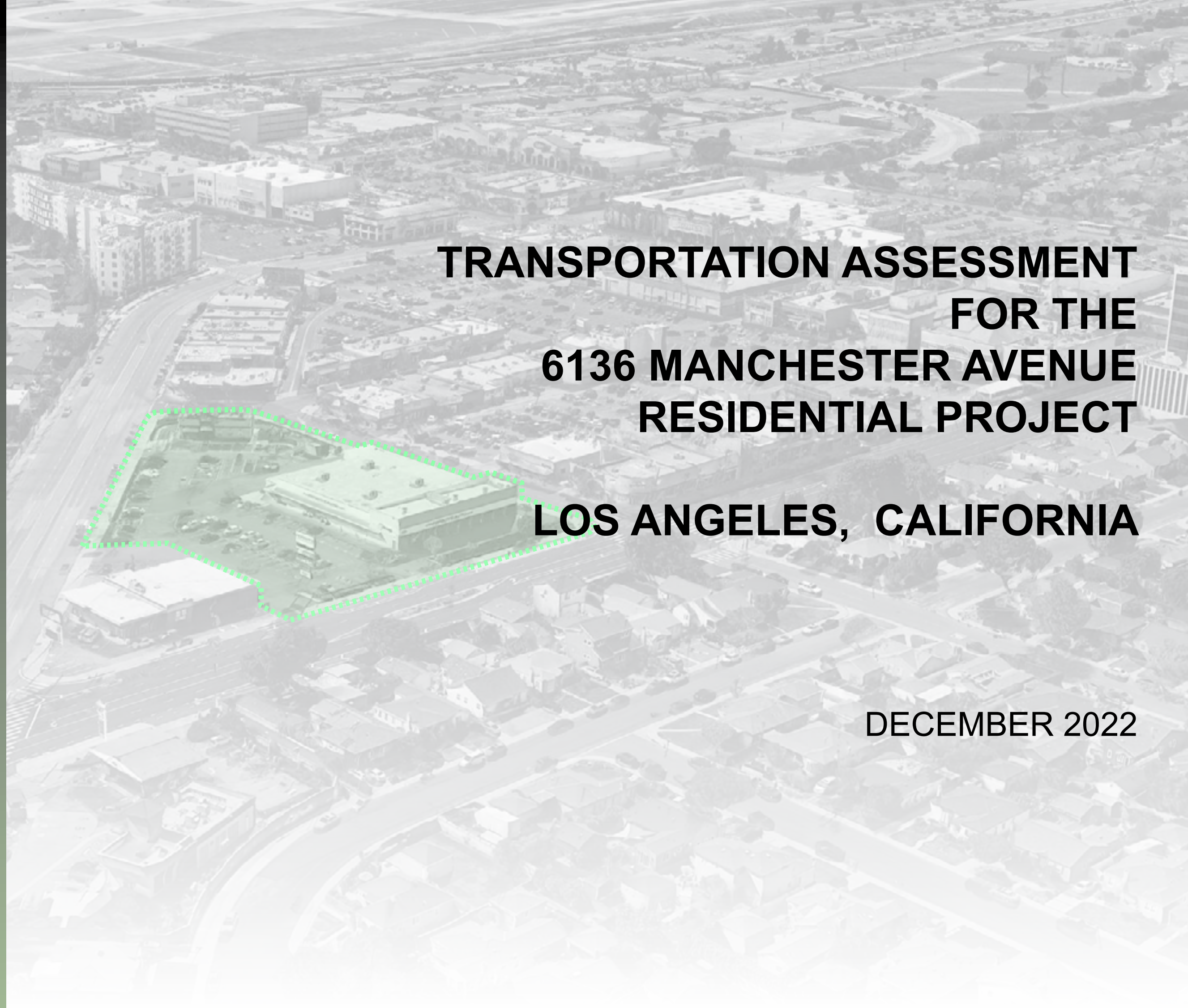
Appendix K

Transportation

Appendix K.1

Transportation Assessment



TRANSPORTATION ASSESSMENT FOR THE 6136 MANCHESTER AVENUE RESIDENTIAL PROJECT

LOS ANGELES, CALIFORNIA

DECEMBER 2022

PREPARED FOR

6136 MANCHESTER AVENUE APARTMENTS, LLC

PREPARED BY

Gibson
transportation consulting, inc.

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Prepared for:

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Table of Contents

Table of Contents, cont.

List of Figures

NO.

List of Tables

NO.

Chapter 1
Introduction

This study presents the transportation assessment for the 6136 Manchester Avenue Residential Project (Project) located at 6136 Manchester Avenue (Project Site) in the *Westchester – Playa Del Rey Community Plan* (Los Angeles Department of City Planning [LADCP], Adopted April 2004) area of the City of Los Angeles (City). The methodology and base assumptions used in the analysis were established in conjunction with the Los Angeles Department of Transportation (LADOT).

PROJECT DESCRIPTION

6136 Manchester Avenue Apartments, LLC (Project Applicant) proposes to construct a residential mixed-use development that includes 441 residential units, including 66 affordable housing units, and approximately 16,600 square feet (sf) of commercial uses. The Project Site currently contains approximately 19,650 sf of existing auto repair uses and 2,165 sf of fast-food restaurant uses that would be replaced with the development of the Project.

The Project would include approximately 566 parking spaces on the ground, mezzanine, and second floors. The Project is anticipated to provide at least 220 bicycle parking spaces, including 193 long-term spaces and 27 short-term spaces. Existing vehicular access to the Project Site is primarily provided via Truxton Avenue, Manchester Avenue, and La Tijera Boulevard. The Project will reduce the overall number of vehicular driveways and potential conflicts by removing the two existing driveways on Manchester Avenue and replacing the two existing driveways on both Truxton Avenue and La Tijera Boulevard with a single driveway on each street. The Project would provide a total of two Project driveways, one full access driveway on Truxton Avenue and one full access driveway on La Tijera Boulevard. Bicycle and pedestrian access would be provided via separate entrances on Truxton Avenue and La Tijera Boulevard. The conceptual Project Site plan is shown in Figure 1.

The Project is anticipated to be completed and operational by Year 2027.

PROJECT LOCATION

As shown in Figure 2, the Project Site is located within City Council District 11 and consists of two parcels assigned Assessor Parcel Numbers 4123-004-010 and 4123-004-011 in the Los Angeles County Assessor's records. The Project Site is bounded by Manchester Avenue to the north, auto repair uses to the east, La Tijera Boulevard to the south, and Truxton Avenue to the west. Most nearby uses are commercial or residential. The Project Site is located approximately 1.00 miles northeast of Los Angeles International Airport, 1.30 miles west of the San Diego Freeway (I-405), and approximately 1.90 miles north of the Glenn Anderson Freeway (I-105).

The Project Site is located adjacent to a bus stop at Truxton Avenue & Manchester Avenue serving Los Angeles County Metropolitan Transportation Authority (Metro) Local Bus Routes 102 and 115 and approximately 1,000 feet east of bus stops at Sepulveda Boulevard & Manchester Avenue serving Metro Local Routes 102 and 115, LADOT Commuter Express (CE) Route 574, Santa Monica Big Blue Bus (BBB) Routes 3 and Rapid 3, and Culver CityBus Routes 6 and Rapid 6. Also notable is the Project Site's location within a Southern California Association of Governments (SCAG)-identified High Quality Transit Area (HQTA)[1] for the base year 2016[2] and the plan year 2045[3] of the *Connect SoCal – The 2020-2045 Regional Transportation Plan / Sustainable Communities Strategy* (SCAG, Adopted September 3, 2020) (RTP/SCS) transit networks.

STUDY SCOPE

The scope of analysis for this study was developed in consultation with LADOT and is consistent with *Transportation Assessment Guidelines* (LADOT, July 2020) (TAG) and in compliance with the California Environmental Quality Act (CEQA) Guidelines (California Code of Regulations, Title 14,

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[1] SCAG defines a HQTA as being "within ½ mile of a well-serviced transit stop or a transit corridor with 15-minute or less service frequency during peak commute hours".

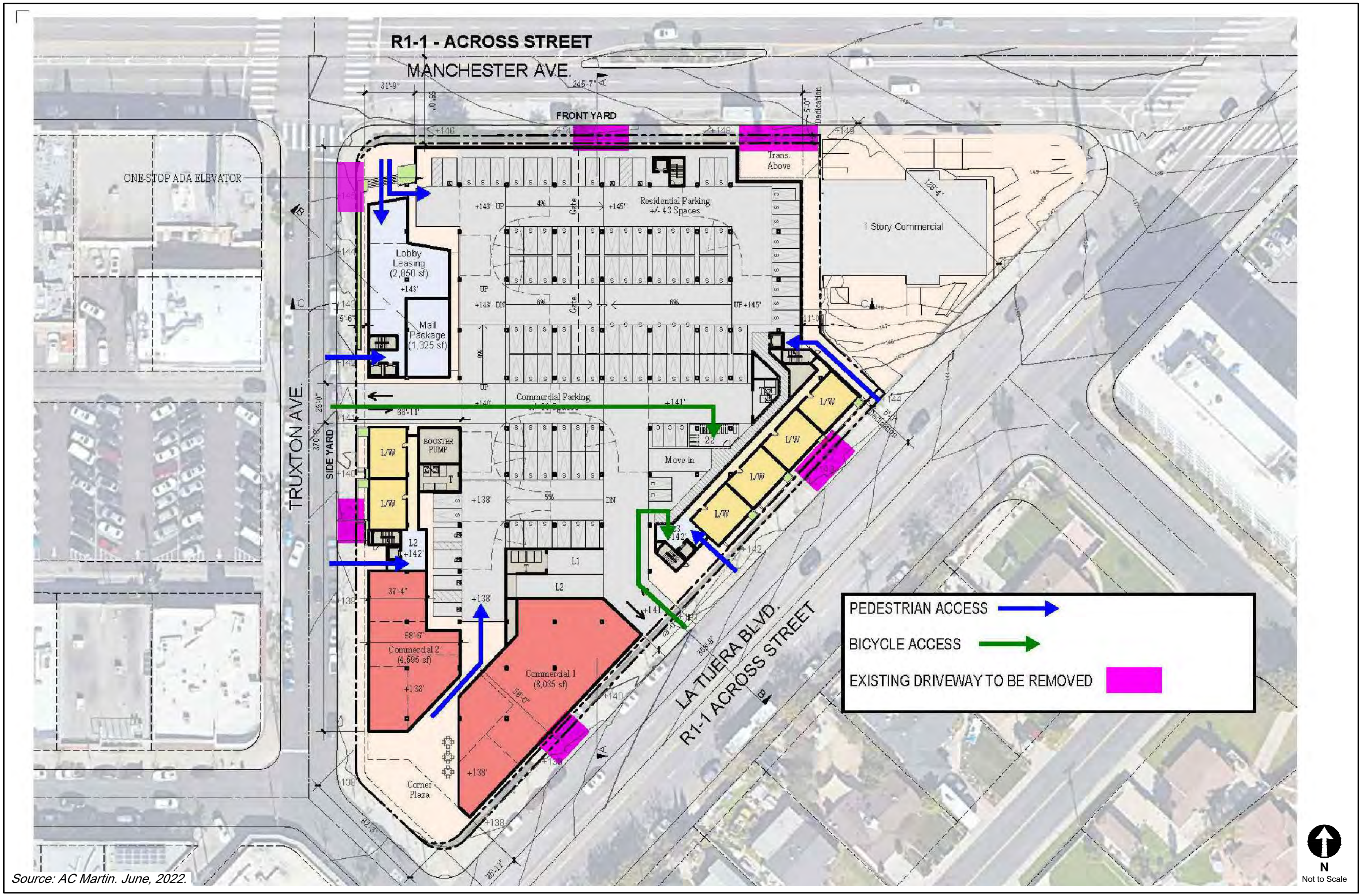
[2] As illustrated at: https://gisdata-scag.opendata.arcgis.com/datasets/SCAG::high-quality-transit-areas-hqta-2016-scag-region/.

[3] As illustrated at: https://gisdata-scag.opendata.arcgis.com/datasets/SCAG::high-quality-transit-areas-hqta-2045-scag-region/.

Section 15000 and following). The base assumptions and technical methodologies (i.e., trip generation, study locations, analysis methodology, etc.) were identified as part of the study approach and were outlined in a Memorandum of Understanding (MOU) that was reviewed and approved by LADOT in May 2022 and is provided in Appendix A.

ORGANIZATION OF REPORT

This report is divided into six chapters, including this Introduction. Chapter 2 describes the Project context including the existing and future circulation system, traffic volumes, and traffic conditions in the Project area. Chapter 3 describes the procedure used to forecast Project traffic volumes and distribution. Chapter 4 presents the CEQA analysis of transportation impacts. Chapter 5 details the non-CEQA transportation analyses. Chapter 6 summarizes the highlights and conclusions of this report. The appendices contain supporting documentation, including the MOU that outlines the study scope and assumptions, and additional details supporting the technical analyses.



Source: AC Martin. June, 2022.

PROJECT SITE PLAN

FIGURE 1

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PROJECT SITE LOCATION

FIGURE 2

Chapter 2
Project Context

A comprehensive data collection effort was undertaken to develop a detailed description of existing and future conditions in the Project area.

The Existing Conditions analysis includes an assessment of the existing freeway and street systems, an analysis of traffic volumes and current operating conditions, and an assessment of the existing public transit service, as well as pedestrian and bicycle circulation, in Year 2022. An inventory of lane configurations, signal phasing, parking restrictions, etc., for the analyzed intersections was also collected.

In addition, this Chapter contains a discussion of the future conditions detailing the assumptions used to develop the Future without Project Conditions in Year 2027, which corresponds to the estimated occupancy of the Project.

STUDY AREA

The Study Area includes nine intersections along Sepulveda Boulevard, Manchester Avenue, La Tijera Boulevard, and Truxton Avenue, as shown in Figure 3. This Study Area was established in consultation with LADOT based on the following factors identified in the TAG:

1. Primary driveway(s)
2. Intersections at either end of the block on which the Project is located or up to 600 feet from the primary Project driveway(s)
3. Unsignalized intersections adjacent to the Project Site that are integral to the Project's site access and circulation plan

4. Signalized intersections in proximity to the Project Site where 100 or more Project trips would be added

Based on the above factors identified in the TAG, a total of nine study intersections, five signalized and four unsignalized, within the City were selected for detailed analysis as listed in Table 1. Figure 3 illustrates the location of the Project Site in relation to the surrounding street system and the nine study intersections. The existing and proposed future lane configurations at all nine study intersections are provided in Figure 4.

EXISTING TRANSPORTATION CONDITIONS

Existing Street System

The existing street system in the Study Area consists of a regional roadway system including Arterial Streets and Local Streets that provide regional, sub-regional, or local access and circulation to the Project Site. These transportation facilities generally provide two to four travel lanes and usually allow parking on either side of the street. Typically, the speed limits range between 25 and 35 miles per hour (mph) on the streets and 55 mph on freeways.

City street classifications are designated in *Mobility Plan 2035, An Element of the General Plan* (LADCP, September 2016) (Mobility Plan). The Mobility Plan defines specific street standards in an effort to provide an enhanced balance between traffic flow and other important street functions including transit routes and stops, pedestrian environments, bicycle routes, building design and site access, etc. Per the Mobility Plan, street classifications are defined as follows:

- <u>Freeways</u> are high-volume, high-speed roadways with limited access provided by interchanges that carry regional traffic through and do not provide local access to adjacent land uses.
- <u>Arterial Streets</u> are major streets that serve through traffic, as well as provide access to major commercial activity centers. Arterials are divided into two categories:
    - <u>Boulevards</u> represent the widest Arterial Streets that typically provide regional access to major destinations and include two categories:

- Boulevard I provides up to four travel lanes in each direction with a target operating speed of 40 mph, and generally includes a right-of-way (ROW) width of 136 feet and pavement width of 100 feet.

- Boulevard II provides up to three travel lanes in each direction with a target operating speed of 35 mph, with a ROW width of 110 feet and a pavement width of 80 feet.

o Avenues are typically narrower Arterial Streets that pass through both residential and commercial areas and include three categories:

- Avenue I provides up to two travel lanes in each direction with a target operating speed of 35 mph, with a ROW width of 100 feet and pavement width of 70 feet.

- Avenue II provides up to two travel lanes in each direction with a target operating speed of 30 mph, with a ROW width of 86 feet and pavement width of 56 feet.

- Avenue III provides up to two travel lanes in each direction with a target operating speed of 25 mph, with a ROW width of 72 feet and pavement width of 46 feet.

- Collector Streets are generally located in residential neighborhoods and provide access to and from Arterial Streets for local traffic and are not intended for cut-through traffic. They provide one travel lane in each direction with operating speed of 25 mph, with a ROW width of varying between 66-68 feet and a pavement width varying between 40-48 feet.

- Local Streets are intended to accommodate lower volumes of vehicle traffic and provide parking on both sides of the street. They provide one travel lane in each direction with a target operating speed of 15 to 20 mph. Pavement widths may vary between 30-44 feet within a ROW width of 50-64 feet.

Primary regional access to the Project Site is provided by I-405 (oriented north-south) and I-105 (oriented east-west). I-405 is located approximately 1.30 miles east of the Project Site. Access to I-405 is provided via La Cienega Boulevard and Manchester Boulevard. I-105 is located approximately 1.90 miles south of the Project Site. Access to I-105 is provided at Sepulveda Boulevard. In proximity to the Project Site, the Study Area is served by major thoroughfares including Sepulveda Boulevard, La Tijera Boulevard, and Manchester Avenue. The following is a brief description of the roadways within the Study Area, including their classifications in the Mobility Plan:

Roadways

- Manchester Avenue – Manchester Avenue is a designated Boulevard II that travels in the east-west direction and is located along the northern boundary of the Project Site. It provides four travel lanes, two lanes in each direction, as well as left-turn lanes at intersections and a center median. Bicycle lanes are also provided on both sides of the street within the Study Area. The total roadway width as required by the Mobility Plan is 80 feet for a Boulevard II. Unmetered on-street parking with morning and afternoon peak hour restrictions is generally available on both sides of the street west of Truxton Avenue. Parking is generally not provided east of Truxton Avenue within the Study Area.

- La Tijera Boulevard – La Tijera Boulevard is a designated Boulevard II that travels in the east-west direction west of Sepulveda Eastway and in the northeast-southwest direction east of Sepulveda Eastway. It is located along the southeast boundary of the Project Site. It provides four travel lanes, two lanes in each direction, and a two-way left-turn median and left-turn lanes at most intersections. The total roadway width as required by the Mobility Plan is 80 feet for a Boulevard II. Unmetered on-street parking is generally available on both sides of the street east of Sepulveda Boulevard and on the east side of the street north of Manchester Avenue within the Study Area.

- Sepulveda Boulevard – Sepulveda Boulevard is a designated Boulevard I that travels in the north-south direction and is located west of the Project Site. It provides six travel lanes, three lanes in each direction, and left-turn lanes at most intersections. Bicycle lanes are provided on both sides of the street north of Manchester Avenue within the Study Area. The total roadway width as required by the Mobility Plan is 100 feet for a Boulevard I. Unmetered on-street parking is generally available on both sides of the street within the Study Area.

- Sepulveda Eastway – Sepulveda Eastway is a designated Local Street north of La Tijera Boulevard and a designated Collector Street south of La Tijera Boulevard that travels in the north-south direction and is located southwest of the Project Site. It provides two travel lanes, one lane in each direction. The total roadway width as required by the Mobility Plan is 36 feet for a Local Street and 40 feet for a Collector Street. Unmetered on-street parking is generally available on both sides of the street north of La Tijera Boulevard and on the east side of the street south of La Tijera Boulevard within the Study Area.

- Truxton Avenue – Truxton Avenue is a designated Local Street that travels in the north-south direction and is located along the west edge of the Project Site. It provides two travel lanes, one lane in each direction. The total roadway width as required by the Mobility Plan is 36 feet for a Local Street. Unmetered on-street parking is generally available on both sides of the street within the Study Area.

- Bleriot Avenue – Bleriot Avenue is a designated Local Street that travels in the northwest-southeast direction and is located east of the Project Site. It provides two travel lanes, one lane in each direction. The total roadway width as required by the Mobility Plan is 36 feet for a Local Street. Unmetered on-street parking is generally available on both sides of the street within the Study Area.

As required by the TAG, a comprehensive review of existing transportation infrastructure and conditions was conducted within the Project Site vicinity, which is typically defined as a minimum 0.25-mile radius from the edge of Project Site. The existing mobility facilities and street designations as defined in the Mobility Plan for the area within the Project Site vicinity are detailed in Figures 5 and 6, respectively. An inventory was collected of facilities serving pedestrians, bicyclists, and transit riders within the Project Site vicinity. Figure 7 identifies the nearby commercial facilities that could be considered pedestrian destinations, along with an estimate of pedestrian distribution. Figures 8 and 9 show the existing transportation facilities and transit service, respectively, that would support pedestrian activity to and from the pedestrian destinations.

Existing Pedestrian Facilities

The walkability of existing facilities is based on the availability of pedestrian routes necessary to accomplish daily tasks without the use of an automobile. These attributes are quantified by WalkScore.com and assigned a score out of 100 points. With the various commercial, institutional, office, school and retail land uses adjacent to residential neighborhoods, the walkability of the Project Site is approximately 87 points[4].

The existing sidewalks that serve as routes to the Project Site provide proper connectivity and adequate widths for a comfortable and safe pedestrian environment and connect to pedestrian crosswalks at major intersections. Generally 12-foot wide sidewalks and parkways are provided along the Project frontage on Truxton Avenue and La Tijera Boulevard, and eight-foot wide sidewalks along the Project frontage on Manchester Avenue. The Project is providing five-foot dedications along Manchester Avenue and La Tijera Boulevard expanding the sidewalk widths adjacent to the Project Site to 13 feet and 17 feet, respectively. The following nearby signalized study intersections provide pedestrian facilities, including curb ramps on all approaches, pedestrian phasing, continental crosswalks (high-visibility crosswalk striping characterized by “zebra” striping patterns), and Americans with Disabilities Act (ADA) accessible curb ramps:

[4] WalkScore.com rates the Project Site (6136 West Manchester Avenue) with a score of 87 of 100 possible points (scores accessed on May 31, 2022, for the Westchester-Playa Del Rey Neighborhood). Walk Score calculates the walkability of specific addresses by taking into account the ease of living in the neighborhood with a reduced reliance on automobile travel.

- Truxton Avenue & Manchester Avenue (Intersection #2)
- La Tijera Boulevard & Manchester Avenue (Intersection #3)

Pedestrian destinations within the Project Site vicinity, including numerous commercial retail and restaurant uses to the east, west, and south, are also shown in Figure 7.

Vision Zero

As described in *Vision Zero: Eliminating Traffic Deaths in Los Angeles by 2025* (City of Los Angeles, August 2015) (Vision Zero), Vision Zero is a traffic safety policy that promotes strategies to eliminate collisions that result in severe injury or death. Vision Zero has identified the High Injury Network (HIN), a network of streets based on the collision data from the last five years, where strategic investments will have the biggest impact in reducing death and severe injury. Within the Project Site vicinity, Manchester Avenue west of Truxton Avenue and Sepulveda Boulevard north of La Tijera Boulevard have been identified in the HIN, as shown in Figure 8.

Existing Bicycle System

Based on *2010 Bicycle Plan, A Component of the City of Los Angeles Transportation Element* (Los Angeles Department of City Planning, adopted March 1, 2011) (2010 Bicycle Plan), the existing bicycle system consists of a limited network of bicycle lanes (Class II) and bicycle routes (Class III). Class II bicycle lanes are a component of street design with dedicated striping separating vehicular traffic from bicycle traffic. These facilities offer a safer environment for both cyclists and motorists. Class III bicycle routes and bicycle-friendly streets are those where motorists and cyclists share the roadway and there is no separated striping for bicycle travel. Bicycle routes and bicycle-friendly streets are preferably placed on Collector Streets and low volume Arterial Streets. Bicycle routes with shared lane markings, or “sharrows”, remind bicyclists to ride farther from parked cars to prevent collisions, increase awareness of motorists that bicycles may be in the travel lane, and show bicyclists the correct direction of travel.

The components of the 2010 Bicycle Plan have been incorporated into the bicycle network of the Mobility Plan. The Mobility Plan consists of a Bicycle Enhanced Network (Low-Stress Network)

(BEN) and a Bicycle Lane Network (BLN). The BEN is a subset of and supplement to the 2010 Bicycle Plan and is comprised of a network of streets that prioritize bicyclists and provide bicycle paths (Class I) and protected bicycle lanes (Class IV). Class IV protected bicycle lanes including cycle tracks, bicycle traffic signals, and demarcated areas to facilitate turns at intersections and along neighborhood streets, provide further protection from other travel lanes. Class IV networks often provide mini-roundabouts, cross-street stop signs, crossing islands at major intersection crossings, improved street lighting, bicycle boxes, and bicycle-only left-turn pockets. Once implemented, these facilities would offer a safer environment for both cyclists and motorists. The BLN consists of Class II bicycle lanes with striped separation from motorized vehicle traffic and Class III bicycle lanes (sharrows).

Within the Project Site vicinity, Class II bicycle lanes are provided along Manchester Avenue and Sepulveda Boulevard north of Manchester Avenue, as shown in Figure 8.

Existing Transit System

Figure 9 illustrates the existing transit service routes within the Project Site vicinity, which is served by bus lines operated by the Metro, Culver CityBus, LADOT CE, and Santa Monica BBB. As described in Chapter 1, the Project Site is also located within a SCAG HQTA based on the 0.25 mile walking distance to the intersection of Sepulveda Boulevard & Manchester Avenue where transit routes with a 15 minute or less service frequency during peak commute hours operate on both streets. Outside of the Project Site vicinity, the Metro C Line (formerly the Metro Green Line), a fixed light-rail line that travels between the City of Redondo Beach and the City of Norwalk, operates approximately 2.02 miles south of the Project Site.

Table 2 summarizes the bus lines operating within the Project Site vicinity for each of the service providers in the region, the type of service (peak vs. off-peak, express vs. local), and frequency of service. The average frequency of transit service during the peak hours was derived from schedule information from each respective transit provider for the stop nearest the Project Site, as well as detailed trip data provided by Metro and Santa Monica BBB and schedule information from each respective transit provider.

Tables 3A and 3B summarize the total residual capacity of the Metro bus systems during the morning and afternoon peak hours, respectively, based on the frequency of service of each line, detailed ridership data provided by the transit provider, and the maximum seated and standing capacity of each bus. Ridership information for the Culver CityBus, LADOT CE, and Santa Monica BBB Rapid 3 bus system was not readily available. As shown in Tables 3A and 3B, for those routes with reported ridership, the transit lines within 0.25 miles walking distance of the Project Site have a minimum available capacity for 635 additional riders during the morning peak hour and 897 additional riders during the afternoon peak hour. The transit lines with bus stops or stations located more than 0.25 miles from the Project Site were not included.

Existing Traffic Volumes

Peak hour vehicular turning movement counts at the study intersections were collected in May 2022. Due to the current traffic conditions related to the State of California and City response to COVID-19, the Year 2022 traffic count data was adjusted based on a comparison of available pre-COVID weekday peak hour traffic data collected in September 2017 at the intersections of Sepulveda Boulevard & Manchester Avenue (Intersection #1), La Tijera Boulevard & Manchester Avenue (Intersection #3), and Sepulveda Boulevard & La Tijera Boulevard (Intersection #5) and early COVID period traffic data collected in June 2020 at the intersections of Truxton Avenue & Manchester Avenue (Intersection #2) and Truxton Avenue & La Tijera Boulevard (Intersection #7). Based on a comparison to the Year 2017 traffic volume data, an average increase of 15% and 24% for the morning and afternoon peak hours, respectively, was identified on the major streets. Comparison of the Year 2022 to the Year 2020 minor street volumes indicate that the new data is, as anticipated, higher than the early COVID period data and the difference in those volumes did not reach the same magnitude of difference on the arterials. The adjustments identified above were applied to the Year 2022 major street traffic volumes; the minor street volumes did not receive additional adjustments. Therefore, the resulting traffic volumes reflect typical traffic operations under Existing Conditions.

The Existing Conditions intersection peak hour traffic volumes are illustrated in Figure 10. Intersection turning movement counts are provided in Appendix B.

FUTURE CUMULATIVE TRANSPORTATION CONDITIONS

The forecast of Future without Project Conditions was prepared in accordance with procedures outlined in the TAG. Specifically, two requirements are provided for developing the cumulative traffic volume forecast:

> "The Transportation Assessment must estimate ambient traffic conditions for the study horizon year selected during the scoping phase and recorded in the executed MOU. The study must clearly identify the horizon year and annual ambient growth rate used for the study. The horizon year should align with the development project's expected completion year. For development projects constructed in phases over several years, the Transportation Assessment should analyze intermediary milestones before the buildout and completion of the project. The annual ambient growth rate shall be determined by LADOT staff during the scoping process and can be based on an adopted TSP, the most recent SCAG regional transportation model, the citywide transportation model, or other empirical information approved by LADOT.
>
> "The Transportation Assessment must consider related projects. For related development projects, this should include the associated trip generation for known development projects within one-half mile (2,640 foot) radius of the project site and one-quarter mile (1,320 foot) radius of the farthest outlying study intersections. Consultation with the Department of City Planning and LADOT may be required to compile the related projects list. The City's ZIMAS database can be used to assist in identifying development projects that have submitted applications to the City of Los Angeles. Project access and circulation constraints would be determined by adding project-generated trips to future base traffic volumes including ambient growth and related projects and conducting the operational analysis."

As described in detail below, this analysis includes increases to traffic from future projects and from regional growth projections. The ambient growth factor discussed below likely includes some traffic increases resulting from the Related Projects. Therefore, through some inherent double-counting of vehicles, the traffic analysis provides a highly conservative estimate of Future without Project traffic volumes.

The Future without Project traffic volumes, therefore, include ambient growth, which reflects increases in traffic due to regional growth and development outside the Study Area, as well as traffic generated by ongoing or entitled projects near or within the Study Area.

Ambient Traffic Growth

Traffic levels are expected to increase over time as a result of regional growth and development in and around the Study Area. Based on discussions with LADOT during the MOU process, a conservative ambient growth rate of 1% per year compounded annually was applied to the Existing Conditions traffic volumes to reflect Year 2027 (the estimated buildout year of the Project) conditions. The total adjustment applied over the five-year period was 5.10%. This growth factor accounts for increases in traffic due to potential projects plus projects not yet proposed and projects located outside the Study Area.

Related Projects

In accordance with the TAG, this study also considered the effects of the Project in relation to other developments either proposed, approved, or under construction (collectively, the Related Projects). Including this analysis step, the potential impact of the Project was evaluated within the context of past, present, and probable future developments capable of producing cumulative impacts.

The list of Related Projects is based on information provided by LADCP and LADOT, as well as recent traffic studies prepared for projects in the area. The Related Projects are detailed in Table 4 and their approximate locations shown in Figure 11.

Though the buildout years of many of these Related Projects are uncertain and may be well beyond the buildout year of the Project, and notwithstanding that some may never be approved or developed, they were all considered as part of this study and conservatively assumed to be completed by the Project buildout Year 2027. Therefore, the traffic growth due to the development of Related Projects considered in this analysis is highly conservative and, by itself, substantially overestimates the actual traffic volume growth in the Study Area that would likely occur prior to Project buildout. With the addition of the 1% per year ambient growth factor previously discussed, the future without Project cumulative condition is even more conservative.

Using these assumptions, the potential transportation effects of the Project were evaluated. The development of estimated traffic volumes added to the Study Area as a result of Related Projects involves the use of a three-step process: trip generation, trip distribution, and trip assignment.

Trip Generation. Trip generation estimates for the Related Projects were provided by LADOT, LADCP, or published transportation-related studies, or were calculated using a combination of previous study findings and the trip generation rates contained in *Trip Generation Manual, 11th Edition* (Institute of Transportation Engineers [ITE], 2021). The Related Projects trip generation estimates summarized in Table 4 are conservative in that they do not in every case account for any trips generated by the existing uses to be removed or the likely use of other travel modes (e.g., transit, bus, bicycling, walking, carpool, etc.) Further, in many cases, they do not account for the internal capture trips within a multi-use development or for the interaction of trips between multiple Related Projects, in which one Related Project serves as the origin for a trip destined for another Related Project.

Trip Distribution. The geographic distribution of the traffic generated by the Related Projects is dependent on several factors. These factors include the type and density of the proposed land uses, the geographic distribution of population from which the employees / residents and potential patrons of the proposed developments are drawn, and the location of these projects in relation to the surrounding street system. These factors are considered along with logical travel routes through the street system to develop a reasonable pattern of trip distribution.

Traffic Assignment. The trip generation estimates for the Related Projects were assigned to the local street system using the trip distribution pattern described above. Figure 12 shows the peak hour traffic volumes associated with these Related Projects at the study intersections.

Future without Project Traffic Volumes

The Related Projects volumes were added to the existing traffic volumes after accounting for ambient growth through the projected Project completion year of 2027. As discussed above, this is a conservative approach as many of the Related Projects may already be reflected in the ambient growth. These volumes represent the Future without Project Conditions (i.e., ambient traffic growth and Related Project traffic growth added to existing traffic volumes) for Year 2027 and are shown in Figure 13 for the nine study intersections.

Future Roadway and Street Improvements

The analysis of Future Conditions accounted for roadway improvements that were funded and reasonably expected to be implemented prior to the buildout of the Project in Year 2027. Any roadway improvement that would result in changes to the physical configuration at the study intersections would be incorporated into the analysis. Other proposed traffic / trip reduction strategies such as transportation demand management (TDM) programs for individual buildings and developments were omitted from the Future Conditions analyses. Figure 14 illustrates the future roadway modal priorities, including future transit, bicycle, and pedestrian facilities per the Mobility Plan, within the Study Area. The following projects were evaluated for their potential effects on the future roadway configurations. They were determined to not influence the Future without Project Conditions due to either the current development stage or speculation of completion date:

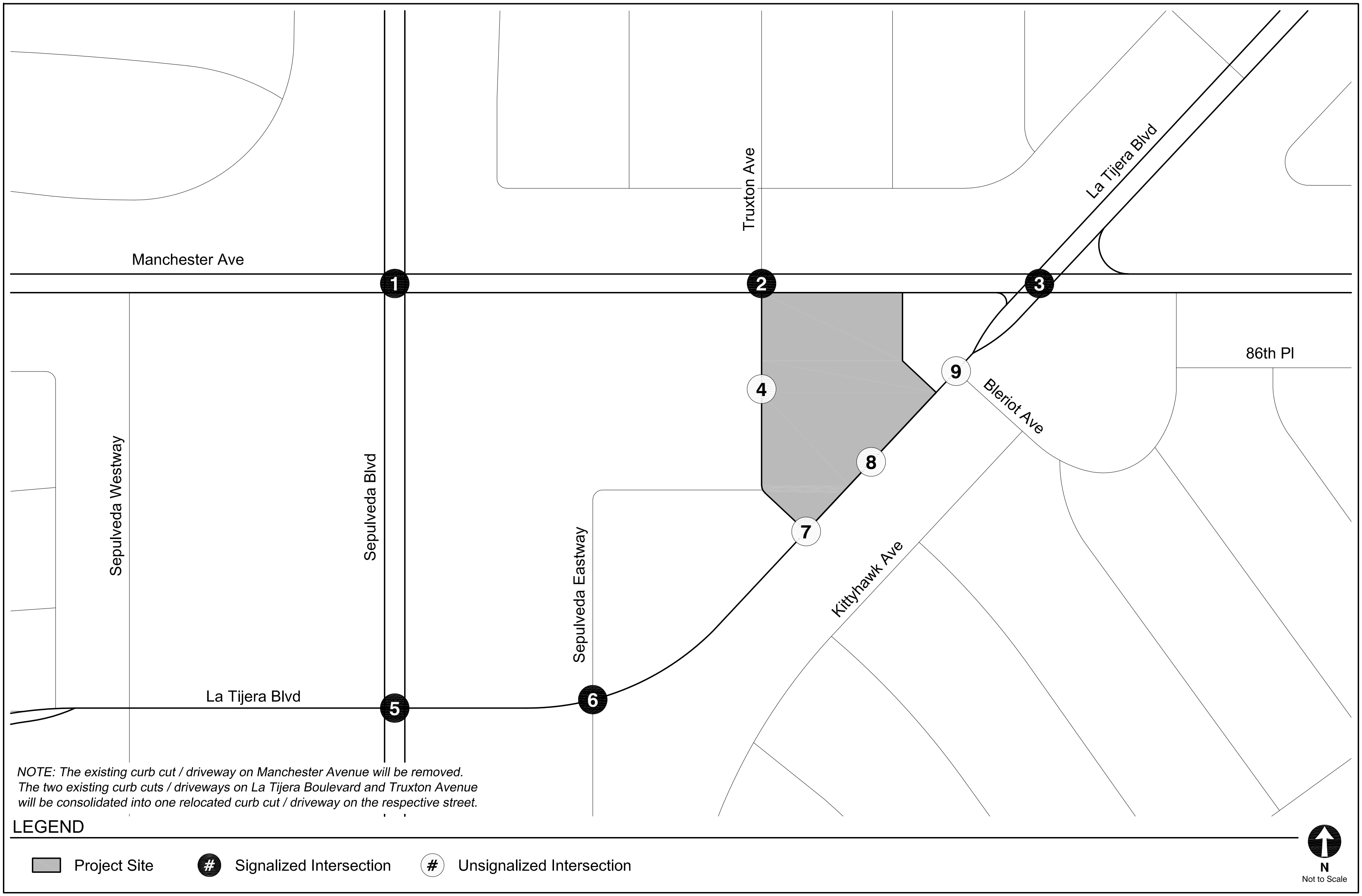
Mobility Plan. In the Mobility Plan, the City identifies key corridors as components of various "mobility-enhanced networks." Each network is intended to focus on improving a particular aspect of urban mobility, including transit, neighborhood connectivity, bicycles, pedestrians, and vehicles. The specific improvements that may be implemented in those networks have not yet been identified, and there is no schedule for implementation; therefore, no changes to intersection lane configurations were made as a result of the Mobility Plan. However, as detailed below, the mobility-enhanced networks included corridors within the Project Site vicinity and are depicted in Figure 14:

- Transit Enhanced Network (TEN): The TEN aims to improve existing and future bus services through reliable and frequent transit service in order to increase transit ridership, reduce single-occupancy vehicle trips, and integrate transit infrastructure investments within the surrounding street system. Sepulveda Boulevard and Manchester Avenue west of Sepulveda Boulevard have been designated as part of the TEN.

- Neighborhood Enhanced Network (NEN): The NEN reflects the synthesis of the bicycle and pedestrian networks and serves as a system of local streets that are slow moving and safe enough to connect neighborhoods through active transportation. No streets within the Study Area have been identified as part of the NEN.

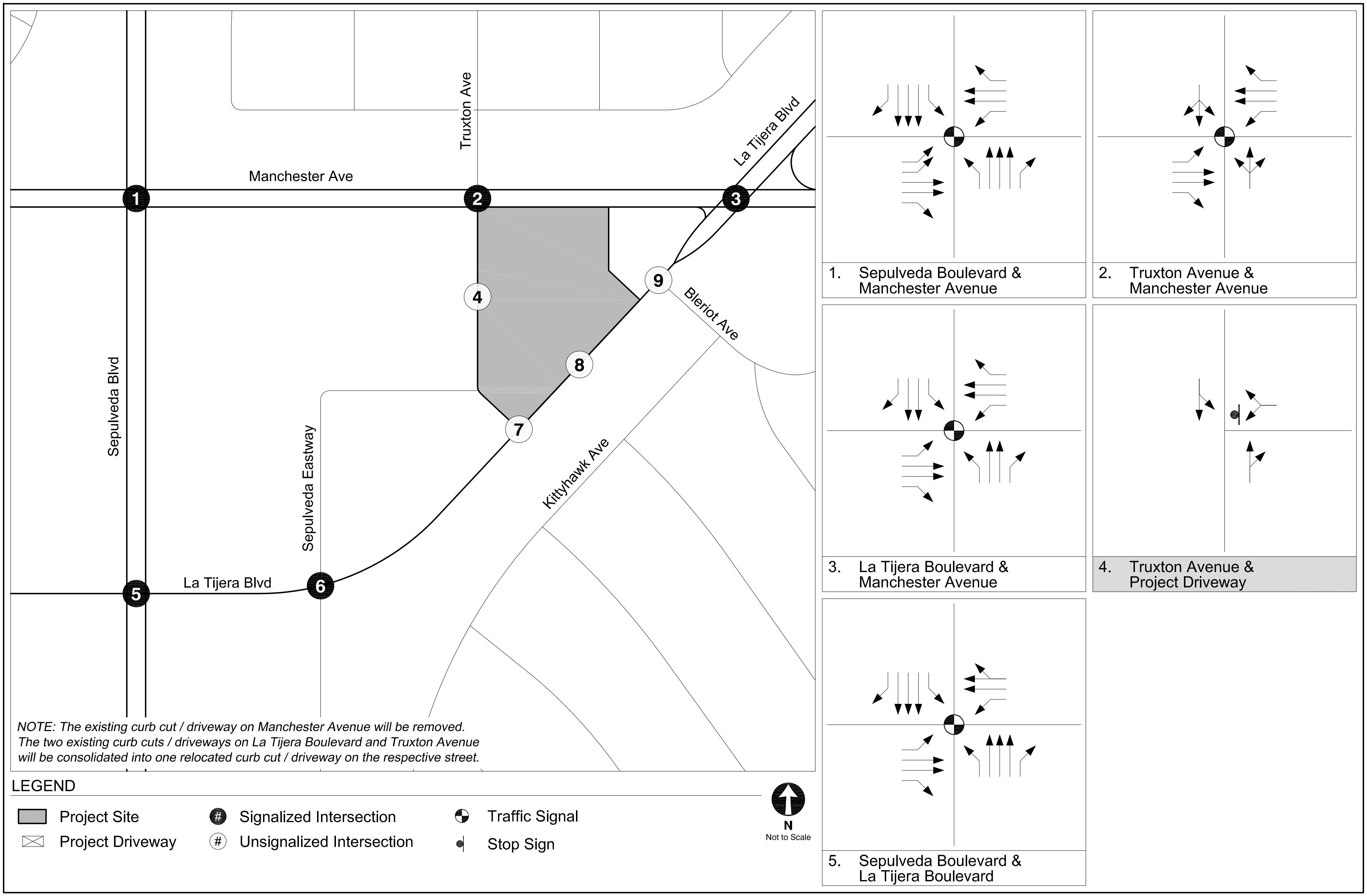
- BEN / BLN: Manchester Avenue and Sepulveda Boulevard north of Manchester Avenue have been identified as part of the BEN and La Tijera Boulevard has been identified as part of the BLN.

- Pedestrian Enhanced District (PED): The Mobility Plan aims to promote walking to reduce the reliance on automobile travel by providing more attractive and pedestrian-friendly sidewalks, as well as adding pedestrian signalizations, street trees, and pedestrian-oriented design features. Sepulveda Boulevard and La Tijera Boulevard are designated as part of the PED.



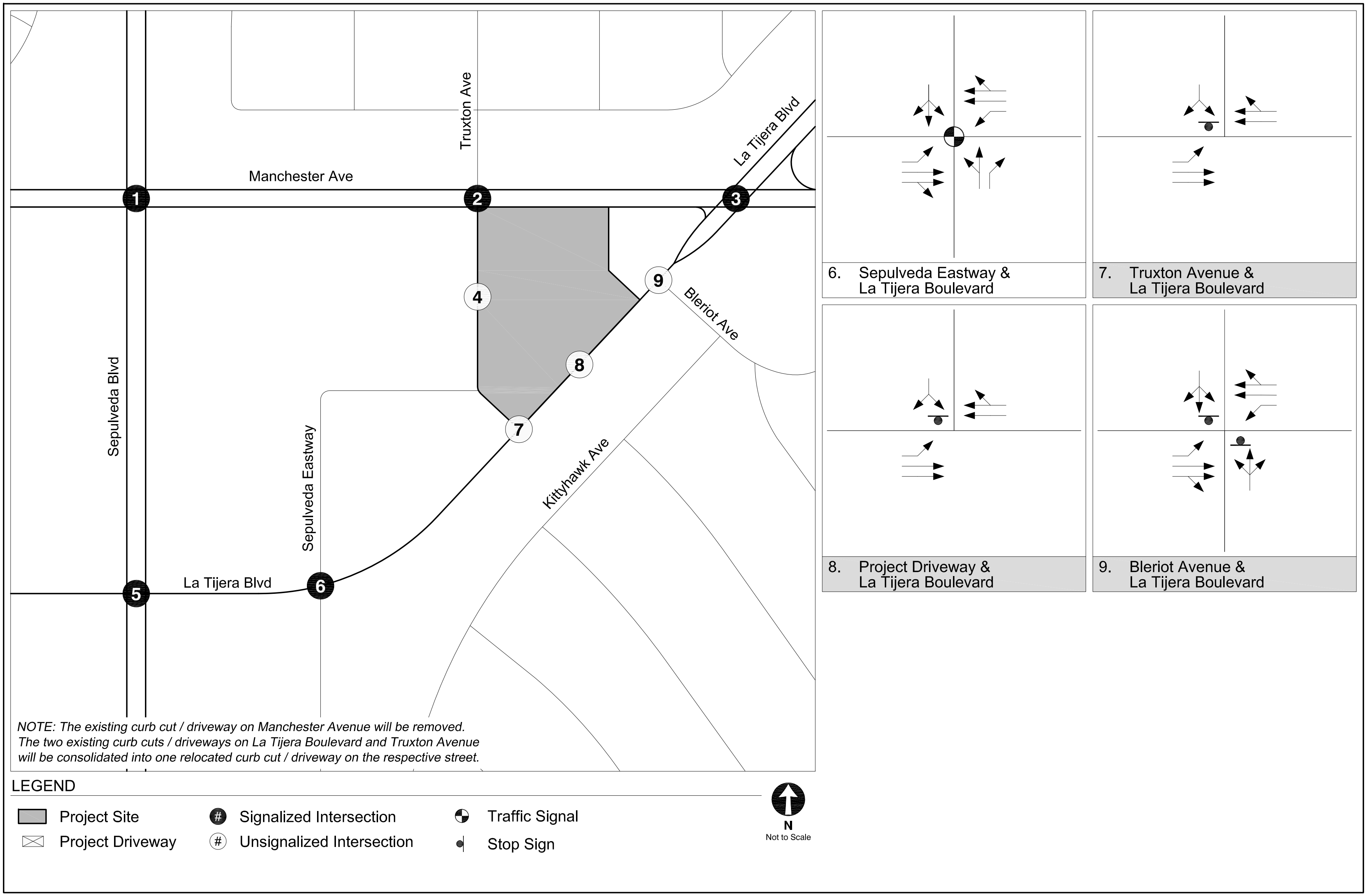
STUDY AREA & ANALYZED INTERSECTIONS

FIGURE 3



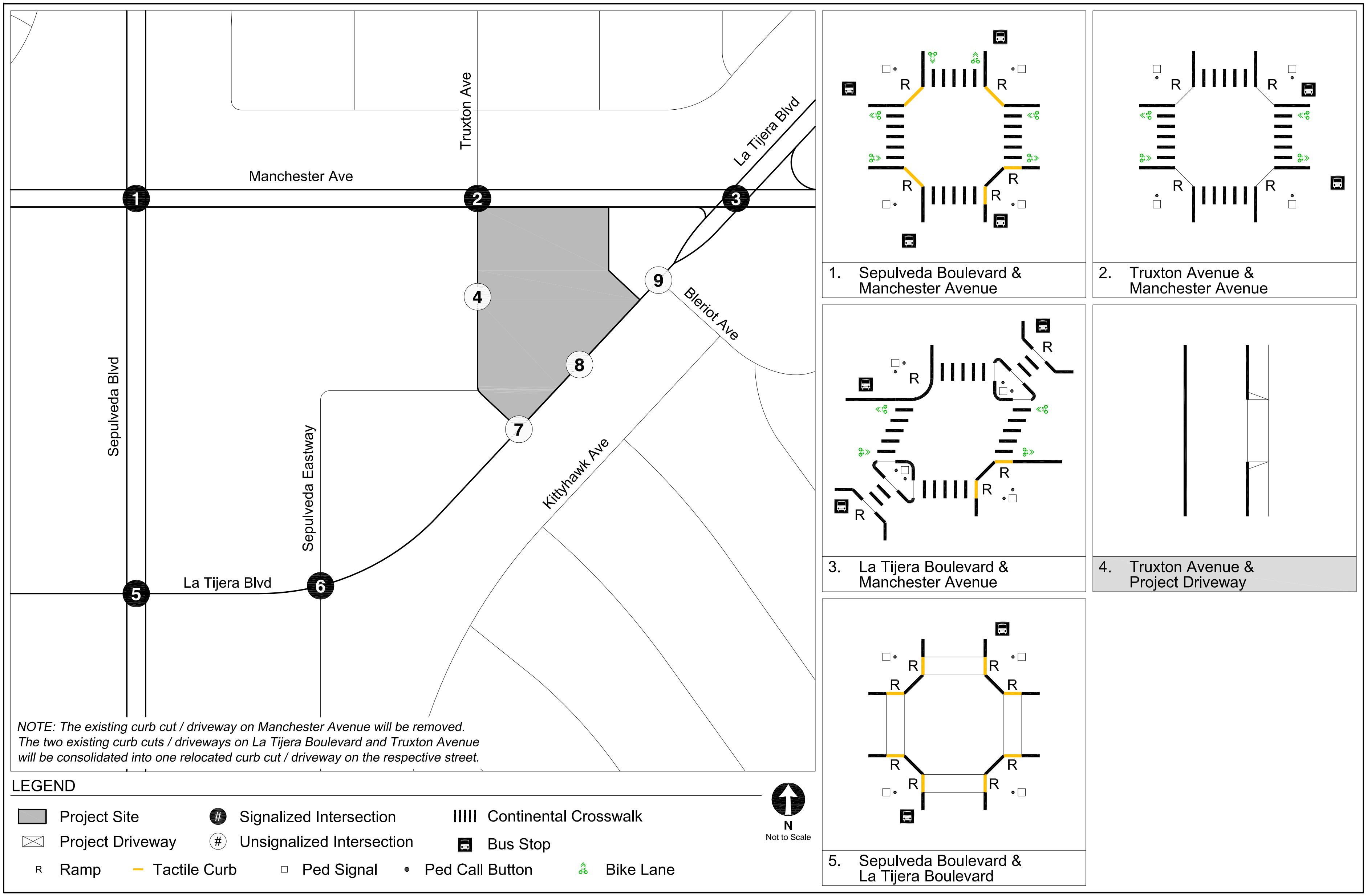
INTERSECTION LANE CONFIGURATIONS

FIGURE 4



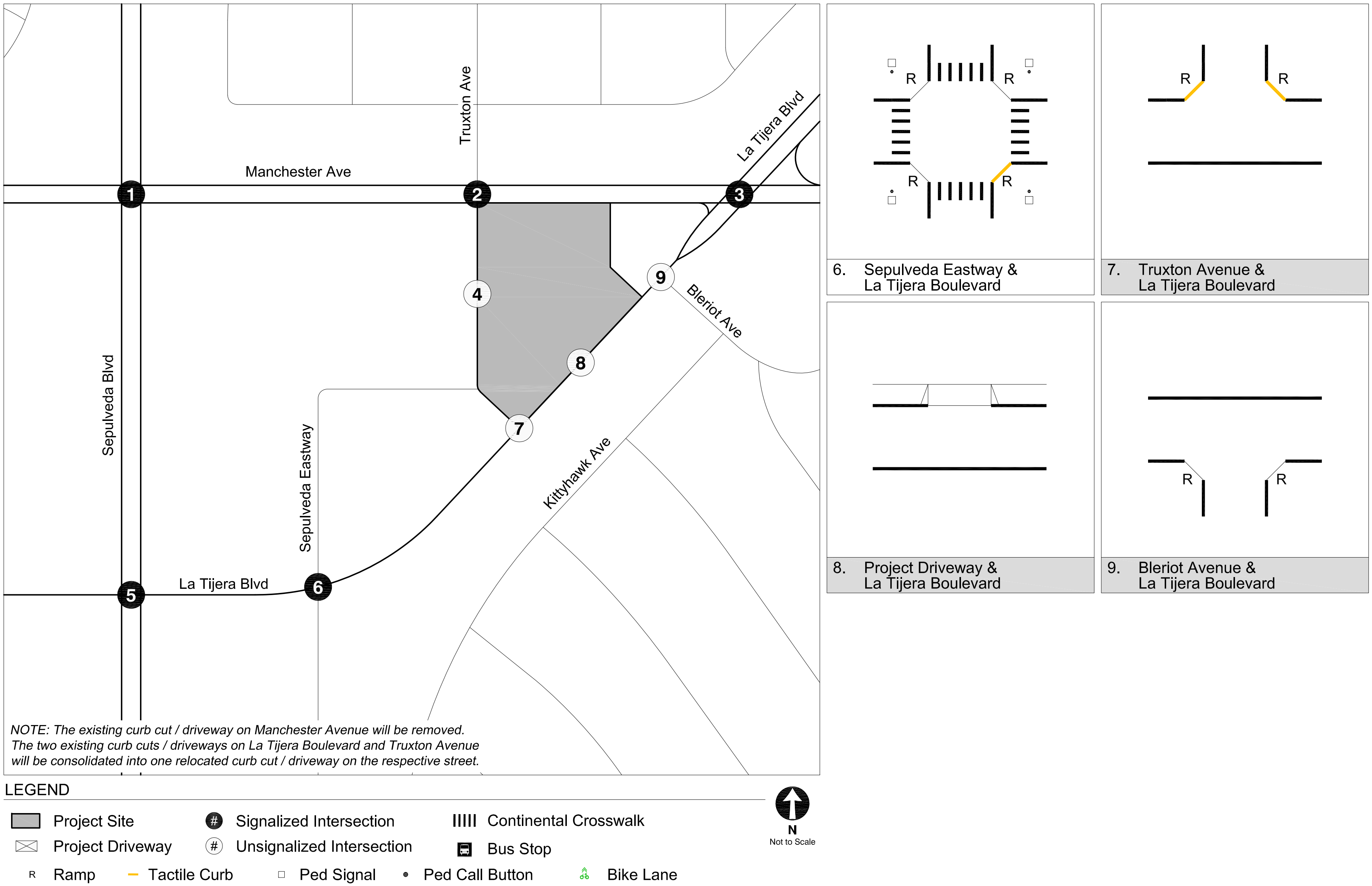
INTERSECTION LANE CONFIGURATIONS

FIGURE 4 (CONT.)



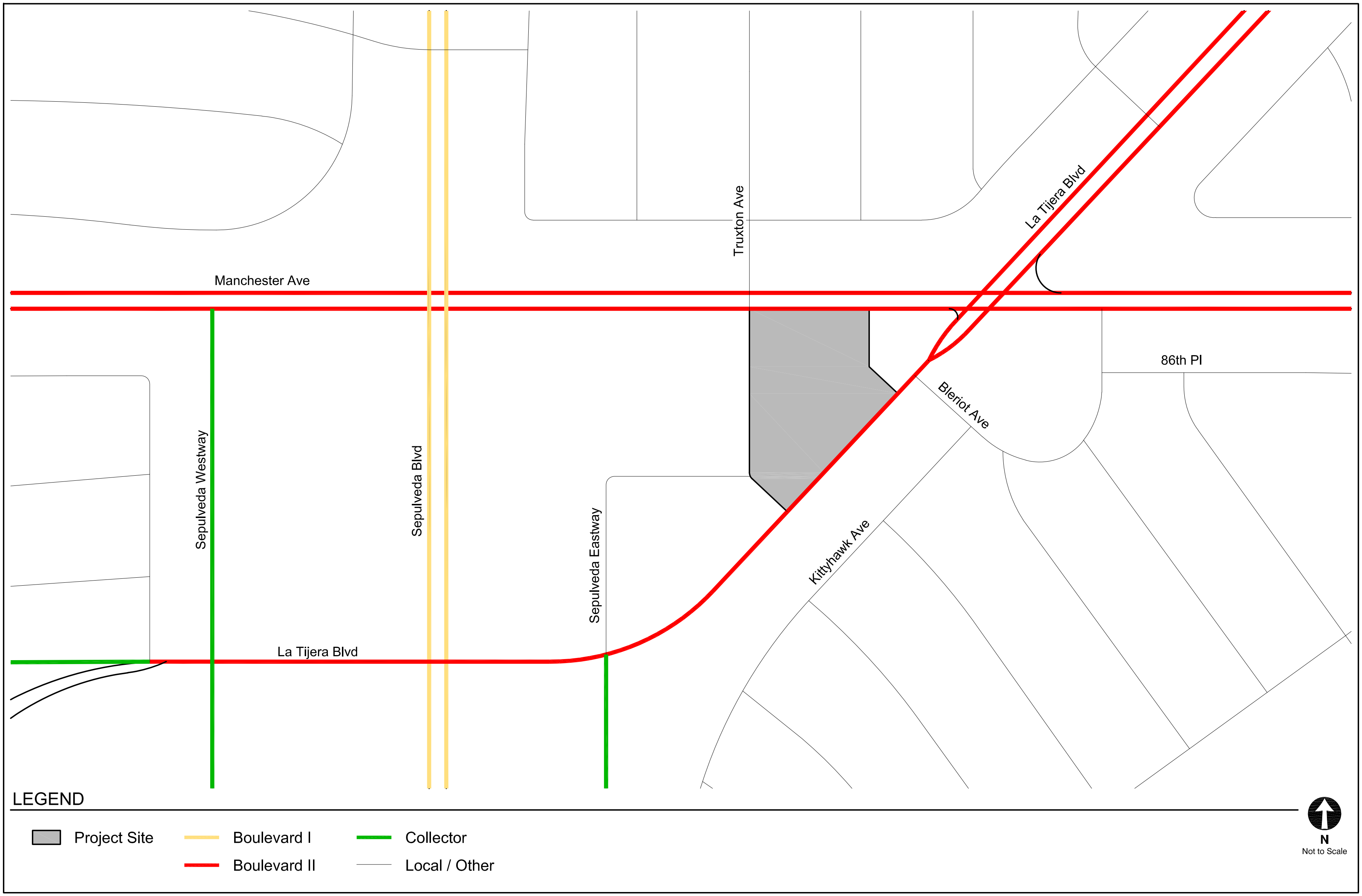
EXISTING INTERSECTION MOBILITY FACILITIES

FIGURE 5



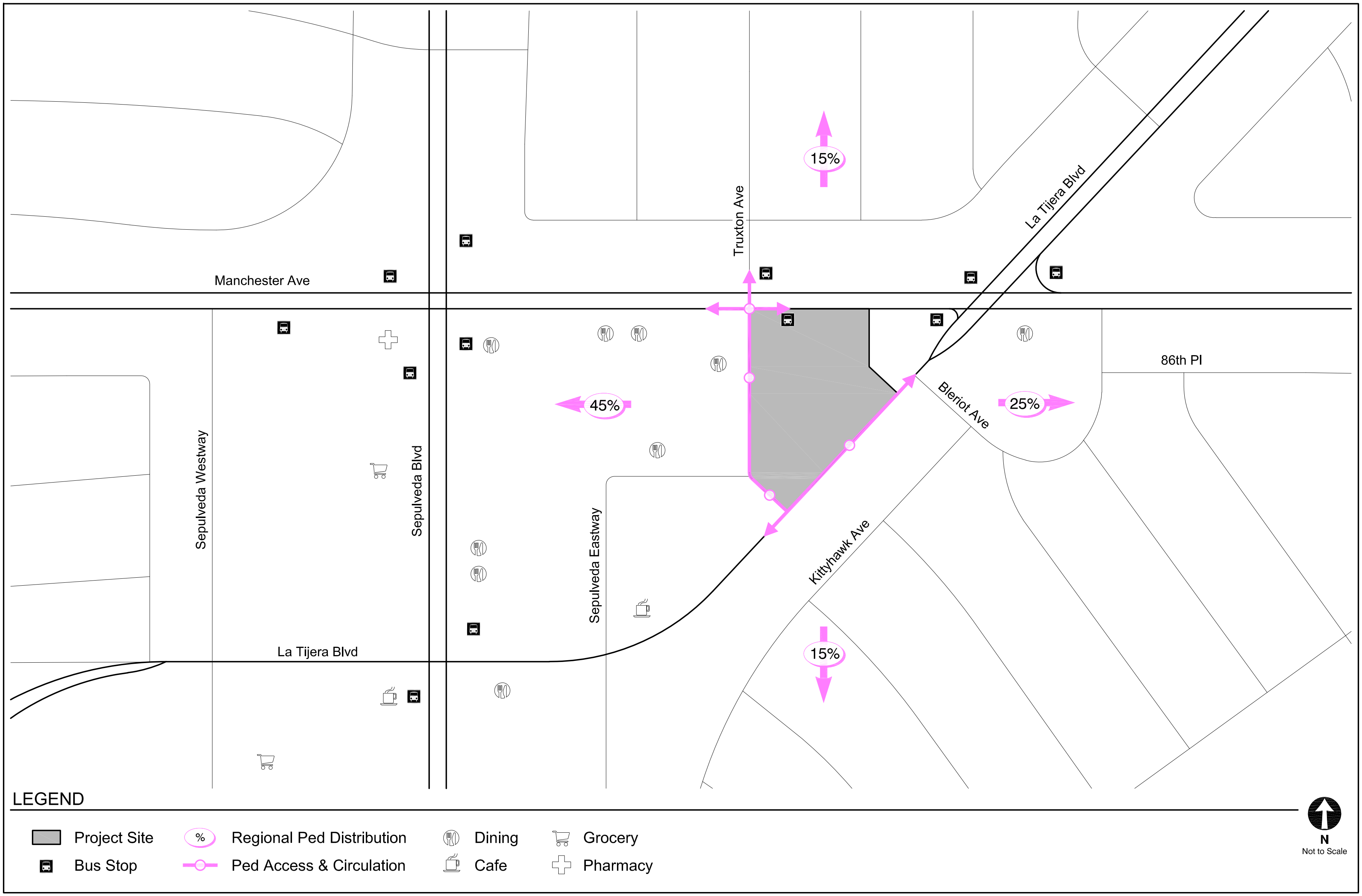
EXISTING INTERSECTION MOBILITY FACILITIES

FIGURE 5 (CONT.)



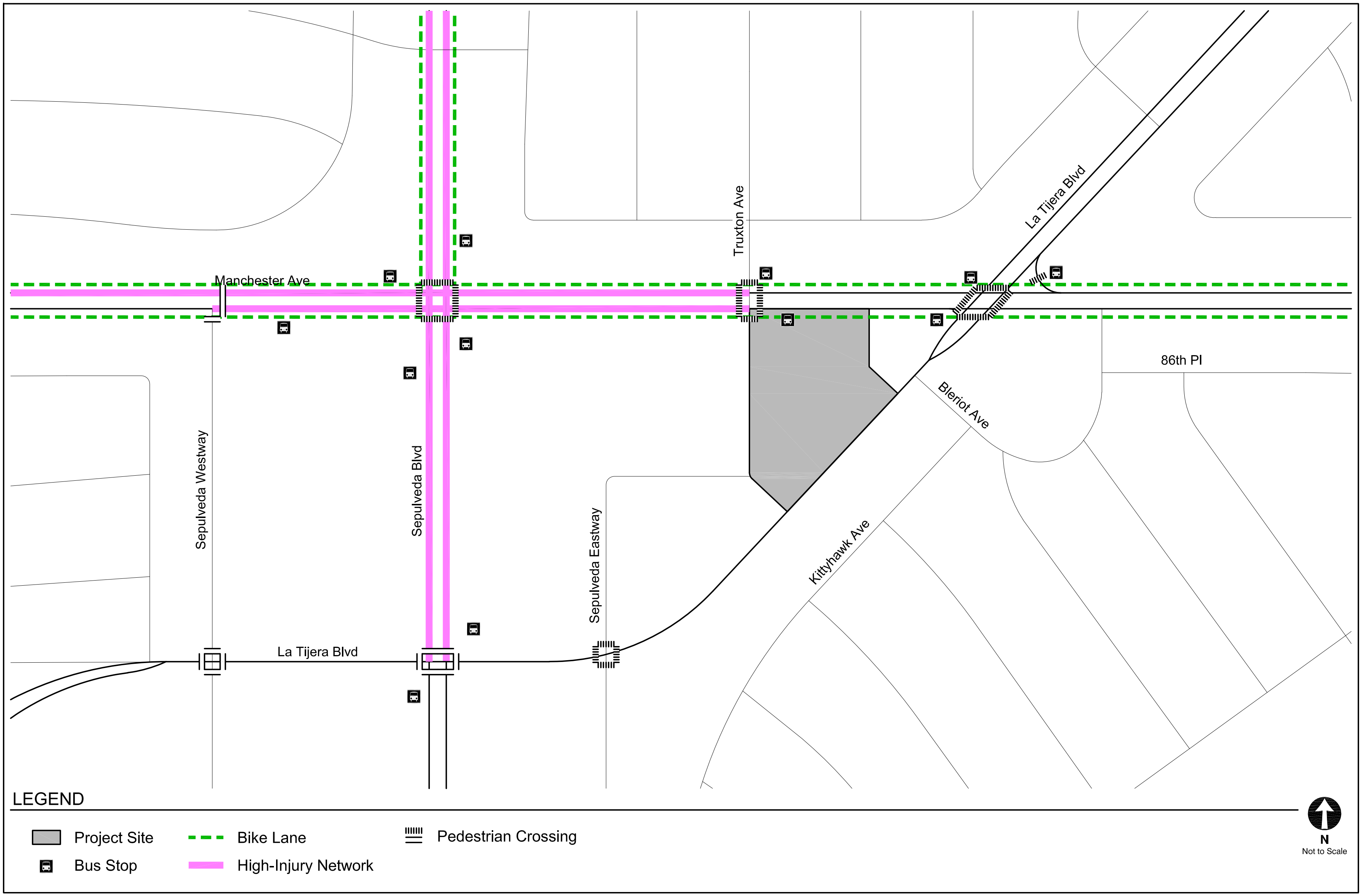
MOBILITY PLAN STREET DESIGNATIONS

FIGURE 6



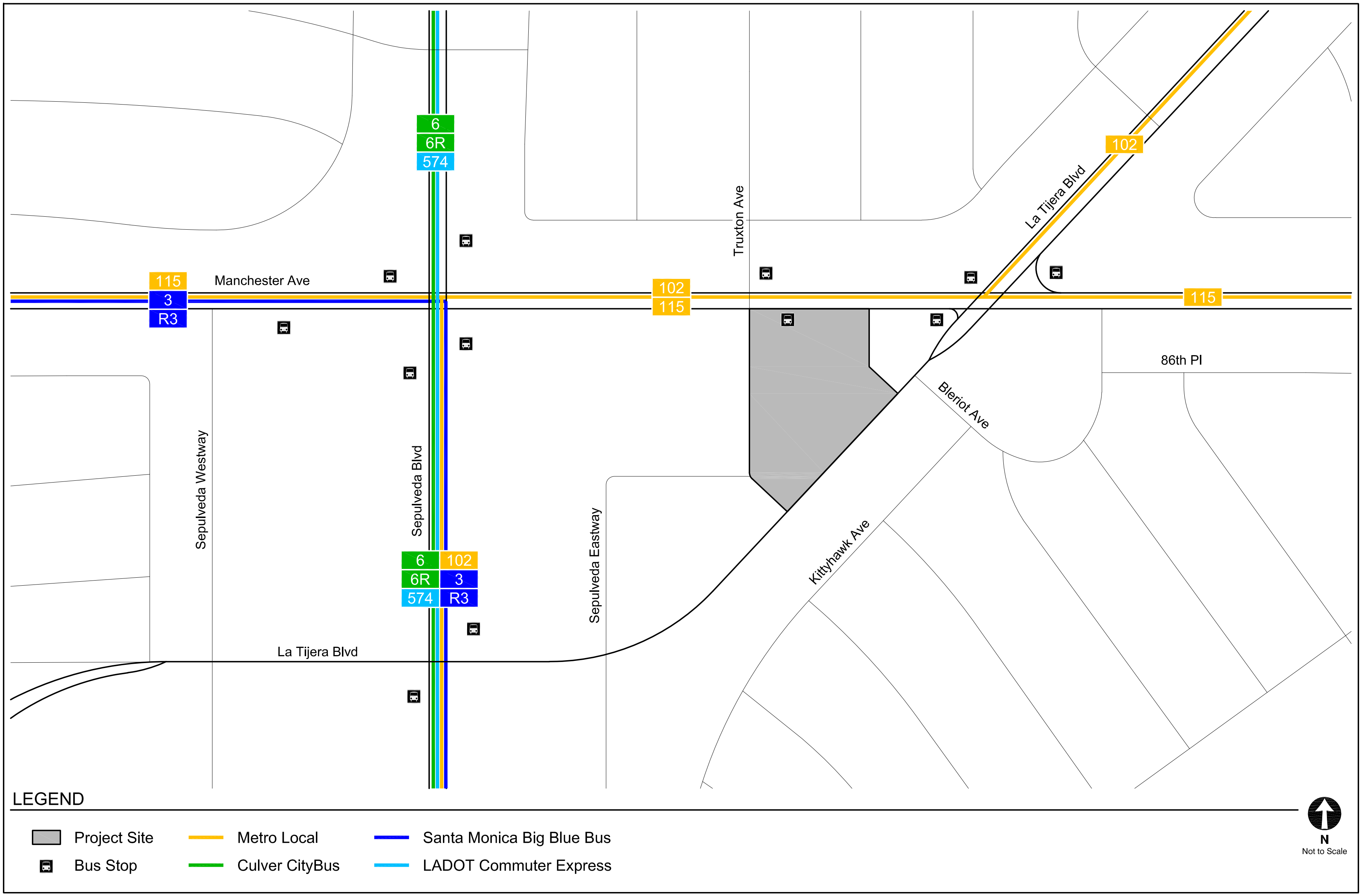
PEDESTRIAN DESTINATIONS INVENTORY

FIGURE 7



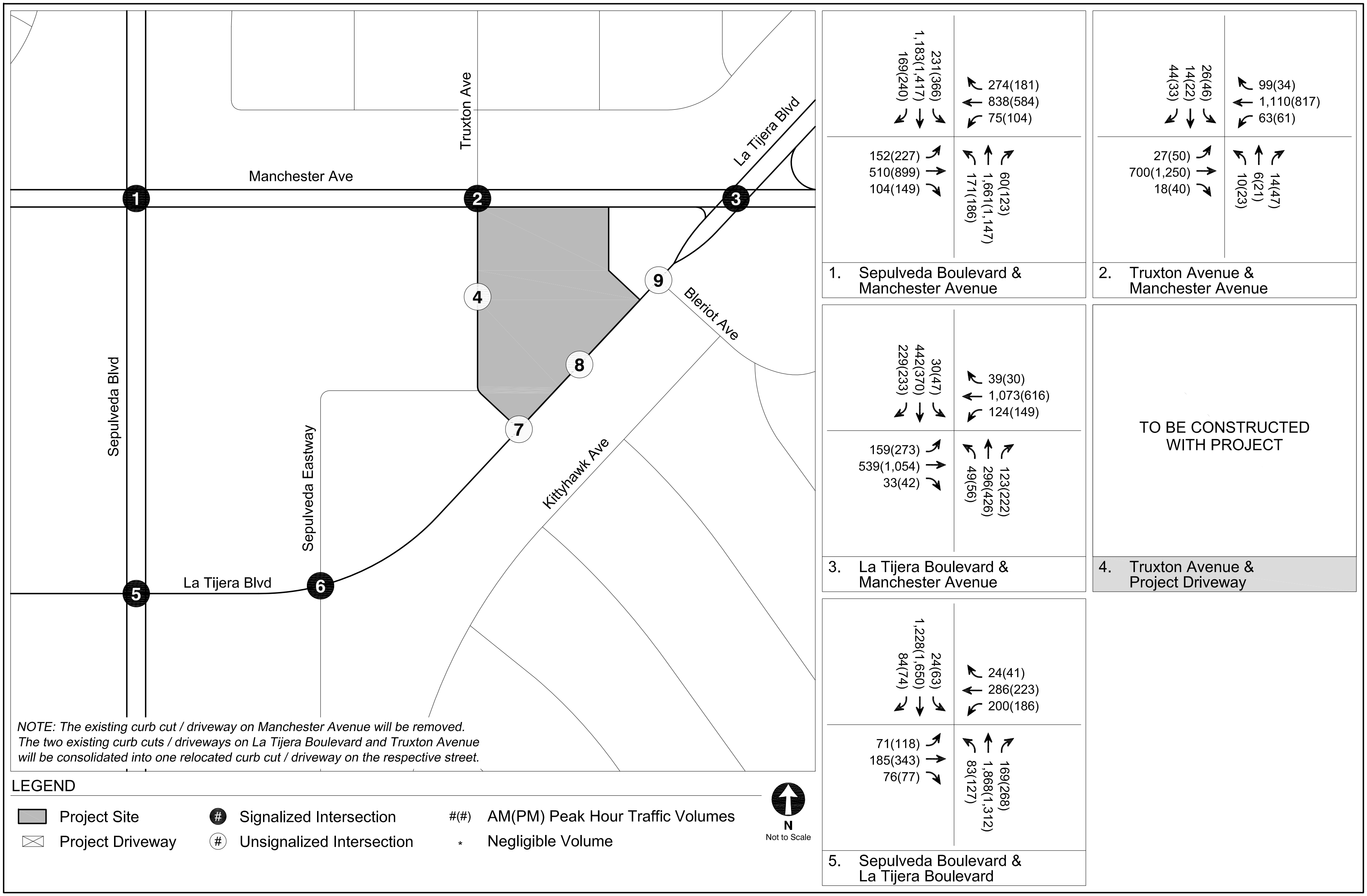
EXISTING TRANSPORTATION FACILITIES

FIGURE 8



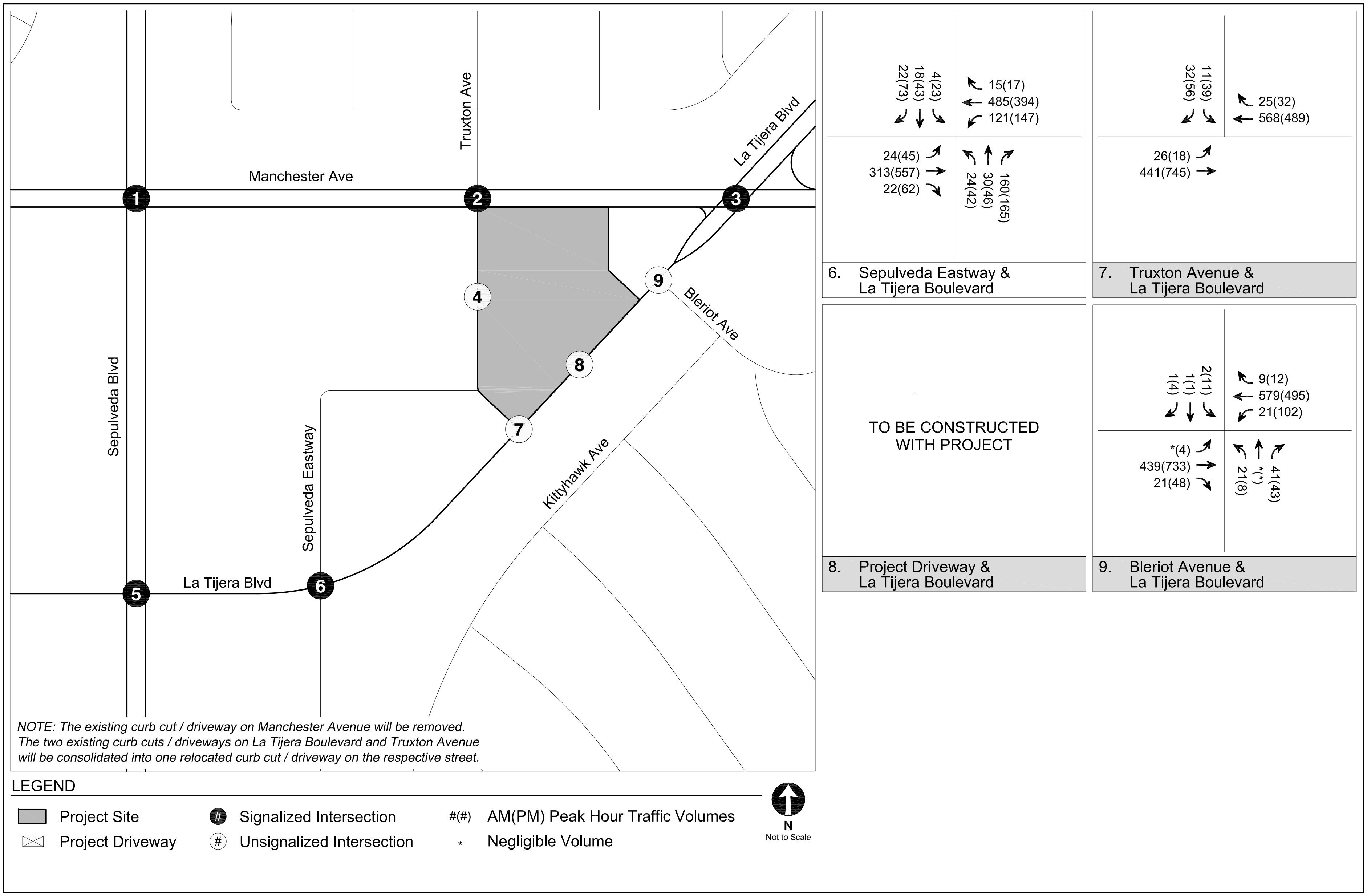
EXISTING TRANSIT SERVICE

FIGURE 9



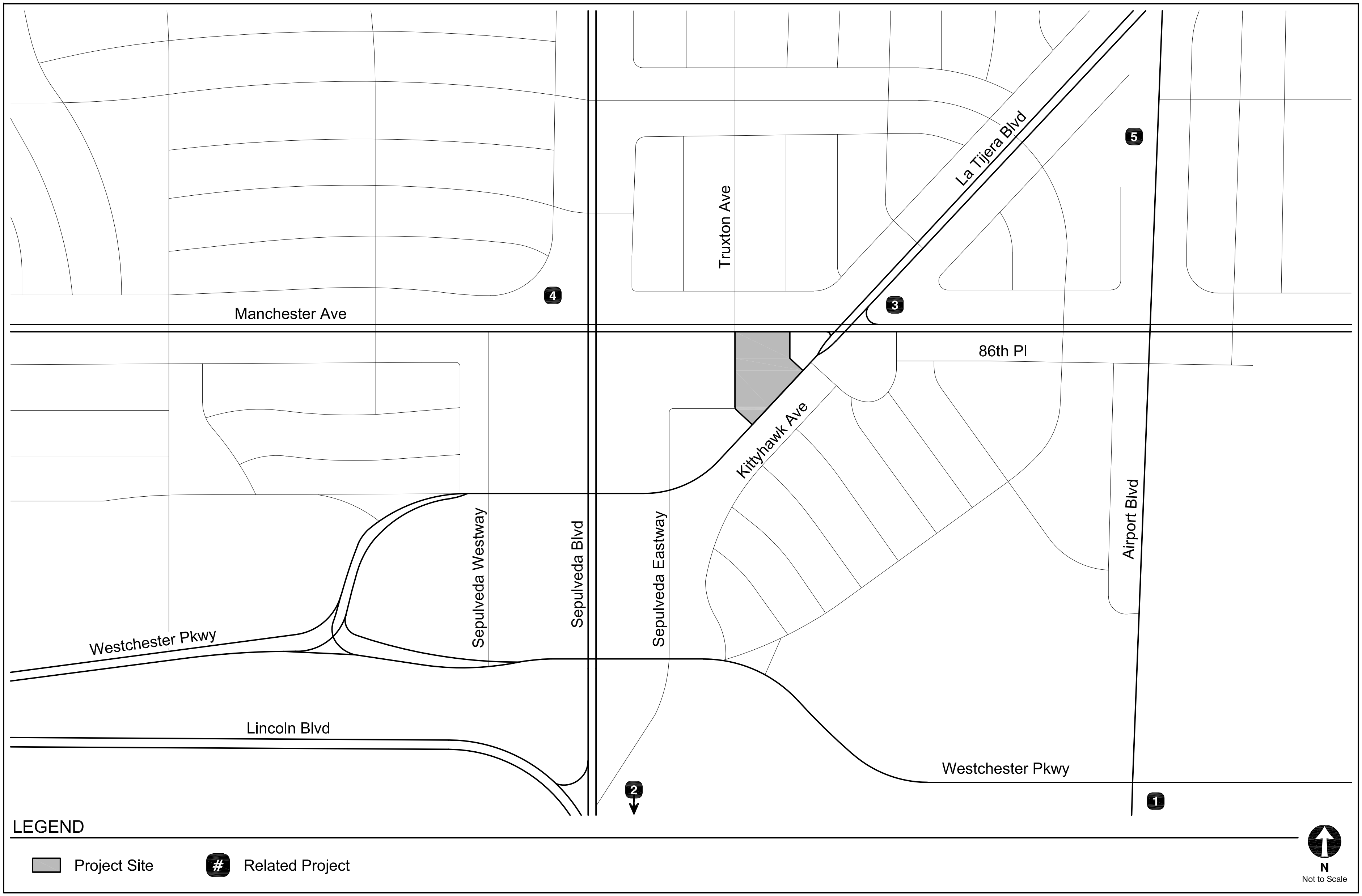
EXISTING CONDITIONS (YEAR 2022)
PEAK HOUR TRAFFIC VOLUMES

FIGURE 10



EXISTING CONDITIONS (YEAR 2022)
PEAK HOUR TRAFFIC VOLUMES

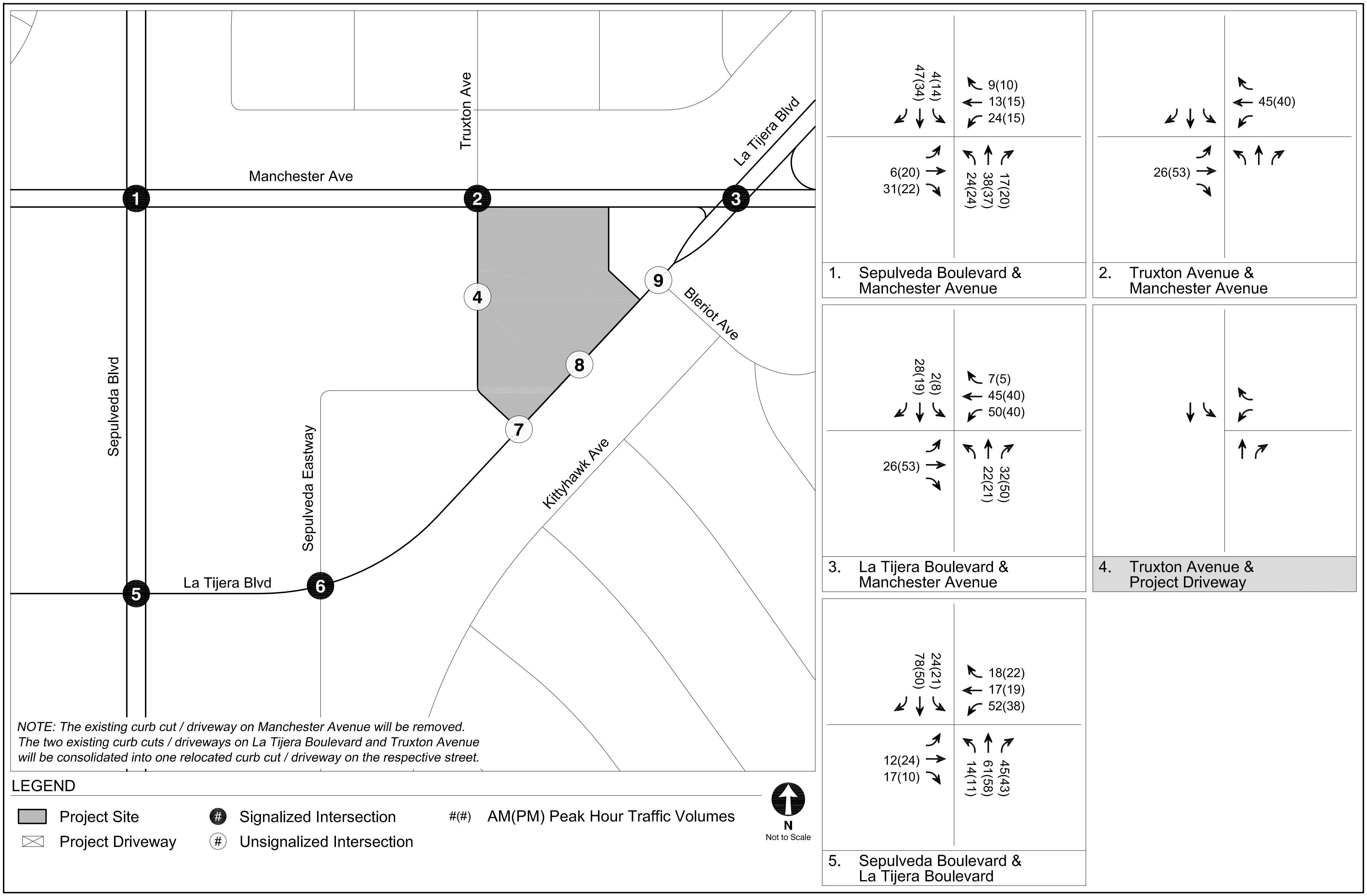
FIGURE 10 (CONT.)



LOCATIONS OF RELATED PROJECTS

FIGURE 11

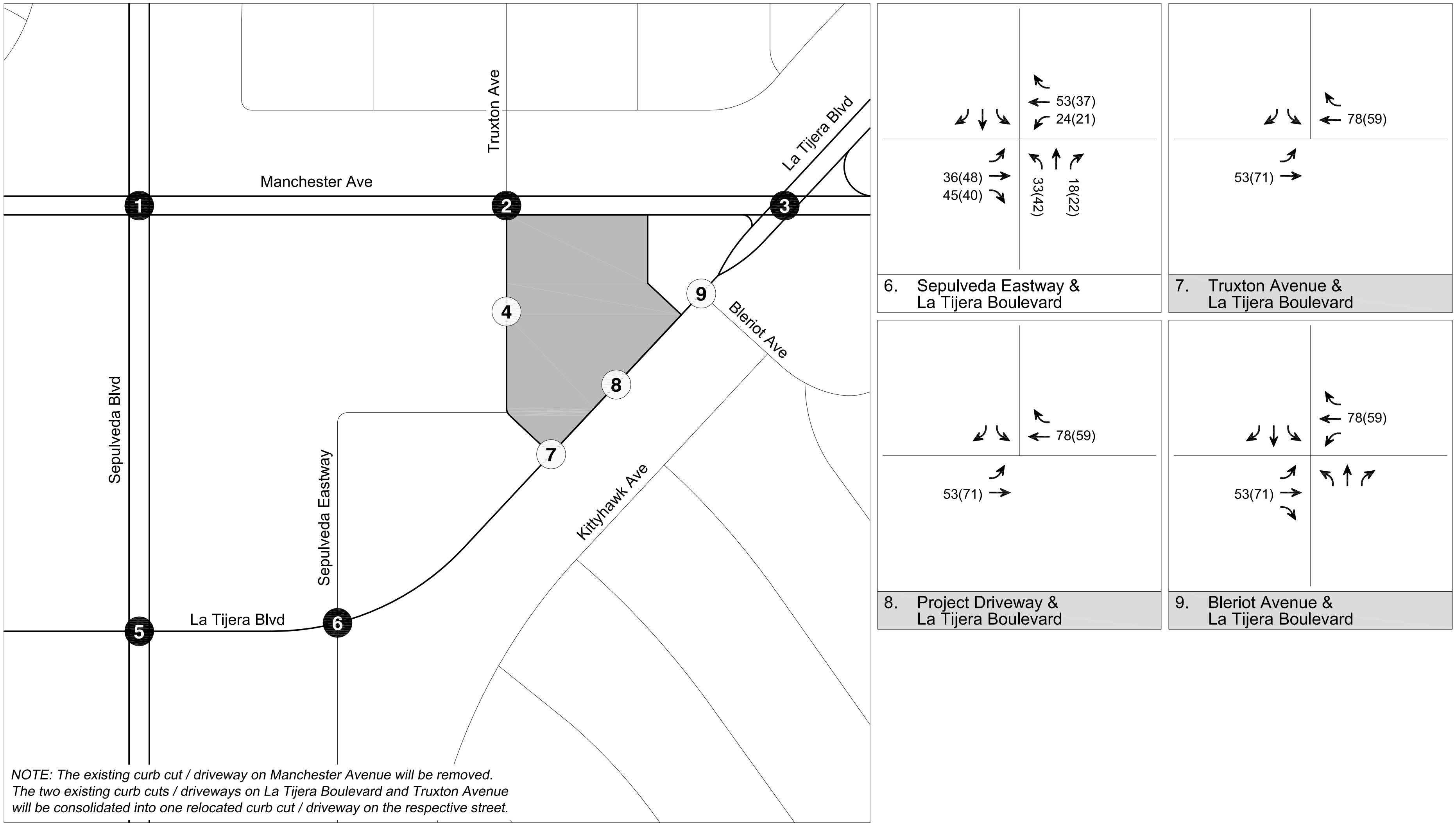
Gibson transportation consulting, inc.



RELATED PROJECT-ONLY
PEAK HOUR TRAFFIC VOLUMES

FIGURE 12

Gibson transportation consulting, inc.



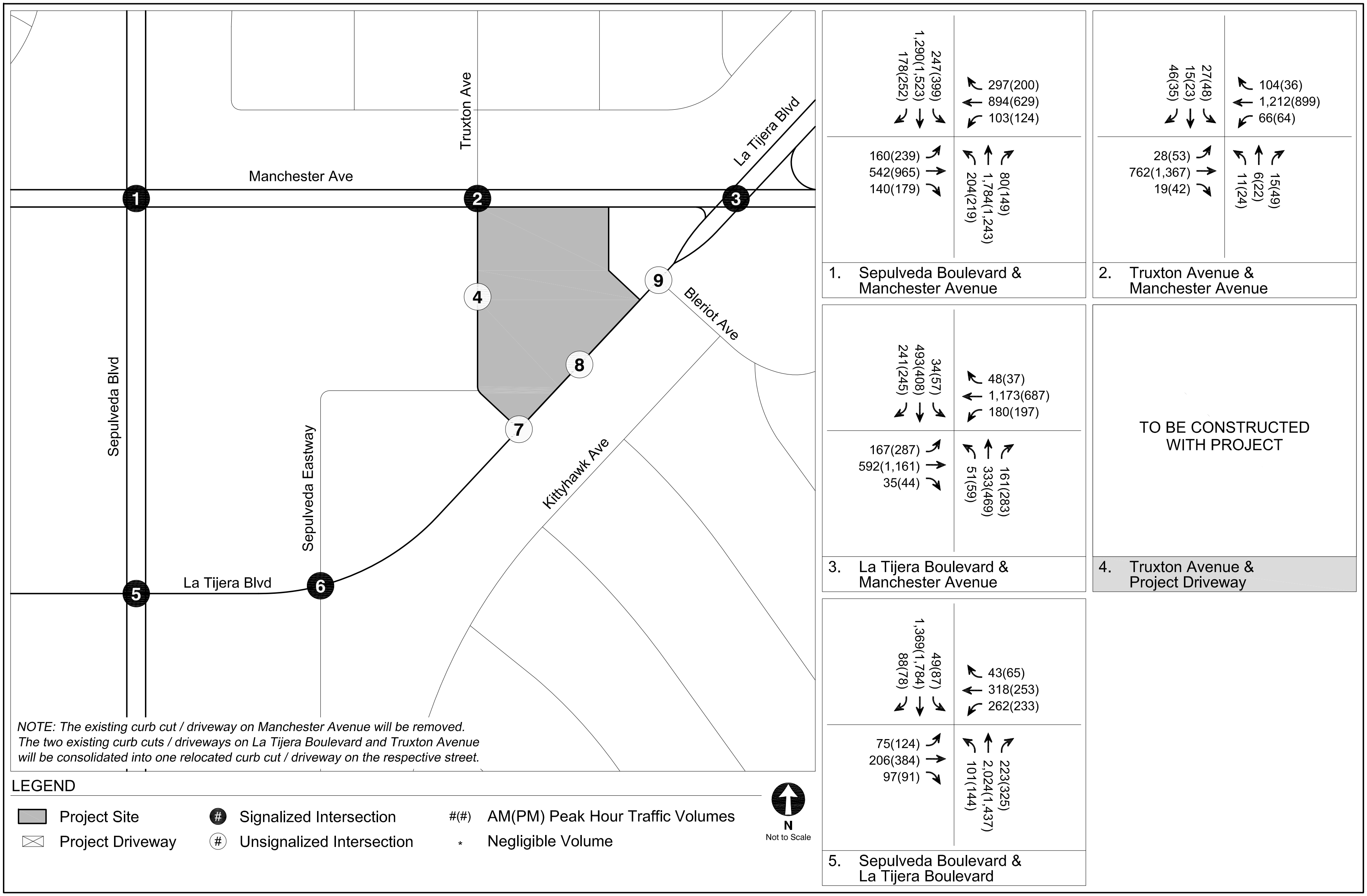
LEGEND

Project Site
Project Driveway
Signalized Intersection
Unsignalized Intersection
#(#) AM(PM) Peak Hour Traffic Volumes

N
Not to Scale

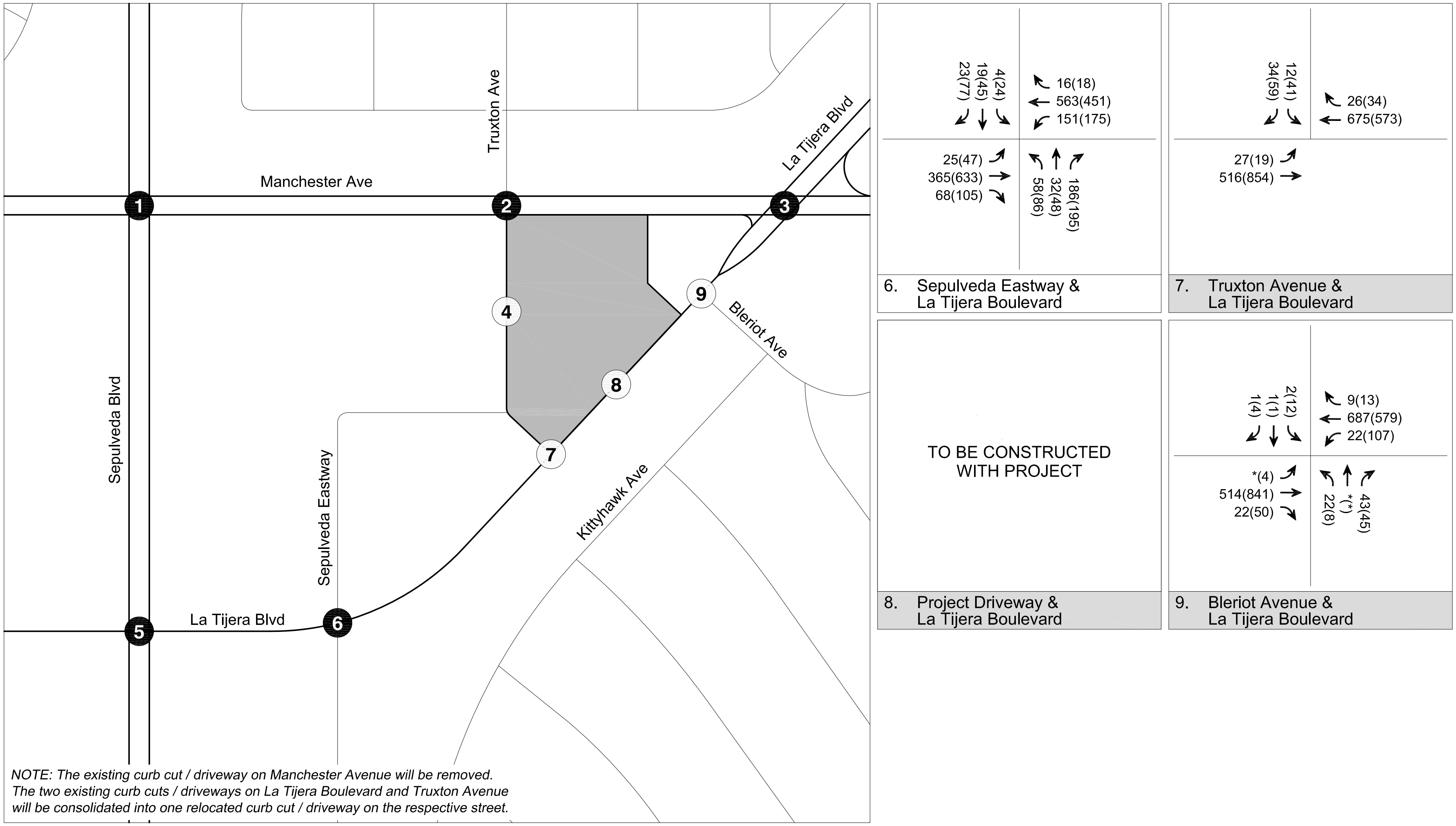
RELATED PROJECT-ONLY
PEAK HOUR TRAFFIC VOLUMES

FIGURE
12 (CONT.)



FUTURE WITHOUT PROJECT CONDITIONS (YEAR 2027)
PEAK HOUR TRAFFIC VOLUMES

FIGURE 13



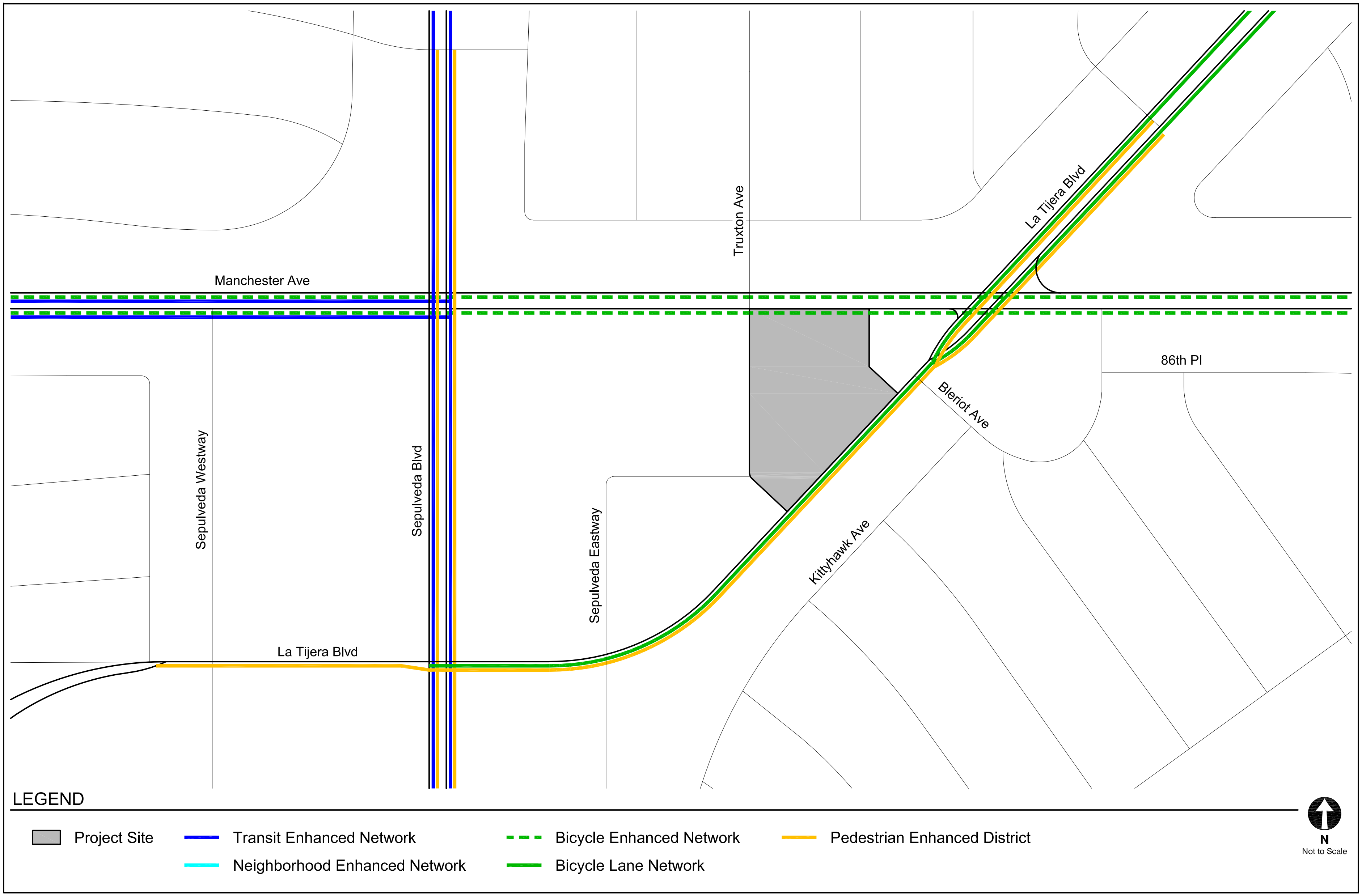
LEGEND

- Project Site
- Project Driveway
- # Signalized Intersection
- (#) Unsignalized Intersection
- #(#) AM(PM) Peak Hour Traffic Volumes
- * Negligible Volume

N
Not to Scale

FUTURE WITHOUT PROJECT CONDITIONS (YEAR 2027)
PEAK HOUR TRAFFIC VOLUMES

FIGURE 13 (CONT.)



ROADWAY MODAL PRIORITIES

FIGURE 14

TABLE 1
STUDY INTERSECTIONS

No	North/South Street	East/West Street	Traffic Control
1.	Sepulveda Boulevard	Manchester Avenue	Signalized
2.	Truxton Avenue	Manchester Avenue	Signalized
3.	La Tijera Boulevard	Manchester Avenue	Signalized
4.	Truxton Avenue	Project Driveway	Unsignalized
5.	Sepulveda Boulevard	La Tijera Boulevard	Signalized
6.	Sepulveda Eastway	La Tijera Boulevard	Signalized
7.	Truxton Avenue	La Tijera Boulevard	Unsignalized
8.	Project Driveway	La Tijera Boulevard	Unsignalized
9.	Bleriot Avenue	La Tijera Boulevard	Unsignalized

TABLE 2
EXISTING TRANSIT SERVICE IN PROJECT VICINITY

Provider, Route, and Service Area		Service Type	Hours of Operation	Average Headway (minutes) [a]	
				AM Peak Period	PM Peak Period
Metro					
102	LAX City Bus Center - South Gate via La Tijera Boulevard	Local	5:00 AM - 12:30 AM	60	60
115	Playa Del Rey - Norwalk via Manchester Avenue	Local	5:30 AM - 11:30 PM	15	15
Culver CityBus					
6	Howard Hughes Center - UCLA via Sepulveda Boulevard	Local	5:30 AM - 11:15 PM	15	24
6R	Howard Hughes Center - UCLA via Sepulveda Boulevard	Rapid	6:30 AM - 9:30 AM; 2:00 PM - 7:00 PM	21	23
Santa Monica Big Blue Bus (BBB)					
3	Santa Monica - El Segundo via Lincoln Boulevard	Local	5:00 AM - 11:00 PM	15	15
R3	Santa Monica - El Segundo via Lincoln Boulevard	Rapid	6:00 AM - 9:00 AM; 1:45 PM - 5:30 PM	15	15
LADOT Commuter Express (CE)					
574	LAX / El Segundo - Encino / Granada Hills	Commuter	5:00 AM - 9:00 AM; 3:00 PM - 8:00 PM	36 [b]	36 [b]

Notes:
Metro: Los Angeles County Metropolitan Transportation Authority
LADOT: Los Angeles Department of Transportation
LAX: Los Angeles International Airport
AM Peak from 6:00 AM - 9:00 AM & PM Peak from 3:00 PM - 7:00 PM
The transit routes identified above intersect at Sepulveda Boulevard & Manchester Avenue, which is located within 1/2 mile (1/4 mile walking distance) of the Project site.
[a] Average headways based on review of the timetables/schedules for the respective routes as published by Metro, City of Culver City, City of Santa Monica, and LADOT as of July 2022.
[b] CE 574 operates in the southbound direction during the AM peak period and northbound direction during the PM peak period.

TABLE 3A
EXISTING TRANSIT SYSTEM CAPACITY - MORNING PEAK HOUR

Provider, Route, and Service Area [a]		Stop Location	Capacity per Trip [b]	Peak Hour Ridership [b]		Average Remaining Capacity per Trip		Remaining Peak Hour Capacity	
				Average Load					
Metro				**NB/EB**	**SB/WB**	**NB/EB**	**SB/WB**	**NB/EB**	**SB/WB**
102	LAX City Bus Center - South Gate via La Tijera Boulevard	Manchester Avenue at Truxton Avenue	50	3	7	47	43	47	43
115	Playa Del Rey - Norwalk via Manchester Avenue	Manchester Avenue at Truxton Avenue	50	4	17	46	33	184	121
Culver CityBus				**NB/EB**	**SB/WB**	**NB/EB**	**SB/WB**	**NB/EB**	**SB/WB**
6	Howard Hughes Center - UCLA via Sepulveda Boulevard	Sepulveda Boulevard at Manchester Avenue	48	*Ridership Data Information not Currently Available*					
6R	Howard Hughes Center - UCLA via Sepulveda Boulevard	Sepulveda Boulevard at Manchester Avenue	48						
Santa Monica Big Blue Bus (BBB)				**NB/EB**	**SB/WB**	**NB/EB**	**SB/WB**	**NB/EB**	**SB/WB**
3	Santa Monica - El Segundo via Lincoln Boulevard	Sepulveda Boulevard at Manchester Avenue	50	18	18	32	32	128	112
R3	Santa Monica - El Segundo via Lincoln Boulevard	Sepulveda Boulevard at Manchester Avenue	50	*Ridership Data Information not Currently Available*					
LADOT Commuter Express (CE)				**NB/EB**	**SB/WB**	**NB/EB**	**SB/WB**	**NB/EB**	**SB/WB**
574	LAX / El Segundo - Encino / Granada Hills	Sepulveda Boulevard at Manchester Avenue	49	*Ridership Data Information not Currently Available*					
						Total Remaining Bus Service Capacity		**635**	

Notes:

No transit capacity data was readily available for the Culver CityBus and LADOT Commuter Express (CE).

Metro: Los Angeles County Metropolitan Transportation Authority.

[a] Capacity assumptions:
Metro Regular Bus - 40 seated / 50 seated and standing.
Culver CityBus - 40 seated / 48 standing.
Santa Monica Big Blue Bus (BBB) - 50 seated and standing
LADOT Commuter Express (CE) - 49 seated.

[b] Based on ridership data provided by Metro in 2019 and City of Santa Monica in 2021.

TABLE 3B
EXISTING TRANSIT SYSTEM CAPACITY - AFTERNOON PEAK HOUR

Provider, Route, and Service Area [a]		Stop Location	Capacity per Trip [b]	Peak Hour Ridership [b] Average Load		Average Remaining Capacity per Trip		Remaining Peak Hour Capacity	
Metro				**NB/EB**	**SB/WB**	**NB/EB**	**SB/WB**	**NB/EB**	**SB/WB**
102	LAX City Bus Center - South Gate via La Tijera Boulevard	Manchester Avenue at Truxton Avenue	50	9	3	41	47	164	188
115	Playa Del Rey - Norwalk via Manchester Avenue	Manchester Avenue at Truxton Avenue	50	20	6	30	44	113	176
Culver CityBus				**NB/EB**	**SB/WB**	**NB/EB**	**SB/WB**	**NB/EB**	**SB/WB**
6	Howard Hughes Center - UCLA via Sepulveda Boulevard	Sepulveda Boulevard at Manchester Avenue	48	*Ridership Data Information not Currently Available*					
6R	Howard Hughes Center - UCLA via Sepulveda Boulevard	Sepulveda Boulevard at Manchester Avenue	48						
Santa Monica Big Blue Bus (BBB)				**NB/EB**	**SB/WB**	**NB/EB**	**SB/WB**	**NB/EB**	**SB/WB**
3	Santa Monica - El Segundo via Lincoln Boulevard	Sepulveda Boulevard at Manchester Avenue	50	18	18	32	32	128	128
R3	Santa Monica - El Segundo via Lincoln Boulevard	Sepulveda Boulevard at Manchester Avenue	50	*Ridership Data Information not Currently Available*					
LADOT Commuter Express (CE)				**NB/EB**	**SB/WB**	**NB/EB**	**SB/WB**	**NB/EB**	**SB/WB**
574	LAX / El Segundo - Encino / Granada Hills	Sepulveda Boulevard at Manchester Avenue	49	*Ridership Data Information not Currently Available*					
						Total Remaining Bus Service Capacity		**897**	

Notes:

No transit capacity data was readily available for the Culver CityBus and LADOT Commuter Express (CE).

Metro: Los Angeles County Metropolitan Transportation Authority.

[a] Capacity assumptions:
Metro Regular Bus - 40 seated / 50 seated and standing.
Culver CityBus - 40 seated / 48 standing.
Santa Monica Big Blue Bus (BBB) - 50 seated and standing
LADOT Commuter Express (CE) - 49 seated.

[b] Based on ridership data provided by Metro in 2019 and City of Santa Monica in 2021.

TABLE 4
RELATED PROJECTS LIST

No.	Project [a]	Address	Use	Trip Generation						
				Daily	Morning Peak Hour			Afternoon Peak Hour		
					In	Out	Total	In	Out	Total
1.	Airport Boulevard Car Wash	9204 S Airport Bl	15,380 sf self-service car wash facility	824	16	16	32	51	50	101
2.	Hotel	9800 S Sepulveda Bl	178-room hotel	1,577	69	50	118	61	64	122
3.	Charter Middle School	8540 S La Tijera Bl	525-student middle school	868	173	142	315	99	111	210
4.	Apartments, 86 units	8521 S Sepulveda Bl	86 apartment units and 561 sf commercial use	1,271	23	69	92	84	50	134
5. [b]	Kite Crossing Apartments	8333 Airport Bl	101 affordable housing units, including 35 permanent supportive housing	486	10	26	36	27	19	46

Notes
[a] Related project information provided by the Los Angeles Department of Transportation in March 2022.
[b] Trip generation estimated using rates from *Trip Generation, 11th Edition* , Institute of Transportation Engineers, 2021.

Chapter 3
Project Traffic

Trip generation estimates, trip distribution patterns, and trip assignments were prepared for the Project. These components form the basis of the Project's traffic analysis.

PROJECT TRIP GENERATION

The number of trips expected to be generated by the Project was estimated using rates published in *Trip Generation Manual, 11th Edition*. For the purposes of this assessment, the trip generation rates for multifamily residential (mid-rise), affordable housing, retail, and high-turnover sit-down restaurant uses were utilized to develop the trip generation estimates for the Project. These rates are based on surveys of similar land uses at sites around the country and are provided as both daily rates and morning and afternoon peak hour rates. They relate the number of vehicle trips traveling to and from the Project Site to the size of development of each land use.

In consultation with LADOT, the following trip generation reductions to account for public transit usage/walking arrivals, internal capture, and pass-by trips were considered:

- Internal Capture: A 5% internal capture adjustment was applied to the commercial retail and restaurant trip generation estimates to account for person trips made between the different uses of the Project without using an off-site road system.

- Transit/Walk-In: The Project Site is located within 0.25 miles of the Culver CityBus Rapid 6 and Santa Monica BBB Rapid 3 bus stops at Manchester Avenue & Sepulveda Boulevard; therefore, a 15% transit/walk-in adjustment was applied to account for transit usage and walk-in arrivals from surrounding neighborhoods and adjacent commercial developments.

- Pass-By Trips: A 20% and 50% pass-by adjustment was applied to the restaurant and commercial retail trip generation estimates, respectively, to account for Project trips made as an intermediate stop on the way from an origin to a primary trip destination without route diversion.

The number of trips currently generated by the existing uses of the Project Site was also estimated using the rates published in *Trip Generation, 11th Edition* for fast-food restaurant with drive-through and automobile parts and service center uses. Reductions to account for public transit usage/walking arrivals and pass-by trip adjustments were also applied to the existing uses.

After accounting for the adjustments above and the removal of the existing uses, the Project is anticipated to generate 142 net new morning peak hour trips (32 inbound, 110 outbound) and 166 net new afternoon peak hour trips (109 inbound, 57 outbound), as summarized in Table 5.

PROJECT TRIP DISTRIBUTION

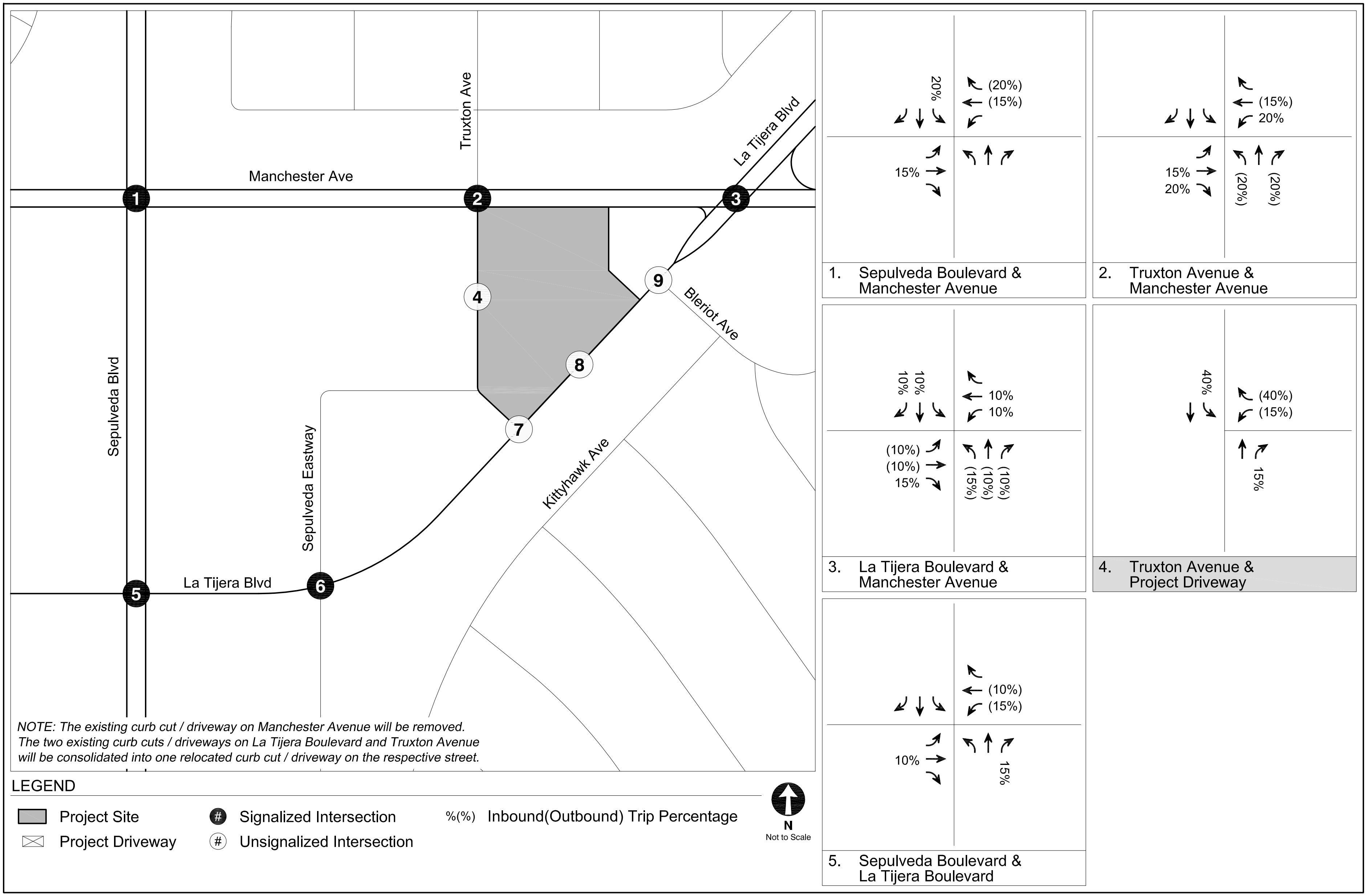
The geographic distribution of trips generated by the Project is primarily dependent on the location of residential, office, and commercial uses from which residents, employees, or visitors of the Project would be drawn, characteristics of the street system serving the Project Site, existing intersection traffic volumes, the location of the proposed driveways, as well as input from LADOT staff.

The intersection-level trip distribution for the Project is shown in Figure 15. Generally, the regional pattern is as follows:

- 40% to/from the north
- 20% to/from the east
- 15% to/from the south
- 25% to/from the west

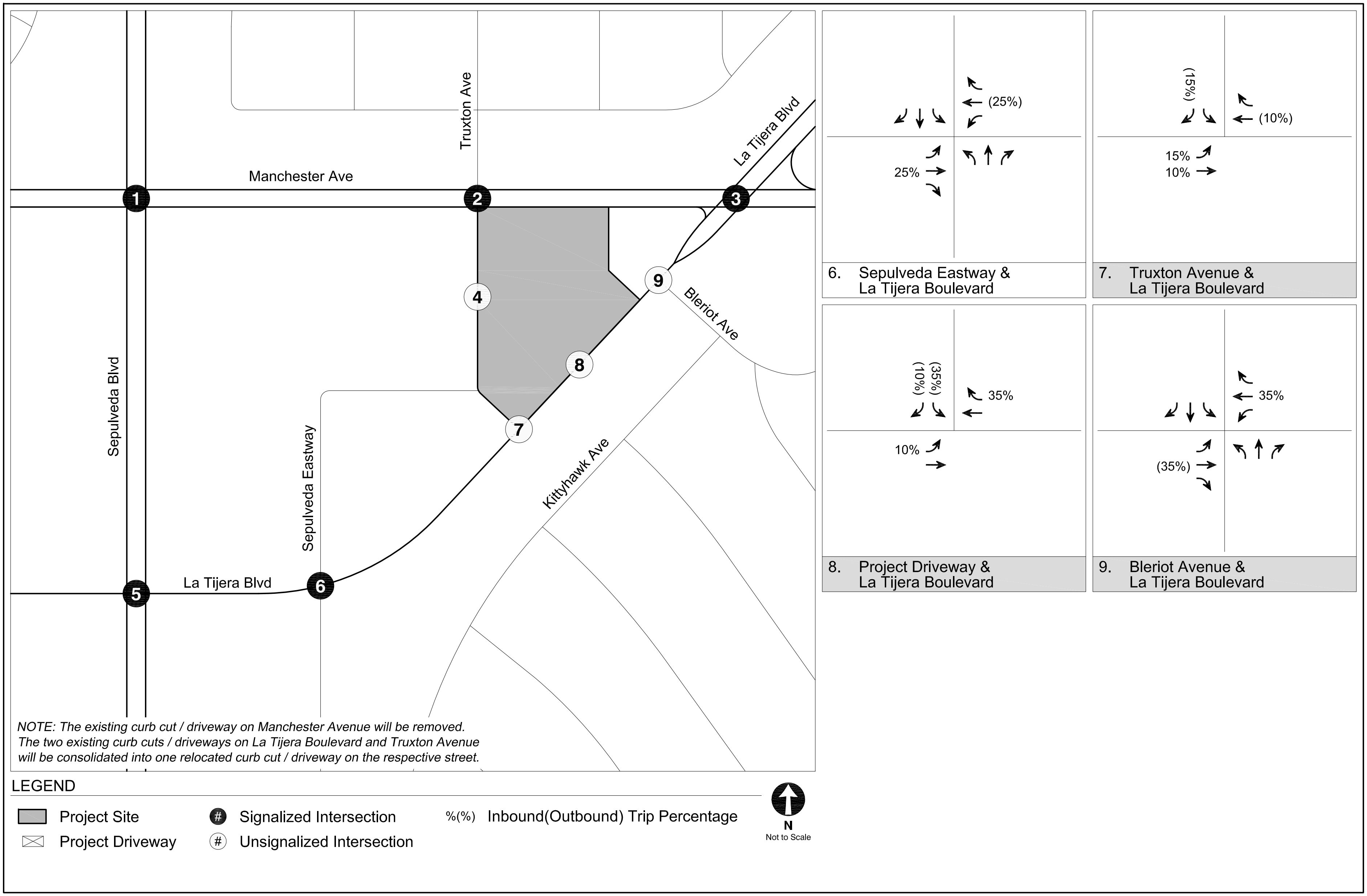
PROJECT TRIP ASSIGNMENT

The Project trip generation estimates summarized in Table 5 and the trip distribution pattern shown in Figure 15 were used to assign the Project-generated traffic through the study intersections. Figure 16A illustrates the existing trips uses to be removed from the Project Site at the Study Area intersections during typical weekday morning and afternoon peak hours. Figure 16B illustrates the net Project-only traffic volumes at the study intersections and Project driveways during typical weekday morning and afternoon peak hours.



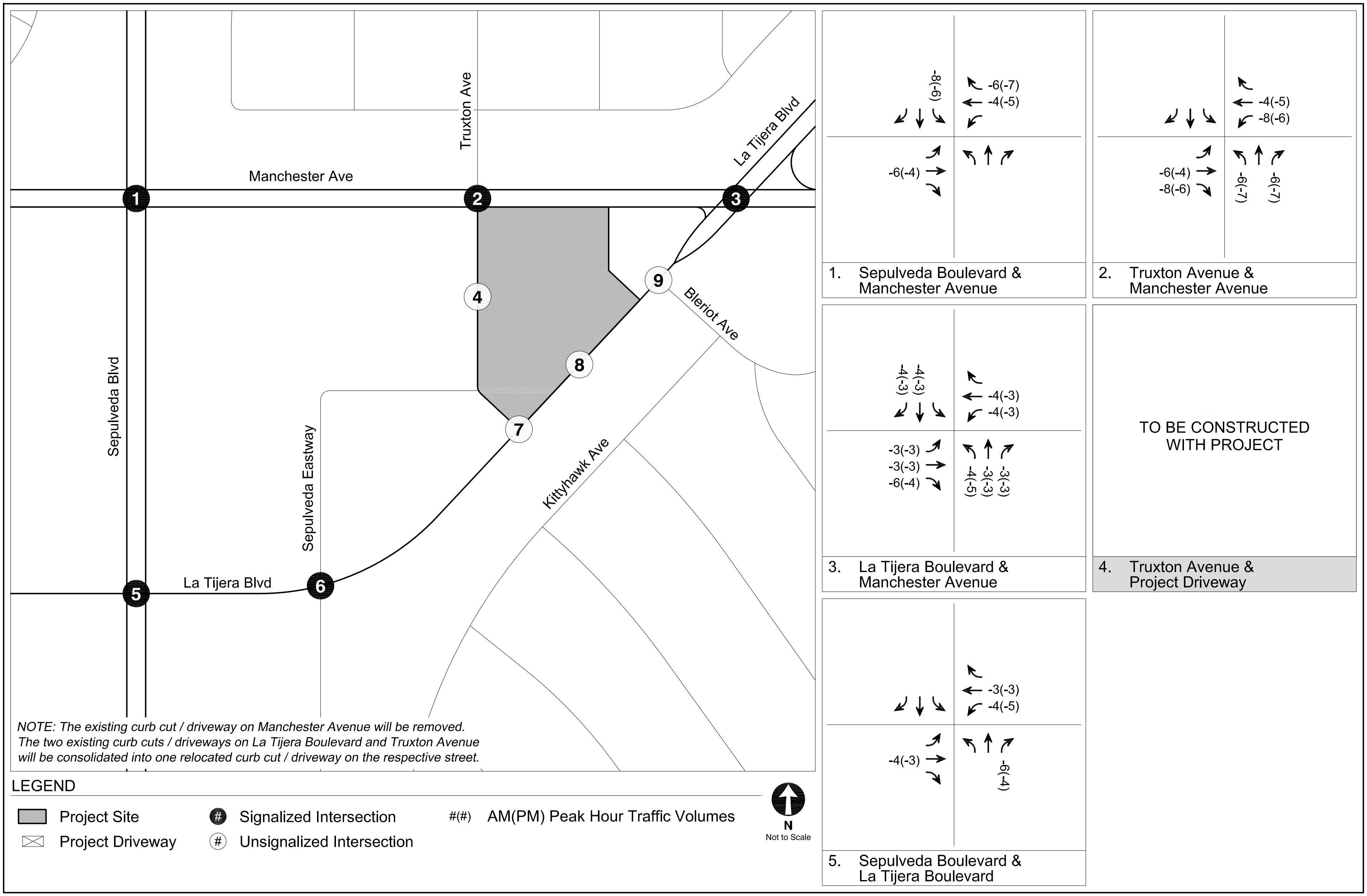
PROJECT TRIP DISTRIBUTION

FIGURE 15



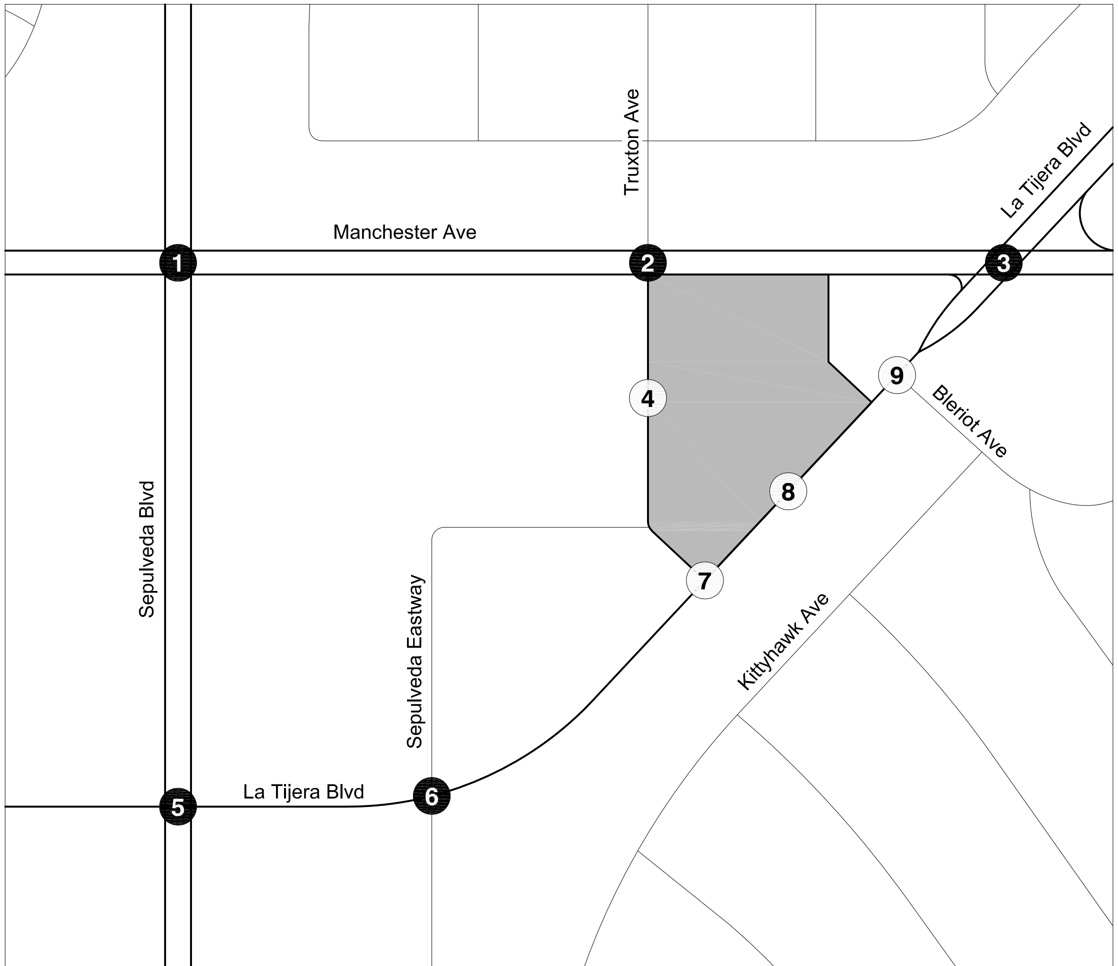
PROJECT TRIP DISTRIBUTION

FIGURE 15 (CONT.)

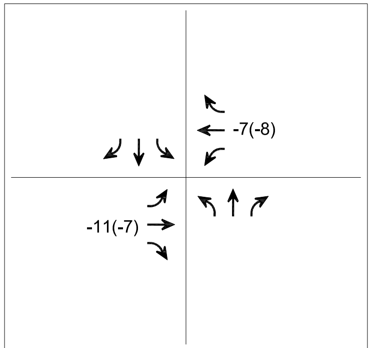


EXISTING USES TO BE REMOVED
PEAK HOUR TRAFFIC VOLUMES

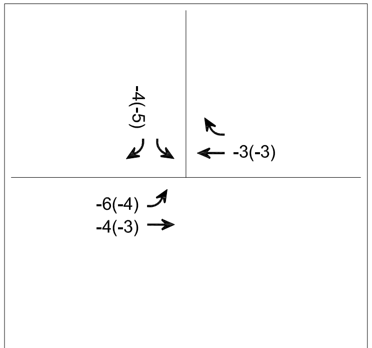
FIGURE 16A



NOTE: The existing curb cut / driveway on Manchester Avenue will be removed. The two existing curb cuts / driveways on La Tijera Boulevard and Truxton Avenue will be consolidated into one relocated curb cut / driveway on the respective street.



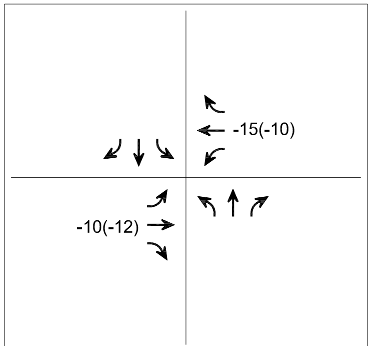
6. Sepulveda Eastway & La Tijera Boulevard



7. Truxton Avenue & La Tijera Boulevard

TO BE CONSTRUCTED WITH PROJECT

8. Project Driveway & La Tijera Boulevard



9. Bleriot Avenue & La Tijera Boulevard

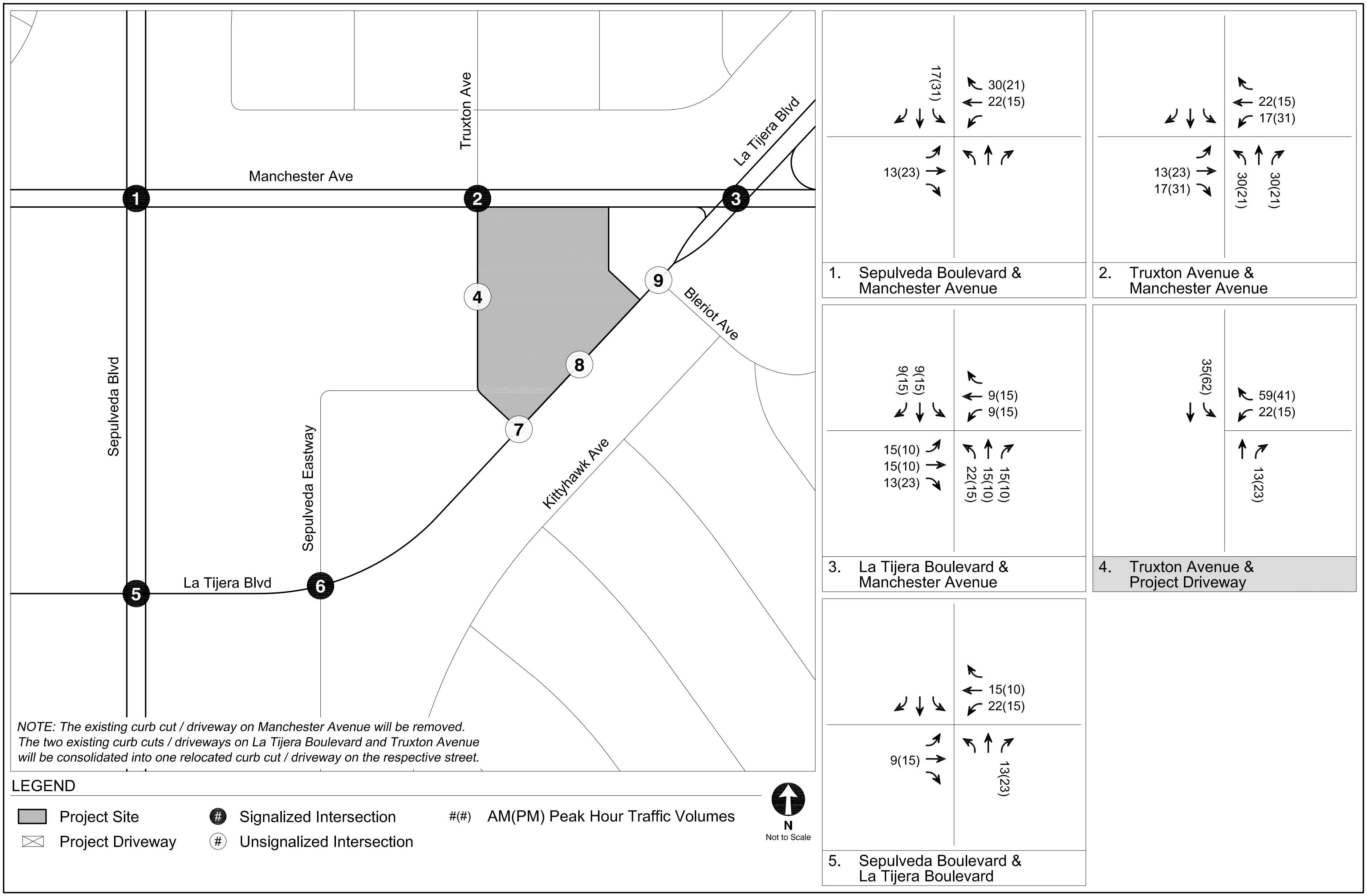
LEGEND

- Project Site
- Project Driveway
- Signalized Intersection
- Unsignalized Intersection
- #(#) AM(PM) Peak Hour Traffic Volumes

N
Not to Scale

EXISTING USES TO BE REMOVED
PEAK HOUR TRAFFIC VOLUMES

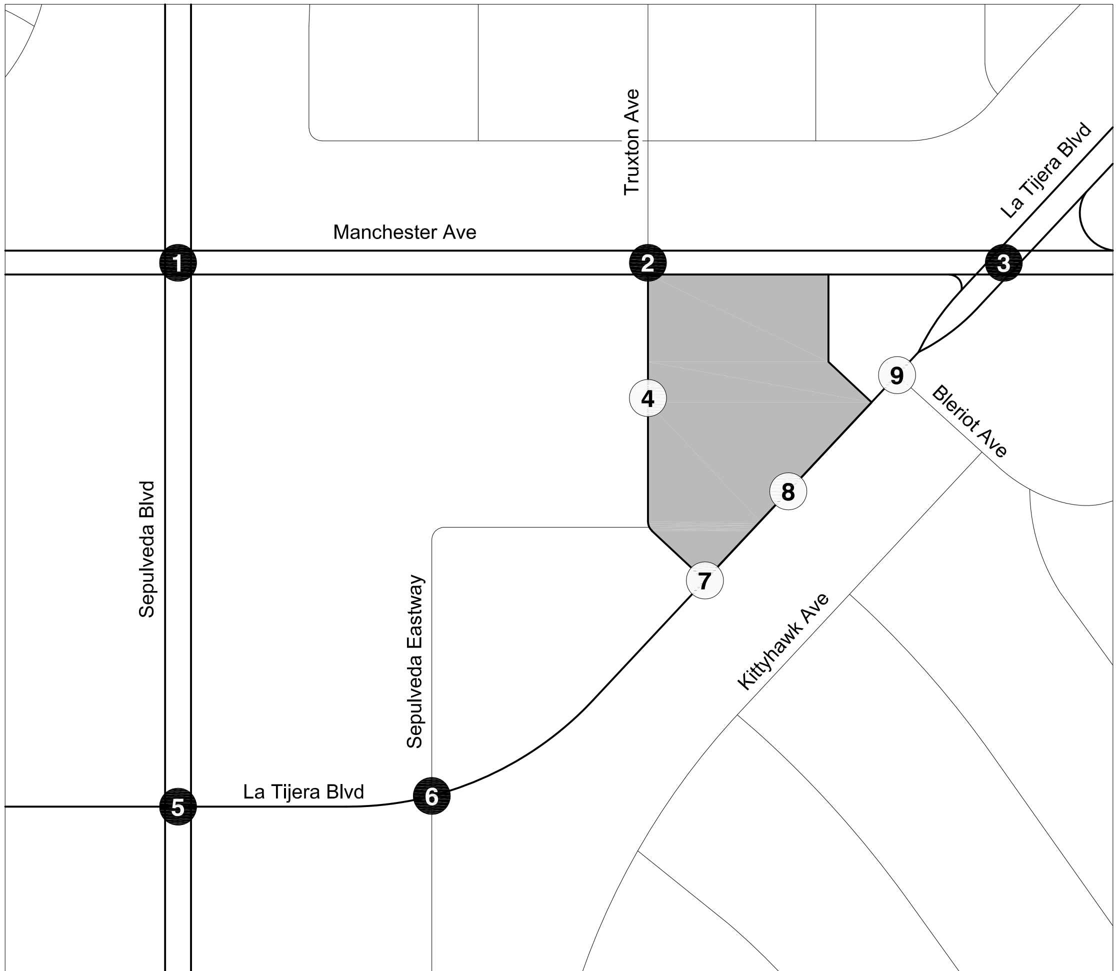
FIGURE 16A (CONT.)



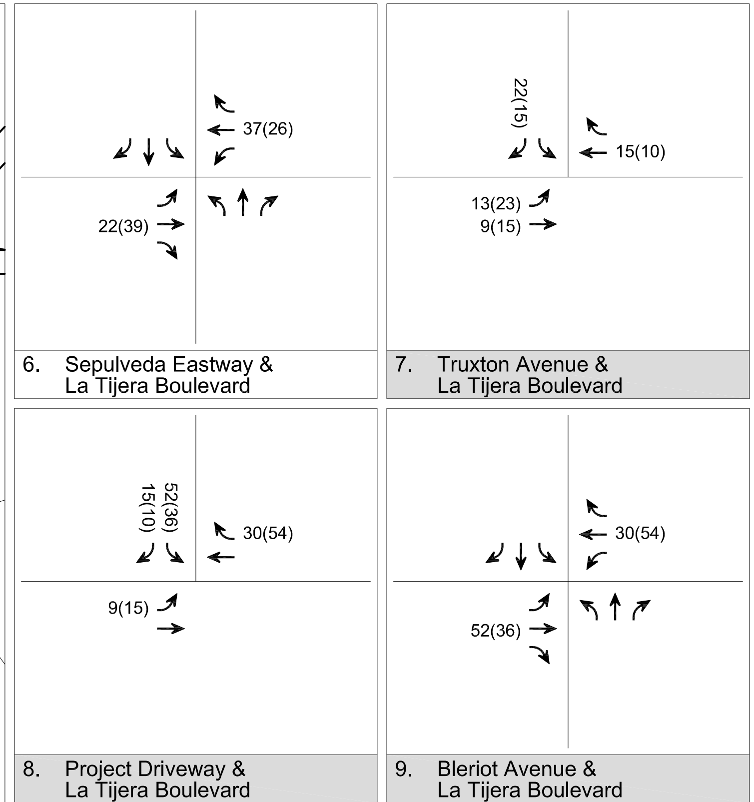
NET PROJECT-ONLY
PEAK HOUR TRAFFIC VOLUMES

FIGURE 16B

Gibson transportation consulting, inc.



NOTE: The existing curb cut / driveway on Manchester Avenue will be removed. The two existing curb cuts / driveways on La Tijera Boulevard and Truxton Avenue will be consolidated into one relocated curb cut / driveway on the respective street.



LEGEND

Project Site

Project Driveway

Signalized Intersection

Unsignalized Intersection

#(#) AM(PM) Peak Hour Traffic Volumes

N

Not to Scale

NET PROJECT-ONLY
PEAK HOUR TRAFFIC VOLUMES

FIGURE
16B (CONT.)

TABLE 5
PROJECT TRIP GENERATION ESTIMATES

Land Use	ITE Land Use	Size	Morning Peak Hour			Afternoon Peak Hour		
			In	Out	Total	In	Out	Total
Trip Generation Rates [a]								
Multi-Family Housing (Mid-Rise)	221	per du	23%	77%	0.37	61%	39%	0.39
Affordable Housing	223	per du	29%	71%	0.36	59%	41%	0.46
Retail (< 40 ksf)	822	per ksf	60%	40%	2.36	50%	50%	6.59
High-Turnover (Sit-Down) Restaurant	932	per ksf	55%	45%	9.57	61%	39%	9.05
Fast-Food Restaurant with Drive-Through	934	per ksf	51%	49%	44.61	52%	48%	33.03
Automobile Parts and Service Center	943	per ksf	72%	28%	1.91	39%	61%	2.06
Proposed Project								
Multi-Family Housing (Mid-Rise)	221	375 du	32	107	139	89	57	146
Transit/Walk-In Reduction - 15% [b]			*(5)*	*(16)*	*(21)*	*(13)*	*(9)*	*(22)*
Affordable Housing	223	66 du	7	17	24	18	12	30
Transit/Walk-In Reduction - 15% [b]			*(1)*	*(3)*	*(4)*	*(3)*	*(2)*	*(5)*
Retail (< 40 ksf)	822	5.5 ksf	8	5	13	18	18	36
Transit/Walk-In Reduction - 15% [b]			*(1)*	*(1)*	*(2)*	*(3)*	*(3)*	*(6)*
Internal Capture Reduction - 5% [c]			*0*	*0*	*0*	*(1)*	*(1)*	*(2)*
Pass-by Reduction - 50% [d]			*(4)*	*(2)*	*(6)*	*(7)*	*(7)*	*(14)*
High-Turnover (Sit-Down) Restaurant	932	11.1 ksf	58	48	106	61	39	100
Transit/Walk-In Reduction - 15% [b]			*(9)*	*(7)*	*(16)*	*(9)*	*(6)*	*(15)*
Internal Capture Reduction - 5% [c]			*(2)*	*(2)*	*(4)*	*(3)*	*(2)*	*(5)*
Pass-by Reduction - 20% [d]			*(9)*	*(8)*	*(17)*	*(10)*	*(6)*	*(16)*
TOTAL - PROPOSED PROJECT			74	138	212	137	90	227
Existing to be Removed								
Fast-Food Restaurant with Drive-Through	934	2.165 ksf	49	48	97	37	35	72
Transit/Walk Reduction - 15% [b]			*(7)*	*(7)*	*(14)*	*(6)*	*(5)*	*(11)*
Pass-by Reductions - 50% [c]			*(21)*	*(21)*	*(42)*	*(16)*	*(15)*	*(31)*
Automobile Parts and Service Center	943	19.650 ksf	27	11	38	16	24	40
Transit/Walk Reduction - 15% [b]			*(4)*	*(2)*	*(6)*	*(2)*	*(4)*	*(6)*
Pass-by Reductions - 10% [c]			*(2)*	*(1)*	*(3)*	*(1)*	*(2)*	*(3)*
TOTAL - EXISTING TO BE REMOVED			42	28	70	28	33	61
TOTAL NET NEW PROJECT TRIPS			**32**	**110**	**142**	**109**	**57**	**166**

Notes

du: dwelling unit; ksf: 1,000 square feet

[a] Source: *Trip Generation, 11th Edition* , Institute of Transportation Engineers, 2020.

[b] The Project site is located within 0.25 mile of the intersection of Sepulveda Boulevard & Manchester Avenue which serves multiple bus lines including the Culver CityBus Rapid 6 and Big Blue Bus Rapid 3 bus lines; therefore, a 15% transit reduction was applied to account for transit usage and walking visitor arrivals.

[c] Internal capture adjustments account for person trips made between distinct land uses within a mixed-use development (e.g., residents visiting the commercial uses).

[d] Per Attachment H of LADOT's *Transportation Assessment Guidelines* , pass-by reductions account for Project trips made as an intermediate stop on the way from an ori[illegible] to a primary trip destination without route diversion.

Chapter 4
CEQA Analysis of Transportation Impacts

This chapter presents the results of an analysis of CEQA-related transportation impacts. The analysis identifies any potential conflicts the Project may have with adopted City plans and policies and the improvements associated with the potential conflicts, as well as the results of a Project vehicle miles traveled (VMT) analysis that addresses State requirements under Senate Bill 743 (SB 743).

METHODOLOGY

SB 743, made effective in January 2014, required the Governor's Office of Planning and Research (OPR) to change the CEQA guidelines regarding the analysis of transportation impacts. Under SB 743, the focus of transportation analysis shifted from vehicular delay (level of service [LOS]) to VMT, in order to reduce greenhouse gas emissions (GHG), create multimodal networks, and promote mixed-use developments.

The TAG defines the methodology of analyzing a project's transportation impacts in accordance with SB 743. Per the TAG, the CEQA transportation analysis contains the following thresholds for identifying significant impacts:

- *Threshold T-1: Conflicting with Plans, Programs, Ordinances, or Policies*
- *Threshold T-2.1: Causing Substantial Vehicle Miles Traveled (VMT)*
- *Threshold T-2.2: Substantially Inducing Additional Automobile Travel*
- *Threshold T-3: Substantially Increasing Hazards Due to a Geometric Design Feature or Incompatible Use*

The thresholds were reviewed and analyzed, as detailed in the following Sections 4A-4D. In addition, a CEQA safety analysis of California Department of Transportation (Caltrans) freeway facilities for the Project is provided in Section 4E.

Section 4A: Threshold T-1
Conflicting with Plans, Programs, Ordinances, or Policies Analysis

Threshold T-1 considers whether a project would conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadways, bicycle, and pedestrian facilities.

The purpose of Threshold T-1 is to assess whether a project would conflict with an adopted program, policy, plan, or ordinance that protects the environment. In general, transportation policies or standards adopted to protect the environment are those that support multimodal transportation options and a reduction in VMT. Conversely, a project would not result in an impact merely based on whether or not it would implement a particular program, plan, policy, or ordinance. Many of these programs must be implemented by the City over time, and over a broad area, and it is the intention of Threshold T-1 is to ensure that proposed development projects and plans do not preclude the City from implementing adopted programs, plans and policies. As stated in Section 2.1.4 of the TAG, a project that generally conforms with, and does not obstruct, the City's development policies and standards will generally be considered consistent.

PLANS, PROGRAMS, ORDINANCES, AND POLICIES

Table 2.1-1 of the TAG identifies the City plans, policies, programs, ordinances, and standards relevant in determining project consistency. Attachment D of the TAG, *Plans, Policies, and Programs Consistency Worksheet,* provides a structured approach to evaluate whether a project conflicts with the City's plans, programs, ordinances, or policies and to streamline the review by highlighting the most relevant plans, policies, and programs when assessing potential impacts to the City's transportation system. The Plans, Policies, and Programs Consistency Worksheet was completed for the Project and is provided in Appendix C.

As summarized below and in Appendix C, the Project is consistent with the City documents listed in Table 2.1-1 and the Plans, Policies, and Programs Consistency Worksheet of the TAG; therefore, the Project would not result in a significant impact under Threshold T-1. Detailed discussion on the Project's consistency with the applicable plans, programs, ordinances, or policies is provided below.

Mobility Plan

The Mobility Plan combines "complete street" principles with the following five goals that define the City's mobility priorities:

- Safety First: Design and operate streets in a way that enables safe access for all users, regardless of age, ability, or transportation mode of choice.
- World Class Infrastructure: A well-maintained and connected network of streets, paths, bikeways, trails, that provides Angelenos with the optimum variety of mode choices.
- Access for All Angelenos: A fair and equitable system must be accessible to all and must pay particularly close attention to the most vulnerable users.
- Collaboration, Communication, and Informed Choices: The impact of new technologies on our day-to-day mobility demands will continue to become increasingly important to the future. The amount of information made available by new technologies must be managed responsibly in the future.
- Clean Environments and Healthy Communities: Active transportation modes such as bicycling and walking can significantly improve personal fitness and create new opportunities for social interaction, while lessening impacts on the environment.

A detailed analysis of the Project's consistency with the Mobility Plan is provided in Table 6. As detailed in Chapter 2, the Mobility Plan identifies corridors within the Study Area as components of various "mobility-enhanced networks." Though no specific improvements have been identified and there is no schedule for implementation, the mobility-enhanced networks represent a focus on improving a particular aspect of urban mobility, including transit, neighborhood connectivity, bicycles, pedestrians, and vehicles. The Project would support the implementation of the Mobility Plan policies.

The Mobility Plan also designates street and sidewalk width standards based on the functional classification. Los Angeles Municipal Code (LAMC) Section 12.37 states that a project must dedicate and improve adjacent streets to half-ROW standards consistent with the Mobility Plan. Adjacent to the Project Site, La Tijera Boulevard and Manchester Avenue are both designated as Boulevard II, requiring a 55-foot half-ROW, and Truxton Avenue is a designated Local Street, requiring a 43-foot half-ROW. The Project would provide five-foot dedications along the Project frontage on La Tijera Boulevard and Manchester Avenue to meet the street dedication widths required by the Mobility Plan. All other street frontages currently meet the required street dedication widths.

Vehicular access to the Project's parking would be provided along Truxton Avenue and La Tijera Boulevard; the existing driveways on Manchester Avenue would be removed. The two existing driveways on Truxton Avenue would be replaced by one new driveway aligning with the northern alley (across Truxton Avenue), and the two existing driveways on La Tijera Boulevard would be replaced by one new Project driveway. The new driveways would be designed in accordance with the standards set forth in *Manual of Policies and Procedures* (LADOT, December 2008) and subject to the approval of LADOT and Bureau of Engineering. The Project would provide sufficient off-street parking to meet the City code parking requirements. On-street parking is currently provided and would be maintained along the Truxton Avenue and La Tijera Boulevard Project frontages.

The Project supports initiatives to create transit-oriented developments as it results in the construction of a residential mixed-use development on an infill site served by transit, supporting Metro ridership goals and enhancing transportation mobility. The Project is located in an urbanized area within proximity to transit stops that would encourage use of alternative transportation modes. The Project includes pedestrian enhancements surrounding the Project Site, such as landscaping, sidewalk improvements, and pedestrian access to the Project Site.

Additionally, the Project would provide secured bicycle parking facilities. The Project does not propose modifying, removing, or otherwise affecting existing bicycle infrastructure. In fact, the existing driveways on Manchester Avenue, a designated street within the BEN, would be removed and the two existing driveways each on Truxton Avenue and La Tijera Boulevard would be replaced by a single new driveway on each street. These measures would promote active transportation modes such as biking and walking. Furthermore, the Project's design features would further reduce vehicle trips and would result in lower VMT per capita and lower work VMT per employee compared to the average for the area, as demonstrated in Section 4B.

The Project is consistent with the transportation goals and policies identified in the Mobility Plan. Thus, the Project would not conflict with the goals and would not preclude the implementation of future improvements of the Mobility Plan.

Plan for a Healthy Los Angeles

Plan for a Healthy Los Angeles: A Health and Wellness Element of the General Plan (LADCP, March 2015) (Plan for a Healthy Los Angeles) introduces guidelines for the City to follow to enhance the City's position as a regional leader in health and equity, encourage healthy design and equitable access, and increase awareness of equity and environmental issues.

A detailed analysis of the Project's consistency with the policies in the Plan for a Healthy Los Angeles is provided in Table 7. In summary, the Project would promote healthy living where active travel modes are encouraged. The Project would support multi-modal mobility options to improve the convenience of making trips without the use of a personal automobile. The Project includes pedestrian enhancements surrounding the Project Site that would provide better connections to transit stops. The Project would also provide bicycle parking facilities to encourage bicycling and walking for residents, employees, and visitors to the Project Site. The Project would expand residential and employment opportunities in proximity of residential and commercial areas, destinations, and other neighborhood services in a diverse urban area. Finally, the Project is estimated to generate lower VMT per capita than the average for the area, as demonstrated in Section 4B. VMT directly contributes to GHG emissions, so a reduced VMT per capita also reduces GHG per capita.

The Project prioritizes safety and access for all individuals utilizing the Project Site and does not hinder other goals and policies identified in the Plan for a Healthy Los Angeles. Therefore, the Project is consistent with and would not obstruct the implementation of the policies recommended by the Plan for a Healthy Los Angeles.

Land Use Element of the General Plan

The City General Plan's Land Use Element contains 35 Community Plans that establish specific goals and strategies for the various neighborhoods across Los Angeles. As mentioned, the Project falls within the boundaries of the Westchester-Playa Del Rey Community Plan (Community Plan).

A detailed analysis of the Project's consistency with the transportation-related policies set forth in the Community Plan is provided in Table 8. The Project incorporates pedestrian and bicycle enhancements that would improve mobility for pedestrians and promote the use of alternative transportation modes. In addition, the Project would implement TDM strategies to further reduce the number of single-occupancy vehicle trips generated by the Project, as discussed in Section 4B. Additionally, to better facilitate Project-related traffic to and from the Project Site, no new access points on Manchester Avenue, Truxton Avenue, and La Tijera Boulevard are proposed[5]. Further, with the removal of existing driveways on Manchester Avenue, the Project would be designed to minimize vehicle/pedestrian conflicts. Thus, the Project complies with the transportation-related goals and objectives of the Community Plan.

LAMC Section 12.21.A.16 (Bicycle Parking)

LAMC Section 12.21.A.16 details the bicycle parking requirements for new developments. The Project would meet the LAMC requirements for on-site bicycle parking supply and, thus, the Project is consistent with LAMC Section 12.21.A.16.

LAMC Section 12.26J (TDM Ordinance)

LAMC Section 12.26J, the TDM Ordinance (1993) establishes TDM requirements for non-residential projects, in addition to non-residential components of the mixed-use projects, in excess of 25,000 sf. The Project would incorporate TDM measures to encourage use of alternative transportation modes by providing on-site bicycle parking facilities, providing connection to off-

[5] The two Truxton Avenue driveways and the two La Tijera Boulevard driveways would be replaced by a single new driveway at a new location on each street.

site pedestrian facilities, and concentrating development in proximity to transit opportunities, consistent with the requirements set forth in the TDM Ordinance.

Vision Zero Action Plan / Vision Zero Corridor Plans

Vision Zero implements projects that are designed to increase safety on the most vulnerable City streets. The City has identified street segments as part of the HIN where City projects will be targeted. As previously discussed, within the Project Site vicinity, Manchester Avenue west of Truxton Avenue and Sepulveda Boulevard north of La Tijera Boulevard have been identified in the HIN. The Project would not provide access on Sepulveda Boulevard, Manchester Avenue west of Sepulveda Boulevard, or any other segments within the HIN. Additionally, no active Vision Zero Safety Improvements projects are planned adjacent to or within the Project Site vicinity. The Project improvements to the pedestrian environment would not preclude future Vision Zero Safety Improvements by the City. Thus, the Project does not conflict with Vision Zero.

Streetscape Plans

There are no streetscape plans identified by the City near the Project Site and, therefore, streetscape plans do not apply to the Project.

Citywide Design Guidelines

The Pedestrian-First Design approach of *Citywide Design Guidelines* (LADCP Urban Design Studio, October 2019) identifies design strategies that "create human scale spaces in response to how people actually engage with their surroundings, by prioritizing active street frontages, clear paths of pedestrian travel, legible wayfinding, and enhanced connectivity. Pedestrian-First Design promotes healthy living, increases economic activity at the street level, enables social interaction, creates equitable and accessible public spaces, and improves public safety by putting eyes and feet on the street."

The Pedestrian-First Design guidelines are as follows:

- Guideline 1: Promote a safe, comfortable, and accessible pedestrian experience for all.
- Guideline 2: Carefully incorporate vehicular access such that it does not degrade the pedestrian experience.
- Guideline 3: Design projects to actively engage with streets and public space and maintain human scale.

As detailed in Table 9, the Project includes sidewalk improvements along Manchester Avenue, La Tijera Boulevard, and Truxton Avenue. Additionally, street trees would be included as part of its streetscape plan to provide adequate shade and a more comfortable environment for pedestrians. The Project Site's proximity to multiple bus route services promotes the use of transit and other alternative modes of transportation. Further, the orientation of the Project provides direct connection to the public ROW. The proposed Project driveway designs would be subject to the approval of LADOT and Bureau of Engineering. All vehicular access to the Project Site would be provided separately from the pedestrian and bicycle access points. Thus, the Project would align with the Pedestrian-First Design approach of *Citywide Design Guidelines* to provide a safe, comfortable, and accessible experience for all transportation modes.

CUMULATIVE ANALYSIS

In addition to potential Project-specific impacts, the TAG requires that the Project be reviewed in combination with nearby Related Projects to determine if there may be a cumulatively significant impact resulting from inconsistency with a particular program, plan, policy, or ordinance. In accordance with the TAG, the cumulative analysis must consider any Related Projects within 0.50 miles of the Project Site and any transportation system improvements in the vicinity of the Project Site. Table 4 identifies the Related Projects located within 1.0 miles of the Project Site, none of which are located along the same block as the Project. Each of the Related Projects considered in this cumulative analysis would be separately reviewed and approved by the lead agency in which the Related Project is located, including a check for consistency with applicable policies of the respective jurisdiction. As summarized in this section, the Project would not preclude the City from serving the City's transportation needs as defined by the City's adopted programs, plans, ordinances, or policies. Therefore, the Project, together with the Related Projects identified in Table 4, would not create inconsistencies nor result in cumulative impacts with respect to the identified programs, plans, policies, and ordinances.

TABLE 6
PROJECT CONSISTENCY WITH MOBILITY PLAN 2035

Objective, Policy, Program, or Plan [a]	Analysis of Project Consistency
Chapter 1 - Safety First	
Policy 1.1, Roadway User Vulnerability Design, plan, and operate streets to prioritize the safety of the most vulnerable roadway user.	**Consistent.** La Tijera Boulevard and Manchester Avenue are designated as Boulevard II and Truxton Avenue is designated as a Local Street in the Mobility Plan. The Project design includes pedestrian enhancements surrounding the Project Site, such as landscaping, sidewalk improvements along the Project frontages on La Tijera Boulevard, Truxton Avenue, and Manchester Avenue. Pedestrian and bicycle access to the Project Site would be provided via entrances along La Tijera Boulevard and Truxton Avenue. The driveways would be designed according to City standards and the Project would be designed in compliance with ADA standards. Off-street parking and bicycle parking would be provided per City code requirements as well.
Policy 1.2, Complete Streets Implement a balanced transportation system on all streets, tunnels, and bridges using complete streets principles to ensure the safety and mobility of all users.	**Consistent.** The Project would improve pedestrian walkability and bicycle infrastructure on-site and within the immediate vicinity of the Project Site to ensure the safety and mobility of all users.
Policy 1.6 Multi-Modal Detour Facilities Design detour facilities to provide safe passage for all modes of travel.	**Consistent.** Construction activities would be maintained on-site. Any impediments to the public right-of-way would be addressed with implementation of a Construction Management Plan.
Chapter 2 - World Class Infrastructure	
Policy 2.2 Complete Streets Design Guide Establish the Complete Streets Design Guide as the City's document to guide the operations and design of streets and other public rights-of-way.	**Consistent.** The Project would conform to all design element requirements which may affect public right-of-way, including proper driveway alignment, and landscaping design that would not hinder sight distance, mobility, or accessibility.
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.	**Consistent.** The Project does not propose repurposing existing curb space and does not propose narrowing or shifting existing sidewalk placement or paving, narrowing, shifting, or removing an existing parkway. The Project is also proposing pedestrian improvements, such as landscaping, along the Project frontage and street dedications along La Tijera Boulevard and Manchester Avenue adjacent to the Project Site to meet the long-term mobility needs identified in the Mobility Plan.
Policy 2.4 Neighborhood Enhanced Network Provide a slow speed network of locally serving streets.	**Consistent.** No streets adjacent to the Project Site are part of the Neighborhood Enhanced Network. The Project is proposing pedestrian improvements along the Project frontage to meet the long-term mobility needs identified in the Mobility Plan.
Policy 2.5 Transit Network Improve the performance and reliability of existing and future bus service.	**Consistent.** No streets adjacent to the Project Site are part of the Transit Enhanced Network. The Project is located within a 0.25-mile walking distance to multiple bus stops serving local and rapid transit routes. The proximity to transit would encourage more transit usage and provides residents, employees, and visitors to the Project with alternative travel modes. Additionally, the Project would improve pedestrian connections to existing and future transit stops through additional landscaping and sidewalk improvements.

Notes:
[a] Objectives, Policies, Programs, or Plans based on information provided in *Mobility Plan 2035: An Element of the General Plan* (Los Angeles Department of City Planning, January 2016).

TABLE 6 (CONT'D)
PROJECT CONSISTENCY WITH MOBILITY PLAN 2035

Objective, Policy, Program, or Plan [a]	Analysis of Project Consistency
Policy 2.6 Bicycle Networks Provide safe, convenient, and comfortable local and regional bicycling facilities for people of all types and abilities. (includes scooters, skateboards, rollerblades, etc.)	**Consistent.** The Project does not propose modifying, removing, or otherwise affecting existing bicycle infrastructure, and the Project driveways are not proposed along a street with a bicycle facility. The Project would remove exisitng driveways from Manchester Avenue, which is part of the Bicycle Enhanced Network, reducing the number of potential vehicle and bicycle conflicts. Bicycle parking would also be provided on-site in accordance with LAMC requirements.
Policy 2.10 Loading Areas Facilitate the provision of adequate on and off-street loading areas.	**Consistent.** All proposed loading areas would be provided on-site. The loading areas would be managed to facilitate safe loading operations and to limit vehicle queue spillovers into the travel lanes.
Policy 2.17 Street Widenings Carefully consider the overall implications (costs, character, safety, travel, infrastructure, environment) of widening a street before requiring the widening, even when the existing right of way does not include a curb and gutter or the resulting roadway would be less than the standard dimension.	**Consistent.** The Project would provide five-foot dedications along La Tijera Boulevard and Manchester Avenue to meet the required Mobility Plan street dedication width. All other street frontages currently meet the street dedication widths.
Chapter 3 - Access for All Angelenos	
Policy 3.1 Access for All Recognize all modes of travel, including pedestrian, bicycle, transit, and vehicular modes – including goods movement – as integral components of the City's transportation system.	**Consistent.** The Project supports initiatives to create transit-oriented developments by expanding residential and employment opportunities in an urbanized area near transit. The Project is committed to encouraging multi-modal transportation alternatives and access for all travel modes to and from the Project Site. The Project provides pedestrian and bicycle entrances, as well as infrastructure (short- and long-term bicycle parking) to encourage walking and bicycling. The Project encourages transit usage by proposing a residential mixed-use project located near bus stops serviced by local and rapid transit lines. Finally, the Project would support those residents, employees, and visitors who choose to travel by automobile through the provision of access points along the Project perimeter, on-site passenger and commercial loading, and adequate parking supply to serve demand.
Policy 3.2 People with Disabilities Accommodate the needs of people with disabilities when modifying or installing infrastructure in the public right-of-way.	**Consistent.** The Project's vehicular and pedestrian entrances would be designed in accordance with LADOT standards and would comply with Americans with Disabilities Act (ADA) requirements. The Project design would also be in compliance with all ADA requirements and would provide direct connections to adjacent and nearby intersections.
Policy 3.3 Land Use Access and Mix Promote equitable land use decisions that result in fewer vehicle trips by providing greater proximity and access to jobs, destinations, and other neighborhood services.	**Consistent.** The Project would expand residential and employment opportunities within proximity of residential and commercial areas, destinations, and other neighborhood services. The surrounding mix of land uses also serve as non-commute needs for Project residents and employees. The Project supports initiatives to create transit-oriented developments as it results in a replacement of the existing commercial uses on an infill site located adjacent to and near multiple transit services.

Notes:
[a] Objectives, Policies, Programs, or Plans based on information provided in *Mobility Plan 2035: An Element of the General Plan* (Los Angeles Department of City Planning, January 2016).

TABLE 6 (CONT'D)
PROJECT CONSISTENCY WITH MOBILITY PLAN 2035

Objective, Policy, Program, or Plan [a]	Analysis of Project Consistency
Policy 3.4 Transit Services Provide all residents, workers, and visitors with affordable, efficient, convenient, and attractive transit services.	**Consistent.** The Project is located within a 0.25-mile walking distance to bus stops serviced by local and rapid transit lines, providing residents, employees, and visitors to the Project with multiple transit route services. Pedestrian and bicycle access to transit stops would be enhanced with additional landscaping and sidewalk improvements.
Policy 3.5 Multi-Modal Features Support “first-mile, last-mile solutions” such as multi-modal transportation services, organizations, and activities in the areas around transit stations and major bus stops (transit stops) to maximize multi-modal connectivity and access for transit riders.	**Consistent.** The Project would support "first-mile, last-mile solutions" by providing pedestrian enhancements in the surrounding area and expanding residential and employment opportunities near multiple transit route services.
Policy 3.8 Bicycle Parking Provide bicyclists with convenient, secure, and well-maintained bicycle parking facilities.	**Consistent.** The Project provides bicycle parking to encourage bicycling for residents, employees, and visitors. The Project would provide the required LAMC on-site bicycle spaces.
Chapter 4 - Collaboration, Communication, & Informed Choices	
Policy 4.5 Improved Communication Facilitate communications between citizens and the City in reporting on and receiving responses to non-emergency street improvements.	**Consistent.** As part of the Project's Construction Management Plan, advance notification to the adjacent property owners and occupants of upcoming construction activities, including durations and daily hours of construction, would be provided.
Policy 4.8 Transportation Demand Management Strategies Encourage greater utilization of Transportation Demand Management (TDM) strategies to reduce dependence on single-occupancy vehicles.	**Consistent.** The Project incorporates several design features, which include TDM measures to reduce the number of single occupancy vehicle trips to the Project Site, including a reduced parking supply and bike parking per LAMC requirements, including short-term and long-term parking facilities.
Policy 4.13 Parking and Land Use Management Balance on-street and off-street parking supply with other transportation and land use objectives.	**Consistent.** The Project would provide sufficient off-street parking to accommodate Project parking demand. No on-street parking adjacent to the Project would be removed.
Chapter 5 - Clean Environments & Healthy Communities	
Policy 5.1 Sustainable Transportation Encourage the development of a sustainable transportation system that promotes environmental and public health.	**Consistent.** As part of the Project, a reduced parking supply and secured bicycle parking facilities would be provided. This would promote active transportation modes such as biking and walking. Additionally, the Project is located adjacent to several Metro bus stops, providing residents, employees, and visitors to the Project with public transportation alternatives.
Policy 5.2 Vehicle Miles Traveled (VMT) Support ways to reduce vehicle miles traveled (VMT) per capita.	**Consistent.** The Project is estimated to generate lower VMT per capita for residents than the average for the area, as demonstrated in Section 4B. Additionally, the Project incorporates several TDM measures to reduce the number of single occupancy vehicle trips to the Project Site.

Notes:
[a] Objectives, Policies, Programs, or Plans based on information provided in *Mobility Plan 2035: An Element of the General Plan* (Los Angeles Department of City Planning, January 2016).

TABLE 7
PROJECT CONSISTENCY WITH PLAN FOR A HEALTHY LOS ANGELES

Objective, Policy, Program, or Plan [a]	**Analysis of Project Consistency**
Chapter 1 - Los Angeles, a Leader in Health and Equity	
Policy 1.5 Plan for Health Improve Angelenos' health and well-being by incorporating a health perspective into land use, design, policy, and zoning decisions through existing tools, practices, and programs.	**Consistent.** The Project prioritizes safety and access for all individuals utilizing the site by complying with all ADA requirements and enhancing pedestrian access to the Project Site and adjacent intersections. Further, the Project supports healthy lifestyles by locating residential uses adjacent to transit, providing bicycle parking, and enhancing the pedestrian environment by providing landscape elements for a more comfortable environment for pedestrians.
Chapter 2 - A City Built for Health	
Policy 2.8 Basic Amenities Promote increased access to basic amenities, which include public restrooms and free drinking water in public spaces, to support active living and access to health-promoting resources.	**Consistent.** The Project design includes basic amenities as well as pedestrian walkways, and open space to support active living.
Chapter 5 - An Environment Where Life Thrives	
Policy 5.7 Land Use Planning for Public Health and GHG Emission Reduction Promote land use policies that reduce per capita greenhouse gas emissions, result in improved air quality and decreased air pollution, especially for children, seniors and others susceptible to respiratory diseases.	**Consistent.** The Project is estimated to generate lower VMT per capita for residents and lower work VMT per employee than the average for the area, as demonstrated in Section 4B. Additionally, the Project incorporates several TDM measures to reduce the number of single occupancy vehicle trips to the Project Site, including a reduced parking supply and short-term and long-term bike parking per LAMC. VMT directly contributes to GHG emissions, so a reduced VMT per capita also reduces GHG per capita.

Notes:
[a] Objectives, Policies, Programs, or Plans based on information provided in *Plan for a Healthy Los Angeles: A Health and Wellness Element of the General Plan* (Los Angeles Department of City Planning, March 2015).

TABLE 8
PROJECT CONSISTENCY WITH WESTCHESTER - PLAYA DEL REY COMMUNITY PLAN

Objective, Policy, Program, or Plan [a]	**Analysis of Project Consistency**
Policy 11-1.1: To the extent feasible and consistent with the Mobility Plan 2035's and the Community Plans' policies promoting multi-modal transportation (e.g., walking, bicycling, driving, and taking public transit) and safety, seek to maintain a satisfactory Level of Service (LOS) for Boulevards, Avenues and Collector Streets.	**Consistent.** Section 5B of the Transportation Assessment details the LOS operations at the nine study intersections selected for operational evaluation. The Project would promote multi-modal transportation by providing residents, employees, and visitors with opportunities to utilize alternative transportation modes and further reduce the number of single occupancy vehicle trips to the Project Site by providing both short-term and long-term bicycle parking as well as a reduced parking supply. Under State of California Senate Bill 743, the focus of transportation analysis shifted from vehicular delay (LOS) to VMT. Thus, a project's CEQA transportation-related analysis and resulting impacts are assessed via VMT methodology. LOS methodology is no longer applicable for purposes of identifying a project's CEQA transportation-related impacts.
Objective 14-1: Continue to encourage improved and additional local and express bus service and neighborhood shuttles throughout the Westchester-Playa del Rey Community Plan Area.	**Consistent.** The Project is located within a 0.25-mile walking distance to bus stops serviced by local and rapid transit lines, providing residents, employees, and visitors to the Project with multiple transit route services. Pedestrian access to transit stops would be enhanced with additional landscaping and sidewalk improvements along Manchester Avenue and Truxton Avenue adjacent to the Project Site.
Objective 14-2: Increase work trips and non-work trips made on public transit.	**Consistent.** The Project would increase work and non-work trips by developing a residential mixed-use development located within a 0.25-mile walking distance to bus stops serviced by local and rapid transit lines and provide residents, employees, and visitors to the Project with multiple transit route services.
Policy 15-1.4: Promote the development of transportation facilities and services that encourage higher transit ridership, increased vehicle occupancy, and improved pedestrian and bicycle access.	**Consistent.** The Project would reduce the number of single occupancy vehicle trips to the Project Site by providing both short-term and long-term bicycle parking as well as a reduced parking supply. Pedestrian access to transit stops would be enhanced with additional landscaping and sidewalk improvements along Manchester Avenue and Truxton Avenue adjacent to the Project Site.
Policy 16-1.4: Support the provision of bicycle facilities in all new development.	**Consistent.** The Project would provide both short-term and long-term bicycle parking facilities.
Objective 16-2: To promote pedestrian mobility, safety, amenities, and access between employment centers, residential areas,recreational areas, schools, and transit centers.	**Consistent.** The Project proposes reducing the number of access points from arterials and the no new access points would be proposed in order to minimize vehicle/ pedestrian conflicts. The Project would provide 5-foot dedications along La Tijera Boulevard and Manchester Avenue, widening the pedestrian walkways adjacent to the Project Site to promote pedestrian safety.
Policy 17-1.1: Minimize the number of ingress and egress points to and from all Arterialsin the Westchester-Playa del Rey Community Plan Area.	**Consistent.** The Project would reduce the number of driveways accessing the site by removing the existing driveways on Manchester Avenue, a major arterial, and consolidating the existing two driveways on La Tijera Boulevard. The Project would also maintain the existing driveway on Truxton Avenue.
Policy 17-1.2: Develop off-street parking resources, including parking structures and underground parking in accordance with design standards.	**Consistent.** The Project would provide 566 vehicular parking spaces on-site. The proposed parking facilities would meet the parking requirements set forth in the LAMC.

Notes:
[a] Objectives, Policies, Programs, or Plans based on information provided in the *Westchester - Playa Del Rey Community Plan* (Los Angeles Department of City Planning, 1997).

TABLE 9
PROJECT CONSISTENCY WITH CITYWIDE DESIGN GUIDELINES

Objective, Policy, Program, or Plan [a]	**Analysis of Project Consistency**
Pedestrian-First Design	
Guideline 1: Promote a safe, comfortable, and accessible pedestrian experience for all Design projects to be safe and accessible and contribute to a better public right-of-way for people of all ages, genders, and abilities, especially the most vulnerable - children, seniors, and people with disabilities. **Guideline 2: Carefully incorporate vehicular access such that it does not degrade the pedestrian experience** Design to avoid pedestrian and vehicular conflicts and to create an inviting and comfortable public right-of-way. A pleasant and welcoming public realm reinforces walkability and improves the quality of life for users. **Guideline 3: Design projects to actively engage with streets and public space and maintain human scale** New projects should be designed to contribute to a vibrant and attractive public realm that promotes a sense of civic pride. Better connections within the built environment contribute to a livable and accessible city and a healthier public realm.	**Consistent.** The Project design includes sidewalk improvements along the Project frontages on Truxton Avenue, Manchester Boulevard, and La Tijera Boulevard and street trees to provide adequate shade and a more comfortable environment for pedestrians. Further, the orientation of the Project design provides direct connection to the public right-of-way. Any modifications to the Project access points would be designed and placed in accordance with City standards so as to not disrupt pedestrian flow on the adjacent sidewalks.

Notes:
[a] Objectives, Policies, Programs, or Plans based on information provided in the Citywide Design Guidelines (Los Angeles Department of City Planning, 2019).

Section 4B: Threshold T-2.1
Causing Substantial VMT Analysis

Threshold T-2.1 of the TAG analyzes whether a project causes substantial VMT and is generally applied to land use projects. Specifically, Threshold T-2.1 inquires whether the project would conflict with or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)(1). This subdivision states that (for land use projects) "vehicle miles travelled exceeding an applicable threshold of significance may indicate a significant impact." This subdivision also states that a lead agency has discretion to choose the most appropriate method to evaluate the project's VMT.

As the Lead Agency for the Project, the City uses the analytical methods established by LADOT to determine impacts. Section 2.2.3 of the TAG states that a residential project would result in a significant VMT impact if the resulting household VMT per capita does not meet the minimum threshold of 15% below the existing average household VMT per capita for the Area Planning Commission (APC) area in which the project is located. Similarly, a commercial project would result in a significant VMT impact if the resulting work VMT per employee does not meet the minimum threshold of 15% below the existing average work VMT per employee for the APC area in which the project is located. The VMT analysis presented below was conducted for the Project in accordance with the TAG, which satisfies State requirements under SB 743.

VMT METHODOLOGY

The following details the methodology by which the vehicle trips and VMT are calculated in *City of Los Angeles VMT Calculator Version 1.3* (LADOT, July 2020) (VMT Calculator), as detailed in *City of Los Angeles VMT Calculator Documentation* (LADOT and LADCP, May 2020). LADOT developed the VMT Calculator to estimate project-specific daily household VMT per capita and daily work VMT per employee for developments within City limits, which are based on the following types of one-way trips:

- Home-Based Work Production: trips from a residential use to a workplace destination
- Home-Based Other Production: trips from a residential use to a non-workplace destination (e.g., retail, restaurant, etc.)
- Home-Based Work Attraction: trips from a workplace to a residential use destination

As detailed in *City of Los Angeles VMT Calculator Documentation* (LADOT and LADCP, May 2020), the household VMT per capita threshold applies to Home-Based Work Production and Home-Based Other Production trips, and the work VMT per employee threshold applies to Home-Based Work Attraction trips, as the location and characteristics of residences and workplaces are often the main drivers of VMT, as detailed in Appendix 1 of *Technical Advisory on Evaluating Transportation Impacts in CEQA* (OPR, December 2018).

Table 2.2-1 of the TAG details the following daily household VMT per capita and daily work VMT per employee impact criteria for the City's APC areas (15% below the APC average):

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

The Project is located in the West Los Angeles APC area.

Other types of one-way trips included in the VMT Calculator include Non-Home-Based Other Production (trips to a non-residential destination originating from a non-residential use), Home-Based Other Attraction (trips to a non-workplace destination originating from a residential use), and Non-Home-Based Other Attraction (trips to a non-residential destination originating from a non-residential use). These trip types are not factored into the household VMT per capita and work VMT per employee thresholds as those trips are typically localized and are assumed to have a negligible effect on the VMT impact assessment. However, those trips were factored into the calculation of total Project VMT for screening purposes when determining that VMT analysis for the Project would be required.

Travel Behavior Zone (TBZ)

The City developed TBZ categories to determine the magnitude of VMT and vehicle trip reductions that could be achieved through TDM strategies. As detailed in *City of Los Angeles VMT Calculator Documentation* , the development of the TBZs considered the population density, land use density, intersection density, and proximity to transit of each Census tract in the City and are categorized as follows:

1. *Suburban (Zone 1): Very low-density primarily centered around single-family homes and minimally connected street network.*
2. *Suburban Center (Zone 2): Low-density developments with a mix of residential and commercial uses with larger blocks and lower intersection density.*
3. *Compact Infill (Zone 3): Higher density neighborhoods that include multi-story buildings and well-connected streets.*
4. *Urban (Zone 4): High-density neighborhoods characterized by multi-story buildings with a dense road network.*

The VMT Calculator determines a project's TBZ based on the latitude and longitude of the project address. The Project is located in the Suburban Center (Zone 2) TBZ.

Mixed-Use Development Methodology

As detailed in *City of Los Angeles VMT Calculator Documentation*, the VMT Calculator accounts for the interaction of land uses within a mixed-use development and considers the following sociodemographic, land use, and built environment factors for a project area:

- The project location's jobs/housing balance, which factors into how many trips are local or internal to a mixed-use project

- Land use density where the project is located, which factors into the likelihood of short trips, as well as walking and bicycling
- Transportation network density, which affects the circuity of travel (whether driving, walking, or bicycling) and, therefore, affects both trip length and the likelihood of choosing non-automobile modes of travel
- Proximity to transit, which affects the likelihood that residents or employees will travel via transit rather than automobile
- Proximity to retail and other destinations, affecting the likelihood that residents or employees will take short trips or non-automobile modes for routine commercial activities
- Vehicle ownership rates, with higher levels of vehicle ownership leading to a higher rate of automobile trips
- Household size, which affects both the number of trips made by a given residential unit (increasing or decreasing overall VMT) and also affects the number of people when calculating the daily VMT per capita

Trip Lengths

The VMT Calculator determines a project's VMT based on trip length information from the City's Travel Demand Forecasting (TDF) Model. The TDF Model considers the TAZs within 0.125 miles from the Project to determine the trip lengths and trip types that factor into the calculation of the Project's VMT.

Population and Employment Assumptions

As previously stated, the VMT thresholds identified in the TAG are based on household VMT per capita and work VMT per employee. Thus, the VMT Calculator contains population assumptions developed based on census data for the City and employment assumptions derived from multiple data sources, including *2012 Developer Fee Justification Study* (Los Angeles Unified School District, 2012), the San Diego Association of Governments' Activity Based Model, *Trip Generation Manual, 9th Edition* (ITE, 2012), the United States Department of Energy, and other modeling resources. A summary of population and employment assumptions for various land uses is provided in Table 1 of *City of Los Angeles VMT Calculator Documentation.*

TDM Strategies

Additionally, the VMT Calculator measures the reduction in VMT resulting from a project's incorporation of TDM strategies as project design features or mitigation measures. The following seven categories of TDM strategies are included in the VMT Calculator:

1. Parking
2. Transit
3. Education and Encouragement
4. Commute Trip Reductions
5. Shared Mobility
6. Bicycle Infrastructure
7. Neighborhood Enhancement

TDM strategies within each of these categories have been empirically demonstrated to reduce trip-making or mode choice in such a way as to reduce VMT, as documented in *Quantifying Greenhouse Gas Mitigation Measures* (California Air Pollution Control Officers Association, 2010).

PROJECT VMT ANALYSIS

The VMT Calculator was used to evaluate Project VMT for comparison to the VMT impact criteria. Based on guidance from the City, the VMT Calculator was modeled for the Project's land uses and their respective sizes as the primary input.

The Project includes a commercial component, (i.e., the 11,100 sf of restaurant uses and 5,500 sf retail uses) that would serve the local area. As noted in the TAG, the commercial component (retail use) of the Project is not considered for the purposes of identifying significant work VMT impacts because the proposed density is less than 50,000 sf and is assumed to be local-serving and, therefore, would have a negligible effect on regional VMT.

Project VMT

As previously detailed, the Project design would reduce the number of single occupancy vehicle trips to the Project Site, by including a reduced vehicle parking supply and providing bicycle parking per LAMC requirements.

The VMT analysis results based on the VMT Calculator are summarized in Table 10. As previously detailed, average work VMT per employee is not reported in the VMT Calculator for components that are considered local-serving (assumed true for retail uses less than 50,000 sf) and the work VMT impact is considered less than significant. Thus, the Project's commercial uses would result in a less than significant work VMT impact. The VMT Calculator estimates that the Project would generate 7,243 total household VMT. Thus, the Project would generate average household VMT per capita of 6.9. The average household VMT per capita would not exceed the West Los Angeles APC significant household VMT impact threshold of 7.4 and, therefore, the Project would not result in a significant VMT impact, and no mitigation measures would be required.

The detailed output from the VMT Calculator is provided in Appendix D.

CUMULATIVE VMT ANALYSIS

Cumulative effects of development projects are determined based on the consistency with the air quality and GHG reduction goals of the RTP/SCS in terms of development location, density, and intensity. The RTP/SCS presents a long-term vision for the region's transportation system through Year 2045 and balances the region's future mobility and housing needs with economic, environmental, and public health goals.

As detailed in the TAG, for projects that do not demonstrate an impact by applying an efficiency-based impact threshold (i.e., household VMT per capita or work VMT per employee) in the project impact analysis, a less than significant impact conclusion is sufficient in demonstrating there is no cumulative VMT impact, as those projects are already shown to align with the long-term VMT and GHG goals of the RTP/SCS. The Project would not result in a significant VMT impact with implementation of the mitigation program, as described above. Therefore, the Project is not anticipated to result in a cumulative VMT impact under Threshold T-2.1, and no further evaluation or mitigation measures would be required.

As previously detailed, the Project includes a residential mixed-use development consisting of multi-family housing units and community serving commercial uses. The Project would be designed to further reduce single occupancy trips to the Project Site through TDM strategies, including a reduced parking supply and bicycle parking facilities. The Project would also contribute to the productivity and use of the regional transportation system by providing housing and employment near transit and encourage active transportation, new bicycle parking, and active street frontages, consistent with RTP/SCS goals. Thus, the Project encourages a variety of transportation options and is consistent with the RTP/SCS goal of maximizing mobility and accessibility in the region, and, therefore, would not result in a cumulatively significant VMT impact.

TABLE 10
VMT ANALYSIS SUMMARY

Project Information	
Address	6136 W. Manchester Avenue
Project Land Uses	**Size**
Multi-Family Housing	375 units
Affordable Housing - Family	66 units
General Retail	5,500 sf
High-Turnover Sit-Down Restaurant	11,100 sf
Project Location Characteristics [a]	
Area Planning Commission	West Los Angeles
Travel Behavior Zone [b]	Suburban Center
Maximum VMT Reduction [c]	*20%*
Project VMT Analysis [d]	
Daily Vehicle Trips	3,173
Daily VMT	23,451
Total Household VMT	7,243
Household VMT per Capita [e]	6.9
Impact Threshold	7.4
Significant Impact	**NO**
Total Work VMT	509
Work VMT per Employee [f]	N/A
Impact Threshold	11.1
Significant Impact	**NO**

Notes:

sf - square feet

[a] Project Analysis based on the *City of Los Angeles VMT Calculator Version 1.3* (May 2020).

[b] A "Suburban Center" TBZ is characterized in *City of Los Angeles VMT Calculator* Documentation (LADOT and DCP, May 2020) as low-density development primarily centered around single-family homes and minimally connected street network.

[c] The maximum allowable VMT reduction is based on the Project's designated TBZ.

[d] The following Project design features were accounted for in the VMT evaluation:
- Include bike parking per LAMC, including short-term and long-term parking facilities
- Reduced parking supply

[e] Household VMT per Capita is based on the "home-based work production" trip types.

[f] Work VMT per Employee is based on the "home-based work attraction" trip types.

Section 4C: Threshold T-2.2

Substantially Inducing Additional Automobile Travel Analysis

The intent of Threshold T-2.2 is to assess whether a transportation project would induce substantial VMT, such as the addition of through traffic lanes on existing or new highways, including general purpose lanes, high-occupancy vehicle lanes, peak period lanes, auxiliary lanes, and lanes through grade-separated interchanges.

The Project does not propose a transportation project that would induce automobile travel. Therefore, the Project would not result in a significant impact under Threshold T-2.2 and further evaluation is not required.

Section 4D: Threshold T-3

Substantially Increasing Hazards Due to a Geometric Design Feature or Incompatible Use Analysis

Threshold T-3 requires that a project undergo further evaluation if it proposes new driveways or new vehicle access points to the property from the public ROW or modifications along the public ROW (i.e., street dedications). Project access plans were reviewed to determine if the Project would substantially increase hazards due to geometric design features, including safety, operational, or capacity impacts, with consideration to the following factors: (1) the relative amount of pedestrian activity at Project access points; (2) design features/physical configurations that affect the visibility of pedestrians and bicyclists to drivers entering and exiting the site and the visibility of cars to pedestrians and bicyclists; (3) the type of bicycle facilities the project driveway(s) crosses and the relative level of utilization; (4) 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 impacts; (5) the Project location, or Project-related changes to the public ROW, relative to proximity to the HIN or a Safe Routes to School program area; (6) and any other conditions, including the approximate location of incompatible uses that would substantially increase a transportation hazard.

ACCESS OVERVIEW

As described in Chapter 1 and shown in Figure 1, vehicular access to the Project Site would be provided via one driveway on Truxton Avenue and one driveway on La Tijera Boulevard. The Project proposes removal of the existing access points on Manchester Avenue and the replacement of two existing access points each on Truxton Avenue and La Tijera Boulevard with a single driveway at a new location on each street. The Project access points are discussed in detail in this Section and are not anticipated to substantially increase geometric design hazards related to safety, operational, or capacity impacts.

PROJECT HAZARDS ANALYSIS

Driveway Design Features

As previously detailed, vehicular access to the Project Site includes the replacement of two existing access points each on Truxton Avenue and La Tijera Boulevard with a single driveway at a new location on each street.

The relocated access points on Truxton Avenue and La Tijera Boulevard would require new curb cuts. The new access points were closely reviewed and compared to the driveway design guidelines from Section 321 of *Manual of Policies and Procedures*. These guidelines include factors such as driveway placement, width, and type. The final design of the access points would be reviewed by the City Department of Building and Safety, Bureau of Engineering, and LADOT during site plan review to ensure code compliance and safe pedestrian and vehicular design.

The new Truxton Avenue driveway would accommodate ingress and egress maneuvers and would not cross any existing or planned bicycle facilities. The driveway would provide both commercial and residential access to the Project parking garage. No exceptional horizontal or vertical curvatures exist along this section of roadway that would create sight distance issues for Project traffic utilizing the proposed driveway. In addition, the two existing on-street unmetered spaces provided along the Truxton Avenue frontage would be removed to provide adequate visibility.

The section of La Tijera Boulevard along which the Project's driveway is located is constructed with four existing travel lanes, two in each direction, divided by a two-way left-turn lane. The new driveway on La Tijera Boulevard would accommodate all ingress and egress maneuvers and would not cross any existing or planned bicycle facilities. No exceptional horizontal or vertical curvatures exist along this section of roadway that would create sight distance issues for Project traffic utilizing the proposed driveway. No unusual or new obstacles are presented in the Project design that would be considered hazardous to motorized vehicles, non-motorized vehicles, or pedestrians.

Pedestrian and Bicycle Activity

Pedestrian and bicycle volumes are expected to increase to and from the Project Site. Nonetheless, the Project is designed to encourage and accommodate the increases in pedestrian and bicycle activity to and from the Project Site, though not in sufficient quantities to result in a significant conflict with the vehicles using the access points. The removal of the two existing access points on Manchester Avenue would further improve bicycle and pedestrian safety to and from the Project Site by reducing the potential for vehicle and pedestrian/bicycle conflicts.

Currently, the sidewalks along the Project frontages provide a continuous pedestrian connection to the Project Site. Adjacent to the Project Site, generally 12-foot wide sidewalks are provided along La Tijera Boulevard and Truxton Avenue, while eight-foot wide sidewalks are provided along Manchester Avenue. None of the Project access points would cross any existing bicycle facilities.

As previously detailed, adjacent to the Project Site, La Tijera Boulevard is identified as part of the PED. The Project includes pedestrian enhancements surrounding the Project Site, such as landscaping and sidewalk improvements as well as dedications along Manchester Avenue and La Tijera Boulevard. Further, pedestrian and bicycle access to the Project Site would be separated from vehicular traffic. The Project improvements would not preclude or interfere with the implementation of any other future roadway improvements benefiting pedestrians or bicycles. The Project driveways would be designed and placed to provide adequate sight distance and pedestrian refuge areas to limit potential vehicular-bicycle or vehicular-pedestrian conflicts. Based on the site plan review and design assumptions, the Project does not present geometric design hazards related to mobility or pedestrian accessibility.

Physical Terrain

The design of new access points would not restrict sight lines, allowing drivers to safely identify approaching vehicles, pedestrians, and bicyclists before committing to turn. Any new driveway would be designed to intersect the adjacent streets at right angles to the extent feasible to allow pedestrians and bicyclists to observe vehicles within the driveways. The Project would provide landscaped elements and sidewalk improvements to facilitate pedestrian and bicycle accessibility and improve visibility near driveways.

Project Location

The Project Site is located in the Westchester – Playa Del Rey Community Plan. The Project Site is not adjacent to any streets identified as HIN. Additionally, the Safe Routes to School map does not identify any infrastructure or safety improvement projects within the Study Area nor any pedestrian routes to schools along the streets adjacent to the Project Site.

The Project would meet the street dedication half-widths required by the Mobility Plan along its frontages. The Project would maintain the designated driveway and roadway width requirements indicated in the Mobility Plan, and the Project would not preclude future roadway improvements proposed in the Mobility Plan.

Incompatible Uses

The Project integrates residential and commercial uses into the surrounding area and would connect to adjacent pedestrian walkways and vehicular access points. The Project incorporates and complements the surrounding areas to provide a more attractive, well-defined, and accessible interaction between the Project residents, employees, and visitors to the adjacent commercial, residential, and retail land uses. The Project also places residential uses in proximity to transit opportunities and adjacent commercial uses in the surrounding area. As previously mentioned, the Project does not propose additional vehicle driveways along the public ROW and would replace two existing access points each on Truxton Avenue and La Tijera Boulevard with a single driveway at a new location on each street. None of the Project design elements that are tangential to the adjacent uses are considered incompatible. There are no unusual or new obstacles that would be considered hazardous to motorized vehicles, non-motorized vehicles, or pedestrians.

CUMULATIVE ANALYSIS

In addition to potential Project-specific impacts, the TAG requires that the Project be reviewed in combination with Related Projects with access points along the same block as the Project to determine if there may be a cumulatively significant impact. There are currently no identified Related Projects proposed with access points along the same block of the Project. Therefore, the Project would not result in cumulative impacts that would substantially increase hazards due to geometric design features, including safety, operational, or capacity impacts under Threshold T-3.

Section 4E
CEQA Freeway Safety Analysis

LADOT issued *Interim Guidance for Freeway Safety Analysis* (LADOT, May 1, 2020) (City Freeway Guidance) identifying City requirements for a CEQA safety analysis of Caltrans facilities as part of a transportation assessment.

ANALYSIS METHODOLOGY

The City Freeway Guidance relates to the identification of potential safety issues at freeway off-ramps as a result of increased traffic from development projects. It provides a methodology and significance criteria for assessing whether additional vehicle queueing at off-ramps could result in an unsafe condition due to speed differentials between the mainline freeway lanes and the queued vehicles at the off-ramp.

Based on the City Freeway Guidance, a transportation assessment for a development project must include analysis of any freeway off-ramp where the project adds 25 or more peak hour trips. A project would result in a safety issue at such a ramp if each of the following three criteria were met:

1. Under a scenario analyzing future conditions upon project buildout, with project traffic included, the off-ramp queue would extend to the mainline freeway lanes[6].
2. The project would contribute at least two vehicle lengths (50 feet, assuming 25 feet per vehicle) to the queue.
3. The average speed of mainline freeway traffic adjacent to the off-ramp during the analyzed peak hour(s) is greater than 30 mph.

Should a safety issue be identified, corrective measures to be considered include TDM strategies to reduce a project's trip generation, investments in active transportation or transit system infrastructure to reduce a project's trip generation, changes to the traffic signal timing or lane

[6] If an auxiliary lane is provided on the freeway, then half the length of the auxiliary lane is added to the ramp storage length.

assignments at the ramp intersection, or physical changes to the off-ramp. Any physical change to the ramp would have to improve safety, not induce greater VMT, and not result in secondary environmental impacts.

PROJECT FREEWAY SAFETY ANALYSIS

As detailed in the MOU, based on the Project's trip generation estimates and traffic distribution pattern, the Project would not add 25 or more peak hour trips to any freeway off-ramp under either site access scenario. Therefore, no freeway off-ramp analysis is required, and the addition of Project trips is not anticipated to cause any freeway off-ramp queues to extend beyond the available storage capacity resulting in queuing impacts. Therefore, no corrective measures would be required.

Chapter 5
Non-CEQA Transportation Analysis

Section 3 of the TAG provides guidance for preparing additional transportation analyses that are not required to determine the CEQA impacts of the Project because VMT is the legally applicable methodology for analyzing traffic, circulation, and transportation impacts. This chapter summarizes the non-CEQA transportation analysis of the Project. It includes sections related to the Project traffic, proposed access provisions, safety, and circulation operations of the Project, and the adjacent pedestrian, bicycle, and transit facilities. This chapter also evaluates the Project's operational conditions, parking supply and requirements, and effects due to Project construction.

Per Section 3.1 of the TAG, any deficiencies identified based on the non-CEQA transportation analysis is "not intended to be interpreted as thresholds of significance, or significance criteria for purposes of CEQA review unless otherwise specifically identified in Section 2." Section 3 of the TAG identifies the following four non-CEQA transportation analyses for reviewing potential transportation deficiencies that may result from a development project:

- Pedestrian, Bicycle, and Transit Access Assessment
- Project Access, Safety, and Circulation Evaluation
- Residential Street Cut-Through Analysis
- Construction Analysis

The four non-CEQA transportation analyses were reviewed in detail in Sections 5A-5D. In addition, a review of the proposed parking and the City's parking requirement for the Project is provided in Section 5E.

Section 5A
Pedestrian, Bicycle, and Transit Assessment

This section assesses the Project's potential effect on pedestrian, bicycle, and transit facilities in the vicinity of the Project Site.

Factors to consider when assessing a project's potential effect on pedestrian, bicycle, and transit facilities, include the following:

- Would the project directly or indirectly result in a permanent removal or modification that would lead to the degradation of pedestrian, bicycle, or transit facilities?
- Would a project intensify use of existing pedestrian, bicycle, or transit facilities?

EXISTING INFRASTRUCTURE

Pedestrians and Bicycles

Adjacent to the Project Site, generally 12-foot wide sidewalks and parkways are provided along the Project frontage on Truxton Avenue and La Tijera Boulevard and eight-foot wide sidewalks along the Project frontage on Manchester Avenue. Curb ramps for ADA accessibility are provided at all corners of Truxton Avenue & Manchester Avenue (Intersection #2) and La Tijera Boulevard & Manchester Avenue (Intersection #3) along with pedestrian push buttons, and continental crosswalks across all legs. Figure 7 identifies facilities within walking distance (0.25 miles) of the Project Site that could attract pedestrian activity.

Within the Project Site vicinity, Class II bicycle lanes are provided along Manchester Avenue and Sepulveda Boulevard north of Manchester Avenue, as shown in Figure 8.

Transit

Adjacent to the Project Site, bus stops are located along Manchester Avenue, as illustrated in Figure 9. Bus stops with benches serving Metro Routes 102 and 115 Manchester Avenue near the intersection of Truxton Avenue.

PROJECT EFFECTS ON INFRASTRUCTURE

The Project would not directly or indirectly result in a permanent removal or modification that would lead to the degradation of pedestrian or bicycle facilities. Although the Project would intensify use of existing pedestrian and bicycle facilities, the Project would generally improve the surrounding infrastructure for pedestrians, bicyclists, and transit users and provide adequate measures to improve the safety of those accessing the Project Site and utilizing the street system surrounding it. Along the frontages of the Project on La Tijera Boulevard, Manchester Avenue, and Truxton Avenue, the Project would provide improved sidewalks lined with street trees, shrubs, and other landscape elements to provide a comfortable pedestrian environment and improve sidewalk widths in accordance with Mobility Plan and design standards. The Project would also provide five-foot dedications along the Project frontage on La Tijera Boulevard and Manchester Avenue to meet the designated street standards in accordance with the Mobility Plan. The Project would maintain internal walkways and open space to continue to provide pedestrian connections throughout the site and to the public pedestrian facilities.

In addition, the proposed access points on La Tijera Boulevard and Truxton Avenue would be designed and maintained, respectively, in accordance with City standards to minimize any potential conflicts with pedestrians and bicyclists by providing adequate sight distance and visibility. The removal of existing driveways on Manchester Avenue and the reduction in the number of driveways on Truxton Avenue and La Tijera Boulevard would also further minimize potential vehicular conflicts with pedestrians and bicyclists.

Currently, there are bicycle lanes adjacent to the Project Site on Manchester Avenue. To facilitate bicycle use, the Project would provide bicycle parking for employees and visitors in accordance with the LAMC. The Project improvements would not preclude or interfere with the implementation of any future roadway improvements benefiting transit, pedestrians, or bicycles.

PROJECT EFFECTS ON VOLUME

As shown in Figure 7, the Project is located in an urbanized area near local commercial facilities that could be considered pedestrian destinations. The Project Site location provides opportunities for non-automobile trips to be made to and from those destinations. Thus, the Project would result in additional pedestrian, bicycle, and transit activity in the vicinity of the Project Site.

As illustrated in Figure 7, pedestrian activity generated by the Project is anticipated to be heaviest along Manchester Avenue and La Tijera Boulevard, which connects to existing transit stops and commercial destinations near the Project Site. Bicycle activity would similarly be most concentrated in those directions.

Although the Project (and other Related Projects) will cumulatively add transit ridership, the Project Site and the Study Area are well-served by transit as detailed in Table 2. As shown in Tables 3A and 3B, the total residual capacity of the bus lines with stops located within a 0.25-mile walking distance of the Project Site is approximately 635 and 897 transit trips during the morning and afternoon peak hours, respectively. As shown in Table 5, transit usage for the Project accounts for the reduction of approximately 43 and 48 vehicle trips during the morning and afternoon peak hours, respectively. Based on the average vehicle occupancy factor of 1.55 for all trip purposes in Los Angeles County as identified in *SCAG Regional Travel Demand Model and 2012 Model Validation* (SCAG, March 2016), the total Project vehicle-transit trips correspond to 67 person-transit trips during the morning peak hour and 75 person-transit trips during the afternoon peak hour. This equates to approximately 11% of the total minimum residual capacity of the transit lines for those routes with available data within the Study Area during the morning and afternoon peak hours, confirming that the adjacent transit capacity can accommodate the intensification of transit usage attributable to the Project.

CONCLUSION

The Project would result in some intensification of pedestrian, bicycle, and transit activity. However, the Project would improve the adjacent pedestrian facilities and promote a more comfortable environment for all users through improved sidewalks and street trees along the Project frontages. The Project would also provide bicycle parking facilities on-site for residents, employees, and visitors to utilize and complete first-mile/last-mile connections. The current transit infrastructure has adequate residual capacity to accommodate Project transit trips. The pedestrian, bicycle, and transit activity generated by the Project would not strain the transportation system dedicated to those modes. Based on the analysis above, the Project would not result in substantial negative effects on pedestrian, bicycle, or transit access and, therefore, no further improvements are necessary.

Section 5B
Project Access, Safety, and Circulation Assessment

This section summarizes the access, safety, and circulation of the Project Site. It includes a quantitative evaluation of the Project's access and circulation operations, including the anticipated LOS and traffic queues at the study intersections. Negative effects of a project may consist of operational delays on surrounding streets, conflicts between vehicles and other vehicles, bicycles, or pedestrians, or geometric configurations that result in unsafe conditions. Such effects are not considered significant under CEQA but could require Project modifications or off-site improvements to ensure safe and efficient circulation around the Project Site.

PROJECT ACCESS

Vehicle Access and Internal Circulation

As described in Chapter 1, vehicular access to the Project Site would be provided via driveways along Truxton Avenue and La Tijera Boulevard. Both driveways would accommodate full access ingress and egress movements. Passenger loading would be accommodated on-site with access provided via the two driveways. The Project would provide internal drive aisles that would accommodate passenger vehicle and truck circulation.

The driveways would be designed to LADOT standards under the review of City staff. Residential access control equipment will be located within the interior of the garage away from the driveways; the commercial parking is anticipated to be uncontrolled. The circulation aisle widths of the parking areas should be designed to allow adequate and safe circulation of vehicles and trucks without significant conflicts. The vehicular access points are adequate to serve the demand of the Project Site and no significant internal congestion is anticipated that would affect traffic flow on adjacent public streets. The detailed queue evaluation worksheets for the proposed Project driveways are provided in Appendix E.

<u>Pedestrians and Bicycles</u>

Pedestrian access to the residential lobby within the Project Site would be provided via a pedestrian entrance along Truxton Avenue. Pedestrian access to the commercial uses would be provided via pedestrian entrances along Truxton Avenue and La Tijera Boulevard.

Residents, employees, and visitors arriving by bicycle would have the same access opportunities as pedestrian visitors.

None of the Project driveways would cross any existing bicycle lanes or routes. Therefore, given the limited access and minimal bicycle traffic, the driveways would not pose a safety hazard to bicyclists. The Project driveways would be designed and placed to provide adequate sight distance and pedestrian refuge areas to limit potential vehicular-bicycle or vehicular-pedestrian conflicts. In order to facilitate bicycle use, short-term and long-term bicycle parking spaces, along with showers and other amenities, would be provided, as detailed in Section 5E.

OPERATIONAL EVALUATION

Intersection operations were evaluated for typical weekday morning (7:00 AM to 10:00 AM) and afternoon (3:00 PM to 6:00 PM) peak periods. A total of five signalized intersections and four unsignalized intersection in the vicinity of the Project Site were selected for detailed transportation analysis and are shown in Figure 3.

The following traffic conditions were developed and analyzed as part of this study:

- <u>Existing with Project Conditions</u>: This analysis condition estimates the potential intersection operating conditions that could be expected if the Project were built under existing conditions.

- <u>Future with Project Conditions (Year 2027)</u>: This analysis condition estimates the potential intersection operating conditions that could be expected if the Project were occupied in the projected buildout year. In this analysis, the Project-generated traffic is added to Future without Project Conditions (Year 2027).

Methodology

In accordance with the TAG, the intersection delay and queue analyses for the operational evaluation were conducted using the Highway Capacity Manual (HCM) methodology, which was implemented using Synchro software with signal timing plans provided by the City to analyze intersection operating conditions. The HCM signalized methodology calculates the average delay, in seconds, for each vehicle passing through the intersections while the HCM unsignalized two-way stop-control methodology calculates the control delay, in seconds, for individual approaches of an intersection. Table 11 presents a description of the LOS categories, which range from excellent, nearly free-flow traffic at LOS A, to congested stop-and-go conditions at LOS F, for signalized intersections. The queue lengths were estimated using Synchro, which reports the 95^{th} percentile queue length for each approach lane.

LOS and queuing worksheets for each scenario are provided in Appendix E.

Existing with Project Conditions

Traffic Volumes. The morning and afternoon peak hour traffic volumes generated by the Project, as described in Chapter 3 and shown in Figure 16B, were added to the Existing Conditions morning and afternoon peak hour traffic volumes shown in Figure 10. The resulting volumes are illustrated in Figure 17 and represent Existing with Project Conditions, assuming Project operation under Existing Conditions.

Intersection LOS. Table 12 summarizes the weekday morning and afternoon peak hour LOS results for the Study Area intersections under Existing Conditions and Existing with Project Conditions. As shown in Table 12, eight Study Area intersections operate at LOS D or better during both the morning and afternoon peak hours. The remaining intersection at Bleriot Avenue & La Tijera Boulevard (Intersection #9) is anticipated to operate at LOS C during the morning peak hour under Existing Conditions and Existing with Project Conditions and at LOS D and E during the afternoon peak hour under Existing Conditions and Existing with Project Conditions, respectively.

The HCM Two-Way-Stop-Control (TWSC) unsignalized methodology calculates the control delay, in seconds, for each individual approach of an intersection. The reported control delay represents the worst-case approach, typically on the lower volume minor street, and does not account for traffic gaps created by adjacent traffic signals that allow turn movements to proceed from the minor street.

Future with Project Conditions

All future cumulative traffic growth (i.e., ambient and Related Project traffic growth) and transportation infrastructure improvements described in Chapter 2 are incorporated into this analysis.

Traffic Volumes. The morning and afternoon peak hour traffic volumes generated by the Project described in Chapter 3 and shown in Figure 16B were added to the Future without Project Conditions (Year 2027) morning and afternoon peak hour traffic volumes shown in Figure 11. The resulting volumes are illustrated in Figure 18 and represent Future with Project Conditions after development of the Project in Year 2027.

Intersection LOS. Table 13 summarizes the results of the Future without Project (Year 2027) and Future with Project Conditions during the weekday morning and afternoon peak hours for the Study Area intersections. As shown in Table 13, seven Study Area intersections operate at LOS D or better during both the morning and afternoon peak hours under Future without Project Conditions and Future with Project Conditions (Year 2027). The remaining two intersections are anticipated to operate at LOS E during the morning or afternoon peak hour under Future without Project Conditions and Future with Project Conditions (Year 2027).

It should be noted that the HCM TWSC unsignalized methodology calculates the control delay, in seconds, for each individual approach of an intersection. The reported control delay represents the worst-case approach, typically on the lower volume minor street, and does not account for traffic gaps created by adjacent traffic signals that allow turn movements to proceed from the minor street.

Signal Warrant Analysis

A signal warrant analysis was conducted to evaluate the potential installation of a new traffic signal at one unsignalized intersection within the Study Area at Bleriot Avenue & La Tijera Boulevard (Intersection #9).

The signal warrant analyses follow the guidelines set forth in *Manual of Policies and Procedures* and *California Manual on Uniform Traffic Control Devices* (Caltrans, 2021) (California MUTCD), by applying the thresholds from Warrant 3 (peak hour). The following methodology, as quoted from the California MUTCD, was used to evaluate signal warrants at the intersection.

> ***Warrant 3, Peak-Hour Vehicular Volume Warrant***
>
> *Signal Warrant 3 is intended for use at a location where traffic conditions are such that for a minimum of one hour of an average day, the minor-street traffic suffers undue delay when entering or crossing the major street. Combined volumes for both approaches of the major street are included while only the volume from the higher minor street approach is included. At an intersection with a high volume of left-turn traffic from the major street, the analysis may include the major street left-turn volumes plus the minor street approach volume as the total "minor street" volume. The warrant is satisfied if traffic volumes for any one hour of an average day exceed the plotted lines shown in the following figure.*

As shown in Appendix F, the unsignalized intersection of Bleriot Avenue & La Tijera Boulevard (Intersection #9) does not meet the minimum peak hour traffic volume threshold of Warrant 3 under Existing Conditions nor Future Conditions, with or without the addition of Project traffic. Thus, the installation of a traffic signal is not recommended.

Intersection Queuing Analysis

The intersections in the Study Area were also analyzed to determine whether the lengths of intersection turning lanes could accommodate vehicle queue lengths.

The queue lengths were estimated using Synchro software, which reports the 95th percentile queue length, in feet, for each approach lane. The reported queues are calculated using the HCM signalized intersection methodology.

Detailed queuing analysis worksheets are provided in Appendix E along with a summary table.

Two study intersections in the Existing Conditions and Future with Project Conditions scenarios demonstrate one or two directions of left-turn or right-turn traffic demand will exceed the available storage length, and the Project adds at least two vehicle lengths to that directional demand. At Sepulveda Boulevard & Manchester Avenue (Intersection #1), the Project would add approximately two vehicles to the westbound right-turn during the morning peak hour and approximately four vehicles to the southbound left-turn during the afternoon peak hours, At La Tijera Boulevard & Manchester Avenue (Intersection #3), the Project would add two vehicles to the westbound left-turn during the afternoon peak hour

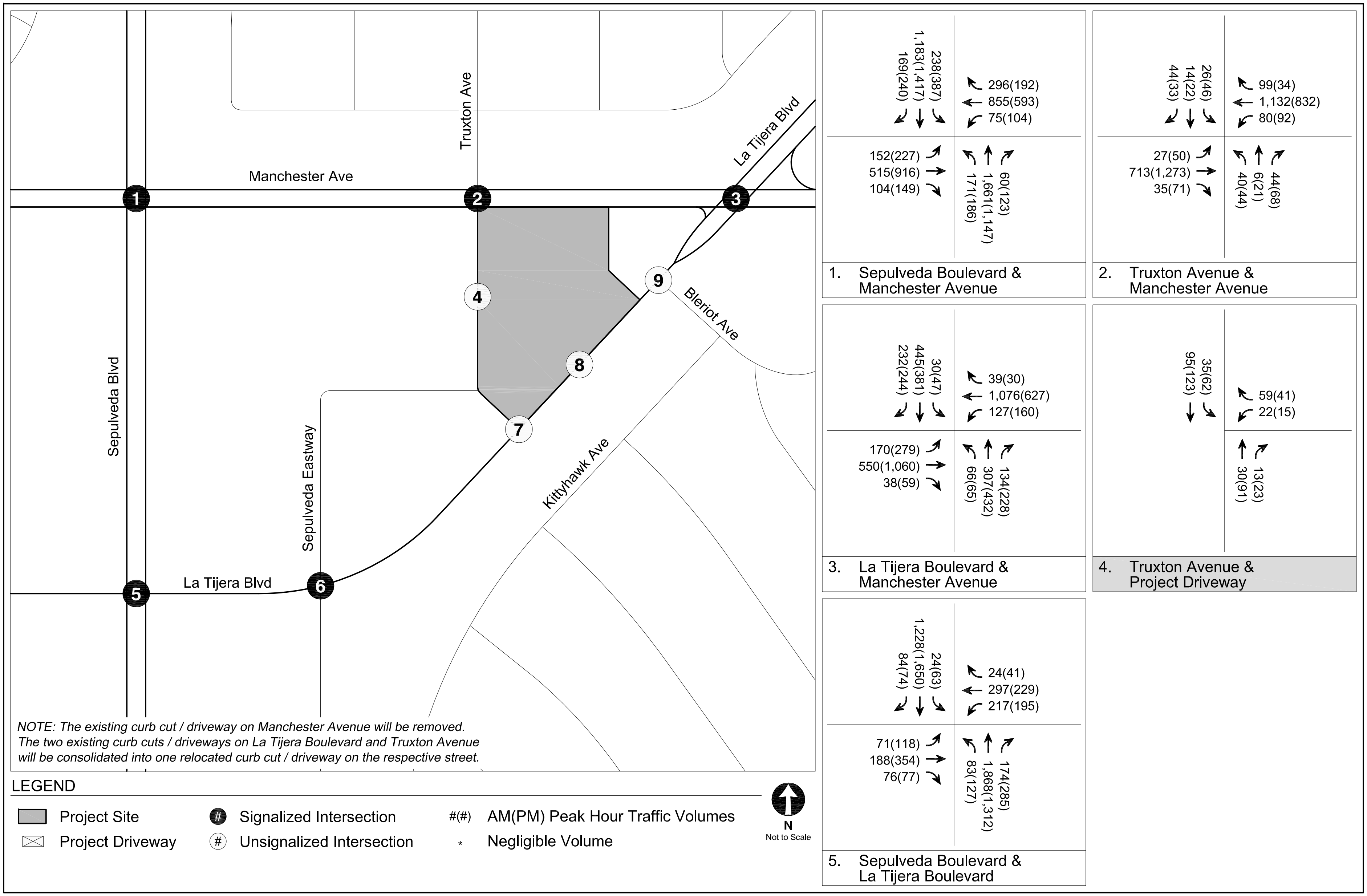
RECOMMENDED ACTIONS

It is anticipated that the Project would add to the cumulative traffic within the Study Area, as detailed above. In order to minimize the effects of Project traffic on surrounding streets and intersections and to help improve circulation in the vicinity, the Project Applicant proposes several improvements, developed in consultation with LADOT. As discussed in Section 4B, the Project would implement various TDM strategies such as a reduced parking supply and the provision of bicycle parking to reduce single occupancy Project-related trips to the Project Site and throughout the Study Area.

Based on Section 3.3.5 of the TAG, the following improvement measures, or corrective actions, proposed by the Project would be consistent with the City's policies and procedures that support improvements that increase safety and reduce GHG emissions by reducing the use of single-occupant vehicle trips, encourage developers to construct transit and pedestrian-friendly projects with safe and walkable sidewalks, and promote other modes of travel.

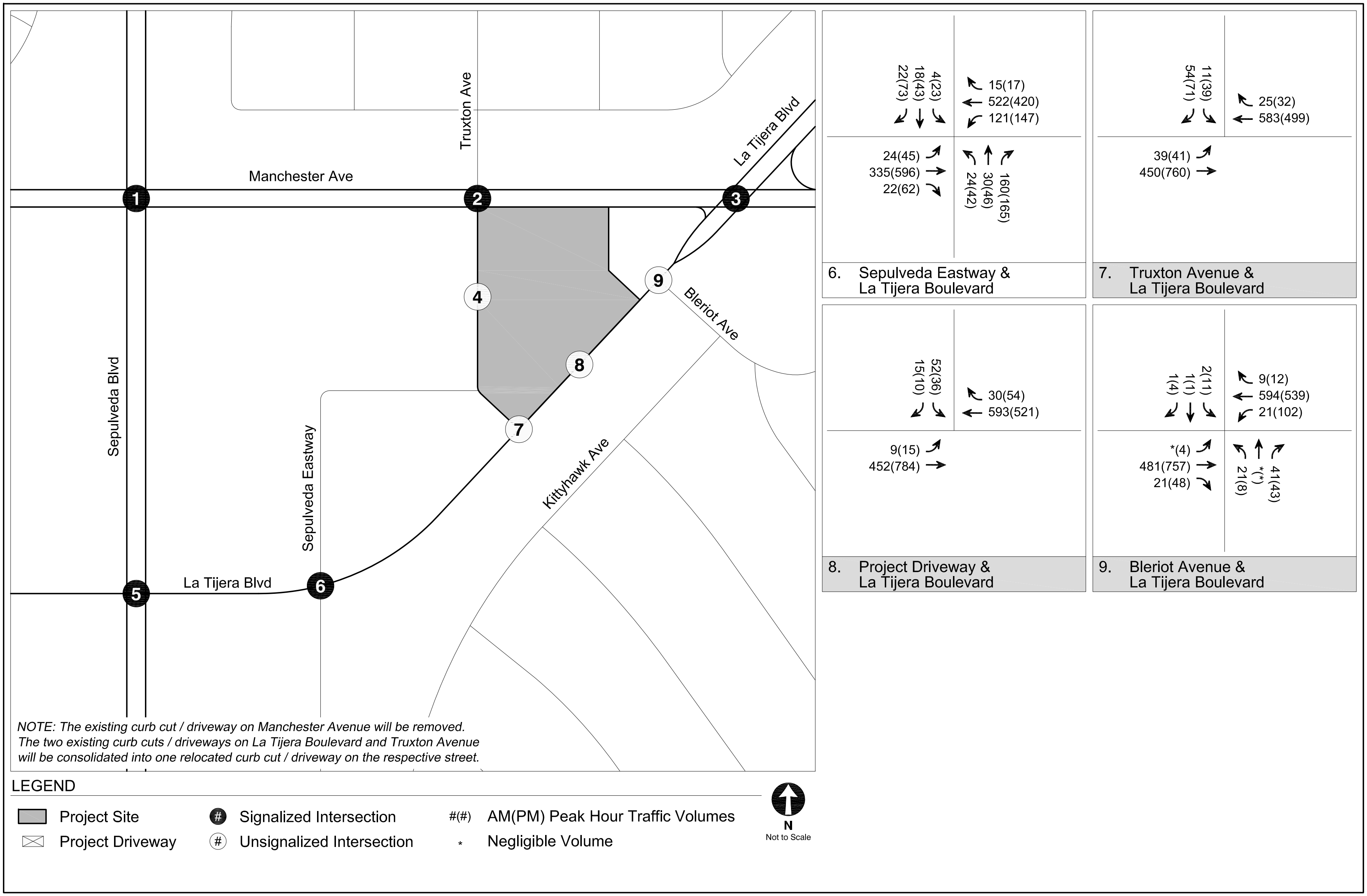
Off-site Infrastructure Improvements. As detailed above, the Project would introduce sidewalk improvements by providing a five-foot half-ROW dedication along the Project frontage on La Tijera

Boulevard and Manchester Avenue to meet the street dedication widths required by the Mobility Plan. The Project proposes measures to minimize vehicle queues including implementation of a TDM measures such as the provision of bicycle parking that would result in peak hour trip reductions to the Project Site.



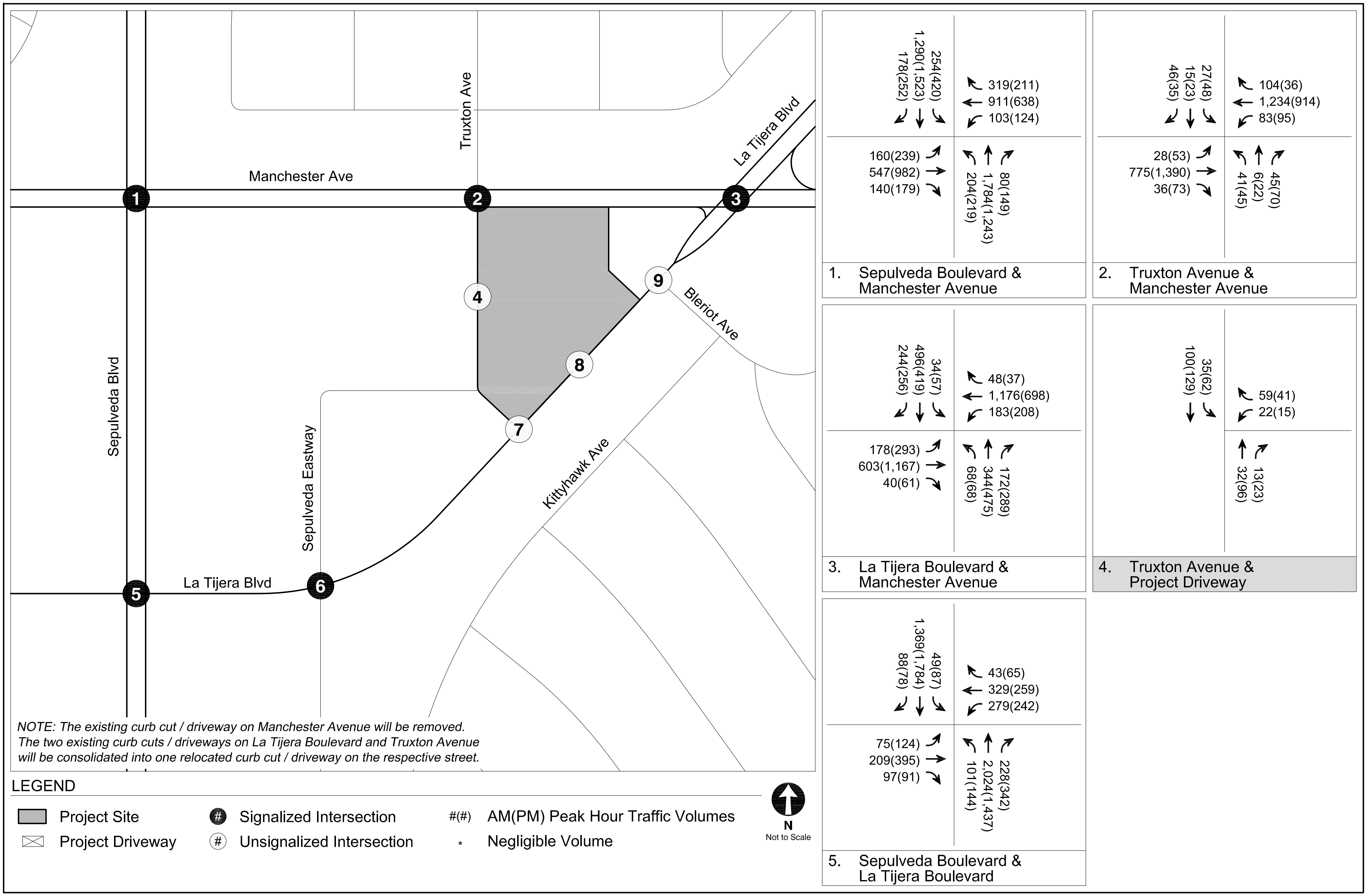
EXISTING WITH PROJECT CONDITIONS (YEAR 2022)
PEAK HOUR TRAFFIC VOLUMES

FIGURE 17



EXISTING WITH PROJECT CONDITIONS (YEAR 2022)
PEAK HOUR TRAFFIC VOLUMES

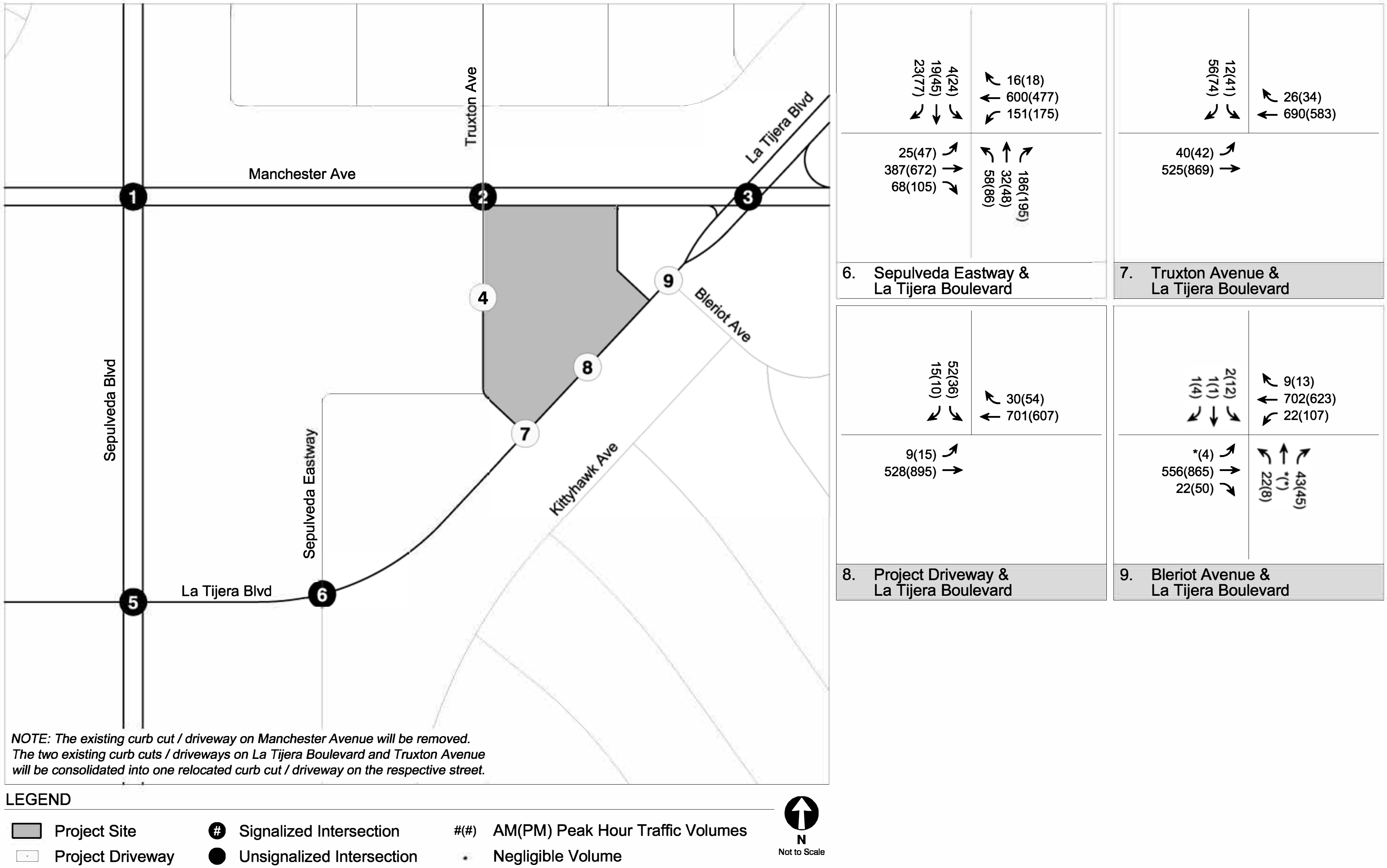
FIGURE
17 (CONT.)



FUTURE WITH PROJECT CONDITIONS (YEAR 2027)
PEAK HOUR TRAFFIC VOLUMES

FIGURE 18

Gibson transportation consulting, inc.



FUTURE WITH PROJECT CONDITIONS (YEAR 2027)
PEAK HOUR TRAFFIC VOLUMES

FIGURE 18 (CONT.)

TABLE 11
INTERSECTION LEVEL OF SERVICE

Level of Service	Description	Delay [a]	
		Signalized Intersections	Unsignalized Intersections
A	EXCELLENT. No vehicle waits longer than one red light and no approach phase is fully used.	≤ 10	≤ 10
B	VERY GOOD. An occasional approach phase is fully utilized; many drivers begin to feel somewhat restricted within groups of vehicles.	> 10 and ≤ 20	> 10 and ≤ 15
C	GOOD. Occasionally drivers may have to wait through more than one red light; backups may develop behind turning vehicles.	> 20 and ≤ 35	> 15 and ≤ 25
D	FAIR. Delays may be substantial during portions of the rush hours, but enough lower volume periods occur to permit clearing of developing lines, preventing excessive backups.	> 35 and ≤ 55	> 25 and ≤ 35
E	POOR. Represents the most vehicles intersection approaches can accommodate; may be long lines of waiting vehicles through several signal cycles.	> 55 and ≤ 80	> 35 and ≤ 50
F	FAILURE. Backups from nearby locations or on cross streets may restrict or prevent movement of vehicles out of the intersection approaches. Tremendous delays with continuously increasing queue lengths.	> 80	> 50

Notes:
Source: *Highway Capacity Manual, 6th Edition* (Transportation Research Board, 2016).
[a] Measured in seconds.

TABLE 12
EXISTING CONDITIONS (YEAR 2022)
INTERSECTION LEVELS OF SERVICE

No	Intersection	Peak Hour	Existing Conditions		Existing with Project Conditions	
			Delay	LOS	Delay	LOS
1. [a]	Sepulveda Boulevard & Manchester Avenue	AM PM	46.5 48.3	D D	49.8 50.4	D D
2. [a]	Truxton Avenue & Manchester Avenue	AM PM	5.3 6.6	A A	6.3 7.6	A A
3. [a]	La Tijera Boulevard & Manchester Avenue	AM PM	36.8 38.4	D D	37.3 39.1	D D
4. [b]	Truxton Avenue & Project Driveway	AM PM	N/A N/A	N/A N/A	9.3 9.8	A A
5. [a]	Sepulveda Boulevard & La Tijera Boulevard	AM PM	28.7 39.5	C D	28.8 39.5	C D
6. [a]	Sepulveda Eastway & La Tijera Boulevard	AM PM	11.2 12.8	B B	10.9 12.5	B B
7. [b]	Truxton Avenue & La Tijera Boulevard	AM PM	10.3 11.6	B B	10.3 11.8	B B
8. [b] [c]	Project Driveway & La Tijera Boulevard	AM PM	N/A N/A	N/A N/A	15.6 15.6	C C
9. [b]	Bleriot Avenue & La Tijera Boulevard	AM PM	19.9 30.6	C D	21.0 33.9	C D

<u>Notes:</u>

Delay is measured in seconds per vehicle. LOS = Level of Service.

[a] Intersection analysis based on HCM 6th Edition Signalized methodology, which calculates the average intersection delay, in seconds, for each vehicle passing through the intersection.

[b] Intersection analysis based on the HCM 6th Edition Two-Way Stop Control Unsignalized methodology, which calculates the control delay, in seconds, for each individual approach of an intersection. The reported control delay represents the worst-case approach, and does not account for traffic gaps created by adjacent traffic signals.

[c] With the development of the Project, the existing two driveways on La Tijera Boulevard that serve the Project Site will be consolidated into one driveway.

TABLE 13
FUTURE CONDITIONS (YEAR 2027)
INTERSECTION LEVELS OF SERVICE

No	Intersection	Peak Hour	Future without Project Conditions		Future with Project Conditions	
			Delay	LOS	Delay	LOS
1. [a]	Sepulveda Boulevard & Manchester Avenue	AM PM	69.3 60.4	E E	73.0 63.2	E E
2. [a]	Truxton Avenue & Manchester Avenue	AM PM	5.5 6.6	A A	6.3 7.8	A A
3. [a]	La Tijera Boulevard & Manchester Avenue	AM PM	41.1 29.0	D C	41.6 30.1	D C
4. [b]	Truxton Avenue & Project Driveway	AM PM	N/A N/A	N/A N/A	9.3 9.8	A A
5. [a]	Sepulveda Boulevard & La Tijera Boulevard	AM PM	46.2 53.6	D D	46.3 53.6	D D
6. [a]	Sepulveda Eastway & La Tijera Boulevard	AM PM	11.7 13.8	B B	11.5 13.7	B B
7. [b]	Truxton Avenue & La Tijera Boulevard	AM PM	10.8 12.4	B B	10.9 12.4	B B
8. [b] [c]	Project Driveway & La Tijera Boulevard	AM PM	N/A N/A	N/A N/A	17.6 17.2	C C
9. [b]	Bleriot Avenue & La Tijera Boulevard	AM PM	24.5 41.5	C E	25.9 46.0	D E

Notes:

Delay is measured in seconds per vehicle. LOS = Level of Service.

[a] Intersection analysis based on HCM 6th Edition Signalized methodology, which calculates the average intersection delay, in seconds, for each vehicle passing through the intersection.

[b] Intersection analysis based on the HCM 6th Edition Two-Way Stop Control Unsignalized methodology, which calculates the control delay, in seconds, for each individual approach of an intersection. The reported control delay represents the worst-case approach, and does not account for traffic gaps created by adjacent traffic signals.

[c] With the development of the Project, the existing two driveways on La Tijera Boulevard that serve the Project Site will be consolidated into one driveway.

Section 5C
Residential Street Cut-Through Analysis

This section summarizes the residential street cut-through analysis for the Project. The residential street cut-through analysis determines potential increases in average daily traffic volumes on designated Local Streets, as classified in the Mobility Plan, which can be identified as cut-through trips generated by the Project and that can adversely affect the character and function of those streets.

Section 3.5.2 of the TAG provides a list of questions to assess whether the Project would negatively affect residential streets. The Project is not projected to lead to trip diversion along residential Local Streets, nor is the Project projected to add a substantial amount of automobile traffic to congested Arterial Streets that could potentially cause a shift to residential Local Streets, as the surrounding area mainly consists of industrial and commercial uses. Thus, the Project is not required to conduct a Local Residential Street Cut-Through Analysis.

Section 5D
Project Construction Assessment

This section summarizes the construction schedule and construction analysis for the Project. The construction analysis relates to the temporary effects of Project construction activities and was conducted in accordance with Section 3.4, Project Construction, of the TAG.

CONSTRUCTION EVALUATION CRITERIA

Section 3.4.3 of the TAG identifies the following three types of in-street construction constraints that require further analysis to assess the effects of Project construction on the existing pedestrian, bicycle, transit, or vehicle circulation.

1. Temporary transportation constraints – potential effects on the transportation system
2. Temporary loss of access – potential effects on visitors entering and leaving sites
3. Temporary loss of bus stops or rerouting of bus lines – potential effects on bus travelers

The factors to be considered include the magnitude and duration of the temporary loss of access and transportation facilities, the potential inconvenience caused to users of the transportation system, and consideration for public safety. Construction activities could potentially interfere with pedestrian, bicycle, transit, or vehicle circulation and accessibility to adjoining areas. As detailed in Section 3.4.4 of the TAG, the proposed construction plans should be reviewed to determine whether construction activities would require any of the following actions within the public ROW:

- Street, sidewalk, or lane closures
- Block existing vehicle, bicycle, or pedestrian access along a street or to parcels fronting the street
- Modification of access to transit stations, stops, or facilities during revenue hours
- Closure or movement of an existing bus stop or rerouting of an existing bus line
- Creation of transportation hazards

PROJECT CONSTRUCTION DETAILS

Schedule

The Project is anticipated to be constructed over a period of approximately 31 months. Typical construction activity would occur between the hours of 7:00 AM and 4:00 PM on weekdays, in conformance with the City's construction hour restrictions, though the majority of work is anticipated to be conducted between the hours of 7:00 AM and 3:00 PM. Construction would not occur on weekends or federal holidays, though construction-related street closures may remain in place even on days construction does not occur.

Effects on Access, Transit, and Parking

All construction activities would be primarily contained within the Project Site boundaries. Construction fences would not encroach into the public ROW (e.g., sidewalks and roadways) adjacent to the Project Site on Truxton Avenue, La Tijera Boulevard, or Manchester Avenue for the duration of Project construction. It is anticipated that the parking lane on Truxton Avenue and La Tijera Boulevard as well as one eastbound travel lane on Manchester Avenue would be closed intermittently for concrete pumping and material hoisting operations. A bus stop adjacent to the Project Site is located on Manchester Avenue; therefore, the bus stop would need to be temporarily relocated through coordination with responsible agency.

Construction Traffic

Project construction would result in truck traffic (haul trucks, delivery trucks, cement trucks) and worker traffic to and from the Project Site on a daily basis.

Construction delivery trucks would generally enter the Project Site from Manchester Avenue. Haul trucks carrying dirt or debris would occur regularly throughout the workday but can be scheduled to travel to and from the Project Site during off-peak hours as necessary. Like haul trucks, trucks delivering materials and equipment can be scheduled to arrive at the Project Site during off-peak hours. On cement pour days, cement trucks typically arrive over the first half of the day and the second half of the day is spent smoothing the cement as it begins to cure.

Construction workers typically arrive at the Project Site before 7:00 AM and depart by 3:00 PM, outside of the morning and afternoon peak hours. During construction, parking for construction workers will be on-site during the demolition phase and provided at an off-site location during the remainder of construction until the parking garage is complete.

EFFECTS OF PROJECT CONSTRUCTION

The severity of the Project's effects on access, transit, and parking during construction, as well as the effects of construction traffic, was assessed. The measures to minimize the negative effects of Project construction proposed below would be incorporated into a Construction Management Plan, summarized at the end of this section.

On-Street Parking

On-street parking is provided on Truxton Avenue and La Tijera Boulevard along the Project frontage. It is anticipated that parking lanes along Truxton Avenue and La Tijera Boulevard, along with the adjacent travel lane along Manchester Avenue, would be closed intermittently throughout the construction period; therefore, Project construction would require the temporary removal of up to 12 unmetered on-street parking spaces on Truxton Avenue and 10 unmetered on-street parking spaces on La Tijera Boulevard.

Public Transit

The Project may also require temporary relocation of the Metro Routes 102 and 115 transit stop east of Manchester Avenue & Truxton Avenue and adjacent to the Project Site during construction. The Project agrees to advanced coordination with affected transit agencies, including Metro, to facilitate this temporary relocation.

Access

Construction activities are expected to be primarily contained within the Project Site boundary with no encroachment or closures on the public ROW (e.g., sidewalks and roadways) adjacent to the Project Site along Truxton Avenue, Manchester Avenue, and La Tijera Boulevard except during concrete pour days and material hoisting operations occurring intermittently. During these construction periods, the use of the public ROW along Truxton Avenue, Manchester Avenue, and La Tijera Boulevard adjacent to the Project Site would require temporary re-routing of pedestrian and bicycle traffic, as the sidewalks fronting the Project Site would be closed. The Construction Management Plan would include measures (e.g., use of directional signage, maintaining continuous and unobstructed pedestrian paths, and/or providing overhead covering) to ensure pedestrian and bicycle safety along the affected sidewalks, bicycle facilities, and temporary walkways.

Construction Traffic

Project construction would result in varying levels of truck and worker traffic to and from the Project Site on a daily basis, including an estimated maximum of approximately 80 haul truck and daily vendor trips and 150 workers. However, nearly all of this traffic would occur outside of the peak hours, as described above. Additionally, the Construction Management Plan would include measures to limit the amount of construction-related traffic during the peak hours.

CONSTRUCTION MANAGEMENT PLAN

A detailed Construction Management Plan, including haul routes and a staging plan, would be prepared and submitted to the City for review and approval, prior to commencing construction. The Construction Management Plan would formalize how construction would be carried out and identify specific actions that would be required to reduce effects on the surrounding community. The Construction Management Plan shall be based on the nature and timing of the specific construction activities and other projects in the vicinity of the Project Site, and shall include, but not be limited to, the following elements, as appropriate:

- Advance, bilingual notification of adjacent property owners and occupants of upcoming construction activities, including durations and daily hours of operation
- Prohibition of construction worker or equipment parking on adjacent streets
- Prohibition of haul truck staging on any streets adjacent to the Project, unless specifically approved as a condition of an approved haul route
- Scheduling of construction activities to reduce the effect on traffic flow on surrounding Arterial Streets
- Containment of construction activity within the Project Site boundaries
- Implementation of safety precautions for pedestrians and bicyclists through such measures as alternate routing and protection barriers
- Scheduling of construction-related deliveries, haul trips, etc., to occur outside the commuter peak hours to the extent feasible
- Spacing of trucks so as to discourage a convoy effect
- Sufficient dampening of the construction area to control dust caused by grading and hauling and reasonable control at all times of dust caused by wind
- Maintenance of a log, available on the job site at all times, documenting the dates of hauling and the number of trips (i.e., trucks) per day
- Identification of a construction manager and provision of a telephone number for any inquiries or complaints from residents regarding construction activities posted at the site readily visible to any interested party during site preparation, grading, and construction

It is likely that Construction Management Plans for the Related Projects would also be submitted for approval to the City prior to the start of construction activities. As part of the LADOT and/or Los Angeles Department of Building and Safety-established review process of Construction Management Plans, potential overlapping construction activities and proposed haul routes would be reviewed to minimize the impacts of cumulative construction activities on any particular roadway.

Section 5E
Parking

This section provides an analysis of the proposed parking and the potential parking impacts of the Project.

PARKING SUPPLY

The Project would provide a total of 566 vehicular parking spaces on-site and 220 bicycle parking spaces. Parking for the Project would be provided via the on-site parking garage.

VEHICLE PARKING CODE REQUIREMENTS

LAMC Section 12.21A.4 identifies the standard parking rates for residential and commercial uses. Based on these standard LAMC parking rates, the Project would be required to provide a total of 726 parking spaces, as detailed in Table 14.

However, the Project qualifies for parking reductions based on the State Density Bonus Law (Gov. Code 65915 [p]) and Assembly Bill 2345 (AB 2345). AB 2345 allows eligible density bonus projects to provide parking at a rate of 0.5 spaces per dwelling unit. An eligible density bonus project must be within 0.50 miles of a major transit stop to receive parking reductions under AB 2345. Per Public Resource Code 21064.3, a major transit stop includes any intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods.

The Project qualifies for parking reductions under AB 2345 because it is located within 0.50 miles (0.25 mile walking distance) from Sepulveda Boulevard & Manchester Avenue (Intersection #1), which is a qualifying major transit stop. The intersection is served by Metro Bus Route 115 and Santa Monica BBB Lines 3 / Rapid 3. Both Metro Route 115 and Santa Monica BBB Lines 3 / Rapid 3 provide service intervals no longer than 15 minutes during peak commute hours, as previously shown in Table 2.

The commercial parking requirements of the Project are based on rates provided in LAMC Section 12.21.A4(x)(3) for projects within a State Enterprise Zone, which requires commercial developments to provide two spaces per 1,000 sf, as detailed in Table 14.

As summarized in Table 14, the minimum parking requirement for the Project would be 501 residential parking spaces and 33 commercial parking spaces, for a total of 534 parking spaces. The Project's proposed parking supply of 566 spaces would satisfy the LAMC parking requirement.

BICYCLE PARKING CODE REQUIREMENTS

LAMC Section 12.21.A.16 details the bicycle parking requirements for new developments. The Code bicycle parking requirement of the Project is based on the following rates:

- <u>Residential</u>
    - Short-Term
        - 1-25 dwelling units: 1.0 space per 10 dwelling units
        - 26-100 dwelling units: 1.0 space per 15 dwelling units
        - 101-200 dwelling units: 1.0 space per 20 dwelling units
        - Over 200 dwelling units: 1.0 space per 40 dwelling units
    - Long-Term
        - 1-15 dwelling units: 1.0 space per 1 dwelling unit
        - 26-100 dwelling units: 1.0 space per 1.5 dwelling units
        - 101-200 dwelling units: 1.0 space per 2 dwelling units
        - Over 200 dwelling units: 1.0 space per 4 dwelling units

- <u>Commercial</u>
    - Short-Term
        - 1.0 space per 2,000 sf (minimum 2 spaces)
    - Long-Term
        - 1.0 space per 2,000 sf (minimum 2 spaces)

As shown in Table 15, the Project requires a total of 220 bicycle parking spaces, including 193 long-term and 27 short-term spaces. With a proposed supply of at least 220 bicycle parking spaces, this requirement would be satisfied.

TABLE 14
VEHICLE PARKING CODE REQUIREMENTS

Land Use	Size	Code Requirement	Parking Required
STANDARD MUNICIPAL CODE PARKING REQUIREMENT[a]			
Residential			
< 3 habitable rooms (Studio)	125 du	1.0 space / 1 du	125 spaces
= 3 habitable rooms (1-bedroom)	196 du	1.5 spaces / 1 du	294 spaces
> 3 habitable rooms (2-bedroom)	120 du	2.0 spaces / 1 du	240 spaces
Commercial [b]	16,600 sf	1.0 space / 250 sf	67 spaces
		Total Standard Municipal Code Parking Required	**726 spaces**
REDUCED MUNICIPAL CODE PARKING REQUIREMENT			
Residential [c]			
< 3 habitable rooms (Studio)	125 du	1.0 space / 1 du	125 spaces
= 3 habitable rooms (1-bedroom)	196 du	1.0 spaces / 1 du	196 spaces
> 3 habitable rooms (2-bedroom)	120 du	1.5 spaces / 1 du	180 spaces
Commercial [b] [d]	16,600 sf	1.0 space / 500 sf	33 spaces
		Total Reduced Municipal Code Parking Required	**534 spaces**

Notes
[a] Parking rates per Section 12.21.A4(a-c) of the Los Angeles Municipal Code.
[b] Commercial uses include 11,100 sf of restaurant uses and 5,500 sf of retail uses.
[c] Residential parking requirement per State Density Bonus Law (Gov. Code 65915 (p)) and AB 2345, which allows elligible density bonus projects to provide parking at a rate of 1 space per studio or 1-bedroom and 1.5 spaces per 2-bedroom.
[d] Commercial parking requirement per LAMC Section 12.21.A4(x)(3)(2) pursuant to the Project Site's location within a State Enterprise Zone.

TABLE 15
BICYCLE PARKING CODE REQUIREMENTS

Land Use	Size	Short-Term		Long-Term	
		Rate [a]	**Requirement**	**Rate** [a]	**Requirement**
Residential					
First 25 units	25 du	1.0 sp / 10 du	3 sp	1.0 sp / 1 du	25 sp
Next 75 units	75 du	1.0 sp / 15 du	5 sp	1.0 sp / 1.5 du	50 sp
Next 100 units	100 du	1.0 sp / 20 du	5 sp	1.0 sp / 2 du	50 sp
Remaining units	241 du	1.0 sp / 40 du	6 sp	1.0 sp / 4 du	60 sp
Subtotal - Residential	441 du		19 sp		185 sp
Commercial [b] [c]	16,600 sf	1.0 sp / 2,000 sf	8 sp	1.0 sp / 2,000 sf	8 sp
Total Bicycle Parking Requirements		**Short-Term:**	**27 sp**	**Long-Term:**	**193 sp**
Total Code Bicycle Parking Requirement					**220 sp**

Notes
sp: spaces
[a] Bicycle requirements as calculated by Section 12.21.A.16 of the LAMC.
[b] A minimum of two bicycle parking spaces is required.
[c] Commercial uses include 11,100 sf of restaurant uses and 5,500 sf of retail uses.

Chapter 6
Summary and Conclusions

This study was undertaken to analyze the potential transportation impacts of the Project on the surrounding transportation system. The following summarizes the results of this analysis:

- The Project is located at 6136 W. Manchester Avenue.
- The Project proposes 441 residential units, including 66 affordable housing units, and approximately 16,600 sf of commercial uses, of which 5,500 sf is anticipated to be retail uses and 11,100 sf is anticipated to be restaurant uses. The Project would replace approximately 19,650 sf of existing auto repair uses and 2,165 sf of fast-food restaurant uses. The Project is anticipated to be completed in Year 2027.
- Residential and commercial vehicular access would be provided via one driveway on Truxton Avenue and one driveway on La Tijera Boulevard.
- The Project is estimated to generate 142 net new morning peak hour trips and 166 net new afternoon peak hour trips.
- The Project would be consistent with the City's plans, programs, ordinances, and polices and would not result in any geometric design hazard impacts.
- The Project would not result in VMT impacts and would not require mitigation.
- The Project provides adequate internal circulation to accommodate vehicular, pedestrian, and bicycle traffic without impeding through traffic movements on City streets.
- The addition of Project trips would not adversely affect any residential Local Streets.
- Construction traffic would be generated outside of the commuter morning and afternoon peak hours to the extent feasible and would be substantially less than the traffic generated by operation of the Project. A Construction Management Plan would be prepared to ensure that construction impacts are minimized.
- The Project would provide a total of 566 vehicle parking spaces and a minimum of 193 long-term and 27 short-term bicycle parking spaces.

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Appendix A

Memorandum of Understanding

LADOT

Attachment C

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: 6136 Manchester Avenue Residential Project

Project Address: 6136 Manchester Avenue, Los Angeles, CA 90045

Project Description: The Project consists of a residential development including 375 market-rate dwelling units, 66 affordable housing units, and 16,600 sf of commercial uses. The existing 19,650 sf of auto repair uses and a 2,165 sf fast-food restaurant will be removed to allow for development of the Project.

LADOT Project Case Number: CTC22-113076 Project Site Plan attached? *(Required)* ☑ Yes ☐ No

II. Transportation Demand Management (TDM) Measures

Provide any transportation demand management measures that are being considered where the eligibility needs to be verified in advance (e.g. bike share kiosks, unbundled parking, microstransit service, etc.). Note that LADOT staff will make the final determination if TDM measures eligibility for a particular project. Please confirm eligibility with the LADOT Planning and Bureau staff assigned to your project.

1 ____ 4 ____
2 ____ 5 ____
3 ____ 6 ____

Select any TDM measures that are currently being considered that may be eligible as a Project Design Feature[1]:

☑	Reduced Parking Supply[2]
☑	Bicycle Parking and Amenities
☐	Parking Cash Out

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	32	110	142
PM Trips	109	57	166

NET Daily Vehicle Trips (DVT)
____ DVT (ITE __ ed.)
2,232 DVT (VMT Calculator ver. 1.3)

[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.
[2]Select 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 a the City/s Transit Oriented ted Community Guidelines.

IV. Study Area and Assumptions

Project Buildout Year: 2027 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	See Table 1	4	
2		5	
3		6	

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

V. ACCESS ASSESSMENT

a. Does the project exceed 1,000 total DVT? ☑ Yes ☐ No
b. 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
c. 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

If questions a., b., or c. is Yes then complete **Attachment C.1: Access Assessment Criteria**.

VI. SITE PLAN and map of Study Area

Does the attached site plan 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 driveways (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)	☐	☐	☑

VII. Contact Information

	CONSULTANT	DEVELOPER
Name:	Gibson Transportation Consulting, Inc.	6136 Manchester Avenue Apartments, LLC
Address:	555 W. 5th St., Suite 3375, Los Angeles, CA 90013	1901 Avenue of the Stars, Suite 1950, Los Angeles, CA 90067
Phone Number:	(213) 683-0088	
E-Mail:	etang@gibsontrans.com	

Approved by: x Janet Ye (signature) 5/18/2022 x Robert Sanchez (May 19, 2022 15:30 PDT) (signature)

Consultant's Representative | Date | LADOT 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.

LADOT

Access Assessment Criteria

This Criteria 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: 6136 Manchester Avenue Residential Project

Project Address: 6136 Manchester Avenue, Los Angeles, CA 90045

Project Description: The Project consists of a residential development including 375 market-rate dwelling units, 66 affordable housing units, and 16,600 sf of commercial uses. The existing 19,650 sf of auto repair uses and a 2,165 sf fast-food restaurant will be removed to allow for development of the Project.

LADOT Project Case Number: ____________________________________

II. PEDESTRIAN/ PERSON TRIP GENERATION

Source of Pedestrian/Person Trip Generation Rate(s)? ☐ VMT Calculator ☐ ITE 10th Edition ☐ Other:

	Land Use	Size/Unit	Daily Person Trips
Proposed			
	Total new trips:		

Pedestrian/Person trip generation table including a description of the proposed land uses, trip credits, person trip assumptions, comparison studies used for reference, etc. attached? ☐ Yes ☑ No

III. PEDESTRIAN ATTRACTORS INVENTORY

Attach Pedestrian Map for the area (1,320 foot radius from edge of the project site) depicting:

- site pedestrian entrance(s)
- Existing or proposed passenger loading zones
- pedestrian generation/distribution values
  - Geographic Distribution: N 15 % S 15 % E 25 % W 45 %
- transit boarding and alighting of transit stops (should include Metro rail stations; Metro, DASH, and

other municipal bus stops)

- Key pedestrian destinations with hours of operation:
    - schools (school times)
    - government offices with a public counter or meeting room
    - senior citizen centers
    - recreation centers or playgrounds
    - public libraries
    - medical centers or clinics
    - child care facilities
    - post offices
    - places of worship
    - grocery stores
    - other facilities that attract pedestrian trips
- pedestrian walking routes to key destinations from project site

Note: Pedestrian Count Summary, Bicycle Count Summary, Manual Traffic Count Summary will need to be attached to the Transportation Assessment

IV. FACILITIES INVENTORY

Is a High Injury Network street located within 1,320 foot radius from the edge of the project site? ☑ Yes ☐ No

If yes, list streets and include distance from the project:

Manchester Boulevard at 50 (feet)

Sepulveda Boulevard at 790 (feet)

________________ at ________(feet)

________________ at ________(feet)

Attach Radius Map for the area (1,320 foot radius from edge of the project site) depicting the following existing and proposed facilities:

- transit stops
- bike facilities
- traffic control devices for controlled crossings
- uncontrolled crosswalks
- location of any missing, damaged or substandard sidewalks

For a reference of planned facilities, see the Transportation Assessment Support Map

Crossing Distances

Does the project property have frontage along an arterial street (designated as either an Avenue or Boulevard?)

☑ Yes ☐ No

If yes, provide the distance between the crossing control devices (e.g. signalized crosswalk, or controlled mid-block crossing) along any arterial within 1,320 feet of the property.

819 (feet) at	Manchester Ave between Sepulveda Bl and Truxton Ave	________(feet) at	________________________
605 (feet) at	Manchester Ave between Truxton Ave and La Tijera Bl	________(feet) at	________________________
354 (feet) at	La Tijera Bl between Sepulveda Bl and Sepulveda Eastway	________(feet) at	________________________
1,294 (feet) at	La Tijera Bl between Sepulveda Eastway and Manchester Ave	________(feet) at	________________________
870 (feet) at	Sepulveda Bl between Manchester Ave and La Tijera Bl	________(feet) at	________________________
________(feet) at	________________________	________(feet) at	________________________

V. Project Construction

Will the project require any construction activity within the city right-of-way? ☑ Yes ☐ No

If yes, will the project require temporary closure of any of the following city facilities?

- ✓ sidewalk
- ✓ bike lane
- ✓ parking lane
- ✓ travel lane
- ✓ bus stop
- bicycle parking (racks or corrals)
- bike share or other micro-mobility station
- car share station
- parklet
- other: ________________________

TABLE 1
STUDY INTERSECTIONS

No	North/South Street	East/West Street	Traffic Control
1.	Sepulveda Boulevard	Manchester Avenue	Signalized
2.	Truxton Avenue	Manchester Avenue	Signalized
3.	La Tijera Boulevard	Manchester Avenue	Signalized
4.	Truxton Avenue	Project Driveway	Unsignalized
5.	Sepulveda Boulevard	La Tijera Boulevard	Signalized
6.	Sepulveda Eastway	La Tijera Boulevard	Signalized
7.	Truxton Avenue	La Tijera Boulevard	Unsignalized
8.	Project Driveway	La Tijera Boulevard	Unsignalized
9.	Bleriot Avenue	La Tijera Boulevard	Unsignalized

TABLE 2
PROJECT TRIP GENERATION ESTIMATES

Land Use	ITE Land Use	Size	Morning Peak Hour			Afternoon Peak Hour		
			In	Out	Total	In	Out	Total
Trip Generation Rates [a]								
Multi-Family Housing (Mid-Rise)	221	per du	23%	77%	0.37	61%	39%	0.39
Affordable Housing	223	per du	29%	71%	0.36	59%	41%	0.46
Retail (< 40 ksf)	822	per ksf	60%	40%	2.36	50%	50%	6.59
High-Turnover (Sit-Down) Restaurant	932	per ksf	55%	45%	9.57	61%	39%	9.05
Fast-Food Restaurant with Drive-Through	934	per ksf	51%	49%	44.61	52%	48%	33.03
Automobile Parts and Service Center	943	per ksf	72%	28%	1.91	39%	61%	2.06
Proposed Project								
Multi-Family Housing (Mid-Rise)	221	375 du	32	107	139	89	57	146
Transit/Walk-In Reduction - 15% [b]			*(5)*	*(16)*	*(21)*	*(13)*	*(9)*	*(22)*
Affordable Housing	223	66 du	7	17	24	18	12	30
Transit/Walk-In Reduction - 15% [b]			*(1)*	*(3)*	*(4)*	*(3)*	*(2)*	*(5)*
Retail (< 40 ksf)	822	5.5 ksf	8	5	13	18	18	36
Transit/Walk-In Reduction - 15% [b]			*(1)*	*(1)*	*(2)*	*(3)*	*(3)*	*(6)*
Internal Capture Reduction - 5% [c]			*0*	*0*	*0*	*(1)*	*(1)*	*(2)*
Pass-by Reduction - 50% [d]			*(4)*	*(2)*	*(6)*	*(7)*	*(7)*	*(14)*
High-Turnover (Sit-Down) Restaurant	932	11.1 ksf	58	48	106	61	39	100
Transit/Walk-In Reduction - 15% [b]			*(9)*	*(7)*	*(16)*	*(9)*	*(6)*	*(15)*
Internal Capture Reduction - 5% [c]			*(2)*	*(2)*	*(4)*	*(3)*	*(2)*	*(5)*
Pass-by Reduction - 20% [d]			*(9)*	*(8)*	*(17)*	*(10)*	*(6)*	*(16)*
TOTAL - PROPOSED PROJECT			74	138	212	137	90	227
Existing to be Removed								
Fast-Food Restaurant with Drive-Through	934	2.165 ksf	49	48	97	37	35	72
Transit/Walk Reduction - 15% [b]			*(7)*	*(7)*	*(14)*	*(6)*	*(5)*	*(11)*
Pass-by Reductions - 50% [c]			*(21)*	*(21)*	*(42)*	*(16)*	*(15)*	*(31)*
Automobile Parts and Service Center	943	19.650 ksf	27	11	38	16	24	40
Transit/Walk Reduction - 15% [b]			*(4)*	*(2)*	*(6)*	*(2)*	*(4)*	*(6)*
Pass-by Reductions - 10% [c]			*(2)*	*(1)*	*(3)*	*(1)*	*(2)*	*(3)*
TOTAL - EXISTING TO BE REMOVED			42	28	70	28	33	61
TOTAL NET NEW PROJECT TRIPS			**32**	**110**	**142**	**109**	**57**	**166**

Notes
du: dwelling unit; ksf: 1,000 square feet
[a] Source: *Trip Generation, 11th Edition* , Institute of Transportation Engineers, 2020.
[b] The Project site is located within 0.25 mile of the intersection of Sepulveda Boulevard & Manchester Avenue which serves multiple bus lines including the Culver CityBus Rapid 6 and Big Blue Bus Rapid 3 bus lines; therefore, a 15% transit reduction was applied to account for transit usage and walking visitor arrivals.
[c] Internal capture adjustments account for person trips made between distinct land uses within a mixed-use development (e.g., residents visiting the commercial uses).
[d] Per Attachment H of LADOT's *Transportation Assessment Guidelines* , pass-by reductions account for Project trips made as an intermediate stop on the way from an or
to a primary trip destination without route diversion.

NCHRP 8-51 Internal Trip Capture Estimation Tool			
Project Name:	6136 Manchester Ave	**Organization:**	
Project Location:	Los Angeles	**Performed By:**	GTC
Scenario Description:	Project	**Date:**	5/5/2022
Analysis Year:	2022	**Checked By:**	
Analysis Period:	**AM Street Peak Hour**	**Date:**	

Table 1-A: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)

Land Use	Development Data (*For Information Only*)			Estimated Vehicle-Trips		
	ITE LUCs[1]	Quantity	Units	Total	Entering	Exiting
Office				0		
Retail				13	8	5
Restaurant				106	58	48
Cinema/Entertainment				0		
Residential				162	38	124
Hotel				0		
All Other Land Uses[2]				0		
Total				281	104	177

Table 2-A: Mode Split and Vehicle Occupancy Estimates

Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.	% Transit	% Non-Motorized	Veh. Occ.	% Transit	% Non-Motorized
Office						
Retail	1.00	15%		1.00	15%	
Restaurant	1.00	15%		1.00	15%	
Cinema/Entertainment						
Residential	1.00	15%		1.00	15%	
Hotel						
All Other Land Uses[2]						

Table 3-A: Average Land Use Interchange Distances (Feet Walking Distance)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-A: Internal Person-Trip Origin-Destination Matrix*

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	0		1	0	1	0
Restaurant	0	1		0	2	0
Cinema/Entertainment	0	0	0		0	0
Residential	0	1	12	0		0
Hotel	0	0	0	0	0	

Table 5-A: Computations Summary

	Total	Entering	Exiting
All Person-Trips	281	104	177
Internal Capture Percentage	13%	17%	10%
External Vehicle-Trips[3]	208	73	135
External Transit-Trips[4]	37	13	24
External Non-Motorized Trips[4]	0	0	0

Table 6-A: Internal Trip Capture Percentages by Land Use

Land Use	Entering Trips	Exiting Trips
Office	N/A	N/A
Retail	25%	40%
Restaurant	22%	6%
Cinema/Entertainment	N/A	N/A
Residential	8%	10%
Hotel	N/A	N/A

[1]Land Use Codes (LUCs) from *Trip Generation Informational Report*, published by the Institute of Transportation Engineers.
[2]Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator
[3]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A
[4]Person-Trips
*Indicates computation that has been rounded to the nearest whole number.

Estimation Tool Developed by the Texas Transportation Institute

Project Name:	6136 Manchester Ave
Analysis Period:	**AM Street Peak Hour**

Table 7-A: Conversion of Vehicle-Trip Ends to Person-Trip Ends

Land Use	Table 7-A (D): Entering Trips				Table 7-A (O): Exiting Trips		
	Veh. Occ.	Vehicle-Trips	Person-Trips*		Veh. Occ.	Vehicle-Trips	Person-Trips*
Office	1.00	0	0		1.00	0	0
Retail	1.00	8	8		1.00	5	5
Restaurant	1.00	58	58		1.00	48	48
Cinema/Entertainment	1.00	0	0		1.00	0	0
Residential	1.00	38	38		1.00	124	124
Hotel	1.00	0	0		1.00	0	0

Table 8-A (O): Internal Person-Trip Origin-Destination Matrix (Computed at Origin)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	1		1	0	1	0
Restaurant	15	7		0	2	1
Cinema/Entertainment	0	0	0		0	0
Residential	2	1	25	0		0
Hotel	0	0	0	0	0	

Table 8-A (D): Internal Person-Trip Origin-Destination Matrix (Computed at Destination)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		3	13	0	0	0
Retail	0		29	0	1	0
Restaurant	0	1		0	2	0
Cinema/Entertainment	0	0	0		0	0
Residential	0	1	12	0		0
Hotel	0	0	3	0	0	

Table 9-A (D): Internal and External Trips Summary (Entering Trips)

Destination Land Use	Person-Trip Estimates				External Trips by Mode*		
	Internal	External	Total		Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	0	0	0		0	0	0
Retail	2	6	8		5	1	0
Restaurant	13	45	58		38	7	0
Cinema/Entertainment	0	0	0		0	0	0
Residential	3	35	38		30	5	0
Hotel	0	0	0		0	0	0
All Other Land Uses[3]	0	0	0		0	0	0

Table 9-A (O): Internal and External Trips Summary (Exiting Trips)

Origin Land Use	Person-Trip Estimates				External Trips by Mode*		
	Internal	External	Total		Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	0	0	0		0	0	0
Retail	2	3	5		3	0	0
Restaurant	3	45	48		38	7	0
Cinema/Entertainment	0	0	0		0	0	0
Residential	13	111	124		94	17	0
Hotel	0	0	0		0	0	0
All Other Land Uses[3]	0	0	0		0	0	0

[1]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A

[2]Person-Trips

[3]Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator

*Indicates computation that has been rounded to the nearest whole number.

NCHRP 8-51 Internal Trip Capture Estimation Tool			
Project Name:	6136 Manchester Ave	**Organization:**	
Project Location:	Los Angeles	**Performed By:**	GTC
Scenario Description:	Project	**Date:**	5/5/2022
Analysis Year:	2022	**Checked By:**	
Analysis Period:	**PM Street Peak Hour**	**Date:**	

Table 1-P: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)

Land Use	Development Data (*For Information Only*)			Estimated Vehicle-Trips		
	ITE LUCs[1]	Quantity	Units	Total	Entering	Exiting
Office				0		
Retail				36	18	18
Restaurant				100	61	39
Cinema/Entertainment				0		
Residential				176	107	69
Hotel				0		
All Other Land Uses[2]				0		
Total				312	186	126

Table 2-P: Mode Split and Vehicle Occupancy Estimates

Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.	% Transit	% Non-Motorized	Veh. Occ.	% Transit	% Non-Motorized
Office						
Retail	1.00	15%		1.00	15%	
Restaurant	1.00	15%		1.00	15%	
Cinema/Entertainment						
Residential	1.00	15%		1.00	15%	
Hotel						
All Other Land Uses[2]						

Table 3-P: Average Land Use Interchange Distances (Feet Walking Distance)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-P: Internal Person-Trip Origin-Destination Matrix*

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	0		5	0	5	0
Restaurant	0	9		0	7	0
Cinema/Entertainment	0	0	0		0	0
Residential	0	2	9	0		0
Hotel	0	0	0	0	0	

Table 5-P: Computations Summary

	Total	Entering	Exiting
All Person-Trips	312	186	126
Internal Capture Percentage	24%	20%	29%
External Vehicle-Trips[3]	203	127	76
External Transit-Trips[4]	35	22	13
External Non-Motorized Trips[4]	0	0	0

Table 6-P: Internal Trip Capture Percentages by Land Use

Land Use	Entering Trips	Exiting Trips
Office	N/A	N/A
Retail	61%	56%
Restaurant	23%	41%
Cinema/Entertainment	N/A	N/A
Residential	11%	16%
Hotel	N/A	N/A

[1]Land Use Codes (LUCs) from *Trip Generation Informational Report*, published by the Institute of Transportation Engineers.
[2]Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator
[3]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P
[4]Person-Trips
*Indicates computation that has been rounded to the nearest whole number.

Estimation Tool Developed by the Texas Transportation Institute

Project Name:	6136 Manchester Ave
Analysis Period:	**PM Street Peak Hour**

Table 7-P: Conversion of Vehicle-Trip Ends to Person-Trip Ends

Land Use	Table 7-P (D): Entering Trips				Table 7-P (O): Exiting Trips		
	Veh. Occ.	Vehicle-Trips	Person-Trips*		Veh. Occ.	Vehicle-Trips	Person-Trips*
Office	1.00	0	0		1.00	0	0
Retail	1.00	18	18		1.00	18	18
Restaurant	1.00	61	61		1.00	39	39
Cinema/Entertainment	1.00	0	0		1.00	0	0
Residential	1.00	107	107		1.00	69	69
Hotel	1.00	0	0		1.00	0	0

Table 8-P (O): Internal Person-Trip Origin-Destination Matrix (Computed at Origin)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	0		5	1	5	1
Restaurant	1	16		3	7	3
Cinema/Entertainment	0	0	0		0	0
Residential	3	29	14	0		2
Hotel	0	0	0	0	0	

Table 8-P (D): Internal Person-Trip Origin-Destination Matrix (Computed at Destination)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		1	1	0	4	0
Retail	0		18	0	49	0
Restaurant	0	9		0	17	0
Cinema/Entertainment	0	1	2		4	0
Residential	0	2	9	0		0
Hotel	0	0	3	0	0	

Table 9-P (D): Internal and External Trips Summary (Entering Trips)

Destination Land Use	Person-Trip Estimates				External Trips by Mode*		
	Internal	External	Total		Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	0	0	0		0	0	0
Retail	11	7	18		6	1	0
Restaurant	14	47	61		40	7	0
Cinema/Entertainment	0	0	0		0	0	0
Residential	12	95	107		81	14	0
Hotel	0	0	0		0	0	0
All Other Land Uses[3]	0	0	0		0	0	0

Table 9-P (O): Internal and External Trips Summary (Exiting Trips)

Origin Land Use	Person-Trip Estimates				External Trips by Mode*		
	Internal	External	Total		Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	0	0	0		0	0	0
Retail	10	8	18		7	1	0
Restaurant	16	23	39		20	3	0
Cinema/Entertainment	0	0	0		0	0	0
Residential	11	58	69		49	9	0
Hotel	0	0	0		0	0	0
All Other Land Uses[3]	0	0	0		0	0	0

[1]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P
[2]Person-Trips
[3]Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator
*Indicates computation that has been rounded to the nearest whole number.

TABLE 3
RELATED PROJECTS LIST

No.	Project	Address	Use	Trip Generation [a]						
				Daily	Morning Peak Hour			Afternoon Peak Hour		
					In	Out	Total	In	Out	Total
1.	Airport Boulevard Car Wash	9204 S Airport Bl	15,380 sf self-service car wash facility	824	16	16	32	51	50	101
2.	Hotel	9800 S Sepulveda Bl	178-room hotel	1,577	69	50	118	61	64	122
3.	Charter Middle School	8540 S La Tijera Bl	525-student middle school	868	173	142	315	99	111	210
4.	Apartments, 86 units	8521 S Sepulveda Bl	86 apartment units and 561 sf commercial use	1,271	23	69	92	84	50	134

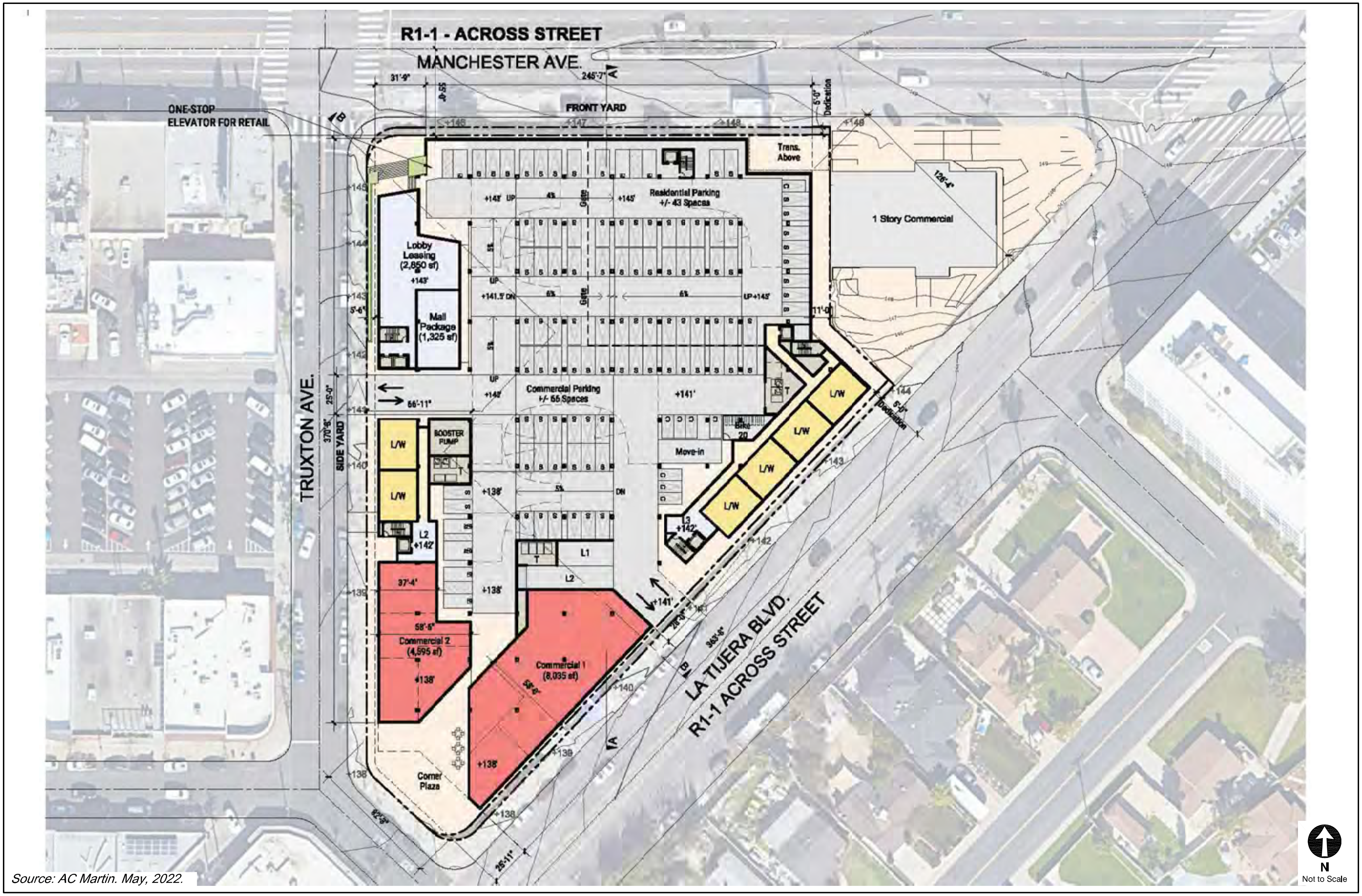
Notes
[a] Related project information provided by the Los Angeles Department of Transportation in March 2022.

TABLE 4
FREEWAY OFF-RAMP SCREENING PROCESS

Freeway Off-Ramp	Peak Hour	Net Project Traffic	Meets Screening Criteria? [b]
I-405 Northbound			
Off-ramp to La Tijera Boulevard	AM PM	0 0	NO NO
Off-ramp to Manchester Boulevard	AM PM	4 12	NO NO
I-405 Southbound			
Off-ramp to La Tijera Boulevard	AM PM	8 24	NO NO
Off-ramp to La Cienega Boulevard	AM PM	4 12	NO NO

Notes

[a] Based on *Interim Guidance for Freeway Safety Analysis* (LADOT, 2020), a transportation assessment for a development project must include analysis of any freeway off-ramp where a project adds 25 or more peak hour trips.

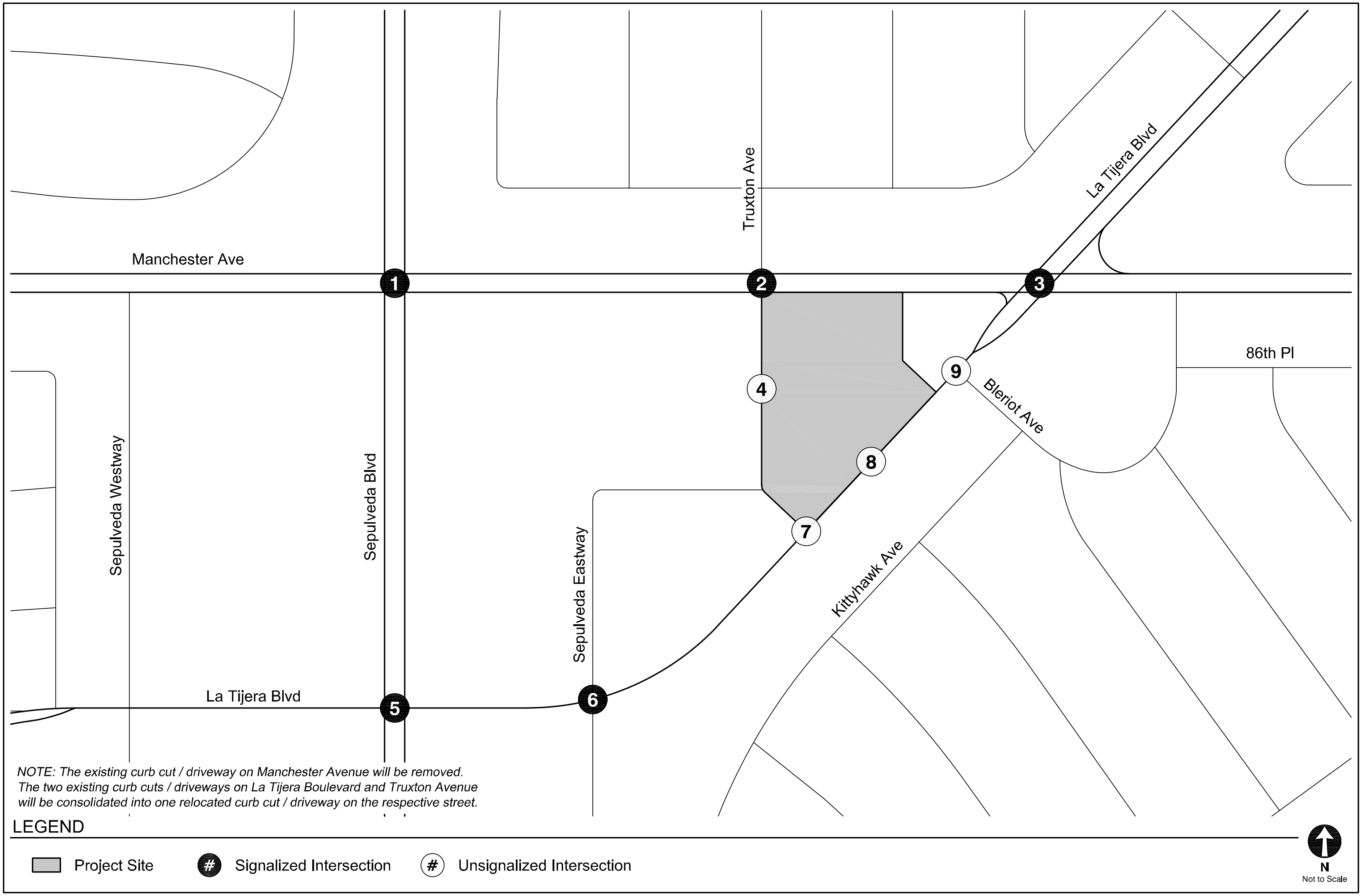


PROJECT SITE PLAN

FIGURE 1

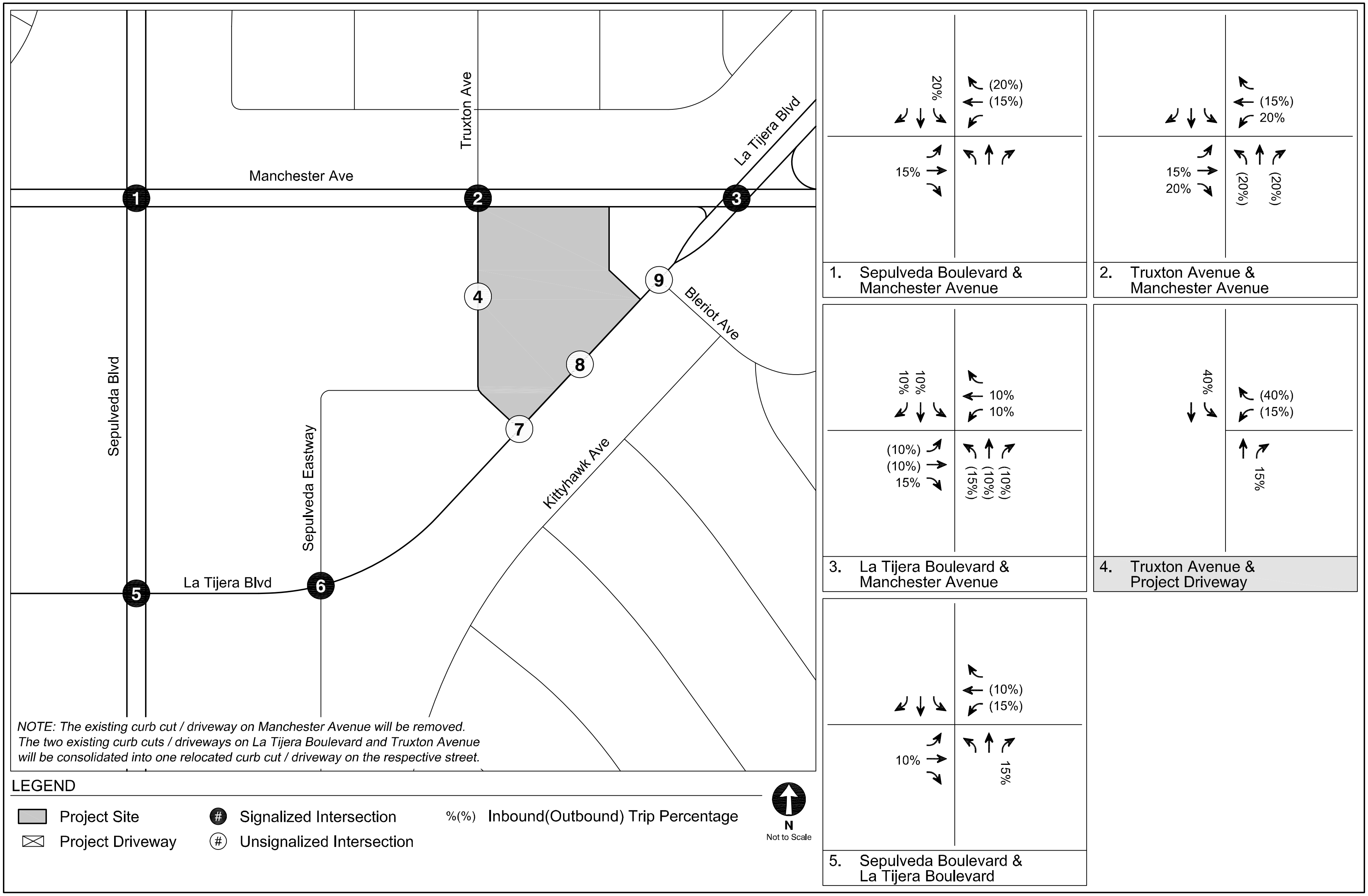
PROJECT SITE LOCATION

FIGURE 2



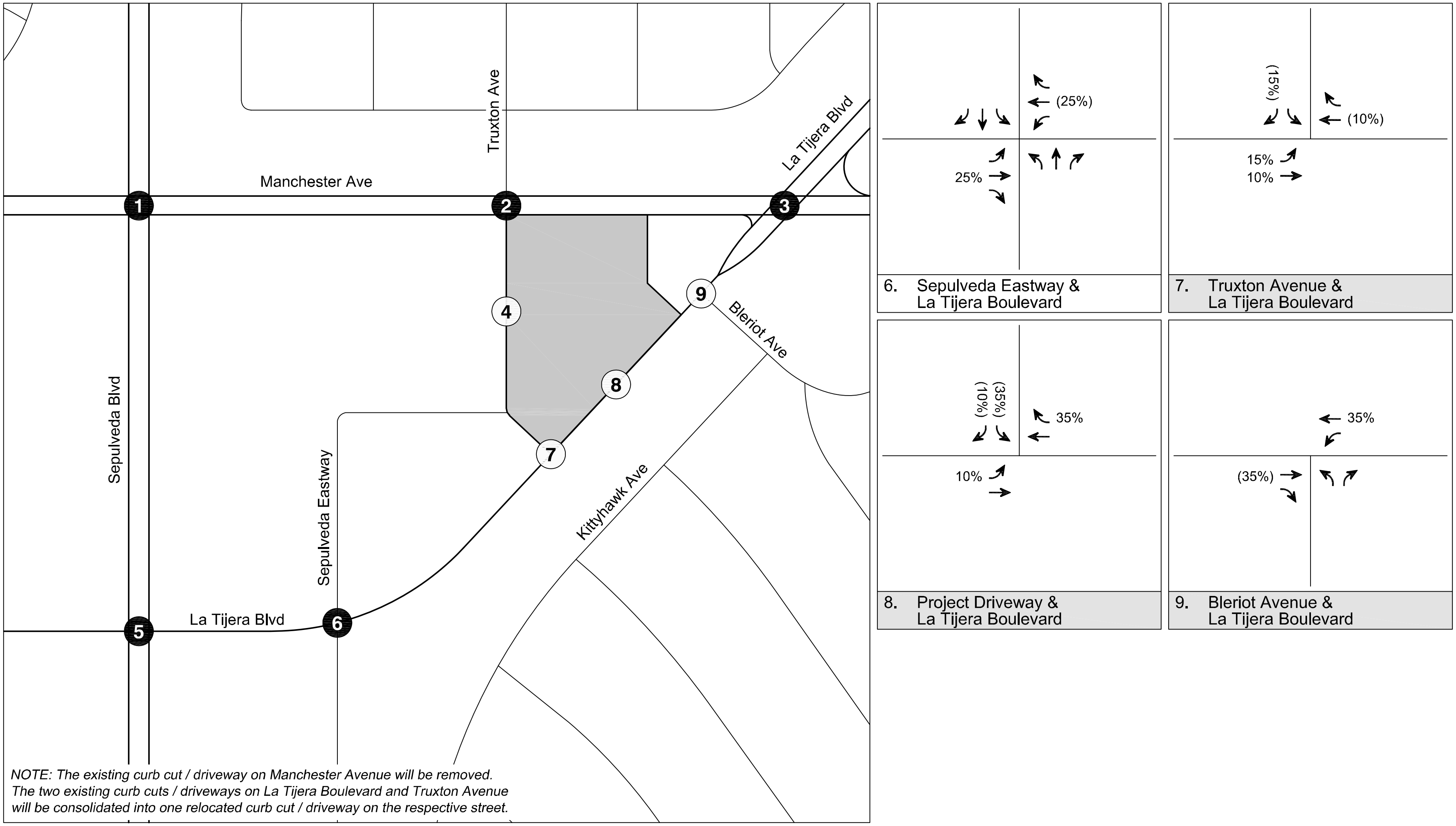
STUDY AREA & ANALYZED INTERSECTIONS

FIGURE 3



PROJECT TRIP DISTRIBUTION

FIGURE 4



NOTE: The existing curb cut / driveway on Manchester Avenue will be removed. The two existing curb cuts / driveways on La Tijera Boulevard and Truxton Avenue will be consolidated into one relocated curb cut / driveway on the respective street.

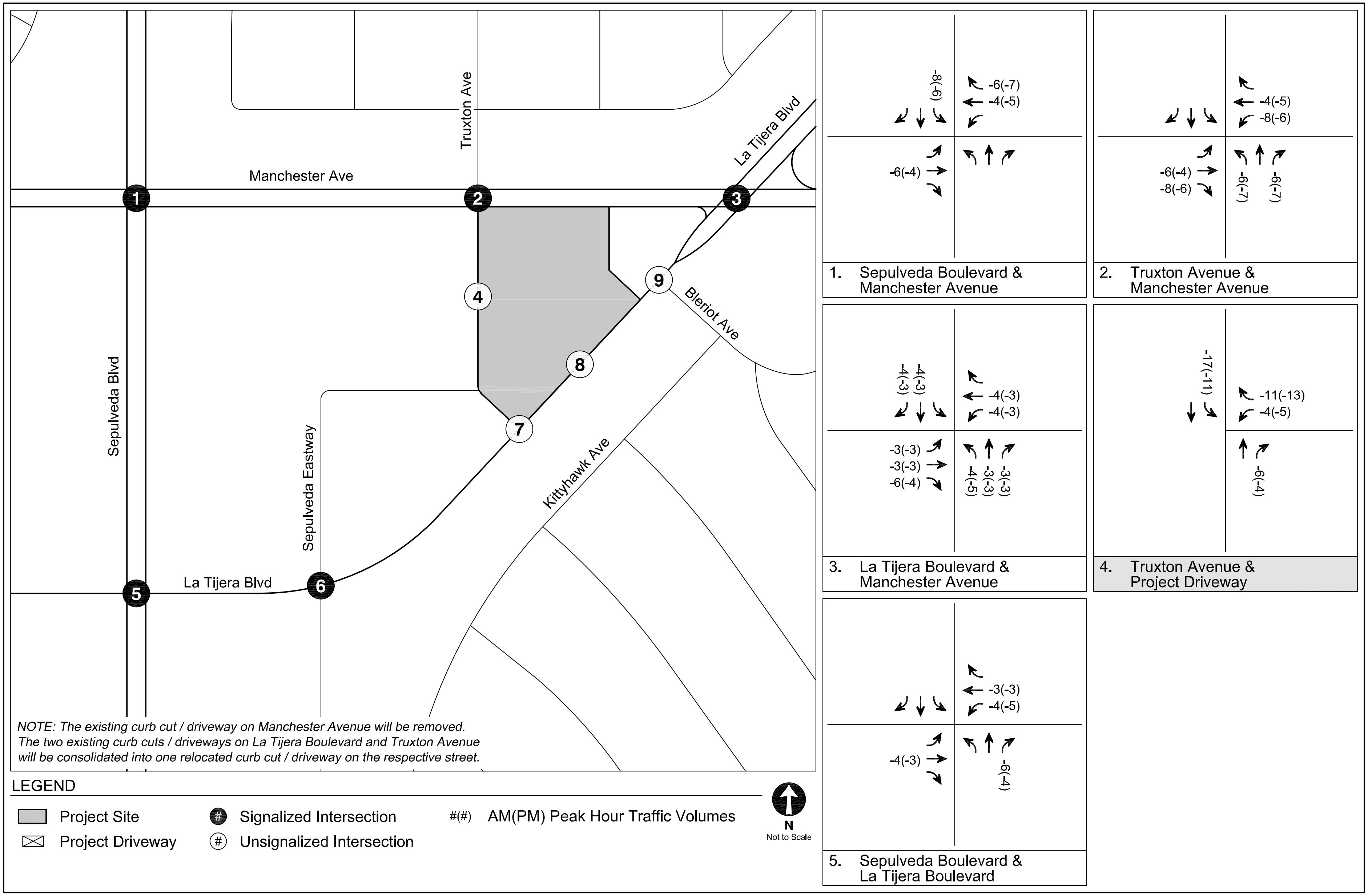
LEGEND

- Project Site
- Project Driveway
- # Signalized Intersection
- # Unsignalized Intersection
- %(%) Inbound(Outbound) Trip Percentage

N
Not to Scale

PROJECT TRIP DISTRIBUTION

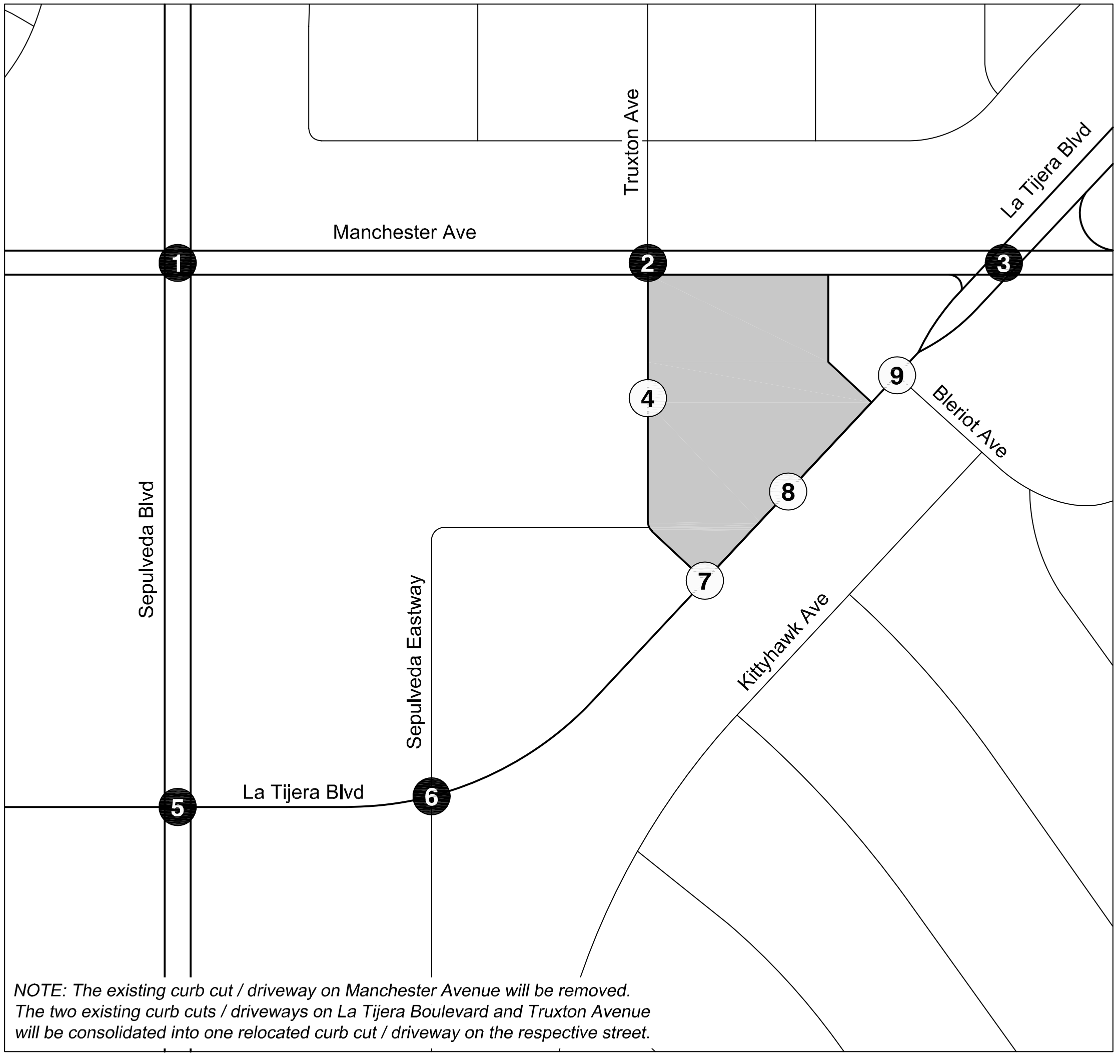
FIGURE 4 (CONT.)

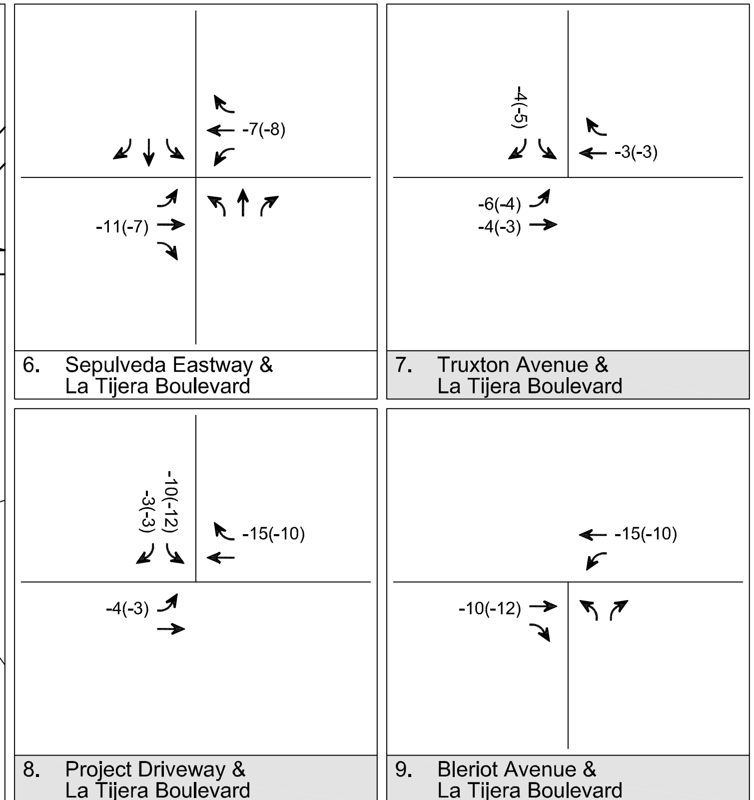


EXISTING USES TO BE REMOVED
PEAK HOUR TRAFFIC VOLUMES

FIGURE 5A

Gibson transportation consulting, inc.





LEGEND

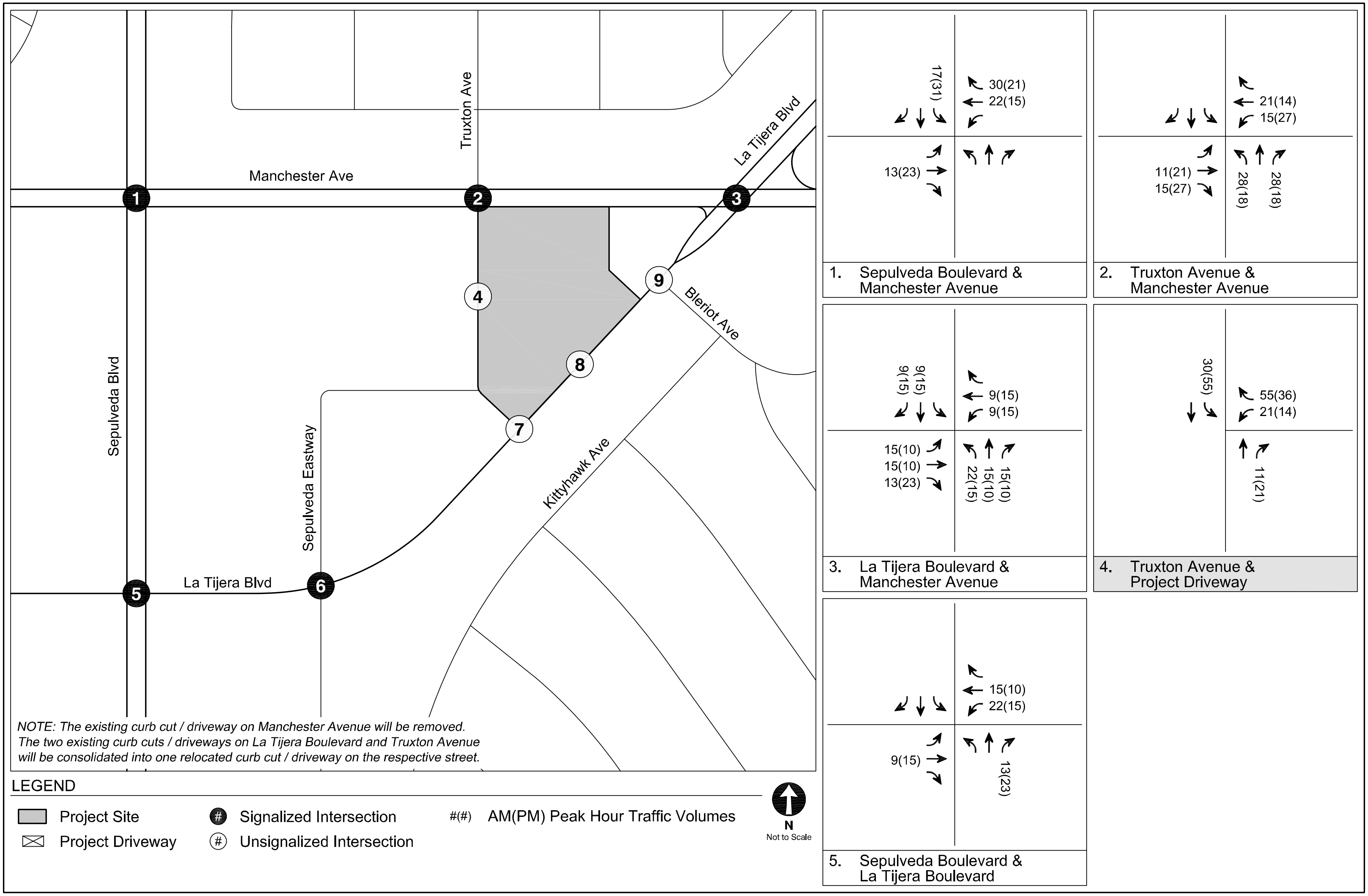
- Project Site
- Project Driveway
- # Signalized Intersection
- (#) Unsignalized Intersection
- #(#) AM(PM) Peak Hour Traffic Volumes

N
Not to Scale

EXISTING USES TO BE REMOVED
PEAK HOUR TRAFFIC VOLUMES

FIGURE
5A (CONT.)

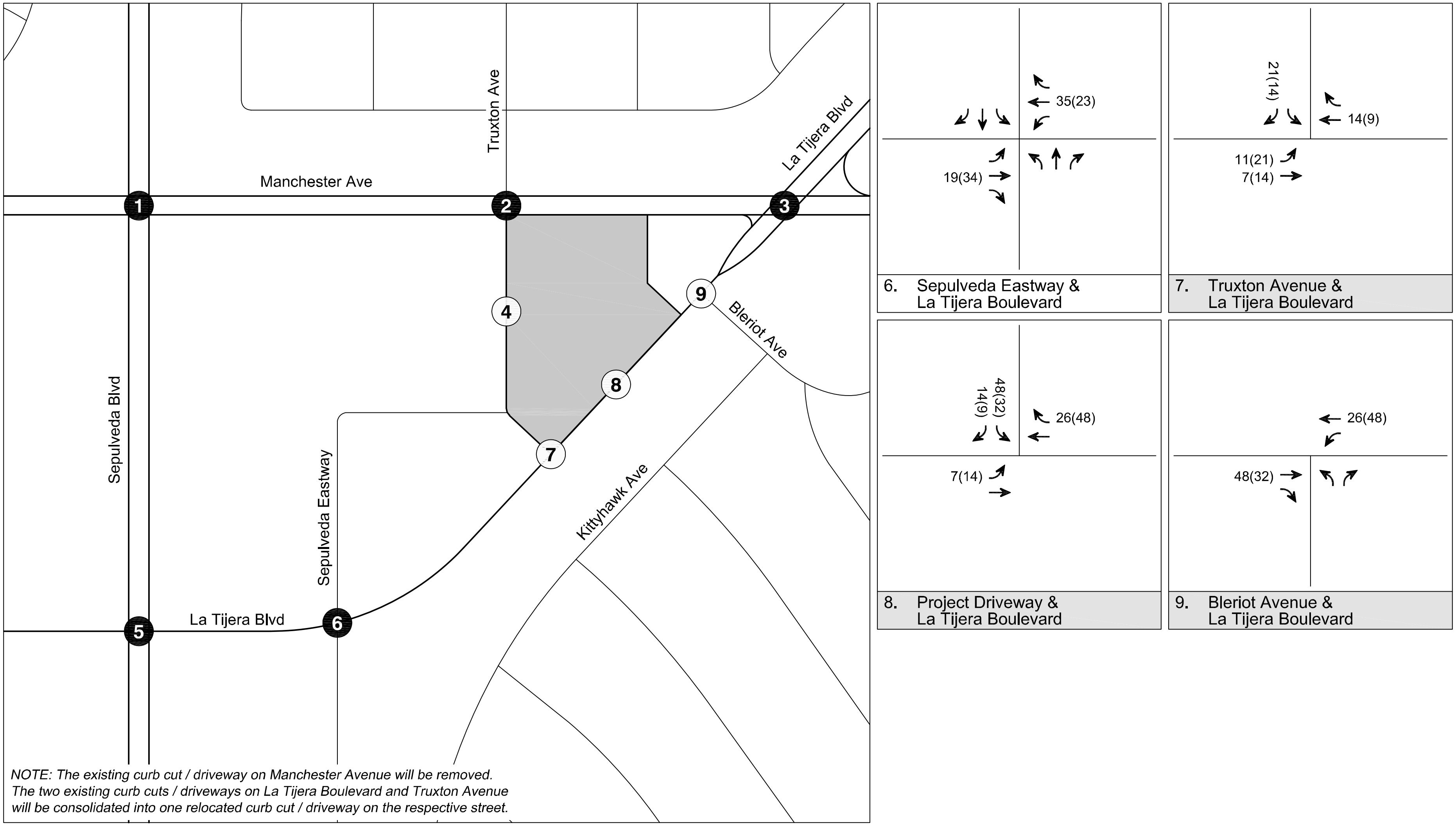
Gibson transportation consulting, inc.



TOTAL PROJECT-ONLY
PEAK HOUR TRAFFIC VOLUMES

FIGURE
5B

Gibson transportation consulting, inc.



LEGEND

Project Site

Project Driveway

Signalized Intersection

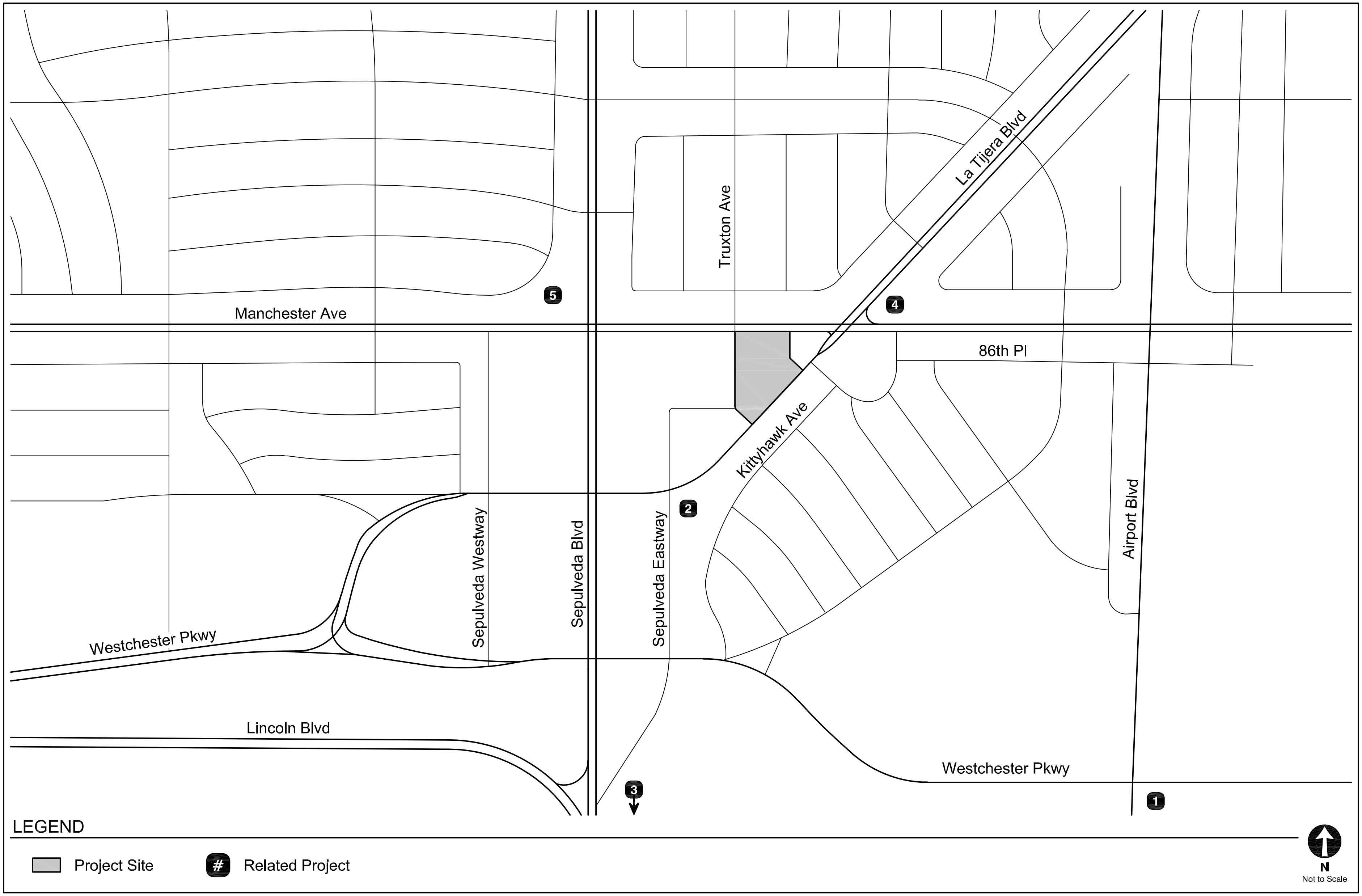
(#) Unsignalized Intersection

#(#) AM(PM) Peak Hour Traffic Volumes

N
Not to Scale

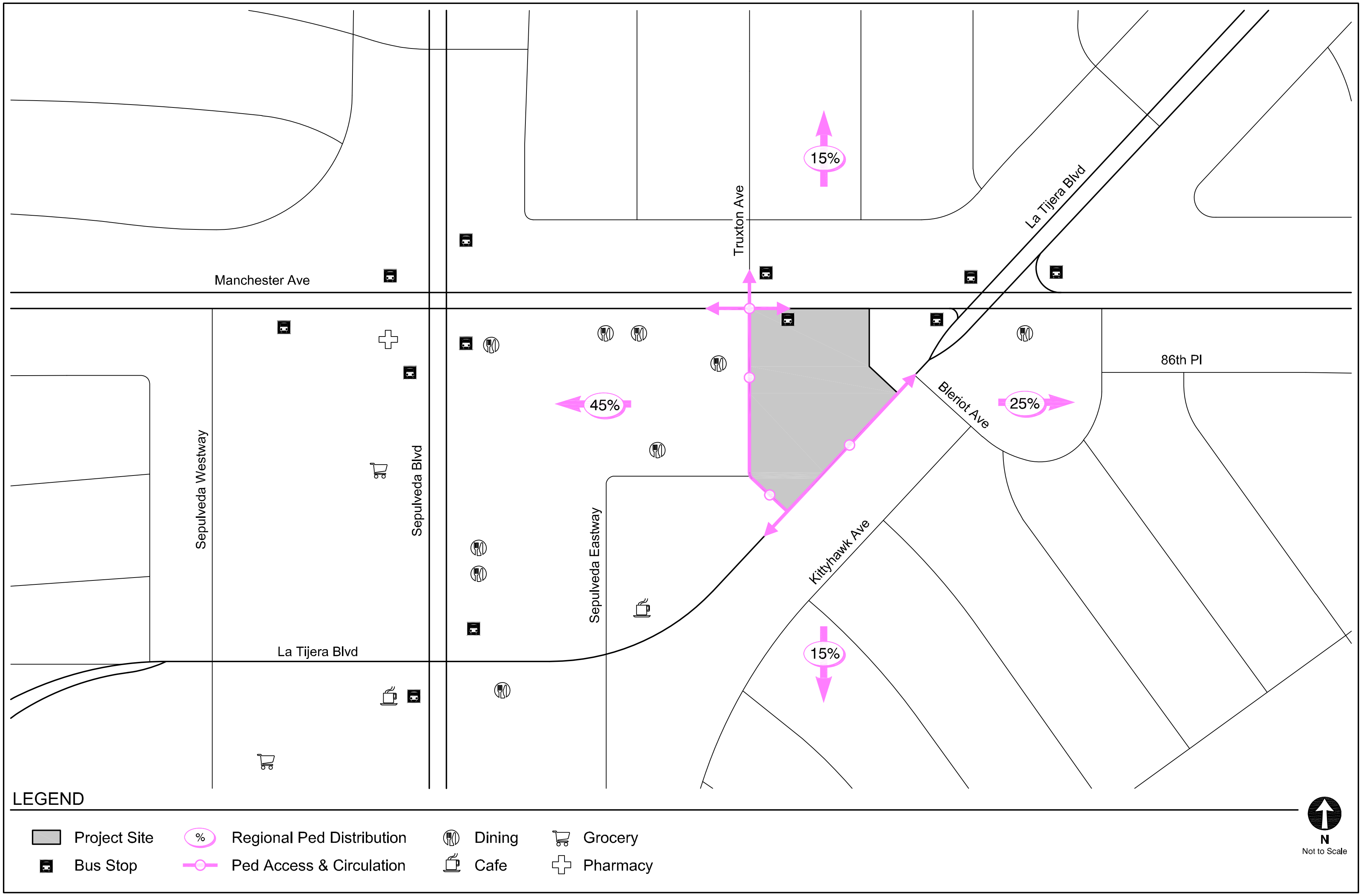
TOTAL PROJECT-ONLY
PEAK HOUR TRAFFIC VOLUMES

FIGURE
5B (CONT.)



LOCATIONS OF RELATED PROJECTS

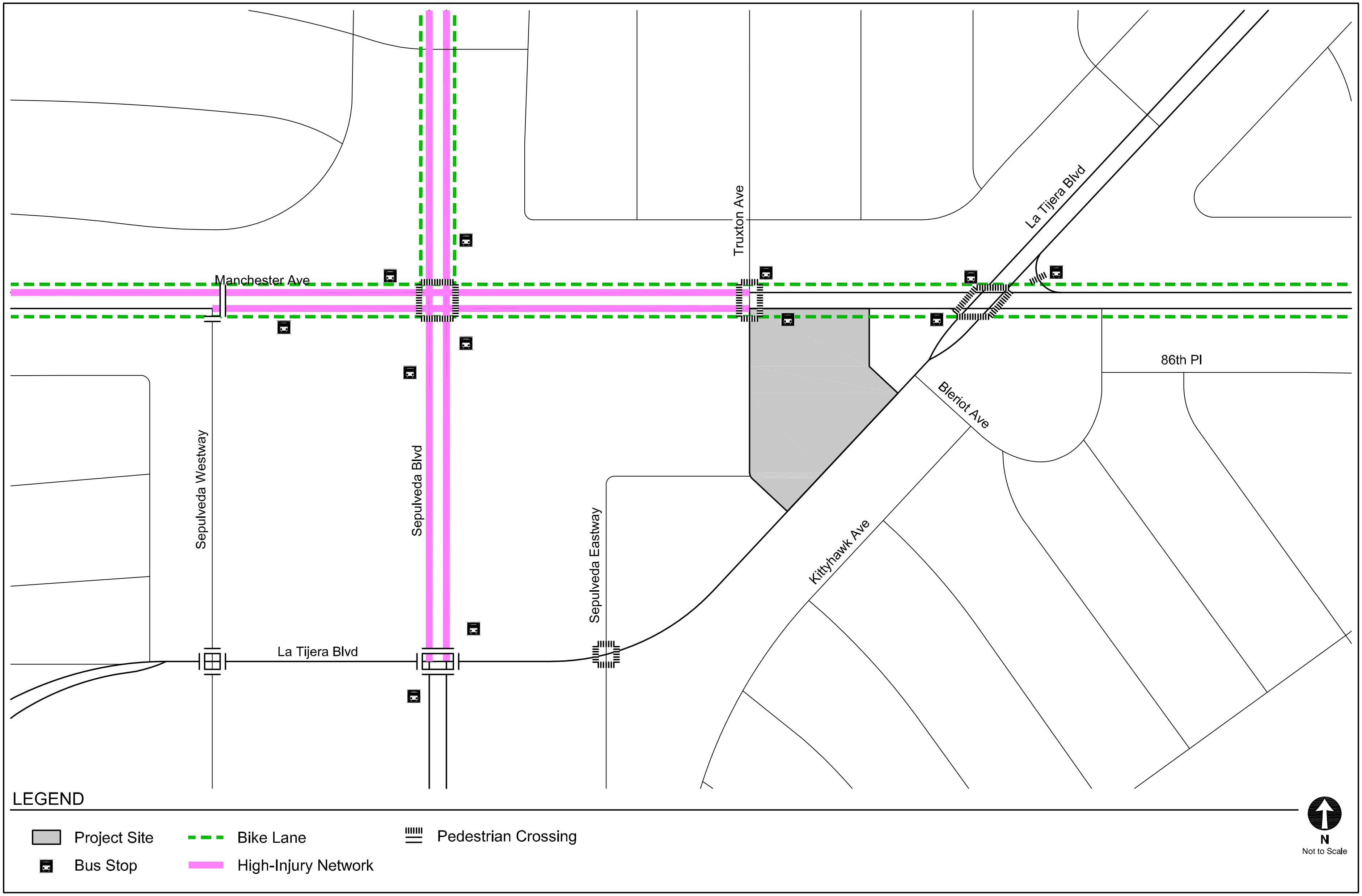
FIGURE 6



PEDESTRIAN DESTINATIONS INVENTORY

FIGURE 7

Gibson transportation consulting, inc.



EXISTING TRANSPORTATION FACILITIES

FIGURE 8

CITY OF LOS ANGELES VMT CALCULATOR Version 1.3

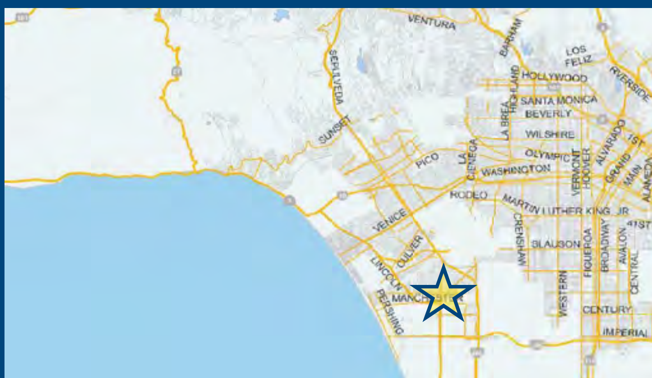
Project Screening Criteria: Is this project required to conduct a vehicle miles traveled analysis?

Project Information

Project: Proposed Mixed use

Scenario: 375 DU, 66 Aff DU & 16.6ksf commercial

Address: 6136 W MANCHESTER AVE, 90045



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
Retail | Auto Repair	19.65	ksf
Retail | Fast-Food Restaurant	2.165	ksf
Retail | Auto Repair	19.65	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	5.5	ksf
Housing | Multi-Family	375	DU
Retail | General Retail	5.5	ksf
Retail | High-Turnover Sit-Down Restaurant	11.1	ksf
Housing | Affordable Housing - Family	66	DU

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

Project Screening Summary

Existing Land Use	Proposed
1,357 Daily Vehicle Trips	3,589 Daily Vehicle Trips
10,373 Daily VMT	26,521 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	2,232 Net Daily Trips
The net increase in daily VMT ≤ 0	16,148 Net Daily VMT
The proposed project consists of only retail land uses ≤ 50,000 square feet total.	16.600 ksf

The proposed project is required to perform VMT analysis.

Measuring the Miles

5/16/2022

VMT Calculator User Agreement

The Los Angeles Department of Transportation (LADOT), in partnership with the Department of City Planning and Fehr & Peers, has developed the City of Los Angeles Vehicle Miles Traveled (VMT) Calculator to estimate project-specific daily household VMT per capita and daily work VMT per employee for land use development projects. This application, the VMT Calculator, has been provided to You, the User, to assess vehicle miles traveled (VMT) outcomes of land use projects within the City of Los Angeles. The term "City" as used below shall refer to the City of Los Angeles. The terms "City" and "Fehr & Peers" as used below shall include their respective affiliates, subconsultants, employees, and representatives.

The City is pleased to be able to provide this information to the public. The City believes that the public is most effectively served when they are provided access to the technical tools that inform the public review process of private and public land use investments. However, in using the VMT Calculator, You agree to be bound by this VMT Calculator User Agreement (this Agreement).

VMT Calculator Application for the City of Los Angeles. The City's consultant calibrated the VMT Calculator's parameters in 2018 to estimate travel patterns of locations in the City, and validated those outcomes against empirical data. However, this calibration process is limited to locations within the City, and practitioners applying the VMT Calculator outside of the City boundaries should not apply these estimates without further calibration and validation of travel patterns to verify the VMT Calculator's accuracy in estimating VMT in such other locations.

Limited License to Use. This Agreement gives You a limited, non-transferrable, non-assignable, and non-exclusive license to use and execute a copy of the VMT Calculator on a computer system owned, leased or otherwise controlled by You in Your own facilities, as set out below, provided You do not use the VMT Calculator in an unauthorized manner, and that You do not republish, copy, distribute, reverse-engineer, modify, decompile, disassemble, transfer, or sell any part of the VMT Calculator, and provided that You know and follow the terms of this Agreement. Your failure to follow the terms of this Agreement shall automatically terminate this license and Your right to use the VMT Calculator.

Ownership. You understand and acknowledge that the City owns the VMT Calculator, and shall continue to own it through Your use of it, and that no transfer of ownership of any kind is intended in allowing You to use the VMT Calculator.

Warranty Disclaimer. In spite of the efforts of the City and Fehr & Peers, some information on the VMT Calculator may not be accurate. The VMT Calculator, OUTPUTS AND ASSOCIATED DATA ARE PROVIDED "as is" WITHOUT WARRANTY OF ANY KIND, whether expressed, implied, statutory, or otherwise including but not limited to, the implied warranties of merchantability and fitness for a particular purpose.

Limitation of Liability. It is understood that the VMT Calculator is provided without charge. Neither the City nor Fehr & Peers can be responsible or liable for any information derived from its use, or for any delays, inaccuracies, incompleteness, errors or omissions arising out of your use of the VMT Calculator or with respect to the material contained in the VMT Calculator. You understand and agree that Your sole remedy against the City or Fehr & Peers for loss or damage caused by any defect or failure of the

VMT Calculator, regardless of the form of action, whether in contract, tort, including negligence, strict liability or otherwise, shall be the repair or replacement of the VMT Calculator to the extent feasible as determined solely by the City. In no event shall the City or Fehr & Peers be responsible to You or anyone else for, or have liability for any special, indirect, incidental or consequential damages (including, without limitation, damages for loss of business profits or changes to businesses costs) or lost data or downtime, however caused, and on any theory of liability from the use of, or the inability to use, the VMT Calculator, whether the data, and/or formulas contained in the VMT Calculator are provided by the City or Fehr & Peers, or another third party, even if the City or Fehr & Peers have been advised of the possibility of such damages.

This Agreement and License shall be governed by the laws of the State of California without regard to their conflicts of law provisions, and shall be effective as of the date set forth below and, unless terminated in accordance with the above or extended by written amendment to this Agreement, shall terminate on the earlier of the date that You are not making use of the VMT Calculator or one year after the beginning of Your use of the VMT Calculator.

By using the VMT Calculator, You hereby waive and release all claims, responsibilities, liabilities, actions, damages, costs, and losses, known and unknown, against the City and Fehr & Peers for Your use of the VMT Calculator.

Before making decisions using the information provided in this application, contact City LADOT staff to confirm the validity of the data provided.

Print and sign below, and submit to LADOT along with the transportation assessment Memorandum of Understanding (MOU).

You, the User	
By:	Janet Ye
Print Name:	Janet Ye
Title:	Associate
Company:	Gibson Transportation Consulting, Inc.
Address:	555 W. 5th St., Suite 3375 Los Angeles, CA 90013
Phone:	(213) 683-0088
Email Address:	jye@gibsontrans.com
Date:	May 18, 2022

Appendix B

Traffic Counts

WILTEC

Phone: (626) 564-1944 Fax: (626) 564-0969 info@wiltecusa.com

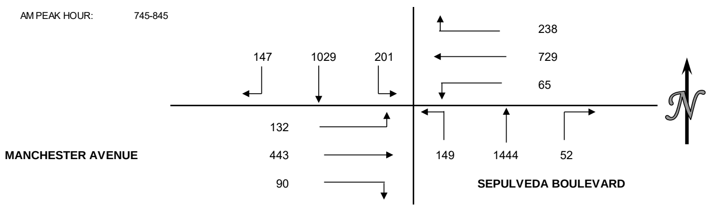
INTERSECTION VEHICLE CLASSIFICATION TURNING MOVEMENT COUNT SUMMARY

CLIENT: GIBSON TRANSPORTATION CONSULTING, INC.
PROJECT: WESTCHESTER TRAFFIC COUNTS
DATE: WEDNESDAY MAY 11, 2022
PERIOD: 7:00 AM to 10:00 AM
INTERSECTION: N/S SEPULVEDA BOULEVARD
E/W MANCHESTER AVENUE

	1 SBRT				2 SBTH				3 SBLT				4 WBRT				5 WBTH				6 WBLT			
15-MIN COUNTS	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL
700-715	15	0	0	15	224	1	0	225	15	0	0	15	75	2	0	77	169	1	0	170	11	1	0	12
715-730	26	1	0	27	217	2	0	219	19	0	0	19	59	1	0	60	180	2	3	185	10	1	0	11
730-745	29	1	0	30	230	3	0	233	24	0	0	24	37	2	0	39	187	3	0	190	7	1	0	8
745-800	38	0	0	38	252	1	2	255	50	0	0	50	47	0	0	47	195	3	0	198	18	0	0	18
800-815	39	0	0	39	245	5	0	250	51	0	0	51	56	0	0	56	184	1	0	185	10	0	0	10
815-830	34	0	0	34	271	3	0	274	54	1	0	55	61	0	1	62	177	0	0	177	16	2	0	18
830-845	36	0	0	36	247	3	0	250	43	2	0	45	72	1	0	73	168	0	1	169	19	0	0	19
845-900	35	0	0	35	219	1	0	220	41	0	0	41	63	0	1	64	146	1	0	147	15	0	1	16
900-915	27	0	1	28	244	3	1	248	26	0	0	26	52	0	1	53	122	0	1	123	8	3	0	11
915-930	39	0	1	40	258	2	0	260	34	0	0	34	62	0	0	62	107	0	2	109	17	1	0	18
930-945	29	0	0	29	228	3	1	232	32	0	0	32	51	0	0	51	104	1	0	105	12	1	0	13
945-1000	40	0	0	40	270	2	0	272	45	0	0	45	37	0	0	37	114	0	1	115	18	1	0	19
HOUR TOTALS																								
700-800	108	2	0	110	923	7	2	932	108	0	0	108	218	5	0	223	731	9	3	743	46	3	0	49
715-815	132	2	0	134	944	11	2	957	144	0	0	144	199	3	0	202	746	9	3	758	45	2	0	47
730-830	140	1	0	141	998	12	2	1012	179	1	0	180	201	2	1	204	743	7	0	750	51	3	0	54
745-845	147	0	0	147	1015	12	2	1029	198	3	0	201	236	1	1	238	724	4	1	729	63	2	0	65
800-900	144	0	0	144	982	12	0	994	189	3	0	192	252	1	2	255	675	2	1	678	60	2	1	63
815-915	132	0	1	133	981	10	1	992	164	3	0	167	248	1	3	252	613	1	2	616	58	5	1	64
830-930	137	0	2	139	968	9	1	978	144	2	0	146	249	1	2	252	543	1	4	548	59	4	1	64
845-945	130	0	2	132	949	9	2	960	133	0	0	133	228	0	2	230	479	2	3	484	52	5	1	58
900-1000	135	0	2	137	1000	10	2	1012	137	0	0	137	202	0	1	203	447	1	4	452	55	6	0	61

	7 NBRT				8 NBTH				9 NBLT				10 EBRT				11 EBTH				12 EBLT				TOTAL OF ALL MOVEMENTS			
15-MIN COUNTS	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	RIDE SHARE VANS	TRUCKS	TOTAL
700-715	15	0	0	15	369	7	0	376	49	2	0	51	12	0	0	12	49	1	1	51	19	0	0	19	1022	15	1	1038
715-730	8	1	0	9	400	5	1	406	31	2	0	33	15	2	0	17	54	1	0	55	19	0	0	19	1038	18	4	1060
730-745	6	1	0	7	363	2	1	366	33	2	0	35	16	2	1	19	70	1	0	71	15	0	1	16	1017	18	3	1038
745-800	5	0	0	5	383	2	1	386	41	2	0	43	14	1	0	15	98	0	1	99	33	0	0	33	1174	9	4	1187
800-815	11	1	0	12	369	4	2	375	29	2	0	31	22	2	0	24	124	1	0	125	41	0	1	42	1181	16	3	1200
815-830	19	0	0	19	348	4	0	352	31	2	0	33	24	1	0	25	107	1	0	108	33	0	0	33	1175	14	1	1190
830-845	15	1	0	16	329	2	0	331	40	2	0	42	25	1	0	26	108	2	1	111	23	1	0	24	1125	15	2	1142
845-900	14	0	0	14	279	2	2	283	39	2	0	41	21	2	1	24	108	1	0	109	35	0	0	35	1015	9	5	1029
900-915	20	0	0	20	257	1	0	258	21	0	0	21	18	0	0	18	90	2	1	93	23	0	0	23	908	9	5	922
915-930	23	0	0	23	267	2	0	269	21	2	0	23	22	1	0	23	82	0	0	82	28	0	0	28	960	8	3	971
930-945	22	0	0	22	234	1	0	235	32	1	0	33	21	2	0	23	56	2	0	58	33	0	0	33	854	11	1	866
945-1000	19	1	0	20	230	1	2	233	27	1	0	28	21	0	0	21	67	1	0	68	35	0	0	35	923	7	3	933
HOUR TOTALS																												
700-800	34	2	0	36	1515	16	3	1534	154	8	0	162	57	5	1	63	271	3	2	276	86	0	1	87	4251	60	12	4323
715-815	30	3	0	33	1515	13	5	1533	134	8	0	142	67	7	1	75	346	3	1	350	108	0	2	110	4410	61	14	4485
730-830	41	2	0	43	1463	12	4	1479	134	8	0	142	76	6	1	83	399	3	1	403	122	0	2	124	4547	57	11	4615
745-845	50	2	0	52	1429	12	3	1444	141	8	0	149	85	5	0	90	437	4	2	443	130	1	1	132	4655	54	10	4719
800-900	59	2	0	61	1325	12	4	1341	139	8	0	147	92	6	1	99	447	5	1	453	132	1	1	134	4496	54	11	4561
815-915	68	1	0	69	1213	9	2	1224	131	6	0	137	88	4	1	93	413	6	2	421	114	1	0	115	4223	47	13	4283
830-930	72	1	0	73	1132	7	2	1141	121	6	0	127	86	4	1	91	388	5	2	395	109	1	0	110	4008	41	15	4064
845-945	79	0	0	79	1037	6	2	1045	113	5	0	118	82	5	1	88	336	5	1	342	119	0	0	119	3737	37	14	3788
900-1000	84	1	0	85	988	5	2	995	101	4	0	105	82	3	0	85	295	5	1	301	119	0	0	119	3645	35	12	3692

CONSOLIDATED VEHICLE COUNTS													
15 MIN COUNTS	1	2	3	4	5	6	7	8	9	10	11	12	
PERIOD	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTAL
700-715	15	225	15	77	170	12	15	376	51	12	51	19	1038
715-730	27	219	19	60	185	11	9	406	33	17	55	19	1060
730-745	30	233	24	39	190	8	7	366	35	19	71	16	1038
745-800	38	255	50	47	198	18	5	386	43	15	99	33	1187
800-815	39	250	51	56	185	10	12	375	31	24	125	42	1200
815-830	34	274	55	62	177	18	19	352	33	25	108	33	1190
830-845	36	250	45	73	169	19	16	331	42	26	111	24	1142
845-900	35	220	41	64	147	16	14	283	41	24	109	35	1029
900-915	28	248	26	53	123	11	20	258	21	18	93	23	922
915-930	40	260	34	62	109	18	23	269	23	23	82	28	971
930-945	29	232	32	51	105	13	22	235	33	23	58	33	866
945-1000	40	272	45	37	115	19	20	233	28	21	68	35	933
HOUR TOTALS	1	2	3	4	5	6	7	8	9	10	11	12	
PERIOD	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTAL
700-800	110	932	108	223	743	49	36	1534	162	63	276	87	4323
715-815	134	957	144	202	758	47	33	1533	142	75	350	110	4485
730-830	141	1012	180	204	750	54	43	1479	142	83	403	124	4615
745-845	147	1029	201	238	729	65	52	1444	149	90	443	132	4719
800-900	144	994	192	255	678	63	61	1341	147	99	453	134	4561
815-915	133	992	167	252	616	64	69	1224	137	93	421	115	4283
830-930	139	978	146	252	548	64	73	1141	127	91	395	110	4064
845-945	132	960	133	230	484	58	79	1045	118	88	342	119	3788
900-1000	137	1012	137	203	452	61	85	995	105	85	301	119	3692



APPROACH SUMMARIES	NORTH APRCH		EAST APRCH		SOUTH APRCH		WEST APRCH	
	APRCH	EXIT	APRCH	EXIT	APRCH	EXIT	APRCH	EXIT
700-800	1150	1844	1015	420	1732	1044	426	1015
715-815	1235	1845	1007	527	1708	1079	535	1034
730-830	1333	1807	1008	626	1664	1149	610	1033
745-845	1377	1814	1032	696	1645	1184	665	1025
800-900	1330	1730	996	706	1549	1156	686	969
815-915	1292	1591	932	657	1430	1149	629	886
830-930	1263	1503	864	614	1341	1133	596	814
845-945	1225	1394	772	554	1242	1106	549	734
900-1000	1286	1317	716	523	1185	1158	505	694

WILTEC

Phone: (626) 564-1944 Fax: (626) 564-0969

INTERSECTION PEDESTRIAN AND BICYCLE COUNT SUMMARY

CLIENT: GIBSON TRANSPORTATION CONSULTING, INC.
PROJECT: WESTCHESTER TRAFFIC COUNTS
DATE: WEDNESDAY MAY 11, 2022
PERIOD: 7:00 AM to 10:00 AM
INTERSECTION: N/S SEPULVEDA BOULEVARD
E/W MANCHESTER AVENUE

PEDESTRIAN COUNTS

15 MIN COUNTS	NORTH LEG		EAST LEG		SOUTH LEG		WEST LEG		
PERIOD	EB	WB	NB	SB	EB	WB	NB	SB	TOTALS
700-715	1	3	2	1	5	0	3	2	17
715-730	2	0	1	0	5	1	11	5	25
730-745	4	0	2	3	0	3	11	1	24
745-800	0	0	3	1	2	0	2	1	9
800-815	0	0	5	2	5	0	1	2	15
815-830	5	0	2	1	2	0	19	1	30
830-845	0	0	2	8	2	1	4	1	18
845-900	1	3	5	10	3	8	0	1	31
900-915	5	1	8	1	4	2	10	3	34
915-930	0	0	3	1	2	2	4	3	15
930-95	0	0	5	3	5	3	5	6	27
945-1000	1	1	5	11	2	3	3	1	27
HOUR TOTALS	NORTH LEG		EAST LEG		SOUTH LEG		WEST LEG		
PERIOD	EB	WB	NB	SB	EB	WB	NB	SB	TOTALS
700-800	7	3	8	5	12	4	27	9	75
715-815	6	0	11	6	12	4	25	9	73
730-830	9	0	12	7	9	3	33	5	78
745-845	5	0	12	12	11	1	26	5	72
845-900	6	3	14	21	12	9	24	5	94
900-915	11	4	17	20	11	11	33	6	113
915-930	6	4	18	20	11	13	18	8	98
930-945	6	4	21	15	14	15	19	13	107
945-1000	6	2	21	16	13	10	22	13	103

BICYCLE COUNTS

15 MIN COUNTS	NORTH LEG		EAST LEG		SOUTH LEG		WEST LEG		
PERIOD	EB	WB	NB	SB	EB	WB	NB	SB	TOTAL
700-715	0	0	0	0	0	0	0	0	0
715-730	0	0	1	0	0	0	0	0	1
730-745	0	0	0	0	1	0	0	0	1
745-800	0	0	0	0	0	0	0	1	1
800-815	0	0	0	0	1	0	0	0	1
815-830	0	1	2	0	1	0	0	0	4
830-845	0	0	0	0	0	0	0	0	0
845-900	0	0	0	0	1	0	0	1	2
900-915	0	0	0	0	0	0	0	0	0
915-930	0	1	1	0	0	0	1	0	3
930-95	0	0	1	0	0	0	0	0	1
945-1000	0	0	0	0	1	0	0	0	1
HOUR TOTALS	NORTH LEG		EAST LEG		SOUTH LEG		WEST LEG		
PERIOD	EB	WB	NB	SB	EB	WB	NB	SB	TOTAL
700-800	0	0	1	0	1	0	0	1	3
715-815	0	0	1	0	2	0	0	1	4
730-830	0	1	2	0	3	0	0	1	7
745-845	0	1	2	0	2	0	0	1	6
845-900	0	1	2	0	3	0	0	1	7
900-915	0	1	2	0	2	0	0	1	6
915-930	0	1	1	0	1	0	1	1	5
930-945	0	1	2	0	1	0	1	1	6
945-1000	0	1	2	0	1	0	1	0	5

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INTERSECTION VEHICLE CLASSIFICATION TURNING MOVEMENT COUNT SUMMARY

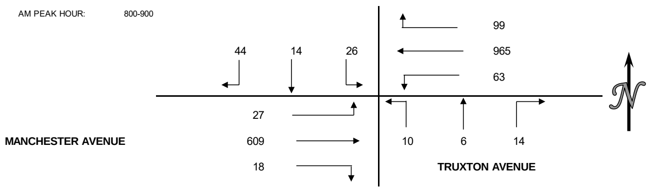
CLIENT: GIBSON TRANSPORTATION CONSULTING, INC.
PROJECT: WESTCHESTER TRAFFIC COUNTS
DATE: WEDNESDAY MAY 11, 2022
PERIOD: 7:00 AM to 10:00 AM
INTERSECTION: N/S TRUXTON AVENUE
E/W MANCHESTER AVENUE

	1 SBRT				2 SBTH				3 SBLT				4 WBRT				5 WBTH				6 WBLT			
15-MIN COUNTS	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL
700-715	1	0	0	1	2	0	0	2	1	0	0	1	13	0	0	13	240	4	1	245	9	0	1	10
715-730	4	0	0	4	1	0	0	1	3	0	0	3	34	0	0	34	264	4	3	271	5	0	0	5
730-745	7	0	0	7	6	0	0	6	3	0	0	3	29	0	0	29	249	6	0	255	5	0	0	5
745-800	6	0	0	6	4	0	0	4	3	0	0	3	16	0	0	16	236	3	0	239	4	0	0	4
800-815	8	0	0	8	0	0	0	0	4	0	0	4	34	0	0	34	223	0	0	223	12	0	0	12
815-830	13	0	0	13	4	0	0	4	9	0	0	9	21	0	0	21	263	2	1	266	12	0	0	12
830-845	9	0	0	9	2	0	0	2	10	0	0	10	27	0	0	27	254	1	2	257	20	0	0	20
845-900	14	0	0	14	8	0	0	8	3	0	0	3	17	0	0	17	215	2	2	219	19	0	0	19
900-915	11	0	0	11	3	0	0	3	7	0	0	7	8	0	0	8	183	2	2	187	11	0	0	11
915-930	9	0	0	9	2	0	0	2	3	0	0	3	13	0	0	13	171	1	2	174	5	0	0	5
930-945	7	0	0	7	2	0	0	2	3	0	0	3	8	0	0	8	151	2	0	153	12	0	0	12
945-1000	14	0	0	14	11	0	0	11	2	0	0	2	9	0	0	9	159	1	1	161	20	0	0	20
HOUR TOTALS																								
700-800	18	0	0	18	13	0	0	13	10	0	0	10	92	0	0	92	989	17	4	1010	23	0	1	24
715-815	25	0	0	25	11	0	0	11	13	0	0	13	113	0	0	113	972	13	3	988	26	0	0	26
730-830	34	0	0	34	14	0	0	14	19	0	0	19	100	0	0	100	971	11	1	983	33	0	0	33
745-845	36	0	0	36	10	0	0	10	26	0	0	26	98	0	0	98	976	6	3	985	48	0	0	48
800-900	44	0	0	44	14	0	0	14	26	0	0	26	99	0	0	99	955	5	5	965	63	0	0	63
815-915	47	0	0	47	17	0	0	17	29	0	0	29	73	0	0	73	915	7	7	929	62	0	0	62
830-930	43	0	0	43	15	0	0	15	23	0	0	23	65	0	0	65	823	6	8	837	55	0	0	55
845-945	41	0	0	41	15	0	0	15	16	0	0	16	46	0	0	46	720	7	6	733	47	0	0	47
900-1000	41	0	0	41	18	0	0	18	15	0	0	15	38	0	0	38	664	6	5	675	48	0	0	48

	7 NBRT				8 NBTH				9 NBLT				10 EBRT				11 EBTH				12 EBLT				TOTAL OF ALL MOVEMENTS			
15-MIN COUNTS	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	RIDE SHARE VANS	TRUCKS	TOTAL
700-715	0	0	0	0	1	0	0	1	2	0	0	2	2	0	0	2	75	1	1	77	2	0	0	2	348	5	3	356
715-730	1	0	0	1	2	0	0	2	4	0	0	4	0	0	0	0	89	2	0	91	3	0	0	3	410	6	3	419
730-745	2	0	0	2	5	0	0	5	0	1	0	1	1	0	0	1	107	2	0	109	3	0	0	3	417	9	0	426
745-800	2	0	0	2	3	0	0	3	2	0	0	2	4	0	0	4	95	0	1	96	8	0	0	8	383	3	1	387
800-815	2	0	0	2	2	0	0	2	2	0	0	2	4	0	0	4	139	2	0	141	3	0	0	3	433	2	0	435
815-830	2	0	0	2	2	0	0	2	2	0	0	2	3	0	0	3	160	2	0	162	10	0	0	10	501	4	1	506
830-845	3	0	0	3	2	0	0	2	1	0	0	1	6	0	0	6	153	4	0	157	7	0	0	7	494	5	2	501
845-900	7	0	0	7	0	0	0	0	5	0	0	5	5	0	0	5	146	1	2	149	7	0	0	7	446	3	4	453
900-915	4	1	0	5	2	0	0	2	4	0	0	4	2	0	0	2	100	1	1	102	7	0	0	7	342	4	3	349
915-930	6	0	0	6	3	0	0	3	1	0	0	1	9	0	0	9	118	0	1	119	4	0	0	4	344	1	3	348
930-945	5	0	0	5	1	0	0	1	3	0	0	3	8	0	0	8	95	2	0	97	7	0	0	7	302	4	0	306
945-1000	5	0	0	5	3	0	0	3	3	0	0	3	8	0	0	8	109	2	0	111	12	0	0	12	355	3	1	359
HOUR TOTALS																												
700-800	5	0	0	5	11	0	0	11	8	1	0	9	7	0	0	7	366	5	2	373	16	0	0	16	1558	23	7	1588
715-815	7	0	0	7	12	0	0	12	8	1	0	9	9	0	0	9	430	6	1	437	17	0	0	17	1643	20	4	1667
730-830	8	0	0	8	12	0	0	12	6	1	0	7	12	0	0	12	501	6	1	508	24	0	0	24	1734	18	2	1754
745-845	9	0	0	9	9	0	0	9	7	0	0	7	17	0	0	17	547	8	1	556	28	0	0	28	1811	14	4	1829
800-900	14	0	0	14	6	0	0	6	10	0	0	10	18	0	0	18	598	9	2	609	27	0	0	27	1874	14	7	1895
815-915	16	1	0	17	6	0	0	6	12	0	0	12	16	0	0	16	559	8	3	570	31	0	0	31	1783	16	10	1809
830-930	20	1	0	21	7	0	0	7	11	0	0	11	22	0	0	22	517	6	4	527	25	0	0	25	1626	13	12	1651
845-945	22	1	0	23	6	0	0	6	13	0	0	13	24	0	0	24	459	4	4	467	25	0	0	25	1434	12	10	1456
900-1000	20	1	0	21	9	0	0	9	11	0	0	11	27	0	0	27	422	5	2	429	30	0	0	30	1343	12	7	1362

CONSOLIDATED VEHICLE COUNTS

15 MIN COUNTS	1	2	3	4	5	6	7	8	9	10	11	12	
PERIOD	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTAL
700-715	1	2	1	13	245	10	0	1	2	2	77	2	356
715-730	4	1	3	34	271	5	1	2	4	0	91	3	419
730-745	7	6	3	29	255	5	2	5	1	1	109	3	426
745-800	6	4	3	16	239	4	2	3	2	4	96	8	387
800-815	8	0	4	34	223	12	2	2	2	4	141	3	435
815-830	13	4	9	21	266	12	2	2	2	3	162	10	506
830-845	9	2	10	27	257	20	3	2	1	6	157	7	501
845-900	14	8	3	17	219	19	7	0	5	5	149	7	453
900-915	11	3	7	8	187	11	5	2	4	2	102	7	349
915-930	9	2	3	13	174	5	6	3	1	9	119	4	348
930-945	7	2	3	8	153	12	5	1	3	8	97	7	306
945-1000	14	11	2	9	161	20	5	3	3	8	111	12	359
HOUR TOTALS	1	2	3	4	5	6	7	8	9	10	11	12	
PERIOD	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTAL
700-800	18	13	10	92	1010	24	5	11	9	7	373	16	1588
715-815	25	11	13	113	988	26	7	12	9	9	437	17	1667
730-830	34	14	19	100	983	33	8	12	7	12	508	24	1754
745-845	36	10	26	98	985	48	9	9	7	17	556	28	1829
800-900	44	14	26	99	965	63	14	6	10	18	609	27	1895
815-915	47	17	29	73	929	62	17	6	12	16	570	31	1809
830-930	43	15	23	65	837	55	21	7	11	22	527	25	1651
845-945	41	15	16	46	733	47	23	6	13	24	467	25	1456
900-1000	41	18	15	38	675	48	21	9	11	27	429	30	1362



APPROACH SUMMARIES

	NORTH APRCH			EAST APRCH			SOUTH APRCH			WEST APRCH	
	APRCH	EXIT		APRCH	EXIT		APRCH	EXIT		APRCH	EXIT
700-800	41	119		1126	388		25	44		396	1037
715-815	49	142		1127	457		28	46		463	1022
730-830	67	136		1116	535		27	59		544	1024
745-845	72	135		1131	591		25	75		601	1028
800-900	84	132		1127	649		30	95		654	1019
815-915	93	110		1064	616		35	95		617	988
830-930	81	97		957	571		39	92		574	891
845-945	72	77		826	506		42	86		516	787
900-1000	74	77		761	465		41	93		486	727

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INTERSECTION PEDESTRIAN AND BICYCLE COUNT SUMMARY

CLIENT: GIBSON TRANSPORTATION CONSULTING, INC.
PROJECT: WESTCHESTER TRAFFIC COUNTS
DATE: WEDNESDAY MAY 11, 2022
PERIOD: 7:00 AM to 10:00 AM
INTERSECTION: N/S TRUXTON AVENUE
E/W MANCHESTER AVENUE

PEDESTRIAN COUNTS

15 MIN COUNTS	NORTH LEG		EAST LEG		SOUTH LEG		WEST LEG		
PERIOD	EB	WB	NB	SB	EB	WB	NB	SB	TOTALS
700-715	0	2	0	1	1	0	0	0	4
715-730	0	1	0	2	0	2	0	0	5
730-745	0	1	1	0	0	0	0	2	4
745-800	0	1	0	1	2	2	0	0	6
800-815	0	0	0	1	1	1	1	0	4
815-830	0	0	1	1	1	1	0	0	4
830-845	0	0	0	0	1	0	0	1	2
845-900	0	0	0	0	0	2	0	0	2
900-915	1	2	0	0	1	1	0	2	7
915-930	0	1	0	0	0	0	0	0	1
930-95	0	1	0	0	1	1	0	1	4
945-1000	0	0	1	0	2	0	0	0	3
HOUR TOTALS	NORTH LEG		EAST LEG		SOUTH LEG		WEST LEG		
PERIOD	EB	WB	NB	SB	EB	WB	NB	SB	TOTALS
700-800	0	5	1	4	3	4	0	2	19
715-815	0	3	1	4	3	5	1	2	19
730-830	0	2	2	3	4	4	1	2	18
745-845	0	1	1	3	5	4	1	1	16
845-900	0	0	1	2	3	4	1	1	12
900-915	1	2	1	1	3	4	0	3	15
915-930	1	3	0	0	2	3	0	3	12
930-945	1	4	0	0	2	4	0	3	14
945-1000	1	4	1	0	4	2	0	3	15

BICYCLE COUNTS

15 MIN COUNTS	NORTH LEG		EAST LEG		SOUTH LEG		WEST LEG		
PERIOD	EB	WB	NB	SB	EB	WB	NB	SB	TOTAL
700-715	1	1	0	0	0	0	0	0	2
715-730	0	0	0	0	0	0	0	0	0
730-745	0	2	0	0	0	0	0	0	2
745-800	0	0	0	0	0	0	0	0	0
800-815	0	0	0	0	1	1	1	0	3
815-830	0	0	0	0	0	0	0	0	0
830-845	0	0	0	0	0	0	0	0	0
845-900	0	0	0	0	0	0	0	0	0
900-915	0	1	0	0	1	0	0	0	2
915-930	0	0	0	0	0	0	0	0	0
930-95	0	0	1	0	2	0	0	0	3
945-1000	0	0	0	0	1	0	0	0	1
HOUR TOTALS	NORTH LEG		EAST LEG		SOUTH LEG		WEST LEG		
PERIOD	EB	WB	NB	SB	EB	WB	NB	SB	TOTAL
700-800	1	3	0	0	0	0	0	0	4
715-815	0	2	0	0	1	1	1	0	5
730-830	0	2	0	0	1	1	1	0	5
745-845	0	0	0	0	1	1	1	0	3
845-900	0	0	0	0	1	1	1	0	3
900-915	0	1	0	0	1	0	0	0	2
915-930	0	1	0	0	1	0	0	0	2
930-945	0	1	1	0	3	0	0	0	5
945-1000	0	1	1	0	4	0	0	0	6

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INTERSECTION VEHICLE CLASSIFICATION TURNING MOVEMENT COUNT SUMMARY

CLIENT:	GIBSON TRANSPORTATION CONSULTING, INC.
PROJECT:	WESTCHESTER TRAFFIC COUNTS
DATE:	WEDNESDAY MAY 11, 2022
PERIOD:	7:00 AM to 10:00 AM
INTERSECTION: N/S	LA TIJERA BOULEVARD
E/W	MANCHESTER BOULEVARD

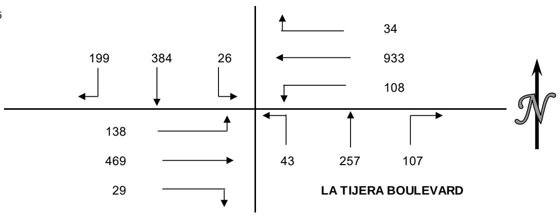
	1 SBRT				2 SBTH				3 SBLT				4 WBRT				5 WBTH				6 WBLT			
15-MIN COUNTS	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL
700-715	38	2	0	40	61	0	0	61	3	0	0	3	3	0	0	3	185	2	0	187	15	0	0	15
715-730	42	0	0	42	82	0	0	82	7	0	0	7	6	0	0	6	263	3	0	266	15	0	2	17
730-745	32	2	0	34	103	1	0	104	2	0	0	2	6	0	0	6	239	4	0	243	28	1	0	29
745-800	49	0	0	49	101	1	0	102	5	0	0	5	7	0	0	7	248	3	0	251	24	1	1	26
800-815	46	0	0	46	98	1	0	99	5	0	0	5	12	0	0	12	236	0	0	236	28	0	0	28
815-830	41	1	0	42	82	1	0	83	8	0	0	8	9	0	0	9	251	1	0	252	29	0	0	29
830-845	62	0	0	62	100	0	0	100	8	0	0	8	6	0	0	6	194	0	0	194	23	0	2	25
845-900	47	0	0	47	98	0	1	99	5	0	1	6	10	0	0	10	173	1	0	174	31	0	0	31
900-915	51	0	1	52	79	1	2	82	2	0	0	2	4	0	0	4	147	3	2	152	29	0	0	29
915-930	35	1	1	37	87	0	1	88	6	0	0	6	5	0	0	5	134	0	3	137	27	0	0	27
930-945	27	0	0	27	82	1	0	83	6	0	0	6	6	0	1	7	141	2	1	144	32	0	0	32
945-1000	46	0	0	46	77	0	0	77	4	0	0	4	5	0	0	5	146	1	3	150	19	0	0	19
HOUR TOTALS																								
700-800	161	4	0	165	347	2	0	349	17	0	0	17	22	0	0	22	935	12	0	947	82	2	3	87
715-815	169	2	0	171	384	3	0	387	19	0	0	19	31	0	0	31	986	10	0	996	95	2	3	100
730-830	168	3	0	171	384	4	0	388	20	0	0	20	34	0	0	34	974	8	0	982	109	2	1	112
745-845	198	1	0	199	381	3	0	384	26	0	0	26	34	0	0	34	929	4	0	933	104	1	3	108
800-900	196	1	0	197	378	2	1	381	26	0	1	27	37	0	0	37	854	2	0	856	111	0	2	113
815-915	201	1	1	203	359	2	3	364	23	0	1	24	29	0	0	29	765	5	2	772	112	0	2	114
830-930	195	1	2	198	364	1	4	369	21	0	1	22	25	0	0	25	648	4	5	657	110	0	2	112
845-945	160	1	2	163	346	2	4	352	19	0	1	20	25	0	1	26	595	6	6	607	119	0	0	119
900-1000	159	1	2	162	325	2	3	330	18	0	0	18	20	0	1	21	568	6	9	583	107	0	0	107

	7 NBRT				8 NBTH				9 NBLT				10 EBRT				11 EBTH				12 EBLT				TOTAL OF ALL MOVEMENTS			
15-MIN COUNTS	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	RIDE SHARE VANS	TRUCKS	TOTAL
700-715	22	0	0	22	32	0	1	33	6	0	0	6	2	0	0	2	53	2	1	56	9	0	1	10	429	6	3	438
715-730	15	0	0	15	40	0	0	40	9	0	0	9	4	1	0	5	69	0	0	69	17	0	0	17	569	4	2	575
730-745	25	0	0	25	47	0	0	47	10	0	0	10	3	0	0	3	71	1	0	72	17	1	0	18	583	10	0	593
745-800	21	0	1	22	72	1	0	73	5	0	0	5	5	0	0	5	100	1	1	102	28	0	0	28	665	7	3	675
800-815	33	0	0	33	77	1	0	78	19	0	0	19	2	1	0	3	115	1	0	116	50	0	0	50	721	4	0	725
815-830	28	0	0	28	53	0	0	53	9	0	0	9	13	0	0	13	133	3	0	136	25	0	0	25	681	6	0	687
830-845	24	0	0	24	53	0	0	53	10	0	0	10	8	0	0	8	113	1	1	115	34	1	0	35	635	2	3	640
845-900	24	0	0	24	56	0	1	57	8	0	2	10	7	0	0	7	113	4	1	118	32	0	0	32	604	5	6	615
900-915	31	0	0	31	64	1	0	65	11	0	0	11	3	0	0	3	81	3	1	85	30	0	2	32	532	8	8	548
915-930	28	0	0	28	69	0	0	69	12	0	0	12	7	0	0	7	95	0	1	96	18	0	0	18	523	1	6	530
930-945	24	0	0	24	51	0	0	51	7	0	0	7	11	0	0	11	63	2	1	66	15	0	0	15	465	5	3	473
945-1000	30	0	0	30	52	0	0	52	7	0	0	7	4	0	0	4	88	1	2	91	25	1	0	26	503	3	5	511
HOUR TOTALS																												
700-800	83	0	1	84	191	1	1	193	30	0	0	30	14	1	0	15	293	4	2	299	71	1	1	73	2246	27	8	2281
715-815	94	0	1	95	236	2	0	238	43	0	0	43	14	2	0	16	355	3	1	359	112	1	0	113	2538	25	5	2568
730-830	107	0	1	108	249	2	0	251	43	0	0	43	23	1	0	24	419	6	1	426	120	1	0	121	2650	27	3	2680
745-845	106	0	1	107	255	2	0	257	43	0	0	43	28	1	0	29	461	6	2	469	137	1	0	138	2702	19	6	2727
800-900	109	0	0	109	239	1	1	241	46	0	2	48	30	1	0	31	474	9	2	485	141	1	0	142	2641	17	9	2667
815-915	107	0	0	107	226	1	1	228	38	0	2	40	31	0	0	31	440	11	3	454	121	1	2	124	2452	21	17	2490
830-930	107	0	0	107	242	1	1	244	41	0	2	43	25	0	0	25	402	8	4	414	114	1	2	117	2294	16	23	2333
845-945	107	0	0	107	240	1	1	242	38	0	2	40	28	0	0	28	352	9	4	365	95	0	2	97	2124	19	23	2166
900-1000	113	0	0	113	236	1	0	237	37	0	0	37	25	0	0	25	327	6	5	338	88	1	2	91	2023	17	22	2062

CONSOLIDATED VEHICLE COUNTS

15 MIN COUNTS	1	2	3	4	5	6	7	8	9	10	11	12	
PERIOD	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTAL
700-715	40	61	3	3	187	15	22	33	6	2	56	10	438
715-730	42	82	7	6	266	17	15	40	9	5	69	17	575
730-745	34	104	2	6	243	29	25	47	10	3	72	18	593
745-800	49	102	5	7	251	26	22	73	5	5	102	28	675
800-815	46	99	5	12	236	28	33	78	19	3	116	50	725
815-830	42	83	8	9	252	29	28	53	9	13	136	25	687
830-845	62	100	8	6	194	25	24	53	10	8	115	35	640
845-900	47	99	6	10	174	31	24	57	10	7	118	32	615
900-915	52	82	2	4	152	29	31	65	11	3	85	32	548
915-930	37	88	6	5	137	27	28	69	12	7	96	18	530
930-945	27	83	6	7	144	32	24	51	7	11	66	15	473
945-1000	46	77	4	5	150	19	30	52	7	4	91	26	511
HOUR TOTALS	1	2	3	4	5	6	7	8	9	10	11	12	
PERIOD	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTAL
700-800	165	349	17	22	947	87	84	193	30	15	299	73	2281
715-815	171	387	19	31	996	100	95	238	43	16	359	113	2568
730-830	171	388	20	34	982	112	108	251	43	24	426	121	2680
745-845	199	384	26	34	933	108	107	257	43	29	469	138	2727
800-900	197	381	27	37	856	113	109	241	48	31	485	142	2667
815-915	203	364	24	29	772	114	107	228	40	31	454	124	2490
830-930	198	369	22	25	657	112	107	244	43	25	414	117	2333
845-945	163	352	20	26	607	119	107	242	40	28	365	97	2166
900-1000	162	330	18	21	583	107	113	237	37	25	338	91	2062

AM PEAK HOUR: 745-845



APPROACH SUMMARIES

	NORTH APRCH			EAST APRCH			SOUTH APRCH			WEST APRCH	
	APRCH	EXIT		APRCH	EXIT		APRCH	EXIT		APRCH	EXIT
700-800	531	288		1056	400		307	451		387	1142
715-815	577	382		1127	473		376	503		488	1210
730-830	579	406		1128	554		402	524		571	1196
745-845	609	429		1075	602		407	521		636	1175
800-900	605	420		1006	621		398	525		658	1101
815-915	591	381		915	585		375	509		609	1015
830-930	589	386		794	543		394	506		556	898
845-945	535	365		752	492		389	499		490	810
900-1000	510	349		711	469		387	462		454	782

WILTEC

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INTERSECTION PEDESTRIAN AND BICYCLE COUNT SUMMARY

CLIENT: GIBSON TRANSPORTATION CONSULTING, INC.
PROJECT: WESTCHESTER TRAFFIC COUNTS
DATE: WEDNESDAY MAY 11, 2022
PERIOD: 7:00 AM to 10:00 AM
INTERSECTION: N/S LA TIJERA BOULEVARD
E/W MANCHESTER BOULEVARD

PEDESTRIAN COUNTS

15 MIN COUNTS	NORTH LEG		EAST LEG		SOUTH LEG		WEST LEG		
PERIOD	EB	WB	NB	SB	EB	WB	NB	SB	TOTALS
700-715	0	2	0	0	0	1	0	0	3
715-730	0	0	0	0	0	1	0	0	1
730-745	2	2	0	0	1	0	0	0	5
745-800	0	1	0	0	0	0	0	0	1
800-815	0	0	0	0	0	1	0	0	1
815-830	1	0	0	0	1	2	0	0	4
830-845	0	0	0	0	1	1	0	0	2
845-900	0	0	0	0	0	2	0	0	2
900-915	0	0	0	0	1	0	0	0	1
915-930	0	0	0	0	0	0	0	0	0
930-95	1	0	0	0	1	1	0	0	3
945-1000	1	0	0	0	1	1	0	0	3
HOUR TOTALS	NORTH LEG		EAST LEG		SOUTH LEG		WEST LEG		
PERIOD	EB	WB	NB	SB	EB	WB	NB	SB	TOTALS
700-800	2	5	0	0	1	2	0	0	10
715-815	2	3	0	0	1	2	0	0	8
730-830	3	3	0	0	2	3	0	0	11
745-845	1	1	0	0	2	4	0	0	8
845-900	1	0	0	0	2	6	0	0	9
900-915	1	0	0	0	3	5	0	0	9
915-930	0	0	0	0	2	3	0	0	5
930-945	1	0	0	0	2	3	0	0	6
945-1000	2	0	0	0	3	2	0	0	7

BICYCLE COUNTS

15 MIN COUNTS	NORTH LEG		EAST LEG		SOUTH LEG		WEST LEG		
PERIOD	EB	WB	NB	SB	EB	WB	NB	SB	TOTAL
700-715	0	1	0	0	0	0	0	0	1
715-730	0	0	0	0	0	0	0	0	0
730-745	0	1	0	0	0	0	0	0	1
745-800	0	0	0	0	0	0	0	0	0
800-815	0	0	0	0	0	0	0	0	0
815-830	0	0	0	0	0	0	0	0	0
830-845	0	0	0	0	0	1	0	0	1
845-900	0	0	0	0	0	0	0	0	0
900-915	0	0	0	0	2	0	0	0	2
915-930	0	1	0	0	0	0	0	0	1
930-95	0	0	0	0	0	0	0	0	0
945-1000	0	0	0	0	2	0	0	0	2
HOUR TOTALS	NORTH LEG		EAST LEG		SOUTH LEG		WEST LEG		
PERIOD	EB	WB	NB	SB	EB	WB	NB	SB	TOTAL
700-800	0	2	0	0	0	0	0	0	2
715-815	0	1	0	0	0	0	0	0	1
730-830	0	1	0	0	0	0	0	0	1
745-845	0	0	0	0	0	1	0	0	1
845-900	0	0	0	0	0	1	0	0	1
900-915	0	0	0	0	2	1	0	0	3
915-930	0	1	0	0	2	1	0	0	4
930-945	0	1	0	0	2	0	0	0	3
945-1000	0	1	0	0	4	0	0	0	5

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INTERSECTION VEHICLE CLASSIFICATION TURNING MOVEMENT COUNT SUMMARY

CLIENT: GIBSON TRANSPORTATION CONSULTING, INC.
PROJECT: WESTCHESTER TRAFFIC COUNTS
DATE: WEDNESDAY MAY 11, 2022
PERIOD: 7:00 AM to 10:00 AM
INTERSECTION: N/S BLERIOT AVENUE
E/W LA TIJERA BOULEVARD

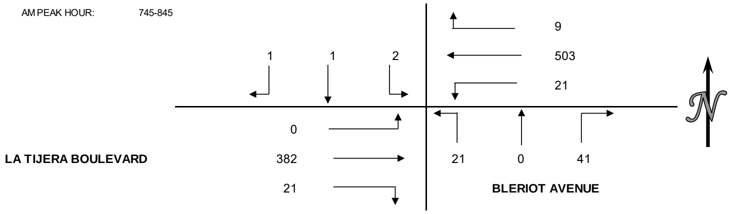
	1 SBRT				2 SBTH				3 SBLT				4 WBRT				5 WBTH				6 WBLT			
15-MIN COUNTS	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL
700-715	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	86	0	1	87	2	0	0	2
715-730	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	97	0	0	97	3	0	0	3
730-745	1	0	0	1	1	0	0	1	0	0	0	0	1	0	0	1	106	1	0	107	10	0	0	10
745-800	0	0	0	0	1	0	0	1	1	0	0	1	0	0	0	0	135	2	0	137	0	0	0	0
800-815	1	0	0	1	0	0	0	0	0	0	0	0	3	0	1	4	120	2	1	123	6	0	0	6
815-830	0	0	0	0	0	0	0	0	1	0	0	1	1	0	0	1	124	2	0	126	4	0	0	4
830-845	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	4	116	1	0	117	11	0	0	11
845-900	1	0	0	1	0	0	0	0	0	0	0	0	1	0	0	1	131	0	1	132	4	0	0	4
900-915	0	0	0	0	0	0	0	0	0	0	2	2	2	0	0	2	124	0	1	125	6	0	0	6
915-930	2	0	0	2	0	0	0	0	1	0	0	1	2	0	0	2	102	1	1	104	4	0	0	4
930-945	3	0	0	3	0	0	0	0	0	0	0	0	3	0	0	3	111	0	1	112	6	0	0	6
945-1000	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	107	1	0	108	4	0	0	4
HOUR TOTALS																								
700-800	1	0	0	1	2	0	0	2	2	0	0	2	1	0	0	1	424	3	1	428	15	0	0	15
715-815	2	0	0	2	2	0	0	2	1	0	0	1	4	0	1	5	458	5	1	464	19	0	0	19
730-830	2	0	0	2	2	0	0	2	2	0	0	2	5	0	1	6	485	7	1	493	20	0	0	20
745-845	1	0	0	1	1	0	0	1	2	0	0	2	8	0	1	9	495	7	1	503	21	0	0	21
800-900	2	0	0	2	0	0	0	0	1	0	0	1	9	0	1	10	491	5	2	498	25	0	0	25
815-915	1	0	0	1	0	0	0	0	1	0	2	3	8	0	0	8	495	3	2	500	25	0	0	25
830-930	3	0	0	3	0	0	0	0	1	0	2	3	9	0	0	9	473	2	3	478	25	0	0	25
845-945	6	0	0	6	0	0	0	0	1	0	2	3	8	0	0	8	468	1	4	473	20	0	0	20
900-1000	5	0	0	5	0	0	0	0	1	0	2	3	9	0	0	9	444	2	3	449	20	0	0	20

	7 NBRT				8 NBTH				9 NBLT				10 EBRT				11 EBTH				12 EBLT				TOTAL OF ALL MOVEMENTS			
15-MIN COUNTS	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	RIDE SHARE VANS	TRUCKS	TOTAL
700-715	17	0	0	17	0	0	0	0	1	0	0	1	0	0	0	0	36	0	0	36	0	0	0	0	143	0	1	144
715-730	14	0	0	14	1	0	0	1	3	0	0	3	3	0	0	3	49	0	1	50	1	0	0	1	171	0	1	172
730-745	8	0	0	8	0	0	0	0	9	0	0	9	1	0	0	1	69	0	1	70	0	0	0	0	206	1	1	208
745-800	14	0	0	14	0	0	0	0	9	0	0	9	3	0	0	3	102	1	1	104	0	0	0	0	265	3	1	269
800-815	11	0	0	11	0	0	0	0	6	0	0	6	8	0	0	8	108	1	0	109	0	0	0	0	263	3	2	268
815-830	7	0	0	7	0	0	0	0	3	0	0	3	7	0	0	7	92	0	0	92	0	0	0	0	239	2	0	241
830-845	9	0	0	9	0	0	0	0	3	0	0	3	3	0	0	3	77	0	0	77	0	0	0	0	223	1	0	224
845-900	8	0	0	8	0	0	0	0	2	0	0	2	4	0	0	4	78	0	2	80	2	0	0	2	231	0	3	234
900-915	11	0	0	11	0	0	0	0	3	0	0	3	2	0	0	2	106	1	1	108	1	0	0	1	255	1	4	260
915-930	5	0	0	5	0	0	0	0	4	0	0	4	4	0	0	4	94	0	1	95	0	0	0	0	218	1	2	221
930-945	8	0	0	8	0	0	0	0	5	0	0	5	2	0	0	2	73	0	2	75	0	0	0	0	211	0	3	214
945-1000	5	0	0	5	1	0	0	1	5	0	0	5	4	0	0	4	68	0	2	70	2	0	0	2	198	1	2	201
HOUR TOTALS																												
700-800	53	0	0	53	1	0	0	1	22	0	0	22	7	0	0	7	256	1	3	260	1	0	0	1	785	4	4	793
715-815	47	0	0	47	1	0	0	1	27	0	0	27	15	0	0	15	328	2	3	333	1	0	0	1	905	7	5	917
730-830	40	0	0	40	0	0	0	0	27	0	0	27	19	0	0	19	371	2	2	375	0	0	0	0	973	9	4	986
745-845	41	0	0	41	0	0	0	0	21	0	0	21	21	0	0	21	379	2	1	382	0	0	0	0	990	9	3	1002
800-900	35	0	0	35	0	0	0	0	14	0	0	14	22	0	0	22	355	1	2	358	2	0	0	2	956	6	5	967
815-915	35	0	0	35	0	0	0	0	11	0	0	11	16	0	0	16	353	1	3	357	3	0	0	3	948	4	7	959
830-930	33	0	0	33	0	0	0	0	12	0	0	12	13	0	0	13	355	1	4	360	3	0	0	3	927	3	9	939
845-945	32	0	0	32	0	0	0	0	14	0	0	14	12	0	0	12	351	1	6	358	3	0	0	3	915	2	12	929
900-1000	29	0	0	29	1	0	0	1	17	0	0	17	12	0	0	12	341	1	6	348	3	0	0	3	882	3	11	896

CONSOLIDATED VEHICLE COUNTS

15 MIN COUNTS	1	2	3	4	5	6	7	8	9	10	11	12	
PERIOD	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTAL
700-715	0	0	1	0	87	2	17	0	1	0	36	0	144
715-730	0	0	0	0	97	3	14	1	3	3	50	1	172
730-745	1	1	0	1	107	10	8	0	9	1	70	0	208
745-800	0	1	1	0	137	0	14	0	9	3	104	0	269
800-815	1	0	0	4	123	6	11	0	6	8	109	0	268
815-830	0	0	1	1	126	4	7	0	3	7	92	0	241
830-845	0	0	0	4	117	11	9	0	3	3	77	0	224
845-900	1	0	0	1	132	4	8	0	2	4	80	2	234
900-915	0	0	2	2	125	6	11	0	3	2	108	1	260
915-930	2	0	1	2	104	4	5	0	4	4	95	0	221
930-945	3	0	0	3	112	6	8	0	5	2	75	0	214
945-1000	0	0	0	2	108	4	5	1	5	4	70	2	201
HOUR TOTALS	1	2	3	4	5	6	7	8	9	10	11	12	
PERIOD	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTAL
700-800	1	2	2	1	428	15	53	1	22	7	260	1	793
715-815	2	2	1	5	464	19	47	1	27	15	333	1	917
730-830	2	2	2	6	493	20	40	0	27	19	375	0	986
745-845	1	1	2	9	503	21	41	0	21	21	382	0	1002
800-900	2	0	1	10	498	25	35	0	14	22	358	2	967
815-915	1	0	3	8	500	25	35	0	11	16	357	3	959
830-930	3	0	3	9	478	25	33	0	12	13	360	3	939
845-945	6	0	3	8	473	20	32	0	14	12	358	3	929
900-1000	5	0	3	9	449	20	29	1	17	12	348	3	896

AM PEAK HOUR: 745-845



APPROACH SUMMARIES

	NORTH APRCH			EAST APRCH			SOUTH APRCH			WEST APRCH	
	APRCH	EXIT		APRCH	EXIT		APRCH	EXIT		APRCH	EXIT
700-800	5	3		444	315		76	24		268	451
715-815	5	7		488	381		75	36		349	493
730-830	6	6		519	417		67	41		394	522
745-845	4	9		533	425		62	43		403	525
800-900	3	12		533	394		49	47		382	514
815-915	4	11		533	395		46	41		376	512
830-930	6	12		512	396		45	38		376	493
845-945	9	11		501	393		46	32		373	493
900-1000	8	13		478	380		47	32		363	471

WILTEC

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INTERSECTION PEDESTRIAN AND BICYCLE COUNT SUMMARY

CLIENT: GIBSON TRANSPORTATION CONSULTING, INC.
PROJECT: WESTCHESTER TRAFFIC COUNTS
DATE: WEDNESDAY MAY 11, 2022
PERIOD: 7:00 AM to 10:00 AM
INTERSECTION: N/S BLERIOT AVENUE
E/W LA TIJERA BOULEVARD

PEDESTRIAN COUNTS

15 MIN COUNTS	NORTH LEG		EAST LEG		SOUTH LEG		WEST LEG		
PERIOD	EB	WB	NB	SB	EB	WB	NB	SB	TOTALS
700-715	0	1	0	0	0	0	0	0	1
715-730	0	0	0	0	0	0	0	0	0
730-745	0	1	0	1	0	0	1	0	3
745-800	0	1	0	1	1	0	1	0	4
800-815	0	0	0	0	0	0	0	0	0
815-830	0	1	0	0	0	0	0	0	1
830-845	0	0	0	0	0	1	0	0	1
845-900	0	1	0	0	1	0	0	0	2
900-915	0	0	0	0	2	2	0	0	4
915-930	0	0	0	0	0	1	1	0	2
930-95	0	0	0	0	0	0	0	0	0
945-1000	0	0	0	0	0	0	0	0	0
HOUR TOTALS	NORTH LEG		EAST LEG		SOUTH LEG		WEST LEG		
PERIOD	EB	WB	NB	SB	EB	WB	NB	SB	TOTALS
700-800	0	3	0	2	1	0	2	0	8
715-815	0	2	0	2	1	0	2	0	7
730-830	0	3	0	2	1	0	2	0	8
745-845	0	2	0	1	1	1	1	0	6
845-900	0	2	0	0	1	1	0	0	4
900-915	0	2	0	0	3	3	0	0	8
915-930	0	1	0	0	3	4	1	0	9
930-945	0	1	0	0	3	3	1	0	8
945-1000	0	0	0	0	2	3	1	0	6

BICYCLE COUNTS

15 MIN COUNTS	NORTH LEG		EAST LEG		SOUTH LEG		WEST LEG		
PERIOD	EB	WB	NB	SB	EB	WB	NB	SB	TOTAL
700-715	0	0	0	0	0	0	0	0	0
715-730	0	0	0	0	0	0	0	0	0
730-745	0	0	0	0	0	0	0	0	0
745-800	0	1	0	0	0	0	0	0	1
800-815	0	0	0	0	0	0	0	0	0
815-830	0	0	0	0	0	0	0	0	0
830-845	0	1	0	0	0	0	0	0	1
845-900	0	1	0	0	0	0	0	0	1
900-915	0	0	0	0	0	0	0	0	0
915-930	0	0	0	0	0	0	0	0	0
930-95	0	0	0	0	0	0	0	0	0
945-1000	0	0	0	1	0	0	2	1	4
HOUR TOTALS	NORTH LEG		EAST LEG		SOUTH LEG		WEST LEG		
PERIOD	EB	WB	NB	SB	EB	WB	NB	SB	TOTAL
700-800	0	1	0	0	0	0	0	0	1
715-815	0	1	0	0	0	0	0	0	1
730-830	0	1	0	0	0	0	0	0	1
745-845	0	2	0	0	0	0	0	0	2
845-900	0	2	0	0	0	0	0	0	2
900-915	0	2	0	0	0	0	0	0	2
915-930	0	2	0	0	0	0	0	0	2
930-945	0	1	0	0	0	0	0	0	1
945-1000	0	0	0	1	0	0	2	1	4

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INTERSECTION VEHICLE CLASSIFICATION TURNING MOVEMENT COUNT SUMMARY

CLIENT: GIBSON TRANSPORTATION CONSULTING, INC.
PROJECT: WESTCHESTER TRAFFIC COUNTS
DATE: WEDNESDAY MAY 11, 2022
PERIOD: 7:00 AM to 10:00 AM
INTERSECTION: N/S TRUXTON AVENUE
E/W LA TIJERA BOULEVARD

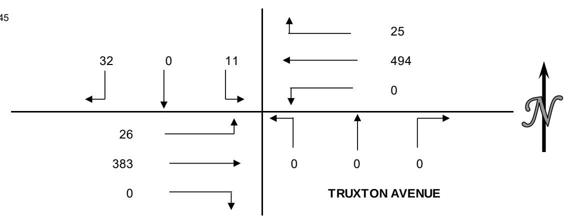
	1 SBRT				2 SBTH				3 SBLT				4 WBRT				5 WBTH				6 WBLT			
15-MIN COUNTS	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL
700-715	4	0	0	4	0	0	0	0	1	0	0	1	1	0	1	2	82	0	0	82	0	0	0	0
715-730	3	0	0	3	0	0	0	0	2	0	0	2	7	0	0	7	95	1	0	96	0	0	0	0
730-745	6	0	0	6	0	0	0	0	1	0	0	1	5	1	0	6	130	2	0	132	0	0	0	0
745-800	8	0	0	8	0	0	0	0	1	0	0	1	6	0	0	6	125	2	0	127	0	0	0	0
800-815	6	0	0	6	0	0	0	0	3	0	0	3	10	0	0	10	123	2	0	125	0	0	0	0
815-830	10	0	0	10	0	0	0	0	3	0	0	3	3	0	0	3	107	1	0	108	0	0	0	0
830-845	8	0	0	8	0	0	0	0	4	0	0	4	6	0	0	6	134	0	0	134	0	0	0	0
845-900	6	0	0	6	0	0	0	0	3	0	0	3	9	0	0	9	123	0	1	124	0	0	0	0
900-915	11	0	0	11	0	0	0	0	4	0	0	4	8	1	0	9	105	0	1	106	0	0	0	0
915-930	9	0	0	9	0	0	0	0	4	0	0	4	5	0	0	5	124	0	1	125	0	0	0	0
930-945	2	0	0	2	0	0	0	0	2	0	0	2	7	0	0	7	119	0	0	119	0	0	0	0
945-1000	16	0	0	16	0	0	0	0	7	0	0	7	6	0	0	6	98	0	0	98	0	0	0	0
HOUR TOTALS																								
700-800	21	0	0	21	0	0	0	0	5	0	0	5	19	1	1	21	432	5	0	437	0	0	0	0
715-815	23	0	0	23	0	0	0	0	7	0	0	7	28	1	0	29	473	7	0	480	0	0	0	0
730-830	30	0	0	30	0	0	0	0	8	0	0	8	24	1	0	25	485	7	0	492	0	0	0	0
745-845	32	0	0	32	0	0	0	0	11	0	0	11	25	0	0	25	489	5	0	494	0	0	0	0
800-900	30	0	0	30	0	0	0	0	13	0	0	13	28	0	0	28	487	3	1	491	0	0	0	0
815-915	35	0	0	35	0	0	0	0	14	0	0	14	26	1	0	27	469	1	2	472	0	0	0	0
830-930	34	0	0	34	0	0	0	0	15	0	0	15	28	1	0	29	486	0	3	489	0	0	0	0
845-945	28	0	0	28	0	0	0	0	13	0	0	13	29	1	0	30	471	0	3	474	0	0	0	0
900-1000	38	0	0	38	0	0	0	0	17	0	0	17	26	1	0	27	446	0	2	448	0	0	0	0

	7 NBRT				8 NBTH				9 NBLT				10 EBRT				11 EBTH				12 EBLT				TOTAL OF ALL MOVEMENTS			
15-MIN COUNTS	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	RIDE SHARE VANS	TRUCKS	TOTAL
700-715	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	37	0	1	38	6	0	0	6	131	0	2	133
715-730	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	53	0	0	53	3	0	0	3	163	1	0	164
730-745	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	71	0	0	71	8	0	0	8	221	3	0	224
745-800	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	104	1	1	106	7	0	0	7	251	3	1	255
800-815	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	1	0	111	6	0	0	6	258	3	0	261
815-830	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	92	0	0	92	8	0	0	8	223	1	0	224
830-845	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	74	0	0	74	5	0	0	5	231	0	0	231
845-900	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	81	0	1	82	5	0	1	6	227	0	3	230
900-915	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	102	1	0	103	10	0	0	10	240	2	1	243
915-930	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	95	0	0	95	8	0	0	8	245	0	1	246
930-945	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	73	0	0	73	9	0	0	9	212	0	0	212
945-1000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	77	0	1	78	6	0	0	6	210	0	1	211
HOUR TOTALS																												
700-800	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	265	1	2	268	24	0	0	24	766	7	3	776
715-815	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	338	2	1	341	24	0	0	24	893	10	1	904
730-830	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	377	2	1	380	29	0	0	29	953	10	1	964
745-845	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	380	2	1	383	26	0	0	26	963	7	1	971
800-900	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	357	1	1	359	24	0	1	25	939	4	3	946
815-915	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	349	1	1	351	28	0	1	29	921	3	4	928
830-930	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	352	1	1	354	28	0	1	29	943	2	5	950
845-945	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	351	1	1	353	32	0	1	33	924	2	5	931
900-1000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	347	1	1	349	33	0	0	33	907	2	3	912

CONSOLIDATED VEHICLE COUNTS

15 MIN COUNTS	1	2	3	4	5	6	7	8	9	10	11	12	
PERIOD	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTAL
700-715	4	0	1	2	82	0	0	0	0	0	38	6	133
715-730	3	0	2	7	96	0	0	0	0	0	53	3	164
730-745	6	0	1	6	132	0	0	0	0	0	71	8	224
745-800	8	0	1	6	127	0	0	0	0	0	106	7	255
800-815	6	0	3	10	125	0	0	0	0	0	111	6	261
815-830	10	0	3	3	108	0	0	0	0	0	92	8	224
830-845	8	0	4	6	134	0	0	0	0	0	74	5	231
845-900	6	0	3	9	124	0	0	0	0	0	82	6	230
900-915	11	0	4	9	106	0	0	0	0	0	103	10	243
915-930	9	0	4	5	125	0	0	0	0	0	95	8	246
930-945	2	0	2	7	119	0	0	0	0	0	73	9	212
945-1000	16	0	7	6	98	0	0	0	0	0	78	6	211
HOUR TOTALS	1	2	3	4	5	6	7	8	9	10	11	12	
PERIOD	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTAL
700-800	21	0	5	21	437	0	0	0	0	0	268	24	776
715-815	23	0	7	29	480	0	0	0	0	0	341	24	904
730-830	30	0	8	25	492	0	0	0	0	0	380	29	964
745-845	32	0	11	25	494	0	0	0	0	0	383	26	971
800-900	30	0	13	28	491	0	0	0	0	0	359	25	946
815-915	35	0	14	27	472	0	0	0	0	0	351	29	928
830-930	34	0	15	29	489	0	0	0	0	0	354	29	950
845-945	28	0	13	30	474	0	0	0	0	0	353	33	931
900-1000	38	0	17	27	448	0	0	0	0	0	349	33	912

AM PEAK HOUR: 745-845



LA TIJERA BOULEVARD

APPROACH SUMMARIES

	NORTH APRCH			EAST APRCH			SOUTH APRCH			WEST APRCH	
	APRCH	EXIT		APRCH	EXIT		APRCH	EXIT		APRCH	EXIT
700-800	26	45		458	273		0	0		292	458
715-815	30	53		509	348		0	0		365	503
730-830	38	54		517	388		0	0		409	522
745-845	43	51		519	394		0	0		409	526
800-900	43	53		519	372		0	0		384	521
815-915	49	56		499	365		0	0		380	507
830-930	49	58		518	369		0	0		383	523
845-945	41	63		504	366		0	0		386	502
900-1000	55	60		475	366		0	0		382	486

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INTERSECTION PEDESTRIAN AND BICYCLE COUNT SUMMARY

CLIENT: GIBSON TRANSPORTATION CONSULTING, INC.
PROJECT: WESTCHESTER TRAFFIC COUNTS
DATE: WEDNESDAY MAY 11, 2022
PERIOD: 7:00 AM to 10:00 AM
INTERSECTION: N/S TRUXTON AVENUE
E/W LA TIJERA BOULEVARD

PEDESTRIAN COUNTS

15 MIN COUNTS	NORTH LEG		EAST LEG		SOUTH LEG		WEST LEG		
PERIOD	EB	WB	NB	SB	EB	WB	NB	SB	TOTALS
700-715	0	0	0	0	0	0	0	0	0
715-730	0	0	0	0	0	0	0	0	0
730-745	0	0	0	0	0	0	0	0	0
745-800	1	0	0	0	0	0	0	0	1
800-815	0	0	0	0	0	0	0	0	0
815-830	0	2	0	0	0	0	0	0	2
830-845	0	0	0	0	0	0	0	0	0
845-900	0	1	0	0	0	0	0	0	1
900-915	2	3	0	0	0	0	0	0	5
915-930	0	1	0	0	0	0	0	0	1
930-95	0	3	0	0	0	0	0	0	3
945-1000	2	1	0	0	0	0	0	0	3
HOUR TOTALS	NORTH LEG		EAST LEG		SOUTH LEG		WEST LEG		
PERIOD	EB	WB	NB	SB	EB	WB	NB	SB	TOTALS
700-800	1	0	0	0	0	0	0	0	1
715-815	1	0	0	0	0	0	0	0	1
730-830	1	2	0	0	0	0	0	0	3
745-845	1	2	0	0	0	0	0	0	3
845-900	0	3	0	0	0	0	0	0	3
900-915	2	6	0	0	0	0	0	0	8
915-930	2	5	0	0	0	0	0	0	7
930-945	2	8	0	0	0	0	0	0	10
945-1000	4	8	0	0	0	0	0	0	12

BICYCLE COUNTS

15 MIN COUNTS	NORTH LEG		EAST LEG		SOUTH LEG		WEST LEG		
PERIOD	EB	WB	NB	SB	EB	WB	NB	SB	TOTAL
700-715	0	0	0	0	0	0	0	0	0
715-730	0	0	0	0	0	0	0	0	0
730-745	0	0	0	0	0	0	0	0	0
745-800	0	0	0	0	0	0	0	0	0
800-815	0	0	0	0	0	0	0	0	0
815-830	0	0	0	0	0	0	0	0	0
830-845	0	0	0	0	0	0	0	0	0
845-900	0	0	0	0	0	0	0	0	0
900-915	0	0	0	0	0	0	0	0	0
915-930	0	0	0	0	0	0	0	0	0
930-95	1	0	0	0	0	0	0	0	1
945-1000	0	0	0	0	0	0	0	0	0
HOUR TOTALS	NORTH LEG		EAST LEG		SOUTH LEG		WEST LEG		
PERIOD	EB	WB	NB	SB	EB	WB	NB	SB	TOTAL
700-800	0	0	0	0	0	0	0	0	0
715-815	0	0	0	0	0	0	0	0	0
730-830	0	0	0	0	0	0	0	0	0
745-845	0	0	0	0	0	0	0	0	0
845-900	0	0	0	0	0	0	0	0	0
900-915	0	0	0	0	0	0	0	0	0
915-930	0	0	0	0	0	0	0	0	0
930-945	1	0	0	0	0	0	0	0	1
945-1000	1	0	0	0	0	0	0	0	1

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INTERSECTION VEHICLE CLASSIFICATION TURNING MOVEMENT COUNT SUMMARY

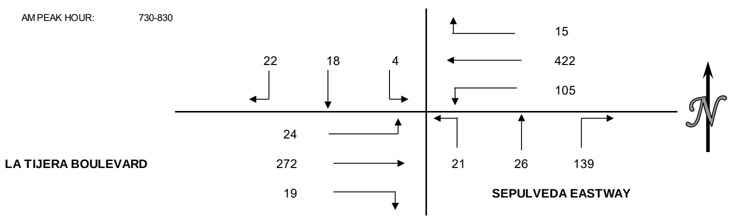
CLIENT: GIBSON TRANSPORTATION CONSULTING, INC.
PROJECT: WESTCHESTER TRAFFIC COUNTS
DATE: WEDNESDAY MAY 11, 2022
PERIOD: 7:00 AM to 10:00 AM
INTERSECTION: N/S SEPULVEDA EASTWAY
E/W LA TIJERA BOULEVARD

	1 SBRT				2 SBTH				3 SBLT				4 WBRT				5 WBTH				6 WBLT			
15-MIN COUNTS	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL
700-715	4	0	0	4	1	0	0	1	0	0	0	0	4	0	0	4	63	0	0	63	12	0	0	12
715-730	6	0	0	6	2	0	0	2	0	0	0	0	1	0	0	1	74	1	0	75	14	0	0	14
730-745	7	0	0	7	1	0	0	1	0	0	0	0	2	0	0	2	134	2	0	136	21	0	0	21
745-800	2	0	0	2	6	0	0	6	1	0	0	1	7	0	0	7	104	2	0	106	13	0	0	13
800-815	3	0	0	3	5	0	0	5	1	0	0	1	2	0	0	2	88	2	0	90	39	0	0	39
815-830	9	0	1	10	6	0	0	6	2	0	0	2	4	0	0	4	89	1	0	90	32	0	0	32
830-845	3	0	0	3	4	0	0	4	4	0	0	4	2	0	0	2	104	0	1	105	32	0	0	32
845-900	10	0	0	10	2	0	0	2	3	0	1	4	10	0	0	10	90	0	1	91	28	0	0	28
900-915	9	0	1	10	8	0	0	8	4	0	0	4	4	0	0	4	77	0	1	78	34	0	0	34
915-930	7	0	0	7	5	0	0	5	3	0	0	3	7	0	0	7	95	0	0	95	30	0	1	31
930-945	9	0	0	9	10	0	0	10	6	0	0	6	14	0	0	14	78	1	0	79	25	0	0	25
945-1000	21	0	0	21	10	0	0	10	6	0	0	6	17	0	0	17	68	0	0	68	26	0	0	26
HOUR TOTALS																								
700-800	19	0	0	19	10	0	0	10	1	0	0	1	14	0	0	14	375	5	0	380	60	0	0	60
715-815	18	0	0	18	14	0	0	14	2	0	0	2	12	0	0	12	400	7	0	407	87	0	0	87
730-830	21	0	1	22	18	0	0	18	4	0	0	4	15	0	0	15	415	7	0	422	105	0	0	105
745-845	17	0	1	18	21	0	0	21	8	0	0	8	15	0	0	15	385	5	1	391	116	0	0	116
800-900	25	0	1	26	17	0	0	17	10	0	1	11	18	0	0	18	371	3	2	376	131	0	0	131
815-915	31	0	2	33	20	0	0	20	13	0	1	14	20	0	0	20	360	1	3	364	126	0	0	126
830-930	29	0	1	30	19	0	0	19	14	0	1	15	23	0	0	23	366	0	3	369	124	0	1	125
845-945	35	0	1	36	25	0	0	25	16	0	1	17	35	0	0	35	340	1	2	343	117	0	1	118
900-1000	46	0	1	47	33	0	0	33	19	0	0	19	42	0	0	42	318	1	1	320	115	0	1	116

	7 NBRT				8 NBTH				9 NBLT				10 EBRT				11 EBTH				12 EBLT				TOTAL OF ALL MOVEMENTS			
15-MIN COUNTS	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	RIDE SHARE VANS	TRUCKS	TOTAL
700-715	16	0	1	17	1	0	0	1	3	0	0	3	3	0	0	3	24	0	0	24	2	0	0	2	133	0	1	134
715-730	20	0	0	20	3	0	0	3	4	0	0	4	2	0	0	2	41	0	1	42	0	0	0	0	167	1	1	169
730-745	24	0	0	24	7	0	0	7	5	0	0	5	5	0	0	5	52	0	0	52	3	0	0	3	261	2	0	263
745-800	37	0	0	37	8	0	0	8	6	0	0	6	5	0	0	5	75	1	1	77	6	0	0	6	270	3	1	274
800-815	48	0	0	48	6	0	0	6	1	0	0	1	5	0	0	5	68	1	0	69	8	0	0	8	274	3	0	277
815-830	30	0	0	30	5	0	0	5	9	0	0	9	4	0	0	4	74	0	0	74	7	0	0	7	271	1	1	273
830-845	22	0	0	22	6	0	1	7	3	0	0	3	7	1	0	8	58	0	0	58	8	0	0	8	253	1	2	256
845-900	40	0	0	40	9	0	0	9	8	0	0	8	1	0	0	1	52	0	1	53	13	0	0	13	266	0	3	269
900-915	39	0	0	39	7	0	0	7	13	0	0	13	4	0	0	4	63	1	0	64	9	0	0	9	271	1	2	274
915-930	38	0	0	38	10	0	0	10	11	0	0	11	6	0	0	6	58	0	0	58	13	0	0	13	283	0	1	284
930-945	25	0	0	25	10	0	0	10	8	0	0	8	4	0	0	4	55	0	0	55	8	0	0	8	252	1	0	253
945-1000	23	0	1	24	10	0	0	10	11	0	0	11	6	0	0	6	50	0	0	50	6	0	0	6	254	0	1	255
HOUR TOTALS																												
700-800	97	0	1	98	19	0	0	19	18	0	0	18	15	0	0	15	192	1	2	195	11	0	0	11	831	6	3	840
715-815	129	0	0	129	24	0	0	24	16	0	0	16	17	0	0	17	236	2	2	240	17	0	0	17	972	9	2	983
730-830	139	0	0	139	26	0	0	26	21	0	0	21	19	0	0	19	269	2	1	272	24	0	0	24	1076	9	2	1087
745-845	137	0	0	137	25	0	1	26	19	0	0	19	21	1	0	22	275	2	1	278	29	0	0	29	1068	8	4	1080
800-900	140	0	0	140	26	0	1	27	21	0	0	21	17	1	0	18	252	1	1	254	36	0	0	36	1064	5	6	1075
815-915	131	0	0	131	27	0	1	28	33	0	0	33	16	1	0	17	247	1	1	249	37	0	0	37	1061	3	8	1072
830-930	139	0	0	139	32	0	1	33	35	0	0	35	18	1	0	19	231	1	1	233	43	0	0	43	1073	2	8	1083
845-945	142	0	0	142	36	0	0	36	40	0	0	40	15	0	0	15	228	1	1	230	43	0	0	43	1072	2	6	1080
900-1000	125	0	1	126	37	0	0	37	43	0	0	43	20	0	0	20	226	1	0	227	36	0	0	36	1060	2	4	1066

CONSOLIDATED VEHICLE COUNTS

15 MIN COUNTS	1	2	3	4	5	6	7	8	9	10	11	12	
PERIOD	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTAL
700-715	4	1	0	4	63	12	17	1	3	3	24	2	134
715-730	6	2	0	1	75	14	20	3	4	2	42	0	169
730-745	7	1	0	2	136	21	24	7	5	5	52	3	263
745-800	2	6	1	7	106	13	37	8	6	5	77	6	274
800-815	3	5	1	2	90	39	48	6	1	5	69	8	277
815-830	10	6	2	4	90	32	30	5	9	4	74	7	273
830-845	3	4	4	2	105	32	22	7	3	8	58	8	256
845-900	10	2	4	10	91	28	40	9	8	1	53	13	269
900-915	10	8	4	4	78	34	39	7	13	4	64	9	274
915-930	7	5	3	7	95	31	38	10	11	6	58	13	284
930-945	9	10	6	14	79	25	25	10	8	4	55	8	253
945-1000	21	10	6	17	68	26	24	10	11	6	50	6	255
HOUR TOTALS	1	2	3	4	5	6	7	8	9	10	11	12	
PERIOD	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTAL
700-800	19	10	1	14	380	60	98	19	18	15	195	11	840
715-815	18	14	2	12	407	87	129	24	16	17	240	17	983
730-830	22	18	4	15	422	105	139	26	21	19	272	24	1087
745-845	18	21	8	15	391	116	137	26	19	22	278	29	1080
800-900	26	17	11	18	376	131	140	27	21	18	254	36	1075
815-915	33	20	14	20	364	126	131	28	33	17	249	37	1072
830-930	30	19	15	23	369	125	139	33	35	19	233	43	1083
845-945	36	25	17	35	343	118	142	36	40	15	230	43	1080
900-1000	47	33	19	42	320	116	126	37	43	20	227	36	1066



APPROACH SUMMARIES

	NORTH APRCH			EAST APRCH			SOUTH APRCH			WEST APRCH	
	APRCH	EXIT		APRCH	EXIT		APRCH	EXIT		APRCH	EXIT
700-800	30	44		454	294		135	85		221	417
715-815	34	53		506	371		169	118		274	441
730-830	44	65		542	415		186	142		315	465
745-845	47	70		522	423		182	159		329	428
800-900	54	81		525	405		188	166		308	423
815-915	67	85		510	394		192	163		303	430
830-930	64	99		517	387		207	163		295	434
845-945	78	114		496	389		218	158		288	419
900-1000	99	115		478	372		206	169		283	410

WILTEC

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INTERSECTION PEDESTRIAN AND BICYCLE COUNT SUMMARY

CLIENT: GIBSON TRANSPORTATION CONSULTING, INC.
PROJECT: WESTCHESTER TRAFFIC COUNTS
DATE: WEDNESDAY MAY 11, 2022
PERIOD: 7:00 AM to 10:00 AM
INTERSECTION: N/S SEPULVEDA EASTWAY
E/W LA TIJERA BOULEVARD

PEDESTRIAN COUNTS

15 MIN COUNTS	NORTH LEG		EAST LEG		SOUTH LEG		WEST LEG		
PERIOD	EB	WB	NB	SB	EB	WB	NB	SB	TOTALS
700-715	0	0	0	0	0	0	1	1	2
715-730	1	1	1	0	0	1	1	0	5
730-745	1	1	1	2	0	0	0	0	5
745-800	1	0	1	0	0	1	0	0	3
800-815	0	0	1	0	0	0	0	0	1
815-830	4	2	0	0	0	2	1	0	9
830-845	6	1	1	1	2	1	0	1	13
845-900	4	3	0	0	1	0	0	1	9
900-915	3	5	3	0	3	1	0	0	15
915-930	2	4	2	0	2	1	0	1	12
930-95	9	2	2	0	1	5	0	1	20
945-1000	3	3	4	0	6	1	0	3	20
HOUR TOTALS	NORTH LEG		EAST LEG		SOUTH LEG		WEST LEG		
PERIOD	EB	WB	NB	SB	EB	WB	NB	SB	TOTALS
700-800	3	2	3	2	0	2	2	1	15
715-815	3	2	4	2	0	2	1	0	14
730-830	6	3	3	2	0	3	1	0	18
745-845	11	3	3	1	2	4	1	1	26
845-900	14	6	2	1	3	3	1	2	32
900-915	17	11	4	1	6	4	1	2	46
915-930	15	13	6	1	8	3	0	3	49
930-945	18	14	7	0	7	7	0	3	56
945-1000	17	14	11	0	12	8	0	5	67

BICYCLE COUNTS

15 MIN COUNTS	NORTH LEG		EAST LEG		SOUTH LEG		WEST LEG		
PERIOD	EB	WB	NB	SB	EB	WB	NB	SB	TOTAL
700-715	0	0	0	0	0	0	0	0	0
715-730	0	0	0	0	1	0	0	0	1
730-745	0	0	0	0	0	0	0	0	0
745-800	0	0	0	0	0	0	0	2	2
800-815	0	0	1	0	0	0	0	0	1
815-830	0	0	0	0	0	0	0	0	0
830-845	0	0	0	0	0	0	0	0	0
845-900	0	1	0	0	0	0	0	0	1
900-915	0	0	0	0	0	0	0	0	0
915-930	0	0	0	0	0	0	0	0	0
930-95	1	0	0	0	0	0	0	0	1
945-1000	0	0	0	0	1	0	0	0	1
HOUR TOTALS	NORTH LEG		EAST LEG		SOUTH LEG		WEST LEG		
PERIOD	EB	WB	NB	SB	EB	WB	NB	SB	TOTAL
700-800	0	0	0	0	1	0	0	2	3
715-815	0	0	1	0	1	0	0	2	4
730-830	0	0	1	0	0	0	0	2	3
745-845	0	0	1	0	0	0	0	2	3
845-900	0	1	1	0	0	0	0	0	2
900-915	0	1	0	0	0	0	0	0	1
915-930	0	1	0	0	0	0	0	0	1
930-945	1	1	0	0	0	0	0	0	2
945-1000	1	0	0	0	1	0	0	0	2

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INTERSECTION VEHICLE CLASSIFICATION TURNING MOVEMENT COUNT SUMMARY

CLIENT: GIBSON TRANSPORTATION CONSULTING, INC.
PROJECT: WESTCHESTER TRAFFIC COUNTS
DATE: WEDNESDAY MAY 11, 2022
PERIOD: 7:00 AM to 10:00 AM
INTERSECTION: N/S SEPULVEDA BOULEVARD
E/W LA TIJERA BOULEVARD

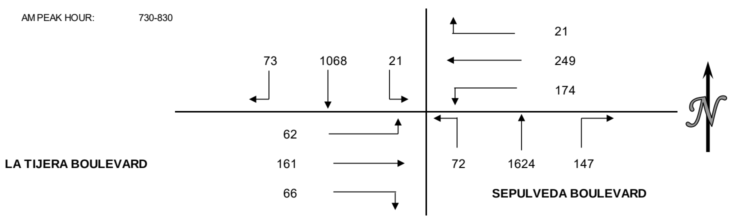
	1 SBRT				2 SBTH				3 SBLT				4 WBRT				5 WBTH				6 WBLT			
15-MIN COUNTS	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL
700-715	9	0	0	9	243	2	0	245	1	0	0	1	7	0	0	7	28	0	0	28	45	0	0	45
715-730	14	1	0	15	239	4	0	243	3	0	0	3	4	0	0	4	38	0	0	38	40	1	0	41
730-745	22	1	0	23	230	4	0	234	1	0	0	1	4	0	1	5	61	2	0	63	48	0	0	48
745-800	14	0	0	14	268	3	0	271	1	0	0	1	8	0	0	8	64	2	0	66	48	0	0	48
800-815	10	1	0	11	289	6	0	295	10	0	2	12	3	0	0	3	59	1	0	60	32	0	0	32
815-830	22	3	0	25	266	2	0	268	7	0	0	7	5	0	0	5	59	1	0	60	46	0	0	46
830-845	17	0	0	17	272	4	0	276	12	0	0	12	7	0	0	7	45	0	0	45	55	0	0	55
845-900	12	0	0	12	229	3	0	232	3	0	1	4	9	0	0	9	37	0	0	37	46	0	0	46
900-915	13	2	0	15	267	3	0	270	7	0	1	8	15	0	1	16	45	0	1	46	61	0	0	61
915-930	20	0	0	20	241	3	0	244	18	0	0	18	9	0	0	9	36	0	0	36	51	0	0	51
930-945	17	1	0	18	235	5	1	241	8	0	0	8	14	0	0	14	53	0	0	53	46	1	0	47
945-1000	18	1	1	20	266	2	0	268	8	0	0	8	16	0	0	16	29	0	0	29	45	0	0	45
HOUR TOTALS																								
700-800	59	2	0	61	980	13	0	993	6	0	0	6	23	0	1	24	191	4	0	195	181	1	0	182
715-815	60	3	0	63	1026	17	0	1043	15	0	2	17	19	0	1	20	222	5	0	227	168	1	0	169
730-830	68	5	0	73	1053	15	0	1068	19	0	2	21	20	0	1	21	243	6	0	249	174	0	0	174
745-845	63	4	0	67	1095	15	0	1110	30	0	2	32	23	0	0	23	227	4	0	231	181	0	0	181
800-900	61	4	0	65	1056	15	0	1071	32	0	3	35	24	0	0	24	200	2	0	202	179	0	0	179
815-915	64	5	0	69	1034	12	0	1046	29	0	2	31	36	0	1	37	186	1	1	188	208	0	0	208
830-930	62	2	0	64	1009	13	0	1022	40	0	2	42	40	0	1	41	163	0	1	164	213	0	0	213
845-945	62	3	0	65	972	14	1	987	36	0	2	38	47	0	1	48	171	0	1	172	204	1	0	205
900-1000	68	4	1	73	1009	13	1	1023	41	0	1	42	54	0	1	55	163	0	1	164	203	1	0	204

	7 NBRT				8 NBTH				9 NBLT				10 EBRT				11 EBTH				12 EBLT				TOTAL OF ALL MOVEMENTS			
15-MIN COUNTS	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	RIDE SHARE VANS	TRUCKS	TOTAL
700-715	15	10	0	25	348	0	0	348	9	0	0	9	12	0	1	13	11	0	0	11	8	0	0	8	736	12	1	749
715-730	23	8	1	32	396	1	0	397	13	0	0	13	8	0	0	8	16	0	1	17	10	0	0	10	804	15	2	821
730-745	25	4	0	29	443	0	0	443	19	0	0	19	19	0	0	19	33	0	0	33	15	0	0	15	920	11	1	932
745-800	37	7	1	45	457	0	0	457	20	0	0	20	24	0	0	24	45	1	1	47	20	0	0	20	1006	13	2	1021
800-815	37	5	1	43	366	1	0	367	17	0	0	17	12	1	0	13	36	1	0	37	10	0	1	11	881	16	4	901
815-830	26	4	0	30	357	0	0	357	16	0	0	16	10	0	0	10	44	0	0	44	16	0	0	16	874	10	0	884
830-845	36	5	1	42	398	0	0	398	17	0	0	17	11	2	0	13	35	0	0	35	13	0	0	13	918	11	1	930
845-900	43	4	1	48	330	1	0	331	20	0	0	20	15	1	0	16	19	0	0	19	14	1	1	16	777	10	3	790
900-915	32	0	0	32	315	2	1	318	15	0	0	15	25	0	0	25	38	1	0	39	17	0	0	17	850	8	4	862
915-930	39	0	0	39	281	2	0	283	19	0	0	19	16	0	0	16	27	0	0	27	4	0	0	4	761	5	0	766
930-945	37	0	0	37	251	3	0	254	19	0	0	19	18	0	0	18	27	0	0	27	16	0	0	16	741	10	1	752
945-1000	38	0	0	38	217	2	0	219	20	0	0	20	11	0	0	11	30	0	0	30	14	0	0	14	712	5	1	718
HOUR TOTALS																												
700-800	100	29	2	131	1644	1	0	1645	61	0	0	61	63	0	1	64	105	1	2	108	53	0	0	53	3466	51	6	3523
715-815	122	24	3	149	1662	2	0	1664	69	0	0	69	63	1	0	64	130	2	2	134	55	0	1	56	3611	55	9	3675
730-830	125	20	2	147	1623	1	0	1624	72	0	0	72	65	1	0	66	158	2	1	161	61	0	1	62	3681	50	7	3738
745-845	136	21	3	160	1578	1	0	1579	70	0	0	70	57	3	0	60	160	2	1	163	59	0	1	60	3679	50	7	3736
800-900	142	18	3	163	1451	2	0	1453	70	0	0	70	48	4	0	52	134	1	0	135	53	1	2	56	3450	47	8	3505
815-915	137	13	2	152	1400	3	1	1404	68	0	0	68	61	3	0	64	136	1	0	137	60	1	1	62	3419	39	8	3466
830-930	150	9	2	161	1324	5	1	1330	71	0	0	71	67	3	0	70	119	1	0	120	48	1	1	50	3306	34	8	3348
845-945	151	4	1	156	1177	8	1	1186	73	0	0	73	74	1	0	75	111	1	0	112	51	1	1	53	3129	33	8	3170
900-1000	146	0	0	146	1064	9	1	1074	73	0	0	73	70	0	0	70	122	1	0	123	51	0	0	51	3064	28	6	3098

CONSOLIDATED VEHICLE COUNTS

15 MIN COUNTS	1	2	3	4	5	6	7	8	9	10	11	12	
PERIOD	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTAL
700-715	9	245	1	7	28	45	25	348	9	13	11	8	749
715-730	15	243	3	4	38	41	32	397	13	8	17	10	821
730-745	23	234	1	5	63	48	29	443	19	19	33	15	932
745-800	14	271	1	8	66	48	45	457	20	24	47	20	1021
800-815	11	295	12	3	60	32	43	367	17	13	37	11	901
815-830	25	268	7	5	60	46	30	357	16	10	44	16	884
830-845	17	276	12	7	45	55	42	398	17	13	35	13	930
845-900	12	232	4	9	37	46	48	331	20	16	19	16	790
900-915	15	270	8	16	46	61	32	318	15	25	39	17	862
915-930	20	244	18	9	36	51	39	283	19	16	27	4	766
930-945	18	241	8	14	53	47	37	254	19	18	27	16	752
945-1000	20	268	8	16	29	45	38	219	20	11	30	14	718
HOUR TOTALS	1	2	3	4	5	6	7	8	9	10	11	12	
PERIOD	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTAL
700-800	61	993	6	24	195	182	131	1645	61	64	108	53	3523
715-815	63	1043	17	20	227	169	149	1664	69	64	134	56	3675
730-830	73	1068	21	21	249	174	147	1624	72	66	161	62	3738
745-845	67	1110	32	23	231	181	160	1579	70	60	163	60	3736
800-900	65	1071	35	24	202	179	163	1453	70	52	135	56	3505
815-915	69	1046	31	37	188	208	152	1404	68	64	137	62	3466
830-930	64	1022	42	41	164	213	161	1330	71	70	120	50	3348
845-945	65	987	38	48	172	205	156	1186	73	75	112	53	3170
900-1000	73	1023	42	55	164	204	146	1074	73	70	123	51	3098

AM PEAK HOUR: 730-830



APPROACH SUMMARIES

	NORTH APRCH			EAST APRCH			SOUTH APRCH			WEST APRCH	
	APRCH	EXIT		APRCH	EXIT		APRCH	EXIT		APRCH	EXIT
700-800	1060	1722		401	245		1837	1239		225	317
715-815	1123	1740		416	300		1882	1276		254	359
730-830	1162	1707		444	329		1843	1308		289	394
745-845	1209	1662		435	355		1809	1351		283	368
800-900	1171	1533		405	333		1686	1302		243	337
815-915	1146	1503		433	320		1624	1318		263	325
830-930	1128	1421		418	323		1562	1305		240	299
845-945	1090	1287		425	306		1415	1267		240	310
900-1000	1138	1180		423	311		1293	1297		244	310

WILTEC

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INTERSECTION PEDESTRIAN AND BICYCLE COUNT SUMMARY

CLIENT: GIBSON TRANSPORTATION CONSULTING, INC.
PROJECT: WESTCHESTER TRAFFIC COUNTS
DATE: WEDNESDAY MAY 11, 2022
PERIOD: 7:00 AM to 10:00 AM
INTERSECTION: N/S SEPULVEDA BOULEVARD
E/W LA TIJERA BOULEVARD

PEDESTRIAN COUNTS

15 MIN COUNTS	NORTH LEG		EAST LEG		SOUTH LEG		WEST LEG		
PERIOD	EB	WB	NB	SB	EB	WB	NB	SB	TOTALS
700-715	0	0	1	0	1	0	1	0	3
715-730	0	2	0	0	0	1	1	2	6
730-745	2	0	1	1	0	0	3	4	11
745-800	1	0	1	1	0	0	1	0	4
800-815	0	1	2	1	1	0	1	5	11
815-830	0	2	3	4	1	1	0	1	12
830-845	0	0	2	1	1	0	1	5	10
845-900	2	2	1	2	1	0	4	4	16
900-915	3	3	3	3	1	1	8	2	24
915-930	1	1	6	1	2	3	4	5	23
930-95	3	0	5	4	1	2	2	6	23
945-1000	4	1	1	5	2	3	5	5	26
HOUR TOTALS	NORTH LEG		EAST LEG		SOUTH LEG		WEST LEG		
PERIOD	EB	WB	NB	SB	EB	WB	NB	SB	TOTALS
700-800	3	2	3	2	1	1	6	6	24
715-815	3	3	4	3	1	1	6	11	32
730-830	3	3	7	7	2	1	5	10	38
745-845	1	3	8	7	3	1	3	11	37
845-900	2	5	8	8	4	1	6	15	49
900-915	5	7	9	10	4	2	13	12	62
915-930	6	6	12	7	5	4	17	16	73
930-945	9	6	15	10	5	6	18	17	86
945-1000	11	5	15	13	6	9	19	18	96

BICYCLE COUNTS

15 MIN COUNTS	NORTH LEG		EAST LEG		SOUTH LEG		WEST LEG		
PERIOD	EB	WB	NB	SB	EB	WB	NB	SB	TOTAL
700-715	0	0	1	0	0	1	0	0	2
715-730	0	0	0	0	0	1	0	0	1
730-745	0	0	0	0	0	0	0	0	0
745-800	0	0	0	0	0	0	0	1	1
800-815	0	0	0	0	0	0	0	0	0
815-830	0	0	0	0	0	0	1	0	1
830-845	0	1	0	0	0	0	0	0	1
845-900	0	0	0	0	0	0	0	1	1
900-915	0	0	0	0	0	0	1	1	2
915-930	0	0	0	0	1	0	1	0	2
930-95	0	0	0	1	0	0	0	4	5
945-1000	0	0	0	1	1	0	0	0	2
HOUR TOTALS	NORTH LEG		EAST LEG		SOUTH LEG		WEST LEG		
PERIOD	EB	WB	NB	SB	EB	WB	NB	SB	TOTAL
700-800	0	0	1	0	0	2	0	1	4
715-815	0	0	0	0	0	1	0	1	2
730-830	0	0	0	0	0	0	1	1	2
745-845	0	1	0	0	0	0	1	1	3
845-900	0	1	0	0	0	0	1	1	3
900-915	0	1	0	0	0	0	2	2	5
915-930	0	1	0	0	1	0	2	2	6
930-945	0	0	0	1	1	0	2	6	10
945-1000	0	0	0	2	2	0	2	5	11

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INTERSECTION VEHICLE CLASSIFICATION TURNING MOVEMENT COUNT SUMMARY

CLIENT:	GIBSON TRANSPORTATION CONSULTING, INC.
PROJECT:	WESTCHESTER TRAFFIC COUNTS
DATE:	WEDNESDAY MAY 11, 2022
PERIOD:	3:00 PM to 6:00 PM
INTERSECTION: N/S	SEPULVEDA BOULEVARD
E/W	MANCHESTER AVENUE

	1 SBRT				2 SBTH				3 SBLT				4 WBRT				5 WBTH				6 WBLT			
15-MIN COUNTS	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL
300-315	45	0	0	45	267	2	0	269	68	0	0	68	42	0	0	42	110	1	0	111	19	2	0	21
315-330	51	0	0	51	262	3	1	266	65	0	0	65	45	0	0	45	115	0	0	115	18	1	0	19
330-345	43	0	0	43	248	3	1	252	72	0	0	72	35	0	0	35	118	1	0	119	18	0	0	18
345-400	55	0	0	55	296	3	0	299	94	3	0	97	31	0	0	31	117	1	0	118	24	1	0	25
400-415	43	1	0	44	318	6	0	324	59	2	0	61	35	0	0	35	118	0	0	118	21	1	0	22
415-430	57	0	0	57	278	1	0	279	78	0	0	78	38	0	0	38	115	0	0	115	22	2	0	24
430-445	50	1	0	51	293	2	0	295	73	0	0	73	33	0	0	33	121	1	0	122	13	0	0	13
445-500	60	0	0	60	336	4	0	340	93	0	1	94	41	0	0	41	96	0	0	96	22	1	0	23
500-515	48	0	0	48	307	1	0	308	71	0	0	71	37	0	0	37	100	1	0	101	16	2	0	18
515-530	61	0	0	61	323	2	0	325	76	0	0	76	27	0	0	27	79	1	0	80	13	0	0	13
530-545	39	0	0	39	301	3	0	304	77	0	0	77	29	0	0	29	91	0	0	91	19	1	0	20
545-600	44	0	0	44	324	4	0	328	77	0	0	77	29	0	0	29	112	0	0	112	15	1	0	16
HOUR TOTALS																								
300-400	194	0	0	194	1073	11	2	1086	299	3	0	302	153	0	0	153	460	3	0	463	79	4	0	83
315-415	192	1	0	193	1124	15	2	1141	290	5	0	295	146	0	0	146	468	2	0	470	81	3	0	84
330-430	198	1	0	199	1140	13	1	1154	303	5	0	308	139	0	0	139	468	2	0	470	85	4	0	89
345-445	205	2	0	207	1185	12	0	1197	304	5	0	309	137	0	0	137	471	2	0	473	80	4	0	84
400-500	210	2	0	212	1225	13	0	1238	303	2	1	306	147	0	0	147	450	1	0	451	78	4	0	82
415-515	215	1	0	216	1214	8	0	1222	315	0	1	316	149	0	0	149	432	2	0	434	73	5	0	78
430-530	219	1	0	220	1259	9	0	1268	313	0	1	314	138	0	0	138	396	3	0	399	64	3	0	67
445-545	208	0	0	208	1267	10	0	1277	317	0	1	318	134	0	0	134	366	2	0	368	70	4	0	74
500-600	192	0	0	192	1255	10	0	1265	301	0	0	301	122	0	0	122	382	2	0	384	63	4	0	67

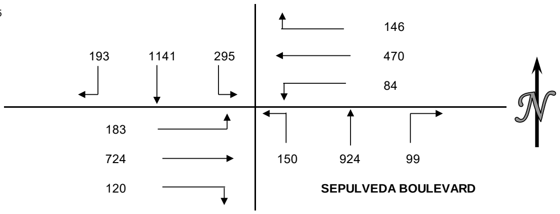
	7 NBRT				8 NBTH				9 NBLT				10 EBRT				11 EBTH				12 EBLT				TOTAL OF ALL MOVEMENTS			
15-MIN COUNTS	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	RIDE SHARE VANS	TRUCKS	TOTAL
300-315	30	0	0	30	217	0	0	217	40	2	1	43	33	1	0	34	186	2	1	189	58	0	0	58	1115	10	2	1127
315-330	18	0	0	18	218	2	0	220	38	2	0	40	34	2	0	36	189	3	1	193	53	0	0	53	1106	13	2	1121
330-345	27	1	0	28	237	0	0	237	36	2	0	38	29	1	0	30	194	1	1	196	50	0	0	50	1107	9	2	1118
345-400	22	0	0	22	233	3	0	236	32	2	0	34	22	1	0	23	154	1	1	156	43	0	0	43	1123	15	1	1139
400-415	31	0	0	31	225	6	0	231	36	2	0	38	28	3	0	31	179	0	0	179	37	0	0	37	1130	21	0	1151
415-430	12	0	0	12	180	2	1	183	36	1	0	37	26	1	0	27	199	1	0	200	50	0	0	50	1091	8	1	1100
430-445	23	1	0	24	202	3	0	205	24	1	0	25	37	2	0	39	159	2	0	161	38	0	0	38	1066	13	0	1079
445-500	17	0	0	17	237	1	0	238	20	2	0	22	29	3	0	32	164	2	0	166	39	0	0	39	1154	13	1	1168
500-515	24	0	0	24	239	3	0	242	43	3	0	46	25	3	0	28	178	2	1	181	42	0	0	42	1130	15	1	1146
515-530	16	0	0	16	255	2	0	257	39	3	0	42	21	0	0	21	171	1	1	173	37	0	0	37	1118	9	1	1128
530-545	18	1	0	19	220	2	0	222	29	2	0	31	19	4	0	23	154	3	0	157	41	0	0	41	1037	16	0	1053
545-600	26	0	0	26	253	1	0	254	45	1	0	46	27	0	0	27	157	2	2	161	32	0	0	32	1141	9	2	1152
HOUR TOTALS																												
300-400	97	1	0	98	905	5	0	910	146	8	1	155	118	5	0	123	723	7	4	734	204	0	0	204	4451	47	7	4505
315-415	98	1	0	99	913	11	0	924	142	8	0	150	113	7	0	120	716	5	3	724	183	0	0	183	4466	58	5	4529
330-430	92	1	0	93	875	11	1	887	140	7	0	147	105	6	0	111	726	3	2	731	180	0	0	180	4451	53	4	4508
345-445	88	1	0	89	840	14	1	855	128	6	0	134	113	7	0	120	691	4	1	696	168	0	0	168	4410	57	2	4469
400-500	83	1	0	84	844	12	1	857	116	6	0	122	120	9	0	129	701	5	0	706	164	0	0	164	4441	55	2	4498
415-515	76	1	0	77	858	9	1	868	123	7	0	130	117	9	0	126	700	7	1	708	169	0	0	169	4441	49	3	4493
430-530	80	1	0	81	933	9	0	942	126	9	0	135	112	8	0	120	672	7	2	681	156	0	0	156	4468	50	3	4521
445-545	75	1	0	76	951	8	0	959	131	10	0	141	94	10	0	104	667	8	2	677	159	0	0	159	4439	53	3	4495
500-600	84	1	0	85	967	8	0	975	156	9	0	165	92	7	0	99	660	8	4	672	152	0	0	152	4426	49	4	4479

CONSOLIDATED VEHICLE COUNTS

15 MIN COUNTS	1	2	3	4	5	6	7	8	9	10	11	12	
PERIOD	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTAL
300-315	45	269	68	42	111	21	30	217	43	34	189	58	1127
315-330	51	266	65	45	115	19	18	220	40	36	193	53	1121
330-345	43	252	72	35	119	18	28	237	38	30	196	50	1118
345-400	55	299	97	31	118	25	22	236	34	23	156	43	1139
400-415	44	324	61	35	118	22	31	231	38	31	179	37	1151
415-430	57	279	78	38	115	24	12	183	37	27	200	50	1100
430-445	51	295	73	33	122	13	24	205	25	39	161	38	1079
445-500	60	340	94	41	96	23	17	238	22	32	166	39	1168
500-515	48	308	71	37	101	18	24	242	46	28	181	42	1146
515-530	61	325	76	27	80	13	16	257	42	21	173	37	1128
530-545	39	304	77	29	91	20	19	222	31	23	157	41	1053
545-600	44	328	77	29	112	16	26	254	46	27	161	32	1152
HOUR TOTALS	1	2	3	4	5	6	7	8	9	10	11	12	
PERIOD	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTAL
300-400	194	1086	302	153	463	83	98	910	155	123	734	204	4505
315-415	193	1141	295	146	470	84	99	924	150	120	724	183	4529
330-430	199	1154	308	139	470	89	93	887	147	111	731	180	4508
345-445	207	1197	309	137	473	84	89	855	134	120	696	168	4469
400-500	212	1238	306	147	451	82	84	857	122	129	706	164	4498
415-515	216	1222	316	149	434	78	77	868	130	126	708	169	4493
430-530	220	1268	314	138	399	67	81	942	135	120	681	156	4521
445-545	208	1277	318	134	368	74	76	959	141	104	677	159	4495
500-600	192	1265	301	122	384	67	85	975	165	99	672	152	4479

AM PEAK HOUR: 315-415

MANCHESTER AVENUE



APPROACH SUMMARIES

	NORTH APRCH			EAST APRCH			SOUTH APRCH			WEST APRCH	
	APRCH	EXIT		APRCH	EXIT		APRCH	EXIT		APRCH	EXIT
300-400	1582	1267		699	1134		1163	1292		1061	812
315-415	1629	1253		700	1118		1173	1345		1027	813
330-430	1661	1206		698	1132		1127	1354		1022	816
345-445	1713	1160		694	1094		1078	1401		984	814
400-500	1756	1168		680	1096		1063	1449		999	785
415-515	1754	1186		661	1101		1075	1426		1003	780
430-530	1802	1236		604	1076		1158	1455		957	754
445-545	1803	1252		576	1071		1176	1455		940	717
500-600	1758	1249		573	1058		1225	1431		923	741

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INTERSECTION PEDESTRIAN AND BICYCLE COUNT SUMMARY

CLIENT: GIBSON TRANSPORTATION CONSULTING, INC.
PROJECT: WESTCHESTER TRAFFIC COUNTS
DATE: WEDNESDAY MAY 11, 2022
PERIOD: 3:00 PM to 6:00 PM
INTERSECTION: N/S SEPULVEDA BOULEVARD
E/W MANCHESTER AVENUE

PEDESTRIAN COUNTS

15 MIN COUNTS	NORTH LEG		EAST LEG		SOUTH LEG		WEST LEG		
PERIOD	EB	WB	NB	SB	EB	WB	NB	SB	TOTALS
300-315	1	2	2	9	3	5	11	5	38
315-330	2	0	4	7	11	7	3	1	35
330-345	4	1	2	9	4	4	0	2	26
345-400	2	2	4	1	5	1	6	4	25
400-415	1	4	5	4	7	4	3	5	33
415-430	9	0	3	4	3	4	13	0	36
430-445	5	3	4	3	6	7	6	1	35
445-500	1	1	5	2	5	1	1	2	18
500-515	1	3	1	2	6	0	5	6	24
515-530	0	0	4	3	4	4	3	7	25
530-545	2	2	2	0	4	5	6	1	22
545-600	3	2	0	0	4	1	4	2	16
HOUR TOTALS	NORTH LEG		EAST LEG		SOUTH LEG		WEST LEG		
PERIOD	EB	WB	NB	SB	EB	WB	NB	SB	TOTALS
300-400	9	5	12	26	23	17	20	12	124
315-415	9	7	15	21	27	16	12	12	119
330-430	16	7	14	18	19	13	22	11	120
345-445	17	9	16	12	21	16	28	10	129
400-500	16	8	17	13	21	16	23	8	122
415-515	16	7	13	11	20	12	25	9	113
430-530	7	7	14	10	21	12	15	16	102
445-545	4	6	12	7	19	10	15	16	89
500-600	6	7	7	5	18	10	18	16	87

BICYCLE COUNTS

15 MIN COUNTS	NORTH LEG		EAST LEG		SOUTH LEG		WEST LEG		
PERIOD	EB	WB	NB	SB	EB	WB	NB	SB	TOTAL
300-315	0	1	0	0	1	0	1	0	3
315-330	0	0	0	0	1	0	0	0	1
330-345	0	1	0	0	0	0	0	1	2
345-400	0	0	0	0	1	0	0	1	2
400-415	0	1	1	0	0	0	0	3	5
415-430	0	2	0	0	0	0	0	0	2
430-445	0	0	0	0	3	0	0	0	3
445-500	0	1	2	0	1	1	1	0	6
500-515	0	0	0	0	0	0	0	1	1
515-530	0	2	1	1	1	0	0	1	6
530-545	0	0	1	1	1	0	0	0	3
545-600	0	0	0	0	0	0	0	0	0
HOUR TOTALS	NORTH LEG		EAST LEG		SOUTH LEG		WEST LEG		
PERIOD	EB	WB	NB	SB	EB	WB	NB	SB	TOTAL
300-400	0	2	0	0	3	0	1	2	8
315-415	0	2	1	0	2	0	0	5	10
330-430	0	4	1	0	1	0	0	5	11
345-445	0	3	1	0	4	0	0	4	12
400-500	0	4	3	0	4	1	1	3	16
415-515	0	3	2	0	4	1	1	1	12
430-530	0	3	3	1	5	1	1	2	16
445-545	0	3	4	2	3	1	1	2	16
500-600	0	2	2	2	2	0	0	2	10

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INTERSECTION VEHICLE CLASSIFICATION TURNING MOVEMENT COUNT SUMMARY

CLIENT:	GIBSON TRANSPORTATION CONSULTING, INC.
PROJECT:	WESTCHESTER TRAFFIC COUNTS
DATE:	WEDNESDAY MAY 11, 2022
PERIOD:	3:00 PM to 6:00 PM
INTERSECTION: N/S	TRUXTON AVENUE
E/W	MANCHESTER AVENUE

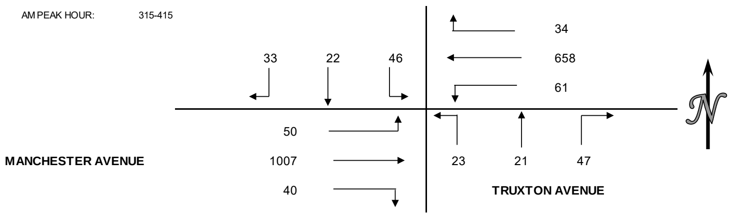
	1 SBRT				2 SBTH				3 SBLT				4 WBRT				5 WBTH				6 WBLT			
15-MIN COUNTS	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL
300-315	8	0	0	8	5	0	0	5	7	0	0	7	5	0	0	5	145	3	0	148	21	0	0	21
315-330	7	0	0	7	6	0	0	6	8	0	0	8	7	0	0	7	168	1	0	169	15	0	0	15
330-345	8	0	0	8	7	0	0	7	10	0	0	10	12	0	0	12	166	0	0	166	18	0	0	18
345-400	8	0	0	8	2	0	0	2	16	0	0	16	9	0	0	9	164	2	0	166	20	0	0	20
400-415	10	0	0	10	7	0	0	7	12	0	0	12	6	0	0	6	156	1	0	157	8	0	0	8
415-430	5	0	0	5	5	0	0	5	14	0	0	14	3	0	0	3	154	2	0	156	11	0	0	11
430-445	7	0	0	7	8	0	0	8	13	0	0	13	4	0	0	4	156	1	0	157	20	0	0	20
445-500	9	0	0	9	3	0	0	3	16	0	0	16	8	0	0	8	148	1	0	149	20	0	0	20
500-515	10	0	0	10	4	0	0	4	23	0	0	23	9	0	0	9	127	3	0	130	10	0	0	10
515-530	3	0	0	3	2	0	0	2	22	0	0	22	5	0	0	5	118	1	0	119	22	0	0	22
530-545	5	0	0	5	6	0	0	6	19	0	0	19	11	0	0	11	116	1	0	117	12	0	0	12
545-600	10	0	0	10	4	0	0	4	23	0	0	23	11	0	0	11	159	1	0	160	17	0	0	17
HOUR TOTALS																								
300-400	31	0	0	31	20	0	0	20	41	0	0	41	33	0	0	33	643	6	0	649	74	0	0	74
315-415	33	0	0	33	22	0	0	22	46	0	0	46	34	0	0	34	654	4	0	658	61	0	0	61
330-430	31	0	0	31	21	0	0	21	52	0	0	52	30	0	0	30	640	5	0	645	57	0	0	57
345-445	30	0	0	30	22	0	0	22	55	0	0	55	22	0	0	22	630	6	0	636	59	0	0	59
400-500	31	0	0	31	23	0	0	23	55	0	0	55	21	0	0	21	614	5	0	619	59	0	0	59
415-515	31	0	0	31	20	0	0	20	66	0	0	66	24	0	0	24	585	7	0	592	61	0	0	61
430-530	29	0	0	29	17	0	0	17	74	0	0	74	26	0	0	26	549	6	0	555	72	0	0	72
445-545	27	0	0	27	15	0	0	15	80	0	0	80	33	0	0	33	509	6	0	515	64	0	0	64
500-600	28	0	0	28	16	0	0	16	87	0	0	87	36	0	0	36	520	6	0	526	61	0	0	61

	7 NBRT				8 NBTH				9 NBLT				10 EBRT				11 EBTH				12 EBLT				TOTAL OF ALL MOVEMENTS			
15-MIN COUNTS	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	RIDE SHARE VANS	TRUCKS	TOTAL
300-315	12	0	0	12	8	0	0	8	2	0	0	2	8	0	0	8	252	4	1	257	8	0	0	8	481	7	1	489
315-330	14	0	0	14	4	0	0	4	5	0	0	5	9	0	1	10	254	3	1	258	16	0	0	16	513	4	2	519
330-345	11	0	0	11	2	0	0	2	3	0	0	3	8	1	0	9	254	3	0	257	7	0	0	7	506	4	0	510
345-400	13	0	0	13	7	0	0	7	7	0	0	7	12	0	0	12	239	2	1	242	12	0	0	12	509	4	1	514
400-415	9	0	0	9	8	0	0	8	8	0	0	8	9	0	0	9	247	3	0	250	15	0	0	15	495	4	0	499
415-430	9	0	0	9	10	0	0	10	5	0	0	5	13	0	0	13	229	1	0	230	12	0	0	12	470	3	0	473
430-445	11	0	0	11	5	0	0	5	10	0	0	10	15	0	0	15	259	3	0	262	14	0	0	14	522	4	0	526
445-500	6	0	0	6	5	0	0	5	6	0	0	6	13	0	0	13	252	1	1	254	12	0	0	12	498	2	1	501
500-515	6	0	0	6	3	0	0	3	6	0	0	6	9	0	0	9	252	2	1	255	9	0	0	9	468	5	1	474
515-530	12	0	0	12	5	0	0	5	8	0	0	8	21	0	0	21	241	1	0	242	9	0	0	9	468	2	0	470
530-545	8	0	0	8	3	0	0	3	2	0	0	2	12	0	0	12	219	4	0	223	10	0	0	10	423	5	0	428
545-600	3	0	0	3	4	0	0	4	5	0	0	5	19	0	0	19	223	1	2	226	14	0	0	14	492	2	2	496
HOUR TOTALS																												
300-400	50	0	0	50	21	0	0	21	17	0	0	17	37	1	1	39	999	12	3	1014	43	0	0	43	2009	19	4	2032
315-415	47	0	0	47	21	0	0	21	23	0	0	23	38	1	1	40	994	11	2	1007	50	0	0	50	2023	16	3	2042
330-430	42	0	0	42	27	0	0	27	23	0	0	23	42	1	0	43	969	9	1	979	46	0	0	46	1980	15	1	1996
345-445	42	0	0	42	30	0	0	30	30	0	0	30	49	0	0	49	974	9	1	984	53	0	0	53	1996	15	1	2012
400-500	35	0	0	35	28	0	0	28	29	0	0	29	50	0	0	50	987	8	1	996	53	0	0	53	1985	13	1	1999
415-515	32	0	0	32	23	0	0	23	27	0	0	27	50	0	0	50	992	7	2	1001	47	0	0	47	1958	14	2	1974
430-530	35	0	0	35	18	0	0	18	30	0	0	30	58	0	0	58	1004	7	2	1013	44	0	0	44	1956	13	2	1971
445-545	32	0	0	32	16	0	0	16	22	0	0	22	55	0	0	55	964	8	2	974	40	0	0	40	1857	14	2	1873
500-600	29	0	0	29	15	0	0	15	21	0	0	21	61	0	0	61	935	8	3	946	42	0	0	42	1851	14	3	1868

CONSOLIDATED VEHICLE COUNTS

15 MIN COUNTS	1	2	3	4	5	6	7	8	9	10	11	12	
PERIOD	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTAL
300-315	8	5	7	5	148	21	12	8	2	8	257	8	489
315-330	7	6	8	7	169	15	14	4	5	10	258	16	519
330-345	8	7	10	12	166	18	11	2	3	9	257	7	510
345-400	8	2	16	9	166	20	13	7	7	12	242	12	514
400-415	10	7	12	6	157	8	9	8	8	9	250	15	499
415-430	5	5	14	3	156	11	9	10	5	13	230	12	473
430-445	7	8	13	4	157	20	11	5	10	15	262	14	526
445-500	9	3	16	8	149	20	6	5	6	13	254	12	501
500-515	10	4	23	9	130	10	6	3	6	9	255	9	474
515-530	3	2	22	5	119	22	12	5	8	21	242	9	470
530-545	5	6	19	11	117	12	8	3	2	12	223	10	428
545-600	10	4	23	11	160	17	3	4	5	19	226	14	496
HOUR TOTALS	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	
PERIOD	**SBRT**	**SBTH**	**SBLT**	**WBRT**	**WBTH**	**WBLT**	**NBRT**	**NBTH**	**NBLT**	**EBRT**	**EBTH**	**EBLT**	**TOTAL**
300-400	31	20	41	33	649	74	50	21	17	39	1014	43	2032
315-415	33	22	46	34	658	61	47	21	23	40	1007	50	2042
330-430	31	21	52	30	645	57	42	27	23	43	979	46	1996
345-445	30	22	55	22	636	59	42	30	30	49	984	53	2012
400-500	31	23	55	21	619	59	35	28	29	50	996	53	1999
415-515	31	20	66	24	592	61	32	23	27	50	1001	47	1974
430-530	29	17	74	26	555	72	35	18	30	58	1013	44	1971
445-545	27	15	80	33	515	64	32	16	22	55	974	40	1873
500-600	28	16	87	36	526	61	29	15	21	61	946	42	1868

AM PEAK HOUR: 315-415



APPROACH SUMMARIES

	NORTH APRCH			EAST APRCH			SOUTH APRCH			WEST APRCH	
	APRCH	EXIT		APRCH	EXIT		APRCH	EXIT		APRCH	EXIT
300-400	92	97		756	1105		88	133		1096	697
315-415	101	105		753	1100		91	123		1097	714
330-430	104	103		732	1073		92	121		1068	699
345-445	107	105		717	1081		102	130		1086	696
400-500	109	102		699	1086		92	132		1099	679
415-515	117	94		677	1099		82	131		1098	650
430-530	120	88		653	1122		83	147		1115	614
445-545	122	89		612	1086		70	134		1069	564
500-600	131	93		623	1062		65	138		1049	575

WILTEC

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INTERSECTION PEDESTRIAN AND BICYCLE COUNT SUMMARY

CLIENT: GIBSON TRANSPORTATION CONSULTING, INC.
PROJECT: WESTCHESTER TRAFFIC COUNTS
DATE: WEDNESDAY MAY 11, 2022
PERIOD: 3:00 PM to 6:00 PM
INTERSECTION: N/S TRUXTON AVENUE
E/W MANCHESTER AVENUE

PEDESTRIAN COUNTS

15 MIN COUNTS	NORTH LEG		EAST LEG		SOUTH LEG		WEST LEG		
PERIOD	EB	WB	NB	SB	EB	WB	NB	SB	TOTALS
300-315	0	0	0	0	2	0	1	0	3
315-330	1	0	0	0	3	1	0	0	5
330-345	0	0	1	0	1	0	0	0	2
345-400	0	1	0	0	1	0	0	1	3
400-415	1	0	0	0	3	1	1	0	6
415-430	1	2	0	1	2	2	1	0	9
430-445	2	0	0	0	0	0	0	2	4
445-500	0	0	0	1	2	1	1	0	5
500-515	0	0	1	1	2	1	0	2	7
515-530	0	1	1	0	1	0	0	1	4
530-545	0	1	0	1	1	2	0	0	5
545-600	1	1	0	1	0	4	0	0	7
HOUR TOTALS	NORTH LEG		EAST LEG		SOUTH LEG		WEST LEG		
PERIOD	EB	WB	NB	SB	EB	WB	NB	SB	TOTALS
300-400	1	1	1	0	7	1	1	1	13
315-415	2	1	1	0	8	2	1	1	16
330-430	2	3	1	1	7	3	2	1	20
345-445	4	3	0	1	6	3	2	3	22
400-500	4	2	0	2	7	4	3	2	24
415-515	3	2	1	3	6	4	2	4	25
430-530	2	1	2	2	5	2	1	5	20
445-545	0	2	2	3	6	4	1	3	21
500-600	1	3	2	3	4	7	0	3	23

BICYCLE COUNTS

15 MIN COUNTS	NORTH LEG		EAST LEG		SOUTH LEG		WEST LEG		
PERIOD	EB	WB	NB	SB	EB	WB	NB	SB	TOTAL
300-315	0	1	0	0	0	0	0	0	1
315-330	1	0	1	1	1	0	0	0	4
330-345	0	0	0	0	0	0	0	0	0
345-400	0	0	0	0	0	0	0	0	0
400-415	0	1	0	0	0	0	0	0	1
415-430	0	1	0	0	1	0	0	0	2
430-445	0	0	0	0	1	0	0	0	1
445-500	0	1	0	0	0	0	0	0	1
500-515	0	0	0	0	0	0	0	0	0
515-530	0	1	0	0	1	0	0	0	2
530-545	0	0	0	0	1	0	0	0	1
545-600	0	0	0	0	0	0	0	0	0
HOUR TOTALS	NORTH LEG		EAST LEG		SOUTH LEG		WEST LEG		
PERIOD	EB	WB	NB	SB	EB	WB	NB	SB	TOTAL
300-400	1	1	1	1	1	0	0	0	5
315-415	1	1	1	1	1	0	0	0	5
330-430	0	2	0	0	1	0	0	0	3
345-445	0	2	0	0	2	0	0	0	4
400-500	0	3	0	0	2	0	0	0	5
415-515	0	2	0	0	2	0	0	0	4
430-530	0	2	0	0	2	0	0	0	4
445-545	0	2	0	0	2	0	0	0	4
500-600	0	1	0	0	2	0	0	0	3

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INTERSECTION VEHICLE CLASSIFICATION TURNING MOVEMENT COUNT SUMMARY

CLIENT: GIBSON TRANSPORTATION CONSULTING, INC.
PROJECT: WESTCHESTER TRAFFIC COUNTS
DATE: WEDNESDAY MAY 11, 2022
PERIOD: 3:00 PM to 6:00 PM
INTERSECTION: N/S LA TIJERA BOULEVARD
E/W MANCHESTER BOULEVARD

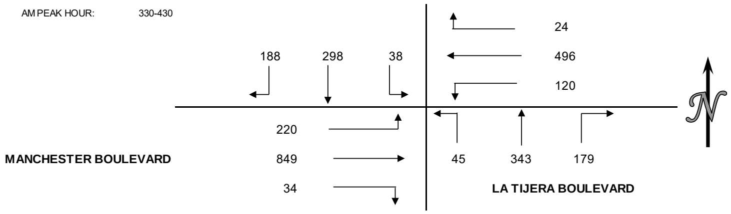
	1 SBRT				2 SBTH				3 SBLT				4 WBRT				5 WBTH				6 WBLT			
15-MIN COUNTS	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL
300-315	44	1	0	45	61	0	0	61	6	0	0	6	3	1	0	4	112	2	0	114	29	0	0	29
315-330	43	0	0	43	84	1	0	85	8	0	0	8	4	0	0	4	129	1	0	130	24	0	0	24
330-345	43	0	0	43	78	0	0	78	5	0	0	5	8	0	0	8	131	0	0	131	24	0	0	24
345-400	56	0	0	56	59	0	1	60	13	0	0	13	9	0	0	9	128	2	0	130	33	0	0	33
400-415	47	1	0	48	70	1	0	71	10	0	0	10	3	0	0	3	117	0	0	117	25	0	0	25
415-430	41	0	0	41	89	0	0	89	10	0	0	10	4	0	0	4	116	2	0	118	38	0	0	38
430-445	36	0	0	36	68	1	0	69	3	0	0	3	5	0	0	5	129	1	0	130	24	0	0	24
445-500	28	0	0	28	76	2	0	78	5	0	0	5	5	0	0	5	122	1	0	123	33	0	0	33
500-515	21	1	0	22	74	0	0	74	6	0	0	6	4	0	0	4	113	2	0	115	20	0	0	20
515-530	29	0	0	29	69	0	0	69	12	0	0	12	11	0	0	11	101	1	0	102	28	0	0	28
530-545	32	0	0	32	66	0	0	66	7	0	0	7	6	0	0	6	93	1	0	94	27	0	0	27
545-600	40	0	0	40	51	0	0	51	8	0	0	8	7	0	0	7	127	1	0	128	26	0	1	27
HOUR TOTALS																								
300-400	186	1	0	187	282	1	1	284	32	0	0	32	24	1	0	25	500	5	0	505	110	0	0	110
315-415	189	1	0	190	291	2	1	294	36	0	0	36	24	0	0	24	505	3	0	508	106	0	0	106
330-430	187	1	0	188	296	1	1	298	38	0	0	38	24	0	0	24	492	4	0	496	120	0	0	120
345-445	180	1	0	181	286	2	1	289	36	0	0	36	21	0	0	21	490	5	0	495	120	0	0	120
400-500	152	1	0	153	303	4	0	307	28	0	0	28	17	0	0	17	484	4	0	488	120	0	0	120
415-515	126	1	0	127	307	3	0	310	24	0	0	24	18	0	0	18	480	6	0	486	115	0	0	115
430-530	114	1	0	115	287	3	0	290	26	0	0	26	25	0	0	25	465	5	0	470	105	0	0	105
445-545	110	1	0	111	285	2	0	287	30	0	0	30	26	0	0	26	429	5	0	434	108	0	0	108
500-600	122	1	0	123	260	0	0	260	33	0	0	33	28	0	0	28	434	5	0	439	101	0	1	102

	7 NBRT				8 NBTH				9 NBLT				10 EBRT				11 EBTH				12 EBLT				TOTAL OF ALL MOVEMENTS			
15-MIN COUNTS	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	RIDE SHARE VANS	TRUCKS	TOTAL
300-315	56	0	1	57	67	1	0	68	10	0	0	10	7	0	0	7	226	2	0	228	44	2	0	46	665	9	1	675
315-330	49	0	0	49	90	2	0	92	8	0	0	8	4	0	0	4	209	3	0	212	46	0	0	46	698	7	0	705
330-345	39	1	0	40	84	0	0	84	18	0	0	18	8	0	0	8	219	2	0	221	56	1	0	57	713	4	0	717
345-400	41	0	0	41	73	0	0	73	11	0	0	11	5	0	0	5	211	1	1	213	56	0	0	56	695	3	2	700
400-415	47	0	0	47	80	0	0	80	9	0	0	9	8	1	0	9	230	2	0	232	57	0	0	57	703	5	0	708
415-430	51	0	0	51	106	0	0	106	7	0	0	7	12	0	0	12	182	1	0	183	50	0	0	50	706	3	0	709
430-445	43	0	0	43	100	0	0	100	14	0	0	14	8	0	0	8	184	1	0	185	62	1	0	63	676	4	0	680
445-500	51	0	0	51	86	0	0	86	14	0	0	14	25	0	0	25	215	1	1	217	37	0	0	37	697	4	1	702
500-515	50	0	0	50	113	0	0	113	12	0	0	12	23	0	0	23	182	2	0	184	56	0	0	56	674	5	0	679
515-530	38	0	0	38	85	0	0	85	15	0	0	15	30	0	0	30	228	1	0	229	40	0	0	40	686	2	0	688
530-545	41	0	0	41	90	0	0	90	10	0	0	10	18	0	0	18	183	2	0	185	41	2	0	43	614	5	0	619
545-600	42	1	0	43	78	0	0	78	14	0	0	14	11	0	0	11	198	1	1	200	40	0	0	40	642	3	2	647
HOUR TOTALS																												
300-400	185	1	1	187	314	3	0	317	47	0	0	47	24	0	0	24	865	8	1	874	202	3	0	205	2771	23	3	2797
315-415	176	1	0	177	327	2	0	329	46	0	0	46	25	1	0	26	869	8	1	878	215	1	0	216	2809	19	2	2830
330-430	178	1	0	179	343	0	0	343	45	0	0	45	33	1	0	34	842	6	1	849	219	1	0	220	2817	15	2	2834
345-445	182	0	0	182	359	0	0	359	41	0	0	41	33	1	0	34	807	5	1	813	225	1	0	226	2780	15	2	2797
400-500	192	0	0	192	372	0	0	372	44	0	0	44	53	1	0	54	811	5	1	817	206	1	0	207	2782	16	1	2799
415-515	195	0	0	195	405	0	0	405	47	0	0	47	68	0	0	68	763	5	1	769	205	1	0	206	2753	16	1	2770
430-530	182	0	0	182	384	0	0	384	55	0	0	55	86	0	0	86	809	5	1	815	195	1	0	196	2733	15	1	2749
445-545	180	0	0	180	374	0	0	374	51	0	0	51	96	0	0	96	808	6	1	815	174	2	0	176	2671	16	1	2688
500-600	171	1	0	172	366	0	0	366	51	0	0	51	82	0	0	82	791	6	1	798	177	2	0	179	2616	15	2	2633

CONSOLIDATED VEHICLE COUNTS

15 MIN COUNTS	1	2	3	4	5	6	7	8	9	10	11	12	
PERIOD	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTAL
300-315	45	61	6	4	114	29	57	68	10	7	228	46	675
315-330	43	85	8	4	130	24	49	92	8	4	212	46	705
330-345	43	78	5	8	131	24	40	84	18	8	221	57	717
345-400	56	60	13	9	130	33	41	73	11	5	213	56	700
400-415	48	71	10	3	117	25	47	80	9	9	232	57	708
415-430	41	89	10	4	118	38	51	106	7	12	183	50	709
430-445	36	69	3	5	130	24	43	100	14	8	185	63	680
445-500	28	78	5	5	123	33	51	86	14	25	217	37	702
500-515	22	74	6	4	115	20	50	113	12	23	184	56	679
515-530	29	69	12	11	102	28	38	85	15	30	229	40	688
530-545	32	66	7	6	94	27	41	90	10	18	185	43	619
545-600	40	51	8	7	128	27	43	78	14	11	200	40	647
HOUR TOTALS	1	2	3	4	5	6	7	8	9	10	11	12	
PERIOD	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTAL
300-400	187	284	32	25	505	110	187	317	47	24	874	205	2797
315-415	190	294	36	24	508	106	177	329	46	26	878	216	2830
330-430	188	298	38	24	496	120	179	343	45	34	849	220	2834
345-445	181	289	36	21	495	120	182	359	41	34	813	226	2797
400-500	153	307	28	17	488	120	192	372	44	54	817	207	2799
415-515	127	310	24	18	486	115	195	405	47	68	769	206	2770
430-530	115	290	26	25	470	105	182	384	55	86	815	196	2749
445-545	111	287	30	26	434	108	180	374	51	96	815	176	2688
500-600	123	260	33	28	439	102	172	366	51	82	798	179	2633

AM PEAK HOUR: 330-430



APPROACH SUMMARIES

	NORTH APRCH			EAST APRCH			SOUTH APRCH			WEST APRCH	
	APRCH	EXIT		APRCH	EXIT		APRCH	EXIT		APRCH	EXIT
300-400	503	547		640	1093		551	418		1103	739
315-415	520	569		638	1091		552	426		1120	744
330-430	524	587		640	1066		567	452		1103	729
345-445	506	606		636	1031		582	443		1073	717
400-500	488	596		625	1037		608	481		1078	685
415-515	461	629		619	988		647	493		1043	660
430-530	431	605		600	1023		621	481		1097	640
445-545	428	576		568	1025		605	491		1087	596
500-600	416	573		569	1003		589	444		1059	613

WILTEC

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INTERSECTION PEDESTRIAN AND BICYCLE COUNT SUMMARY

CLIENT: GIBSON TRANSPORTATION CONSULTING, INC.
PROJECT: WESTCHESTER TRAFFIC COUNTS
DATE: WEDNESDAY MAY 11, 2022
PERIOD: 3:00 PM to 6:00 PM
INTERSECTION: N/S LA TIJERA BOULEVARD
E/W MANCHESTER BOULEVARD

PEDESTRIAN COUNTS

15 MIN COUNTS	NORTH LEG		EAST LEG		SOUTH LEG		WEST LEG		
PERIOD	EB	WB	NB	SB	EB	WB	NB	SB	TOTALS
300-315	0	0	0	0	0	2	0	0	2
315-330	0	0	0	0	1	0	0	0	1
330-345	1	0	0	0	2	0	0	0	3
345-400	1	0	0	0	1	0	0	0	2
400-415	0	0	0	0	1	1	0	0	2
415-430	0	0	0	0	2	1	0	0	3
430-445	1	0	0	0	0	0	0	0	1
445-500	0	1	0	0	4	1	0	0	6
500-515	0	0	0	0	3	0	0	0	3
515-530	2	0	0	0	0	1	0	0	3
530-545	1	0	0	0	0	2	0	0	3
545-600	1	1	0	0	0	3	0	0	5
HOUR TOTALS	NORTH LEG		EAST LEG		SOUTH LEG		WEST LEG		
PERIOD	EB	WB	NB	SB	EB	WB	NB	SB	TOTALS
300-400	2	0	0	0	4	2	0	0	8
315-415	2	0	0	0	5	1	0	0	8
330-430	2	0	0	0	6	2	0	0	10
345-445	2	0	0	0	4	2	0	0	8
400-500	1	1	0	0	7	3	0	0	12
415-515	1	1	0	0	9	2	0	0	13
430-530	3	1	0	0	7	2	0	0	13
445-545	3	1	0	0	7	4	0	0	15
500-600	4	1	0	0	3	6	0	0	14

BICYCLE COUNTS

15 MIN COUNTS	NORTH LEG		EAST LEG		SOUTH LEG		WEST LEG		
PERIOD	EB	WB	NB	SB	EB	WB	NB	SB	TOTAL
300-315	0	1	0	0	0	0	0	0	1
315-330	0	0	0	0	0	0	0	0	0
330-345	0	1	0	0	0	0	0	0	1
345-400	0	0	0	0	0	0	0	0	0
400-415	0	1	0	0	0	0	0	0	1
415-430	0	1	0	0	1	0	0	0	2
430-445	0	0	0	0	1	0	0	0	1
445-500	0	0	0	0	0	0	0	0	0
500-515	0	0	0	0	0	0	0	0	0
515-530	0	1	0	0	1	0	0	0	2
530-545	0	0	0	0	1	0	0	0	1
545-600	0	0	0	0	0	0	0	0	0
HOUR TOTALS	NORTH LEG		EAST LEG		SOUTH LEG		WEST LEG		
PERIOD	EB	WB	NB	SB	EB	WB	NB	SB	TOTAL
300-400	0	2	0	0	0	0	0	0	2
315-415	0	2	0	0	0	0	0	0	2
330-430	0	3	0	0	1	0	0	0	4
345-445	0	2	0	0	2	0	0	0	4
400-500	0	2	0	0	2	0	0	0	4
415-515	0	1	0	0	2	0	0	0	3
430-530	0	1	0	0	2	0	0	0	3
445-545	0	1	0	0	2	0	0	0	3
500-600	0	1	0	0	2	0	0	0	3

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INTERSECTION VEHICLE CLASSIFICATION TURNING MOVEMENT COUNT SUMMARY

CLIENT: GIBSON TRANSPORTATION CONSULTING, INC.
PROJECT: WESTCHESTER TRAFFIC COUNTS
DATE: WEDNESDAY MAY 11, 2022
PERIOD: 3:00 PM to 6:00 PM
INTERSECTION: N/S BLERIOT AVENUE
E/W LA TIJERA BOULEVARD

	1 SBRT				2 SBTH				3 SBLT				4 WBRT				5 WBTH				6 WBLT			
15-MIN COUNTS	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL
300-315	0	0	0	0	0	0	0	0	2	0	0	2	1	0	0	1	102	0	1	103	6	0	0	6
315-330	0	0	0	0	0	0	0	0	1	0	0	1	1	0	0	1	86	1	1	88	9	0	0	9
330-345	1	0	0	1	0	0	0	0	3	0	0	3	3	0	0	3	99	0	0	99	14	0	0	14
345-400	2	0	0	2	1	0	0	1	2	0	0	2	1	0	0	1	86	0	0	86	8	0	0	8
400-415	1	0	0	1	0	0	0	0	1	0	0	1	5	0	0	5	94	2	0	96	10	0	0	10
415-430	1	0	0	1	0	0	0	0	0	0	0	0	5	0	0	5	113	0	0	113	12	0	0	12
430-445	2	0	0	2	1	0	0	1	3	0	0	3	4	0	0	4	103	1	0	104	16	1	0	17
445-500	1	0	0	1	0	0	0	0	4	0	0	4	1	0	0	1	81	1	0	82	24	0	0	24
500-515	0	0	0	0	0	0	0	0	4	0	0	4	2	0	0	2	100	0	0	100	29	0	0	29
515-530	0	0	0	0	0	0	0	0	2	0	0	2	1	0	0	1	85	0	0	85	20	0	0	20
530-545	0	0	0	0	1	0	0	1	1	0	0	1	1	0	0	1	98	0	0	98	19	0	0	19
545-600	0	0	0	0	1	0	0	1	1	0	0	1	0	0	0	0	81	0	1	82	10	0	0	10
HOUR TOTALS																								
300-400	3	0	0	3	1	0	0	1	8	0	0	8	6	0	0	6	373	1	2	376	37	0	0	37
315-415	4	0	0	4	1	0	0	1	7	0	0	7	10	0	0	10	365	3	1	369	41	0	0	41
330-430	5	0	0	5	1	0	0	1	6	0	0	6	14	0	0	14	392	2	0	394	44	0	0	44
345-445	6	0	0	6	2	0	0	2	6	0	0	6	15	0	0	15	396	3	0	399	46	1	0	47
400-500	5	0	0	5	1	0	0	1	8	0	0	8	15	0	0	15	391	4	0	395	62	1	0	63
415-515	4	0	0	4	1	0	0	1	11	0	0	11	12	0	0	12	397	2	0	399	81	1	0	82
430-530	3	0	0	3	1	0	0	1	13	0	0	13	8	0	0	8	369	2	0	371	89	1	0	90
445-545	1	0	0	1	1	0	0	1	11	0	0	11	5	0	0	5	364	1	0	365	92	0	0	92
500-600	0	0	0	0	2	0	0	2	8	0	0	8	4	0	0	4	364	0	1	365	78	0	0	78

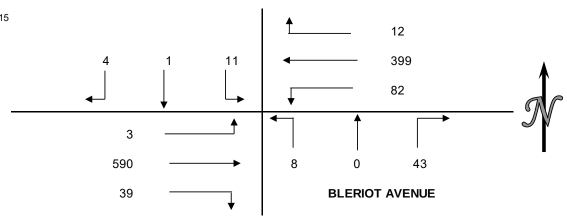
	7 NBRT				8 NBTH				9 NBLT				10 EBRT				11 EBTH				12 EBLT				TOTAL OF ALL MOVEMENTS			
15-MIN COUNTS	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	RIDE SHARE VANS	TRUCKS	TOTAL
300-315	1	0	0	1	0	0	0	0	1	0	0	1	6	0	0	6	144	1	1	146	1	0	0	1	264	1	2	267
315-330	2	0	0	2	0	0	0	0	2	0	0	2	8	0	0	8	133	2	0	135	3	0	0	3	245	3	1	249
330-345	10	0	0	10	1	0	0	1	4	0	0	4	9	0	0	9	141	1	1	143	1	0	0	1	286	1	1	288
345-400	8	0	0	8	0	0	0	0	3	0	0	3	7	0	0	7	120	0	0	120	1	0	0	1	239	0	0	239
400-415	11	0	0	11	0	0	0	0	6	0	0	6	7	0	0	7	138	0	0	138	0	0	0	0	273	2	0	275
415-430	9	0	0	9	0	0	0	0	1	0	0	1	11	0	0	11	139	0	0	139	1	0	0	1	292	0	0	292
430-445	7	0	0	7	0	0	0	0	2	0	0	2	8	0	0	8	142	0	0	142	0	0	0	0	288	2	0	290
445-500	19	0	0	19	0	0	0	0	2	0	0	2	8	0	0	8	160	0	0	160	2	0	0	2	302	1	0	303
500-515	8	0	0	8	0	0	0	0	3	0	0	3	12	0	0	12	149	0	0	149	0	0	0	0	307	0	0	307
515-530	5	0	0	5	0	0	0	0	5	0	0	5	7	0	0	7	141	0	0	141	0	0	0	0	266	0	0	266
530-545	6	0	0	6	0	0	0	0	11	0	0	11	9	0	0	9	148	0	0	148	0	0	0	0	294	0	0	294
545-600	12	0	0	12	0	0	0	0	2	0	0	2	9	0	0	9	114	0	0	114	0	0	0	0	230	0	1	231
HOUR TOTALS																												
300-400	21	0	0	21	1	0	0	1	10	0	0	10	30	0	0	30	538	4	2	544	6	0	0	6	1034	5	4	1043
315-415	31	0	0	31	1	0	0	1	15	0	0	15	31	0	0	31	532	3	1	536	5	0	0	5	1043	6	2	1051
330-430	38	0	0	38	1	0	0	1	14	0	0	14	34	0	0	34	538	1	1	540	3	0	0	3	1090	3	1	1094
345-445	35	0	0	35	0	0	0	0	12	0	0	12	33	0	0	33	539	0	0	539	2	0	0	2	1092	4	0	1096
400-500	46	0	0	46	0	0	0	0	11	0	0	11	34	0	0	34	579	0	0	579	3	0	0	3	1155	5	0	1160
415-515	43	0	0	43	0	0	0	0	8	0	0	8	39	0	0	39	590	0	0	590	3	0	0	3	1189	3	0	1192
430-530	39	0	0	39	0	0	0	0	12	0	0	12	35	0	0	35	592	0	0	592	2	0	0	2	1163	3	0	1166
445-545	38	0	0	38	0	0	0	0	21	0	0	21	36	0	0	36	598	0	0	598	2	0	0	2	1169	1	0	1170
500-600	31	0	0	31	0	0	0	0	21	0	0	21	37	0	0	37	552	0	0	552	0	0	0	0	1097	0	1	1098

CONSOLIDATED VEHICLE COUNTS

15 MIN COUNTS	1	2	3	4	5	6	7	8	9	10	11	12	
PERIOD	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTAL
300-315	0	0	2	1	103	6	1	0	1	6	146	1	267
315-330	0	0	1	1	88	9	2	0	2	8	135	3	249
330-345	1	0	3	3	99	14	10	1	4	9	143	1	288
345-400	2	1	2	1	86	8	8	0	3	7	120	1	239
400-415	1	0	1	5	96	10	11	0	6	7	138	0	275
415-430	1	0	0	5	113	12	9	0	1	11	139	1	292
430-445	2	1	3	4	104	17	7	0	2	8	142	0	290
445-500	1	0	4	1	82	24	19	0	2	8	160	2	303
500-515	0	0	4	2	100	29	8	0	3	12	149	0	307
515-530	0	0	2	1	85	20	5	0	5	7	141	0	266
530-545	0	1	1	1	98	19	6	0	11	9	148	0	294
545-600	0	1	1	0	82	10	12	0	2	9	114	0	231
HOUR TOTALS	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	
PERIOD	**SBRT**	**SBTH**	**SBLT**	**WBRT**	**WBTH**	**WBLT**	**NBRT**	**NBTH**	**NBLT**	**EBRT**	**EBTH**	**EBLT**	**TOTAL**
300-400	3	1	8	6	376	37	21	1	10	30	544	6	1043
315-415	4	1	7	10	369	41	31	1	15	31	536	5	1051
330-430	5	1	6	14	394	44	38	1	14	34	540	3	1094
345-445	6	2	6	15	399	47	35	0	12	33	539	2	1096
400-500	5	1	8	15	395	63	46	0	11	34	579	3	1160
415-515	4	1	11	12	399	82	43	0	8	39	590	3	1192
430-530	3	1	13	8	371	90	39	0	12	35	592	2	1166
445-545	1	1	11	5	365	92	38	0	21	36	598	2	1170
500-600	0	2	8	4	365	78	31	0	21	37	552	0	1098

AM PEAK HOUR: 415-515

LA TIJERA BOULEVARD



APPROACH SUMMARIES

	NORTH APRCH			EAST APRCH			SOUTH APRCH			WEST APRCH	
	APRCH	EXIT		APRCH	EXIT		APRCH	EXIT		APRCH	EXIT
300-400	12	13		419	573		32	68		580	389
315-415	12	16		420	574		47	73		572	388
330-430	12	18		452	584		53	79		577	413
345-445	14	17		461	580		47	82		574	417
400-500	14	18		473	633		57	98		616	411
415-515	16	15		493	644		51	122		632	411
430-530	17	10		469	644		51	126		629	386
445-545	13	7		462	647		59	129		636	387
500-600	10	4		447	591		52	117		589	386

WILTEC

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INTERSECTION PEDESTRIAN AND BICYCLE COUNT SUMMARY

CLIENT: GIBSON TRANSPORTATION CONSULTING, INC.
PROJECT: WESTCHESTER TRAFFIC COUNTS
DATE: WEDNESDAY MAY 11, 2022
PERIOD: 3:00 PM to 6:00 PM
INTERSECTION: N/S BLERIOT AVENUE
E/W LA TIJERA BOULEVARD

PEDESTRIAN COUNTS

15 MIN COUNTS	NORTH LEG		EAST LEG		SOUTH LEG		WEST LEG		
PERIOD	EB	WB	NB	SB	EB	WB	NB	SB	TOTALS
300-315	0	0	0	0	4	0	0	1	5
315-330	0	0	0	0	0	0	0	2	2
330-345	0	0	0	0	0	0	0	0	0
345-400	0	0	0	0	0	0	0	0	0
400-415	0	0	0	0	0	0	0	0	0
415-430	0	0	0	0	1	2	0	0	3
430-445	0	0	0	0	2	0	0	1	3
445-500	0	0	0	0	0	0	0	1	1
500-515	0	0	0	0	0	2	0	0	2
515-530	0	0	0	0	1	0	0	0	1
530-545	0	1	0	0	0	0	0	0	1
545-600	0	0	0	0	1	0	0	0	1
HOUR TOTALS	NORTH LEG		EAST LEG		SOUTH LEG		WEST LEG		
PERIOD	EB	WB	NB	SB	EB	WB	NB	SB	TOTALS
300-400	0	0	0	0	4	0	0	3	7
315-415	0	0	0	0	0	0	0	2	2
330-430	0	0	0	0	1	2	0	0	3
345-445	0	0	0	0	3	2	0	1	6
400-500	0	0	0	0	3	2	0	2	7
415-515	0	0	0	0	3	4	0	2	9
430-530	0	0	0	0	3	2	0	2	7
445-545	0	1	0	0	1	2	0	1	5
500-600	0	1	0	0	2	2	0	0	5

BICYCLE COUNTS

15 MIN COUNTS	NORTH LEG		EAST LEG		SOUTH LEG		WEST LEG		
PERIOD	EB	WB	NB	SB	EB	WB	NB	SB	TOTAL
300-315	0	0	0	0	1	0	0	0	1
315-330	0	0	0	0	1	1	1	0	3
330-345	0	0	0	0	0	0	0	0	0
345-400	0	0	0	0	0	0	0	0	0
400-415	0	0	0	1	0	0	0	0	1
415-430	0	0	0	0	0	0	0	0	0
430-445	0	0	0	1	0	0	0	0	1
445-500	0	0	0	0	1	0	0	0	1
500-515	0	0	0	0	0	0	0	0	0
515-530	0	0	0	0	1	0	0	0	1
530-545	0	1	0	0	0	0	0	0	1
545-600	0	0	0	0	0	0	0	0	0
HOUR TOTALS	NORTH LEG		EAST LEG		SOUTH LEG		WEST LEG		
PERIOD	EB	WB	NB	SB	EB	WB	NB	SB	TOTAL
300-400	0	0	0	0	2	1	1	0	4
315-415	0	0	0	1	1	1	1	0	4
330-430	0	0	0	1	0	0	0	0	1
345-445	0	0	0	2	0	0	0	0	2
400-500	0	0	0	2	1	0	0	0	3
415-515	0	0	0	1	1	0	0	0	2
430-530	0	0	0	1	2	0	0	0	3
445-545	0	1	0	0	2	0	0	0	3
500-600	0	1	0	0	1	0	0	0	2

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INTERSECTION VEHICLE CLASSIFICATION TURNING MOVEMENT COUNT SUMMARY

CLIENT: GIBSON TRANSPORTATION CONSULTING, INC.
PROJECT: WESTCHESTER TRAFFIC COUNTS
DATE: WEDNESDAY MAY 11, 2022
PERIOD: 3:00 PM to 6:00 PM
INTERSECTION: N/S TRUXTON AVENUE
E/W LA TIJERA BOULEVARD

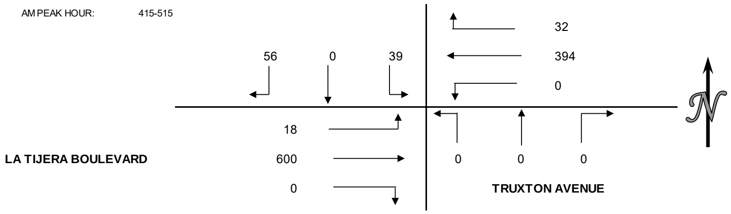
	1 SBRT				2 SBTH				3 SBLT				4 WBRT				5 WBTH				6 WBLT			
15-MIN COUNTS	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL
300-315	9	0	0	9	0	0	0	0	8	0	0	8	9	0	0	9	96	0	0	96	0	0	0	0
315-330	21	0	0	21	0	0	0	0	14	0	0	14	10	0	0	10	87	1	0	88	0	0	0	0
330-345	11	0	0	11	0	0	0	0	7	0	0	7	8	0	0	8	93	0	0	93	0	0	0	0
345-400	19	0	0	19	0	0	0	0	8	0	0	8	7	0	0	7	81	0	0	81	0	0	0	0
400-415	13	0	0	13	0	0	0	0	5	0	0	5	4	0	0	4	99	2	0	101	0	0	0	0
415-430	14	0	0	14	0	0	0	0	14	0	0	14	12	0	0	12	110	0	0	110	0	0	0	0
430-445	14	0	0	14	0	0	0	0	11	0	0	11	8	0	0	8	96	0	0	96	0	0	0	0
445-500	16	0	0	16	0	0	0	0	6	0	0	6	7	0	0	7	95	2	0	97	0	0	0	0
500-515	12	0	0	12	0	0	0	0	8	0	0	8	5	0	0	5	91	0	0	91	0	0	0	0
515-530	18	0	0	18	0	0	0	0	7	0	0	7	15	0	0	15	87	0	0	87	0	0	0	0
530-545	15	0	0	15	0	0	0	0	6	0	0	6	14	0	0	14	93	0	0	93	0	0	0	0
545-600	12	0	0	12	0	0	0	0	10	0	0	10	1	0	0	1	82	0	0	82	0	0	0	0
HOUR TOTALS																								
300-400	60	0	0	60	0	0	0	0	37	0	0	37	34	0	0	34	357	1	0	358	0	0	0	0
315-415	64	0	0	64	0	0	0	0	34	0	0	34	29	0	0	29	360	3	0	363	0	0	0	0
330-430	57	0	0	57	0	0	0	0	34	0	0	34	31	0	0	31	383	2	0	385	0	0	0	0
345-445	60	0	0	60	0	0	0	0	38	0	0	38	31	0	0	31	386	2	0	388	0	0	0	0
400-500	57	0	0	57	0	0	0	0	36	0	0	36	31	0	0	31	400	4	0	404	0	0	0	0
415-515	56	0	0	56	0	0	0	0	39	0	0	39	32	0	0	32	392	2	0	394	0	0	0	0
430-530	60	0	0	60	0	0	0	0	32	0	0	32	35	0	0	35	369	2	0	371	0	0	0	0
445-545	61	0	0	61	0	0	0	0	27	0	0	27	41	0	0	41	366	2	0	368	0	0	0	0
500-600	57	0	0	57	0	0	0	0	31	0	0	31	35	0	0	35	353	0	0	353	0	0	0	0

	7 NBRT				8 NBTH				9 NBLT				10 EBRT				11 EBTH				12 EBLT				TOTAL OF ALL MOVEMENTS			
15-MIN COUNTS	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	RIDE SHARE VANS	TRUCKS	TOTAL
300-315	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	138	1	1	140	7	0	0	7	267	1	1	269
315-330	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	136	2	0	138	5	0	0	5	273	3	0	276
330-345	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	137	1	1	139	3	0	0	3	259	1	1	261
345-400	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	120	0	0	120	8	0	0	8	243	0	0	243
400-415	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	132	0	1	133	4	0	0	4	257	2	1	260
415-430	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	153	0	0	153	3	0	0	3	306	0	0	306
430-445	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	139	0	0	139	6	0	0	6	274	0	0	274
445-500	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	149	0	0	149	3	0	0	3	276	2	0	278
500-515	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	159	0	0	159	6	0	0	6	281	0	0	281
515-530	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	138	0	0	138	3	0	0	3	268	0	0	268
530-545	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	149	0	0	149	2	0	0	2	279	0	0	279
545-600	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	112	1	0	113	2	0	0	2	219	1	0	220
HOUR TOTALS																												
300-400	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	531	4	2	537	23	0	0	23	1042	5	2	1049
315-415	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	525	3	2	530	20	0	0	20	1032	6	2	1040
330-430	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	542	1	2	545	18	0	0	18	1065	3	2	1070
345-445	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	544	0	1	545	21	0	0	21	1080	2	1	1083
400-500	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	573	0	1	574	16	0	0	16	1113	4	1	1118
415-515	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	600	0	0	600	18	0	0	18	1137	2	0	1139
430-530	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	585	0	0	585	18	0	0	18	1099	2	0	1101
445-545	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	595	0	0	595	14	0	0	14	1104	2	0	1106
500-600	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	558	1	0	559	13	0	0	13	1047	1	0	1048

CONSOLIDATED VEHICLE COUNTS

15 MIN COUNTS	1	2	3	4	5	6	7	8	9	10	11	12	
PERIOD	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTAL
300-315	9	0	8	9	96	0	0	0	0	0	140	7	269
315-330	21	0	14	10	88	0	0	0	0	0	138	5	276
330-345	11	0	7	8	93	0	0	0	0	0	139	3	261
345-400	19	0	8	7	81	0	0	0	0	0	120	8	243
400-415	13	0	5	4	101	0	0	0	0	0	133	4	260
415-430	14	0	14	12	110	0	0	0	0	0	153	3	306
430-445	14	0	11	8	96	0	0	0	0	0	139	6	274
445-500	16	0	6	7	97	0	0	0	0	0	149	3	278
500-515	12	0	8	5	91	0	0	0	0	0	159	6	281
515-530	18	0	7	15	87	0	0	0	0	0	138	3	268
530-545	15	0	6	14	93	0	0	0	0	0	149	2	279
545-600	12	0	10	1	82	0	0	0	0	0	113	2	220
HOUR TOTALS	1	2	3	4	5	6	7	8	9	10	11	12	
PERIOD	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTAL
300-400	60	0	37	34	358	0	0	0	0	0	537	23	1049
315-415	64	0	34	29	363	0	0	0	0	0	530	20	1040
330-430	57	0	34	31	385	0	0	0	0	0	545	18	1070
345-445	60	0	38	31	388	0	0	0	0	0	545	21	1083
400-500	57	0	36	31	404	0	0	0	0	0	574	16	1118
415-515	56	0	39	32	394	0	0	0	0	0	600	18	1139
430-530	60	0	32	35	371	0	0	0	0	0	585	18	1101
445-545	61	0	27	41	368	0	0	0	0	0	595	14	1106
500-600	57	0	31	35	353	0	0	0	0	0	559	13	1048

AM PEAK HOUR: 415-515



APPROACH SUMMARIES

	NORTH APRCH			EAST APRCH			SOUTH APRCH			WEST APRCH	
	APRCH	EXIT		APRCH	EXIT		APRCH	EXIT		APRCH	EXIT
300-400	97	57		392	574		0	0		560	418
315-415	98	49		392	564		0	0		550	427
330-430	91	49		416	579		0	0		563	442
345-445	98	52		419	583		0	0		566	448
400-500	93	47		435	610		0	0		590	461
415-515	95	50		426	639		0	0		618	450
430-530	92	53		406	617		0	0		603	431
445-545	88	55		409	622		0	0		609	429
500-600	88	48		388	590		0	0		572	410

WILTEC

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INTERSECTION PEDESTRIAN AND BICYCLE COUNT SUMMARY

CLIENT: GIBSON TRANSPORTATION CONSULTING, INC.
PROJECT: WESTCHESTER TRAFFIC COUNTS
DATE: WEDNESDAY MAY 11, 2022
PERIOD: 3:00 PM to 6:00 PM
INTERSECTION: N/S TRUXTON AVENUE
E/W LA TIJERA BOULEVARD

PEDESTRIAN COUNTS									
15 MIN COUNTS	NORTH LEG		EAST LEG		SOUTH LEG		WEST LEG		
PERIOD	EB	WB	NB	SB	EB	WB	NB	SB	TOTALS
300-315	0	4	0	0	0	0	0	0	4
315-330	2	2	0	0	0	0	0	1	5
330-345	3	1	0	0	0	0	0	0	4
345-400	3	2	0	0	0	0	0	0	5
400-415	0	2	0	0	0	0	0	0	2
415-430	0	0	0	0	0	0	0	0	0
430-445	0	0	0	0	0	0	0	2	2
445-500	5	0	0	0	0	0	0	0	5
500-515	0	0	0	0	0	0	0	0	0
515-530	0	0	0	0	0	0	0	0	0
530-545	0	1	0	0	0	0	0	0	1
545-600	1	1	0	0	0	0	0	0	2
HOUR TOTALS	NORTH LEG		EAST LEG		SOUTH LEG		WEST LEG		
PERIOD	EB	WB	NB	SB	EB	WB	NB	SB	TOTALS
300-400	8	9	0	0	0	0	0	1	18
315-415	8	7	0	0	0	0	0	1	16
330-430	6	5	0	0	0	0	0	0	11
345-445	3	4	0	0	0	0	0	2	9
400-500	5	2	0	0	0	0	0	2	9
415-515	5	0	0	0	0	0	0	2	7
430-530	5	0	0	0	0	0	0	2	7
445-545	5	1	0	0	0	0	0	0	6
500-600	1	2	0	0	0	0	0	0	3

BICYCLE COUNTS									
15 MIN COUNTS	NORTH LEG		EAST LEG		SOUTH LEG		WEST LEG		
PERIOD	EB	WB	NB	SB	EB	WB	NB	SB	TOTAL
300-315	0	0	0	0	0	0	0	0	0
315-330	0	1	0	0	0	0	0	0	1
330-345	0	0	0	0	0	0	0	0	0
345-400	0	0	0	0	0	0	0	0	0
400-415	0	0	0	0	0	0	0	0	0
415-430	0	0	0	0	0	0	0	0	0
430-445	0	0	0	0	0	0	0	0	0
445-500	0	0	0	0	0	0	0	0	0
500-515	0	0	0	0	0	0	0	0	0
515-530	0	0	0	0	0	0	0	0	0
530-545	0	0	0	0	0	0	0	0	0
545-600	0	1	0	0	0	0	0	0	1
HOUR TOTALS	NORTH LEG		EAST LEG		SOUTH LEG		WEST LEG		
PERIOD	EB	WB	NB	SB	EB	WB	NB	SB	TOTAL
300-400	0	1	0	0	0	0	0	0	1
315-415	0	1	0	0	0	0	0	0	1
330-430	0	0	0	0	0	0	0	0	0
345-445	0	0	0	0	0	0	0	0	0
400-500	0	0	0	0	0	0	0	0	0
415-515	0	0	0	0	0	0	0	0	0
430-530	0	0	0	0	0	0	0	0	0
445-545	0	0	0	0	0	0	0	0	0
500-600	0	1	0	0	0	0	0	0	1

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INTERSECTION VEHICLE CLASSIFICATION TURNING MOVEMENT COUNT SUMMARY

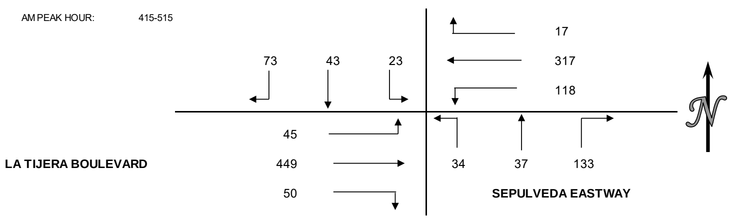
CLIENT: GIBSON TRANSPORTATION CONSULTING, INC.
PROJECT: WESTCHESTER TRAFFIC COUNTS
DATE: WEDNESDAY MAY 11, 2022
PERIOD: 3:00 PM to 6:00 PM
INTERSECTION: N/S SEPULVEDA EASTWAY
E/W LA TIJERA BOULEVARD

	1 SBRT				2 SBTH				3 SBLT				4 WBRT				5 WBTH				6 WBLT			
15-MIN COUNTS	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL
300-315	22	0	0	22	13	1	0	14	6	0	0	6	2	0	0	2	73	0	1	74	27	0	0	27
315-330	14	0	0	14	9	0	0	9	10	0	0	10	3	0	0	3	78	1	0	79	29	0	0	29
330-345	11	0	0	11	19	0	0	19	4	0	0	4	2	0	0	2	77	0	0	77	23	0	0	23
345-400	19	0	0	19	11	0	0	11	7	0	0	7	3	0	0	3	60	0	0	60	39	0	0	39
400-415	19	0	0	19	11	0	0	11	3	0	0	3	3	0	0	3	79	1	0	80	27	1	0	28
415-430	17	0	0	17	12	0	0	12	3	0	0	3	6	0	0	6	86	0	0	86	37	0	0	37
430-445	14	0	1	15	8	0	0	8	7	0	0	7	5	0	0	5	74	1	0	75	31	0	0	31
445-500	13	0	0	13	14	0	0	14	4	0	0	4	4	0	0	4	80	1	0	81	23	0	0	23
500-515	28	0	0	28	9	0	0	9	9	0	0	9	2	0	0	2	75	0	0	75	27	0	0	27
515-530	15	0	0	15	11	0	0	11	5	0	0	5	4	0	0	4	69	0	0	69	33	0	0	33
530-545	10	0	0	10	3	0	0	3	6	0	0	6	3	0	0	3	79	0	0	79	26	0	0	26
545-600	18	0	0	18	11	0	0	11	2	0	0	2	2	0	0	2	75	0	0	75	18	0	0	18
HOUR TOTALS																								
300-400	66	0	0	66	52	1	0	53	27	0	0	27	10	0	0	10	288	1	1	290	118	0	0	118
315-415	63	0	0	63	50	0	0	50	24	0	0	24	11	0	0	11	294	2	0	296	118	1	0	119
330-430	66	0	0	66	53	0	0	53	17	0	0	17	14	0	0	14	302	1	0	303	126	1	0	127
345-445	69	0	1	70	42	0	0	42	20	0	0	20	17	0	0	17	299	2	0	301	134	1	0	135
400-500	63	0	1	64	45	0	0	45	17	0	0	17	18	0	0	18	319	3	0	322	118	1	0	119
415-515	72	0	1	73	43	0	0	43	23	0	0	23	17	0	0	17	315	2	0	317	118	0	0	118
430-530	70	0	1	71	42	0	0	42	25	0	0	25	15	0	0	15	298	2	0	300	114	0	0	114
445-545	66	0	0	66	37	0	0	37	24	0	0	24	13	0	0	13	303	1	0	304	109	0	0	109
500-600	71	0	0	71	34	0	0	34	22	0	0	22	11	0	0	11	298	0	0	298	104	0	0	104

	7 NBRT				8 NBTH				9 NBLT				10 EBRT				11 EBTH				12 EBLT				TOTAL OF ALL MOVEMENTS			
15-MIN COUNTS	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	RIDE SHARE VANS	TRUCKS	TOTAL
300-315	48	0	0	48	10	0	0	10	8	0	0	8	15	0	0	15	98	1	1	100	10	0	0	10	332	2	2	336
315-330	44	0	0	44	6	0	0	6	12	0	0	12	12	0	0	12	92	2	0	94	9	0	0	9	318	3	0	321
330-345	35	0	0	35	8	0	0	8	11	0	0	11	12	1	0	13	101	1	1	103	13	0	0	13	316	2	1	319
345-400	41	0	0	41	8	0	0	8	15	0	0	15	7	0	0	7	79	0	0	79	6	0	0	6	295	0	0	295
400-415	45	0	0	45	8	0	0	8	15	0	0	15	5	1	0	6	94	0	0	94	8	0	0	8	317	3	0	320
415-430	42	0	0	42	10	0	0	10	9	0	0	9	18	0	0	18	114	0	0	114	11	0	0	11	365	0	0	365
430-445	32	0	0	32	9	0	0	9	10	0	0	10	13	0	0	13	100	0	0	100	7	0	0	7	310	1	1	312
445-500	21	0	0	21	10	0	0	10	8	0	0	8	8	0	0	8	125	0	0	125	14	0	0	14	324	1	0	325
500-515	38	0	0	38	8	0	0	8	7	0	0	7	11	0	0	11	110	0	0	110	13	0	0	13	337	0	0	337
515-530	34	0	0	34	7	0	0	7	5	0	0	5	16	0	0	16	105	0	0	105	10	0	0	10	314	0	0	314
530-545	37	0	0	37	8	0	0	8	9	0	0	9	15	0	0	15	103	0	0	103	12	0	0	12	311	0	0	311
545-600	38	0	0	38	10	0	0	10	9	0	0	9	17	0	0	17	76	0	0	76	7	0	0	7	283	0	0	283
HOUR TOTALS																												
300-400	168	0	0	168	32	0	0	32	46	0	0	46	46	1	0	47	370	4	2	376	38	0	0	38	1261	7	3	1271
315-415	165	0	0	165	30	0	0	30	53	0	0	53	36	2	0	38	366	3	1	370	36	0	0	36	1246	8	1	1255
330-430	163	0	0	163	34	0	0	34	50	0	0	50	42	2	0	44	388	1	1	390	38	0	0	38	1293	5	1	1299
345-445	160	0	0	160	35	0	0	35	49	0	0	49	43	1	0	44	387	0	0	387	32	0	0	32	1287	4	1	1292
400-500	140	0	0	140	37	0	0	37	42	0	0	42	44	1	0	45	433	0	0	433	40	0	0	40	1316	5	1	1322
415-515	133	0	0	133	37	0	0	37	34	0	0	34	50	0	0	50	449	0	0	449	45	0	0	45	1336	2	1	1339
430-530	125	0	0	125	34	0	0	34	30	0	0	30	48	0	0	48	440	0	0	440	44	0	0	44	1285	2	1	1288
445-545	130	0	0	130	33	0	0	33	29	0	0	29	50	0	0	50	443	0	0	443	49	0	0	49	1286	1	0	1287
500-600	147	0	0	147	33	0	0	33	30	0	0	30	59	0	0	59	394	0	0	394	42	0	0	42	1245	0	0	1245

CONSOLIDATED VEHICLE COUNTS

15 MIN COUNTS	1	2	3	4	5	6	7	8	9	10	11	12	
PERIOD	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTAL
300-315	22	14	6	2	74	27	48	10	8	15	100	10	336
315-330	14	9	10	3	79	29	44	6	12	12	94	9	321
330-345	11	19	4	2	77	23	35	8	11	13	103	13	319
345-400	19	11	7	3	60	39	41	8	15	7	79	6	295
400-415	19	11	3	3	80	28	45	8	15	6	94	8	320
415-430	17	12	3	6	86	37	42	10	9	18	114	11	365
430-445	15	8	7	5	75	31	32	9	10	13	100	7	312
445-500	13	14	4	4	81	23	21	10	8	8	125	14	325
500-515	28	9	9	2	75	27	38	8	7	11	110	13	337
515-530	15	11	5	4	69	33	34	7	5	16	105	10	314
530-545	10	3	6	3	79	26	37	8	9	15	103	12	311
545-600	18	11	2	2	75	18	38	10	9	17	76	7	283
HOUR TOTALS	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	
PERIOD	**SBRT**	**SBTH**	**SBLT**	**WBRT**	**WBTH**	**WBLT**	**NBRT**	**NBTH**	**NBLT**	**EBRT**	**EBTH**	**EBLT**	**TOTAL**
300-400	66	53	27	10	290	118	168	32	46	47	376	38	1271
315-415	63	50	24	11	296	119	165	30	53	38	370	36	1255
330-430	66	53	17	14	303	127	163	34	50	44	390	38	1299
345-445	70	42	20	17	301	135	160	35	49	44	387	32	1292
400-500	64	45	17	18	322	119	140	37	42	45	433	40	1322
415-515	73	43	23	17	317	118	133	37	34	50	449	45	1339
430-530	71	42	25	15	300	114	125	34	30	48	440	44	1288
445-545	66	37	24	13	304	109	130	33	29	50	443	49	1287
500-600	71	34	22	11	298	104	147	33	30	59	394	42	1245



APPROACH SUMMARIES

	NORTH APRCH			EAST APRCH			SOUTH APRCH			WEST APRCH	
	APRCH	EXIT		APRCH	EXIT		APRCH	EXIT		APRCH	EXIT
300-400	146	80		418	571		246	218		461	402
315-415	137	77		426	559		248	207		444	412
330-430	136	86		444	570		247	224		472	419
345-445	132	84		453	567		244	221		463	420
400-500	126	95		459	590		219	209		518	428
415-515	139	99		452	605		204	211		544	424
430-530	138	93		429	590		189	204		532	401
445-545	127	95		426	597		192	196		542	399
500-600	127	86		413	563		210	197		495	399

WILTEC

Phone: (626) 564-1944 Fax: (626) 564-0969

INTERSECTION PEDESTRIAN AND BICYCLE COUNT SUMMARY

CLIENT: GIBSON TRANSPORTATION CONSULTING, INC.
PROJECT: WESTCHESTER TRAFFIC COUNTS
DATE: WEDNESDAY MAY 11, 2022
PERIOD: 3:00 PM to 6:00 PM
INTERSECTION: N/S SEPULVEDA EASTWAY
E/W LA TIJERA BOULEVARD

PEDESTRIAN COUNTS

15 MIN COUNTS	NORTH LEG		EAST LEG		SOUTH LEG		WEST LEG		
PERIOD	EB	WB	NB	SB	EB	WB	NB	SB	TOTALS
300-315	0	4	3	0	1	0	0	1	9
315-330	1	2	1	1	0	0	0	0	5
330-345	1	1	1	1	0	1	0	0	5
345-400	0	1	2	1	1	1	1	1	8
400-415	0	0	0	0	0	0	1	0	1
415-430	1	1	0	0	2	1	0	0	5
430-445	2	0	0	1	0	1	0	0	4
445-500	1	5	0	0	0	0	1	0	7
500-515	3	0	0	3	0	0	0	2	8
515-530	0	0	2	0	4	0	0	0	6
530-545	0	1	0	0	1	0	0	1	3
545-600	1	1	0	0	0	0	1	0	3
HOUR TOTALS	NORTH LEG		EAST LEG		SOUTH LEG		WEST LEG		
PERIOD	EB	WB	NB	SB	EB	WB	NB	SB	TOTALS
300-400	2	8	7	3	2	2	1	2	27
315-415	2	4	4	3	1	2	2	1	19
330-430	2	3	3	2	3	3	2	1	19
345-445	3	2	2	2	3	3	2	1	18
400-500	4	6	0	1	2	2	2	0	17
415-515	7	6	0	4	2	2	1	2	24
430-530	6	5	2	4	4	1	1	2	25
445-545	4	6	2	3	5	0	1	3	24
500-600	4	2	2	3	5	0	1	3	20

BICYCLE COUNTS

15 MIN COUNTS	NORTH LEG		EAST LEG		SOUTH LEG		WEST LEG		
PERIOD	EB	WB	NB	SB	EB	WB	NB	SB	TOTAL
300-315	0	0	0	0	0	0	0	0	0
315-330	0	0	0	0	0	0	0	0	0
330-345	0	0	0	0	0	0	0	0	0
345-400	0	0	0	0	0	0	0	0	0
400-415	0	0	0	0	0	0	0	0	0
415-430	0	0	0	0	0	0	0	0	0
430-445	0	0	0	0	0	0	0	0	0
445-500	0	0	0	0	0	0	0	0	0
500-515	0	0	0	0	1	0	0	0	1
515-530	0	0	0	0	2	0	0	0	2
530-545	0	0	0	0	0	0	0	0	0
545-600	0	1	0	0	0	0	0	0	1
HOUR TOTALS	NORTH LEG		EAST LEG		SOUTH LEG		WEST LEG		
PERIOD	EB	WB	NB	SB	EB	WB	NB	SB	TOTAL
300-400	0	0	0	0	0	0	0	0	0
315-415	0	0	0	0	0	0	0	0	0
330-430	0	0	0	0	0	0	0	0	0
345-445	0	0	0	0	0	0	0	0	0
400-500	0	0	0	0	0	0	0	0	0
415-515	0	0	0	0	1	0	0	0	1
430-530	0	0	0	0	3	0	0	0	3
445-545	0	0	0	0	3	0	0	0	3
500-600	0	1	0	0	3	0	0	0	4

WILTEC

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INTERSECTION VEHICLE CLASSIFICATION TURNING MOVEMENT COUNT SUMMARY

CLIENT: GIBSON TRANSPORTATION CONSULTING, INC.
PROJECT: WESTCHESTER TRAFFIC COUNTS
DATE: WEDNESDAY MAY 11, 2022
PERIOD: 3:00 PM to 6:00 PM
INTERSECTION: N/S SEPULVEDA BOULEVARD
E/W LA TIJERA BOULEVARD

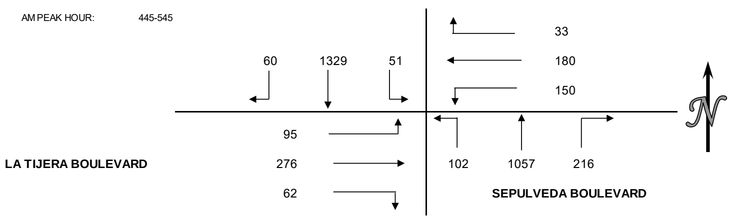
	1 SBRT				2 SBTH				3 SBLT				4 WBRT				5 WBTH				6 WBLT			
15-MIN COUNTS	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL
300-315	15	0	0	15	303	5	0	308	22	0	0	22	14	0	0	14	51	0	0	51	46	0	0	46
315-330	23	0	0	23	245	5	1	251	12	0	0	12	11	0	0	11	53	1	0	54	43	0	0	43
330-345	9	0	0	9	287	2	2	291	13	1	0	14	6	0	0	6	54	0	0	54	50	0	0	50
345-400	18	0	0	18	292	6	0	298	20	0	0	20	6	0	0	6	41	0	0	41	32	0	0	32
400-415	10	0	0	10	321	10	0	331	14	1	0	15	11	0	0	11	68	0	0	68	47	1	0	48
415-430	10	0	0	10	270	1	0	271	21	0	0	21	11	0	0	11	44	0	0	44	48	0	0	48
430-445	10	2	0	12	345	3	0	348	14	0	0	14	15	0	0	15	51	1	0	52	41	0	1	42
445-500	19	1	0	20	355	7	0	362	16	1	0	17	7	0	0	7	36	1	0	37	39	0	0	39
500-515	12	1	0	13	343	5	0	348	13	0	0	13	14	0	0	14	55	0	0	55	45	0	0	45
515-530	11	0	0	11	291	2	0	293	10	0	0	10	5	0	0	5	38	0	0	38	34	0	0	34
530-545	15	1	0	16	318	8	0	326	11	0	0	11	7	0	0	7	50	0	0	50	32	0	0	32
545-600	15	0	0	15	340	4	0	344	25	0	0	25	15	0	0	15	55	0	1	56	38	0	0	38
HOUR TOTALS																								
300-400	65	0	0	65	1127	18	3	1148	67	1	0	68	37	0	0	37	199	1	0	200	171	0	0	171
315-415	60	0	0	60	1145	23	3	1171	59	2	0	61	34	0	0	34	216	1	0	217	172	1	0	173
330-430	47	0	0	47	1170	19	2	1191	68	2	0	70	34	0	0	34	207	0	0	207	177	1	0	178
345-445	48	2	0	50	1228	20	0	1248	69	1	0	70	43	0	0	43	204	1	0	205	168	1	1	170
400-500	49	3	0	52	1291	21	0	1312	65	2	0	67	44	0	0	44	199	2	0	201	175	1	1	177
415-515	51	4	0	55	1313	16	0	1329	64	1	0	65	47	0	0	47	186	2	0	188	173	0	1	174
430-530	52	4	0	56	1334	17	0	1351	53	1	0	54	41	0	0	41	180	2	0	182	159	0	1	160
445-545	57	3	0	60	1307	22	0	1329	50	1	0	51	33	0	0	33	179	1	0	180	150	0	0	150
500-600	53	2	0	55	1292	19	0	1311	59	0	0	59	41	0	0	41	198	0	1	199	149	0	0	149

	7 NBRT				8 NBTH				9 NBLT				10 EBRT				11 EBTH				12 EBLT				TOTAL OF ALL MOVEMENTS			
15-MIN COUNTS	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	BUSES	TRUCKS	TOTAL	AUTOS	RIDE SHARE VANS	TRUCKS	TOTAL
300-315	44	1	0	45	260	2	1	263	25	0	0	25	26	0	0	26	59	0	1	60	20	0	0	20	885	8	2	895
315-330	35	0	0	35	235	3	0	238	27	0	0	27	14	0	0	14	62	2	0	64	20	0	0	20	780	11	1	792
330-345	48	1	1	50	251	4	0	255	21	0	0	21	23	0	0	23	71	0	0	71	17	0	0	17	850	8	3	861
345-400	36	0	0	36	267	4	0	271	27	0	0	27	18	0	0	18	43	0	0	43	15	0	0	15	815	10	0	825
400-415	26	0	0	26	237	7	1	245	27	1	0	28	23	0	0	23	71	0	0	71	18	0	0	18	873	20	1	894
415-430	38	0	0	38	213	4	0	217	21	0	0	21	27	0	0	27	82	0	0	82	19	0	0	19	804	5	0	809
430-445	49	0	0	49	220	4	0	224	27	0	0	27	18	0	0	18	62	0	0	62	22	0	0	22	874	10	1	885
445-500	67	0	0	67	229	4	0	233	27	0	0	27	16	0	0	16	67	0	0	67	24	0	0	24	902	14	0	916
500-515	55	0	0	55	265	5	0	270	23	0	0	23	11	0	0	11	71	0	0	71	34	0	0	34	941	11	0	952
515-530	40	1	0	41	287	5	0	292	27	1	0	28	16	0	0	16	63	0	0	63	16	0	0	16	838	9	0	847
530-545	53	0	0	53	256	6	0	262	24	0	0	24	19	0	0	19	75	0	0	75	21	0	0	21	881	15	0	896
545-600	35	0	0	35	251	2	0	253	25	0	1	26	24	0	0	24	53	1	0	54	15	0	0	15	891	7	2	900
HOUR TOTALS																												
300-400	163	2	1	166	1013	13	1	1027	100	0	0	100	81	0	0	81	235	2	1	238	72	0	0	72	3330	37	6	3373
315-415	145	1	1	147	990	18	1	1009	102	1	0	103	78	0	0	78	247	2	0	249	70	0	0	70	3318	49	5	3372
330-430	148	1	1	150	968	19	1	988	96	1	0	97	91	0	0	91	267	0	0	267	69	0	0	69	3342	43	4	3389
345-445	149	0	0	149	937	19	1	957	102	1	0	103	86	0	0	86	258	0	0	258	74	0	0	74	3366	45	2	3413
400-500	180	0	0	180	899	19	1	919	102	1	0	103	84	0	0	84	282	0	0	282	83	0	0	83	3453	49	2	3504
415-515	209	0	0	209	927	17	0	944	98	0	0	98	72	0	0	72	282	0	0	282	99	0	0	99	3521	40	1	3562
430-530	211	1	0	212	1001	18	0	1019	104	1	0	105	61	0	0	61	263	0	0	263	96	0	0	96	3555	44	1	3600
445-545	215	1	0	216	1037	20	0	1057	101	1	0	102	62	0	0	62	276	0	0	276	95	0	0	95	3562	49	0	3611
500-600	183	1	0	184	1059	18	0	1077	99	1	1	101	70	0	0	70	262	1	0	263	86	0	0	86	3551	42	2	3595

CONSOLIDATED VEHICLE COUNTS

15 MIN COUNTS	1	2	3	4	5	6	7	8	9	10	11	12	
PERIOD	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTAL
300-315	15	308	22	14	51	46	45	263	25	26	60	20	895
315-330	23	251	12	11	54	43	35	238	27	14	64	20	792
330-345	9	291	14	6	54	50	50	255	21	23	71	17	861
345-400	18	298	20	6	41	32	36	271	27	18	43	15	825
400-415	10	331	15	11	68	48	26	245	28	23	71	18	894
415-430	10	271	21	11	44	48	38	217	21	27	82	19	809
430-445	12	348	14	15	52	42	49	224	27	18	62	22	885
445-500	20	362	17	7	37	39	67	233	27	16	67	24	916
500-515	13	348	13	14	55	45	55	270	23	11	71	34	952
515-530	11	293	10	5	38	34	41	292	28	16	63	16	847
530-545	16	326	11	7	50	32	53	262	24	19	75	21	896
545-600	15	344	25	15	56	38	35	253	26	24	54	15	900
HOUR TOTALS	1	2	3	4	5	6	7	8	9	10	11	12	
PERIOD	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTAL
300-400	65	1148	68	37	200	171	166	1027	100	81	238	72	3373
315-415	60	1171	61	34	217	173	147	1009	103	78	249	70	3372
330-430	47	1191	70	34	207	178	150	988	97	91	267	69	3389
345-445	50	1248	70	43	205	170	149	957	103	86	258	74	3413
400-500	52	1312	67	44	201	177	180	919	103	84	282	83	3504
415-515	55	1329	65	47	188	174	209	944	98	72	282	99	3562
430-530	56	1351	54	41	182	160	212	1019	105	61	263	96	3600
445-545	60	1329	51	33	180	150	216	1057	102	62	276	95	3611
500-600	55	1311	59	41	199	149	184	1077	101	70	263	86	3595

AM PEAK HOUR: 445-545



APPROACH SUMMARIES

	NORTH APRCH			EAST APRCH			SOUTH APRCH			WEST APRCH	
	APRCH	EXIT		APRCH	EXIT		APRCH	EXIT		APRCH	EXIT
300-400	1281	1136		408	472		1293	1400		391	365
315-415	1292	1113		424	457		1259	1422		397	380
330-430	1308	1091		419	487		1235	1460		427	351
345-445	1368	1074		418	477		1209	1504		418	358
400-500	1431	1046		422	529		1202	1573		449	356
415-515	1449	1090		409	556		1251	1575		453	341
430-530	1461	1156		383	529		1336	1572		420	343
445-545	1440	1185		363	543		1375	1541		433	342
500-600	1425	1204		389	506		1362	1530		419	355

WILTEC

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INTERSECTION PEDESTRIAN AND BICYCLE COUNT SUMMARY

CLIENT: GIBSON TRANSPORTATION CONSULTING, INC.
PROJECT: WESTCHESTER TRAFFIC COUNTS
DATE: WEDNESDAY MAY 11, 2022
PERIOD: 3:00 PM to 6:00 PM
INTERSECTION: N/S SEPULVEDA BOULEVARD
E/W LA TIJERA BOULEVARD

PEDESTRIAN COUNTS

15 MIN COUNTS	NORTH LEG		EAST LEG		SOUTH LEG		WEST LEG		
PERIOD	EB	WB	NB	SB	EB	WB	NB	SB	TOTALS
300-315	8	4	6	3	2	3	4	3	33
315-330	2	2	4	1	5	2	4	2	22
330-345	2	0	4	5	3	6	1	1	22
345-400	1	0	6	1	0	4	7	2	21
400-415	2	1	2	2	4	2	2	3	18
415-430	0	3	1	5	4	2	3	4	22
430-445	3	4	5	2	3	0	5	1	23
445-500	1	2	6	3	1	0	0	4	17
500-515	1	2	6	2	3	2	3	2	21
515-530	0	0	1	6	3	4	1	2	17
530-545	4	0	3	3	1	5	6	5	27
545-600	0	3	2	1	2	3	1	5	17
HOUR TOTALS	NORTH LEG		EAST LEG		SOUTH LEG		WEST LEG		
PERIOD	EB	WB	NB	SB	EB	WB	NB	SB	TOTALS
300-400	13	6	20	10	10	15	16	8	98
315-415	7	3	16	9	12	14	14	8	83
330-430	5	4	13	13	11	14	13	10	83
345-445	6	8	14	10	11	8	17	10	84
400-500	6	10	14	12	12	4	10	12	80
415-515	5	11	18	12	11	4	11	11	83
430-530	5	8	18	13	10	6	9	9	78
445-545	6	4	16	14	8	11	10	13	82
500-600	5	5	12	12	9	14	11	14	82

BICYCLE COUNTS

15 MIN COUNTS	NORTH LEG		EAST LEG		SOUTH LEG		WEST LEG		
PERIOD	EB	WB	NB	SB	EB	WB	NB	SB	TOTAL
300-315	0	0	0	0	0	0	0	0	0
315-330	0	0	0	0	0	0	0	0	0
330-345	0	0	0	0	0	0	0	0	0
345-400	0	0	0	0	0	0	0	1	1
400-415	0	0	0	1	0	0	0	0	1
415-430	0	0	0	0	0	0	0	1	1
430-445	0	0	1	0	0	0	0	0	1
445-500	0	0	0	0	0	0	0	0	0
500-515	0	0	0	0	0	0	0	0	0
515-530	0	0	0	0	0	0	0	0	0
530-545	0	0	0	0	0	2	0	0	2
545-600	0	1	0	0	0	0	0	0	1
HOUR TOTALS	NORTH LEG		EAST LEG		SOUTH LEG		WEST LEG		
PERIOD	EB	WB	NB	SB	EB	WB	NB	SB	TOTAL
300-400	0	0	0	0	0	0	0	1	1
315-415	0	0	0	1	0	0	0	1	2
330-430	0	0	0	1	0	0	0	2	3
345-445	0	0	1	1	0	0	0	2	4
400-500	0	0	1	1	0	0	0	1	3
415-515	0	0	1	0	0	0	0	1	2
430-530	0	0	1	0	0	0	0	0	1
445-545	0	0	0	0	0	2	0	0	2
500-600	0	1	0	0	0	2	0	0	3

INTERSECTION TURNING MOVEMENT COUNT SUMMARY

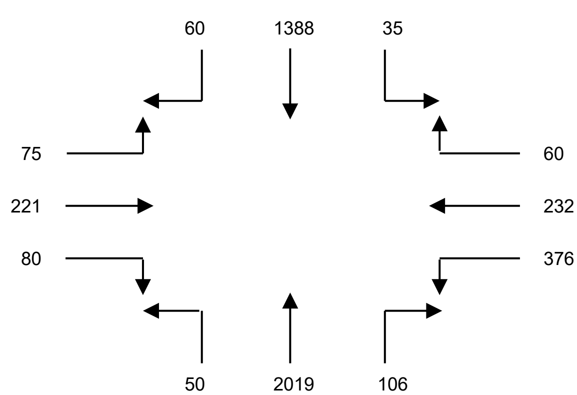
CLIENT: OVERLAND TRAFFIC CONSULTANTS
PROJECT: WESTCHESTER
DATE: WEDNESDAY, SEPTEMBER 20, 2017
PERIOD: 07:00 AM TO 10:00 AM
INTERSECTION: N/S SEPULVEDA BOULEVARD
E/W LA TIJERA BOULEVARD
FILE NUMBER: 9-AM

15 MINUTE	1	2	3	4	5	6	7	8	9	10	11	12
TOTALS	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT
0700-0715	9	279	7	15	38	95	20	524	9	3	24	9
0715-0730	10	287	5	16	59	105	22	493	12	7	37	15
0730-0745	13	319	6	10	87	82	19	533	19	17	50	13
0745-0800	19	332	5	19	71	105	27	528	11	18	65	14
0800-0815	12	301	5	10	54	83	33	510	11	17	63	20
0815-0830	11	369	10	13	61	98	26	502	11	24	43	20
0830-0845	18	386	15	18	46	90	20	479	17	21	50	21
0845-0900	13	320	12	21	57	102	31	493	19	13	57	14
0900-0915	20	311	16	16	53	98	21	452	19	14	43	15
0915-0930	22	272	16	20	49	100	33	433	16	19	41	16
0930-0945	21	319	22	27	47	109	24	369	15	16	37	13
0945-1000	20	356	19	21	54	84	15	395	10	14	44	12

1 HOUR	1	2	3	4	5	6	7	8	9	10	11	12	
TOTALS	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTALS
0700-0800	51	1217	23	60	255	387	88	2078	51	45	176	51	4482
0715-0815	54	1239	21	55	271	375	101	2064	53	59	215	62	4569
0730-0830	55	1321	26	52	273	368	105	2073	52	76	221	67	4689
0745-0845	60	1388	35	60	232	376	106	2019	50	80	221	75	4702
0800-0900	54	1376	42	62	218	373	110	1984	58	75	213	75	4640
0815-0915	62	1386	53	68	217	388	98	1926	66	72	193	70	4599
0830-0930	73	1289	59	75	205	390	105	1857	71	67	191	66	4448
0845-0945	76	1222	66	84	206	409	109	1747	69	62	178	58	4286
0900-1000	83	1258	73	84	203	391	93	1649	60	63	165	56	4178

A.M. PEAK HOUR
0745-0845

LA TIJERA BOULEVARD



SEPULVEDA BOULEVARD

DATA PROVIDED BY:

THE TRAFFIC SOLUTION
329 DIAMOND STREET
ARCADIA, CALIFORNIA 91005
PH: 626-446-7978
FAX: 626-446-2877

.

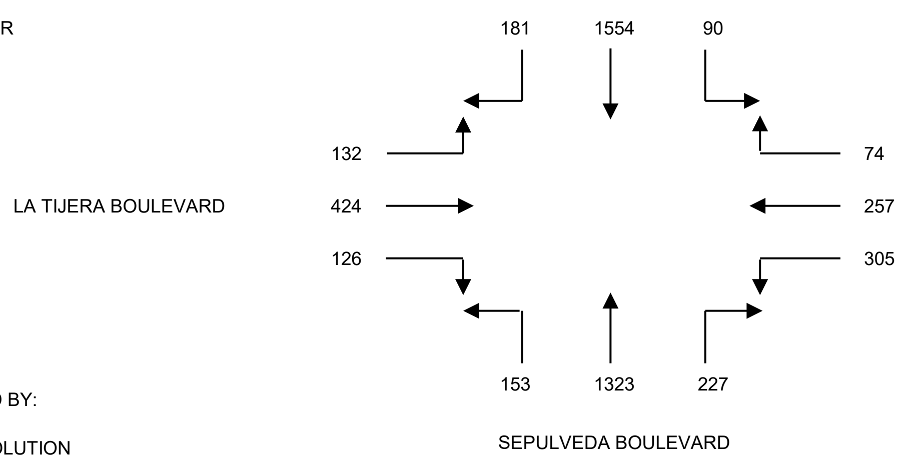
INTERSECTION TURNING MOVEMENT COUNT SUMMARY

CLIENT: OVERLAND TRAFFIC CONSULTANTS
PROJECT: WESTCHESTER
DATE: WEDNESDAY, SEPTEMBER 20, 2017
PERIOD: 03:00 PM TO 06:00 PM
INTERSECTION: N/S SEPULVEDA BOULEVARD
E/W LA TIJERA BOULEVARD
FILE NUMBER: 9-PM

15 MINUTE	1	2	3	4	5	6	7	8	9	10	11	12
TOTALS	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT
0300-0315	37	360	16	33	65	68	42	344	33	30	93	20
0315-0330	31	385	20	27	65	67	32	306	27	25	97	22
0330-0345	32	390	20	35	60	85	46	310	32	22	95	20
0345-0400	23	356	16	24	44	95	54	314	20	23	103	15
0400-0415	45	392	22	23	65	85	48	320	36	20	104	23
0415-0430	46	363	27	23	69	80	58	285	27	22	95	18
0430-0445	39	381	19	21	56	66	46	278	32	21	100	22
0445-0500	38	406	25	20	56	51	52	300	30	21	91	31
0500-0515	41	399	25	18	67	69	62	342	41	26	108	32
0515-0530	44	353	15	19	62	84	57	367	40	38	109	38
0530-0545	51	391	21	18	66	82	58	321	36	34	105	35
0545-0600	45	411	29	19	62	70	50	293	36	28	102	27

1 HOUR	1	2	3	4	5	6	7	8	9	10	11	12	
TOTALS	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTALS
0300-0400	123	1491	72	119	234	315	174	1274	112	100	388	77	4479
0315-0415	131	1523	78	109	234	332	180	1250	115	90	399	80	4521
0330-0430	146	1501	85	105	238	345	206	1229	115	87	397	76	4530
0345-0445	153	1492	84	91	234	326	206	1197	115	86	402	78	4464
0400-0500	168	1542	93	87	246	282	204	1183	125	84	390	94	4498
0415-0515	164	1549	96	82	248	266	218	1205	130	90	394	103	4545
0430-0530	162	1539	84	78	241	270	217	1287	143	106	408	123	4658
0445-0545	174	1549	86	75	251	286	229	1330	147	119	413	136	4795
0500-0600	181	1554	90	74	257	305	227	1323	153	126	424	132	4846

P.M. PEAK HOUR
0500-0600



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PH: 626-446-7978
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INTERSECTION TURNING MOVEMENT COUNT SUMMARY

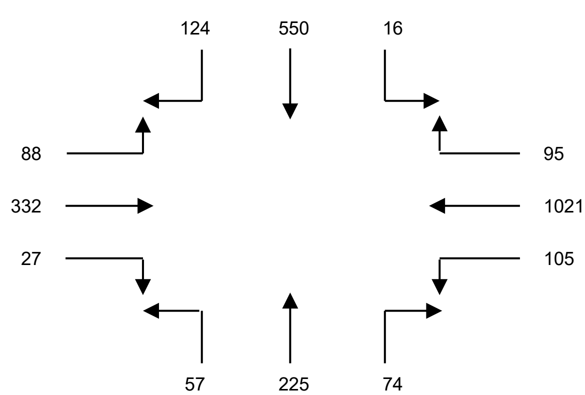
CLIENT: OVERLAND TRAFFIC CONSULTANTS
PROJECT: WESTCHESTER
DATE: THURSDAY, SEPTEMBER 21, 2017
PERIOD: 07:00 AM TO 10:00 AM
INTERSECTION: N/S LA TIJERA BOULEVARD
E/W MANCHESTER AVENUE
FILE NUMBER: 5-AM

15 MINUTE	1	2	3	4	5	6	7	8	9	10	11	12
TOTALS	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT
0700-0715	30	127	4	7	304	24	14	38	13	4	59	14
0715-0730	33	139	3	15	298	26	9	48	10	5	71	17
0730-0745	30	147	2	29	254	26	14	56	16	6	81	25
0745-0800	33	142	4	26	259	28	23	57	13	6	94	24
0800-0815	28	122	7	25	210	25	28	64	18	10	86	22
0815-0830	27	118	11	20	229	35	25	54	18	13	82	21
0830-0845	31	126	6	21	246	42	28	62	8	12	90	23
0845-0900	30	124	4	14	223	48	26	53	11	13	93	30
0900-0915	34	106	3	10	200	40	21	46	11	14	95	22
0915-0930	49	116	5	10	210	36	27	43	15	25	118	34
0930-0945	40	118	11	14	205	37	31	39	15	35	121	27
0945-1000	38	120	7	11	196	37	28	34	12	21	130	35

1 HOUR	1	2	3	4	5	6	7	8	9	10	11	12	
TOTALS	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTALS
0700-0800	126	555	13	77	1115	104	60	199	52	21	305	80	2707
0715-0815	124	550	16	95	1021	105	74	225	57	27	332	88	2714
0730-0830	118	529	24	100	952	114	90	231	65	35	343	92	2693
0745-0845	119	508	28	92	944	130	104	237	57	41	352	90	2702
0800-0900	116	490	28	80	908	150	107	233	55	48	351	96	2662
0815-0915	122	474	24	65	898	165	100	215	48	52	360	96	2619
0830-0930	144	472	18	55	879	166	102	204	45	64	396	109	2654
0845-0945	153	464	23	48	838	161	105	181	52	87	427	113	2652
0900-1000	161	460	26	45	811	150	107	162	53	95	464	118	2652

A.M. PEAK HOUR
0715-0815

MANCHESTER AVENUE



LA TIJERA BOULEVARD

DATA PROVIDED BY:

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329 DIAMOND STREET
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FAX: 626-446-2877
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INTERSECTION TURNING MOVEMENT COUNT SUMMARY

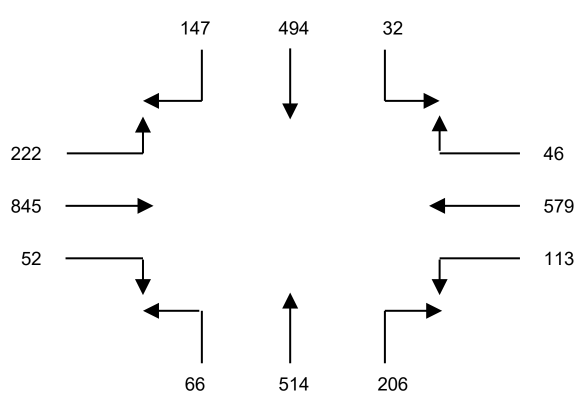
CLIENT:		OVERLAND TRAFFIC CONSULTANTS
PROJECT:		WESTCHESTER
DATE:		THURSDAY, SEPTEMBER 21, 2017
PERIOD:		03:00 PM TO 06:00 PM
INTERSECTION:	N/S	LA TIJERA BOULEVARD
	E/W	MANCHESTER AVENUE
FILE NUMBER:		5-PM

15 MINUTE	1	2	3	4	5	6	7	8	9	10	11	12
TOTALS	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT
0300-0315	23	100	6	11	148	35	51	98	13	7	175	40
0315-0330	30	109	10	8	131	42	53	112	11	13	234	40
0330-0345	46	114	12	9	113	31	59	115	12	12	183	45
0345-0400	39	117	6	11	132	53	61	108	19	12	206	50
0400-0415	21	107	5	12	139	30	48	119	14	10	240	50
0415-0430	27	109	5	8	136	25	52	127	12	14	228	55
0430-0445	34	100	10	12	121	27	46	131	19	9	227	48
0445-0500	38	105	7	10	151	24	51	128	12	12	233	50
0500-0515	37	110	10	12	152	28	53	126	10	9	220	57
0515-0530	40	135	7	11	141	34	54	130	14	13	214	54
0530-0545	39	124	9	10	135	29	44	122	22	15	211	58
0545-0600	31	125	6	13	151	22	55	136	20	15	200	53

1 HOUR	1	2	3	4	5	6	7	8	9	10	11	12	
TOTALS	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTALS
0300-0400	138	440	34	39	524	161	224	433	55	44	798	175	3065
0315-0415	136	447	33	40	515	156	221	454	56	47	863	185	3153
0330-0430	133	447	28	40	520	139	220	469	57	48	857	200	3158
0345-0445	121	433	26	43	528	135	207	485	64	45	901	203	3191
0400-0500	120	421	27	42	547	106	197	505	57	45	928	203	3198
0415-0515	136	424	32	42	560	104	202	512	53	44	908	210	3227
0430-0530	149	450	34	45	565	113	204	515	55	43	894	209	3276
0445-0545	154	474	33	43	579	115	202	506	58	49	878	219	3310
0500-0600	147	494	32	46	579	113	206	514	66	52	845	222	3316

P.M. PEAK HOUR
0500-0600

MANCHESTER AVENUE



LA TIJERA BOULEVARD

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INTERSECTION TURNING MOVEMENT COUNT SUMMARY

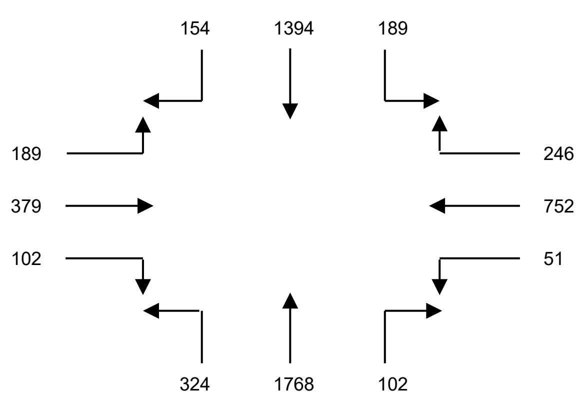
CLIENT: OVERLAND TRAFFIC CONSULTANTS
PROJECT: WESTCHESTER
DATE: WEDNESDAY, SEPTEMBER 20, 2017
PERIOD: 07:00 AM TO 10:00 AM
INTERSECTION: N/S SEPULVEDA BOULEVARD
E/W MANCHESTER AVENUE
FILE NUMBER: 4-AM

15 MINUTE	1	2	3	4	5	6	7	8	9	10	11	12
TOTALS	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT
0700-0715	16	251	16	60	207	14	10	461	41	12	75	35
0715-0730	32	283	25	77	196	10	15	537	55	10	80	31
0730-0745	49	290	30	75	213	11	25	496	79	13	88	21
0745-0800	46	333	47	56	194	10	31	430	93	19	89	39
0800-0815	33	344	33	50	181	11	30	414	88	29	91	41
0815-0830	38	378	50	67	183	15	21	473	82	34	97	50
0830-0845	37	339	59	73	194	15	20	451	61	20	102	59
0845-0900	31	284	42	58	179	11	26	434	67	23	92	36
0900-0915	37	303	40	73	198	16	22	381	54	24	95	36
0915-0930	37	266	26	63	212	20	26	340	41	22	108	33
0930-0945	41	330	36	52	180	21	24	388	45	24	105	33
0945-1000	40	308	43	61	154	16	25	348	37	26	99	48

1 HOUR	1	2	3	4	5	6	7	8	9	10	11	12	
TOTALS	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTALS
0700-0800	143	1157	118	268	810	45	81	1924	268	54	332	126	5326
0715-0815	160	1250	135	258	784	42	101	1877	315	71	348	132	5473
0730-0830	166	1345	160	248	771	47	107	1813	342	95	365	151	5610
0745-0845	154	1394	189	246	752	51	102	1768	324	102	379	189	5650
0800-0900	139	1345	184	248	737	52	97	1772	298	106	382	186	5546
0815-0915	143	1304	191	271	754	57	89	1739	264	101	386	181	5480
0830-0930	142	1192	167	267	783	62	94	1606	223	89	397	164	5186
0845-0945	146	1183	144	246	769	68	98	1543	207	93	400	138	5035
0900-1000	155	1207	145	249	744	73	97	1457	177	96	407	150	4957

A.M. PEAK HOUR
0745-0845

MANCHESTER AVENUE



SEPULVEDA BOULEVARD

DATA PROVIDED BY:

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INTERSECTION TURNING MOVEMENT COUNT SUMMARY

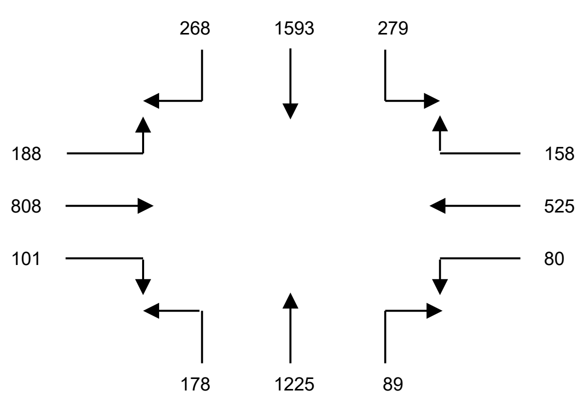
CLIENT: OVERLAND TRAFFIC CONSULTANTS
PROJECT: WESTCHESTER
DATE: WEDNESDAY, SEPTEMBER 20, 2017
PERIOD: 03:00 PM TO 06:00 PM
INTERSECTION: N/S SEPULVEDA BOULEVARD
E/W MANCHESTER AVENUE
FILE NUMBER: 4-PM

15 MINUTE	1	2	3	4	5	6	7	8	9	10	11	12
TOTALS	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT
0300-0315	66	336	61	48	125	22	23	310	44	39	148	49
0315-0330	46	378	53	39	107	21	20	292	30	31	163	67
0330-0345	59	364	74	39	135	29	23	317	39	30	153	51
0345-0400	47	335	69	37	128	20	27	281	33	33	186	53
0400-0415	42	386	59	43	131	25	38	281	32	31	184	59
0415-0430	57	386	67	39	108	18	31	273	33	30	208	63
0430-0445	69	375	65	26	134	24	24	280	51	23	213	46
0445-0500	53	427	76	37	112	21	21	281	48	28	224	42
0500-0515	89	405	65	43	134	20	25	317	36	21	180	46
0515-0530	62	322	67	34	128	17	24	278	45	28	196	41
0530-0545	64	439	71	44	151	22	19	349	49	24	208	59
0545-0600	67	452	83	30	112	18	23	276	41	22	187	39

1 HOUR	1	2	3	4	5	6	7	8	9	10	11	12	
TOTALS	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTALS
0300-0400	218	1413	257	163	495	92	93	1200	146	133	650	220	5080
0315-0415	194	1463	255	158	501	95	108	1171	134	125	686	230	5120
0330-0430	205	1471	269	158	502	92	119	1152	137	124	731	226	5186
0345-0445	215	1482	260	145	501	87	120	1115	149	117	791	221	5203
0400-0500	221	1574	267	145	485	88	114	1115	164	112	829	210	5324
0415-0515	268	1593	273	145	488	83	101	1151	168	102	825	197	5394
0430-0530	273	1529	273	140	508	82	94	1156	180	100	813	175	5323
0445-0545	268	1593	279	158	525	80	89	1225	178	101	808	188	5492
0500-0600	282	1618	286	151	525	77	91	1220	171	95	771	185	5472

P.M. PEAK HOUR
0445-0545

MANCHESTER AVENUE



SEPULVEDA BOULEVARD

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Appendix C

Threshold T-1 Evaluation

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:

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 76' Roadway/ 12' Sidewalk Required 80' Roadway / 15' Sidewalk Proposed 5' dedication to PROW
Project frontages on La Tijera Boulevard

Frontage 2 Existing PROW'/Curb' : Existing 36' Roadway/ 12' Sidewalk Required 36' Roadway/ 12' Sidewalk Proposed No Change
Project frontages on Truxton Avenue

Frontage 3 Existing PROW'/Curb' : Existing 84' Roadway/ 8' Sidewalk Required 70' Roadway/ 15' Sidewalk Proposed 5' dedication to PROW
Project frontages on Manchester Avenue

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?

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

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

[1] LADOT Transportation Assessment Support Map https://arcg.is/fubbD

B.1 Does the project 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 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
- 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 feet[2] 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
- 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

[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.

[3] LADOT Transportation Assessment Support Map https://arcg.is/fubbD

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 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.*

Mobility Plan 2035 Policy 4.13 *– Parking and Land Use Management: Balance on-street and off-street parking supply with other transportation and land use objectives.*

D.1 Would the project propose a supply of onsite parking that exceeds the baseline amount[4] as required in the Los Angeles Municipal Code or a Specific plan, whichever requirement prevails?

☐ Yes ☑ No

D.2 If the answer to D.1. is YES, would the project propose to actively manage the demand of parking by independently pricing the supply to all users (e.g. parking cash-out), or for residential properties, unbundle the supply from the lease or sale of residential units?

☐ Yes ☐ **No** ☑ N/A

If the answer to **D.2. is NO** the project may conflict with parking management policies. Further analysis is needed to demonstrate how the supply of parking above city requirements will not result in additional (induced) drive-alone trips as compared to an alternative that provided no more parking than the baseline required by the LAMC or Specific Plan. If there is potential for the supply of parking to result in induced demand for drive-alone trips, the project should further explore transportation demand management (TDM) measures to further off-set the induced demands of driving and vehicle miles travelled (VMT) that may result from higher amounts of on-site parking. The TDM measures should specifically focus on strategies that encourage dynamic and context-sensitive pricing solutions and ensure the parking is efficiently allocated, such as providing real time information. Research has demonstrated that charging a user cost for parking or providing a 'cash-out' option in return for not using it is the most effective strategy to reduce the instances of drive-alone trips and increase non-auto mode share to further reduce VMT. To ensure the parking is efficiently managed and reduce the need to build parking for future uses, further strategies should include sharing parking with other properties and/or the general public.

D.3. Would the project provide the minimum on and off-site bicycle parking spaces as required by Section 12.21 A.16 of the LAMC?

☑ Yes ☐ **No**

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[4] The baseline parking is defined here as the default parking requirements in section 12.21 A.4 of the Los Angeles Municipal Code or any applicable Specific Plan, whichever prevails, for each applicable use not taking into consideration other parking incentives to reduce the amount of required parking.

D.4. Does the Project include more than 25,000 square feet of gross floor area construction of new non-residential gross floor?

☐ Yes ☑ No

D.5 If the answer to D.4. is YES, does the project comply with the City's TDM Ordinance in Section 12.26 J of the LAMC?

☐ Yes ☐ **No** ☑ N/A

If the answer to **D.3. or D.5. is NO** the project conflicts with LAMC code requirements of bicycle parking and TDM measures. If the project includes uses that require bicycle parking (Section 12.21 A.16) or TDM (Section 12.26 J), and the project does not comply with those Sections of the LAMC, further analysis is required to ensure that the project supports the intent of the two LAMC sections. To meet the intent of bicycle parking requirements, the analysis should identify how the project commits to providing safe access to those traveling by bicycle and accommodates storing their bicycle in locations that demonstrates priority over vehicle access.

Similarly, to meet the intent of the TDM requirements of Section 12.26 J of the LAMC, the analysis should identify how the project commits to providing effective strategies in either physical facilities or programs that encourage non-drive alone trips to and from the project site and changes in work schedule that move trips out of the peak period or eliminate them altogether (as in the case in telecommuting or compressed work weeks).

E. Consistency with Regional Plans

This section addresses potential inconsistencies with greenhouse gas (GHG) reduction targets forecasted in the Southern California Association of Governments (SCAG) Regional Transportation Plan (RTP) / Sustainable Communities Strategy (SCS).

E.1 Does the Project or Plan apply one the City's efficiency-based impact thresholds (i.e. VMT per capita, VMT per employee, or VMT per service population) as discussed in Section 2.2.3 of the TAG?

☑ Yes ☐ No

E.2 If the Answer to E.1 is YES, does the Project or Plan result in a significant VMT impact?

☐ Yes ☑ No ☐ N/A

E.3 If the Answer to E.1 is NO, does the Project result in a net increase in VMT?

☐ Yes ☐ No ☑ N/A

If the Answer to E.2 or E.3 is NO, then the Project or Plan is shown to align with the long-term VMT and GHG reduction goals of SCAG's RTP/SCS.

E.4 If the Answer to E.2 or E.3 is YES, then further evaluation would be necessary to determine whether such a project or land use plan would be shown to be consistent with VMT and GHG reduction goals of the SCAG RTP/SCS. For the purpose of making a finding that a project is consistent with the GHG reduction targets forecasted in the SCAG RTP/SCS, the project analyst should consult Section 2.2.4 of the Transportation Assessment Guidelines (TAG). Section 2.2.4 provides the methodology for evaluating a land use project's cumulative impacts to VMT, and the appropriate reliance on SCAG's most recently adopted RTP/SCS in reaching that conclusion.

The analysis methods therein can further support findings that the project is consistent with the general use designation, density, building intensity, and applicable policies specified for the project area in either a sustainable communities strategy or an alternative planning strategy for which the State Air Resources Board, pursuant to Section 65080(b)(2)(H) of the Government Code, has accepted a metropolitan planning organization's determination that the sustainable communities strategy or the alternative planning strategy would, if implemented, achieve the greenhouse gas emission reduction targets.

References

BOE Street Standard Dimensions S-470-1 http://eng2.lacity.org/techdocs/stdplans/s-400/S-470-1_20151021_150849.pdf

LADCP Citywide Design Guidelines. https://planning.lacity.org/odocument/f6608be7-d5fe-4187-bea6-20618eec5049/Citywide_Design_Guidelines.pdf

LADOT Transportation Assessment Support Map https://arcg.is/fubbD

Mobility Plan 2035 https://planning.lacity.org/odocument/523f2a95-9d72-41d7-aba5-1972f84c1d36/Mobility_Plan_2035.pdf

SCAG. Connect SoCal, 2020-2045 RTP/SCS, https://www.connectsocal.org/Pages/default.aspx

ATTACHMENT D.1: CITY PLAN, POLICIES AND GUIDELINES

The Transportation Element of the City's General Plan, Mobility Plan 2035, established the "Complete Streets Design Guide" as the City's document to guide the operations and design of streets and other public rights-of-way. It lays out a vision for designing safer, more vibrant streets that are accessible to people, no matter what their mode choice. As a living document, it is intended to be frequently updated as City departments identify and implement street standards and experiment with different configurations to promote complete streets. The guide is meant to be a toolkit that provides numerous examples of what is possible in the public right-of-way and that provides guidance on context-sensitive design.

The Plan for A Healthy Los Angeles (March 2015) includes policies directing several City departments to develop plans that promote active transportation and safety.

The City of Los Angeles Community Plans, which make up the Land Use Element of the City's General Plan, guide the physical development of neighborhoods by establishing the goals and policies for land use. The 35 Community Plans provide specific, neighborhood-level detail for land uses and the transportation network, relevant policies, and implementation strategies necessary to achieve General Plan and community-specific objectives.

The stated goal of Vision Zero is to eliminate traffic-related deaths in Los Angeles by 2025 through a number of strategies, including modifying the design of streets to increase the safety of vulnerable road users. Extensive crash data analysis is conducted on an ongoing basis to prioritize intersections and corridors for implementation of projects that will have the greatest effect on overall fatality reduction. The City designs and deploys Vision Zero Corridor Plans as part of the implementation of Vision Zero. If a project is proposed whose site lies on the High Injury Network (HIN), the applicant should consult with LADOT to inform the project's site plan and to determine appropriate improvements, whether by funding their implementation in full or by making a contribution toward their implementation.

The Citywide Design Guidelines (October 24, 2019) includes sections relevant to development projects where improvements are proposed within the public realm. Specifically, Guidelines one through three provide building design strategies that support the pedestrian experience. The Guidelines provide best practices in designing that apply in three spatial categories of site planning, building design and public right of way. The Guidelines should be followed to ensure that the project design supports pedestrian safety, access and comfort as they access to and from the building and the immediate public right of way.

The City's Transportation Demand Management (TDM) Ordinance (LA Municipal Code 12.26.J) requires certain projects to incorporate strategies that reduce drive-alone vehicle trips and improve access to destinations and services. The ordinance is revised and updated periodically and should be reviewed for application to specific projects as they are reviewed.

The City's LAMC Section 12.37 (Waivers of Dedication and Improvement) requires certain projects to dedicate and/or implement improvements within the public right-of-way to meet the street designation standards of the Mobility Plan 2035.

The Bureau of Engineering (BOE) Street Standard Dimensions S-470-1 provides the specific street widths and public right of way dimensions associated with the City's street standards.

Appendix D

Vehicle Miles Traveled Worksheets

CITY OF LOS ANGELES VMT CALCULATOR Version 1.3

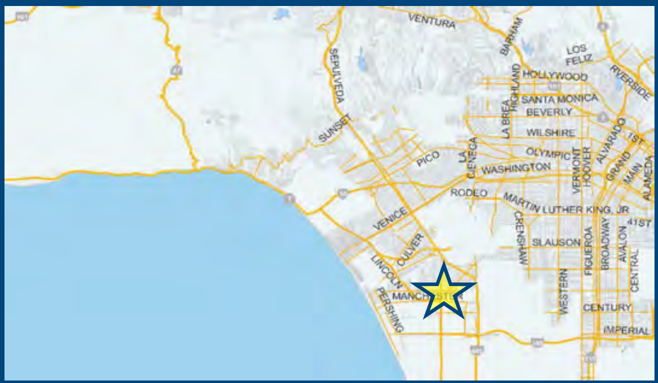
Project Screening Criteria: Is this project required to conduct a vehicle miles traveled analysis?

Project Information

Project: Proposed Mixed use

Scenario: 375 DU, 66 Aff DU & 16.6ksf commercial

Address: 6136 W MANCHESTER AVE, 90045



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
Retail | Auto Repair	19.65	ksf
Retail | Fast-Food Restaurant	2.165	ksf
Retail | Auto Repair	19.65	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
Housing | Affordable Housing - Family	66	DU
Housing | Multi-Family	375	DU
Retail | General Retail	5.5	ksf
Retail | High-Turnover Sit-Down Restaurant	11.1	ksf
Housing | Affordable Housing - Family	66	DU

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

Project Screening Summary

Existing Land Use	Proposed
1,357 Daily Vehicle Trips	**3,589** Daily Vehicle Trips
10,373 Daily VMT	**26,521** 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	2,232 Net Daily Trips
The net increase in daily VMT ≤ 0	16,148 Net Daily VMT
The proposed project consists of only retail land uses ≤ 50,000 square feet total.	16.600 ksf

The proposed project is required to perform VMT analysis.

Measuring the Miles

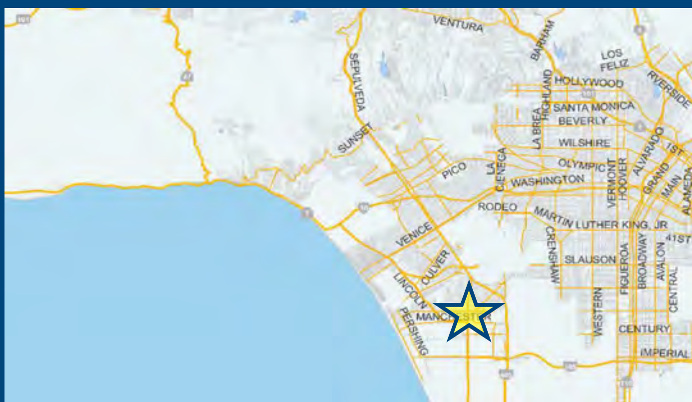
CITY OF LOS ANGELES VMT CALCULATOR Version 1.3

Project Information

Project: Proposed Mixed use

Scenario: 375 DU, 66 Aff DU & 16.6ksf commercial

Address: 6136 W MANCHESTER AVE, 90045



Proposed Project Land Use Type	Value	Unit
Housing | Multi-Family		
Retail | General Retail		
Retail | High-Turnover Sit-Down Restaurant		
Housing | Affordable Housing - Family		

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

Analysis Results

Proposed Project	With Mitigation
3,173 Daily Vehicle Trips	**3,173** Daily Vehicle Trips
23,451 Daily VMT	**23,451** Daily VMT
6.9 Household VMT per Capita	**6.9** Household VMT per Capita
N/A Work VMT per Employee	**N/A** Work VMT per Employee

Significant VMT Impact?

Household: No Threshold = 7.4 15% Below APC	**Household: No** Threshold = 7.4 15% Below APC
Work: N/A Threshold = 11.1 15% Below APC	**Work: N/A** Threshold = 11.1 15% Below APC

Measuring the Miles

5/18/2022

Project Information

Land Use Type		Value	Units
Housing	*Single Family*	*0*	*DU*
	Multi Family	375	DU
	Townhouse	*0*	*DU*
	Hotel	*0*	*Rooms*
	Motel	*0*	*Rooms*
Affordable Housing	Family	66	DU
	Senior	*0*	*DU*
	Special Needs	*0*	*DU*
	Permanent Supportive	*0*	*DU*
Retail	General Retail	5.500	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	11.100	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*	*0.000*	*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*
	Private School (K-12)	*0*	*Students*
Other		*0*	*Trips*

CITY OF LOS ANGELES VMT CALCULATOR

Report 1: Project & Analysis Overview

Date: May 18, 2022
Project Name: Proposed Mixed use
Project Scenario: 375 DU, 66 Aff DU & 16.6ksf commercia
Project Address: 6136 W MANCHESTER AVE, 90045

Version 1.3

Analysis Results

Total Employees: 55
Total Population: 1,052

Proposed Project		*With Mitigation*	
3,173	**Daily Vehicle Trips**	**3,173**	**Daily Vehicle Trips**
23,451	**Daily VMT**	**23,451**	**Daily VMT**
6.9	**Household VMT per Capita**	**6.9**	**Household VMT per Capita**
N/A	**Work VMT per Employee**	**N/A**	**Work VMT per Employee**

Significant VMT Impact?

APC: West Los Angeles

Impact Threshold: 15% Below APC Average
Household = 7.4
Work = 11.1

Proposed Project		*With Mitigation*	
VMT Threshold	**Impact**	**VMT Threshold**	**Impact**
Household > 7.4	No	Household > 7.4	No
Work > 11.1	N/A	Work > 11.1	N/A

TDM Strategy Inputs

Strategy Type		Description	Proposed Project	Mitigations
Parking	Reduce parking supply	City code parking provision (spaces)	726	726
		Actual parking provision (spaces)	566	566
	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)

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 (%)*	*0%*	*0%*

(cont. on following page)

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*
	Employer sponsored vanpool or shuttle	*Degree of implementation (low, medium, high)*	*0*	*0*
		Employees eligible (%)	*0%*	*0%*
		Employer size (small, medium, large)	*0*	*0*
	Ride-share program	*Employees eligible (%)*	*0%*	*0%*
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)

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 improvements (%)*	*0%*	*0%*
		Intersections with traffic calming improvements (%)	*0%*	*0%*
	Pedestrian network improvements	*Included (within project and connecting off-site/within project only)*	*0*	*0*

CITY OF LOS ANGELES VMT CALCULATOR

Report 3: TDM Outputs

Version 1.3

TDM Adjustments by Trip Purpose & Strategy

Place type: Suburban Center

		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	11%	11%	11%	11%	11%	11%	11%	11%	11%	11%	11%	11%	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%	
	Price 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	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	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%	0%	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%	

TDM Adjustments by Trip Purpose & Strategy, Cont.

Place type: Suburban Center

		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	*12%*	*12%*	*12%*	*12%*	*12%*	*12%*	*12%*	*12%*	*12%*	*12%*	*12%*	*12%*
MAX. TDM EFFECT	*12%*	*12%*	*12%*	*12%*	*12%*	*12%*	*12%*	*12%*	*12%*	*12%*	*12%*	*12%*

= Minimum (X%, 1-[(1-A)*(1-B)...])

where X%=

PLACE TYPE MAX:	*urban*	*75%*
	compact infill	*40%*
	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 18, 2022
Project Name: Proposed Mixed use
Project Scenario: 375 DU, 66 Aff DU & 16.6ksf commercia
Project Address: 6136 W MANCHESTER AVE, 90045

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	392	-12.0%	345	8.4	3,293	2,898
Home Based Other Production	1,085	-26.1%	802	6.6	7,161	5,293
Non-Home Based Other Production	871	-2.9%	846	7.6	6,620	6,430
Home-Based Work Attraction	80	-28.8%	57	10.1	808	576
Home-Based Other Attraction	1,354	-21.0%	1,069	6.9	9,343	7,376
Non-Home Based Other Attraction	487	-3.5%	470	8.4	4,091	3,948

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	-11.6%	305	2,563	-11.6%	305	2,563
Home Based Other Production	-11.6%	709	4,680	-11.6%	709	4,680
Non-Home Based Other Production	-11.6%	748	5,686	-11.6%	748	5,686
Home-Based Work Attraction	-11.6%	50	509	-11.6%	50	509
Home-Based Other Attraction	-11.6%	945	6,522	-11.6%	945	6,522
Non-Home Based Other Attraction	-11.6%	416	3,491	-11.6%	416	3,491

MXD VMT Methodology Per Capita & Per Employee

Total Population: 1,052
Total Employees: 55
APC: West Los Angeles

	Proposed Project	*Project with Mitigation Measures*
Total Home Based Production VMT	**7,243**	**7,243**
Total Home Based Work Attraction VMT	**509**	**509**
Total Home Based VMT Per Capita	**6.9**	**6.9**
Total Work Based VMT Per Employee	**N/A**	**N/A**

VMT Calculator User Agreement

The Los Angeles Department of Transportation (LADOT), in partnership with the Department of City Planning and Fehr & Peers, has developed the City of Los Angeles Vehicle Miles Traveled (VMT) Calculator to estimate project-specific daily household VMT per capita and daily work VMT per employee for land use development projects. This application, the VMT Calculator, has been provided to You, the User, to assess vehicle miles traveled (VMT) outcomes of land use projects within the City of Los Angeles. The term "City" as used below shall refer to the City of Los Angeles. The terms "City" and "Fehr & Peers" as used below shall include their respective affiliates, subconsultants, employees, and representatives.

The City is pleased to be able to provide this information to the public. The City believes that the public is most effectively served when they are provided access to the technical tools that inform the public review process of private and public land use investments. However, in using the VMT Calculator, You agree to be bound by this VMT Calculator User Agreement (this Agreement).

VMT Calculator Application for the City of Los Angeles. The City's consultant calibrated the VMT Calculator's parameters in 2018 to estimate travel patterns of locations in the City, and validated those outcomes against empirical data. However, this calibration process is limited to locations within the City, and practitioners applying the VMT Calculator outside of the City boundaries should not apply these estimates without further calibration and validation of travel patterns to verify the VMT Calculator's accuracy in estimating VMT in such other locations.

Limited License to Use. This Agreement gives You a limited, non-transferrable, non-assignable, and non-exclusive license to use and execute a copy of the VMT Calculator on a computer system owned, leased or otherwise controlled by You in Your own facilities, as set out below, provided You do not use the VMT Calculator in an unauthorized manner, and that You do not republish, copy, distribute, reverse-engineer, modify, decompile, disassemble, transfer, or sell any part of the VMT Calculator, and provided that You know and follow the terms of this Agreement. Your failure to follow the terms of this Agreement shall automatically terminate this license and Your right to use the VMT Calculator.

Ownership. You understand and acknowledge that the City owns the VMT Calculator, and shall continue to own it through Your use of it, and that no transfer of ownership of any kind is intended in allowing You to use the VMT Calculator.

Warranty Disclaimer. In spite of the efforts of the City and Fehr & Peers, some information on the VMT Calculator may not be accurate. The VMT Calculator, OUTPUTS AND ASSOCIATED DATA ARE PROVIDED "as is" WITHOUT WARRANTY OF ANY KIND, whether expressed, implied, statutory, or otherwise including but not limited to, the implied warranties of merchantability and fitness for a particular purpose.

Limitation of Liability. It is understood that the VMT Calculator is provided without charge. Neither the City nor Fehr & Peers can be responsible or liable for any information derived from its use, or for any delays, inaccuracies, incompleteness, errors or omissions arising out of your use of the VMT Calculator or with respect to the material contained in the VMT Calculator. You understand and agree that Your sole remedy against the City or Fehr & Peers for loss or damage caused by any defect or failure of the

VMT Calculator, regardless of the form of action, whether in contract, tort, including negligence, strict liability or otherwise, shall be the repair or replacement of the VMT Calculator to the extent feasible as determined solely by the City. In no event shall the City or Fehr & Peers be responsible to You or anyone else for, or have liability for any special, indirect, incidental or consequential damages (including, without limitation, damages for loss of business profits or changes to businesses costs) or lost data or downtime, however caused, and on any theory of liability from the use of, or the inability to use, the VMT Calculator, whether the data, and/or formulas contained in the VMT Calculator are provided by the City or Fehr & Peers, or another third party, even if the City or Fehr & Peers have been advised of the possibility of such damages.

This Agreement and License shall be governed by the laws of the State of California without regard to their conflicts of law provisions, and shall be effective as of the date set forth below and, unless terminated in accordance with the above or extended by written amendment to this Agreement, shall terminate on the earlier of the date that You are not making use of the VMT Calculator or one year after the beginning of Your use of the VMT Calculator.

By using the VMT Calculator, You hereby waive and release all claims, responsibilities, liabilities, actions, damages, costs, and losses, known and unknown, against the City and Fehr & Peers for Your use of the VMT Calculator.

Before making decisions using the information provided in this application, contact City LADOT staff to confirm the validity of the data provided.

Print and sign below, and submit to LADOT along with the transportation assessment Memorandum of Understanding (MOU).

You, the User	
By:	______________________
Print Name:	______________________
Title:	______________________
Company:	______________________
Address:	______________________
Phone:	______________________
Email Address:	______________________
Date:	______________________

Appendix E

Level of Service Worksheets

APPENDIX E
QUEUE ANALYSIS

No.	Intersection	Peak Hour	Movement	Available Queue	Existing Conditions (Year 2022)		Existing with Project Conditions (Year 2022)			Future Conditions (Year 2027)		Future with Project Conditions (Year 2027)		
					95th Queue Length	Available Capacity	95th Queue Length	Available Capacity	Change in Available Capacity	95th Queue Length	Available Capacity	95th Queue Length	Available Capacity	Change in Available Capacity
1.	Sepulveda Bl & Manchester Ave	AM	EBL	262	118	145	118	145	0	125	137	125	137	0
			EBR	170	133	38	133	38	0	135	35	133	38	3
			WBL	240	100	140	100	140	0	138	103	138	103	0
			WBR	138	345	(207)	383	(245)	(38)	383	(245)	428	(290)	(45)
			NBL	224	103	122	103	122	0	125	99	128	97	(2)
			NBR	100	10	90	10	90	0	23	78	23	78	0
			SBL	206	355	(149)	368	(162)	(13)	380	(174)	393	(187)	(13)
			SBR	189	178	12	178	12	0	193	(4)	193	(4)	0
		PM	EBL	262	190	72	190	72	0	200	62	200	62	0
			EBR	170	128	43	128	43	0	160	10	160	10	0
			WBL	240	158	83	158	83	0	195	45	195	45	0
			WBR	138	220	(82)	233	(95)	(13)	243	(105)	255	(117)	(13)
			NBL	224	200	24	200	24	0	283	(59)	283	(59)	0
			NBR	100	40	60	40	60	0	48	53	48	53	0
			SBL	206	583	(377)	655	(449)	(73)	735	(529)	828	(622)	(93)
			SBR	189	258	(69)	258	(69)	0	273	(84)	273	(84)	0
2.	Truxton Ave & Manchester Ave	AM	EBL	158	10	148	10	148	0	10	148	10	148	0
			WBL	118	15	103	23	96	(8)	18	101	23	96	(5)
			WBR	86	15	71	15	71	0	0	86	15	71	(15)
		PM	EBL	158	13	146	13	146	0	15	143	15	143	0
			WBL	118	28	91	53	66	(25)	33	86	63	56	(30)
			WBR	86	5	81	5	81	0	5	81	5	81	0
3.	La Tijera Bl & Manchester Ave	AM	EBL	200	233	(33)	253	(53)	(20)	248	(48)	268	(68)	(20)
			EBR [a]	165	0	165	0	165	0	0	165	0	165	0
			WBL	185	200	(15)	205	(20)	(5)	293	(108)	298	(113)	(5)
			WBR [a]	122	0	122	0	122	0	0	122	0	122	0
			NBL	70	70	0	98	(28)	(28)	75	(5)	105	(35)	(30)
			NBR	77	143	(66)	155	(78)	(13)	190	(113)	203	(126)	(13)
			SBL	215	35	180	35	180	0	40	175	40	175	0
			SBR	574	255	319	258	317	(3)	268	307	270	304	(3)
		PM	EBL	200	213	(13)	218	(18)	(5)	178	23	178	23	0
			EBR [a]	165	0	165	0	165	0	0	165	0	165	0
			WBL	185	248	(63)	268	(83)	(20)	343	(158)	383	(198)	(40)
			WBR [a]	122	0	122	0	122	0	0	122	0	122	0
			NBL	70	78	(8)	93	(23)	(15)	83	(13)	100	(30)	(18)
			NBR	77	258	(181)	265	(188)	(8)	333	(256)	340	(263)	(8)
			SBL	215	60	155	60	155	0	78	138	78	138	0
			SBR	574	258	317	270	304	(13)	273	302	285	289	(13)
4.	TruxtonAve & Project Dwy [b]	AM	NBT/NBR	160	N/A		8	153	N/A	N/A		8	153	N/A
			SBT/SBL	200			3	198				3	198	
		PM	NBT/NBR	160			5	155				5	155	
			SBT/SBL	200			3	198				3	198	
5.	Sepulveda Bl & La Tijera Bl	AM	EBL	367	70	297	70	297	0	78	290	80	287	(3)
			EBR	136	80	56	80	56	0	105	31	108	29	(3)
			WBL	200	188	13	203	(3)	(15)	240	(40)	255	(55)	(15)
			NBL	160	68	93	70	90	(3)	88	73	88	73	0
			NBR	100	128	(28)	130	(30)	(3)	170	(70)	173	(73)	(3)
			SBL	230	20	210	20	210	0	43	188	43	188	0
			SBR	100	25	75	25	75	0	60	40	60	40	0
		PM	EBL	367	110	257	110	257	0	120	247	120	247	0
			EBR	136	73	64	75	61	(3)	90	46	90	46	0
			WBL	200	140	60	178	23	(38)	210	(10)	218	(18)	(7)
			NBL	160	138	23	138	23	0	175	(15)	175	(15)	0
			NBR	100	233	(133)	245	(145)	(13)	278	(178)	293	(193)	(15)
			SBL	230	58	173	58	173	0	83	148	83	148	0
			SBR	100	75	25	75	25	0	80	20	80	20	0
6.	Sepulveda Eastway & La Tijera Bl	AM	EBL	60	5	55	8	53	(3)	8	53	8	53	0
			WBL	254	33	222	33	222	0	50	204	50	204	0
			NBR	52	183	(131)	183	(131)	0	203	(151)	203	(151)	0
		PM	EBL	60	13	48	13	48	0	18	43	18	43	0
			WBL	254	53	202	55	199	(3)	98	157	100	154	(3)
			NBR	52	188	(136)	188	(136)	0	198	(146)	198	(146)	0
7.	Truxton Ave & La Tijera Bl	AM	EBL	200	3	198	3	198	0	3	198	3	198	0
			SBR/SBL	70	5	65	8	63	(3)	5	65	10	60	(5)
		PM	EBL	200	0	200	3	198	(3)	3	198	3	198	0
			SBR/SBL	70	15	55	18	53	(3)	18	53	20	50	(3)
8.	Project Dwy & La Tijera Bl [b]	AM	EBL	270	N/A		0	270	N/A	N/A		0	270	N/A
			WBT/WBR	160			15	145				20	140	
		PM	EBL	270			3	268				3	268	
			WBT/WBR	160			10	150				13	148	
9.	Bleriot Ave & La Tijera Bl	AM	EBL	33	0	33	0	33	0	0	33	0	33	0
			WBL	160	3	158	3	158	0	3	158	3	158	0
		PM	EBL	33	0	33	0	33	0	0	33	0	33	0
			WBL	160	8	153	8	153	0	10	150	10	150	0

Notes:
[a] Free right turn, therefore no queuing was assumed.
[b] Driveway is proposed as part of the Project.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	152	510	104	75	838	274	171	1661	60	231	1183	169
Future Volume (veh/h)	152	510	104	75	838	274	171	1661	60	231	1183	169
Initial Q (Qb), 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	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	165	554	113	82	911	298	186	1805	65	251	1286	184
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	258	731	326	310	888	396	273	1729	731	280	1918	596
Arrive On Green	0.07	0.21	0.21	0.12	0.25	0.25	0.17	0.68	0.68	0.12	0.38	0.38
Sat Flow, veh/h	3456	3554	1585	1781	3554	1585	1781	5106	1585	1781	5106	1585
Grp Volume(v), veh/h	165	554	113	82	911	298	186	1805	65	251	1286	184
Grp Sat Flow(s),veh/h/ln	1728	1777	1585	1781	1777	1585	1781	1702	1585	1781	1702	1585
Q Serve(g_s), s	5.6	17.6	5.6	0.0	30.0	20.8	8.2	40.6	0.5	12.6	25.2	9.8
Cycle Q Clear(g_c), s	5.6	17.6	5.6	0.0	30.0	20.8	8.2	40.6	0.5	12.6	25.2	9.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	258	731	326	310	888	396	273	1729	731	280	1918	596
V/C Ratio(X)	0.64	0.76	0.35	0.26	1.03	0.75	0.68	1.04	0.09	0.90	0.67	0.31
Avail Cap(c_a), veh/h	259	894	399	310	888	396	311	1729	731	327	1918	596
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.91	0.91	0.91	0.13	0.13	0.13	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.9	44.8	23.6	45.2	45.0	41.6	23.2	19.4	2.9	34.7	31.3	26.5
Incr Delay (d2), s/veh	5.2	4.8	1.6	0.4	35.4	8.5	0.7	22.5	0.0	23.7	1.9	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	4.7	12.9	5.3	4.0	24.4	13.8	4.1	15.1	0.4	14.2	16.0	7.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	59.1	49.6	25.1	45.6	80.4	50.1	23.8	41.9	2.9	58.4	33.1	27.8
LnGrp LOS	E	D	C	D	F	D	C	F	A	E	C	C
Approach Vol, veh/h		832			1291			2056			1721	
Approach Delay, s/veh		48.2			71.2			39.0			36.3	
Approach LOS		D			E			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.7	51.4	15.6	36.4	21.1	46.9	21.1	30.9
Change Period (Y+Rc), s	* 6.3	6.3	* 6.6	* 6.4	* 6.3	6.3	6.4	6.2
Max Green Setting (Gmax), s	* 13	42.7	* 9	* 30	* 18	37.6	9.0	30.2
Max Q Clear Time (g_c+I1), s	10.2	27.2	7.6	32.0	14.6	42.6	2.0	19.6
Green Ext Time (p_c), s	0.1	8.7	0.1	0.0	0.2	0.0	0.1	5.1

Intersection Summary	
HCM 6th Ctrl Delay	46.5
HCM 6th LOS	D

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	27	700	18	63	1110	99	10	6	14	26	14	44
Future Volume (veh/h)	27	700	18	63	1110	99	10	6	14	26	14	44
Initial Q (Qb), 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	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	29	761	20	68	1207	108	11	7	15	28	15	48
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	361	2771	73	581	2784	1242	85	55	72	86	39	80
Arrive On Green	0.78	0.78	0.78	0.78	0.78	0.78	0.10	0.10	0.10	0.10	0.10	0.10
Sat Flow, veh/h	418	3538	93	692	3554	1585	334	575	757	350	405	843
Grp Volume(v), veh/h	29	382	399	68	1207	108	33	0	0	91	0	0
Grp Sat Flow(s),veh/h/ln	418	1777	1854	692	1777	1585	1666	0	0	1598	0	0
Q Serve(g_s), s	2.2	5.3	5.3	2.7	10.0	1.4	0.0	0.0	0.0	2.5	0.0	0.0
Cycle Q Clear(g_c), s	12.2	5.3	5.3	8.1	10.0	1.4	1.6	0.0	0.0	4.8	0.0	0.0
Prop In Lane	1.00		0.05	1.00		1.00	0.33		0.45	0.31		0.53
Lane Grp Cap(c), veh/h	361	1392	1452	581	2784	1242	212	0	0	205	0	0
V/C Ratio(X)	0.08	0.27	0.27	0.12	0.43	0.09	0.16	0.00	0.00	0.44	0.00	0.00
Avail Cap(c_a), veh/h	361	1392	1452	581	2784	1242	546	0	0	542	0	0
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
Upstream Filter(I)	0.67	0.67	0.67	0.59	0.59	0.59	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	5.2	2.7	2.7	3.8	3.2	2.3	37.5	0.0	0.0	38.9	0.0	0.0
Incr Delay (d2), s/veh	0.3	0.3	0.3	0.2	0.3	0.1	0.3	0.0	0.0	1.5	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	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.4	2.4	2.5	0.6	4.3	0.6	1.2	0.0	0.0	3.6	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	5.5	3.0	3.0	4.0	3.5	2.3	37.9	0.0	0.0	40.4	0.0	0.0
LnGrp LOS	A	A	A	A	A	A	D	A	A	D	A	A
Approach Vol, veh/h		810			1383			33			91	
Approach Delay, s/veh		3.1			3.4			37.9			40.4	
Approach LOS		A			A			D			D	

Timer - Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		75.5		14.5		75.5		14.5
Change Period (Y+Rc), s		* 5		* 5.9		* 5		* 5.9
Max Green Setting (Gmax), s		* 51		* 28		* 51		* 28
Max Q Clear Time (g_c+I1), s		12.0		6.8		14.2		3.6
Green Ext Time (p_c), s		20.1		0.4		9.8		0.1

Intersection Summary	
HCM 6th Ctrl Delay	5.3
HCM 6th LOS	A

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	159	539	33	124	1073	39	49	296	123	30	442	229
Future Volume (veh/h)	159	539	33	124	1073	39	49	296	123	30	442	229
Initial Q (Qb), 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	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	173	586	0	135	1166	0	53	322	134	33	480	249
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	246	1508		165	1383		205	1096	489	284	1096	489
Arrive On Green	0.14	0.42	0.00	0.09	0.39	0.00	0.31	0.31	0.31	0.31	0.31	0.31
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	726	3554	1585	935	3554	1585
Grp Volume(v), veh/h	173	586	0	135	1166	0	53	322	134	33	480	249
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	726	1777	1585	935	1777	1585
Q Serve(g_s), s	11.1	13.6	0.0	8.9	35.8	0.0	7.6	8.3	7.7	3.3	13.0	15.5
Cycle Q Clear(g_c), s	11.1	13.6	0.0	8.9	35.8	0.0	20.5	8.3	7.7	11.6	13.0	15.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	246	1508		165	1383		205	1096	489	284	1096	489
V/C Ratio(X)	0.70	0.39		0.82	0.84		0.26	0.29	0.27	0.12	0.44	0.51
Avail Cap(c_a), veh/h	246	1508		257	1383		205	1096	489	284	1096	489
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
Upstream Filter(I)	0.97	0.97	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.3	23.8	0.0	53.5	33.3	0.0	41.4	31.6	31.4	36.0	33.2	34.1
Incr Delay (d2), s/veh	8.4	0.7	0.0	11.2	6.4	0.0	3.0	0.7	1.4	0.2	0.3	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	9.3	9.8	0.0	8.0	23.0	0.0	2.8	6.6	5.7	1.4	9.5	10.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	57.7	24.6	0.0	64.7	39.7	0.0	44.4	32.2	32.7	36.2	33.5	35.1
LnGrp LOS	E	C		E	D		D	C	C	D	C	D
Approach Vol, veh/h		759			1301			509			762	
Approach Delay, s/veh		32.1			42.3			33.6			34.2	
Approach LOS		C			D			C			C	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	24.0	52.8		43.2	18.5	58.3		43.2
Change Period (Y+Rc), s	* 7.4	6.1		* 6.2	7.4	* 7.4		* 6.2
Max Green Setting (Gmax), s	* 17	46.7		* 37	17.3	* 46		* 37
Max Q Clear Time (g_c+I1), s	13.1	37.8		17.5	10.9	15.6		22.5
Green Ext Time (p_c), s	0.1	5.6		5.2	0.2	5.1		2.5

Intersection Summary	
HCM 6th Ctrl Delay	36.8
HCM 6th LOS	D

Notes

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

Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	71	185	76	200	286	24	83	1868	169	24	1228	84
Future Volume (veh/h)	71	185	76	200	286	24	83	1868	169	24	1228	84
Initial Q (Qb), 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	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	77	201	83	217	311	26	90	2030	184	26	1335	91
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	437	1053	540	518	1176	98	248	2145	826	110	2042	702
Arrive On Green	0.04	0.30	0.30	0.10	0.35	0.35	0.04	0.42	0.42	0.05	0.80	0.80
Sat Flow, veh/h	1781	3554	1585	1781	3322	276	1781	5106	1585	1781	5106	1585
Grp Volume(v), veh/h	77	201	83	217	165	172	90	2030	184	26	1335	91
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1821	1781	1702	1585	1781	1702	1585
Q Serve(g_s), s	3.6	5.1	4.4	9.8	8.0	8.1	3.5	45.9	7.5	1.0	13.2	1.4
Cycle Q Clear(g_c), s	3.6	5.1	4.4	9.8	8.0	8.1	3.5	45.9	7.5	1.0	13.2	1.4
Prop In Lane	1.00		1.00	1.00		0.15	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	437	1053	540	518	629	645	248	2145	826	110	2042	702
V/C Ratio(X)	0.18	0.19	0.15	0.42	0.26	0.27	0.36	0.95	0.22	0.24	0.65	0.13
Avail Cap(c_a), veh/h	500	1053	540	643	629	645	325	2145	826	148	2042	702
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	0.99	0.99	0.99	1.00	1.00	1.00	0.73	0.73	0.73
Uniform Delay (d), s/veh	27.4	31.5	27.5	23.7	27.6	27.6	20.3	33.5	15.6	28.5	8.5	6.3
Incr Delay (d2), s/veh	0.2	0.4	0.6	0.5	1.0	1.0	0.9	10.4	0.6	0.8	1.2	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.8	4.1	3.2	7.5	6.4	6.7	2.7	27.9	5.1	0.8	5.4	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.5	31.9	28.1	24.2	28.6	28.6	21.2	43.9	16.2	29.3	9.7	6.6
LnGrp LOS	C	C	C	C	C	C	C	D	B	C	A	A
Approach Vol, veh/h		361			554			2304			1452	
Approach Delay, s/veh		30.1			26.9			40.8			9.9	
Approach LOS		C			C			D			A	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.2	48.5	9.3	53.0	16.1	41.6	6.9	55.4
Change Period (Y+Rc), s	4.0	* 6	4.0	* 5	4.0	* 6	4.0	* 5
Max Green Setting (Gmax), s	9.5	* 43	10.5	* 39	20.5	* 32	5.5	* 44
Max Q Clear Time (g_c+I1), s	5.6	10.1	5.5	15.2	11.8	7.1	3.0	47.9
Green Ext Time (p_c), s	0.0	2.1	0.1	11.1	0.4	1.5	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	28.7
HCM 6th LOS	C

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	24	313	22	121	485	15	24	30	160	4	18	22
Future Volume (veh/h)	24	313	22	121	485	15	24	30	160	4	18	22
Initial Q (Qb), 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	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	26	340	24	132	527	16	26	33	174	4	20	24
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	694	2540	178	819	2656	81	136	151	219	50	110	117
Arrive On Green	0.75	0.75	0.75	0.75	0.75	0.75	0.14	0.14	0.14	0.14	0.14	0.14
Sat Flow, veh/h	863	3368	237	1018	3521	107	567	1092	1585	47	798	845
Grp Volume(v), veh/h	26	179	185	132	266	277	59	0	174	48	0	0
Grp Sat Flow(s),veh/h/ln	863	1777	1828	1018	1777	1851	1659	0	1585	1690	0	0
Q Serve(g_s), s	0.8	2.5	2.5	3.7	3.9	3.9	0.1	0.0	9.6	0.0	0.0	0.0
Cycle Q Clear(g_c), s	4.7	2.5	2.5	6.2	3.9	3.9	2.5	0.0	9.6	2.2	0.0	0.0
Prop In Lane	1.00		0.13	1.00		0.06	0.44		1.00	0.08		0.50
Lane Grp Cap(c), veh/h	694	1340	1378	819	1340	1396	287	0	219	277	0	0
V/C Ratio(X)	0.04	0.13	0.13	0.16	0.20	0.20	0.21	0.00	0.80	0.17	0.00	0.00
Avail Cap(c_a), veh/h	694	1340	1378	819	1340	1396	707	0	634	707	0	0
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
Upstream Filter(I)	0.99	0.99	0.99	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	3.9	3.0	3.0	3.9	3.2	3.2	34.5	0.0	37.6	34.4	0.0	0.0
Incr Delay (d2), s/veh	0.1	0.2	0.2	0.4	0.3	0.3	0.4	0.0	6.4	0.3	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	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.2	1.3	1.4	1.3	2.1	2.1	2.1	0.0	7.3	1.7	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	4.0	3.2	3.2	4.3	3.5	3.5	34.9	0.0	44.0	34.7	0.0	0.0
LnGrp LOS	A	A	A	A	A	A	C	A	D	C	A	A
Approach Vol, veh/h		390			675			233			48	
Approach Delay, s/veh		3.3			3.7			41.7			34.7	
Approach LOS		A			A			D			C	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		72.6		17.4		72.6		17.4				
Change Period (Y+Rc), s		* 4.7		5.0		* 4.7		5.0				
Max Green Setting (Gmax), s		* 44		36.0		* 44		36.0				
Max Q Clear Time (g_c+I1), s		8.2		4.2		6.7		11.6				
Green Ext Time (p_c), s		4.4		0.2		2.5		0.9				
Intersection Summary												
HCM 6th Ctrl Delay			11.2									
HCM 6th LOS			B									

Notes

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

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	26	441	568	25	11	32
Future Vol, veh/h	26	441	568	25	11	32
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	200	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	28	479	617	27	12	35

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	644	0	-	0	927	322
Stage 1	-	-	-	-	631	-
Stage 2	-	-	-	-	296	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	1237	-	-	-	*267	*867
Stage 1	-	-	-	-	*781	-
Stage 2	-	-	-	-	*849	-
Platoon blocked, %	1	-	-	-		1
Mov Cap-1 Maneuver	1237	-	-	-	*261	*867
Mov Cap-2 Maneuver	-	-	-	-	*485	-
Stage 1	-	-	-	-	*763	-
Stage 2	-	-	-	-	*849	-

Approach	EB	WB	SB
HCM Control Delay, s	0.4	0	10.3
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1237	-	-	-	722
HCM Lane V/C Ratio	0.023	-	-	-	0.065
HCM Control Delay (s)	8	-	-	-	10.3
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.2

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

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	439	21	21	579	9	21	0	41	2	1	1
Future Vol, veh/h	0	439	21	21	579	9	21	0	41	2	1	1
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	0	-	-	33	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	477	23	23	629	10	23	0	45	2	1	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	639	0	0	500	0	0	850	1174	250	919	1180	320
Stage 1	-	-	-	-	-	-	489	489	-	680	680	-
Stage 2	-	-	-	-	-	-	361	685	-	239	500	-
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	947	-	-	*1345	-	-	*254	*190	*899	*226	*189	690
Stage 1	-	-	-	-	-	-	*848	*743	-	*413	*454	-
Stage 2	-	-	-	-	-	-	*642	*451	-	*848	*743	-
Platoon blocked, %	1	-	-	1	-	-			1			1
Mov Cap-1 Maneuver	947	-	-	*1345	-	-	*249	*187	*899	*212	*186	690
Mov Cap-2 Maneuver	-	-	-	-	-	-	*249	*187	-	*212	*186	-
Stage 1	-	-	-	-	-	-	*848	*743	-	*413	*446	-
Stage 2	-	-	-	-	-	-	*628	*443	-	*806	*743	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.3	13.8	19.9
HCM LOS			B	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	477	947	-	-	* 1345	-	-	246
HCM Lane V/C Ratio	0.141	-	-	-	0.017	-	-	0.018
HCM Control Delay (s)	13.8	0	-	-	7.7	-	-	19.9
HCM Lane LOS	B	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	0.5	0	-	-	0.1	-	-	0.1

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	227	899	149	104	584	181	186	1147	123	366	1417	240
Future Volume (veh/h)	227	899	149	104	584	181	186	1147	123	366	1417	240
Initial Q (Qb), 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	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	247	977	162	113	635	197	202	1247	134	398	1540	261
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	303	971	433	191	908	405	236	1324	527	400	1817	564
Arrive On Green	0.09	0.27	0.27	0.07	0.26	0.26	0.17	0.52	0.52	0.18	0.36	0.36
Sat Flow, veh/h	3456	3554	1585	1781	3554	1585	1781	5106	1585	1781	5106	1585
Grp Volume(v), veh/h	247	977	162	113	635	197	202	1247	134	398	1540	261
Grp Sat Flow(s),veh/h/ln	1728	1777	1585	1781	1777	1585	1781	1702	1585	1781	1702	1585
Q Serve(g_s), s	8.4	32.8	7.3	3.2	19.4	12.7	10.4	27.6	1.9	22.0	33.4	15.2
Cycle Q Clear(g_c), s	8.4	32.8	7.3	3.2	19.4	12.7	10.4	27.6	1.9	22.0	33.4	15.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	303	971	433	191	908	405	236	1324	527	400	1817	564
V/C Ratio(X)	0.81	1.01	0.37	0.59	0.70	0.49	0.86	0.94	0.25	1.00	0.85	0.46
Avail Cap(c_a), veh/h	334	971	433	194	908	405	236	1324	527	400	1817	564
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.96	0.96	0.96	0.65	0.65	0.65	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.8	43.6	19.1	52.2	40.5	38.0	29.4	28.0	6.7	35.2	35.6	29.8
Incr Delay (d2), s/veh	13.3	30.3	1.3	4.5	2.9	1.9	17.8	10.3	0.8	43.9	5.1	2.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	7.6	25.4	5.1	6.3	13.6	8.8	8.0	13.7	1.6	23.3	20.8	10.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	67.1	73.9	20.5	56.6	43.4	39.8	47.2	38.3	7.4	79.2	40.8	32.5
LnGrp LOS	E	F	C	E	D	D	D	D	A	E	D	C
Approach Vol, veh/h		1386			945			1583			2199	
Approach Delay, s/veh		66.4			44.3			36.9			46.7	
Approach LOS		E			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.8	49.0	17.1	37.1	28.4	37.4	15.2	39.0
Change Period (Y+Rc), s	* 6.3	6.3	* 6.6	* 6.4	* 6.3	6.3	6.4	6.2
Max Green Setting (Gmax), s	* 11	42.5	* 12	* 30	* 22	30.9	9.0	32.8
Max Q Clear Time (g_c+I1), s	12.4	35.4	10.4	21.4	24.0	29.6	5.2	34.8
Green Ext Time (p_c), s	0.0	5.6	0.1	4.9	0.0	1.0	0.1	0.0

Intersection Summary	
HCM 6th Ctrl Delay	48.3
HCM 6th LOS	D

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	1250	40	61	817	34	23	21	47	46	22	33
Future Volume (veh/h)	50	1250	40	61	817	34	23	21	47	46	22	33
Initial Q (Qb), 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	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	54	1359	43	66	888	37	25	23	51	50	24	36
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	507	2741	87	326	2770	1235	80	52	87	122	48	54
Arrive On Green	0.78	0.78	0.78	0.78	0.78	0.78	0.10	0.10	0.10	0.10	0.10	0.10
Sat Flow, veh/h	605	3516	111	384	3554	1585	296	525	873	639	483	546
Grp Volume(v), veh/h	54	686	716	66	888	37	99	0	0	110	0	0
Grp Sat Flow(s),veh/h/ln	605	1777	1850	384	1777	1585	1694	0	0	1668	0	0
Q Serve(g_s), s	2.6	12.5	12.5	6.7	6.6	0.5	0.0	0.0	0.0	0.5	0.0	0.0
Cycle Q Clear(g_c), s	9.2	12.5	12.5	19.2	6.6	0.5	4.8	0.0	0.0	5.3	0.0	0.0
Prop In Lane	1.00		0.06	1.00		1.00	0.25		0.52	0.45		0.33
Lane Grp Cap(c), veh/h	507	1385	1442	326	2770	1235	219	0	0	224	0	0
V/C Ratio(X)	0.11	0.50	0.50	0.20	0.32	0.03	0.45	0.00	0.00	0.49	0.00	0.00
Avail Cap(c_a), veh/h	507	1385	1442	326	2770	1235	533	0	0	525	0	0
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
Upstream Filter(I)	0.22	0.22	0.22	0.83	0.83	0.83	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	4.3	3.6	3.6	7.0	2.9	2.2	38.7	0.0	0.0	38.9	0.0	0.0
Incr Delay (d2), s/veh	0.1	0.3	0.3	1.2	0.3	0.0	1.5	0.0	0.0	1.7	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	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.5	4.4	4.5	1.1	3.0	0.2	3.9	0.0	0.0	4.3	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	4.4	3.8	3.8	8.2	3.2	2.3	40.2	0.0	0.0	40.5	0.0	0.0
LnGrp LOS	A	A	A	A	A	A	D	A	A	D	A	A
Approach Vol, veh/h		1456			991			99			110	
Approach Delay, s/veh		3.9			3.5			40.2			40.5	
Approach LOS		A			A			D			D	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		75.1		14.9		75.1		14.9				
Change Period (Y+Rc), s		* 5		* 5.9		* 5		* 5.9				
Max Green Setting (Gmax), s		* 52		* 27		* 52		* 27				
Max Q Clear Time (g_c+I1), s		21.2		7.3		14.5		6.8				
Green Ext Time (p_c), s		13.0		0.5		21.5		0.5				
Intersection Summary												
HCM 6th Ctrl Delay			6.6									
HCM 6th LOS			A									

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	273	1054	42	149	616	30	56	426	222	47	370	233
Future Volume (veh/h)	273	1054	42	149	616	30	56	426	222	47	370	233
Initial Q (Qb), 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	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	297	1146	0	162	670	0	61	463	241	51	402	253
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	395	1456		190	1087		231	1096	489	212	1096	489
Arrive On Green	0.22	0.41	0.00	0.11	0.31	0.00	0.31	0.31	0.31	0.31	0.31	0.31
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	778	3554	1585	743	3554	1585
Grp Volume(v), veh/h	297	1146	0	162	670	0	61	463	241	51	402	253
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	778	1777	1585	743	1777	1585
Q Serve(g_s), s	18.7	33.7	0.0	10.7	19.4	0.0	8.0	12.4	14.9	7.0	10.6	15.8
Cycle Q Clear(g_c), s	18.7	33.7	0.0	10.7	19.4	0.0	18.5	12.4	14.9	19.5	10.6	15.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	395	1456		190	1087		231	1096	489	212	1096	489
V/C Ratio(X)	0.75	0.79		0.85	0.62		0.26	0.42	0.49	0.24	0.37	0.52
Avail Cap(c_a), veh/h	395	1456		232	1087		231	1096	489	212	1096	489
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
Upstream Filter(I)	0.86	0.86	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.6	30.9	0.0	52.6	35.6	0.0	39.6	33.0	33.9	40.7	32.4	34.2
Incr Delay (d2), s/veh	6.9	3.8	0.0	21.5	2.6	0.0	2.8	1.2	3.5	0.7	0.3	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	13.5	20.8	0.0	9.9	13.6	0.0	3.1	9.4	10.3	2.4	8.1	10.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.5	34.6	0.0	74.2	38.3	0.0	42.4	34.2	37.4	41.5	32.6	35.3
LnGrp LOS	D	C		E	D		D	C	D	D	C	D
Approach Vol, veh/h		1443			832			765			706	
Approach Delay, s/veh		37.9			45.2			35.9			34.2	
Approach LOS		D			D			D			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	34.0	42.8		43.2	20.2	56.6		43.2				
Change Period (Y+Rc), s	* 7.4	6.1		* 6.2	7.4	* 7.4		* 6.2				
Max Green Setting (Gmax), s	* 27	36.7		* 37	15.6	* 48		* 37				
Max Q Clear Time (g_c+I1), s	20.7	21.4		21.5	12.7	35.7		20.5				
Green Ext Time (p_c), s	0.5	4.6		4.3	0.1	6.9		4.0				

Intersection Summary			
HCM 6th Ctrl Delay			38.4
HCM 6th LOS			D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	118	343	77	186	223	41	127	1312	268	63	1650	74
Future Volume (veh/h)	118	343	77	186	223	41	127	1312	268	63	1650	74
Initial Q (Qb), 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	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	128	373	84	202	242	45	138	1426	291	68	1793	80
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	496	1152	616	454	1060	194	177	1978	761	169	1841	672
Arrive On Green	0.06	0.32	0.32	0.09	0.35	0.35	0.06	0.39	0.39	0.03	0.24	0.24
Sat Flow, veh/h	1781	3554	1585	1781	2999	549	1781	5106	1585	1781	5106	1585
Grp Volume(v), veh/h	128	373	84	202	142	145	138	1426	291	68	1793	80
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1772	1781	1702	1585	1781	1702	1585
Q Serve(g_s), s	5.7	9.5	4.1	8.8	6.7	6.9	5.7	28.5	14.0	2.9	41.8	4.3
Cycle Q Clear(g_c), s	5.7	9.5	4.1	8.8	6.7	6.9	5.7	28.5	14.0	2.9	41.8	4.3
Prop In Lane	1.00		1.00	1.00		0.31	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	496	1152	616	454	628	626	177	1978	761	169	1841	672
V/C Ratio(X)	0.26	0.32	0.14	0.44	0.23	0.23	0.78	0.72	0.38	0.40	0.97	0.12
Avail Cap(c_a), veh/h	525	1152	616	593	628	626	219	1978	761	184	1841	672
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.67	0.67	0.67
Upstream Filter(I)	1.00	1.00	1.00	0.99	0.99	0.99	1.00	1.00	1.00	0.52	0.52	0.52
Uniform Delay (d), s/veh	24.3	30.6	23.7	22.7	27.3	27.3	29.0	31.2	19.9	26.5	44.9	25.1
Incr Delay (d2), s/veh	0.3	0.7	0.5	0.7	0.8	0.9	13.2	2.3	1.5	0.8	10.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	4.4	7.6	2.9	6.7	5.4	5.6	5.5	17.7	9.3	2.3	25.3	3.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.6	31.4	24.2	23.4	28.1	28.2	42.2	33.6	21.3	27.3	55.1	25.2
LnGrp LOS	C	C	C	C	C	C	D	C	C	C	E	C
Approach Vol, veh/h		585			489			1855			1941	
Approach Delay, s/veh		28.8			26.2			32.3			52.9	
Approach LOS		C			C			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.6	48.4	11.7	48.3	15.1	44.9	8.5	51.5
Change Period (Y+Rc), s	4.0	* 6	4.0	* 5	4.0	* 6	4.0	* 5
Max Green Setting (Gmax), s	9.6	* 42	10.5	* 39	20.5	* 32	5.5	* 44
Max Q Clear Time (g_c+I1), s	7.7	8.9	7.7	43.8	10.8	11.5	4.9	30.5
Green Ext Time (p_c), s	0.1	1.8	0.1	0.0	0.4	2.6	0.0	8.7

Intersection Summary	
HCM 6th Ctrl Delay	39.5
HCM 6th LOS	D

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	45	557	62	147	394	17	42	46	165	23	43	73
Future Volume (veh/h)	45	557	62	147	394	17	42	46	165	23	43	73
Initial Q (Qb), 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	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	49	605	67	160	428	18	46	50	179	25	47	79
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	755	2420	268	610	2606	109	145	138	225	70	86	120
Arrive On Green	0.75	0.75	0.75	0.75	0.75	0.75	0.14	0.14	0.14	0.14	0.14	0.14
Sat Flow, veh/h	944	3226	357	766	3475	146	606	971	1585	163	608	846
Grp Volume(v), veh/h	49	333	339	160	218	228	96	0	179	151	0	0
Grp Sat Flow(s),veh/h/ln	944	1777	1806	766	1777	1844	1577	0	1585	1617	0	0
Q Serve(g_s), s	1.4	5.2	5.2	7.3	3.2	3.2	0.0	0.0	9.8	3.0	0.0	0.0
Cycle Q Clear(g_c), s	4.6	5.2	5.2	12.5	3.2	3.2	4.7	0.0	9.8	7.8	0.0	0.0
Prop In Lane	1.00		0.20	1.00		0.08	0.48		1.00	0.17		0.52
Lane Grp Cap(c), veh/h	755	1333	1355	610	1333	1383	283	0	225	276	0	0
V/C Ratio(X)	0.06	0.25	0.25	0.26	0.16	0.16	0.34	0.00	0.79	0.55	0.00	0.00
Avail Cap(c_a), veh/h	755	1333	1355	610	1333	1383	524	0	476	523	0	0
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
Upstream Filter(I)	0.95	0.95	0.95	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	3.9	3.5	3.5	5.4	3.2	3.2	35.0	0.0	37.3	36.4	0.0	0.0
Incr Delay (d2), s/veh	0.2	0.4	0.4	1.0	0.3	0.3	0.7	0.0	6.2	1.7	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	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.5	2.7	2.8	2.1	1.7	1.7	3.5	0.0	7.5	5.8	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	4.0	3.9	3.9	6.4	3.5	3.5	35.7	0.0	43.6	38.0	0.0	0.0
LnGrp LOS	A	A	A	A	A	A	D	A	D	D	A	A
Approach Vol, veh/h		721			606			275			151	
Approach Delay, s/veh		3.9			4.3			40.8			38.0	
Approach LOS		A			A			D			D	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		72.2		17.8		72.2		17.8				
Change Period (Y+Rc), s		* 4.7		5.0		* 4.7		5.0				
Max Green Setting (Gmax), s		* 53		27.0		* 53		27.0				
Max Q Clear Time (g_c+I1), s		14.5		9.8		7.2		11.8				
Green Ext Time (p_c), s		4.3		0.7		5.1		1.0				

Intersection Summary

HCM 6th Ctrl Delay			12.8
HCM 6th LOS			B

Notes

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

Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	18	745	489	32	39	56
Future Vol, veh/h	18	745	489	32	39	56
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	200	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	20	810	532	35	42	61

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	567	0	-	0	995	284
Stage 1	-	-	-	-	550	-
Stage 2	-	-	-	-	445	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	1282	-	-	-	*242	*893
Stage 1	-	-	-	-	*816	-
Stage 2	-	-	-	-	*750	-
Platoon blocked, %	1	-	-	-		1
Mov Cap-1 Maneuver	1282	-	-	-	*238	*893
Mov Cap-2 Maneuver	-	-	-	-	*462	-
Stage 1	-	-	-	-	*803	-
Stage 2	-	-	-	-	*750	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	11.6
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1282	-	-	-	646
HCM Lane V/C Ratio	0.015	-	-	-	0.16
HCM Control Delay (s)	7.9	-	-	-	11.6
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.6

Notes

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

Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	733	48	102	495	12	8	0	43	11	1	4
Future Vol, veh/h	4	733	48	102	495	12	8	0	43	11	1	4
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	0	-	-	33	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	797	52	111	538	13	9	0	47	12	1	4

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	551	0	0	849	0	0	1323	1604	425	1174	1624	276
Stage 1	-	-	-	-	-	-	831	831	-	767	767	-
Stage 2	-	-	-	-	-	-	492	773	-	407	857	-
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	1084	-	-	1123	-	-	114	104	*795	*147	102	863
Stage 1	-	-	-	-	-	-	707	628	-	*408	444	-
Stage 2	-	-	-	-	-	-	608	441	-	*750	607	-
Platoon blocked, %	1	-	-	1	-	-			1			1
Mov Cap-1 Maneuver	1084	-	-	1123	-	-	104	93	*795	*128	91	863
Mov Cap-2 Maneuver	-	-	-	-	-	-	104	93	-	*128	91	-
Stage 1	-	-	-	-	-	-	704	626	-	*407	400	-
Stage 2	-	-	-	-	-	-	543	398	-	*703	605	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	1.4	15.8	30.6
HCM LOS			C	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	389	1084	-	-	1123	-	-	158
HCM Lane V/C Ratio	0.143	0.004	-	-	0.099	-	-	0.11
HCM Control Delay (s)	15.8	8.3	-	-	8.6	-	-	30.6
HCM Lane LOS	C	A	-	-	A	-	-	D
HCM 95th %tile Q(veh)	0.5	0	-	-	0.3	-	-	0.4

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	152	515	104	75	855	296	171	1661	60	238	1183	169
Future Volume (veh/h)	152	515	104	75	855	296	171	1661	60	238	1183	169
Initial Q (Qb), 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	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	165	560	113	82	929	322	186	1805	65	259	1286	184
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	258	736	328	308	888	396	274	1708	722	287	1916	595
Arrive On Green	0.07	0.21	0.21	0.12	0.25	0.25	0.17	0.67	0.67	0.13	0.38	0.38
Sat Flow, veh/h	3456	3554	1585	1781	3554	1585	1781	5106	1585	1781	5106	1585
Grp Volume(v), veh/h	165	560	113	82	929	322	186	1805	65	259	1286	184
Grp Sat Flow(s),veh/h/ln	1728	1777	1585	1781	1777	1585	1781	1702	1585	1781	1702	1585
Q Serve(g_s), s	5.6	17.8	5.5	0.0	30.0	22.9	8.3	40.1	0.5	13.1	25.2	9.8
Cycle Q Clear(g_c), s	5.6	17.8	5.5	0.0	30.0	22.9	8.3	40.1	0.5	13.1	25.2	9.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	258	736	328	308	888	396	274	1708	722	287	1916	595
V/C Ratio(X)	0.64	0.76	0.34	0.27	1.05	0.81	0.68	1.06	0.09	0.90	0.67	0.31
Avail Cap(c_a), veh/h	259	894	399	308	888	396	311	1708	722	327	1916	595
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.91	0.91	0.91	0.13	0.13	0.13	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.9	44.8	23.4	45.4	45.0	42.4	23.3	19.9	3.0	35.0	31.3	26.5
Incr Delay (d2), s/veh	5.2	4.9	1.5	0.4	41.5	12.5	0.7	28.0	0.0	24.8	1.9	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	4.7	13.1	5.3	4.0	25.6	15.3	4.1	16.3	0.4	14.7	16.0	7.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	59.1	49.6	24.9	45.8	86.5	54.8	24.0	47.9	3.1	59.9	33.2	27.8
LnGrp LOS	E	D	C	D	F	D	C	F	A	E	C	C
Approach Vol, veh/h		838			1333			2056			1729	
Approach Delay, s/veh		48.2			76.3			44.3			36.6	
Approach LOS		D			E			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.7	51.3	15.6	36.4	21.6	46.4	20.9	31.1
Change Period (Y+Rc), s	* 6.3	6.3	* 6.6	* 6.4	* 6.3	6.3	6.4	6.2
Max Green Setting (Gmax), s	* 13	42.7	* 9	* 30	* 18	37.6	9.0	30.2
Max Q Clear Time (g_c+I1), s	10.3	27.2	7.6	32.0	15.1	42.1	2.0	19.8
Green Ext Time (p_c), s	0.1	8.7	0.1	0.0	0.2	0.0	0.1	5.1

Intersection Summary		
HCM 6th Ctrl Delay		49.8
HCM 6th LOS		D

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	27	713	35	80	1132	99	40	6	44	26	14	44
Future Volume (veh/h)	27	713	35	80	1132	99	40	6	44	26	14	44
Initial Q (Qb), 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	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	29	775	38	87	1230	108	43	7	48	28	15	48
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	351	2688	132	561	2771	1236	115	25	79	89	42	87
Arrive On Green	0.78	0.78	0.78	0.78	0.78	0.78	0.10	0.10	0.10	0.10	0.10	0.10
Sat Flow, veh/h	409	3448	169	671	3554	1585	579	254	800	366	421	878
Grp Volume(v), veh/h	29	399	414	87	1230	108	98	0	0	91	0	0
Grp Sat Flow(s),veh/h/ln	409	1777	1840	671	1777	1585	1633	0	0	1664	0	0
Q Serve(g_s), s	2.3	5.7	5.7	3.8	10.5	1.4	0.4	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	12.8	5.7	5.7	9.6	10.5	1.4	4.8	0.0	0.0	4.4	0.0	0.0
Prop In Lane	1.00		0.09	1.00		1.00	0.44		0.49	0.31		0.53
Lane Grp Cap(c), veh/h	351	1386	1435	561	2771	1236	219	0	0	217	0	0
V/C Ratio(X)	0.08	0.29	0.29	0.16	0.44	0.09	0.45	0.00	0.00	0.42	0.00	0.00
Avail Cap(c_a), veh/h	351	1386	1435	561	2771	1236	535	0	0	546	0	0
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
Upstream Filter(I)	0.66	0.66	0.66	0.59	0.59	0.59	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	5.5	2.8	2.8	4.2	3.3	2.3	38.7	0.0	0.0	38.5	0.0	0.0
Incr Delay (d2), s/veh	0.3	0.3	0.3	0.3	0.3	0.1	1.4	0.0	0.0	1.3	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	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.4	2.7	2.8	0.9	4.6	0.6	3.8	0.0	0.0	3.5	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	5.8	3.2	3.2	4.5	3.6	2.4	40.1	0.0	0.0	39.8	0.0	0.0
LnGrp LOS	A	A	A	A	A	A	D	A	A	D	A	A
Approach Vol, veh/h		842			1425			98			91	
Approach Delay, s/veh		3.2			3.6			40.1			39.8	
Approach LOS		A			A			D			D	

Timer - Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		75.2		14.8		75.2		14.8
Change Period (Y+Rc), s		* 5		* 5.9		* 5		* 5.9
Max Green Setting (Gmax), s		* 51		* 28		* 51		* 28
Max Q Clear Time (g_c+I1), s		12.5		6.4		14.8		6.8
Green Ext Time (p_c), s		20.8		0.4		10.3		0.5

Intersection Summary			
HCM 6th Ctrl Delay			6.3
HCM 6th LOS			A

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	170	550	38	127	1076	39	66	307	134	30	445	232
Future Volume (veh/h)	170	550	38	127	1076	39	66	307	134	30	445	232
Initial Q (Qb), 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	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	185	598	0	138	1170	0	72	334	146	33	484	252
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	246	1502		168	1383		204	1096	489	276	1096	489
Arrive On Green	0.14	0.42	0.00	0.09	0.39	0.00	0.31	0.31	0.31	0.31	0.31	0.31
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	722	3554	1585	915	3554	1585
Grp Volume(v), veh/h	185	598	0	138	1170	0	72	334	146	33	484	252
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	722	1777	1585	915	1777	1585
Q Serve(g_s), s	12.0	14.0	0.0	9.1	36.0	0.0	10.7	8.6	8.4	3.4	13.1	15.7
Cycle Q Clear(g_c), s	12.0	14.0	0.0	9.1	36.0	0.0	23.7	8.6	8.4	12.0	13.1	15.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	246	1502		168	1383		204	1096	489	276	1096	489
V/C Ratio(X)	0.75	0.40		0.82	0.85		0.35	0.30	0.30	0.12	0.44	0.52
Avail Cap(c_a), veh/h	246	1502		257	1383		204	1096	489	276	1096	489
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
Upstream Filter(I)	0.97	0.97	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.7	24.1	0.0	53.4	33.4	0.0	42.7	31.7	31.6	36.3	33.2	34.1
Incr Delay (d2), s/veh	11.8	0.8	0.0	11.9	6.5	0.0	4.7	0.7	1.6	0.2	0.3	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	10.1	10.0	0.0	8.2	23.1	0.0	3.9	6.9	6.2	1.4	9.6	10.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	61.5	24.8	0.0	65.3	39.9	0.0	47.5	32.4	33.2	36.5	33.6	35.3
LnGrp LOS	E	C		E	D		D	C	C	D	C	D
Approach Vol, veh/h		783			1308			552			769	
Approach Delay, s/veh		33.5			42.6			34.6			34.3	
Approach LOS		C			D			C			C	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	24.0	52.8		43.2	18.7	58.1		43.2
Change Period (Y+Rc), s	* 7.4	6.1		* 6.2	7.4	* 7.4		* 6.2
Max Green Setting (Gmax), s	* 17	46.7		* 37	17.3	* 46		* 37
Max Q Clear Time (g_c+I1), s	14.0	38.0		17.7	11.1	16.0		25.7
Green Ext Time (p_c), s	0.1	5.5		5.2	0.2	5.2		2.5

Intersection Summary		
HCM 6th Ctrl Delay		37.3
HCM 6th LOS		D

Notes

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

Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.

Intersection						
Int Delay, s/veh	4					

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	22	59	30	13	35	95
Future Vol, veh/h	22	59	30	13	35	95
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	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	24	64	33	14	38	103

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	219	40	0	0	47	0
Stage 1	40	-	-	-	-	-
Stage 2	179	-	-	-	-	-
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	769	1031	-	-	1560	-
Stage 1	982	-	-	-	-	-
Stage 2	852	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	749	1031	-	-	1560	-
Mov Cap-2 Maneuver	749	-	-	-	-	-
Stage 1	982	-	-	-	-	-
Stage 2	830	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.3	0	2
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	935	1560	-
HCM Lane V/C Ratio	-	-	0.094	0.024	-
HCM Control Delay (s)	-	-	9.3	7.4	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.3	0.1	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	71	188	76	217	297	24	83	1868	174	24	1228	84
Future Volume (veh/h)	71	188	76	217	297	24	83	1868	174	24	1228	84
Initial Q (Qb), 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	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	77	204	83	236	323	26	90	2030	189	26	1335	91
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	431	1025	527	523	1180	94	248	2143	839	109	2040	702
Arrive On Green	0.04	0.29	0.29	0.11	0.35	0.35	0.04	0.42	0.42	0.05	0.80	0.80
Sat Flow, veh/h	1781	3554	1585	1781	3332	267	1781	5106	1585	1781	5106	1585
Grp Volume(v), veh/h	77	204	83	236	171	178	90	2030	189	26	1335	91
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1822	1781	1702	1585	1781	1702	1585
Q Serve(g_s), s	3.6	5.2	4.4	10.7	8.3	8.4	3.5	46.0	7.6	1.0	13.2	1.4
Cycle Q Clear(g_c), s	3.6	5.2	4.4	10.7	8.3	8.4	3.5	46.0	7.6	1.0	13.2	1.4
Prop In Lane	1.00		1.00	1.00		0.15	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	431	1025	527	523	629	645	248	2143	839	109	2040	702
V/C Ratio(X)	0.18	0.20	0.16	0.45	0.27	0.28	0.36	0.95	0.23	0.24	0.65	0.13
Avail Cap(c_a), veh/h	495	1025	527	632	629	645	325	2143	839	148	2040	702
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	0.99	0.99	0.99	1.00	1.00	1.00	0.73	0.73	0.73
Uniform Delay (d), s/veh	28.0	32.2	28.2	24.0	27.7	27.7	20.3	33.5	15.1	28.5	8.6	6.4
Incr Delay (d2), s/veh	0.2	0.4	0.6	0.6	1.1	1.0	0.9	10.5	0.6	0.8	1.2	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.8	4.2	3.2	8.1	6.7	6.9	2.8	28.0	5.2	0.8	5.4	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.2	32.7	28.8	24.6	28.8	28.8	21.2	44.0	15.7	29.3	9.8	6.6
LnGrp LOS	C	C	C	C	C	C	C	D	B	C	A	A
Approach Vol, veh/h		364			585			2309			1452	
Approach Delay, s/veh		30.9			27.1			40.8			9.9	
Approach LOS		C			C			D			A	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.2	48.5	9.3	52.9	17.1	40.6	6.9	55.4
Change Period (Y+Rc), s	4.0	* 6	4.0	* 5	4.0	* 6	4.0	* 5
Max Green Setting (Gmax), s	9.5	* 43	10.5	* 39	20.5	* 32	5.5	* 44
Max Q Clear Time (g_c+I1), s	5.6	10.4	5.5	15.2	12.7	7.2	3.0	48.0
Green Ext Time (p_c), s	0.0	2.2	0.1	11.1	0.4	1.5	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	28.8
HCM 6th LOS	C

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	24	335	22	121	522	15	24	30	160	4	18	22
Future Volume (veh/h)	24	335	22	121	522	15	24	30	160	4	18	22
Initial Q (Qb), 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	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	26	364	24	132	567	16	26	33	174	4	20	24
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	668	2553	168	801	2662	75	136	151	219	50	110	117
Arrive On Green	0.75	0.75	0.75	0.75	0.75	0.75	0.14	0.14	0.14	0.14	0.14	0.14
Sat Flow, veh/h	832	3385	222	996	3530	100	567	1092	1585	47	798	845
Grp Volume(v), veh/h	26	190	198	132	285	298	59	0	174	48	0	0
Grp Sat Flow(s),veh/h/ln	832	1777	1830	996	1777	1852	1659	0	1585	1690	0	0
Q Serve(g_s), s	0.9	2.7	2.7	3.8	4.2	4.2	0.1	0.0	9.6	0.0	0.0	0.0
Cycle Q Clear(g_c), s	5.1	2.7	2.7	6.5	4.2	4.2	2.5	0.0	9.6	2.2	0.0	0.0
Prop In Lane	1.00		0.12	1.00		0.05	0.44		1.00	0.08		0.50
Lane Grp Cap(c), veh/h	668	1340	1380	801	1340	1397	287	0	219	277	0	0
V/C Ratio(X)	0.04	0.14	0.14	0.16	0.21	0.21	0.21	0.00	0.80	0.17	0.00	0.00
Avail Cap(c_a), veh/h	668	1340	1380	801	1340	1397	707	0	634	707	0	0
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
Upstream Filter(I)	0.99	0.99	0.99	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	4.0	3.0	3.0	3.9	3.2	3.2	34.5	0.0	37.6	34.4	0.0	0.0
Incr Delay (d2), s/veh	0.1	0.2	0.2	0.4	0.4	0.3	0.4	0.0	6.4	0.3	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	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.3	1.4	1.5	1.3	2.2	2.3	2.1	0.0	7.3	1.7	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	4.1	3.3	3.3	4.4	3.6	3.6	34.9	0.0	44.0	34.7	0.0	0.0
LnGrp LOS	A	A	A	A	A	A	C	A	D	C	A	A
Approach Vol, veh/h		414			715			233			48	
Approach Delay, s/veh		3.3			3.7			41.7			34.7	
Approach LOS		A			A			D			C	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		72.6		17.4		72.6		17.4				
Change Period (Y+Rc), s		* 4.7		5.0		* 4.7		5.0				
Max Green Setting (Gmax), s		* 44		36.0		* 44		36.0				
Max Q Clear Time (g_c+I1), s		8.5		4.2		7.1		11.6				
Green Ext Time (p_c), s		4.7		0.2		2.7		0.9				
Intersection Summary												
HCM 6th Ctrl Delay			10.9									
HCM 6th LOS			B									

Notes

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

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	39	450	583	25	11	54
Future Vol, veh/h	39	450	583	25	11	54
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	200	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	42	489	634	27	12	59

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	661	0	-	0	977	331
Stage 1	-	-	-	-	648	-
Stage 2	-	-	-	-	329	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	*1258	-	-	-	*248	*841
Stage 1	-	-	-	-	*794	-
Stage 2	-	-	-	-	*849	-
Platoon blocked, %	1	-	-	-		1
Mov Cap-1 Maneuver	*1258	-	-	-	*240	*841
Mov Cap-2 Maneuver	-	-	-	-	*477	-
Stage 1	-	-	-	-	*767	-
Stage 2	-	-	-	-	*849	-

Approach	EB	WB	SB
HCM Control Delay, s	0.6	0	10.3
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	* 1258	-	-	-	745
HCM Lane V/C Ratio	0.034	-	-	-	0.095
HCM Control Delay (s)	8	-	-	-	10.3
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.3

Notes

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

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	9	452	593	30	52	15
Future Vol, veh/h	9	452	593	30	52	15
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	10	491	645	33	57	16

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	678	0	-	0	928	339
Stage 1	-	-	-	-	662	-
Stage 2	-	-	-	-	266	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	910	-	-	-	267	657
Stage 1	-	-	-	-	475	-
Stage 2	-	-	-	-	754	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	910	-	-	-	264	657
Mov Cap-2 Maneuver	-	-	-	-	373	-
Stage 1	-	-	-	-	470	-
Stage 2	-	-	-	-	754	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	15.6
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	910	-	-	-	413
HCM Lane V/C Ratio	0.011	-	-	-	0.176
HCM Control Delay (s)	9	-	-	-	15.6
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	0.6

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	481	21	21	594	9	21	0	41	2	1	1
Future Vol, veh/h	0	481	21	21	594	9	21	0	41	2	1	1
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	0	-	-	33	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	523	23	23	646	10	23	0	45	2	1	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	656	0	0	546	0	0	905	1237	273	959	1243	328
Stage 1	-	-	-	-	-	-	535	535	-	697	697	-
Stage 2	-	-	-	-	-	-	370	702	-	262	546	-
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	933	-	-	1297	-	-	232	175	*899	*211	173	682
Stage 1	-	-	-	-	-	-	815	721	-	*404	445	-
Stage 2	-	-	-	-	-	-	634	443	-	*848	712	-
Platoon blocked, %	1	-	-	1	-	-			1			1
Mov Cap-1 Maneuver	933	-	-	1297	-	-	227	172	*899	*198	170	682
Mov Cap-2 Maneuver	-	-	-	-	-	-	227	172	-	*198	170	-
Stage 1	-	-	-	-	-	-	815	721	-	*404	437	-
Stage 2	-	-	-	-	-	-	620	435	-	*806	712	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.3	14.4	21
HCM LOS			B	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	449	933	-	-	1297	-	-	229
HCM Lane V/C Ratio	0.15	-	-	-	0.018	-	-	0.019
HCM Control Delay (s)	14.4	0	-	-	7.8	-	-	21
HCM Lane LOS	B	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	0.5	0	-	-	0.1	-	-	0.1

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	227	916	149	104	593	192	186	1147	123	387	1417	240
Future Volume (veh/h)	227	916	149	104	593	192	186	1147	123	387	1417	240
Initial Q (Qb), 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	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	247	996	162	113	645	209	202	1247	134	421	1540	261
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	303	971	433	191	908	405	236	1324	527	400	1817	564
Arrive On Green	0.09	0.27	0.27	0.07	0.26	0.26	0.17	0.52	0.52	0.18	0.36	0.36
Sat Flow, veh/h	3456	3554	1585	1781	3554	1585	1781	5106	1585	1781	5106	1585
Grp Volume(v), veh/h	247	996	162	113	645	209	202	1247	134	421	1540	261
Grp Sat Flow(s),veh/h/ln	1728	1777	1585	1781	1777	1585	1781	1702	1585	1781	1702	1585
Q Serve(g_s), s	8.4	32.8	7.3	3.2	19.8	13.6	10.4	27.6	1.9	22.1	33.4	15.2
Cycle Q Clear(g_c), s	8.4	32.8	7.3	3.2	19.8	13.6	10.4	27.6	1.9	22.1	33.4	15.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	303	971	433	191	908	405	236	1324	527	400	1817	564
V/C Ratio(X)	0.81	1.03	0.37	0.59	0.71	0.52	0.86	0.94	0.25	1.05	0.85	0.46
Avail Cap(c_a), veh/h	334	971	433	194	908	405	236	1324	527	400	1817	564
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.95	0.95	0.95	0.65	0.65	0.65	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.8	43.6	19.1	52.2	40.6	38.3	29.4	28.0	6.7	35.3	35.6	29.8
Incr Delay (d2), s/veh	13.3	35.5	1.3	4.4	3.1	2.1	17.8	10.3	0.8	59.8	5.1	2.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	7.6	26.6	5.1	6.3	13.8	9.3	8.0	13.7	1.6	26.2	20.8	10.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	67.1	79.1	20.5	56.6	43.7	40.4	47.2	38.3	7.4	95.2	40.8	32.5
LnGrp LOS	E	F	C	E	D	D	D	D	A	F	D	C
Approach Vol, veh/h		1405			967			1583			2222	
Approach Delay, s/veh		70.2			44.5			36.9			50.1	
Approach LOS		E			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.8	49.0	17.1	37.1	28.4	37.4	15.2	39.0
Change Period (Y+Rc), s	* 6.3	6.3	* 6.6	* 6.4	* 6.3	6.3	6.4	6.2
Max Green Setting (Gmax), s	* 11	42.5	* 12	* 30	* 22	30.9	9.0	32.8
Max Q Clear Time (g_c+I1), s	12.4	35.4	10.4	21.8	24.1	29.6	5.2	34.8
Green Ext Time (p_c), s	0.0	5.6	0.1	4.8	0.0	1.0	0.1	0.0

Intersection Summary		
HCM 6th Ctrl Delay		50.4
HCM 6th LOS		D

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	1273	71	92	832	34	44	21	68	46	22	33
Future Volume (veh/h)	50	1273	71	92	832	34	44	21	68	46	22	33
Initial Q (Qb), 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	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	54	1384	77	100	904	37	48	23	74	50	24	36
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	490	2629	146	302	2729	1217	104	41	95	123	54	58
Arrive On Green	0.77	0.77	0.77	0.77	0.77	0.77	0.11	0.11	0.11	0.11	0.11	0.11
Sat Flow, veh/h	596	3423	190	363	3554	1585	454	369	858	584	484	520
Grp Volume(v), veh/h	54	717	744	100	904	37	145	0	0	110	0	0
Grp Sat Flow(s),veh/h/ln	596	1777	1836	363	1777	1585	1681	0	0	1588	0	0
Q Serve(g_s), s	2.8	14.1	14.2	13.3	7.1	0.5	1.5	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	9.9	14.1	14.2	27.6	7.1	0.5	7.3	0.0	0.0	5.8	0.0	0.0
Prop In Lane	1.00		0.10	1.00		1.00	0.33		0.51	0.45		0.33
Lane Grp Cap(c), veh/h	490	1365	1410	302	2729	1217	240	0	0	234	0	0
V/C Ratio(X)	0.11	0.53	0.53	0.33	0.33	0.03	0.61	0.00	0.00	0.47	0.00	0.00
Avail Cap(c_a), veh/h	490	1365	1410	302	2729	1217	529	0	0	515	0	0
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
Upstream Filter(I)	0.15	0.15	0.15	0.82	0.82	0.82	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	4.8	4.1	4.1	9.4	3.2	2.5	38.8	0.0	0.0	38.1	0.0	0.0
Incr Delay (d2), s/veh	0.1	0.2	0.2	2.4	0.3	0.0	2.5	0.0	0.0	1.5	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	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.5	4.8	4.9	2.1	3.3	0.2	5.8	0.0	0.0	4.3	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	4.9	4.3	4.3	11.9	3.5	2.5	41.2	0.0	0.0	39.5	0.0	0.0
LnGrp LOS	A	A	A	B	A	A	D	A	A	D	A	A
Approach Vol, veh/h		1515			1041			145			110	
Approach Delay, s/veh		4.3			4.3			41.2			39.5	
Approach LOS		A			A			D			D	

Timer - Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		74.1		15.9		74.1		15.9
Change Period (Y+Rc), s		* 5		* 5.9		* 5		* 5.9
Max Green Setting (Gmax), s		* 52		* 27		* 52		* 27
Max Q Clear Time (g_c+I1), s		29.6		7.8		16.2		9.3
Green Ext Time (p_c), s		12.0		0.5		22.1		0.7

Intersection Summary			
HCM 6th Ctrl Delay			7.6
HCM 6th LOS			A

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	279	1060	59	160	627	30	65	432	228	47	381	244
Future Volume (veh/h)	279	1060	59	160	627	30	65	432	228	47	381	244
Initial Q (Qb), 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	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	303	1152	0	174	682	0	71	470	248	51	414	265
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	395	1433		202	1087		225	1096	489	209	1096	489
Arrive On Green	0.22	0.40	0.00	0.11	0.31	0.00	0.31	0.31	0.31	0.31	0.31	0.31
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	761	3554	1585	734	3554	1585
Grp Volume(v), veh/h	303	1152	0	174	682	0	71	470	248	51	414	265
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	761	1777	1585	734	1777	1585
Q Serve(g_s), s	19.1	34.3	0.0	11.5	19.8	0.0	9.7	12.7	15.4	7.1	10.9	16.7
Cycle Q Clear(g_c), s	19.1	34.3	0.0	11.5	19.8	0.0	20.6	12.7	15.4	19.8	10.9	16.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	395	1433		202	1087		225	1096	489	209	1096	489
V/C Ratio(X)	0.77	0.80		0.86	0.63		0.32	0.43	0.51	0.24	0.38	0.54
Avail Cap(c_a), veh/h	395	1433		232	1087		225	1096	489	209	1096	489
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
Upstream Filter(I)	0.81	0.81	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.8	31.6	0.0	52.3	35.8	0.0	40.6	33.1	34.0	41.0	32.5	34.5
Incr Delay (d2), s/veh	7.2	4.0	0.0	24.3	2.7	0.0	3.6	1.2	3.7	0.7	0.3	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	18.7	21.1	0.0	10.7	13.9	0.0	3.7	9.5	10.6	2.4	8.3	10.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	51.0	35.6	0.0	76.6	38.5	0.0	44.2	34.3	37.8	41.7	32.8	35.9
LnGrp LOS	D	D		E	D		D	C	D	D	C	D
Approach Vol, veh/h		1455			856			789			730	
Approach Delay, s/veh		38.8			46.3			36.3			34.5	
Approach LOS		D			D			D			C	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	34.0	42.8		43.2	21.0	55.8		43.2
Change Period (Y+Rc), s	* 7.4	6.1		* 6.2	7.4	* 7.4		* 6.2
Max Green Setting (Gmax), s	* 27	36.7		* 37	15.6	* 48		* 37
Max Q Clear Time (g_c+I1), s	21.1	21.8		21.8	13.5	36.3		22.6
Green Ext Time (p_c), s	0.5	4.6		4.4	0.1	6.7		3.9

Intersection Summary	
HCM 6th Ctrl Delay	39.1
HCM 6th LOS	D

Notes

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

Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Int Delay, s/veh	2.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	15	41	91	23	62	123
Future Vol, veh/h	15	41	91	23	62	123
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	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	16	45	99	25	67	134

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	380	112	0	0	124	0
Stage 1	112	-	-	-	-	-
Stage 2	268	-	-	-	-	-
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	622	941	-	-	1463	-
Stage 1	913	-	-	-	-	-
Stage 2	777	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	592	941	-	-	1463	-
Mov Cap-2 Maneuver	592	-	-	-	-	-
Stage 1	913	-	-	-	-	-
Stage 2	739	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.8	0	2.5
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	813	1463	-
HCM Lane V/C Ratio	-	-	0.075	0.046	-
HCM Control Delay (s)	-	-	9.8	7.6	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0.1	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	118	354	77	195	229	41	127	1312	285	63	1650	74
Future Volume (veh/h)	118	354	77	195	229	41	127	1312	285	63	1650	74
Initial Q (Qb), 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	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	128	385	84	212	249	45	138	1426	310	68	1793	80
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	493	1140	610	452	1065	190	177	1977	767	168	1840	672
Arrive On Green	0.06	0.32	0.32	0.10	0.35	0.35	0.06	0.39	0.39	0.03	0.24	0.24
Sat Flow, veh/h	1781	3554	1585	1781	3014	537	1781	5106	1585	1781	5106	1585
Grp Volume(v), veh/h	128	385	84	212	145	149	138	1426	310	68	1793	80
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1774	1781	1702	1585	1781	1702	1585
Q Serve(g_s), s	5.7	9.9	4.1	9.2	6.9	7.1	5.7	28.5	15.1	2.9	41.8	4.3
Cycle Q Clear(g_c), s	5.7	9.9	4.1	9.2	6.9	7.1	5.7	28.5	15.1	2.9	41.8	4.3
Prop In Lane	1.00		1.00	1.00		0.30	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	493	1140	610	452	628	627	177	1977	767	168	1840	672
V/C Ratio(X)	0.26	0.34	0.14	0.47	0.23	0.24	0.78	0.72	0.40	0.40	0.97	0.12
Avail Cap(c_a), veh/h	522	1140	610	584	628	627	219	1977	767	183	1840	672
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.67	0.67	0.67
Upstream Filter(I)	1.00	1.00	1.00	0.99	0.99	0.99	1.00	1.00	1.00	0.52	0.52	0.52
Uniform Delay (d), s/veh	24.5	31.0	24.0	22.6	27.3	27.4	29.0	31.3	19.9	26.5	45.0	25.1
Incr Delay (d2), s/veh	0.3	0.8	0.5	0.8	0.9	0.9	13.3	2.3	1.6	0.8	10.3	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	4.4	7.8	3.0	7.1	5.6	5.7	5.5	17.7	9.8	2.3	25.3	3.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.8	31.9	24.4	23.4	28.2	28.3	42.3	33.6	21.5	27.3	55.2	25.2
LnGrp LOS	C	C	C	C	C	C	D	C	C	C	E	C
Approach Vol, veh/h		597			506			1874			1941	
Approach Delay, s/veh		29.3			26.2			32.2			53.0	
Approach LOS		C			C			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.7	48.4	11.7	48.2	15.6	44.5	8.5	51.5
Change Period (Y+Rc), s	4.0	* 6	4.0	* 5	4.0	* 6	4.0	* 5
Max Green Setting (Gmax), s	9.6	* 42	10.5	* 39	20.5	* 32	5.5	* 44
Max Q Clear Time (g_c+I1), s	7.7	9.1	7.7	43.8	11.2	11.9	4.9	30.5
Green Ext Time (p_c), s	0.1	1.8	0.1	0.0	0.4	2.7	0.0	8.7

Intersection Summary	
HCM 6th Ctrl Delay	39.5
HCM 6th LOS	D

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	45	596	62	147	420	17	42	46	165	23	43	73
Future Volume (veh/h)	45	596	62	147	420	17	42	46	165	23	43	73
Initial Q (Qb), 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	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	49	648	67	160	457	18	46	50	179	25	47	79
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	735	2438	252	586	2614	103	145	138	225	70	86	120
Arrive On Green	0.75	0.75	0.75	0.75	0.75	0.75	0.14	0.14	0.14	0.14	0.14	0.14
Sat Flow, veh/h	919	3251	336	736	3485	137	606	971	1585	163	608	846
Grp Volume(v), veh/h	49	354	361	160	233	242	96	0	179	151	0	0
Grp Sat Flow(s),veh/h/ln	919	1777	1810	736	1777	1846	1577	0	1585	1617	0	0
Q Serve(g_s), s	1.5	5.6	5.6	7.8	3.4	3.4	0.0	0.0	9.8	3.0	0.0	0.0
Cycle Q Clear(g_c), s	4.9	5.6	5.6	13.4	3.4	3.4	4.7	0.0	9.8	7.8	0.0	0.0
Prop In Lane	1.00		0.19	1.00		0.07	0.48		1.00	0.17		0.52
Lane Grp Cap(c), veh/h	735	1333	1358	586	1333	1384	283	0	225	276	0	0
V/C Ratio(X)	0.07	0.27	0.27	0.27	0.17	0.18	0.34	0.00	0.79	0.55	0.00	0.00
Avail Cap(c_a), veh/h	735	1333	1358	586	1333	1384	524	0	476	523	0	0
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
Upstream Filter(I)	0.95	0.95	0.95	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	3.9	3.5	3.5	5.6	3.2	3.2	35.0	0.0	37.3	36.4	0.0	0.0
Incr Delay (d2), s/veh	0.2	0.5	0.5	1.1	0.3	0.3	0.7	0.0	6.2	1.7	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	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.5	3.0	3.0	2.2	1.8	1.9	3.5	0.0	7.5	5.8	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	4.1	4.0	4.0	6.8	3.5	3.5	35.7	0.0	43.6	38.0	0.0	0.0
LnGrp LOS	A	A	A	A	A	A	D	A	D	D	A	A
Approach Vol, veh/h		764			635			275			151	
Approach Delay, s/veh		4.0			4.3			40.8			38.0	
Approach LOS		A			A			D			D	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		72.2		17.8		72.2		17.8				
Change Period (Y+Rc), s		* 4.7		5.0		* 4.7		5.0				
Max Green Setting (Gmax), s		* 53		27.0		* 53		27.0				
Max Q Clear Time (g_c+I1), s		15.4		9.8		7.6		11.8				
Green Ext Time (p_c), s		4.6		0.7		5.6		1.0				

Intersection Summary			
HCM 6th Ctrl Delay			12.5
HCM 6th LOS			B

Notes

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

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	41	760	499	32	39	71
Future Vol, veh/h	41	760	499	32	39	71
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	200	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	45	826	542	35	42	77

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	577	0	-	0	1063	289
Stage 1	-	-	-	-	560	-
Stage 2	-	-	-	-	503	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	1269	-	-	-	*218	*893
Stage 1	-	-	-	-	*805	-
Stage 2	-	-	-	-	*718	-
Platoon blocked, %	1	-	-	-		1
Mov Cap-1 Maneuver	1269	-	-	-	*210	*893
Mov Cap-2 Maneuver	-	-	-	-	*436	-
Stage 1	-	-	-	-	*777	-
Stage 2	-	-	-	-	*718	-

Approach	EB	WB	SB
HCM Control Delay, s	0.4	0	11.8
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1269	-	-	-	651
HCM Lane V/C Ratio	0.035	-	-	-	0.184
HCM Control Delay (s)	7.9	-	-	-	11.8
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.7

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

Intersection						
Int Delay, s/veh	0.6					

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	15	784	521	54	36	10
Future Vol, veh/h	15	784	521	54	36	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	16	852	566	59	39	11

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	625	0	-	0	1054	313
Stage 1	-	-	-	-	596	-
Stage 2	-	-	-	-	458	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	952	-	-	-	221	683
Stage 1	-	-	-	-	513	-
Stage 2	-	-	-	-	604	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	952	-	-	-	217	683
Mov Cap-2 Maneuver	-	-	-	-	348	-
Stage 1	-	-	-	-	504	-
Stage 2	-	-	-	-	604	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	15.6
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	952	-	-	-	390
HCM Lane V/C Ratio	0.017	-	-	-	0.128
HCM Control Delay (s)	8.8	-	-	-	15.6
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	0.4

Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	757	48	102	539	12	8	0	43	11	1	4
Future Vol, veh/h	4	757	48	102	539	12	8	0	43	11	1	4
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	0	-	-	33	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	823	52	111	586	13	9	0	47	12	1	4

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	599	0	0	875	0	0	1373	1678	438	1235	1698	300
Stage 1	-	-	-	-	-	-	857	857	-	815	815	-
Stage 2	-	-	-	-	-	-	516	821	-	420	883	-
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	1038	-	-	1089	-	-	105	94	*795	*133	91	831
Stage 1	-	-	-	-	-	-	674	607	-	*381	421	-
Stage 2	-	-	-	-	-	-	587	418	-	*750	586	-
Platoon blocked, %	1	-	-	1	-	-			1			1
Mov Cap-1 Maneuver	1038	-	-	1089	-	-	95	84	*795	*115	81	831
Mov Cap-2 Maneuver	-	-	-	-	-	-	95	84	-	*115	81	-
Stage 1	-	-	-	-	-	-	671	605	-	*379	378	-
Stage 2	-	-	-	-	-	-	523	375	-	*703	584	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	1.4	16.5	33.9
HCM LOS			C	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	369	1038	-	-	1089	-	-	142
HCM Lane V/C Ratio	0.15	0.004	-	-	0.102	-	-	0.122
HCM Control Delay (s)	16.5	8.5	-	-	8.7	-	-	33.9
HCM Lane LOS	C	A	-	-	A	-	-	D
HCM 95th %tile Q(veh)	0.5	0	-	-	0.3	-	-	0.4

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	160	542	140	103	894	297	204	1784	80	247	1290	178
Future Volume (veh/h)	160	542	140	103	894	297	204	1784	80	247	1290	178
Initial Q (Qb), 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	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	174	589	152	112	972	323	222	1939	87	268	1402	193
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	258	764	341	292	888	396	276	1683	702	296	1851	575
Arrive On Green	0.07	0.22	0.22	0.11	0.25	0.25	0.13	0.44	0.44	0.13	0.36	0.36
Sat Flow, veh/h	3456	3554	1585	1781	3554	1585	1781	5106	1585	1781	5106	1585
Grp Volume(v), veh/h	174	589	152	112	972	323	222	1939	87	268	1402	193
Grp Sat Flow(s),veh/h/ln	1728	1777	1585	1781	1777	1585	1781	1702	1585	1781	1702	1585
Q Serve(g_s), s	5.9	18.7	7.4	0.6	30.0	23.0	9.9	39.6	1.1	13.7	29.0	10.6
Cycle Q Clear(g_c), s	5.9	18.7	7.4	0.6	30.0	23.0	9.9	39.6	1.1	13.7	29.0	10.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	258	764	341	292	888	396	276	1683	702	296	1851	575
V/C Ratio(X)	0.67	0.77	0.45	0.38	1.09	0.82	0.81	1.15	0.12	0.91	0.76	0.34
Avail Cap(c_a), veh/h	259	894	399	292	888	396	290	1683	702	327	1851	575
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.89	0.89	0.89	0.09	0.09	0.09	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.1	44.3	22.4	46.5	45.0	42.4	26.6	33.7	5.5	35.1	33.6	27.8
Incr Delay (d2), s/veh	6.7	5.2	2.3	0.7	57.7	12.4	1.5	69.2	0.0	26.1	3.0	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	5.0	13.6	5.4	5.5	28.7	15.3	5.0	31.3	0.9	15.2	18.1	7.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	60.7	49.5	24.7	47.3	102.7	54.8	28.1	102.9	5.6	61.2	36.6	29.3
LnGrp LOS	E	D	C	D	F	D	C	F	A	E	D	C
Approach Vol, veh/h		915			1407			2248			1863	
Approach Delay, s/veh		47.5			87.3			91.7			39.4	
Approach LOS		D			F			F			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.2	49.8	15.6	36.4	22.2	45.9	20.0	32.0
Change Period (Y+Rc), s	* 6.3	6.3	* 6.6	* 6.4	* 6.3	6.3	6.4	6.2
Max Green Setting (Gmax), s	* 13	42.7	* 9	* 30	* 18	37.6	9.0	30.2
Max Q Clear Time (g_c+I1), s	11.9	31.0	7.9	32.0	15.7	41.6	2.6	20.7
Green Ext Time (p_c), s	0.1	7.7	0.1	0.0	0.2	0.0	0.1	5.1

Intersection Summary	
HCM 6th Ctrl Delay	69.3
HCM 6th LOS	E

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	28	762	19	66	1212	0	11	6	15	27	15	46
Future Volume (veh/h)	28	762	19	66	1212	0	11	6	15	27	15	46
Initial Q (Qb), 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	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	30	828	21	72	1317	0	12	7	16	29	16	50
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	353	2772	70	545	2782	1241	88	53	73	86	39	81
Arrive On Green	0.78	0.78	0.78	0.78	0.78	0.00	0.10	0.10	0.10	0.10	0.10	0.10
Sat Flow, veh/h	417	3541	90	649	3554	1585	353	554	764	350	407	841
Grp Volume(v), veh/h	30	415	434	72	1317	0	35	0	0	95	0	0
Grp Sat Flow(s),veh/h/ln	417	1777	1854	649	1777	1585	1671	0	0	1598	0	0
Q Serve(g_s), s	2.4	6.0	6.0	3.2	11.5	0.0	0.0	0.0	0.0	2.8	0.0	0.0
Cycle Q Clear(g_c), s	13.9	6.0	6.0	9.2	11.5	0.0	1.7	0.0	0.0	5.0	0.0	0.0
Prop In Lane	1.00		0.05	1.00		1.00	0.34		0.46	0.31		0.53
Lane Grp Cap(c), veh/h	353	1391	1451	545	2782	1241	214	0	0	206	0	0
V/C Ratio(X)	0.08	0.30	0.30	0.13	0.47	0.00	0.16	0.00	0.00	0.46	0.00	0.00
Avail Cap(c_a), veh/h	353	1391	1451	545	2782	1241	546	0	0	542	0	0
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
Upstream Filter(I)	0.65	0.65	0.65	0.47	0.47	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	5.8	2.8	2.8	4.1	3.4	0.0	37.5	0.0	0.0	39.0	0.0	0.0
Incr Delay (d2), s/veh	0.3	0.4	0.3	0.2	0.3	0.0	0.4	0.0	0.0	1.6	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	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.4	2.7	2.9	0.7	4.6	0.0	1.3	0.0	0.0	3.7	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	6.1	3.1	3.1	4.3	3.6	0.0	37.9	0.0	0.0	40.6	0.0	0.0
LnGrp LOS	A	A	A	A	A	A	D	A	A	D	A	A
Approach Vol, veh/h		879			1389			35			95	
Approach Delay, s/veh		3.2			3.7			37.9			40.6	
Approach LOS		A			A			D			D	

Timer - Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		75.4		14.6		75.4		14.6
Change Period (Y+Rc), s		* 5		* 5.9		* 5		* 5.9
Max Green Setting (Gmax), s		* 51		* 28		* 51		* 28
Max Q Clear Time (g_c+I1), s		13.5		7.0		15.9		3.7
Green Ext Time (p_c), s		20.9		0.4		10.7		0.1

Intersection Summary	
HCM 6th Ctrl Delay	5.5
HCM 6th LOS	A

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	167	592	35	180	1173	0	51	333	161	34	493	241
Future Volume (veh/h)	167	592	35	180	1173	0	51	333	161	34	493	241
Initial Q (Qb), 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	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	182	643	0	196	1275	0	55	362	175	37	536	262
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	246	1389		224	1383		186	1096	489	260	1096	489
Arrive On Green	0.14	0.39	0.00	0.13	0.39	0.00	0.31	0.31	0.31	0.31	0.31	0.31
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	681	3554	1585	868	3554	1585
Grp Volume(v), veh/h	182	643	0	196	1275	0	55	362	175	37	536	262
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	681	1777	1585	868	1777	1585
Q Serve(g_s), s	11.8	16.1	0.0	13.0	41.0	0.0	8.6	9.4	10.3	4.1	14.7	16.4
Cycle Q Clear(g_c), s	11.8	16.1	0.0	13.0	41.0	0.0	23.3	9.4	10.3	13.5	14.7	16.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	246	1389		224	1383		186	1096	489	260	1096	489
V/C Ratio(X)	0.74	0.46		0.87	0.92		0.30	0.33	0.36	0.14	0.49	0.54
Avail Cap(c_a), veh/h	246	1389		257	1383		186	1096	489	260	1096	489
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
Upstream Filter(I)	0.97	0.97	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.6	27.2	0.0	51.5	34.9	0.0	43.3	32.0	32.3	37.2	33.8	34.4
Incr Delay (d2), s/veh	10.8	1.1	0.0	24.6	11.6	0.0	4.0	0.8	2.0	0.3	0.4	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	9.9	11.3	0.0	11.7	26.8	0.0	3.0	7.5	7.6	1.6	10.6	10.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	60.4	28.3	0.0	76.1	46.5	0.0	47.3	32.8	34.3	37.5	34.2	35.8
LnGrp LOS	E	C		E	D		D	C	C	D	C	D
Approach Vol, veh/h		825			1471			592			835	
Approach Delay, s/veh		35.4			50.4			34.6			34.8	
Approach LOS		D			D			C			C	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	24.0	52.8		43.2	22.5	54.3		43.2
Change Period (Y+Rc), s	* 7.4	6.1		* 6.2	7.4	* 7.4		* 6.2
Max Green Setting (Gmax), s	* 17	46.7		* 37	17.3	* 46		* 37
Max Q Clear Time (g_c+I1), s	13.8	43.0		18.4	15.0	18.1		25.3
Green Ext Time (p_c), s	0.1	2.8		5.7	0.1	5.5		2.7

Intersection Summary		
HCM 6th Ctrl Delay		41.1
HCM 6th LOS		D

Notes

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

Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	75	206	97	262	318	43	101	2024	223	49	1369	88
Future Volume (veh/h)	75	206	97	262	318	43	101	2024	223	49	1369	88
Initial Q (Qb), 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	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	82	224	105	285	346	47	110	2200	242	53	1488	96
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	411	960	511	525	1115	150	205	2074	851	122	1981	689
Arrive On Green	0.05	0.27	0.27	0.13	0.35	0.35	0.05	0.41	0.41	0.05	0.52	0.52
Sat Flow, veh/h	1781	3554	1585	1781	3147	424	1781	5106	1585	1781	5106	1585
Grp Volume(v), veh/h	82	224	105	285	194	199	110	2200	242	53	1488	96
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1794	1781	1702	1585	1781	1702	1585
Q Serve(g_s), s	4.0	5.9	5.8	13.3	9.5	9.7	4.4	48.7	10.0	2.1	27.6	3.5
Cycle Q Clear(g_c), s	4.0	5.9	5.8	13.3	9.5	9.7	4.4	48.7	10.0	2.1	27.6	3.5
Prop In Lane	1.00		1.00	1.00		0.24	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	411	960	511	525	629	635	205	2074	851	122	1981	689
V/C Ratio(X)	0.20	0.23	0.21	0.54	0.31	0.31	0.54	1.06	0.28	0.44	0.75	0.14
Avail Cap(c_a), veh/h	469	960	511	596	629	635	267	2074	851	142	1981	689
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33
Upstream Filter(I)	1.00	1.00	1.00	0.98	0.98	0.98	1.00	1.00	1.00	0.65	0.65	0.65
Uniform Delay (d), s/veh	29.4	34.1	29.5	24.6	28.1	28.1	24.8	35.6	15.2	29.3	24.5	15.9
Incr Delay (d2), s/veh	0.2	0.6	0.9	0.9	1.2	1.3	2.2	38.2	0.8	1.6	1.8	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.1	4.7	4.2	9.6	7.6	7.8	3.5	37.1	6.8	1.7	14.5	2.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.6	34.7	30.4	25.4	29.3	29.4	27.0	73.8	16.0	30.9	26.2	16.2
LnGrp LOS	C	C	C	C	C	C	C	F	B	C	C	B
Approach Vol, veh/h		411			678			2552			1637	
Approach Delay, s/veh		32.6			27.7			66.3			25.8	
Approach LOS		C			C			E			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.6	48.5	10.3	51.6	19.7	38.4	8.1	53.7
Change Period (Y+Rc), s	4.0	* 6	4.0	* 5	4.0	* 6	4.0	* 5
Max Green Setting (Gmax), s	9.5	* 43	10.5	* 39	20.5	* 32	5.5	* 44
Max Q Clear Time (g_c+I1), s	6.0	11.7	6.4	29.6	15.3	7.9	4.1	50.7
Green Ext Time (p_c), s	0.0	2.5	0.1	6.3	0.4	1.7	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	46.2
HCM 6th LOS	D

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	25	365	68	151	563	16	58	32	186	4	19	23
Future Volume (veh/h)	25	365	68	151	563	16	58	32	186	4	19	23
Initial Q (Qb), 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	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	27	397	74	164	612	17	63	35	202	4	21	25
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	620	2197	406	719	2591	72	210	103	251	50	127	134
Arrive On Green	0.73	0.73	0.73	0.73	0.73	0.73	0.16	0.16	0.16	0.16	0.16	0.16
Sat Flow, veh/h	797	2994	553	922	3532	98	909	651	1585	42	803	846
Grp Volume(v), veh/h	27	234	237	164	308	321	98	0	202	50	0	0
Grp Sat Flow(s),veh/h/ln	797	1777	1771	922	1777	1853	1560	0	1585	1691	0	0
Q Serve(g_s), s	1.0	3.6	3.7	6.0	5.0	5.0	2.5	0.0	11.1	0.0	0.0	0.0
Cycle Q Clear(g_c), s	6.0	3.6	3.7	9.7	5.0	5.0	4.7	0.0	11.1	2.3	0.0	0.0
Prop In Lane	1.00		0.31	1.00		0.05	0.64		1.00	0.08		0.50
Lane Grp Cap(c), veh/h	620	1304	1299	719	1304	1360	313	0	251	311	0	0
V/C Ratio(X)	0.04	0.18	0.18	0.23	0.24	0.24	0.31	0.00	0.80	0.16	0.00	0.00
Avail Cap(c_a), veh/h	620	1304	1299	719	1304	1360	677	0	634	707	0	0
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
Upstream Filter(I)	0.98	0.98	0.98	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	4.8	3.7	3.7	5.2	3.9	3.9	33.8	0.0	36.5	32.8	0.0	0.0
Incr Delay (d2), s/veh	0.1	0.3	0.3	0.7	0.4	0.4	0.6	0.0	6.0	0.2	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	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.3	2.0	2.0	2.0	2.8	2.9	3.5	0.0	8.1	1.7	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	5.0	4.0	4.0	5.9	4.3	4.3	34.3	0.0	42.5	33.1	0.0	0.0
LnGrp LOS	A	A	A	A	A	A	C	A	D	C	A	A
Approach Vol, veh/h		498			793			300			50	
Approach Delay, s/veh		4.0			4.6			39.8			33.1	
Approach LOS		A			A			D			C	

Timer - Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		70.7		19.3		70.7		19.3
Change Period (Y+Rc), s		* 4.7		5.0		* 4.7		5.0
Max Green Setting (Gmax), s		* 44		36.0		* 44		36.0
Max Q Clear Time (g_c+I1), s		11.7		4.3		8.0		13.1
Green Ext Time (p_c), s		5.4		0.2		3.3		1.2

Intersection Summary	
HCM 6th Ctrl Delay	11.7
HCM 6th LOS	B

Notes

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

Intersection						
Int Delay, s/veh	0.6					

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	27	516	675	26	12	34
Future Vol, veh/h	27	516	675	26	12	34
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	200	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	29	561	734	28	13	37

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	762	0	-	0	1087	381
Stage 1	-	-	-	-	748	-
Stage 2	-	-	-	-	339	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	1194	-	-	-	*211	*815
Stage 1	-	-	-	-	*763	-
Stage 2	-	-	-	-	*849	-
Platoon blocked, %	1	-	-	-		1
Mov Cap-1 Maneuver	1194	-	-	-	*206	*815
Mov Cap-2 Maneuver	-	-	-	-	*456	-
Stage 1	-	-	-	-	*745	-
Stage 2	-	-	-	-	*849	-

Approach	EB	WB	SB
HCM Control Delay, s	0.4	0	10.8
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1194	-	-	-	676
HCM Lane V/C Ratio	0.025	-	-	-	0.074
HCM Control Delay (s)	8.1	-	-	-	10.8
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.2

Notes

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

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	514	22	22	687	9	22	0	43	2	1	1
Future Vol, veh/h	0	514	22	22	687	9	22	0	43	2	1	1
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	0	-	-	33	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	559	24	24	747	10	24	0	47	2	1	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	757	0	0	583	0	0	993	1376	292	1080	1383	379
Stage 1	-	-	-	-	-	-	571	571	-	800	800	-
Stage 2	-	-	-	-	-	-	422	805	-	280	583	-
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	855	-	-	1249	-	-	200	144	*899	*172	143	632
Stage 1	-	-	-	-	-	-	769	691	-	*350	399	-
Stage 2	-	-	-	-	-	-	590	397	-	*848	681	-
Platoon blocked, %	1	-	-	1	-	-			1			1
Mov Cap-1 Maneuver	855	-	-	1249	-	-	196	141	*899	*161	140	632
Mov Cap-2 Maneuver	-	-	-	-	-	-	196	141	-	*161	140	-
Stage 1	-	-	-	-	-	-	769	691	-	*350	392	-
Stage 2	-	-	-	-	-	-	576	390	-	*804	681	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.2	15.7	24.5
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	406	855	-	-	1249	-	-	189
HCM Lane V/C Ratio	0.174	-	-	-	0.019	-	-	0.023
HCM Control Delay (s)	15.7	0	-	-	7.9	-	-	24.5
HCM Lane LOS	C	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	0.6	0	-	-	0.1	-	-	0.1

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	239	965	179	124	629	200	219	1243	149	399	1523	252
Future Volume (veh/h)	239	965	179	124	629	200	219	1243	149	399	1523	252
Initial Q (Qb), 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	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	260	1049	195	135	684	217	238	1351	162	434	1655	274
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	315	971	433	192	899	401	226	1319	527	388	1813	563
Arrive On Green	0.09	0.27	0.27	0.07	0.25	0.25	0.17	0.52	0.52	0.18	0.35	0.35
Sat Flow, veh/h	3456	3554	1585	1781	3554	1585	1781	5106	1585	1781	5106	1585
Grp Volume(v), veh/h	260	1049	195	135	684	217	238	1351	162	434	1655	274
Grp Sat Flow(s),veh/h/ln	1728	1777	1585	1781	1777	1585	1781	1702	1585	1781	1702	1585
Q Serve(g_s), s	8.9	32.8	9.0	4.7	21.4	14.2	10.5	31.0	2.4	22.1	37.1	16.2
Cycle Q Clear(g_c), s	8.9	32.8	9.0	4.7	21.4	14.2	10.5	31.0	2.4	22.1	37.1	16.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	315	971	433	192	899	401	226	1319	527	388	1813	563
V/C Ratio(X)	0.83	1.08	0.45	0.70	0.76	0.54	1.05	1.02	0.31	1.12	0.91	0.49
Avail Cap(c_a), veh/h	334	971	433	194	899	401	226	1319	527	388	1813	563
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.95	0.95	0.95	0.49	0.49	0.49	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.6	43.6	19.6	52.6	41.5	38.8	32.6	29.0	6.8	37.2	36.9	30.2
Incr Delay (d2), s/veh	14.8	53.0	1.8	10.3	4.3	2.5	56.0	23.8	0.7	81.8	8.6	3.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	8.0	30.4	6.4	7.8	14.9	9.7	11.3	16.6	1.9	29.4	23.3	10.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	68.4	96.6	21.4	62.8	45.8	41.3	88.6	52.8	7.5	119.0	45.5	33.2
LnGrp LOS	E	F	C	E	D	D	F	F	A	F	D	C
Approach Vol, veh/h		1504			1036			1751			2363	
Approach Delay, s/veh		82.0			47.1			53.5			57.6	
Approach LOS		F			D			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.8	48.9	17.5	36.8	28.4	37.3	15.3	39.0
Change Period (Y+Rc), s	* 6.3	6.3	* 6.6	* 6.4	* 6.3	6.3	6.4	6.2
Max Green Setting (Gmax), s	* 11	42.5	* 12	* 30	* 22	30.9	9.0	32.8
Max Q Clear Time (g_c+I1), s	12.5	39.1	10.9	23.4	24.1	33.0	6.7	34.8
Green Ext Time (p_c), s	0.0	2.9	0.1	4.2	0.0	0.0	0.1	0.0

Intersection Summary	
HCM 6th Ctrl Delay	60.4
HCM 6th LOS	E

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	53	1367	42	64	899	36	24	22	49	48	23	35
Future Volume (veh/h)	53	1367	42	64	899	36	24	22	49	48	23	35
Initial Q (Qb), 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	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	58	1486	46	70	977	39	26	24	53	52	25	38
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	466	2742	85	290	2769	1235	80	52	87	122	47	55
Arrive On Green	0.78	0.78	0.78	0.78	0.78	0.78	0.10	0.10	0.10	0.10	0.10	0.10
Sat Flow, veh/h	555	3519	109	339	3554	1585	302	525	876	646	475	553
Grp Volume(v), veh/h	58	749	783	70	977	39	103	0	0	115	0	0
Grp Sat Flow(s),veh/h/ln	555	1777	1851	339	1777	1585	1702	0	0	1674	0	0
Q Serve(g_s), s	3.2	14.5	14.6	8.9	7.5	0.5	0.0	0.0	0.0	0.6	0.0	0.0
Cycle Q Clear(g_c), s	10.7	14.5	14.6	23.5	7.5	0.5	5.0	0.0	0.0	5.6	0.0	0.0
Prop In Lane	1.00		0.06	1.00		1.00	0.25		0.51	0.45		0.33
Lane Grp Cap(c), veh/h	466	1385	1442	290	2769	1235	220	0	0	225	0	0
V/C Ratio(X)	0.12	0.54	0.54	0.24	0.35	0.03	0.47	0.00	0.00	0.51	0.00	0.00
Avail Cap(c_a), veh/h	466	1385	1442	290	2769	1235	534	0	0	525	0	0
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
Upstream Filter(I)	0.09	0.09	0.09	0.78	0.78	0.78	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	4.7	3.8	3.8	8.3	3.0	2.2	38.8	0.0	0.0	39.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.1	0.1	1.5	0.3	0.0	1.6	0.0	0.0	1.8	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	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.6	4.4	4.6	1.3	3.4	0.2	4.0	0.0	0.0	4.5	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	4.7	3.9	3.9	9.8	3.3	2.3	40.3	0.0	0.0	40.8	0.0	0.0
LnGrp LOS	A	A	A	A	A	A	D	A	A	D	A	A
Approach Vol, veh/h		1590			1086			103			115	
Approach Delay, s/veh		4.0			3.7			40.3			40.8	
Approach LOS		A			A			D			D	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		75.1		14.9		75.1		14.9				
Change Period (Y+Rc), s		* 5		* 5.9		* 5		* 5.9				
Max Green Setting (Gmax), s		* 52		* 27		* 52		* 27				
Max Q Clear Time (g_c+I1), s		25.5		7.6		16.6		7.0				
Green Ext Time (p_c), s		13.6		0.5		23.4		0.5				

Intersection Summary		
HCM 6th Ctrl Delay		6.6
HCM 6th LOS		A

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	287	1161	44	197	687	37	59	469	283	57	408	245
Future Volume (veh/h)	287	1161	44	197	687	37	59	469	283	57	408	245
Initial Q (Qb), 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	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	312	1262	0	214	747	0	64	510	308	62	443	266
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	1051	2683		232	1087		215	1096	489	189	1096	489
Arrive On Green	0.59	0.76	0.00	0.13	0.31	0.00	0.31	0.31	0.31	0.31	0.31	0.31
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	740	3554	1585	668	3554	1585
Grp Volume(v), veh/h	312	1262	0	214	747	0	64	510	308	62	443	266
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	740	1777	1585	668	1777	1585
Q Serve(g_s), s	10.4	16.2	0.0	14.3	22.2	0.0	9.0	13.9	20.0	9.9	11.8	16.7
Cycle Q Clear(g_c), s	10.4	16.2	0.0	14.3	22.2	0.0	20.8	13.9	20.0	23.8	11.8	16.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	1051	2683		232	1087		215	1096	489	189	1096	489
V/C Ratio(X)	0.30	0.47		0.92	0.69		0.30	0.47	0.63	0.33	0.40	0.54
Avail Cap(c_a), veh/h	1051	2683		232	1087		215	1096	489	189	1096	489
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
Upstream Filter(I)	0.82	0.82	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.2	5.6	0.0	51.6	36.6	0.0	41.0	33.5	35.6	43.1	32.8	34.5
Incr Delay (d2), s/veh	0.1	0.5	0.0	39.0	3.6	0.0	3.5	1.4	6.1	1.3	0.3	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	7.1	8.8	0.0	13.7	15.3	0.0	3.3	10.3	13.3	3.1	8.9	10.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	12.4	6.1	0.0	90.6	40.2	0.0	44.5	34.9	41.7	44.4	33.1	36.0
LnGrp LOS	B	A		F	D		D	C	D	D	C	D
Approach Vol, veh/h		1574			961			882			771	
Approach Delay, s/veh		7.3			51.4			38.0			35.0	
Approach LOS		A			D			D			C	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	79.5	42.8		43.2	23.0	99.3		43.2
Change Period (Y+Rc), s	* 7.4	6.1		* 6.2	7.4	* 7.4		* 6.2
Max Green Setting (Gmax), s	* 27	36.7		* 37	15.6	* 48		* 37
Max Q Clear Time (g_c+I1), s	12.4	24.2		25.8	16.3	18.2		22.8
Green Ext Time (p_c), s	0.8	4.6		4.1	0.0	13.2		4.4

Intersection Summary	
HCM 6th Ctrl Delay	29.0
HCM 6th LOS	C

Notes

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

Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	124	384	91	233	253	65	144	1437	325	87	1784	78
Future Volume (veh/h)	124	384	91	233	253	65	144	1437	325	87	1784	78
Initial Q (Qb), 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	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	135	417	99	253	275	71	157	1562	353	95	1939	85
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	472	1093	601	453	992	251	188	1915	774	165	1781	660
Arrive On Green	0.07	0.31	0.31	0.11	0.35	0.35	0.07	0.37	0.37	0.03	0.23	0.23
Sat Flow, veh/h	1781	3554	1585	1781	2807	712	1781	5106	1585	1781	5106	1585
Grp Volume(v), veh/h	135	417	99	253	172	174	157	1562	353	95	1939	85
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1742	1781	1702	1585	1781	1702	1585
Q Serve(g_s), s	6.1	11.0	5.0	11.2	8.3	8.6	6.6	33.1	17.6	4.1	41.9	4.6
Cycle Q Clear(g_c), s	6.1	11.0	5.0	11.2	8.3	8.6	6.6	33.1	17.6	4.1	41.9	4.6
Prop In Lane	1.00		1.00	1.00		0.41	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	472	1093	601	453	628	616	188	1915	774	165	1781	660
V/C Ratio(X)	0.29	0.38	0.16	0.56	0.27	0.28	0.83	0.82	0.46	0.58	1.09	0.13
Avail Cap(c_a), veh/h	494	1093	601	555	628	616	216	1915	774	165	1781	660
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.67	0.67	0.67
Upstream Filter(I)	1.00	1.00	1.00	0.99	0.99	0.99	1.00	1.00	1.00	0.42	0.42	0.42
Uniform Delay (d), s/veh	25.4	32.6	24.6	23.1	27.8	27.9	29.1	33.8	20.2	29.5	46.0	25.6
Incr Delay (d2), s/veh	0.3	1.0	0.6	1.1	1.1	1.1	21.4	4.0	1.9	2.1	44.5	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	4.8	8.6	3.6	8.4	6.7	6.8	7.0	20.4	11.1	3.3	33.0	3.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.7	33.6	25.2	24.2	28.9	29.0	50.5	37.7	22.1	31.6	90.5	25.8
LnGrp LOS	C	C	C	C	C	C	D	D	C	C	F	C
Approach Vol, veh/h		651			599			2072			2119	
Approach Delay, s/veh		30.7			26.9			36.1			85.3	
Approach LOS		C			C			D			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.1	48.4	12.6	46.9	17.6	42.9	9.5	50.0				
Change Period (Y+Rc), s	4.0	* 6	4.0	* 5	4.0	* 6	4.0	* 5				
Max Green Setting (Gmax), s	9.6	* 42	10.5	* 39	20.5	* 32	5.5	* 44				
Max Q Clear Time (g_c+I1), s	8.1	10.6	8.6	43.9	13.2	13.0	6.1	35.1				
Green Ext Time (p_c), s	0.0	2.2	0.1	0.0	0.4	2.9	0.0	6.6				
Intersection Summary												
HCM 6th Ctrl Delay			53.6									
HCM 6th LOS			D									

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	47	633	105	175	451	18	86	48	195	24	45	77
Future Volume (veh/h)	47	633	105	175	451	18	86	48	195	24	45	77
Initial Q (Qb), 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	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	51	688	114	190	490	20	93	52	212	26	49	84
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	654	2122	351	492	2421	99	172	83	312	57	84	105
Arrive On Green	0.70	0.70	0.70	0.70	0.70	0.70	0.20	0.20	0.20	0.20	0.20	0.20
Sat Flow, veh/h	890	3051	505	678	3480	142	541	421	1585	52	425	534
Grp Volume(v), veh/h	51	400	402	190	250	260	145	0	212	159	0	0
Grp Sat Flow(s),veh/h/ln	890	1777	1779	678	1777	1845	962	0	1585	1011	0	0
Q Serve(g_s), s	1.9	8.0	8.0	13.8	4.5	4.5	0.0	0.0	11.2	1.1	0.0	0.0
Cycle Q Clear(g_c), s	6.4	8.0	8.0	21.7	4.5	4.5	14.1	0.0	11.2	15.1	0.0	0.0
Prop In Lane	1.00		0.28	1.00		0.08	0.64		1.00	0.16		0.53
Lane Grp Cap(c), veh/h	654	1236	1238	492	1236	1283	255	0	312	245	0	0
V/C Ratio(X)	0.08	0.32	0.32	0.39	0.20	0.20	0.57	0.00	0.68	0.65	0.00	0.00
Avail Cap(c_a), veh/h	654	1236	1238	492	1236	1283	402	0	476	406	0	0
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
Upstream Filter(I)	0.91	0.91	0.91	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	6.0	5.4	5.4	9.7	4.9	4.9	34.1	0.0	33.5	32.5	0.0	0.0
Incr Delay (d2), s/veh	0.2	0.6	0.6	2.3	0.4	0.4	2.0	0.0	2.6	2.9	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	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.7	4.8	4.8	3.9	2.7	2.8	5.6	0.0	7.9	5.8	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	6.2	6.0	6.0	11.9	5.2	5.2	36.1	0.0	36.1	35.4	0.0	0.0
LnGrp LOS	A	A	A	B	A	A	D	A	D	D	A	A
Approach Vol, veh/h		853			700			357			159	
Approach Delay, s/veh		6.0			7.0			36.1			35.4	
Approach LOS		A			A			D			D	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	67.3	22.7	67.3	22.7
Change Period (Y+Rc), s	* 4.7	5.0	* 4.7	5.0
Max Green Setting (Gmax), s	* 53	27.0	* 53	27.0
Max Q Clear Time (g_c+I1), s	23.7	17.1	10.0	16.1
Green Ext Time (p_c), s	5.3	0.6	6.5	1.2

Intersection Summary	
HCM 6th Ctrl Delay	13.8
HCM 6th LOS	B

Notes

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

Intersection						
Int Delay, s/veh	0.9					

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	19	854	573	34	41	59
Future Vol, veh/h	19	854	573	34	41	59
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	200	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	21	928	623	37	45	64

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	660	0	-	0	1148	330
Stage 1	-	-	-	-	642	-
Stage 2	-	-	-	-	506	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	*1258	-	-	-	*192	*841
Stage 1	-	-	-	-	*794	-
Stage 2	-	-	-	-	*685	-
Platoon blocked, %	1	-	-	-		1
Mov Cap-1 Maneuver	*1258	-	-	-	*189	*841
Mov Cap-2 Maneuver	-	-	-	-	*419	-
Stage 1	-	-	-	-	*780	-
Stage 2	-	-	-	-	*685	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	12.4
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	* 1258	-	-	-	595
HCM Lane V/C Ratio	0.016	-	-	-	0.183
HCM Control Delay (s)	7.9	-	-	-	12.4
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.7

Notes

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

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	841	50	107	579	13	8	0	45	12	1	4
Future Vol, veh/h	4	841	50	107	579	13	8	0	45	12	1	4
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	0	-	-	33	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	914	54	116	629	14	9	0	49	13	1	4

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	643	0	0	968	0	0	1496	1824	484	1333	1844	322
Stage 1	-	-	-	-	-	-	949	949	-	868	868	-
Stage 2	-	-	-	-	-	-	547	875	-	465	976	-
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	1028	-	-	*1085	-	-	*85	*76	*726	*112	*74	872
Stage 1	-	-	-	-	-	-	*684	*600	-	*372	*412	-
Stage 2	-	-	-	-	-	-	*599	*408	-	*684	*600	-
Platoon blocked, %	1	-	-	1	-	-			1			1
Mov Cap-1 Maneuver	1028	-	-	*1085	-	-	*77	*68	*726	*96	*66	872
Mov Cap-2 Maneuver	-	-	-	-	-	-	*77	*68	-	*96	*66	-
Stage 1	-	-	-	-	-	-	*681	*597	-	*371	*368	-
Stage 2	-	-	-	-	-	-	*531	*364	-	*635	*597	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	1.3	18.7	41.5
HCM LOS			C	E

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	320	1028	-	-	* 1085	-	-	117
HCM Lane V/C Ratio	0.18	0.004	-	-	0.107	-	-	0.158
HCM Control Delay (s)	18.7	8.5	-	-	8.7	-	-	41.5
HCM Lane LOS	C	A	-	-	A	-	-	E
HCM 95th %tile Q(veh)	0.6	0	-	-	0.4	-	-	0.5

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	160	547	140	103	911	319	204	1784	80	254	1290	178
Future Volume (veh/h)	160	547	140	103	911	319	204	1784	80	254	1290	178
Initial Q (Qb), 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	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	174	595	152	112	990	347	222	1939	87	276	1402	193
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	258	769	343	289	888	396	276	1662	693	303	1849	574
Arrive On Green	0.07	0.22	0.22	0.11	0.25	0.25	0.13	0.43	0.43	0.14	0.36	0.36
Sat Flow, veh/h	3456	3554	1585	1781	3554	1585	1781	5106	1585	1781	5106	1585
Grp Volume(v), veh/h	174	595	152	112	990	347	222	1939	87	276	1402	193
Grp Sat Flow(s),veh/h/ln	1728	1777	1585	1781	1777	1585	1781	1702	1585	1781	1702	1585
Q Serve(g_s), s	5.9	18.9	7.4	0.7	30.0	25.2	9.9	39.1	1.1	14.2	29.0	10.6
Cycle Q Clear(g_c), s	5.9	18.9	7.4	0.7	30.0	25.2	9.9	39.1	1.1	14.2	29.0	10.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	258	769	343	289	888	396	276	1662	693	303	1849	574
V/C Ratio(X)	0.67	0.77	0.44	0.39	1.11	0.88	0.80	1.17	0.13	0.91	0.76	0.34
Avail Cap(c_a), veh/h	259	894	399	289	888	396	290	1662	693	327	1849	574
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.88	0.88	0.88	0.09	0.09	0.09	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.1	44.3	22.3	46.7	45.0	43.2	26.7	34.0	5.7	35.3	33.7	27.8
Incr Delay (d2), s/veh	6.7	5.3	2.2	0.7	65.2	18.4	1.5	75.8	0.0	27.2	3.0	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	5.0	13.8	5.3	5.5	30.1	17.1	5.1	32.4	0.9	15.7	18.1	7.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	60.7	49.5	24.5	47.4	110.2	61.6	28.2	109.8	5.7	62.6	36.6	29.4
LnGrp LOS	E	D	C	D	F	E	C	F	A	E	D	C
Approach Vol, veh/h		921			1449			2248			1871	
Approach Delay, s/veh		47.5			93.7			97.7			39.7	
Approach LOS		D			F			F			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.3	49.7	15.6	36.4	22.7	45.4	19.8	32.2
Change Period (Y+Rc), s	* 6.3	6.3	* 6.6	* 6.4	* 6.3	6.3	6.4	6.2
Max Green Setting (Gmax), s	* 13	42.7	* 9	* 30	* 18	37.6	9.0	30.2
Max Q Clear Time (g_c+I1), s	11.9	31.0	7.9	32.0	16.2	41.1	2.7	20.9
Green Ext Time (p_c), s	0.1	7.7	0.1	0.0	0.2	0.0	0.1	5.0

Intersection Summary	
HCM 6th Ctrl Delay	73.0
HCM 6th LOS	E

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	28	775	36	83	1234	104	41	6	45	27	15	46
Future Volume (veh/h)	28	775	36	83	1234	104	41	6	45	27	15	46
Initial Q (Qb), 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	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	30	842	39	90	1341	113	45	7	49	29	16	50
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	316	2696	125	527	2771	1236	117	24	79	89	42	87
Arrive On Green	0.78	0.78	0.78	0.78	0.78	0.78	0.10	0.10	0.10	0.10	0.10	0.10
Sat Flow, veh/h	366	3458	160	630	3554	1585	599	246	796	368	423	879
Grp Volume(v), veh/h	30	433	448	90	1341	113	101	0	0	95	0	0
Grp Sat Flow(s),veh/h/ln	366	1777	1842	630	1777	1585	1640	0	0	1670	0	0
Q Serve(g_s), s	2.8	6.4	6.4	4.4	12.0	1.5	0.3	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	14.9	6.4	6.4	10.8	12.0	1.5	4.9	0.0	0.0	4.6	0.0	0.0
Prop In Lane	1.00		0.09	1.00		1.00	0.45		0.49	0.31		0.53
Lane Grp Cap(c), veh/h	316	1385	1436	527	2771	1236	221	0	0	218	0	0
V/C Ratio(X)	0.09	0.31	0.31	0.17	0.48	0.09	0.46	0.00	0.00	0.44	0.00	0.00
Avail Cap(c_a), veh/h	316	1385	1436	527	2771	1236	535	0	0	546	0	0
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
Upstream Filter(I)	0.64	0.64	0.64	0.47	0.47	0.47	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	6.1	2.9	2.9	4.5	3.5	2.4	38.7	0.0	0.0	38.6	0.0	0.0
Incr Delay (d2), s/veh	0.4	0.4	0.4	0.3	0.3	0.1	1.5	0.0	0.0	1.4	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	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.4	3.0	3.1	0.9	4.9	0.6	3.9	0.0	0.0	3.7	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	6.5	3.3	3.3	4.8	3.8	2.4	40.2	0.0	0.0	40.0	0.0	0.0
LnGrp LOS	A	A	A	A	A	A	D	A	A	D	A	A
Approach Vol, veh/h		911			1544			101			95	
Approach Delay, s/veh		3.4			3.8			40.2			40.0	
Approach LOS		A			A			D			D	

Timer - Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		75.2		14.8		75.2		14.8
Change Period (Y+Rc), s		* 5		* 5.9		* 5		* 5.9
Max Green Setting (Gmax), s		* 51		* 28		* 51		* 28
Max Q Clear Time (g_c+I1), s		14.0		6.6		16.9		6.9
Green Ext Time (p_c), s		22.5		0.4		11.3		0.5

Intersection Summary	
HCM 6th Ctrl Delay	6.3
HCM 6th LOS	A

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	178	603	40	183	1176	48	68	344	172	34	496	244
Future Volume (veh/h)	178	603	40	183	1176	48	68	344	172	34	496	244
Initial Q (Qb), 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	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	193	655	0	199	1278	0	74	374	187	37	539	265
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	246	1383		227	1383		185	1096	489	253	1096	489
Arrive On Green	0.14	0.39	0.00	0.13	0.39	0.00	0.31	0.31	0.31	0.31	0.31	0.31
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	677	3554	1585	849	3554	1585
Grp Volume(v), veh/h	193	655	0	199	1278	0	74	374	187	37	539	265
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	677	1777	1585	849	1777	1585
Q Serve(g_s), s	12.6	16.6	0.0	13.2	41.2	0.0	12.0	9.8	11.1	4.2	14.8	16.7
Cycle Q Clear(g_c), s	12.6	16.6	0.0	13.2	41.2	0.0	26.8	9.8	11.1	14.0	14.8	16.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	246	1383		227	1383		185	1096	489	253	1096	489
V/C Ratio(X)	0.78	0.47		0.88	0.92		0.40	0.34	0.38	0.15	0.49	0.54
Avail Cap(c_a), veh/h	246	1383		257	1383		185	1096	489	253	1096	489
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
Upstream Filter(I)	0.96	0.96	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.0	27.4	0.0	51.4	35.0	0.0	44.8	32.1	32.5	37.5	33.8	34.5
Incr Delay (d2), s/veh	14.6	1.1	0.0	25.2	11.8	0.0	6.3	0.8	2.3	0.3	0.4	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	10.7	11.5	0.0	11.9	27.0	0.0	4.2	7.8	8.1	1.6	10.6	10.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	64.5	28.6	0.0	76.6	46.7	0.0	51.1	32.9	34.8	37.8	34.3	35.9
LnGrp LOS	E	C		E	D		D	C	C	D	C	D
Approach Vol, veh/h		848			1477			635			841	
Approach Delay, s/veh		36.7			50.8			35.6			34.9	
Approach LOS		D			D			D			C	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	24.0	52.8		43.2	22.7	54.1		43.2
Change Period (Y+Rc), s	* 7.4	6.1		* 6.2	7.4	* 7.4		* 6.2
Max Green Setting (Gmax), s	* 17	46.7		* 37	17.3	* 46		* 37
Max Q Clear Time (g_c+I1), s	14.6	43.2		18.7	15.2	18.6		28.8
Green Ext Time (p_c), s	0.1	2.7		5.7	0.1	5.6		2.4

Intersection Summary	
HCM 6th Ctrl Delay	41.6
HCM 6th LOS	D

Notes

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

Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Int Delay, s/veh	3.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	22	59	32	13	35	100
Future Vol, veh/h	22	59	32	13	35	100
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	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	24	64	35	14	38	109

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	227	42	0	0	49	0
Stage 1	42	-	-	-	-	-
Stage 2	185	-	-	-	-	-
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	761	1029	-	-	1558	-
Stage 1	980	-	-	-	-	-
Stage 2	847	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	741	1029	-	-	1558	-
Mov Cap-2 Maneuver	741	-	-	-	-	-
Stage 1	980	-	-	-	-	-
Stage 2	825	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.3	0	1.9
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	931	1558	-
HCM Lane V/C Ratio	-	-	0.095	0.024	-
HCM Control Delay (s)	-	-	9.3	7.4	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.3	0.1	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	75	209	97	279	329	43	101	2024	228	49	1369	88
Future Volume (veh/h)	75	209	97	279	329	43	101	2024	228	49	1369	88
Initial Q (Qb), 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	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	82	227	105	303	358	47	110	2200	248	53	1488	96
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	401	933	500	530	1120	146	205	2071	863	122	1978	689
Arrive On Green	0.05	0.26	0.26	0.14	0.35	0.35	0.05	0.41	0.41	0.05	0.52	0.52
Sat Flow, veh/h	1781	3554	1585	1781	3161	412	1781	5106	1585	1781	5106	1585
Grp Volume(v), veh/h	82	227	105	303	200	205	110	2200	248	53	1488	96
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1796	1781	1702	1585	1781	1702	1585
Q Serve(g_s), s	4.0	6.0	5.8	14.3	9.8	10.0	4.4	48.7	10.1	2.1	27.7	3.5
Cycle Q Clear(g_c), s	4.0	6.0	5.8	14.3	9.8	10.0	4.4	48.7	10.1	2.1	27.7	3.5
Prop In Lane	1.00		1.00	1.00		0.23	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	401	933	500	530	630	637	205	2071	863	122	1978	689
V/C Ratio(X)	0.20	0.24	0.21	0.57	0.32	0.32	0.54	1.06	0.29	0.44	0.75	0.14
Avail Cap(c_a), veh/h	458	933	500	587	630	637	266	2071	863	142	1978	689
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33
Upstream Filter(I)	1.00	1.00	1.00	0.98	0.98	0.98	1.00	1.00	1.00	0.65	0.65	0.65
Uniform Delay (d), s/veh	30.0	34.9	30.1	24.9	28.2	28.2	24.8	35.7	14.8	29.3	24.5	16.0
Incr Delay (d2), s/veh	0.2	0.6	1.0	1.1	1.3	1.3	2.2	38.7	0.8	1.6	1.8	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.2	4.9	4.3	10.2	7.8	8.0	3.5	37.2	6.9	1.7	14.6	2.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.2	35.5	31.1	25.9	29.5	29.5	27.0	74.4	15.6	30.9	26.3	16.2
LnGrp LOS	C	D	C	C	C	C	C	F	B	C	C	B
Approach Vol, veh/h		414			708			2558			1637	
Approach Delay, s/veh		33.3			28.0			66.7			25.9	
Approach LOS		C			C			E			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.7	48.5	10.3	51.5	20.7	37.5	8.1	53.7				
Change Period (Y+Rc), s	4.0	* 6	4.0	* 5	4.0	* 6	4.0	* 5				
Max Green Setting (Gmax), s	9.5	* 43	10.5	* 39	20.5	* 32	5.5	* 44				
Max Q Clear Time (g_c+I1), s	6.0	12.0	6.4	29.7	16.3	8.0	4.1	50.7				
Green Ext Time (p_c), s	0.0	2.5	0.1	6.3	0.4	1.8	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay			46.3									
HCM 6th LOS			D									

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	25	387	68	151	600	16	58	32	186	4	19	23
Future Volume (veh/h)	25	387	68	151	600	16	58	32	186	4	19	23
Initial Q (Qb), 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	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	27	421	74	164	652	17	63	35	202	4	21	25
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	597	2219	387	703	2596	68	210	103	251	50	127	134
Arrive On Green	0.73	0.73	0.73	0.73	0.73	0.73	0.16	0.16	0.16	0.16	0.16	0.16
Sat Flow, veh/h	768	3024	528	902	3538	92	909	651	1585	42	803	846
Grp Volume(v), veh/h	27	246	249	164	327	342	98	0	202	50	0	0
Grp Sat Flow(s),veh/h/ln	768	1777	1775	902	1777	1854	1560	0	1585	1691	0	0
Q Serve(g_s), s	1.1	3.9	3.9	6.2	5.4	5.4	2.5	0.0	11.1	0.0	0.0	0.0
Cycle Q Clear(g_c), s	6.5	3.9	3.9	10.1	5.4	5.4	4.7	0.0	11.1	2.3	0.0	0.0
Prop In Lane	1.00		0.30	1.00		0.05	0.64		1.00	0.08		0.50
Lane Grp Cap(c), veh/h	597	1304	1303	703	1304	1360	313	0	251	311	0	0
V/C Ratio(X)	0.05	0.19	0.19	0.23	0.25	0.25	0.31	0.00	0.80	0.16	0.00	0.00
Avail Cap(c_a), veh/h	597	1304	1303	703	1304	1360	677	0	634	707	0	0
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
Upstream Filter(I)	0.98	0.98	0.98	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	5.0	3.7	3.7	5.3	3.9	3.9	33.8	0.0	36.5	32.8	0.0	0.0
Incr Delay (d2), s/veh	0.1	0.3	0.3	0.8	0.5	0.4	0.6	0.0	6.0	0.2	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	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.3	2.1	2.2	2.0	3.0	3.1	3.5	0.0	8.1	1.7	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	5.1	4.0	4.0	6.0	4.4	4.4	34.3	0.0	42.5	33.1	0.0	0.0
LnGrp LOS	A	A	A	A	A	A	C	A	D	C	A	A
Approach Vol, veh/h		522			833			300			50	
Approach Delay, s/veh		4.1			4.7			39.8			33.1	
Approach LOS		A			A			D			C	

Timer - Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		70.7		19.3		70.7		19.3
Change Period (Y+Rc), s		* 4.7		5.0		* 4.7		5.0
Max Green Setting (Gmax), s		* 44		36.0		* 44		36.0
Max Q Clear Time (g_c+I1), s		12.1		4.3		8.5		13.1
Green Ext Time (p_c), s		5.8		0.2		3.5		1.2

Intersection Summary		
HCM 6th Ctrl Delay		11.5
HCM 6th LOS		B

Notes

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

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	40	525	690	26	12	56
Future Vol, veh/h	40	525	690	26	12	56
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	200	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	43	571	750	28	13	61

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	778	0	-	0	1136	389
Stage 1	-	-	-	-	764	-
Stage 2	-	-	-	-	372	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	*1180	-	-	-	*196	*789
Stage 1	-	-	-	-	*744	-
Stage 2	-	-	-	-	*816	-
Platoon blocked, %	1	-	-	-		1
Mov Cap-1 Maneuver	*1180	-	-	-	*189	*789
Mov Cap-2 Maneuver	-	-	-	-	*434	-
Stage 1	-	-	-	-	*718	-
Stage 2	-	-	-	-	*816	-

Approach	EB	WB	SB
HCM Control Delay, s	0.6	0	10.9
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	* 1180	-	-	-	689
HCM Lane V/C Ratio	0.037	-	-	-	0.107
HCM Control Delay (s)	8.2	-	-	-	10.9
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.4

Notes

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

Intersection						
Int Delay, s/veh	1					

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	9	528	701	30	52	15
Future Vol, veh/h	9	528	701	30	52	15
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	10	574	762	33	57	16

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	795	0	-	0	1086	398
Stage 1	-	-	-	-	779	-
Stage 2	-	-	-	-	307	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	822	-	-	-	211	601
Stage 1	-	-	-	-	413	-
Stage 2	-	-	-	-	719	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	822	-	-	-	208	601
Mov Cap-2 Maneuver	-	-	-	-	321	-
Stage 1	-	-	-	-	408	-
Stage 2	-	-	-	-	719	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	17.6
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	822	-	-	-	358
HCM Lane V/C Ratio	0.012	-	-	-	0.203
HCM Control Delay (s)	9.4	-	-	-	17.6
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	0.8

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	556	22	22	702	9	22	0	43	2	1	1
Future Vol, veh/h	0	556	22	22	702	9	22	0	43	2	1	1
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	0	-	-	33	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	604	24	24	763	10	24	0	47	2	1	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	773	0	0	628	0	0	1046	1437	314	1118	1444	387
Stage 1	-	-	-	-	-	-	616	616	-	816	816	-
Stage 2	-	-	-	-	-	-	430	821	-	302	628	-
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	843	-	-	1264	-	-	183	132	*865	*162	131	624
Stage 1	-	-	-	-	-	-	801	706	-	*342	392	-
Stage 2	-	-	-	-	-	-	584	390	-	*815	695	-
Platoon blocked, %	1	-	-	1	-	-			1			1
Mov Cap-1 Maneuver	843	-	-	1264	-	-	179	129	*865	*151	129	624
Mov Cap-2 Maneuver	-	-	-	-	-	-	179	129	-	*151	129	-
Stage 1	-	-	-	-	-	-	801	706	-	*342	385	-
Stage 2	-	-	-	-	-	-	570	383	-	*771	695	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.2	16.7	25.9
HCM LOS			C	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	377	843	-	-	1264	-	-	177
HCM Lane V/C Ratio	0.187	-	-	-	0.019	-	-	0.025
HCM Control Delay (s)	16.7	0	-	-	7.9	-	-	25.9
HCM Lane LOS	C	A	-	-	A	-	-	D
HCM 95th %tile Q(veh)	0.7	0	-	-	0.1	-	-	0.1

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	239	982	179	124	638	211	219	1243	149	420	1523	252
Future Volume (veh/h)	239	982	179	124	638	211	219	1243	149	420	1523	252
Initial Q (Qb), 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	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	260	1067	195	135	693	229	238	1351	162	457	1655	274
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	315	971	433	192	899	401	226	1319	527	388	1813	563
Arrive On Green	0.09	0.27	0.27	0.07	0.25	0.25	0.17	0.52	0.52	0.18	0.35	0.35
Sat Flow, veh/h	3456	3554	1585	1781	3554	1585	1781	5106	1585	1781	5106	1585
Grp Volume(v), veh/h	260	1067	195	135	693	229	238	1351	162	457	1655	274
Grp Sat Flow(s),veh/h/ln	1728	1777	1585	1781	1777	1585	1781	1702	1585	1781	1702	1585
Q Serve(g_s), s	8.9	32.8	9.0	4.7	21.7	15.1	10.5	31.0	2.4	22.1	37.1	16.2
Cycle Q Clear(g_c), s	8.9	32.8	9.0	4.7	21.7	15.1	10.5	31.0	2.4	22.1	37.1	16.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	315	971	433	192	899	401	226	1319	527	388	1813	563
V/C Ratio(X)	0.83	1.10	0.45	0.70	0.77	0.57	1.05	1.02	0.31	1.18	0.91	0.49
Avail Cap(c_a), veh/h	334	971	433	194	899	401	226	1319	527	388	1813	563
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.93	0.93	0.93	0.49	0.49	0.49	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.6	43.6	19.6	52.6	41.6	39.1	32.6	29.0	6.8	37.2	36.9	30.2
Incr Delay (d2), s/veh	14.8	59.7	1.8	10.1	4.5	3.0	56.0	23.8	0.7	103.7	8.6	3.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	8.0	31.8	6.4	7.8	15.1	10.2	11.3	16.6	1.9	33.1	23.3	10.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	68.4	103.3	21.4	62.6	46.1	42.1	88.6	52.8	7.5	140.9	45.5	33.2
LnGrp LOS	E	F	C	E	D	D	F	F	A	F	D	C
Approach Vol, veh/h		1522			1057			1751			2386	
Approach Delay, s/veh		86.8			47.4			53.5			62.3	
Approach LOS		F			D			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.8	48.9	17.5	36.8	28.4	37.3	15.3	39.0
Change Period (Y+Rc), s	* 6.3	6.3	* 6.6	* 6.4	* 6.3	6.3	6.4	6.2
Max Green Setting (Gmax), s	* 11	42.5	* 12	* 30	* 22	30.9	9.0	32.8
Max Q Clear Time (g_c+I1), s	12.5	39.1	10.9	23.7	24.1	33.0	6.7	34.8
Green Ext Time (p_c), s	0.0	2.9	0.1	4.1	0.0	0.0	0.1	0.0

Intersection Summary			
HCM 6th Ctrl Delay			63.2
HCM 6th LOS			E

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	53	1390	73	95	914	36	45	22	70	48	23	35
Future Volume (veh/h)	53	1390	73	95	914	36	45	22	70	48	23	35
Initial Q (Qb), 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	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	58	1511	79	103	993	39	49	24	76	52	25	38
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	448	2629	137	266	2719	1213	104	42	97	124	54	59
Arrive On Green	0.77	0.77	0.77	0.77	0.77	0.77	0.11	0.11	0.11	0.11	0.11	0.11
Sat Flow, veh/h	547	3436	179	321	3554	1585	448	372	854	577	476	520
Grp Volume(v), veh/h	58	779	811	103	993	39	149	0	0	115	0	0
Grp Sat Flow(s),veh/h/ln	547	1777	1838	321	1777	1585	1674	0	0	1572	0	0
Q Serve(g_s), s	3.5	16.5	16.7	17.9	8.2	0.5	1.4	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	11.7	16.5	16.7	34.6	8.2	0.5	7.5	0.0	0.0	6.1	0.0	0.0
Prop In Lane	1.00		0.10	1.00		1.00	0.33		0.51	0.45		0.33
Lane Grp Cap(c), veh/h	448	1359	1406	266	2719	1213	244	0	0	237	0	0
V/C Ratio(X)	0.13	0.57	0.58	0.39	0.37	0.03	0.61	0.00	0.00	0.48	0.00	0.00
Avail Cap(c_a), veh/h	448	1359	1406	266	2719	1213	529	0	0	513	0	0
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
Upstream Filter(I)	0.09	0.09	0.09	0.77	0.77	0.77	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	5.4	4.4	4.4	11.7	3.4	2.5	38.6	0.0	0.0	38.0	0.0	0.0
Incr Delay (d2), s/veh	0.1	0.2	0.2	3.3	0.3	0.0	2.5	0.0	0.0	1.5	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	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.6	5.2	5.4	2.5	3.9	0.2	5.9	0.0	0.0	4.5	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	5.4	4.6	4.6	15.0	3.7	2.6	41.1	0.0	0.0	39.5	0.0	0.0
LnGrp LOS	A	A	A	B	A	A	D	A	A	D	A	A
Approach Vol, veh/h		1648			1135			149			115	
Approach Delay, s/veh		4.6			4.7			41.1			39.5	
Approach LOS		A			A			D			D	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		73.9		16.1		73.9		16.1				
Change Period (Y+Rc), s		* 5		* 5.9		* 5		* 5.9				
Max Green Setting (Gmax), s		* 52		* 27		* 52		* 27				
Max Q Clear Time (g_c+I1), s		36.6		8.1		18.7		9.5				
Green Ext Time (p_c), s		10.2		0.5		23.4		0.7				
Intersection Summary												
HCM 6th Ctrl Delay			7.8									
HCM 6th LOS			A									

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	293	1167	61	208	698	37	68	475	289	57	419	256
Future Volume (veh/h)	293	1167	61	208	698	37	68	475	289	57	419	256
Initial Q (Qb), 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	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	318	1268	0	226	759	0	74	516	314	62	455	278
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	1051	2683		232	1087		210	1096	489	186	1096	489
Arrive On Green	0.59	0.76	0.00	0.13	0.31	0.00	0.31	0.31	0.31	0.31	0.31	0.31
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	724	3554	1585	661	3554	1585
Grp Volume(v), veh/h	318	1268	0	226	759	0	74	516	314	62	455	278
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	724	1777	1585	661	1777	1585
Q Serve(g_s), s	10.7	16.3	0.0	15.2	22.6	0.0	10.8	14.1	20.5	10.1	12.2	17.7
Cycle Q Clear(g_c), s	10.7	16.3	0.0	15.2	22.6	0.0	23.0	14.1	20.5	24.2	12.2	17.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	1051	2683		232	1087		210	1096	489	186	1096	489
V/C Ratio(X)	0.30	0.47		0.98	0.70		0.35	0.47	0.64	0.33	0.42	0.57
Avail Cap(c_a), veh/h	1051	2683		232	1087		210	1096	489	186	1096	489
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
Upstream Filter(I)	0.75	0.75	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.3	5.6	0.0	52.0	36.8	0.0	42.1	33.6	35.8	43.4	32.9	34.8
Incr Delay (d2), s/veh	0.1	0.5	0.0	52.2	3.7	0.0	4.6	1.5	6.4	1.3	0.3	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	7.1	8.7	0.0	15.3	15.6	0.0	4.0	10.4	13.6	3.1	9.1	11.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	12.4	6.0	0.0	104.2	40.5	0.0	46.7	35.0	42.2	44.6	33.2	36.6
LnGrp LOS	B	A		F	D		D	D	D	D	C	D
Approach Vol, veh/h		1586			985			904			795	
Approach Delay, s/veh		7.3			55.1			38.5			35.3	
Approach LOS		A			E			D			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	79.5	42.8		43.2	23.0	99.3		43.2				
Change Period (Y+Rc), s	* 7.4	6.1		* 6.2	7.4	* 7.4		* 6.2				
Max Green Setting (Gmax), s	* 27	36.7		* 37	15.6	* 48		* 37				
Max Q Clear Time (g_c+I1), s	12.7	24.6		26.2	17.2	18.3		25.0				
Green Ext Time (p_c), s	0.8	4.6		4.1	0.0	13.2		4.1				

Intersection Summary		
HCM 6th Ctrl Delay		30.1
HCM 6th LOS		C

Notes

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

Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Int Delay, s/veh	2.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	15	41	96	23	62	129
Future Vol, veh/h	15	41	96	23	62	129
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	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	16	45	104	25	67	140

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	391	117	0	0	129	0
Stage 1	117	-	-	-	-	-
Stage 2	274	-	-	-	-	-
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	613	935	-	-	1457	-
Stage 1	908	-	-	-	-	-
Stage 2	772	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	582	935	-	-	1457	-
Mov Cap-2 Maneuver	582	-	-	-	-	-
Stage 1	908	-	-	-	-	-
Stage 2	733	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.8	0	2.5
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	804	1457	-
HCM Lane V/C Ratio	-	-	0.076	0.046	-
HCM Control Delay (s)	-	-	9.8	7.6	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0.1	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	124	395	91	242	259	65	144	1437	342	87	1784	78
Future Volume (veh/h)	124	395	91	242	259	65	144	1437	342	87	1784	78
Initial Q (Qb), 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	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	135	429	99	263	282	71	157	1562	372	95	1939	85
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	469	1079	595	451	997	247	188	1913	780	164	1780	660
Arrive On Green	0.07	0.30	0.30	0.12	0.35	0.35	0.07	0.37	0.37	0.03	0.23	0.23
Sat Flow, veh/h	1781	3554	1585	1781	2823	699	1781	5106	1585	1781	5106	1585
Grp Volume(v), veh/h	135	429	99	263	176	177	157	1562	372	95	1939	85
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1745	1781	1702	1585	1781	1702	1585
Q Serve(g_s), s	6.2	11.5	5.0	11.7	8.5	8.8	6.6	33.1	18.7	4.1	41.8	4.6
Cycle Q Clear(g_c), s	6.2	11.5	5.0	11.7	8.5	8.8	6.6	33.1	18.7	4.1	41.8	4.6
Prop In Lane	1.00		1.00	1.00		0.40	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	469	1079	595	451	628	616	188	1913	780	164	1780	660
V/C Ratio(X)	0.29	0.40	0.17	0.58	0.28	0.29	0.83	0.82	0.48	0.58	1.09	0.13
Avail Cap(c_a), veh/h	491	1079	595	546	628	616	216	1913	780	164	1780	660
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.67	0.67	0.67
Upstream Filter(I)	1.00	1.00	1.00	0.99	0.99	0.99	1.00	1.00	1.00	0.42	0.42	0.42
Uniform Delay (d), s/veh	25.7	33.1	25.0	23.3	27.8	27.9	29.1	33.8	20.2	29.6	46.0	25.6
Incr Delay (d2), s/veh	0.3	1.1	0.6	1.2	1.1	1.2	21.4	4.0	2.1	2.1	44.9	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	4.8	8.8	3.6	8.7	6.9	7.0	7.0	20.4	11.7	3.3	33.1	3.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.0	34.2	25.6	24.5	28.9	29.1	50.5	37.8	22.3	31.7	90.9	25.8
LnGrp LOS	C	C	C	C	C	C	D	D	C	C	F	C
Approach Vol, veh/h		663			616			2091			2119	
Approach Delay, s/veh		31.2			27.1			36.0			85.6	
Approach LOS		C			C			D			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.1	48.4	12.6	46.8	18.1	42.4	9.5	50.0
Change Period (Y+Rc), s	4.0	* 6	4.0	* 5	4.0	* 6	4.0	* 5
Max Green Setting (Gmax), s	9.6	* 42	10.5	* 39	20.5	* 32	5.5	* 44
Max Q Clear Time (g_c+I1), s	8.2	10.8	8.6	43.8	13.7	13.5	6.1	35.1
Green Ext Time (p_c), s	0.0	2.2	0.1	0.0	0.4	3.0	0.0	6.6

Intersection Summary	
HCM 6th Ctrl Delay	53.6
HCM 6th LOS	D

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	47	672	105	175	477	18	86	48	195	24	45	77
Future Volume (veh/h)	47	672	105	175	477	18	86	48	195	24	45	77
Initial Q (Qb), 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	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	51	730	114	190	518	20	93	52	212	26	49	84
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	637	2142	334	472	2427	94	172	83	312	57	84	105
Arrive On Green	0.70	0.70	0.70	0.70	0.70	0.70	0.20	0.20	0.20	0.20	0.20	0.20
Sat Flow, veh/h	867	3080	481	652	3488	135	541	421	1585	52	425	534
Grp Volume(v), veh/h	51	421	423	190	264	274	145	0	212	159	0	0
Grp Sat Flow(s),veh/h/ln	867	1777	1784	652	1777	1846	962	0	1585	1011	0	0
Q Serve(g_s), s	2.0	8.5	8.5	14.8	4.8	4.8	0.0	0.0	11.2	1.1	0.0	0.0
Cycle Q Clear(g_c), s	6.8	8.5	8.5	23.3	4.8	4.8	14.1	0.0	11.2	15.1	0.0	0.0
Prop In Lane	1.00		0.27	1.00		0.07	0.64		1.00	0.16		0.53
Lane Grp Cap(c), veh/h	637	1236	1241	472	1236	1284	255	0	312	245	0	0
V/C Ratio(X)	0.08	0.34	0.34	0.40	0.21	0.21	0.57	0.00	0.68	0.65	0.00	0.00
Avail Cap(c_a), veh/h	637	1236	1241	472	1236	1284	402	0	476	406	0	0
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
Upstream Filter(I)	0.90	0.90	0.90	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	6.1	5.5	5.5	10.1	4.9	4.9	34.1	0.0	33.5	32.5	0.0	0.0
Incr Delay (d2), s/veh	0.2	0.7	0.7	2.5	0.4	0.4	2.0	0.0	2.6	2.9	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	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.7	5.1	5.1	4.0	2.9	3.0	5.6	0.0	7.9	5.8	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	6.3	6.1	6.1	12.7	5.3	5.3	36.1	0.0	36.1	35.4	0.0	0.0
LnGrp LOS	A	A	A	B	A	A	D	A	D	D	A	A
Approach Vol, veh/h		895			728			357			159	
Approach Delay, s/veh		6.2			7.2			36.1			35.4	
Approach LOS		A			A			D			D	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	67.3	22.7	67.3	22.7
Change Period (Y+Rc), s	* 4.7	5.0	* 4.7	5.0
Max Green Setting (Gmax), s	* 53	27.0	* 53	27.0
Max Q Clear Time (g_c+I1), s	25.3	17.1	10.5	16.1
Green Ext Time (p_c), s	5.5	0.6	6.9	1.2

Intersection Summary	
HCM 6th Ctrl Delay	13.7
HCM 6th LOS	B

Notes

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

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	42	869	583	34	41	74
Future Vol, veh/h	42	869	583	34	41	74
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	200	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	46	945	634	37	45	80

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	671	0	-	0	1218	336
Stage 1	-	-	-	-	653	-
Stage 2	-	-	-	-	565	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	1258	-	-	-	*173	*841
Stage 1	-	-	-	-	*794	-
Stage 2	-	-	-	-	*685	-
Platoon blocked, %	1	-	-	-		1
Mov Cap-1 Maneuver	1258	-	-	-	*167	*841
Mov Cap-2 Maneuver	-	-	-	-	*406	-
Stage 1	-	-	-	-	*764	-
Stage 2	-	-	-	-	*685	-

Approach	EB	WB	SB
HCM Control Delay, s	0.4	0	12.4
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1258	-	-	-	609
HCM Lane V/C Ratio	0.036	-	-	-	0.205
HCM Control Delay (s)	8	-	-	-	12.4
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.8

Notes

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

Intersection						
Int Delay, s/veh	0.6					

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	15	895	607	54	36	10
Future Vol, veh/h	15	895	607	54	36	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	16	973	660	59	39	11

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	719	0	-	0	1209	360
Stage 1	-	-	-	-	690	-
Stage 2	-	-	-	-	519	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	878	-	-	-	175	637
Stage 1	-	-	-	-	459	-
Stage 2	-	-	-	-	562	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	878	-	-	-	172	637
Mov Cap-2 Maneuver	-	-	-	-	305	-
Stage 1	-	-	-	-	451	-
Stage 2	-	-	-	-	562	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	17.2
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	878	-	-	-	344
HCM Lane V/C Ratio	0.019	-	-	-	0.145
HCM Control Delay (s)	9.2	-	-	-	17.2
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	0.5

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	865	50	107	623	13	8	0	45	12	1	4
Future Vol, veh/h	4	865	50	107	623	13	8	0	45	12	1	4
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	0	-	-	33	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	940	54	116	677	14	9	0	49	13	1	4

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	691	0	0	994	0	0	1546	1898	497	1394	1918	346
Stage 1	-	-	-	-	-	-	975	975	-	916	916	-
Stage 2	-	-	-	-	-	-	571	923	-	478	1002	-
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	983	-	-	1081	-	-	*78	*69	*726	*101	67	840
Stage 1	-	-	-	-	-	-	*684	*600	-	*346	390	-
Stage 2	-	-	-	-	-	-	*579	*386	-	*684	590	-
Platoon blocked, %	1	-	-	1	-	-			1			1
Mov Cap-1 Maneuver	983	-	-	1081	-	-	*70	*61	*726	*86	60	840
Mov Cap-2 Maneuver	-	-	-	-	-	-	*70	*61	-	*86	60	-
Stage 1	-	-	-	-	-	-	*681	*597	-	*345	348	-
Stage 2	-	-	-	-	-	-	*513	*345	-	*635	587	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	1.3	19.8	46
HCM LOS			C	E

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	301	983	-	-	1081	-	-	106
HCM Lane V/C Ratio	0.191	0.004	-	-	0.108	-	-	0.174
HCM Control Delay (s)	19.8	8.7	-	-	8.7	-	-	46
HCM Lane LOS	C	A	-	-	A	-	-	E
HCM 95th %tile Q(veh)	0.7	0	-	-	0.4	-	-	0.6

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

Appendix F

Signal Warrants

SR#

LADOT

Traffic Signal Warrants Worksheet

DATE 12/22/22 PREPARER GTC REVIEWER ___________

MAJOR ST: La Tijera Boulevard

MINOR ST: Bleriot Avenue

Critical Approach Speed: MPH ____ *or* Speed Limit: MPH 35

Speed limit or critical speed on major street traffic > 40 mph………….……….. ☐
or
In built up area of isolated community of < 10,000 population……….…………. ☐

☐ RURAL (R) ☒ URBAN (U)

Eight-Hour Vehicular Volume — WARRANT 1

N/A ☒

SATISFIED YES ☐ NO ☐

✯ The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal ✯

a. Condition A or Condition B or combination of 80% of both parts A and B must be satisfied.

b. A 6-hour Manual Count may be used in a determination that this warrant is not met. However, supplement manual counts should be taken during separate hours for a determination that this warrant is met.

c. In applying each condition, the major street and minor street volumes shall be for the same hours. On the minor street, the higher volume does not need to be the same approach during each of the hours.

d. The study should consider the effects of the right-turn vehicles from the minor-street approaches. Engineering judgment should be used to determine what, if any, portion of the right-turn traffic is subtracted from the minor-street traffic count.

e. Figure 4C-103(CA) should be used for new intersections, significantly reconstructed intersections, where near-term land development will result in increased volumes, or where it is not reasonable to use current traffic volumes.

f. Engineering judgment should also be used in applying various traffic signal warrants to cases where approaches consist of one lane plus one left-turn or right-turn lane. This site-specific traffic characteristics should dictate whether an approach is considered as one lane or two lanes. For example, for an approach with one lane for through and right-turning traffic plus a left-turn lane, if engineering judgment indicates that it should be considered a one-lane approach because the traffic using the left turn lane is minor, the total traffic volume approaching the intersection should be applied against the signal warrants as a one-lane approach. The approach should be considered two lanes if approximately half of the traffic on the approach turns left and the left-turn lane is of sufficient length to accommodate all left-turn vehicles. Similar engineering judgment and rationale should be applied to a street approach with one through/left-turn lane plus a right-turn lane. In this case, the degree of conflict of minor-street right-turn traffic with traffic on the major street should be considered. Thus, right-turn traffic should not be included in the minor-street volume if the movement enters the major street with minimal conflict. The approach should be evaluated as a one -lane approach with only the traffic volume in the through/left-turn lane considered.

g. At an intersection with a high volume of left-turn traffic from the major street, the signal warrant analysis may be performed in a manner that considers the higher volume of the major-street left-turn volumes plus the higher volume minor-street approach as the “minor street” volume and both approaches of the major street minus the higher of the major-street left-turn volume as “major street” volume. In these cases, engineering judgment should be used to determine if left-turn phasing is necessary to accommodate the high volume of left-turn traffic.

Eight-Hour Vehicular Volume WARRANT 1 (continued)

✯ The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal ✯

Condition A

Minimum Vehicle Volume

SATISFIED	YES	NO
100%	☐	☐
80%	☐	☐

RIGHT TURN REDUCTION APPLICATION *MINOR STREET* ☐
(If Yes, fill in percentage) ☐ ____%

MINIMUM REQUIREMENTS (80% SHOW IN BRACKETS)

	0	R	0	R	Hours: 16:45							
APPROACH LANES	1 ✓		2 or More ✓									
Both Approach Major Street	500 (400)	350 (280)	600 ✓ (480)	420 (336)	1,394							
Highest Approach Minor Street	150 ✓ (120)	105 (84)	200 (160)	140 (112)	51							

Condition B

Interruption of Continuous Traffic

SATISFIED	YES	NO
100%	☐	☐
80%	☐	☐

RIGHT TURN REDUCTION APPLICATION *MINOR STREET* ☐
(If Yes, fill in percentage) ☐ ____%

MINIMUM REQUIREMENTS (80% SHOW IN BRACKETS)

	0	R	0	R	Hours: 16:45							
APPROACH LANES	1 ✓		2 or More ✓									
Both Approach Major Street	750 (600)	525 (420)	900 ✓ (720)	630 (504)	1,394							
Highest Approach Minor Street	75 ✓ (60)	53 (42)	100 (80)	70 (56)	51							

COMBINATION OF A & B

SATISFIED	YES	NO
	☐	☐

REQUIREMENT	CONDITION	✓	FULFILLED YES	FULFILLED NO
TWO CONDITIONS SATISFIED 80%	A. MINIMUM VEHICULAR VOLUME AND B. INTERRUPTION OF CONTINUOUS TRAFFIC		☐	☐
AND AN ADEQUATE TRIAL OF OTHER ALTERNATIVES THAT COULD CAUSE LESS DELAY AND INCOVENIENCE TO TRAFFIC HAS FAILED TO SOLVE THE TRAFFIC PROBLEMS			☐	☐

Eight-Hour Vehicular Volume WARRANT 1 (continued)

✯ The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal ✯

Projected Volumes

N/A ☒

SATISFIED	YES	NO
	☐	☐

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet (Average Traffic Estimate Form)
Based on Estimated Average Daily Traffic - see *Note**

URBAN ☐	RURAL ☐	Minimum Requirements Estimated Average Daily Traffic			
CONDITION A - Minimum Vehicular Volume Satisfied ☐ Not Satisfied ☐		Vehicles Per Day On Major Street (Total of Both Approaches)		Vehicles Per Day On Higher-Volume Minor Street Approach (One Direction Only)	
Number of lanes for moving traffic on each approach		Urban	Rural	Urban	Rural
Major Street	Minor Street				
1…………………	1…………………	8,000	5,600	2,400	1,680
2 or More…………	1…………………	9,600	6,720	2,400	1,680
2 or More…………	2 or More…………	9,600	6,720	3,200	2,240
1…………………	2 or More…………	8,000	5,600	3,200	2,240
CONDITION B - Interruption of Continuous Traffic Satisfied ☐ Not Satisfied ☐		Vehicles Per Day On Major Street (Total of Both Approaches)		Vehicles Per Day On Higher-Volume Minor Street Approach (One Direction Only)	
Number of lanes for moving traffic on each approach		Urban	Rural	Urban	Rural
Minor Street	Minor Street				
1…………………	1…………………	12,000	8,400	1,200	850
2 or More…………	1…………………	14,400	10,080	1,200	850
2 or More…………	2 or More…………	14,400	10,080	1,600	1,120
1…………………	2 or More…………	12,000	8,400	1,600	1,120
Combination of CONDITIONS A + B Satisfied ☐ Not Satisfied ☐ No one condition satisfied, but following conditions fulfilled 80% or more…… ______ A ______ B		2 CONDITIONS 80%		2 CONDITIONS 80%	

*** Note:** *To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes*

Four-Hour Vehicular Volume

WARRANT 2

N/A ☒
SATISFIED YES ☐
NO ☐

✯ The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal ✯

a. Record hourly vehicle volumes for the highest four hours of an average day.

b. In applying each condition, the major street and minor street volumes shall be for the same hours. On the minor street, the higher volume does not need to be the same approach during each of the hours.

c. The study should consider the effects of the right-turn vehicles from the minor-street approaches. Engineering judgment should be used to determine what, if any, portion of the right-turn traffic is subtracted from the minor-street traffic count.

d. Engineering judgment should also be used in applying various traffic signal warrants to cases where approaches consist of one lane plus one left-turn or right-turn lane. This site-specific traffic characteristics should dictate whether an approach is considered as one lane or two lanes. For example, for an approach with one lane for through and right-turning traffic plus a left-turn lane, if engineering judgment indicates that it should be considered a one-lane approach because the traffic using the left turn lane is minor, the total traffic volume approaching the intersection should be applied against the signal warrants as a one-lane approach. The approach should be considered two lanes if approximately half of the traffic on the approach turns left and the left-turn lane is of sufficient length to accommodate all left-turn vehicles. Similar engineering judgment and rationale should be applied to a street approach with one through/left-turn lane plus a right-turn lane. In this case, the degree of conflict of minor-street right-turn traffic with traffic on the major street should be considered. Thus, right-turn traffic should not be included in the minor-street volume if the movement enters the major street with minimal conflict. The approach should be evaluated as a one-lane approach with only the traffic volume in the through/left-turn lane considered.

e. At an intersection with a high volume of left-turn traffic from the major street, the signal warrant analysis may be performed in a manner that considers the higher volume of the major-street left-turn volumes plus the higher volume minor-street approach as the “minor street” volume and both approaches of the major street minus the higher of the major-street left-turn volume as “major street” volume. In these cases, engineering judgment should be used to determine if left-turn phasing is necessary to accommodate the high volume of left -turn traffic.

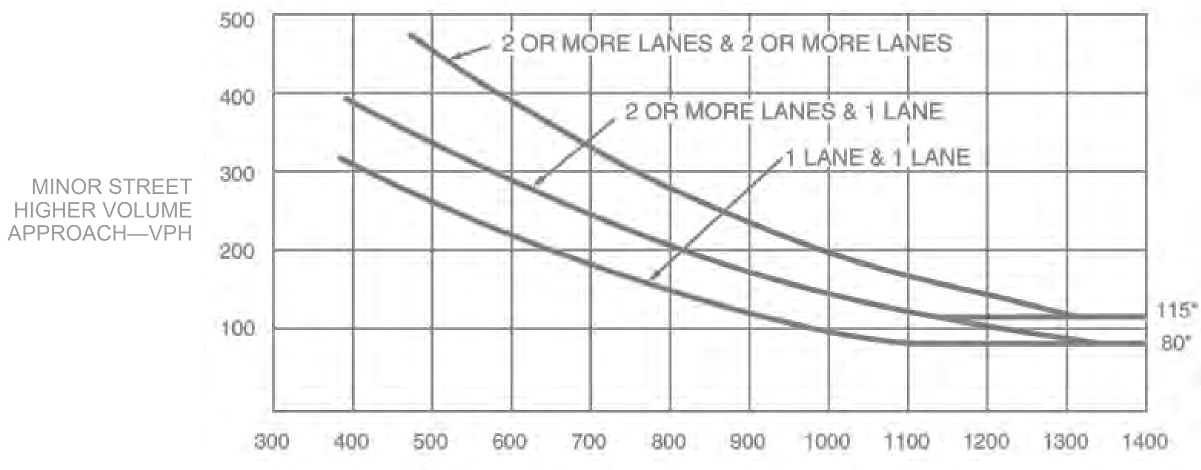
APPROACH LANES	One	2 or More	Hours			
Both Approaches - Major Street		✓				
Higher Approach - Minor Street	✓					

	YES	NO
RIGHT TURN REDUCTION APPLICATION *MINOR STREET*	☐	☐
(If Yes, fill in percentage)	_______%	
* All plotted points fall above the applicable curve in Figure 4C-1. (URBAN AREAS) OR, All plotted points fall above the applicable curve in Figure 4C-2. (RURAL AREAS)	☐	☐

Four-Hour Vehicular Volume WARRANT 2 *(continued)*

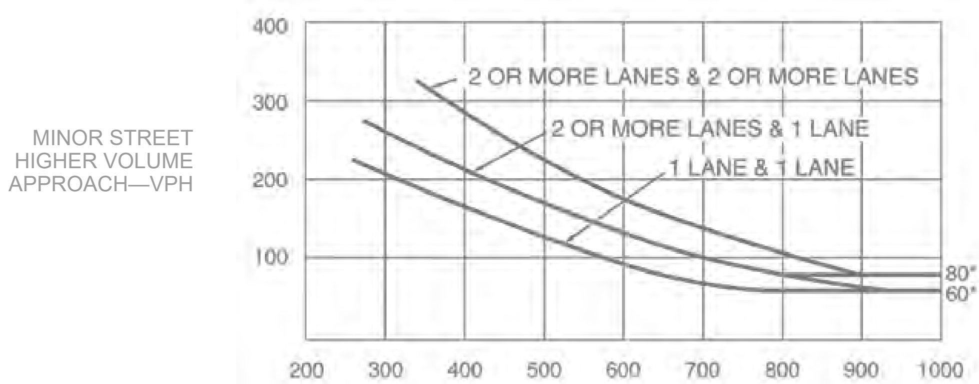
✯ The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal ✯

URBAN
Figure 4C-1. Warrant 2, Four-Hour Vehicular Volume



**Note: 115 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 80 vph applies as the lower threshold volume for a minor-street approach with one lane.*

RURAL
Figure 4C-2. Warrant 2, Four-Hour Vehicular Volume (70% Factor)



**Note: 80 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 60 vph applies as the lower threshold volume for a minor-street approach with one lane.*

Peak Hour WARRANT 3

N/A	☐
SATISFIED YES	☐
NO	☒

★ The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal ★

a. Part A or Part B must be satisfied.

b. This signal warrant shall be applied only in unusual cases, such as office complexes, manufacturing plants, industrial complexes, or high-occupancy vehicle facilities that attract or discharge large numbers of vehicles over a short time.

c. In applying each condition, the major street and minor street volumes shall be for the same hours.

d. The study should consider the effects of the right-turn vehicles from the minor-street approaches. Engineering judgment should be used to determine what, if any, portion of the right-turn traffic is subtracted from the minor-street traffic count.

e. Estimated Peak Hour Volumes may be used for new intersections, significantly reconstructed intersections, or where near-term land development will result in increased volumes.

f. Engineering judgment should also be used in applying various traffic signal warrants to cases where approaches consist of one lane plus one left-turn or right-turn lane. This site-specific traffic characteristics should dictate whether an approach is considered as one lane or two lanes. For example, for an approach with one lane for through and right-turning traffic plus a left-turn lane, if engineering judgment indicates that it should be considered a one-lane approach because the traffic using the left turn lane is minor, the total traffic volume approaching the intersection should be applied against the signal warrants as a one-lane approach. The approach should be considered two lanes if approximately half of the traffic on the approach turns left and the left-turn lane is of sufficient length to accommodate all left-turn vehicles. Similar engineering judgment and rationale should be applied to a street approach with one through/left-turn lane plus a right-turn lane. In this case, the degree of conflict of minor-street right-turn traffic with traffic on the major street should be considered. Thus, right-turn traffic should not be included in the minor-street volume if the movement enters the major street with minimal conflict. The approach should be evaluated as a one-lane approach with only the traffic volume in the through/left-turn lane considered.

g. At an intersection with a high volume of left-turn traffic from the major street, the signal warrant analysis may be performed in a manner that considers the higher volume of the major-street left-turn volumes plus the higher volume minor-street approach as the "minor street" volume and both approaches of the major street minus the higher of the major-street left-turn volume as "major street" volume. In these cases, engineering judgment should be used to determine if left-turn phasing is necessary to accommodate the high volume of left-turn traffic.

	YES	NO
Unusual facility per Note b.	☐	☒

Name 1,394

PART A

All parts 1, 2, and 3 below must be satisfied for the same one hour, for any four consecutive 15-minute periods)

SATISFIED YES ☐ NO ☒

	YES	NO	N/A
1. The total delay experienced by traffic on one minor street approach (one direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach, or five vehicle-hours for a two-lane approach; AND	☐	☐	☒
2. The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; AND	☐	☒	☐
3. The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches.	☒	☐	☐

PART B

SATISFIED YES ☐ NO ☒

APPROACH LANES	One	2 or More	Hour 16:45
Both Approaches - Major Street		✓	1,394
Higher Approach - Minor Street	✓		51

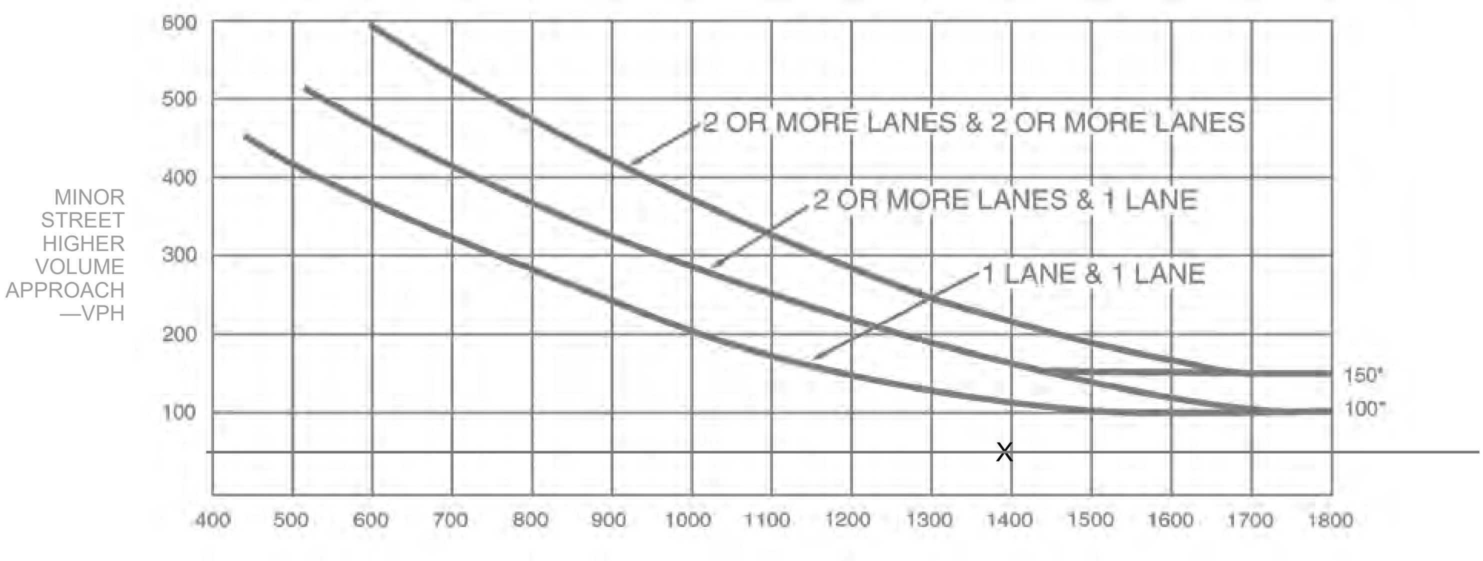
	YES	NO
RIGHT TURN REDUCTION APPLICATION ***MINOR STREET***	☐	☒
(If Yes, fill in percentage)	1,394 %	

	YES	NO
The plotted point falls above the applicable curve in ~~Figure 4C-3. (URBAN AREAS)~~	☐	☒
OR, The plotted point falls above the applicable curve in Figure 4C-4. (RURAL AREAS)		

Peak Hour WARRANT 3 *(continued)*

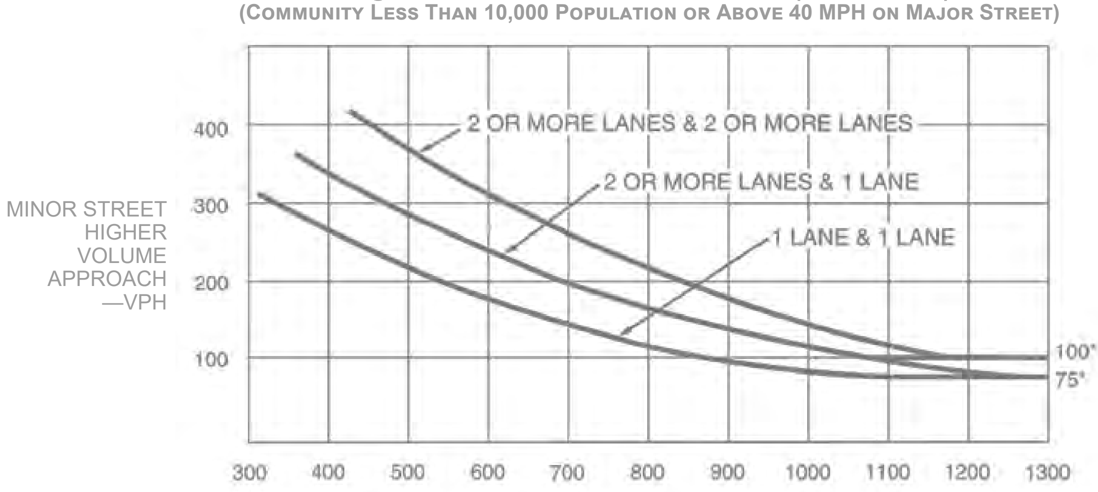
✯ The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal ✯

URBAN
Figure 4C-3. Warrant 3, Peak Hour



** Note: 150 vph applies as the lower threshold volume for a minor street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor street approach with one lane.*

RURAL
Figure 4C-4. Warrant 3, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



** Note: 100 vph applies as the lower threshold volume for a minor street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor street approach with one lane.*

Pedestrian Volume — WARRANT 4

	N/A	☒
SATISFIED	YES	☐
	NO	☐

★ The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal ★

a. Parts 1 and 2 shall be satisfied.
b. The pedestrian volume criterion may be reduced by as much as 50% if the 15th percentile speed of the pedestrians is less than 3.5 feet/second.
c. Estimated pedestrian volumes may be used where nearby, near-term land use development has been approved for construction.
d. In applying each condition, the total vehicles per hour on the major street (on both approaches) and the total pedestrians per hour crossing the major street shall be for the same hours.
e. The Pedestrian Volume signal warrants shall not be applied at locations where the distance to the nearest traffic control signal or STOP sign controlling the street that pedestrians desire to cross is less than 300 feet, unless the proposed traffic control signal will not restrict the progressive movement of traffic.
f. Traffic control signal may not be needed at the study location if adjacent coordinated traffic control signals consistently provide gaps of adequate length for pedestrians to cross the street.
g. If it is considered at a non-intersection crossing, the traffic control signal should be installed at least 100 feet from side streets or driveways that are controlled by STOP or YIELD signs. If the traffic control signal is installed at a non-intersection crossing, at least one of the signal faces should be over the traveled way for each approach, parking and other sight obstructions should be prohibited for at least 100 feet in advance of and at least 20 feet beyond the crosswalk or site accommodations should be made through curb extensions or other techniques to provide adequate sight distance, and the installation should include suitable standard signs and pavement markings.
h. Bicycles may be counted as pedestrians.
i. Pedestrian Hybrid Beacons may be considered instead of a traffic signal if a device is recommended based upon pedestrian needs

PART 1 (A or B must be satisfied)

SATISFIED	YES	NO
	☐	☐

A. FOUR-HOUR PEDESTRIAN VOLUMES

	Hours			
Vehicles per hour on major street for 4 hours				
Pedestrians crossing major street per hour for highest 4 hours				

(FIGURE 4C-5 OR 4C-6 SATISFIED)

SATISFIED	YES	NO
100%	☐	☐
80%	☐	☐
50%	☐	☐
15% WALKING RATE	____ *fps*	

B. ONE HOUR PEDESTRIAN VOLUMES

	Hour
Vehicles per hour on major street for 1 hour	
Pedestrians crossing major street per hour for highest 1 hour	*0*

(FIGURE 4C-7 or 4C-8 SATISFIED)

SATISFIED	YES	NO
100%	☐	☐
80%	☐	☐
50%	☐	☐
15% WALKING RATE	____ *fps*	

PART 2

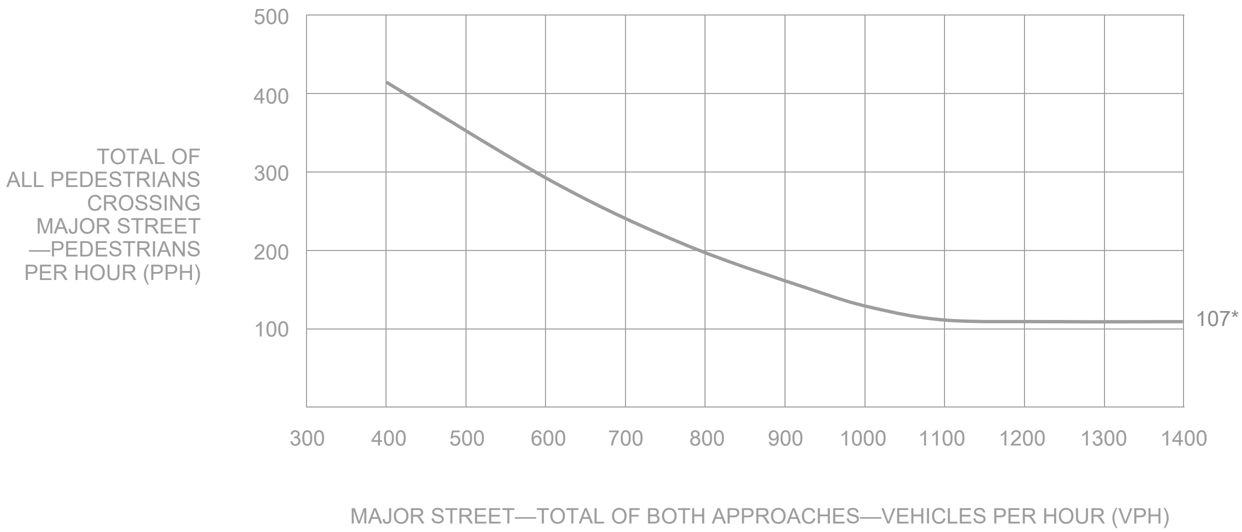
SATISFIED	YES	NO
	☐	☐

	YES	NO
AND, The distance to the nearest traffic signal along the major street is greater than 300 ft	☐	☐
OR, The proposed traffic signal will not restrict progressive traffic flow along the major street	☐	☐

Pedestrian Volume WARRANT 4 *(continued)*

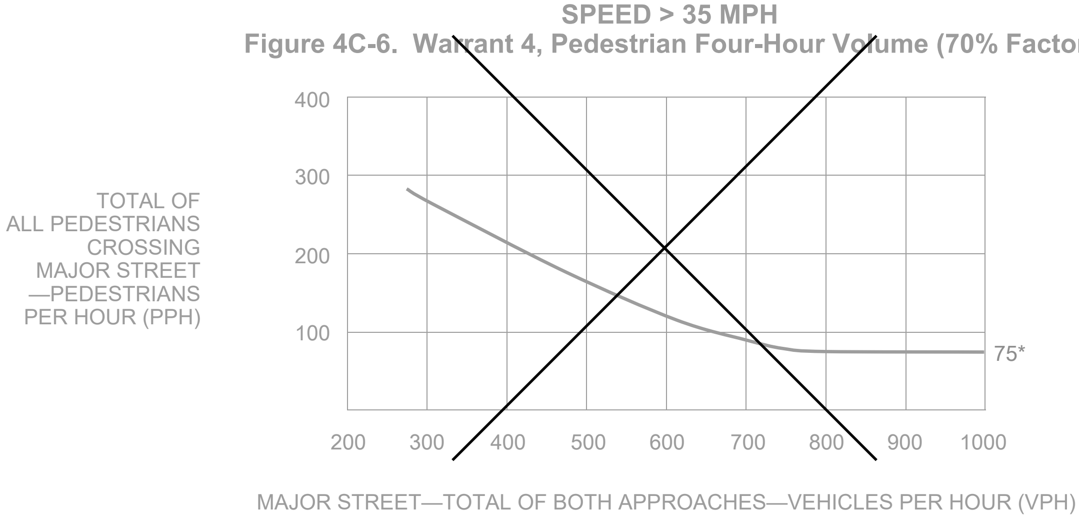
✯ The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal ✯

SPEED ≤ 35 MPH
Figure 4C-5. Warrant 4, Pedestrian Four-Hour Volume



** Note: 107 pph applies as the lower threshold volume*

SPEED > 35 MPH
Figure 4C-6. Warrant 4, Pedestrian Four-Hour Volume (70% Factor)

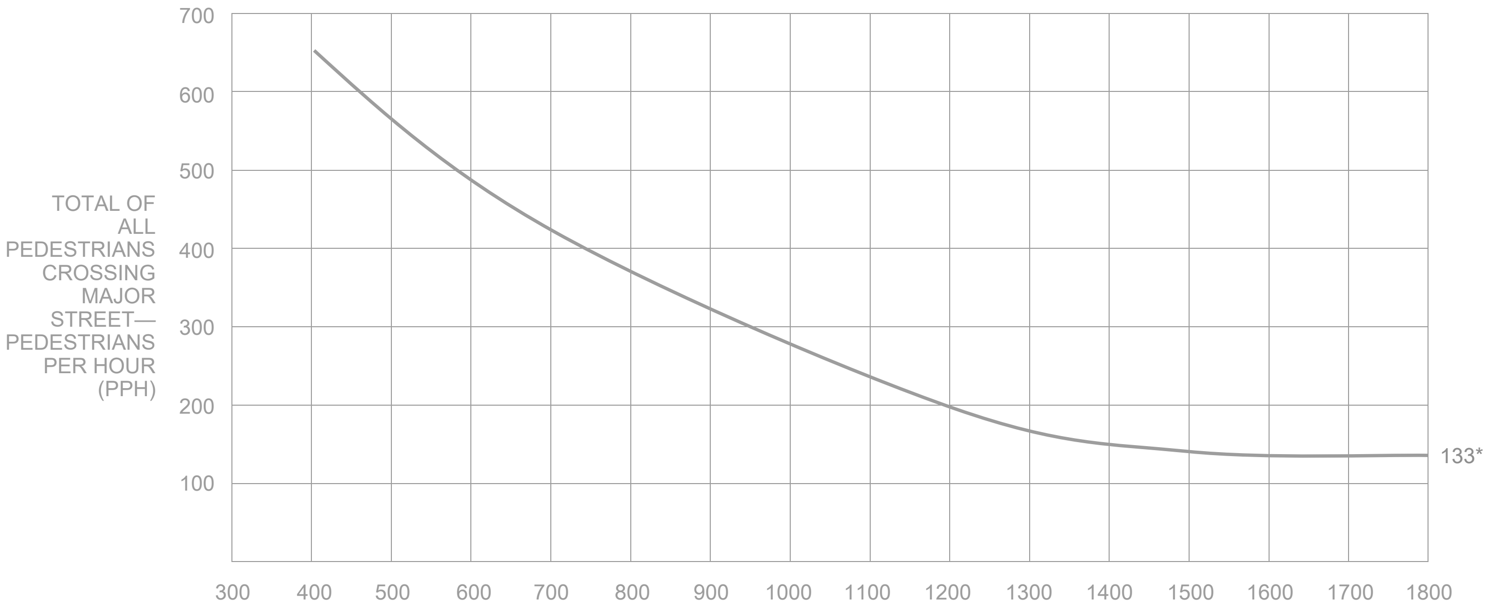


** Note: 75 pph applies as the lower threshold volume*

Pedestrian Volume WARRANT 4 *(continued)*

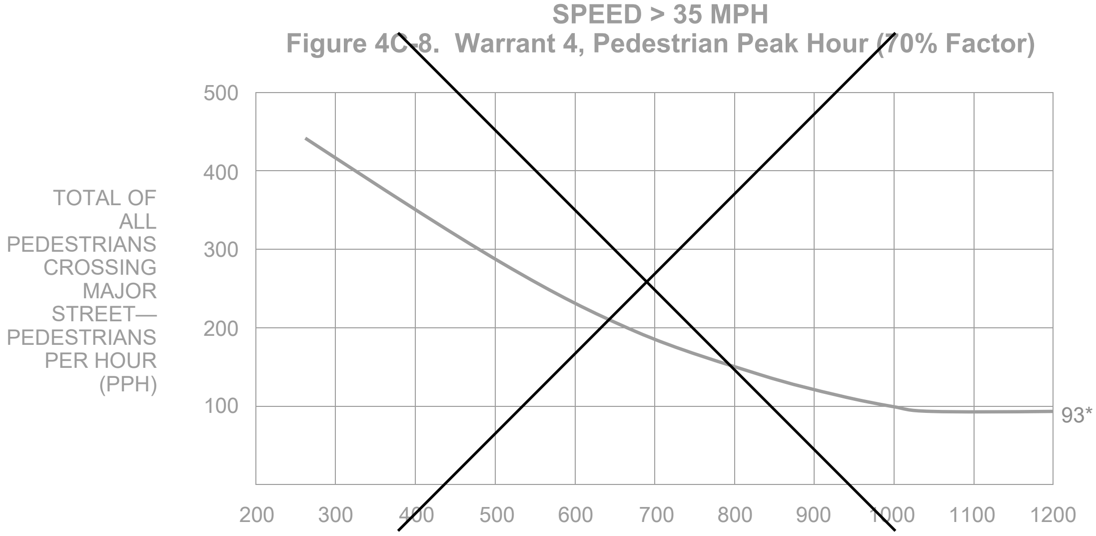
✯ The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal ✯

SPEED ≤ 35 MPH
Figure 4C-7. Warrant 4, Pedestrian Peak Hour



** Note: 133 pph applies as the lower threshold volume*

SPEED > 35 MPH
Figure 4C-8. Warrant 4, Pedestrian Peak Hour (70% Factor)



** Note: 93 pph applies as the lower threshold volume*

School Crossing — WARRANT 5

N/A ☒
SATISFIED YES ☐ NO ☐

★ The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal ★

a. Part A and Part B shall be satisfied.
b. For purposes of this warrant, schoolchildren include elementary through high school students.
c. Estimated schoolchildren volumes may be used where a new school or expanded school has been approved for construction.
d. The need for a traffic control signal shall be considered when an engineering study of the frequency and adequacy of gaps in the vehicular traffic stream as related to the number and size of groups of schoolchildren at an established school crossing across the major street shows that the number of adequate gaps in the traffic stream during the period when the schoolchildren are using the crossing is less than the number of minutes in the same period and there are a minimum of 20 schoolchildren during the highest crossing hour.
e. The School Crossing signal warrant shall not be applied at locations where the distance to the nearest traffic control signal along the major street is less than 300 feet, unless the proposed traffic control signal will not restrict the progressive movement of traffic.
f. Non-intersectional schoolchildren crosswalk locations may be signalized when justified.
g. Pedestrian Hybrid Beacons may be considered instead of a traffic signal if a device is recommended based upon pedestrian needs

PART A

SATISFIED YES ☐ NO ☐

Gap / Minutes and # of Children

		Hour
Gaps vs Minutes	Minutes Children Using Crossing	
	Number of Adequate Gaps	
School Age Pedestrians Crossing Street / hr		

	YES	NO
Gaps < Minutes	☐	☐
AND Children ≥ 20/hr	☐	☐
AND, Consideration has been given to less restrictive remedial measures	☐	☐

PART B

SATISFIED YES ☐ NO ☐

	YES	NO
The distance to the nearest traffic signal along the major street is greater than 300 ft	☐	☐
OR, The proposed traffic signal will not restrict progressive movement of traffic	☐	☐

Coordinated Signal System — WARRANT 6

N/A ☒
SATISFIED YES ☐ NO ☐

★ The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal ★

a. The Coordinated Signal System signal warrant should not be applied where the resultant spacing of traffic control signals would be less than 1,000 feet.
b. All Parts must be satisfied.

MINIMUM REQUIREMENTS	DISTANCE TO NEAREST SIGNAL	YES	NO
≥ 1000 ft	N ________ ft, S ________ ft, E ________ ft, W ________ft	☐	☐
On a one-way street or a street that has traffic predominantly in one direction, the adjacent traffic control signals are so far apart that they do not provide the necessary degree of vehicular platooning. **OR**, On a two-way street, adjacent traffic control signals do not provide the necessary degree of platooning and the proposed and adjacent traffic control signals will collectively provide a progressive operation.		☐	☐

Crash Experience Warrant — WARRANT 7

N/A ☒
SATISFIED YES ☐
NO ☐

★ The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal ★

a. All Parts must be satisfied.
b. For locations that involve other agencies, crash data from other involved jurisdictions should be obtained.

			YES	NO
Adequate trial of alternatives with satisfactory observance and enforcement has failed to reduce the crash frequency			☐	☐
REQUIREMENTS	Number of crashes reported within a 12-month period susceptible to correction by a traffic signal:		☐	☐
5 OR MORE	Indicate Date(s):			
REQUIREMENTS	CONDITIONS	✓		
ONE CONDITION SATISFIED 80%	Warrant 1, Condition A - Minimum Vehicular Volume		☐	☐
	OR, Warrant 1, Condition B - Interruption of Continuous Traffic			
	OR, Warrant 4, Pedestrian Volume Condition - Ped Vol ≥ 80% for ped volumes per Figures 4C-5 to 4C-8			

Roadway Network — WARRANT 8

N/A ☒
SATISFIED YES ☐
NO ☐

★ The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal ★

a. Existing traffic volumes with an ambient growth rate of 1% (or other LADOT approved ambient growth rate) may be used if projected volumes are not available.
b. All Parts must be satisfied.

MINIMUM VOLUME REQUIREMENTS	ENTERING VOLUMES - ALL APPROACHES	✓	FULLFILLED YES	FULLFILLED NO
1000 Veh / Hr	During Typical Weekday Peak Hour ________________ Veh/Hr **AND** has 5-year projected traffic volumes that meet one or more of Warrants 1,2, and 3 during an average weekday.		☐	☐
	OR During Each of Any 5 Hrs. of a Saturday or Sunday ________ Veh / Hr			

CHARACTERISTICS OF MAJOR ROUTES	MAJOR ROUTE A	MAJOR ROUTE B		YES	NO
Highway System Serving as Principal Network for Through Traffic					
Rural or Suburban Highway Outside Of, Entering, or Traversing a City					
Appears as Major Route on an Official Plan					
Any Major Route Characteristics Met, Both Streets				☐	☐

Intersection Near a Grade Crossing

WARRANT 9

N/A ☒
SATISFIED YES ☐
NO ☐

⋆ The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal ⋆

a. Both Parts A and B shall be satisfied.

b. This Warrant shall only be applied after review and approval by the LADOT Railroad Crossing and Safety Section (RCOSS), subject to CPUC General Order approval.

c. This Warrant does not apply for Pre-Signals and/or Queue-Cutter signals, as an alternative application of Pre-Signals (See 2012 CA MUTCD, Sec 8C.09). Pre-Signals shall only be applied after review and approval by RCOSS, subject to CPUC General Order approval.

	FULFILLED	
	YES	NO
PART A A grade crossing exists on an approach controlled by a STOP or YIELD sign and the center of the track nearest to the intersection is within 140 feet of the stop line or yield line on the approach. Track Center Line to Limit Line ________ ft	☐	☐
PART B **There is one minor street approach lane at the track crossing** - During the highest traffic volume hour during which rail traffic uses the crossing, the plotted point falls above the applicable curve in Figure 4C-9. Major Street - Total of both approaches: ________ VPH Minor Street - Crosses the track (one direction only, approaching the intersection): ________ VPH X AF (Use Tables 4C-2, 3, & 4 below to calculate AF) = ________ VPH **OR, There are two or more minor street approach lanes at the track crossing -** During the highest traffic volume hour during which rail traffic uses the crossing, the plotted point falls above the applicable curve in Figure 4C-10. Major Street - Total of both approaches: ________ VPH Minor Street - Crosses the track (one direction only, approaching the intersection): ________ VPH X AF (Use Tables 4C-2, 3, & 4 below to calculate AF) = ________ VPH	☐	☐

The minor street approach volume may be multiplied by up to three following adjustment factors (AF) as described in Section 4C-10.

1. Number of Rail Traffic per Day ________ Adjustment factor from Table 4C-2 _____
2. Percentage of High-Occupancy Buses on Minor Street Approach ______ Adjustment factor from Table 4C-3 _____
3. Percentage of Tractor-Trailer Trucks on Minor Street Approach _______ Adjustment factor from Table 4C-4 _____

NOTE: If no data is available or known, then use AF = 1 (no adjustment)

Table 4C-2. Warrant 9, Adjustment Factor for Daily Frequency of Rail Traffic

Rail Traffic per Day	Adjustment Factor
1	0.67
2	0.91
3 to 5	1.00
6 to 8	1.18
9 to 11	1.25
12 or more	1.33

Table 4C-3. Warrant 9, Adjustment Factor for Percentage of High-Occupancy Buses

% of High-Occupancy Buses * on Minor-Street Approach	Adjustment Factor
0 %	1.00
2 %	1.09
4 %	1.19
6 % or more	1.32

* A high-occupancy bus is defined as a bus occupied by at least 20 people

Intersection Near a Grade Crossing WARRANT 9 *(continued)*

✯ The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal ✯

**Table 4C-4. Warrant 9,
Adjustment Factor for Percentage of Tractor-Trailer Trucks**

% of Tractor-Trailer Trucks on Minor-Street Approach	Adjustment Factor	
	D less than 70 feet	D of 70 feet or more
0% to 2.5%	0.50	0.50
2.6% to 7.5%	0.75	0.75
7.6% to 12.5%	1.00	1.00
12.6% to 17.5%	2.30	1.15
17.6% to 22.5%	2.70	1.35
22.6% to 27.5%	3.28	1.64
More than 27.5%	4.18	2.09

**Figure 4C-9. Warrant 9, Intersection Near a Grade Crossing
(One Approach Lane at the Track Crossing)**

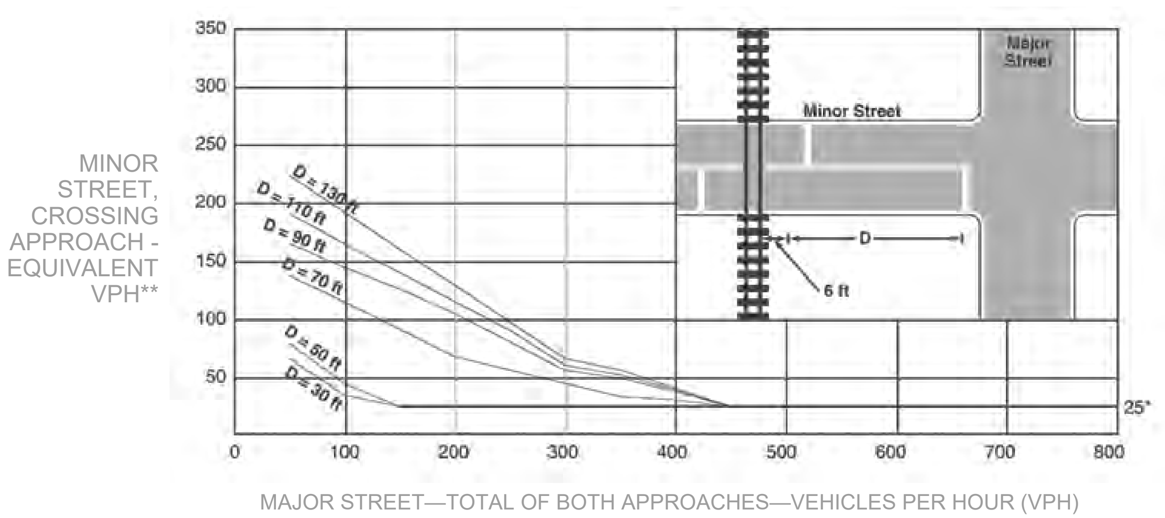
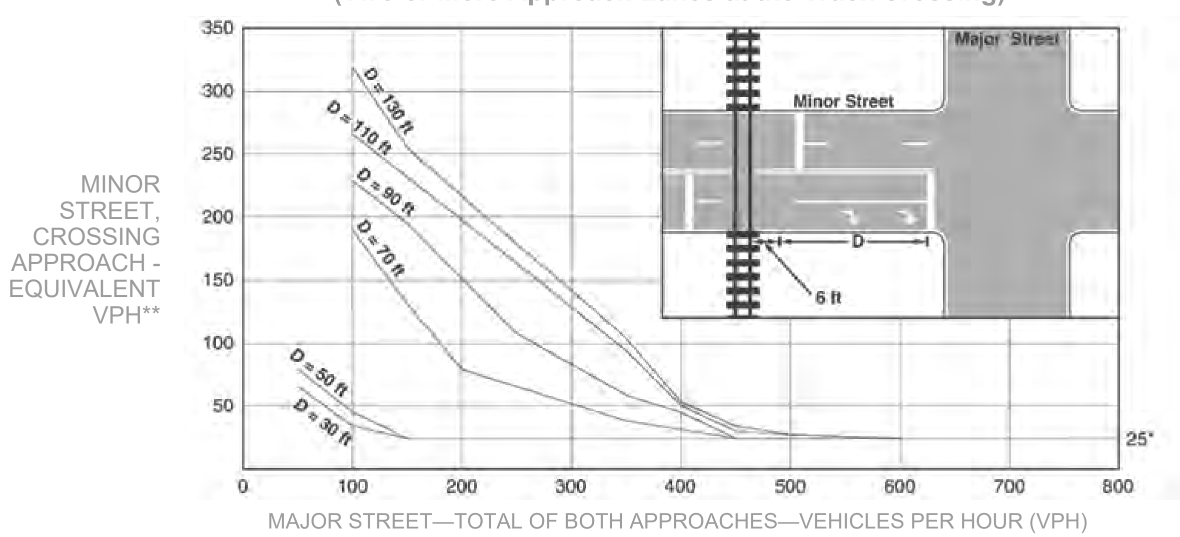


**Figure 4C-10. Warrant 9, Intersection Near a Grade Crossing
(Two or More Approach Lanes at the Track Crossing)**



** 25 vph applies as the lower threshold volume*
*** VPH after applying the adjustment factors in Tables 4C-2, 4C-3, and/or 4C-4, if appropriate*

The next two warrants are not included in the MUTCD (CA) standard warrants, but are added as optional warrants that an engineer may use with discretion to justify a traffic signal for special conditions where other traffic control devices could be considered, but where a traffic signal might be more appropriate

Bicycles — WARRANT 10

N/A ☒
SATISFIED YES ☐ NO ☐

✶ The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal ✶

a. Part A and Part B shall be satisfied
b. Per MUTCD (CA) Section 4C.01.15: "For signal warrant analysis, bicyclists may be counted as either vehicles or pedestrians."
c. When performing a signal warrant analysis, bicyclists riding in the street with other vehicular traffic are usually counted as vehicles, and bicyclists who are clearly using pedestrian facilities are usually counted as pedestrians; however for this bicycle specific warrant, bicyclists are counted as bicyclists, regardless of where they are riding.
d. Bicycle signal faces should be considered for use when this warrant is satisfied, with the final determination made during the signal design process. Refer to MUTCD (CA) Section 4D.104 (CA).
e. Estimated peak hour bicycle volumes may be used for new intersections, significantly reconstructed intersections, or where new bicycle facilities or near-term land development are proposed which will result in increased bicycle volumes.

PART A and B must be satisfied

SATISFIED YES ☐ NO ☐

PART A (*1 or 2 below must be satisfied*)

	SATISFIED YES	NO
1. Location meets the Department's guidelines for a marked crosswalk with Pedestrian Hybrid Beacons, where pedestrian units are replaced with bicyclists; **AND** the minor street is designated as part of the Neighborhood Enhanced Network in the Mobility Plan 2035 Element of the City's General Plan.	☐	☐
2. The intersection features a two-way bicycle or pedestrian path or trail within the median or alongside one of the roadways.	☐	☐

PART B (*1, 2, or 3 below must be satisfied*)

	SATISFIED YES	NO
1. Signal would be part of a corridor or area project to improve bicycle connectivity.*	☐	☐
2. Signal is associated with a development project.*	☐	☐
3. There have been at least 3 correctable collisions involving bicyclists in the last 1 year, 2 per year for the last 2 years, or 5 in the last 3 years of available data.	☐	☐

Specify dates of correctable bicycle collisions:

	Period Dates	Dates of Correctable Bicycle Collisions
1 year		
2 year		
3 year		

**The authority for a traffic signal justified using Part B.1 or B.2 shall be automatically rescinded three years after the date of approval if funding for construction of the traffic signal is not secured or project plans are not actively being reviewed for approval.*

Pedestrian Activated Yellow Flashing Beacons

WARRANT 11

N/A	☒
SATISFIED YES	☐
NO	☐

⭑ The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal ⭑

a. All Parts shall be satisfied.
b. This warrant should be applied when Pedestrian Activated Yellow Flashing Beacons are recommended within 600 feet BOTH upstream and downstream of existing traffic signals.

PART A	YES	NO
Location meets the guidelines for the installation of Pedestrian Activated Yellow Flashing Beacons as described in the LADOT Marked Crosswalk Guidelines.	☐	☐

PART B

MINIMUM REQUIREMENTS	DISTANCE TO NEAREST SIGNALS	YES	NO
≤ 600 ft	N ________ ft, S ________ ft, E ________ ft, W ________ft	☐	☐

LADOT

SR#

Traffic Signal Warrants Worksheet

DATE 12/22/22 PREPARER GTC REVIEWER ____

MAJOR ST: La Tijera Boulevard

MINOR ST: Bleriot Avenue

Critical Approach Speed: MPH ____ *or* Speed Limit: MPH 35

Speed limit or critical speed on major street traffic > 40 mph………………………☐
or
In built up area of isolated community of < 10,000 population………………………☐
} RURAL (R) ☒ URBAN (U)

Eight-Hour Vehicular Volume — WARRANT 1

N/A ☒
SATISFIED YES ☐
NO ☐

✯ The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal ✯

a. Condition A or Condition B or combination of 80% of both parts A and B must be satisfied.

b. A 6-hour Manual Count may be used in a determination that this warrant is not met. However, supplement manual counts should be taken during separate hours for a determination that this warrant is met.

c. In applying each condition, the major street and minor street volumes shall be for the same hours. On the minor street, the higher volume does not need to be the same approach during each of the hours.

d. The study should consider the effects of the right-turn vehicles from the minor-street approaches. Engineering judgment should be used to determine what, if any, portion of the right-turn traffic is subtracted from the minor-street traffic count.

e. Figure 4C-103(CA) should be used for new intersections, significantly reconstructed intersections, where near-term land development will result in increased volumes, or where it is not reasonable to use current traffic volumes.

f. Engineering judgment should also be used in applying various traffic signal warrants to cases where approaches consist of one lane plus one left-turn or right-turn lane. This site-specific traffic characteristics should dictate whether an approach is considered as one lane or two lanes. For example, for an approach with one lane for through and right-turning traffic plus a left-turn lane, if engineering judgment indicates that it should be considered a one-lane approach because the traffic using the left turn lane is minor, the total traffic volume approaching the intersection should be applied against the signal warrants as a one-lane approach. The approach should be considered two lanes if approximately half of the traffic on the approach turns left and the left-turn lane is of sufficient length to accommodate all left-turn vehicles. Similar engineering judgment and rationale should be applied to a street approach with one through/left-turn lane plus a right-turn lane. In this case, the degree of conflict of minor-street right-turn traffic with traffic on the major street should be considered. Thus, right-turn traffic should not be included in the minor-street volume if the movement enters the major street with minimal conflict. The approach should be evaluated as a one -lane approach with only the traffic volume in the through/left-turn lane considered.

g. At an intersection with a high volume of left-turn traffic from the major street, the signal warrant analysis may be performed in a manner that considers the higher volume of the major-street left-turn volumes plus the higher volume minor-street approach as the “minor street” volume and both approaches of the major street minus the higher of the major-street left-turn volume as “major street” volume. In these cases, engineering judgment should be used to determine if left-turn phasing is necessary to accommodate the high volume of left-turn traffic.

Eight-Hour Vehicular Volume WARRANT 1 (continued)

☆ The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal ☆

Condition A

Minimum Vehicle Volume

SATISFIED	YES	NO
100%	☐	☐
80%	☐	☐

RIGHT TURN REDUCTION APPLICATION *MINOR STREET* ☐
(If Yes, fill in percentage) ☐ ____%

	MINIMUM REQUIREMENTS (80% SHOW IN BRACKETS)				Hours							
	0	R	0	R								
APPROACH LANES	1 ✓		2 or More ✓		16:45							
Both Approach Major Street	500 (400)	350 (280)	600 ✓ (480)	420 (336)	1,462							
Highest Approach Minor Street	150 ✓ (120)	105 (84)	200 (160)	140 (112)	51							

Condition B

Interruption of Continuous Traffic

SATISFIED	YES	NO
100%	☐	☐
80%	☐	☐

RIGHT TURN REDUCTION APPLICATION *MINOR STREET* ☐
(If Yes, fill in percentage) ☐ ____%

	MINIMUM REQUIREMENTS (80% SHOW IN BRACKETS)				Hours							
	0	R	0	R								
APPROACH LANES	1 ✓		2 or More ✓		16:45							
Both Approach Major Street	750 (600)	525 (420)	900 ✓ (720)	630 (504)	1,462							
Highest Approach Minor Street	75 ✓ (60)	53 (42)	100 (80)	70 (56)	51							

COMBINATION OF A & B

SATISFIED	YES	NO
	☐	☐

REQUIREMENT	CONDITION	✓	FULFILLED YES	FULFILLED NO
TWO CONDITIONS SATISFIED 80%	A. MINIMUM VEHICULAR VOLUME AND B. INTERRUPTION OF CONTINUOUS TRAFFIC		☐	☐
AND AN ADEQUATE TRIAL OF OTHER ALTERNATIVES THAT COULD CAUSE LESS DELAY AND INCOVENIENCE TO TRAFFIC HAS FAILED TO SOLVE THE TRAFFIC PROBLEMS			☐	☐

Eight-Hour Vehicular Volume WARRANT 1 (continued)

✯ The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal ✯

Projected Volumes

	N/A	☒
SATISFIED	YES	NO
	☐	☐

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet (Average Traffic Estimate Form)
Based on Estimated Average Daily Traffic - see *Note**

URBAN ☐	RURAL ☐	Minimum Requirements Estimated Average Daily Traffic			
CONDITION A - Minimum Vehicular Volume Satisfied ☐ Not Satisfied ☐		Vehicles Per Day On Major Street (Total of Both Approaches)		Vehicles Per Day On Higher-Volume Minor Street Approach (One Direction Only)	
Number of lanes for moving traffic on each approach		Urban	Rural	Urban	Rural
Major Street	Minor Street				
1……………………….	1……………………….	8,000	5,600	2,400	1,680
2 or More……………..	1……………………….	9,600	6,720	2,400	1,680
2 or More……………..	2 or More……………..	9,600	6,720	3,200	2,240
1……………………….	2 or More……………..	8,000	5,600	3,200	2,240
CONDITION B - Interruption of Continuous Traffic Satisfied ☐ Not Satisfied ☐		Vehicles Per Day On Major Street (Total of Both Approaches)		Vehicles Per Day On Higher-Volume Minor Street Approach (One Direction Only)	
Number of lanes for moving traffic on each approach		Urban	Rural	Urban	Rural
Minor Street	Minor Street				
1……………………….	1……………………….	12,000	8,400	1,200	850
2 or More……………..	1……………………….	14,400	10,080	1,200	850
2 or More……………..	2 or More……………..	14,400	10,080	1,600	1,120
1……………………….	2 or More……………..	12,000	8,400	1,600	1,120
Combination of CONDITIONS A + B Satisfied ☐ Not Satisfied ☐ No one condition satisfied, but following conditions fulfilled 80% or more…… ______ A ______ B		2 CONDITIONS 80%		2 CONDITIONS 80%	

*** Note:** *To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes*

Four-Hour Vehicular Volume

WARRANT 2

N/A ☒
SATISFIED YES ☐
NO ☐

☆ The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal ☆

a. Record hourly vehicle volumes for the highest four hours of an average day.

b. In applying each condition, the major street and minor street volumes shall be for the same hours. On the minor street, the higher volume does not need to be the same approach during each of the hours.

c. The study should consider the effects of the right-turn vehicles from the minor-street approaches. Engineering judgment should be used to determine what, if any, portion of the right-turn traffic is subtracted from the minor-street traffic count.

d. Engineering judgment should also be used in applying various traffic signal warrants to cases where approaches consist of one lane plus one left-turn or right-turn lane. This site-specific traffic characteristics should dictate whether an approach is considered as one lane or two lanes. For example, for an approach with one lane for through and right-turning traffic plus a left-turn lane, if engineering judgment indicates that it should be considered a one-lane approach because the traffic using the left turn lane is minor, the total traffic volume approaching the intersection should be applied against the signal warrants as a one-lane approach. The approach should be considered two lanes if approximately half of the traffic on the approach turns left and the left-turn lane is of sufficient length to accommodate all left-turn vehicles. Similar engineering judgment and rationale should be applied to a street approach with one through/left-turn lane plus a right-turn lane. In this case, the degree of conflict of minor-street right-turn traffic with traffic on the major street should be considered. Thus, right-turn traffic should not be included in the minor-street volume if the movement enters the major street with minimal conflict. The approach should be evaluated as a one-lane approach with only the traffic volume in the through/left-turn lane considered.

e. At an intersection with a high volume of left-turn traffic from the major street, the signal warrant analysis may be performed in a manner that considers the higher volume of the major-street left-turn volumes plus the higher volume minor-street approach as the "minor street" volume and both approaches of the major street minus the higher of the major-street left-turn volume as "major street" volume. In these cases, engineering judgment should be used to determine if left-turn phasing is necessary to accommodate the high volume of left -turn traffic.

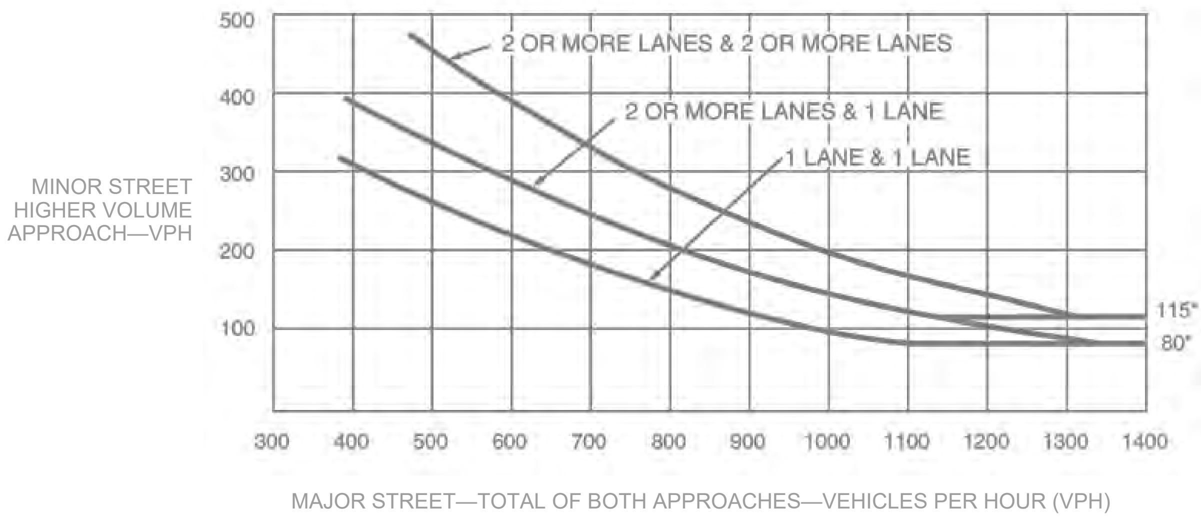
APPROACH LANES	One	2 or More	Hours			
Both Approaches - Major Street		✓				
Higher Approach - Minor Street	✓					

	YES	NO
RIGHT TURN REDUCTION APPLICATION *MINOR STREET* (If Yes, fill in percentage) ________%	☐	☐
* All plotted points fall above the applicable curve in Figure 4C-1. (URBAN AREAS) OR, All plotted points fall above the applicable curve in Figure 4C-2. (RURAL AREAS)	☐	☐

Four-Hour Vehicular Volume WARRANT 2 *(continued)*

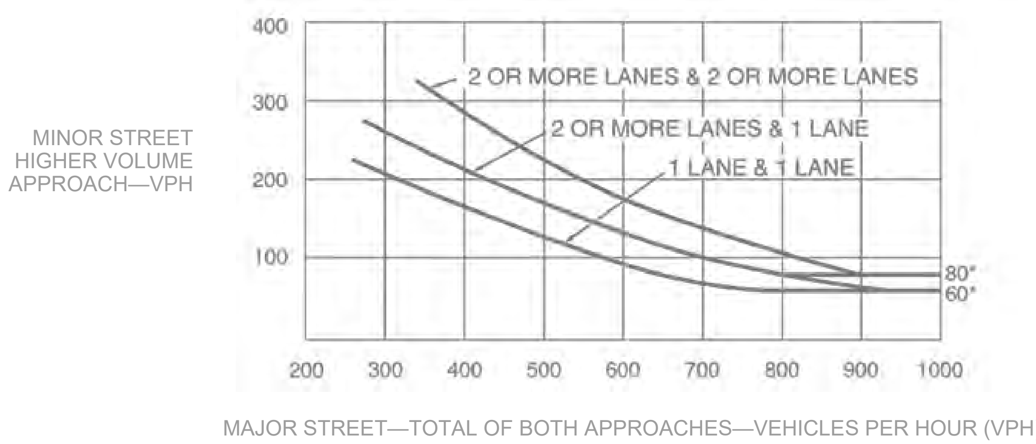
✭ The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal ✭

URBAN
Figure 4C-1. Warrant 2, Four-Hour Vehicular Volume



**Note: 115 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 80 vph applies as the lower threshold volume for a minor-street approach with one lane.*

RURAL
Figure 4C-2. Warrant 2, Four-Hour Vehicular Volume (70% Factor)



**Note: 80 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 60 vph applies as the lower threshold volume for a minor-street approach with one lane.*

Peak Hour — WARRANT 3

	N/A	❑
SATISFIED	YES	❑
	NO	☒

✭ The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal ✭

a. Part A or Part B must be satisfied.

b. This signal warrant shall be applied only in unusual cases, such as office complexes, manufacturing plants, industrial complexes, or high-occupancy vehicle facilities that attract or discharge large numbers of vehicles over a short time.

c. In applying each condition, the major street and minor street volumes shall be for the same hours.

d. The study should consider the effects of the right-turn vehicles from the minor-street approaches. Engineering judgment should be used to determine what, if any, portion of the right-turn traffic is subtracted from the minor-street traffic count.

e. Estimated Peak Hour Volumes may be used for new intersections, significantly reconstructed intersections, or where near-term land development will result in increased volumes.

f. Engineering judgment should also be used in applying various traffic signal warrants to cases where approaches consist of one lane plus one left-turn or right-turn lane. This site-specific traffic characteristics should dictate whether an approach is considered as one lane or two lanes. For example, for an approach with one lane for through and right-turning traffic plus a left-turn lane, if engineering judgment indicates that it should be considered a one-lane approach because the traffic using the left turn lane is minor, the total traffic volume approaching the intersection should be applied against the signal warrants as a one-lane approach. The approach should be considered two lanes if approximately half of the traffic on the approach turns left and the left-turn lane is of sufficient length to accommodate all left-turn vehicles. Similar engineering judgment and rationale should be applied to a street approach with one through/left-turn lane plus a right-turn lane. In this case, the degree of conflict of minor-street right-turn traffic with traffic on the major street should be considered. Thus, right-turn traffic should not be included in the minor-street volume if the movement enters the major street with minimal conflict. The approach should be evaluated as a one-lane approach with only the traffic volume in the through/left-turn lane considered.

g. At an intersection with a high volume of left-turn traffic from the major street, the signal warrant analysis may be performed in a manner that considers the higher volume of the major-street left-turn volumes plus the higher volume minor-street approach as the "minor street" volume and both approaches of the major street minus the higher of the major-street left-turn volume as "major street" volume. In these cases, engineering judgment should be used to determine if left-turn phasing is necessary to accommodate the high volume of left-turn traffic.

	YES	NO
Unusual facility per Note b.	❑	☒

Name: 1,462

PART A

All parts 1, 2, and 3 below must be satisfied for the same one hour, for any four consecutive 15-minute periods)

SATISFIED: YES ❑ NO ☒

	YES	NO	N/A
1. The total delay experienced by traffic on one minor street approach (one direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach, or five vehicle-hours for a two-lane approach; AND	❑	❑	☒
2. The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; AND	❑	☒	❑
3. The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches.	☒	❑	❑

PART B

SATISFIED: YES ❑ NO ☒

APPROACH LANES	One	2 or More	Hour 16:45
Both Approaches - Major Street		✓	1,462
Higher Approach - Minor Street	✓		51

	YES	NO
RIGHT TURN REDUCTION APPLICATION *MINOR STREET*	❑	☒

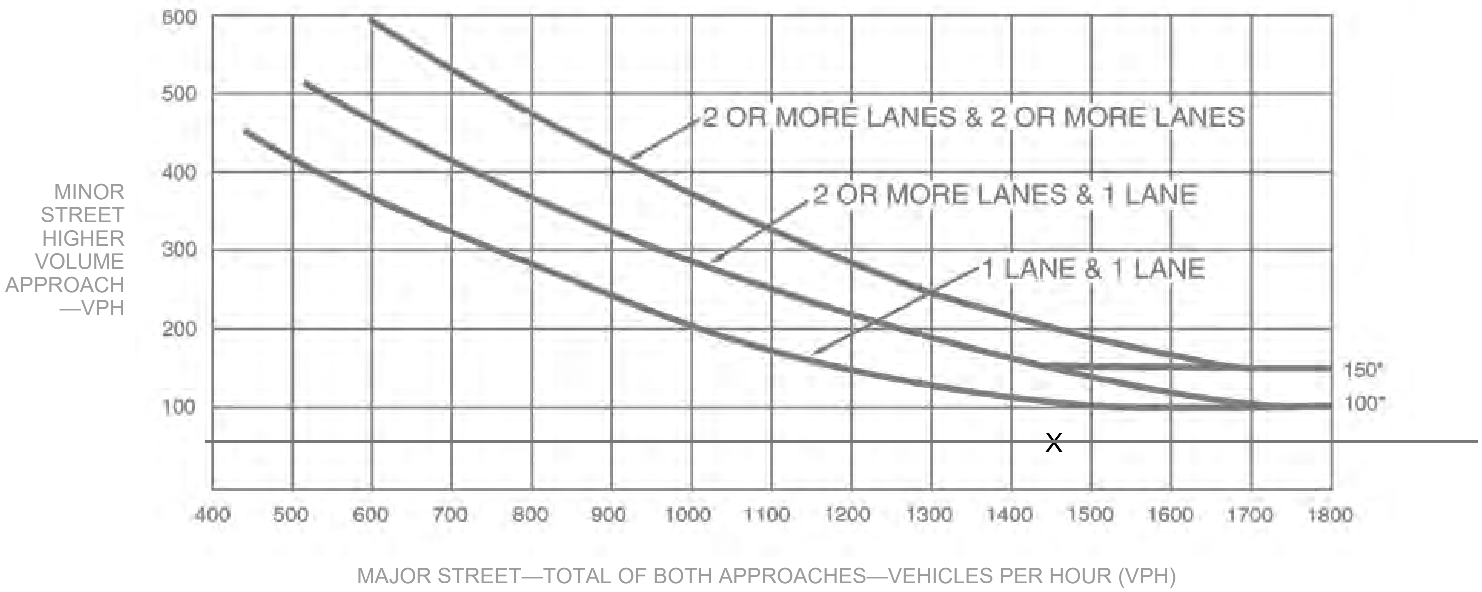
(If Yes, fill in percentage) 1,462 %

	YES	NO
The plotted point falls above the applicable curve in ~~Figure 4C-3. (URBAN AREAS)~~ **OR**, The plotted point falls above the applicable curve in Figure 4C-4. (RURAL AREAS)	❑	☒

Peak Hour WARRANT 3 *(continued)*

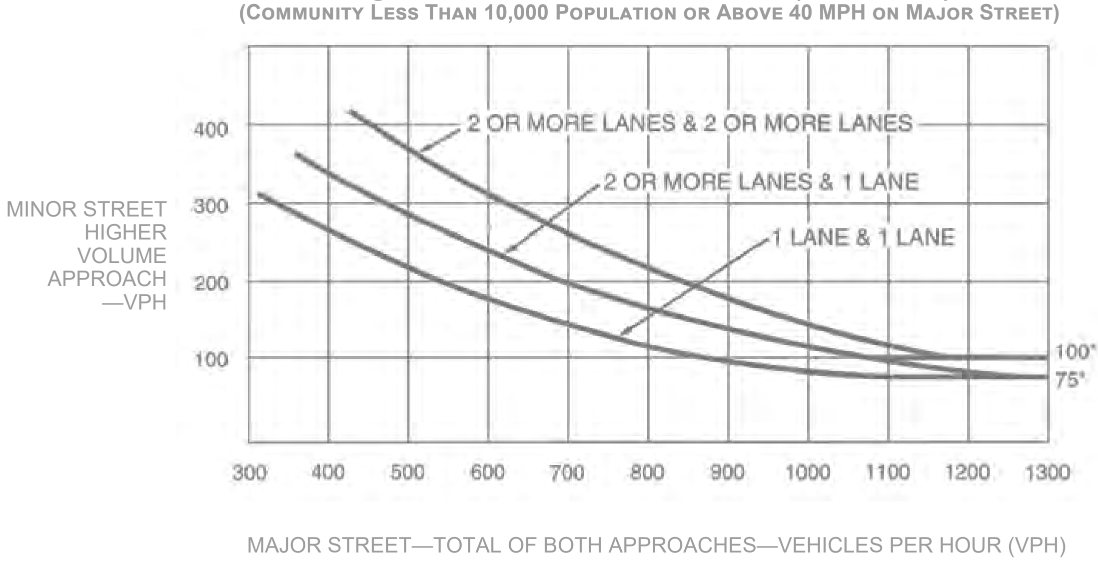
✯ The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal ✯

URBAN
Figure 4C-3. Warrant 3, Peak Hour



** Note: 150 vph applies as the lower threshold volume for a minor street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor street approach with one lane.*

RURAL
Figure 4C-4. Warrant 3, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



** Note: 100 vph applies as the lower threshold volume for a minor street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor street approach with one lane.*

Pedestrian Volume — WARRANT 4

	N/A	☒
SATISFIED	YES	☐
	NO	☐

★ The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal ★

a. Parts 1 and 2 shall be satisfied.
b. The pedestrian volume criterion may be reduced by as much as 50% if the 15th percentile speed of the pedestrians is less than 3.5 feet/second.
c. Estimated pedestrian volumes may be used where nearby, near-term land use development has been approved for construction.
d. In applying each condition, the total vehicles per hour on the major street (on both approaches) and the total pedestrians per hour crossing the major street shall be for the same hours.
e. The Pedestrian Volume signal warrants shall not be applied at locations where the distance to the nearest traffic control signal or STOP sign controlling the street that pedestrians desire to cross is less than 300 feet, unless the proposed traffic control signal will not restrict the progressive movement of traffic.
f. Traffic control signal may not be needed at the study location if adjacent coordinated traffic control signals consistently provide gaps of adequate length for pedestrians to cross the street.
g. If it is considered at a non-intersection crossing, the traffic control signal should be installed at least 100 feet from side streets or driveways that are controlled by STOP or YIELD signs. If the traffic control signal is installed at a non-intersection crossing, at least one of the signal faces should be over the traveled way for each approach, parking and other sight obstructions should be prohibited for at least 100 feet in advance of and at least 20 feet beyond the crosswalk or site accommodations should be made through curb extensions or other techniques to provide adequate sight distance, and the installation should include suitable standard signs and pavement markings.
h. Bicycles may be counted as pedestrians.
i. Pedestrian Hybrid Beacons may be considered instead of a traffic signal if a device is recommended based upon pedestrian needs

PART 1 (A or B must be satisfied)

SATISFIED	YES	NO
	☐	☐

A. FOUR-HOUR PEDESTRIAN VOLUMES

	Hours			
Vehicles per hour on major street for 4 hours				
Pedestrians crossing major street per hour for highest 4 hours				

(FIGURE 4C-5 OR 4C-6 SATISFIED)

SATISFIED	YES	NO
100%	☐	☐
80%	☐	☐
50%	☐	☐

15% WALKING RATE ______ *fps*

B. ONE HOUR PEDESTRIAN VOLUMES

	Hour
Vehicles per hour on major street for 1 hour	
Pedestrians crossing major street per hour for highest 1 hour	*0*

(FIGURE 4C-7 or 4C-8 SATISFIED)

SATISFIED	YES	NO
100%	☐	☐
80%	☐	☐
50%	☐	☐

15% WALKING RATE ______ *fps*

PART 2

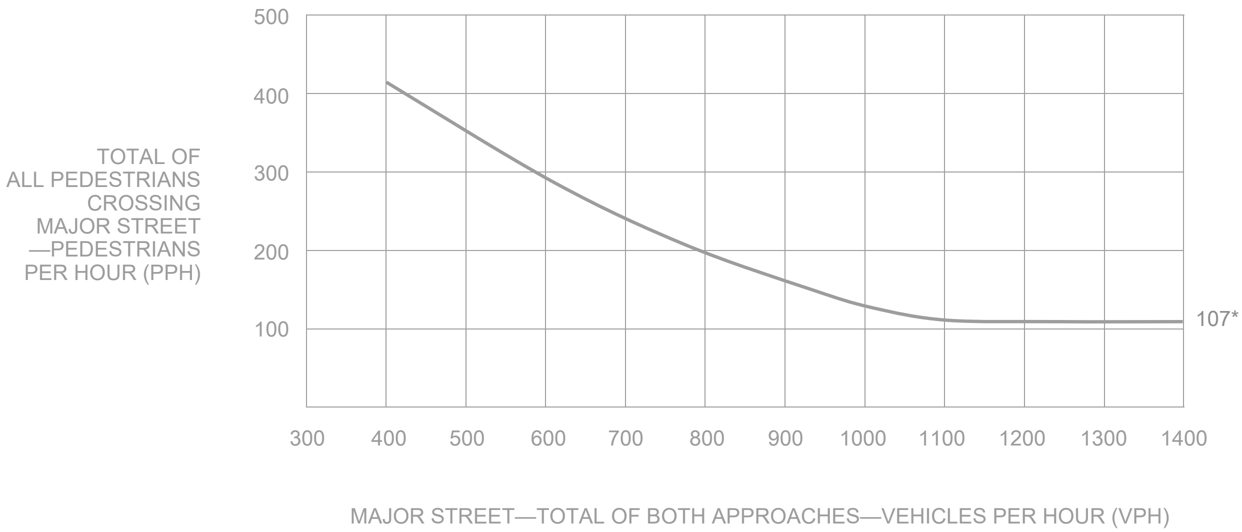
SATISFIED	YES	NO
	☐	☐

	YES	NO
AND, The distance to the nearest traffic signal along the major street is greater than 300 ft	☐	☐
OR, The proposed traffic signal will not restrict progressive traffic flow along the major street	☐	☐

Pedestrian Volume WARRANT 4 *(continued)*

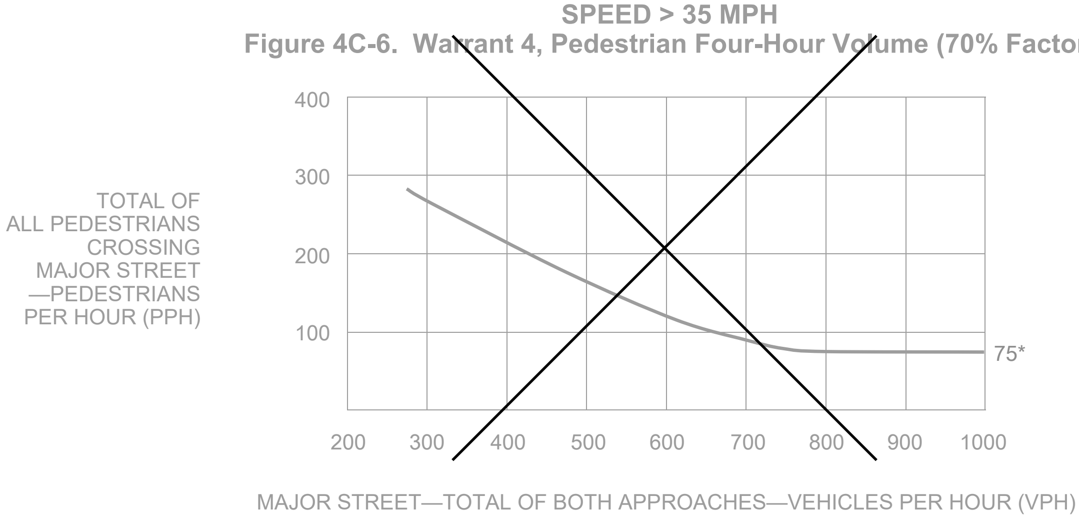
✯ The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal ✯

SPEED ≤ 35 MPH
Figure 4C-5. Warrant 4, Pedestrian Four-Hour Volume



** Note: 107 pph applies as the lower threshold volume*

SPEED > 35 MPH
Figure 4C-6. Warrant 4, Pedestrian Four-Hour Volume (70% Factor)

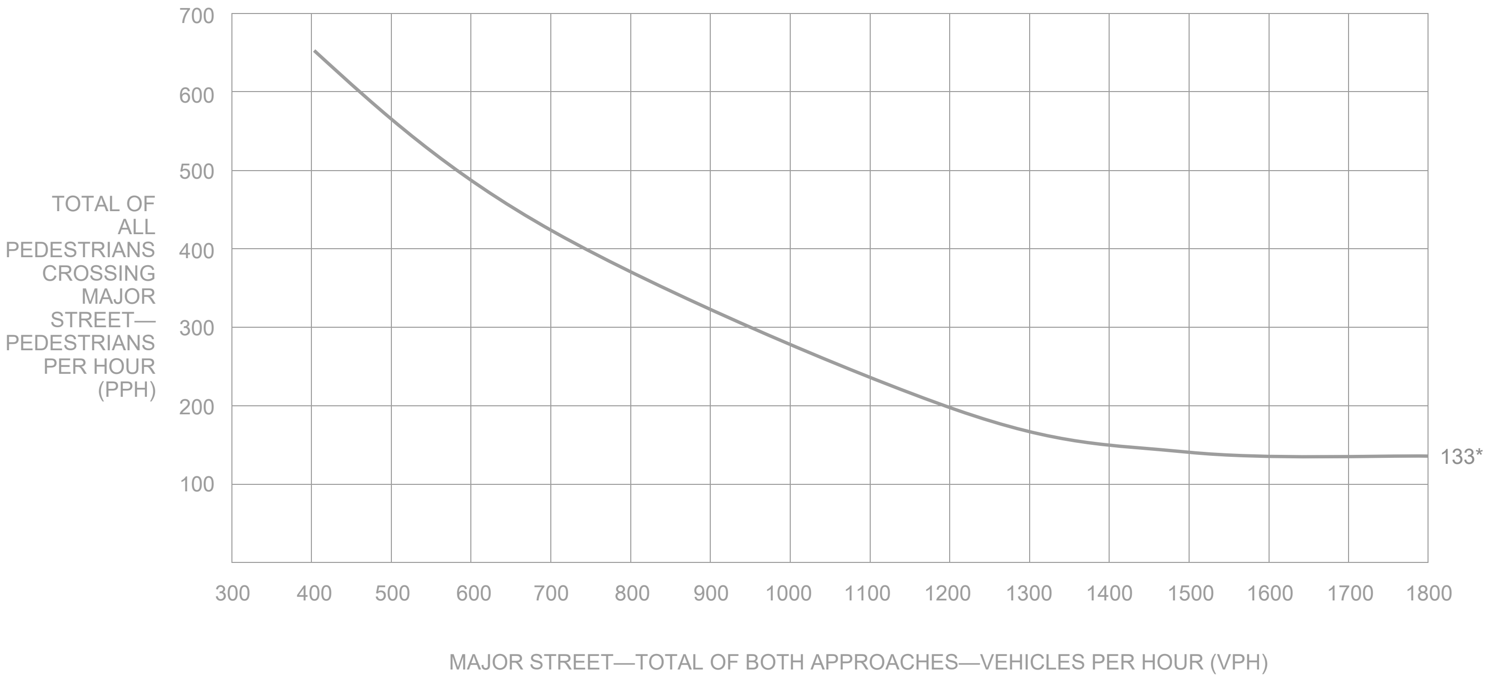


** Note: 75 pph applies as the lower threshold volume*

Pedestrian Volume WARRANT 4 *(continued)*

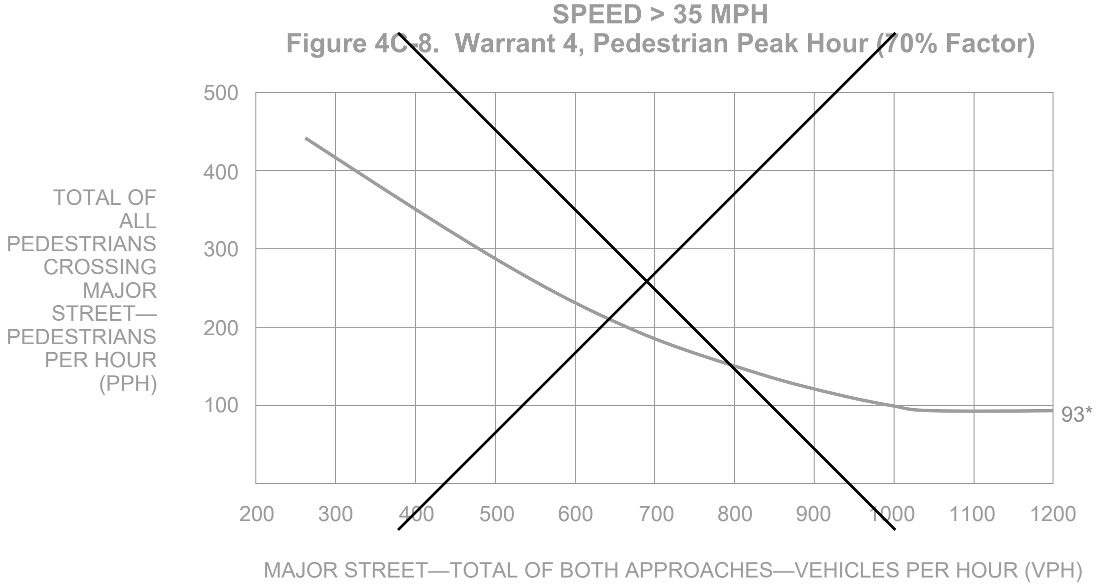
✯ The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal ✯

SPEED ≤ 35 MPH
Figure 4C-7. Warrant 4, Pedestrian Peak Hour



** Note: 133 pph applies as the lower threshold volume*

SPEED > 35 MPH
Figure 4C-8. Warrant 4, Pedestrian Peak Hour (70% Factor)



** Note: 93 pph applies as the lower threshold volume*

School Crossing — WARRANT 5

N/A ☒
SATISFIED YES ☐ NO ☐

✭ The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal ✭

a. Part A and Part B shall be satisfied.
b. For purposes of this warrant, schoolchildren include elementary through high school students.
c. Estimated schoolchildren volumes may be used where a new school or expanded school has been approved for construction.
d. The need for a traffic control signal shall be considered when an engineering study of the frequency and adequacy of gaps in the vehicular traffic stream as related to the number and size of groups of schoolchildren at an established school crossing across the major street shows that the number of adequate gaps in the traffic stream during the period when the schoolchildren are using the crossing is less than the number of minutes in the same period and there are a minimum of 20 schoolchildren during the highest crossing hour.
e. The School Crossing signal warrant shall not be applied at locations where the distance to the nearest traffic control signal along the major street is less than 300 feet, unless the proposed traffic control signal will not restrict the progressive movement of traffic.
f. Non-intersectional schoolchildren crosswalk locations may be signalized when justified.
g. Pedestrian Hybrid Beacons may be considered instead of a traffic signal if a device is recommended based upon pedestrian needs

PART A

SATISFIED YES ☐ NO ☐

Gap / Minutes and # of Children

		Hour
Gaps vs Minutes	Minutes Children Using Crossing	
	Number of Adequate Gaps	
School Age Pedestrians Crossing Street / hr		

	YES	NO
Gaps < Minutes	☐	☐
AND Children ≥ 20/hr	☐	☐
AND, Consideration has been given to less restrictive remedial measures	☐	☐

PART B

SATISFIED YES ☐ NO ☐

	YES	NO
The distance to the nearest traffic signal along the major street is greater than 300 ft	☐	☐
OR, The proposed traffic signal will not restrict progressive movement of traffic	☐	☐

Coordinated Signal System — WARRANT 6

N/A ☒
SATISFIED YES ☐ NO ☐

✭ The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal ✭

a. The Coordinated Signal System signal warrant should not be applied where the resultant spacing of traffic control signals would be less than 1,000 feet.
b. All Parts must be satisfied.

MINIMUM REQUIREMENTS	DISTANCE TO NEAREST SIGNAL	YES	NO
≥ 1000 ft	N ________ ft, S ________ ft, E ________ ft, W ________ft	☐	☐
On a one-way street or a street that has traffic predominantly in one direction, the adjacent traffic control signals are so far apart that they do not provide the necessary degree of vehicular platooning. **OR**, On a two-way street, adjacent traffic control signals do not provide the necessary degree of platooning and the proposed and adjacent traffic control signals will collectively provide a progressive operation.		☐	☐

Crash Experience Warrant — WARRANT 7

N/A ☒
SATISFIED YES ☐
NO ☐

★ The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal ★

a. All Parts must be satisfied.
b. For locations that involve other agencies, crash data from other involved jurisdictions should be obtained.

			YES	NO
Adequate trial of alternatives with satisfactory observance and enforcement has failed to reduce the crash frequency			☐	☐
REQUIREMENTS	Number of crashes reported within a 12-month period susceptible to correction by a traffic signal:		☐	☐
5 OR MORE	*Indicate Date(s):*			
REQUIREMENTS	CONDITIONS	✓		
ONE CONDITION SATISFIED 80%	Warrant 1, Condition A - Minimum Vehicular Volume		☐	☐
	OR, Warrant 1, Condition B - Interruption of Continuous Traffic			
	OR, Warrant 4, Pedestrian Volume Condition - Ped Vol ≥ 80% for ped volumes per Figures 4C-5 to 4C-8			

Roadway Network — WARRANT 8

N/A ☒
SATISFIED YES ☐
NO ☐

★ The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal ★

a. Existing traffic volumes with an ambient growth rate of 1% (or other LADOT approved ambient growth rate) may be used if projected volumes are not available.
b. All Parts must be satisfied.

MINIMUM VOLUME REQUIREMENTS	ENTERING VOLUMES - ALL APPROACHES	✓	FULLFILLED YES	FULLFILLED NO
1000 Veh / Hr	During Typical Weekday Peak Hour ________________ Veh/Hr **AND** has 5-year projected traffic volumes that meet one or more of Warrants 1,2, and 3 during an average weekday.		☐	☐
	<u>OR</u> During Each of Any 5 Hrs. of a Saturday or Sunday ________ Veh / Hr			

CHARACTERISTICS OF MAJOR ROUTES	MAJOR ROUTE A	MAJOR ROUTE B		YES	NO
Highway System Serving as Principal Network for Through Traffic					
Rural or Suburban Highway Outside Of, Entering, or Traversing a City					
Appears as Major Route on an Official Plan					
Any Major Route Characteristics Met, Both Streets				☐	☐

Intersection Near a Grade Crossing

WARRANT 9

N/A ☒
SATISFIED YES ☐
NO ☐

✭ The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal ✭

a. Both Parts A and B shall be satisfied.

b. This Warrant shall only be applied after review and approval by the LADOT Railroad Crossing and Safety Section (RCOSS), subject to CPUC General Order approval.

c. This Warrant does not apply for Pre-Signals and/or Queue-Cutter signals, as an alternative application of Pre-Signals (See 2012 CA MUTCD, Sec 8C.09). Pre-Signals shall only be applied after review and approval by RCOSS, subject to CPUC General Order approval.

	FULFILLED YES	FULFILLED NO
PART A A grade crossing exists on an approach controlled by a STOP or YIELD sign and the center of the track nearest to the intersection is within 140 feet of the stop line or yield line on the approach. Track Center Line to Limit Line ________ ft	☐	☐
PART B **There is one minor street approach lane at the track crossing** - During the highest traffic volume hour during which rail traffic uses the crossing, the plotted point falls above the applicable curve in Figure 4C-9. Major Street - Total of both approaches: ________ VPH Minor Street - Crosses the track (one direction only, approaching the intersection): ________ VPH X AF (Use Tables 4C-2, 3, & 4 below to calculate AF) = ________ VPH **OR, There are two or more minor street approach lanes at the track crossing -** During the highest traffic volume hour during which rail traffic uses the crossing, the plotted point falls above the applicable curve in Figure 4C-10. Major Street - Total of both approaches: ________ VPH Minor Street - Crosses the track (one direction only, approaching the intersection): ________ VPH X AF (Use Tables 4C-2, 3, & 4 below to calculate AF) = ________ VPH	☐	☐

The minor street approach volume may be multiplied by up to three following adjustment factors (AF) as described in Section 4C-10.

1. Number of Rail Traffic per Day ________________________ Adjustment factor from Table 4C-2 _____
2. Percentage of High-Occupancy Buses on Minor Street Approach ______ Adjustment factor from Table 4C-3 _____
3. Percentage of Tractor-Trailer Trucks on Minor Street Approach _______ Adjustment factor from Table 4C-4 _____

NOTE: If no data is available or known, then use AF = 1 (no adjustment)

Table 4C-2. Warrant 9, Adjustment Factor for Daily Frequency of Rail Traffic

Rail Traffic per Day	Adjustment Factor
1	0.67
2	0.91
3 to 5	1.00
6 to 8	1.18
9 to 11	1.25
12 or more	1.33

Table 4C-3. Warrant 9, Adjustment Factor for Percentage of High-Occupancy Buses

% of High-Occupancy Buses * on Minor-Street Approach	Adjustment Factor
0 %	1.00
2 %	1.09
4 %	1.19
6 % or more	1.32

* A high-occupancy bus is defined as a bus occupied by at least 20 people

Intersection Near a Grade Crossing WARRANT 9 *(continued)*

✭ The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal ✭

Table 4C-4. Warrant 9,
Adjustment Factor for Percentage of Tractor-Trailer Trucks

% of Tractor-Trailer Trucks on Minor-Street Approach	Adjustment Factor	
	D less than 70 feet	D of 70 feet or more
0% to 2.5%	0.50	0.50
2.6% to 7.5%	0.75	0.75
7.6% to 12.5%	1.00	1.00
12.6% to 17.5%	2.30	1.15
17.6% to 22.5%	2.70	1.35
22.6% to 27.5%	3.28	1.64
More than 27.5%	4.18	2.09

Figure 4C-9. Warrant 9, Intersection Near a Grade Crossing
(One Approach Lane at the Track Crossing)

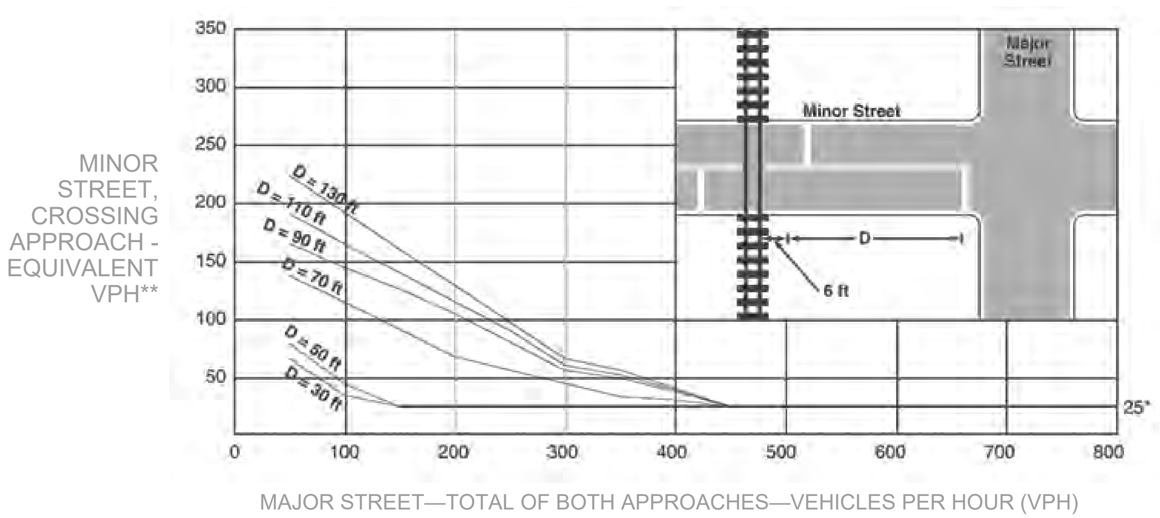
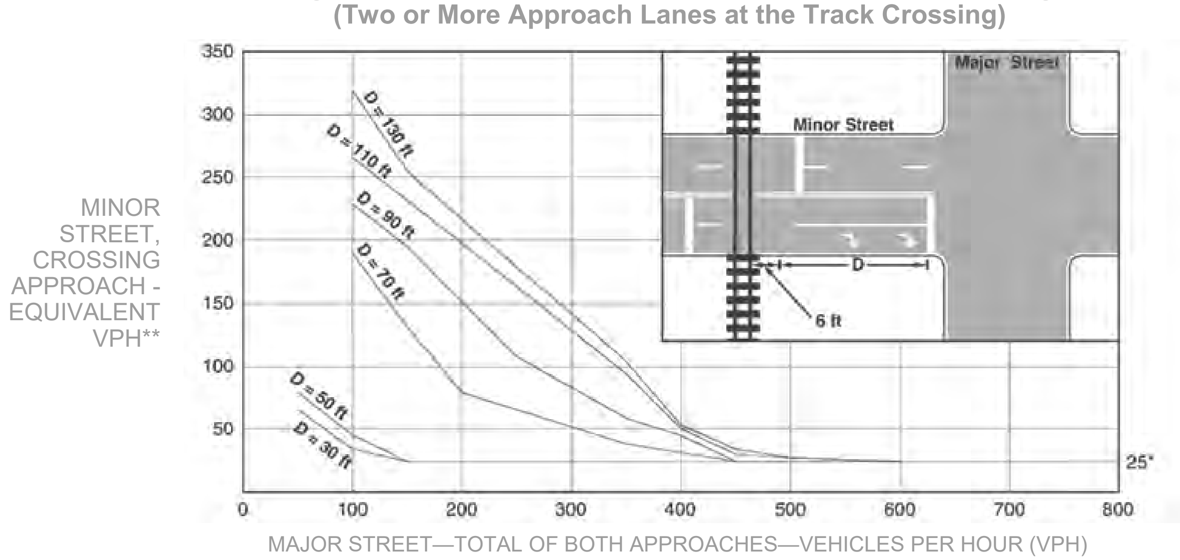


Figure 4C-10. Warrant 9, Intersection Near a Grade Crossing
(Two or More Approach Lanes at the Track Crossing)



** 25 vph applies as the lower threshold volume*
*** VPH after applying the adjustment factors in Tables 4C-2, 4C-3, and/or 4C-4, if appropriate*

The next two warrants are not included in the MUTCD (CA) standard warrants, but are added as optional warrants that an engineer may use with discretion to justify a traffic signal for special conditions where other traffic control devices could be considered, but where a traffic signal might be more appropriate

Bicycles WARRANT 10

N/A ☒
SATISFIED YES ☐
NO ☐

✭ The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal ✭

a. Part A and Part B shall be satisfied
b. Per MUTCD (CA) Section 4C.01.15: "For signal warrant analysis, bicyclists may be counted as either vehicles or pedestrians."
c. When performing a signal warrant analysis, bicyclists riding in the street with other vehicular traffic are usually counted as vehicles, and bicyclists who are clearly using pedestrian facilities are usually counted as pedestrians; however for this bicycle specific warrant, bicyclists are counted as bicyclists, regardless of where they are riding.
d. Bicycle signal faces should be considered for use when this warrant is satisfied, with the final determination made during the signal design process. Refer to MUTCD (CA) Section 4D.104 (CA).
e. Estimated peak hour bicycle volumes may be used for new intersections, significantly reconstructed intersections, or where new bicycle facilities or near-term land development are proposed which will result in increased bicycle volumes.

PART A and B must be satisfied

SATISFIED	YES	NO
	☐	☐

PART A (*1 or 2 below must be satisfied)*

	SATISFIED YES	NO
1. Location meets the Department's guidelines for a marked crosswalk with Pedestrian Hybrid Beacons, where pedestrian units are replaced with bicyclists; **AND** the minor street is designated as part of the Neighborhood Enhanced Network in the Mobility Plan 2035 Element of the City's General Plan.	☐	☐
2. The intersection features a two-way bicycle or pedestrian path or trail within the median or alongside one of the roadways.	☐	☐

PART B (*1, 2, or 3 below must be satisfied)*

	SATISFIED YES	NO
1. Signal would be part of a corridor or area project to improve bicycle connectivity.*	☐	☐
2. Signal is associated with a development project.*	☐	☐
3. There have been at least 3 correctable collisions involving bicyclists in the last 1 year, 2 per year for the last 2 years, or 5 in the last 3 years of available data.	☐	☐

Specify dates of correctable bicycle collisions:

	Period Dates	Dates of Correctable Bicycle Collisions
1 year		
2 year		
3 year		

**The authority for a traffic signal justified using Part B.1 or B.2 shall be automatically rescinded three years after the date of approval if funding for construction of the traffic signal is not secured or project plans are not actively being reviewed for approval.*

Pedestrian Activated Yellow Flashing Beacons

WARRANT 11

N/A ☒
SATISFIED YES ☐
NO ☐

★ *The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal* ★

a. All Parts shall be satisfied.
b. This warrant should be applied when Pedestrian Activated Yellow Flashing Beacons are recommended within 600 feet BOTH upstream and downstream of existing traffic signals.

PART A	YES	NO
Location meets the guidelines for the installation of Pedestrian Activated Yellow Flashing Beacons as described in the LADOT Marked Crosswalk Guidelines.	☐	☐

PART B

MINIMUM REQUIREMENTS	DISTANCE TO NEAREST SIGNALS	YES	NO
≤ 600 ft	N ________ ft, S ________ ft, E ________ ft, W ________ft	☐	☐

SR#

Traffic Signal Warrants Worksheet

DATE 12/22/22 PREPARER GTC REVIEWER ___________

MAJOR ST: La Tijera Boulevard

MINOR ST: Bleriot Avenue

Critical Approach Speed MPH ___ *or* Speed Limit MPH 35

Speed limit or critical speed on major street traffic > 40 mph............................ ☐
or
In built up area of isolated community of < 10,000 population.......................... ☐
} RURAL (R) ☒ URBAN (U)

Eight-Hour Vehicular Volume — WARRANT 1

N/A ☒
SATISFIED YES ☐
NO ☐

✯ The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal ✯

a. Condition A or Condition B or combination of 80% of both parts A and B must be satisfied.

b. A 6-hour Manual Count may be used in a determination that this warrant is not met. However, supplement manual counts should be taken during separate hours for a determination that this warrant is met.

c. In applying each condition, the major street and minor street volumes shall be for the same hours. On the minor street, the higher volume does not need to be the same approach during each of the hours.

d. The study should consider the effects of the right-turn vehicles from the minor-street approaches. Engineering judgment should be used to determine what, if any, portion of the right-turn traffic is subtracted from the minor-street traffic count.

e. Figure 4C-103(CA) should be used for new intersections, significantly reconstructed intersections, where near-term land development will result in increased volumes, or where it is not reasonable to use current traffic volumes.

f. Engineering judgment should also be used in applying various traffic signal warrants to cases where approaches consist of one lane plus one left-turn or right-turn lane. This site-specific traffic characteristics should dictate whether an approach is considered as one lane or two lanes. For example, for an approach with one lane for through and right-turning traffic plus a left-turn lane, if engineering judgment indicates that it should be considered a one-lane approach because the traffic using the left turn lane is minor, the total traffic volume approaching the intersection should be applied against the signal warrants as a one-lane approach. The approach should be considered two lanes if approximately half of the traffic on the approach turns left and the left-turn lane is of sufficient length to accommodate all left-turn vehicles. Similar engineering judgment and rationale should be applied to a street approach with one through/left-turn lane plus a right-turn lane. In this case, the degree of conflict of minor-street right-turn traffic with traffic on the major street should be considered. Thus, right-turn traffic should not be included in the minor-street volume if the movement enters the major street with minimal conflict. The approach should be evaluated as a one -lane approach with only the traffic volume in the through/left-turn lane considered.

g. At an intersection with a high volume of left-turn traffic from the major street, the signal warrant analysis may be performed in a manner that considers the higher volume of the major-street left-turn volumes plus the higher volume minor-street approach as the “minor street” volume and both approaches of the major street minus the higher of the major-street left-turn volume as “major street” volume. In these cases, engineering judgment should be used to determine if left-turn phasing is necessary to accommodate the high volume of left-turn traffic.

Eight-Hour Vehicular Volume WARRANT 1 (continued)

✯ The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal ✯

Condition A

Minimum Vehicle Volume

SATISFIED	YES	NO
100%	☐	☐
80%	☐	☐

RIGHT TURN REDUCTION APPLICATION *MINOR STREET* ☐
(If Yes, fill in percentage) ☐ ____%

MINIMUM REQUIREMENTS (80% SHOW IN BRACKETS)	0	R	0	R	Hours							
APPROACH LANES	1 ✓		2 or More ✓		16:45							
Both Approach Major Street	500 (400)	350 (280)	600 ✓ (480)	420 (336)	1,594							
Highest Approach Minor Street	150 ✓ (120)	105 (84)	200 (160)	140 (112)	53							

Condition B

Interruption of Continuous Traffic

SATISFIED	YES	NO
100%	☐	☐
80%	☐	☐

RIGHT TURN REDUCTION APPLICATION *MINOR STREET* ☐
(If Yes, fill in percentage) ☐ ____%

MINIMUM REQUIREMENTS (80% SHOW IN BRACKETS)	0	R	0	R	Hours							
APPROACH LANES	1 ✓		2 or More ✓		16:45							
Both Approach Major Street	750 (600)	525 (420)	900 ✓ (720)	630 (504)	1,594							
Highest Approach Minor Street	75 ✓ (60)	53 (42)	100 (80)	70 (56)	53							

COMBINATION OF A & B

SATISFIED	YES	NO
	☐	☐

REQUIREMENT	CONDITION	✓	FULFILLED YES	FULFILLED NO
TWO CONDITIONS SATISFIED 80%	A. MINIMUM VEHICULAR VOLUME AND B. INTERRUPTION OF CONTINUOUS TRAFFIC		☐	☐
AND AN ADEQUATE TRIAL OF OTHER ALTERNATIVES THAT COULD CAUSE LESS DELAY AND INCOVENIENCE TO TRAFFIC HAS FAILED TO SOLVE THE TRAFFIC PROBLEMS			☐	☐

Eight-Hour Vehicular Volume WARRANT 1 *(continued)*

✯ The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal ✯

Projected Volumes

	N/A ☒	
SATISFIED	YES	NO
	☐	☐

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet (Average Traffic Estimate Form)
Based on Estimated Average Daily Traffic - see *Note**

URBAN ☐	RURAL ☐	Minimum Requirements Estimated Average Daily Traffic			
CONDITION A - Minimum Vehicular Volume Satisfied ☐	Not Satisfied ☐	Vehicles Per Day On Major Street (Total of Both Approaches)		Vehicles Per Day On Higher-Volume Minor Street Approach (One Direction Only)	
Number of lanes for moving traffic on each approach		Urban	Rural	Urban	Rural
Major Street	Minor Street				
1………………….…….	1……………………….	8,000	5,600	2,400	1,680
2 or More……………..	1……………………….	9,600	6,720	2,400	1,680
2 or More……………..	2 or More……………..	9,600	6,720	3,200	2,240
1………………….…….	2 or More……………..	8,000	5,600	3,200	2,240
CONDITION B - Interruption of Continuous Traffic Satisfied ☐	Not Satisfied ☐	Vehicles Per Day On Major Street (Total of Both Approaches)		Vehicles Per Day On Higher-Volume Minor Street Approach (One Direction Only)	
Number of lanes for moving traffic on each approach		Urban	Rural	Urban	Rural
Minor Street	Minor Street				
1………………….…….	1……………………….	12,000	8,400	1,200	850
2 or More……………..	1……………………….	14,400	10,080	1,200	850
2 or More……………..	2 or More……………..	14,400	10,080	1,600	1,120
1………………….…….	2 or More……………..	12,000	8,400	1,600	1,120
Combination of CONDITIONS A + B Satisfied ☐ Not Satisfied ☐ No one condition satisfied, but following conditions fulfilled 80% or more…… ______ A ______ B		2 CONDITIONS 80%		2 CONDITIONS 80%	

*** Note:** *To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes*

Four-Hour Vehicular Volume

WARRANT 2

N/A ☒

SATISFIED YES ☐

NO ☐

✯ The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal ✯

a. Record hourly vehicle volumes for the highest four hours of an average day.

b. In applying each condition, the major street and minor street volumes shall be for the same hours. On the minor street, the higher volume does not need to be the same approach during each of the hours.

c. The study should consider the effects of the right-turn vehicles from the minor-street approaches. Engineering judgment should be used to determine what, if any, portion of the right-turn traffic is subtracted from the minor-street traffic count.

d. Engineering judgment should also be used in applying various traffic signal warrants to cases where approaches consist of one lane plus one left-turn or right-turn lane. This site-specific traffic characteristics should dictate whether an approach is considered as one lane or two lanes. For example, for an approach with one lane for through and right-turning traffic plus a left-turn lane, if engineering judgment indicates that it should be considered a one-lane approach because the traffic using the left turn lane is minor, the total traffic volume approaching the intersection should be applied against the signal warrants as a one-lane approach. The approach should be considered two lanes if approximately half of the traffic on the approach turns left and the left-turn lane is of sufficient length to accommodate all left-turn vehicles. Similar engineering judgment and rationale should be applied to a street approach with one through/left-turn lane plus a right-turn lane. In this case, the degree of conflict of minor-street right-turn traffic with traffic on the major street should be considered. Thus, right-turn traffic should not be included in the minor-street volume if the movement enters the major street with minimal conflict. The approach should be evaluated as a one-lane approach with only the traffic volume in the through/left-turn lane considered.

e. At an intersection with a high volume of left-turn traffic from the major street, the signal warrant analysis may be performed in a manner that considers the higher volume of the major-street left-turn volumes plus the higher volume minor-street approach as the “minor street” volume and both approaches of the major street minus the higher of the major-street left-turn volume as “major street” volume. In these cases, engineering judgment should be used to determine if left-turn phasing is necessary to accommodate the high volume of left -turn traffic.

APPROACH LANES	One	2 or More	Hours			
Both Approaches - Major Street		✓				
Higher Approach - Minor Street	✓					

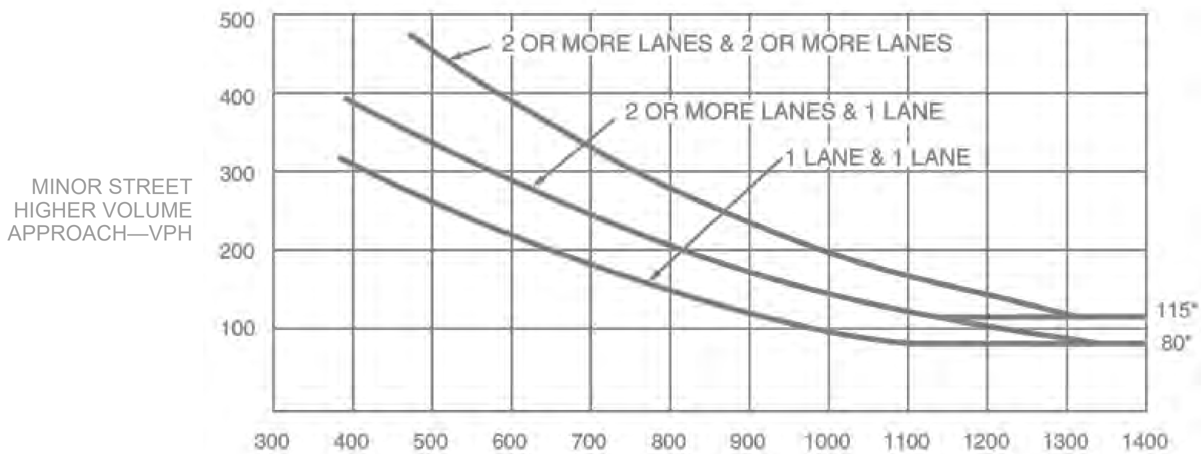
	YES	NO
RIGHT TURN REDUCTION APPLICATION *MINOR STREET*	☐	☐
(If Yes, fill in percentage)	______%	

	YES	NO
* All plotted points fall above the applicable curve in Figure 4C-1. (URBAN AREAS) OR, All plotted points fall above the applicable curve in Figure 4C-2. (RURAL AREAS)	☐	☐

Four-Hour Vehicular Volume WARRANT 2 (continued)

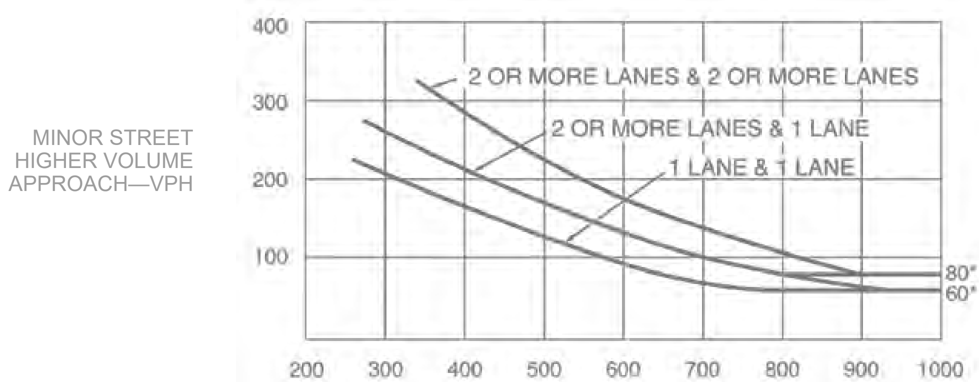
✭ The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal ✭

URBAN
Figure 4C-1. Warrant 2, Four-Hour Vehicular Volume



**Note: 115 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 80 vph applies as the lower threshold volume for a minor-street approach with one lane.*

RURAL
Figure 4C-2. Warrant 2, Four-Hour Vehicular Volume (70% Factor)



**Note: 80 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 60 vph applies as the lower threshold volume for a minor-street approach with one lane.*

Peak Hour WARRANT 3

	N/A	☐
SATISFIED	YES	☐
	NO	☒

✯ The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal ✯

a. Part A or Part B must be satisfied.

b. This signal warrant shall be applied only in unusual cases, such as office complexes, manufacturing plants, industrial complexes, or high-occupancy vehicle facilities that attract or discharge large numbers of vehicles over a short time.

c. In applying each condition, the major street and minor street volumes shall be for the same hours.

d. The study should consider the effects of the right-turn vehicles from the minor-street approaches. Engineering judgment should be used to determine what, if any, portion of the right-turn traffic is subtracted from the minor-street traffic count.

e. Estimated Peak Hour Volumes may be used for new intersections, significantly reconstructed intersections, or where near-term land development will result in increased volumes.

f. Engineering judgment should also be used in applying various traffic signal warrants to cases where approaches consist of one lane plus one left-turn or right-turn lane. This site-specific traffic characteristics should dictate whether an approach is considered as one lane or two lanes. For example, for an approach with one lane for through and right-turning traffic plus a left-turn lane, if engineering judgment indicates that it should be considered a one-lane approach because the traffic using the left turn lane is minor, the total traffic volume approaching the intersection should be applied against the signal warrants as a one-lane approach. The approach should be considered two lanes if approximately half of the traffic on the approach turns left and the left-turn lane is of sufficient length to accommodate all left-turn vehicles. Similar engineering judgment and rationale should be applied to a street approach with one through/left-turn lane plus a right-turn lane. In this case, the degree of conflict of minor-street right-turn traffic with traffic on the major street should be considered. Thus, right-turn traffic should not be included in the minor-street volume if the movement enters the major street with minimal conflict. The approach should be evaluated as a one-lane approach with only the traffic volume in the through/left-turn lane considered.

g. At an intersection with a high volume of left-turn traffic from the major street, the signal warrant analysis may be performed in a manner that considers the higher volume of the major-street left-turn volumes plus the higher volume minor-street approach as the "minor street" volume and both approaches of the major street minus the higher of the major-street left-turn volume as "major street" volume. In these cases, engineering judgment should be used to determine if left-turn phasing is necessary to accommodate the high volume of left-turn traffic.

	YES		NO	
Unusual facility per Note b.	YES	☐	NO	☒

Name: 1,594

PART A

All parts 1, 2, and 3 below must be satisfied for the same one hour, for any four consecutive 15-minute periods)

SATISFIED: YES ☐ NO ☒

	YES	NO	N/A
1. The total delay experienced by traffic on one minor street approach (one direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach, or five vehicle-hours for a two-lane approach; AND	☐	☐	☒
2. The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; AND	☐	☒	☐
3. The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches.	☒	☐	☐

PART B

SATISFIED: YES ☐ NO ☒

APPROACH LANES	One	2 or More	Hour 16:45
Both Approaches - Major Street		✓	1,594
Higher Approach - Minor Street	✓		53

RIGHT TURN REDUCTION APPLICATION *MINOR STREET*: YES ☐ NO ☒

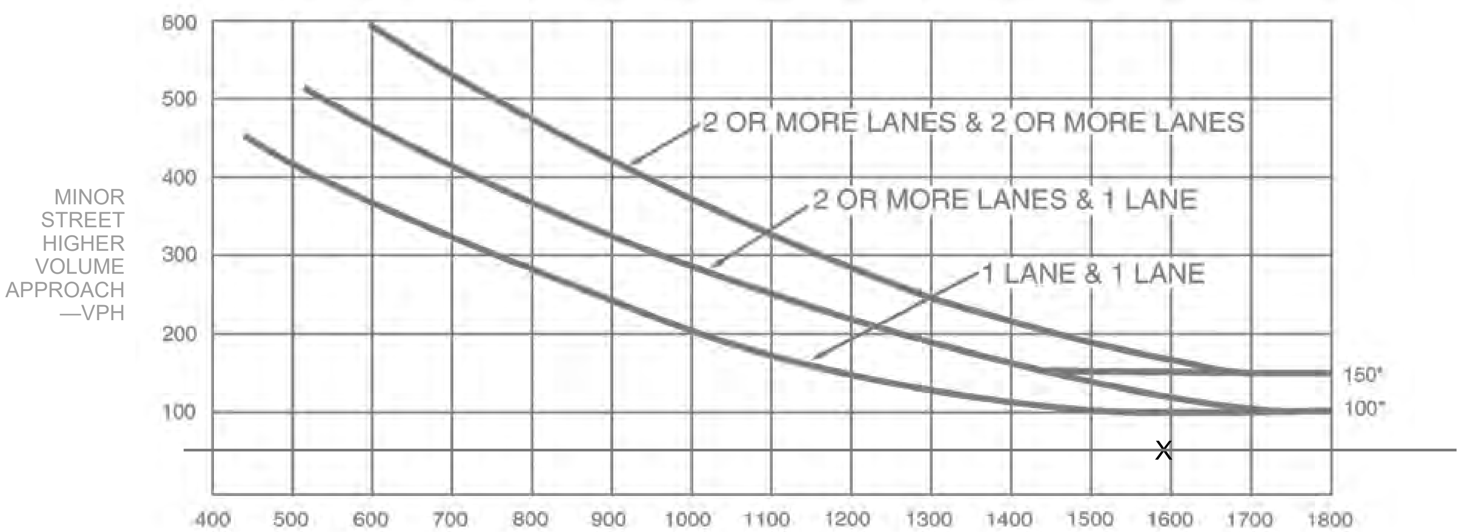
(If Yes, fill in percentage) 1,594 %

	YES	NO
The plotted point falls above the applicable curve in Figure 4C-3. (URBAN AREAS) OR, The plotted point falls above the applicable curve in Figure 4C-4. (RURAL AREAS)	☐	☒

Peak Hour WARRANT 3 (continued)

⭑ The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal ⭑

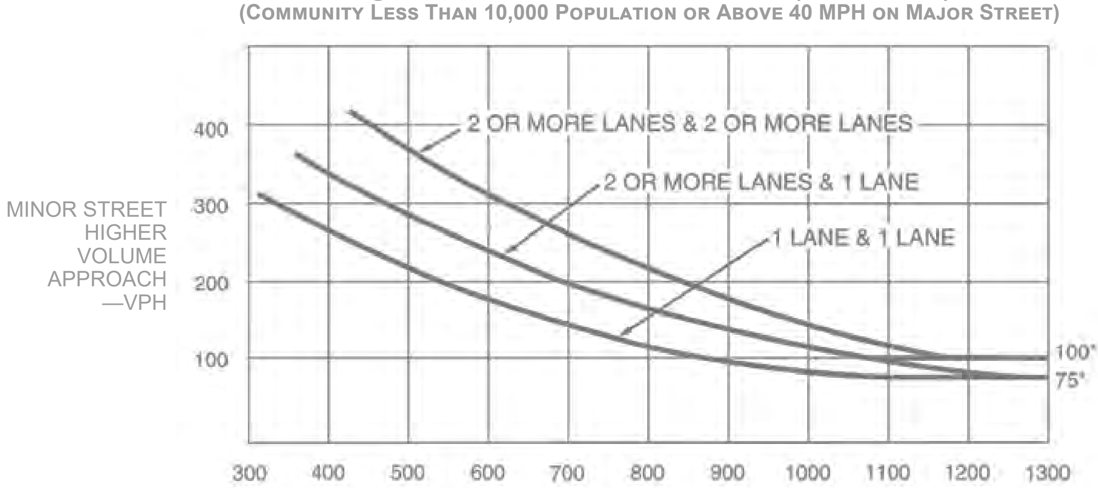
URBAN
Figure 4C-3. Warrant 3, Peak Hour



MAJOR STREET—TOTAL OF BOTH APPROACHES—VEHICLES PER HOUR (VPH)

** Note: 150 vph applies as the lower threshold volume for a minor street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor street approach with one lane.*

RURAL
Figure 4C-4. Warrant 3, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



MAJOR STREET—TOTAL OF BOTH APPROACHES—VEHICLES PER HOUR (VPH)

** Note: 100 vph applies as the lower threshold volume for a minor street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor street approach with one lane.*

Pedestrian Volume — WARRANT 4

N/A ☒
SATISFIED YES ☐ NO ☐

★ *The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal* ★

a. Parts 1 and 2 shall be satisfied.
b. The pedestrian volume criterion may be reduced by as much as 50% if the 15th percentile speed of the pedestrians is less than 3.5 feet/second.
c. Estimated pedestrian volumes may be used where nearby, near-term land use development has been approved for construction.
d. In applying each condition, the total vehicles per hour on the major street (on both approaches) and the total pedestrians per hour crossing the major street shall be for the same hours.
e. The Pedestrian Volume signal warrants shall not be applied at locations where the distance to the nearest traffic control signal or STOP sign controlling the street that pedestrians desire to cross is less than 300 feet, unless the proposed traffic control signal will not restrict the progressive movement of traffic.
f. Traffic control signal may not be needed at the study location if adjacent coordinated traffic control signals consistently provide gaps of adequate length for pedestrians to cross the street.
g. If it is considered at a non-intersection crossing, the traffic control signal should be installed at least 100 feet from side streets or driveways that are controlled by STOP or YIELD signs. If the traffic control signal is installed at a non-intersection crossing, at least one of the signal faces should be over the traveled way for each approach, parking and other sight obstructions should be prohibited for at least 100 feet in advance of and at least 20 feet beyond the crosswalk or site accommodations should be made through curb extensions or other techniques to provide adequate sight distance, and the installation should include suitable standard signs and pavement markings.
h. Bicycles may be counted as pedestrians.
i. Pedestrian Hybrid Beacons may be considered instead of a traffic signal if a device is recommended based upon pedestrian needs

PART 1 (A or B must be satisfied)

SATISFIED YES ☐ NO ☐

A. FOUR-HOUR PEDESTRIAN VOLUMES

	Hours			
Vehicles per hour on major street for 4 hours				
Pedestrians crossing major street per hour for highest 4 hours				

(FIGURE 4C-5 OR 4C-6 SATISFIED)

SATISFIED	YES	NO
100%	☐	☐
80%	☐	☐
50%	☐	☐

15% WALKING RATE ____ *fps*

B. ONE HOUR PEDESTRIAN VOLUMES

	Hour
Vehicles per hour on major street for 1 hour	
Pedestrians crossing major street per hour for highest 1 hour	*0*

(FIGURE 4C-7 or 4C-8 SATISFIED)

SATISFIED	YES	NO
100%	☐	☐
80%	☐	☐
50%	☐	☐

15% WALKING RATE ____ *fps*

PART 2

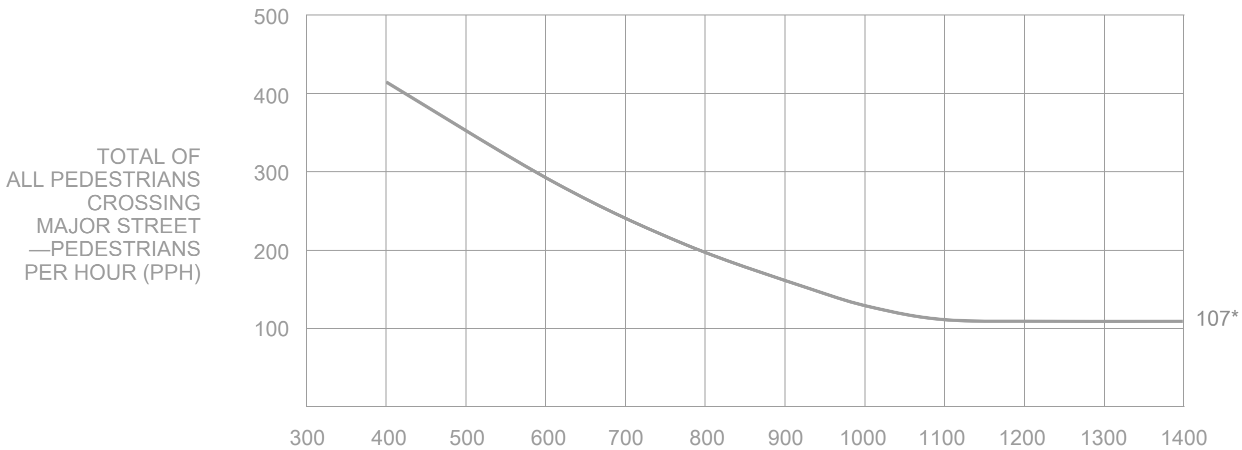
SATISFIED YES ☐ NO ☐

	YES	NO
AND, The distance to the nearest traffic signal along the major street is greater than 300 ft	☐	☐
OR, The proposed traffic signal will not restrict progressive traffic flow along the major street	☐	☐

Pedestrian Volume WARRANT 4 *(continued)*

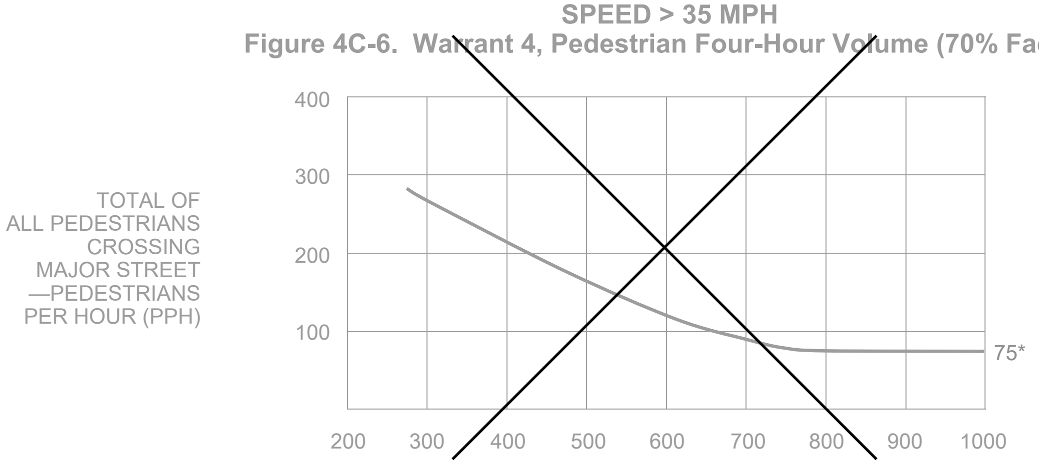
✭ The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal ✭

SPEED ≤ 35 MPH
Figure 4C-5. Warrant 4, Pedestrian Four-Hour Volume



** Note: 107 pph applies as the lower threshold volume*

SPEED > 35 MPH
Figure 4C-6. Warrant 4, Pedestrian Four-Hour Volume (70% Factor)

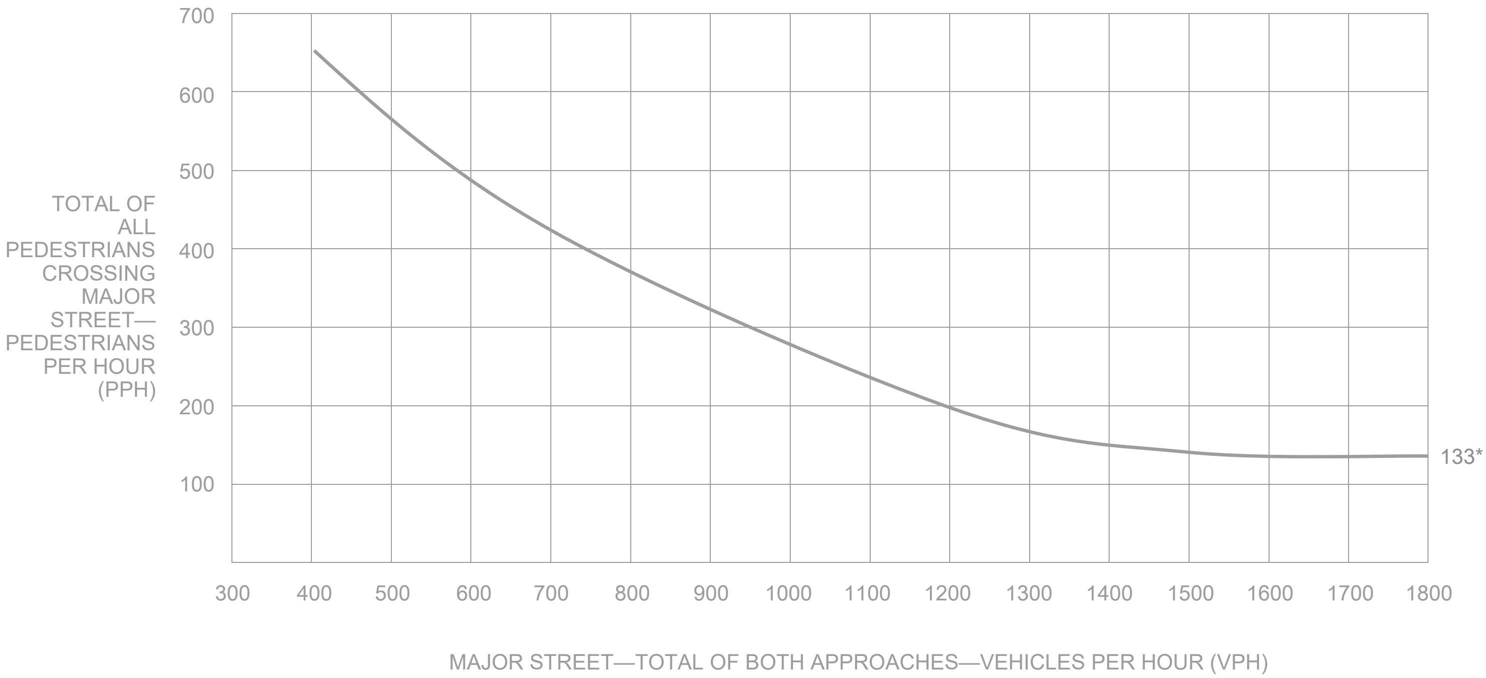


** Note: 75 pph applies as the lower threshold volume*

Pedestrian Volume WARRANT 4 *(continued)*

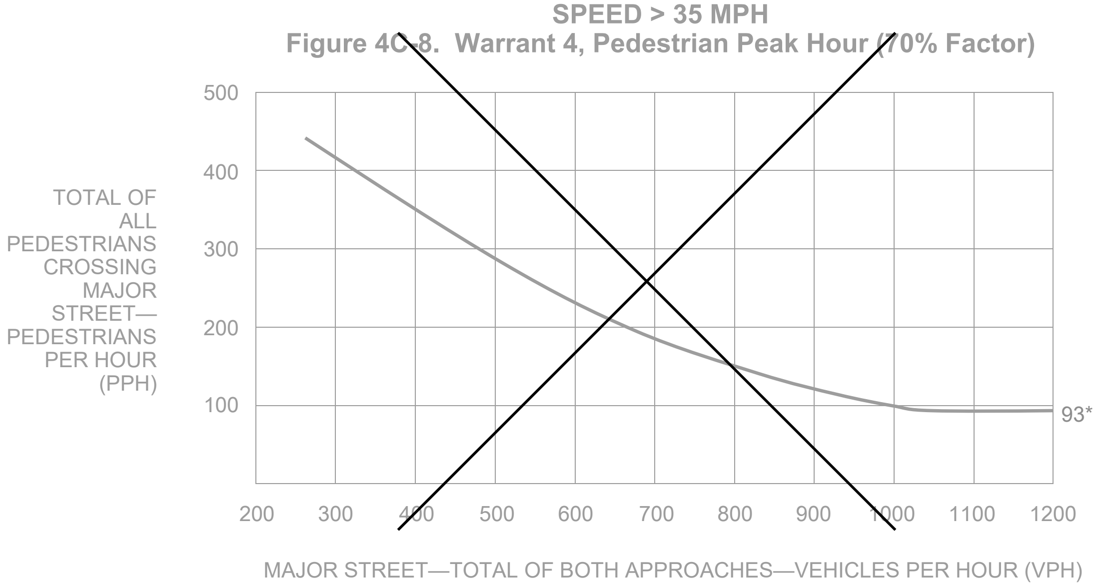
✯ The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal ✯

SPEED ≤ 35 MPH
Figure 4C-7. Warrant 4, Pedestrian Peak Hour



** Note: 133 pph applies as the lower threshold volume*

SPEED > 35 MPH
Figure 4C-8. Warrant 4, Pedestrian Peak Hour (70% Factor)



** Note: 93 pph applies as the lower threshold volume*

School Crossing — WARRANT 5

	N/A	☒
SATISFIED	YES	☐
	NO	☐

★ The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal ★

a. Part A and Part B shall be satisfied.
b. For purposes of this warrant, schoolchildren include elementary through high school students.
c. Estimated schoolchildren volumes may be used where a new school or expanded school has been approved for construction.
d. The need for a traffic control signal shall be considered when an engineering study of the frequency and adequacy of gaps in the vehicular traffic stream as related to the number and size of groups of schoolchildren at an established school crossing across the major street shows that the number of adequate gaps in the traffic stream during the period when the schoolchildren are using the crossing is less than the number of minutes in the same period and there are a minimum of 20 schoolchildren during the highest crossing hour.
e. The School Crossing signal warrant shall not be applied at locations where the distance to the nearest traffic control signal along the major street is less than 300 feet, unless the proposed traffic control signal will not restrict the progressive movement of traffic.
f. Non-intersectional schoolchildren crosswalk locations may be signalized when justified.
g. Pedestrian Hybrid Beacons may be considered instead of a traffic signal if a device is recommended based upon pedestrian needs

PART A

SATISFIED YES ☐ NO ☐

Gap / Minutes and # of Children

		Hour
Gaps vs Minutes	Minutes Children Using Crossing	
	Number of Adequate Gaps	
School Age Pedestrians Crossing Street / hr		

	YES	NO
Gaps < Minutes	☐	☐
AND Children ≥ 20/hr	☐	☐
AND, Consideration has been given to less restrictive remedial measures	☐	☐

PART B

SATISFIED YES ☐ NO ☐

	YES	NO
The distance to the nearest traffic signal along the major street is greater than 300 ft	☐	☐
OR, The proposed traffic signal will not restrict progressive movement of traffic	☐	☐

Coordinated Signal System — WARRANT 6

	N/A	☒
SATISFIED	YES	☐
	NO	☐

★ The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal ★

a. The Coordinated Signal System signal warrant should not be applied where the resultant spacing of traffic control signals would be less than 1,000 feet.
b. All Parts must be satisfied.

MINIMUM REQUIREMENTS	DISTANCE TO NEAREST SIGNAL	YES	NO
≥ 1000 ft	N ________ ft, S ________ ft, E ________ ft, W ________ft	☐	☐
On a one-way street or a street that has traffic predominantly in one direction, the adjacent traffic control signals are so far apart that they do not provide the necessary degree of vehicular platooning. **OR**, On a two-way street, adjacent traffic control signals do not provide the necessary degree of platooning and the proposed and adjacent traffic control signals will collectively provide a progressive operation.		☐	☐

Crash Experience Warrant — WARRANT 7

N/A ☒
SATISFIED YES ☐
NO ☐

✯ The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal ✯

a. All Parts must be satisfied.
b. For locations that involve other agencies, crash data from other involved jurisdictions should be obtained.

			YES	NO
Adequate trial of alternatives with satisfactory observance and enforcement has failed to reduce the crash frequency			☐	☐
REQUIREMENTS 5 OR MORE	Number of crashes reported within a 12-month period susceptible to correction by a traffic signal: *Indicate Date(s):*		☐	☐
REQUIREMENTS	CONDITIONS	✓		
ONE CONDITION SATISFIED 80%	Warrant 1, Condition A - Minimum Vehicular Volume		☐	☐
	OR, Warrant 1, Condition B - Interruption of Continuous Traffic			
	OR, Warrant 4, Pedestrian Volume Condition - Ped Vol ≥ 80% for ped volumes per Figures 4C-5 to 4C-8			

Roadway Network — WARRANT 8

N/A ☒
SATISFIED YES ☐
NO ☐

✯ The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal ✯

a. Existing traffic volumes with an ambient growth rate of 1% (or other LADOT approved ambient growth rate) may be used if projected volumes are not available.
b. All Parts must be satisfied.

MINIMUM VOLUME REQUIREMENTS	ENTERING VOLUMES - ALL APPROACHES	✓	FULLFILLED YES	FULLFILLED NO
1000 Veh / Hr	During Typical Weekday Peak Hour ________________ Veh/Hr **AND** has 5-year projected traffic volumes that meet one or more of Warrants 1,2, and 3 during an average weekday.		☐	☐
	OR During Each of Any 5 Hrs. of a Saturday or Sunday ________ Veh / Hr			

CHARACTERISTICS OF MAJOR ROUTES	MAJOR ROUTE A	MAJOR ROUTE B		YES	NO
Highway System Serving as Principal Network for Through Traffic					
Rural or Suburban Highway Outside Of, Entering, or Traversing a City					
Appears as Major Route on an Official Plan					
Any Major Route Characteristics Met, Both Streets				☐	☐

Intersection Near a Grade Crossing

WARRANT 9

N/A ☒
SATISFIED YES ☐
NO ☐

⭑ The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal ⭑

a. Both Parts A and B shall be satisfied.

b. This Warrant shall only be applied after review and approval by the LADOT Railroad Crossing and Safety Section (RCOSS), subject to CPUC General Order approval.

c. This Warrant does not apply for Pre-Signals and/or Queue-Cutter signals, as an alternative application of Pre-Signals (See 2012 CA MUTCD, Sec 8C.09). Pre-Signals shall only be applied after review and approval by RCOSS, subject to CPUC General Order approval.

	FULFILLED YES	FULFILLED NO
PART A A grade crossing exists on an approach controlled by a STOP or YIELD sign and the center of the track nearest to the intersection is within 140 feet of the stop line or yield line on the approach. Track Center Line to Limit Line ________ ft	☐	☐
PART B **There is one minor street approach lane at the track crossing** - During the highest traffic volume hour during which rail traffic uses the crossing, the plotted point falls above the applicable curve in Figure 4C-9. Major Street - Total of both approaches: ________ VPH Minor Street - Crosses the track (one direction only, approaching the intersection): ________ VPH X AF (Use Tables 4C-2, 3, & 4 below to calculate AF) = ________ VPH **OR, There are two or more minor street approach lanes at the track crossing -** During the highest traffic volume hour during which rail traffic uses the crossing, the plotted point falls above the applicable curve in Figure 4C-10. Major Street - Total of both approaches: ________ VPH Minor Street - Crosses the track (one direction only, approaching the intersection): ________ VPH X AF (Use Tables 4C-2, 3, & 4 below to calculate AF) = ________ VPH	☐	☐

The minor street approach volume may be multiplied by up to three following adjustment factors (AF) as described in Section 4C-10.

1. Number of Rail Traffic per Day ________________ Adjustment factor from Table 4C-2 _____
2. Percentage of High-Occupancy Buses on Minor Street Approach ______ Adjustment factor from Table 4C-3 _____
3. Percentage of Tractor-Trailer Trucks on Minor Street Approach _______ Adjustment factor from Table 4C-4 _____

NOTE: If no data is available or known, then use AF = 1 (no adjustment)

Table 4C-2. Warrant 9, Adjustment Factor for Daily Frequency of Rail Traffic

Rail Traffic per Day	Adjustment Factor
1	0.67
2	0.91
3 to 5	1.00
6 to 8	1.18
9 to 11	1.25
12 or more	1.33

Table 4C-3. Warrant 9, Adjustment Factor for Percentage of High-Occupancy Buses

% of High-Occupancy Buses * on Minor-Street Approach	Adjustment Factor
0 %	1.00
2 %	1.09
4 %	1.19
6 % or more	1.32

* A high-occupancy bus is defined as a bus occupied by at least 20 people

Intersection Near a Grade Crossing WARRANT 9 *(continued)*

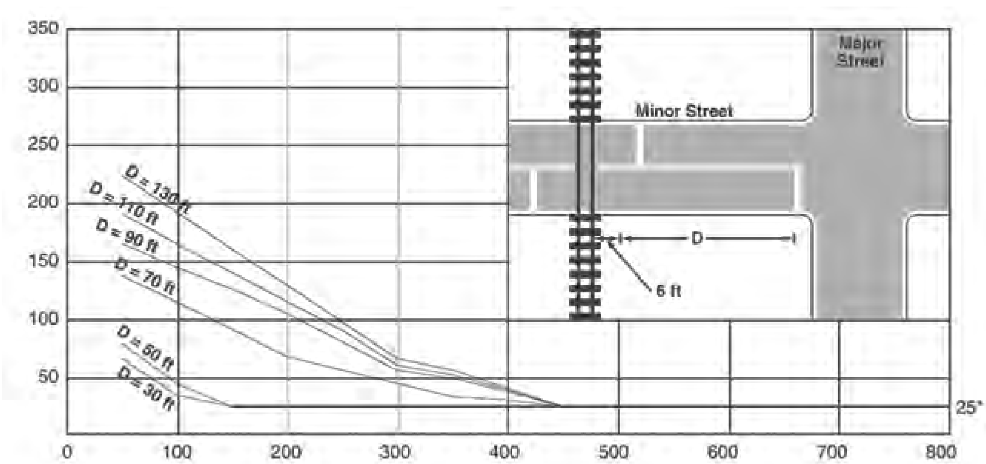
✯ The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal ✯

Table 4C-4. Warrant 9,
Adjustment Factor for Percentage of Tractor-Trailer Trucks

% of Tractor-Trailer Trucks on Minor-Street Approach	Adjustment Factor	
	D less than 70 feet	D of 70 feet or more
0% to 2.5%	0.50	0.50
2.6% to 7.5%	0.75	0.75
7.6% to 12.5%	1.00	1.00
12.6% to 17.5%	2.30	1.15
17.6% to 22.5%	2.70	1.35
22.6% to 27.5%	3.28	1.64
More than 27.5%	4.18	2.09

Figure 4C-9. Warrant 9, Intersection Near a Grade Crossing
(One Approach Lane at the Track Crossing)

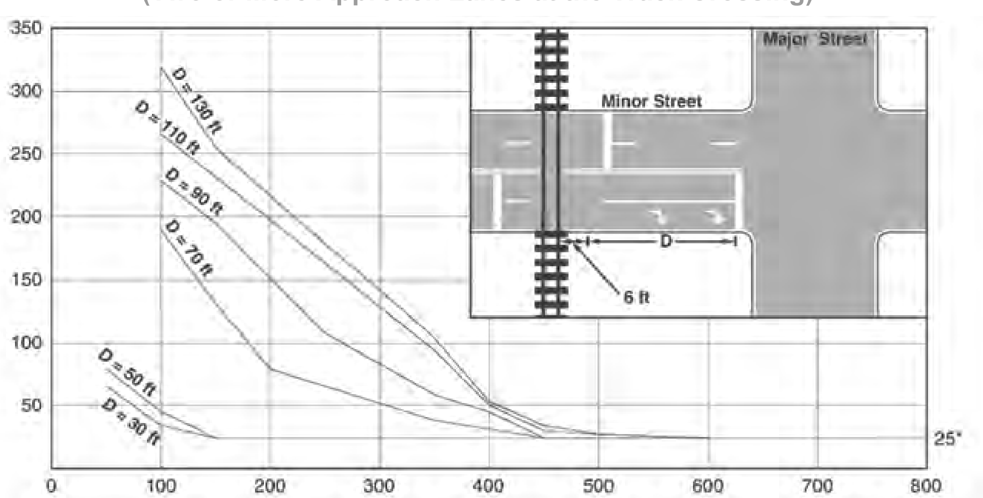
MINOR STREET, CROSSING APPROACH - EQUIVALENT VPH**



MAJOR STREET—TOTAL OF BOTH APPROACHES—VEHICLES PER HOUR (VPH)

Figure 4C-10. Warrant 9, Intersection Near a Grade Crossing
(Two or More Approach Lanes at the Track Crossing)

MINOR STREET, CROSSING APPROACH - EQUIVALENT VPH**



MAJOR STREET—TOTAL OF BOTH APPROACHES—VEHICLES PER HOUR (VPH)

** 25 vph applies as the lower threshold volume*
*** VPH after applying the adjustment factors in Tables 4C-2, 4C-3, and/or 4C-4, if appropriate*

The next two warrants are not included in the MUTCD (CA) standard warrants, but are added as optional warrants that an engineer may use with discretion to justify a traffic signal for special conditions where other traffic control devices could be considered, but where a traffic signal might be more appropriate

Bicycles WARRANT 10

N/A ☒

SATISFIED YES ☐ NO ☐

✭ The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal ✭

a. Part A and Part B shall be satisfied
b. Per MUTCD (CA) Section 4C.01.15: "For signal warrant analysis, bicyclists may be counted as either vehicles or pedestrians."
c. When performing a signal warrant analysis, bicyclists riding in the street with other vehicular traffic are usually counted as vehicles, and bicyclists who are clearly using pedestrian facilities are usually counted as pedestrians; however for this bicycle specific warrant, bicyclists are counted as bicyclists, regardless of where they are riding.
d. Bicycle signal faces should be considered for use when this warrant is satisfied, with the final determination made during the signal design process. Refer to MUTCD (CA) Section 4D.104 (CA).
e. Estimated peak hour bicycle volumes may be used for new intersections, significantly reconstructed intersections, or where new bicycle facilities or near-term land development are proposed which will result in increased bicycle volumes.

PART A and B must be satisfied	SATISFIED YES	NO
	☐	☐

PART A (*1 or 2 below must be satisfied*)	SATISFIED YES	NO
1. Location meets the Department's guidelines for a marked crosswalk with Pedestrian Hybrid Beacons, where pedestrian units are replaced with bicyclists; **AND** the minor street is designated as part of the Neighborhood Enhanced Network in the Mobility Plan 2035 Element of the City's General Plan.	☐	☐
2. The intersection features a two-way bicycle or pedestrian path or trail within the median or alongside one of the roadways.	☐	☐

PART B (*1, 2, or 3 below must be satisfied*)	SATISFIED YES	NO
1. Signal would be part of a corridor or area project to improve bicycle connectivity.*	☐	☐
2. Signal is associated with a development project.*	☐	☐
3. There have been at least 3 correctable collisions involving bicyclists in the last 1 year, 2 per year for the last 2 years, or 5 in the last 3 years of available data.	☐	☐

Specify dates of correctable bicycle collisions:

	Period Dates	Dates of Correctable Bicycle Collisions
1 year		
2 year		
3 year		

**The authority for a traffic signal justified using Part B.1 or B.2 shall be automatically rescinded three years after the date of approval if funding for construction of the traffic signal is not secured or project plans are not actively being reviewed for approval.*

Pedestrian Activated Yellow Flashing Beacons

WARRANT 11

N/A ☒
SATISFIED YES ☐
NO ☐

★ *The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal* ★

a. All Parts shall be satisfied.
b. This warrant should be applied when Pedestrian Activated Yellow Flashing Beacons are recommended within 600 feet BOTH upstream and downstream of existing traffic signals.

PART A	YES	NO
Location meets the guidelines for the installation of Pedestrian Activated Yellow Flashing Beacons as described in the LADOT Marked Crosswalk Guidelines.	☐	☐

PART B

MINIMUM REQUIREMENTS	DISTANCE TO NEAREST SIGNALS	YES	NO
≤ 600 ft	N ________ ft, S ________ ft, E ________ ft, W ________ft	☐	☐

LADOT

SR#

Traffic Signal Warrants Worksheet

DATE 12/22/22 PREPARER GTC REVIEWER ___________

MAJOR ST: La Tijera Boulevard

MINOR ST: Bleriot Avenue

Critical Approach Speed: MPH ____ *or* Speed Limit: MPH 35

Speed limit or critical speed on major street traffic > 40 mph………………………… ☐
or
In built up area of isolated community of < 10,000 population……………………… ☐
} RURAL (R) ☒ URBAN (U)

Eight-Hour Vehicular Volume — WARRANT 1

N/A ☒
SATISFIED YES ☐
NO ☐

✯ The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal ✯

a. Condition A or Condition B or combination of 80% of both parts A and B must be satisfied.

b. A 6-hour Manual Count may be used in a determination that this warrant is not met. However, supplement manual counts should be taken during separate hours for a determination that this warrant is met.

c. In applying each condition, the major street and minor street volumes shall be for the same hours. On the minor street, the higher volume does not need to be the same approach during each of the hours.

d. The study should consider the effects of the right-turn vehicles from the minor-street approaches. Engineering judgment should be used to determine what, if any, portion of the right-turn traffic is subtracted from the minor-street traffic count.

e. Figure 4C-103(CA) should be used for new intersections, significantly reconstructed intersections, where near-term land development will result in increased volumes, or where it is not reasonable to use current traffic volumes.

f. Engineering judgment should also be used in applying various traffic signal warrants to cases where approaches consist of one lane plus one left-turn or right-turn lane. This site-specific traffic characteristics should dictate whether an approach is considered as one lane or two lanes. For example, for an approach with one lane for through and right-turning traffic plus a left-turn lane, if engineering judgment indicates that it should be considered a one-lane approach because the traffic using the left turn lane is minor, the total traffic volume approaching the intersection should be applied against the signal warrants as a one-lane approach. The approach should be considered two lanes if approximately half of the traffic on the approach turns left and the left-turn lane is of sufficient length to accommodate all left-turn vehicles. Similar engineering judgment and rationale should be applied to a street approach with one through/left-turn lane plus a right-turn lane. In this case, the degree of conflict of minor-street right-turn traffic with traffic on the major street should be considered. Thus, right-turn traffic should not be included in the minor-street volume if the movement enters the major street with minimal conflict. The approach should be evaluated as a one -lane approach with only the traffic volume in the through/left-turn lane considered.

g. At an intersection with a high volume of left-turn traffic from the major street, the signal warrant analysis may be performed in a manner that considers the higher volume of the major-street left-turn volumes plus the higher volume minor-street approach as the “minor street” volume and both approaches of the major street minus the higher of the major-street left-turn volume as “major street” volume. In these cases, engineering judgment should be used to determine if left-turn phasing is necessary to accommodate the high volume of left-turn traffic.

Eight-Hour Vehicular Volume — WARRANT 1 (continued)

★ The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal ★

Condition A

Minimum Vehicle Volume

SATISFIED	YES	NO
100%	❑	❑
80%	❑	❑

RIGHT TURN REDUCTION APPLICATION *MINOR STREET* ❑
(If Yes, fill in percentage) ❑ ____%

MINIMUM REQUIREMENTS (80% SHOW IN BRACKETS)

	0	R	0	R	Hours							
APPROACH LANES	1 ✓		2 or More ✓		16:45							
Both Approach Major Street	500 (400)	350 (280)	600 ✓ (480)	420 (336)	1,682							
Highest Approach Minor Street	150 ✓ (120)	105 (84)	200 (160)	140 (112)	53							

Condition B

Interruption of Continuous Traffic

SATISFIED	YES	NO
100%	❑	❑
80%	❑	❑

RIGHT TURN REDUCTION APPLICATION *MINOR STREET* ❑
(If Yes, fill in percentage) ❑ ____%

MINIMUM REQUIREMENTS (80% SHOW IN BRACKETS)

	0	R	0	R	Hours							
APPROACH LANES	1 ✓		2 or More ✓		16:45							
Both Approach Major Street	750 (600)	525 (420)	900 ✓ (720)	630 (504)	1,682							
Highest Approach Minor Street	75 ✓ (60)	53 (42)	100 (80)	70 (56)	53							

COMBINATION OF A & B

SATISFIED	YES	NO
	❑	❑

REQUIREMENT	CONDITION	✓	FULFILLED YES	FULFILLED NO
TWO CONDITIONS SATISFIED 80%	A. MINIMUM VEHICULAR VOLUME AND B. INTERRUPTION OF CONTINUOUS TRAFFIC		❑	❑
AND AN ADEQUATE TRIAL OF OTHER ALTERNATIVES THAT COULD CAUSE LESS DELAY AND INCOVENIENCE TO TRAFFIC HAS FAILED TO SOLVE THE TRAFFIC PROBLEMS			❑	❑

Eight-Hour Vehicular Volume WARRANT 1 *(continued)*

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal

Projected Volumes

N/A ☒

SATISFIED	YES	NO
	☐	☐

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet (Average Traffic Estimate Form)
Based on Estimated Average Daily Traffic - see *Note**

URBAN ☐	RURAL ☐	Minimum Requirements Estimated Average Daily Traffic			
CONDITION A - Minimum Vehicular Volume Satisfied ☐ Not Satisfied ☐		Vehicles Per Day On Major Street (Total of Both Approaches)		Vehicles Per Day On Higher-Volume Minor Street Approach (One Direction Only)	
Number of lanes for moving traffic on each approach		Urban	Rural	Urban	Rural
Major Street	Minor Street				
1………………………	1………………………	8,000	5,600	2,400	1,680
2 or More……………..	1………………………	9,600	6,720	2,400	1,680
2 or More……………..	2 or More……………..	9,600	6,720	3,200	2,240
1………………………	2 or More……………..	8,000	5,600	3,200	2,240
CONDITION B - Interruption of Continuous Traffic Satisfied ☐ Not Satisfied ☐		Vehicles Per Day On Major Street (Total of Both Approaches)		Vehicles Per Day On Higher-Volume Minor Street Approach (One Direction Only)	
Number of lanes for moving traffic on each approach		Urban	Rural	Urban	Rural
Minor Street	Minor Street				
1………………………	1………………………	12,000	8,400	1,200	850
2 or More……………..	1………………………	14,400	10,080	1,200	850
2 or More……………..	2 or More……………..	14,400	10,080	1,600	1,120
1………………………	2 or More……………..	12,000	8,400	1,600	1,120
Combination of CONDITIONS A + B Satisfied ☐ Not Satisfied ☐ No one condition satisfied, but following conditions fulfilled 80% or more…… ______ A ______ B		2 CONDITIONS 80%		2 CONDITIONS 80%	

*** Note:** *To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes*

Four-Hour Vehicular Volume — WARRANT 2

N/A ☒
SATISFIED YES ☐
NO ☐

✯ The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal ✯

a. Record hourly vehicle volumes for the highest four hours of an average day.

b. In applying each condition, the major street and minor street volumes shall be for the same hours. On the minor street, the higher volume does not need to be the same approach during each of the hours.

c. The study should consider the effects of the right-turn vehicles from the minor-street approaches. Engineering judgment should be used to determine what, if any, portion of the right-turn traffic is subtracted from the minor-street traffic count.

d. Engineering judgment should also be used in applying various traffic signal warrants to cases where approaches consist of one lane plus one left-turn or right-turn lane. This site-specific traffic characteristics should dictate whether an approach is considered as one lane or two lanes. For example, for an approach with one lane for through and right-turning traffic plus a left-turn lane, if engineering judgment indicates that it should be considered a one-lane approach because the traffic using the left turn lane is minor, the total traffic volume approaching the intersection should be applied against the signal warrants as a one-lane approach. The approach should be considered two lanes if approximately half of the traffic on the approach turns left and the left-turn lane is of sufficient length to accommodate all left-turn vehicles. Similar engineering judgment and rationale should be applied to a street approach with one through/left-turn lane plus a right-turn lane. In this case, the degree of conflict of minor-street right-turn traffic with traffic on the major street should be considered. Thus, right-turn traffic should not be included in the minor-street volume if the movement enters the major street with minimal conflict. The approach should be evaluated as a one-lane approach with only the traffic volume in the through/left-turn lane considered.

e. At an intersection with a high volume of left-turn traffic from the major street, the signal warrant analysis may be performed in a manner that considers the higher volume of the major-street left-turn volumes plus the higher volume minor-street approach as the “minor street” volume and both approaches of the major street minus the higher of the major-street left-turn volume as “major street” volume. In these cases, engineering judgment should be used to determine if left-turn phasing is necessary to accommodate the high volume of left -turn traffic.

APPROACH LANES	One	2 or More	Hours			
Both Approaches - Major Street		✓				
Higher Approach - Minor Street	✓					

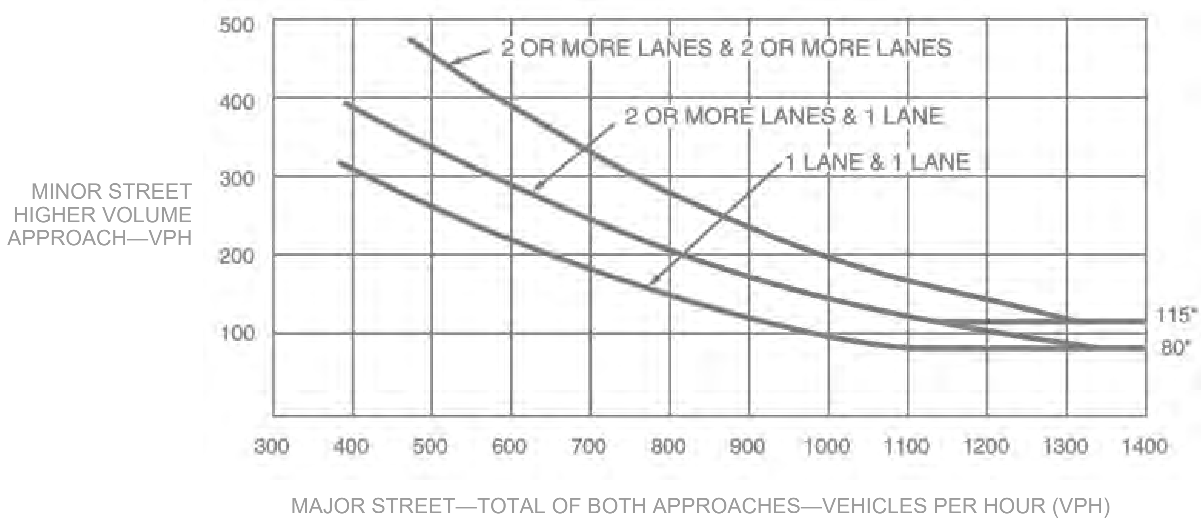
	YES	NO
RIGHT TURN REDUCTION APPLICATION *MINOR STREET*	☐	☐
(If Yes, fill in percentage)	________%	

	YES	NO
* All plotted points fall above the applicable curve in Figure 4C-1. (URBAN AREAS) <u>OR</u>, All plotted points fall above the applicable curve in Figure 4C-2. (RURAL AREAS)	☐	☐

Four-Hour Vehicular Volume WARRANT 2 *(continued)*

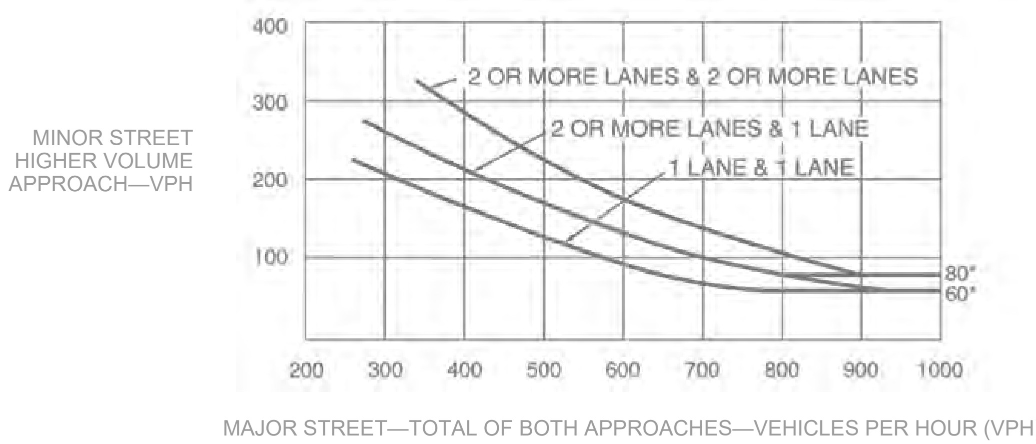
✮ The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal ✮

URBAN
Figure 4C-1. Warrant 2, Four-Hour Vehicular Volume



**Note: 115 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 80 vph applies as the lower threshold volume for a minor-street approach with one lane.*

RURAL
Figure 4C-2. Warrant 2, Four-Hour Vehicular Volume (70% Factor)



**Note: 80 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 60 vph applies as the lower threshold volume for a minor-street approach with one lane.*

Peak Hour — WARRANT 3

SATISFIED		
N/A	☐	
YES	☐	
NO	☒	

☆ *The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal* ☆

a. Part A or Part B must be satisfied.

b. This signal warrant shall be applied only in unusual cases, such as office complexes, manufacturing plants, industrial complexes, or high-occupancy vehicle facilities that attract or discharge large numbers of vehicles over a short time.

c. In applying each condition, the major street and minor street volumes shall be for the same hours.

d. The study should consider the effects of the right-turn vehicles from the minor-street approaches. Engineering judgment should be used to determine what, if any, portion of the right-turn traffic is subtracted from the minor-street traffic count.

e. Estimated Peak Hour Volumes may be used for new intersections, significantly reconstructed intersections, or where near-term land development will result in increased volumes.

f. Engineering judgment should also be used in applying various traffic signal warrants to cases where approaches consist of one lane plus one left-turn or right-turn lane. This site-specific traffic characteristics should dictate whether an approach is considered as one lane or two lanes. For example, for an approach with one lane for through and right-turning traffic plus a left-turn lane, if engineering judgment indicates that it should be considered a one-lane approach because the traffic using the left turn lane is minor, the total traffic volume approaching the intersection should be applied against the signal warrants as a one-lane approach. The approach should be considered two lanes if approximately half of the traffic on the approach turns left and the left-turn lane is of sufficient length to accommodate all left-turn vehicles. Similar engineering judgment and rationale should be applied to a street approach with one through/left-turn lane plus a right-turn lane. In this case, the degree of conflict of minor-street right-turn traffic with traffic on the major street should be considered. Thus, right-turn traffic should not be included in the minor-street volume if the movement enters the major street with minimal conflict. The approach should be evaluated as a one-lane approach with only the traffic volume in the through/left-turn lane considered.

g. At an intersection with a high volume of left-turn traffic from the major street, the signal warrant analysis may be performed in a manner that considers the higher volume of the major-street left-turn volumes plus the higher volume minor-street approach as the "minor street" volume and both approaches of the major street minus the higher of the major-street left-turn volume as "major street" volume. In these cases, engineering judgment should be used to determine if left-turn phasing is necessary to accommodate the high volume of left-turn traffic.

	YES	NO
Unusual facility per Note b.	☐	☒

Name: 1,682

PART A

All parts 1, 2, and 3 below must be satisfied for the same one hour, for any four consecutive 15-minute periods)

SATISFIED: YES ☐ NO ☒

	YES	NO	N/A
1. The total delay experienced by traffic on one minor street approach (one direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach, or five vehicle-hours for a two-lane approach; AND	☐	☐	☒
2. The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; AND	☐	☒	☐
3. The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches.	☒	☐	☐

PART B

SATISFIED: YES ☐ NO ☒

APPROACH LANES	One	2 or More	Hour 16:45
Both Approaches - Major Street		✓	1,682
Higher Approach - Minor Street	✓		53

RIGHT TURN REDUCTION APPLICATION *MINOR STREET*: YES ☐ NO ☒

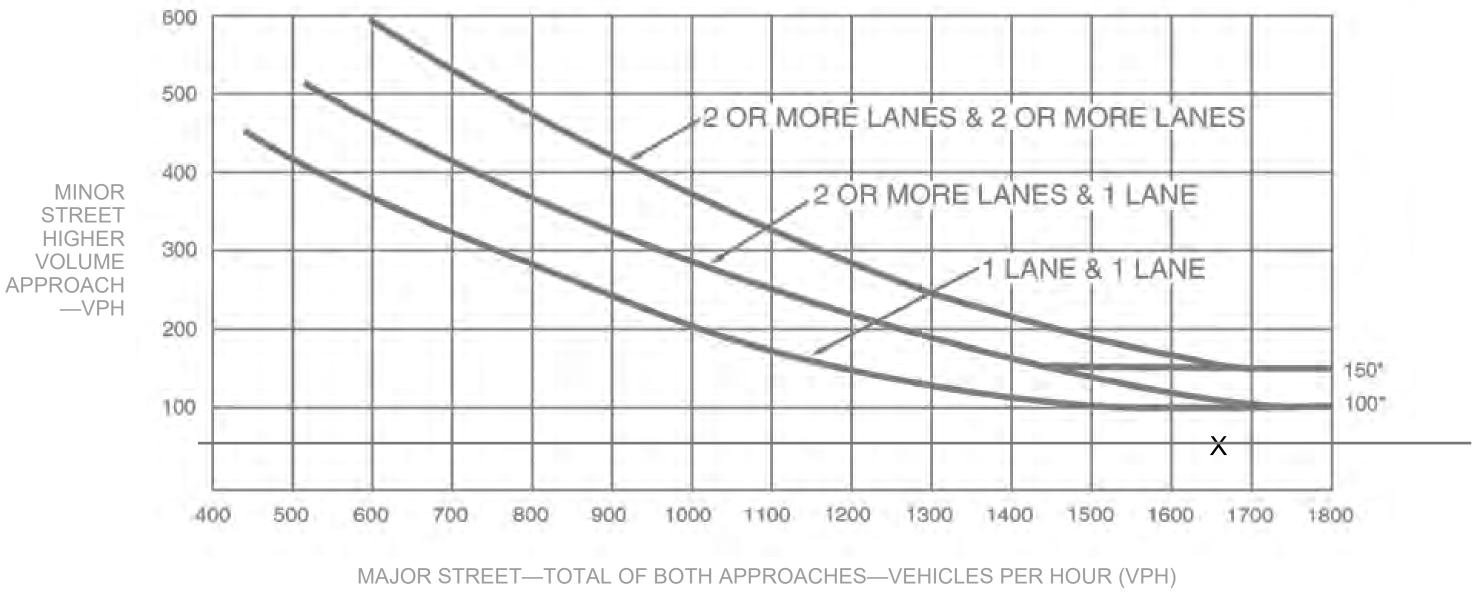
(If Yes, fill in percentage) 1,682 %

	YES	NO
The plotted point falls above the applicable curve in ~~Figure 4C-3. (URBAN AREAS)~~ **OR**, The plotted point falls above the applicable curve in Figure 4C-4. (RURAL AREAS)	☐	☒

Peak Hour WARRANT 3 (continued)

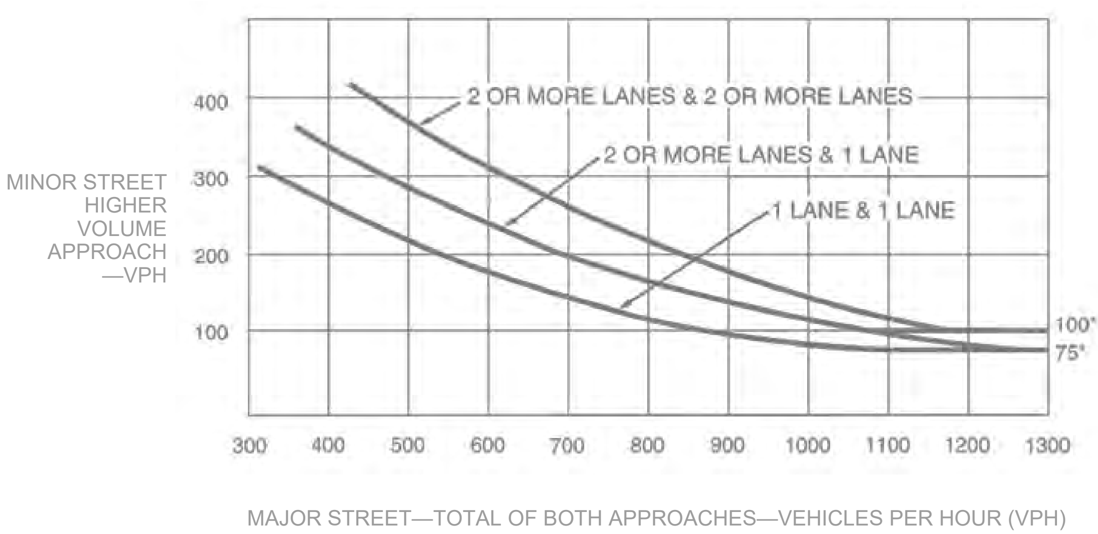
✯ The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal ✯

URBAN
Figure 4C-3. Warrant 3, Peak Hour



** Note: 150 vph applies as the lower threshold volume for a minor street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor street approach with one lane.*

RURAL
Figure 4C-4. Warrant 3, Peak Hour (70% Factor)
(Community Less Than 10,000 Population or Above 40 MPH on Major Street)



** Note: 100 vph applies as the lower threshold volume for a minor street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor street approach with one lane.*

Pedestrian Volume — WARRANT 4

N/A ☒
SATISFIED YES ☐
NO ☐

✯ The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal ✯

a. Parts 1 and 2 shall be satisfied.
b. The pedestrian volume criterion may be reduced by as much as 50% if the 15th percentile speed of the pedestrians is less than 3.5 feet/second.
c. Estimated pedestrian volumes may be used where nearby, near-term land use development has been approved for construction.
d. In applying each condition, the total vehicles per hour on the major street (on both approaches) and the total pedestrians per hour crossing the major street shall be for the same hours.
e. The Pedestrian Volume signal warrants shall not be applied at locations where the distance to the nearest traffic control signal or STOP sign controlling the street that pedestrians desire to cross is less than 300 feet, unless the proposed traffic control signal will not restrict the progressive movement of traffic.
f. Traffic control signal may not be needed at the study location if adjacent coordinated traffic control signals consistently provide gaps of adequate length for pedestrians to cross the street.
g. If it is considered at a non-intersection crossing, the traffic control signal should be installed at least 100 feet from side streets or driveways that are controlled by STOP or YIELD signs. If the traffic control signal is installed at a non-intersection crossing, at least one of the signal faces should be over the traveled way for each approach, parking and other sight obstructions should be prohibited for at least 100 feet in advance of and at least 20 feet beyond the crosswalk or site accommodations should be made through curb extensions or other techniques to provide adequate sight distance, and the installation should include suitable standard signs and pavement markings.
h. Bicycles may be counted as pedestrians.
i. Pedestrian Hybrid Beacons may be considered instead of a traffic signal if a device is recommended based upon pedestrian needs

PART 1 (A or B must be satisfied)

SATISFIED	YES	NO
	☐	☐

A. FOUR-HOUR PEDESTRIAN VOLUMES

	Hours			
Vehicles per hour on major street for 4 hours				
Pedestrians crossing major street per hour for highest 4 hours				

(FIGURE 4C-5 OR 4C-6 SATISFIED)

SATISFIED	YES	NO
100%	☐	☐
80%	☐	☐
50%	☐	☐

15% WALKING RATE ______ *fps*

B. ONE HOUR PEDESTRIAN VOLUMES

	Hour
Vehicles per hour on major street for 1 hour	
Pedestrians crossing major street per hour for highest 1 hour	0

(FIGURE 4C-7 or 4C-8 SATISFIED)

SATISFIED	YES	NO
100%	☐	☐
80%	☐	☐
50%	☐	☐

15% WALKING RATE ______ *fps*

PART 2

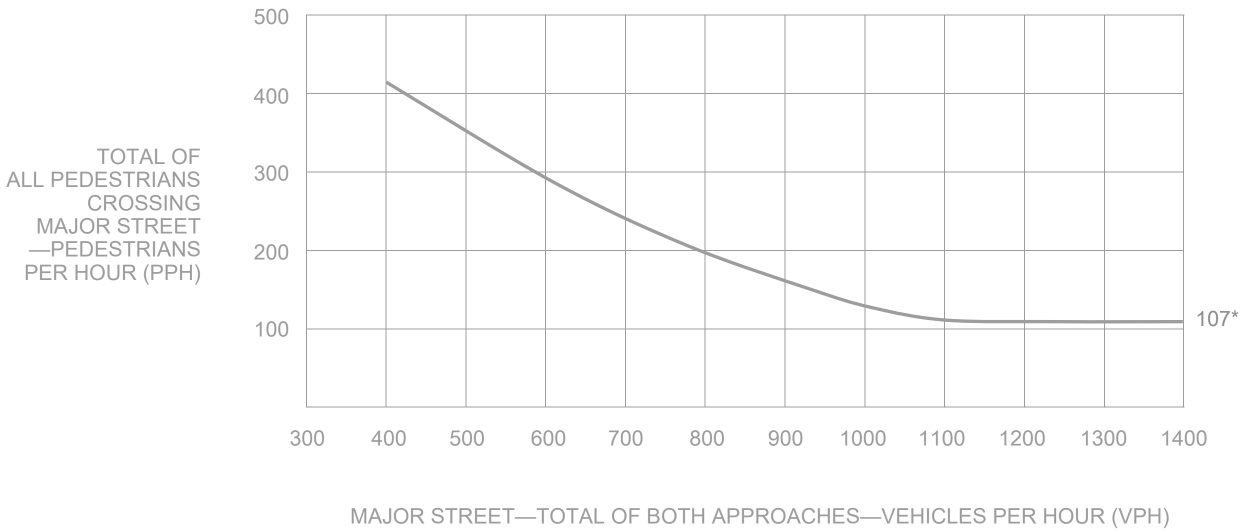
SATISFIED	YES	NO
	☐	☐

	YES	NO
AND, The distance to the nearest traffic signal along the major street is greater than 300 ft	☐	☐
OR, The proposed traffic signal will not restrict progressive traffic flow along the major street	☐	☐

Pedestrian Volume WARRANT 4 (continued)

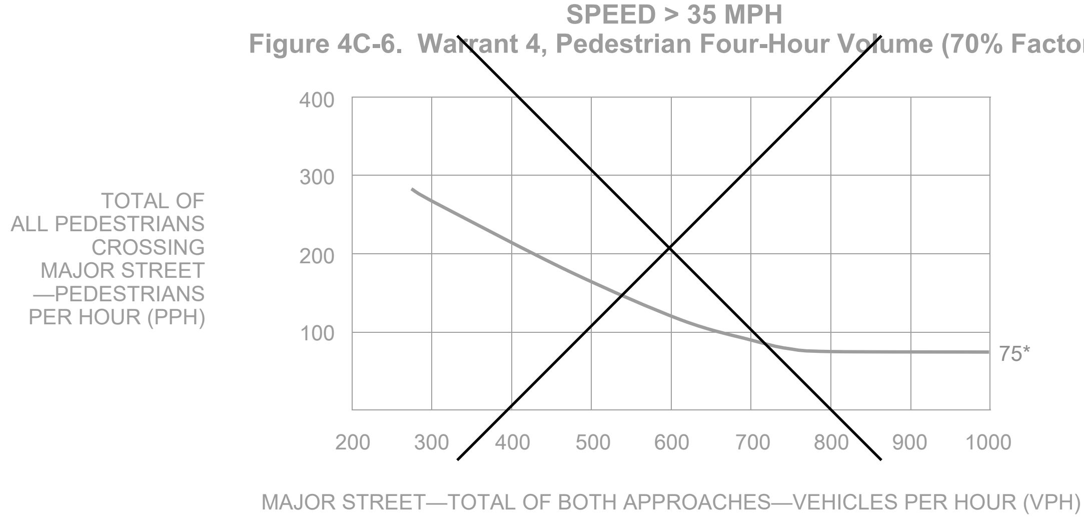
✯ The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal ✯

SPEED ≤ 35 MPH
Figure 4C-5. Warrant 4, Pedestrian Four-Hour Volume



** Note: 107 pph applies as the lower threshold volume*

SPEED > 35 MPH
Figure 4C-6. Warrant 4, Pedestrian Four-Hour Volume (70% Factor)

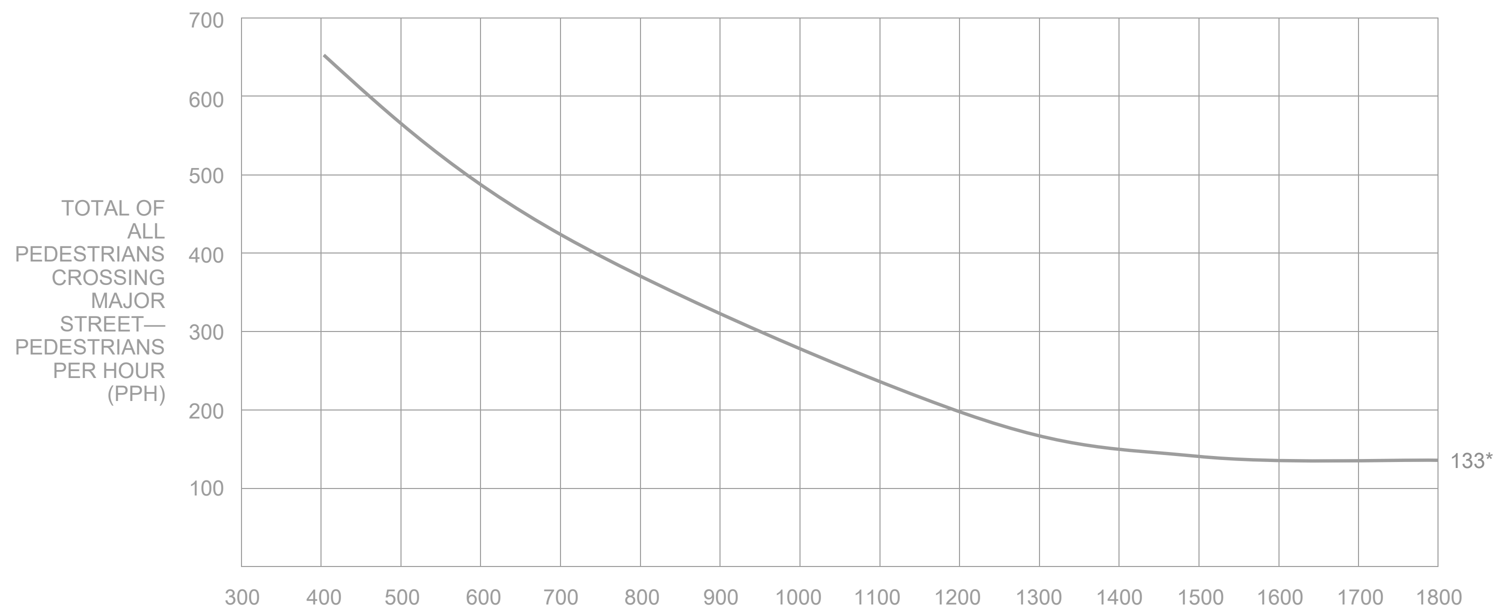


** Note: 75 pph applies as the lower threshold volume*

Pedestrian Volume WARRANT 4 *(continued)*

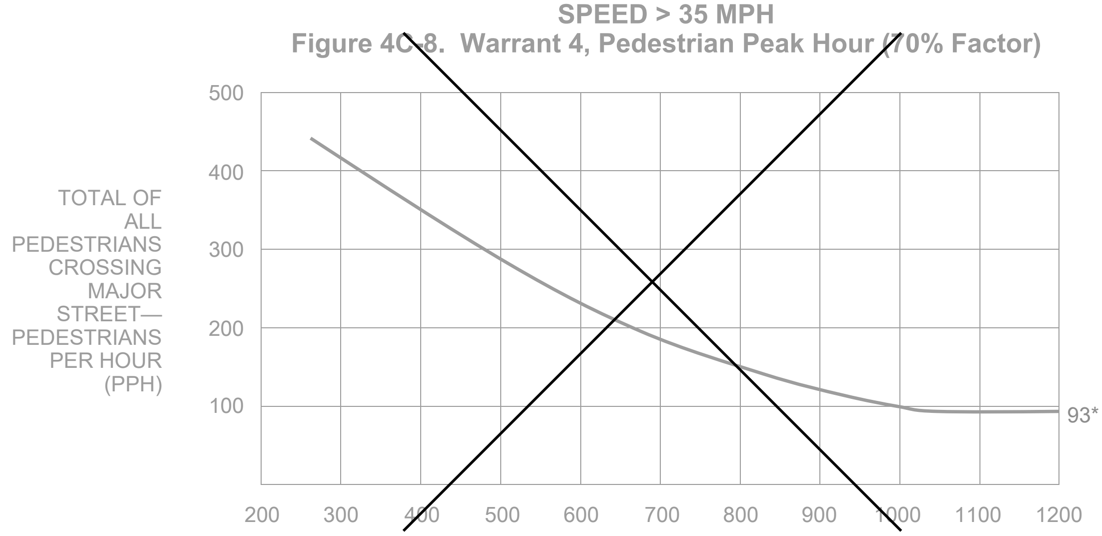
✯ The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal ✯

SPEED ≤ 35 MPH
Figure 4C-7. Warrant 4, Pedestrian Peak Hour



** Note: 133 pph applies as the lower threshold volume*

SPEED > 35 MPH
Figure 4C-8. Warrant 4, Pedestrian Peak Hour (70% Factor)



** Note: 93 pph applies as the lower threshold volume*

School Crossing — WARRANT 5

N/A ☒
SATISFIED YES ☐
NO ☐

★ *The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal* ★

a. Part A and Part B shall be satisfied.
b. For purposes of this warrant, schoolchildren include elementary through high school students.
c. Estimated schoolchildren volumes may be used where a new school or expanded school has been approved for construction.
d. The need for a traffic control signal shall be considered when an engineering study of the frequency and adequacy of gaps in the vehicular traffic stream as related to the number and size of groups of schoolchildren at an established school crossing across the major street shows that the number of adequate gaps in the traffic stream during the period when the schoolchildren are using the crossing is less than the number of minutes in the same period and there are a minimum of 20 schoolchildren during the highest crossing hour.
e. The School Crossing signal warrant shall not be applied at locations where the distance to the nearest traffic control signal along the major street is less than 300 feet, unless the proposed traffic control signal will not restrict the progressive movement of traffic.
f. Non-intersectional schoolchildren crosswalk locations may be signalized when justified.
g. Pedestrian Hybrid Beacons may be considered instead of a traffic signal if a device is recommended based upon pedestrian needs

PART A

SATISFIED YES ☐ NO ☐

Gap / Minutes and # of Children

		Hour
Gaps vs Minutes	Minutes Children Using Crossing	
	Number of Adequate Gaps	
School Age Pedestrians Crossing Street / hr		

	YES	NO
Gaps < Minutes	☐	☐
AND Children ≥ 20/hr	☐	☐
AND, Consideration has been given to less restrictive remedial measures	☐	☐

PART B

SATISFIED YES ☐ NO ☐

	YES	NO
The distance to the nearest traffic signal along the major street is greater than 300 ft	☐	☐
OR, The proposed traffic signal will not restrict progressive movement of traffic	☐	☐

Coordinated Signal System — WARRANT 6

N/A ☒
SATISFIED YES ☐
NO ☐

★ *The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal* ★

a. The Coordinated Signal System signal warrant should not be applied where the resultant spacing of traffic control signals would be less than 1,000 feet.
b. All Parts must be satisfied.

MINIMUM REQUIREMENTS	DISTANCE TO NEAREST SIGNAL	YES	NO
≥ 1000 ft	N ________ ft, S ________ ft, E ________ ft, W ________ft	☐	☐
On a one-way street or a street that has traffic predominantly in one direction, the adjacent traffic control signals are so far apart that they do not provide the necessary degree of vehicular platooning. **OR**, On a two-way street, adjacent traffic control signals do not provide the necessary degree of platooning and the proposed and adjacent traffic control signals will collectively provide a progressive operation.		☐	☐

Crash Experience Warrant — WARRANT 7

N/A ☒
SATISFIED YES ☐
NO ☐

★ The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal ★

a. All Parts must be satisfied.
b. For locations that involve other agencies, crash data from other involved jurisdictions should be obtained.

			YES	NO
Adequate trial of alternatives with satisfactory observance and enforcement has failed to reduce the crash frequency			☐	☐
REQUIREMENTS 5 OR MORE	Number of crashes reported within a 12-month period susceptible to correction by a traffic signal: *Indicate Date(s):*		☐	☐
REQUIREMENTS	CONDITIONS	✓		
ONE CONDITION SATISFIED 80%	Warrant 1, Condition A - Minimum Vehicular Volume		☐	☐
	OR, Warrant 1, Condition B - Interruption of Continuous Traffic			
	OR, Warrant 4, Pedestrian Volume Condition - Ped Vol ≥ 80% for ped volumes per Figures 4C-5 to 4C-8			

Roadway Network — WARRANT 8

N/A ☒
SATISFIED YES ☐
NO ☐

★ The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal ★

a. Existing traffic volumes with an ambient growth rate of 1% (or other LADOT approved ambient growth rate) may be used if projected volumes are not available.
b. All Parts must be satisfied.

MINIMUM VOLUME REQUIREMENTS	ENTERING VOLUMES - ALL APPROACHES	✓	FULLFILLED YES	FULLFILLED NO
1000 Veh / Hr	During Typical Weekday Peak Hour _________________ Veh/Hr **AND** has 5-year projected traffic volumes that meet one or more of Warrants 1,2, and 3 during an average weekday.		☐	☐
	OR During Each of Any 5 Hrs. of a Saturday or Sunday ________ Veh / Hr			

CHARACTERISTICS OF MAJOR ROUTES	MAJOR ROUTE A	MAJOR ROUTE B		YES	NO
Highway System Serving as Principal Network for Through Traffic					
Rural or Suburban Highway Outside Of, Entering, or Traversing a City					
Appears as Major Route on an Official Plan					
Any Major Route Characteristics Met, Both Streets				☐	☐

Intersection Near a Grade Crossing

WARRANT 9

N/A ☒

SATISFIED YES ☐

NO ☐

⋆ The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal ⋆

a. Both Parts A and B shall be satisfied.

b. This Warrant shall only be applied after review and approval by the LADOT Railroad Crossing and Safety Section (RCOSS), subject to CPUC General Order approval.

c. This Warrant does not apply for Pre-Signals and/or Queue-Cutter signals, as an alternative application of Pre-Signals (See 2012 CA MUTCD, Sec 8C.09). Pre-Signals shall only be applied after review and approval by RCOSS, subject to CPUC General Order approval.

	FULFILLED YES	FULFILLED NO
PART A A grade crossing exists on an approach controlled by a STOP or YIELD sign and the center of the track nearest to the intersection is within 140 feet of the stop line or yield line on the approach. Track Center Line to Limit Line ________ ft	☐	☐
PART B **There is one minor street approach lane at the track crossing** - During the highest traffic volume hour during which rail traffic uses the crossing, the plotted point falls above the applicable curve in Figure 4C-9. Major Street - Total of both approaches: ________ VPH Minor Street - Crosses the track (one direction only, approaching the intersection): ________ VPH X AF (Use Tables 4C-2, 3, & 4 below to calculate AF) = ________ VPH **OR, There are two or more minor street approach lanes at the track crossing -** During the highest traffic volume hour during which rail traffic uses the crossing, the plotted point falls above the applicable curve in Figure 4C-10. Major Street - Total of both approaches: ________ VPH Minor Street - Crosses the track (one direction only, approaching the intersection): ________ VPH X AF (Use Tables 4C-2, 3, & 4 below to calculate AF) = ________ VPH	☐	☐

The minor street approach volume may be multiplied by up to three following adjustment factors (AF) as described in Section 4C-10.

1. Number of Rail Traffic per Day ________________________________ Adjustment factor from Table 4C-2 _____
2. Percentage of High-Occupancy Buses on Minor Street Approach ______ Adjustment factor from Table 4C-3 _____
3. Percentage of Tractor-Trailer Trucks on Minor Street Approach _______ Adjustment factor from Table 4C-4 _____

NOTE: If no data is available or known, then use AF = 1 (no adjustment)

Table 4C-2. Warrant 9, Adjustment Factor for Daily Frequency of Rail Traffic

Rail Traffic per Day	Adjustment Factor
1	0.67
2	0.91
3 to 5	1.00
6 to 8	1.18
9 to 11	1.25
12 or more	1.33

Table 4C-3. Warrant 9, Adjustment Factor for Percentage of High-Occupancy Buses

% of High-Occupancy Buses * on Minor-Street Approach	Adjustment Factor
0 %	1.00
2 %	1.09
4 %	1.19
6 % or more	1.32

* A high-occupancy bus is defined as a bus occupied by at least 20 people

Intersection Near a Grade Crossing WARRANT 9 (continued)

✭ The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal ✭

**Table 4C-4. Warrant 9,
Adjustment Factor for Percentage of Tractor-Trailer Trucks**

% of Tractor-Trailer Trucks on Minor-Street Approach	Adjustment Factor	
	D less than 70 feet	D of 70 feet or more
0% to 2.5%	0.50	0.50
2.6% to 7.5%	0.75	0.75
7.6% to 12.5%	1.00	1.00
12.6% to 17.5%	2.30	1.15
17.6% to 22.5%	2.70	1.35
22.6% to 27.5%	3.28	1.64
More than 27.5%	4.18	2.09

**Figure 4C-9. Warrant 9, Intersection Near a Grade Crossing
(One Approach Lane at the Track Crossing)**

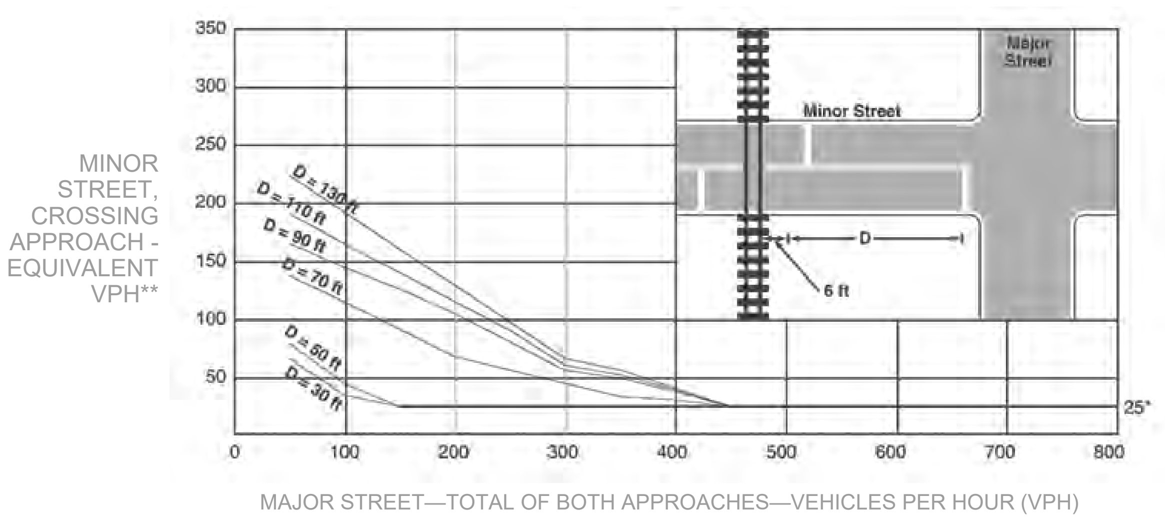
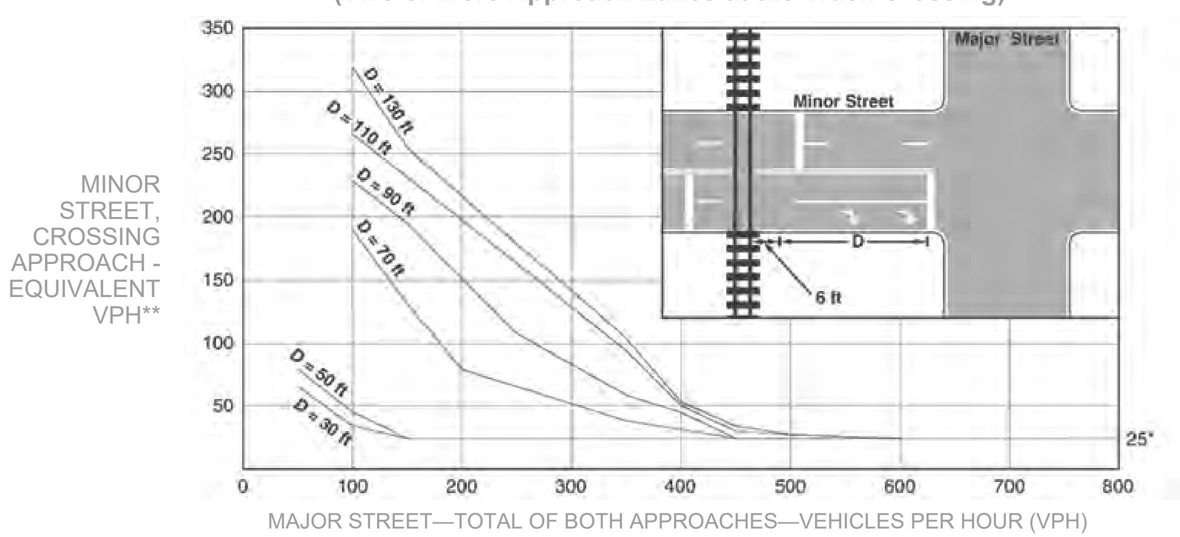


**Figure 4C-10. Warrant 9, Intersection Near a Grade Crossing
(Two or More Approach Lanes at the Track Crossing)**



** 25 vph applies as the lower threshold volume*
*** VPH after applying the adjustment factors in Tables 4C-2, 4C-3, and/or 4C-4, if appropriate*

The next two warrants are not included in the MUTCD (CA) standard warrants, but are added as optional warrants that an engineer may use with discretion to justify a traffic signal for special conditions where other traffic control devices could be considered, but where a traffic signal might be more appropriate

Bicycles WARRANT 10

N/A ☒

SATISFIED YES ☐ NO ☐

✭ The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal ✭

a. Part A and Part B shall be satisfied
b. Per MUTCD (CA) Section 4C.01.15: "For signal warrant analysis, bicyclists may be counted as either vehicles or pedestrians."
c. When performing a signal warrant analysis, bicyclists riding in the street with other vehicular traffic are usually counted as vehicles, and bicyclists who are clearly using pedestrian facilities are usually counted as pedestrians; however for this bicycle specific warrant, bicyclists are counted as bicyclists, regardless of where they are riding.
d. Bicycle signal faces should be considered for use when this warrant is satisfied, with the final determination made during the signal design process. Refer to MUTCD (CA) Section 4D.104 (CA).
e. Estimated peak hour bicycle volumes may be used for new intersections, significantly reconstructed intersections, or where new bicycle facilities or near-term land development are proposed which will result in increased bicycle volumes.

PART A and B must be satisfied

SATISFIED YES ☐ NO ☐

PART A (*1 or 2 below must be satisfied)*

	SATISFIED YES	NO
1. Location meets the Department's guidelines for a marked crosswalk with Pedestrian Hybrid Beacons, where pedestrian units are replaced with bicyclists; **AND** the minor street is designated as part of the Neighborhood Enhanced Network in the Mobility Plan 2035 Element of the City's General Plan.	☐	☐
2. The intersection features a two-way bicycle or pedestrian path or trail within the median or alongside one of the roadways.	☐	☐

PART B (*1, 2, or 3 below must be satisfied)*

	SATISFIED YES	NO
1. Signal would be part of a corridor or area project to improve bicycle connectivity.*	☐	☐
2. Signal is associated with a development project.*	☐	☐
3. There have been at least 3 correctable collisions involving bicyclists in the last 1 year, 2 per year for the last 2 years, or 5 in the last 3 years of available data.	☐	☐

Specify dates of correctable bicycle collisions:

	Period Dates	Dates of Correctable Bicycle Collisions
1 year		
2 year		
3 year		

**The authority for a traffic signal justified using Part B.1 or B.2 shall be automatically rescinded three years after the date of approval if funding for construction of the traffic signal is not secured or project plans are not actively being reviewed for approval.*

Pedestrian Activated Yellow Flashing Beacons

WARRANT 11

N/A ☒
SATISFIED YES ☐
NO ☐

⭑ *The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal* ⭑

a. All Parts shall be satisfied.
b. This warrant should be applied when Pedestrian Activated Yellow Flashing Beacons are recommended within 600 feet BOTH upstream and downstream of existing traffic signals.

PART A	YES	NO
Location meets the guidelines for the installation of Pedestrian Activated Yellow Flashing Beacons as described in the LADOT Marked Crosswalk Guidelines.	☐	☐

PART B

MINIMUM REQUIREMENTS	DISTANCE TO NEAREST SIGNALS	YES	NO
≤ 600 ft	N ________ ft, S ________ ft, E ________ ft, W ________ft	☐	☐

Appendix K.2

Los Angeles Department of Transportation Assessment Letter for the Transportation Assessment

FORM GEN. 160A (Rev. 1/82)

CITY OF LOS ANGELES

INTER-DEPARTMENTAL CORRESPONDENCE

6136 W Manchester Ave
DOT Case No. CTC22-113076 (53348)

Date: May 25, 2023

To: Brenda Kahinju, Senior Administrative Clerk
Department of City Planning

Robert Sanchez (May 25, 2023 15:47 PDT)

From: Robert Sanchez, Transportation Engineer
Department of Transportation

Subject: **TRANSPORTATION ASSESSMENT FOR THE PROPOSED MIXED USE, RESIDENTIAL/RETAIL, PROJECT LOCATED AT 6136 W MANCHESTER AVE.**

The Department of Transportation (DOT) has reviewed the transportation analysis prepared by Gibson Transportation Consulting Inc., dated July 2022, with subsequent revision dated December 2022 for the proposed project located at 6136 W Manchester Ave (Project). In compliance with 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, 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 DOT's Transportation Assessment Guidelines (TAG), as described below.

DISCUSSION AND FINDINGS

A. Project Description

The Project proposes to construct 441 residential units, including 66 affordable housing units and approximately 16,600 square feet (sf) of commercial, on a 1.78-acre parcel located in the Westchester-Playa del Rey Community Plan Area. The existing 19,650sf auto repair uses and 2,165sf of fast-food restaurant use to be completely removed to accommodate the development. The Project results in the closure of six total existing driveways - two on Manchester Ave, two on Truxton Ave and two on La Tijera Blvd. Vehicular access will be provided via two new full access driveways located on Truxton Ave and La Tijera Blvd as shown in Figure 1, **Attachment A.** Parking for the project will be provided on-site, to include 566 parking spaces on the ground, mezzanine and second floors. The Project is expected to be completed by 2027.

B. Freeway Safety Analysis

Per the Interim Guidance for Freeway Safety Analysis memorandum issued by DOT 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 included in the assessment by Gibson Transportation Consulting Inc., 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 analyses is not required.

C. <u>CEQA Screening Threshold</u>

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 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 <u>**does**</u> exceed the net 250 daily vehicle trips threshold. A copy of the VMT calculator screening page, with the corresponding net daily trips estimate, is provided as **Attachment B** to this report.

D. <u>Transportation Impacts</u>

On July 30, 2019, pursuant to SB 743 and the recent changes to Section 15064.3 of the State's CEQA Guidelines, the City of Los Angeles adopted VMT as a criteria in determining transportation impacts under CEQA. The new DOT TAG provides instructions on preparing transportation assessments for land use proposals and defines the significant impact thresholds.

The DOT VMT Calculator tool measures project impact in terms of Household VMT per Capita, and Work VMT per Employee. DOT identified distinct thresholds for significant VMT impacts for each of the seven Area Planning Commission (APC) areas in the City. For the West LA APC area, in which the Project is located, the following thresholds have been established:

- Household VMT per Capita: 7.4
- Work VMT per Employee: 11.1

The project proposes the following TDM strategies as Project Design Features to the Project to reduce Household and Work VMT:

- Reduced Parking Supply
- Bicycle Parking per LAMC

As cited in the VMT Analysis report, prepared by Gibson Transportation Consulting Inc., the household VMT per capita is 6.9, but it does not have an applicable Work VMT per employee since the retail component is less than 50,000sf and considered local serving.

Therefore, it is concluded that implementation of the Project would not result in a significant Household or Work VMT impact. A copy of the VMT Calculator summary report is provided as **Attachment C** to this report.

E. <u>Access and Circulation</u>

During the 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, DOT 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 result in adverse circulation conditions at any of the studied locations, and will not cause or extend vehicle queuing that exceeds the TAG thresholds. DOT has reviewed this analysis and determined that it adequately discloses operational concerns and that the project's physical/ street improvements (listed below) will address potential issues. A copy of the circulation analysis table that summarizes these potential conditions is shown in **Attachment D** to this report.

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PROJECT REQUIREMENTS

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
   Parking for vehicles and bicycles will be provided onsite. The applicant should check with the Department of Building and Safety on the number of Code-required parking spaces needed for this project. The Project is proposing 566 parking spaces which are distributed between ground, mezzanine and second floors. The project will also provide 193 long-term and 27 short-term bicycle parking spaces.

2. Highway Dedication and Street Widening Requirements
   In order to mitigate potential access and circulation impacts, the applicant may be required to make highway dedications and improvements. The applicant shall consult the Bureau of Engineering (BOE) for any highway dedication or street widening requirements. These requirements must be guaranteed before the issuance of any building permit through the B-permit process of the BOE. They must be constructed and completed prior to the issuance of any certificate of occupancy to the satisfaction of DOT and BOE.

3. Project Access and Circulation
   The proposed site plan is acceptable to DOT; however, review of the study does not constitute approval of the driveway dimensions and internal circulation schemes. Those require separate review and approval and should be coordinated with DOT's West LA/Coastal Development Review Section (7166 W Manchester Ave, @ 213-485-1062). In order to minimize potential building design changes, the applicant should contact DOT for driveway width and internal circulation requirements so that such traffic flow considerations are designed and incorporated early into the building and parking layout plans. All new driveways should be Case 2 driveways and any security gates should be a minimum of 20 feet from the property line. All truck loading and unloading should take place on site with no vehicles backing into the project from public streets via any of the project driveways. Applicants should consult LADOT's Driveway, Access, and Circulation Design Guidelines prior to initiating project design. The applicant should also check with The Department of City Planning regarding the project's driveway placement and design.

4. <u>Worksite Traffic Control Requirements</u>
DOT recommends that a construction work site traffic control plan be submitted to DOT'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/what-we-do/plan-review 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. DOT also recommends that all construction related truck traffic be restricted to off-peak hours to the extent feasible.

5. <u>Physical/Street Improvements</u>
To address the adverse vehicle queuing conditions that may occur as the result of the additional Project traffic, the applicant has agreed to make a financial contribution of $100,000 to LADOT to fund traffic signal system improvements within LADOT's Automated Traffic Surveillance and Control (ATSAC) program. Current potential improvements include additional signal system upgrades at the Sepulveda & Manchester intersection and the installation of closed circuit television (CCTV) camera including the hardware and components required for operation) at the La Tijera & Manchester intersection. Payment of the ATSAC contribution shall occur prior to the issuance of the first certificate of occupancy with the collected funds to be deposited into the Coastal Transportation Corridor Fund.

Should the above noted improvements be deemed infeasible at the time of reconciliation, the City may substitute an alternative improvement measure of equivalent effectiveness.

6. <u>Transportation Impact Assessment (TIA) Fee</u>
Pursuant to Section 1.D.2 of the Fee Ordinance No. 186105 as authorized by the Coastal Transportation Corridor Specific Plan (CTC SP), an applicant for a project within the Specific Plan area, except as exempted, shall pay, or guarantee payment of a TIA Fee prior to issuance of any building permit. Applicable fee rates are identified in the TIA Fee Table of the Fee Ordinance. The applicable fee for the proposed project has been determined as follows:

<u>TIA Fee Estimate</u>

Land Use:	Multi-Family = *$6,287 / Dwelling Unit*
	Affordable Housing Credit[1] = *$6,287 * 2 / Dwelling Unit*
	Retail = *$18,066 / 1,000sf*
Proposed:	*(441 DU * $6,287 / DU) = $2,772,567.00*
	*(66 DU * ($6,287 * 2)/DU) = - $ 829,884.00*
	*(16.600ksf * $18,066 / ksf) = $299,895.60*
Existing:	*<u>(21.815 ksf * $18,066.00 / ksf) = - $394,109.79</u>*
	$1,848,468.81

[1] Per the Coastal Transportation Corridor Specific plan and related Specific Plan Fee Ordinance, the project must provide a copy of the Housing Covenant & Agreement guaranteeing the affordable units to receive credit.

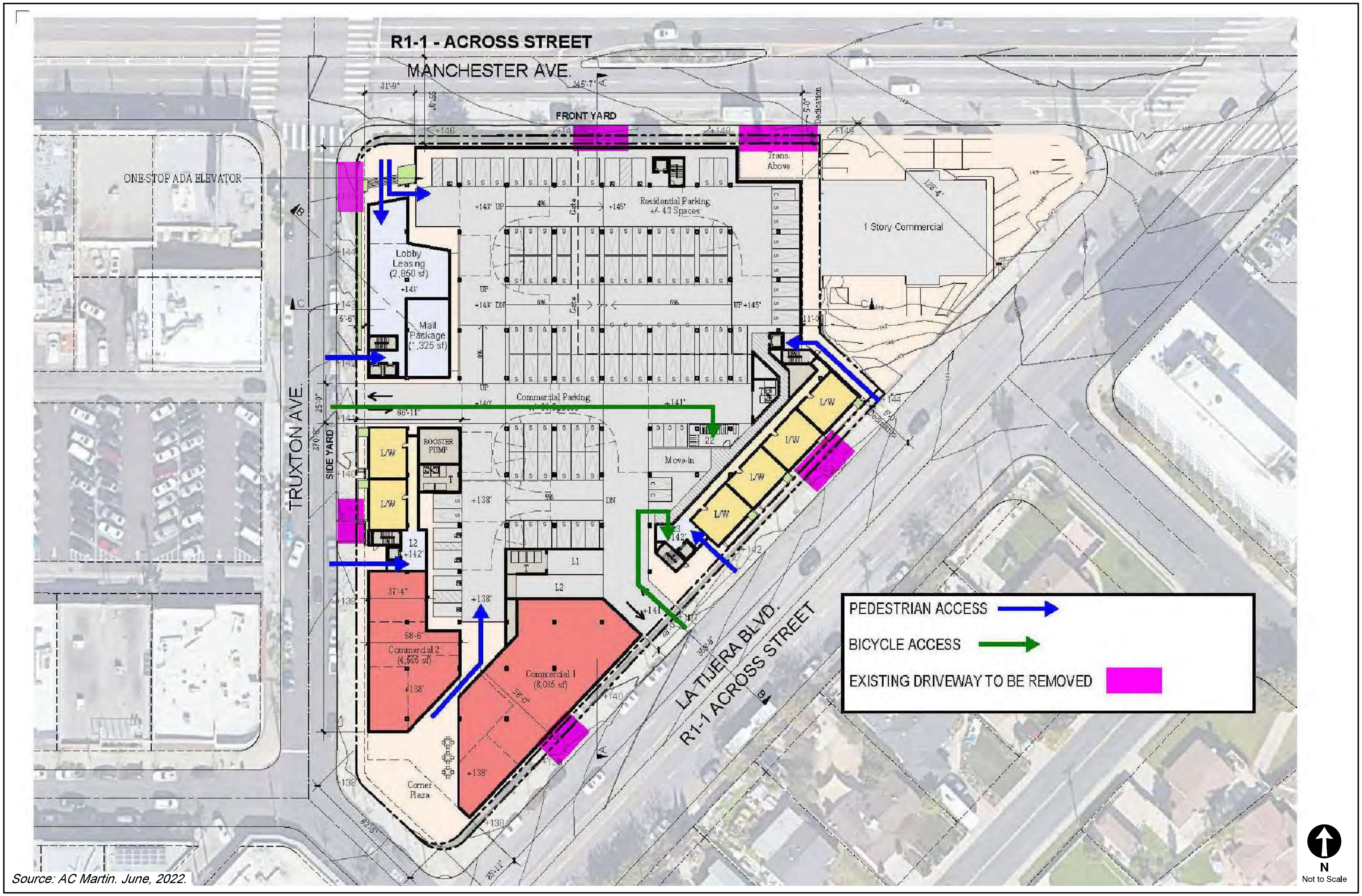
Pursuant to Section 1.C.4 of the Fee Ordinance No. 186105 as authorized by the CTC SP, the Transportation Cost Factor shall be increased (or decreased) as of January 1 of each year by the amount of the percentage increase (or decrease) in the most recently available City Building Code Index, as determined by DOT. Therefore, the actual TIA Fee may vary depending upon when payment is made to DOT. In addition, Existing Land Use credit shall be granted pursuant to Section 3.a of ordinance No. 186105.

7. 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 me or Freddy Garcia at (213) 485-1062.

Attachments

c: Jeff Khau, Gabriela Medina, Council District No. 11
Rudy Guevara, DOT
Mike Patonai, Oscar Gutierrez, BOE
Sarah Drobis, Emily Wong, Gibson Transportation Consulting Inc.



Source: AC Martin. June, 2022.

PROJECT SITE PLAN

FIGURE 1

CITY OF LOS ANGELES VMT CALCULATOR Version 1.3

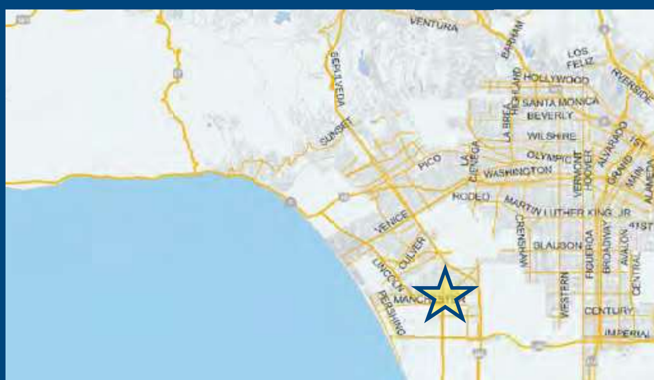
Project Screening Criteria: Is this project required to conduct a vehicle miles traveled analysis?

Project Information

Project: Proposed Mixed use

Scenario: 375 DU, 66 Aff DU & 16.6ksf commercial

Address: 6136 W MANCHESTER AVE, 90045



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
Retail | Auto Repair	19.65	ksf
Retail | Fast-Food Restaurant	2.165	ksf
Retail | Auto Repair	19.65	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	5.5	ksf
Housing | Multi-Family	375	DU
Retail | General Retail	5.5	ksf
Retail | High-Turnover Sit-Down Restaurant	11.1	ksf
Housing | Affordable Housing - Family	66	DU

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

Project Screening Summary

Existing Land Use	Proposed
1,357 Daily Vehicle Trips	3,589 Daily Vehicle Trips
10,373 Daily VMT	26,521 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	2,232 Net Daily Trips
The net increase in daily VMT ≤ 0	16,148 Net Daily VMT
The proposed project consists of only retail land uses ≤ 50,000 square feet total.	16.600 ksf

The proposed project is required to perform VMT analysis.

Measuring the Miles

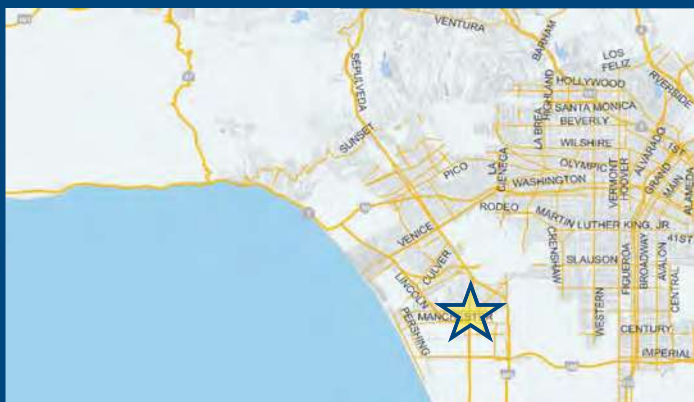
CITY OF LOS ANGELES VMT CALCULATOR Version 1.3

Project Information

Project: Proposed Mixed use

Scenario: 375 DU, 66 Aff DU & 16.6ksf commercial

Address: 6136 W MANCHESTER AVE, 90045



Proposed Project Land Use Type	Value	Unit
Housing | Multi-Family		
Retail | General Retail		
Retail | High-Turnover Sit-Down Restaurant		
Housing | Affordable Housing - Family		

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 — ☐ Proposed Prj ☐ Mitigation — Select Proposed Prj or Mitigation to include this strategy

Include Bike Parking Per LAMC — ☑ Proposed Prj ☐ Mitigation — Select Proposed Prj or Mitigation to include this strategy

Include Secure Bike Parking and Showers — ☐ Proposed Prj ☐ Mitigation — Select Proposed Prj or Mitigation to include this strategy

G Neighborhood Enhancement

Analysis Results

Proposed Project	With Mitigation
3,173 Daily Vehicle Trips	**3,173** Daily Vehicle Trips
23,451 Daily VMT	**23,451** Daily VMT
6.9 Household VMT per Capita	**6.9** Household VMT per Capita
N/A Work VMT per Employee	**N/A** Work VMT per Employee

Significant VMT Impact?

Household: No Threshold = 7.4 15% Below APC	**Household: No** Threshold = 7.4 15% Below APC
Work: N/A Threshold = 11.1 15% Below APC	**Work: N/A** Threshold = 11.1 15% Below APC

Measuring the Miles

APPENDIX E
QUEUE ANALYSIS

No.	Intersection	Peak Hour	Movement	Available Queue	Existing Conditions (Year 2022)		Existing with Project Conditions (Year 2022)			Future Conditions (Year 2027)		Future with Project Conditions (Year 2027)		
					95th Queue Length	Available Capacity	95th Queue Length	Available Capacity	Change in Available Capacity	95th Queue Length	Available Capacity	95th Queue Length	Available Capacity	Change in Available Capacity
1.	Sepulveda Bl & Manchester Ave	AM	EBL	262	118	145	118	145	0	125	137	125	137	0
			EBR	170	133	38	133	38	0	135	35	133	38	3
			WBL	240	100	140	100	140	0	138	103	138	103	0
			WBR	138	345	(207)	383	(245)	(38)	383	(245)	428	(290)	(45)
			NBL	224	103	122	103	122	0	125	99	128	97	(2)
			NBR	100	10	90	10	90	0	23	78	23	78	0
			SBL	206	355	(149)	368	(162)	(13)	380	(174)	393	(187)	(13)
			SBR	189	178	12	178	12	0	193	(4)	193	(4)	0
		PM	EBL	262	190	72	190	72	0	200	62	200	62	0
			EBR	170	128	43	128	43	0	160	10	160	10	0
			WBL	240	158	83	158	83	0	195	45	195	45	0
			WBR	138	220	(82)	233	(95)	(13)	243	(105)	255	(117)	(13)
			NBL	224	200	24	200	24	0	283	(59)	283	(59)	0
			NBR	100	40	60	40	60	0	48	53	48	53	0
			SBL	206	583	(377)	655	(449)	(73)	735	(529)	828	(622)	(93)
			SBR	189	258	(69)	258	(69)	0	273	(84)	273	(84)	0
2.	Truxton Ave & Manchester Ave	AM	EBL	158	10	148	10	148	0	10	148	10	148	0
			WBL	118	15	103	23	96	(8)	18	101	23	96	(5)
			WBR	86	15	71	15	71	0	0	86	15	71	(15)
		PM	EBL	158	13	146	13	146	0	15	143	15	143	0
			WBL	118	28	91	53	66	(25)	33	86	63	56	(30)
			WBR	86	5	81	5	81	0	5	81	5	81	0
3.	La Tijera Bl & Manchester Ave	AM	EBL	200	233	(33)	253	(53)	(20)	248	(48)	268	(68)	(20)
			EBR [a]	165	0	165	0	165	0	0	165	0	165	0
			WBL	185	200	(15)	205	(20)	(5)	293	(108)	298	(113)	(5)
			WBR [a]	122	0	122	0	122	0	0	122	0	122	0
			NBL	70	70	0	98	(28)	(28)	75	(5)	105	(35)	(30)
			NBR	77	143	(66)	155	(78)	(13)	190	(113)	203	(126)	(13)
			SBL	215	35	180	35	180	0	40	175	40	175	0
			SBR	574	255	319	258	317	(3)	268	307	270	304	(3)
		PM	EBL	200	213	(13)	218	(18)	(5)	178	23	178	23	0
			EBR [a]	165	0	165	0	165	0	0	165	0	165	0
			WBL	185	248	(63)	268	(83)	(20)	343	(158)	383	(198)	(40)
			WBR [a]	122	0	122	0	122	0	0	122	0	122	0
			NBL	70	78	(8)	93	(23)	(15)	83	(13)	100	(30)	(18)
			NBR	77	258	(181)	265	(188)	(8)	333	(256)	340	(263)	(8)
			SBL	215	60	155	60	155	0	78	138	78	138	0
			SBR	574	258	317	270	304	(13)	273	302	285	289	(13)
4.	TruxtonAve & Project Dwy [b]	AM	NBT/NBR	160	N/A		8	153	N/A	N/A		8	153	N/A
			SBT/SBL	200			3	198				3	198	
		PM	NBT/NBR	160			5	155				5	155	
			SBT/SBL	200			3	198				3	198	
5.	Sepulveda Bl & La Tijera Bl	AM	EBL	367	70	297	70	297	0	78	290	80	287	(3)
			EBR	136	80	56	80	56	0	105	31	108	29	(3)
			WBL	200	188	13	203	(3)	(15)	240	(40)	255	(55)	(15)
			NBL	160	68	93	70	90	(3)	88	73	88	73	0
			NBR	100	128	(28)	130	(30)	(3)	170	(70)	173	(73)	(3)
			SBL	230	20	210	20	210	0	43	188	43	188	0
			SBR	100	25	75	25	75	0	60	40	60	40	0
		PM	EBL	367	110	257	110	257	0	120	247	120	247	0
			EBR	136	73	64	75	61	(3)	90	46	90	46	0
			WBL	200	140	60	178	23	(38)	210	(10)	218	(18)	(7)
			NBL	160	138	23	138	23	0	175	(15)	175	(15)	0
			NBR	100	233	(133)	245	(145)	(13)	278	(178)	293	(193)	(15)
			SBL	230	58	173	58	173	0	83	148	83	148	0
			SBR	100	75	25	75	25	0	80	20	80	20	0
6.	Sepulveda Eastway & La Tijera Bl	AM	EBL	60	5	55	8	53	(3)	8	53	8	53	0
			WBL	254	33	222	33	222	0	50	204	50	204	0
			NBR	52	183	(131)	183	(131)	0	203	(151)	203	(151)	0
		PM	EBL	60	13	48	13	48	0	18	43	18	43	0
			WBL	254	53	202	55	199	(3)	98	157	100	154	(3)
			NBR	52	188	(136)	188	(136)	0	198	(146)	198	(146)	0
7.	Truxton Ave & La Tijera Bl	AM	EBL	200	3	198	3	198	0	3	198	3	198	0
			SBR/SBL	70	5	65	8	63	(3)	5	65	10	60	(5)
		PM	EBL	200	0	200	3	198	(3)	3	198	3	198	0
			SBR/SBL	70	15	55	18	53	(3)	18	53	20	50	(3)
8.	Project Dwy & La Tijera Bl [b]	AM	EBL	270	N/A		0	270	N/A	N/A		0	270	N/A
			WBT/WBR	160			15	145				20	140	
		PM	EBL	270			3	268				3	268	
			WBT/WBR	160			10	150				13	148	
9.	Bleriot Ave & La Tijera Bl	AM	EBL	33	0	33	0	33	0	0	33	0	33	0
			WBL	160	3	158	3	158	0	3	158	3	158	0
		PM	EBL	33	0	33	0	33	0	0	33	0	33	0
			WBL	160	8	153	8	153	0	10	150	10	150	0

Notes:
[a] Free right turn, therefore no queuing was assumed.
[b] Driveway is proposed as part of the Project.

Appendix K.3

Transit Priority Area Analysis

transportation consulting, inc.

MEMORANDUM

TO: Stephanie Eyestone Jones, Eyestone Environmental

FROM: Sarah Drobis, P.E.
Emily Wong, P.E.
Lauren Mullarkey-Williams

DATE: June 29, 2023

RE: Transit Priority Area Analysis for the
6136 Manchester Avenue Project
Los Angeles, California **Ref:** J1964

Gibson Transportation Consulting, Inc. was asked to conduct a Transit Priority Area (TPA) analysis for the mixed-use development at 6136 Manchester Avenue (Project Site) in the City of Los Angeles.

PROJECT LOCATION

The Project Site is located adjacent to a bus stop at Truxton Avenue & Manchester Avenue serving Los Angeles County Metropolitan Transportation Authority (Metro) Local Bus Routes 102 and 115 and approximately 1,000 feet east of bus stops at Sepulveda Boulevard & Manchester Avenue serving Metro Local Routes 102 and 115, Los Angeles Department of Transportation Commuter Express Route 574, Culver CityBus Routes 6 and Rapid 6, and Santa Monica Big Blue Bus (BBB) Routes 3 and Rapid 3. The Project Site is also located within a High-Quality Transit Area, defined as an area within 0.50 miles of a well-serviced transit stop or a transit corridor with 15-minute or less service frequency during peak commute hours, as identified in the *Connect SoCal – The 2020-2045 Regional Transportation Plan / Sustainable Communities Strategy* (Southern California Association of Governments [SCAG], Adopted September 3, 2020) (RTP/SCS) Year 2016 and Year 2045 transit networks.

ANALYSIS METHODOLOGIES

California Public Resource Code, Section 21099 defines a TPA as an area within 0.50 miles of an existing or planned major transit stop, if the planned stop is scheduled for completion within the planning horizon of an applicable regional transportation plan. Within the Study Area, SCAG's RTP/SCS serves as the applicable regional transportation plan. Therefore, any planned transit stops scheduled for completion by the Year 2045 may be assessed for major transit stop eligibility.

A major transit stop is defined in California Public Resource Code, Section 21064.3 as a stop containing a rail or bus rapid transit station, a ferry terminal served by bus or rail transit, or the intersection of two or more major bus routes with headways of 15 minutes or less during the morning and afternoon peak hours.

TPA REVIEW

Table 1 details the transit lines operating within 0.50 miles of the Project Site, the type of service (peak vs. off-peak, express vs. local), and the frequency of service. The average frequency of transit service during the peak hour was derived from the number of peak-period stops made nearest the Project Site.

As detailed in Table 1, Metro Local Route 115, which travels east-west along Manchester Avenue, and BBB Route 3, which travels north-south along Sepulveda Boulevard, operate with headways of 15 minutes or less during the morning and afternoon peak hours. Therefore, the intersection of Sepulveda Boulevard & Manchester Avenue would qualify as a major transit stop.

Because the Project Site is located within 0.50 miles of the existing major transit stop at Sepulveda Boulevard & Manchester Avenue, the Project Site is located within a TPA.

TABLE 1
EXISTING TRANSIT SERVICE

Transit Stop [a]			Direction of Travel	Corridor	Service Type	Hours of Operation	Peak Period Frequencies (minutes) [b] [c]	
Sepulveda Boulevard & Manchester Avenue	**Metro Bus Service**						**NB/EB**	**SB/WB**
	102	LAX City Bus Center - South Gate via La Tijera-Exposition Boulevard	East/West	Manchester Avenue	Local	5:00 A.M. - 12:30 A.M.	53	60
	115	Playa Del Rey - Norwalk via Manchester Ave-Firestone Boulevard	East/West	Manchester Avenue	Local	4:40 A.M. - 12:30 A.M.	12	12
	LADOT Commuter Express						**NB/EB**	**SB/WB**
	574	A.M. Southbound to LAX/El Segundo; P.M. Northbound to Encino/Granada Hills	North/South	Sepulveda Boulevard	Express	5:20 A.M. - 7:50 P.M.	84	84
	Culver City Bus						**NB/EB**	**SB/WB**
	6	Westwood/UCLA to C Line Aviation Station via Sepulveda Boulevard	North/South	Sepulveda Boulevard	Local	5:00 A.M. - 12:10 A.M.	14	16
	6R	Westwood/UCLA to C Line Aviation Station via Sepulveda Boulevard	North/South	Sepulveda Boulevard	Rapid	6:20 A.M. - 8:00 P.M.	26	30
	Santa Monica Big Blue Bus						**NB/EB**	**SB/WB**
	3	C Line Aviation Station to Downtown Santa Monica via Lincoln Boulevard	North/South	Sepulveda Boulevard	Local	4:40 A.M. - 11:50 P.M.	14	14
	R3	C Line Aviation Station to Downtown Santa Monica via Lincoln Boulevard	North/South	Sepulveda Boulevard	Rapid [d]	7:00 A.M. - 6:20 P.M.	84	105

Notes:

Metro: Los Angeles County Metropolitan Transportation Authority
LADOT: Los Angeles Department of Transportation
[a] The intersection of Sepulveda Boulevard & Manchester Avenue is located approximately 1,000 feet west of the Project Site.
[b] Service routes and frequencies are based on transit timetables as of June 27, 2023.
[c] Peak period frequencies are measured during the combined seven-hour morning (6 AM - 9 AM) and afternoon (3 PM - 7 PM) peak periods.
[d] Santa Monica Big Blue Bus R3 travels northbound during morning peak hours and southbound during afternoon peak hours.