4.B Transportation and Traffic

Introduction

This section describes the existing transportation setting, including the roadway, transit, pedestrian and bicycle networks serving the project site, and a summary of transportation regulations applicable to the proposed project. Thresholds of significance are presented, as is an analysis of potential effects associated with implementation of the proposed project. Descriptions and analyses presented within this section are based on traffic modeling conducted in December 2017 and April 2018 by W-Trans (see **Appendix D**).

Environmental Setting

Roadway Network

The City of Fremont roadway network in the vicinity of the proposed project is comprised of freeways, arterials, collector streets and local streets. **Figure 4.B-1** illustrates the roadway network.

Regional Roadways

Interstate 880 (I-880) is a major regional freeway that runs in the north-south direction through Fremont, serving the East Bay and South Bay, and connecting State Route 17 (SR-17) in San Jose to I-980 in Oakland. In the project study area, it has three mixed-use lanes plus a High-Occupancy Vehicle (HOV) lane in each direction. I-880 currently serves approximately 197,000 vehicles per day in this area, including approximately 13,500 vehicles during the peak hour (Caltrans, 2015). I-880 provides access to Mission Boulevard in the project study area via the interchanges at Decoto Road and Mowry Avenue.

Interstate 680 (I-680) is a major regional freeway that runs east-west through Fremont from San Jose to I-80 in Cordelia. In the vicinity of the proposed project, the roadway has eight lanes (four lanes in each direction, including a High-Occupancy Toll (HOT) lane in the southbound direction) and serves approximately 148,000 vehicles per day.

State Route 84 (SR-84) runs in the north-south direction connecting U.S. 101 on the peninsula and I-880 in Fremont. The roadway has six lanes (three lanes in each direction) and becomes Decoto Road east of I-880. In the project study area, it serves approximately 15,000 vehicles per day, including about 1,650 vehicles during the peak hour (Caltrans, 2015). SR-84 provides access to the project study area via the interchanges at Mission Boulevard (SR-238)/Mowry Avenue and Mission Boulevard (SR-238)/Niles Boulevard/Niles Canyon Road.

Mission Boulevard (SR-238) is an arterial running north-south between Hayward and I-680 in Fremont. The roadway segments south of Mowry Avenue and north of Niles Canyon Road have four lanes, and between Mowry Avenue and Niles Canyon Road there are six lanes.

SOURCE: W-Trans, 2018

Niles Gateway Mixed-Use Project

Figure 4.B-1
Study Area and Lane Configurations

ESA

Local Roadways

J Street is a two-lane, east-west collector roadway that runs from Niles Boulevard to Alameda Creek Trail.

Mowry Avenue is a two- to four-lane arterial roadway in the vicinity of the proposed project that runs from Mission Boulevard (SR-238) into Newark, and connects to I-880. Mowry Avenue serves as a section of SR-84 running through Fremont.

Niles Boulevard is oriented north-south from the project site to Alvarado-Niles Road and in the east-west direction from the project site to Mission Boulevard (SR-238). The arterial roadway's number of lanes varies from two to four plus a center two-way left-turn lane.

Niles Canyon Road is a two-lane east-west regional arterial roadway that runs from Mission Boulevard (SR-238) to Sunol. Niles Canyon Road serves as SR-84 between Mission Boulevard and I-680 in Sunol.

Nursery Avenue is a two-lane local roadway running east-west between Mission Boulevard (SR-238) and Niles Boulevard.

Sullivan Underpass is a two-lane collector roadway running east-west connecting Mission Boulevard (SR-238) and Niles Boulevard.

Traffic Operating Conditions

Operating conditions during the weekday a.m. and p.m. peak periods were evaluated to capture the greatest potential impacts for the proposed project as well as the highest volumes on the local transportation network. The morning peak hour occurs between 7:00 and 9:00 a.m. and reflects conditions during the home-to-work or school commute, while the p.m. peak hour occurs between 4:00 and 6:00 p.m., and typically reflects the highest level of congestion during the work-to-home commute.

Study Area

The project study area was selected based on the potential for project impacts and includes the following four signalized and three unsignalized intersections:

1. Mission Boulevard (SR-238) and Nursery Avenue (signalized)
2. Mission Boulevard (SR-238) and Sullivan Underpass (unsignalized)
3. Mission Boulevard (SR-238) and Niles Boulevard / Niles Canyon Road (signalized)
4. Mission Boulevard (SR-238) and Mowry Avenue (signalized)
5. Niles Boulevard and Nursery Avenue (signalized)
6. Niles Boulevard and Sullivan Underpass (unsignalized)
7. Niles Boulevard and J Street (unsignalized)

In addition, the project study area includes the following 14 road segments for Congestion Management Program (CMP) analysis:[1]

1. Mission Boulevard (SR-238) southbound, from Decoto Road to Nursery Avenue
2. Mission Boulevard (SR-238) northbound, from Nursery Avenue to Decoto Road
3. Mission Boulevard (SR-238) southbound, from Nursery Avenue to Niles Canyon Road
4. Mission Boulevard (SR-238) northbound, from Niles Canyon Road to Nursery Avenue
5. Mission Boulevard (SR-238) southbound, from Niles Canyon Road to Mowry Avenue
6. Mission Boulevard (SR-238) northbound, from Mowry Avenue to Niles Canyon Road
7. Mission Boulevard (SR-238) southbound, from Mowry Avenue to Walnut Avenue
8. Mission Boulevard (SR-238) northbound, from Walnut Avenue to Mowry Avenue
9. Mowry Avenue (SR-84) westbound, from Mission Boulevard (SR-238) to Peralta Boulevard (SR-84)
10. Mowry Avenue (SR-84) eastbound, from Peralta Boulevard (SR-84) to Mission Boulevard (SR-238)
11. Niles Canyon Road (SR-84) westbound, from I-680 to Mission Boulevard (SR-238)
12. Niles Canyon Road (SR-84) eastbound, from Mission Boulevard (SR-238) to I-680
13. I-680 southbound, from Mission Boulevard (SR-238) to Washington Boulevard
14. I-680 northbound, from Mission Boulevard (SR-238) to Vargas Road

Level of Service Conditions

The concept of Level of Service (LOS) is used to characterize traffic operating conditions on various types of facilities (intersections and roadways) based on traffic volumes and roadway capacity using a series of six letter designations. Generally, LOS A represents free-flow conditions and LOS F represents heavily congested or breakdown conditions. LOS methodologies for intersections, freeways and arterials are described below under "Methodology" (page 4.B-15), and the City of Fremont General Plan policy regarding LOS standards is described below under "Significance Criteria" (Page 4.B-16).

Intersections. Traffic volume data was collected on Thursday, May 4, 2017, on a date when local schools were in session. As shown in **Table 4.B-1**, all seven study intersections are currently

[1] Each county in the Bay Area, and each urban county in California generally, has a countywide agency that administers a county congestion management program (CMP), which is intended to monitor and manage congestion on key routes on the CMP network and ultimately reduce greenhouse gas emissions, in conformance with state law. In Alameda County, the congestion management agency is the Alameda County Transportation Commission. The CMP network includes, at a minimum, state highways and principal arterials. In the Fremont area, the Tier 1 CMP network includes I-880, I-680, SR 238 (Mission Boulevard), Decoto Road, Mowry Avenue, SR 262 (Mission Boulevard), and SR-84 (including parts of Thornton Avenue, Fremont Boulevard, Peralta Boulevard, Mowry Avenue, and Niles Canyon Road). Additional roadways form a Tier 2 network that is monitored for informational purposes only (ACTC, 2017a). For purposes of this EIR, the terms CMP network and CMP roads/streets refer to roadways included in the legislatively mandated Tier 1 CMP network.

operating acceptably at LOS D or better (or LOS E where that standard applies) except for the eastbound approach at the intersection of Mission Boulevard (SR-238) and Sullivan Underpass during both the a.m. and p.m. peak hours, and the intersection of Mission Boulevard (SR-238) and Mowry Avenue during the a.m. peak hour. The existing traffic volumes are shown in **Figure 4.B-2**.

TABLE 4.B-1
EXISTING PEAK HOUR INTERSECTION LEVELS OF SERVICE (LOS)

Study Intersection *Approach*	AM Peak Hour		PM Peak Hour	
	Delay	LOS	Delay	LOS
1. Mission Blvd (SR-238)/Nursery Ave	53.1	D	38.6	D
2. Mission Blvd (SR-238)/Sullivan Underpass	11.8	B	7.3	A
Eastbound Sullivan Underpass Approach	**	**F**	**	**F**
3. Mission Blvd (SR-238)/Niles Blvd and Niles Canyon Rd	58.1	E	58.3	E
4. Mission Blvd (SR-238)/Mowry Ave	**85.7**	**F**	32.0	C
5. Niles Blvd/Nursery Ave	29.4	C	33.3	C
6. Niles Blvd/Sullivan Underpass	3.2	A	3.8	A
Eastbound Sullivan Underpass Approach	19.5	C	17.3	C
7. Niles Blvd/J St	2.2	A	2.5	A
Eastbound J St Approach	21.8	C	13.8	B

NOTES: Results are displayed as Delay/LOS; Delay is measured in average seconds per vehicle;
For unsignalized intersections, overall intersection results presented first, followed by minor street movement with greatest delay, which is the approach presented in the Highway Capacity Manual.
LOS = Level of Service; **= Saturated Movement, Delay not Meaningful; Bold text= Deficient Operation

SOURCE: W-Trans, 2017 (Appendix D)

Public Transit Service

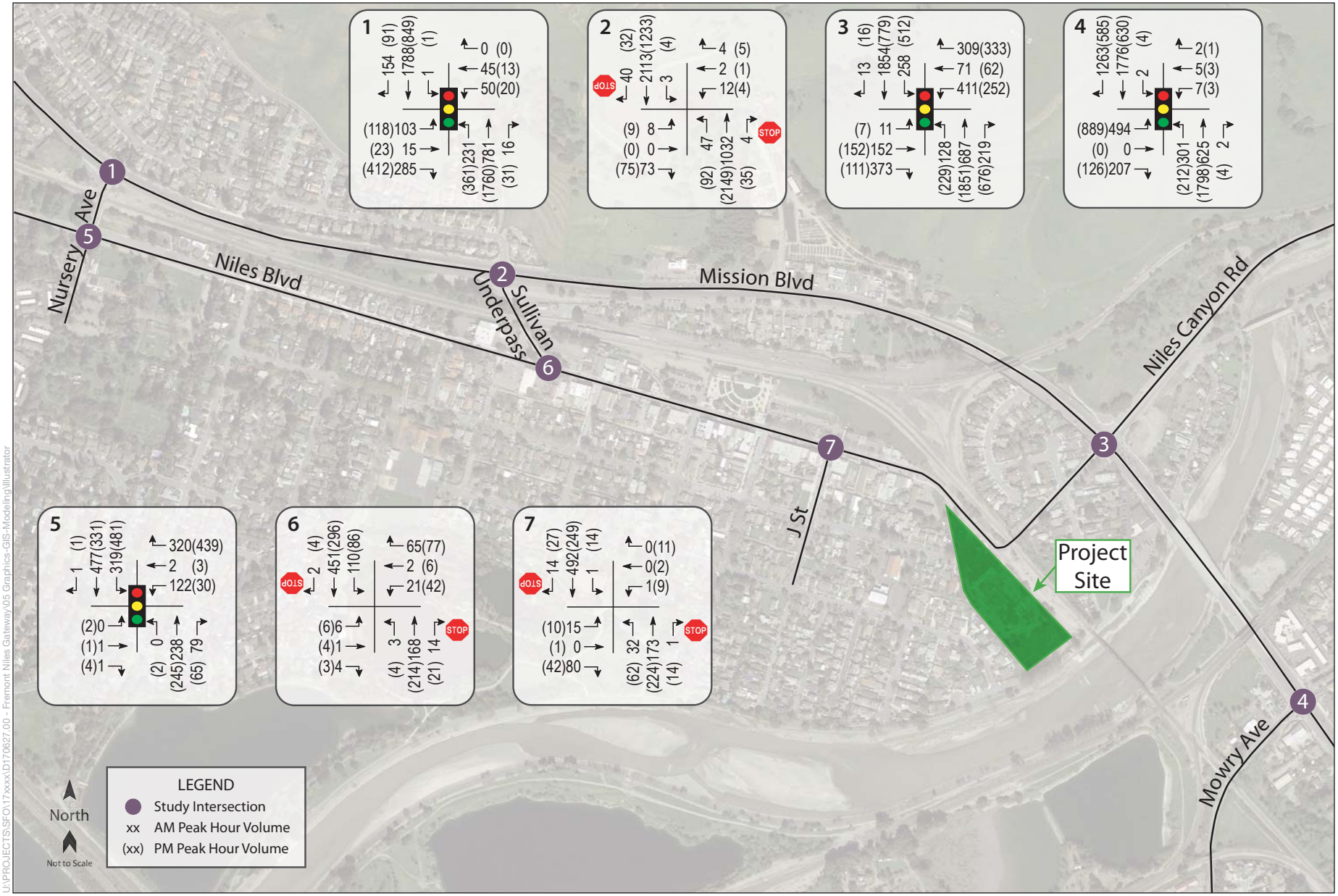
Figure 4.B-3 illustrates the existing transit routes within the project study area.

AC Transit

Alameda-Contra Costa County (AC) Transit provides bus transit service throughout the East Bay. There are numerous bus routes that run along major streets in Fremont, connecting to the adjacent cities of Union City and Newark. The following bus routes currently operate in the project study area (AC Transit, 2017).

Route 216 runs between Bay Area Rapid Transit's (BART) Union City Station and the Ohlone College Newark Campus via Niles Boulevard. The nearest bus stop location to the proposed project is on Niles Boulevard at Vallejo Street. Route 216 operates between 6:00 a.m. and 8:00 p.m. on weekdays with 60-minute headways. On weekends Route 216 operates from 7:00 am to 8:00 pm with one-hour headways.

Route 232 connects BART's Fremont Station and the Newpark Mall via Mission Boulevard (SR-238) in the project study area. The nearest bus stop location to the proposed project, is at the



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SOURCE: W-Trans, 2018

Niles Gateway Mixed-Use Project

Figure 4.B-2
Existing Traffic Volumes

ESA

SOURCE: W-Trans, 2018

Niles Gateway Mixed-Use Project

Figure 4.B-3
Transit System

ESA

intersection of Niles Boulevard-Niles Canyon Road and Mission Boulevard. Route 232 operates with 60-minute headways between 5:30 a.m. and 8:20 p.m. on weekdays. On weekends Route 232 operates from 7:30am to 8:00 pm with one-hour headways.

Route 625 connects Niles Boulevard to Centerville Jr. High School and Washington High School. The nearest bus stops are located at Niles Boulevard and Vallejo Street. Route 625 runs once in the morning, leaving at approximately 7:30 a.m., and has two services from the schools to the Niles Area after school around 2:00 or 3:00 p.m. Route 625 does not have weekend service.

BART

The BART system provides rail service between San Mateo, San Francisco, Alameda, and Contra Costa counties, with stations in Fremont near Mowry Avenue and Civic Center Drive and on Warm Springs Boulevard near S. Grimmer Boulevard, and a station in Union City on Decoto Road near Union Square. The project site is located approximately two miles from the Fremont BART Station, approximately three miles from the Union City BART Station, and approximately 6.5 miles from the Warm Springs/South Fremont BART Station (BART, 2017).

The Dumbarton Express

The Dumbarton Express operates on weekdays as an express bus service across the Dumbarton Bridge, connecting Union City, Fremont, Newark, Menlo Park and Palo Alto. Dumbarton Express service is provided through a consortium of AC Transit, BART, Union City Transit, Caltrain, SamTrans, and VTA. Routes DB and DB1 provide service from the Union City BART station to the Stanford Oval and the Stanford Research Park respectively. Route DB runs from 5:20 a.m. to 8:50 p.m. with headways of 10 to 30 minutes depending on the time of day. Route DB1 runs from 5:25 a.m. to 8:45 p.m. Route DB1 has headways ranging from 15 minutes to 25 minutes. No weekend service is provided on either route. The nearest bus stop location to the proposed project is at Decoto Road and Alvarado Niles Road (The Dumbarton Express, 2017).

Altamont Corridor Express (ACE)

ACE is a commuter rail for those who travel westbound in the morning and eastbound in the evening between San Jose and Stockton. There is a station in Fremont on Fremont Boulevard, approximately 3 miles from the proposed project. ACE provides Westbound Service on four trains each morning from 4:20 a.m. to 9:20 a.m. with 30-minute to 75-minute headways. From 3:30 p.m. to 9:00 pm ACE provides eastbound service with 60-minute headways (ACE, 2018).

Amtrak

Amtrak is a passenger rail system which operates throughout the entire Country. In the Bay Area the Capital Corridor route runs between Auburn and San Jose, with a stop in Fremont. The Fremont station is on Fremont Boulevard approximately 3 miles from the proposed project (Amtrak, 2017).

Pedestrian and Bicycle Circulation

Policy 11-9.6 of the North Fremont Community Plan (found in the Community Plans Element of the General Plan) seeks to make North Fremont neighborhoods less auto-dependent, including improving pedestrian and bicycle connections.

Pedestrian Facilities

Pedestrian facilities include sidewalks, crosswalks, pedestrian signals, curb ramps, curb extensions, and various streetscape amenities such as lighting, benches, etc. In general, a network of sidewalks, crosswalks, pedestrian signals, and curb ramps provide access for pedestrians in the vicinity of the project site; however, sidewalk gaps, obstacles, and barriers can be found along some of the roadways connecting to the project site. Existing gaps and obstacles along the connecting roadways negatively affect convenient and continuous access for pedestrians and present safety concerns in those locations where appropriate pedestrian infrastructure would address potential conflict points.

Existing pedestrian traffic flow is relatively light in the vicinity of the project site. More activity is noticeable in the vicinity of the commercial areas on Niles Boulevard approximately one quarter-mile north of the project site.

There are currently sidewalks on both sides of Niles Boulevard in the vicinity of the project site. On Mission Boulevard (SR-238) north of Niles Canyon Road/Niles Boulevard, there are sidewalks on the west side only. South of Niles Canyon Road/Niles Boulevard, sidewalks are provided along both sides of Mission Boulevard (SR-238).

Bicycle Facilities

Both the *2011 General Plan* and the draft *2017 City of Fremont Bicycle Master Plan* identify existing and planned bicycle facilities in the vicinity of the project site (City of Fremont, 2011a, 2012). The system consists of three classifications of bicycle facilities:

- Class I facilities (bike path) are completely separated, with paved right-of-way (shared with pedestrians) which excludes general motor vehicle traffic.
- Class II facilities (bike lane) provide a striped and stenciled lane for one-way bike travel on a street or highway.
- Class III facilities (bike route) share a roadway with motor vehicle traffic and are only identified by signage.

Guidance for Class IV Bikeways is provided in *Design Information Bulletin Number 89: Class IV Bikeway Guidance (Separated Bikeways/Cycle Tracks), Caltrans, 2015.*

- Class IV facilities (bikeway) also known as a separated bikeway, is for the exclusive use of bicycles and includes a separation between the bikeway and the motor vehicle traffic lane. The separation may include, but is not limited to, grade separation, flexible posts, inflexible physical barriers, or on-street parking.

In the project study area, a Class III Bike Route exists on Niles Boulevard between the city limit for Union City and the Alameda Creek Trail with a Class II Bike Lane on the section between

Carnation Way and Rock Avenue. Bicyclists ride in the roadway and/or on sidewalks along all other streets within the project study area. **Table 4.B-2** summarizes the existing and planned bicycle facilities in the vicinity of the proposed project, as identified in the City of Fremont Draft Bicycle Master Plan (City of Fremont, 2017a).

TABLE 4.B-2
BICYCLE FACILITY SUMMARY

Status Facility	Class	Length (Miles)	Begin Point	End Point
Existing				
Alameda Creek Trail	I	12.00	San Francisco Bay	Old Canyon Rd
2nd St	II	0.75	Hillview Dr.	End of Street
Mission Blvd	II	5.60	Union City Limits	I-680
Niles Blvd	II	0.35	Carnation Way	Rock Ave
H St	III	0.15	Niles Blvd	3rd St
Niles Blvd	III	0.32	Hayward City Limit	Carnation Way
Niles Blvd	III	1.40	Rock Ave	Alameda Creek Trail
Niles Blvd	III	0.16	Niles Blvd	Niles Canyon Rd
Niles Canyon Rd	III	1.38	Union City Limit	Mission Blvd
Planned				
Niles Blvd	IV	2.75	Union City Limits	G St
Mission Blvd	IV	9.60	Union City Limits	Warm Springs Blvd

NOTES: All or portions of these bikeways are located within the City of Fremont

SOURCE: City of Fremont, *2017a*

Collision History

The collision history for the project study area was compiled and reviewed to determine any trends or patterns that may indicate a safety issue. Collision rates were calculated based on records available from the City of Fremont. The most current five-year period available is January 1, 2012 through October 18, 2017.

As presented in **Table 4.B-3**, the calculated collision rates for the seven study intersections were compared to average collision rates for similar facilities statewide, as indicated in 2013 Collision Data on California State Highways, California Department of Transportation (Caltrans). The collision data showed that all seven study intersections have a lower collision rate than the statewide average. The collision rate calculations are provided in **Appendix D**.

TABLE 4.B-3
COLLISION RATES AT STUDY INTERSECTIONS

Study Intersection	Number of Collisions (2012-2017)	Calculated Collision Rate (c/mve)	Statewide Average Collision Rate (c/mve)
1. Mission Blvd/Nursery Ave	5	0.06	0.43
2. Mission Blvd/Sullivan Underpass	4	0.05	0.14
3. Mission Blvd/Niles Blvd/Niles Canyon Rd	11	0.11	0.43
4. Mission Blvd/Mowry Ave	1	0.04	0.43
5. Niles Blvd/Nursery Ave	2	0.06	0.43
6. Niles Blvd/Sullivan Underpass	0	0.00	0.14
7. Niles Blvd/J St	1	0.05	0.14

NOTES: c/mve = collisions per million vehicles entering
SOURCE: W-Trans (Appendix D)

Background Conditions

The Background Conditions scenario provides an evaluation of operating conditions with traffic from approved projects in the vicinity of the proposed project added to existing peak hour traffic volumes. The following projects were identified by City staff to be included in the analysis of this scenario.

1. *Niles Canyon Service Station* – A 12-vehicle fueling position gas station with two car washes, a convenience store, and a fast food restaurant is proposed at 38010 Mission Boulevard (SR-238). This project is expected to generate 1,238 daily trips including 88 a.m. peak hour trips, and 89 trips during the p.m. peak hour.
2. *California Nursery Historical Park* – This project would add new buildings and structures for community events to the existing California Nursery Company at the southwest corner of Niles Boulevard and Nursery Avenue. It would generate approximately 244 net new p.m. peak hour trips, and no net new trips during the a.m. peak hour.
3. *39501 Stevenson Place* – This project would construct 46 new single-family dwelling units at 39501 Stevenson Place. It would generate approximately 438 daily trips, including 35 trips during the weekday a.m. peak hour and 46 during the weekday p.m. peak hour.
4. *MidPen Stevenson Place* – This project would construct 80 new apartments directly adjacent to the 39501 Stevenson Place project. It would generate 532 daily trips, including 76 during the weekday a.m. peak hour, and 96 during the weekday p.m. peak hour.
5. *Mission-Stevenson* – This 77-unit apartment complex is proposed at 39393 and 39439 Mission Boulevard. The project is expected to generate 564 daily trips with 43 during the weekday a.m. peak hour, and 52 during the weekday p.m. peak hour.
6. *Shannon Townhomes* – This 23-unit townhome project is proposed to be located at 38861 and 38873 Mission Boulevard. The project is expected to generate 168 daily trips with 13 during the weekday a.m. peak hour, and15 during the weekday p.m. peak hour.

7. *Villas of Mission* – This proposed 13 residential unit project is located at 36341 Mission Boulevard. The project is anticipated to generate 95 daily trips including seven trips during the weekday a.m. peak hour, and nine trips during the weekday p.m. peak hour.

8. *1031 Walnut* – This 632-apartment project is located on the northeast corner of the intersection of Walnut Avenue and Guardino Drive and would generate approximately 3,788 daily trips, including 291 weekday a.m. peak hour trips and 353 weekday p.m. peak hour trips.

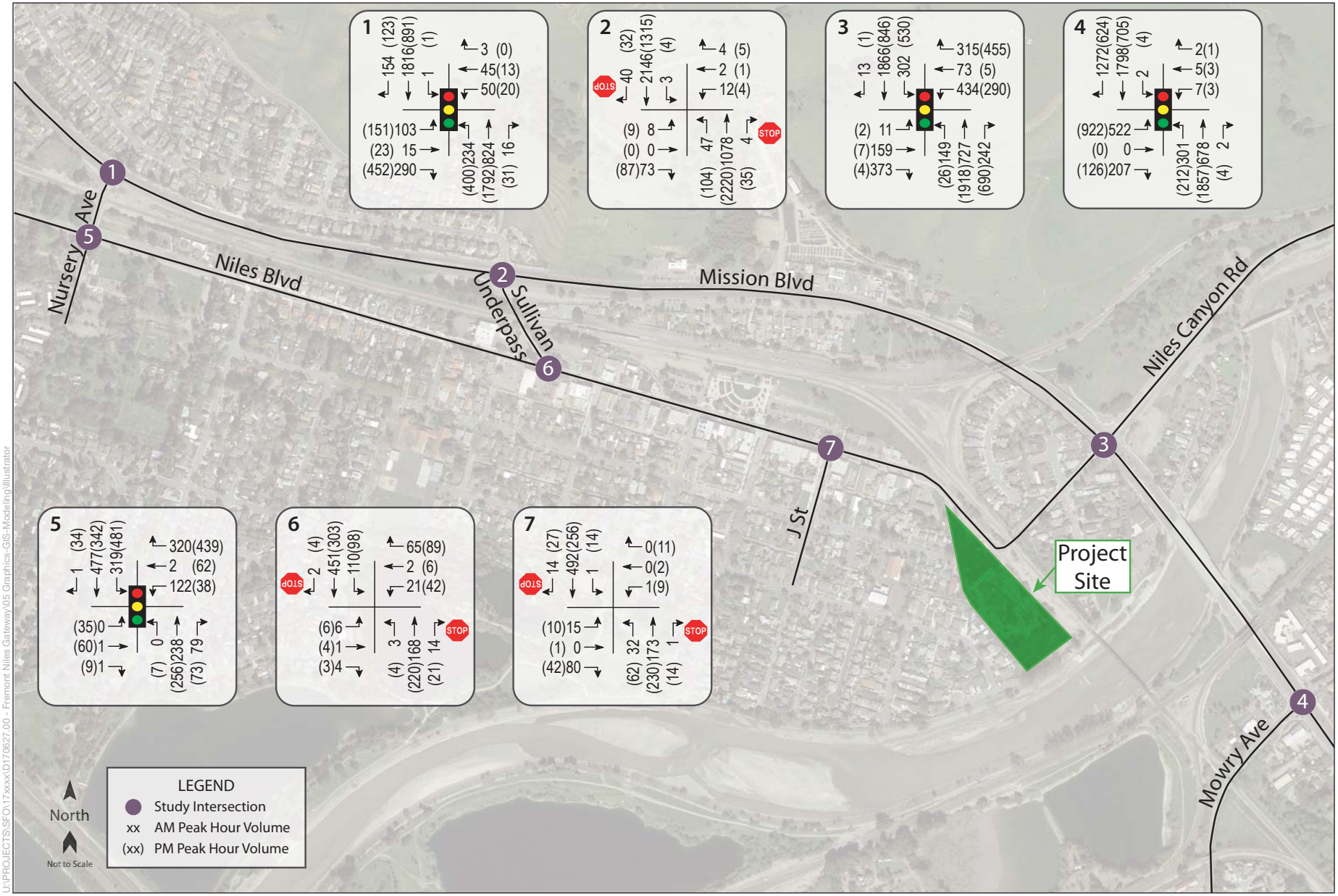
Under Background conditions, most of the study intersections are expected to operate at LOS D or better during both peak periods. The eastbound approach of Mission Boulevard (SR-238) and Sullivan Underpass is projected to operate at unacceptable levels of service during both peak hours. Mission Boulevard (SR-238) and Mowry Avenue are expected to operate at unacceptable levels of service during the a.m. peak hour, and Niles Boulevard and Nursery Avenue have unacceptable operation projected during the p.m. peak hour. These results are summarized in **Table 4.B-4**, and Background Traffic volumes are shown in **Figure 4.B-4**. Copies of the Level of Service calculations are provided in **Appendix D**.

TABLE 4.B-4
BACKGROUND PEAK HOUR INTERSECTION LEVELS OF SERVICE (LOS)

	AM Peak Hour		PM Peak Hour	
Study Intersection	**Delay**	**LOS**	**Delay**	**LOS**
1. Mission Blvd (SR-238)/Nursery Ave	55.8	D	52.2	D
2. Mission Blvd (SR-238)/Sullivan Underpass	13.9	B	11.3	B
Eastbound Sullivan Underpass Approach	**	**F**	**	**F**
3. Mission Blvd (SR-238)/Niles Blvd and Niles Canyon Rd	60.1	E	68.3	E
4. Mission Blvd (SR-238)/Mowry Ave	**88.4**	**F**	33.4	C
5. Niles Blvd/Nursery Ave	29.6	C	**79.7**	**E**
6. Niles Blvd/Sullivan Underpass	3.2	A	4.1	A
Eastbound Sullivan Underpass Approach	19.5	C	18.4	C
7. Niles Blvd/J St	2.2	A	2.5	A
Eastbound J St Approach	21.8	C	14.0	B

NOTES: Results are displayed as Delay/LOS; Delay is measured in average seconds per vehicle;
For unsignalized intersections, overall intersection results presented first, followed by minor street movement with greatest delay, which is the approach presented in the Highway Capacity Manual.
LOS = Level of Service; **= Saturated Movement, Delay not Meaningful; **Bold** text= Deficient Operation

SOURCE: W-Trans, 2017 (Appendix D)



SOURCE: W-Trans, 2018

Niles Gateway Mixed-Use Project

Figure 4.B-4
Background Traffic Volumes

ESA

Regulatory Framework

State Regulations

California Department of Transportation

The California Department of Transportation (Caltrans) is responsible for operations and maintenance of the state highway system, and serves as a reviewing agency for Environmental Impact Reports (EIRs) to ensure that proposed projects would not have a significant impact on state highway facilities.

Regional

Metropolitan Transportation Commission

The majority of federal, state and local financing available for transportation projects is allocated at the regional level by the Metropolitan Transportation Commission (MTC), the transportation planning, coordinating and financing agency for the nine-county Bay Area. MTC functions as both the State-mandated regional transportation planning agency and the federally-mandated metropolitan planning organization (MPO) for the region. As such, it is responsible for regularly updating the Regional Transportation Plan, a comprehensive blueprint for the development of transportation facilities within the region. The Commission also screens requests from local agencies for State and federal grants for transportation projects to determine their compatibility with the Plan.

Alameda County Transportation Commission

The Alameda County Transportation Commission (Alameda CTC), through its Congestion Management Program (CMP), oversees how roads of regional significance function, and requires local jurisdictions to evaluate the impact of proposed land use changes (i.e., General Plan amendments, and developments with trip-generating potential of more than 100 new peak-hour vehicle trips) on the regional transportation systems (ACTC, 2017a).

Local Regulations

City of Fremont General Plan

The Mobility Element of the Fremont General Plan establishes the following goals and policies that are relevant to transportation:

- Goal 3-1: Complete Streets, and Policies 3-1.1, 3-1.2, 3-1.3, 3-1.5 and 3-1.7 call for providing City streets that serve multiple modes of transportation while enhancing Fremont's appearance and character.
- Goal 3-2: Reducing Vehicle Miles Traveled, and Policies 3-2.1, 3-2.2, 3-2.3 and 3-2.7 establish an objective of improving mobility in Fremont while reducing the growth of vehicle miles traveled.
- Goal 3-3: Accessibility, Efficiency, and Connectivity, and Policies 3-3.2 and 3.3-8 call for maximizing the efficiency of the transportation network, and its ability to connect the city, minimize travel distances, and increase mobility for all residents.

- Goal 3-4: Balancing Mobility and Neighborhood Quality, and Policies 3.4-2 and 3-4.4 promote a transportation system that balances speed and convenience with the desire to have walkable neighborhoods and an enhanced sense of place.

Impacts and Mitigation Measures

Methodology

Potential impacts associated with the proposed project were determined on the basis of the anticipated increase in vehicle trips generated by full development of the proposed project, and analysis of changes to existing and forecasted cumulative conditions caused by those additional trips. The analysis is used to identify significant adverse impacts of the proposed project on the surrounding transportation system and recommend appropriate mitigation measures.

Project Trip Generation and Trip Distribution Estimates

Vehicle trip generation estimates were developed using standard rates published by the Institute of Transportation Engineers (ITE) in *Trip Generation Manual*, 10th Edition, 2017. Trip distribution assumptions from the previous Niles Gateway Traffic Operations Report were reviewed and found to be appropriate and acceptable for use in this analysis.

Level of Service Analysis Methodologies

Intersections. The study intersections that are controlled by traffic signals were evaluated using the signalized methodology from the Highway Capacity Manual (HCM), published by the Transportation Research Board, part of the National Academy of Sciences. This nationally accepted methodology is based on factors including traffic volumes, green time for each movement, phasing, whether or not the signals are coordinated, truck traffic, and pedestrian activity. Average stopped delay per vehicle in seconds is used as the basis for evaluation in this LOS methodology. Under existing and background scenarios, traffic signal timing was obtained from Caltrans and the City of Fremont for the signalized study intersections. For purposes of this study, delays were calculated using optimized signal timing for cumulative and cumulative plus project scenarios.

The levels of service for the intersections with side street stop controls, or those that are unsignalized and have one or two approaches stop-controlled, were analyzed using the "Two-Way Stop-Controlled" intersection capacity method from the HCM. This methodology determines a level of service for each minor turning movement by estimating the level of average delay in seconds per vehicle. Results are presented for individual movements together with the weighted overall average delay for the intersection. The ranges of delay associated with the various levels of service are indicated in **Table 4.B-5**.

The level of service analysis at unsignalized intersections is supplemented with an assessment of the need for signalization of the intersections. For this study, the need for signalization is assessed on the basis of the operating conditions at the intersections (i.e., level of service) and on the peak hour volume signal warrant – warrant #3 – described in the *2014 California Manual on Uniform Traffic Control Devices* (MUTCD). This method provides an indication of whether

traffic conditions and peak hour traffic levels are, or would be, sufficient to justify installation of a traffic signal.

TABLE 4.B-5
INTERSECTION LEVEL OF SERVICE CRITERIA

LOS	Signalized	Two-Way-Stop-Controlled
A	Delay of 0 to 10 seconds. Most vehicles arrive during the green phase, so do not stop at all.	Delay of 0 to 10 seconds. Gaps in traffic are readily available for drivers exiting the minor street.
B	Delay of 10 to 20 seconds. More vehicles stop than with LOS A, but many drivers still do not have to stop.	Delay of 10 to 15 seconds. Gaps in traffic are somewhat less readily available than with LOS A, but no queuing occurs on the minor street.
C	Delay of 20 to 35 seconds. The number of vehicles stopping is significant, although many still pass through without stopping.	Delay of 15 to 25 seconds. Acceptable gaps in traffic are less frequent, and drivers may approach while another vehicle is already waiting to exit the side street.
D	Delay of 35 to 55 seconds. The influence of congestion is noticeable, and most vehicles have to stop.	Delay of 25 to 35 seconds. There are fewer acceptable gaps in traffic, and drivers may enter a queue of one or two vehicles on the side street.
E	Delay of 55 to 80 seconds. Most, if not all, vehicles must stop and drivers consider the delay excessive.	Delay of 35 to 50 seconds. Few acceptable gaps in traffic are available, and longer queues may form on the side street.
F	Delay of more than 80 seconds. Vehicles may wait through more than one cycle to clear the intersection.	Delay of more than 50 seconds. Drivers may wait for long periods before there is an acceptable gap in traffic for exiting the side streets, creating long queues

SOURCE: Transportation Research Board, *Highway Capacity Manual*, 2000, 2010

Congestion Management Program (CMP) Segments. Alameda CTC requires the evaluation of regional roadway facilities within the project study area that are designated in the CMP (ACTC, 2017a). Regional roadway study segments that would potentially be impacted by the proposed project have been evaluated per CMP requirements.

Significance Criteria

According to Appendix G, Environmental Checklist, of the CEQA *Guidelines*, transportation impacts resulting from the implementation of the proposed project would be considered significant if a project would:

- Exceed the capacity of the existing circulation system, based on an applicable measure of effectiveness (as designated in a general plan policy, ordinance, etc.), taking into account all relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit.
- Conflict with an applicable congestion management program, including but not limited to level of service standards and travel demand measures, or other standards established by the congestion management agency for designated roads or highways.
- Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks.

- Substantially increase hazards due to a design feature. (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).
- Result in inadequate emergency access.
- Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.

With respect to the third Checklist Item above, as indicated in the Initial Study (see **Appendix A**), the proposed project would have no impact on air traffic patterns as the closest airport to the site, Hayward Executive Airport, is located 9.4 miles to the northwest. Thus, no impact would result and this issue is not further addressed in this EIR.

In the context of the first two Checklist Items above, the following thresholds of significance apply:

Intersections

General Plan Policy 3-4.2 provides for variable LOS standards that recognize the character of adjacent land uses, differing functions of streets and differing modes of transportation along streets. The City of Fremont's LOS standard for acceptable operation is generally defined as LOS D or better during peak hours and LOS E for locations identified as a regional arterial in the Alameda County CMP (the intersections of Mission Boulevard (SR-238) / Mowry Avenue and Mission Boulevard (SR-238) / Niles Canyon Road).

Signalized Intersections

For signalized intersections, the City of Fremont utilizes the HCM methodology to evaluate intersection operations. The HCM methodology evaluates signalized intersection operations on the basis of average control delay time for all vehicles at the intersection. Control delay is the amount of delay that is attributed to the particular traffic control device at the intersection, and includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. Significance criteria are used to establish what constitutes an impact.

Intersections along Mission Boulevard (SR-238) and Niles Canyon Road (SR-84) are maintained by Caltrans and are State highway facilities. As stated in the Caltrans' Guide for the preparation of Traffic Impact Studies: "Caltrans endeavors to maintain a target LOS at the transition between LOS "C" and "D" on State highway facilities, however, Caltrans acknowledges that may not always be feasible and recommends that the lead agency consult with Caltrans to determine the appropriate target LOS. If an existing State highway facility is operating at less than the appropriate target LOS, the existing MOE [Measure of Effectiveness] should be maintained."[2] Because the City of Fremont is the lead agency for this project, the LOS standards and impact criteria used in this report were based on City standards, as they better reflect local traffic conditions and local planning priorities in Fremont. This approach is consistent with all previous traffic impact analyses conducted in the City of Fremont, and is also consistent with CEQA.

[2] Caltrans uses different Measures of Effectiveness (MOEs) to evaluate operations of different types of facilities. For example, both signalized and unsignalized intersections are analyzed based on average delay, in seconds, per vehicle; this average delay is measured as part of level of service analysis. For freeways and ramps, the Caltrans MOE is based on vehicle density per lane per mile, while for city streets, the MOE is vehicle speed.

According to City of Fremont standards, a project is said to create a significant adverse impact on traffic conditions at a CMP signalized intersection if for either peak hour:

1. The level of service at the intersection degrades from LOS E or better under no project conditions to an unacceptable LOS F under project conditions; or
2. If the intersection is already operating at LOS F under no project conditions, the addition of the project causes the intersection average control delay to increase by more than four seconds per vehicle.

Three of the four study intersections that are signalized—all but Niles Boulevard/Nursery Avenue—are on CMP routes and are subject to the above threshold of significance.

For non-CMP signalized intersections (i.e., the intersection of Niles Boulevard/Nursery Avenue) City of Fremont standards indicate that a significant adverse impact on traffic conditions would occur if for either peak hour:

1. The level of service at the intersection degrades from LOS D or better under no project conditions to an unacceptable LOS E under project conditions; or.
2. If the intersection is already operating at LOS E or worse under no project conditions, the addition of the project causes the intersection average control delay to increase by more than four seconds per vehicle.

The justification for the use of a four-second increase in average vehicle delay as a trigger for significant impact (absent a degradation from acceptable to unacceptable LOS) is that a lesser change is unlikely to be perceptible to a typical motorist. Therefore, basing a significant effect on an increase in average vehicle delay of less than four seconds would overstate impacts.

A significant impact at a signalized intersection is said to be satisfactorily mitigated when measures are implemented that would restore intersection levels of service to an acceptable LOS or restore the intersection to operating levels that are better than no project conditions.

Unsignalized Intersections

The impacts of the proposed project on an unsignalized intersection are considered significant if the contribution of the project traffic is at least five percent of the total traffic, and if the addition of project traffic results in the intersection meeting the peak-hour signal warrant.

CMP Segments

Per the Alameda County Congestion Management Program, the level of service performance standard for a CMP facility is LOS E (ACTC, 2017a). The City of Fremont has no significance criteria to establish whether a project would result in a significant impact to facilities already operating at LOS F. For the purpose of this analysis, a potentially significant project impact is assumed to occur if project-generated traffic causes operation to drop to LOS F, or increases the v/c ratio by 0.05 or greater on CMP segments already forecast to operate at LOS F. The v/c ratio is the ratio of traffic volume on a roadway to the theoretical capacity (i.e., number of vehicles) that the roadway can accommodate. The addition of 0.05 or less to the v/c ratio would not typically be perceptible to a motorist.

Impact Analysis

Impact 4.B-1: Development facilitated by the proposed project would increase traffic volumes on the area roadway network, but would not exceed the capacity of the existing circulation system, based on the applicable measures of effectiveness. *(Less than Significant)*

Based on the applicable measure of effectiveness, including level of service analysis at study intersections, and roadway segment analysis of CMP facilities, the project would not exceed the capacity of the existing circulation system.

Trip Generation

The anticipated trip generation for the proposed project was estimated using standard rates for the "Multifamily Housing (Low-Rise)," "Quality Restaurant," and "Shopping Center" land uses published in the ITE *Trip Generation Manual*, 10th Edition. There is also a proposed 1,450 square foot community center that is for residential use only. Therefore, it is not expected to generate trips to or from the site and was not included in the trip generation assumptions.

The *Trip Generation Manual* also includes data and methodologies that can be applied to determine the proportion of internal trips that may occur within a development area that includes a variety of land uses. The NCHRP 684 Internal Trip Capture Estimation Tool accounts for trips that occur at mixed-use developments, and in the case of the proposed Niles Gateway project would consist of residents patronizing the adjacent retail land uses and restaurant, as well as employees of nonresidential uses patronizing other nonresidential uses. The majority of these trips would be made by walking, and the few that would be made by automobile would only travel on-site and, therefore, would not affect the adjacent street network. An internal trip reduction of eight percent for the a.m. peak hour and 15 percent for the p.m. peak hour was used based on the NCHRP 684 Internal Trip Capture Estimation Tool.

The proposed project would generate 1,027 daily trips, including 68 net new trips during the a.m. peak hour and 84 trips during the p.m. peak hour. These results are summarized in **Table 4.B-6** as well as in **Appendix D**.

TABLE 4.B-6
PROJECT TRIP GENERATION SUMMARY

		Daily		AM Peak Hour				PM Peak Hour			
Scenario	**Units**	**Rate**	**Trips**	**Rate**	**Trips**	**In**	**Out**	**Rate**	**Trips**	**In**	**Out**
Multifamily Housing (Low-Rise)	95 du	7.32	695	0.56	53	15	38	0.67	64	38	26
Quality Restaurant	2.4 ksf	83.84	201	4.47	11	9	2	8.28	20	12	8
Shopping Center	3.48 ksf	37.75	131	3.00	10	6	4	4.21	15	7	8
Internal Trip Reduction				8%	-6	-2	-4	15%	-15	-9	6
Total			**1,027**		**68**	**28**	**40**		**84**	**48**	**36**

NOTES: ksf = 1,000 square feet; du = dwelling units

SOURCE: W-Trans, 2017, using ITE, *Trip Generation Manual*, 10th Edition, 2017 (Appendix D).

Trip Distribution

Trip distribution assumptions were taken from the prior Niles Boulevard Residential Development Report and reviewed to confirm their appropriateness. The trip distribution patterns were considered adequate as they represent prevailing traffic patterns in the project study area. The project trip distribution is summarized in **Table 4.B-7**, and shown in **Figure 4.B-5**. Project-added volumes are shown in **Figure 4.B-6**.

TABLE 4.B-7
TRIP DISTRIBUTION ASSUMPTIONS

Origin/Destination	Distribution	AM Trips	PM Trips
Mission Blvd West	16%	11	13
Mission Blvd East	36%	24	30
Niles Blvd West	17%	12	14
G St	2%	1	2
Niles Canyon Rd	4%	3	3
Mowry Ave	25%	17	22
TOTAL	**100%**	**68**	**84**

SOURCE: W-Trans, 2017 (Appendix D)

Existing Plus Project Conditions

Intersection Levels of Service.

Existing plus Project traffic volumes are shown in **Figure 4.B-7**. The levels of service for the study intersections are summarized in **Table 4.B-8**. Under Existing plus Project Conditions, all seven study intersections would continue operating acceptably, with the exception of the eastbound approach at Mission Boulevard (SR-238) / Sullivan Underpass and Mission Boulevard (SR-238) / Mowry Avenue, which would continue to experience unacceptable levels of service during the a.m. peak hour with or without the proposed project.

Signalized Intersections

The addition of project trips would not result in a significant impact at Mission Boulevard (SR-238) / Mowry Avenue as the increase in average delay would be less than four seconds and, therefore, the increase in delay would likely not be perceptible to the typical motorist. Other signalized intersections would operate at acceptable LOS and, thus, effects at these intersections would also be less than significant. As shown in **Table 4.B-8**, the addition of project-generated traffic would slightly decrease the average delay at the intersection of Niles Boulevard/Nursery Avenue during the p.m. peak hour. This condition may occur when a project adds trips to movements that have delays that are below the intersection average, resulting in a better balance between approaches and lower overall average delay. The project would add traffic predominantly to the northbound and southbound through movements, which have an average delay that is lower than the average for the intersection as a whole, resulting in a slight reduction in the overall average delay.

Unsignalized Intersections

The addition of project trips would not result in a significant impact at the Mission Boulevard (SR-238) / Sullivan Underpass intersection, as the project would not contribute five percent or more of the total traffic at this intersection and the intersection would meet the peak-hour volume-based signal warrant both without and with the project. The project would not contribute five percent or more of total traffic at either of the other two unsignalized intersections, nor would the peak-hour volume-based signal warrant be met at either intersection, without or with the project and, thus, effects at these intersections would also be less than significant.

TABLE 4.B-8
SUMMARY OF EXISTING AND EXISTING PLUS PROJECT PEAK HOUR INTERSECTION LEVELS OF SERVICE

Study Intersection ***Approach***	**Existing**		**Existing plus Project**		**Change in Delay Significant Impact?**	
	AM	**PM**	**AM**	**PM**	**AM**	**PM**
1. Mission Blvd (SR-238)/Nursery Ave	53.1/D	38.7/D	53.4/D	38.8/D	No	No
2. Mission Blvd (SR-238)/Sullivan Underpass	11.8/B	7.3/A	12.1/B	7.5/A		
Eastbound Sullivan Underpass Approach	****/F**	****/F**	****/F**	****/F**		
Intersection Meets Signal Warrant #3 (volume)	Yes	Yes	Yes	Yes	No	No
Project Percent of Total Intersection Volume	n/a	n/a	0.3%	0.4%		
3. Mission Blvd (SR-238)/Niles Blvd and Niles Canyon Rd	58.1/E	58.3/E	61.8/E	62.8/E	No	No
4. Mission Blvd (SR-238)/Mowry Ave	**85.7/F**	32.0/C	**87.9/F**	32.5/C	2.2/No	No
5. Niles Blvd/Nursery Ave	29.4/C	33.3/C	29.6/C	33.1/C	No	No
6. Niles Blvd/Sullivan Underpass	3.2/B	3.8/A	3.2/B	3.8/A		
Eastbound Sullivan Underpass Approach	19.5/B	17.3/C	19.5/C	17.5/C		
Intersection Meets Signal Warrant #3 (volume)	No	No	No	No	No	No
Project Percent of Total Intersection Volume	n/a	n/a	1.4%	1.8%		
7. Niles Blvd/J St	2.2/A	2.5/A	2.2/A	2.5/A		
Eastbound J St Approach	21.8/C	13.8/B	21.8/C	14.0/B		
Intersection Meets Signal Warrant #3 (volume)	No	No	No	No	No	No
Project Percent of Total Intersection Volume	n/a	n/a	1.7%	2.6%		

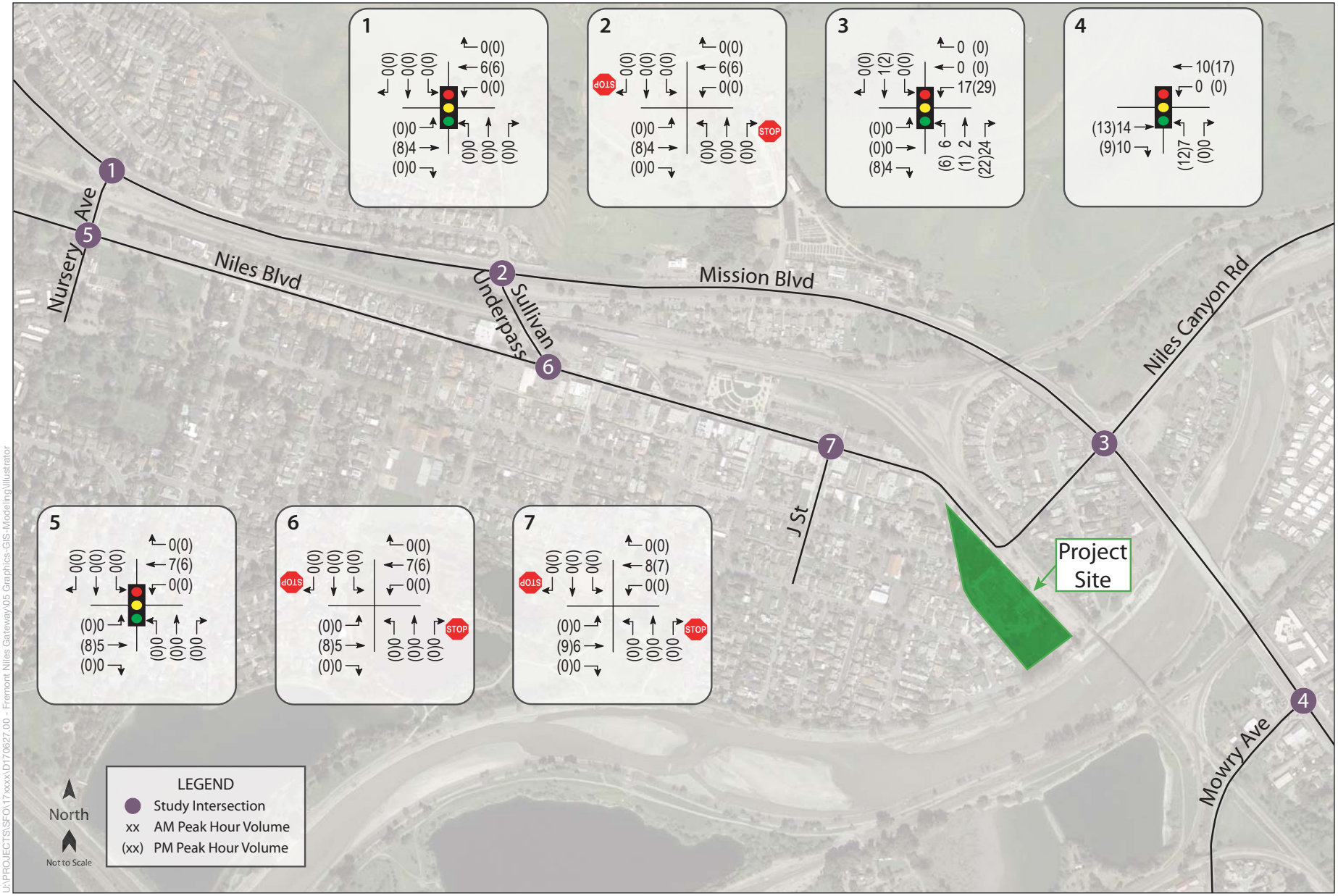
NOTES: Results are displayed as Delay/LOS; Delay is measured in average seconds per vehicle; Change in delay shown only for signalized intersections operating unacceptably without project
For unsignalized intersections, overall intersection results presented first, followed by minor street movement with greatest delay, which is the approach presented in the Highway Capacity Manual.
LOS = Level of Service; **= Saturated Movement, Delay not Meaningful; **Bold** = deficient operation; n/a – Not Applicable
SOURCE: W-Trans, 2017 (Appendix D)

SOURCE: W-Trans, 2018

Niles Gateway Mixed-Use Project

Figure 4.B-5
Trip Distribution

ESA

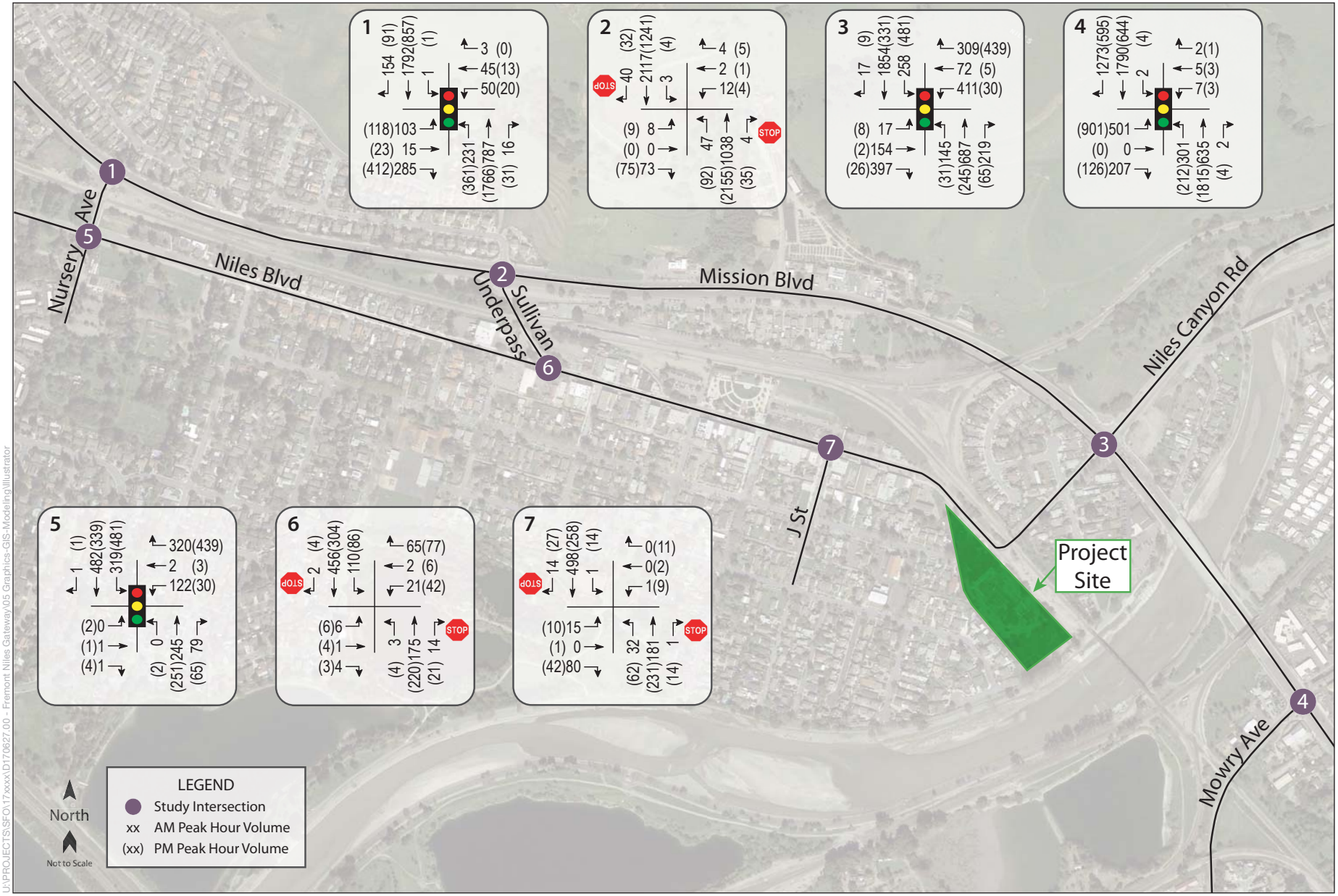


SOURCE: W-Trans, 2018

Niles Gateway Mixed-Use Project

Figure 4.B-6
Project Traffic Volumes

ESA



SOURCE: W-Trans, 2018

Niles Gateway Mixed-Use Project

Figure 4.B-7
Existing Plus Project Traffic Volumes

ESA

Background Plus Project Conditions

Intersection Levels of Service.

Background plus Project traffic volumes are shown in **Figure 4.B-8**. The Background Plus Project Conditions scenario provides an evaluation of operating conditions with traffic from approved projects plus the proposed project trips in the vicinity of the project added to existing peak hour traffic volumes. Under Background plus Project Conditions, four of the seven study intersections would continue operating acceptably. The following three study intersections would operate at unacceptable levels of service with or without the proposed project:

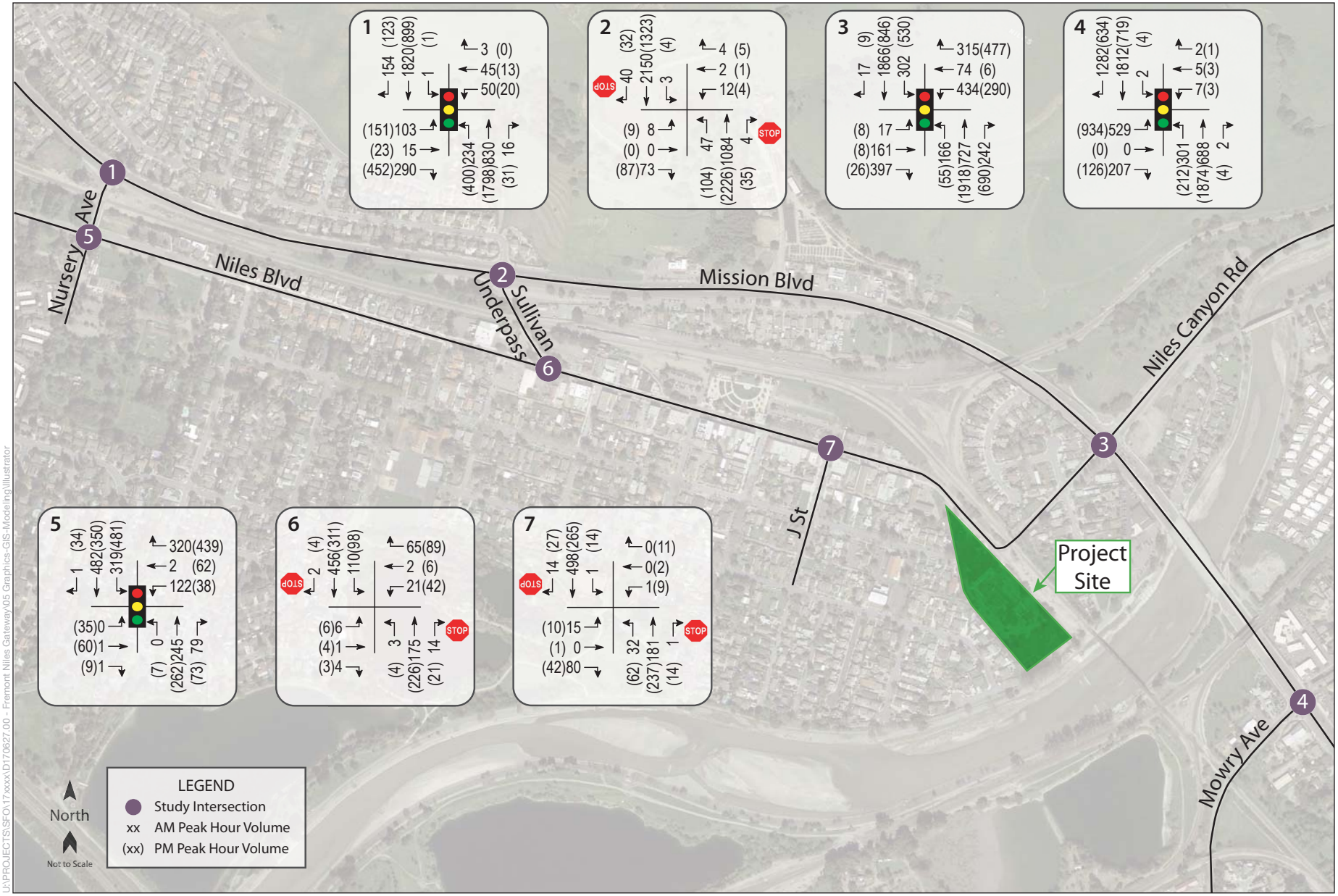
- Mission Boulevard (SR-238) / Sullivan Underpass eastbound approach during both peak hours.
- Mission Boulevard (SR-238) / Mowry Avenue during the a.m. peak hour.
- Niles Boulevard / Nursery Avenue during the p.m. peak hour.

The levels of service for the study intersections are summarized in **Table 4.B-9**.

TABLE 4.B-9
SUMMARY OF BACKGROUND AND BACKGROUND PLUS PROJECT PEAK HOUR INTERSECTION LEVELS OF SERVICE

	Background		Background plus Project		Change in Delay/ Significant Impact?	
Study Intersection	**AM**	**PM**	**AM**	**PM**	**AM**	**PM**
1. Mission Blvd (SR-238)/Nursery Ave	55.8/D	52.2/D	56.0/D	52.3/D	No	No
2. Mission Blvd (SR-238)/Sullivan Underpass	13.9/B	11.3/B	14.2/B	11.6/B		
Eastbound Sullivan Underpass Approach	****/F**	****/F**	****/F**	****/F**		
Intersection Meets Traffic Signal Warrant #3 (volume)	Yes	Yes	Yes	Yes	No	No
Project Percent of Total Intersection Volume	n/a	n/a	0.3%	0.2%		
3. Mission Blvd (SR-238)/Niles Boulevard - Niles Canyon Rd	60.1/E	68.3/E	63.1/E	73.4/E	No	No
4. Mission Blvd (SR-238)/Mowry Ave	**88.4/F**	33.4/C	**90.6/F**	33.9/C	2.2/No	No
5. Niles Blvd/Nursery Ave	29.6/C	**79.7/E**	29.8/C	**80.0/F**	No	0.3/No
6. Niles Blvd/Sullivan Underpass	3.2/A	4.1/A	3.2/B	4.0/A		
Eastbound Sullivan Underpass Approach	19.5/C	18.4/C	19.8/C	18.7/C		
Intersection Meets Traffic Signal Warrant #3 (volume)	No	No	No	No	No	No
Project Percent of Total Intersection Volume	n/a	n/a	1.4%	1.7%		
7. Niles Blvd/J St	2.2/A	2.5/A	2.2/A	2.5/A		
Eastbound J St Approach	21.8/C	14.0/B	22.2/C	18.3/C		
Intersection Meets Traffic Signal Warrant #3 (volume)	No	No	No	No	No	No
Project Percent of Total Intersection Volume	n/a	n/a	1.7%	2.6%		

NOTES: Results are displayed as Delay/LOS; Delay is measured in average seconds per vehicle; Change in delay shown only for signalized intersections operating unacceptably without project.
For unsignalized intersections, overall intersection results presented first, followed by minor street movement with greatest delay, which is the approach presented in the Highway Capacity Manual.
LOS = Level of Service; **= Saturated Movement, Delay not Meaningful; **Bold** = deficient operation; n/a – Not Applicable
SOURCE: W-Trans, 2017 (Appendix D)



SOURCE: W-Trans, 2018

Niles Gateway Mixed-Use Project

Figure 4.B-8
Background Plus Project Traffic Volumes

ESA

Signalized Intersections

The addition of project trips would not result in a significant impact at the intersections of Mission Boulevard (SR-238) and Mowry Avenue or Niles Boulevard and Nursery Avenue, as the increase in average delay at each intersection would be less than four seconds and, therefore, the increase in delay would likely not be perceptible to the typical motorist. Other signalized intersections would operate at acceptable LOS and, thus, effects at these intersections would also be less than significant.

Unsignalized Intersections

As shown in **Table 4.B-9,** the impact at the unsignalized intersection of Mission Boulevard (SR-238) and Sullivan Underpass would be less than significant because the project would not contribute five percent of more of the total traffic and the intersection would meet the peak-hour volume-based signal warrant both without and with the project. At the other two unsignalized intersections, the project would not contribute five percent of more of the total traffic, nor would the peak-hour volume-based signal warrant be met, either without or with the project and, thus, effects at these intersections would also be less than significant. The addition of project-generated traffic would slightly decrease the overall average delay at the intersection of Niles Boulevard / Sullivan Underpass in the p.m. peak hour, although the delay would increase on the approach with greatest delay (eastbound). As previously described, this may occur when a project adds trips to movements that have relatively lesser delays, resulting in lower overall average delay.

Mitigation: None Required.

Cumulative Impact

Impact 4.B-2: The proposed project, combined with cumulative development, including past, present, and reasonably foreseeable future development, would result in significant cumulative traffic impacts, as the intersection of Mission Boulevard (SR-238)/Niles Boulevard and Niles Canyon Road is projected to operate at LOS F under no project conditions, and the addition of project-generated traffic would cause the average control delay at this intersection to increase by more than four seconds per vehicle. *(Significant and Unavoidable)*

The Cumulative No-Project scenario provides an evaluation of intersection operations under long-term conditions based on traffic volumes contained within the General Plan for year 2035 for Mission Boulevard (SR-238) / Niles Boulevard - Niles Canyon Road, and for Mission Boulevard (SR-238) / Mowry Avenue. Turning movement volumes for Mission Boulevard (SR-238) and Sullivan Underpass and Mission Boulevard (SR-238) / Nursery Avenue were previously forecasted in the Niles Canyon Chevron TIA, and upon review were determined adequate for use in this analysis. This condition does not include traffic volumes generated by the proposed project.

The General Plan EIR Mitigation Monitoring Program (City of Fremont, 2011b) identifies a mitigation measure at the Mission Boulevard (SR-238) / Mowry Avenue intersection (General Plan EIR Impact TRA-15). Based on this mitigation measure, the following changes will occur:

- Mowry Avenue at Mission Boulevard (SR-238) will be modified from one left, one through-left and one right turn lane to include two left-turn lanes and one through/right-turn lane;
- Mission Boulevard (SR-238) northbound at Mowry Avenue will be modified from one left-turn lane, two through lanes, and one shared right turn/through lane to one left-turn lane, one through lanes, and one shared through/right-turn lane;
- Mission Boulevard (SR-238) southbound at Mowry Avenue will change from having one left-turn lane, three through lanes and one right-turn lane to having one left-turn lane, four through lanes, and one shared through/right-turn lane;
- At the Mission Boulevard (SR-238) / Niles Boulevard - Niles Canyon Road intersection, the traffic signal will be modified to include protected left-turn phasing, along with a change to the Niles Boulevard approach from a shared left-through-right lane and one right-turn lane to one right-turn lane and one shared left-through lane. which is expected to stay within the available right-of-way and avoid relocation of utilities. (General Plan EIR TRA-14).

For the purposes of identifying the potential impacts associated only with the proposed project, these General Plan EIR mitigation measures are assumed to be fully implemented by 2035, and are included in the Cumulative No-Project and Cumulative plus Project scenarios.

The Cumulative plus Project scenario provides an evaluation of intersection operations based on cumulative traffic volumes plus volumes that would be generated by the proposed project during the a.m. and p.m. peak hours. Cumulative plus Project traffic volumes are shown in **Figure 4.B-9**.

Intersection Levels of Service.

Under Cumulative No Project conditions, most intersections are expected to operate unacceptably including:

- Mission Boulevard (SR-238) / Nursery Avenue during both peak-hours.
- Mission Boulevard (SR-238) / Sullivan Underpass during both peak-hours.
- Mission Boulevard (SR-238) / Niles Boulevard and Niles Canyon Road during both peak hours.
- Mission Boulevard (SR-238) / Mowry Avenue during both peak-hours.
- Niles Boulevard / Sullivan Underpass during the a.m. peak-hour.

Signalized Intersections

As shown in **Table 4.B-10**, all signalized study intersections that are projected to operate unacceptably under the Cumulative No Project conditions would continue to operate unacceptably under Cumulative plus Project conditions. However, the impact at intersections other than Mission Boulevard (SR-238) / Niles Boulevard - Niles Canyon Road would be less than significant as the increases in delay at all other signalized intersections would be less than four seconds and, therefore, the increase in delay would likely not be perceptible to the typical motorist. Even with implementation of the General Plan EIR mitigation measures discussed above, the proposed project would result in a significant impact at Mission Boulevard (SR-238) / Niles Boulevard - Niles Canyon Road during the p.m. peak hour under Cumulative plus Project conditions, because project traffic would result in an increase in average delay in excess of four

seconds. The average delay at the intersection of Niles Boulevard/Nursery Avenue would slightly decrease during the p.m. peak hour with the addition of project-generated traffic volumes because project traffic would be added to movements with relatively lower delay, resulting in lesser overall delay for the intersection as a whole.

TABLE 4.B-10
CUMULATIVE PEAK HOUR INTERSECTION LEVELS OF SERVICE

	Cumulative		Cumulative plus Project		Change in Delay/ Significant Impact?	
Study Intersection	**AM**	**PM**	**AM**	**PM**	**AM**	**PM**
1. Mission Blvd (SR-238)/Nursery Ave	**251.8/F**	**173.1/F**	**252.1/F**	**174.1/F**	0.3/No	1.0/No
2. Mission Blvd (SR-238)/Sullivan Underpass	****/F**	****/F**	****/F**	****/F**		
Eastbound Sullivan Underpass Approach	****/F**	****/F**	****/F**	****/F**		
Intersection Meets Traffic Signal Warrant #3 (volume)	Yes	Yes	Yes	Yes	No	No
Project Percent of Total Intersection Volume	n/a	n/a	0.2%	0.2%		
3. Mission Blvd (SR-238)/Niles Blvd and Niles Canyon Rd	**126.2/F**	**148.1/F**	**130.1/F**	**152.2/F**	3.9/No	**4.1/Yes**
4. Mission Blvd (SR-238)/Mowry Ave	**150.5/F**	**187.8/F**	**153.1/F**	**191.0/F**	2.6/No	3.2/No
5. Niles Blvd/Nursery Ave	**88.1/F**	**124.3/F**	**88.5/F**	**124.0/F**	0.4/No	-0.3/No
6. Niles Blvd/Sullivan Underpass	**30.7/E**	6.8/A	**31.9/E**	7.0/A		
Eastbound Sullivan Underpass Approach	****/F**	53.6/F	****/F**	55.2/F		
Intersection Meets Traffic Signal Warrant #3 (volume)	Yes	Yes	Yes	Yes	No	No
Project Percent of Total Intersection Volume	n/a	n/a	0.8%	0.8%		
7. Niles Blvd/J St	2.0/A	2.1/A	2.0/A	2.1/A		
Eastbound J St Approach	**35.9/E**	18.3/C	**36.7/E**	18.6/C		
Intersection Meets Traffic Signal Warrant #3 (volume)	No	No	No	No	No	No
Project Percent of Total Intersection Volume	n/a	n/a	1.1%	1.7%		

NOTES: Results are displayed as Delay/LOS; Delay is measured in average seconds per vehicle; Change in delay shown only for signalized intersections operating unacceptably without project.
For unsignalized intersections, overall intersection results presented first, followed by minor street movement with greatest delay, which is the approach presented in the Highway Capacity Manual.
LOS = Level of Service; **= Saturated Movement, Delay not Meaningful; **Bold** = deficient operation; n/a – Not Applicable
SOURCE: W-Trans, 2017 (Appendix D)

To reduce the impact at the Mission Boulevard (SR-238) / Niles Boulevard-Niles Canyon Road intersection to a less-than-significant level would require an additional through-lane on either Mission Boulevard, Niles Boulevard, or Niles Canyon Road approaching the intersection. The addition of a fourth southbound (Mission Boulevard) through lane would result the largest reduction in average p.m. peak hour delay under the Cumulative plus Project condition (from 152.2 seconds to 117.2 seconds), but it would still result in a LOS F operation overall.

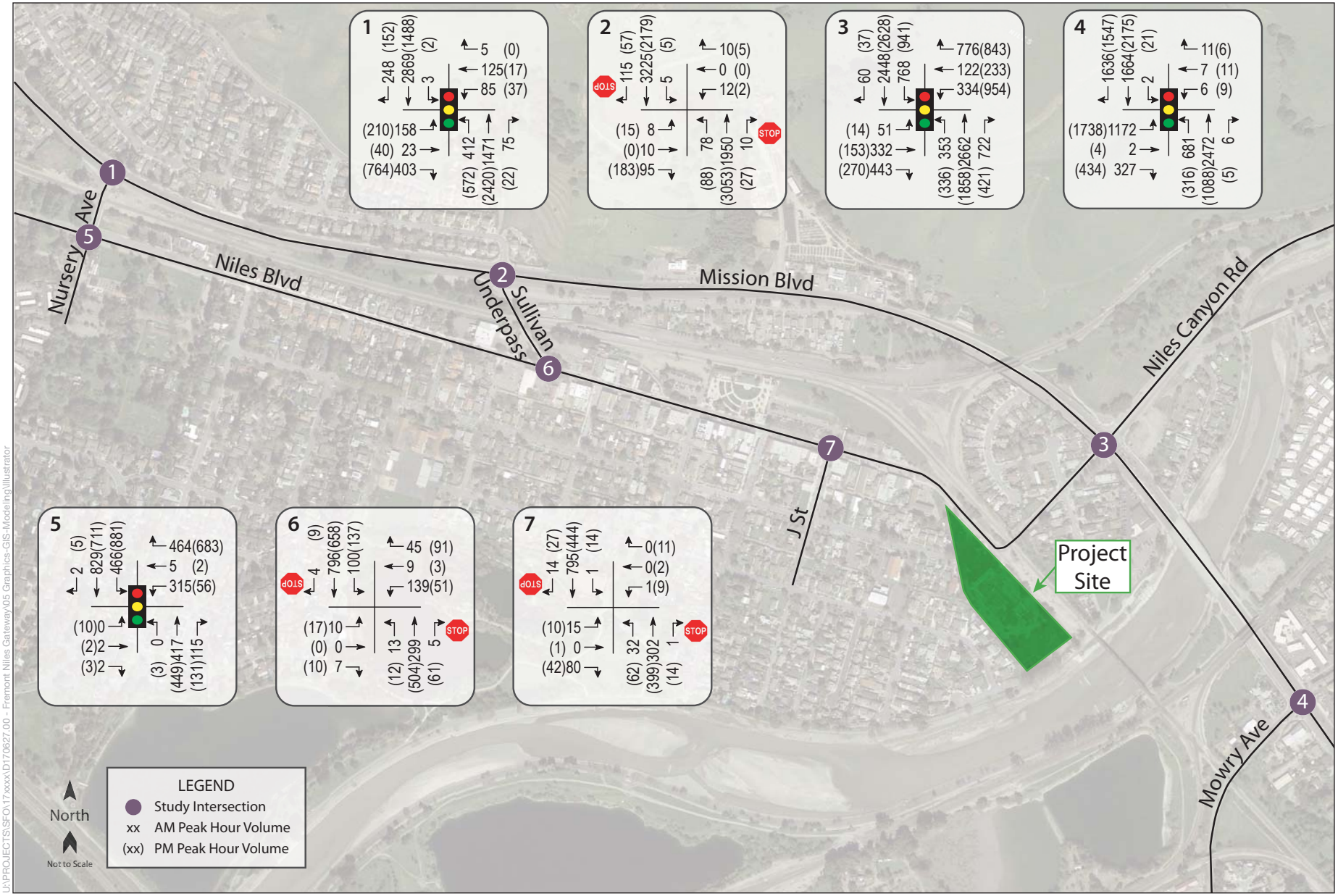
While this intersection improvement would improve intersection operations, the existing right-of-way is not wide enough to accommodate the improvement, and implementation of this improvement would adversely affect existing businesses, residences and utilities as a result of the acquisition of necessary right-of-way to complete the improvement. Right-of-way acquisition

would affect the financial feasibility of the overall improvement and would generate a number of additional relocation and environmental impacts that may not be mitigated to a less than significant level. While this intersection improvement could improve intersection LOS conditions, it is considered infeasible given the potential impacts to businesses, residents and utilities, environmental impacts, and financial feasibility. Furthermore, additional physical improvements would not be consistent with the City's General Plan (page 3-26, Mobility Chapter), which notes that the General Plan promotes policies that shift away from those that increase roadway capacity towards those that improve other modes of travel. However, since the project would result in an average delay greater than four seconds at an impacted intersection, the impact would be ***significant and unavoidable***.

Unsignalized Intersections

As shown in **Table 4.B-10**, the impact at the unsignalized intersections of Mission Boulevard (SR-238) /Sullivan Underpass and Niles Boulevard / Sullivan Underpass would be less than significant because the project would not contribute more than five percent of the total traffic at either intersection and the project would meet the peak-hour signal warrant at each intersection with and without the project. At Niles Boulevard /J Street, the project would not contribute five percent or more of total traffic, nor would the peak-hour volume-based signal warrant be met, either without or with the project and, thus, effects at this intersection would also be less than significant. . . Although no significant impact was identified, the City is planning to install a traffic signal at the intersection of Mission Boulevard (SR-238) / Sullivan Underpass by 2019, which would improve intersection operations from existing conditions and would also improve future intersection operations, compared to those reported here.

Mitigation Measures: As explained above, no feasible mitigation measures have been identified for the cumulative impact at the intersection of Mission Boulevard (SR-238) / Niles Boulevard-Niles Canyon Road because of the potential impacts to businesses, residents and utilities, environmental impacts, and uncertain financial feasibility.



SOURCE: W-Trans, 2018

Niles Gateway Mixed-Use Project

Figure 4.B-9
Cumulative Plus Project Traffic Volumes

ESA

Traffic Signal Warrants

A peak hour traffic signal warrant analysis was performed to determine the potential need for a traffic signal at the three unsignalized study intersections that would operate at unacceptable levels of service under any of the scenarios: Mission Boulevard (SR-238) / Sullivan Underpass, and Niles Boulevard / J Street, Niles Boulevard / Sullivan Underpass. As explained in the significance criteria, for an unsignalized intersection, a significant impact is identified when a project contributes at least five percent to the total traffic volume and the addition of project traffic results in the intersection meeting the peak-hour signal warrant. As also noted previously, however, according to the City's practice, satisfying one or more traffic signal warrants does not automatically result in the decision to install a traffic signal, but rather as an indication that a traffic signal may be needed at some point.

Chapter 4C of the *California Manual on Uniform Traffic Control Devices* (CA-MUTCD) provides guidance on when a traffic signal should be considered (CA, CalSTA, and Caltrans, 2014). For the purposes of this EIR, Warrant 3, the Peak Hour volume warrant, which determines the need for traffic control based on the highest volume hour of the day, was used as an initial indication of traffic control needs. The use of this signal warrant is common practice for planning studies.

Under Exiting and Existing plus Project conditions, Warrant 3 was met for the Mission Boulevard (SR-238) / Sullivan Underpass intersection during the a.m. and p.m. peak hours under all six scenarios, including Existing Conditions. As stated above, the City currently plans to install a traffic signal at this intersection by 2019, meaning that the signal will be in place by the time the proposed project is complete and project traffic is added to the local street network. At the Niles Boulevard / J Street and Niles Boulevard / Sullivan Underpass intersections, the peak hour warrant was not met for either peak hour under Exiting, or Existing plus Project, Baseline, or Baseline plus Project conditions. The peak-hour warrant was met under Cumulative and Cumulative plus Project conditions for the intersection of Niles Boulevard / Sullivan Underpass. The warrant was not met in any scenario at the intersection of Niles Boulevard / J Street. Copies of the traffic signal warrant analysis are contained in **Appendix D**.

Congestion Management Program (CMP) Analysis

Impact 4.B-3: The project would add traffic to Congestion Management Program facilities (roadway segments on the Metropolitan Transportation System [MTS]), but would not cause operations to drop to LOS F, or increase the v/c ratio by 0.05 or greater on segments already forecast to operate at LOS F. *(Less than Significant)*

The 2015 Alameda CTC Congestion Management Program (CMP) includes a Land Use Analysis component to determine the impacts of land use decisions made by local jurisdictions on the regional transportation system. The intent of this program is to:

- Better tie together decisions on local land use and regional transportation facilities;

- Better assess the impacts of developments in one community on another community; and
- Promote information sharing between local governments when decisions made by one jurisdiction will have an impact on another.

Alameda CTC's mission is to plan, fund, and deliver transportation programs and projects that expand access and improve mobility to foster a vibrant and livable Alameda County. This broad spectrum of projects and programs enhances mobility and improves air quality throughout Alameda County by:

- Providing streamlined methods to deliver transportation services;
- Strengthening local jurisdictions' ability to compete for transportation funds;
- Giving Alameda County a stronger voice in state and regional transportation decisions;
- Coordinating planning and development across jurisdictional lines; and
- Generating and supporting legislation to coordinate local and regional policies on transportation investment.

Local jurisdictions have responsibilities regarding the analysis of transportation impacts of land use decisions. Among those is an analysis of project impacts on the Metropolitan Transportation System (MTS)[3] for the 2020 and 2040 horizon years in accordance with the Technical and Policy Guidelines of the Congestion Management Program. For projects that generate more than 100 peak-hour vehicle trips, a CMP traffic analysis is required using the Alameda Countywide Transportation Demand Model (ACTDM). It is important to note the ACTDM horizon year (2040) differs from the General Plan horizon year (2035) (ACTC, 2017b).

Based on the trip generation described previously, a total of 84 new trips would be generated during the p.m. peak hour. Although the threshold for a CMP Analysis is 100 net new peak hour vehicle trips, this analysis has been included for informational purposes. These trips would be added to the following CMP segments in the vicinity of the project site according to the project trip assignment as illustrated on **Figure 4.B-5.**

- Mission Boulevard (SR-238)
- Mowry Avenue (SR-84)
- Niles Canyon Road (SR-84)
- I-680

The level of service standard for CMP segments is LOS E. The Alameda County CTC has not established a threshold of significance on CMP segments for significant project impacts; instead, it expects that professional judgment will be used to determine the level of significance of project impacts. For the purposes of this traffic analysis, it was assumed that if a segment operates at an unacceptable service level without the proposed project, the project impact would be considered

[3] The Metropolitan Transportation System, designated by the Metropolitan Transportation Commission, is similar to, but somewhat more extensive than, the Tier 1 CMP network.

significant if the contribution of project traffic results in an increase in the v/c ratio of more than 0.05. This threshold is consistent with prior traffic impact analyses completed for developments in the City of Fremont. The v/c ratio is the ratio of traffic volume on a roadway to the theoretical capacity (i.e. number of vehicles) that the roadway can accommodate. The addition of 0.05 or less to the v/c ratio would not typically be perceptible to a motorist. In order to determine the potential impact of the proposed project, p.m. peak hour traffic conditions on 14 directional CMP segments in the vicinity of the proposed project were analyzed under projected 2020 and 2040 volumes as shown in **Figure 4.B-10** and **Figure 4.B-11**. These CMP segments were chosen as they are the ones that would most likely be utilized by project-generated traffic.

Year 2020 Roadway Traffic Conditions

Model estimates show that by the year 2020, most of the roadway segments would generally operate at LOS D or better during the p.m. peak hour, with and without traffic generated by the proposed project. Traffic on southbound Mission Boulevard (SR-238) between Nursery Avenue and Niles Canyon Road would continue to operate at LOS E during the p.m. peak hour, with and without traffic generated by the proposed project.

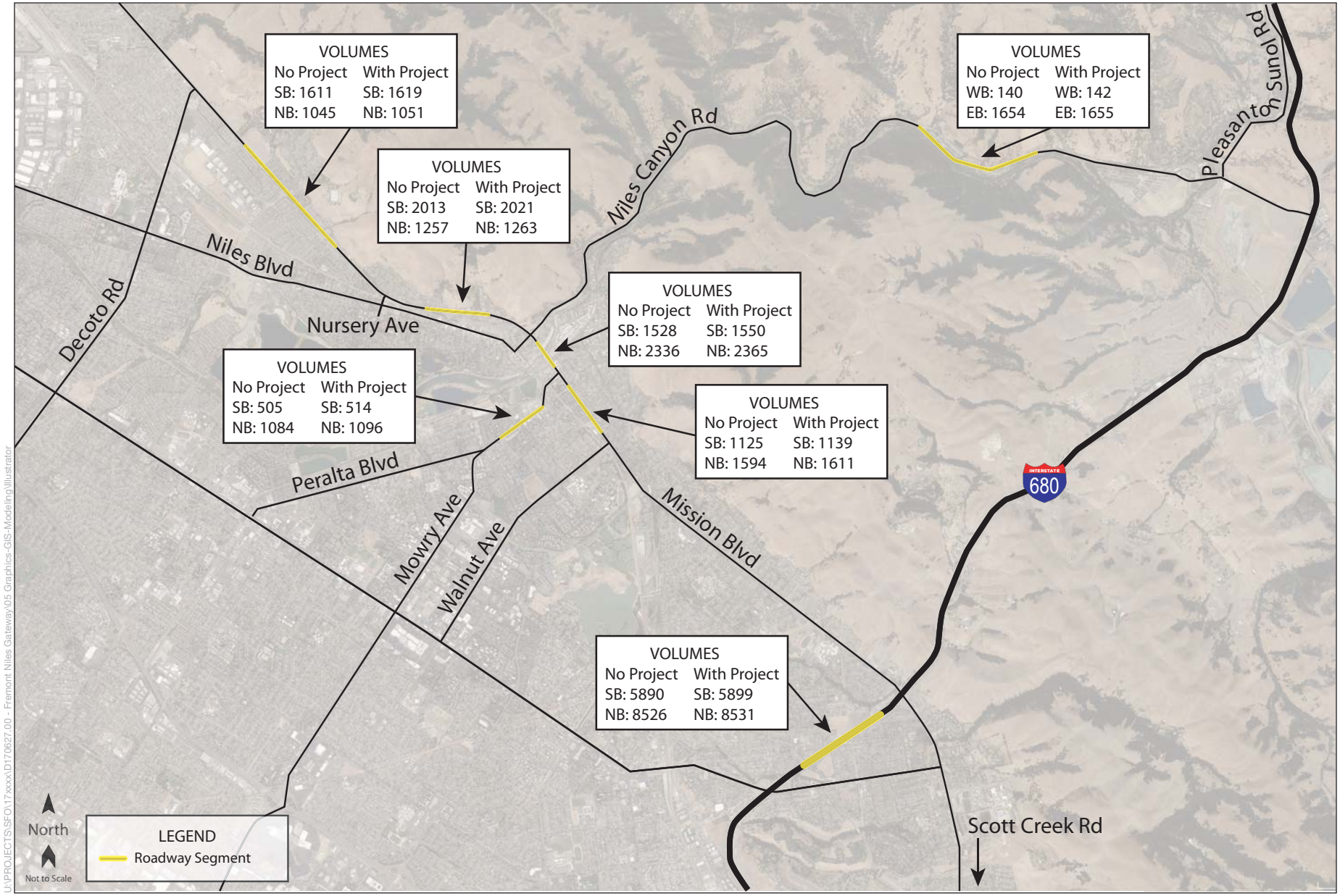
Eastbound Mowry Avenue and eastbound Niles Canyon Road would continue to operate at congested LOS F conditions. Although the model estimates that the proposed project would increase traffic on these roadway segments during the p.m. peak hour, the proposed project would not cause a significant impact because the increase in v/c ratio on segments that operate at LOS F would be less than 0.05 as shown in **Table 4.B-11.**

Year 2040 Roadway Traffic Conditions

By the year 2040, the increase in traffic would result in more congested traffic operations on the CMP roadway network in the vicinity of the proposed project. Although the model estimates that the proposed project would increase traffic on some LOS F segments during the p.m. peak hour, the proposed project would not cause a significant impact because the increase in v/c ratio would be less than 0.05 at any location. All other road segments would operate at LOS E or better during the p.m. peak hour with or without traffic generated by the proposed project, as shown in **Table 4.B-12**.

In summary, the proposed project would result in a less-than-significant year 2020 and year 2040 impact to CMP roadway operations.

Mitigation: None Required.

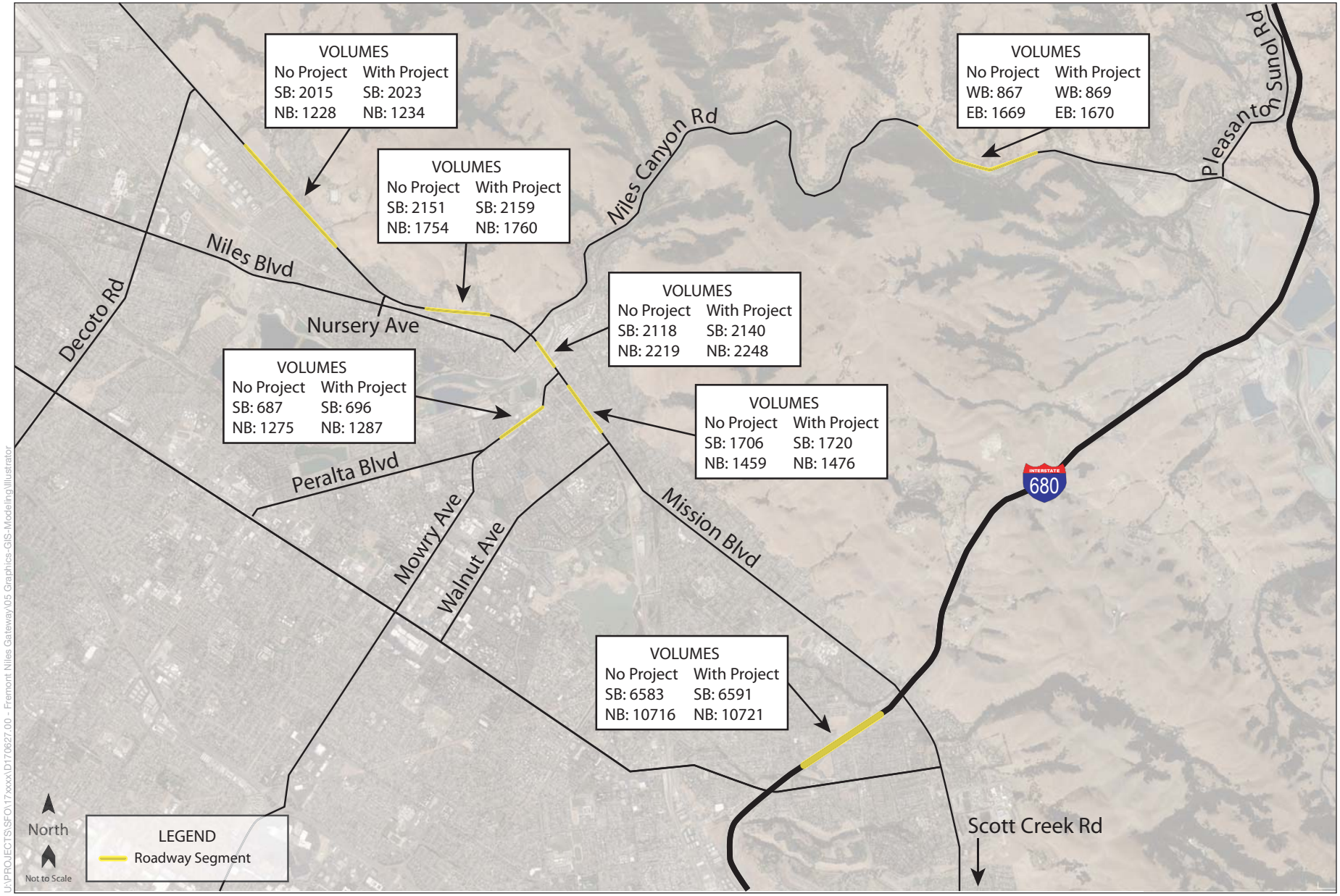


SOURCE: W-Trans, 2018

Niles Gateway Mixed-Use Project

Figure 4.B-10
2020 Cumulative and Cumulative Plus Project CMP Traffic Volumes

ESA



SOURCE: W-Trans, 2018

Niles Gateway Mixed-Use Project

Figure 4.B-11
2040 Cumulative and Cumulative Plus Project CMP Traffic Volumes

ESA

TABLE 4.B-11
2020 PM PEAK HOUR ROADWAY SEGMENT LOS

				No Project		Plus Project		Change		
Segment	**From**	**To**	**Dir**	**Volume**	**V/C/ LOS**	**Volume**	**V/C/ LOS**	**Volume**	**V/C**	**Project Impact**
Mission Blvd	Decoto Rd	Nursery Ave	SB	1,611	0.767/C	1,619	0.771/D	8	0.004	LTS
Mission Blvd	Nursery Ave	Decoto Rd	NB	1,045	0.498/C	1,051	0.500/C	6	0.002	LTS
Mission Blvd	Nursery Ave	Niles Canyon Rd	SB	2,013	0.915/E	2,021	0.919/E	8	0.004	LTS
Mission Blvd	Niles Canyon Rd	Nursery Ave	NB	1,257	0.571/C	1,263	0.574/C	6	0.003	LTS
Mission Blvd	Niles Canyon Rd	Mowry Ave	SB	1,528	0.463/C	1,550	0.470/C	22	0.007	LTS
Mission Blvd	Mowry Ave	Niles Canyon Rd	NB	2,336	0.708/D	2,365	0.717/D	29	0.009	LTS
Mission Blvd	Mowry Ave	Walnut Ave	SB	1,125	0.511/C	1,139	0.518/C	14	0.007	LTS
Mission Blvd	Walnut Ave	Mowry Ave	NB	1,594	0.725/D	1,611	0.732/D	17	0.007	LTS
Mowry Ave	Mission Blvd	Peralta Blvd	WB	505	0.481/A	514	0.490/A	9	0.009	LTS
Mowry Ave	Peralta Blvd	Mission Blvd	EB	1,084	**1.032/F**	1,096	**1.044/F**	12	0.012	LTS
Niles Canyon Rd	Pleasanton Sunol Rd	Mission Blvd	WB	140	0.085/A	142	0.086/A	2	0.001	LTS
Niles Canyon Rd	Mission Blvd	Pleasanton Sunol Rd	EB	1,654	**1.002/F**	1,655	**1.003/F**	1	0.001	LTS
I-680	Mission Blvd	I-680 SB	SB	5,890	0.669/D	5,898	0.670/D	8	0.001	LTS
I-680	Mission Blvd	I-680 NB	NB	8,526	**1.292/F**	8,531	**1.293/F**	5	0.001	LTS

NOTES: Results are displayed as Volume to Capacity (V/C) ratio / Level of Service; LTS= Less than significant;
Change = difference in volume and V/C ratio between no-project and project conditions; **Bold** = Unacceptable operation
SOURCE: W-Trans, 2017 (Appendix D)

TABLE 4.B-12
2040 PM PEAK HOUR ROADWAY SEGMENT LOS

				No Project		Plus Project		Change		
Segment	**From**	**To**	**Dir**	**Volume**	**V/C/ LOS**	**Volume**	**V/C/ LOS**	**Volume**	**V/C**	**Project Impact**
Mission Blvd	Decoto Rd	Nursery Ave	SB	2,015	0.960/E	2,023	0.963/E	8	0.003	LTS
Mission Blvd	Nursery Ave	Decoto Rd	NB	1,228	0.585/C	1,234	0.588/C	6	0.003	LTS
Mission Blvd	Nursery Ave	Niles Canyon Rd	SB	2,151	**0.978/F**	2,159	**0.981/F**	8	0.003	LTS
Mission Blvd	Niles Canyon Rd	Nursery Ave	NB	1,754	0.797/D	1,760	0.800/D	6	0.003	LTS
Mission Blvd	Niles Canyon Rd	Mowry Ave	SB	2,118	0.642/D	2,140	0.648/D	22	0.006	LTS
Mission Blvd	Mowry Ave	Niles Canyon Rd	NB	2,219	0.672/D	2,248	0.681/D	29	0.009	LTS
Mission Blvd	Mowry Ave	Walnut Ave	SB	1,706	0.775/E	1,720	0.782/E	14	0.007	LTS
Mission Blvd	Walnut Ave	Mowry Ave	NB	1,459	0.663/D	1,476	0.671/D	17	0.008	LTS
Mowry Ave	Mission Blvd	Peralta Blvd	WB	687	0.654/B	696	0.663/B	9	0.009	LTS
Mowry Ave	Peralta Blvd	Mission Blvd	EB	1,275	**1.214/F**	1,287	**1.226/F**	12	0.012	LTS
Niles Canyon Rd	Pleasanton Sunol Rd	Mission Blvd	WB	867	0.525/E	869	0.527/E	2	0.002	LTS
Niles Canyon Rd	Mission Blvd	Pleasanton Sunol Rd	EB	1,669	**1.012/F**	1,670	**1.012/F**	1	0.000	LTS
I-680	Mission Blvd	I-680 SB	SB	6,583	0.748/D	6,591	0.749/D	8	0.001	LTS
I-680	Mission Blvd	I-680 NB	NB	10,716	**1.624/F**	10,721	**1.624/F**	5	0.000	LTS

NOTES: Results are displayed as Volume to Capacity (V/C) ratio / Level of Service; LTS= Less than significant;
Change = difference in volume and V/C ratio between no-project and project conditions; **Bold** = significant impact
SOURCE: W-Trans, 2017 (Appendix D)

Impact 4.B-4: Development facilitated by the proposed project would not substantially increase hazards due to a design feature or incompatible uses. *(Less Than Significant)*

Traffic hazards generally would result from the introduction of design features such as sharp roadway curves, dangerous intersections, or incompatible uses of roadways, none of which would be caused by the proposed project. The project site is served by an existing roadway network, and development facilitated by the proposed project would not alter the system of roads (i.e., would not construct any new roads that would impact traffic safety). Also, the land uses envisioned by the proposed project would be compatible and consistent with current uses near the project site. Impacts would be less than significant.

Site Access

Access to the site would be provided by two driveways on Niles Boulevard. The north driveway would have a left-turn lane for the northbound approach on Niles Boulevard. The south driveway would be at the location where Niles Boulevard turns from north-south to east-west and would be limited to right-turns in and out only. The proposed project would also re-stripe northbound Niles Boulevard to accommodate a new left turn pocket lane to the north driveway. Potential impacts associated with site access are discussed below.

Driveway Operation

Delays at both project driveways were evaluated for potential impact on Niles Boulevard. As shown in **Table 4.B-13** the average vehicle delay would be 0.5 seconds or less, which would be imperceptible to roadway operations on Niles Boulevard. Both project driveways would operate at LOS C or better under each project scenario. The proposed driveways would not result in a perceptible vehicle delay on Niles Boulevard and, therefore, would not increase hazards due to its design and impacts would be less than significant.

TABLE 4.B-13
DELAY AT DRIVEWAYS

	Existing Plus Project		Background Plus Project		Cumulative Plus Project	
Intersection	**AM**	**PM**	**AM**	**PM**	**AM**	**PM**
Niles Blvd / North Driveway	0.5/A	0.5/A	0.5/A	0.5/A	0.5/A	0.0/A
North Driveway Approach	14.2/B	11.5/B	14.2/B	11.6/B	21.1/C	14.8/B
Niles Blvd / South Driveway	0.2/A	0.2/A	0.2/A	0.2/A	0.1/A	0.1/A
South Driveway Approach	12.2/B	9.9/A	12.3/B	10.0/B	15.5/C	11.0/B

NOTE: Delay is measured in seconds/vehicle
SOURCE: W-Trans, 2017 (Appendix D)

Sight Distance

Sight distance along Niles Boulevard at the project driveways was evaluated based on sight distance criteria contained in the *Highway Design Manual* published by Caltrans (Caltrans, 2017). The recommended sight distance for minor street approaches that are either a private road or a

driveway is based on stopping sight distance. The approach travel speeds are used as the basis for determining the recommended sight distance. Additionally, the stopping sight distance needed for a following driver to stop if there is a vehicle waiting to turn into a side street or driveway is evaluated based on stopping sight distance criterion and the approach speed on the major street.

At unsignalized intersections and driveways, a substantially clear line of sight should be maintained between the driver of a vehicle waiting at the crossroad and the driver of an approaching vehicle. Adequate time must be provided for the waiting vehicle to either cross, turn left, or turn right, without requiring the through traffic to radically alter their speed. Sight distance should be measured from a 3.5-foot height at the location of the driver on the minor road to a 4.25-foot object height in the center of the approaching lane of the major road. Setback for the driver on the crossroad is typically measured from a minimum of 15 feet, measured from the edge of the traveled way.

Sight distance at the proposed driveways was measured using the site plan (see Project Description, **Figure 3-3**). Based on a design speed of 25 mph on Niles Boulevard, the minimum stopping sight distance needed is 150 feet. For vehicles traveling 25 mph on Niles Boulevard, stopping sight distance at both driveways would exceed 150 feet and therefore would be adequate to allow a vehicle on Niles Boulevard to stop if necessary to allow a car to enter or exit the project site. The proposed project would not cause traffic hazards and impacts related to sight distance and the impact would be less than significant.

Circulation

On-site circulation was evaluated using AutoTURN, an AutoCAD support program which simulates vehicle turning movements. For the analysis, the maneuverability through the site was reviewed for a 30-foot delivery truck.[4] The analysis indicates that a 30-foot delivery truck or smaller would be able to successfully maneuver through the site. The analysis also determined that all the necessary maneuvers into and out of the site through both entrances and along the project roadway can be made within the provided dimensions. Should a larger truck (e.g., a semi-trailer moving truck) require site access, such a vehicle would likely have to use the on-site private street south of the point where Niles Boulevard makes a 90-degree turn to the east. The truck would then have to back out onto Niles Boulevard, which could be safely accomplished with the assistance of a second person to temporarily halt traffic on Niles Boulevard while the truck backs out of the site. Access to and from the site for other vehicles would remain available via the northern site driveway. Therefore, the proposed on-site circulation would not increase hazards due to its design and impacts would be less than significant.

On-Street Parking

The project proposes 25 on-street parking spaces that would be set diagonally to the curb, in a manner similar to the existing diagonal parking in the commercial area along Niles Boulevard

[4] A 30-foot truck is a single-unit truck (i.e., no semi-trailer) with an overall length of 30 feet, commonly referred to as a “box truck” or a “straight truck.” The 30-foot overall length represents the standard transportation industry design dimension for a single-unit truck.

north of the project site. Diagonal parking typically functions acceptably on low-speed streets in commercial districts where drivers are already accustomed to watching for potential conflicts (i.e., cars backing out, pedestrians accessing vehicles, etc.), and given the low speeds, are able to easily stop in a short distance if a parking maneuver were to occur. The width of the travel lane behind the diagonal parking would be 16 feet wide to provide additional space between through traffic and parked vehicles. Based on a design speed of 25 mph on Niles Boulevard, the minimum stopping sight distance needed is 150 feet. For vehicles traveling 25 mph on Niles Boulevard, stopping sight distance at any of the diagonal parking spaces would exceed 150 feet and, therefore, would be adequate to allow a vehicle on Niles Boulevard to stop if necessary to allow a car to back up from one of the diagonal parking spaces on Niles Boulevard. No adverse circulation or safety affects are anticipated as a result of diagonal parking.

Driveway Queue Length Evaluation

Under the Background plus Project scenario, the projected maximum queues at the project driveways were determined using the SimTraffic application of Synchro, and averaging the maximum projected queue for each of ten runs. Summarized in **Table 4.B-14** are the predicted queue lengths for approaches to driveways. Copies of the SimTraffic projections are provided in **Appendix D**.

TABLE 4.B-14
PEAK HOUR 95TH PERCENTILE QUEUES

	Storage Length (ft.)	Background plus Project Queue Length	
		AM	PM
Niles Blvd / North Driveway			
EB Left-Right Turn Lane	150	43	45
NB Left Turn Lane	150	13	11
Niles Blvd / South Driveway			
NB Through-Right Turn Lane	500	35	34

SOURCE: W-Trans, 2017 (Appendix D)

Vehicle queues at the project driveways are not expected to exceed the storage capacity under the Background plus Project scenario. The proposed project would not substantially increase hazards due to a design feature or incompatible uses. Accordingly, the impacts would be less than significant.

Mitigation: None Required.

Impact 4.B-5: Development facilitated by the proposed project would not result in inadequate emergency access. ***(Less than Significant)***

The project site is served by an existing roadway network that fully accommodates vehicle access including access by emergency vehicles (fire, police, ambulance). Development facilitated by the proposed project would not alter vehicle access to the site, nor would project traffic substantially increase congestion so as to preclude emergency vehicle access. Moreover, emergency vehicles have emergency lights and sirens and California law requires that drivers yield the right-of-way to emergency vehicles and remain stopped until the emergency vehicle passes. Accordingly, impacts would be less than significant.

Mitigation: None Required.

Impact 4.B-6: Development facilitated by the proposed project would increase traffic volumes on the area roadway network, affecting the performance of public transit and non-motorized travel modes (i.e., pedestrians and bicyclists). ***(Less than Significant)***

Public Transit

As described in Impact 4.B-1, despite implementation of planned improvements, some of the study intersections would operate at unacceptable levels of service with or without the proposed project. The levels of vehicle delay experienced at area intersections (including by transit vehicles) would be similar to that of other vehicles. However, the total added delay at project study intersections for AC Transit Line 216 and Line 232, which operate in the vicinity of the project site, would be less than 17 seconds per round trip under the Cumulative plus Project scenario. Given that each of these routes operates once per hour, the delay would not be considered substantial because no additional service would be required to maintain existing headways. Therefore, the effect would be less than significant. (Line 625 provides only three daily one-way trips to/from school and would not be adversely affected by project traffic.)

In terms of transit ridership, the traffic analysis conservatively assumes that all project travel would be by private vehicle, given the hourly headways on nearby transit lines. However, a small share of project a.m. and p.m. peak-hour trips could be made by transit. If 10 percent (the transit share for the census tract that contains the project site) (MTC 2018) of commuters were to use transit, this would amount to approximately eight peak-hour transit riders, which would not be anticipated to substantially affect either nearby AC Transit route or BART. The impact would be less than significant.

Pedestrian Circulation

Niles Boulevard currently has sidewalks along both sides of the roadway. New buildings that are constructed would be required to include sidewalks installed along their frontages per City of Fremont Municipal Code Chapter 12.10, “Street Right-Of-Way and Improvements” section 12.10.080 “Street Improvement Requirement” (City of Fremont, 2017b). Internal pedestrian circulation would be provided via sidewalks, crosswalks, and paved walking paths. The project impact on pedestrian circulation would be less than significant.

Bicycle Circulation

The Alameda Creek Trail is located between the site and the Alameda Creek. There is also a Class III Bike Route on Niles Boulevard along the project frontage. The proposed project would not include any elements that would disrupt or impede access to these bicycle facilities.

Because bicycle facilities (on-street routes and an off-street path) are available, and with the expectation that the required bicycle parking spaces would be provided consistent with Fremont Municipal Code, the project's impact on bicycle circulation would be less than significant.

Mitigation: None Required.

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