Appendix M
Traffic Impact Assessment

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TRANSPORTATION IMPACT ANALYSIS

ROYAL VISTA RESIDENTIAL AND PARKS PROJECT

Los Angeles County, California
July 18, 2023

Prepared for:

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LLG Ref. 1-20-4388-2





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TRANSPORTATION IMPACT ANALYSIS

ROYAL VISTA RESIDENTIAL AND PARKS PROJECT

Los Angeles County, California
July 18, 2023

1.0 INTRODUCTION

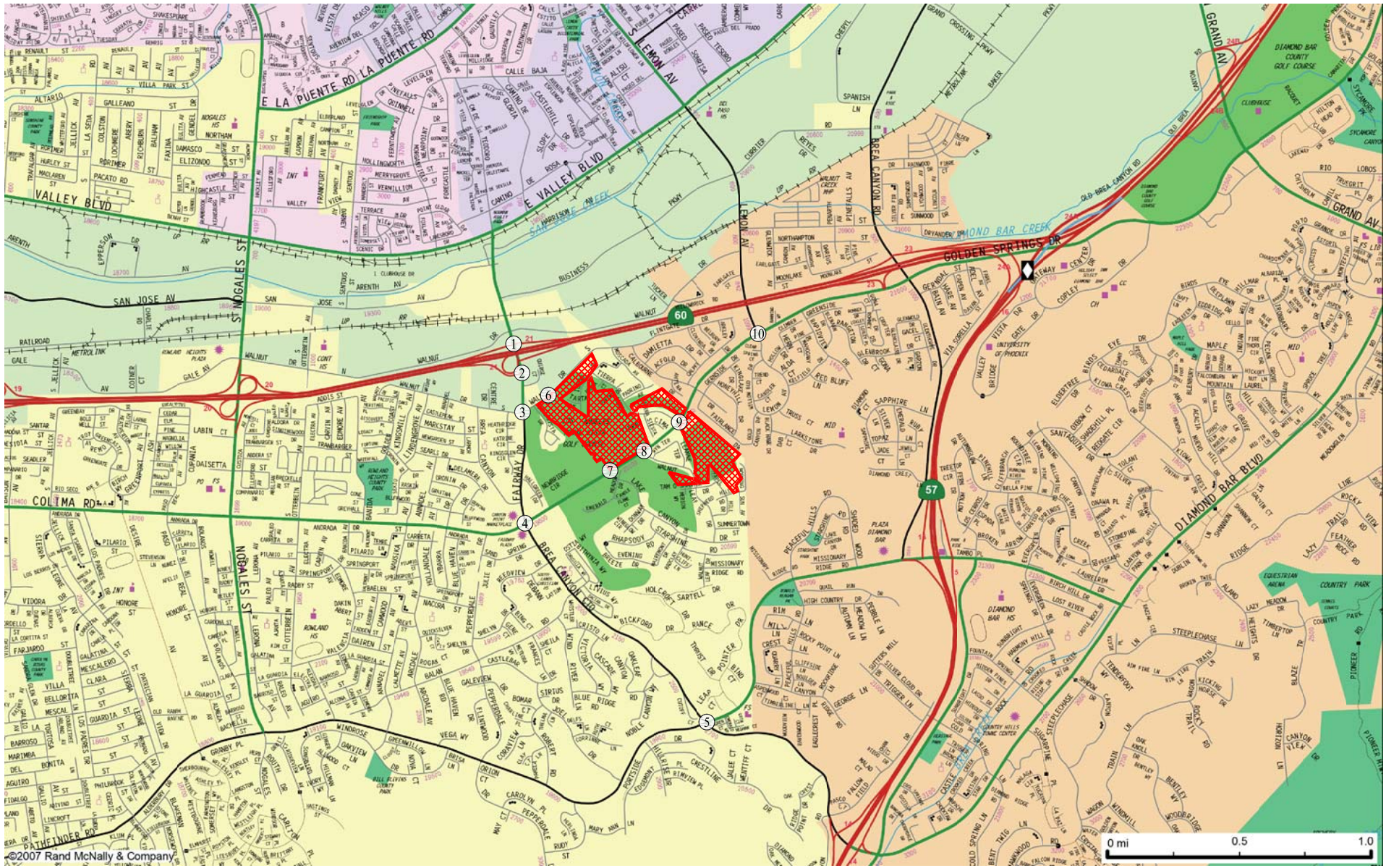
1.1 Transportation Impact Analysis Overview

This transportation impact analysis report has been prepared to identify and evaluate the potential transportation impacts resulting from the proposed Royal Vista Residential and Parks Project ("proposed project"). The proposed project site is located in the unincorporated Rowland Heights community of Los Angeles County. The site is adjacent to the Cities of Industry and Diamond Bar to the north and east, respectively. The project is comprised of several mostly non-contiguous parcels which comprise the northerly and easterly portions of the existing Royal Vista Golf Course, and are generally bounded by East Walnut Drive South to the north, the City of Diamond Bar to the east, and the remainder of the Royal Vista Golf Course and other existing residential developments to the south and west. The proposed project site and general vicinity are shown in ***Figure 1-1***.

The transportation impact analysis follows the analysis requirements set forth by Los Angeles County in the Los Angeles County Public Works *Transportation Impact Analysis Guidelines*[1] ("County Guidelines"). The County Guidelines identify both CEQA based analysis requirements and non-CEQA based analysis requirements for analyzing the potential transportation impacts of proposed development projects. Specifically, in compliance with California Environmental Quality Act (CEQA) Sections 15064.3 and 15064.7, the County Guidelines utilize Vehicle Miles Traveled (VMT) for the purpose of analyzing transportation impacts under CEQA. In addition, the County Guidelines require additional site access studies in order to identify a proposed project's effect on local transportation infrastructure. The site access studies prepared for the proposed project evaluate potential project-related effects on intersection operations and Level of Service (LOS) at 10 key intersections in the vicinity of the project site. The study intersections were determined in consultation with Los Angeles County staff.

In summary, this report (i) presents the proposed project's existing transportation network context, (ii) presents existing traffic volumes, (iii) forecasts cumulative baseline conditions, (iv) forecasts project-generated traffic, (v) assesses the potential for project-related transportation impacts consistent with the CEQA based and non-CEQA based metrics set forth in the County Guidelines, and (vi) recommends transportation network improvement measures, where necessary.

[1] Los Angeles County Public Works "Transportation Impact Analysis Guidelines", prepared by Public Works, July 23, 2020.



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Project Site

(#) Study Intersection

Figure 1-1
Vicinity Map

Royal Vista Residential and Parks Project

1.2 Study Methodology

The CEQA and non-CEQA analysis criteria for this transportation impact report were identified in consultation with Los Angeles County staff. The analysis criteria were determined based on the County Guidelines, the proposed project description and location, and the characteristics of the surrounding transportation system. Los Angeles County Public Works confirmed the appropriateness of the analysis criteria when it approved the transportation impact analysis Scoping Memorandum. The approved Scoping Memorandum is attached to this report in ***Appendix A***.

On September 27, 2013, Governor Brown signed Senate Bill (SB) 743 (Steinberg, 2013). Among other things, SB 743 created a process to change the methodology to analyze transportation impacts under CEQA (Public Resources Code Section 21000 and following) in order to promote 1) the reduction of greenhouse gas emissions, 2) the development of multimodal transportation networks, and 3) a diversity of land uses. On December 30, 2013, the State of California Governor's Office of Planning and Research (OPR) released a preliminary evaluation of alternative methods of transportation analysis, which included analysis based on project VMT rather than impacts to intersection LOS. OPR issued other draft discussion documents in March 2015 and January 2016, suggesting new revisions to the state CEQA Guidelines. Concurrently, OPR developed the *Technical Advisory on Evaluating Transportation Impacts in CEQA*[2] *("Technical Advisory")*, which provides non-binding recommendations on the implementation of VMT methodology and which has significantly informed the way VMT analyses are conducted in the State. In November 2017, OPR submitted the proposed amendments to the CEQA Guidelines to the State's Natural Resources Agency (that included a proposed new Guidelines Section 15064.3 which governs how analyses of potential traffic impacts should be conducted). On January 26, 2018, the Natural Resources Agency published a Notice of Rulemaking, commencing the formal rulemaking process for the amendments to the CEQA Guidelines. On December 28, 2018, the California Office of Administrative Law adopted the proposed amendments, formally implementing the use of VMT as the metric for transportation analysis under CEQA. State-wide implementation of the new metric was required by July 1, 2020.

The passage of SB 743 and the resulting amendment to the CEQA Guidelines does not prevent agencies from continuing to analyze delay or LOS outside of CEQA review for other transportation planning or analysis purposes (i.e., general plans, impact fee programs, corridor studies, congestion reduction, or ongoing network monitoring). The County Guidelines likewise include additional requirements for local transportation network analyses. Specifically, the County Guidelines require an operational analysis of intersections in the vicinity of a proposed project in order to evaluate site access and circulation constraints that may be caused or worsened by project-generated traffic. For purposes of this analysis, a total of 10 study intersections were selected in coordination with Los Angeles County Public Works staff. The study intersections are summarized in ***Table 1-1***, along with the current traffic controls and the agencies which have jurisdiction at each intersection, and are

[2] *Technical Advisory on Evaluating Transportation Impacts in CEQA*, Governor's Office of Planning and Research, December 2018.

Table 1-1
LIST OF STUDY INTERSECTIONS

NO.	STUDY INTERSECTION	TRAFFIC CONTROL	JURISDICTION(S)
1	Fairway Drive/ SR-60 Freeway Westbound Ramps	Signalized	City of Industry/ Caltrans
2	Fairway Drive/ SR-60 Freeway Eastbound Off-Ramp	Signalized	City of Industry/ Caltrans
3	Fairway Drive/ East Walnut Drive South	Signalized	City of Industry/ Los Angeles County
4	Fairway Drive-Brea Canyon Cutoff Road/ Colima Road	Signalized	Los Angeles County
5	Brea Canyon Cutoff Road/ Pathfinder Road	Signalized	Los Angeles County
6	Lot 1 & Lot 2 Driveway/ East Walnut Drive South	(Future Intersection)	Los Angeles County
7	Lake Canyon Drive/ Colima Road	Signalized	Los Angeles County
8	Lot 1 & Lot 2 Driveway-Walnut Leaf Drive/ Colima Road	Unsignalized	Los Angeles County
9	Tierra Luna-Lot 5 Driveway/ Colima Road	Unsignalized	Los Angeles County
10	Lemon Avenue/ Golden Springs Drive	Signalized	City of Diamond Bar

illustrated in *Figure 1-1*. Pursuant to the County Guidelines, this assessment utilizes the latest version of the *Highway Capacity Manual*[3] (HCM) methodology to evaluate queuing and LOS at intersections, which is then reviewed for detrimental effects on circulation within the existing transportation network.

The County Guidelines also require an analysis of the effect of construction traffic on local pedestrian, bicycle, and transit access in the vicinity of the proposed project, as well as a review of the potential for project-generated traffic to result in increases in average daily traffic (ADT) volumes on designated local streets near a project that can be classified as cut-through and which can adversely affect the character and function of those streets. This report provides a qualitative review of the proposed project's anticipated construction activities and the potential for project traffic to result in local residential street cut-through trips.

As required by State law, the California Department of Transportation (Caltrans) has also formally adopted VMT as the metric for evaluating the transportation impacts of local development projects on the State Highway System. Caltrans' *Transportation Impact Study Guide*[4] (TISG) relies on the December 2018 *Technical Advisory* prepared by OPR as the basis for its guidance on VMT assessment. For the purpose of this transportation impact analysis, it is understood that Los Angeles County's adopted VMT methodology and criteria are consistent with the recommendations provided by OPR in the *Technical Advisory* and thus satisfy Caltrans' VMT analysis requirements as well. Therefore, no separate VMT analysis has been prepared for Caltrans' review of the proposed project.

Caltrans' TISG states, "Additional future guidance will include the basis for requesting transportation impact analysis that is not based on VMT. This guidance will include a simplified safety analysis approach that reduces risks to all road users and that focuses on multi-modal conflict analysis as well as access management issues." While the final guidance is still being developed, Caltrans has released the "Interim Land Development and Intergovernmental Review (LDIGR) Safety Review Practitioners Guidance"[5]. The proposed project does not take direct access to/from a State facility; however, it is situated in the vicinity of the SR-60 Freeway eastbound and westbound ramps at Fairway Drive and is expected to generate net new project trips at the ramp intersections. Therefore, the Caltrans interim safety guidance was reviewed and analyses relevant to the proposed project were identified for inclusion in the transportation impact analysis.

In summary, the proposed project's CEQA transportation impacts have been evaluated based on Los Angeles County's adopted VMT screening criteria, methodology, and thresholds. In order to evaluate the proposed project's effect on local transportation infrastructure, a non-CEQA analysis of 10 study intersections has been conducted for the weekday AM and PM peak hours, utilizing the

[3] *Highway Capacity Manual 6th Edition*, Transportation Research Board of the National Academies of Sciences-Engineering-Medicine, 2016.
[4] "Vehicle Miles Traveled-Focused Transportation Impact Study Guide", Caltrans, May 20, 2020.
[5] "Traffic Safety Bulletin 20-02-R1: Interim Local Development Intergovernmental Review Safety Review Practitioners Guidance", Caltrans, December 18, 2020.

County-approved HCM operational methodology. Further, the SR-60 Freeway ramp intersections under Caltrans' jurisdiction were also evaluated based on HCM operational analysis methodologies.

1.3 Los Angeles County Congestion Management Program Status

The Los Angeles County Congestion Management Program (CMP) was previously a state-mandated program that was enacted by the California State Legislature with the passage of Proposition 111 in 1990 that primarily utilized an LOS performance metric. Pursuant to California Government Code §65088.3, local jurisdictions may opt out of the CMP requirement without penalty if a majority of the local jurisdictions representing a majority of the County's population formally adopt resolutions requesting to opt out of the program. As stated in a letter from the Los Angeles County Metropolitan Transportation Authority (Metro)[6], by August 28, 2019, fifty-seven local jurisdictions, which in total represent 8.5 million in population, had adopted resolutions electing to be exempt from the CMP. With the Los Angeles County region having reached the statutorily required threshold, the provisions of the CMP are no longer applicable to any of the 89 local jurisdictions within Los Angeles County, regardless of whether or not a jurisdiction adopted an opt-out resolution. Therefore, CMP Traffic Impact Analysis is no longer required.

[6] Kalieh Honish, Los Angeles County Metropolitan Transportation Authority, to Seleta Reynolds, City of Los Angeles Department of Transportation, "Re: Dissolution of the Congestion Management Program in Los Angeles County", August 28, 2019.

2.0 PROJECT DESCRIPTION

2.1 Project Location[7]

The 75.65-acre Royal Vista Residential and Parks Project is located in the unincorporated community of Rowland Heights in Los Angeles County. The project would be developed on a 75.65-acre site consisting of six non-contiguous parcels located both north and south of Colima Road, including Assessor Parcel Numbers (APNs) 8762-022-002, 8762-023-001, 8762-023-002, 8762-027-039, 8764-002-005, and 8764-002-006 (Los Angeles County Office of the Assessor, 2021), and located in the 20100 block of Colima Road, Rowland Heights, California 91789 (project site). A map of the parcels which comprise the project site is presented in ***Figure 2-1***. The project site generally comprises 13 holes and the driving range of the existing 27-hole Royal Vista Golf Club. The project site is bisected by Colima Road, with four parcels comprising 52.96 acres located north of Colima Road, and two parcels comprising 22.68 acres located south of Colima Road. The proposed project site and general vicinity are shown in *Figure 1-1*.

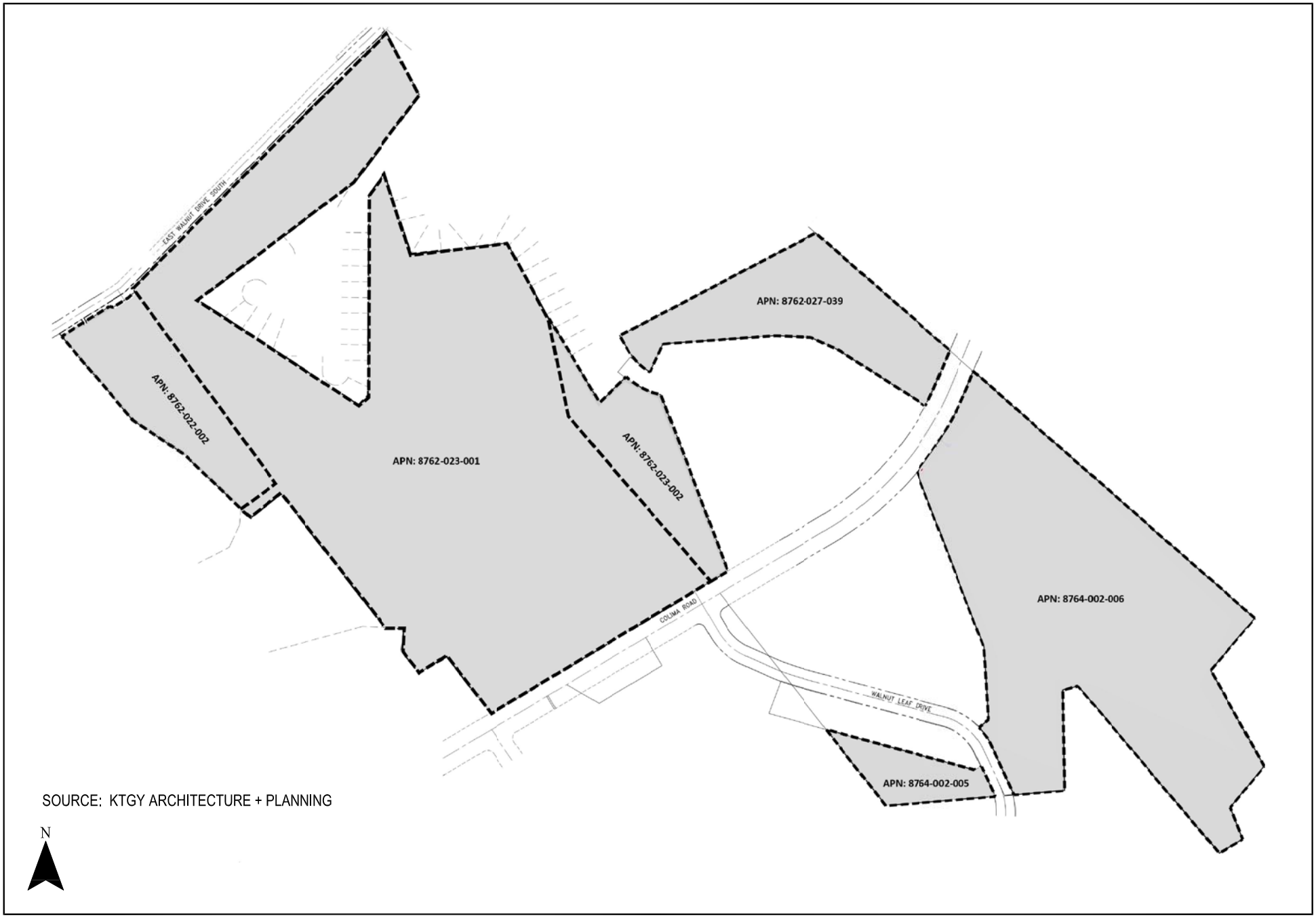
The project site is bounded by East Walnut Drive South to the north, Fairway Drive to the west, residential neighborhoods along Chapel Hill Drive and Morning Sun Avenue to the south, and residential neighborhoods along Tierra Luna, Calbourne Drive, and Fairlance Drive to the east. The City of Diamond Bar is located immediately east of the project site, adjacent to the parcels south of Colima Road. The City of Industry is located immediately north of the project site, on the north side of East Walnut Drive South. An aerial photograph of the existing project site is presented in ***Figure 2-2***.

The project site is located within a developed and urbanized area. Single-family residential uses immediately surround the project site on all sides except the north, where commercial and hotel uses are located along East Walnut Drive South, including a Quality Inn, supply goods store, home improvement, storage facility, and associated surface parking lot uses. South of Colima Road are the existing golf course, landscaping, and residential uses surrounding the southwestern most edge of the project site. Land uses further north of the project site, between SR-60 and Valley Boulevard, include business parks and commercial uses such as, car wash, restaurants, dance studio, gas station, storage facilities, and several retail stores.

2.2 Existing Conditions[7]

The project site consists of six irregularly-shaped and non-contiguous parcels comprising portions of the existing Royal Vista Golf Club, which was established in 1962. The proposed project generally comprises 13 holes and the driving range of the existing 27-hole golf course. There are no existing structures on the majority of the project site; however, APN 8762-022-002 includes a maintenance facility building and APN 8762-023-002 includes the driving range, both of which would be removed in connection with the project. The project site is not accessible to the general public except

[7] Source: Environmental Science Associates.



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Figure 2-1

Assessors Parcel Numbers Map



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MAP SOURCE: GOOGLE EARTH

Project Site

PA-# Planning Area

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Figure 2-2
Aerial Photograph of the Existing Project Site

Royal Vista Residential and Parks Project

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for golf course patrons. Fencing forms a perimeter around the existing golf course. A tall driving range safety fence exists along the north side of Colima Road and security lighting fixtures are also present on the project site. Additional discussion of the existing transportation network in the vicinity of the proposed project site is provided in *Section 3.0*, herein.

2.3 Proposed Project Description[8]

The project proposes to redevelop four of the project site's parcels into residential planning areas (Planning Areas[9] 1, 2, 3, and 5) with 360 residential units and the two remaining parcels into open space planning areas (Planning Areas 4 and 6). These planning areas would consist of a 31.60-acre planning area north of Colima Road (Planning Area 1), a 9.55-acre second planning area north of Colima Road and south of East Walnut Drive South (Planning Area 2), a 6.00-acre planning area south of East Walnut Drive South (Planning Area 3), a 5.81-acre open space planning area north of Colima Road and east of Tierra Luna (Planning Area 4), a 21.09-acre planning area south of Colima Road (Planning Area 5), and a 1.59-acre open space planning area south of Colima Road and west of Walnut Leaf Drive (Planning Area 6). The project site plan is presented in ***Figure 2-3***.

Proposed Planning Area 1 is bordered on the south by Colima Road, by residential single-family uses to the north and to the east, and the Royal Vista Golf Club clubhouse and surface parking lot to the west. Proposed Planning Area 2 is bordered by East Walnut Drive South on the north, residential single-family uses to the east and west, proposed Planning Area 1 to the southeast, and the existing golf course to the southwest. Proposed Planning Area 3 is bordered by East Walnut Drive South on the north, proposed Planning Area 2 to the west, single-family residential uses and Iluso Avenue to the south, and single-family residential uses to the east. Proposed Planning Area 4 is bordered by Colima Road to the south, and single-family residential uses to the north, east, and west. Proposed Planning Area 5 is bordered on the north by Colima Road, and single-family residential uses to the west, east and south. Proposed Planning Area 6 is bordered by residential single-family homes on the north and south, Walnut Leaf Drive to the east, and the existing golf course to the west. The project's proposed site access and internal site circulation is described in *Section 2.4*, below.

Three of the four proposed residential planning areas (Planning Areas 1, 2 and 5) will be subdivided into 288 single-family residences provided in mix of detached, duplex, and triplex dwelling units, and the fourth residential planning area (Planning Area 3) will include 72 townhouse units within 14 structures. Planning Area 4 would be developed into a 5.81-acre open space area for walking, biking and picnicking with no formal athletic activities, and Planning Area 6 would be developed into a 1.59-acre open space area. *Figure 2-3* shows the layout of the proposed residential units and two open space uses. As shown in ***Table 2-1*** below, the proposed project's residential component would comprise 47.64 net acres and would develop 360 residential units (288 single-family units and 72 townhomes). The proposed project would also include 28.00 acres of on-site retained open space.

[8] Source: Environmental Science Associates.
[9] A "Planning Area" is interchangeably referred to as a "Planning Area Lot" or "Lot", herein.



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Figure 2-3
Site Plan

Table 2-1
PROPOSED DEVELOPMENT SUMMARY [1]

PLANNING AREA	NET PLANNING AREA SIZE (ACRES)	NUMBER OF UNITS	UNIT TYPE	OPEN SPACE (ACRES)
Planning Area 1	19.76 4.71	116 52	SFR Duplex/Triplex	7.14
Planning Area 2	6.36	32	SFR	3.19
Planning Area 3	4.39	72	Townhome	1.61
Planning Area 4	-	-	Open Space	5.81
Planning Area 5	9.12 3.00	52 36	SFR Duplex/Triplex	8.97
Planning Area 6	-	-	Open Space	1.59
Total	**47.34**	**360**		**28.31**

[1] Source: KTGY Architecture and Planning

The proposed project would include roadways, curbs and gutters, sidewalks, fire hydrants, street lights, landscaping, and irrigation for the project site. The proposed project would also include roadway widening along East Walnut Drive South, which is described in detail in *Section 2.4.2*, below. All construction activities associated with the proposed project would occur within the project site, except for off-site road improvements. Building demolition of existing structures, infrastructure construction, and remedial grading would occur within the project site. Earthwork activities necessary for construction would require an estimated 8,000 cubic yards of export during the Site Preparation phase, and an estimated 133,600 cubic yards of export during the Grading/Excavation phase. Construction is planned to begin in 2024 and continue into 2027. A detailed discussion of the project's construction activities is provided in *Section 6.0,* herein. The project is planned to be fully constructed and occupied by the end of 2027.

2.4 Project Site Access

As noted previously, the existing project site is currently occupied by portions of a golf course and is fenced around the perimeter which limits public access. As shown in *Figure 2-2*, the project site does not currently provide any driveways which accommodate access by passenger vehicles. Pedestrian and golf cart access between the project parcels is accommodated by a paved golf cart path. Unmarked mid-block crossings are provided between Planning Area 1 and Planning Area 3 across Iluso Avenue, between Planning Area 1 and Planning Area 4 across Tierra Luna, and between Planning Area 5 and Planning Area 6 across Walnut Leaf Drive. A fully signalized mid-block pedestrian and golf cart crossing is provided across Colima Road between Planning Area 4 and Planning Area 5, with traffic signals facing the eastbound and westbound approaches along Colima Road, and pedestrian signals facing the crosswalk approaches. Additional pedestrian and golf cart access across Colima Road is provided at the existing signalized intersection of Lake Canyon

Drive/Colima Road, where formally marked crosswalks are provided on each of the existing intersection legs. The proposed project site access is described in detail below.

2.4.1 *Vehicular Site Access*

As shown in *Figure 2*-3, access to the proposed project is planned to be accommodated by a variety of project driveways. Access to Planning Area 1 will primarily be provided via a new project driveway which would become the north leg of the existing Walnut Leaf Drive/Colima Road intersection. Access to Planning Area 2 will primarily be provided by a new project driveway located on the south side of East Walnut Drive South which would create a new "T"-intersection. Access between Planning Area 1 and 2 is accommodated via the proposed internal roadway system. Access to Planning Area 3 is provided via two (2) additional new driveways located along the south side of East Walnut Drive South. Access to Planning Area 5 will be provided via a new project driveway which would become the south leg of the existing Tierra Luna/Colima Road intersection. The project driveways providing access to Planning Areas 1, 2 and 5 are planned to provide a median island separating the inbound and outbound lanes, which would accommodate landscaping and monument signage at the project entrances. No gates are proposed as part of the project. The proposed project driveways and vehicular access scheme is described in detail below:

- East Walnut Drive South Driveway (Planning Area 2)
  The East Walnut Drive South driveway, which provides access to Planning Area 2, will be constructed near the westerly project boundary. This project driveway will provide one inbound and one outbound lane, separated by a median, and would form a "T"-intersection with East Walnut Drive South. This project driveway is expected to accommodate full access (i.e., left- and right-turning inbound and outbound movements).

- East Walnut Drive South Driveways (Planning Area 3)
  Two (2) driveways along East Walnut Drive South will provide access to Planning Area 3. The driveways will be constructed at the easterly and westerly ends of the parcel, and each are expected to accommodate full access (i.e., left- and right-turning inbound and outbound movements).

- Colima Road Driveway at Walnut Leaf Drive (Planning Area 1)
  The Colima Road driveway at Walnut Leaf Drive will primarily provide access to Planning Area 1. The driveway will provide one inbound and one outbound lane, separated by a median, and would form the north leg of the existing "T"-intersection of Walnut Leaf Drive/Colima Road. The project driveway is expected to accommodate full access (i.e., left- and right-turning inbound and outbound movements). It is assumed that turns into and out of the project driveway would be accommodated by either the existing two-way left-turn lane or an exclusive left-turn lane provided along Colima Road.

- Colima Road Driveway at Tierra Luna (Planning Area 5)
  The Colima Road driveway at Tierra Luna will provide access to Planning Area 5. The driveway will provide one inbound and one outbound lane, separated by a median, and would

form the south leg of the existing "T"-intersection of Tierra Luna/Colima Road. The project driveway is expected to accommodate full access (i.e., left- and right-turning inbound and outbound movements). It is assumed that turns into and out of the project driveway would be accommodated by either a two-way left-turn lane or an exclusive left-turn lane provided along Colima Road. The existing signalized crossing located east of the Tierra Luna/Colima Road intersection will be relocated to this future four (4) way intersection in order to accommodate development of the proposed project and maintain pedestrian access across Colima Road. This recommendation is discussed in greater detail in *Sections 2.6* and *8.3*, herein.

Within the project site, vehicular circulation will be accommodated by private roadways. These roadways are planned to be constructed to the applicable County design standards for local roads and would adequately accommodate emergency vehicles as required by the Fire Department.

2.4.2 *Required Street Improvements*

Colima Road is designated as a Major Highway in the *Los Angeles County General Plan*[10] Mobility Element. The County standard for Major Highways consists of a 42-foot half roadway width within a 50-foot half right-of-way width. Colima Road is currently improved to County standards adjacent to the project site; therefore, no street improvements along Colima Road are required. East Walnut Drive South is designated as a Local Street in the *General Plan* Mobility Element. The County standard for Local Streets consists of a 20-foot half roadway width within a 32-foot half right-of-way width. Currently, East Walnut Drive South adjacent to the project site provides a 10-foot half roadway width within a 20-foot half right-of-way. Accordingly, the project applicant will provide a 12-foot right-of-way dedication on the south side of East Walnut Drive South adjacent to the project site. The applicant will construct 10 feet of roadway widening along the project frontage in order to meet the standard half-roadway width requirement, as well as six- (6) foot wide public sidewalks separated from the roadway by formal curb and gutter. The roadway widening, sidewalks, curb and gutter, and project driveways along the project frontage will be constructed to Los Angeles County Public Works standards.

2.4.3 *Non-Vehicular Site Access*

The project site is planned to accommodate non-vehicular access as well. As previously described, the private golf club is fenced to limit public access from adjacent sidewalks in the public right-of-way, and only limited access into and within the project site is provided via the existing golf cart path. The proposed project would provide sidewalks, curb, and gutter along all of the internal project roadways in order to accommodate pedestrian access to the planned residential homes/units. The sidewalks would accommodate Americans with Disabilities Act (ADA) compliant curb ramps and high-contrast tactile warning strips (i.e., yellow truncated dome pads) at all internal project intersections. In addition, the project would provide public sidewalks along East Walnut Drive South as well as appropriate connections to the existing public sidewalks adjacent to the project site. Thus,

[10] Los Angeles County General Plan, adopted October 6, 2015.

the project will provide a comfortable, convenient, and safe environment for pedestrians to access the proposed project from the public right-of-way. Bicycle access to and from the residential homes/units is expected to be accommodated by the internal roadway network at the project site.

The existing project access points which currently accommodate access to the golf cart path are planned to continue to provide pedestrian access to and from the public right-of-way as well (as described in more detail in the following *Section 2.5*). The existing signalized pedestrian and golf cart crossing at Colima Road is planned to be removed in order to accommodate the development of the open space in Planning Area 4 and the residential neighborhood in Planning Area 5. The signalized crossing will be relocated to the future Tierra Luna-Project Driveway/Colima Road intersection in order to maintain a protected pedestrian crossing at Colima Road.

2.5 Recreational Multi-Use Trails

The proposed project is planned to provide recreational multi-use trails throughout the project site. As shown in *Figure 2-3,* the trails would be situated in the open space which is planned to be maintained along the outer project boundaries of Planning Areas 1, 2, 3, and 5, and would provide connections into and through the open spaces in Planning Areas 4 and 6. These recreational trails would be open to the general public as well as residents of the project site, and are expected to accommodate pedestrians, bicycles, and other non-motorized modes of travel. A series of mini-parks will be provided along the trails which will include public exercise equipment and picnic tables/seating. The recreational trail system would connect to the public sidewalks and roadways at various locations, including access points from East Walnut Drive South, Iluso Avenue, Colima Road, Tierra Luna, and Walnut Leaf Drive. The access points would be provided in the same locations as the existing golf cart path crossings. The crossings across Iluso Avenue, Tierra Luna, and Walnut Leaf Drive would continue to remain unsignalized. As noted previously, the existing golf cart crossing across Colima Road will be removed due to the development of the proposed project and the signalized crossing will be relocated to the Tierra Luna-Project Driveway/Colima Road intersection in order to maintain pedestrian access across Colima Road. Therefore, pedestrian crossings across Colima Road associated with use of the recreational trails are planned to be accommodated at the Tierra Luna-Project Driveway/Colima Road intersection. It is noted that the planned recreational trail would connect in approximately the same location on the north side of Colima Road as the existing golf cart crossing, however on the south side of Colima Road the trail will connect to the public sidewalks on either side of the project driveway (which would form the south leg of the Tierra Luna-Project Driveway/Colima Road intersection). In addition, trail connections to the internal project roadway system will be provided within Planning Areas 1, 2, 3, and 5.

2.6 Traffic Signal Warrant Analysis

Traffic signal warrant analyses have been prepared to determine whether a traffic signal installation is formally warranted at either of the project driveways along Colima Road (i.e., Project Driveway-Walnut Leaf Drive/Colima Road and Tierra Luna-Project Driveway/Colima Road) upon completion and occupancy of the proposed project. It should be noted that the existing signalized crossing

situated east of the existing Tierra Luna/Colima Road intersection will be relocated to the future four (4) way Tierra Luna-Project Driveway/Colima Road intersection in order to accommodate the development of the proposed project and maintain pedestrian access across Colima Road. Therefore, the signal warrant analysis provided for this location is for informational purposes only.

The warrant analysis is consistent with the signal warrants outlined in Chapter 4C of the *California Manual on Uniform Traffic Control Devices*[11] (MUTCD). It is important to note that the satisfaction of a traffic signal warrant is not necessarily justification for the installation of a traffic signal. Delay, congestion, approach conditions, driver confusion, future land use or other evidence of the need for right-of-way assignment beyond that which could be provided by stop sign control may be demonstrated. Conversely, if a traffic signal warrant is not met, these other factors may be just cause for consideration of a traffic signal installation.

Traffic signal warrants were prepared for the Project Driveway-Walnut Leaf Drive/Colima Road and Tierra Luna-Project Driveway/Colima Road intersections. Specifically, Warrant No. 1 (Eight Hour Vehicular Volume), Warrant No. 2 (Four Hour Vehicular Volume), and Warrant No. 3 (Peak Hour Volume) were prepared for the forecast future cumulative with project traffic conditions, and Warrant No. 7 (Crash Experience) was prepared based on a review of existing collision records. The traffic signal warrant calculations were based on average daily traffic volumes collected in September and November 2021, the expected project-generated peak hour traffic volumes, and the forecast cumulative project traffic volumes at the intersection (refer to *Section 2.7* and *Section 3.5*, respectively, for further discussion of the proposed project and cumulative project traffic volumes utilized in the analysis). The traffic signal warrant worksheets and average daily traffic count data worksheets are provided in ***Appendix B***. The following paragraphs provide detailed discussions of the traffic signal warrants prepared for the intersection.

Warrant 1: Eight-Hour Vehicular Volume

The Eight Hour Vehicular Volume warrant consists of three conditions: Condition A – the Minimum Vehicular Volume, Condition B – the Interruption of Continuous Traffic, and the Combination of Conditions A and B.

The Minimum Vehicular Volume warrant (Condition A) is intended for application where a large volume of intersecting traffic is the principal reason for consideration of a signal installation. The warrant is satisfied when for each of any eight hours of an average day the traffic volumes provided in the table for Warrant 1 under Condition A exist on the major street and on the higher-volume minor street approach to the intersection.

The Interruption of Continuous Traffic warrant (Condition B) applies to operating conditions where Condition A is not satisfied and where the traffic volume on a major street is so heavy that traffic on a minor intersecting street suffers excessive delay or hazard in entering or crossing the major street.

[11] *California Manual on Uniform Traffic Control Devices (MUTCD),* State of California Business, Transportation and Housing Agency, Department of Transportation, 2014 Edition, Revision 6, March 30, 2021.

The warrant is satisfied when, for each of any eight hours of an average day, the traffic volumes given in the table exist on the major street and on the higher-volume minor street approach to the intersection, and the signal installation will not seriously disrupt progressive traffic flow.

The Combination of Conditions A and B warrant applies at locations where Conditions A and B are not satisfied but where Conditions A and B are satisfied to the extent of 80 percent or more of the stated numerical values.

Warrant 2: Four-Hour Vehicular Volume

The Four Hour Vehicular Volume Warrant is satisfied when, for each of any four hours of an average day, the plotted points representing the vehicles per hour on the major street (total of both approaches) and the corresponding vehicles per hour on the higher volume minor street approach (one direction only) all fall above the applicable curves in Figure 4C-1 or 4C-2 for the combination of approach lanes. In urban settings, the lower threshold for a minor street approach with two or more lanes is 115 vehicles per hour while the lower threshold for a minor street approach with one lane is 80 vehicles per hour. In rural settings, the lower threshold for a minor street approach with two or more lanes is 80 vehicles per hour while the lower threshold for a minor street approach with one lane is 60 vehicles per hour. As shown in the worksheets contained in *Appendix B*, the signal warrant is met when the plotted points fall above the appropriate curve.

Warrant 3: Peak Hour Volume

The Peak Hour Warrant consists of Part A and Part B and is intended for application where traffic conditions are such that for one hour of the day minor street traffic suffers undue delay in entering or crossing the major street. The Peak Hour warrant applies when one of the following criteria are satisfied:

- Part A. If all three of the following conditions exist for the same 1 hour (any four consecutive 15-minute periods) of an average day:
    - The total stopped time delay experienced by the traffic on one minor-street approach (one direction only) controlled by a STOP sign equals or exceeds 4 vehicle-hours for a one-lane approach, or 5 vehicle-hours for a two-lane approach, and
    - The volume on the same minor-street approach (one direction only) equals or exceeds 100 vehicles per hour for one moving lane of traffic or 150 vehicles per hour for two moving lanes, and
    - The total entering volume serviced during the hour equals or exceeds 650 vehicles per hour for intersections with three approaches or 800 vehicles per hour for intersections with four or more approaches.
- Part B of Warrant No. 3 is satisfied when the plotted point, representing the vehicles per hour on the major street (total of both approaches) and the corresponding vehicles per hour on the higher volume minor street approach (one direction only) for one hour of an average day,

falls above the applicable curves in Figure 4C-3 or 4C-4 for the applicable number of approach lanes. In urban settings, the lower threshold for a minor street approach with two or more lanes is 150 vehicles per hour while the lower threshold for a minor street approach with one lane is 100 vehicles per hour. In rural settings, the lower threshold for a minor street approach with two or more lanes is 100 vehicles per hour while the lower threshold for a minor street approach with one lane is 75 vehicles per hour. As shown in the worksheets contained in *Appendix B*, the signal warrant is met when the plotted point falls above the appropriate curve.

Warrant 7: Crash Experience

The Crash Experience Warrant is intended for application where the severity and frequency of collisions are the primary reasons to consider installation of a traffic signal. The Crash Experience warrant applies when the following criteria are satisfied:

- Condition A or B of Warrant No. 1 is satisfied to the extent of 80 percent or more of the stated numerical values, or Warrant No. 4 (Pedestrian Volume) is satisfied to the extent of 80 percent or more of the stated numerical values, and
- Adequate trial of less restrictive remedies has failed to reduce the accident frequency, and
- Five or more reported accidents of types susceptible to correction by traffic signal control have occurred within the most recent 12-month period, or two per year during the most recent three-year period.

2.6.1 *Project Driveway-Walnut Leaf Drive/Colima Road Intersection*

As described above, traffic signal warrants were prepared for the Project Driveway-Walnut Leaf Drive/Colima Road intersection, assuming construction of the proposed project driveway would form the north leg of the existing "T"-intersection. In reviewing the traffic signal warrant analysis for the Project Driveway-Walnut Leaf Drive/Colima Road intersection, it is important to note the following:

- For the signal warrant analysis, Colima Road was assumed to be the major street while the proposed project driveway and the existing Walnut Leaf Drive approaches were assumed to be the minor streets.
- Colima Road has a posted speed limit of 45 miles per hour in the vicinity of the subject intersection. The MUTCD Traffic Signal Warrant Worksheets indicate that where the speed limit or critical speed on the major street is greater than 40 miles per hour, or in the built-up area of an isolated community of less than 10,000 population, the project context may be considered rural. Pursuant to the posted speed limit on Colima Road and the criteria provided on the MUTCD worksheets, the signal warrants have been evaluated using the criteria for rural settings.

- Summary data worksheets of the existing peak hour intersection turning movement counts and automatic 24-hour average daily traffic count data for the subject intersection and street segments are contained in *Appendix B*. The forecast future cumulative with project traffic volume conditions utilized in the analysis of the eight-hour and four-hour vehicular volume warrants are presented in ***Appendix Table B-1***. The forecast future cumulative with project traffic peak hour volumes are presented in *Figures 5-5* and *5-6*, included in this report.

- The lane configurations stated below have been assumed for the intersection. It should be noted that for the existing approaches at the intersection, the existing lane configurations have been utilized in order to provide a conservative (i.e., worst-case) signal warrant analysis.

  - Northbound Walnut Leaf Drive approach: one combination left-turn/through/right-turn lane
  - Southbound Project Driveway approach: one combination left-turn/through/right-turn lane
  - Eastbound Colima Road approach: one left-turn lane, one through lane, and one shared through-right-turn lane
  - Westbound Colima Road approach: one left-turn lane, one through lane, and one shared through-right-turn lane

The resulting traffic signal warrant analysis conclusions are described below:

Warrant 1 – Eight-Hour Vehicular Volume: As shown in the worksheets provided in *Appendix B*, neither the Minimum Vehicular Volume warrant (Condition A), the Interruption of Continuous Traffic (Condition B) warrant, nor the Combination of Conditions A and B is met under future cumulative with project conditions for the subject intersection. As none of the three conditions are met, Warrant No. 1 is not satisfied for the Project Driveway-Walnut Leaf Drive/Colima Road intersection under future cumulative with project conditions.

Warrant 2 – Four-Hour Vehicular Volume: As indicated in Figure 4C-2 provided in *Appendix B*, none of the four of the plotted points for the four highest hours of the day under future cumulative with project conditions fall above the applicable curve for the subject intersection. Thus, Warrant No. 2 is not satisfied for the Project Driveway-Walnut Leaf Drive/Colima Road intersection under future cumulative with project conditions.

Warrant 3 – Peak Hour Volume: As previously described, when either all three criteria of Part A are met, or when Part B of the Peak Hour Volume Warrant is met, the warrant can be considered satisfied. As shown in the worksheets provided in *Appendix B*, under evening peak hour future cumulative with project conditions, two of the three criteria for Part A are not met. Further, as shown in Figure 4C-4 for Part B, the plotted point for the evening peak hour under future cumulative with project conditions falls below the applicable curve for the subject intersection. Therefore, neither Part A nor Part B is met. Thus, Warrant No. 3 is not satisfied under evening peak hour future

cumulative with project conditions for the Project Driveway-Walnut Leaf Drive/Colima Road intersection.

Warrant 7 – Crash Experience: Research was conducted of available collision records in order to determine the existing collision history at the subject intersection. Collision records for the existing Walnut Leaf Drive/Colima Road intersection were requested from the California Highway Patrol's (CHP) online Statewide Integrated Traffic Records System (SWITRS) for the most recent five-year period, which consists of December 1, 2015 through November 30, 2020. ***Appendix Table B-3*** provides a summary of the collision records data for the subject intersection. As shown in the collision data, a total of four (4) collisions occurred over the most recent five-year period at this location. At most, a total of two (2) collisions occurred within any 12-month period. Since at least one of the three conditions is not satisfied, Warrant No. 7 is not met based on strict application of the warrant criteria.

It is therefore determined that none of the traffic signal warrants which have been evaluated for the Project Driveway-Walnut Leaf Drive/Colima Road intersection are satisfied under future cumulative with project conditions.

2.6.2 *Tierra Luna-Project Driveway/Colima Road Intersection*

As described above, the existing signalized crossing located east of the Tierra Luna/Colima Road intersection is planned to be relocated to the future Tierra Luna-Project Driveway/Colima Road intersection. For informational purposes, traffic signal warrants were prepared for the Tierra Luna-Project Driveway/Colima Road intersection, assuming construction of the proposed project driveway would form the south leg of the existing "T"-intersection. In reviewing the traffic signal warrant analysis for the Tierra Luna-Project Driveway/Colima Road intersection, it is important to note the following:

- For the signal warrant analysis, Colima Road was assumed to be the major street while the existing Tierra Luna and proposed project driveway approaches were assumed to be the minor streets.

- Colima Road has a posted speed limit of 45 miles per hour in the vicinity of the subject intersection. The MUTCD Traffic Signal Warrant Worksheets indicate that where the speed limit or critical speed on the major street is greater than 40 miles per hour, or in the built-up area of an isolated community of less than 10,000 population, the project context may be considered rural. Pursuant to the posted speed on Colima Road and the criteria provided on the MUTCD worksheets, the signal warrants have been evaluated using the criteria for rural settings.

- Summary data worksheets of the existing peak hour intersection turning movement counts and automatic 24-hour average daily traffic count data for the subject intersection and street segments are contained in *Appendix B*. The forecast future cumulative with project traffic volume conditions utilized in the analysis of the eight-hour and four-hour vehicular volume

warrants are presented in ***Appendix Table B-2***. The forecast future cumulative with project traffic peak hour volumes are presented in *Figures 5-5* and *5-6*, included in this report.

- The lane configurations stated below have been assumed for the intersection. It should be noted that for the existing approaches at the intersection, the existing lane configurations have been utilized for the signal warrant analysis.

  - Northbound Project Driveway approach: one combination left-turn/through/right-turn lane

  - Southbound Tierra Luna approach: one combination left-turn/through/right-turn lane

  - Eastbound Colima Road approach: one left-turn lane, one through lane, and one shared through-right-turn lane

  - Westbound Colima Road approach: one left-turn lane, one through lane, and one shared through-right-turn lane

The resulting traffic signal warrant analysis conclusions are described below:

Warrant 1 – Eight-Hour Vehicular Volume: As shown in the worksheets provided in *Appendix B*, neither the Minimum Vehicular Volume warrant (Condition A), the Interruption of Continuous Traffic (Condition B) warrant, nor the Combination of Conditions A and B is met under future cumulative with project conditions for the subject intersection. As none of the three conditions are met, Warrant No. 1 is not satisfied for the for the Tierra Luna-Project Driveway/Colima Road intersection under future cumulative with project conditions.

Warrant 2 – Four-Hour Vehicular Volume: As indicated in Figure 4C-2 provided in *Appendix B*, none of the four of the plotted points for the four highest hours of the day under future cumulative with project conditions fall above the applicable curve for the subject intersection. Thus, Warrant No. 2 is not satisfied for the Tierra Luna-Project Driveway/Colima Road intersection under future cumulative with project conditions.

Warrant 3 – Peak Hour Volume: As previously described, when either all three criteria of Part A are met, or when Part B of the Peak Hour Volume Warrant is met, the warrant can be considered satisfied. As shown in the worksheets provided in *Appendix B*, under evening peak hour future cumulative with project conditions, two of the three criteria for Part A are not met. Further, as shown in Figure 4C-4 for Part B, the plotted point for the evening peak hour under future cumulative with project conditions falls below the applicable curve for the subject intersection. Therefore, neither Part A nor Part B is met. Thus, Warrant No. 3 is not satisfied under evening peak hour future cumulative with project conditions for the Tierra Luna-Project Driveway/Colima Road intersection.

Warrant 7 – Crash Experience: Research was conducted of available collision records in order to determine the existing collision history at the subject intersection. Collision records for the existing Tierra Luna/Colima Road intersection were requested from the California Highway Patrol's (CHP) online Statewide Integrated Traffic Records System (SWITRS) for the most recent five-year period,

which consists of December 1, 2015 through November 30, 2020. *Appendix Table B-3* provides a summary of the collision records data for the subject intersection. As shown in the collision data, a total of two (2) collisions occurred over the most recent five-year period at this location. Since at least one of the three conditions is not satisfied, Warrant No. 7 is not met based on strict application of the warrant criteria.

It is important to note that one (1) of the two (2) collisions reported at the Tierra Luna/Colima Road intersection involved a collision at the existing signalized pedestrian and golf cart crossing located to the east of the intersection. A golf cart utilizing the signalized mid-block crossing across Colima Road was struck by a motorist traveling along Colima Road, resulting in the death of the golf cart occupant. The motorist was found to be at fault for violating California Vehicle Code Section 21453(a), which requires drivers to come to a complete stop when facing a steady red traffic signal indication.

It is therefore determined that none of the traffic signal warrants which have been evaluated for the Tierra Luna-Project Driveway/Colima Road intersection are satisfied under future cumulative with project conditions.

2.6.3 *Traffic Signal Warrant Analysis Conclusions*

As presented above, it is determined that none of the traffic signal warrants which have been evaluated for the Project Driveway-Walnut Leaf Drive/Colima Road intersection are satisfied under future cumulative with project conditions. Thus, a traffic signal is not recommended for the Project Driveway-Walnut Leaf Drive/Colima Road intersection.

It is also determined that none of the traffic signal warrants which have been evaluated for the Tierra Luna-Project Driveway/Colima Road intersection are satisfied under future cumulative with project conditions. However, the existing signalized pedestrian and golf cart crossing at Colima Road is planned to be removed in order to accommodate the development of the open space in Planning Area 4 and the proposed single-family homes in Planning Area 5. The signalized crossing will be relocated to the future Tierra Luna-Project Driveway/Colima Road intersection in order to maintain a protected pedestrian crossing at Colima Road.

Currently, the signalized crossing accommodates approximately 15 golf-cart crossings and nominal pedestrian crossings during the peak hours of use (refer to the manual pedestrian and golf cart crossing counts included in *Appendix C*). While golf cart crossings will not occur at the subject intersection after construction and occupancy of the proposed project, it is anticipated that pedestrian crossings across Colima Road will increase due to use of the proposed recreational multi-use trails. The proposed trail system connects across Colima Road at the Planning Area 4 open space on the north side of the roadway and at the proposed project driveway on the south side of the roadway, thus requiring pedestrians, bicyclists, and other users to cross at the subject intersection.

Colima Road provides an approximately 84-foot roadway width and is signed for a 45 mile per hour speed limit in the vicinity of the subject intersection. Both factors require an extensive gap (up to 24 seconds, assuming a pedestrian travel speed of 3.5 feet per second) in traffic along Colima Road in

order to accommodate safe pedestrian crossings. Identification of such extensive gaps is hindered by curves in the alignment of Colima Road to the east and west of the subject intersection. In addition, the proposed project would construct the south leg of the intersection, increasing potential conflicts between pedestrians/bicyclists crossing Colima Road and vehicles turning to and from the minor streets. In recognition of the increase in vulnerable roadway users expected at the intersection due to the proposed development and the prior fatality at the existing signalized crossing, it is recommended the Tierra Luna-Project Driveway/Colima Road intersection be signalized. Without the additional degree of protection provided by a signalized crossing, crossing Colima Road would be hazardous to pedestrians, bicyclists, and other users.

Further, Int. 9 – Tierra Luna-Project Driveway/Colima Road is expected to operate at LOS F under the existing with project and future cumulative with project traffic conditions, and signalization of the study intersection is anticipated to result in LOS A at the subject intersection during AM and PM peak hours under future cumulative with project traffic conditions (refer to *Section 5.5*, herein).

As previously noted, the satisfaction of a traffic signal warrant is not necessarily justification for the installation of a traffic signal. Conversely, if a traffic signal warrant is not met, other factors may be just cause for consideration of a traffic signal installation. At the Tierra Luna-Project Driveway/Colima Road intersection, the expected increase in pedestrian activity, the approach speeds along Colima Road, and the safety of vulnerable roadway users, along with a reduction in minor street delays, justify the relocation of the existing signal to the future intersection.

2.7 Project Trip Generation and Distribution

2.7.1 *Project Trip Generation Forecast*

Traffic trip generation is expressed in vehicle trip ends, defined as one-way vehicular movements, either entering or exiting the generating land use. The traffic volumes anticipated to be generated by the proposed project were forecast for the typical weekday AM and PM peak commute hours as well as over a 24-hour period (i.e., daily). Trip generation rate information provided in the Institute of Transportation Engineers' (ITE) *Trip Generation Manual*, 11th Edition[12] was utilized to prepare the trip generation forecast. Specifically, trip generation average rates for Land Use 210: Single-Family Detached Housing, Land Use 215: Single-Family Attached Housing, and Land Use 220: Multi-family Housing (Low-Rise) were utilized to forecast the trips generated by the proposed single-family residential units and townhomes, respectively.

As previously described, the existing project site is currently occupied by portions of the Royal Vista Golf Course which comprise 13 golf course holes and the driving range. The golf course holes and driving range will be removed in order to accommodate development of the proposed residential project. Trip generation forecasts were prepared for the existing Royal Vista Golf Course components which are planned for demolition using trip generation average rates for Land Use 430: Golf Course and Land Use 432: Golf Driving Range. The existing trips generated by the current site

[12] Institute of Transportation Engineers *Trip Generation Manual*, 11th Edition, Washington D.C., 2021.

land uses have been applied as an existing use trip generation credit towards the proposed project's trip generation forecast. Evidence that the existing Royal Vista Golf Course has been in operation for more than six (6) months in the last two (2) years is provided in ***Appendix H***.

The trip generation forecast for the proposed project is summarized in ***Table 2-2***. As presented in *Table 2-2*, the proposed project is expected to generate 176 net new vehicle trips (31 inbound trips and 145 outbound trips) during the weekday AM peak hour. During the weekday PM peak hour, the proposed project is expected to generate 204 net new vehicle trips (136 inbound trips and 68 outbound trips). Over a 24-hour period, the proposed project is forecast to generate 2,243 daily trip ends (approximately 1,122 inbound trips and approximately 1,122 outbound trips) on a typical weekday.

2.7.2 *Project Trip Distribution and Assignment*

Project traffic volumes both entering and exiting the site have been distributed and assigned to the adjacent street system based on the following considerations:

- The site's proximity to major traffic corridors (i.e., Fairway Drive, Brea Canyon Cutoff Road, Colima Road, Golden Springs Drive, etc.);
- Expected localized traffic flow patterns based on adjacent roadway channelization and presence of traffic signals;
- Existing intersection traffic volumes;
- Ingress/egress scheme planned for the proposed project;
- Nearby population and employment centers; and
- Input from Los Angeles County staff.

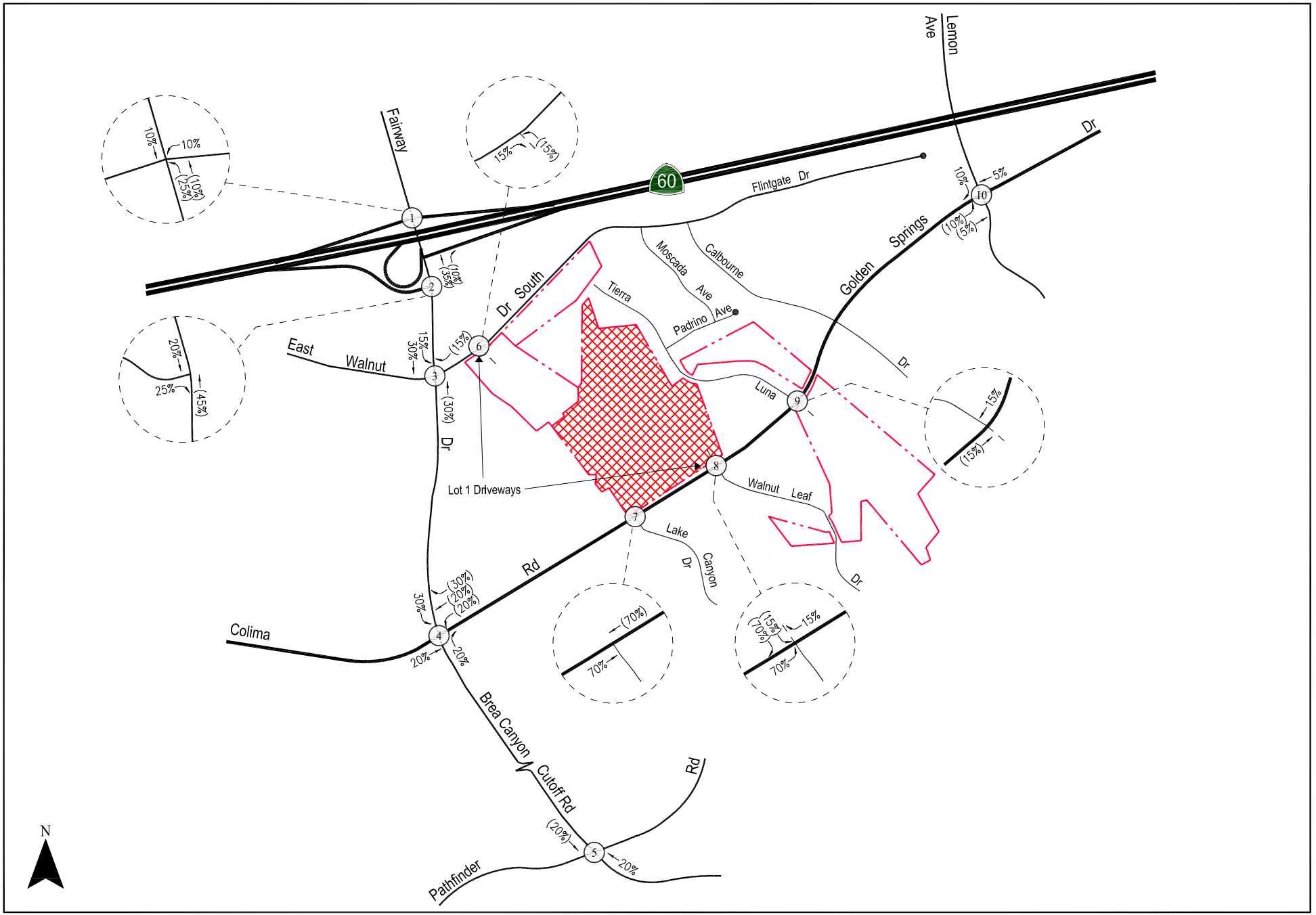
The general, directional traffic distribution patterns for the proposed project are presented in ***Figures 2-4*** through ***2-7***, which present the distribution of project traffic generated by Planning Areas 1, 2, 3, and 5, respectively. In consultation with County staff (pursuant to the approved Scoping Document), project trips to and from the Planning Areas 2 and 3 driveways have been assigned to the Planning Area 2 driveway only in order to provide a conservative assessment of project traffic along East Walnut Drive South. Actual vehicle trips at the Planning Areas 2 and 3 project driveways are expected to be lower than the volumes assumed for analysis purposes. The distribution of traffic generated by the existing uses which are to be removed is presented in ***Figure 2-8***. The forecast net new weekday AM and PM peak hour project traffic volumes at the study intersections associated with the proposed project are presented in ***Figures 2-9*** and ***2-10***, respectively. The traffic volume assignments presented in *Figures 2-9* and *2-10* reflect the traffic distribution characteristics shown in *Figures 2-4* through *2-8* and the project trip generation forecasts presented in *Table 2-2*.

Table 2-2
PROJECT TRIP GENERATION FORECAST

TRIP GENERATION RATES [1]									
	ITE LAND USE		WEEKDAY	WEEKDAY AM PEAK HOUR			WEEKDAY PM PEAK HOUR		
ITE LAND USE CATEGORY	CODE	VARIABLE	DAILY	IN (%)	OUT (%)	TOTAL	IN (%)	OUT (%)	TOTAL
Single-Family Detached Housing	210	Per Dwelling Unit	9.43	26%	74%	0.70	63%	37%	0.94
Single-Family Attached Housing	215	Per Dwelling Unit	7.20	31%	69%	0.48	57%	43%	0.57
Multi-Family Housing (Low-Rise)	220	Per Dwelling Unit	6.74	24%	76%	0.40	63%	37%	0.51
Public Park	411	Per Acre	0.78	59%	41%	0.02	55%	45%	0.11
Golf Course	430	Per Hole	30.38	79%	21%	1.76	53%	47%	2.91
Golf Driving Range	432	Per Driving Position	13.65	61%	39%	0.40	45%	55%	1.25

PROJECT TRIP GENERATION FORECAST									
	ITE LAND USE		DAILY TRIP ENDS [2]	AM PEAK HOUR VOLUMES [2]			PM PEAK HOUR VOLUMES [2]		
LAND USE	CODE	SIZE	VOLUMES	IN	OUT	TOTAL	IN	OUT	TOTAL
Proposed Project									
Planning Area Lot 1									
Single-Family Residential	210	116 DU	1,094	21	60	81	69	40	109
Duplex/Triplex Residential	215	52 DU	374	8	17	25	17	13	30
Planning Area Lot 2									
Single-Family Residential	210	32 DU	302	6	16	22	19	11	30
Planning Area Lot 3									
Multi-Family Housing	220	72 DU	485	7	22	29	23	14	37
Planning Area Lot 5									
Single-Family Residential	210	52 DU	490	9	27	36	31	18	49
Duplex/Triplex Residential	215	36 DU	259	5	12	17	12	9	21
Planning Area Lots 4 and 6									
Public Park	411	7.40 Acres	6	Nom.	Nom.	Nom.	1	Nom.	1
- Less Walk-In Adjustment (50%) [3]			(3)	Nom.	Nom.	Nom.	(1)	Nom.	(1)
Subtotal Proposed Project			***3,007***	***56***	***154***	***210***	***171***	***105***	***276***
Existing Uses to be Removed									
Royal Vista Golf Holes	430	(13) Holes	(395)	(18)	(5)	(23)	(20)	(18)	(38)
Royal Vista Driving Range	432	(27) Driv. Pos.	(369)	(7)	(4)	(11)	(15)	(19)	(34)
Subtotal Existing Uses			***(764)***	***(25)***	***(9)***	***(34)***	***(35)***	***(37)***	***(72)***
NET NEW PROJECT TRIPS			***2,243***	***31***	***145***	***176***	***136***	***68***	***204***

[1] Source: ITE "Trip Generation Manual", 11th Edition, 2021.
[2] Trips are one-way traffic movements, entering or leaving.
[3] The 5.81-acre public neighborhood park planned for Lot 4 and the 1.59-acre public pocket park planned for Lot 6 (providing a total of 7.40 acres of public park space) are intended to be neighborhood-serving in nature. A walk-in adjustment of 50% has been applied in order to account for the anticipated use of the parks by residents of the proposed project as well as the general public, including residents from the existing neighborhoods nearby.
"Nom." = Nominal trips.



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Project Site

(XX) Study Intersection

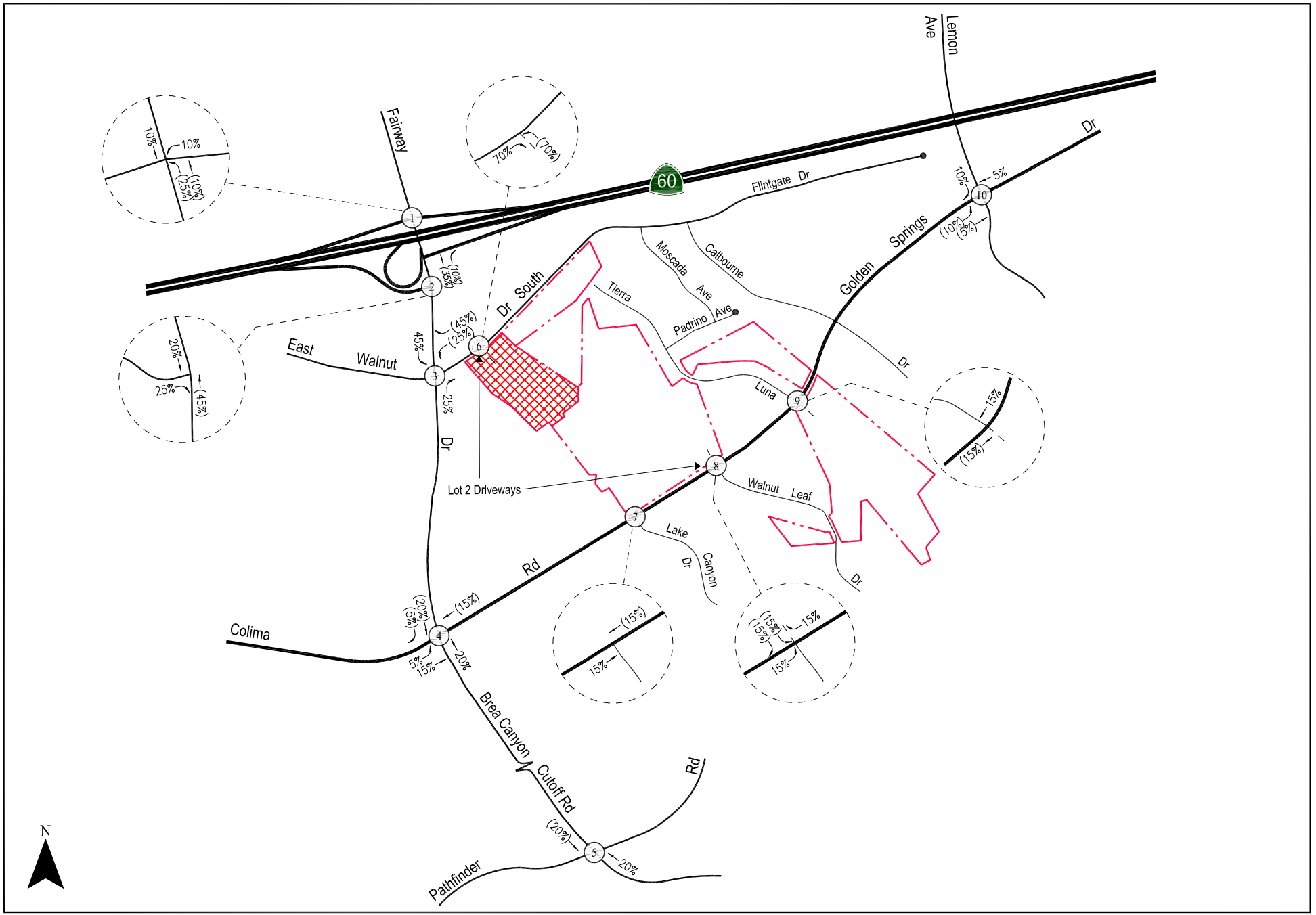
XX = Inbound Percentages

(XX) = Outbound Percentages

Figure 2-4

Project Trip Distribution - Planning Area Lot 1

Royal Vista Residential and Parks Project



Project Site

(XX) Study Intersection

XX = Inbound Percentages

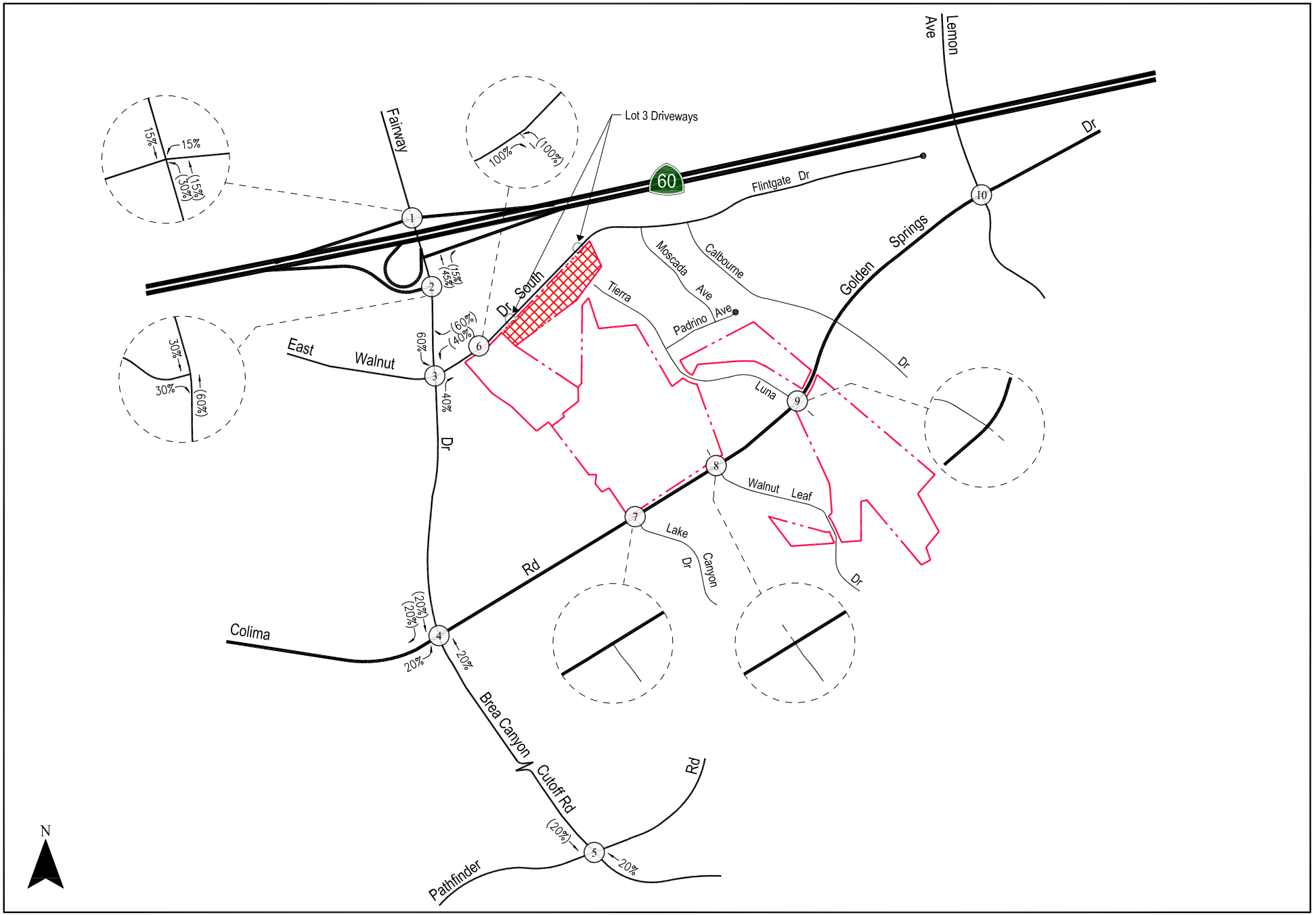
(XX) = Outbound Percentages

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Figure 2-5
Project Trip Distribution - Planning Area Lot 2

Royal Vista Residential and Parks Project

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Project Site

(XX) Study Intersection

XX = Inbound Percentages

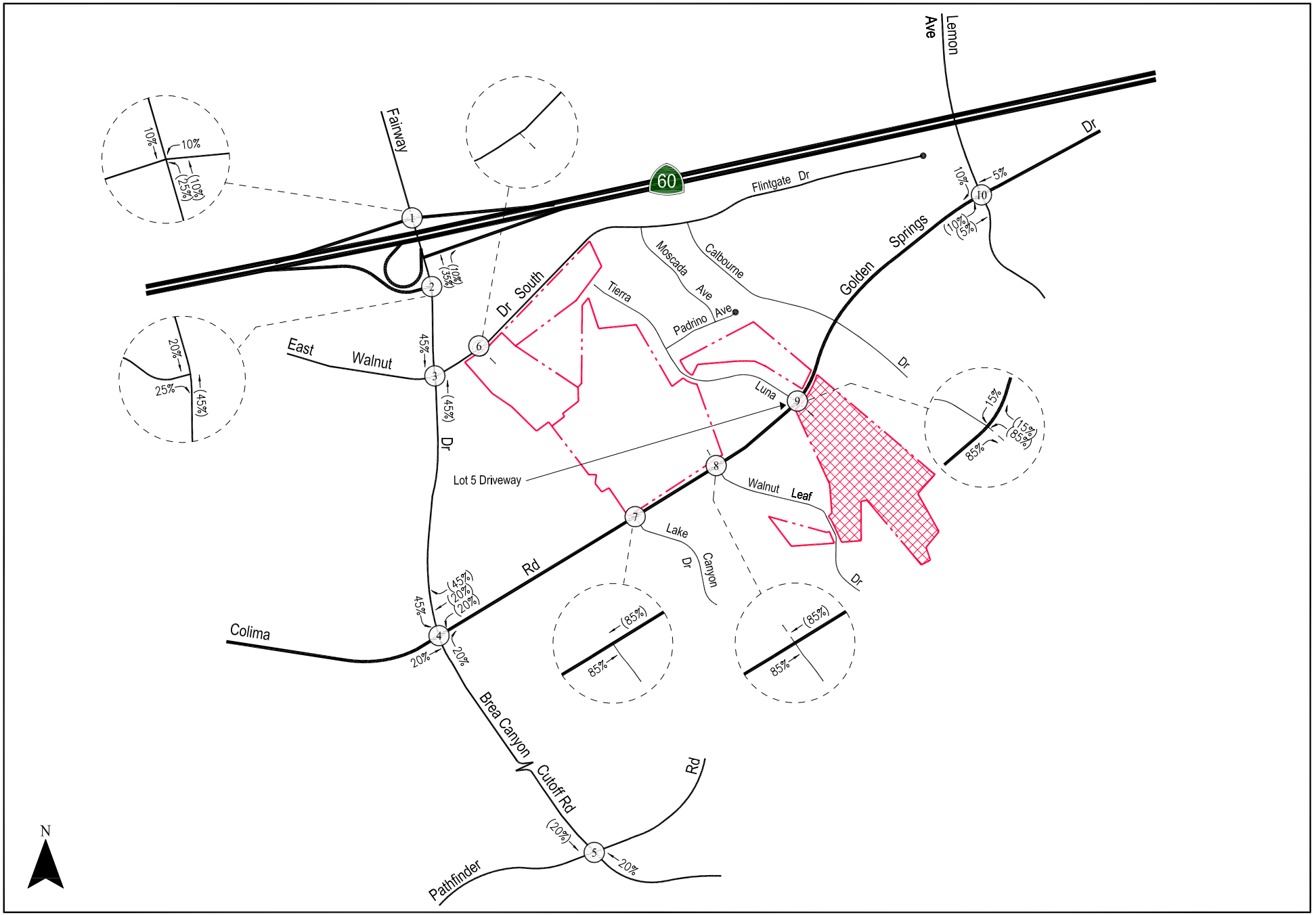
(XX) = Outbound Percentages

Figure 2-6

Project Trip Distribution - Planning Area Lot 3

Royal Vista Residential and Parks Project

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Project Site

XX Study Intersection

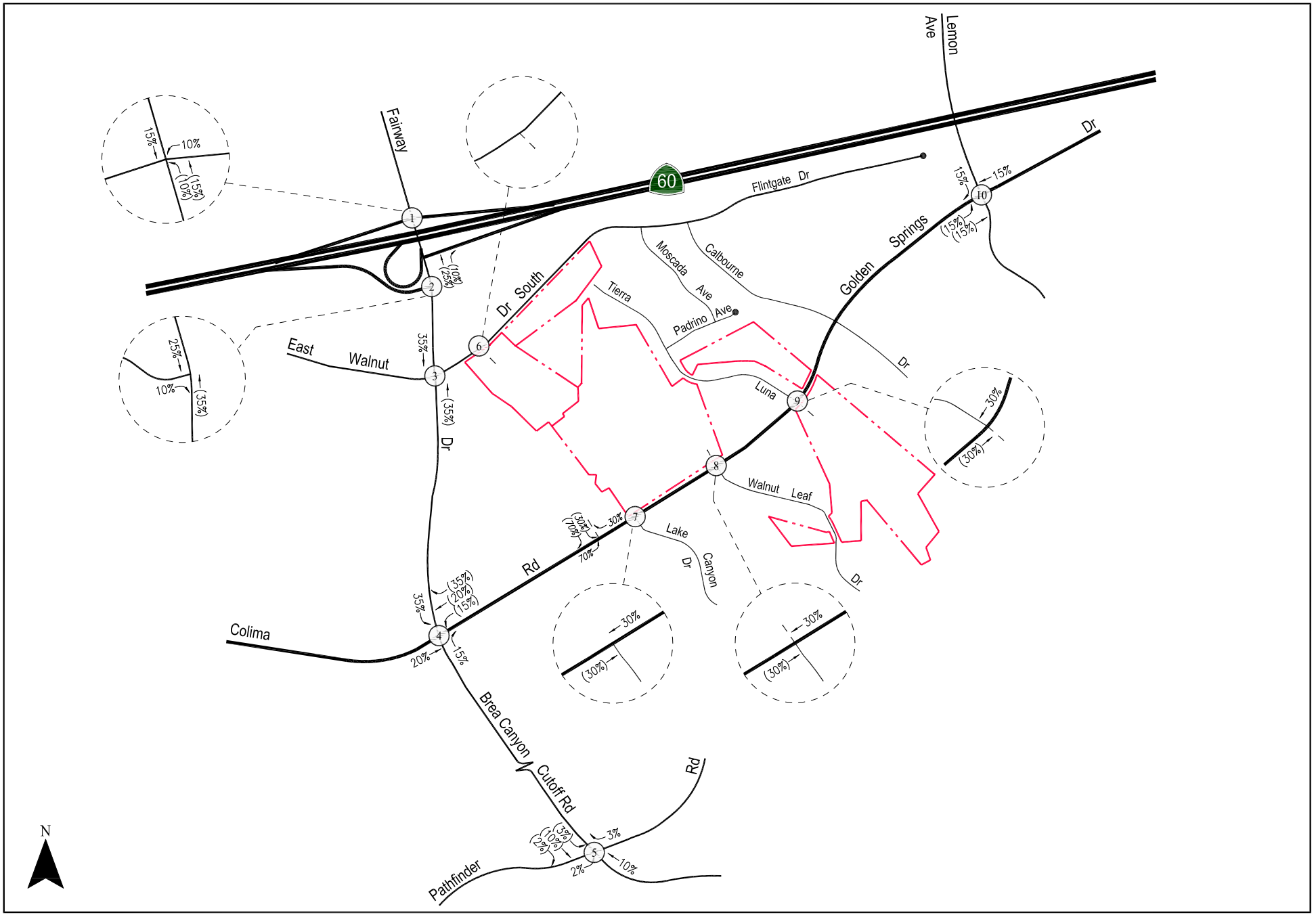
XX = Inbound Percentages

(XX) = Outbound Percentages

Figure 2-7

Project Trip Distribution - Planning Area Lot 5

Royal Vista Residential and Parks Project



Project Site

(XX) Study Intersection

XX = Inbound Percentages

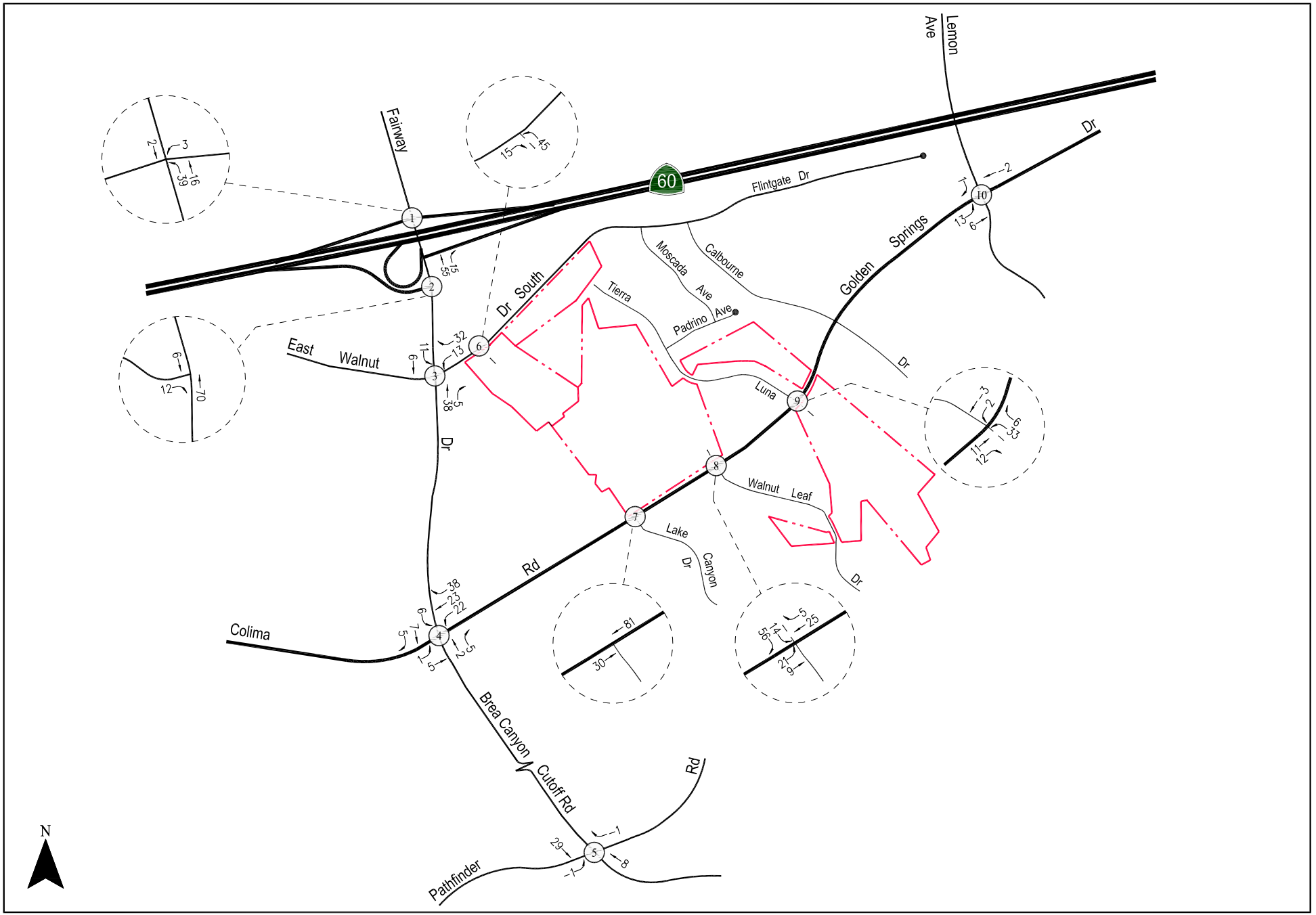
(XX) = Outbound Percentages

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Figure 2-8
Existing Use Trip Distribution

Royal Vista Residential and Parks Project

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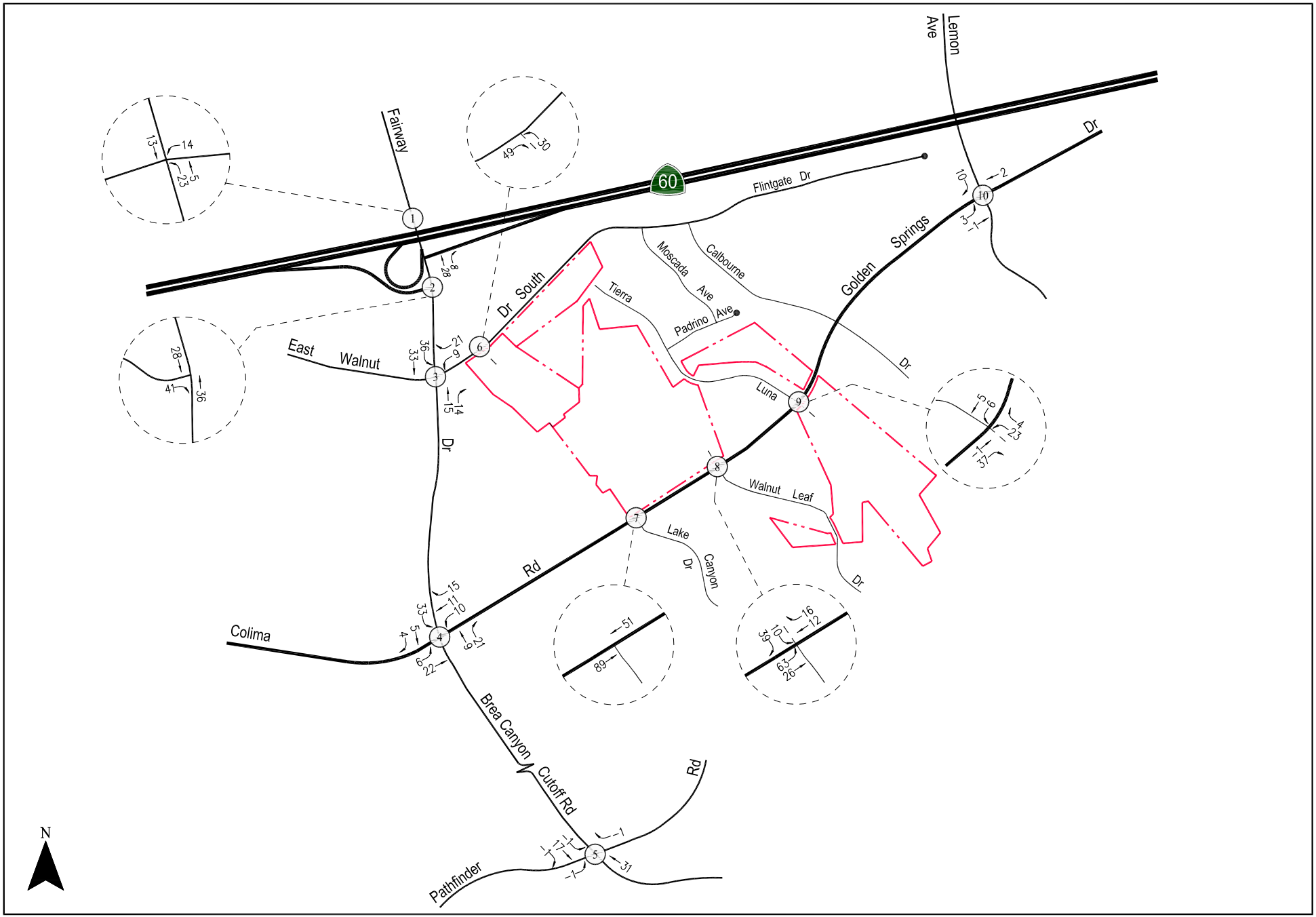


Project Site

Study Intersection

Figure 2-9
Project Traffic Volumes
Weekday AM Peak Hour
Royal Vista Residential and Parks Project

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Project Site

(XX) Study Intersection

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Figure 2-10
Project Traffic Volumes
Weekday PM Peak Hour
Royal Vista Residential and Parks Project

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3.0 PROJECT SITE CONTEXT

The project site is located within a well-established multi-modal transportation network maintained by Los Angeles County. The following sections will provide an overview of the transportation infrastructure in the vicinity of the proposed project, including infrastructure which supports both motorized and non-motorized transportation modes.

3.1 Non-Vehicular Network

Non-vehicular transportation generally encompasses walking, biking, and other active transportation modes. Distinct facilities are often provided for these non-vehicular modes. Most prominently, paved sidewalks are typically provided to facilitate pedestrian travel outside of the roadway. In some cases, bicycle facilities such as painted bike lanes or separated bike paths are provided within the roadway in order to separate bike traffic from vehicular traffic. Roadways which are designed to prioritize non-vehicular transportation modes utilize complimentary non-vehicular infrastructure in order to promote comfortable, safe travel for both pedestrians and bicyclists. A review of the pedestrian and bicycle infrastructure provided in the vicinity of the project site is provided below.

3.1.1 *Pedestrian System*

Pedestrian infrastructure consists of facilities such as sidewalks, crosswalks, pedestrian signals, curb access ramps, Americans with Disabilities Act (ADA) compliant tactile warning strips, and curb extensions, among other things. These facilities are generally provided within the study area. Public sidewalks are provided along most roadways within the vicinity of the project site, including along Fairway Drive, Brea Canyon Cutoff Road, Lake Canyon Drive, Walnut Leaf Drive, Tierra Luna, and Colima Road. It is noted that the proposed project site frontage along East Walnut Drive South does not currently provide public sidewalks separated from the roadway by curb and gutter, although public sidewalks are provided elsewhere along the roadway. The proposed project will construct new sidewalk, curb, and gutter to comply with Los Angeles County Public Works standards.

Striped crosswalks with pedestrian signals are provided at the signalized intersections in the vicinity of the project site. At the unsignalized intersections of Walnut Leaf Drive/Colima Road and Tierra Luna/Colima Road, no formally striped crosswalks are provided. As noted previously, a fully signalized mid-block pedestrian crossing is currently provided east of Tierra Luna across Colima Road. Additionally, ADA curb ramps with high-contrast tactile warning strips consisting of yellow truncated dome pads are provided at most major intersections in the vicinity of the project site, although truncated dome pads are not provided on the existing curb ramps at the intersections of Fairway Drive-Brea Canyon Cutoff Road/Colima Road, Lake Canyon Drive/Colima Road, Walnut Leaf Drive/Colima Road, or Tierra Luna/Colima Road.

3.1.2 *Bicycle System*

Bicycle infrastructure consists of both facilities within the roadway as well as public bicycle parking spaces. The Federal and State transportation systems recognize three primary bikeway facilities: Bicycle Paths (Class I), Bicycle Lanes (Class II), and Bicycle Routes (Class III). Bicycle Paths

(Class I) are exclusive car free facilities that are typically not located within a roadway area. Bicycle Lanes (Class II) are part of the street design that is dedicated only for bicycles and identified by a striped lane separating vehicle lanes from bicycle lanes. Bicycle Routes (Class III) are preferably located on collector and lower volume arterial streets.

Currently, bicycle lanes are provided along Fairway Drive between East Walnut Drive South and Colima Road, as well as to the south of the project site along Pathfinder Road and to the east of the project site along Golden Springs Drive in the City of Diamond Bar. The *County of Los Angeles Bicycle Master Plan* indicates that future bicycle lanes are planned for Colima Road and Brea Canyon Cutoff Road in the immediate vicinity of the project site.[13] The County's existing and proposed bicycle network in the vicinity of the proposed project site is illustrated in ***Figure 3-1***. Since there are no existing bicycle facilities providing direct access to the project site, bicyclists traveling to and from the project site will be required to share the existing roadway system with all other motorists, and the rules of the road contained within the State's Vehicle Code, as it relates to bicyclists, must be adhered to.

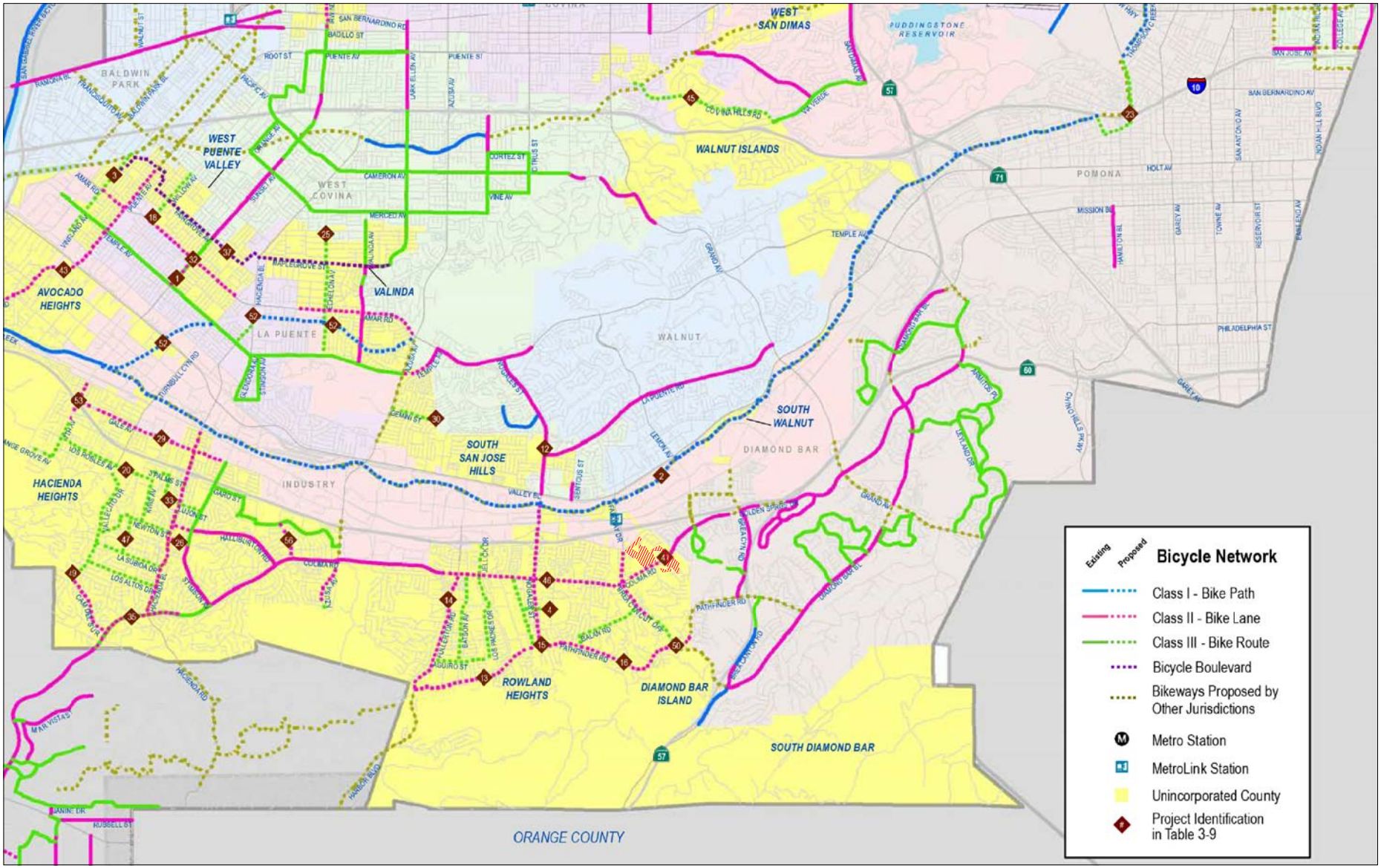
3.2 Transit Network

Public bus transit services are provided within the project study area by Foothill Transit. A summary of the existing transit service within approximately 0.5-miles of the project site, including the transit line number, corridor(s) served, and typical number of buses per hour is presented in ***Table 3-1***. The existing public transit routes in the vicinity of the project site are illustrated in ***Figure 3-2***. As summarized in *Table 3-1*, a total of two (2) public transit routes provide service along Colima Road in the vicinity of the project site. Each line provides service approximately every 20-30 minutes during the morning and evening peak commute hours.

Public bus stops located at the northwest and southeast corners of the Fairway Drive-Brea Canyon Cutoff Road/Colima Road intersection serve Foothill Transit Lines 482 and 493. Each stop currently provides bus benches, shelters, and public trash receptacles. Public bus stops on the northeast and southeast corners of the Lake Canyon Drive/Colima Road intersection serve Foothill Transit Line 428. The stop on the north side of Colima Road provides bus benches and a public trash receptacle, while the stop on the south side of Colima Road provides a public trash receptacle only.

It is also noted that the Heights Hopper Shuttle, operated by Los Angeles County Public Works, provides service in the Hacienda Heights and Rowland Heights communities. The nearest stops along the Heights Hopper shuttle route are located on Banida Avenue north of Colima Road, which is an approximately one-mile walk from the proposed project site.

[13] Source: County of Los Angeles Bicycle Master Plan (Final Plan March 2012).



MAP SOURCE: COUNTY OF LOS ANGELES BICYCLE MASTER PLAN 2012

N

Project Site

Figure 3-1

Los Angeles County Existing and Proposed Bicycle Network

Royal Vista Residential and Parks Project

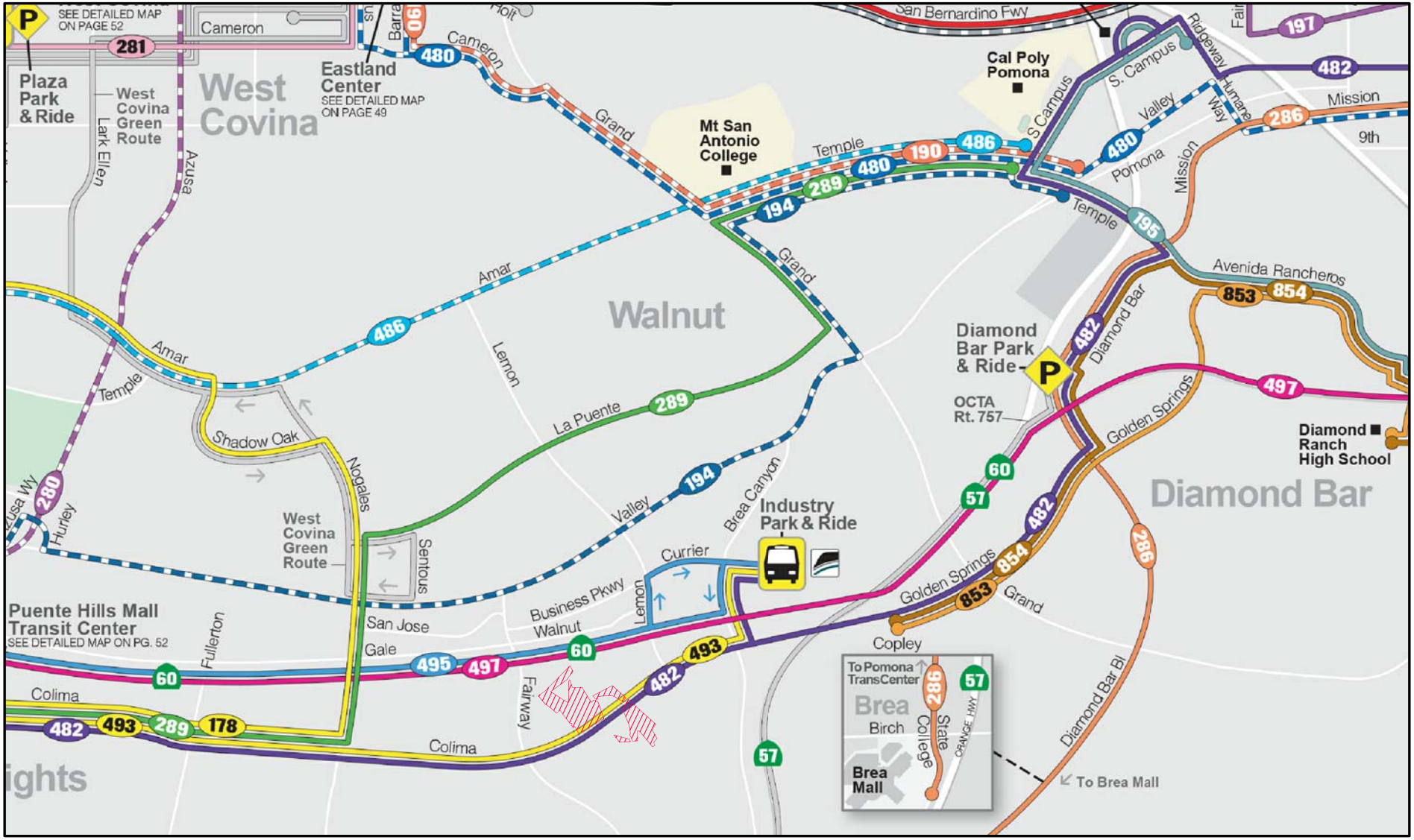
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Table 3-1
EXISTING TRANSIT ROUTES [1]

ROUTE	DESTINATIONS	TRANSIT CORRIDOR(S) IN VICINITY OF SITE	TRANSIT STOP NEAREST TO SITE	NO. OF BUSES DURING PEAK HOUR		
				DIR	AM	PM
Foothill Transit 482	Pomona to Industry via Walnut, Diamond Bar and Rowland Heights	Colima Road	Lake Canyon Dr/Colima Rd Fairway Dr/Colima Rd	EB WB	2 3	3 2
Foothill Transit 493	Rowland Heights to Downtown Los Angeles via Industry, Cal State LA and USC Medical Center	Colima Road	Fairway Dr/Colima Rd	EB WB	0 3	3 0
TOTAL					8	8

[1] Sources: Foothill Transit website 2021.



Project Site

Figure 3-2
Existing Transit Routes

Royal Vista Residential and Parks Project

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3.3 Vehicle Network

3.3.1 *Roadway Classifications*

Los Angeles County utilizes the roadway categories recognized by regional, state and federal transportation agencies. There are four categories in the roadway hierarchy, ranging from freeways with the highest capacity to two-lane undivided roadways with the lowest capacity. The roadway categories are summarized as follows:

- *Freeways* are limited-access and high speed travel ways included in the state and federal highway systems. Their purpose is to carry regional through-traffic. Access is provided by interchanges with typical spacing of one mile or greater. No local access is provided to adjacent land uses.

- *Arterial* roadways are major streets that primarily serve through-traffic and provide access to abutting properties as a secondary function. Arterials are generally designed with two to six travel lanes and their major intersections are signalized. This roadway type is divided into two categories: principal and minor arterials. Principal arterials are typically four-or-more lane roadways and serve both local and regional through-traffic. Minor arterials are typically two-to-four lane streets that service local and commute traffic.

- *Collector* roadways are streets that provide access and traffic circulation within residential and non-residential (e.g., commercial and industrial) areas. Collector roadways connect local streets to arterials and are typically designed with two through travel lanes (i.e., one through travel lane in each direction) that may accommodate on-street parking. They may also provide access to abutting properties.

- *Local* roadways distribute traffic within a neighborhood, or similar adjacent neighborhoods, and are not intended for use as a through-street or a link between higher capacity facilities such as collector or arterial roadways. Local streets are fronted by residential uses and do not typically serve commercial uses.

3.3.2 *Regional Highway Access*

Regional vehicular access to the project site is primarily provided by the SR-60 (Pomona) Freeway and the SR-57 (Orange) Freeway. A brief description of the Pomona and Orange Freeways is provided in the following paragraph.

SR-60 (Pomona) Freeway is an east-west oriented freeway connecting downtown Los Angeles to the southerly San Gabriel and Pomona Valleys to the east. The Pomona Freeway generally provides four mainline travel lanes and one HOV lane along with auxiliary lanes in each direction in the project vicinity. Within the project area, on- and off-ramps are provided at Fairway Drive.

SR-57 (Orange) Freeway is north-south oriented freeway connecting the San Gabriel and Pomona Valleys to the north with Orange County to the south. The Orange Freeway generally provides four

mainline travel lanes and one HOV lane in each direction in the project vicinity. In the vicinity of the project area, on- and off-ramps are provided at Pathfinder Road and Diamond Bar Boulevard.

3.3.3 *Local Roadway Descriptions*

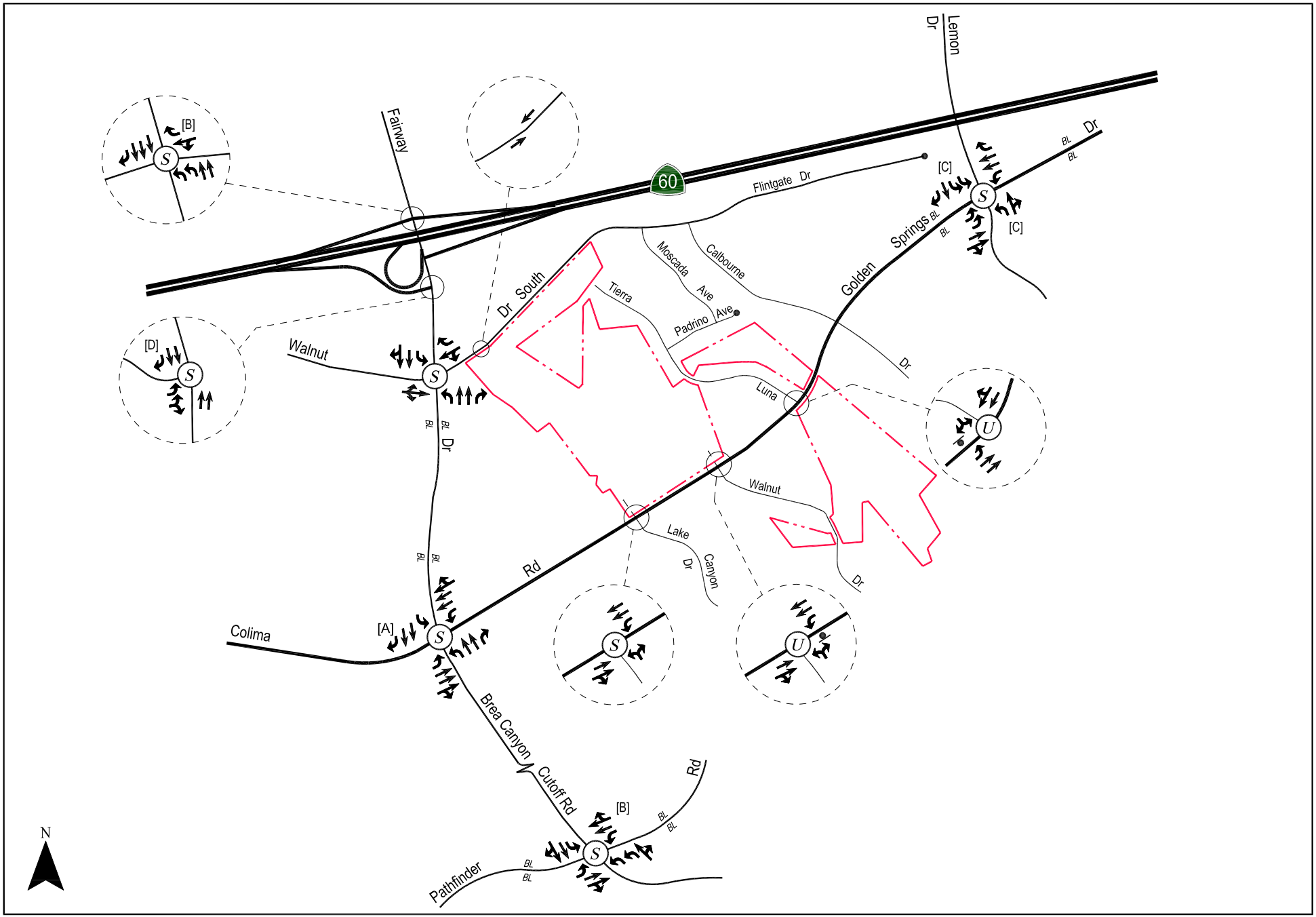
The current lane configurations and traffic control measures at each study intersection are presented in ***Figure 3-3***. Descriptions of the roadways which make up the study area are provided in ***Table 3-2***, including the roadway classification, number of lanes, median types, and speed limits designated by Los Angeles County and other agencies with jurisdiction over the roadways in the study area.

3.4 Traffic, Pedestrian, and Bicycle Count Data

Manual counts of vehicular, pedestrian, and bicycle volumes were conducted at each of the 10 study intersections during the weekday morning (AM) and afternoon (PM) commuter periods to determine the peak hour traffic volumes. The manual counts utilized in the analysis were conducted in September and November 2021 by an independent traffic count subconsultant (City Traffic Counters) at the study intersections from 7:00 AM to 9:00 AM and from 4:00 PM to 6:00 PM to determine the AM and PM peak commute hours, respectively. In conjunction with the manual turning movement vehicle counts, a count of bicycle and pedestrian volumes were collected during the peak periods. Summary data worksheets of the manual traffic counts of the study intersections as well as the pedestrian and bicycle counts are contained in ***Appendix C***.

It is noted that the traffic count data was collected during the continuing COVID-19 pandemic. At the time that the traffic counts were collected, local public schools (i.e., Rowland Unified School District) were in regular, in-person session, and prior social distancing requirements and capacity limitations issued by Los Angeles County Department of Health had been lifted.

The resulting weekday AM and PM peak hour manual counts of vehicle movements at the 10 study intersections are summarized in ***Table 3-3***. The existing traffic volumes at the study intersections during the weekday AM and PM peak hours are shown in ***Figures 3-4*** and ***3-5***, respectively. For each study intersection, the highest one-hour total traffic volumes (i.e., four consecutive 15-minute time intervals) traversing through the intersection during the 7:00 to 9:00 AM and 4:00 to 6:00 PM time periods were selected so as to determine the respective weekday AM and PM peak hour traffic volumes for each study intersection. For purposes of the analysis, this common traffic engineering practice ensures that a more conservative (i.e., worst case) assessment of existing operating conditions be attained for each study intersection. Therefore, the traffic volumes shown in *Figures 3-4* and *3-5* for the study intersections do not necessarily reflect the same exact one-hour time period during the morning and/or afternoon peak commuter conditions (i.e., one intersection's peak hour may have occurred between 7:30 and 8:30 AM, while another intersection's peak hour may have occurred between 7:45 and 8:45 AM).



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Project Site

S Signalized
U Unsignalized
Stop Sign

[A] Overlap Phase
[B] No Right-turn On Red
[C] Split Phase Operation

[D] Free-flow Movement
BL Bike Lane

Figure 3-3
Existing Lane Configurations

Table 3-2
EXISTING ROADWAY DESCRIPTIONS

ROADWAY	CLASSIFICATION [1]	TRAVEL LANES		MEDIAN TYPES [4]	SPEED LIMIT
		DIRECTION [2]	NO. LANES [3]		
Fairway Drive	Major Highway [5] Major Highway [6]	NB-SB	4 [8]	RMI	40
Brea Canyon Cutoff Road	Limited Secondary Highway [5]	NB-SB	2 to 4	2WLT-N/A	45
Lake Canyon Drive	Local Street [5]	NB-SB	2	N/A	25
Walnut Leaf Drive	Local Street [5]	NB-SB	2	N/A	25
Tierra Luna	Local Street [5]	NB-EB	2	N/A	25
Lemon Avenue	Major Highway [7]	NB-SB	4	RMI-N/A	35
East Walnut Drive South	Local Street [5] Collector Street [6]	EB-WB	2	N/A	35
Colima Road	Major Highway [5]	EB-WB	4 to 6	RMI-2WLT	45
Golden Springs Drive	Major Arterial [7]	EB-WB	4 [8]	RMI	45
Pathfinder Road	Secondary Highway [5]	EB-WB	4 [8]	2WLT	45

[1] Roadway classifications obtained from the *County of Los Angeles General Plan,* adopted October 2015, *City of Industry General Plan,* adopted June 2014, and *City of Diamond Bar General Plan 2040,* adopted 2019.
[2] Direction of roadways in the project area: NB-SB = northbound and southbound; and EB-WB = eastbound and westbound.
[3] Number of lanes in both directions on the roadway.
[4] Median type of the road: RMI = Raised Median Island; 2WLT = 2-Way Left-Turn Lane; and N/A = Not Applicable.
[5] Los Angeles County
[6] City of Industry
[7] City of Diamond Bar
[8] Class II Bike Lane

Table 3-3
EXISTING TRAFFIC VOLUMES [1]
WEEKDAY AM AND PM PEAK HOURS

NO.	INTERSECTION	DATE	DIR	AM PEAK HOUR		PM PEAK HOUR	
				BEGAN	VOLUME	BEGAN	VOLUME
1	Fairway Drive/ SR-60 Freeway Westbound Ramps	09/30/2021	NB SB EB WB	7:45 AM	587 253 0 640	5:00 PM	759 458 0 425
2	Fairway Drive/ SR-60 Freeway Eastbound Off-Ramp	09/30/2021	NB SB EB WB	7:30 AM	774 454 743 0	5:00 PM	868 675 745 0
3	Fairway Drive/ East Walnut Drive South	11/02/2021	NB SB EB WB	7:30 AM	526 1,126 330 142	5:00 PM	728 1,343 215 83
4	Fairway Drive-Brea Canyon Cutoff Road/ Colima Road	09/30/2021	NB SB EB WB	7:30 AM	668 931 601 571	5:00 PM	752 1,048 1,056 756
5	Brea Canyon Cutoff Road/ Pathfinder Road	09/30/2021	NB SB EB WB	7:30 AM	520 868 474 569	4:45 PM	906 985 845 427
6	Project Driveway/ Walnut Drive South [2]	---	NB SB EB WB	---	0 0 76 142	---	0 0 142 83
7	Lake Canyon Drive/ Colima Road	11/02/2021	NB SB EB WB	7:30 AM	88 0 473 556	4:45 PM	50 0 1,030 730
8	Walnut Leave Drive/ Colima Road	11/02/2021	NB SB EB WB	7:45 AM	71 0 474 531	4:45 PM	40 0 1,000 722
9	Tierra Luna/ Colima Road	11/02/2021	NB SB EB WB	7:45 AM	0 33 471 522	4:45 PM	0 34 979 716
10	Lemon Avenue/ Golden Springs Drive	09/30/2021	NB SB EB WB	8:00 AM	215 616 521 826	5:00 PM	88 741 1,019 771

[1] Counts conducted by City Traffic Counters.
[2] Future Intersection. Existing volumes derived from Int. 3 - Fairway Drive/Walnut Drive South.

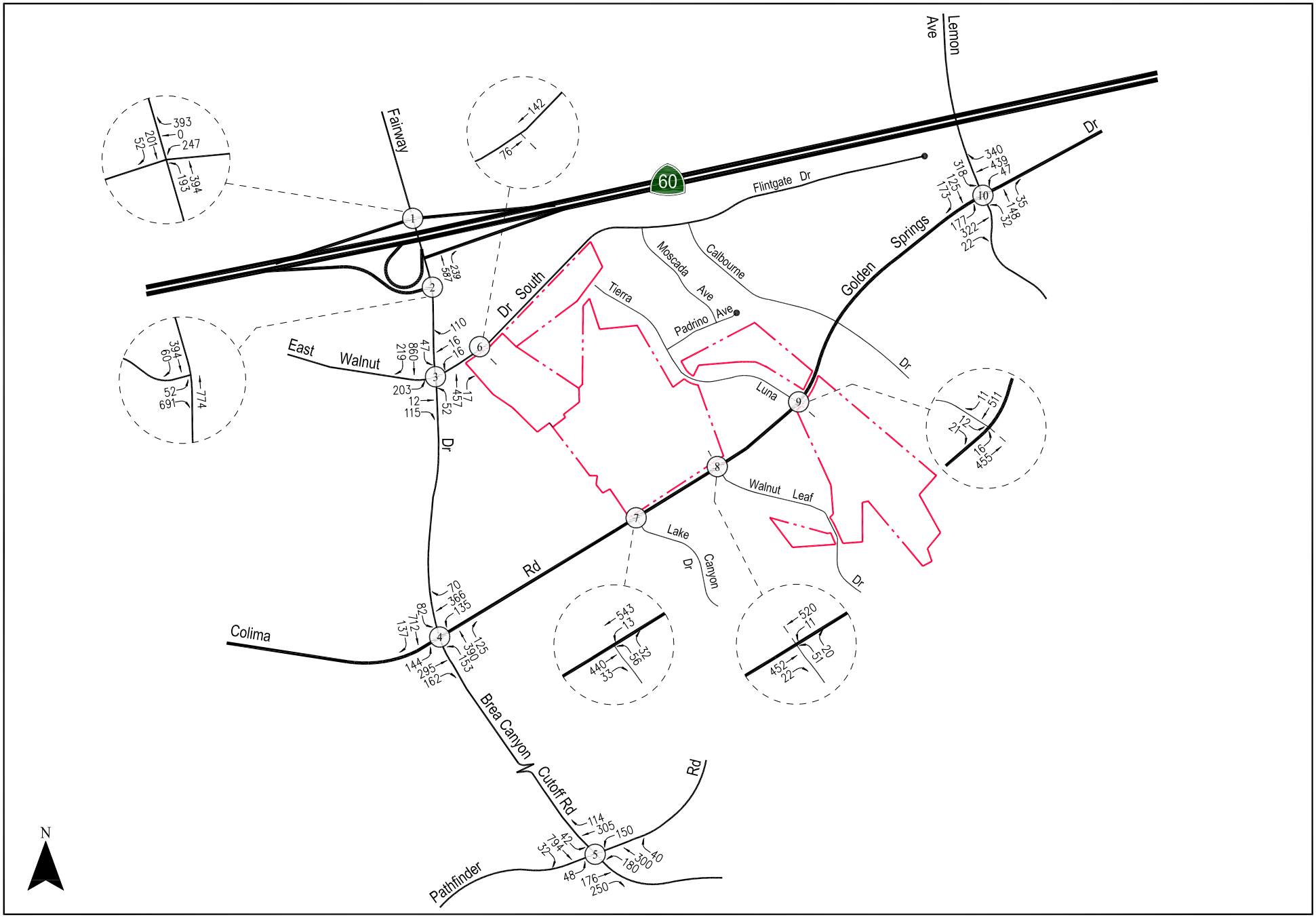


Figure 3-4

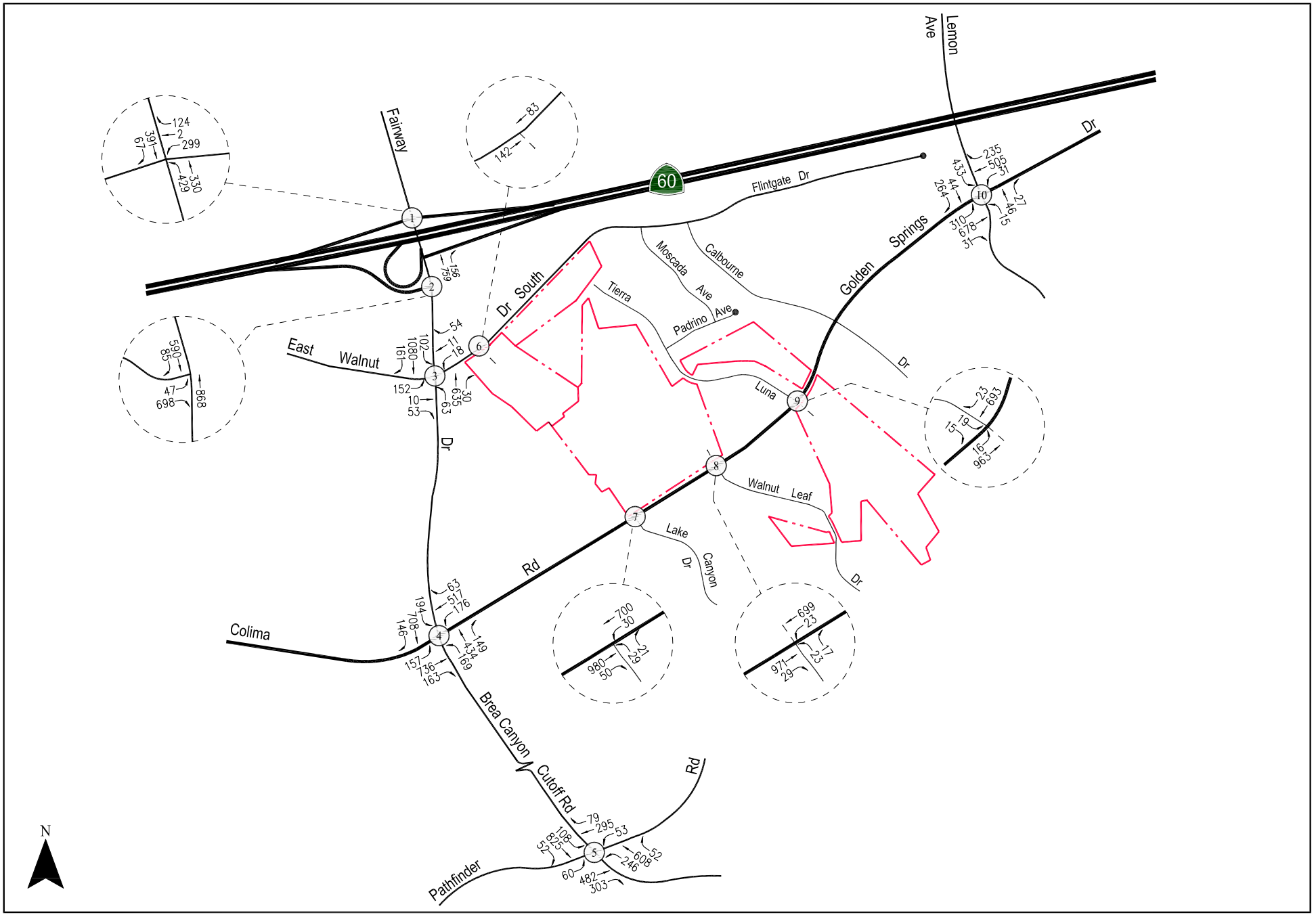
Existing Traffic Volumes

Weekday AM Peak Hour

Royal Vista Residential and Parks Project

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Project Site

(XX) Study Intersection

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Figure 3-5
Existing Traffic Volumes
Weekday PM Peak Hour
Royal Vista Residential and Parks Project

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3.5 Future Cumulative Traffic Forecast

The forecast of future cumulative pre-project conditions was prepared in accordance to procedures outlined in Section 15130 of the CEQA Guidelines. Specifically, the CEQA Guidelines provide two options for developing the future traffic volume forecast:

> "(A) A list of past, present, and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the [lead] agency, or
>
> (B) A summary of projections contained in an adopted local, regional or statewide plan, or related planning document, that describes or evaluates conditions contributing to the cumulative effect. Such plans may include: a general plan, regional transportation plan, or plans for the reduction of greenhouse gas emissions. A summary of projections may also be contained in an adopted or certified prior environmental document for such a plan. Such projections may be supplemented with additional information such as a regional modeling program. Any such document shall be referenced and made available to the public at a location specified by the lead agency."

This traffic analysis provides a forecast of future cumulative traffic volumes through incorporation of traffic associated with other known development projects located in the project study area as well as an ambient traffic growth rate (i.e., option "A" and "B" above).

3.5.1 *Cumulative Development Projects*

A forecast of future on-street traffic conditions was prepared by incorporating the potential trips associated with other known development projects (related projects) in the area (i.e., within an approximate 1.0-mile radius from the project site). With this information, the potential impact of the proposed project can be evaluated within the context of the cumulative impacts of all ongoing development. The related projects research was based on information on file with the Los Angeles County Department of Regional Planning and the Cities of Industry, Diamond Bar, Walnut, and West Covina. The list of related projects in the project site area is presented in ***Table 3-4***. The location of the related projects is shown in ***Figure 3-6***.

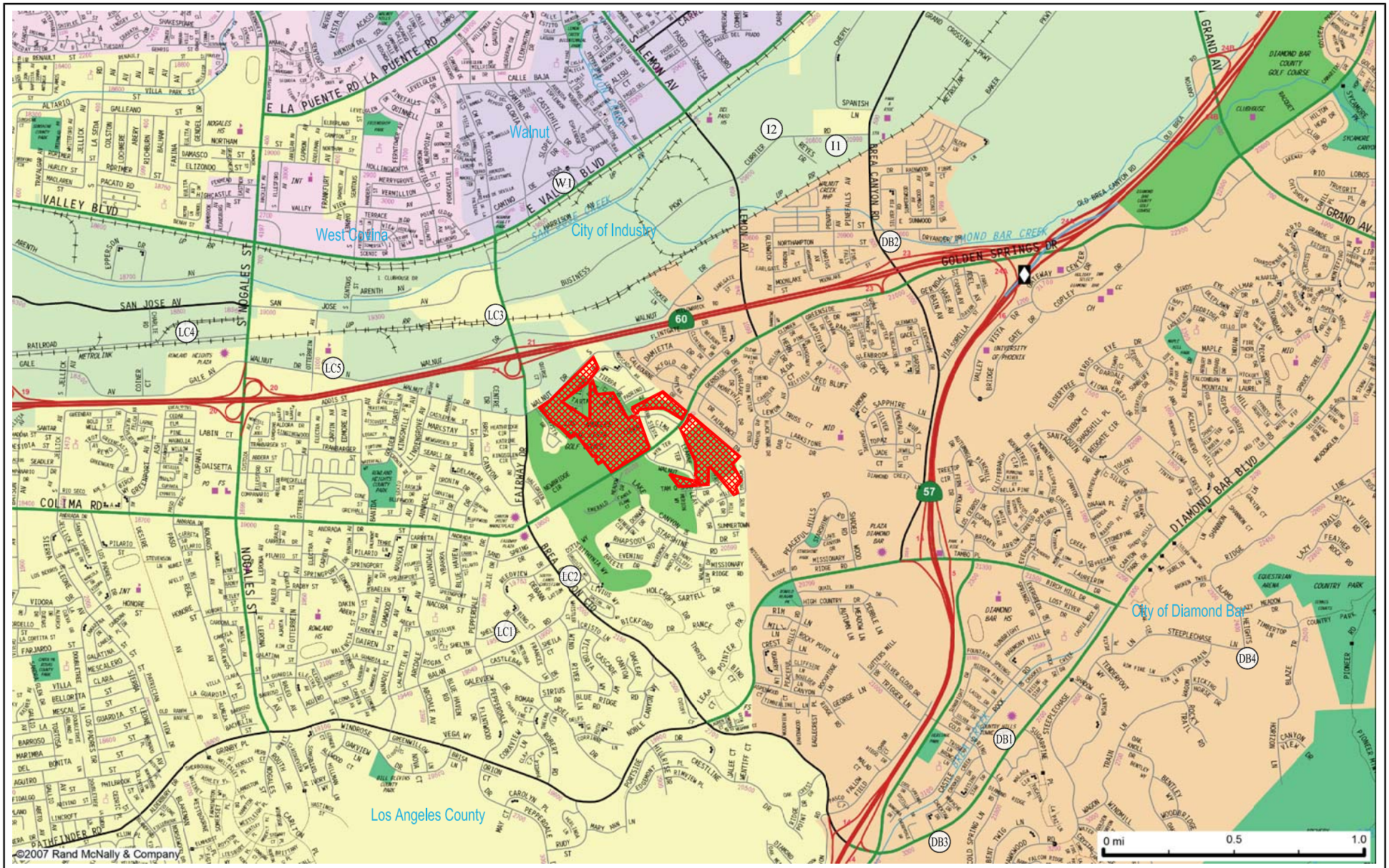
Traffic volumes expected to be generated by the related projects were calculated using rates provided in the Institute of Transportation Engineers' (ITE) *Trip Generation Manual*[14], or they were obtained from other jurisdictions as noted. The related projects' respective traffic generation for the weekday AM and PM peak hours, as well as on a daily basis for a typical weekday, is summarized in *Table 3-4*. The related projects traffic volumes were distributed and assigned to the street system based on the projects' locations in relation to the study intersections, their proximity to major traffic corridors, proposed land uses, nearby population and employment centers, etc. The distribution of

[14] Institute of Transportation Engineers *Trip Generation Manual*, 11th Edition, Washington, D.C., 2021.

Table 3-4
RELATED PROJECTS LIST AND TRIP GENERATION [1]

MAP NO.	PROJECT STATUS	PROJECT NAME/NUMBER ADDRESS/LOCATION	LAND USE DATA LAND-USE	LAND USE DATA SIZE	PROJECT DATA SOURCE	DAILY TRIP ENDS [2] VOLUMES	AM PEAK HOUR VOLUMES [2] IN	AM OUT	AM TOTAL	PM PEAK HOUR VOLUMES [2] IN	PM OUT	PM TOTAL
Los Angeles County												
LC1	Proposed	19606 Shelyn Drive	Residential	7 DU	[3]	66	1	4	5	4	3	7
LC2	Approved	1920 Brea Canyon Cutoff Road	Preschool	4,320 GSF	[4]	206	25	23	48	23	25	48
LC3	Approved	985 Fairway Drive	Mini-Warehouse	13,500 GSF	[5]	20	1	0	1	1	1	2
LC4	Approved	18800 Railroad Street	Shopping Center	127,534 GLSF	[6]	8,611	137	84	221	324	338	662
LC5	Approved	19237 East Walnut Drive North	Light Industrial	1,900 GSF	[7]	9	1	0	1	0	1	1
City of Diamond Bar												
DB1	Approved	2825 South Diamond Bar Boulevard	Fitness Center	21,440 GSF	[8]	740	14	14	28	42	32	74
DB2	Approved	850 Brea Canyon Road	Hotel	109 Rooms	[9]	871	28	22	50	33	31	64
			General Office	47,642 GSF	[10]	516	63	9	72	12	57	69
			Medical Office	8,900 GSF	[11]	320	22	6	28	11	24	35
DB3	Approved	Southern terminus Crooked Creek Drive APN 8714-028-003	Residential	7 DU	[3]	66	1	4	5	4	3	7
DB4	Approved	End of Alamo Heights	Residential	53 DU	[3]	500	10	27	37	32	18	50
City of Industry												
I1	Proposed	20922 Currier Road	Light Industrial	139,593 GSF	[7]	680	91	12	103	13	78	91
I2	Proposed	20701 Currier Raod	Light Industrial	107,555 GSF	[7]	524	70	10	80	10	60	70
City of Walnut												
W1	Under Construction	19901 Valley Boulevard	Condominium	3 DU	[12]	20	0	1	1	1	1	2
			Commercial	1,350 GLSF	[13]	74	2	1	3	5	4	9
TOTAL						13,223	466	217	683	515	676	1,191

[1] Source: Los Angeles County Department of Regional Planning, City of Diamond Bar Planning Division, and City of Industry Department of Planning. Research was conducted with the Cities of Walnut and West Covina, and no development projects in the vicinity were identified. The peak hour traffic volumes were forecast on trip data provided by the ITE "Trip Generation Manual", 11th Edition, 2021.
[2] Trips are one-way traffic movements, entering or leaving.
[3] ITE Land Use Code 210 (Single-Family Detached Housing) trip generation average rates.
[4] ITE Land Use Code 565 (Day Care Center) trip generation average rates.
[5] ITE Land Use Code 151 (Mini-Warehouse) trip generation average rates.
[6] ITE Land Use Code 820 (Shopping Center) trip generation average rates.
[7] ITE Land Use Code 110 (General Light Industrial) trip generation average rates.
[8] ITE Land Use Code 492 (Health/Fitness Club) trip generation average rates.
[9] ITE Land Use Code 310 (Hotel) trip generation average rates.
[10] ITE Land Use Code 710 (General Office Building) trip generation average rates.
[11] ITE Land Use Code 720 (Medical-Dental Office Building) trip generation average rates.
[12] ITE Land Use Code 220 (Multifamily Housing (Low-Rise) Not Close to Rail Transit) trip generation average rates.
[13] ITE Land Use Code 822 (Strip Retail Plaza (<40k) trip generation average rates.



MAP SOURCE: RAND MCNALLY & COMPANY

Project Site

(LC) Los Angeles County Related Project

(DB) City of Diamond Bar Related Project

(I) City of Industry Related Project

(W) City of Walnut Related Project

LINSCOTT LAW & GREENSPAN engineers

Figure 3-6

Location of Related Projects

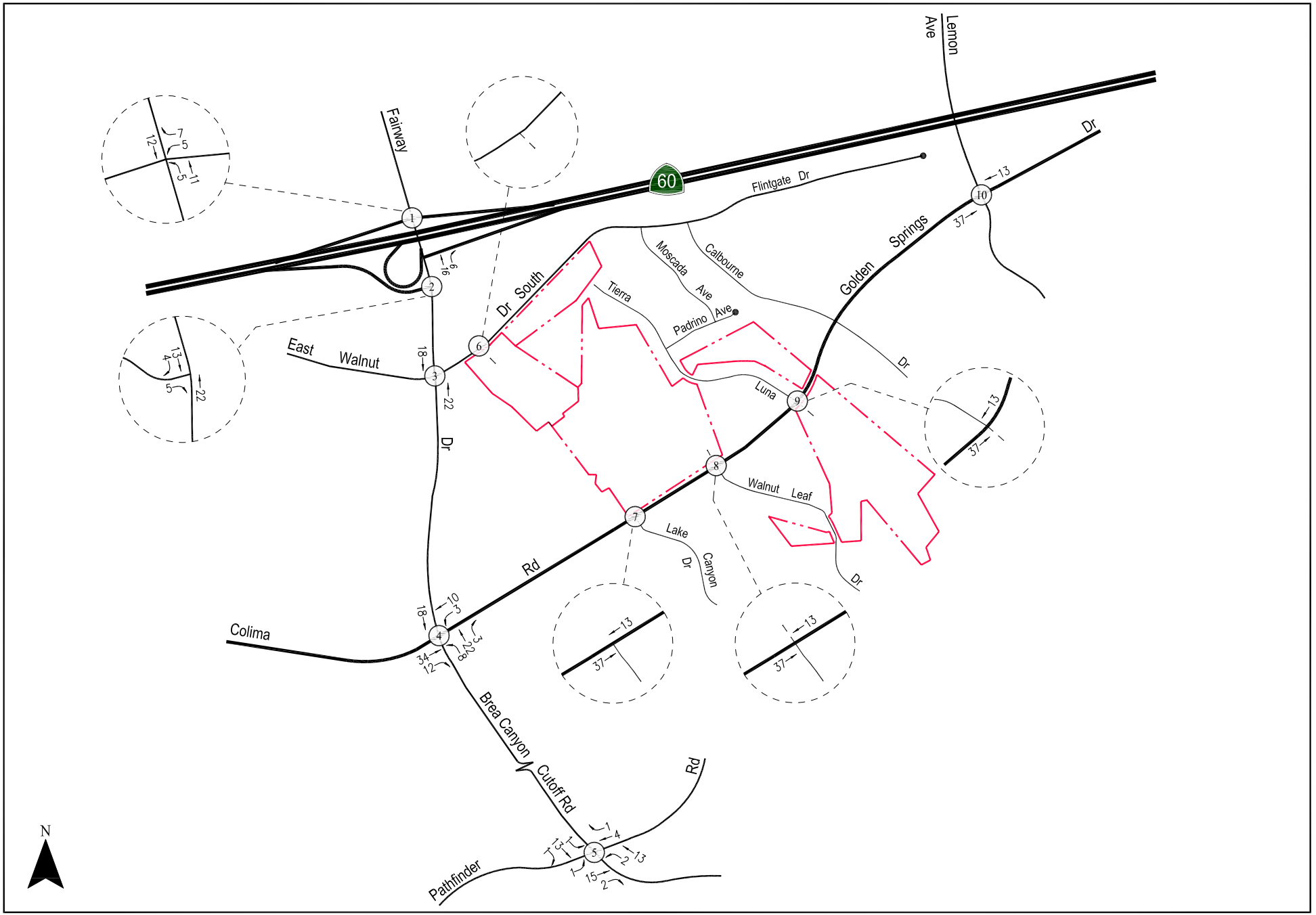
Royal Vista Residential and Parks Project

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the related projects traffic volumes to the study intersections during the weekday AM and PM peak hours are displayed in ***Figures 3-7*** and ***3-8***, respectively.

3.5.2 *Ambient Growth Factor*

In order to account for area-wide regional growth beyond the listed related projects, the existing traffic volumes were increased at an annual compounding rate of 0.38 percent (0.38%) between existing year 2021 and the future build-out year of 2027, resulting in a total growth factor of 2.30% applied to the existing year 2021 traffic volumes. The ambient growth factor was based on general traffic growth factors provided in the Los Angeles County 2010 Congestion Management Program (CMP) manual for the project study area (i.e., RSA 26, which is generally bounded by Azusa, Glendora, West Covina, Diamond Bar, and Hacienda Heights) and determined in consultation with LACPW staff. Based on information provided by the CMP manual, existing traffic volumes are expected to increase at an annual compounding rate of 0.38% per year between the years 2020 and 2025 (i.e., [1.066/1.046]^(1/5) = 1.0038 or 0.38%), and at an annual compounding rate of 0.37% between the years 2025 and 2030 (i.e., [1.086/1.066]^(1/5) = 1.0037 or 0.37%). In order to forecast the future year 2027 traffic conditions, the more conservative growth rate of 0.38% per year was applied between the years 2021 and 2027, resulting in a total growth factor of 2.30% (i.e., [1+0.0038]^(2027-2021) = 1.0230 or 2.30%). Thus, application of this annual growth factor in addition to the forecast traffic generated by the related projects allows for a conservative forecast of future baseline year 2027 traffic volumes in the project study area, as incorporation of both (i.e., an ambient traffic growth rate and a detailed list of cumulative development projects) is expected to overstate potential future traffic volumes. The cumulative development projects should already be incorporated as part of the growth rate projection per the adopted local and regional planning documents (i.e., which account for the future population, housing, and employment [socio-economic data] projections).



Project Site

(XX) Study Intersection

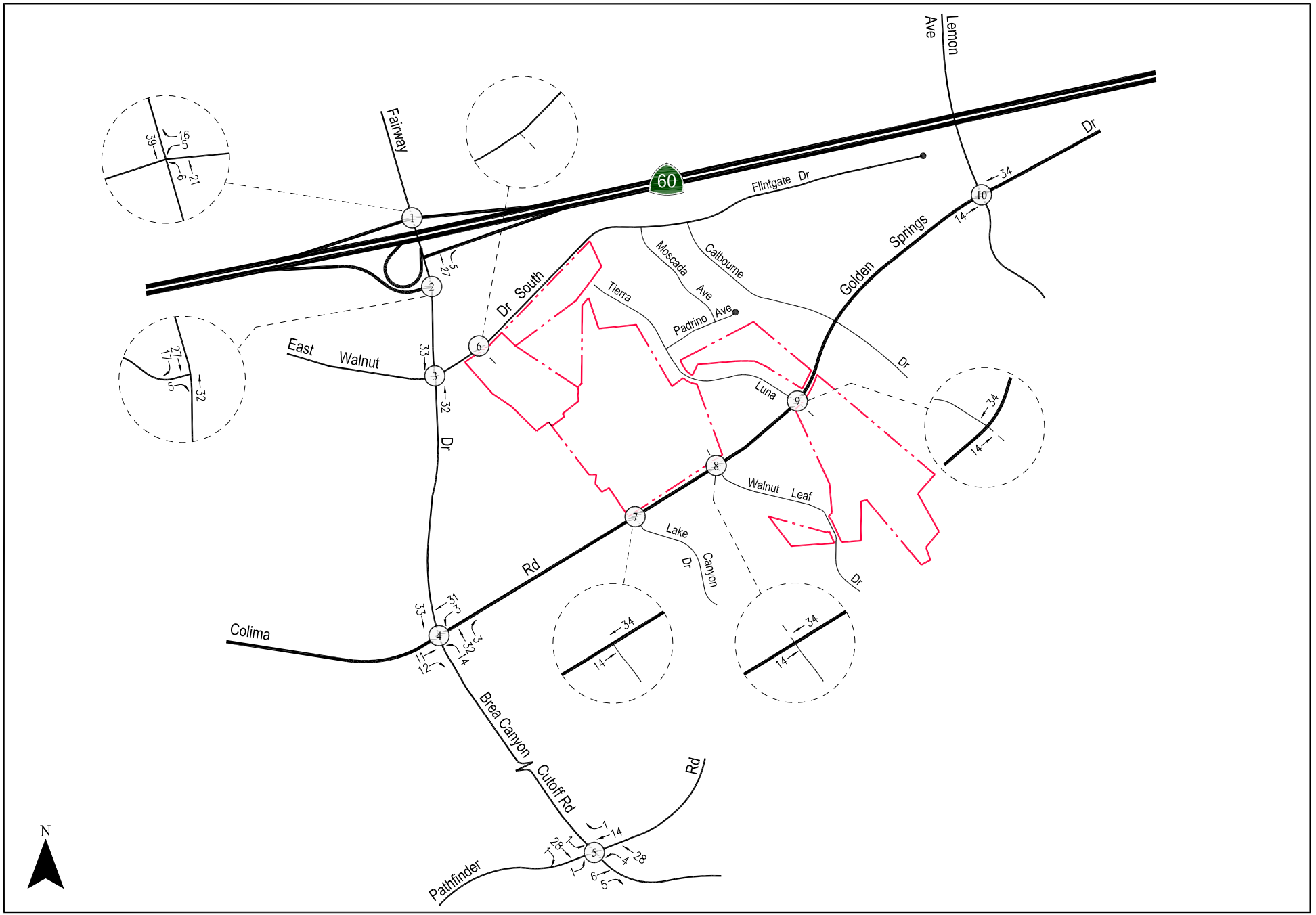
Figure 3-7

Related Projects Traffic Volumes

Weekday AM Peak Hour

Royal Vista Residential and Parks Project

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Project Site

(XX) Study Intersection

Figure 3-8

Related Projects Traffic Volumes

Weekday PM Peak Hour

Royal Vista Residential and Parks Project

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4.0 VEHICLE MILES TRAVELED (VMT) CEQA ANALYSIS

As described in *Section 1.1*, and in compliance with the current statutory requirements for analysis of transportation impacts under CEQA, the County Guidelines issued by the Los Angeles County Department of Public Works in September 2020 set forth the VMT screening criteria, impact criteria, methodology, and mitigation measures applicable to proposed development projects within the County's jurisdiction. The following sections discuss the VMT screening criteria, impact threshold, and analysis methodology applied to the proposed project.

4.1 Screening Criteria

Traditionally, public agencies have set certain thresholds to determine whether a project requires detailed transportation analysis or if it could be assumed to have less than significant environmental impacts without additional study. Consistent with the recommendations provided by OPR in the *Technical Advisory*, the County's Guidelines recognize four screening criteria which may be applied to screen proposed projects out of detailed VMT analysis. These criteria are based on a proposed project's number of daily vehicle trips, classification as a local serving retail use, proximity to high-quality transit, and inclusion of affordable housing. Proposed projects are not required to satisfy all of the screening criteria in order to screen out of further VMT analysis; satisfaction of one criterion is generally sufficient for screening purposes. Projects, or project components, which are screened out of detailed VMT assessment based on these criteria are presumed to have less than significant transportation impacts. Projects or project components which are not screened out would be required to conduct a formal Transportation Impact Analysis in order to determine the significance of project impacts.

4.1.1 *Non-Retail Project Trip Generation Screening Criteria*

Section 3.1.2.1 of the County Guidelines states that: "If the answer is no to the question below, further analysis is not required, and a less than significant determination can be made.

- Does the development project generate a net increase of 110 or more daily vehicle trips?"

The County Guidelines further indicate that a proposed project's daily vehicle trip generation should be estimated using the most recent edition of the Institute of Transportation Engineers' (ITE) *Trip Generation Manual*, or through use of empirical trip generation data if the project's land use is not listed in the *Manual*.

The proposed project is forecast to generate a total of 2,243 daily vehicle trips. Therefore, the non-retail project trip generation screening criteria is not satisfied.

4.1.2 *Retail Project Screening Criteria*

The proposed project does not include any retail components; therefore, this screening criterion does not apply.

4.1.3 *Proximity to Transit Screening Criteria*

CEQA Guidelines Section 15064.3(b)(1) states in part: "Generally, projects within one-half mile of either an existing major transit stop or a stop along an existing high-quality transit corridor should be presumed to cause a less than significant transportation impact." In keeping with the statutory presumption of less than significant impacts due to nearby high-quality transit, the County's Guidelines include a screening criterion based on proximity to transit. Consistent with the recommendations provided by OPR, the County also notes certain project-specific or location-specific information which might indicate that the presumption is not appropriate.

Thus, Section 3.1.2.3 of the Guidelines states that: "If the project is located near a major transit stop or high-quality transit corridor, the following question should be considered:

- Is the project located within a one-half mile radius of a major transit stop[15] or an existing stop along a high-quality transit corridor[16]?"

The proposed project is not within a one-half mile radius of a major transit stop or an existing stop on a high-quality transit corridor. Therefore, the proximity to transit screening criteria is not satisfied.

4.1.4 *Residential Project Screening Criteria*

In the *Technical Advisory*, OPR refers to research indicating that low-income housing in infill locations generally improves the jobs-housing match, shortening commutes and reducing VMT. OPR asserts that evidence supports presuming less than significant transportation impacts for 100% affordable residential developments, and that a project consisting of a high percentage of affordable housing may be a basis for a lead agency to find a less than significant impact on VMT, thereby screening out of detailed VMT analysis.

Consistent with the recommendations provided by OPR, Section 3.1.2.4 of the County's Guidelines indicate that certain projects which further the State's affordable housing goals are presumed to have less than significant impacts on VMT. The Guidelines state: "If the project requires discretionary action and the answer is yes to the question below, further analysis is not required, and a less than significant determination can be made.

- Are 100% of the units, excluding manager's units, set aside for lower income households?"

While the proposed project is planned to set aside a portion of the planned townhomes as moderate-income, for-sale workforce housing, the project does not provide any lower-income housing; therefore, this screening criterion does not apply.

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[15] Public Resources Code Section 21064.3: ""Major transit stop" means a site containing any of the following: (a) An existing rail or bus rapid transit station. (b) A ferry terminal served by either a bus or rail transit service. (c) The intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods.

[16] Public Resources Code Section 21155(b): "For purposes of this section, a high-quality transit corridor means a corridor with fixed route bus service with service intervals no longer than 15 minutes during peak commute hours."

4.1.5 *Screening Conclusions*

The proposed project does not satisfy any of the four screening criteria stated in the County Guidelines and is not screened out of further analysis. Therefore, a VMT analysis is required in order to determine if the proposed project will result in any significant transportation impacts.

4.2 Impact Criteria

The County provides the following impact criteria for residential land uses: "The project's residential VMT per capita[17] would not be 16.8% below the existing residential VMT per capita for the Baseline Area in which the project is located." The proposed project is located in the South County Baseline Area, which generally consists of the region of Los Angeles County which is situated below the Santa Susana and San Gabriel Mountain Ranges. The County Guidelines further state that the baseline VMT applied in the impact analysis should be consistent with the year that the transportation study is begun. The South County residential VMT baseline for the year 2022 is 12.0 VMT per capita. Therefore, the threshold of 16.8% below the baseline residential VMT is 10.0 VMT per capita. A significant transportation impact would result if the project VMT exceeds 10.0 VMT per capita.

As of the preparation of this report, Los Angeles County is preparing revised VMT thresholds for use in determining the significance of VMT impacts in response to further guidance from OPR. It is understood that the revised thresholds will be applied County-wide, rather than separated by the North or South County Baseline areas. Based on coordination with Los Angeles County Public Works staff, it is further understood that the current South County thresholds are more environmentally protective (i.e., reflect a lower VMT threshold) than the forthcoming revised thresholds. Therefore, continuing to apply the current South County thresholds to the proposed project results in a conservative VMT impact analysis.

4.3 Methodology

In January 2021, Los Angeles County Public Works released the VMT Tool Version 1.0. The VMT Tool implements the methodologies, screening criteria, and significance thresholds described in the County Guidelines. The VMT Tool can be used to analyze projects that consist of either one land use or up to a mix of eight (8) commonly occurring land uses, including single-family housing, multi-family housing, affordable housing, general office, medical office, light industrial, warehousing, and retail (shopping center, restaurant, and services) land uses. The VMT Tool also was developed to allow an analyst to enter the daily trips associated with a custom land use to be entered; however, it should be noted that no other land use categories can be utilized in conjunction with the custom entry function. Based on the included land use categories, the County-developed VMT Tool was determined to be applicable to the proposed project.

[17] "Residential VMT is the VMT generated by Home-Based Work and Home-Based Other trip productions."

It should be noted that the VMT Tool was developed to analyze projects which are situated within a single Transportation Analysis Zone (TAZ). The proposed project, however, falls into two separate TAZs, as illustrated in ***Figure 4-1***. As shown in *Figure 4-1*, Planning Areas 1 through 4 are located in TAZ 22375100, while Planning Areas 5 and 6 are located in TAZ 22379100. It was determined in coordination with County staff that since the project's parcels are not fully contiguous with one another, the project would most appropriately be evaluated in two parts, with the residential development on Planning Areas 1, 2, and 3 evaluated together and the residential development on Planning Area 5 evaluated separately. It is noted that Planning Areas 4 and 6 comprise the proposed project's open space areas, and are not planned to be developed with residential uses. The County confirmed the appropriateness of the use of the VMT Tool for analysis of the proposed project when it approved the Scoping Memorandum provided in *Appendix A*.

4.4 VMT Analysis

4.4.1 *Project VMT Analysis*

The proposed project's daily residential VMT per capita for Planning Areas 1, 2, and 3 and for Planning Area 5 were forecast using the County-developed VMT Tool. Copies of the VMT Tool summary worksheets for Planning Areas 1, 2, and 3 and for Planning Area 5 are contained in ***Appendix D***. As stated on the summary worksheets, the project is forecast to generate the following baseline residential VMT per capita:

- Planning Areas 1, 2, and 3 are forecast to generate 18.8 residential VMT per capita.
- Planning Area 5 is forecast to generate 21.6 residential VMT per capita.

4.4.2 *CAPCOA Guidance and Project Design Features*

The California Air Pollution Control Officers Association's (CAPCOA*) Handbook for Analyzing Greenhouse Gas Emissions Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity*[21] ("2021 Handbook") provides a comprehensive set of guidelines for assessing and quantifying reductions in greenhouse gas emissions. The emissions reduction measures are grouped by emission sector into nine categories, including transportation, energy, water, and other related areas. Transportation emissions can be reduced by improving the emissions profile of the vehicle fleet, or by reducing VMT. Reductions in VMT are achieved when any of the following occurs: 1) vehicle ownership declines, 2) vehicle trips are reduced, 3) vehicle trip lengths are reduced, or 4) any combination of the first three variables. The 2021 Handbook lists 34 quantified measures covering a total of six transportation subsectors, including land use, trip reduction programs, parking or road pricing/management, neighborhood design, transit, and clean vehicles and fuels. The majority of the measures (i.e., 32 of the 34 measures) quantified in the 2021 Handbook aim to reduce VMT, although two strategies are aimed at improving the emissions profile of the vehicle fleet and thus do

[21] *Handbook for Analyzing Greenhouse Gas Emissions Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity Final Draft*, California Air Pollution Control Officers Association, December 2021, adopted December 15, 2021.



SOURCE: SOUTHERN CALIFORNIA ASSOCIATION OF GOVERNMENTS

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Project Site

Figure 4-1
Los Angeles County Transportation Analysis Zones

not result in quantified VMT reductions. The VMT reducing strategies are broadly referred to as transportation demand management (TDM) strategies due to the focus on reducing the amount of automobile travel generated by a project.

The 2021 Handbook acknowledges that interactions between transportation measures are complex and sometimes counterintuitive, whereby combining measures can have substantive impact on reported emissions reductions. Therefore, in order to safeguard the accuracy and reliability of the methods, certain rules are recommended when combining reductions achieved by transportation measures. First, the quantified measures may be applied at one of two scales of application: 1) the Project/Site scale, which refers to measures that reduce VMT at the scale of a parcel, employer, or development project, or 2) the Plan/Community scale, which refers to measures that reduce emissions at the scale of a neighborhood (e.g., specific plan, general plan, or climate action plan), corridor, or entire municipality (e.g., city- or county-level). According to the 2021 Handbook, measures from different scales of application should never be combined. Second, the effectiveness of multiple measures within a subsector should be multiplied (i.e., not added) in order to determine a combined level of effectiveness. Each quantified measure has a maximum allowable reduction, and in turn each subsector has a maximum allowable reduction which is intended to ensure that emissions reductions are not double counted when measures within the subsector are combined. The subsector maximums vary by scale of application. Finally, there is limited research directly analyzing the combined VMT impact from implementation of all, or a majority, of transportation sector measures. However, the 2021 Handbook adopts a 70 percent (70%) maximum for the combined VMT reduction from the following four subsectors: land use, neighborhood design, parking or road pricing/management, and transit. The multi-subsector maximum does not include the trip reduction program subsector, since these measures are implemented by individual employers and are not as directly correlated with place type as the other subsectors.

For the purpose of this VMT analysis, measures at the Project/Site scale of application were determined to be the most appropriate for the proposed project. Of the 15 quantified measures at the Project/Site scale which reduce VMT, it has been determined that one (1) measure is applicable as a project design feature, as described in further detail below:

- T-1. Increase Residential Density

  This measure accounts for the VMT reduction achieved by a project that is designed with a higher density of dwelling units (DU) compared to the average residential density in the country. When reductions are being calculated from a baseline derived from a travel demand model, the residential density of the relevant TAZ is used for the comparison instead. Increased densities affect the distance people travel and provide greater options for the mode of travel they choose. Increasing residential density results in shorter and fewer trips by single-occupancy vehicles and thus a reduction in VMT.

  The project-generated VMT is derived from the County's VMT Tool, which is based on SCAG travel demand model data. Therefore, the proposed project's potential VMT reduction

is determined by comparing the residential density in TAZ 22375100 without and with the residential development proposed for Planning Areas 1, 2, and 3, and by comparing the residential density in TAZ 22379100 without and with the residential development proposed for Planning Area 5. The residential density of each TAZ was determined based on parcel-level data obtained from the Los Angeles County Office of the Assessor, which reports the type of residential development (e.g., single family, duplex, multi-family), the number of units, and the acreage of each parcel.

The 2021 Handbook also identifies a number of non-quantified or supporting measures that may enhance the ability of quantified measures to attain expanded reductions or co-benefits. The 2021 Handbook lists 25 non-quantified transportation strategies across all six subsectors. The following supporting measures are expected to enhance the ability to achieve the quantified VMT reductions as project design features:

- T-32. Locate Project near Bike Path/Bike Lane

  This measure requires projects to be located within a 0.5-mile bicycling distance from an existing Class I bike path or Class II bike lane. A project that is designed around an existing or planned bicycle facility encourages sustainable mode use. The project design should include a comparable network that connects the project uses to the existing off-site facilities that connect to work/retail destinations.

  The proposed project site is located within a 0.5-mile distance of the existing bicycle lanes along Fairway Drive and along Golden Springs Road. As noted in *Section 3.1.2*, future bicycle lanes are planned for Colima Road and Brea Canyon Cutoff Road in the immediate vicinity of the project site, which would provide connections to the existing bicycle lanes west and south of the site. Upon installation of the planned bicycle lanes, the project site would be served by regional-serving bicycle facilities that connect to work/retail destinations and facilitate bicycle commuting.

  The proposed project is planned to provide recreational multi-use trails within the project site which are expected to accommodate pedestrians, bicycles, and other non-motorized modes of travel. The multi-use trail system will connect to the internal project roadways as well as public sidewalks and roadways at various places, including along Colima Road. Therefore, the proposed project site is planned to provide convenient connections to the future bicycle lanes for residents of the project site as well as the general public. It is expected that providing connections throughout the project site to regional bicycle facilities will result in greater substitution of bicycle trips for vehicle trips. Therefore, the project is well-located and designed to attain expanded VMT reductions in the future when the planned bicycle facilities are installed.

- Telecommuting

  Telework refers to the practice of working from home or other remote locations by using telecommunications services such as the internet and phone services to connect to a central office or place of business.[22] The Orange County Transportation Authority (OCTA) determined based on an employment travel survey that in February 2020[23], an average of 0.76 days per five-day work week, or 15.1% of working days were worked remotely via teleworking. OCTA further found that teleworking increased to an average of 2.56 days per work week, or 52.8% of working days, in response to the COVID-19 pandemic, although surveyed employees expected to telework 1.55 days per work week on average, or 31.2% of working days, in post-pandemic conditions. While the degree of teleworking in the SCAG region is expected to remain higher than pre-pandemic levels in coming years, any prediction of the future levels of telecommuting would be speculative in nature. Employed residents of the proposed project are expected on average to reflect the same regional teleworking trends.

  Based on information provided by the project Applicant, it is understood that the proposed project is designed to accommodate the teleworking needs of future residents through features, technology, finishes, and filters that help contribute to improved working conditions, increased convenience, healthier indoor air quality, and energy efficiency. The proposed residential units are planned and sized appropriately to provide dedicated home office spaces (e.g., through the inclusion of home office rooms, home office lofts, and home office nooks), and the proposed development is planned to provide high-speed internet connections to each residential unit as well as high speed internet and wi-fi network infrastructure within each unit. The residential units will also feature additional data connections, power outlets, and USB charging outlets which will facilitate the use of teleworking equipment, along with smart home technology such as smart thermostats, locks, and video doorbells. The residential units will also promote healthy indoor environments for teleworking residents by providing all electric appliances, advanced technology HVAC air filters, and low VOC interior finishes. The units will also include energy efficient features such as solar panels, low E glass, smart thermostats, Energy-Star appliances, LED lighting, and tankless water heaters, which will reduce future residents' energy demands. Therefore, the proposed project is well designed to accommodate the space, technology, indoor environmental conditions, and energy demands of telework.

The measure described above (i.e., T-1, Increase Residential Density) results in a quantifiable VMT reduction of 13.04% for Planning Areas 1, 2, and 3, and a quantifiable VMT reduction of 2.39% for Planning Area 5. Calculation worksheets for the VMT reductions are provided in *Appendix D*. The

[22] It should be noted that the definition of telework typically does not include work which is primarily conducted in the home (i.e., self-employed, caretaker, etc.) or which require travel to off-site locations as part of the normal job duties (i.e., service technicians, drivers, etc.)

[23] "Employment & Travel Survey: Summary Report of Pandemic Impacts", prepared for OCTA by True North Research, Inc., December 14, 2021.

VMT reductions due to increased residential density have been applied to the baseline forecast provided by the County's VMT Tool, since the spreadsheet-based tool does not account for project-related changes in TAZ characteristics such as density. Application of these VMT reductions to the baseline VMT forecast derived via the use of the County's VMT Tool results in the following project-generated VMT forecast:

- Planning Areas 1, 2, and 3 are forecast to generate 16.3 residential VMT per capita (18.8 VMT/capita * (1-0.1304) = 16.3 VMT/capita) when accounting for project design features, which exceeds the South County residential VMT threshold of 10.0 residential VMT per capita.

- Planning Area 5 is forecast to generate 21.1 residential VMT per capita (21.6 VMT/capita * (1-0.0239) = 21.1 VMT/capita) when accounting for project design features, which exceeds the South County residential VMT threshold of 10.0 residential VMT per capita.

Therefore, after application of the VMT reductions due to project design features, the proposed project is expected to result in a significant residential VMT impact. A summary of the project-level VMT impact analysis is presented in ***Table 4-1***, which presents the baseline VMT per capita forecasts obtained from the VMT Tool, the adjustment to the baseline VMT forecast due to telework, and the VMT reductions due to project design features for Planning Areas 1, 2, and 3 as well as Planning Area 5.

4.4.3 *Cumulative VMT Analysis*

A project's cumulative impacts are determined on the basis of whether the incremental effects of an individual project are considerable when viewed in connection with the effects of past projects, the effects of current projects, and the effects of probable future projects. The County Guidelines state that short-term effects are evaluated in the detailed project-level VMT analysis, while long-term or cumulative effects are determined through consistency with SCAG's current 2020-2045 RTP/SCS, which is called Connect SoCal. Connect SoCal is the regional plan that demonstrates compliance with air quality conformity requirements and greenhouse gas (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. Developments in a location where the RTP/SCS does not specify any development may indicate a significant impact on transportation. However, if a project does not demonstrate a significant impact in the project impact analysis, a less than significant impact in the cumulative impact analysis can also be determined. Projects that fall under an efficiency-based impact threshold (e.g., residential VMT per capita, employment VMT per employee, or total VMT per service population) are already shown to align with the long-term VMT and greenhouse gas reduction goals. Land use projects that demonstrate a project-level impact and which are not found to be consistent with the SCAG RTP/SCS could have a significant transportation impact.

Table 4-1
SUMMARY OF VEHICLE MILES TRAVELED (VMT) ANALYSIS [1]

VMT ANALYSIS CONDITIONS	LOTS 1, 2, AND 3 (TAZ 22375100)	LOT 5 (TAZ 22379100)
Baseline VMT per Capita Forecast From VMT Tool [2]	18.8	21.6
VMT Reductions Due to Project Design Features [3]	*-13.04%*	*-2.39%*
- Measure T-1. Increase Residential Density		
Project-Generated VMT per Capita [4]	16.3	21.1
Significant Impact? (Yes/No) [5]	YES	YES
VMT Reductions Due to Mitigation Measures [3]	*-0.45%*	*-0.45%*
- Measure T-9. Implement Subsidized or Discounted Transit Program		
Project-Generated VMT per Capita After Mitigation [6]	16.2	21.0
Significant Impact? (Yes/No) [5]	YES	YES

[1] The VMT analysis presented in this table, including all adjustments and VMT reductions, is described in detail in *Section 4.0.*
[2] LA County Public Works VMT Tool Version 1.0 Worksheets are provided in *Appendix D.*
[3] The VMT reduction calculations are presented in *Appendix D.*
[4] Lots 1, 2 and 3: Baseline VMT * (1-0.1304) = Project-Generated VMT
Lot 5: Baseline VMT * (1-0.0239) = Project-Generated VMT
[5] A significant impact occurs when the project-generated VMT per Capita exceeds the South County threshold of 10.0 VMT per Capita.
[6] Project-Generated VMT * (1-0.0045) = Project-Generated VMT After Mitigation

The *Technical Advisory* provides the following additional discussion of cumulative impacts: "[M]etrics such as VMT per capita or VMT per employee, i.e., metrics framed in terms of efficiency (as recommended below for use on residential and office projects), cannot be summed because they employ a denominator. A project that falls below an efficiency-based threshold that is aligned with long-term goals and relevant plans has no cumulative impact distinct from the project impact. Accordingly, a finding of a less-than-significant project impact would imply a less than significant cumulative impact, and vice-versa."

The proposed project has been determined to have a significant project-level impact in comparison to the County's efficiency-based residential VMT impact thresholds. Therefore, it is conservatively concluded that the proposed project potentially contributes toward a cumulative VMT impact.

4.5 CEQA Transportation Mitigation Measures

As described above, based on the baseline VMT forecasts from the County's VMT Tool and application of appropriate VMT reductions due to project design features, the proposed project is expected to result in a significant VMT impact. CEQA requires identification of mitigation measures to reduce a significant environmental impact to the greatest extent possible. The 2021 Handbook was reviewed to identify any additional TDM measures which would further mitigate the residential VMT impact. The measures were reviewed for applicability to the proposed project based on land use type, location, and feasibility of implementation. A summary of this review is provided in *Appendix D*. The TDM strategies which are applicable to the proposed project as VMT mitigation measures are described in further detail below.

- T-9. Implement Subsidized or Discounted Transit Program

  This measure reflects subsidized or discounted, or free transit passes being offered to residents. Reducing the out-of-pocket cost for choosing transit improves the competitiveness of transit against driving, increasing the total number of transit trips and decreasing vehicle trips. This decrease in vehicle trips results in reduced VMT. This measure is most effective when the project is located in the vicinity of high-quality transit service, or nearby local or less frequent transit service, or shuttles that provide a last-mile connection to rail. As stated in the 2021 Handbook, when supported by bicycle access, projects may be up to two (2) miles from a high-quality transit service.

  The Metrolink Industry Station is located at 600 South Brea Canyon Road, which is approximately 1.9 miles from the project site. The station is served by the Riverside line, which provides service between Union Station in Downtown Los Angeles to the west and Downtown Riverside to the east. In order to encourage use of the Metrolink commuter rail system and reduce commute-related VMT in the region, the project developer/homeowner's association (HOA) will provide a reimbursement subsidy of up to 50% of the cost of one Metrolink monthly pass per homeowner/residential dwelling unit for five (5) years (the project developer will administer and fund the reimbursement subsidy program for the first three [3] years, at which point the HOA will take over administration and funding).

Consistent with the guidance provided in the 2021 Handbook which states that projects may be located up to two (2) miles from high-quality transit service when access is supported by bicycle, the project applicant will also provide an electric bicycle with the purchase of each dwelling unit in order to support the effectiveness of this measure (discussed in further detail below).

It should be noted that monthly passes for the Metrolink system are sold based on the specific origin and destination stations both for cost and ticketing purposes (e.g., a monthly pass from Industry Station to L.A. Union Station costs approximately $238.00, while a monthly pass from Industry Station to Riverside – Downtown Station costs approximately $259.00). As the destination stations for future residents cannot be determined in advance, it is not feasible for the project to pre-purchase and distribute passes along with the purchase of each dwelling unit. Instead, the project will advertise the subsidy program to future residents at the time of purchase, and once a year for the remaining years of the subsidy program. As the total cost of the transit passes cannot be determined in advance, the total yearly homeowner transit subsidy reimbursement cost for Metrolink passes shall not exceed $20,250.00 to the project developer/HOA.

The project site is also served by public bus transit. As described in *Section 3.2*, public bus transit service in the vicinity is provided by Foothill Transit. Public bus stops are provided at the intersections of Fairway Drive-Brea Canyon Cutoff Road/Colima Road and Lake Canyon Drive/Colima Road, with service approximately every 20-30 minutes during the peak commute hours. Therefore, in addition to the Metrolink subsidies, the project developer/HOA will also fund a reimbursement subsidy of up to 50% of the cost of one Foothill Transit monthly bus pass per homeowner/residential dwelling unit for five (5) years in order to encourage the use of bus transit and reduce residential VMT in the region. A 31-day Foothill Transit bus pass costs approximately $60.00. The project developer/HOA will advertise the subsidy program to future residents at the time of purchase, and once a year for the remaining years of the subsidy program. As the total cost of the transit passes cannot be determined in advance, the total yearly homeowner transit subsidy reimbursement for Foothill Transit bus passes shall not exceed $24,750.00 to the project developer/HOA.

Total annual transit reimbursement subsidies (Metrolink and Foothill Transit) paid by the project developer/HOA will not exceed $45,000 per year for the five (5)-year period. The project developer/HOA will provide a report to Los Angeles County six (6) months prior to the end of the fifth year, detailing the use of the transit subsidy program. The County will determine within 90 days if the use of the transit subsidy program should continue for an additional five (5) years. In no event will the transit subsidy program last more than a total of 10 years.

The TDM measure described above (T-9) results in a 0.45% reduction in VMT. Calculation of the VMT reduction for this strategy is provided in *Appendix D*. It was determined that the remaining strategies in the Land Use, Trip Reduction Programs, and Parking or Road Pricing/Management

subsectors are not applicable to the proposed project which consists of single-family and townhome residential units. A summary of this review is provided in *Appendix D*. Strategies in the Neighborhood Design, Transit, and Cleaner Vehicles and Fuels subsectors are not applicable at the Project/Site scale of application.

As stated previously, according to the 2021 Handbook, providing transit subsidies can be expected to result in reductions in VMT when projects up to two (2) miles away from high quality transit are supported by bicycle access. Therefore, the proposed project will provide electric bicycles to support the implementation of the transit subsidy program (measure T-9). This additional measure is described below:

- Electric Bicycles

  The project applicant will provide an electric bicycle along with the purchase of each dwelling unit. Electric bicycles promote the use of bicycling as a travel mode instead of vehicles. There is insufficient research to determine a quantifiable VMT reduction resulting directly from ownership and use of electric bicycles at the project site scale; however, recent research indicates that at a community-wide scale (e.g., a community bike-share program), electric bicycles result in a higher percentage of vehicle trips being substituted with bicycle trips than conventional (pedal) bicycles.[24] Further, the provision of electric bicycles is expected to support implementation of the transit subsidy program by providing an alternative last-mile connection to the nearby Metrolink Industry Station. Therefore, although no quantifiable VMT reduction can be determined, it is expected that providing electric bicycles will both support the implementation of the transit subsidy program described above (measure T-9), as well as encourage the substitution of bicycle trips in place of all vehicle trips and thus further mitigate the project's VMT impact.

As stated above, the mitigation measures (i.e., provision of transit subsidies and electric bicycles) are expected to result in a quantifiable VMT reduction of 0.45%. Application of the 0.45% VMT reduction would therefore result in a project VMT of 16.2 residential VMT per capita for Planning Areas 1, 2, and 3 (i.e., 16.3 VMT/Capita * [1.00 – 0.0045] = 16.2 VMT/Capita), and a project VMT of 21.0 residential VMT per capita for Planning Area 5 (i.e., 21.1 VMT/Capita * [1.00 – 0.0045] = 21.0 VMT/Capita). The VMT reductions due to mitigation measures and the resulting project-level VMT per capita are summarized in *Table 4-1*. The proposed project's VMT would continue to exceed the threshold of 10.0 residential VMT per capita after mitigation, therefore the project-level VMT impacts will remain significant and unavoidable.

[24] Based on information provided in the 2021 Handbook for T-22-A – Implement Pedal (Non-Electric) Bikeshare Program, which is anticipated to result in a vehicle to bicycle substitution rate of 19.6%, and T-22-B – Implement Electric Bikeshare Program, which is anticipated to result in a vehicle to bikeshare substitution rate of 35%.

5.0 OPERATIONAL ANALYSIS

As part of a project's discretionary review and approval process, the County has the authority to require additional local transportation network analyses and site access studies. Specifically, the County Guidelines require an operational analysis of intersections in the vicinity of a proposed project in order to evaluate site access and circulation constraints that may be caused or worsened by project-generated traffic. In order to determine if an operational analysis is appropriate for the proposed project, the County Guidelines provide the following questions for consideration, with responses for the proposed project provided below:

- Is the project required to submit a Transportation Impact Analysis?
    - Yes, the proposed project must submit a Transportation Impact Analysis.
- Does the development project involve a discretionary action that would be reviewed by the Department of Regional Planning?
    - Yes, the proposed project requires discretionary approvals that would be reviewed by the Department of Regional Planning.

The answer to both of the questions above is "Yes"; therefore, a quantitative analysis is required to evaluate the proposed project's effects on access and circulation in the vicinity of the project site. The following sections present the intersection operational and queuing analyses prepared for the proposed project pursuant to this requirement.

5.1 Evaluation Criteria

According to the County Guidelines, project access would be considered constrained if the project's traffic would contribute to unacceptable queuing at nearby signalized intersections. Unacceptable or extended queuing may be defined as follows:

- Spill over from turn pockets into through lanes,
- Spill over into intersections.

Although the County Guidelines do not formally identify intersection peak hour LOS as an evaluation criteria, the peak hour LOS at study intersections is also disclosed for informational purposes.

5.2 Methodology

In coordination with County staff, a total of 10 study intersections were identified for operational and queuing evaluation both without and with the proposed project and other cumulative developments in the study area. The study intersections are summarized in *Table 1-1*, along with the current traffic controls and the agencies which have jurisdiction at each intersection.

In order to estimate the proposed project's effect on intersection operations, a multi-step process has been utilized. The first step is trip generation, which estimates the total arriving and departing traffic volumes on a peak hour and daily basis. The second step of the forecasting process is trip distribution, which identifies the origins and destinations of inbound and outbound project traffic volumes. These origins and destinations are typically based on demographics and existing/anticipated travel patterns in the study area. The third step is traffic assignment, which involves the allocation of project traffic to study area streets and intersections. Traffic distribution patterns are indicated by general percentage orientation, while traffic assignment allocates specific volume forecasts to individual roadway links and intersection turning movements throughout the study area. The proposed project's forecast trip generation, distribution, and assignment is presented in *Section 2.7* herein. With the forecasting process complete and project traffic assignments developed, the effect of the proposed project is isolated by comparing operational conditions at the selected study intersections using traffic volumes without and with the forecast project traffic.

The study intersection LOS was analyzed using the *Highway Capacity Manual* (HCM) method of analysis. The HCM methodology determines the average control delay (expressed in seconds per vehicle) at the intersection. Average control delay for any particular movement is a function of the capacity of the approach and the degree of saturation. The overall intersection delay represents the weighted average of delay for each intersection approach. The intersection delay is subsequently assigned a LOS value to describe intersection operations. LOS varies from LOS A (free flow conditions) to LOS F (jammed condition). The average control delay for signalized intersections represents the delay attributed to the traffic control facility as compared to a reference travel time in the absence of traffic control, geometric delay, incidents, and the influence of other vehicles. Average control delay includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. The average control delay for stop-controlled intersections includes delay due to deceleration to a stop at the back of the queue from free-flow speed, move-up time within the queue, stopped delay at the front of the queue, and delay due to acceleration back to free-flow speed. It should be noted that the two-way stop-controlled (TWSC) methodology estimates the average control delay for each minor-street movement (or shared movement) as well as major-street left-turns and determines the LOS for each constrained movement. As no delays are calculated for the uncontrolled major-street approaches, the weighted average of approach delays is not utilized to determine overall intersection delay at TWSC intersections. Instead, the most constrained minor street approach at the intersection is reported in order to determine the intersection LOS. A detailed description of the HCM method and corresponding LOS for signalized and unsignalized intersections is provided in ***Appendix E***.

The HCM method was also utilized to analyze vehicular queuing at the study intersections. The HCM methodology determines the 95th percentile queues, which represent the maximum back of vehicle queues with 95th percentile traffic volumes. These queues are assumed to represent the expected maximum vehicle queues, as the probability that these queues will be exceeded is 5% or less. The 95th percentile condition is anticipated to occur at a signalized intersection only during one or two signal cycles within each of the respective analysis peak hours. The HCM method reports delays in vehicles per lane (veh/ln). For the purposes of comparing the calculated vehicle queuing to

the existing available storage space, an average length of 25 feet per vehicle (including vehicle separation) was assumed. The corresponding maximum vehicle queue lengths were then compared to the length of available queue storage space in order to determine the potential for queue spill back into adjacent lanes or intersections.

The HCM method calculations were prepared using the *Synchro 11* software package which implements the HCM operational methodology. A *Synchro* network was created based on existing conditions field reviews at the 10 study intersections. In addition, specifics such as traffic volume data, lane configurations, available vehicle storage lengths, crosswalk locations, posted speed limits, traffic signal timing and phasing, etc., were coded to complete the existing network. The operational analysis was prepared utilizing the following data previously presented herein:

- Project Peak Hour Traffic Generation: Refer to *Section 2.7* herein.
- Project Trip Distribution and Assignment: Refer to *Section 2.7* herein.
- Existing Roadway Network: Refer to *Section 3.3* herein.
- Existing Weekday AM and PM Peak Hour Traffic Count Data: Refer to *Section 3.4* herein.
- Related Projects (i.e., with a one [1]-mile radius): Refer to *Section 3.5* herein.

5.3 Analysis Scenarios

The operational and queuing analyses at the study intersections were prepared for the typical weekday AM peak hour and PM peak hour time periods. Pursuant to the County Guidelines and in coordination with City staff, LOS and queuing calculations have been prepared for the following scenarios:

1. Existing traffic conditions.
2. Existing with project traffic conditions.
3. Condition 2 with implementation of corrective intersection improvement measures, if necessary.
4. Future cumulative without project conditions (i.e., condition 1 plus application of ambient growth through year 2027 and with completion and occupancy of the related projects).
5. Future cumulative with project conditions (i.e., condition 4 with completion and occupancy of the proposed project).
6. Condition 5 with implementation of corrective intersection improvement measures, if necessary.

The existing traffic volumes (i.e., condition 1) at the study intersections during the weekday AM and PM peak hours are displayed in *Figures 3-4* and *3-5*, respectively. The existing with project traffic volumes (i.e., condition 2) at the study intersections during the weekday AM and PM peak hour are displayed in ***Figures 5-1*** and ***5-2***, respectively. The future cumulative without project traffic (i.e., condition 4) at the study intersections during the weekday AM and PM peak hours are displayed in ***Figures 5-3*** and ***5-4***, respectively. The future cumulative with project traffic volumes (i.e., condition 5) at the study intersections during the weekday AM and PM peak hour are displayed in ***Figures 5-5*** and ***5-6***, respectively.

5.4 Intersection Queuing Analysis

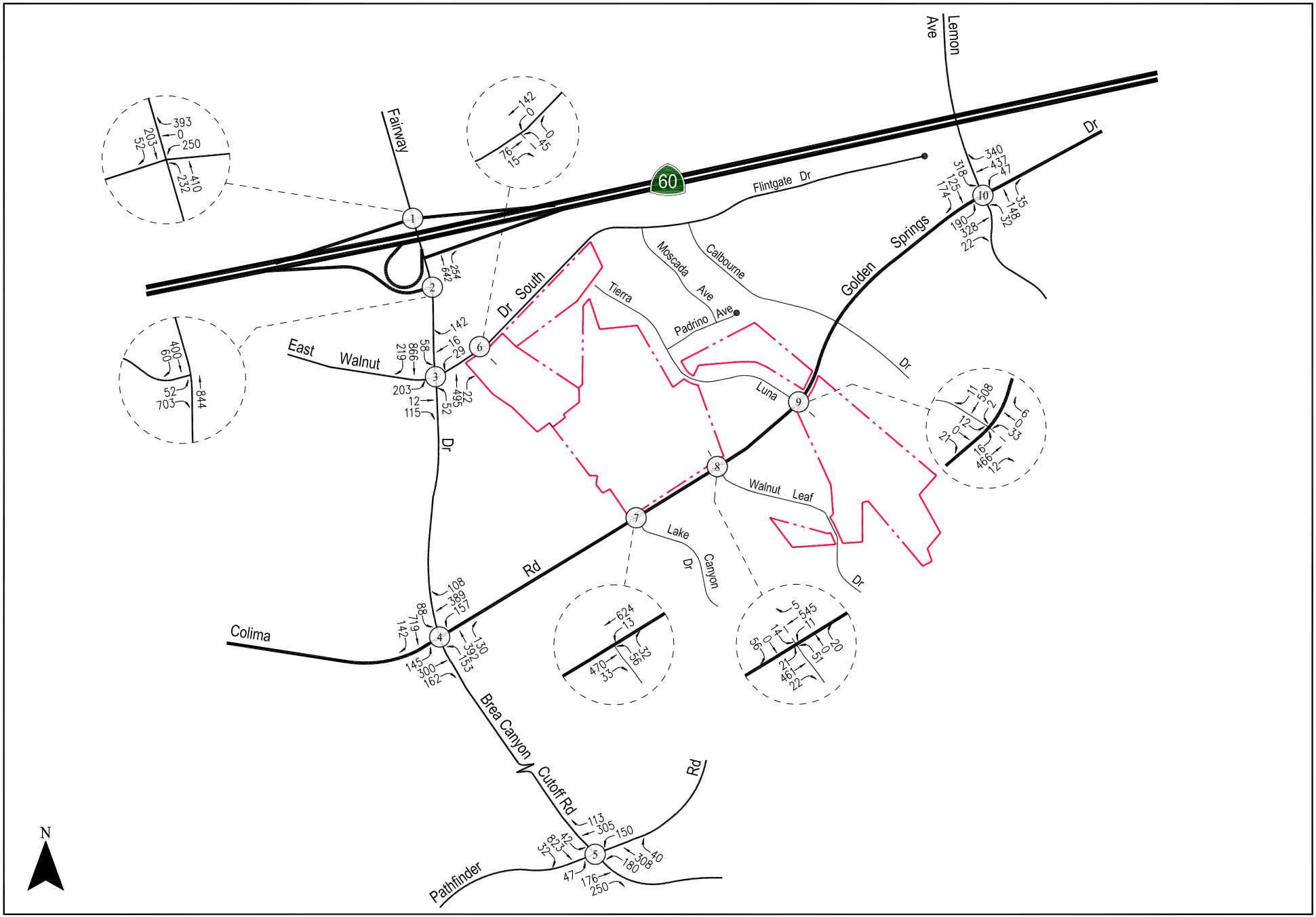
The vehicle queuing analysis prepared for each of the study locations for the representative intersection traffic movements is summarized in ***Table 5–1***. The intersection vehicle queuing analysis focuses on queuing associated with exclusive left- and right-turn lanes, as well as minor streets where one lane accommodates all permissible traffic movements. The HCM data worksheets for the analyzed intersections are contained in *Appendix E*.

As shown in *Table 5-1*, the vehicle queuing at five (5) of the study intersections is expected to be adequately accommodated by the existing available turn-lane queue storage areas. It is noted that the only turn-lane queuing identified at Int. 2 – Fairway Drive/SR-60 Freeway EB Off-Ramp is associated with the freeway off-ramp (eastbound) approach. The off-ramp queuing is assessed in *Section 9.0*, California Department of Transportation Traffic Analysis, herein. The remaining intersection approaches (northbound and southbound) at that intersection do not accommodate signalized turning movements; thus, no additional queuing is reported in *Table 5-1* for Int. 2 – Fairway Drive/SR-60 Freeway EB Off-Ramp. The turning movements which are calculated to exceed the available storage area at the remaining four (4) study intersections are discussed in further detail below.

5.4.1 *Int. 1 – Fairway Drive/SR-60 Freeway WB Ramps*

Northbound Left Turn: The northbound approach of the intersection provides dual left-turn lanes, which provide approximately 200 feet of queue storage area per lane, or a total of 400 feet of queue storage. As shown in column [a] of *Table 5-1*, the vehicle queue for the northbound left-turn movement under existing conditions is calculated to total 293 feet per lane during the PM peak hour, which corresponds to a total of 586 feet of vehicle queuing. The turn-lane queuing under existing conditions exceeds the total available turn-lane storage area by 186 feet (or approximately 7.4 vehicles), resulting in queue spill-back into the adjacent through travel lane, and indicating an existing queue storage deficiency (i.e., without project-generated traffic) for the northbound left-turn movement.

As shown in column [b] of *Table 5-1*, the addition of project traffic at the intersection is forecast to result in 15 feet of additional queuing per northbound left-turn lane. The vehicle queue for the northbound left-turn movement under existing with project conditions is forecast to total 308 feet per lane during the PM peak hour, corresponding to a total of 616 feet of vehicle queuing. The turn-lane



Project Site

(XX) Study Intersection

Figure 5-1

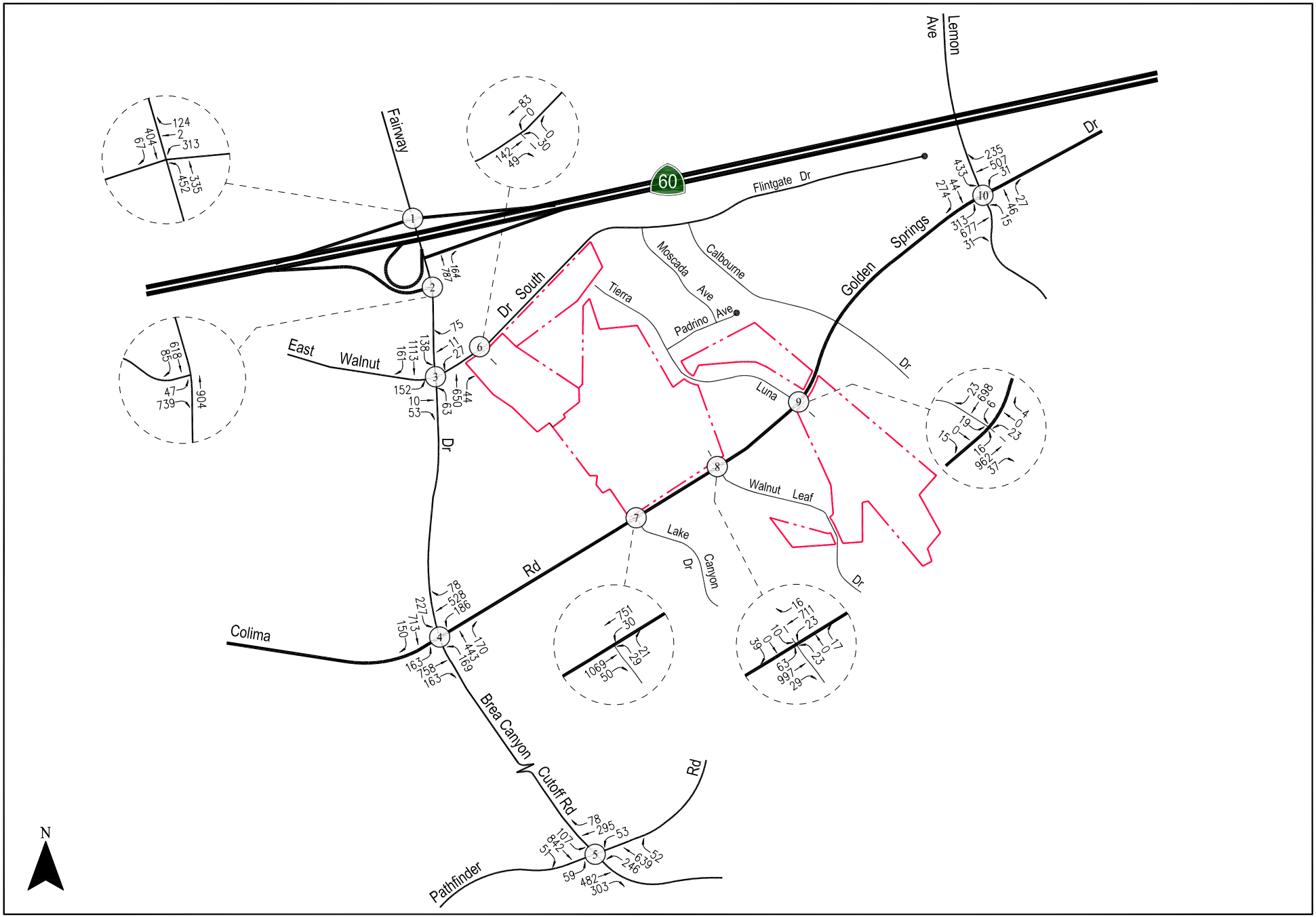
Existing With Project Traffic Volumes

Weekday AM Peak Hour

Royal Vista Residential and Parks Project

LINSCOTT LAW & GREENSPAN engineers

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Project Site

(XX) Study Intersection

Figure 5-2

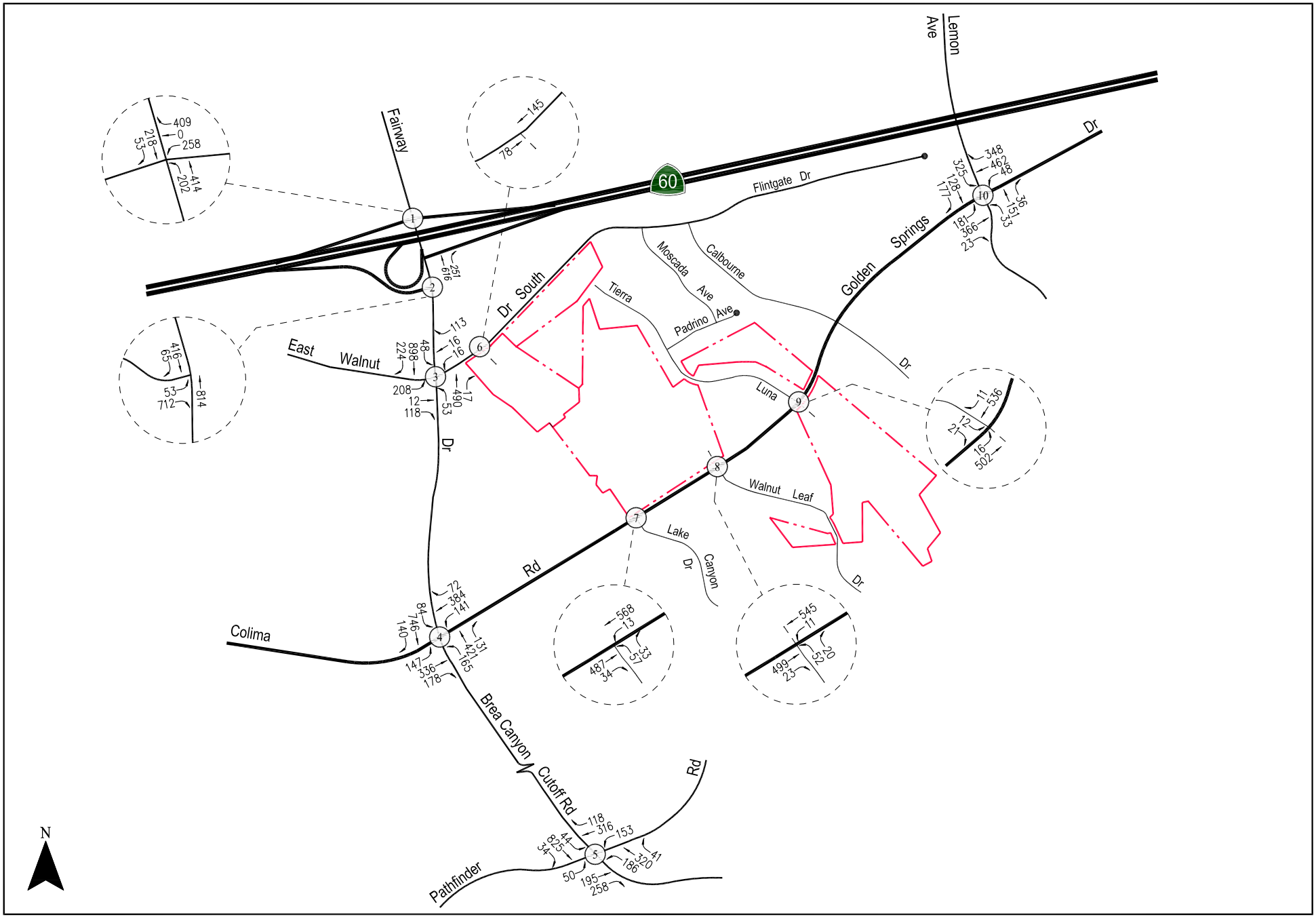
Existing With Project Traffic Volumes

Weekday PM Peak Hour

Royal Vista Residential and Parks Project

LINSCOTT LAW & GREENSPAN engineers

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Project Site

(XX) Study Intersection

LINSCOTT LAW & GREENSPAN engineers

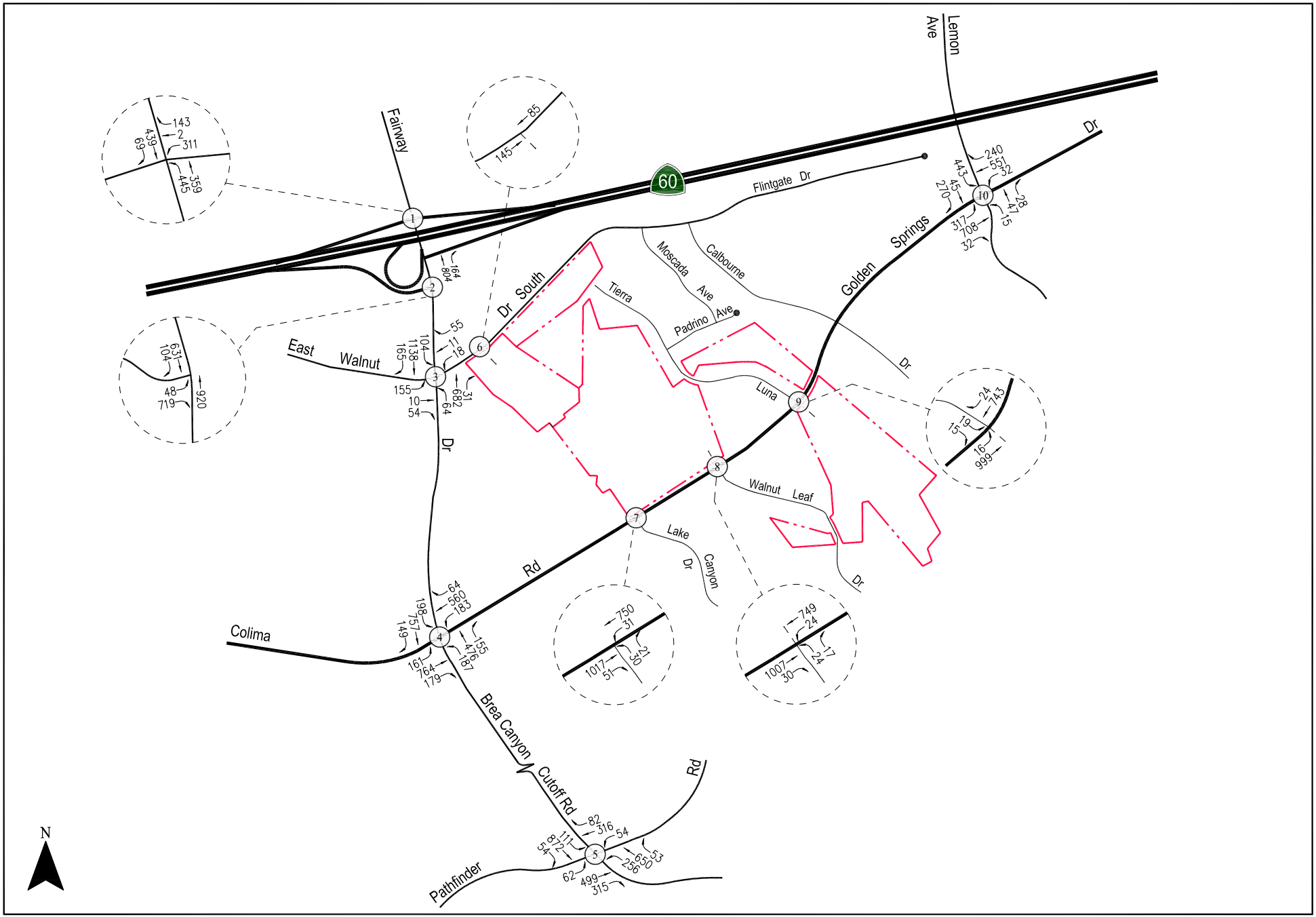
Figure 5-3

Future Cumulative Without Project Traffic Volumes

Weekday AM Peak Hour

Royal Vista Residential and Parks Project

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Project Site

(XX) Study Intersection

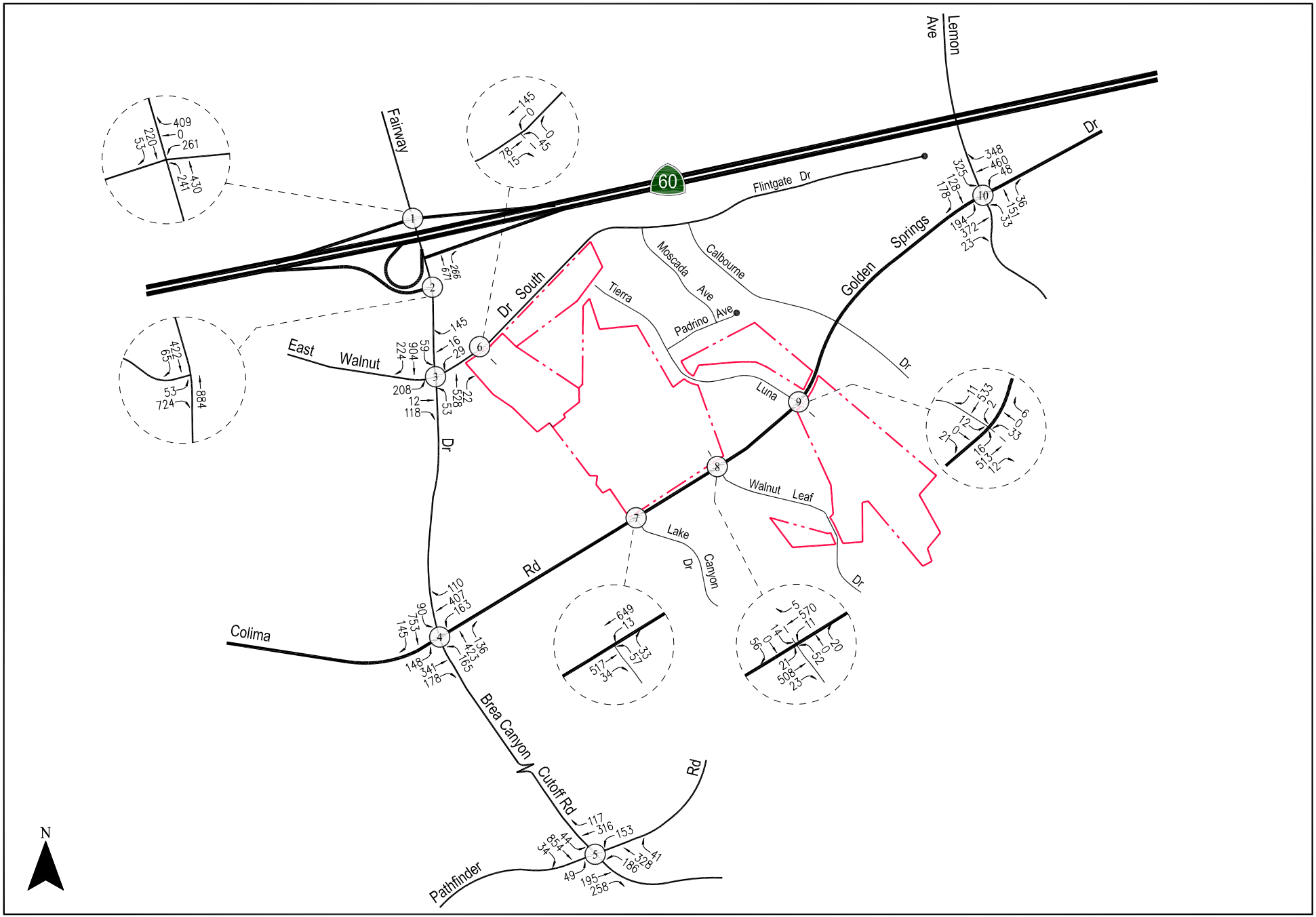
Figure 5-4

Future Cumulative Without Project Traffic Volumes

Weekday PM Peak Hour

Royal Vista Residential and Parks Project

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Project Site

XX Study Intersection

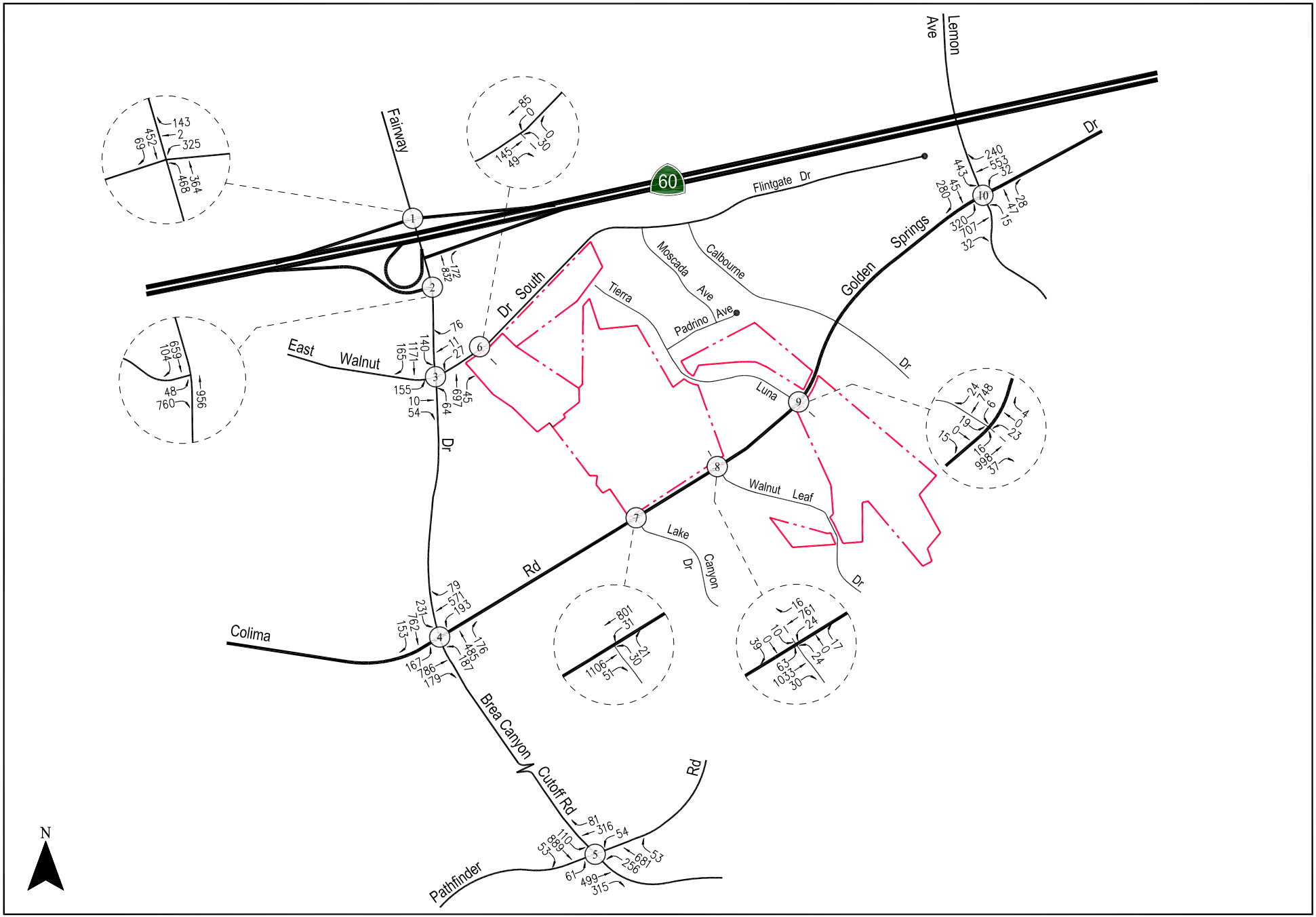
Figure 5-5

Future Cumulative With Project Traffic Volumes

Weekday AM Peak Hour

Royal Vista Residential and Parks Project

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Project Site

(XX) Study Intersection

LINSCOTT LAW & GREENSPAN engineers

Figure 5-6

Future Cumulative With Project Traffic Volumes

Weekday PM Peak Hour

Royal Vista Residential and Parks Project

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Table 5-1
SUMMARY OF 95th PERCENTILE INTERSECTION TURN-LANE VEHICLE QUEUING [1]
WEEKDAY AM AND PM PEAK HOURS

NO.	INTERSECTION	TRAFFIC CONTROL	MOVE-MENT	QUEUE STORAGE SPACE (FEET)	PEAK HOUR	[a] EXISTING (FEET) [2]	[b] EXISTING WITH PROJECT (FEET) [2]	[b] CHANGE IN QUEUE ([b]-[a])	[c] FUTURE CUM. WITHOUT PROJECT (FEET) [2]	[d] FUTURE CUM. WITH PROJECT (FEET) [2]	[d] CHANGE IN QUEUE ([d]-[c])
1	Fairway Drive/ SR-60 Freeway WB Ramps [3]	Signalized	NBL	200	AM	140	170	30	148	175	27
				200	PM	293	308	15	303	318	15
			SBR	115	AM	38	40	2	40	43	3
				115	PM	48	50	2	50	53	3
2	Fairway Drive/ SR-60 Freeway EB Off-Ramp [3]	Signalized	---	---	AM	---	---	---	---	---	---
				---	PM	---	---	---	---	---	---
3	Fairway Drive/ East Walnut Drive South	Signalized	NBL	120	AM	38	40	2	40	40	0
				120	PM	25	28	3	28	28	0
			NBR	100	AM	25	25	0	25	25	0
				100	PM	25	25	0	25	25	0
			SBL	150	AM	25	25	0	25	25	0
				150	PM	25	25	0	25	25	0
			EB	-	AM	453	463	10	465	475	10
			[4]	-	PM	273	273	0	278	278	0
			WBR	50	AM	125	168	43	128	165	37
				50	PM	63	88	25	65	90	25
4	Fairway Drive- Brea Canyon Cutoff Road/ Colima Road	Signalized	NBL	190 [5]	AM	255	255	0	275	275	0
				190 [5]	PM	260	260	0	290	290	0
			NBR	200	AM	143	148	5	148	155	7
				200	PM	180	208	28	180	208	28
			SBL	185 [5]	AM	113	123	10	115	125	10
				185 [5]	PM	258	320	62	260	333	73
			SBR	130	AM	90	93	3	90	90	0
				130	PM	93	95	2	93	93	0
			EBL	200	AM	238	243	5	243	245	2
				200	PM	243	253	10	248	258	10
			WBL	200	AM	223	265	42	233	273	40
				200	PM	273	290	17	285	303	18

Table 5-1 (Continued)
SUMMARY OF 95th PERCENTILE INTERSECTION TURN-LANE VEHICLE QUEUING [1]
WEEKDAY AM AND PM PEAK HOURS

NO.	INTERSECTION	TRAFFIC CONTROL	MOVE-MENT	QUEUE STORAGE SPACE (FEET)	PEAK HOUR	[a] EXISTING (FEET) [2]	[b] EXISTING WITH PROJECT (FEET) [2]	[b] CHANGE IN QUEUE ([b]-[a])	[c] FUTURE CUM. WITHOUT PROJECT (FEET) [2]	[d] FUTURE CUM. WITH PROJECT (FEET) [2]	[d] CHANGE IN QUEUE ([d]-[c])
5	Brea Canyon Cutoff Road/ Pathfinder Road	Signalized	NBL	-	AM	108	108	0	113	113	0
				-	PM	140	140	0	148	148	0
			SBL	200 [5]	AM	58	58	0	60	60	0
				200 [5]	PM	160	160	0	168	165	-3
			EBL	200	AM	70	70	0	73	73	0
				200	PM	83	83	0	85	85	0
			WBL	290 [5]	AM	260	260	0	273	273	0
				290 [5]	PM	73	73	0	73	73	0
6	Project Driveway/ East Walnut Drive South [6]	Two-Way Stop	NB	-	AM	[6]	25	25	[6]	25	25
			[4]	-	PM	[6]	25	25	[6]	25	25
			EB	-	AM	[6]	0	0	[6]	0	0
			[4]	-	PM	[6]	0	0	[6]	0	0
			WB	-	AM	[6]	0	0	[6]	0	0
			[4]	-	PM	[6]	0	0	[6]	0	0
7	Lake Canyon Drive/ Colima Road	Signalized	NB	-	AM	138	138	0	140	140	0
			[4]	-	PM	70	70	0	73	73	0
			WBL	120	AM	25	25	0	25	25	0
				120	PM	25	25	0	25	25	0
8	Project Driveway- Walnut Leaf Drive/ Colima Road [7]	Two-Way Stop	NB	-	AM	25	43	18	30	50	20
			[4]	-	PM	25	43	18	25	50	25
			SB	-	AM	[7]	25	25	[7]	25	25
			[4]	-	PM	[7]	25	25	[7]	25	25
			EBL	-	AM	[7]	25	25	[7]	25	25
				-	PM	[7]	25	25	[7]	25	25
			WBL	100	AM	0	0	0	0	0	0
				100	PM	25	25	0	25	25	0

Table 5-1 (Continued)
SUMMARY OF 95th PERCENTILE INTERSECTION TURN-LANE VEHICLE QUEUING [1]
WEEKDAY AM AND PM PEAK HOURS

NO.	INTERSECTION	TRAFFIC CONTROL	MOVE-MENT	QUEUE STORAGE SPACE (FEET)	PEAK HOUR	[a] EXISTING (FEET) [2]	[b] EXISTING WITH PROJECT (FEET) [2]	[b] CHANGE IN QUEUE ([b]-[a])	[c] FUTURE CUM. WITHOUT PROJECT (FEET) [2]	[d] FUTURE CUM. WITH PROJECT (FEET) [2]	[d] CHANGE IN QUEUE ([d]-[c])
9	Tierra Luna-Project Driveway/ Colima Road [8]	Two-Way Stop	NB [4]	-	AM	[8]	25	25	[8]	25	25
				-	PM	[8]	28	28	[8]	33	33
			SB [4]	-	AM	25	25	0	25	25	0
				-	PM	25	25	0	25	25	0
			EBL	105	AM	25	25	0	25	25	0
				105	PM	25	25	0	25	25	0
			WBL	-	AM	[8]	0	0	[8]	0	0
				-	PM	[8]	0	0	[8]	0	0
10	Lemon Avenue/ Golden Springs Drive	Signalized	NBL	50	AM	40	40	0	40	40	0
				50	PM	25	25	0	25	25	0
			SBL	270 [5]	AM	208	208	0	213	213	0
				270 [5]	PM	260	260	0	265	265	0
			SBR	450	AM	243	243	0	248	248	0
				450	PM	350	368	18	360	380	20
			EBL	245 [5]	AM	135	145	10	138	148	10
				245 [5]	PM	218	220	2	223	225	2
			WBL	135	AM	75	75	0	78	78	0
				135	PM	50	50	0	50	50	0
			WBR	150	AM	455	463	8	475	483	8
				150	PM	275	275	0	283	283	0

[1] Queuing analysis based on the Highway Capacity Manual, 6th Edition operational analysis methodologies. The 95th percentile queue is the maximum back of queue with 95th percentile traffic volumes.
[2] The HCM 6th Edition methodology worksheets report queues in number of vehicles, however an average vehicle length of 25 feet was assumed for analysis purposes. The reported queues therefore represent the calculated maximum back of queue in feet. Where a queue of less than one (1.0) vehicle is calculated, a minimum queue of 25 feet is reported.
[3] The vehicular queuing associated with the freeway off-ramp at this location is assessed in *Section 9.0, California Department of Transportation Traffic Analysis.*
[4] Approach consists of a single lane which accommodates all permissible movements.
[5] Queue storage space includes the striped turn-pocket length as well as the lane taper area, which can accommodate additional vehicle queuing.
[6] Future intersection. No queuing is reported for existing or future cumulative without project conditions.
[7] Project will construct the fourth leg of the existing T-intersection (north leg). No queuing is reported for the southbound approach or the east-bound left-turn under existing or future cumulative without project conditions.
[8] Project will construct the fourth leg of the existing T-intersection (south leg). No queuing is reported for the northbound approach or the west-bound left-turn under existing or future cumulative without project conditions.

queuing under existing with project conditions is forecast to exceed the total available turn-lane storage area by 216 feet (or approximately 8.6 vehicles), and is anticipated to continue to spill back into the adjacent through travel lane.

The vehicle queue for the northbound left-turn movement under future cumulative without project (i.e., existing plus ambient growth and cumulative projects traffic) conditions, as presented in column [c] of *Table 5-1*, is calculated to total 303 feet per lane during the PM peak hour, which corresponds to a total of 606 feet of vehicle queuing. The turn-lane queuing under future cumulative without project conditions is forecast to exceed the total available turn-lane storage area by 206 feet (or approximately 8.2 vehicles), and is anticipated to continue to spill back into the adjacent through travel lane.

As shown in column [d] of *Table 5-1*, 15 feet of additional queuing per northbound lane is forecast to occur under future cumulative with project (i.e., existing plus project traffic and cumulative projects traffic) conditions, when compared to future cumulative without project conditions. The vehicle queue for the northbound left-turn movement under future cumulative with project conditions is calculated to total 318 feet per lane during the PM peak hour, corresponding to a total of 636 feet of vehicle queuing. The turn-lane queuing under future cumulative with project conditions is forecast to exceed the total available turn-lane storage area by 236 feet (or approximately 9.4 vehicles), and is anticipated to continue to spill back into the adjacent through travel lane.

5.4.2 *Int. 3 – Fairway Drive/ East Walnut Drive South*

Westbound Right-Turn: The westbound approach of the intersection is striped to provide one shared left-through lane and one right-turn lane. The right-turn lane is formally striped for a length of 50 feet. As shown in column [a] of *Table 5-1*, the vehicle queue for the westbound right-turn movement under existing conditions is calculated to total 125 feet during the AM peak hour and 63 feet during the PM peak hour. The turn-lane queuing under existing conditions (i.e., without the proposed project) therefore exceeds the total available turn-lane storage area by 75 feet (or approximately 3.0 vehicles).

As shown in column [b] of *Table 5-1*, under existing with project traffic conditions, up to 43 feet of additional queuing is forecast to occur during the AM peak hour for the westbound right-turn movement, corresponding to a total vehicle queue of 168 feet. In addition, 25 feet of additional queuing is forecast to occur during the PM peak hour for the westbound right-turn movement, resulting in a total vehicle queue of 88 feet. The turn-lane queuing under existing with project conditions is forecast to exceed the total available turn-lane storage area by up to 118 feet (or approximately 4.7 vehicles).

The vehicle queue for the westbound right-turn movement under future cumulative without project conditions, as presented in column [c] of *Table 5-1*, is calculated to total 128 feet during the AM peak hour and 65 feet during the PM peak hour. The turn-lane queuing under future cumulative

without project conditions is forecast to exceed the total available turn-lane storage area by 78 feet (or approximately 3.1 vehicles).

As shown in column [d] of *Table 5-1*, under future cumulative with project traffic conditions, up to 37 feet of additional queuing is forecast to occur during the AM peak hour for the westbound right-turn movement, corresponding to a total vehicle queue of 165 feet. In addition, 25 feet of additional queuing is forecast to occur during the PM peak hour for the westbound right-turn movement, resulting in a total vehicle queue of 90 feet. The turn-lane queuing under future cumulative with project conditions is forecast to exceed the total available turn-lane storage area by up to 115 feet (or approximately 4.6 vehicles).

It is noted that the additional vehicle queuing which is not expected to be accommodated by the existing 50-foot turn lane would be adequately accommodated by the westbound lane along East Walnut Drive South. Right-turning vehicles are expected to queue with left-turning and through vehicles in the westbound lane until sufficiently near the intersection to access the right-turn lane. Therefore, any vehicle queuing associated with the westbound right-turn movement is not expected to result in queue spill back that blocks other traffic movements at the intersection.

5.4.3 *Int. 4 – Fairway Drive-Brea Canyon Cutoff Road/Colima Road*

Northbound Left-Turn: The northbound approach of the intersection is striped to provide one left-turn lane, which accommodates up to 190 feet of queue storage area. As shown in column [a] of *Table 5-1*, the vehicle queue for the northbound left-turn movement under existing conditions is calculated to total 255 feet during the AM peak hour, and 260 feet during the PM peak hour. The turn-lane queuing under existing conditions is calculated to exceed the total available turn-lane storage area by 70 feet (or approximately 2.8 vehicles), resulting in queue spill-back into the adjacent through travel lane. This indicates an existing queue storage deficiency (i.e., without project-generated traffic) for the northbound left-turn movement.

The vehicle queue for the northbound left-turn movement under future cumulative without project conditions, as presented in column [c] of *Table 5-1*, is calculated to total 275 feet during the AM peak hour and 290 feet during the PM peak hour. The turn-lane queuing under future cumulative without project conditions is forecast to exceed the total available turn-lane storage area by 100 feet (or approximately 4.0 vehicles).

The proposed project is not expected to add any additional traffic to the northbound left-turn movement. As shown in columns [b] and [d] of *Table 5-1*, the addition of project traffic to other movements at the intersection is not forecast to result in any additional queuing in the northbound left-turn lane during the AM or PM peak hours.

Northbound Right-Turn: The northbound approach of the intersection is striped to provide one right-turn lane, which provides 200 feet of queue storage area. As shown in column [a] of *Table 5-1*, the vehicle queue for the northbound right-turn movement under existing conditions is calculated to total 143 feet during the AM peak hour and 180 feet during the PM peak hour. The turn-lane queuing

under existing conditions is therefore adequately accommodated by the available turn-lane storage area.

The vehicle queue for the northbound left-turn movement under future cumulative without project conditions, as presented in column [c] of *Table 5-1*, is calculated to total 148 feet during the AM peak hour and 180 feet during the PM peak hour. Thus, the turn-lane queuing under future cumulative without project conditions is anticipated to continue to be adequately accommodated by the available storage area.

As shown in columns [b] and [d] of *Table 5-1*, under existing with project and future cumulative with project traffic conditions, 28 feet of additional queuing is forecast to occur during the PM peak hour for the northbound right-turn movement, corresponding to a total of 208 feet of vehicle queuing. The turn-lane queuing under existing with project and future cumulative with project conditions is forecast to exceed the total available turn-lane storage area by eight (8) feet (or approximately 0.3 vehicles). The additional eight (8) feet of queuing is determined to be nominal, as it represents less than one vehicle length (assuming a vehicle length of 18 feet without vehicle separation).

It is also noted that the additional vehicle queuing which is not expected to be accommodated by the existing 200-foot right-turn lane would be adequately accommodated by the northbound through travel lane along Brea Canyon Cutoff Road. Right-turning vehicles are expected to queue with through vehicles in the northbound curb lane until sufficiently near the intersection to access the right-turn lane. Therefore, any vehicle queuing associated with the northbound right-turn movement is not expected to result in queue spill back that would block other traffic movements at the intersection.

Southbound Left-Turn: The southbound approach of the intersection is striped to provide one left-turn lane, which accommodates up to 185 feet of queue storage area. As shown in column [a] of *Table 5-1*, the vehicle queue for the southbound left-turn movement under existing conditions is calculated to total 258 feet during the PM peak hour. The turn-lane queuing under existing conditions exceeds the total available turn-lane storage area by 73 feet (or approximately 2.9 vehicles), resulting in queue spill-back into the adjacent through travel lane, and indicating an existing queue storage deficiency (i.e., without project-generated traffic) for the southbound left-turn movement.

As shown in column [b] of *Table 5-1*, under existing with project traffic conditions, 62 feet of additional queuing is forecast to occur for the southbound left-turn movement, corresponding to a total of 320 feet of vehicle queuing. The turn-lane queuing under existing with project with project conditions is forecast to exceed the total available turn-lane storage area by 135 feet (or approximately 5.4 vehicles), and is anticipated to continue to spill back into the adjacent through travel lane.

The vehicle queue for the southbound left-turn movement under future cumulative without project conditions, as presented in column [c] of *Table 5-1*, is calculated to total 260 feet during the PM

peak hour. The turn-lane queuing under future cumulative without project conditions is forecast to exceed the total available turn-lane storage area by 75 feet (or approximately 3.0 vehicles), and is anticipated to continue to spill back into the adjacent through travel lane.

As shown in column [d] of *Table 5-1*, under future cumulative with project traffic conditions, up to 73 feet of additional queuing is forecast to occur during the PM peak hour for the southbound left-turn movement, corresponding to a total vehicle queue of 333 feet. The turn-lane queuing under future cumulative with project conditions is forecast to exceed the total available turn-lane storage area by up to 148 feet (or approximately 5.9 vehicles), and is anticipated to continue to spill back into the adjacent through travel lane.

Eastbound Left-Turn: The eastbound approach of the intersection is striped to provide one left-turn lane, which accommodates up to 200 feet of queue storage area. As shown in column [a] of *Table 5-1*, the vehicle queue for the eastbound left-turn movement under existing conditions is calculated to total 238 feet during the AM peak hour, and 243 feet during the PM peak hour. The turn-lane queuing under existing conditions is calculated to exceed the total available turn-lane storage area by 43 feet (or approximately 1.7 vehicles), resulting in queue spill-back into the adjacent through travel lane. This indicates an existing queue storage deficiency (i.e., without project-generated traffic) for the eastbound left-turn movement.

As shown in column [b] of *Table 5-1*, under existing with project traffic conditions, five (5) feet of additional queuing is forecast to occur during the AM peak hour and 10 feet of additional queuing is forecast to occur during the PM peak hour for the eastbound right-turn movement, corresponding to a total of up to 253 feet of vehicle queuing. The turn-lane queuing under existing with project with project conditions is forecast to exceed the total available turn-lane storage area by 53 feet (or approximately 2.1 vehicles), and is anticipated to continue to spill back into the adjacent through travel lane. The additional five (5) to 10 feet of queuing resulting from the addition of project traffic is determined to be nominal, as it represents less than one vehicle length (assuming a vehicle length of 18 feet without vehicle separation).

The vehicle queue for the eastbound left-turn movement under future cumulative without project conditions, as presented in column [c] of *Table 5-1*, is calculated to total 243 feet during the AM peak hour, and 248 feet during the PM peak hour. The turn-lane queuing under future cumulative without project conditions is forecast to exceed the total available turn-lane storage area by 48 feet (or approximately 1.9 vehicles), and is anticipated to continue to spill back into the adjacent through travel lane.

As shown in column [d] of *Table 5-1*, under future cumulative with project traffic conditions, two (2) feet of additional queuing is forecast to occur during the AM peak hour and 10 feet of additional queuing is forecast to occur during the PM peak hour for the eastbound right-turn movement, corresponding to a total of up to 258 feet of vehicle queuing. The turn-lane queuing under future cumulative with project conditions is forecast to exceed the total available turn-lane storage area by up to 58 feet (or approximately 2.3 vehicles), and is anticipated to continue to spill back into the

adjacent through travel lane. The additional two (2) to 10 feet of queuing resulting from the addition of project traffic is determined to be nominal, as it represents less than one vehicle length (assuming a vehicle length of 18 feet without vehicle separation).

Westbound Left-Turn: The westbound approach of the intersection is striped to provide one left-turn lane, which accommodates up to 200 feet of queue storage area. As shown in column [a] of *Table 5-1*, the vehicle queue for the westbound left-turn movement under existing conditions is calculated to total 223 feet during the AM peak hour, and 273 feet during the PM peak hour. The turn-lane queuing under existing conditions is calculated to exceed the total available turn-lane storage area by 73 feet (or approximately 2.9 vehicles), resulting in queue spill-back into the adjacent through travel lane. This indicates an existing queue storage deficiency (i.e., without project-generated traffic) for the westbound left-turn movement.

As shown in column [b] of *Table 5-1*, the addition of project traffic at the intersection is forecast to result in 42 feet of additional queuing during the AM peak hour and 17 feet of additional queuing during the PM peak hour. The vehicle queue for the westbound left-turn movement under future with project conditions is calculated to be 265 feet during the AM peak hour and 290 feet during the PM peak hour. The turn-lane queuing under existing with project conditions is forecast to exceed the total available turn-lane storage area by up to 90 feet (or approximately 3.6 vehicles) and is anticipated to continue to spill back into the adjacent through travel lane.

The vehicle queue for the westbound left-turn movement under future cumulative without project conditions, as presented in column [c] of *Table 5-1*, is calculated to total 233 feet during the AM peak hour, and 285 feet during the PM peak hour. The turn-lane queuing under future cumulative without project conditions is forecast to exceed the total available turn-lane storage area by 85 feet (or approximately 3.4 vehicles), and is anticipated to continue to spill back into the adjacent through travel lane.

As shown in column [d] of *Table 5-1*, under future cumulative with project conditions, 40 feet of additional queuing during the AM peak hour and 18 feet of additional queuing during the PM peak hour is forecast to occur. The vehicle queue for the westbound left-turn movement under future cumulative with project conditions is calculated to be 273 feet during the AM peak hour and 303 feet during the PM peak hour. The turn-lane queuing under future cumulative with project conditions exceeds the total available turn-lane storage area by up to 103 feet (or approximately 4.1 vehicles), and is anticipated to continue to spill back into the adjacent through travel lane.

5.4.4 *Int. 10 – Lemon Avenue/Golden Springs Drive*

Westbound Right-Turn: The westbound approach of the intersection is striped to provide one right-turn lane, which provides 150 feet of queue storage area. As shown in column [a] of *Table 5-1*, the vehicle queue for the westbound right-turn movement under existing conditions is calculated to total 455 feet during the AM peak hour and 275 feet during the PM peak hour. The turn-lane queuing under existing conditions therefore exceeds the total available turn-lane storage area by up to 305 feet (or approximately 12.2 vehicles).

The vehicle queue for the westbound right-turn movement under future cumulative without project conditions, as presented in column [c] of *Table 5-1*, is calculated to total 475 feet during the AM peak hour and 283 feet during the PM peak hour. The turn-lane queuing under future cumulative without project conditions is forecast to exceed the total available turn-lane storage area by 325 feet (or approximately 13.0 vehicles).

The proposed project is not expected to add any additional traffic to the westbound right-turn movement. As shown in columns [b] and [d] of *Table 5-1*, under existing with project and future cumulative with project traffic conditions, eight (8) additional feet of queuing for this movement is forecast to occur during the AM peak hour and no additional queuing is forecast to occur during the PM peak hour. The additional eight (8) feet of queuing is determined to be nominal, as it represents less than one vehicle length (assuming a vehicle length of 18 feet without vehicle separation).

It is noted that the additional vehicle queuing which is not expected to be accommodated by the existing 150-foot turn lane would be adequately accommodated by the westbound through travel lane along Golden Springs Drive. Right-turning vehicles are expected to queue with through vehicles in the westbound curb lane until sufficiently near the intersection to access the right-turn lane. Therefore, any vehicle queuing associated with the westbound right-turn movement is not expected to result in queue spill back that blocks other traffic movements at the intersection.

5.4.5 *Intersection Queuing Summary*

As shown in *Table 5-1*, four (4) of the 10 study intersections are forecast to have turn-lane queuing which exceeds the available queue storage area. The movements, time periods, and analysis conditions are briefly summarized below:

- Int. 1 – Fairway Drive/SR-60 Freeway WB Ramps

  Northbound Left-Turn: PM Peak Hour
  - Queue exceeds available storage space without project traffic, and is expected to spill back into the adjacent through travel lane.
  - Project results in 15 feet of additional queuing, which is expected to continue to spill back into the adjacent through travel lane.

- Int. 3 – Fairway Drive/East Walnut Drive South

  Westbound Right-Turn: AM and PM Peak Hour
  - Queue exceeds available storage space, but it is not expected to result in queue spill back that blocks other traffic movements at the intersection.
  - Project results in up to 43 feet of additional queuing under existing with project conditions, and up to 37 feet of additional queuing under future cumulative with project conditions, but it is not expected to result in queue spill back that blocks other traffic movements at the intersection.

- Int. 4 – Fairway Drive-Brea Canyon Cutoff Road/Colima Road

  Northbound Left-Turn: AM and PM Peak Hour
  - Queue exceeds available storage space without project traffic, and is expected to spill back into the adjacent through travel lane.
  - Project does not add traffic volumes to the movement and results in no additional queuing.

  Northbound Right-Turn: PM Peak Hour
  - Project results in 28 feet of additional queuing, causing the queue to potentially exceed the available turn-lane storage space, but it is not expected to result in queue spill back that blocks other traffic movements at the intersection.

  Southbound Left-Turn: PM Peak Hour
  - Queue exceeds available storage space without project traffic, and is expected to spill back into the adjacent through travel lane.
  - Project results in 62 feet of additional queuing under existing with project conditions, and 73 feet of additional queuing under future cumulative with project conditions, which is expected to continue to spill back into the adjacent through travel lane.

  Eastbound Left-Turn: AM and PM Peak Hour
  - Queue exceeds available storage space without project traffic, and is expected to spill back into the adjacent through travel lane.
  - Project results in up to 10 feet of additional queuing, which is expected to continue to spill back into the adjacent through travel lane.

  Westbound Left-Turn: AM and PM Peak Hour
  - Queue exceeds available storage space without project traffic, and is expected to spill back into the adjacent through travel lane.
  - Project results in 42 feet of additional queuing under existing with project conditions, and 40 feet of additional queuing under future cumulative with project conditions, which is expected to continue to spill back into the adjacent through travel lane.

- Int. 10 – Lemon Avenue/Golden Springs Drive

  Westbound Right-Turn: AM and PM Peak Hour
  - Queue exceeds available storage space without project traffic, but it is not expected to result in queue spill back that blocks other traffic movements at the intersection.
  - Project does not add traffic volumes to the movement.
  - The addition of project traffic to other movements at the intersection results in eight (8) feet of additional queuing, but it is not expected to result in queue spill back that blocks other traffic movements at the intersection.

5.5 Intersection Level of Service Analysis

The intersection delay and level of service analysis prepared for the study intersections using the HCM signalized and unsignalized methodologies is summarized in ***Table 5-2***. The HCM data worksheets for the analyzed intersections are contained in *Appendix E*.

Existing Conditions: As shown in column [a] of *Table 5-2*, eight (8) of the nine (9) existing intersections are currently operating at LOS D or better during the weekday AM and PM peak hours under existing conditions. The following study intersection is expected to operate at LOS E during the peak hour(s) shown below:

- Int. 2 – Fairway Drive/SR-60 Freeway EB Off-Ramp; AM Peak Hour: 63.0 seconds, LOS E
  PM Peak Hour: 56.8 seconds, LOS E

Note that one (1) of the 10 study intersections is planned to be constructed as part of the proposed project, and therefore was not analyzed under existing conditions.

Existing With Project Conditions: As shown in column [b] of *Table 5-2*, seven (7) of the 10 study intersections are expected to operate at LOS D or better during the weekday AM and PM peak hours under existing with project conditions. The following study intersections are expected to operate at LOS E or F during the peak hour(s) shown below:

- Int. 2 – Fairway Drive/SR-60 Freeway EB Off-Ramp; AM Peak Hour: 64.1 seconds, LOS E
  PM Peak Hour: 67.3 seconds, LOS E
- Int. 8 – Project Driveway-Walnut Leaf Drive/Colima Road;
  PM Peak Hour: >50.0 seconds, LOS F
- Int. 9 – Tierra Luna-Project Driveway/Colima Road; PM Peak Hour: >50.0 seconds, LOS F

Future Cumulative Without Project Conditions: As shown in column [c] of *Table 5-2*, eight (8) of the nine (9) existing intersections are currently operating at LOS D or better during the weekday AM and PM peak hours under future cumulative without project (i.e., existing plus ambient growth and cumulative project traffic) conditions. The following study intersection is expected to operate at LOS E during the peak hour(s) shown below:

- Int. 2 – Fairway Drive/SR-60 Freeway EB Off-Ramp; AM Peak Hour: 68.0 seconds, LOS E
  PM Peak Hour: 60.8 seconds, LOS E

Note that one (1) of the 10 study intersections is planned to be constructed as part of the proposed project, and therefore was not analyzed under future cumulative without project conditions.

Future Cumulative With Project Conditions: As shown in column [d] of *Table 5-2*, six (6) of the 10 study intersections are expected to continue operating at LOS D or better during the weekday AM and PM peak hours under future cumulative with project (i.e., existing plus ambient growth,

Table 5-2
SUMMARY OF INTERSECTION DELAYS AND LEVELS OF SERVICE [1]
WEEKDAY AM AND PM PEAK HOURS

NO.	INTERSECTION	TRAFFIC CONTROL	PEAK HOUR	[a] EXISTING DELAY [2]	[a] EXISTING LOS [3]	[b] EXISTING WITH PROJECT DELAY [2]	[b] EXISTING WITH PROJECT LOS [3]	CHANGE IN DELAY ([b]-[a])	[c] FUTURE CUM. W/O PROJECT DELAY [2]	[c] FUTURE CUM. W/O PROJECT LOS [3]	[d] FUTURE CUM. WITH PROJECT DELAY [2]	[d] FUTURE CUM. WITH PROJECT LOS [3]	CHANGE IN DELAY ([c]-[a])
1	Fairway Drive/ SR-60 Freeway WB Ramps	Signalized	AM PM	34.6 35.1	C D	34.9 36.1	C D	0.3 1.0	34.9 35.2	C D	35.3 36.2	D D	0.4 1.0
2	Fairway Drive/ SR-60 Freeway EB Off-Ramp	Signalized	AM PM	63.0 56.8	E E	64.1 67.3	E E	1.1 10.5	68.0 60.8	E E	69.4 71.3	E E	1.4 10.5
3	Fairway Drive/ East Walnut Drive South	Signalized	AM PM	14.5 8.7	B A	15.4 9.1	B A	0.9 0.4	14.8 8.7	B A	15.6 9.1	B A	0.8 0.4
4	Fairway Drive- Brea Canyon Cutoff Road/ Colima Road	Signalized	AM PM	38.0 41.1	D D	38.8 43.0	D D	0.8 1.9	38.8 42.4	D D	39.6 44.6	D D	0.8 2.2
5	Brea Canyon Cutoff Road/ Pathfinder Road	Signalized	AM PM	48.3 52.1	D D	48.6 53.0	D D	0.3 0.9	48.9 55.0	D D	49.3 56.5	D E	0.4 1.5
6	Project Driveway/ East Walnut Drive South [4]	Two-Way Stop	AM PM	-- --	-- --	10.3 10.3	B B	10.3 10.3	-- --	-- --	10.3 10.3	B B	10.3 10.3
7	Lake Canyon Drive/ Colima Road	Signalized	AM PM	7.2 5.8	A A	7.0 5.9	A A	-0.2 0.1	7.2 5.9	A A	7.0 6.0	A A	-0.2 0.1
8	Project Driveway-Walnut Leaf Drive/ Colima Road [5]	Two-Way Stop	AM PM	19.6 28.6	C D	30.7 >50.0	D F	11.1 [7]	21.9 32.0	C D	36.6 >50.0	E F	14.7 [7]
9	Tierra Luna-Project Driveway/ Colima Road [6]	Two-Way Stop	AM PM	13.7 23.9	B C	21.8 >50.0	C F	8.1 [7]	14.2 26.3	B D	24.0 >50.0	C F	9.8 [7]
10	Lemon Avenue/ Golden Springs Drive	Signalized	AM PM	43.4 43.6	D D	43.9 43.9	D D	0.5 0.3	44.0 44.3	D D	44.5 44.7	D D	0.5 0.4

[1] Intersection Level of Service analysis based on the Highway Capacity Manual, 6th Edition operational analysis methodologies.
[2] Reported control delay values in seconds per vehicle.
[3] Intersection Levels of Service are based on the following criteria:

Signalized Intersection Control Delay (s/veh)	Unsignalized Intersection Control Delay (s/veh)	LOS
<= 10	<= 10	A
> 10-20	> 10-15	B
> 20-35	> 15-25	C
> 35-55	> 25-35	D
> 55-80	> 35-50	E
> 80	> 50	F

[4] Future intersection. Since the intersection does not currently exist, no delays or LOS are reported for existing or future cumulative without project conditions.
[5] Project will construct the fourth leg of the existing T-intersection (north leg).
[6] Project will construct the fourth leg of the existing T-intersection (south leg).
[7] Oversaturated conditions. Under these conditions, minor changes in volumes result in disproportionate changes in delay.

cumulative projects, and project traffic) conditions. The following study intersections are expected to operate at LOS E or F during the peak hour(s) shown below:

- Int. 2 – Fairway Drive/SR-60 Freeway EB Off-Ramp; AM Peak Hour: 69.4 seconds, LOS E
  PM Peak Hour: 71.3 seconds, LOS E
- Int. 5 – Brea Canyon Cutoff Road/Pathfinder Road; PM Peak Hour: 56.5 seconds, LOS E
- Int. 8 – Project Driveway-Walnut Leaf Drive/Colima Road;
  AM Peak Hour: 36.6 seconds, LOS E
  PM Peak Hour: >50.0 seconds, LOS F
- Int. 9 – Tierra Luna-Project Driveway/Colima Road; PM Peak Hour: >50.0 seconds, LOS F

6.0 PROJECT CONSTRUCTION PHASE ANALYSIS

The project construction evaluation addresses activity associated with project construction and major in-street construction of infrastructure projects. The analysis addresses the effect a project's construction activity on existing pedestrian, bicycle, transit, or vehicular circulation in the vicinity. Factors which are to be considered include the location of the project site, functional classification of the adjacent streets, availability of alternate routes or additional capacity, temporary loss of bicycle parking, temporary loss of bus stops or rerouting of transit lines, duration of temporary loss of access, affected land uses, and magnitude of the temporary construction activities.

While final construction plans have not yet been developed, the project applicant has provided preliminary information regarding the overall construction activities in order to identify the potential construction traffic generation. The following general construction details are provided based on information provided by the project applicant team.

Construction of the proposed project is expected to occur over 36 months, beginning in the fourth quarter of 2024 with completion estimated to occur by the end of 2027. Construction activity is expected to occur six days a week (i.e., throughout the five-day week and on Saturdays). The hours of construction activities would be limited to hours in compliance with County Code requirements and are planned to occur between the hours of 7:00 AM and 5:00 PM Monday through Friday, and between the hours of 8:00 AM and 5:00 PM on Saturdays. Consistent with standard construction industry practices, it is assumed that workers would generally arrive at the project site prior to 7:00 AM and depart the site after 3:30 PM (i.e., after an eight-hour workday including a half-hour lunch break), except when overtime is necessary to maintain the schedule. It is anticipated that construction workers would primarily remain on-site throughout the day. Project construction activities are expected to consist of the following eight (8) phases:

- Phase I – Demolition
- Phase II – Site Preparation
- Phase III – Grading/Excavation
- Phase IV – Drainage/Utilities/Trenching
- Phase V – Foundations/Concrete Pour
- Phase VI – Building Construction
- Phase VII – Paving
- Phase VIII – Architectural Coatings

Table 6-1 summarizes the expected duration of each phase, as well as the number of workers and vendor deliveries, the total number of haul trucks per phase, and the maximum number of haul

Table 6-1
SUMMARY OF CONSTRUCTION PHASE INFORMATION [1]

PHASE	DURATION (DAYS)	WORKERS PER DAY	VENDOR DELIVERIES PER DAY	TOTAL HAUL TRUCKS PER PHASE [2]	MAXIMUM HAUL TRUCKS PER DAY [3]
Demolition	36	15	2	350	10
Site Preparation	51	15	2	800	20
Grading/Excavation	262	25	2	10,277	50
Drainage/Utilities/Trenching	130	20	2	0	0
Foundations/Concrete Pour	216	20	2	0	0
Building Construction	326	142	35	0	0
Paving	87	15	9	0	0
Architectural Coating	196	28	2	0	0

[1] Based on information provided by the Project Applicant and Environmental Science Associates.
[2] Represents the total number of haul trucks required for material import/export during the phase.
[3] Represents the peak number of haul trucks that could be expected on the single most intensive day of hauling during the phase. Fewer haul trucks per day are expected to access the site during typical phase activities. For example, an average of 40 haul trucks per day would be expected during the Grading/Excavation phase (i.e., 10,277 haul trucks / 262 days = 40 haul trucks / day).

trucks per day during each construction phase. Additional activities related to landscape construction are also anticipated to occur.

Earthwork activities necessary for construction would require an estimated 8,000 cubic yards of export during the Site Preparation phase, and an estimated 133,600 cubic yards of export during the Grading/Excavation phase. The maximum depth of excavation within the project site would be approximately 25 feet in areas where fill was deposited during construction of the golf course. The exact locations of the material receptor sites and corresponding haul routes cannot be determined until closer to the commencement of construction. Export materials will be hauled to the closest landfill, which at the time this report was prepared is expected to be the Olinda Landfill in the City of Brea. The haul route is expected to be the SR-60 Freeway East, to the SR-57 Freeway South, and then exiting at Lambert Road (approximately ten miles away).

Based on a review of the construction phasing information available at the time this report was prepared, it is assumed that the overall highest construction traffic generation during the AM peak hour will occur during grading and excavation activities, while the highest construction traffic generation during the PM peak hour will occur during building construction. Other phases such as demolition, site preparation, drainage/utilities/trenching, foundations, paving, and architectural coating are expected to be less intensive in terms of overall construction traffic generation during the weekday AM and PM peak hours.

According to information provided by the applicant, the construction vehicles that are planned to be utilized for import and export activities will have a capacity of 13 cubic yards per truck. During the Grading/Excavation phase (which is expected to occur over 262 work days), a total of 10,277 haul trucks will be required (i.e., 133,600 CY material export/13 CY trucks = 10,277 truckloads of material export). Therefore, on average a total of 40 haul trucks are expected to travel to and from the project site on a daily basis (i.e., 10,277 truckloads/262 days = 40 truckloads/day). During the most intensive ("worst-case") material hauling activities, a maximum of up to 50 truckloads may access the site per day. The maximum of up to 50 truckloads per day corresponds to approximately six (6) truckloads per hour, assuming that hauling overlaps with the AM peak hour but concludes by 3:30 PM (i.e., prior to the PM peak hour) after an 8-hour workday. This equates to 15 inbound and 15 outbound passenger car equivalent (PCE) vehicle trips, or a total of 30 PCE-adjusted vehicle trips during the AM peak hour (i.e., when accounting for a passenger car equivalency factor [PCE] of 2.5 for each 13 cubic yard capacity haul truck).

A total of 142 workers are expected at the site on a daily basis during peak building construction activities. Based on the planned construction hours it is assumed that workers would generally arrive at the site prior to the start of the workday (i.e., 7:00 AM on weekdays and 8:00 AM on Saturdays). Therefore, it is assumed that the workers' inbound trips would not overlap the weekday AM commute peak period (between 7:00 and 9:00 AM). Further, the workers are expected to depart the site after the conclusion of the workday (i.e., after 3:30 PM on weekdays and after 4:30 PM on Saturdays). On weekdays, it is assumed that 50 percent (50%) of the workers will leave the site between 3:30 and 4:00 PM, 25 percent (25%) between 4:00 and 4:30 PM, and the remaining 25 percent (25%) after 4:30 PM (including supervisors, inspectors, and overtime workers). It is therefore assumed that 50 percent (50%) of the outbound worker trips would overlap the weekday

PM commute peak period (between 4:00 and 6:00 PM). The number of construction worker vehicles is estimated using an average vehicle ridership (AVR) of 1.135 persons per vehicle (as provided in the South Coast Air Quality Management District in its CEQA Air Quality Handbook). Therefore, a total of 63 outbound worker trips are expected to occur during the PM peak hour (i.e., 142 workers / 1.135 AVR = 125 vehicles * 0.50 = 63 outbound trips). It is noted that up to 35 vendor deliveries each day are anticipated to occur during the building construction phase (e.g., for delivery of construction materials, etc.), which corresponds to up to five (5) deliveries per hour, assuming eight (8) hour days. It is assumed that vendor deliveries may overlap with the AM peak hour but would conclude by 3:30 PM (i.e., prior to the PM peak hour) after an 8-hour workday. This equates to up to 10 inbound and 10 outbound passenger car equivalent (PCE) vehicle trips, or a total of 20 PCE-adjusted vehicle trips during the AM peak hour (i.e., when accounting for a PCE factor of 2.0 for each vendor delivery truck). Therefore, the peak construction traffic generation during the AM peak hour is still expected to occur during the grading and excavation phase.

As presented above, the peak construction traffic generation during the AM peak hour is expected to occur during the grading and excavation phase, when a total of 30 vehicle trips (15 inbound PCE-adjusted trips and 15 outbound PCE-adjusted trips) are anticipated to occur. The peak construction traffic generation during the PM peak hour is expected to occur during the building construction phase, when a total of 63 trips (0 inbound trips and 63 outbound trips) are anticipated to occur.

It is assumed that the equipment and material staging area during construction would occur on/within the project site, as well as all construction worker parking. It is anticipated that after being delivered, heavy construction equipment required for the above-described construction activity (e.g., backhoes, tractors, excavators, loaders, etc.) would remain on site throughout the construction period. It is noted that all movement of construction equipment within the public right-of-way (e.g., while being delivered to/from the project site) will be accompanied by flagmen to provide traffic control. Thus, the peak construction traffic generation is based on trips generated by workers traveling to and from the project site on a daily basis, as well as trucks involved in hauling excavated soil and other debris from the site.

6.1 Screening Criteria

In order to determine the appropriateness and applicability of construction phase analysis for land use development projects, the County Guidelines provide the following questions for consideration, with discussion of the proposed project's expected construction activities provided below:

- For projects that require construction activities to take place within the right-of-way of a highway, would it be necessary to close any temporary lanes, alleys, or streets for more than one day (including day and evening hours, and overnight closures if on a residential street)?
    - Detailed construction plans have not been developed at the time of the study preparation. However, while not expected, it is conservatively assumed that a temporary but more than one (1) day closure of a travel lane may be required on Colima Road, which is classified as a Major Highway in the County's General Plan 2035 Mobility Element, due to the construction of the proposed project driveways

which will tie-in to the existing intersections of Walnut Leaf Drive/Colima Road and Tierra Luna/Colima Road.

- For projects that require construction activities to take place within the right-of-way of a Local Street, would it be necessary to temporarily close any lanes, alleys, or streets for more than seven days (including day and evening hours, and including overnight closures if on a residential street)?
    - Detailed construction plans have not been developed at the time of the study preparation. However, while not expected, it is conservatively assumed that a temporary but more than seven (7) day closure of a travel lane may occur along East Walnut Drive South, which is classified as a local street, due to the planned roadway widening and construction of public sidewalk, curb, and gutter along the project frontage.
- Would in-street construction activities result in the loss of any vehicle, bicycle, or pedestrian access, including loss of existing bicycle parking to an existing land use for more than one day, including day and evening hours and overnight closures if access is lost to residential units?
    - No. Construction of the proposed project is not expected to result in the loss of vehicle, bicycle, or pedestrian access to any adjacent existing land uses. The majority of construction activity is expected to take place internal to the project site. Construction activity which is to take place in the public right-of-way is expected to occur along the project frontage only.
- Would in-street construction activities result in the loss of any ADA access to an existing transit station, stop, or facility (e.g., layover zone)?
    - No. Construction of the proposed project will not affect ADA access to existing transit stops in the vicinity of the project site. No existing transit stops are located along the project frontage which might be disrupted by project construction activities.
- Would in-street construction activities restrict access to any bus stops for more than one day, or necessitate any rerouting of a bus route?
    - No. Construction of the proposed project is not expected to restrict access to any bus stops, or necessitate any rerouting of a bus route.
- Would construction of a project interfere with pedestrian, bicycle, transit, or vehicle circulation and accessibility to adjoining areas?
    - No. The Rowland Heights community of unincorporated Los Angeles County provides a well-developed multi-modal transportation network. Therefore, while some construction activities are expected to occur in the public right-of-way adjacent to the project site, alternate pedestrian, bicycle, and vehicular routes are available to provide access to adjoining areas within the vicinity of the project site.

Although the anticipated construction activities for the proposed project are not expected to affect pedestrian, bicycle, or transit access and circulation in the vicinity of the proposed project, closure of a travel lane or portion of a travel lane in the public right-of-way may occur, potentially resulting in temporary vehicular circulation constraints.

6.2 Evaluation Criteria

According to the County Guidelines, the project construction phase activities should be compared to the following evaluation criteria to determine the potential level of deficiency:

- Temporary transportation constraints:
  - Length of time of temporary street closures or closures of one or more travel lanes,
  - Classification of the street (major arterial, state highway) affected,
  - Existing congestion levels on the affected street segments and intersections,
  - Direct access to freeway on- or off-ramp or other state highway,
  - Presence of emergency services (fire, hospital, etc.) located nearby that regularly use the affected street,

- Temporary loss of access:
  - Length of time of any loss of pedestrian or bicycle circulation outside the construction zone,
  - Length of time of any loss of vehicular, bicycle, or pedestrian access to a parcel within the construction zone,
  - Length of time of any loss of ADA pedestrian access to a transit station, stop, or facility,
  - Availability of nearby vehicular or pedestrian access within ½-mile of the lost access,

- Temporary Loss of Bus Stops or Rerouting of Bus Lines:
  - Days and times during which an existing bus stop would be unavailable or existing service would be interrupted,
  - Availability of a nearby location (within ½-mile) to which the bus stop or route can be temporarily relocated,
  - Existence of other bus stops or routes with similar routes/destinations within a ½-mile radius of the affected stops or routes,
  - Time of interruption on a weekday, weekend or holiday, and whether the existing bus route typically provides service on those day(s).

6.3 Qualitative Assessment of Project Construction Phase

The following paragraphs provide a qualitative assessment of the degree of potential transportation deficiencies that may be caused due to project construction phase activities, based on the evaluation criteria presented above. Descriptions of the project location and physical setting are provided in *Section 2.0* and *Section 3.0*, herein. For reference purposes in the project construction evaluation,

these sections present project location and project setting data such as adjacent street classifications, public bicycle infrastructure, inventory of existing transit lines, bus stops, etc.

The project construction activities may require closure of a portion of a travel lane on East Walnut Drive South (designated as a Local Street) in order to accommodate the planned roadway widening and construction of new public sidewalk, curb, and gutter along the project frontage. In addition, closure of a portion of a travel lane may be required along Colima Road (designated as a Major Highway) in order to accommodate construction of the project driveways which will tie-in to the existing intersections of Walnut Leaf Drive/Colima Road and Tierra Luna/Colima Road. As presented in *Section 5.5*, the study intersections along East Walnut Drive South and Colima Road are operating at LOS D or better during the AM and PM peak hours under existing conditions. While detailed construction plans have not been developed at the time of the study preparation, it is assumed that any closure of a travel lane along the project's frontage would be temporary, and would be expected to occur outside the weekday AM and PM commute hours so as to maintain roadway capacity when the street system is typically most heavily constrained. Further, the project is not located along any facilities within the State Highway System (maintained by Caltrans) or any nearby public emergency services such as hospitals or police/fire stations which would require frequent use of unobstructed roadways. Therefore, the project construction activities are not expected to negatively affect circulation within the local transportation network.

The majority of project construction activity is expected to take place internal to the project site. Construction activity which is to take place in the public right-of-way is expected to occur along the project frontage only. Construction activity will not result in loss of access to existing parcels or public infrastructure outside the construction zone. Therefore, project construction activities are not expected to negatively affect pedestrian, bicycle, transit, or vehicular access in the vicinity.

The project site context, including the existing pedestrian, bicycle, transit, and roadway network in the vicinity of the proposed project, is described in greater detail in *Section 3.0* herein. The two (2) transit lines that utilize Colima Road adjacent to the project site are not expected to experience service interruptions, rerouting, or relocation of stops. Therefore, project construction activities are not expected to negatively affect existing transit service or stops in the vicinity.

6.4 Construction Phase Improvement Measures

Although project construction activities are not expected to negatively affect the existing transportation network, access to adjacent properties, or transit service in the vicinity, the project applicant will submit a detailed Construction Staging and Traffic Management Plan (CSTMP) to the County for review and approval prior to the start of construction activity. The CSTMP is intended to identify the location of any temporary roadway lane and/or sidewalk closures needed during project construction, including the construction of the new project driveway and installation of new curb and gutter near the driveway. As the new project driveways will be designed to meet County standards, no hazards with respect to driveway design and/or safety are expected. It is anticipated that the project applicant would be required to prepare a detailed CSTMP in compliance with the County's

standard regulatory requirements, which would include any applicable street/lane/sidewalk closure information, a detour plan, haul route(s), and a staging plan.

The CSTMP would be based on the nature and timing of the project's specific construction activities and would consider other projects under construction in the immediate vicinity of the project site, if any. The CSTMP also would include features such as notification to adjacent property owners and occupants of upcoming construction activities, advance notification regarding any temporary transit stop relocations, and limitation of any potential roadway lane closure(s) to off-peak travel periods, to the extent feasible. Accordingly, the CSTMP will include, but not be limited to, the following features, as appropriate:

- Provide advanced notification to adjacent property owners and occupants, as well as nearby schools, of upcoming construction activities, including durations and daily hours of construction. Provide a posted sign on the project site with hotline information for adjacent property owners to call and address specific issues or activities that may potentially cause problems at on-and-off-site locations;
- Coordinate with the County and emergency service providers to ensure adequate access is maintained to the project site and neighboring businesses;
- Coordinate with public transit agencies to provide advanced notifications of any temporary stop relocations and durations and follow all safety required procedures required by the concerned agency;
- Limit any potential roadway lane closure/s to off-peak travel periods, to the extent feasible;
- Provide traffic control for any potential roadway lane closure, detour, or other disruption to traffic circulation;
- To the extent feasible, store any construction equipment within the perimeter fence of the construction site. Should temporary storage of a large piece of equipment be necessary outside of the perimeter fence (e.g., within a designated lane closure area), that area must comply with County and/or State-approved detour/traffic control plans;
- Provide safety precautions for pedestrians and bicyclists through such measures as alternate routing and protection barriers. Should any temporary closure of an existing sidewalk be required, appropriate pedestrian detours will be established and signed as such so as to maintain public pedestrian circulation. The project applicant will submit all necessary permit applications prior to commencing construction activities which might encroach on public right-of-way;
- Identify the routes that construction vehicles would utilize for the delivery of construction materials (i.e., lumber, tiles, piping, windows, etc.), to access the project site, traffic controls and detours, and proposed construction phasing plan for the project;
- Require the applicant to keep all haul routes adjacent to the project site clean and free of debris including, but not limited to, gravel and dirt as a result of its operations;

- Schedule delivery of construction materials and hauling/transport of oversize loads to non-peak travel periods, to the extent possible;
- Obtain a Caltrans transportation permit for use of oversized transport vehicles on Caltrans facilities, if needed;
- Haul trucks entering or exiting public streets shall at all times yield to public traffic;
- Construction-related parking and staging of vehicles shall occur on-site to the extent possible;
- Coordinate deliveries to reduce the potential of trucks waiting to unload for protracted periods of times;
- Prohibit parking by construction workers on nearby streets and direct construction workers to available/designated parking areas within and adjacent to the project site; and
- The construction zone traffic control plans detailed in the CSTMP shall meet standards established in the current *California Manual on Uniform Traffic Control Devices (MUTCD)* as well as Los Angeles County requirements. The traffic control plans should be prepared by either a Civil or Traffic Engineer licensed by the State of California, and submitted to Los Angeles County Public Works for review and approval prior to the commencement of project construction.

Although project construction activities are not expected to result in negative effects on mobility in the vicinity, implementation of the above construction management practices would reduce the degree of impact on the surrounding community.

7.0 LOCAL RESIDENTIAL STREET CUT-THROUGH ANALYSIS

Under the County Guidelines, land use and transportation projects may be required to conduct a local residential street cut-through analysis. Cut-through trips are defined as trips which travel along a roadway which is classified as a local street, with residential land use frontage, as an alternative to trips along roadway segments with higher roadway classifications (i.e., collectors, boulevards, or avenues), for the purposes of accessing a destination that is not within the neighborhood in which the local street is located. Cut-through traffic is understood to result from development projects that add vehicle trips to congested arterial streets, or from transportation projects that reduce vehicular capacity on arterial street segments. The objective of the analysis is to determine potential increases in average daily traffic (ADT) volumes on designated local residential streets due to project-generated traffic which could affect the character and function of those streets.

In order to determine the appropriateness and applicability of local residential street cut-through analysis for land use development projects, the County Guidelines indicate that the following three (3) general conditions should be met:

- The project is located along a non-local roadway and the roadway intersections operate at LOS E or LOS F during the peak hours under project build-out conditions.

- The project has a potential, based on connectivity to the roadway network, to add automobile traffic to an alternative local residential street route(s) during peak hours,

- An alternative local residential street route (defined as local streets passing through a residential neighborhood) provides motorists with a viable alternative route. A viable alternative local residential street route is defined as one which is parallel and reasonably adjacent to the primary route as to make it attractive as an alternative to the primary route.

The proposed project is located adjacent to Fairway Drive and Colima Road, which are each designated as a Major Highway in the County's *Los Angeles County General Plan* Mobility Element. As presented in *Section 5.5*, the signalized study intersections providing access to the project site along Fairway Drive and along Colima Road are expected to operate at LOS D or better during the AM and PM peak hours under future cumulative with project conditions, with the exception of the SR-60 Freeway EB Off-Ramp/Fairway Drive intersection (Int. No. 2), which is expected to operate at LOS E during the AM and PM peak hours under existing and future cumulative with project conditions. It is noted that the most constrained approaches (i.e., the stop-controlled minor street approaches) at the unsignalized intersections along Colima Road (Int. Nos. 8 and 9) are expected to operate at LOS F during the PM peak hour under future with project conditions; however, the uncontrolled through traffic along Colima Road is not expected to experience control delay at these locations.

Local residential streets are located north of Colima Road and east of the project site. This existing residential neighborhood is generally bounded by the SR-60 Freeway corridor to the north, Colima Road to the south, and the existing Royal Vista Golf Course to the west (refer to *Figure 2-2*). No

new project-generated trips are anticipated to travel through the residential neighborhood to the east of the project site (e.g., no project trips are assumed to travel on Calbourne Drive), as the project will have direct access to and from Colima Road. The limited crossing opportunities across the SR-60 Freeway corridor, as well as the neighborhood's limited connectivity to the surrounding roadway network, do not provide an attractive viable alternative route for motorists traveling in either the east-west or north-south directions. Additionally, local residential streets are also located south of Colima Road south of the project site. The limited connectivity of the existing neighborhood to the south does not provide an attractive viable alternative route for motorists traveling along Brea Canyon Cutoff Road or Colima Road.

Based on the expected future operations along nearby major arterial corridors and the existing network connectivity in the vicinity, it is determined that the conditions which would require a detailed local residential street cut-through analysis are not present. The proposed Royal Vista Residential and Parks Project is not anticipated to generate cut-through traffic in the vicinity of the project site which would adversely affect the character and function of nearby local residential streets.

8.0 TRANSPORTATION MITIGATION AND IMPROVEMENT MEASURES

The following section summarizes the various transportation improvement measures that have been identified for the proposed project. Transportation improvement measures may consist of project-specific TDM measures aimed at reducing a project's overall demand on the transportation network and reducing VMT, or may consist of physical improvements to the existing roadway network and traffic control systems in order to accommodate the addition of project-generated traffic while meeting the County's mobility goals. The following section summarizes the various transportation improvement measures that have been identified for the proposed project, including measures that are planned as part of the proposed project, measures that are identified to address impacts determined under CEQA, and measures that are identified to address any local circulation and site access constraints determined through the operational and site access studies.

8.1 Summary of Planned Transportation Network Improvement Measures

The proposed project is planned to provide a number of local transportation network improvements as part of the project site design. As stated in *Section 2.4.2*, the project is planned to provide roadway widening on East Walnut Drive South along the project frontage. East Walnut Drive South is designated as a Local Street in the *General Plan* Mobility Element. The County standard for Local Streets consists of a 20-foot half roadway width within a 32-foot half right-of-way width. Currently, East Walnut Drive South adjacent to the project site provides a 10-foot half roadway width within a 20-foot half right-of-way. Accordingly, the project applicant will provide a 12-foot right-of-way dedication on the south side of East Walnut Drive South adjacent to the project site, and will construct 10 feet of roadway widening along the project frontage in order to meet the standard half-roadway width requirement. The right-of-way dedication and roadway widening will also include construction of public sidewalks separated from the roadway by formal curb and gutter. As a result of the proposed development project, East Walnut Drive South will be improved to meet the County standards and to bridge the gap in the pedestrian network along the project frontage.

The proposed project is also planned to provide a system of recreational multi-use trails and mini-parks throughout the project site. The recreational trails will accommodate pedestrians, bicycles, and other non-motorized modes of travel, and are planned to be open to residents of the project site as well as the general public. *Section 2.5* summarizes the recreational trail system in greater detail. By providing new multi-use paths separated from vehicular traffic, the proposed development project will expand the multi-modal network in the Rowland Heights community.

8.2 CEQA Mitigation Measures

The proposed project is determined to have a significant VMT impact after application of appropriate VMT reductions due to project design features to the baseline VMT forecast derived via the use of the County's VMT Tool. The project applicant must therefore identify mitigation measures to seek to reduce the impact to less than significant levels. The CAPCOA 2021 Handbook (as described in *Section 4.4.3*) was reviewed to identify TDM measures which are expected to

mitigate the residential VMT impact. The TDM strategies which are applicable to the proposed project as VMT mitigation measures are described in further detail below.

- T-9. Implement Subsidized or Discounted Transit Program

  This measure reflects subsidized or discounted, or free transit passes being offered to residents. Reducing the out-of-pocket cost for choosing transit improves the competitiveness of transit against driving, increasing the total number of transit trips and decreasing vehicle trips. This decrease in vehicle trips results in reduced VMT. This measure is most effective when the project is located in the vicinity of high-quality transit service, or nearby local or less frequent transit service, or shuttles that provide a last-mile connection to rail. As stated in the 2021 Handbook, when supported by bicycle access, projects may be up to two (2) miles from a high-quality transit service.

  The Metrolink Industry Station is located at 600 South Brea Canyon Road, which is approximately 1.9 miles from the project site. The station is served by the Riverside line, which provides service between Union Station in Downtown Los Angeles to the west and Downtown Riverside to the east. In order to encourage use of the Metrolink commuter rail system and reduce commute-related VMT in the region, the project developer/homeowner's association (HOA) will provide a reimbursement subsidy of up to 50% of the cost of one Metrolink monthly pass per homeowner/residential dwelling unit for five (5) years (the project developer will administer and fund the reimbursement subsidy program for the first three [3] years, at which point the HOA will take over administration and funding). Consistent with the guidance provided in the 2021 Handbook which states that projects may be located up to two (2) miles from high-quality transit service when access is supported by bicycle, the project applicant will also provide an electric bicycle with the purchase of each dwelling unit in order to support the effectiveness of this measure (discussed in further detail below).

  It should be noted that monthly passes for the Metrolink system are sold based on the specific origin and destination stations both for cost and ticketing purposes (e.g., a monthly pass from Industry Station to L.A. Union Station costs approximately $238.00, while a monthly pass from Industry Station to Riverside – Downtown Station costs approximately $259.00). As the destination stations for future residents cannot be determined in advance, it is not feasible for the project to pre-purchase and distribute passes along with the purchase of each dwelling unit. Instead, the project will advertise the subsidy program to future residents at the time of purchase, and once a year for the remaining years of the subsidy program. As the total cost of the transit passes cannot be determined in advance, the total yearly homeowner transit subsidy reimbursement cost shall not exceed $20,250.00 to the project developer/HOA.

  The project site is also served by public bus transit. As described in *Section 3.2*, public bus transit service in the vicinity is provided by Foothill Transit. Public bus stops are provided at the intersections of Fairway Drive-Brea Canyon Cutoff Road/Colima Road and Lake Canyon

Drive/Colima Road, with service approximately every 20-30 minutes during the peak commute hours. Therefore, in addition to the Metrolink subsidies, the project developer/HOA will also fund a reimbursement subsidy of up to 50% of the cost of one Foothill Transit monthly bus pass per homeowner/residential dwelling unit for five (5) years in order to encourage the use of bus transit and reduce residential VMT in the region. A 31-day Foothill Transit bus pass costs approximately $60.00. The project developer/HOA will advertise the subsidy program to future residents at the time of purchase, and once a year for the remaining years of the subsidy program. As the total cost of the transit passes cannot be determined in advance, the total yearly homeowner transit subsidy reimbursement for Foothill Transit bus passes shall not exceed $24,750.00 to the project developer/HOA.

Total annual transit reimbursement subsidies (Metrolink and Foothill Transit) paid by the project developer/HOA will not exceed $45,000 per year for the five (5)-year period. The project developer/HOA will provide a report to Los Angeles County Public Works six (6) months prior to the end of the fifth year, detailing the use of the transit subsidy program. The County will determine within 90 days if the use of the transit subsidy program should continue for an additional five (5) years. In no event will the transit subsidy program last more than a total of 10 years.

As stated previously, according to the 2021 Handbook, providing transit subsidies can be expected to result in reductions in VMT when projects up to two (2) miles away are supported by bicycle access. Therefore, the proposed project will provide electric bicycles to support the implementation of the transit subsidy program (measure T-9). This additional measure is described below:

- Electric Bicycles

  The project applicant will provide an electric bicycle along with the purchase of each dwelling unit. Electric bicycles promote the use of bicycling as a travel mode instead of vehicles. There is insufficient research to determine a quantifiable VMT reduction resulting directly from ownership and use of electric bicycles at the project site scale; however, recent research indicates that at a community-wide scale (e.g., a community bike-share program), electric bicycles result in a higher percentage of vehicle trips being substituted with bicycle trips than conventional (pedal) bicycles.[25] Further, the provision of electric bicycles is expected to support implementation of the transit subsidy program by providing an alternative last-mile connection to the nearby Metrolink Industry Station. Therefore, although no quantifiable VMT reduction can be determined, it is expected that providing electric bicycles will both support the implementation of the transit subsidy program described above (measure T-9), as well as encourage the substitution of bicycle trips in place of all vehicle trips and thus further mitigate the project's VMT impact.

[25] Based on information provided in the 2021 Handbook for T-22-A – Implement Pedal (Non-Electric) Bikeshare Program, which is anticipated to result in a vehicle to bicycle substitution rate of 19.6%, and T-22-B – Implement Electric Bikeshare Program, which is anticipated to result in a vehicle to bikeshare substitution rate of 35%.

The mitigation measure described above is expected to result in a quantifiable VMT reduction of 0.45%. Application of the 0.45% VMT reduction would therefore result in a project VMT of 16.2 residential VMT per capita for Planning Areas 1, 2, and 3 (i.e., 16.3 VMT/Capita * [1.00 – 0.0045] = 16.2 VMT/Capita), and a project VMT of 21.0 residential VMT per capita for Planning Area 5 (i.e., 21.1 VMT/Capita * [1.00 – 0.0045] = 21.0 VMT/Capita). The proposed project's VMT would continue to exceed the threshold of 10.0 residential VMT per capita after mitigation, therefore the project-level VMT impacts will remain significant and unavoidable.

8.3 Operational (Non-CEQA) Improvement Measures

The effect of the following operational improvements at five of the study intersections on intersection queueing and Levels of Service are summarized in ***Tables 8-1*** and ***8-2***, respectively. The HCM data worksheets for the subject intersections with the proposed improvement are provided in ***Appendix F***.

8.3.1 *Int. 1 – Fairway Drive/SR-60 Freeway WB Ramps*

As summarized in *Table 5-1*, the addition of project traffic at the Fairway Drive/SR-60 Freeway WB Ramps will result in additional vehicle queuing for the northbound left-turn movement. While the queue currently exceeds the available turn-lane storage capacity, the project is forecast to result in additional queuing under the existing with project and future cumulative with project conditions which is expected to continue to spill back into the adjacent through travel lane. The current dual left-turn lanes provide a total of 400 feet of queue storage space, however under future cumulative with project conditions, the total queue is expected to require up to 616 feet of queue storage space.

In order to adequately accommodate the forecast queues without blocking other traffic movements at the intersection, it is proposed that the northbound approach along Fairway Drive be restriped to provide additional left-turn queue storage. The exclusive northbound right-turn lane at the SR-60 Freeway EB on-ramp would be restriped to accommodate a shared through/right-turn lane, and the other northbound lanes would be restriped to accommodate the full extent of the forecast northbound left-turn queue. A conceptual illustration of the proposed restriping is provided in ***Appendix Figure F-1***. It is not anticipated that any roadway widening would be required in order to accommodate the proposed lane configuration on Fairway Drive. It should be noted that the reconfiguration of the northbound lanes at the SR-60 Freeway ramp intersections would require approval from Caltrans prior to being implemented by the project Applicant. Since Caltrans' approval cannot be guaranteed at the time of report preparation, the improvement cannot be guaranteed to be implemented.

8.3.2 *Int. 3 – Fairway Drive/East Walnut Drive South*

As summarized in *Table 5-1*, the addition of project traffic at the Fairway Drive/East Walnut Drive South intersection will result in additional vehicle queuing for the westbound right-turn movement. While the queue currently exceeds the available turn-lane storage capacity, the project is forecast to result in additional queuing under the existing with project and future cumulative with project conditions, although it should be noted that the right-turn queue is not expected to block other traffic movements at the intersection. The current right-turn lane provides a total of 50 feet of queue storage

Table 8-1
SUMMARY OF 95th PERCENTILE INTERSECTION TURN-LANE VEHICLE QUEUING WITH IMPROVEMENT MEASURES [1]
WEEKDAY AM AND PM PEAK HOURS

NO.	INTERSECTION	TRAFFIC CONTROL	MOVE-MENT	PEAK HOUR	WITHOUT IMPROVEMENTS		WITH IMPROVEMENTS	
					QUEUE STORAGE SPACE (FEET)	FUTURE CUM. WITH PROJECT (FEET) [2]	QUEUE STORAGE SPACE (FEET)	FUTURE CUM. WITH PROJECT (FEET) [2]
1	Fairway Drive/ SR-60 Freeway WB Ramps	Signalized	NBL [3]	AM	400	350	640	350
				PM	400	636	640	636
			SBR	AM	115	43	115	43
				PM	115	53	115	53
3	Fairway Drive/ East Walnut Drive South	Signalized	NBL	AM	120	40	120	40
				PM	120	28	120	28
			NBR	AM	100	25	100	25
				PM	100	25	100	25
			SBL	AM	150	25	150	25
				PM	150	25	150	25
			EB [4]	AM	-	475	-	475
				PM	-	278	-	278
			WBR	AM	50	165	100	165
				PM	50	90	100	90
4	Fairway Drive- Brea Canyon Cutoff Road/ Colima Road	Signalized	NBL	AM	190	275	250	275
				PM	190	290	250	290
			NBR	AM	200	155	210	155
				PM	200	208	210	208
			SBL	AM	185 [5]	125	185 [5]	125
				PM	185 [5]	333	185 [5]	333
			SBR	AM	130	90	130	90
				PM	130	93	130	93
			EBL	AM	200	245	260	245
				PM	200	258	260	258
			WBL	AM	200	273	305	273
				PM	200	303	305	303
8	Project Driveway- Walnut Leaf Drive/ Colima Road [6]	Two-Way Stop	NB [4]	AM	-	50	-	50
				PM	-	50	-	50
			SB [4]	AM	-	25	-	25
				PM	-	25	-	25
			EBL	AM	-	25	-	25
				PM	-	25	-	25
			WBL	AM	100	0	100	0
				PM	100	25	100	25

Table 8-1 (Continued)
SUMMARY OF 95th PERCENTILE INTERSECTION TURN-LANE VEHICLE QUEUING WITH IMPROVEMENT MEASURES [1]
WEEKDAY AM AND PM PEAK HOURS

NO.	INTERSECTION	TRAFFIC CONTROL	MOVE-MENT	PEAK HOUR	WITHOUT IMPROVEMENTS		WITH IMPROVEMENTS	
					QUEUE STORAGE SPACE (FEET)	FUTURE CUM. WITH PROJECT (FEET) [2]	QUEUE STORAGE SPACE (FEET)	FUTURE CUM. WITH PROJECT (FEET) [2]
9	Tierra Luna-Project Driveway/ Colima Road [7]	Two-Way Stop	NB [4]	AM	-	25	-	25
				PM	-	33	-	33
			SB [4]	AM	-	25	-	25
				PM	-	25	-	25
			EBL	AM	105	25	105	25
				PM	105	25	105	25
			WBL	AM	-	0	-	0
				PM	-	0	-	0
10	Lemon Avenue/ Golden Springs Drive	Signalized	NBL	AM	50	40	50	40
				PM	50	25	50	25
			SBL	AM	270 [5]	213	270 [5]	213
				PM	270 [5]	265	270 [5]	265
			SBR	AM	450	248	450	248
				PM	450	380	450	380
			EBL	AM	245 [5]	148	245 [5]	148
				PM	245 [5]	225	245 [5]	225
			WBL	AM	135	78	135	78
				PM	135	50	135	50
			WBR	AM	150	483	150	415
				PM	150	283	150	268

[1] Queuing analysis based on the Highway Capacity Manual, 6th Edition operational analysis methodologies. The 95th percentile queue is the maximum back of queue with 95th percentile traffic volumes.
[2] The HCM 6th Edition methodology worksheets report queues in number of vehicles, however an average vehicle length of 25 feet was assumed for analysis purposes. The reported queues therefore represent the calculated maximum back of queue in feet. Where a queue of less than one (1.0) vehicle is calculated, a minimum queue of 25 feet is reported.
[3] For purposes of evaluating the effect of the proposed improvement, the total queue storage area and 95th percentile queue is reported (i.e., the sum of the dual northbound turn-lanes) for without and with improvement conditions.
[4] Approach consists of a single lane which accommodates all permissible movements.
[5] Queue storage space includes the striped turn-pocket length as well as the lane taper area, which can accommodate additional vehicle queuing.
[6] Project will construct the fourth leg of the existing T-intersection (north leg).
[7] Project will construct the fourth leg of the existing T-intersection (south leg).

Table 8-2
SUMMARY OF INTERSECTION DELAYS AND LEVELS OF SERVICE WITH IMPROVEMENT MEASURES [1]
WEEKDAY AM AND PM PEAK HOURS

NO.	INTERSECTION	TRAFFIC CONTROL	PEAK HOUR	[a] FUTURE CUM. WITH PROJECT W/O IMPROVEMENTS DELAY [2]	[a] LOS [3]	[b] FUTURE CUM. WITH PROJECT W/ IMPROVEMENTS DELAY [2]	[b] LOS [3]
1	Fairway Drive/ SR-60 Freeway WB Ramps	Signalized	AM PM	35.3 36.2	D D	35.3 36.2	D D
3	Fairway Drive/ East Walnut Drive South	Signalized	AM PM	15.6 9.1	B A	15.6 9.1	B A
4	Fairway Drive- Brea Canyon Cutoff Road/ Colima Road	Signalized	AM PM	39.6 44.6	D D	39.6 44.6	D D
8	Project Driveway-Walnut Leaf Drive/ Colima Road [4]	Two-Way Stop	AM PM	36.6 >50.0	E F	19.7 24.8	B C
9	Tierra Luna-Project Driveway/ Colima Road [5]	Two-Way Stop	AM PM	24.0 >50.0	C F	4.5 2.9	A A
10	Lemon Avenue/ Golden Springs Drive	Signalized	AM PM	44.5 44.7	D D	38.3 42.5	D D

[1] Intersection Level of Service analysis based on the Highway Capacity Manual, 6th Edition operational analysis methodologies.

[2] Reported control delay values in seconds per vehicle.

[3] Intersection Levels of Service are based on the following criteria:

Signalized Intersection Control Delay (s/veh)	Unsignalized Intersection Control Delay (s/veh)	LOS
<= 10	<= 10	A
> 10-20	> 10-15	B
> 20-35	> 15-25	C
> 35-55	> 25-35	D
> 55-80	> 35-50	E
> 80	> 50	F

[4] Project will construct the fourth leg of the existing T-intersection (north leg). Improvement consists of signalization of intersection.

[5] Project will construct the fourth leg of the existing T-intersection (south leg).

space, however under future cumulative with project traffic conditions, the total queue is expected to require up to 165 feet of queue storage space.

The westbound approach along East Walnut Drive South is approximately 20 feet wide, and is currently striped to provide one 10-foot-wide shared through/left-turn lane and one 10-foot-wide right turn lane. In order to better accommodate the forecast right-turn queues, it is proposed that the westbound right-turn lane striping be extended to provide an additional 50 feet of storage space. It is proposed that the lane striping terminate prior to the existing driveway along the north side of the roadway in order to maintain full access to the existing parcel. The roadway width along the westbound approach of East Walnut Drive South is adequate for vehicles to utilize the curb lane (i.e., a de facto turn lane) should additional storage space be required. A conceptual illustration of the proposed restriping is provided in ***Appendix Figure F-2***.

8.3.3 *Int. 4 – Fairway Drive-Brea Canyon Cutoff Road/Colima Road*

As summarized in *Table 5-1*, the addition of project traffic at the Fairway Drive-Brea Canyon Cutoff Road/Colima Road intersection will result in additional vehicle queuing for the northbound right-turn, southbound left-turn, eastbound left-turn, and westbound left-turn movements. It is also noted that the northbound left-turn movement currently exceeds the available queue storage space, although the project does not result in any additional queuing for this movement. A conceptual illustration of all proposed improvements at the intersection is provided in ***Appendix Figure F-3***. The proposed improvements for each movement are discussed below:

Northbound Left-Turn: The queue currently exceeds the available turn-lane storage capacity, and is forecast to continue to exceed the storage capacity under future cumulative conditions. The current northbound left-turn lane provides a total of 190 feet of queue storage space, and under future cumulative conditions the total queue is expected to require up to 290 feet of queue storage space. In order to better accommodate the left-turn queues and improve overall operations at the intersection, it is proposed that the raised concrete median adjacent to the northbound left-turn lane be modified and narrowed in order to accommodate the extension of the left-turn lane by 60 feet. In order to maintain access to the existing parcel along the west side of the roadway, the median is not proposed to be extended further to the south.

Northbound Right-Turn: The addition of project-generated traffic is expected to result in queuing which exceeds the available turn-lane storage capacity under the existing with project and future cumulative with project conditions, although it should be noted that the right-turn queue is not expected to block other traffic movements at the intersection. The current northbound right-turn lane provides a total of 200 feet of queue storage space, and under future cumulative with project conditions the total queue is expected to require up to 208 feet of queue storage space. In order to adequately accommodate the forecast right-turn queues, it is proposed that the lane striping be extended to provide an additional 10 feet of storage space for the northbound right-turn lane.

Southbound Left-Turn: While the queue currently exceeds the available turn-lane storage capacity, the project is forecast to result in additional queuing under the existing with project and future

cumulative with project conditions which is expected to continue to spill back into the adjacent through travel lane. The current southbound left-turn lane provides a total of 185 feet of queue storage space, and under future cumulative with project conditions the total queue is expected to required up to 333 feet of queue storage space.

It is noted that the southbound left-turn lane is separated from an adjacent northbound left-turn lane (i.e., at the Fairway Drive/Brea Canyon Cutoff Road intersection) by a raised concrete median. The median and southbound left-turn lane cannot be modified without impacting access at the adjacent intersection. Therefore, no median or striping modifications are proposed for this movement. Traffic signal timing at the subject intersection were also reviewed for potential operational improvements that would reduce the southbound left-turn queues. As a result of the constraints of the timing parameters required to accommodate pedestrian crossings at the intersection (i.e., Walk, Flashing Don't Walk, and Yellow/Red clearance intervals), no signal timing changes were identified which would improve operations and reduce the southbound left-turn queuing. Based on direction from LACPW staff, improvements which would require roadway widening were not considered. As a result, no improvements were identified which would reduce or adequately accommodate the southbound left-turn queues.

Eastbound Left-Turn: While the queue currently exceeds the available turn-lane storage capacity, the project is forecast to result in additional queuing under the existing with project and future cumulative with project conditions which is expected to continue to spill back into the adjacent through travel lane. The current eastbound left-turn lane provides a total of 200 feet of queue storage space, and under future cumulative with project conditions the total queue is expected to require up to 258 feet of queue storage space. In order to adequately accommodate the left-turn queues, it is proposed that the raised concrete median adjacent to the eastbound left-turn lane be modified to accommodate the extension left-turn lane by 60 feet.

Westbound Left-Turn: While the queue currently exceeds the available turn-lane storage capacity, the project is forecast to result in additional queuing under the existing with project and future cumulative with project conditions which is expected to continue to spill back into the adjacent through travel lane. The current westbound left-turn lane provides a total of 200 feet of queue storage space, and under future cumulative with project conditions the total queue is expected to require up to 303 feet of queue storage space. In order to adequately accommodate the left-turn queues, it is proposed that the raised concrete median adjacent to the westbound left-turn lane be modified to accommodate the extension left-turn lane by 105 feet.

8.3.4 *Int. 8 – Project Driveway-Walnut Leaf Drive/Colima Road*

The proposed project would construct a driveway at the existing Walnut Leaf Drive/Colima Road intersection. The project driveway will tie-in to the intersection as the new north leg of the existing unsignalized "T"-intersection. As summarized in *Table 5-2*, Int. 8 – Project Driveway-Walnut Leaf Drive/Colima Road is expected to operate at LOS F under the existing with project and future cumulative with project (i.e., with ambient growth, related projects, and proposed project) traffic conditions. As stated in *Section 5.2*, at TWSC intersections the LOS associated with the most

constrained minor street approach is reported as the overall intersection LOS. It is noted that under future cumulative with project traffic conditions, it is the Walnut Leaf Drive approach (i.e., northbound approach) that is expected to operate at LOS F. The proposed project driveway (i.e., the southbound approach) is expected to operate at LOS C or better under all analysis conditions (refer to the HCM worksheets provided in *Appendix E)*.

Walnut Leaf Drive is approximately 40 feet wide at the intersection, and is currently striped to provide one 20-foot southbound departure lane and one 20-foot northbound approach lane which accommodates left and right-turning movements. In order to bring the intersection back to LOS D or better, it is proposed that the Walnut Leaf Drive approach be restriped to provide one 18-foot southbound departure lane, as well as one 10-foot shared left-through lane and one 12-foot right-turn lane on the northbound approach. A conceptual illustration of the proposed restriping is provided in ***Appendix Figure F-4***. It is not anticipated that any roadway widening would be required in order to accommodate the proposed lane configuration on Walnut Leaf Drive.

The proposed improvement is expected to result in LOS D or better at the subject intersection during AM and PM peak hours under future cumulative with project traffic conditions. The HCM data worksheets for the subject intersection with the proposed improvement are provided in *Appendix F*.

8.3.5 *Int. 9 – Tierra Luna-Project Driveway/Colima Road*

The proposed project would construct a driveway at the existing Tierra Luna/Colima Road intersection. The project driveway will tie-in to the intersection as the new south leg of the existing unsignalized "T"-intersection. The existing signalized pedestrian and golf cart crossing across Colima Road is planned to be removed in order to accommodate the development of the planned open space in Planning Area 4 and the proposed single-family homes in Planning Area 5. The signalized crossing will be relocated to the future Tierra Luna-Project Driveway/Colima Road intersection in order to maintain a protected pedestrian crossing at Colima Road.

Currently, the signalized crossing accommodates approximately 15 golf-cart crossings and nominal pedestrian crossings during the peak hours of use (refer to the manual pedestrian and golf cart crossing counts included in *Appendix C*). While golf cart crossings will not occur at the subject intersection after construction and occupancy of the proposed project, it is anticipated that pedestrian crossings across Colima Road will increase due to use of the proposed recreational multi-use trails. The proposed trail system connects across Colima Road at the Planning Area 4 open space on the north side of the roadway and at the proposed project driveway on the south side of the roadway, thus requiring pedestrians, bicyclists, and other users to cross at the subject intersection.

Colima Road provides an approximately 84-foot roadway width and is signed for a 45 mile per hour speed limit in the vicinity of the subject intersection. Both factors require an extensive gap (up to 24 seconds, assuming a pedestrian travel speed of 3.5 feet per second) in traffic along Colima Road in order to accommodate safe pedestrian crossings. Identification of such extensive gaps is hindered by curves in the alignment of Colima Road to the east and west of the subject intersection. In addition, the proposed project would construct the south leg of the intersection, increasing potential conflicts

between pedestrians/bicyclists crossing Colima Road and vehicles turning to and from the minor streets.

While traffic signal warrants were not met at the subject intersection based on strict application of the warrant criteria as summarized in *Section 2.6.2*, it was noted that a fatal collision occurred at the existing signalized crossing in 2017. The collision occurred due to a motorist on Colima Road failing to come to a stop at a steady red traffic signal indication (i.e., "running a red-light") while the crossing was in use, resulting in the death of a golf cart driver utilizing the crossing. In recognition of the increase in vulnerable roadway users expected at the intersection due to the proposed development and the prior fatality at the existing signalized crossing, it is proposed that the Tierra Luna-Project Driveway/Colima Road intersection be signalized. Without the additional degree of protection provided by a signalized crossing, crossing Colima Road would be hazardous to pedestrians, bicyclists, and other users.

Further, Int. 9 – Tierra Luna-Project Driveway/Colima Road is expected to operate at LOS F under the existing with project and future cumulative with project (i.e., with the proposed project and related projects) traffic conditions, as summarized in *Table 5-2*. The proposed signalization of the study intersection is anticipated to result in LOS A at the subject intersection during AM and PM peak hours under future cumulative with project traffic conditions. The HCM data worksheets for the subject intersection with the proposed improvement are provided in *Appendix F*.

As previously noted, the satisfaction of a traffic signal warrant is not necessarily justification for the installation of a traffic signal. Conversely, if a traffic signal warrant is not met, other factors may be just cause for consideration of a traffic signal installation. At the Tierra Luna-Project Driveway/Colima Road intersection, the expected increase in pedestrian activity, the approach speeds along Colima Road, and the safety of vulnerable roadway users, along with a reduction in minor street delays, justify the relocation of the existing signal to the future intersection.

8.3.6 *Int. 10 – Lemon Avenue/Golden Springs Drive*

As summarized in *Table 5-1*, the addition of project traffic at the Lemon Avenue/Golden Springs Drive intersection will result in additional vehicle queuing for the westbound right-turn movement. It should be noted that the project is not expected to add any traffic to this movement. The queue currently exceeds the available turn-lane storage capacity, and the addition of project traffic to other movements at the intersection is forecast to result in additional queuing under the existing with project and future cumulative with project conditions, although it should be noted that the right-turn queue is not expected to block other traffic movements at the intersection. The current right-turn lane provides a total of 150 feet of queue storage space, however under future cumulative with project traffic conditions, the total queue is expected to require up to 483 feet of queue storage space.

The westbound approach of Golden Springs Drive is currently striped to provide a 150-foot right-turn lane. The right-turn lane striping terminates prior to two existing driveways which provide access to existing parcels along the north side of the roadway. A buffered bicycle lane is also provided along westbound Golden Springs Drive upstream of the right-turn lane. Due to the need to

maintain access to the existing parcels and to preserve the buffered bicycle lane, no striping modifications are proposed for this movement.

The Lemon Avenue/Golden Springs Drive intersection is currently controlled by a traffic signal which provides split phasing for the north and southbound approaches, and southbound U-turns are prohibited. In order to better accommodate the forecast right-turn queues, it is proposed that the traffic signal be modified to provide a westbound right-turn overlap phase (i.e., the westbound right-turns would receive a green arrow concurrent with the existing protected southbound phase). A conceptual illustration of the proposed improvement is provided in ***Appendix Figure F-5***.

The improvement is anticipated to result in a reduction in the westbound right-turn queues under future cumulative with project traffic conditions. It should be noted that the signal modification would require approval from the City of Diamond Bar prior to being implemented by the project Applicant. Since the City of Diamond Bar's approval cannot be guaranteed at the time of report preparation, the improvement cannot be guaranteed to be implemented.

9.0 CALIFORNIA DEPARTMENT OF TRANSPORTATION TRAFFIC ANALYSIS

Consistent with the previously described statutory changes to the CEQA Guidelines, Caltrans has also formally adopted VMT as the metric for reviewing the transportation impacts of a land use development project. As described in *Section 1.2* herein, Caltrans has released the *Transportation Impact Study Guide* (TISG) and the "Interim LD-IGR Safety Review Practitioners Guidance" in order to provide guidance on Caltrans' review of land use projects.

9.1 Vehicle Miles Traveled Analysis

Caltrans' TISG references the December 2018 *Technical Advisory* prepared by OPR as the basis for its guidance on VMT assessment. For the purpose of this transportation impact analysis, it is understood that Los Angeles County's adopted VMT analysis methodology is consistent with the recommendations provided in the *Technical Advisory* and thus satisfy Caltrans' VMT analysis requirements as well. Therefore, no separate VMT analysis has been prepared for Caltrans' review of the proposed project.

9.2 Off-Ramp Vehicle Queuing Analysis

The "Interim LD-IGR Safety Review Practitioners Guidance" provides direction on a simplified safety analysis approach that reduces the risk to all road users and that focuses on multi-modal conflict analysis as well as access management issues. District traffic safety staff are encouraged to consider the proposed project's potential influence on safety on state roadways, including the following factors:

- Increased presence of pedestrians and bicyclists
- Degradation of the walking and bicycling environment and experience
- New pedestrian and bicyclist connection desires
- Multimodal conflict points, especially at intersections and project access locations
- Change in traffic mix such as an increase in bicyclists or pedestrians where features such as shoulders or sidewalks may not exist or are inconsistent with facility design (sidewalks, bike and multi-user paths, multimodal roadways, etc.)
- Increased vehicular speeds
- Transition between free flow and metered flow
- Increased traffic volumes
- Queuing at off-ramps resulting in slow or stopped traffic on the mainline or speed differentials between adjacent lanes
- Queuing exceeding turn pocket length that impedes through-traffic

The proposed project does not take direct access from a State facility; therefore, the project has not been reviewed for factors pertaining to site access from State roadways. However, the proposed

project is expected to generate net new project trips at the SR-60 Freeway ramps at Fairway Drive (i.e., Int. No. 1 – Fairway Drive/SR-60 Freeway WB Ramps and Int. No. 2 – Fairway Drive/SR-60 Freeway EB Off-Ramp). Therefore, an analysis of the project's effect on off-ramp queuing was prepared in order to determine if the project would cause, or contribute towards, slowing or stopped traffic on mainline travel lanes resulting in unsafe speed differentials between adjacent lanes.

Pursuant to prior direction from Caltrans staff, the off-ramp queuing was analyzed using the HCM method for signalized intersections. The off-ramp queuing calculations were prepared using the *Synchro 11* software package which implements the HCM operational methodology. A *Synchro* network was created based on existing conditions field reviews at the above noted ramp intersection. In addition, specifics such as traffic volume data, lane configurations, available vehicle storage lengths, crosswalk locations, posted speed limits, traffic signal timing and phasing, etc., were coded to complete the existing network. The corresponding weekday AM and PM peak hour HCM worksheets for purposes of determining the 95th percentile vehicle queues are contained in ***Appendix G***.

The queuing analysis was prepared for the existing, existing with project, and future cumulative without and with project traffic conditions. The freeway off-ramp intersection approach was reviewed in terms of expected maximum vehicle queues (i.e., 95th percentile queues) which represent the maximum back of vehicle queues with 95th percentile traffic volumes. The corresponding maximum vehicle queue lengths were then compared to the total ramp storage lengths (i.e., the available storage length as measured from the applicable off-ramp lane striping from the point of gore to the respective off-ramp approach limit lines). The total queuing for the off-ramp was determined based on the sum of the maximum vehicle queues for each off-ramp lane. The total ramp storage length was determined based on the sum of the striped storage for all lanes provided at the off-ramp location.

As presented in ***Table 9-1***, adequate storage area is provided at the SR-60 Freeway eastbound and westbound off-ramps to accommodate the forecast 95th percentile queues under existing and future cumulative conditions, both without and with project-generated traffic. Therefore, the proposed project is expected to neither cause nor contribute towards vehicle queuing which extends back into the SR-60 Freeway mainline travel lanes resulting in unsafe speed differentials between adjacent lanes. Therefore, the proposed project is not anticipated to negatively influence safety on the State Highway System.

Table 9-1
SUMMARY OF OFF-RAMP VEHICLE QUEUING [1]

NO.	INTERSECTION	PEAK HOUR	AVAILABLE OFF-RAMP STORAGE [2] (FEET)	EXISTING		EXISTING WITH PROJECT		FUTURE WITHOUT PROJECT		FUTURE WITH PROJECT	
				95th PERCENTILE QUEUE [3] (FEET)	EXCEEDS STORAGE? (YES/NO)	95th PERCENTILE QUEUE [3] (FEET)	EXCEEDS STORAGE? (YES/NO)	95th PERCENTILE QUEUE [3] (FEET)	EXCEEDS STORAGE? (YES/NO)	95th PERCENTILE QUEUE [3] (FEET)	EXCEEDS STORAGE? (YES/NO)
1	Fairway Drive/ SR-60 Freeway WB Ramps	AM PM	1,710 1,710	780 563	No No	783 583	No No	810 605	No No	795 610	No No
2	Fairway Drive/ SR-60 Freeway EB Off-Ramp [4]	AM PM	2,020 2,020	1,463 1,453	No No	1,520 1,673	No No	1,573 1,563	No No	1,550 1,713	No No

[1] Queuing analysis based on the Highway Capacity Manual, 6th Edition operational analysis methodologies.
[2] Available storage represents the sum of storage space provided by all off-ramp lanes, as measured via Google Earth, 2021.
[3] The 95th percentile queue is the maximum back of queue with 95th percentile traffic volumes. An average vehicle length of 25 feet (including vehicle separation) was assumed for analysis purposes. The reported queue represents the sum of queues for all off-ramp lanes.
[4] It is recognized that a major grade-separation project is currently under construction along Fairway Drive north of Walnut Drive North, resulting in temporary changes in traffic demand at the intersection.

10.0 SUMMARY AND CONCLUSIONS

- ***Project Description*** – The proposed project site is located in the unincorporated Rowland Heights community of Los Angeles County. The site is adjacent to the Cities of Industry and Diamond Bar to the north and east, respectively. The project is comprised of several mostly non-contiguous parcels which comprise the northerly and easterly portions of the existing Royal Vista Golf Club, and are generally bounded by East Walnut Drive South to the north, the City of Diamond Bar to the east, and the remainder of the Royal Vista Golf Club and other existing residential developments to the south and west. The proposed project is planned to consist of 360 residential units and two open space areas on six (6) existing parcels, and involves the redevelopment of four (4) of the existing golf course parcels into residential planning areas (Planning Areas 1, 2, 3, and 5) and two (2) into recreational/open space planning areas (Planning Areas 4 and 6). Three of the four proposed residential planning areas (Planning Areas 1, 2 and 5) will be subdivided into 288 single-family residences via a mix of detached, duplex, and triplex dwelling units, and the fourth residential planning area (Planning Area 3) is planned to include 72 townhouse units within 14 structures.

- ***Project Site Access*** – Access to the proposed project is planned to be accommodated by a variety of project driveways. Access to Planning Area 1 will primarily be provided via a new project driveway which would become the north leg of the existing Walnut Leaf Drive/Colima Road intersection. Access to Planning Area 2 will primarily be provided by a new project driveway located on the south side of East Walnut Drive South which would form a new intersection. Access between Planning Areas 1 and 2 is accommodated via the proposed internal roadway system. Access to Planning Area 3 is provided via two (2) additional new driveways located along the south side of East Walnut Drive South. Access to Planning Area 5 will be provided via a new project driveway which would become the south leg of the existing Tierra Luna/Colima Road intersection. The existing signalized crossing located east of the Tierra Luna/Colima Road intersection will be relocated to this future four (4) way intersection in order to accommodate development of the proposed project and maintain pedestrian access across Colima Road. Pedestrian access throughout the project site would be accommodated by Americans with Disabilities Act (ADA) compliant sidewalks as well as a proposed recreational multi-use trail network.

- ***Traffic Signal Warrants*** – Traffic signal warrants were prepared for the Project Driveway-Walnut Leaf Drive/Colima Road and Tierra Luna-Project Driveway/Colima Road intersections. Specifically, Warrant No. 1 (Eight Hour Vehicular Volume), Warrant No. 2 (Four Hour Vehicular Volume), and Warrant No. 3 (Peak Hour Volume) were prepared for the forecast future cumulative with project traffic conditions, and Warrant No. 7 (Crash Experience) was prepared based on a review of existing collision records. It was determined that based on the strict application of the warrant criteria, none of the traffic signal warrants were met for either intersection. However, the existing signalized pedestrian and golf cart crossing across Colima Road is planned to be relocated to the future Tierra Luna-Project Driveway/Colima Road intersection in order to maintain pedestrian access across Colima Road. At the Tierra Luna-

Project Driveway/Colima Road intersection, the expected increase in pedestrian activity, the approach speeds along Colima Road, and the safety of vulnerable roadway users, along with a reduction in minor street delays, justify the relocation of the existing signal to the future intersection.

- ***Project Trip Generation*** – The proposed project is expected to generate 176 net new vehicle trips (31 inbound trips and 145 outbound trips) during the weekday AM peak hour. During the weekday PM peak hour, the proposed project is expected to generate 204 net new vehicle trips (136 inbound trips and 68 outbound trips). Over a 24-hour period, the proposed project is forecast to generate 2,243 daily trip ends (approximately 1,122 inbound trips and approximately 1,122 outbound trips) on a typical weekday.

- ***CEQA Vehicle Miles Traveled Analysis*** – The baseline project-generated VMT per capita was forecast using the County's VMT Tool, which utilizes data derived from SCAG's Regional Travel Demand Model (RTDM). The baseline VMT forecasts were adjusted downward to reflect pre-pandemic levels of telework or remote work in the SCAG region, which is not reflected in the RTDM. The VMT reductions due to increased residential density in the study area (per CAPCOA 2021 Handbook measure T-1) have been applied to the baseline forecast derived via the use of the County's VMT Tool, since the spreadsheet-based tool does not account for changes in TAZ characteristics such as density. Planning Areas 1, 2, and 3, which fall into TAZ 22375100, are forecast to generate 15.3 residential VMT per capita when accounting for project design features, which exceeds the South County residential VMT threshold of 10.0 residential VMT per capita. Planning Area 5, which falls into TAZ 22379100, is forecast to generate 19.8 residential VMT per capita when accounting for project design features, which exceeds the South County residential VMT threshold of 10.0 residential VMT per capita. It is concluded that the proposed project is expected to result in a significant VMT impact.

- ***Intersection Queuing Analysis*** – Project-generated traffic is expected to be added to the following left-turn traffic movements, contributing towards additional vehicle queuing for movements which already experience queue spill-back into adjacent lanes: northbound left-turn movement at Int. 1 – Fairway Drive/SR-60 Freeway WB Ramps; southbound left-turn, eastbound left-turn, and westbound left-turn movements at Int. 4 – Fairway Drive-Brea Canyon Cutoff Road/Colima Road. Project-generated traffic is expected to be added to the following right-turn traffic movements, contributing towards additional vehicle queuing for movements that are not expected to block other traffic movements at the intersection: westbound right-turn at Int. 3 – Fairway Drive/East Walnut Drive South; northbound right-turn at Int. 4 - Fairway Drive-Brea Canyon Cutoff Road/Colima Road. Additionally, vehicle queue spill back occurs for the northbound left-turn movement at Int. 4 – Fairway Drive-Brea Canyon Cutoff Road/Colima Road and for the westbound right-turn movement at Int. 10 – Lemon Avenue/Golden Springs Drive, although the proposed project is not expected to add additional traffic to the movements. The vehicle queuing at the remaining study intersections is expected to be adequately accommodated by the existing available turn-lane queue storage areas under all analysis conditions.

- ***Intersection Level of Service Analysis*** – Intersection 2 – Fairway Drive/SR-60 Freeway EB Off-Ramp is expected to operate at LOS E under existing with project and future cumulative with project traffic conditions. Intersection 5 – Brea Canyon Cutoff Road/Pathfinder Road is expected to operate at LOS E under the future cumulative with project conditions. Intersection 8 – Project Driveway-Walnut Leaf Drive/Colima Road is expected to operate at LOS F under existing with project and future cumulative with project conditions. Intersection 9 –Tierra Luna-Project Driveway/Colima Road is expected to operate at LOS F under existing with project and future cumulative with project traffic conditions. All other study intersections are expected to operate at LOS D or better under all analysis conditions.

- ***Project Construction Phase Analysis*** – Detailed construction plans have not been developed at the time of the study preparation. While not expected, it is conservatively assumed that construction of the proposed project may result in the temporary closure of portions of travel lanes along East Walnut Drive South and/or Colima Road. The project would not relocate existing bus transit stops or routes, and would not interfere with pedestrian, bicycle, transit, or vehicle circulation and accessibility during construction. The project applicant will submit a detailed Construction Staging and Traffic Management Plan (CSTMP) to the County for review and approval prior to the start of construction activity in compliance with standard regulatory requirements. The CSTMP, in addition to any applicable street/lane/sidewalk closure information, will also include a detour plan, haul route(s), and a staging plan.

- ***Local Residential Street Cut-Through Analysis*** – The signalized intersections along major corridors in the vicinity of the proposed project are expected to operate at LOS D or better under future cumulative with project traffic conditions, with the exception of the SR-60 Freeway EB Off-Ramp/Fairway Drive intersection (Int. No. 2) which is expected to operate at LOS E. Due to the limited crossing opportunities across the SR-60 Freeway corridor, and the limited connectivity of the existing residential neighborhoods east and south of the project site with the major corridors, it is not expected that motorists would be diverted from the adjacent major highway corridors in search of less congested alternative travel routes. No new project trips are anticipated to travel through the existing residential neighborhoods since the project will have direct access to and from Colima Road. It is determined that the conditions which would require a detailed local residential street cut-through analysis are not present.

- ***Planned Transportation Network Improvement Measures*** – The proposed project will provide roadway widening and construct public sidewalk, curb, and gutter on East Walnut Drive South along the project frontage in order to satisfy the County's current standard design for local streets. The project is also planned to provide a system of recreational multi-use trails for public use throughout the site as an enhancement to the pedestrian network.

- ***CEQA Mitigation Measures*** – The proposed project is expected to result in a significant VMT impact, and thus the applicant is required to identify mitigation measures to reduce the impact to the greatest extent possible. Pursuant to the CAPCOA 2021 Handbook, the project will implement mitigation measure T-9, Implement Subsidized or Discounted Transit Program, which

results in a quantifiable VMT reduction. The project applicant will provide a subsidy of up to 50% of the cost of one Metrolink monthly pass or Foothill Transit 31-day pass per residential dwelling unit for five years. The project will advertise the subsidy program at the time of purchase, and once a year for the remaining years of the subsidy program. As the total cost of the transit passes cannot be determined in advance, the total yearly transit subsidy cost of the Metrolink and Foothill Transit passes shall not exceed $45,000.00 for the five-year term. Prior to the end of the five-year term, Los Angeles County will determine if the transit subsidy program shall continue for an additional five years. In no event will the transit subsidy program last more than a total of 10 years. Consistent with the guidance provided in the 2021 Handbook which states that projects may be located up to two (2) miles from high-quality transit service when access is supported by bicycle, the project applicant will also provide an electric bicycle with the purchase of each dwelling unit in order to support the effectiveness of this measure. After application of the quantifiable VMT reduction to the forecast project-generated residential VMT per capita, Planning Areas 1, 2, and 3 are expected to generate 16.2 residential VMT per capita when accounting for project mitigation measures, which exceeds the South County residential VMT threshold of 10.0 residential VMT per capita. Planning Area 5 is forecast to generate 21.0 residential VMT per capita when accounting for project mitigation measures, which exceeds the South County residential VMT threshold of 10.0 residential VMT per capita. It is therefore concluded that a significant and unavoidable VMT impact would remain.

- ***Operational (Non-CEQA) Improvement Measures –*** In order to address circulation constraints identified by the operational analyses, it is proposed that restriping be provided for: northbound Fairway Drive at Int. 1 – Fairway Drive/SR-60 Freeway WB Ramps; westbound East Walnut Drive South for Int. 3 – Fairway Drive/East Walnut Drive South; and northbound Walnut Leaf Drive at Int. 8 – Project Driveway-Walnut Leaf Drive/Colima Road. Median improvements and restriping are proposed for the northbound, eastbound, and westbound approaches of Int. 4 – Fairway Drive-Brea Canyon Cutoff Road/Colima Road. No roadway widening is anticipated in order to accommodate the restriping and median improvements. It is also proposed that the existing signalized crossing across Colima Road be relocated to Int. 9 – Tierra Luna-Project Driveway/Colima Road in order to maintain a protected pedestrian crossing across Colima Road as well as to address circulation constraints identified at the study intersection. It is further proposed that the existing traffic signal at Int. 10 – Lemon Avenue/Golden Springs Drive be modified to provide a westbound right-turn overlap phase in order to address circulation constraints at the intersection.

- ***Caltrans Analysis –*** It is understood that Los Angeles County's adopted VMT methodology and screening criteria is consistent with the recommendations provided in the *Technical Advisory* prepared by OPR and thus satisfy Caltrans' VMT analysis requirements as well. Therefore, no separate VMT analysis has been prepared for Caltrans' review of the proposed project. Pursuant to the direction provided in the "Interim LD-IGR Safety Review Practitioners Guidance", an analysis of the project's effect on off-ramp queuing at Int. 1 – Fairway Drive/SR-60 Freeway WB Ramps and Int. 2 – Fairway Drive/SR-60 Freeway EB Off-Ramp determined that the proposed project is not expected to cause or contribute towards vehicle queuing which extends

back into the SR-60 Freeway mainline travel lanes in either the eastbound or westbound directions.

APPENDIX A

APPROVED SCOPING DOCUMENT

LINSCOTT
LAW &
GREENSPAN
engineers

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Transportation
Parking

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MEMORANDUM

To:	Kent Tsujii, P.E. Suen Fei Lau, P.E. Los Angeles County Public Works Traffic Safety and Mobility Division	Date:	October 6, 2022
From:	David S. Shender, P.E. Grace Turney, EIT Linscott, Law & Greenspan, Engineers	LLG Ref:	1-20-4388-2
Subject:	Royal Vista Residential and Parks Project – Transportation Impact Analysis Scope of Work		

Linscott, Law & Greenspan, Engineers (LLG) is pleased to submit the following revised Transportation Impact Analysis Scope of Work for the Royal Vista Residential and Parks Project for your review and approval.

Transportation Impact Analysis Scope of Work

The Transportation Impact Analysis Report for the proposed Royal Vista Residential and Parks Project will be prepared according to the analysis and significance criteria outlined in the Los Angeles County Public Works *Transportation Impact Analysis Guidelines*, July 2020. In compliance with the *Guidelines*, the proposed Royal Vista Residential and Parks Project Transportation Impact Study will be prepared using appropriate VMT-based analysis methodologies and significant impact thresholds. The applicable non-VMT site access and circulation studies set forth in the guidelines will also be prepared and included in the study.

A. Project Location: The proposed project site is located in the unincorporated Rowland Heights community of Los Angeles County. The site is adjacent to the Cities of Industry and Diamond Bar to the north and east, respectively. The project is comprised of several mostly non-contiguous parcels which make up the northerly and easterly portions of the existing Royal Vista Golf Course, and are generally bounded by East Walnut Drive South to the north, the City of Diamond Bar to the east, and the remainder of the Royal Vista Golf Course and other existing residential developments to the south and west. See attached ***Figure 1 – Vicinity Map***.

B. Project Description: The project would be developed on a 75.64-acre site consisting of six non-contiguous parcels located both north and south of Colima Road, including Assessor Parcel Numbers (APNs) 8762-022-002, 8762-023-001, 8762-023-002, 8762-027-039, 8764-002-005, and 8764-002-006. The project proposes to redevelop four of the project site's parcels into residential planning areas (Planning Area Lots 1, 2, 3, and 5) providing 360 residential units and the two remaining parcels into recreational/open space planning areas (Planning Area Lots 4 and 6) with a public neighborhood park and a public pocket park. The planned development for each Planning Area Lot is noted below:

- Lot 1 is planned to accommodate up to 116 single-family residential units and 52 duplex and triplex residential units,

- Lot 2 is planned to accommodate up to 32 single-family residential units,
- Lot 3 is planned to accommodate up to 72 multi-family residential units,
- Lot 4 is planned to accommodate a 5.81-acre public neighborhood park,
- Lot 5 is planned to accommodate up to 52 single-family residential units and 36 duplex and triplex residential units, and
- Lot 6 is planned to accommodate a 1.59-acre public pocket park.

The 72 multi-family units located on Lot 3, six (6) of the triplex units on Lot 1, and four (4) of the triplex units on Lot 5 are currently planned to accommodate for-sale, moderate-income, workforce housing. A total of 28.99 acres will be retained as open space, including Lots 4 and 6.

In order to accommodate the proposed project, portions of the existing Royal Vista Golf Course will be removed, including the existing 27-tee driving range as well as 13 of the existing 27 golf holes. As the potential future use of the remaining portions of the existing golf course is currently unknown, for the purposes of this analysis it is assumed that the Royal Vista golf club will continue to operate the clubhouse as well as a 9-hole to 14-hole golf course situated west of the proposed project site. Full build-out of the proposed project is expected to occur by the end of year 2026. The conceptual site plan is presented in ***Figure 2 – Site Plan***.

CEQA Analysis

C. VMT Assessment: LLG has reviewed the requirements for VMT analysis set forth in the Los Angeles County Public Works Transportation Impact Analysis Guidelines (dated July 23, 2020). The proposed project will be reviewed to determine whether any screening thresholds are met. It is assumed that the project will not be screened out of detailed VMT analysis, and that a VMT assessment will be required for the proposed project. The proposed project's residential VMT per capita will be evaluated utilizing the County's spreadsheet-based VMT Tool (Version 1.0), which was released for public use in January 2020. The project-generated residential VMT per capita will be compared to the appropriate thresholds set forth in the Transportation Impact Analysis Guidelines for the South County area. It is noted that the project parcels fall into two Transportation Analysis Zones (TAZ), with the parcels located north of Colima Road falling into TAZ 22375100 and the parcels located south of Colima Road falling into TAZ 22379100. The proposed development within each TAZ will be analyzed separately in order to determine the potential for significant impacts. The significance of project-level VMT impacts and cumulative VMT impacts will be determined based on the thresholds and methodology provided in the County Guidelines.

Non-VMT Analysis

D. Project Study Area: The following 10 study intersections, including all project driveways, have been identified for intersection operational evaluation. These study intersections will be reviewed as part of the site access studies required for the project (refer to Item H herein). See attached *Figure 1 – Vicinity Map.* The existing traffic control and the agency with jurisdiction over each study intersection is presented below.

NO.	STUDY LOCATION	TRAFFIC CONTROL	AGENCY/ JURISDICTION
1	Fairway Drive/ SR-60 Freeway Westbound Ramps	Signalized	City of Industry/ Caltrans
2	Fairway Drive/ SR-60 Freeway Eastbound Off-Ramp	Signalized	City of Industry/ Caltrans
3	Fairway Drive/ East Walnut Drive South	Signalized	City of Industry/ Los Angeles County
4	Fairway Drive-Brea Canyon Cutoff Road/Colima Road	Signalized	Los Angeles County
5	Brea Canyon Cutoff Road/ Pathfinder Road	Signalized	Los Angeles County
6	Project Driveway/ East Walnut Drive South	(Future Intersection)	Los Angeles County
7	Lake Canyon Dr/ Colima Road	Signalized	Los Angeles County
8	Project Driveway-Walnut Leaf Dr/ Colima Road	Unsignalized	Los Angeles County
9	Tierra Luna-Project Driveway/ Colima Road	Unsignalized	Los Angeles County
10	Lemon Avenue/ Golden Springs Drive	Signalized	City of Diamond Bar

E. Traffic Counts: New manual traffic counts have been conducted at the nine (9) existing study intersections listed in Item D above. The counts were collected by an independent traffic count subconsultant in September and November 2021 during the weekday morning (7:00-9:00 AM) and afternoon (4:00-6:00 PM) peak periods. At the time that the traffic counts were collected, local public schools (i.e., Rowland Unified School District) were in regular, in-person session, and prior social distancing requirements and capacity limitations issued by Los Angeles County Department of Health in response to the COVID-19 pandemic had been lifted. Intersection 6 currently does not exist, as it is a future planned project driveway intersection.

F. Project Traffic Generation: Traffic volumes expected to be generated by the proposed project were forecast for the weekday AM and PM peak hours, and over a 24-hour period. Trip generation rates provided in the Institute of Transportation Engineers' (ITE) *Trip Generation Manual*[1] were utilized to forecast project traffic generation for the proposed project and existing site uses. Specifically, ITE Land Use Code 210 (Single-Family Detached Housing) and ITE Land Use Code 215 (Single-Family Attached Housing) trip generation average rates were used to forecast the traffic volumes expected to be generated by the proposed residential units planned for Lots 1, 2, and 5, while ITE Land Use Code 220 (Multifamily Housing [Low-Rise]) trip generation average rates were used to forecast the multi-family residential units planned for Lot 3. ITE Land Use Code 411 (Public Park) trip generation average rates were used to forecast the traffic volumes expected to be generated by the public parks planned for Lots 4 and 6. As the park components of the proposed project are intended to be neighborhood-serving in nature, a walk-in adjustment of 50% was applied in order to account for the anticipated use of the parks by residents of the proposed project as well as the general public, including residents from the existing neighborhoods nearby.

Trip generation forecasts were also prepared for the existing Royal Vista Golf Course components which are to be removed in order to accommodate the proposed project. ITE Land Use Code 430 (Golf Course) and Land Use Code 432 (Golf Driving Range) trip generation average rates were used to forecast the existing trips generated by the golf holes and driving range which will be demolished. These existing trips were applied as a credit towards the proposed project's trip generation forecast.

The trip generation forecast for the proposed project is summarized in ***Table 1 – Project Trip Generation Forecast***. As presented in *Table 1*, the proposed project is expected to generate 176 net new vehicle trips (31 inbound trips and 145 outbound trips) during the weekday AM peak hour. During the weekday PM peak hour, the proposed project is expected to generate 204 net new vehicle trips (136 inbound trips and 68 outbound trips). Over a 24-hour period, the proposed project is forecast to generate a net increase of 2,243 daily trip ends during a typical weekday (approximately 1,122 inbound trips and approximately 1,122 outbound trips).

G. Project Trip Distribution Pattern: See attached ***Figures 3*** through ***6 – Project Trip Distribution***, which present the residential distribution patterns to Lots 1, 2, 3, and 5, respectively. It should be noted that in order to provide a conservative assessment of project traffic along East Walnut Drive South, project trips to and from the Lot 2 and Lot 3 driveways have been assigned to the Lot 2 driveway only. Actual vehicle trips at the Lots 2 and 3 project driveways would be lower

[1] Institute of Transportation Engineers *Trip Generation Manual*, 11th Edition, Washington, D.C., 2021.

than assumed for analysis purposes. ***Figure 7 – Existing Use Trip Distribution*** presents the distribution pattern for the portions of the Royal Vista Golf Course which is to be removed.

H. Year 2026 Cumulative Traffic: LLG will research data on file with the Cities of Industry, Walnut, Diamond Bar, and the County of Los Angeles in order to identify other proposed development projects (related projects) within a one-mile radius of the site which may contribute towards cumulative deficiencies on the adjacent street system in the vicinity of the proposed project.

LLG will also apply an annual ambient growth factor to the existing year 2021 traffic volumes in order to forecast the future year 2026 cumulative traffic volumes. The ambient growth factor will be based on the general traffic growth factors provided in the Los Angeles County 2010 Congestion Management Program (CMP) manual for the project study area (i.e., RSA 26, which is generally bounded by Azusa, Glendora, West Covina, Diamond Bar, and Hacienda Heights). Based on information provided by the CMP manual, existing traffic volumes are expected to increase at an annual compounding rate of 0.38% per year between the years 2020 and 2025 (i.e., [1.066/1.046]^(1/5) = 1.0038 or 0.38%), and at an annual compounding rate of 0.37% between the years 2025 and 2030 (i.e., [1.086/1.066]^(1/5) = 1.0037 or 0.37%). In order to forecast the future year 2026 traffic conditions, the more conservative growth rate of 0.38% per year will be applied between the years 2021 and 2026, resulting in a total growth factor of 1.91% (i.e., [1+0.0038]^(2026-2021) = 1.0191 or 1.91%).

I. Site Access Studies: The following additional transportation studies will be prepared.

Operational Analysis: Evaluation of the project's site access and circulation operations will focus on the 10 study intersections highlighted in Item D. The Highway Capacity Manual (HCM), 6th Edition intersection level of service and queuing methodologies for signalized and unsignalized intersections will be utilized. The following analysis scenarios will be prepared for the weekday AM and PM peak hour conditions in order to assess potential effects on queue lengths at the study intersections associated with the proposed project:

(a) Existing Traffic Condition;

(b) Future 2026 Cumulative Without Project Traffic Condition (For Informational Purposes);

(c) Future 2026 Cumulative Plus Project Traffic Condition; and

(d) Scenario (c) with Corrective Improvements, if necessary.

Construction Analysis: The project site location and the anticipated construction staging and phasing will be reviewed to determine if project construction

activities have the potential to negatively affect existing pedestrian, bicycle, transit, or vehicle circulation. LLG will review and discuss the criteria for construction analysis as it pertains to the proposed project.

Local Residential Street Cut-Through Analysis: LLG will review and discuss the criteria for local residential street cut-through analysis as it relates to the proposed project. The site access and circulation scheme will be reviewed in order to determine if the project would generate vehicle trips that could be classified as cut-through trips (i.e., trips made as an alternative to trips along congested arterial street segments) that would result in adverse effects on local residential streets.

Additional Site Access Analyses: The County's *Transportation Impact Analysis Guidelines* include criteria to determine if Traffic Access Management, Traffic Queuing Analysis, and Traffic Event Management Studies would be required for a development project. The project is not proposing to provide a driveway on a rural cross-section two-lane highway; therefore, it is determined that an access management study pursuant to the "Access Management for Private Developments Guidelines Manual" (May 2011) is not applicable to the proposed project. The proposed residential development project is not planned to accommodate any intermittent public events; therefore, it is determined that an event management study is not applicable to the proposed project. The proposed residential project is not planned to result in on-site queuing associated with commercial uses which could interfere with circulation and access to adjacent parcels (e.g., restaurant drive-through service lanes).

Traffic Signal Warrant Analysis: Traffic signal warrant analysis will be prepared for both of the proposed project driveways located along Colima Road (i.e., Int. No. 7 - Project Driveway-Walnut Leaf Drive/Colima Road and Int. No. 8- Tierra Luna-Project Driveway/Colima Road) for the Future 2026 Cumulative Plus Project condition utilizing the applicable warrants outlined in the latest edition of the California *Manual on Uniform Traffic Control Devices (*MUTCD). The following applicable traffic signal warrants from the California MUTCD document will be prepared:

- Warrant 1: Eight-Hour Vehicular Volume
- Warrant 2: Four-Hour Vehicular Volume
- Warrant 3: Peak Hour Volume
- Warrant 7: Crash Experience

J. Other Issues/Items:

- Caltrans Facilities Analysis: In compliance with State law, Caltrans also now requires VMT-based analysis of development projects. Caltrans' *Vehicle Miles Traveled-Focused Transportation Impact Study Guidelines* (dated May

20, 2020) states that Caltrans will review and comment on impact determinations which are consistent with OPR's Technical Advisory and State greenhouse gas (GHG) emissions goals. LLG believes that the VMT analysis requirements set forth in the Los Angeles County Transportation Impact Guidelines are consistent with the Technical Advisory and State GHG goals, and therefore no separate VMT analysis will be prepared for Caltrans. However, Caltrans has also released the *Interim Land Development and Intergovernmental Review (LD-IGR) Safety Review Practitioner's Guide* (dated July 2020), which requires a detailed safety review for projects which are expected to affect the State Highway System. Therefore, based on the project site location and proximity to the SR-60 Freeway, existing and future year analyses will be prepared for the Fairway Drive ramp intersections in order to address any potential concerns Caltrans may have in accordance with the *Interim LD-IGR Safety Review Practitioner's Guide*.

Pending your review of the above information, we will proceed with the transportation impact analysis. Please feel free to contact us at 626.796.2322 if you have any questions, comments, or suggested revisions regarding the above. Thank you.

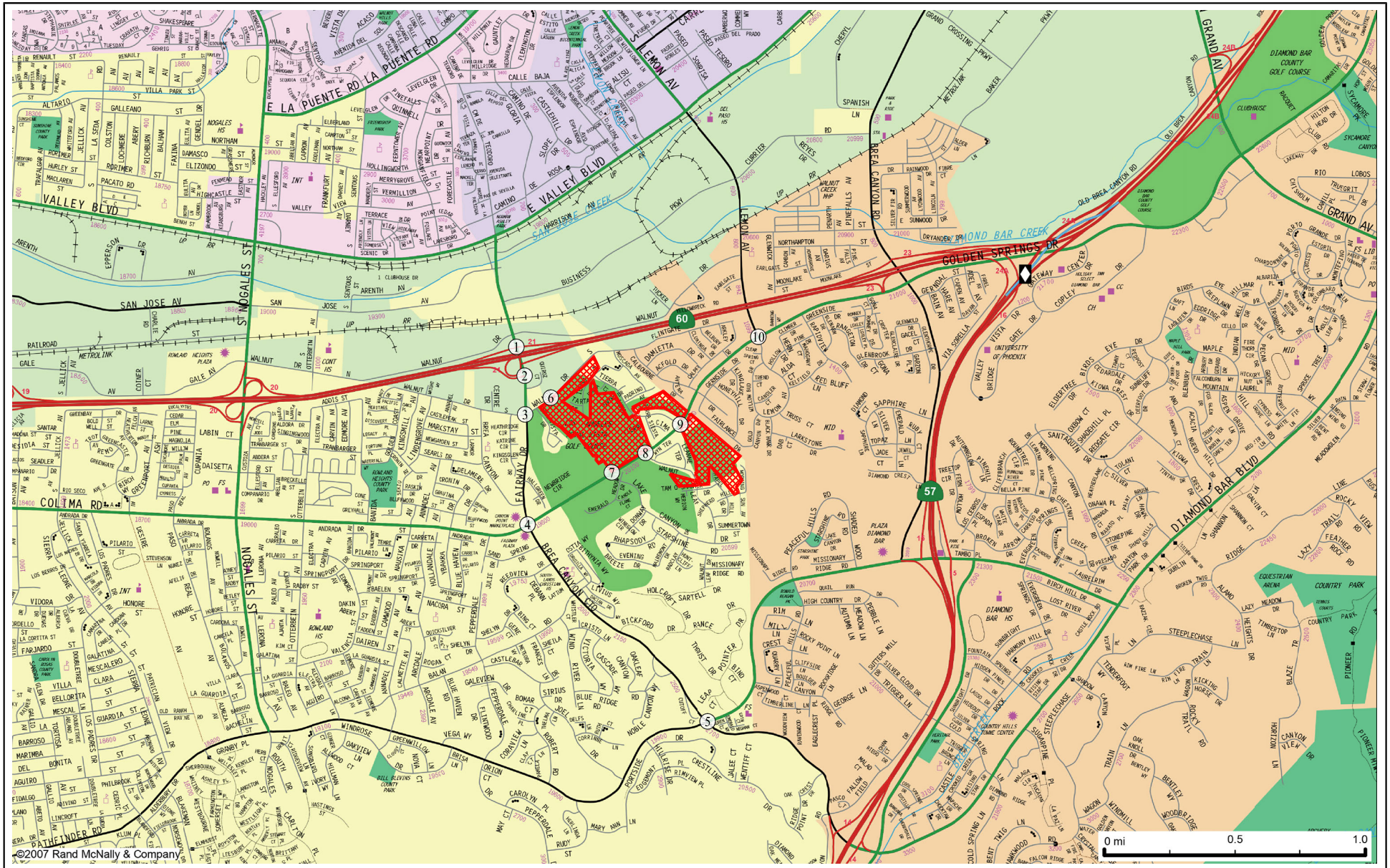
Approved by:

_____ _____

Los Angeles County Public Works Date

Attachments

c: File



MAP SOURCE: RAND MCNALLY & COMPANY

Project Site

Study Intersection

LINSCOTT LAW & GREENSPAN engineers

Figure 1
Vicinity Map

Royal Vista Residential and Parks Project

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SOURCE: KTGY ARCHITECTURE + PLANNING

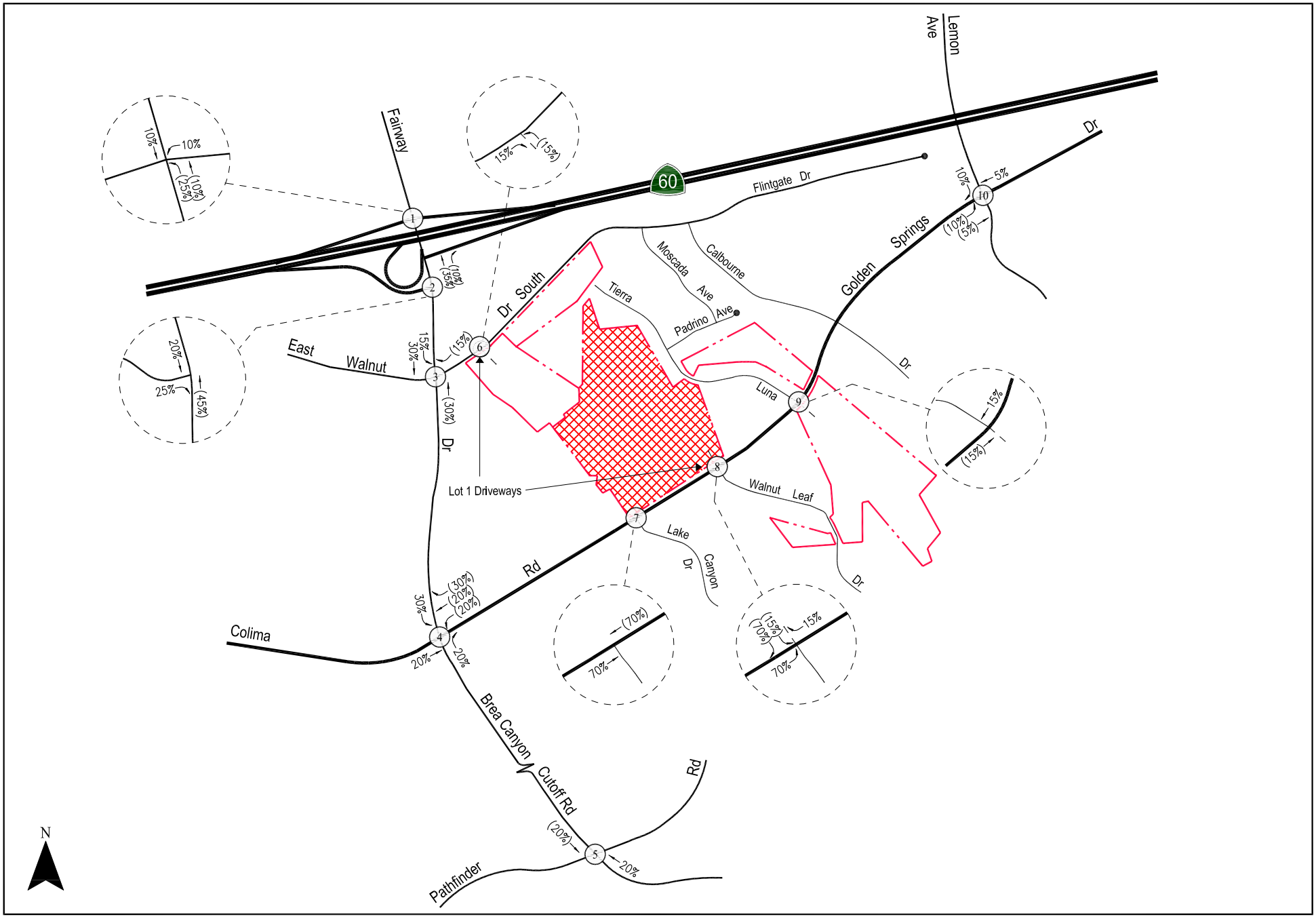
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Figure 2
Site Plan

Royal Vista Residential and Parks Project

LINSCOTT LAW & GREENSPAN engineers

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LINSCOTT LAW & GREENSPAN engineers

Project Site

XX Study Intersection

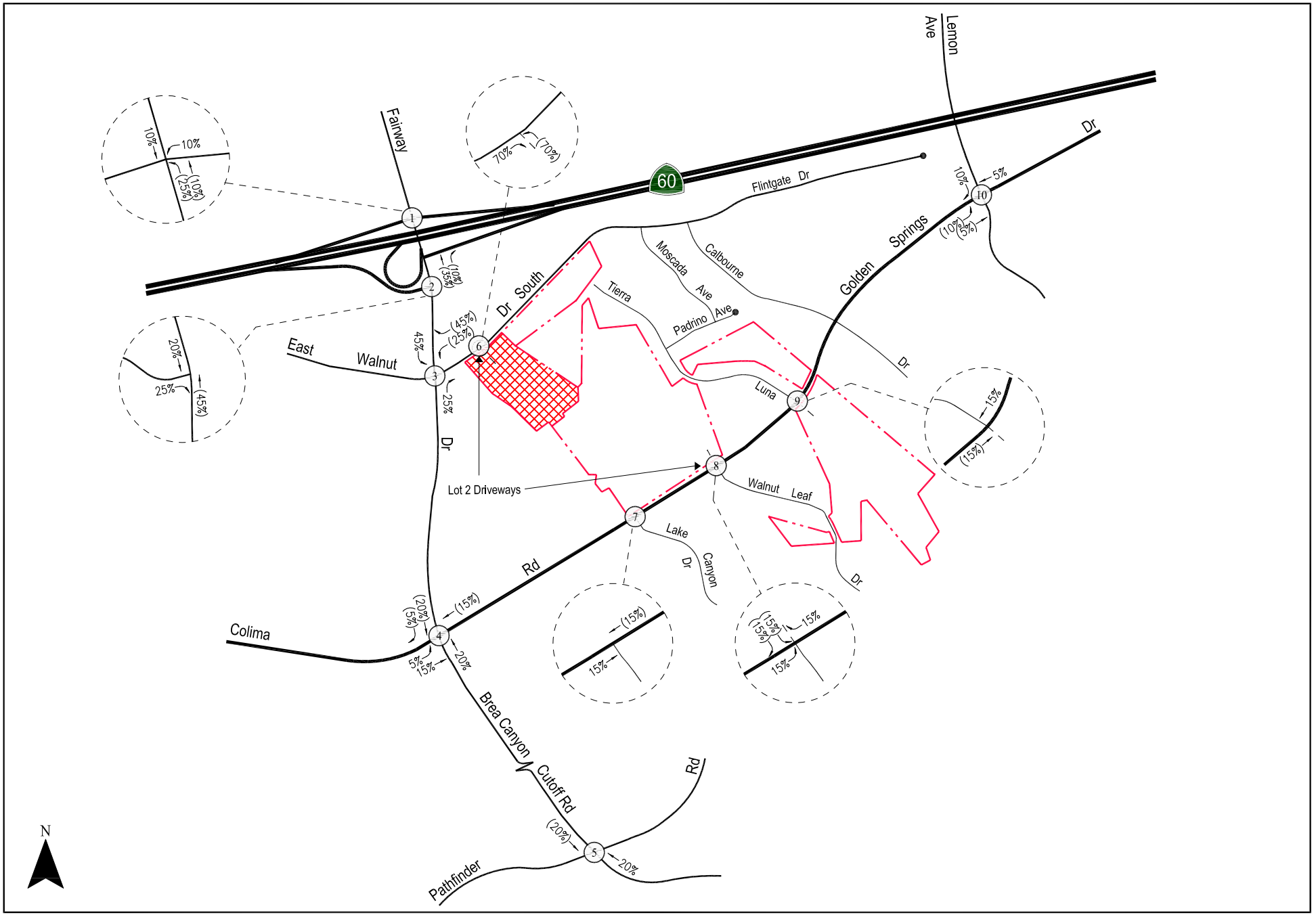
XX = Inbound Percentages

(XX) = Outbound Percentages

Figure 3

Project Trip Distribution - Lot 1

Royal Vista Residential and Parks Project



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LINSCOTT LAW & GREENSPAN engineers

Project Site

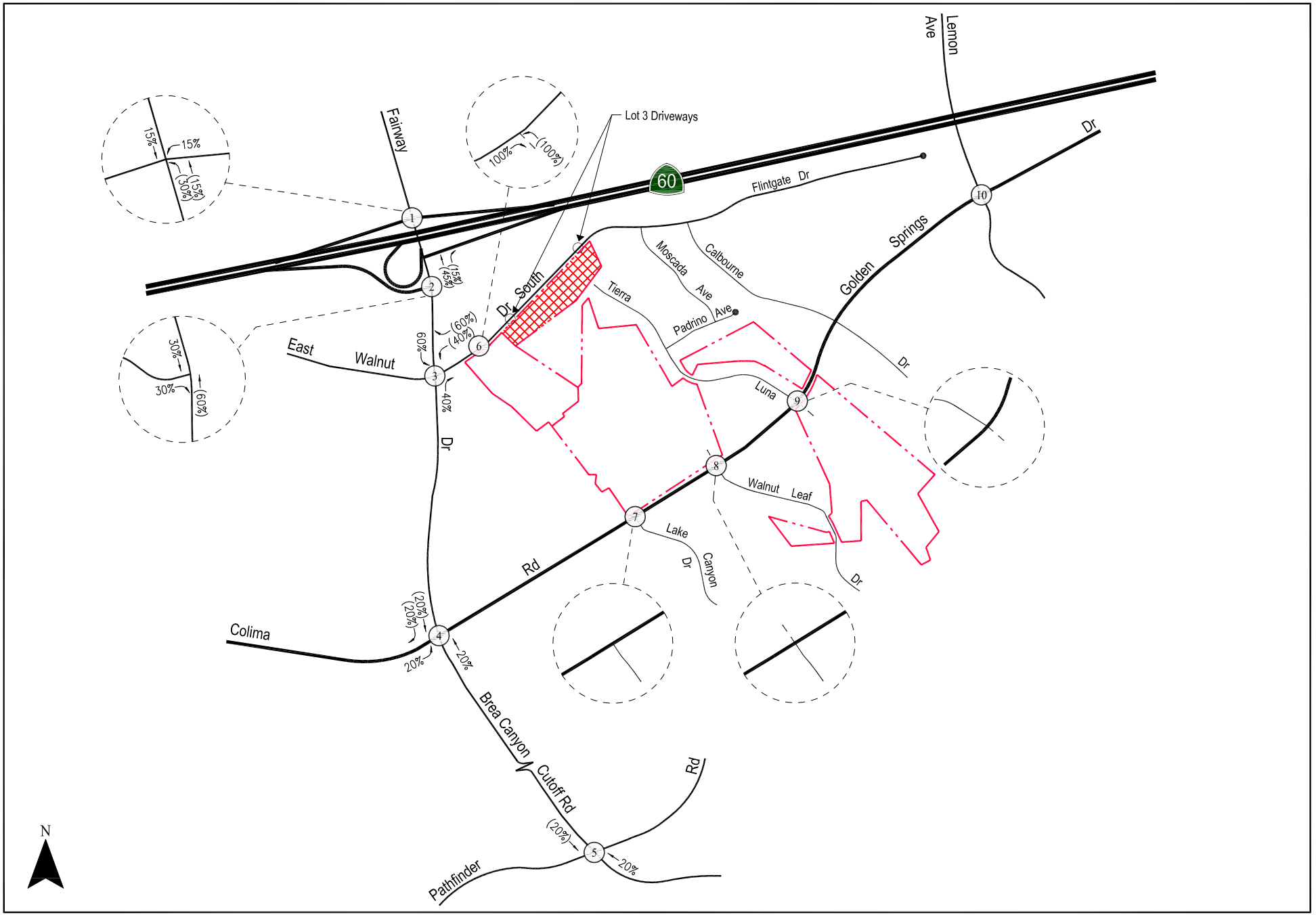
(XX) Study Intersection

XX = Inbound Percentages

(XX) = Outbound Percentages

Figure 4
Project Trip Distribution - Lot 2

Royal Vista Residential and Parks Project



Project Site

(XX) Study Intersection

XX = Inbound Percentages

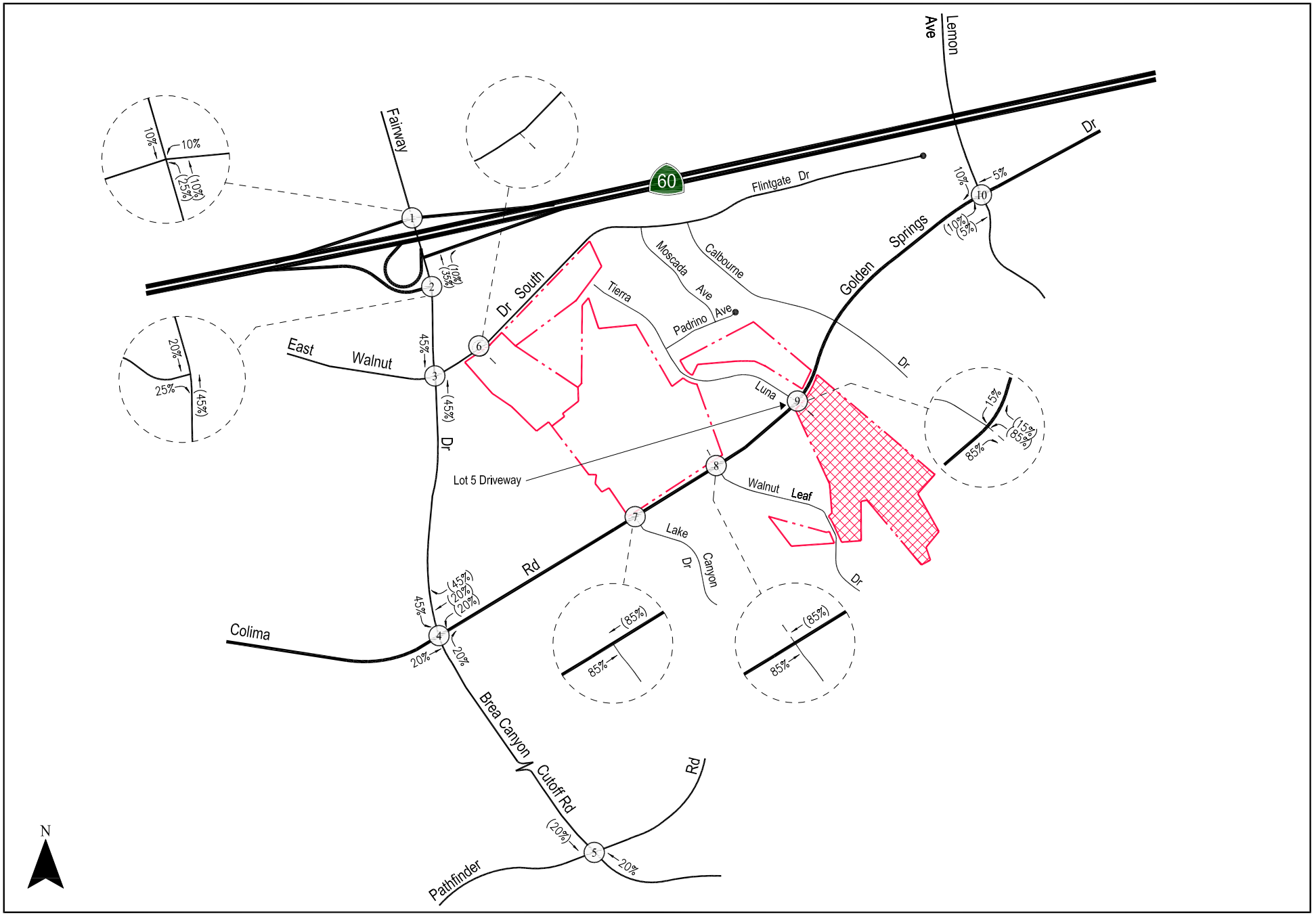
(XX) = Outbound Percentages

LINSCOTT LAW & GREENSPAN engineers

Figure 5
Project Trip Distribution - Lot 3

Royal Vista Residential and Parks Project

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LINSCOTT LAW & GREENSPAN engineers

Project Site

(XX) Study Intersection

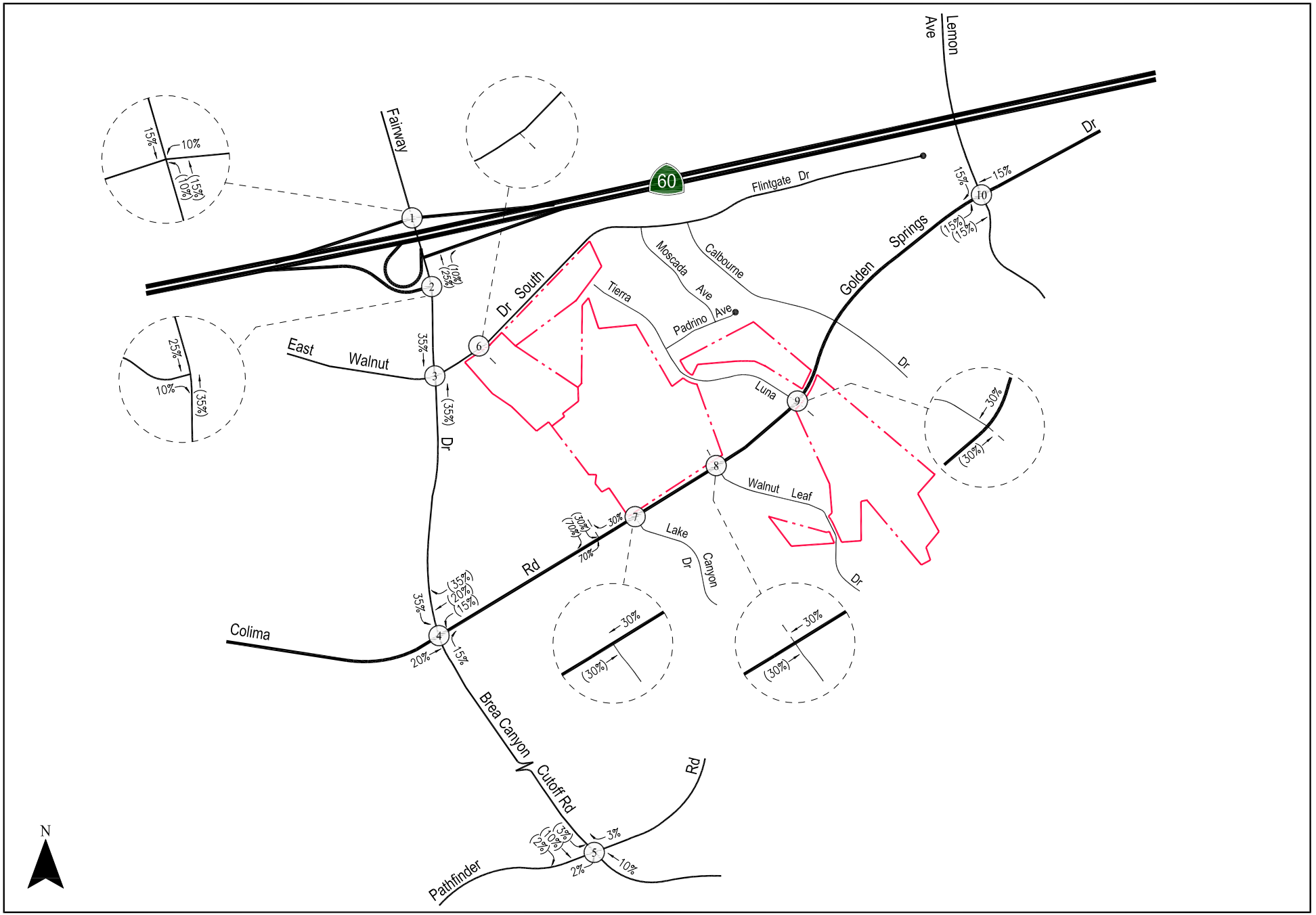
XX = Inbound Percentages

(XX) = Outbound Percentages

Figure 6

Project Trip Distribution - Lot 5

Royal Vista Residential and Parks Project



Project Site

(XX) Study Intersection

XX = Inbound Percentages

(XX) = Outbound Percentages

Figure 7

Existing Use Trip Distribution

Royal Vista Residential and Parks Project

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Table 1
PROJECT TRIP GENERATION FORECAST

TRIP GENERATION RATES [1]									
	ITE LAND USE		WEEKDAY	WEEKDAY AM PEAK HOUR			WEEKDAY PM PEAK HOUR		
ITE LAND USE CATEGORY	CODE	VARIABLE	DAILY	IN (%)	OUT (%)	TOTAL	IN (%)	OUT (%)	TOTAL
Single-Family Detached Housing	210	Per Dwelling Unit	9.43	26%	74%	0.70	63%	37%	0.94
Single-Family Attached Housing	215	Per Dwelling Unit	7.20	31%	69%	0.48	57%	43%	0.57
Multi-Family Housing (Low-Rise)	220	Per Dwelling Unit	6.74	24%	76%	0.40	63%	37%	0.51
Public Park	411	Per Acre	0.78	59%	41%	0.02	55%	45%	0.11
Golf Course	430	Per Hole	30.38	79%	21%	1.76	53%	47%	2.91
Golf Driving Range	432	Per Driving Position	13.65	61%	39%	0.40	45%	55%	1.25

PROJECT TRIP GENERATION FORECAST									
	ITE LAND USE		DAILY TRIP ENDS [2]	AM PEAK HOUR VOLUMES [2]			PM PEAK HOUR VOLUMES [2]		
LAND USE	CODE	SIZE	VOLUMES	IN	OUT	TOTAL	IN	OUT	TOTAL
Proposed Project									
Planning Area Lot 1									
Single-Family Residential	210	116 DU	1,094	21	60	81	69	40	109
Duplex/Triplex Residential	215	52 DU	374	8	17	25	17	13	30
Planning Area Lot 2									
Single-Family Residential	210	32 DU	302	6	16	22	19	11	30
Planning Area Lot 3									
Multi-Family Housing	220	72 DU	485	7	22	29	23	14	37
Planning Area Lot 5									
Single-Family Residential	210	52 DU	490	9	27	36	31	18	49
Duplex/Triplex Residential	215	36 DU	259	5	12	17	12	9	21
Planning Area Lots 4 and 6									
Public Park	411	7.40 Acres	6	Nom.	Nom.	Nom.	1	Nom.	1
- Less Walk-In Adjustment (50%) [3]			(3)	Nom.	Nom.	Nom.	(1)	Nom.	(1)
Subtotal Proposed Project			***3,007***	***56***	***154***	***210***	***171***	***105***	***276***
Existing Uses to be Removed									
Royal Vista Golf Holes	430	(13) Holes	(395)	(18)	(5)	(23)	(20)	(18)	(38)
Royal Vista Driving Range	432	(27) Driv. Pos.	(369)	(7)	(4)	(11)	(15)	(19)	(34)
Subtotal Existing Uses			***(764)***	***(25)***	***(9)***	***(34)***	***(35)***	***(37)***	***(72)***
NET NEW PROJECT TRIPS			***2,243***	***31***	***145***	***176***	***136***	***68***	***204***

[1] Source: ITE "Trip Generation Manual", 11th Edition, 2021.
[2] Trips are one-way traffic movements, entering or leaving.
[3] The 5.81-acre public neighborhood park planned for Lot 4 and the 1.59-acre public pocket park planned for Lot 6 (providing a total of 7.40 acres of public park space) are intended to be neighborhood-serving in nature. A walk-in adjustment of 50% has been applied in order to account for the anticipated use of the parks by residents of the proposed project as well as the general public, including residents from the existing neighborhoods nearby.
"Nom." = Nominal trips.

APPENDIX B

TRAFFIC SIGNAL WARRANT WORKSHEETS:

LOT 1 & LOT 2 PROJECT DRIVEWAY-WALNUT LEAF DRIVE/COLIMA ROAD
TIERRA LUNA-LOT 5 PROJECT DRIVEWAY/COLIMA ROAD

Future Cumulative with Project Conditions

Figure 4C-101 (CA). Traffic Signal Warrants Worksheet (Sheet 1 of 5)

DIST ____ CO ____ RTE ____ PM ____

COUNT DATE November 2021
CALC GT DATE November 2022
CHK ____ DATE ____

Major St: Colima Road — Critical Approach Speed 45 mph
Minor St: Project Driveway - Walnut Leaf Drive — Critical Approach Speed 25 mph

Speed limit or critical speed on major street traffic > 40 mph..... ☑
or
In built up area of isolated community of < 10,000 population..... ☐
} RURAL (R)
☐ URBAN (U)

WARRANT 1 - Eight Hour Vehicular Volume SATISFIED YES ☐ NO ☐
(Condition A or Condition B or combination of A and B must be satisfied)

Condition A - Minimum Vehicle Volume 100% SATISFIED YES ☐ NO ☑
80% SATISFIED YES ☐ NO ☑

	MINIMUM REQUIREMENTS (80% SHOWN IN BRACKETS)												
	U	R	U	R	8:00 AM	12:00 PM	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM	Hour
APPROACH LANES	1		2 or More										
Both Approaches Major Street	500 (400)	350 (280)	600 (480)	420 (336)	1236	1252	1275	1361	1576	1967	2037	1613	
Highest Approach Minor Street	150 (120)	105 (84)	200 (160)	140 (112)	70	42	53	47	46	49	49	47	

Condition B - Interruption of Continuous Traffic 100% SATISFIED YES ☐ NO ☑
80% SATISFIED YES ☐ NO ☑

	MINIMUM REQUIREMENTS (80% SHOWN IN BRACKETS)												
	U	R	U	R	8:00 AM	12:00 PM	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM	Hour
APPROACH LANES	1		2 or More										
Both Approaches Major Street	750 (600)	525 (420)	900 (720)	630 (504)	1236	1252	1275	1361	1576	1967	2037	1613	
Highest Approach Minor Street	75 (60)	53 (42)	100 (80)	70 (56)	70	42	53	47	46	49	49	47	

Combination of Conditions A & B SATISFIED YES ☐ NO ☑

REQUIREMENT	CONDITION	✓	FULFILLED
TWO CONDITIONS SATISFIED 80%	A. MINIMUM VEHICULAR VOLUME		Yes ☐ No ☑
	AND, B. INTERRUPTION OF CONTINUOUS TRAFFIC		
AND, AN ADEQUATE TRIAL OF OTHER ALTERNATIVES THAT COULD CAUSE LESS DELAY AND INCONVENIENCE TO TRAFFIC HAS FAILED TO SOLVE THE TRAFFIC PROBLEMS			Yes ☐ No ☑

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Future Cumulative with Project Conditions

Figure 4C-101 (CA). Traffic Signal Warrants Worksheet (Sheet 2 of 5)

WARRANT 2 - Four Hour Vehicular Volume **SATISFIED* YES ☐ NO ☑**

Record hourly vehicular volumes for any four hours of an average day.

APPROACH LANES	One	2 or More	3:00 PM	4:00 PM	5:00 PM	6:00 PM	Hour
Both Approaches - Major Street		✓	1576	1967	2037	1613	
Higher Approach - Minor Street	✓		46	49	49	47	

*All plotted points fall above the applicable curve in Figure 4C-1. (URBAN AREAS)	Yes ☐	No ☐
OR, All plotted points fall above the applicable curve in Figure 4C-2. (RURAL AREAS)	Yes ☐	No ☑

WARRANT 3 - Peak Hour **SATISFIED YES ☐ NO ☑**
(Part A or Part B must be satisfied)

PART A **SATISFIED YES ☐ NO ☑**

(All parts 1, 2, and 3 below must be satisfied for the same one hour, for any four consecutive 15-minute periods)

1. The total delay experienced by traffic on one minor street approach (one direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach, or five vehicle-hours for a two-lane approach; AND 49 veh * 24.2 sec / 3600 sec/hr = 0.33 veh-hrs	Yes ☐	No ☑
2. The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; AND	Yes ☐	No ☑
3. The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches.	Yes ☑	No ☐

PART B **SATISFIED YES ☐ NO ☑**

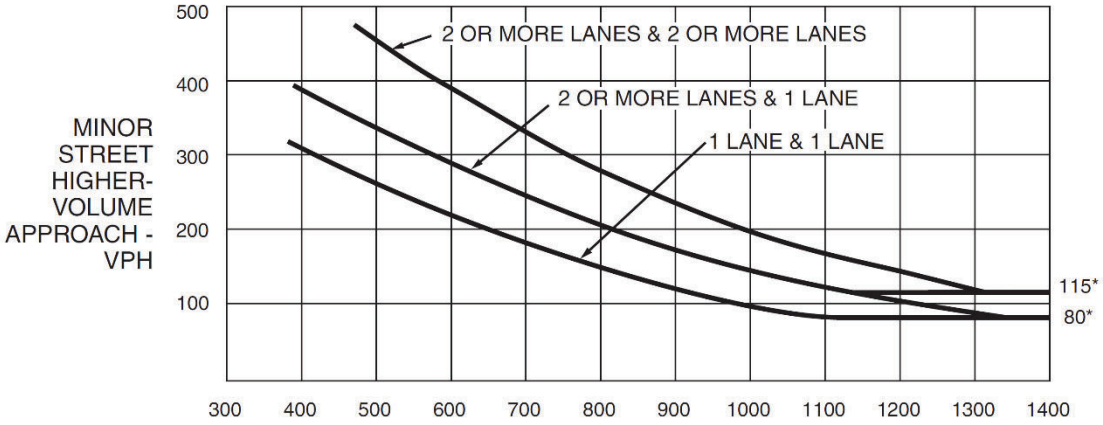
APPROACH LANES	One	2 or More	4:45 PM	Hour
Both Approaches - Major Street		✓	1927	
Higher Approach - Minor Street	✓		49	

The plotted point falls above the applicable curve in Figure 4C-3. (URBAN AREAS)	Yes ☐	No ☐
OR, The plotted point falls above the applicable curve in Figure 4C-4. (RURAL AREAS)	Yes ☐	No ☑

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Future Cumulative with Project Conditions

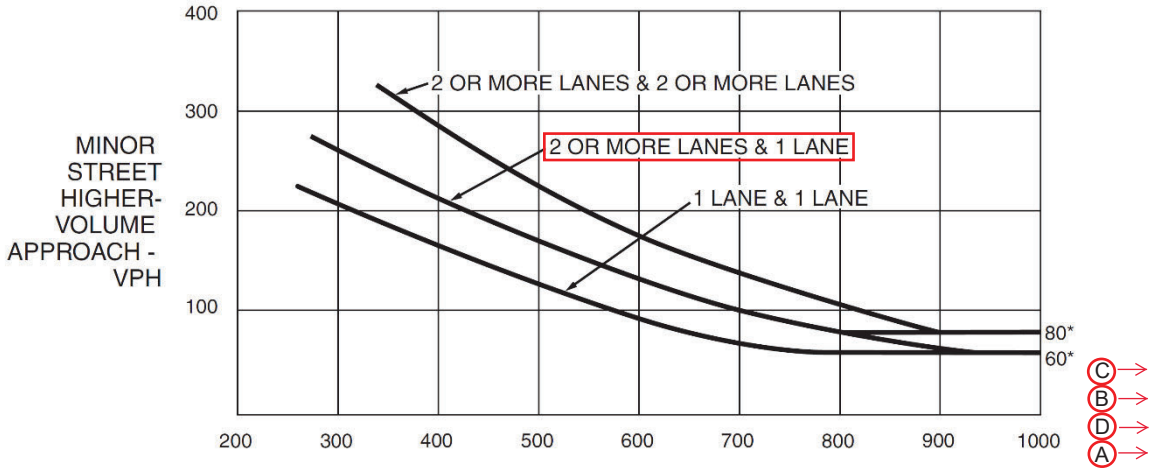
Figure 4C-1. Warrant 2, Four-Hour Vehicular Volume



*Note: 115 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 80 vph applies as the lower threshold volume for a minor-street approach with one lane.

Figure 4C-2. Warrant 2, Four-Hour Vehicular Volume (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)

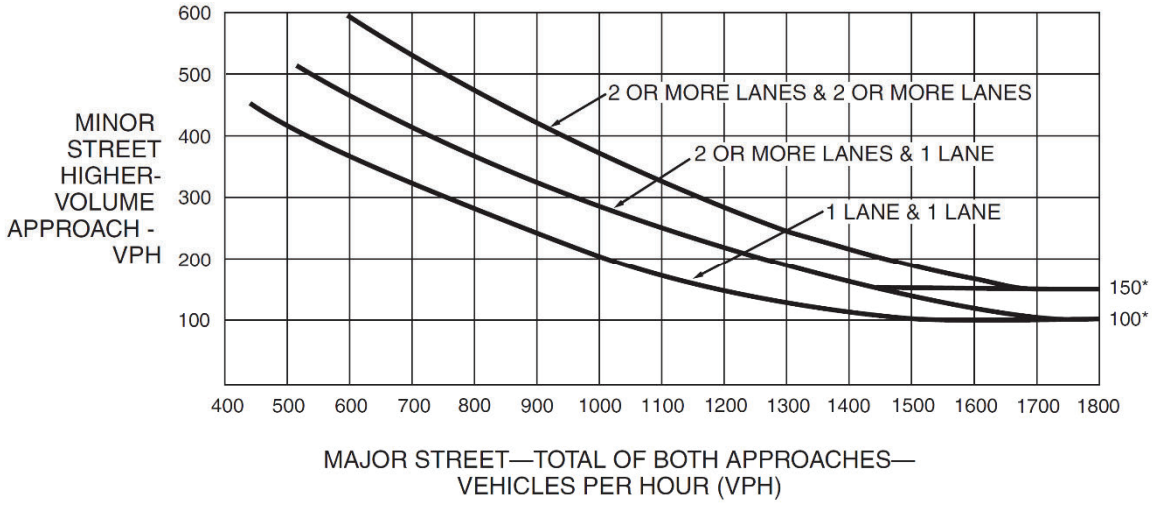


*Note: 80 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 60 vph applies as the lower threshold volume for a minor-street approach with one lane.

A = (1576,46)
B = (1967,49)
C = (2037,49)
D = (1613,47)

Future Cumulative with Project Conditions

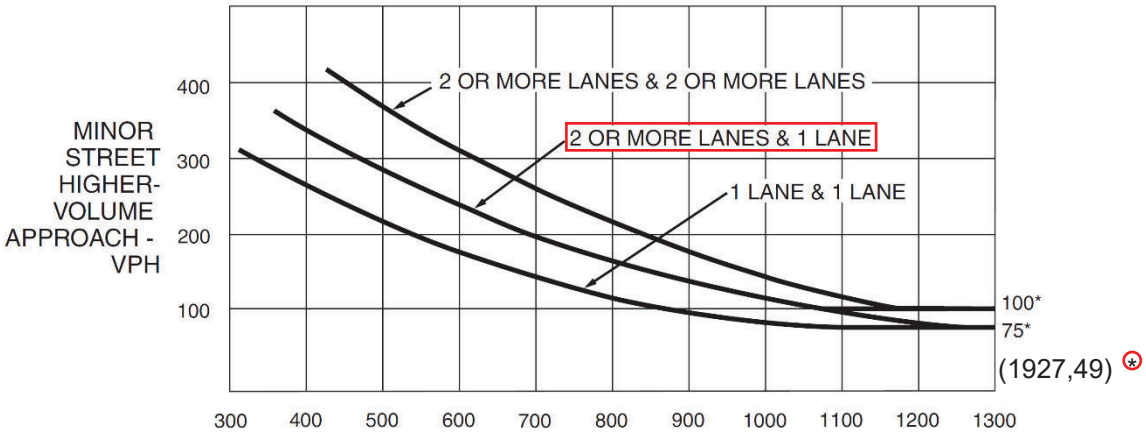
Figure 4C-3. Warrant 3, Peak Hour



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Future Cumulative with Project Conditions

Figure 4C-101 (CA). Traffic Signal Warrants Worksheet (Sheet 4 of 5)

WARRANT 6 - Coordinated Signal System **SATISFIED YES ☐ NO ☐**
(All Parts Must Be Satisfied)

MINIMUM REQUIREMENTS	DISTANCE TO NEAREST SIGNAL	
≥ 1000 ft	N _____ ft, S _____ ft, E _____ ft, W _____ ft	Yes ☐ No ☐
On a one-way street or a street that has traffic predominantly in one direction, the adjacent traffic control signals are so far apart that they do not provide the necessary degree of vehicular platooning.		Yes ☐ No ☐
OR, On a two-way street, adjacent traffic control signals do not provide the necessary degree of platooning and the proposed and adjacent traffic control signals will collectively provide a progressive operation.		

WARRANT 7 - Crash Experience Warrant **SATISFIED YES ☐ NO ☑**
(All Parts Must Be Satisfied)

Adequate trial of alternatives with satisfactory observance and enforcement has failed to reduce the crash frequency.			Yes ☐ No ☑
REQUIREMENTS	Number of crashes reported within a 12 month period susceptible to correction by a traffic signal, and involving injury or damage exceeding the requirements for a reportable crash.		Yes ☐ No ☑
5 OR MORE	Four collisions over five years. Refer to Appendix Table B-3.		
REQUIREMENTS	CONDITIONS	✓	
ONE CONDITION SATISFIED 80%	Warrant 1, Condition A - Minimum Vehicular Volume		Yes ☐ No ☑
	OR, Warrant 1, Condition B - Interruption of Continuous Traffic		
	OR, Warrant 4, Pedestrian Volume Condition Ped Vol ≥ 80% of Figure 4C-5 through Figure 4C-8		

WARRANT 8 - Roadway Network **SATISFIED YES ☐ NO ☐**
(All Parts Must Be Satisfied)

MINIMUM VOLUME REQUIREMENTS	ENTERING VOLUMES - ALL APPROACHES	✓	FULFILLED
1000 Veh/Hr	During Typical Weekday Peak Hour _____ Veh/Hr and has 5-year projected traffic volumes that meet one or more of Warrants 1, 2, and 3 during an average weekday.		Yes ☐ No ☐
	OR During Each of Any 5 Hrs. of a Sat. or Sun _____ Veh/Hr		

CHARACTERISTICS OF MAJOR ROUTES	MAJOR ROUTE A	MAJOR ROUTE B	
Hwy. System Serving as Principal Network for Through Traffic			
Rural or Suburban Highway Outside Of, Entering, or Traversing a City			
Appears as Major Route on an Official Plan			
Any Major Route Characteristics Met, Both Streets			Yes ☐ No ☐

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Future Cumulative with Project Conditions

Figure 4C-101 (CA). Traffic Signal Warrants Worksheet (Sheet 1 of 5)

DIST ____ CO ____ RTE ____ PM ____

COUNT DATE November 2021
CALC GT DATE November 2022
CHK ____ DATE ____

Major St: Colima Road — Critical Approach Speed 45 mph
Minor St: Tierra Luna - Project Driveway — Critical Approach Speed 25 mph

Speed limit or critical speed on major street traffic > 40 mph..... ☑
or
In built up area of isolated community of < 10,000 population..... ☐ **RURAL (R)**
☐ **URBAN (U)**

WARRANT 1 - Eight Hour Vehicular Volume **SATISFIED YES ☐ NO ☐**
(Condition A or Condition B or combination of A and B must be satisfied)

Condition A - Minimum Vehicle Volume **100% SATISFIED YES ☐ NO ☑**
80% SATISFIED YES ☐ NO ☑

APPROACH LANES	MINIMUM REQUIREMENTS (80% SHOWN IN BRACKETS) 1 U	1 R	2 or More U	2 or More R	8:00 AM	12:00 PM	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM	Hour
Both Approaches Major Street	500 (400)	350 (280)	600 (480)	420 (336)	1069	1121	1192	1207	1413	1843	1891	1412	
Highest Approach Minor Street	150 (120)	105 (84)	200 (160)	140 (112)	39	12	29	25	20	27	29	19	

Condition B - Interruption of Continuous Traffic **100% SATISFIED YES ☐ NO ☑**
80% SATISFIED YES ☐ NO ☑

APPROACH LANES	MINIMUM REQUIREMENTS (80% SHOWN IN BRACKETS) 1 U	1 R	2 or More U	2 or More R	8:00 AM	12:00 PM	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM	Hour
Both Approaches Major Street	750 (600)	525 (420)	900 (720)	630 (504)	1069	1121	1192	1207	1413	1843	1891	1412	
Highest Approach Minor Street	75 (60)	53 (42)	100 (80)	70 (56)	39	12	29	25	20	27	29	19	

Combination of Conditions A & B **SATISFIED YES ☐ NO ☑**

REQUIREMENT	CONDITION	✓	FULFILLED
TWO CONDITIONS SATISFIED 80%	A. MINIMUM VEHICULAR VOLUME		Yes ☐ No ☑
	AND, B. INTERRUPTION OF CONTINUOUS TRAFFIC		
AND, AN ADEQUATE TRIAL OF OTHER ALTERNATIVES THAT COULD CAUSE LESS DELAY AND INCONVENIENCE TO TRAFFIC HAS FAILED TO SOLVE THE TRAFFIC PROBLEMS			Yes ☐ No ☑

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Future Cumulative with Project Conditions

Figure 4C-101 (CA). Traffic Signal Warrants Worksheet (Sheet 2 of 5)

WARRANT 2 - Four Hour Vehicular Volume **SATISFIED* YES ☐ NO ☑**

Record hourly vehicular volumes for any four hours of an average day.

APPROACH LANES	One	2 or More	3:00 PM	4:00 PM	5:00 PM	6:00 PM
Both Approaches - Major Street		✓	1413	1843	1891	1412
Higher Approach - Minor Street	✓		20	27	29	19

Hour

*All plotted points fall above the applicable curve in Figure 4C-1. (URBAN AREAS)	Yes ☐	No ☐
OR, All plotted points fall above the applicable curve in Figure 4C-2. (RURAL AREAS)	Yes ☐	No ☑

WARRANT 3 - Peak Hour **SATISFIED YES ☐ NO ☑**
(Part A or Part B must be satisfied)

PART A **SATISFIED YES ☐ NO ☑**

(All parts 1, 2, and 3 below must be satisfied for the same one hour, for any four consecutive 15-minute periods)

1. The total delay experienced by traffic on one minor street approach (one direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach, or five vehicle-hours for a two-lane approach; AND 34 veh * 35.2 sec / 3600 sec/hr = 0.31 veh-hrs	Yes ☐	No ☑
2. The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; AND	Yes ☐	No ☑
3. The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches.	Yes ☑	No ☐

PART B **SATISFIED YES ☐ NO ☑**

APPROACH LANES	One	2 or More	4:45 PM
Both Approaches - Major Street		✓	1829
Higher Approach - Minor Street	✓		34

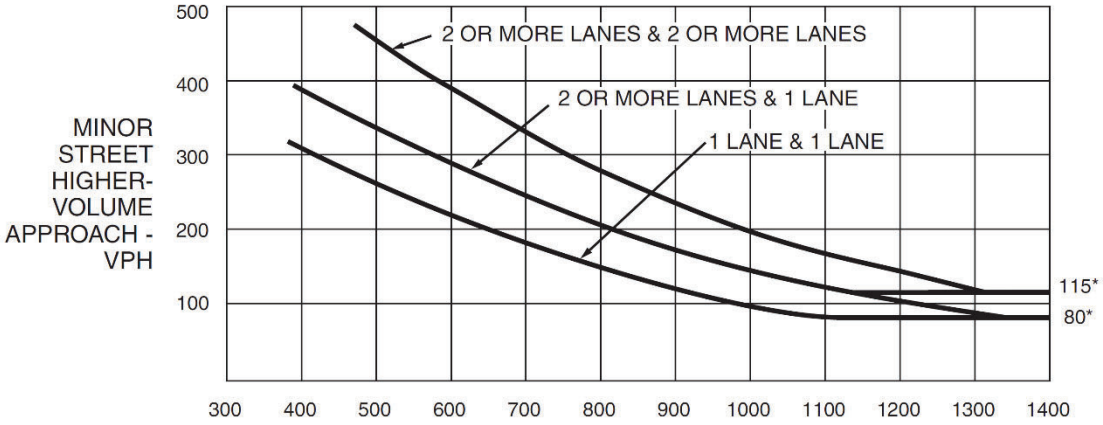
Hour

The plotted point falls above the applicable curve in Figure 4C-3. (URBAN AREAS)	Yes ☐	No ☐
OR, The plotted point falls above the applicable curve in Figure 4C-4. (RURAL AREAS)	Yes ☐	No ☑

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Future Cumulative with Project Conditions

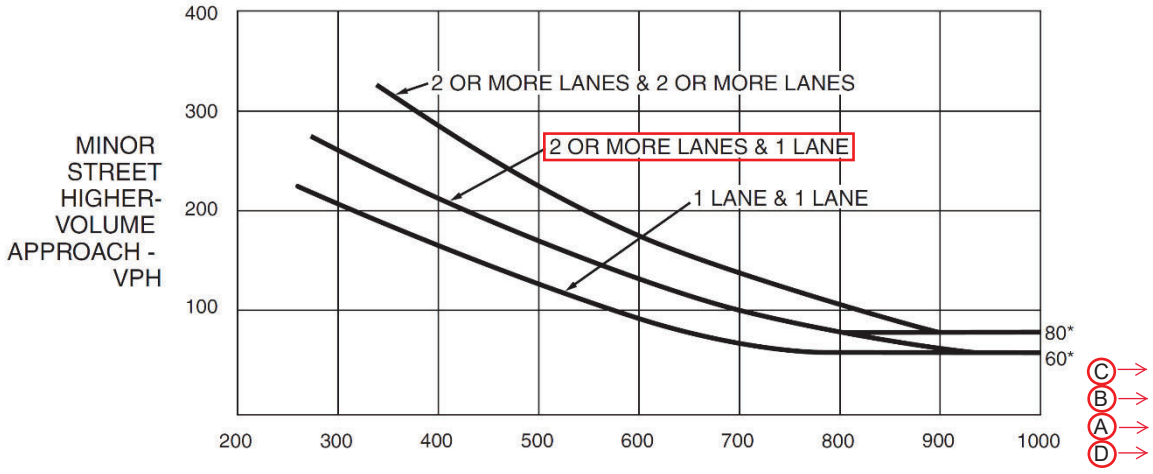
Figure 4C-1. Warrant 2, Four-Hour Vehicular Volume



*Note: 115 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 80 vph applies as the lower threshold volume for a minor-street approach with one lane.

Figure 4C-2. Warrant 2, Four-Hour Vehicular Volume (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)

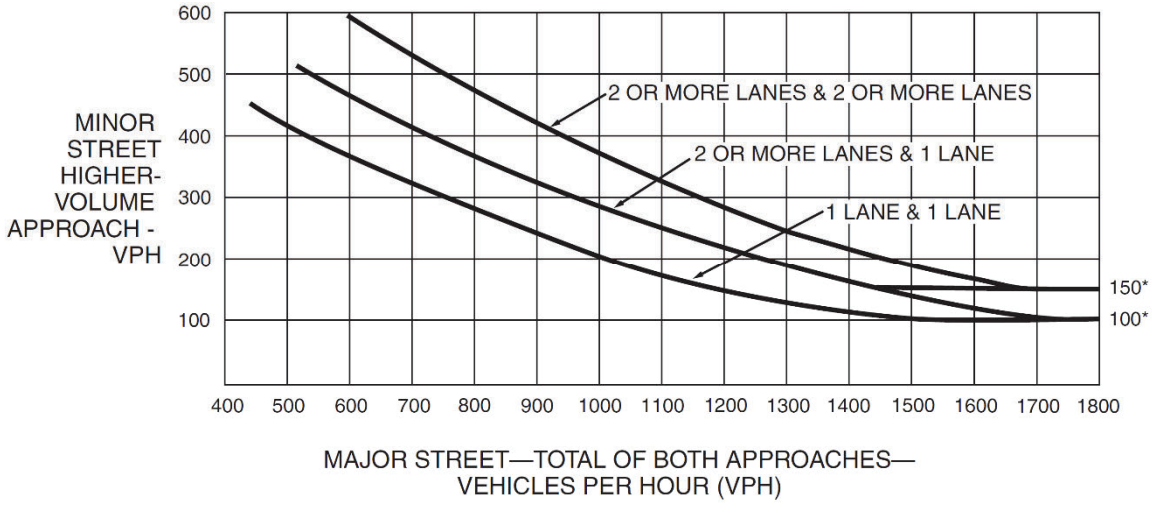


*Note: 80 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 60 vph applies as the lower threshold volume for a minor-street approach with one lane.

A = (1413,20)
B = (1843,27)
C = (1891,29)
D = (1412,19)

Future Cumulative with Project Conditions

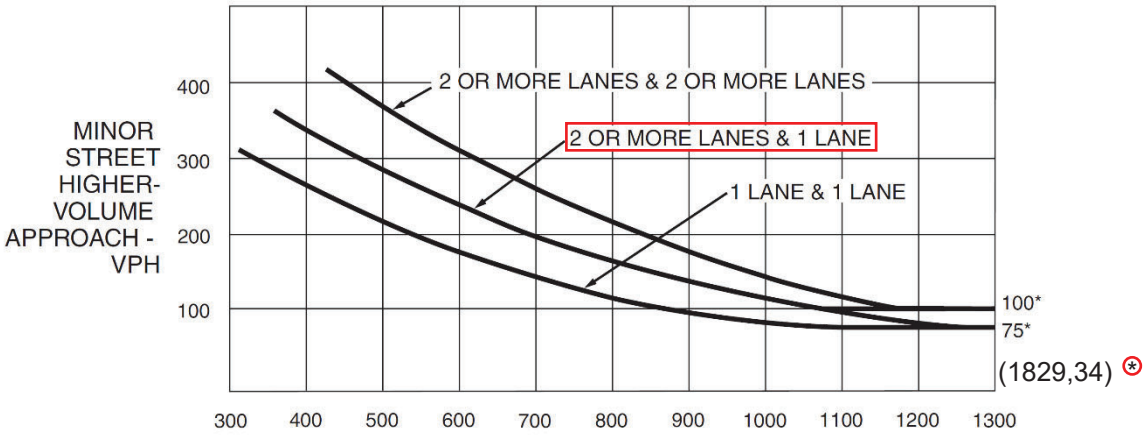
Figure 4C-3. Warrant 3, Peak Hour



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Future Cumulative with Project Conditions

Figure 4C-101 (CA). Traffic Signal Warrants Worksheet (Sheet 4 of 5)

WARRANT 6 - Coordinated Signal System **SATISFIED YES ☐ NO ☐**
(All Parts Must Be Satisfied)

MINIMUM REQUIREMENTS	DISTANCE TO NEAREST SIGNAL	
≥ 1000 ft	N _____ ft, S _____ ft, E _____ ft, W _____ ft	Yes ☐ No ☐
On a one-way street or a street that has traffic predominantly in one direction, the adjacent traffic control signals are so far apart that they do not provide the necessary degree of vehicular platooning.		Yes ☐ No ☐
OR, On a two-way street, adjacent traffic control signals do not provide the necessary degree of platooning and the proposed and adjacent traffic control signals will collectively provide a progressive operation.		

WARRANT 7 - Crash Experience Warrant **SATISFIED YES ☐ NO ☑**
(All Parts Must Be Satisfied)

Adequate trial of alternatives with satisfactory observance and enforcement has failed to reduce the crash frequency.			Yes ☐ No ☑
REQUIREMENTS	Number of crashes reported within a 12 month period susceptible to correction by a traffic signal, and involving injury or damage exceeding the requirements for a reportable crash.		Yes ☐ No ☑
5 OR MORE	Two collisions over five years. Refer to Appendix Table B-3.		
REQUIREMENTS	CONDITIONS	✓	Yes ☐ No ☑
ONE CONDITION SATISFIED 80%	Warrant 1, Condition A - Minimum Vehicular Volume		
	OR, Warrant 1, Condition B - Interruption of Continuous Traffic		
	OR, Warrant 4, Pedestrian Volume Condition Ped Vol ≥ 80% of Figure 4C-5 through Figure 4C-8		

WARRANT 8 - Roadway Network **SATISFIED YES ☐ NO ☐**
(All Parts Must Be Satisfied)

MINIMUM VOLUME REQUIREMENTS	ENTERING VOLUMES - ALL APPROACHES	✓	FULFILLED
1000 Veh/Hr	During Typical Weekday Peak Hour _____ Veh/Hr and has 5-year projected traffic volumes that meet one or more of Warrants 1, 2, and 3 during an average weekday.		Yes ☐ No ☐
	OR During Each of Any 5 Hrs. of a Sat. or Sun _____ Veh/Hr		

CHARACTERISTICS OF MAJOR ROUTES	MAJOR ROUTE A	MAJOR ROUTE B	
Hwy. System Serving as Principal Network for Through Traffic			
Rural or Suburban Highway Outside Of, Entering, or Traversing a City			
Appears as Major Route on an Official Plan			
Any Major Route Characteristics Met, Both Streets			Yes ☐ No ☐

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Appendix Table B-1
TRAFFIC SIGNAL WARRANT VOLUMES WORKSHEET
Project Driveway-Walnut Leaf Drive/Colima Road
Eight-Hour and Four-Hour Volumes

	EXISTING VOLUMES [1]				AMBIENT GROWTH VOLUMES [2]				CUMULATIVE PROJECT VOLUMES [3]				PROPOSED PROJECT VOLUMES [4]				FUTURE CUMULATIVE WITH PROJECT VOLUMES [5]				
	Major Street		Minor Street		Major Street		Minor Street		Major Street		Minor Street		Major Street		Minor Street		Major Street		Minor Street		
HOUR	Colima Road		Project Driveway/ Walnut Leaf Drive		Colima Road		Project Driveway/ Walnut Leaf Drive		Colima Road		Project Driveway/ Walnut Leaf Drive		Colima Road		Project Driveway/ Walnut Leaf Drive		Colima Road		Project Driveway/ Walnut Leaf Drive		TOTAL INTERSECTION VOLUME/*RANK*
BEGINNING	EB	WB	NB	SB	EB	WB	NB	SB	EB	WB	NB	SB	EB	WB	NB	SB	EB	WB	NB	SB	
12:00 AM	58	43	7	0	1	1	0	0									59	44	7	0	110 *20*
1:00 AM	26	40	3	0	1	1	0	0									27	41	3	0	71 *21*
2:00 AM	12	11	1	0	0	0	0	0									12	11	1	0	24 *24*
3:00 AM	19	24	1	0	0	1	0	0									19	25	1	0	45 *23*
4:00 AM	30	16	7	0	1	0	0	0									31	16	7	0	54 *22*
5:00 AM	69	62	15	0	2	1	0	0									71	63	15	0	149 *19*
6:00 AM	131	221	34	0	3	5	1	0									134	226	35	0	395 *16*
7:00 AM	403	558	65	0	9	13	1	0	37	13	0	0	30	30	0	70	479	614	66	70	1,229 *9*
8:00 AM	497	604	60	0	11	14	1	0	37	13	0	0	30	30	0	70	575	661	61	70	1,367 *6*
9:00 AM	449	512	47	0	10	12	1	0									459	524	48	0	1,031 *12*
10:00 AM	497	492	47	0	11	11	1	0									508	503	48	0	1,059 *11*
11:00 AM	563	494	62	0	13	11	1	0									576	505	63	0	1,144 *10*
12:00 PM	676	547	41	0	16	13	1	0									692	560	42	0	1,294 *8*
1:00 PM	691	555	52	0	16	13	1	0									707	568	53	0	1,328 *7*
2:00 PM	765	565	46	0	18	13	1	0									783	578	47	0	1,408 *5*
3:00 PM	914	627	45	0	21	14	1	0									935	641	46	0	1,622 *4*
4:00 PM	1,072	689	43	0	25	16	1	0	14	34	0	0	89	28	0	49	1,200	767	44	49	2,060 *2*
5:00 PM	1,070	760	38	0	25	17	1	0	14	34	0	0	89	28	0	49	1,198	839	39	49	2,125 *1*
6:00 PM	1,015	562	46	0	23	13	1	0									1,038	575	47	0	1,660 *3*
7:00 PM	551	373	27	0	13	9	1	0									564	382	28	0	974 *13*
8:00 PM	441	344	32	0	10	8	1	0									451	352	33	0	836 *14*
9:00 PM	289	252	17	0	7	6	0	0									296	258	17	0	571 *15*
10:00 PM	131	174	14	0	3	4	0	0									134	178	14	0	326 *17*
11:00 PM	75	81	9	0	2	2	0	0									77	83	9	0	169 *18*

[1] Average daily traffic counts conducted by City Traffic Counters on Tuesday, November 2, 2021.
[2] Ambient growth determined by applying an exponential growth rate of 0.38% per year from the existing year 2021 to the future year 2027.
[3] Cumulative (related) projects volumes based on Figures 3-7 and 3-8. Peak hour cumulative project volumes were conservatively applied to both hours of the weekday morning and afternoon peak periods.
[4] Proposed project volumes based on the project trip assignment as presented in Figures 2-8 and 2-9. Peak hour project volumes were conservatively applied to both hours of the weekday morning and afternoon peak periods.
[5] Future cumulative volumes determined by adding proposed project volumes and related projects volumes to existing volumes.

Appendix Table B-2
TRAFFIC SIGNAL WARRANT VOLUMES WORKSHEET
Tierra Luna-Project Driveway/Colima Road
Eight-Hour and Four-Hour Volumes

	EXISTING VOLUMES [1]				AMBIENT GROWTH VOLUMES [2]				CUMULATIVE PROJECT VOLUMES [3]				PROPOSED PROJECT VOLUMES [4]				FUTURE CUMULATIVE WITH PROJECT VOLUMES [5]				
	Major Street		Minor Street		Major Street		Minor Street		Major Street		Minor Street		Major Street		Minor Street		Major Street		Minor Street		
HOUR	Colima Road		Tierra Luna/ Project Driveway		Colima Road		Tierra Luna/ Project Driveway		Colima Road		Tierra Luna/ Project Driveway		Colima Road		Tierra Luna/ Project Driveway		Colima Road		Tierra Luna/ Project Driveway		TOTAL INTERSECTION VOLUME/*RANK*
BEGINNING	EB	WB	NB	SB	EB	WB	NB	SB	EB	WB	NB	SB	EB	WB	NB	SB	EB	WB	NB	SB	
12:00 AM	39	27	0	1	1	1	0	0									40	28	0	1	69 *20*
1:00 AM	17	24	0	0	0	1	0	0									17	25	0	0	42 *21*
2:00 AM	9	6	0	0	0	0	0	0									9	6	0	0	15 *24*
3:00 AM	16	13	0	1	0	0	0	0									16	13	0	1	30 *23*
4:00 AM	28	11	0	0	1	0	0	0									29	11	0	0	40 *22*
5:00 AM	60	38	0	5	1	1	0	0									61	39	0	5	105 *19*
6:00 AM	110	187	0	14	3	4	0	0									113	191	0	14	318 *16*
7:00 AM	360	453	0	34	8	10	0	1	37	13	0	0	23	-1	39	0	428	475	39	35	977 *10*
8:00 AM	492	483	0	27	11	11	0	1	37	13	0	0	23	-1	39	0	563	506	39	28	1,136 *7*
9:00 AM	416	398	0	22	10	9	0	1									426	407	0	23	856 *12*
10:00 AM	422	418	0	16	10	10	0	0									432	428	0	16	876 *11*
11:00 AM	500	468	0	24	12	11	0	1									512	479	0	25	1,016 *9*
12:00 PM	624	472	0	12	14	11	0	0									638	483	0	12	1,133 *8*
1:00 PM	685	480	0	28	16	11	0	1									701	491	0	29	1,221 *6*
2:00 PM	693	487	0	24	16	11	0	1									709	498	0	25	1,232 *5*
3:00 PM	850	531	0	20	20	12	0	0									870	543	0	20	1,433 *3*
4:00 PM	1,067	641	0	23	25	15	0	1	14	34	0	0	36	11	27	0	1,142	701	27	24	1,894 *2*
5:00 PM	1,047	709	0	28	24	16	0	1	14	34	0	0	36	11	27	0	1,121	770	27	29	1,947 *1*
6:00 PM	871	509	0	19	20	12	0	0									891	521	0	19	1,431 *4*
7:00 PM	452	296	0	14	10	7	0	0									462	303	0	14	779 *13*
8:00 PM	324	289	0	11	7	7	0	0									331	296	0	11	638 *14*
9:00 PM	204	199	0	12	5	5	0	0									209	204	0	12	425 *15*
10:00 PM	98	124	0	0	2	3	0	0									100	127	0	0	227 *17*
11:00 PM	48	65	0	4	1	1	0	0									49	66	0	4	119 *18*

[1] Average daily traffic counts conducted by City Traffic Counters on Tuesday, November 2, 2021.
[2] Ambient growth determined by applying an exponential growth rate of 0.38% per year from the existing year 2021 to the future year 2027.
[3] Cumulative (related) projects volumes based on Figures 3-7 and 3-8. Peak hour cumulative project volumes were conservatively applied to both hours of the weekday morning and afternoon peak periods.
[4] Proposed project volumes based on the project trip assignment as presented in Figures 2-8 and 2-9. Peak hour project volumes were conservatively applied to both hours of the weekday morning and afternoon peak periods.
[5] Future cumulative volumes determined by adding proposed project volumes and related projects volumes to existing volumes.

Appendix Table B-3
COLLISION HISTORY [1]

NO.	DATE OF COLLISION	TIME OF DAY	DAY OF WEEK	DISTANCE FROM INTERSECTION	WEATHER CONDITIONS	ROADWAY SURFACE	LIGHTING	MOVEMENT PRECEDING COLLISION		PRIMARY COLLISION FACTOR	VEHICLE CODE VIOLATION SUBSECTION	TYPE OF COLLISION	COLLISION SEVERITY	NUMBER KILLED	NUMBER INJURED
								AT FAULT PARTY	OTHER PARTY						
Walnut Leaf Drive/Colima Road															
1	06/30/2021	11:00 AM	Wednesday	11' West	Clear	Dry	Daylight	Northbound Making Left Turn	Eastbound Proceeding Straight	Driving or Bicycling Under the Influence of Alcohol/Drug	23152A	Broadside	Injury (Severe)	0	2
2	12/31/2019	6:14 AM	Tuesday	250' East	Clear	Dry	Dark - Street Lights	Westbound Other Unsafe Turning	-	Improper Turning	22107	Hit Object	PDO	0	0
3	06/06/2019	13:00 PM	Thursday	140' South	Clear	Dry	Daylight	Northbound Backing	Southbound Parked	Unsafe Starting or Backing	22106	Other	PDO	0	0
4	11/21/2018	11:28 AM	Wednesday	30' South	Clear	Dry	Daylight	Eastbound Making Right Turn	-	Other Equipment	24002A	Hit Object	Injury (Other Visible)	0	1
Tierra Luna/Colima Road															
5	10/12/2020	10:20 AM	Monday	230' North	Clear	Dry	Daylight	Northbound Backing	Southbound Stopped	Unsafe Starting or Backing	22106	Rear End	PDO	0	0
6 [2]	05/21/2017	1:20 PM	Sunday	141' North	Clear	Dry	Daylight	Southbound Proceeding Straight	Eastbound Proceeding Straight	Traffic Signals & Signs	21453A	Broadside	Fatal	1	0

[1] Collision data were requested from the California Highway Patrol's (CHP) online Statewide Integrated Traffic Records System (SWITRS) database on July 28, 2021. Records were requested for the most recent five year period. According to the SWITRS website, data from seven months prior to the date of request should be considered incomplete due to a collision records processing backlog. Therefore, the most recent five year period is assumed to include December 1, 2015 through November 30, 2020. Collisions which occurred from December 1, 2020 to the present were also requested and have been included for informational purposes.

[2] The orientation of the intersection in the collision data assumes that Colima Road is the north-south road, and Tierra Luna is the east-west road. Records for this collision indicate that a golf cart at the signalized crossing across Colima Road north of Tierra Luna was struck by a vehicle traveling southbound along Colima Road, resulting in the death of the golf cart occupant. California Vehicle Code Section 21453A requires drivers to come to a complete stop when facing a steady red traffic signal control.

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Colima Road
W/O Walnut Leaf Drive

Start	02-Nov-21	East		Hour Totals		West		Hour Totals		Combined Totals	
Time	Tue	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		25	174			9	157				
12:15		9	162			11	157				
12:30		8	162			8	134				
12:45		16	178	58	676	5	144	33	592	91	1268
01:00		12	185			4	152				
01:15		6	186			7	144				
01:30		6	154			8	151				
01:45		2	166	26	691	7	144	26	591	52	1282
02:00		2	172			2	123				
02:15		3	194			2	135				
02:30		3	194			4	143				
02:45		4	205	12	765	0	148	8	549	20	1314
03:00		2	203			2	159				
03:15		2	217			5	133				
03:30		8	236			6	124				
03:45		7	258	19	914	3	159	16	575	35	1489
04:00		6	288			1	148				
04:15		6	224			2	140				
04:30		8	302			4	139				
04:45		10	258	30	1072	8	188	15	615	45	1687
05:00		10	246			6	183				
05:15		20	255			8	204				
05:30		15	302			17	198				
05:45		24	267	69	1070	25	185	56	770	125	1840
06:00		18	265			30	176				
06:15		21	286			46	162				
06:30		39	231			79	136				
06:45		53	233	131	1015	102	117	257	591	388	1606
07:00		78	199			105	93				
07:15		81	139			114	97				
07:30		105	114			133	80				
07:45		139	99	403	551	195	69	547	339	950	890
08:00		139	121			149	113				
08:15		123	121			144	73				
08:30		115	111			134	88				
08:45		120	88	497	441	151	52	578	326	1075	767
09:00		113	92			141	57				
09:15		95	78			142	50				
09:30		124	47			129	51				
09:45		117	72	449	289	131	51	543	209	992	498
10:00		107	49			169	51				
10:15		137	32			141	44				
10:30		145	28			150	25				
10:45		108	22	497	131	145	26	605	146	1102	277
11:00		143	25			168	14				
11:15		141	15			121	18				
11:30		159	18			184	22				
11:45		120	17	563	75	176	11	649	65	1212	140
Total		2754	7690			3333	5368			6087	13058
Percent		26.4%	73.6%			38.3%	61.7%			31.8%	68.2%
Grand Total		2754	7690			3333	5368			6087	13058
Percent		26.4%	73.6%			38.3%	61.7%			31.8%	68.2%
ADT		ADT 19,145		AADT 19,145							

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Colima Road
Btwn Walnut Leaf Dr & Tierra Luna

Start Time	02-Nov-21 Tue	East Morning	East Afternoon	Hour Totals Morning	Hour Totals Afternoon	West Morning	West Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		16	155			13	140				
12:15		7	155			14	126				
12:30		6	141			13	132				
12:45		10	173	39	624	3	149	43	547	82	1171
01:00		8	170			7	141				
01:15		6	176			12	136				
01:30		2	157			9	144				
01:45		1	182	17	685	12	134	40	555	57	1240
02:00		1	159			4	125				
02:15		3	179			3	135				
02:30		2	175			4	149				
02:45		3	180	9	693	0	156	11	565	20	1258
03:00		1	199			3	152				
03:15		2	194			9	129				
03:30		7	214			8	156				
03:45		6	243	16	850	4	190	24	627	40	1477
04:00		5	293			2	186				
04:15		6	215			3	154				
04:30		6	298			3	157				
04:45		11	261	28	1067	8	192	16	689	44	1756
05:00		9	243			9	195				
05:15		16	250			10	191				
05:30		16	290			21	203				
05:45		19	264	60	1047	22	171	62	760	122	1807
06:00		17	269			33	185				
06:15		22	220			44	135				
06:30		33	187			65	131				
06:45		38	195	110	871	79	111	221	562	331	1433
07:00		82	161			101	104				
07:15		73	118			130	108				
07:30		85	94			150	85				
07:45		120	79	360	452	177	76	558	373	918	825
08:00		133	84			154	99				
08:15		130	91			130	89				
08:30		115	85			146	96				
08:45		114	64	492	324	174	60	604	344	1096	668
09:00		116	66			136	74				
09:15		97	56			125	64				
09:30		101	34			118	59				
09:45		102	48	416	204	133	55	512	252	928	456
10:00		95	40			123	52				
10:15		113	24			129	47				
10:30		121	18			116	39				
10:45		93	16	422	98	124	36	492	174	914	272
11:00		127	15			122	21				
11:15		113	11			101	25				
11:30		140	13			135	22				
11:45		120	9	500	48	136	13	494	81	994	129
Total		2469	6963			3077	5529			5546	12492
Percent		26.2%	73.8%			35.8%	64.2%			30.7%	69.3%
Grand Total		2469	6963			3077	5529			5546	12492
Percent		26.2%	73.8%			35.8%	64.2%			30.7%	69.3%
ADT		ADT 18,038		AADT 18,038							

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Colima Road
E/O Tierra Luna

Start Time	02-Nov-21 Tue	East Morning	East Afternoon	Hour Totals Morning	Hour Totals Afternoon	West Morning	West Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		17	140			8	123				
12:15		6	138			8	114				
12:30		7	128			8	113				
12:45		9	152	39	558	3	122	27	472	66	1030
01:00		10	138			4	123				
01:15		6	169			6	113				
01:30		1	138			7	127				
01:45		1	146	18	591	7	117	24	480	42	1071
02:00		2	160			2	98				
02:15		3	173			1	124				
02:30		2	173			3	134				
02:45		4	202	11	708	0	131	6	487	17	1195
03:00		1	173			1	146				
03:15		3	195			5	109				
03:30		6	217			3	134				
03:45		7	235	17	820	4	142	13	531	30	1351
04:00		5	278			1	169				
04:15		4	206			2	144				
04:30		7	287			4	142				
04:45		12	250	28	1021	4	186	11	641	39	1662
05:00		10	247			3	188				
05:15		16	255			7	175				
05:30		17	288			12	196				
05:45		23	244	66	1034	16	150	38	709	104	1743
06:00		19	241			28	167				
06:15		24	223			35	124				
06:30		35	170			58	120				
06:45		37	177	115	811	66	98	187	509	302	1320
07:00		75	147			85	89				
07:15		83	104			121	78				
07:30		100	88			118	72				
07:45		123	76	381	415	129	57	453	296	834	711
08:00		130	78			116	88				
08:15		103	88			108	69				
08:30		107	83			138	80				
08:45		120	68	460	317	121	52	483	289	943	606
09:00		107	64			100	63				
09:15		99	59			104	47				
09:30		97	34			94	44				
09:45		93	45	396	202	100	45	398	199	794	401
10:00		92	36			105	42				
10:15		109	24			106	38				
10:30		110	18			102	22				
10:45		89	15	400	93	105	22	418	124	818	217
11:00		121	19			115	18				
11:15		104	11			96	19				
11:30		128	11			131	21				
11:45		102	11	455	52	126	7	468	65	923	117
Total		2386	6622			2526	4802			4912	11424
Percent		26.5%	73.5%			34.5%	65.5%			30.1%	69.9%
Grand Total		2386	6622			2526	4802			4912	11424
Percent		26.5%	73.5%			34.5%	65.5%			30.1%	69.9%
ADT		ADT 16,336		AADT 16,336							

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Walnut Leaf Drive
S/O Colima Road

Start	02-Nov-21	Northwest		Hour Totals		Southeast		Hour Totals		Combined Totals	
Time	Tue	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		2	7			0	9				
12:15		1	15			1	5				
12:30		2	8			1	10				
12:45		2	11	7	41	1	12	3	36	10	77
01:00		1	11			0	14				
01:15		1	18			1	12				
01:30		0	10			2	19				
01:45		1	13	3	52	0	14	3	59	6	111
02:00		0	13			0	9				
02:15		0	14			0	9				
02:30		0	9			0	11				
02:45		1	10	1	46	0	18	0	47	1	93
03:00		0	17			0	14				
03:15		0	8			0	19				
03:30		1	10			0	12				
03:45		0	10	1	45	0	10	0	55	1	100
04:00		1	9			1	14				
04:15		1	10			0	15				
04:30		1	11			2	14				
04:45		4	13	7	43	0	14	3	57	10	100
05:00		3	7			0	10				
05:15		3	14			0	14				
05:30		5	11			0	12				
05:45		4	6	15	38	1	18	1	54	16	92
06:00		3	13			0	12				
06:15		12	10			2	12				
06:30		9	11			1	16				
06:45		10	12	34	46	2	19	5	59	39	105
07:00		10	6			9	18				
07:15		14	7			2	9				
07:30		19	9			6	7				
07:45		22	5	65	27	5	8	22	42	87	69
08:00		19	11			9	15				
08:15		18	11			10	13				
08:30		11	6			9	10				
08:45		12	4	60	32	3	9	31	47	91	79
09:00		11	5			7	12				
09:15		13	3			6	10				
09:30		8	4			9	2				
09:45		15	5	47	17	11	11	33	35	80	52
10:00		11	2			6	6				
10:15		6	6			6	4				
10:30		15	4			9	3				
10:45		15	2	47	14	6	0	27	13	74	27
11:00		18	4			8	3				
11:15		13	0			7	0				
11:30		14	1			13	4				
11:45		17	4	62	9	18	3	46	10	108	19
Total		349	410			174	514			523	924
Percent		46.0%	54.0%			25.3%	74.7%			36.1%	63.9%
Grand Total		349	410			174	514			523	924
Percent		46.0%	54.0%			25.3%	74.7%			36.1%	63.9%
ADT		ADT 1,447		AADT 1,447							

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Tierra Luna
N/O Colima Road

Start Time	02-Nov-21 Tue	Northwest Morning	Northwest Afternoon	Hour Totals Morning	Hour Totals Afternoon	Southeast Morning	Southeast Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		0	3			0	1				
12:15		0	5			0	6				
12:30		1	4			1	2				
12:45		0	7	1	19	0	3	1	12	2	31
01:00		1	8			0	4				
01:15		0	1			0	10				
01:30		1	6			0	12				
01:45		0	5	2	20	0	2	0	28	2	48
02:00		0	4			0	7				
02:15		1	12			0	2				
02:30		0	6			0	10				
02:45		0	9	1	31	0	5	0	24	1	55
03:00		0	7			0	8				
03:15		0	3			1	2				
03:30		0	4			0	4				
03:45		0	12	0	26	0	6	1	20	1	46
04:00		1	7			0	7				
04:15		0	8			0	3				
04:30		0	9			0	5				
04:45		0	11	1	35	0	8	0	23	1	58
05:00		0	7			1	3				
05:15		1	12			1	10				
05:30		2	6			0	11				
05:45		0	8	3	33	3	4	5	28	8	61
06:00		0	11			1	5				
06:15		0	9			0	6				
06:30		0	9			4	2				
06:45		1	10	1	39	9	6	14	19	15	58
07:00		4	8			4	3				
07:15		2	8			3	4				
07:30		4	4			13	5				
07:45		10	5	20	25	14	2	34	14	54	39
08:00		7	3			12	2				
08:15		6	6			5	5				
08:30		4	4			2	1				
08:45		3	2	20	15	8	3	27	11	47	26
09:00		4	7			5	3				
09:15		3	4			6	4				
09:30		7	2			6	3				
09:45		3	2	17	15	5	2	22	12	39	27
10:00		2	3			7	0				
10:15		2	4			3	0				
10:30		3	1			4	0				
10:45		2	4	9	12	2	0	16	0	25	12
11:00		2	3			3	3				
11:15		7	1			5	0				
11:30		5	0			12	0				
11:45		8	1	22	5	4	1	24	4	46	9
Total		97	275			144	195			241	470
Percent		26.1%	73.9%			42.5%	57.5%			33.9%	66.1%
Grand Total		97	275			144	195			241	470
Percent		26.1%	73.9%			42.5%	57.5%			33.9%	66.1%
ADT		ADT 711		AADT 711							

CITY TRAFFIC COUNTERS

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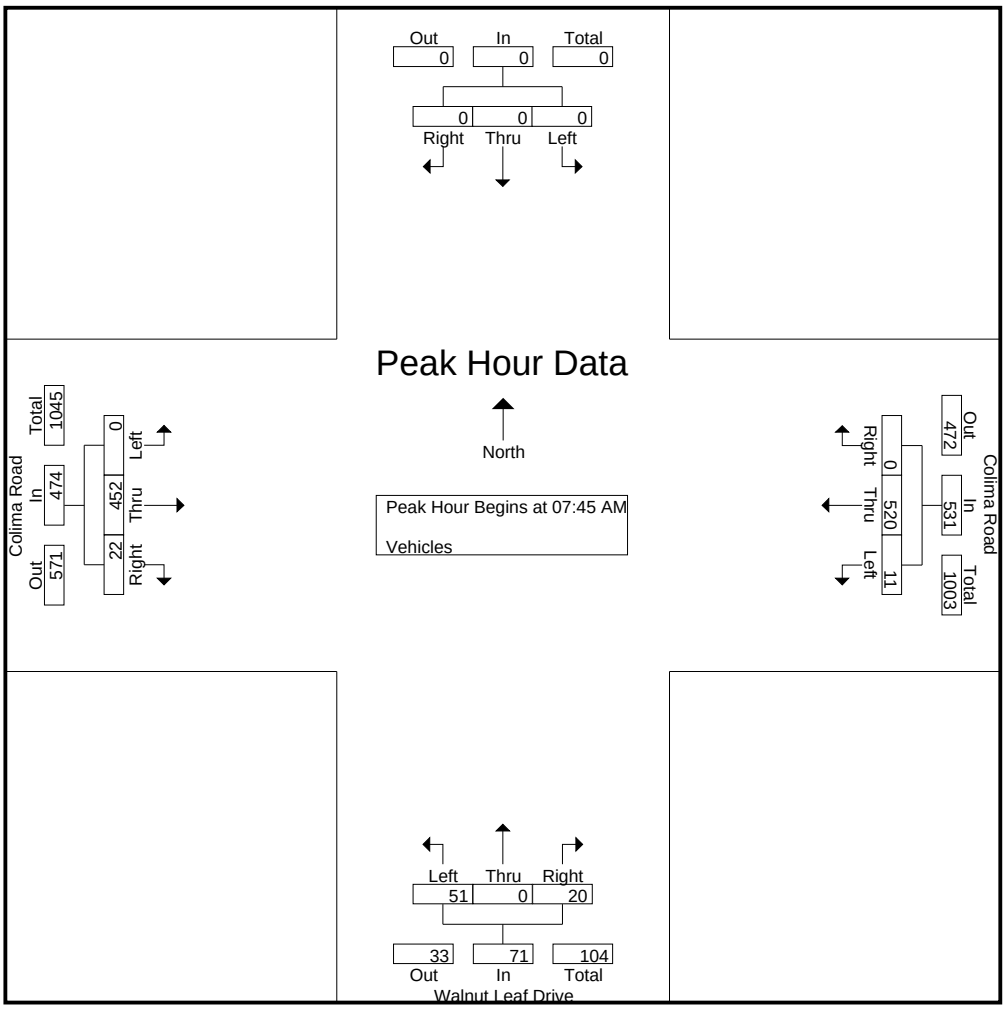
File Name : WalnutLeaf_Colima_Nov2021
Site Code : 00000000
Start Date : 11/2/2021
Page No : 1

Groups Printed- Vehicles

	Southbound			Colima Road Westbound			Walnut Leaf Drive Northbound			Colima Road Eastbound			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
07:00 AM	0	0	0	2	88	0	4	0	6	0	67	6	173
07:15 AM	0	0	0	1	105	0	6	0	6	0	75	2	195
07:30 AM	0	0	0	4	117	0	9	0	9	0	95	3	237
07:45 AM	0	0	0	1	154	0	19	0	3	0	131	4	312
Total	0	0	0	8	464	0	38	0	24	0	368	15	917
08:00 AM	0	0	0	2	117	0	12	0	8	0	119	7	265
08:15 AM	0	0	0	4	125	0	9	0	8	0	100	6	252
08:30 AM	0	0	0	4	124	0	11	0	1	0	102	5	247
08:45 AM	0	0	0	1	128	0	6	0	6	0	108	2	251
Total	0	0	0	11	494	0	38	0	23	0	429	20	1015
04:00 PM	0	0	0	3	145	0	5	0	4	0	269	10	436
04:15 PM	0	0	0	2	135	0	5	0	3	0	203	11	359
04:30 PM	0	0	0	9	133	0	4	0	5	0	274	7	432
04:45 PM	0	0	0	6	172	0	4	0	8	0	242	9	441
Total	0	0	0	20	585	0	18	0	20	0	988	37	1668
05:00 PM	0	0	0	7	178	0	3	0	2	0	222	4	416
05:15 PM	0	0	0	3	172	0	10	0	5	0	228	8	426
05:30 PM	0	0	0	7	177	0	6	0	2	0	279	8	479
05:45 PM	0	0	0	6	133	0	2	0	4	0	243	13	401
Total	0	0	0	23	660	0	21	0	13	0	972	33	1722
Grand Total	0	0	0	62	2203	0	115	0	80	0	2757	105	5322
Apprch %	0	0	0	2.7	97.3	0	59	0	41	0	96.3	3.7	
Total %	0	0	0	1.2	41.4	0	2.2	0	1.5	0	51.8	2	

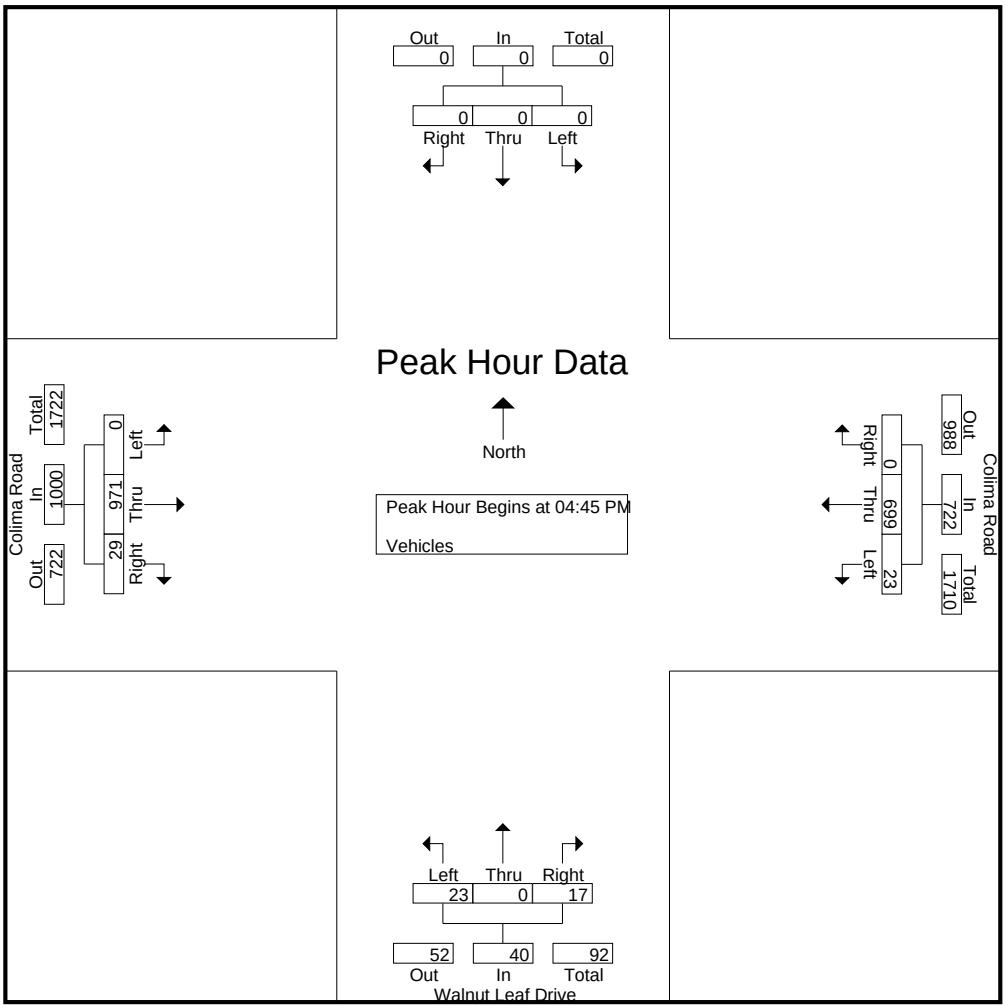
File Name : WalnutLeaf_Colima_Nov2021
Site Code : 00000000
Start Date : 11/2/2021
Page No : 2

	Southbound				Colima Road Westbound				Walnut Leaf Drive Northbound				Colima Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	0	0	0	0	1	**154**	0	**155**	**19**	0	3	**22**	0	**131**	4	**135**	**312**
08:00 AM	0	0	0	0	2	117	0	119	12	0	**8**	20	0	119	**7**	126	265
08:15 AM	0	0	0	0	**4**	125	0	129	9	0	8	17	0	100	6	106	252
08:30 AM	0	0	0	0	4	124	0	128	11	0	1	12	0	102	5	107	247
Total Volume	0	0	0	0	11	520	0	531	51	0	20	71	0	452	22	474	1076
% App. Total	0	0	0		2.1	97.9	0		71.8	0	28.2		0	95.4	4.6		
PHF	.000	.000	.000	.000	.688	.844	.000	.856	.671	.000	.625	.807	.000	.863	.786	.878	.862



File Name : WalnutLeaf_Colima_Nov2021
Site Code : 00000000
Start Date : 11/2/2021
Page No : 3

	Southbound				Colima Road Westbound				Walnut Leaf Drive Northbound				Colima Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	0	0	0	6	172	0	178	4	0	**8**	12	0	242	**9**	251	441
05:00 PM	0	0	0	0	**7**	**178**	0	**185**	3	0	2	5	0	222	4	226	416
05:15 PM	0	0	0	0	3	172	0	175	**10**	0	5	**15**	0	228	8	236	426
05:30 PM	0	0	0	0	7	177	0	184	6	0	2	8	0	**279**	8	**287**	**479**
Total Volume	0	0	0	0	23	699	0	722	23	0	17	40	0	971	29	1000	1762
% App. Total	0	0	0		3.2	96.8	0		57.5	0	42.5		0	97.1	2.9		
PHF	.000	.000	.000	.000	.821	.982	.000	.976	.575	.000	.531	.667	.000	.870	.806	.871	.920



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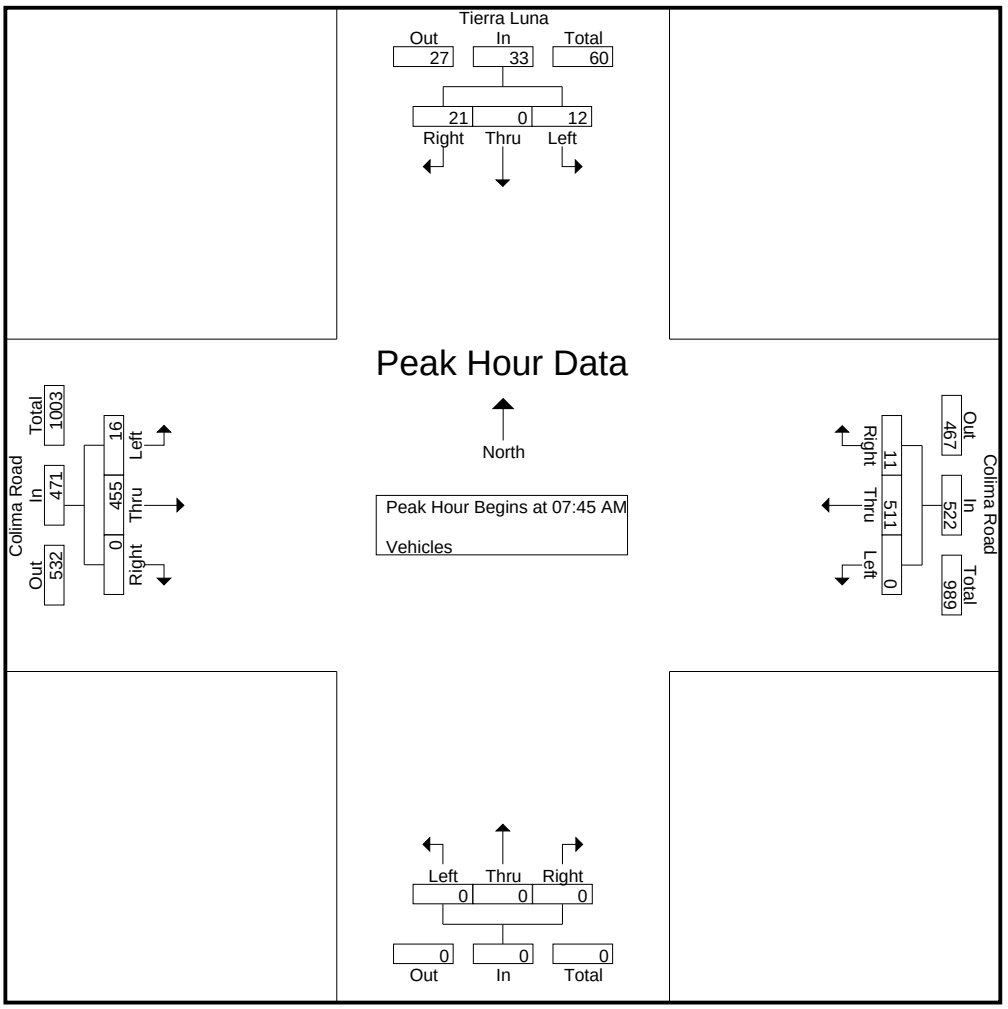
File Name : TierraLuna_Colima_Nov2021
Site Code : 00000000
Start Date : 11/2/2021
Page No : 1

Groups Printed- Vehicles

	Tierra Luna Southbound			Colima Road Westbound			Northbound			Colima Road Eastbound			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
07:00 AM	1	0	2	0	87	1	0	0	0	2	69	0	162
07:15 AM	3	0	1	0	113	1	0	0	0	2	79	0	199
07:30 AM	5	0	9	0	115	2	0	0	0	2	107	0	240
07:45 AM	4	0	9	0	144	4	0	0	0	5	121	0	287
Total	13	0	21	0	459	8	0	0	0	11	376	0	888
08:00 AM	7	0	5	0	119	1	0	0	0	8	123	0	263
08:15 AM	1	0	5	0	116	4	0	0	0	0	108	0	234
08:30 AM	0	0	2	0	132	2	0	0	0	3	103	0	242
08:45 AM	3	0	4	0	126	0	0	0	0	3	116	0	252
Total	11	0	16	0	493	7	0	0	0	14	450	0	991
04:00 PM	2	0	5	0	154	7	0	0	0	3	274	0	445
04:15 PM	2	0	2	0	136	3	0	0	0	2	200	0	345
04:30 PM	1	0	5	0	140	6	0	0	0	6	276	0	434
04:45 PM	1	0	7	0	164	7	0	0	0	3	248	0	430
Total	6	0	19	0	594	23	0	0	0	14	998	0	1654
05:00 PM	3	0	1	0	176	3	0	0	0	4	228	0	415
05:15 PM	9	0	2	0	175	9	0	0	0	5	215	0	415
05:30 PM	6	0	5	0	178	4	0	0	0	4	272	0	469
05:45 PM	1	0	3	0	136	2	0	0	0	5	244	0	391
Total	19	0	11	0	665	18	0	0	0	18	959	0	1690
Grand Total	49	0	67	0	2211	56	0	0	0	57	2783	0	5223
Apprch %	42.2	0	57.8	0	97.5	2.5	0	0	0	2	98	0	
Total %	0.9	0	1.3	0	42.3	1.1	0	0	0	1.1	53.3	0	

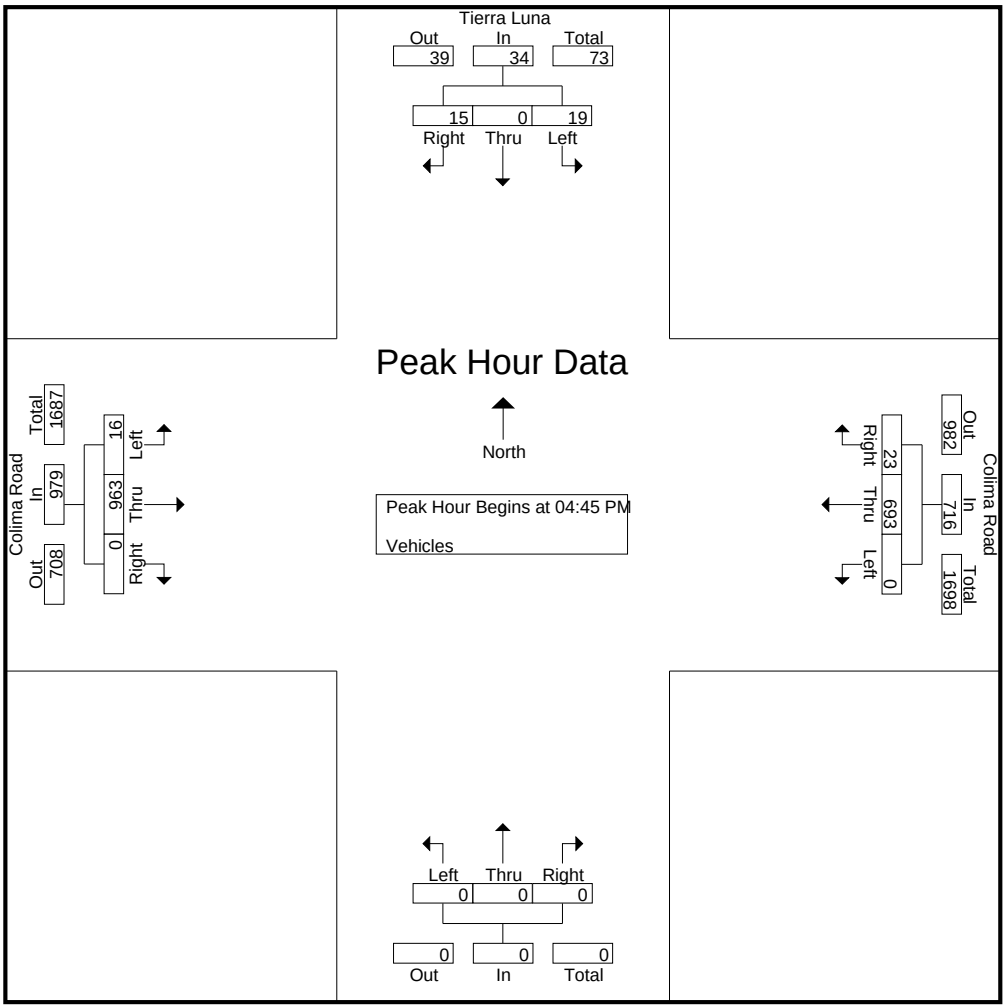
File Name : TierraLuna_Colima_Nov2021
Site Code : 00000000
Start Date : 11/2/2021
Page No : 2

	Tierra Luna Southbound				Colima Road Westbound				Northbound				Colima Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	4	0	**9**	**13**	0	**144**	**4**	**148**	0	0	0	0	5	121	0	126	**287**
08:00 AM	**7**	0	5	12	0	119	1	120	0	0	0	0	**8**	**123**	0	**131**	263
08:15 AM	1	0	5	6	0	116	4	120	0	0	0	0	0	108	0	108	234
08:30 AM	0	0	2	2	0	132	2	134	0	0	0	0	3	103	0	106	242
Total Volume	12	0	21	33	0	511	11	522	0	0	0	0	16	455	0	471	1026
% App. Total	36.4	0	63.6		0	97.9	2.1		0	0	0		3.4	96.6	0		
PHF	.429	.000	.583	.635	.000	.887	.688	.882	.000	.000	.000	.000	.500	.925	.000	.899	.894



File Name : TierraLuna_Colima_Nov2021
Site Code : 00000000
Start Date : 11/2/2021
Page No : 3

	Tierra Luna Southbound				Colima Road Westbound				Northbound				Colima Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	1	0	**7**	8	0	164	7	171	0	0	0	0	3	248	0	251	430
05:00 PM	3	0	1	4	0	176	3	179	0	0	0	0	4	228	0	232	415
05:15 PM	**9**	0	2	**11**	0	175	**9**	**184**	0	0	0	0	**5**	215	0	220	415
05:30 PM	6	0	5	11	0	**178**	4	182	0	0	0	0	4	**272**	0	**276**	**469**
Total Volume	19	0	15	34	0	693	23	716	0	0	0	0	16	963	0	979	1729
% App. Total	55.9	0	44.1		0	96.8	3.2		0	0	0		1.6	98.4	0		
PHF	.528	.000	.536	.773	.000	.973	.639	.973	.000	.000	.000	.000	.800	.885	.000	.887	.922



APPENDIX C

PEDESTRIAN, BICYCLE, AND VEHICLE COUNT DATA

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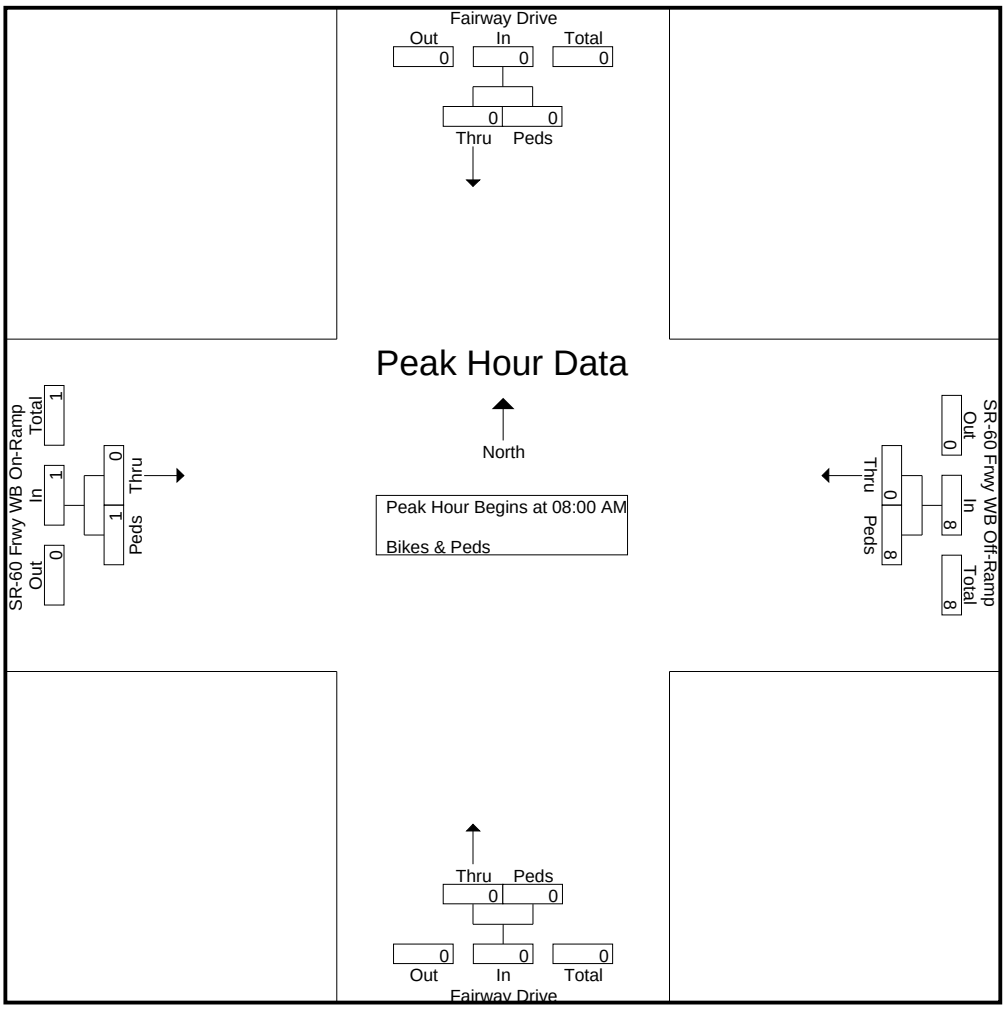
File Name : Fairway_SR-60FrwyWBRamps_BP_Sept2021
Site Code : 00000000
Start Date : 9/30/2021
Page No : 1

Groups Printed- Bikes & Peds

	Fairway Drive Southbound		SR-60 Frwy WB Off-Ramp Westbound		Fairway Drive Northbound		SR-60 Frwy WB On-Ramp Eastbound		
Start Time	Bikes	Peds	Bikes	Peds	Bikes	Peds	Bikes	Peds	Int. Total
07:00 AM	0	0	0	1	0	0	0	0	1
07:30 AM	0	0	0	1	0	0	0	0	1
Total	0	0	0	2	0	0	0	0	2
08:30 AM	0	0	0	0	0	0	0	1	1
08:45 AM	0	0	0	8	0	0	0	0	8
Total	0	0	0	8	0	0	0	1	9
05:15 PM	0	0	0	6	0	0	0	1	7
Total	0	0	0	6	0	0	0	1	7
Grand Total	0	0	0	16	0	0	0	2	18
Apprch %	0	0	0	100	0	0	0	100	
Total %	0	0	0	88.9	0	0	0	11.1	

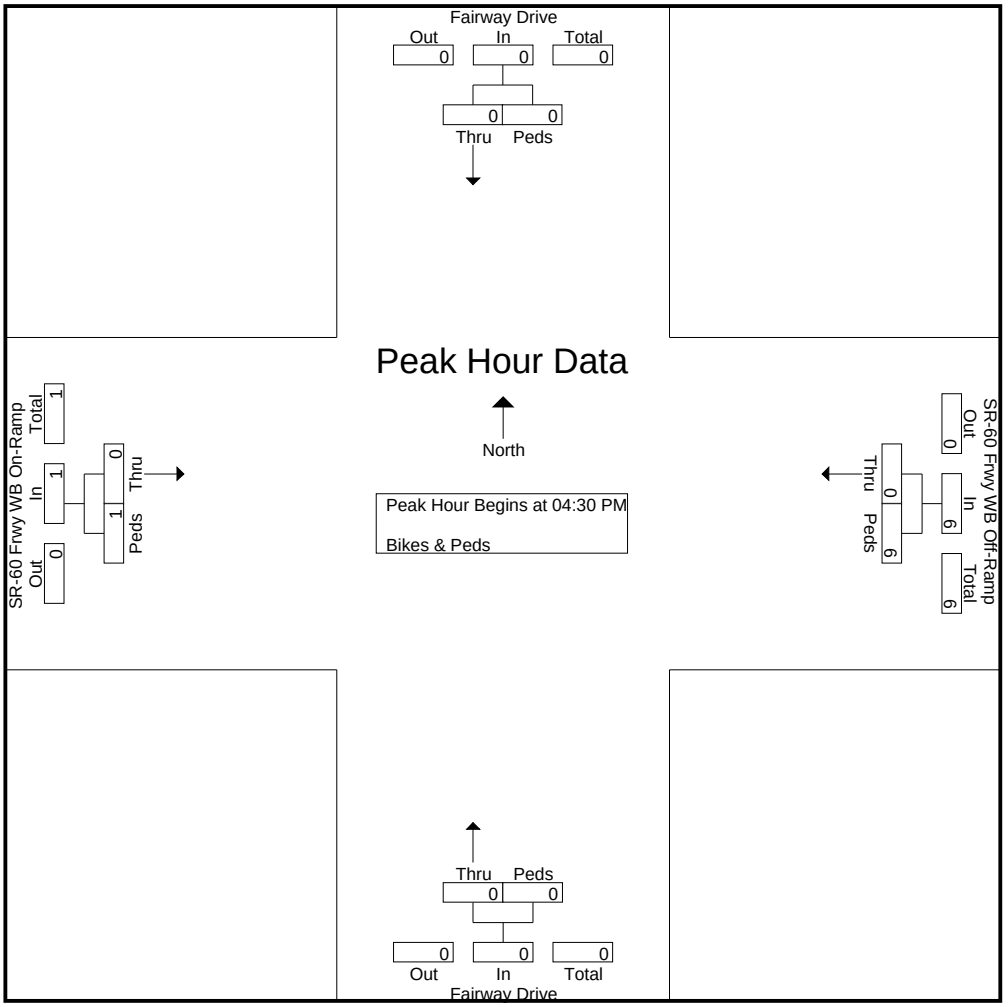
File Name : Fairway_SR-60FrwyWBRamps_BP_Sept2021
Site Code : 00000000
Start Date : 9/30/2021
Page No : 2

	Fairway Drive Southbound			SR-60 Frwy WB Off-Ramp Westbound			Fairway Drive Northbound			SR-60 Frwy WB On-Ramp Eastbound			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 08:00 AM													
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	**1**	**1**	1
08:45 AM	0	0	0	0	**8**	**8**	0	0	0	0	0	0	**8**
Total Volume	0	0	0	0	8	8	0	0	0	0	1	1	9
% App. Total	0	0		0	100		0	0		0	100		
PHF	.000	.000	.000	.000	.250	.250	.000	.000	.000	.000	.250	.250	.281



File Name : Fairway_SR-60FrwyWBRamps_BP_Sept2021
Site Code : 00000000
Start Date : 9/30/2021
Page No : 3

	Fairway Drive Southbound			SR-60 Frwy WB Off-Ramp Westbound			Fairway Drive Northbound			SR-60 Frwy WB On-Ramp Eastbound			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:30 PM													
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	**6**	**6**	0	0	0	0	**1**	**1**	**7**
Total Volume	0	0	0	0	6	6	0	0	0	0	1	1	7
% App. Total	0	0		0	100		0	0		0	100		
PHF	.000	.000	.000	.000	.250	.250	.000	.000	.000	.000	.250	.250	.250



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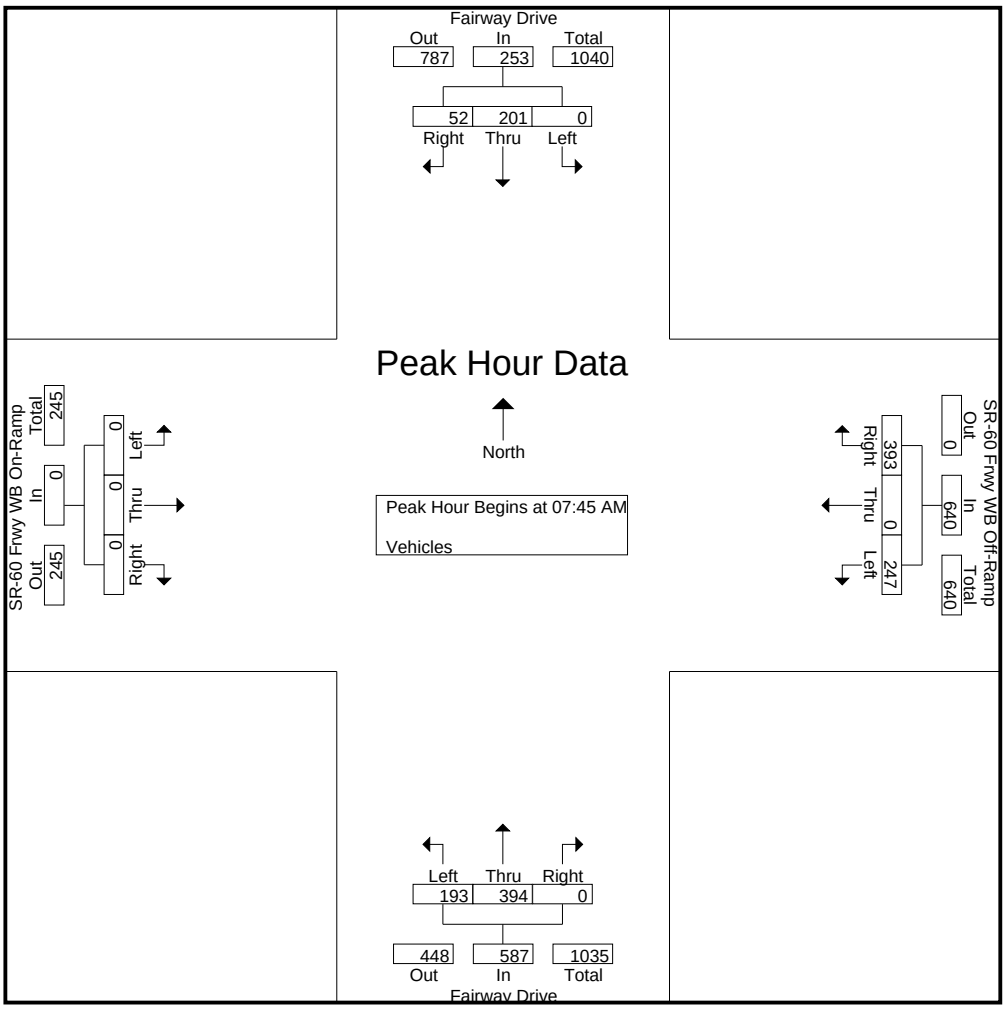
File Name : Fairway_SR-60FrwyWBRamps_Sept2021
Site Code : 00000000
Start Date : 9/30/2021
Page No : 1

Groups Printed- Vehicles

	Fairway Drive Southbound			SR-60 Frwy WB Off-Ramp Westbound			Fairway Drive Northbound			SR-60 Frwy WB On-Ramp Eastbound			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
07:00 AM	0	34	7	32	4	36	37	49	0	0	0	0	199
07:15 AM	0	33	5	49	1	51	31	59	0	0	0	0	229
07:30 AM	0	46	9	71	0	41	66	78	0	0	0	0	311
07:45 AM	0	60	15	72	0	83	46	105	0	0	0	0	381
Total	0	173	36	224	5	211	180	291	0	0	0	0	1120
08:00 AM	0	51	11	58	0	105	55	100	0	0	0	0	380
08:15 AM	0	47	16	52	0	106	53	85	0	0	0	0	359
08:30 AM	0	43	10	65	0	99	39	104	0	0	0	0	360
08:45 AM	0	42	7	70	1	71	36	66	0	0	0	0	293
Total	0	183	44	245	1	381	183	355	0	0	0	0	1392
04:00 PM	0	80	18	37	0	35	144	67	0	0	0	0	381
04:15 PM	0	77	12	54	0	28	96	72	0	0	0	0	339
04:30 PM	0	78	15	46	1	30	123	95	0	0	0	0	388
04:45 PM	0	85	11	51	0	33	110	98	0	0	0	0	388
Total	0	320	56	188	1	126	473	332	0	0	0	0	1496
05:00 PM	0	103	23	54	0	37	89	92	0	0	0	0	398
05:15 PM	0	100	16	79	0	22	123	85	0	0	0	0	425
05:30 PM	0	95	9	80	2	38	116	87	0	0	0	0	427
05:45 PM	0	93	19	86	0	27	101	66	0	0	0	0	392
Total	0	391	67	299	2	124	429	330	0	0	0	0	1642
Grand Total	0	1067	203	956	9	842	1265	1308	0	0	0	0	5650
Apprch %	0	84	16	52.9	0.5	46.6	49.2	50.8	0	0	0	0	
Total %	0	18.9	3.6	16.9	0.2	14.9	22.4	23.2	0	0	0	0	

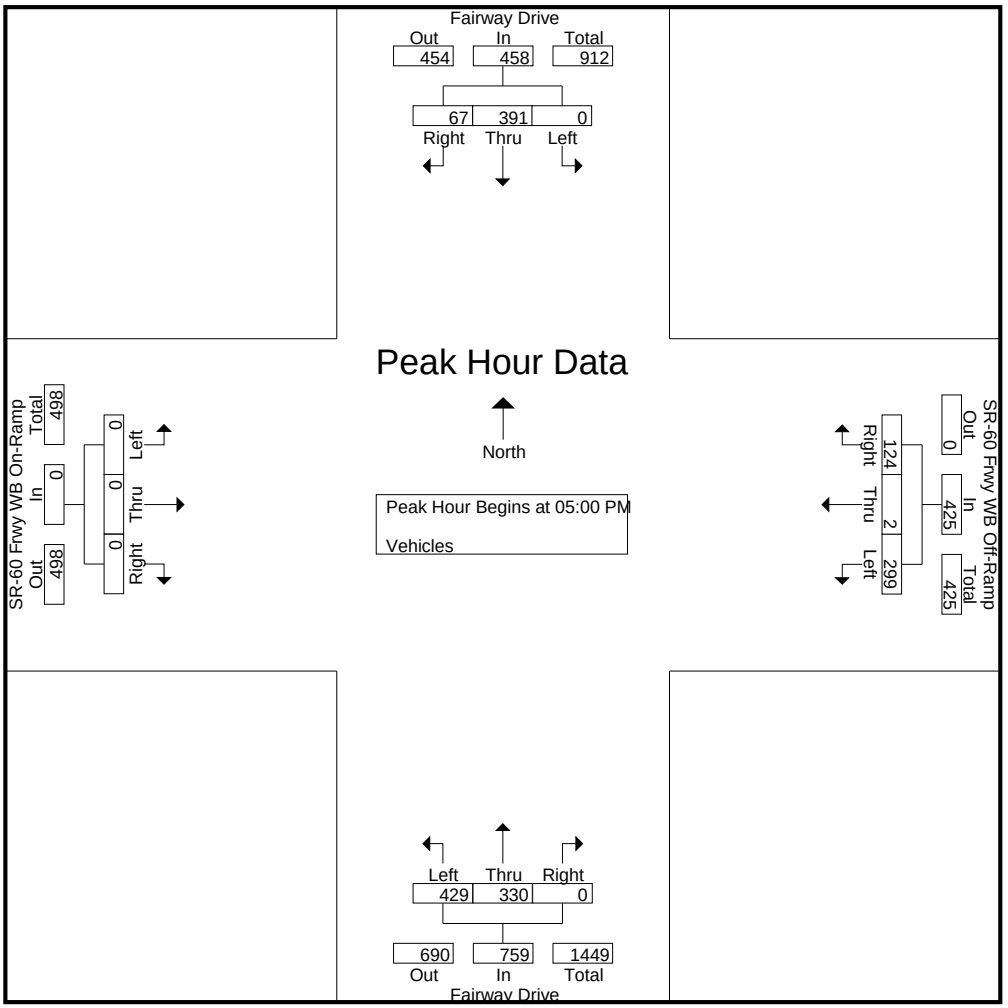
File Name : Fairway_SR-60FrwyWBRamps_Sept2021
Site Code : 00000000
Start Date : 9/30/2021
Page No : 2

	Fairway Drive Southbound				SR-60 Frwy WB Off-Ramp Westbound				Fairway Drive Northbound				SR-60 Frwy WB On-Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	0	**60**	15	**75**	**72**	0	83	155	46	**105**	0	151	0	0	0	0	**381**
08:00 AM	0	51	11	62	58	0	105	163	**55**	100	0	**155**	0	0	0	0	380
08:15 AM	0	47	**16**	63	52	0	**106**	158	53	85	0	138	0	0	0	0	359
08:30 AM	0	43	10	53	65	0	99	**164**	39	104	0	143	0	0	0	0	360
Total Volume	0	201	52	253	247	0	393	640	193	394	0	587	0	0	0	0	1480
% App. Total	0	79.4	20.6		38.6	0	61.4		32.9	67.1	0		0	0	0		
PHF	.000	.838	.813	.843	.858	.000	.927	.976	.877	.938	.000	.947	.000	.000	.000	.000	.971



File Name : Fairway_SR-60FrwyWBRamps_Sept2021
Site Code : 00000000
Start Date : 9/30/2021
Page No : 3

	Fairway Drive Southbound				SR-60 Frwy WB Off-Ramp Westbound				Fairway Drive Northbound				SR-60 Frwy WB On-Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	**103**	**23**	**126**	54	0	37	91	89	**92**	0	181	0	0	0	0	398
05:15 PM	0	100	16	116	79	0	22	101	**123**	85	0	**208**	0	0	0	0	425
05:30 PM	0	95	9	104	80	**2**	**38**	**120**	116	87	0	203	0	0	0	0	**427**
05:45 PM	0	93	19	112	**86**	0	27	113	101	66	0	167	0	0	0	0	392
Total Volume	0	391	67	458	299	2	124	425	429	330	0	759	0	0	0	0	1642
% App. Total	0	85.4	14.6		70.4	0.5	29.2		56.5	43.5	0		0	0	0		
PHF	.000	.949	.728	.909	.869	.250	.816	.885	.872	.897	.000	.912	.000	.000	.000	.000	.961



CITY TRAFFIC COUNTERS
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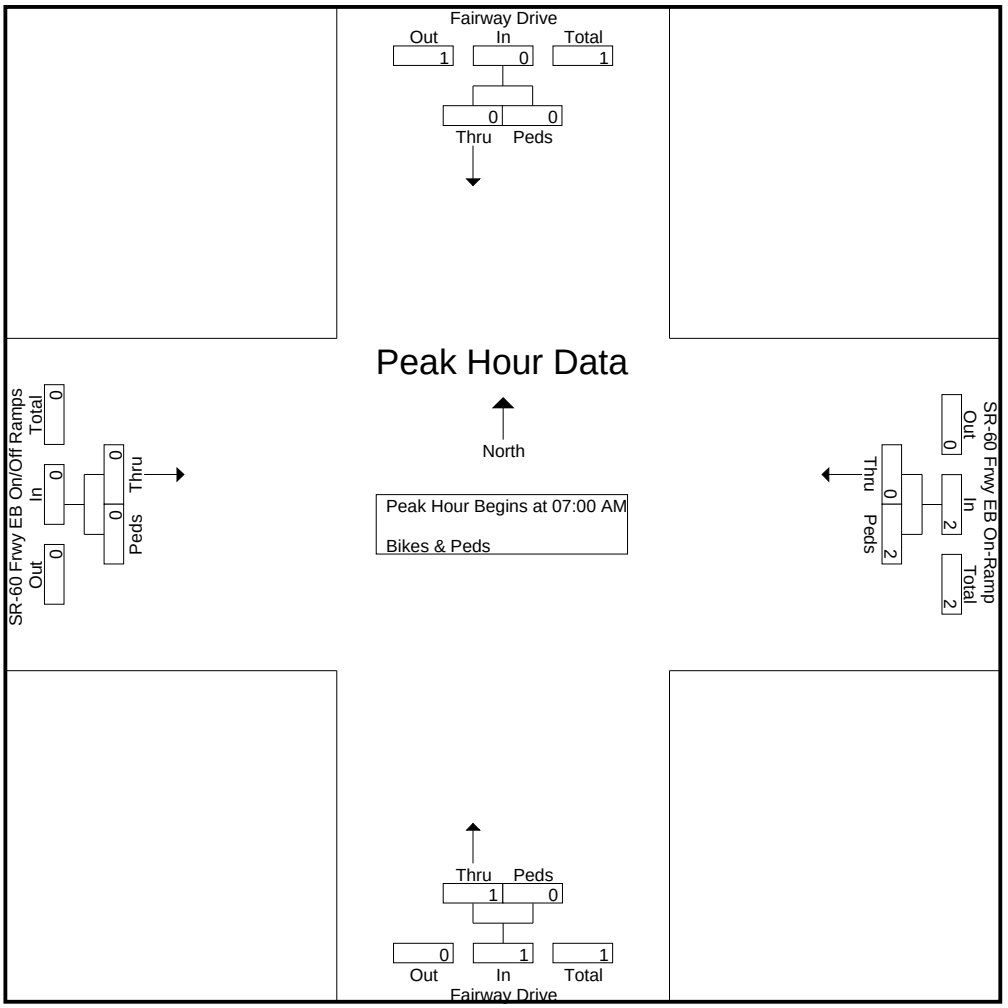
File Name : Fairway_SR-60FrwyEBRamps_BP_Sept2021
Site Code : 00000000
Start Date : 9/30/2021
Page No : 1

Groups Printed- Bikes & Peds

	Fairway Drive Southbound		SR-60 Frwy EB On-Ramp Westbound		Fairway Drive Northbound		SR-60 Frwy EB On/Off Ramps Eastbound		
Start Time	Bikes	Peds	Bikes	Peds	Bikes	Peds	Bikes	Peds	Int. Total
07:15 AM	0	0	0	1	0	0	0	0	1
07:30 AM	0	0	0	1	1	0	0	0	2
Total	0	0	0	2	1	0	0	0	3
08:15 AM	0	0	0	0	0	0	0	1	1
08:45 AM	0	0	0	8	0	0	0	0	8
Total	0	0	0	8	0	0	0	1	9
05:30 PM	0	0	0	6	0	2	0	1	9
05:45 PM	0	0	0	0	0	1	0	0	1
Total	0	0	0	6	0	3	0	1	10
Grand Total	0	0	0	16	1	3	0	2	22
Apprch %	0	0	0	100	25	75	0	100	
Total %	0	0	0	72.7	4.5	13.6	0	9.1	

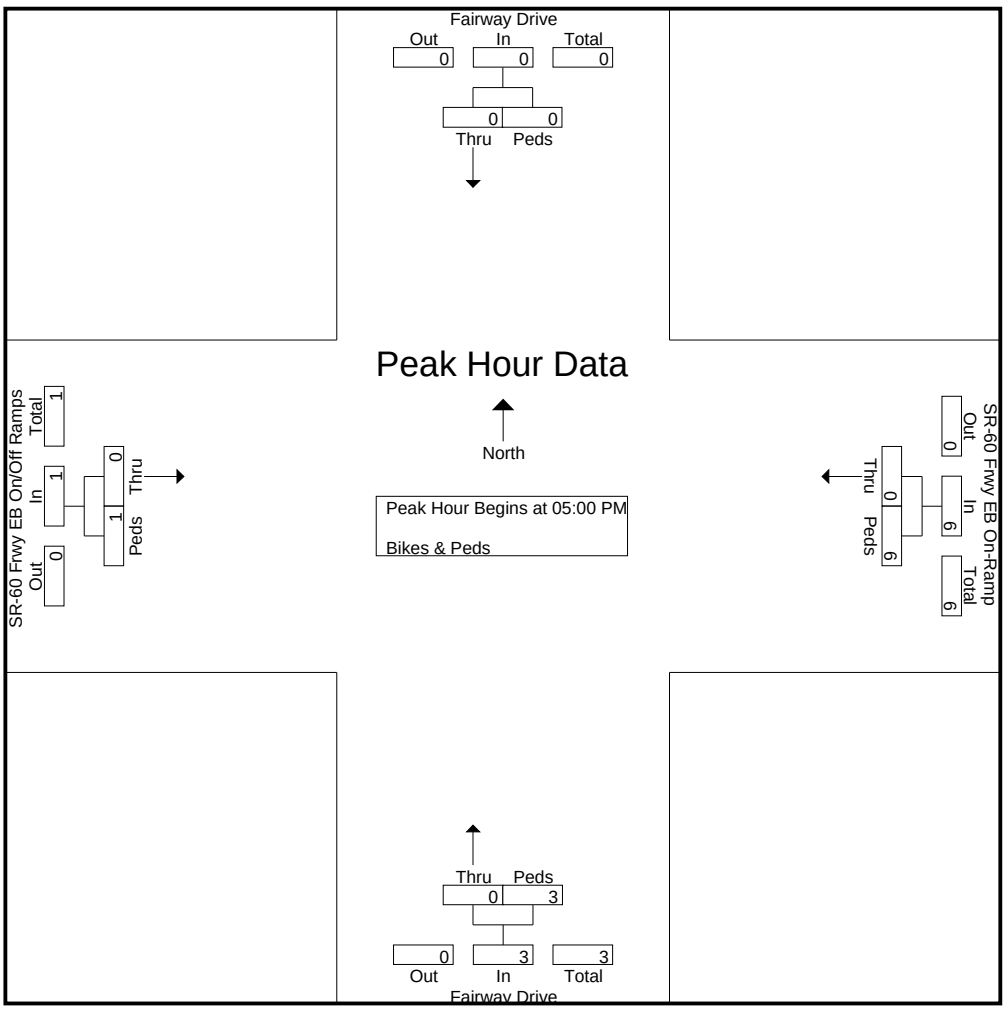
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Site Code : 00000000
Start Date : 9/30/2021
Page No : 2

	Fairway Drive Southbound			SR-60 Frwy EB On-Ramp Westbound			Fairway Drive Northbound			SR-60 Frwy EB On/Off Ramps Eastbound			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:30 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:00 AM													
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	**1**	**1**	0	0	0	0	0	0	1
07:30 AM	0	0	0	0	1	1	**1**	0	**1**	0	0	0	**2**
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	2	2	1	0	1	0	0	0	3
% App. Total	0	0		0	100		100	0		0	0		
PHF	.000	.000	.000	.000	.500	.500	.250	.000	.250	.000	.000	.000	.375



File Name : Fairway_SR-60FrwyEBRamps_BP_Sept2021
Site Code : 00000000
Start Date : 9/30/2021
Page No : 3

	Fairway Drive Southbound			SR-60 Frwy EB On-Ramp Westbound			Fairway Drive Northbound			SR-60 Frwy EB On/Off Ramps Eastbound			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 05:00 PM													
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	**6**	**6**	0	**2**	**2**	0	**1**	**1**	**9**
05:45 PM	0	0	0	0	0	0	0	1	1	0	0	0	1
Total Volume	0	0	0	0	6	6	0	3	3	0	1	1	10
% App. Total	0	0		0	100		0	100		0	100		
PHF	.000	.000	.000	.000	.250	.250	.000	.375	.375	.000	.250	.250	.278



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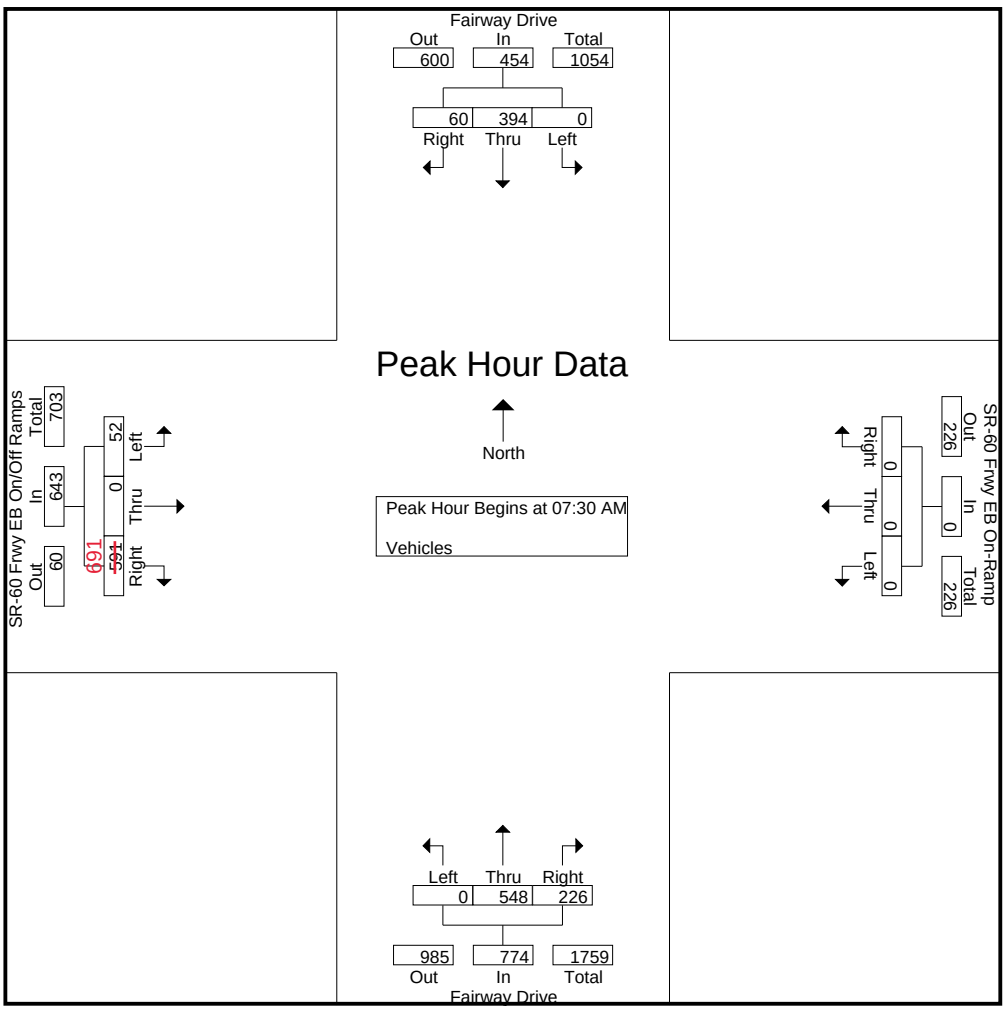
File Name : Fairway_SR-60FrwyEBRamps_Sept2021
Site Code : 00000000
Start Date : 9/30/2021
Page No : 1

Groups Printed- Vehicles

	Fairway Drive Southbound			SR-60 Frwy EB On-Ramp Westbound			Fairway Drive Northbound			SR-60 Frwy EB On/Off Ramps Eastbound			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
07:00 AM	0	52	17	0	0	0	0	77	31	12	0	131	320
07:15 AM	0	74	10	0	0	0	0	88	54	11	0	142	379
07:30 AM	0	108	12	0	0	0	0	135	53	9	0	142	459
07:45 AM	0	120	11	0	0	0	0	137	60	18	0	171	517
Total	0	354	50	0	0	0	0	437	198	50	0	586	1675
08:00 AM	0	82	18	0	0	0	0	143	60	17	0	163	483
08:15 AM	0	84	19	0	0	0	0	133	53	8	0	115	412
08:30 AM	0	90	17	0	0	0	0	119	51	19	0	117	413
08:45 AM	0	95	14	0	0	0	0	98	42	14	0	114	377
Total	0	351	68	0	0	0	0	493	206	58	0	509	1685
04:00 PM	0	105	24	0	0	0	0	197	41	8	0	97	472
04:15 PM	0	103	23	0	0	0	0	174	35	12	0	109	456
04:30 PM	0	99	22	0	0	0	0	215	41	6	0	126	509
04:45 PM	0	120	24	0	0	0	0	192	25	10	0	101	472
Total	0	427	93	0	0	0	0	778	142	36	0	433	1909
05:00 PM	0	127	22	0	0	0	0	169	44	10	0	133	505
05:15 PM	0	151	23	0	0	0	0	189	30	16	0	150	559
05:30 PM	0	155	23	0	0	0	0	184	40	12	0	155	569
05:45 PM	0	157	17	0	0	0	0	166	46	9	0	160	555
Total	0	590	85	0	0	0	0	708	160	47	0	598	2188
Grand Total	0	1722	296	0	0	0	0	2416	706	191	0	2126	7457
Apprch %	0	85.3	14.7	0	0	0	0	77.4	22.6	8.2	0	91.8	
Total %	0	23.1	4	0	0	0	0	32.4	9.5	2.6	0	28.5	

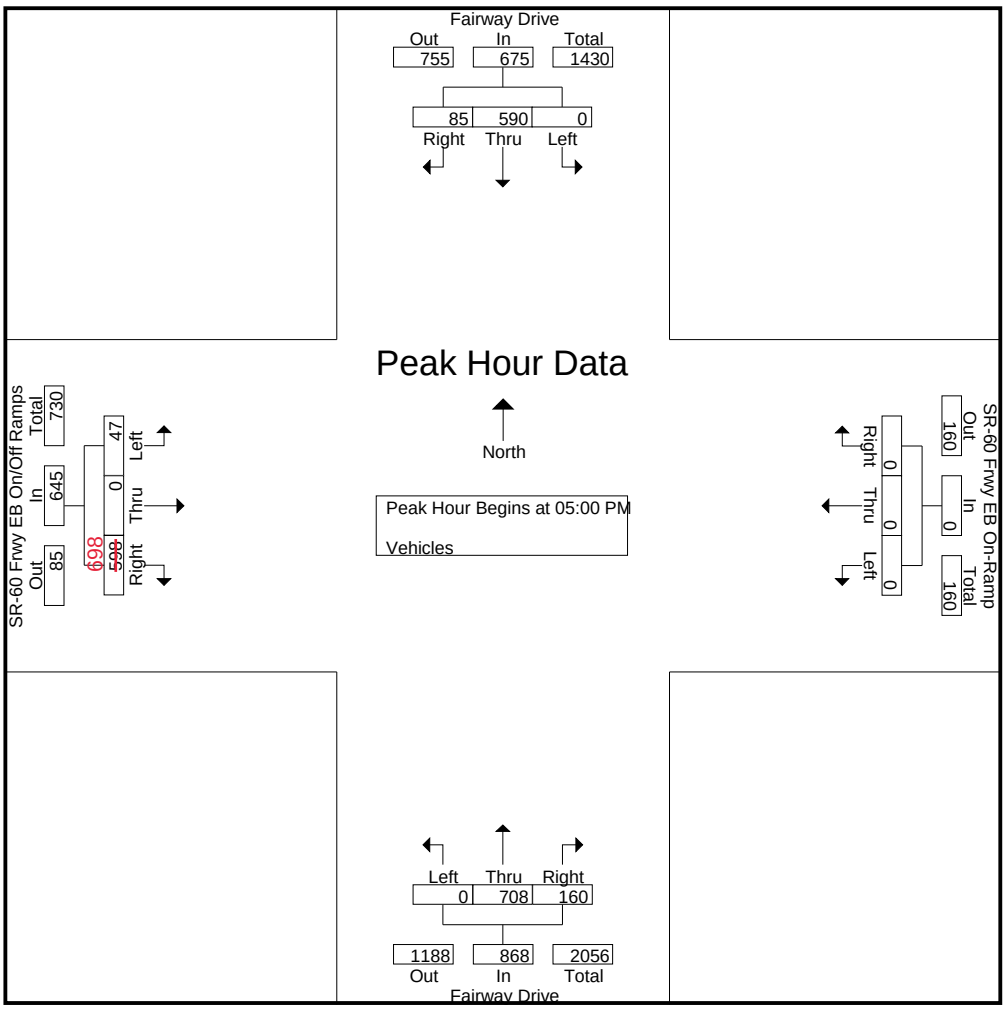
File Name : Fairway_SR-60FrwyEBRamps_Sept2021
Site Code : 00000000
Start Date : 9/30/2021
Page No : 2

	Fairway Drive Southbound				SR-60 Frwy EB On-Ramp Westbound				Fairway Drive Northbound				SR-60 Frwy EB On/Off Ramps Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:30 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	108	12	120	0	0	0	0	0	135	53	188	9	0	142	151	459
07:45 AM	0	**120**	11	**131**	0	0	0	0	0	137	**60**	197	**18**	0	**171**	**189**	**517**
08:00 AM	0	82	18	100	0	0	0	0	0	**143**	60	**203**	17	0	163	180	483
08:15 AM	0	84	**19**	103	0	0	0	0	0	133	53	186	8	0	115	123	412
Total Volume	0	394	60	454	0	0	0	0	0	548	226	774	52	0	591	643	1871
% App. Total	0	86.8	13.2		0	0	0		0	70.8	29.2		8.1	0	91.9		
PHF	.000	.821	.789	.866	.000	.000	.000	.000	.000	.958	.942	.953	.722	.000	.864	.851	.905



File Name : Fairway_SR-60FrwyEBRamps_Sept2021
Site Code : 00000000
Start Date : 9/30/2021
Page No : 3

	Fairway Drive Southbound				SR-60 Frwy EB On-Ramp Westbound				Fairway Drive Northbound				SR-60 Frwy EB On/Off Ramps Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	127	22	149	0	0	0	0	0	169	44	213	10	0	133	143	505
05:15 PM	0	151	**23**	174	0	0	0	0	0	**189**	30	219	**16**	0	150	166	559
05:30 PM	0	155	23	**178**	0	0	0	0	0	184	40	**224**	12	0	155	167	**569**
05:45 PM	0	**157**	17	174	0	0	0	0	0	166	**46**	212	9	0	**160**	**169**	555
Total Volume	0	590	85	675	0	0	0	0	0	708	160	868	47	0	598	645	2188
% App. Total	0	87.4	12.6		0	0	0		0	81.6	18.4		7.3	0	92.7		
PHF	.000	.939	.924	.948	.000	.000	.000	.000	.000	.937	.870	.969	.734	.000	.934	.954	.961



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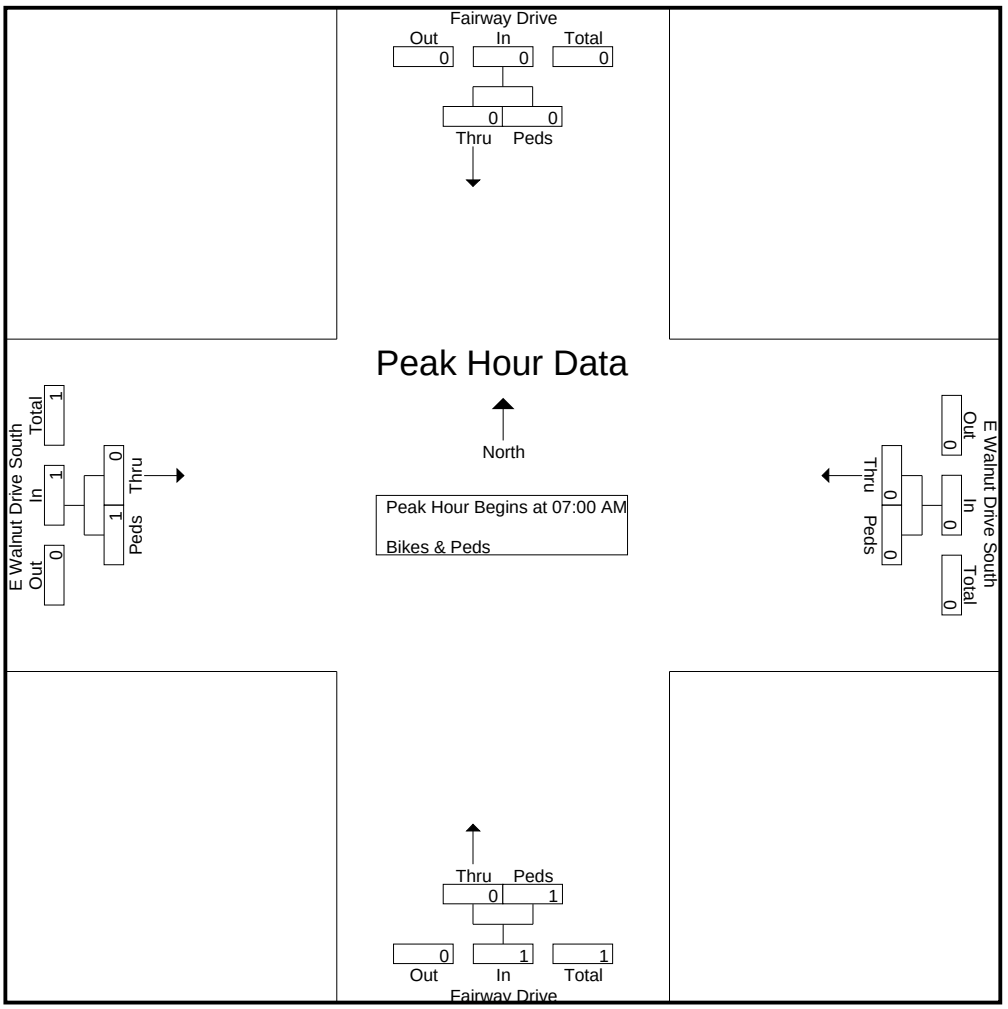
File Name : Fairway_EWalnutDrSouth_BP_Nov2021
Site Code : 00000000
Start Date : 11/2/2021
Page No : 1

Groups Printed- Bikes & Peds

	Fairway Drive Southbound		E Walnut Drive South Westbound		Fairway Drive Northbound		E Walnut Drive South Eastbound		
Start Time	Bikes	Peds	Bikes	Peds	Bikes	Peds	Bikes	Peds	Int. Total
07:15 AM	0	0	0	0	0	1	0	0	1
07:45 AM	0	0	0	0	0	0	0	1	1
Total	0	0	0	0	0	1	0	1	2
08:45 AM	0	0	0	0	2	0	0	0	2
Total	0	0	0	0	2	0	0	0	2
04:15 PM	0	0	0	0	0	2	0	0	2
Total	0	0	0	0	0	2	0	0	2
Grand Total	0	0	0	0	2	3	0	1	6
Apprch %	0	0	0	0	40	60	0	100	
Total %	0	0	0	0	33.3	50	0	16.7	

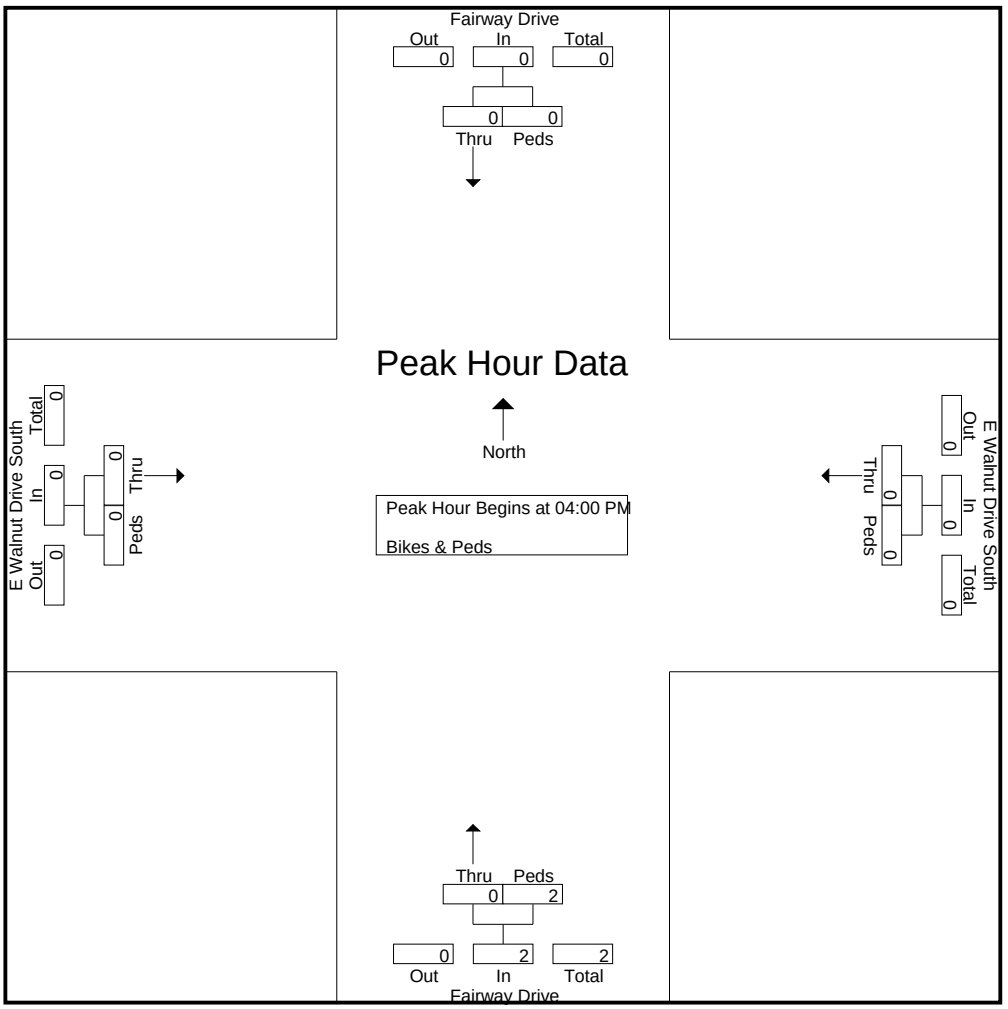
File Name : Fairway_EWalnutDrSouth_BP_Nov2021
Site Code : 00000000
Start Date : 11/2/2021
Page No : 2

	Fairway Drive Southbound			E Walnut Drive South Westbound			Fairway Drive Northbound			E Walnut Drive South Eastbound			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:00 AM													
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	**1**	**1**	0	0	0	**1**
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	**1**	**1**	1
Total Volume	0	0	0	0	0	0	0	1	1	0	1	1	2
% App. Total	0	0		0	0		0	100		0	100		
PHF	.000	.000	.000	.000	.000	.000	.000	.250	.250	.000	.250	.250	.500



File Name : Fairway_EWalnutDrSouth_BP_Nov2021
Site Code : 00000000
Start Date : 11/2/2021
Page No : 3

	Fairway Drive Southbound			E Walnut Drive South Westbound			Fairway Drive Northbound			E Walnut Drive South Eastbound			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:00 PM													
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	**2**	**2**	0	0	0	**2**
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	2	2	0	0	0	2
% App. Total	0	0		0	0		0	100		0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.250	.250	.000	.000	.000	.250



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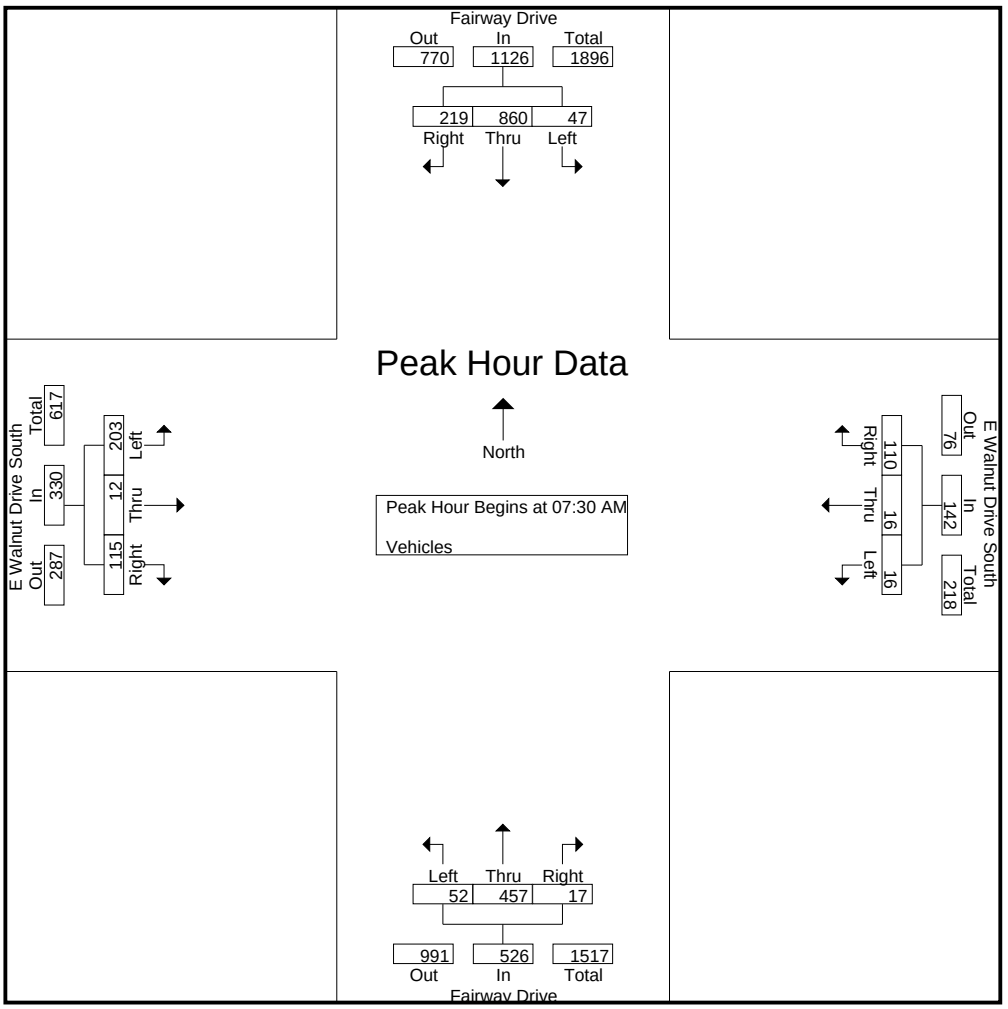
File Name : Fairway_EWalnutDrSouth_Nov2021
Site Code : 00000000
Start Date : 11/2/2021
Page No : 1

Groups Printed- Vehicles

	Fairway Drive Southbound			E Walnut Drive South Westbound			Fairway Drive Northbound			E Walnut Drive South Eastbound			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
07:00 AM	5	125	18	6	1	19	4	68	3	23	1	2	275
07:15 AM	7	188	24	5	1	21	9	76	3	32	0	3	369
07:30 AM	8	215	45	8	5	24	8	90	7	45	3	26	484
07:45 AM	10	249	80	4	7	32	21	103	2	83	4	41	636
Total	30	777	167	23	14	96	42	337	15	183	8	72	1764
08:00 AM	14	230	53	2	3	24	10	145	6	50	2	34	573
08:15 AM	15	166	41	2	1	30	13	119	2	25	3	14	431
08:30 AM	12	174	43	6	3	22	11	116	2	24	0	15	428
08:45 AM	10	181	47	3	2	21	20	109	5	28	1	16	443
Total	51	751	184	13	9	97	54	489	15	127	6	79	1875
04:00 PM	15	195	15	4	2	10	6	158	7	14	2	6	434
04:15 PM	12	213	16	5	2	15	10	168	6	16	3	7	473
04:30 PM	18	220	24	3	4	12	10	172	6	29	2	6	506
04:45 PM	21	218	25	2	5	11	12	157	8	15	4	6	484
Total	66	846	80	14	13	48	38	655	27	74	11	25	1897
05:00 PM	25	255	36	6	2	12	13	141	4	40	3	9	546
05:15 PM	28	302	33	4	1	13	11	144	9	22	2	6	575
05:30 PM	28	287	44	5	5	13	17	163	10	49	2	22	645
05:45 PM	21	236	48	3	3	16	22	187	7	41	3	16	603
Total	102	1080	161	18	11	54	63	635	30	152	10	53	2369
Grand Total	249	3454	592	68	47	295	197	2116	87	536	35	229	7905
Apprch %	5.8	80.4	13.8	16.6	11.5	72	8.2	88.2	3.6	67	4.4	28.6	
Total %	3.1	43.7	7.5	0.9	0.6	3.7	2.5	26.8	1.1	6.8	0.4	2.9	

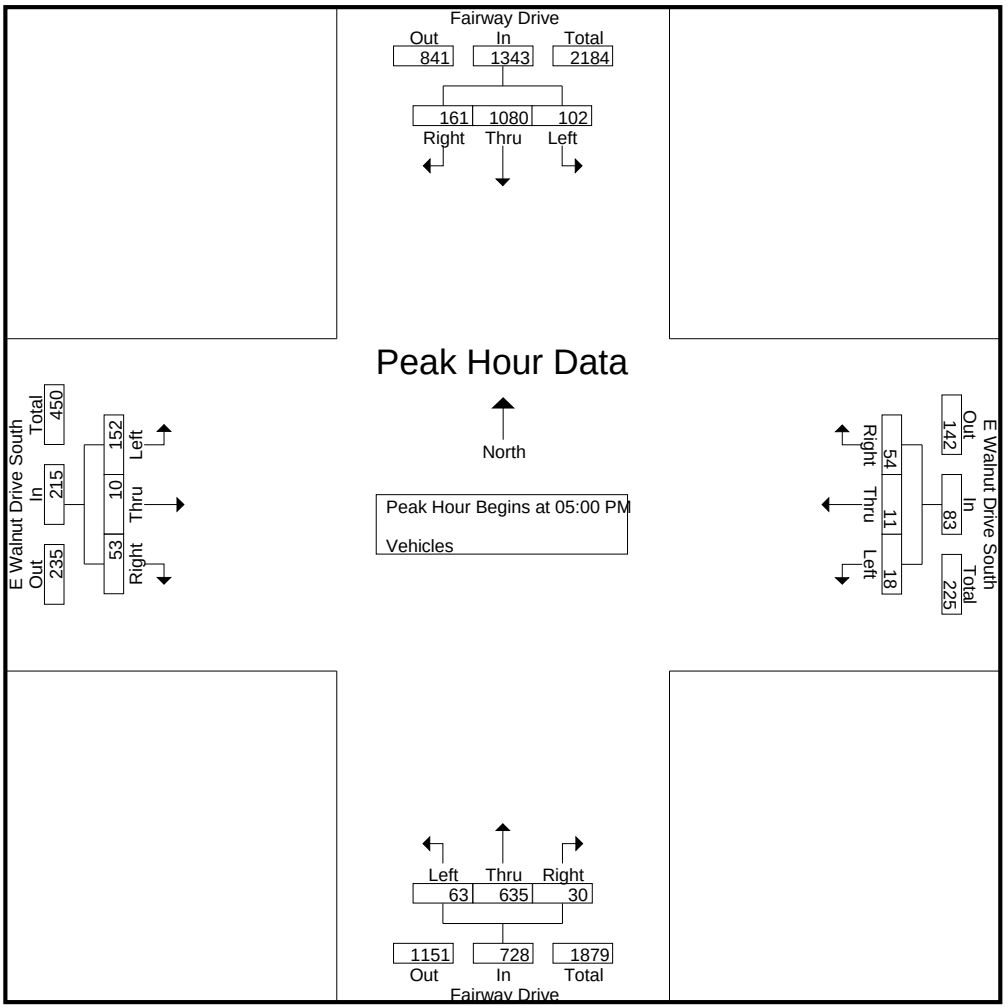
File Name : Fairway_EWalnutDrSouth_Nov2021
Site Code : 00000000
Start Date : 11/2/2021
Page No : 2

	Fairway Drive Southbound				E Walnut Drive South Westbound				Fairway Drive Northbound				E Walnut Drive South Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	8	215	45	268	**8**	5	24	37	8	90	**7**	105	45	3	26	74	484
07:45 AM	10	**249**	**80**	**339**	4	**7**	**32**	**43**	**21**	103	2	126	**83**	**4**	**41**	**128**	**636**
08:00 AM	14	230	53	297	2	3	24	29	10	**145**	6	**161**	50	2	34	86	573
08:15 AM	**15**	166	41	222	2	1	30	33	13	119	2	134	25	3	14	42	431
Total Volume	47	860	219	1126	16	16	110	142	52	457	17	526	203	12	115	330	2124
% App. Total	4.2	76.4	19.4		11.3	11.3	77.5		9.9	86.9	3.2		61.5	3.6	34.8		
PHF	.783	.863	.684	.830	.500	.571	.859	.826	.619	.788	.607	.817	.611	.750	.701	.645	.835



File Name : Fairway_EWalnutDrSouth_Nov2021
Site Code : 00000000
Start Date : 11/2/2021
Page No : 3

	Fairway Drive Southbound				E Walnut Drive South Westbound				Fairway Drive Northbound				E Walnut Drive South Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	25	255	36	316	**6**	2	12	20	13	141	4	158	40	**3**	9	52	546
05:15 PM	**28**	**302**	33	**363**	4	1	13	18	11	144	9	164	22	2	6	30	575
05:30 PM	28	287	44	359	5	**5**	13	**23**	17	163	**10**	190	**49**	2	**22**	**73**	**645**
05:45 PM	21	236	**48**	305	3	3	**16**	22	**22**	**187**	7	**216**	41	3	16	60	603
Total Volume	102	1080	161	1343	18	11	54	83	63	635	30	728	152	10	53	215	2369
% App. Total	7.6	80.4	12		21.7	13.3	65.1		8.7	87.2	4.1		70.7	4.7	24.7		
PHF	.911	.894	.839	.925	.750	.550	.844	.902	.716	.849	.750	.843	.776	.833	.602	.736	.918



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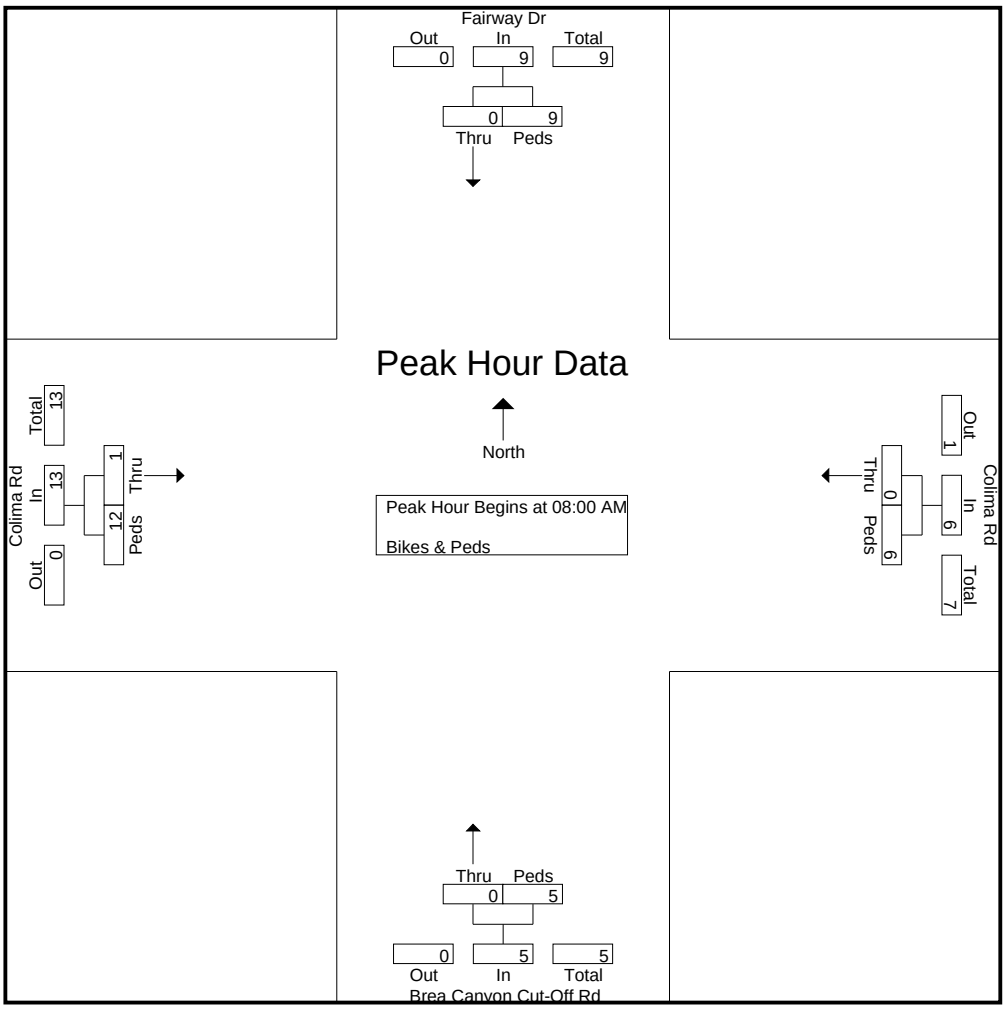
File Name : Fairway-BreaCanyonCutOff_Colima_BP_Sept2021
Site Code : 00000000
Start Date : 9/30/2021
Page No : 1

Groups Printed- Bikes & Peds

	Fairway Dr Southbound		Colima Rd Westbound		Brea Canyon Cut-Off Rd Northbound		Colima Rd Eastbound		
Start Time	Bikes	Peds	Bikes	Peds	Bikes	Peds	Bikes	Peds	Int. Total
07:00 AM	0	1	0	0	0	0	0	0	1
07:15 AM	0	0	0	0	0	1	0	1	2
07:30 AM	0	2	0	1	1	0	0	1	5
07:45 AM	1	0	0	0	0	0	0	0	1
Total	1	3	0	1	1	1	0	2	9
08:00 AM	0	3	0	6	0	2	0	2	13
08:15 AM	0	2	0	0	0	0	1	3	6
08:30 AM	0	3	0	0	0	2	0	3	8
08:45 AM	0	1	0	0	0	1	0	4	6
Total	0	9	0	6	0	5	1	12	33
04:00 PM	0	0	0	0	0	1	0	0	1
04:15 PM	1	2	0	0	0	0	0	4	7
04:45 PM	0	0	0	0	0	0	0	1	1
Total	1	2	0	0	0	1	0	5	9
05:00 PM	0	0	0	2	0	1	0	2	5
05:15 PM	0	2	0	0	0	0	0	1	3
05:30 PM	0	0	0	1	0	1	0	2	4
05:45 PM	0	1	0	0	0	2	1	5	9
Total	0	3	0	3	0	4	1	10	21
Grand Total	2	17	0	10	1	11	2	29	72
Apprch %	10.5	89.5	0	100	8.3	91.7	6.5	93.5	
Total %	2.8	23.6	0	13.9	1.4	15.3	2.8	40.3	

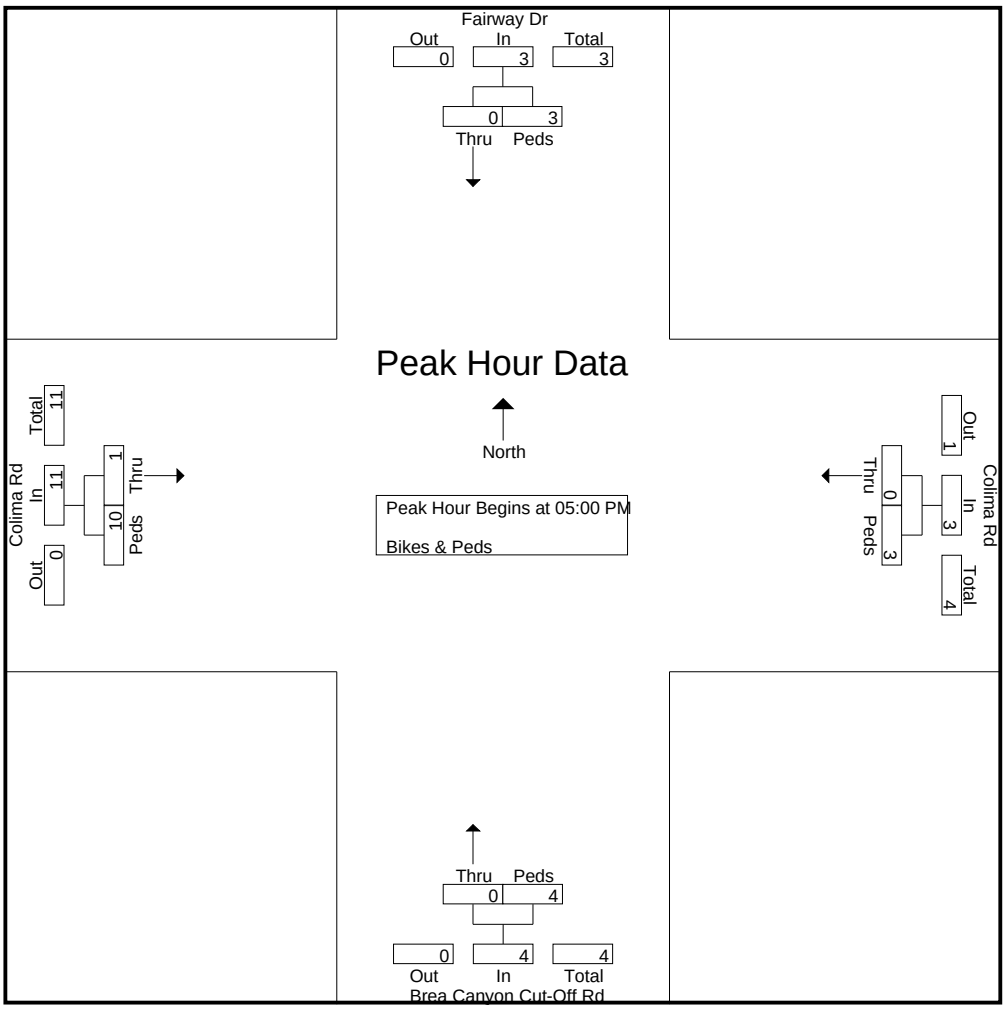
File Name : Fairway-BreaCanyonCutOff_Colima_BP_Sept2021
Site Code : 00000000
Start Date : 9/30/2021
Page No : 2

	Fairway Dr Southbound			Colima Rd Westbound			Brea Canyon Cut-Off Rd Northbound			Colima Rd Eastbound			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 08:00 AM													
08:00 AM	0	**3**	**3**	0	**6**	**6**	0	**2**	**2**	0	2	2	**13**
08:15 AM	0	2	2	0	0	0	0	0	0	**1**	3	**4**	6
08:30 AM	0	3	3	0	0	0	0	2	2	0	3	3	8
08:45 AM	0	1	1	0	0	0	0	1	1	0	**4**	4	6
Total Volume	0	9	9	0	6	6	0	5	5	1	12	13	33
% App. Total	0	100		0	100		0	100		7.7	92.3		
PHF	.000	.750	.750	.000	.250	.250	.000	.625	.625	.250	.750	.813	.635



File Name : Fairway-BreaCanyonCutOff_Colima_BP_Sept2021
Site Code : 00000000
Start Date : 9/30/2021
Page No : 3

	Fairway Dr Southbound			Colima Rd Westbound			Brea Canyon Cut-Off Rd Northbound			Colima Rd Eastbound			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 05:00 PM													
05:00 PM	0	0	0	0	**2**	**2**	0	1	1	0	2	2	5
05:15 PM	0	**2**	**2**	0	0	0	0	0	0	0	1	1	3
05:30 PM	0	0	0	0	1	1	0	1	1	0	2	2	4
05:45 PM	0	1	1	0	0	0	0	**2**	**2**	**1**	**5**	**6**	**9**
Total Volume	0	3	3	0	3	3	0	4	4	1	10	11	21
% App. Total	0	100		0	100		0	100		9.1	90.9		
PHF	.000	.375	.375	.000	.375	.375	.000	.500	.500	.250	.500	.458	.583



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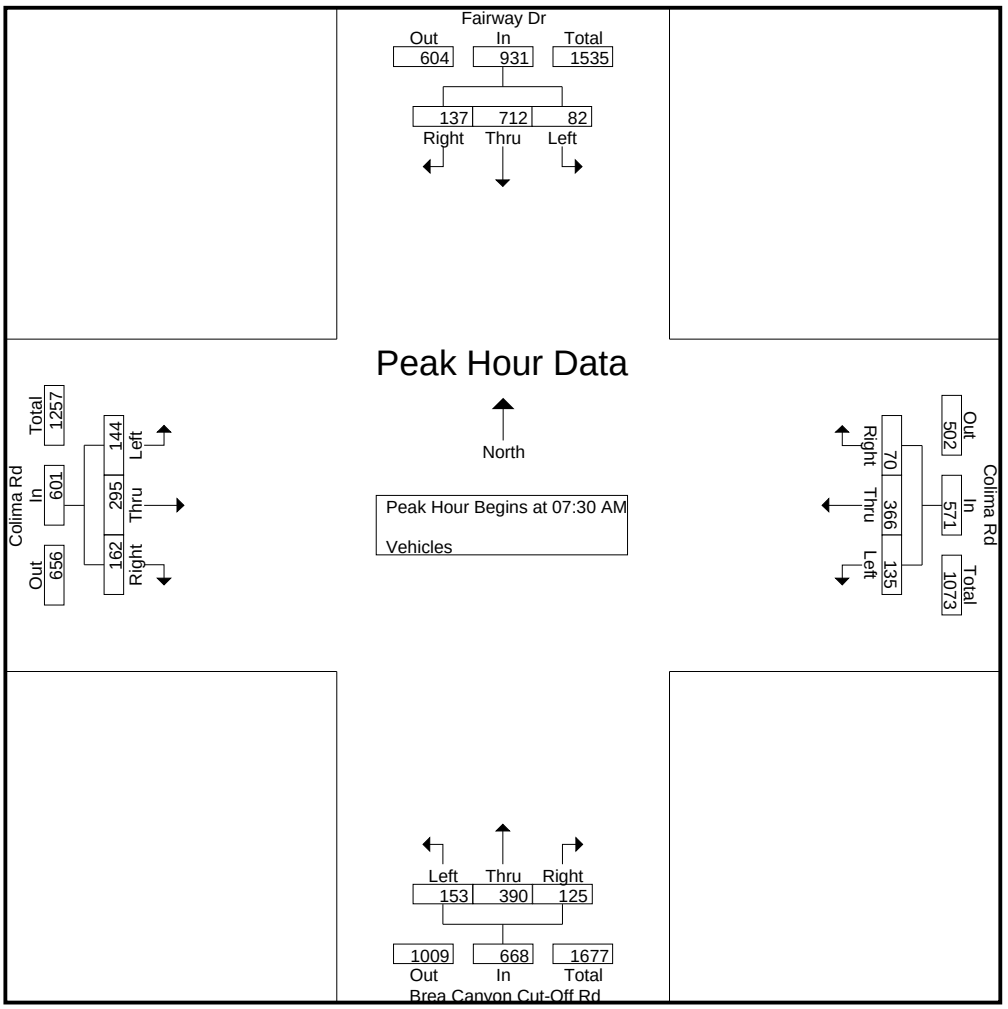
File Name : Fairway-BreaCanyonCutOff_Colima_Sept2021
Site Code : 00000000
Start Date : 9/30/2021
Page No : 1

Groups Printed- Vehicles

	Fairway Dr Southbound			Colima Rd Westbound			Brea Canyon Cut-Off Rd Northbound			Colima Rd Eastbound			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
07:00 AM	10	120	23	24	64	8	14	45	14	29	46	21	418
07:15 AM	13	163	32	28	76	12	26	73	19	31	48	38	559
07:30 AM	19	184	35	30	77	15	27	99	29	31	49	43	638
07:45 AM	19	178	42	37	96	21	34	103	30	29	73	35	697
Total	61	645	132	119	313	56	101	320	92	120	216	137	2312
08:00 AM	23	209	32	41	89	18	36	98	38	51	94	39	768
08:15 AM	21	141	28	27	104	16	56	90	28	33	79	45	668
08:30 AM	20	108	27	32	102	9	35	83	30	38	60	24	568
08:45 AM	27	103	24	29	114	9	48	80	22	25	94	30	605
Total	91	561	111	129	409	52	175	351	118	147	327	138	2609
04:00 PM	45	120	37	34	108	16	43	131	62	40	183	50	869
04:15 PM	42	119	35	41	97	7	50	141	44	28	197	44	845
04:30 PM	36	162	31	40	90	10	45	157	47	38	182	52	890
04:45 PM	44	123	23	43	115	16	50	129	61	35	157	44	840
Total	167	524	126	158	410	49	188	558	214	141	719	190	3444
05:00 PM	47	163	33	41	110	13	37	115	43	39	179	41	861
05:15 PM	55	173	30	41	121	19	39	105	33	35	192	40	883
05:30 PM	47	208	39	50	120	12	53	113	39	41	162	43	927
05:45 PM	45	164	44	44	166	19	40	101	34	42	203	39	941
Total	194	708	146	176	517	63	169	434	149	157	736	163	3612
Grand Total	513	2438	515	582	1649	220	633	1663	573	565	1998	628	11977
Apprch %	14.8	70.3	14.9	23.7	67.3	9	22.1	58	20	17.7	62.6	19.7	
Total %	4.3	20.4	4.3	4.9	13.8	1.8	5.3	13.9	4.8	4.7	16.7	5.2	

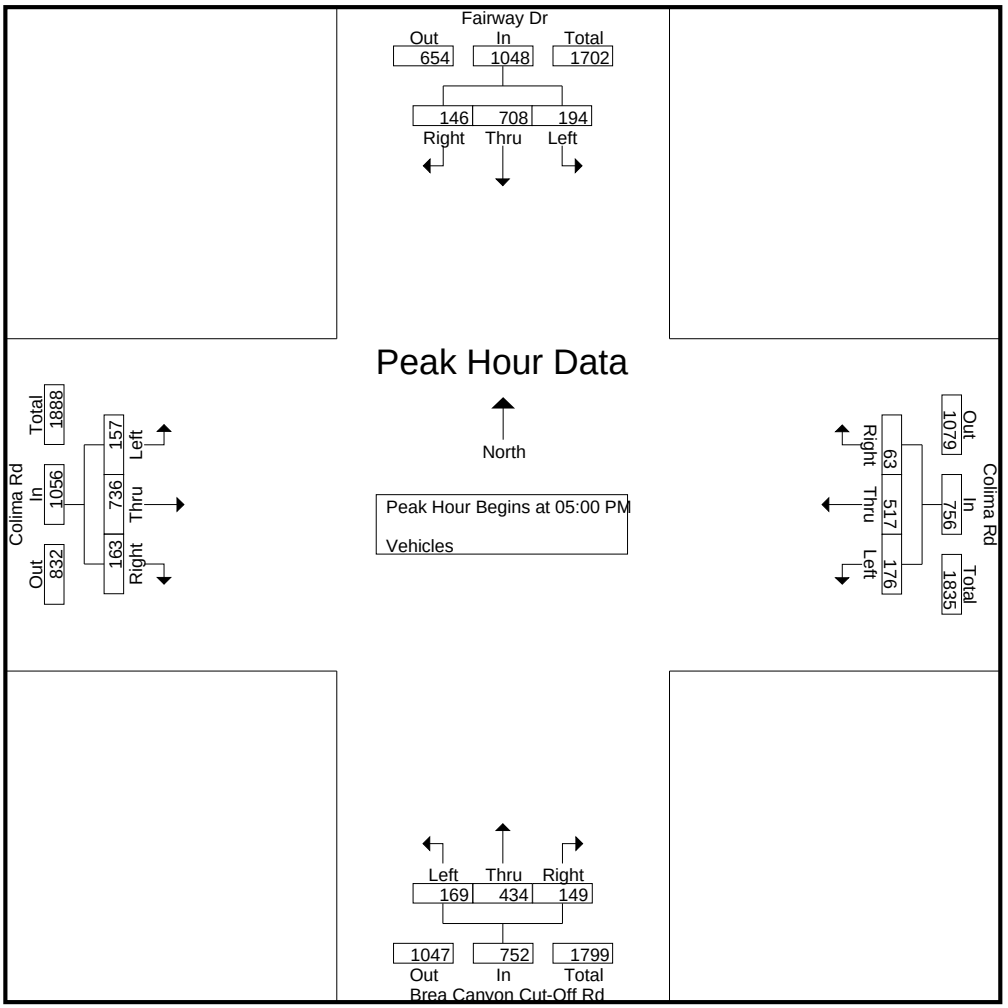
File Name : Fairway-BreaCanyonCutOff_Colima_Sept2021
Site Code : 00000000
Start Date : 9/30/2021
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	Fairway Dr Southbound				Colima Rd Westbound				Brea Canyon Cut-Off Rd Northbound				Colima Rd Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	19	184	35	238	30	77	15	122	27	99	29	155	31	49	43	123	638
07:45 AM	19	178	**42**	239	37	96	**21**	**154**	34	**103**	30	167	29	73	35	137	697
08:00 AM	**23**	**209**	32	**264**	**41**	89	18	148	36	98	**38**	172	**51**	**94**	39	**184**	**768**
08:15 AM	21	141	28	190	27	**104**	16	147	**56**	90	28	**174**	33	79	**45**	157	668
Total Volume	82	712	137	931	135	366	70	571	153	390	125	668	144	295	162	601	2771
% App. Total	8.8	76.5	14.7		23.6	64.1	12.3		22.9	58.4	18.7		24	49.1	27		
PHF	.891	.852	.815	.882	.823	.880	.833	.927	.683	.947	.822	.960	.706	.785	.900	.817	.902



File Name : Fairway-BreaCanyonCutOff_Colima_Sept2021
Site Code : 00000000
Start Date : 9/30/2021
Page No : 3

	Fairway Dr Southbound				Colima Rd Westbound				Brea Canyon Cut-Off Rd Northbound				Colima Rd Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	47	163	33	243	41	110	13	164	37	**115**	**43**	195	39	179	41	259	861
05:15 PM	**55**	173	30	258	41	121	**19**	181	39	105	33	177	35	192	40	267	883
05:30 PM	47	**208**	39	**294**	**50**	120	12	182	**53**	113	39	**205**	41	162	**43**	246	927
05:45 PM	45	164	**44**	253	44	**166**	19	**229**	40	101	34	175	**42**	**203**	39	**284**	**941**
Total Volume	194	708	146	1048	176	517	63	756	169	434	149	752	157	736	163	1056	3612
% App. Total	18.5	67.6	13.9		23.3	68.4	8.3		22.5	57.7	19.8		14.9	69.7	15.4		
PHF	.882	.851	.830	.891	.880	.779	.829	.825	.797	.943	.866	.917	.935	.906	.948	.930	.960



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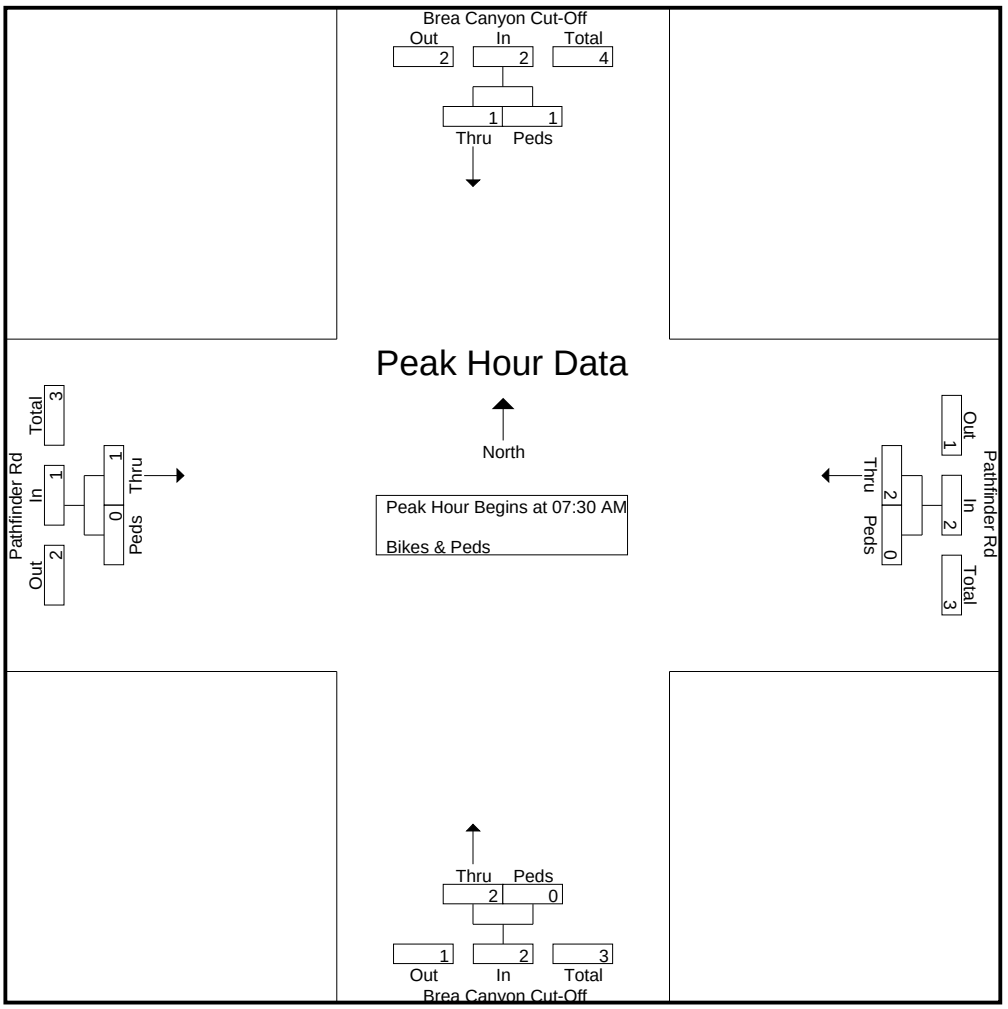
File Name : BreaCanyonCutOff_Pathfinder_BP_Sept2021
Site Code : 00000000
Start Date : 9/30/2021
Page No : 1

Groups Printed- Bikes & Peds

	Brea Canyon Cut-Off Southbound		Pathfinder Rd Westbound		Brea Canyon Cut-Off Northbound		Pathfinder Rd Eastbound		
Start Time	Bikes	Peds	Bikes	Peds	Bikes	Peds	Bikes	Peds	Int. Total
07:30 AM	0	1	0	0	0	0	0	0	1
07:45 AM	0	0	1	0	1	0	0	0	2
Total	0	1	1	0	1	0	0	0	3
08:15 AM	1	0	1	0	1	0	1	0	4
08:45 AM	0	0	0	0	1	0	0	0	1
Total	1	0	1	0	2	0	1	0	5
04:30 PM	0	0	0	1	0	0	0	0	1
Total	0	0	0	1	0	0	0	0	1
05:15 PM	0	0	0	1	0	0	0	0	1
05:45 PM	0	0	0	0	0	2	0	0	2
Total	0	0	0	1	0	2	0	0	3
Grand Total	1	1	2	2	3	2	1	0	12
Apprch %	50	50	50	50	60	40	100	0	
Total %	8.3	8.3	16.7	16.7	25	16.7	8.3	0	

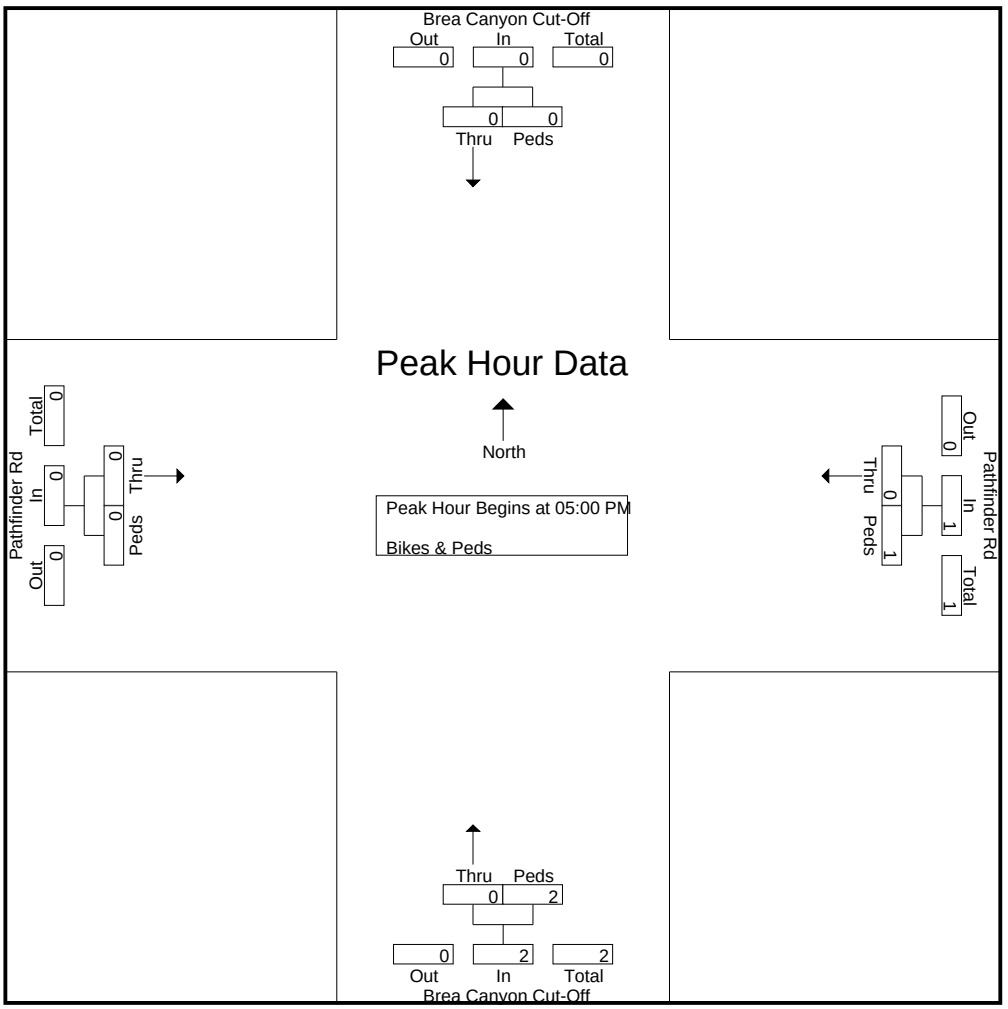
File Name : BreaCanyonCutOff_Pathfinder_BP_Sept2021
Site Code : 00000000
Start Date : 9/30/2021
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	Brea Canyon Cut-Off Southbound			Pathfinder Rd Westbound			Brea Canyon Cut-Off Northbound			Pathfinder Rd Eastbound			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:30 AM													
07:30 AM	0	**1**	**1**	0	0	0	0	0	0	0	0	0	1
07:45 AM	0	0	0	**1**	0	**1**	**1**	0	**1**	0	0	0	2
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	**1**	0	1	1	0	1	1	0	1	**1**	0	**1**	**4**
Total Volume	1	1	2	2	0	2	2	0	2	1	0	1	7
% App. Total	50	50		100	0		100	0		100	0		
PHF	.250	.250	.500	.500	.000	.500	.500	.000	.500	.250	.000	.250	.438



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	Brea Canyon Cut-Off Southbound			Pathfinder Rd Westbound			Brea Canyon Cut-Off Northbound			Pathfinder Rd Eastbound			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 05:00 PM													
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	**1**	**1**	0	0	0	0	0	0	1
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	**2**	**2**	0	0	0	**2**
Total Volume	0	0	0	0	1	1	0	2	2	0	0	0	3
% App. Total	0	0		0	100		0	100		0	0		
PHF	.000	.000	.000	.000	.250	.250	.000	.250	.250	.000	.000	.000	.375



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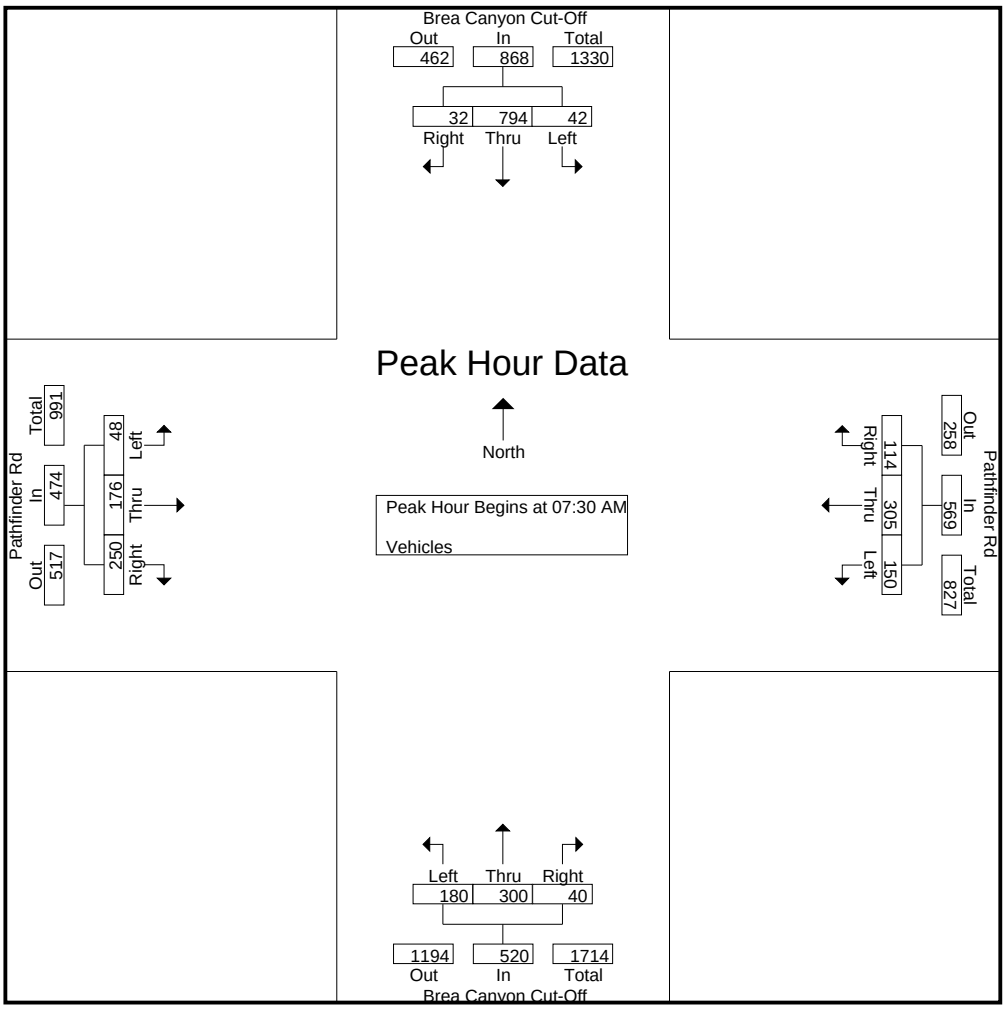
File Name : BreaCanyonCutOff_Pathfinder_Sept2021
Site Code : 00000000
Start Date : 9/30/2021
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Groups Printed- Vehicles

	Brea Canyon Cut-Off Southbound			Pathfinder Rd Westbound			Brea Canyon Cut-Off Northbound			Pathfinder Rd Eastbound			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
07:00 AM	2	170	3	15	50	13	30	33	3	7	37	50	413
07:15 AM	13	195	2	21	60	16	40	39	3	6	53	54	502
07:30 AM	13	215	10	39	84	21	35	63	2	10	48	62	602
07:45 AM	4	200	8	58	77	31	48	73	7	11	58	84	659
Total	32	780	23	133	271	81	153	208	15	34	196	250	2176
08:00 AM	13	214	9	39	84	29	47	71	16	14	33	62	631
08:15 AM	12	165	5	14	60	33	50	93	15	13	37	42	539
08:30 AM	10	107	5	10	51	27	54	78	7	8	32	55	444
08:45 AM	9	123	7	14	79	28	44	67	9	9	31	58	478
Total	44	609	26	77	274	117	195	309	47	44	133	217	2092
04:00 PM	18	120	13	4	44	18	66	185	17	12	142	98	737
04:15 PM	23	157	8	5	74	29	80	172	16	14	115	77	770
04:30 PM	18	164	9	8	67	21	62	172	24	6	154	65	770
04:45 PM	26	200	12	6	57	11	74	182	17	18	143	81	827
Total	85	641	42	23	242	79	282	711	74	50	554	321	3104
05:00 PM	22	175	11	16	73	13	61	159	13	10	120	71	744
05:15 PM	33	195	17	15	82	32	54	128	13	19	119	69	776
05:30 PM	27	255	12	16	83	23	57	139	9	13	100	82	816
05:45 PM	30	217	12	8	54	21	72	161	9	13	101	81	779
Total	112	842	52	55	292	89	244	587	44	55	440	303	3115
Grand Total	273	2872	143	288	1079	366	874	1815	180	183	1323	1091	10487
Apprch %	8.3	87.3	4.3	16.6	62.3	21.1	30.5	63.3	6.3	7	50.9	42	
Total %	2.6	27.4	1.4	2.7	10.3	3.5	8.3	17.3	1.7	1.7	12.6	10.4	

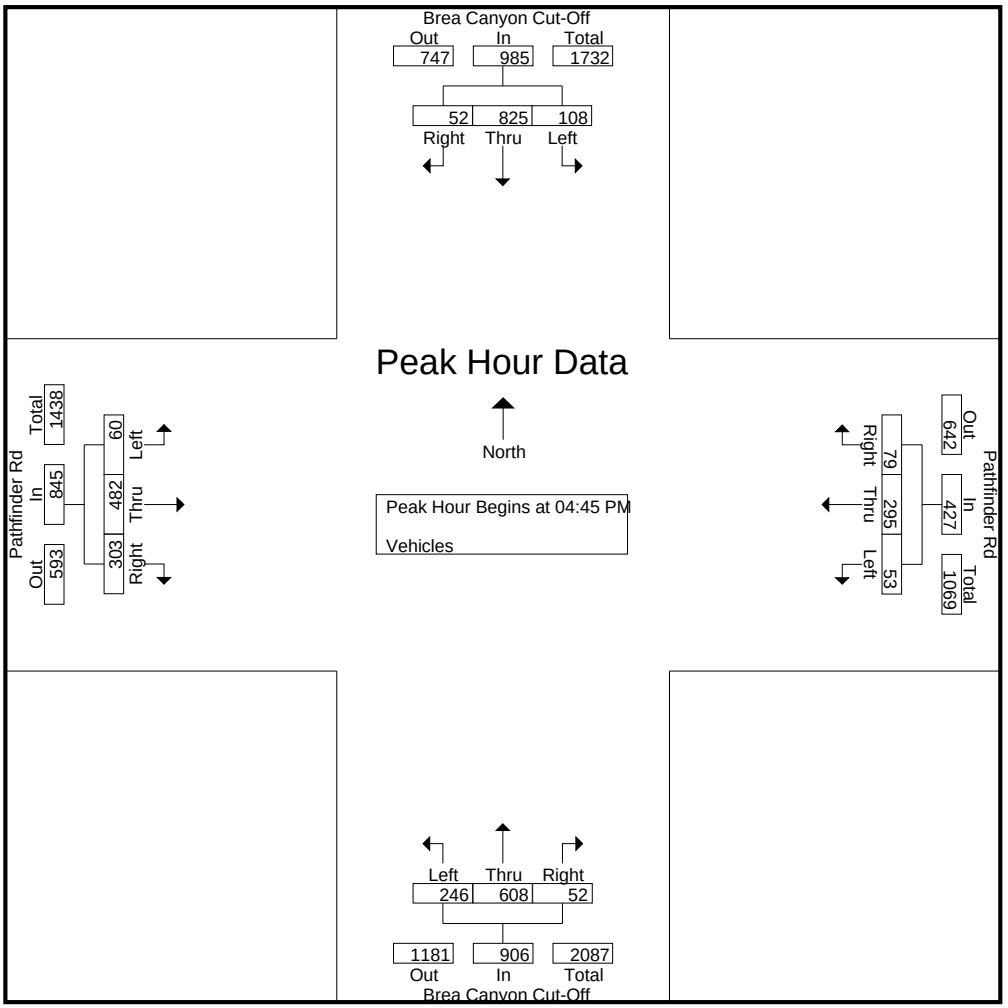
File Name : BreaCanyonCutOff_Pathfinder_Sept2021
Site Code : 00000000
Start Date : 9/30/2021
Page No : 2

	Brea Canyon Cut-Off Southbound				Pathfinder Rd Westbound				Brea Canyon Cut-Off Northbound				Pathfinder Rd Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	**13**	**215**	**10**	**238**	39	**84**	21	144	35	63	2	100	10	48	62	120	602
07:45 AM	4	200	8	212	**58**	77	31	**166**	48	73	7	128	11	**58**	**84**	**153**	**659**
08:00 AM	13	214	9	236	39	84	29	152	47	71	**16**	134	**14**	33	62	109	631
08:15 AM	12	165	5	182	14	60	**33**	107	**50**	**93**	15	**158**	13	37	42	92	539
Total Volume	42	794	32	868	150	305	114	569	180	300	40	520	48	176	250	474	2431
% App. Total	4.8	91.5	3.7		26.4	53.6	20		34.6	57.7	7.7		10.1	37.1	52.7		
PHF	.808	.923	.800	.912	.647	.908	.864	.857	.900	.806	.625	.823	.857	.759	.744	.775	.922



File Name : BreaCanyonCutOff_Pathfinder_Sept2021
Site Code : 00000000
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	Brea Canyon Cut-Off Southbound				Pathfinder Rd Westbound				Brea Canyon Cut-Off Northbound				Pathfinder Rd Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	26	200	12	238	6	57	11	74	**74**	**182**	**17**	**273**	18	**143**	81	**242**	**827**
05:00 PM	22	175	11	208	**16**	73	13	102	61	159	13	233	10	120	71	201	744
05:15 PM	**33**	195	**17**	245	15	82	**32**	**129**	54	128	13	195	**19**	119	69	207	776
05:30 PM	27	**255**	12	**294**	16	**83**	23	122	57	139	9	205	13	100	**82**	195	816
Total Volume	108	825	52	985	53	295	79	427	246	608	52	906	60	482	303	845	3163
% App. Total	11	83.8	5.3		12.4	69.1	18.5		27.2	67.1	5.7		7.1	57	35.9		
PHF	.818	.809	.765	.838	.828	.889	.617	.828	.831	.835	.765	.830	.789	.843	.924	.873	.956



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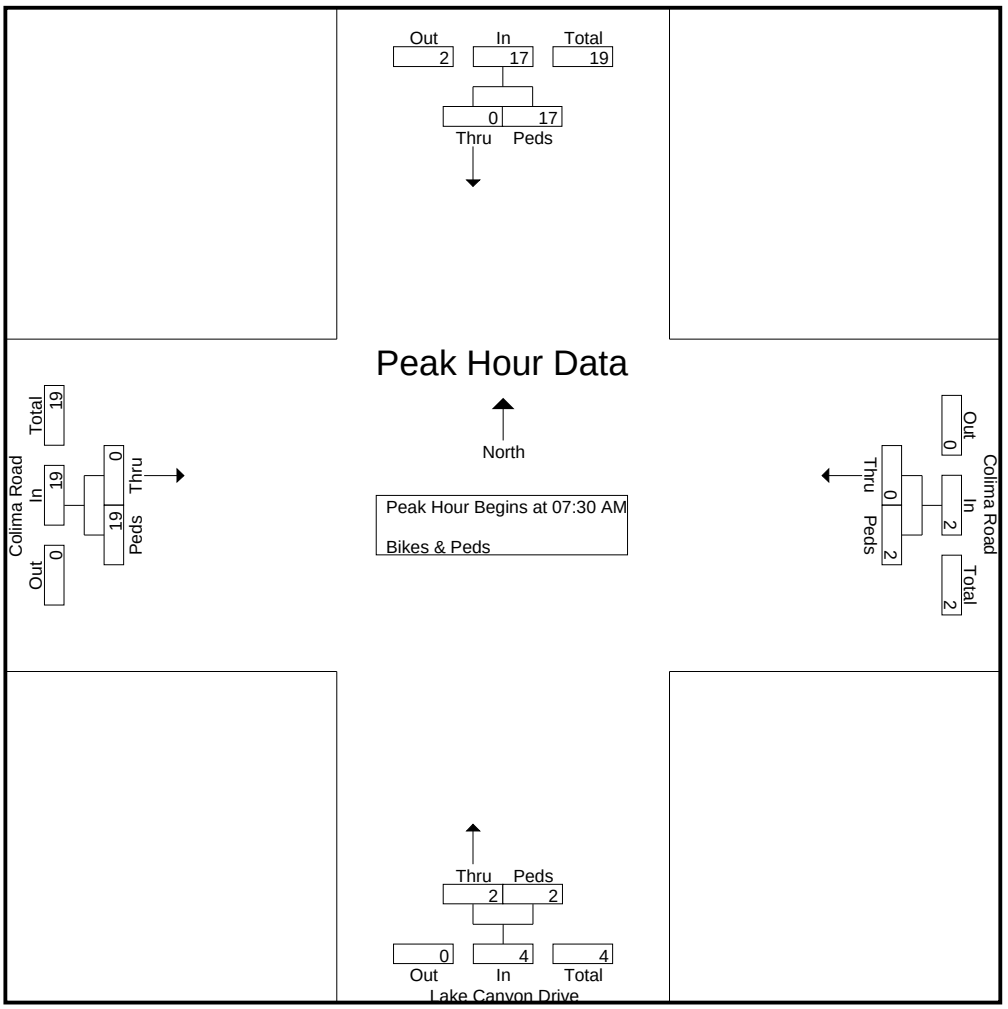
File Name : LakeCanyon_Colima_BP_Nov2021
Site Code : 00000000
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Groups Printed- Bikes & Peds

	Southbound		Colima Road Westbound		Lake Canyon Drive Northbound		Colima Road Eastbound		
Start Time	Bikes	Peds	Bikes	Peds	Bikes	Peds	Bikes	Peds	Int. Total
07:15 AM	0	2	0	0	0	0	0	2	4
07:30 AM	0	3	0	0	0	0	0	3	6
07:45 AM	0	3	0	1	0	1	0	4	9
Total	0	8	0	1	0	1	0	9	19
08:00 AM	0	7	0	0	2	1	0	7	17
08:15 AM	0	4	0	1	0	0	0	5	10
08:30 AM	0	0	0	1	0	0	0	2	3
08:45 AM	0	2	0	4	0	0	0	3	9
Total	0	13	0	6	2	1	0	17	39
04:00 PM	0	0	0	4	0	0	0	4	8
04:15 PM	0	0	0	2	1	0	0	4	7
04:30 PM	0	0	0	0	1	2	0	1	4
Total	0	0	0	6	2	2	0	9	19
05:00 PM	0	0	0	6	0	1	0	8	15
05:15 PM	0	0	0	1	0	0	0	2	3
05:30 PM	0	0	0	1	0	0	0	1	2
Total	0	0	0	8	0	1	0	11	20
Grand Total	0	21	0	21	4	5	0	46	97
Apprch %	0	100	0	100	44.4	55.6	0	100	
Total %	0	21.6	0	21.6	4.1	5.2	0	47.4	

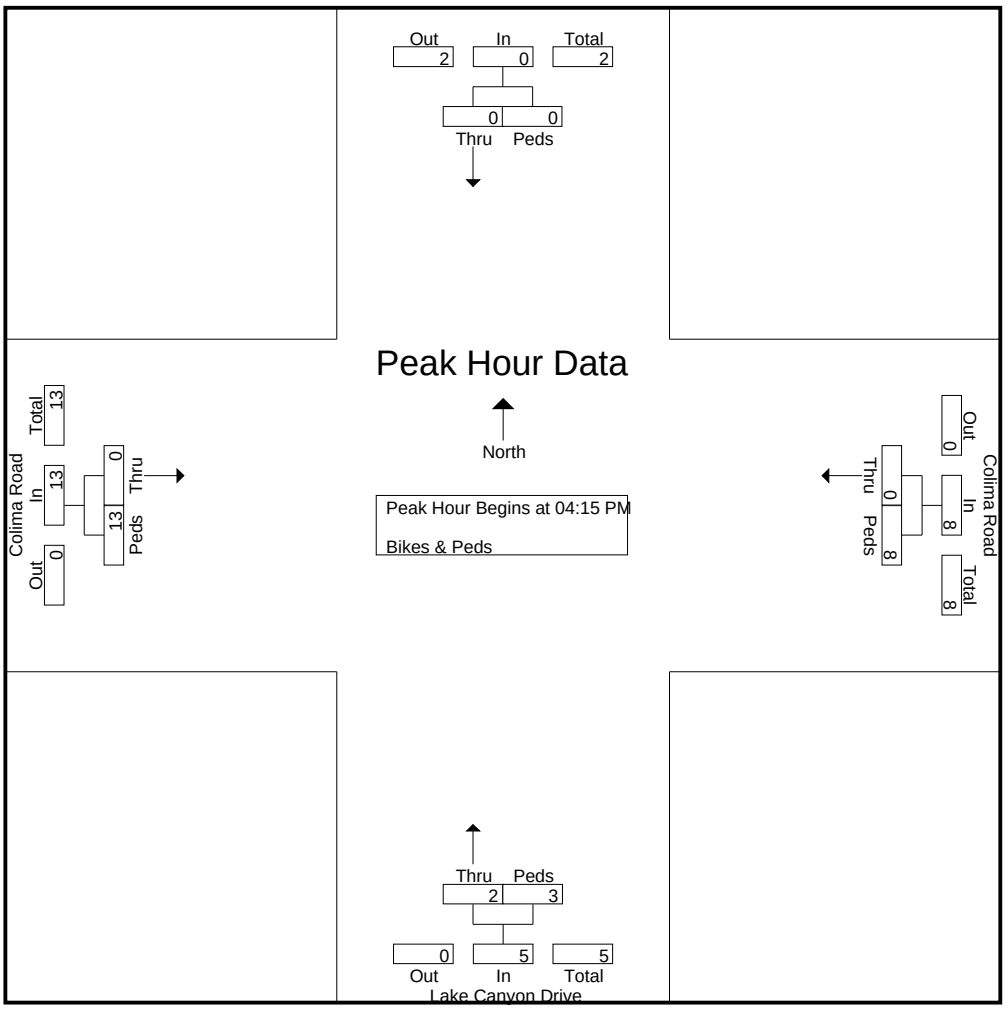
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	Southbound			Colima Road Westbound			Lake Canyon Drive Northbound			Colima Road Eastbound			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:30 AM													
07:30 AM	0	3	3	0	0	0	0	0	0	0	3	3	6
07:45 AM	0	3	3	0	**1**	**1**	0	**1**	1	0	4	4	9
08:00 AM	0	**7**	**7**	0	0	0	**2**	1	**3**	0	**7**	**7**	**17**
08:15 AM	0	4	4	0	1	1	0	0	0	0	5	5	10
Total Volume	0	17	17	0	2	2	2	2	4	0	19	19	42
% App. Total	0	100		0	100		50	50		0	100		
PHF	.000	.607	.607	.000	.500	.500	.250	.500	.333	.000	.679	.679	.618



File Name : LakeCanyon_Colima_BP_Nov2021
Site Code : 00000000
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	Southbound			Colima Road Westbound			Lake Canyon Drive Northbound			Colima Road Eastbound			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:15 PM													
04:15 PM	0	0	0	0	2	2	**1**	0	1	0	4	4	7
04:30 PM	0	0	0	0	0	0	1	**2**	**3**	0	1	1	4
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	**6**	**6**	0	1	1	0	**8**	**8**	**15**
Total Volume	0	0	0	0	8	8	2	3	5	0	13	13	26
% App. Total	0	0		0	100		40	60		0	100		
PHF	.000	.000	.000	.000	.333	.333	.500	.375	.417	.000	.406	.406	.433



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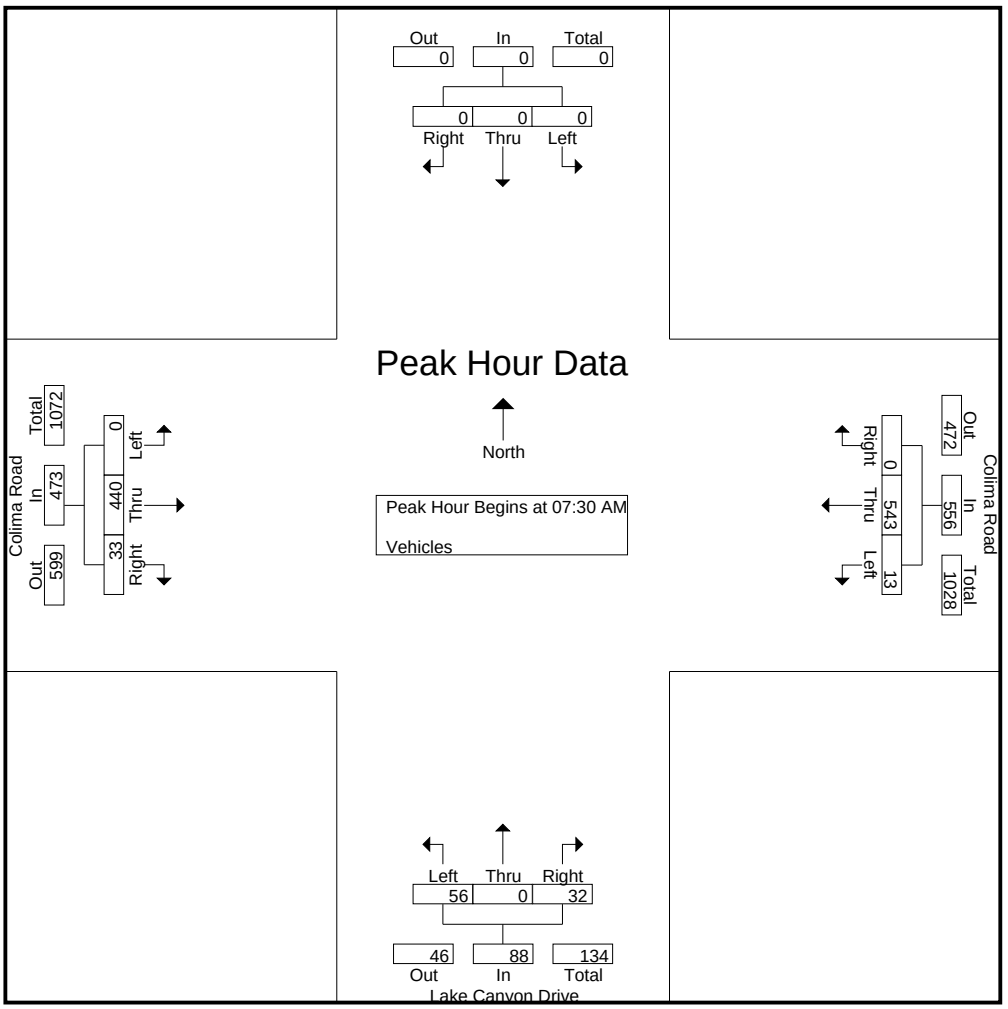
File Name : LakeCanyon_Colima_Nov2021
Site Code : 00000000
Start Date : 11/2/2021
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Groups Printed- Vehicles

	Southbound			Colima Road Westbound			Lake Canyon Drive Northbound			Colima Road Eastbound			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
07:00 AM	0	0	0	2	90	0	6	0	6	0	68	7	179
07:15 AM	0	0	0	4	112	0	16	0	10	0	70	2	214
07:30 AM	0	0	0	2	129	0	12	0	8	0	96	4	251
07:45 AM	0	0	0	5	162	0	18	0	8	0	125	11	329
Total	0	0	0	13	493	0	52	0	32	0	359	24	973
08:00 AM	0	0	0	2	129	0	14	0	6	0	127	10	288
08:15 AM	0	0	0	4	123	0	12	0	10	0	92	8	249
08:30 AM	0	0	0	2	132	0	5	0	5	0	98	2	244
08:45 AM	0	0	0	0	136	0	8	0	6	0	112	5	267
Total	0	0	0	8	520	0	39	0	27	0	429	25	1048
04:00 PM	0	0	0	10	135	0	7	0	9	0	268	12	441
04:15 PM	0	0	0	9	143	0	7	0	1	0	217	9	386
04:30 PM	0	0	0	5	132	0	8	0	7	0	286	16	454
04:45 PM	0	0	0	4	168	0	8	0	4	0	245	15	444
Total	0	0	0	28	578	0	30	0	21	0	1016	52	1725
05:00 PM	0	0	0	8	170	0	8	0	6	0	227	11	430
05:15 PM	0	0	0	9	181	0	8	0	5	0	235	13	451
05:30 PM	0	0	0	9	181	0	5	0	6	0	273	11	485
05:45 PM	0	0	0	4	140	0	10	0	2	0	247	23	426
Total	0	0	0	30	672	0	31	0	19	0	982	58	1792
Grand Total	0	0	0	79	2263	0	152	0	99	0	2786	159	5538
Apprch %	0	0	0	3.4	96.6	0	60.6	0	39.4	0	94.6	5.4	
Total %	0	0	0	1.4	40.9	0	2.7	0	1.8	0	50.3	2.9	

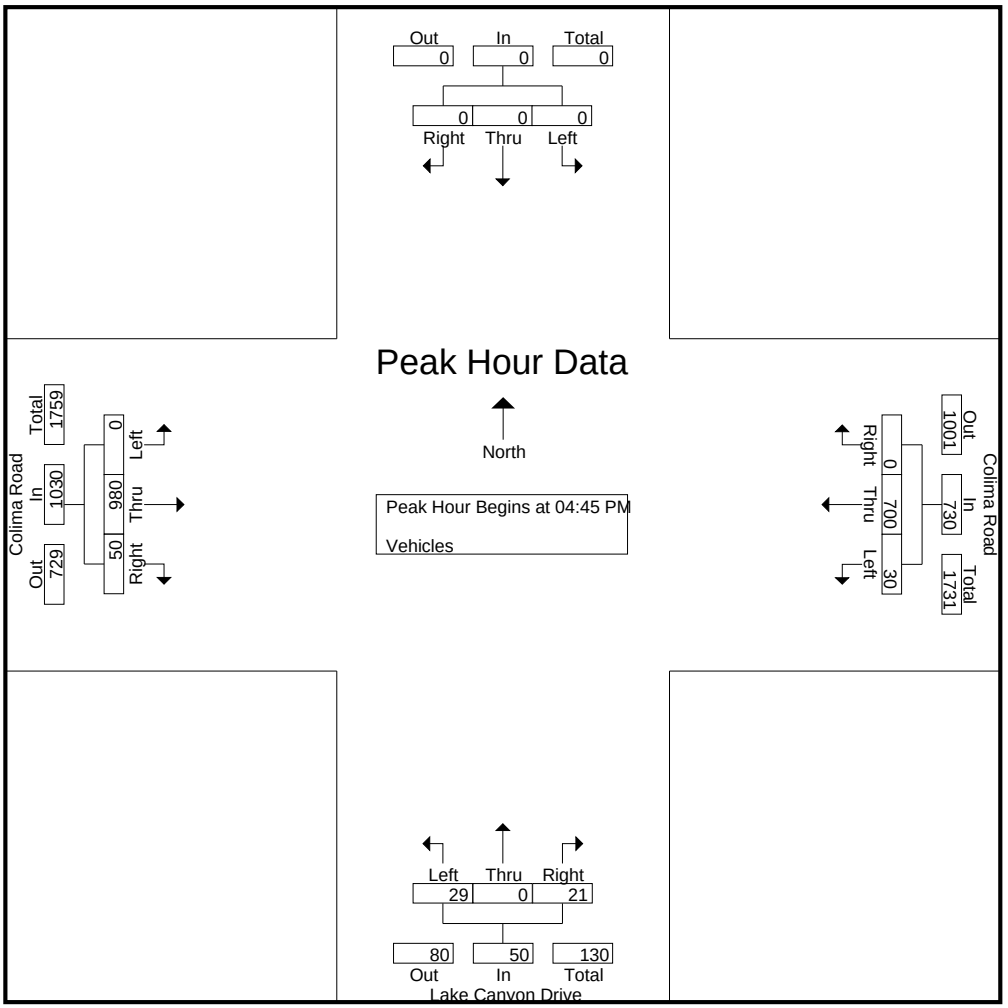
File Name : LakeCanyon_Colima_Nov2021
Site Code : 00000000
Start Date : 11/2/2021
Page No : 2

	Southbound				Colima Road Westbound				Lake Canyon Drive Northbound				Colima Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	0	0	0	2	129	0	131	12	0	8	20	0	96	4	100	251
07:45 AM	0	0	0	0	**5**	**162**	0	**167**	**18**	0	8	**26**	0	125	**11**	136	**329**
08:00 AM	0	0	0	0	2	129	0	131	14	0	6	20	0	**127**	10	**137**	288
08:15 AM	0	0	0	0	4	123	0	127	12	0	**10**	22	0	92	8	100	249
Total Volume	0	0	0	0	13	543	0	556	56	0	32	88	0	440	33	473	1117
% App. Total	0	0	0		2.3	97.7	0		63.6	0	36.4		0	93	7		
PHF	.000	.000	.000	.000	.650	.838	.000	.832	.778	.000	.800	.846	.000	.866	.750	.863	.849



File Name : LakeCanyon_Colima_Nov2021
Site Code : 00000000
Start Date : 11/2/2021
Page No : 3

	Southbound				Colima Road Westbound				Lake Canyon Drive Northbound				Colima Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	0	0	0	4	168	0	172	**8**	0	4	12	0	245	**15**	260	444
05:00 PM	0	0	0	0	8	170	0	178	8	0	**6**	**14**	0	227	11	238	430
05:15 PM	0	0	0	0	**9**	**181**	0	**190**	8	0	5	13	0	235	13	248	451
05:30 PM	0	0	0	0	9	181	0	190	5	0	6	11	0	**273**	11	**284**	**485**
Total Volume	0	0	0	0	30	700	0	730	29	0	21	50	0	980	50	1030	1810
% App. Total	0	0	0		4.1	95.9	0		58	0	42		0	95.1	4.9		
PHF	.000	.000	.000	.000	.833	.967	.000	.961	.906	.000	.875	.893	.000	.897	.833	.907	.933



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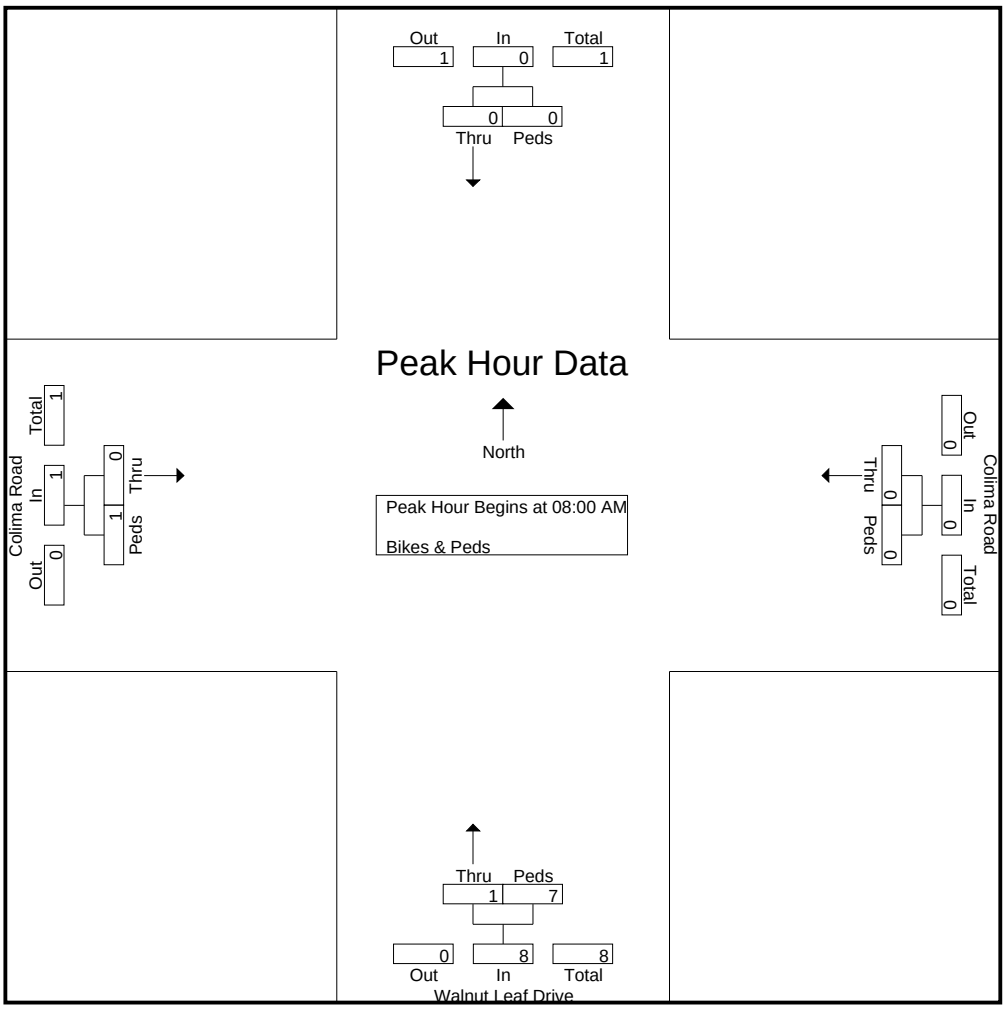
File Name : WalnutLeaf_Colima_BP_Nov2021
Site Code : 00000000
Start Date : 11/2/2021
Page No : 1

Groups Printed- Bikes & Peds

	Southbound		Colima Road Westbound		Walnut Leaf Drive Northbound		Colima Road Eastbound		
Start Time	Bikes	Peds	Bikes	Peds	Bikes	Peds	Bikes	Peds	Int. Total
07:45 AM	0	0	0	0	1	2	0	0	3
Total	0	0	0	0	1	2	0	0	3
08:00 AM	0	0	0	0	1	2	0	1	4
08:15 AM	0	0	0	0	0	1	0	0	1
08:45 AM	0	0	0	0	0	4	0	0	4
Total	0	0	0	0	1	7	0	1	9
04:30 PM	0	0	0	0	2	0	0	0	2
Total	0	0	0	0	2	0	0	0	2
05:00 PM	0	0	0	0	1	1	0	0	2
05:30 PM	0	0	0	0	0	1	0	0	1
05:45 PM	0	0	0	0	0	2	0	0	2
Total	0	0	0	0	1	4	0	0	5
Grand Total	0	0	0	0	5	13	0	1	19
Apprch %	0	0	0	0	27.8	72.2	0	100	
Total %	0	0	0	0	26.3	68.4	0	5.3	

File Name : WalnutLeaf_Colima_BP_Nov2021
Site Code : 00000000
Start Date : 11/2/2021
Page No : 2

	Southbound			Colima Road Westbound			Walnut Leaf Drive Northbound			Colima Road Eastbound			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 08:00 AM													
08:00 AM	0	0	0	0	0	0	**1**	2	3	0	**1**	**1**	**4**
08:15 AM	0	0	0	0	0	0	0	1	1	0	0	0	1
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	**4**	**4**	0	0	0	4
Total Volume	0	0	0	0	0	0	1	7	8	0	1	1	9
% App. Total	0	0		0	0		12.5	87.5		0	100		
PHF	.000	.000	.000	.000	.000	.000	.250	.438	.500	.000	.250	.250	.563



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File Name : WalnutLeaf_Colima_BP_Nov2021
Site Code : 00000000
Start Date : 11/2/2021
Page No : 3

	Southbound			Colima Road Westbound			Walnut Leaf Drive Northbound			Colima Road Eastbound			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 05:00 PM													
05:00 PM	0	0	0	0	0	0	**1**	1	**2**	0	0	0	**2**
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	1	1	0	0	0	1
05:45 PM	0	0	0	0	0	0	0	**2**	2	0	0	0	2
Total Volume	0	0	0	0	0	0	1	4	5	0	0	0	5
% App. Total	0	0		0	0		20	80		0	0		
PHF	.000	.000	.000	.000	.000	.000	.250	.500	.625	.000	.000	.000	.625

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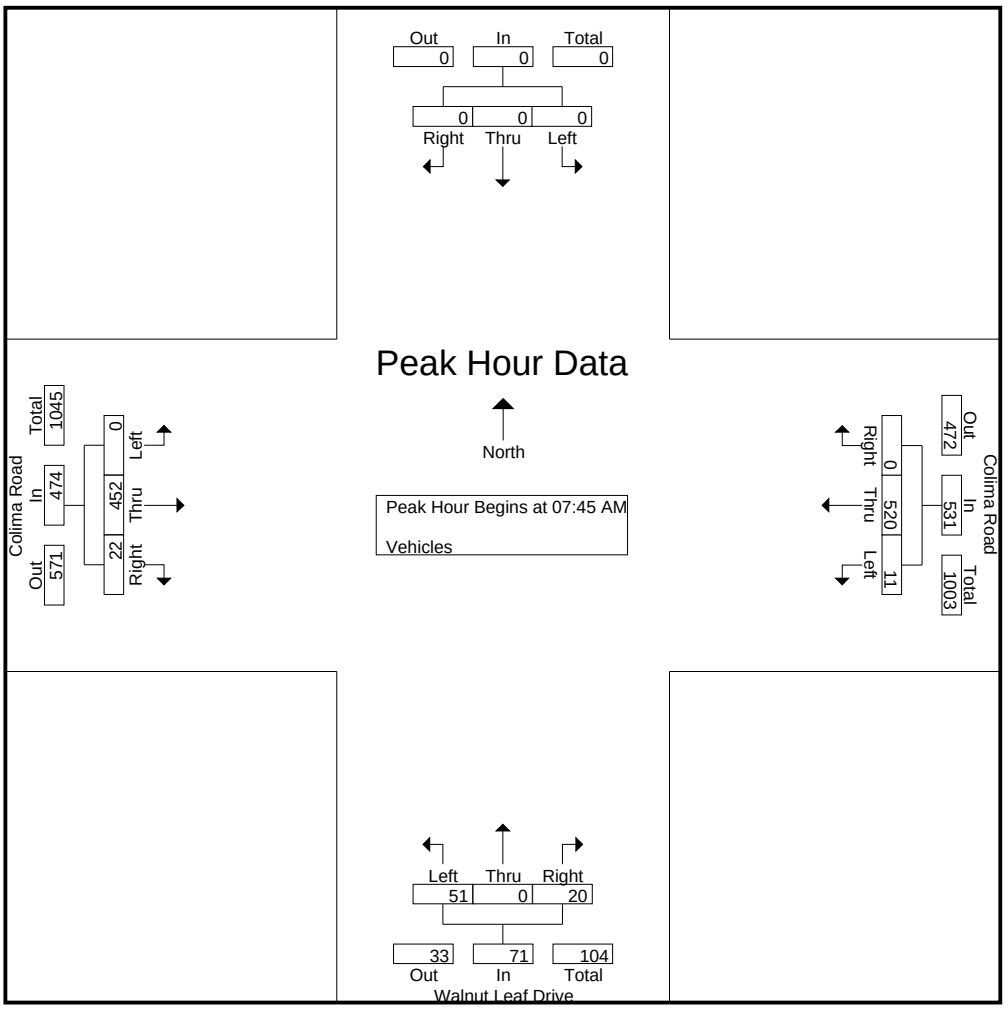
File Name : WalnutLeaf_Colima_Nov2021
Site Code : 00000000
Start Date : 11/2/2021
Page No : 1

Groups Printed- Vehicles

	Southbound			Colima Road Westbound			Walnut Leaf Drive Northbound			Colima Road Eastbound			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
07:00 AM	0	0	0	2	88	0	4	0	6	0	67	6	173
07:15 AM	0	0	0	1	105	0	6	0	6	0	75	2	195
07:30 AM	0	0	0	4	117	0	9	0	9	0	95	3	237
07:45 AM	0	0	0	1	154	0	19	0	3	0	131	4	312
Total	0	0	0	8	464	0	38	0	24	0	368	15	917
08:00 AM	0	0	0	2	117	0	12	0	8	0	119	7	265
08:15 AM	0	0	0	4	125	0	9	0	8	0	100	6	252
08:30 AM	0	0	0	4	124	0	11	0	1	0	102	5	247
08:45 AM	0	0	0	1	128	0	6	0	6	0	108	2	251
Total	0	0	0	11	494	0	38	0	23	0	429	20	1015
04:00 PM	0	0	0	3	145	0	5	0	4	0	269	10	436
04:15 PM	0	0	0	2	135	0	5	0	3	0	203	11	359
04:30 PM	0	0	0	9	133	0	4	0	5	0	274	7	432
04:45 PM	0	0	0	6	172	0	4	0	8	0	242	9	441
Total	0	0	0	20	585	0	18	0	20	0	988	37	1668
05:00 PM	0	0	0	7	178	0	3	0	2	0	222	4	416
05:15 PM	0	0	0	3	172	0	10	0	5	0	228	8	426
05:30 PM	0	0	0	7	177	0	6	0	2	0	279	8	479
05:45 PM	0	0	0	6	133	0	2	0	4	0	243	13	401
Total	0	0	0	23	660	0	21	0	13	0	972	33	1722
Grand Total	0	0	0	62	2203	0	115	0	80	0	2757	105	5322
Apprch %	0	0	0	2.7	97.3	0	59	0	41	0	96.3	3.7	
Total %	0	0	0	1.2	41.4	0	2.2	0	1.5	0	51.8	2	

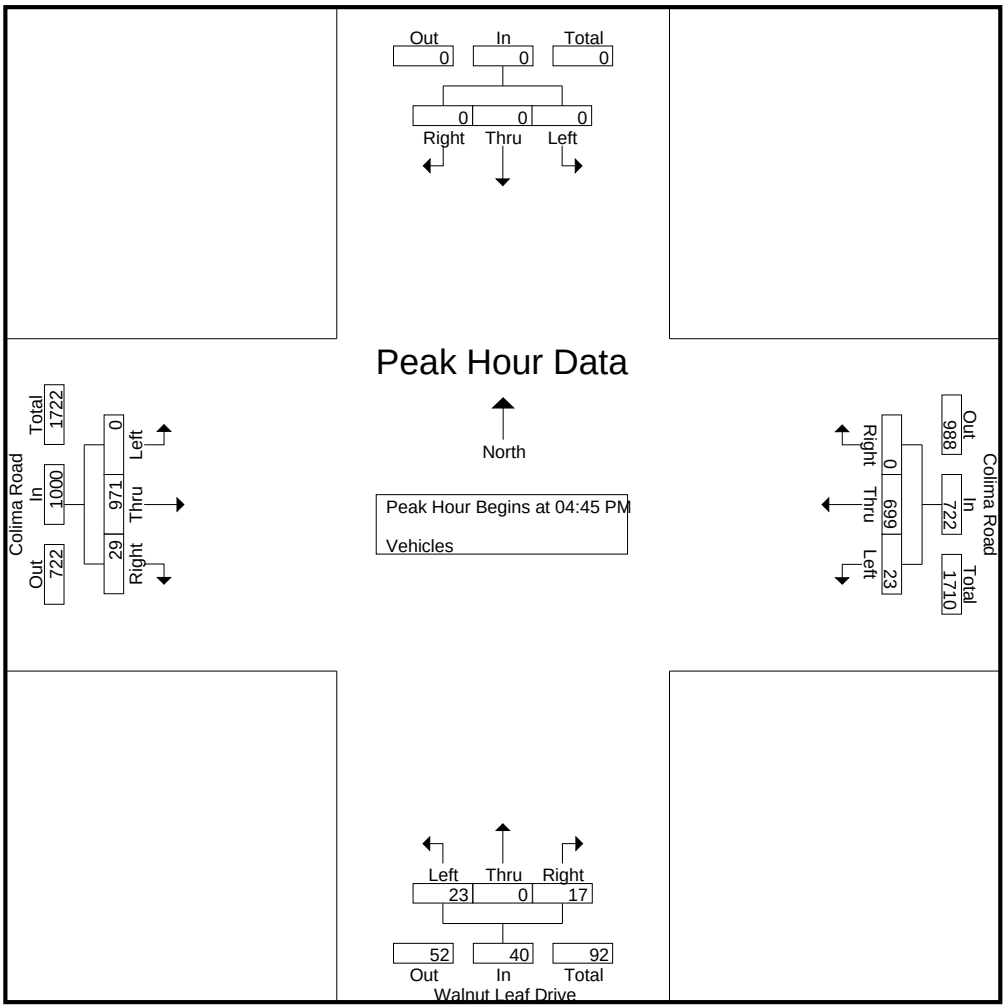
File Name : WalnutLeaf_Colima_Nov2021
Site Code : 00000000
Start Date : 11/2/2021
Page No : 2

	Southbound				Colima Road Westbound				Walnut Leaf Drive Northbound				Colima Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	0	0	0	0	1	**154**	0	**155**	**19**	0	3	**22**	0	**131**	4	**135**	**312**
08:00 AM	0	0	0	0	2	117	0	119	12	0	**8**	20	0	119	**7**	126	265
08:15 AM	0	0	0	0	**4**	125	0	129	9	0	8	17	0	100	6	106	252
08:30 AM	0	0	0	0	4	124	0	128	11	0	1	12	0	102	5	107	247
Total Volume	0	0	0	0	11	520	0	531	51	0	20	71	0	452	22	474	1076
% App. Total	0	0	0		2.1	97.9	0		71.8	0	28.2		0	95.4	4.6		
PHF	.000	.000	.000	.000	.688	.844	.000	.856	.671	.000	.625	.807	.000	.863	.786	.878	.862



File Name : WalnutLeaf_Colima_Nov2021
Site Code : 00000000
Start Date : 11/2/2021
Page No : 3

	Southbound				Colima Road Westbound				Walnut Leaf Drive Northbound				Colima Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	0	0	0	6	172	0	178	4	0	**8**	12	0	242	**9**	251	441
05:00 PM	0	0	0	0	**7**	**178**	0	**185**	3	0	2	5	0	222	4	226	416
05:15 PM	0	0	0	0	3	172	0	175	**10**	0	5	**15**	0	228	8	236	426
05:30 PM	0	0	0	0	7	177	0	184	6	0	2	8	0	**279**	8	**287**	**479**
Total Volume	0	0	0	0	23	699	0	722	23	0	17	40	0	971	29	1000	1762
% App. Total	0	0	0		3.2	96.8	0		57.5	0	42.5		0	97.1	2.9		
PHF	.000	.000	.000	.000	.821	.982	.000	.976	.575	.000	.531	.667	.000	.870	.806	.871	.920



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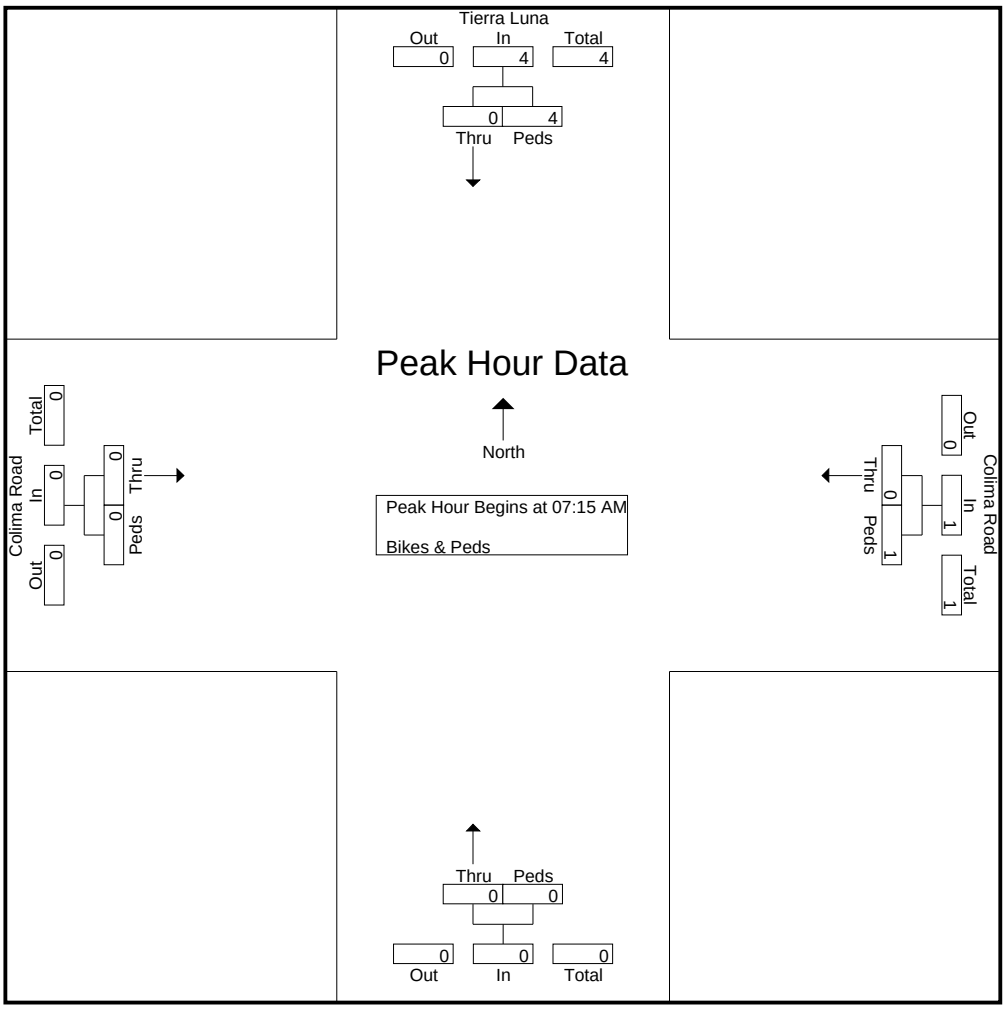
File Name : TierraLuna_Colima_BP_Nov2021
Site Code : 00000000
Start Date : 11/2/2021
Page No : 1

Groups Printed- Bikes & Peds

	Tierra Luna Southbound		Colima Road Westbound		Northbound		Colima Road Eastbound		
Start Time	Bikes	Peds	Bikes	Peds	Thru	Peds	Bikes	Peds	Int. Total
07:15 AM	0	1	0	0	0	0	0	0	1
07:30 AM	0	2	0	0	0	0	0	0	2
07:45 AM	0	1	0	0	0	0	0	0	1
Total	0	4	0	0	0	0	0	0	4
08:00 AM	0	0	0	1	0	0	0	0	1
08:30 AM	0	1	0	0	0	0	0	0	1
Total	0	1	0	1	0	0	0	0	2
04:45 PM	0	2	0	0	0	0	0	0	2
Total	0	2	0	0	0	0	0	0	2
Grand Total	0	7	0	1	0	0	0	0	8
Apprch %	0	100	0	100	0	0	0	0	
Total %	0	87.5	0	12.5	0	0	0	0	

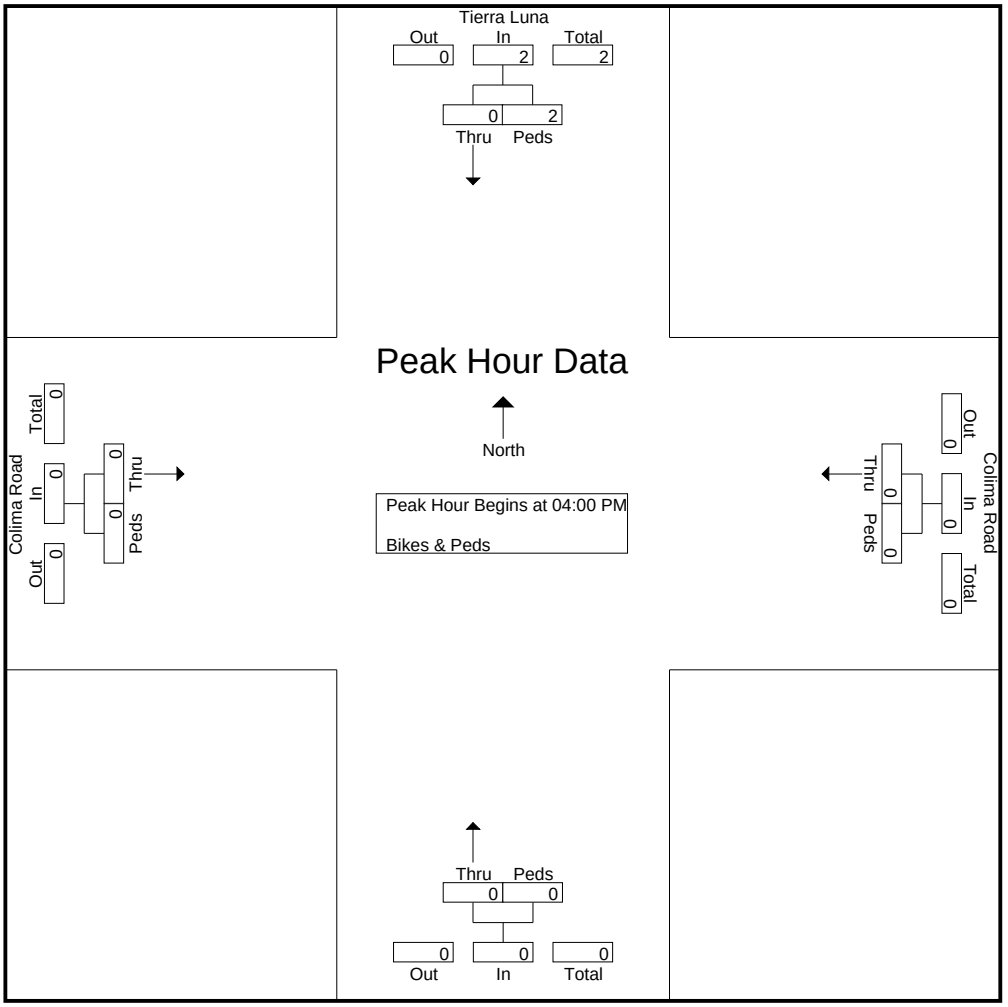
File Name : TierraLuna_Colima_BP_Nov2021
Site Code : 00000000
Start Date : 11/2/2021
Page No : 2

	Tierra Luna Southbound			Colima Road Westbound			Northbound			Colima Road Eastbound			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Thru	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:15 AM													
07:15 AM	0	1	1	0	0	0	0	0	0	0	0	0	1
07:30 AM	0	**2**	**2**	0	0	0	0	0	0	0	0	0	**2**
07:45 AM	0	1	1	0	0	0	0	0	0	0	0	0	1
08:00 AM	0	0	0	0	**1**	**1**	0	0	0	0	0	0	1
Total Volume	0	4	4	0	1	1	0	0	0	0	0	0	5
% App. Total	0	100		0	100		0	0		0	0		
PHF	.000	.500	.500	.000	.250	.250	.000	.000	.000	.000	.000	.000	.625



File Name : TierraLuna_Colima_BP_Nov2021
Site Code : 00000000
Start Date : 11/2/2021
Page No : 3

	Tierra Luna Southbound			Colima Road Westbound			Northbound			Colima Road Eastbound			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Thru	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:00 PM													
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	**2**	**2**	0	0	0	0	0	0	0	0	0	**2**
Total Volume	0	2	2	0	0	0	0	0	0	0	0	0	2
% App. Total	0	100		0	0		0	0		0	0		
PHF	.000	.250	.250	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250



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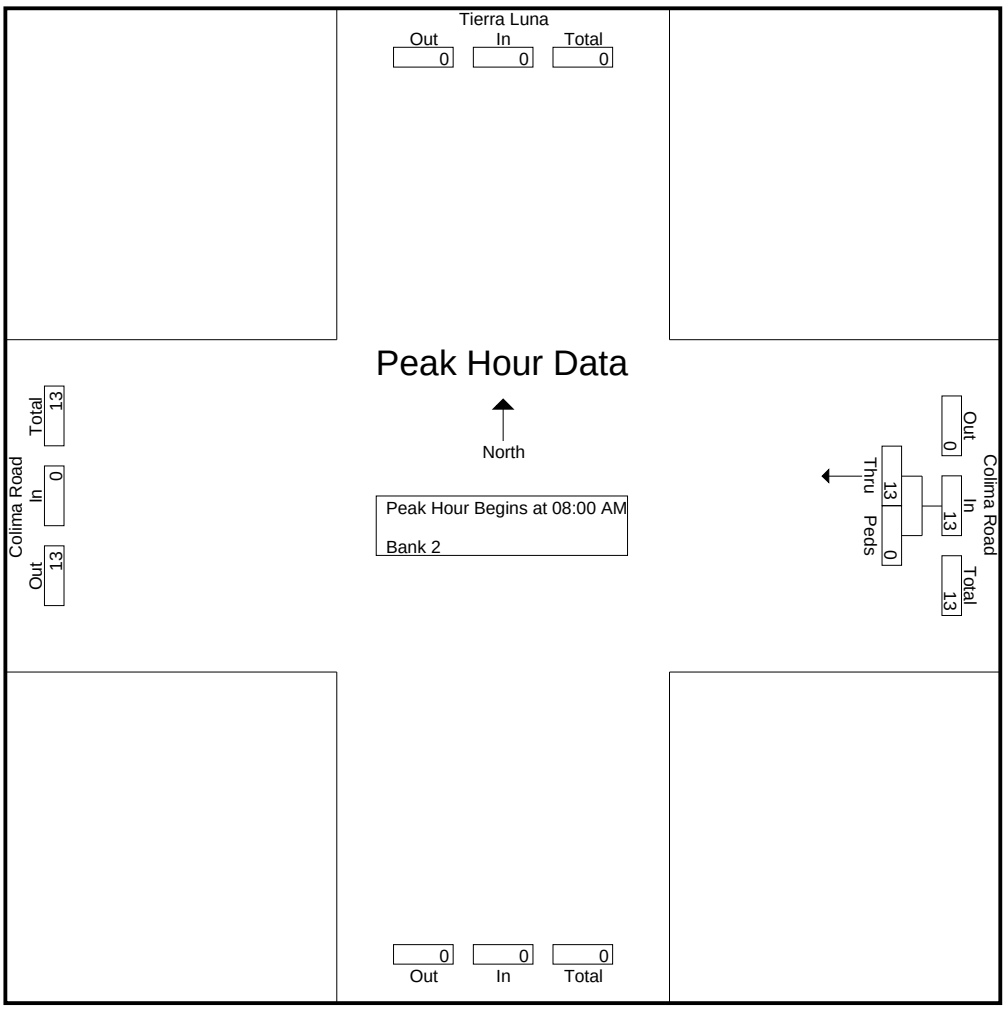
File Name : CrosswalkEO_TierraLuna_Colima_Peds_GolfCarts_Nov2021
Site Code : 00000000
Start Date : 11/2/2021
Page No : 1

Groups Printed- Bank 2

	Colima Road Westbound		
Start Time	Golf Carts	Peds	Int. Total
07:15 AM	2	0	2
07:45 AM	4	0	4
Total	6	0	6
08:00 AM	3	0	3
08:15 AM	5	0	5
08:45 AM	5	0	5
Total	13	0	13
04:00 PM	2	0	2
04:15 PM	1	0	1
04:45 PM	2	0	2
Total	5	0	5
05:00 PM	1	0	1
05:15 PM	1	0	1
05:45 PM	2	0	2
Total	4	0	4
Grand Total	28	0	28
Apprch %	100	0	
Total %	100	0	

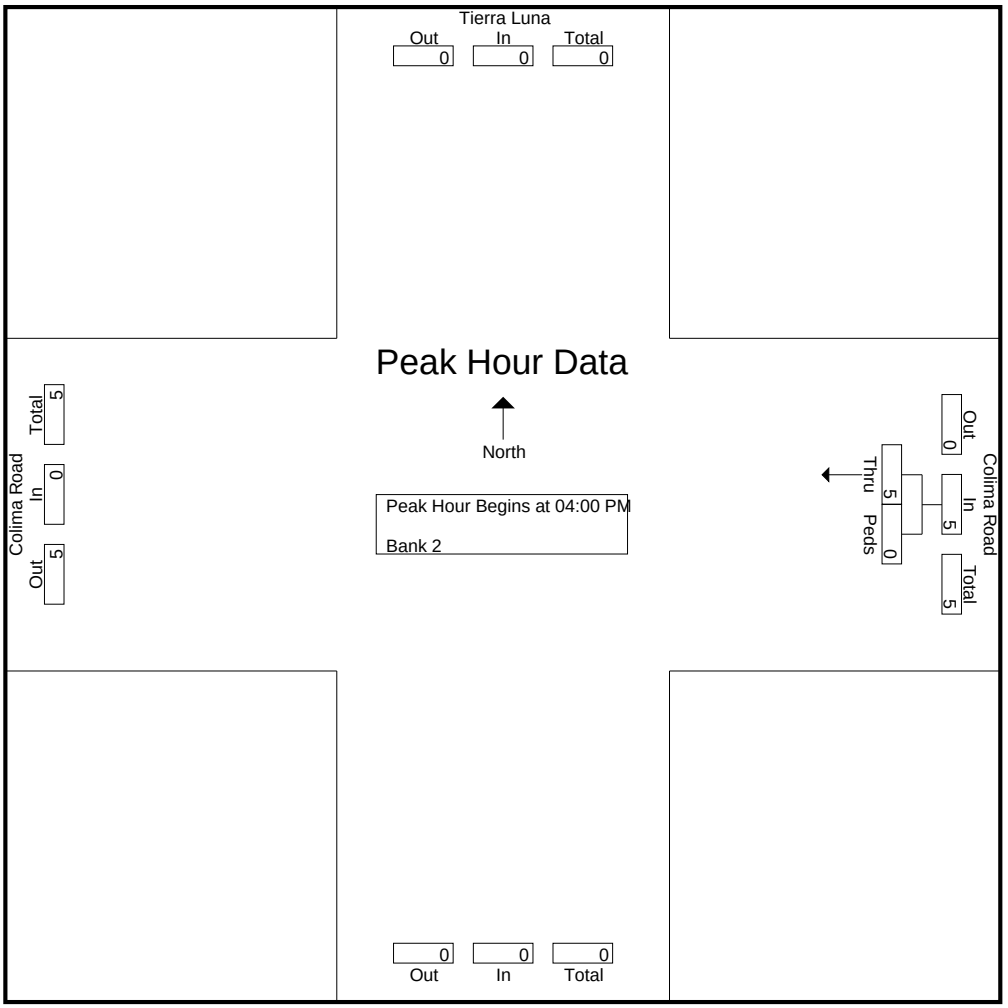
File Name : CrosswalkEO_TierraLuna_Colima_Peds_GolfCarts_Nov2021
Site Code : 00000000
Start Date : 11/2/2021
Page No : 2

	Southbound	Colima Road Westbound			Northbound	Eastbound	
Start Time	App. Total	Golf Carts	Peds	App. Total	App. Total	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1							
Peak Hour for Entire Intersection Begins at 08:00 AM							
08:00 AM	0	3	0	3	0	0	3
08:15 AM	0	**5**	0	**5**	0	0	**5**
08:30 AM	0	0	0	0	0	0	0
08:45 AM	0	5	0	5	0	0	5
Total Volume	0	13	0	13	0	0	13
% App. Total		100	0				
PHF	.000	.650	.000	.650	.000	.000	.650



File Name : CrosswalkEO_TierraLuna_Colima_Peds_GolfCarts_Nov2021
Site Code : 00000000
Start Date : 11/2/2021
Page No : 3

	Southbound	Colima Road Westbound			Northbound	Eastbound	
Start Time	App. Total	Golf Carts	Peds	App. Total	App. Total	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1							
Peak Hour for Entire Intersection Begins at 04:00 PM							
04:00 PM	0	**2**	0	**2**	0	0	**2**
04:15 PM	0	1	0	1	0	0	1
04:30 PM	0	0	0	0	0	0	0
04:45 PM	0	2	0	2	0	0	2
Total Volume	0	5	0	5	0	0	5
% App. Total		100	0				
PHF	.000	.625	.000	.625	.000	.000	.625



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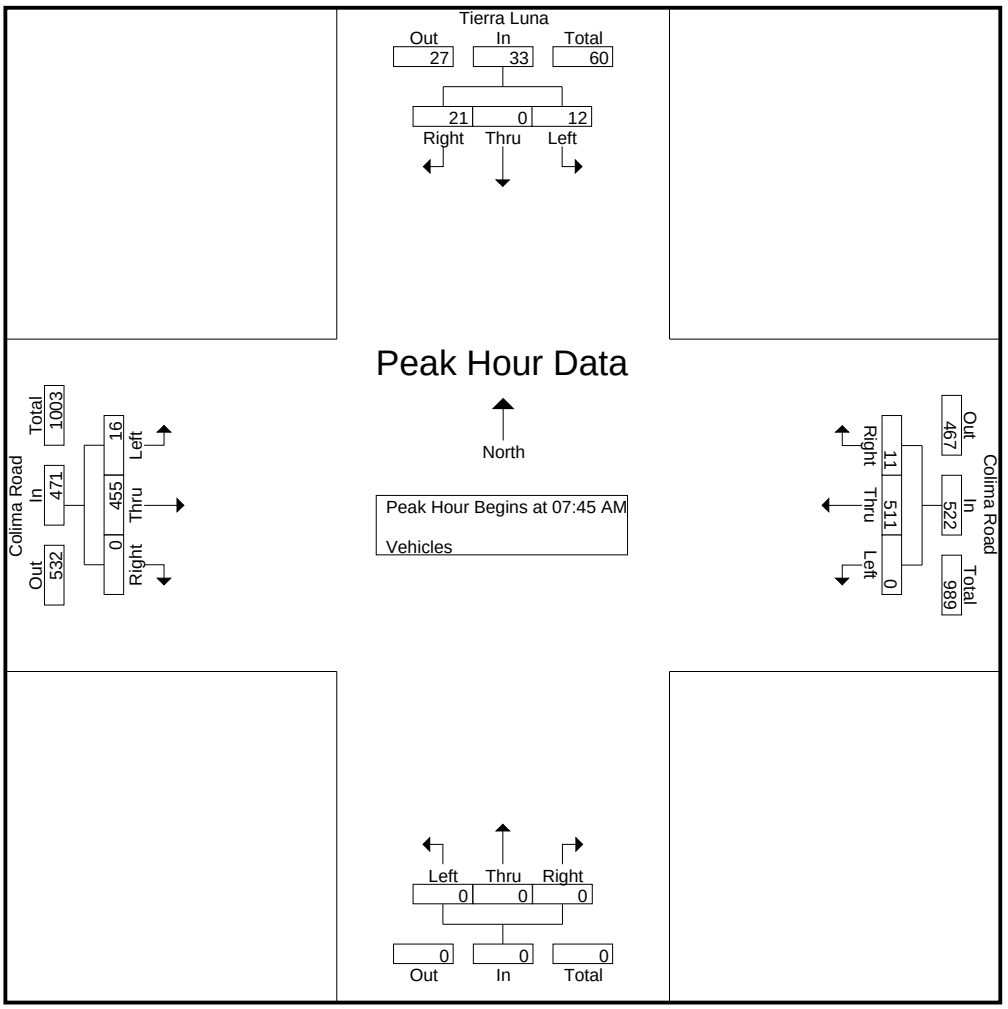
File Name : TierraLuna_Colima_Nov2021
Site Code : 00000000
Start Date : 11/2/2021
Page No : 1

Groups Printed- Vehicles

	Tierra Luna Southbound			Colima Road Westbound			Northbound			Colima Road Eastbound			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
07:00 AM	1	0	2	0	87	1	0	0	0	2	69	0	162
07:15 AM	3	0	1	0	113	1	0	0	0	2	79	0	199
07:30 AM	5	0	9	0	115	2	0	0	0	2	107	0	240
07:45 AM	4	0	9	0	144	4	0	0	0	5	121	0	287
Total	13	0	21	0	459	8	0	0	0	11	376	0	888
08:00 AM	7	0	5	0	119	1	0	0	0	8	123	0	263
08:15 AM	1	0	5	0	116	4	0	0	0	0	108	0	234
08:30 AM	0	0	2	0	132	2	0	0	0	3	103	0	242
08:45 AM	3	0	4	0	126	0	0	0	0	3	116	0	252
Total	11	0	16	0	493	7	0	0	0	14	450	0	991
04:00 PM	2	0	5	0	154	7	0	0	0	3	274	0	445
04:15 PM	2	0	2	0	136	3	0	0	0	2	200	0	345
04:30 PM	1	0	5	0	140	6	0	0	0	6	276	0	434
04:45 PM	1	0	7	0	164	7	0	0	0	3	248	0	430
Total	6	0	19	0	594	23	0	0	0	14	998	0	1654
05:00 PM	3	0	1	0	176	3	0	0	0	4	228	0	415
05:15 PM	9	0	2	0	175	9	0	0	0	5	215	0	415
05:30 PM	6	0	5	0	178	4	0	0	0	4	272	0	469
05:45 PM	1	0	3	0	136	2	0	0	0	5	244	0	391
Total	19	0	11	0	665	18	0	0	0	18	959	0	1690
Grand Total	49	0	67	0	2211	56	0	0	0	57	2783	0	5223
Apprch %	42.2	0	57.8	0	97.5	2.5	0	0	0	2	98	0	
Total %	0.9	0	1.3	0	42.3	1.1	0	0	0	1.1	53.3	0	

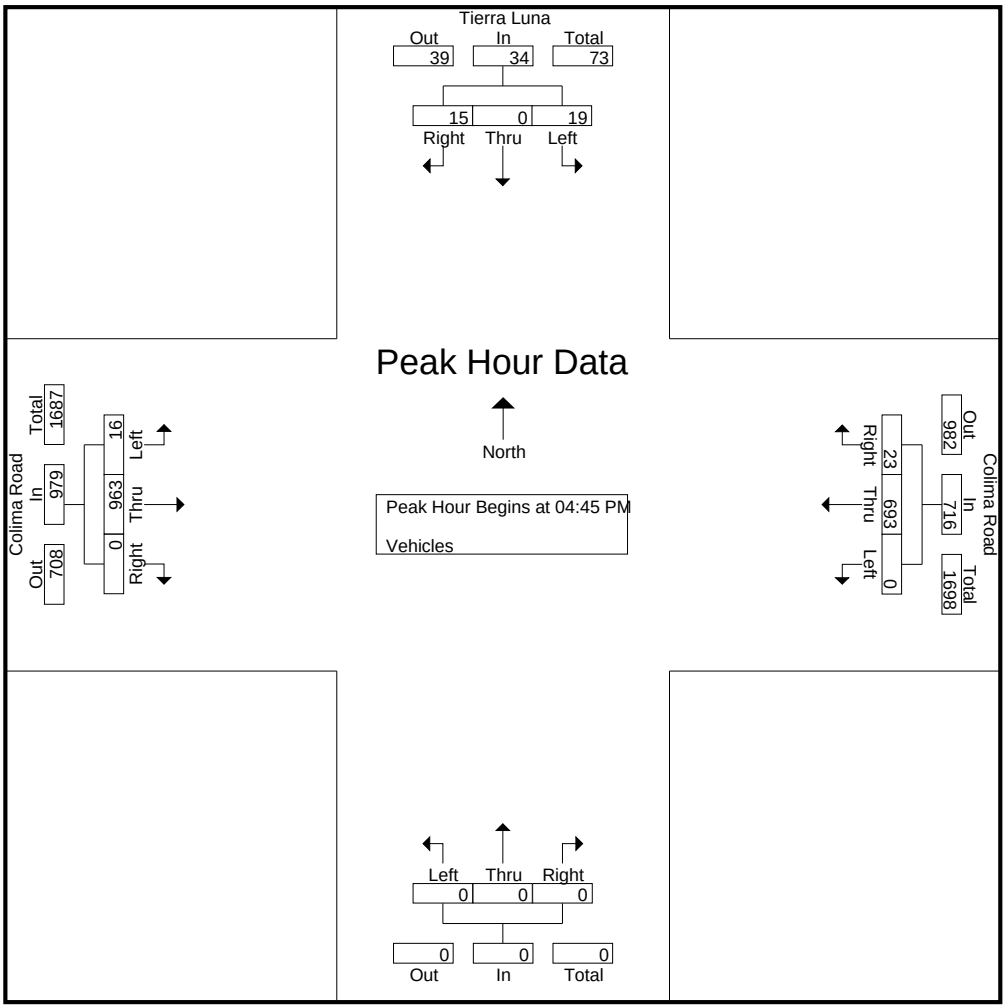
File Name : TierraLuna_Colima_Nov2021
Site Code : 00000000
Start Date : 11/2/2021
Page No : 2

	Tierra Luna Southbound				Colima Road Westbound				Northbound				Colima Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	4	0	**9**	**13**	0	**144**	**4**	**148**	0	0	0	0	5	121	0	126	**287**
08:00 AM	**7**	0	5	12	0	119	1	120	0	0	0	0	**8**	**123**	0	**131**	263
08:15 AM	1	0	5	6	0	116	4	120	0	0	0	0	0	108	0	108	234
08:30 AM	0	0	2	2	0	132	2	134	0	0	0	0	3	103	0	106	242
Total Volume	12	0	21	33	0	511	11	522	0	0	0	0	16	455	0	471	1026
% App. Total	36.4	0	63.6		0	97.9	2.1		0	0	0		3.4	96.6	0		
PHF	.429	.000	.583	.635	.000	.887	.688	.882	.000	.000	.000	.000	.500	.925	.000	.899	.894



File Name : TierraLuna_Colima_Nov2021
Site Code : 00000000
Start Date : 11/2/2021
Page No : 3

	Tierra Luna Southbound				Colima Road Westbound				Northbound				Colima Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	1	0	**7**	8	0	164	7	171	0	0	0	0	3	248	0	251	430
05:00 PM	3	0	1	4	0	176	3	179	0	0	0	0	4	228	0	232	415
05:15 PM	**9**	0	2	**11**	0	175	**9**	**184**	0	0	0	0	**5**	215	0	220	415
05:30 PM	6	0	5	11	0	**178**	4	182	0	0	0	0	4	**272**	0	**276**	**469**
Total Volume	19	0	15	34	0	693	23	716	0	0	0	0	16	963	0	979	1729
% App. Total	55.9	0	44.1		0	96.8	3.2		0	0	0		1.6	98.4	0		
PHF	.528	.000	.536	.773	.000	.973	.639	.973	.000	.000	.000	.000	.800	.885	.000	.887	.922



CITY TRAFFIC COUNTERS
WWW.CTCOUNTERS.COM

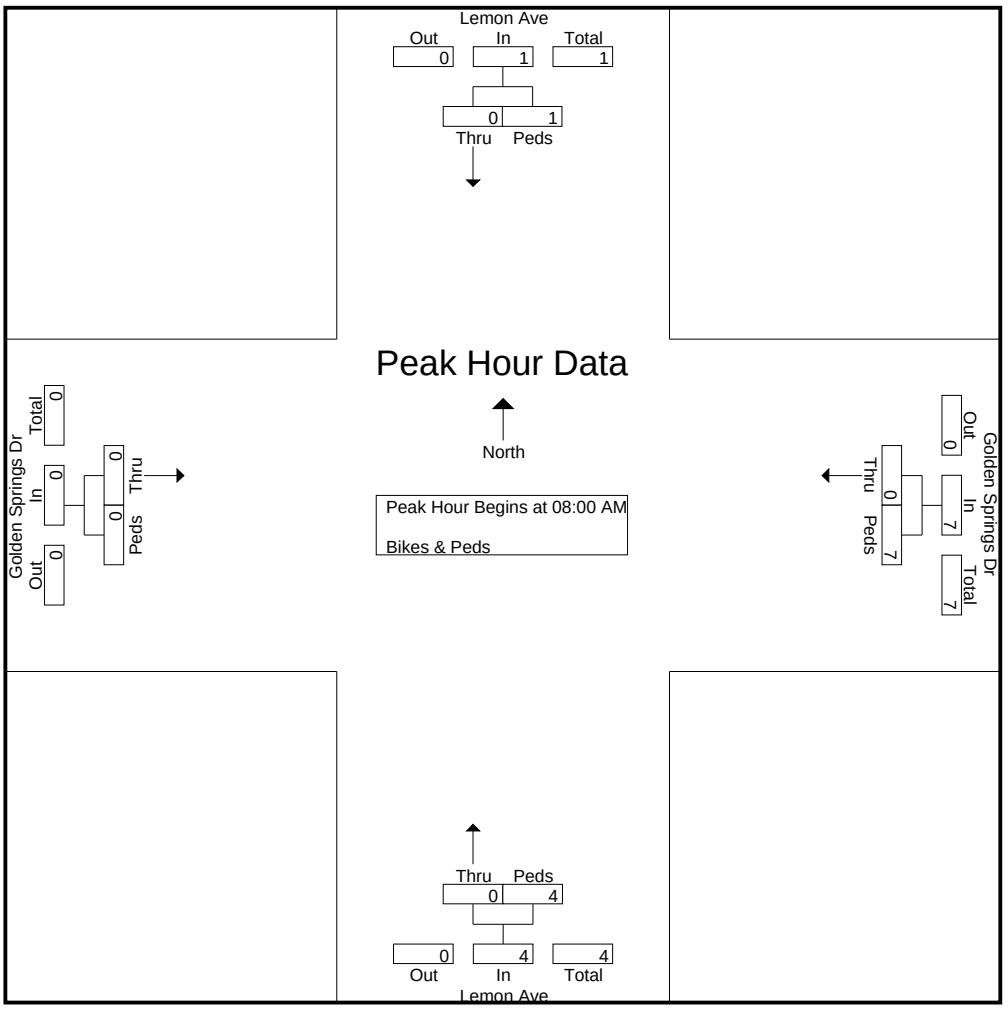
File Name : Lemon_GoldenSprings_BP_Sept2021
Site Code : 00000000
Start Date : 9/30/2021
Page No : 1

Groups Printed- Bikes & Peds

	Lemon Ave Southbound		Golden Springs Dr Westbound		Lemon Ave Northbound		Golden Springs Dr Eastbound		
Start Time	Bikes	Peds	Bikes	Peds	Bikes	Peds	Bikes	Peds	Int. Total
07:00 AM	0	0	0	1	0	0	0	0	1
07:30 AM	0	0	0	1	0	1	0	0	2
Total	0	0	0	2	0	1	0	0	3
08:00 AM	0	1	0	1	0	0	0	0	2
08:15 AM	0	0	0	3	0	2	0	0	5
08:30 AM	0	0	0	1	0	0	0	0	1
08:45 AM	0	0	0	2	0	2	0	0	4
Total	0	1	0	7	0	4	0	0	12
04:00 PM	0	3	0	2	0	0	0	0	5
04:15 PM	1	0	0	0	0	0	0	0	1
04:30 PM	0	0	0	1	0	0	0	0	1
04:45 PM	0	1	0	2	0	0	0	0	3
Total	1	4	0	5	0	0	0	0	10
05:00 PM	0	1	0	5	0	0	0	0	6
05:15 PM	0	0	0	1	0	0	0	0	1
05:45 PM	0	2	0	0	0	0	0	0	2
Total	0	3	0	6	0	0	0	0	9
Grand Total	1	8	0	20	0	5	0	0	34
Apprch %	11.1	88.9	0	100	0	100	0	0	
Total %	2.9	23.5	0	58.8	0	14.7	0	0	

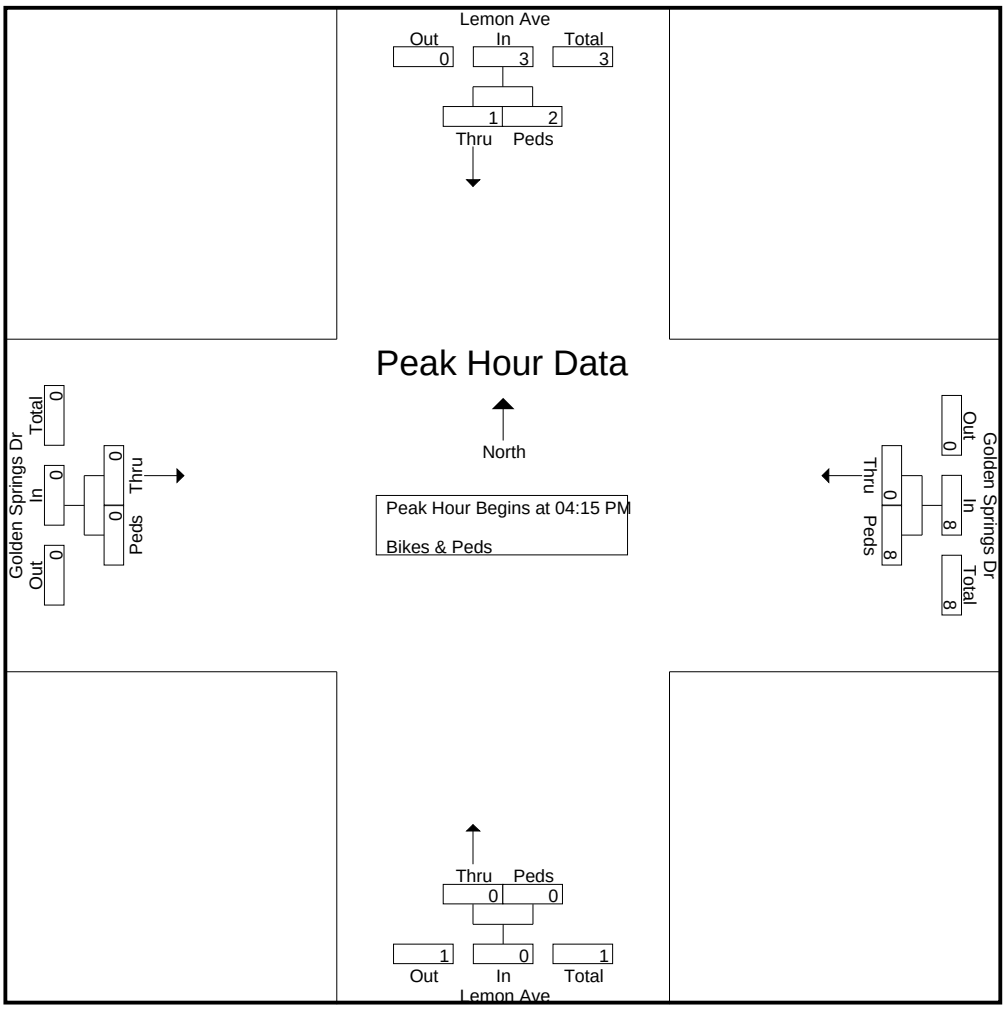
File Name : Lemon_GoldenSprings_BP_Sept2021
Site Code : 00000000
Start Date : 9/30/2021
Page No : 2

	Lemon Ave Southbound			Golden Springs Dr Westbound			Lemon Ave Northbound			Golden Springs Dr Eastbound			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 08:00 AM													
08:00 AM	0	**1**	**1**	0	1	1	0	0	0	0	0	0	2
08:15 AM	0	0	0	0	**3**	**3**	0	**2**	**2**	0	0	0	**5**
08:30 AM	0	0	0	0	1	1	0	0	0	0	0	0	1
08:45 AM	0	0	0	0	2	2	0	2	2	0	0	0	4
Total Volume	0	1	1	0	7	7	0	4	4	0	0	0	12
% App. Total	0	100		0	100		0	100		0	0		
PHF	.000	.250	.250	.000	.583	.583	.000	.500	.500	.000	.000	.000	.600



File Name : Lemon_GoldenSprings_BP_Sept2021
Site Code : 00000000
Start Date : 9/30/2021
Page No : 3

	Lemon Ave Southbound			Golden Springs Dr Westbound			Lemon Ave Northbound			Golden Springs Dr Eastbound			
Start Time	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Bikes	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:15 PM													
04:15 PM	**1**	0	**1**	0	0	0	0	0	0	0	0	0	1
04:30 PM	0	0	0	0	1	1	0	0	0	0	0	0	1
04:45 PM	0	**1**	1	0	2	2	0	0	0	0	0	0	3
05:00 PM	0	1	1	0	**5**	**5**	0	0	0	0	0	0	**6**
Total Volume	1	2	3	0	8	8	0	0	0	0	0	0	11
% App. Total	33.3	66.7		0	100		0	0		0	0		
PHF	.250	.500	.750	.000	.400	.400	.000	.000	.000	.000	.000	.000	.458



CITY TRAFFIC COUNTERS

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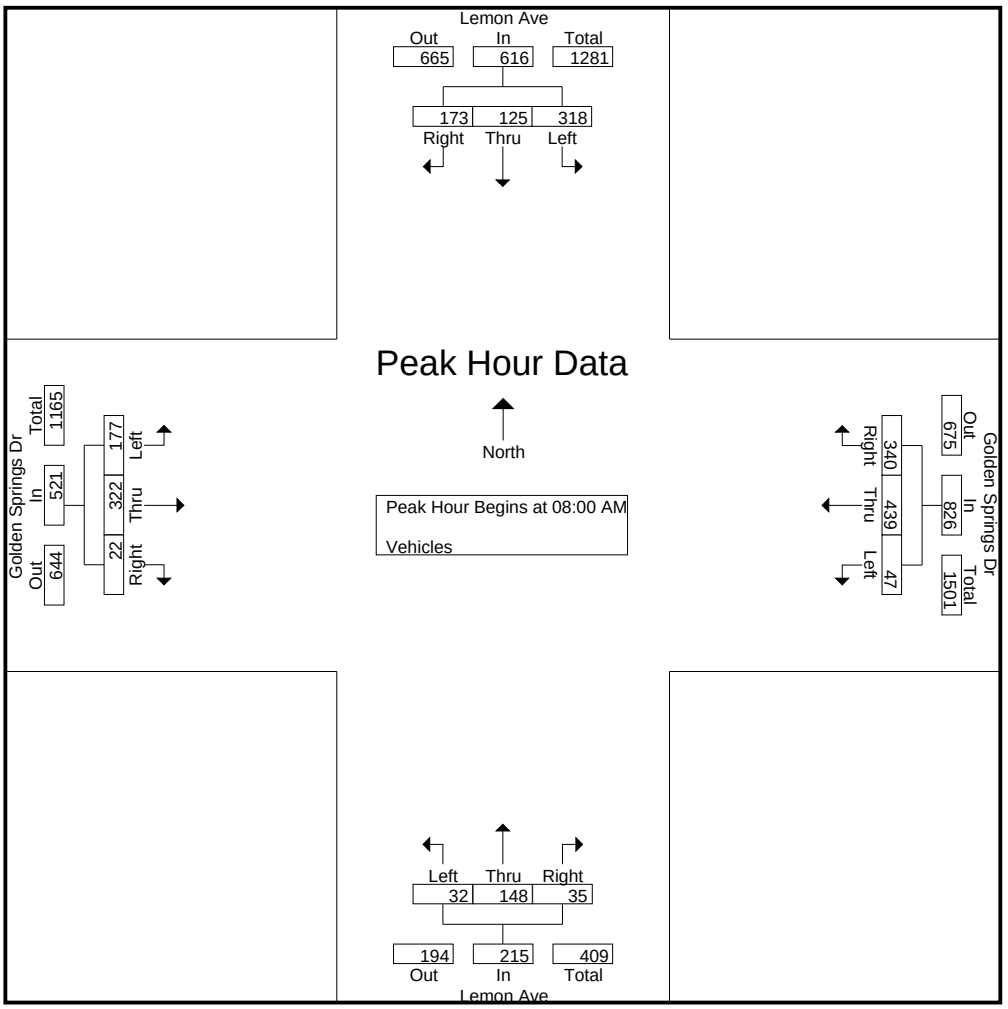
File Name : Lemon_GoldenSprings_Sept2021
Site Code : 00000000
Start Date : 9/30/2021
Page No : 1

Groups Printed- Vehicles

	Lemon Ave Southbound			Golden Springs Dr Westbound			Lemon Ave Northbound			Golden Springs Dr Eastbound			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
07:00 AM	42	26	17	12	54	35	11	25	5	32	43	11	313
07:15 AM	45	4	23	4	73	45	4	19	2	35	46	3	303
07:30 AM	44	6	33	9	86	84	2	28	8	48	69	3	420
07:45 AM	72	22	58	10	96	89	2	36	8	71	67	1	532
Total	203	58	131	35	309	253	19	108	23	186	225	18	1568
08:00 AM	74	27	57	12	105	107	2	27	4	59	89	3	566
08:15 AM	80	19	33	14	118	75	11	39	7	36	80	7	519
08:30 AM	72	56	45	14	98	73	12	50	12	32	86	9	559
08:45 AM	92	23	38	7	118	85	7	32	12	50	67	3	534
Total	318	125	173	47	439	340	32	148	35	177	322	22	2178
04:00 PM	109	6	32	13	85	48	8	19	6	88	172	9	595
04:15 PM	109	8	30	18	109	55	6	12	4	59	182	5	597
04:30 PM	92	7	61	12	84	56	6	11	3	67	154	5	558
04:45 PM	106	8	47	13	118	51	4	17	4	82	204	2	656
Total	416	29	170	56	396	210	24	59	17	296	712	21	2406
05:00 PM	83	5	63	4	104	64	5	12	6	76	162	5	589
05:15 PM	124	16	68	5	126	61	1	10	5	67	164	8	655
05:30 PM	106	10	66	12	122	59	4	14	9	85	169	10	666
05:45 PM	120	13	67	10	153	51	5	10	7	82	183	8	709
Total	433	44	264	31	505	235	15	46	27	310	678	31	2619
Grand Total	1370	256	738	169	1649	1038	90	361	102	969	1937	92	8771
Apprch %	58	10.8	31.2	5.9	57.7	36.3	16.3	65.3	18.4	32.3	64.6	3.1	
Total %	15.6	2.9	8.4	1.9	18.8	11.8	1	4.1	1.2	11	22.1	1	

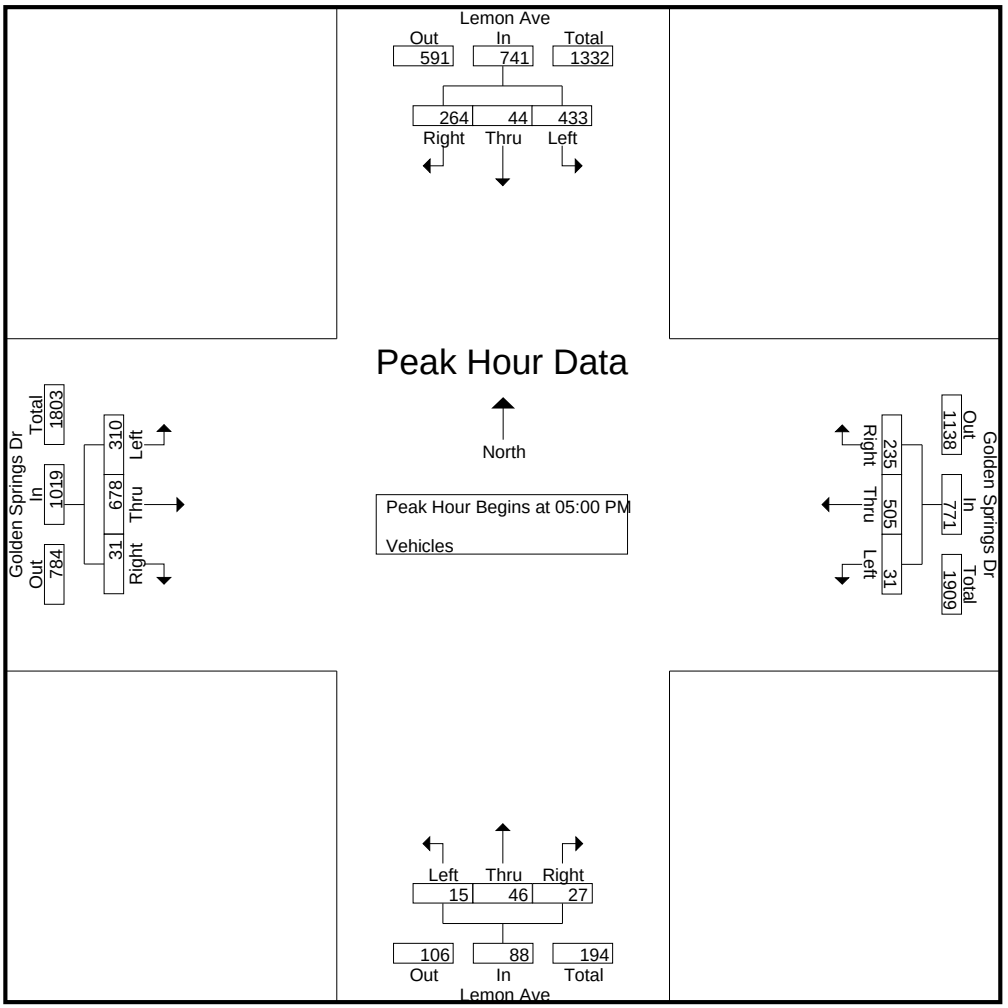
File Name : Lemon_GoldenSprings_Sept2021
Site Code : 00000000
Start Date : 9/30/2021
Page No : 2

	Lemon Ave Southbound				Golden Springs Dr Westbound				Lemon Ave Northbound				Golden Springs Dr Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	74	27	**57**	158	12	105	**107**	**224**	2	27	4	33	**59**	**89**	3	**151**	**566**
08:15 AM	80	19	33	132	**14**	**118**	75	207	11	39	7	57	36	80	7	123	519
08:30 AM	72	**56**	45	**173**	14	98	73	185	**12**	**50**	**12**	**74**	32	86	**9**	127	559
08:45 AM	**92**	23	38	153	7	118	85	210	7	32	12	51	50	67	3	120	534
Total Volume	318	125	173	616	47	439	340	826	32	148	35	215	177	322	22	521	2178
% App. Total	51.6	20.3	28.1		5.7	53.1	41.2		14.9	68.8	16.3		34	61.8	4.2		
PHF	.864	.558	.759	.890	.839	.930	.794	.922	.667	.740	.729	.726	.750	.904	.611	.863	.962



File Name : Lemon_GoldenSprings_Sept2021
Site Code : 00000000
Start Date : 9/30/2021
Page No : 3

	Lemon Ave Southbound				Golden Springs Dr Westbound				Lemon Ave Northbound				Golden Springs Dr Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	83	5	63	151	4	104	**64**	172	**5**	12	6	23	76	162	5	243	589
05:15 PM	**124**	**16**	**68**	**208**	5	126	61	192	1	10	5	16	67	164	8	239	655
05:30 PM	106	10	66	182	**12**	122	59	193	4	**14**	**9**	**27**	**85**	169	**10**	264	666
05:45 PM	120	13	67	200	10	**153**	51	**214**	5	10	7	22	82	**183**	8	**273**	**709**
Total Volume	433	44	264	741	31	505	235	771	15	46	27	88	310	678	31	1019	2619
% App. Total	58.4	5.9	35.6		4	65.5	30.5		17	52.3	30.7		30.4	66.5	3		
PHF	.873	.688	.971	.891	.646	.825	.918	.901	.750	.821	.750	.815	.912	.926	.775	.933	.923



APPENDIX D

LA COUNTY VMT TOOL VERSION 1.0 WORKSHEETS

CAPCOA VMT MITIGATION WORKSHEETS

COUNTY OF LOS ANGELES VMT TOOL

version 1.0

Project Information

Project Name	Analysis Year
Royal Vista Residential Project (Lots 1, 2, and 3)	2022

Parcel Number (TAZ# 22375100)

8762022002, 8762023001, 8762023002

Project Land Use Information

	Values	Unit
Residential - Single-Family Housing	200	DU
Residential - Multifamily Housing	72	DU
Residential - Affordable Housing		DU
Office - General Office		KSF
Office - Medical Office		KSF
Retail - Shopping Center, Restaurant, Services		KSF
Industrial - Warehousing		KSF
Industrial - Light Industrial		KSF
Custom Land Use (ignores all other land use entries)		Daily Trips

Project Daily Trips: 2,280

Screening Criteria for County of Los Angeles

	Value
Is the project screened in a Transit Priority Area?	No
Is the project's residential land uses 100% affordable housing?	N/A
Is the project's local service retail land uses under 50,000 square foot?	N/A
Does the project generate fewer than 110 daily trips? (enter project land use in the section above)	No

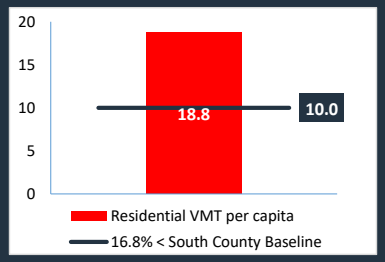
Project Location and VMT Information



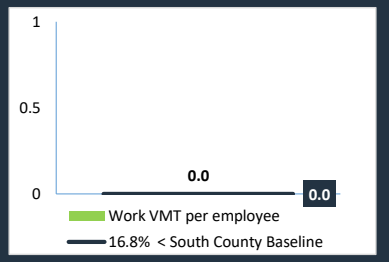
Project Summary Information

South County Residential VMT Baseline (12.0)	16.8%	% Threshold for Screening
South County Work VMT Baseline (16.4)	16.8%	% Threshold for Screening

Residential VMT per capita



Work VMT per employee



The project is not presumed to have a less than significant impact on VMT, therefore a CEQA VMT analysis may be required. Please refer to the Transportation Impact Analysis Guidelines on how to proceed forward.

FEHR PEERS

COUNTY OF LOS ANGELES VMT TOOL

version 1.0

Project Information

Project Name	Analysis Year
Royal Vista Residential Project (Lot 5)	2022

Parcel Number (TAZ# 22379100)

8764002006

Project Land Use Information

	Values	Unit
Residential - Single-Family Housing	88	DU
Residential - Multifamily Housing		DU
Residential - Affordable Housing		DU
Office - General Office		KSF
Office - Medical Office		KSF
Retail - Shopping Center, Restaurant, Services		KSF
Industrial - Warehousing		KSF
Industrial - Light Industrial		KSF
Custom Land Use (ignores all other land use entries)		Daily Trips

Project Daily Trips: 831

Screening Criteria for County of Los Angeles

	Value
Is the project screened in a Transit Priority Area?	No
Is the project's residential land uses 100% affordable housing?	N/A
Is the project's local service retail land uses under 50,000 square foot?	N/A
Does the project generate fewer than 110 daily trips? (enter project land use in the section above)	No

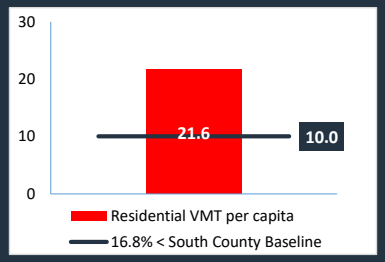
Project Location and VMT Information



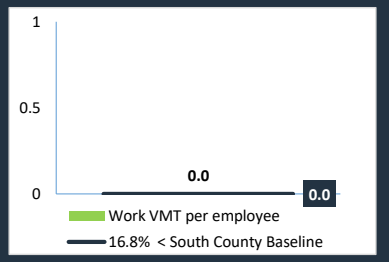
Project Summary Information

South County Residential VMT Baseline (12.0)	16.8%	% Threshold for Screening
South County Work VMT Baseline (16.4)	16.8%	% Threshold for Screening

Residential VMT per capita



Work VMT per employee



The project is not presumed to have a less than significant impact on VMT, therefore a CEQA VMT analysis may be required. Please refer to the Transportation Impact Analysis Guidelines on how to proceed forward.

FEHR PEERS

CAPCOA 2021 Handbook VMT Reduction Calculation Worksheets

Proposed Project

TAZ 22375100 - Planning Area Lots 1, 2, and 3 (272 Dwelling Units)

Measure T-1. Increase Residential Density	
Measure Scale	Project/Site
Max VMT Mitigation Potential	30.0%

Baseline Residential Density [1]		
	Residential Dwelling Units (DU)	459
	Acres of Developable Land (Acres) [2]	206.6
C	Number of Dwelling Units per Acre (DU/Acre)	2.22

Residential Density with Project		
	Residential Dwelling Units with Project (DU) [3]	731
	Acres of Developable Land (Acres) [2]	206.6
B	Number of Dwelling Units per Acre (DU/Acre)	3.54

Project VMT Reduction Due to Increased Residential Density		
	Percent Increase in Housing Units per Acre [4]	59.26%
D	Elasticity of VMT with respect to residential density	0.22
A	VMT Reduction = (B-C)/C x D	13.04%
	VMT Reduction	***13.04%***

[1] Baseline residential density based on dwelling unit and area information obtained from the Los Angeles County Office of the Assessor's parcel-level data for all parcels located within TAZ 22375100.

[2] The acres of developable land represents the sum of all parcel areas, excluding the public right-of-way and land owned by public agencies.

[3] The project proposes to construct 272 new dwelling units in the TAZ.

[4] Determined by calculating (B-C)/C.

LA County Office of the Assessor Parcel Attribute Table for Parcels Located in TAZ 22375100

APN	SitusAddress	UseType	UseDescription	Units	Shape_Area (SF)
8762-023-001	19816 WALNUT DR	Recreational	Golf Courses	0	1738654.081
8762-022-008		Recreational	Golf Courses	0	775938.5684
8762-022-006	20055 E COLIMA RD	Recreational	Golf Courses	1	328170.7157
8762-022-030	1348 BELLAVISTA DR	Residential	Single	1	293679.576
8762-022-029	1356 BELLAVISTA DR	Residential	Single	1	293679.576
8762-022-028	1393 BELLAVISTA DR	Residential	Single	1	293679.576
8762-022-027	1387 BELLAVISTA DR	Residential	Single	1	293679.576
8762-022-026	1383 BELLAVISTA DR	Residential	Single	1	293679.576
8762-022-025	1375 BELLAVISTA DR	Residential	Single	1	293679.576
8762-022-024	1369 BELLAVISTA DR	Residential	Single	1	293679.576
8762-022-023	1363 BELLAVISTA DR	Residential	Single	1	293679.576
8762-022-022	1357 BELLAVISTA DR	Residential	Single	1	293679.576
8762-022-021	1351 BELLAVISTA DR	Residential	Single	1	293679.576
8762-022-020	1345 BELLAVISTA DR	Residential	Single	1	293679.576
8762-022-019	1339 BELLAVISTA DR	Residential	Single	1	293679.576
8762-022-018	1335 BELLAVISTA DR	Residential	Single	1	293679.576
8762-022-017	1329 BELLAVISTA DR	Residential	Single	1	293679.576
8762-022-016	1323 BELLAVISTA DR	Residential	Single	1	293679.576
8762-022-015	1317 BELLAVISTA DR	Residential	Single	1	293679.576
8762-022-014	1311 BELLAVISTA DR	Residential	Single	1	293679.576
8762-022-013	1305 BELLAVISTA DR	Residential	Single	1	293679.576
8762-022-012	1261 BELLAVISTA DR	Residential	Single	1	293679.576
8762-022-011	1253 BELLAVISTA DR	Residential	Single	1	293679.576
8762-022-010	1239 BELLAVISTA DR	Residential	Single	1	293679.576
8762-022-005	20055 E COLIMA RD	Recreational	Golf Courses	0	287102.7186
8762-027-039		Recreational	Golf Courses	0	258456.7309
8763-007-030	20801 GOLDEN SPRINGS DR	Recreational	Athletic & Amusement Facilities	1	199054.95
8762-022-002	19816 S WALNUT DR	Recreational	Golf Courses	1	174382.8007
8762-002-904	20137 E WALNUT DR S	Residential	Single	1	160215.2856
8762-023-002		Recreational	Golf Courses	0	133955.893
8762-034-024	20627 GOLDEN SPRINGS DR	Commercial	Shopping Centers (Neighborhood, community)	0	125786.7102
8762-002-004	19937 E WALNUT DR S	Industrial	Warehousing, Distribution, Storage	0	122577.7991
8762-002-024	19907 E WALNUT DR S	Industrial	Warehousing, Distribution, Storage	1	109341.2573
8763-007-022	20657 GOLDEN SPRINGS DR	Commercial	Store Combination	0	100271.1722
8762-002-012	19844 QUIROZ CT	Industrial	Warehousing, Distribution, Storage	1	84872.26588
8762-002-020	1170 FAIRWAY DR	Commercial	Hotel & Motels	92	79474.66127
8762-002-900	19865 E WALNUT DR S	Government	Government Parcel		74160.4424
8762-002-010	19888 QUIROZ CT	Industrial	Heavy Manufacturing	1	64378.20991
8762-002-903	20249 E WALNUT DR S	Government	Government Parcel		62911.99954
8762-021-027	19811 COLIMA RD	Commercial	Store Combination	0	57810.12684
8762-002-008	19855 QUIROZ CT	Industrial	Warehousing, Distribution, Storage	0	53990.21123
8762-002-009	19877 QUIROZ CT	Industrial	Warehousing, Distribution, Storage	0	51761.83236
8762-002-023		Commercial	Commercial	0	48658.23703
8762-002-022	20001 E WALNUT DR S	Commercial	Office Buildings	0	46881.83925
8763-007-028	21095 GOLDEN SPRINGS DR	Commercial	Service Stations	0	37071.66736
8762-002-011	19866 QUIROZ CT	Industrial	Warehousing, Distribution, Storage	0	36755.13805
8763-007-026	20855 GOLDEN SPRINGS DR	Commercial	Store Combination	0	36129.70245
8762-002-019		Commercial	Parking Lots (Commercial Use Properties)	0	30292.0247
8763-007-008	20885 GOLDEN SPRINGS DR	Commercial	Stores	1	28195.39775
8763-007-010	20955 GOLDEN SPRINGS DR	Commercial	Restaurants, Cocktail Lounges	1	24815.40192
8763-007-003	20655 GOLDEN SPRINGS DR	Commercial	Stores	0	24099.15107
8762-025-045	20055 ILUSO AVE	Residential	Single	1	22109.37238
8762-024-046	20109 ILUSO AVE	Residential	Single	1	21879.10409
8762-024-045	20115 ILUSO AVE	Residential	Single	1	20138.56379
8763-007-029	1035 BANNING WAY	Commercial	Nurseries or Greenhouses	0	19830.89988
8762-025-040	20005 TARTA CT	Residential	Single	1	18963.98639
8762-024-044	20119 ILUSO AVE	Residential	Single	1	18335.8445
8763-007-011	20955 GOLDEN SPRINGS DR	Commercial	Parking Lots (Commercial Use Properties)	0	17778.78268
8762-029-001	20110 E WALNUT DR S	Residential	Single	1	17621.05082
8763-007-013	20965 GOLDEN SPRINGS DR	Commercial	Restaurants, Cocktail Lounges	0	17041.53542
8762-028-001	1163 CALBOURNE DR	Residential	Single	1	15264.24965
8763-007-004	20709 GOLDEN SPRINGS DR	Commercial	Professional Buildings	0	15201.17331
8762-024-047	20101 ILUSO AVE	Residential	Single	1	15178.80109
8762-024-043	20123 ILUSO AVE	Residential	Single	1	15075.92613
8762-025-039	20000 TARTA CT	Residential	Single	1	14792.61924
8762-028-020	1285 AHTENA DR	Residential	Single	1	14750.88415
8762-028-002	1205 CALBOURNE DR	Residential	Single	1	14446.74643
8762-024-033	20150 ILUSO AVE	Residential	Single	1	13954.96357
8762-029-004	1113 CALBOURNE DR	Residential	Single	1	13138.31432
8762-021-001	1502 HALLGREEN DR	Residential	Single	1	13071.39715
8763-007-027	21095 GOLDEN SPRINGS DR	Commercial	Commercial		12694.61
8762-028-005	1223 CALBOURNE DR	Residential	Single	1	12621.15975
8762-034-019	20403 FLINTGATE DR	Residential	Single	1	11987.4911
8762-024-034	20146 ILUSO AVE	Residential	Single	1	11827.89765

LA County Office of the Assessor Parcel Attribute Table for Parcels Located in TAZ 22375100

APN	SitusAddress	UseType	UseDescription	Units	Shape_Area (SF)
8762-031-025	20343 ACFOLD DR	Residential	Single	1	11409.29878
8762-024-042	20129 ILUSO AVE	Residential	Single	1	11391.31314
8762-028-019	1286 AHTENA DR	Residential	Single	1	11356.70816
8762-028-004	1217 CALBOURNE DR	Residential	Single	1	11333.84581
8762-032-012	20564 CALPET DR	Residential	Single	1	10962.21718
8762-024-035	20140 ILUSO AVE	Residential	Single	1	10871.2652
8762-031-016	20402 CALPET DR	Residential	Single	1	10788.6188
8762-031-042	20330 DAMIETTA DR	Residential	Single	1	10522.39055
8762-029-005	1119 CALBOURNE DR	Residential	Single	1	10519.37095
8762-031-005	1228 CALBOURNE DR	Residential	Single	1	10375.3499
8762-024-032	20154 ILUSO AVE	Residential	Single	1	10247.3569
8762-028-007	1245 AHTENA DR	Residential	Single	1	10183.2802
8762-027-017	20166 PADRINO AVE	Residential	Single	1	10158.30702
8762-032-040	20329 DAMIETTA DR	Residential	Single	1	10125.76362
8762-032-042	20400 FLINTGATE DR	Residential	Single	1	10111.7325
8762-021-019	19800 NEWBRIDGE CIR	Residential	Single	1	9978.284497
8762-031-011	20348 ACFOLD DR	Residential	Single	1	9966.86629
8762-029-030	20167 PADRINO AVE	Residential	Single	1	9934.178257
8762-031-017	20416 CALPET DR	Residential	Single	1	9908.163984
8762-027-030	20102 PADRINO AVE	Residential	Single	1	9832.044845
8762-031-007	20304 ACFOLD DR	Residential	Single	1	9779.168256
8762-024-041	20133 ILUSO AVE	Residential	Single	1	9747.252642
8762-021-002	1506 HALLGREEN DR	Residential	Single	1	9735.850049
8762-024-036	20134 ILUSO AVE	Residential	Single	1	9697.978688
8762-031-024	20347 ACFOLD DR	Residential	Single	1	9697.855809
8762-021-015	1623 HALLGREEN DR	Residential	Single	1	9643.243782
8762-031-010	20336 ACFOLD DR	Residential	Single	1	9600.237595
8762-029-026	1188 MOSCADA AVE	Residential	Single	1	9591.751246
8762-031-006	1222 CALBOURNE DR	Residential	Single	1	9534.488025
8762-031-015	20380 ACFOLD DR	Residential	Single	1	9447.651558
8762-031-026	20337 ACFOLD DR	Residential	Single	1	9392.512445
8762-031-023	20355 ACFOLD DR	Residential	Single	1	9376.047299
8762-033-019	1139 BELBURY DR	Residential	Single	1	9352.500919
8762-025-020	20078 ILUSO AVE	Residential	Single	1	9258.33425
8762-028-015	1250 AHTENA DR	Residential	Single	1	9257.285188
8762-032-014	20574 CALPET DR	Residential	Single	1	9253.530717
8762-031-004	1236 CALBOURNE DR	Residential	Single	1	9246.355
8762-033-043	20565 CALPET DR	Residential	Single	1	9233.350431
8762-029-024	1178 MOSCADA AVE	Residential	Single	1	9225.829586
8762-031-008	20312 ACFOLD DR	Residential	Single	1	9221.504863
8762-021-023	1527 HALLGREEN DR	Residential	Single	1	9140.760551
8762-033-033	1123 ARKLEY DR	Residential	Single	1	9139.468776
8762-031-043	20344 DAMIETTA DR	Residential	Single	1	9136.856676
8762-026-019	1440 TIERRA CIMA AVE	Residential	Single	1	9115.450576
8762-024-037	20128 ILUSO AVE	Residential	Single	1	9105.800216
8762-029-011	1155 CALBOURNE DR	Residential	Single	1	9083.869709
8762-028-003	1211 CALBOURNE DR	Residential	Single	1	9069.873456
8762-031-012	20358 ACFOLD DR	Residential	Single	1	9068.148149
8762-030-035	20325 FLINTGATE DR	Residential	Single	1	9066.131651
8762-024-038	20110 ILUSO AVE	Residential	Single	1	9057.182862
8762-028-016	1259 CALBOURNE DR	Residential	Single	1	9056.0305
8762-032-013	20570 CALPET DR	Residential	Single	1	9009.334496
8762-033-031	1111 ARKLEY DR	Residential	Single	1	8963.20809
8762-030-023	20302 FLINTGATE DR	Residential	Single	1	8953.295199
8762-031-052	20448 CALPET DR	Residential	Single	1	8928.318565
8762-021-013	1630 HALLGREEN DR	Residential	Single	1	8921.18376
8762-031-013	20364 ACFOLD DR	Residential	Single	1	8902.05405
8762-031-014	20374 ACFOLD DR	Residential	Single	1	8868.248999
8762-031-029	20319 ACFOLD DR	Residential	Single	1	8863.990908
8762-028-008	1251 AHTENA DR	Residential	Single	1	8846.783323
8762-028-009	1259 AHTENA DR	Residential	Single	1	8842.461038
8762-028-006	1239 AHTENA DR	Residential	Single	1	8837.291704
8762-029-027	1192 MOSCADA AVE	Residential	Single	1	8832.874421
8762-030-025	20316 FLINTGATE DR	Residential	Single	1	8814.504799
8762-032-039	20335 DAMIETTA DR	Residential	Single	1	8813.566367
8762-029-006	1125 CALBOURNE DR	Residential	Single	1	8812.901818
8762-031-003	1244 CALBOURNE DR	Residential	Single	1	8796.287499
8762-030-024	20310 FLINTGATE DR	Residential	Single	1	8787.220251
8762-032-011	20558 CALPET DR	Residential	Single	1	8786.005742
8762-028-014	1260 AHTENA DR	Residential	Single	1	8741.337603
8762-031-050	20432 CALPET DR	Residential	Single	1	8718.084649
8762-033-021	1136 BELBURY DR	Residential	Single	1	8697.769841
8762-031-021	20369 ACFOLD DR	Residential	Single	1	8693.27269
8762-031-030	20313 ACFOLD DR	Residential	Single	1	8688.847159

LA County Office of the Assessor Parcel Attribute Table for Parcels Located in TAZ 22375100

APN	SitusAddress	UseType	UseDescription	Units	Shape_Area (SF)
8762-031-031	1164 CALBOURNE DR	Residential	Single	1	8678.18133
8762-031-044	20350 DAMIETTA DR	Residential	Single	1	8666.376351
8762-031-027	20331 ACFOLD DR	Residential	Single	1	8655.963267
8762-029-022	1166 MOSCADA AVE	Residential	Single	1	8655.543128
8762-031-038	20248 DAMIETTA DR	Residential	Single	1	8641.986811
8762-031-018	20424 CALPET DR	Residential	Single	1	8639.038251
8762-028-012	1278 AHTENA DR	Residential	Single	1	8629.075448
8762-021-016	1617 HALLGREEN DR	Residential	Single	1	8626.853872
8762-031-020	20377 ACFOLD DR	Residential	Single	1	8622.673035
8762-021-024	1521 HALLGREEN DR	Residential	Single	1	8617.022651
8762-028-017	1269 CALBOURNE DR	Residential	Single	1	8587.92728
8762-031-019	20383 ACFOLD DR	Residential	Single	1	8582.023069
8762-031-022	20361 ACFOLD DR	Residential	Single	1	8572.568651
8762-030-022	20228 E WALNUT DR S	Residential	Single	1	8569.754887
8762-031-028	20325 ACFOLD DR	Residential	Single	1	8565.490744
8762-031-051	20440 CALPET DR	Residential	Single	1	8551.615701
8762-031-047	20370 DAMIETTA DR	Residential	Single	1	8548.801249
8762-031-002	1252 CALBOURNE DR	Residential	Single	1	8536.6965
8762-021-012	1622 HALLGREEN DR	Residential	Single	1	8534.860288
8762-031-009	20324 ACFOLD DR	Residential	Single	1	8533.576249
8762-030-027	20330 FLINTGATE DR	Residential	Single	1	8500.0975
8762-030-033	20215 DAMIETTA DR	Residential	Single	1	8467.50155
8762-028-010	1269 AHTENA DR	Residential	Single	1	8458.146649
8762-021-011	1616 HALLGREEN DR	Residential	Single	1	8452.635307
8762-031-040	20310 DAMIETTA DR	Residential	Single	1	8442.21695
8762-021-014	1631 HALLGREEN DR	Residential	Single	1	8438.460038
8762-030-026	20324 FLINTGATE DR	Residential	Single	1	8435.358
8762-024-014	20103 PADRINO AVE	Residential	Single	1	8433.084256
8762-030-017	20160 E WALNUT DR S	Residential	Single	1	8419.458565
8762-031-045	20356 DAMIETTA DR	Residential	Single	1	8415.618199
8762-028-018	1275 CALBOURNE DR	Residential	Single	1	8407.551357
8762-031-032	1158 CALBOURNE DR	Residential	Single	1	8378.1568
8762-030-016	20154 E WALNUT DR S	Residential	Single	1	8358.287234
8762-031-053	20456 CALPET DR	Residential	Single	1	8357.363472
8762-028-013	1270 AHTENA DR	Residential	Single	1	8345.161449
8762-026-018	1439 TIERRA CIMA AVE	Residential	Single	1	8333.984704
8762-028-011	1277 AHTENA DR	Residential	Single	1	8303.434647
8762-032-021	1115 CLORINDA DR	Residential	Single	1	8300.074573
8762-032-001	20462 CALPET DR	Residential	Single	1	8277.4564
8762-032-010	20552 CALPET DR	Residential	Single	1	8268.4709
8762-027-016	1202 TIERRA LUNA	Residential	Single	1	8260.636357
8762-030-034	1124 CALBOURNE DR	Residential	Single	1	8257.569005
8762-021-020	19801 NEWBRIDGE CIR	Residential	Single	1	8230.886661
8762-031-041	20316 DAMIETTA DR	Residential	Single	1	8187.910936
8762-030-018	20200 E WALNUT DR S	Residential	Single	1	8180.685711
8762-030-019	20208 E WALNUT DR S	Residential	Single	1	8172.348269
8762-030-020	20214 E WALNUT DR S	Residential	Single	1	8138.233701
8762-031-049	20382 DAMIETTA DR	Residential	Single	1	8135.093438
8762-034-027	20521 FLINTGATE DR	Residential	Single	1	8126.304547
8762-031-035	20224 DAMIETTA DR	Residential	Single	1	8112.939825
8762-032-015	20580 CALPET DR	Residential	Single	1	8082.371475
8762-031-036	20232 DAMIETTA DR	Residential	Single	1	8046.948163
8762-033-035	1118 ARKLEY DR	Residential	Single	1	8046.887601
8762-031-048	20376 DAMIETTA DR	Residential	Single	1	8040.299901
8762-030-021	20220 E WALNUT DR S	Residential	Single	1	8036.367258
8762-032-009	20548 CALPET DR	Residential	Single	1	8033.450151
8762-024-024	1177 MOSCADA AVE	Residential	Single	1	8009.104499
8762-030-012	1130 CALBOURNE DR	Residential	Single	1	8007.951898
8762-031-046	20364 DAMIETTA DR	Residential	Single	1	8007.272451
8762-032-003	20502 CALPET DR	Residential	Single	1	7997.2359
8762-029-020	1156 MOSCADA AVE	Residential	Single	1	7995.886898
8762-032-038	20341 DAMIETTA DR	Residential	Single	1	7963.588251
8762-031-039	20302 DAMIETTA DR	Residential	Single	1	7961.629852
8762-031-037	20240 DAMIETTA DR	Residential	Single	1	7933.824597
8762-029-023	1172 MOSCADA AVE	Residential	Single	1	7900.921693
8762-032-008	20538 CALPET DR	Residential	Single	1	7897.259309
8762-033-027	20468 FLINTGATE DR	Residential	Single	1	7892.2609
8762-032-002	20468 CALPET DR	Residential	Single	1	7888.96425
8762-021-025	1515 HALLGREEN DR	Residential	Single	1	7873.303317
8762-029-003	20130 E WALNUT DR S	Residential	Single	1	7868.044342
8762-032-005	20514 CALPET DR	Residential	Single	1	7837.356801
8762-031-034	20216 DAMIETTA DR	Residential	Single	1	7821.047186
8762-032-004	20508 CALPET DR	Residential	Single	1	7810.970549
8762-026-001	1301 TIERRA SIESTA	Residential	Single	1	7768.610178

LA County Office of the Assessor Parcel Attribute Table for Parcels Located in TAZ 22375100

APN	SitusAddress	UseType	UseDescription	Units	Shape_Area (SF)
8762-029-025	1182 MOSCADA AVE	Residential	Single	1	7766.018831
8762-033-034	1122 ARKLEY DR	Residential	Single	1	7757.610026
8762-031-001	1258 CALBOURNE DR	Residential	Single	1	7754.9663
8762-032-007	20532 CALPET DR	Residential	Single	1	7728.468615
8762-030-015	20144 E WALNUT DR S	Residential	Single	1	7724.187112
8762-034-018	20409 FLINTGATE DR	Residential	Single	1	7723.069974
8762-030-011	1140 CALBOURNE DR	Residential	Single	1	7721.917153
8762-029-002	20124 E WALNUT DR S	Residential	Single	1	7720.296451
8762-032-041	20323 DAMIETTA DR	Residential	Single	1	7695.231718
8762-030-036	20319 FLINTGATE DR	Residential	Single	1	7671.263613
8762-021-003	1510 HALLGREEN DR	Residential	Single	1	7667.566836
8762-033-028	20474 FLINTGATE DR	Residential	Single	1	7653.6376
8762-030-037	20311 FLINTGATE DR	Residential	Single	1	7637.639115
8762-027-015	1212 TIERRA LUNA	Residential	Single	1	7624.341245
8762-026-010	1355 TIERRA SIESTA	Residential	Single	1	7618.141527
8762-032-031	20383 DAMIETTA DR	Residential	Single	1	7594.115
8762-032-006	20520 CALPET DR	Residential	Single	1	7592.320015
8762-021-010	1608 HALLGREEN DR	Residential	Single	1	7573.88201
8762-030-014	1116 CALBOURNE DR	Residential	Single	1	7552.026347
8762-033-020	1140 BELBURY DR	Residential	Single	1	7494.255925
8762-025-035	20044 TARTA CT	Residential	Single	1	7474.248617
8762-026-016	1419 TIERRA CIMA AVE	Residential	Single	1	7445.692786
8762-024-025	1173 MOSCADA AVE	Residential	Single	1	7430.148007
8762-027-025	20128 PADRINO AVE	Residential	Single	1	7426.420968
8762-029-007	1129 CALBOURNE DR	Residential	Single	1	7398.394568
8762-029-009	1143 CALBOURNE DR	Residential	Single	1	7387.603897
8762-027-014	1222 TIERRA LUNA	Residential	Single	1	7374.823849
8762-032-017	20594 CALPET DR	Residential	Single	1	7368.538158
8762-027-031	1167 TIERRA LUNA	Residential	Single	1	7342.242795
8762-029-012	1110 MOSCADA AVE	Residential	Single	1	7257.901289
8762-029-008	1137 CALBOURNE DR	Residential	Single	1	7245.808509
8762-027-027	20118 PADRINO AVE	Residential	Single	1	7245.3476
8762-034-017	20415 FLINTGATE DR	Residential	Single	1	7190.887449
8762-029-010	1149 CALBOURNE DR	Residential	Single	1	7170.390554
8762-027-026	20122 PADRINO AVE	Residential	Single	1	7168.276482
8762-024-017	20119 PADRINO AVE	Residential	Single	1	7143.289125
8762-029-021	1162 MOSCADA AVE	Residential	Single	1	7121.755671
8762-032-020	1107 CLORINDA DR	Residential	Single	1	7112.1126
8762-030-009	20221 DAMIETTA DR	Residential	Single	1	7104.939918
8762-024-009	20117 DIVINO DR	Residential	Single	1	7101.123988
8762-024-040	20139 ILUSO AVE	Residential	Single	1	7099.131842
8762-024-028	1157 MOSCADA AVE	Residential	Single	1	7082.598263
8762-034-016	20421 FLINTGATE DR	Residential	Single	1	7067.942451
8762-021-017	19814 NEWBRIDGE CIR	Residential	Single	1	7062.53455
8762-025-001	1010 TIERRA LUNA	Residential	Single	1	7004.876261
8762-026-009	1349 TIERRA SIESTA	Residential	Single	1	7002.761857
8762-024-026	1167 MOSCADA AVE	Residential	Single	1	6996.612581
8762-021-009	1600 HALLGREEN DR	Residential	Single	1	6992.834087
8762-021-005	1520 HALLGREEN DR	Residential	Single	1	6954.56425
8762-024-027	1163 MOSCADA AVE	Residential	Single	1	6916.067519
8762-032-018	20406 FLINTGATE DR	Residential	Single	1	6914.408482
8762-027-028	20114 PADRINO AVE	Residential	Single	1	6902.917783
8762-024-018	20123 PADRINO AVE	Residential	Single	1	6883.976129
8762-024-015	20109 PADRINO AVE	Residential	Single	1	6876.194001
8762-026-011	1354 TIERRA SIESTA	Residential	Single	1	6839.265847
8762-030-008	20227 DAMIETTA DR	Residential	Single	1	6816.366209
8762-033-026	20460 FLINTGATE DR	Residential	Single	1	6803.549104
8762-025-015	20105 PROSA CT	Residential	Single	1	6799.407057
8762-032-037	20347 DAMIETTA DR	Residential	Single	1	6789.84535
8762-030-005	20245 DAMIETTA DR	Residential	Single	1	6776.14481
8762-031-033	1152 CALBOURNE DR	Residential	Single	1	6774.876634
8762-025-018	20135 PROSA CT	Residential	Single	1	6773.380667
8762-021-022	19815 NEWBRIDGE CIR	Residential	Single	1	6771.113393
8762-025-009	1077 TIERRA LUNA	Residential	Single	1	6762.889351
8762-032-022	1119 CLORINDA DR	Residential	Single	1	6755.812918
8762-021-008	1538 HALLGREEN DR	Residential	Single	1	6712.113959
8762-032-036	20353 DAMIETTA DR	Residential	Single	1	6696.495649
8762-032-035	20359 DAMIETTA DR	Residential	Single	1	6690.08105
8762-030-007	20233 DAMIETTA DR	Residential	Single	1	6681.564142
8762-030-004	20251 DAMIETTA DR	Residential	Single	1	6681.4825
8762-033-009	1118 CLORINDA DR	Residential	Single	1	6669.956312
8762-033-032	1119 ARKLEY DR	Residential	Single	1	6668.149399
8762-024-039	20145 ILUSO AVE	Residential	Single	1	6667.454818
8762-021-018	19808 NEWBRIDGE CIR	Residential	Single	1	6666.614656

LA County Office of the Assessor Parcel Attribute Table for Parcels Located in TAZ 22375100

APN	SitusAddress	UseType	UseDescription	Units	Shape_Area (SF)
8762-033-013	1107 BELBURY DR	Residential	Single	1	6658.739428
8762-032-016	20588 CALPET DR	Residential	Single	1	6649.261965
8762-032-033	20371 DAMIETTA DR	Residential	Single	1	6631.52195
8762-030-002	20313 DAMIETTA DR	Residential	Single	1	6627.8544
8762-021-007	1532 HALLGREEN DR	Residential	Single	1	6620.77105
8762-021-006	1526 HALLGREEN DR	Residential	Single	1	6620.18495
8762-026-028	1225 TIERRA LUNA	Residential	Single	1	6617.959469
8762-030-001	20319 DAMIETTA DR	Residential	Single	1	6606.841901
8762-034-015	20427 FLINTGATE DR	Residential	Single	1	6597.0237
8762-024-029	1153 MOSCADA AVE	Residential	Single	1	6596.214487
8762-030-006	20239 DAMIETTA DR	Residential	Single	1	6591.884484
8762-030-003	20305 DAMIETTA DR	Residential	Single	1	6584.789999
8762-024-016	20115 PADRINO AVE	Residential	Single	1	6580.8438
8762-021-021	19809 NEWBRIDGE CIR	Residential	Single	1	6568.750991
8762-032-034	20365 DAMIETTA DR	Residential	Single	1	6554.020049
8762-034-008	20471 FLINTGATE DR	Residential	Single	1	6526.771697
8762-027-024	20132 PADRINO AVE	Residential	Single	1	6510.42645
8762-032-032	20377 DAMIETTA DR	Residential	Single	1	6478.57385
8762-034-013	20437 FLINTGATE DR	Residential	Single	1	6477.3354
8762-032-030	20465 CALPET DR	Residential	Single	1	6465.183232
8762-033-023	1124 BELBURY DR	Residential	Single	1	6455.789025
8762-027-022	20144 PADRINO AVE	Residential	Single	1	6450.15995
8762-027-013	1228 TIERRA LUNA	Residential	Single	1	6425.51275
8762-033-012	20444 FLINTGATE DR	Residential	Single	1	6420.568037
8762-033-014	1111 BELBURY DR	Residential	Single	1	6420.552033
8762-033-025	1112 BELBURY DR	Residential	Single	1	6413.149004
8762-027-029	20108 PADRINO AVE	Residential	Single	1	6397.888299
8762-033-048	20525 CALPET DR	Residential	Single	1	6397.1448
8762-034-011	20451 FLINTGATE DR	Residential	Single	1	6392.250149
8762-025-031	20000 ILUSO AVE	Residential	Single	1	6390.7082
8762-024-019	20129 PADRINO AVE	Residential	Single	1	6390.032072
8762-034-012	20445 FLINTGATE DR	Residential	Single	1	6378.109751
8762-027-023	20138 PADRINO AVE	Residential	Single	1	6372.7056
8762-033-050	20515 CALPET DR	Residential	Single	1	6370.555599
8762-021-004	1514 HALLGREEN DR	Residential	Single	1	6368.646866
8762-033-039	20597 CALPET DR	Residential	Single	1	6362.08828
8762-025-021	20056 ILUSO AVE	Residential	Single	1	6341.275829
8762-033-045	20545 CALPET DR	Residential	Single	1	6338.624199
8762-034-007	20475 FLINTGATE DR	Residential	Single	1	6331.125027
8762-033-030	1107 ARKLEY DR	Residential	Single	1	6322.737881
8762-033-022	1130 BELBURY DR	Residential	Single	1	6320.713768
8762-033-044	20551 CALPET DR	Residential	Single	1	6319.281551
8762-034-014	20433 FLINTGATE DR	Residential	Single	1	6318.410499
8762-033-010	1108 CLORINDA DR	Residential	Single	1	6313.61778
8762-033-018	1135 BELBURY DR	Residential	Single	1	6312.55242
8762-033-038	20504 FLINTGATE DR	Residential	Single	1	6292.139755
8762-033-036	1112 ARKLEY DR	Residential	Single	1	6286.510999
8762-026-030	1237 TIERRA LUNA	Residential	Single	1	6285.898974
8762-025-032	20009 ILUSO AVE	Residential	Single	1	6285.84154
8762-029-019	1152 MOSCADA AVE	Residential	Single	1	6285.806053
8762-034-006	20483 FLINTGATE DR	Residential	Single	1	6284.486849
8762-033-046	20537 CALPET DR	Residential	Single	1	6280.806899
8762-034-009	20465 FLINTGATE DR	Residential	Single	1	6277.0814
8762-033-011	20432 FLINTGATE DR	Residential	Single	1	6274.685001
8762-033-049	20521 CALPET DR	Residential	Single	1	6268.4036
8762-025-019	20082 ILUSO AVE	Residential	Single	1	6266.365756
8762-033-047	20531 CALPET DR	Residential	Single	1	6255.055951
8762-033-037	1106 ARKLEY DR	Residential	Single	1	6250.8366
8762-029-015	1130 MOSCADA AVE	Residential	Single	1	6243.563902
8762-034-010	20459 FLINTGATE DR	Residential	Single	1	6213.29705
8762-032-027	1147 CLORINDA DR	Residential	Single	1	6202.39645
8762-034-028	20489 FLINTGATE DR	Residential	Single	1	6185.410253
8762-026-038	1289 TIERRA LUNA	Residential	Single	1	6181.540805
8762-025-016	20115 PROSA CT	Residential	Single	1	6151.938585
8762-033-041	20589 CALPET DR	Residential	Single	1	6132.957151
8762-033-029	20480 FLINTGATE DR	Residential	Single	1	6130.398627
8762-025-041	20037 TARTA CT	Residential	Single	1	6103.560202
8762-033-024	1120 BELBURY DR	Residential	Single	1	6103.189351
8762-026-029	1231 TIERRA LUNA	Residential	Single	1	6093.921649
8762-032-029	1161 CLORINDA DR	Residential	Single	1	6088.79645
8762-032-023	1123 CLORINDA DR	Residential	Single	1	6078.5282
8762-033-040	20593 CALPET DR	Residential	Single	1	6063.0671
8762-033-016	1125 BELBURY DR	Residential	Single	1	6060.898349
8762-033-003	1156 CLORINDA DR	Residential	Single	1	6028.8421

LA County Office of the Assessor Parcel Attribute Table for Parcels Located in TAZ 22375100

APN	SitusAddress	UseType	UseDescription	Units	Shape_Area (SF)
8762-033-005	1144 CLORINDA DR	Residential	Single	1	6002.9745
8762-029-018	1146 MOSCADA AVE	Residential	Single	1	5987.158286
8762-032-024	1129 CLORINDA DR	Residential	Single	1	5981.5821
8762-033-042	20581 CALPET DR	Residential	Single	1	5964.47455
8762-025-012	20130 PROSA CT	Residential	Single	1	5960.334565
8762-027-012	1234 TIERRA LUNA	Residential	Single	1	5957.814074
8762-027-001	1290 TIERRA LUNA	Residential	Single	1	5955.790133
8762-032-019	20414 FLINTGATE DR	Residential	Single	1	5953.619646
8762-034-023	20503 FLINTGATE DR	Residential	Single	1	5951.9537
8762-033-017	1129 BELBURY DR	Residential	Single	1	5946.984172
8762-025-036	20036 TARTA CT	Residential	Single	1	5946.758275
8762-032-028	1155 CLORINDA DR	Residential	Single	1	5941.658401
8762-026-002	1309 TIERRA SIESTA	Residential	Single	1	5938.382342
8762-032-026	1141 CLORINDA DR	Residential	Single	1	5926.88645
8762-033-001	20507 CALPET DR	Residential	Single	1	5905.512889
8762-026-015	1332 TIERRA SIESTA	Residential	Single	1	5902.606513
8762-029-016	1136 MOSCADA AVE	Residential	Single	1	5900.354901
8762-033-008	1126 CLORINDA DR	Residential	Single	1	5886.130751
8762-027-008	1254 TIERRA LUNA	Residential	Single	1	5885.289963
8762-024-008	20111 DIVINO DR	Residential	Single	1	5881.9878
8762-034-025	20515 FLINTGATE DR	Residential	Single	1	5880.602381
8762-033-007	1132 CLORINDA DR	Residential	Single	1	5877.484401
8762-027-009	1248 TIERRA LUNA	Residential	Single	1	5867.101272
8762-033-004	1148 CLORINDA DR	Residential	Single	1	5863.2999
8762-033-006	1138 CLORINDA DR	Residential	Single	1	5855.448051
8762-032-025	1135 CLORINDA DR	Residential	Single	1	5832.5026
8762-026-003	1315 TIERRA SIESTA	Residential	Single	1	5822.326
8762-025-014	20110 PROSA CT	Residential	Single	1	5818.913969
8762-033-015	1117 BELBURY DR	Residential	Single	1	5817.37105
8762-029-017	1140 MOSCADA AVE	Residential	Single	1	5816.172196
8762-026-033	1261 TIERRA LUNA	Residential	Single	1	5808.199551
8762-024-007	20107 DIVINO DR	Residential	Single	1	5802.797791
8762-027-010	1242 TIERRA LUNA	Residential	Single	1	5797.906428
8762-034-026	20509 FLINTGATE DR	Residential	Single	1	5788.675183
8762-024-003	1117 TIERRA LUNA	Residential	Single	1	5784.786752
8762-027-006	1262 TIERRA LUNA	Residential	Single	1	5737.424288
8762-033-002	1162 CLORINDA DR	Residential	Single	1	5735.2893
8762-030-031		Residential	Single	1	5724.599678
8762-029-013	1118 MOSCADA AVE	Residential	Single	1	5716.850476
8762-024-001	1131 TIERRA LUNA	Residential	Single	1	5675.81205
8762-026-027	1402 TIERRA CIMA AVE	Residential	Single	1	5670.006228
8762-025-042	20033 ILUSO AVE	Residential	Single	1	5663.023165
8762-024-023	1183 MOSCADA AVE	Residential	Single	1	5657.466754
8762-029-014	1124 MOSCADA AVE	Residential	Single	1	5656.798861
8762-026-013	1342 TIERRA SIESTA	Residential	Single	1	5647.928893
8762-026-017	1431 TIERRA CIMA AVE	Residential	Single	1	5636.05525
8762-027-021	20148 PADRINO AVE	Residential	Single	1	5617.4452
8762-026-004	1321 TIERRA SIESTA	Residential	Single	1	5596.8818
8762-027-020	20154 PADRINO AVE	Residential	Single	1	5589.6937
8762-026-031	1245 TIERRA LUNA	Residential	Single	1	5582.811998
8762-025-013	20120 PROSA CT	Residential	Single	1	5552.327991
8762-024-005	1103 TIERRA LUNA	Residential	Single	1	5544.302639
8762-024-022	1189 MOSCADA AVE	Residential	Single	1	5534.834488
8762-024-006	20103 DIVINO DR	Residential	Single	1	5518.968338
8762-026-008	1343 TIERRA SIESTA	Residential	Single	1	5518.962275
8762-024-002	1125 TIERRA LUNA	Residential	Single	1	5505.7867
8762-025-037	20022 TARTA CT	Residential	Single	1	5477.989069
8762-026-005	1327 TIERRA SIESTA	Residential	Single	1	5427.410649
8762-027-018	20162 PADRINO AVE	Residential	Single	1	5404.277286
8762-026-006	1333 TIERRA SIESTA	Residential	Single	1	5380.74465
8762-027-019	20158 PADRINO AVE	Residential	Single	1	5369.449199
8762-027-011	1238 TIERRA LUNA	Residential	Single	1	5355.136676
8762-027-032	1161 TIERRA LUNA	Residential	Single	1	5348.211516
8762-025-002	1022 TIERRA LUNA	Residential	Single	1	5325.189625
8762-024-010	20116 DIVINO DR	Residential	Single	1	5324.25555
8762-026-020	1434 TIERRA CIMA AVE	Residential	Single	1	5307.656063
8762-024-013	20102 DIVINO DR	Residential	Single	1	5283.208366
8762-026-032	1253 TIERRA LUNA	Residential	Single	1	5248.646826
8762-025-003	1030 TIERRA LUNA	Residential	Single	1	5247.575112
8762-024-004	1111 TIERRA LUNA	Residential	Single	1	5219.878872
8762-026-007	1337 TIERRA SIESTA	Residential	Single	1	5180.215375
8762-026-021	1430 TIERRA CIMA AVE	Residential	Single	1	5178.32515
8762-025-038	20010 TARTA CT	Residential	Single	1	5164.868494
8762-025-017	20125 PROSA CT	Residential	Single	1	5156.752619

LA County Office of the Assessor Parcel Attribute Table for Parcels Located in TAZ 22375100

APN	SitusAddress	UseType	UseDescription	Units	Shape_Area (SF)
8762-026-014	1336 TIERRA SIESTA	Residential	Single	1	5151.992999
8762-026-012	1348 TIERRA SIESTA	Residential	Single	1	5146.473102
8762-027-003	1276 TIERRA LUNA	Residential	Single	1	5144.41505
8762-027-002	1284 TIERRA LUNA	Residential	Single	1	5130.353599
8762-026-023	1420 TIERRA CIMA AVE	Residential	Single	1	5123.558339
8762-026-034	1267 TIERRA LUNA	Residential	Single	1	5119.579351
8762-026-025	1412 TIERRA CIMA AVE	Residential	Single	1	5106.977398
8762-024-012	20106 DIVINO DR	Residential	Single	1	5105.872872
8762-025-034	20019 ILUSO AVE	Residential	Single	1	5100.623172
8762-029-029	20159 PADRINO AVE	Residential	Single	1	5049.510484
8762-025-027	20024 ILUSO AVE	Residential	Single	1	5048.550701
8762-025-030	20006 ILUSO AVE	Residential	Single	1	5045.917872
8762-026-024	1416 TIERRA CIMA AVE	Residential	Single	1	5043.808425
8762-025-008	1088 TIERRA LUNA	Residential	Single	1	5006.88396
8762-025-004	1044 TIERRA LUNA	Residential	Single	1	5004.31055
8762-027-004	1272 TIERRA LUNA	Residential	Single	1	4980.8164
8762-026-026	1406 TIERRA CIMA AVE	Residential	Single	1	4976.884248
8762-027-005	1268 TIERRA LUNA	Residential	Single	1	4960.534201
8762-026-035	1271 TIERRA LUNA	Residential	Single	1	4948.10775
8762-026-036	1277 TIERRA LUNA	Residential	Single	1	4946.979451
8762-025-044	20045 ILUSO AVE	Residential	Single	1	4931.12305
8762-025-010	1067 TIERRA LUNA	Residential	Single	1	4922.3854
8762-027-007	1256 TIERRA LUNA	Residential	Single	1	4905.52216
8762-025-007	1070 TIERRA LUNA	Residential	Single	1	4899.249551
8762-025-043	20039 ILUSO AVE	Residential	Single	1	4877.670901
8762-025-023	20048 ILUSO AVE	Residential	Single	1	4876.531896
8762-026-037	1283 TIERRA LUNA	Residential	Single	1	4874.87885
8762-027-037	1135 TIERRA LUNA	Residential	Single	1	4836.36055
8762-025-024	20042 ILUSO AVE	Residential	Single	1	4831.79175
8762-025-025	20036 ILUSO AVE	Residential	Single	1	4823.230256
8762-025-005	1050 TIERRA LUNA	Residential	Single	1	4821.70515
8762-025-026	20030 ILUSO AVE	Residential	Single	1	4815.462188
8762-025-022	20052 ILUSO AVE	Residential	Single	1	4795.171125
8762-024-030	1147 MOSCADA AVE	Residential	Single	1	4794.098161
8762-024-020	20133 PADRINO AVE	Residential	Single	1	4772.974301
8762-027-036	1141 TIERRA LUNA	Residential	Single	1	4768.2773
8762-025-006	1060 TIERRA LUNA	Residential	Single	1	4761.9453
8762-024-011	20112 DIVINO DR	Residential	Single	1	4742.880007
8762-024-031	1141 MOSCADA AVE	Residential	Single	1	4740.468121
8762-026-022	1424 TIERRA CIMA AVE	Residential	Single	1	4737.433729
8762-025-028	20018 ILUSO AVE	Residential	Single	1	4729.10985
8762-025-029	20012 ILUSO AVE	Residential	Single	1	4717.217867
8762-025-011	1055 TIERRA LUNA	Residential	Single	1	4704.965232
8762-025-033	20015 ILUSO AVE	Residential	Single	1	4700.2816
8762-027-033	1155 TIERRA LUNA	Residential	Single	1	4604.412041
8762-027-034	1151 TIERRA LUNA	Residential	Single	1	4558.927697
8762-027-035	1145 TIERRA LUNA	Residential	Single	1	4527.712135
8762-029-028	20149 PADRINO AVE	Residential	Single	1	4205.175524
8762-024-021	20139 PADRINO AVE	Residential	Single	1	3962.083534
8763-007-012	20965 GOLDEN SPRINGS DR	Commercial	Parking Lots (Commercial Use Properties)	0	3924.83105
8763-007-009		Commercial	Commercial		2168.4751
8762-022-001	19816 S WALNUT DR	Recreational	Golf Courses	0	859.6207498
8762-002-021		Commercial	Hotel & Motels		301.9563981
			Totals	**459**	**8,999,523.4 Sq Ft**
				Residential DU	**206.6 Acres**

CAPCOA 2021 Handbook VMT Reduction Calculation Worksheets

Proposed Project

TAZ 22379100 - Planning Area Lot 5 (88 Dwelling Units)

Measure T-1. Increase Residential Density	
Measure Scale	Project/Site
Max VMT Mitigation Potential	30.0%

Baseline Residential Density [1]		
	Residential Dwelling Units (DU)	809
	Acres of Developable Land (Acres) [2]	329.8
C	Number of Dwelling Units per Acre (DU/Acre)	2.45

Residential Density with Project		
	Residential Dwelling Units with Project (DU) [3]	897
	Acres of Developable Land (Acres) [2]	329.8
B	Number of Dwelling Units per Acre (DU/Acre)	2.72

Project VMT Reduction Due to Increased Residential Density		
	Percent Increase in Housing Units per Acre [4]	10.88%
D	Elasticity of VMT with respect to residential density	0.22
A	VMT Reduction = (B-C)/C x D	2.39%
	VMT Reduction	***2.39%***

[1] Baseline residential density based on dwelling unit and area information obtained from the Los Angeles County Office of the Assessor's parcel-level data for all parcels located within TAZ 22379100.

[2] The acres of developable land represents the sum of all parcel areas, excluding the public right-of-way and land owned by public agencies.

[3] The project proposes to construct 88 new dwelling units in the TAZ.

[4] Determined by calculating (B-C)/C.

LA County Office of the Assessor Parcel Attribute Table for Parcels Located in TAZ 22379100

APN	SitusAddress	UseType	UseDescription	Units	Shape_Area (SF)
8764-024-024	20400 LEAP CT	Residential	Single	1	82076.07209
8764-024-023	20442 THRUST DR	Residential	Single	1	30876.94239
8764-024-022	20428 THRUST DR	Residential	Single	1	43549.65108
8764-024-021	2483 POINTER DR	Residential	Single	1	88272.96706
8764-024-020	2485 POINTER DR	Residential	Single	1	58146.31663
8764-024-012	20409 LEAP CT	Residential	Single	1	53416.92476
8764-024-009	20416 THRUST DR	Residential	Single	1	56644.66768
8764-024-006	20450 THRUST DR	Residential	Single	1	34175.56012
8764-024-003	20425 LEAP CT	Residential	Single	1	28383.85921
8764-023-029	20360 BICKFORD DR	Residential	Single	1	36364.50934
8764-023-028	20350 BICKFORD DR	Residential	Single	1	37912.51404
8764-023-026	20380 BICKFORD DR	Residential	Single	1	108275.7905
8764-023-025	20376 BICKFORD DR	Residential	Single	1	63327.72839
8764-023-024	20374 BICKFORD DR	Residential	Single	1	121712.221
8764-023-023	20370 BICKFORD DR	Residential	Single	1	49429.32096
8764-023-020	20340 BICKFORD DR	Residential	Single	1	33449.27149
8764-023-019	20310 BICKFORD DR	Residential	Single	1	27203.6989
8764-022-015	20455 THRUST DR	Residential	Single	1	55503.03758
8764-022-014	20445 THRUST DR	Residential	Single	1	60588.92776
8764-022-013	20429 THRUST DR	Residential	Single	1	40817.6512
8764-022-012	20415 THRUST DR	Residential	Single	1	50254.95045
8764-022-011	20405 THRUST DR	Residential	Single	1	46552.22384
8764-022-010	20401 THRUST DR	Residential	Single	1	126744.7335
8764-022-009	20406 THRUST DR	Residential	Single	1	70855.55082
8764-022-008	20410 RANCE DR	Residential	Single	1	48197.70363
8764-022-007	20470 RANCE DR	Residential	Single	1	35887.44179
8764-022-006	2215 POINTER DR	Residential	Single	1	38681.75604
8764-022-005	2245 POINTER DR	Residential	Single	1	70943.38003
8764-022-004	2275 POINTER DR	Residential	Single	1	45454.74306
8764-022-003	2403 POINTER DR	Residential	Single	1	71385.05018
8764-022-002	2405 POINTER DR	Residential	Single	1	84575.39525
8764-022-001	2407 POINTER DR	Residential	Single	1	72864.64212
8764-021-021	2428 POINTER DR	Residential	Single	1	58550.9535
8764-021-020	2426 POINTER DR	Residential	Single	1	35940.01336
8764-021-019	2280 POINTER DR	Residential	Single	1	39183.55999
8764-021-017	20518 SARTELL DR	Residential	Single	1	215500.3896
8764-021-016	20517 SARTELL DR	Residential	Single	1	34912.03754
8764-021-010	20507 SARTELL DR	Residential	Single	1	30765.83259
8764-021-009	20529 BIND CT	Residential	Single	1	37903.70618
8764-021-008	20509 BIND CT	Residential	Single	1	32668.97153
8764-021-006	2410 POINTER DR	Residential	Single	1	25491.21932
8764-021-003	2266 POINTER DR	Residential	Single	1	28430.37088
8764-021-002	2250 POINTER DR	Residential	Single	1	40660.16214
8764-021-001	20475 RANCE DR	Residential	Single	1	117056.4154
8764-020-026	20478 SARTELL DR	Residential	Single	1	65922.77713
8764-020-025	20504 SARTELL DR	Residential	Single	1	49479.40794
8764-020-023	20435 RANCE DR	Residential	Single	1	47056.6912
8764-020-022	20405 RANCE DR	Residential	Single	1	39126.70088
8764-020-021	20425 RANCE DR	Residential	Single	1	53743.13599
8764-020-019	20415 RANCE DR	Residential	Single	1	57452.41139
8764-020-017	20516 SARTELL DR	Residential	Single	1	69035.93195
8764-020-016	20465 RANCE DR	Residential	Single	1	104490.6207
8764-020-015	20455 RANCE DR	Residential	Single	1	36076.93118
8764-020-014	20445 RANCE DR	Residential	Single	1	59179.20094
8764-020-009	20445 HOLCROFT DR	Residential	Single	1	44324.7606
8764-020-008	20410 SARTELL DR	Residential	Single	1	32533.76082
8764-020-007	20430 SARTELL DR	Residential	Single	1	33916.0078
8764-020-006	20442 SARTELL DR	Residential	Single	1	33505.67033
8764-020-005	20454 SARTELL DR	Residential	Single	1	37054.80723
8764-020-004	20466 SARTELL DR	Residential	Single	1	34950.61042
8764-019-028	20310 HOLCROFT DR	Residential	Single	1	64938.14546
8764-019-027	20426 HOLCROFT DR	Residential	Single	1	47281.24813
8764-019-026	20456 HOLCROFT DR	Residential	Single	1	45418.5649
8764-019-025	20406 HOLCROFT DR	Residential	Single	1	47826.6589
8764-019-024	20330 HOLCROFT DR	Residential	Single	1	47718.52908
8764-019-020	20315 BICKFORD DR	Residential	Single	1	39376.35577
8764-019-019	20303 BICKFORD DR	Residential	Single	1	55496.95017
8764-019-016	20300 HOLCROFT DR	Residential	Single	1	80351.3935
8764-019-013	20342 HOLCROFT DR	Residential	Single	1	48741.04047
8764-019-012	20366 HOLCROFT DR	Residential	Single	1	45214.98772
8764-019-008	20385 BICKFORD DR	Residential	Single	1	57777.33733
8764-019-007	20365 BICKFORD DR	Residential	Single	1	49648.62167
8764-019-006	20355 BICKFORD DR	Residential	Single	1	58364.41422
8764-019-005	20345 BICKFORD DR	Residential	Single	1	51382.40393

LA County Office of the Assessor Parcel Attribute Table for Parcels Located in TAZ 22379100

APN	SitusAddress	UseType	UseDescription	Units	Shape_Area (SF)
8764-019-004	20335 BICKFORD DR	Residential	Single	1	51177.51673
8764-019-003	20325 BICKFORD DR	Residential	Single	1	39863.57063
8764-018-011	20477 SARTELL DR	Residential	Single	1	29219.632
8764-018-010	20463 SARTELL DRIVE	Residential	Single	1	45174.03704
8764-018-009	20445 SARTELL DR	Residential	Single	1	46721.05926
8764-018-008	20431 SARTELL DR	Residential	Single	1	45826.3697
8764-018-007	20419 SARTELL DR	Residential	Single	1	48537.92698
8764-018-006	20407 SARTELL DR	Residential	Single	1	59053.69541
8764-018-005	20353 HOLCROFT DR	Residential	Single	1	36707.18535
8764-018-004	20335 HOLCROFT DR	Residential	Single	1	32422.91897
8764-018-003	20321 HOLCROFT DR	Residential	Single	1	28735.24335
8764-018-002	20307 HOLCROFT DR	Residential	Single	1	37818.18556
8764-018-001	20301 HOLCROFT DR	Residential	Single	1	79423.89066
8764-017-023	20430 LEAP CT	Residential	Single	1	62520.4961
8764-017-022	20422 LEAP CT	Residential	Single	1	27033.35406
8764-017-021	2630 POINTER DR	Residential	Single	1	37142.48512
8764-017-020	2600 POINTER DR	Residential	Single	1	43407.90925
8764-017-016	20510 BIND CT	Residential	Single	1	36673.4853
8764-017-015	20524 BIND CT	Residential	Single	1	33474.12319
8764-017-014	20536 BIND CT	Residential	Single	1	43762.904
8764-017-013	20539 BIND CT	Residential	Single	1	39561.92927
8764-017-010	20408 LEAP CT	Residential	Single	1	60824.415
8764-016-023	20444 HUNTCLIFF LN	Residential	Single	1	9396.615702
8764-016-022	20450 HUNTCLIFF LN	Residential	Single	1	7512.492456
8764-016-021	20449 HUNTCLIFF LN	Residential	Single	1	7701.497042
8764-016-020	20443 HUNTCLIFF LN	Residential	Single	1	7309.799329
8764-016-019	20431 HUNTCLIFF LN	Residential	Single	1	10193.46158
8764-016-018	20419 HUNTCLIFF LN	Residential	Single	1	9944.451937
8764-016-017	20405 HUNTCLIFF LN	Residential	Single	1	8693.11515
8764-016-016	1938 RADCLAY DR	Residential	Single	1	8827.519454
8764-016-015	1928 RADCLAY DR	Residential	Single	1	9279.541183
8764-016-014	20412 STARSHINE RD	Residential	Single	1	9474.632333
8764-016-013	20422 STARSHINE RD	Residential	Single	1	11757.5375
8764-016-012	20430 STARSHINE RD	Residential	Single	1	10419.63001
8764-016-011	1905 WALNUT LEAF DR	Residential	Single	1	11351.06145
8764-016-010	1915 WALNUT LEAF DR	Residential	Single	1	9148.089203
8764-016-009	1925 WALNUT LEAF DR	Residential	Single	1	8705.760268
8764-016-008	1935 WALNUT LEAF DR	Residential	Single	1	13048.72512
8764-016-007	20440 HUNTCLIFF LN	Residential	Single	1	16815.5383
8764-016-006	20436 HUNTCLIFF LN	Residential	Single	1	11424.26023
8764-016-005	20428 HUNTCLIFF LN	Residential	Single	1	16088.73106
8764-016-004	20420 HUNTCLIFF LN	Residential	Single	1	16158.50953
8764-016-003	20414 HUNTCLIFF LN	Residential	Single	1	9006.492432
8764-016-002	20406 HUNTCLIFF LN	Residential	Single	1	9396.615238
8764-016-001	20410 HUNTCLIFF LN	Residential	Single	1	17730.8062
8764-015-027	20574 STARSHINE RD	Residential	Single	1	11892.6522
8764-015-026	20568 STARSHINE RD	Residential	Single	1	15452.79334
8764-015-025	20560 STARSHINE RD	Residential	Single	1	14223.79091
8764-015-024	20550 STARSHINE RD	Residential	Single	1	12450.10505
8764-015-023	20540 STARSHINE RD	Residential	Single	1	12013.59715
8764-015-022	20530 STARSHINE RD	Residential	Single	1	10335.0753
8764-015-021	20522 STARSHINE RD	Residential	Single	1	10014.11838
8764-015-020	20512 STARSHINE RD	Residential	Single	1	8611.125291
8764-015-019	20502 STARSHINE RD	Residential	Single	1	11406.21031
8764-015-018	20505 MISSIONARY RIDGE ST	Residential	Single	1	9942.083756
8764-015-017	20515 MISSIONARY RIDGE ST	Residential	Single	1	8414.821965
8764-015-016	20525 MISSIONARY RIDGE ST	Residential	Single	1	9043.732985
8764-015-015	20535 MISSIONARY RIDGE ST	Residential	Single	1	8787.252694
8764-015-014	20545 MISSIONARY RIDGE ST	Residential	Single	1	8500.481769
8764-015-013	20555 MISSIONARY RIDGE ST	Residential	Single	1	8501.047618
8764-015-012	20565 MISSIONARY RIDGE ST	Residential	Single	1	8564.463802
8764-015-011	20573 MISSIONARY RIDGE ST	Residential	Single	1	8470.175518
8764-015-010	20579 MISSIONARY RIDGE ST	Residential	Single	1	13302.13825
8764-015-009	20576 MISSIONARY RIDGE ST	Residential	Single	1	15885.04147
8764-015-008	20570 MISSIONARY RIDGE ST	Residential	Single	1	9286.916307
8764-015-007	20566 MISSIONARY RIDGE ST	Residential	Single	1	10477.23514
8764-015-006	20554 MISSIONARY RIDGE ST	Residential	Single	1	9776.374421
8764-015-005	20544 MISSIONARY RIDGE ST	Residential	Single	1	11304.28127
8764-015-004	20534 MISSIONARY RIDGE ST	Residential	Single	1	13089.12935
8764-015-003	20524 MISSIONARY RIDGE ST	Residential	Single	1	13047.28088
8764-015-002	20514 MISSIONARY RIDGE ST	Residential	Single	1	13707.3677
8764-015-001	20502 MISSIONARY RIDGE ST	Residential	Single	1	12423.0803
8764-014-025	20554 LAKE CANYON DR	Residential	Single	1	16883.91625
8764-014-024	20550 LAKE CANYON DR	Residential	Single	1	11245.16653

LA County Office of the Assessor Parcel Attribute Table for Parcels Located in TAZ 22379100

APN	SitusAddress	UseType	UseDescription	Units	Shape_Area (SF)
8764-014-023	20540 LAKE CANYON DR	Residential	Single	1	9091.075541
8764-014-022	20536 LAKE CANYON DR	Residential	Single	1	12027.18879
8764-014-021	20526 LAKE CANYON DR	Residential	Single	1	11755.35305
8764-014-020	20516 LAKE CANYON DR	Residential	Single	1	13038.023
8764-014-019	20506 LAKE CANYON DR	Residential	Single	1	14443.70476
8764-014-018	20454 LAKE CANYON DR	Residential	Single	1	12010.23108
8764-014-017	20442 LAKE CANYON DR	Residential	Single	1	14130.13496
8764-014-016	20430 LAKE CANYON DR	Residential	Single	1	10727.22625
8764-014-015	20422 LAKE CANYON DR	Residential	Single	1	9891.002051
8764-014-014	20412 LAKE CANYON DR	Residential	Single	1	7989.6694
8764-014-013	20400 LAKE CANYON DR	Residential	Single	1	8568.242118
8764-014-012	20405 STARSHINE RD	Residential	Single	1	9616.943242
8764-014-011	20415 E STARSHINE RD	Residential	Single	1	9179.543898
8764-014-010	20425 STARSHINE RD	Residential	Single	1	8785.470337
8764-014-009	20435 STARSHINE RD	Residential	Single	1	8988.3694
8764-014-008	20447 STARSHINE RD	Residential	Single	1	8744.877526
8764-014-007	20509 STARSHINE RD	Residential	Single	1	10069.34
8764-014-006	20523 STARSHINE RD	Residential	Single	1	10907.3111
8764-014-005	20537 STARSHINE RD	Residential	Single	1	8806.953601
8764-014-004	20547 STARSHINE RD	Residential	Single	1	8793.5002
8764-014-003	20557 STARSHINE RD	Residential	Single	1	8537.439959
8764-014-002	20567 STARSHINE RD	Residential	Single	1	10015.07379
8764-014-001	20575 STARSHINE RD	Residential	Single	1	9793.006645
8764-013-024	1736 CHAPEL HILL DR	Residential	Single	1	13398.44798
8764-013-023	1740 CHAPEL HILL DR	Residential	Single	1	13255.86733
8764-013-022	1744 CHAPEL HILL DR	Residential	Single	1	8820.229786
8764-013-021	1750 CHAPEL HILL DR	Residential	Single	1	10145.61427
8764-013-020	1806 WALNUT LEAF DR	Residential	Single	1	9865.632096
8764-013-019	20503 SUMMERTOWN ST	Residential	Single	1	8631.953244
8764-013-018	20513 SUMMERTOWN ST	Residential	Single	1	8454.940764
8764-013-017	20523 SUMMERTOWN ST	Residential	Single	1	8471.565865
8764-013-016	20531 SUMMERTOWN ST	Residential	Single	1	8641.524214
8764-013-015	20543 SUMMERTOWN ST	Residential	Single	1	9287.219587
8764-013-014	20551 SUMMERTOWN ST	Residential	Single	1	15450.59616
8764-013-013	20557 SUMMERTOWN ST	Residential	Single	1	9917.797304
8764-013-012	20550 SUMMERTOWN ST	Residential	Single	1	10953.79642
8764-013-011	20542 SUMMERTOWN ST	Residential	Single	1	9755.768176
8764-013-010	20534 SUMMERTOWN ST	Residential	Single	1	9178.768896
8764-013-009	20524 SUMMERTOWN ST	Residential	Single	1	10833.44785
8764-013-008	20514 SUMMERTOWN ST	Residential	Single	1	10147.37361
8764-013-007	1834 WALNUT LEAF DR	Residential	Single	1	9498.464485
8764-013-006	20505 LAKE CANYON DR	Residential	Single	1	10544.55575
8764-013-005	20515 LAKE CANYON DR	Residential	Single	1	12497.0179
8764-013-004	20527 LAKE CANYON DR	Residential	Single	1	11070.9924
8764-013-003	20537 LAKE CANYON DR	Residential	Single	1	11198.92468
8764-013-002	20547 LAKE CANYON DR	Residential	Single	1	10476.43618
8764-013-001	20555 LAKE CANYON DR	Residential	Single	1	12124.49214
8764-012-022		Residential	Single	1	1584.023931
8764-012-020		Residential	Single	1	1700.277369
8764-012-019		Residential	Single	1	1699.808312
8764-012-018		Residential	Single	1	1496.09465
8764-012-017	1706 CHAPEL HILL DR	Residential	Single	1	8410.050982
8764-012-016	1710 CHAPEL HILL DR	Residential	Single	1	8635.494937
8764-012-015	1718 CHAPEL HILL DR	Residential	Single	1	8652.982905
8764-012-014	1726 CHAPEL HILL DR	Residential	Single	1	9023.501983
8764-012-013	1732 CHAPEL HILL DR	Residential	Single	1	8381.316531
8764-012-012	1741 MORNING SUN AVE	Residential	Single	1	8253.578045
8764-012-011	1735 MORNING SUN AVE	Residential	Single	1	8914.279782
8764-012-010	1725 MORNING SUN AVE	Residential	Single	1	8397.198269
8764-012-009	1717 MORNING SUN AVE	Residential	Single	1	8322.950495
8764-012-008	1707 MORNING SUN AVE	Residential	Single	1	9543.171661
8764-012-007	1704 MORNING SUN AVE	Residential	Single	1	11155.99169
8764-012-006	1712 MORNING SUN AVE	Residential	Single	1	10349.99841
8764-012-005	1720 MORNING SUN AVE	Residential	Single	1	10392.69001
8764-012-004	1728 MORNING SUN AVE	Residential	Single	1	9206.718224
8764-012-003	1738 MORNING SUN AVE	Residential	Single	1	13083.8755
8764-012-002	1744 MORNING SUN AVE	Residential	Single	1	14892.30258
8764-012-001	1747 MORNING SUN AVE	Residential	Single	1	10025.66786
8764-011-018	1722 WALNUT LEAF DR	Residential	Single	1	13237.4217
8764-011-017	1704 WALNUT LEAF DR	Residential	Single	1	10174.92873
8764-011-016	20456 TAM OSHANTER DR	Residential	Single	1	9933.726851
8764-011-015	20460 TAM OSHANTER DR	Residential	Single	1	9050.638278
8764-011-014	20468 TAM OSHANTER DR	Residential	Single	1	9605.406457
8764-011-013	1645 CHAPEL HILL DR	Residential	Single	1	11727.18589

LA County Office of the Assessor Parcel Attribute Table for Parcels Located in TAZ 22379100

APN	SitusAddress	UseType	UseDescription	Units	Shape_Area (SF)
8764-011-012	20521 SHEPHERD HILLS DR	Residential	Single	1	11898.16381
8764-011-011	20511 SHEPHERD HILLS DR	Residential	Single	1	12012.1639
8764-011-010	20503 SHEPHERD HILLS DR	Residential	Single	1	12318.57442
8764-011-009	1732 WALNUT LEAF DR	Residential	Single	1	11158.6318
8764-011-008	1740 WALNUT LEAF DR	Residential	Single	1	9662.142194
8764-011-007	1750 WALNUT LEAF DR	Residential	Single	1	11122.46644
8764-011-006	1760 WALNUT LEAF DR	Residential	Single	1	8786.031265
8764-011-005	1755 CHAPEL HILL DR	Residential	Single	1	8348.823747
8764-011-004	1727 CHAPEL HILL DR	Residential	Single	1	8934.028267
8764-011-003	1719 CHAPEL HILL DR	Residential	Single	1	10131.80087
8764-011-002	20504 SHEPHERD HILLS DR	Residential	Single	1	14504.7692
8764-011-001	1707 CHAPEL HILL DR	Residential	Single	1	10806.30153
8764-010-024	1612 MORNING SUN AVE	Residential	Single	1	10974.44598
8764-010-023	1608 MORNING SUN AVE	Residential	Single	1	10357.15438
8764-010-022	1604 MORNING SUN AVE	Residential	Single	1	15457.71812
8764-010-021	1600 MORNING SUN AVE	Residential	Single	1	11779.62849
8764-010-020	1601 MORNING SUN AVE	Residential	Single	1	11228.97674
8764-010-019	1611 MORNING SUN AVE	Residential	Single	1	11234.3119
8764-010-018	1623 MORNING SUN AVE	Residential	Single	1	10331.63372
8764-010-017	1635 MORNING SUN AVE	Residential	Single	1	9673.291451
8764-010-016	1645 MORNING SUN AVE	Residential	Single	1	11126.78194
8764-010-015	1649 MORNING SUN AVE	Residential	Single	1	13852.40211
8764-010-014	1657 MORNING SUN AVE	Residential	Single	1	10299.8406
8764-010-013	1665 MORNING SUN AVE	Residential	Single	1	12135.19335
8764-010-012	20547 SHEPHERD HILLS DR	Residential	Single	1	9141.126829
8764-010-011	1664 CHAPEL HILL DR	Residential	Single	1	12348.18554
8764-010-010	1652 CHAPEL HILL DR	Residential	Single	1	11964.42246
8764-010-009	1644 CHAPEL HILL DR	Residential	Single	1	10906.76009
8764-010-008	1632 CHAPEL HILL DR	Residential	Single	1	11092.0742
8764-010-007	1620 CHAPEL HILL DR	Residential	Single	1	10404.64858
8764-010-006	1600 CHAPEL HILL DR	Residential	Single	1	14880.09985
8764-010-005	1609 CHAPEL HILL DR	Residential	Single	1	9760.803675
8764-010-004	1615 CHAPEL HILL DR	Residential	Single	1	10126.33537
8764-010-003	20467 TAM OSHANTER DR	Residential	Single	1	12872.58546
8764-010-002	20455 TAM OSHANTER DR	Residential	Single	1	11485.1202
8764-010-001	20447 TAM OSHANTER DR	Residential	Single	1	11576.62521
8764-009-089	1525 WALNUT LEAF DR NO 21	Residential	Single	1	52955.69181
8764-009-088	1525 WALNUT LEAF DR NO 21	Residential	Single	1	52955.69181
8764-009-087	1525 WALNUT LEAF DR NO 21	Residential	Single	1	52955.69181
8764-009-086	1525 WALNUT LEAF DR NO 21	Residential	Single	1	52955.69181
8764-009-085	1525 WALNUT LEAF DR NO 21	Residential	Single	1	52955.69181
8764-009-084	1525 WALNUT LEAF DR NO 21	Residential	Single	1	52955.69181
8764-009-083	1525 WALNUT LEAF DR NO 21	Residential	Single	1	52955.69181
8764-009-082	1525 WALNUT LEAF DR NO 20	Residential	Single	1	52955.69181
8764-009-081	1525 WALNUT LEAF DR NO 20	Residential	Single	1	52955.69181
8764-009-080	1525 WALNUT LEAF DR 207	Residential	Single	1	52955.69181
8764-009-079	1525 WALNUT LEAF DR NO 20	Residential	Single	1	52955.69181
8764-009-078	1525 WALNUT LEAF DR NO 20	Residential	Single	1	52955.69181
8764-009-077	1525 WALNUT LEAF DR NO 20	Residential	Single	1	52955.69181
8764-009-076	1525 WALNUT LEAF DR NO 20	Residential	Single	1	52955.69181
8764-009-075	1525 WALNUT LEAF DR NO 20	Residential	Single	1	52955.69181
8764-009-074	1525 WALNUT LEAF DR NO 20	Residential	Single	1	52955.69181
8764-009-073	1525 WALNUT LEAF DR NO 11	Residential	Single	1	52955.69181
8764-009-072	1525 WALNUT LEAF DR NO 11	Residential	Single	1	52955.69181
8764-009-071	1525 WALNUT LEAF DR NO 11	Residential	Single	1	52955.69181
8764-009-070	1525 WALNUT LEAF DR NO 11	Residential	Single	1	52955.69181
8764-009-069	1525 WALNUT LEAF DR NO 11	Residential	Single	1	52955.69181
8764-009-068	1525 WALNUT LEAF DR NO 11	Residential	Single	1	52955.69181
8764-009-067	1525 WALNUT LEAF DR NO 11	Residential	Single	1	52955.69181
8764-009-066	1525 WALNUT LEAF DR NO 10	Residential	Single	1	52955.69181
8764-009-065	1525 WALNUT LEAF DR NO 10	Residential	Single	1	52955.69181
8764-009-064	1525 WALNUT LEAF DR NO 10	Residential	Single	1	52955.69181
8764-009-063	1525 WALNUT LEAF DR NO 10	Residential	Single	1	52955.69181
8764-009-062	1525 WALNUT LEAF DR NO 10	Residential	Single	1	52955.69181
8764-009-061	1525 WALNUT LEAF DR NO 10	Residential	Single	1	52955.69181
8764-009-060	1525 WALNUT LEAF DR NO 10	Residential	Single	1	52955.69181
8764-009-059	1525 WALNUT LEAF DR NO 10	Residential	Single	1	52955.69181
8764-009-058	1525 WALNUT LEAF DR NO 10	Residential	Single	1	52955.69181
8764-009-057	1540 WALNUT LEAF DR	Residential	Single	1	7619.421954
8764-009-056	1548 WALNUT LEAF DR	Residential	Single	1	7000.219124
8764-009-055	1554 WALNUT LEAF DR	Residential	Single	1	8671.001231
8764-009-054	1560 WALNUT LEAF DR	Residential	Single	1	9067.093037
8764-009-053	1566 WALNUT LEAF DR	Residential	Single	1	7161.379692
8764-009-052	1555 LEANNE TER	Residential	Single	1	6858.114349

LA County Office of the Assessor Parcel Attribute Table for Parcels Located in TAZ 22379100

APN	SitusAddress	UseType	UseDescription	Units	Shape_Area (SF)
8764-009-051	1543 LEANNE TER	Residential	Single	1	6236.28873
8764-009-050	1537 LEANNE TER	Residential	Single	1	5342.23348
8764-009-049	1531 LEANNE TER	Residential	Single	1	6106.263438
8764-009-048	1525 LEANNE TER	Residential	Single	1	6541.729951
8764-009-047	1521 LEANNE TER	Residential	Single	1	6310.84505
8764-009-046	20248 WYN TER	Residential	Single	1	7209.231613
8764-009-045	20244 WYN TER	Residential	Single	1	5102.6372
8764-009-044	20238 WYN TER	Residential	Single	1	5937.142894
8764-009-043	20234 WYN TER	Residential	Single	1	6016.395838
8764-009-042	20230 WYN TER	Residential	Single	1	5999.877142
8764-009-041	20224 WYN TER	Residential	Single	1	5478.267216
8764-009-040	20218 WYN TER	Residential	Single	1	5217.68015
8764-009-039	20214 WYN TER	Residential	Single	1	5260.861384
8764-009-038	20202 WYN TER	Residential	Single	1	7005.244952
8764-009-037	20201 WYN TER	Residential	Single	1	8361.820933
8764-009-036	20207 WYN TER	Residential	Single	1	6181.917894
8764-009-035	20211 WYN TER	Residential	Single	1	6220.157283
8764-009-034	20215 WYN TER	Residential	Single	1	5587.752819
8764-009-033	20219 WYN TER	Residential	Single	1	5993.206549
8764-009-032	20225 WYN TER	Residential	Single	1	6123.5564
8764-009-031	20231 WYN TER	Residential	Single	1	6348.0167
8764-009-030	20235 WYN TER	Residential	Single	1	5572.0882
8764-009-029	20239 WYN TER	Residential	Single	1	5677.82825
8764-009-028	20245 WYN TER	Residential	Single	1	6037.063902
8764-009-027	20249 WYN TER	Residential	Single	1	5513.923584
8764-009-026	20253 WYN TER	Residential	Single	1	7755.099838
8764-009-025	20259 WYN TER	Residential	Single	1	16779.19396
8764-009-024	1500 LEANNE TER	Residential	Single	1	9666.279474
8764-009-023	1504 LEANNE TER	Residential	Single	1	7663.172674
8764-009-022	1510 LEANNE TER	Residential	Single	1	6561.885003
8764-009-021	1516 LEANNE TER	Residential	Single	1	7288.721574
8764-009-020	1520 LEANNE TER	Residential	Single	1	6685.247973
8764-009-019	1524 LEANNE TER	Residential	Single	1	7304.074662
8764-009-018	1530 LEANNE TER	Residential	Single	1	7524.482543
8764-009-017	1536 LEANNE TER	Residential	Single	1	7208.119004
8764-009-016	1540 LEANNE TER	Residential	Single	1	7480.730506
8764-009-015	1544 LEANNE TER	Residential	Single	1	7119.887777
8764-009-014	1548 LEANNE TER	Residential	Single	1	7296.464627
8764-009-013	1554 LEANNE TER	Residential	Single	1	10062.2584
8764-009-012	1609 WALNUT LEAF DR	Residential	Single	1	6455.954126
8764-009-011	1603 WALNUT LEAF DR	Residential	Single	1	6088.753845
8764-009-010	1585 WALNUT LEAF DR	Residential	Single	1	6247.45235
8764-009-009	1579 WALNUT LEAF DR	Residential	Single	1	5995.714689
8764-009-008	1573 WALNUT LEAF DR	Residential	Single	1	5934.620581
8764-009-007	1567 WALNUT LEAF DR	Residential	Single	1	6158.186793
8764-009-006	1561 WALNUT LEAF DR	Residential	Single	1	6267.766957
8764-009-005	1555 WALNUT LEAF DR	Residential	Single	1	5999.4185
8764-009-004	1551 WALNUT LEAF DR	Residential	Single	1	5639.4084
8764-009-003	1545 WALNUT LEAF DR	Residential	Single	1	6218.51245
8764-009-002	1541 WALNUT LEAF DR	Residential	Single	1	6074.7993
8764-009-001	1535 WALNUT LEAF DR	Residential	Single	1	6267.770149
8764-008-029	20433 TAM OSHANTER DR	Residential	Single	1	13250.65872
8764-008-028	20421 TAM OSHANTER DR	Residential	Single	1	11981.61775
8764-008-027	20411 TAM OSHANTER DR	Residential	Single	1	10963.82075
8764-008-026	20405 TAM OSHANTER DR	Residential	Single	1	14320.5226
8764-008-025	20401 TAM OSHANTER DR	Residential	Single	1	17361.80951
8764-008-024	20404 TAM OSHANTER DR	Residential	Single	1	10735.06265
8764-008-023	20409 TAM OSHANTER DR	Residential	Single	1	9667.12977
8764-008-022	1715 MERION WAY	Residential	Single	1	8353.280821
8764-008-021	1714 MERION WAY	Residential	Single	1	8527.928419
8764-008-020	1710 MERION WAY	Residential	Single	1	9425.132119
8764-008-019	20422 TAM OSHANTER DR	Residential	Single	1	7915.870286
8764-008-018	20428 TAM OSHANTER DR	Residential	Single	1	9142.416232
8764-008-017	1713 WALNUT LEAF DR	Residential	Single	1	8219.165794
8764-008-016	1721 WALNUT LEAF DR	Residential	Single	1	9147.062044
8764-008-015	1727 WALNUT LEAF DR	Residential	Single	1	9079.7575
8764-008-014	1735 WALNUT LEAF DR	Residential	Single	1	8913.215449
8764-008-013	1751 WALNUT LEAF DR	Residential	Single	1	11200.46518
8764-008-012	1763 WALNUT LEAF DR	Residential	Single	1	12147.4993
8764-008-011	1805 WALNUT LEAF DR	Residential	Single	1	14624.2038
8764-008-010	1817 WALNUT LEAF DR	Residential	Single	1	17163.98289
8764-008-009	1833 WALNUT LEAF DR	Residential	Single	1	17238.72798
8764-008-008	20349 LAKE CANYON DR	Residential	Single	1	13223.57249
8764-008-007	20359 LAKE CANYON DR	Residential	Single	1	13102.16531

LA County Office of the Assessor Parcel Attribute Table for Parcels Located in TAZ 22379100

APN	SitusAddress	UseType	UseDescription	Units	Shape_Area (SF)
8764-008-006	20369 LAKE CANYON DR	Residential	Single	1	12096.00568
8764-008-005	20401 LAKE CANYON DR	Residential	Single	1	10338.94236
8764-008-004	20413 LAKE CANYON DR	Residential	Single	1	10446.9988
8764-008-003	20421 LAKE CANYON DR	Residential	Single	1	12430.24137
8764-008-002	20431 LAKE CANYON DR	Residential	Single	1	16181.03691
8764-008-001	20441 LAKE CANYON DR	Residential	Single	1	8812.032071
8764-007-020	1907 MAIREMONT DR	Residential	Single	1	9332.738252
8764-007-019	1913 MAIREMONT DR	Residential	Single	1	12315.55745
8764-007-018	1760 STARSHINE RD	Residential	Single	1	11401.36795
8764-007-017	1748 STARSHINE RD	Residential	Single	1	11418.00885
8764-007-016	1740 STARSHINE RD	Residential	Single	1	10999.84085
8764-007-015	1724 STARSHINE RD	Residential	Single	1	9662.674744
8764-007-014	20306 LAKE CANYON DR	Residential	Single	1	9684.985166
8764-007-013	20312 LAKE CANYON DR	Residential	Single	1	10059.73759
8764-007-012	20324 LAKE CANYON DR	Residential	Single	1	10998.54791
8764-007-011	20332 LAKE CANYON DR	Residential	Single	1	9569.704737
8764-007-010	20339 LAKE CANYON DR	Residential	Single	1	11266.64504
8764-007-009	20331 LAKE CANYON DR	Residential	Single	1	9531.913486
8764-007-008	20321 LAKE CANYON DR	Residential	Single	1	9627.56786
8764-007-007	20311 LAKE CANYON DR	Residential	Single	1	9659.841512
8764-007-006	20305 LAKE CANYON DR	Residential	Single	1	9611.287575
8764-007-005	20259 LAKE CANYON DR	Residential	Single	1	10120.34541
8764-007-004	20247 LAKE CANYON DR	Residential	Single	1	10823.7836
8764-007-003	20235 LAKE CANYON DR	Residential	Single	1	10280.59117
8764-007-002	20227 LAKE CANYON DR	Residential	Single	1	11243.6872
8764-007-001	20211 LAKE CANYON DR	Residential	Single	1	9842.683104
8764-006-035	20102 EVENING BREEZE DR	Residential	Single	1	15896.8162
8764-006-034	20106 EVENING BREEZE DR	Residential	Single	1	15606.40979
8764-006-033	20112 EVENING BREEZE DR	Residential	Single	1	11915.16688
8764-006-032	20122 EVENING BREEZE DR	Residential	Single	1	11014.81687
8764-006-031	20130 EVENING BREEZE DR	Residential	Single	1	10164.97995
8764-006-030	20136 EVENING BREEZE DR	Residential	Single	1	12362.56612
8764-006-029	20148 EVENING BREEZE DR	Residential	Single	1	13102.42556
8764-006-028	20152 EVENING BREEZE DR	Residential	Single	1	11319.92913
8764-006-027	1765 STARSHINE RD	Residential	Single	1	15207.87323
8764-006-026	1759 STARSHINE RD	Residential	Single	1	11103.98704
8764-006-025	1957 MAIREMONT DR	Residential	Single	1	9595.039829
8764-006-024	1949 MAIREMONT DR	Residential	Single	1	21421.00747
8764-006-023	1955 MAIREMONT DR	Residential	Single	1	12257.1243
8764-006-022	20237 EVENING BREEZE DR	Residential	Single	1	10626.08245
8764-006-021	20235 EVENING BREEZE DR	Residential	Single	1	15442.6893
8764-006-020	20221 EVENING BREEZE DR	Residential	Single	1	10767.5825
8764-006-019	20205 EVENING BREEZE DR	Residential	Single	1	11570.8694
8764-006-018	20215 EVENING BREEZE DR	Residential	Single	1	9086.905499
8764-006-017	20227 EVENING BREEZE DR	Residential	Single	1	11982.465
8764-006-016	20243 EVENING BREEZE DR	Residential	Single	1	11052.99585
8764-006-015	20253 EVENING BREEZE DR	Residential	Single	1	10515.58201
8764-006-014	20165 EVENING BREEZE DR	Residential	Single	1	14676.96315
8764-006-013	20153 EVENING BREEZE DR	Residential	Single	1	14013.30569
8764-006-012	20135 EVENING BREEZE DR	Residential	Single	1	12557.0899
8764-006-011	20111 EVENING BREEZE DR	Residential	Single	1	14291.93633
8764-006-010	20110 RHAPSODY RD	Residential	Single	1	9028.844438
8764-006-009	20124 RHAPSODY RD	Residential	Single	1	10701.8142
8764-006-008	20136 RHAPSODY RD	Residential	Single	1	12493.94452
8764-006-007	20144 RHAPSODY RD	Residential	Single	1	13615.06422
8764-006-006	20160 RHAPSODY RD	Residential	Single	1	13482.59616
8764-006-005	20170 RHAPSODY RD	Residential	Single	1	13729.37883
8764-006-004		Residential	Single	1	15667.03935
8764-006-003		Residential	Single	1	15239.60876
8764-006-002	20230 RHAPSODY RD	Residential	Single	1	17718.85514
8764-006-001	1745 STARSHINE RD	Residential	Single	1	12480.47155
8764-005-026	20370 LAKE CANYON DR	Residential	Single	1	11096.25455
8764-005-025	20360 LAKE CANYON DR	Residential	Single	1	10644.25283
8764-005-024	1914 MAIREMONT DR	Residential	Single	1	10017.58935
8764-005-023	1926 MAIREMONT DR	Residential	Single	1	10691.02935
8764-005-022	1936 MAIREMONT DR	Residential	Single	1	10723.82195
8764-005-021	1948 MAIREMONT DR	Residential	Single	1	10757.38627
8764-005-020	1954 MAIREMONT DR	Residential	Single	1	9101.458578
8764-005-019	1964 MAIREMONT DR	Residential	Single	1	9098.929421
8764-005-018	1974 MAIREMONT DR	Residential	Single	1	11658.40702
8764-005-017	20400 HUNTCLIFF LN	Residential	Single	1	9080.829848
8764-005-016	1955 RADCLAY DR	Residential	Single	1	7880.600649
8764-005-015	1951 RADCLAY DR	Residential	Single	1	7756.989956
8764-005-014	1945 RADCLAY DR	Residential	Single	1	7984.582084

LA County Office of the Assessor Parcel Attribute Table for Parcels Located in TAZ 22379100

APN	SitusAddress	UseType	UseDescription	Units	Shape_Area (SF)
8764-005-013	1935 RADCLAY DR	Residential	Single	1	8412.311801
8764-005-012	1925 RADCLAY DR	Residential	Single	1	8516.601149
8764-005-011	1915 RADCLAY DR	Residential	Single	1	8035.185124
8764-005-010	1978 MAIREMONT DR	Residential	Single	1	16180.59638
8764-005-009	1980 MAIREMONT DR	Residential	Single	1	18847.21703
8764-005-008	20260 EVENING BREEZE DR	Residential	Single	1	18193.59286
8764-005-007	20252 EVENING BREEZE DR	Residential	Single	1	16503.04737
8764-005-006	20242 EVENING BREEZE DR	Residential	Single	1	16035.90186
8764-005-005	20232 EVENING BREEZE DR	Residential	Single	1	13771.64633
8764-005-004	20224 EVENING BREEZE DR	Residential	Single	1	13881.92008
8764-005-003	20214 EVENING BREEZE DR	Residential	Single	1	14006.50874
8764-005-002	20206 EVENING BREEZE DR	Residential	Single	1	13797.45796
8764-005-001	20166 EVENING BREEZE DR	Residential	Single	1	17186.98777
8764-004-041	20214 LAKE CANYON DR	Residential	Single	1	11702.69313
8764-004-040	20163 DONWAY DR	Residential	Single	1	8007.528822
8764-004-039	20157 DONWAY DR	Residential	Single	1	8998.985873
8764-004-038	20151 DONWAY DR	Residential	Single	1	11858.00329
8764-004-037	20149 DONWAY DR	Residential	Single	1	11918.29364
8764-004-036	20143 DONWAY DR	Residential	Single	1	8852.310422
8764-004-035	20135 DONWAY DR	Residential	Single	1	8636.396912
8764-004-034	20129 DONWAY DR	Residential	Single	1	11976.23565
8764-004-033	20127 DONWAY DR	Residential	Single	1	12193.86798
8764-004-032	20121 DONWAY DR	Residential	Single	1	8350.096625
8764-004-031	20115 DONWAY DR	Residential	Single	1	8238.921891
8764-004-030	20107 DONWAY DR	Residential	Single	1	11753.7693
8764-004-029	20105 DONWAY DR	Residential	Single	1	12282.8288
8764-004-028	20101 DONWAY DR	Residential	Single	1	13707.84929
8764-004-027	20102 DONWAY DR	Residential	Single	1	9335.004257
8764-004-026	20114 DONWAY DR	Residential	Single	1	8257.873295
8764-004-025	20124 DONWAY DR	Residential	Single	1	10571.9506
8764-004-024	1711 WINEGLOW CIR	Residential	Single	1	12237.37751
8764-004-023	1717 WINEGLOW CIR	Residential	Single	1	13357.35242
8764-004-022	1718 WINEGLOW CIR	Residential	Single	1	10308.15125
8764-004-021	1712 WINEGLOW CIR	Residential	Single	1	10119.24327
8764-004-020	1706 WINEGLOW CIR	Residential	Single	1	8427.536159
8764-004-019	20146 DONWAY DR	Residential	Single	1	8158.354301
8764-004-018	20152 DONWAY DR	Residential	Single	1	9316.466014
8764-004-017	20162 DONWAY DR	Residential	Single	1	8923.756429
8764-004-016	20252 LAKE CANYON DR	Residential	Single	1	8907.234649
8764-004-015	1711 STARSHINE RD	Residential	Single	1	8611.479602
8764-004-014	1719 STARSHINE RD	Residential	Single	1	9679.647199
8764-004-013	1725 STARSHINE RD	Residential	Single	1	10267.92547
8764-004-012	1733 STARSHINE RD	Residential	Single	1	8231.350827
8764-004-011	20223 RHAPSODY RD	Residential	Single	1	8917.497363
8764-004-010	20215 RHAPSODY RD	Residential	Single	1	9249.57685
8764-004-009	20203 RHAPSODY RD	Residential	Single	1	9886.738781
8764-004-008	20169 RHAPSODY RD	Residential	Single	1	9412.104529
8764-004-007	20155 RHAPSODY RD	Residential	Single	1	10056.34868
8764-004-006	20137 RHAPSODY RD	Residential	Single	1	12004.45856
8764-004-005	20125 RHAPSODY RD	Residential	Single	1	12398.4049
8764-004-004	20117 RHAPSODY RD	Residential	Single	1	10534.36105
8764-004-003	20103 DONWAY DR	Residential	Single	1	14000.99493
8764-004-002	20109 RHAPSODY RD	Residential	Single	1	14732.22354
8764-004-001	20105 RHAPSODY RD	Residential	Single	1	14404.82907
8764-003-048	20165 LAKE CANYON DR	Residential	Single	1	12215.95541
8764-003-047	20155 LAKE CANYON DR	Residential	Single	1	10822.66168
8764-003-046	20147 LAKE CANYON DR	Residential	Single	1	9265.613896
8764-003-045	20139 LAKE CANYON DR	Residential	Single	1	10821.23852
8764-003-044	20138 EMERALD MEADOW DR	Residential	Single	1	11348.52904
8764-003-043	20132 EMERALD MEADOW DR	Residential	Single	1	9720.0464
8764-003-042	20116 EMERALD MEADOW DR	Residential	Single	1	9067.336176
8764-003-041	20106 EMERALD MEADOW DR	Residential	Single	1	9058.6099
8764-003-040	20094 EMERALD MEADOW DR	Residential	Single	1	8449.826149
8764-003-039	20088 EMERALD MEADOW DR	Residential	Single	1	8443.150177
8764-003-038	20125 CANDLEFLAME CT	Residential	Single	1	10660.75022
8764-003-037	20131 CANDLEFLAME CT	Residential	Single	1	10945.33193
8764-003-036		Residential	Single	1	11504.72216
8764-003-035	20156 LAKE CANYON DR	Residential	Single	1	11611.14495
8764-003-034	20172 LAKE CANYON DR	Residential	Single	1	11404.43265
8764-003-033	20128 CANDLEFLAME CT	Residential	Single	1	13838.0367
8764-003-032	20122 CANDLEFLAME CT	Residential	Single	1	10597.78967
8764-003-031	20114 CANDLEFLAME CT	Residential	Single	1	11046.30691
8764-003-030	20106 CANDLEFLAME CT	Residential	Single	1	11391.99164
8764-003-029	20074 EMERALD MEADOW DR	Residential	Single	1	8977.916852

LA County Office of the Assessor Parcel Attribute Table for Parcels Located in TAZ 22379100

APN	SitusAddress	UseType	UseDescription	Units	Shape_Area (SF)
8764-003-028	20070 EMERALD MEADOW DR	Residential	Single	1	11775.1317
8764-003-027	20068 EMERALD MEADOW DR	Residential	Single	1	12971.37875
8764-003-026	20026 EMERALD MEADOW DR	Residential	Single	1	10500.50006
8764-003-025	20050 EMERALD MEADOW DR	Residential	Single	1	10200.99435
8764-003-024	20044 EMERALD MEADOW DR	Residential	Single	1	12795.94476
8764-003-023	20042 EMERALD MEADOW DR	Residential	Single	1	13852.57635
8764-003-022	20036 EMERALD MEADOW DR	Residential	Single	1	9737.617836
8764-003-021	20028 EMERALD MEADOW DR	Residential	Single	1	12711.57686
8764-003-020	20022 EMERALD MEADOW DR	Residential	Single	1	16024.36484
8764-003-019	20020 EMERALD MEADOW DR	Residential	Single	1	16576.77386
8764-003-018	20016 EMERALD MEADOW DR	Residential	Single	1	17483.68329
8764-003-017	20008 EMERALD MEADOW DR	Residential	Single	1	12864.94241
8764-003-016	20002 EMERALD MEADOW DR	Residential	Single	1	11835.2837
8764-003-015	20003 EMERALD MEADOW DR	Residential	Single	1	11473.88647
8764-003-014	20009 EMERALD MEADOW DR	Residential	Single	1	13820.89333
8764-003-013	20021 EMERALD MEADOW DR	Residential	Single	1	8806.693361
8764-003-012	20035 EMERALD MEADOW DR	Residential	Single	1	8253.001467
8764-003-011	20043 EMERALD MEADOW DR	Residential	Single	1	13022.10773
8764-003-010	20049 EMERALD MEADOW DR	Residential	Single	1	10033.65074
8764-003-009	20059 EMERALD MEADOW DR	Residential	Single	1	9885.3423
8764-003-008	20063 EMERALD MEADOW DR	Residential	Single	1	14692.32461
8764-003-007	20065 EMERALD MEADOW DR	Residential	Single	1	13315.07266
8764-003-006	20071 EMERALD MEADOW DR	Residential	Single	1	10891.3613
8764-003-005	20085 EMERALD MEADOW DR	Residential	Single	1	9613.648937
8764-003-004	20101 EMERALD MEADOW DR	Residential	Single	1	12885.44753
8764-003-003	20107 EMERALD MEADOW DR	Residential	Single	1	9956.965116
8764-003-002	20115 EMERALD MEADOW DR	Residential	Single	1	9389.759629
8764-003-001	20115 LAKE CANYON DR	Residential	Single	1	13156.6542
8764-002-016	20138 E COLIMA RD	Residential	Single	1	15917.94444
8764-002-015	20132 E COLIMA RD	Residential	Single	1	15917.94444
8764-002-014	20130 E COLIMA RD	Residential	Single	1	15917.94444
8764-002-013	20128 E COLIMA RD	Residential	Single	1	15917.94444
8764-002-012	20122 E COLIMA RD	Residential	Single	1	15917.94444
8764-002-011	20120 E COLIMA RD	Residential	Single	1	15917.94444
8764-002-010	20118 E COLIMA RD	Residential	Single	1	15917.94444
8764-002-008		Residential	Single	1	60042.19945
8764-001-132	1920 BREA CANYON CUT OFF	Institutional	Churches	0	214271.3261
8764-001-131		Residential	Single	1	454073.7435
8764-001-130	19850 COLIMA RD	Institutional	Homes For Aged & Others	96	68070.69814
8764-001-129		Residential	Single	1	21804.16006
8764-001-128	20057 ESQUILINE AVE	Residential	Single	1	336158.044
8764-001-127	20055 ESQUILINE AVE	Residential	Single	1	336158.044
8764-001-126	20053 ESQUILINE AVE	Residential	Single	1	336158.044
8764-001-125	20051 ESQUILINE AVE	Residential	Single	1	336158.044
8764-001-124	20047 ESQUILINE AVE	Residential	Single	1	336158.044
8764-001-123	20045 ESQUILINE AVE	Residential	Single	1	336158.044
8764-001-122	20043 ESQUILINE AVE	Residential	Single	1	336158.044
8764-001-121	20041 ESQUILINE AVE	Residential	Single	1	336158.044
8764-001-120	20039 ESQUILINE AVE	Residential	Single	1	336158.044
8764-001-119	20029 ESQUILINE AVE	Residential	Single	1	336158.044
8764-001-118	20027 ESQUILINE AVE	Residential	Single	1	336158.044
8764-001-117	20025 ESQUILINE AVE	Residential	Single	1	336158.044
8764-001-116	20023 ESQUILINE AVE	Residential	Single	1	336158.044
8764-001-115	20019 ESQUILINE AVE	Residential	Single	1	336158.044
8764-001-114	20017 ESQUILINE AVE	Residential	Single	1	336158.044
8764-001-113	20015 ESQUILINE AVE	Residential	Single	1	336158.044
8764-001-112	20013 ESQUILINE AVE	Residential	Single	1	336158.044
8764-001-111	20009 ESQUILINE AVE	Residential	Single	1	336158.044
8764-001-110	20005 ESQUILINE AVE	Residential	Single	1	336158.044
8764-001-109	20003 ESQUILINE AVE	Residential	Single	1	336158.044
8764-001-108	19969 ESQUILINE AVE	Residential	Single	1	336158.044
8764-001-107	19967 ESQUILINE AVE	Residential	Single	1	336158.044
8764-001-106	19933 ESQUILINE AVE	Residential	Single	1	56797.17518
8764-001-105	19931 ESQUILINE AVE	Residential	Single	1	56797.17518
8764-001-104	19929 ESQUILINE AVE	Residential	Single	1	56797.17518
8764-001-103	19927 ESQUILINE AVE	Residential	Single	1	56797.17518
8764-001-102	19923 ESQUILINE AVE	Residential	Single	1	56797.17518
8764-001-101	19921 ESQUILINE AVE	Residential	Single	1	56797.17518
8764-001-100	19919 ESQUILINE AVE	Residential	Single	1	56797.17518
8764-001-099	19915 ESQUILINE AVE	Residential	Single	1	56797.17518
8764-001-098	19913 ESQUILINE AVE	Residential	Single	1	56797.17518
8764-001-097	19909 ESQUILINE AVE	Residential	Single	1	56797.17518
8764-001-096	19907 ESQUILINE AVE	Residential	Single	1	56797.17518
8764-001-095	19905 ESQUILINE AVE	Residential	Single	1	56797.17518

LA County Office of the Assessor Parcel Attribute Table for Parcels Located in TAZ 22379100

APN	SitusAddress	UseType	UseDescription	Units	Shape_Area (SF)
8764-001-094	19903 ESQUILINE AVE	Residential	Single	1	56797.17518
8764-001-093	2009 DACIAN ST	Residential	Single	1	247849.2932
8764-001-092	19908 ESQUILINE AVE	Residential	Single	1	247849.2932
8764-001-091	19906 ESQUILINE AVE	Residential	Single	1	247849.2932
8764-001-090	19904 ESQUILINE AVE	Residential	Single	1	247849.2932
8764-001-089	2019 DACIAN ST	Residential	Single	1	247849.2932
8764-001-088	2021 DACIAN ST	Residential	Single	1	247849.2932
8764-001-087	2023 DACIAN ST # 87	Residential	Single	1	247849.2932
8764-001-086	2025 DACIAN ST	Residential	Single	1	247849.2932
8764-001-085	2027 DACIAN ST	Residential	Single	1	247849.2932
8764-001-084	2031 DACIAN ST	Residential	Single	1	247849.2932
8764-001-083	2033 DACIAN ST	Residential	Single	1	247849.2932
8764-001-082	2035 DACIAN ST	Residential	Single	1	247849.2932
8764-001-081	2037 DACIAN ST	Residential	Single	1	247849.2932
8764-001-080	2039 DACIAN ST	Residential	Single	1	247849.2932
8764-001-079	2045 DACIAN ST	Residential	Single	1	247849.2932
8764-001-078	2047 DACIAN ST	Residential	Single	1	247849.2932
8764-001-077	2049 DACIAN ST	Residential	Single	1	247849.2932
8764-001-076	2051 DACIAN ST	Residential	Single	1	247849.2932
8764-001-075	2055 DACIAN ST	Residential	Single	1	247849.2932
8764-001-074	2057 DACIAN ST	Residential	Single	1	247849.2932
8764-001-073	2059 DACIAN ST	Residential	Single	1	247849.2932
8764-001-072	2061 DACIAN ST	Residential	Single	1	247849.2932
8764-001-071	2063 DACIAN ST	Residential	Single	1	247849.2932
8764-001-070	2067 DACIAN ST	Residential	Single	1	247849.2932
8764-001-069	2069 DACIAN ST	Residential	Single	1	247849.2932
8764-001-068	2071 DACIAN ST	Residential	Single	1	247849.2932
8764-001-067	2073 DACIAN ST	Residential	Single	1	247849.2932
8764-001-066	2075 DACIAN ST	Residential	Single	1	247849.2932
8764-001-065	2072 DACIAN ST	Residential	Single	1	247849.2932
8764-001-064	2070 DACIAN ST # 37	Residential	Single	1	247849.2932
8764-001-063	2068 DACIAN ST	Residential	Single	1	247849.2932
8764-001-062	2066 DACIAN ST	Residential	Single	1	247849.2932
8764-001-061	2062 DACIAN ST	Residential	Single	1	247849.2932
8764-001-060	2060 DACIAN ST	Residential	Single	1	247849.2932
8764-001-059	2058 DACIAN ST	Residential	Single	1	247849.2932
8764-001-058	2056 DACIAN ST	Residential	Single	1	247849.2932
8764-001-057	2054 DACIAN ST	Residential	Single	1	247849.2932
8764-001-056	2050 DACIAN ST	Residential	Single	1	247849.2932
8764-001-055	2048 DACIAN ST	Residential	Single	1	247849.2932
8764-001-054	2046 DACIAN ST	Residential	Single	1	247849.2932
8764-001-053	2044 DACIAN ST	Residential	Single	1	247849.2932
8764-001-052	2042 DACIAN ST	Residential	Single	1	247849.2932
8764-001-051	2036 DACIAN ST	Residential	Single	1	247849.2932
8764-001-050	2034 DACIAN ST	Residential	Single	1	247849.2932
8764-001-049	2032 DACIAN ST	Residential	Single	1	247849.2932
8764-001-048	2030 DACIAN ST	Residential	Single	1	247849.2932
8764-001-047	2028 DACIAN ST	Residential	Single	1	247849.2932
8764-001-046	2022 DACIAN ST	Residential	Single	1	247849.2932
8764-001-045	2020 DACIAN ST	Residential	Single	1	247849.2932
8764-001-044	2018 DACIAN ST	Residential	Single	1	247849.2932
8764-001-043	2016 DACIAN ST	Residential	Single	1	247849.2932
8764-001-042	2010 DACIAN ST	Residential	Single	1	247849.2932
8764-001-041	2008 DACIAN ST	Residential	Single	1	247849.2932
8764-001-040	2006 DACIAN ST	Residential	Single	1	247849.2932
8764-001-039	2004 DACIAN ST	Residential	Single	1	247849.2932
8764-001-038	19926 ESQUILINE AVE	Residential	Single	1	247849.2932
8764-001-037	19942 ESQUILINE AVE	Residential	Single	1	336158.044
8764-001-036	19944 ESQUILINE AVE	Residential	Single	1	336158.044
8764-001-035	19946 ESQUILINE AVE	Residential	Single	1	336158.044
8764-001-034	19948 ESQUILINE AVE	Residential	Single	1	336158.044
8764-001-033	19950 ESQUILINE AVE	Residential	Single	1	336158.044
8764-001-032	19956 ESQUILINE AVE	Residential	Single	1	336158.044
8764-001-031	19958 ESQUILINE AVE	Residential	Single	1	336158.044
8764-001-030	19960 ESQUILINE AVE	Residential	Single	1	336158.044
8764-001-029	19962 ESQUILINE AVE	Residential	Single	1	336158.044
8764-001-028	19966 ESQUILINE AVE	Residential	Single	1	336158.044
8764-001-027	19968 ESQUILINE AVE	Residential	Single	1	336158.044
8764-001-026	19970 ESQUILINE AVE	Residential	Single	1	336158.044
8764-001-025	19972 ESQUILINE AVE	Residential	Single	1	336158.044
8764-001-024	20004 ESQUILINE AVE	Residential	Single	1	336158.044
8764-001-023	20006 ESQUILINE AVE	Residential	Single	1	336158.044
8764-001-022	20008 ESQUILINE AVE	Residential	Single	1	336158.044
8764-001-021	20010 ESQUILINE AVE	Residential	Single	1	336158.044

LA County Office of the Assessor Parcel Attribute Table for Parcels Located in TAZ 22379100

APN	SitusAddress	UseType	UseDescription	Units	Shape_Area (SF)
8764-001-020	20012 ESQUILINE AVE	Residential	Single	1	336158.044
8764-001-019	20016 ESQUILINE AVE	Residential	Single	1	336158.044
8764-001-018	20018 ESQUILINE AVE	Residential	Single	1	336158.044
8764-001-017	20020 ESQUILINE AVE	Residential	Single	1	336158.044
8764-001-016	20022 ESQUILINE AVE	Residential	Single	1	336158.044
8764-001-015	20028 ESQUILINE AVE	Residential	Single	1	336158.044
8764-001-014	20030 ESQUILINE AVE	Residential	Single	1	336158.044
8764-001-013	20032 ESQUILINE AVE	Residential	Single	1	336158.044
8764-001-012	20034 ESQUILINE AVE	Residential	Single	1	336158.044
8764-001-011	20036 ESQUILINE AVE	Residential	Single	1	336158.044
8764-001-010	20040 ESQUILINE AVE	Residential	Single	1	336158.044
8764-001-009	20042 ESQUILINE AVE	Residential	Single	1	336158.044
8764-001-008	20044 ESQUILINE AVE	Residential	Single	1	336158.044
8764-001-007	20046 ESQUILINE AVE	Residential	Single	1	336158.044
8764-001-006	20048 ESQUILINE AVE	Residential	Single	1	336158.044
8764-001-005	20060 ESQUILINE AVE	Residential	Single	1	336158.044
8764-001-004	20058 ESQUILINE AVE	Residential	Single	1	336158.044
8764-001-003	20056 ESQUILINE AVE	Residential	Single	1	336158.044
8764-001-002	20054 ESQUILINE AVE	Residential	Single	1	336158.044
8764-001-001	20052 ESQUILINE AVE	Residential	Single	1	336158.044
8269-035-075	2711 S ERIN CT	Residential	Single	1	283109.6692
8269-035-074	2716 S ERIN CT	Residential	Single	1	283109.6692
8269-035-073	20550 E MEGHAN CT	Residential	Single	1	283109.6692
8269-035-072	20510 E MEGHAN CT	Residential	Single	1	283109.6692
8269-035-071	20506 E MEGHAN CT	Residential	Single	1	283109.6692
8269-035-070	20516 E LAUREN CT	Residential	Single	1	283109.6692
8269-035-069	20512 E LAUREN CT	Residential	Single	1	283109.6692
8269-035-068	20501 E LAUREN CT	Residential	Single	1	283109.6692
8269-035-067	20503 E LAUREN CT	Residential	Single	1	283109.6692
8269-035-066	20507 E LAUREN CT	Residential	Single	1	283109.6692
8269-035-065	20511 E LAUREN CT	Residential	Single	1	283109.6692
8269-035-064	20515 E LAUREN CT	Residential	Single	1	283109.6692
8269-035-061	2707 S ERIN CT	Residential	Single	1	283109.6692
8269-035-060	2703 S ERIN CT	Residential	Single	1	283109.6692
8269-035-059	2702 S ERIN CT	Residential	Single	1	283109.6692
8269-035-058	2706 S ERIN CT	Residential	Single	1	283109.6692
8269-035-057	2710 S ERIN CT	Residential	Single	1	283109.6692
8269-035-054	20535 E MEGHAN CT	Residential	Single	1	283109.6692
8269-035-053	20555 E MEGHAN CT	Residential	Single	1	283109.6692
8269-035-052	20559 E MEGHAN CT	Residential	Single	1	283109.6692
8269-035-051	20565 E MEGHAN CT	Residential	Single	1	283109.6692
8269-035-050	20560 E MEGHAN CT	Residential	Single	1	283109.6692
8269-035-049	20556 E MEGHAN CT	Residential	Single	1	283109.6692
8269-035-046	20536 E MEGHAN CT	Residential	Single	1	283109.6692
8269-035-045	20530 E MEGHAN CT	Residential	Single	1	283109.6692
8269-035-044	20526 E MEGHAN CT	Residential	Single	1	283109.6692
8269-035-043	20520 E MEGHAN CT	Residential	Single	1	283109.6692
8269-035-042	20516 E MEGHAN CT	Residential	Single	1	283109.6692
8269-035-033	20508 E LAUREN CT	Residential	Single	1	283109.6692
			Totals	**809**	**14,367,257.1 Sq Ft**
				Residential DU	**329.8 Acres**

T-1. Increase Residential Density



GHG Mitigation Potential



Up to 30.0% of GHG emissions from project VMT in the study area

Co-Benefits (icon key on pg. 34)



Climate Resilience

Increased density can put people closer to resources they may need to access during an extreme weather event. Increased density can also shorten commutes, decreasing the amount of time people are on the road and exposed to hazards such as extreme heat or flooding.

Health and Equity Considerations

Neighborhoods should include different types of housing to support a variety of household sizes, age ranges, and incomes.

Measure Description

This measure accounts for the VMT reduction achieved by a project that is designed with a higher density of dwelling units (du) compared to the average residential density in the U.S. Increased densities affect the distance people travel and provide greater options for the mode of travel they choose. Increasing residential density results in shorter and fewer trips by single-occupancy vehicles and thus a reduction in GHG emissions. This measure is best quantified when applied to larger developments and developments where the density is somewhat similar to the surrounding area due to the underlying research being founded in data from the neighborhood level.

Subsector

Land Use

Locational Context

Urban, suburban

Scale of Application

Project/Site

Implementation Requirements

This measure is most accurately quantified when applied to larger developments and/or developments where the density is somewhat similar to the surrounding neighborhood.

Cost Considerations

Depending on the location, increasing residential density may increase housing and development costs. However, the costs of providing public services, such as health care, education, policing, and transit, are generally lower in more dense areas where things are closer together. Infrastructure that provides drinking water and electricity also operates more efficiently when the service and transmission area is reduced. Local governments may provide approval streamlining benefits or financial incentives for infill and high-density residential projects.

Expanded Mitigation Options

When paired with Measure T-2, *Increase Job Density*, the cumulative densification from these measures can result in a highly walkable and bikeable area, yielding increased co-benefits in VMT reductions, improved public health, and social equity.

GHG Reduction Formula

$$A = \frac{B - C}{C} \times D$$

GHG Calculation Variables

ID	Variable	Value	Unit	Source
Output				
A	Percent reduction in GHG emissions from project VMT in study area	0–30.0	%	calculated
User Inputs				
B	Residential density of project development	[ ]	du/acre	user input
Constants, Assumptions, and Available Defaults				
C	Residential density of typical development	9.1	du/acre	Ewing et al. 2007
D	Elasticity of VMT with respect to residential density	-0.22	unitless	Stevens 2016

Further explanation of key variables:

- (C) – The residential density of typical development is based on the blended average density of residential development in the U.S. forecasted for 2025. This estimate includes apartments, condominiums, and townhouses, as well as detached single-family housing on both small and large lots. An acre in this context is defined as an acre of developed land, not including streets, school sites, parks, and other undevelopable land. If reductions are being calculated from a specific baseline derived from a travel demand forecasting model, the residential density of the relevant transportation analysis zone should be used instead of the value for a typical development.
- (D) – A meta-regression analysis of five studies that controlled for self-selection found that a 0.22 percent decrease in VMT occurs for every 1 percent increase in residential density (Stevens 2016).

GHG Calculation Caps or Maximums

Measure Maximum

(A_{max}) The percent reduction in GHG emissions (A) is capped at 30 percent. The purpose for the 30 percent cap is to limit the influence of any single built environmental factor (such as density). Projects that implement multiple land use strategies (e.g., density, design, diversity) will show more of a reduction than relying on improvements from a single built environment factor.

Subsector Maximum

($\sum A_{max_{T\text{-}1 \text{ through } T\text{-}4}} \leq 65\%$) This measure is in the Land Use subsector. This subcategory includes Measures T-1 through T-4. The VMT reduction from the combined implementation of all measures within this subsector is capped at 65 percent.

Example GHG Reduction Quantification

The user reduces VMT by increasing the residential density of the project study area. In this example, the project's residential density would be 15 du per acre (B), which would reduce GHG emissions from project VMT by 14.2 percent.

$$A = \frac{15 \frac{du}{ac} - 9.1 \frac{du}{ac}}{9.1 \frac{du}{ac}} \times -0.22 = -14.2\%$$

Quantified Co-Benefits

Improved Local Air Quality

The percent reduction in GHG emissions (A) would be the same as the percent reduction in NO_X, CO, NO_2, SO_2, and PM. Reductions in ROG emissions can be calculated by multiplying the percent reduction in GHG emissions (A) by an adjustment factor of 87 percent. See *Adjusting VMT Reductions to Emission Reductions* above for further discussion.

Energy and Fuel Savings

The percent reduction in vehicle fuel consumption would be the same as the percent reduction in GHG emissions (A).

VMT Reductions

The percent reduction in VMT would be the same as the percent reduction in GHG emissions (A).

Sources

- Ewing, R., K. Bartholomew, S. Winkelman, J. Walters, and D. Chen. 2007. *Growing Cooler: The Evidence on Urban Development and Climate Change*. October. Available: https://www.nrdc.org/sites/default/files/cit_07092401a.pdf. Accessed: January 2021.
- Stevens, M. 2016. Does Compact Development Make People Drive Less? *Journal of the American Planning Association* 83:1(7–18), DOI: 10.1080/01944363.2016.1240044. November. Available: https://www.researchgate.net/publication/309890412_Does_Compact_Development_Make_People_Drive_Less. Accessed: January 2021.

Measure T-9. Implement Subsidized or Discounted Transit Program	
Measure Scale	Project/Site
Max VMT Mitigation Potential	5.5%

Project VMT Reduction Due to Increased Residential Density		
C/B	Subsidy amount/Average transit fare without subsidy	50%
D	Percent of residents eligible for subsidy	100%
E	Percent of project-generated VMT from residents	100%
F	Transit mode share of all trips [1]	4.23%
G	Elasticity of transit boardings with respect to fare price	0.43
H	Percent of transit trips that would otherwise be vehicle trips	50%
I	Converstion factor from vehicle trips to VMT	1.0
A	VMT Reduction = (C/B) * G * D * E * F * H * I	0.45%
	VMT Reduction	***0.45%***

[1] Transit mode share of all trips obtained from Table T-3.1 of the 2021 Handbook, for the Los Angeles-Long Beach-Anaheim Core-Based Statistical Area.

T-9. Implement Subsidized or Discounted Transit Program



GHG Mitigation Potential



Up to 5.5% of emissions from employee/resident vehicles accessing the site

Co-Benefits (icon key on pg. 34)

Climate Resilience

Subsidized and discounted transit programs increase the capacity of low-income populations to use transit to evacuate or access resources during an extreme weather event. They could also incentivize more people to use transit, resulting in less traffic and better allowing emergency responders to access a hazard site during an extreme weather event. Lower overall out-of-pocket costs would also help increase community resilience by freeing up resources for other purposes.

Health and Equity Considerations

Program should include all onsite workers, such as contractors, interns, and service workers.

Measure Description

This measure will provide subsidized or discounted, or free transit passes for employees and/or residents. Reducing the out-of-pocket cost for choosing transit improves the competitiveness of transit against driving, increasing the total number of transit trips and decreasing vehicle trips. This decrease in vehicle trips results in reduced VMT and thus a reduction in GHG emissions.

Subsector

Trip Reduction Programs

Locational Context

Urban, suburban

Scale of Application

Project/Site

Implementation Requirements

The project should be accessible either within 1 mile of high-quality transit service (rail or bus with headways of less than 15 minutes), 0.5 mile of local or less frequent transit service, or along a designated shuttle route providing last-mile connections to rail service. If a well-established bikeshare service (Measure T-22-A) is available, the site may be located up to 2 miles from a high-quality transit service.

If more than one transit agency serves the site, subsidies should be provided that can be applied to each of the services available. If subsidies are applied for only one service, all variable inputs below should also pertain only to the service that is subsidized.

Cost Considerations

The employer cost is the recurring, direct cost for transit subsidies. The subsidies will lower the per capita income of the transit service, decreasing the revenue of the local transit agency. This cost may be offset by increased revenue from increased ridership. The beneficiaries include the program participants saving on commuting cost, the employer reducing onsite parking expenses, and the municipality reducing cars on the road, which leads to lower infrastructure and roadway maintenance costs.

Expanded Mitigation Options

This measure could be paired with any combination of the other commute trip reduction strategies (Measures T-7 through T-13) for increased reductions.

GHG Reduction Formula

$$A = \frac{C}{B} \times G \times D \times E \times F \times H \times I$$

GHG Calculation Variables

If subsidies or discounts target employees, the GHG reduction from this measure may be limited to work-related employee trips only (i.e., home-to- work) and work-to-other, where at least one trip end is work). If residents are targeted, the GHG reductions extend to all trips.

ID	Variable	Value	Unit	Source
Output				
A	Percent reduction in GHG emissions from employee/resident vehicles accessing the site	0–5.5	%	calculated
User Inputs				
B	Average transit fare without subsidy	[ ]	$	user input
C	Subsidy amount	[ ]	$	user input
D	Percent of employees/residents eligible for subsidy	0–100	%	user input
E	Percent of project-generated VMT from employees/residents	0–100	%	user input
Constants, Assumptions, and Available Defaults				
F	Transit mode share of all trips or work trips	Table T-3.1 or Table T-9.1	%	FHWA 2017
G	Elasticity of transit boardings with respect to transit fare price	-0.43	unitless	Taylor et al. 2008
H	Percent of transit trips that would otherwise be made in a vehicle	50	%	Handy & Boarnet 2013
I	Conversion factor of vehicle trips to VMT	1.0	unitless	assumption

Further explanation of key variables:

- (B and C) – The average transit fare and subsidy amount can be presented as either a fare per ride, or the cost of a monthly pass for typical transit service near the site. Pricing should be based on the expected means of subsidy implementation; for instance, if a monthly pass is provided to all residents, prices should be input on a monthly basis.
- (D) – The percentage of employees/residents associated with the site who have access to the subsidy. If subsidy is provided as an employee benefit, care should be taken to account for any contract or temporary workers who do not receive such benefits.
- (E) – The percentage of project-generated VMT from employees/residents is used to adjust the percent reduction in GHG emissions from the scale of employee and/or resident-generated VMT to project-generated VMT. If subsidies or discounts target employees at an office development, this value would simply be 100 percent. If the project site is a multifamily development with no onsite workers, this value would also be

100 percent. If the project site is a retail development, this value would be less than 100 percent, as it does not account for retail shopper trips to the site. The share of total VMT generated by employees for visitor-intensive uses, such as retail or medical offices, can be roughly estimated by multiplying the total number of employees by two (to account for both arrival and departure), divided by the total number of daily trips.

- (F) – Ideally, the user will calculate transit mode share for work trips or all trips of a Project/Site at a scale no larger than a census tract. Potential data sources include the U.S. Census, California Household Travel Survey (preferred), or local survey efforts. Care should be taken *not* to present the reported commute mode share as retrieved from the American Community Survey (ACS), unless the land use is office or employment based and the tables are based on work location (rather than home location). If the subsidies or discounts target employees and their commute trips, then the mode share should use the home-to-work trip purpose. If the user is not able to provide a project-specific value using one of the data sources described above, they have the option to input the transit mode share for one of the six most populated CBSAs in California. The transit mode share for work trips by CBSA is presented in Table T-9.1 in Appendix C (FHWA 2017). The transit mode share for all trips is provided in Table T-3.1 in Appendix C.
- (G) – A cross-sectional analysis of transit use in 265 urbanized areas in the U.S. found that a 0.43 percent decrease in transit boardings occurs for every 1 percent increase in transit fare price (Taylor et al. 2008). A policy brief summarizing the results of transit service strategies found this analysis to fall in the mid-point of observed, short-term values (Handy & Boarnet 2013). Price elasticities of transit demand vary based on both long-term and short-term demand, service type, and service location (Litman 2020 and Handy & Boarnet 2013).
- (H) – Not all new transit trips replace a vehicle trip. The share of transit trips that would otherwise be made by private vehicle ranges from less than 5 percent to 50 percent across studies. This assumption is based on observed values for high quality BRT service under the assumption that this measure is implemented alongside marketing measures and is targeted primarily at reducing vehicle commute trips. (Handy & Boarnet 2013). Note that this study looked at service improvements rather than fare changes and is used as a proxy variable. If project-specific or location-specific information is available, it should be substituted for this assumptive variable.
- (I) – The adjustment factor from vehicle trips to VMT is 1. This assumes that all vehicle trips will average out to typical trip length ("assumes all trip lengths are equal"). Thus, it can be assumed that a percentage reduction in vehicle trips will equal the same percentage reduction in VMT. Subsidies or discounts targeting commute trips may have a higher factor as they are generally longer than the trip lengths for other purposes.

GHG Calculation Caps or Maximums

Measure Maximum

(A_{max}) The GHG reduction is capped at 5.5 percent, which is based on the following assumptions:

- (C=B) – The subsidy coverage is capped at 100 percent of the typical transit fare.
- (D) – All employees are eligible for the subsidy.

- (E) – All project-generated VMT is from employee-generated VMT.
- (F) – Employees at an office development in the San Francisco-Oakland-Hayward CBSA have a default transit mode share for work trips of 25.60 percent.

Subsector Maximum

$(\sum A_{max_{T\text{-}5 \text{ through } T\text{-}13}} \leq 45\%)$ This measure is in the Trip Reduction Programs subsector. This subcategory includes Measures T-5 through T-13. The employee commute VMT reduction from the combined implementation of all measures within this subsector is capped at 45 percent.

Mutually Exclusive Measures

If this measure is selected, the user may not also take credit for either Measure T-5 or T-6. However, this measure may be implemented alongside other individual CTR measures (Measures T-7, T-8, T-10 through T-13). The efficacy of individual programs may vary highly based on individual employers and local contexts.

Example GHG Reduction Quantification

In this example, the user reduces VMT by providing all employees (D) of a proposed office development in the San Francisco-Oakland-Hayward CBSA a 100 percent transit subsidy in the form of a $100 monthly transit pass (C=B). The user would reduce GHG emissions from VMT by 5.5 percent.

$$A = \left(\frac{\$100}{\$100} \times -0.43\right) \times 100\% \times 100\% \times 25.60\% \times 50\% \times 1 = -5.5\%$$

Quantified Co-Benefits

Improved Local Air Quality

The percent reduction in GHG emissions (A) would be the same as the percent reduction in NO_X, CO, NO_2, SO_2, and PM. Reductions in ROG emissions can be calculated by multiplying the percent reduction in GHG emissions (A) by an adjustment factor of 87 percent. See *Adjusting VMT Reductions to Emission Reductions* above for further discussion.

Energy and Fuel Savings

The percent reduction in vehicle fuel consumption would be the same as the percent reduction in GHG emissions (A).

VMT Reductions

The percent reduction in VMT would be the same as the percent reduction in GHG emissions (A).

Sources

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Appendix Table D-1
SUMMARY OF 2021 CAPCOA HANDBOOK VEHICLE MILES TRAVELED (VMT) REDUCTION STRATEGIES [1]

MEASURE	NAME	MAXIMUM VMT REDUCTION PER MEASURE [2]	PROJECT VMT REDUCTION [3]	DISCUSSION/NOTES
T-1	Increase Residential Density	30.0%	2.39% 13.04%	This measure is expected to result in a VMT reduction of 13.04% below the project VMT calculated by the LACPW VMT Tool for Lots 1, 2, and 3 (located in TAZ 22375100), and a VMT reduction of 2.39% below the project VMT calculated for Lot 5 (located in TAZ 22379100).
T-2	Increase Job Density	30.0%	Not Applicable	The proposed project does not include any commercial components, and is not expected to result in any permanent new jobs. Therefore, this measure is not applicable to the proposed project.
T-3	Provide Transit-Oriented Development	31.0%	Not Applicable	This measure quantifies VMT reductions due to project location. The proposed project is not located in a context of compact, mixed-use development area with easy access to high-quality transit or transit stations.
T-4	Integrate Affordable and Below Market Housing	28.6%	0%	The proposed project does not include any low-income affordable housing.
T-5	Implement Commute Trip Reduction Program (Voluntary)	4.0%	Not Applicable	This strategy is implemented by employers on behalf of their employee workforce. Therefore, this measure is not applicable to the proposed project.
T-6	Implement Commute Trip Reduction Program (Mandatory Implementation and Monitoring)	26.0%	Not Applicable	This strategy is implemented by employers on behalf of their employee workforce. Therefore, this measure is not applicable to the proposed project.
T-7	Implement Commute Trip Reduction Marketing	4.0%	Not Applicable	This strategy is implemented by employers on behalf of their employee workforce. Therefore, this measure is not applicable to the proposed project.
T-8	Provide Ridesharing Program	8.0%	Not Applicable	This strategy is implemented by employers on behalf of their employee workforce. Therefore, this measure is not applicable to the proposed project.
T-9	Implement Subsidized or Discounted Transit Program	5.5%	0.45%	This measure is expected to result in a VMT reduction of 0.45% for Lots 1, 2, 3, and 5. The project proposes to provide a 50% subsidy for one Metrolink Monthly Pass per residence.
T-10	Provide End-of-Trip Bicycle Facilities	4.4%	Not Applicable	This strategy is implemented by employers on behalf of their employee workforce. Therefore, this measure is not applicable to the proposed project.
T-11	Provide Employer-Sponsored Vanpool	20.4%	Not Applicable	This strategy is implemented by employers on behalf of their employee workforce. Therefore, this measure is not applicable to the proposed project.
T-12	Price Workplace Parking	20.0%	Not Applicable	This strategy is implemented by employers at the place of employment. Therefore, this measure is not applicable to the proposed project.
T-13	Implement Employee Parking Cash-Out	12.0%	Not Applicable	This strategy is implemented by employers at the place of employment. Therefore, this measure is not applicable to the proposed project.
T-14	Provide Electric Vehicle Charging Infrastructure	-	-	Measure does not result in quantifiable VMT reductions.
T-15	Limit Residential Parking Supply	13.7%	0%	The proposed project consists primarily of single-family detached housing on individual lots, where parking is accommodated within each lot. Reducing residential parking supply would be infeasible.
T-16	Unbundle Residential Parking Costs from Property Cost	15.7%	0%	The proposed project consists primarily of single-family detached housing on individual lots, where parking is accommodated within each lot. Unbundling the cost of parking from property costs would be infeasible.
T-17	Improve Street Connectivity	30.0%	Not Applicable	Measure is only applicable at the Plan/Community scale, and cannot be applied to the proposed project. [4]
T-18	Provide Pedestrian Network Improvement	6.4%	Not Applicable	Measure is only applicable at the Plan/Community scale, and cannot be applied to the proposed project. [4]
T-19-A	Construct or Improve Bike Facility	0.8%	Not Applicable	Measure is only applicable at the Plan/Community scale, and cannot be applied to the proposed project. [4]
T-19-B	Construct or Improve Bike Boulevard	0.2%	Not Applicable	Measure is only applicable at the Plan/Community scale, and cannot be applied to the proposed project. [4]
T-20	Expand Bikeway Network	0.5%	Not Applicable	Measure is only applicable at the Plan/Community scale, and cannot be applied to the proposed project. [4]
T-21-A	Implement Conventional Carshare Program	0.15%	Not Applicable	Measure is only applicable at the Plan/Community scale, and cannot be applied to the proposed project. [4]

Appendix Table D-1
SUMMARY OF 2021 CAPCOA HANDBOOK VEHICLE MILES TRAVELED (VMT) REDUCTION STRATEGIES [1]

MEASURE	NAME	MAXIMUM VMT REDUCTION PER MEASURE [2]	PROJECT VMT REDUCTION [3]	DISCUSSION/NOTES
T-21-B	Implement Electric Carshare Program	0.18%	Not Applicable	Measure is only applicable at the Plan/Community scale, and cannot be applied to the proposed project. [4]
T-22-A	Implement Pedal (Non-Electric) Bikeshare Program	0.02%	Not Applicable	Measure is only applicable at the Plan/Community scale, and cannot be applied to the proposed project. [4]
T-22-B	Implement Electric Bikeshare Program	0.06%	Not Applicable	Measure is only applicable at the Plan/Community scale, and cannot be applied to the proposed project. [4]
T-22-C	Implement Scootershare Program	0.07%	Not Applicable	Measure is only applicable at the Plan/Community scale, and cannot be applied to the proposed project. [4]
T-23	Provide Community-Based Travel Planning	2.3%	Not Applicable	Measure is only applicable at the Plan/Community scale, and cannot be applied to the proposed project. [4]
T-24	Implement Market Price Public Parking (On-Street)	30.0%	Not Applicable	Measure is only applicable at the Plan/Community scale, and cannot be applied to the proposed project. [4]
T-25	Extend Transit Network Coverage or Hours	4.6%	Not Applicable	Measure is only applicable at the Plan/Community scale, and cannot be applied to the proposed project. [4]
T-26	Increase Transit Service Frequency	11.3%	Not Applicable	Measure is only applicable at the Plan/Community scale, and cannot be applied to the proposed project. [4]
T-27	Implement Transit-Supportive Roadway Treatments	0.6%	Not Applicable	Measure is only applicable at the Plan/Community scale, and cannot be applied to the proposed project. [4]
T-28	Provide Bus Rapid Transit	13.8%	Not Applicable	Measure is only applicable at the Plan/Community scale, and cannot be applied to the proposed project. [4]
T-29	Reduce Transit Fares	1.2%	Not Applicable	Measure is only applicable at the Plan/Community scale, and cannot be applied to the proposed project. [4]
T-30	Use Cleaner-Fuel Vehicles	-	-	Measure does not result in quantifiable VMT reductions.

[1] Measures obtained from the California Air Pollution Control Officers Association's (CAPCOA) "Handbook for Analyzing Greenhouse Gas Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity" ("2021 CAPCOA Handbook"), December 2021 Final Draft, adopted December 15, 2021. As stated in the 2021 Handbook, "reductions of transportation measures from different scales of application should never be combined."

[2] Each mitigation measure has a recommended maximum reduction, or cap, which is often based on the maximum values of one or more variables utilized in the reduction calculations.

[3] The project VMT reduction represents the calculated or otherwise assumed amount of VMT reduction due to project-specific inputs and assumptions (e.g., percent of eligible employees, job or housing density, etc.).

[4] According to the 2021 CAPCOA Handbook, the Plan/Community scale refers to measures that reduce emissions at the scale of a neighborhood (e.g., specific plan, general plan, climate action plan), corridor, or entire municipality (e.g., city- or county-level). While some of the transportation measures could be implemented at both scales in practice, the quantification methods provided are limited to only the scale for which there is literature to defensively support quantification. The reductions of transportation measures from different scales of application should never be combined.

APPENDIX E

HCM AND LEVELS OF SERVICE EXPLANATION

HCM DATA WORKSHEETS – WEEKDAY AM AND PM PEAK HOURS

LEVEL OF SERVICE FOR SIGNALIZED INTERSECTIONS

In the *Highway Capacity Manual (HCM)*, published by the Transportation Research Board, 2000, level of service for signalized intersections is defined in terms of delay, which is a measure of driver discomfort, frustration, fuel consumption, and increased travel time. The delay experienced by a motorist is made up of a number of factors that relate to control, geometrics, traffic, and incidents. Total delay is the difference between the travel time actually experienced and the reference travel time that would result during base conditions: in the absence of traffic control, in the absence of geometric delay, in the absence of incidents, and when there are no other vehicles on the road. Only the portion of total delay attributed to the control facility is quantified. This delay is called *control delay*. Control delay includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay.

Level of Service criteria for traffic signals are stated in terms of the average control delay per vehicle. Delay is a complex measure and is dependent on a number of variables, including the quality of progression, the cycle length, the green ratio, and the *v/c* ratio for the lane group in question.

Level of Service Criteria for Signalized Intersections

Level of Service	Control Delay (Sec/Veh)
A	≤ 10
B	> 10 and ≤ 20
C	> 20 and ≤ 35
D	> 35 and ≤ 55
E	> 55 and ≤ 80
F	> 80

Level of Service (LOS) values are used to describe intersection operations with service levels varying from LOS A (free flow) to LOS F (jammed condition). The following descriptions summarize *HCM* criteria for each level of service:

LOS A describes operations with very low control delay, up to 10 seconds per vehicle. This level of service occurs when progression is extremely favorable and most vehicles arrive during the green phase. Most vehicles do not stop at all. Short cycle lengths may also contribute to low delay values.

LOS B describes operations with control delay greater than 10 and up to 20 seconds per vehicle. This level generally occurs with good progression, short cycle lengths, or both. More vehicles stop than with LOS A, causing higher levels of delay.

LOS C describes operations with control delay greater than 20 and up to 35 seconds per vehicle. These higher delays may result from fair progression, longer cycle lengths, or both. Individual cycle failures may begin to appear at this level. The number of vehicles stopping is significant at this level, though many still pass through the intersection without stopping.

LOS D describes operations with control delay greater than 35 and up to 55 seconds per vehicle. At LOS D, the influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or high *v/c* ratios. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are noticeable.

LOS E describes operations with control delay greater than 55 and up to 80 seconds per vehicle. This level is considered by many agencies to be the limit of acceptable delay. These high delay values generally indicate poor progression, long cycle lengths, and high *v/c* ratios. Individual cycle failures are frequent occurrences.

LOS F describes operations with control delay in excess of 80 seconds per vehicle. This level, considered to be unacceptable to most drivers, often occurs with oversaturation, that is, when arrival flow rates exceed the capacity of the lane groups. It may also occur at high *v/c* ratios with many individual cycle failures. Poor progression and long cycle lengths may also be major contributing factors to such delay levels.

LEVEL OF SERVICE FOR UNSIGNALIZED INTERSECTIONS

In the *Highway Capacity Manual (HCM)*, published by the Transportation Research Board, level of service for unsignalized intersections is defined in terms of delay, which is a measure of driver discomfort, frustration, fuel consumption, and lost travel time. The delay experienced by a motorist is made up of a number of factors that relate to control, geometrics, traffic, and incidents. Total delay is the difference between the travel time actually experienced and the reference travel time that would result during base conditions, in the absence of incidents, control, traffic, or geometric delay. Only the portion of total delay attributed to the traffic control measures, either traffic signals or stop signs, is quantified. This delay is called *control delay*. Control delay includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay.

Level of Service criteria for unsignalized intersections are stated in terms of the average control delay per vehicle. The level of service is determined by the computed or measured control delay and is defined for each minor movement. Average control delay for any particular minor movement is a function of the service time for the approach and the degree of utilization. (Level of service is not defined for the intersection as a whole for two-way stop controlled intersections.)

Level of Service Criteria for TWSC/AWSC Intersections

Level of Service	Average Control Delay (Sec/Veh)
A	≤ 10
B	> 10 and ≤ 15
C	> 15 and ≤ 25
D	> 25 and ≤ 35
E	> 35 and ≤ 50
F	> 50

Level of Service (LOS) values are used to describe intersection operations with service levels varying from LOS A (free flow) to LOS F (jammed condition). The following descriptions summarize *HCM* criteria for each level of service:

LOS A describes operations with very low control delay, up to 10 seconds per vehicle.

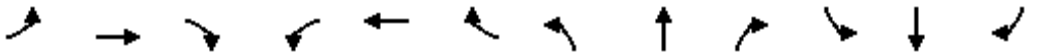
LOS B describes operations with control delay greater than 10 and up to 15 seconds per vehicle.

LOS C describes operations with control delay greater than 15 and up to 25 seconds per vehicle.

LOS D describes operations with control delay greater than 25 and up to 35 seconds per vehicle.

LOS E describes operations with control delay greater than 35 and up to 50 seconds per vehicle.

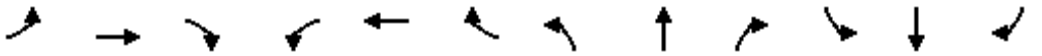
LOS F describes operations with control delay in excess of 50 seconds per vehicle. For two-way stop controlled intersections, LOS F exists when there are insufficient gaps of suitable size to allow side-street demand to safely cross through a major-street traffic stream. This level of service is generally evident from extremely long control delays experienced by side-street traffic and by queuing on the minor-street approaches.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	247	0	393	193	394	0	0	201	52
Future Volume (veh/h)	0	0	0	247	0	393	193	394	0	0	201	52
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj				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	
Adj Sat Flow, veh/h/ln				1870	1870	1870	1870	1870	0	0	1870	1945
Adj Flow Rate, veh/h				268	0	427	210	428	0	0	218	57
Peak Hour Factor				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	0	0	2	2
Cap, veh/h				531	0	472	272	2154	0	0	2480	790
Arrive On Green				0.30	0.00	0.30	0.08	0.61	0.00	0.00	0.49	0.49
Sat Flow, veh/h				1781	0	1585	3456	3647	0	0	5274	1626
Grp Volume(v), veh/h				268	0	427	210	428	0	0	218	57
Grp Sat Flow(s),veh/h/ln				1781	0	1585	1728	1777	0	0	1702	1626
Q Serve(g_s), s				14.9	0.0	31.1	7.2	6.5	0.0	0.0	2.8	2.2
Cycle Q Clear(g_c), s				14.9	0.0	31.1	7.2	6.5	0.0	0.0	2.8	2.2
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				531	0	472	272	2154	0	0	2480	790
V/C Ratio(X)				0.50	0.00	0.90	0.77	0.20	0.00	0.00	0.09	0.07
Avail Cap(c_a), veh/h				601	0	535	720	2154	0	0	2480	790
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				34.8	0.0	40.5	54.2	10.6	0.0	0.0	16.6	16.5
Incr Delay (d2), s/veh				1.1	0.0	18.2	1.8	0.2	0.0	0.0	0.1	0.2
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln				10.8	0.0	20.4	5.6	4.4	0.0	0.0	1.9	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				35.9	0.0	58.6	56.0	10.8	0.0	0.0	16.7	16.6
LnGrp LOS				D	A	E	E	B	A	A	B	B
Approach Vol, veh/h					695			638			275	
Approach Delay, s/veh					49.8			25.7			16.6	
Approach LOS					D			C			B	

Timer - Assigned Phs	2		5	6		8						
Phs Duration (G+Y+Rc), s	78.7		14.5	64.3		41.3						
Change Period (Y+Rc), s	6.0		5.0	6.0		5.5						
Max Green Setting (Gmax), s	68.0		25.0	38.0		40.5						
Max Q Clear Time (g_c+I1), s	8.5		9.2	4.8		33.1						
Green Ext Time (p_c), s	5.1		0.3	2.7		2.7						

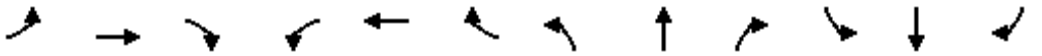
Intersection Summary		
HCM 6th Ctrl Delay		34.6
HCM 6th LOS		C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	299	2	124	429	330	0	0	391	67
Future Volume (veh/h)	0	0	0	299	2	124	429	330	0	0	391	67
Initial Q (Qb), veh				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
Parking Bus, Adj				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	
Adj Sat Flow, veh/h/ln				1870	1870	1870	1870	1870	0	0	1870	1945
Adj Flow Rate, veh/h				325	2	135	466	359	0	0	425	73
Peak Hour Factor				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	0	0	2	2
Cap, veh/h				374	2	335	531	2462	0	0	2541	820
Arrive On Green				0.21	0.21	0.21	0.15	0.69	0.00	0.00	0.50	0.50
Sat Flow, veh/h				1771	11	1585	3456	3647	0	0	5274	1647
Grp Volume(v), veh/h				327	0	135	466	359	0	0	425	73
Grp Sat Flow(s),veh/h/ln				1782	0	1585	1728	1777	0	0	1702	1647
Q Serve(g_s), s				21.3	0.0	8.8	15.8	4.1	0.0	0.0	5.5	2.8
Cycle Q Clear(g_c), s				21.3	0.0	8.8	15.8	4.1	0.0	0.0	5.5	2.8
Prop In Lane				0.99		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				376	0	335	531	2462	0	0	2541	820
V/C Ratio(X)				0.87	0.00	0.40	0.88	0.15	0.00	0.00	0.17	0.09
Avail Cap(c_a), veh/h				468	0	416	720	2462	0	0	2541	820
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				45.7	0.0	40.8	49.7	6.3	0.0	0.0	16.5	15.8
Incr Delay (d2), s/veh				14.8	0.0	1.1	7.6	0.1	0.0	0.0	0.1	0.2
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln				16.2	0.0	6.3	11.7	2.6	0.0	0.0	3.8	1.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				60.5	0.0	41.9	57.2	6.4	0.0	0.0	16.7	16.1
LnGrp LOS				E	A	D	E	A	A	A	B	B
Approach Vol, veh/h					462			825			498	
Approach Delay, s/veh					55.1			35.1			16.6	
Approach LOS					E			D			B	

Timer - Assigned Phs	2		5	6		8						
Phs Duration (G+Y+Rc), s	89.1		23.4	65.7		30.9						
Change Period (Y+Rc), s	6.0		5.0	6.0		5.5						
Max Green Setting (Gmax), s	77.0		25.0	47.0		31.5						
Max Q Clear Time (g_c+I1), s	6.1		17.8	7.5		23.3						
Green Ext Time (p_c), s	4.2		0.6	5.5		2.1						

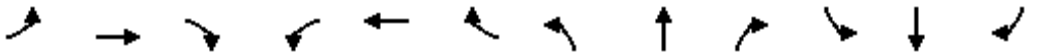
Intersection Summary		
HCM 6th Ctrl Delay	35.1	
HCM 6th LOS	D	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	250	0	393	235	411	0	0	203	52
Future Volume (veh/h)	0	0	0	250	0	393	235	411	0	0	203	52
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj				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	
Adj Sat Flow, veh/h/ln				1870	1870	1870	1870	1870	0	0	1870	1945
Adj Flow Rate, veh/h				272	0	427	255	447	0	0	221	57
Peak Hour Factor				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	0	0	2	2
Cap, veh/h				531	0	473	318	2153	0	0	2411	768
Arrive On Green				0.30	0.00	0.30	0.09	0.61	0.00	0.00	0.47	0.47
Sat Flow, veh/h				1781	0	1585	3456	3647	0	0	5274	1626
Grp Volume(v), veh/h				272	0	427	255	447	0	0	221	57
Grp Sat Flow(s),veh/h/ln				1781	0	1585	1728	1777	0	0	1702	1626
Q Serve(g_s), s				15.2	0.0	31.1	8.7	6.8	0.0	0.0	2.9	2.3
Cycle Q Clear(g_c), s				15.2	0.0	31.1	8.7	6.8	0.0	0.0	2.9	2.3
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				531	0	473	318	2153	0	0	2411	768
V/C Ratio(X)				0.51	0.00	0.90	0.80	0.21	0.00	0.00	0.09	0.07
Avail Cap(c_a), veh/h				601	0	535	720	2153	0	0	2411	768
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				34.9	0.0	40.4	53.4	10.7	0.0	0.0	17.5	17.3
Incr Delay (d2), s/veh				1.1	0.0	18.1	1.8	0.2	0.0	0.0	0.1	0.2
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln				10.9	0.0	20.4	6.8	4.6	0.0	0.0	2.0	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				36.0	0.0	58.6	55.2	10.9	0.0	0.0	17.5	17.5
LnGrp LOS				D	A	E	E	B	A	A	B	B
Approach Vol, veh/h					699			702			278	
Approach Delay, s/veh					49.8			27.0			17.5	
Approach LOS					D			C			B	

Timer - Assigned Phs	2		5	6		8						
Phs Duration (G+Y+Rc), s	78.7		16.1	62.7		41.3						
Change Period (Y+Rc), s	6.0		5.0	6.0		5.5						
Max Green Setting (Gmax), s	68.0		25.0	38.0		40.5						
Max Q Clear Time (g_c+I1), s	8.8		10.7	4.9		33.1						
Green Ext Time (p_c), s	5.4		0.4	2.7		2.7						

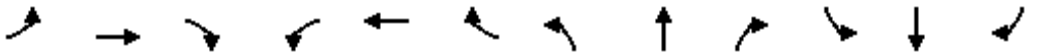
Intersection Summary		
HCM 6th Ctrl Delay	34.9	
HCM 6th LOS	C	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	313	2	124	452	335	0	0	404	67
Future Volume (veh/h)	0	0	0	313	2	124	452	335	0	0	404	67
Initial Q (Qb), veh				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
Parking Bus, Adj				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	
Adj Sat Flow, veh/h/ln				1870	1870	1870	1870	1870	0	0	1870	1945
Adj Flow Rate, veh/h				340	2	135	491	364	0	0	439	73
Peak Hour Factor				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	0	0	2	2
Cap, veh/h				387	2	347	555	2436	0	0	2467	796
Arrive On Green				0.22	0.22	0.22	0.16	0.69	0.00	0.00	0.48	0.48
Sat Flow, veh/h				1771	10	1585	3456	3647	0	0	5274	1647
Grp Volume(v), veh/h				342	0	135	491	364	0	0	439	73
Grp Sat Flow(s),veh/h/ln				1782	0	1585	1728	1777	0	0	1702	1647
Q Serve(g_s), s				22.3	0.0	8.7	16.7	4.3	0.0	0.0	5.8	2.9
Cycle Q Clear(g_c), s				22.3	0.0	8.7	16.7	4.3	0.0	0.0	5.8	2.9
Prop In Lane				0.99		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				390	0	347	555	2436	0	0	2467	796
V/C Ratio(X)				0.88	0.00	0.39	0.88	0.15	0.00	0.00	0.18	0.09
Avail Cap(c_a), veh/h				468	0	416	720	2436	0	0	2467	796
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				45.3	0.0	40.0	49.3	6.6	0.0	0.0	17.5	16.8
Incr Delay (d2), s/veh				16.1	0.0	1.0	8.8	0.1	0.0	0.0	0.2	0.2
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln				17.0	0.0	6.3	12.3	2.7	0.0	0.0	4.1	2.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				61.4	0.0	41.0	58.1	6.7	0.0	0.0	17.7	17.0
LnGrp LOS				E	A	D	E	A	A	A	B	B
Approach Vol, veh/h					477			855			512	
Approach Delay, s/veh					55.7			36.2			17.6	
Approach LOS					E			D			B	

Timer - Assigned Phs	2		5	6		8						
Phs Duration (G+Y+Rc), s	88.3		24.3	64.0		31.7						
Change Period (Y+Rc), s	6.0		5.0	6.0		5.5						
Max Green Setting (Gmax), s	77.0		25.0	47.0		31.5						
Max Q Clear Time (g_c+I1), s	6.3		18.7	7.8		24.3						
Green Ext Time (p_c), s	4.3		0.6	5.6		2.0						

Intersection Summary		
HCM 6th Ctrl Delay	36.1	
HCM 6th LOS	D	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	258	0	409	202	414	0	0	218	53
Future Volume (veh/h)	0	0	0	258	0	409	202	414	0	0	218	53
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj				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	
Adj Sat Flow, veh/h/ln				1870	1870	1870	1870	1870	0	0	1870	1945
Adj Flow Rate, veh/h				280	0	445	220	450	0	0	237	58
Peak Hour Factor				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	0	0	2	2
Cap, veh/h				547	0	487	283	2121	0	0	2417	770
Arrive On Green				0.31	0.00	0.31	0.08	0.60	0.00	0.00	0.47	0.47
Sat Flow, veh/h				1781	0	1585	3456	3647	0	0	5274	1626
Grp Volume(v), veh/h				280	0	445	220	450	0	0	237	58
Grp Sat Flow(s),veh/h/ln				1781	0	1585	1728	1777	0	0	1702	1626
Q Serve(g_s), s				15.5	0.0	32.4	7.5	7.0	0.0	0.0	3.1	2.3
Cycle Q Clear(g_c), s				15.5	0.0	32.4	7.5	7.0	0.0	0.0	3.1	2.3
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				547	0	487	283	2121	0	0	2417	770
V/C Ratio(X)				0.51	0.00	0.91	0.78	0.21	0.00	0.00	0.10	0.08
Avail Cap(c_a), veh/h				601	0	535	720	2121	0	0	2417	770
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				34.2	0.0	40.0	54.0	11.2	0.0	0.0	17.4	17.3
Incr Delay (d2), s/veh				1.1	0.0	19.8	1.8	0.2	0.0	0.0	0.1	0.2
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln				11.1	0.0	21.4	5.9	4.8	0.0	0.0	2.1	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				35.2	0.0	59.9	55.8	11.4	0.0	0.0	17.5	17.4
LnGrp LOS				D	A	E	E	B	A	A	B	B
Approach Vol, veh/h					725			670			295	
Approach Delay, s/veh					50.3			26.0			17.5	
Approach LOS					D			C			B	

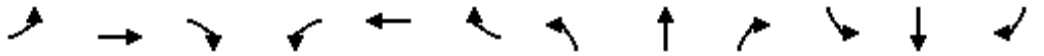
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		77.6			14.8	62.8		42.4				
Change Period (Y+Rc), s		6.0			5.0	6.0		5.5				
Max Green Setting (Gmax), s		68.0			25.0	38.0		40.5				
Max Q Clear Time (g_c+I1), s		9.0			9.5	5.1		34.4				
Green Ext Time (p_c), s		5.4			0.3	2.9		2.4				

Intersection Summary												
HCM 6th Ctrl Delay			34.9									
HCM 6th LOS			C									

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	311	2	143	445	359	0	0	439	69
Future Volume (veh/h)	0	0	0	311	2	143	445	359	0	0	439	69
Initial Q (Qb), veh				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
Parking Bus, Adj				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	
Adj Sat Flow, veh/h/ln				1870	1870	1870	1870	1870	0	0	1870	1945
Adj Flow Rate, veh/h				338	2	155	484	390	0	0	477	75
Peak Hour Factor				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	0	0	2	2
Cap, veh/h				387	2	346	548	2438	0	0	2480	800
Arrive On Green				0.22	0.22	0.22	0.16	0.69	0.00	0.00	0.49	0.49
Sat Flow, veh/h				1771	10	1585	3456	3647	0	0	5274	1647
Grp Volume(v), veh/h				340	0	155	484	390	0	0	477	75
Grp Sat Flow(s),veh/h/ln				1782	0	1585	1728	1777	0	0	1702	1647
Q Serve(g_s), s				22.1	0.0	10.2	16.4	4.6	0.0	0.0	6.4	2.9
Cycle Q Clear(g_c), s				22.1	0.0	10.2	16.4	4.6	0.0	0.0	6.4	2.9
Prop In Lane				0.99		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				389	0	346	548	2438	0	0	2480	800
V/C Ratio(X)				0.87	0.00	0.45	0.88	0.16	0.00	0.00	0.19	0.09
Avail Cap(c_a), veh/h				468	0	416	720	2438	0	0	2480	800
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				45.3	0.0	40.6	49.4	6.6	0.0	0.0	17.5	16.6
Incr Delay (d2), s/veh				15.7	0.0	1.3	8.5	0.1	0.0	0.0	0.2	0.2
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln				16.9	0.0	7.3	12.1	2.9	0.0	0.0	4.4	2.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				61.0	0.0	41.9	57.9	6.8	0.0	0.0	17.7	16.9
LnGrp LOS				E	A	D	E	A	A	A	B	B
Approach Vol, veh/h					495			874			552	
Approach Delay, s/veh					55.0			35.1			17.6	
Approach LOS					E			D			B	

Timer - Assigned Phs	2		5	6		8				
Phs Duration (G+Y+Rc), s	88.3		24.0	64.3		31.7				
Change Period (Y+Rc), s	6.0		5.0	6.0		5.5				
Max Green Setting (Gmax), s	77.0		25.0	47.0		31.5				
Max Q Clear Time (g_c+I1), s	6.6		18.4	8.4		24.1				
Green Ext Time (p_c), s	4.6		0.6	6.2		2.1				

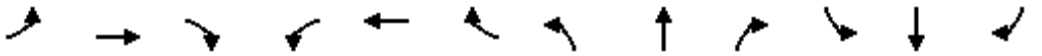
Intersection Summary	
HCM 6th Ctrl Delay	35.2
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	261	0	409	241	430	0	0	220	53
Future Volume (veh/h)	0	0	0	261	0	409	241	430	0	0	220	53
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj				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	
Adj Sat Flow, veh/h/ln				1870	1870	1870	1870	1870	0	0	1870	1945
Adj Flow Rate, veh/h				284	0	445	262	467	0	0	239	58
Peak Hour Factor				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	0	0	2	2
Cap, veh/h				548	0	487	326	2121	0	0	2353	749
Arrive On Green				0.31	0.00	0.31	0.09	0.60	0.00	0.00	0.46	0.46
Sat Flow, veh/h				1781	0	1585	3456	3647	0	0	5274	1626
Grp Volume(v), veh/h				284	0	445	262	467	0	0	239	58
Grp Sat Flow(s),veh/h/ln				1781	0	1585	1728	1777	0	0	1702	1626
Q Serve(g_s), s				15.8	0.0	32.4	8.9	7.3	0.0	0.0	3.2	2.4
Cycle Q Clear(g_c), s				15.8	0.0	32.4	8.9	7.3	0.0	0.0	3.2	2.4
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				548	0	487	326	2121	0	0	2353	749
V/C Ratio(X)				0.52	0.00	0.91	0.80	0.22	0.00	0.00	0.10	0.08
Avail Cap(c_a), veh/h				601	0	535	720	2121	0	0	2353	749
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				34.2	0.0	40.0	53.3	11.2	0.0	0.0	18.3	18.1
Incr Delay (d2), s/veh				1.1	0.0	19.8	1.8	0.2	0.0	0.0	0.1	0.2
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln				11.2	0.0	21.4	7.0	5.0	0.0	0.0	2.2	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				35.3	0.0	59.8	55.1	11.5	0.0	0.0	18.4	18.3
LnGrp LOS				D	A	E	E	B	A	A	B	B
Approach Vol, veh/h					729			729			297	
Approach Delay, s/veh					50.3			27.1			18.4	
Approach LOS					D			C			B	

Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		77.6			16.3	61.3		42.4				
Change Period (Y+Rc), s		6.0			5.0	6.0		5.5				
Max Green Setting (Gmax), s		68.0			25.0	38.0		40.5				
Max Q Clear Time (g_c+I1), s		9.3			10.9	5.2		34.4				
Green Ext Time (p_c), s		5.7			0.4	2.9		2.5				

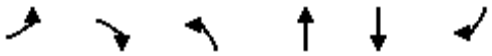
Intersection Summary												
HCM 6th Ctrl Delay			35.3									
HCM 6th LOS			D									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	325	2	143	468	364	0	0	452	69
Future Volume (veh/h)	0	0	0	325	2	143	468	364	0	0	452	69
Initial Q (Qb), veh				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
Parking Bus, Adj				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	
Adj Sat Flow, veh/h/ln				1870	1870	1870	1870	1870	0	0	1870	1945
Adj Flow Rate, veh/h				353	2	155	509	396	0	0	491	75
Peak Hour Factor				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	0	0	2	2
Cap, veh/h				399	2	357	572	2412	0	0	2407	777
Arrive On Green				0.23	0.23	0.23	0.17	0.68	0.00	0.00	0.47	0.47
Sat Flow, veh/h				1772	10	1585	3456	3647	0	0	5274	1647
Grp Volume(v), veh/h				355	0	155	509	396	0	0	491	75
Grp Sat Flow(s),veh/h/ln				1782	0	1585	1728	1777	0	0	1702	1647
Q Serve(g_s), s				23.1	0.0	10.1	17.3	4.8	0.0	0.0	6.7	3.0
Cycle Q Clear(g_c), s				23.1	0.0	10.1	17.3	4.8	0.0	0.0	6.7	3.0
Prop In Lane				0.99		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				402	0	357	572	2412	0	0	2407	777
V/C Ratio(X)				0.88	0.00	0.43	0.89	0.16	0.00	0.00	0.20	0.10
Avail Cap(c_a), veh/h				468	0	416	720	2412	0	0	2407	777
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				45.0	0.0	39.9	49.0	7.0	0.0	0.0	18.5	17.6
Incr Delay (d2), s/veh				17.1	0.0	1.2	9.7	0.1	0.0	0.0	0.2	0.2
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln				17.7	0.0	7.2	12.7	3.0	0.0	0.0	4.7	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				62.1	0.0	41.1	58.7	7.1	0.0	0.0	18.7	17.8
LnGrp LOS				E	A	D	E	A	A	A	B	B
Approach Vol, veh/h					510			905			566	
Approach Delay, s/veh					55.7			36.1			18.6	
Approach LOS					E			D			B	

Timer - Assigned Phs	2		5	6		8						
Phs Duration (G+Y+Rc), s	87.4		24.9	62.6		32.6						
Change Period (Y+Rc), s	6.0		5.0	6.0		5.5						
Max Green Setting (Gmax), s	77.0		25.0	47.0		31.5						
Max Q Clear Time (g_c+I1), s	6.8		19.3	8.7		25.1						
Green Ext Time (p_c), s	4.7		0.6	6.3		1.9						

Intersection Summary		
HCM 6th Ctrl Delay	36.2	
HCM 6th LOS	D	



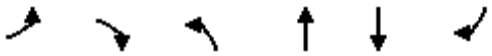
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	52	691	0	774	394	0
Future Volume (veh/h)	52	691	0	774	394	0
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	0	1945	1945	0
Adj Flow Rate, veh/h	58	768	0	860	438	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	0	2	2	0
Cap, veh/h	690	614	0	1910	1910	0
Arrive On Green	0.39	0.39	0.00	1.00	0.52	0.00
Sat Flow, veh/h	1781	1585	0	3890	3890	0
Grp Volume(v), veh/h	58	768	0	860	438	0
Grp Sat Flow(s),veh/h/ln	1781	1585	0	1848	1848	0
Q Serve(g_s), s	2.5	46.5	0.0	0.0	7.8	0.0
Cycle Q Clear(g_c), s	2.5	46.5	0.0	0.0	7.8	0.0
Prop In Lane	1.00	1.00	0.00			0.00
Lane Grp Cap(c), veh/h	690	614	0	1910	1910	0
V/C Ratio(X)	0.08	1.25	0.00	0.45	0.23	0.00
Avail Cap(c_a), veh/h	690	614	0	1910	1910	0
HCM Platoon Ratio	1.00	1.00	1.00	2.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.98	1.00	0.00
Uniform Delay (d), s/veh	23.3	36.8	0.0	0.0	15.9	0.0
Incr Delay (d2), s/veh	0.1	125.8	0.0	0.8	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.9	56.6	0.0	0.4	5.8	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	23.3	162.5	0.0	0.8	16.2	0.0
LnGrp LOS	C	F	A	A	B	A
Approach Vol, veh/h	826			860	438	
Approach Delay, s/veh	152.8			0.8	16.2	
Approach LOS	F			A	B	

Timer - Assigned Phs	2		4		6
Phs Duration (G+Y+Rc), s	68.0		52.0		68.0
Change Period (Y+Rc), s	6.0		5.5		6.0
Max Green Setting (Gmax), s	62.0		46.5		62.0
Max Q Clear Time (g_c+I1), s	2.0		48.5		9.8
Green Ext Time (p_c), s	12.6		0.0		5.2

Intersection Summary	
HCM 6th Ctrl Delay	63.0
HCM 6th LOS	E

Notes

User approved volume balancing among the lanes for turning movement.



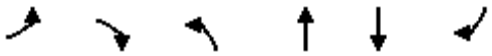
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	47	698	0	868	590	0
Future Volume (veh/h)	47	698	0	868	590	0
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	0	1945	1945	0
Adj Flow Rate, veh/h	52	767	0	954	648	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	0	2	2	0
Cap, veh/h	690	614	0	1910	1910	0
Arrive On Green	0.39	0.39	0.00	1.00	0.52	0.00
Sat Flow, veh/h	1781	1585	0	3890	3890	0
Grp Volume(v), veh/h	52	767	0	954	648	0
Grp Sat Flow(s),veh/h/ln	1781	1585	0	1848	1848	0
Q Serve(g_s), s	2.2	46.5	0.0	0.0	12.3	0.0
Cycle Q Clear(g_c), s	2.2	46.5	0.0	0.0	12.3	0.0
Prop In Lane	1.00	1.00	0.00			0.00
Lane Grp Cap(c), veh/h	690	614	0	1910	1910	0
V/C Ratio(X)	0.08	1.25	0.00	0.50	0.34	0.00
Avail Cap(c_a), veh/h	690	614	0	1910	1910	0
HCM Platoon Ratio	1.00	1.00	1.00	2.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.98	1.00	0.00
Uniform Delay (d), s/veh	23.2	36.8	0.0	0.0	17.0	0.0
Incr Delay (d2), s/veh	0.0	125.1	0.0	0.9	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.7	56.4	0.0	0.4	8.8	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	23.2	161.9	0.0	0.9	17.5	0.0
LnGrp LOS	C	F	A	A	B	A
Approach Vol, veh/h	819			954	648	
Approach Delay, s/veh	153.1			0.9	17.5	
Approach LOS	F			A	B	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		68.0		52.0		68.0
Change Period (Y+Rc), s		6.0		5.5		6.0
Max Green Setting (Gmax), s		62.0		46.5		62.0
Max Q Clear Time (g_c+I1), s		2.0		48.5		14.3
Green Ext Time (p_c), s		14.7		0.0		8.3

Intersection Summary	
HCM 6th Ctrl Delay	56.8
HCM 6th LOS	E

Notes

User approved volume balancing among the lanes for turning movement.



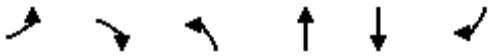
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	52	702	0	848	399	0
Future Volume (veh/h)	52	702	0	848	399	0
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	0	1945	1945	0
Adj Flow Rate, veh/h	58	780	0	942	443	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	0	2	2	0
Cap, veh/h	690	614	0	1910	1910	0
Arrive On Green	0.39	0.39	0.00	1.00	0.52	0.00
Sat Flow, veh/h	1781	1585	0	3890	3890	0
Grp Volume(v), veh/h	58	780	0	942	443	0
Grp Sat Flow(s),veh/h/ln	1781	1585	0	1848	1848	0
Q Serve(g_s), s	2.5	46.5	0.0	0.0	7.9	0.0
Cycle Q Clear(g_c), s	2.5	46.5	0.0	0.0	7.9	0.0
Prop In Lane	1.00	1.00	0.00			0.00
Lane Grp Cap(c), veh/h	690	614	0	1910	1910	0
V/C Ratio(X)	0.08	1.27	0.00	0.49	0.23	0.00
Avail Cap(c_a), veh/h	690	614	0	1910	1910	0
HCM Platoon Ratio	1.00	1.00	1.00	2.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.97	1.00	0.00
Uniform Delay (d), s/veh	23.3	36.8	0.0	0.0	15.9	0.0
Incr Delay (d2), s/veh	0.1	134.0	0.0	0.9	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.9	58.9	0.0	0.4	5.9	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	23.3	170.7	0.0	0.9	16.2	0.0
LnGrp LOS	C	F	A	A	B	A
Approach Vol, veh/h	838			942	443	
Approach Delay, s/veh	160.5			0.9	16.2	
Approach LOS	F			A	B	

Timer - Assigned Phs	2		4		6
Phs Duration (G+Y+Rc), s	68.0		52.0		68.0
Change Period (Y+Rc), s	6.0		5.5		6.0
Max Green Setting (Gmax), s	62.0		46.5		62.0
Max Q Clear Time (g_c+I1), s	2.0		48.5		9.9
Green Ext Time (p_c), s	14.4		0.0		5.3

Intersection Summary	
HCM 6th Ctrl Delay	64.1
HCM 6th LOS	E

Notes

User approved volume balancing among the lanes for turning movement.



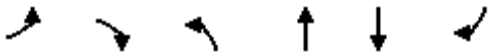
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	47	739	0	904	618	0
Future Volume (veh/h)	47	739	0	904	618	0
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	0	1945	1945	0
Adj Flow Rate, veh/h	52	812	0	993	679	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	0	2	2	0
Cap, veh/h	690	614	0	1910	1910	0
Arrive On Green	0.39	0.39	0.00	1.00	0.52	0.00
Sat Flow, veh/h	1781	1585	0	3890	3890	0
Grp Volume(v), veh/h	52	812	0	993	679	0
Grp Sat Flow(s),veh/h/ln	1781	1585	0	1848	1848	0
Q Serve(g_s), s	2.2	46.5	0.0	0.0	13.1	0.0
Cycle Q Clear(g_c), s	2.2	46.5	0.0	0.0	13.1	0.0
Prop In Lane	1.00	1.00	0.00			0.00
Lane Grp Cap(c), veh/h	690	614	0	1910	1910	0
V/C Ratio(X)	0.08	1.32	0.00	0.52	0.36	0.00
Avail Cap(c_a), veh/h	690	614	0	1910	1910	0
HCM Platoon Ratio	1.00	1.00	1.00	2.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.97	1.00	0.00
Uniform Delay (d), s/veh	23.2	36.8	0.0	0.0	17.2	0.0
Incr Delay (d2), s/veh	0.0	156.1	0.0	1.0	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.7	65.2	0.0	0.5	9.3	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	23.2	192.8	0.0	1.0	17.7	0.0
LnGrp LOS	C	F	A	A	B	A
Approach Vol, veh/h	864			993	679	
Approach Delay, s/veh	182.6			1.0	17.7	
Approach LOS	F			A	B	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		68.0		52.0		68.0
Change Period (Y+Rc), s		6.0		5.5		6.0
Max Green Setting (Gmax), s		62.0		46.5		62.0
Max Q Clear Time (g_c+I1), s		2.0		48.5		15.1
Green Ext Time (p_c), s		15.6		0.0		8.8

Intersection Summary	
HCM 6th Ctrl Delay	67.3
HCM 6th LOS	E

Notes

User approved volume balancing among the lanes for turning movement.



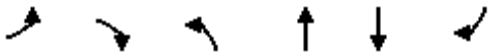
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	53	712	0	814	416	0
Future Volume (veh/h)	53	712	0	814	416	0
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	0	1945	1945	0
Adj Flow Rate, veh/h	59	791	0	904	462	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	0	2	2	0
Cap, veh/h	690	614	0	1910	1910	0
Arrive On Green	0.39	0.39	0.00	1.00	0.52	0.00
Sat Flow, veh/h	1781	1585	0	3890	3890	0
Grp Volume(v), veh/h	59	791	0	904	462	0
Grp Sat Flow(s),veh/h/ln	1781	1585	0	1848	1848	0
Q Serve(g_s), s	2.5	46.5	0.0	0.0	8.3	0.0
Cycle Q Clear(g_c), s	2.5	46.5	0.0	0.0	8.3	0.0
Prop In Lane	1.00	1.00	0.00			0.00
Lane Grp Cap(c), veh/h	690	614	0	1910	1910	0
V/C Ratio(X)	0.09	1.29	0.00	0.47	0.24	0.00
Avail Cap(c_a), veh/h	690	614	0	1910	1910	0
HCM Platoon Ratio	1.00	1.00	1.00	2.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.97	1.00	0.00
Uniform Delay (d), s/veh	23.3	36.8	0.0	0.0	16.0	0.0
Incr Delay (d2), s/veh	0.1	141.5	0.0	0.8	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.9	61.0	0.0	0.4	6.2	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	23.3	178.3	0.0	0.8	16.3	0.0
LnGrp LOS	C	F	A	A	B	A
Approach Vol, veh/h	850			904	462	
Approach Delay, s/veh	167.5			0.8	16.3	
Approach LOS	F			A	B	

Timer - Assigned Phs	2		4		6
Phs Duration (G+Y+Rc), s	68.0		52.0		68.0
Change Period (Y+Rc), s	6.0		5.5		6.0
Max Green Setting (Gmax), s	62.0		46.5		62.0
Max Q Clear Time (g_c+I1), s	2.0		48.5		10.3
Green Ext Time (p_c), s	13.5		0.0		5.5

Intersection Summary	
HCM 6th Ctrl Delay	68.0
HCM 6th LOS	E

Notes

User approved volume balancing among the lanes for turning movement.



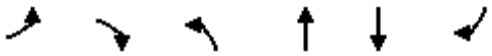
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	48	719	0	920	631	0
Future Volume (veh/h)	48	719	0	920	631	0
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	0	1945	1945	0
Adj Flow Rate, veh/h	53	790	0	1011	693	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	0	2	2	0
Cap, veh/h	690	614	0	1910	1910	0
Arrive On Green	0.39	0.39	0.00	1.00	0.52	0.00
Sat Flow, veh/h	1781	1585	0	3890	3890	0
Grp Volume(v), veh/h	53	790	0	1011	693	0
Grp Sat Flow(s),veh/h/ln	1781	1585	0	1848	1848	0
Q Serve(g_s), s	2.3	46.5	0.0	0.0	13.4	0.0
Cycle Q Clear(g_c), s	2.3	46.5	0.0	0.0	13.4	0.0
Prop In Lane	1.00	1.00	0.00			0.00
Lane Grp Cap(c), veh/h	690	614	0	1910	1910	0
V/C Ratio(X)	0.08	1.29	0.00	0.53	0.36	0.00
Avail Cap(c_a), veh/h	690	614	0	1910	1910	0
HCM Platoon Ratio	1.00	1.00	1.00	2.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.97	1.00	0.00
Uniform Delay (d), s/veh	23.2	36.8	0.0	0.0	17.3	0.0
Incr Delay (d2), s/veh	0.0	140.8	0.0	1.0	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.7	60.8	0.0	0.5	9.5	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	23.2	177.6	0.0	1.0	17.8	0.0
LnGrp LOS	C	F	A	A	B	A
Approach Vol, veh/h	843			1011	693	
Approach Delay, s/veh	167.9			1.0	17.8	
Approach LOS	F			A	B	

Timer - Assigned Phs	2		4		6
Phs Duration (G+Y+Rc), s	68.0		52.0		68.0
Change Period (Y+Rc), s	6.0		5.5		6.0
Max Green Setting (Gmax), s	62.0		46.5		62.0
Max Q Clear Time (g_c+I1), s	2.0		48.5		15.4
Green Ext Time (p_c), s	16.1		0.0		9.0

Intersection Summary	
HCM 6th Ctrl Delay	60.8
HCM 6th LOS	E

Notes

User approved volume balancing among the lanes for turning movement.



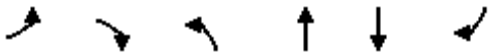
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	53	724	0	884	422	0
Future Volume (veh/h)	53	724	0	884	422	0
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	0	1945	1945	0
Adj Flow Rate, veh/h	59	804	0	982	469	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	0	2	2	0
Cap, veh/h	690	614	0	1910	1910	0
Arrive On Green	0.39	0.39	0.00	1.00	0.52	0.00
Sat Flow, veh/h	1781	1585	0	3890	3890	0
Grp Volume(v), veh/h	59	804	0	982	469	0
Grp Sat Flow(s),veh/h/ln	1781	1585	0	1848	1848	0
Q Serve(g_s), s	2.5	46.5	0.0	0.0	8.4	0.0
Cycle Q Clear(g_c), s	2.5	46.5	0.0	0.0	8.4	0.0
Prop In Lane	1.00	1.00	0.00			0.00
Lane Grp Cap(c), veh/h	690	614	0	1910	1910	0
V/C Ratio(X)	0.09	1.31	0.00	0.51	0.25	0.00
Avail Cap(c_a), veh/h	690	614	0	1910	1910	0
HCM Platoon Ratio	1.00	1.00	1.00	2.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.97	1.00	0.00
Uniform Delay (d), s/veh	23.3	36.8	0.0	0.0	16.1	0.0
Incr Delay (d2), s/veh	0.1	150.5	0.0	1.0	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.9	63.6	0.0	0.5	6.3	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	23.3	187.3	0.0	1.0	16.4	0.0
LnGrp LOS	C	F	A	A	B	A
Approach Vol, veh/h	863			982	469	
Approach Delay, s/veh	176.1			1.0	16.4	
Approach LOS	F			A	B	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		68.0		52.0		68.0
Change Period (Y+Rc), s		6.0		5.5		6.0
Max Green Setting (Gmax), s		62.0		46.5		62.0
Max Q Clear Time (g_c+I1), s		2.0		48.5		10.4
Green Ext Time (p_c), s		15.4		0.0		5.6

Intersection Summary		
HCM 6th Ctrl Delay	69.4	
HCM 6th LOS	E	

Notes

User approved volume balancing among the lanes for turning movement.



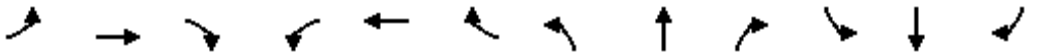
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	48	760	0	956	659	0
Future Volume (veh/h)	48	760	0	956	659	0
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	0	1945	1945	0
Adj Flow Rate, veh/h	53	835	0	1051	724	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	0	2	2	0
Cap, veh/h	690	614	0	1910	1910	0
Arrive On Green	0.39	0.39	0.00	1.00	0.52	0.00
Sat Flow, veh/h	1781	1585	0	3890	3890	0
Grp Volume(v), veh/h	53	835	0	1051	724	0
Grp Sat Flow(s),veh/h/ln	1781	1585	0	1848	1848	0
Q Serve(g_s), s	2.3	46.5	0.0	0.0	14.1	0.0
Cycle Q Clear(g_c), s	2.3	46.5	0.0	0.0	14.1	0.0
Prop In Lane	1.00	1.00	0.00			0.00
Lane Grp Cap(c), veh/h	690	614	0	1910	1910	0
V/C Ratio(X)	0.08	1.36	0.00	0.55	0.38	0.00
Avail Cap(c_a), veh/h	690	614	0	1910	1910	0
HCM Platoon Ratio	1.00	1.00	1.00	2.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.97	1.00	0.00
Uniform Delay (d), s/veh	23.2	36.8	0.0	0.0	17.4	0.0
Incr Delay (d2), s/veh	0.0	172.2	0.0	1.1	0.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.7	69.8	0.0	0.5	9.9	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	23.2	208.9	0.0	1.1	18.0	0.0
LnGrp LOS	C	F	A	A	B	A
Approach Vol, veh/h	888			1051	724	
Approach Delay, s/veh	197.8			1.1	18.0	
Approach LOS	F			A	B	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		68.0		52.0		68.0
Change Period (Y+Rc), s		6.0		5.5		6.0
Max Green Setting (Gmax), s		62.0		46.5		62.0
Max Q Clear Time (g_c+I1), s		2.0		48.5		16.1
Green Ext Time (p_c), s		17.1		0.0		9.5

Intersection Summary	
HCM 6th Ctrl Delay	71.3
HCM 6th LOS	E

Notes

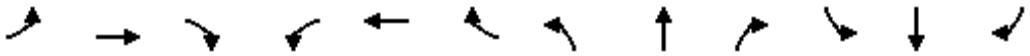
User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	203	12	115	16	16	110	52	457	17	47	860	219
Future Volume (veh/h)	203	12	115	16	16	110	52	457	17	47	860	219
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	239	14	135	19	19	129	61	538	20	55	1012	258
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	304	15	144	262	248	504	317	2092	933	499	1651	419
Arrive On Green	0.32	0.32	0.32	0.32	0.32	0.32	0.59	0.59	0.59	1.00	1.00	1.00
Sat Flow, veh/h	798	47	451	678	776	1578	436	3554	1585	851	2806	712
Grp Volume(v), veh/h	388	0	0	38	0	129	61	538	20	55	639	631
Grp Sat Flow(s),veh/h/ln	1296	0	0	1454	0	1578	436	1777	1585	851	1777	1741
Q Serve(g_s), s	33.4	0.0	0.0	0.0	0.0	7.3	8.0	8.8	0.6	1.1	0.0	0.0
Cycle Q Clear(g_c), s	35.1	0.0	0.0	1.7	0.0	7.3	8.0	8.8	0.6	9.9	0.0	0.0
Prop In Lane	0.62		0.35	0.50		1.00	1.00		1.00	1.00		0.41
Lane Grp Cap(c), veh/h	463	0	0	510	0	504	317	2092	933	499	1046	1025
V/C Ratio(X)	0.84	0.00	0.00	0.07	0.00	0.26	0.19	0.26	0.02	0.11	0.61	0.62
Avail Cap(c_a), veh/h	498	0	0	549	0	546	317	2092	933	499	1046	1025
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	0.85	0.85	0.85	0.99	0.99	0.99
Uniform Delay (d), s/veh	40.5	0.0	0.0	28.3	0.0	30.2	11.8	12.0	10.3	0.6	0.0	0.0
Incr Delay (d2), s/veh	11.4	0.0	0.0	0.1	0.0	0.3	1.1	0.3	0.0	0.4	2.6	2.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	18.1	0.0	0.0	1.4	0.0	5.0	1.5	6.0	0.4	0.1	1.4	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	51.9	0.0	0.0	28.4	0.0	30.5	13.0	12.2	10.3	1.1	2.6	2.7
LnGrp LOS	D	A	A	C	A	C	B	B	B	A	A	A
Approach Vol, veh/h		388			167			619			1325	
Approach Delay, s/veh		51.9			30.0			12.2			2.6	
Approach LOS		D			C			B			A	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	76.1	43.9	76.1	43.9
Change Period (Y+Rc), s	5.5	5.5	5.5	5.5
Max Green Setting (Gmax), s	67.5	41.5	67.5	41.5
Max Q Clear Time (g_c+I1), s	10.8	37.1	11.9	9.3
Green Ext Time (p_c), s	5.1	1.0	11.9	0.6

Intersection Summary	
HCM 6th Ctrl Delay	14.5
HCM 6th LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	152	10	53	18	11	54	63	635	30	102	1080	161
Future Volume (veh/h)	152	10	53	18	11	54	63	635	30	102	1080	161
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	158	10	55	19	11	56	66	661	31	106	1125	168
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	231	12	63	223	119	308	364	2536	1131	547	2213	330
Arrive On Green	0.19	0.19	0.19	0.19	0.19	0.19	0.71	0.71	0.71	1.00	1.00	1.00
Sat Flow, veh/h	925	60	322	895	611	1585	427	3554	1585	752	3101	462
Grp Volume(v), veh/h	223	0	0	30	0	56	66	661	31	106	643	650
Grp Sat Flow(s),veh/h/ln	1308	0	0	1505	0	1585	427	1777	1585	752	1777	1786
Q Serve(g_s), s	18.5	0.0	0.0	0.0	0.0	3.5	6.3	7.8	0.7	1.9	0.0	0.0
Cycle Q Clear(g_c), s	20.2	0.0	0.0	1.7	0.0	3.5	6.3	7.8	0.7	9.8	0.0	0.0
Prop In Lane	0.71		0.25	0.63		1.00	1.00		1.00	1.00		0.26
Lane Grp Cap(c), veh/h	306	0	0	342	0	308	364	2536	1131	547	1268	1275
V/C Ratio(X)	0.73	0.00	0.00	0.09	0.00	0.18	0.18	0.26	0.03	0.19	0.51	0.51
Avail Cap(c_a), veh/h	519	0	0	568	0	548	364	2536	1131	547	1268	1275
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	0.75	0.75	0.75	0.97	0.97	0.97
Uniform Delay (d), s/veh	47.8	0.0	0.0	39.6	0.0	40.3	5.8	6.0	5.0	0.4	0.0	0.0
Incr Delay (d2), s/veh	3.3	0.0	0.0	0.1	0.0	0.3	0.8	0.2	0.0	0.8	1.4	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	10.9	0.0	0.0	1.3	0.0	2.5	1.0	4.7	0.4	0.2	0.9	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	51.2	0.0	0.0	39.7	0.0	40.6	6.6	6.2	5.0	1.2	1.4	1.4
LnGrp LOS	D	A	A	D	A	D	A	A	A	A	A	A
Approach Vol, veh/h		223			86			758			1399	
Approach Delay, s/veh		51.2			40.3			6.2			1.4	
Approach LOS		D			D			A			A	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	91.1	28.9	91.1	28.9
Change Period (Y+Rc), s	5.5	5.5	5.5	5.5
Max Green Setting (Gmax), s	67.5	41.5	67.5	41.5
Max Q Clear Time (g_c+I1), s	9.8	22.2	11.8	5.5
Green Ext Time (p_c), s	6.4	1.2	13.1	0.3

Intersection Summary	
HCM 6th Ctrl Delay	8.7
HCM 6th LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	203	12	115	31	16	145	52	496	22	59	865	219
Future Volume (veh/h)	203	12	115	31	16	145	52	496	22	59	865	219
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	239	14	135	36	19	171	61	584	26	69	1018	258
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	300	15	142	333	166	527	309	2041	910	458	1614	407
Arrive On Green	0.33	0.33	0.33	0.33	0.33	0.33	0.57	0.57	0.57	1.00	1.00	1.00
Sat Flow, veh/h	753	44	425	849	498	1578	434	3554	1585	811	2810	709
Grp Volume(v), veh/h	388	0	0	55	0	171	61	584	26	69	642	634
Grp Sat Flow(s),veh/h/ln	1222	0	0	1347	0	1578	434	1777	1585	811	1777	1742
Q Serve(g_s), s	34.5	0.0	0.0	0.0	0.0	9.7	8.4	10.0	0.9	1.7	0.0	0.0
Cycle Q Clear(g_c), s	37.5	0.0	0.0	3.0	0.0	9.7	8.4	10.0	0.9	11.8	0.0	0.0
Prop In Lane	0.62		0.35	0.65		1.00	1.00		1.00	1.00		0.41
Lane Grp Cap(c), veh/h	457	0	0	500	0	527	309	2041	910	458	1020	1000
V/C Ratio(X)	0.85	0.00	0.00	0.11	0.00	0.32	0.20	0.29	0.03	0.15	0.63	0.63
Avail Cap(c_a), veh/h	472	0	0	516	0	546	309	2041	910	458	1020	1000
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	0.85	0.85	0.85	0.99	0.99	0.99
Uniform Delay (d), s/veh	40.6	0.0	0.0	27.5	0.0	29.8	12.7	13.0	11.1	0.9	0.0	0.0
Incr Delay (d2), s/veh	13.4	0.0	0.0	0.1	0.0	0.4	1.2	0.3	0.0	0.7	2.9	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	18.5	0.0	0.0	2.0	0.0	6.7	1.6	6.8	0.5	0.2	1.5	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.9	0.0	0.0	27.6	0.0	30.2	13.9	13.3	11.1	1.5	2.9	3.0
LnGrp LOS	D	A	A	C	A	C	B	B	B	A	A	A
Approach Vol, veh/h		388			226			671			1345	
Approach Delay, s/veh		53.9			29.6			13.3			2.9	
Approach LOS		D			C			B			A	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	74.4	45.6	74.4	45.6
Change Period (Y+Rc), s	5.5	5.5	5.5	5.5
Max Green Setting (Gmax), s	67.5	41.5	67.5	41.5
Max Q Clear Time (g_c+I1), s	12.0	39.5	13.8	11.7
Green Ext Time (p_c), s	5.5	0.5	12.2	0.9

Intersection Summary	
HCM 6th Ctrl Delay	15.4
HCM 6th LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	152	10	53	27	11	75	63	650	44	138	1113	161
Future Volume (veh/h)	152	10	53	27	11	75	63	650	44	138	1113	161
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	158	10	55	28	11	78	66	677	46	144	1159	168
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	230	12	63	255	92	320	352	2510	1119	525	2200	318
Arrive On Green	0.20	0.20	0.20	0.20	0.20	0.20	0.71	0.71	0.71	1.00	1.00	1.00
Sat Flow, veh/h	884	62	310	1005	455	1585	413	3554	1585	730	3115	450
Grp Volume(v), veh/h	223	0	0	39	0	78	66	677	46	144	659	668
Grp Sat Flow(s),veh/h/ln	1256	0	0	1460	0	1585	413	1777	1585	730	1777	1788
Q Serve(g_s), s	18.7	0.0	0.0	0.0	0.0	5.0	6.7	8.3	1.1	3.2	0.0	0.0
Cycle Q Clear(g_c), s	21.1	0.0	0.0	2.4	0.0	5.0	6.7	8.3	1.1	11.5	0.0	0.0
Prop In Lane	0.71		0.25	0.72		1.00	1.00		1.00	1.00		0.25
Lane Grp Cap(c), veh/h	305	0	0	347	0	320	352	2510	1119	525	1255	1263
V/C Ratio(X)	0.73	0.00	0.00	0.11	0.00	0.24	0.19	0.27	0.04	0.27	0.53	0.53
Avail Cap(c_a), veh/h	504	0	0	556	0	548	352	2510	1119	525	1255	1263
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	0.71	0.71	0.71	0.97	0.97	0.97
Uniform Delay (d), s/veh	47.7	0.0	0.0	39.1	0.0	40.2	6.2	6.4	5.3	0.6	0.0	0.0
Incr Delay (d2), s/veh	3.4	0.0	0.0	0.1	0.0	0.4	0.8	0.2	0.0	1.3	1.5	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	10.9	0.0	0.0	1.7	0.0	3.5	1.1	5.0	0.6	0.3	1.0	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	51.1	0.0	0.0	39.2	0.0	40.6	7.0	6.6	5.4	1.8	1.5	1.5
LnGrp LOS	D	A	A	D	A	D	A	A	A	A	A	A
Approach Vol, veh/h		223			117			789			1471	
Approach Delay, s/veh		51.1			40.1			6.6			1.6	
Approach LOS		D			D			A			A	

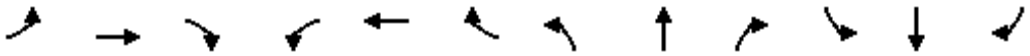
Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	90.2	29.8	90.2	29.8
Change Period (Y+Rc), s	5.5	5.5	5.5	5.5
Max Green Setting (Gmax), s	67.5	41.5	67.5	41.5
Max Q Clear Time (g_c+I1), s	10.3	23.1	13.5	7.0
Green Ext Time (p_c), s	6.7	1.2	14.3	0.4

Intersection Summary	
HCM 6th Ctrl Delay	9.1
HCM 6th LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	208	12	118	16	16	113	53	490	17	48	898	224
Future Volume (veh/h)	208	12	118	16	16	113	53	490	17	48	898	224
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	245	14	139	19	19	133	62	576	20	56	1056	264
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	308	15	147	266	252	514	302	2069	923	472	1642	408
Arrive On Green	0.33	0.33	0.33	0.33	0.33	0.33	0.58	0.58	0.58	1.00	1.00	1.00
Sat Flow, veh/h	797	46	452	678	774	1578	416	3554	1585	822	2819	701
Grp Volume(v), veh/h	398	0	0	38	0	133	62	576	20	56	663	657
Grp Sat Flow(s),veh/h/ln	1294	0	0	1453	0	1578	416	1777	1585	822	1777	1743
Q Serve(g_s), s	34.4	0.0	0.0	0.0	0.0	7.4	8.8	9.7	0.6	1.3	0.0	0.0
Cycle Q Clear(g_c), s	36.1	0.0	0.0	1.7	0.0	7.4	8.8	9.7	0.6	11.0	0.0	0.0
Prop In Lane	0.62		0.35	0.50		1.00	1.00		1.00	1.00		0.40
Lane Grp Cap(c), veh/h	470	0	0	519	0	514	302	2069	923	472	1035	1015
V/C Ratio(X)	0.85	0.00	0.00	0.07	0.00	0.26	0.21	0.28	0.02	0.12	0.64	0.65
Avail Cap(c_a), veh/h	497	0	0	548	0	546	302	2069	923	472	1035	1015
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	0.84	0.84	0.84	0.99	0.99	0.99
Uniform Delay (d), s/veh	40.2	0.0	0.0	27.8	0.0	29.8	12.3	12.5	10.6	0.8	0.0	0.0
Incr Delay (d2), s/veh	12.3	0.0	0.0	0.1	0.0	0.3	1.3	0.3	0.0	0.5	3.0	3.2
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	18.6	0.0	0.0	1.4	0.0	5.1	1.6	6.6	0.4	0.1	1.6	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.5	0.0	0.0	27.9	0.0	30.0	13.6	12.8	10.6	1.3	3.0	3.2
LnGrp LOS	D	A	A	C	A	C	B	B	B	A	A	A
Approach Vol, veh/h		398			171			658			1376	
Approach Delay, s/veh		52.5			29.5			12.8			3.0	
Approach LOS		D			C			B			A	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	75.4	44.6	75.4	44.6
Change Period (Y+Rc), s	5.5	5.5	5.5	5.5
Max Green Setting (Gmax), s	67.5	41.5	67.5	41.5
Max Q Clear Time (g_c+I1), s	11.7	38.1	13.0	9.4
Green Ext Time (p_c), s	5.5	0.8	12.8	0.6

Intersection Summary	
HCM 6th Ctrl Delay	14.8
HCM 6th LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	155	10	54	18	11	55	64	682	31	104	1138	165
Future Volume (veh/h)	155	10	54	18	11	55	64	682	31	104	1138	165
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	161	10	56	19	11	57	67	710	32	108	1185	172
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	235	11	64	226	121	314	345	2525	1126	518	2213	320
Arrive On Green	0.20	0.20	0.20	0.20	0.20	0.20	0.71	0.71	0.71	1.00	1.00	1.00
Sat Flow, veh/h	927	58	322	896	610	1585	401	3554	1585	718	3115	450
Grp Volume(v), veh/h	227	0	0	30	0	57	67	710	32	108	674	683
Grp Sat Flow(s),veh/h/ln	1307	0	0	1506	0	1585	401	1777	1585	718	1777	1788
Q Serve(g_s), s	18.9	0.0	0.0	0.0	0.0	3.6	7.0	8.7	0.7	2.3	0.0	0.0
Cycle Q Clear(g_c), s	20.5	0.0	0.0	1.7	0.0	3.6	7.0	8.7	0.7	11.0	0.0	0.0
Prop In Lane	0.71		0.25	0.63		1.00	1.00		1.00	1.00		0.25
Lane Grp Cap(c), veh/h	310	0	0	347	0	314	345	2525	1126	518	1262	1271
V/C Ratio(X)	0.73	0.00	0.00	0.09	0.00	0.18	0.19	0.28	0.03	0.21	0.53	0.54
Avail Cap(c_a), veh/h	518	0	0	568	0	548	345	2525	1126	518	1262	1271
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	0.74	0.74	0.74	0.97	0.97	0.97
Uniform Delay (d), s/veh	47.7	0.0	0.0	39.3	0.0	40.1	6.0	6.3	5.1	0.6	0.0	0.0
Incr Delay (d2), s/veh	3.4	0.0	0.0	0.1	0.0	0.3	0.9	0.2	0.0	0.9	1.6	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	11.1	0.0	0.0	1.3	0.0	2.6	1.1	5.2	0.4	0.2	1.0	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	51.0	0.0	0.0	39.4	0.0	40.3	7.0	6.5	5.2	1.4	1.6	1.6
LnGrp LOS	D	A	A	D	A	D	A	A	A	A	A	A
Approach Vol, veh/h		227			87			809			1465	
Approach Delay, s/veh		51.0			40.0			6.5			1.6	
Approach LOS		D			D			A			A	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	90.8	29.2	90.8	29.2
Change Period (Y+Rc), s	5.5	5.5	5.5	5.5
Max Green Setting (Gmax), s	67.5	41.5	67.5	41.5
Max Q Clear Time (g_c+I1), s	10.7	22.5	13.0	5.6
Green Ext Time (p_c), s	7.1	1.2	14.3	0.3

Intersection Summary	
HCM 6th Ctrl Delay	8.7
HCM 6th LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	208	12	118	29	16	145	53	528	22	59	904	224
Future Volume (veh/h)	208	12	118	29	16	145	53	528	22	59	904	224
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	245	14	139	34	19	171	62	621	26	69	1064	264
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	305	15	145	332	175	534	295	2025	903	435	1609	397
Arrive On Green	0.34	0.34	0.34	0.34	0.34	0.34	0.57	0.57	0.57	1.00	1.00	1.00
Sat Flow, veh/h	757	43	429	836	518	1578	413	3554	1585	784	2824	697
Grp Volume(v), veh/h	398	0	0	53	0	171	62	621	26	69	667	661
Grp Sat Flow(s),veh/h/ln	1230	0	0	1354	0	1578	413	1777	1585	784	1777	1744
Q Serve(g_s), s	35.4	0.0	0.0	0.0	0.0	9.6	9.1	10.9	0.9	2.0	0.0	0.0
Cycle Q Clear(g_c), s	38.2	0.0	0.0	2.8	0.0	9.6	9.1	10.9	0.9	12.9	0.0	0.0
Prop In Lane	0.62		0.35	0.64		1.00	1.00		1.00	1.00		0.40
Lane Grp Cap(c), veh/h	465	0	0	508	0	534	295	2025	903	435	1012	994
V/C Ratio(X)	0.86	0.00	0.00	0.10	0.00	0.32	0.21	0.31	0.03	0.16	0.66	0.66
Avail Cap(c_a), veh/h	474	0	0	518	0	546	295	2025	903	435	1012	994
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	0.84	0.84	0.84	0.99	0.99	0.99
Uniform Delay (d), s/veh	40.3	0.0	0.0	27.1	0.0	29.4	13.1	13.5	11.3	1.0	0.0	0.0
Incr Delay (d2), s/veh	14.2	0.0	0.0	0.1	0.0	0.3	1.4	0.3	0.0	0.8	3.3	3.5
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	19.0	0.0	0.0	1.9	0.0	6.6	1.6	7.3	0.5	0.2	1.7	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	54.4	0.0	0.0	27.2	0.0	29.8	14.4	13.8	11.3	1.8	3.3	3.5
LnGrp LOS	D	A	A	C	A	C	B	B	B	A	A	A
Approach Vol, veh/h		398			224			709			1397	
Approach Delay, s/veh		54.4			29.2			13.8			3.3	
Approach LOS		D			C			B			A	

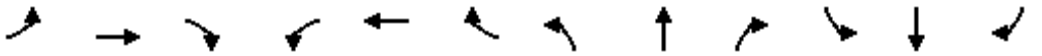
Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	73.9	46.1	73.9	46.1
Change Period (Y+Rc), s	5.5	5.5	5.5	5.5
Max Green Setting (Gmax), s	67.5	41.5	67.5	41.5
Max Q Clear Time (g_c+I1), s	12.9	40.2	14.9	11.6
Green Ext Time (p_c), s	6.0	0.3	13.1	0.9

Intersection Summary	
HCM 6th Ctrl Delay	15.6
HCM 6th LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	155	10	54	27	11	76	64	697	45	140	1171	165
Future Volume (veh/h)	155	10	54	27	11	76	64	697	45	140	1171	165
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	161	10	56	28	11	79	67	726	47	146	1220	172
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	233	12	64	258	93	326	333	2498	1114	497	2199	309
Arrive On Green	0.21	0.21	0.21	0.21	0.21	0.21	0.70	0.70	0.70	1.00	1.00	1.00
Sat Flow, veh/h	886	59	310	1006	455	1585	388	3554	1585	697	3128	439
Grp Volume(v), veh/h	227	0	0	39	0	79	67	726	47	146	691	701
Grp Sat Flow(s),veh/h/ln	1255	0	0	1460	0	1585	388	1777	1585	697	1777	1790
Q Serve(g_s), s	19.0	0.0	0.0	0.0	0.0	5.0	7.4	9.2	1.1	3.9	0.0	0.0
Cycle Q Clear(g_c), s	21.5	0.0	0.0	2.4	0.0	5.0	7.4	9.2	1.1	13.0	0.0	0.0
Prop In Lane	0.71		0.25	0.72		1.00	1.00		1.00	1.00		0.25
Lane Grp Cap(c), veh/h	309	0	0	351	0	326	333	2498	1114	497	1249	1258
V/C Ratio(X)	0.73	0.00	0.00	0.11	0.00	0.24	0.20	0.29	0.04	0.29	0.55	0.56
Avail Cap(c_a), veh/h	504	0	0	555	0	548	333	2498	1114	497	1249	1258
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	0.69	0.69	0.69	0.96	0.96	0.96
Uniform Delay (d), s/veh	47.5	0.0	0.0	38.8	0.0	39.9	6.4	6.7	5.5	0.7	0.0	0.0
Incr Delay (d2), s/veh	3.4	0.0	0.0	0.1	0.0	0.4	0.9	0.2	0.0	1.4	1.7	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	11.1	0.0	0.0	1.7	0.0	3.6	1.1	5.4	0.6	0.4	1.1	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.9	0.0	0.0	38.9	0.0	40.3	7.3	6.9	5.5	2.1	1.7	1.7
LnGrp LOS	D	A	A	D	A	D	A	A	A	A	A	A
Approach Vol, veh/h		227			118			840			1538	
Approach Delay, s/veh		50.9			39.8			6.8			1.7	
Approach LOS		D			D			A			A	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	89.9	30.1	89.9	30.1
Change Period (Y+Rc), s	5.5	5.5	5.5	5.5
Max Green Setting (Gmax), s	67.5	41.5	67.5	41.5
Max Q Clear Time (g_c+I1), s	11.2	23.5	15.0	7.0
Green Ext Time (p_c), s	7.4	1.2	15.6	0.4

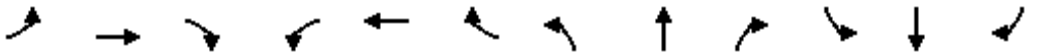
Intersection Summary	
HCM 6th Ctrl Delay	9.1
HCM 6th LOS	A



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	144	295	162	135	366	70	153	390	125	82	712	137
Future Volume (veh/h)	144	295	162	135	366	70	153	390	125	82	712	137
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	1945	1870	1870	1945	1870	1870	1870	1870	1870	1945
Adj Flow Rate, veh/h	162	331	182	152	411	79	172	438	140	92	800	154
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	189	1234	573	179	1541	288	199	1048	466	127	906	593
Arrive On Green	0.11	0.36	0.36	0.10	0.36	0.36	0.11	0.29	0.29	0.14	0.51	0.51
Sat Flow, veh/h	1781	3404	1580	1781	4319	807	1781	3554	1580	1781	3554	1641
Grp Volume(v), veh/h	162	331	182	152	321	169	172	438	140	92	800	154
Grp Sat Flow(s),veh/h/ln	1781	1702	1580	1781	1702	1723	1781	1777	1580	1781	1777	1641
Q Serve(g_s), s	10.7	8.2	10.0	10.1	8.0	8.4	11.4	11.9	8.2	5.9	24.1	5.8
Cycle Q Clear(g_c), s	10.7	8.2	10.0	10.1	8.0	8.4	11.4	11.9	8.2	5.9	24.1	5.8
Prop In Lane	1.00		1.00	1.00		0.47	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	189	1234	573	179	1215	615	199	1048	466	127	906	593
V/C Ratio(X)	0.86	0.27	0.32	0.85	0.26	0.27	0.87	0.42	0.30	0.72	0.88	0.26
Avail Cap(c_a), veh/h	238	1234	573	238	1215	615	245	1048	466	245	977	626
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.75	0.75	0.75
Uniform Delay (d), s/veh	52.8	27.0	27.6	53.1	27.4	27.5	52.4	34.0	32.7	50.3	27.8	17.4
Incr Delay (d2), s/veh	18.6	0.5	1.5	15.7	0.5	1.1	19.8	0.5	0.6	2.2	7.6	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	9.5	6.0	7.0	8.9	5.9	6.3	10.2	8.8	5.7	4.5	11.6	3.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	71.3	27.5	29.0	68.8	27.9	28.6	72.2	34.5	33.3	52.4	35.4	17.7
LnGrp LOS	E	C	C	E	C	C	E	C	C	D	D	B
Approach Vol, veh/h		675			642			750			1046	
Approach Delay, s/veh		38.5			37.8			42.9			34.3	
Approach LOS		D			D			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.5	49.0	17.9	36.6	17.2	48.3	13.1	41.4
Change Period (Y+Rc), s	4.5	5.5	4.5	6.0	4.5	5.5	4.5	6.0
Max Green Setting (Gmax), s	16.0	34.0	16.5	33.0	16.0	34.0	16.5	33.0
Max Q Clear Time (g_c+I1), s	12.1	12.0	13.4	26.1	12.7	10.4	7.9	13.9
Green Ext Time (p_c), s	0.0	4.9	0.0	4.2	0.0	4.7	0.0	4.9

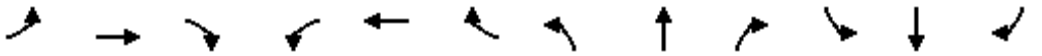
Intersection Summary	
HCM 6th Ctrl Delay	38.0
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	157	736	163	176	517	63	169	434	149	194	708	146
Future Volume (veh/h)	157	736	163	176	517	63	169	434	149	194	708	146
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		0.98	1.00		0.99
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	1945	1870	1870	1945	1870	1870	1870	1870	1870	1945
Adj Flow Rate, veh/h	164	767	170	183	539	66	176	452	155	202	738	152
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	191	1478	324	210	1683	203	203	821	361	225	866	576
Arrive On Green	0.11	0.35	0.35	0.12	0.36	0.36	0.11	0.23	0.23	0.25	0.49	0.49
Sat Flow, veh/h	1781	4176	916	1781	4616	557	1781	3554	1560	1781	3554	1638
Grp Volume(v), veh/h	164	624	313	183	396	209	176	452	155	202	738	152
Grp Sat Flow(s),veh/h/ln	1781	1702	1688	1781	1702	1769	1781	1777	1560	1781	1777	1638
Q Serve(g_s), s	10.9	17.4	17.7	12.1	10.0	10.2	11.7	13.4	10.2	13.2	21.9	6.0
Cycle Q Clear(g_c), s	10.9	17.4	17.7	12.1	10.0	10.2	11.7	13.4	10.2	13.2	21.9	6.0
Prop In Lane	1.00		0.54	1.00		0.32	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	191	1205	598	210	1241	645	203	821	361	225	866	576
V/C Ratio(X)	0.86	0.52	0.52	0.87	0.32	0.32	0.87	0.55	0.43	0.90	0.85	0.26
Avail Cap(c_a), veh/h	238	1205	598	238	1241	645	245	977	429	245	977	627
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.84	0.84	0.84
Uniform Delay (d), s/veh	52.7	30.7	30.7	52.1	27.4	27.5	52.3	40.6	39.4	44.1	28.9	18.5
Incr Delay (d2), s/veh	19.1	1.6	3.3	24.0	0.7	1.3	20.8	1.0	1.4	25.6	6.4	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	9.7	11.5	11.9	10.9	7.3	7.9	10.4	9.9	7.2	10.3	11.1	3.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	71.8	32.2	34.0	76.1	28.1	28.8	73.1	41.6	40.8	69.7	35.2	18.8
LnGrp LOS	E	C	C	E	C	C	E	D	D	E	D	B
Approach Vol, veh/h		1101			788			783			1092	
Approach Delay, s/veh		38.6			39.4			48.5			39.3	
Approach LOS		D			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.6	48.0	18.2	35.2	17.3	49.3	19.7	33.7
Change Period (Y+Rc), s	4.5	5.5	4.5	6.0	4.5	5.5	4.5	6.0
Max Green Setting (Gmax), s	16.0	34.0	16.5	33.0	16.0	34.0	16.5	33.0
Max Q Clear Time (g_c+I1), s	14.1	19.7	13.7	23.9	12.9	12.2	15.2	15.4
Green Ext Time (p_c), s	0.0	7.3	0.0	4.9	0.0	5.7	0.0	5.0

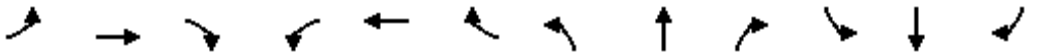
Intersection Summary	
HCM 6th Ctrl Delay	41.1
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	146	299	162	158	391	109	153	393	129	87	721	143
Future Volume (veh/h)	146	299	162	158	391	109	153	393	129	87	721	143
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	1945	1870	1870	1945	1870	1870	1870	1870	1870	1945
Adj Flow Rate, veh/h	164	336	182	178	439	122	172	442	145	98	810	161
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	191	1178	547	205	1417	380	199	1052	468	129	912	597
Arrive On Green	0.11	0.35	0.35	0.11	0.35	0.35	0.11	0.30	0.30	0.14	0.51	0.51
Sat Flow, veh/h	1781	3404	1580	1781	4003	1075	1781	3554	1580	1781	3554	1641
Grp Volume(v), veh/h	164	336	182	178	371	190	172	442	145	98	810	161
Grp Sat Flow(s),veh/h/ln	1781	1702	1580	1781	1702	1674	1781	1777	1580	1781	1777	1641
Q Serve(g_s), s	10.9	8.6	10.2	11.8	9.5	9.9	11.4	12.0	8.5	6.3	24.5	6.1
Cycle Q Clear(g_c), s	10.9	8.6	10.2	11.8	9.5	9.9	11.4	12.0	8.5	6.3	24.5	6.1
Prop In Lane	1.00		1.00	1.00		0.64	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	191	1178	547	205	1205	592	199	1052	468	129	912	597
V/C Ratio(X)	0.86	0.29	0.33	0.87	0.31	0.32	0.87	0.42	0.31	0.76	0.89	0.27
Avail Cap(c_a), veh/h	238	1178	547	238	1205	592	245	1052	468	245	977	628
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.75	0.75	0.75
Uniform Delay (d), s/veh	52.7	28.5	29.0	52.2	28.1	28.3	52.4	34.0	32.7	50.4	27.7	17.2
Incr Delay (d2), s/veh	19.1	0.6	1.6	22.8	0.7	1.4	19.8	0.5	0.6	2.6	8.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	9.7	6.3	7.2	10.6	6.9	7.4	10.2	8.9	5.9	4.9	11.7	3.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	71.8	29.1	30.6	75.0	28.8	29.7	72.2	34.4	33.4	53.0	35.6	17.5
LnGrp LOS	E	C	C	E	C	C	E	C	C	D	D	B
Approach Vol, veh/h		682			739			759			1069	
Approach Delay, s/veh		39.8			40.1			42.8			34.5	
Approach LOS		D			D			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.3	47.0	17.9	36.8	17.3	48.0	13.2	41.5
Change Period (Y+Rc), s	4.5	5.5	4.5	6.0	4.5	5.5	4.5	6.0
Max Green Setting (Gmax), s	16.0	34.0	16.5	33.0	16.0	34.0	16.5	33.0
Max Q Clear Time (g_c+I1), s	13.8	12.2	13.4	26.5	12.9	11.9	8.3	14.0
Green Ext Time (p_c), s	0.0	4.9	0.0	4.0	0.0	5.3	0.0	5.0

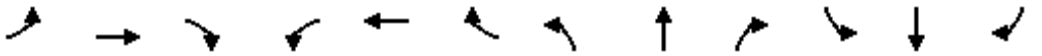
Intersection Summary	
HCM 6th Ctrl Delay	38.8
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	163	758	163	186	528	78	169	443	170	227	713	150
Future Volume (veh/h)	163	758	163	186	528	78	169	443	170	227	713	150
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		0.98	1.00		0.99
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	1945	1870	1870	1945	1870	1870	1870	1870	1870	1945
Adj Flow Rate, veh/h	170	790	170	194	550	81	176	461	177	236	743	156
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	197	1457	311	220	1622	235	203	785	345	245	869	583
Arrive On Green	0.11	0.35	0.35	0.12	0.36	0.36	0.11	0.22	0.22	0.28	0.49	0.49
Sat Flow, veh/h	1781	4200	896	1781	4503	653	1781	3554	1560	1781	3554	1638
Grp Volume(v), veh/h	170	639	321	194	414	217	176	461	177	236	743	156
Grp Sat Flow(s),veh/h/ln	1781	1702	1692	1781	1702	1752	1781	1777	1560	1781	1777	1638
Q Serve(g_s), s	11.3	18.1	18.4	12.9	10.6	10.9	11.7	13.9	12.0	15.7	22.0	6.2
Cycle Q Clear(g_c), s	11.3	18.1	18.4	12.9	10.6	10.9	11.7	13.9	12.0	15.7	22.0	6.2
Prop In Lane	1.00		0.53	1.00		0.37	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	197	1181	587	220	1226	631	203	785	345	245	869	583
V/C Ratio(X)	0.86	0.54	0.55	0.88	0.34	0.34	0.87	0.59	0.51	0.96	0.85	0.27
Avail Cap(c_a), veh/h	238	1181	587	238	1226	631	245	977	429	245	977	633
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.83	0.83	0.83
Uniform Delay (d), s/veh	52.5	31.5	31.6	51.7	28.0	28.0	52.3	41.8	41.1	43.2	28.8	18.2
Incr Delay (d2), s/veh	20.7	1.8	3.6	26.6	0.7	1.5	20.8	1.2	2.0	42.1	6.4	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	10.1	11.9	12.4	11.6	7.7	8.2	10.4	10.2	8.3	12.8	11.1	3.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	73.2	33.3	35.2	78.3	28.7	29.5	73.1	43.0	43.1	85.3	35.2	18.6
LnGrp LOS	E	C	D	E	C	C	E	D	D	F	D	B
Approach Vol, veh/h		1130			825			814			1135	
Approach Delay, s/veh		39.8			40.6			49.6			43.3	
Approach LOS		D			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.3	47.1	18.2	35.4	17.8	48.7	21.0	32.5
Change Period (Y+Rc), s	4.5	5.5	4.5	6.0	4.5	5.5	4.5	6.0
Max Green Setting (Gmax), s	16.0	34.0	16.5	33.0	16.0	34.0	16.5	33.0
Max Q Clear Time (g_c+I1), s	14.9	20.4	13.7	24.0	13.3	12.9	17.7	15.9
Green Ext Time (p_c), s	0.0	7.2	0.0	4.9	0.0	5.9	0.0	5.1

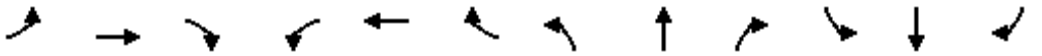
Intersection Summary	
HCM 6th Ctrl Delay	43.0
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	147	336	178	141	384	72	165	421	131	84	746	140
Future Volume (veh/h)	147	336	178	141	384	72	165	421	131	84	746	140
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	1945	1870	1870	1945	1870	1870	1870	1870	1870	1945
Adj Flow Rate, veh/h	165	378	200	158	431	81	185	473	147	94	838	157
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	192	1177	546	185	1481	271	212	1095	487	128	928	606
Arrive On Green	0.11	0.35	0.35	0.10	0.34	0.34	0.12	0.31	0.31	0.14	0.52	0.52
Sat Flow, veh/h	1781	3404	1580	1781	4335	794	1781	3554	1580	1781	3554	1641
Grp Volume(v), veh/h	165	378	200	158	336	176	185	473	147	94	838	157
Grp Sat Flow(s),veh/h/ln	1781	1702	1580	1781	1702	1725	1781	1777	1580	1781	1777	1641
Q Serve(g_s), s	10.9	9.8	11.4	10.5	8.7	9.0	12.3	12.7	8.5	6.1	25.6	5.8
Cycle Q Clear(g_c), s	10.9	9.8	11.4	10.5	8.7	9.0	12.3	12.7	8.5	6.1	25.6	5.8
Prop In Lane	1.00		1.00	1.00		0.46	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	192	1177	546	185	1163	589	212	1095	487	128	928	606
V/C Ratio(X)	0.86	0.32	0.37	0.86	0.29	0.30	0.87	0.43	0.30	0.74	0.90	0.26
Avail Cap(c_a), veh/h	238	1177	546	238	1163	589	245	1095	487	245	977	629
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.73	0.73	0.73
Uniform Delay (d), s/veh	52.7	28.9	29.4	52.9	28.9	29.0	52.0	33.1	31.7	50.3	27.3	16.7
Incr Delay (d2), s/veh	19.4	0.7	1.9	17.5	0.6	1.3	23.1	0.5	0.6	2.2	9.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	9.7	7.2	7.9	9.3	6.3	6.9	11.0	9.3	5.9	4.6	12.1	3.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	72.1	29.6	31.3	70.3	29.5	30.3	75.0	33.6	32.3	52.5	36.3	16.9
LnGrp LOS	E	C	C	E	C	C	E	C	C	D	D	B
Approach Vol, veh/h		743			670			805			1089	
Approach Delay, s/veh		39.5			39.3			42.9			34.9	
Approach LOS		D			D			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.9	47.0	18.8	37.3	17.4	46.5	13.1	43.0
Change Period (Y+Rc), s	4.5	5.5	4.5	6.0	4.5	5.5	4.5	6.0
Max Green Setting (Gmax), s	16.0	34.0	16.5	33.0	16.0	34.0	16.5	33.0
Max Q Clear Time (g_c+I1), s	12.5	13.4	14.3	27.6	12.9	11.0	8.1	14.7
Green Ext Time (p_c), s	0.0	5.4	0.0	3.5	0.0	4.9	0.0	5.2

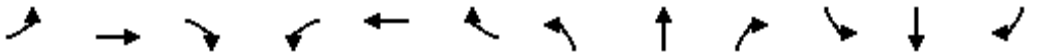
Intersection Summary	
HCM 6th Ctrl Delay	38.8
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	161	764	179	183	560	64	187	476	155	198	757	149
Future Volume (veh/h)	161	764	179	183	560	64	187	476	155	198	757	149
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		0.98	1.00		0.99
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	1945	1870	1870	1945	1870	1870	1870	1870	1870	1945
Adj Flow Rate, veh/h	168	796	186	191	583	67	195	496	161	206	789	155
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	195	1361	315	217	1593	181	222	884	388	229	899	595
Arrive On Green	0.11	0.33	0.33	0.12	0.34	0.34	0.12	0.25	0.25	0.26	0.51	0.51
Sat Flow, veh/h	1781	4128	956	1781	4650	528	1781	3554	1561	1781	3554	1639
Grp Volume(v), veh/h	168	655	327	191	425	225	195	496	161	206	789	155
Grp Sat Flow(s),veh/h/ln	1781	1702	1680	1781	1702	1774	1781	1777	1561	1781	1777	1639
Q Serve(g_s), s	11.1	19.2	19.4	12.7	11.3	11.5	12.9	14.6	10.4	13.4	23.7	5.9
Cycle Q Clear(g_c), s	11.1	19.2	19.4	12.7	11.3	11.5	12.9	14.6	10.4	13.4	23.7	5.9
Prop In Lane	1.00		0.57	1.00		0.30	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	195	1123	554	217	1166	608	222	884	388	229	899	595
V/C Ratio(X)	0.86	0.58	0.59	0.88	0.36	0.37	0.88	0.56	0.41	0.90	0.88	0.26
Avail Cap(c_a), veh/h	238	1123	554	238	1166	608	245	977	429	245	977	631
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.81	0.81	0.81
Uniform Delay (d), s/veh	52.6	33.4	33.5	51.8	29.6	29.7	51.7	39.3	37.8	43.8	28.0	17.4
Incr Delay (d2), s/veh	20.2	2.2	4.6	25.9	0.9	1.7	25.4	1.0	1.2	25.8	7.7	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	9.9	12.6	13.0	11.4	8.1	8.7	11.6	10.5	7.2	10.4	11.7	3.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	72.8	35.6	38.0	77.7	30.5	31.4	77.0	40.3	39.0	69.6	35.7	17.7
LnGrp LOS	E	D	D	E	C	C	E	D	D	E	D	B
Approach Vol, veh/h		1150			841			852			1150	
Approach Delay, s/veh		41.7			41.5			48.5			39.4	
Approach LOS		D			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.2	45.1	19.4	36.4	17.6	46.6	19.9	35.9
Change Period (Y+Rc), s	4.5	5.5	4.5	6.0	4.5	5.5	4.5	6.0
Max Green Setting (Gmax), s	16.0	34.0	16.5	33.0	16.0	34.0	16.5	33.0
Max Q Clear Time (g_c+I1), s	14.7	21.4	14.9	25.7	13.1	13.5	15.4	16.6
Green Ext Time (p_c), s	0.0	6.9	0.0	4.3	0.0	6.0	0.0	5.3

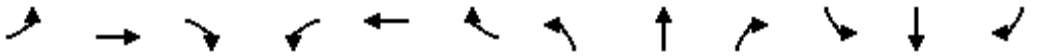
Intersection Summary	
HCM 6th Ctrl Delay	42.4
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	148	341	178	163	407	110	165	423	136	90	753	145
Future Volume (veh/h)	148	341	178	163	407	110	165	423	136	90	753	145
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	1945	1870	1870	1945	1870	1870	1870	1870	1870	1945
Adj Flow Rate, veh/h	166	383	200	183	457	124	185	475	153	101	846	163
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	193	1125	522	210	1367	359	212	1097	488	129	932	609
Arrive On Green	0.11	0.33	0.33	0.12	0.34	0.34	0.12	0.31	0.31	0.14	0.52	0.52
Sat Flow, veh/h	1781	3404	1579	1781	4024	1057	1781	3554	1580	1781	3554	1641
Grp Volume(v), veh/h	166	383	200	183	384	197	185	475	153	101	846	163
Grp Sat Flow(s),veh/h/ln	1781	1702	1579	1781	1702	1677	1781	1777	1580	1781	1777	1641
Q Serve(g_s), s	11.0	10.2	11.7	12.1	10.1	10.5	12.3	12.8	8.9	6.6	25.9	6.0
Cycle Q Clear(g_c), s	11.0	10.2	11.7	12.1	10.1	10.5	12.3	12.8	8.9	6.6	25.9	6.0
Prop In Lane	1.00		1.00	1.00		0.63	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	193	1125	522	210	1157	570	212	1097	488	129	932	609
V/C Ratio(X)	0.86	0.34	0.38	0.87	0.33	0.35	0.87	0.43	0.31	0.78	0.91	0.27
Avail Cap(c_a), veh/h	238	1125	522	238	1157	570	245	1097	488	245	977	630
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.72	0.72	0.72
Uniform Delay (d), s/veh	52.6	30.3	30.8	52.1	29.5	29.6	52.0	33.1	31.7	50.4	27.2	16.5
Incr Delay (d2), s/veh	19.7	0.8	2.1	24.0	0.8	1.7	23.1	0.5	0.6	2.8	9.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	9.8	7.5	8.1	10.9	7.4	7.8	11.0	9.3	6.2	5.0	12.3	3.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	72.3	31.1	32.9	76.1	30.2	31.3	75.0	33.6	32.4	53.2	36.5	16.8
LnGrp LOS	E	C	C	E	C	C	E	C	C	D	D	B
Approach Vol, veh/h		749			764			813			1110	
Approach Delay, s/veh		40.7			41.5			42.8			35.1	
Approach LOS		D			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.6	45.1	18.8	37.5	17.5	46.3	13.2	43.0
Change Period (Y+Rc), s	4.5	5.5	4.5	6.0	4.5	5.5	4.5	6.0
Max Green Setting (Gmax), s	16.0	34.0	16.5	33.0	16.0	34.0	16.5	33.0
Max Q Clear Time (g_c+I1), s	14.1	13.7	14.3	27.9	13.0	12.5	8.6	14.8
Green Ext Time (p_c), s	0.0	5.4	0.0	3.4	0.0	5.5	0.0	5.3

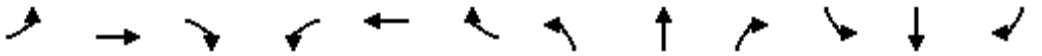
Intersection Summary	
HCM 6th Ctrl Delay	39.6
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	167	786	179	193	571	79	187	485	176	231	762	153
Future Volume (veh/h)	167	786	179	193	571	79	187	485	176	231	762	153
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		0.98	1.00		0.99
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	1945	1870	1870	1945	1870	1870	1870	1870	1870	1945
Adj Flow Rate, veh/h	174	819	186	201	595	82	195	505	183	241	794	159
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	201	1343	303	227	1537	209	222	855	376	245	902	602
Arrive On Green	0.11	0.32	0.32	0.13	0.34	0.34	0.12	0.24	0.24	0.28	0.51	0.51
Sat Flow, veh/h	1781	4152	936	1781	4544	618	1781	3554	1561	1781	3554	1639
Grp Volume(v), veh/h	174	670	335	201	444	233	195	505	183	241	794	159
Grp Sat Flow(s),veh/h/ln	1781	1702	1684	1781	1702	1758	1781	1777	1561	1781	1777	1639
Q Serve(g_s), s	11.5	19.9	20.1	13.3	11.9	12.1	12.9	15.1	12.1	16.1	23.9	6.0
Cycle Q Clear(g_c), s	11.5	19.9	20.1	13.3	11.9	12.1	12.9	15.1	12.1	16.1	23.9	6.0
Prop In Lane	1.00		0.56	1.00		0.35	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	201	1101	544	227	1152	595	222	855	376	245	902	602
V/C Ratio(X)	0.87	0.61	0.61	0.88	0.39	0.39	0.88	0.59	0.49	0.98	0.88	0.26
Avail Cap(c_a), veh/h	238	1101	544	238	1152	595	245	977	429	245	977	636
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.80	0.80	0.80
Uniform Delay (d), s/veh	52.4	34.2	34.3	51.5	30.2	30.3	51.7	40.3	39.2	43.4	27.9	17.1
Incr Delay (d2), s/veh	21.8	2.5	5.1	28.2	1.0	1.9	25.4	1.2	1.7	46.8	7.8	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	10.3	13.0	13.5	12.1	8.5	9.1	11.6	10.8	8.3	13.3	11.7	3.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	74.1	36.7	39.4	79.7	31.2	32.2	77.0	41.5	40.9	90.2	35.7	17.5
LnGrp LOS	E	D	D	E	C	C	E	D	D	F	D	B
Approach Vol, veh/h		1179			878			883			1194	
Approach Delay, s/veh		43.0			42.6			49.2			44.3	
Approach LOS		D			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.8	44.3	19.4	36.5	18.0	46.1	21.0	34.9
Change Period (Y+Rc), s	4.5	5.5	4.5	6.0	4.5	5.5	4.5	6.0
Max Green Setting (Gmax), s	16.0	34.0	16.5	33.0	16.0	34.0	16.5	33.0
Max Q Clear Time (g_c+I1), s	15.3	22.1	14.9	25.9	13.5	14.1	18.1	17.1
Green Ext Time (p_c), s	0.0	6.8	0.0	4.3	0.0	6.2	0.0	5.4

Intersection Summary	
HCM 6th Ctrl Delay	44.6
HCM 6th LOS	D



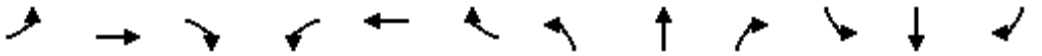
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	48	176	250	150	305	114	180	300	40	42	794	32
Future Volume (veh/h)	48	176	250	150	305	114	180	300	40	42	794	32
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		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	1945	1945	1870	1870	1870
Adj Flow Rate, veh/h	52	189	269	161	328	123	194	323	43	45	854	34
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	98	371	331	186	656	241	708	759	101	115	1013	40
Arrive On Green	0.05	0.21	0.21	0.10	0.26	0.26	0.20	0.45	0.45	0.06	0.29	0.29
Sat Flow, veh/h	1781	1777	1585	1781	2543	936	3456	1681	224	1781	3484	139
Grp Volume(v), veh/h	52	189	269	161	227	224	194	0	366	45	436	452
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1702	1728	0	1905	1781	1777	1845
Q Serve(g_s), s	3.4	11.3	19.4	10.7	13.1	13.5	5.7	0.0	15.6	2.9	27.6	27.6
Cycle Q Clear(g_c), s	3.4	11.3	19.4	10.7	13.1	13.5	5.7	0.0	15.6	2.9	27.6	27.6
Prop In Lane	1.00		1.00	1.00		0.55	1.00		0.12	1.00		0.08
Lane Grp Cap(c), veh/h	98	371	331	186	458	439	708	0	860	115	517	537
V/C Ratio(X)	0.53	0.51	0.81	0.87	0.50	0.51	0.27	0.00	0.43	0.39	0.84	0.84
Avail Cap(c_a), veh/h	186	503	449	186	503	482	708	0	860	148	570	592
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	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.2	42.1	45.3	52.9	37.9	38.0	40.2	0.0	22.3	53.8	40.0	40.0
Incr Delay (d2), s/veh	1.7	2.3	11.8	31.5	1.8	2.0	0.1	0.0	1.5	0.8	15.4	14.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.8	8.7	13.3	10.4	9.7	9.6	4.3	0.0	11.4	2.3	19.9	20.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.9	44.4	57.1	84.4	39.7	40.0	40.3	0.0	23.9	54.6	55.4	54.9
LnGrp LOS	E	D	E	F	D	D	D	A	C	D	E	D
Approach Vol, veh/h		510			612			560			933	
Approach Delay, s/veh		52.4			51.6			29.6			55.1	
Approach LOS		D			D			C			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.8	60.7	16.5	31.0	31.1	41.4	10.6	36.9
Change Period (Y+Rc), s	4.0	6.5	4.0	6.0	6.5	* 6.5	4.0	6.0
Max Green Setting (Gmax), s	10.0	43.0	12.5	34.0	14.0	* 39	12.5	34.0
Max Q Clear Time (g_c+I1), s	4.9	17.6	12.7	21.4	7.7	29.6	5.4	15.5
Green Ext Time (p_c), s	0.0	4.0	0.0	3.6	0.1	5.3	0.0	4.3

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

Notes

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	60	482	303	53	295	79	246	608	52	108	825	52
Future Volume (veh/h)	60	482	303	53	295	79	246	608	52	108	825	52
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		0.99
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	1945	1945	1870	1870	1870
Adj Flow Rate, veh/h	61	492	309	54	301	81	251	620	53	110	842	53
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	103	561	351	99	736	195	713	751	64	145	947	60
Arrive On Green	0.06	0.27	0.27	0.06	0.26	0.26	0.21	0.43	0.43	0.08	0.28	0.28
Sat Flow, veh/h	1781	2098	1313	1781	2779	735	3456	1767	151	1781	3392	213
Grp Volume(v), veh/h	61	416	385	54	191	191	251	0	673	110	441	454
Grp Sat Flow(s),veh/h/ln	1781	1777	1634	1781	1777	1738	1728	0	1918	1781	1777	1829
Q Serve(g_s), s	4.0	26.9	27.1	3.5	10.6	10.9	7.5	0.0	37.3	7.3	28.6	28.6
Cycle Q Clear(g_c), s	4.0	26.9	27.1	3.5	10.6	10.9	7.5	0.0	37.3	7.3	28.6	28.6
Prop In Lane	1.00		0.80	1.00		0.42	1.00		0.08	1.00		0.12
Lane Grp Cap(c), veh/h	103	475	437	99	471	460	713	0	815	145	496	511
V/C Ratio(X)	0.59	0.88	0.88	0.54	0.40	0.42	0.35	0.00	0.83	0.76	0.89	0.89
Avail Cap(c_a), veh/h	148	503	463	148	503	492	713	0	815	186	518	533
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	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.1	42.1	42.1	55.2	36.3	36.4	40.8	0.0	30.6	54.0	41.5	41.5
Incr Delay (d2), s/veh	2.0	16.9	18.5	1.7	1.2	1.3	0.1	0.0	9.3	9.1	20.6	20.1
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	3.3	19.6	18.6	2.9	8.2	8.2	5.6	0.0	25.3	6.4	21.1	21.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	57.1	59.0	60.6	56.9	37.5	37.7	40.9	0.0	39.9	63.1	62.0	61.6
LnGrp LOS	E	E	E	E	D	D	D	A	D	E	E	E
Approach Vol, veh/h		862			436			924			1005	
Approach Delay, s/veh		59.6			40.0			40.2			62.0	
Approach LOS		E			D			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.7	57.5	10.7	38.1	31.2	40.0	11.0	37.8
Change Period (Y+Rc), s	4.0	6.5	4.0	6.0	6.5	* 6.5	4.0	6.0
Max Green Setting (Gmax), s	12.5	43.0	10.0	34.0	20.0	* 35	10.0	34.0
Max Q Clear Time (g_c+I1), s	9.3	39.3	5.5	29.1	9.5	30.6	6.0	12.9
Green Ext Time (p_c), s	0.0	2.1	0.0	3.0	0.2	2.9	0.0	3.7

Intersection Summary	
HCM 6th Ctrl Delay	52.1
HCM 6th LOS	D

Notes

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

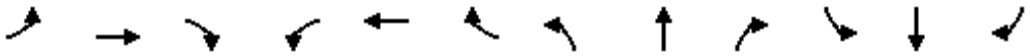
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	47	176	250	150	305	113	180	308	40	42	826	32
Future Volume (veh/h)	47	176	250	150	305	113	180	308	40	42	826	32
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		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	1945	1945	1870	1870	1870
Adj Flow Rate, veh/h	51	189	269	161	328	122	194	331	43	45	888	34
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	97	371	331	186	658	240	686	762	99	115	1036	40
Arrive On Green	0.05	0.21	0.21	0.10	0.26	0.26	0.20	0.45	0.45	0.06	0.30	0.30
Sat Flow, veh/h	1781	1777	1585	1781	2549	931	3456	1687	219	1781	3490	134
Grp Volume(v), veh/h	51	189	269	161	227	223	194	0	374	45	452	470
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1703	1728	0	1906	1781	1777	1846
Q Serve(g_s), s	3.3	11.3	19.4	10.7	13.0	13.4	5.7	0.0	16.1	2.9	28.8	28.8
Cycle Q Clear(g_c), s	3.3	11.3	19.4	10.7	13.0	13.4	5.7	0.0	16.1	2.9	28.8	28.8
Prop In Lane	1.00		1.00	1.00		0.55	1.00		0.11	1.00		0.07
Lane Grp Cap(c), veh/h	97	371	331	186	459	440	686	0	861	115	528	548
V/C Ratio(X)	0.53	0.51	0.81	0.87	0.49	0.51	0.28	0.00	0.43	0.39	0.86	0.86
Avail Cap(c_a), veh/h	186	503	449	186	503	482	686	0	861	148	570	592
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	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.2	42.1	45.3	52.9	37.8	38.0	40.8	0.0	22.4	53.8	39.8	39.8
Incr Delay (d2), s/veh	1.6	2.3	11.8	31.5	1.8	1.9	0.1	0.0	1.6	0.8	16.3	15.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.7	8.7	13.3	10.4	9.6	9.6	4.3	0.0	11.7	2.3	20.7	21.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.9	44.4	57.1	84.4	39.6	39.9	40.9	0.0	24.0	54.6	56.1	55.6
LnGrp LOS	E	D	E	F	D	D	D	A	C	D	E	E
Approach Vol, veh/h		509			611			568			967	
Approach Delay, s/veh		52.3			51.5			29.8			55.8	
Approach LOS		D			D			C			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.8	60.7	16.5	31.0	30.3	42.1	10.5	37.0
Change Period (Y+Rc), s	4.0	6.5	4.0	6.0	6.5	* 6.5	4.0	6.0
Max Green Setting (Gmax), s	10.0	43.0	12.5	34.0	14.0	* 39	12.5	34.0
Max Q Clear Time (g_c+I1), s	4.9	18.1	12.7	21.4	7.7	30.8	5.3	15.4
Green Ext Time (p_c), s	0.0	4.1	0.0	3.6	0.1	4.8	0.0	4.3

Intersection Summary	
HCM 6th Ctrl Delay	48.6
HCM 6th LOS	D

Notes

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	59	482	303	53	295	78	246	639	52	107	842	51
Future Volume (veh/h)	59	482	303	53	295	78	246	639	52	107	842	51
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		0.99
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	1945	1945	1870	1870	1870
Adj Flow Rate, veh/h	60	492	309	54	301	80	251	652	53	109	859	52
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	103	561	351	99	739	193	705	755	61	145	957	58
Arrive On Green	0.06	0.27	0.27	0.06	0.27	0.27	0.20	0.43	0.43	0.08	0.28	0.28
Sat Flow, veh/h	1781	2098	1313	1781	2787	729	3456	1775	144	1781	3401	206
Grp Volume(v), veh/h	60	416	385	54	190	191	251	0	705	109	449	462
Grp Sat Flow(s),veh/h/ln	1781	1777	1634	1781	1777	1739	1728	0	1919	1781	1777	1830
Q Serve(g_s), s	3.9	26.9	27.1	3.5	10.6	10.9	7.5	0.0	40.1	7.2	29.1	29.1
Cycle Q Clear(g_c), s	3.9	26.9	27.1	3.5	10.6	10.9	7.5	0.0	40.1	7.2	29.1	29.1
Prop In Lane	1.00		0.80	1.00		0.42	1.00		0.08	1.00		0.11
Lane Grp Cap(c), veh/h	103	475	437	99	471	461	705	0	816	145	500	515
V/C Ratio(X)	0.58	0.88	0.88	0.54	0.40	0.41	0.36	0.00	0.86	0.75	0.90	0.90
Avail Cap(c_a), veh/h	148	503	463	148	503	493	705	0	816	186	518	534
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	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.1	42.1	42.1	55.2	36.3	36.4	41.0	0.0	31.3	54.0	41.5	41.5
Incr Delay (d2), s/veh	2.0	16.9	18.5	1.7	1.2	1.3	0.1	0.0	11.8	8.5	21.5	21.0
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	3.2	19.6	18.6	2.9	8.1	8.2	5.6	0.0	27.4	6.3	21.6	22.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	57.1	59.0	60.6	56.9	37.5	37.7	41.1	0.0	43.1	62.5	62.9	62.5
LnGrp LOS	E	E	E	E	D	D	D	A	D	E	E	E
Approach Vol, veh/h		861			435			956			1020	
Approach Delay, s/veh		59.6			40.0			42.6			62.7	
Approach LOS		E			D			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.7	57.5	10.7	38.1	31.0	40.3	10.9	37.8
Change Period (Y+Rc), s	4.0	6.5	4.0	6.0	6.5	* 6.5	4.0	6.0
Max Green Setting (Gmax), s	12.5	43.0	10.0	34.0	20.0	* 35	10.0	34.0
Max Q Clear Time (g_c+I1), s	9.2	42.1	5.5	29.1	9.5	31.1	5.9	12.9
Green Ext Time (p_c), s	0.0	0.6	0.0	3.0	0.2	2.6	0.0	3.7

Intersection Summary	
HCM 6th Ctrl Delay	53.0
HCM 6th LOS	D

Notes

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

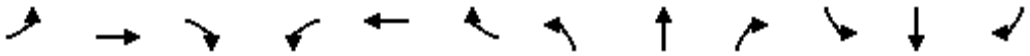
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	195	258	153	316	118	186	320	41	44	825	34
Future Volume (veh/h)	50	195	258	153	316	118	186	320	41	44	825	34
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		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	1945	1945	1870	1870	1870
Adj Flow Rate, veh/h	54	210	277	165	340	127	200	344	44	47	887	37
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	99	381	340	186	669	246	665	752	96	117	1034	43
Arrive On Green	0.06	0.21	0.21	0.10	0.26	0.26	0.19	0.44	0.44	0.07	0.30	0.30
Sat Flow, veh/h	1781	1777	1585	1781	2545	934	3456	1690	216	1781	3476	145
Grp Volume(v), veh/h	54	210	277	165	236	231	200	0	388	47	453	471
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1702	1728	0	1906	1781	1777	1844
Q Serve(g_s), s	3.5	12.6	20.0	11.0	13.5	13.9	6.0	0.0	17.0	3.0	28.9	28.9
Cycle Q Clear(g_c), s	3.5	12.6	20.0	11.0	13.5	13.9	6.0	0.0	17.0	3.0	28.9	28.9
Prop In Lane	1.00		1.00	1.00		0.55	1.00		0.11	1.00		0.08
Lane Grp Cap(c), veh/h	99	381	340	186	467	447	665	0	848	117	528	548
V/C Ratio(X)	0.54	0.55	0.82	0.89	0.50	0.52	0.30	0.00	0.46	0.40	0.86	0.86
Avail Cap(c_a), veh/h	186	503	449	186	503	482	665	0	848	148	570	592
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	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.2	42.0	44.9	53.1	37.6	37.7	41.5	0.0	23.2	53.8	39.8	39.8
Incr Delay (d2), s/veh	1.7	2.7	12.0	36.0	1.8	2.0	0.1	0.0	1.8	0.8	16.4	15.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.9	9.6	13.6	10.9	9.9	9.9	4.5	0.0	12.2	2.4	20.8	21.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.9	44.7	56.9	89.1	39.4	39.7	41.6	0.0	25.0	54.6	56.1	55.7
LnGrp LOS	E	D	E	F	D	D	D	A	C	D	E	E
Approach Vol, veh/h		541			632			588			971	
Approach Delay, s/veh		52.1			52.5			30.7			55.8	
Approach LOS		D			D			C			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.9	59.9	16.5	31.7	29.6	42.2	10.7	37.5
Change Period (Y+Rc), s	4.0	6.5	4.0	6.0	6.5	* 6.5	4.0	6.0
Max Green Setting (Gmax), s	10.0	43.0	12.5	34.0	14.0	* 39	12.5	34.0
Max Q Clear Time (g_c+I1), s	5.0	19.0	13.0	22.0	8.0	30.9	5.5	15.9
Green Ext Time (p_c), s	0.0	4.2	0.0	3.8	0.1	4.8	0.0	4.4

Intersection Summary	
HCM 6th Ctrl Delay	48.9
HCM 6th LOS	D

Notes

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



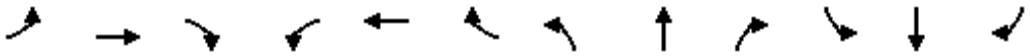
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	62	499	315	54	316	82	256	650	53	111	872	54
Future Volume (veh/h)	62	499	315	54	316	82	256	650	53	111	872	54
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.99
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	1945	1945	1870	1870	1870
Adj Flow Rate, veh/h	63	509	321	55	322	84	261	663	54	113	890	55
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	104	569	358	100	754	194	673	745	61	145	970	60
Arrive On Green	0.06	0.27	0.27	0.06	0.27	0.27	0.19	0.42	0.42	0.08	0.29	0.29
Sat Flow, veh/h	1781	2093	1317	1781	2799	719	3456	1775	145	1781	3396	210
Grp Volume(v), veh/h	63	432	398	55	203	203	261	0	717	113	466	479
Grp Sat Flow(s),veh/h/ln	1781	1777	1633	1781	1777	1741	1728	0	1919	1781	1777	1829
Q Serve(g_s), s	4.1	28.1	28.2	3.6	11.3	11.6	7.9	0.0	41.5	7.5	30.4	30.4
Cycle Q Clear(g_c), s	4.1	28.1	28.2	3.6	11.3	11.6	7.9	0.0	41.5	7.5	30.4	30.4
Prop In Lane	1.00		0.81	1.00		0.41	1.00		0.08	1.00		0.11
Lane Grp Cap(c), veh/h	104	483	444	100	479	469	673	0	806	145	508	523
V/C Ratio(X)	0.60	0.89	0.90	0.55	0.42	0.43	0.39	0.00	0.89	0.78	0.92	0.92
Avail Cap(c_a), veh/h	148	503	463	148	503	493	673	0	806	186	518	534
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	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.1	42.0	42.1	55.2	36.1	36.3	42.1	0.0	32.2	54.1	41.5	41.5
Incr Delay (d2), s/veh	2.1	19.0	20.6	1.8	1.3	1.4	0.1	0.0	14.1	11.1	23.9	23.4
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	3.4	20.6	19.5	2.9	8.6	8.6	5.9	0.0	28.8	6.7	22.8	23.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	57.2	61.0	62.7	56.9	37.4	37.6	42.2	0.0	46.3	65.1	65.4	64.9
LnGrp LOS	E	E	E	E	D	D	D	A	D	E	E	E
Approach Vol, veh/h		893			461			978			1058	
Approach Delay, s/veh		61.5			39.8			45.2			65.2	
Approach LOS		E			D			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.8	56.9	10.7	38.6	29.9	40.8	11.0	38.3
Change Period (Y+Rc), s	4.0	6.5	4.0	6.0	6.5	* 6.5	4.0	6.0
Max Green Setting (Gmax), s	12.5	43.0	10.0	34.0	20.0	* 35	10.0	34.0
Max Q Clear Time (g_c+I1), s	9.5	43.5	5.6	30.2	9.9	32.4	6.1	13.6
Green Ext Time (p_c), s	0.0	0.0	0.0	2.5	0.2	1.8	0.0	4.0

Intersection Summary	
HCM 6th Ctrl Delay	55.0
HCM 6th LOS	D

Notes

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	49	195	258	153	316	117	186	328	41	44	854	34
Future Volume (veh/h)	49	195	258	153	316	117	186	328	41	44	854	34
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	1945	1945	1870	1870	1870
Adj Flow Rate, veh/h	53	210	277	165	340	126	200	353	44	47	918	37
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	98	381	340	186	671	245	647	754	94	117	1053	42
Arrive On Green	0.06	0.21	0.21	0.10	0.26	0.26	0.19	0.44	0.44	0.07	0.30	0.30
Sat Flow, veh/h	1781	1777	1585	1781	2551	929	3456	1696	211	1781	3482	140
Grp Volume(v), veh/h	53	210	277	165	235	231	200	0	397	47	469	486
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1703	1728	0	1907	1781	1777	1845
Q Serve(g_s), s	3.5	12.6	20.0	11.0	13.5	13.9	6.0	0.0	17.5	3.0	30.0	30.0
Cycle Q Clear(g_c), s	3.5	12.6	20.0	11.0	13.5	13.9	6.0	0.0	17.5	3.0	30.0	30.0
Prop In Lane	1.00		1.00	1.00		0.55	1.00		0.11	1.00		0.08
Lane Grp Cap(c), veh/h	98	381	340	186	468	448	647	0	848	117	538	558
V/C Ratio(X)	0.54	0.55	0.82	0.89	0.50	0.52	0.31	0.00	0.47	0.40	0.87	0.87
Avail Cap(c_a), veh/h	186	503	449	186	503	483	647	0	848	148	570	592
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	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.2	42.0	44.9	53.1	37.5	37.7	42.1	0.0	23.4	53.8	39.6	39.6
Incr Delay (d2), s/veh	1.7	2.7	12.0	36.0	1.8	2.0	0.1	0.0	1.9	0.8	17.5	16.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.8	9.6	13.6	10.9	9.9	9.8	4.5	0.0	12.5	2.4	21.5	22.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.9	44.7	56.9	89.1	39.3	39.6	42.2	0.0	25.2	54.6	57.1	56.6
LnGrp LOS	E	D	E	F	D	D	D	A	C	D	E	E
Approach Vol, veh/h		540			631			597			1002	
Approach Delay, s/veh		52.1			52.4			30.9			56.7	
Approach LOS		D			D			C			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.9	59.9	16.5	31.7	29.0	42.8	10.6	37.6
Change Period (Y+Rc), s	4.0	6.5	4.0	6.0	6.5	* 6.5	4.0	6.0
Max Green Setting (Gmax), s	10.0	43.0	12.5	34.0	14.0	* 39	12.5	34.0
Max Q Clear Time (g_c+I1), s	5.0	19.5	13.0	22.0	8.0	32.0	5.5	15.9
Green Ext Time (p_c), s	0.0	4.3	0.0	3.8	0.1	4.3	0.0	4.4

Intersection Summary	
HCM 6th Ctrl Delay	49.3
HCM 6th LOS	D

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	61	499	315	54	316	81	256	681	53	110	889	53
Future Volume (veh/h)	61	499	315	54	316	81	256	681	53	110	889	53
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		0.99
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	1945	1945	1870	1870	1870
Adj Flow Rate, veh/h	62	509	321	55	322	83	261	695	54	112	907	54
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	104	569	358	100	757	192	667	748	58	145	979	58
Arrive On Green	0.06	0.27	0.27	0.06	0.27	0.27	0.19	0.42	0.42	0.08	0.29	0.29
Sat Flow, veh/h	1781	2093	1317	1781	2806	713	3456	1782	138	1781	3405	203
Grp Volume(v), veh/h	62	432	398	55	202	203	261	0	749	112	473	488
Grp Sat Flow(s),veh/h/ln	1781	1777	1633	1781	1777	1742	1728	0	1920	1781	1777	1831
Q Serve(g_s), s	4.1	28.1	28.2	3.6	11.2	11.6	7.9	0.0	44.5	7.4	31.0	31.0
Cycle Q Clear(g_c), s	4.1	28.1	28.2	3.6	11.2	11.6	7.9	0.0	44.5	7.4	31.0	31.0
Prop In Lane	1.00		0.81	1.00		0.41	1.00		0.07	1.00		0.11
Lane Grp Cap(c), veh/h	104	483	444	100	479	470	667	0	806	145	511	526
V/C Ratio(X)	0.60	0.89	0.90	0.55	0.42	0.43	0.39	0.00	0.93	0.77	0.93	0.93
Avail Cap(c_a), veh/h	148	503	463	148	503	494	667	0	806	186	518	534
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	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.1	42.0	42.1	55.2	36.1	36.2	42.3	0.0	33.1	54.0	41.5	41.5
Incr Delay (d2), s/veh	2.0	19.0	20.6	1.8	1.3	1.3	0.1	0.0	18.5	10.4	25.3	24.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.3	20.6	19.5	2.9	8.5	8.6	5.9	0.0	31.5	6.6	23.3	23.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	57.2	61.0	62.7	56.9	37.4	37.6	42.4	0.0	51.6	64.4	66.8	66.3
LnGrp LOS	E	E	E	E	D	D	D	A	D	E	E	E
Approach Vol, veh/h		892			460			1010			1073	
Approach Delay, s/veh		61.5			39.8			49.2			66.3	
Approach LOS		E			D			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.8	56.9	10.7	38.6	29.7	41.0	11.0	38.4
Change Period (Y+Rc), s	4.0	6.5	4.0	6.0	6.5	* 6.5	4.0	6.0
Max Green Setting (Gmax), s	12.5	43.0	10.0	34.0	20.0	* 35	10.0	34.0
Max Q Clear Time (g_c+I1), s	9.4	46.5	5.6	30.2	9.9	33.0	6.1	13.6
Green Ext Time (p_c), s	0.0	0.0	0.0	2.5	0.2	1.4	0.0	4.0

Intersection Summary	
HCM 6th Ctrl Delay	56.5
HCM 6th LOS	E

Notes

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

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	76	0	0	142	0	0
Future Vol, veh/h	76	0	0	142	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	84	0	0	158	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	84	0	242	84
Stage 1	-	-	-	-	84	-
Stage 2	-	-	-	-	158	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1513	-	746	975
Stage 1	-	-	-	-	939	-
Stage 2	-	-	-	-	871	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1513	-	746	975
Mov Cap-2 Maneuver	-	-	-	-	746	-
Stage 1	-	-	-	-	939	-
Stage 2	-	-	-	-	871	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	1513	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	142	0	0	83	0	0
Future Vol, veh/h	142	0	0	83	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	156	0	0	91	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	156	0	247	156
Stage 1	-	-	-	-	156	-
Stage 2	-	-	-	-	91	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1424	-	741	890
Stage 1	-	-	-	-	872	-
Stage 2	-	-	-	-	933	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1424	-	741	890
Mov Cap-2 Maneuver	-	-	-	-	741	-
Stage 1	-	-	-	-	872	-
Stage 2	-	-	-	-	933	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	1424	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Intersection	
Int Delay, s/veh	1.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	76	16	0	142	50	0
Future Vol, veh/h	76	16	0	142	50	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	84	18	0	158	56	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	102	0	251	93
Stage 1	-	-	-	-	93	-
Stage 2	-	-	-	-	158	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1490	-	738	964
Stage 1	-	-	-	-	931	-
Stage 2	-	-	-	-	871	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1490	-	738	964
Mov Cap-2 Maneuver	-	-	-	-	738	-
Stage 1	-	-	-	-	931	-
Stage 2	-	-	-	-	871	-

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

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	738	-	-	1490	-
HCM Lane V/C Ratio	0.075	-	-	-	-
HCM Control Delay (s)	10.3	-	-	0	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.2	-	-	0	-

Intersection	
Int Delay, s/veh	1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	142	49	0	83	30	0
Future Vol, veh/h	142	49	0	83	30	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	156	54	0	91	33	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	210	0	274	183
Stage 1	-	-	-	-	183	-
Stage 2	-	-	-	-	91	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1361	-	716	859
Stage 1	-	-	-	-	848	-
Stage 2	-	-	-	-	933	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1361	-	716	859
Mov Cap-2 Maneuver	-	-	-	-	716	-
Stage 1	-	-	-	-	848	-
Stage 2	-	-	-	-	933	-

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

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	716	-	-	1361	-
HCM Lane V/C Ratio	0.046	-	-	-	-
HCM Control Delay (s)	10.3	-	-	0	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	78	0	0	145	0	0
Future Vol, veh/h	78	0	0	145	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	87	0	0	161	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	87	0	248	87
Stage 1	-	-	-	-	87	-
Stage 2	-	-	-	-	161	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1509	-	740	971
Stage 1	-	-	-	-	936	-
Stage 2	-	-	-	-	868	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1509	-	740	971
Mov Cap-2 Maneuver	-	-	-	-	740	-
Stage 1	-	-	-	-	936	-
Stage 2	-	-	-	-	868	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	1509	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	145	0	0	85	0	0
Future Vol, veh/h	145	0	0	85	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	159	0	0	93	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	159	0	252	159
Stage 1	-	-	-	-	159	-
Stage 2	-	-	-	-	93	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1420	-	737	886
Stage 1	-	-	-	-	870	-
Stage 2	-	-	-	-	931	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1420	-	737	886
Mov Cap-2 Maneuver	-	-	-	-	737	-
Stage 1	-	-	-	-	870	-
Stage 2	-	-	-	-	931	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	1420	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Intersection	
Int Delay, s/veh	1.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	78	15	0	145	45	0
Future Vol, veh/h	78	15	0	145	45	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	87	17	0	161	50	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	104	0	257	96
Stage 1	-	-	-	-	96	-
Stage 2	-	-	-	-	161	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1488	-	732	960
Stage 1	-	-	-	-	928	-
Stage 2	-	-	-	-	868	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1488	-	732	960
Mov Cap-2 Maneuver	-	-	-	-	732	-
Stage 1	-	-	-	-	928	-
Stage 2	-	-	-	-	868	-

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

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	732	-	-	1488	-
HCM Lane V/C Ratio	0.068	-	-	-	-
HCM Control Delay (s)	10.3	-	-	0	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.2	-	-	0	-

Intersection	
Int Delay, s/veh	1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	145	49	0	85	30	0
Future Vol, veh/h	145	49	0	85	30	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	159	54	0	93	33	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	213	0	279	186
Stage 1	-	-	-	-	186	-
Stage 2	-	-	-	-	93	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1357	-	711	856
Stage 1	-	-	-	-	846	-
Stage 2	-	-	-	-	931	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1357	-	711	856
Mov Cap-2 Maneuver	-	-	-	-	711	-
Stage 1	-	-	-	-	846	-
Stage 2	-	-	-	-	931	-

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

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	711	-	-	1357	-
HCM Lane V/C Ratio	0.046	-	-	-	-
HCM Control Delay (s)	10.3	-	-	0	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	440	33	13	543	56	32
Future Volume (veh/h)	440	33	13	543	56	32
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		0.99	1.00		1.00	0.95
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1945	1870	1870	1945	1945
Adj Flow Rate, veh/h	518	39	15	639	66	38
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	2639	198	696	2802	136	78
Arrive On Green	0.79	0.79	0.79	0.79	0.12	0.12
Sat Flow, veh/h	3440	251	848	3647	1093	630
Grp Volume(v), veh/h	274	283	15	639	105	0
Grp Sat Flow(s),veh/h/ln	1777	1821	848	1777	1739	0
Q Serve(g_s), s	4.6	4.7	0.5	5.6	6.8	0.0
Cycle Q Clear(g_c), s	4.6	4.7	5.2	5.6	6.8	0.0
Prop In Lane		0.14	1.00		0.63	0.36
Lane Grp Cap(c), veh/h	1401	1436	696	2802	216	0
V/C Ratio(X)	0.20	0.20	0.02	0.23	0.49	0.00
Avail Cap(c_a), veh/h	1401	1436	696	2802	471	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	3.2	3.2	3.8	3.3	49.0	0.0
Incr Delay (d2), s/veh	0.3	0.3	0.1	0.2	1.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.3	2.3	0.2	2.6	5.5	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	3.5	3.5	3.9	3.5	50.7	0.0
LnGrp LOS	A	A	A	A	D	A
Approach Vol, veh/h	557			654	105	
Approach Delay, s/veh	3.5			3.5	50.7	
Approach LOS	A			A	D	

Timer - Assigned Phs	2		4		6
Phs Duration (G+Y+Rc), s	100.6		19.4		100.6
Change Period (Y+Rc), s	6.0		4.5		6.0
Max Green Setting (Gmax), s	77.0		32.5		77.0
Max Q Clear Time (g_c+I1), s	7.6		8.8		6.7
Green Ext Time (p_c), s	4.6		0.3		7.4

Intersection Summary	
HCM 6th Ctrl Delay	7.2
HCM 6th LOS	A



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	980	50	30	700	29	21
Future Volume (veh/h)	980	50	30	700	29	21
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		0.99	1.00		1.00	0.94
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1945	1870	1870	1945	1945
Adj Flow Rate, veh/h	1077	55	33	769	32	23
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	2690	137	399	2781	128	92
Arrive On Green	0.78	0.78	0.78	0.78	0.13	0.13
Sat Flow, veh/h	3532	176	497	3647	981	705
Grp Volume(v), veh/h	556	576	33	769	56	0
Grp Sat Flow(s),veh/h/ln	1777	1837	497	1777	1716	0
Q Serve(g_s), s	11.9	11.9	2.7	7.2	3.5	0.0
Cycle Q Clear(g_c), s	11.9	11.9	14.6	7.2	3.5	0.0
Prop In Lane		0.10	1.00		0.57	0.41
Lane Grp Cap(c), veh/h	1390	1437	399	2781	223	0
V/C Ratio(X)	0.40	0.40	0.08	0.28	0.25	0.00
Avail Cap(c_a), veh/h	1390	1437	399	2781	465	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	4.1	4.1	6.5	3.6	46.9	0.0
Incr Delay (d2), s/veh	0.9	0.8	0.4	0.2	0.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	6.0	6.2	0.5	3.4	2.8	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	5.0	5.0	6.9	3.9	47.5	0.0
LnGrp LOS	A	A	A	A	D	A
Approach Vol, veh/h	1132			802	56	
Approach Delay, s/veh	5.0			4.0	47.5	
Approach LOS	A			A	D	

Timer - Assigned Phs	2		4		6
Phs Duration (G+Y+Rc), s	99.9		20.1		99.9
Change Period (Y+Rc), s	6.0		4.5		6.0
Max Green Setting (Gmax), s	77.0		32.5		77.0
Max Q Clear Time (g_c+I1), s	16.6		5.5		13.9
Green Ext Time (p_c), s	6.2		0.1		20.9

Intersection Summary	
HCM 6th Ctrl Delay	5.8
HCM 6th LOS	A

Notes

User approved volume balancing among the lanes for turning movement.



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	468	33	13	629	56	32
Future Volume (veh/h)	468	33	13	629	56	32
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		0.99	1.00		1.00	0.95
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1945	1870	1870	1945	1945
Adj Flow Rate, veh/h	551	39	15	740	66	38
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	2652	187	674	2802	136	78
Arrive On Green	0.79	0.79	0.79	0.79	0.12	0.12
Sat Flow, veh/h	3456	238	823	3647	1093	630
Grp Volume(v), veh/h	291	299	15	740	105	0
Grp Sat Flow(s),veh/h/ln	1777	1824	823	1777	1739	0
Q Serve(g_s), s	5.0	5.0	0.6	6.7	6.8	0.0
Cycle Q Clear(g_c), s	5.0	5.0	5.5	6.7	6.8	0.0
Prop In Lane		0.13	1.00		0.63	0.36
Lane Grp Cap(c), veh/h	1401	1438	674	2802	216	0
V/C Ratio(X)	0.21	0.21	0.02	0.26	0.49	0.00
Avail Cap(c_a), veh/h	1401	1438	674	2802	471	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	3.2	3.2	3.9	3.4	49.0	0.0
Incr Delay (d2), s/veh	0.3	0.3	0.1	0.2	1.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.4	2.5	0.2	3.1	5.5	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	3.5	3.5	4.0	3.6	50.7	0.0
LnGrp LOS	A	A	A	A	D	A
Approach Vol, veh/h	590			755	105	
Approach Delay, s/veh	3.5			3.6	50.7	
Approach LOS	A			A	D	

Timer - Assigned Phs	2		4		6
Phs Duration (G+Y+Rc), s	100.6		19.4		100.6
Change Period (Y+Rc), s	6.0		4.5		6.0
Max Green Setting (Gmax), s	77.0		32.5		77.0
Max Q Clear Time (g_c+I1), s	8.7		8.8		7.0
Green Ext Time (p_c), s	5.5		0.3		7.9

Intersection Summary	
HCM 6th Ctrl Delay	7.0
HCM 6th LOS	A

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1069	50	30	751	29	21
Future Volume (veh/h)	1069	50	30	751	29	21
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		0.99	1.00		1.00	0.94
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1945	1870	1870	1945	1945
Adj Flow Rate, veh/h	1175	55	33	825	32	23
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	2703	126	363	2781	128	92
Arrive On Green	0.78	0.78	0.78	0.78	0.13	0.13
Sat Flow, veh/h	3548	162	453	3647	981	705
Grp Volume(v), veh/h	604	626	33	825	56	0
Grp Sat Flow(s),veh/h/ln	1777	1840	453	1777	1716	0
Q Serve(g_s), s	13.4	13.5	3.1	7.9	3.5	0.0
Cycle Q Clear(g_c), s	13.4	13.5	16.6	7.9	3.5	0.0
Prop In Lane		0.09	1.00		0.57	0.41
Lane Grp Cap(c), veh/h	1390	1439	363	2781	223	0
V/C Ratio(X)	0.43	0.43	0.09	0.30	0.25	0.00
Avail Cap(c_a), veh/h	1390	1439	363	2781	465	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	4.3	4.3	7.0	3.7	46.9	0.0
Incr Delay (d2), s/veh	1.0	1.0	0.5	0.3	0.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	6.8	7.0	0.6	3.8	2.8	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	5.3	5.3	7.5	4.0	47.5	0.0
LnGrp LOS	A	A	A	A	D	A
Approach Vol, veh/h	1230			858	56	
Approach Delay, s/veh	5.3			4.1	47.5	
Approach LOS	A			A	D	

Timer - Assigned Phs	2		4		6
Phs Duration (G+Y+Rc), s	99.9		20.1		99.9
Change Period (Y+Rc), s	6.0		4.5		6.0
Max Green Setting (Gmax), s	77.0		32.5		77.0
Max Q Clear Time (g_c+I1), s	18.6		5.5		15.5
Green Ext Time (p_c), s	6.9		0.1		23.9

Intersection Summary	
HCM 6th Ctrl Delay	5.9
HCM 6th LOS	A

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	487	34	13	568	57	33
Future Volume (veh/h)	487	34	13	568	57	33
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		0.99	1.00		1.00	0.95
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1945	1870	1870	1945	1945
Adj Flow Rate, veh/h	573	40	15	668	67	39
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	2651	185	659	2799	136	79
Arrive On Green	0.79	0.79	0.79	0.79	0.12	0.12
Sat Flow, veh/h	3460	235	805	3647	1089	634
Grp Volume(v), veh/h	302	311	15	668	107	0
Grp Sat Flow(s),veh/h/ln	1777	1824	805	1777	1739	0
Q Serve(g_s), s	5.2	5.2	0.6	5.9	6.9	0.0
Cycle Q Clear(g_c), s	5.2	5.2	5.8	5.9	6.9	0.0
Prop In Lane		0.13	1.00		0.63	0.36
Lane Grp Cap(c), veh/h	1399	1437	659	2799	217	0
V/C Ratio(X)	0.22	0.22	0.02	0.24	0.49	0.00
Avail Cap(c_a), veh/h	1399	1437	659	2799	471	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	3.3	3.3	4.0	3.3	49.0	0.0
Incr Delay (d2), s/veh	0.4	0.3	0.1	0.2	1.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.6	2.6	0.2	2.7	5.6	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	3.6	3.6	4.1	3.5	50.7	0.0
LnGrp LOS	A	A	A	A	D	A
Approach Vol, veh/h	613			683	107	
Approach Delay, s/veh	3.6			3.5	50.7	
Approach LOS	A			A	D	

Timer - Assigned Phs	2		4		6
Phs Duration (G+Y+Rc), s	100.5		19.5		100.5
Change Period (Y+Rc), s	6.0		4.5		6.0
Max Green Setting (Gmax), s	77.0		32.5		77.0
Max Q Clear Time (g_c+I1), s	7.9		8.9		7.2
Green Ext Time (p_c), s	4.9		0.3		8.3

Intersection Summary	
HCM 6th Ctrl Delay	7.2
HCM 6th LOS	A



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1017	51	31	750	30	21
Future Volume (veh/h)	1017	51	31	750	30	21
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		0.99	1.00		1.00	0.94
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1945	1870	1870	1945	1945
Adj Flow Rate, veh/h	1118	56	34	824	33	23
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	2692	135	383	2780	130	90
Arrive On Green	0.78	0.78	0.78	0.78	0.13	0.13
Sat Flow, veh/h	3536	172	478	3647	995	693
Grp Volume(v), veh/h	577	597	34	824	57	0
Grp Sat Flow(s),veh/h/ln	1777	1838	478	1777	1719	0
Q Serve(g_s), s	12.6	12.6	3.0	7.9	3.6	0.0
Cycle Q Clear(g_c), s	12.6	12.6	15.5	7.9	3.6	0.0
Prop In Lane		0.09	1.00		0.58	0.40
Lane Grp Cap(c), veh/h	1390	1437	383	2780	224	0
V/C Ratio(X)	0.42	0.42	0.09	0.30	0.25	0.00
Avail Cap(c_a), veh/h	1390	1437	383	2780	465	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	4.2	4.2	6.7	3.7	46.9	0.0
Incr Delay (d2), s/veh	0.9	0.9	0.5	0.3	0.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	6.3	6.5	0.6	3.8	2.9	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	5.1	5.1	7.2	4.0	47.5	0.0
LnGrp LOS	A	A	A	A	D	A
Approach Vol, veh/h	1174			858	57	
Approach Delay, s/veh	5.1			4.1	47.5	
Approach LOS	A			A	D	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		99.9		20.1		99.9
Change Period (Y+Rc), s		6.0		4.5		6.0
Max Green Setting (Gmax), s		77.0		32.5		77.0
Max Q Clear Time (g_c+I1), s		17.5		5.6		14.6
Green Ext Time (p_c), s		6.9		0.1		22.2

Intersection Summary	
HCM 6th Ctrl Delay	5.9
HCM 6th LOS	A

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	517	34	13	649	57	33
Future Volume (veh/h)	517	34	13	649	57	33
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		0.99	1.00		1.00	0.95
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1945	1870	1870	1945	1945
Adj Flow Rate, veh/h	608	40	15	764	67	39
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	2663	175	638	2799	136	79
Arrive On Green	0.79	0.79	0.79	0.79	0.12	0.12
Sat Flow, veh/h	3475	222	780	3647	1089	634
Grp Volume(v), veh/h	319	329	15	764	107	0
Grp Sat Flow(s),veh/h/ln	1777	1827	780	1777	1739	0
Q Serve(g_s), s	5.6	5.6	0.6	7.0	6.9	0.0
Cycle Q Clear(g_c), s	5.6	5.6	6.2	7.0	6.9	0.0
Prop In Lane		0.12	1.00		0.63	0.36
Lane Grp Cap(c), veh/h	1399	1439	638	2799	217	0
V/C Ratio(X)	0.23	0.23	0.02	0.27	0.49	0.00
Avail Cap(c_a), veh/h	1399	1439	638	2799	471	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	3.3	3.3	4.1	3.4	49.0	0.0
Incr Delay (d2), s/veh	0.4	0.4	0.1	0.2	1.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.7	2.8	0.2	3.2	5.6	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	3.7	3.7	4.2	3.7	50.7	0.0
LnGrp LOS	A	A	A	A	D	A
Approach Vol, veh/h	648			779	107	
Approach Delay, s/veh	3.7			3.7	50.7	
Approach LOS	A			A	D	

Timer - Assigned Phs	2		4		6
Phs Duration (G+Y+Rc), s	100.5		19.5		100.5
Change Period (Y+Rc), s	6.0		4.5		6.0
Max Green Setting (Gmax), s	77.0		32.5		77.0
Max Q Clear Time (g_c+I1), s	9.0		8.9		7.6
Green Ext Time (p_c), s	5.8		0.3		9.0

Intersection Summary	
HCM 6th Ctrl Delay	7.0
HCM 6th LOS	A



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1106	51	31	801	30	21
Future Volume (veh/h)	1106	51	31	801	30	21
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		0.99	1.00		1.00	0.94
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1945	1870	1870	1945	1945
Adj Flow Rate, veh/h	1215	56	34	880	33	23
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	2705	125	349	2780	130	90
Arrive On Green	0.78	0.78	0.78	0.78	0.13	0.13
Sat Flow, veh/h	3551	159	435	3647	995	693
Grp Volume(v), veh/h	624	647	34	880	57	0
Grp Sat Flow(s),veh/h/ln	1777	1840	435	1777	1719	0
Q Serve(g_s), s	14.1	14.2	3.4	8.6	3.6	0.0
Cycle Q Clear(g_c), s	14.1	14.2	17.6	8.6	3.6	0.0
Prop In Lane		0.09	1.00		0.58	0.40
Lane Grp Cap(c), veh/h	1390	1439	349	2780	224	0
V/C Ratio(X)	0.45	0.45	0.10	0.32	0.25	0.00
Avail Cap(c_a), veh/h	1390	1439	349	2780	465	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	4.4	4.4	7.3	3.8	46.9	0.0
Incr Delay (d2), s/veh	1.1	1.0	0.6	0.3	0.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	7.1	7.4	0.6	4.1	2.9	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	5.4	5.4	7.9	4.1	47.5	0.0
LnGrp LOS	A	A	A	A	D	A
Approach Vol, veh/h	1271			914	57	
Approach Delay, s/veh	5.4			4.2	47.5	
Approach LOS	A			A	D	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		99.9		20.1		99.9
Change Period (Y+Rc), s		6.0		4.5		6.0
Max Green Setting (Gmax), s		77.0		32.5		77.0
Max Q Clear Time (g_c+I1), s		19.6		5.6		16.2
Green Ext Time (p_c), s		7.5		0.1		25.2

Intersection Summary	
HCM 6th Ctrl Delay	6.0
HCM 6th LOS	A

Notes

User approved volume balancing among the lanes for turning movement.

Intersection	
Int Delay, s/veh	1.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	452	22	11	520	51	20
Future Vol, veh/h	452	22	11	520	51	20
Conflicting Peds, #/hr	0	0	0	0	1	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	83	83	83	83	83	83
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	545	27	13	627	61	24

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	572	0	900	286
Stage 1	-	-	-	-	559	-
Stage 2	-	-	-	-	341	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	997	-	278	711
Stage 1	-	-	-	-	536	-
Stage 2	-	-	-	-	692	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	997	-	274	711
Mov Cap-2 Maneuver	-	-	-	-	274	-
Stage 1	-	-	-	-	536	-
Stage 2	-	-	-	-	682	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	19.6
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	331	-	-	997	-
HCM Lane V/C Ratio	0.258	-	-	0.013	-
HCM Control Delay (s)	19.6	-	-	8.7	-
HCM Lane LOS	C	-	-	A	-
HCM 95th %tile Q(veh)	1	-	-	0	-

Intersection	
Int Delay, s/veh	0.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	971	29	23	699	23	17
Future Vol, veh/h	971	29	23	699	23	17
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	971	29	23	699	23	17

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1000	0	1382	500
Stage 1	-	-	-	-	986	-
Stage 2	-	-	-	-	396	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	688	-	135	516
Stage 1	-	-	-	-	322	-
Stage 2	-	-	-	-	649	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	688	-	131	516
Mov Cap-2 Maneuver	-	-	-	-	131	-
Stage 1	-	-	-	-	322	-
Stage 2	-	-	-	-	628	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.3	28.6
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	192	-	-	688	-
HCM Lane V/C Ratio	0.208	-	-	0.033	-
HCM Control Delay (s)	28.6	-	-	10.4	-
HCM Lane LOS	D	-	-	B	-
HCM 95th %tile Q(veh)	0.8	-	-	0.1	-

Intersection	
Int Delay, s/veh	3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	20	460	22	11	546	5	51	0	20	15	0	60
Future Vol, veh/h	20	460	22	11	546	5	51	0	20	15	0	60
Conflicting Peds, #/hr	0	0	0	0	0	0	1	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	100	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	83	83	83	83	85	83	85	83	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	24	554	27	13	658	6	61	0	24	18	0	71

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	664	0	0	581	0	0	972	1306	291	1012	1316	333
Stage 1	-	-	-	-	-	-	616	616	-	687	687	-
Stage 2	-	-	-	-	-	-	356	690	-	325	629	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	921	-	-	989	-	-	207	159	706	193	156	663
Stage 1	-	-	-	-	-	-	445	480	-	403	446	-
Stage 2	-	-	-	-	-	-	634	444	-	661	474	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	921	-	-	989	-	-	177	151	706	179	148	662
Mov Cap-2 Maneuver	-	-	-	-	-	-	177	151	-	179	148	-
Stage 1	-	-	-	-	-	-	428	461	-	387	440	-
Stage 2	-	-	-	-	-	-	558	438	-	614	456	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.5	0.2	30.7	15.5
HCM LOS			D	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	224	921	-	-	989	-	-	430
HCM Lane V/C Ratio	0.382	0.026	-	-	0.013	-	-	0.205
HCM Control Delay (s)	30.7	9	0.2	-	8.7	-	-	15.5
HCM Lane LOS	D	A	A	-	A	-	-	C
HCM 95th %tile Q(veh)	1.7	0.1	-	-	0	-	-	0.8

Intersection	
Int Delay, s/veh	2.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	63	997	29	23	711	16	23	0	17	10	0	39
Future Vol, veh/h	63	997	29	23	711	16	23	0	17	10	0	39
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	100	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	100	100	100	100	95	100	95	100	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	66	997	29	23	711	17	23	0	17	11	0	41

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	728	0	0	1026	0	0	1546	1918	513	1397	1924	364
Stage 1	-	-	-	-	-	-	1144	1144	-	766	766	-
Stage 2	-	-	-	-	-	-	402	774	-	631	1158	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	871	-	-	673	-	-	78	67	506	101	66	633
Stage 1	-	-	-	-	-	-	213	273	-	361	410	-
Stage 2	-	-	-	-	-	-	596	406	-	436	269	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	871	-	-	673	-	-	61	53	506	82	52	633
Mov Cap-2 Maneuver	-	-	-	-	-	-	61	53	-	82	52	-
Stage 1	-	-	-	-	-	-	175	224	-	297	396	-
Stage 2	-	-	-	-	-	-	538	392	-	346	221	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.2	0.3	66	21.7
HCM LOS			F	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	97	871	-	-	673	-	-	267
HCM Lane V/C Ratio	0.412	0.076	-	-	0.034	-	-	0.193
HCM Control Delay (s)	66	9.5	0.7	-	10.5	-	-	21.7
HCM Lane LOS	F	A	A	-	B	-	-	C
HCM 95th %tile Q(veh)	1.7	0.2	-	-	0.1	-	-	0.7

Intersection	
Int Delay, s/veh	1.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	499	23	11	545	52	20
Future Vol, veh/h	499	23	11	545	52	20
Conflicting Peds, #/hr	0	0	0	0	1	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	83	83	83	83	83	83
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	601	28	13	657	63	24

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	629	0	971	315
Stage 1	-	-	-	-	615	-
Stage 2	-	-	-	-	356	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	949	-	250	681
Stage 1	-	-	-	-	502	-
Stage 2	-	-	-	-	680	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	949	-	246	681
Mov Cap-2 Maneuver	-	-	-	-	246	-
Stage 1	-	-	-	-	502	-
Stage 2	-	-	-	-	670	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	21.9
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	299	-	-	949	-
HCM Lane V/C Ratio	0.29	-	-	0.014	-
HCM Control Delay (s)	21.9	-	-	8.8	-
HCM Lane LOS	C	-	-	A	-
HCM 95th %tile Q(veh)	1.2	-	-	0	-

Intersection	
Int Delay, s/veh	0.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1007	30	24	749	24	17
Future Vol, veh/h	1007	30	24	749	24	17
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1007	30	24	749	24	17

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1037	0	1445	519
Stage 1	-	-	-	-	1022	-
Stage 2	-	-	-	-	423	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	666	-	123	502
Stage 1	-	-	-	-	308	-
Stage 2	-	-	-	-	629	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	666	-	119	502
Mov Cap-2 Maneuver	-	-	-	-	119	-
Stage 1	-	-	-	-	308	-
Stage 2	-	-	-	-	606	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.3	32
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	174	-	-	666	-
HCM Lane V/C Ratio	0.236	-	-	0.036	-
HCM Control Delay (s)	32	-	-	10.6	-
HCM Lane LOS	D	-	-	B	-
HCM 95th %tile Q(veh)	0.9	-	-	0.1	-

Intersection	
Int Delay, s/veh	3.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	21	508	23	11	570	5	52	0	20	14	0	56
Future Vol, veh/h	21	508	23	11	570	5	52	0	20	14	0	56
Conflicting Peds, #/hr	0	0	0	0	0	0	1	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	100	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	83	83	83	83	85	83	85	83	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	25	612	28	13	687	6	63	0	24	16	0	66

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	693	0	0	640	0	0	1047	1395	320	1072	1406	348
Stage 1	-	-	-	-	-	-	676	676	-	716	716	-
Stage 2	-	-	-	-	-	-	371	719	-	356	690	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	898	-	-	940	-	-	182	140	676	175	138	648
Stage 1	-	-	-	-	-	-	409	451	-	387	432	-
Stage 2	-	-	-	-	-	-	622	431	-	634	444	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	898	-	-	940	-	-	156	132	676	162	130	647
Mov Cap-2 Maneuver	-	-	-	-	-	-	156	132	-	162	130	-
Stage 1	-	-	-	-	-	-	391	432	-	370	426	-
Stage 2	-	-	-	-	-	-	550	425	-	585	425	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.5	0.2	36.6	16.1
HCM LOS			E	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	198	898	-	-	940	-	-	405
HCM Lane V/C Ratio	0.438	0.028	-	-	0.014	-	-	0.203
HCM Control Delay (s)	36.6	9.1	0.2	-	8.9	-	-	16.1
HCM Lane LOS	E	A	A	-	A	-	-	C
HCM 95th %tile Q(veh)	2	0.1	-	-	0	-	-	0.8

Intersection	
Int Delay, s/veh	3.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	63	1033	30	24	761	16	24	0	17	10	0	39
Future Vol, veh/h	63	1033	30	24	761	16	24	0	17	10	0	39
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	100	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	100	100	100	100	95	100	95	100	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	66	1033	30	24	761	17	24	0	17	11	0	41

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	778	0	0	1063	0	0	1609	2006	532	1467	2013	389
Stage 1	-	-	-	-	-	-	1180	1180	-	818	818	-
Stage 2	-	-	-	-	-	-	429	826	-	649	1195	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	834	-	-	651	-	-	70	59	492	89	58	610
Stage 1	-	-	-	-	-	-	202	262	-	336	388	-
Stage 2	-	-	-	-	-	-	574	385	-	425	258	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	834	-	-	651	-	-	54	46	492	71	45	610
Mov Cap-2 Maneuver	-	-	-	-	-	-	54	46	-	71	45	-
Stage 1	-	-	-	-	-	-	163	211	-	270	374	-
Stage 2	-	-	-	-	-	-	516	371	-	330	208	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.3	0.3	80.3	24.2
HCM LOS			F	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	86	834	-	-	651	-	-	239
HCM Lane V/C Ratio	0.477	0.08	-	-	0.037	-	-	0.216
HCM Control Delay (s)	80.3	9.7	0.8	-	10.7	-	-	24.2
HCM Lane LOS	F	A	A	-	B	-	-	C
HCM 95th %tile Q(veh)	2	0.3	-	-	0.1	-	-	0.8

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	16	455	511	11	12	21
Future Vol, veh/h	16	455	511	11	12	21
Conflicting Peds, #/hr	0	0	0	0	1	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	105	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	18	517	581	13	14	24

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	594	0	-	0	884	297
Stage 1	-	-	-	-	588	-
Stage 2	-	-	-	-	296	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	978	-	-	-	285	699
Stage 1	-	-	-	-	518	-
Stage 2	-	-	-	-	729	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	978	-	-	-	280	699
Mov Cap-2 Maneuver	-	-	-	-	280	-
Stage 1	-	-	-	-	509	-
Stage 2	-	-	-	-	729	-

Approach	EB	WB	SB
HCM Control Delay, s	0.3	0	13.7
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	978	-	-	-	453
HCM Lane V/C Ratio	0.019	-	-	-	0.083
HCM Control Delay (s)	8.8	-	-	-	13.7
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.3

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	16	963	693	23	19	15
Future Vol, veh/h	16	963	693	23	19	15
Conflicting Peds, #/hr	0	0	0	0	0	1
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	105	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	17	1024	737	24	20	16

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	761	0	-	0	1295	382
Stage 1	-	-	-	-	749	-
Stage 2	-	-	-	-	546	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	847	-	-	-	154	616
Stage 1	-	-	-	-	428	-
Stage 2	-	-	-	-	544	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	847	-	-	-	151	615
Mov Cap-2 Maneuver	-	-	-	-	151	-
Stage 1	-	-	-	-	419	-
Stage 2	-	-	-	-	544	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	23.9
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	847	-	-	-	226
HCM Lane V/C Ratio	0.02	-	-	-	0.16
HCM Control Delay (s)	9.3	-	-	-	23.9
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	0.6

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	16	467	11	2	508	11	34	0	6	12	0	21
Future Vol, veh/h	16	467	11	2	508	11	34	0	6	12	0	21
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	1	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	105	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	85	85	88	88	85	85	85	88	85	88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	18	531	13	2	577	13	40	0	7	14	0	24

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	590	0	0	544	0	0	867	1168	273	891	1168	295
Stage 1	-	-	-	-	-	-	574	574	-	588	588	-
Stage 2	-	-	-	-	-	-	293	594	-	303	580	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	982	-	-	1021	-	-	247	192	725	237	192	701
Stage 1	-	-	-	-	-	-	471	501	-	462	494	-
Stage 2	-	-	-	-	-	-	691	491	-	681	498	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	982	-	-	1021	-	-	235	188	724	231	188	701
Mov Cap-2 Maneuver	-	-	-	-	-	-	235	188	-	231	188	-
Stage 1	-	-	-	-	-	-	463	492	-	454	493	-
Stage 2	-	-	-	-	-	-	665	490	-	661	489	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	0	21.8	14.8
HCM LOS			C	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	261	982	-	-	1021	-	-	403
HCM Lane V/C Ratio	0.18	0.019	-	-	0.002	-	-	0.093
HCM Control Delay (s)	21.8	8.7	-	-	8.5	0	-	14.8
HCM Lane LOS	C	A	-	-	A	A	-	B
HCM 95th %tile Q(veh)	0.6	0.1	-	-	0	-	-	0.3

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	16	962	37	6	698	23	23	0	4	19	0	15
Future Vol, veh/h	16	962	37	6	698	23	23	0	4	19	0	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	1
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	105	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	95	95	94	94	95	95	95	94	95	94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	17	1023	39	6	743	24	24	0	4	20	0	16

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	767	0	0	1062	0	0	1462	1856	531	1313	1863	385
Stage 1	-	-	-	-	-	-	1077	1077	-	767	767	-
Stage 2	-	-	-	-	-	-	385	779	-	546	1096	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	842	-	-	652	-	-	90	73	493	116	72	613
Stage 1	-	-	-	-	-	-	234	293	-	361	410	-
Stage 2	-	-	-	-	-	-	610	404	-	490	287	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	842	-	-	652	-	-	85	70	493	112	69	612
Mov Cap-2 Maneuver	-	-	-	-	-	-	85	70	-	112	69	-
Stage 1	-	-	-	-	-	-	229	287	-	354	403	-
Stage 2	-	-	-	-	-	-	584	398	-	476	281	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.2	56.8	30.9
HCM LOS			F	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	97	842	-	-	652	-	-	175
HCM Lane V/C Ratio	0.293	0.02	-	-	0.01	-	-	0.207
HCM Control Delay (s)	56.8	9.4	-	-	10.6	0.1	-	30.9
HCM Lane LOS	F	A	-	-	B	A	-	D
HCM 95th %tile Q(veh)	1.1	0.1	-	-	0	-	-	0.7

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	16	502	536	11	12	21
Future Vol, veh/h	16	502	536	11	12	21
Conflicting Peds, #/hr	0	0	0	0	1	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	105	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	18	570	609	13	14	24

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	622	0	-	0	938	311
Stage 1	-	-	-	-	616	-
Stage 2	-	-	-	-	322	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	955	-	-	-	263	685
Stage 1	-	-	-	-	501	-
Stage 2	-	-	-	-	707	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	955	-	-	-	258	685
Mov Cap-2 Maneuver	-	-	-	-	258	-
Stage 1	-	-	-	-	491	-
Stage 2	-	-	-	-	707	-

Approach	EB	WB	SB
HCM Control Delay, s	0.3	0	14.2
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	955	-	-	-	428
HCM Lane V/C Ratio	0.019	-	-	-	0.088
HCM Control Delay (s)	8.8	-	-	-	14.2
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.3

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	16	999	743	24	19	15
Future Vol, veh/h	16	999	743	24	19	15
Conflicting Peds, #/hr	0	0	0	0	0	1
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	105	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	17	1063	790	26	20	16

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	816	0	-	0	1369	409
Stage 1	-	-	-	-	803	-
Stage 2	-	-	-	-	566	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	807	-	-	-	138	592
Stage 1	-	-	-	-	401	-
Stage 2	-	-	-	-	532	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	807	-	-	-	135	591
Mov Cap-2 Maneuver	-	-	-	-	135	-
Stage 1	-	-	-	-	393	-
Stage 2	-	-	-	-	532	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	26.3
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	807	-	-	-	205
HCM Lane V/C Ratio	0.021	-	-	-	0.176
HCM Control Delay (s)	9.6	-	-	-	26.3
HCM Lane LOS	A	-	-	-	D
HCM 95th %tile Q(veh)	0.1	-	-	-	0.6

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	16	513	12	2	533	11	33	0	6	12	0	21
Future Vol, veh/h	16	513	12	2	533	11	33	0	6	12	0	21
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	1	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	105	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	85	85	88	88	85	85	85	88	85	88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	18	583	14	2	606	13	39	0	7	14	0	24

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	619	0	0	597	0	0	933	1249	300	946	1250	310
Stage 1	-	-	-	-	-	-	626	626	-	617	617	-
Stage 2	-	-	-	-	-	-	307	623	-	329	633	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	957	-	-	976	-	-	221	172	696	216	172	686
Stage 1	-	-	-	-	-	-	439	475	-	444	479	-
Stage 2	-	-	-	-	-	-	678	476	-	658	472	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	957	-	-	976	-	-	210	168	695	210	168	686
Mov Cap-2 Maneuver	-	-	-	-	-	-	210	168	-	210	168	-
Stage 1	-	-	-	-	-	-	431	466	-	436	478	-
Stage 2	-	-	-	-	-	-	652	475	-	638	463	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	0	24	15.6
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	235	957	-	-	976	-	-	376
HCM Lane V/C Ratio	0.195	0.019	-	-	0.002	-	-	0.1
HCM Control Delay (s)	24	8.8	-	-	8.7	0	-	15.6
HCM Lane LOS	C	A	-	-	A	A	-	C
HCM 95th %tile Q(veh)	0.7	0.1	-	-	0	-	-	0.3

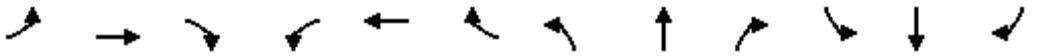
Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	16	998	37	6	748	24	23	0	4	19	0	15
Future Vol, veh/h	16	998	37	6	748	24	23	0	4	19	0	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	1
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	105	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	95	95	94	94	95	95	95	94	95	94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	17	1062	39	6	796	26	24	0	4	20	0	16

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	822	0	0	1101	0	0	1527	1950	551	1386	1956	412
Stage 1	-	-	-	-	-	-	1116	1116	-	821	821	-
Stage 2	-	-	-	-	-	-	411	834	-	565	1135	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	803	-	-	630	-	-	80	64	478	102	63	589
Stage 1	-	-	-	-	-	-	221	281	-	335	387	-
Stage 2	-	-	-	-	-	-	589	381	-	477	275	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	803	-	-	630	-	-	75	62	478	98	61	588
Mov Cap-2 Maneuver	-	-	-	-	-	-	75	62	-	98	61	-
Stage 1	-	-	-	-	-	-	216	275	-	328	380	-
Stage 2	-	-	-	-	-	-	562	374	-	463	269	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.2	66.3	35.2
HCM LOS			F	E

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	86	803	-	-	630	-	-	155
HCM Lane V/C Ratio	0.33	0.021	-	-	0.01	-	-	0.233
HCM Control Delay (s)	66.3	9.6	-	-	10.8	0.1	-	35.2
HCM Lane LOS	F	A	-	-	B	A	-	E
HCM 95th %tile Q(veh)	1.3	0.1	-	-	0	-	-	0.9



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	177	322	22	47	439	340	32	148	35	318	125	173
Future Volume (veh/h)	177	322	22	47	439	340	32	148	35	318	125	173
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		1.00	1.00		0.98
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	1945	1945	1870	1870	1945
Adj Flow Rate, veh/h	201	366	25	53	499	386	36	168	40	361	142	197
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	261	1106	75	69	1035	458	445	380	90	778	421	365
Arrive On Green	0.08	0.33	0.33	0.04	0.29	0.29	0.25	0.25	0.25	0.22	0.22	0.22
Sat Flow, veh/h	3456	3371	229	1781	3554	1574	1781	1518	361	3456	1870	1623
Grp Volume(v), veh/h	201	192	199	53	499	386	36	0	208	361	142	197
Grp Sat Flow(s),veh/h/ln	1728	1777	1823	1781	1777	1574	1781	0	1880	1728	1870	1623
Q Serve(g_s), s	6.9	9.8	9.9	3.5	13.9	27.6	1.9	0.0	11.2	10.8	7.6	12.9
Cycle Q Clear(g_c), s	6.9	9.8	9.9	3.5	13.9	27.6	1.9	0.0	11.2	10.8	7.6	12.9
Prop In Lane	1.00		0.13	1.00		1.00	1.00		0.19	1.00		1.00
Lane Grp Cap(c), veh/h	261	583	598	69	1035	458	445	0	470	778	421	365
V/C Ratio(X)	0.77	0.33	0.33	0.77	0.48	0.84	0.08	0.00	0.44	0.46	0.34	0.54
Avail Cap(c_a), veh/h	490	583	598	252	1035	458	445	0	470	778	421	365
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	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.5	30.4	30.4	57.2	35.1	39.9	34.4	0.0	37.9	40.2	39.0	41.0
Incr Delay (d2), s/veh	1.8	1.5	1.5	6.8	1.6	16.9	0.4	0.0	3.0	2.0	2.2	5.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	5.4	7.7	7.9	3.0	10.1	18.2	1.6	0.0	9.5	8.3	6.7	9.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.3	31.9	31.9	63.9	36.7	56.9	34.8	0.0	41.0	42.2	41.2	46.6
LnGrp LOS	E	C	C	E	D	E	C	A	D	D	D	D
Approach Vol, veh/h		592			938			244			700	
Approach Delay, s/veh		40.2			46.5			40.0			43.3	
Approach LOS		D			D			D			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.6	45.4		32.0	13.0	41.0		34.0				
Change Period (Y+Rc), s	4.0	6.0		5.0	4.0	6.0		4.0				
Max Green Setting (Gmax), s	17.0	27.0		27.0	17.0	27.0		30.0				
Max Q Clear Time (g_c+I1), s	5.5	11.9		14.9	8.9	29.6		13.2				
Green Ext Time (p_c), s	0.0	2.5		2.2	0.2	0.0		1.2				

Intersection Summary	
HCM 6th Ctrl Delay	43.4
HCM 6th LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	310	678	31	31	505	235	15	46	27	433	44	264
Future Volume (veh/h)	310	678	31	31	505	235	15	46	27	433	44	264
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		0.99	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	1945	1945	1870	1870	1945
Adj Flow Rate, veh/h	326	714	33	33	532	247	16	48	28	456	46	278
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	387	1244	57	42	965	430	416	268	156	778	421	370
Arrive On Green	0.11	0.36	0.36	0.02	0.27	0.27	0.23	0.23	0.23	0.22	0.22	0.22
Sat Flow, veh/h	3456	3458	160	1781	3554	1583	1781	1150	671	3456	1870	1646
Grp Volume(v), veh/h	326	367	380	33	532	247	16	0	76	456	46	278
Grp Sat Flow(s),veh/h/ln	1728	1777	1841	1781	1777	1583	1781	0	1820	1728	1870	1646
Q Serve(g_s), s	11.1	20.0	20.0	2.2	15.4	16.2	0.8	0.0	4.0	14.1	2.3	18.9
Cycle Q Clear(g_c), s	11.1	20.0	20.0	2.2	15.4	16.2	0.8	0.0	4.0	14.1	2.3	18.9
Prop In Lane	1.00		0.09	1.00		1.00	1.00		0.37	1.00		1.00
Lane Grp Cap(c), veh/h	387	639	662	42	965	430	416	0	425	778	421	370
V/C Ratio(X)	0.84	0.57	0.57	0.79	0.55	0.57	0.04	0.00	0.18	0.59	0.11	0.75
Avail Cap(c_a), veh/h	547	639	662	148	965	430	416	0	425	778	421	370
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	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.3	31.0	31.0	58.3	37.5	37.7	35.6	0.0	36.8	41.5	36.9	43.4
Incr Delay (d2), s/veh	5.9	3.7	3.6	11.6	2.3	5.5	0.2	0.0	0.9	3.2	0.5	13.1
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	8.7	13.8	14.2	2.0	11.1	11.0	0.7	0.0	3.5	10.4	2.0	14.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	58.2	34.7	34.6	69.9	39.7	43.2	35.8	0.0	37.7	44.7	37.5	56.5
LnGrp LOS	E	C	C	E	D	D	D	A	D	D	D	E
Approach Vol, veh/h		1073			812			92			780	
Approach Delay, s/veh		41.8			42.0			37.4			48.5	
Approach LOS		D			D			D			D	

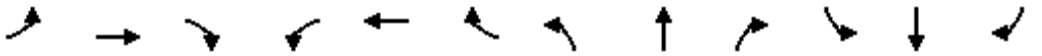
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.8	49.2		32.0	17.4	38.6		32.0				
Change Period (Y+Rc), s	4.0	6.0		5.0	4.0	6.0		4.0				
Max Green Setting (Gmax), s	10.0	36.0		27.0	19.0	27.0		28.0				
Max Q Clear Time (g_c+I1), s	4.2	22.0		20.9	13.1	18.2		6.0				
Green Ext Time (p_c), s	0.0	4.9		1.7	0.3	3.6		0.4				

Intersection Summary			
HCM 6th Ctrl Delay		43.6	
HCM 6th LOS		D	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	190	328	22	47	437	340	32	148	35	318	125	174
Future Volume (veh/h)	190	328	22	47	437	340	32	148	35	318	125	174
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		1.00	1.00		0.98
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	1945	1945	1870	1870	1945
Adj Flow Rate, veh/h	216	373	25	53	497	386	36	168	40	361	142	198
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	276	1108	74	69	1019	451	445	380	90	778	421	365
Arrive On Green	0.08	0.33	0.33	0.04	0.29	0.29	0.25	0.25	0.25	0.22	0.22	0.22
Sat Flow, veh/h	3456	3375	225	1781	3554	1573	1781	1518	361	3456	1870	1623
Grp Volume(v), veh/h	216	196	202	53	497	386	36	0	208	361	142	198
Grp Sat Flow(s),veh/h/ln	1728	1777	1824	1781	1777	1573	1781	0	1880	1728	1870	1623
Q Serve(g_s), s	7.4	10.0	10.1	3.5	13.9	27.8	1.9	0.0	11.2	10.8	7.6	12.9
Cycle Q Clear(g_c), s	7.4	10.0	10.1	3.5	13.9	27.8	1.9	0.0	11.2	10.8	7.6	12.9
Prop In Lane	1.00		0.12	1.00		1.00	1.00		0.19	1.00		1.00
Lane Grp Cap(c), veh/h	276	583	599	69	1019	451	445	0	470	778	421	365
V/C Ratio(X)	0.78	0.34	0.34	0.77	0.49	0.86	0.08	0.00	0.44	0.46	0.34	0.54
Avail Cap(c_a), veh/h	490	583	599	252	1019	451	445	0	470	778	421	365
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	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.2	30.4	30.5	57.2	35.5	40.4	34.4	0.0	37.9	40.2	39.0	41.0
Incr Delay (d2), s/veh	1.9	1.5	1.5	6.8	1.7	18.4	0.4	0.0	3.0	2.0	2.2	5.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	5.8	7.8	8.0	3.0	10.1	18.5	1.6	0.0	9.5	8.3	6.7	9.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.1	32.0	32.0	63.9	37.1	58.8	34.8	0.0	41.0	42.2	41.2	46.7
LnGrp LOS	E	C	C	E	D	E	C	A	D	D	D	D
Approach Vol, veh/h		614			936			244			701	
Approach Delay, s/veh		40.5			47.6			40.0			43.3	
Approach LOS		D			D			D			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.6	45.4		32.0	13.6	40.4		34.0				
Change Period (Y+Rc), s	4.0	6.0		5.0	4.0	6.0		4.0				
Max Green Setting (Gmax), s	17.0	27.0		27.0	17.0	27.0		30.0				
Max Q Clear Time (g_c+I1), s	5.5	12.1		14.9	9.4	29.8		13.2				
Green Ext Time (p_c), s	0.0	2.5		2.2	0.2	0.0		1.2				

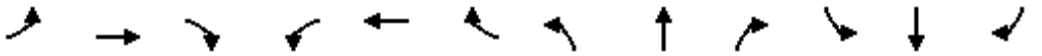
Intersection Summary	
HCM 6th Ctrl Delay	43.9
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	313	677	31	31	507	235	15	46	27	433	44	274
Future Volume (veh/h)	313	677	31	31	507	235	15	46	27	433	44	274
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		0.99	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	1945	1945	1870	1870	1945
Adj Flow Rate, veh/h	329	713	33	33	534	247	16	48	28	456	46	288
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	390	1244	58	42	962	428	416	268	156	778	421	370
Arrive On Green	0.11	0.36	0.36	0.02	0.27	0.27	0.23	0.23	0.23	0.22	0.22	0.22
Sat Flow, veh/h	3456	3457	160	1781	3554	1583	1781	1150	671	3456	1870	1646
Grp Volume(v), veh/h	329	366	380	33	534	247	16	0	76	456	46	288
Grp Sat Flow(s),veh/h/ln	1728	1777	1841	1781	1777	1583	1781	0	1820	1728	1870	1646
Q Serve(g_s), s	11.2	19.9	20.0	2.2	15.5	16.2	0.8	0.0	4.0	14.1	2.3	19.7
Cycle Q Clear(g_c), s	11.2	19.9	20.0	2.2	15.5	16.2	0.8	0.0	4.0	14.1	2.3	19.7
Prop In Lane	1.00		0.09	1.00		1.00	1.00		0.37	1.00		1.00
Lane Grp Cap(c), veh/h	390	639	662	42	962	428	416	0	425	778	421	370
V/C Ratio(X)	0.84	0.57	0.57	0.79	0.56	0.58	0.04	0.00	0.18	0.59	0.11	0.78
Avail Cap(c_a), veh/h	547	639	662	148	962	428	416	0	425	778	421	370
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	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.2	31.0	31.0	58.3	37.6	37.8	35.6	0.0	36.8	41.5	36.9	43.7
Incr Delay (d2), s/veh	6.1	3.7	3.6	11.6	2.3	5.6	0.2	0.0	0.9	3.2	0.5	14.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	8.8	13.7	14.1	2.0	11.1	11.0	0.7	0.0	3.5	10.4	2.0	14.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	58.3	34.7	34.6	69.9	39.9	43.4	35.8	0.0	37.7	44.7	37.5	58.5
LnGrp LOS	E	C	C	E	D	D	D	A	D	D	D	E
Approach Vol, veh/h		1075			814			92			790	
Approach Delay, s/veh		41.9			42.2			37.4			49.3	
Approach LOS		D			D			D			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.8	49.2		32.0	17.5	38.5		32.0				
Change Period (Y+Rc), s	4.0	6.0		5.0	4.0	6.0		4.0				
Max Green Setting (Gmax), s	10.0	36.0		27.0	19.0	27.0		28.0				
Max Q Clear Time (g_c+I1), s	4.2	22.0		21.7	13.2	18.2		6.0				
Green Ext Time (p_c), s	0.0	4.9		1.5	0.3	3.6		0.4				

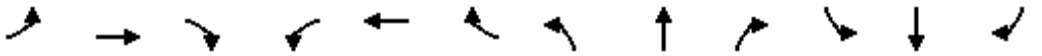
Intersection Summary	
HCM 6th Ctrl Delay	43.9
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	181	366	23	48	462	348	33	151	36	325	128	177
Future Volume (veh/h)	181	366	23	48	462	348	33	151	36	325	128	177
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		1.00	1.00		0.98
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	1945	1945	1870	1870	1945
Adj Flow Rate, veh/h	206	416	26	55	525	395	38	172	41	369	145	201
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	266	1108	69	71	1030	456	445	379	90	778	421	365
Arrive On Green	0.08	0.33	0.33	0.04	0.29	0.29	0.25	0.25	0.25	0.22	0.22	0.22
Sat Flow, veh/h	3456	3392	211	1781	3554	1574	1781	1518	362	3456	1870	1623
Grp Volume(v), veh/h	206	217	225	55	525	395	38	0	213	369	145	201
Grp Sat Flow(s),veh/h/ln	1728	1777	1827	1781	1777	1574	1781	0	1880	1728	1870	1623
Q Serve(g_s), s	7.0	11.2	11.3	3.7	14.8	28.6	2.0	0.0	11.5	11.1	7.8	13.1
Cycle Q Clear(g_c), s	7.0	11.2	11.3	3.7	14.8	28.6	2.0	0.0	11.5	11.1	7.8	13.1
Prop In Lane	1.00		0.12	1.00		1.00	1.00		0.19	1.00		1.00
Lane Grp Cap(c), veh/h	266	581	597	71	1030	456	445	0	470	778	421	365
V/C Ratio(X)	0.78	0.37	0.38	0.77	0.51	0.87	0.09	0.00	0.45	0.47	0.34	0.55
Avail Cap(c_a), veh/h	490	581	597	252	1030	456	445	0	470	778	421	365
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	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.4	31.0	31.0	57.1	35.5	40.4	34.5	0.0	38.1	40.3	39.1	41.1
Incr Delay (d2), s/veh	1.8	1.8	1.8	6.5	1.8	19.3	0.4	0.0	3.1	2.1	2.2	5.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	5.5	8.6	8.9	3.1	10.6	19.0	1.6	0.0	9.7	8.5	6.8	9.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.2	32.8	32.8	63.6	37.3	59.8	34.9	0.0	41.2	42.4	41.3	47.0
LnGrp LOS	E	C	C	E	D	E	C	A	D	D	D	D
Approach Vol, veh/h		648			975			251			715	
Approach Delay, s/veh		40.3			47.9			40.2			43.5	
Approach LOS		D			D			D			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.8	45.2		32.0	13.2	40.8		34.0				
Change Period (Y+Rc), s	4.0	6.0		5.0	4.0	6.0		4.0				
Max Green Setting (Gmax), s	17.0	27.0		27.0	17.0	27.0		30.0				
Max Q Clear Time (g_c+I1), s	5.7	13.3		15.1	9.0	30.6		13.5				
Green Ext Time (p_c), s	0.0	2.7		2.3	0.2	0.0		1.2				

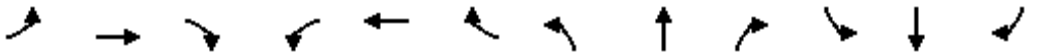
Intersection Summary			
HCM 6th Ctrl Delay		44.0	
HCM 6th LOS		D	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	317	708	32	32	551	240	15	47	28	443	45	270
Future Volume (veh/h)	317	708	32	32	551	240	15	47	28	443	45	270
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		0.99	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	1945	1945	1870	1870	1945
Adj Flow Rate, veh/h	334	745	34	34	580	253	16	49	29	466	47	284
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	395	1242	57	43	957	426	416	267	158	778	421	370
Arrive On Green	0.11	0.36	0.36	0.02	0.27	0.27	0.23	0.23	0.23	0.22	0.22	0.22
Sat Flow, veh/h	3456	3460	158	1781	3554	1583	1781	1143	676	3456	1870	1646
Grp Volume(v), veh/h	334	382	397	34	580	253	16	0	78	466	47	284
Grp Sat Flow(s),veh/h/ln	1728	1777	1841	1781	1777	1583	1781	0	1819	1728	1870	1646
Q Serve(g_s), s	11.4	21.1	21.1	2.3	17.1	16.7	0.8	0.0	4.1	14.5	2.4	19.4
Cycle Q Clear(g_c), s	11.4	21.1	21.1	2.3	17.1	16.7	0.8	0.0	4.1	14.5	2.4	19.4
Prop In Lane	1.00		0.09	1.00		1.00	1.00		0.37	1.00		1.00
Lane Grp Cap(c), veh/h	395	638	661	43	957	426	416	0	425	778	421	370
V/C Ratio(X)	0.85	0.60	0.60	0.79	0.61	0.59	0.04	0.00	0.18	0.60	0.11	0.77
Avail Cap(c_a), veh/h	547	638	661	148	957	426	416	0	425	778	421	370
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	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.1	31.4	31.4	58.2	38.3	38.1	35.6	0.0	36.8	41.7	37.0	43.6
Incr Delay (d2), s/veh	6.5	4.1	4.0	11.1	2.9	6.0	0.2	0.0	1.0	3.4	0.5	14.1
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	8.9	14.5	14.8	2.0	12.1	11.3	0.7	0.0	3.6	10.6	2.1	14.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	58.6	35.5	35.4	69.4	41.2	44.1	35.8	0.0	37.8	45.1	37.5	57.6
LnGrp LOS	E	D	D	E	D	D	D	A	D	D	D	E
Approach Vol, veh/h		1113			867			94			797	
Approach Delay, s/veh		42.4			43.1			37.5			49.1	
Approach LOS		D			D			D			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.9	49.1		32.0	17.7	38.3		32.0				
Change Period (Y+Rc), s	4.0	6.0		5.0	4.0	6.0		4.0				
Max Green Setting (Gmax), s	10.0	36.0		27.0	19.0	27.0		28.0				
Max Q Clear Time (g_c+I1), s	4.3	23.1		21.4	13.4	19.1		6.1				
Green Ext Time (p_c), s	0.0	4.9		1.6	0.3	3.6		0.4				

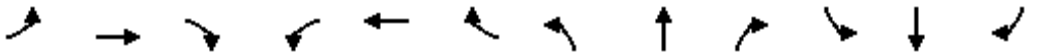
Intersection Summary	
HCM 6th Ctrl Delay	44.3
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	194	372	23	48	460	348	33	151	36	325	128	178
Future Volume (veh/h)	194	372	23	48	460	348	33	151	36	325	128	178
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		1.00	1.00		0.98
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	1945	1945	1870	1870	1945
Adj Flow Rate, veh/h	220	423	26	55	523	395	38	172	41	369	145	202
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	280	1110	68	71	1015	450	445	379	90	778	421	365
Arrive On Green	0.08	0.33	0.33	0.04	0.29	0.29	0.25	0.25	0.25	0.22	0.22	0.22
Sat Flow, veh/h	3456	3396	208	1781	3554	1573	1781	1518	362	3456	1870	1623
Grp Volume(v), veh/h	220	221	228	55	523	395	38	0	213	369	145	202
Grp Sat Flow(s),veh/h/ln	1728	1777	1827	1781	1777	1573	1781	0	1880	1728	1870	1623
Q Serve(g_s), s	7.5	11.5	11.5	3.7	14.8	28.7	2.0	0.0	11.5	11.1	7.8	13.2
Cycle Q Clear(g_c), s	7.5	11.5	11.5	3.7	14.8	28.7	2.0	0.0	11.5	11.1	7.8	13.2
Prop In Lane	1.00		0.11	1.00		1.00	1.00		0.19	1.00		1.00
Lane Grp Cap(c), veh/h	280	581	597	71	1015	450	445	0	470	778	421	365
V/C Ratio(X)	0.79	0.38	0.38	0.77	0.52	0.88	0.09	0.00	0.45	0.47	0.34	0.55
Avail Cap(c_a), veh/h	490	581	597	252	1015	450	445	0	470	778	421	365
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	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.1	31.1	31.1	57.1	35.9	40.9	34.5	0.0	38.1	40.3	39.1	41.2
Incr Delay (d2), s/veh	1.9	1.9	1.9	6.5	1.9	21.0	0.4	0.0	3.1	2.1	2.2	5.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	5.9	8.7	9.0	3.1	10.6	19.3	1.6	0.0	9.7	8.5	6.8	9.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.0	32.9	32.9	63.6	37.8	61.8	34.9	0.0	41.2	42.4	41.3	47.1
LnGrp LOS	E	C	C	E	D	E	C	A	D	D	D	D
Approach Vol, veh/h		669			973			251			716	
Approach Delay, s/veh		40.5			49.0			40.2			43.5	
Approach LOS		D			D			D			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.8	45.2		32.0	13.7	40.3		34.0				
Change Period (Y+Rc), s	4.0	6.0		5.0	4.0	6.0		4.0				
Max Green Setting (Gmax), s	17.0	27.0		27.0	17.0	27.0		30.0				
Max Q Clear Time (g_c+I1), s	5.7	13.5		15.2	9.5	30.7		13.5				
Green Ext Time (p_c), s	0.0	2.7		2.3	0.2	0.0		1.2				

Intersection Summary			
HCM 6th Ctrl Delay		44.5	
HCM 6th LOS		D	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	320	707	32	32	553	240	15	47	28	443	45	280
Future Volume (veh/h)	320	707	32	32	553	240	15	47	28	443	45	280
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		0.99	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	1945	1945	1870	1870	1945
Adj Flow Rate, veh/h	337	744	34	34	582	253	16	49	29	466	47	295
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	397	1242	57	43	953	425	416	267	158	778	421	370
Arrive On Green	0.12	0.36	0.36	0.02	0.27	0.27	0.23	0.23	0.23	0.22	0.22	0.22
Sat Flow, veh/h	3456	3460	158	1781	3554	1583	1781	1143	676	3456	1870	1646
Grp Volume(v), veh/h	337	382	396	34	582	253	16	0	78	466	47	295
Grp Sat Flow(s),veh/h/ln	1728	1777	1841	1781	1777	1583	1781	0	1819	1728	1870	1646
Q Serve(g_s), s	11.5	21.1	21.1	2.3	17.2	16.7	0.8	0.0	4.1	14.5	2.4	20.3
Cycle Q Clear(g_c), s	11.5	21.1	21.1	2.3	17.2	16.7	0.8	0.0	4.1	14.5	2.4	20.3
Prop In Lane	1.00		0.09	1.00		1.00	1.00		0.37	1.00		1.00
Lane Grp Cap(c), veh/h	397	638	661	43	953	425	416	0	425	778	421	370
V/C Ratio(X)	0.85	0.60	0.60	0.79	0.61	0.60	0.04	0.00	0.18	0.60	0.11	0.80
Avail Cap(c_a), veh/h	547	638	661	148	953	425	416	0	425	778	421	370
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	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.1	31.4	31.4	58.2	38.4	38.2	35.6	0.0	36.8	41.7	37.0	43.9
Incr Delay (d2), s/veh	6.7	4.1	4.0	11.1	2.9	6.0	0.2	0.0	1.0	3.4	0.5	16.2
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	9.0	14.4	14.8	2.0	12.2	11.3	0.7	0.0	3.6	10.6	2.1	15.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	58.8	35.5	35.4	69.4	41.3	44.3	35.8	0.0	37.8	45.1	37.5	60.1
LnGrp LOS	E	D	D	E	D	D	D	A	D	D	D	E
Approach Vol, veh/h		1115			869			94			808	
Approach Delay, s/veh		42.5			43.3			37.5			50.1	
Approach LOS		D			D			D			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.9	49.1		32.0	17.8	38.2		32.0				
Change Period (Y+Rc), s	4.0	6.0		5.0	4.0	6.0		4.0				
Max Green Setting (Gmax), s	10.0	36.0		27.0	19.0	27.0		28.0				
Max Q Clear Time (g_c+I1), s	4.3	23.1		22.3	13.5	19.2		6.1				
Green Ext Time (p_c), s	0.0	4.9		1.4	0.3	3.6		0.4				

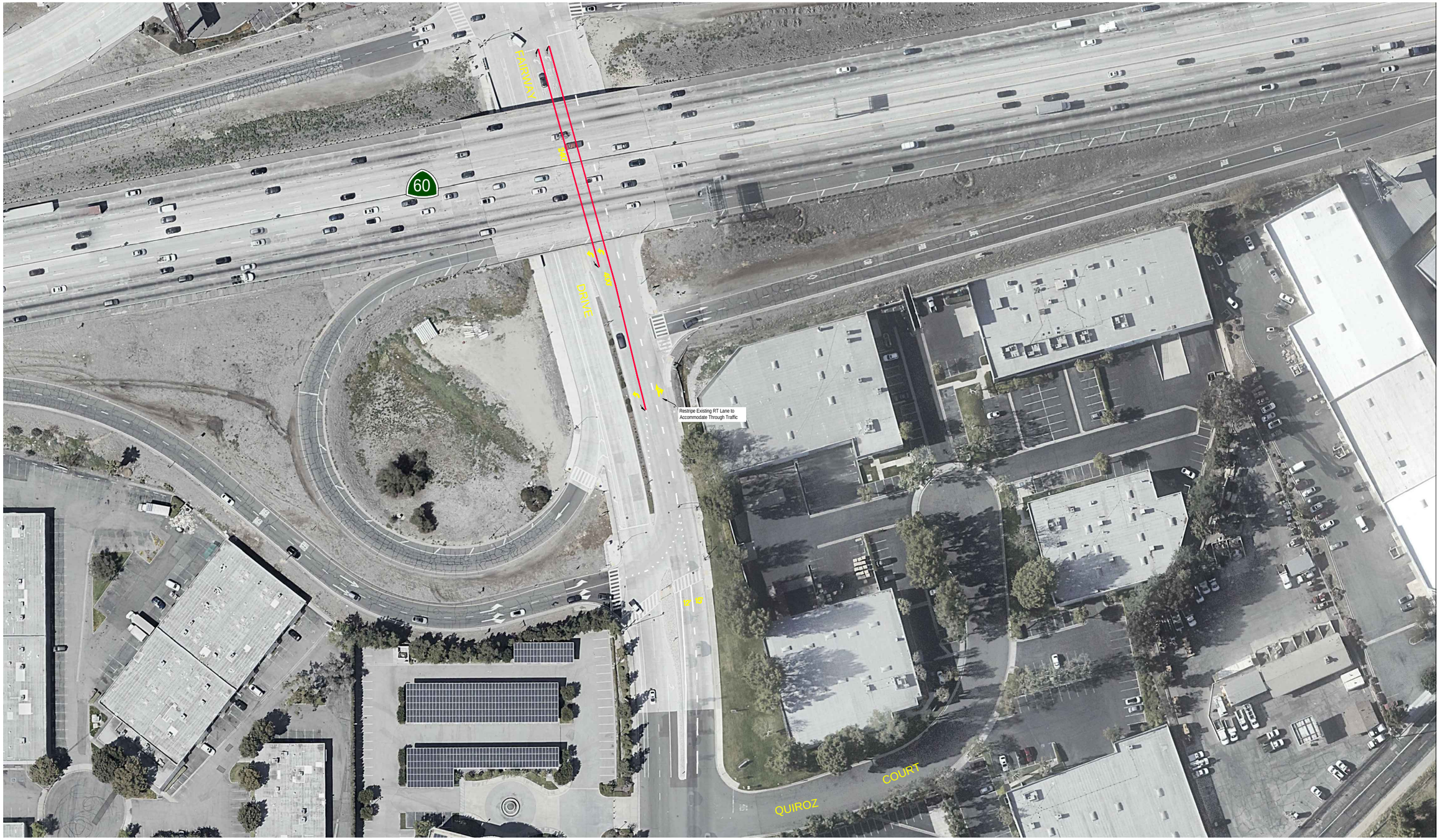
Intersection Summary		
HCM 6th Ctrl Delay		44.7
HCM 6th LOS		D

APPENDIX F

RECOMMENDED IMPROVEMENT MEASURE CONCEPTUAL PLANS

HCM DATA WORKSHEETS – WEEKDAY AM AND PM PEAK HOUR:

FAIRWAY DRIVE/SR-60 FREEWAY WB RAMPS
FAIRWAY DRIVE/EAST WALNUT DRIVE SOUTH
FAIRWAY DRIVE-BREA CANYON CUTOFF ROAD/COLIMA ROAD
LOT 1 & 2 PROJECT DRIVEWAY/COLIMA ROAD
TIERRA LUNA-LOT 5 PROJECT DRIVEWAY/COLIMA ROAD
LEMON AVENUE/GOLDEN SPRINGS ROAD



MAP SOURCE: GOOGLE EARTH

SCALE 1" = 100'

Appendix Figure F-1
Conceptual Improvement Plan
Fairway Drive and SR-60 Freeway WB Ramps
Royal Vista Residential and Parks Project

-F-334-

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MAP SOURCE: GOOGLE EARTH

LIN-SCOTT LAW & GREEN-PAN engineers

N

SCALE 1" = 40'

Appendix Figure F-2
Conceptual Improvement Plan
East Walnut Drive South at Fairway Drive
Royal Vista Residential and Parks Project

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MAP SOURCE: GOOGLE EARTH

LIN-SCOTT LAW & GREENSPAN engineers

N

SCALE 1" = 80'

Appendix Figure F-3
Conceptual Improvement Plan
Fairway Drive and Colima Road
Royal Vista Residential and Parks Project

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MAP SOURCE: GOOGLE EARTH

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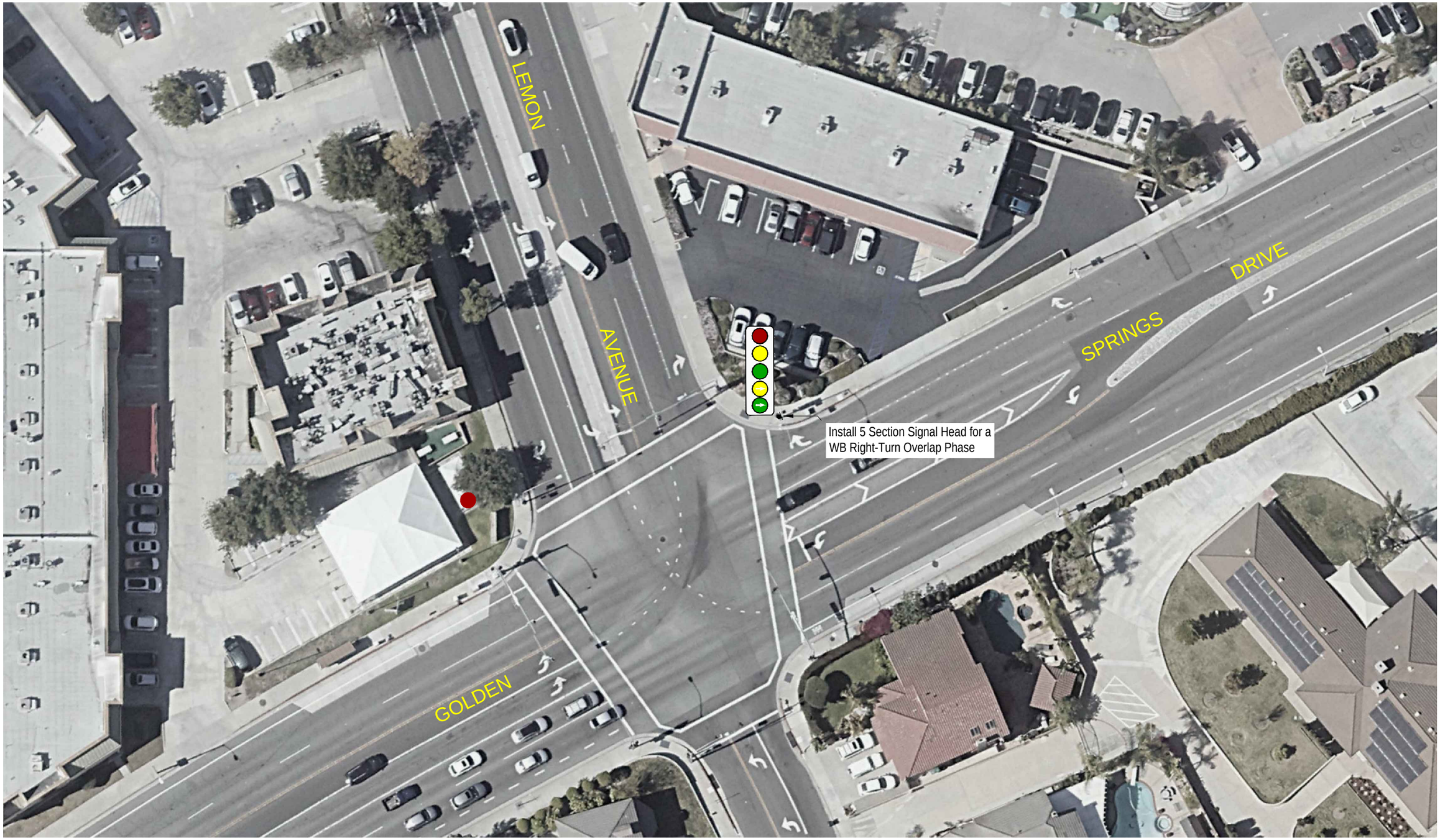
SCALE 1" = 40'

LIN-LOTT LAW & GREENSPAN engineers

Appendix Figure F-4
Conceptual Striping Plan
Walnut Leaf Drive and Colima Road
Royal Vista Residential and Parks Project

-F-337-

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MAP SOURCE: GOOGLE EARTH

LIN-SCOTT LAW & GREEN-PAN engineers

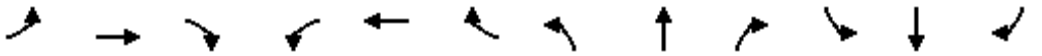
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Appendix Figure F-5
Conceptual Improvement Plan
Lemon Avenue and Golden Springs Drive
Royal Vista Residential and Parks Project

-F-338-

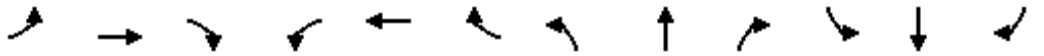
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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	261	0	409	241	430	0	0	220	53
Future Volume (veh/h)	0	0	0	261	0	409	241	430	0	0	220	53
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj				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	
Adj Sat Flow, veh/h/ln				1870	1870	1870	1870	1870	0	0	1870	1945
Adj Flow Rate, veh/h				284	0	445	262	467	0	0	239	58
Peak Hour Factor				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	0	0	2	2
Cap, veh/h				548	0	487	326	2121	0	0	2353	749
Arrive On Green				0.31	0.00	0.31	0.09	0.60	0.00	0.00	0.46	0.46
Sat Flow, veh/h				1781	0	1585	3456	3647	0	0	5274	1626
Grp Volume(v), veh/h				284	0	445	262	467	0	0	239	58
Grp Sat Flow(s),veh/h/ln				1781	0	1585	1728	1777	0	0	1702	1626
Q Serve(g_s), s				15.8	0.0	32.4	8.9	7.3	0.0	0.0	3.2	2.4
Cycle Q Clear(g_c), s				15.8	0.0	32.4	8.9	7.3	0.0	0.0	3.2	2.4
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				548	0	487	326	2121	0	0	2353	749
V/C Ratio(X)				0.52	0.00	0.91	0.80	0.22	0.00	0.00	0.10	0.08
Avail Cap(c_a), veh/h				601	0	535	720	2121	0	0	2353	749
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				34.2	0.0	40.0	53.3	11.2	0.0	0.0	18.3	18.1
Incr Delay (d2), s/veh				1.1	0.0	19.8	1.8	0.2	0.0	0.0	0.1	0.2
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln				11.2	0.0	21.4	7.0	5.0	0.0	0.0	2.2	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				35.3	0.0	59.8	55.1	11.5	0.0	0.0	18.4	18.3
LnGrp LOS				D	A	E	E	B	A	A	B	B
Approach Vol, veh/h					729			729			297	
Approach Delay, s/veh					50.3			27.1			18.4	
Approach LOS					D			C			B	

Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		77.6			16.3	61.3		42.4				
Change Period (Y+Rc), s		6.0			5.0	6.0		5.5				
Max Green Setting (Gmax), s		68.0			25.0	38.0		40.5				
Max Q Clear Time (g_c+I1), s		9.3			10.9	5.2		34.4				
Green Ext Time (p_c), s		5.7			0.4	2.9		2.5				

Intersection Summary												
HCM 6th Ctrl Delay			35.3									
HCM 6th LOS			D									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	325	2	143	468	364	0	0	452	69
Future Volume (veh/h)	0	0	0	325	2	143	468	364	0	0	452	69
Initial Q (Qb), veh				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
Parking Bus, Adj				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	
Adj Sat Flow, veh/h/ln				1870	1870	1870	1870	1870	0	0	1870	1945
Adj Flow Rate, veh/h				353	2	155	509	396	0	0	491	75
Peak Hour Factor				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	0	0	2	2
Cap, veh/h				399	2	357	572	2412	0	0	2407	777
Arrive On Green				0.23	0.23	0.23	0.17	0.68	0.00	0.00	0.47	0.47
Sat Flow, veh/h				1772	10	1585	3456	3647	0	0	5274	1647
Grp Volume(v), veh/h				355	0	155	509	396	0	0	491	75
Grp Sat Flow(s),veh/h/ln				1782	0	1585	1728	1777	0	0	1702	1647
Q Serve(g_s), s				23.1	0.0	10.1	17.3	4.8	0.0	0.0	6.7	3.0
Cycle Q Clear(g_c), s				23.1	0.0	10.1	17.3	4.8	0.0	0.0	6.7	3.0
Prop In Lane				0.99		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				402	0	357	572	2412	0	0	2407	777
V/C Ratio(X)				0.88	0.00	0.43	0.89	0.16	0.00	0.00	0.20	0.10
Avail Cap(c_a), veh/h				468	0	416	720	2412	0	0	2407	777
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				45.0	0.0	39.9	49.0	7.0	0.0	0.0	18.5	17.6
Incr Delay (d2), s/veh				17.1	0.0	1.2	9.7	0.1	0.0	0.0	0.2	0.2
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln				17.7	0.0	7.2	12.7	3.0	0.0	0.0	4.7	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				62.1	0.0	41.1	58.7	7.1	0.0	0.0	18.7	17.8
LnGrp LOS				E	A	D	E	A	A	A	B	B
Approach Vol, veh/h					510			905			566	
Approach Delay, s/veh					55.7			36.1			18.6	
Approach LOS					E			D			B	

Timer - Assigned Phs	2		5	6		8						
Phs Duration (G+Y+Rc), s	87.4		24.9	62.6		32.6						
Change Period (Y+Rc), s	6.0		5.0	6.0		5.5						
Max Green Setting (Gmax), s	77.0		25.0	47.0		31.5						
Max Q Clear Time (g_c+I1), s	6.8		19.3	8.7		25.1						
Green Ext Time (p_c), s	4.7		0.6	6.3		1.9						

Intersection Summary		
HCM 6th Ctrl Delay	36.2	
HCM 6th LOS	D	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	208	12	118	29	16	145	53	528	22	59	904	224
Future Volume (veh/h)	208	12	118	29	16	145	53	528	22	59	904	224
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	245	14	139	34	19	171	62	621	26	69	1064	264
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	305	15	145	332	175	534	295	2025	903	435	1609	397
Arrive On Green	0.34	0.34	0.34	0.34	0.34	0.34	0.57	0.57	0.57	1.00	1.00	1.00
Sat Flow, veh/h	757	43	429	836	518	1578	413	3554	1585	784	2824	697
Grp Volume(v), veh/h	398	0	0	53	0	171	62	621	26	69	667	661
Grp Sat Flow(s),veh/h/ln	1230	0	0	1354	0	1578	413	1777	1585	784	1777	1744
Q Serve(g_s), s	35.4	0.0	0.0	0.0	0.0	9.6	9.1	10.9	0.9	2.0	0.0	0.0
Cycle Q Clear(g_c), s	38.2	0.0	0.0	2.8	0.0	9.6	9.1	10.9	0.9	12.9	0.0	0.0
Prop In Lane	0.62		0.35	0.64		1.00	1.00		1.00	1.00		0.40
Lane Grp Cap(c), veh/h	465	0	0	508	0	534	295	2025	903	435	1012	994
V/C Ratio(X)	0.86	0.00	0.00	0.10	0.00	0.32	0.21	0.31	0.03	0.16	0.66	0.66
Avail Cap(c_a), veh/h	474	0	0	518	0	546	295	2025	903	435	1012	994
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	0.84	0.84	0.84	0.99	0.99	0.99
Uniform Delay (d), s/veh	40.3	0.0	0.0	27.1	0.0	29.4	13.1	13.5	11.3	1.0	0.0	0.0
Incr Delay (d2), s/veh	14.2	0.0	0.0	0.1	0.0	0.3	1.4	0.3	0.0	0.8	3.3	3.5
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	19.0	0.0	0.0	1.9	0.0	6.6	1.6	7.3	0.5	0.2	1.7	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	54.4	0.0	0.0	27.2	0.0	29.8	14.4	13.8	11.3	1.8	3.3	3.5
LnGrp LOS	D	A	A	C	A	C	B	B	B	A	A	A
Approach Vol, veh/h		398			224			709			1397	
Approach Delay, s/veh		54.4			29.2			13.8			3.3	
Approach LOS		D			C			B			A	

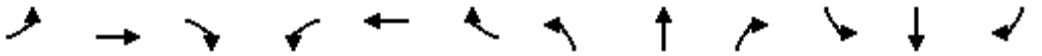
Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	73.9	46.1	73.9	46.1
Change Period (Y+Rc), s	5.5	5.5	5.5	5.5
Max Green Setting (Gmax), s	67.5	41.5	67.5	41.5
Max Q Clear Time (g_c+I1), s	12.9	40.2	14.9	11.6
Green Ext Time (p_c), s	6.0	0.3	13.1	0.9

Intersection Summary	
HCM 6th Ctrl Delay	15.6
HCM 6th LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	155	10	54	27	11	76	64	697	45	140	1171	165
Future Volume (veh/h)	155	10	54	27	11	76	64	697	45	140	1171	165
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	161	10	56	28	11	79	67	726	47	146	1220	172
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	233	12	64	258	93	326	333	2498	1114	497	2199	309
Arrive On Green	0.21	0.21	0.21	0.21	0.21	0.21	0.70	0.70	0.70	1.00	1.00	1.00
Sat Flow, veh/h	886	59	310	1006	455	1585	388	3554	1585	697	3128	439
Grp Volume(v), veh/h	227	0	0	39	0	79	67	726	47	146	691	701
Grp Sat Flow(s),veh/h/ln	1255	0	0	1460	0	1585	388	1777	1585	697	1777	1790
Q Serve(g_s), s	19.0	0.0	0.0	0.0	0.0	5.0	7.4	9.2	1.1	3.9	0.0	0.0
Cycle Q Clear(g_c), s	21.5	0.0	0.0	2.4	0.0	5.0	7.4	9.2	1.1	13.0	0.0	0.0
Prop In Lane	0.71		0.25	0.72		1.00	1.00		1.00	1.00		0.25
Lane Grp Cap(c), veh/h	309	0	0	351	0	326	333	2498	1114	497	1249	1258
V/C Ratio(X)	0.73	0.00	0.00	0.11	0.00	0.24	0.20	0.29	0.04	0.29	0.55	0.56
Avail Cap(c_a), veh/h	504	0	0	555	0	548	333	2498	1114	497	1249	1258
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	0.69	0.69	0.69	0.96	0.96	0.96
Uniform Delay (d), s/veh	47.5	0.0	0.0	38.8	0.0	39.9	6.4	6.7	5.5	0.7	0.0	0.0
Incr Delay (d2), s/veh	3.4	0.0	0.0	0.1	0.0	0.4	0.9	0.2	0.0	1.4	1.7	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	11.1	0.0	0.0	1.7	0.0	3.6	1.1	5.4	0.6	0.4	1.1	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.9	0.0	0.0	38.9	0.0	40.3	7.3	6.9	5.5	2.1	1.7	1.7
LnGrp LOS	D	A	A	D	A	D	A	A	A	A	A	A
Approach Vol, veh/h		227			118			840			1538	
Approach Delay, s/veh		50.9			39.8			6.8			1.7	
Approach LOS		D			D			A			A	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	89.9	30.1	89.9	30.1
Change Period (Y+Rc), s	5.5	5.5	5.5	5.5
Max Green Setting (Gmax), s	67.5	41.5	67.5	41.5
Max Q Clear Time (g_c+I1), s	11.2	23.5	15.0	7.0
Green Ext Time (p_c), s	7.4	1.2	15.6	0.4

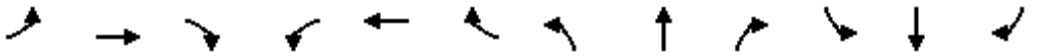
Intersection Summary	
HCM 6th Ctrl Delay	9.1
HCM 6th LOS	A



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	148	341	178	163	407	110	165	423	136	90	753	145
Future Volume (veh/h)	148	341	178	163	407	110	165	423	136	90	753	145
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	1945	1870	1870	1945	1870	1870	1870	1870	1870	1945
Adj Flow Rate, veh/h	166	383	200	183	457	124	185	475	153	101	846	163
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	193	1125	522	210	1367	359	212	1097	488	129	932	609
Arrive On Green	0.11	0.33	0.33	0.12	0.34	0.34	0.12	0.31	0.31	0.14	0.52	0.52
Sat Flow, veh/h	1781	3404	1579	1781	4024	1057	1781	3554	1580	1781	3554	1641
Grp Volume(v), veh/h	166	383	200	183	384	197	185	475	153	101	846	163
Grp Sat Flow(s),veh/h/ln	1781	1702	1579	1781	1702	1677	1781	1777	1580	1781	1777	1641
Q Serve(g_s), s	11.0	10.2	11.7	12.1	10.1	10.5	12.3	12.8	8.9	6.6	25.9	6.0
Cycle Q Clear(g_c), s	11.0	10.2	11.7	12.1	10.1	10.5	12.3	12.8	8.9	6.6	25.9	6.0
Prop In Lane	1.00		1.00	1.00		0.63	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	193	1125	522	210	1157	570	212	1097	488	129	932	609
V/C Ratio(X)	0.86	0.34	0.38	0.87	0.33	0.35	0.87	0.43	0.31	0.78	0.91	0.27
Avail Cap(c_a), veh/h	238	1125	522	238	1157	570	245	1097	488	245	977	630
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.72	0.72	0.72
Uniform Delay (d), s/veh	52.6	30.3	30.8	52.1	29.5	29.6	52.0	33.1	31.7	50.4	27.2	16.5
Incr Delay (d2), s/veh	19.7	0.8	2.1	24.0	0.8	1.7	23.1	0.5	0.6	2.8	9.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	9.8	7.5	8.1	10.9	7.4	7.8	11.0	9.3	6.2	5.0	12.3	3.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	72.3	31.1	32.9	76.1	30.2	31.3	75.0	33.6	32.4	53.2	36.5	16.8
LnGrp LOS	E	C	C	E	C	C	E	C	C	D	D	B
Approach Vol, veh/h		749			764			813			1110	
Approach Delay, s/veh		40.7			41.5			42.8			35.1	
Approach LOS		D			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.6	45.1	18.8	37.5	17.5	46.3	13.2	43.0
Change Period (Y+Rc), s	4.5	5.5	4.5	6.0	4.5	5.5	4.5	6.0
Max Green Setting (Gmax), s	16.0	34.0	16.5	33.0	16.0	34.0	16.5	33.0
Max Q Clear Time (g_c+I1), s	14.1	13.7	14.3	27.9	13.0	12.5	8.6	14.8
Green Ext Time (p_c), s	0.0	5.4	0.0	3.4	0.0	5.5	0.0	5.3

Intersection Summary	
HCM 6th Ctrl Delay	39.6
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	167	786	179	193	571	79	187	485	176	231	762	153
Future Volume (veh/h)	167	786	179	193	571	79	187	485	176	231	762	153
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		0.98	1.00		0.99
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	1945	1870	1870	1945	1870	1870	1870	1870	1870	1945
Adj Flow Rate, veh/h	174	819	186	201	595	82	195	505	183	241	794	159
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	201	1343	303	227	1537	209	222	855	376	245	902	602
Arrive On Green	0.11	0.32	0.32	0.13	0.34	0.34	0.12	0.24	0.24	0.28	0.51	0.51
Sat Flow, veh/h	1781	4152	936	1781	4544	618	1781	3554	1561	1781	3554	1639
Grp Volume(v), veh/h	174	670	335	201	444	233	195	505	183	241	794	159
Grp Sat Flow(s),veh/h/ln	1781	1702	1684	1781	1702	1758	1781	1777	1561	1781	1777	1639
Q Serve(g_s), s	11.5	19.9	20.1	13.3	11.9	12.1	12.9	15.1	12.1	16.1	23.9	6.0
Cycle Q Clear(g_c), s	11.5	19.9	20.1	13.3	11.9	12.1	12.9	15.1	12.1	16.1	23.9	6.0
Prop In Lane	1.00		0.56	1.00		0.35	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	201	1101	544	227	1152	595	222	855	376	245	902	602
V/C Ratio(X)	0.87	0.61	0.61	0.88	0.39	0.39	0.88	0.59	0.49	0.98	0.88	0.26
Avail Cap(c_a), veh/h	238	1101	544	238	1152	595	245	977	429	245	977	636
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.80	0.80	0.80
Uniform Delay (d), s/veh	52.4	34.2	34.3	51.5	30.2	30.3	51.7	40.3	39.2	43.4	27.9	17.1
Incr Delay (d2), s/veh	21.8	2.5	5.1	28.2	1.0	1.9	25.4	1.2	1.7	46.8	7.8	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	10.3	13.0	13.5	12.1	8.5	9.1	11.6	10.8	8.3	13.3	11.7	3.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	74.1	36.7	39.4	79.7	31.2	32.2	77.0	41.5	40.9	90.2	35.7	17.5
LnGrp LOS	E	D	D	E	C	C	E	D	D	F	D	B
Approach Vol, veh/h		1179			878			883			1194	
Approach Delay, s/veh		43.0			42.6			49.2			44.3	
Approach LOS		D			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.8	44.3	19.4	36.5	18.0	46.1	21.0	34.9
Change Period (Y+Rc), s	4.5	5.5	4.5	6.0	4.5	5.5	4.5	6.0
Max Green Setting (Gmax), s	16.0	34.0	16.5	33.0	16.0	34.0	16.5	33.0
Max Q Clear Time (g_c+I1), s	15.3	22.1	14.9	25.9	13.5	14.1	18.1	17.1
Green Ext Time (p_c), s	0.0	6.8	0.0	4.3	0.0	6.2	0.0	5.4

Intersection Summary	
HCM 6th Ctrl Delay	44.6
HCM 6th LOS	D

Intersection	
Int Delay, s/veh	2.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	21	508	23	11	570	5	52	0	20	14	0	56
Future Vol, veh/h	21	508	23	11	570	5	52	0	20	14	0	56
Conflicting Peds, #/hr	0	0	0	0	0	0	1	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	100	-	-	-	-	30	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	83	83	83	83	85	83	85	83	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	25	612	28	13	687	6	63	0	24	16	0	66

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	693	0	0	640	0	0	1047	1395	320	1072	1406	348
Stage 1	-	-	-	-	-	-	676	676	-	716	716	-
Stage 2	-	-	-	-	-	-	371	719	-	356	690	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	898	-	-	1178	-	-	295	184	*899	*281	180	648
Stage 1	-	-	-	-	-	-	649	609	-	*387	432	-
Stage 2	-	-	-	-	-	-	622	431	-	*848	599	-
Platoon blocked, %		-	-	1	-	-	1	1	1	1	1	
Mov Cap-1 Maneuver	898	-	-	1178	-	-	254	174	*899	*262	170	647
Mov Cap-2 Maneuver	-	-	-	-	-	-	254	174	-	*262	170	-
Stage 1	-	-	-	-	-	-	621	583	-	*370	427	-
Stage 2	-	-	-	-	-	-	552	426	-	*790	573	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.5	0.2	19.7	13.6
HCM LOS			C	B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	254	899	898	-	-	1178	-	-	500
HCM Lane V/C Ratio	0.247	0.027	0.028	-	-	0.011	-	-	0.165
HCM Control Delay (s)	23.8	9.1	9.1	0.2	-	8.1	-	-	13.6
HCM Lane LOS	C	A	A	A	-	A	-	-	B
HCM 95th %tile Q(veh)	0.9	0.1	0.1	-	-	0	-	-	0.6

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

Intersection	
Int Delay, s/veh	1.7

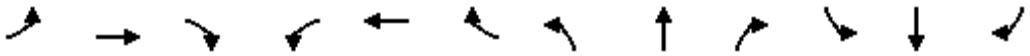
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	63	1033	30	24	761	16	24	0	17	10	0	39
Future Vol, veh/h	63	1033	30	24	761	16	24	0	17	10	0	39
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	100	-	-	-	-	30	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	100	100	100	100	95	100	95	100	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	66	1033	30	24	761	17	24	0	17	11	0	41

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	778	0	0	1063	0	0	1609	2006	532	1467	2013	389
Stage 1	-	-	-	-	-	-	1180	1180	-	818	818	-
Stage 2	-	-	-	-	-	-	429	826	-	649	1195	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	834	-	-	*1001	-	-	185	87	*669	*271	86	610
Stage 1	-	-	-	-	-	-	587	524	-	*336	388	-
Stage 2	-	-	-	-	-	-	574	385	-	*631	512	-
Platoon blocked, %		-	-	1	-	-	1	1	1	1	1	
Mov Cap-1 Maneuver	834	-	-	*1001	-	-	144	69	*669	*221	68	610
Mov Cap-2 Maneuver	-	-	-	-	-	-	144	69	-	*221	68	-
Stage 1	-	-	-	-	-	-	472	422	-	*270	379	-
Stage 2	-	-	-	-	-	-	523	376	-	*495	412	-

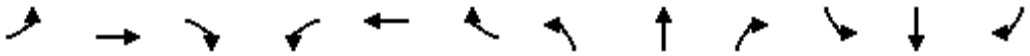
Approach	EB	WB	NB	SB
HCM Control Delay, s	1.3	0.3	24.8	14.1
HCM LOS			C	B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	144	669	834	-	-	* 1001	-	-	449
HCM Lane V/C Ratio	0.167	0.025	0.08	-	-	0.024	-	-	0.115
HCM Control Delay (s)	34.9	10.5	9.7	0.8	-	8.7	-	-	14.1
HCM Lane LOS	D	B	A	A	-	A	-	-	B
HCM 95th %tile Q(veh)	0.6	0.1	0.3	-	-	0.1	-	-	0.4

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



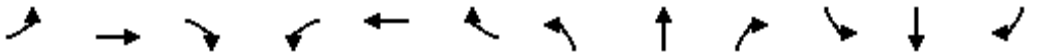
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	16	513	12	2	533	11	33	0	6	12	0	21
Future Volume (veh/h)	16	513	12	2	533	11	33	0	6	12	0	21
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		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	1945	1870	1870	1870	1945	1870	1945
Adj Flow Rate, veh/h	18	583	14	2	606	12	39	0	7	14	0	24
Peak Hour Factor	0.88	0.88	0.85	0.85	0.88	0.88	0.85	0.85	0.85	0.88	0.85	0.88
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	709	2975	71	749	2990	59	146	5	17	68	15	73
Arrive On Green	1.00	1.00	1.00	0.84	0.84	0.84	0.07	0.00	0.07	0.07	0.00	0.07
Sat Flow, veh/h	805	3547	85	821	3564	71	1228	63	232	370	208	990
Grp Volume(v), veh/h	18	292	305	2	302	316	46	0	0	38	0	0
Grp Sat Flow(s),veh/h/ln	805	1777	1855	821	1777	1858	1522	0	0	1568	0	0
Q Serve(g_s), s	0.1	0.0	0.0	0.0	4.0	4.0	0.4	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	4.1	0.0	0.0	0.0	4.0	4.0	3.0	0.0	0.0	2.6	0.0	0.0
Prop In Lane	1.00		0.05	1.00		0.04	0.85		0.15	0.37		0.63
Lane Grp Cap(c), veh/h	709	1491	1556	749	1491	1558	167	0	0	156	0	0
V/C Ratio(X)	0.03	0.20	0.20	0.00	0.20	0.20	0.27	0.00	0.00	0.24	0.00	0.00
Avail Cap(c_a), veh/h	709	1491	1556	749	1491	1558	563	0	0	581	0	0
HCM Platoon Ratio	2.00	2.00	2.00	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	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	0.1	0.0	0.0	1.6	1.9	1.9	52.9	0.0	0.0	52.7	0.0	0.0
Incr Delay (d2), s/veh	0.1	0.3	0.3	0.0	0.1	0.1	0.9	0.0	0.0	0.8	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	0.2	0.2	0.0	1.2	1.3	2.5	0.0	0.0	2.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.1	0.3	0.3	1.6	1.9	1.9	53.7	0.0	0.0	53.5	0.0	0.0
LnGrp LOS	A	A	A	A	A	A	D	A	A	D	A	A
Approach Vol, veh/h		615			620			46			38	
Approach Delay, s/veh		0.3			1.9			53.7			53.5	
Approach LOS		A			A			D			D	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		106.7		13.3		106.7		13.3				
Change Period (Y+Rc), s		6.0		4.5		6.0		4.5				
Max Green Setting (Gmax), s		67.0		42.5		67.0		42.5				
Max Q Clear Time (g_c+I1), s		6.1		4.6		6.0		5.0				
Green Ext Time (p_c), s		3.7		0.2		3.7		0.2				
Intersection Summary												
HCM 6th Ctrl Delay			4.5									
HCM 6th LOS			A									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	16	998	37	6	748	24	23	0	4	19	0	15
Future Volume (veh/h)	16	998	37	6	748	24	23	0	4	19	0	15
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	1945	1870	1870	1870	1945	1870	1945
Adj Flow Rate, veh/h	17	1062	39	6	796	26	24	0	4	20	0	16
Peak Hour Factor	0.94	0.94	0.95	0.95	0.94	0.94	0.95	0.95	0.95	0.94	0.95	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	591	2947	108	492	2961	97	142	4	15	94	12	47
Arrive On Green	1.00	1.00	1.00	0.84	0.84	0.84	0.07	0.00	0.07	0.07	0.00	0.07
Sat Flow, veh/h	666	3496	128	512	3512	115	1247	63	218	675	178	683
Grp Volume(v), veh/h	17	540	561	6	403	419	28	0	0	36	0	0
Grp Sat Flow(s),veh/h/ln	666	1777	1847	512	1777	1850	1528	0	0	1537	0	0
Q Serve(g_s), s	0.2	0.0	0.0	0.2	5.5	5.5	0.0	0.0	0.0	0.7	0.0	0.0
Cycle Q Clear(g_c), s	5.7	0.0	0.0	0.2	5.5	5.5	1.8	0.0	0.0	2.5	0.0	0.0
Prop In Lane	1.00		0.07	1.00		0.06	0.86		0.14	0.56		0.44
Lane Grp Cap(c), veh/h	591	1498	1558	492	1498	1560	162	0	0	153	0	0
V/C Ratio(X)	0.03	0.36	0.36	0.01	0.27	0.27	0.17	0.00	0.00	0.23	0.00	0.00
Avail Cap(c_a), veh/h	591	1498	1558	492	1498	1560	447	0	0	452	0	0
HCM Platoon Ratio	2.00	2.00	2.00	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	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	0.2	0.0	0.0	1.5	1.9	1.9	52.8	0.0	0.0	53.1	0.0	0.0
Incr Delay (d2), s/veh	0.1	0.7	0.6	0.0	0.1	0.1	0.5	0.0	0.0	0.8	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	0.5	0.5	0.0	1.6	1.7	1.5	0.0	0.0	1.9	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.2	0.7	0.6	1.5	2.0	2.0	53.3	0.0	0.0	53.9	0.0	0.0
LnGrp LOS	A	A	A	A	A	A	D	A	A	D	A	A
Approach Vol, veh/h		1118			828			28			36	
Approach Delay, s/veh		0.7			2.0			53.3			53.9	
Approach LOS		A			A			D			D	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	107.2	12.8	107.2	12.8
Change Period (Y+Rc), s	6.0	4.5	6.0	4.5
Max Green Setting (Gmax), s	77.0	32.5	77.0	32.5
Max Q Clear Time (g_c+I1), s	7.7	4.5	7.5	3.8
Green Ext Time (p_c), s	8.5	0.1	5.4	0.1

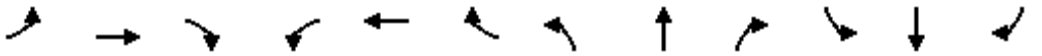
Intersection Summary	
HCM 6th Ctrl Delay	2.9
HCM 6th LOS	A



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	194	372	23	48	460	348	33	151	36	325	128	178
Future Volume (veh/h)	194	372	23	48	460	348	33	151	36	325	128	178
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		1.00	1.00		0.98
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	1945	1945	1870	1870	1945
Adj Flow Rate, veh/h	220	423	26	55	523	395	38	172	41	369	145	202
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	280	1110	68	71	1015	806	445	379	90	778	421	365
Arrive On Green	0.08	0.33	0.33	0.04	0.29	0.29	0.25	0.25	0.25	0.22	0.22	0.22
Sat Flow, veh/h	3456	3396	208	1781	3554	1573	1781	1518	362	3456	1870	1623
Grp Volume(v), veh/h	220	221	228	55	523	395	38	0	213	369	145	202
Grp Sat Flow(s),veh/h/ln	1728	1777	1827	1781	1777	1573	1781	0	1880	1728	1870	1623
Q Serve(g_s), s	7.5	11.5	11.5	3.7	14.8	19.7	2.0	0.0	11.5	11.1	7.8	13.2
Cycle Q Clear(g_c), s	7.5	11.5	11.5	3.7	14.8	19.7	2.0	0.0	11.5	11.1	7.8	13.2
Prop In Lane	1.00		0.11	1.00		1.00	1.00		0.19	1.00		1.00
Lane Grp Cap(c), veh/h	280	581	597	71	1015	806	445	0	470	778	421	365
V/C Ratio(X)	0.79	0.38	0.38	0.77	0.52	0.49	0.09	0.00	0.45	0.47	0.34	0.55
Avail Cap(c_a), veh/h	490	581	597	252	1015	806	445	0	470	778	421	365
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	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.1	31.1	31.1	57.1	35.9	19.2	34.5	0.0	38.1	40.3	39.1	41.2
Incr Delay (d2), s/veh	1.9	1.9	1.9	6.5	1.9	2.1	0.4	0.0	3.1	2.1	2.2	5.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	5.9	8.7	9.0	3.1	10.6	16.6	1.6	0.0	9.7	8.5	6.8	9.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.0	32.9	32.9	63.6	37.8	21.3	34.9	0.0	41.2	42.4	41.3	47.1
LnGrp LOS	E	C	C	E	D	C	C	A	D	D	D	D
Approach Vol, veh/h		669			973			251			716	
Approach Delay, s/veh		40.5			32.5			40.2			43.5	
Approach LOS		D			C			D			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.8	45.2		32.0	13.7	40.3		34.0				
Change Period (Y+Rc), s	4.0	6.0		5.0	4.0	6.0		4.0				
Max Green Setting (Gmax), s	17.0	27.0		27.0	17.0	27.0		30.0				
Max Q Clear Time (g_c+I1), s	5.7	13.5		15.2	9.5	21.7		13.5				
Green Ext Time (p_c), s	0.0	2.7		2.3	0.2	2.8		1.2				

Intersection Summary			
HCM 6th Ctrl Delay		38.3	
HCM 6th LOS		D	



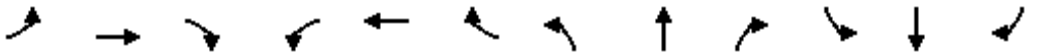
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	320	707	32	32	553	240	15	47	28	443	45	280
Future Volume (veh/h)	320	707	32	32	553	240	15	47	28	443	45	280
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		0.99	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	1945	1945	1870	1870	1945
Adj Flow Rate, veh/h	337	744	34	34	582	253	16	49	29	466	47	295
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	397	1242	57	43	953	781	416	267	158	778	421	370
Arrive On Green	0.12	0.36	0.36	0.02	0.27	0.27	0.23	0.23	0.23	0.22	0.22	0.22
Sat Flow, veh/h	3456	3460	158	1781	3554	1583	1781	1143	676	3456	1870	1646
Grp Volume(v), veh/h	337	382	396	34	582	253	16	0	78	466	47	295
Grp Sat Flow(s),veh/h/ln	1728	1777	1841	1781	1777	1583	1781	0	1819	1728	1870	1646
Q Serve(g_s), s	11.5	21.1	21.1	2.3	17.2	11.6	0.8	0.0	4.1	14.5	2.4	20.3
Cycle Q Clear(g_c), s	11.5	21.1	21.1	2.3	17.2	11.6	0.8	0.0	4.1	14.5	2.4	20.3
Prop In Lane	1.00		0.09	1.00		1.00	1.00		0.37	1.00		1.00
Lane Grp Cap(c), veh/h	397	638	661	43	953	781	416	0	425	778	421	370
V/C Ratio(X)	0.85	0.60	0.60	0.79	0.61	0.32	0.04	0.00	0.18	0.60	0.11	0.80
Avail Cap(c_a), veh/h	547	638	661	148	953	781	416	0	425	778	421	370
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	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.1	31.4	31.4	58.2	38.4	18.3	35.6	0.0	36.8	41.7	37.0	43.9
Incr Delay (d2), s/veh	6.7	4.1	4.0	11.1	2.9	1.1	0.2	0.0	1.0	3.4	0.5	16.2
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	9.0	14.4	14.8	2.0	12.2	10.7	0.7	0.0	3.6	10.6	2.1	15.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	58.8	35.5	35.4	69.4	41.3	19.4	35.8	0.0	37.8	45.1	37.5	60.1
LnGrp LOS	E	D	D	E	D	B	D	A	D	D	D	E
Approach Vol, veh/h		1115			869			94			808	
Approach Delay, s/veh		42.5			36.0			37.5			50.1	
Approach LOS		D			D			D			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.9	49.1		32.0	17.8	38.2		32.0				
Change Period (Y+Rc), s	4.0	6.0		5.0	4.0	6.0		4.0				
Max Green Setting (Gmax), s	10.0	36.0		27.0	19.0	27.0		28.0				
Max Q Clear Time (g_c+I1), s	4.3	23.1		22.3	13.5	19.2		6.1				
Green Ext Time (p_c), s	0.0	4.9		1.4	0.3	3.6		0.4				

Intersection Summary		
HCM 6th Ctrl Delay		42.5
HCM 6th LOS		D

APPENDIX G

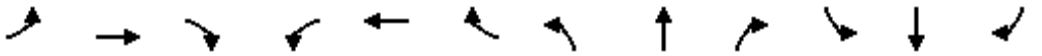
CALTRANS ANALYSIS HCM DATA WORKSHEETS – WEEKDAY AM AND PM PEAK HOURS



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	247	0	393	193	394	0	0	201	52
Future Volume (veh/h)	0	0	0	247	0	393	193	394	0	0	201	52
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj				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	
Adj Sat Flow, veh/h/ln				1870	1870	1870	1870	1870	0	0	1870	1945
Adj Flow Rate, veh/h				268	0	427	210	428	0	0	218	57
Peak Hour Factor				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	0	0	2	2
Cap, veh/h				531	0	472	272	2154	0	0	2480	790
Arrive On Green				0.30	0.00	0.30	0.08	0.61	0.00	0.00	0.49	0.49
Sat Flow, veh/h				1781	0	1585	3456	3647	0	0	5274	1626
Grp Volume(v), veh/h				268	0	427	210	428	0	0	218	57
Grp Sat Flow(s),veh/h/ln				1781	0	1585	1728	1777	0	0	1702	1626
Q Serve(g_s), s				14.9	0.0	31.1	7.2	6.5	0.0	0.0	2.8	2.2
Cycle Q Clear(g_c), s				14.9	0.0	31.1	7.2	6.5	0.0	0.0	2.8	2.2
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				531	0	472	272	2154	0	0	2480	790
V/C Ratio(X)				0.50	0.00	0.90	0.77	0.20	0.00	0.00	0.09	0.07
Avail Cap(c_a), veh/h				601	0	535	720	2154	0	0	2480	790
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				34.8	0.0	40.5	54.2	10.6	0.0	0.0	16.6	16.5
Incr Delay (d2), s/veh				1.1	0.0	18.2	1.8	0.2	0.0	0.0	0.1	0.2
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln				10.8	0.0	20.4	5.6	4.4	0.0	0.0	1.9	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				35.9	0.0	58.6	56.0	10.8	0.0	0.0	16.7	16.6
LnGrp LOS				D	A	E	E	B	A	A	B	B
Approach Vol, veh/h					695			638			275	
Approach Delay, s/veh					49.8			25.7			16.6	
Approach LOS					D			C			B	

Timer - Assigned Phs	2		5	6		8						
Phs Duration (G+Y+Rc), s	78.7		14.5	64.3		41.3						
Change Period (Y+Rc), s	6.0		5.0	6.0		5.5						
Max Green Setting (Gmax), s	68.0		25.0	38.0		40.5						
Max Q Clear Time (g_c+I1), s	8.5		9.2	4.8		33.1						
Green Ext Time (p_c), s	5.1		0.3	2.7		2.7						

Intersection Summary	
HCM 6th Ctrl Delay	34.6
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	299	2	124	429	330	0	0	391	67
Future Volume (veh/h)	0	0	0	299	2	124	429	330	0	0	391	67
Initial Q (Qb), veh				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
Parking Bus, Adj				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	
Adj Sat Flow, veh/h/ln				1870	1870	1870	1870	1870	0	0	1870	1945
Adj Flow Rate, veh/h				325	2	135	466	359	0	0	425	73
Peak Hour Factor				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	0	0	2	2
Cap, veh/h				374	2	335	531	2462	0	0	2541	820
Arrive On Green				0.21	0.21	0.21	0.15	0.69	0.00	0.00	0.50	0.50
Sat Flow, veh/h				1771	11	1585	3456	3647	0	0	5274	1647
Grp Volume(v), veh/h				327	0	135	466	359	0	0	425	73
Grp Sat Flow(s),veh/h/ln				1782	0	1585	1728	1777	0	0	1702	1647
Q Serve(g_s), s				21.3	0.0	8.8	15.8	4.1	0.0	0.0	5.5	2.8
Cycle Q Clear(g_c), s				21.3	0.0	8.8	15.8	4.1	0.0	0.0	5.5	2.8
Prop In Lane				0.99		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				376	0	335	531	2462	0	0	2541	820
V/C Ratio(X)				0.87	0.00	0.40	0.88	0.15	0.00	0.00	0.17	0.09
Avail Cap(c_a), veh/h				468	0	416	720	2462	0	0	2541	820
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				45.7	0.0	40.8	49.7	6.3	0.0	0.0	16.5	15.8
Incr Delay (d2), s/veh				14.8	0.0	1.1	7.6	0.1	0.0	0.0	0.1	0.2
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln				16.2	0.0	6.3	11.7	2.6	0.0	0.0	3.8	1.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				60.5	0.0	41.9	57.2	6.4	0.0	0.0	16.7	16.1
LnGrp LOS				E	A	D	E	A	A	A	B	B
Approach Vol, veh/h					462			825			498	
Approach Delay, s/veh					55.1			35.1			16.6	
Approach LOS					E			D			B	

Timer - Assigned Phs	2		5	6		8						
Phs Duration (G+Y+Rc), s	89.1		23.4	65.7		30.9						
Change Period (Y+Rc), s	6.0		5.0	6.0		5.5						
Max Green Setting (Gmax), s	77.0		25.0	47.0		31.5						
Max Q Clear Time (g_c+I1), s	6.1		17.8	7.5		23.3						
Green Ext Time (p_c), s	4.2		0.6	5.5		2.1						

Intersection Summary		
HCM 6th Ctrl Delay	35.1	
HCM 6th LOS	D	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	250	0	393	235	411	0	0	203	52
Future Volume (veh/h)	0	0	0	250	0	393	235	411	0	0	203	52
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj				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	
Adj Sat Flow, veh/h/ln				1870	1870	1870	1870	1870	0	0	1870	1945
Adj Flow Rate, veh/h				272	0	427	255	447	0	0	221	57
Peak Hour Factor				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	0	0	2	2
Cap, veh/h				531	0	473	318	2153	0	0	2411	768
Arrive On Green				0.30	0.00	0.30	0.09	0.61	0.00	0.00	0.47	0.47
Sat Flow, veh/h				1781	0	1585	3456	3647	0	0	5274	1626
Grp Volume(v), veh/h				272	0	427	255	447	0	0	221	57
Grp Sat Flow(s),veh/h/ln				1781	0	1585	1728	1777	0	0	1702	1626
Q Serve(g_s), s				15.2	0.0	31.1	8.7	6.8	0.0	0.0	2.9	2.3
Cycle Q Clear(g_c), s				15.2	0.0	31.1	8.7	6.8	0.0	0.0	2.9	2.3
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				531	0	473	318	2153	0	0	2411	768
V/C Ratio(X)				0.51	0.00	0.90	0.80	0.21	0.00	0.00	0.09	0.07
Avail Cap(c_a), veh/h				601	0	535	720	2153	0	0	2411	768
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				34.9	0.0	40.4	53.4	10.7	0.0	0.0	17.5	17.3
Incr Delay (d2), s/veh				1.1	0.0	18.1	1.8	0.2	0.0	0.0	0.1	0.2
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln				10.9	0.0	20.4	6.8	4.6	0.0	0.0	2.0	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				36.0	0.0	58.6	55.2	10.9	0.0	0.0	17.5	17.5
LnGrp LOS				D	A	E	E	B	A	A	B	B
Approach Vol, veh/h					699			702			278	
Approach Delay, s/veh					49.8			27.0			17.5	
Approach LOS					D			C			B	

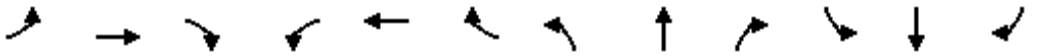
Timer - Assigned Phs	2		5	6		8				
Phs Duration (G+Y+Rc), s	78.7		16.1	62.7		41.3				
Change Period (Y+Rc), s	6.0		5.0	6.0		5.5				
Max Green Setting (Gmax), s	68.0		25.0	38.0		40.5				
Max Q Clear Time (g_c+I1), s	8.8		10.7	4.9		33.1				
Green Ext Time (p_c), s	5.4		0.4	2.7		2.7				

Intersection Summary		
HCM 6th Ctrl Delay	34.9	
HCM 6th LOS	C	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	313	2	124	452	335	0	0	404	67
Future Volume (veh/h)	0	0	0	313	2	124	452	335	0	0	404	67
Initial Q (Qb), veh				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
Parking Bus, Adj				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	
Adj Sat Flow, veh/h/ln				1870	1870	1870	1870	1870	0	0	1870	1945
Adj Flow Rate, veh/h				340	2	135	491	364	0	0	439	73
Peak Hour Factor				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	0	0	2	2
Cap, veh/h				387	2	347	555	2436	0	0	2467	796
Arrive On Green				0.22	0.22	0.22	0.16	0.69	0.00	0.00	0.48	0.48
Sat Flow, veh/h				1771	10	1585	3456	3647	0	0	5274	1647
Grp Volume(v), veh/h				342	0	135	491	364	0	0	439	73
Grp Sat Flow(s),veh/h/ln				1782	0	1585	1728	1777	0	0	1702	1647
Q Serve(g_s), s				22.3	0.0	8.7	16.7	4.3	0.0	0.0	5.8	2.9
Cycle Q Clear(g_c), s				22.3	0.0	8.7	16.7	4.3	0.0	0.0	5.8	2.9
Prop In Lane				0.99		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				390	0	347	555	2436	0	0	2467	796
V/C Ratio(X)				0.88	0.00	0.39	0.88	0.15	0.00	0.00	0.18	0.09
Avail Cap(c_a), veh/h				468	0	416	720	2436	0	0	2467	796
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				45.3	0.0	40.0	49.3	6.6	0.0	0.0	17.5	16.8
Incr Delay (d2), s/veh				16.1	0.0	1.0	8.8	0.1	0.0	0.0	0.2	0.2
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln				17.0	0.0	6.3	12.3	2.7	0.0	0.0	4.1	2.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				61.4	0.0	41.0	58.1	6.7	0.0	0.0	17.7	17.0
LnGrp LOS				E	A	D	E	A	A	A	B	B
Approach Vol, veh/h					477			855			512	
Approach Delay, s/veh					55.7			36.2			17.6	
Approach LOS					E			D			B	

Timer - Assigned Phs	2		5	6		8						
Phs Duration (G+Y+Rc), s	88.3		24.3	64.0		31.7						
Change Period (Y+Rc), s	6.0		5.0	6.0		5.5						
Max Green Setting (Gmax), s	77.0		25.0	47.0		31.5						
Max Q Clear Time (g_c+I1), s	6.3		18.7	7.8		24.3						
Green Ext Time (p_c), s	4.3		0.6	5.6		2.0						

Intersection Summary		
HCM 6th Ctrl Delay	36.1	
HCM 6th LOS	D	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	258	0	409	202	414	0	0	218	53
Future Volume (veh/h)	0	0	0	258	0	409	202	414	0	0	218	53
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj				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	
Adj Sat Flow, veh/h/ln				1870	1870	1870	1870	1870	0	0	1870	1945
Adj Flow Rate, veh/h				280	0	445	220	450	0	0	237	58
Peak Hour Factor				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	0	0	2	2
Cap, veh/h				547	0	487	283	2121	0	0	2417	770
Arrive On Green				0.31	0.00	0.31	0.08	0.60	0.00	0.00	0.47	0.47
Sat Flow, veh/h				1781	0	1585	3456	3647	0	0	5274	1626
Grp Volume(v), veh/h				280	0	445	220	450	0	0	237	58
Grp Sat Flow(s),veh/h/ln				1781	0	1585	1728	1777	0	0	1702	1626
Q Serve(g_s), s				15.5	0.0	32.4	7.5	7.0	0.0	0.0	3.1	2.3
Cycle Q Clear(g_c), s				15.5	0.0	32.4	7.5	7.0	0.0	0.0	3.1	2.3
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				547	0	487	283	2121	0	0	2417	770
V/C Ratio(X)				0.51	0.00	0.91	0.78	0.21	0.00	0.00	0.10	0.08
Avail Cap(c_a), veh/h				601	0	535	720	2121	0	0	2417	770
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				34.2	0.0	40.0	54.0	11.2	0.0	0.0	17.4	17.3
Incr Delay (d2), s/veh				1.1	0.0	19.8	1.8	0.2	0.0	0.0	0.1	0.2
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln				11.1	0.0	21.4	5.9	4.8	0.0	0.0	2.1	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				35.2	0.0	59.9	55.8	11.4	0.0	0.0	17.5	17.4
LnGrp LOS				D	A	E	E	B	A	A	B	B
Approach Vol, veh/h					725			670			295	
Approach Delay, s/veh					50.3			26.0			17.5	
Approach LOS					D			C			B	

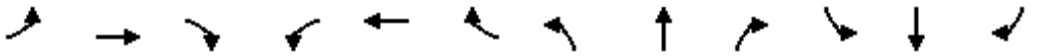
Timer - Assigned Phs	2		5	6		8						
Phs Duration (G+Y+Rc), s	77.6		14.8	62.8		42.4						
Change Period (Y+Rc), s	6.0		5.0	6.0		5.5						
Max Green Setting (Gmax), s	68.0		25.0	38.0		40.5						
Max Q Clear Time (g_c+I1), s	9.0		9.5	5.1		34.4						
Green Ext Time (p_c), s	5.4		0.3	2.9		2.4						

Intersection Summary		
HCM 6th Ctrl Delay	34.9	
HCM 6th LOS	C	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	311	2	143	445	359	0	0	439	69
Future Volume (veh/h)	0	0	0	311	2	143	445	359	0	0	439	69
Initial Q (Qb), veh				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
Parking Bus, Adj				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	
Adj Sat Flow, veh/h/ln				1870	1870	1870	1870	1870	0	0	1870	1945
Adj Flow Rate, veh/h				338	2	155	484	390	0	0	477	75
Peak Hour Factor				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	0	0	2	2
Cap, veh/h				387	2	346	548	2438	0	0	2480	800
Arrive On Green				0.22	0.22	0.22	0.16	0.69	0.00	0.00	0.49	0.49
Sat Flow, veh/h				1771	10	1585	3456	3647	0	0	5274	1647
Grp Volume(v), veh/h				340	0	155	484	390	0	0	477	75
Grp Sat Flow(s),veh/h/ln				1782	0	1585	1728	1777	0	0	1702	1647
Q Serve(g_s), s				22.1	0.0	10.2	16.4	4.6	0.0	0.0	6.4	2.9
Cycle Q Clear(g_c), s				22.1	0.0	10.2	16.4	4.6	0.0	0.0	6.4	2.9
Prop In Lane				0.99		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				389	0	346	548	2438	0	0	2480	800
V/C Ratio(X)				0.87	0.00	0.45	0.88	0.16	0.00	0.00	0.19	0.09
Avail Cap(c_a), veh/h				468	0	416	720	2438	0	0	2480	800
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				45.3	0.0	40.6	49.4	6.6	0.0	0.0	17.5	16.6
Incr Delay (d2), s/veh				15.7	0.0	1.3	8.5	0.1	0.0	0.0	0.2	0.2
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln				16.9	0.0	7.3	12.1	2.9	0.0	0.0	4.4	2.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				61.0	0.0	41.9	57.9	6.8	0.0	0.0	17.7	16.9
LnGrp LOS				E	A	D	E	A	A	A	B	B
Approach Vol, veh/h					495			874			552	
Approach Delay, s/veh					55.0			35.1			17.6	
Approach LOS					E			D			B	

Timer - Assigned Phs	2		5	6		8				
Phs Duration (G+Y+Rc), s	88.3		24.0	64.3		31.7				
Change Period (Y+Rc), s	6.0		5.0	6.0		5.5				
Max Green Setting (Gmax), s	77.0		25.0	47.0		31.5				
Max Q Clear Time (g_c+I1), s	6.6		18.4	8.4		24.1				
Green Ext Time (p_c), s	4.6		0.6	6.2		2.1				

Intersection Summary	
HCM 6th Ctrl Delay	35.2
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	261	0	409	241	430	0	0	220	53
Future Volume (veh/h)	0	0	0	261	0	409	241	430	0	0	220	53
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj				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	
Adj Sat Flow, veh/h/ln				1870	1870	1870	1870	1870	0	0	1870	1945
Adj Flow Rate, veh/h				284	0	445	262	467	0	0	239	58
Peak Hour Factor				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	0	0	2	2
Cap, veh/h				548	0	487	326	2121	0	0	2353	749
Arrive On Green				0.31	0.00	0.31	0.09	0.60	0.00	0.00	0.46	0.46
Sat Flow, veh/h				1781	0	1585	3456	3647	0	0	5274	1626
Grp Volume(v), veh/h				284	0	445	262	467	0	0	239	58
Grp Sat Flow(s),veh/h/ln				1781	0	1585	1728	1777	0	0	1702	1626
Q Serve(g_s), s				15.8	0.0	32.4	8.9	7.3	0.0	0.0	3.2	2.4
Cycle Q Clear(g_c), s				15.8	0.0	32.4	8.9	7.3	0.0	0.0	3.2	2.4
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				548	0	487	326	2121	0	0	2353	749
V/C Ratio(X)				0.52	0.00	0.91	0.80	0.22	0.00	0.00	0.10	0.08
Avail Cap(c_a), veh/h				601	0	535	720	2121	0	0	2353	749
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				34.2	0.0	40.0	53.3	11.2	0.0	0.0	18.3	18.1
Incr Delay (d2), s/veh				1.1	0.0	19.8	1.8	0.2	0.0	0.0	0.1	0.2
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln				11.2	0.0	21.4	7.0	5.0	0.0	0.0	2.2	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				35.3	0.0	59.8	55.1	11.5	0.0	0.0	18.4	18.3
LnGrp LOS				D	A	E	E	B	A	A	B	B
Approach Vol, veh/h					729			729			297	
Approach Delay, s/veh					50.3			27.1			18.4	
Approach LOS					D			C			B	

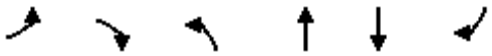
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		77.6			16.3	61.3		42.4				
Change Period (Y+Rc), s		6.0			5.0	6.0		5.5				
Max Green Setting (Gmax), s		68.0			25.0	38.0		40.5				
Max Q Clear Time (g_c+I1), s		9.3			10.9	5.2		34.4				
Green Ext Time (p_c), s		5.7			0.4	2.9		2.5				

Intersection Summary												
HCM 6th Ctrl Delay			35.3									
HCM 6th LOS			D									

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	325	2	143	468	364	0	0	452	69
Future Volume (veh/h)	0	0	0	325	2	143	468	364	0	0	452	69
Initial Q (Qb), veh				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
Parking Bus, Adj				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	
Adj Sat Flow, veh/h/ln				1870	1870	1870	1870	1870	0	0	1870	1945
Adj Flow Rate, veh/h				353	2	155	509	396	0	0	491	75
Peak Hour Factor				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	0	0	2	2
Cap, veh/h				399	2	357	572	2412	0	0	2407	777
Arrive On Green				0.23	0.23	0.23	0.17	0.68	0.00	0.00	0.47	0.47
Sat Flow, veh/h				1772	10	1585	3456	3647	0	0	5274	1647
Grp Volume(v), veh/h				355	0	155	509	396	0	0	491	75
Grp Sat Flow(s),veh/h/ln				1782	0	1585	1728	1777	0	0	1702	1647
Q Serve(g_s), s				23.1	0.0	10.1	17.3	4.8	0.0	0.0	6.7	3.0
Cycle Q Clear(g_c), s				23.1	0.0	10.1	17.3	4.8	0.0	0.0	6.7	3.0
Prop In Lane				0.99		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				402	0	357	572	2412	0	0	2407	777
V/C Ratio(X)				0.88	0.00	0.43	0.89	0.16	0.00	0.00	0.20	0.10
Avail Cap(c_a), veh/h				468	0	416	720	2412	0	0	2407	777
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				45.0	0.0	39.9	49.0	7.0	0.0	0.0	18.5	17.6
Incr Delay (d2), s/veh				17.1	0.0	1.2	9.7	0.1	0.0	0.0	0.2	0.2
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln				17.7	0.0	7.2	12.7	3.0	0.0	0.0	4.7	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				62.1	0.0	41.1	58.7	7.1	0.0	0.0	18.7	17.8
LnGrp LOS				E	A	D	E	A	A	A	B	B
Approach Vol, veh/h					510			905			566	
Approach Delay, s/veh					55.7			36.1			18.6	
Approach LOS					E			D			B	

Timer - Assigned Phs	2		5	6		8						
Phs Duration (G+Y+Rc), s	87.4		24.9	62.6		32.6						
Change Period (Y+Rc), s	6.0		5.0	6.0		5.5						
Max Green Setting (Gmax), s	77.0		25.0	47.0		31.5						
Max Q Clear Time (g_c+I1), s	6.8		19.3	8.7		25.1						
Green Ext Time (p_c), s	4.7		0.6	6.3		1.9						

Intersection Summary		
HCM 6th Ctrl Delay	36.2	
HCM 6th LOS	D	



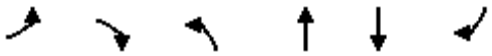
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	52	691	0	774	394	0
Future Volume (veh/h)	52	691	0	774	394	0
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	0	1945	1945	0
Adj Flow Rate, veh/h	58	768	0	860	438	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	0	2	2	0
Cap, veh/h	690	614	0	1910	1910	0
Arrive On Green	0.39	0.39	0.00	1.00	0.52	0.00
Sat Flow, veh/h	1781	1585	0	3890	3890	0
Grp Volume(v), veh/h	58	768	0	860	438	0
Grp Sat Flow(s),veh/h/ln	1781	1585	0	1848	1848	0
Q Serve(g_s), s	2.5	46.5	0.0	0.0	7.8	0.0
Cycle Q Clear(g_c), s	2.5	46.5	0.0	0.0	7.8	0.0
Prop In Lane	1.00	1.00	0.00			0.00
Lane Grp Cap(c), veh/h	690	614	0	1910	1910	0
V/C Ratio(X)	0.08	1.25	0.00	0.45	0.23	0.00
Avail Cap(c_a), veh/h	690	614	0	1910	1910	0
HCM Platoon Ratio	1.00	1.00	1.00	2.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.98	1.00	0.00
Uniform Delay (d), s/veh	23.3	36.8	0.0	0.0	15.9	0.0
Incr Delay (d2), s/veh	0.1	125.8	0.0	0.8	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.9	56.6	0.0	0.4	5.8	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	23.3	162.5	0.0	0.8	16.2	0.0
LnGrp LOS	C	F	A	A	B	A
Approach Vol, veh/h	826			860	438	
Approach Delay, s/veh	152.8			0.8	16.2	
Approach LOS	F			A	B	

Timer - Assigned Phs	2		4		6
Phs Duration (G+Y+Rc), s	68.0		52.0		68.0
Change Period (Y+Rc), s	6.0		5.5		6.0
Max Green Setting (Gmax), s	62.0		46.5		62.0
Max Q Clear Time (g_c+I1), s	2.0		48.5		9.8
Green Ext Time (p_c), s	12.6		0.0		5.2

Intersection Summary	
HCM 6th Ctrl Delay	63.0
HCM 6th LOS	E

Notes

User approved volume balancing among the lanes for turning movement.



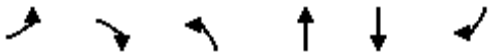
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	47	698	0	868	590	0
Future Volume (veh/h)	47	698	0	868	590	0
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	0	1945	1945	0
Adj Flow Rate, veh/h	52	767	0	954	648	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	0	2	2	0
Cap, veh/h	690	614	0	1910	1910	0
Arrive On Green	0.39	0.39	0.00	1.00	0.52	0.00
Sat Flow, veh/h	1781	1585	0	3890	3890	0
Grp Volume(v), veh/h	52	767	0	954	648	0
Grp Sat Flow(s),veh/h/ln	1781	1585	0	1848	1848	0
Q Serve(g_s), s	2.2	46.5	0.0	0.0	12.3	0.0
Cycle Q Clear(g_c), s	2.2	46.5	0.0	0.0	12.3	0.0
Prop In Lane	1.00	1.00	0.00			0.00
Lane Grp Cap(c), veh/h	690	614	0	1910	1910	0
V/C Ratio(X)	0.08	1.25	0.00	0.50	0.34	0.00
Avail Cap(c_a), veh/h	690	614	0	1910	1910	0
HCM Platoon Ratio	1.00	1.00	1.00	2.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.98	1.00	0.00
Uniform Delay (d), s/veh	23.2	36.8	0.0	0.0	17.0	0.0
Incr Delay (d2), s/veh	0.0	125.1	0.0	0.9	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.7	56.4	0.0	0.4	8.8	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	23.2	161.9	0.0	0.9	17.5	0.0
LnGrp LOS	C	F	A	A	B	A
Approach Vol, veh/h	819			954	648	
Approach Delay, s/veh	153.1			0.9	17.5	
Approach LOS	F			A	B	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		68.0		52.0		68.0
Change Period (Y+Rc), s		6.0		5.5		6.0
Max Green Setting (Gmax), s		62.0		46.5		62.0
Max Q Clear Time (g_c+I1), s		2.0		48.5		14.3
Green Ext Time (p_c), s		14.7		0.0		8.3

Intersection Summary	
HCM 6th Ctrl Delay	56.8
HCM 6th LOS	E

Notes

User approved volume balancing among the lanes for turning movement.



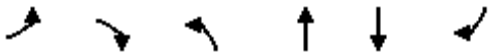
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	52	702	0	848	399	0
Future Volume (veh/h)	52	702	0	848	399	0
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	0	1945	1945	0
Adj Flow Rate, veh/h	58	780	0	942	443	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	0	2	2	0
Cap, veh/h	690	614	0	1910	1910	0
Arrive On Green	0.39	0.39	0.00	1.00	0.52	0.00
Sat Flow, veh/h	1781	1585	0	3890	3890	0
Grp Volume(v), veh/h	58	780	0	942	443	0
Grp Sat Flow(s),veh/h/ln	1781	1585	0	1848	1848	0
Q Serve(g_s), s	2.5	46.5	0.0	0.0	7.9	0.0
Cycle Q Clear(g_c), s	2.5	46.5	0.0	0.0	7.9	0.0
Prop In Lane	1.00	1.00	0.00			0.00
Lane Grp Cap(c), veh/h	690	614	0	1910	1910	0
V/C Ratio(X)	0.08	1.27	0.00	0.49	0.23	0.00
Avail Cap(c_a), veh/h	690	614	0	1910	1910	0
HCM Platoon Ratio	1.00	1.00	1.00	2.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.97	1.00	0.00
Uniform Delay (d), s/veh	23.3	36.8	0.0	0.0	15.9	0.0
Incr Delay (d2), s/veh	0.1	134.0	0.0	0.9	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.9	58.9	0.0	0.4	5.9	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	23.3	170.7	0.0	0.9	16.2	0.0
LnGrp LOS	C	F	A	A	B	A
Approach Vol, veh/h	838			942	443	
Approach Delay, s/veh	160.5			0.9	16.2	
Approach LOS	F			A	B	

Timer - Assigned Phs	2		4		6
Phs Duration (G+Y+Rc), s	68.0		52.0		68.0
Change Period (Y+Rc), s	6.0		5.5		6.0
Max Green Setting (Gmax), s	62.0		46.5		62.0
Max Q Clear Time (g_c+I1), s	2.0		48.5		9.9
Green Ext Time (p_c), s	14.4		0.0		5.3

Intersection Summary	
HCM 6th Ctrl Delay	64.1
HCM 6th LOS	E

Notes

User approved volume balancing among the lanes for turning movement.



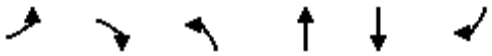
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	47	739	0	904	618	0
Future Volume (veh/h)	47	739	0	904	618	0
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	0	1945	1945	0
Adj Flow Rate, veh/h	52	812	0	993	679	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	0	2	2	0
Cap, veh/h	690	614	0	1910	1910	0
Arrive On Green	0.39	0.39	0.00	1.00	0.52	0.00
Sat Flow, veh/h	1781	1585	0	3890	3890	0
Grp Volume(v), veh/h	52	812	0	993	679	0
Grp Sat Flow(s),veh/h/ln	1781	1585	0	1848	1848	0
Q Serve(g_s), s	2.2	46.5	0.0	0.0	13.1	0.0
Cycle Q Clear(g_c), s	2.2	46.5	0.0	0.0	13.1	0.0
Prop In Lane	1.00	1.00	0.00			0.00
Lane Grp Cap(c), veh/h	690	614	0	1910	1910	0
V/C Ratio(X)	0.08	1.32	0.00	0.52	0.36	0.00
Avail Cap(c_a), veh/h	690	614	0	1910	1910	0
HCM Platoon Ratio	1.00	1.00	1.00	2.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.97	1.00	0.00
Uniform Delay (d), s/veh	23.2	36.8	0.0	0.0	17.2	0.0
Incr Delay (d2), s/veh	0.0	156.1	0.0	1.0	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.7	65.2	0.0	0.5	9.3	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	23.2	192.8	0.0	1.0	17.7	0.0
LnGrp LOS	C	F	A	A	B	A
Approach Vol, veh/h	864			993	679	
Approach Delay, s/veh	182.6			1.0	17.7	
Approach LOS	F			A	B	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		68.0		52.0		68.0
Change Period (Y+Rc), s		6.0		5.5		6.0
Max Green Setting (Gmax), s		62.0		46.5		62.0
Max Q Clear Time (g_c+I1), s		2.0		48.5		15.1
Green Ext Time (p_c), s		15.6		0.0		8.8

Intersection Summary	
HCM 6th Ctrl Delay	67.3
HCM 6th LOS	E

Notes

User approved volume balancing among the lanes for turning movement.



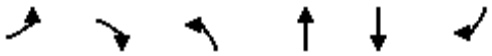
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	53	712	0	814	416	0
Future Volume (veh/h)	53	712	0	814	416	0
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	0	1945	1945	0
Adj Flow Rate, veh/h	59	791	0	904	462	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	0	2	2	0
Cap, veh/h	690	614	0	1910	1910	0
Arrive On Green	0.39	0.39	0.00	1.00	0.52	0.00
Sat Flow, veh/h	1781	1585	0	3890	3890	0
Grp Volume(v), veh/h	59	791	0	904	462	0
Grp Sat Flow(s),veh/h/ln	1781	1585	0	1848	1848	0
Q Serve(g_s), s	2.5	46.5	0.0	0.0	8.3	0.0
Cycle Q Clear(g_c), s	2.5	46.5	0.0	0.0	8.3	0.0
Prop In Lane	1.00	1.00	0.00			0.00
Lane Grp Cap(c), veh/h	690	614	0	1910	1910	0
V/C Ratio(X)	0.09	1.29	0.00	0.47	0.24	0.00
Avail Cap(c_a), veh/h	690	614	0	1910	1910	0
HCM Platoon Ratio	1.00	1.00	1.00	2.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.97	1.00	0.00
Uniform Delay (d), s/veh	23.3	36.8	0.0	0.0	16.0	0.0
Incr Delay (d2), s/veh	0.1	141.5	0.0	0.8	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.9	61.0	0.0	0.4	6.2	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	23.3	178.3	0.0	0.8	16.3	0.0
LnGrp LOS	C	F	A	A	B	A
Approach Vol, veh/h	850			904	462	
Approach Delay, s/veh	167.5			0.8	16.3	
Approach LOS	F			A	B	

Timer - Assigned Phs	2		4		6
Phs Duration (G+Y+Rc), s	68.0		52.0		68.0
Change Period (Y+Rc), s	6.0		5.5		6.0
Max Green Setting (Gmax), s	62.0		46.5		62.0
Max Q Clear Time (g_c+I1), s	2.0		48.5		10.3
Green Ext Time (p_c), s	13.5		0.0		5.5

Intersection Summary	
HCM 6th Ctrl Delay	68.0
HCM 6th LOS	E

Notes

User approved volume balancing among the lanes for turning movement.



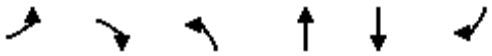
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	48	719	0	920	631	0
Future Volume (veh/h)	48	719	0	920	631	0
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	0	1945	1945	0
Adj Flow Rate, veh/h	53	790	0	1011	693	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	0	2	2	0
Cap, veh/h	690	614	0	1910	1910	0
Arrive On Green	0.39	0.39	0.00	1.00	0.52	0.00
Sat Flow, veh/h	1781	1585	0	3890	3890	0
Grp Volume(v), veh/h	53	790	0	1011	693	0
Grp Sat Flow(s),veh/h/ln	1781	1585	0	1848	1848	0
Q Serve(g_s), s	2.3	46.5	0.0	0.0	13.4	0.0
Cycle Q Clear(g_c), s	2.3	46.5	0.0	0.0	13.4	0.0
Prop In Lane	1.00	1.00	0.00			0.00
Lane Grp Cap(c), veh/h	690	614	0	1910	1910	0
V/C Ratio(X)	0.08	1.29	0.00	0.53	0.36	0.00
Avail Cap(c_a), veh/h	690	614	0	1910	1910	0
HCM Platoon Ratio	1.00	1.00	1.00	2.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.97	1.00	0.00
Uniform Delay (d), s/veh	23.2	36.8	0.0	0.0	17.3	0.0
Incr Delay (d2), s/veh	0.0	140.8	0.0	1.0	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.7	60.8	0.0	0.5	9.5	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	23.2	177.6	0.0	1.0	17.8	0.0
LnGrp LOS	C	F	A	A	B	A
Approach Vol, veh/h	843			1011	693	
Approach Delay, s/veh	167.9			1.0	17.8	
Approach LOS	F			A	B	

Timer - Assigned Phs	2		4		6
Phs Duration (G+Y+Rc), s	68.0		52.0		68.0
Change Period (Y+Rc), s	6.0		5.5		6.0
Max Green Setting (Gmax), s	62.0		46.5		62.0
Max Q Clear Time (g_c+I1), s	2.0		48.5		15.4
Green Ext Time (p_c), s	16.1		0.0		9.0

Intersection Summary	
HCM 6th Ctrl Delay	60.8
HCM 6th LOS	E

Notes

User approved volume balancing among the lanes for turning movement.



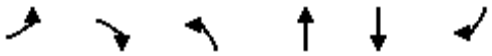
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	53	724	0	884	422	0
Future Volume (veh/h)	53	724	0	884	422	0
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	0	1945	1945	0
Adj Flow Rate, veh/h	59	804	0	982	469	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	0	2	2	0
Cap, veh/h	690	614	0	1910	1910	0
Arrive On Green	0.39	0.39	0.00	1.00	0.52	0.00
Sat Flow, veh/h	1781	1585	0	3890	3890	0
Grp Volume(v), veh/h	59	804	0	982	469	0
Grp Sat Flow(s),veh/h/ln	1781	1585	0	1848	1848	0
Q Serve(g_s), s	2.5	46.5	0.0	0.0	8.4	0.0
Cycle Q Clear(g_c), s	2.5	46.5	0.0	0.0	8.4	0.0
Prop In Lane	1.00	1.00	0.00			0.00
Lane Grp Cap(c), veh/h	690	614	0	1910	1910	0
V/C Ratio(X)	0.09	1.31	0.00	0.51	0.25	0.00
Avail Cap(c_a), veh/h	690	614	0	1910	1910	0
HCM Platoon Ratio	1.00	1.00	1.00	2.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.97	1.00	0.00
Uniform Delay (d), s/veh	23.3	36.8	0.0	0.0	16.1	0.0
Incr Delay (d2), s/veh	0.1	150.5	0.0	1.0	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.9	63.6	0.0	0.5	6.3	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	23.3	187.3	0.0	1.0	16.4	0.0
LnGrp LOS	C	F	A	A	B	A
Approach Vol, veh/h	863			982	469	
Approach Delay, s/veh	176.1			1.0	16.4	
Approach LOS	F			A	B	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		68.0		52.0		68.0
Change Period (Y+Rc), s		6.0		5.5		6.0
Max Green Setting (Gmax), s		62.0		46.5		62.0
Max Q Clear Time (g_c+I1), s		2.0		48.5		10.4
Green Ext Time (p_c), s		15.4		0.0		5.6

Intersection Summary		
HCM 6th Ctrl Delay	69.4	
HCM 6th LOS	E	

Notes

User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	48	760	0	956	659	0
Future Volume (veh/h)	48	760	0	956	659	0
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	0	1945	1945	0
Adj Flow Rate, veh/h	53	835	0	1051	724	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	0	2	2	0
Cap, veh/h	690	614	0	1910	1910	0
Arrive On Green	0.39	0.39	0.00	1.00	0.52	0.00
Sat Flow, veh/h	1781	1585	0	3890	3890	0
Grp Volume(v), veh/h	53	835	0	1051	724	0
Grp Sat Flow(s),veh/h/ln	1781	1585	0	1848	1848	0
Q Serve(g_s), s	2.3	46.5	0.0	0.0	14.1	0.0
Cycle Q Clear(g_c), s	2.3	46.5	0.0	0.0	14.1	0.0
Prop In Lane	1.00	1.00	0.00			0.00
Lane Grp Cap(c), veh/h	690	614	0	1910	1910	0
V/C Ratio(X)	0.08	1.36	0.00	0.55	0.38	0.00
Avail Cap(c_a), veh/h	690	614	0	1910	1910	0
HCM Platoon Ratio	1.00	1.00	1.00	2.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.97	1.00	0.00
Uniform Delay (d), s/veh	23.2	36.8	0.0	0.0	17.4	0.0
Incr Delay (d2), s/veh	0.0	172.2	0.0	1.1	0.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.7	69.8	0.0	0.5	9.9	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	23.2	208.9	0.0	1.1	18.0	0.0
LnGrp LOS	C	F	A	A	B	A
Approach Vol, veh/h	888			1051	724	
Approach Delay, s/veh	197.8			1.1	18.0	
Approach LOS	F			A	B	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		68.0		52.0		68.0
Change Period (Y+Rc), s		6.0		5.5		6.0
Max Green Setting (Gmax), s		62.0		46.5		62.0
Max Q Clear Time (g_c+I1), s		2.0		48.5		16.1
Green Ext Time (p_c), s		17.1		0.0		9.5

Intersection Summary		
HCM 6th Ctrl Delay	71.3	
HCM 6th LOS	E	

Notes

User approved volume balancing among the lanes for turning movement.

APPENDIX H

EVIDENCE OF EXISTING ROYAL VISTA GOLF COURSE OPERATIONS

SoCalGas
A Sempra Energy utility®

ACCOUNT NUMBER 053 518 2792 7
SERVICE FOR
RVGC PARTNERS INC
20055 COLIMA RD
WALNUT CA 91789-3502

DATE MAILED Jul 16, 2021
24 Hour Service
1-800-427-2000 *English*
1-800-427-6029 *Español*

socalgas.com

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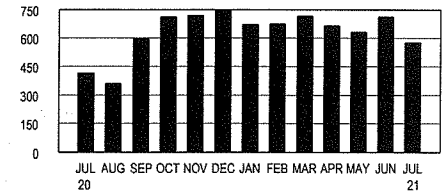
Account Summary

Amount of Last Bill			$909.57
Payment Received	06/24/21	THANK YOU	- 909.57
Current Charges			+ 782.52
Total Amount Due			**$782.52**

.7% Late Payment Charge Due if Paid After AUG 09, 2021

DATE DUE Aug 5, 2021
AMOUNT DUE $782.52

Gas Usage History *(Total Therms used)*



	Jul 20	Jun 21	Jul 21
Total Therms used	418	716	580
Daily average Therms	13.1	22.4	19.3
Days in billing cycle	32	32	30

Current Charges

Rate: GN-10 - Non-Residential

Meter Number: 12509980 (*Next scheduled read date Aug 12 2021*) **Cycle:** 10

Billing Period	Days	Meter Number	Current Reading	- Previous Reading	= Difference	x Billing Factor	x BTU Factor	= Total Therms
06/14/21 - 07/14/21	30	12509980	88494	87931	563	1.000	1.030	580

GAS CHARGES Amount($)

Customer Charge	30 Days x $.49315		14.79
Gas Transportation *(Details below)*	580 Therms		

	Tier 1	Tier 2	
Therms used	250	330	
Rate/Therm	$.99326	$.55395	
Charge	$248.32	+ $182.80	= 431.12

Gas Commodity	580 Therms x $.40935	237.43
	Total Gas Charges	**$683.34**

TAXES & FEES ON GAS CHARGES Amount($)

State Regulatory Fee	580 Therms x $.00577	3.35
Public Purpose Surcharge	580 Therms x $.10712	62.13
Los Angeles County Users Tax	$748.82 x 4.50%	33.70
	Total Taxes and Fees on Gas Charges	**$99.18**
	Total Current Charges	**$782.52**

SoCalGas is committed to helping our business customers. If you need help paying your bill, we offer several payment options, including a temporarily enhanced payment plan with an extended payback period. Learn more: socalgas.com/BusinessMyAccount

SoCalGas' gas commodity cost per therm for your billing period:
Jul. . . . . .$.42622 Jun. . . . . .$.39460

PLEASE KEEP THIS PORTION FOR YOUR RECORDS. (FAVOR DE GUARDAR ESTA PARTE PARA SUS REGISTROS.)

PLEASE RETURN THIS PORTION WITH YOUR PAYMENT. (FAVOR DE DEVOLVER ESTA PARTE CON SU PAGO.)

SoCalGas A Sempra Energy utility®

Save Paper & Postage
PAY ONLINE
socalgas.com

ACCOUNT NUMBER
053 518 2792 7

DATE DUE Aug 5, 2021
AMOUNT DUE $782.52

Please enter amount enclosed.
$

Write account number on check and make payable to SoCalGas.

RVGC PARTNERS INC
20055 COLIMA RD
WALNUT CA 91789-3502

SoCalGas
PO BOX C
MONTEREY PARK CA 91756-5111

80 0535182792 00078252 71 0535182792 0001270577

SoCalGas Policies and Notices

Electronic Check Processing - When you pay your bill by check, you authorize us to electronically process your payment. If your check is processed electronically, your checking account may be debited on the same day we receive the check. Your check will not be returned by your bank, however, the transaction will appear on your bank statement. **If you do not wish to participate in this program, please have your account number ready and *call 1-877-272-3303.***

Closing your Gas Service - We require two (2) working days and access to the meter to close your gas service.

Information about Deposits - Non-Residential accounts only
Amount of Deposit - The amount of deposit required to establish or re-establish service credit is twice the estimated average periodic bill.
Return of Deposit/Interest on Deposit - This deposit, together with any interest due, less the amount of any unpaid bills, will normally be returned either on discontinuance of service or after the deposit has been held for twelve (12) consecutive months, during which time continuous gas service has been received and all bills for such service have been paid in accordance with the rules in effect and filed with the Public Utilities Commission of the State of California. No Interest will be paid if the service is temporarily or permanently discontinued for non-payment of bills.

Billing Term Definitions

Baseline - Amount of gas billed at the lowest residential rate.
Billing Factor - Adjusts the amount of gas measured for differences in delivery pressure, altitude, and meter calibration.
BTU Factor - Adjusts the amount of gas measured to reflect the heating content of gas.
Climate Zone - Weather zone in which a customer lives. Colder zones receive more baseline allowance.
State Regulatory Fee - A fee used to fund the California Public Utilities Commission. Each customer's fee is determined by the number of therms used.
Gas Commodity Charge - Cost of gas purchased by SoCalGas on behalf of its customers.

Public Purpose Surcharge - Charge to fund Public Purpose Programs such as California Alternate Rates for Energy (CARE), Energy Savings Assistance Program (ESAP), energy efficiency and research and development. CARE customers pay a reduced surcharge which excludes CARE program costs.

Public Utilities Commission Notice - If you believe there is an error on your bill or have a question about your service, please call **SoCalGas customer support at (800) 427-2200.**
If you are not satisfied with **SoCalGas** response, submit a complaint to the California Public Utilities Commission (CPUC) by visiting **www.cpuc.ca.gov/complaints/**. Billing and service complaints are handled by the CPUC s Consumer Affairs Branch (CAB), 505 Van Ness Avenue, Room 2003, San Francisco CA 94102. phone:**800-649-7570.**

If you have limitations hearing or speaking, dial 711 to reach the California Relay Service, which is for those needing assistance relaying telephone conversations. Dial one of the numbers below to be routed to the California Relay Service provider in your preferred mode of communication.

California Relay Service Phone Numbers:

Type of Call	Language	Toll-Free 800 Number
TTY/VCO/HCO to Voice	English	1-800-735-2929
	Spanish	1-800-855-3000
Voice to TTY/VCO/HCO	English	1-800-735-2922
	Spanish	1-800-855-3000
From or to Speech-to-Speech	English & Spanish	1-800-854-7784

To avoid having service turned off while waiting for the outcome of a complaint to the CPUC **specifically regarding the accuracy of your bill**, please contact CAB for assistance. If your case meets the eligibility criteria, CAB will provide you instructions on how to mail a check or money order to be impounded pending resolution of your case. You must continue to pay your current charges while your complaint is under review to keep your service turned on.

Other Important Phone Numbers

For the following, call
Monday - Friday, 8 a.m. - 5 p.m.:

粵語 電話	Cantonese	**1-800-427-1420**
한국어 전화	Korean	**1-800-427-0471**
國語 電話	Mandarin	**1-800-427-1429**
NÓI TIẾNG VIỆT	Vietnamese	**1-800-427-0478**

Self Service Options available 24 hours a day, 7 days a week **1-800-772-5050**
For information regarding payment arrangements, office locations, account balance, billing recap, duplicate bill, Residential Past Due Bill Forgiveness through the Arrearage Management Plan, and *CARE* applications for income qualified customers.

To locate underground cables & gas pipes, please call DigAlert, Monday-Friday, 6 a.m. - 7 p.m. . . . **8-1-1**

Payment Options $

Online: It's fast, easy and free. Just register or sign into My Account at https://myaccount.socalgas.com

Home banking: If you pay bills online through your bank, check with them, to see if you can receive your bill online.

Direct Debit: Have your payment automatically deducted from your account. For more information, call 1-800-427-2200 or visit socalgas.com

Pay by Phone: Call 1-800-427-2700 to enroll or, if already enrolled, call to authorize a payment from your checking account.

By Mail: Mail your check or money order, along with the payment stub at the bottom of your bill, in the enclosed envelope to SoCalGas, PO Box C, Monterey Park, CA 91756

ATM/Debit/Credit Card or Electronic Check: You can use most major ATM/debit cards, VISA and MasterCard credit cards, or the Electronic Check thru BillMatrix. A convenience fee is charged. Contact BillMatrix at 1-800-232-6629 or visit socalgas.com.

In Person: Pay in person at one of our conveniently located payment locations. To find the nearest location and hours of operation, call 1-800-427-2200 or visit socalgas.com.

SoCalGas Payment Locations

Authorized Payment Agencies - Call the Self Service Options number 1-800-772-5050 for the addresses of payment agencies in your area.

Company Offices - Business Hours: Monday - Friday 9am - 5pm

Alhambra, 333 E. Main St. Suite J
Anaheim, 716 S. State College Blvd.
Banning, 60 E. Ramsey St. #A
Commerce, 5708 E. Whittier Blvd.
Compton, 700 N. Long Beach Blvd.
Corona, 341 S. Lincoln Ave. #A
Covina, 932 N. Citrus Ave.
Delano, 1227 Jefferson St.
Dinuba, 239 E. Tulare St.
El Centro, 1111 W. Main St.
El Monte, 11912 Valley Blvd., Suite B
Fontana, 9781 Sierra Ave. #C
Glendale, 919 S. Central Ave. #B
Hanford, 420 N. 11th Ave. #105
Hemet, 527 N. San Jacinto St.
Hollywood, 1811 Hillhurst Ave.
Huntington Park, 5916 Pacific Blvd.
Indio, 45123 Towne Ave.
Inglewood, 3530 W. Century Blvd. Ste. 102
Lancaster, 2065 W. Avenue K
Lompoc, 128 S. "H" St.
Los Angeles, 3739 Crenshaw Blvd. #C
Los Angeles, 4619 S. Central Ave.
Los Angeles, 2522 N. Daly St.
Ontario, 962 N. Mountain Ave.
Oxnard, 1640 E. Gonzales Rd.
Pasadena, 1214 E. Green St. #102
Pomona, 196 E. 3rd St.
Porterville, 59 W. Thurman Ave.
Riverside, 7000 Indiana Ave. #105
San Bernardino, 1136 N. Mount Vernon Ave. #305
San Fernando, 444 S. Brand Blvd. Suite 101
San Luis Obispo, 2240 Emily St. Suite 140
San Pedro, 1851 N. Gaffey St. Suite A
Santa Ana, 738 S. Harbor Blvd.
Santa Barbara, 134 E. Victoria St.
Santa Fe Springs, 11516 Telegraph Rd.
Santa Maria, 550 E. Betteravia Rd. Suite B
South Gate, 3530 Tweedy Blvd.
Van Nuys, 6550 Van Nuys Blvd.
Visalia, 1305 E. Noble Ave.
Watts, 1665 E. 103rd St.
Wilmington, 929 N. Avalon Blvd.

Drop Box Location
Burbank, Public Service Department, 164 W. Magnolia Blvd.

SoCalGas: Delivering affordable, clean and increasingly renewable energy to more than 21 million Californians.

Success!

Your payment of **$782.52** was accepted and will be processed on **07/20/2021**.Your confirmation number is **2010629.** You may Print This Page for your records and you will receive an email confirmation.

For payments scheduled for today: The Current Balance amount will not be updated immediately; however, **Payments scheduled for today are effective immediately**. There is no need to call to confirm this payment was received.

Payments by Account

Account Number	Account Payment	Bank Account	Confirmation Number	Edit or Cancel Payment
05351827927 (COLIMA RD 20055)	$782.52 on 07/20/2021	WILSHIRE BANK27 (****27)	2010629	Payments cannot be edited or canceled on the payment date.

Feedback

Other Account Options

Manage Payment Reminders »

See all Scheduled Payments »

My Account Home »

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SoCalGas
A Sempra Energy utility®

ACCOUNT NUMBER 053 518 2792 7
SERVICE FOR
RVGC PARTNERS INC
20055 COLIMA RD
WALNUT CA 91789-3502

DATE MAILED Jun 16, 2021
24 Hour Service
1-800-427-2000 *English*
1-800-427-6029 *Español*

socalgas.com

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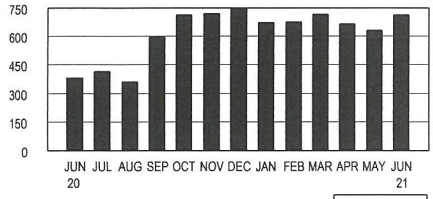
Account Summary

Amount of Last Bill			$793.21
Payment Received	05/26/21	THANK YOU	- 793.21
Current Charges			+ 909.57
Total Amount Due			**$909.57**

.7% Late Payment Charge Due if Paid After JUL 09, 2021

DATE DUE	Jul 7, 2021
AMOUNT DUE	$909.57

Gas Usage History *(Total Therms used)*



	Jun 20	May 21	Jun 21
Total Therms used	385	635	716
Daily average Therms	12.8	21.9	22.4
Days in billing cycle	30	29	32

Tis' the season for backyard projects and home upgrades! Contact 811 before you dig to keep your family and neighborhood safe. More info at socalgas.com/811

Current Charges

Rate: GN-10 - Non-Residential

Meter Number: 12509980 (*Next scheduled read date Jul 14 2021*) **Cycle:** 10

Billing Period	Days	Meter Number	Current Reading	- Previous Reading	= Difference	x Billing Factor	x BTU Factor	= Total Therms
05/13/21 - 06/14/21	32	12509980	87931	87236	695	1.000	1.030	716

GAS CHARGES			Amount($)
Customer Charge	32 Days x $.49315		15.78
Gas Transportation *(Details below)*	716 Therms		
	Tier 1	Tier 2	
Therms used	250	466	
Rate/Therm	$.99326	$.55395	
Charge	$248.32	+ $258.14	= 506.46
Gas Commodity	716 Therms x $.37336		267.33
		Total Gas Charges	**$789.57**

TAXES & FEES ON GAS CHARGES		Amount($)
State Regulatory Fee	716 Therms x $.00577	4.13
Public Purpose Surcharge	716 Therms x $.10712	76.70
Los Angeles County Users Tax	$870.40 x 4.50%	39.17
	Total Taxes and Fees on Gas Charges	**$120.00**
	Total Current Charges	**$909.57**

SoCalGas' gas commodity cost per therm for your billing period:
Jun. . . . . .$.39460 May. . . . . .$.35684

PLEASE KEEP THIS PORTION FOR YOUR RECORDS. (FAVOR DE GUARDAR ESTA PARTE PARA SUS REGISTROS.)
PLEASE RETURN THIS PORTION WITH YOUR PAYMENT. (FAVOR DE DEVOLVER ESTA PARTE CON SU PAGO.)

SoCalGas A Sempra Energy utility®

Save Paper & Postage
PAY ONLINE
socalgas.com

ACCOUNT NUMBER
053 518 2792 7

DATE DUE	Jul 7, 2021
AMOUNT DUE	$909.57

Please enter amount enclosed.
$

Write account number on check and make payable to SoCalGas.

PAID

RVGC PARTNERS INC
20055 COLIMA RD
WALNUT CA 91789-3502

SoCalGas
PO BOX C
MONTEREY PARK CA 91756-5111

80 0535182792 00090957 79 0535182792 0001163675

SOUTHERN CALIFORNIA EDISON®
An EDISON INTERNATIONAL® Company

For billing and service inquiries
1-800-990-7788
www.sce.com

Your electricity bill

Customer Account
700365270722

Date bill prepared
06/21/21

20055 COLIMA RD
WALNUT, CA 91789-3502

Amount due $19,960.11
Due by 07/12/21

Your account summary

Previous Balance	$23,646.38
Payment Received 06/09/21	-$23,646.38
Balance forward	$0.00
Your new charges	$19,960.11
Total amount you owe by 07/12/21	**$19,960.11**

Summary of your billing detail

Service account	Service address	Billing period	Your rate	New charges
8003467505	950 S WATERS AVE WALNUT, CA	05/13/21 to 06/13/21	TOU-PA-2-D	$3,060.66
8003467745	1 WALNUT LEAF DR PMP4 WALNUT, CA	05/13/21 to 06/13/21	TOU-PA-2-D (SCE)	$3,125.71
8003465260	20055 COLIMA RD ROWLAND HEIGHTS, CA	05/14/21 to 06/14/21	TOU-GS-2-E (SCE)	$6,099.22
8003467971	20055 COLIMA RD ROWLAND HEIGHTS, CA	05/14/21 to 06/14/21	TOU-GS-1-E (SCE)	$196.69
8003468415	20055 COLIMA RD ROWLAND HEIGHTS, CA	05/14/21 to 06/14/21	TOU-PA-2-D (SCE)	$1,686.37
8003465260 Billing adjustment	20055 COLIMA RD ROWLAND HEIGHTS, CA	03/17/21 to 04/14/21	TOU-GS-2-E	-$1,588.43
8003465260	20055 COLIMA RD ROWLAND HEIGHTS, CA	03/17/21 to 04/14/21	TOU-GS-2-E	$1,586.73
8003467745	1 WALNUT LEAF DR PMP4 WALNUT, CA	05/13/21 to 06/13/21	TOU-GS-2-E	$1,432.23

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(14-574) Tear here

Please return the payment stub below with your payment and make your check payable to Southern California Edison.
If you want to pay in person, call 1-800-747-8908 for locations, or you can pay online at www.sce.com.

Tear here

SOUTHERN CALIFORNIA EDISON®
An EDISON INTERNATIONAL® Company

Customer account 700365270722
Please write this number on the memo line of your check. Make your check payable to Southern California Edison.

Amount due by 07/12/21 **$19,960.11**

Amount enclosed $

STMT 06212021 P1

POSTED

RVGC PARTNERS, INC
20055 COLIMA RD
WALNUT CA 91789-3502

P.O. BOX 300
ROSEMEAD, CA 91772-0002

700365270722 0000266 00000000000199601100199601 1

SOUTHERN CALIFORNIA EDISON®
An EDISON INTERNATIONAL® Company

For billing and service inquiries
1-800-990-7788
www.sce.com

Your electricity bill

Customer Account
700365270722

Date bill prepared
05/18/21

Amount due $23,646.38

20055 COLIMA RD
WALNUT, CA 91789-3502

Your account summary

Previous Balance	$10,835.24
Past due amount	$10,835.24
Your new charges	$12,811.14
Total amount you owe	**$23,646.38**

Summary of your billing detail

Service account	Service address	Billing period	Your rate	New charges
8003467505 Billing correction	950 S WATERS AVE WALNUT, CA	03/16/21 to 04/13/21	TOU-PA-2-D	-$1,588.34
8003467745 Billing correction	1 WALNUT LEAF DR WALNUT, CA	03/16/21 to 04/13/21	TOU-PA-2-D	-$2,437.64
8003467971 Billing correction	20055 COLIMA RD ROWLAND HEIGHTS, CA	03/17/21 to 04/14/21	TOU-GS-2-E	-$257.42
8003468415 Billing correction	20055 COLIMA RD ROWLAND HEIGHTS, CA	03/17/21 to 04/14/21	TOU-GS-2-E	-$1,466.29
8003465260 Billing correction	20055 COLIMA RD ROWLAND HEIGHTS, CA	03/17/21 to 04/14/21	TOU-GS-2-E	-$5,085.55
8003467505	950 S WATERS AVE WALNUT, CA	03/16/21 to 04/13/21	TOU-PA-2-D	$1,588.34
8003467745	1 WALNUT LEAF DR PMP4 WALNUT, CA	03/16/21 to 04/13/21	TOU-PA-2-D (SCE)	$1,807.37
8003465260	20055 COLIMA RD ROWLAND HEIGHTS, CA	03/17/21 to 04/14/21	TOU-GS-2-E (SCE)	$3,492.20
8003467971	20055 COLIMA RD ROWLAND HEIGHTS, CA	03/17/21 to 04/14/21	TOU-GS-1-E (SCE)	$183.35

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Please return the payment stub below with your payment and make your check payable to Southern California Edison.
If you want to pay in person, call 1-800-747-8908 for locations, or you can pay online at www.sce.com.

(14-574) Tear here — Tear here

SOUTHERN CALIFORNIA EDISON®
An EDISON INTERNATIONAL® Company

Customer account 700365270722
Please write this number on the memo line of your check. Make your check payable to Southern California Edison.

Past due charges - pay immediately	$10,835.24
New charges - pay by 06/07/21	$12,811.14
Total amount you owe	**$23,646.38**

Amount enclosed $

PAID

STMT 05182021 P1

RVGC PARTNERS, INC
20055 COLIMA RD
WALNUT CA 91789-3502

P.O. BOX 300
ROSEMEAD, CA 91772-0002

700365270722 0000268 001083524001281114002364638