

Attachment L
Transportation Assessment
Memorandum





MEMORANDUM

TO: Wes Pringle, Los Angeles Department of Transportation

FROM: Sarah M. Drobis, P.E., Emily Wong, P.E., and David Roachford

DATE: August 18, 2020

RE: Transportation Assessment for the
Miramar Development Project
Los Angeles, California

Ref: J1832

This memorandum presents the transportation assessment for the proposed Miramar Development (Project) located at 1917-2005½ West 3rd Street (Project Site) within the *Westlake Community Plan* (Los Angeles Department of City Planning [LADCP], 1997) area of the City of Los Angeles, California (City). The methodology and base assumptions used in the analysis were established in conjunction with the Los Angeles Department of Transportation (LADOT). The analysis in this assessment is for informational purposes only and is not legally required for the Sustainable Communities Project Exemption under Public Resources Code Sections 21155 and 21155.1. As such, nothing in this assessment shall trigger the need for any California Environmental Quality Act (CEQA) findings, CEQA analysis, or CEQA mitigation measures.

The scope of assessment was developed in consultation with LADOT and is consistent with *Transportation Assessment Guidelines* (LADOT, July 2020) (TAG) and in compliance with the CEQA Guidelines (California Code of Regulations, Title 14, 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 July 2020 and is provided in Attachment A.

PROJECT DESCRIPTION

The Project proposes to construct a total of 137 affordable housing units in a seven-story residential building above a basement lobby level. Open space would be provided in the form of exterior areas, community recreation rooms, and landscaped areas. Vehicular access to the Project Site would be provided via the existing driveway along 3rd Street. The adjacent Miramar Towers senior apartment building would share the existing driveway solely for the purpose of fire department access. Short-term bicycle parking would be provided at the building exterior to the west of the main entrance. Long-term bicycle parking would be provided within the basement level of the Project. Both bicycle and pedestrian access to the Project would be provided via the entrances along 3rd Street. The Project Site is currently improved with the Project driveway, a pedestrian walkway, landscaping, outdoor seating, and a surface parking lot as part of the adjacent Miramar Towers.

The Project is anticipated to be completed in Year 2023. The Project site plan is provided in Figure 1.

PROJECT LOCATION

The Project Site, contained within a portion of Assessor Parcel Number 5154020030, is located in the Westlake area of Los Angeles, within City Council District 1. As shown in Figure 2, the Project Site is bounded by Miramar Towers to the north, residential uses to the east, 3rd Street to the south, and a multi-family residential use to the west. The Project is located approximately 0.70 miles south of the Hollywood Freeway (US 101) and 1.0 miles west of the Harbor Freeway (I-110/SR 110). The Project Site is primarily served by 3rd Street and Alvarado Street.

The Project Site is located within 0.5 miles of numerous Major Transit Stops, which are defined in *Transit Oriented Communities Program Guidelines* (LADCP, Revised February 26, 2018) (TOC Guidelines) as a rail station or an intersection of two or more bus routes with service intervals of 15 minutes or less during the morning and afternoon commuter peak periods. The Project Site is located within 0.50 miles of the Westlake/MacArthur Park Station, which is served by the Los Angeles County Metropolitan Transit Authority (Metro) B Line (formerly Red Line) and D Line (formerly Purple Line). The Metro B Line runs between North Hollywood and downtown Los Angeles and the Metro D Line runs between Koreatown and downtown Los Angeles. In addition, the Project Site is served by numerous bus lines primarily along 3rd Street and Alvarado Street that are operated by Metro and the LADOT Downtown Area Shuttle (DASH).

PROJECT CONTEXT

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

Study Area

The Study Area includes key intersections along 3rd Street, as well as the transportation infrastructure described below. 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

The following two signalized study intersections were identified for detailed analysis during the MOU process: Alvarado Street & 3rd Street and Bonnie Brae Street & 3rd Street.

Figure 3 illustrates the Study Area and the two study intersections. The existing lane configurations at the analyzed intersections are provided in Figure 4.

Existing Transportation Conditions

The Existing Conditions includes an assessment of the existing transportation infrastructure and conditions of the Study Area including freeway and street systems and transit service, as well as pedestrian and bicycle circulation, in Year 2020. An inventory of lane configurations, signal phasing, parking restrictions, etc., for the analyzed intersections was also collected. Traffic count data is provided in Attachment B.

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

Street classifications are designated in *Mobility Plan 2035, An Element of the General Plan* (LADCP, September 2016) (the 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.

The following is a brief description of the roadways in the Study Area, including their classifications under the Mobility Plan:

- **Alvarado Street** – Alvarado Street is a designated Avenue II that runs in the north-south direction and is located west of the Project Site. It generally provides six travel lanes, three lanes in each direction, and a two-way left-turn median. Daytime two-hour metered parking is generally available with morning peak hour restrictions on the west side of the street and afternoon peak hour restrictions on the east side of the street within the Study Area. Travel lanes are typically 10 feet wide and the total paved width is approximately 56 to 66 feet wide.
- **Bonnie Brae Street** – Bonnie Brae Street is a designated Collector Street that runs in the north-south direction and is located east of the Project Site. It generally provides two travel lanes, one in each direction, and a two way left-turn median north of 3rd Street. Unmetered parking is generally available on both sides of the street. The total paved width of the street is approximately 56 feet north of 3rd Street and approximately 36 feet south of 3rd Street.
- **3rd Street** – 3rd Street is a designated Avenue II that runs in the east-west direction and is located adjacent to the southern boundary of the Project Site. It generally provides four travel lanes, two in each direction, and a two-way left-turn median. Within the Study Area, unmetered parking with morning peak hour restrictions is generally available on the south side of the street between Westlake Avenue and Bonnie Brae Street and metered two-hour

parking is available on the north side of the street west of Alvarado Street. Travel lanes are typically 10 feet wide and the total paved width is typically 56 to 60 feet.

The existing intersection mobility facilities are shown in Figure 5 and the Mobility Plan street designations are shown in Figure 6.

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 businesses, employment, entertainment, and cultural centers adjacent to residential neighborhoods, the walkability of the Study Area is approximately 91 points¹.

The sidewalks that serve as routes to the Project Site provide proper connectivity and adequate widths for a comfortable and safe pedestrian environment. The sidewalks provide connectivity to accessible crossings at signalized intersections within the Study Area. Both study intersections provide pedestrian access in the vicinity of the Project Site with marked pedestrian crossings on all approaches, pedestrian phasing, crosswalk striping, and Americans with Disabilities Act (ADA) curb ramps. Pedestrian facilities located within the Study Area and are further detailed in Figure 5. An inventory of pedestrian attractors within a 0.25-mile walking distance from the Project Site is illustrated 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 transportation-related collisions that result in severe injury or death. Vision Zero has identified a High Injury Network (HIN), a network of streets included based on collision data from the last five years, where strategic investments would have the biggest impact in reducing death and severe injury. Adjacent to the Project Site, 3rd Street has been identified as part of the HIN. Additionally, the following streets within 0.25 miles of the Project are also identified in the HIN (and depicted in Figure 8):

- Alvarado Street
- Westlake Avenue
- 6th Street

Existing Bicycle System. The Mobility Plan includes the specific goals and policies of *2010 Bicycle Plan, A Component of the City of Los Angeles Transportation Element* (LADCP, 2010) (2010 Bicycle Plan). The Mobility Plan establishes the overall framework for those components of the 2010 Bicycle Plan and builds upon those goals of improving bicycling for all levels of experience. Currently, no bicycle facilities are provided within 0.25 miles of the Project Site.

Existing Transit System. Figure 9 illustrates the existing transit service in the Study Area, which is served by bus lines operated by Metro and LADOT DASH. In addition, Figure 9 identifies Major Transit Stops located within 0.50 miles of the Project Site, including the Westlake/MacArthur Park Station, which serves the Metro B Line and D Line.

¹ Walk Score (www.walkscore.com) rates the Project Site with a score of 91 of 100 possible points (scores assessed on July 7, 2020 for 1917 W. 3rd Street). 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.

Table 1 summarizes the various transit line services operating in and around the Study Area for each of the 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 from April 2019 provided by Metro.

Tables 2A and 2B summarize the total capacity of the Metro transit system and LADOT bus lines during the morning and afternoon peak hours 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 or train. As shown, the Metro and LADOT bus lines within 0.50 miles of the Project Site currently provide additional capacity for 4,993 transit riders during the morning peak hour and 4,451 transit riders during the afternoon peak hour. Additionally, the Metro B Line and D Line provide additional capacity for approximately 9,222 transit riders during the morning peak hour and 8,094 transit riders during the afternoon peak hour. In total, the public transit system in the Study Area has available capacity for approximately 14,215 additional riders during the morning peak hour and 12,545 additional riders during the afternoon peak hour. Ridership data information was not available for the Pico Union – Echo Park DASH service, so any additional capacity from those services could not be calculated into the above values but are expected to provide additional capacity.

Existing Traffic Volumes. Traffic count data collection is generally conducted during times with typical travel demand patterns (i.e., when local schools are in session, businesses are in full operation, weeks without holidays, etc.). Collection of new traffic count data was not conducted in light of the Safer at Home order in response to COVID-19. Consistent with the TAG, based on historical trends in traffic growth, an ambient growth rate of 1% per year was applied to weekday morning (7:00 AM to 10:00 AM) and afternoon (3:00 PM to 6:00 PM) peak period intersection counts from April 2016 to represent Year 2020 conditions. The existing intersection peak hour traffic volumes are illustrated in Figure 10.

Future Cumulative Transportation Conditions

The future conditions detail the assumptions used to develop the Future without Project Conditions in Year 2023, which corresponds to expected occupancy of the Project.

The Future without Project Conditions traffic volumes include ambient growth, which reflects the increase 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 (the Related Projects) in accordance with procedures outlined in the CEQA Guidelines.

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 through the MOU process, a conservative ambient growth factor of 1% per year compounded annually was applied by inflating the existing traffic volumes to simulate Year 2023 traffic volumes. The total adjustment applied over the three-year period was 3.03%. These growth factors account for increases in traffic due to potential projects not yet proposed and projects located outside the Study Area.

Related Projects. The list of Related Projects is based on information provided by LADCP and LADOT, as well as recent studies in the area. The Related Projects are detailed in Table 3 and their approximate locations are 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 transportation assessment and conservatively assumed to be completed by the Project buildout year of 2023. The traffic growth due to the development of Related Projects considered in this analysis is conservative and, by itself, substantially overestimates the actual traffic volume growth in the area that would likely occur prior to Project buildout years. With the addition of the 1% per year ambient growth factor previously discussed, the Future without Project cumulative condition is even more conservative.

Peak hour traffic volumes resulting from Related Projects are shown in Figure 12 at each study intersection.

Future without Project Traffic Volumes. The Related Projects volumes were then added to the existing traffic volumes after adjustment for ambient growth through the projected Project completion year of 2023. These volumes represent the Future without Project Conditions (i.e., ambient traffic growth and Related Project traffic added to existing traffic volumes) for Year 2023 and are shown in Figure 13 for both study intersections.

Future Improvements. The analysis of Future Conditions considered roadway improvements that have been funded and are expected to be implemented prior to the buildout of the proposed Project, however, none were identified within the Study Area. Other proposed roadway improvement projects that are not funded and traffic/trip reduction strategies such as Transportation Demand Management (TDM) programs for individual buildings and developments were not considered in the Future Conditions analyses.

Although no planned improvements were identified within the Study Area, the Mobility Plan 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 vehicular lane configurations were made as a result of the Mobility Plan. However, the following mobility-enhanced networks included corridors within or near the Study Area and 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. The TEN has designated Alvarado Street and 3rd Street within the Study Area as part of the network.
- **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. The NEN has designated Bonnie Brae Street and 6th Street within the Study Area as part of the network.

- Bicycle Enhanced Network (BEN)/Bicycle Lane Network (BLN): No streets within the Study Area are designated as part of the BEN. The BLN has designated Alvarado Street within the Study Area as part of the network.
- 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. The PED has designated Beverly Boulevard, 3rd Street, 6th Street, Alvarado Street, and Union Avenue within the Study Area as part of the network.

PROJECT TRAFFIC

Trip generation estimates, trip distribution patterns and trip assignments were prepared for the Project.

Trip Generation

The number of trips generated by the Project was estimated using local trip generation rates developed by LADOT for affordable family housing projects inside Transit Priority Areas (TPAs), as provided in Table 3.3-2 of the TAG. These rates are based on vehicle trip count data collected at affordable housing sites in the City. The rates calculate the number of weekday peak hour vehicle trips traveling to and from the Project Site based on the proposed residential density. These rates also inherently account for transit utilization and walk-in trips; therefore, no further trip reductions were applied.

As shown in Table 4, after accounting for the adjustments above, the Project is anticipated to generate 67 morning peak hour trips (25 inbound trips, 42 outbound trips) and 48 afternoon peak hour trips (27 inbound trips, 21 outbound trips).

Project Trip Distribution

Traffic entering and exiting the Project was assigned to the surrounding street system by land use type and access provisions. The intersection-level trip distribution pattern for Project traffic at the study intersections is shown in Figure 15.

Project Trip Assignment

The Project trip generation estimates summarized in Table 4 and the trip distribution patterns shown in Figure 15 were used to assign the Project-generated traffic through the study intersections. Figure 16 illustrates the net Project-only traffic volumes for the Project at the study intersections during typical weekday morning and afternoon peak hours.

CEQA ANALYSIS OF TRANSPORTATION IMPACTS

State of California Senate Bill 743 (Steinberg, 2013) (SB 743), made effective in January 2014, required the Governor's Office of Planning and Research to change the CEQA guidelines regarding the analysis of transportation impacts. Under SB 743, the focus of transportation analysis shifts from driver delay (level of service [LOS]) to vehicle miles traveled (VMT) in order to reduce greenhouse gas emissions (GHG), create multimodal networks, and promote mixed-use developments.

LADOT's TAG defines the methodology for analyzing a project's transportation impacts in accordance with SB 743.

The TAG and CEQA Guidelines Appendix G identifies four CEQA thresholds applicable to the Project for identifying significant transportation impacts in accordance with SB 743:

- 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

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

THRESHOLD T-1: CONFLICTING WITH PLANS, PROGRAMS, ORDINANCES, OR POLICIES

Threshold T-1 states that a project would result in a significant impact if it conflicts with a program, plan, ordinance, or policy adopted to protect the environment and that addresses the circulation system, including transit, roadways, bicycle, and pedestrian facilities. Table 2.1-1 of the TAG provides 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 plans, programs, ordinances, or policies and streamlines 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 Attachment C.

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 to be consistent. As summarized below, the Project is consistent with the transportation-related elements of the City documents listed in Table 2.1-1 of the TAG. Therefore, the Project would not result in a significant impact under Threshold T-1. Detailed discussion of the plans, programs, ordinances, or policies related is provided below.

Mobility Plan

The Mobility Plan combines “complete street” principles with the following five goals that define the City’s mobility priorities:

1. Safety First
2. World Class Infrastructure
3. Access for all Angelenos
4. Collaboration, Communication, and Informed Choices
5. Clean Environments and Healthy Communities

The Project location and site access is consistent with the goals of the Mobility Plan as the Project would be designed to provide safe access for all users. The Project would support the policies of the Mobility Plan as it would promote a balanced transportation system by locating affordable housing in proximity to transit, jobs, and local retail uses. The Project would meet the goals of the Mobility Plan and would not interfere with the applicable policies of the Mobility Plan. Thus, the Project would be consistent with the Mobility Plan. The following provides further details of specific policies and programs in the Mobility Plan that were deemed most relevant to the Project.

- Policy 1.3 Safe Routes to School – Prioritize the safety of school children on all streets regardless of highway classifications. A number of elementary and middle schools are located within the Project Study Area, including Union Elementary School, N.E.W. Academy of Science & Arts, and Sal Castro Middle School, which are located less than 0.25 miles east of the Project Site. Adjacent to the Project Site, 3rd Street has been identified as part of the pedestrian route to Sal Castro Middle School as part of the Safe Routes to School program. Appropriate traffic measures would be installed during construction activities to ensure pedestrian and bicycle safety adjacent to the Project Site. Once operational, the expanded existing Project driveway would be designed and operated to provide safe pedestrian crossings along 3rd Street. Therefore, the Project would not conflict with Mobility Plan Policy 1.3.
- 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 (ROW) modifications to provide a safe and comfortable walking environment. Pedestrian access to the Project would be provided via separated pedestrian entrances along 3rd Street. The Project includes pedestrian-friendly landscaping and design to enhance the pedestrian experience. The Project would also widen the existing sidewalk along the Project frontage in accordance with City standards. In addition, the driveway widening would be designed to provide safe pedestrian crossings. Therefore, the Project would not conflict with Mobility Plan Policy 2.3.
- Policy 2.5 Transit Network – Improve the performance and reliability of existing and future bus service. As detailed in Tables 2A and 2B, the transit system serving the Project Site has available capacity for approximately 14,215 additional riders during the morning peak hour and 12,545 additional riders during the afternoon peak hour. Even with the increased ridership from the Project, ample transit capacity would be available to serve the Project area. Furthermore, Los Angeles County voters approved Measure R, a half-cent sales tax increase to finance new transportation projects and accelerate projects already in progress, in 2008 and Measure M, an additional half-cent sales tax increase to fund

transportation projects, in 2016. As such, the Project's net increase in transit trips would be partially offset by improvements to transit service in the Project area. Accordingly, the Project would not cause the capacity of the transit system to be substantially exceeded and the Project would not conflict with Mobility Plan Policy 2.5.

- Policy 2.6 Bicycle Networks – Provide safe, convenient, and comfortable local and regional bicycling facilities for people of all types and abilities. There are no existing bicycle facilities within 0.25 miles of the Project Site. However, Alvarado Street is part of the BLN in the Mobility Plan. The Project driveway widening would be designed to minimize conflicts to bicyclists along 3rd Street and bicyclists would have the same access opportunities to the Project Site as pedestrians. Bicycle parking requirements per Los Angeles Municipal Code (LAMC) Section 12.21-A, 16(a) include short-term and long-term parking. Short-term bicycle parking is characterized by bicycle racks that support the bicycle frame at two points and long-term bicycle parking is characterized by an enclosure protecting all sides from inclement weather and secured from the general public. In accordance with the requirements of LAMC Section 12.21-A, 16(a), the Project would provide 104 bicycle parking spaces, including 10 short-term and 94 long-term bicycle parking spaces. Therefore, the Project would not conflict with Mobility Plan Policy 2.6.
- Policy 2.9 Multiple Networks – Consider the role of each enhanced network (i.e., TEN, PED, and BEN) when designing a street that includes multiple modes. As discussed above, in the analyses for Policies 2.5 and 2.6, the Project would not conflict with Mobility Plan policies related to transit and bicycle networks. 3rd Street adjacent to the Project Site is identified as part of the TEN and PED. The Project would upgrade the existing sidewalk on 3rd Street along the Project frontage to meet Mobility Plan standards. Additionally, bicycle parking that meets LAMC requirements would be provided. Bicyclists and pedestrians would have separate entrances from vehicles and the driveway widening would be designed in line with the Driveway Design Guidelines. No modifications to the roadway width are proposed, and completion of the Project would not preclude implementation of the Mobility Plan. Therefore, the Project would not conflict with Mobility Plan policies related to any of the enhanced networks in the Mobility Plan.
- Policy 2.10 Loading Area – Facilitate the provision of adequate on and off-street loading areas. The Project would maintain its existing loading area on-site. As such, delivery trucks would not encroach on or block the public ROW. Therefore, the Project would not conflict with Mobility Plan Policy 2.10.
- Policy 3.2 People with Disabilities – Accommodate the needs of people with disabilities when modifying or installing infrastructure in the public ROW. Both vehicular and pedestrian access to the Project from the public ROW would be designed to meet the standards of ADA requirements. Therefore, the Project would not conflict with Mobility Plan Policy 3.2.

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.

The Project supports healthy lifestyles by reducing single-occupant vehicle trips by virtue of its location near to abundant high-quality and high-frequency transit options and its provision of bicycle parking per the LAMC. The Project does not interfere with any other policies recommended by the plan. Therefore, the Project is consistent with Plan for a Healthy Los Angeles.

LAMC Section 12.21-A.16

LAMC Section 12.21.A.16 details the bicycle parking requirements for new developments. In accordance with the requirements of the LAMC, the Project would provide a total 104 bicycle parking spaces, including 10 short-term and 94 long-term bicycle parking spaces.

LAMC Section 12.26-J

LAMC Section 12.26J, the TDM Ordinance (1993), establishes TDM requirements for projects with at least 25,000 sf of non-residential gross floor area. The Project is not proposing any non-residential floor area and, therefore, the TDM Ordinance does not apply.

LAMC Section 12.37

LAMC Section 12.37 pertains to development or expansion of buildings along Highways and Collector Streets and applies to streets designated Boulevard I, Boulevard II, Avenue I, Avenue II, and Avenue III in the Mobility Plan. 3rd Street is a designated Avenue II in the Mobility Plan. The Project would provide a three-foot dedication to widen the sidewalk to 15 feet, in accordance with the Mobility Plan standards for an Avenue II. Thus, the Project would be consistent with the requirements of LAMC Section 12.37.

Vision Zero

The primary goal of Vision Zero is to eliminate traffic deaths in the City by 2025. Vision Zero identifies the HIN, a network of streets where strategic investments will have the biggest impact in reducing death and severe injury. Annually developed Action Plans emphasize creating safe streets for all users, developing a culture of safety, adopting policy measures to promote safety, and using data to inform the most effective solutions. The information from this review comes from the City's *Vision Zero Los Angeles: 2018 Action Plan + Progress Report* (2018) and LADOT's list of active Vision Zero projects maintained at www.ladotlivablestreets.org.

3rd Street has been identified as part of the HIN within the immediate vicinity of the Project Site, however, has not been identified as a Priority Corridor, and no improvements are currently planned adjacent to the Project Site. Nevertheless, the Project would not preclude future Vision Zero safety improvements by the City. Thus, the Project does not conflict with Vision Zero.

Citywide Design Guidelines for Residential, Commercial, and Industrial Development

Citywide Design Guidelines (LADCP Urban Design Studio, October 2019), identifies urban design principles to guide architects and developers in designing high-quality projects that meet the City's functional, aesthetic, and policy objectives and help foster a sense of community. *Citywide Design Guidelines* is organized around six design objectives. *City of Los Angeles Urban Design Principles* (LADCP, 2011) aims to improve mobility in the City through travel mode choices.

The Project would provide affordable housing in proximity to a broad range of land uses and transit options within walking distance, which would encourage pedestrian activity. The Project would be integrated within the surrounding area by providing wider sidewalks and landscaping. Pedestrian connections would be provided via separate entrances from vehicle entrances. In addition, all loading activities would occur on-site, which would limit spillover of vehicle queues into 3rd Street. Therefore, the Project would align with *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 include consideration of any Related Projects within 0.5 miles of the Project Site and any transportation system improvements in the vicinity.

Each of the Related Projects considered in this cumulative analysis of consistency with programs, plans, policies, and ordinances would be separately reviewed and approved by the City, including a check for their consistency with applicable policies. Collectively, the Project and the Related Projects add higher-density development in a high-quality transit area, which would increase pedestrian activity and reduce the need for single occupancy vehicles. Therefore, the Project, together with the Related Projects identified in this study, would neither create inconsistencies nor result in cumulative impacts with respect to the identified programs, plans, policies, and ordinances.

THRESHOLD T-2.1 – CAUSING SUBSTANTIAL VMT

The VMT metric is intended to promote the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses. This encourages development that shortens the distance between housing, jobs, and services, increases the availability of affordable housing options in proximity to public transit, offers attractive non-vehicular transportation alternatives, provides strong transportation demand management programs, and promotes walking and bicycling trips.

VTM Impact Thresholds

The TAG identifies significance thresholds to apply to development projects when evaluating potential VMT impacts consistent with the California Governor's Office of Planning and Research (OPR) CEQA guidance. Threshold T-2.1 (Causing Substantial Vehicle Miles Traveled) of the TAG states that a residential project would result in a significant VMT impact if it cannot demonstrate average household VMT per capita of at least 15% below the existing standard for the Area Planning Commission (APC) in which it is located.

The Project is located in the Central APC which, according to the TAG, has an average household VMT per capita impact threshold of 6.0, including the 15% reduction target. Therefore, should the Project's average household VMT per capita be equal to or lower than 6.0, the Project's overall VMT impact would be less than significant.

VTM Analysis Methodology

LADOT developed the *City of Los Angeles VMT Calculator Version 1.3* (July 2020) (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: origin trips from a residential use to a workplace destination
- Home-Based Other Production: origin trips from a residential use to a non-workplace destination (e.g., retail, restaurant, etc.)
- Home-Based Work Attraction: destination trips to a workplace originating from a residential use

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).

Other types of 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), are not factored into the VMT per capita and 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 are factored into the calculation of total project VMT for LADOT screening purposes when determining if further VMT analysis for a project would be required.

The methodology in determining VMT based on the VMT Calculator is consistent with the TAG.

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 an Urban (Zone 4) TBZ.

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 traffic analysis zones within 0.125 miles of a project to determine the trip lengths and trip types, which factor into the calculation of a 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* (Institute of Transportation Engineers, 2012), the US 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 Measures. 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). As detailed in *Transportation Demand Management Strategies in LA VMT Calculator* (LADOT, November 2019), the effectiveness of the TDM strategies applied in the VMT Calculator is based on the research presented in *Quantifying Greenhouse Gas Mitigation Measures*, as well as localized data. To ensure that the cumulative effectiveness of the applied TDM strategies is not overstated, a multiplicative dampening formula is applied to account for potential overlaps in users of each strategy.

Project VMT Analysis

The VMT Calculator was used to evaluate Project VMT and compare it to the VMT impact criteria. Table 5 summarizes the Project VMT evaluation. The detailed worksheets from the VMT Calculator are provided in Attachment D.

Project VMT. It should be noted that as part of the Project design, measures would be implemented to reduce the number of single occupancy vehicle trips to the Project Site. For the purposes of this analysis, the VMT evaluation accounted for the inclusion of short-term and long-term bicycle parking per LAMC requirements.

As shown in Table 5², the VMT Calculator estimates that the Project would generate 3,089 total household VMT. Thus, based on the population assumptions, the Project would generate an average household VMT per capita of 3.4, which would not exceed the significance thresholds for the Central APC (6.0 household VMT per capita). Therefore, the Project would not result in a significant household VMT impact and no mitigation measures would be required.

Cumulative Analysis. The TAG provides that cumulative effects of development projects are determined based on the consistency with the air quality and GHG reduction goals of *2016–2040 Regional Transportation Plan / Sustainable Communities Strategy* (Southern California Association of Governments, Adopted April 2016) (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 2040 and balances the region's future mobility and housing needs with economic, environmental, and public health goals. The TAG also explains that the RTP/SCS is the regional plan that demonstrates compliance with air quality conformity requirements and GHG reduction targets. As such, projects that are consistent with this plan in terms of development location, density, and intensity are part of the regional solution for meeting air pollution and GHG goals. Projects that are deemed to be consistent would have a less than significant cumulative impact on VMT. Therefore, based on the conclusions above, the Project would not result in a significant cumulative VMT impact.

Moreover, as previously detailed, the Project is located within a TPA as defined by the City and a High-Quality Transit Area as defined by the RTP/SCS. The Project's specific location in close proximity to high-quality transit and other off-site retail, restaurant, commercial, and residential

² Without application of any TDM strategies, the Project would also generate average household VMT per capita of 3.4, thus falling below the Central APC significance threshold. Therefore, implementation of TDM strategies as either project design features or mitigation is not required for the Project.

areas, along with its highly walkable environment, support the conclusion that the Project would achieve a VMT reduction greater than the average for the area, as concluded in the Project VMT analysis provided above.

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. The Project would also contribute to the productivity and use of the regional transportation system by providing housing near transit and encourage active transportation by providing new bicycle parking infrastructure and active street frontages, consistent with RTP/SCS goals. Therefore, the Project would not result in a cumulative VMT impact under Threshold T-2.1, and no further evaluation or mitigation measures would be required.

THRESHOLD T-2.2: SUBSTANTIALLY INDUCING ADDITIONAL AUTOMOBILE TRAVEL ANALYSIS

Threshold T-2.2 applies to transportation projects that increase vehicular capacity can lead to additional travel on the roadway network, which can include induced vehicle travel due to factors such as increased speeds and induced growth.

The Project does not include additional through traffic lanes on existing or new highways, general purpose lanes, high-occupancy vehicle lanes, peak period lanes, auxiliary lanes, or lanes through grade-separated interchanges. Accordingly, neither the Project nor any improvements associated with it are considered a transportation project. Therefore, Threshold T-2.2 does not apply to the Project and no further evaluation is required.

THRESHOLD T-3: SUBSTANTIALLY INCREASING HAZARDS DUE TO A GEOMETRIC DESIGN FEATURE OR INCOMPATIBLE USE

Impacts regarding the potential increase of hazards due to a geometric design feature generally relate to the design of access points to and from a project site, and may include safety, operational, or capacity impacts. Impacts can be related to vehicle/vehicle, vehicle/bicycle, or vehicle/pedestrian conflicts as well as to operational delays caused by vehicles slowing and/or queuing to access a project site. These conflicts may be created by the driveway configuration or through the placement of project driveway(s) in areas of inadequate visibility, adjacent to bicycle or pedestrian facilities, or too close to busy or congested intersections.

A review of Project access points, internal circulation, and parking access was performed to determine if the Project would substantially increase hazards due to geometric design features, including safety, operational, or capacity impacts.

Vehicles

As previously detailed, vehicular access to the Project Site would be provided via an existing driveway along 3rd Street, a designated Avenue II. The driveway would be improved in accordance with City standards and widened to better accommodate fire truck access. The driveway would continue to provide full access and accommodate both left- and right-turn ingress and egress

maneuvers. 3rd Street currently provides a two-way left-turn median adjacent to the Project Site, which would allow for both left and right-turn ingress and egress maneuvers at the driveway without causing spillover into the through traffic lanes. Adequate queuing area would also be provided at the driveway internal to the Project Site to limit any potential spillover into the public ROW.

The driveway is located between the signalized intersections of Alvarado Street & 3rd Street, located approximately 600 feet to the west, and Bonnie Brae Street & 3rd Street, located approximately 150 feet to the east. The operations of the signalized intersections would create gaps in traffic to allow vehicles to safely exit the Project driveway onto 3rd Street.

Therefore, as detailed above, the vehicular access and internal circulation plan for the Project would be designed to minimize vehicular conflicts, and safety impacts to the abutting street system are not anticipated.

Pedestrians & Bicycles

Bicycle and pedestrian access would be provided via separated pedestrian entrances along 3rd Street, which has been identified as part of Vision Zero's High Injury Network and the Mobility Plan's Pedestrian Enhanced Network. The Project would dedicate three feet along 3rd Street to improve the sidewalks adjacent to the Project Site to meet City standards. In addition, the driveways would continue to provide safe pedestrian crossings.

Currently, no bicycle facilities are provided along 3rd Street adjacent to the Project Site. Therefore, the driveway would not pose a safety hazard to bicyclists.

Cumulative Analysis

The TAG indicates that cumulative impacts for Threshold T-3 require a review of related projects with access points proposed along the same block(s) as a proposed project in order to determine the combined impact and the proposed project's contribution. None of the Related Projects identified in Table 3 provides access along the same block as the Project. Thus, the Project and Related Projects would not result in a cumulative impact under Threshold T-3.

CALTRANS ANALYSIS

LADOT issued the City Freeway Guidance identifying requirements for a CEQA safety analysis of Caltrans facilities as part of a transportation assessment.

Methodology

The City Freeway Guidance relates to the identification of potential safety impacts 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

a safety impact 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 significant impact 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 lanes³.
2. A 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 significant impact be identified, mitigation 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 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.

Analysis

Based on the Project's trip generation estimates and trip assignments, the Project would not add 25 or more peak hour trips to any freeway off-ramp. Therefore, no further freeway off-ramp queuing analysis is required. Furthermore, the Project would not result in a significant safety impact, and no corrective measures at any freeway off-ramps would be required.

NON-CEQA TRANSPORTATION ANALYSIS

The non-CEQA transportation analysis of the Project includes sections related to the Project traffic, proposed access provisions, safety, and circulation operations of the Project, and pedestrian, bicycle, and transit facilities in the vicinity of the Project, as well as the Project's operational conditions 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:

³ If an auxiliary lane is provided on the freeway, then half the length of the auxiliary lane is added to the ramp storage length.

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

PEDESTRIAN, BICYCLE, AND TRANSIT ASSESSMENT

The TAG indicates that the pedestrian, bicycle, and transit facilities assessment is intended to determine a project's potential effect on pedestrian, bicycle, and transit facilities in the vicinity of the proposed project. The deficiencies could be physical (through removal, modification, or degradation of facilities) or demand-based (by adding pedestrian or bicycle demand to inadequate facilities).

Project Modifications

As previously described, vehicular access to the Project would be provided via an existing driveway located along 3rd Street. The driveway would be shared with the adjacent Miramar Towers senior apartment building. The Project would widen the driveway by three feet to better accommodate fire truck access; this improvement would be designed in accordance with LADOT standards and would not present a significant safety hazard for pedestrians or bicyclists. Further, the utilization of an existing driveway for vehicular access to the Project Site would limit increased interruptions to pedestrian flow along 3rd Street.

The Project would provide a three-foot dedication along the 3rd Street Project frontage to widen the sidewalk width to meet the designated standards for an Avenue II in the Mobility Plan. The Project would also improve the adjacent sidewalk facilities to meet ADA requirements for slopes and passable spaces, including ADA compliance at driveways. The Project would not remove or cause degradation of existing sidewalks, crosswalks, pedestrian refuge areas or curb extensions, nor would the Project narrow existing sidewalks, paths, crossings, or access points.

The Project would not result in the deterioration of any existing bicycle facilities or transit facilities as no dedicated bicycle facilities or transit stops are located adjacent to the Project Site.

Intensification of Use

Although the Project would result in an increase in pedestrian volume along pedestrian facilities and pedestrian connections to transit stops along 3rd Street, continuous pedestrian facilities are provided adjacent to the Project Site that connect to the signalized intersection of Bonnie Brae Street & 3rd Street, which provides signalized pedestrian phasing with pedestrian push buttons and marked pedestrian crossings, including continental crosswalks along the east, south, and west legs. Thus, the increase in pedestrian volume resulting from the Project would not warrant the installation of additional pedestrian facilities. Further, the Project would dedicate three feet along 3rd Street adjacent to the Project Site to improve the sidewalk to meet City standards.

PROJECT ACCESS AND CIRCULATION EVALUATION

Project access and circulation constraints relate to the provision of access to and from the Project Site, and may include safety, operational, or capacity constraints. Constraints can be related to vehicular/vehicular, vehicular/bicycle, or vehicular/pedestrian constraints as well as to operational delays. These conflicts may be created by the driveway configuration or through the placement of project driveway(s) in areas of inadequate visibility, adjacent to bicycle or pedestrian facilities, or too close to an intersection or crosswalk.

Vehicular Access & Internal Circulation

Vehicular access to the Project Site would be provided via the existing driveway along 3rd Street and would be shared with the adjacent Miramar Towers senior apartment building. 3rd Street currently provides a two-way left-turn median adjacent to the Project Site, which would allow for both left and right-turn ingress and egress maneuvers at the driveway without causing spillover into the through traffic lanes. Adequate queuing area would also be provided at the driveway internal to the Project Site to limit any potential spillover into the public ROW.

With development of the Project, the driveway would be widened and improved to safely accommodate fire truck access, consistent with City design standards. The driveway is located approximately 600 feet east of the signalized intersection of Alvarado Street & 3rd Street and approximately 150 west of the signalized intersection of Bonnie Brae Street & 3rd Street. The operations of these signalized intersections would create gaps in traffic to allow vehicles to safely enter/exit the Project driveway along 3rd Street.

The Project driveway is anticipated to safely accommodate both the Project and the existing Miramar Towers senior apartment building without causing significant queues at the driveway and along the adjacent roadway network. A detailed operational analysis is presented below.

Pedestrians and Bicycles

Pedestrian access to the Project Site would be provided via improved sidewalks along 3rd Street. The Project access locations would be designed to provide adequate sidewalk widths and connectivity that meet the City's requirements to further protect pedestrian safety. The driveway and internal circulation system would be designed to maximize sight distance for all travel modes. The design is sensitive to not place street trees and other potential impediments in the sidewalk that would affect sight distance and visibility.

Residents, guests, and employees arriving by bicycle would have the same access opportunities as pedestrian visitors. Due to the minimal bicycle traffic demand on 3rd Street and the alignment of the Project driveway, the driveway design is not anticipated to result in vehicle-bicycle conflicts. In order to support and facilitate bicycle use to and from the Project Site, short-term and long-term bicycle parking spaces would be provided.

Operational Evaluation

Intersection operation conditions were evaluated at the two study intersections for typical weekday morning (7:00 AM to 10:00 AM) and afternoon (3:00 PM to 6:00 PM) peak periods. The following traffic conditions were developed and analyzed as part of this study:

- **Existing with Project Conditions (Year 2020)** – This analysis condition analyzes the potential intersection operating conditions that could be expected if the Project were built under existing conditions. In this analysis, the Project-generated traffic is added to the Existing Conditions.
- **Future with Project Conditions (Year 2023)** – This analysis condition analyzes the potential intersection operating conditions that could be expected if the Project were fully occupied in the projected buildout year. In this analysis, the Project-generated traffic is added to Future without Project Conditions (Year 2023).

Methodology. In accordance with the TAG, the intersection delay and queue analyses for the operational evaluation were conducted using the *Highway Capacity Manual, 6th Edition* (Transportation Research Board, 2016) (HCM) methodology. The HCM methodology was implemented using Synchro software and signal timing worksheets from the City to analyze intersection operating conditions. The HCM signalized methodology calculates the average delay, in seconds, for each vehicle passing through the intersections. Table 6 presents a description of the LOS categories, which range from excellent, nearly free-flow traffic at LOS A, to stop-and-go conditions at LOS F, for signalized and unsignalized intersections. The queue lengths were estimated using Synchro, which reports the 95th percentile queue length in feet. The reported queues are calculated using the HCM signalized intersection methodology.

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

Existing with Project Conditions. The Project-only morning and afternoon peak hour traffic volumes were added to the Existing morning and afternoon peak hour traffic volumes, resulting in the Existing with Project Conditions traffic volumes illustrated in Figure 17, representing Project operation under Existing Conditions.

Table 7 summarizes the results of the Existing and Existing with Project Conditions during the weekday morning and afternoon peak hours for the two study intersections. As shown, both study intersections are anticipated to continue to operate at LOS C or better during both the morning and afternoon peak hours under Existing with Project Conditions.

Future with Project Conditions. All future adjustments, including cumulative traffic growth (i.e., ambient growth and Related Project traffic) and transportation infrastructure improvements were incorporated into this analysis.

The Project-only morning and afternoon peak hour traffic volumes were added to the Future without Project (Year 2023) morning and afternoon peak hour traffic volumes, resulting in the Future with Project Conditions traffic volumes illustrated in Figure 18, representing conditions after development of the Project in Year 2023.

Table 8 summarizes the results of the Future without Project (Year 2026) and Future with Project Conditions during the weekday morning and afternoon peak hours for the two study intersections. As shown, both study intersections are anticipated to continue to operate at LOS C or better during both the morning and afternoon peak hours under Future with Project Conditions.

Intersection Queuing Analysis. The queue lengths were estimated using Synchro software, which reports the 95th percentile queue length for signalized intersection at each approach lane. Synchro queue results that are reported in vehicle-length were converted to feet by multiplying each vehicle by 25 feet to account for the average length of a vehicle plus distance between vehicles in the queue. The reported queues are calculated using the HCM signalized and unsignalized intersection methodology.

Detailed queuing analysis worksheets are provided in Attachment E.

RESIDENTIAL STREET CUT-THROUGH ANALYSIS

The objective of the residential street cut-through analysis is to determine potential increases in average daily traffic volumes on designated Local Streets, as classified in the City's General Plan, that 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 net daily trips generated by the Project are not anticipated to cause a traffic shift from 3rd Street, a designated Avenue II, to alternative routes along residential Local Streets. In addition, access to the Project is provided along 3rd Street, in proximity to regional connections. Thus, based on the location of the Project Site, it is unlikely that local residential streets would serve as an alternative route. Therefore, the addition of Project trips would not adversely affect any residential Local Streets.

CONSTRUCTION IMPACT ANALYSIS

The construction impact analysis relates to the temporary impacts that may result from the construction activities associated with the Project and was performed in accordance with Section 3.4 of the TAG.

Section 3.4.3 of the TAG identifies three types of in-street construction impacts that require further analysis to assess the effects of Project construction on the existing pedestrian, bicycle, transit, or vehicle circulation. The three types of impacts and related populations are:

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

The factors used to determine the significance of a project's impacts involve the likelihood and extent to which an impact might occur, 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.

Proposed Construction Schedule

The Project is anticipated to be constructed over a period of approximately 24 months. The construction period would include sub-phases of site clearing and utility relocation, building structure, and building skin and finishes. Peak haul truck activity occurs during the site clearing and utility relocation phase, and peak worker activity occurs during building skin and finishes phase. These two sub-phases of construction were studied in greater detail.

Site Clearing and Utility Relocation Phase

The peak period of truck activity during construction of the Project would occur during the site clearing and utility relocation phase of the Project Site.

Haul trucks would travel on approved truck routes designated within the City from 3rd Street to US 101. The haul route will be reviewed and approved by the City. Based on projections compiled for the Project, approximately 8,500 cubic yards of material would be excavated and removed from the Project Site and would require on average 40 haul trucks per day. In addition, up to one delivery truck is anticipated per day during this phase. Thus, on average 82 daily haul truck trips (41 inbound, 41 outbound) are forecast to occur during the site clearing and utility relocation phase, with approximately 14 trips per hour (seven inbound, seven outbound) uniformly over a typical six-hour haul period (i.e., outside of commuter peak hours).

Transportation Research Circular No. 212, Interim Materials on Highway Capacity (Transportation Research Board, 1980) defines passenger car equivalency (PCE) for a heavy vehicle as the number of through moving passenger cars to which it is equivalent based on the heavy vehicle's headway and delay-creating effects. Table 8 of *Transportation Research Circular No. 212* and Exhibit 12-25 of the HCM suggest a PCE of 2.0 for trucks. Assuming a PCE factor of 2.0, the 82 truck trips would be equivalent to 164 daily PCE trips. The 14 hourly truck trips would be equivalent to 28 PCE trips (14 inbound, 14 outbound) per hour.

An anticipated total of 16 construction workers would be on-site during this phase. Assuming minimal carpooling amongst those workers, an average vehicle occupancy (AVO) of 1.135 persons per vehicle was applied, as provided in *CEQA Air Quality Handbook* (South Coast Air Quality Management District, 1993). Therefore, 16 workers would result in 14 vehicles inbound and 14 vehicles outbound on a daily basis during this phase.

With implementation of the Construction Management Plan, it is anticipated that almost all haul truck activity to and from the Project Site would occur outside of the morning and afternoon commuter peak hours. In addition, construction worker trips to and from the Project Site would also occur outside of the peak hours. Therefore, no peak hour construction traffic impacts are expected during the site clearing and utility relocation phase of construction.

Building Skin and Finishes Phase

According to construction projections prepared for the Project, the building skin and finishes subphase would employ the most construction workers, with an anticipated total of 206 workers per day for all components of the building after the structure is completed.

In general, the hours of construction typically require workers to be on-site before the weekday morning commuter peak period and allow them to leave before or after the afternoon commuter peak period (i.e., arrive at the site prior to 7:00 AM and depart before 4:00 PM or after 6:00 PM). Therefore, most, if not all, construction worker trips would occur outside of the typical weekday commuter peak periods.

Assuming an AVO of 1.135 persons per vehicle, 206 workers would result in a total of 153 vehicles that would arrive and depart from the Project Site each day. The estimated number of daily trips associated with the construction workers is approximately 306 (153 inbound and 153 outbound trips), but nearly all of those trips would occur outside of the peak hours, as described above. As such, the building phase of Project construction would not cause a significant traffic impact at any of the study intersections.

Parking for construction workers would be secured off-site in a nearby parking facility. Restrictions against workers parking in the public ROW in the vicinity of (or adjacent to) the Project Site would be identified as part of the Construction Management Plan. All construction materials storage and truck staging would be contained on-site or provided on-demand/as needed to reduce the need for storage.

Potential Impacts on Access, Transit, And Parking

Project construction is not expected to create hazards for roadway travelers, bus riders, or parkers, so long as commonly practiced safety procedures for construction are followed. Such procedures and other measures (e.g., to address temporary traffic control, lane closures, sidewalk closures, etc.) would be incorporated into the Construction Management Plan. The construction-related impacts associated with access to other businesses and transit are anticipated to be less than significant, and the implementation of the Construction Management Plan described below would further reduce those impacts.

Access. Construction activities would be primarily contained within the Project Site boundaries. All construction equipment will be staged entirely on-site or delivered on an as needed basis. However, temporary closures of the public ROW (e.g., travel lanes, sidewalks) adjacent to the Project Site may be required during construction. Temporary traffic controls (e.g., use of directional signage, maintaining continuous and unobstructed pedestrian paths, and/or providing overhead covering) would be provided to direct traffic and/or pedestrians safely around any closures, as required in the Construction Management Plan.

Transit. The construction activities of the Project would not require temporary transit stop relocation for any routes along 3rd Street. The Project would coordinate with Metro to ensure no construction related impacts to the transit system would occur. Metro would be notified should the Project construction affect any other Metro facilities.

Parking. Parking is not permitted along 3rd Street adjacent to the Project Site. However, construction activities may result in a temporary removal of up to three metered parking spaces on the south side of 3rd Street. As such, coordination with LADOT would be included in the Construction Management Plan.

Construction Management Plan

A detailed Construction Management Plan, including street closure information, a detour plan, 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.

CONCLUSION

The Project is consistent with the City's plans, programs, ordinances, and policies and would not generate any VMT, geometric design hazard, or emergency access impacts. Therefore, the Project would not result in a significant and unavoidable CEQA impact. In addition, the Project would not result in a significant safety impact on any Caltrans freeway off-ramp facilities. Furthermore, the Project is not anticipated to result in any operational deficiencies on the adjacent transportation system.

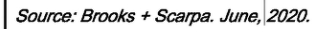
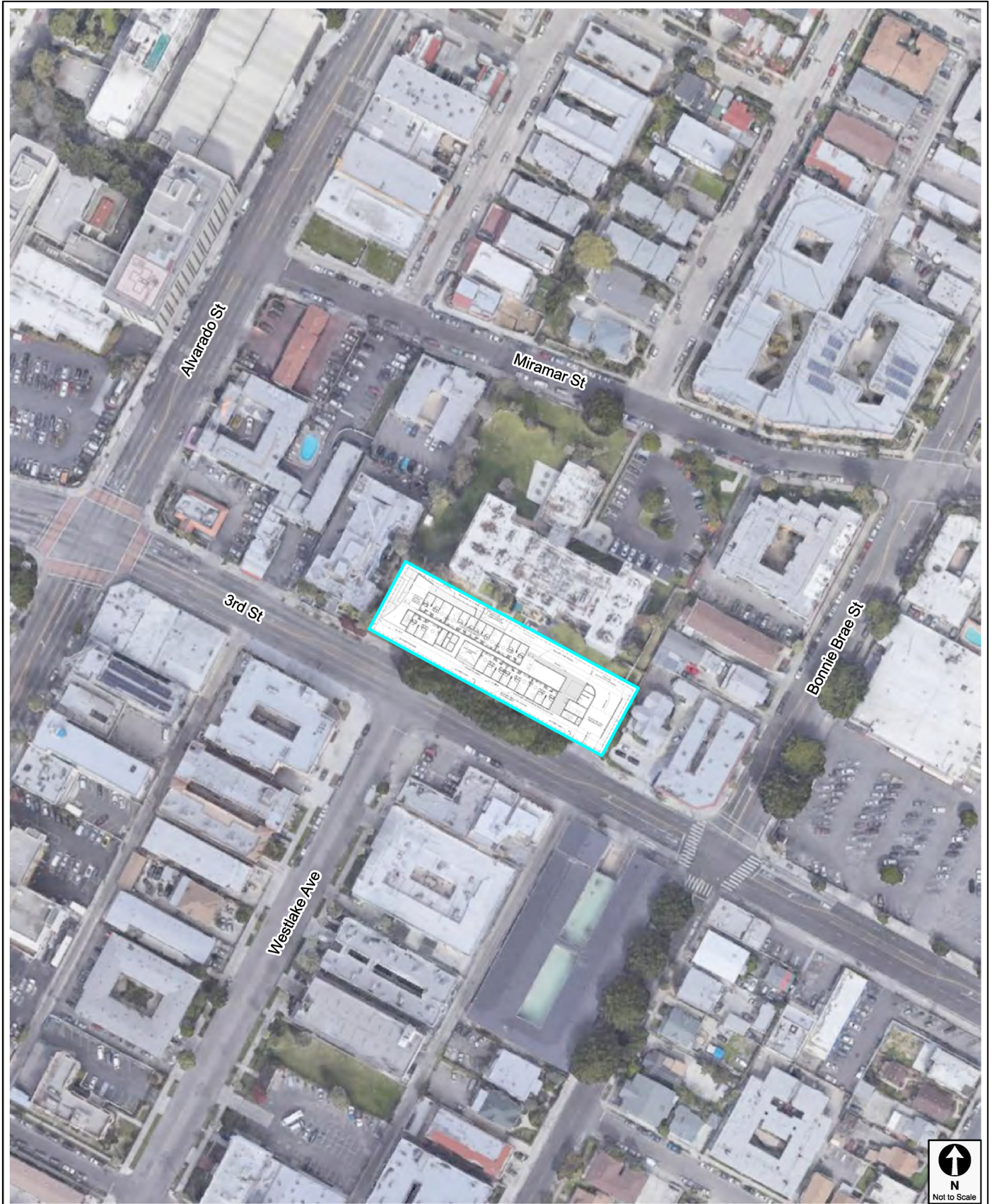


FIGURE
1

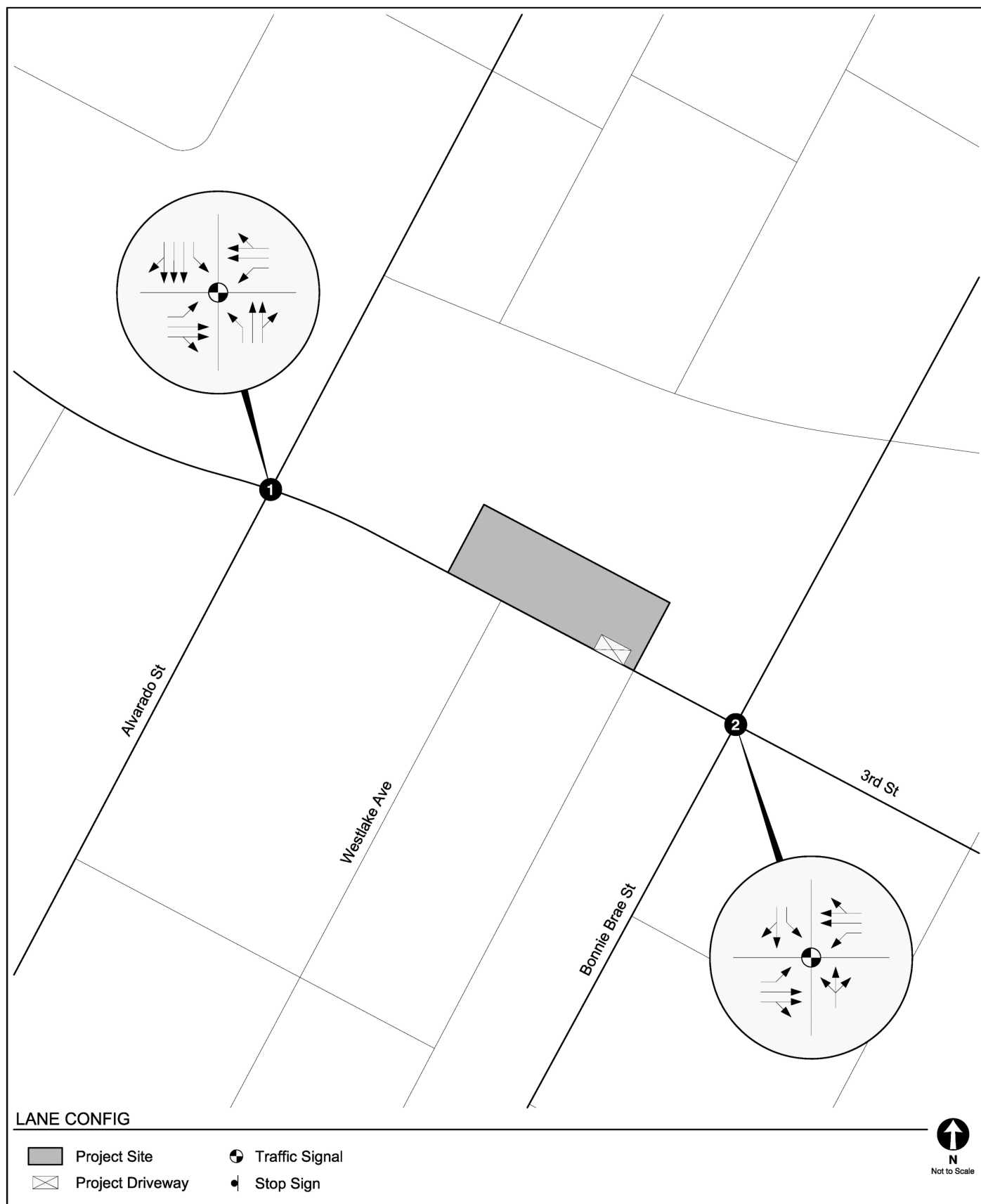


PROJECT SITE LOCATION

FIGURE
2



FIGURE
3



EXISTING INTERSECTION LANE CONFIGURATIONS

FIGURE
4

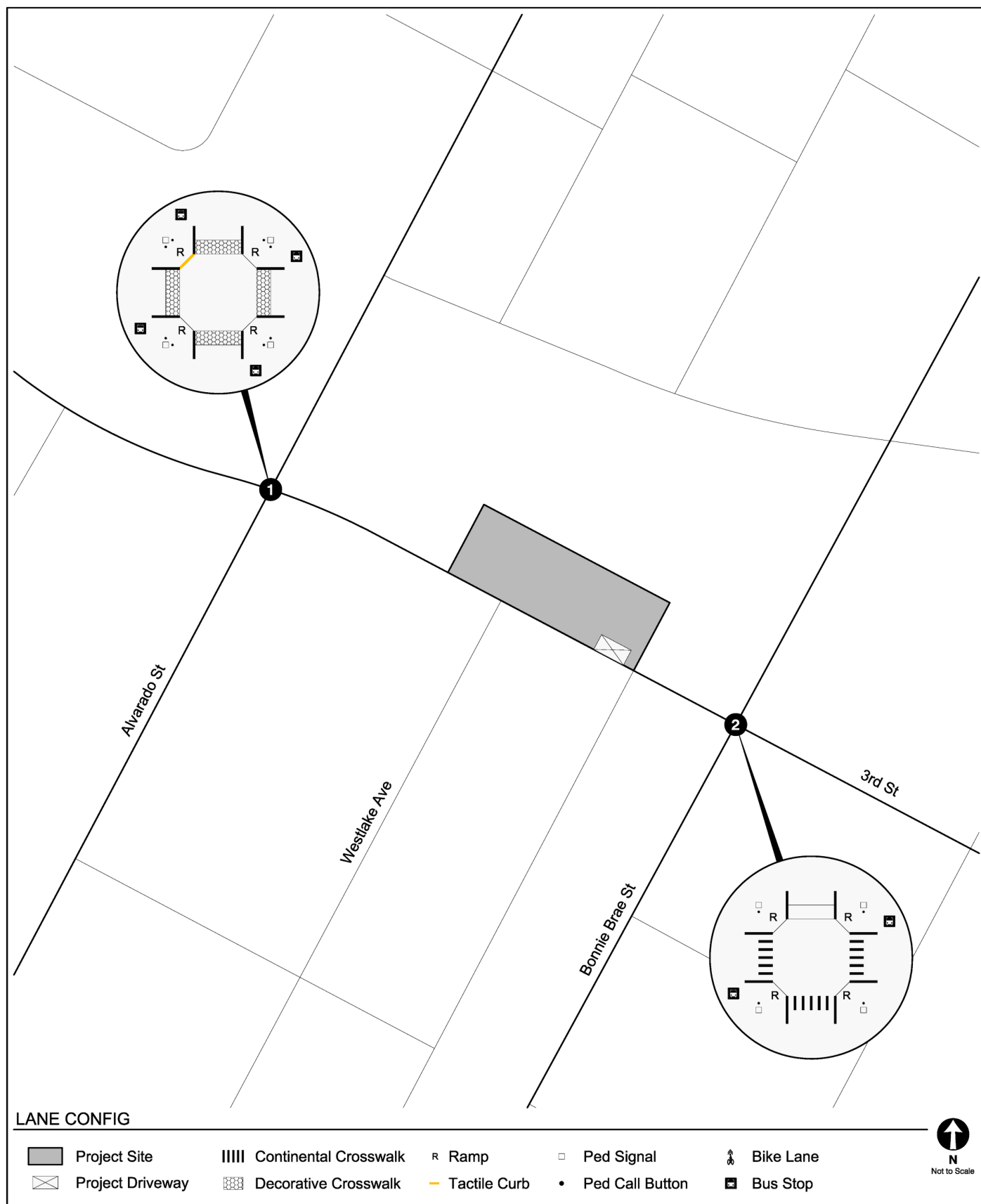


FIGURE
5



MOBILITY PLAN STREET DESIGNATIONS

FIGURE
6



PEDESTRIAN ATTRACTORS INVENTORY

FIGURE
7



EXISTING TRANSPORTATION FACILITIES

FIGURE
8



EXISTING TRANSIT SERVICE

FIGURE
9



EXISTING CONDITIONS (YEAR 2020)
PEAK HOUR TRAFFIC VOLUMES

FIGURE
10



LOCATIONS OF RELATED PROJECTS

FIGURE
11



RELATED PROJECT-ONLY
PEAK HOUR TRAFFIC VOLUMES

FIGURE
12



FUTURE WITHOUT PROJECT CONDITIONS (YEAR 2023)
PEAK HOUR TRAFFIC VOLUMES

FIGURE
13



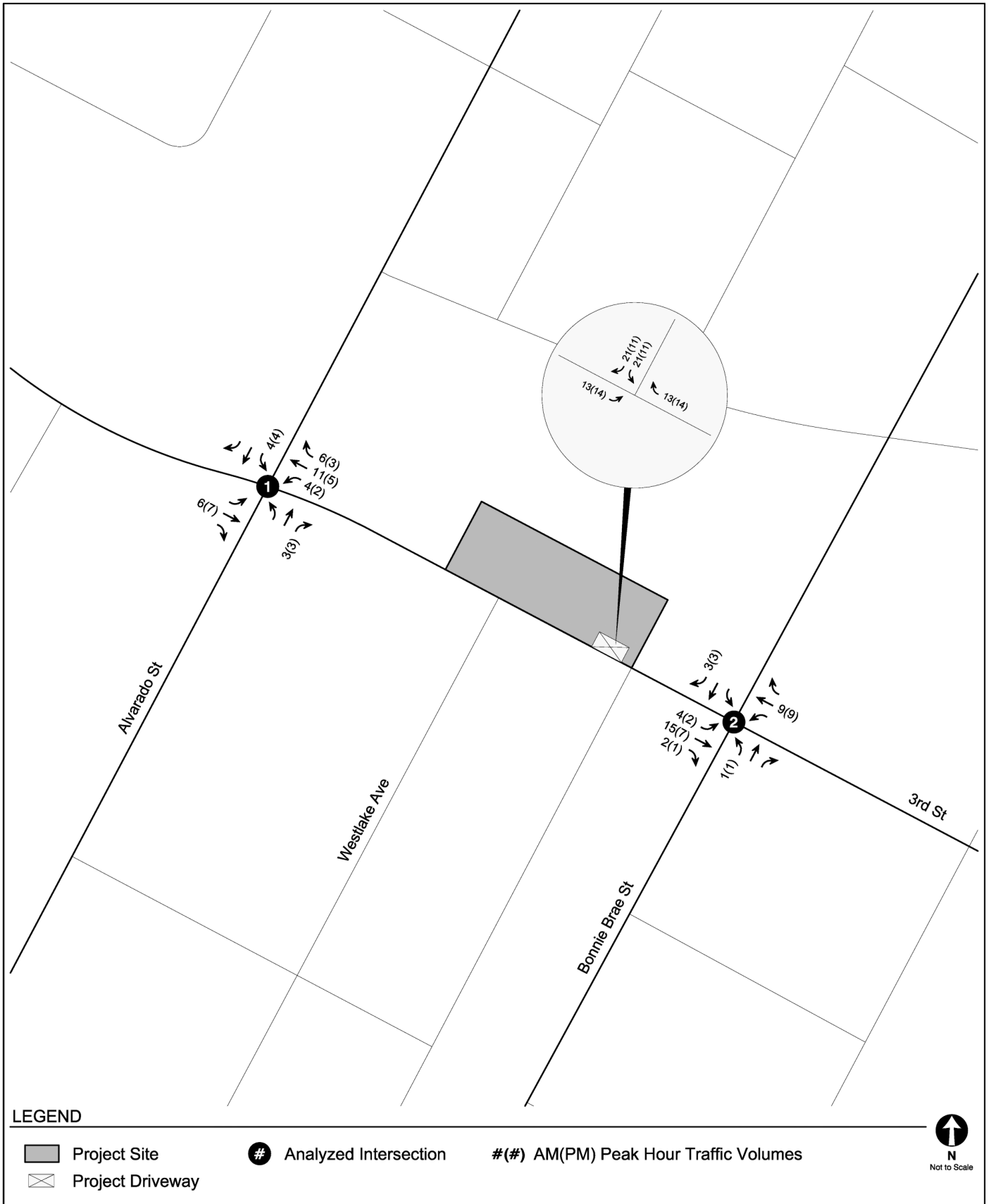
ROADWAY MODAL PRIORITIES

FIGURE
14



PROJECT TRIP DISTRIBUTION

FIGURE
15



PROJECT-ONLY
PEAK HOUR TRAFFIC VOLUMES

FIGURE
16



EXISTING WITH PROJECT CONDITIONS (YEAR 2020)
PEAK HOUR TRAFFIC VOLUMES

FIGURE
17



**FUTURE WITH PROJECT CONDITIONS (YEAR 2023)
PEAK HOUR TRAFFIC VOLUMES**

**FIGURE
18**

**TABLE 1
EXISTING TRANSIT SERVICE**

Provider, Route, and Service Area	Service Type	Hours of Operation in Study Area	Approximate Headway (minutes) [a]			
			Morning Peak Hour		Afternoon Peak Hour	
<i>Metro Bus Service</i>			NB/EB	SB/WB	NB/EB	SB/WB
14/37 Beverly Hills to Downtown Los Angeles	Local	24 - Hour	7	8	8	8
16/17 Century City to Downtown Los Angeles	Local	4:30 A.M. - 1:30 A.M.	5	5	5	5
18 Montebello to Koreatown	Local	4:00 A.M. - 12:30 A.M.	7	12	11	7
20 Westwood to Downtown Los Angeles	Local	24 - Hour	15	11	10	13
51/52 Koreatown to Downtown Los Angeles to South Los Angeles	Local	5:00 A.M. - 12:00 A.M.	6	6	6	6
200 Exposition Park to Echo Park	Local	5:00 A.M. - 2:30 A.M.	10	10	8	9
487/489 El Monte to Westlake	Local	5:30 A.M. - 9:30 P.M.	34	14	14	40
603 Exposition Park to Glendale	Local	5:30 A.M. - 11:00 P.M.	13	13	14	12
720 Westwood to Downtown Los Angeles	Rapid	4:00 A.M. - 2:30 P.M.	11	4	4	10
<i>LADOT DASH Bus Service</i>			NB/EB	SB/WB	NB/EB	SB/WB
PUEP Pico Union/Echo Park	Local	7:00 A.M. - 7:00 P.M.	14	14	10	10
<i>Metro Rail Service</i>			NB/EB	SB/WB	NB/EB	SB/WB
B North Hollywood to Downtown Los Angeles	Rail	4:30 A.M. - 1:30 A.M.	10	10	10	10
D Koreatown to Downtown Los Angeles	Rail	4:30 A.M. - 1:30 A.M.	10	10	10	10

Notes

Metro: Los Angeles County Metropolitan Transportation Authority

LADOT DASH: Los Angeles Department of Transportation Downtown Area Shuttle

[a] Headway information based on operating and ridership data from Metro for April 2019 and LADOT for May 2019.

**TABLE 2A
TRANSIT SYSTEM CAPACITY - MORNING PEAK HOUR**

Provider, Route, and Stop Location [a]		Capacity per Trip [b]	Peak Hour Ridership [c]				Average Remaining Capacity per Trip		Remaining Peak Hour Capacity	
			Peak Load		Average Load		NB/EB	SB/WB	NB/EB	SB/WB
			NB/EB	SB/WB	NB/EB	SB/WB				
Metro Bus Service										
14/37	Beverly Boulevard at Alvarado Street	50	16	38	14	24	36	26	295	195
16/17	3rd Street at Alvarado Street	50	39	27	24	18	26	33	335	358
18	6th Street at Alvarado Street	50	32	17	16	13	34	37	288	185
20	Wilshire Boulevard at Alvarado Street	50	26	29	19	17	31	33	125	179
51/52	7th Street at Alvarado Street	50	11	25	7	15	43	35	423	342
200	Alvarado Street at 3rd Street	50	30	31	22	21	28	29	163	180
487/489	Wilshire Boulevard at Union Avenue	50	4	2	2	1	48	49	84	208
603	6th Street at Alvarado Street	50	26	19	17	13	33	37	149	165
720	Wilshire Boulevard at Alvarado Street	75	30	41	23	22	52	53	288	894
LADOT DASH Bus Service										
PUEP	3rd Street at Alvarado Street	30	42	24	14	14	16	16	69	68
Metro Rail Service										
B	Westlake / MacArthur Park Station	750	no data provided		416	327	334	423	2,004	2,538
D	Westlake / MacArthur Park Station	500	no data provided		116	104	384	396	2,304	2,376
Total Bus Service Capacity									4,993	
Total Rail Transit Capacity									9,222	
Total Transit Service Capacity									14,215	

Notes

Metro: Los Angeles County Metropolitan Transportation Authority

LADOT DASH: Los Angeles Department of Transportation Downtown Area Shuttle

[a] Nearest stop location within 0.5 miles of the Project Site.

[b] Capacity assumptions:

Metro Regular Bus - 40 seated / 50 standing.

Metro Articulated Bus - 66 seated / 75 standing.

Metro B Line (Red) - 55 seats / car, 6 cars / run during peak periods. Metro assumes a maximum capacity of 230% of seated capacity, or approximately 125 / car.

Metro D Line (Red) - 55 seats / car, 4 cars / run during peak periods. Metro assumes a maximum capacity of 230% of seated capacity, or approximately 125 / car.

LADOT DASH - 25 seated / 30 standing.

[c] Ridership information based on data from Metro for April 2019 and LADOT for May 2019.

TABLE 2B
TRANSIT SYSTEM CAPACITY - AFTERNOON PEAK HOUR

Provider, Route, and Stop Location [a]		Capacity per Trip [b]	Peak Hour Ridership [c]				Average Remaining Capacity per Trip		Remaining Peak Hour Capacity	
			Peak Load		Average Load		NB/EB	SB/WB	NB/EB	SB/WB
			NB/EB	SB/WB	NB/EB	SB/WB				
Metro Bus Service										
14/37	Beverly Boulevard at Alvarado Street	50	31	18	21	12	29	39	210	289
16/17	3rd Street at Alvarado Street	50	31	42	18	26	32	24	360	286
18	6th Street at Alvarado Street	50	27	26	20	16	30	34	164	292
20	Wilshire Boulevard at Alvarado Street	50	31	30	16	22	34	28	212	132
51/52	7th Street at Alvarado Street	50	19	22	12	14	38	36	371	335
200	Alvarado Street at 3rd Street	50	29	32	21	24	29	26	209	173
487/489	Wilshire Boulevard at Union Avenue	50	4	6	2	4	48	46	205	69
603	6th Street at Alvarado Street	50	25	16	18	14	32	36	135	182
720	Wilshire Boulevard at Alvarado Street	50	35	42	19	28	32	23	441	135
LADOT DASH Bus Service										
PUEP	3rd Street at Alvarado Street	30	26	23	9	9	21	21	129	123
Metro Rail Service										
B	Westlake / MacArthur Park Station	750	no data provided		389	461	361	289	2,166	1,734
D	Westlake / MacArthur Park Station	500	no data provided		169	132	331	368	1,986	2,208
Total Bus Service Capacity									4,451	
Total Rail Transit Capacity									8,094	
Total Transit Service Capacity									12,545	

Notes

Metro: Los Angeles County Metropolitan Transportation Authority

LADOT DASH: Los Angeles Department of Transportation Downtown Area Shuttle

[a] Nearest stop location within 0.5 miles of the Project Site.

[b] Capacity assumptions:

Metro Regular Bus - 40 seated / 50 standing.

Metro Articulated Bus - 66 seated / 75 standing.

Metro B Line (Red) - 55 seats / car, 6 cars / run during peak periods. Metro assumes a maximum capacity of 230% of seated capacity, or approximately 125 / car.

Metro D Line (Red) - 55 seats / car, 4 cars / run during peak periods. Metro assumes a maximum capacity of 230% of seated capacity, or approximately 125 / car.

LADOT DASH - 25 seated / 30 standing.

[c] Ridership information based on data from Metro for April 2019 and LADOT for May 2019.

**TABLE 3
RELATED PROJECTS**

ID	Name	Address	Description	Trip Generation [a]						
				Daily Trips	Morning Peak Hour Trips			Afternoon Peak Hour Trips		
					In	Out	Total	In	Out	Total
1	Apartments	422 S Lake St	80 apartments	532	8	33	41	33	17	50
2	1930 Wilshire Mixed-Use	1930 W Wilshire Blvd	478 apartments, 850 seat theater, 50 student classroom, 220 hotel rooms	1,355	-44	128	85	103	-41	61
3	Mixed-Use	1800 W Beverly Blvd	243 apartments, 3,500 sf restaurant	1,585	36	93	129	92	51	143
4	425 S Union Apts	425 S Union Ave	33 apartments	213	3	13	16	13	7	20
5	Westlake Housing Project	619 S Westlake Ave	78 apartments	233	11	16	27	11	9	20
6	Fast Food with Drive-through	1501 W 6th St	1,665 sf fast food restaurant	784	17	16	33	14	13	27
7	Hotel	1631 W 3rd St	157 hotel rooms	1,174	46	31	77	49	40	89
8	Burlington Place	231 S Burlington Ave	130 apartments, 5,000 sf retail, 5,000 sf restaurant	1,322	33	57	90	67	41	108
9	Apartments	459 S Hartford Ave	101 affordable apartments	361	15	15	31	22	22	44
10	Urban View Lofts Project	495 S Hartford Ave	218 apartments	1,033	16	63	79	62	34	96
11	Restaurants	1728 W 7th St	9,600 sf restaurant, 3,500 sf bar	362	-30	-40	-70	50	14	64

Notes

[a] Source: Related project information based on available information provided by LADOT and Department of City Planning on June 10, 2020, and recent studies for developments within 0.5 miles radius of the Project Site.

**TABLE 4
TRIP GENERATION**

Land Use	Land Use Code	Size	Morning Peak Hour			Afternoon Peak Hour		
			In	Out	Total	In	Out	Total
<u>Trip Generation Rates</u>								
Affordable Housing - Family	[a]	per unit	37%	63%	0.49	56%	44%	0.35
<u>Proposed Project</u>								
Affordable Housing - Family	[a]	137 units	25	42	67	27	21	48
Total - Net New Project Trips			25	42	67	27	21	48

Notes

[a] The Project is located within 0.5 miles of numerous major transit stops, including the Metro 720 Rapid Bus at the Wilshire / Alvarado bus stop and the Metro B Line (Red) and D Line (Purple) Westlake / MacArthur Park Station. Therefore, the trip generation rates from LADOT *Transportation Assessment Guidelines* (July 2020) for affordable housing - family uses within a Transit Priority Area were utilized.

TABLE 5
VMT ANALYSIS SUMMARY

Project Information	
Land Use	Size
Housing Affordable Family Housing	137
Project Analysis [a]	
Project Area Planning Commission	Central
Travel Behavior Zone	Urban
Maximun Allowable VMT Reduction	75%
VMT Analysis [b]	
Daily Vehicle Trips	489
Daily VMT	3,089
Household VMT per Capita [c]	3.4
Impact Threshold	6.0
Significant Impact	NO
Work VMT per Employee [d]	-
Impact Threshold	7.6
Significant Impact	N/A

Notes

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

[b] Project design features include:

1. Bicycle parking per LAMC requirements including short-term and long-term spaces.

[c] Based on home-based production trips only (see Appendix D, Report 4).

[d] Based on home-based work attraction trips only (see Appendix D, Report 4).

TABLE 6
INTERSECTION LEVEL OF SERVICE

Level of Service	Description	Delay [a]
		Signalized Intersections
A	EXCELLENT. No vehicle waits longer than one red light and no approach phase is fully used.	≤ 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
C	GOOD. Occasionally drivers may have to wait through more than one red light; backups may develop behind turning vehicles.	> 20 and ≤ 35
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
E	POOR. Represents the most vehicles intersection approaches can accommodate; may be long lines of waiting vehicles through several signal cycles.	> 55 and ≤ 80
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

Notes:

Source: *Highway Capacity Manual, 6th Edition* (Transportation Research Board, 2016).

[a] Measured in seconds.

TABLE 7
EXISTING WITH PROJECT CONDITIONS (YEAR 2020)
INTERSECTION LEVELS OF SERVICE ANALYSIS

No	Intersection	Peak Hour	Existing		Existing with Project	
			Delay	LOS	Delay	LOS
1.	Alvarado Street & 3rd Street	AM	25.1	C	25.4	C
		PM	24.8	C	25.1	C
2.	Bonnie Brae Street & 3rd Street	AM	11.9	B	12.0	B
		PM	13.0	B	13.2	B

Notes:

Delay is measured in seconds per vehicle

LOS = Level of service

Results per Synchro 10 (HCM 6th Edition methodology)

TABLE 8
FUTURE WITH PROJECT CONDITIONS (YEAR 2023)
INTERSECTION LEVELS OF SERVICE ANALYSIS

No	Intersection	Peak Hour	Future without Project		Future with Project	
			Delay	LOS	Delay	LOS
1.	Alvarado Street & 3rd Street	AM	28.8	C	29.1	C
		PM	28.3	C	28.6	C
2.	Bonnie Brae Street & 3rd Street	AM	13.2	B	13.3	B
		PM	14.9	B	15.0	B

Notes:

Delay is measured in seconds per vehicle

LOS = Level of service

Results per Synchro 10 (HCM 6 Edition methodology)

Attachment A

Memorandum of Understanding

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: Miramar Development

Project Address: 1917-2005 1/2 W 3rd Street

Project Description: The Project proposes to construct an affordable housing apartment building with 137 affordable units.

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

II. TRIP GENERATION

Geographic Distribution: N 25 % S 15 % E 35 % W 25 %

Illustration of Project trip distribution percentages at Study intersections attached? (Required) ☒ Yes ☐ No

Trip Generation Rate(s): ITE 10th Edition / Other LADOT Traffic Assessment Guidelines (TAG)

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

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

	IN	OUT	TOTAL	
AM Trips	<u>25</u>	<u>42</u>	<u>67</u>	Daily Trips <u>492</u> (From VMT Calculator)
PM Trips	<u>27</u>	<u>21</u>	<u>48</u>	

III. STUDY AREA AND ASSUMPTIONS

Project Buildout Year: 2023 Ambient Growth Rate: 1 % Per Yr.

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

Map of Study Intersections/Segments attached? ☒ Yes ☐ No

STUDY INTERSECTIONS (May be subject to LADOT revision after access, safety and circulation analysis)

- Alvarado Street & 3rd Street 4 _____
- Bonnie Brae Street & 3rd Street 5 _____
- _____ 6 _____

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

IV. ACCESS ASSESSMENT

Is the project on a lot that is 0.5-acre or more in total gross area? ☐ Yes ☒ No

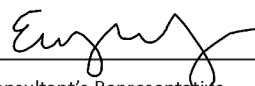
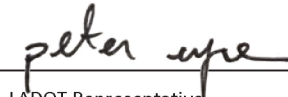
Is the project's frontage 250 linear feet or more along an Avenue or Boulevard as classified by the City's General Plan? ☒ Yes ☐ No

Is the project's building frontage encompassing an entire block along an Avenue or Boulevard as classified by the City's General Plan? ☐ Yes ☒ No

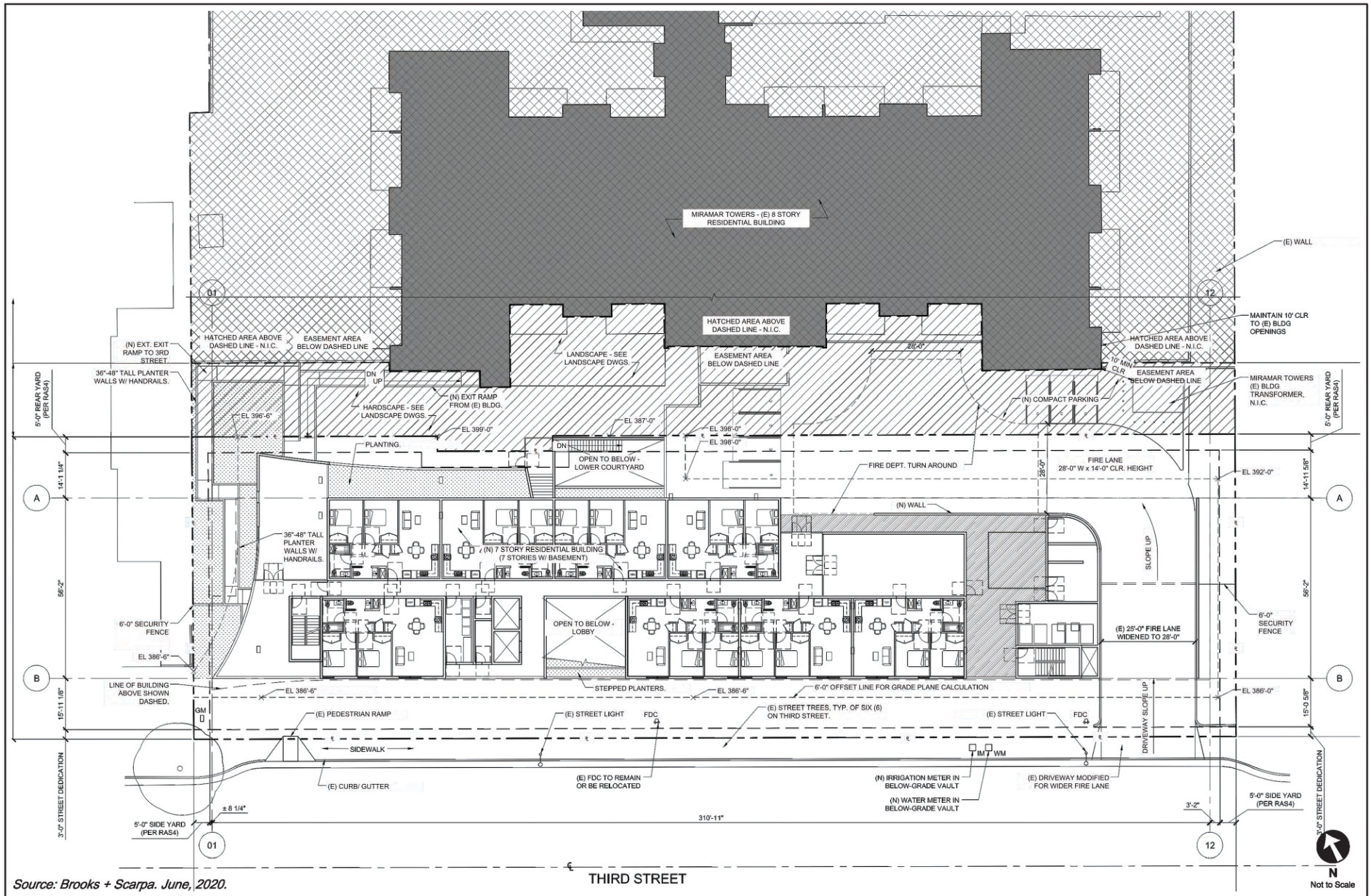
V. CONTACT INFORMATION

CONSULTANT
 Name: Gibson Transportation Consulting, Inc.
 Address: 555 W. 5th St., Suite 3375, Los Angeles, CA 90013
 Phone Number: (213) 683-0088
 E-Mail: ewong@gibsontrans.com

DEVELOPER
 Name: Miramar Development, LP
 Address: _____
 Phone Number: (917)-542-3618
 E-Mail: nzaccack@rosecompanies.com

Approved by: x 	<u>6-30-2020</u>	x 	<u>7/9/2020</u>
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.



Source: Brooks + Scarpa, June, 2020.

PROJECT SITE PLAN

FIGURE
1



STUDY AREA & ANALYZED INTERSECTIONS

FIGURE
2

TABLE 1
1917-2005 W 3RD STREET AFFORDABLE HOUSING
TRIP GENERATION ESTIMATES

Land Use	ITE Land Use Code	Size	Morning Peak Hour			Afternoon Peak Hour		
			In	Out	Total	In	Out	Total
<u>Trip Generation Rates</u>								
Affordable Housing - Family	[a]	per unit	37%	63%	0.49	56%	44%	0.35
<u>Proposed Project</u>								
Affordable Housing - Family	[a]	137 units	25	42	67	27	21	48
Total - Net New Project Trips			25	42	67	27	21	48

Notes

[a] The Project is located within 0.5 miles of numerous major transit stops, including the Metro 720 Rapid Bus at the Wilshire / Alvarado bus stop and the Metro B Line (Red) and D Line (Purple) Westlake / MacArthur Park Station. Therefore, the trip generation rates from LADOT *Transportation Assessment Guidelines* (July 2019) for affordable housing - family uses within a Transit Priority Area were utilized.



PROJECT TRIP DISTRIBUTION

FIGURE
3



PROJECT-ONLY
PEAK HOUR TRAFFIC VOLUMES

FIGURE
4

**TABLE 2
RELATED PROJECTS**

ID	Name	Address	Description	Trip Generation [a]						
				Daily Trips	Morning Peak Hour Trips			Afternoon Peak Hour Trips		
					In	Out	Total	In	Out	Total
1	Apartments	422 S Lake St	80 apartments	532	8	33	41	33	17	50
2	1930 Wilshire Mixed-Use	1930 W Wilshire Blvd	478 apartments, 850 seat theater, 50 student classroom, 220 hotel rooms	1,355	-44	128	85	103	-41	61
3	Mixed-Use	1800 W Beverly Blvd	243 apartments, 3,500 sf restaurant	1,585	36	93	129	92	51	143
4	425 S Union Apts	425 S Union Ave	33 apartments	213	3	13	16	13	7	20
5	Westlake Housing Project	619 S Westlake Ave	78 apartments	233	11	16	27	11	9	20
6	Fast Food with Drive-through	1501 W 6th St	1,665 sf fast food restaurant	784	17	16	33	14	13	27
7	Hotel	1631 W 3rd St	157 hotel rooms	1,174	46	31	77	49	40	89
8	Burlington Place	231 S Burlington Ave	130 apartments, 5,000 sf retail, 5,000 sf restaurant	1,322	33	57	90	67	41	108

Notes

[a] Source: Related project information based on available information provided by LADOT and Department of City Planning on June 10, 2020, and recent studies. Related projects include developments within one-quarter mile radius of the furthest outlying intersection, as suggested in the TAG. Therefore, Related Projects within 0.4-mile radius of the Project Site were considered.



LOCATIONS OF RELATED PROJECTS

FIGURE
5

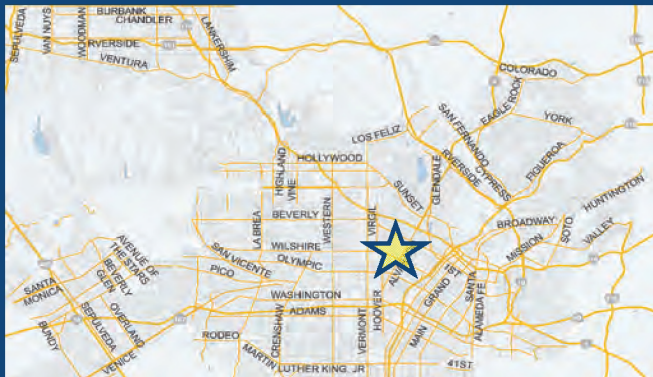
CITY OF LOS ANGELES VMT CALCULATOR Version 1.3



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

Project Information

Project:
 Scenario:
 Address:



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

☐ Yes ☐ No

Existing Land Use

Land Use Type	Value	Unit
Housing Single Family		DU

☐ 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	2	DU
Housing Affordable Housing - Family	137	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
0 Daily Vehicle Trips	492 Daily Vehicle Trips
0 Daily VMT	3,107 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	492 Net Daily Trips
The net increase in daily VMT ≤ 0	3,107 Net Daily VMT
The proposed project consists of only retail land uses ≤ 50,000 square feet total.	0.000 ksf
The proposed project is required to perform VMT analysis.	

Attachment B

Traffic Count Data

Location ID: 3
 North/South: Alvarado Street
 East/West: 3rd Street

Date: 04/27/16
 City: Los Angeles, CA

	Southbound			Westbound			Northbound			Eastbound			Totals:
	1	2	3	4	5	6	7	8	9	10	11	12	
Movements:	R	T	L	R	T	L	R	T	L	R	T	L	
7:00	40	233	27	23	148	26	23	222	32	18	124	24	940
7:15	35	249	21	21	176	18	18	216	14	14	174	30	986
7:30	44	255	23	28	171	22	21	272	28	14	242	32	1152
7:45	35	246	34	31	177	28	31	215	32	17	224	21	1091
8:00	45	231	22	25	154	24	24	222	29	17	236	33	1062
8:15	53	294	26	26	169	20	29	182	23	12	232	38	1104
8:30	51	229	20	24	153	21	18	192	18	18	276	35	1055
8:45	49	239	19	26	144	23	23	223	23	20	263	35	1087
9:00	46	259	32	23	153	25	19	197	26	25	263	31	1099
9:15	47	259	20	24	154	22	23	188	25	15	204	37	1018
9:30	48	221	24	28	145	30	17	202	25	18	224	29	1011
9:45	30	178	20	26	126	20	20	179	32	14	173	35	853

Total Volume:	523	2893	288	305	1870	279	266	2510	307	202	2635	380	12458
Approach %	14%	78%	8%	12%	76%	11%	9%	81%	10%	6%	82%	12%	

Peak Hr Begin:	7:30												
PHV	177	1026	105	110	671	94	105	891	112	60	934	124	4409
PHF		0.877			0.927			0.863			0.970		0.957

	Southbound			Westbound			Northbound			Eastbound			Totals:
	1	2	3	4	5	6	7	8	9	10	11	12	
Movements:	R	T	L	R	T	L	R	T	L	R	T	L	
15:00	41	184	16	25	135	17	20	304	27	27	165	33	994
15:15	39	195	20	26	152	22	23	288	28	24	186	28	1031
15:30	55	213	21	24	182	27	24	270	23	28	182	29	1078
15:45	48	231	24	31	178	33	19	311	32	22	196	25	1150
16:00	46	204	20	25	179	27	20	293	32	30	234	38	1148
16:15	44	188	20	29	143	20	22	309	26	26	216	34	1077
16:30	42	227	20	34	196	24	18	325	27	29	234	25	1201
16:45	24	198	17	21	160	24	18	348	23	28	231	39	1131
17:00	40	221	21	34	210	15	21	328	28	30	225	32	1205
17:15	40	221	16	35	215	25	26	338	30	30	241	32	1249
17:30	39	205	22	29	203	19	9	207	20	26	243	26	1048
17:45	45	207	15	33	220	19	9	160	18	22	242	25	1015

Total Volume:	503	2494	232	346	2173	272	229	3481	314	322	2595	366	13327
Approach %	16%	77%	7%	12%	78%	10%	6%	87%	8%	10%	79%	11%	

Peak Hr Begin:	16:30												
PHV	146	867	74	124	781	88	83	1339	108	117	931	128	4786
PHF		0.940			0.903			0.971			0.970		0.958

Leg:	North		East		South		West	
	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle
7:00	13	0	17	0	32	1	7	3
7:15	40	0	24	0	47	0	19	0
7:30	30	1	21	2	50	1	18	1
7:45	32	1	26	0	38	0	16	1
8:00	35	0	26	0	33	3	14	1
8:15	28	0	26	1	35	1	13	1
8:30	20	0	15	0	30	0	18	1
8:45	20	0	17	1	33	0	14	0
9:00	27	1	24	1	19	1	6	0
9:15	15	0	24	1	34	0	18	0
9:30	13	0	18	0	18	0	6	0
9:45	30	0	25	0	35	1	15	1

Leg:	North		East		South		West	
	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle
15:00	27	0	29	0	20	0	15	1
15:15	45	1	23	3	27	0	21	1
15:30	56	0	18	0	51	0	21	3
15:45	33	1	26	0	34	0	23	1
16:00	42	2	32	2	26	1	25	1
16:15	23	0	30	0	25	1	18	0
16:30	32	2	35	1	42	0	26	4
16:45	32	0	29	0	27	1	13	1
17:00	47	0	46	0	26	0	18	3
17:15	31	1	30	1	25	0	23	2
17:30	33	2	40	1	28	0	32	0
17:45	14	1	30	0	16	1	23	1

Turning Movement Count Report AM

Location ID: 13
 North/South: Bonnie Brae Street
 East/West: 3rd Street

Date: 11/16/16
 City: Los Angeles, CA

	Southbound			Westbound			Northbound			Eastbound			Totals:
	1	2	3	4	5	6	7	8	9	10	11	12	
Movements:	R	T	L	R	T	L	R	T	L	R	T	L	
7:00	24	30	10	10	157	4	16	32	9	18	171	11	492
7:15	17	20	12	9	184	5	10	47	10	17	251	18	600
7:30	25	48	19	12	224	5	19	51	10	18	277	19	727
7:45	21	51	25	13	232	13	20	40	5	13	255	27	715
8:00	19	55	15	8	154	51	8	30	4	10	250	14	618
8:15	23	32	16	11	183	4	10	27	4	12	280	19	621
8:30	20	34	20	8	167	7	13	22	7	13	246	16	573
8:45	28	41	16	9	184	5	12	21	5	5	247	13	586
9:00	20	42	11	5	155	4	1	19	3	13	243	11	527
9:15	13	40	14	5	166	2	8	21	2	5	214	19	509
9:30	20	22	17	13	171	2	6	11	6	8	207	21	504
9:45	24	20	15	8	175	7	3	11	7	6	189	11	476

Total Volume:	254	435	190	111	2152	109	126	332	72	138	2830	199	6948
Approach %	29%	49%	22%	5%	91%	5%	24%	63%	14%	4%	89%	6%	

Peak Hr Begin:	7:30												
PHV	88	186	75	44	793	73	57	148	23	53	1062	79	2681
PHF	0.899			0.882			0.713			0.951			0.922

Turning Movement Count Report PM

Location ID: 13
 North/South: Bonnie Brae Street
 East/West: 3rd Street

Date: 11/16/16
 City: Los Angeles, CA

	Southbound			Westbound			Northbound			Eastbound			Totals:
	1	2	3	4	5	6	7	8	9	10	11	12	
Movements:	R	T	L	R	T	L	R	T	L	R	T	L	
15:00	11	35	14	2	154	4	15	43	7	8	169	27	489
15:15	16	29	4	5	168	13	9	34	7	5	216	35	541
15:30	16	27	18	9	189	8	13	37	7	13	223	25	585
15:45	17	41	9	5	164	4	17	41	5	7	193	32	535
16:00	20	46	14	10	184	5	8	52	3	6	242	35	625
16:15	12	36	14	10	194	4	7	45	9	21	243	30	625
16:30	16	42	10	9	172	12	11	43	9	15	214	29	582
16:45	23	37	4	12	224	11	12	76	10	12	227	23	671
17:00	21	47	13	10	226	7	7	67	10	20	265	44	737
17:15	23	53	14	14	206	7	8	74	7	20	275	36	737
17:30	26	54	12	14	221	12	9	68	7	16	254	31	724
17:45	27	41	10	11	194	5	9	66	6	19	247	38	673

Total Volume:	228	488	136	111	2296	92	125	646	87	162	2768	385	7524
Approach %	27%	57%	16%	4%	92%	4%	15%	75%	10%	5%	83%	12%	

Peak Hr Begin:	17:00												
PHV	97	195	49	49	847	31	33	275	30	75	1041	149	2871
PHF	0.927			0.938			0.949			0.955			0.974

Pedestrian/Bicycle Count Report

	North		East		South		West	
Leg:	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle
7:00	15	0	33	0	17	1	21	0
7:15	22	0	46	0	57	0	26	1
7:30	80	0	87	0	118	0	71	0
7:45	51	1	42	0	66	1	33	1
8:00	24	1	23	0	26	0	15	3
8:15	16	1	21	0	20	0	19	2
8:30	15	0	23	1	22	0	13	0
8:45	20	0	25	0	22	1	14	0
9:00	7	0	14	0	23	0	8	0
9:15	31	0	29	0	28	0	13	0
9:30	19	0	15	0	20	0	14	0
9:45	18	0	22	0	28	0	11	0

	North		East		South		West	
Leg:	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle
15:00	33	0	28	1	64	0	20	2
15:15	22	0	25	2	44	1	11	1
15:30	31	1	28	1	43	1	14	0
15:45	26	1	28	0	28	2	27	0
16:00	35	1	21	0	40	1	18	0
16:15	22	0	25	0	43	2	18	0
16:30	20	0	27	0	32	0	31	2
16:45	17	0	32	0	41	0	19	0
17:00	20	0	31	3	45	4	11	0
17:15	23	1	34	0	27	2	27	2
17:30	20	0	41	0	52	1	11	0
17:45	22	0	60	0	46	1	30	0

Attachment C

Plans, Policies, and Programs Consistency Worksheet

Plans, Policies and Programs Consistency Worksheet

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

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

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

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

I. SCREENING CRITERIA FOR POLICY ANALYSIS

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

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

☒ Yes ☐ No

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

☐ Yes ☒ No

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

☒ Yes ☐ No

II. PLAN CONSISTENCY ANALYSIS

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

These questions address potential conflict with:

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 60/80 Required 56/86 Proposed 60/83

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

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

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

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

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

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

- 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 feet² along on the Avenue or Boulevard frontage, or
- locating new driveways on an Avenue or Boulevard within 150 feet from the intersecting street, or
- locating new driveways on a collector or local street within 75 feet from the intersecting street, or
- 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 amount⁴ 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

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) 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). 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.

Attachment D

VMT Worksheets

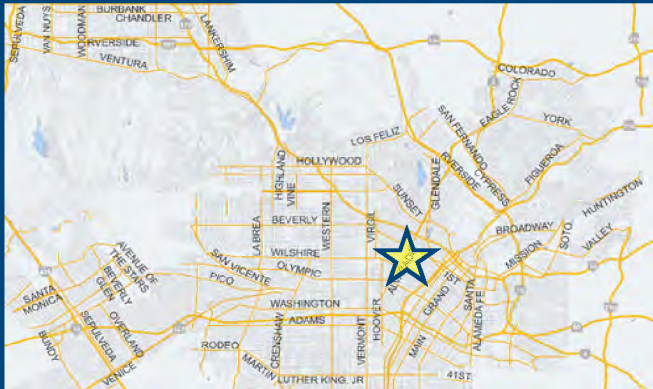
CITY OF LOS ANGELES VMT CALCULATOR Version 1.3



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

Project Information

Project:
 Scenario:
 Address:



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
Housing Single Family		DU

[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	137	DU
Housing Affordable Housing - Family	137	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 Project
0 Daily Vehicle Trips	492 Daily Vehicle Trips
0 Daily VMT	3,107 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 492
Net Daily Trips

The net increase in daily VMT ≤ 0 3,107
Net Daily VMT

The proposed project consists of only retail land uses ≤ 50,000 square feet total. 0.000
ksf

The proposed project is required to perform VMT analysis.

CITY OF LOS ANGELES VMT CALCULATOR Version 1.3

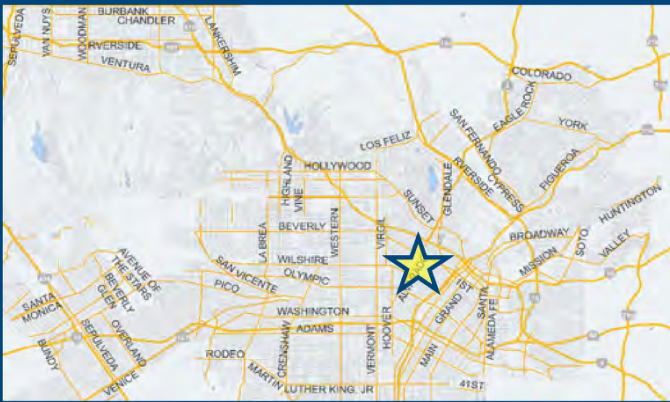


Project Information

Project:

Scenario:

Address:



Proposed Project Land Use Type	Value	Unit
Housing Affordable Housing - Family	137	DU

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
489 Daily Vehicle Trips	489 Daily Vehicle Trips
3,089 Daily VMT	3,089 Daily VMT
3.4 Household VMT per Capita	3.4 Household VMT per Capita
N/A Work VMT per Employee	N/A Work VMT per Employee

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



CITY OF LOS ANGELES VMT CALCULATOR

Report 1: Project & Analysis Overview

Date: July 15, 2020

Project Name: Miramar Development

Project Scenario:

Project Address: 1917 W 3RD ST, 90057



Version 1.3

Project Information			
Land Use Type		Value	Units
Housing	Single Family	0	DU
	Multi Family	0	DU
	Townhouse	0	DU
	Hotel	0	Rooms
	Motel	0	Rooms
Affordable Housing	Family	137	DU
	Senior	0	DU
	Special Needs	0	DU
	Permanent Supportive	0	DU
Retail	General Retail	0.000	ksf
	Furniture Store	0.000	ksf
	Pharmacy/Drugstore	0.000	ksf
	Supermarket	0.000	ksf
	Bank	0.000	ksf
	Health Club	0.000	ksf
	High-Turnover Sit-Down Restaurant	0.000	ksf
	Fast-Food Restaurant	0.000	ksf
	Quality Restaurant	0.000	ksf
	Auto Repair	0.000	ksf
	Home Improvement	0.000	ksf
	Free-Standing Discount	0.000	ksf
	Movie Theater	0	Seats
Office	General Office	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

Project and Analysis Overview

CITY OF LOS ANGELES VMT CALCULATOR

Report 1: Project & Analysis Overview

Date: July 15, 2020

Project Name: Miramar Development

Project Scenario:

Project Address: 1917 W 3RD ST, 90057



Version 1.3

Analysis Results			
Total Employees: 0			
Total Population: 430			
Proposed Project		With Mitigation	
489	Daily Vehicle Trips	489	Daily Vehicle Trips
3,089	Daily VMT	3,089	Daily VMT
3.4	Household VMT per Capita	3.4	Household VMT per Capita
N/A	Work VMT per Employee	N/A	Work VMT per Employee
Significant VMT Impact?			
APC: Central			
Impact Threshold: 15% Below APC Average			
Household = 6.0			
Work = 7.6			
Proposed Project		With Mitigation	
VMT Threshold	Impact	VMT Threshold	Impact
Household > 6.0	No	Household > 6.0	No
Work > 7.6	N/A	Work > 7.6	N/A

CITY OF LOS ANGELES VMT CALCULATOR

Report 2: TDM Inputs

Date: July 15, 2020

Project Name: Miramar Development

Project Scenario:

Project Address: 1917 W 3RD ST, 90057



Version 1.3

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

CITY OF LOS ANGELES VMT CALCULATOR

Report 2: TDM Inputs

Date: July 15, 2020

Project Name: Miramar Development

Project Scenario:

Project Address: 1917 W 3RD ST, 90057



Version 1.3

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

CITY OF LOS ANGELES VMT CALCULATOR

Report 2: TDM Inputs

Date: July 15, 2020

Project Name: Miramar Development

Project Scenario:

Project Address: 1917 W 3RD ST, 90057



Version 1.3

TDM Strategy Inputs, Cont.				
Strategy Type		Description	Proposed Project	Mitigations
Commute Trip Reductions	Required commute trip reduction program	Employees participating (%)	0%	0%
	Alternative Work Schedules and Telecommute	Employees participating (%)	0%	0%
		Type of program	0	0
		Degree of implementation (low, medium, high)	0	0
	Employer sponsored vanpool or shuttle	Employees eligible (%)	0%	0%
		Employer size (small, medium, large)	0	0
	Ride-share program	Employees eligible (%)	0%	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)				

CITY OF LOS ANGELES VMT CALCULATOR

Report 2: TDM Inputs

Date: July 15, 2020

Project Name: Miramar Development

Project Scenario:

Project Address: 1917 W 3RD ST, 90057



Version 1.3

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

CITY OF LOS ANGELES VMT CALCULATOR

Report 3: TDM Outputs

Date: July 15, 2020
 Project Name: Miramar Development
 Project Scenario:
 Project Address: 1917 W 3RD ST, 90057



Version 1.3

TDM Adjustments by Trip Purpose & Strategy

Place type: Urban

		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	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	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%	

CITY OF LOS ANGELES VMT CALCULATOR

Report 3: TDM Outputs

Date: July 15, 2020
 Project Name: Miramar Development
 Project Scenario:
 Project Address: 1917 W 3RD ST, 90057



Version 1.3

TDM Adjustments by Trip Purpose & Strategy, Cont.

Place type: Urban

		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		1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
MAX. TDM EFFECT		1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%

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

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

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

CITY OF LOS ANGELES VMT CALCULATOR

Report 4: MXD Methodology

Date: July 15, 2020

Project Name: Miramar Development

Project Scenario:

Project Address: 1917 W 3RD ST, 90057



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	116	-22.4%	90	7.2	835	648
Home Based Other Production	321	-49.2%	163	5.0	1,605	815
Non-Home Based Other Production	150	-7.3%	139	7.3	1,095	1,015
Home-Based Work Attraction	0	0.0%	0	10.9	0	0
Home-Based Other Attraction	153	-56.2%	67	5.9	903	395
Non-Home Based Other Attraction	36	-8.3%	33	7.1	256	234

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	-0.6%	89	644	-0.6%	89	644
Home Based Other Production	-0.6%	162	810	-0.6%	162	810
Non-Home Based Other Production	-0.6%	138	1,009	-0.6%	138	1,009
Home-Based Work Attraction	-0.6%	0	0	-0.6%	0	0
Home-Based Other Attraction	-0.6%	67	393	-0.6%	67	393
Non-Home Based Other Attraction	-0.6%	33	233	-0.6%	33	233

MXD VMT Methodology Per Capita & Per Employee

Total Population: 430

Total Employees: 0

APC: Central

	Proposed Project	Project with Mitigation Measures
Total Home Based Production VMT	1,454	1,454
Total Home Based Work Attraction VMT	0	0
Total Home Based VMT Per Capita	3.4	3.4
Total Work Based VMT Per Employee	N/A	N/A

Attachment E
HCM Worksheets

HCM 6th Signalized Intersection Summary

1: Alvarado Street & 3rd Street

07/16/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	129	971	62	98	698	114	116	927	109	109	1067	184
Future Volume (veh/h)	129	971	62	98	698	114	116	927	109	109	1067	184
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	140	1055	67	107	759	124	126	1008	118	118	1160	200
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	232	1459	93	167	1315	215	181	1442	169	179	1972	340
Arrive On Green	0.43	0.43	0.43	0.43	0.43	0.43	0.45	0.45	0.45	0.45	0.45	0.45
Sat Flow, veh/h	629	3393	215	502	3058	499	400	3205	375	500	4383	755
Grp Volume(v), veh/h	140	552	570	107	441	442	126	559	567	118	901	459
Grp Sat Flow(s),veh/h/ln	629	1777	1832	502	1777	1780	400	1777	1803	500	1702	1734
Q Serve(g_s), s	19.5	23.1	23.2	15.5	16.9	16.9	22.7	22.7	22.7	17.8	17.8	17.8
Cycle Q Clear(g_c), s	36.5	23.1	23.2	38.7	16.9	16.9	40.5	22.7	22.7	40.5	17.8	17.8
Prop In Lane	1.00		0.12	1.00		0.28	1.00		0.21	1.00		0.44
Lane Grp Cap(c), veh/h	232	764	788	167	764	766	181	800	811	179	1532	780
V/C Ratio(X)	0.60	0.72	0.72	0.64	0.58	0.58	0.70	0.70	0.70	0.66	0.59	0.59
Avail Cap(c_a), veh/h	232	764	788	167	764	766	181	800	811	179	1532	780
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)	1.00	1.00	1.00	0.86	0.86	0.86	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.3	21.2	21.2	38.7	19.4	19.4	35.9	19.9	19.9	37.6	18.5	18.5
Incr Delay (d2), s/veh	11.1	5.9	5.7	15.2	2.7	2.7	11.1	2.7	2.7	8.7	0.6	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	6.4	15.4	15.8	5.5	11.2	11.2	6.0	14.5	14.7	5.5	11.0	11.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	44.4	27.1	26.9	53.9	22.2	22.2	47.0	22.6	22.5	46.2	19.1	19.7
LnGrp LOS	D	C	C	D	C	C	D	C	C	D	B	B
Approach Vol, veh/h	1262			990			1252			1478		
Approach Delay, s/veh	28.9			25.6			25.0			21.4		
Approach LOS	C			C			C			C		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	44.0			46.0			44.0			46.0		
Change Period (Y+Rc), s	* 5.3			* 5.5			* 5.3			* 5.5		
Max Green Setting (Gmax), s	* 39			* 41			* 39			* 41		
Max Q Clear Time (g_c+I1), s	40.7			42.5			38.5			42.5		
Green Ext Time (p_c), s	0.0			0.0			0.2			0.0		
Intersection Summary												
HCM 6th Ctrl Delay	25.1											
HCM 6th LOS	C											
Notes												

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

HCM 6th Signalized Intersection Summary

2: Bonnie Brae Street & 3rd Street

07/16/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	82	1104	55	76	825	46	24	154	59	78	193	92
Future Volume (veh/h)	82	1104	55	76	825	46	24	154	59	78	193	92
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	89	1200	60	83	897	50	26	167	64	85	210	100
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	385	2039	102	285	2026	113	79	230	80	299	285	136
Arrive On Green	0.59	0.59	0.59	0.59	0.59	0.59	0.24	0.24	0.24	0.24	0.24	0.24
Sat Flow, veh/h	592	3444	172	440	3422	191	54	966	338	1149	1197	570
Grp Volume(v), veh/h	89	619	641	83	466	481	257	0	0	85	0	310
Grp Sat Flow(s),veh/h/ln	592	1777	1839	440	1777	1836	1358	0	0	1149	0	1768
Q Serve(g_s), s	5.9	13.1	13.1	8.7	8.7	8.7	1.7	0.0	0.0	0.0	0.0	9.7
Cycle Q Clear(g_c), s	14.6	13.1	13.1	21.8	8.7	8.7	11.5	0.0	0.0	6.8	0.0	9.7
Prop In Lane	1.00		0.09	1.00		0.10	0.10		0.25	1.00		0.32
Lane Grp Cap(c), veh/h	385	1052	1089	285	1052	1087	389	0	0	299	0	421
V/C Ratio(X)	0.23	0.59	0.59	0.29	0.44	0.44	0.66	0.00	0.00	0.28	0.00	0.74
Avail Cap(c_a), veh/h	385	1052	1089	285	1052	1087	548	0	0	409	0	589
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)	0.45	0.45	0.45	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	10.8	7.7	7.7	14.5	6.8	6.8	20.8	0.0	0.0	20.0	0.0	21.1
Incr Delay (d2), s/veh	0.6	1.1	1.1	2.6	1.4	1.3	1.9	0.0	0.0	0.5	0.0	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	1.3	6.0	6.1	1.7	4.9	5.0	5.8	0.0	0.0	1.8	0.0	7.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	11.4	8.8	8.7	17.1	8.1	8.1	22.8	0.0	0.0	20.5	0.0	24.1
LnGrp LOS	B	A	A	B	A	A	C	A	A	C	A	C
Approach Vol, veh/h	1349			1030			257			395		
Approach Delay, s/veh	8.9			8.8			22.8			23.4		
Approach LOS	A			A			C			C		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	40.5			19.5			40.5			19.5		
Change Period (Y+Rc), s	* 5			* 5.2			* 5			* 5.2		
Max Green Setting (Gmax), s	* 30			* 20			* 30			* 20		
Max Q Clear Time (g_c+I1), s	23.8			11.7			16.6			13.5		
Green Ext Time (p_c), s	4.4			1.5			10.3			0.8		
Intersection Summary												
HCM 6th Ctrl Delay	11.9											
HCM 6th LOS	B											
Notes												

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

HCM 6th Signalized Intersection Summary

1: Alvarado Street & 3rd Street

07/30/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			  			 	
Traffic Volume (veh/h)	133	968	122	92	812	129	112	1393	86	77	902	152
Future Volume (veh/h)	133	968	122	92	812	129	112	1393	86	77	902	152
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	145	1052	133	100	883	140	122	1514	93	84	980	165
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	198	1397	176	156	1352	214	187	2317	142	154	1434	241
Arrive On Green	0.44	0.44	0.43	0.44	0.44	0.43	0.47	0.47	0.45	0.47	0.47	0.45
Sat Flow, veh/h	551	3174	401	473	3072	487	491	4918	302	316	3043	512
Grp Volume(v), veh/h	145	588	597	100	511	512	122	1048	559	84	572	573
Grp Sat Flow(s),veh/h/ln	551	1777	1798	473	1777	1783	491	1702	1816	316	1777	1778
Q Serve(g_s), s	19.2	25.0	25.1	14.5	20.3	20.4	19.7	21.2	21.2	21.2	22.6	22.7
Cycle Q Clear(g_c), s	39.6	25.0	25.1	39.6	20.3	20.4	42.4	21.2	21.2	42.4	22.6	22.7
Prop In Lane	1.00		0.22	1.00		0.27	1.00		0.17	1.00		0.29
Lane Grp Cap(c), veh/h	198	782	791	156	782	784	187	1604	856	154	837	838
V/C Ratio(X)	0.73	0.75	0.75	0.64	0.65	0.65	0.65	0.65	0.65	0.54	0.68	0.68
Avail Cap(c_a), veh/h	198	782	791	156	782	784	187	1604	856	154	837	838
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)	1.00	1.00	1.00	0.78	0.78	0.78	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.2	21.1	21.3	39.5	19.8	20.0	36.4	18.2	18.3	35.6	18.6	18.8
Incr Delay (d2), s/veh	21.3	6.6	6.6	14.6	3.3	3.3	7.8	1.0	1.8	3.9	2.3	2.3
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	7.8	16.5	16.7	5.1	12.7	12.9	5.6	12.7	13.7	3.6	14.2	14.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	58.5	27.7	27.8	54.1	23.1	23.3	44.1	19.1	20.1	39.6	20.9	21.1
LnGrp LOS	E	C	C	D	C	C	D	B	C	D	C	C
Approach Vol, veh/h	1330			1123			1729			1229		
Approach Delay, s/veh	31.1			25.9			21.2			22.2		
Approach LOS	C			C			C			C		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	43.6			46.4			43.6			46.4		
Change Period (Y+Rc), s	* 5.3			* 5.5			* 5.3			* 5.5		
Max Green Setting (Gmax), s	* 38			* 41			* 38			* 41		
Max Q Clear Time (g_c+I1), s	41.6			44.4			41.6			44.4		
Green Ext Time (p_c), s	0.0			0.0			0.0			0.0		
Intersection Summary												
HCM 6th Ctrl Delay	24.9											
HCM 6th LOS	C											
Notes												

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

HCM 6th Signalized Intersection Summary

2: Bonnie Brae Street & 3rd Street

07/30/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	155	1083	78	32	881	51	31	286	34	51	203	101
Future Volume (veh/h)	155	1083	78	32	881	51	31	286	34	51	203	101
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	168	1177	85	35	958	55	34	311	37	55	221	110
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	332	1866	135	258	1896	109	89	423	48	333	367	183
Arrive On Green	0.56	0.56	0.54	0.56	0.56	0.54	0.31	0.31	0.29	0.31	0.31	0.29
Sat Flow, veh/h	556	3361	242	439	3416	196	75	1356	153	1033	1178	586
Grp Volume(v), veh/h	168	622	640	35	498	515	382	0	0	55	0	331
Grp Sat Flow(s),veh/h/ln	556	1777	1827	439	1777	1835	1585	0	0	1033	0	1765
Q Serve(g_s), s	16.1	14.4	14.5	3.6	10.4	10.4	4.1	0.0	0.0	0.0	0.0	9.6
Cycle Q Clear(g_c), s	26.5	14.4	14.5	18.0	10.4	10.4	13.7	0.0	0.0	4.5	0.0	9.6
Prop In Lane	1.00		0.13	1.00		0.11	0.09		0.10	1.00		0.33
Lane Grp Cap(c), veh/h	332	986	1014	258	986	1019	559	0	0	333	0	550
V/C Ratio(X)	0.51	0.63	0.63	0.14	0.51	0.51	0.68	0.00	0.00	0.17	0.00	0.60
Avail Cap(c_a), veh/h	332	986	1014	258	986	1019	803	0	0	480	0	800
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)	0.43	0.43	0.43	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	16.5	9.1	9.2	15.3	8.3	8.3	18.6	0.0	0.0	15.8	0.0	17.7
Incr Delay (d2), s/veh	2.4	1.3	1.3	1.1	1.8	1.8	1.5	0.0	0.0	0.2	0.0	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	3.5	6.7	7.0	0.7	6.3	6.5	8.4	0.0	0.0	1.0	0.0	6.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.8	10.5	10.5	16.4	10.1	10.1	20.1	0.0	0.0	16.0	0.0	18.7
LnGrp LOS	B	B	B	B	B	B	C	A	A	B	A	B
Approach Vol, veh/h	1430			1048			382			386		
Approach Delay, s/veh	11.5			10.3			20.1			18.4		
Approach LOS	B			B			C			B		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	37.3			22.7			37.3			22.7		
Change Period (Y+Rc), s	* 5			* 5.2			* 5			* 5.2		
Max Green Setting (Gmax), s	* 24			* 26			* 24			* 26		
Max Q Clear Time (g_c+I1), s	20.0			11.6			28.5			15.7		
Green Ext Time (p_c), s	2.9			2.1			0.0			1.8		
Intersection Summary												
HCM 6th Ctrl Delay	12.9											
HCM 6th LOS	B											
Notes												

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

HCM 6th Signalized Intersection Summary

1: Alvarado Street & 3rd Street

07/16/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	129	977	62	102	709	120	116	927	112	113	1067	184
Future Volume (veh/h)	129	977	62	102	709	120	116	927	112	113	1067	184
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	140	1062	67	111	771	130	126	1008	122	123	1160	200
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	226	1460	92	165	1308	221	181	1436	174	178	1972	340
Arrive On Green	0.43	0.43	0.43	0.43	0.43	0.43	0.45	0.45	0.45	0.45	0.45	0.45
Sat Flow, veh/h	618	3395	214	499	3042	513	400	3192	386	498	4383	755
Grp Volume(v), veh/h	140	556	573	111	450	451	126	561	569	123	901	459
Grp Sat Flow(s),veh/h/ln	618	1777	1832	499	1777	1778	400	1777	1801	498	1702	1734
Q Serve(g_s), s	20.1	23.3	23.4	15.3	17.4	17.4	22.7	22.8	22.9	17.6	17.8	17.8
Cycle Q Clear(g_c), s	37.5	23.3	23.4	38.7	17.4	17.4	40.5	22.8	22.9	40.5	17.8	17.8
Prop In Lane	1.00		0.12	1.00		0.29	1.00		0.21	1.00		0.44
Lane Grp Cap(c), veh/h	226	764	788	165	764	765	181	800	810	178	1532	780
V/C Ratio(X)	0.62	0.73	0.73	0.67	0.59	0.59	0.70	0.70	0.70	0.69	0.59	0.59
Avail Cap(c_a), veh/h	226	764	788	165	764	765	181	800	810	178	1532	780
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)	1.00	1.00	1.00	0.86	0.86	0.86	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.9	21.3	21.3	39.1	19.6	19.6	35.9	19.9	19.9	38.0	18.5	18.5
Incr Delay (d2), s/veh	12.1	6.0	5.8	17.3	2.9	2.9	11.1	2.8	2.7	11.0	0.6	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	6.6	15.5	15.9	5.8	11.4	11.4	6.0	14.6	14.7	5.9	11.0	11.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.0	27.3	27.1	56.4	22.4	22.4	47.0	22.7	22.6	49.0	19.1	19.7
LnGrp LOS	D	C	C	E	C	C	D	C	C	D	B	B
Approach Vol, veh/h	1269			1012			1256			1483		
Approach Delay, s/veh	29.3			26.2			25.1			21.8		
Approach LOS	C			C			C			C		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	44.0			46.0			44.0			46.0		
Change Period (Y+Rc), s	* 5.3			* 5.5			* 5.3			* 5.5		
Max Green Setting (Gmax), s	* 39			* 41			* 39			* 41		
Max Q Clear Time (g_c+l1), s	40.7			42.5			39.5			42.5		
Green Ext Time (p_c), s	0.0			0.0			0.0			0.0		
Intersection Summary												
HCM 6th Ctrl Delay	25.4											
HCM 6th LOS	C											
Notes												

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

HCM 6th Signalized Intersection Summary

2: Bonnie Brae Street & 3rd Street

07/16/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	86	1119	57	76	834	46	25	154	59	78	193	95
Future Volume (veh/h)	86	1119	57	76	834	46	25	154	59	78	193	95
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	93	1216	62	83	907	50	27	167	64	85	210	103
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	379	2029	103	278	2019	111	80	230	80	300	285	140
Arrive On Green	0.59	0.59	0.59	0.59	0.59	0.59	0.24	0.24	0.24	0.24	0.24	0.24
Sat Flow, veh/h	587	3440	175	433	3424	189	56	957	334	1149	1185	581
Grp Volume(v), veh/h	93	628	650	83	471	486	258	0	0	85	0	313
Grp Sat Flow(s),veh/h/ln	587	1777	1839	433	1777	1836	1347	0	0	1149	0	1766
Q Serve(g_s), s	6.3	13.4	13.5	9.0	8.9	8.9	1.8	0.0	0.0	0.0	0.0	9.8
Cycle Q Clear(g_c), s	15.2	13.4	13.5	22.5	8.9	8.9	11.6	0.0	0.0	6.8	0.0	9.8
Prop In Lane	1.00		0.10	1.00		0.10	0.10		0.25	1.00		0.33
Lane Grp Cap(c), veh/h	379	1048	1084	278	1048	1083	390	0	0	300	0	424
V/C Ratio(X)	0.25	0.60	0.60	0.30	0.45	0.45	0.66	0.00	0.00	0.28	0.00	0.74
Avail Cap(c_a), veh/h	379	1048	1084	278	1048	1083	545	0	0	407	0	589
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)	0.43	0.43	0.43	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	11.1	7.8	7.8	15.0	6.9	6.9	20.8	0.0	0.0	19.9	0.0	21.0
Incr Delay (d2), s/veh	0.7	1.1	1.1	2.7	1.4	1.3	1.9	0.0	0.0	0.5	0.0	3.1
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	1.4	6.1	6.3	1.8	5.0	5.2	5.8	0.0	0.0	1.8	0.0	7.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	11.8	8.9	8.9	17.7	8.3	8.2	22.7	0.0	0.0	20.4	0.0	24.1
LnGrp LOS	B	A	A	B	A	A	C	A	A	C	A	C
Approach Vol, veh/h	1371		1040				258		398			
Approach Delay, s/veh	9.1		9.0				22.7		23.3			
Approach LOS	A		A				C		C			
Timer - Assigned Phs	2		4		6		8					
Phs Duration (G+Y+Rc), s	40.4		19.6		40.4		19.6					
Change Period (Y+Rc), s	* 5		* 5.2		* 5		* 5.2					
Max Green Setting (Gmax), s	* 30		* 20		* 30		* 20					
Max Q Clear Time (g_c+I1), s	24.5		11.8		17.2		13.6					
Green Ext Time (p_c), s	4.0		1.5		10.0		0.8					
Intersection Summary												
HCM 6th Ctrl Delay	12.0											
HCM 6th LOS	B											
Notes												

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

HCM 6th Signalized Intersection Summary

1: Alvarado Street & 3rd Street

07/16/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			  			 	
Traffic Volume (veh/h)	133	975	122	94	817	132	112	1393	89	81	902	152
Future Volume (veh/h)	133	975	122	94	817	132	112	1393	89	81	902	152
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	145	1060	133	102	888	143	122	1514	97	88	980	165
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	216	1483	186	173	1430	230	168	2179	140	142	1353	228
Arrive On Green	0.47	0.47	0.45	0.47	0.47	0.45	0.44	0.44	0.43	0.44	0.44	0.43
Sat Flow, veh/h	547	3177	398	469	3065	494	491	4904	314	314	3043	512
Grp Volume(v), veh/h	145	592	601	102	515	516	122	1051	560	88	572	573
Grp Sat Flow(s),veh/h/ln	547	1777	1799	469	1777	1782	491	1702	1814	314	1777	1778
Q Serve(g_s), s	22.3	24.0	24.1	17.9	19.6	19.7	16.1	22.3	22.4	17.6	23.7	23.9
Cycle Q Clear(g_c), s	42.0	24.0	24.1	42.0	19.6	19.7	40.0	22.3	22.4	40.0	23.7	23.9
Prop In Lane	1.00		0.22	1.00		0.28	1.00		0.17	1.00		0.29
Lane Grp Cap(c), veh/h	216	829	839	173	829	831	168	1513	806	142	790	790
V/C Ratio(X)	0.67	0.71	0.72	0.59	0.62	0.62	0.73	0.69	0.69	0.62	0.72	0.73
Avail Cap(c_a), veh/h	216	829	839	173	829	831	168	1513	806	142	790	790
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)	1.00	1.00	1.00	0.81	0.81	0.81	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.5	19.2	19.4	36.8	18.0	18.2	39.2	20.1	20.2	38.8	20.5	20.7
Incr Delay (d2), s/veh	15.5	5.2	5.2	11.4	2.8	2.8	14.5	1.4	2.6	8.1	3.3	3.3
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	7.2	15.5	15.8	5.0	12.2	12.4	6.1	13.5	14.6	4.1	15.2	15.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.0	24.4	24.5	48.2	20.9	21.0	53.7	21.5	22.8	47.0	23.8	24.0
LnGrp LOS	D	C	C	D	C	C	D	C	C	D	C	C
Approach Vol, veh/h	1338			1133			1733			1233		
Approach Delay, s/veh	27.2			23.4			24.2			25.6		
Approach LOS	C			C			C			C		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	46.0			44.0			46.0			44.0		
Change Period (Y+Rc), s	* 5.3			* 5.5			* 5.3			* 5.5		
Max Green Setting (Gmax), s	* 41			* 39			* 41			* 39		
Max Q Clear Time (g_c+I1), s	44.0			42.0			44.0			42.0		
Green Ext Time (p_c), s	0.0			0.0			0.0			0.0		
Intersection Summary												
HCM 6th Ctrl Delay	25.1											
HCM 6th LOS	C											
Notes												

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

HCM 6th Signalized Intersection Summary

2: Bonnie Brae Street & 3rd Street

07/16/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	157	1090	79	32	890	51	32	286	34	51	203	104
Future Volume (veh/h)	157	1090	79	32	890	51	32	286	34	51	203	104
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	171	1185	86	35	967	55	35	311	37	55	221	113
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	333	1880	136	259	1912	109	88	404	46	318	358	183
Arrive On Green	0.56	0.56	0.54	0.56	0.56	0.54	0.31	0.31	0.29	0.31	0.31	0.29
Sat Flow, veh/h	552	3360	244	436	3418	194	74	1317	149	1033	1167	596
Grp Volume(v), veh/h	171	626	645	35	503	519	383	0	0	55	0	334
Grp Sat Flow(s),veh/h/ln	552	1777	1827	436	1777	1835	1539	0	0	1033	0	1763
Q Serve(g_s), s	16.6	14.4	14.5	3.6	10.4	10.5	4.6	0.0	0.0	0.0	0.0	9.8
Cycle Q Clear(g_c), s	27.0	14.4	14.5	18.0	10.4	10.5	14.4	0.0	0.0	4.7	0.0	9.8
Prop In Lane	1.00		0.13	1.00		0.11	0.09		0.10	1.00		0.34
Lane Grp Cap(c), veh/h	333	994	1022	259	994	1027	538	0	0	318	0	541
V/C Ratio(X)	0.51	0.63	0.63	0.14	0.51	0.51	0.71	0.00	0.00	0.17	0.00	0.62
Avail Cap(c_a), veh/h	333	994	1022	259	994	1027	618	0	0	366	0	623
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)	0.49	0.49	0.49	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	16.4	9.0	9.1	15.2	8.1	8.2	19.1	0.0	0.0	16.0	0.0	18.0
Incr Delay (d2), s/veh	2.8	1.5	1.5	1.1	1.8	1.8	3.3	0.0	0.0	0.3	0.0	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	3.6	7.0	7.2	0.7	6.3	6.5	8.9	0.0	0.0	1.0	0.0	7.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.2	10.5	10.5	16.2	10.0	9.9	22.3	0.0	0.0	16.3	0.0	19.4
LnGrp LOS	B	B	B	B	A	A	C	A	A	B	A	B
Approach Vol, veh/h	1442			1057			383			389		
Approach Delay, s/veh	11.5			10.2			22.3			19.0		
Approach LOS	B			B			C			B		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	37.6			22.4			37.6			22.4		
Change Period (Y+Rc), s	* 5			* 5.2			* 5			* 5.2		
Max Green Setting (Gmax), s	* 30			* 20			* 30			* 20		
Max Q Clear Time (g_c+I1), s	20.0			11.8			29.0			16.4		
Green Ext Time (p_c), s	6.7			1.5			0.7			0.8		
Intersection Summary												
HCM 6th Ctrl Delay	13.2											
HCM 6th LOS	B											
Notes												

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

HCM 6th Signalized Intersection Summary

1: Alvarado Street & 3rd Street

07/16/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	133	1016	61	106	751	127	152	987	147	115	1096	190
Future Volume (veh/h)	133	1016	61	106	751	127	152	987	147	115	1096	190
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	145	1104	66	115	816	138	165	1073	160	125	1191	207
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	210	1465	88	155	1307	221	174	1396	208	152	1970	342
Arrive On Green	0.43	0.43	0.43	0.43	0.43	0.43	0.45	0.45	0.45	0.45	0.45	0.45
Sat Flow, veh/h	588	3407	204	480	3040	514	386	3102	462	452	4377	761
Grp Volume(v), veh/h	145	576	594	115	477	477	165	614	619	125	926	472
Grp Sat Flow(s),veh/h/ln	588	1777	1834	480	1777	1778	386	1777	1787	452	1702	1733
Q Serve(g_s), s	19.9	24.6	24.6	14.1	18.8	18.8	22.0	26.1	26.2	14.3	18.5	18.5
Cycle Q Clear(g_c), s	38.7	24.6	24.6	38.7	18.8	18.8	40.5	26.1	26.2	40.5	18.5	18.5
Prop In Lane	1.00		0.11	1.00		0.29	1.00		0.26	1.00		0.44
Lane Grp Cap(c), veh/h	210	764	788	155	764	764	174	800	804	152	1532	780
V/C Ratio(X)	0.69	0.75	0.75	0.74	0.62	0.62	0.95	0.77	0.77	0.82	0.60	0.60
Avail Cap(c_a), veh/h	210	764	788	155	764	764	174	800	804	152	1532	780
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)	1.00	1.00	1.00	0.83	0.83	0.83	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.1	21.6	21.6	40.4	20.0	20.0	38.7	20.8	20.8	40.9	18.7	18.7
Incr Delay (d2), s/veh	17.1	6.8	6.6	23.1	3.2	3.2	52.6	4.5	4.6	29.5	0.7	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	7.5	16.3	16.7	6.3	12.1	12.1	10.3	16.7	16.8	7.2	11.4	11.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.1	28.4	28.2	63.5	23.2	23.2	91.3	25.3	25.4	70.4	19.4	20.0
LnGrp LOS	D	C	C	E	C	C	F	C	C	E	B	C
Approach Vol, veh/h	1315			1069			1398			1523		
Approach Delay, s/veh	31.1			27.5			33.2			23.8		
Approach LOS	C			C			C			C		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	44.0			46.0			44.0			46.0		
Change Period (Y+Rc), s	* 5.3			* 5.5			* 5.3			* 5.5		
Max Green Setting (Gmax), s	* 39			* 41			* 39			* 41		
Max Q Clear Time (g_c+I1), s	40.7			42.5			40.7			42.5		
Green Ext Time (p_c), s	0.0			0.0			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.

HCM 6th Signalized Intersection Summary

2: Bonnie Brae Street & 3rd Street

07/16/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	87	1190	67	86	873	47	36	164	71	80	203	96
Future Volume (veh/h)	87	1190	67	86	873	47	36	164	71	80	203	96
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	95	1293	73	93	949	51	39	178	77	87	221	104
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	343	1924	108	238	1929	104	90	240	93	306	322	151
Arrive On Green	0.56	0.56	0.56	0.56	0.56	0.56	0.27	0.27	0.27	0.27	0.27	0.27
Sat Flow, veh/h	563	3420	193	398	3430	184	83	898	348	1125	1203	566
Grp Volume(v), veh/h	95	671	695	93	492	508	294	0	0	87	0	325
Grp Sat Flow(s),veh/h/ln	563	1777	1836	398	1777	1837	1328	0	0	1125	0	1768
Q Serve(g_s), s	7.4	15.9	16.0	12.9	10.0	10.0	3.4	0.0	0.0	0.0	0.0	9.9
Cycle Q Clear(g_c), s	17.4	15.9	16.0	28.9	10.0	10.0	13.3	0.0	0.0	7.4	0.0	9.9
Prop In Lane	1.00		0.11	1.00		0.10	0.13		0.26	1.00		0.32
Lane Grp Cap(c), veh/h	343	1000	1033	238	1000	1033	423	0	0	306	0	473
V/C Ratio(X)	0.28	0.67	0.67	0.39	0.49	0.49	0.69	0.00	0.00	0.28	0.00	0.69
Avail Cap(c_a), veh/h	343	1000	1033	238	1000	1033	530	0	0	380	0	589
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)	0.31	0.31	0.31	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	13.2	9.2	9.2	19.4	7.9	7.9	20.3	0.0	0.0	18.8	0.0	19.7
Incr Delay (d2), s/veh	0.6	1.1	1.1	4.8	1.7	1.7	2.9	0.0	0.0	0.5	0.0	2.4
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	1.5	6.8	7.1	2.5	6.0	6.2	7.3	0.0	0.0	1.8	0.0	7.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.8	10.4	10.3	24.2	9.7	9.6	23.1	0.0	0.0	19.3	0.0	22.2
LnGrp LOS	B	B	B	C	A	A	C	A	A	B	A	C
Approach Vol, veh/h	1461			1093			294			412		
Approach Delay, s/veh	10.6			10.9			23.1			21.6		
Approach LOS	B			B			C			C		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	38.8			21.2			38.8			21.2		
Change Period (Y+Rc), s	* 5			* 5.2			* 5			* 5.2		
Max Green Setting (Gmax), s	* 30			* 20			* 30			* 20		
Max Q Clear Time (g_c+I1), s	30.9			11.9			19.4			15.3		
Green Ext Time (p_c), s	0.0			1.5			8.7			0.8		
Intersection Summary												
HCM 6th Ctrl Delay	13.2											
HCM 6th LOS	B											
Notes												

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

HCM 6th Signalized Intersection Summary

1: Alvarado Street & 3rd Street

07/16/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			  			 	
Traffic Volume (veh/h)	137	1032	152	125	858	138	111	1431	93	89	955	157
Future Volume (veh/h)	137	1032	152	125	858	138	111	1431	93	89	955	157
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	149	1122	165	136	933	150	121	1555	101	97	1038	171
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	218	1520	223	165	1499	241	137	2069	134	126	1290	212
Arrive On Green	0.49	0.49	0.47	0.49	0.49	0.47	0.42	0.42	0.41	0.42	0.42	0.41
Sat Flow, veh/h	521	3109	456	429	3066	493	462	4899	318	301	3054	502
Grp Volume(v), veh/h	149	640	647	136	541	542	121	1080	576	97	603	606
Grp Sat Flow(s),veh/h/ln	521	1777	1788	429	1777	1782	462	1702	1813	301	1777	1780
Q Serve(g_s), s	23.8	25.9	26.2	17.8	20.1	20.2	11.1	24.2	24.2	13.8	26.7	26.9
Cycle Q Clear(g_c), s	44.0	25.9	26.2	44.0	20.1	20.2	38.0	24.2	24.2	38.0	26.7	26.9
Prop In Lane	1.00		0.26	1.00		0.28	1.00		0.18	1.00		0.28
Lane Grp Cap(c), veh/h	218	869	874	165	869	871	137	1437	766	126	750	752
V/C Ratio(X)	0.68	0.74	0.74	0.82	0.62	0.62	0.88	0.75	0.75	0.77	0.80	0.81
Avail Cap(c_a), veh/h	218	869	874	165	869	871	137	1437	766	126	750	752
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)	1.00	1.00	1.00	0.75	0.75	0.75	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.0	18.4	18.6	39.4	16.9	17.1	42.4	22.0	22.1	41.7	22.7	23.0
Incr Delay (d2), s/veh	16.1	5.5	5.6	28.2	2.5	2.5	44.1	2.3	4.2	24.6	6.4	6.5
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	7.5	16.4	16.7	7.2	12.2	12.3	7.8	14.7	16.0	5.4	17.5	17.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.1	23.9	24.2	67.6	19.4	19.6	86.5	24.3	26.3	66.4	29.1	29.4
LnGrp LOS	D	C	C	E	B	B	F	C	C	E	C	C
Approach Vol, veh/h	1436			1219			1777			1306		
Approach Delay, s/veh	26.7			24.9			29.2			32.0		
Approach LOS	C			C			C			C		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	48.0			42.0			48.0			42.0		
Change Period (Y+Rc), s	* 5.3			* 5.5			* 5.3			* 5.5		
Max Green Setting (Gmax), s	* 43			* 37			* 43			* 37		
Max Q Clear Time (g_c+I1), s	46.0			40.0			46.0			40.0		
Green Ext Time (p_c), s	0.0			0.0			0.0			0.0		
Intersection Summary												
HCM 6th Ctrl Delay	28.3											
HCM 6th LOS	C											
Notes												

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

HCM 6th Signalized Intersection Summary

2: Bonnie Brae Street & 3rd Street

07/16/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	162	1141	94	46	958	53	42	299	44	53	215	107
Future Volume (veh/h)	162	1141	94	46	958	53	42	299	44	53	215	107
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	176	1240	102	50	1041	58	46	325	48	58	234	116
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	289	1775	146	224	1827	102	97	409	57	318	393	195
Arrive On Green	0.53	0.53	0.52	0.53	0.53	0.52	0.33	0.33	0.31	0.33	0.33	0.31
Sat Flow, veh/h	513	3325	273	407	3422	191	93	1230	171	1009	1180	585
Grp Volume(v), veh/h	176	661	681	50	540	559	419	0	0	58	0	350
Grp Sat Flow(s),veh/h/ln	513	1777	1821	407	1777	1836	1493	0	0	1009	0	1765
Q Serve(g_s), s	19.8	16.6	16.7	6.3	12.2	12.3	6.3	0.0	0.0	0.0	0.0	10.0
Cycle Q Clear(g_c), s	32.0	16.6	16.7	23.0	12.2	12.3	16.3	0.0	0.0	5.2	0.0	10.0
Prop In Lane	1.00		0.15	1.00		0.10	0.11		0.11	1.00		0.33
Lane Grp Cap(c), veh/h	289	949	972	224	949	980	564	0	0	318	0	587
V/C Ratio(X)	0.61	0.70	0.70	0.22	0.57	0.57	0.74	0.00	0.00	0.18	0.00	0.60
Avail Cap(c_a), veh/h	289	949	972	224	949	980	598	0	0	339	0	624
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)	0.43	0.43	0.43	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	20.5	10.4	10.5	19.0	9.4	9.4	18.6	0.0	0.0	15.1	0.0	16.8
Incr Delay (d2), s/veh	4.1	1.9	1.8	2.3	2.5	2.4	4.7	0.0	0.0	0.3	0.0	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	4.2	7.9	8.2	1.2	7.7	7.9	9.8	0.0	0.0	1.0	0.0	7.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.6	12.2	12.3	21.3	11.8	11.8	23.3	0.0	0.0	15.4	0.0	18.2
LnGrp LOS	C	B	B	C	B	B	C	A	A	B	A	B
Approach Vol, veh/h	1518			1149			419			408		
Approach Delay, s/veh	13.7			12.2			23.3			17.8		
Approach LOS	B			B			C			B		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	36.0			24.0			36.0			24.0		
Change Period (Y+Rc), s	* 5			* 5.2			* 5			* 5.2		
Max Green Setting (Gmax), s	* 30			* 20			* 30			* 20		
Max Q Clear Time (g_c+I1), s	25.0			12.0			34.0			18.3		
Green Ext Time (p_c), s	3.8			1.6			0.0			0.5		
Intersection Summary												
HCM 6th Ctrl Delay	14.9											
HCM 6th LOS	B											
Notes												

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

HCM 6th Signalized Intersection Summary

1: Alvarado Street & 3rd Street

07/16/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	133	1022	61	110	762	133	152	987	150	119	1096	190
Future Volume (veh/h)	133	1022	61	110	762	133	152	987	150	119	1096	190
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	145	1111	66	120	828	145	165	1073	163	129	1191	207
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	195	1428	85	146	1266	222	180	1427	216	158	2018	351
Arrive On Green	0.42	0.42	0.42	0.42	0.42	0.42	0.46	0.46	0.46	0.46	0.46	0.46
Sat Flow, veh/h	578	3408	202	476	3023	529	386	3094	469	450	4377	761
Grp Volume(v), veh/h	145	579	598	120	487	486	165	615	621	129	926	472
Grp Sat Flow(s),veh/h/ln	578	1777	1834	476	1777	1775	386	1777	1786	450	1702	1733
Q Serve(g_s), s	18.0	25.3	25.3	12.4	19.7	19.7	23.4	25.7	25.8	15.7	18.1	18.1
Cycle Q Clear(g_c), s	37.7	25.3	25.3	37.7	19.7	19.7	41.5	25.7	25.8	41.5	18.1	18.1
Prop In Lane	1.00		0.11	1.00		0.30	1.00		0.26	1.00		0.44
Lane Grp Cap(c), veh/h	195	744	768	146	744	744	180	819	824	158	1570	799
V/C Ratio(X)	0.74	0.78	0.78	0.82	0.65	0.65	0.92	0.75	0.75	0.81	0.59	0.59
Avail Cap(c_a), veh/h	195	744	768	146	744	744	180	819	824	158	1570	799
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)	1.00	1.00	1.00	0.83	0.83	0.83	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.9	22.5	22.5	41.6	20.9	20.9	37.9	20.0	20.0	40.2	18.0	18.0
Incr Delay (d2), s/veh	22.3	7.9	7.6	33.7	3.7	3.7	43.7	3.9	4.0	26.7	0.6	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	7.8	17.0	17.4	7.0	12.8	12.7	9.8	16.2	16.4	7.2	11.2	11.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	60.1	30.4	30.2	75.3	24.6	24.6	81.6	23.9	24.0	67.0	18.5	19.1
LnGrp LOS	E	C	C	E	C	C	F	C	C	E	B	B
Approach Vol, veh/h	1322			1093			1401			1527		
Approach Delay, s/veh	33.6			30.2			30.7			22.8		
Approach LOS	C			C			C			C		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	43.0			47.0			43.0			47.0		
Change Period (Y+Rc), s	* 5.3			* 5.5			* 5.3			* 5.5		
Max Green Setting (Gmax), s	* 38			* 42			* 38			* 42		
Max Q Clear Time (g_c+I1), s	39.7			43.5			39.7			43.5		
Green Ext Time (p_c), s	0.0			0.0			0.0			0.0		
Intersection Summary												
HCM 6th Ctrl Delay	29.1											
HCM 6th LOS	C											
Notes												

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

HCM 6th Signalized Intersection Summary

2: Bonnie Brae Street & 3rd Street

07/16/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	91	1205	69	86	882	47	37	164	71	80	203	99
Future Volume (veh/h)	91	1205	69	86	882	47	37	164	71	80	203	99
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	99	1310	75	93	959	51	40	178	77	87	221	108
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	337	1913	109	232	1921	102	91	240	93	307	320	157
Arrive On Green	0.56	0.56	0.56	0.56	0.56	0.56	0.27	0.27	0.27	0.27	0.27	0.27
Sat Flow, veh/h	558	3417	195	391	3432	183	84	889	344	1125	1186	580
Grp Volume(v), veh/h	99	680	705	93	497	513	295	0	0	87	0	329
Grp Sat Flow(s),veh/h/ln	558	1777	1835	391	1777	1838	1316	0	0	1125	0	1766
Q Serve(g_s), s	7.9	16.4	16.5	13.4	10.2	10.2	3.4	0.0	0.0	0.0	0.0	10.0
Cycle Q Clear(g_c), s	18.1	16.4	16.5	29.9	10.2	10.2	13.5	0.0	0.0	7.4	0.0	10.0
Prop In Lane	1.00		0.11	1.00		0.10	0.14		0.26	1.00		0.33
Lane Grp Cap(c), veh/h	337	995	1027	232	995	1029	424	0	0	307	0	477
V/C Ratio(X)	0.29	0.68	0.69	0.40	0.50	0.50	0.70	0.00	0.00	0.28	0.00	0.69
Avail Cap(c_a), veh/h	337	995	1027	232	995	1029	526	0	0	378	0	589
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)	0.27	0.27	0.27	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	13.6	9.4	9.4	20.1	8.1	8.1	20.2	0.0	0.0	18.7	0.0	19.6
Incr Delay (d2), s/veh	0.6	1.0	1.0	5.1	1.8	1.7	3.0	0.0	0.0	0.5	0.0	2.5
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	1.6	6.9	7.1	2.5	6.2	6.3	7.3	0.0	0.0	1.8	0.0	7.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	14.2	10.5	10.5	25.2	9.9	9.8	23.2	0.0	0.0	19.2	0.0	22.2
LnGrp LOS	B	B	B	C	A	A	C	A	A	B	A	C
Approach Vol, veh/h	1484			1103				295		416		
Approach Delay, s/veh	10.7			11.1				23.2		21.5		
Approach LOS	B			B				C		C		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	38.6			21.4			38.6			21.4		
Change Period (Y+Rc), s	* 5			* 5.2			* 5			* 5.2		
Max Green Setting (Gmax), s	* 30			* 20			* 30			* 20		
Max Q Clear Time (g_c+I1), s	31.9			12.0			20.1			15.5		
Green Ext Time (p_c), s	0.0			1.5			8.2			0.7		
Intersection Summary												
HCM 6th Ctrl Delay	13.3											
HCM 6th LOS	B											
Notes												

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

HCM 6th Signalized Intersection Summary

1: Alvarado Street & 3rd Street

07/16/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	137	1039	152	127	863	141	111	1431	96	93	955	157
Future Volume (veh/h)	137	1039	152	127	863	141	111	1431	96	93	955	157
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	149	1129	165	138	938	153	121	1555	104	101	1038	171
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	215	1521	222	163	1495	244	137	2064	138	126	1290	212
Arrive On Green	0.49	0.49	0.47	0.49	0.49	0.47	0.42	0.42	0.41	0.42	0.42	0.41
Sat Flow, veh/h	517	3112	454	426	3059	499	462	4889	327	300	3054	502
Grp Volume(v), veh/h	149	643	651	138	545	546	121	1083	576	101	603	606
Grp Sat Flow(s),veh/h/ln	517	1777	1789	426	1777	1781	462	1702	1812	300	1777	1780
Q Serve(g_s), s	23.6	26.1	26.4	17.6	20.3	20.4	11.1	24.2	24.3	13.7	26.7	26.9
Cycle Q Clear(g_c), s	44.0	26.1	26.4	44.0	20.3	20.4	38.0	24.2	24.3	38.0	26.7	26.9
Prop In Lane	1.00		0.25	1.00		0.28	1.00		0.18	1.00		0.28
Lane Grp Cap(c), veh/h	215	869	874	163	869	871	137	1437	765	126	750	752
V/C Ratio(X)	0.69	0.74	0.74	0.84	0.63	0.63	0.88	0.75	0.75	0.80	0.80	0.81
Avail Cap(c_a), veh/h	215	869	874	163	869	871	137	1437	765	126	750	752
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)	1.00	1.00	1.00	0.74	0.74	0.74	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.3	18.4	18.6	39.7	17.0	17.1	42.4	22.0	22.2	41.9	22.7	23.0
Incr Delay (d2), s/veh	16.8	5.6	5.7	30.7	2.5	2.5	44.1	2.3	4.3	30.3	6.4	6.5
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	7.6	16.6	16.9	7.4	12.2	12.4	7.8	14.7	16.1	5.9	17.5	17.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	51.1	24.1	24.3	70.4	19.5	19.7	86.5	24.3	26.4	72.2	29.1	29.4
LnGrp LOS	D	C	C	E	B	B	F	C	C	E	C	C
Approach Vol, veh/h	1443			1229			1780			1310		
Approach Delay, s/veh	27.0			25.3			29.2			32.6		
Approach LOS	C			C			C			C		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	48.0			42.0			48.0			42.0		
Change Period (Y+Rc), s	* 5.3			* 5.5			* 5.3			* 5.5		
Max Green Setting (Gmax), s	* 43			* 37			* 43			* 37		
Max Q Clear Time (g_c+I1), s	46.0			40.0			46.0			40.0		
Green Ext Time (p_c), s	0.0			0.0			0.0			0.0		
Intersection Summary												
HCM 6th Ctrl Delay	28.6											
HCM 6th LOS	C											
Notes												

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

HCM 6th Signalized Intersection Summary

2: Bonnie Brae Street & 3rd Street

07/16/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	164	1148	95	46	967	53	43	299	44	53	215	110
Future Volume (veh/h)	164	1148	95	46	967	53	43	299	44	53	215	110
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	178	1248	103	50	1051	58	47	325	48	58	234	120
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	284	1767	145	220	1820	100	98	408	57	318	391	200
Arrive On Green	0.53	0.53	0.51	0.53	0.53	0.51	0.34	0.34	0.32	0.34	0.34	0.32
Sat Flow, veh/h	508	3324	274	404	3424	189	94	1218	169	1009	1165	598
Grp Volume(v), veh/h	178	666	685	50	545	564	420	0	0	58	0	354
Grp Sat Flow(s),veh/h/ln	508	1777	1821	404	1777	1836	1481	0	0	1009	0	1763
Q Serve(g_s), s	19.4	16.8	17.0	6.4	12.4	12.5	6.4	0.0	0.0	0.0	0.0	10.1
Cycle Q Clear(g_c), s	31.9	16.8	17.0	23.4	12.4	12.5	16.5	0.0	0.0	5.2	0.0	10.1
Prop In Lane	1.00		0.15	1.00		0.10	0.11		0.11	1.00		0.34
Lane Grp Cap(c), veh/h	284	944	968	220	944	976	563	0	0	318	0	591
V/C Ratio(X)	0.63	0.71	0.71	0.23	0.58	0.58	0.75	0.00	0.00	0.18	0.00	0.60
Avail Cap(c_a), veh/h	284	944	968	220	944	976	594	0	0	337	0	623
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)	0.42	0.42	0.42	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	21.0	10.5	10.6	19.4	9.5	9.5	18.5	0.0	0.0	15.0	0.0	16.8
Incr Delay (d2), s/veh	4.3	1.9	1.9	2.4	2.6	2.5	4.9	0.0	0.0	0.3	0.0	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	4.3	8.0	8.3	1.2	7.8	8.0	9.8	0.0	0.0	1.0	0.0	7.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.4	12.4	12.5	21.7	12.1	12.0	23.4	0.0	0.0	15.3	0.0	18.2
LnGrp LOS	C	B	B	C	B	B	C	A	A	B	A	B
Approach Vol, veh/h	1529			1159			420			412		
Approach Delay, s/veh	14.0			12.5			23.4			17.8		
Approach LOS	B			B			C			B		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	35.9			24.1			35.9			24.1		
Change Period (Y+Rc), s	* 5			* 5.2			* 5			* 5.2		
Max Green Setting (Gmax), s	* 30			* 20			* 30			* 20		
Max Q Clear Time (g_c+I1), s	25.4			12.1			33.9			18.5		
Green Ext Time (p_c), s	3.6			1.6			0.0			0.4		
Intersection Summary												
HCM 6th Ctrl Delay	15.0											
HCM 6th LOS	B											
Notes												

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

CITY OF LOS ANGELES
INTER-DEPARTMENTAL CORRESPONDENCE

1917-2005 ½ W 3rd St
DOT Case No. CEN20-49969

Date: August 27, 2020

To: Milena Zasadzien, Senior City Planner
Department of City Planning


From: Wes Pringle, Transportation Engineer
Department of Transportation

Subject: **TRANSPORTATION ASSESSMENT FOR THE PROPOSED MIRAMAR DEVELOPMENT
AFFORDABLE HOUSING PROJECT LOCATED AT 1917-2005 ½ WEST 3RD STREET (DIR-
2020-3752-TOC-SPR-HCA-PHP/ENV-2020-3753-EAF)**

The Department of Transportation (DOT) has reviewed the transportation assessment prepared by Gibson Transportation Consulting, Inc. (GTC), dated August 18, 2020, for the proposed Miramar Development project located at 1917-2005 ½ West 3rd Street in the Central Area Planning Commission and Transit Oriented Community (TOC) Tier 3. In compliance with Senate Bill (SB) 743 and the California Environmental Quality Act (CEQA), a vehicle miles traveled (VMT) analysis is required to identify the project's ability to promote the reduction of green-house gas emissions, the access to diverse land uses, and the development of multi-modal networks. The significance of a project's impact in this regard is measured against the VMT thresholds established in DOT's Transportation Assessment Guidelines (TAG). Although the project is designated as a Sustainable Communities Project CEQA Exemption (SCPE) under Public Resources Sections 21155 and 21155.1, the project has submitted a VMT analysis and the results of which are discussed below.

DISCUSSION AND FINDINGS

A. Project Description

The project proposes to replace landscaping and a surface parking lot with a seven-story residential development with 137 affordable housing units adjacent to the Miramar Towers, a senior apartment building, located at 1917-2005 ½ West 3rd Street as illustrated in **Attachment A**. The project is within half a mile of the Los Angeles County Metropolitan Transit Authority (Metro) B Line (formerly Red Line), D Line (formerly Purple Line, and the Westlake/MacArthur Park Station, which serves both B and D Lines. The existing driveway will be shared by Miramar Towers and the project and will serve primarily as fire department access. The project will provide 104 (10 short-term and 94 long-term) bicycle parking spaces. Bicycle and pedestrian access would be provided via the entrances along 3rd Street. The project is expected to be completed by 2023.

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 assessment determined that project traffic at any nearby freeway off-ramp serving the project site will not exceed 25 peak hour trips. Therefore, a freeway ramp analysis is not required.

C. CEQA Screening Threshold

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

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

- T-1 Conflicting with plans, programs, ordinances, or policies
- T-2.1 Causing substantial vehicle miles traveled
- T-3 Substantially increasing hazards due to a geometric design feature or incompatible use.

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

C. Transportation Impacts

On July 30, 2019, pursuant to SB 743 and the recent changes to Section 15064.03 of the State's CEQA Guidelines, the City of Los Angeles adopted VMT as criteria in determining transportation impacts under CEQA. The new DOT TAG provide 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 Central APC area, in which the project is located, the following thresholds have been established:

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

As cited in the VMT Analysis report, prepared by GTC, the project proposes to incorporate the TDM strategy of including bicycle parking per Los Angeles Municipal Code (LAMC) as a project design feature. The proposed project is projected to have a Household VMT per capita of 3.4 and a Work VMT per employee of 0. Therefore, it is concluded that implementation of the project would result in no significant VMT impact. A copy of the VMT Calculator summary report is provided as **Attachment B**.

D. Access and Circulation

During preparation of the new CEQA guidelines, the State's Office of Planning and Research stressed that lead agencies can continue to apply traditional operational analysis requirements to inform land use decisions provided that such analyses were outside of the CEQA process. The authority for requiring non-CEQA transportation analysis and requiring improvements to address potential circulation deficiencies, lies in the City of Los Angeles' Site Plan Review authority as established in Section 16.05 of the LAMC. Therefore, 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 likely result in adverse circulation conditions at several locations. Vehicular access to the project will be provided along 3rd Street. DOT has reviewed this analysis and determined that it adequately discloses operational concerns. A copy of the circulation analysis table that summarizes these potential deficiencies is provided as **Attachment C** to this report.

PROJECT REQUIREMENTS

A. CEQA-Related Requirement

The project will implement the TDM strategy of Include Bike Parking per LAMC as a project design feature by providing 10 short-term and 94 long-term bicycle parking spaces in order to encourage the use of bicycling as an alternative to driving.

B. Non-CEQA-Related Requirements and Considerations

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

1. Parking Requirements

The project would provide parking for 104 bicycles. The applicant should check with the Departments of Building and Safety and City Planning on the number of parking spaces required for this project within a TOC Tier 3.

2. Highway Dedication and Street Widening Requirements

Per the new Mobility Element of the General Plan, **3rd Street**, an Avenue II, would require an 28-foot half-width roadway within a 43-foot half-width right-of-way. The project would provide a three-foot dedication to widen the sidewalk to 15 feet. The project should check with the Bureau of Engineering's Land Development Group to determine if there are any other applicable highway dedication, street widening and/or sidewalk requirements for this project.

3. Project Access and Circulation

The conceptual site plan for the project (see **Attachment A**) is acceptable to DOT. The project would be accessed via an existing full-access driveway along 3rd Street. Review of this study does not constitute approval of the dimensions for any new proposed driveway. Review and approval of the driveway should be coordinated with DOT's Citywide Planning Coordination Section (201 North Figueroa Street, 5th Floor, Room 550, at 213-482-7024). In order to minimize and prevent last minute building design changes, the applicant should contact DOT for driveway width and internal circulation requirements prior to the commencement of building or parking layout design.

4. Worksite Traffic Control Requirements

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/businesses/temporary-traffic-control-plans> to determine which

section to coordinate review of the work site traffic control plan. The plan should show the location of any roadway or sidewalk closures, traffic detours, haul routes, hours of operation, protective devices, warning signs and access to abutting properties. DOT also recommends that all construction related truck traffic be restricted to off-peak hours to the extent feasible.

5. TDM Ordinance Requirements

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

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

Although not yet adopted, DOT recommends that the applicant be subject to the terms of the proposed TDM Ordinance update expected in 2020. The updated ordinance is expected to be completed prior to the anticipated construction of this project, if approved.

6. Development Review Fees

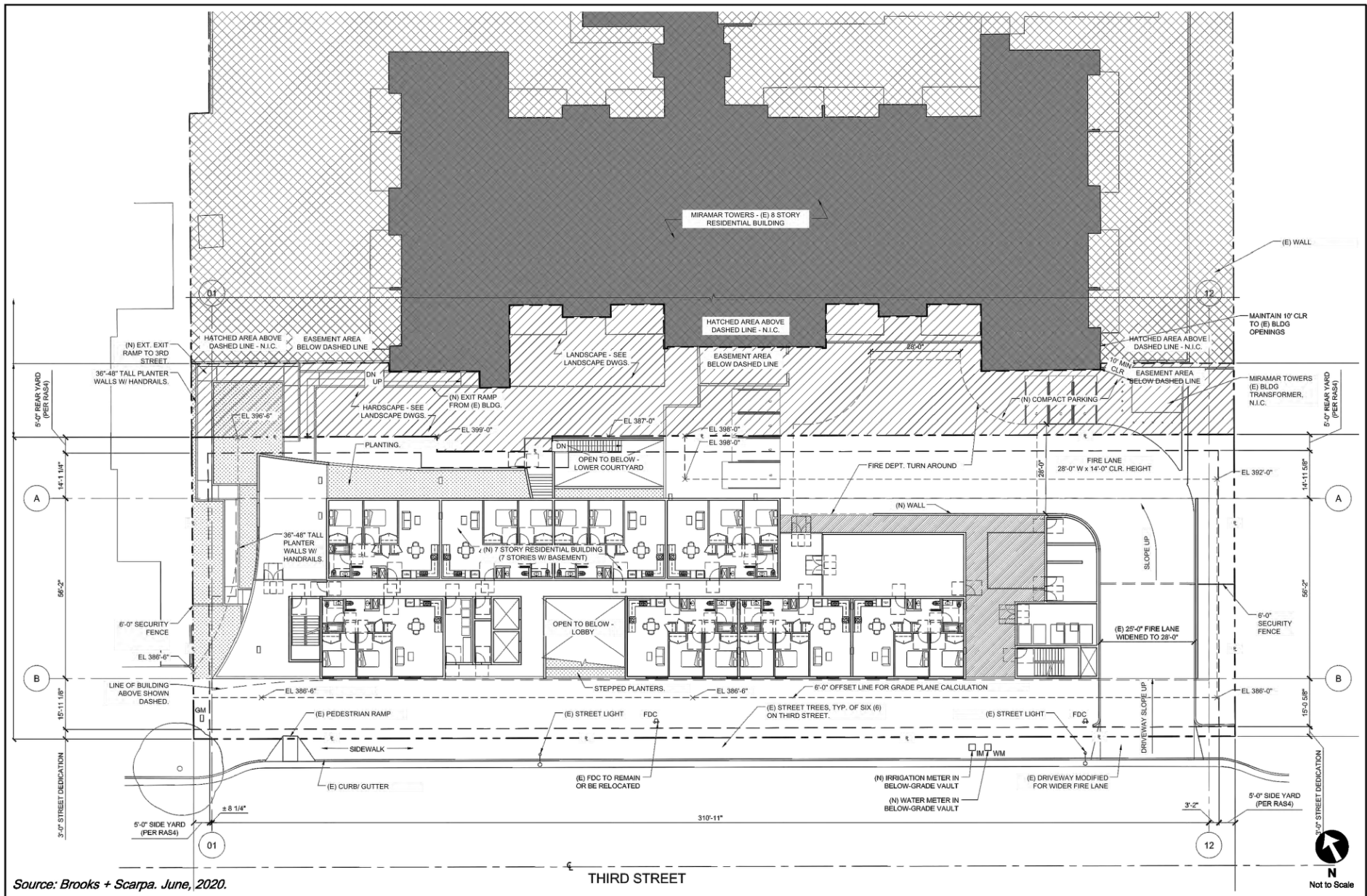
Section 19.15 of the LAMC identifies specific fees for traffic study review, condition clearance, and permit issuance. The applicant shall comply with any applicable fees per this ordinance.

If you have any questions, please contact Eileen Hunt of my staff at (213) 972-8481.

Attachments

K:\Letters\2020\CEN20-49969_1917 3rd St_affordable housing.docx

c: Craig Bullock, Council District 13
James Harris, City Planning
Matthew Masuda, Central District, BOE
Bhuvan Bajaj, Hollywood-Wilshire District, DOT
Taimour Tanavoli, Case Management Office, DOT
Emily Wong, GTC



PROJECT SITE PLAN

FIGURE
1

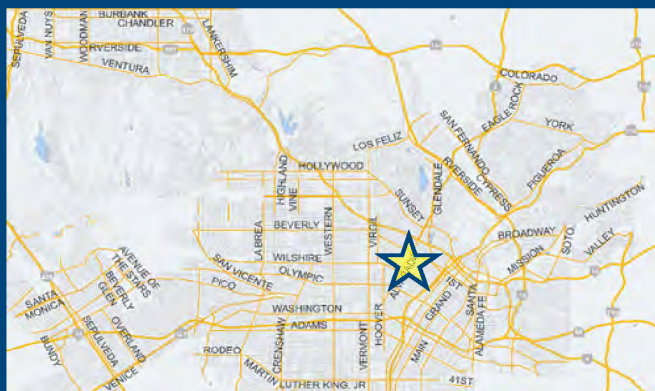
CITY OF LOS ANGELES VMT CALCULATOR Version 1.3



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

Project Information

Project:
 Scenario:
 Address:



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
Housing Single Family		DU

[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	137	DU
Housing Affordable Housing - Family	137	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 Project
0 Daily Vehicle Trips	492 Daily Vehicle Trips
0 Daily VMT	3,107 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	492 Net Daily Trips
The net increase in daily VMT ≤ 0	3,107 Net Daily VMT
The proposed project consists of only retail land uses ≤ 50,000 square feet total.	0.000 ksf

The proposed project is required to perform VMT analysis.

CITY OF LOS ANGELES VMT CALCULATOR Version 1.3

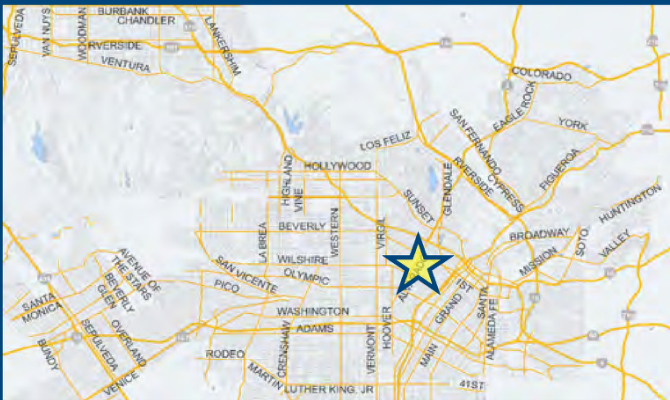


Project Information

Project:

Scenario:

Address:



Proposed Project Land Use Type	Value	Unit
Housing Affordable Housing - Family	137	DU

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
489 Daily Vehicle Trips	489 Daily Vehicle Trips
3,089 Daily VMT	3,089 Daily VMT
3.4 Household VMT per Capita	3.4 Household VMT per Capita
N/A Work VMT per Employee	N/A Work VMT per Employee

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



CITY OF LOS ANGELES VMT CALCULATOR

Report 1: Project & Analysis Overview

Date: July 15, 2020

Project Name: Miramar Development

Project Scenario:

Project Address: 1917 W 3RD ST, 90057



Version 1.3

Project Information			
Land Use Type		Value	Units
Housing	Single Family	0	DU
	Multi Family	0	DU
	Townhouse	0	DU
	Hotel	0	Rooms
	Motel	0	Rooms
Affordable Housing	Family	137	DU
	Senior	0	DU
	Special Needs	0	DU
	Permanent Supportive	0	DU
Retail	General Retail	0.000	ksf
	Furniture Store	0.000	ksf
	Pharmacy/Drugstore	0.000	ksf
	Supermarket	0.000	ksf
	Bank	0.000	ksf
	Health Club	0.000	ksf
	High-Turnover Sit-Down Restaurant	0.000	ksf
	Fast-Food Restaurant	0.000	ksf
	Quality Restaurant	0.000	ksf
	Auto Repair	0.000	ksf
	Home Improvement	0.000	ksf
	Free-Standing Discount	0.000	ksf
	Movie Theater	0	Seats
Office	General Office	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

Project and Analysis Overview

CITY OF LOS ANGELES VMT CALCULATOR

Report 1: Project & Analysis Overview

Date: July 15, 2020

Project Name: Miramar Development

Project Scenario:

Project Address: 1917 W 3RD ST, 90057



Version 1.3

Analysis Results			
Total Employees: 0			
Total Population: 430			
Proposed Project		With Mitigation	
489	Daily Vehicle Trips	489	Daily Vehicle Trips
3,089	Daily VMT	3,089	Daily VMT
3.4	Household VMT per Capita	3.4	Household VMT per Capita
N/A	Work VMT per Employee	N/A	Work VMT per Employee
Significant VMT Impact?			
APC: Central			
Impact Threshold: 15% Below APC Average			
Household = 6.0			
Work = 7.6			
Proposed Project		With Mitigation	
VMT Threshold	Impact	VMT Threshold	Impact
Household > 6.0	No	Household > 6.0	No
Work > 7.6	N/A	Work > 7.6	N/A

CITY OF LOS ANGELES VMT CALCULATOR

Report 2: TDM Inputs

Date: July 15, 2020

Project Name: Miramar Development

Project Scenario:

Project Address: 1917 W 3RD ST, 90057



Version 1.3

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

CITY OF LOS ANGELES VMT CALCULATOR

Report 2: TDM Inputs

Date: July 15, 2020

Project Name: Miramar Development

Project Scenario:

Project Address: 1917 W 3RD ST, 90057



Version 1.3

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

CITY OF LOS ANGELES VMT CALCULATOR

Report 2: TDM Inputs

Date: July 15, 2020

Project Name: Miramar Development

Project Scenario:

Project Address: 1917 W 3RD ST, 90057



Version 1.3

TDM Strategy Inputs, Cont.				
Strategy Type		Description	Proposed Project	Mitigations
Commute Trip Reductions	Required commute trip reduction program	Employees participating (%)	0%	0%
	Alternative Work Schedules and Telecommute	Employees participating (%)	0%	0%
		Type of program	0	0
		Degree of implementation (low, medium, high)	0	0
	Employer sponsored vanpool or shuttle	Employees eligible (%)	0%	0%
		Employer size (small, medium, large)	0	0
	Ride-share program	Employees eligible (%)	0%	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)				

CITY OF LOS ANGELES VMT CALCULATOR

Report 2: TDM Inputs

Date: July 15, 2020

Project Name: Miramar Development

Project Scenario:

Project Address: 1917 W 3RD ST, 90057



Version 1.3

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

CITY OF LOS ANGELES VMT CALCULATOR

Report 3: TDM Outputs

Date: July 15, 2020
 Project Name: Miramar Development
 Project Scenario:
 Project Address: 1917 W 3RD ST, 90057



Version 1.3

TDM Adjustments by Trip Purpose & Strategy

Place type: Urban

		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	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	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%	

CITY OF LOS ANGELES VMT CALCULATOR

Report 3: TDM Outputs

Date: July 15, 2020
 Project Name: Miramar Development
 Project Scenario:
 Project Address: 1917 W 3RD ST, 90057



Version 1.3

TDM Adjustments by Trip Purpose & Strategy, Cont.

Place type: Urban

		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		1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
MAX. TDM EFFECT		1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%

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

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

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

CITY OF LOS ANGELES VMT CALCULATOR

Report 4: MXD Methodology

Date: July 15, 2020

Project Name: Miramar Development

Project Scenario:

Project Address: 1917 W 3RD ST, 90057



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	116	-22.4%	90	7.2	835	648
Home Based Other Production	321	-49.2%	163	5.0	1,605	815
Non-Home Based Other Production	150	-7.3%	139	7.3	1,095	1,015
Home-Based Work Attraction	0	0.0%	0	10.9	0	0
Home-Based Other Attraction	153	-56.2%	67	5.9	903	395
Non-Home Based Other Attraction	36	-8.3%	33	7.1	256	234

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	-0.6%	89	644	-0.6%	89	644
Home Based Other Production	-0.6%	162	810	-0.6%	162	810
Non-Home Based Other Production	-0.6%	138	1,009	-0.6%	138	1,009
Home-Based Work Attraction	-0.6%	0	0	-0.6%	0	0
Home-Based Other Attraction	-0.6%	67	393	-0.6%	67	393
Non-Home Based Other Attraction	-0.6%	33	233	-0.6%	33	233

MXD VMT Methodology Per Capita & Per Employee

Total Population: 430

Total Employees: 0

APC: Central

	Proposed Project	Project with Mitigation Measures
Total Home Based Production VMT	1,454	1,454
Total Home Based Work Attraction VMT	0	0
Total Home Based VMT Per Capita	3.4	3.4
Total Work Based VMT Per Employee	N/A	N/A

TABLE 8
FUTURE WITH PROJECT CONDITIONS (YEAR 2023)
INTERSECTION LEVELS OF SERVICE ANALYSIS

No	Intersection	Peak Hour	Future without Project		Future with Project	
			Delay	LOS	Delay	LOS
1.	Alvarado Street & 3rd Street	AM	28.8	C	29.1	C
		PM	28.3	C	28.6	C
2.	Bonnie Brae Street & 3rd Street	AM	13.2	B	13.3	B
		PM	14.9	B	15.0	B

Notes:

Delay is measured in seconds per vehicle

LOS = Level of service

Results per Synchro 10 (HCM 6 Edition methodology)