

Appendix J

Transportation Assessment



1151 N. Las Palmas Avenue Project Transportation Assessment

Los Angeles City Planning Department
200 N. Spring St., Room 621
Los Angeles, CA 90012

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I. Introduction

Kimley-Horn and Associates, Inc. (“Kimley-Horn”) prepared this *Transportation Assessment* (traffic study) for the 1151 N. Las Palmas Avenue Project (the “Project”), to be located at 1128 - 1146 N. Las Palmas Avenue, 1139-1155 N. Las Palmas Avenue, and 1138-1150 N. McCadden Place (Project Site) in the City of Los Angeles (“City”). The traffic study was prepared in accordance with the latest version of LADOT’s *City of Los Angeles Transportation Assessment Guidelines (TAG)* (August 2022). A Memorandum of Understanding (MOU) outlining the study assumptions was submitted to and approved by the City. The MOU is included in **Appendix A**.

Project Description

The Project Site is comprised of eight parcels with the following Assessor Parcel Numbers (APN): 5532-021-003, 004, 005, 014, 015, 016, 017, 5532-022-003, 004, 005, and 006) and is approximately 2.06 acres. The Project Site is located mid-block between Lexington Avenue to the north and Santa Monica Boulevard to the south, fronting N. McCadden to the west. N. Las Palmas Avenue runs north-south through the Project Site, bisecting it and separating 1139-1155 N. Las Palmas Avenue and 1138-1150 N. McCadden Place in the western portion of the Project Site from 1128-1146 N. Las Palmas Avenue in the eastern portion of the Project Site. The western portion of the Project Site is currently developed with a one-story, 30-foot-tall manufacturing building and a surface parking lot. The eastern portion of the Project Site is currently developed with four office buildings ranging from one- to two stories and 27 to 30 feet tall.

Figure 1 illustrates the Project Site Location in its regional setting.

The Project proposes to demolish the surface parking lot at 1139-1149 N. Las Palmas Avenue and construct a new 3-story office building (80,987 square feet) with a three-level subterranean parking in the western portion of the Project Site. The Project also proposes to renovate the existing manufacturing building (5,498 square feet) at 1155 N. Las Palmas Avenue in the western portion of the Project Site, change its existing use to office, and construct an addition for retail (135 square feet) and office (560 square feet). The Project would retain the four existing buildings located at 1128 to 1146 N. Las Palmas Avenue with only minor interior renovations currently anticipated; no exterior renovations, change in use, or expansion of these buildings are proposed at this time. The Project would provide 81,682 square feet of new development with 41,728 square feet of existing development to remain, for a total of 123,410 square feet of floor area, resulting in a Floor Area Ratio (FAR) of approximately 1.38 to 1.

The Project Site plan is shown in **Figure 2**.

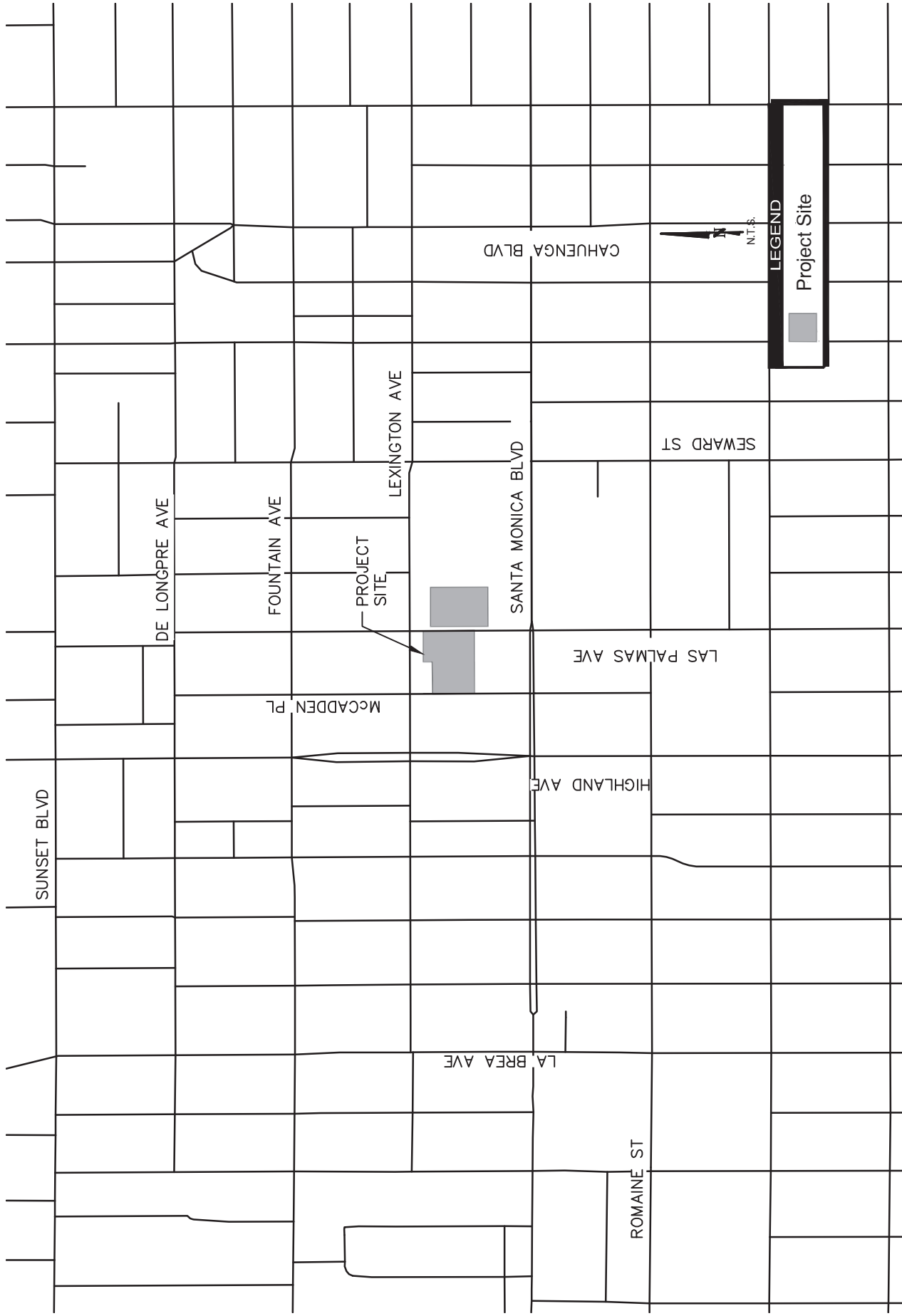


FIGURE 1 - PROJECT LOCATION
1151 N LAS PALMAS AVENUE



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II. Environmental Setting

The Project study area was defined in accordance with the latest version of City of Los Angeles Department of Transportation (LADOT)'s *City of Los Angeles Transportation Assessment Guidelines (August 2022)* (TAG) and agreed upon with LADOT staff. A Memorandum of Understanding (MOU) which outlines all the traffic study assumptions was submitted to LADOT and approved on October 17, 2022, as part of this transportation assessment. The approved MOU is incorporated as a reference in **Appendix A**.

Existing Street System

The key roadways in the vicinity of the Project Site are:

- **N. Las Palmas Avenue** – N. Las Palmas Avenue is classified as a Local Street in City of Los Angeles Mobility Plan. Oriented in the north-south direction, it bisects the Project Site and provides primary access to the Project Site. It has two travel lanes in the study area, one lane in each direction. One and two-hour metered and unmetered on-street parking is generally provided on both sides of the street within the study area.
- **Santa Monica Boulevard** – Santa Monica Boulevard is classified as Avenue I in the City of Los Angeles Mobility Plan. Oriented in the east-west direction, it is located south of the Project Site, at the end of the block in which the Project Site is located. It provides four travel lanes, two lanes in each direction with a left turn lane at the intersections in the study area.
- **Lexington Avenue** – Lexington Avenue is classified as a Local Street in the City of Los Angeles Mobility Plan. Oriented in the east-west direction, it is located north of the Project Site, at the end of the block in which the Project Site is located. It has two travel lanes in the study area, one lane in each direction. One and two-hour metered and unmetered on-street parking is generally provided on both sides of the street within the study area.
- **N. McCadden Place** – N. McCadden Place is classified as Local Street in the City of Los Angeles Mobility Plan. Oriented in the north-south direction, it is located along the west side of the Project Site. It has two travel lanes in the study area, one lane in each direction. One and two-hour metered and unmetered on-street parking is generally provided on both sides of the street within the study area.
- **Highland Avenue** – Highland Avenue is classified as Avenue I in the City of Los Angeles Mobility Plan. Oriented in the north-south direction, it is located one block west of the western border of the Project Site. It provides six travel lanes, three lanes in each direction, with a left turn at the intersections in the study area.

Existing Transit Service

The Project Site is approximately 0.7 miles from the Hollywood and Highland Metro Station which serves the B Line (formally the Red Line) of the Metro Rail System. The existing transit services within 1,320 ft of the Project Site consist of two bus lines operated by Metro and LADOT DASH.

- **Metro Local 4** – Route 4 is a local line that travels between Santa Monica and Downtown Los Angeles via Santa Monica Boulevard, with average headways of 10 to 15 minutes during weekday peak hours.
- **LADOT DASH Hollywood** – DASH Hollywood is a local line that travels clockwise and counterclockwise within the Hollywood area mainly via Fountain Avenue, Highland Avenue, Franklin Avenue and Vermont Avenue. The DASH Hollywood operates every day of the week except for public holidays with an average headway of 30 minutes.

Bicycle and Pedestrian Facilities

The LADOT's guidelines require a description of the pedestrian and bicycle facilities within one-quarter mile (1,320 ft) of the edge of the Project site. There are currently no Class I, II, III, or IV bike facilities located within 1,320 ft from the Project Site. The study area has a mature pedestrian network including sidewalks and crosswalks providing easy access and connectivity to transit facilities.

The Project would provide 26 bicycle spaces within the Project Site. The Project would provide 17 long-term bicycle parking spaces on Building A's subterranean parking Level 1 and nine short-term bicycle parking spaces on Building A's ground level adjacent to Building A along N. Las Palmas Avenue.

High-Injury Network

The City of Los Angeles' High Injury Network (HIN) spotlights streets with the highest incidence of severe and fatal collisions in the City of Los Angeles. The Project study area includes several street segments that have been identified by the City as part of the HIN. These HIN Street segments are:

- N. Las Palmas Avenue between Santa Monica Boulevard and Lexington Avenue;
- Santa Monica Boulevard between Highland Avenue and N. Las Palmas Avenue; and
- Highland Avenue between Santa Monica Boulevard and Lexington Avenue.

III. CEQA Transportation Analyses

Plans, Programs, and Policy Review (Threshold T-1)

Per the City of Los Angeles Transportation Assessment Guidelines, the City aims to achieve an accessible and sustainable transportation system that meets the needs for all users of the transportation system, including pedestrians, bicyclist, motorists, public transit riders, disabled persons, senior citizens, and movers of commercial goods. Therefore, the transportation requirements and mitigations for proposed developments should be consistent with the City's transportation goals and policies. Proposed development projects shall be analyzed to identify potential conflicts with adopted City plans and policies if the proposed project does not meet the screening criteria.

Screening Criteria

This section describes the City's screening criteria to determine if a project requires a plans, programs, and policy analysis. If the project requires a discretionary action, and the answer is yes to any of the following questions, further analysis will be required to assess whether the proposed project would conflict with plans, programs, ordinances, or policies:

- Does the project require a discretionary action that requires the decision maker to find that the decision substantially conforms to the purpose, intent and provisions of the General Plan?
- Is the project known to directly conflict with a transportation plan, policy, or program adopted to support multimodal transportation options or public safety?
- Is the project required to or proposing to make any voluntary modifications to the public right-of-way (i.e., dedications and/or improvements in the right-of-way, reconfigurations of curb line, etc.)?

Impact Criteria

This section describes the City's impact criteria for a plans, programs, and policy analysis.

Threshold T-1: Would the project conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadways, bicycle, and pedestrian facilities?

Analysis

Because the Project is proposing modifications to the public right-of-way, an analysis is required to assess whether the Project would conflict with plans, programs, ordinances, or policies. The proposed modifications include dedications along N. Las Palmas Avenue and N. McCadden Place and roadway widening on N. McCadden Place.

The purpose of this section is to evaluate whether the Project would conflict with or would interfere with the City's implementation of a City plan, program, or policy related to the transportation

network. **Appendix B** includes LADOT's Plans, Policies, and Consistency Worksheet for the Project. The following documents were reviewed for this analysis:

- **City of Los Angeles Mobility Plan 2035**, which serves as the City's General Plan circulation element. The mobility plan incorporates "complete streets" principles and lays the policy foundation. The mobility plan also identifies corridors proposed to enhance modes (bicycle, pedestrian, transit, and vehicle). These corridors are categorized as:
 - Neighborhood Enhanced Network (NEN) is a selection of streets that provide comfortable and safe routes for localized travel of slower-moving modes such as walking, bicycling, or other slow speed motorized means of travel. N. Las Palmas Avenue in the study area is identified as NEN.
 - Transit Enhanced Network (TEN) is the network of arterial streets enhanced to improve transit service performances and/or the overall experience of people who walk and take transit. Santa Monica Boulevard in the study area is identified as TEN.
 - Bicycle Enhanced Network (BEN) is a network of streets planned for protected bicycle lanes, and bicycle paths to provide bikeways to a variety of users. Santa Monica Boulevard and Highland Avenue in the study area are identified as Tier 3 bicycle lanes. Tier 3 bicycle lanes are bicycle lanes along streets that are defined by pavement striping and signage to delineate the portion of a roadway dedicated for bicycle travel.
 - Vehicle Enhanced Network (VEN) is a selection of streets that prioritize vehicular movement and that offer safe, consistent travel speeds and reliable travel times. None of the streets in the study area is identified as VEN.
 - Pedestrian Enhanced Network (PEN) is a selection of streets that enhance the environment to promote more walking, reduce reliance on other modes for shorter trips, promote health, increase the vitality of streets, and more. Santa Monica Boulevard and Highland Avenue in the study area are identified as PEN.

Based on a review of the Project's proposed land uses, design features, and mitigation measures, the Project would be consistent with and would not impede the City's implementation of the Mobility Plan 2035.

- **The Hollywood Community Plan** is one of the 35 Community Plans in the City of Los Angeles, adopted in December 1988 it has been designed to accommodate development to the year 2010. An update to the Hollywood Community Plan is currently in process that will guide the development of the Hollywood community area through 2040. One of the major objectives of the Adopted (1988) Hollywood Community Plan is to make provisions for a circulation system coordinated with land uses and densities and adequate to accommodate traffic; and to encourage the expansion and improvement of public transportation service. While this is a citywide objective, the Project would support its implementation. Specifically, the Project Site is located in a highly urbanized area that is well-served by public transit. The Project would include various streetscape improvements

such as additional street trees and landscaping to encourage walkability. Furthermore, the Project would provide approximately 9 short- and 17 long-term bicycle parking spaces, and amenities per LAMC requirements. Amenities include locker, repair room, restrooms and showers. Thus, the Project would promote the use of alternative modes of transportation, including use of public transportation, walking, and bicycling. The Project would also be consistent with the mobility goals and objectives within the Draft Hollywood Plan which include providing a range of employment opportunities and promoting mixed use along Santa Monica Boulevard. The Project proposes a mixed-use land use, would generate employment opportunities, and would be located within one-quarter mile of Santa Monica Boulevard. The Project would be consistent with the policies of the adopted and draft Hollywood Community Plan.

- **Vision Zero Los Angeles** is a plan with the goal of eliminating traffic deaths in Los Angeles and to design streets to increase the safety of pedestrians. The Project Site is located on N. Las Palmas Avenue, which is included in the High Injury Network. The Project Site has access on N. Las Palmas Avenue, but it is an existing access. The Project would not add new access on N. Las Palmas Avenue and therefore would not conflict with the implementation of future Vision Zero projects in the public right-of-way.

Findings

Based on the results of the analysis of the Project's consistency with plans, programs, and policy, the following findings are made:

- The Project would be consistent with and would not impede the City's implementation of the Mobility Plan 2035.
- The Project would be consistent with the policies of the Hollywood Community Plan.
- The Project would not add new access on N. Las Palmas Avenue and therefore would be consistent with and would not conflict with the implementation of future Vision Zero projects in the public right-of-way.

Vehicle Miles Traveled Analysis (Threshold T - 2.1)

Per the City of Los Angeles Transportation Assessment Guidelines, one objective of the Los Angeles Mobility Plan 2035 is to decrease vehicle miles traveled (VMT) per capita by 20% by 2035. To meet this objective, proposed land use projects are required to assess whether a land use project causes substantial vehicle miles traveled if the proposed project does not meet the screening criteria.

Screening Criteria

This section describes the City's screening criteria to determine if a project requires a VMT analysis. If the project requires a discretionary action, and the answer is yes to any of the following

questions, further analysis will be required to assess whether the proposed project would cause substantial vehicle miles traveled:

- Would the land use project generate a net increase of 250 or more daily vehicle trips?
- Would the project generate a net increase in daily VMT?
- If the project includes retail uses, does the portion of the project that contain retail uses exceed a net 50,000 square feet?
- Would the Project or Plan located within a one-half mile of a fixed-rail or fixed-guideway transit station replace an existing number of residential units with a smaller number of residential units?

Impact Criteria

This section describes the City's impact criteria for development projects that require a VMT analysis.

- For residential projects, the project would generate household VMT per capita exceeding 15% below the existing average household VMT per capita for the Area Planning Commission (APC) area in which the project is located. (See Table 1)
- For office projects, the project would generate work VMT per employee exceeding 15% below the existing average work VMT per employee for the APC in which the project is located. (See Table 1)
- For regional serving projects including retail projects, entertainment projects, and/or event centers, the project would result in a net increase in VMT.
- For other land use types where the threshold is not further specified below, measure VMT impacts for the work trip element using the criteria for office projects above. (see Table 1)

Table 1: LADOT VMT Impact Criteria (15% Below APC Average)

Area Planning Commission (APC)	Daily Household VMT Per Capita	Daily Work VMT Per Employee
Central*	6.0	7.6
East LA	7.2	12.7
Harbor	9.2	12.3
North Valley	9.2	15.0
South LA	6.0	11.6
South Valley	9.4	11.6
West LA	7.4	11.1

*Project APC

Source: LADOT TAG

Analysis

Because the Project is generating more than the City's 250 daily vehicle trips threshold, an analysis is required to assess whether the Project would cause substantial vehicle miles traveled.

Methodology and Assumptions

Based on the Project's proposed land use information, only the office land use was analyzed. Trips generated by the four existing office buildings located at 1128 to 1148 N. Las Palmas Avenue are not included in the trip generation calculation because the land-use is not changing, and it is not expected that these building would generate new, additional trips after the Project is constructed. Trip credits for the existing land use (manufacturing) building that would be displaced were applied to the Project. The City of Los Angeles VMT calculator, as outlined in the TAG, was used to determine the Project's VMT. The VMT estimation tool generates VMT estimates in a manner that is consistent with OPR's guidelines.

The Project's proposed retail area is presumed to have a less than significant VMT impact per the City's TAG. Per the TAG, retail uses in mixed-use projects can be removed from the analysis if the use falls under 50,000 square feet. The Project's proposed retail area of 135 square feet would be local serving, resulting in a less than significant VMT impact and no further VMT analysis is required.

As the Project Site is located within the Central APC, and the Project proposes only non-residential uses, the VMT impact criteria applicable to the Project is 7.6 daily work VMT per employee, as shown in **Table 1** above.

VMT Analysis

VMT was calculated for the Project's proposed office land use using the City's VMT calculator, in compliance with the TAG. The Project would include three project design features that would reduce trips and VMT through TDM strategies and are included in the VMT analysis for the Project.

- **PDF TRAF-1 Promotions and Marketing:** The Project would provide marketing and promotional tools to educate and inform employees about site specific transportation options and effects of their travel choices and opportunities to alter their habits through the office employers. This study assumed that 100 percent of employees would be eligible to be involved with a promotions and marketing program, allowing for the full 4% VMT reduction.
- **PDF TRAF-2 Reduced Parking Supply:** Pursuant to City Ordinance No. 185,480 (Bicycle Parking Ordinance), new or existing code-required vehicle parking spaces for all uses may be replaced by bicycle parking at a ratio of one vehicle space for every four bicycle spaces. Based on LAMC, the project would typically require 219 vehicle parking spaces. Per City Ordinance No. 185, project would provide 213 vehicle parking spaces, six (6) fewer than the LAMC requirement.

- **PDF TRAF-3 Bicycle Parking and Amenities:** The project would provide 26 short-and long-term bicycle parking spaces, (i.e., 26 bicycle parking spaces consisting of 9 short-term and 17 long-term spaces), and amenities such as shower/changing facilities.

The effectiveness of the TDMs to reduce vehicle trips and VMT is based on research from the California Air Pollution Control Officers Association (CAPCOA). The Project VMT is 8.8 daily work VMT per employee with the project features which exceeds the threshold of 7.6 daily work VMT per employee. To reduce the Project VMT to below the threshold, the Project would implement a ridesharing program.

- **MM TRAF-1 Rideshare Program:** The Project would provide either designated parking spaces and loading zones for ridesharing vehicles and/or an internal website or program to coordinate rides. The rideshare program would be implemented through the office employers. It is assumed that 100 percent of employees would be eligible to be involved with a ridesharing program, allowing for the full 15% VMT reduction.

Attachment G of the LADOT's TAG provides the methodology to calculate the VMT reduction by TDM which is included in Appendix C. The detailed VMT calculator results are shown in **Appendix C. Table 2** summarizes VMT per employee for the proposed Project and compares it to the City thresholds for the Central APC.

Table 2: Vehicle Miles Traveled (VMT) by Land Use and Scenario

Scenario - Central APC	VMT/Employee (Office)
Proposed Project	9.30
Project Feature: Promotions and Marketing (100% Eligible)	- 0.37
Project Feature: Reduced Parking Supply	- 0.09
Project Feature: Include Bike Parking Per LAMC	- 0.09
Project VMT	8.8
Over City Threshold (7.60 VMT/Employee)?	Yes
Mitigation Measure	
Rideshare Program (100% Eligible)	- 1.40
Project VMT with mitigation	7.4
Over City Threshold (7.60 VMT/Employee)?	No

As shown in **Table 2**, the office land use would result in an estimated VMT per employee of 7.4, which would be below the City threshold for the Central APC. Therefore, the Project is assumed to have a less than significant impact.

Cumulative Analysis

Whether a project would have a potential cumulative VMT impact is determined by assessing its consistency with the Southern California Association of Government's (SCAG) Regional

Transportation Plan (RTP)/Sustainable Communities Strategy (SCS), per LADOT's TAG¹. Projects that are consistent with the RTP/SCS in terms of location, density, and land-use assist in meeting the region's air quality and greenhouse gas (GHG) goals.

The western portion of the Project Site is currently zoned as limited manufacturing and is proposed to be developed as office space with a small retail space component (135 square feet). The proposed Project's land use is similar to the existing use and consistent with the SCAG RTP/SCS plan. Because the Project is consistent with the RTP/SCS and has a less than a significant VMT impact, the Project would have a less than significant cumulative impact on VMT.

Findings

Based on the results of the VMT analysis, the following findings are made:

- The Project's retail land use (135 square feet) would be less than 50,000 square feet and would be considered local serving, resulting in a less than significant VMT impact.
- With the Project's TDM design features and mitigation measure (MM-TRAF-1), the Project's estimated VMT per employee would be 7.4, which is below the City's threshold for the Central APC. As a result, the Project would not have a significant transportation impact.
- The Project would be consistent with the SCAG regional plan. Therefore, the Project would have a less-than-significant cumulative impact as it would contribute to the reduction in VMT in the region.

Geometric Design Feature Review (Threshold T- 3.1)

Per the City of Los Angeles Transportation Assessment Guidelines, projects are evaluated to determine if there are potential geometric design feature impacts and potential increases in hazards related to the design of the Project's access points.

Screening Criteria

This section describes the City's screening criteria to determine if a project requires a geometric design feature review. If the project requires a discretionary action, and the answer is yes to any of the following questions, further analysis will be required to assess whether the proposed project would cause a potential increase of hazards:

- Is the project proposing new driveways, or introducing new vehicle access to the property from the public right-of-way?
- Is the project proposing to make any voluntary or required modifications to the public right-of-way (i.e., street dedications, reconfigurations of curb line, etc.)?
- Would the land use project add 25 or more trips to any off ramp in either the morning or afternoon peak hour?

¹ LADOT Transportation Assessment Guidelines [2022], Section 2.2.4

Impact Criteria

This section describes factors that the City considers when evaluating a project's access plans to determine if the project would substantially increase hazards due to a geometric design feature. impact criteria for development projects that require a VMT analysis. The following factors are considered:

- The relative amount of pedestrian activity at project access points.
- Design features/physical configurations that the project introduces that affect the visibility of pedestrians and bicyclists to drivers entering and exiting the site, and the visibility of cars to pedestrians and bicyclists.
- The type of bicycle facilities the project driveway(s) crosses and the relative level of utilization.
- The physical conditions of the site and surrounding area, such as curves, slopes, walks, landscaping or other barriers, that could result in vehicle/pedestrian, vehicle/bicycle, or vehicle/vehicle safety hazards.
- The project location, or project-related changes to the public right-of-way, relative to proximity to the High Injury Network or a Safe Routes to School program area.
- Any other conditions, including the approximate location of incompatible uses that would substantially increase a transportation hazard.

Analysis

Pedestrian and Bicyclists

Pedestrians and bicyclists would be able to access the Project Site via existing sidewalks around the perimeter of the Project Site. Bicycle parking facilities would be provided on-site as part of the Project. The Project's access locations would be designed in compliance with City standards and safety requirements to provide adequate sight distance, sidewalks, crosswalks and pedestrian movement controls.

Vehicular Access

Vehicular access to the western portion of the Project Site is currently provided by three driveways on N. McCadden Place and three driveways on N. Las Palmas Avenue. The Project proposes to close all driveways on N. McCadden Place and limit all vehicular access to the new building's parking garage to two driveways on N. Las Palmas Avenue. The two driveways are proposed along the western side of N. Las Palmas Avenue: (1) one driveway would provide two-way entry/exit to the subterranean parking levels beneath Building A for monthly parkers and valet parking, as well as entry to the ground floor parking level; and (2) the other driveway would provide a one-way exit from the ground floor parking level for Uber, Lyft or rideshare drop off. There would also be an on-site drop-off area to serve rideshare arrivals/departures in the ground floor parking level. Existing temporary loading zones and driveways along the eastern side of N. Las Palmas Avenue associated with the existing office buildings at 1128-1146 N. Las Palmas Avenue would remain.

Although Las Palmas Avenue is on the HIN, the driveway locations are preferable compared to N. McCadden Place because N. McCadden Place has pedestrian-friendly land uses such as a Charter School (1123 N McCadden Place) and LGBT Youth Center (1118 N McCadden Place). Providing a driveway on McCadden Place would potentially create or increase vehicle-pedestrian and vehicle-bicycle conflicts.

N. McCadden Place and Santa Monica Boulevard is an unsignalized intersection whereas N. Las Palmas Avenue and Santa Monica Boulevard is a signalized intersection. With a driveway on McCadden Place, the intersection of McCadden Place and Santa Monica Boulevard would be likely to operate at an unacceptable level of service and would likely increase the queues by more than 50 ft. This would result in an impact as per LADOT Transportation Assessment Guidelines (Section 3.3.3).

Lastly, N. Las Palmas Avenue between Lexington Avenue and Santa Monica Boulevard witnessed zero traffic fatalities between 2010 and 2021. The Project's new driveways would be designed to comply with LADOT standards. Both driveways are on N. Las Palmas Avenue, a low volume local street with no existing bike lanes or transit facilities. Hence, the Project would not be expected to increase hazards or conflicts.

Caltrans Freeway Impact Analysis

Per the City's guidance for Caltrans Freeway Ramp Impact Analysis, the Projects trip generation and trip distribution were evaluated for potential safety impacts under CEQA. The initial screening involves identifying the number of project trips expected to be added to nearby freeway off ramps serving the site. As identified in the attached Memorandum of Understanding (**Appendix A**), a

freeway safety analysis was performed, and it was identified that the Project would not add more than 25 trips to any freeway ramp in both the AM and PM peak hours. Since the Project is not expected to go over the 25-trip threshold to any off ramp, freeway ramp analysis is not required. It should be noted that the closest freeway ramps to the US-101 are over 1.5 miles from the Project Site.

Findings

Based on the results of the geometric design feature review, the following findings are made:

- The proposed Project would reduce the number of access points.
- The Project Site would not create physical obstructions that would impact the visibility or safety of pedestrians or bicyclists.

IV. Non-CEQA Transportation Analyses

This portion of the traffic study has been performed in accordance with the latest version of LADOT's *City of Los Angeles Transportation Assessment Guidelines (August 2022)* (TAG). A traffic impact analysis was conducted to analyze the traffic conditions in the Project Site area under following scenarios:

- Existing (2022) conditions
- Opening Year (2025) conditions
- Opening Year (2025) with Project conditions

The Project study intersections (Figure 3) and future scenario analysis were defined in consultation with LADOT staff. The MOU, which outlined all the traffic study assumptions, growth rate, and Project trip generation and distribution, was submitted and approved as part of this transportation assessment. The approved MOU is incorporated as a reference in **Appendix A**.

Existing (2022) conditions were analyzed using traffic count data collected during September 2022. A growth rate of 1% approved by LADOT in the MOU was applied to traffic volumes in opening year scenarios.

Study Area

The Project Site, which is bisected into a western and an eastern portion by N. Las Palmas Avenue, is bounded by Stewart Street toward the east, Lexington Avenue toward the north, N. McCadden Place at the west, and Santa Monica Boulevard toward the south.

The following intersections within the study area were identified in conjunction with City for analysis:

1. Lexington Avenue & N. La Palmas Avenue
2. N. Las Palmas Avenue & Santa Monica Boulevard
3. N. McCadden Place & Lexington Avenue
4. N. McCadden Place & Santa Monica Boulevard
5. N. Las Palmas Avenue & Project Driveway 1
6. N. Las Palmas Avenue & Project Driveway 2

An intersection Level of Service (LOS) analysis was performed at these study intersections to assess potential impacts resulting from the Project.

Figure 3 illustrates the Project study intersections location as well as the existing lane configurations and traffic control at each location. **Figure 4** shows the future lane configurations and traffic control for each intersection.

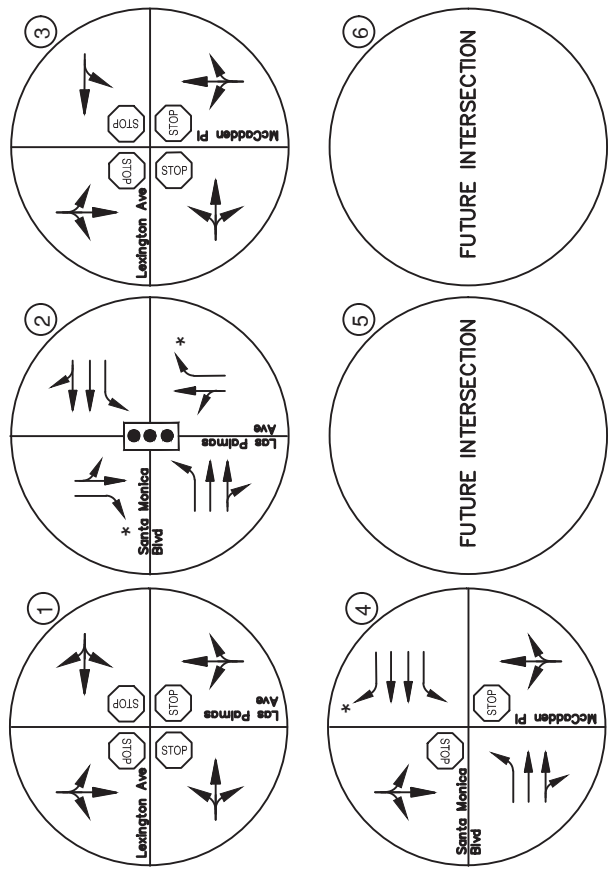
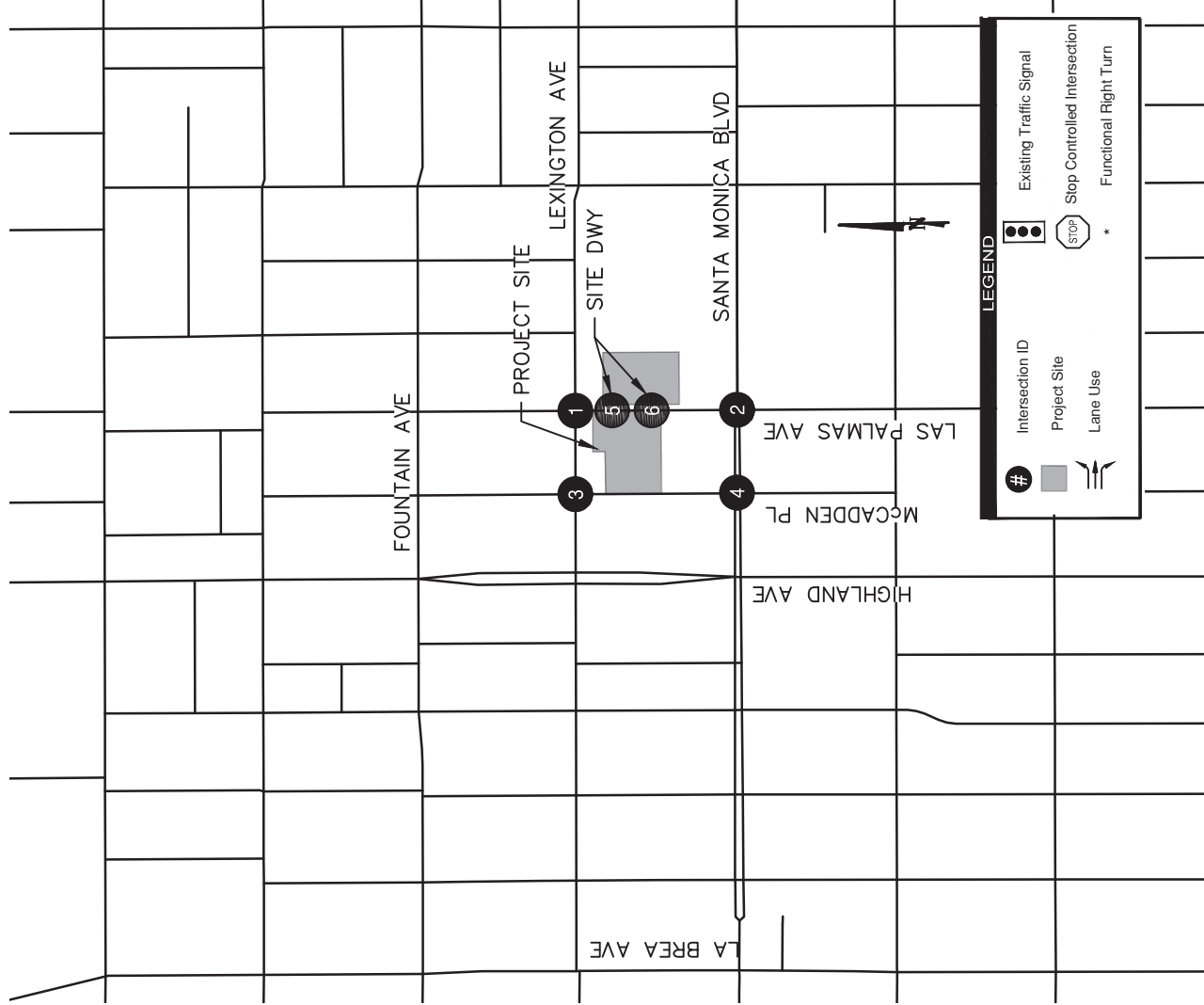


FIGURE 3 - EXISTING INTERSECTIONS LANE CONFIGURATION
1151 N LAS PALMAS AVENUE

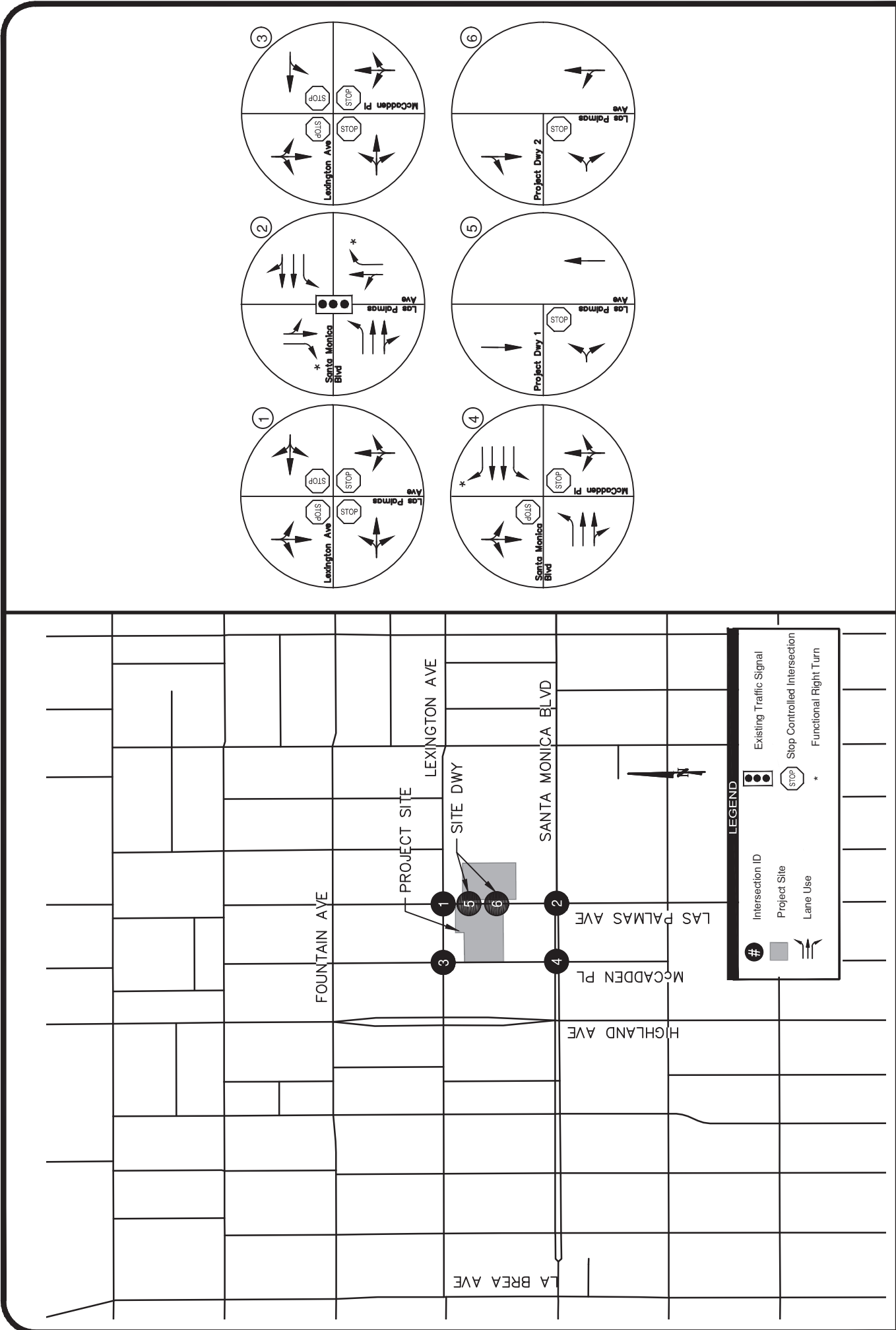


FIGURE 4 - OPENING YEAR (2025) INTERSECTIONS LANE CONFIGURATION
1151 N LAS PALMAS AVENUE

Analysis Methodology

Peak hour intersection operations at the study intersections were evaluated using the methods prescribed in the Highway Capacity Manual (HCM) 6th Edition, consistent with the requirements of the City of Los Angeles. The intersection analysis for the proposed Project has been accomplished using the Synchro software program.

For signalized intersections, the HCM methodology estimates the average delay (in average seconds per vehicle) for each of the movements through the intersection, considering a number of factors, including number of lanes, volume of traffic, cycle length, and signal timing and phasing.

For unsignalized intersections, the HCM methodology determines the average total delay, expressed in seconds of delay per vehicle for left turns from the major street and from the stop-controlled minor street traffic stream for a two-way stop-controlled (TWSC) intersection. Delay values are calculated based on the relationship between traffic on the major street and the availability of acceptable “gaps” in this stream through which conflicting traffic movements can be made. For TWSC intersections, the level of service (LOS) is based on the turning movement with the highest average delay. For an all-way stop-controlled (AWSC) intersection, the LOS is based on the overall intersection delay.

The HCM delay forecast translates to a LOS designation, ranging from LOS A to LOS F. A summary description of each LOS and the corresponding delay is provided in **Table 4**.

Table 3: Intersection Level of Service Definitions

LOS	Interpretation	Signalized Intersection Control Delay (seconds/vehicle)	Unsignalized Intersection Control Delay (seconds/vehicle)
A	Excellent operation. All approaches to the intersection appear quite open, turning movements are easy and nearly all drivers find freedom of operation.	≤10	≤10
B	Very good operation. Many drivers begin to feel somewhat restricted within platoons of vehicles. This represents stable flow. An approach to an intersection may occasionally be fully utilized and traffic queues start to form.	>10 and ≤20	>10 and ≤15
C	Good operation. Occasionally backups may develop behind turning vehicles. Most drivers feel somewhat restricted.	>20 and ≤35	>15 and ≤25
D	Fair operation. There are no long-standing traffic queues. This level is typically associated with design practice for peak periods.	>35 and ≤55	>25 and ≤35
E	Poor operation. Some long-standing vehicular queues develop on critical approaches.	>55 and ≤80	>35 and ≤50
F	Forced flow. Represents jammed conditions. Backups from locations downstream or on the cross street may restrict or prevent movements of vehicles out of the intersection approach lanes; therefore, volumes carried are not predictable. Potential for stop-and-go type traffic flow.	>80	>50 or v/c > 1

Source: HCM, 6th Edition

Impact Criteria

The potential impacts of Project generated traffic at the study intersections was determined using the criteria identified in the LADOT's TAG.

The LADOT TAG (Section 3.3.3) states that project access is considered constrained if the project's traffic would contribute to unacceptable queuing on an Avenue or Boulevard (as designated in the Mobility Plan 2035) at project driveway(s) or would cause or substantially extend queuing at nearby signalized intersections. Unacceptable or extended queuing may be defined as follows:

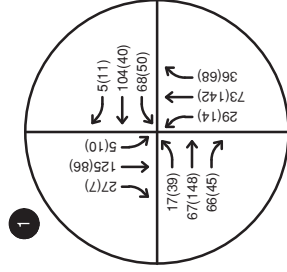
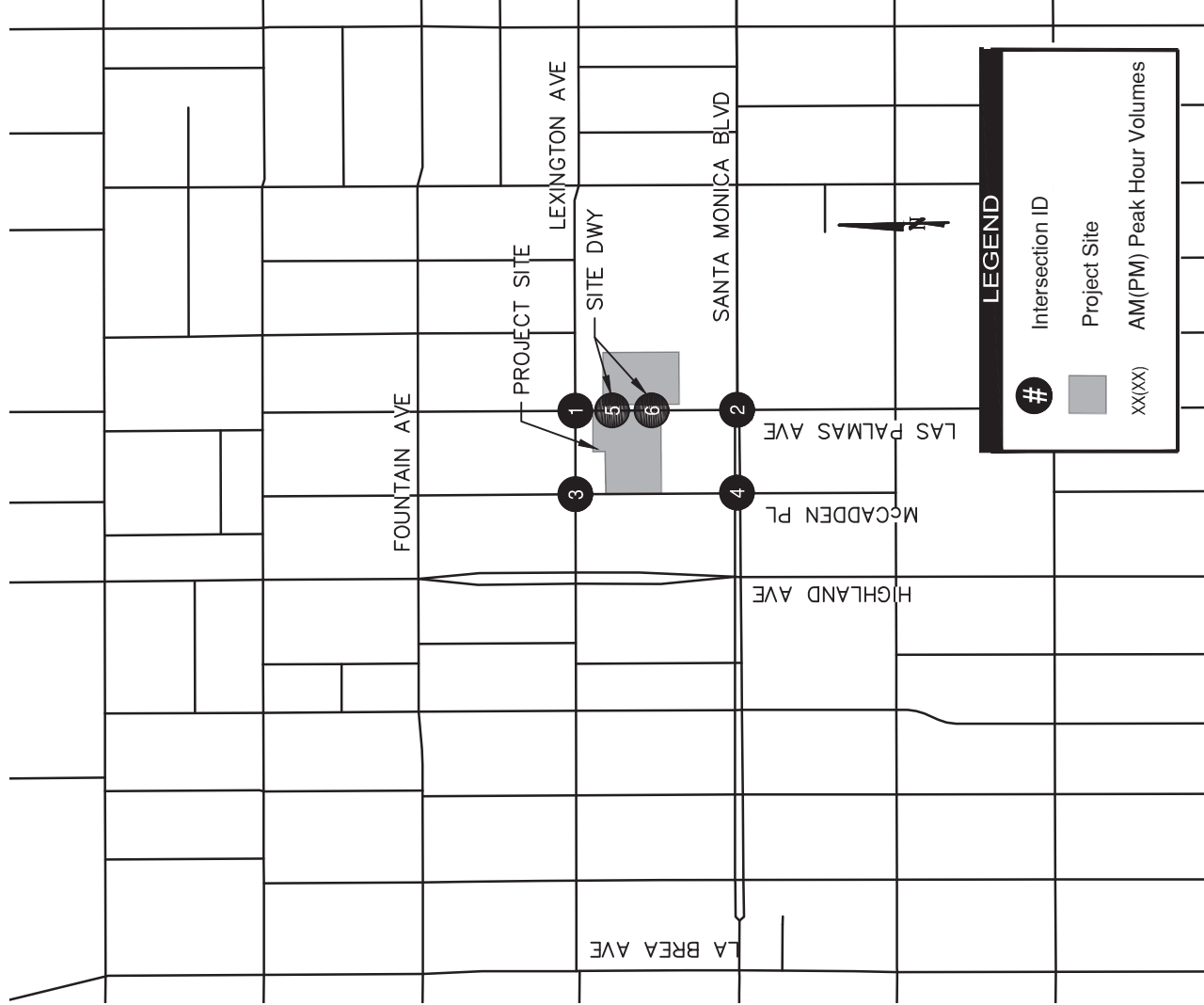
- Additional queue along through lanes and either of the following conditions are expected:
 - the projected peak hour intersection LOS is D and the through lane queue increases by greater than 75 feet on any approach with the directional approach LOS at E or F, or
 - the projected peak hour intersection LOS is E or F and the through lane queue increases by greater than 50 feet on any approach with the directional approach LOS at E or F.
- Spill over from turn pockets into through lanes.
- Block cross streets or alleys.
- Spill over from drive-throughs into streets.
- Contribute to "gridlock" congestion. For the purposes of this section, "gridlock" is defined as the condition where traffic queues between closely spaced intersections and impedes the flow of traffic through upstream intersections.

Traffic Analysis

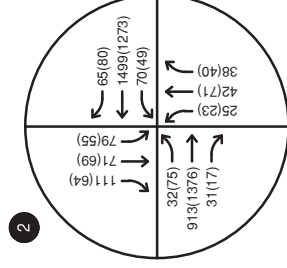
This section presents level of service (LOS) analysis for the Existing (2022) and Opening Year (2025) conditions.

Existing Conditions

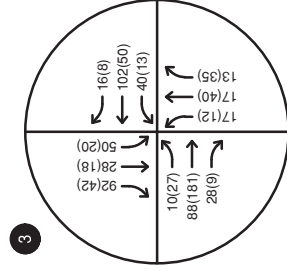
LOS analyses were conducted for weekday AM and PM peak hour conditions. The AM peak hour is defined as the one hour of highest traffic volumes occurring between 7:00 and 9:00 AM. The PM peak hour is defined as the one hour of highest traffic volumes occurring between 4:00 and 6:00 PM. Peak hour turning movement counts were collected at the study intersections on Thursday, September 29, 2022. Peak hour used for this analysis were 8:00 AM - 9 AM for the AM peak and 4:15 PM to 5:15 PM for the PM peak. Traffic counts worksheets are included in **Appendix D. Figure 5** illustrates the existing peak hour traffic volumes at the study intersections.



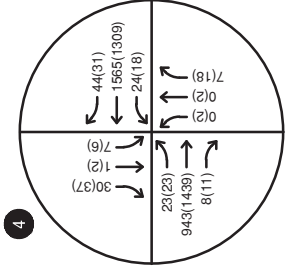
Lexington Ave &
Las Palmas Ave



Las Palmas Ave &
Santa Monica Blvd



McCadden Pl &
Lexington Ave



McCadden Pl &
Las Palmas Ave

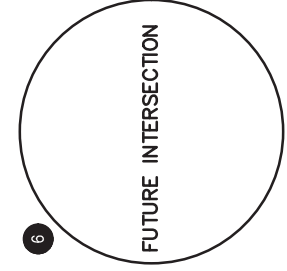
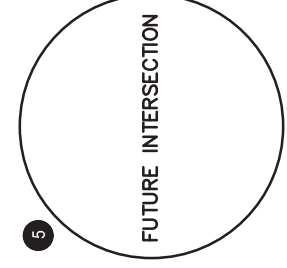


FIGURE 5 - EXISTING INTERSECTION PEAK HOUR VOLUMES
1151 N LAS PALMAS AVENUE

Table 5 presents the existing peak hour LOS and the corresponding delay for each study intersection.

Table 4: Existing (2022) Intersection Level of Service

	Intersection	Traffic Control	AM Peak Hour		PM Peak Hour	
			Delay	LOS	Delay	LOS
1	Lexington Avenue & N. La Palmas Avenue	AWSC	11.6	B	10.3	B
2	N. Las Palmas Avenue & Santa Monica Boulevard	Signal	35.5	D	26.2	C
3	N. McCadden Place & Lexington Avenue	AWSC	8.7	A	8.6	A
4	N. McCadden Place & Santa Monica Boulevard	TWSC*	67.1	F	91.3	F
5	N. Las Palmas Avenue & Project Driveway 1	Future	-	-	-	-
6	N. Las Palmas Avenue & Project Driveway 2	Future	-	-	-	-

Note: * The delay for the worst approach is reported for TWSC.

Table 5 above reports that all study intersections currently operate at LOS D or better during the AM and PM peak periods, except the intersection at N. McCadden Place and Santa Monica Boulevard. The intersection at N. McCadden Place and Santa Monica Boulevard is a two-way stop-controlled (TWSC) intersection which operates at LOS F during AM and PM peak hour. It should be noted that for a TWSC, the LOS reported is based on the delay of the worst approach.

Peak hour analysis worksheets for the Existing (2022) traffic conditions are provided in **Appendix E**.

Project Conditions

Proposed Project Forecast Trip Generation

The Project's potential trip generation was calculated using the ITE *Trip Generation Manual*, 11th Edition trip generation rates for general office building (Land Use Code 710: General Office Building), and strip retail plaza (Land Use Code 822: Strip Retail Plaza - <40k). In addition, the trip generation rates for manufacturing (Land Use Code 140: Manufacturing) were used for existing trip generation.

The square footage of general office and general retail land-use spaces are defined as gross floor area (GFA), which typically includes gross leasable and gross rentable area. Trips generated by the four existing office buildings located at 1128 to 1148 N. Las Palmas Avenue in the eastern portion of the Project Site are not included in the trip generation calculation because their land use is not changing, and it is not expected that these building will generate new, additional trips after the Project is constructed. **Table 6** on the next page shows the Project's estimated daily and peak hour trip generation.

Table 5: Project Trip Generation

Trip Rates										
Land Use	ITE Code		ADT ¹	AM Peak Hour			PM Peak Hour			
				In	Out	Total	In	Out	Total	
Manufacturing	140		4.75	0.52	0.16	0.68	0.23	0.51	0.74	
General Office Building	710		10.84	1.34	0.18	1.52	0.25	1.20	1.44	
Strip Retail Plaza (<40k)	822		54.45	1.42	0.94	2.36	3.30	3.30	6.59	
Project Trip Generation										
Land Use	Size		Unit	ADT ¹	AM Peak Hour			PM Peak Hour		
					In	Out	Total	In	Out	Total
Proposed Project										
General Office Building - New	80.987	KSF	878	108	15	123	20	97	117	
General Office Building – Existing Building with Addition	6.058	KSF	66	8	1	9	1	7	8	
Strip Retail Plaza (<40k)	0.135	KSF	7	0	0	0	0	0	0	
Existing Land Use										
Manufacturing	5.498	KSF	-26	-3	-1	-4	-1	-3	-4	
Net Project Trips			925	113	15	128	20	101	121	

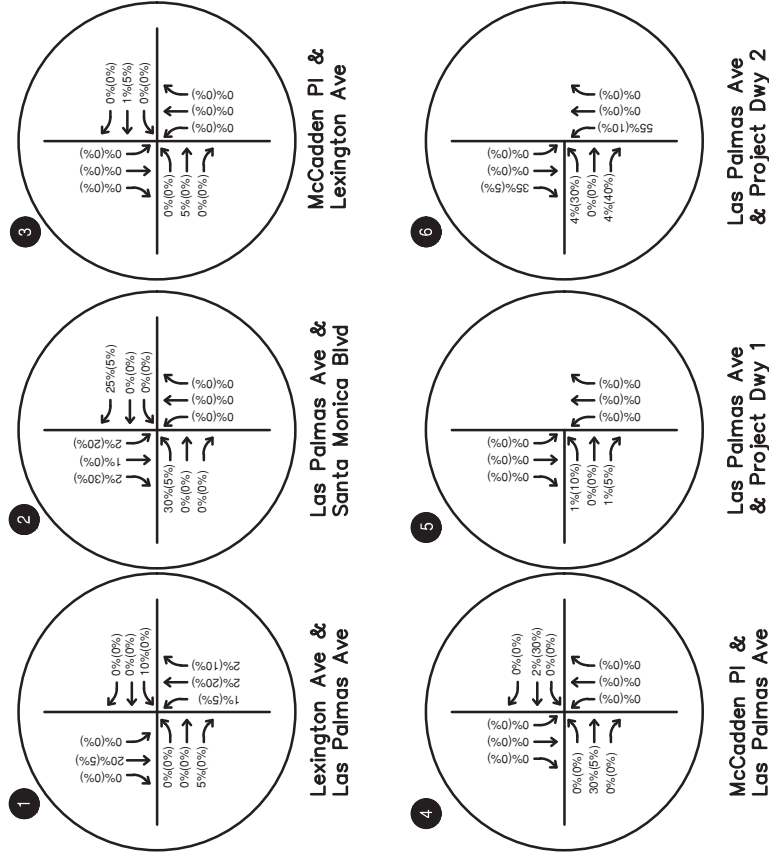
¹ADT=Average Daily Traffic, the daily trips generated by a site, in vehicles per 1,000 square feet (KSF).

As shown in **Table 6**, the Project is anticipated to generate a net increase of 925 daily trips, 128 weekday AM peak hour trips, and 121 weekday PM peak hour trips.

Project Trip Distribution and Traffic Assignment

Trip distribution assumptions for the Project were based on proximity to regional and local roadways and existing travel patterns. Trip distribution percentages at each study intersection were applied to the Project trip generation to determine the Project trips through each intersection. The Project trip distribution and resulting Project-related peak hour trips were added to the surrounding street system. **Figure 6** and **Figure 7** show the Project's projected trip distribution percentages and projected Project traffic volumes on the study intersections, respectively. Trip distribution utilized was submitted to and approved by the LADOT as part of the MOU. The MOU is attached to **Appendix A**.

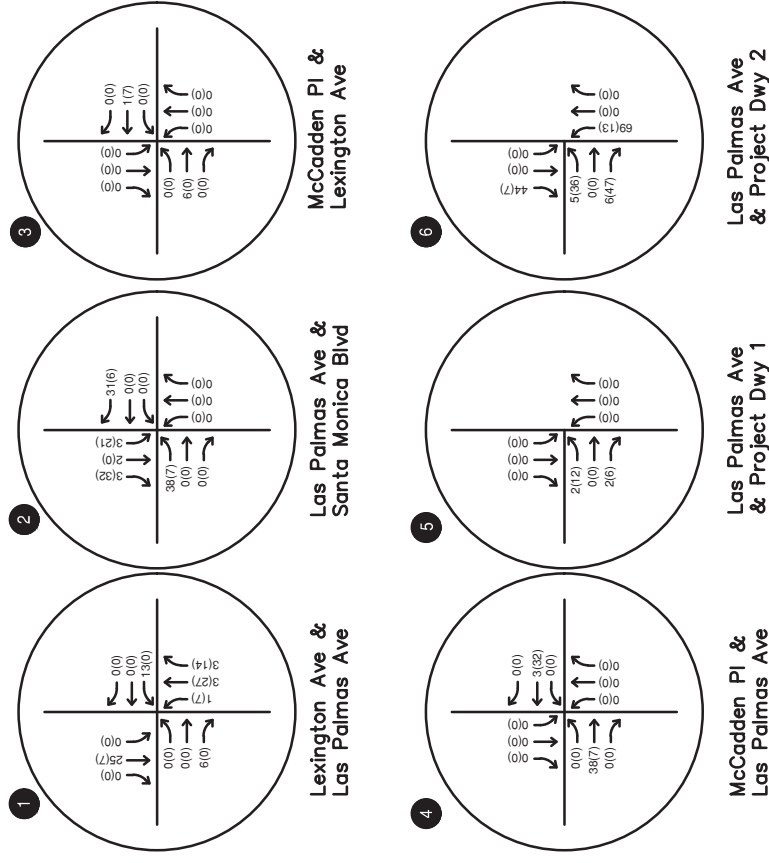
OFFICE*



*Retail land use generates 7 daily trips and 0 peak hour trips (AM & PM)

FIGURE 6 - PROJECT TRIP DISTRIBUTION
1151 N LAS PALMAS AVENUE

OFFICE*



*Retail land use generates 7 daily trips and 0 peak hour trips (AM & PM)

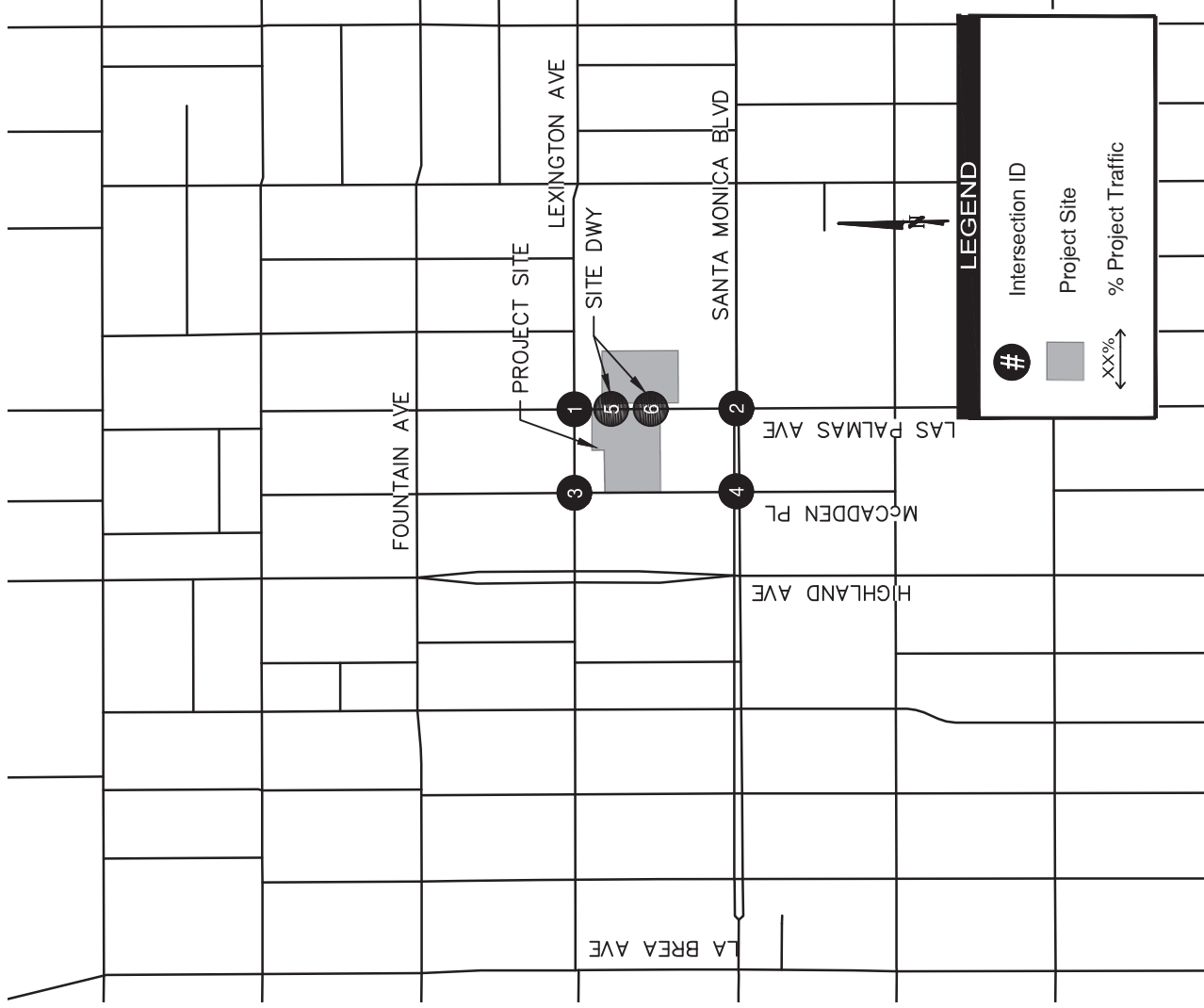


FIGURE 7 - PROJECT TRAFFIC VOLUMES
1151N LAS PALMAS AVENUE

Ambient (2025) Growth

Regional ambient growth was estimated as an annual percentage increase over the existing traffic volumes. A growth rate of 1% per year was utilized and approved by the LADOT as part of the MOU. The ambient growth rate of 1% was applied to the peak hour traffic volumes to represent Opening Year (2025) volumes.

Related Project Trip Generation and Assignment

In addition to ambient growth, traffic volumes from related Projects (approved or pending projects expected to be built by the year 2025 in the proposed Project Site vicinity) were added to the study intersections to simulate future traffic conditions with expected new development in the area. The list of related projects was provided by LADOT in an email on September 19th, 2022. **Table 7** lists the 15 related projects and the trips generated by each related project per information provided by LADOT. The locations of the related projects are shown in **Figure 8**.

Trip distribution and assignment for the related projects were obtained from approved traffic studies, where available, and were developed by Kimley-Horn if approved traffic studies were not available. Kimley-Horn developed cumulative projects trip distribution and assignment based on LA County CMP² trip distribution percentages. Traffic volumes associated with the related projects were compiled for each of the study intersections and are shown on **Figure 9**. The related projects' traffic volumes were added to the Opening Year 2025 traffic volumes for both the with and without Project scenarios to generate the Opening Year (2025) Cumulative traffic volumes.

² 2010 Congestion Management Program, Los Angeles County Metropolitan Transportation Authority. Available at: <https://planning.lacity.org/eir/conventionctr/DEIR/files/references/2010%20Congestion%20Management%20Plan.pdf> (Accessed November 2022)

Table 6: Summary of Related Projects

Map No.	Project Name	Address	Description	Daily	AM Peak Hour			PM Peak Hour		
					IN	OUT	TOTAL	IN	OUT	TOTAL
1	7007 W Romaine Mu	7007 W Romaine St	28,486 SF Media Office & 4,694 SF Restaurant	598	42	18	60	24	36	60
2	Cd 13 Schrader Temp Bridge Housing Shelter	1533 N Schrader Blvd	70-Bed Shelter	89	3	5	8	5	3	8
3	Mixed-Use	1524 N Cassil Pl	138 Apts, 60 Rm Hotel, 1400 Sf Retail	1240	32	46	78	56	41	97
4	926 Sycamore Office	926 N Sycamore Avenue	70,742 Sf Media Production Office Building	620	64	10	74	13	61	74
5	Mixed-Use Project	1000 N Seward St	136.2 Ksf Office, 2.2 Ksf Restaurant, 2.2 Ksf Retail	1718	147	48	195	58	135	193
6	Sunset + Wilcox MU	6450 W Sunset Bl	Mu: 431.032ksf Office, 12.386ksf Restaurant	2836	311	50	361	93	319	412
7	Fast Food with Drive-through	6800 W Sunset Bl	2129 SF Fast-Food with Drive-Through	343	18	18	36	15	14	29
8	Creative Offices	1200 N Cahuenga Bl	Commercial Use - 75,362 Sf Creative Offices Total, 500sf Retail	259	6	-31	-25	5	12	17
9	Tesla Santa Monica Project	7001 W Santa Monica Bl	34 Charging/Parking Spaces, 4440 Sf Café	351	9	13	22	5	12	17
10	Mixed Use -Office/Retail	936 N La Brea Av	88750 Sf Office & 12000 Retail (In Construction)	911	24	5	29	14	37	51
11	Mixed-Use	1233 N Highland Av	72 Apartments	714	11	27	38	38	28	66
12	Crossroads Hollywood	6701 W Sunset Bl	Crossroads Hollywood Mixed-Use Project	14833	381	498	879	733	548	1281
13	6901 Santa Monica MU	6901 W Santa Monica Bl	In Construction; 231 Apts, 5KSF Restaurant, 10KSF Retail	1010	0	78	78	86	19	105
14	1UP Fitness	960 N La Brea Avenue	58,417 SSF Fitness Center	1192	26	26	52	79	59	138
15	Seward St Office Project	956 N Seward St	130,000 Gsf Office	1240	165	21	186	29	151	180
Total				27,954	1,239	832	2,071	1,253	1,475	2,728

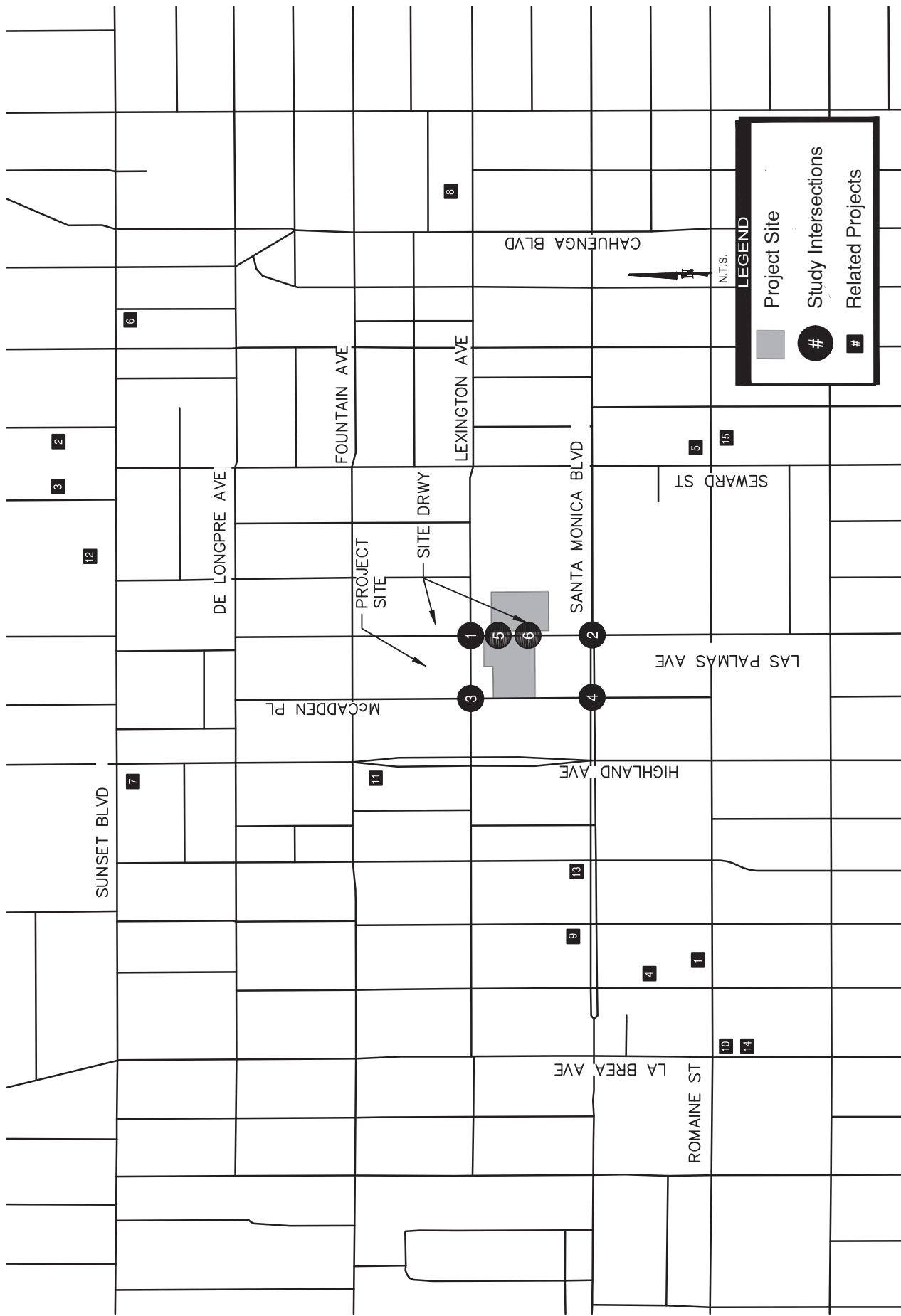


FIGURE 8 - RELATED PROJECTS
1151 N LAS PALMAS AVENUE

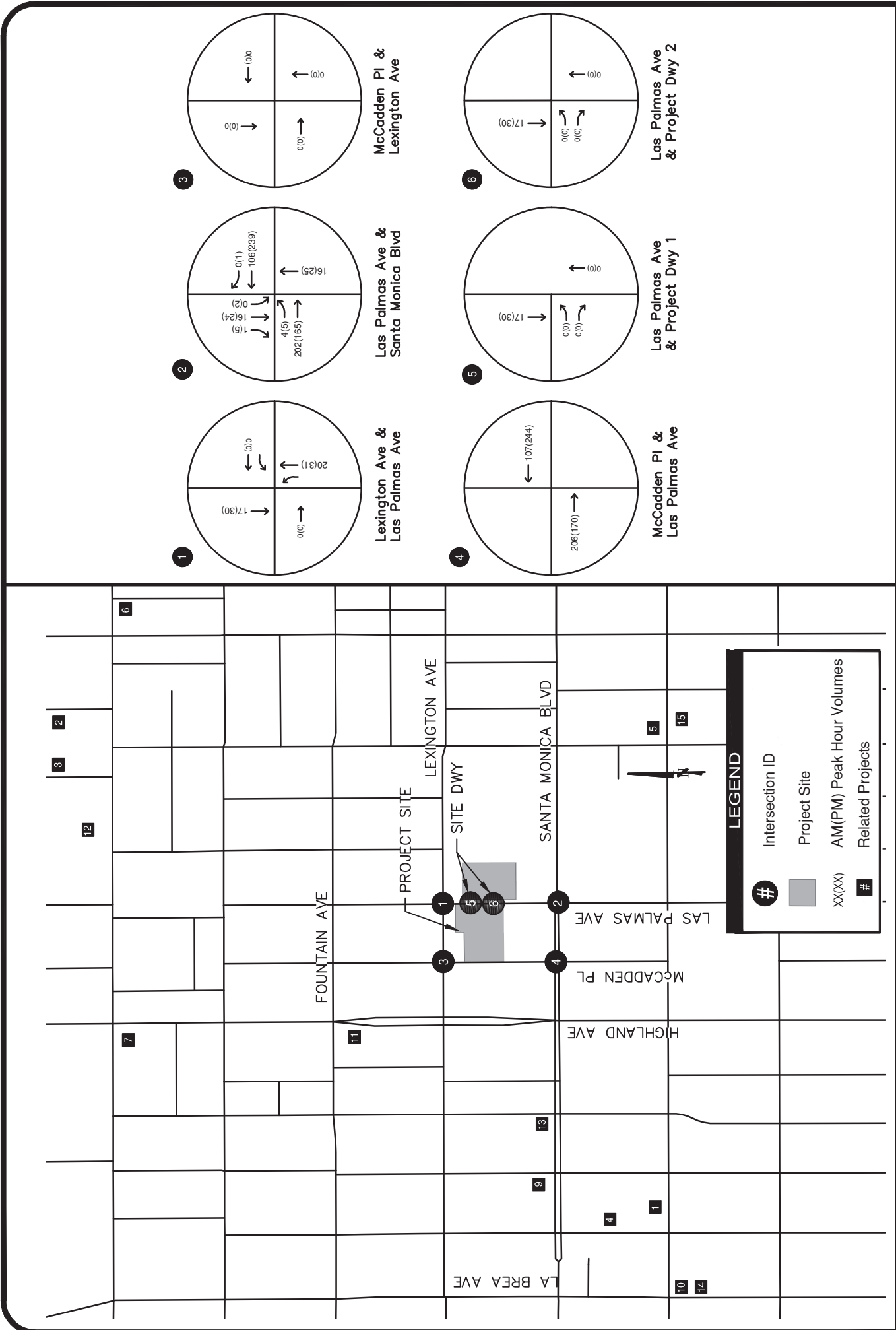


FIGURE 9 - RELATED PROJECTS VOLUMES
1151 N LAS PALMAS AVENUE

Opening Year (2025) Cumulative Without Project Conditions

Level of service (LOS) analyses were conducted for weekday AM and PM peak hour conditions for the Project's Opening Year 2025 Cumulative Without Project conditions. The intersection LOS results are shown in **Table 8** below. Similar to the existing conditions, all study intersections are projected to operate at LOS D or better during the AM and PM peak periods, except the intersection at N. McCadden Place and Santa Monica Boulevard. The intersection at N. McCadden Place and Santa Monica Boulevard is a two-way-stop-controlled (TWSC) intersection which would operate at LOS F.

Table 7: Opening Year (2025) Cumulative Without Project Level of Service

	Intersection	Traffic Control	AM Peak Hour		PM Peak Hour	
			Delay	LOS	Delay	LOS
1	Lexington Avenue & N. La Palmas Avenue	AWSC	10.8	B	11.2	B
2	N. Las Palmas Avenue & Santa Monica Boulevard	Signal	41.3	D	32.1	C
3	N. McCadden Place & Lexington Avenue	AWSC	8.8	A	8.7	A
4	N. McCadden Place & Santa Monica Boulevard	TWSC*	180.3	F	392.8	F
5	N. Las Palmas Avenue & Project Driveway 1	Future	-	-	-	-
6	N. Las Palmas Avenue & Project Driveway 2	Future	-	-	-	-

Note: * The delay for the worst approach is reported for TWSC.

The resulting traffic volumes for Opening Year 2025 Cumulative Without Project Conditions are shown on **Figure 10**.

Opening Year (2025) Cumulative Plus Project Conditions

Project-related traffic was added to the Project Opening Year 2025 Cumulative traffic volumes.

Level of service (LOS) analyses were conducted for weekday AM and PM peak hour conditions for the Project's Opening Year 2025 Cumulative Plus Project Conditions. The intersection LOS results are shown in **Table 9** on the next page.

Opening Year 2025 Cumulative Plus Project traffic volumes at the study intersections are shown on **Figure 11**.

Table 8: Opening Year (2025) Cumulative Plus Project Level of Service

Intersection	Traffic Control	Opening Year (2025)						Opening Year (2025) with Project						Change in Delay	
		AM Peak Hour		PM Peak Hour		LOS		AM Peak Hour		PM Peak Hour		LOS		AM Peak Hour	PM Peak Hour
		Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	Delay
1	Lexington Avenue & N. La Palmas Avenue	10.8	B	11.2	B		B	11.4	B	12.1	B		B	0.6	0.9
2	N. Las Palmas Avenue & Santa Monica Boulevard	41.3	D	34.1	C		C	44.4	D	42.9	D		D	3.1	8.8
3	N. McCadden Place & Lexington Avenue	8.8	A	8.7	A		A	8.8	A	8.8	A		A	0	0.1
4	N. McCadden Place & Santa Monica Boulevard	180.3	F	392.8	F		F	186.6	F	495.7	F		F	6.3	102.9
5	N. Las Palmas Avenue & Project Driveway 1	-	-	-	-		-	10.6	B	11.1	B		B	-	-
6	N. Las Palmas Avenue & Project Driveway 2	-	-	-	-		-	11.7	B	11.4	B		B	-	-

Table 9 shows that for Opening Year (2025) Cumulative Plus Project conditions, all intersections are projected to operate at LOS D or better, except for the intersection at N. McCadden Place and Santa Monica Boulevard which operates at LOS F. The two Project driveway intersections (Intersection 5 and 6) are projected to operate at LOS B. Also, the nearest signalized intersection at N. Las Palmas Avenue and Santa Monica Boulevard is projected to operate at LOS B under Plus Project condition.

Since intersection #2 (N. McCadden Place and Santa Monica Boulevard) is projected to operate at LOS F under Plus Project condition, queuing analysis was conducted.

As per LADOT's TAG:

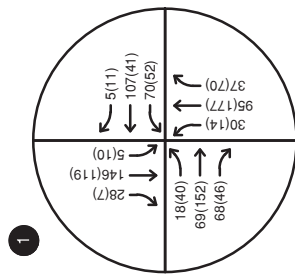
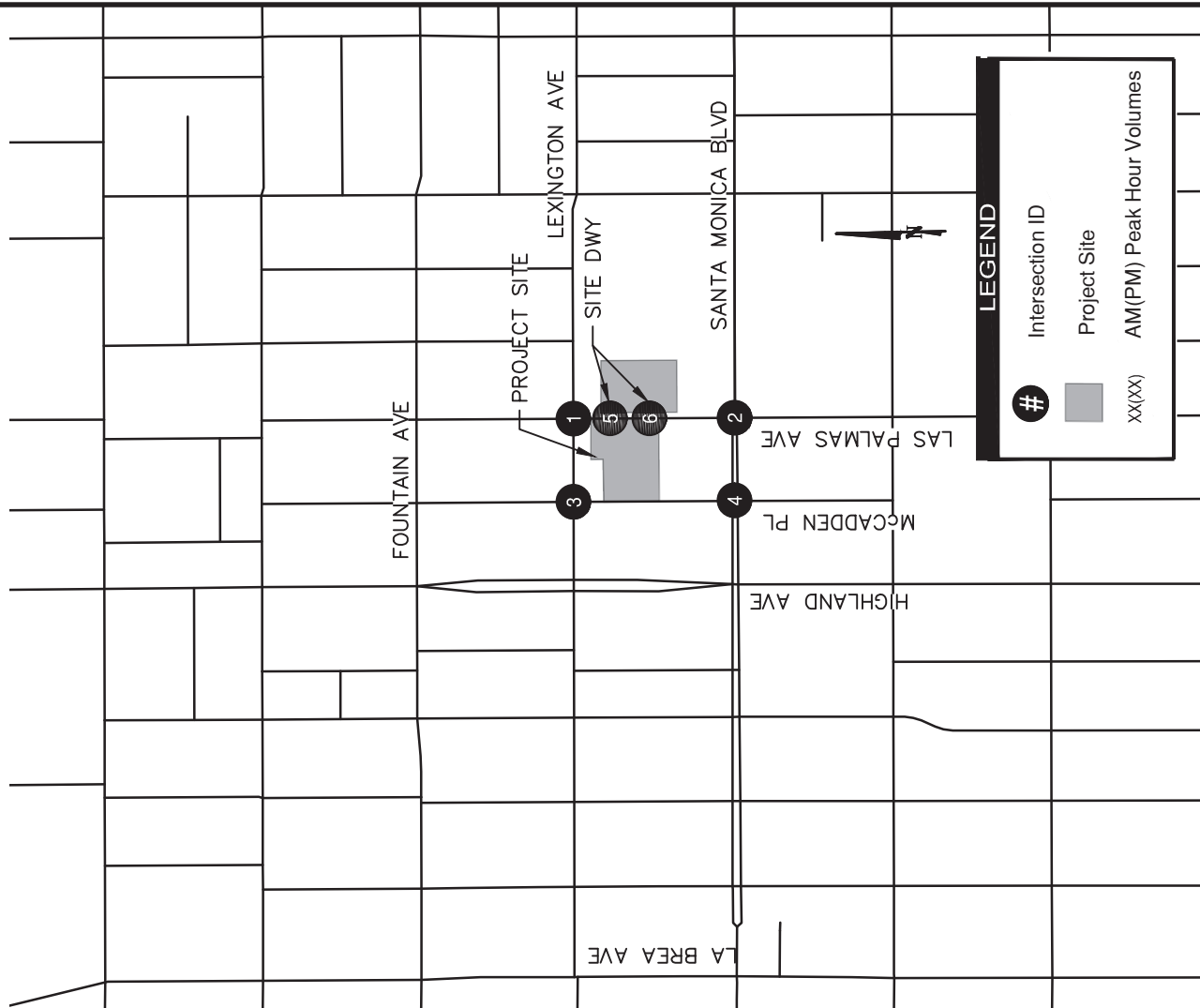
Project access is considered constrained if the project's traffic would contribute to unacceptable queuing on an Avenue or Boulevard (as designated in the Mobility Plan 2035) at Project driveway(s) or would cause or substantially extend queuing at nearby signalized intersections. Unacceptable or extended queuing may be defined as follows:

- *Additional queue along through lanes and either of the following conditions are expected:*
 - *the projected peak hour intersection LOS is E or F and the through lane queue increases by greater than 50 feet on any approach with the directional approach LOS at E or F.*

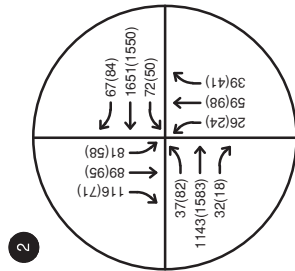
Table 10 shows the 95th percentile queue lengths at the intersection of N. McCadden Avenue and Santa Monica Boulevard under Opening Year (2025) Cumulative both with and without Project conditions. As shown in the table, the increase in queue length would be less than 50 feet (a maximum of 10 feet) under the plus Project condition. Therefore, the Project would not cause significant impact at this intersection.

Table 9: Opening Year (2025) 95th Percentile Queue Lengths

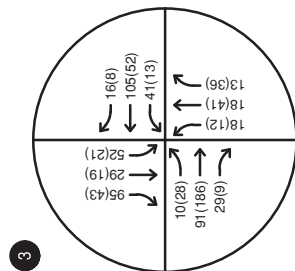
Peak Period	Intersection Name/Scenarios	95th Percentile Queue Length (ft)											
		NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
	#4: Santa Monica Boulevard & N. McCadden Place												
AM	Opening Year (2025) Cumulative Without Project	0	0	1	73	73	73	5	0	0	4	0	0
	Opening Year Cumulative Plus Project (2025)	0	0	1	78	78	78	5	0	0	4	0	0
	Change in Queue	0	0	0	5	5	5	0	0	0	0	0	0
PM	Opening Year Cumulative (2025) Without Project	79	79	79	144	144	144	5	0	0	4	0	0
	Opening Year Cumulative Plus Project (2025)	84	84	84	154	154	154	5	0	0	4	0	0
	Change in Queue	5	5	5	10	10	10	0	0	0	0	0	0



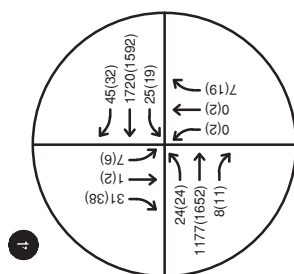
Lexington Ave & Las Palmas Ave



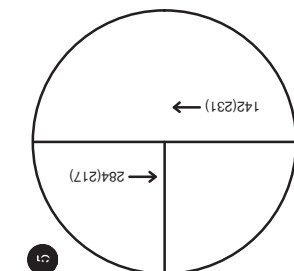
Las Palmas Ave & Santa Monica Blvd



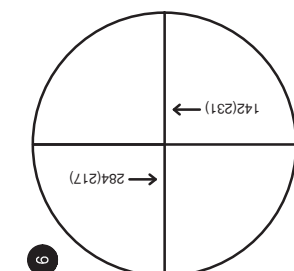
McCadden Pl & Lexington Ave



McCadden Pl & Las Palmas Ave



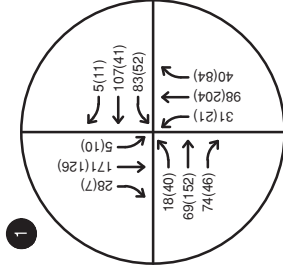
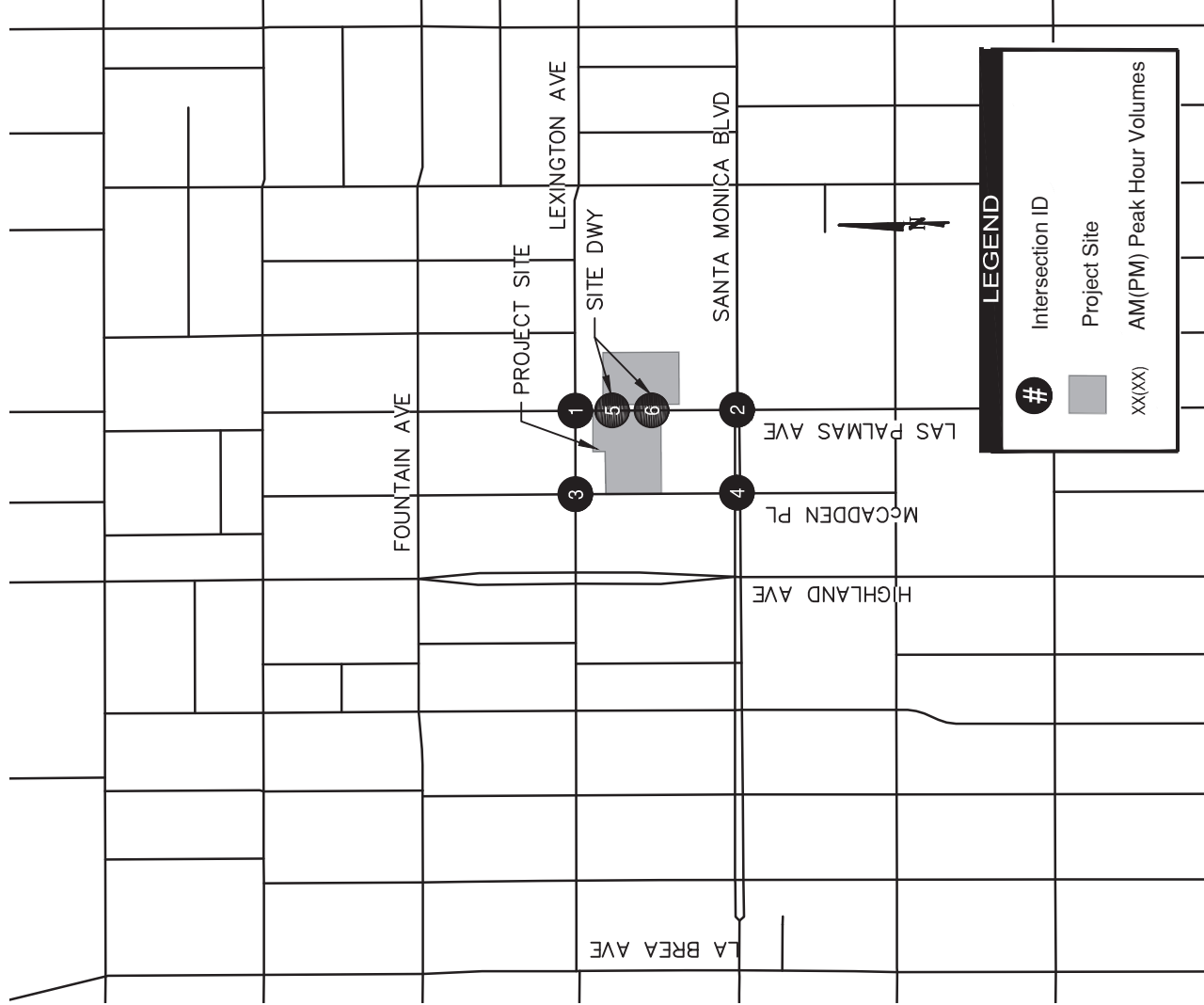
Las Palmas Ave & Project Dwy 1



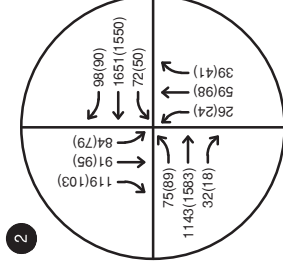
Las Palmas Ave & Project Dwy 2



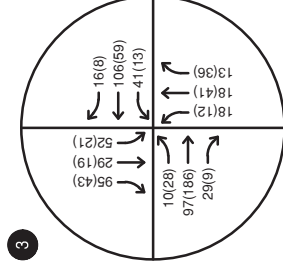
FIGURE 10 - OPENING YEAR (2025) CUMULATIVE WITHOUT PROJECT PEAK HOUR VOLUMES
1151 N LAS PALMAS AVENUE



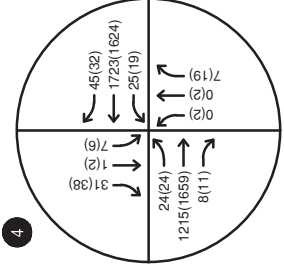
Lexington Ave & Las Palmas Ave



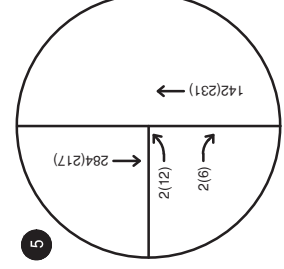
Las Palmas Ave & Santa Monica Blvd



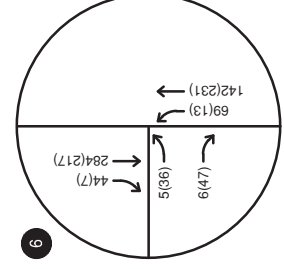
McCadden Pl & Lexington Ave



McCadden Pl & Las Palmas Ave



Las Palmas Ave & Project Dwy 1



Las Palmas Ave & Project Dwy 2

FIGURE 11 - OPENING YEAR (2025) CUMULATIVE PLUS PROJECT PEAK HOUR VOLUMES
1151 N LAS PALMAS AVENUE

Project Access Evaluation

The Project would have two driveways on N. Las Palmas Avenue providing access to the new building. The northern driveway (Driveway 1) would only be used to exit the new building, while the southern driveway (Driveway 2) would be used to both enter and exit the new building. For both driveways, drivers can exit northbound to Lexington Avenue or southbound to Santa Monica Boulevard.

A LOS analysis was conducted for the driveways to evaluate the ability of each driveway to accommodate anticipated traffic using the two-way stop control methodology from the HCM 6th edition. Queuing analysis was also conducted at Project driveways. The LOS and queuing analyses for the Project driveways are shown in **Table 11** below.

Table 10: Opening Year (2025) 95th Percentile Queue Lengths

		Delay (sec/veh)	LOS	95th Percentile Queue (veh)
	#5: N. Las Palmas Avenue and Driveway 1			
AM	Opening Year Cumulative Plus Project (2025)	10.6	B	0
PM	Opening Year Cumulative Plus Project (2025)	11	B	0.1
	#6: N. Las Palmas Avenue and Driveway 2			
AM	Opening Year Cumulative Plus Project (2025)	11.7	B	0.1
PM	Opening Year Cumulative Plus Project (2025)	11.4	B	0.5

Project Construction

Construction Analysis

This section discusses construction period traffic analysis and assesses whether the construction would interfere with pedestrians, bicyclists, transit or vehicles circulation. As per LADOT guidelines, the construction impacts were analyzed under the following categories:

1. Temporary traffic constraints
2. Temporary loss of access
3. Temporary loss of bus stops or rerouting of bus lines.

The construction of the Project would begin with the demolition of the existing surface parking lot on the western portion of the Project Site followed by site preparation, grading, building construction, and paving/concrete installation. The construction of the Project is expected to be completed by 2025.

Temporary Traffic Constraints

During construction, the Project would intermittently experience continuous concrete pour which may temporarily disrupt sidewalks near the Project. A covered pedestrian walkway would be provided as an alternative for pedestrians during construction and would also be addressed in the worksite traffic control plans.

During hoisting rebar and concrete pours, N. Las Palmas Avenue and N. McCadden Place would be intermittently disrupted. Both streets are classified as Local Streets in the City of Los Angeles Mobility Plan, and both are two-lane roadways. At times, the lane closest to the Project Site would have to be closed, and both travel lanes might need to be temporarily closed depending on the size of the cranes. Such intermittent travel lane closures may disrupt local traffic. However, a construction management plan which would include a worksite traffic control plan that would be prepared, in accordance with applicable City guidelines, for any temporary closure of vehicle lanes or sidewalks and these plans would provide for safe and efficient movement for vehicular and pedestrian traffic.

Parking closure across the property frontage would be requested to allow for ongoing construction access and possible staging, this impact would be less than significant with implementation of the Construction Management Plan listed below.

Temporary Loss of Access

The existing land uses in the proximity of the construction site would remain open throughout construction. Pedestrian and vehicular access to properties nearby the Project Site would also remain open for the duration of construction. The sidewalks at the Project Site frontages along N. Las Palmas Avenue would be closed intermittently during the construction and access would be provided via a covered pedestrian walkway. Appropriate signage would be implemented to direct pedestrians to accessible routes during this time.

Temporary loss of bus stops or rerouting of bus lines

The construction of the Project would not result in any temporary loss of bus stops or rerouting of bus lines.

Haul Rote and Truck Analysis

The proposed haul route for the Project would require trucks to access the Project Site from the nearby US 101 using Santa Monica Boulevard (State Route 2) and N. Las Palmas Avenue. The maximum number of daily truck trips is estimated to be 150 trips per day and would occur during the peak construction phase (extending over 30 days).

PDF TRAF-4: Construction Management Plan

The contractor would develop Construction Management Plan as part of the Project and submit it to the City of Los Angeles for approval to reduce the Project's potential construction impact.

The Construction Management Plan would include the following:

- Coordinate with the City to ensure adequate access to the Project Site and land uses in proximity of the Project site is maintained.
- Pick-ups and deliveries of construction materials should be scheduled off-peak hours to the extent possible.
- Reduce the potential of trucks waiting for extended periods to load or unload.
- Construction truck contractor should provide off-site staging in a legal area.
- Determine the number and location of flag men required during traffic rerouting and deliveries.
- Contractor to post construction notices/hotlines at several locations on the Project Site.
- Establish requirements for storage of materials and loading/unloading on the Project Site.
- Worksite traffic control plans approved by the City of Los Angeles should be implemented to route vehicles, bicyclist and pedestrians around the area during any parking, travel lane or sidewalk closures.

V. Summary and Conclusions

This report documents the results of a Traffic Assessment completed for the Project. The following summarizes the results of assessment:

CEQA Analysis

- The Project proposes to demolish the surface parking lot at 1149 N. Las Palmas Avenue and construct a new 3-story office building (80,987 square feet) with subterranean parking. The Project also proposes to renovate the existing manufacturing building (5,498 square feet) at 1139-1149 N. Las Palmas Avenue and convert it to office, and to construct an addition for retail (135 square feet) and office (560 square feet). The Project would retain the four existing buildings located at 1128 to 1146 N. Las Palmas Avenue with only minor interior renovations currently anticipated. No exterior renovations, change in use, or expansion of these buildings are proposed at this time.
- The new building's driveways would be designed to comply with LADOT standards. The two proposed driveways would be on N. Las Palmas Avenue, a low volume local street with no existing bike lanes or transit facilities; the existing driveways on N. McCadden Place and one existing driveway on N. Las Palmas Avenue would be closed. As such, the Project would reduce the existing 6 driveways to 2 driveways. Hence, the Project would not be expected to increase hazards or conflicts.
- Pedestrians and bicyclists would be able to access the Project Site via sidewalks around the perimeter of the Project Site. Bicycle parking facilities will be provided on-site by the Project. The Project's access locations would be designed in compliance with City standards and safety requirements to provide adequate sight distance, sidewalks, crosswalks and pedestrian movement controls.
- Based on the Project's land uses and design features, the Project would be in conformance with and would not interfere with implementation of City's plans, programs, and policies related to the transportation network. The Project would not conflict with City of Los Angeles Mobility Plan 2035, the adopted or draft Hollywood Community Plan and Vision Zero.
- When taking into account the Project's design features and mitigation measure) that result in VMT reductions including promotions and marketing and rideshare, the Project's VMT per employee would be below the applicable City threshold. As a result, the Project would have a less than significant transportation impact.

- The Project would be consistent with the current SCAG regional plan and would have a less than significant VMT impact. Therefore, the Project would have a less than significant cumulative impact.

Non-CEQA Analysis

- The traffic impact analysis includes an analysis of six intersections which were selected as per discussions with LADOT.
- The Project is estimated to generate approximately 925 new daily trips, 128 new trips during the AM peak hour and 121 new trips during the PM peak hour.
- Weekday peak hour intersection analysis was conducted for 3 scenarios including Existing (2022), Opening Year (2025) without Project, and Opening Year (2025) with Project conditions.
- Under existing conditions, all intersections operate at LOS D or better during the AM and PM peak periods, except the intersection of McCadden Place and Santa Monica Boulevard.
- Under Opening Year (2025) without Project conditions, similar to existing, all intersections would operate at LOS D or better during the AM and PM peak periods, except the intersection of McCadden Place and Santa Monica Boulevard.
- Under Opening Year (2025) with Project conditions, similar to without Project conditions, all intersections would operate at LOS D or better during the AM and PM peak periods, except the intersection of McCadden Place and Santa Monica Boulevard.
- According to the LADOT's *City of Los Angeles Transportation Assessment Guidelines (August 2020)*, the Project is considered constrained if *"the projected peak hour intersection LOS is E or F and the through lane queue increases by greater than 50 feet on any approach with the directional approach LOS at E or F."*
- The intersection at N. McCadden Place and Santa Monica Boulevard is a two-way stop controlled (TWSC) intersection. This intersection is projected to operate at LOS F under both Opening Year with and without Project conditions. Based on the queuing analysis, the increase in queue length would be less than 50 feet. The Project would not cause significant impact at this intersection.

Appendix A – Approved MOU

Transportation Assessment Memorandum of Understanding (MOU)

This MOU acknowledges that the Transportation Assessment for the following Project will be prepared in accordance with the latest version of LADOT's Transportation Assessment Guidelines:

I. PROJECT INFORMATION

Project Name: 1149 N. Las Palmas Avenue Project

Project Address: 1149 Las Palmas Avenue

Project Description: Mixed-Use Office and Retail Space in Hollywood

LADOT Project Case Number: CEN22-54194 Project Site Plan attached? (Required) ☒ Yes ☐ No

II. TRANSPORTATION DEMAND MANAGEMENT (TDM) MEASURES

Select any of the following TDM measures, which may be eligible as a Project Design Feature¹, that are being considered for this project:

☒ Reduced Parking Supply ²	☒ Bicycle Parking and Amenities	☐ Parking Cash Out
---	---	---

List any other TDM measures (e.g. bike share kiosks, unbundled parking, microtransit service, etc.) below that are also being considered and would require LADOT staff's determination of its eligibility as a TDM measure. LADOT staff will make the final determination of the TDM measure's eligibility for this project.

- | | |
|---|-----------|
| 1 <u>Promotions and Marketing (Education & Encouragement)</u> | 4 <u></u> |
| 2 <u>Ride-Share Program (Commute Trip Reductions)</u> | 5 <u></u> |
| 3 <u></u> | 6 <u></u> |

III. TRIP GENERATION

Trip Generation Rate(s) Source: ITE 10th Edition / Other ITE 11th Edition

Trip Generation Adjustment (Exact amount of credit subject to approval by LADOT)	Yes	No
Transit Usage	☐	☒
Existing Active or Previous Land Use	☒	☐
Internal Trip	☐	☒
Pass-By Trip	☐	☒
Transportation Demand Management (See above)	☒	☐

Trip generation table including a description of the existing and proposed land uses, rates, estimated morning and afternoon peak hour volumes (ins/outs/totals), proposed trip credits, etc. attached? (Required) ☒ Yes ☐ No

	IN	OUT	TOTAL
AM Trips	<u>113</u>	<u>15</u>	<u>128</u>
PM Trips	<u>20</u>	<u>101</u>	<u>121</u>

NET Daily Vehicle Trips (DVT)	
<u>925</u>	DVT (ITE ^{11th} ed.)
<u>618</u>	DVT (VMT Calculator ver. <u>1.3</u>)

¹ At this time Project Design Features are only those measures that are also shown to be needed to comply with a local ordinance, affordable housing incentive program, or State law.

²Select if reduced parking supply is pursued as a result of a parking incentive as permitted by the City's Bicycle Parking Ordinance, State Density Bonus Law, or the City's Transit Oriented Community Guidelines.

IV. STUDY AREA AND ASSUMPTIONS

Project Buildout Year: 2025 Ambient Growth Rate: 1 % Per Yr.

Related Projects List, researched by the consultant and approved by LADOT, attached? (Required) ☒ Yes ☐ No

STUDY INTERSECTIONS and/or STREET SEGMENTS:

(May be subject to LADOT revision after access, safety, and circulation evaluation.)

- | | |
|--|---|
| 1 <u>North Project Driveway on Las Palmas</u> | 4 <u>Las Palmas Ave & Lexington Ave (unsignalized)</u> |
| 2 <u>South Project Driveway on Las Palmas</u> | 5 <u>McCadden Pl & Santa Monica Blvd (unsignalized)</u> |
| 3 <u>Las Palmas Ave & Santa Monica Blvd (Signalized)</u> | 6 <u>McCadden Pl & Lexington Ave (unsignalized)</u> |

Provide a separate list if more than six study intersections and/or street segments.

Is this Project located on a street within the High Injury Network? ☒ Yes ☐ No

If a study intersection is located within a ¼-mile of an adjacent municipality's jurisdiction, signature approval from said municipality is required prior to MOU approval.

V. ACCESS ASSESSMENT

- Does the project exceed 1,000 net DVT? ☐ Yes ☒ No
- Is the project's frontage 250 linear feet or more along an Avenue or Boulevard as classified by the City's General Plan? ☐ Yes ☒ No
- Is the project's building frontage encompassing an entire block along an Avenue or Boulevard as classified by the City's General Plan? ☐ Yes ☒ No

VI. ACCESS ASSESSMENT CRITERIA

If Yes to any of the above questions a., b., or c., complete **Attachment C.1: Access Assessment Criteria**.

VII. SITE PLAN AND MAP OF STUDY AREA

Please note that the site plan should also be submitted to the Department of City Planning for cursory review.

Does the attached site plan and/or map of study area show	Yes	No	Not Applicable
Each study intersection and/or street segment	☒	☐	☐
*Project Vehicle Peak Hour trips at each study intersection	☒	☐	☐
*Project Vehicle Peak Hour trips at each project access point	☒	☐	☐
*Project trip distribution percentages at each study intersection	☒	☐	☐
Project driveways designed per LADOT MPP 321 (show widths and directions or lane assignment)	☒	☐	☐
Pedestrian access points and any pedestrian paths	☒	☐	☐
Pedestrian loading zones	☒	☐	☐
Delivery loading zone or area	☒	☐	☐
Bicycle parking onsite	☒	☐	☐
Bicycle parking offsite (in public right-of-way)	☐	☐	☒

*For mixed-use projects, also show the project trips and project trip distribution by land use category.

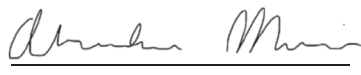
VIII. FREEWAY SAFETY ANALYSIS SCREENING

Will the project add 25 or more trips to any freeway off-ramp in either the AM or PM peak hour? ☐ Yes ☒ No

Provide a brief explanation or graphic identifying the number of project trips expected to be added to the nearby freeway off-ramps serving the project site. If Yes to the question above, a freeway ramp analysis is required.

IX. CONTACT INFORMATION

<u>CONSULTANT</u>	<u>DEVELOPER</u>
Name: <u>Laura Forinash</u>	<u>Collin Monsour</u>
Address: <u>660 S Figueroa Street Los Angeles, CA</u>	<u>1015 N Fairfax Ave, West Hollywood, CA 90046</u>
Phone Number: <u>213-261-4067</u>	<u>415-254-2711</u>
E-Mail: <u>laura.forinash@kimley-horn.com</u>	<u>cmonsour@bardasig.com</u>

Approved by: x _____ Consultant's Representative	_____ Date	x  LADOT Representative	<u>10/17/22</u> **Date
Adjacent Municipality: _____			
Approved by: _____ (if applicable) Representative Date			

****MOUs are generally valid for two years after signing. If after two years a transportation assessment has not been submitted to LADOT, the developer's representative shall check with the appropriate LADOT office to determine if the terms of this MOU are still valid or if a new MOU is needed.**

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This MOU acknowledges that the Transportation Assessment for the following Project will be prepared in accordance with the latest version of LADOT's Transportation Assessment Guidelines:

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Project Address: 1149 Las Palmas Avenue

Project Description: Mixed-Use Office and Retail Space in Hollywood

LADOT Project Case Number: CEN22-54194 Project Site Plan attached? (Required) ☒ Yes ☐ No

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Select any of the following TDM measures, which may be eligible as a Project Design Feature¹, that are being considered for this project:

☒	Reduced Parking Supply ²	☒	Bicycle Parking and Amenities	☐	Parking Cash Out
-------------------------------------	-------------------------------------	-------------------------------------	-------------------------------	--------------------------	------------------

List any other TDM measures (e.g. bike share kiosks, unbundled parking, microtransit service, etc.) below that are also being considered and would require LADOT staff's determination of its eligibility as a TDM measure. LADOT staff will make the final determination of the TDM measure's eligibility for this project.

- | | | | |
|---|---|---|---------|
| 1 | <u>Promotions and Marketing (Education & Encouragement)</u> | 4 | <u></u> |
| 2 | <u>Ride-Share Program (Commute Trip Reductions)</u> | 5 | <u></u> |
| 3 | <u></u> | 6 | <u></u> |

III. TRIP GENERATION

Trip Generation Rate(s) Source: ITE 10th Edition / Other ITE 11th Edition

Trip Generation Adjustment (Exact amount of credit subject to approval by LADOT)	Yes	No
Transit Usage	☐	☒
Existing Active or Previous Land Use	☒	☐
Internal Trip	☐	☒
Pass-By Trip	☐	☒
Transportation Demand Management (See above)	☒	☐

Trip generation table including a description of the existing and proposed land uses, rates, estimated morning and afternoon peak hour volumes (ins/outs/totals), proposed trip credits, etc. attached? (Required) ☒ Yes ☐ No

	<u>IN</u>	<u>OUT</u>	<u>TOTAL</u>
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Project Buildout Year: 2025 Ambient Growth Rate: 1 % Per Yr.

Related Projects List, researched by the consultant and approved by LADOT, attached? (Required) ☒ Yes ☐ No

STUDY INTERSECTIONS and/or STREET SEGMENTS:

(May be subject to LADOT revision after access, safety, and circulation evaluation.)

- | | |
|--|---|
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Provide a separate list if more than six study intersections and/or street segments.

Is this Project located on a street within the High Injury Network? ☒ Yes ☐ No

If a study intersection is located within a ¼-mile of an adjacent municipality's jurisdiction, signature approval from said municipality is required prior to MOU approval.

V. ACCESS ASSESSMENT

- Does the project exceed 1,000 net DVT? ☐ Yes ☒ No
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- Is the project's building frontage encompassing an entire block along an Avenue or Boulevard as classified by the City's General Plan? ☐ Yes ☒ No

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*Project Vehicle Peak Hour trips at each study intersection	☒	☐	☐
*Project Vehicle Peak Hour trips at each project access point	☒	☐	☐
*Project trip distribution percentages at each study intersection	☒	☐	☐
Project driveways designed per LADOT MPP 321 (show widths and directions or lane assignment)	☒	☐	☐
Pedestrian access points and any pedestrian paths	☒	☐	☐
Pedestrian loading zones	☒	☐	☐
Delivery loading zone or area	☒	☐	☐
Bicycle parking onsite	☒	☐	☐
Bicycle parking offsite (in public right-of-way)	☐	☐	☒

*For mixed-use projects, also show the project trips and project trip distribution by land use category.

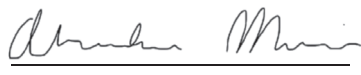
VIII. FREEWAY SAFETY ANALYSIS SCREENING

Will the project add 25 or more trips to any freeway off-ramp in either the AM or PM peak hour? ☐ Yes ☒ No

Provide a brief explanation or graphic identifying the number of project trips expected to be added to the nearby freeway off-ramps serving the project site. If Yes to the question above, a freeway ramp analysis is required.

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Approved by: x _____ Consultant's Representative	_____ Date	x  LADOT Representative	<u>10/17/22</u> **Date
Adjacent Municipality: _____ Approved by: _____ (if applicable) Representative Date			

****MOUs are generally valid for two years after signing. If after two years a transportation assessment has not been submitted to LADOT, the developer's representative shall check with the appropriate LADOT office to determine if the terms of this MOU are still valid or if a new MOU is needed.**

Appendix B – LADOT’s Plans, Policies, and Consistency Worksheet for the Project



Attachment D: Plan, Policy, and Program Consistency Worksheet

Plans, Policies and Programs Consistency Worksheet

The worksheet provides a structured approach to evaluate the threshold T-1 question below, that asks whether a project conflicts with a program, plan, ordinance or policy addressing the circulation system. The intention of the worksheet is to streamline the project review by highlighting the most relevant plans, policies and programs when assessing potential impacts to the City's circulation system.

Threshold T-1: Would the project conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadways, bicycle, and pedestrian facilities?

This worksheet does not include an exhaustive list of City policies, and does not include community plans, specific plans, or any area-specific regulatory overlays. The Department of City Planning project planner will need to be consulted to determine if the project would obstruct the City from carrying out a policy or program in a community plan, specific plan, streetscape plan, or regulatory overlay that was adopted to support multimodal transportation options or public safety. LADOT staff should be consulted if a project would lead to a conflict with a mobility investment in the Public Right of Way (PROW) that is currently undergoing planning, design, or delivery. This worksheet must be completed for all projects that meet the Section I. Screening Criteria. For description of the relevant planning documents, **see Attachment D.1.**

For any response to the following questions that checks the box in **bold text** ((i.e. ☐ **Yes** or ☐ **No**), further analysis is needed to demonstrate that the project does not conflict with a plan, policy, or program.

I. SCREENING CRITERIA FOR POLICY ANALYSIS

If the answer is 'yes' to any of the following questions, further analysis will be required:

Does the project require a discretionary action that requires the decision maker to find that the project would substantially conform to the purpose, intent and provisions of the General Plan?

☒ Yes ☐ No

Is the project known to directly conflict with a transportation plan, policy, or program adopted to support multimodal transportation options or public safety?

☐ Yes ☒ No

Is the project required to or proposing to make any voluntary modifications to the public right-of-way (i.e., dedications and/or improvements in the right-of-way, reconfigurations of curb line, etc.)?

☐ Yes ☒ No

II. PLAN CONSISTENCY ANALYSIS

A. Mobility Plan 2035 PROW Classification Standards for Dedications and Improvements

These questions address potential conflict with:



Plan, Policy, and Program Consistency Worksheet

Mobility Plan 2035 Policy 2.1 – Adaptive Reuse of Streets. Design, plan, and operate streets to serve multiple purposes and provide flexibility in design to adapt to future demands.

Mobility Plan 2035 Policy 2.3 – Pedestrian Infrastructure. Recognize walking as a component of every trip, and ensure high quality pedestrian access in all site planning and public right-of-way modifications to provide a safe and comfortable walking environment.

Mobility Plan 2035 Policy 3.2 – People with Disabilities. Accommodate the needs of people with disabilities when modifying or installing infrastructure in the public right-of-way.

Mobility Plan 2035 Street Designations and Standard Roadway Dimensions

A.1 Does the project include additions or new construction along a street designated as a Boulevard I, and II, and/or Avenue I, II, or III on property zoned for R3 or less restrictive zone? ☐ Yes ☒ No

A.2 If **A.1 is yes**, is the project required to make additional dedications or improvements to the Public Right of Way as demonstrated by the street designation. ☐ Yes ☐ No ☒ N/A

A.3 If **A.2 is yes**, is the project making the dedications and improvements as necessary to meet the designated dimensions of the fronting street (Boulevard I, and II, or Avenue I, II, or III)?

☐ Yes ☐ No ☒ N/A

If the answer is to **A.1 or A.2 is NO, or to A.1, A.2 and A.3. is YES**, then the project does not conflict with the dedication and improvement requirements that are needed to comply with the Mobility Plan 2035 Street Designations and Standard Roadway Dimensions.

A.4 If the answer to **A.3. is NO**, is the project applicant asking to waive from the dedication standards?

☐ **Yes** ☐ **No** ☒ N/A

Lists any streets subject to dedications or voluntary dedications and include existing roadway and sidewalk widths, required roadway and sidewalk widths, and proposed roadway and sidewalk width or waivers.

Frontage 1 Existing PROW'/Curb' : Existing _____ Required _____ Proposed _____

Frontage 2 Existing PROW'/Curb' : Existing _____ Required _____ Proposed _____

Frontage 3 Existing PROW'/Curb' : Existing _____ Required _____ Proposed _____

Frontage 4 Existing PROW'/Curb' : Existing _____ Required _____ Proposed _____

If the answer to **A.4 is NO**, the project is inconsistent with Mobility Plan 2035 street designations and must file for a waiver of street dedication and improvement.

If the answer to **A.4 is YES**, additional analysis is necessary to determine if the dedication and/or improvements are necessary to meet the City's mobility needs for the next 20 years. The following factors may contribute to determine if the dedication or improvement is necessary:

Is the project site along any of the following networks identified in the City's Mobility Plan?



Plan, Policy, and Program Consistency Worksheet

- Transit Enhanced Network
- Bicycle Enhanced Network
- Bicycle Lane Network
- Pedestrian Enhanced District
- Neighborhood Enhanced Network - Yes, Las Palmas Ave is NEN

To see the location of the above networks, see **Transportation Assessment Support Map**.¹

Is the project within the service area of Metro Bike Share, or is there demonstrated demand for micro-mobility services?

If the project dedications and improvements asking to be waived are necessary to meet the City's mobility needs, the project may be found to conflict with a plan that is adopted to protect the environment.

B. Mobility Plan 2035 PROW Policy Alignment with Project-Initiated Changes

B.1 Project-Initiated Changes to the PROW Dimensions

These questions address potential conflict with:

Mobility Plan 2035 Policy 2.1 – Adaptive Reuse of Streets. Design, plan, and operate streets to serve multiple purposes and provide flexibility in design to adapt to future demands.

Mobility Plan 2035 Policy 2.3 – Pedestrian Infrastructure. Recognize walking as a component of every trip, and ensure high quality pedestrian access in all site planning and public right-of-way modifications to provide a safe and comfortable walking environment.

Mobility Plan 2035 Policy 3.2 – People with Disabilities. Accommodate the needs of people with disabilities when modifying or installing infrastructure in the public right-of-way.

Mobility Plan 2035 Policy 2.10 – Loading Areas. Facilitate the provision of adequate on and off-site street loading areas.

Mobility Plan 2035 Street Designations and Standard Roadway Dimensions

B.1 Does the project propose, above and beyond any PROW changes needed to comply with Section 12.37 of the LAMC as discussed in Section II.A, physically modify the curb placement or turning radius and/or physically alter the sidewalk and parkways space that changes how people access a property?

Examples of developer-initiated physical changes to the public right-of-way include:

- widening the roadway,
- narrowing the sidewalk,
- adding space for vehicle turn outs or loading areas,
- removing bicycle lanes, bike share stations, or bicycle parking

¹ LADOT Transportation Assessment Support Map <https://arcg.is/fubbbD>



Plan, Policy, and Program Consistency Worksheet

- modifying existing bus stop, transit shelter, or other street furniture
- paving, narrowing, shifting or removing an existing parkway or tree well

☐ Yes ☒ No

B.2 Driveway Access

These questions address potential conflict with:

Mobility Plan 2035 Policy 2.10 – Loading Areas. Facilitate the provision of adequate on and off-site street loading areas.

Mobility Plan 2035 Program PL.1. Driveway Access. Require driveway access to buildings from non-arterial streets or alleys (where feasible) in order to minimize interference with pedestrian access and vehicular movement.

Citywide Design Guidelines - Guideline 2: Carefully incorporate vehicular access such that it does not degrade the pedestrian experience.

Site Planning Best Practices:

- Prioritize pedestrian access first and automobile access second. Orient parking and driveways toward the rear or side of buildings and away from the public right-of-way. On corner lots, parking should be oriented as far from the corner as possible.
- Minimize both the number of driveway entrances and overall driveway widths.
- Do not locate drop-off/pick-up areas between principal building entrances and the adjoining sidewalks.
- Orient vehicular access as far from street intersections as possible.
- Place drive-thru elements away from intersections and avoid placing them so that they create a barrier between the sidewalk and building entrance(s).
- Ensure that loading areas do not interfere with on-site pedestrian and vehicular circulation by separating loading areas and larger commercial vehicles from areas that are used for public parking and public entrances.

B.2 Does the project add new driveways along a street designated as an Avenue or a Boulevard that conflict with LADOT's Driveway Design Guidelines (See Sec. 321 in the Manual of Policies and Procedures) by any of the following:

- locating new driveways for residential properties on an Avenue or Boulevard, and access is otherwise possible using an alley or a collector/local street, or
- locating new driveways for industrial or commercial properties on an Avenue or Boulevard and access is possible along a collector/local street, or
- the total number of new driveways exceeds 1 driveway per every 200 feet² along on the Avenue or Boulevard frontage, or
- locating new driveways on an Avenue or Boulevard within 150 feet from the intersecting street, or
- locating new driveways on a collector or local street within 75 feet from the intersecting street, or

² for a project frontage that exceeds 400 feet along an Avenue or Boulevard, the incremental additional driveway above 2 is more than 1 driveway for every 400 additional feet.



Plan, Policy, and Program Consistency Worksheet

- locating new driveways near mid-block crosswalks, requiring relocation of the mid-block crosswalk

☐ Yes ☒ No

If the answer to **B.1 and B.2 are both NO**, then the project would not conflict with a plan or policies that govern the PROW as a result of the project-initiated changes to the PROW.

Impact Analysis

If the answer to either **B.1 or B.2 are YES**, City plans and policies should be reviewed in light of the proposed physical changes to determine if the City would be obstructed from carrying out the plans and policies. The analysis should pay special consideration to substantial changes to the Public Right of Way that may either degrade existing facilities for people walking and bicycling (e.g., removing a bicycle lane), or preclude the City from completing complete street infrastructure as identified in the Mobility Plan 2035, especially if the physical changes are along streets that are on the High Injury Network (HIN). The analysis should also consider if the project is in a Transit Oriented Community (TOC) area, and would degrade or inhibit trips made by biking, walking and/ or transit ridership. The streets that need special consideration are those that are included on the following networks identified in the Mobility Plan 2035, or the HIN:

- Transit Enhanced Network
- Bicycle Enhanced Network
- Bicycle Lane Network
- Pedestrian Enhanced District
- Neighborhood Enhanced Network
- High Injury Network

To see the location of the above networks, see **Transportation Assessment Support Map**.³

Once the project is reviewed relevant to plans and policies, and existing facilities that may be impacted by the project, the analysis will need to answer the following two questions in concluding if there is an impact due to plan inconsistency.

B.2.1 Would the physical changes in the public right of way or new driveways that conflict with LADOT's Driveway Design Guidelines degrade the experience of vulnerable roadway users such as modify, remove, or otherwise negatively impact existing bicycle, transit, and/or pedestrian infrastructure?

☐ Yes ☒ No ☐ N/A

B.2.2 Would the physical modifications or new driveways that conflict with LADOT's Driveway Design Guidelines preclude the City from advancing the safety of vulnerable roadway users?

☐ Yes ☒ No ☐ N/A

If either of the answers to either **B.2.1 or B.2.2 are YES**, the project may conflict with the Mobility Plan 2035, and therefore conflict with a plan that is adopted to protect the

³ LADOT Transportation Assessment Support Map <https://arcg.is/fubbbD>



Plan, Policy, and Program Consistency Worksheet

environment. If either of the answers to both **B.2.1. or B.2.2. are NO**, then the project would not be shown to conflict with plans or policies that govern the Public Right-of-Way.

C. Network Access

C. 1 Alley, Street and Stairway Access

These questions address potential conflict with:

Mobility Plan Policy 3.9 Increased Network Access: Discourage the vacation of public rights-of-way.

C.1.1 Does the project propose to vacate or otherwise restrict public access to a street, alley, or public stairway?

☐ Yes ☒ No

C.1.2 If the answer to C.1.1 is Yes, will the project provide or maintain public access to people walking and biking on the street, alley or stairway?

☐ Yes ☐ **No** ☒ N/A

C.2 New Cul-de-sacs

These questions address potential conflict with:

Mobility Plan 2035 Policy 3.10 Cul-de-sacs: Discourage the use of cul-de-sacs that do not provide access for active transportation options.

C.2.1 Does the project create a cul-de-sac or is the project located adjacent to an existing cul-de-sac?

☐ Yes ☒ No

C.2.2 If yes, will the cul-de-sac maintain convenient and direct public access to people walking and biking to the adjoining street network?

☐ Yes ☐ **No** ☒ N/A

If the answers to either C.1.2 or C.2.2 are YES, then the project would not conflict with a plan or policies that ensures access for all modes of travel. If the answer to either **C.1.2 or C.2.2 are NO**, the project may conflict with a plan or policies that governs multimodal access to a property. Further analysis must assess to the degree that pedestrians and bicyclists have sufficient public access to the transportation network.

D. Parking Supply and Transportation Demand Management

These questions address potential conflict with:

Mobility Plan 2035 Policy 3.8 – Bicycle Parking, Provide bicyclists with convenient, secure and well maintained bicycle parking facilities.

Mobility Plan 2035 Policy 4.8 – Transportation Demand Management Strategies. Encourage greater utilization of Transportation Demand Management Strategies to reduce dependence on single-occupancy vehicles.

Appendix C – VMT Calculator and “Attachment G” of LADOT’s Transportation Assessment Guidelines

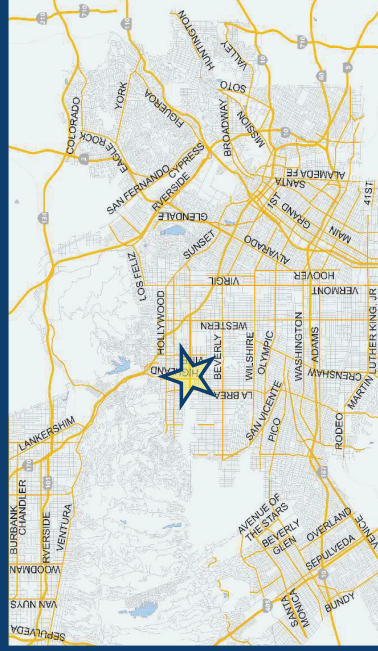
CITY OF LOS ANGELES VMT CALCULATOR Version 1.3



Project Screening Criteria: Is this project required to conduct a vehicle miles traveled analysis?

Project Information

Project: 1149 Las Palmas
Scenario: [WWW](#)
Address: 1149 N LAS PALMAS AVE, 90038



Is the project replacing an existing number of residential units with a smaller number of residential units AND is located within one-half mile of a fixed-rail or fixed-guideway transit station?

☐ Yes ☒ No

Existing Land Use

Land Use Type: Industrial | Manufacturing Value: 5,498 Unit: ksf
Industrial | Manufacturing 5,498 ksf

Proposed Project Land Use

Land Use Type: Retail | General Retail Value: 0.135 Unit: ksf
Retail | General Retail 0.135 ksf
Retail | General Retail Office | General Office 87.045 ksf

Project Screening Summary

Existing Land Use	Proposed
16 Daily Vehicle Trips	710 Daily Vehicle Trips
117 Daily VMT	5,650 Daily VMT
Tier 1 Screening Criteria	
Project will have less residential units compared to existing residential units & is within one-half mile of a fixed-rail station. ☐	
Tier 2 Screening Criteria	
The net increase in daily trips < 250 trips	694 Net Daily Trips
The net increase in daily VMT ≤ 0	5,533 Net Daily VMT
The proposed project consists of only retail land uses ≤ 50,000 square feet total.	0.135 ksf
The proposed project is required to perform VMT analysis.	

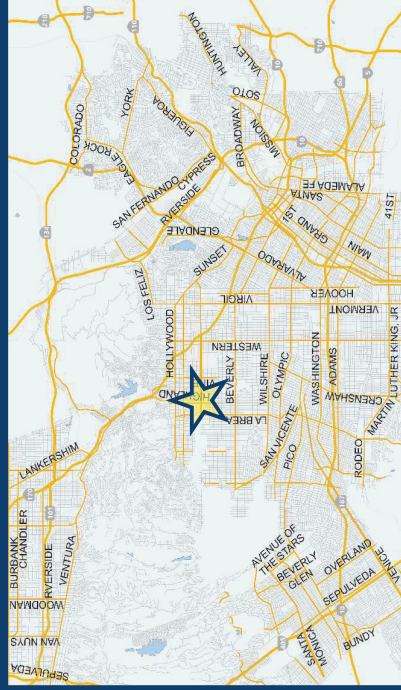


CITY OF LOS ANGELES VMT CALCULATOR Version 1.3



Project Information

Project: 1149 Las Palmas
Scenario:
Address: 1149 N LAS PALMAS AVE, 90038



Proposed Project Land Use Type			Value	Unit
Retail General Retail Office General Office	General Retail		0.135	ksf
	General Office		87.045	ksf

TDM Strategies

Select each section to show individual strategies
Use ☒ to denote if the TDM strategy is part of the proposed project or is a mitigation strategy

Max Home Based TDM Achieved?		Proposed Project	With Mitigation
Max Work Based TDM Achieved?		No	No
A	Parking		
B	Transit		
C	Education & Encouragement		
D	Commute Trip Reductions		
E	Shared Mobility		
F	Bicycle Infrastructure		
Implement/Improve On-street Bicycle Facility		Select Proposed Prj or Mitigation to include this strategy	
		☐ Proposed Prj	☐ Mitigation
Include Bike Parking Per LAMC		Select Proposed Prj or Mitigation to include this strategy	
		☒ Proposed Prj	☐ Mitigation
Include Secure Bike Parking and Showers		Select Proposed Prj or Mitigation to include this strategy	
		☐ Proposed Prj	☐ Mitigation
G	Neighborhood Enhancement		

Analysis Results

Proposed Project	With Mitigation
669 Daily Vehicle Trips	618 Daily Vehicle Trips
5,317 Daily VMT	4,859 Daily VMT
0.0 Household VMT per Capita	0.0 Household VMT per Capita
8.8 Work VMT per Employee	7.4 Work VMT per Employee

Significant VMT Impact?	
Household: No Threshold = 6.0 15% Below APC	Household: No Threshold = 6.0 15% Below APC
Work: Yes Threshold = 7.6 15% Below APC	Work: No Threshold = 7.6 15% Below APC



CITY OF LOS ANGELES VMT CALCULATOR

Report 1: Project & Analysis Overview

Date: May 4, 2023
Project Name: 1149 Las Palmas
Project Scenario:
Project Address: 1149 N LAS PALMAS AVE, 90038



Version 1.3

Project Information			
Land Use Type	Value	Units	
Housing	Single Family	0	DU
	Multi Family	0	DU
	Townhouse	0	DU
	Hotel	0	Rooms
	Motel	0	Rooms
Affordable Housing	Family	0	DU
	Senior	0	DU
	Special Needs	0	DU
	Permanent Supportive	0	DU
	General Retail	0.135	ksf
Retail	Furniture Store	0.000	ksf
	Pharmacy/Drugstore	0.000	ksf
	Supermarket	0.000	ksf
	Bank	0.000	ksf
	Health Club	0.000	ksf
	High-Turnover Sit-Down Restaurant	0.000	ksf
	Fast-Food Restaurant	0.000	ksf
	Quality Restaurant	0.000	ksf
	Auto Repair	0.000	ksf
	Home Improvement	0.000	ksf
	Free-Standing Discount	0.000	ksf
	Movie Theater	0	Seats
	General Office	87.045	ksf
Office	Medical Office	0.000	ksf
	Light Industrial	0.000	ksf
Industrial	Manufacturing	0.000	ksf
	Warehousing/Self-Storage	0.000	ksf
School	University	0	Students
	High School	0	Students
	Middle School	0	Students
	Elementary	0	Students
	Private School (K-12)	0	Students
Other		0	Trips

CITY OF LOS ANGELES VMT CALCULATOR

Report 1: Project & Analysis Overview

Date: May 4, 2023
Project Name: 1149 Las Palmas
Project Scenario:
Project Address: 1149 N LAS PALMAS AVE, 90038



Version 1.3

Analysis Results				
Total Employees: 348 Total Population: 0				
Proposed Project		With Mitigation		
669 5,317	Daily Vehicle Trips Daily VMT	618 4,859	Daily Vehicle Trips Daily VMT	
0 8.8	Household VMT per Capita Work VMT per Employee	0 7.4	Household VMT per Capita Work VMT per Employee	
Significant VMT Impact?				
APC: Central				
Impact Threshold: 15% Below APC Average Household = 6.0 Work = 7.6				
Proposed Project		With Mitigation		
VMT Threshold	Impact	VMT Threshold	Impact	
Household > 6.0 Work > 7.6	No Yes	Household > 6.0 Work > 7.6	No No	

CITY OF LOS ANGELES VMT CALCULATOR

Report 2: TDM Inputs

Date: May 4, 2023
Project Name: 1149 Las Palmas
Project Scenario:
Project Address: 1149 N LAS PALMAS AVE, 90038



Version 1.3

TDM Strategy Inputs			
Strategy Type	Description	Proposed Project	Mitigations
Parking	City code parking provision (spaces)	219	219
	Actual parking provision (spaces)	213	213
	Monthly cost for parking (\$)	\$0	\$0
	Employees eligible (%)	0%	0%
	Daily parking charge (\$)	\$0.00	\$0.00
	Employees subject to priced parking (%)	0%	0%
	Cost of annual permit (\$)	\$0	\$0
(cont. on following page)			

CITY OF LOS ANGELES VMT CALCULATOR

Report 2: TDM Inputs

Date: May 4, 2023
Project Name: 1149 Las Palmas
Project Scenario:
Project Address: 1149 N LAS PALMAS AVE, 90038



Version 1.3

TDM Strategy Inputs, Cont.			
Strategy Type	Description	Proposed Project	Mitigations
Transit	Reduce transit headways	0%	0%
	Reduction in headways (increase in frequency) (%)	0%	0%
	Existing transit mode share (as a percent of total daily trips) (%)	0	0
	Lines within project site improved (<50%, >=50%)	0	0
	Degree of implementation (low, medium, high)	0	0
Transit subsidies	Implement neighborhood shuttle	0%	0%
	Employees and residents eligible (%)	0%	0%
	Employees and residents eligible (%)	0%	0%
Education & Encouragement	Amount of transit subsidy per passenger (daily equivalent) (\$)	\$0.00	\$0.00
	Voluntary travel behavior change program	0%	0%
	Employees and residents participating (%)	0%	0%
Promotions and marketing	Employees and residents participating (%)	100%	100%
	Employees and residents participating (%)	100%	100%
(cont. on following page)			

CITY OF LOS ANGELES VMT CALCULATOR

Report 2: TDM Inputs

Date: May 4, 2023
 Project Name: 1149 Las Palmas
 Project Scenario:
 Project Address: 1149 N LAS PALMAS AVE, 90038



Version 1.3

TDM Strategy Inputs, Cont.			
Strategy Type	Description	Proposed Project	Mitigations
Commuter Trip Reductions	Required commute trip reduction program	0%	0%
	Alternative Work Schedules and Telecommute	0%	0%
	Employees participating (%)	0	0
	Degree of implementation (low, medium, high)	0	0
	Employer sponsored vanpool or shuttle	0%	0%
Shared Mobility	Ride-share program	0%	100%
	Car share	0	0
	Bike share	0	0
	School carpool program	0	0
	(cont. on following page)		

CITY OF LOS ANGELES VMT CALCULATOR

Report 2: TDM Inputs

Date: May 4, 2023
Project Name: 1149 Las Palmas
Project Scenario:
Project Address: 1149 N LAS PALMAS AVE, 90038



Version 1.3

TDM Strategy Inputs, Cont.			
Strategy Type	Description	Proposed Project	Mitigations
Bicycle Infrastructure	Implement/Improve on-street bicycle facility	0	0
	Include Bike parking per LAMC	Yes	Yes
	Include secure bike parking and showers	0	0
Neighborhood Enhancement	Traffic calming improvements	0%	0%
	Traffic calming improvements with intersections with traffic calming improvements (%)	0%	0%
	Pedestrian network improvements	0	0

CITY OF LOS ANGELES VMT CALCULATOR

Report 3: TDM Outputs

Date: May 4, 2023
Project Name: 1149 Las Palmas
Project Scenario:
Project Address: 1149 N LAS PALMAS AVE, 90038



Version 1.1.3

TDM Adjustments by Trip Purpose & Strategy													
Place type: Compact Infill													
	Home Based Work			Home Based Other			Home Based Other			Non-Home Based Other			Source
	Production	Attraction		Production	Attraction		Production	Attraction		Production	Attraction		
	Proposed	Mitigated		Proposed	Mitigated		Proposed	Mitigated		Proposed	Mitigated		
Parking	Reduce parking supply	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	TDM Strategy Appendix, Parking sections 1 - 5
	Unbundle parking	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	Parking cash-out	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	Price workplace parking	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
Transit	Residential area parking permits	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	TDM Strategy Appendix, Transit sections 1 - 3
	Reduce transit headways	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	Implement neighborhood shuttle	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	Transit subsidies	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
Education & Encouragement	Voluntary travel behavior change program	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	TDM Strategy Appendix, Education & Encouragement sections 1 - 2
	Promotions and marketing	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	
	Required commute trip reduction program	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	Alternative Work Schedules and Telecommute Program	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
Commute Trip Reductions	Employer sponsored vanpool or shuttle	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	TDM Strategy Appendix, Commute Trip Reductions sections 1 - 4
	Ride-share program	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	Car-share	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
	Bike share	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
Shared Mobility	School carpool program	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	TDM Strategy Appendix, Shared Mobility sections 1 - 3

CITY OF LOS ANGELES VMT CALCULATOR

Report 3: TDM Outputs

Date: May 4, 2023
Project Name: 1149 Las Palmas
Project Scenario:
Project Address: 1149 N LAS PALMAS AVE, 90038



Version 1.3

TDM Adjustments by Trip Purpose & Strategy, Cont.

Place type: Compact Infill

	Home Based Work Production			Home Based Other Attraction			Non-Home Based Other Production			Non-Home Based Other Attraction			Source
	Proposed	Mitigated	0.0%	Proposed	Mitigated	0.0%	Proposed	Mitigated	0.0%	Proposed	Mitigated	0.0%	
Bicycle Infrastructure	Implement/ Improve on-street bicycle facility	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	TDM Strategy Appendix, Bicycle Infrastructure sections 1 - 3
	Include Bike parking per LAMC	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	
	Include secure bike parking and showers	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
Neighborhood Enhancement	Traffic calming improvements	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	TDM Strategy Appendix, Neighborhood Enhancement sections 1 - 2
	Pedestrian network improvements	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	

Final Combined & Maximum TDM Effect

	Home Based Work Production			Home Based Other Attraction			Non-Home Based Other Production			Non-Home Based Other Attraction		
	Proposed	Mitigated	6%	Proposed	Mitigated	6%	Proposed	Mitigated	6%	Proposed	Mitigated	6%
COMBINED TOTAL	6%	6%	6%	20%	6%	6%	6%	6%	6%	6%	6%	2%
MAX. TDM EFFECT	6%	6%	6%	20%	6%	6%	6%	6%	6%	6%	6%	6%

$$= \text{Minimum } (X\%, 1 - [(1-A) * (1-B)...])$$

where X%=

PLACE	urban	75%
TYPE	compact infill	40%
MAX:	suburban center	20%
	suburban	15%

Note: $(1 - [(1-A) * (1-B)...])$ reflects the dampened combined effectiveness of TDM Strategies (e.g., A, B,...). See the TDM Strategy Appendix (*Transportation Assessment Guidelines Attachment G*) for further discussion of dampening.

CITY OF LOS ANGELES VMT CALCULATOR

Report 4: MXD Methodology

Date: May 4, 2023

Project Name: 1149 Las Palmas

Project Scenario:

Project Address: 1149 N LAS PALMAS AVE, 90038



Version 1.3

MXD Methodology - Project Without TDM

	Unadjusted Trips	MXD Adjustment	MXD Trips	Average Trip Length	Unadjusted VMT	MXD VMT
Home Based Work Production	0	0.0%	0	7.2	0	0
Home Based Other Production	0	0.0%	0	4.9	0	0
Non-Home Based Other Production	115	-6.1%	108	7.4	851	799
Home-Based Work Attraction	505	-28.7%	360	9.0	4,545	3,240
Home-Based Other Attraction	230	-41.7%	134	6.7	1,541	898
Non-Home Based Other Attraction	115	-6.1%	108	6.6	759	713

MXD Methodology with TDM Measures

Proposed Project			Project with Mitigation Measures		
TDM Adjustment	Project Trips	Project VMT	TDM Adjustment	Mitigated Trips	Mitigated VMT
-5.9%	0	0	-5.9%	0	0
-5.9%	0	0	-5.9%	0	0
-5.9%	102	752	-5.9%	102	752
-5.9%	339	3,049	-20.0%	288	2,591
-5.9%	126	845	-5.9%	126	845
-5.9%	102	671	-5.9%	102	671

MXD VMT Methodology Per Capita & Per Employee

Total Population: 0

Total Employees: 348

APC: Central

	Proposed Project	Project with Mitigation Measures
Total Home Based Production VMT	0	0
Total Home Based Work Attraction VMT	3,049	2,591
Total Home Based VMT Per Capita	0.0	0.0
Total Work Based VMT Per Employee	8.8	7.4

ATTACHMENT G

TRANSPORTATION DEMAND MANAGEMENT STRATEGIES IN LA VMT CALCULATOR

Introduction

This document provides an overview of the Transportation Demand Management (TDM) strategies included in the City of Los Angeles Department of Transportation Vehicle Miles Traveled (VMT) Calculator. The VMT Calculator is a tool designed to measure whether a development project exceeds the VMT thresholds of the City of Los Angeles, based on the MXD methodology¹ validated for City of Los Angeles conditions as documented in the City of Los Angeles VMT Calculator Documentation (Fehr & Peers, October 2017) and the potential VMT reductions available from certain types of project site modifications, programming, and operational changes collectively known as *TDM strategies*.

The effectiveness of each of the 23 TDM strategies included in the VMT Calculator is based primarily on research documented in the 2010 California Air Pollution Control Officers Association (CAPCOA) publication, *Quantifying Greenhouse Gas Mitigation Measures* (CAPCOA, 2010). CAPCOA offers methodology based on preferred literature, along with methodology based on alternative literature, for each strategy. The strategies used in the VMT Calculator follow CAPCOA guidance by either directly applying the CAPCOA methodology, applying the alternative literature methodology, or adjusting the methodology offered by CAPCOA to account for local needs and departmental goals. Where more recent research (since 2010) or local empirical data are available, those methods have been used in place of the methodology outlined by CAPCOA. The methodology is specified for each strategy in the pages that follow.

The TDM strategies are individually described in this document, with individual levels of effectiveness identified. However, to ensure the effectiveness of TDM strategies is not overstated, the VMT reductions in the VMT Calculator are both *dampened* and *capped*.

Dampening: Within each type of trip (home-based work trip starting at the home end, for example), a multiplicative dampening formula is applied. For example, if both Strategy A and Strategy B are applied, the combined effectiveness is not A+B, but rather $1-(1-A)*(1-B)$. This captures the reality that many people who would consider using Strategy B overlap with the potential market for Strategy A, and would choose A or B for each trip, but not both A and B.

Capping: For the full set of strategies selected across all trip types, a place-type limit, or cap, is applied. The place-type is a pre-defined category based on land use characteristics of the location where the project is sited. Four place-types, or travel behavior zones (TBZs), have been developed by the City: Urban, Compact Infill, Suburban Center, and Suburban. Consistent with CAPCOA, for urban locations, the maximum VMT reduction that can be achieved by combining TDM strategies is 75%. For compact infill locations, the maximum is 40%. For suburban center locations, the maximum is 20%, and for suburban locations the maximum is 15%. These maximums are described and substantiated in CAPCOA. A map of the TBZ system is included in Figure 1.

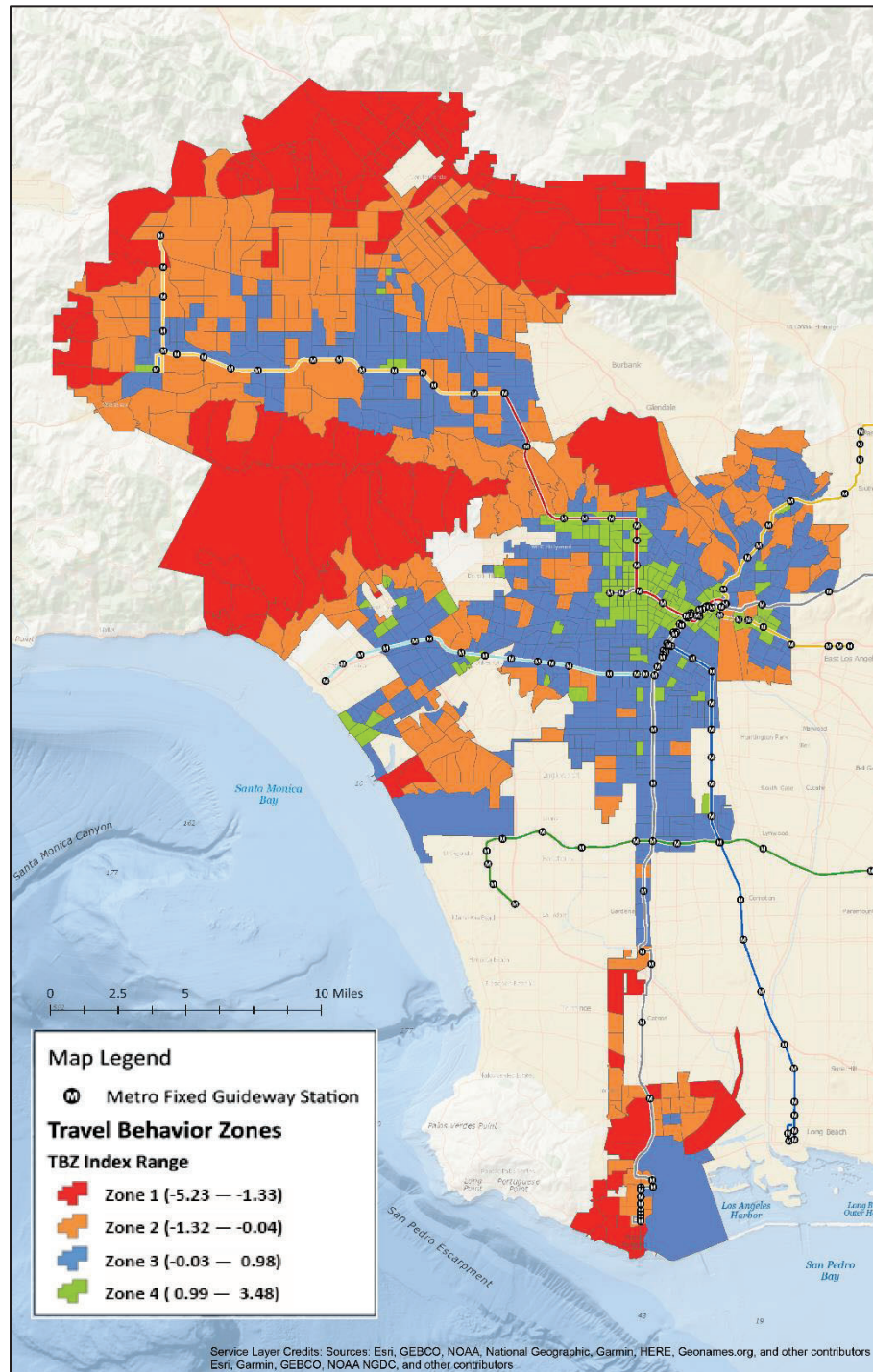
¹ The MXD methodology was originally developed by the U.S. Environmental Protection Agency to better estimate trip generation in urban areas considering a number of factors including the relative numbers of residents and jobs, the density of development, the connectivity for walking or driving among different activities, the availability of transit, the number of convenient trip destinations within the immediate area, vehicle ownership, and household size.

Transportation Demand Management Strategies in LA VMT Calculator

November 2019

In the pages that follow, the inputs required by the project applicant are highlighted in yellow. The other formula components are either coefficients identified in the research and documented in CAPCOA or predefined quantities based on the location of the project.

FIGURE 1 TRAVEL BEHAVIOR ZONES



Parking

1. Reduce Parking Supply
2. Unbundle Parking
3. Parking Cash-Out
4. Price Workplace Parking
5. Residential Area Parking Permits

Transit

1. Reduce Transit Headways
2. Implement Neighborhood Shuttle
3. Transit Subsidies

Education & Encouragement

1. Voluntary Travel Behavior Change Program
2. Promotions & Marketing

Commute Trip Reductions

1. Required Commute Trip Reduction Program
2. Alternative Work Schedules and Telecommute Program
3. Employer Sponsored Vanpool or Shuttle
4. Ride Share Program

Shared Mobility

1. Car Share
2. Bike Share
3. School Carpool Program

Bicycle Infrastructure

1. Implement/Improve On-Street Bicycle Facility
2. Include Bike Parking per LAMC
3. Include Secure Bike Parking and Showers per LAMC

Neighborhood Infrastructure

1. Traffic Calming Improvements
2. Pedestrian Network Improvements

Parking

1. Reduce Parking Supply

This strategy changes the on-site parking supply to provide less than the amount of vehicle parking required by direct application of the Los Angeles Municipal Code (LAMC) without consideration of parking reduction mechanisms permitted in the code. Permitted reductions in parking supply could utilize parking reduction mechanisms such as TOC, Density Bonus, Bike Parking ordinance, or locating in an Enterprise Zone or Specific Plan area. Reductions in parking supply could also include reductions in parking requirements due to variances sought by a project. This strategy is appropriate for use in all land-use contexts and all types of development, and applies to all trip types.

The maximum available VMT reduction from this strategy is 12.5%.

The formula used to calculate the reduction in VMT as a result of this strategy is as follows:

$$\text{VMT Reduction} = [(\text{Base City Code parking requirement} - \text{Actual parking provision}) / \text{Base City Code parking requirement}] \times 0.5$$

Inputs:

- Base city code parking requirements – enter the number of spaces required by direct application of the LA Municipal Code without consideration of parking reduction mechanisms permitted in the code..
- Actual parking provision – enter the number of spaces that the project will be providing.

The application and effectiveness of this strategy is based on research and methodology documented in the 2010 California Air Pollution Control Officers Association publication, *Quantifying Greenhouse Gas Mitigation Measures* (CAPCOA), Strategy PDT-1. CAPCOA Strategy PDT-1 has been adjusted to reflect a change in parking provision compared to the City Code requirements, rather than the ITE Parking requirements as specified in CAPCOA.

Parking

2. Unbundle Parking

This strategy unbundles the parking costs from the property costs, requiring those who wish to purchase parking spaces to do so at an additional cost from the property cost. The strategy assumes the parking cost is set by the project applicant, between \$25 and \$220 per month, and paid by the vehicle owners/drivers. This strategy is appropriate for residential developments in all land-use contexts, and applies to home-based trip types. This strategy is appropriate only where residential parking permit zones are in place for residential neighborhoods adjacent to the project or where street parking is metered, on-street parking supply is regulated by parking management strategies approved by LADOT, or heavily utilized as demonstrated through a parking analysis

The maximum available VMT reduction from this strategy is 26% of residential-based VMT, if implemented with residential permit parking and priced on-street parking to limit spillover.

The formula used to calculate the reduction in VMT as a result of this strategy is as follows:

$$\text{VMT Reduction} = (-0.4) \times [(\text{Monthly parking cost}) \times (12/\$4,000)]$$

Inputs:

- Monthly parking cost – enter the monthly dollar amount cost of each parking space, between \$25 and \$220. If amount of each parking space cost to vehicle owners/drivers is greater than \$220, maximum reduction will be calculated.

The application and effectiveness of this strategy is based on research and methodology documented in the 2010 California Air Pollution Control Officers Association publication, *Quantifying Greenhouse Gas Mitigation Measures* (CAPCOA), Strategy PDT-2.

Parking

3. Parking Cash-Out

This strategy requires employers to offer employees the opportunity to “cash-out” the monthly value of their currently-free or subsidized parking space. The project applicant determines an employee’s eligibility to participate. This strategy is appropriate for all land-use contexts and all types of development that have employment, and applies only to attraction-end trips originating at home and terminating at work. The strategy depends on parking that is unbundled from the commercial lease.

The maximum available VMT reduction from this strategy is 7.7% of commute VMT.

The formula used to calculate the reduction in VMT as a result of this strategy is as follows:

$$\text{VMT Reduction} = (\text{Percent reduction in commute VMT associated with project setting}) \times (\text{Percent of employees eligible})$$

Inputs:

- Percent of employees eligible – enter the percent of employees on-site that will be eligible to participate in the parking cash-out program. Eligibility is determined by the project applicant. Some employees may be excluded based on their job category or employment status, such as part-time employees or interns.

The application and effectiveness of this strategy is based on research and methodology documented in the 2010 California Air Pollution Control Officers Association publication, *Quantifying Greenhouse Gas Mitigation Measures* (CAPCOA), Strategy TRT-15.

Parking

4. Price Workplace Parking

This strategy implements workplace parking pricing for employees at employment locations. This strategy is appropriate for all land-use contexts and all types of development that include employment, and applies only to attraction-end trips originating at home and terminating at work. This strategy is appropriate only where residential parking permit zones are in place for residential neighborhoods adjacent to the project or where street parking is metered, on-street parking supply is regulated by parking management strategies approved by LADOT, or heavily utilized as demonstrated through a parking analysis.

The maximum available VMT reduction from this strategy is 19.7% of commute VMT.

The formula used to calculate the reduction in VMT as a result of this strategy is as follows:

$$\text{VMT Reduction} = (\text{Percent reduction in commute VMT associated with daily parking charge}) \times (\text{Percent of employees subject to charge})$$

Inputs:

- Daily parking charge – enter the closest dollar amount of the daily parking cost (\$1, \$2, \$3, or \$6). If necessary, convert monthly costs to daily costs by dividing by 22 work days per month.
- Percent of employees subject to charge – enter the percent of employees on-site that will be subject to priced parking.

The application and effectiveness of this strategy is based on research and methodology documented in the 2010 California Air Pollution Control Officers Association publication, *Quantifying Greenhouse Gas Mitigation Measures* (CAPCOA), Strategy TRT-14.

Parking

5. Residential Area Parking Permits

This strategy involves the implementation of residential permit parking zones for long-term use of on-street parking in residential areas. This strategy is often implemented to curb “spillover effect” that could be caused by parking pricing strategies implemented in adjacent commercial or employment locations. This strategy is appropriate for all land-use contexts and all types of development that have residential units, and applies only to production-end trips originating at home and terminating at work or other locations. This strategy is appropriate only for large developments with internal blocks within the project footprint.

The maximum available VMT reduction from this strategy is 0.25%.

The formula used to calculate the reduction in VMT as a result of this strategy is as follows:

VMT Reduction based on a categorical association of annual permit price with percent VMT reduction.

Inputs:

- Annual permit price – enter the closest dollar value of the annual price for the residential permit (\$100 or \$200).

The application and effectiveness of this strategy is based on research and methodology documented in the 2010 California Air Pollution Control Officers Association publication, *Quantifying Greenhouse Gas Mitigation Measures* (CAPCOA), Strategy PDT-4. In order to disaggregate the effects of this strategy from other parking strategies, the tool uses the alternative literature available for CAPCOA Strategy PDT-4 rather than the bundled approach described in the report.

Transit

1. Reduce Transit Headways

This strategy makes transit service more appealing by reducing headways and thereby reducing overall transit trip time, encouraging riders to switch from auto to transit use. This strategy assumes transit is already present in the project area, and requires close coordination with the transit service operator in the area to demonstrate the service improvements are viable. The project applicant would typically be required to financially support the operation of additional service and demonstrate commitment and partnership with the transit service provider with formal documentation. This strategy is appropriate for all land-use contexts and all types of development, and applies to all trip types.

The maximum available VMT reduction from this strategy is 2.5%.

The formula used to calculate the reduction in VMT as a result of this strategy is as follows:

$$\text{VMT Reduction} = (\text{Percent reduction in headway}) \times (\text{Elasticity of transit ridership based on project setting}) \times (\text{Existing transit modeshare}) \times (\text{Level of implementation}) \times (0.67 \text{ Adjustment factor from transit ridership increase to VMT})$$

Inputs:

- Percent reduction in headway – enter the percent reduction in peak-period headways (for example, if the headways are reduced from 30 minutes to 15 minutes, enter 50%), not to exceed 80%.
- Existing transit mode share – enter the percent mode share for transit in the project area, based on US Census' American Communities Survey commute mode share information for the city, or more granular if possible (e.g., census tract level), not to exceed 17%.
- Level of implementation – enter the percentage of lines within the project area that will be improved ($\geq$ 50% or $<$ 50%).

The application and effectiveness of this strategy is based on research and methodology documented in the 2010 California Air Pollution Control Officers Association publication, *Quantifying Greenhouse Gas Mitigation Measures* (CAPCOA), Strategy TST-4.

Transit

2. Implement Neighborhood Shuttle

This strategy involves the implementation of a project-operated or project-sponsored neighborhood shuttle, serving residents, employees, and visitors of the project site. This strategy is most appropriate for application to very large project sites, or for smaller projects participating in a neighborhood shuttle in conjunction with other projects in the vicinity. Shuttle service should not simply mirror existing service, but provide new opportunities for access, either through differences in route or in cost to the rider. Shuttle service should provide new connections to job/activity centers and transit. This strategy is appropriate for all land-use contexts and all types of development, and applies to all trip types.

The maximum available VMT reduction from this strategy is 13.4%.

The formula used to calculate the reduction in VMT as a result of this strategy is as follows:

$$\text{VMT Reduction} = (\text{Percent shift in modeshare of trips based on degree of implementation}) \times (\text{Percent employees, residents \& visitors eligible}) \times (0.67 \text{ Adjustment factor from shuttle ridership increase to VMT})$$

Inputs:

- Degree of implementation – enter high (all day service; headways less than 15 minutes), medium (all day service; headways 15 minutes or more), or low (peak hours only; headways 15 minutes or more).
- Percent employees, residents, and visitors eligible – enter the percent of all individuals who may access the project that are eligible to utilize the shuttle (for example, if the shuttle serves only residents on a mixed-use site with retail employment, divide the anticipated population of residents into the anticipated population of residents + employees + visitors to determine the percent).

The application and effectiveness of this strategy is based on research and methodology documented in the 2010 California Air Pollution Control Officers Association publication, *Quantifying Greenhouse Gas Mitigation Measures* (CAPCOA), Strategy TRT-11. CAPCOA Strategy TRT-11 has been adjusted in the tool to allow for the implementation of a shuttle in any type of development, open to all residents, employees, and visitors of the site, rather than its application in CAPCOA as a purely commute-based strategy for work trips only.

Transit

3. Transit Subsidies

This strategy involves the subsidization of transit fare for residents and employees of the project site. The subsidy must be proactively offered to each dwelling unit and/or employee at least once annually for a minimum of five years. This strategy assumes transit service is already present in the project area. This strategy is appropriate for all land-use contexts and all types of development, and applies to all trip types.

In Los Angeles, many transit fare products are available that can pay for individual trips, unlimited trips on a single transit operator's system, or unlimited trips on multiple transit operators' systems. Unlimited passes are available on a daily, weekly, and monthly basis, and can provide a per-trip discount if the rider exceeds a certain number of trips within the given time period. In addition, Metro offers several annual pass programs, such as the B-TAP program for businesses, which offer steep discounts but require a high minimum threshold of participation amongst all employees. In the future, new pass options may become available and fare structures may change.

Given this level of variation across all transit operators in Los Angeles, subsidy levels are measured in dollars rather than percent of fares. At the low end, a single trip on LADOT's DASH system costs \$0.35 per ride if the rider pays with a TAP card. At the high end, some LADOT Commuter Express routes cost \$4.25 per ride if the route crosses several distance-based zones. The base fare on the Metro system is \$1.75 for a single trip. Metro's monthly pass costs \$100/month for unlimited rides.

The maximum available VMT reduction from this strategy is 20%.

The formula used to calculate the reduction in VMT as a result of this strategy is as follows:

$$\text{VMT Reduction} = (\text{Percent employees \& residents eligible}) \times (\text{Percent reduction in trips associated with daily transit subsidy amount})$$

Inputs:

- Percent employees & residents eligible – enter the percent of all individuals who may access the project that are eligible to receive transit subsidies (for example, if the project only offers transit subsidies to office employees on a mixed-use site with residential units, divide the anticipated population of eligible office employees into the anticipated population of residents + employees to determine the percent).
- Daily transit subsidy amount – enter the closest dollar amount of daily transit fare subsidy per passenger (\$0.75, \$1.49, \$2.98, or \$5.96); select the highest value if unlimited-ride passes are provided.

The application and effectiveness of this strategy is based on research and methodology documented in the 2010 California Air Pollution Control Officers Association publication, *Quantifying Greenhouse Gas Mitigation Measures* (CAPCOA), Strategy TRT-4. CAPCOA Strategy TRT-4 has been adjusted in the tool to allow for transit subsidies to be offered to both employees and residents of a project site, rather than its application in CAPCOA as a purely commute-based strategy for work trips only.

Education & Encouragement

1. Voluntary Travel Behavior Change Program

This strategy involves the development of a travel behavior change program that targets individual attitudes, goals, and travel behaviors, educating participants on the impacts of their travel choices and the opportunities to alter their habits. Unlike the Promotions & Marketing strategy below, which uses only passive educational tools such as posters, websites, and travel information displays, these programs often include two-way mass communication campaigns and travel feedback programs that actively engage participants as they make their travel choices in real time. This program also relies on a coordinator to manage the program and administer the tools, which may be analog (submit paper forms) or digital (online logging system, push notifications from an app, etc.). This strategy does not include any monitoring or reporting at the level of the development, but may encourage individual tracking and reporting of trips for incentives. This strategy is appropriate for all land-use contexts and all types of development, and applies to all trip types.

The maximum available VMT reduction from this strategy is 8%.

The formula used to calculate the reduction in VMT as a result of this strategy is as follows:

$$\text{VMT Reduction} = (8\%) \times (\text{Percent employees \& residents participating}) \times (\text{Adjustment factor based on project setting})$$

Inputs:

- Percent employees & residents participating – enter the percent of all individuals who will be targeted to participate in the program (for example, if the program targets only office employees on a mixed-use site with residential units, divide the anticipated population of eligible office employees into the anticipated population of residents + employees to determine the percent).

The application and effectiveness of this strategy is based on research and methodology documented in the 2013 policy brief by Steven Spears, Marlon Boarnet, and Susan Handy, *Policy Brief on the Impacts of Voluntary Travel Behavior Change Programs Based on a Review of the Empirical Literature*.

Education & Encouragement

2. Promotions & Marketing

This strategy involves the use of marketing and promotional tools to educate and inform travelers about site-specific transportation options and the effects of their travel choices. Unlike the Voluntary Travel Behavior Change Program, which involves active two-way communication between the transportation management coordinator and the participating traveler, this strategy does not include two-way communication tools or tools that would encourage an individual to consider a different mode at the time the trip is taken (such as an app or a daily email). Rather, this strategy includes passive educational and promotional materials, such as posters, info boards, or a website with information that a traveler could choose to read at their own leisure. This strategy is appropriate for all land-use contexts and all types of development, and applies to all trip types.

The maximum available VMT reduction from this strategy is 4%.

The formula used to calculate the reduction in VMT as a result of this strategy is as follows:

$$\text{VMT Reduction} = (4\%) \times (\text{Percent employees \& residents eligible})$$

Inputs:

- Percent employees & residents eligible – enter the percent of all individuals who will be targeted by the promotions and marketing (for example, if the program targets only office employees on a mixed-use site with residential units, divide the anticipated population of eligible office employees into the anticipated population of residents + employees to determine the percent).

The application and effectiveness of this strategy is based on research and methodology documented in the 2010 California Air Pollution Control Officers Association publication, *Quantifying Greenhouse Gas Mitigation Measures* (CAPCOA), Strategy TRT-7. CAPCOA Strategy TRT-7 has been adjusted in the tool to allow for promotions and marketing efforts to be targeted to both employees and residents of a project site, rather than its application in CAPCOA as a purely commute-based strategy for work trips only. The tool disallows the use of this strategy if the Voluntary Travel Behavior Change Program is selected, because the activities described in this strategy are duplicative.

Commute Trip Reductions

1. Required Commute Trip Reduction Program

This strategy involves the development of an employee-focused travel behavior change program that targets individual attitudes, goals, and travel behaviors, educating participants on the impacts of their travel choices and the opportunities to alter their habits. The program typically includes elements such as a coordinated ride-sharing or carpooling program, vanpool program, alternative work schedule program, preferential carpool parking, guaranteed ride home service, and a program coordinator. The program requires the development of metrics to evaluate success, program monitoring, and regular reporting. This strategy is appropriate for all land-use contexts and all types of development that have employment, and applies only to attraction-end trips originating at home and terminating at work.

The maximum available VMT reduction from this strategy is 21% of commute VMT.

The formula used to calculate the reduction in VMT as a result of this strategy is as follows:

$$\text{VMT Reduction} = (21\%) \times (\text{Percent of employees eligible})$$

Inputs:

- Percent employees & residents eligible – enter the percent of all individuals who will be eligible to participate in the program (for example, if the program targets only office employees on a mixed-use site with both office and retail employment, divide the anticipated population of eligible office employees into the anticipated population of office employees + retail employees to determine the percent).

The application and effectiveness of this strategy is based on research and methodology documented in the 2010 California Air Pollution Control Officers Association publication, *Quantifying Greenhouse Gas Mitigation Measures* (CAPCOA), Strategy TRT-2. The tool disallows the use of all other Commute Trip Reduction strategies if this strategy is selected, because the activities described in this strategy are duplicative.

Commute Trip Reductions

2. Alternative Work Schedules and Telecommuting Program

This strategy encourages employees to work alternative schedules or telecommute, including staggered start times, flexible schedules, or compressed work weeks. This strategy is appropriate for all land-use contexts and all types of development that have employment, and applies only to attraction-end trips originating at home and terminating at work.

The maximum available VMT reduction from this strategy is 5.5% of commute VMT.

The formula used to calculate the reduction in VMT as a result of this strategy is as follows:

VMT Reduction based on a categorical association of schedule type and employee participation with percent VMT reduction.

Inputs:

- Schedule type – enter the type of alternative work schedule program that will be offered (9-day/80-hour work week, 4-day/40-hour workweek, or 1.5 days per week of telecommuting).
- Percentage of employees participating – enter the closest percentage of employees that are anticipated to participate in an alternative work schedule (1%, 3%, 5%, 10%, or 25%).

The application and effectiveness of this strategy is based on research and methodology documented in the 2010 California Air Pollution Control Officers Association publication, *Quantifying Greenhouse Gas Mitigation Measures* (CAPCOA), Strategy TRT-6. The tool disallows the use of this strategy if either the Voluntary Travel Behavior Change Program or Required Commute Trip Reduction Program is selected, because the activities described in this strategy are duplicative.

Commute Trip Reductions

3. Employer-Sponsored Vanpool or Shuttle

This strategy involves the implementation of an employer-sponsored employee vanpool or shuttle connecting employees to the project site. Vanpool or shuttle service should not simply mirror existing service, but provide new opportunities for access, through differences in route directness or by providing a lower cost or free option to the rider. This strategy is appropriate for all land-use contexts and all types of development that have employment, and applies only to attraction-end trips originating at home and terminating at work.

The maximum available VMT reduction from this strategy is 13.4% of commute VMT.

The formula used to calculate the reduction in VMT as a result of this strategy is as follows:

$$\text{VMT Reduction} = (\text{Percent shift in vanpool/shuttle mode share of commute trips based on degree of implementation and employer size}) \times (\text{Percent employees eligible}) \times (0.67 \text{ Adjustment factor from vanpool/shuttle mode share to VMT})$$

Inputs:

- Degree of implementation – enter high (>30 vans), medium (10-30 vans), or low (<10 vans).
- Employer size – enter large (>500 employees), medium (100-500 employees), or low (<100 employees).
- Percent employees eligible – enter the percent of all employees that are eligible to utilize the vanpool (for example, if the vanpools only serve office employees on a mixed-use site with both office and retail employment, divide the anticipated population of eligible office employees into the anticipated population of office employees + retail employees to determine the percent).

The application and effectiveness of this strategy is based on research and methodology documented in the 2010 California Air Pollution Control Officers Association publication, *Quantifying Greenhouse Gas Mitigation Measures* (CAPCOA), Strategy TRT-11. The tool disallows the use of this strategy if either the Neighborhood Shuttle or Required Commute Trip Reduction Program is selected, because the activities described in this strategy are duplicative.

Commute Trip Reductions

4. Ride-Share Program

This strategy increases vehicle occupancy by providing ride-share matching services, designating preferred parking for ride-share participants, designing adequate passenger loading/unloading and waiting areas for ride-share vehicles, and providing a website or message board to connect riders and coordinate rides. This strategy is appropriate for all land-use contexts and all types of development that have employment, and applies only to attraction-end trips originating at home and terminating at work.

The maximum available VMT reduction from this strategy is 15% of commute VMT.

The formula used to calculate the reduction in VMT as a result of this strategy is as follows:

$$\text{VMT Reduction} = (\text{Percent reduction commute VMT associated with project setting}) \times (\text{Percent employees eligible})$$

Inputs:

- Percent employees eligible – enter the percent of all employees that are eligible to utilize the ride-share program (for example, if the ride-share program is only offered to office employees on a mixed-use site with both office and retail employment, divide the anticipated population of eligible office employees into the anticipated population of office employees + retail employees to determine the percent).

The application and effectiveness of this strategy is based on research and methodology documented in the 2010 California Air Pollution Control Officers Association publication, *Quantifying Greenhouse Gas Mitigation Measures* (CAPCOA), Strategy TRT-3. The tool disallows the use of this strategy if either the Voluntary Travel Behavior Change Program or Required Commute Trip Reduction Program is selected, because the activities described in this strategy are duplicative. This strategy does not include ride-sharing services such as Lyft, Uber, or other transportation network companies (TNCs).

Shared Mobility

1. Car-Share

This strategy involves implementation of car-sharing to allow people to have on-demand access to a vehicle, as-needed. This may include providing membership to an existing program located within ¼ mile, contracting with a third-party vendor to extend membership-based service to an area, or implementing a project-specific fleet that supports the residents and employees on-site. Car-share can serve as a supportive strategy that enhances other TDM strategies including unbundled parking. Car-share implementation should meet the following conditions:

- Memberships are proactively offered to residents/employees annually for the life of the project.
- Car-share vendor provides vehicle insurance and vehicle maintenance.
- Vehicles are located on-site; can be accessed by those on-site and by those off-site.
- Vehicles are unstaffed and self-service; available 24 hours a day.
- Vehicles are available for reservation hourly or in smaller intervals.

This strategy is appropriate for all land-use contexts and all types of development, and applies to all trip types.

The maximum available VMT reduction from this strategy is 0.7%.

The formula used to calculate the reduction in VMT as a result of this strategy is as follows:

$$\text{VMT Reduction} = (\% \text{ reduction in car-share member annual VMT that corresponds to project setting, below}) \times (20 \text{ car-share members per shared car}) / (\text{Deployment level based on project setting})$$

Inputs:

- Project setting – enter urban + comprehensive transit, suburban + commuter rail, or all other settings.
 - Urban + comprehensive transit corresponds to a 50% reduction in member VMT
 - Suburban + commuter rail corresponds to a 75% reduction in member VMT
 - All other settings corresponds to a 37% reduction in member VMT

The application and effectiveness of this strategy is based on research and methodology documented in the 2010 California Air Pollution Control Officers Association publication, *Quantifying Greenhouse Gas Mitigation Measures* (CAPCOA), Strategy TRT-9, and empirical analysis conducted by Fehr & Peers.

Shared Mobility

2. Bike Share

This strategy involves implementation of bike share to allow people to have on-demand access to a bicycle, as-needed. In order to apply this strategy, the project must either:

1. be located less than 500 feet away from an existing bike share station;
2. install a publicly-accessible bike share station on-site (for a minimum of 10 bicycles) within 0.25 miles of an existing or planned bike share station meeting all LADOT Bike Share siting guidelines.
3. offer all building occupants bike share membership passes within a bike share service area (defined as 0.25 miles from an existing or planned bike share station).

This strategy is appropriate for all land-use contexts and all types of development, and applies to all trip types.

The maximum available VMT reduction from this strategy is 0.25%.

The formula used to calculate the reduction in VMT as a result of this strategy is as follows:

VMT Reduction = 0.25% reduction if the project is within 500 feet of an existing bike share station, or if the project implements a publicly-accessible bike share station for a minimum of 10 bicycles within 0.25 miles of an existing or planned bike share station or offers all building occupants bike share membership passes within a bike share service area

Inputs:

- Presence of bike share – enter Yes or No.

The application and effectiveness of this strategy is based on empirical data collected from the Downtown Los Angeles bike share pilot and research documented in the 2010 California Air Pollution Control Officers Association publication, *Quantifying Greenhouse Gas Mitigation Measures* (CAPCOA), Strategy TRT-12.

Shared Mobility

3. School Carpool Program

This strategy involves implementation of a school carpool program to encourage ride-sharing for students. This strategy requires a staff person or volunteers tasked with implementing the program and matching parents to other families that could pool. This strategy is appropriate for residential land uses in all land-use contexts, and applies only to school trips.

The maximum available VMT reduction from this strategy is 15.8% of school VMT, or 0.9% of overall VMT, given the share of overall VMT that is comprised by school VMT.

The formula used to calculate the reduction in VMT as a result of this strategy is as follows:

$$\text{VMT Reduction} = (\text{Percent of families that participate}) \times (45\% \text{ Adjustment to convert daily school VMT to annual school VMT}) \times (0.059 \text{ Adjustment to convert project-level trips to school trips only})$$

Inputs:

- Percent of families that participate – enter anticipated level of participation: high (75%-100% of all students + active school pool coordinator), medium (50%-75% of all students), or low (<50% of all students).

The application and effectiveness of this strategy is based on research and methodology documented in the 2010 California Air Pollution Control Officers Association publication, *Quantifying Greenhouse Gas Mitigation Measures* (CAPCOA), Strategy TRT-10, and local adjustment.

Bicycle Infrastructure

1. Implement/Improve On-Street Bicycle Facility

This strategy involves implementing or providing funding for improvements to corridors and crossings for bike networks identified within the City's Mobility Plan 2035 within a one-half mile buffer area of the project boundary, to support safe and comfortable bicycle travel. This strategy is appropriate for all land-use contexts and all types of development, and applies to all trip types.

The maximum available VMT reduction from this strategy is 0.625%.

The formula used to calculate the reduction in VMT as a result of this strategy is as follows:

VMT Reduction = 0.625% reduction if the project implements or provides funding for improvements to corridors and crossings for bike networks identified within the City's Mobility Plan 2035 within a one-half mile buffer area of the project boundary

Inputs:

- Implements/improves on-street bicycle facility – enter Yes or No.

The application and effectiveness of this strategy is based on research and methodology documented in the 2010 California Air Pollution Control Officers Association publication, *Quantifying Greenhouse Gas Mitigation Measures* (CAPCOA), Strategy LUT-8. In order to disaggregate the effects of this strategy from other bicycle-supportive strategies, the tool uses the alternative literature available for CAPCOA Strategy LUT-8 rather than the bundled approach described in the report.

Bicycle Infrastructure

2. Include Bike Parking Per LAMC

This strategy involves implementation of short and long-term bicycle parking to support safe and comfortable bicycle travel by providing parking facilities at destinations. This strategy is appropriate for all land-use contexts and all types of development, and applies to all trip types.

The maximum available VMT reduction from this strategy is 0.625%.

The formula used to calculate the reduction in VMT as a result of this strategy is as follows:

VMT Reduction = 0.625% reduction if the project provides bike parking at the level specified by City Code, or more
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Inputs:

- Meets or exceeds bike parking requirements as established in the Los Angeles Municipal Code (LAMC) – enter Yes or No.

Projects providing short-term and long-term bicycle parking spaces in accordance with LAMC Section 12.21A.16 qualify for this measure.

The application and effectiveness of this strategy is based on research and methodology documented in the 2010 California Air Pollution Control Officers Association publication, *Quantifying Greenhouse Gas Mitigation Measures* (CAPCOA), Strategy SDT-6. In order to disaggregate the effects of this strategy from other bicycle-supportive strategies, the tool uses the alternative literature available for CAPCOA Strategy SDT-6 rather than the bundled approach described in the report.

Bicycle Infrastructure

3. Include Secure Bike Parking and Showers

This strategy involves implementation of additional end-of-trip bicycle facilities to support safe and comfortable bicycle travel by providing amenities at destinations. This strategy is appropriate for all land-use contexts and all types of development, and applies to all trip types. This strategy applies to projects that include bicycle parking on-site per LAMC.

The maximum available VMT reduction from this strategy is 0.625%.

The formula used to calculate the reduction in VMT as a result of this strategy is as follows:

VMT Reduction = 0.625% reduction if the project provides secure bike parking and showers
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Inputs:

- Provides secure bike parking (e.g., bicycle lockers, bicycle rooms, bicycle cages, or commercially-operated attended bicycle facilities) and showers – enter Yes or No.

Projects providing long-term bicycle parking secured from the general public in accordance with LAMC Section 12.21A.16(d)(2) and showers in accordance with LAMC Section 91.6307 qualify for this measure.

The application and effectiveness of this strategy is based on research and methodology documented in the 2010 California Air Pollution Control Officers Association publication, *Quantifying Greenhouse Gas Mitigation Measures* (CAPCOA), Strategy TRT-5. In order to disaggregate the effects of this strategy from other bicycle-supportive strategies, the tool uses the alternative literature available for CAPCOA Strategy TRT-5 rather than the bundled approach described in the report.

Neighborhood Infrastructure

1. Traffic Calming Improvements

This strategy involves implementation of traffic calming measures throughout and around the perimeter of the project site that encourage people to walk, bike, or take transit within the development and to the development from other locations. Traffic calming at an intersection may include elements such as enhanced crossings, curb extensions, speed tables, raised crosswalks, pedestrian refuge islands, or neighborhood traffic circles. Traffic calming along a street may include elements such as speed tables, speed humps, raised median islands, chicanes, or correcting a substandard sidewalk width. This strategy is appropriate for all land-use contexts and all types of development, and applies to all trip types. This strategy is appropriate for streets on the perimeter of or near the project site and for large developments with internal blocks within the project footprint.

The maximum available VMT reduction from this strategy is 1%.

The formula used to calculate the reduction in VMT as a result of this strategy is as follows:

VMT Reduction based on a categorical association between percent of intersections and percent of streets improved and percent change in VMT.

Inputs:

- Percent of intersections improved – enter the closest percentage (25%, 50%, 75%, or 100%).
- Percent of streets improved – enter the closest percentage (25%, 50%, 75%, or 100%).

To determine the total number of intersections and streets to be included in the denominator, count each street segment either on the project perimeter or within the project footprint as one and count each intersection either at each end of the block(s) on which the project is located or within the project footprint as one. To determine the number of intersections and streets to be included in the numerator, count the number of street segments and the number of intersections with improvements; if improvements are being implemented at locations farther from the project site such that the calculation would yield a percent of street segments or percent of intersections improved greater than 100%, use 100%.

The application and effectiveness of this strategy is based on research and methodology documented in the 2010 California Air Pollution Control Officers Association publication, *Quantifying Greenhouse Gas Mitigation Measures* (CAPCOA), Strategy SDT-2.

Neighborhood Infrastructure

2. Pedestrian Network Improvements

This strategy involves implementation of pedestrian network improvements throughout and around the project site that encourage people to walk. This includes internally linking all uses within the project site with pedestrian facilities such as sidewalks, and connecting the project site to the surrounding pedestrian network. It also includes the elimination of barriers such as walls, landscaping, and slopes that impede pedestrian circulation. This strategy is appropriate for all land-use contexts and all types of development, and applies to all trip types. This strategy is appropriate only for developments that have both an internal pedestrian network as well as connections to an off-site pedestrian network, which typically applies to larger projects. Internal pedestrian connections between the project's land uses and its parking supply do not qualify.

The maximum available VMT reduction from this strategy is 2%.

The formula used to calculate the reduction in VMT as a result of this strategy is as follows:

VMT Reduction based on a categorical association between the extent of improvements and percent change in VMT.
--

Inputs:

- Extent of improvements – enter within project only, or within project site and connecting off-site.

The application and effectiveness of this strategy is based on research and methodology documented in the 2010 California Air Pollution Control Officers Association publication, *Quantifying Greenhouse Gas Mitigation Measures* (CAPCOA), Strategy SDT-1.

Appendix D – Traffic Count Worksheets



City Of Los Angeles
Department Of Transportation
MANUAL TRAFFIC COUNT SUMMARY

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

STREET:
North / South

Las Palmas

East/West

Santa Monica

Day: Thursday, September 29, 2022

Weather Sunny

Hours:

School Day Yes

District

I/S CODE

	N/B	S/B	E/B	W/B
DUAL- WHEELED	77	72	321	456
BIKES	16	27	18	29
BUSES	6	1	48	44

	N/B	TIME	S/B	TIME	E/B	TIME	W/B	TIME
AM PK 15 MIN	36	8:00:00 AM	90	8:15:00 AM	274	8:30:00 AM	465	7:15:00 AM
PM PK 15 MIN	45	5:00:00 PM	77	3:30:00 PM	411	4:30:00 PM	357	5:00:00 PM
AM PK HOUR	115	7:45:00 AM	264	8:15:00 AM	1016	8:30:00 AM	1749	7:15:00 AM
PM PK HOUR	163	5:00:00 PM	239	3:00:00 PM	1515	4:30:00 PM	1402	4:15:00 PM

NORTHBOUND Approach

Hours	Lt	Th	Rt	Total
7-8	22	17	25	64
8-9	25	42	38	105
9-10	24	44	29	97
3-4	29	67	52	148
4-5	23	61	38	122
5-6	31	86	46	163
TOTAL	154	317	228	699

SOUTHBOUND Approach

Hours	Lt	Th	Rt	Total
7-8	51	45	58	154
8-9	79	71	111	261
9-10	50	39	64	153
3-4	96	69	74	239
4-5	53	72	60	185
5-6	35	48	52	135
TOTAL	364	344	419	1127

TOTAL

N-S	Ped	Sch	Ped	Sch
218	3	1	18	16
366	3	2	29	14
250	9	2	28	8
387	12	9	28	19
307	15	3	45	4
298	15	0	43	2
1826	57	17	191	63

EASTBOUND Approach

Hours	Lt	Th	Rt	Total
7-8	24	667	24	715
8-9	32	913	31	976
9-10	40	927	29	996
3-4	74	1283	17	1374
4-5	64	1358	16	1438
5-6	75	1329	15	1419
TOTAL	309	6477	132	6918

WESTBOUND Approach

Hours	Lt	Th	Rt	Total
7-8	82	1550	33	1665
8-9	70	1499	65	1634
9-10	75	1342	51	1468
3-4	55	1247	67	1369
4-5	57	1250	71	1378
5-6	43	1201	58	1302
TOTAL	382	8089	345	8816

TOTAL

E-W	Ped	Sch	Ped	Sch
2380	10	21	4	1
2610	14	23	11	10
2464	11	6	13	2
2743	22	35	14	5
2816	27	7	11	3
2721	26	4	20	0
15734	110	96	73	21

INTERSECTION TURNING MOVEMENT COUNTS

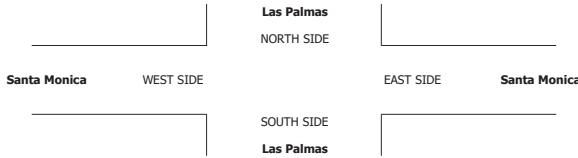
PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

T42321

DATE: Thu, Sep 29, 22	LOCATION: NORTH & SOUTH: EAST & WEST:	LA Las Palmas Santa Monica	PROJECT #: SC3629 LOCATION #: 1 CONTROL: SIGNAL
NOTES: Queue WB AM/PM		AM PM MD OTHER OTHER	▲ N ◀ W S ▶ E

☒ Add U-Turns to Left Turns

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL	U-TURNS					
	Las Palmas			Las Palmas			Santa Monica			Santa Monica				NB	SB	EB	WB	TTL	
LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 1	ET 2	ER 0	WL 1	WT 2	WR 0							
AM	7:00 AM	5	4	0	8	3	14	5	148	5	19	327	11	549	0	0	0	0	0
	7:15 AM	1	5	6	12	7	10	6	176	5	11	444	10	693	0	0	0	0	0
	7:30 AM	5	2	9	15	16	12	6	151	7	24	405	4	656	0	0	0	0	0
	7:45 AM	6	11	6	16	19	22	7	192	7	28	374	8	700	0	0	0	0	0
	8:00 AM	6	13	17	14	15	16	4	207	6	23	402	16	739	0	0	0	0	0
	8:15 AM	9	14	11	24	24	42	14	206	15	22	352	13	746	0	0	0	0	0
	8:30 AM	3	9	6	19	17	32	9	259	6	17	370	19	766	0	0	0	0	0
	8:45 AM	7	6	4	22	15	21	5	241	4	8	375	17	725	0	0	0	0	0
	9:00 AM	8	17	5	15	11	22	4	231	6	13	356	12	700	0	0	0	1	1
	9:15 AM	4	6	7	16	10	11	15	229	7	17	333	9	664	0	0	0	0	0
	9:30 AM	11	7	8	7	9	16	7	236	5	24	335	16	685	0	0	0	0	0
	9:45 AM	1	10	9	12	9	15	14	231	11	21	318	14	665	0	0	0	0	0
	VOLUMES	71	103	92	180	155	233	96	2,507	84	227	4,391	149	8,288	0	0	0	1	1
	APPROACH %	27%	39%	35%	32%	27%	41%	4%	93%	3%	5%	92%	3%						
	APP/DEPART	266	/	348	568	/	465	2,687	/	2,780	4,767	/	4,695	0					
BEGIN PEAK HR	8:00 AM																		
VOLUMES	25	42	38	79	71	111	32	913	31	70	1,499	65	2,976						
APPROACH %	24%	40%	36%	30%	27%	43%	3%	94%	3%	4%	92%	4%							
PEAK HR FACTOR	0.729			0.725			0.891			0.926			0.971						
APP/DEPART	105	/	139	261	/	172	976	/	1,030	1,634	/	1,635	0						
PM	03:00 PM	7	14	17	22	10	13	12	311	3	5	326	19	759	0	0	0	0	0
	3:15 PM	8	16	9	27	13	20	16	317	4	18	307	21	776	0	0	0	0	0
	3:30 PM	7	15	18	28	30	19	22	308	4	22	290	12	775	0	0	0	0	0
	3:45 PM	7	22	8	19	16	22	24	347	6	10	324	15	820	0	0	0	0	0
	4:00 PM	7	16	10	12	21	11	12	300	6	18	303	12	728	0	0	0	0	0
	4:15 PM	3	10	9	15	12	18	14	324	3	14	314	22	758	0	0	0	0	0
	4:30 PM	5	14	15	14	19	17	19	389	3	15	303	25	838	0	0	0	0	0
	4:45 PM	8	21	4	12	20	14	19	345	4	10	330	12	799	0	0	0	0	0
	5:00 PM	7	26	12	14	18	15	23	318	7	10	326	21	797	0	0	0	0	0
	5:15 PM	7	22	12	9	12	11	18	365	5	14	256	12	743	0	0	0	0	0
	5:30 PM	10	14	11	6	10	8	15	337	2	7	294	12	726	0	0	0	0	0
	5:45 PM	7	24	11	6	8	18	19	309	1	12	325	13	753	0	0	0	0	0
	VOLUMES	83	214	136	184	189	186	213	3,970	48	155	3,698	196	9,272	0	0	0	0	0
	APPROACH %	19%	49%	31%	33%	34%	33%	5%	94%	1%	4%	91%	5%						
	APP/DEPART	433	/	623	559	/	392	4,231	/	4,290	4,049	/	3,967	0					
BEGIN PEAK HR	4:15 PM																		
VOLUMES	23	71	40	55	69	64	75	1,376	17	49	1,273	80	3,192						
APPROACH %	17%	53%	30%	29%	37%	34%	5%	94%	1%	3%	91%	6%							
PEAK HR FACTOR	0.744			0.940			0.893			0.982			0.952						
APP/DEPART	134	/	226	188	/	135	1,468	/	1,471	1,402	/	1,360	0						



		ALL PED AND BIKE			
		N SIDE	S SIDE	E SIDE	W SIDE
AM	7:00 AM	6	0	0	3
	7:15 AM	11	1	1	7
	7:30 AM	9	0	1	5
	7:45 AM	12	3	3	17
	8:00 AM	16	3	12	11
	8:15 AM	22	2	2	10
	8:30 AM	6	1	2	6
	8:45 AM	5	1	8	15
	9:00 AM	9	5	8	10
	9:15 AM	8	6	4	4
	9:30 AM	15	2	4	3
	9:45 AM	8	0	4	7
	TOTAL	127	24	49	98
PM	3:00 PM	10	0	1	2
	3:15 PM	0	6	3	6
	3:30 PM	8	13	8	21
	3:45 PM	31	7	9	34
	4:00 PM	14	5	3	16
	4:15 PM	19	6	7	12
	4:30 PM	16	6	3	6
	4:45 PM	6	6	4	5
	5:00 PM	9	4	4	10
	5:15 PM	18	2	8	6
	5:30 PM	16	6	4	12
	5:45 PM	9	7	7	5
	TOTAL	156	68	61	135

		PEDESTRIAN CROSSINGS			
		N SIDE	S SIDE	E SIDE	W SIDE
AM	7:00 AM	4	0	0	3
	7:15 AM	4	1	1	2
	7:30 AM	5	0	1	1
	7:45 AM	5	2	2	4
	8:00 AM	6	2	4	1
	8:15 AM	17	0	0	3
	8:30 AM	3	1	2	3
	8:45 AM	3	0	5	7
	9:00 AM	6	3	6	4
	9:15 AM	5	4	3	1
	9:30 AM	10	2	2	1
	9:45 AM	7	0	2	5
	TOTAL	75	15	28	35
PM	3:00 PM	8	0	0	1
	3:15 PM	0	4	1	3
	3:30 PM	8	5	6	8
	3:45 PM	12	3	7	10
	4:00 PM	10	4	2	8
	4:15 PM	18	1	4	11
	4:30 PM	13	5	1	4
	4:45 PM	4	5	4	4
	5:00 PM	9	3	3	10
	5:15 PM	13	2	8	3
	5:30 PM	15	4	3	9
	5:45 PM	6	6	6	4
	TOTAL	116	42	45	75

		BICYCLE CROSSINGS			
		NS	SS	ES	WS
AM	7:00 AM	1	0	0	0
	7:15 AM	2	0	0	0
	7:30 AM	0	0	0	1
	7:45 AM	1	0	0	0
	8:00 AM	1	0	1	2
	8:15 AM	3	2	0	1
	8:30 AM	1	0	0	0
	8:45 AM	1	0	2	2
	9:00 AM	2	2	1	4
	9:15 AM	1	2	1	2
	9:30 AM	1	0	1	1
	9:45 AM	1	0	2	2
	TOTAL	14	4	8	13
PM	3:00 PM	2	0	0	1
	3:15 PM	0	1	2	3
	3:30 PM	0	3	0	0
	3:45 PM	0	1	0	2
	4:00 PM	1	1	1	2
	4:15 PM	2	1	2	5
	4:30 PM	2	1	2	1
	4:45 PM	2	1	0	1
	5:00 PM	0	1	1	0
	5:15 PM	3	0	0	1
	5:30 PM	1	2	1	1
	5:45 PM	3	1	1	1
	TOTAL	15	14	8	14

		SCHOOL AGE PED			
		NS	SS	ES	WS
AM	7:00 AM	1	0	0	0
	7:15 AM	5	0	0	5
	7:30 AM	4	0	0	3
	7:45 AM	6	1	1	13
	8:00 AM	9	1	7	8
	8:15 AM	2	0	2	6
	8:30 AM	2	0	0	3
	8:45 AM	1	1	1	6
	9:00 AM	2	2	1	4
	9:15 AM	2	0	0	1
	9:30 AM	4	0	1	1
	9:45 AM	0	0	0	0
	TOTAL	38	5	13	50
PM	3:00 PM	0	0	1	0
	3:15 PM	0	1	0	0
	3:30 PM	0	5	2	13
	3:45 PM	19	3	2	22
	4:00 PM	3	0	0	6
	4:15 PM	0	3	3	0
	4:30 PM	1	0	0	1
	4:45 PM	0	0	0	0
	5:00 PM	0	0	0	0
	5:15 PM	2	0	0	2
	5:30 PM	0	0	0	2
	5:45 PM	0	0	0	0
	TOTAL	25	12	8	46



City Of Los Angeles
Department Of Transportation
MANUAL TRAFFIC COUNT SUMMARY

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

STREET:
North / South

Las Palmas

East/West

Lexington

Day: Thursday, September 29, 2022

Weather Sunny

Hours:

School Day Yes

District

I/S CODE

	N/B	S/B	E/B	W/B
DUAL- WHEELED	50	31	55	30
BIKES	7	10	24	13
BUSES	1	0	1	0

	N/B	TIME	S/B	TIME	E/B	TIME	W/B	TIME
AM PK 15 MIN	38	8:15:00 AM	68	8:15:00 AM	41	8:45:00 AM	63	8:30:00 AM
PM PK 15 MIN	64	5:00:00 PM	37	3:30:00 PM	66	4:00:00 PM	28	5:00:00 PM
AM PK HOUR	138	8:00:00 AM	162	8:15:00 AM	150	8:00:00 AM	177	8:00:00 AM
PM PK HOUR	224	4:15:00 PM	124	3:15:00 PM	259	3:15:00 PM	101	4:15:00 PM

NORTHBOUND Approach

Hours	Lt	Th	Rt	Total
7-8	15	27	10	52
8-9	29	73	36	138
9-10	25	65	30	120
3-4	22	130	47	199
4-5	12	132	60	204
5-6	19	127	58	204
TOTAL	122	554	241	917

SOUTHBOUND Approach

Hours	Lt	Th	Rt	Total
7-8	4	78	10	92
8-9	5	125	27	157
9-10	4	80	10	94
3-4	2	91	28	121
4-5	8	87	9	104
5-6	5	67	9	81
TOTAL	28	528	93	649

TOTAL

N-S	Ped	Sch	Ped	Sch
144	9	1	11	6
295	10	0	9	3
214	15	2	13	7
320	9	4	13	2
308	16	4	8	4
285	8	3	14	6
1566	67	14	68	28

EASTBOUND Approach

Hours	Lt	Th	Rt	Total
7-8	4	27	22	53
8-9	17	67	66	150
9-10	14	52	32	98
3-4	31	152	63	246
4-5	42	148	43	233
5-6	28	165	44	237
TOTAL	136	611	270	1017

WESTBOUND Approach

Hours	Lt	Th	Rt	Total
7-8	26	56	6	88
8-9	68	104	5	177
9-10	41	54	1	96
3-4	42	44	6	92
4-5	45	41	11	97
5-6	26	44	5	75
TOTAL	248	343	34	625

TOTAL

E-W	Ped	Sch	Ped	Sch
141	17	4	12	4
327	17	1	13	3
194	7	0	14	0
338	16	2	8	0
330	17	9	14	2
312	10	2	12	4
1642	84	18	73	13

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

T42321

DATE:
Thu, Sep 29, 22

LOCATION:
NORTH & SOUTH:
EAST & WEST:

LA
Las Palmas
Lexington

PROJECT #:
LOCATION #:
CONTROL:

SC3629
2
STOP ALL

NOTES:

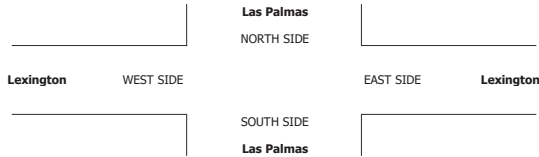
AM
PM
MD
OTHER
OTHER

◀ W
S
▼

▲ N
E ▶

☐ Add U-Turns to Left Turns

LANES:	NORTHBOUND Las Palmas			SOUTHBOUND Las Palmas			EASTBOUND Lexington			WESTBOUND Lexington			TOTAL	U-TURNS				
	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0		NB 0	SB 0	EB 0	WB 0	TTL
7:00 AM	2	4	3	0	14	0	1	6	7	3	4	2	46	0	0	0	0	0
7:15 AM	5	7	0	1	16	3	2	6	3	4	12	0	59	0	0	0	0	0
7:30 AM	4	5	2	0	23	5	0	4	6	10	15	1	75	0	0	0	0	0
7:45 AM	4	11	5	3	25	2	1	11	6	9	25	3	105	0	1	0	0	1
8:00 AM	8	18	10	1	15	9	4	23	14	9	18	2	131	0	0	0	0	0
8:15 AM	5	23	10	1	56	11	6	18	17	20	26	0	193	0	0	0	0	0
8:30 AM	10	18	9	2	30	5	5	7	15	21	40	2	164	1	0	0	0	1
8:45 AM	6	14	7	1	24	2	2	19	20	18	20	1	134	1	0	0	0	1
9:00 AM	6	12	15	1	24	5	5	8	10	11	14	0	111	0	0	0	0	0
9:15 AM	11	15	6	1	17	1	4	16	9	11	19	0	110	1	0	0	0	1
9:30 AM	2	18	1	0	25	1	3	13	7	12	14	1	97	0	0	0	0	0
9:45 AM	6	20	8	2	14	3	2	15	6	7	7	0	90	0	0	0	0	0
VOLUMES	69	165	76	13	283	47	35	146	120	135	214	12	1,315	3	1	0	0	4
APPROACH %	22%	53%	25%	4%	83%	14%	12%	49%	40%	37%	59%	3%						
APP/DEPART	310	/	213	343	/	541	301	/	234	361	/	327	0					
BEGIN PEAK HR	8:00 AM																	
VOLUMES	29	73	36	5	125	27	17	67	66	68	104	5	622					
APPROACH %	21%	53%	26%	3%	80%	17%	11%	45%	44%	38%	59%	3%						
PEAK HR FACTOR	0.908			0.577			0.915			0.702			0.806					
APP/DEPART	138	/	95	157	/	261	150	/	108	177	/	158	0					
03:00 PM	4	26	13	0	19	10	7	26	20	8	11	2	146	0	0	0	0	0
3:15 PM	8	35	10	0	24	8	9	44	12	13	13	2	178	0	0	0	0	0
3:30 PM	4	26	10	1	30	6	9	38	19	12	13	1	169	0	0	0	0	0
3:45 PM	6	43	14	1	18	4	6	44	12	9	7	1	165	0	0	0	0	0
4:00 PM	2	30	12	3	25	4	11	44	11	8	14	2	166	1	0	0	0	1
4:15 PM	6	24	19	1	12	2	9	40	10	18	6	3	150	0	0	0	0	0
4:30 PM	2	47	14	0	28	3	15	35	14	8	10	4	180	0	0	1	0	1
4:45 PM	2	31	15	4	22	0	7	29	8	11	11	2	142	0	0	0	0	0
5:00 PM	4	40	20	5	24	2	8	44	13	13	13	2	188	0	0	0	0	0
5:15 PM	6	29	9	0	11	0	7	39	16	2	9	0	128	0	0	1	0	1
5:30 PM	3	29	11	0	15	3	8	44	7	4	10	1	135	0	0	0	0	0
5:45 PM	6	29	18	0	17	4	5	38	8	7	12	2	146	0	0	0	0	0
VOLUMES	53	389	165	15	245	46	101	465	150	113	129	22	1,893	1	0	2	0	3
APPROACH %	9%	64%	27%	5%	80%	15%	14%	65%	21%	43%	49%	8%						
APP/DEPART	607	/	510	306	/	509	716	/	645	264	/	229	0					
BEGIN PEAK HR	3:15 PM																	
VOLUMES	20	134	46	5	97	22	35	170	54	42	47	6	678					
APPROACH %	10%	67%	23%	4%	78%	18%	14%	66%	21%	44%	49%	6%						
PEAK HR FACTOR	0.794			0.838			0.981			0.848			0.952					
APP/DEPART	200	/	175	124	/	194	259	/	221	95	/	88	0					



		ALL PED AND BIKE					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS					SCHOOL AGE PED				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL	NS	SS	ES	WS	TOTAL
AM	7:00 AM	4	4	2	2	12	3	1	2	1	7	0	2	0	0	2	1	1	0	1	3
	7:15 AM	6	1	1	2	10	4	1	1	2	8	0	0	0	0	0	2	0	0	0	2
	7:30 AM	6	1	6	8	21	3	1	3	8	15	1	0	0	0	1	2	0	3	0	5
	7:45 AM	2	6	7	9	24	1	6	6	6	19	0	0	0	0	0	1	0	1	3	5
	8:00 AM	7	4	8	2	21	4	4	4	1	13	2	0	3	1	6	1	0	1	0	2
	8:15 AM	1	4	4	6	15	1	4	3	6	14	0	0	0	0	0	0	0	1	0	1
	8:30 AM	3	1	3	8	15	2	1	3	8	14	1	0	0	0	1	0	0	0	0	0
	8:45 AM	4	1	5	3	13	2	1	3	2	8	0	0	1	0	1	2	0	1	1	4
	9:00 AM	3	3	3	0	9	2	2	3	0	7	1	0	0	0	1	0	1	0	0	1
	9:15 AM	7	8	4	0	19	6	7	4	0	17	0	0	0	0	0	1	1	0	0	2
PM	9:30 AM	8	5	4	6	23	4	5	4	5	18	1	0	0	1	2	3	0	0	0	3
	9:45 AM	4	3	3	2	12	1	1	3	2	7	0	2	0	0	2	3	0	0	0	3
	TOTAL	55	41	50	48	194	33	34	39	41	147	6	4	4	2	16	16	3	7	5	31
	3:00 PM	5	9	3	6	23	5	4	3	5	17	0	4	0	1	5	0	1	0	0	1
	3:15 PM	2	1	1	3	7	2	1	1	2	6	0	0	0	1	1	0	0	0	0	0
	3:30 PM	5	4	1	6	16	3	2	1	6	12	0	2	0	0	2	2	0	0	0	2
	3:45 PM	4	5	3	5	17	3	2	3	3	11	1	0	0	0	1	0	3	0	2	5
	4:00 PM	2	8	7	12	29	1	5	6	4	16	1	2	1	1	5	0	1	0	7	8
	4:15 PM	4	5	4	6	19	2	2	4	4	12	2	3	0	2	7	0	0	0	0	0
	4:30 PM	3	8	2	5	18	2	5	2	3	12	0	2	0	2	4	1	1	0	0	2
	4:45 PM	6	6	4	8	24	3	4	2	6	15	0	0	0	0	0	3	2	2	2	9
	5:00 PM	3	8	9	2	22	2	5	8	1	16	0	1	0	0	1	1	2	0	1	5
	5:15 PM	7	6	1	2	16	6	2	0	2	10	0	1	4	0	5	0	2	0	1	0
	5:30 PM	7	3	6	4	20	2	1	3	2	8	1	1	1	1	4	4	1	2	1	8
	5:45 PM	6	1	2	5	14	4	0	1	5	10	1	1	1	0	3	1	0	0	0	1
	TOTAL	54	64	43	64	225	35	33	34	43	145	7	20	3	8	38	12	11	6	13	42



City Of Los Angeles
Department Of Transportation
MANUAL TRAFFIC COUNT SUMMARY

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

STREET:
North / South

Highland

East/West

Lexington

Day: Thursday, September 29, 2022

Weather Sunny

Hours:

School Day Yes

District

I/S CODE

	N/B	S/B	E/B	W/B
DUAL- WHEELED	362	364	48	43
BIKES	9	19	12	11
BUSES	17	14	2	1

	N/B	TIME	S/B	TIME	E/B	TIME	W/B	TIME
AM PK 15 MIN	321	8:00:00 AM	311	8:00:00 AM	27	8:15:00 AM	59	8:15:00 AM
PM PK 15 MIN	372	5:45:00 PM	300	4:00:00 PM	63	3:30:00 PM	44	3:15:00 PM
AM PK HOUR	1119	7:45:00 AM	1208	8:00:00 AM	87	8:15:00 AM	211	8:00:00 AM
PM PK HOUR	1229	3:30:00 PM	1149	3:15:00 PM	224	3:30:00 PM	144	3:00:00 PM

NORTHBOUND Approach

Hours	Lt	Th	Rt	Total
7-8	9	850	15	874
8-9	15	1065	30	1110
9-10	39	882	38	959
3-4	23	1044	51	1118
4-5	41	1091	58	1190
5-6	13	1065	58	1136
TOTAL	140	5997	250	6387

SOUTHBOUND Approach

Hours	Lt	Th	Rt	Total
7-8	16	915	34	965
8-9	56	1101	51	1208
9-10	31	978	47	1056
3-4	53	1026	18	1097
4-5	38	1003	24	1065
5-6	39	949	25	1013
TOTAL	233	5972	199	6404

TOTAL

N-S	Ped	Sch	Ped	Sch
1839	4	0	4	1
2318	13	4	10	2
2015	13	3	14	6
2215	14	7	8	6
2255	18	4	7	3
2149	19	2	21	1
12791	81	20	64	19

EASTBOUND Approach

Hours	Lt	Th	Rt	Total
7-8	9	20	22	51
8-9	23	40	22	85
9-10	20	35	21	76
3-4	35	111	46	192
4-5	32	132	48	212
5-6	46	128	36	210
TOTAL	165	466	195	826

WESTBOUND Approach

Hours	Lt	Th	Rt	Total
7-8	25	27	32	84
8-9	75	81	55	211
9-10	33	41	25	99
3-4	41	47	56	144
4-5	30	44	25	99
5-6	26	36	33	95
TOTAL	230	276	226	732

TOTAL

E-W	Ped	Sch	Ped	Sch
135	5	6	7	5
296	10	3	21	1
175	12	1	24	8
336	18	13	15	0
311	36	5	13	1
305	31	0	24	0
1558	112	28	104	15

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

T42321

DATE: Thu, Sep 29, 22	LOCATION: NORTH & SOUTH: EAST & WEST:	LA Highland Lexington	PROJECT #: LOCATION #: CONTROL:	SC3629 3 SIGNAL
NOTES: Queue SB AM/PM			AM PM MD OTHER OTHER ▲ N ◀ W ▶ E ▼ S	☒ Add U-Turns to Left Turns

	NORTHBOUND			SOUTHBOUND			EAST BOUND			WEST BOUND			TOTAL
	Highland			Highland			Lexington			Lexington			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	1	3	0	1	3	0	0	1	0	0	1	0	
7:00 AM	5	171	4	4	197	10	4	6	4	3	1	4	413
7:15 AM	0	218	4	5	225	2	1	2	7	5	7	9	485
7:30 AM	2	203	2	4	237	10	3	4	4	6	6	6	487
7:45 AM	2	258	5	3	256	12	1	8	7	11	13	13	589
8:00 AM	3	307	11	11	292	8	4	6	5	15	22	21	705
8:15 AM	0	262	5	13	279	7	8	16	3	20	21	18	652
8:30 AM	5	252	9	17	259	16	3	9	9	25	23	9	636
8:45 AM	7	244	5	15	271	20	8	9	5	15	15	7	621
9:00 AM	6	215	9	5	220	19	6	6	5	7	17	7	522
9:15 AM	11	224	9	3	267	8	6	14	3	10	11	6	572
9:30 AM	11	223	11	11	279	12	5	5	7	8	8	5	585
9:45 AM	11	220	9	12	212	8	3	10	6	8	5	7	511
VOLUMES	63	2,797	83	103	2,994	132	52	95	65	133	149	112	6,778
APPROACH %	2%	95%	3%	3%	93%	4%	25%	45%	31%	34%	38%	28%	
APP/DEPART	2,943	/	2,970	3,229	/	3,195	212	/	272	394	/	341	0
BEGIN PEAK HR	8:00 AM												
VOLUMES	15	1,065	30	56	1,101	51	23	40	22	75	81	55	2,614
APPROACH %	1%	96%	3%	5%	91%	4%	27%	47%	26%	36%	38%	26%	
PEAK HR FACTOR		0.864			0.971			0.787			0.894		0.927
APP/DEPART	1,110	/	1,145	1,208	/	1,198	85	/	124	211	/	147	0
03:00 PM	6	277	12	16	229	3	11	16	13	12	/	21	623
3:15 PM	4	275	19	10	249	4	4	25	13	13	13	18	647
3:30 PM	9	276	5	15	269	5	12	37	14	11	14	12	679
3:45 PM	4	216	15	12	279	6	8	33	6	5	13	5	602
4:00 PM	11	342	19	14	278	8	4	38	11	5	7	6	743
4:15 PM	10	307	15	6	244	6	10	37	14	4	13	5	671
4:30 PM	11	236	14	9	265	6	10	35	13	10	13	7	629
4:45 PM	9	206	10	9	216	4	8	22	10	11	11	7	523
5:00 PM	4	213	15	10	227	7	16	34	10	8	4	10	558
5:15 PM	5	260	17	11	253	9	10	34	16	8	7	11	641
5:30 PM	2	294	14	12	232	6	12	30	4	5	12	7	630
5:45 PM	2	298	12	6	237	3	8	30	6	5	13	5	625
VOLUMES	77	3,200	167	130	2,978	67	113	371	130	97	127	114	7,571
APPROACH %	2%	93%	5%	4%	94%	2%	18%	60%	21%	29%	38%	34%	
APP/DEPART	3,444	/	3,434	3,175	/	3,208	614	/	661	338	/	268	0
BEGIN PEAK HR	3:30 PM												
VOLUMES	34	1,141	54	47	1,070	25	34	145	45	25	47	28	2,695
APPROACH %	3%	93%	4%	4%	94%	2%	15%	65%	20%	25%	47%	28%	
PEAK HR FACTOR		0.826			0.952			0.889			0.676		0.907
APP/DEPART	1,229	/	1,205	1,142	/	1,140	224	/	244	100	/	106	0

U-TURNS				
NB	SB	EB	WB	TTL
0	0	0	0	0
0	1	0	0	1
1	1	0	0	2
0	2	0	0	2
0	1	0	0	1
0	1	0	0	1
0	0	0	0	0
0	0	0	0	0
1	0	0	0	1
1	0	0	0	1
0	0	0	0	0
0	3	0	0	3
3	9	0	0	12

0	1	0	0	1
0	0	0	0	0
0	0	0	0	0
0	1	0	0	1
0	1	0	0	1
0	0	0	0	0
1	1	0	0	2
1	1	0	0	2
1	2	0	0	3
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
3	7	0	0	10



	AM	PM
7:00 AM	5	6
7:15 AM	0	1
7:30 AM	2	1
7:45 AM	3	3
8:00 AM	3	2
8:15 AM	4	6
8:30 AM	3	5
8:45 AM	3	5
9:00 AM	3	2
9:15 AM	3	5
9:30 AM	8	6
9:45 AM	8	6
TOTAL	41	42
3:00 PM	9	6
3:15 PM	3	6
3:30 PM	2	6
3:45 PM	3	5
4:00 PM	6	6
4:15 PM	1	3
4:30 PM	2	10
4:45 PM	3	6
5:00 PM	4	8
5:15 PM	6	7
5:30 PM	8	5
5:45 PM	6	3
TOTAL	53	71

ALL PED AND BIKE				
N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
0	1	0	1	2
1	0	5	1	7
2	1	7	3	13
3	3	5	7	18
3	2	5	3	13
4	6	4	4	18
3	5	8	3	19
3	5	5	5	18
3	2	8	6	19
3	5	11	2	21
8	6	3	4	21
8	6	10	2	26
41	42	71	41	195
9	6	5	10	30
3	6	5	6	20
2	6	5	11	24
3	5	2	9	19
6	6	4	14	30
1	3	6	11	21
2	10	1	9	22
3	6	5	12	26
4	8	8	7	27
6	7	3	11	27
8	5	10	9	32
6	3	3	9	21
53	71	57	118	299

PEDESTRIAN CROSSINGS				
N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
0	0	0	1	1
1	0	2	1	4
1	1	3	2	7
2	3	2	1	8
3	2	5	3	13
3	3	4	1	11
1	4	7	3	15
3	4	5	3	15
2	2	6	5	15
1	4	8	2	15
5	2	2	4	13
6	5	8	1	20
28	30	52	27	137
3	6	5	6	20
2	3	5	3	13
2	2	4	4	12
1	3	1	5	10
3	4	3	11	21
0	2	5	7	14
1	7	1	7	16
3	5	4	11	23
3	7	8	6	24
6	6	3	10	25
8	5	10	8	31
4	1	3	7	15
36	51	52	85	224

BICYCLE CROSSINGS				
NS	SS	ES	WS	TOTAL
0	1	0	0	1
0	0	3	0	3
1	0	1	1	3
0	0	1	0	1
0	0	0	0	0
0	1	0	0	1
1	0	0	0	1
0	0	0	2	2
1	0	0	0	1
0	0	0	0	0
1	2	0	0	3
0	1	0	1	2
4	5	5	4	18
2	0	0	1	3
0	0	0	2	2
0	2	1	2	5
1	0	1	0	2
1	1	1	3	6
1	1	0	1	3
0	1	0	0	1
0	0	1	1	2
0	0	0	1	1
0	1	0	0	1
0	0	0	1	1
2	1	0	2	5
7	7	4	15	33

SCHOOL AGE PED				
NS	SS	ES	WS	TOTAL
0	0	0	0	0
0	0	0	0	0
0	0	3	0	3
0	0	2	0	2
1	0	2	6	9
0	0	0	0	0
1	2	0	3	6
1	1	1	0	3
0	1	0	0	1
0	0	2	1	3
2	1	3	0	6
2	2	1	0	5
2	0	2	0	4
9	7	14	10	40
4	0	0	3	7
1	3	0	1	5
0	2	0	5	7
1	2	0	4	7
2	1	0	0	3
0	0	1	3	4
1	2	0	2	5
1	1	0	0	2
1	1	0	0	2
0	0	0	0	0
0	0	0	0	0
0	1	0	0	1
10	13	1	18	42



City Of Los Angeles
Department Of Transportation
MANUAL TRAFFIC COUNT SUMMARY

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

STREET:
North / South

Highland

East/West

Santa Monica

Day: Thursday, September 29, 2022

Weather Sunny

Hours:

School Day Yes

District

I/S CODE

	N/B	S/B	E/B	W/B
DUAL-				
WHEELED	338	344	320	439
BIKES	14	26	33	42
BUSES	15	13	44	42

	N/B	TIME	S/B	TIME	E/B	TIME	W/B	TIME
AM PK 15 MIN	296	8:00:00 AM	320	8:15:00 AM	292	8:30:00 AM	457	7:15:00 AM
PM PK 15 MIN	333	4:15:00 PM	305	4:30:00 PM	369	5:15:00 PM	359	5:45:00 PM
AM PK HOUR	1067	8:00:00 AM	1170	8:00:00 AM	1095	8:30:00 AM	1679	7:15:00 AM
PM PK HOUR	1235	3:30:00 PM	1142	3:45:00 PM	1440	4:30:00 PM	1366	4:15:00 PM

NORTHBOUND Approach

Hours	Lt	Th	Rt	Total
7-8	41	669	98	808
8-9	60	882	125	1067
9-10	40	717	137	894
3-4	69	915	230	1214
4-5	68	909	251	1228
5-6	55	897	191	1143
TOTAL	333	4989	1032	6354

SOUTHBOUND Approach

Hours	Lt	Th	Rt	Total
7-8	40	769	128	937
8-9	61	916	193	1170
9-10	53	821	154	1028
3-4	67	925	110	1102
4-5	68	894	122	1084
5-6	66	845	113	1024
TOTAL	355	5170	820	6345

TOTAL

N-S	Ped	Sch	Ped	Sch
1745	11	0	12	3
2237	23	0	20	2
1922	12	1	28	4
2316	29	2	22	8
2312	32	4	26	1
2167	38	4	40	4
12699	145	11	148	22

EASTBOUND Approach

Hours	Lt	Th	Rt	Total
7-8	160	591	35	786
8-9	172	804	88	1064
9-10	170	822	76	1068
3-4	130	1133	70	1333
4-5	155	1147	72	1374
5-6	174	1157	82	1413
TOTAL	961	5654	423	7038

WESTBOUND Approach

Hours	Lt	Th	Rt	Total
7-8	240	1324	39	1603
8-9	282	1260	62	1604
9-10	291	1011	97	1399
3-4	191	1083	75	1349
4-5	203	1071	90	1364
5-6	205	1021	77	1303
TOTAL	1412	6770	440	8622

TOTAL

E-W	Ped	Sch	Ped	Sch
2389	12	4	6	4
2668	15	1	24	2
2467	19	0	35	3
2682	31	4	21	12
2738	43	1	16	1
2716	28	1	37	0
15660	148	11	139	22

Appendix E – Peak Hour Analysis Worksheets

HCM 6th AWSC
1: Lexington Ave & Las Palmas Ave

11/11/2022

Intersection	
Intersection Delay, s/veh	11.6
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	17	67	66	68	194	5	29	73	36	5	125	27
Future Vol, veh/h	17	67	66	68	194	5	29	73	36	5	125	27
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	21	83	81	84	240	6	36	90	44	6	154	33
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	10.2	13.2	10.6	10.9
HCM LOS	B	B	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	21%	11%	25%	3%
Vol Thru, %	53%	45%	73%	80%
Vol Right, %	26%	44%	2%	17%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	138	150	267	157
LT Vol	29	17	68	5
Through Vol	73	67	194	125
RT Vol	36	66	5	27
Lane Flow Rate	170	185	330	194
Geometry Grp	1	1	1	1
Degree of Util (X)	0.262	0.27	0.484	0.297
Departure Headway (Hd)	5.539	5.243	5.289	5.514
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	647	683	682	649
Service Time	3.588	3.289	3.327	3.561
HCM Lane V/C Ratio	0.263	0.271	0.484	0.299
HCM Control Delay	10.6	10.2	13.2	10.9
HCM Lane LOS	B	B	B	B
HCM 95th-tile Q	1	1.1	2.7	1.2

Queues

2: Las Palmas Ave & Santa Monica Blvd

11/11/2022



Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	33	973	72	1612	69	39	154	114
v/c Ratio	0.40	0.49	0.30	0.82	0.13	0.07	0.30	0.21
Control Delay	28.9	13.1	15.0	20.6	21.8	7.4	24.4	18.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	28.9	13.1	15.0	20.6	21.8	7.4	24.4	18.0
Queue Length 50th (ft)	10	164	20	365	27	0	64	35
Queue Length 95th (ft)	#46	214	51	467	58	21	115	75
Internal Link Dist (ft)		262		274	303		378	
Turn Bay Length (ft)	90		75			50		50
Base Capacity (vph)	83	1967	238	1965	542	551	505	542
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.40	0.49	0.30	0.82	0.13	0.07	0.30	0.21

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

HCM 6th Signalized Intersection Capacity Analysis

2: Las Palmas Ave & Santa Monica Blvd

11/11/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	32	913	31	70	1499	65	25	42	38	79	71	111
Future Volume (veh/h)	32	913	31	70	1499	65	25	42	38	79	71	111
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	33	941	32	72	1545	67	26	43	39	81	73	114
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	143	1956	67	309	1936	84	55	69	527	61	37	527
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.56	0.56	0.56	0.56	0.56	0.56	0.33	0.33	0.33	0.33	0.33	0.33
Unsig. Movement Delay												
Ln Grp Delay, s/veh	35.8	13.7	13.6	20.5	22.4	22.5	33.6	0.0	20.7	330.9	0.0	22.6
Ln Grp LOS	D	B	B	C	C	C	C	A	C	F	A	C
Approach Vol, veh/h	1006			1684			108			268		
Approach Delay, s/veh	14.4			22.4			29.0			199.7		
Approach LOS	B			C			C			F		
Timer:	1	2	3	4	5	6	7	8				
Assigned Phs	2			4			6			8		
Case No	6.0			7.0			6.0			7.0		
Phs Duration (G+Y+Rc), s	55.0			35.0			55.0			35.0		
Change Period (Y+Rc), s	* 4.8			5.1			* 4.8			5.1		
Max Green (Gmax), s	* 50			29.9			* 50			29.9		
Max Allow Headway (MAH), s	5.4			4.9			7.1			6.9		
Max Q Clear (g_c+I1), s	42.6			31.9			34.1			31.9		
Green Ext Time (g_e), s	3.9			0.0			14.0			0.0		
Prob of Phs Call (p_c)	1.00			1.00			1.00			1.00		
Prob of Max Out (p_x)	0.00			0.00			0.00			1.00		
Left-Turn Movement Data												
Assigned Mvmt	5			7			1			3		
Mvmt Sat Flow, veh/h	314			0			578			0		
Through Movement Data												
Assigned Mvmt	2			4			6			8		
Mvmt Sat Flow, veh/h	3506			113			3470			207		
Right-Turn Movement Data												
Assigned Mvmt	12			14			16			18		
Mvmt Sat Flow, veh/h	119			1585			150			1585		
Left Lane Group Data												
Assigned Mvmt	0	5	0	7	0	1	0	3				
Lane Assignment	L			L+T			L			L+T		

HCM 6th Signalized Intersection Capacity Analysis

2: Las Palmas Ave & Santa Monica Blvd

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Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	33	0	154	0	72	0	69
Grp Sat Flow (s), veh/h/ln	0	314	0	113	0	578	0	207
Q Serve Time (g_s), s	0.0	8.4	0.0	0.0	0.0	7.7	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	40.6	0.0	29.9	0.0	22.3	0.0	29.9
Perm LT Sat Flow (s_l), veh/h/ln	0	314	0	1337	0	578	0	1215
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	50.2	0.0	29.9	0.0	50.2	0.0	29.9
Perm LT Serve Time (g_u), s	0.0	18.1	0.0	0.0	0.0	35.6	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	8.4	0.0	0.0	0.0	7.7	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	1.8	0.0	0.0	0.0	3.3
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	1.8	0.0	0.0	0.0	2.3
Prop LT Inside Lane (P_L)	0.00	1.00	0.00	0.53	0.00	1.00	0.00	0.38
Lane Grp Cap (c), veh/h	0	143	0	98	0	309	0	124
V/C Ratio (X)	0.00	0.23	0.00	1.56	0.00	0.23	0.00	0.56
Avail Cap (c_a), veh/h	0	143	0	98	0	309	0	124
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	32.1	0.0	34.0	0.0	18.8	0.0	24.8
Incr Delay (d2), s/veh	0.0	3.7	0.0	296.9	0.0	1.8	0.0	8.9
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	35.8	0.0	330.9	0.0	20.5	0.0	33.6
1st-Term Q (Q1), veh/ln	0.0	0.6	0.0	2.2	0.0	1.0	0.0	1.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	8.1	0.0	0.2	0.0	0.3
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.8	0.0	10.3	0.0	1.1	0.0	1.3
%ile Storage Ratio (RQ%)	0.00	0.22	0.00	0.67	0.00	0.39	0.00	0.10
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	13.9	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0

Middle Lane Group Data

Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment	T				T			
Lanes in Grp	0	1	0	0	0	1	0	0
Grp Vol (v), veh/h	0	477	0	0	0	789	0	0
Grp Sat Flow (s), veh/h/ln	0	1777	0	0	0	1777	0	0
Q Serve Time (g_s), s	0.0	14.6	0.0	0.0	0.0	31.8	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	14.6	0.0	0.0	0.0	31.8	0.0	0.0
Lane Grp Cap (c), veh/h	0	991	0	0	0	991	0	0
V/C Ratio (X)	0.00	0.48	0.00	0.00	0.00	0.80	0.00	0.00
Avail Cap (c_a), veh/h	0	991	0	0	0	991	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	12.0	0.0	0.0	0.0	15.8	0.0	0.0
Incr Delay (d2), s/veh	0.0	1.7	0.0	0.0	0.0	6.6	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	13.7	0.0	0.0	0.0	22.4	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	5.2	0.0	0.0	0.0	11.3	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.5	0.0	0.0	0.0	1.8	0.0	0.0

HCM 6th Signalized Intersection Capacity Analysis

2: Las Palmas Ave & Santa Monica Blvd

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3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	5.6	0.0	0.0	0.0	13.1	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.53	0.00	0.00	0.00	1.06	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data

Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment	T+R		R		T+R		R	
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	496	0	114	0	823	0	39
Grp Sat Flow (s), veh/h/ln	0	1849	0	1585	0	1843	0	1585
Q Serve Time (g_s), s	0.0	14.6	0.0	4.7	0.0	32.1	0.0	1.5
Cycle Q Clear Time (g_c), s	0.0	14.6	0.0	4.7	0.0	32.1	0.0	1.5
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.06	0.00	1.00	0.00	0.08	0.00	1.00
Lane Grp Cap (c), veh/h	0	1031	0	527	0	1028	0	527
V/C Ratio (X)	0.00	0.48	0.00	0.22	0.00	0.80	0.00	0.07
Avail Cap (c_a), veh/h	0	1031	0	527	0	1028	0	527
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	12.0	0.0	21.6	0.0	15.9	0.0	20.6
Incr Delay (d2), s/veh	0.0	1.6	0.0	0.9	0.0	6.6	0.0	0.1
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	13.6	0.0	22.6	0.0	22.5	0.0	20.7
1st-Term Q (Q1), veh/ln	0.0	5.4	0.0	1.7	0.0	11.8	0.0	0.6
2nd-Term Q (Q2), veh/ln	0.0	0.5	0.0	0.1	0.0	1.9	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	5.8	0.0	1.9	0.0	13.7	0.0	0.6
%ile Storage Ratio (RQ%)	0.00	0.54	0.00	0.95	0.00	1.11	0.00	0.29
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary

HCM 6th Ctrl Delay	35.5
HCM 6th LOS	D

Notes

* HCM 6th Edition computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th AWSC
3: McCadden Pl & Lexington Ave

11/11/2022

Intersection

Intersection Delay, s/veh 8.7

Intersection LOS A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	10	88	28	40	102	16	17	17	13	50	28	92
Future Vol, veh/h	10	88	28	40	102	16	17	17	13	50	28	92
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	93	29	42	107	17	18	18	14	53	29	97
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.5	8.9	8.1	8.7
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	36%	8%	25%	29%
Vol Thru, %	36%	70%	65%	16%
Vol Right, %	28%	22%	10%	54%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	47	126	158	170
LT Vol	17	10	40	50
Through Vol	17	88	102	28
RT Vol	13	28	16	92
Lane Flow Rate	49	133	166	179
Geometry Grp	1	1	1	1
Degree of Util (X)	0.065	0.167	0.213	0.22
Departure Headway (Hd)	4.746	4.537	4.602	4.421
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	753	789	780	811
Service Time	2.787	2.571	2.635	2.454
HCM Lane V/C Ratio	0.065	0.169	0.213	0.221
HCM Control Delay	8.1	8.5	8.9	8.7
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.2	0.6	0.8	0.8

HCM 6th TWSC
4: McCadden Pl & Santa Monica Blvd

11/11/2022

Intersection												
Int Delay, s/veh	1.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	31	977	10	21	1532	47	1	0	6	6	1	33
Future Vol, veh/h	31	977	10	21	1532	47	1	0	6	6	1	33
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	70	-	-	100	-	100	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	32	1007	10	22	1579	48	1	0	6	6	1	34

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1627	0	0	1017	0	0	1910	2747	509	2191	2704	790
Stage 1	-	-	-	-	-	-	1076	1076	-	1623	1623	-
Stage 2	-	-	-	-	-	-	834	1671	-	568	1081	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	396	-	-	678	-	-	41	20	509	25	21	333
Stage 1	-	-	-	-	-	-	234	294	-	107	160	-
Stage 2	-	-	-	-	-	-	329	151	-	475	292	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	396	-	-	678	-	-	32	18	509	23	19	333
Mov Cap-2 Maneuver	-	-	-	-	-	-	32	18	-	23	19	-
Stage 1	-	-	-	-	-	-	215	270	-	98	155	-
Stage 2	-	-	-	-	-	-	284	146	-	431	268	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.5			0.1			28.1			67.1		
HCM LOS							D			F		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	163	396	-	-	678	-	-	97
HCM Lane V/C Ratio	0.044	0.081	-	-	0.032	-	-	0.425
HCM Control Delay (s)	28.1	14.9	-	-	10.5	-	-	67.1
HCM Lane LOS	D	B	-	-	B	-	-	F
HCM 95th %tile Q(veh)	0.1	0.3	-	-	0.1	-	-	1.8

HCM 6th AWSC
1: Lexington Ave & Las Palmas Ave

11/11/2022

Intersection

Intersection Delay, s/veh 10.3

Intersection LOS B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	39	148	45	50	40	11	14	142	68	10	86	7
Future Vol, veh/h	39	148	45	50	40	11	14	142	68	10	86	7
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	44	168	51	57	45	13	16	161	77	11	98	8
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	10.8	9.4	10.5	9.4
HCM LOS	B	A	B	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	6%	17%	50%	10%
Vol Thru, %	63%	64%	40%	83%
Vol Right, %	30%	19%	11%	7%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	224	232	101	103
LT Vol	14	39	50	10
Through Vol	142	148	40	86
RT Vol	68	45	11	7
Lane Flow Rate	255	264	115	117
Geometry Grp	1	1	1	1
Degree of Util (X)	0.343	0.36	0.17	0.172
Departure Headway (Hd)	4.858	4.913	5.332	5.288
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	731	722	676	681
Service Time	2.952	3.009	3.338	3.294
HCM Lane V/C Ratio	0.349	0.366	0.17	0.172
HCM Control Delay	10.5	10.8	9.4	9.4
HCM Lane LOS	B	B	A	A
HCM 95th-tile Q	1.5	1.6	0.6	0.6

Queues

2: Las Palmas Ave & Santa Monica Blvd

11/11/2022



Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	79	1466	52	1424	99	42	131	67
v/c Ratio	0.37	0.56	0.26	0.54	0.41	0.16	0.60	0.25
Control Delay	11.0	6.5	8.4	6.3	39.1	15.5	47.0	17.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	11.0	6.5	8.4	6.3	39.1	15.5	47.0	17.8
Queue Length 50th (ft)	13	153	8	146	52	5	71	12
Queue Length 95th (ft)	51	258	30	245	94	31	121	46
Internal Link Dist (ft)		262		274	303		378	
Turn Bay Length (ft)	90		75			50		50
Base Capacity (vph)	215	2633	202	2616	553	547	501	554
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.37	0.56	0.26	0.54	0.18	0.08	0.26	0.12
Intersection Summary								

HCM 6th Signalized Intersection Capacity Analysis

2: Las Palmas Ave & Santa Monica Blvd

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	75	1376	17	49	1273	80	23	71	40	55	69	64
Future Volume (veh/h)	75	1376	17	49	1273	80	23	71	40	55	69	64
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	79	1448	18	52	1340	84	24	75	42	58	73	67
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	181	2005	25	174	1895	118	50	128	527	58	52	527
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.56	0.56	0.56	0.56	0.56	0.56	0.33	0.33	0.33	0.33	0.33	0.33
Unsig. Movement Delay												
Ln Grp Delay, s/veh	37.9	19.3	19.1	33.2	18.7	18.7	30.6	0.0	20.7	177.3	0.0	21.1
Ln Grp LOS	D	B	B	C	B	B	C	A	C	F	A	C
Approach Vol, veh/h	1545			1476			141			198		
Approach Delay, s/veh	20.1			19.2			27.7			124.4		
Approach LOS	C			B			C			F		
Timer:	1	2	3	4	5	6	7	8				
Assigned Phs	2			4			6			8		
Case No	6.0			7.0			6.0			7.0		
Phs Duration (G+Y+Rc), s	55.0			35.0			55.0			35.0		
Change Period (Y+Rc), s	* 4.8			5.1			* 4.8			5.1		
Max Green (Gmax), s	* 50			29.9			* 50			29.9		
Max Allow Headway (MAH), s	5.4			5.0			7.2			7.0		
Max Q Clear (g_c+I1), s	45.5			31.9			40.1			31.9		
Green Ext Time (g_e), s	3.7			0.0			8.7			0.0		
Prob of Phs Call (p_c)	1.00			1.00			1.00			1.00		
Prob of Max Out (p_x)	0.00			1.00			0.00			1.00		
Left-Turn Movement Data												
Assigned Mvmt	5			7			1			3		
Mvmt Sat Flow, veh/h	376			0			362			0		
Through Movement Data												
Assigned Mvmt	2			4			6			8		
Mvmt Sat Flow, veh/h	3595			157			3397			385		
Right-Turn Movement Data												
Assigned Mvmt	12			14			16			18		
Mvmt Sat Flow, veh/h	45			1585			212			1585		
Left Lane Group Data												
Assigned Mvmt	0	5	0	7	0	1	0	3				
Lane Assignment	L			L+T			L			L+T		

HCM 6th Signalized Intersection Capacity Analysis 2: Las Palmas Ave & Santa Monica Blvd

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Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	79	0	131	0	52	0	99
Grp Sat Flow (s), veh/h/ln	0	376	0	157	0	362	0	385
Q Serve Time (g_s), s	0.0	17.5	0.0	0.0	0.0	11.2	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	43.5	0.0	29.9	0.0	38.1	0.0	29.9
Perm LT Sat Flow (s_l), veh/h/ln	0	376	0	1295	0	362	0	1269
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	50.2	0.0	29.9	0.0	50.2	0.0	29.9
Perm LT Serve Time (g_u), s	0.0	24.2	0.0	0.0	0.0	23.3	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	17.5	0.0	0.0	0.0	11.2	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	2.5	0.0	0.0	0.0	6.2
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	2.5	0.0	0.0	0.0	3.4
Prop LT Inside Lane (P_L)	0.00	1.00	0.00	0.44	0.00	1.00	0.00	0.24
Lane Grp Cap (c), veh/h	0	181	0	110	0	174	0	178
V/C Ratio (X)	0.00	0.44	0.00	1.19	0.00	0.30	0.00	0.56
Avail Cap (c_a), veh/h	0	181	0	110	0	174	0	178
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	30.5	0.0	31.4	0.0	28.8	0.0	24.3
Incr Delay (d2), s/veh	0.0	7.5	0.0	145.9	0.0	4.4	0.0	6.3
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	37.9	0.0	177.3	0.0	33.2	0.0	30.6
1st-Term Q (Q1), veh/ln	0.0	1.5	0.0	2.5	0.0	0.9	0.0	1.5
2nd-Term Q (Q2), veh/ln	0.0	0.4	0.0	4.5	0.0	0.2	0.0	0.3
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	1.9	0.0	6.9	0.0	1.1	0.0	1.8
%ile Storage Ratio (RQ%)	0.00	0.53	0.00	0.45	0.00	0.39	0.00	0.13
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	5.2	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0

Middle Lane Group Data

Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment	T				T			
Lanes in Grp	0	1	0	0	0	1	0	0
Grp Vol (v), veh/h	0	715	0	0	0	700	0	0
Grp Sat Flow (s), veh/h/ln	0	1777	0	0	0	1777	0	0
Q Serve Time (g_s), s	0.0	26.8	0.0	0.0	0.0	25.8	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	26.8	0.0	0.0	0.0	25.8	0.0	0.0
Lane Grp Cap (c), veh/h	0	991	0	0	0	991	0	0
V/C Ratio (X)	0.00	0.72	0.00	0.00	0.00	0.71	0.00	0.00
Avail Cap (c_a), veh/h	0	991	0	0	0	991	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	14.7	0.0	0.0	0.0	14.5	0.0	0.0
Incr Delay (d2), s/veh	0.0	4.5	0.0	0.0	0.0	4.2	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	19.3	0.0	0.0	0.0	18.7	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	9.5	0.0	0.0	0.0	9.2	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	1.3	0.0	0.0	0.0	1.2	0.0	0.0

HCM 6th Signalized Intersection Capacity Analysis

2: Las Palmas Ave & Santa Monica Blvd

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3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	10.8	0.0	0.0	0.0	10.3	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	1.00	0.00	0.00	0.00	0.84	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data

Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment	T+R		R		T+R		R	
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	751	0	67	0	724	0	42
Grp Sat Flow (s), veh/h/ln	0	1862	0	1585	0	1832	0	1585
Q Serve Time (g_s), s	0.0	26.9	0.0	2.7	0.0	26.0	0.0	1.6
Cycle Q Clear Time (g_c), s	0.0	26.9	0.0	2.7	0.0	26.0	0.0	1.6
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.02	0.00	1.00	0.00	0.12	0.00	1.00
Lane Grp Cap (c), veh/h	0	1039	0	527	0	1022	0	527
V/C Ratio (X)	0.00	0.72	0.00	0.13	0.00	0.71	0.00	0.08
Avail Cap (c_a), veh/h	0	1039	0	527	0	1022	0	527
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	14.7	0.0	21.0	0.0	14.6	0.0	20.6
Incr Delay (d2), s/veh	0.0	4.4	0.0	0.1	0.0	4.2	0.0	0.1
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	19.1	0.0	21.1	0.0	18.7	0.0	20.7
1st-Term Q (Q1), veh/ln	0.0	10.0	0.0	1.0	0.0	9.5	0.0	0.6
2nd-Term Q (Q2), veh/ln	0.0	1.3	0.0	0.0	0.0	1.2	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	11.2	0.0	1.0	0.0	10.7	0.0	0.6
%ile Storage Ratio (RQ%)	0.00	1.05	0.00	0.51	0.00	0.87	0.00	0.32
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary

HCM 6th Ctrl Delay	26.2
HCM 6th LOS	C

Notes

* HCM 6th Edition computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th AWSC
3: McCadden Pl & Lexington Ave

11/11/2022

Intersection

Intersection Delay, s/veh 8.6

Intersection LOS A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	27	181	9	13	50	8	12	40	35	20	18	42
Future Vol, veh/h	27	181	9	13	50	8	12	40	35	20	18	42
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	29	195	10	14	54	9	13	43	38	22	19	45
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9.2	8.1	8.2	8.1
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	14%	12%	18%	25%
Vol Thru, %	46%	83%	70%	22%
Vol Right, %	40%	4%	11%	53%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	87	217	71	80
LT Vol	12	27	13	20
Through Vol	40	181	50	18
RT Vol	35	9	8	42
Lane Flow Rate	94	233	76	86
Geometry Grp	1	1	1	1
Degree of Util (X)	0.118	0.287	0.097	0.107
Departure Headway (Hd)	4.534	4.433	4.576	4.493
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	790	812	783	797
Service Time	2.562	2.458	2.606	2.522
HCM Lane V/C Ratio	0.119	0.287	0.097	0.108
HCM Control Delay	8.2	9.2	8.1	8.1
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.4	1.2	0.3	0.4

HCM 6th TWSC
4: McCadden Pl & Santa Monica Blvd

11/11/2022

Intersection												
Int Delay, s/veh	2.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	23	1439	11	18	1309	31	2	2	18	6	2	37
Future Vol, veh/h	23	1439	11	18	1309	31	2	2	18	6	2	37
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	70	-	-	100	-	100	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	24	1484	11	19	1349	32	2	2	19	6	2	38

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1381	0	0	1495	0	0	2252	2957	748	2178	2930	675
Stage 1	-	-	-	-	-	-	1538	1538	-	1387	1387	-
Stage 2	-	-	-	-	-	-	714	1419	-	791	1543	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	492	-	-	445	-	-	23	14	355	26	15	396
Stage 1	-	-	-	-	-	-	121	176	-	150	208	-
Stage 2	-	-	-	-	-	-	388	201	-	349	175	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	492	-	-	445	-	-	17	13	355	20	14	396
Mov Cap-2 Maneuver	-	-	-	-	-	-	17	13	-	20	14	-
Stage 1	-	-	-	-	-	-	115	167	-	143	199	-
Stage 2	-	-	-	-	-	-	332	192	-	311	166	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.2			0.2			82.4			91.3		
HCM LOS							F			F		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	68	492	-	-	445	-	-	84
HCM Lane V/C Ratio	0.334	0.048	-	-	0.042	-	-	0.552
HCM Control Delay (s)	82.4	12.7	-	-	13.4	-	-	91.3
HCM Lane LOS	F	B	-	-	B	-	-	F
HCM 95th %tile Q(veh)	1.2	0.2	-	-	0.1	-	-	2.4

HCM 6th AWSC
1: Lexington Ave & Las Palmas Ave

11/11/2022

Intersection	
Intersection Delay, s/veh	10.8
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	18	69	68	70	107	5	30	95	37	5	146	28
Future Vol, veh/h	18	69	68	70	107	5	30	95	37	5	146	28
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	22	85	84	86	132	6	37	117	46	6	180	35
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	10.2	11.3	10.6	10.9
HCM LOS	B	B	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	19%	12%	38%	3%
Vol Thru, %	59%	45%	59%	82%
Vol Right, %	23%	44%	3%	16%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	162	155	182	179
LT Vol	30	18	70	5
Through Vol	95	69	107	146
RT Vol	37	68	5	28
Lane Flow Rate	200	191	225	221
Geometry Grp	1	1	1	1
Degree of Util (X)	0.296	0.277	0.339	0.325
Departure Headway (Hd)	5.324	5.206	5.438	5.301
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	674	689	661	678
Service Time	3.363	3.247	3.478	3.34
HCM Lane V/C Ratio	0.297	0.277	0.34	0.326
HCM Control Delay	10.6	10.2	11.3	10.9
HCM Lane LOS	B	B	B	B
HCM 95th-tile Q	1.2	1.1	1.5	1.4

Queues

2: Las Palmas Ave & Santa Monica Blvd

11/11/2022



Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	38	1211	74	1771	88	40	176	120
v/c Ratio	0.34	0.48	0.28	0.70	0.31	0.13	0.67	0.40
Control Delay	17.0	7.0	9.5	10.3	33.5	10.0	46.3	29.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	17.0	7.0	9.5	10.3	33.5	10.0	46.3	29.3
Queue Length 50th (ft)	7	131	13	254	44	0	95	50
Queue Length 95th (ft)	41	230	45	444	79	24	148	92
Internal Link Dist (ft)		262		274	303		378	
Turn Bay Length (ft)	90		75			50		50
Base Capacity (vph)	112	2517	263	2513	534	552	497	540
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.34	0.48	0.28	0.70	0.16	0.07	0.35	0.22
Intersection Summary								

HCM 6th Signalized Intersection Capacity Analysis

2: Las Palmas Ave & Santa Monica Blvd

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	37	1143	32	72	1651	67	26	59	39	81	89	116
Future Volume (veh/h)	37	1143	32	72	1651	67	26	59	39	81	89	116
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	38	1178	33	74	1702	69	27	61	40	84	92	120
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	115	1969	55	235	1942	78	52	94	527	59	46	527
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.56	0.56	0.56	0.56	0.56	0.56	0.33	0.33	0.33	0.33	0.33	0.33
Unsig. Movement Delay												
Ln Grp Delay, s/veh	47.0	15.9	15.8	27.1	27.7	28.0	34.6	0.0	20.7	377.3	0.0	21.9
Ln Grp LOS	D	B	B	C	C	C	C	A	C	F	A	C
Approach Vol, veh/h	1249			1845			128			296		
Approach Delay, s/veh	16.8			27.8			30.2			233.2		
Approach LOS	B			C			C			F		
Timer:	1	2	3	4	5	6	7	8				
Assigned Phs	2			4			6			8		
Case No	6.0			7.0			6.0			7.0		
Phs Duration (G+Y+Rc), s	55.0			35.0			55.0			35.0		
Change Period (Y+Rc), s	* 4.8			5.1			* 4.8			5.1		
Max Green (Gmax), s	* 50			29.9			* 50			29.9		
Max Allow Headway (MAH), s	5.4			4.9			7.2			7.0		
Max Q Clear (g_c+I1), s	52.2			31.9			40.4			31.9		
Green Ext Time (g_e), s	0.0			0.0			9.2			0.0		
Prob of Phs Call (p_c)	1.00			1.00			1.00			1.00		
Prob of Max Out (p_x)	0.00			1.00			0.00			1.00		
Left-Turn Movement Data												
Assigned Mvmt	5			7			1			3		
Mvmt Sat Flow, veh/h	269			0			461			0		
Through Movement Data												
Assigned Mvmt	2			4			6			8		
Mvmt Sat Flow, veh/h	3531			137			3481			281		
Right-Turn Movement Data												
Assigned Mvmt	12			14			16			18		
Mvmt Sat Flow, veh/h	99			1585			140			1585		
Left Lane Group Data												
Assigned Mvmt	0	5	0	7	0	1	0	3				
Lane Assignment	L			L+T			L			L+T		

HCM 6th Signalized Intersection Capacity Analysis

2: Las Palmas Ave & Santa Monica Blvd

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Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	38	0	176	0	74	0	88
Grp Sat Flow (s), veh/h/ln	0	269	0	137	0	461	0	281
Q Serve Time (g_s), s	0.0	11.8	0.0	0.0	0.0	11.4	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	50.2	0.0	29.9	0.0	31.4	0.0	29.9
Perm LT Sat Flow (s_l), veh/h/ln	0	269	0	1314	0	461	0	1188
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	50.2	0.0	29.9	0.0	50.2	0.0	29.9
Perm LT Serve Time (g_u), s	0.0	11.8	0.0	0.0	0.0	30.3	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	11.8	0.0	0.0	0.0	11.4	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	2.2	0.0	0.0	0.0	4.5
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	2.2	0.0	0.0	0.0	3.0
Prop LT Inside Lane (P_L)	0.00	1.00	0.00	0.48	0.00	1.00	0.00	0.31
Lane Grp Cap (c), veh/h	0	115	0	105	0	235	0	146
V/C Ratio (X)	0.00	0.33	0.00	1.68	0.00	0.31	0.00	0.60
Avail Cap (c_a), veh/h	0	115	0	105	0	235	0	146
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	39.5	0.0	32.5	0.0	23.6	0.0	24.6
Incr Delay (d2), s/veh	0.0	7.5	0.0	344.9	0.0	3.5	0.0	9.9
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	47.0	0.0	377.3	0.0	27.1	0.0	34.6
1st-Term Q (Q1), veh/ln	0.0	0.8	0.0	2.3	0.0	1.2	0.0	1.3
2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	10.0	0.0	0.2	0.0	0.4
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	1.1	0.0	12.4	0.0	1.4	0.0	1.7
%ile Storage Ratio (RQ%)	0.00	0.30	0.00	0.81	0.00	0.48	0.00	0.13
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	17.8	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0

Middle Lane Group Data

Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment	T				T			
Lanes in Grp	0	1	0	0	0	1	0	0
Grp Vol (v), veh/h	0	593	0	0	0	865	0	0
Grp Sat Flow (s), veh/h/ln	0	1777	0	0	0	1777	0	0
Q Serve Time (g_s), s	0.0	19.9	0.0	0.0	0.0	37.7	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	19.9	0.0	0.0	0.0	37.7	0.0	0.0
Lane Grp Cap (c), veh/h	0	991	0	0	0	991	0	0
V/C Ratio (X)	0.00	0.60	0.00	0.00	0.00	0.87	0.00	0.00
Avail Cap (c_a), veh/h	0	991	0	0	0	991	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	13.2	0.0	0.0	0.0	17.1	0.0	0.0
Incr Delay (d2), s/veh	0.0	2.7	0.0	0.0	0.0	10.5	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	15.9	0.0	0.0	0.0	27.7	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	7.1	0.0	0.0	0.0	13.4	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.7	0.0	0.0	0.0	2.9	0.0	0.0

HCM 6th Signalized Intersection Capacity Analysis

2: Las Palmas Ave & Santa Monica Blvd

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3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	7.8	0.0	0.0	0.0	16.3	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.73	0.00	0.00	0.00	1.32	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data

Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment	T+R		R		T+R		R	
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	618	0	120	0	906	0	40
Grp Sat Flow (s), veh/h/ln	0	1853	0	1585	0	1845	0	1585
Q Serve Time (g_s), s	0.0	19.9	0.0	4.9	0.0	38.4	0.0	1.6
Cycle Q Clear Time (g_c), s	0.0	19.9	0.0	4.9	0.0	38.4	0.0	1.6
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.05	0.00	1.00	0.00	0.08	0.00	1.00
Lane Grp Cap (c), veh/h	0	1033	0	527	0	1029	0	527
V/C Ratio (X)	0.00	0.60	0.00	0.23	0.00	0.88	0.00	0.08
Avail Cap (c_a), veh/h	0	1033	0	527	0	1029	0	527
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	13.2	0.0	21.7	0.0	17.3	0.0	20.6
Incr Delay (d2), s/veh	0.0	2.6	0.0	0.2	0.0	10.7	0.0	0.1
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	15.8	0.0	21.9	0.0	28.0	0.0	20.7
1st-Term Q (Q1), veh/ln	0.0	7.4	0.0	1.8	0.0	14.1	0.0	0.6
2nd-Term Q (Q2), veh/ln	0.0	0.7	0.0	0.0	0.0	3.1	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	8.1	0.0	1.9	0.0	17.2	0.0	0.6
%ile Storage Ratio (RQ%)	0.00	0.76	0.00	0.94	0.00	1.40	0.00	0.30
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary

HCM 6th Ctrl Delay	41.3
HCM 6th LOS	D

Notes

* HCM 6th Edition computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th AWSC
3: McCadden Pl & Lexington Ave

11/11/2022

Intersection

Intersection Delay, s/veh 8.8

Intersection LOS A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	10	91	29	41	105	16	18	18	13	52	29	95
Future Vol, veh/h	10	91	29	41	105	16	18	18	13	52	29	95
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	96	31	43	111	17	19	19	14	55	31	100
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.6	9	8.2	8.8
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	37%	8%	25%	30%
Vol Thru, %	37%	70%	65%	16%
Vol Right, %	27%	22%	10%	54%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	49	130	162	176
LT Vol	18	10	41	52
Through Vol	18	91	105	29
RT Vol	13	29	16	95
Lane Flow Rate	52	137	171	185
Geometry Grp	1	1	1	1
Degree of Util (X)	0.069	0.173	0.219	0.229
Departure Headway (Hd)	4.787	4.564	4.631	4.449
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	746	784	774	806
Service Time	2.828	2.602	2.668	2.481
HCM Lane V/C Ratio	0.07	0.175	0.221	0.23
HCM Control Delay	8.2	8.6	9	8.8
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.2	0.6	0.8	0.9

HCM 6th TWSC
4: McCadden Pl & Santa Monica Blvd

11/11/2022

Intersection												
Int Delay, s/veh	2.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	24	1177	8	25	1720	45	0	0	7	7	1	31
Future Vol, veh/h	24	1177	8	25	1720	45	0	0	7	7	1	31
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	70	-	-	100	-	100	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	25	1213	8	26	1773	46	0	0	7	7	1	32

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1819	0	0	1221	0	0	2206	3138	611	2482	3096	887
Stage 1	-	-	-	-	-	-	1267	1267	-	1825	1825	-
Stage 2	-	-	-	-	-	-	939	1871	-	657	1271	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	333	-	-	567	-	-	25	11	437	15	12	287
Stage 1	-	-	-	-	-	-	179	238	-	80	127	-
Stage 2	-	-	-	-	-	-	284	120	-	420	237	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	333	-	-	567	-	-	19	10	437	13	11	287
Mov Cap-2 Maneuver	-	-	-	-	-	-	19	10	-	13	11	-
Stage 1	-	-	-	-	-	-	166	220	-	74	121	-
Stage 2	-	-	-	-	-	-	239	114	-	382	219	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.3			0.2			13.4			180.3		
HCM LOS							B			F		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	437	333	-	-	567	-	-	53
HCM Lane V/C Ratio	0.017	0.074	-	-	0.045	-	-	0.759
HCM Control Delay (s)	13.4	16.7	-	-	11.7	-	-	180.3
HCM Lane LOS	B	C	-	-	B	-	-	F
HCM 95th %tile Q(veh)	0.1	0.2	-	-	0.1	-	-	3.2

HCM 6th TWSC
5: Las Palmas Ave & Project Dwy 1

11/11/2022

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	142	284	0
Future Vol, veh/h	0	0	0	142	284	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	149	299	0
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	448	299	-	0	-	0
Stage 1	299	-	-	-	-	-
Stage 2	149	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	-	-
Pot Cap-1 Maneuver	568	741	0	-	-	0
Stage 1	752	-	0	-	-	0
Stage 2	879	-	0	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	568	741	-	-	-	-
Mov Cap-2 Maneuver	568	-	-	-	-	-
Stage 1	752	-	-	-	-	-
Stage 2	879	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	0	0		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBT EBLn1		SBT			
Capacity (veh/h)	-		-			
HCM Lane V/C Ratio	-		-			
HCM Control Delay (s)	-		0			
HCM Lane LOS	-		A			
HCM 95th %tile Q(veh)	-		-			

HCM 6th TWSC
6: Las Palmas Ave & Project Dwy 2

11/11/2022

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	142	284	0
Future Vol, veh/h	0	0	0	142	284	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	149	299	0
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	448	299	299	0	-	0
Stage 1	299	-	-	-	-	-
Stage 2	149	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	568	741	1262	-	-	-
Stage 1	752	-	-	-	-	-
Stage 2	879	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	568	741	1262	-	-	-
Mov Cap-2 Maneuver	568	-	-	-	-	-
Stage 1	752	-	-	-	-	-
Stage 2	879	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	0	0		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1262	-	-	-	-	
HCM Lane V/C Ratio	-	-	-	-	-	
HCM Control Delay (s)	0	-	0	-	-	
HCM Lane LOS	A	-	A	-	-	
HCM 95th %tile Q(veh)	0	-	-	-	-	

HCM 6th AWSC
1: Lexington Ave & Las Palmas Ave

11/11/2022

Intersection	
Intersection Delay, s/veh	11.2
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	40	152	46	52	41	11	14	177	70	10	119	7
Future Vol, veh/h	40	152	46	52	41	11	14	177	70	10	119	7
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	45	173	52	59	47	13	16	201	80	11	135	8
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	11.7	9.9	11.8	10.2
HCM LOS	B	A	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	5%	17%	50%	7%
Vol Thru, %	68%	64%	39%	88%
Vol Right, %	27%	19%	11%	5%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	261	238	104	136
LT Vol	14	40	52	10
Through Vol	177	152	41	119
RT Vol	70	46	11	7
Lane Flow Rate	297	270	118	155
Geometry Grp	1	1	1	1
Degree of Util (X)	0.421	0.395	0.185	0.234
Departure Headway (Hd)	5.105	5.255	5.623	5.451
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	706	684	637	658
Service Time	3.139	3.291	3.667	3.491
HCM Lane V/C Ratio	0.421	0.395	0.185	0.236
HCM Control Delay	11.8	11.7	9.9	10.2
HCM Lane LOS	B	B	A	B
HCM 95th-tile Q	2.1	1.9	0.7	0.9

Queues

2: Las Palmas Ave & Santa Monica Blvd

11/11/2022



Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	86	1685	53	1720	128	43	161	75
v/c Ratio	0.66	0.66	0.38	0.67	0.47	0.16	0.68	0.27
Control Delay	38.6	8.6	16.2	8.9	38.7	19.3	49.5	25.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	38.6	8.6	16.2	8.9	38.7	19.3	49.5	25.7
Queue Length 50th (ft)	21	216	9	225	67	10	87	26
Queue Length 95th (ft)	#125	364	50	381	112	36	142	61
Internal Link Dist (ft)		262		274	303		378	
Turn Bay Length (ft)	90		75			50		50
Base Capacity (vph)	130	2570	138	2557	563	540	484	540
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.66	0.66	0.38	0.67	0.23	0.08	0.33	0.14

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

HCM 6th Signalized Intersection Capacity Analysis

2: Las Palmas Ave & Santa Monica Blvd

11/11/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	82	1583	18	50	1550	84	24	98	41	58	95	71
Future Volume (veh/h)	82	1583	18	50	1550	84	24	98	41	58	95	71
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	86	1666	19	53	1632	88	25	103	43	61	100	75
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	123	2007	23	131	1913	103	48	165	527	55	68	527
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.56	0.56	0.56	0.56	0.56	0.56	0.33	0.33	0.33	0.33	0.33	0.33
Unsig. Movement Delay												
Ln Grp Delay, s/veh	69.7	24.4	24.1	46.3	25.7	26.1	31.1	0.0	20.8	213.8	0.0	21.2
Ln Grp LOS	E	C	C	D	C	C	C	A	C	F	A	C
Approach Vol, veh/h	1771			1773			171			236		
Approach Delay, s/veh	26.4			26.5			28.5			152.6		
Approach LOS	C			C			C			F		
Timer:	1	2	3	4	5	6	7	8				
Assigned Phs	2			4			6			8		
Case No	6.0			7.0			6.0			7.0		
Phs Duration (G+Y+Rc), s	55.0			35.0			55.0			35.0		
Change Period (Y+Rc), s	* 4.8			5.1			* 4.8			5.1		
Max Green (Gmax), s	* 50			29.9			* 50			29.9		
Max Allow Headway (MAH), s	5.5			5.1			7.2			7.0		
Max Q Clear (g_c+I1), s	52.2			31.9			52.2			31.9		
Green Ext Time (g_e), s	0.0			0.0			0.0			0.0		
Prob of Phs Call (p_c)	1.00			1.00			1.00			1.00		
Prob of Max Out (p_x)	0.00			1.00			0.00			1.00		
Left-Turn Movement Data												
Assigned Mvmt	5			7			1			3		
Mvmt Sat Flow, veh/h	283			0			293			0		
Through Movement Data												
Assigned Mvmt	2			4			6			8		
Mvmt Sat Flow, veh/h	3599			205			3430			495		
Right-Turn Movement Data												
Assigned Mvmt	12			14			16			18		
Mvmt Sat Flow, veh/h	41			1585			184			1585		
Left Lane Group Data												
Assigned Mvmt	0	5	0	7	0	1	0	3				
Lane Assignment	L			L+T			L			L+T		

HCM 6th Signalized Intersection Capacity Analysis

2: Las Palmas Ave & Santa Monica Blvd

11/11/2022

Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	86	0	161	0	53	0	128
Grp Sat Flow (s), veh/h/ln	0	283	0	205	0	293	0	495
Q Serve Time (g_s), s	0.0	13.7	0.0	0.0	0.0	15.8	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	50.2	0.0	29.9	0.0	50.2	0.0	29.9
Perm LT Sat Flow (s_l), veh/h/ln	0	283	0	1262	0	293	0	1229
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	50.2	0.0	29.9	0.0	50.2	0.0	29.9
Perm LT Serve Time (g_u), s	0.0	13.7	0.0	0.0	0.0	15.8	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	13.7	0.0	0.0	0.0	15.8	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	3.3	0.0	0.0	0.0	7.9
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	3.3	0.0	0.0	0.0	4.4
Prop LT Inside Lane (P_L)	0.00	1.00	0.00	0.38	0.00	1.00	0.00	0.20
Lane Grp Cap (c), veh/h	0	123	0	123	0	131	0	212
V/C Ratio (X)	0.00	0.70	0.00	1.31	0.00	0.40	0.00	0.60
Avail Cap (c_a), veh/h	0	123	0	123	0	131	0	212
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	41.6	0.0	29.4	0.0	37.3	0.0	24.2
Incr Delay (d2), s/veh	0.0	28.1	0.0	184.4	0.0	8.9	0.0	6.9
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	69.7	0.0	213.8	0.0	46.3	0.0	31.1
1st-Term Q (Q1), veh/ln	0.0	1.9	0.0	2.7	0.0	1.1	0.0	1.9
2nd-Term Q (Q2), veh/ln	0.0	1.0	0.0	6.3	0.0	0.3	0.0	0.4
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	2.8	0.0	9.1	0.0	1.5	0.0	2.3
%ile Storage Ratio (RQ%)	0.00	0.80	0.00	0.59	0.00	0.49	0.00	0.18
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	9.4	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0
Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment	T				T			
Lanes in Grp	0	1	0	0	0	1	0	0
Grp Vol (v), veh/h	0	822	0	0	0	841	0	0
Grp Sat Flow (s), veh/h/ln	0	1777	0	0	0	1777	0	0
Q Serve Time (g_s), s	0.0	34.2	0.0	0.0	0.0	35.8	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	34.2	0.0	0.0	0.0	35.8	0.0	0.0
Lane Grp Cap (c), veh/h	0	991	0	0	0	991	0	0
V/C Ratio (X)	0.00	0.83	0.00	0.00	0.00	0.85	0.00	0.00
Avail Cap (c_a), veh/h	0	991	0	0	0	991	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	16.4	0.0	0.0	0.0	16.7	0.0	0.0
Incr Delay (d2), s/veh	0.0	8.0	0.0	0.0	0.0	9.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	24.4	0.0	0.0	0.0	25.7	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	12.1	0.0	0.0	0.0	12.7	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	2.2	0.0	0.0	0.0	2.5	0.0	0.0

HCM 6th Signalized Intersection Capacity Analysis

2: Las Palmas Ave & Santa Monica Blvd

11/11/2022

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	14.3	0.0	0.0	0.0	15.2	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	1.34	0.00	0.00	0.00	1.23	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data

Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment	T+R		R		T+R		R	
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	863	0	75	0	879	0	43
Grp Sat Flow (s), veh/h/ln	0	1863	0	1585	0	1837	0	1585
Q Serve Time (g_s), s	0.0	34.4	0.0	3.0	0.0	36.5	0.0	1.7
Cycle Q Clear Time (g_c), s	0.0	34.4	0.0	3.0	0.0	36.5	0.0	1.7
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.02	0.00	1.00	0.00	0.10	0.00	1.00
Lane Grp Cap (c), veh/h	0	1039	0	527	0	1025	0	527
V/C Ratio (X)	0.00	0.83	0.00	0.14	0.00	0.86	0.00	0.08
Avail Cap (c_a), veh/h	0	1039	0	527	0	1025	0	527
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	16.4	0.0	21.1	0.0	16.9	0.0	20.6
Incr Delay (d2), s/veh	0.0	7.7	0.0	0.1	0.0	9.2	0.0	0.1
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	24.1	0.0	21.2	0.0	26.1	0.0	20.8
1st-Term Q (Q1), veh/ln	0.0	12.8	0.0	1.1	0.0	13.4	0.0	0.6
2nd-Term Q (Q2), veh/ln	0.0	2.2	0.0	0.0	0.0	2.6	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	15.0	0.0	1.1	0.0	16.0	0.0	0.6
%ile Storage Ratio (RQ%)	0.00	1.40	0.00	0.57	0.00	1.30	0.00	0.33
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary

HCM 6th Ctrl Delay	34.1
HCM 6th LOS	C

Notes

* HCM 6th Edition computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th AWSC
3: McCadden Pl & Lexington Ave

11/11/2022

Intersection

Intersection Delay, s/veh 8.7

Intersection LOS A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	28	186	9	13	52	8	12	41	36	21	19	43
Future Vol, veh/h	28	186	9	13	52	8	12	41	36	21	19	43
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	30	200	10	14	56	9	13	44	39	23	20	46
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9.4	8.1	8.2	8.1
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	13%	13%	18%	25%
Vol Thru, %	46%	83%	71%	23%
Vol Right, %	40%	4%	11%	52%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	89	223	73	83
LT Vol	12	28	13	21
Through Vol	41	186	52	19
RT Vol	36	9	8	43
Lane Flow Rate	96	240	78	89
Geometry Grp	1	1	1	1
Degree of Util (X)	0.121	0.297	0.1	0.112
Departure Headway (Hd)	4.558	4.452	4.601	4.522
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	786	808	778	792
Service Time	2.59	2.477	2.633	2.555
HCM Lane V/C Ratio	0.122	0.297	0.1	0.112
HCM Control Delay	8.2	9.4	8.1	8.1
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.4	1.2	0.3	0.4

HCM 6th TWSC
4: McCadden Pl & Santa Monica Blvd

11/11/2022

Intersection												
Int Delay, s/veh	7.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	24	1652	11	19	1592	32	2	2	19	6	2	38
Future Vol, veh/h	24	1652	11	19	1592	32	2	2	19	6	2	38
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	70	-	-	100	-	100	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	25	1703	11	20	1641	33	2	2	20	6	2	39

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1674	0	0	1714	0	0	2621	3473	857	2584	3445	821
Stage 1	-	-	-	-	-	-	1759	1759	-	1681	1681	-
Stage 2	-	-	-	-	-	-	862	1714	-	903	1764	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	379	-	-	366	-	-	12	6	301	13	7	318
Stage 1	-	-	-	-	-	-	88	137	-	98	149	-
Stage 2	-	-	-	-	-	-	316	144	-	299	136	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	379	-	-	366	-	-	7	5	301	8	6	318
Mov Cap-2 Maneuver	-	-	-	-	-	-	7	5	-	8	6	-
Stage 1	-	-	-	-	-	-	82	128	-	92	141	-
Stage 2	-	-	-	-	-	-	258	136	-	257	127	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.2			0.2			275			\$ 392.8		
HCM LOS							F			F		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	31	379	-	-	366	-	-	38
HCM Lane V/C Ratio	0.765	0.065	-	-	0.054	-	-	1.248
HCM Control Delay (s)	275	15.2	-	-	15.4	-	-	\$ 392.8
HCM Lane LOS	F	C	-	-	C	-	-	F
HCM 95th %tile Q(veh)	2.6	0.2	-	-	0.2	-	-	4.8

Notes												
~: Volume exceeds capacity			\$: Delay exceeds 300s			+: Computation Not Defined			*: All major volume in platoon			

HCM 6th TWSC
5: Las Palmas Ave & Project Dwy 1

11/11/2022

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	231	217	0
Future Vol, veh/h	0	0	0	231	217	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	243	228	0
Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	471	228	-	0	-	0
Stage 1	228	-	-	-	-	-
Stage 2	243	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	-	-
Pot Cap-1 Maneuver	551	811	0	-	-	0
Stage 1	810	-	0	-	-	0
Stage 2	797	-	0	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	551	811	-	-	-	-
Mov Cap-2 Maneuver	551	-	-	-	-	-
Stage 1	810	-	-	-	-	-
Stage 2	797	-	-	-	-	-
Approach	EB	NB	SB			
HCM Control Delay, s	0	0	0			
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	EBLn1	SBT			
Capacity (veh/h)	-	-	-			
HCM Lane V/C Ratio	-	-	-			
HCM Control Delay (s)	-	0	-			
HCM Lane LOS	-	A	-			
HCM 95th %tile Q(veh)	-	-	-			

HCM 6th TWSC
6: Las Palmas Ave & Project Dwy 2

11/11/2022

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	231	217	0
Future Vol, veh/h	0	0	0	231	217	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	243	228	0
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	471	228	228	0	-	0
Stage 1	228	-	-	-	-	-
Stage 2	243	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	551	811	1340	-	-	-
Stage 1	810	-	-	-	-	-
Stage 2	797	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	551	811	1340	-	-	-
Mov Cap-2 Maneuver	551	-	-	-	-	-
Stage 1	810	-	-	-	-	-
Stage 2	797	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	0	0		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1340	-	-	-	-	
HCM Lane V/C Ratio	-	-	-	-	-	
HCM Control Delay (s)	0	-	0	-	-	
HCM Lane LOS	A	-	A	-	-	
HCM 95th %tile Q(veh)	0	-	-	-	-	

HCM 6th AWSC
1: Lexington Ave & Las Palmas Ave

11/11/2022

Intersection	
Intersection Delay, s/veh	11.4
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	18	69	74	83	107	5	31	98	40	5	171	28
Future Vol, veh/h	18	69	74	83	107	5	31	98	40	5	171	28
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	22	85	91	102	132	6	38	121	49	6	211	35
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	10.7	12	11.1	11.8
HCM LOS	B	B	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	18%	11%	43%	2%
Vol Thru, %	58%	43%	55%	84%
Vol Right, %	24%	46%	3%	14%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	169	161	195	204
LT Vol	31	18	83	5
Through Vol	98	69	107	171
RT Vol	40	74	5	28
Lane Flow Rate	209	199	241	252
Geometry Grp	1	1	1	1
Degree of Util (X)	0.318	0.297	0.375	0.38
Departure Headway (Hd)	5.482	5.376	5.61	5.437
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	653	666	640	660
Service Time	3.536	3.432	3.662	3.488
HCM Lane V/C Ratio	0.32	0.299	0.377	0.382
HCM Control Delay	11.1	10.7	12	11.8
HCM Lane LOS	B	B	B	B
HCM 95th-tile Q	1.4	1.2	1.7	1.8

Queues

2: Las Palmas Ave & Santa Monica Blvd

11/11/2022



Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	77	1211	74	1803	88	40	181	123
v/c Ratio	0.74	0.48	0.28	0.72	0.30	0.13	0.68	0.41
Control Delay	57.0	7.2	9.7	10.9	33.0	9.8	46.3	29.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	57.0	7.2	9.7	10.9	33.0	9.8	46.3	29.3
Queue Length 50th (ft)	22	133	13	267	44	0	97	51
Queue Length 95th (ft)	#72	233	46	469	79	24	151	93
Internal Link Dist (ft)		262		274	303		378	
Turn Bay Length (ft)	90		75			50		50
Base Capacity (vph)	104	2505	262	2496	534	552	497	540
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.74	0.48	0.28	0.72	0.16	0.07	0.36	0.23

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

HCM 6th Signalized Intersection Capacity Analysis

2: Las Palmas Ave & Santa Monica Blvd

11/11/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	75	1143	32	72	1651	98	26	59	39	84	91	119
Future Volume (veh/h)	75	1143	32	72	1651	98	26	59	39	84	91	119
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	77	1178	33	74	1702	101	27	61	40	87	94	123
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	109	1969	55	235	1902	112	52	94	527	59	45	527
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.56	0.56	0.56	0.56	0.56	0.56	0.33	0.33	0.33	0.33	0.33	0.33
Unsig. Movement Delay												
Ln Grp Delay, s/veh	75.3	15.9	15.8	27.1	29.2	30.2	34.6	0.0	20.7	401.4	0.0	22.0
Ln Grp LOS	E	B	B	C	C	C	C	A	C	F	A	C
Approach Vol, veh/h	1288			1877			128			304		
Approach Delay, s/veh	19.4			29.6			30.2			247.9		
Approach LOS	B			C			C			F		
Timer:	1	2	3	4	5	6	7	8				
Assigned Phs	2			4			6			8		
Case No	6.0			7.0			6.0			7.0		
Phs Duration (G+Y+Rc), s	55.0			35.0			55.0			35.0		
Change Period (Y+Rc), s	* 4.8			5.1			* 4.8			5.1		
Max Green (Gmax), s	* 50			29.9			* 50			29.9		
Max Allow Headway (MAH), s	5.6			4.9			7.2			7.0		
Max Q Clear (g_c+I1), s	52.2			31.9			42.2			31.9		
Green Ext Time (g_e), s	0.0			0.0			7.5			0.0		
Prob of Phs Call (p_c)	1.00			1.00			1.00			1.00		
Prob of Max Out (p_x)	0.00			1.00			0.00			1.00		
Left-Turn Movement Data												
Assigned Mvmt	5			7			1			3		
Mvmt Sat Flow, veh/h	261			0			461			0		
Through Movement Data												
Assigned Mvmt	2			4			6			8		
Mvmt Sat Flow, veh/h	3531			135			3410			281		
Right-Turn Movement Data												
Assigned Mvmt	12			14			16			18		
Mvmt Sat Flow, veh/h	99			1585			201			1585		
Left Lane Group Data												
Assigned Mvmt	0	5	0	7	0	1	0	3				
Lane Assignment	L			L+T			L			L+T		

HCM 6th Signalized Intersection Capacity Analysis

2: Las Palmas Ave & Santa Monica Blvd

11/11/2022

Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	77	0	181	0	74	0	88
Grp Sat Flow (s), veh/h/ln	0	261	0	135	0	461	0	281
Q Serve Time (g_s), s	0.0	10.0	0.0	0.0	0.0	11.4	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	50.2	0.0	29.9	0.0	31.4	0.0	29.9
Perm LT Sat Flow (s_l), veh/h/ln	0	261	0	1314	0	461	0	1183
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	50.2	0.0	29.9	0.0	50.2	0.0	29.9
Perm LT Serve Time (g_u), s	0.0	10.0	0.0	0.0	0.0	30.3	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	10.0	0.0	0.0	0.0	11.4	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	2.2	0.0	0.0	0.0	4.5
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	2.2	0.0	0.0	0.0	3.0
Prop LT Inside Lane (P_L)	0.00	1.00	0.00	0.48	0.00	1.00	0.00	0.31
Lane Grp Cap (c), veh/h	0	109	0	104	0	235	0	146
V/C Ratio (X)	0.00	0.71	0.00	1.74	0.00	0.31	0.00	0.60
Avail Cap (c_a), veh/h	0	109	0	104	0	235	0	146
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	43.1	0.0	32.6	0.0	23.6	0.0	24.6
Incr Delay (d2), s/veh	0.0	32.1	0.0	368.8	0.0	3.5	0.0	9.9
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	75.3	0.0	401.4	0.0	27.1	0.0	34.6
1st-Term Q (Q1), veh/ln	0.0	1.7	0.0	2.3	0.0	1.2	0.0	1.3
2nd-Term Q (Q2), veh/ln	0.0	1.0	0.0	10.7	0.0	0.2	0.0	0.4
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	2.7	0.0	13.0	0.0	1.4	0.0	1.7
%ile Storage Ratio (RQ%)	0.00	0.75	0.00	0.85	0.00	0.48	0.00	0.13
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	19.2	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0

Middle Lane Group Data

Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment	T				T			
Lanes in Grp	0	1	0	0	0	1	0	0
Grp Vol (v), veh/h	0	593	0	0	0	881	0	0
Grp Sat Flow (s), veh/h/ln	0	1777	0	0	0	1777	0	0
Q Serve Time (g_s), s	0.0	19.9	0.0	0.0	0.0	39.1	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	19.9	0.0	0.0	0.0	39.1	0.0	0.0
Lane Grp Cap (c), veh/h	0	991	0	0	0	991	0	0
V/C Ratio (X)	0.00	0.60	0.00	0.00	0.00	0.89	0.00	0.00
Avail Cap (c_a), veh/h	0	991	0	0	0	991	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	13.2	0.0	0.0	0.0	17.5	0.0	0.0
Incr Delay (d2), s/veh	0.0	2.7	0.0	0.0	0.0	11.7	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	15.9	0.0	0.0	0.0	29.2	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	7.1	0.0	0.0	0.0	13.9	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.7	0.0	0.0	0.0	3.2	0.0	0.0

HCM 6th Signalized Intersection Capacity Analysis

2: Las Palmas Ave & Santa Monica Blvd

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3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	7.8	0.0	0.0	0.0	17.1	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.73	0.00	0.00	0.00	1.39	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data

Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment	T+R		R		T+R		R	
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	618	0	123	0	922	0	40
Grp Sat Flow (s), veh/h/ln	0	1853	0	1585	0	1834	0	1585
Q Serve Time (g_s), s	0.0	19.9	0.0	5.1	0.0	40.2	0.0	1.6
Cycle Q Clear Time (g_c), s	0.0	19.9	0.0	5.1	0.0	40.2	0.0	1.6
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.05	0.00	1.00	0.00	0.11	0.00	1.00
Lane Grp Cap (c), veh/h	0	1033	0	527	0	1023	0	527
V/C Ratio (X)	0.00	0.60	0.00	0.23	0.00	0.90	0.00	0.08
Avail Cap (c_a), veh/h	0	1033	0	527	0	1023	0	527
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	13.2	0.0	21.8	0.0	17.7	0.0	20.6
Incr Delay (d2), s/veh	0.0	2.6	0.0	0.2	0.0	12.5	0.0	0.1
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	15.8	0.0	22.0	0.0	30.2	0.0	20.7
1st-Term Q (Q1), veh/ln	0.0	7.4	0.0	1.9	0.0	14.7	0.0	0.6
2nd-Term Q (Q2), veh/ln	0.0	0.7	0.0	0.0	0.0	3.6	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	8.1	0.0	1.9	0.0	18.3	0.0	0.6
%ile Storage Ratio (RQ%)	0.00	0.76	0.00	0.97	0.00	1.48	0.00	0.30
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary

HCM 6th Ctrl Delay	44.4
HCM 6th LOS	D

Notes

* HCM 6th Edition computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th AWSC

3: McCadden Pl & Lexington Ave

11/11/2022

Intersection

Intersection Delay, s/veh 8.8

Intersection LOS A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	10	97	29	41	106	16	18	18	13	52	29	95
Future Vol, veh/h	10	97	29	41	106	16	18	18	13	52	29	95
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	102	31	43	112	17	19	19	14	55	31	100
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.6	9	8.2	8.8
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	37%	7%	25%	30%
Vol Thru, %	37%	71%	65%	16%
Vol Right, %	27%	21%	10%	54%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	49	136	163	176
LT Vol	18	10	41	52
Through Vol	18	97	106	29
RT Vol	13	29	16	95
Lane Flow Rate	52	143	172	185
Geometry Grp	1	1	1	1
Degree of Util (X)	0.069	0.182	0.221	0.23
Departure Headway (Hd)	4.806	4.573	4.641	4.466
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	743	783	772	802
Service Time	2.851	2.611	2.679	2.502
HCM Lane V/C Ratio	0.07	0.183	0.223	0.231
HCM Control Delay	8.2	8.6	9	8.8
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.2	0.7	0.8	0.9

HCM 6th TWSC
4: McCadden Pl & Santa Monica Blvd

11/11/2022

Intersection												
Int Delay, s/veh	2.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	24	1215	8	25	1723	45	0	0	7	7	1	31
Future Vol, veh/h	24	1215	8	25	1723	45	0	0	7	7	1	31
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	70	-	-	100	-	100	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	25	1253	8	26	1776	46	0	0	7	7	1	32
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1822	0	0	1261	0	0	2248	3181	631	2505	3139	888
Stage 1	-	-	-	-	-	-	1307	1307	-	1828	1828	-
Stage 2	-	-	-	-	-	-	941	1874	-	677	1311	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	332	-	-	547	-	-	23	10	424	14	11	287
Stage 1	-	-	-	-	-	-	169	228	-	79	126	-
Stage 2	-	-	-	-	-	-	283	120	-	409	227	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	332	-	-	547	-	-	17	9	424	13	10	287
Mov Cap-2 Maneuver	-	-	-	-	-	-	17	9	-	13	10	-
Stage 1	-	-	-	-	-	-	156	211	-	73	120	-
Stage 2	-	-	-	-	-	-	237	114	-	372	210	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.3			0.2			13.6			186.6		
HCM LOS							B			F		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	424	332	-	-	547	-	-	52				
HCM Lane V/C Ratio	0.017	0.075	-	-	0.047	-	-	0.773				
HCM Control Delay (s)	13.6	16.7	-	-	11.9	-	-	186.6				
HCM Lane LOS	B	C	-	-	B	-	-	F				
HCM 95th %tile Q(veh)	0.1	0.2	-	-	0.1	-	-	3.2				

HCM 6th TWSC
5: Las Palmas Ave & Project Dwy 1

11/11/2022

Intersection

Int Delay, s/veh 0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	2	2	0	142	284	0
Future Vol, veh/h	2	2	0	142	284	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	2	0	149	299	0

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	448	299	- 0 - 0
Stage 1	299	-	- - -
Stage 2	149	-	- - -
Critical Hdwy	6.42	6.22	- - -
Critical Hdwy Stg 1	5.42	-	- - -
Critical Hdwy Stg 2	5.42	-	- - -
Follow-up Hdwy	3.518	3.318	- - -
Pot Cap-1 Maneuver	568	741	0 - - 0
Stage 1	752	-	0 - - 0
Stage 2	879	-	0 - - 0
Platoon blocked, %			- -
Mov Cap-1 Maneuver	568	741	- - - -
Mov Cap-2 Maneuver	568	-	- - - -
Stage 1	752	-	- - - -
Stage 2	879	-	- - - -

Approach	EB	NB	SB
HCM Control Delay, s	10.6	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT EBLn1	SBT
Capacity (veh/h)	- 643	-
HCM Lane V/C Ratio	- 0.007	-
HCM Control Delay (s)	- 10.6	-
HCM Lane LOS	- B	-
HCM 95th %tile Q(veh)	- 0	-

HCM 6th TWSC
6: Las Palmas Ave & Project Dwy 2

11/11/2022

Intersection						
Int Delay, s/veh	1.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	6	69	142	284	44
Future Vol, veh/h	5	6	69	142	284	44
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	6	73	149	299	46
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	617	322	345	0	-	0
Stage 1	322	-	-	-	-	-
Stage 2	295	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	453	719	1214	-	-	-
Stage 1	735	-	-	-	-	-
Stage 2	755	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	423	719	1214	-	-	-
Mov Cap-2 Maneuver	423	-	-	-	-	-
Stage 1	686	-	-	-	-	-
Stage 2	755	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	11.7	2.7		0		
HCM LOS	B					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1214	-	545	-	-	
HCM Lane V/C Ratio	0.06	-	0.021	-	-	
HCM Control Delay (s)	8.2	0	11.7	-	-	
HCM Lane LOS	A	A	B	-	-	
HCM 95th %tile Q(veh)	0.2	-	0.1	-	-	

HCM 6th AWSC
1: Lexington Ave & Las Palmas Ave

11/11/2022

Intersection

Intersection Delay, s/veh 12.1

Intersection LOS B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	40	152	46	52	41	11	21	204	84	10	126	7
Future Vol, veh/h	40	152	46	52	41	11	21	204	84	10	126	7
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	45	173	52	59	47	13	24	232	95	11	143	8
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	12.2	10.3	13.3	10.5
HCM LOS	B	B	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	7%	17%	50%	7%
Vol Thru, %	66%	64%	39%	88%
Vol Right, %	27%	19%	11%	5%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	309	238	104	143
LT Vol	21	40	52	10
Through Vol	204	152	41	126
RT Vol	84	46	11	7
Lane Flow Rate	351	270	118	163
Geometry Grp	1	1	1	1
Degree of Util (X)	0.503	0.409	0.192	0.252
Departure Headway (Hd)	5.16	5.445	5.834	5.58
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	699	660	613	642
Service Time	3.202	3.49	3.889	3.631
HCM Lane V/C Ratio	0.502	0.409	0.192	0.254
HCM Control Delay	13.3	12.2	10.3	10.5
HCM Lane LOS	B	B	B	B
HCM 95th-tile Q	2.8	2	0.7	1

Queues

2: Las Palmas Ave & Santa Monica Blvd

11/11/2022



Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	94	1685	53	1727	128	43	183	108
v/c Ratio	0.79	0.67	0.41	0.69	0.42	0.14	0.70	0.35
Control Delay	60.3	10.0	20.1	10.4	35.3	17.8	48.4	27.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	60.3	10.0	20.1	10.4	35.3	17.8	48.4	27.0
Queue Length 50th (ft)	30	237	11	249	65	10	99	43
Queue Length 95th (ft)	#88	411	#65	433	107	34	154	81
Internal Link Dist (ft)		262		274	303		378	
Turn Bay Length (ft)	90		75			50		50
Base Capacity (vph)	119	2500	128	2488	562	540	474	540
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.79	0.67	0.41	0.69	0.23	0.08	0.39	0.20

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

HCM 6th Signalized Intersection Capacity Analysis

2: Las Palmas Ave & Santa Monica Blvd

11/11/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	89	1583	18	50	1550	90	24	98	41	79	95	103
Future Volume (veh/h)	89	1583	18	50	1550	90	24	98	41	79	95	103
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	94	1666	19	53	1632	95	25	103	43	83	100	108
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	122	2007	23	131	1904	110	48	165	527	58	50	527
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.56	0.56	0.56	0.56	0.56	0.56	0.33	0.33	0.33	0.33	0.33	0.33
Unsig. Movement Delay												
Ln Grp Delay, s/veh	79.0	24.4	24.1	46.3	26.0	26.5	31.1	0.0	20.8	379.2	0.0	21.7
Ln Grp LOS	E	C	C	D	C	C	C	A	C	F	A	C
Approach Vol, veh/h	1779			1780			171			291		
Approach Delay, s/veh	27.1			26.8			28.5			246.5		
Approach LOS	C			C			C			F		
Timer:	1	2	3	4	5	6	7	8				
Assigned Phs	2			4			6			8		
Case No	6.0			7.0			6.0			7.0		
Phs Duration (G+Y+Rc), s	55.0			35.0			55.0			35.0		
Change Period (Y+Rc), s	* 4.8			5.1			* 4.8			5.1		
Max Green (Gmax), s	* 50			29.9			* 50			29.9		
Max Allow Headway (MAH), s	5.5			5.0			7.2			7.0		
Max Q Clear (g_c+I1), s	52.2			31.9			52.2			31.9		
Green Ext Time (g_e), s	0.0			0.0			0.0			0.0		
Prob of Phs Call (p_c)	1.00			1.00			1.00			1.00		
Prob of Max Out (p_x)	0.00			1.00			0.00			1.00		
Left-Turn Movement Data												
Assigned Mvmt	5			7			1			3		
Mvmt Sat Flow, veh/h	281			0			293			0		
Through Movement Data												
Assigned Mvmt	2			4			6			8		
Mvmt Sat Flow, veh/h	3599			151			3414			495		
Right-Turn Movement Data												
Assigned Mvmt	12			14			16			18		
Mvmt Sat Flow, veh/h	41			1585			198			1585		
Left Lane Group Data												
Assigned Mvmt	0	5	0	7	0	1	0	3				
Lane Assignment	L			L+T			L			L+T		

HCM 6th Signalized Intersection Capacity Analysis

2: Las Palmas Ave & Santa Monica Blvd

11/11/2022

Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	94	0	183	0	53	0	128
Grp Sat Flow (s), veh/h/ln	0	281	0	151	0	293	0	495
Q Serve Time (g_s), s	0.0	13.3	0.0	0.0	0.0	15.8	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	50.2	0.0	29.9	0.0	50.2	0.0	29.9
Perm LT Sat Flow (s_l), veh/h/ln	0	281	0	1262	0	293	0	1192
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	50.2	0.0	29.9	0.0	50.2	0.0	29.9
Perm LT Serve Time (g_u), s	0.0	13.3	0.0	0.0	0.0	15.8	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	13.3	0.0	0.0	0.0	15.8	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	2.4	0.0	0.0	0.0	7.9
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	2.4	0.0	0.0	0.0	4.4
Prop LT Inside Lane (P_L)	0.00	1.00	0.00	0.45	0.00	1.00	0.00	0.20
Lane Grp Cap (c), veh/h	0	122	0	108	0	131	0	212
V/C Ratio (X)	0.00	0.77	0.00	1.69	0.00	0.40	0.00	0.60
Avail Cap (c_a), veh/h	0	122	0	108	0	131	0	212
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	42.0	0.0	31.7	0.0	37.3	0.0	24.2
Incr Delay (d2), s/veh	0.0	37.0	0.0	347.4	0.0	8.9	0.0	6.9
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	79.0	0.0	379.2	0.0	46.3	0.0	31.1
1st-Term Q (Q1), veh/ln	0.0	2.1	0.0	2.4	0.0	1.1	0.0	1.9
2nd-Term Q (Q2), veh/ln	0.0	1.2	0.0	10.4	0.0	0.3	0.0	0.4
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	3.3	0.0	12.9	0.0	1.5	0.0	2.3
%ile Storage Ratio (RQ%)	0.00	0.93	0.00	0.84	0.00	0.49	0.00	0.18
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	18.7	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0

Middle Lane Group Data

Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment	T				T			
Lanes in Grp	0	1	0	0	0	1	0	0
Grp Vol (v), veh/h	0	822	0	0	0	845	0	0
Grp Sat Flow (s), veh/h/ln	0	1777	0	0	0	1777	0	0
Q Serve Time (g_s), s	0.0	34.2	0.0	0.0	0.0	36.1	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	34.2	0.0	0.0	0.0	36.1	0.0	0.0
Lane Grp Cap (c), veh/h	0	991	0	0	0	991	0	0
V/C Ratio (X)	0.00	0.83	0.00	0.00	0.00	0.85	0.00	0.00
Avail Cap (c_a), veh/h	0	991	0	0	0	991	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	16.4	0.0	0.0	0.0	16.8	0.0	0.0
Incr Delay (d2), s/veh	0.0	8.0	0.0	0.0	0.0	9.2	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	24.4	0.0	0.0	0.0	26.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	12.1	0.0	0.0	0.0	12.8	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	2.2	0.0	0.0	0.0	2.5	0.0	0.0

HCM 6th Signalized Intersection Capacity Analysis

2: Las Palmas Ave & Santa Monica Blvd

11/11/2022

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	14.3	0.0	0.0	0.0	15.3	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	1.34	0.00	0.00	0.00	1.24	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data

Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment	T+R		R		T+R		R	
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	863	0	108	0	882	0	43
Grp Sat Flow (s), veh/h/ln	0	1863	0	1585	0	1835	0	1585
Q Serve Time (g_s), s	0.0	34.4	0.0	4.4	0.0	36.9	0.0	1.7
Cycle Q Clear Time (g_c), s	0.0	34.4	0.0	4.4	0.0	36.9	0.0	1.7
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.02	0.00	1.00	0.00	0.11	0.00	1.00
Lane Grp Cap (c), veh/h	0	1039	0	527	0	1023	0	527
V/C Ratio (X)	0.00	0.83	0.00	0.21	0.00	0.86	0.00	0.08
Avail Cap (c_a), veh/h	0	1039	0	527	0	1023	0	527
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	16.4	0.0	21.5	0.0	17.0	0.0	20.6
Incr Delay (d2), s/veh	0.0	7.7	0.0	0.2	0.0	9.5	0.0	0.1
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	24.1	0.0	21.7	0.0	26.5	0.0	20.8
1st-Term Q (Q1), veh/ln	0.0	12.8	0.0	1.6	0.0	13.5	0.0	0.6
2nd-Term Q (Q2), veh/ln	0.0	2.2	0.0	0.0	0.0	2.7	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	15.0	0.0	1.7	0.0	16.2	0.0	0.6
%ile Storage Ratio (RQ%)	0.00	1.40	0.00	0.84	0.00	1.31	0.00	0.33
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary

HCM 6th Ctrl Delay	42.9
HCM 6th LOS	D

Notes

* HCM 6th Edition computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th AWSC
3: McCadden Pl & Lexington Ave

11/11/2022

Intersection

Intersection Delay, s/veh 8.8

Intersection LOS A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	28	186	9	13	59	8	12	41	36	21	19	43
Future Vol, veh/h	28	186	9	13	59	8	12	41	36	21	19	43
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	30	200	10	14	63	9	13	44	39	23	20	46
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9.4	8.2	8.2	8.2
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	13%	13%	16%	25%
Vol Thru, %	46%	83%	74%	23%
Vol Right, %	40%	4%	10%	52%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	89	223	80	83
LT Vol	12	28	13	21
Through Vol	41	186	59	19
RT Vol	36	9	8	43
Lane Flow Rate	96	240	86	89
Geometry Grp	1	1	1	1
Degree of Util (X)	0.122	0.297	0.11	0.113
Departure Headway (Hd)	4.579	4.463	4.606	4.543
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	783	806	778	788
Service Time	2.61	2.49	2.639	2.574
HCM Lane V/C Ratio	0.123	0.298	0.111	0.113
HCM Control Delay	8.2	9.4	8.2	8.2
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.4	1.2	0.4	0.4

HCM 6th TWSC
4: McCadden Pl & Santa Monica Blvd

11/11/2022

Intersection												
Int Delay, s/veh	8.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	24	1659	11	19	1624	32	2	2	19	6	2	38
Future Vol, veh/h	24	1659	11	19	1624	32	2	2	19	6	2	38
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	70	-	-	100	-	100	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	25	1710	11	20	1674	33	2	2	20	6	2	39

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1707	0	0	1721	0	0	2644	3513	861	2620	3485	837
Stage 1	-	-	-	-	-	-	1766	1766	-	1714	1714	-
Stage 2	-	-	-	-	-	-	878	1747	-	906	1771	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	368	-	-	364	-	-	11	6	299	12	6	310
Stage 1	-	-	-	-	-	-	87	135	-	94	144	-
Stage 2	-	-	-	-	-	-	309	138	-	297	135	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	368	-	-	364	-	-	6	5	299	7	5	310
Mov Cap-2 Maneuver	-	-	-	-	-	-	6	5	-	7	5	-
Stage 1	-	-	-	-	-	-	81	126	-	88	136	-
Stage 2	-	-	-	-	-	-	251	130	-	254	126	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0.2	\$ 305.7	\$ 495.7
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	29	368	-	-	364	-	-	33
HCM Lane V/C Ratio	0.818	0.067	-	-	0.054	-	-	1.437
HCM Control Delay (s)	\$ 305.7	15.5	-	-	15.5	-	-	\$ 495.7
HCM Lane LOS	F	C	-	-	C	-	-	F
HCM 95th %tile Q(veh)	2.7	0.2	-	-	0.2	-	-	5.2

Notes			
~: Volume exceeds capacity	\$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

HCM 6th TWSC
5: Las Palmas Ave & Project Dwy 1

11/11/2022

Intersection						
Int Delay, s/veh	0.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	12	6	0	231	217	0
Future Vol, veh/h	12	6	0	231	217	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	13	6	0	243	228	0
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	471	228	-	0	-	0
Stage 1	228	-	-	-	-	-
Stage 2	243	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	-	-
Pot Cap-1 Maneuver	551	811	0	-	-	0
Stage 1	810	-	0	-	-	0
Stage 2	797	-	0	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	551	811	-	-	-	-
Mov Cap-2 Maneuver	551	-	-	-	-	-
Stage 1	810	-	-	-	-	-
Stage 2	797	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	11	0		0		
HCM LOS	B					
Minor Lane/Major Mvmt	NBT EBLn1		SBT			
Capacity (veh/h)	- 617		-			
HCM Lane V/C Ratio	- 0.031		-			
HCM Control Delay (s)	- 11		-			
HCM Lane LOS	- B		-			
HCM 95th %tile Q(veh)	- 0.1		-			

HCM 6th TWSC
6: Las Palmas Ave & Project Dwy 2

11/11/2022

Intersection						
Int Delay, s/veh	1.9					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	36	47	13	231	217	7
Future Vol, veh/h	36	47	13	231	217	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	38	49	14	243	228	7
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	503	232	235	0	-	0
Stage 1	232	-	-	-	-	-
Stage 2	271	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	528	807	1332	-	-	-
Stage 1	807	-	-	-	-	-
Stage 2	775	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	522	807	1332	-	-	-
Mov Cap-2 Maneuver	522	-	-	-	-	-
Stage 1	797	-	-	-	-	-
Stage 2	775	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	11.4	0.4		0		
HCM LOS	B					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1332	-	652	-	-	
HCM Lane V/C Ratio	0.01	-	0.134	-	-	
HCM Control Delay (s)	7.7	0	11.4	-	-	
HCM Lane LOS	A	A	B	-	-	
HCM 95th %tile Q(veh)	0	-	0.5	-	-	

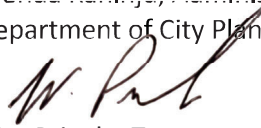
Appendix F – LADOT Assessment Letter

CITY OF LOS ANGELES
INTER-DEPARTMENTAL CORRESPONDENCE

1149 N Las Palmas Av
DOT Case No. CEN22-54194

Date: May 9, 2023

To: Brenda Kahinju, Administrative Clerk
Department of City Planning

From: 
Wes Pringle, Transportation Engineer
Department of Transportation

Subject: **TRANSPORTATION ASSESSMENT FOR THE PROPOSED OFFICE PROJECT LOCATED AT 1149 NORTH LAS PALMAS AVENUE (PAR-2022-3666-CM)**

The Los Angeles Department of Transportation (LADOT) has reviewed the transportation assessment prepared by Kimley-Horn and Associates, Inc., dated December 2022 and May 2023, for the proposed office project located at 1128-1146 and 1139-1155 North Las Palmas Avenue and 1138-1150 North McCadden Place within the Hollywood Community Plan Area and the Central Area Planning Commission (APC). In compliance with Senate Bill (SB) 743 and the California Environmental Quality Act (CEQA), a vehicle miles traveled (VMT) analysis is required to identify the project's ability to promote the reduction of green-house gas emissions, the access to diverse land uses, and the development of multi-modal networks. The significance of a project's impact in this regard is measured against the VMT thresholds established in LADOT's Transportation Assessment Guidelines (TAG), as described below.

DISCUSSION AND FINDINGS

A. Project Description

The project proposes to renovate and convert an existing one-story manufacturing building and to replace an existing parking lot with a three-story office building at a mid-block location along Las Palmas Avenue between Lexington Avenue and Santa Monica Boulevard with frontage along McCadden Place to the west. The project will retain four existing one-story to two-story office buildings. The project is bisected by Las Palmas Avenue in the north-south direction and contains the existing manufacturing building and parking lot to the west of Las Palmas Avenue and the four existing office buildings to the east of Las Palmas Avenue. The development will provide 87,045 square feet of office space, 135 square feet of retail space, a total of 26 (17 long-term and nine short-term) bicycle parking spaces, and 213 vehicle parking spaces in a subterranean parking garage. The development will be accessed via a two-way driveway and a one-way driveway along Las Palmas Avenue as illustrated in **Attachment A**. All passenger loading is expected to occur on site in the parking garage. The project is expected to be completed by 2025.

B. Freeway Safety Analysis

Per the Interim Guidance for Freeway Safety Analysis memorandum issued by LADOT on May 1, 2020 to address Caltrans safety concerns on freeways, the study addresses the project's effects on vehicle queuing on freeway off-ramps. Such an evaluation measures the project's potential to lengthen a forecasted off-ramp queue and create speed differentials between vehicles exiting the freeway off-ramps and vehicles operating on the freeway mainline. The evaluation identified the number of project trips expected to be added to nearby freeway off-ramps serving the project site. It was determined that project traffic at any freeway off-ramp will not exceed 25 peak hour trips. Therefore, a freeway ramp analysis is not required.

C. CEQA Screening Threshold

Prior to accounting for trip reductions resulting from the application of Transportation Demand Management (TDM) strategies, a trip generation analysis was conducted to determine if the project would exceed the net 250 daily vehicle trips screening threshold. Using the City of Los Angeles VMT Calculator tool, which draws upon trip rate estimates published in the Institute of Transportation Engineers (ITE) Trip Generation Manual, 9th Edition as well as applying trip generation adjustments when applicable, based on sociodemographic data and the built environment factors of the project's surroundings, it was determined that the project **does** exceed the net 250 daily vehicle trips threshold.

Additionally, the analysis included further discussion of the transportation impact thresholds:

T-1 Conflicting with plans, programs, ordinances, or policies

T-2.1 Causing substantial vehicle miles traveled

T-3 Substantially increasing hazards due to a geometric design feature or incompatible use.

The assessment determined that the project would **not** have a significant transportation impact under Thresholds T-1 and T-3. A project's impacts per Threshold T-2.1 is determined by using the VMT calculator and is discussed further below. A copy of the VMT Calculator summary report is provided as **Attachment B** to this report.

D. Transportation Impacts

On July 30, 2019, pursuant to SB 743 and the recent changes to Section 15064.03 of the State's CEQA Guidelines, the City of Los Angeles adopted VMT as criteria in determining transportation impacts under CEQA. The new LADOT TAG provide instructions on preparing transportation assessments for land use proposals and defines the significant impact thresholds.

The LADOT VMT Calculator tool measures project impact in terms of Household VMT per Capita, and Work VMT per Employee. LADOT identified distinct thresholds for significant VMT impacts for each of the seven APC areas in the City. For the Central APC area, in which the project is located, the following thresholds have been established:

- Household VMT per Capita: 6.0
- Work VMT per Employee: 7.6

As cited in the VMT Analysis report, prepared by Kimley-Horn and Associates, Inc., the project proposes to incorporate the TDM strategies of promotions and marketing, reduced parking supply by providing 213 of the Code-required 219 parking spaces, and include bike parking per Los Angeles Municipal Code (LAMC) as project design features. With the application of these TDM measures, the proposed project is projected to have no Household VMT and Work VMT per capita of 8.8. Therefore, the project would result in a Work VMT impact. A copy of the VMT Calculator summary report is provided as **Attachment B**.

E. Access and Circulation

During preparation of the new CEQA guidelines, the State's Office of Planning and Research stressed that lead agencies can continue to apply traditional operational analysis requirements to inform land use decisions provided that such analyses were outside of the CEQA process. The authority for requiring non-CEQA transportation analysis and requiring improvements to

address potential circulation deficiencies, lies in the City of Los Angeles' Site Plan Review authority as established in Section 16.05 of the LAMC. Therefore, LADOT continues to require and review a project's site access, circulation, and operational plan to determine if any access enhancements, transit amenities, intersection improvements, traffic signal upgrades, neighborhood traffic calming, or other improvements are needed. In accordance with this authority, the project has completed a circulation analysis using a "level of service" screening methodology that indicates that the trips generated by the proposed development will not likely result in adverse circulation conditions at several locations. Access to the project will be provided along Las Palmas Avenue. LADOT has reviewed this analysis and determined that it adequately discloses operational concerns. A copy of the circulation analysis table that summarizes these potential deficiencies is provided as **Attachment C** to this report.

PROJECT REQUIREMENTS

A. CEQA-Related Mitigation

As a result of the expected significant impacts identified in the project's transportation impact study, LADOT recommends that the applicant be required to implement the following transportation demand management (TDM) mitigation measures:

Rideshare Program – The Project would provide either designated parking spaces and loading zones for ridesharing vehicles and/or an internal website or program to coordinate rides. The rideshare program would be implemented through the office employers.

B. Non-CEQA-Related Requirements and Considerations

To comply with transportation and mobility goals and provisions of adopted City plans and ordinances, the applicant should be required to implement the following:

1. Parking Requirements

The project would provide parking for 213 vehicles and 26 bicycles onsite. The applicant should check with the Departments of Building and Safety and City Planning on the number of parking spaces required for this project.

2. Highway Dedication and Street Widening Requirements

Per the Mobility Element of the General Plan, **Las Palmas Avenue** and **McCadden Place**, both classified as a Local Streets, would require an 18-foot half-width roadway within a 30-foot half-width right-of-way. The applicant should check with the Bureau of Engineering's Land Development Group to determine if there are any other applicable highway dedication, street widening and/or sidewalk requirements for this project.

3. Project Access and Circulation

The conceptual site plan for the project (see **Attachment A**) is acceptable to LADOT. The project would be accessed via a two-way driveway and a one-way driveway along Las Palmas Avenue. The two-way driveway would provide access to monthly parkers and valet parking in the subterranean parking levels as well as entry to the ground floor parking level and the one-way driveway would provide egress for rideshare vehicles and for vehicles using the passenger drop-off area. All passenger loading is expected to occur on site in the drop-off area in the ground floor parking level. Review of this study does not constitute approval of the dimensions for any new proposed driveway. Review and approval of the driveway should be coordinated with LADOT's Citywide Planning Coordination Section (201 North Figueroa Street, 5th Floor, Room 550, at 213-482-

7024). In order to minimize and prevent last minute building design changes, the applicant should contact LADOT for driveway width and internal circulation requirements prior to the commencement of building or parking layout design. The applicant should check with City Planning regarding the project's driveway placement and design.

4. Worksite Traffic Control Requirements

LADOT recommends that a construction work site traffic control plan be submitted to LADOT's Citywide Temporary Traffic Control Section or Permit Plan Review Section for review and approval prior to the start of any construction work. Refer to <http://ladot.lacity.org/businesses/temporary-traffic-control-plans> to determine which section to coordinate review of the work site traffic control plan. The plan should show the location of any roadway or sidewalk closures, traffic detours, haul routes, hours of operation, protective devices, warning signs and access to abutting properties. LADOT also recommends that all construction related truck traffic be restricted to off-peak hours to the extent feasible.

5. TDM Ordinance Requirements

The TDM Ordinance (LAMC 12.26 J) is currently being updated. The updated ordinance, which is currently progressing through the City's approval process, will:

- Expand the reach and application of TDM strategies to more land uses and neighborhoods,
- Rely on a broader range of strategies that can be updated to keep pace with technology, and
- Provide flexibility for developments and communities to choose strategies that work best for their neighborhood context.

Although not yet adopted, LADOT recommends that the applicant be subject to the terms of the proposed TDM Ordinance update which is expected to be completed prior to the anticipated construction of this project, if approved.

6. Development Review Fees

Section 19.15 of the LAMC identifies specific fees for traffic study review, condition clearance, and permit issuance. The applicant shall comply with any applicable fees per this ordinance.

If you have any questions, please contact Jimmy Vivar or my staff at (213) 972-4993.

Attachments

K:\Letters\2023\CEN22-54194_1149 N Las Palmas_office project_ltr.docx

c: Emma Howard, Council District 13
Hokchi Chiu, Central District, BOE
Bhuvan Bajaj, Hollywood-Wilshire District, DOT
Taimour Tanavoli, Case Management Office, DOT
Laura Forinash/Angelo Pastelin, Kimley-Horn and Associates, Inc.

Attachment A
CEN22-54194_1149 N Las Palmas Av

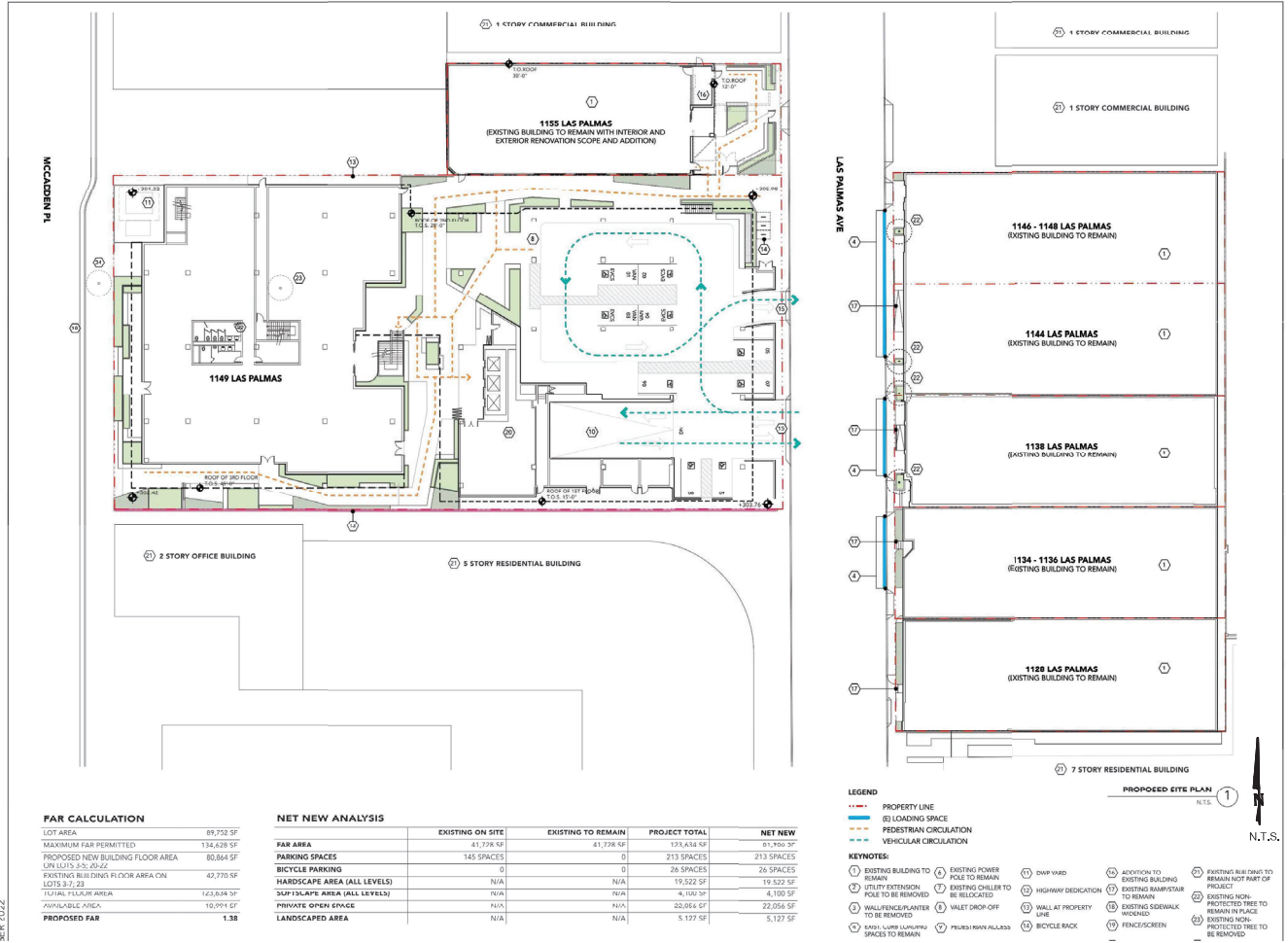


FIGURE 2 - PROJECT SITE PLAN
1151 N LAS PALMAS AVENUE

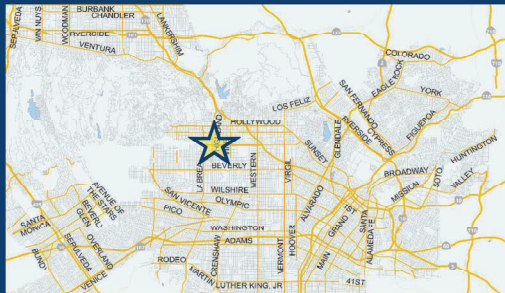
CITY OF LOS ANGELES VMT CALCULATOR Version 1.3



Project Screening Criteria: Is this project required to conduct a vehicle miles traveled analysis?

Project Information

Project: 1149 Las Palmas
Scenario: [www](#)
Address: 1149 N LAS PALMAS AVE. 90038



Is the project replacing an existing number of residential units with a smaller number of residential units AND is located within one-half mile of a fixed-rail or fixed-guideway transit station?

☐ Yes ☐ No

Existing Land Use

Land Use Type	Value	Unit
Industrial Manufacturing	5.498	ksf
Industrial Manufacturing	5.498	ksf

Click here to add a single custom land use type (will be included in the above list)

Proposed Project Land Use

Land Use Type	Value	Unit
Retail General Retail	0.135	ksf
Retail General Retail	0.135	ksf
Office General Office	87.045	ksf

Click here to add a single custom land use type (will be included in the above list)

Project Screening Summary

Existing Land Use	Proposed
16 Daily Vehicle Trips	710 Daily Vehicle Trips
117 Daily VMT	5,650 Daily VMT
Tier 1 Screening Criteria	
Project will have less residential units compared to existing residential units & is within one-half mile of a fixed-rail station. ☐	
Tier 2 Screening Criteria	
The net increase in daily trips < 250 trips	694 Net Daily Trips
The net increase in daily VMT ≤ 0	5,533 Net Daily VMT
The proposed project consists of only retail land uses ≤ 50,000 square feet total.	0.135 ksf
The proposed project is required to perform VMT analysis.	

CITY OF LOS ANGELES VMT CALCULATOR Version 1.3



Project:

1149 Las Palmas

Scenario:

Address:

1149 N LAS PALMAS AVE, 90038

Proposed Project Land Use Type	Value	Unit
Retail General Retail	0.135	ksf
Office General Office	87.045	ksf

TDM Strategies

Select each section to show individual strategies
Use ☒ to denote if the TDM strategy is part of the proposed project or is a mitigation strategy

	Proposed Project	With Mitigation
Max Home Based TDM Achieved?	No	No
Max Work Based TDM Achieved?	No	No
A Parking		
B Transit		
C Education & Encouragement		
D Commute Trip Reductions		
E Shared Mobility		
F Bicycle Infrastructure		
Implement/Improve On-street Bicycle Facility	Select Proposed Prj or Mitigation to include this strategy	
☐ Proposed Prj ☐ Mitigation		
Include Bike Parking Per LAMC	Select Proposed Prj or Mitigation to include this strategy	
☒ Proposed Prj ☐ Mitigation		
Include Secure Bike Parking and Showers	Select Proposed Prj or Mitigation to include this strategy	
☐ Proposed Prj ☐ Mitigation		
G Neighborhood Enhancement		

Proposed Project	With Mitigation
669 Daily Vehicle Trips	618 Daily Vehicle Trips
5,317 Daily VMT	4,859 Daily VMT
0.0 Household VMT per Capita	0.0 Household VMT per Capita
8.8 Work VMT per Employee	7.4 Work VMT per Employee

Significant VMT Impact?	
Household: No Threshold = 6.0 15% Below APC	Household: No Threshold = 6.0 15% Below APC
Work: Yes Threshold = 7.6 15% Below APC	Work: No Threshold = 7.6 15% Below APC

CITY OF LOS ANGELES VMT CALCULATOR

Report 1: Project & Analysis Overview

Date: May 4, 2023

Project Name: 1149 Las Palmas

Project Scenario:

Project Address: 1149 N LAS PALMAS AVE, 90038



Version 1.3

Project Information			
Land Use Type		Value	Units
Housing	Single Family	0	DU
	Multi Family	0	DU
	Townhouse	0	DU
	Hotel	0	Rooms
	Motel	0	Rooms
Affordable Housing	Family	0	DU
	Senior	0	DU
	Special Needs	0	DU
	Permanent Supportive	0	DU
Retail	General Retail	0.135	ksf
	Furniture Store	0.000	ksf
	Pharmacy/Drugstore	0.000	ksf
	Supermarket	0.000	ksf
	Bank	0.000	ksf
	Health Club	0.000	ksf
	High-Turnover Sit-Down Restaurant	0.000	ksf
	Fast-Food Restaurant	0.000	ksf
	Quality Restaurant	0.000	ksf
	Auto Repair	0.000	ksf
	Home Improvement	0.000	ksf
	Free-Standing Discount	0.000	ksf
	Movie Theater	0	Seats
Office	General Office	87.045	ksf
	Medical Office	0.000	ksf
Industrial	Light Industrial	0.000	ksf
	Manufacturing	0.000	ksf
	Warehousing/Self-Storage	0.000	ksf
School	University	0	Students
	High School	0	Students
	Middle School	0	Students
	Elementary	0	Students
Other	Private School (K-12)	0	Students
		0	Trips

Project and Analysis Overview

1 of 2

CITY OF LOS ANGELES VMT CALCULATOR

Report 1: Project & Analysis Overview

Date: May 4, 2023

Project Name: 1149 Las Palmas

Project Scenario:

Project Address: 1149 N LAS PALMAS AVE, 90038



Version 1.3

Analysis Results			
Total Employees: 348			
Total Population: 0			
Proposed Project		With Mitigation	
669	Daily Vehicle Trips	618	Daily Vehicle Trips
5,317	Daily VMT	4,859	Daily VMT
0	Household VMT per Capita	0	Household VMT per Capita
8.8	Work VMT per Employee	7.4	Work VMT per Employee
Significant VMT Impact?			
APC: Central			
Impact Threshold: 15% Below APC Average			
Household = 6.0			
Work = 7.6			
Proposed Project		With Mitigation	
VMT Threshold	Impact	VMT Threshold	Impact
Household > 6.0	No	Household > 6.0	No
Work > 7.6	Yes	Work > 7.6	No

CITY OF LOS ANGELES VMT CALCULATOR

Report 2: TDM Inputs

Date: May 4, 2023

Project Name: 1149 Las Palmas

Project Scenario:

Project Address: 1149 N LAS PALMAS AVE, 90038



Version 1.3

TDM Strategy Inputs				
Strategy Type		Description	Proposed Project	Mitigations
Parking	Reduce parking supply	City code parking provision (spaces)	219	219
		Actual parking provision (spaces)	213	213
	Unbundle parking	Monthly cost for parking (\$)	\$0	\$0
	Parking cash-out	Employees eligible (%)	0%	0%
	Price workplace parking	Daily parking charge (\$)	\$0.00	\$0.00
		Employees subject to priced parking (%)	0%	0%
	Residential area parking permits	Cost of annual permit (\$)	\$0	\$0
(cont. on following page)				

CITY OF LOS ANGELES VMT CALCULATOR

Report 2: TDM Inputs

Date: May 4, 2023

Project Name: 1149 Las Palmas

Project Scenario:

Project Address: 1149 N LAS PALMAS AVE, 90038



Version 1.3

TDM Strategy Inputs, Cont.				
Strategy Type		Description	Proposed Project	Mitigations
Transit	Reduce transit headways	Reduction in headways (increase in frequency) (%)	0%	0%
		Existing transit mode share (as a percent of total daily trips) (%)	0%	0%
		Lines within project site improved (<50%, >=50%)	0	0
	Implement neighborhood shuttle	Degree of implementation (low, medium, high)	0	0
		Employees and residents eligible (%)	0%	0%
	Transit subsidies	Employees and residents eligible (%)	0%	0%
		Amount of transit subsidy per passenger (daily equivalent) (\$)	\$0.00	\$0.00
Education & Encouragement	Voluntary travel behavior change program	Employees and residents participating (%)	0%	0%
	Promotions and marketing	Employees and residents participating (%)	100%	100%
(cont. on following page)				

CITY OF LOS ANGELES VMT CALCULATOR

Report 2: TDM Inputs

Date: May 4, 2023

Project Name: 1149 Las Palmas

Project Scenario:

Project Address: 1149 N LAS PALMAS AVE, 90038



Version 1.3

TDM Strategy Inputs, Cont.				
Strategy Type		Description	Proposed Project	Mitigations
Commute Trip Reductions	Required commute trip reduction program	Employees participating (%)	0%	0%
	Alternative Work Schedules and Telecommute	Employees participating (%)	0%	0%
		Type of program	0	0
		Degree of implementation (low, medium, high)	0	0
	Employer sponsored vanpool or shuttle	Employees eligible (%)	0%	0%
		Employer size (small, medium, large)	0	0
	Ride-share program	Employees eligible (%)	0%	100%
Shared Mobility	Car share	Car share project setting (Urban, Suburban, All Other)	0	0
	Bike share	Within 600 feet of existing bike share station - OR- implementing new bike share station (Yes/No)	0	0
	School carpool program	Level of implementation (Low, Medium, High)	0	0
(cont. on following page)				

CITY OF LOS ANGELES VMT CALCULATOR

Report 2: TDM Inputs

Date: May 4, 2023

Project Name: 1149 Las Palmas

Project Scenario:

Project Address: 1149 N LAS PALMAS AVE, 90038



Version 1.3

TDM Strategy Inputs, Cont.				
Strategy Type		Description	Proposed Project	Mitigations
Bicycle Infrastructure	Implement/improve on-street bicycle facility	Provide bicycle facility along site (Yes/No)	0	0
	Include Bike parking per LAMC	Meets City Bike Parking Code (Yes/No)	Yes	Yes
	Include secure bike parking and showers	Includes indoor bike parking/lockers, showers, & repair station (Yes/No)	0	0
Neighborhood Enhancement	Traffic calming improvements	Streets with traffic calming	0%	0%
		Improvements (%)		
	Pedestrian network improvements	Intersections with traffic calming improvements (%)	0%	0%
		Included (within project and connecting off-site/within project only)	0	0

CITY OF LOS ANGELES VMT CALCULATOR

Report 3: TDM Outputs

Date: May 4, 2023
 Project Name: 1149 Las Palmas
 Project Scenario:
 Project Address: 1149 N LAS PALMAS AVE, 90038



Version 1.3

TDM Adjustments by Trip Purpose & Strategy

Place type: Compact Infill

		Home Based Work Production		Home Based Work Attraction		Home Based Other Production		Home Based Other Attraction		Non-Home Based Other Production		Non-Home Based Other Attraction		Source
		Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	
Parking	Reduce parking supply	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	TDM Strategy Appendix, Parking sections 1 - 5
	Unbundle parking	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	Parking cash-out	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	Prior workplace parking	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	Residential area parking permits	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
Transit	Reduce transit headways	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	TDM Strategy Appendix, Transit sections 1 - 3
	Implement neighborhood shuttle	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	Transit subsidies	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
Education & Encouragement	Voluntary travel behavior change program	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	TDM Strategy Appendix, Education & Encouragement sections 1 - 2
	Promotions and marketing	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	0%	
Commute Trip Reductions	Required commute trip reduction program	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	TDM Strategy Appendix, Commute Trip Reductions sections 1 - 4
	Alternative Work Schedules and Telecommute Program	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	Employer sponsored vanpool or shuttle	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	Ride-share program	0%	0%	0%	15%	0%	0%	0%	0%	0%	0%	0%	0%	
Shared Mobility	Car-share	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	TDM Strategy Appendix, Shared Mobility sections 1 - 3
	Bike share	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
	School carpool program	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	

CITY OF LOS ANGELES VMT CALCULATOR

Report 3: TDM Outputs

Date: May 4, 2023
 Project Name: 1149 Las Palmas
 Project Scenario:
 Project Address: 1149 N LAS PALMAS AVE, 90038



Version 1.3

TDM Adjustments by Trip Purpose & Strategy, Cont.

Place type: Compact Infill

		Home Based Work Production		Home Based Work Attraction		Home Based Other Production		Home Based Other Attraction		Non-Home Based Other Production		Non-Home Based Other Attraction		Source
		Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	
Bicycle Infrastructure	Implement/ Improve on-street bicycle facility	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	TDM Strategy Appendix, Bicycle Infrastructure sections 1 - 3
	Include Bike parking per LAMC	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	
	Include secure bike parking and showers	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
Neighborhood Enhancement	Traffic calming improvements	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	TDM Strategy Appendix, Neighborhood Enhancement sections 1 - 2
	Pedestrian network improvements	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	

Final Combined & Maximum TDM Effect

	Home Based Work Production		Home Based Work Attraction		Home Based Other Production		Home Based Other Attraction		Non-Home Based Other Production		Non-Home Based Other Attraction	
	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated
COMBINED TOTAL	6%	6%	6%	20%	6%	6%	6%	6%	6%	6%	6%	2%
MAX. TDM EFFECT	6%	6%	6%	20%	6%	6%	6%	6%	6%	6%	6%	6%

$$= \text{Minimum } (X\%, 1 - [(1-A) * (1-B) \dots])$$

where X%=

PLACE	urban	75%
TYPE	compact infill	40%
MAX:	suburban center	20%
	suburban	15%

Note: $(1 - [(1-A) * (1-B) \dots])$ reflects the dampened combined effectiveness of TDM Strategies (e.g., A, B, ...). See the TDM Strategy Appendix (Transportation Assessment Guidelines Attachment G) for further discussion of dampening.

CITY OF LOS ANGELES VMT CALCULATOR

Report 4: MXD Methodology

Date: May 4, 2023

Project Name: 1149 Las Palmas

Project Scenario:

Project Address: 1149 N LAS PALMAS AVE, 90038



Version 1.3

MXD Methodology - Project Without TDM

	Unadjusted Trips	MXD Adjustment	MXD Trips	Average Trip Length	Unadjusted VMT	MXD VMT
Home Based Work Production	0	0.0%	0	7.2	0	0
Home Based Other Production	0	0.0%	0	4.9	0	0
Non-Home Based Other Production	115	-6.1%	108	7.4	851	799
Home-Based Work Attraction	505	-28.7%	360	9.0	4,545	3,240
Home-Based Other Attraction	230	-41.7%	134	6.7	1,541	898
Non-Home Based Other Attraction	115	-6.1%	108	6.6	759	713

MXD Methodology with TDM Measures

	Proposed Project			Project with Mitigation Measures		
	TDM Adjustment	Project Trips	Project VMT	TDM Adjustment	Mitigated Trips	Mitigated VMT
Home Based Work Production	-5.9%	0	0	-5.9%	0	0
Home Based Other Production	-5.9%	0	0	-5.9%	0	0
Non-Home Based Other Production	-5.9%	102	752	-5.9%	102	752
Home-Based Work Attraction	-5.9%	339	3,049	-20.0%	288	2,591
Home-Based Other Attraction	-5.9%	126	845	-5.9%	126	845
Non-Home Based Other Attraction	-5.9%	102	671	-5.9%	102	671

MXD VMT Methodology Per Capita & Per Employee

Total Population: 0

Total Employees: 348

APC: Central

	Proposed Project	Project with Mitigation Measures
Total Home Based Production VMT	0	0
Total Home Based Work Attraction VMT	3,049	2,591
Total Home Based VMT Per Capita	0.0	0.0
Total Work Based VMT Per Employee	8.8	7.4

Opening Year (2025) Cumulative Without Project Conditions

Level of service (LOS) analyses were conducted for weekday AM and PM peak hour conditions for the Project's Opening Year 2025 Cumulative Without Project conditions. The intersection LOS results are shown in **Table 8** below. Similar to the existing conditions, all study intersections are projected to operate at LOS D or better during the AM and PM peak periods, except the intersection at N. McCadden Place and Santa Monica Boulevard. The intersection at N. McCadden Place and Santa Monica Boulevard is a two-way-stop-controlled (TWSC) intersection which would operate at LOS F.

Table 7: Opening Year (2025) Cumulative Without Project Level of Service

	Intersection	Traffic Control	AM Peak Hour		PM Peak Hour	
			Delay	LOS	Delay	LOS
1	Lexington Avenue & N. La Palmas Avenue	AWSC	10.8	B	11.2	B
2	N. Las Palmas Avenue & Santa Monica Boulevard	Signal	41.3	D	32.1	C
3	N. McCadden Place & Lexington Avenue	AWSC	8.8	A	8.7	A
4	N. McCadden Place & Santa Monica Boulevard	TWSC*	180.3	F	392.8	F
5	N. Las Palmas Avenue & Project Driveway 1	Future	-	-	-	-
6	N. Las Palmas Avenue & Project Driveway 2	Future	-	-	-	-

Note: * The delay for the worst approach is reported for TWSC.

The resulting traffic volumes for Opening Year 2025 Cumulative Without Project Conditions are shown on **Figure 10**.

Opening Year (2025) Cumulative Plus Project Conditions

Project-related traffic was added to the Project Opening Year 2025 Cumulative traffic volumes.

Level of service (LOS) analyses were conducted for weekday AM and PM peak hour conditions for the Project's Opening Year 2025 Cumulative Plus Project Conditions. The intersection LOS results are shown in **Table 9** on the next page.

Opening Year 2025 Cumulative Plus Project traffic volumes at the study intersections are shown on **Figure 11**.

Table 8: Opening Year (2025) Cumulative Plus Project Level of Service

Intersection		Traffic Control	Opening Year (2025)				Opening Year (2025) with Project				Change in Delay	
			AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		AM Peak Hour	PM Peak Hour
			Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	Delay
1	Lexington Avenue & N. La Palmas Avenue	AWSC	10.8	B	11.2	B	11.4	B	12.1	B	0.6	0.9
2	N. Las Palmas Avenue & Santa Monica Boulevard	Signal	41.3	D	34.1	C	44.4	D	42.9	D	3.1	8.8
3	N. McCadden Place & Lexington Avenue	AWSC	8.8	A	8.7	A	8.8	A	8.8	A	0	0.1
4	N. McCadden Place & Santa Monica Boulevard	TWSC*	180.3	F	392.8	F	186.6	F	495.7	F	6.3	102.9
5	N. Las Palmas Avenue & Project Driveway 1	TWSC*	-	-	-	-	10.6	B	11.1	B	-	-
6	N. Las Palmas Avenue & Project Driveway 2	TWSC*	-	-	-	-	11.7	B	11.4	B	-	-