Cucamonga	D	Signal	11.9	B		16.0	B		Signal	11.9	B		16.0	B		0.0	0.0	No

Notes:
OWSC = One-Way Stop Control; LOS = Level of Service
Delay = Average control delay in seconds (For OWSC/TWSC intersections, reported delay is for worst-case movement).
*Exceeds LOS Standard

Table 8-9: Design Year (2051) Build Intersection Levels of Service

	Intersection	Jurisdiction	LOS Standard	Control	No Build A.M. Peak Hour Delay (sec.)	No Build A.M. Peak Hour LOS		No Build P.M. Peak Hour Delay (sec.)	No Build P.M. Peak Hour LOS		Control	Build A.M. Peak Hour Delay (sec.)	Build A.M. Peak Hour LOS		Build P.M. Peak Hour Delay (sec.)	Build P.M. Peak Hour LOS		A.M. Peak Hour Increase in Delay (sec.)	P.M. Peak Hour Increase in Delay (sec.)	Improvement Required?
1	East Terminal Way/Airport Drive [West]	City of Ontario	E	Signal	40.5	D		81.9	F	*	Signal	39.3	D		73.9	E		-1.2	-8.0	No
2	Archibald Avenue - Terminal Way/Airport Drive	City of Ontario	E	Signal	>100	F	*	>100	F	*	Signal	>100	F	*	>100	F	*	-4.6	-0.2	Yes
3	East Terminal Way/Airport Drive [East]	City of Ontario	E	Signal	>100	F	*	30.8	C		Signal	>100	F	*	30.5	C		-1.5	-0.3	Yes
4	Rental Car Road/Airport Drive	City of Ontario	E	Signal	28.5	C		28.7	C		Signal	27.1	C		28.4	C		-1.4	-0.3	No
5	Milliken Avenue/Azusa Court	City of Rancho Cucamonga	D	OWSC	15.2	C		14.7	B		OWSC	15.3	C		14.8	B		0.1	0.0	No
6	Milliken Avenue/7th Street	City of Rancho Cucamonga	D	Signal	15.7	B		21.2	C		Signal	15.8	B		21.3	C		0.1	0.1	No

Notes:
OWSC = One-Way Stop Control; LOS = Level of Service
Delay = Average control delay in seconds (For OWSC/TWSC intersections, reported delay is for worst-case movement).
*Exceeds LOS Standard

8.1.2.2.4 Transit Facilities

The proposed Project would provide a connection from the Cucamonga Metrolink Station to and from ONT. The proposed Project would not modify transit facilities (e.g., stations or bus stops) or decrease any existing transit service facilities.

8.1.2.2.5 Roadway, Bicycle, and Pedestrian Facilities

The proposed Project would provide a connection from the Cucamonga Metrolink Station to and from ONT and would not modify the existing roadway network or bicycle and pedestrian facilities.

8.1.2.2.6 Parking

The proposed Project would provide on-demand service using autonomous vehicles for passengers traveling to and from ONT from the Cucamonga Metrolink Station, within the Cities of Rancho Cucamonga and Ontario. As previously mentioned, the proposed Project includes the development of 3 passenger stations: one in the Cucamonga Metrolink Station western parking lot, one in the ONT Terminal 2 parking lot, and one in the ONT Terminal 4 parking lot. During project operation, the proposed Project is estimated to result in the permanent loss of 85 spaces in the ONT Lot 2 General parking lot, the permanent loss of 115 spaces in the ONT Lot 4 General parking lot, and the permanent loss of 180 spaces in the Cucamonga Metrolink Station western parking lot.

Ontario International Airport Parking

Parking demand at ONT is based on the methodology outlined in Section 4.4.1. As previously mentioned, the proposed Project is estimated to result in the permanent loss of 85 spaces in the ONT Lot 2 General parking lot and the permanent loss of 115 spaces in the ONT Lot 4 General parking lot during project operation. As a conservative measure, the highest value among the inbound and outbound trips for both a.m. and p.m. peak hours, as shown in Table 8-7 (Project Trip Generation (Traffic Operations Analysis)), was used to determine the proposed Project's parking demand for each build scenario. Table 8-10 (Ontario International Airport Parking Analysis During Project Operations - Opening Year (2031)) summarizes the estimated peak daily demand during a typical weekday and weekend day as well as any surplus or deficit of parking stalls for each ONT parking lot under opening year conditions.

As shown in Table 8-10 (Ontario International Airport Parking Analysis During Project Operations - Opening Year (2031)), all parking lots at ONT are forecast to operate with a surplus of parking stalls, with a total surplus of 2,449 parking stalls on a typical weekday and 2,925 parking stalls on a typical weekend day, under opening year conditions. As such, the number of available parking stalls for all ONT parking lots is sufficient to service the parking demand at each corresponding lot on a typical weekday and weekend day under opening year conditions. Therefore, under opening year conditions, no parking avoidance, minimization, or mitigation measures are recommended at ONT.

Table 8-11 (Ontario International Airport Parking Analysis During Project Operations - Design Year (2051)) summarizes the estimated peak daily demand during a typical weekday and weekend day as well as any surplus or deficit of parking stalls for each ONT parking lot under design year conditions.

As shown in Table 8-11 (Ontario International Airport Parking Analysis During Project Operations - Design Year (2051)), all parking lots at ONT are forecast to operate with a surplus of parking stalls, with a total surplus of 2,453 parking stalls on a typical weekday and 2,929 parking stalls on a typical weekend day, under design year conditions. As such, the number of available parking stalls for all ONT parking lots is sufficient to service the parking demand at each corresponding lot on a typical weekday and weekend day under design year conditions. Therefore, under design year conditions, no parking avoidance, minimization, or mitigation measures are recommended at ONT.

Detailed parking survey and OIAA parking data sheets are included in Appendix G.

Table 8-10: Ontario International Airport Parking Analysis During Project Operations – Opening Year (2031)

Parking Lot	Current Parking Stalls	Parking Stall Adjustment[1]	Available Parking Stalls During Project Operation	Project Demand[2]	Weekday: Existing Peak Demand[3]	Weekday: Build Demand	Weekday: Surplus/ (Deficit)	Weekday: % Utilization[4]	Weekend: Existing Peak Demand[3]	Weekend: Build Demand	Weekend: Surplus/ (Deficit)	Weekend: % Utilization[4]
Ontario International Airport												
Lot 2 - General	1,234	(85)	1,149	(1)	1,058	1,057	92	92%	1,033	1,032	117	90%
Lot 2 - Premium	347	0	347	0	311	311	36	90%	239	239	108	69%
Lot 3	1,192	0	1,192	0	829	829	363	70%	849	849	343	71%
Lot 4 - General	1,430	(115)	1,315	(2)	1,301	1,299	16	99%	924	922	393	70%
Lot 4 - Premium	352	0	352	0	340	340	12	97%	334	334	18	95%
Lot 5	2,316	0	2,316	0	1,019	1,019	1,297	44%	995	995	1,321	43%
Lot 6	1,337	0	1,337	0	704	704	633	53%	712	712	625	53%
			Total Observed Surplus				2,449				2,925	
			Total Observed Deficit				0				0	
			Remaining Surplus/(Deficit)[5]				2,449				2,925	

Notes:

1 Parking stall adjustment reflects either addition or loss of parking stalls due to future operations.

2 Project demand is determined by the highest number inbound or outbound trips among both a.m. and p.m. peak hours as shown in Table 8-7 'Project Trip Generation (Traffic Operations Analysis)'.

3 Parking demand data obtained from OIAA. Parking demand includes disability and EV charging parking. Parking demand includes data from all days between June 1, 2024 and June 11, 2024.

4 Hourly utilization rates calculated as the percentage of occupied stalls versus the total amount of parking stalls available.

5 Reflects the total number of surplus or deficit parking stalls among all parking lots on-site.

Table 8-11: Ontario International Airport Parking Analysis During Project Operation – Design Year (2051)

Parking Lot	Current Parking Stalls	Parking Stall Adjustment[1]	Available Parking Stalls During Project Operation	Project Demand[2]	Weekday Existing Peak Demand[3]	Weekday Build Demand	Weekday Surplus/ (Deficit)	Weekday % Utilization[4]	Weekend Existing Peak Demand[3]	Weekend Build Demand	Weekend Surplus/ (Deficit)	Weekend % Utilization[4]
Ontario International Airport												
Lot 2 - General	1,234	(85)	1,149	(5)	1,058	1,053	96	92%	1,033	1,028	121	89%
Lot 2 - Premium	347	0	347	0	311	311	36	90%	239	239	108	69%
Lot 3	1,192	0	1,192	0	829	829	363	70%	849	849	343	71%
Lot 4 - General	1,430	(115)	1,315	(2)	1,301	1,299	16	99%	924	922	393	70%
Lot 4 - Premium	352	0	352	0	340	340	12	97%	334	334	18	95%
Lot 5	2,316	0	2,316	0	1,019	1,019	1,297	44%	995	995	1,321	43%
Lot 6	1,337	0	1,337	0	704	704	633	53%	712	712	625	53%
			Total Observed Surplus				2,453				2,929	
			Total Observed Deficit				0				0	
			Remaining Surplus/(Deficit)[5]				2,453				2,929	

Notes:
1 Parking stall adjustment reflects either addition or loss of parking stalls due to future operations.
2 Project demand is determined by the highest number inbound or outbound trips among both a.m. and p.m. peak hours as shown in Table 8-7 'Project Trip Generation (Traffic Operations Analysis)'.
3 Parking demand data obtained from OIAA. Parking demand includes disability and EV charging parking. Parking demand includes data from all days between June 1, 2024 and June 11, 2024.
4 Hourly utilization rates calculated as the percentage of occupied stalls versus the total amount of parking stalls available.
5 Reflects the total number of surplus or deficit parking stalls among all parking lots on-site.

Cucamonga Metrolink Station Parking

Parking demand at the Cucamonga Metrolink Station is based on the methodology outlined in Section 4.4.2. As previously mentioned, the proposed Project is estimated to result in the permanent loss of 180 spaces at the Cucamonga Metrolink Station western parking lot during project operation, leaving 150 parking stalls available at this lot. As a conservative measure, the highest value between the inbound trips for a.m. and p.m. peak hours, as shown in Table 8-7 (Project Trip Generation (Traffic Operations Analysis)), was used to determine the proposed Project's parking demand.

Based on the proposed location of the project station terminal at the Cucamonga Metrolink Station, it is assumed that proposed Project passengers that park on-site will utilize the west lot due to its close proximity with the proposed Project's station terminal. As such, Cucamonga Metrolink Station project trips were added to the existing parking demand at the west lot to determine the peak demand during project operation.

In contrast, based on the descriptions provided by the *Brightline West Cajon Pass High-Speed Rail Project Transportation Technical Report*, it is assumed that Brightline West, intercity rail, employee, and Metrolink passengers will utilize the proposed parking structure with 4,100 total parking stalls that would replace the east lot. As such, Brightline West parking demand data was added to the existing parking demand data at the east lot to determine the peak demand during project operation. According to the Brightline West project, the proposed parking structure will reserve 650 parking stalls for Metrolink passengers, which is equal to the number of parking stalls provided by the existing east lot and is already included in the Brightline West demand data. Therefore, existing parking demand at the east lot has not been included to calculate the peak build demand as it is already included in the Brightline West demand data. Furthermore, it should be noted that all parking demand data provided by the Brightline West project reflects the peak daily demand during a typical week, which occurs between Friday and Saturday. As such, Brightline West parking demand data was consistently applied to both weekday and weekend day analyses as a conservative measure.

Table 8-12 (Cucamonga Metrolink Station Parking Analysis During Project Operations - Opening Year (2031)) summarizes the estimated peak daily demand during a typical weekday and weekend day as well as any surplus or deficit of parking stalls for both Cucamonga Metrolink Station parking lots under opening year conditions.

As shown in Table 8-12 (Cucamonga Metrolink Station Parking Analysis During Project Operations - Opening Year [2031]), both west and east lots are forecast to operate with a surplus of parking stalls, with a total surplus of 137 parking stalls on a typical weekday and 211 parking stalls on a typical weekend day, under opening year conditions. As such, the number of available parking stalls for all ONT parking lots is sufficient to service the parking demand at each corresponding lot on a typical weekday and weekend day under opening year conditions. Therefore, under opening year conditions, no parking mitigations are recommended at the Cucamonga Metrolink Station.

Table 8-13 (Cucamonga Metrolink Station Parking Analysis During Project Operations - Design Year (2051)) summarizes the estimated peak daily demand during a typical weekday and weekend day as well as any surplus or deficit of parking stalls for both Cucamonga Metrolink Station parking lots under design year (2051) conditions.

As shown in Table 8-13 (Cucamonga Metrolink Station Parking Analysis During Project Operations - Design Year (2051)), the west lot is forecast to operate with a surplus of 62 parking stalls and 136 parking stalls on a typical weekday and weekend day, respectively, under design year (2051) conditions. The number of available parking stalls for the west lot is sufficient to service the parking demand at this parking lot on a typical weekday and weekend day under design year conditions.

Brightline West is anticipated to have a peak daily demand of 8,654 parking stalls under their horizon year forecast, which would create a deficit of 4,554 parking stalls on both a typical weekday and weekend day. This parking deficit would result entirely from parking demand associated with Brightline West operations. As shown in Table 8-12 (Cucamonga Metrolink Station Parking Analysis During Project Operations - Opening Year [2031]) and Table 8-13 (Cucamonga Metrolink Station Parking Analysis during Project Operations - Design Year [2051]), during operation (in the opening year and design year), the proposed Project would not change the supply of and would not generate demand for parking stalls at the Cucamonga Metrolink Station east lot. SBCTA would continue to coordinate with SCRRA, Brightline West, Omnitrans, and the City of Rancho Cucamonga to minimize potential parking impacts when the proposed Project and Brightline West are operational. Therefore, during operation of the proposed Project, no parking avoidance, minimization, or mitigation measures are recommended at Cucamonga Metrolink Station.

Detailed parking survey sheets for the Cucamonga Metrolink Station are included in Appendix G.

Table 8-12: Cucamonga Metrolink Station Parking Analysis During Project Operation – Opening Year (2031)

Parking Lot	Current Parking Stalls	Parking Stall Adjustment[1]	Available Parking Stalls During Project Operation	Project Demand[2]	Brightline West Demand[3]	Weekday				Weekend			
						Existing Peak Demand[4]	Build Demand	Surplus/ (Deficit)	% Utilization[5]	Existing Peak Demand[4]	Build Demand	Surplus/ (Deficit)	% Utilization[5]
Cucamonga Metrolink Station													
West Lot	330	(180)	150	1	0	87	88	62	59%	13	14	136	9%
East Lot	650	3,450	4,100	0	4,025	168	4,025	75	98%	20	4,025	75	98%
					Total Observed Surplus			137				211	
					Total Observed Deficit			0				0	
					Remaining Surplus/(Deficit)[6]			137				211	

Notes:

[1] Parking stall adjustment reflects either addition or loss of parking stalls due to future operations.

[2] Project demand is determined by the highest number inbound or outbound trips among both a.m. and p.m. peak hours as shown in Table 8-7 'Project Trip Generation (Traffic Operations Analysis)'.

[3] Brightline West demand is extracted from the Brightline West Cajon Pass High-Speed Rail Project Transportation Technical Report, dated October 2022.

[4] Existing demand is based on parking surveys conducted by Counts Unlimited. Parking demand includes disability and EV charging parking. Parking surveys were conducted on June 22, 2024 (Saturday), June 25, 2024 (Tuesday), June 26, 2024 (Wednesday), and June 29, 2024 (Saturday).

[5] Hourly utilization rates calculated as the percentage of occupied stalls versus the total amount of parking stalls available.

[6] Reflects the total number of surplus or deficit parking stalls among all parking lots on-site.

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Table 8-13: Cucamonga Metrolink Station Parking Analysis During Project Operation – Design Year (2051)

						Weekday				Weekend			
Parking Lot	Current Parking Stalls	Parking Stall Adjustment[1]	Available Parking Stalls During Project Operation	Project Demand[2]	Brightline West Demand[3]	Existing Peak Demand[4]	Build Demand	Surplus/ (Deficit)	% Utilization[5]	Existing Peak Demand[4]	Build Demand	Surplus/ (Deficit)	% Utilization[5]
Cucamonga Metrolink Station													
West Lot	330	(180)	150	1	0	87	88	62	59%	13	14	136	9%
East Lot	650	3,450	4,100	0	8,654	168	8,654	(4,554)	211%	20	8,654	(4,554)	211%
				Total Observed Surplus		62				136			
				Total Observed Deficit		(4,554)				(4,554)			
				Remaining Surplus/(Deficit)[6]		(4,492)				(4,418)			

Notes:

1 Parking stall adjustment reflects either addition or loss of parking stalls due to future operations.

2 Project demand is determined by the highest number inbound or outbound trips among both a.m. and p.m. peak hours as shown in Table 8-7 'Project Trip Generation (Traffic Operations Analysis)'.

3 Brightline West demand is extracted from the Brightline West Cajon Pass High-Speed Rail Project Transportation Technical Report, dated October 2022.

4 Existing demand is based on parking surveys conducted by Counts Unlimited. Parking demand includes disability and EV charging parking. Parking surveys were conducted on June 22, 2024 (Saturday), June 25, 2024 (Tuesday), June 26, 2024 (Wednesday), and June 29, 2024 (Saturday).

5 Hourly utilization rates calculated as the percentage of occupied stalls versus the total amount of parking stalls available.

6 Reflects the total number of surplus or deficit parking stalls among all parking lots on-site.

8.2 WOULD THE PROJECT CONFLICT OR BE INCONSISTENT WITH CALIFORNIA ENVIRONMENTAL QUALITY ACT GUIDELINES SECTION 15064.3, SUBDIVISION (B)

8.2.1 No Project Alternative

Under the No Project Alternative, the proposed Project would not be constructed. State CEQA Guidelines Section 15064.3, subdivision (b), specifies applicable criteria for analyzing transport impacts. Specifically, it states the following:

"Transportation projects that reduce, or have no impacts on, VMT should be presumed to cause a less than significant transportation impact. For roadway capacity projects, agencies have the discretion to determine the appropriate measures of transportation impact consistent with CEQA and other applicable requirements."

While the proposed Project would not be constructed under the No Project Alternative, the No Project Alternative includes planned expansion, improvement projects, and routine maintenance activities for the existing roadway system and transit facilities. Such projects would be subject to their own environmental review. Further, it is anticipated that planned transportation-related projects would be consistent with all federal, state, regional and local goals and policies aimed at reducing environmental impacts from increased VMT, and therefore, under CEQA Guidelines, be presumed to cause a less than significant transportation impact related to exceedance of regional and local VMT thresholds. However, construction of foreseeable projects would likely result in a temporary increase in VMT due to trips generated by construction personnel traveling to and from the job sites, transport of construction equipment and materials, and removal of construction-generated debris (e.g., dirt removed during excavations that is not reused on site). Impacts related to construction-generated VMT increases of foreseeable projects would be analyzed during the environmental review process of these projects. The No Project Alternative, which includes future, planned projects, would not conflict, or be inconsistent with CEQA Guidelines Section 15064.3. subdivision (b).

8.2.2 Proposed Project

8.2.2.1 Construction Impacts

A qualitative analysis was conducted to analyze potential VMT impacts during the proposed Project's construction. *State CEQA Guidelines* Section 15064.3, Subdivision (b), allows for a qualitative analysis of construction traffic for many projects. During construction, the proposed Project would temporarily increase VMT within the study area due to construction vehicles traveling to and from the construction staging areas and transporting excavated materials to local landfill sites. As the proposed Project has the potential to temporarily increase regional VMT during construction, the proposed Project could result in a potential significant impact.

8.2.2.2 Operational Impacts

As mentioned previously, the proposed Project would provide connection from Cucamonga Metrolink Station to and from ONT, which would be a transportation improvement for the study area. Improvements to first/last-mile access encourage mode shift from automobiles to other modes, such as transit and nonmotorized travel. Therefore, the proposed Project would encourage the use of transit for the airport trips, thereby stimulating a mode shift from automobile to transit. As demonstrated under the proposed Project VMT analysis, the proposed Project would be reducing the overall regional VMT compared to the No Project Alternative. As such, the proposed Project would not result in a significant impact.

8.3 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)

8.3.1 No Project Alternative

The No Project Alternative includes planned expansion, improvement projects, and routine maintenance activities for the existing roadway system and transit facilities. Temporary short-term impacts on local streets adjacent to the No Project Alternative vicinity would experience potential extension of construction activities into the public ROW, which could result in a reduction in the number of travel lanes or temporary closure of segments of adjacent roadways. Any such impacts would be limited to the construction period of the No Project Alternative and would impact only adjacent streets or intersections. However, safety measures would be set in place in accordance with BMPs, including wayfinding and signage, alternative travel routes, and maintaining access to local businesses and residents. The No Project Alternative would be designed in accordance with local and regional design requirements such that operational activities are not anticipated to increase hazards on the existing circulation network due to any design features or incompatible uses.

8.3.2 Proposed Project

8.3.2.1 Construction Impacts

As previously described, construction of the proposed Project includes aboveground and belowground elements that would be designed in accordance with local and regional building requirements. Temporary short-term impacts on local streets adjacent to the proposed Project site would experience increased VMT due to roadway and infrastructure improvements, and the potential extension of construction activities into the public ROW could result in a reduction of the number of travel lanes, or temporary closure of segments of adjacent roadways. Any such impacts would be limited to the construction period of the proposed Project and would impact only adjacent streets or intersections. However, safety measures would be set in place in accordance with BMPs, including wayfinding and signage, alternative travel routes, and maintaining access to local businesses and residences. As such, it is anticipated that the proposed Project's construction traffic will have a temporary impact on the existing circulation network. However, the impact of the proposed Project construction traffic is anticipated to be less than significant with the implementation of mitigation measures as detailed in Section 9.2.2.2.

8.3.2.2 Operational Impacts

The proposed Project would include the operation of autonomous vehicles within a closed system that is primarily underground. As such, this portion of the proposed Project would not present geometric hazards or incompatible uses within the existing roadway network. The aboveground proposed Project features (e.g., proposed stations, vent shaft, and MSF) would be constructed within existing surface parking lots for the Cucamonga Metrolink Station and Terminals 2 and 4 at ONT and would be designed in accordance with local and regional design requirements. As such, the proposed Project would not have a significant.

8.4 WOULD THE PROJECT RESULT IN INADEQUATE EMERGENCY ACCESS

8.4.1 No Project Alternative

The No Project Alternative includes planned expansion, improvement projects, and routine maintenance activities for the existing roadway system and transit facilities. Temporary short-term construction impacts on local streets and freeways could occur due to roadway and infrastructure improvements and the potential extension of construction activities into the public ROW. As such, the No Project Alternative could result in a reduction of the number of lanes or temporary closure of segments of adjacent roadways. Any such impacts would be limited to the construction period of the No Project Alternative and would affect only adjacent streets or intersections. These short-term construction impacts would not interfere with any adopted emergency response or evacuation plans.

The No Project Alternative would be designed to incorporate adequate emergency access (e.g., parking lot driveways, sufficient turning movements for emergency vehicles). Further, compliance with applicable San Bernardino County design criteria pertaining to emergency vehicle access, as well as the California Fire Code standards would ensure that operation of the No Project Alternative would not impair implementation of, or physically interfere with, any adopted emergency response or evacuation plans. Therefore, the No Project Alternative is not anticipated to result in inadequate emergency access for the existing circulation network.

8.4.2 Proposed Project

8.4.2.1 Construction Impacts

Temporary short-term construction impacts on street traffic adjacent to the proposed Project site due to roadway and infrastructure improvements and the potential extension of construction activities into the ROW could result in a reduction of the number of lanes or temporary closure of segments of adjacent roadways. Any such impacts would be limited to the construction period of the proposed Project and would affect only adjacent streets or intersections. These short-term construction impacts would not interfere with any adopted emergency response or evacuation plans and would be a less than significant impact.

8.4.2.1.1 Vent Shaft Design Option 2 – Scenario 2A

As previously stated, vent shaft design option 2 is located between Milliken Avenue and the I-10 westbound loop-on off-ramp. As such, construction for vent shaft design option 2 could result in temporary lane or freeway ramp closures due to the close proximity of the staging area to existing roadways such as Milliken Avenue and the I-10 westbound ramps. Such impacts would be limited to the construction period of the vent shaft design option 2. However, safety measures would be set in place in accordance with BMPs, including wayfinding and signage, alternative travel routes, and maintaining access to local businesses and residences. These short-term construction impacts would not interfere with any adopted emergency response or evacuation plans.

8.4.2.1.2 Vent Shaft Design Option 4 - Scenario 2B

As previously stated, vent shaft design option 4 is located between Milliken Avenue and the I-10 eastbound loop-on on-ramp. As such, construction for vent shaft design option 4 could result in temporary lane or freeway ramp closures due to the close proximity of the staging area to existing roadways such as Milliken Avenue and the I-10 eastbound ramps. Such impacts would be limited to the construction period of the vent shaft design option 4. However, safety measures would be set in place in accordance with BMPs, including wayfinding and signage, alternative travel routes, and maintaining access to local businesses and residences. These short-term construction impacts would not interfere with any adopted emergency response or evacuation plans.

8.4.2.2 Operational Impacts

The proposed Project would primarily be underground, with the exception of the proposed at-grade stations. The proposed Cucamonga Station would be located in the northwestern corner of the existing Cucamonga Metrolink Station parking lot, and two stations are proposed at ONT within the existing parking lots located across from Terminals 2 and 4. These parking lots currently have sufficient ingress and egress routes that allow emergency access. The proposed Project would be designed to incorporate adequate emergency access (e.g., parking lot driveways, sufficient turning movements for emergency vehicles) at the proposed Project termini. Further, compliance with applicable county design criteria pertaining to emergency vehicle access as well as the California Fire Code standards would ensure that operation of the proposed Project would not impair implementation of, or physically interfere with, any adopted emergency response or evacuation plans.

9 MITIGATION MEASURES AND IMPACTS AFTER MITIGATION

9.1 MITIGATION MEASURES FOR TRANSPORTATION.

9.1.1 No Project Alternative

No mitigation measures would be required for the No Project Alternative during construction and operation.

9.1.2 Proposed Project

9.1.2.1 Construction Impacts

The proposed Project would implement the following mitigation measure during construction.

MM-TRA-1: San Bernardino County Transportation Authority and the contractor shall prepare a TMP as needed to facilitate the flow of traffic in and around construction zones and to reduce proposed Project construction vehicle-miles traveled. The TMP shall include, at minimum, the following measures:

- The proposed Project contractor shall encourage construction workers to participate in vanpool and carpool opportunities to reduce congestion and vehicle-miles traveled on the regional transportation network.
- The proposed Project contractor shall be encouraged to hire local construction workers who would have lower commute distance to the construction site.
- Develop detour routes to facilitate traffic movement through construction zones without significantly increasing cut-through-traffic in adjacent residential areas.
- Develop and implement an outreach program and public awareness campaign in coordination with Caltrans, the City of Rancho Cucamonga, the City of Ontario and the San Bernardino County to inform the general public about the construction process and planned roadway closures, potential impacts, and mitigation measures.
- Provide wayfinding signage, lighting, and access to specify pedestrian safety amenities (such as handrails, fences, and alternative walkways) during construction.
- Temporarily modify signal timings at specified intersections during construction.
- Where construction encroaches on sidewalks, walkways and crosswalks, special pedestrian safety measures shall be used, such as detour routes and temporary pedestrian barricades.

- Coordinate with first responders and emergency service providers to minimize impacts on emergency response.
- Maintain customer and delivery access to all operating businesses near construction work areas.
- The proposed Project contractor shall encourage construction workers to participate in vanpool and carpool opportunities to reduce congestion and vehicle-miles traveled on the regional transportation network.
- The proposed Project contractor shall be encouraged to hire local construction workers who would have lower commute distance to the construction site.

9.1.2.2 Operational Impacts

- No mitigation measures are required for transportation or traffic during operation of the proposed Project.

9.2 CEQA SIGNIFICANCE CONCLUSION

9.2.1 Conflict with a Program Plan, Ordinance or Policy Addressing the Circulation System, Including Transit, Roadways, Bicycle and Pedestrian Facilities

9.2.1.1 No Project Alternative

While the proposed Project would not be constructed under the No Project Alternative, the No Project Alternative includes planned expansion, improvement projects, and routine maintenance activities for the existing roadway system and transit facilities. Construction and operation of these projects may result in roadway impacts; however, these planned projects would be subject to separate environmental review and, in an effort to reduce construction-related effects, would be required to comply with existing regulations, similar to those listed in Section 3, Regulatory Setting.

The No Project Alternative construction and operation of these projects may result in conflicts with existing program plans, ordinances or policies addressing the circulation system, including transit, roadways, bicycle, and pedestrian facilities. However, construction activities under the No Project Alternative would be reviewed by applicable jurisdictions, i.e., the City of Rancho Cucamonga or the City of Ontario with appropriate transit agencies consulted prior to construction activities. The operation activities associated with the No Project Alternative would advance the PlanRC and Ontario Plan's goals and policies which aim to improve circulation within the cities, including transit, roadway, bicycle and pedestrian facilities. In addition, under the No Project Alternative, the proposed Project will not have any conflicts with existing program plans, ordinances or policies addressing the circulation system, including transit, roadways, bicycle, and pedestrian facilities. With adherence to federal, state, and local policies and plans, the No Project Alternative would result in less than significant impacts.

9.2.1.2 Proposed Project

This Transportation Technical Report addressed both the NEPA and CEQA requirements and includes both LOS and VMT discussion and evaluation. For CEQA analysis, VMT is the current standard for evaluating transportation impacts under CEQA and is the basis for impact evaluation. The discussion of LOS included in this section for CEQA is for informational and disclosure purposes only.

The proposed Project would not result in modifications to roadway, bicycle, or pedestrian facilities; therefore, the proposed Project would not conflict with related plans or policies regarding transit, bicycle, and pedestrian facilities, as the proposed Project would be subject to review by multiple agencies throughout its duration. Additionally, MM-TRA-1 would be implemented during construction, which requires SBCTA to prepare a TMP to facilitate the flow of traffic in and around construction zones and to reduce proposed Project construction VMT. Therefore, the proposed Project would not conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadways, bicycle, and pedestrian facilities during operations, and impacts would be less than significant with mitigation.

The proposed Project would be consistent with SB 375 through compliance with SCAG's RTP, and the SANBAG's CMP. The proposed Project would comply with the Complete Streets Act of 2008 which requires that General Plans (which includes PlanRC and the Ontario Plan) accommodate a balanced, multimodal transportation network that meets the needs of all users of streets, roads, and highways in a manner that is suitable to applicable rural, suburban, or urban contexts.

The proposed Project's circulation elements would be consistent with the PlanRC chapters pertaining to the land use and mobility (circulation) system, including transit, roadway, bicycle and pedestrian facilities. In addition, the proposed Project would be consistent with the goals and policies of the Mobility Element of the Ontario Plan by enhancing multimodal transportation networks, efficiently and safely accommodating the movement of people and products through the City of Ontario, following the City of Ontario's transportation system design standards, and generally contributing to the improvement of the City of Ontario's transportation system.

Because much of the proposed Project is located underground, it is not anticipated that the proposed Project would conflict with programs, plans, ordinances, or policies addressing circulation with the exception of signal timing improvements at select intersections. The intersections of Archibald Avenue – Terminal Way/Airport Drive and East Terminal Way/Airport Drive (East) are forecast to operate at a deficient LOS under Design Year (2051) Build conditions. With the recommended signal timing improvements, both intersections are forecast to operate at a satisfactory LOS in the a.m. peak hour under Design Year (2051) Build with Improvements conditions. However, the intersection of Archibald Avenue – Terminal Way/Airport Drive is still forecast to operate at a deficient LOS in the p.m. peak hour under Design Year (2051) Build with Improvements conditions. It should be noted that this intersection is forecast to have less average vehicle delay with the recommended signal timing improvements than compared to No Build conditions. Furthermore, the proposed Project sees a reduction of trips compared to the No Project Alternative. The proposed Project would support transit-related policies by providing an alternative to vehicular travel and first/last-mile access between the Cucamonga Metrolink Station and ONT. Therefore, the proposed Project would not conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadways, bicycle, and pedestrian facilities during operations, and a less than significant impact would occur.

9.2.2 Conflict or be Inconsistent with California Environmental Quality Act Guidelines Section 15064.3, Subdivision (b)

9.2.2.1 No Project Alternative

Under the No Project Alternative, the proposed Project would not be constructed. State CEQA Guidelines Section 15064.3, subdivision (b), specifies applicable criteria for analyzing transport impacts. Specifically, it states the following:

"Transportation projects that reduce, or have no impacts on, VMT should be presumed to cause a less than significant transportation impact. For roadway capacity projects, agencies have the discretion to determine the appropriate measures of transportation impact consistent with CEQA and other applicable requirements."

While the proposed Project would not be constructed under the No Project Alternative, the No Project Alternative includes planned expansion, improvement projects, and routine maintenance activities for the existing roadway system and transit facilities, and such projects would be subject to environmental review. Further, it is anticipated that planned transportation related projects would be consistent with all federal, state, regional and local goals and policies aimed at reducing environmental impacts from increased VMT, and therefore, under CEQA Guidelines, be presumed to cause a less than significant transportation impact related to exceedance of regional and local VMT thresholds. However, construction of foreseeable projects would likely result in a temporary increase in VMT due to trips generated by construction personnel traveling to and from the job sites, transport of construction equipment and materials, and removal of construction generated debris (e.g., dirt removed during excavations that is not reused on site). Impacts related to construction generated VMT increases of foreseeable projects would be analyzed during the environmental review process of these projects. However, it is anticipated that construction and operation VMT impacts would be less than significant.

Therefore, the No Project Alternative, which includes future, planned projects, would have a less than significant impact on VMT and would not be in conflict, or inconsistent with CEQA Guidelines Section 15064.3, subdivision (b).

9.2.2.2 Proposed Project

VMT data presented in Sections 6.2 and 7.2 illustrate that the proposed Project would not result in a significant increase in VMT during operations Sections 6.2 and 7.2. As such, no mitigation measures are required, and impacts would remain less than significant.

The qualitative assessment conducted for the proposed Project as discussed in Sections 6.2 and 7.2 shows that the proposed Project would temporarily increase regional VMT during construction activities. Mitigation to offset the temporary VMT impact during construction is listed under MM-TRA-1. Vanpool and carpool have been proven TDM measures for reducing congestion and VMT on regional transportation networks. Vanpool and carpool are suitable for employment locations, and they tend to produce only a fraction of traffic and VMT compared to multiple single-occupant vehicles generated by construction employees. Implementation of the TMP identified as part of MM-TRA-1 would reduce proposed Project construction VMT.

A commute trip is considered a mandatory trip which is especially true for construction workers. Hiring locally would reduce the amount of VMT that would be generated from workers otherwise having a longer commute VMT. While the number of trips coming to the proposed Project area would remain the same, the distance from where those workers travel would be reduced, as the trip lengths for local workers would be shorter when compared to out-of-region workers.

Provision of free or reduced-cost transit passes with implementation of MM-TRA-1 would assist in encouraging a mode-shift by construction workers. These transit passes would also encourage individuals that cannot participate in the workforce due to lack of transportation. Therefore, provision of free/reduced-cost transit passes would reduce VMT by encouraging construction worker mode-shift.

With implementation of MM-TRA-1, the proposed Project's construction impacts would be less than significant with mitigation.

9.2.3 Substantially Increase Hazards Due to Geometric Design Feature (e.g., Sharp Curves or Dangerous Intersections) or Incompatible Uses (e.g., Farm Equipment)

9.2.3.1 No Project Alternative

The No Project Alternative includes planned expansion, improvement projects, and routine maintenance activities for the existing roadway system and transit facilities. Temporary short-term impacts on local streets adjacent to the No Project Alternative vicinity would experience potential extension of construction activities into the public ROW, which could result in a reduction in the number of travel lanes or temporary closure of segments of adjacent roadways. Any such impacts would be limited to the construction period of the No Project Alternative and would impact only adjacent streets or intersections. However, safety measures would be set in place in accordance with BMPs, including wayfinding and signage, alternative travel routes, and maintaining access to local businesses and residences. The No

Project Alternative would be designed in accordance with local and regional design requirements such that operational activities are not anticipated to increase hazards on the existing circulation network due to any design features or incompatible uses. Therefore, construction and operational impacts would be less than significant.

9.2.3.2 Proposed Project

The proposed Project would be located primarily underground. The aboveground proposed Project features (e.g., proposed stations, vent shaft, and MSF) would be constructed on existing developed properties and would be designed in accordance with local and regional design guidelines. Therefore, the proposed Project would not substantially increase hazards due to any design features for incompatible uses, and impacts would be less than significant. Implementation of a TMP to facilitate the flow of traffic and transit service in and around construction zones, as outlined in MM-TRA-1, would reduce potential construction impacts related to hazards from geometric design features to less than significant.

9.2.4 Result in Inadequate Emergency Access

9.2.4.1 No Project Alternative

The No Project Alternative includes planned expansion, improvement projects, and routine maintenance activities for the existing roadway system and transit facilities. Temporary short-term construction impacts on local streets and freeways could occur adjacent to the No Project Alternative vicinity due to roadway and infrastructure improvements and the potential extension of construction activities into the public ROW. As such, the No Project Alternative could result in a reduction in the number of lanes or temporary closure of segments of adjacent roadways. Any such impacts would be limited to the construction period of the No Project Alternative and would affect only adjacent streets or intersections. These short-term construction impacts would not interfere with any adopted emergency response or evacuation plans.

The No Project Alternative would be designed to incorporate adequate emergency access (e.g., parking lot driveways, sufficient turning movements for emergency vehicles). Further, compliance with applicable San Bernardino County design criteria pertaining to emergency vehicle access, as well as the California Fire Code standards would ensure that operation of the No Project Alternative would not impair implementation of, or physically interfere with, any adopted emergency response or evacuation plans. Therefore, the No Project Alternative is not anticipated to result in inadequate emergency access for the existing circulation network, and impacts would be less than significant.

9.2.4.2 Proposed Project

The proposed Project would be located primarily underground and would be designed to incorporate and maintain adequate emergency access (e.g., parking lot driveways, sufficient turning movements for emergency vehicles) at the proposed Project termini. With implementation of MM-TRA-1, short-term construction impacts would not interfere with any adopted emergency response or evacuation plans. Therefore, with implementation of MM-TRA-1, construction of the proposed Project is not anticipated to result in inadequate emergency access for the existing circulation network during construction, and impacts would be less than significant.

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