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# Transportation Impact Analysis

# **255 E. Nance Street**

# **Warehouse Project**

# **City of Perris**

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FEBRUARY 2023

Case Number: PRN 22 - 00015

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# 1 Introduction

## 1.1 Purpose and Scope of the TIA

The purpose of this Transportation Impact Analysis (TIA) is to identify transportation-related impacts associated with the 255 E. Nance Street Warehouse Project (proposed project) located in the City of Perris (City).

The following TIA is consistent with the City of Perris (City) *Transportation Impact Analysis Guidelines for CEQA* (May 2020) and complies with the City of Perris General Plan Circulation Element requirements. The scope of work for this TIA has been approved by the City and is provided in Appendix A. The City's guidelines also contain VMT scoping forms and are consistent with the requirements of Senate Bill 743 (SB 743) which require that vehicle miles traveled (VMT) analyses be used to determine transportation impacts under CEQA. In addition, this TIA references the Western Riverside Council of Governments (WRCOG) Transportation Uniform Mitigation Fee (TUMF) which is a regional fee program that mitigates the impact of new growth in western Riverside County.

The objectives of this TIA are as follows:

- Document existing roadway, pedestrian, bicycle, transit and traffic conditions, including intersection levels of service (LOS) in the study area;
- Estimate trip generation, distribution, and assignment characteristics for the proposed project;
- Provide a VMT analysis per SB 743, the updated California Environmental Quality Act (CEQA) Guidelines, and the City of Perris TIA Guidelines;
- Determine LOS for study area intersections under: 1) Existing; 2) Existing plus Project; 3) Opening Year (2024); and, 4) Opening Year (2024) plus Project conditions;
- Identify CEQA-required mitigation measures for significant transportation impacts and/or other improvements needed to meet LOS standards (if any); and,
- Provide findings and recommendations based on the traffic analysis of the proposed project.

Figure 1 shows the project location and study area intersections. As shown in Figure 1, the study area is comprised of the following intersections, project driveways, and roadway segment:

### Intersections

1. Perris Boulevard/Harley Knox Boulevard (signalized)
2. Redlands Avenue/Harley Knox Boulevard (signalized)
3. Redlands Avenue/Nance Street (unsignalized)
4. Redlands Avenue/Ramona Expressway (signalized)

### Project Driveways

- D1. West Project Driveway/Nance Street (unsignalized)
- D2. East Project Driveway/Nance Street (unsignalized)

## Roadway Segments

1. Nance Street, Perris Boulevard to the West Project Driveway

## 1.2 Project Description and Location

The proposed project is located at 255 E. Nance Street and would involve the construction and operations of an approximately 202,500 square foot (sf) warehouse building on an approximately 9.54-acre site. It is our understanding the site currently supports trucking related uses which would be replaced by the proposed project. The project would include associated warehouse characteristics including loading docks, truck and vehicle parking, and landscaped areas. Additional improvements, such as the construction of roadways and sidewalks along the project's frontage will be necessary to accommodate the project's development. The project site is located within the Perris Valley Commerce Center Specific Plan (PVCCSP) (2022). Figure 2 illustrates the project's site plan.

Regional access to the project site is primarily served by Interstate 215 (I-215), which extends north-south from the City of Murrieta to the City of Riverside. Local access to the project is provided via Harley Knox Boulevard, Perris Boulevard, and Redlands Avenue. Two driveways are provided along Nance Street, and both project access driveways provide full inbound and outbound access. Additionally, the eastern proposed driveway is designated as truck access only, with the western driveway is designated as auto access only and restricted to truck access. Truck access to the project will follow the City's established truck routes, and would provide access to and from I-215 via Harley Knox Boulevard, to Redlands Avenue and to Nance Street.

## 1.3 Analysis Methodology

### 1.3.1 Vehicle Miles Traveled Analysis for CEQA

On September 27, 2013, Senate Bill (SB) 743 was signed into law, which creates a process to change the way that transportation impacts are analyzed under California Environmental Quality Act (CEQA). SB 743 required the Governor's Office of Planning and Research (OPR) to amend the CEQA Guidelines to provide an alternative to level of service (LOS) for evaluating transportation impacts. Under the new transportation guidelines, LOS, or vehicle delay, will no longer be considered an environmental impact under CEQA. OPR recommended Vehicle Miles Traveled (VMT) as the most appropriate measure of project transportation impacts for land use projects and land use plans. The updates to the CEQA Guidelines required under SB 743 were approved on December 28, 2018.

Under the guidelines, VMT has been adopted as the most appropriate measure of transportation impacts under CEQA. The OPR's regulatory text indicates that a public agency may immediately commence implementation of the new transportation impact guidelines, and that the guidelines must be implemented statewide by July 1, 2020. The City of Perris adopted VMT specific TIA guidelines on June 10, 2020. The details of applicable screening and VMT analysis methodology has been provided in Chapter 4 of the TIA.

The Updated CEQA Guidelines state that "*...generally, vehicle miles traveled (VMT) is the most appropriate measure of transportation impacts...*" and define VMT as "*...the amount and distance of automobile travel attributable to a project...*". It should be noted that "automobile" refers to on-road passenger vehicles, specifically cars and light trucks. Heavy-duty truck VMT could be included for modeling convenience and ease of calculation (for example, where models or data provide combined auto and heavy truck VMT). Other relevant considerations may include the effects of the project on transit and non-motorized travel.

The City of Perris TIA Guidelines for CEQA have been utilized in screening the proposed project's VMT analysis. If the proposed project is unable to be screened out from further VMT analysis, then according to the City's TIA Guidelines, the WRCOG screening tool (available at <http://gis.fehrandpeers.com/WRCOGVMT/>) and the following steps would be used in the proposed project's VMT assessment:

- A. Identify the Traffic Analysis Zone (TAZ) and jurisdiction associated with the project location.
- B. Determine if the project meets screening criteria related to being located within a Transit Priority Area (TPA).
- C. Determine if project meets screening criteria related to being within a low VMT generating TAZ. This test largely applies to residential and work-related land uses. Retail uses are required to have a separate screening related to whether the project is local serving, which is based on size (i.e., less than 50,000 square feet). This step relies on Riverside County Transportation Analysis Model 's (RIVTAM) base year estimate of the TAZ VMT per service population and would compare that value to the proposed threshold measured at the jurisdictional or a reasonable sub-regional area (i.e., WRCOG or TUMF districts).
- D. Provide baseline and cumulative estimates of project generated VMT if the project fails to be screened out including VMT estimates for use in other sections of CEQA analysis, such as air quality, greenhouse gases, and energy based on TAZ VMT averages.

### 1.3.2 Level of Service (LOS) for General Plan Consistency

Level of service (LOS) is commonly used as a qualitative description of intersection operations and roadway segments and is based on the design capacity of the intersection configuration and roadway facility, compared to the volume of traffic using the facility.

The study area intersections and roadway segments are analyzed in the TIA for the following scenarios:

#### Existing (2022)

The TIA includes a description of existing traffic conditions in the site vicinity, including existing and traffic operations. The existing condition is representative of the year 2022. Daily, AM and PM peak hour turning movements counts were collected at the study intersections and roadway segment in April 2022. The raw traffic data is provided in Appendix B. Intersection cycle lengths were collected to verify the signal timing at signalized intersections. Through volumes on Nance Street, between Redlands Avenue and Perris Boulevard were estimated to conservatively include all inbound and outbound traffic from the Redlands Avenue/Nance Street intersection count. When compared to the data within the roadway segment count, this method is extremely conservative.

#### Existing plus Project (2022)

This condition includes analysis of traffic operations under existing conditions with project-related traffic, assuming full buildout of the project, added to the existing daily roadway and AM and PM peak hour intersection traffic volumes. The traffic impacts specific to the project under this condition were used as the basis for determining the project's direct impacts.

#### Opening Year (2024)

This condition represents a short-term horizon period where the proposed project is constructed and fully occupied. Peak hour traffic forecasts for the Year 2024 have been projected by increasing the traffic volumes by an annual

growth rate of 3.0% per year and adding traffic volumes generated by cumulative projects. Consistent with the 2016-2040 SCAG SCS/RTP and other recent TIA's completed for projects within the City of Perris, a growth rate of 3.0% per year was determined to be appropriate.

### Opening Year plus Project (2024)

This condition includes analysis of traffic operations under the Opening Year (2024) condition (described above) with project-related traffic added to the AM and PM peak hour traffic volumes. The traffic impacts specific to the project under this condition were used as the basis for determining the project's contribution to cumulative impacts in the year 2024.

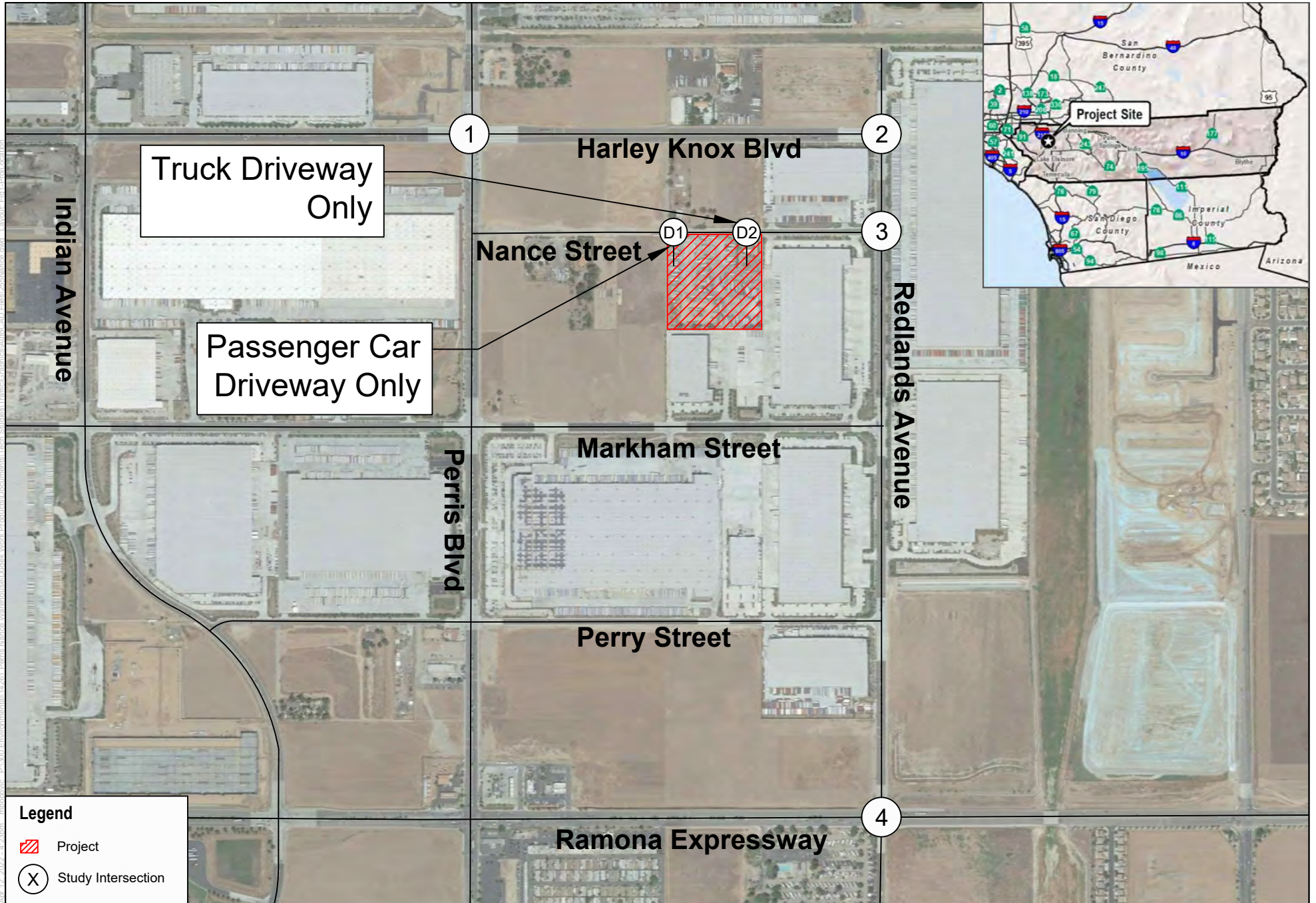
#### 1.3.2.1 Intersections

The Highway Capacity Manual, 6<sup>th</sup> Edition (HCM 6) methodology was used to assess level of service for the intersections within the study area. The HCM intersection analysis methodology was used to analyze the operation of signalized and unsignalized study intersections. The HCM analysis methodology describes the operation of an intersection using a range of LOS from LOS A (free-flow conditions) to LOS F (severely congested conditions), based on the corresponding control delay experienced per vehicle for unsignalized intersections. The Synchro 11 LOS software was used to determine intersection LOS. Synchro is consistent with the HCM 6 methodology (Transportation Research Board 2016). Table 1 shows the LOS values by delay ranges for unsignalized and signalized intersections under the HCM methodology.

**Table 1. Levels of Service for Intersections using HCM Methodology**

Level of Service	Unsignalized Intersections Control Delay (in seconds per vehicle)	Signalized Intersections Control Delay (in seconds per vehicle)
A	< 10.0	< 10.0
B	> 10.0 to < 15.0	> 10.0 to < 20.0
C	> 15.0 to < 25.0	> 20.0 to < 35.0
D	> 25.0 to < 35.0	> 35.0 to < 55.0
E	> 35.0 to < 50.0	> 55.0 to < 80.0
F	> 50.0	> 80.0

Source: HCM 6 (Transportation Research Board 2016).



SOURCE: Google Maps 2021

FIGURE 1

Project Location and Study Area

255 E. Nance Street Warehouse Project

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### 1.3.2.2 Roadway Segments

The analysis of roadway segments is to determine whether the daily capacity of a specific roadway segment would have satisfactory daily capacity under its current and/or General Plan roadway classification. The study area roadway segment was analyzed using the volume-to-capacity (V/C) method based on the average daily traffic (ADT) capacities.

### 1.3.3 General Plan Consistency Requirements

Per WRCOG guidance, consistent with the acceptable LOS in the local agency's General Plan, the local agency may consider the following criteria for application in this traffic study to identify infrastructure improvements required to provide acceptable operations. The study area intersections are located within the jurisdiction of the City of Perris, therefore, the following consistency requirements would apply.

#### 1.3.3.1 City of Perris General Plan Circulation Element

This TIA uses the level of service threshold provided in the City of Perris Circulation Element of the current General Plan. According to *Policy II.A* of the Circulation Element:

**Maintain the following target Levels of Service:**

- LOS "D" along all City maintained roads (including intersections) and LOS "D" along I-215 and SR 74 (including intersections with local streets and roads). An exception to the local road standard is LOS "E", at intersections of any Arterials and Expressways with SR 74, the Ramona-Cajalco Expressway or at I-215 freeway ramps.
- LOS "E" may be allowed within the boundaries of the Downtown Specific Plan Area to the extent that it would support transit-oriented development and walkable communities. Increased congestion in this area will facilitate an increase in transit ridership and encourage development of a complementary mix of land uses within a comfortable walking distance from light rail stations.

The City has not adopted an LOS standard for unsignalized intersections. Performance of unsignalized intersections is evaluated on a case-by-case basis.

For the purposes of this analysis, an intersection or roadway would be found inconsistent with the City's Circulation Element if project traffic causes a roadway to go from an acceptable LOS to a deficient LOS. For the intersection of Redlands Avenue/Ramona Expressway, LOS F constitutes deficient LOS; for all remaining study intersections and segments, LOS E/F constitutes deficient LOS. For intersections and roadway segments already operating at an unacceptable LOS, any increase in average delay for intersections, or volume to capacity (V/C) ratio for roadway segments, would be found inconsistent with the City's Circulation Element.

Table 2 displays the City's roadway segment LOS thresholds for roadway segment operations, as presented in the City's Circulation Element.

**Table 2. City of Perris Roadway Segment LOS Thresholds**

Roadway Classification	No. of Travel Lanes	Maximum Two-way Average Daily Traffic (ADT)				
		LOS A	LOS B	LOS C	LOS D	LOS E
Collector	2	7,800	9,100	10,400	11,700	13,000
Collector	4	15,540	18,130	20,700	23,300	25,900
Arterial	2	10,800	12,600	14,400	16,200	18,000
Arterial	4	21,540	25,130	28,700	32,300	35,900
Arterial	6	32,340	37,730	43,100	48,500	53,900
Expressway	4	24,540	28,630	32,700	36,800	40,900
Expressway	6	36,780	42,910	49,000	55,200	61,300
Expressway	8	49,020	57,190	65,400	73,500	81,700
Freeway	4	45,900	53,550	61,200	68,900	76,500
Freeway	6	70,500	82,250	94,000	105,800	117,500
Freeway	8	96,300	112,350	128,400	144,500	160,500
Freeway	10	120,360	140,420	160,500	180,500	200,600

Source: City of Perris Circulation Element, 2022

**Project Access, Safety and Other Analyses**

An analysis of Project access, safety and traffic signal warrant analysis for any unsignalized intersections around the project and on adjacent streets is recommended per City of Perris TIA guidelines.

## 1.4 Improvements for Transportation Impacts

As part of the final acceptance of a TIA, the City will review and approve any required improvements and/or fair share contributions necessary to improve the transportation-related deficiencies caused by the proposed development. These improvements would be included as part of the conditions of approval and should be in addition to any improvements required by any other departments. Any transportation improvements based on a transportation study will be in addition to any other fees related to the WRCOG TUMF program, the City of Perris Development Impact Fee (DIF) program, or the North Perris Road and Bridge Benefit District (NPRBBD) program. Fair share contributions identified in the TIA and subsequently listed in the conditions of approval shall be required before a building permit will be issued. Improvements required in the TIA and subsequently listed in the conditions of approval shall be completed prior to occupancy.

### 1.4.1 Perris Valley Commerce Center Specific Plan EIR Traffic Mitigation Measures

The proposed project is located within the Perris Valley Commerce Center Specific Plan (PVCC). As such, relevant traffic mitigation measures identified in the PVCC FEIR (2011) are identified below and reviewed in this analysis.

MM Trans 1 Future implementing development projects shall construct on-site roadway improvements pursuant to the general alignments and right-of-way sections set forth in the PVCC Circulation Plan, except where said improvements have previously been constructed.

- MM Trans 2 Sight distance at the project entrance roadway of each implementing development project shall be reviewed with respect to standard City of Perris sight distance standards at the time of preparation of final grading, landscape and street improvement plans.
- MM Trans 3 Each implementing development project shall participate in the phased construction of off-site traffic signals through payment of that project's fair share of traffic signal mitigation fees and the cost of other off-site improvements through payment of fair share mitigation fees which include TUMF (Transportation Uniform Mitigation Fee), DIF (Development Impact Fee), and the NPRBBD (North Perris Road and Bridge Benefit District). The fees shall be collected and utilized as needed by the City of Perris to construct the improvements necessary to maintain the required level of service and build or improve roads to their build-out level.
- MM Trans 4 Prior to the approval of individual implementing development projects, the Riverside Transit Agency (RTA) shall be contacted to determine if the RTA has plans for the future provision of bus routing in the project area that would require bus stops at the project access points. If the RTA has future plans for the establishment of a bus route that will serve the project area, road improvements adjacent to the project site shall be designed to accommodate future bus turnouts at locations established through consultation with the RTA. RTA shall be responsible for the construction and maintenance of the bus stop facilities. The area set aside for bus turnouts shall conform to RTA design standards, including the design of the contact between sidewalk and curb and gutter at bus stops and the use of ADA-compliant paths to the major building entrances in the project.
- MM Trans 5 Bike racks shall be installed in all parking lots in compliance with City of Perris standards.
- MM Trans 6 Each implementing development project that is located adjacent to the MWD Trail shall coordinate with the City of Perris Parks and Recreation Department to determine the development plan for the trail.
- MM Trans 7 Implementing project-level traffic impact studies shall be required for all subsequent implementing development proposals within the boundaries of the PVCC as approved by the City of Perris Engineering Department. These subsequent traffic studies shall identify specific project impacts and needed roadway improvements to be constructed in conjunction with each implementing development project. All intersection spacing for individual tracts or maps shall conform to the minimum City intersection spacing standards. All turn pocket lengths shall conform at least to the minimum City turn pocket length standards. If any of the proposed improvements are found to be infeasible, the implementing development project applicant would be required to provide alternative feasible improvements to achieve levels of service satisfactory to the City.
- MM Trans 8 Proposed mitigation measures resulting from project-level traffic impact studies shall be coordinated with the North Perris Road and Bridge Benefit District (NPRBBD) to ensure that they are in conformance with the ultimate improvements planned by the NPRBBD. The applicant shall be eligible to receive proportional credits against the NPRBBD for construction of project level mitigation that is included in the NPRBBD.

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## 2 Existing Conditions

This section describes existing conditions within the study area. Characteristics are provided for the existing roadway, transit, bike and pedestrian facilities, daily roadway segment traffic volumes, peak hour intersection traffic volumes and traffic operations.

### 2.1 Roadway System

Regional access to the City of Perris is primarily provided via Interstate 215 (I-215), located west of Perris. State Route 74 (SR-74) also carries a significant amount of regional traffic and generally traverses the southern half of the City from southwest to northeast. Additionally, Perris Boulevard serves as the primary north-south connection between the southern and northern halves of the City, and Ramona Expressway serves as a primary east-west connector in the northern half of the City, from I-215 to the Cities of Lakeview, San Jacinto, and Hemet to the east.

Characteristics of the existing street system within the study area are described below. All City truck routes that would be utilized by the project are provided in Figure 3.

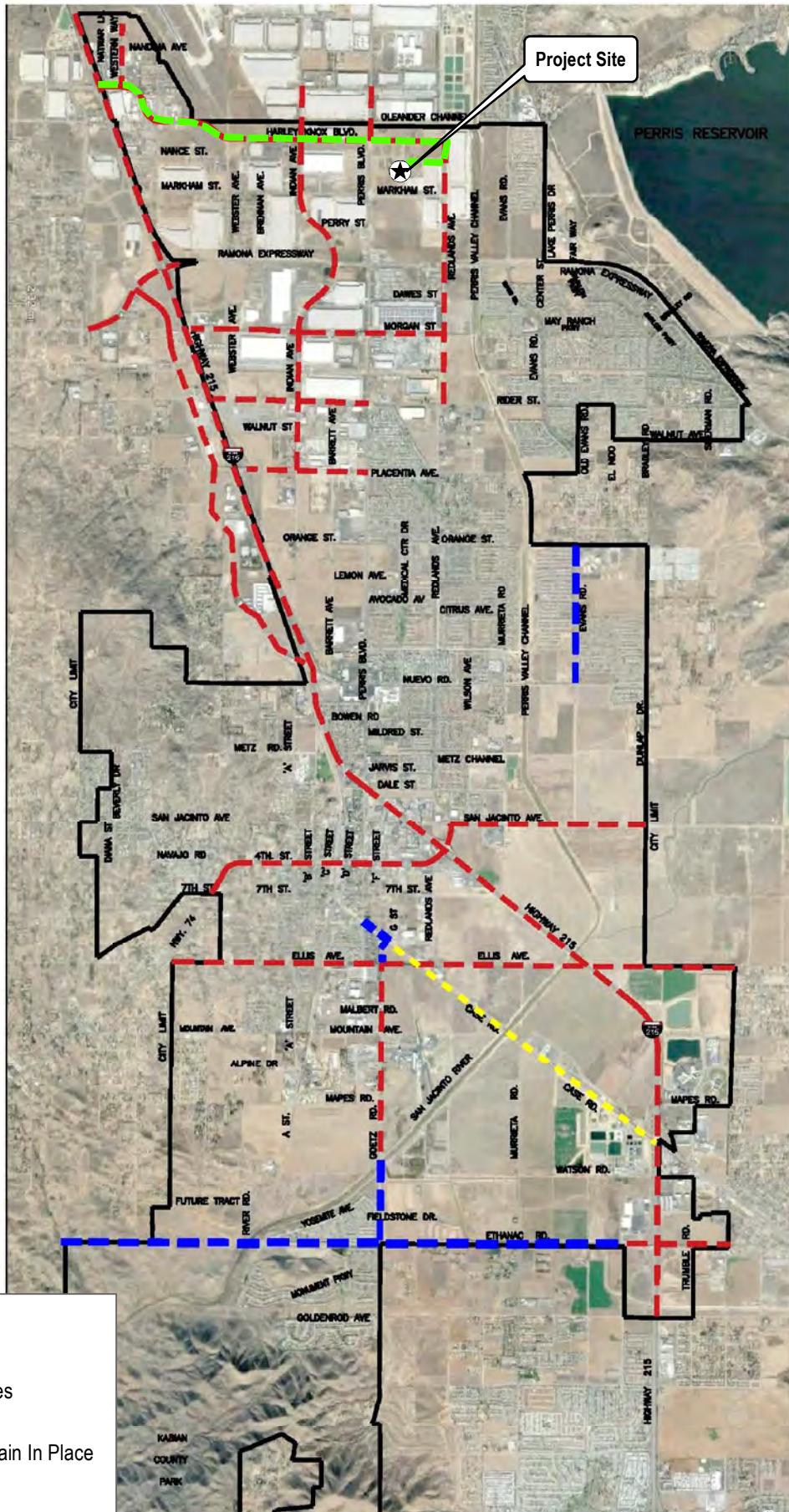
**Ramona Expressway** is an east-west, 6-lane divided roadway between Webster Avenue and Evans Road, and 4-lane divided roadway west of Webster Avenue and east of Evans Road. Within the study area, Ramona Expressway extends from I-215 to the west and the City of Hemet to the east. West of I-215, Ramona Expressway becomes Cajalco Road. The posted speed limit within the study area ranges from 50 to 55 miles per hour (MPH). There are paved sidewalks along some sections of either side of the roadway, and parking is not permitted along either side of the roadway. Ramona Expressway is currently designated as an Expressway in the Circulation Element and the PVCCSP and is not designated as a City truck route.

**Perris Boulevard** is a north-south, 6-lane divided roadway within the study area, extending from the City of Perris downtown area, to Moreno Valley to the north. The posted speed limit is 45 MPH. There are paved sidewalks on either side of the roadway except along unimproved parcels, and parking is generally not permitted along either side of the roadway. Perris Boulevard is designated as a Primary Arterial in both the Circulation Element and the PVCCSP and is designated as a truck route north of Harley Knox Boulevard.

**Harley Knox Boulevard** is a north-south, 6-lane divided roadway within the study area, extending from Harvill Avenue to the west and to Redlands Avenue to the east. The posted speed limit is 45 MPH. There are paved sidewalks on either side of the roadway except along unimproved parcels, and parking is generally not permitted along either side of the roadway. Harley Knox Boulevard is not designated as a roadway in the Circulation Element, however, is designated as a Primary Arterial in the PVCCSP. Harley Knox Boulevard is a designated truck route from I-215 to Redlands Avenue.

**Redlands Avenue** is north-south, 4-lane divided roadway north of Ramona Expressway to its existing terminus just north of Harley Knox Boulevard. The posted speed limit is 40 MPH. There are paved sidewalks along some sections of either side of the roadway, and parking is generally not permitted along either side of the roadway. Redlands Avenue is designated as a Secondary Arterial in both the Circulation Element and the PVCCSP and is designated as a truck route from Harley Knox Boulevard to Rider Street.

**Nance Street** is an east-west, 2-lane undivided roadway with a two-way left-turn lane (TWLTL) west of the project site. Nance Street is located on the northern boundary of the project site, extending from Perris Boulevard to the west, to Redlands Avenue to the east. The posted speed limit within the study area ranges from 25 to 30 MPH. There are paved sidewalks on either side of the roadway except along unimproved parcels, and parking is not permitted along either side of the roadway. The proposed project includes plans to include a paved sidewalk and landscaping along this segment. Parking is not permitted along either side of the roadway. Nance Street is designated as a Collector in the Circulation Element and as a Local road in the PVCCSP. Nance Street is not designated as a truck route, however, project trucks will utilize Nance Street to the nearest designated truck route roadway, which is Redlands Avenue to the west.



SOURCE: Tri Lake Consultants Inc. 2022

FIGURE 3

Project Truck Routes

255 E.Nance Street Warehouse Project

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## 2.2 Transit System

Public transit in the Perris area consists of taxis, paratransit vans, buses, and passenger services through the Metrolink rail system. Figure 4 identifies transit routes throughout the City of Perris.

Currently, Metrolink service in the City of Perris is provided via two stations in the southern half of the City (Perris Station and South Perris Station), with a third station (Ramona Expressway Station) planned to serve the northern Perris area, to be located west of I-215 and north of Cajalco Expressway.

The Riverside Transit Agency (RTA) provides public transportation throughout Riverside County. RTA operates fixed bus routes providing public transit service throughout western Riverside County. The route that serves the study area is Route 19.

Route 19 operates between the Perris Station Transit Center in Downtown Perris to the Moreno Valley Mall with a peak service frequency of 15-minutes throughout the week. The nearest bus stops (serving Route 19) are located along Perris Boulevard, near the Perris Boulevard/Harley Knox Boulevard.

## 2.3 Pedestrian and Bicycle Facilities

The City of Perris General Plan Circulation Element identifies the following bicycle facility classifications:

**Class I Bikeway/Regional Trails** – Provide bicycles and pedestrians exclusive use of the path through a completely separated right-of-way; functions as a regional connector to link all of the major water bodies in western City of Perris and facilitates the ability for long-distance users to take advantage of this system for long one-way or loop-type trips.

**Class I Bikeway (Bike Path)** – Provide bicycles and pedestrians exclusive use of the path through a completely separated right-of-way.

**Class II bikeway (Bike Lane)** – Provides for one-way bike travel on a street or highway in a striped lane.

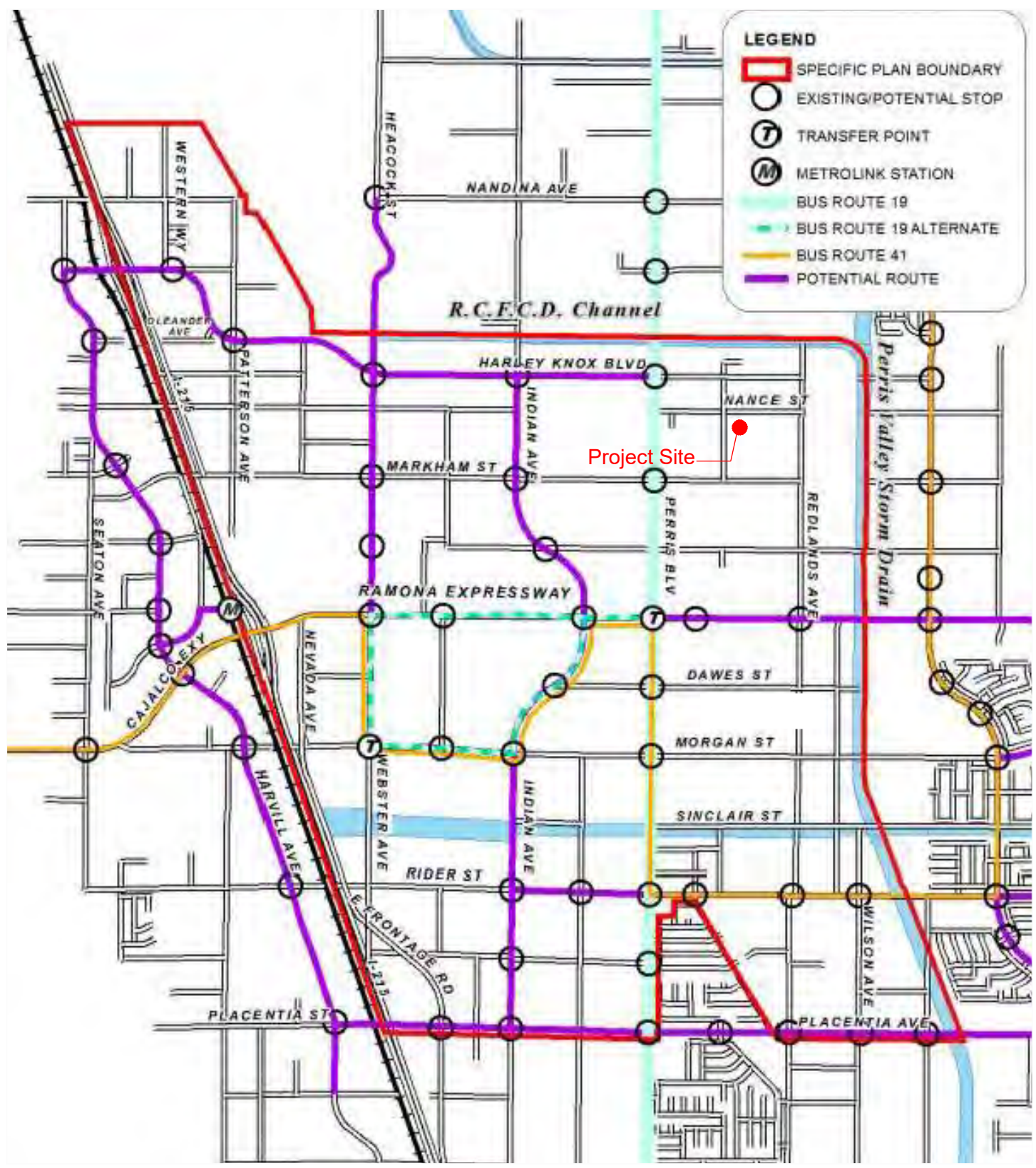
The Perris Trail Master Plan, adopted February 26, 2013 (Resolution No. 4562), includes an additional bikeway classification, as defined below:

**Class III bikeway (Bike Route)** --A preferred travel route for bicyclists, on which a separate lane or path is either not feasible or not desirable. The rightmost lane of a bicycle route is shared by bicyclists and cars. The lane is marked with signs and can also be marked with sharrows.

As shown in Figure 5, PVCCSP Trails System, within the study area a Class I Bikeway/Regional Trail is planned along Ramona Expressway. However, several bicycle facilities have already been constructed that are not depicted on the PVCCSP Trails System map. Additionally, upon field observations, Redlands Avenue is designated as a Class II Bike Route north of Ramona Expressway to Harley Knox Boulevard. Harley Knox Boulevard also currently has Class II Bike Lanes on both sides of the roadway.

Nance Street is generally built with paved sidewalks and pedestrian facilities, except for portions of the road that front unimproved parcels, west of the project site. The proposed project would be responsible for making frontage improvements along Nance Street, including paved sidewalk facilities.

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SOURCE: Perris Valley Commerce Center Specific Plan, 2022

FIGURE 4

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SOURCE: Perris Valley Commerce Center Specific Plan, 2022

FIGURE 5

Perris Valley Commerce Center Specific Plan Trails System

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# 3 Project Traffic

This section documents the trip generation, distribution, and assignment of project traffic in the study area.

## 3.1 Trip Generation

Trip generation estimates for the proposed project are based on daily and AM and PM peak hour trip generation rates obtained from the Institute of Transportation Engineers (ITE) *Trip Generation Handbook, 11<sup>th</sup> Edition (2021)* for a warehouse use (ITE Land Use Code 150). Additionally, passenger car equivalent (PCE) factors were applied to the trip generation estimates to account for truck traffic. The Riverside County Transportation Department *Transportation Analysis Guidelines (2020)* indicates that project with truck intensive uses must convert project trips to PCE. A 1.5 PCE factor was applied to 2-axle trucks, 2.0 PCE for 3-axle trucks, and a 3.0 PCE factor was applied to 4-axle trucks to provide a conservative analysis. Trip generation rates, vehicle splits, and the resulting trip generation estimates for the project are summarized in Table 3.

**Table 3. Project Trip Generation**

Land Use	ITE Code	Size/Units	Daily	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
<b>Trip Rates<sup>1</sup></b>									
Warehousing	150	TSF	1.74	0.13	0.04	0.17	0.05	0.14	0.19
<b>Trip Generation</b>									
225 E. Nance St. Warehouse	150	202,500 TSF	347	27	8	35	10	27	37
<b>Trip Generation (By Vehicle Classification)</b>									
Vehicle Mix <sup>2</sup>		Percent <sup>2</sup>							
Passenger Vehicles		72.5%	251	20	5	25	7	20	27
2-Axle Trucks		4.6%	16	2	0	2	0	2	2
3-Axle Trucks		5.7%	20	1	1	2	1	1	2
4+-Axle Trucks		17.2%	60	4	2	6	2	4	6
<b>Total Trip Generation (Non-PCE)</b>			<b>347</b>	<b>27</b>	<b>8</b>	<b>35</b>	<b>10</b>	<b>27</b>	<b>37</b>
Vehicle Mix <sup>2</sup>		PCE Factor							
Passenger Vehicles		1.0	251	20	5	25	7	20	27
2-Axle Trucks		1.5	24	3	0	3	0	3	3
3-Axle Trucks		2.0	40	2	2	4	2	2	4
4+-Axle Trucks		3.0	180	12	6	18	6	12	18
<b>Total Trip Generation (w/PCE)</b>			<b>495</b>	<b>37</b>	<b>13</b>	<b>50</b>	<b>15</b>	<b>37</b>	<b>52</b>

**Notes:** ITE = Institute of Transportation Engineers; PCE = Passenger Car Equivalent; TSF = Thousand Square Feet

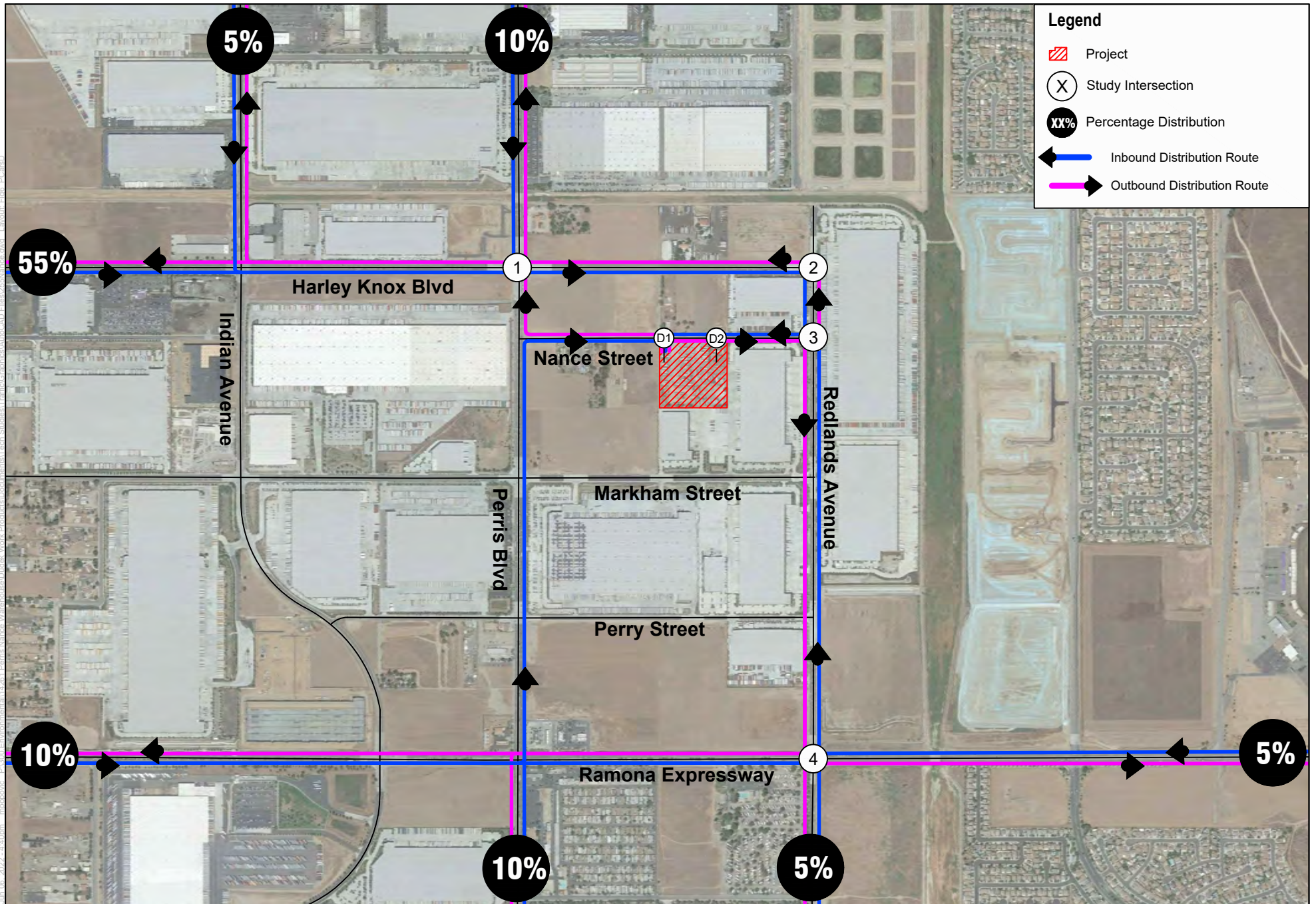
<sup>1</sup> Trip rates from the Institute of Transportation Engineers (ITE), *Trip Generation, 11th Edition, 2021*.

<sup>2</sup> Vehicle Mix and Percent from SCAQMD, Warehouse Truck Trip Study Data Results and Usage, July 2014.

As shown in Table 3, the proposed project would generate 347 daily trips, 35 AM peak hour trips (27 inbound and 8 outbound), and 37 PM peak hour trips (10 inbound and 27 outbound). Accounting for truck traffic from the warehousing land use, the proposed project would generation 495 daily PCE trips, 50 AM peak hour PCE trips (37 inbound and 13 outbound), and 52 PM peak hour PCE trips (15 inbound and 37 outbound).

## 3.2 Trip Distribution and Assignment

Project trip distribution percentages were based on logical travel paths to commute corridors and existing truck routes in the study area. All passenger vehicles will use the western most driveway on Nance Street (Driveway 1) and all truck access will occur at the eastern most driveway on Nance Street (Driveway 2). The project trip distribution percentages are shown in Figure 6 (Project Passenger Vehicle Trip Distribution) and Figure 7 (Project Truck Trip Distribution), and the resulting project trips are shown in Figure 8 (Project Passenger Vehicle Trip Assignment), Figure 9 (Project Truck Trip Assignment), and Figure 10 (Project Total Trip Assignment). These trip assignments are used in the Existing plus Project condition.



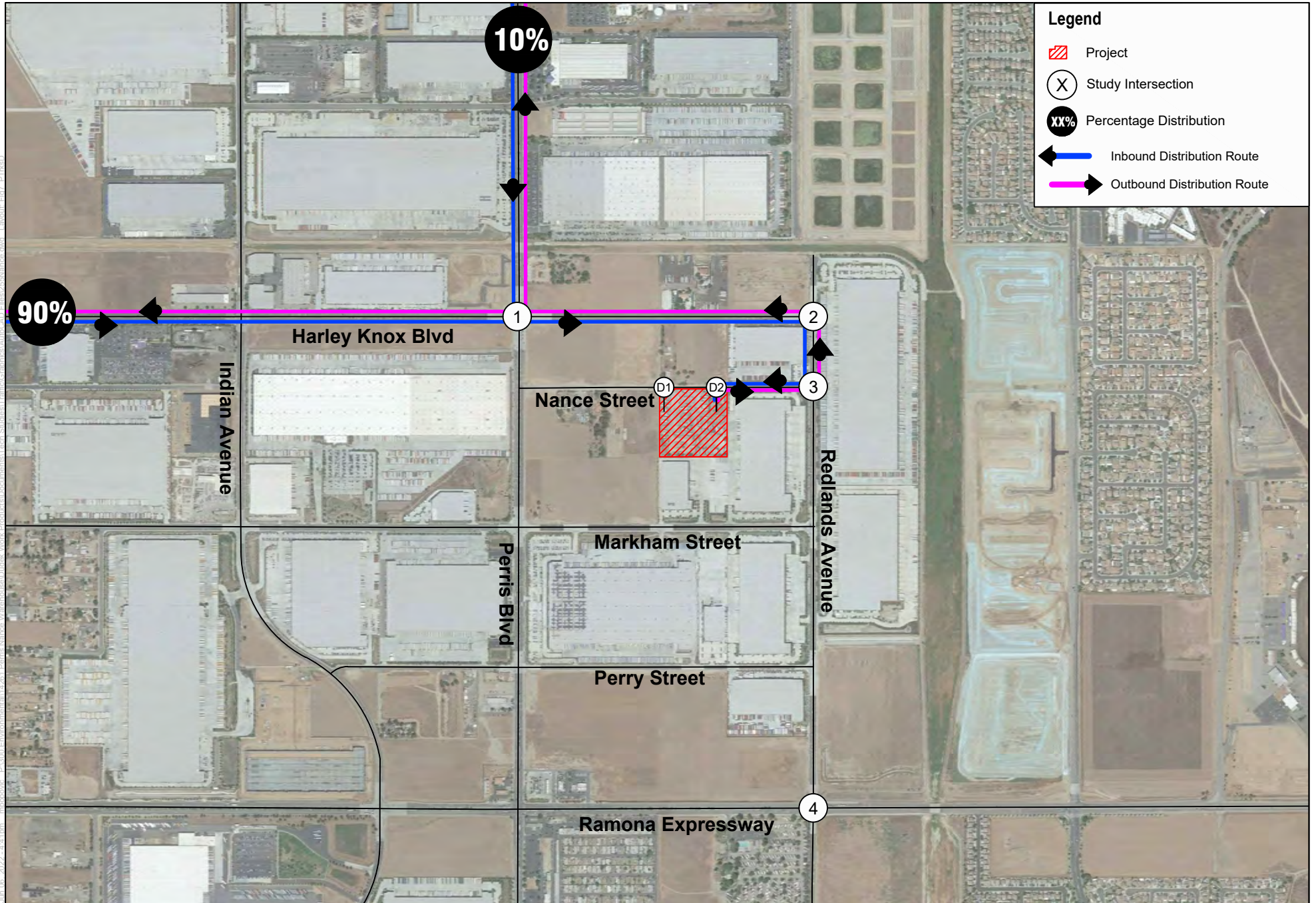
SOURCE: Google Maps 2021

FIGURE 6

Project Passenger Vehicle Trip Distribution

255 E. Nance Street Warehouse Project

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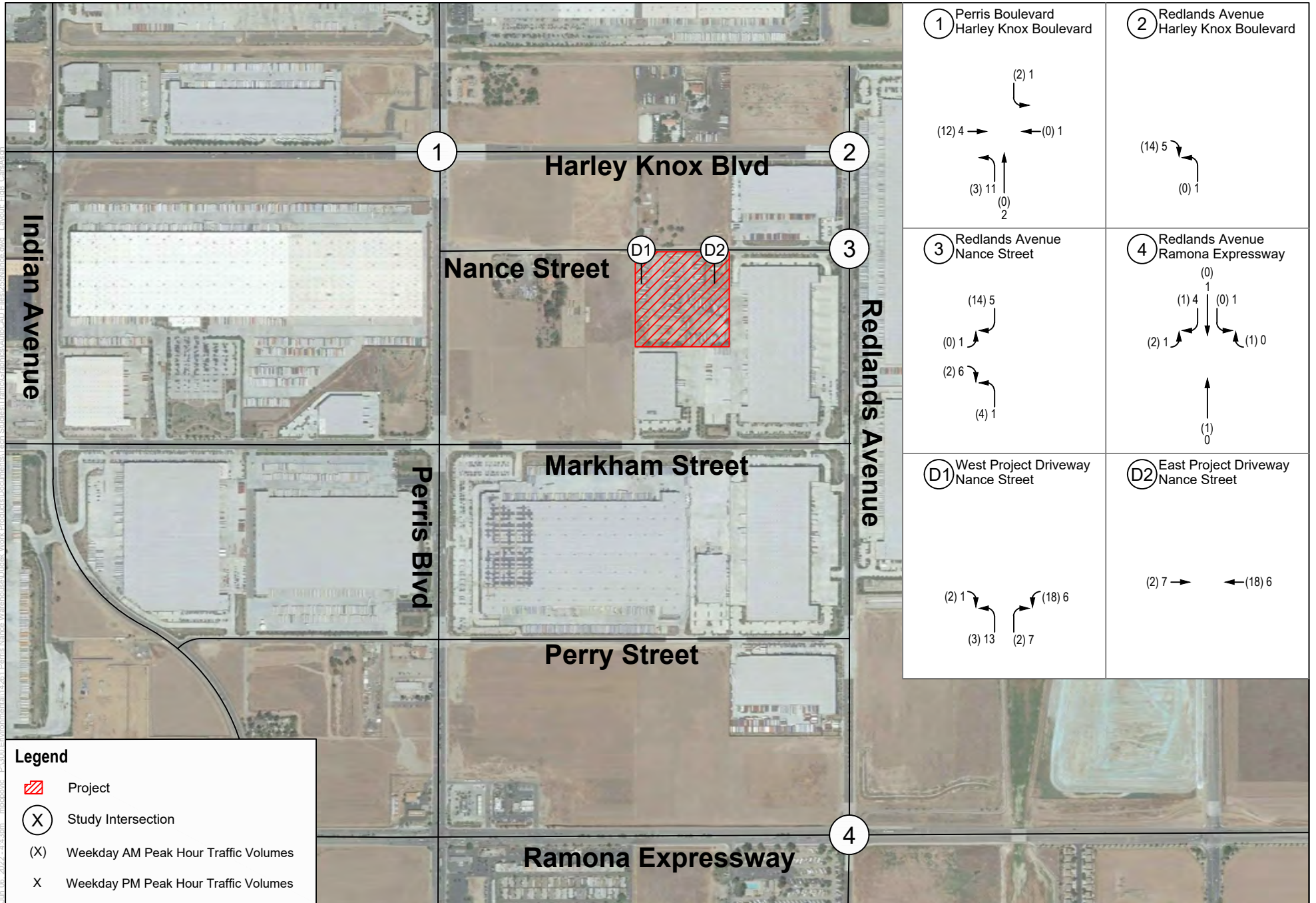
SOURCE: Google Maps 2021

FIGURE 7

Project Truck Trip Distribution

255 E. Nance Street Warehouse Project

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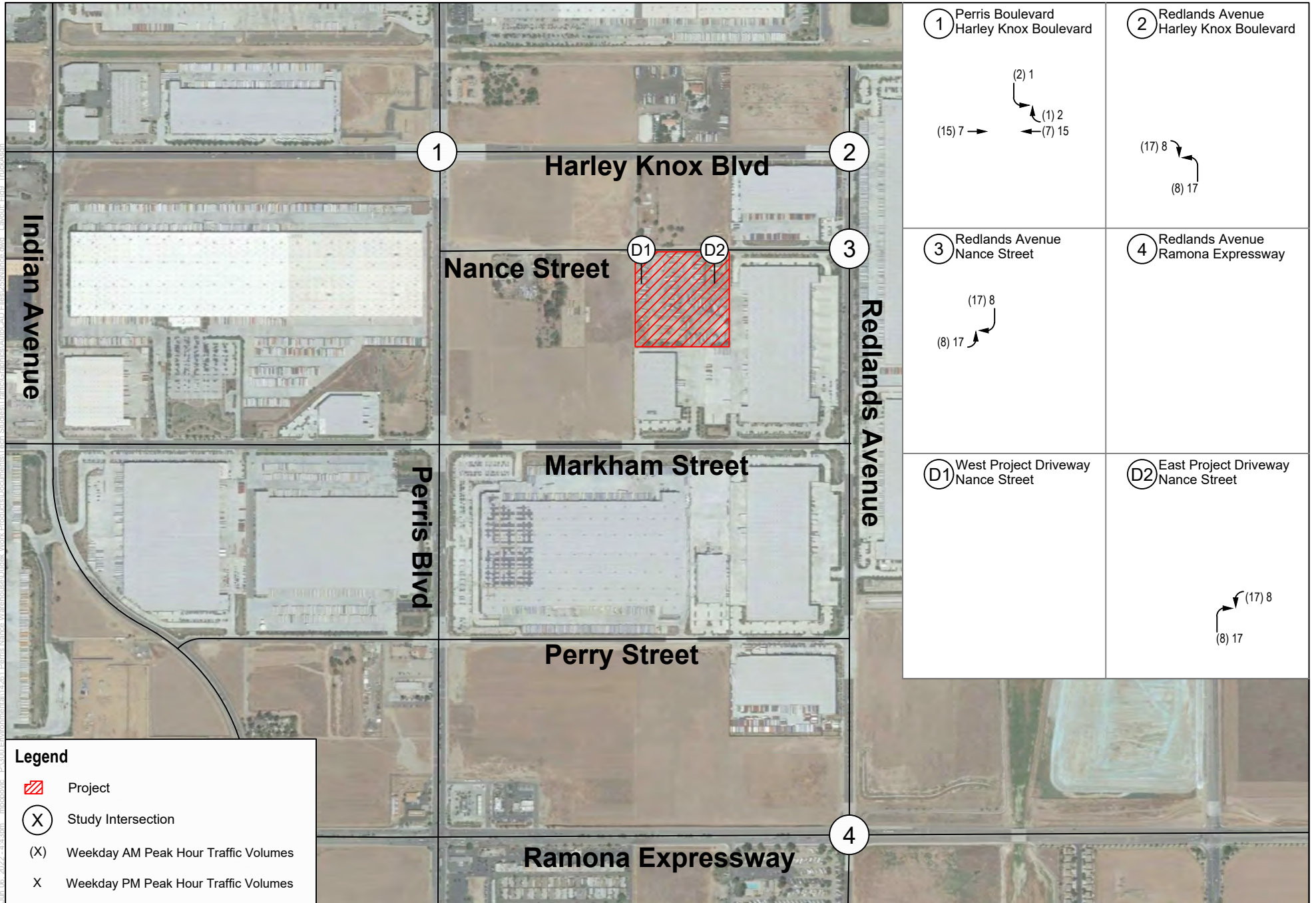
SOURCE: Google Maps 2021

FIGURE 8

Project Passenger Vehicle Trip Assignment

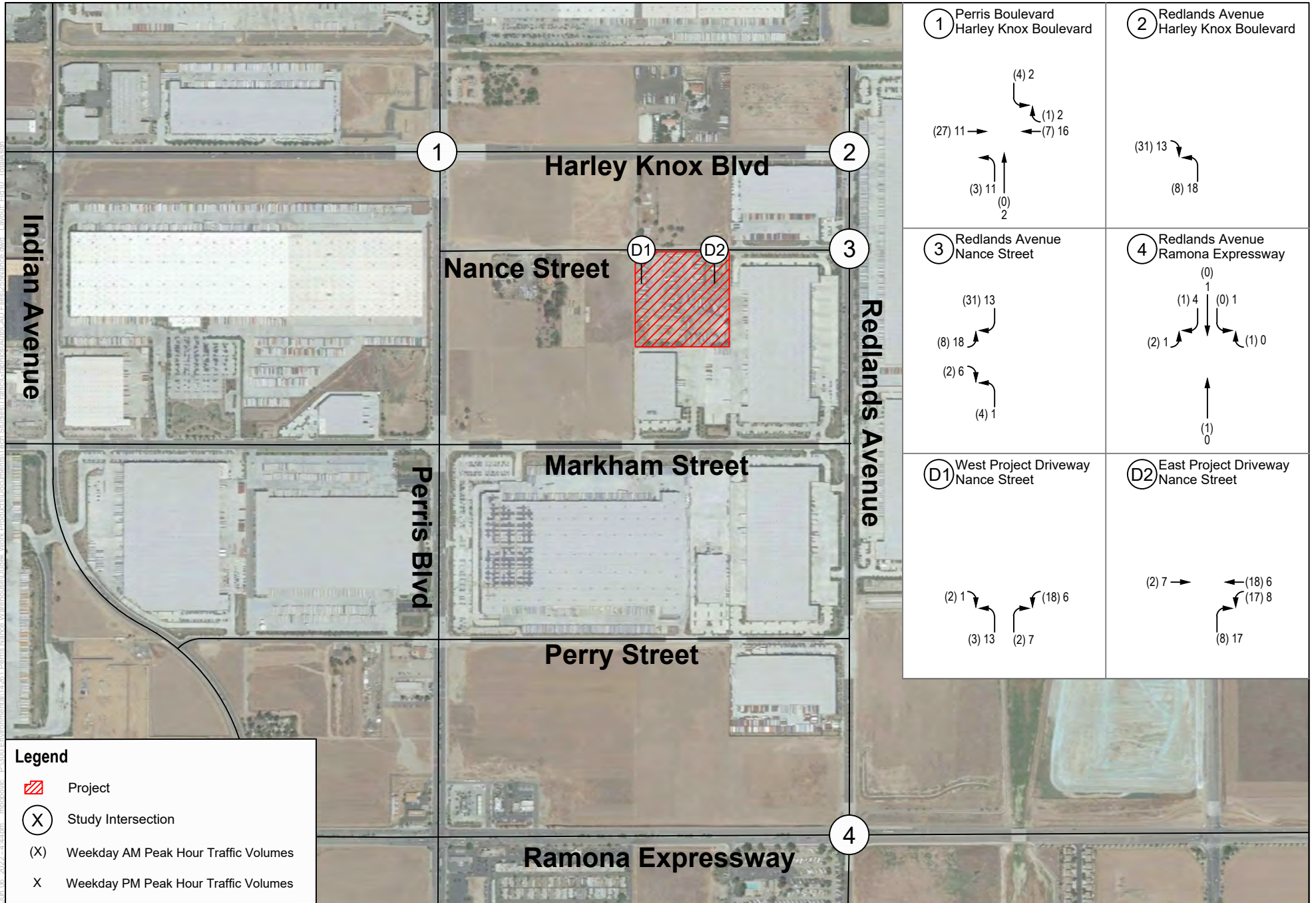
255 E. Nance Street Warehouse Project

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SOURCE: Google Maps 2021

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SOURCE: Google Maps 2021

**FIGURE 10**  
Project Total Trip Assignment - PCE

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# 4 Vehicle Miles Traveled Analysis

## 4.1 Project Screening

As shown in the screening analysis below, the proposed project would be screened out based on two of the five criteria. Therefore, the project would not need to provide baseline and cumulative estimates of project generated VMT and its impacts to VMT can be presumed to be less than significant.

The following screening criteria were applied to screen the project from a project-level assessment per the City of Perris TIA Guidelines for CEQA:

- A. **Affordable Housing Screening:** The proposed project is not a housing project and therefore cannot be screened out using this criterion.
  
- B. **Transit Priority Area (TPA) <sup>1</sup> Screening:** Figure 11, City of Perris Transit Priority Area, illustrates the project's location and the TPA's within the City of Perris. Riverside Transit Authority (RTA) Bus Route 19 operates with a service frequency of 15-minutes, and travels along Perris Boulevard, from the Perris Station Transit Center in downtown Perris to the neighboring City of Moreno Valley to the north. Although the project is located within a TPA, as shown in Figure 11, the presumption of less than significant does not apply if the project:
  - Includes more parking for use by residents, customers, or employees of the project than required by the jurisdiction (if the jurisdiction requires the project to supply parking);
  - Is consistent with the applicable Sustainable Communities Strategy (as determined by the lead agency, with input from the Metropolitan Planning Organization; or
  - Replaces affordable residential units with a smaller number of moderate or high-income residential units.

The proposed project includes more parking than required by the City of Perris, as shown in Figure 2, Conceptual Site Plan. Therefore, the project cannot be screened out under the TPA screening criteria.

- C. **Project Type Screening:** Local serving retail projects less than 50,000 square feet, along with some educational/institutional projects and municipal/public services listed in the City's TIA Guidelines may be presumed to have a less than significant impact absent substantial evidence to the contrary. This is due to the fact that local serving retail generally improves the convenience of shopping close to home and has the effect of reducing vehicle travel instead of increasing or inducing vehicular travel. The proposed project would not be considered a local serving retail project, nor would it fall under the other categories listed in the City's TIA Guidelines; therefore, the project cannot be screened out using this criterion.

---

<sup>1</sup> A Transit Priority Area in the City of Perris is defined as a half mile area around an existing major transit stop or an existing stop along a high quality transit quality corridor per definition below:  
Pub. Resources Code, § 21064.3 - 'Major transit stop' means a site containing an existing rail transit station, a ferry terminal served by either a bus or rail transit service, or 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.  
Pub. Resources Code, § 21155 - 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.

D. **Low VMT Area Screening:** Based on the total daily VMT per worker estimated in project’s TAZ 3821, the proposed project is within a low VMT generating TAZ based on VMT per worker.

- Jurisdictional average 2012 daily VMT per worker = 11.62 Project TAZ 2012 daily VMT per worker = 11.26

The project is screened out using this criterion since the project TAZ has a lower Home-Based Work VMT (11.26) compared to the jurisdictional average (11.62) and is therefore in a low VMT generating area.

Table 4 summarizes the project TAZ’s VMT provided in the WRCOG screening tool.

**Table 4. Summary of Project TAZ Vehicle Miles Traveled (VMT)**

Metric	Citywide VMT Averages <sup>1</sup>	Project TAZ (3821)	Less than Citywide Average
Home-Based VMT per Capita	15.05 VMT/Capita	13.39 VMT/Capita	Yes
Employment Based VMT per employee	11.62 VMT/Employee	11.26 VMT/Employee	Yes

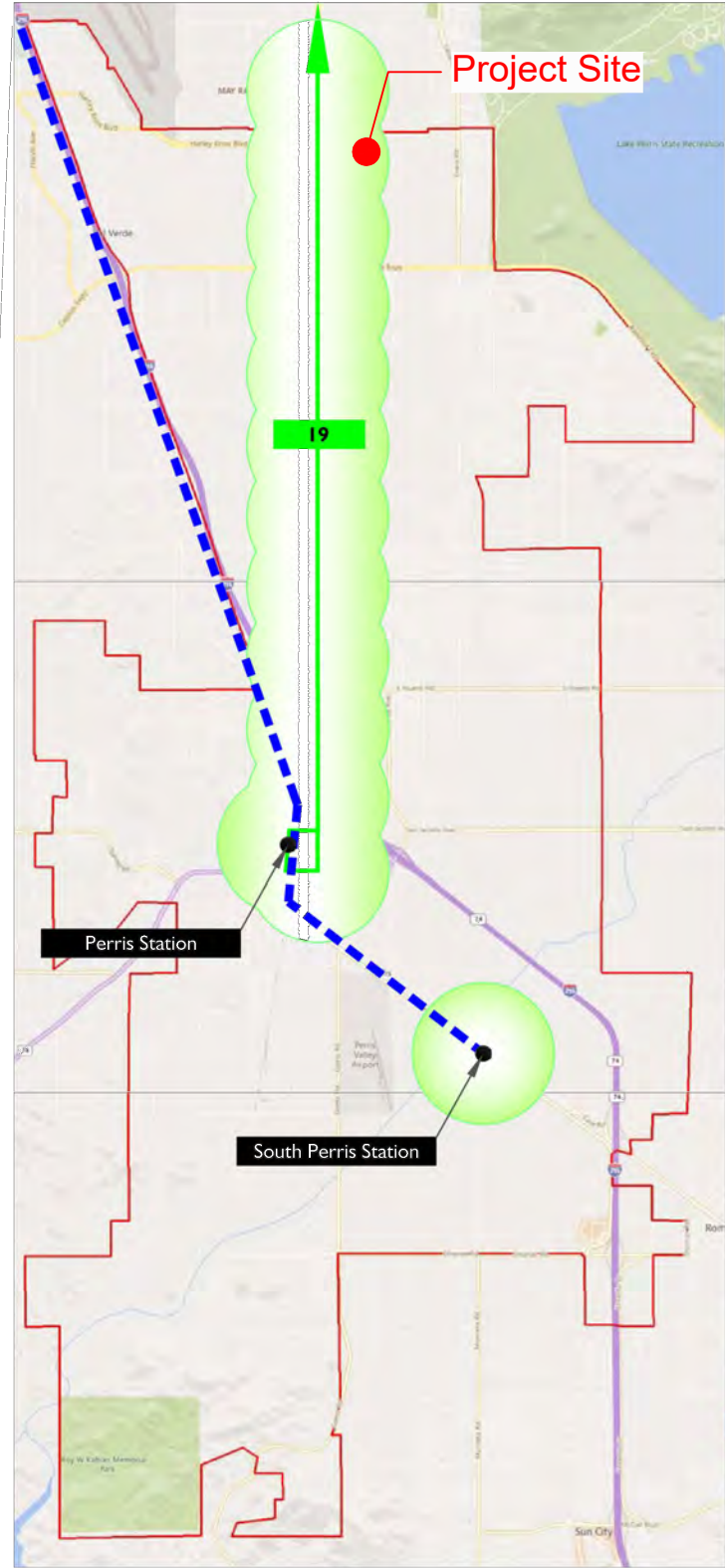
Source: WRCOG 2022




<sup>1</sup> Base year (2012) projections from RVITAM

E. **Net Daily Trips Screening:** Projects that generate less than 500 ADT would not cause a substantial increase in the total citywide or regional VMT and are therefore presumed to have a less than significant impact on VMT per the City of Perris TIA Guidelines. As shown in Table 3, the proposed project would generate 347 ADT; therefore, the project can be screened out using this criterion.

As shown in the analysis above, the proposed project passes two of the five screening criteria: low VMT-generating area; and, net daily trips screening. Therefore, the proposed project is presumed to have a less than significant VMT impact under Existing and Opening Year (2024) conditions.

# Exhibit B Perris Transit Priority Areas



- Legend:**
-  = Transit Priority Area (1/2 Mile Radius)
  -  = RTA Bus Route 19
  -  = Metrolink 91/Perris Valley Line



CITY OF PERRIS TRANSPORTATION IMPACT ANALYSIS GUIDELINES FOR CEQA



SOURCE: City of Perris Transportation Impact Analysis Guidelines for CEQA, 2020



Figure 11  
City of Perris Transit Priority Area  
255 E. Nance Street Warehouse Project

Jun 08, 2022, 4:48pm mpopovic: P:\300 Environmental\14261 Perris Nance Warehouse\Drawings\Work Products\Documents\Tech Studies\Traffic\Graphics\A\MapCAD Files\025\Nance.dwg Layout: Fig11.TPA

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# 5 Project Access and Circulation

## 5.1 Project Access

As shown in the site plan (Figure 2) and as described in Chapter 1, local access to the project is provided via Nance Street. All project access driveways are unsignalized.

- D1. West Project Driveway/Nance Street – full access (passenger cars only, no truck traffic allowed)
- D2. East Project Driveway/Nance Street – right turn in/out only (gated; truck traffic only, no passenger cars allowed)

The levels of service at the project access driveways are also provided in the ensuing chapters and is summarized in Table 5 below for all plus-project analysis scenarios.

**Table 5. Project Access Level of Service**

Scenario	Peak Hour	D1. West Project Driveway/Nance Street		D2. East Project Driveway/Nance Street	
		Delay <sup>1</sup>	LOS <sup>2</sup>	Delay <sup>1</sup>	LOS <sup>2</sup>
Existing plus Project	AM	8.9	A	8.9	A
	PM	8.4	A	8.5	A
Opening Year (2024) plus Project	AM	8.9	A	8.9	A
	PM	8.8	A	8.6	A

**Notes**

- <sup>1</sup> Delay in seconds per vehicle
- <sup>2</sup> Level of Service (LOS)

The project access driveways were analyzed as stop-controlled intersections with stop control on the driveway approaches only. As shown in Table 5, all project access driveways are forecast to operate with satisfactory LOS, at LOS D or better, during both peak hours under both study scenarios. The detailed LOS worksheets for all project access intersections are included in Appendix C.

## 5.2 Queuing Analysis

A queuing analysis was prepared using SimTraffic software for the intersection of Redlands Avenue/Nance Street and both project driveways along Nance Street to assess the adequacy of the intersections’ storage lane capacities. The intersection of Redlands Avenue/Nance Street is the nearest intersection to the project site and is also the nearest intersection to the City’s approved truck route (on Redlands Avenue). Per the HCM, the 95<sup>th</sup> percentile queue is defined as “the queue length that has only a 5-percent probability of being exceeded during the analysis time period.” All intersections were evaluated based on the Opening Year (2024) plus Project scenario. SimTraffic queuing reports are provided in Appendix C.

There is a proposed development (DPR 21-00006) located directly across the street on Nance Street, consisting of an approximately 156,000 square-foot warehouse. The project would provide 4 total driveways, two right turn in/out only driveways for passenger cars and trucks respectively on Harley Knox Boulevard, and two full access driveways

along Nance Street. As shown in Figure 13, the western driveway of that project (restricted to trucks only) would be approximately 173 feet from the 255 E. Nance Street Warehouse Project’s western driveway. The eastern driveway (restricted to cars only) would be within one car length (approximately 9.5 feet) of alignment with the 255 E. Nance Street Warehouse Project’s eastern driveway. Figure 13 further displays each driveway’s turn restrictions. Due to the relatively low amount of traffic volumes along Nance Street, each driveway would not produce hazardous or unsafe conditions. Queuing for the 255 E. Nance Street Warehouse Project’s East Project Driveway was analyzed to include the proposed development (DPR 21-00006).

As shown in Table 6, none of the calculated 95th percentile (design) queues are forecast to exceed storage capacities within the existing eastbound or southbound left-turn pockets. Additionally, there is sufficient capacity on-site to support exiting vehicles. Therefore, the project would not cause a substantial direct or cumulative effect to vehicular queueing.

**Table 6. Intersection and Driveway Queuing Summary**

Intersection/Driveway	Movement	Vehicle Storage Length <sup>1</sup>	Opening Year (2024) plus Project Queue <sup>2</sup>		Exceeds Vehicle Storage Length?		Improvement Warranted?
			AM	PM	In	Out	
Redlands Avenue/ Nance Street	EBL <sup>3</sup>	110	37	48	No	No	No
	EBTR <sup>3</sup>	110	37	37	No	No	No
	NBL	305	15	20	No	No	No
West Project Driveway/ Nance Street	WBLT <sup>3</sup>	173	4	0	No	No	No
	NBLR <sup>4</sup>	600	25	39	No	No	No
East Project Driveway/ Nance Street	NBLR <sup>5</sup>	150	28	39	No	No	No
	WBLTR <sup>3</sup>	110	6	0	No	No	No

**Notes:** EBL = eastbound left-turn lane; EBTR = eastbound through-right lane; NBL = northbound left-turn lane; WBLT = westbound through-right lane; NBLR = northbound left-right-turn lane; WBLR = westbound left-right-turn lane

- <sup>1</sup> Measured in feet
- <sup>2</sup> Based on 95th percentile (design) queue length in SimTraffic 10
- <sup>3</sup> Length measured from nearest driveway
- <sup>4</sup> Length is measured based on the estimated capacity of the site to queue vehicles
- <sup>5</sup> Length is measured based on the estimated capacity of the site to queue vehicles to the truck gate

### 5.3 Gate Stacking Analysis

As described previously, the east project driveway along Nance Street would provide a gated entrance for trucks, approximately 150 feet in length from the edge of the roadway to the secure gated area.

A gate stacking analysis was conducted to evaluate the amount of vehicular storage necessary to accommodate the project site. According to the project trip distribution and trip assignment, a maximum of approximately 7 inbound trucks would arrive inbound to the gate in the AM peak hour, and 3 inbound trucks would arrive in the PM peak hour. Therefore, 7 inbound trucks were utilized in this analysis as the upper boundary of inbound truck trips. Entrance through the gate would likely be administered via a visual approach and verification from a gate operator inside the building who would open the gate remotely. However, in order to provide a conservative analysis, a manual gate opening procedure has been assumed where the average time for a truck to fully pass through the

gate has been estimated to be approximately 90 seconds. This time allotment accounts for a driver pulling up to a closed gate, exiting their truck to input a numbered code at the gate’s keypad, returning to their truck, and driving through the gate. Table 7 displays the gate service rates using the Crommelin method of gate entrance control estimation (Robert Crommelin and Associates 1972).

**Table 7. Gate Service Rates**

Gate Entrance <sup>1</sup>	Average Headway (seconds/truck)	Design Capacity (trucks/hour)	Maximum Capacity (trucks/hour)
Code Entry Gate for Trucks	90.0	32	40

Source: Dudek 2023

**Notes:**

<sup>1</sup> The type of gate control is not found in Entrance-Exit Design and Control for Major Parking Facilities (Robert Crommelin and Associates 1972), however this has been conservatively estimated based on discussion with the applicant and shows the worst case scenario.

Traffic intensity is calculated based on the volume of inbound project vehicles and the rates presented in Table 7. Table 8 presents the traffic intensity at the gate (also known as the volume to service ratio). The inbound peak PM peak hour totaling 7 vehicles was divided by the design capacity service rate of 32 vehicles/hour to compute a traffic intensity of 0.219.

**Table 8. Traffic Intensity**

Gate Entrance	Traffic Intensity
North Project Driveway/Constitution Drive	7/32 = 0.219

Source: Dudek 2022

Based on the gate stacking analysis using the Crommelin methodology above, a stacking reservoir of less than one truck behind a truck being serviced (i.e., queued) at the entrance gate is required (Appendix D). Using the standard size of a WB-67 type Truck as 67-feet in length, the approximately 150 feet of storage length that is provided from the gate entrance to the public roadway (Nance Street) is adequate since the total length of two trucks is 134 feet plus the space between the queued trucks. Per the Crommelin methodology, this occurrence would not be exceeded more than one time over 100 occurrences (99<sup>th</sup> percentile). Furthermore, the proposed project gate would also be evaluated by the City’s Public Works Department as part of the standard design review process and would be constructed according to all City specifications.

## 5.4 Pedestrian and Bicycle Access

Nance Street is generally built with paved sidewalks and pedestrian facilities, except for portions of the road that front unimproved parcels, west of the project site. The project would be responsible for constructing frontage improvements including sidewalks along Nance Street, which would connect to existing sidewalks and improve pedestrian connectivity.

Additionally, upon field observations, the nearest bicycle facilities to the project site are along Redlands Avenue, which is designated as a Class II Bike Route north of Ramona Expressway to Harley Knox Boulevard. Harley Knox Boulevard currently has Class II Bike Lanes on both sides of the roadway.

The project would not conflict with the existing or proposed bicycle facilities in its vicinity. The project is located adjacent to RTA Bus Route 19, which operates with a service frequency of 15-minutes during normal operation and provides bus stops near the Perris Boulevard/Harley Knox Boulevard intersection. As such, bicycle facilities may be used as first-/last-mile trips by employees commuting to the project site via bus.

Additionally, per MM Trans 5 identified in the PVCCSP, the proposed project would be required to install bike racks in all parking lots in compliance with City of Perris standards. Pursuant to Section 5.106.5.3.2 of the CalGreen Code, 15 parking spaces would provide equipment for the charging of electric vehicles. Further, 16 bicycle parking locations would be provided around the buildings.

## 5.5 Project Site Circulation

As the proposed project is a warehousing land use, trucks would access the site using only the east driveway along Nance Street. A truck turning analysis was created to determine whether adequate curb radii would be available and whether turning movements into and out of project driveways could be adequately accommodated.

Sufficient curb radii are provided for both ingress to and egress from the project site along Nance Street, as shown in Figure 12. Additionally, during site plan review, the internal roadway and driveway widths, curb radii to facilitate passenger car and truck turning and movement would be reviewed, designed, and constructed per City standards and applicable street design requirements.

Sufficient curb radii and intersection sight distance would be provided for both passenger car and truck access to the two proposed driveways along Nance Street. There is currently no existing vegetation located near either driveway. Prior to issuance of a building permit, the applicant would be required to meet all standards and guidelines outlined in the PVCC SP, including MM Trans 2, which details adherence to City of Perris sight distance standards. Therefore, the project would not cause a substantial direct or cumulative effect to vehicular safety or access.

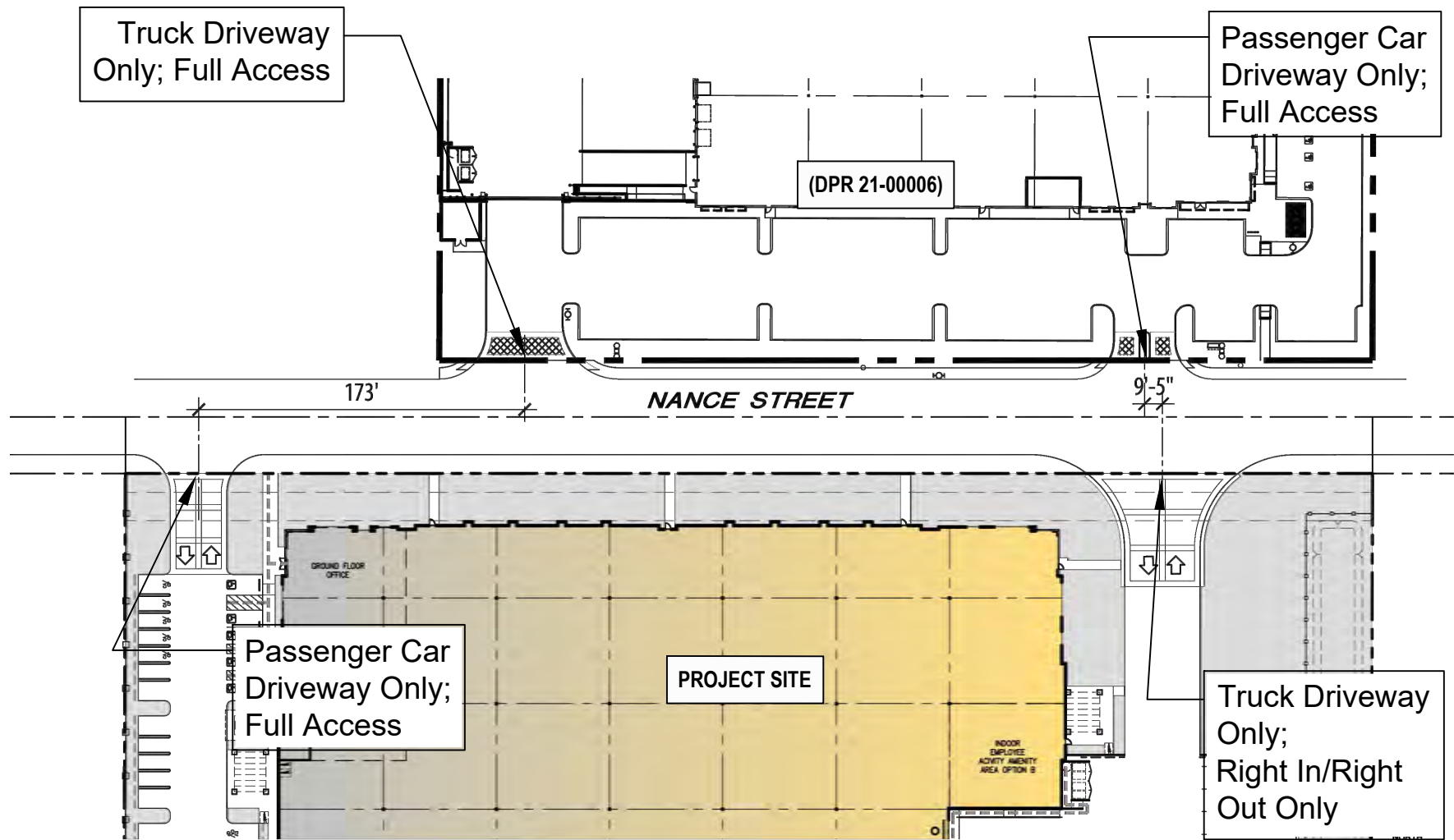
The project site would also provide adequate emergency vehicle access and would not impede any existing emergency vehicle routes. Emergency vehicles have sufficient capacity to enter and exit the project site as needed, and to navigate all curb radii. Therefore, the project would not cause a substantial direct or cumulative effect to emergency vehicle access.

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**255 NANCE STREET WAREHOUSE - PERRIS, CA**  
**OAKMONT INDUSTRIAL GROUP**

**ENTRY DRIVE ALIGNMENT EXHIBIT**

PROJECT NO.: 00152.01  
 DATE: 06/25/2022

NOTE: LAND AREA AND BUILDING SQUARE FOOTAGE ARE PRELIMINARY AND MAY BE SUBJECT TO CHANGE UPON REVIEW BY GOVERNING AGENCIES, CIVIL ENGINEER, AND OWNER.  
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 www.GAAArchitects.com

SOURCE: GAA Architects 2022

**FIGURE 13**  
 Driveway Alignment Comparison with Proposed Development (DPR 21-00006)

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# 6 Level of Service Analysis

## 6.1 Existing Traffic Conditions

This section details the existing intersection and roadway segment operations within the study area. Figure 14 displays the existing traffic control and roadway geometrics. Existing weekday AM and PM peak hour are summarized in Figure 15. All traffic counts are provided in Attachment A.

### 6.1.1 Intersection Operations

An intersection LOS analysis was prepared for the existing conditions using HCM 6<sup>th</sup> Edition methodology via the Synchro LOS software described in Chapter 1.3. Table 9 shows the results of the existing conditions analysis. LOS worksheets are provided in Appendix C.

As shown in the table, all the study area intersections are currently operating at satisfactory levels of service (at LOS E or better for intersections with Ramona Expressway; and LOS D or better for all other City intersections) under existing conditions per City of Perris General Plan requirements.

**Table 9. Existing Peak Hour Intersection Level of Service**

No.	Intersection	Control/ LOS Method	Existing			
			AM Peak		PM Peak	
			Delay <sup>1</sup>	LOS <sup>2</sup>	Delay <sup>1</sup>	LOS <sup>2</sup>
1	Perris Boulevard/Harley Knox Boulevard	HCM Signal	23.3	C	25.5	C
2	Redlands Avenue/Harley Knox Boulevard	HCM Signal	18.5	B	15.3	B
3	Redlands Avenue/Nance Street	HCM TWSC	12.9	B	13.4	B
4	Redlands Avenue/Ramona Expressway	HCM Signal	30.6	C	31.8	C
D1	West Project Driveway/Nance Street	HCM TWSC	<i>Does Not Exist</i>			
D2	East Project Driveway/Nance Street	HCM TWSC	<i>Does Not Exist</i>			

**Notes:** HCM = Highway Capacity Manual; TWSC = Two-Way Stop-Controlled

<sup>1</sup> Delay in seconds per vehicle

<sup>2</sup> Level of Service (LOS)

### 6.1.2 Roadway Segment Operations

A roadway segment LOS analysis was prepared for the existing conditions using V/C methodology as discussed in Chapter 1.3. Table 10 shows the results of the existing conditions analysis.

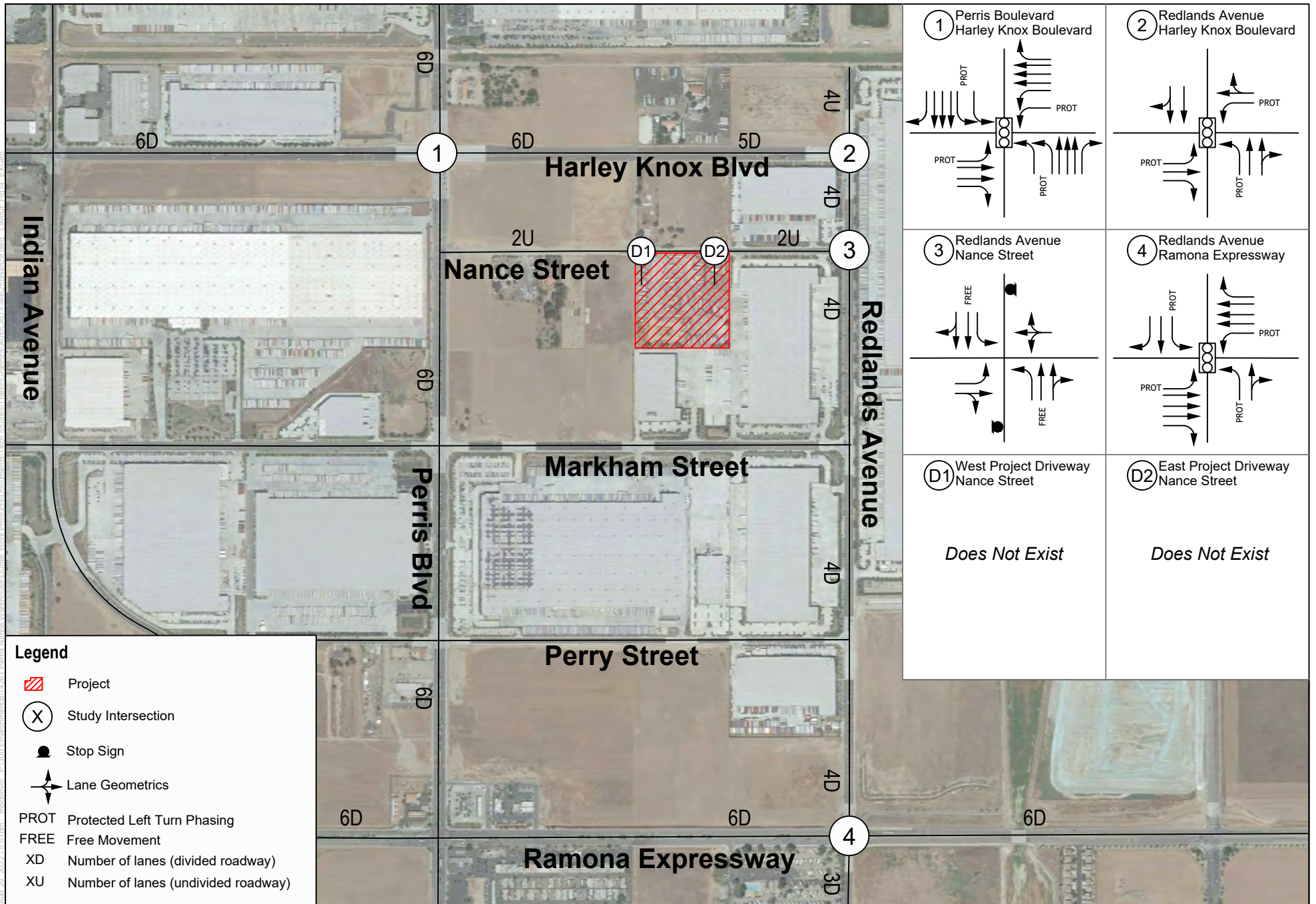
As shown in the table, the study area roadway segment is currently operating at satisfactory levels of service, at LOS D or better, under existing conditions per City of Perris General Plan requirements.

**Table 10. Existing Peak Hour Roadway Segment Level of Service**

No.	Roadway Segment	Classification	No. of Lanes	Capacity <sup>1</sup>	Existing		
					Volume	V/C	LOS
1	Nance Street, Perris Boulevard to the West Project Driveway	Collector	2	13,000	96	0.007	A

**Notes:** LOS is based on City of Perris Roadway Segment Classifications and volume-to-capacity (V/C) ratios.

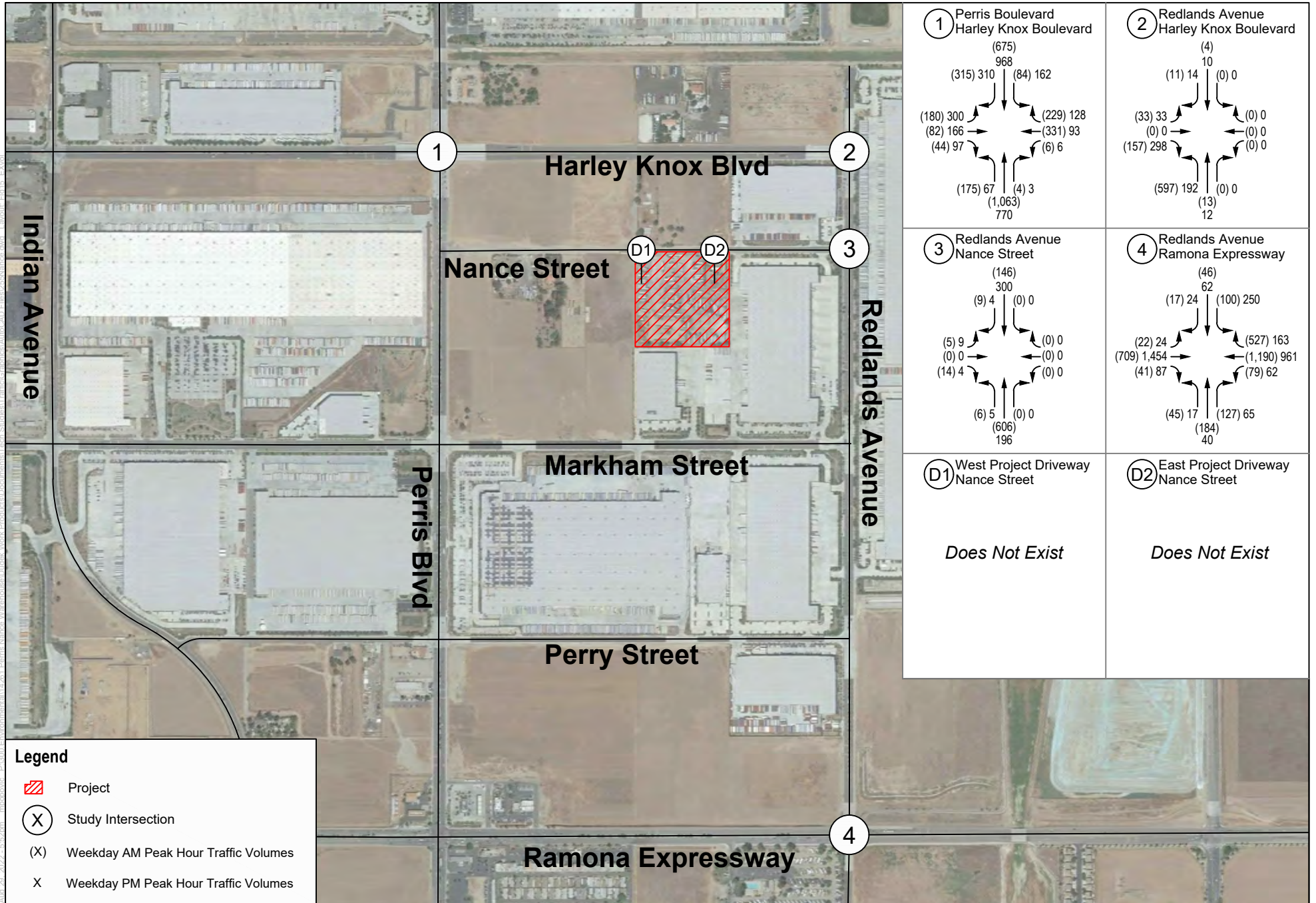
<sup>1</sup> Classification and capacity from the City of Perris Circulation Element; capacity noted at LOS E threshold.



SOURCE: Google Maps 2021

**FIGURE 14**  
Existing Intersection Controls and Geometrics

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SOURCE: Google Maps 2021

**FIGURE 15**  
Existing Peak Hour Traffic Volumes - PCE

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## 6.2 Existing Plus Project

This section details the Existing plus Project traffic volumes and the intersection operations within the study area. Project traffic volumes shown in Figure 10 were added to the Existing traffic volumes shown in Figure 15 to derive the Existing Plus Project traffic condition. Figure 16 shows the Existing plus Project traffic volumes.

### 6.2.1 Intersection Operations

An intersection LOS analysis was prepared for the Existing plus Project condition using HCM 6th Edition methodology. Table 11 summarizes the results of the Existing plus Project intersection analysis for the AM and PM peak hours. Detailed LOS calculation worksheets are included in Appendix C.

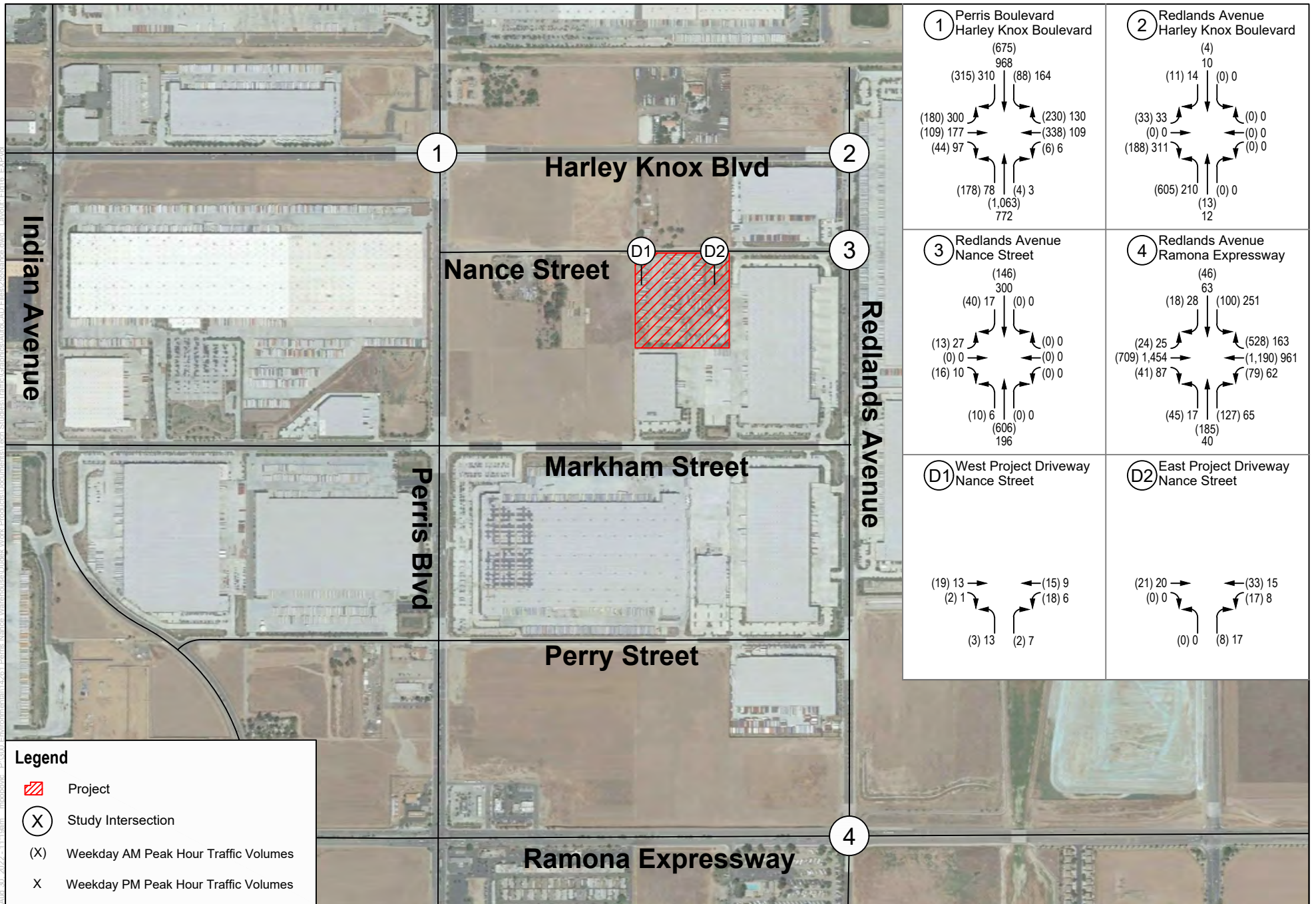
As shown in Table 11, all of the study area intersections within the City of Perris are forecast to continue to operate with satisfactory LOS, at LOS E or better for the intersection of Redlands Avenue/Ramona Expressway and at LOS D or better for all remaining intersections, under Existing plus Project conditions during both peak hours. Since all study area intersections are forecast to operate at LOS D or better under the Existing plus Project conditions, the project would not cause a substantial direct or cumulative effect to intersection operations or result in an inconsistency with the City of Perris General Plan LOS standards.

### 6.2.2 Roadway Segment Operations

A roadway segment LOS analysis was prepared for the Existing plus Project conditions using V/C methodology per the City of Perris General Plan Circulation Element, as discussed in Chapter 1.3. Table 12 shows the results of the Existing plus Project conditions analysis.

As shown in the table, all the study area roadway segments are currently operating at satisfactory levels of service, at LOS D or better, under Existing plus Project conditions per City of Perris General Plan requirements.

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SOURCE: Google Maps 2021

FIGURE 16

Existing plus Project Peak Hour Traffic Volumes - PCE

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**Table 11. Existing plus Project Peak Hour Intersection Level of Service**

No.	Intersection	Control/ LOS Method	Existing				Existing plus Project				Change in Delay <sup>1</sup>		Inconsistent with City LOS Standard?	
			AM Peak		PM Peak		AM Peak		PM Peak		AM	PM	AM	PM
			Delay <sup>1</sup>	LOS <sup>2</sup>	Delay <sup>1</sup>	LOS <sup>2</sup>	Delay <sup>1</sup>	LOS <sup>2</sup>	Delay <sup>1</sup>	LOS <sup>2</sup>				
1	Perris Boulevard/Harley Knox Boulevard	HCM Signal	23.3	C	25.5	C	23.4	C	26.0	C	0.1	0.5	No	No
2	Redlands Avenue/Harley Knox Boulevard	HCM Signal	18.5	B	15.3	B	20.3	C	15.8	B	1.8	0.5	No	No
3	Redlands Avenue/Nance Street	HCM TWSC	12.9	B	13.4	B	13.5	B	14.0	B	0.6	0.6	No	No
4	Redlands Avenue/Ramona Expressway	HCM Signal	30.6	C	31.8	C	30.7	C	31.9	C	0.1	0.1	No	No
D1	West Project Driveway/Nance Street	HCM TWSC	<i>Does Not Exist</i>				8.9	A	8.9	A	8.9	8.9	No	No
D2	East Project Driveway/Nance Street	HCM TWSC	<i>Does Not Exist</i>				8.4	A	8.5	A	8.4	8.5	No	No

**Notes:** HCM = Highway Capacity Manual; TWSC = Two-Way Stop-Controlled

<sup>1</sup> Delay in seconds per vehicle

<sup>2</sup> Level of Service (LOS)

**Table 12. Existing plus Project Roadway Segment Level of Service**

No.	Roadway Segment	Classification	No. of Lanes	Capacity <sup>1</sup>	Existing			Existing plus Project		
					Volume	V/C	LOS	Volume	V/C	LOS
1	Nance Street, Perris Boulevard to the West Project Driveway	Collector	2	13,000	96	0.007	A	188	0.014	A

**Notes:** LOS is based on City of Perris Roadway Segment Classifications and volume-to-capacity (V/C) ratios.

<sup>1</sup> Classification and capacity from the City of Perris Circulation Element; capacity noted at LOS E threshold.

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## 6.3 Opening Year (2024) Conditions

This section details the Opening Year (2024) traffic volumes and the intersection and roadway operations within the study area. This Opening Year represents a short-term horizon period where the proposed project is constructed and fully occupied. Peak hour traffic forecasts for the Year 2024 have been projected by increasing the traffic volumes by an annual growth rate of 3.0% per year and adding traffic volumes generated by cumulative projects.

### 6.3.1 Cumulative Projects

Cumulative projects are projects that are proposed and in the review process, but not yet fully approved; or, projects that have been approved, but not fully constructed or occupied. The Opening Year (2024) conditions include the addition of cumulative project traffic to the study area. A list of cumulative project information was provided by the City of Perris and is included in Appendix D, along with cumulative project data for the City of Moreno Valley and County of Riverside. Based on review of the cumulative projects and locations, 63 cumulative projects were identified that would potentially add traffic to the study area. Table 13 provides a brief description of these cumulative projects. Figure 17 illustrates the locations of the cumulative project within the City of Perris, City of Moreno Valley, and the County of Riverside.

Project trip generation estimates for the cumulative projects were taken from traffic studies prepared for the recent development projects and/or derived using ITE *Trip Generation, 11<sup>th</sup> Edition* (2021) trip rates or from the traffic impact studies or environmental documents available for some of the projects, unless otherwise noted. As shown in Table 13, the cumulative projects are forecast to generate approximately 52,371 daily trips, 3,624 AM peak hour trips, and 4,710 PM peak hour trips. As many of these projects are industrial/warehousing land uses, trip generation estimates were adjusted using PCE factors, resulting in approximately 63,731 daily PCE trips, 4,571 AM peak hour PCE trips, and 5,745 PM peak hour trips.

**Table 13. Cumulative Project Trip Generation Summary**

ID	Land Use	ITE #	Size/Unit	TSF	Daily	AM Peak Hour			PM Peak Hour		
						In	Out	Total	In	Out	Total
P1	Burge Indus 1	110	18.000	TSF	88	12	2	13	2	10	12
<i>Burge Indus 1 (PCE)</i>					162	22	3	25	3	19	22
P2	Burge Indus 2	110	43.354	TSF	211	28	4	32	4	24	28
<i>Burge Indus 2 (PCE)</i>					390	52	7	59	7	45	52
P3	Duke @ Perry	150	140.000	TSF	246	19	6	24	7	19	26
<i>Duke @ Perry (PCE)</i>					351	27	8	35	10	27	37
P4	IDI @ Ramona	154	426.000	TSF	596	26	8	34	12	31	43
<i>IDI @ Ramona (PCE)</i>					849	37	11	49	17	44	61
P5	Pulliam Indus	110	16.000	TSF	78	10	1	12	1	9	10
<i>Pulliam Indus (PCE)</i>					144	19	3	22	3	17	19
P6	Rider 2 & 4	154	1,373	TSF	1,922	85	25	110	38	99	137
<i>Rider 2 &amp; 4 (PCE)</i>					2,737	120	36	156	55	141	196
P7	Walnut Indu	154	205.000	TSF	287	13	4	16	6	15	21

**Table 13. Cumulative Project Trip Generation Summary**

ID	Land Use	ITE #	Size/Unit	Daily	AM Peak Hour			PM Peak Hour			
					In	Out	Total	In	Out	Total	
<i>Walnut Indus (PCE)</i>					409	18	5	23	8	21	29
P8	Wilson Indus	154	303.00 0	TSF	424	19	6	24	8	22	30
<i>Wilson Indus (PCE)</i>					604	27	8	35	12	31	43
P9	First Indus (Goodwin)	154	338.00 0	TSF	473	21	6	27	9	24	34
<i>First Indus (Goodwin) (PCE)</i>					674	30	9	39	13	35	48
P10	Canyon Steel (CS)	110	25.000	TSF	122	16	2	19	2	14	16
<i>Canyon Steel (CS) (PCE)</i>					225	30	4	34	4	26	30
P11	Truck Terminal	30	9.5	ac	778	28	41	69	27	35	62
<i>Truck Terminal (PCE)</i>					1,439	52	75	128	49	66	115
P12	Wilson Ind 1	154	248.00 0	TSF	347	15	5	20	7	18	25
<i>Wilson Ind 1 (PCE)</i>					494	22	6	28	10	25	35
P13	Wilson Ind 2	154	155.00 0	TSF	217	10	3	12	4	11	16
<i>Wilson Ind 2 (PCE)</i>					309	14	4	18	6	16	22
P14	Oleander Cultivation	817	12.985	TSF	884	16	16	32	45	45	90
P15	Integra - Expansion (IT- E)	154	273.00 0	TSF	382	17	5	22	8	20	27
<i>Integra - Expansion (IT-E) (PCE)</i>					544	24	7	31	11	28	39
P16	Holistic Inc. - Marijuana	140	5.000	TSF	24	3	1	4	2	3	5
P17	Marijuana Manufacturin g (MM)	140	1.000	TSF	5	1	1	2	1	1	2
P18	Harley Knox 25K	150	12.985	22	2	1	2	1	2	2	22
<i>Harley Knox 25K (PCE)</i>					32	2	1	3	1	2	3
P19	Patriot Ind Perris and Morgan	150	286.89 2	TSF	499	38	12	51	16	40	56
<i>Patriot Ind Perris and Morgan (PCE)</i>					711	55	17	72	23	57	80
P20	Park Ind	150	31.000	TSF	53	4	1	5	2	4	6
<i>Park Ind (PCE)</i>					75	6	2	8	2	6	8
P21	First Harley Knox Ind	154	154.25 0	TSF	264	20	6	26	8	20	28
<i>First Harley Knox Ind (PCE)</i>					376	29	9	37	11	28	40

**Table 13. Cumulative Project Trip Generation Summary**

ID	Land Use	ITE #	Size/Unit	Daily	AM Peak Hour			PM Peak Hour			
					In	Out	Total	In	Out	Total	
P22	Kwasizur Indu	150	138.00 0	TSF	236	18	5	23	7	18	25
<i>Kwasizur Indu (PCE)</i>					336	26	8	33	10	25	35
P23	Calvio Ind	8	2	10	3	8	11	105	8	2	10
<i>Calvio Ind (PCE)</i>					105	8	2	10	3	8	11
P24	Expressway Industrial	154	347.00 0	TSF	486	21	6	28	10	25	35
<i>Expressway Industrial (PCE)</i>					692	30	9	40	14	36	49
P25	Natwar Ind	154	420.00 0	TSF	588	26	8	34	12	30	42
<i>Natwar Ind (PCE)</i>					837	37	11	48	17	43	60
P26	Serrao Ind	154	3.500	TSF	6	0	0	1	0	0	1
<i>Serrao Ind (PCE)</i>					9	1	0	1	0	1	1
P27	Lakecreek East	154	256.00 0	TSF	438	34	10	44	13	33	46
<i>Lakecreek East (PCE)</i>					623	48	14	62	18	47	66
P28	Lakecreek West	154	300.00 0	TSF	513	39	12	51	15	39	54
<i>Lakecreek West (PCE)</i>					731	56	17	73	22	55	77
P29	Chartwell Ind	154	141.00 0	TSF	241	18	6	24	7	18	25
<i>Chartwell Ind (PCE)</i>					343	26	8	34	10	26	36
P30	SE corner of Perris & Harley Knox	150	345.00 0	TSF	590	45	13	59	17	45	62
<i>SE corner of Perris &amp; Harley Knox (PCE)</i>					840	64	19	84	25	64	88
P31	Duke @ Patterson and Nance	150	580.00 0	TSF	992	76	23	99	29	75	104
<i>Duke @ Patterson and Nance (PCE)</i>					1,412	108	32	140	42	107	149
P32	Nance Ind	150	156.78 0	TSF	272	19	6	25	9	19	28
<i>Nance Ind (PCE)</i>					420	21	8	29	13	22	35
P33	Lakecreek at Harley Knox	154	143.00 0	TSF	245	19	6	24	7	19	26
<i>Lakecreek at Harley Knox (PCE)</i>					348	27	8	35	10	26	37
P34	McKay Indus	150	232.00 0	TSF	397	30	9	39	12	30	42
<i>McKay Indus (PCE)</i>					565	43	13	56	17	43	59
P35	Ramona Gateway Industrial	150	850.00 0	TSF	1,454	111	33	145	43	110	153
<i>Ramona Gateway Industrial (PCE)</i>					2,070	158	47	206	61	157	218

**Table 13. Cumulative Project Trip Generation Summary**

ID	Land Use	ITE #	Size/Unit	Daily	AM Peak Hour			PM Peak Hour			
					In	Out	Total	In	Out	Total	
P36	Ramona Gateway Commercial	820	35.000	TSF	1,295	18	11	29	57	62	119
P37	OLC 3	150	879.000	TSF	1,503	115	34	149	44	114	158
<i>OLC 3 (PCE)</i>					2,140	164	49	213	63	162	225
P38	RG Ind	150	263.000	TSF	450	34	10	45	13	34	47
<i>RG Ind (PCE)</i>					640	49	15	64	19	49	67
P39	Seefried Indus	150	165.000	TSF	282	22	6	28	8	21	30
<i>Seefried Indus (PCE)</i>					402	31	9	40	12	30	42
P40	Brew Indus	150	62.000	TSF	106	8	2	11	3	8	11
<i>Brew Indus (PCE)</i>					151	12	3	15	4	11	16
P41	Dedeaux Markham	150	88.000	TSF	150	12	3	15	4	11	16
<i>Dedeaux Markham (PCE)</i>					214	16	5	21	6	16	23
P42	March Plaza	820	47.253	TSF	1,749	25	15	40	77	84	161
P43	Cali Express Carwash	948	5.600	TSF	795	20	20	40	40	40	80
P44	Tommy's carwash	948	8.5	TSF	1,207	30	30	60	60	60	121
P45	Pacific Ave	210	131	DU	1,235	24	68	92	78	46	123
P46	Stratford Ranch	210	270	DU	2,546	49	140	189	160	94	254
P47	Barrett Apt	221	228	DU	1,537	22	69	91	73	43	116
P48	DR Horton Citrus and Evans	210	161	DU	1,518	29	83	113	95	56	151
P49	DR Horton Citrus and Dunlap	210	122	DU	1,150	22	63	85	72	42	115
P50	DR Horton Nuevo and Evans	210	75	DU	707	14	39	53	44	26	71
P51	Sterling Villa	220	429	DU	2,891	41	130	172	138	81	219
P52	Nova Homes	210	76	DU	717	14	39	53	45	26	71
P53	Citrus Court	210	111	DU	1,047	20	57	78	66	39	104
P54	John Abel Stratford Ranch	210	90	DU	849	16	47	63	53	31	85

**Table 13. Cumulative Project Trip Generation Summary**

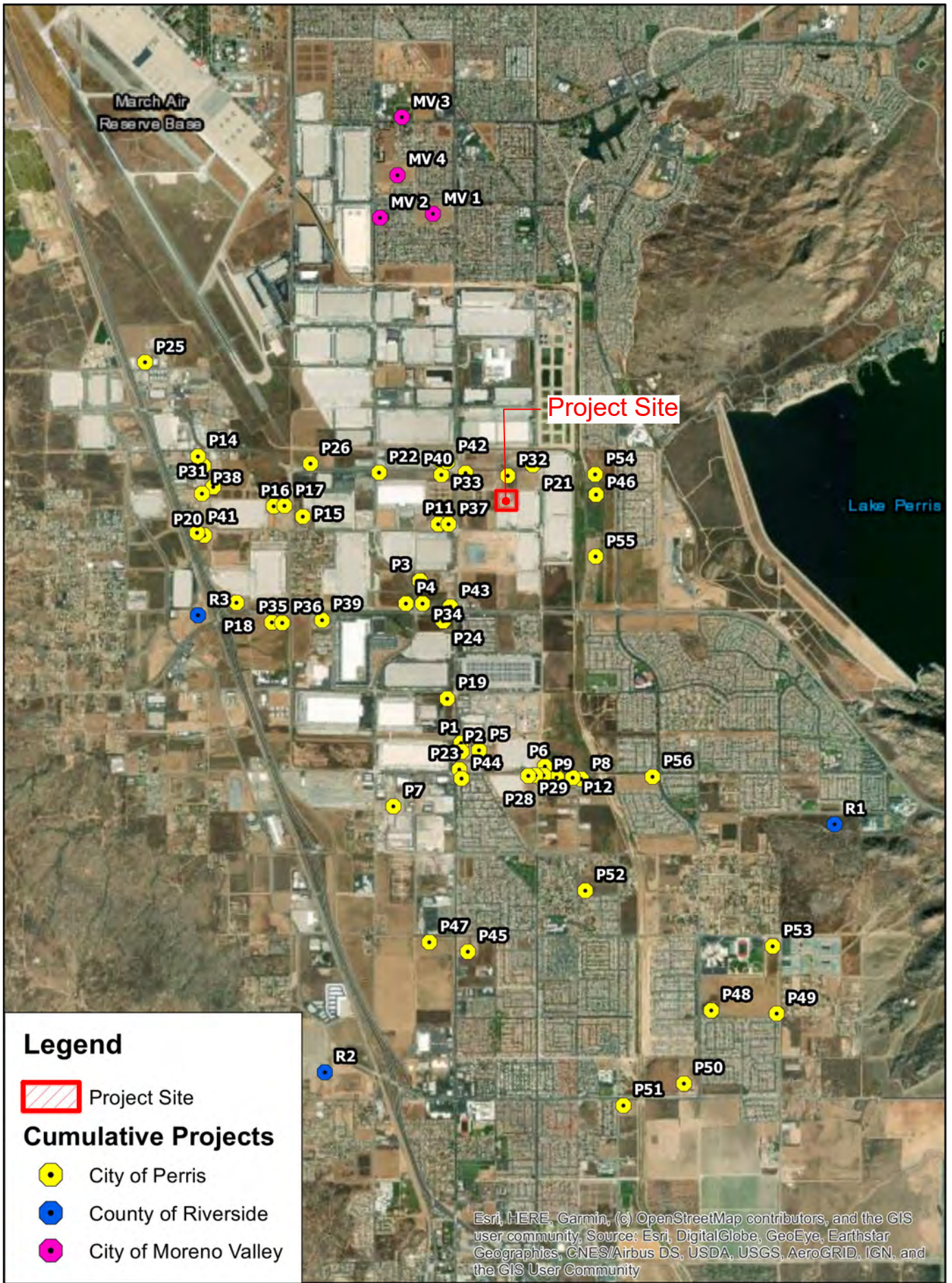
ID	Land Use	ITE #	Size/Unit		Daily	AM Peak Hour			PM Peak Hour		
						In	Out	Total	In	Out	Total
P55	John Abel Stratford Ranch	210	197	DU	1,858	36	102	138	117	69	185
P56	May Ranch Multi-Family	211	308	DU	2,076	30	94	123	99	58	157
<i>Subtotal City of Perris</i>					40,409	1,479	1,362	2,841	1,747	1,992	3,740
<i>Subtotal City of Perris (PCE)</i>					47,496	1,940	1,519	3,460	1,935	2,467	4,402
MV 1	PEN19-0188 PI Properties No. 67 LLC	210	66	DU	622	12	34	46	39	23	62
MV 2	PEN18-0042 Ada Deturcios	210	2	DU	19	0	1	1	1	1	2
MV 3	PEN21-0021/0215/0216 Perris at Pentecostal	220	426	DU	2,871	41	130	170	137	80	217
MV4	PEN21-0179/0180/0188/0189 TTM 38242	220	52	DU	350	5	16	21	17	10	27
<i>Subtotal City of Moreno Valley</i>					3,863	58	181	239	194	114	308
R1	TTM 33978	210	139	DU	1,311	25	72	97	82	48	131
R2	Nuevo Distribution Center	154	1,586.645	TSF	2,221	98	29	127	44	114	159
<i>Nuevo Distribution Center (PCE)</i>					3,163	139	42	181	63	163	226
R3	Majestic Freeway Business Center SP	150	816.142	TSF	1,396	107	32	139	41	106	147
		154	2,264.920	TSF	3,171	140	42	181	63	163	226
<i>Majestic Freeway Business Center SP (PCE)</i>					6,503	351	105	456	149	383	532
<i>Subtotal County of Riverside</i>					8,099	369	175	544	231	431	663
<i>Subtotal County of Riverside (PCE)</i>					12,372	622	250	872	336	700	1,035
<b>Total</b>					<b>52,371</b>	<b>1,906</b>	<b>1,717</b>	<b>3,624</b>	<b>2,173</b>	<b>2,538</b>	<b>4,710</b>
<b>Total (PCE)</b>					<b>63,731</b>	<b>2,621</b>	<b>1,950</b>	<b>4,571</b>	<b>2,464</b>	<b>3,280</b>	<b>5,745</b>

Notes: TSF = Thousand Square Feet; DU = Dwelling Unit; ac = acres; PCE = Passenger Car Equivalent

Trip distributions and assignments for the cumulative projects were obtained from traffic studies prepared for recent development projects, and/or assuming logical commute corridors. The trips generated by the cumulative projects were distributed through the study area network. Figure 18 shows the cumulative projects traffic volumes for the peak hour conditions. The full cumulative trip generation with calculations is provided in Appendix E.

Figure 19 illustrates the Opening Year (2024) Peak Hour Traffic Volumes.

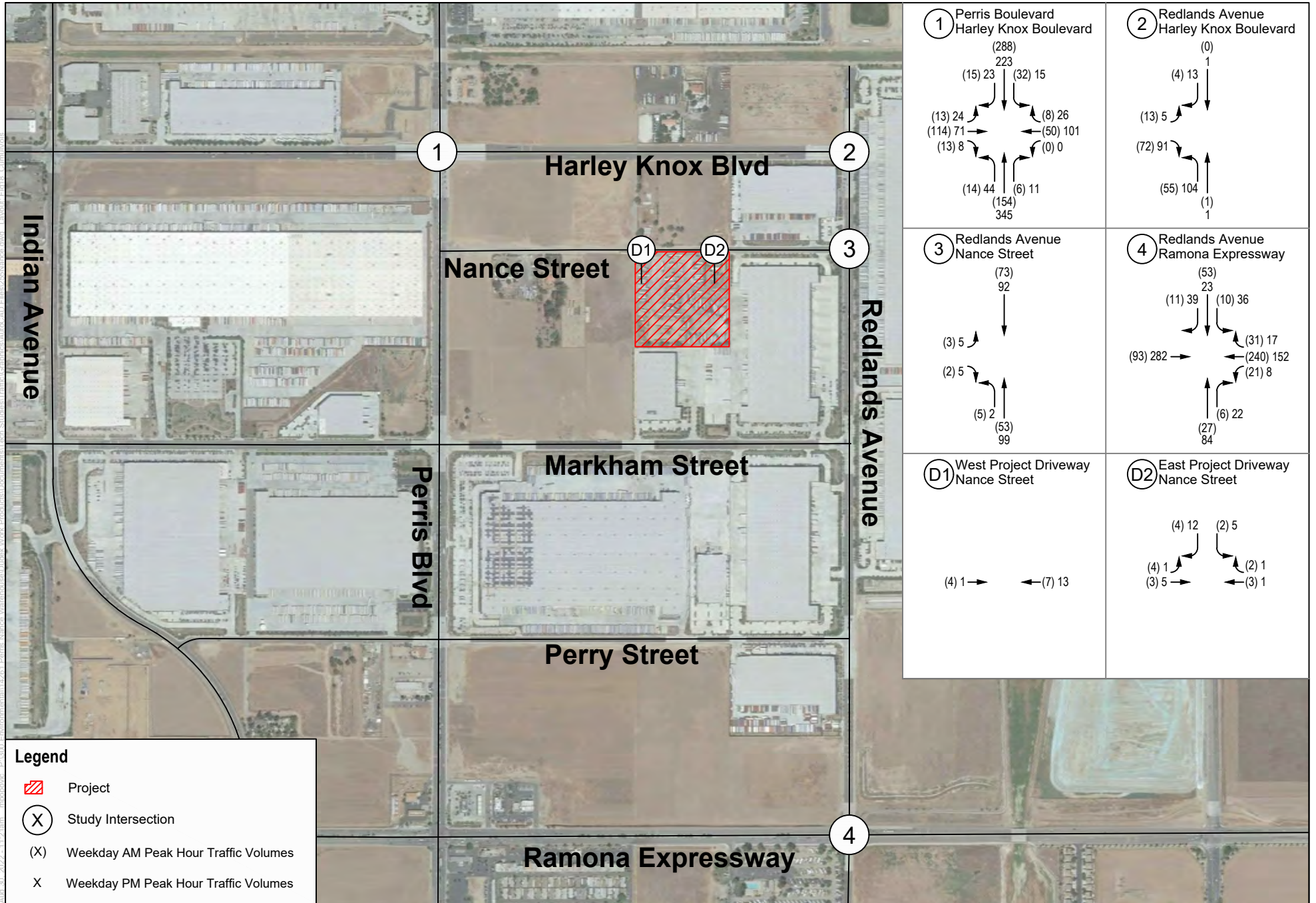
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SOURCE: ArcMap; Bing Maps; County of Riverside 2022; City of Moreno Valley 2022; City of Perris 2022

Figure 17  
 Cumulative Projects Location  
 255 E. Nance Street Warehouse Project

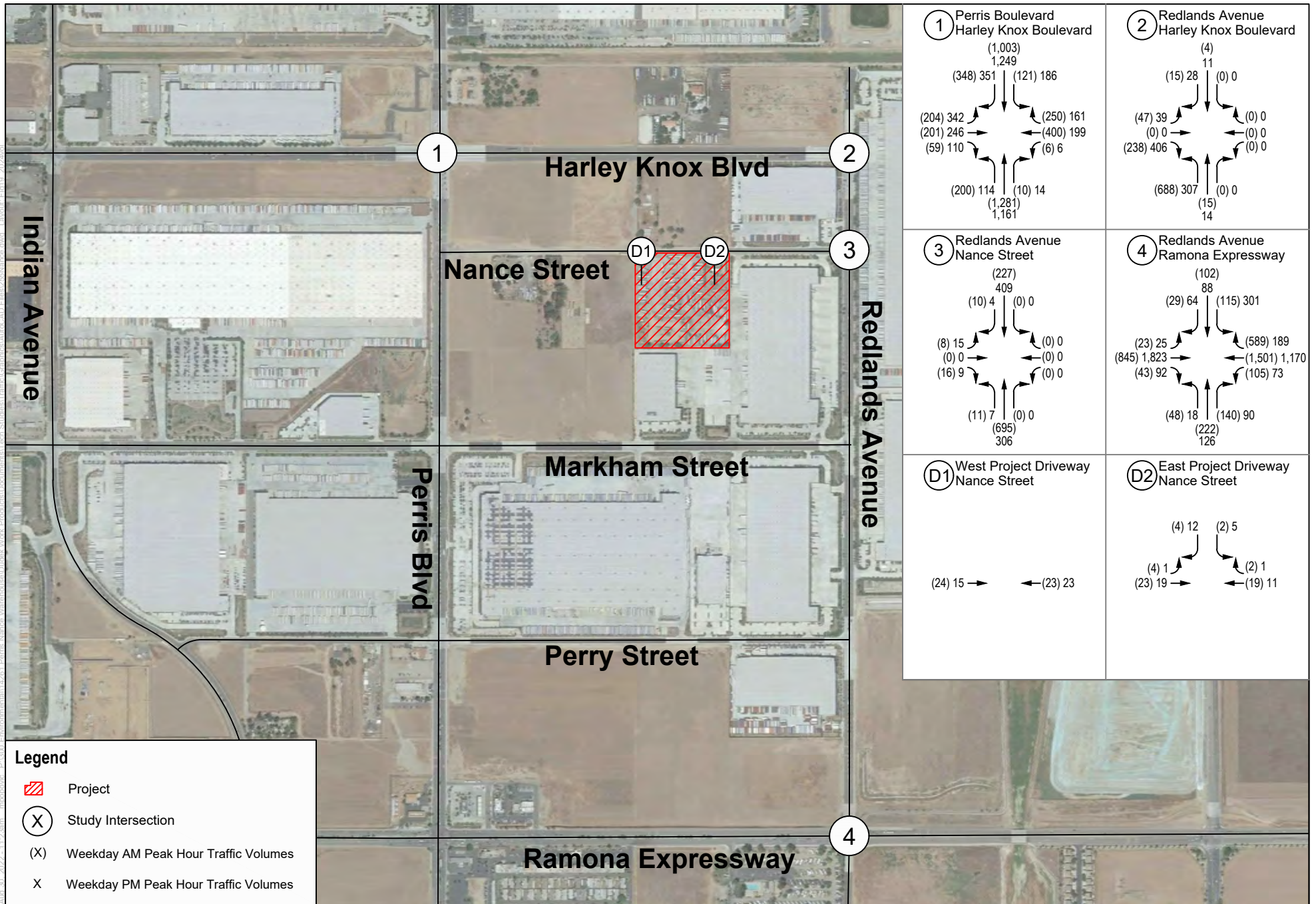
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SOURCE: Google Maps 2021

**FIGURE 18**  
Cumulative Project Peak Hour Traffic Volumes - PCE

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SOURCE: Google Maps 2021

**FIGURE 19**  
Opening Year (2024) Peak Hour Traffic Volumes - PCE

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### 6.3.2 Intersection Operations

An intersection LOS analysis was prepared for the Opening Year (2024) conditions using HCM 6<sup>th</sup> Edition methodology. Table 14 shows the results of the Opening Year (2024) analysis. LOS worksheets are provided in Appendix C.

As shown in the table, all the study area intersections would operate at satisfactory levels of service, at LOS E or better for the intersection of Redlands Avenue/Ramona Expressway and at LOS D or better for all remaining intersections, under Opening Year (2024) conditions during both peak hours per City of Perris General Plan requirements.

**Table 14. Opening Year (2024) Peak Hour Intersection Level of Service**

No.	Intersection	Control/ LOS Method	Opening Year (2024)			
			AM Peak		PM Peak	
			Delay <sup>1</sup>	LOS <sup>2</sup>	Delay <sup>1</sup>	LOS <sup>2</sup>
1	Perris Boulevard/Harley Knox Boulevard	HCM Signal	28.1	C	38.8	D
2	Redlands Avenue/Harley Knox Boulevard	HCM Signal	29.3	C	19.4	B
3	Redlands Avenue/Nance Street	HCM TWSC	15.2	C	17.4	C
4	Redlands Avenue/Ramona Expressway	HCM Signal	37.6	D	49.4	D
D1	West Project Driveway/Nance Street	HCM TWSC	<i>Does Not Exist</i>			
D2	East Project Driveway/Nance Street	HCM TWSC	<i>Does Not Exist</i>			

**Notes:** HCM = Highway Capacity Manual; AWSC = All-Way Stop-Controlled; TWSC = Two-Way Stop-Controlled

<sup>1</sup> Delay in seconds per vehicle

<sup>2</sup> Level of Service (LOS)

### 6.3.3 Roadway Segment Operations

A roadway segment LOS analysis was prepared for the Opening Year (2024) conditions using V/C methodology as discussed in Chapter 1.3. Table 15 shows the results of the Opening Year (2024) roadway segment analysis. As shown in the table, the study area roadway segment is forecast to operate at satisfactory levels of service, at LOS D or better, under Opening Year (2024) conditions per City of Perris General Plan requirements.

**Table 15. Opening Year (2024) Roadway Segment Level of Service**

No.	Roadway Segment	Classification	No. of Lanes	Capacity <sup>1</sup>	Opening Year (2024)		
					Volume	V/C	LOS
1	Nance Street, Perris Boulevard to the West Project Driveway	Collector	2	13,000	335	0.026	A

**Notes:** LOS is based on City of Perris Roadway Segment Classifications and volume-to-capacity (V/C) ratios.

<sup>1</sup> Classification and capacity from the City of Perris Circulation Element; capacity noted at LOS E threshold.

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## 6.4 Opening Year Plus Project (2024)

This section details the Opening Year Plus Project (2024) traffic volumes and the intersection operations within the study area. Figure 20 illustrates the Opening Year Plus Project (2024) Peak Hour Traffic Volumes.

### 6.4.1 Intersection Operations

An intersection LOS analysis was prepared for the Opening Year Plus Project (2024) condition using HCM 6<sup>th</sup> Edition methodology. Table 16 summarizes the results of the Opening Year Plus Project (2024) intersection analysis for the AM and PM peak hours. Detailed LOS calculation worksheets are included in Appendix C.

As shown in Table 16, all of the study area intersections within the City of Perris are forecast to continue to operate with satisfactory LOS, at LOS E or better for the intersection of Redlands Avenue/Ramona Expressway and at LOS D or better for all remaining intersections, under Opening Year Plus Project (2024) conditions during both peak hours. Since all study area intersections are forecast to operate at LOS D or better, the project would not cause a substantial direct or cumulative effect to intersection operations or result in an inconsistency with the City of Perris General Plan LOS standards.

### 6.4.2 Roadway Segment Operations

A roadway segment LOS analysis was prepared for the Opening Year Plus Project (2024) conditions using V/C methodology per the City of Perris General Plan Circulation Element, as discussed in Chapter 1.3. Table 17 shows the results of the Opening Year Plus Project (2024) conditions analysis.

As shown in the table, the study area roadway segment is forecast to operate at satisfactory levels of service, at LOS D or better, under Opening Year Plus Project (2024) conditions per City of Perris General Plan requirements.

**Table 16. Opening Year Plus Project (2024) Peak Hour Intersection Level of Service**

No.	Intersection	Control/ LOS Method	Opening Year (2024)				Opening Year Plus Project (2024)				Change in Delay <sup>1</sup>		Inconsistent with City LOS Standard?	
			AM Peak		PM Peak		AM Peak		PM Peak		AM	PM	AM	PM
			Delay <sup>1</sup>	LOS <sup>2</sup>	Delay <sup>1</sup>	LOS <sup>2</sup>	Delay <sup>1</sup>	LOS <sup>2</sup>	Delay <sup>1</sup>	LOS <sup>2</sup>				
1	Perris Boulevard/Harley Knox Boulevard	HCM Signal	28.1	C	38.8	D	28.3	C	39.5	D	0.2	0.7	No	No
2	Redlands Avenue/Harley Knox Boulevard	HCM Signal	29.3	C	19.4	B	33.6	C	20.3	C	4.3	0.9	No	No
3	Redlands Avenue/Nance Street	HCM TWSC	15.2	C	17.4	C	15.9	C	18.7	C	0.7	1.3	No	No
4	Redlands Avenue/Ramona Expressway	HCM Signal	37.6	D	49.4	D	37.8	D	49.5	D	0.2	0.1	No	No
D1	West Project Driveway/Nance Street	HCM TWSC	<i>Does Not Exist</i>				8.9	A	8.9	A	8.9	8.9	No	No
D2	East Project Driveway/Nance Street	HCM TWSC	<i>Does Not Exist</i>				8.8	A	8.6	A	8.8	8.6	No	No

Notes: HCM = Highway Capacity Manual; TWSC = Two-Way Stop-Controlled

<sup>1</sup> Delay in seconds per vehicle

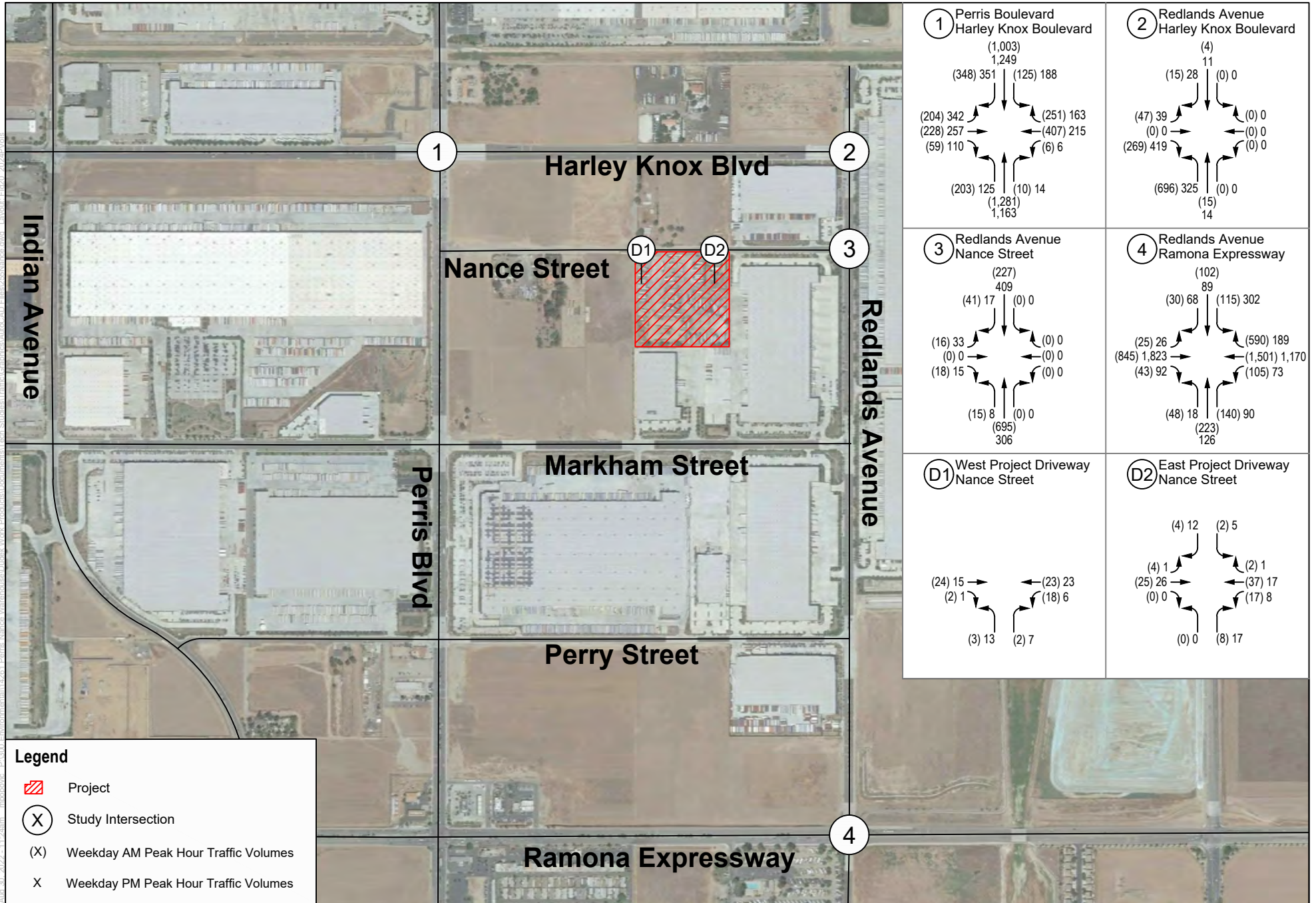
<sup>2</sup> Level of Service (LOS)

**Table 17. Opening Year Plus Project (2024) Roadway Segment Level of Service**

No.	Roadway Segment	Classification	No. of Lanes	Capacity <sup>1</sup>	Opening Year (2024)			Opening Year Plus Project (2024)		
					Volume	V/C	LOS	Volume	V/C	LOS
1	Nance Street, Perris Boulevard to the West Project Driveway	Collector	2	13,000	335	0.026	A	427	0.033	A

Notes: LOS is based on City of Perris Roadway Segment Classifications and volume-to-capacity (V/C) ratios.

<sup>1</sup> Classification and capacity from the City of Perris Circulation Element; capacity noted at LOS E threshold.



SOURCE: Google Maps 2021

FIGURE 20

Opening Year (2024) plus Project Peak Hour Traffic Volumes - PCE

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# 7 Project Impacts, Mitigation Measures, and LOS Improvements

## 7.1 Project Impacts per CEQA

### 7.1.1 VMT Analysis

As detailed in Chapter 4, the proposed project passes two of the five screening criteria, i.e., low VMT-generating are and net daily trips. Therefore, the proposed project can be presumed to have a less than significant VMT impact under Existing and Opening Year (2024) conditions. A project-level detailed VMT analysis would not be required, and impacts to VMT could be presumed to be less than significant.

### 7.1.2 Access Analysis

There is a proposed development (DPR 21-00006) located directly across the street on Nance Street, consisting of an approximately 156,000 square-foot warehouse. The project would provide 4 total driveways, two right turn in/out only driveways for passenger cars and trucks respectively on Harley Knox Boulevard, and two full access driveways along Nance Street. As shown in Figure 13, the western driveway of that project (restricted to trucks only) would be approximately 173 feet from the 255 E. Nance Street Warehouse Project's western driveway. The eastern driveway (restricted to cars only) would be within one car length (approximately 9.5 feet) of alignment with the 255 E. Nance Street Warehouse Project's eastern driveway. Figure 13 further displays each driveway's turn restrictions. Due to the relatively low amount of traffic volumes along Nance Street, each driveway would not produce hazardous or unsafe conditions. Queuing for the 255 E. Nance Street Warehouse Project's East Project Driveway was analyzed to include the proposed development (DPR 21-00006).

Sufficient curb radii and intersection sight distance would be provided for passenger car and truck access to the two proposed driveways along Nance Street. Prior to issuance of a building permit, the applicant would be required to meet all standards and guidelines outlined in the PVCC SP, including MM Trans 2, which details adherence to City of Perris sight distance standards. The project would not cause a substantial direct or cumulative effect to emergency vehicle access.

### 7.1.3 Mitigation Measures

No mitigation measures would be necessary for the proposed project.

## 7.2 Level of Service Findings

### 7.2.1 LOS Results

Under the Existing conditions, all study area intersections included in this analysis operate at LOS E or better for the intersection of Redlands Avenue/Ramona Expressway and at LOS D or better for all remaining intersections.

Additionally, since all study area intersections are forecast to operate at LOS E or better for the intersection of Redlands Avenue/Ramona Expressway and at LOS D or better for all remaining intersections under all Opening Year (2024) conditions, the project would not cause a substantial direct or cumulative effect to intersection operations or result in an inconsistency with the City of Perris General Plan LOS standards.

## 7.2.2 Improvement Measures

No inconsistencies with applicable plans can be concluded in the study area. Per the City's applicable LOS consistency analysis, no substantial project-specific effect would occur, and no improvements are recommended.

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## 8 References

- Albert A. Webb Associates. 2011. Perris Valley Commerce Center Specific Plan. Final Environmental Impact Report. Accessed April 2022. <https://www.cityofperris.org/Home/ShowDocument?id=2645>
- City of Perris. 2022. PVCCSP (Perris Valley Commerce Center Specific Plan) Specific Plan. Accessed April 2022. <https://www.cityofperris.org/Home/ShowDocument?id=2647>.
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- City of Perris. 2022. City of Perris General Plan. Circulation Element. Approved January 11, 2022. Accessed April 2022. <https://www.cityofperris.org/home/showpublisheddocument/447/637806276230830000>
- Crommelin, Robert. Robert Crommelin and Associate. 1972. *Entrance-Exit Design and Control for Major Parking Facilities*.
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- OPR (California Governor’s Office of Planning and Research). 2018. Technical Advisory on Evaluating Transportation Impacts in CEQA. December 2018. Accessed June 2022. [http://opr.ca.gov/docs/20190122-743\\_Technical\\_Advisory.pdf](http://opr.ca.gov/docs/20190122-743_Technical_Advisory.pdf).
- Riverside County Transportation Department. *Transportation Analysis Guidelines*. December 2020.
- SCAQMD. 2014. *SCAQMD High Cube Warehouse Truck Trip Study White Paper Summary of Business Survey Results*. June 2014. Accessed April 2022. <http://www.aqmd.gov/docs/default-source/ceqa/handbook/high-cube-warehouse-trip-rate-study-for-air-quality-analysis/business-survey-summary.pdf>.
- Transportation Research Board. 2016. *Highway Capacity Manual, Sixth Edition: A Guide for Multimodal Mobility Analysis*.
- Western Riverside Council of Governments (WRCOG). 2020. Recommended Transportation Impact Analysis Guidelines for Vehicle Miles Traveled and Level of Service Assessment. January 2020

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# **Appendix A**

## City of Perris VMT Scoping Form and Supplemental Scoping Information



**CITY OF PERRIS  
VMT SCOPING FORM FOR LAND USE PROJECTS**

This Scoping Form acknowledges the City of Perris requirements for the evaluation of transportation impacts under CEQA. The analysis provided in this form should follow the City of Perris TIA Guidelines, dated May 12, 2020.

**I. Project Description**

Tract/Case No.

Project Name:

Project Location:

Project Description:

(Please attach a copy of the project Site Plan)

Current GP Land Use:

Proposed GP Land Use:

Current Zoning:

Proposed Zoning:

If a project requires a General Plan Amendment or Zone change, then additional information and analysis should be provided to ensure the project is consistent with RHNA and RTP/SCS Strategies.

**II. VMT Screening Criteria**

- A. Is the Project 100% affordable housing?      YES       NO       Attachments:
- B. Is the Project within 1/2 mile of qualifying transit?      YES       NO       Attachments:
- C. Is the Project a local serving land use?      YES       NO       Attachments:
- D. Is the Project in a low VMT area?      YES       NO       Attachments:
- E. Are the Project's Net Daily Trips less than 500 ADT?      YES       NO       Attachments:

**Low VMT Area Evaluation:**

Citywide VMT Averages <sup>1</sup>		
Citywide Home-Based VMT =	15.05	VMT/Capita
Citywide Employment-Based VMT =	11.62	VMT/Employee

[WRCOG VMT MAP](#)

Project TAZ	VMT Rate for Project TAZ <sup>1</sup>	Type of Project	
3821	13.39 VMT/Capita	Residential:	<input type="checkbox"/>
	11.26 VMT/Employee	Non-Residential:	<input checked="" type="checkbox"/>

<sup>1</sup> Base year (2012) projections from RIVTAM.

**Trip Generation Evaluation:**

Source of Trip Generation:

Project Trip Generation:  Average Daily Trips (ADT)

Internal Trip Credit:	YES	<input type="checkbox"/>	NO	<input checked="" type="checkbox"/>	% Trip Credit:	<input type="text"/>
Pass-By Trip Credit:	YES	<input type="checkbox"/>	NO	<input checked="" type="checkbox"/>	% Trip Credit:	<input type="text"/>
Affordable Housing Credit:	YES	<input type="checkbox"/>	NO	<input checked="" type="checkbox"/>	% Trip Credit:	<input type="text"/>
Existing Land Use Trip Credit:	YES	<input type="checkbox"/>	NO	<input checked="" type="checkbox"/>	Trip Credit:	<input type="text"/>

Net Project Daily Trips:  Average Daily Trips (ADT)      Attachments:

Does project trip generation warrant an LOS evaluation outside of CEQA?      YES       X       NO       --

**III. VMT Screening Summary**

**A. Is the Project presumed to have a less than significant impact on VMT?**

A Project is presumed to have a less than significant impact on VMT if the Project satisfies at least one (1) of the VMT screening criteria.

Yes, per TPA Screening, low VMT area, and Project trips <500 ADT

**B. Is mitigation required?**

If the Project does not satisfy at least one (1) of the VMT screening criteria, then mitigation is required to reduce the Project's impact on VMT.

No

**C. Is additional VMT modeling required to evaluate Project impacts?**

If the Project requires a zone change and/or General Plan Amendment AND generates 2,500 or more net daily trips, then additional VMT modeling using RIVTAM/RIVCOM is required. If the project generates less than 2,500 net daily trips, the Project TAZ VMT Rate can be used for mitigation purposes.

YES	--	NO	X
-----	----	----	---

**IV. MITIGATION**

**A. Citywide Average VMT Rate (Threshold of Significance) for Mitigation Purposes:**

--

--

**B. Unmitigated Project TAZ VMT Rate:**

--

--

**C. Percentage Reduction Required to Achieve the Citywide Average VMT:**

--

**D. VMT Reduction Mitigation Measures:**

Source of VMT Reduction Estimates: \_\_\_\_\_

Project Location Setting \_\_\_\_\_

VMT Reduction Mitigation Measure:		Estimated VMT Reduction (%)
1.		0.00%
2.		0.00%
3.		0.00%
4.		0.00%
5.		0.00%
6.		0.00%
7.		0.00%
8.		0.00%
9.		0.00%
10.		0.00%
<b>Total VMT Reduction (%)</b>		<b>0.00%</b>

(Attach additional pages, if necessary, and a copy of all mitigation calculations.)

**E. Mitigated Project TAZ VMT Rate:**

--

--

**F. Is the project presumed to have a less than significant impact with mitigation?**

--

If the mitigated Project VMT rate is below the Citywide Average Rate, then the Project is presumed to have a less than significant impact with mitigation. If the answer is no, then additional VMT modeling may be required and a potentially significant and unavoidable impact may occur. All mitigation measures identified in Section IV.D. are subject to become Conditions of Approval of the project. Development review and processing fees should be submitted with, or prior to the submittal of this Form. The Planning Department staff will not process the Form prior to fees being paid to the City.

Prepared By		Developer/Applicant	
<b>Company:</b>	Dudek	<b>Company:</b>	PME Oakmont Perris Nance Street, LP
<b>Contact:</b>	Mladen Popovic	<b>Contact:</b>	Attn: John Atwell
<b>Address:</b>	605 Third Street, Encinitas, CA 92024	<b>Address:</b>	3520 Piedmont Rd, STE 100, Atlanta, GA 30305
<b>Phone:</b>	510.601.2516	<b>Phone:</b>	
<b>Email:</b>	mpopovic@dudek.com	<b>Email:</b>	jatwell@oakmontre.com
<b>Date:</b>	04/12/2022	<b>Date:</b>	04/12/2022
<b>Approved by:</b>			
<b>Perris Development Services Dept.</b>	<b>Date</b>	<b>Perris Public Works Dept.</b>	<b>Date</b>

Table 1 - Trip Generation Estimates

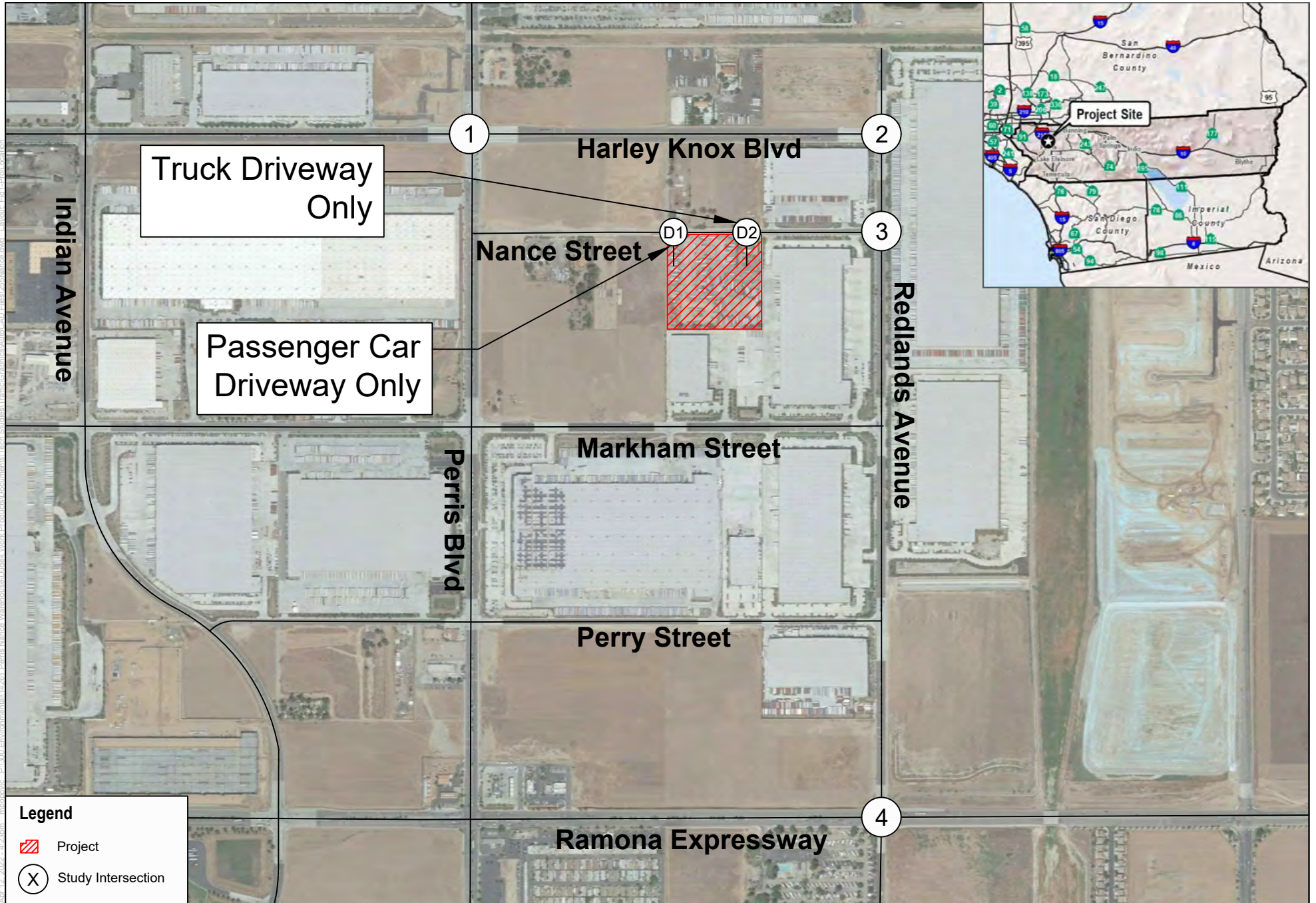
Land Use	ITE Code	Size/Units	Daily	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
<b>TRIP RATES</b>									
Warehousing	150	TSF	1.71	0.13	0.04	0.17	0.05	0.13	0.18
<b>TRIP GENERATION</b>									
255 E. Nance Street Warehouse	150	202.500 TSF	346	27	8	35	10	27	37
<b>TRIP GENERATION (by Vehicle Classification)</b>									
<b>Vehicle Mix<sup>2</sup></b>		<b>Percent<sup>2</sup></b>							
Passenger Vehicles		72.5%	251	20	5	25	7	20	27
2-Axle Trucks		4.6%	16	2	0	2	0	2	2
3-Axle Trucks		5.7%	20	1	1	2	1	1	2
4+-Axle Trucks		17.2%	60	4	2	6	2	4	6
Warehousing Subtotal (Non-PCE)			347	27	8	35	10	27	37
		<b>PCE Factor<sup>3</sup></b>							
Passenger Vehicles		1.0	251	20	5	25	7	20	27
2-Axle Trucks		1.5	24	3	0	3	0	3	3
3-Axle Trucks		2.0	40	2	2	4	2	2	4
4+-Axle Trucks		3.0	180	12	6	18	6	12	18
<b>Total Trip Generation (w/PCE)</b>			<b>495</b>	<b>37</b>	<b>13</b>	<b>50</b>	<b>15</b>	<b>37</b>	<b>52</b>

Notes: TSF = Thousand Square Feet; PCE = Passenger Car Equivalent

<sup>1</sup> Trip rates from the Institute of Transportation Engineers (ITE), *Trip Generation, 11th Edition, 2021*.

<sup>2</sup> Vehicle Mix and Percent from SCAQMD, Warehouse Truck Trip Study Data Results and Usage, July 2014.

<sup>3</sup> Passenger Car Equivalent (PCE) factors per the San Bernardino County CMP, 2016.



SOURCE: Google Maps 2021

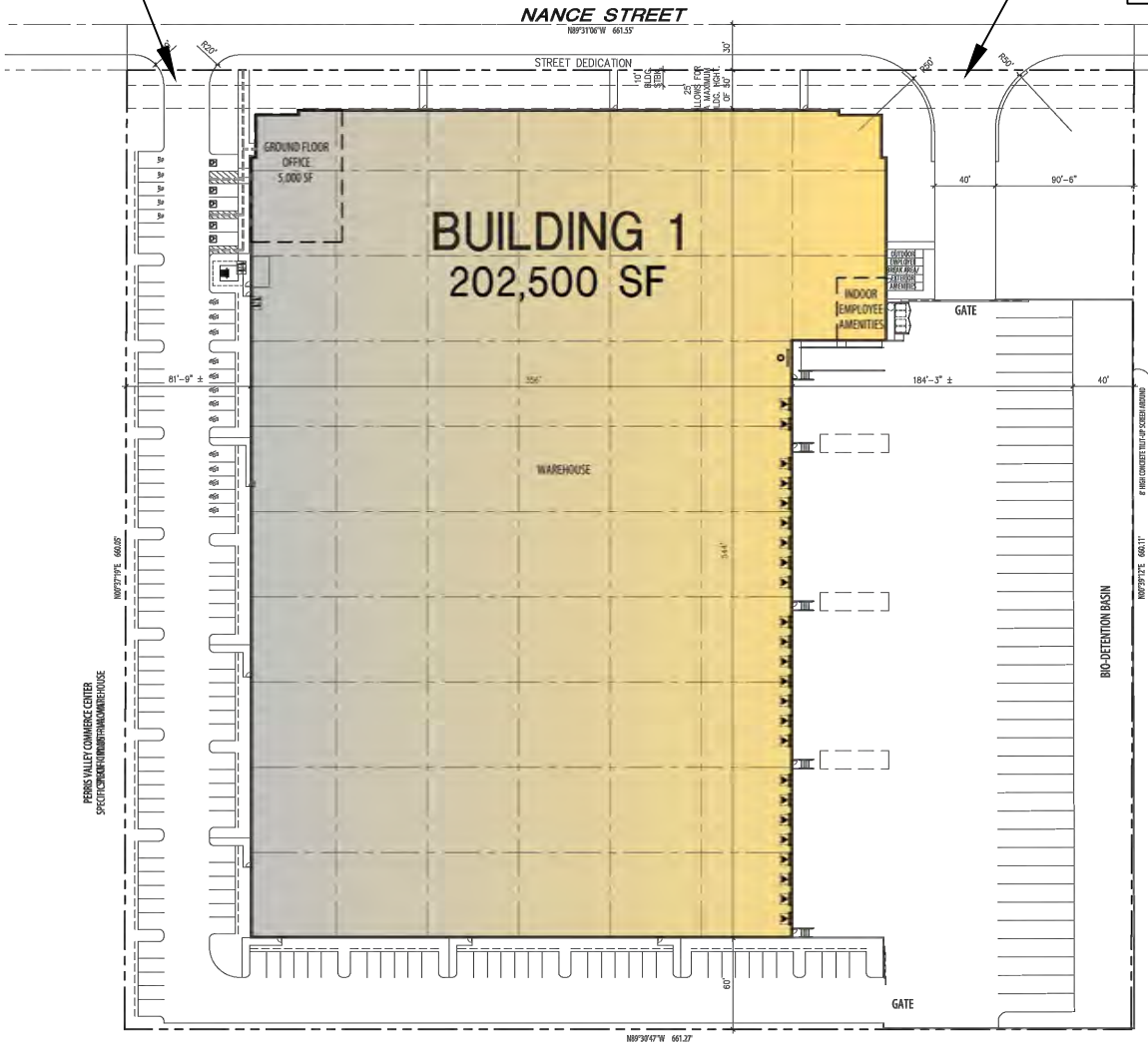
FIGURE 1

Project Location and Study Area

255 E. Nance Street Warehouse Project

Passenger Car Driveway Only

Truck Driveway Only



**TABULATIONS**

SITE AREA	SF	ACRES
Gross	436,585	10.02
Street Dedication	19,846	0.46
<b>NET SITE AREA</b>	<b>416,739</b>	<b>9.57</b>
BUILDING AREA		BUILDING 1
Ground Floor Office	5,000	
Warehouse	197,500	
Total Building Footprint	202,500	
Mezzanine	0	
<b>TOTAL BUILDING AREA</b>	<b>202,500</b>	
<b>COVERAGE (50%)</b>	<b>48.6%</b>	
<b>FAR (75%)</b>	<b>48.6%</b>	
PARKING REQUIRED		
Office	1/300	17
Warehouse	0 - 20,000 sf	20
	20,000 sf +	92
<b>TOTAL PARKING REQUIRED</b>		<b>129</b>
PARKING PROVIDED		
H/C		5
Bicycle Parking (1 Vehicle/2 Bicycle)		2
Standard		126
<b>TOTAL PARKING PROVIDED</b>		<b>133</b>
		0.66/1000
CLEAN AIR/VANPOOL/EV		Required
CA/VP (101-150 Parking)	18	18
EV (101-150 Parking)	13	13
BICYCLE PARKING		Required
Long-term (5% of Tenant Parking)	4	4
Short-term (5% of Visitor Parking)	4	4
<b>DOCK DOORS</b>		<b>24</b>
<b>GRADE DOORS</b>		<b>1</b>
<b>TRAILER STALLS REQUIRED</b>	1/5000	<b>41</b>
<b>TRAILER STALLS PROVIDED</b>		<b>41</b>
LANDSCAPE		%
Required	12.0%	Area (S.F.)
Provided	16.0%	66,500

**255 NANCE STREET WAREHOUSE - PERRIS, CA**  
**OAKMONT INDUSTRIAL GROUP**

**SCHEME B.2**  
**CONCEPTUAL SITE PLAN**  
**G|A|A ARCHITECTS**

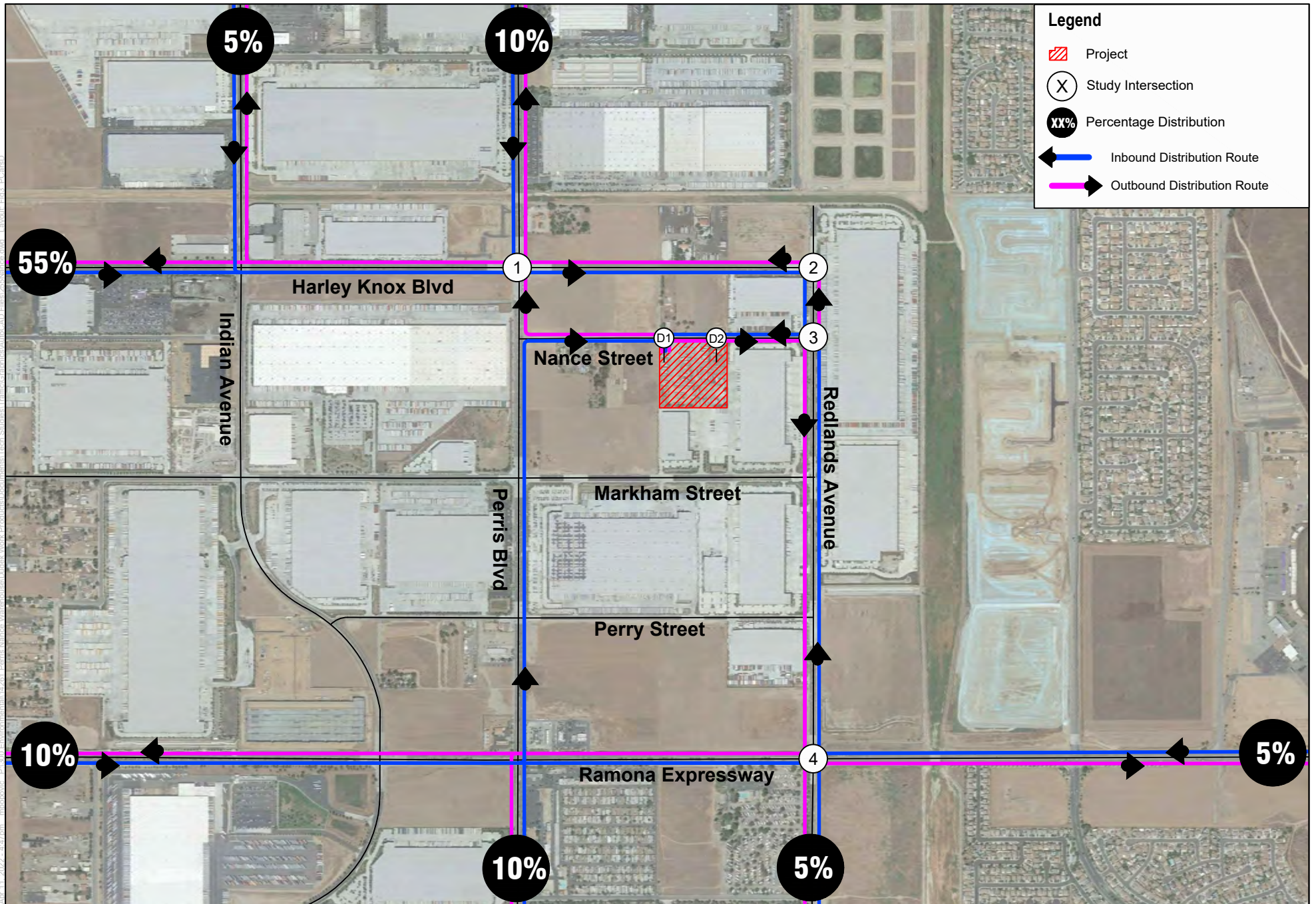
PROJECT NO.: 010152.01  
 DATE: 03/09/2022

NOTE: LAND AREA AND BUILDING SQUARE FOOTAGE ARE PRELIMINARY AND MAY BE SUBJECT TO CHANGE UPON REVIEW BY GOVERNING AGENCIES, CIVIL ENGINEER, AND OWNER.  
 © GAA ARCHITECTS INC. ALL RIGHTS RESERVED

8611 Research Drive,  
 Suite 200,  
 Irvine, CA 92618  
 T 949-474-1775  
 www.GAAArchitects.com

SOURCE: GAA Architects 2022



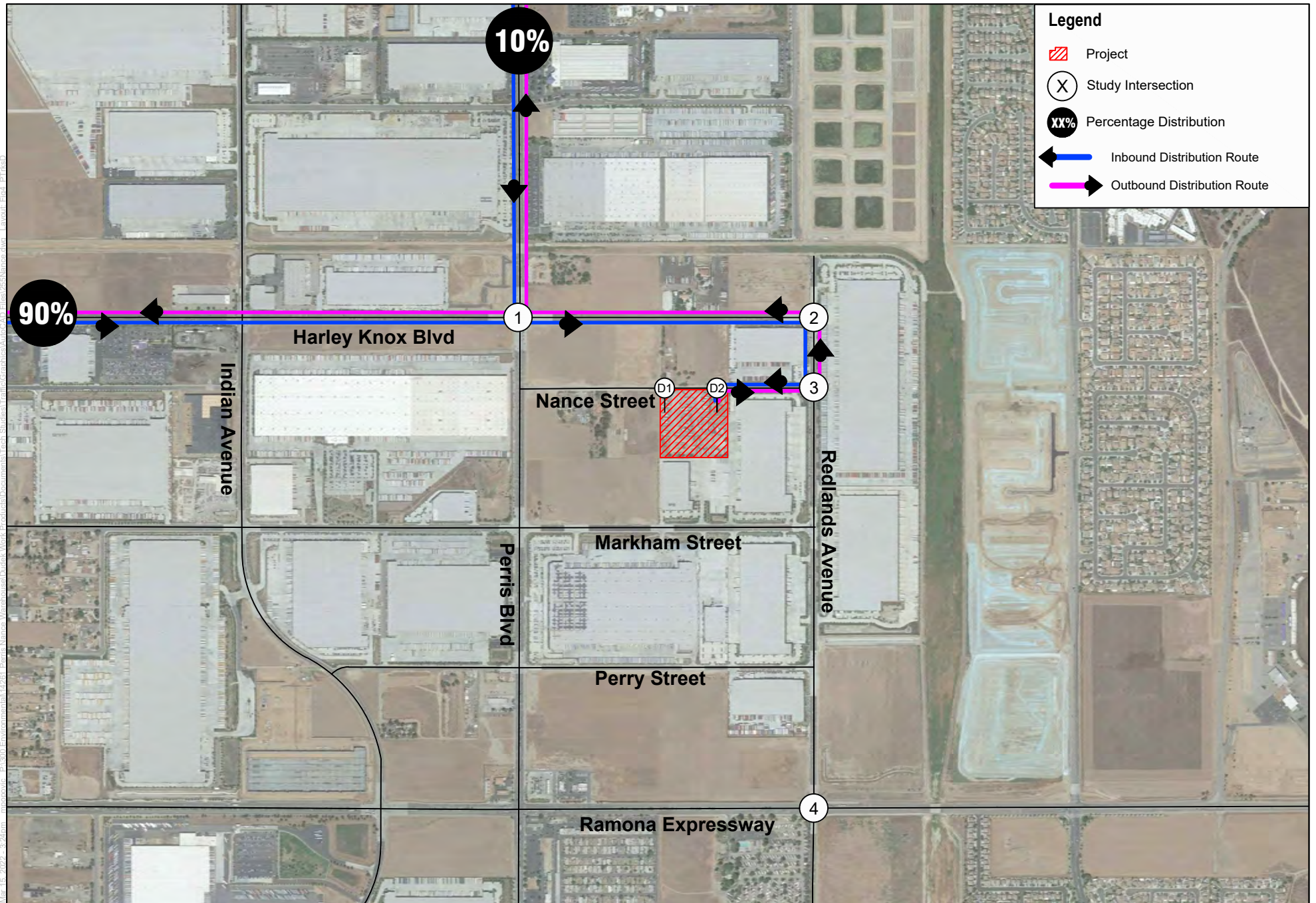


SOURCE: Google Maps 2021

FIGURE 3

Project Passenger Vehicle Trip Distribution

255 E. Nance Street Warehouse Project

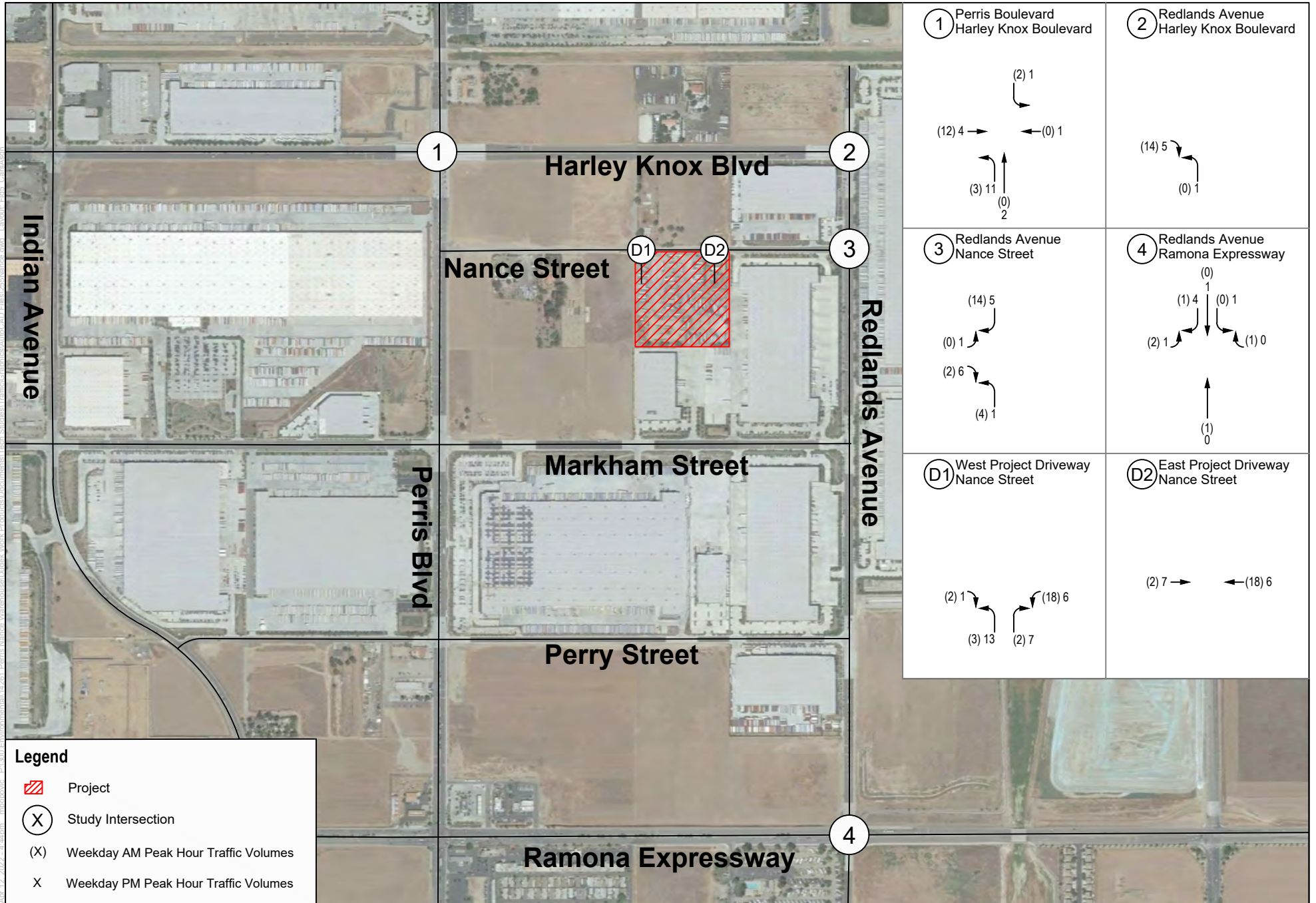


SOURCE: Google Maps 2021

FIGURE 4

Project Truck Trip Distribution

255 E. Nance Street Warehouse Project

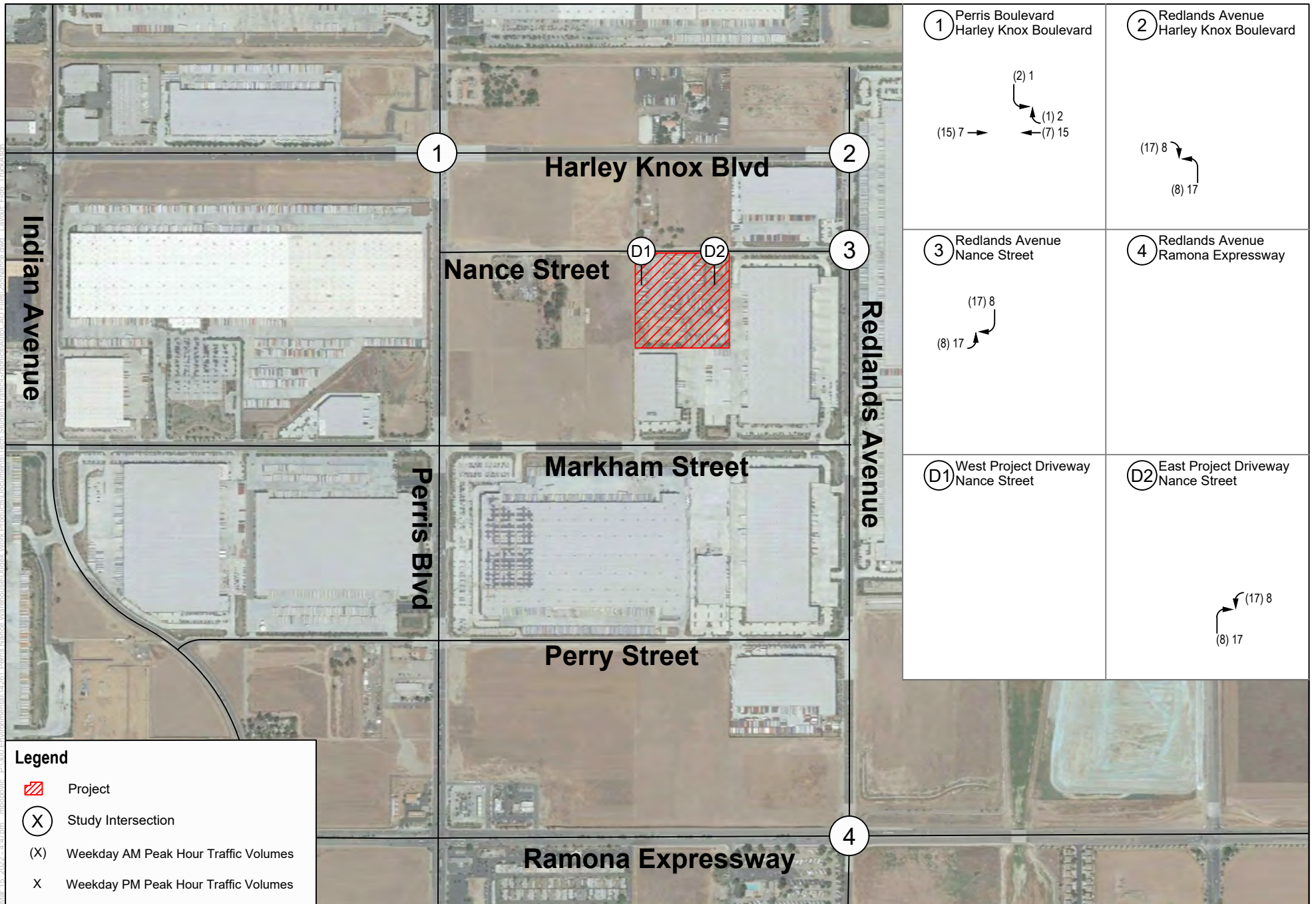


SOURCE: Google Maps 2021

FIGURE 5

Project Passenger Vehicle Trip Assignment

255 E. Nance Street Warehouse Project



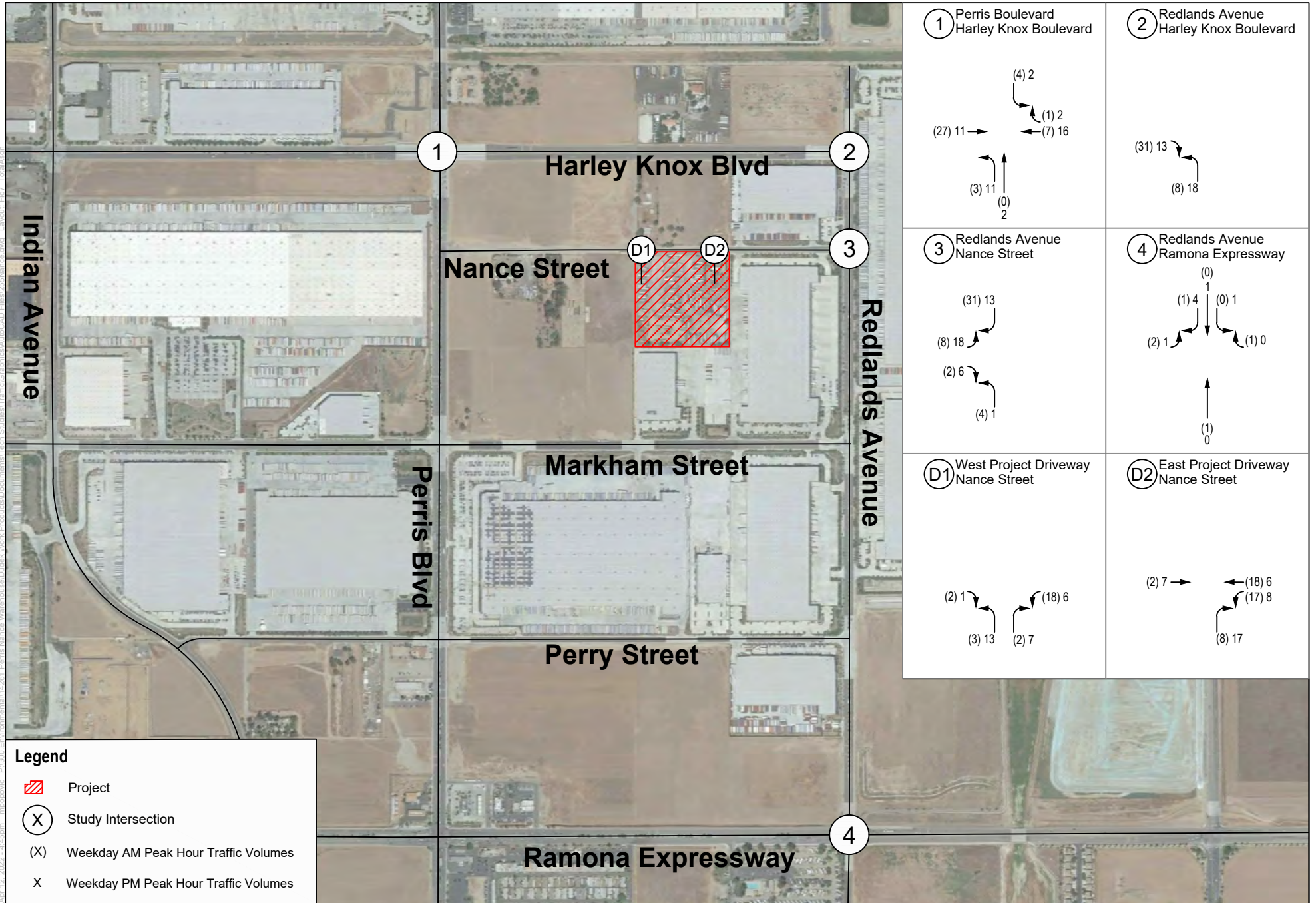
**Legend**

- Project
- Study Intersection
- (X) Weekday AM Peak Hour Traffic Volumes
- X Weekday PM Peak Hour Traffic Volumes

SOURCE: Google Maps 2021

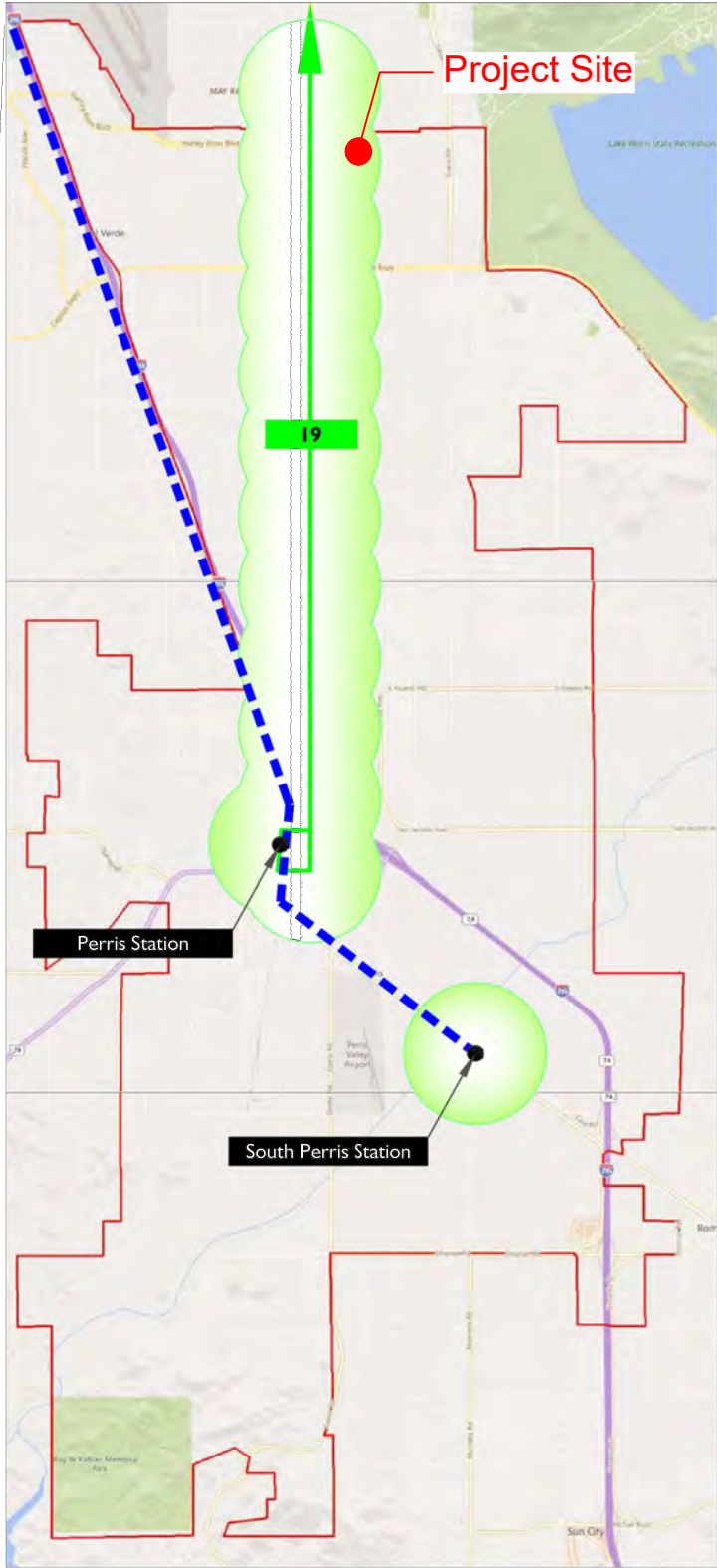
**FIGURE 6**  
Project Truck Trip Assignment - PCE




255 E. Nance Street Warehouse Project



SOURCE: Google Maps 2021

# Exhibit B Perris Transit Priority Areas



- Legend:**
-  = Transit Priority Area (1/2 Mile Radius)
  -  = RTA Bus Route 19
  -  = Metrolink 91/Perris Valley Line



CITY OF PERRIS TRANSPORTATION IMPACT ANALYSIS GUIDELINES FOR CEQA



SOURCE: City of Perris Transportation Impact Analysis Guidelines for CEQA, 2020

Mar 03, 2022 - 12:43pm mposovic P:\300\_Environmental\14281\_Perris Nance Warehouse\Drawings\Products\Traffic\Graphics\AutoCAD Files\255Nance.dwg Layout\_Tp8L1P7A

April 12, 2022

14261

City of Perris Engineering Department  
24 South D Street., Suite 100  
Perris, CA 92570**Subject: Supplemental Scoping Information for the 255 E. Nance Street Warehouse Project, Perris, CA**

Dudek appreciates the opportunity to provide supplemental scoping information regarding the preparation of a Transportation Impact Analysis (TIA) for the 255 E. Nance Street Warehouse Project (proposed project). The following TIA scope is consistent with the City of Perris (City) *Transportation Impact Analysis Guidelines for CEQA* (May 2020). It is our understanding that the City does not have a standardized form for TIA scoping, therefore this letter serves to provide information regarding the scope of work for the proposed project. The City's guidelines contain VMT scoping forms that have been submitted separately and are consistent with the requirements of Senate Bill 743 (SB 743) which require that vehicle miles traveled (VMT) analyses be used to determine transportation impacts under CEQA.

## Project Description

The proposed project is located at 255 E. Nance Street, and would involve the construction and operations of an approximately 202,500 square foot (sf) warehouse building on an approximately 9.54-acre site. It is our understanding the site currently supports trucking related uses which would be replaced by the proposed project. The project would include associated warehouse characteristics including loading docks, truck and vehicle parking, and landscaped areas. Additional improvements, such as the construction of roadways and sidewalks along the project's frontage will be necessary to accommodate the project's development. The project site is located within the Perris Valley Commerce Center Specific Plan.

## Vehicle Miles Traveled

Consistent with SB 743 and the City's guidelines, Dudek will prepare a VMT screening analysis. Project trip generation estimates based on methodologies in trip rates in the *Institute of Transportation Engineers' (ITE) Trip Generation, 11th Edition (2021)* and supplemented with the appropriate vehicle mode splits (per SCQAMD) and passenger car equivalence (PCE) factors. The proposed project would generate approximately 347 daily trips, 35 AM peak hour trips, and 37 PM peak hour trips. The trip generation table for the proposed project is attached to the VMT scoping form. In terms of PCE, the proposed project would generate approximately 495 daily PCE trips, 50 AM PCE peak hour trips, and 52 PM PCE peak hour trips. PCE trip generation would only be used in the operations analysis, and for purposes of the VMT analysis, only non-PCE trip generation would be utilized.

Per Chapter 2.0, Project Screening for VMT Analysis, of the City's TIA Guidelines for CEQA:

*Projects that generate less than 500 average daily trips (ADT) would not cause a substantial increase in the total citywide or regional VMT and are therefore presumed to have a less than significant impact on VMT. Appendix B provides additional discussion and analysis regarding the application of the 500 ADT screening criteria and how it has been established within the context of CEQA.*

The project would generate 347 daily trips and therefore, the proposed project would qualify to be screened-out of VMT analysis since it would generate less than 500 daily trips. The proposed project is also located within proximity of a Transit Priority Area (TPA). Additionally, the proposed project is located in a low VMT area. Therefore, according to a preliminary review of the project, and the City's VMT screening criteria, the project is expected to be screened out of further analysis due to its daily traffic of less than 500 ADT, its proximity to a TPA, and being in a low VMT area. The methodologies and findings of the VMT screening analysis will be provided in the TIA.

## Transit, Pedestrian, Bicycle Facilities, and Project Access

Dudek will qualitatively analyze the transit, pedestrian, and bicycle facilities that serve the project site. Project access and on-site circulation will be based on the City's Standard Plans/Drawings for access and on-site circulation design requirements. For any significant project transportation impacts found, Dudek will determine appropriate and feasible mitigation measures to offset significant project impacts. This assessment will be provided in the TIA.

## Operations Analysis

Per the City's TIA Guidelines, Dudek will also conduct a traffic operations analysis of study area intersection level of service (LOS), roadway segment, and vehicular queuing. The LOS analyses will be prepared consistent with the City requirements. The study area intersections will be analyzed using Synchro/SimTraffic (version 10) which is consistent with *Highway Capacity Manual* (HCM 6) methodology. Where applicable, peak hour signal warrants will be conducted for the unsignalized study intersections consistent with the California Manual of Uniform Traffic Control Devices (CA MUTCD). The Project's trucks would use established truck routes as designated on the City's Truck Routes Map (January 11, 2022). This route is depicted in Attachment A and would require trucks to utilize the following route: Nance Street to Redlands Avenue, Redlands Avenue to Harley Knox Boulevard. Trucks then would proceed along Harley Knox Boulevard to Interstate 215 or Harley Knox Boulevard to Perris Boulevard. All information regarding project trip distribution and assignment is provided within the VMT scoping form that precedes this letter. The project's trip generation, distribution, and assignment will be approved by the City prior to completion of the traffic analysis.

For purposes of this scope, the following intersections would comprise the study area:

1. Perris Boulevard/Harley Knox Boulevard (signalized)
2. Redlands Avenue/Harley Knox Boulevard (signalized)
3. Redlands Avenue/Nance Street (unsignalized)

4. Redlands Avenue/Ramona Expressway (signalized)

D1. West Project Driveway/Nance Street (unsignalized)

D2. East Project Driveway/Nance Street (unsignalized)

The following roadway segment would comprise the study area:

1. Nance Street, Perris Boulevard to the West Project Driveway

Intersection LOS, roadway segment, and queuing analyses will be prepared for the weekday AM and PM peak hours at the study area locations listed above for the following analysis scenarios:

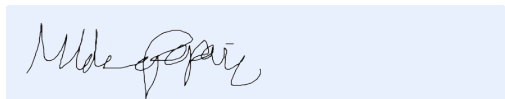
- Existing
- Existing plus Project
- Project Opening Year No Project (future short-term year with cumulative projects and ambient growth)
- Project Opening Year Plus Project

Vehicular queuing at the project's driveways will be analyzed for adequacy based on the 95th percentile (design) queues. For the Project Opening Year condition, cumulative projects' traffic volumes will be based on a list of cumulative projects provided by the City's Planning Division, plus the application of an ambient growth rate approved by the City's Engineering Department. For any study area roadway segments and/or intersections determined to be inconsistent with the City's LOS policies, Dudek will recommend appropriate and feasible improvements for LOS consistency, as well as determine the project's fair-share contribution to any affected study area location. The traffic operations analysis will be prepared and provided within the TIA.

## Conclusion

Dudek is pleased to submit this scoping letter for the 255 E. Nance Street Warehouse Project. If you have any questions or wish to discuss the proposed methodology in greater detail, please contact me at (510) 601-2516 or mpopovic@dudek.com. We look forward to working with you.

Sincerely,



Mladen Popovic, AICP  
Transportation Planner, Dudek

*Attachment A: City of Perris Truck Route - Map and Project's Truck Routes*

cc: *Dennis Pascua, Transportation Manager, Dudek*  
*Patrick Cruz, Environmental Planner, Dudek*

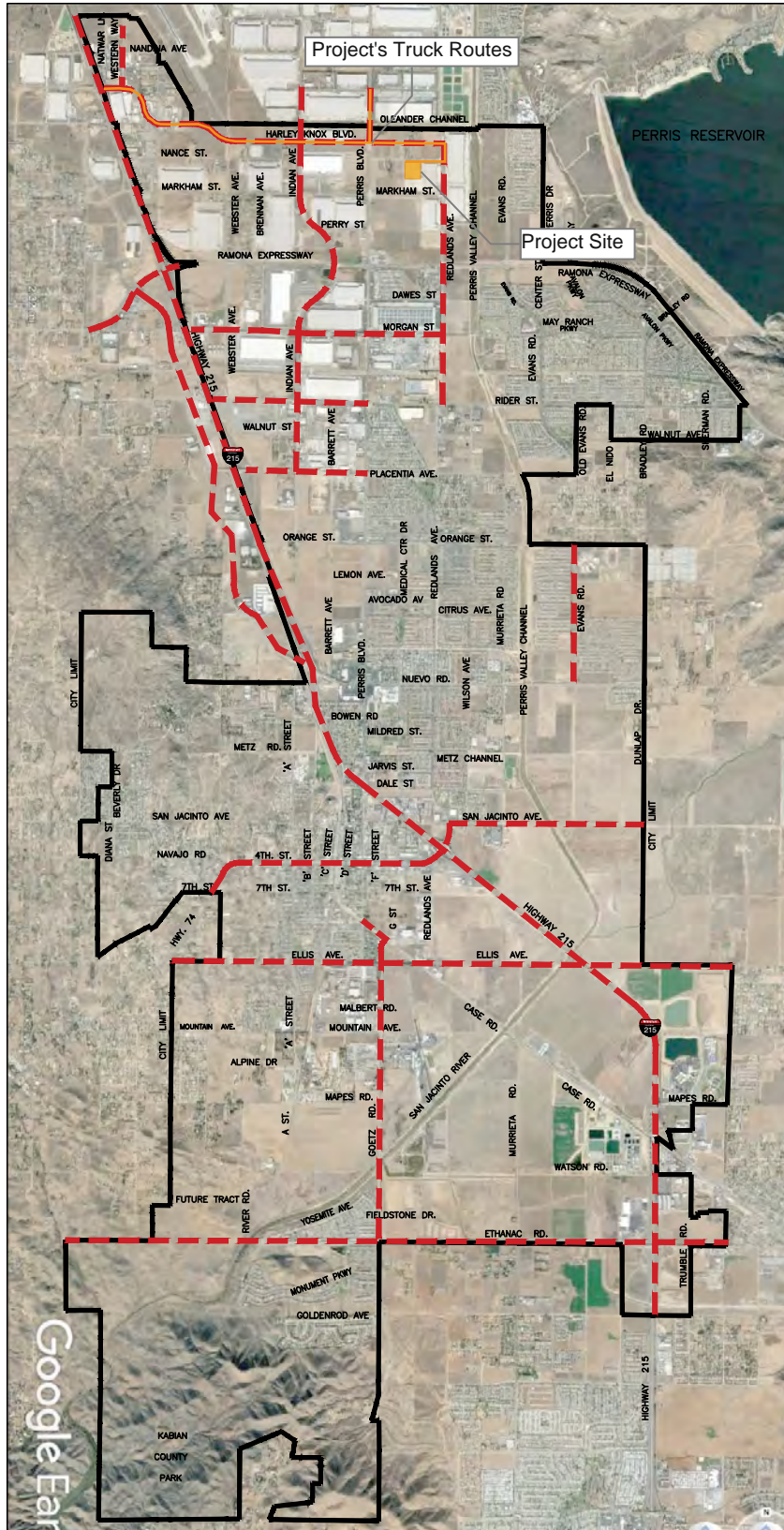
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# **Attachment A**

City of Perris Truck Route  
Map and Project's Truck Routes

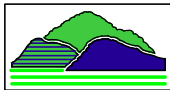
# CITY OF PERRIS TRUCK ROUTES

CITY COUNCIL APPROVED JANUARY 11TH, 2022 - EFFECTIVE FEBRUARY 10TH, 2022



**LEGEND:**

- TRUCK ROUTES
- PERRIS CITY LIMITS



**TRI LAKE**  
CONSULTANTS, INC.  
CITY ENGINEER  
DATE: 01-31-2022



April 14, 2022

Ms. Lupita Garcia  
CITY OF PERRIS (Planning Division)  
135 North "D" Street  
Perris, CA 92570

**Subject: 255 E. Nance Street Warehouse (PRN 22-05040) Project  
Scoping Agreement and VMT Analysis Review #2, City of Perris**

**Introduction**

RK ENGINEERING GROUP, INC. (RK) has reviewed the Scoping Agreement and VMT Analysis #2 for 255 E. Nance Street Warehouse (PRN 22-05040) Project, City of Perris. The project would include one 202,500 square feet industrial/warehouse building located south of Nance Street, east of Perris Boulevard and west of Redlands Avenue in the City of Perris. The project is located within the PVCCSP (Perris Valley Commerce Center Specific Plan) area. The project would have two access driveways on Nance Street. The westerly driveway would be for automobile traffic and the easterly driveway for truck traffic.

RK has reviewed the Scoping Agreement and VMT Analysis #2 dated April 12, 2022 prepared by Dudek. The scoping agreement and VMT Analysis followed the requirements of the City of Perris and traffic engineering criteria. RK has reviewed the Scoping Agreement and VMT Analysis #2 and it is acceptable as currently written.

**Comments**

Scoping Agreement and VMT Analysis

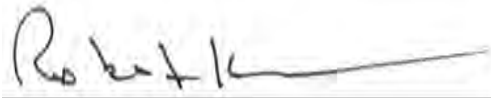
1. The Scoping Agreement and VMT Analysis #2 are acceptable as currently written.

**Conclusions**

RK has reviewed the Scoping Agreement and VMT Analysis #2 for the 255 E. Nance Street Warehouse (PRN 22-05040) Project. Based upon this review, RK has determined that it is acceptable from a technical standpoint. Please have the traffic Consultant proceed with preparing the traffic study.

RK engineering group appreciates this opportunity to work with the City of Perris on this project, if you have any questions, please give me a call at area code 949-293-9639

Sincerely,  
RK ENGINEERING GROUP, INC.



Robert Kahn, P.E.  
Founding Principal

Registered Civil Engineer 20285  
Registered Traffic Engineer 0555

XC: Kenneth Phung, City of Perris,  
Stuart McKibben, City of Peris  
John Pourkazemi, Tri-Lake Consultants

Attachment

*RK17313.DOC*  
*JN: 2126-2022-07*



---

# **Appendix B**

## Traffic Counts

### INTERSECTION TURNING MOVEMENT COUNTS

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

<b>DATE:</b> Tue, Apr 12, 22	<b>LOCATION:</b> NORTH & SOUTH: EAST & WEST:	<b>Perris</b> Perris Harley Knox	<b>PROJECT #:</b> SC3375 <b>LOCATION #:</b> 1 <b>CONTROL:</b> SIGNAL
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<b>NOTES:</b>	AM PM MD OTHER OTHER	▲ N ◀ W ▶ E ▼ S
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Add U-Turns to Left Turns

LANES:	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
	NL 2	NT 3	NR 1	SL 2	ST 3	SR 1	EL 1	ET 2	ER 1	WL 2	WT 3	WR 1	

U-TURNS				
NB	SB	EB	WB	TTL

<b>AM</b>	7:00 AM	52	179	3	12	111	58	29	14	14	1	114	30	617
	7:15 AM	47	285	4	15	131	79	34	10	5	0	92	67	769
	7:30 AM	31	306	0	18	127	71	33	23	5	1	84	61	760
	7:45 AM	42	193	0	21	183	66	41	9	10	2	71	55	693
	8:00 AM	34	190	0	21	178	61	34	7	9	0	62	32	628
	8:15 AM	21	156	0	20	166	41	47	11	8	0	47	22	539
	8:30 AM	17	169	0	6	122	39	44	13	8	1	38	22	479
	8:45 AM	12	124	0	9	114	27	34	13	4	0	22	16	375
	<b>VOLUMES</b>	256	1,602	7	122	1,132	442	296	100	63	5	530	305	4,860
	<b>APPROACH %</b>	14%	86%	0%	7%	67%	26%	64%	22%	14%	1%	63%	36%	
<b>APP/DEPART</b>	1,865	/	2,202	1,696	/	1,203	459	/	228	840	/	1,227	0	
<b>BEGIN PEAK HR</b>	7:15 AM													
<b>VOLUMES</b>	154	974	4	75	619	277	142	49	29	3	309	215	2,850	
<b>APPROACH %</b>	14%	86%	0%	8%	64%	29%	65%	22%	13%	1%	59%	41%		
<b>PEAK HR FACTOR</b>	0.840													
<b>APP/DEPART</b>	1,132	/	1,330	971	/	652	220	/	129	527	/	739	0	
<b>PM</b>	4:00 PM	10	191	0	31	210	61	74	38	19	1	14	45	694
	4:15 PM	13	174	0	45	201	52	68	42	16	0	15	23	649
	4:30 PM	19	203	1	63	265	70	70	36	20	5	26	29	807
	4:45 PM	12	145	0	19	241	75	53	31	18	0	13	22	629
	5:00 PM	10	169	3	33	210	71	62	33	20	1	20	14	646
	5:15 PM	19	148	1	20	174	54	61	46	13	0	23	18	577
	5:30 PM	13	161	0	26	187	50	38	39	14	0	13	23	564
	5:45 PM	6	142	1	27	232	56	49	28	19	3	14	26	603
	<b>VOLUMES</b>	102	1,333	6	264	1,720	489	475	293	139	10	138	200	5,169
	<b>APPROACH %</b>	7%	93%	0%	11%	70%	20%	52%	32%	15%	3%	40%	57%	
<b>APP/DEPART</b>	1,441	/	2,009	2,473	/	1,864	907	/	567	348	/	729	0	
<b>BEGIN PEAK HR</b>	4:00 PM													
<b>VOLUMES</b>	54	713	1	158	917	258	265	147	73	6	68	119	2,779	
<b>APPROACH %</b>	7%	93%	0%	12%	69%	19%	55%	30%	15%	3%	35%	62%		
<b>PEAK HR FACTOR</b>	0.861													
<b>APP/DEPART</b>	768	/	1,097	1,333	/	995	485	/	307	193	/	380	0	

0	1	1	1	3
0	0	0	0	0
0	0	1	1	2
0	0	0	0	0
2	0	0	0	2
1	2	1	0	4
0	0	0	0	0
2	0	1	0	3
5	3	4	2	14
0	0	0	0	0
0	0	0	0	0
0	0	0	1	1
0	0	0	0	0
0	0	0	1	1
0	1	0	0	1
0	0	0	0	0
0	0	0	3	3
0	1	0	5	6



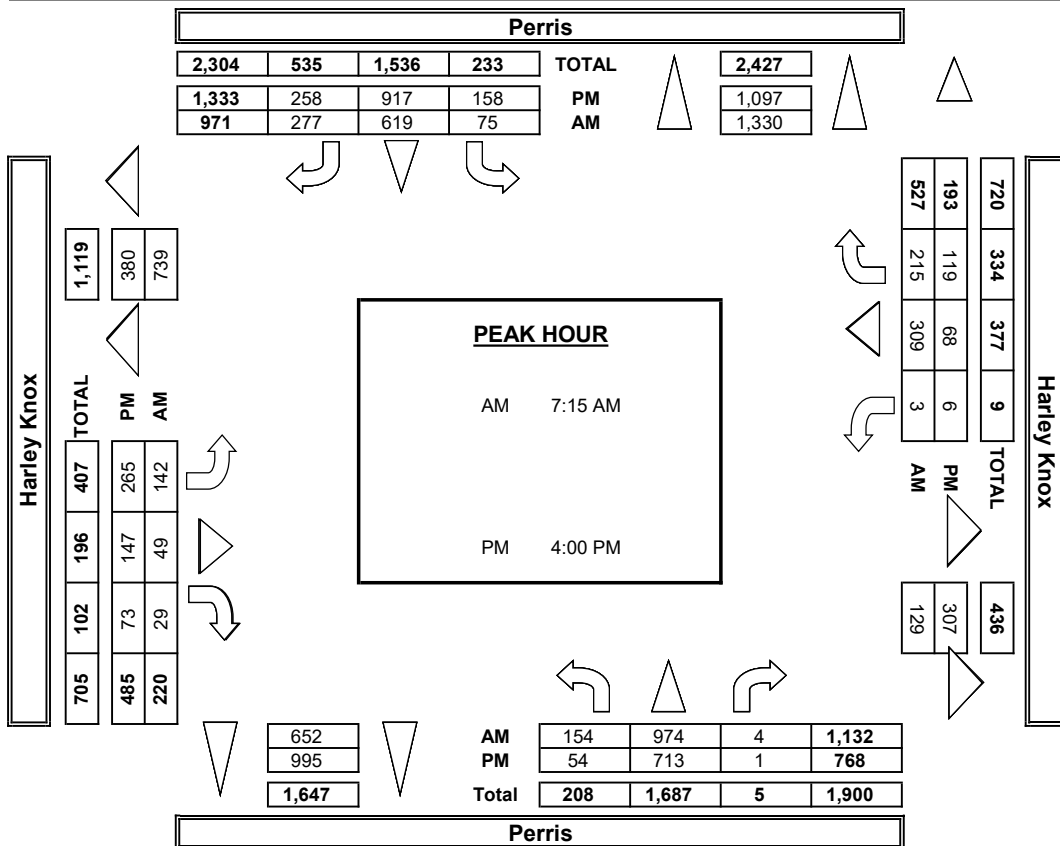
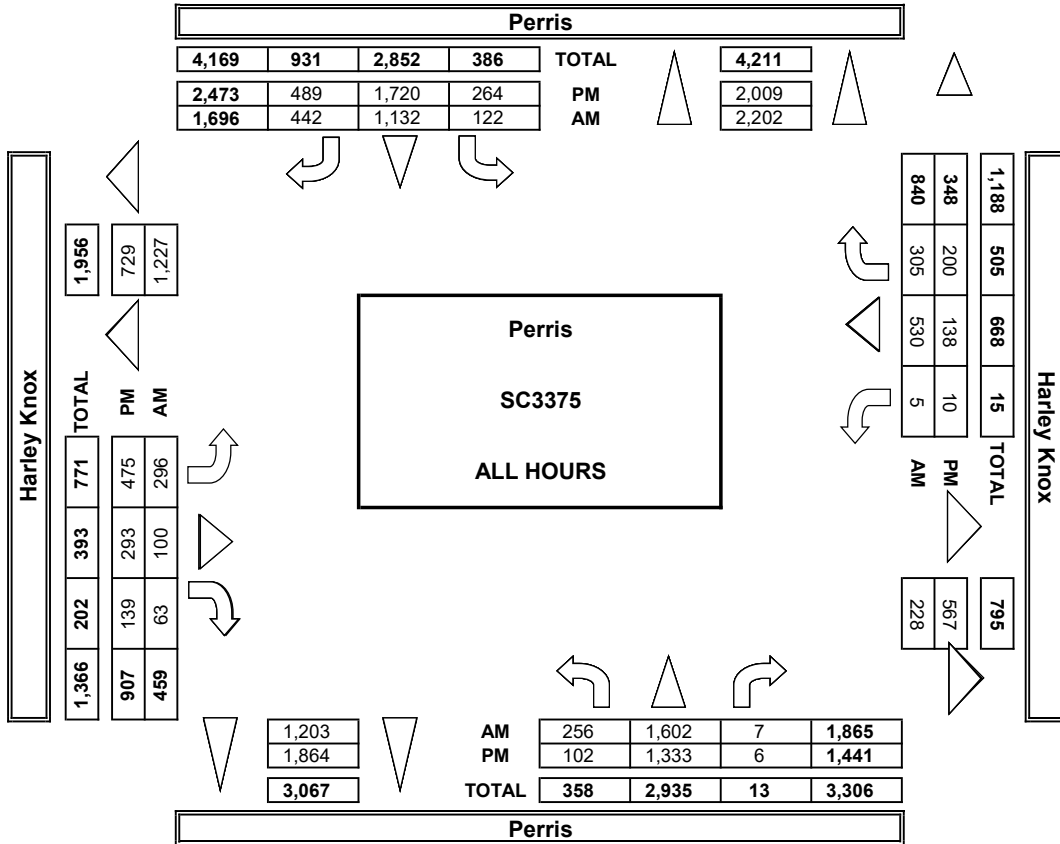
<b>AM</b>	7:00 AM	2	0	0	0	2
	7:15 AM	1	0	0	0	1
	7:30 AM	0	0	0	0	0
	7:45 AM	0	0	0	0	0
	8:00 AM	0	0	0	0	0
	8:15 AM	0	0	0	0	0
	8:30 AM	0	0	0	0	0
	8:45 AM	0	0	0	0	0
<b>TOTAL</b>	3	0	0	0	3	
<b>PM</b>	4:00 PM	0	0	0	0	0
	4:15 PM	0	0	0	0	0
	4:30 PM	0	0	0	0	0
	4:45 PM	0	0	0	1	1
	5:00 PM	0	0	0	0	0
	5:15 PM	0	1	0	0	1
	5:30 PM	0	0	0	0	0
	5:45 PM	0	0	0	0	0
<b>TOTAL</b>	0	1	0	1	2	

ALL PED AND BIKE				
N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
2	0	0	0	2
1	0	0	0	1
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
3	0	0	0	3
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	1	1
0	1	0	0	1
0	0	0	0	0
0	0	0	0	0
0	1	0	1	2

PEDESTRIAN CROSSINGS				
N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
2	0	0	0	2
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
2	0	0	0	2
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	1	1
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	1	1

BICYCLE CROSSINGS				
NS	SS	ES	WS	TOTAL
0	0	0	0	0
1	0	0	0	1
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
1	0	0	0	1
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	1	0	0	1
0	0	0	0	0
0	0	0	0	0
0	1	0	0	1

**AimTD LLC**  
TURNING MOVEMENT COUNTS





## INTERSECTION TURNING MOVEMENT COUNTS

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

<b>DATE:</b> 4/12/22 TUESDAY	LOCATION: NORTH & SOUTH: EAST & WEST:	Perris Perris Harley Knox	PROJECT #: LOCATION #: CONTROL:	SC3375 1 SIGNAL
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<b>CLASS 1:</b> PASSENGER VEHICLES	<b>NOTES:</b>	AM PM MD OTHER OTHER	◀ W E ▶	▲ N S ▼
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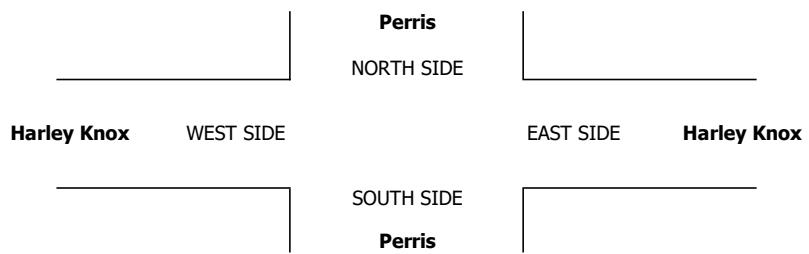
LANES:	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
	Perris			Perris			Harley Knox			Harley Knox			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	

U-TURNS				
NB	SB	EB	WB	TTL

<b>AM</b>	7:00 AM	49	163	3	7	101	50	23	5	11	1	110	28	551
	7:15 AM	42	257	4	12	120	65	27	4	3	0	85	66	685
	7:30 AM	27	286	0	17	118	64	27	13	4	0	81	55	692
	7:45 AM	37	178	0	20	162	62	32	8	7	1	67	51	625
	8:00 AM	26	172	0	18	158	54	22	3	6	0	56	30	545
	8:15 AM	16	147	0	18	152	35	34	5	6	0	44	20	477
	8:30 AM	15	146	0	3	102	27	36	11	6	0	32	19	397
	8:45 AM	10	114	0	6	97	20	23	7	2	0	22	14	315
	VOLUMES	222	1,463	7	101	1,010	377	224	56	45	2	497	283	4,287
	APPROACH %	13%	86%	0%	7%	68%	25%	69%	17%	14%	0%	64%	36%	
APP/DEPART	1,692	/	1,971	1,488	/	1,061	325	/	163	782	/	1,092	0	
BEGIN PEAK HR	7:15 AM													
VOLUMES	130	893	4	67	558	245	108	28	20	1	289	202	2,547	
APPROACH %	13%	87%	0%	8%	64%	28%	69%	18%	13%	0%	59%	41%		
PEAK HR FACTOR	0.822			0.891			0.830			0.815			0.920	
APP/DEPART	1,029	/	1,203	870	/	581	156	/	99	492	/	664	0	
<b>PM</b>	4:00 PM	4	172	0	28	197	54	63	35	14	1	12	41	621
	4:15 PM	10	158	0	43	186	42	56	35	10	0	12	21	573
	4:30 PM	19	191	0	63	253	58	65	36	18	5	23	29	760
	4:45 PM	10	134	0	19	230	66	47	26	15	0	7	20	574
	5:00 PM	6	163	2	28	196	65	52	29	18	1	9	13	582
	5:15 PM	17	143	0	20	165	48	53	45	12	0	15	16	534
	5:30 PM	12	151	0	25	181	46	33	37	13	0	12	23	533
	5:45 PM	5	133	1	27	221	49	45	25	16	3	13	24	562
	VOLUMES	83	1,245	3	253	1,629	428	414	268	116	10	103	187	4,739
	APPROACH %	6%	94%	0%	11%	71%	19%	52%	34%	15%	3%	34%	62%	
APP/DEPART	1,331	/	1,847	2,310	/	1,750	798	/	528	300	/	614	0	
BEGIN PEAK HR	4:00 PM													
VOLUMES	43	655	0	153	866	220	231	132	57	5	54	111	2,528	
APPROACH %	6%	94%	0%	12%	70%	18%	55%	31%	14%	3%	32%	65%		
PEAK HR FACTOR	0.831			0.828			0.882			0.750			0.832	
APP/DEPART	698	/	997	1,239	/	928	420	/	286	171	/	317	0	

0	0	1	1	2
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
2	0	0	0	2
1	2	0	0	3
0	0	0	0	0
2	0	0	0	2
5	2	1	1	9

0	0	0	0	0
0	0	0	0	0
0	0	0	1	1
0	0	0	0	0
0	0	0	1	1
0	1	0	0	1
0	0	0	0	0
0	0	0	3	3
0	1	0	5	6



## INTERSECTION TURNING MOVEMENT COUNTS

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<b>DATE:</b> 4/12/22 TUESDAY	LOCATION: NORTH & SOUTH: EAST & WEST:	Perris Perris Harley Knox	PROJECT #: LOCATION #: CONTROL:	SC3375 1 SIGNAL
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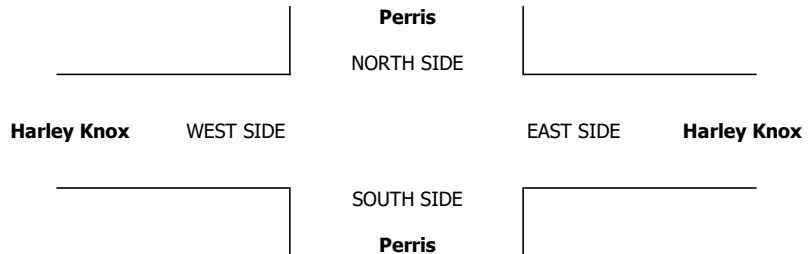
<b>CLASS 2:</b> 2-AXLE WORK VEHICLES/ TRUCKS	<b>NOTES:</b>	AM PM MD OTHER OTHER	▲ N ◀ W E ▶ S ▼
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LANES:	NORTHBOUND <small>Perris</small>			SOUTHBOUND <small>Perris</small>			EASTBOUND <small>Harley Knox</small>			WESTBOUND <small>Harley Knox</small>			TOTAL
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	2	3	1	2	3	1	1	2	1	2	3	1	

U-TURNS				
NB	SB	EB	WB	TTL
0	1	0	0	1

<b>AM</b>	7:00 AM	1	9	0	2	3	5	1	2	1	0	2	1	27	0	1	0	0	1
	7:15 AM	3	12	0	1	7	6	5	1	0	0	3	1	39	0	0	0	0	0
	7:30 AM	3	9	0	0	7	2	2	2	0	1	2	2	30	0	0	0	1	1
	7:45 AM	2	6	0	1	13	2	3	0	0	0	1	2	30	0	0	0	0	0
	8:00 AM	4	9	0	1	10	3	6	1	1	0	3	0	38	0	0	0	0	0
	8:15 AM	2	4	0	1	8	1	4	1	0	0	1	1	23	0	0	0	0	0
	8:30 AM	0	16	0	1	3	3	1	1	1	0	2	0	28	0	0	0	0	0
	8:45 AM	0	7	0	1	6	0	3	0	1	0	0	2	20	0	0	0	0	0
	VOLUMES	15	72	0	8	57	22	25	8	4	1	14	9	235	0	1	0	1	2
	APPROACH %	17%	83%	0%	9%	66%	25%	68%	22%	11%	4%	58%	38%		0	1	0	1	2
APP/DEPART	87	/	107	87	/	61	37	/	16	24	/	51	0						
BEGIN PEAK HR	7:15 AM																		
VOLUMES	12	36	0	3	37	13	16	4	1	0	9	5	137						
APPROACH %	25%	75%	0%	6%	70%	25%	76%	19%	5%	0%	60%	33%							
PEAK HR FACTOR	0.800			0.828			0.656			0.750			0.878						
APP/DEPART	48	/	57	53	/	38	21	/	8	15	/	34	0						
<b>PM</b>	4:00 PM	2	10	0	2	6	3	6	1	0	0	2	32	0	0	0	0	0	
	4:15 PM	3	12	0	1	9	4	5	2	1	0	0	37	0	0	0	0	0	
	4:30 PM	0	5	0	0	7	4	2	0	1	0	0	19	0	0	0	0	0	
	4:45 PM	0	5	0	0	6	2	3	2	1	0	1	21	0	0	0	0	0	
	5:00 PM	0	3	0	3	6	3	6	1	1	0	0	23	0	0	0	0	0	
	5:15 PM	2	3	0	0	5	2	2	0	0	0	0	14	0	0	0	0	0	
	5:30 PM	1	5	0	1	2	0	1	2	1	0	0	13	0	0	0	0	0	
	5:45 PM	0	7	0	0	10	0	2	0	2	0	0	1	22	0	0	0	0	0
	VOLUMES	8	50	0	7	51	18	27	8	7	0	1	4	181	0	0	0	0	0
	APPROACH %	14%	86%	0%	9%	67%	24%	64%	19%	17%	0%	20%	80%		0	0	0	0	0
APP/DEPART	58	/	81	76	/	58	42	/	15	5	/	27	0						
BEGIN PEAK HR	4:00 PM																		
VOLUMES	5	32	0	3	28	13	16	5	3	0	1	3	109						
APPROACH %	14%	86%	0%	7%	64%	30%	67%	21%	13%	0%	25%	75%							
PEAK HR FACTOR	0.617			0.786			0.750			0.500			0.736						
APP/DEPART	37	/	51	44	/	31	24	/	8	4	/	19	0						

0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0



## INTERSECTION TURNING MOVEMENT COUNTS

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

<b>DATE:</b> 4/12/22 TUESDAY	LOCATION: NORTH & SOUTH: EAST & WEST:	Perris Perris Harley Knox	PROJECT #: LOCATION #: CONTROL:	SC3375 1 SIGNAL
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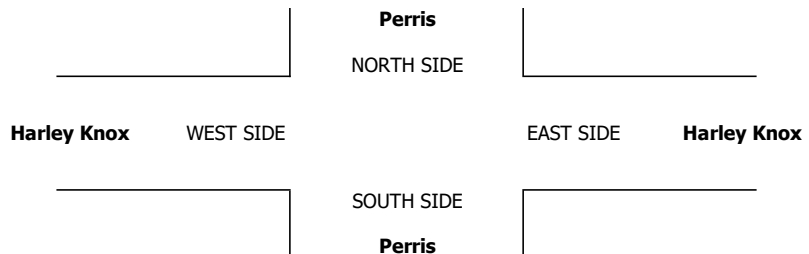
<b>CLASS 3:</b> 3-AXLE TRUCKS	<b>NOTES:</b>	AM PM MD OTHER OTHER	◀ W	▲ N S ▼	E ▶
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LANES:	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
	Perris			Perris			Harley Knox			Harley Knox			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	

U-TURNS				
NB	SB	EB	WB	TTL

<b>AM</b>	7:00 AM	1	3	0	2	3	2	2	4	1	0	1	0	19	0	0	0	0	0
	7:15 AM	2	6	0	0	0	3	2	2	0	0	1	0	16	0	0	0	0	0
	7:30 AM	0	4	0	1	1	2	2	1	0	0	0	2	13	0	0	1	0	1
	7:45 AM	2	1	0	0	1	1	1	0	2	0	2	1	11	0	0	0	0	0
	8:00 AM	1	2	0	1	3	1	1	0	0	0	1	0	10	0	0	0	0	0
	8:15 AM	1	2	0	0	1	2	3	0	0	0	0	0	9	0	0	1	0	1
	8:30 AM	1	2	0	0	2	5	1	0	1	0	1	0	13	0	0	0	0	0
	8:45 AM	1	0	0	0	1	0	3	4	0	0	0	0	9	0	0	1	0	1
	VOLUMES	9	20	0	4	12	16	15	11	4	0	6	3	100	0	0	3	0	3
	APPROACH %	31%	69%	0%	13%	38%	50%	50%	37%	13%	0%	67%	33%						
APP/DEPART	29	/	35	32	/	16	30	/	15	9	/	34	0						
BEGIN PEAK HR	7:15 AM																		
VOLUMES	5	13	0	2	5	7	5	3	2	0	4	3	50						
APPROACH %	28%	72%	0%	14%	36%	50%	45%	27%	18%	0%	57%	43%							
PEAK HR FACTOR	0.563			0.700			0.688			0.583			0.781						
APP/DEPART	18	/	21	14	/	7	11	/	5	7	/	17	0						
<b>PM</b>	4:00 PM	2	3	0	0	1	0	1	0	2	0	1	10	0	0	0	0	0	
	4:15 PM	0	1	0	0	0	0	2	1	2	0	1	0	7	0	0	0	0	
	4:30 PM	0	2	0	0	0	3	2	0	0	0	0	7	0	0	0	0	0	
	4:45 PM	0	0	0	0	1	2	1	3	0	0	1	0	8	0	0	0	0	
	5:00 PM	3	1	0	0	4	0	0	1	0	0	6	1	16	0	0	0	0	
	5:15 PM	0	1	0	0	1	3	2	1	0	0	1	1	10	0	0	0	0	
	5:30 PM	0	1	0	0	0	2	1	0	0	0	1	0	5	0	0	0	0	
	5:45 PM	0	0	0	0	0	1	0	2	0	0	1	0	4	0	0	0	0	
	VOLUMES	5	9	0	0	7	11	9	8	4	0	11	3	67					
	APPROACH %	36%	64%	0%	0%	39%	61%	43%	38%	19%	0%	79%	21%						
APP/DEPART	14	/	21	18	/	11	21	/	8	14	/	27	0						
BEGIN PEAK HR	4:00 PM																		
VOLUMES	2	6	0	0	2	5	6	4	4	0	2	1	32						
APPROACH %	25%	75%	0%	0%	29%	71%	43%	29%	29%	0%	67%	33%							
PEAK HR FACTOR	0.400			0.583			0.700			0.750			0.800						
APP/DEPART	8	/	13	7	/	6	14	/	4	3	/	9	0						

0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0



## INTERSECTION TURNING MOVEMENT COUNTS

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<b>DATE:</b> 4/12/22 TUESDAY	LOCATION: NORTH & SOUTH: EAST & WEST:	Perris Perris Harley Knox	PROJECT #: LOCATION #: CONTROL:	SC3375 1 SIGNAL
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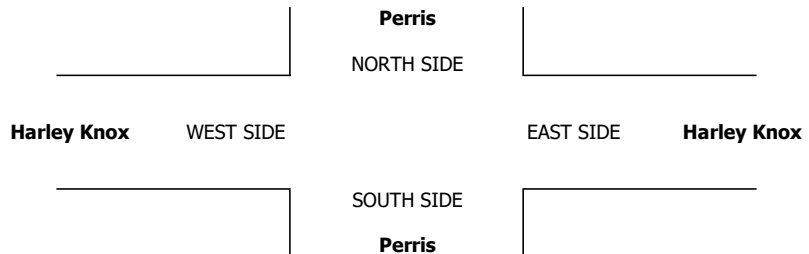
<b>CLASS 4:</b> 4 OR MORE AXLE TRUCKS	<b>NOTES:</b>	AM PM MD OTHER OTHER	◀ W E ▶	▲ N S ▼
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LANES:	NORTHBOUND <small>Perris</small>			SOUTHBOUND <small>Perris</small>			EASTBOUND <small>Harley Knox</small>			WESTBOUND <small>Harley Knox</small>			TOTAL
	NL 2	NT 3	NR 1	SL 2	ST 3	SR 1	EL 1	ET 2	ER 1	WL 2	WT 3	WR 1	

U-TURNS				
NB	SB	EB	WB	TTL

<b>AM</b>	7:00 AM	1	3	0	1	4	0	3	2	1	0	1	1	17	0	0	0	0	0
	7:15 AM	0	9	0	2	3	5	0	3	2	0	2	0	26	0	0	0	0	0
	7:30 AM	1	5	0	0	1	3	2	7	1	0	1	1	22	0	0	0	0	0
	7:45 AM	1	6	0	0	6	1	5	1	1	1	1	0	23	0	0	0	0	0
	8:00 AM	3	6	0	0	3	3	5	3	2	0	2	2	29	0	0	0	0	0
	8:15 AM	2	1	0	1	2	3	5	5	2	0	1	1	23	0	0	0	0	0
	8:30 AM	0	4	0	2	9	2	6	1	0	1	3	3	31	0	0	0	0	0
	8:45 AM	1	2	0	2	8	7	5	2	1	0	0	0	28	0	0	0	0	0
	VOLUMES	9	36	0	8	36	24	31	24	10	2	11	8	199	0	0	0	0	0
	APPROACH %	20%	80%	0%	12%	53%	35%	48%	37%	15%	10%	52%	38%		0	0	0	0	0
APP/DEPART	45	/	75	68	/	48	65	/	32	21	/	44	0						
BEGIN PEAK HR	7:15 AM																		
VOLUMES	5	26	0	2	13	12	12	14	6	1	6	3	100						
APPROACH %	16%	84%	0%	7%	48%	44%	38%	44%	19%	10%	60%	30%							
PEAK HR FACTOR	0.861			0.675			0.800			0.625			0.862						
APP/DEPART	31	/	41	27	/	20	32	/	16	10	/	23	0						
<b>PM</b>	4:00 PM	2	5	0	0	4	4	3	2	3	0	2	0	25	0	0	0	0	0
	4:15 PM	0	2	0	0	5	6	3	4	3	0	2	2	27	0	0	0	0	0
	4:30 PM	0	5	1	0	2	5	1	0	1	0	3	0	18	0	0	0	0	0
	4:45 PM	2	3	0	0	3	5	2	0	2	0	4	0	21	0	0	0	0	0
	5:00 PM	1	1	1	2	1	3	4	2	1	0	5	0	21	0	0	0	0	0
	5:15 PM	0	1	1	0	2	1	4	0	1	0	7	1	18	0	0	0	0	0
	5:30 PM	0	3	0	0	3	2	3	0	0	0	0	0	11	0	0	0	0	0
	5:45 PM	1	1	0	0	1	6	2	1	1	0	0	1	14	0	0	0	0	0
	VOLUMES	6	21	3	2	21	32	22	9	12	0	23	4	155	0	0	0	0	0
	APPROACH %	20%	70%	10%	4%	38%	58%	51%	21%	28%	0%	85%	15%		0	0	0	0	0
APP/DEPART	30	/	47	55	/	33	43	/	14	27	/	61	0						
BEGIN PEAK HR	4:00 PM																		
VOLUMES	4	15	1	0	14	20	9	6	9	0	11	2	91						
APPROACH %	20%	75%	5%	0%	41%	59%	38%	25%	38%	0%	85%	15%							
PEAK HR FACTOR	0.714			0.773			0.600			0.813			0.843						
APP/DEPART	20	/	26	34	/	23	24	/	7	13	/	35	0						

0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0



## INTERSECTION TURNING MOVEMENT COUNTS

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

<b>DATE:</b> 4/12/22 TUESDAY	LOCATION: NORTH & SOUTH: EAST & WEST:	Perris Perris Harley Knox	PROJECT #: LOCATION #: CONTROL:	SC3375 1 SIGNAL
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<b>CLASS 5:</b> RV	<b>NOTES:</b>	AM PM MD OTHER OTHER	▲ N ◀ W S E ▶ ▼
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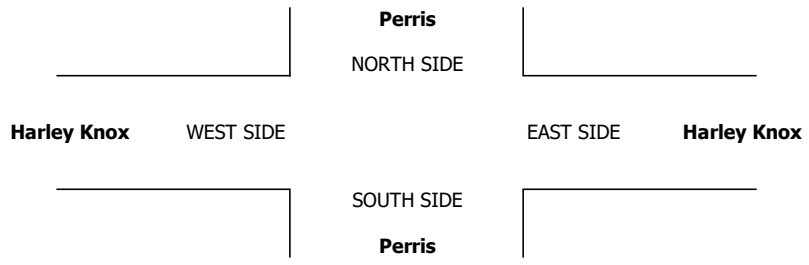
LANES:	NORTHBOUND <small>Perris</small>			SOUTHBOUND <small>Perris</small>			EASTBOUND <small>Harley Knox</small>			WESTBOUND <small>Harley Knox</small>			TOTAL
	NL 2	NT 3	NR 1	SL 2	ST 3	SR 1	EL 1	ET 2	ER 1	WL 2	WT 3	WR 1	

U-TURNS				
NB	SB	EB	WB	TTL

AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0	0	
BEGIN PEAK HR	7:15 AM														
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0	
PEAK HR FACTOR	0.000			0.000			0.000			0.000			0.000		
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0	0	
PM	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0	0	
BEGIN PEAK HR	4:00 PM														
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0	
PEAK HR FACTOR	0.000			0.000			0.000			0.000			0.000		
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0	0	

0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
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0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0



## INTERSECTION TURNING MOVEMENT COUNTS

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

<b>DATE:</b> 4/12/22 TUESDAY	<b>LOCATION:</b> NORTH & SOUTH: EAST & WEST:	Perris Perris Harley Knox	<b>PROJECT #:</b> SC3375 <b>LOCATION #:</b> 1 <b>CONTROL:</b> SIGNAL
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<b>CLASS 6:</b>	<b>NOTES:</b>	AM PM MD OTHER OTHER	◀ W E ▶	▲ N S ▼
BUSES				

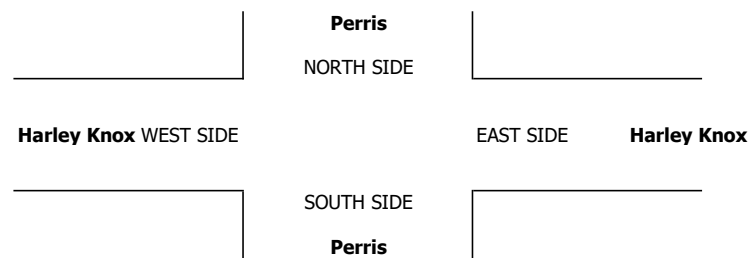
LANES:	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	

U-TURNS				
NB	SB	EB	WB	TTL

<b>AM</b>	7:00 AM	0	1	0	0	0	1	0	1	0	0	0	0	3
	7:15 AM	0	1	0	0	1	0	0	0	0	0	1	0	3
	7:30 AM	0	2	0	0	0	0	0	0	0	0	0	1	3
	7:45 AM	0	2	0	0	1	0	0	0	0	0	0	1	4
	8:00 AM	0	1	0	1	4	0	0	0	0	0	0	0	6
	8:15 AM	0	2	0	0	3	0	1	0	0	0	1	0	7
	8:30 AM	1	1	0	0	6	2	0	0	0	0	0	0	10
	8:45 AM	0	1	0	0	2	0	0	0	0	0	0	0	3
	VOLUMES	1	11	0	1	17	3	1	1	0	0	2	2	39
	APPROACH %	8%	92%	0%	5%	81%	14%	50%	50%	0%	0%	50%	50%	
APP/DEPART	12	/	14	21	/	17	2	/	2	4	/	6	0	
BEGIN PEAK HR	7:15 AM													
VOLUMES	0	6	0	1	6	0	0	0	0	0	1	2	16	
APPROACH %	0%	100%	0%	14%	86%	0%	0%	0%	0%	0%	33%	67%		
PEAK HR FACTOR	0.750			0.350			0.000			0.750			0.667	
APP/DEPART	6	/	8	7	/	6	0	/	1	3	/	1	0	
<b>PM</b>	4:00 PM	0	1	0	1	2	0	1	0	0	0	0	1	6
	4:15 PM	0	1	0	1	1	0	2	0	0	0	0	0	5
	4:30 PM	0	0	0	0	3	0	0	0	0	0	0	0	3
	4:45 PM	0	3	0	0	1	0	0	0	0	0	0	1	5
	5:00 PM	0	1	0	0	3	0	0	0	0	0	0	0	4
	5:15 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
	5:30 PM	0	1	0	0	1	0	0	0	0	0	0	0	2
	5:45 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
	VOLUMES	0	8	0	2	12	0	3	0	0	0	0	2	27
	APPROACH %	0%	100%	0%	14%	86%	0%	100%	0%	0%	0%	0%	100%	
APP/DEPART	8	/	13	14	/	12	3	/	2	2	/	0	0	
BEGIN PEAK HR	4:00 PM													
VOLUMES	0	5	0	2	7	0	3	0	0	0	0	2	19	
APPROACH %	0%	100%	0%	22%	78%	0%	100%	0%	0%	0%	0%	100%		
PEAK HR FACTOR	0.417			0.750			0.375			0.500			0.792	
APP/DEPART	5	/	10	9	/	7	3	/	2	2	/	0	0	

0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0



### INTERSECTION TURNING MOVEMENT COUNTS

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

DATE: Tue, Apr 12, 22	LOCATION: NORTH & SOUTH: EAST & WEST:	Perris Redlands Harley Knox	PROJECT #: LOCATION #: CONTROL:	SC3375 2 SIGNAL
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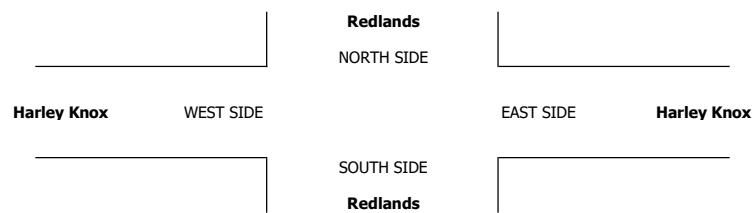
NOTES:  E leg always closed	AM PM MD OTHER OTHER	▲ N ▼ S	◀ W E ▶
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Add U-Turns to Left Turns

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
LANES:	1	2	0	0	2	0	1	1	1	1	1	0	
<b>AM</b>													
7:00 AM	135	1	0	0	1	2	3	0	33	0	0	0	175
7:15 AM	163	0	0	0	0	0	2	0	23	0	0	0	188
7:30 AM	146	5	0	0	0	3	7	0	31	0	0	0	192
7:45 AM	128	7	0	0	1	1	9	0	32	0	0	0	178
8:00 AM	100	2	0	0	2	1	3	0	22	0	0	0	130
8:15 AM	71	1	0	0	0	1	2	0	20	0	0	0	95
8:30 AM	59	3	0	0	1	2	0	0	23	0	0	0	88
8:45 AM	38	5	0	0	2	0	2	0	20	0	0	0	67
VOLUMES	840	24	0	0	7	10	28	0	204	0	0	0	1,113
APPROACH %	97%	3%	0%	0%	41%	59%	12%	0%	88%	0%	0%	0%	
APP/DEPART	864	/	43	17	/	216	232	/	0	0	/	854	0
BEGIN PEAK HR	7:00 AM												
VOLUMES	572	13	0	0	2	6	21	0	119	0	0	0	733
APPROACH %	98%	2%	0%	0%	25%	75%	15%	0%	85%	0%	0%	0%	
PEAK HR FACTOR	0.897												
APP/DEPART	585	/	28	8	/	124	140	/	0	0	/	581	0
<b>PM</b>													
4:00 PM	47	1	0	0	4	4	14	0	54	0	0	0	124
4:15 PM	36	0	0	0	0	1	4	0	83	0	0	0	124
4:30 PM	55	2	0	0	3	2	1	0	93	0	0	0	156
4:45 PM	33	4	0	0	2	2	1	0	55	0	0	0	97
5:00 PM	29	2	0	0	5	4	7	0	53	0	0	0	100
5:15 PM	36	2	0	0	2	2	2	0	68	0	0	0	112
5:30 PM	34	3	0	0	1	2	1	0	70	0	0	0	111
5:45 PM	39	1	0	0	1	2	2	0	55	0	0	0	100
VOLUMES	309	15	0	0	18	19	32	0	531	0	0	0	924
APPROACH %	95%	5%	0%	0%	49%	51%	6%	0%	94%	0%	0%	0%	
APP/DEPART	324	/	34	37	/	549	563	/	0	0	/	341	0
BEGIN PEAK HR	4:00 PM												
VOLUMES	171	7	0	0	9	9	20	0	285	0	0	0	501
APPROACH %	96%	4%	0%	0%	50%	50%	7%	0%	93%	0%	0%	0%	
PEAK HR FACTOR	0.781												
APP/DEPART	178	/	16	18	/	294	305	/	0	0	/	191	0

U-TURNS				
NB	SB	EB	WB	TTL
2	0	2	0	4
1	0	0	0	1
0	0	1	0	1
0	0	3	0	3
0	0	2	0	2
2	0	1	0	3
0	0	0	0	0
0	0	0	0	0
5	0	9	0	14

0	0	10	0	10
0	0	1	0	1
0	0	0	0	0
0	0	0	0	0
0	0	1	0	1
0	0	1	0	1
0	0	0	0	0
0	0	0	0	0
0	0	13	0	13



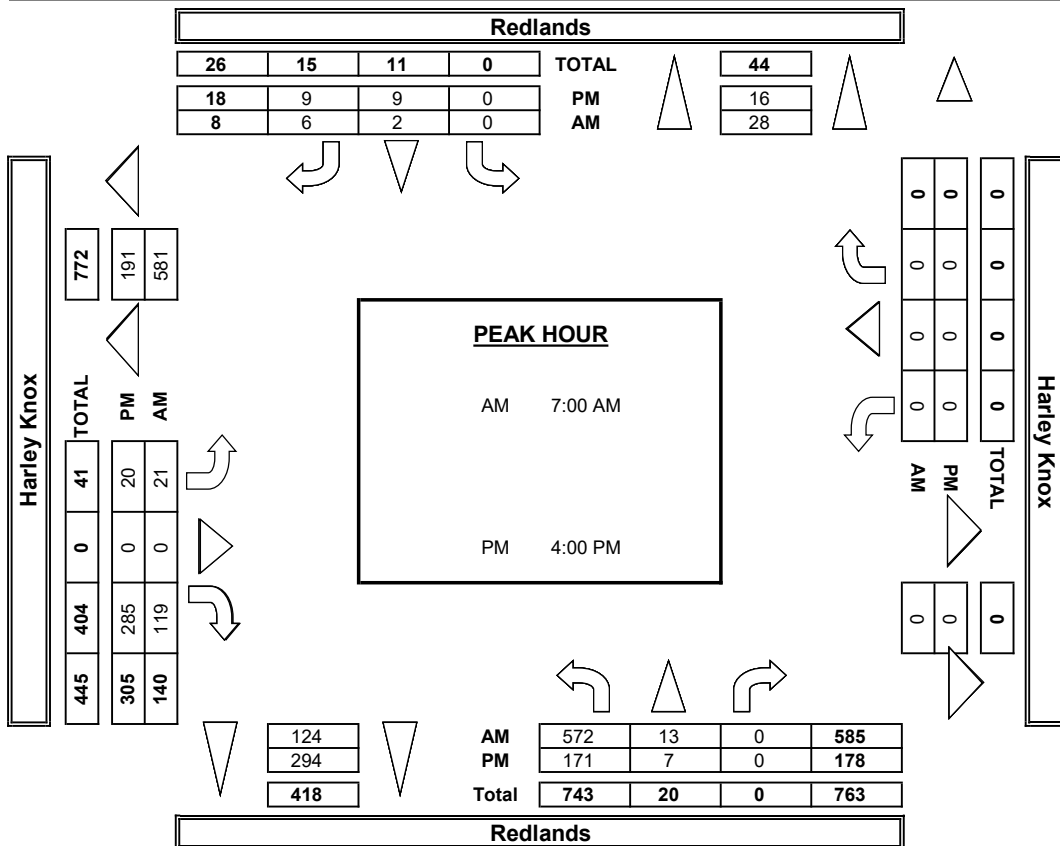
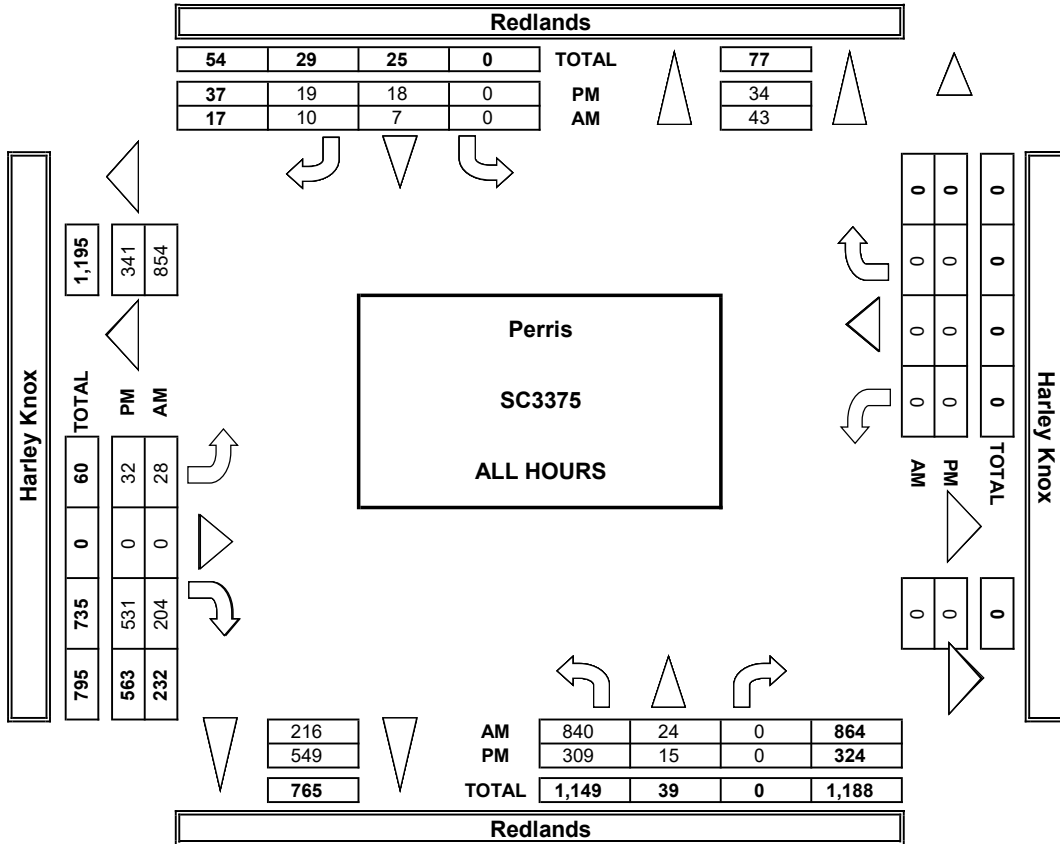
	AM	PM
7:00 AM	0	0
7:15 AM	0	0
7:30 AM	0	0
7:45 AM	0	0
8:00 AM	0	0
8:15 AM	0	0
8:30 AM	0	0
8:45 AM	0	0
TOTAL	0	0
4:00 PM	0	0
4:15 PM	0	0
4:30 PM	0	0
4:45 PM	0	0
5:00 PM	0	0
5:15 PM	0	0
5:30 PM	0	0
5:45 PM	0	0
TOTAL	0	0

ALL PED AND BIKE				
N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	1	0	1
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	1	0	1
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	1	1	2

PEDESTRIAN CROSSINGS				
N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	1	0	1
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	1	0	1

BICYCLE CROSSINGS				
NS	SS	ES	WS	TOTAL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	1	0	1
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	1	0	1

**AimTD LLC**  
TURNING MOVEMENT COUNTS



### INTERSECTION TURNING MOVEMENT COUNTS

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

DATE: 4/12/22 TUESDAY	LOCATION: NORTH & SOUTH: EAST & WEST:	Perris Redlands Harley Knox	PROJECT #: LOCATION #: CONTROL:	SC3375 2 SIGNAL
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PCE Adjusted	<b>NOTES:</b>						AM PM MD OTHER OTHER	◀ W S ▶ E	▲ N S ▼	
	Class	1	2	3	4	5				6
	Factor	1	1.5	2	3	2				2

LANES:	NORTHBOUND <small>Redlands</small>			SOUTHBOUND <small>Redlands</small>			EASTBOUND <small>Harley Knox</small>			WESTBOUND <small>Harley Knox</small>			TOTAL	U-TURNS				
	NL 1	NT 2	NR 0	SL 0	ST 2	SR 0	EL 1	ET 1	ER 1	WL 1	WT 1	WR 0		NB	SB	EB	WB	TTL

AM	7:00 AM	137	1	0	0	3	4	6	0	45	0	0	0	196					0
	7:15 AM	171	0	0	0	0	0	5	0	31	0	0	0	207					0
	7:30 AM	153	5	0	0	0	5	11	0	43	0	0	0	217					0
	7:45 AM	137	7	0	0	1	2	11	0	38	0	0	0	195					0
	8:00 AM	109	2	0	0	2	3	7	0	27	0	0	0	150					0
	8:15 AM	77	3	0	0	0	2	2	0	26	0	0	0	109					0
	8:30 AM	71	7	0	0	1	6	0	0	34	0	0	0	119					0
	8:45 AM	39	10	0	0	4	0	2	0	32	0	0	0	87					0
	VOLUMES	892	35	0	0	11	21	44	0	275	0	0	0	1,277	0	0	0	0	0
	APPROACH %	96%	4%	0%	0%	34%	66%	14%	0%	86%	0%	0%	0%						
APP/DEPART	927	/	79	32	/	286	318	/	0	0	/	913	0						
BEGIN PEAK HR	7:00 AM																		
VOLUMES	597	13	0	0	4	11	33	0	157	0	0	0	814						
APPROACH %	98%	2%	0%	0%	28%	72%	17%	0%	83%	0%	0%	0%							
PEAK HR FACTOR	0.894				0.518			0.875			0.000		0.937						
APP/DEPART	610	/	46	15	/	161	189	/	0	0	/	608	0						
PM	4:00 PM	50	3	0	0	4	4	20	0	57	0	0	0	138					0
	4:15 PM	42	0	0	0	0	1	8	0	91	0	0	0	142					0
	4:30 PM	61	3	0	0	4	4	3	0	93	0	0	0	168					0
	4:45 PM	39	6	0	0	2	5	2	0	57	0	0	0	111					0
	5:00 PM	44	2	0	0	8	7	16	0	57	0	0	0	133					0
	5:15 PM	51	2	0	0	2	6	3	0	70	0	0	0	134					0
	5:30 PM	35	6	0	0	1	2	2	0	71	0	0	0	117					0
	5:45 PM	43	3	0	0	1	4	3	0	58	0	0	0	112					0
	VOLUMES	364	25	0	0	21	33	57	0	554	0	0	0	1,053	0	0	0	0	0
	APPROACH %	94%	6%	0%	0%	39%	61%	9%	0%	91%	0%	0%	0%						
APP/DEPART	389	/	82	54	/	575	610	/	0	0	/	397	0						
BEGIN PEAK HR	4:00 PM																		
VOLUMES	192	12	0	0	10	14	33	0	298	0	0	0	557						
APPROACH %	94%	6%	0%	0%	40%	60%	10%	0%	90%	0%	0%	0%							
PEAK HR FACTOR	0.795				0.734			0.838			0.000		0.831						
APP/DEPART	204	/	45	24	/	307	330	/	0	0	/	206	0						



## INTERSECTION TURNING MOVEMENT COUNTS

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

<b>DATE:</b> 4/12/22 TUESDAY	<b>LOCATION:</b> NORTH & SOUTH: EAST & WEST:	Perris Redlands Harley Knox	<b>PROJECT #:</b> SC3375 <b>LOCATION #:</b> 2 <b>CONTROL:</b> SIGNAL
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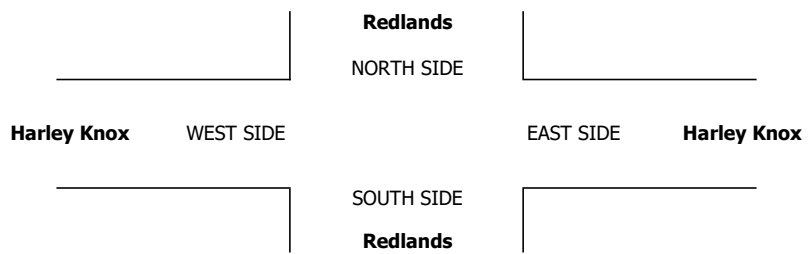
<b>CLASS 1:</b> PASSENGER VEHICLES	<b>NOTES:</b>	AM PM MD OTHER OTHER	◀ W E ▶	▲ N S ▼
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LANES:	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
	Redlands			Redlands			Harley Knox			Harley Knox			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	

U-TURNS				
NB	SB	EB	WB	TTL

<b>AM</b>	7:00 AM	132	1	0	0	0	1	1	0	22	0	0	0	157
	7:15 AM	155	0	0	0	0	0	0	0	18	0	0	0	173
	7:30 AM	138	5	0	0	0	2	5	0	22	0	0	0	172
	7:45 AM	120	7	0	0	0	1	0	7	0	27	0	0	162
	8:00 AM	92	2	0	0	2	0	1	0	18	0	0	0	115
	8:15 AM	67	0	0	0	0	0	2	0	17	0	0	0	86
	8:30 AM	52	1	0	0	1	0	0	0	16	0	0	0	70
	8:45 AM	36	2	0	0	1	0	2	0	11	0	0	0	52
	VOLUMES	792	18	0	0	5	3	18	0	151	0	0	0	987
	APPROACH %	98%	2%	0%	0%	63%	38%	11%	0%	89%	0%	0%	0%	
APP/DEPART	810	/	33	8	/	160	169	/	0	0	/	794	0	
BEGIN PEAK HR	7:00 AM													
VOLUMES	542	13	0	0	1	3	11	0	89	0	0	0	664	
APPROACH %	97%	2%	0%	0%	25%	75%	11%	0%	87%	0%	0%	0%		
PEAK HR FACTOR	0.900			0.500			0.750			0.000			0.960	
APP/DEPART	558	/	24	4	/	93	102	/	0	0	/	547	0	
<b>PM</b>	4:00 PM	45	0	0	0	4	4	10	0	51	0	0	0	114
	4:15 PM	33	0	0	0	0	1	2	0	76	0	0	0	112
	4:30 PM	52	1	0	0	2	1	0	0	93	0	0	0	149
	4:45 PM	29	3	0	0	2	0	0	0	52	0	0	0	86
	5:00 PM	18	2	0	0	3	2	2	0	48	0	0	0	75
	5:15 PM	28	2	0	0	2	0	1	0	67	0	0	0	100
	5:30 PM	33	1	0	0	1	2	0	0	68	0	0	0	105
	5:45 PM	36	0	0	0	1	1	1	0	53	0	0	0	92
	VOLUMES	274	9	0	0	15	11	16	0	508	0	0	0	833
	APPROACH %	97%	3%	0%	0%	58%	42%	3%	0%	97%	0%	0%	0%	
APP/DEPART	283	/	16	26	/	523	524	/	0	0	/	294	0	
BEGIN PEAK HR	4:00 PM													
VOLUMES	159	4	0	0	8	6	4	0	272	0	0	0	461	
APPROACH %	98%	2%	0%	0%	57%	43%	1%	0%	96%	0%	0%	0%		
PEAK HR FACTOR	0.769			0.438			0.763			0.000			0.773	
APP/DEPART	163	/	8	14	/	280	284	/	0	0	/	173	0	

2	0	0	0	2
1	0	0	0	1
0	0	1	0	1
0	0	1	0	1
0	0	0	0	0
1	0	1	0	2
0	0	0	0	0
0	0	0	0	0
4	0	3	0	7
0	0	8	0	8
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	1	0	1
0	0	0	0	0
0	0	0	0	0
0	0	9	0	9



## INTERSECTION TURNING MOVEMENT COUNTS

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

<b>DATE:</b> 4/12/22 TUESDAY	<b>LOCATION:</b> NORTH & SOUTH: EAST & WEST:	Perris Redlands Harley Knox	<b>PROJECT #:</b> SC3375 <b>LOCATION #:</b> 2 <b>CONTROL:</b> SIGNAL
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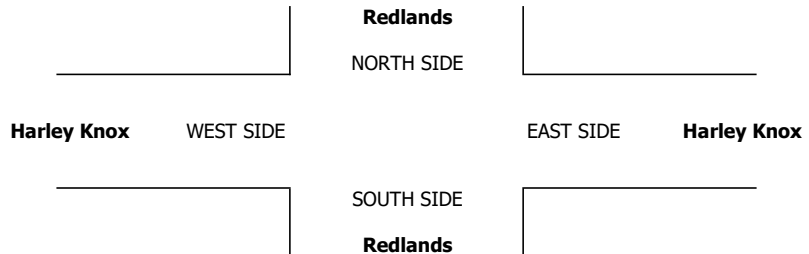
<b>CLASS 2:</b> 2-AXLE WORK VEHICLES/ TRUCKS	<b>NOTES:</b>	AM PM MD OTHER OTHER	▲ N ◀ W E ▶ S ▼
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LANES:	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
	Redlands			Redlands			Harley Knox			Harley Knox			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	1	2	0	0	2	0	1	1	1	1	1	0	

U-TURNS				
NB	SB	EB	WB	TTL
0	0	1	0	1
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
1	0	0	0	1
0	0	0	0	0
0	0	0	0	0
1	0	1	0	2

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
	Redlands			Redlands			Harley Knox			Harley Knox			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
<b>AM</b>													
7:00 AM	2	0	0	0	0	0	1	0	2	0	0	0	5
7:15 AM	5	0	0	0	0	0	0	0	0	0	0	0	5
7:30 AM	4	0	0	0	0	0	0	0	4	0	0	0	8
7:45 AM	3	0	0	0	0	1	0	0	3	0	0	0	7
8:00 AM	4	0	0	0	0	0	0	0	1	0	0	0	5
8:15 AM	1	0	0	0	0	1	0	0	0	0	0	0	2
8:30 AM	1	0	0	0	0	0	0	0	2	0	0	0	3
8:45 AM	2	0	0	0	0	0	0	0	1	0	0	0	3
VOLUMES	22	0	0	0	0	2	1	0	13	0	0	0	38
APPROACH %	100%	0%	0%	0%	0%	100%	7%	0%	93%	0%	0%	0%	
APP/DEPART	22	/	0	2	/	14	14	/	0	0	/	24	0
BEGIN PEAK HR	7:00 AM												
VOLUMES	14	0	0	0	0	1	0	0	9	0	0	0	25
APPROACH %	100%	0%	0%	0%	0%	100%	0%	0%	90%	0%	0%	0%	
PEAK HR FACTOR	0.700			0.250			0.625			0.000			0.781
APP/DEPART	14	/	0	1	/	9	10	/	0	0	/	16	0
<b>PM</b>													
4:00 PM	0	0	0	0	0	0	1	0	2	0	0	0	3
4:15 PM	0	0	0	0	0	0	0	0	3	0	0	0	3
4:30 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
4:45 PM	1	0	0	0	0	0	0	0	2	0	0	0	3
5:00 PM	1	0	0	0	1	0	0	0	4	0	0	0	6
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	2	0	0	0	2
5:45 PM	1	0	0	0	0	0	0	0	0	0	0	0	1
VOLUMES	3	0	0	0	2	0	1	0	13	0	0	0	19
APPROACH %	100%	0%	0%	0%	100%	0%	7%	0%	93%	0%	0%	0%	
APP/DEPART	3	/	0	2	/	15	14	/	0	0	/	4	0
BEGIN PEAK HR	4:00 PM												
VOLUMES	1	0	0	0	1	0	0	0	7	0	0	0	10
APPROACH %	100%	0%	0%	0%	100%	0%	0%	0%	88%	0%	0%	0%	
PEAK HR FACTOR	0.250			0.250			0.667			0.000			0.833
APP/DEPART	1	/	0	1	/	8	8	/	0	0	/	2	0

NB	SB	EB	WB	TTL
0	0	1	0	1
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	1	0	1





## INTERSECTION TURNING MOVEMENT COUNTS

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

<b>DATE:</b> 4/12/22 TUESDAY	LOCATION: NORTH & SOUTH: EAST & WEST:	Perris Redlands Harley Knox	PROJECT #: LOCATION #: CONTROL:	SC3375 2 SIGNAL
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<b>CLASS 4:</b> 4 OR MORE AXLE TRUCKS	<b>NOTES:</b>	AM PM MD OTHER OTHER	◀ W E ▶	▲ N S ▼
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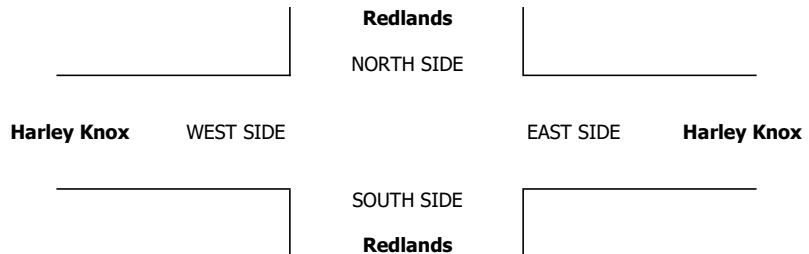
LANES:	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
	Redlands			Redlands			Harley Knox			Harley Knox			
	NL 1	NT 2	NR 0	SL 0	ST 2	SR 0	EL 1	ET 1	ER 1	WL 1	WT 1	WR 0	

U-TURNS				
NB	SB	EB	WB	TTL

<b>AM</b>	7:00 AM	0	0	0	0	1	1	1	0	2	0	0	0	5
	7:15 AM	2	0	0	0	0	0	1	0	3	0	0	0	6
	7:30 AM	1	0	0	0	0	1	2	0	5	0	0	0	9
	7:45 AM	2	0	0	0	0	0	0	0	2	0	0	0	4
	8:00 AM	3	0	0	0	0	1	2	0	1	0	0	0	7
	8:15 AM	2	1	0	0	0	0	0	0	3	0	0	0	6
	8:30 AM	5	2	0	0	0	2	0	0	5	0	0	0	14
	8:45 AM	0	2	0	0	1	0	0	0	3	0	0	0	6
	VOLUMES	15	5	0	0	2	5	6	0	24	0	0	0	57
	APPROACH %	75%	25%	0%	0%	29%	71%	20%	0%	80%	0%	0%	0%	
APP/DEPART	20	/	8	7	/	26	30	/	0	0	/	23	0	
BEGIN PEAK HR	7:00 AM													
VOLUMES	5	0	0	0	1	2	3	0	12	0	0	0	24	
APPROACH %	100%	0%	0%	0%	33%	67%	19%	0%	75%	0%	0%	0%		
PEAK HR FACTOR	0.625			0.375			0.571			0.000			0.667	
APP/DEPART	5	/	3	3	/	13	16	/	0	0	/	8	0	
<b>PM</b>	4:00 PM	1	1	0	0	0	0	2	0	1	0	0	0	5
	4:15 PM	3	0	0	0	0	0	2	0	2	0	0	0	7
	4:30 PM	3	0	0	0	0	1	1	0	0	0	0	0	5
	4:45 PM	2	1	0	0	0	1	0	0	0	0	0	0	4
	5:00 PM	4	0	0	0	1	1	4	0	1	0	0	0	11
	5:15 PM	7	0	0	0	0	2	0	0	1	0	0	0	10
	5:30 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
	5:45 PM	1	1	0	0	0	1	0	0	1	0	0	0	4
	VOLUMES	21	4	0	0	1	6	9	0	6	0	0	0	47
	APPROACH %	84%	16%	0%	0%	14%	86%	60%	0%	40%	0%	0%	0%	
APP/DEPART	25	/	11	7	/	7	15	/	0	0	/	29	0	
BEGIN PEAK HR	4:00 PM													
VOLUMES	9	2	0	0	0	2	4	0	3	0	0	0	21	
APPROACH %	82%	18%	0%	0%	0%	100%	50%	0%	38%	0%	0%	0%		
PEAK HR FACTOR	0.917			0.500			0.500			0.000			0.750	
APP/DEPART	11	/	6	2	/	3	8	/	0	0	/	12	0	

0	0	1	0	1
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	2	0	2
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	3	0	3

0	0	0	0	0
0	0	1	0	1
0	0	0	0	0
0	0	0	0	0
0	0	1	0	1
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	2	0	2



## INTERSECTION TURNING MOVEMENT COUNTS

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

<b>DATE:</b> 4/12/22 TUESDAY	LOCATION: NORTH & SOUTH: EAST & WEST:	Perris Redlands Harley Knox	PROJECT #: LOCATION #: CONTROL:	SC3375 2 SIGNAL
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<b>CLASS 5:</b> RV	<b>NOTES:</b>	AM PM MD OTHER OTHER	▲ N ◀ W S ▶ E ▼
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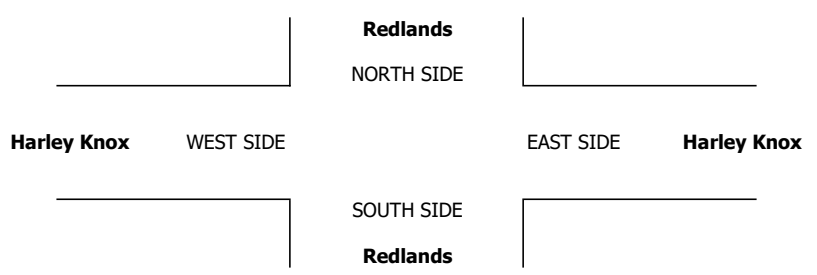
LANES:	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
	Redlands			Redlands			Harley Knox			Harley Knox			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	

U-TURNS				
NB	SB	EB	WB	TTL

<b>AM</b>	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0	
BEGIN PEAK HR	7:00 AM													
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0	
PEAK HR FACTOR	0.000			0.000			0.000			0.000			0.000	
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0	
<b>PM</b>	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0	
BEGIN PEAK HR	4:00 PM													
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0	
PEAK HR FACTOR	0.000			0.000			0.000			0.000			0.000	
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0	

0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
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0	0	0	0	0

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0	0	0	0	0
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0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0



## INTERSECTION TURNING MOVEMENT COUNTS

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

<b>DATE:</b> 4/12/22 TUESDAY	<b>LOCATION:</b> NORTH & SOUTH: EAST & WEST:	Perris Redlands Harley Knox	<b>PROJECT #:</b> SC3375 <b>LOCATION #:</b> 2 <b>CONTROL:</b> SIGNAL
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<b>CLASS 6:</b>  BUSES	<b>NOTES:</b>	AM PM MD OTHER OTHER	◀ W E ▶	▲ N S ▼
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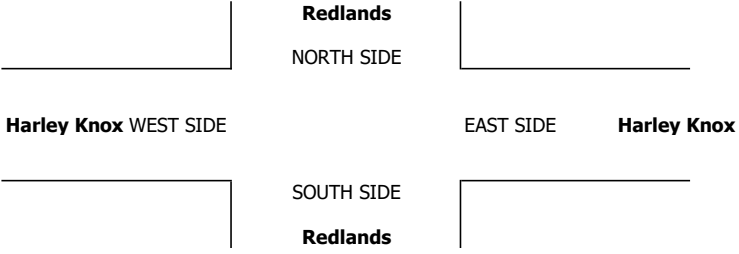
LANES:	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
	Redlands			Redlands			Harley Knox			Harley Knox			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	

U-TURNS				
NB	SB	EB	WB	TTL

<b>AM</b>	7:00 AM	0	0	0	0	0	0	0	1	0	0	0	1	<b>PM</b>	
	7:15 AM	1	0	0	0	0	0	0	0	0	0	0	1		
	7:30 AM	1	0	0	0	0	0	0	0	0	0	0	1		
	7:45 AM	1	0	0	0	0	0	0	0	0	0	0	1		
	8:00 AM	0	0	0	0	0	0	0	0	1	0	0	1		
	8:15 AM	1	0	0	0	0	0	0	0	0	0	0	1		
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0		
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0		
	VOLUMES	4	0	0	0	0	0	0	0	2	0	0	0		6
	APPROACH %	100%	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	0%		0%
APP/DEPART	4	/	0	0	/	2	2	/	0	0	/	4	0		
BEGIN PEAK HR	7:00 AM														
VOLUMES	3	0	0	0	0	0	0	0	1	0	0	0	4		
APPROACH %	100%	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%		
PEAK HR FACTOR	0.750			0.000			0.250			0.000			1.000		
APP/DEPART	3	/	0	0	/	1	1	/	0	0	/	3	0		
4:00 PM	0	0	0	0	0	0	1	0	0	0	0	0	1		
4:15 PM	0	0	0	0	0	0	0	0	1	0	0	0	1		
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0		
4:45 PM	1	0	0	0	0	0	0	0	0	0	0	0	1		
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0		
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0		
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0		
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0		
VOLUMES	1	0	0	0	0	0	1	0	1	0	0	0	3		
APPROACH %	100%	0%	0%	0%	0%	0%	50%	0%	50%	0%	0%	0%	0%		
APP/DEPART	1	/	0	0	/	1	2	/	0	0	/	2	0		
BEGIN PEAK HR	4:00 PM														
VOLUMES	1	0	0	0	0	0	0	0	1	0	0	0	3		
APPROACH %	100%	0%	0%	0%	0%	0%	0%	0%	50%	0%	0%	0%	0%		
PEAK HR FACTOR	0.250			0.000			0.500			0.000			0.750		
APP/DEPART	1	/	0	0	/	1	2	/	0	0	/	2	0		

0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

0	0	1	0	1
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	1	0	1



### INTERSECTION TURNING MOVEMENT COUNTS

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

<b>DATE:</b> Tue, Apr 12, 22	LOCATION: NORTH & SOUTH: EAST & WEST:	Perris Redlands Nance	PROJECT #: LOCATION #: CONTROL:	SC3375 3 STOP E/W
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NOTES:	AM PM MD OTHER OTHER	▲ N ▼	◀ W ▶	E ▶
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Add U-Turns to Left Turns

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL	U-TURNS				
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR		NB	SB	EB	WB	TTL
LANES:	1	2	0	1	2	0	1	1	0	0	0	1	0	0	0	0	0	0
7:00 AM	1	136	0	0	28	4	1	0	2	0	0	0	0	0	0	0	0	
7:15 AM	0	163	0	0	21	1	0	0	4	0	0	0	0	0	0	0	0	
7:30 AM	5	151	0	0	32	1	0	0	0	0	0	0	0	0	0	0	0	
7:45 AM	0	134	0	0	28	1	1	0	1	0	0	0	0	0	0	0	0	
8:00 AM	3	100	0	0	26	0	2	0	2	0	0	0	0	0	0	0	0	
8:15 AM	0	71	0	0	18	1	1	0	1	0	0	0	0	0	0	0	0	
8:30 AM	1	62	0	0	21	1	0	0	1	0	0	0	0	0	0	0	0	
8:45 AM	0	44	0	0	20	1	0	0	0	0	0	0	0	0	0	0	1	
VOLUMES	10	861	0	0	194	10	5	0	11	0	0	0	0	0	0	0	1,092	
APPROACH %	1%	99%	0%	0%	95%	5%	31%	0%	69%	0%	0%	0%	0%	0%	0%	0%	0	
APP/DEPART	871	/	867	205	/	205	16	/	0	0	/	20	0				0	
BEGIN PEAK HR	7:00 AM																	
VOLUMES	6	584	0	0	109	7	2	0	7	0	0	0	0	0	0	0	715	
APPROACH %	1%	99%	0%	0%	94%	6%	22%	0%	78%	0%	0%	0%	0%	0%	0%	0%	0	
PEAK HR FACTOR	0.905			0.879			0.563			0.000			0.946					
APP/DEPART	590	/	586	116	/	116	9	/	0	0	/	13	0				0	
4:00 PM	2	47	0	0	55	1	1	0	0	0	0	0	0	0	0	0	106	
4:15 PM	0	36	0	0	84	1	1	0	2	0	0	0	0	0	0	0	124	
4:30 PM	2	57	0	0	94	1	0	0	2	0	0	0	0	0	0	0	156	
4:45 PM	1	36	0	0	54	0	1	0	0	0	0	0	0	0	0	0	92	
5:00 PM	3	29	0	0	63	0	2	0	2	0	0	0	0	0	0	0	99	
5:15 PM	0	38	0	0	66	2	1	0	2	0	0	0	0	0	0	0	109	
5:30 PM	1	37	0	0	72	0	0	0	0	0	0	0	0	0	0	0	110	
5:45 PM	2	39	0	0	53	1	1	0	0	0	0	0	0	0	0	0	96	
VOLUMES	11	319	0	0	541	6	7	0	8	0	0	0	0	0	0	0	894	
APPROACH %	3%	97%	0%	0%	99%	1%	47%	0%	53%	0%	0%	0%	0%	0%	0%	0%	0	
APP/DEPART	330	/	328	549	/	549	15	/	0	0	/	17	0				0	
BEGIN PEAK HR	4:00 PM																	
VOLUMES	5	176	0	0	287	3	3	0	4	0	0	0	0	0	0	0	478	
APPROACH %	3%	97%	0%	0%	99%	1%	43%	0%	57%	0%	0%	0%	0%	0%	0%	0%	0	
PEAK HR FACTOR	0.767			0.763			0.583			0.000			0.766					
APP/DEPART	181	/	179	290	/	291	7	/	0	0	/	8	0				0	



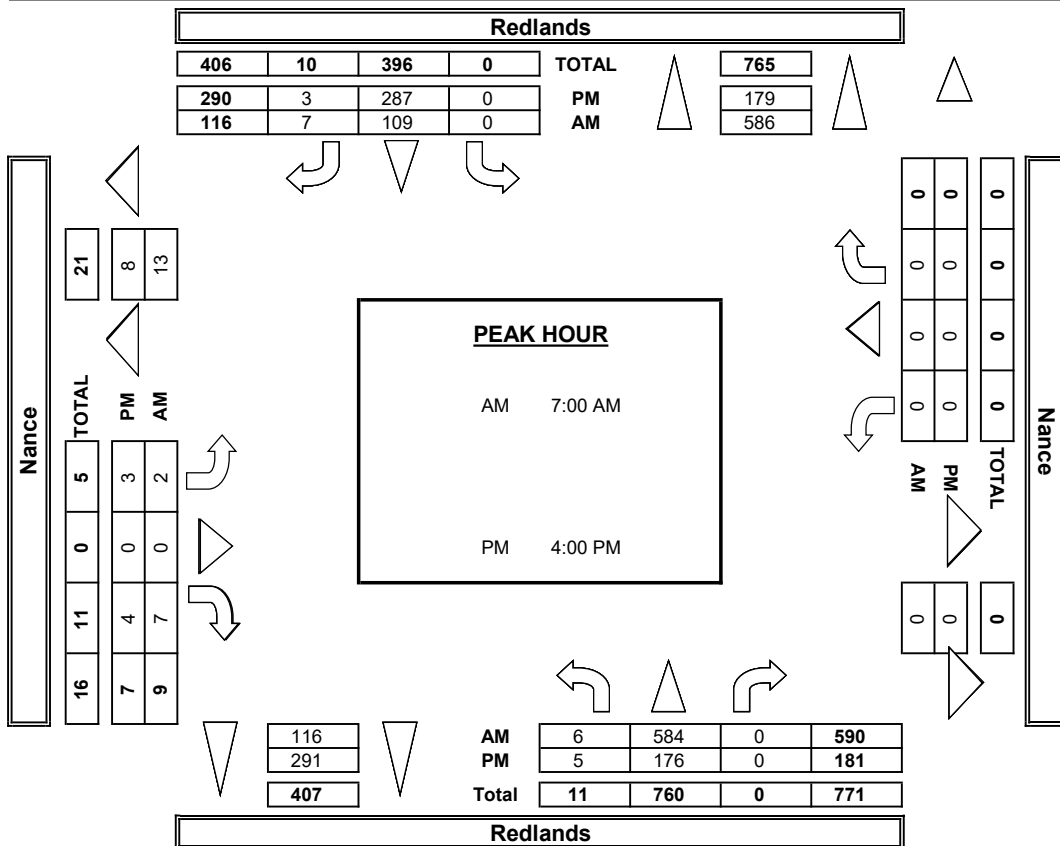
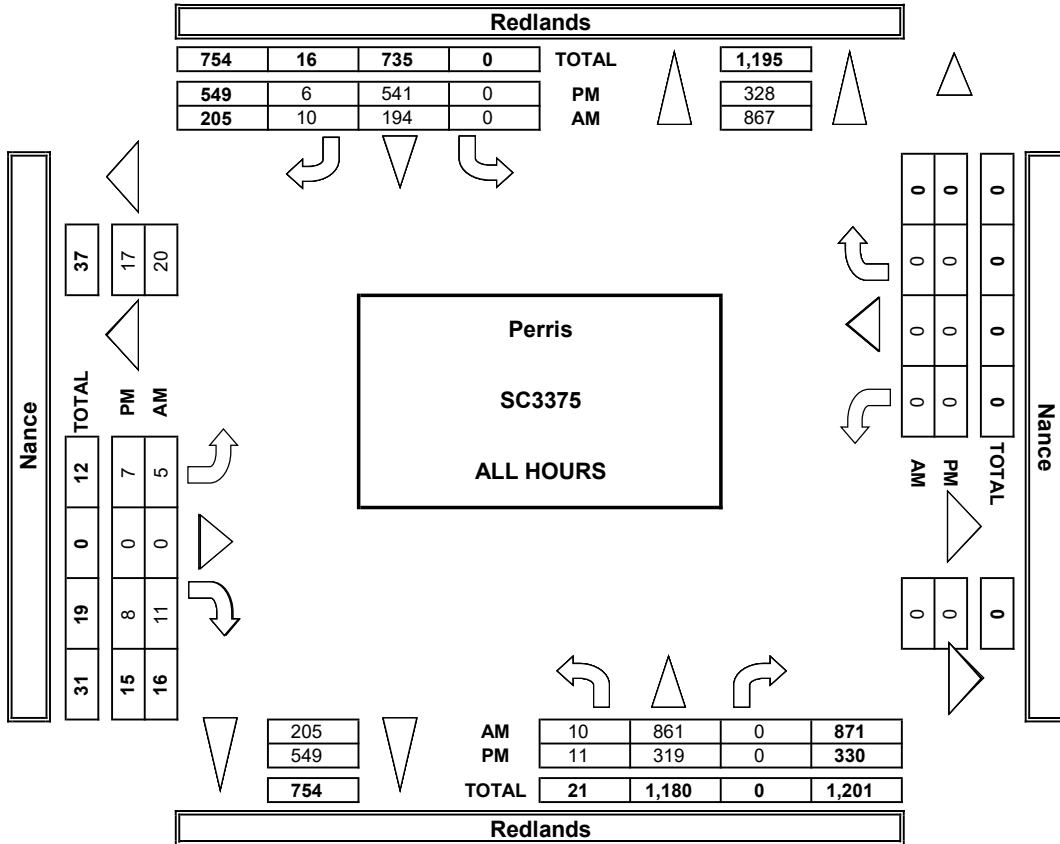
AM	7:00 AM	0	0	0	0	0
	7:15 AM	0	0	0	0	0
	7:30 AM	0	0	0	0	0
	7:45 AM	0	0	1	0	1
	8:00 AM	0	0	0	0	0
	8:15 AM	0	0	0	0	0
	8:30 AM	1	0	0	1	2
	8:45 AM	0	0	0	0	0
TOTAL	1	0	1	1	3	
PM	4:00 PM	0	0	0	0	0
	4:15 PM	0	0	0	0	0
	4:30 PM	0	0	0	0	0
	4:45 PM	0	0	0	0	0
	5:00 PM	0	0	0	0	0
	5:15 PM	0	0	1	1	2
	5:30 PM	0	0	0	0	0
	5:45 PM	0	0	0	0	0
TOTAL	0	0	1	1	2	

ALL PED AND BIKE				
N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	1	0	1
0	0	0	0	0
0	0	0	0	0
1	0	0	1	2
0	0	0	0	0
1	0	1	1	3
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	1	1	2
0	0	0	0	0
0	0	0	0	0
0	0	1	1	2

PEDESTRIAN CROSSINGS				
N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	1	0	1
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	1	0	1
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

BICYCLE CROSSINGS				
NS	SS	ES	WS	TOTAL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
1	0	0	1	2
0	0	0	0	0
1	0	0	1	2
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	1	1	2
0	0	0	0	0
0	0	0	0	0
0	0	1	1	2

**AimTD LLC**  
TURNING MOVEMENT COUNTS



## INTERSECTION TURNING MOVEMENT COUNTS

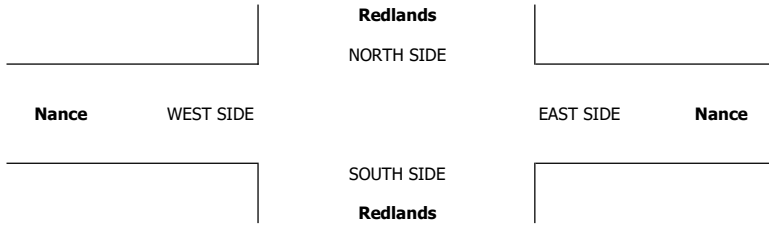
PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: 4/12/22 TUESDAY	LOCATION: NORTH & SOUTH: EAST & WEST:	Perris Redlands Nance	PROJECT #: LOCATION #: CONTROL:	SC3375 3 STOP E/W
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PCE Adjusted	<b>NOTES:</b>						AM PM MD OTHER OTHER	◀ W	▲ N S ▼	E ▶	
	Class	1	2	3	4	5					6
	Factor	1	1.5	2	3	2					2

LANES:	NORTHBOUND <small>Redlands</small>			SOUTHBOUND <small>Redlands</small>			EASTBOUND <small>Nance</small>			WESTBOUND <small>Nance</small>			TOTAL	U-TURNS				
	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 1	ET 1	ER 0	WL 0	WT 1	WR 0		NB	SB	EB	WB	TTL

AM	7:00 AM	1	137	0	0	42	5	2	0	3	0	0	0	190						0
	7:15 AM	0	171	0	0	27	2	0	0	9	0	0	0	208						0
	7:30 AM	5	158	0	0	44	2	0	0	0	0	0	0	209						0
	7:45 AM	0	141	0	0	33	1	3	0	2	0	0	0	179						0
	8:00 AM	4	106	0	0	31	0	5	0	4	0	0	0	150						0
	8:15 AM	0	77	0	0	23	1	3	0	2	0	0	0	106						0
	8:30 AM	1	78	0	0	33	1	0	0	1	0	0	0	114						0
	8:45 AM	0	50	0	0	32	1	0	0	0	0	0	0	83						0
	VOLUMES	11	916	0	0	264	12	13	0	21	0	0	0	1,237						0
APPROACH %	1%	99%	0%	0%	96%	4%	39%	0%	61%	0%	0%	0%							0	
APP/DEPART	927	/	929	276	/	285	34	/	0	0	/	23	0						0	
BEGIN PEAK HR	7:00 AM																			
VOLUMES	6	606	0	0	146	9	5	0	14	0	0	0	785						0	
APPROACH %	1%	99%	0%	0%	94%	6%	27%	0%	73%	0%	0%	0%							0	
PEAK HR FACTOR	0.897				0.831		0.514		0.000				0.941						0	
APP/DEPART	612	/	611	155	/	159	19	/	0	0	/	15	0						0	
PM	4:00 PM	2	50	0	0	59	1	3	0	0	0	0	115						0	
	4:15 PM	0	40	0	0	91	2	3	0	2	0	0	138						0	
	4:30 PM	2	64	0	0	95	1	0	0	2	0	0	164						0	
	4:45 PM	1	42	0	0	56	0	3	0	0	0	0	102						0	
	5:00 PM	4	43	0	0	70	0	3	0	3	0	0	122						0	
	5:15 PM	0	53	0	0	68	2	1	0	2	0	0	126						0	
	5:30 PM	1	41	0	0	73	0	0	0	0	0	0	115						0	
	5:45 PM	3	45	0	0	56	2	1	0	0	0	0	106						0	
	VOLUMES	13	377	0	0	566	8	14	0	9	0	0	0	986						0
APPROACH %	3%	97%	0%	0%	99%	1%	62%	0%	38%	0%	0%	0%							0	
APP/DEPART	390	/	391	574	/	574	23	/	0	0	/	21	0						0	
BEGIN PEAK HR	4:00 PM																			
VOLUMES	5	196	0	0	300	4	9	0	4	0	0	0	517						0	
APPROACH %	2%	98%	0%	0%	99%	1%	69%	0%	31%	0%	0%	0%							0	
PEAK HR FACTOR	0.759				0.795		0.650		0.000				0.791						0	
APP/DEPART	201	/	205	304	/	304	13	/	0	0	/	9	0						0	



## INTERSECTION TURNING MOVEMENT COUNTS

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

<b>DATE:</b> 4/12/22 TUESDAY	LOCATION: NORTH & SOUTH: EAST & WEST:	Perris Redlands Nance	PROJECT #: LOCATION #: CONTROL:	SC3375 3 STOP E/W
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<b>CLASS 1:</b> PASSENGER VEHICLES	<b>NOTES:</b>	AM PM MD OTHER OTHER	◀ W S ▶	▲ N E ▶
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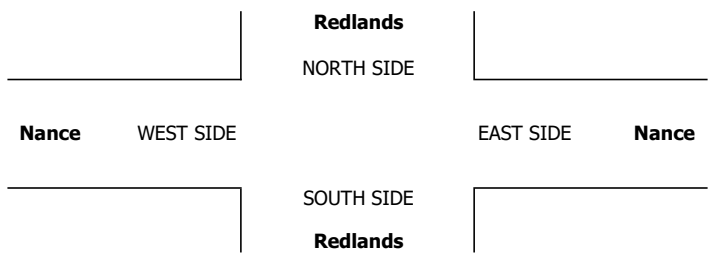
LANES:	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
	Redlands			Redlands			Nance			Nance			
	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 1	ET 1	ER 0	WL 0	WT 1	WR 0	

U-TURNS				
NB	SB	EB	WB	TTL

<b>AM</b>	7:00 AM	1	134	0	0	17	3	0	0	1	0	0	0	156	0	0	0	0	0
	7:15 AM	0	155	0	0	17	0	0	0	1	0	0	0	173	0	0	0	0	0
	7:30 AM	5	143	0	0	24	0	0	0	0	0	0	0	172	0	0	0	0	0
	7:45 AM	0	127	0	0	24	1	0	0	0	0	0	0	152	0	0	0	0	0
	8:00 AM	2	94	0	0	22	0	0	0	1	0	0	0	119	0	0	0	0	0
	8:15 AM	0	67	0	0	14	1	0	0	0	0	0	0	82	0	0	0	0	0
	8:30 AM	1	53	0	0	13	1	0	0	1	0	0	0	69	0	0	0	0	0
	8:45 AM	0	39	0	0	11	1	0	0	0	0	0	0	51	0	1	0	0	1
	VOLUMES	9	812	0	0	142	7	0	0	4	0	0	0	975	0	1	0	0	1
	APPROACH %	1%	99%	0%	0%	95%	5%	0%	0%	100%	0%	0%	0%		0%	0%	0%		
APP/DEPART	821	/	813	150	/	146	4	/	0	0	/	16	0						
BEGIN PEAK HR	7:00 AM																		
VOLUMES	6	559	0	0	82	4	0	0	2	0	0	0	653	0	0	0	0	0	
APPROACH %	1%	99%	0%	0%	95%	5%	0%	0%	100%	0%	0%	0%		0%	0%	0%			
PEAK HR FACTOR	0.911			0.860			0.500			0.000			0.944						
APP/DEPART	565	/	559	86	/	84	2	/	0	0	/	10	0						
<b>PM</b>	4:00 PM	2	45	0	0	51	1	0	0	0	0	0	99	0	0	0	0	0	
	4:15 PM	0	34	0	0	78	0	0	0	2	0	0	114	0	0	0	0	0	
	4:30 PM	2	53	0	0	93	1	0	0	2	0	0	151	0	0	0	0	0	
	4:45 PM	1	32	0	0	51	0	0	0	0	0	0	84	0	0	0	0	0	
	5:00 PM	2	19	0	0	56	0	1	0	1	0	0	79	0	0	0	0	0	
	5:15 PM	0	30	0	0	65	2	1	0	2	0	0	100	0	0	0	0	0	
	5:30 PM	1	34	0	0	70	0	0	0	0	0	0	105	0	2	0	0	2	
	5:45 PM	1	35	0	0	51	0	1	0	0	0	0	88	0	0	0	0	0	
	VOLUMES	9	282	0	0	515	4	3	0	7	0	0	0	822	0	2	0	0	2
	APPROACH %	3%	97%	0%	0%	99%	1%	30%	0%	70%	0%	0%	0%		0%	0%	0%		
APP/DEPART	291	/	287	521	/	522	10	/	0	0	/	13	0						
BEGIN PEAK HR	4:00 PM																		
VOLUMES	5	164	0	0	273	2	0	0	4	0	0	0	448	0	0	0	0	0	
APPROACH %	3%	97%	0%	0%	99%	1%	0%	0%	100%	0%	0%	0%		0%	0%	0%			
PEAK HR FACTOR	0.768			0.731			0.500			0.000			0.742						
APP/DEPART	169	/	164	275	/	277	4	/	0	0	/	7	0						

0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	1	0	0	1
0	1	0	0	1

0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	2	0	0	2
0	0	0	0	0
0	2	0	0	2



## INTERSECTION TURNING MOVEMENT COUNTS

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

DATE: 4/12/22 TUESDAY	LOCATION: NORTH & SOUTH: EAST & WEST:	Perris Redlands Nance	PROJECT #: LOCATION #: CONTROL:	SC3375 3 STOP E/W
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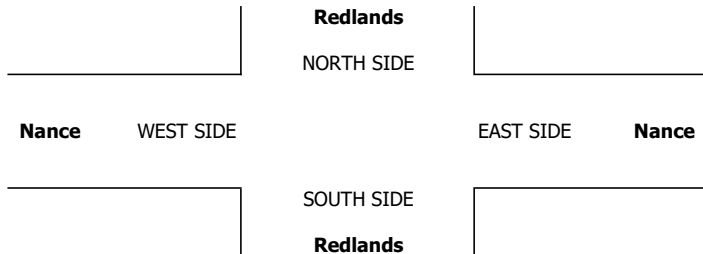
<b>CLASS 2:</b> 2-AXLE WORK VEHICLES/ TRUCKS	<b>NOTES:</b>	AM PM MD OTHER OTHER	▲ N ◀ W S ▶ E ▼
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LANES:	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
	Redlands			Redlands			Nance			Nance			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	1	2	0	1	2	0	1	1	0	0	1	0	

U-TURNS				
NB	SB	EB	WB	TTL
0	0	0	0	0

<b>AM</b>	7:00 AM	0	2	0	0	2	1	0	0	0	0	0	0	5	0	0	0	0	0
	7:15 AM	0	5	0	0	1	0	0	0	0	0	0	0	6	0	0	0	0	0
	7:30 AM	0	4	0	0	2	1	0	0	0	0	0	0	7	0	0	0	0	0
	7:45 AM	0	3	0	0	2	0	0	0	0	1	0	0	6	0	0	0	0	0
	8:00 AM	0	4	0	0	1	0	0	0	0	0	0	0	5	0	0	0	0	0
	8:15 AM	0	1	0	0	2	0	0	0	0	0	0	0	3	0	0	0	0	0
	8:30 AM	0	1	0	0	2	0	0	0	0	0	0	0	3	0	0	0	0	0
	8:45 AM	0	2	0	0	2	0	0	0	0	0	0	0	4	0	0	0	0	0
	VOLUMES	0	22	0	0	14	2	0	0	1	0	0	0	39	0	0	0	0	0
	APPROACH %	0%	100%	0%	0%	88%	13%	0%	0%	100%	0%	0%	0%		0	0	0	0	0
APP/DEPART	22	/	22	16	/	15	1	/	0	0	/	2	0						
BEGIN PEAK HR	7:00 AM																		
VOLUMES	0	14	0	0	7	2	0	0	1	0	0	0	24						
APPROACH %	0%	100%	0%	0%	78%	22%	0%	0%	100%	0%	0%	0%							
PEAK HR FACTOR	0.700			0.750			0.250			0.000			0.857						
APP/DEPART	14	/	14	9	/	8	1	/	0	0	/	2	0						
<b>PM</b>	4:00 PM	0	0	0	0	3	0	0	0	0	0	0	3	0	0	0	0	0	
	4:15 PM	0	0	0	0	3	0	0	0	0	0	0	3	0	0	0	0	0	
	4:30 PM	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	
	4:45 PM	0	1	0	0	2	0	0	0	0	0	0	3	0	0	0	0	0	
	5:00 PM	0	1	0	0	5	0	0	0	1	0	0	7	0	0	0	0	0	
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	5:30 PM	0	0	0	0	2	0	0	0	0	0	0	2	0	0	0	0	0	
	5:45 PM	0	1	0	0	1	0	0	0	0	0	0	2	0	0	0	0	0	
	VOLUMES	0	3	0	0	17	0	0	0	1	0	0	0	21	0	0	0	0	
	APPROACH %	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%	0%			0	0	0	0	
APP/DEPART	3	/	3	17	/	18	1	/	0	0	/	0	0						
BEGIN PEAK HR	4:00 PM																		
VOLUMES	0	1	0	0	9	0	0	0	0	0	0	0	10						
APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%								
PEAK HR FACTOR	0.250			0.750			0.000			0.000			0.833						
APP/DEPART	1	/	1	9	/	9	0	/	0	0	/	0	0						

0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0



## INTERSECTION TURNING MOVEMENT COUNTS

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

<b>DATE:</b> 4/12/22 TUESDAY	LOCATION: NORTH & SOUTH: EAST & WEST:	Perris Redlands Nance	PROJECT #: LOCATION #: CONTROL:	SC3375 3 STOP E/W
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<b>CLASS 3:</b> 3-AXLE TRUCKS	<b>NOTES:</b>	AM PM MD OTHER OTHER	◀ W	▲ N S ▼	E ▶
-------------------------------------	---------------	----------------------------------	-----	---------------	-----

LANES:	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
	Redlands			Redlands			Nance			Nance			
	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 1	ET 1	ER 0	WL 0	WT 1	WR 0	

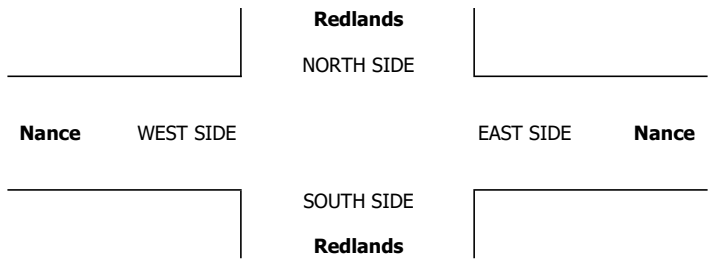
U-TURNS				
NB	SB	EB	WB	TTL

<b>AM</b>	7:00 AM	0	0	0	0	5	0	1	0	1	0	0	0	7
	7:15 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
	7:30 AM	0	2	0	0	1	0	0	0	0	0	0	0	3
	7:45 AM	0	2	0	0	0	0	0	0	0	0	0	0	2
	8:00 AM	0	0	0	0	1	0	1	0	0	0	0	0	2
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	1	0	0	1	0	0	0	0	0	0	0	2
	8:45 AM	0	1	0	0	3	0	0	0	0	0	0	0	4
	VOLUMES	0	6	0	0	12	0	2	0	1	0	0	0	21
	APPROACH %	0%	100%	0%	0%	100%	0%	67%	0%	33%	0%	0%	0%	
APP/DEPART	6	/	8	12	/	13	3	/	0	0	/	0	0	
BEGIN PEAK HR	7:00 AM													
VOLUMES	0	4	0	0	7	0	1	0	1	0	0	0	13	
APPROACH %	0%	100%	0%	0%	100%	0%	50%	0%	50%	0%	0%	0%		
PEAK HR FACTOR	0.500			0.350			0.250			0.000			0.464	
APP/DEPART	4	/	5	7	/	8	2	/	0	0	/	0	0	

0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

<b>PM</b>	4:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
	4:15 PM	0	0	0	0	0	1	0	0	0	0	0	0	1
	4:30 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
	4:45 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
	5:00 PM	1	5	0	0	0	0	1	0	0	0	0	0	7
	5:15 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
	5:30 PM	0	2	0	0	0	0	0	0	0	0	0	0	2
	5:45 PM	1	1	0	0	0	1	0	0	0	0	0	0	3
	VOLUMES	2	11	0	0	1	2	1	0	0	0	0	0	17
	APPROACH %	15%	85%	0%	0%	33%	67%	100%	0%	0%	0%	0%	0%	
APP/DEPART	13	/	12	3	/	1	1	/	0	0	/	4	0	
BEGIN PEAK HR	4:00 PM													
VOLUMES	0	2	0	0	1	1	0	0	0	0	0	0	4	
APPROACH %	0%	100%	0%	0%	50%	50%	0%	0%	0%	0%	0%	0%		
PEAK HR FACTOR	0.500			0.500			0.000			0.000			1.000	
APP/DEPART	2	/	2	2	/	1	0	/	0	0	/	1	0	

0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0



### INTERSECTION TURNING MOVEMENT COUNTS

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

<b>DATE:</b> 4/12/22 TUESDAY	LOCATION: NORTH & SOUTH: EAST & WEST:	Perris Redlands Nance	PROJECT #: LOCATION #: CONTROL:	SC3375 3 STOP E/W
<b>CLASS 4:</b> 4 OR MORE AXLE TRUCKS	<b>NOTES:</b>		AM PM MD OTHER OTHER	▲ N ◀ W      E ▶ S ▼

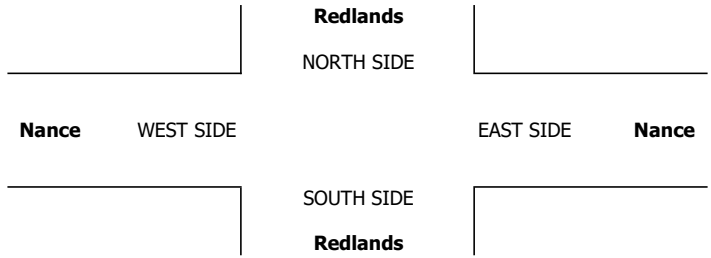
LANES:	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
	Redlands			Redlands			Nance			Nance			
	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 1	ET 1	ER 0	WL 0	WT 1	WR 0	

U-TURNS				
NB	SB	EB	WB	TTL

AM	7:00 AM	0	0	0	0	4	0	0	0	0	0	0	4	
	7:15 AM	0	2	0	0	2	0	0	2	0	0	0	6	
	7:30 AM	0	1	0	0	5	0	0	0	0	0	0	6	
	7:45 AM	0	1	0	0	2	0	1	0	0	0	0	4	
	8:00 AM	0	2	0	0	1	0	1	0	1	0	0	5	
	8:15 AM	0	2	0	0	2	0	1	0	0	0	0	5	
	8:30 AM	0	7	0	0	5	0	0	0	0	0	0	12	
	8:45 AM	0	2	0	0	4	0	0	0	0	0	0	6	
	VOLUMES	0	17	0	0	25	0	3	0	3	0	0	0	48
	APPROACH %	0%	100%	0%	0%	100%	0%	50%	0%	50%	0%	0%	0%	
APP/DEPART	17	/	20	25	/	28	6	/	0	0	/	0	0	
BEGIN PEAK HR	7:00 AM													
VOLUMES	0	4	0	0	13	0	1	0	2	0	0	0	20	
APPROACH %	0%	100%	0%	0%	100%	0%	33%	0%	67%	0%	0%	0%		
PEAK HR FACTOR	0.500			0.650			0.375			0.000			0.833	
APP/DEPART	4	/	5	13	/	15	3	/	0	0	/	0	0	
PM	4:00 PM	0	1	0	0	1	0	0	0	0	0	0	3	
	4:15 PM	0	2	0	0	2	0	1	0	0	0	0	5	
	4:30 PM	0	3	0	0	0	0	0	0	0	0	0	3	
	4:45 PM	0	2	0	0	0	0	1	0	0	0	0	3	
	5:00 PM	0	4	0	0	2	0	0	0	0	0	0	6	
	5:15 PM	0	7	0	0	1	0	0	0	0	0	0	8	
	5:30 PM	0	1	0	0	0	0	0	0	0	0	0	1	
	5:45 PM	0	2	0	0	1	0	0	0	0	0	0	3	
	VOLUMES	0	22	0	0	7	0	3	0	0	0	0	0	32
	APPROACH %	0%	100%	0%	0%	100%	0%	100%	0%	0%	0%	0%	0%	
APP/DEPART	22	/	25	7	/	7	3	/	0	0	/	0	0	
BEGIN PEAK HR	4:00 PM													
VOLUMES	0	8	0	0	3	0	3	0	0	0	0	0	14	
APPROACH %	0%	100%	0%	0%	100%	0%	100%	0%	0%	0%	0%	0%		
PEAK HR FACTOR	0.667			0.375			0.750			0.000			0.700	
APP/DEPART	8	/	11	3	/	3	3	/	0	0	/	0	0	

0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
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0	0	0	0	0
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0	0	0	0	0

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0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0



## INTERSECTION TURNING MOVEMENT COUNTS

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

<b>DATE:</b> 4/12/22 TUESDAY	LOCATION: NORTH & SOUTH: EAST & WEST:	Perris Redlands Nance	PROJECT #: LOCATION #: CONTROL:	SC3375 3 STOP E/W																				
<b>CLASS 5:</b> RV	<b>NOTES:</b>		<table border="1" style="margin: auto;"> <tr><td>AM</td><td></td><td>▲</td><td></td></tr> <tr><td>PM</td><td></td><td>N</td><td></td></tr> <tr><td>MD</td><td>◀ W</td><td></td><td>E ▶</td></tr> <tr><td>OTHER</td><td></td><td>S</td><td></td></tr> <tr><td>OTHER</td><td></td><td>▼</td><td></td></tr> </table>	AM		▲		PM		N		MD	◀ W		E ▶	OTHER		S		OTHER		▼		
AM		▲																						
PM		N																						
MD	◀ W		E ▶																					
OTHER		S																						
OTHER		▼																						

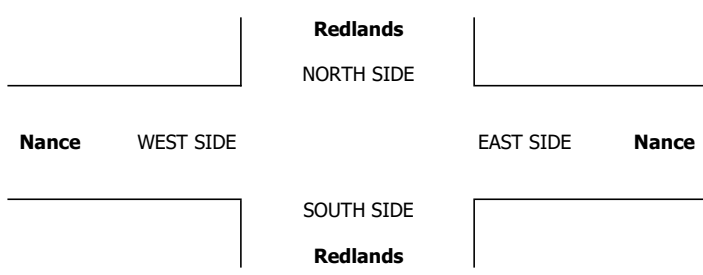
LANES:	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
	Redlands			Redlands			Nance			Nance			
	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 1	ET 1	ER 0	WL 0	WT 1	WR 0	

U-TURNS				
NB	SB	EB	WB	TTL

<b>AM</b>	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	
BEGIN PEAK HR	7:00 AM												
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
PEAK HR FACTOR	0.000			0.000			0.000			0.000			0.000
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	
<b>PM</b>	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	
BEGIN PEAK HR	4:00 PM												
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
PEAK HR FACTOR	0.000			0.000			0.000			0.000			0.000
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	

0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
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0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0



## INTERSECTION TURNING MOVEMENT COUNTS

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

DATE: 4/12/22 TUESDAY	LOCATION: NORTH & SOUTH: EAST & WEST:	Perris Redlands Nance	PROJECT #: LOCATION #: CONTROL:	SC3375 3 STOP E/W
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<b>CLASS 6:</b>	<b>NOTES:</b>	AM PM MD OTHER OTHER	◀ W E ▶	▲ N S ▼
BUSES				

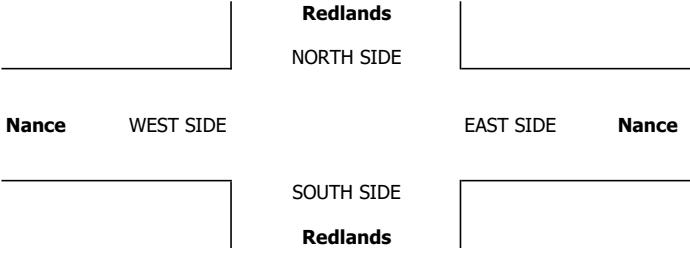
LANES:	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
	Redlands			Redlands			Nance			Nance			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	

U-TURNS				
NB	SB	EB	WB	TTL

<b>AM</b>	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	1	0	0	0	1	0	0	1	0	0	0	3
	7:30 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
	7:45 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
	8:00 AM	1	0	0	0	1	0	0	0	0	0	0	0	2
	8:15 AM	0	1	0	0	0	0	0	0	1	0	0	0	2
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	1	4	0	0	1	1	0	0	2	0	0	0	9
	APPROACH %	20%	80%	0%	0%	50%	50%	0%	0%	100%	0%	0%	0%	
APP/DEPART	5	/	4	2	/	3	2	/	0	0	/	2	0	
BEGIN PEAK HR	7:00 AM													
VOLUMES	0	3	0	0	0	1	0	0	1	0	0	0	5	
APPROACH %	0%	100%	0%	0%	0%	100%	0%	0%	100%	0%	0%	0%		
PEAK HR FACTOR	0.750			0.250			0.250			0.000			0.417	
APP/DEPART	3	/	3	1	/	1	1	/	0	0	/	1	0	
<b>PM</b>	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	
	4:15 PM	0	0	0	0	1	0	0	0	0	0	0	1	
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	
	4:45 PM	0	1	0	0	0	0	0	0	0	0	0	1	
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	
	VOLUMES	0	1	0	0	1	0	0	0	0	0	0	0	2
	APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	
APP/DEPART	1	/	1	1	/	1	0	/	0	0	/	0	0	
BEGIN PEAK HR	4:00 PM													
VOLUMES	0	1	0	0	1	0	0	0	0	0	0	0	2	
APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%		
PEAK HR FACTOR	0.250			0.250			0.000			0.000			0.500	
APP/DEPART	1	/	1	1	/	1	0	/	0	0	/	0	0	

0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
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0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
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### INTERSECTION TURNING MOVEMENT COUNTS

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

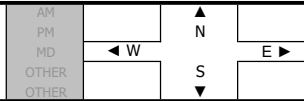
**DATE:**  
Tue, Apr 12, 22

**LOCATION:**  
NORTH & SOUTH:  
EAST & WEST:

Perris  
Redlands  
Ramona

**PROJECT #:** SC3375  
**LOCATION #:** 4  
**CONTROL:** SIGNAL

NOTES:



Add U-Turns to Left Turns

LANES:	NORTHBOUND <small>Redlands</small>			SOUTHBOUND <small>Redlands</small>			EASTBOUND <small>Ramona</small>			WESTBOUND <small>Ramona</small>			TOTAL
	NL 1	NT 1	NR 0	SL 1	ST 1	SR 1	EL 1	ET 3	ER 1	WL 1	WT 3	WR 1	

U-TURNS				
NB	SB	EB	WB	TTL

<b>AM</b>	7:00 AM	9	25	14	25	5	6	4	173	7	8	278	136	690
	7:15 AM	11	48	40	19	5	2	3	143	7	17	284	136	715
	7:30 AM	10	50	32	21	5	2	5	159	10	15	288	135	732
	7:45 AM	11	47	35	22	15	1	6	169	10	31	275	106	728
	8:00 AM	7	26	20	25	12	3	2	202	9	27	265	66	664
	8:15 AM	8	14	24	17	6	1	5	171	12	17	269	71	615
	8:30 AM	7	12	15	23	5	7	6	155	16	17	239	47	549
	8:45 AM	6	11	8	14	9	1	9	163	12	9	205	39	486
	VOLUMES	69	233	188	166	62	23	40	1,335	83	141	2,103	736	5,179
	APPROACH %	14%	48%	38%	66%	25%	9%	3%	92%	6%	5%	71%	25%	
APP/DEPART	490	/	1,002	251	/	283	1,458	/	1,692	2,980	/	2,202	0	
BEGIN PEAK HR	7:00 AM													
VOLUMES	41	170	121	87	30	11	18	644	34	71	1,125	513	2,865	
APPROACH %	12%	51%	36%	68%	23%	9%	3%	93%	5%	4%	66%	30%		
PEAK HR FACTOR	0.838													
APP/DEPART	332	/	696	128	/	132	696	/	855	1,709	/	1,182	0	
<b>PM</b>	4:00 PM	12	10	18	62	22	7	5	271	15	18	245	48	733
	4:15 PM	12	8	20	82	26	2	8	275	22	8	239	38	740
	4:30 PM	6	11	13	72	22	3	5	333	15	20	248	40	788
	4:45 PM	9	12	20	70	17	3	8	296	20	14	209	24	702
	5:00 PM	4	6	14	54	17	8	5	370	30	16	234	35	793
	5:15 PM	2	6	16	61	17	4	4	333	15	18	218	24	718
	5:30 PM	7	11	18	67	17	3	2	324	19	9	253	41	771
	5:45 PM	4	8	11	62	5	5	8	363	11	13	221	43	754
	VOLUMES	56	72	130	530	143	35	45	2,565	147	116	1,867	293	5,999
	APPROACH %	22%	28%	50%	75%	20%	5%	2%	93%	5%	5%	82%	13%	
APP/DEPART	258	/	399	708	/	403	2,757	/	3,228	2,276	/	1,969	0	
BEGIN PEAK HR	5:00 PM													
VOLUMES	17	31	59	244	56	20	19	1,390	75	56	926	143	3,036	
APPROACH %	16%	29%	55%	76%	18%	6%	1%	94%	5%	5%	82%	13%		
PEAK HR FACTOR	0.743													
APP/DEPART	107	/	188	320	/	187	1,484	/	1,693	1,125	/	968	0	

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

0	0	2	0	2
0	0	1	0	1
0	0	0	1	1
0	0	3	2	5
0	0	1	0	1
0	0	1	0	1
0	0	0	0	0
0	0	3	0	3
0	0	11	3	14



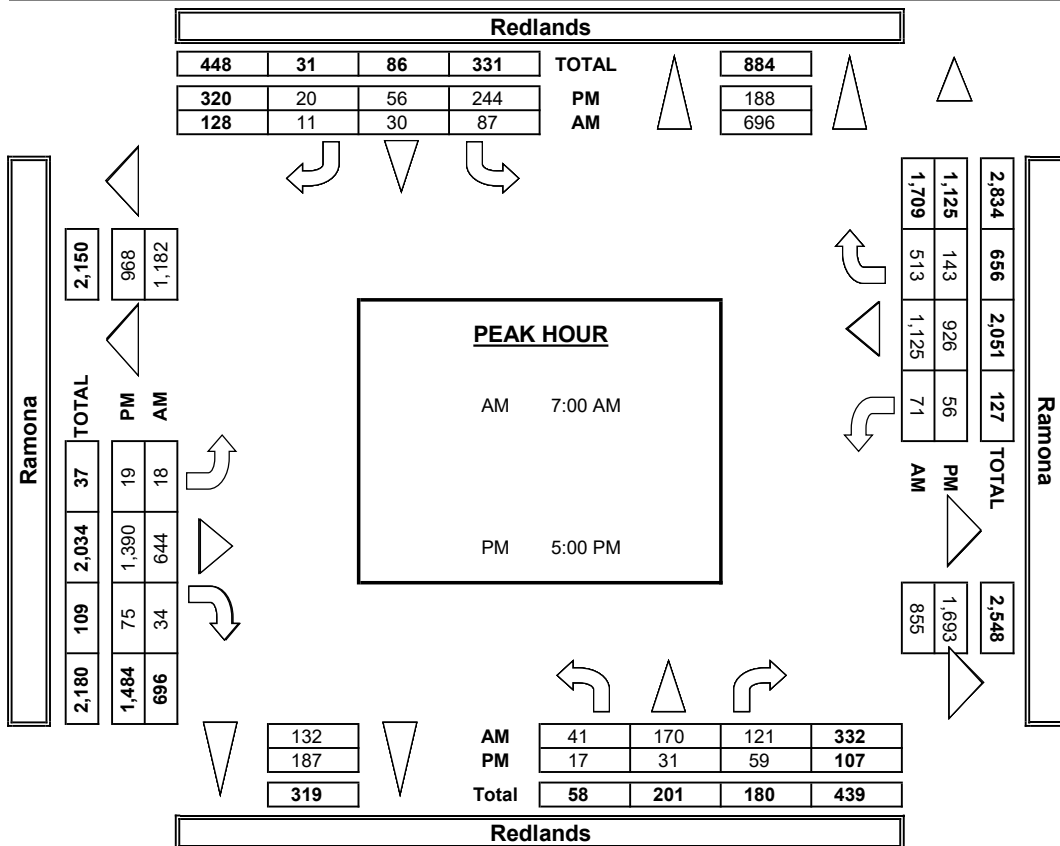
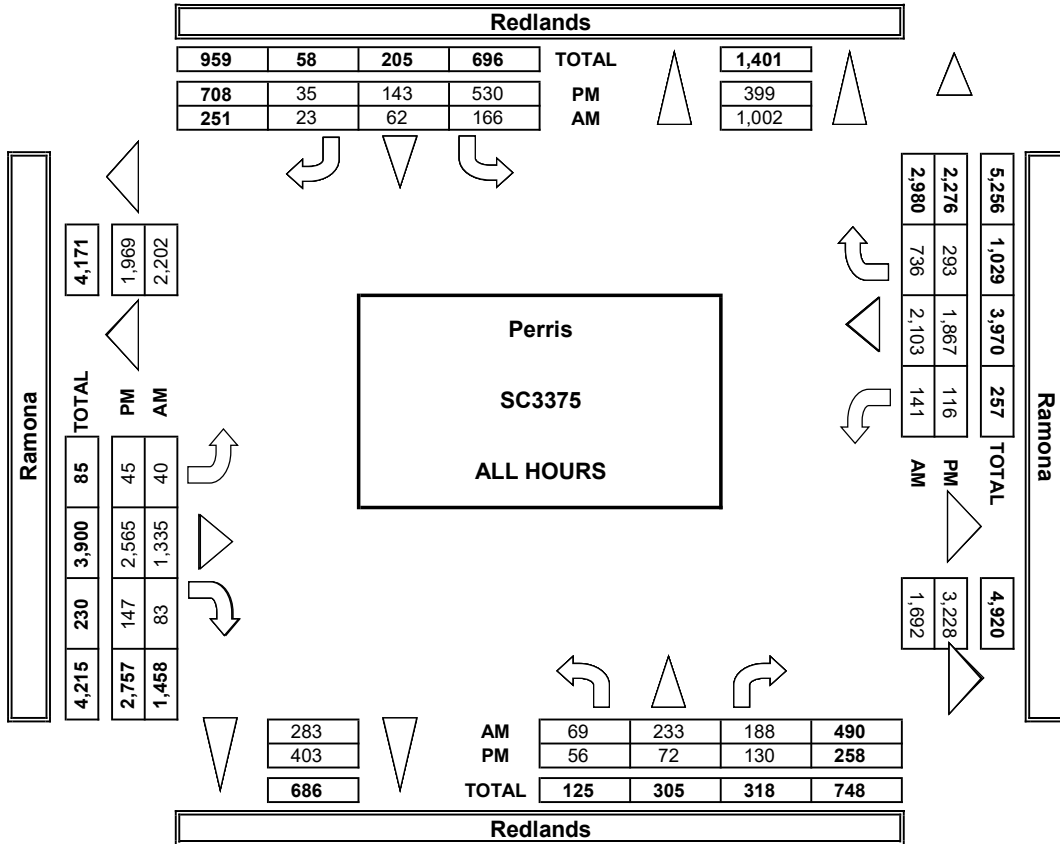
<b>AM</b>	7:00 AM	0	0	0	0	0
	7:15 AM	0	0	0	0	0
	7:30 AM	0	0	0	0	0
	7:45 AM	0	1	0	0	1
	8:00 AM	0	2	0	0	2
	8:15 AM	0	1	0	0	1
	8:30 AM	0	2	0	0	2
	8:45 AM	0	1	0	0	1
TOTAL	0	7	0	0	7	
<b>PM</b>	4:00 PM	0	1	0	0	1
	4:15 PM	1	0	0	0	1
	4:30 PM	0	0	0	1	1
	4:45 PM	0	1	1	0	2
	5:00 PM	1	2	0	0	3
	5:15 PM	1	0	0	0	1
	5:30 PM	0	0	0	1	1
	5:45 PM	0	1	1	0	2
TOTAL	3	5	2	2	12	

ALL PED AND BIKE				
N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	1	0	0	1
0	2	0	0	2
0	1	0	0	1
0	2	0	0	2
0	1	0	0	1
0	7	0	0	7
0	1	0	0	1
1	0	0	0	1
0	0	0	1	1
0	1	1	0	2
1	2	0	0	3
1	0	0	0	1
0	0	0	1	1
0	1	1	0	2
3	5	2	2	12

PEDESTRIAN CROSSINGS				
N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	1	0	0	1
0	1	0	0	1
0	1	0	0	1
0	1	0	0	1
0	1	0	0	1
0	3	0	0	3
0	1	0	0	1
0	0	0	0	0
0	0	0	0	0
0	0	1	0	1
1	1	0	0	2
0	0	0	0	0
0	0	0	0	0
0	1	1	0	2
1	3	2	0	6

BICYCLE CROSSINGS				
NS	SS	ES	WS	TOTAL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	1	0	0	1
0	1	0	0	1
0	1	0	0	1
0	1	0	0	1
0	0	0	0	0
0	4	0	0	4
0	0	0	0	0
1	0	0	0	1
0	0	0	1	1
0	1	0	0	1
0	1	0	0	1
0	0	0	1	1
0	0	0	0	0
2	2	0	2	6

**AimTD LLC**  
TURNING MOVEMENT COUNTS



**INTERSECTION TURNING MOVEMENT COUNTS**

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

DATE: 4/12/22 TUESDAY	LOCATION: NORTH & SOUTH: EAST & WEST:	Perris Redlands Ramona	PROJECT #: LOCATION #: CONTROL:	SC3375 4 SIGNAL
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PCE Adjusted	<b>NOTES:</b>												AM PM MD OTHER OTHER	▲ N S ▼	◀ W E ▶
	Class	1	2	3	4	5	6								
	Factor	1	1.5	2	3	2	2								

LANES:	NORTHBOUND Redlands			SOUTHBOUND Redlands			EASTBOUND Ramona			WESTBOUND Ramona			TOTAL	U-TURNS				
	NL 1	NT 1	NR 0	SL 1	ST 1	SR 1	EL 1	ET 3	ER 1	WL 1	WT 3	WR 1		NB	SB	EB	WB	TTL

AM	7:00 AM	10	25	14	32	9	10	4	186	9	13	297	138	746					0	
	7:15 AM	14	53	43	22	7	4	5	152	10	20	295	142	764					0	
	7:30 AM	11	57	33	24	10	2	7	178	12	16	299	139	785					0	
	7:45 AM	11	50	37	23	21	1	6	194	11	32	300	109	792					0	
	8:00 AM	9	31	20	27	17	3	2	232	13	30	278	67	727					0	
	8:15 AM	8	21	27	18	9	1	6	188	13	18	289	73	668					0	
	8:30 AM	9	17	15	25	11	12	9	168	21	19	257	47	608					0	
	8:45 AM	6	13	9	16	15	1	15	179	13	9	221	43	540					0	
	VOLUMES	77	265	198	184	98	34	54	1,475	100	154	2,234	756	5,627	0	0	0	0	0	
APPROACH %	14%	49%	37%	58%	31%	11%	3%	91%	6%	5%	71%	24%								
APP/DEPART	539	/	1,074	316	/	352	1,629	/	1,857	3,144	/	2,345	0							
BEGIN PEAK HR	7:00 AM																			
VOLUMES	45	184	127	100	46	17	22	709	41	79	1,190	527	3,085							
APPROACH %	13%	52%	36%	61%	28%	10%	3%	92%	5%	4%	66%	29%								
PEAK HR FACTOR	0.812			0.797			0.917			0.985			0.974							
APP/DEPART	356	/	733	163	/	166	772	/	935	1,795	/	1,252	0							
PM	4:00 PM	13	11	19	66	23	8	5	289	15	19	257	52	775					0	
	4:15 PM	14	8	20	86	30	4	10	283	25	9	259	46	792					0	
	4:30 PM	7	12	14	75	22	3	6	348	20	21	258	41	824					0	
	4:45 PM	9	13	21	72	18	6	9	306	28	16	226	28	749					0	
	5:00 PM	4	10	15	57	18	9	5	385	34	19	243	45	842					0	
	5:15 PM	2	8	17	62	19	4	4	353	19	20	225	32	764					0	
	5:30 PM	7	11	21	68	20	3	4	339	21	10	264	42	808					0	
	5:45 PM	4	12	13	64	5	8	11	377	13	14	230	44	792					0	
	VOLUMES	59	84	137	548	155	44	53	2,679	173	125	1,960	329	6,343	0	0	0	0	0	
APPROACH %	21%	30%	49%	73%	21%	6%	2%	92%	6%	5%	81%	14%								
APP/DEPART	280	/	465	746	/	452	2,905	/	3,364	2,413	/	2,063	0							
BEGIN PEAK HR	5:00 PM																			
VOLUMES	17	40	65	250	62	24	24	1,454	87	62	961	163	3,205							
APPROACH %	14%	33%	53%	75%	18%	7%	2%	93%	6%	5%	81%	14%								
PEAK HR FACTOR	0.789			0.925			0.923			0.940			0.952							
APP/DEPART	122	/	226	335	/	210	1,564	/	1,768	1,185	/	1,001	0							



## INTERSECTION TURNING MOVEMENT COUNTS

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

<b>DATE:</b> 4/12/22 TUESDAY	<b>LOCATION:</b> NORTH & SOUTH: EAST & WEST:	Perris Redlands Ramona	<b>PROJECT #:</b> SC3375 <b>LOCATION #:</b> 4 <b>CONTROL:</b> SIGNAL
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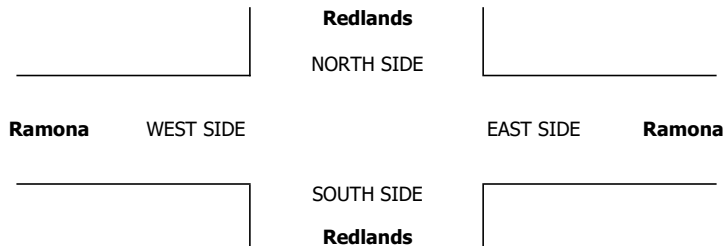
<b>CLASS 1:</b> PASSENGER VEHICLES	<b>NOTES:</b>	AM PM MD OTHER OTHER	◀ W S ▶	▲ N E ▶
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LANES:	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
	Redlands			Redlands			Ramona			Ramona			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	

U-TURNS				
NB	SB	EB	WB	TTL

<b>AM</b>	7:00 AM	8	25	14	17	3	4	4	154	6	5	250	133	623
	7:15 AM	8	45	38	16	4	1	2	130	4	14	268	129	659
	7:30 AM	9	44	31	19	2	2	4	140	9	14	270	128	672
	7:45 AM	11	43	32	21	11	1	6	140	9	30	252	102	658
	8:00 AM	6	21	20	22	8	3	2	175	7	22	248	64	598
	8:15 AM	8	10	21	16	4	1	4	151	11	16	250	69	561
	8:30 AM	6	9	15	20	2	4	4	138	11	14	221	47	491
	8:45 AM	6	10	6	12	5	1	6	147	11	9	191	35	439
	VOLUMES	62	207	177	143	39	17	32	1,175	68	124	1,950	707	4,701
	APPROACH %	14%	46%	40%	72%	20%	9%	3%	92%	5%	4%	70%	25%	
APP/DEPART	446	/	939	199	/	228	1,275	/	1,498	2,781	/	2,036	0	
BEGIN PEAK HR	7:00 AM													
VOLUMES	36	157	115	73	20	8	11	564	28	60	1,040	492	2,612	
APPROACH %	12%	51%	37%	72%	20%	8%	2%	93%	5%	4%	65%	31%		
PEAK HR FACTOR	0.846			0.765			0.927			0.968			0.972	
APP/DEPART	308	/	660	101	/	108	608	/	755	1,595	/	1,089	0	
<b>PM</b>	4:00 PM	11	9	17	57	20	5	5	248	15	17	230	44	678
	4:15 PM	11	8	20	76	24	1	7	261	20	7	216	33	684
	4:30 PM	5	9	12	70	22	3	4	311	12	19	237	39	743
	4:45 PM	9	11	19	67	16	1	7	282	13	12	187	20	644
	5:00 PM	4	3	13	51	15	7	5	341	27	14	222	24	726
	5:15 PM	2	5	15	60	16	4	4	303	13	17	207	19	665
	5:30 PM	7	11	16	65	15	3	1	305	18	8	237	40	726
	5:45 PM	4	5	10	60	5	3	6	343	10	12	210	42	710
	VOLUMES	53	61	122	506	133	27	39	2,394	128	106	1,746	261	5,576
	APPROACH %	22%	26%	52%	76%	20%	4%	2%	93%	5%	5%	83%	12%	
APP/DEPART	236	/	352	666	/	365	2,561	/	3,024	2,113	/	1,835	0	
BEGIN PEAK HR	5:00 PM													
VOLUMES	17	24	54	236	51	17	12	1,292	68	51	876	125	2,827	
APPROACH %	18%	25%	57%	78%	17%	6%	1%	94%	5%	5%	83%	12%		
PEAK HR FACTOR	0.699			0.916			0.922			0.923			0.973	
APP/DEPART	95	/	161	304	/	170	1,376	/	1,582	1,052	/	914	0	

0	0	1	0	1
0	0	0	2	2
0	0	3	0	3
0	0	1	1	2
0	0	0	0	0
0	0	0	0	0
0	0	1	0	1
0	0	1	0	1
0	0	7	3	10
0	0	2	0	2
0	0	1	0	1
0	0	0	1	1
0	0	2	1	3
0	0	1	0	1
0	0	0	0	0
0	0	2	0	2
0	0	9	2	11



## INTERSECTION TURNING MOVEMENT COUNTS

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

<b>DATE:</b> 4/12/22 TUESDAY	LOCATION: NORTH & SOUTH: EAST & WEST:	Perris Redlands Ramona	PROJECT #: LOCATION #: CONTROL:	SC3375 4 SIGNAL
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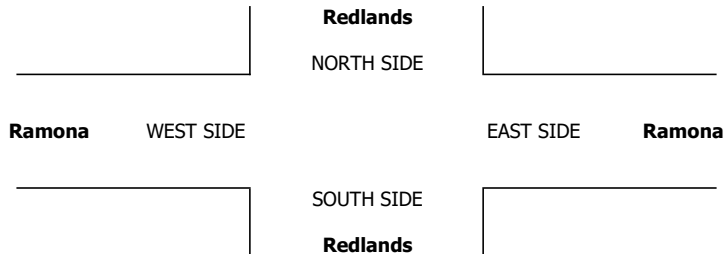
<b>CLASS 2:</b> 2-AXLE WORK VEHICLES/ TRUCKS	<b>NOTES:</b>	AM PM MD OTHER OTHER	▲ N ◀ W E ▶ S ▼
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LANES:	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
	Redlands			Redlands			Ramona			Ramona			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	

U-TURNS				
NB	SB	EB	WB	TTL

AM	7:00 AM	1	0	0	2	0	0	0	14	0	1	24	3	45	0	0	0	0	0
	7:15 AM	2	1	0	1	0	0	0	11	1	1	13	5	35	0	0	0	0	0
	7:30 AM	1	2	1	1	1	0	0	11	0	1	17	6	41	0	0	0	0	0
	7:45 AM	0	3	2	1	1	0	0	18	1	1	11	3	41	0	0	0	0	0
	8:00 AM	0	3	0	3	0	0	0	13	0	5	14	2	40	0	0	0	0	0
	8:15 AM	0	1	2	1	0	0	1	15	1	1	10	1	33	0	0	0	0	0
	8:30 AM	0	1	0	2	0	1	0	12	3	3	11	0	33	0	0	0	0	0
	8:45 AM	0	0	2	1	0	0	0	10	0	0	6	2	21	0	0	0	0	0
	VOLUMES	4	11	7	12	2	1	1	104	6	13	106	22	289	0	0	0	0	0
	APPROACH %	18%	50%	32%	80%	13%	7%	1%	94%	5%	9%	75%	16%		0	0	0	0	0
APP/DEPART	22	/	34	15	/	21	111	/	123	141	/	111	0						
BEGIN PEAK HR	7:00 AM																		
VOLUMES	4	6	3	5	2	0	0	54	2	4	65	17	162						
APPROACH %	31%	46%	23%	71%	29%	0%	0%	96%	4%	5%	76%	20%							
PEAK HR FACTOR	0.650			0.875			0.737			0.768			0.900						
APP/DEPART	13	/	23	7	/	8	56	/	62	86	/	69	0						
PM	4:00 PM	1	1	1	4	2	2	0	17	0	1	10	2	41	0	0	0	0	0
	4:15 PM	0	0	0	5	0	0	0	12	1	1	15	1	35	0	0	0	0	0
	4:30 PM	1	2	1	1	0	0	0	18	1	1	8	1	34	0	0	0	0	0
	4:45 PM	0	0	1	3	0	1	1	12	3	1	13	2	37	0	0	1	1	2
	5:00 PM	0	1	1	2	2	1	0	28	1	1	8	2	47	0	0	0	0	0
	5:15 PM	0	0	1	1	0	0	0	24	0	0	9	0	35	0	0	0	0	0
	5:30 PM	0	0	1	2	1	0	0	15	0	1	13	0	33	0	0	0	0	0
	5:45 PM	0	1	0	1	0	0	1	16	0	1	9	1	30	0	0	1	0	1
	VOLUMES	2	5	6	19	5	4	2	142	6	7	85	9	292	0	0	2	1	3
	APPROACH %	15%	38%	46%	68%	18%	14%	1%	95%	4%	7%	84%	9%						
APP/DEPART	13	/	14	28	/	17	150	/	168	101	/	93	0						
BEGIN PEAK HR	5:00 PM																		
VOLUMES	0	2	3	6	3	1	0	83	1	3	39	3	145						
APPROACH %	0%	40%	60%	60%	30%	10%	0%	98%	1%	7%	87%	7%							
PEAK HR FACTOR	0.625			0.500			0.733			0.804			0.771						
APP/DEPART	5	/	5	10	/	7	85	/	92	45	/	41	0						

0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	1	1	2
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	1	0	1
0	0	2	1	3



## INTERSECTION TURNING MOVEMENT COUNTS

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

<b>DATE:</b> 4/12/22 TUESDAY	LOCATION: NORTH & SOUTH: EAST & WEST:	Perris Redlands Ramona	PROJECT #: LOCATION #: CONTROL:	SC3375 4 SIGNAL
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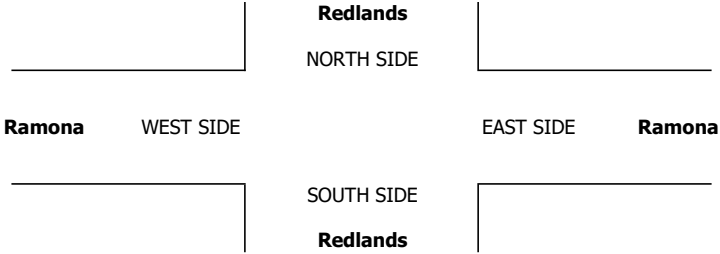
<b>CLASS 3:</b> 3-AXLE TRUCKS	<b>NOTES:</b>	AM PM MD OTHER OTHER	◀ W S ▶	▲ N E ▶
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LANES:	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
	Redlands			Redlands			Ramona			Ramona			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	

U-TURNS				
NB	SB	EB	WB	TTL

<b>AM</b>	7:00 AM	0	0	0	6	0	0	0	2	0	0	1	0	9
	7:15 AM	0	0	0	1	0	0	0	1	2	1	2	0	7
	7:30 AM	0	2	0	0	0	0	0	2	0	0	0	0	4
	7:45 AM	0	1	1	0	1	0	0	5	0	0	4	0	12
	8:00 AM	0	0	0	0	2	0	0	1	0	0	0	0	3
	8:15 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
	8:30 AM	0	0	0	1	0	0	0	3	1	0	0	0	5
	8:45 AM	0	0	0	1	2	0	0	1	1	0	2	1	8
	VOLUMES	0	3	1	9	5	0	0	16	4	1	9	1	49
	APPROACH %	0%	75%	25%	64%	36%	0%	0%	80%	20%	9%	82%	9%	
APP/DEPART	4	/	4	14	/	10	20	/	26	11	/	9	0	
BEGIN PEAK HR	7:00 AM													
VOLUMES	0	3	1	7	1	0	0	10	2	1	7	0	32	
APPROACH %	0%	75%	25%	88%	13%	0%	0%	83%	17%	13%	88%	0%		
PEAK HR FACTOR	0.500			0.333			0.600			0.500			0.667	
APP/DEPART	4	/	3	8	/	4	12	/	18	8	/	7	0	
<b>PM</b>	4:00 PM	0	0	0	0	0	0	0	2	0	0	2	1	5
	4:15 PM	0	0	0	0	0	0	0	1	0	0	1	1	3
	4:30 PM	0	0	0	0	0	0	1	2	0	0	0	0	3
	4:45 PM	0	0	0	0	1	0	0	0	2	0	7	1	11
	5:00 PM	0	1	0	0	0	0	0	1	1	0	2	9	14
	5:15 PM	0	0	0	0	0	0	0	3	0	0	2	2	7
	5:30 PM	0	0	0	0	0	0	0	1	0	0	2	1	4
	5:45 PM	0	1	0	1	0	1	0	2	0	0	0	0	5
	VOLUMES	0	2	0	1	1	1	1	12	3	0	16	15	52
	APPROACH %	0%	100%	0%	33%	33%	33%	6%	75%	19%	0%	52%	48%	
APP/DEPART	2	/	18	3	/	4	16	/	13	31	/	17	0	
BEGIN PEAK HR	5:00 PM													
VOLUMES	0	2	0	1	0	1	0	7	1	0	6	12	30	
APPROACH %	0%	100%	0%	50%	0%	50%	0%	88%	13%	0%	33%	67%		
PEAK HR FACTOR	0.500			0.250			0.667			0.409			0.536	
APP/DEPART	2	/	14	2	/	1	8	/	8	18	/	7	0	

0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0



## INTERSECTION TURNING MOVEMENT COUNTS

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

<b>DATE:</b> 4/12/22 TUESDAY	LOCATION: NORTH & SOUTH: EAST & WEST:	Perris Redlands Ramona	PROJECT #: LOCATION #: CONTROL:	SC3375 4 SIGNAL
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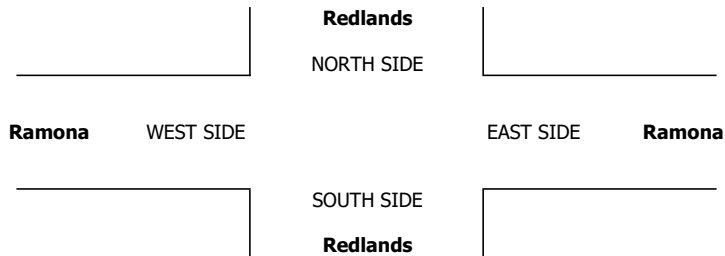
<b>CLASS 4:</b> 4 OR MORE AXLE TRUCKS	<b>NOTES:</b>	AM PM MD OTHER OTHER	◀ W E ▶	▲ N S ▼
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LANES:	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
	Redlands			Redlands			Ramona			Ramona			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	1	1	0	1	1	1	1	3	1	1	3	1	

U-TURNS				
NB	SB	EB	WB	TTL

<b>AM</b>	7:00 AM	0	0	0	0	2	2	0	1	1	2	3	0	11	0	0	0	0	0
	7:15 AM	1	2	1	0	1	1	1	1	0	0	1	1	10	0	0	0	0	0
	7:30 AM	0	2	0	1	2	0	1	5	1	0	1	0	13	0	0	0	0	0
	7:45 AM	0	0	0	0	2	0	0	5	0	0	7	0	14	0	0	0	0	0
	8:00 AM	1	1	0	0	1	0	0	9	2	0	3	0	17	0	0	0	0	0
	8:15 AM	0	3	1	0	1	0	0	4	0	0	6	0	15	0	0	0	0	0
	8:30 AM	1	2	0	0	3	2	1	2	1	0	5	0	17	0	0	0	0	0
	8:45 AM	0	1	0	0	2	0	3	5	0	0	5	1	17	0	0	0	0	0
	VOLUMES	3	11	2	1	14	5	6	32	5	2	31	2	114	0	0	0	0	0
	APPROACH %	19%	69%	13%	5%	70%	25%	14%	74%	12%	6%	89%	6%		0	0	0	0	0
APP/DEPART	16	/	19	20	/	21	43	/	35	35	/	39	0						
BEGIN PEAK HR	7:00 AM																		
VOLUMES	1	4	1	1	7	3	2	12	2	2	12	1	48						
APPROACH %	17%	67%	17%	9%	64%	27%	13%	75%	13%	13%	80%	7%							
PEAK HR FACTOR	0.375			0.688			0.571			0.536			0.857						
APP/DEPART	6	/	7	11	/	11	16	/	14	15	/	16	0						
<b>PM</b>	4:00 PM	0	0	0	1	0	0	0	3	0	0	2	1	7	0	0	0	0	0
	4:15 PM	1	0	0	0	2	1	1	0	1	0	4	3	13	0	0	0	0	0
	4:30 PM	0	0	0	1	0	0	0	2	2	0	3	0	8	0	0	0	0	0
	4:45 PM	0	0	0	0	0	1	0	2	2	0	1	1	7	0	0	0	0	0
	5:00 PM	0	1	0	1	0	0	0	0	1	1	1	0	5	0	0	0	0	0
	5:15 PM	0	1	0	0	1	0	0	2	2	1	0	3	10	0	0	0	0	0
	5:30 PM	0	0	1	0	1	0	1	3	1	0	1	0	8	0	0	0	0	0
	5:45 PM	0	1	1	0	0	1	1	2	1	0	2	0	9	0	0	0	0	0
	VOLUMES	1	3	2	3	4	3	3	14	10	2	14	8	67	0	0	0	0	0
	APPROACH %	17%	50%	33%	30%	40%	30%	11%	52%	37%	8%	58%	33%						
APP/DEPART	6	/	14	10	/	16	27	/	19	24	/	18	0						
BEGIN PEAK HR	5:00 PM																		
VOLUMES	0	3	2	1	2	1	2	7	5	2	4	3	32						
APPROACH %	0%	60%	40%	25%	50%	25%	14%	50%	36%	22%	44%	33%							
PEAK HR FACTOR	0.625			1.000			0.700			0.563			0.800						
APP/DEPART	5	/	8	4	/	9	14	/	10	9	/	5	0						

0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0



## INTERSECTION TURNING MOVEMENT COUNTS

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

<b>DATE:</b> 4/12/22 TUESDAY	LOCATION: NORTH & SOUTH: EAST & WEST:	Perris Redlands Ramona	PROJECT #: LOCATION #: CONTROL:	SC3375 4 SIGNAL
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<b>CLASS 5:</b> RV	<b>NOTES:</b>	AM PM MD OTHER OTHER	▲ N ◀ W S ▶ E ▼
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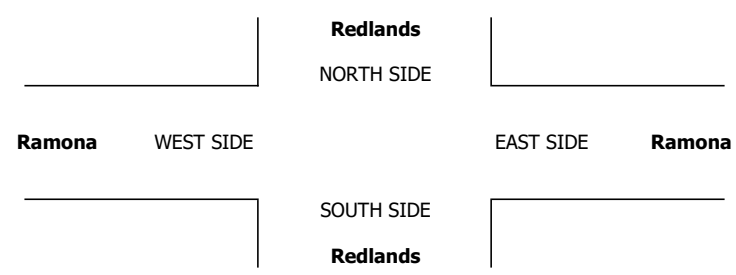
LANES:	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
	Redlands			Redlands			Ramona			Ramona			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	1	1	0	1	1	1	1	3	1	1	3	1	

U-TURNS				
NB	SB	EB	WB	TTL
0	0	0	0	0

AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0	
BEGIN PEAK HR	7:00 AM													
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0	
PEAK HR FACTOR	0.000			0.000			0.000			0.000			0.000	
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0	
PM	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0	
BEGIN PEAK HR	5:00 PM													
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0	
PEAK HR FACTOR	0.000			0.000			0.000			0.000			0.000	
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0	

0	0	0	0	0
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0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0



## INTERSECTION TURNING MOVEMENT COUNTS

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

<b>DATE:</b> 4/12/22 TUESDAY	<b>LOCATION:</b> NORTH & SOUTH: EAST & WEST:	Perris Redlands Ramona	<b>PROJECT #:</b> SC3375 <b>LOCATION #:</b> 4 <b>CONTROL:</b> SIGNAL
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<b>CLASS 6:</b>  BUSES	<b>NOTES:</b>	AM PM MD OTHER OTHER	◀ W E ▶	▲ N  S ▼
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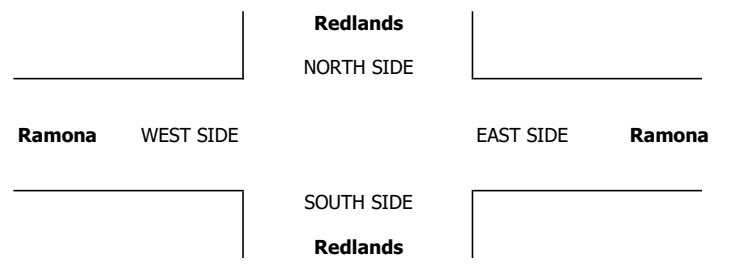
LANES:	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
	Redlands			Redlands			Ramona			Ramona			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	

U-TURNS				
NB	SB	EB	WB	TTL

<b>AM</b>	7:00 AM	0	0	0	0	0	0	2	0	0	0	0	2	0	0	0	0	
	7:15 AM	0	0	1	1	0	0	0	0	0	1	0	1	4	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	1	0	0	0	1	2	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	1	0	0	0	1	3	0	0	0	0
	8:00 AM	0	1	0	0	1	0	0	4	0	0	0	0	6	0	0	0	0
	8:15 AM	0	0	0	0	1	0	0	0	0	0	0	3	5	0	0	0	0
	8:30 AM	0	0	0	0	0	0	1	0	0	0	0	2	3	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0
	VOLUMES	0	1	1	1	2	0	1	8	0	1	7	4	26				
	APPROACH %	0%	50%	50%	33%	67%	0%	11%	89%	0%	8%	58%	33%					
	APP/DEPART	2	/	6	3	/	3	9	/	10	12	/	7	0				
	BEGIN PEAK HR	7:00 AM																
VOLUMES	0	0	1	1	0	0	0	4	0	1	1	3	11					
APPROACH %	0%	0%	100%	100%	0%	0%	0%	100%	0%	20%	20%	60%						
PEAK HR FACTOR	0.250			0.250			0.500			0.625			0.688					
APP/DEPART	1	/	3	1	/	1	4	/	6	5	/	1	0					
<b>PM</b>	4:00 PM	0	0	0	0	0	0	1	0	0	1	0	2	0	0	0	0	
	4:15 PM	0	0	0	1	0	0	0	1	0	0	3	5	0	0	0	0	
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	4:45 PM	0	1	0	0	0	0	0	0	0	1	1	0	3	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	1	0	1	0	0	0	3	0	1	6	0	12				
	APPROACH %	0%	100%	0%	100%	0%	0%	0%	100%	0%	14%	86%	0%					
	APP/DEPART	1	/	1	1	/	1	3	/	4	7	/	6	0				
	BEGIN PEAK HR	5:00 PM																
VOLUMES	0	0	0	0	0	0	0	1	0	0	1	0	2					
APPROACH %	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%						
PEAK HR FACTOR	0.000			0.000			0.250			0.250			0.500					
APP/DEPART	0	/	0	0	/	0	1	/	1	1	/	1	0					

0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
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0	0	0	0	0
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0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0







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# Appendix C

## Synchro LOS and Queuing Worksheets

Timings  
1: Perris Blvd & Harley Knox Blvd

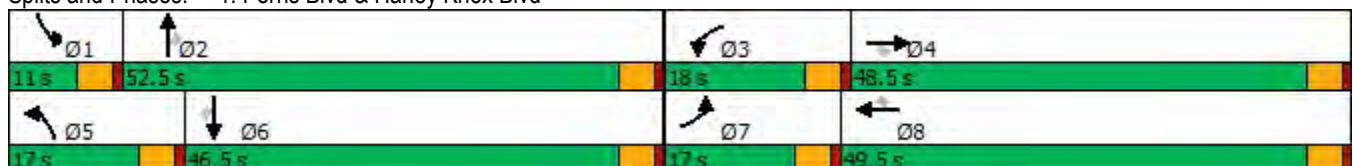
Existing Conditions  
Timing Plan: AM PEAK HOUR

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	180	82	44	6	331	229	175	1063	4	84	675	315
Future Volume (vph)	180	82	44	6	331	229	175	1063	4	84	675	315
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	48.5	48.5	9.5	49.5	49.5	9.5	52.5	52.5	9.5	46.5	46.5
Total Split (s)	17.0	48.5	48.5	18.0	49.5	49.5	17.0	52.5	52.5	11.0	46.5	46.5
Total Split (%)	13.1%	37.3%	37.3%	13.8%	38.1%	38.1%	13.1%	40.4%	40.4%	8.5%	35.8%	35.8%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	Min	None	Min	Min
Act Effct Green (s)	13.4	33.1	33.1	6.1	16.2	16.2	10.1	29.4	29.4	6.8	23.2	23.2
Actuated g/C Ratio	0.16	0.40	0.40	0.07	0.20	0.20	0.12	0.36	0.36	0.08	0.28	0.28
v/c Ratio	0.66	0.06	0.06	0.02	0.35	0.57	0.44	0.62	0.01	0.31	0.50	0.48
Control Delay	49.2	18.1	0.2	47.2	29.0	19.0	41.5	24.8	0.0	45.7	26.5	5.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	49.2	18.1	0.2	47.2	29.0	19.0	41.5	24.8	0.0	45.7	26.5	5.7
LOS	D	B	A	D	C	B	D	C	A	D	C	A
Approach Delay		33.9			25.1			27.1			21.9	
Approach LOS		C			C			C			C	

Intersection Summary

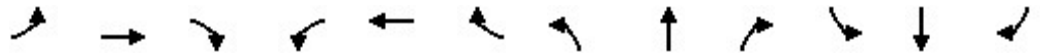
Cycle Length: 130	
Actuated Cycle Length: 82.2	
Natural Cycle: 125	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.66	
Intersection Signal Delay: 25.6	Intersection LOS: C
Intersection Capacity Utilization 56.1%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 1: Perris Blvd & Harley Knox Blvd



Phasings  
1: Perris Blvd & Harley Knox Blvd

Existing Conditions  
Timing Plan: AM PEAK HOUR



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	48.5	48.5	9.5	49.5	49.5	9.5	52.5	52.5	9.5	46.5	46.5
Total Split (s)	17.0	48.5	48.5	18.0	49.5	49.5	17.0	52.5	52.5	11.0	46.5	46.5
Total Split (%)	13.1%	37.3%	37.3%	13.8%	38.1%	38.1%	13.1%	40.4%	40.4%	8.5%	35.8%	35.8%
Maximum Green (s)	12.5	44.0	44.0	13.5	45.0	45.0	12.5	48.0	48.0	6.5	42.0	42.0
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None	None	None	None	Min	Min	None	Min	Min
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		37.0	37.0		38.0	38.0		41.0	41.0		35.0	35.0
Pedestrian Calls (#/hr)		5	5		5	5		5	5		5	5
90th %ile Green (s)	12.5	51.2	51.2	6.3	45.0	45.0	12.5	48.0	48.0	6.5	42.0	42.0
90th %ile Term Code	Max	Hold	Hold	Gap	Ped	Ped	Max	Ped	Ped	Max	Ped	Ped
70th %ile Green (s)	12.5	32.1	32.1	0.0	15.1	15.1	11.0	27.9	27.9	6.5	23.4	23.4
70th %ile Term Code	Max	Hold	Hold	Skip	Gap	Gap	Gap	Gap	Gap	Max	Hold	Hold
50th %ile Green (s)	12.5	29.1	29.1	0.0	12.1	12.1	9.6	24.4	24.4	6.5	21.3	21.3
50th %ile Term Code	Max	Hold	Hold	Skip	Gap	Gap	Gap	Gap	Gap	Max	Hold	Hold
30th %ile Green (s)	12.5	26.8	26.8	0.0	9.8	9.8	8.6	21.2	21.2	6.5	19.1	19.1
30th %ile Term Code	Max	Hold	Hold	Skip	Gap	Gap	Gap	Gap	Gap	Max	Hold	Hold
10th %ile Green (s)	12.5	25.4	25.4	0.0	8.4	8.4	7.3	25.3	25.3	0.0	13.5	13.5
10th %ile Term Code	Max	Hold	Hold	Skip	Gap	Gap	Gap	Hold	Hold	Skip	Gap	Gap

Intersection Summary

Cycle Length: 130  
 Actuated Cycle Length: 82.2  
 Control Type: Actuated-Uncoordinated  
 90th %ile Actuated Cycle: 130  
 70th %ile Actuated Cycle: 80  
 50th %ile Actuated Cycle: 73.5  
 30th %ile Actuated Cycle: 68  
 10th %ile Actuated Cycle: 59.7

HCM 6th Signalized Intersection Summary  
 1: Perris Blvd & Harley Knox Blvd

Existing Conditions  
 Timing Plan: AM PEAK HOUR

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	180	82	44	6	331	229	175	1063	4	84	675	315
Future Volume (veh/h)	180	82	44	6	331	229	175	1063	4	84	675	315
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	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	194	88	47	6	356	246	188	1143	4	90	726	339
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, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	238	1220	544	28	1111	345	289	1766	548	206	1643	510
Arrive On Green	0.13	0.34	0.34	0.01	0.21	0.21	0.08	0.34	0.34	0.06	0.32	0.32
Sat Flow, veh/h	1810	3610	1610	3510	5187	1610	3510	5187	1610	3510	5187	1610
Grp Volume(v), veh/h	194	88	47	6	356	246	188	1143	4	90	726	339
Grp Sat Flow(s),veh/h/ln	1810	1805	1610	1755	1729	1610	1755	1729	1610	1755	1729	1610
Q Serve(g_s), s	7.4	1.2	1.4	0.1	4.1	10.0	3.7	13.2	0.1	1.7	7.8	12.9
Cycle Q Clear(g_c), s	7.4	1.2	1.4	0.1	4.1	10.0	3.7	13.2	0.1	1.7	7.8	12.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	238	1220	544	28	1111	345	289	1766	548	206	1643	510
V/C Ratio(X)	0.81	0.07	0.09	0.22	0.32	0.71	0.65	0.65	0.01	0.44	0.44	0.66
Avail Cap(c_a), veh/h	320	2250	1004	671	3306	1026	622	3527	1095	323	3086	958
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(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.8	15.9	15.9	34.8	23.4	25.7	31.4	19.7	15.4	32.1	19.2	20.9
Incr Delay (d2), s/veh	11.1	0.0	0.1	3.9	0.2	2.7	2.5	0.4	0.0	1.5	0.2	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(50%),veh/ln	3.7	0.4	0.5	0.1	1.5	3.7	1.5	4.6	0.0	0.7	2.8	4.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	41.0	15.9	16.0	38.7	23.6	28.5	33.9	20.1	15.4	33.6	19.3	22.4
LnGrp LOS	D	B	B	D	C	C	C	C	B	C	B	C
Approach Vol, veh/h		329			608			1335			1155	
Approach Delay, s/veh		30.7			25.7			22.0			21.3	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.6	28.5	5.1	28.4	10.3	26.9	13.8	19.6				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	6.5	48.0	13.5	44.0	12.5	42.0	12.5	45.0				
Max Q Clear Time (g_c+I1), s	3.7	15.2	2.1	3.4	5.7	14.9	9.4	12.0				
Green Ext Time (p_c), s	0.0	8.9	0.0	0.6	0.3	6.2	0.1	3.1				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				23.3								
HCM 6th LOS				C								

Timings  
2: Redlands Ave & Harley Knox Blvd

Existing Conditions  
Timing Plan: AM PEAK HOUR

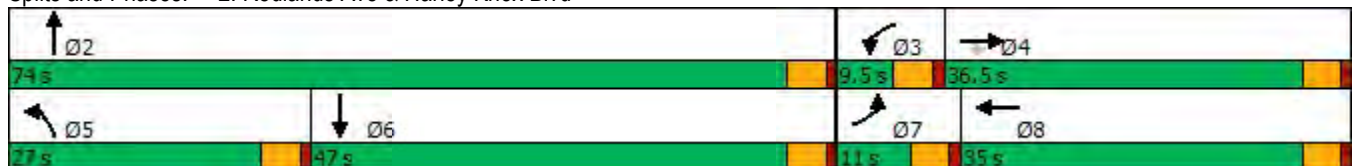


Lane Group	EBL	EBR	NBL	NBT	SBT	Ø3	Ø8
Lane Configurations	↖	↗	↖	↕	↕		
Traffic Volume (vph)	33	157	597	13	4		
Future Volume (vph)	33	157	597	13	4		
Turn Type	Prot	Perm	Prot	NA	NA		
Protected Phases	7		5	2	6	3	8
Permitted Phases		4					
Detector Phase	7	4	5	2	6		
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	36.5	9.5	34.5	47.0	9.5	34.5
Total Split (s)	11.0	36.5	27.0	74.0	47.0	9.5	35.0
Total Split (%)	9.2%	30.4%	22.5%	61.7%	39.2%	8%	29%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5		
Lead/Lag	Lead	Lag	Lead		Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None	None	Min	Min	None	None
Act Effct Green (s)	9.4	8.8	25.1	40.3	10.1		
Actuated g/C Ratio	0.16	0.15	0.42	0.68	0.17		
v/c Ratio	0.12	0.14	0.83	0.01	0.01		
Control Delay	23.8	0.3	31.1	4.6	0.0		
Queue Delay	0.0	0.0	0.0	0.0	0.0		
Total Delay	23.8	0.3	31.1	4.6	0.0		
LOS	C	A	C	A	A		
Approach Delay				30.5			
Approach LOS				C			

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 59.2  
 Natural Cycle: 145  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.83  
 Intersection Signal Delay: 23.8  
 Intersection LOS: C  
 Intersection Capacity Utilization 51.4%  
 ICU Level of Service A  
 Analysis Period (min) 15

Splits and Phases: 2: Redlands Ave & Harley Knox Blvd



Phasings  
2: Redlands Ave & Harley Knox Blvd

Existing Conditions  
Timing Plan: AM PEAK HOUR



Lane Group	EBL	EBR	NBL	NBT	SBT	Ø3	Ø8
Protected Phases	7		5	2	6	3	8
Permitted Phases		4					
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	36.5	9.5	34.5	47.0	9.5	34.5
Total Split (s)	11.0	36.5	27.0	74.0	47.0	9.5	35.0
Total Split (%)	9.2%	30.4%	22.5%	61.7%	39.2%	8%	29%
Maximum Green (s)	6.5	32.0	22.5	69.5	42.5	5.0	30.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lead		Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	Min	Min	None	None
Walk Time (s)		7.0		7.0	7.0		
Flash Dont Walk (s)		23.0		21.0	35.0		
Pedestrian Calls (#/hr)		5		5	5		
90th %ile Green (s)	30.0	30.0	22.5	69.0	42.0	0.0	0.0
90th %ile Term Code	Hold	Ped	Max	Hold	Ped	Skip	Skip
70th %ile Green (s)	0.0	5.5	22.5	32.5	5.5	0.0	5.5
70th %ile Term Code	Skip	Gap	Max	Hold	Gap	Skip	Hold
50th %ile Green (s)	0.0	5.5	22.5	32.5	5.5	0.0	5.5
50th %ile Term Code	Skip	Gap	Max	Hold	Gap	Skip	Hold
30th %ile Green (s)	0.0	5.5	22.5	32.5	5.5	0.0	5.5
30th %ile Term Code	Skip	Gap	Max	Hold	Gap	Skip	Hold
10th %ile Green (s)	0.0	5.5	22.5	32.5	5.5	0.0	5.5
10th %ile Term Code	Skip	Gap	Max	Hold	Gap	Skip	Hold






















Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 59.2  
 Control Type: Actuated-Uncoordinated  
 90th %ile Actuated Cycle: 108  
 70th %ile Actuated Cycle: 47  
 50th %ile Actuated Cycle: 47  
 30th %ile Actuated Cycle: 47  
 10th %ile Actuated Cycle: 47

# HCM 6th Signalized Intersection Summary

## 2: Redlands Ave & Harley Knox Blvd

Existing Conditions  
Timing Plan: AM PEAK HOUR

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	33	0	157	0	0	0	597	13	0	0	4	11
Future Volume (veh/h)	33	0	157	0	0	0	597	13	0	0	4	11
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	1900	1900	1900	1900	1900	1900	1900	1900	1900	0	1900	1900
Adj Flow Rate, veh/h	35	0	167	0	0	0	635	14	0	0	4	12
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	72	273	231	4	5	0	731	2306	0	0	228	203
Arrive On Green	0.04	0.00	0.14	0.00	0.00	0.00	0.40	0.64	0.00	0.00	0.13	0.13
Sat Flow, veh/h	1810	1900	1610	1810	1900	0	1810	3705	0	0	1900	1610
Grp Volume(v), veh/h	35	0	167	0	0	0	635	14	0	0	4	12
Grp Sat Flow(s),veh/h/ln	1810	1900	1610	1810	1900	0	1810	1805	0	0	1805	1610
Q Serve(g_s), s	0.8	0.0	4.1	0.0	0.0	0.0	13.3	0.1	0.0	0.0	0.1	0.3
Cycle Q Clear(g_c), s	0.8	0.0	4.1	0.0	0.0	0.0	13.3	0.1	0.0	0.0	0.1	0.3
Prop In Lane	1.00		1.00	1.00		0.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h	72	273	231	4	5	0	731	2306	0	0	228	203
V/C Ratio(X)	0.48	0.00	0.72	0.00	0.00	0.00	0.87	0.01	0.00	0.00	0.02	0.06
Avail Cap(c_a), veh/h	284	1470	1246	219	1401	0	984	6066	0	0	1855	1655
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(l)	1.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	19.4	0.0	16.9	0.0	0.0	0.0	11.3	2.7	0.0	0.0	15.8	15.9
Incr Delay (d2), s/veh	4.9	0.0	4.2	0.0	0.0	0.0	6.5	0.0	0.0	0.0	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.0	1.6	0.0	0.0	0.0	4.7	0.0	0.0	0.0	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.3	0.0	21.1	0.0	0.0	0.0	17.8	2.7	0.0	0.0	15.9	16.0
LnGrp LOS	C	A	C	A	A	A	B	A	A	A	B	B
Approach Vol, veh/h		202			0			649			16	
Approach Delay, s/veh		21.7			0.0			17.5			16.0	
Approach LOS		C						B			B	
Timer - Assigned Phs		2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s		30.9	0.0	10.4	21.2	9.7	6.2	4.3				
Change Period (Y+Rc), s		4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s		69.5	5.0	32.0	22.5	42.5	6.5	30.5				
Max Q Clear Time (g_c+l1), s		2.1	0.0	6.1	15.3	2.3	2.8	0.0				
Green Ext Time (p_c), s		0.1	0.0	0.5	1.4	0.0	0.0	0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			18.5									
HCM 6th LOS			B									
<b>Notes</b>												
User approved pedestrian interval to be less than phase max green.												

Intersection												
Int Delay, s/veh	0.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗			↕		↖	↗		↖	↗	
Traffic Vol, veh/h	5	0	14	0	0	0	6	606	0	0	146	9
Future Vol, veh/h	5	0	14	0	0	0	6	606	0	0	146	9
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	1	1	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	110	-	-	-	-	-	305	-	-	80	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	5	0	15	0	0	0	6	645	0	0	155	10





























Major/Minor	Minor2		Minor1			Major1		Major2				
Conflicting Flow All	495	818	83	736	823	324	165	0	0	646	0	0
Stage 1	160	160	-	658	658	-	-	-	-	-	-	-
Stage 2	335	658	-	78	165	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.5	6.5	6.9	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	462	313	966	311	311	678	1426	-	-	949	-	-
Stage 1	832	769	-	424	464	-	-	-	-	-	-	-
Stage 2	658	464	-	928	766	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	461	311	966	305	309	677	1426	-	-	948	-	-
Mov Cap-2 Maneuver	461	311	-	305	309	-	-	-	-	-	-	-
Stage 1	829	769	-	422	462	-	-	-	-	-	-	-
Stage 2	655	462	-	914	766	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.9	0	0.1	0
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1426	-	-	461	966	-	948	-	-
HCM Lane V/C Ratio	0.004	-	-	0.012	0.015	-	-	-	-
HCM Control Delay (s)	7.5	-	-	12.9	8.8	0	0	-	-
HCM Lane LOS	A	-	-	B	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0	0	-	0	-	-

Timings  
4: Redlands Ave & Ramona Expy

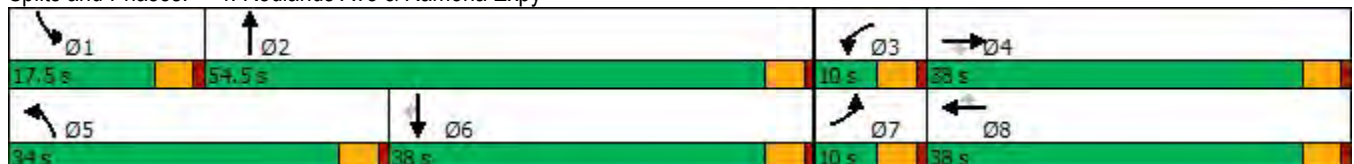
Existing Conditions  
Timing Plan: AM PEAK HOUR

											
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations		  			  			 		 	
Traffic Volume (vph)	22	709	41	79	1190	527	45	184	100	46	17
Future Volume (vph)	22	709	41	79	1190	527	45	184	100	46	17
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2	1	6	
Permitted Phases			4			8					6
Detector Phase	7	4	4	3	8	8	5	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	31.5	31.5	9.5	36.5	36.5	9.5	54.5	9.5	22.5	22.5
Total Split (s)	10.0	38.0	38.0	10.0	38.0	38.0	34.0	54.5	17.5	38.0	38.0
Total Split (%)	8.3%	31.7%	31.7%	8.3%	31.7%	31.7%	28.3%	45.4%	14.6%	31.7%	31.7%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	None	Max	Max
Act Effct Green (s)	5.8	22.9	22.9	5.8	30.2	30.2	8.0	33.1	10.3	37.8	37.8
Actuated g/C Ratio	0.07	0.26	0.26	0.07	0.34	0.34	0.09	0.38	0.12	0.43	0.43
v/c Ratio	0.19	0.54	0.08	0.69	0.69	0.60	0.28	0.46	0.49	0.06	0.02
Control Delay	52.1	29.9	0.3	75.6	29.3	5.8	48.1	23.5	50.0	19.7	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	52.1	29.9	0.3	75.6	29.3	5.8	48.1	23.5	50.0	19.7	0.1
LOS	D	C	A	E	C	A	D	C	D	B	A
Approach Delay		29.0			24.4			26.6		36.2	
Approach LOS		C			C			C		D	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 88  
 Natural Cycle: 110  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.69  
 Intersection Signal Delay: 26.5  
 Intersection LOS: C  
 Intersection Capacity Utilization 65.5%  
 ICU Level of Service C  
 Analysis Period (min) 15

Splits and Phases: 4: Redlands Ave & Ramona Expy



Phasings  
4: Redlands Ave & Ramona Expy

Existing Conditions  
Timing Plan: AM PEAK HOUR



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Protected Phases	7	4		3	8		5	2	1	6	
Permitted Phases			4			8					6
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	31.5	31.5	9.5	36.5	36.5	9.5	54.5	9.5	22.5	22.5
Total Split (s)	10.0	38.0	38.0	10.0	38.0	38.0	34.0	54.5	17.5	38.0	38.0
Total Split (%)	8.3%	31.7%	31.7%	8.3%	31.7%	31.7%	28.3%	45.4%	14.6%	31.7%	31.7%
Maximum Green (s)	5.5	33.5	33.5	5.5	33.5	33.5	29.5	50.0	13.0	33.5	33.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None	None	None	None	Min	None	Max	Max
Walk Time (s)		7.0	7.0		7.0	7.0		7.0			
Flash Dont Walk (s)		19.0	19.0		24.0	24.0		42.0			
Pedestrian Calls (#/hr)		5	5		5	5		5			
90th %ile Green (s)	5.5	33.5	33.5	5.5	33.5	33.5	11.5	49.0	13.0	50.5	50.5
90th %ile Term Code	Max	Hold	Hold	Max	Max	Max	Gap	Ped	Max	Hold	Hold
70th %ile Green (s)	5.5	33.5	33.5	5.5	33.5	33.5	9.0	30.0	12.5	33.5	33.5
70th %ile Term Code	Max	Hold	Hold	Max	Max	Max	Gap	Hold	Gap	MaxR	MaxR
50th %ile Green (s)	0.0	23.5	23.5	5.5	33.5	33.5	7.9	30.6	10.8	33.5	33.5
50th %ile Term Code	Skip	Hold	Hold	Max	Max	Max	Gap	Hold	Gap	MaxR	MaxR
30th %ile Green (s)	0.0	16.1	16.1	5.5	26.1	26.1	0.0	20.6	8.4	33.5	33.5
30th %ile Term Code	Skip	Hold	Hold	Max	Gap	Gap	Skip	Hold	Gap	MaxR	MaxR
10th %ile Green (s)	0.0	11.9	11.9	5.5	21.9	21.9	0.0	33.5	0.0	33.5	33.5
10th %ile Term Code	Skip	Gap	Gap	Max	Hold	Hold	Skip	Hold	Skip	MaxR	MaxR

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 88  
 Control Type: Actuated-Uncoordinated  
 90th %ile Actuated Cycle: 119  
 70th %ile Actuated Cycle: 99.5  
 50th %ile Actuated Cycle: 88.4  
 30th %ile Actuated Cycle: 68.6  
 10th %ile Actuated Cycle: 64.4

HCM 6th Signalized Intersection Summary  
 4: Redlands Ave & Ramona Expy

Existing Conditions  
 Timing Plan: AM PEAK HOUR

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	22	709	41	79	1190	527	45	184	127	100	46	17
Future Volume (veh/h)	22	709	41	79	1190	527	45	184	127	100	46	17
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		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	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	23	731	42	81	1227	543	46	190	131	103	47	18
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	44	1725	524	104	1898	589	69	353	243	132	707	599
Arrive On Green	0.02	0.33	0.33	0.06	0.37	0.37	0.04	0.34	0.34	0.07	0.37	0.37
Sat Flow, veh/h	1810	5187	1576	1810	5187	1610	1810	1048	722	1810	1900	1610
Grp Volume(v), veh/h	23	731	42	81	1227	543	46	0	321	103	47	18
Grp Sat Flow(s),veh/h/ln	1810	1729	1576	1810	1729	1610	1810	0	1770	1810	1900	1610
Q Serve(g_s), s	1.1	9.9	1.6	4.0	17.7	29.1	2.3	0.0	13.2	5.0	1.4	0.6
Cycle Q Clear(g_c), s	1.1	9.9	1.6	4.0	17.7	29.1	2.3	0.0	13.2	5.0	1.4	0.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.41	1.00		1.00
Lane Grp Cap(c), veh/h	44	1725	524	104	1898	589	69	0	596	132	707	599
V/C Ratio(X)	0.52	0.42	0.08	0.78	0.65	0.92	0.67	0.00	0.54	0.78	0.07	0.03
Avail Cap(c_a), veh/h	110	1929	586	110	1929	599	593	0	983	261	707	599
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	43.4	23.3	20.6	41.9	23.7	27.3	42.8	0.0	24.2	41.0	18.2	18.0
Incr Delay (d2), s/veh	9.3	0.2	0.1	27.4	0.7	19.7	10.7	0.0	0.8	9.4	0.2	0.1
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(50%),veh/ln	0.6	3.6	0.6	2.5	6.5	12.9	1.2	0.0	5.3	2.5	0.6	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.7	23.5	20.7	69.3	24.5	47.0	53.5	0.0	25.0	50.4	18.4	18.1
LnGrp LOS	D	C	C	E	C	D	D	A	C	D	B	B
Approach Vol, veh/h		796			1851			367			168	
Approach Delay, s/veh		24.2			33.0			28.5			38.0	
Approach LOS		C			C			C			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.1	34.8	9.7	34.5	7.9	38.0	6.7	37.5				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	13.0	50.0	5.5	33.5	29.5	33.5	5.5	33.5				
Max Q Clear Time (g_c+I1), s	7.0	15.2	6.0	11.9	4.3	3.4	3.1	31.1				
Green Ext Time (p_c), s	0.1	2.0	0.0	4.5	0.1	0.2	0.0	1.9				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			30.6									
HCM 6th LOS			C									



Timings  
1: Perris Blvd & Harley Knox Blvd

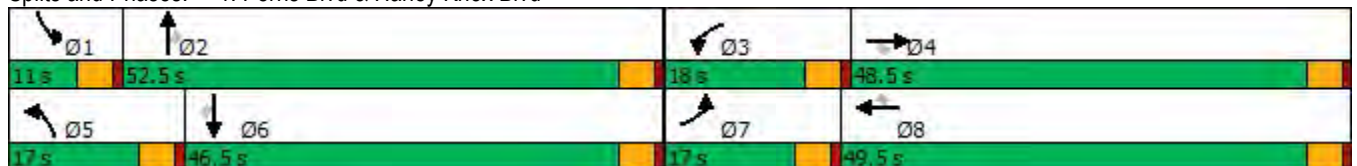
Existing Conditions  
Timing Plan: PM PEAK HOUR

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	300	166	97	6	93	128	67	770	3	162	968	310
Future Volume (vph)	300	166	97	6	93	128	67	770	3	162	968	310
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	48.5	48.5	9.5	49.5	49.5	9.5	52.5	52.5	9.5	46.5	46.5
Total Split (s)	17.0	48.5	48.5	18.0	49.5	49.5	17.0	52.5	52.5	11.0	46.5	46.5
Total Split (%)	13.1%	37.3%	37.3%	13.8%	38.1%	38.1%	13.1%	40.4%	40.4%	8.5%	35.8%	35.8%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	Min	None	Min	Min
Act Effct Green (s)	13.6	29.0	29.0	6.2	11.9	11.9	7.7	27.1	27.1	7.1	29.4	29.4
Actuated g/C Ratio	0.17	0.37	0.37	0.08	0.15	0.15	0.10	0.34	0.34	0.09	0.37	0.37
v/c Ratio	1.09	0.14	0.16	0.03	0.13	0.39	0.22	0.49	0.00	0.58	0.57	0.43
Control Delay	113.3	19.2	3.8	45.7	29.5	8.7	41.3	21.8	0.0	47.9	23.1	4.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	113.3	19.2	3.8	45.7	29.5	8.7	41.3	21.8	0.0	47.9	23.1	4.7
LOS	F	B	A	D	C	A	D	C	A	D	C	A
Approach Delay		66.7			18.2			23.3			21.9	
Approach LOS		E			B			C			C	

Intersection Summary

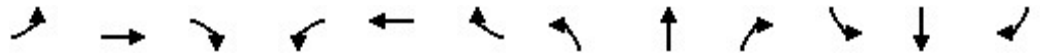
Cycle Length: 130	
Actuated Cycle Length: 79.2	
Natural Cycle: 145	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.09	
Intersection Signal Delay: 30.2	Intersection LOS: C
Intersection Capacity Utilization 57.9%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 1: Perris Blvd & Harley Knox Blvd



Phasings  
1: Perris Blvd & Harley Knox Blvd

Existing Conditions  
Timing Plan: PM PEAK HOUR



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	48.5	48.5	9.5	49.5	49.5	9.5	52.5	52.5	9.5	46.5	46.5
Total Split (s)	17.0	48.5	48.5	18.0	49.5	49.5	17.0	52.5	52.5	11.0	46.5	46.5
Total Split (%)	13.1%	37.3%	37.3%	13.8%	38.1%	38.1%	13.1%	40.4%	40.4%	8.5%	35.8%	35.8%
Maximum Green (s)	12.5	44.0	44.0	13.5	45.0	45.0	12.5	48.0	48.0	6.5	42.0	42.0
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None	None	None	None	Min	Min	None	Min	Min
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		37.0	37.0		38.0	38.0		41.0	41.0		35.0	35.0
Pedestrian Calls (#/hr)		5	5		5	5		5	5		5	5
90th %ile Green (s)	12.5	51.1	51.1	6.4	45.0	45.0	10.3	48.0	48.0	6.5	44.2	44.2
90th %ile Term Code	Max	Hold	Hold	Gap	Ped	Ped	Gap	Ped	Ped	Max	Hold	Hold
70th %ile Green (s)	12.5	24.6	24.6	0.0	7.6	7.6	7.8	30.3	30.3	6.5	29.0	29.0
70th %ile Term Code	Max	Hold	Hold	Skip	Gap	Gap	Gap	Hold	Hold	Max	Gap	Gap
50th %ile Green (s)	12.5	24.0	24.0	0.0	7.0	7.0	7.1	25.9	25.9	6.5	25.3	25.3
50th %ile Term Code	Max	Hold	Hold	Skip	Gap	Gap	Gap	Hold	Hold	Max	Gap	Gap
30th %ile Green (s)	12.5	23.5	23.5	0.0	6.5	6.5	6.5	21.6	21.6	6.5	21.6	21.6
30th %ile Term Code	Max	Hold	Hold	Skip	Gap	Gap	Gap	Hold	Hold	Max	Gap	Gap
10th %ile Green (s)	12.5	22.8	22.8	0.0	5.8	5.8	0.0	13.2	13.2	6.5	24.2	24.2
10th %ile Term Code	Max	Hold	Hold	Skip	Gap	Gap	Skip	Gap	Gap	Max	Hold	Hold

Intersection Summary

Cycle Length: 130  
 Actuated Cycle Length: 79.2  
 Control Type: Actuated-Uncoordinated  
 90th %ile Actuated Cycle: 130  
 70th %ile Actuated Cycle: 74.9  
 50th %ile Actuated Cycle: 69.9  
 30th %ile Actuated Cycle: 65.1  
 10th %ile Actuated Cycle: 56

HCM 6th Signalized Intersection Summary  
 1: Perris Blvd & Harley Knox Blvd

Existing Conditions  
 Timing Plan: PM PEAK HOUR

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	300	166	97	6	93	128	67	770	3	162	968	310
Future Volume (veh/h)	300	166	97	6	93	128	67	770	3	162	968	310
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	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	337	187	109	7	104	144	75	865	3	182	1088	348
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, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	338	1115	498	32	681	211	197	1735	538	275	1850	574
Arrive On Green	0.19	0.31	0.31	0.01	0.13	0.13	0.06	0.33	0.33	0.08	0.36	0.36
Sat Flow, veh/h	1810	3610	1610	3510	5187	1610	3510	5187	1609	3510	5187	1609
Grp Volume(v), veh/h	337	187	109	7	104	144	75	865	3	182	1088	348
Grp Sat Flow(s),veh/h/ln	1810	1805	1610	1755	1729	1610	1755	1729	1609	1755	1729	1609
Q Serve(g_s), s	12.5	2.5	3.4	0.1	1.2	5.7	1.4	8.9	0.1	3.4	11.4	11.9
Cycle Q Clear(g_c), s	12.5	2.5	3.4	0.1	1.2	5.7	1.4	8.9	0.1	3.4	11.4	11.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	338	1115	498	32	681	211	197	1735	538	275	1850	574
V/C Ratio(X)	1.00	0.17	0.22	0.22	0.15	0.68	0.38	0.50	0.01	0.66	0.59	0.61
Avail Cap(c_a), veh/h	338	2374	1059	708	3488	1083	656	3721	1154	341	3256	1010
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(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.2	16.8	17.1	32.9	25.8	27.7	30.5	17.8	14.8	30.0	17.5	17.7
Incr Delay (d2), s/veh	48.1	0.1	0.2	3.4	0.1	3.8	1.2	0.2	0.0	3.4	0.3	1.0
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(50%),veh/ln	9.3	0.9	1.1	0.1	0.5	2.2	0.6	3.1	0.0	1.4	3.9	3.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	75.3	16.9	17.4	36.3	25.9	31.6	31.7	18.0	14.9	33.3	17.8	18.7
LnGrp LOS	E	B	B	D	C	C	C	B	B	C	B	B
Approach Vol, veh/h		633			255			943			1618	
Approach Delay, s/veh		48.1			29.4			19.1			19.8	
Approach LOS		D			C			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.7	26.9	5.1	25.2	8.3	28.4	17.0	13.3				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	6.5	48.0	13.5	44.0	12.5	42.0	12.5	45.0				
Max Q Clear Time (g_c+l1), s	5.4	10.9	2.1	5.4	3.4	13.9	14.5	7.7				
Green Ext Time (p_c), s	0.1	6.3	0.0	1.4	0.1	9.6	0.0	1.1				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			25.5									
HCM 6th LOS			C									

Timings  
2: Redlands Ave & Harley Knox Blvd

Existing Conditions  
Timing Plan: PM PEAK HOUR

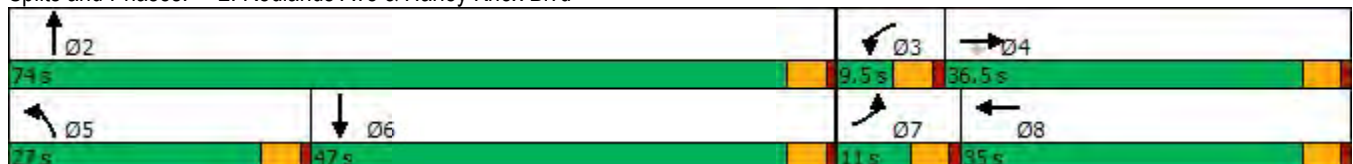


Lane Group	EBL	EBR	NBL	NBT	SBT	Ø3	Ø8
Lane Configurations	↖	↗	↖	↕	↕		
Traffic Volume (vph)	33	298	192	12	10		
Future Volume (vph)	33	298	192	12	10		
Turn Type	Prot	Perm	Prot	NA	NA		
Protected Phases	7		5	2	6	3	8
Permitted Phases		4					
Detector Phase	7	4	5	2	6		
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	36.5	9.5	34.5	47.0	9.5	34.5
Total Split (s)	11.0	36.5	27.0	74.0	47.0	9.5	35.0
Total Split (%)	9.2%	30.4%	22.5%	61.7%	39.2%	8%	29%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5		
Lead/Lag	Lead	Lag	Lead		Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None	None	Min	Min	None	None
Act Effct Green (s)	9.7	9.0	12.4	28.3	10.2		
Actuated g/C Ratio	0.20	0.19	0.26	0.58	0.21		
v/c Ratio	0.11	0.31	0.50	0.01	0.04		
Control Delay	20.0	0.7	24.0	5.0	11.0		
Queue Delay	0.0	0.0	0.0	0.0	0.0		
Total Delay	20.0	0.7	24.0	5.0	11.0		
LOS	B	A	C	A	B		
Approach Delay				22.9	11.0		
Approach LOS				C	B		

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 48.5  
 Natural Cycle: 105  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.50  
 Intersection Signal Delay: 10.4  
 Intersection LOS: B  
 Intersection Capacity Utilization 31.1%  
 ICU Level of Service A  
 Analysis Period (min) 15

Splits and Phases: 2: Redlands Ave & Harley Knox Blvd



Phasings  
2: Redlands Ave & Harley Knox Blvd

Existing Conditions  
Timing Plan: PM PEAK HOUR



Lane Group	EBL	EBR	NBL	NBT	SBT	Ø3	Ø8
Protected Phases	7		5	2	6	3	8
Permitted Phases		4					
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	36.5	9.5	34.5	47.0	9.5	34.5
Total Split (s)	11.0	36.5	27.0	74.0	47.0	9.5	35.0
Total Split (%)	9.2%	30.4%	22.5%	61.7%	39.2%	8%	29%
Maximum Green (s)	6.5	32.0	22.5	69.5	42.5	5.0	30.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lead		Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	Min	Min	None	None
Walk Time (s)		7.0		7.0	7.0		
Flash Dont Walk (s)		23.0		21.0	35.0		
Pedestrian Calls (#/hr)		5		5	5		
90th %ile Green (s)	30.0	30.0	22.5	69.0	42.0	0.0	0.0
90th %ile Term Code	Hold	Ped	Max	Hold	Ped	Skip	Skip
70th %ile Green (s)	0.0	5.5	10.6	20.9	5.8	0.0	5.5
70th %ile Term Code	Skip	Gap	Gap	Hold	Gap	Skip	Hold
50th %ile Green (s)	0.0	5.5	9.6	19.7	5.6	0.0	5.5
50th %ile Term Code	Skip	Gap	Gap	Hold	Gap	Skip	Hold
30th %ile Green (s)	0.0	5.5	8.7	18.7	5.5	0.0	5.5
30th %ile Term Code	Skip	Gap	Gap	Hold	Gap	Skip	Hold
10th %ile Green (s)	0.0	5.5	7.4	17.4	5.5	0.0	5.5
10th %ile Term Code	Skip	Gap	Gap	Hold	Gap	Skip	Hold






















Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 48.5  
 Control Type: Actuated-Uncoordinated  
 90th %ile Actuated Cycle: 108  
 70th %ile Actuated Cycle: 35.4  
 50th %ile Actuated Cycle: 34.2  
 30th %ile Actuated Cycle: 33.2  
 10th %ile Actuated Cycle: 31.9

# HCM 6th Signalized Intersection Summary

## 2: Redlands Ave & Harley Knox Blvd

Existing Conditions  
Timing Plan: PM PEAK HOUR

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	33	0	298	0	0	0	192	12	0	0	10	14
Future Volume (veh/h)	33	0	298	0	0	0	192	12	0	0	10	14
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	1900	1900	1900	1900	1900	1900	1900	1900	1900	0	1900	1900
Adj Flow Rate, veh/h	40	0	359	0	0	0	231	14	0	0	12	17
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	83	548	465	5	217	0	314	1642	0	0	276	246
Arrive On Green	0.05	0.00	0.29	0.00	0.00	0.00	0.17	0.45	0.00	0.00	0.15	0.15
Sat Flow, veh/h	1810	1900	1610	1810	1900	0	1810	3705	0	0	1900	1607
Grp Volume(v), veh/h	40	0	359	0	0	0	231	14	0	0	12	17
Grp Sat Flow(s),veh/h/ln	1810	1900	1610	1810	1900	0	1810	1805	0	0	1805	1607
Q Serve(g_s), s	0.8	0.0	7.2	0.0	0.0	0.0	4.2	0.1	0.0	0.0	0.2	0.3
Cycle Q Clear(g_c), s	0.8	0.0	7.2	0.0	0.0	0.0	4.2	0.1	0.0	0.0	0.2	0.3
Prop In Lane	1.00		1.00	1.00		0.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h	83	548	465	5	217	0	314	1642	0	0	276	246
V/C Ratio(X)	0.48	0.00	0.77	0.00	0.00	0.00	0.74	0.01	0.00	0.00	0.04	0.07
Avail Cap(c_a), veh/h	335	1734	1470	258	1653	0	1161	7156	0	0	2188	1948
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(l)	1.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	16.3	0.0	11.4	0.0	0.0	0.0	13.7	5.2	0.0	0.0	12.7	12.7
Incr Delay (d2), s/veh	4.2	0.0	2.8	0.0	0.0	0.0	3.4	0.0	0.0	0.0	0.1	0.1
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(50%),veh/ln	0.3	0.0	2.3	0.0	0.0	0.0	1.5	0.0	0.0	0.0	0.1	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	20.6	0.0	14.2	0.0	0.0	0.0	17.1	5.2	0.0	0.0	12.7	12.8
LnGrp LOS	C	A	B	A	A	A	B	A	A	A	B	B
Approach Vol, veh/h		399			0			245			29	
Approach Delay, s/veh		14.8			0.0			16.4			12.8	
Approach LOS		B						B			B	
Timer - Assigned Phs		2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s		20.4	0.0	14.6	10.6	9.9	6.1	8.5				
Change Period (Y+Rc), s		4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s		69.5	5.0	32.0	22.5	42.5	6.5	30.5				
Max Q Clear Time (g_c+I1), s		2.1	0.0	9.2	6.2	2.3	2.8	0.0				
Green Ext Time (p_c), s		0.1	0.0	1.2	0.6	0.1	0.0	0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			15.3									
HCM 6th LOS			B									
<b>Notes</b>												
User approved pedestrian interval to be less than phase max green.												

Intersection												
Int Delay, s/veh	0.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗			↕		↖	↗		↖	↗	
Traffic Vol, veh/h	9	0	4	0	0	0	5	196	0	0	300	4
Future Vol, veh/h	9	0	4	0	0	0	5	196	0	0	300	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	110	-	-	-	-	-	305	-	-	80	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	79	79	79	79	79	79	79	79	79	79	79	79
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	11	0	5	0	0	0	6	248	0	0	380	5

Major/Minor	Minor2		Minor1			Major1			Major2			
Conflicting Flow All	519	643	193	450	645	124	385	0	0	248	0	0
Stage 1	383	383	-	260	260	-	-	-	-	-	-	-
Stage 2	136	260	-	190	385	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.5	6.5	6.9	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	444	394	822	497	393	910	1185	-	-	1330	-	-
Stage 1	617	616	-	728	697	-	-	-	-	-	-	-
Stage 2	859	697	-	799	614	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	442	392	822	492	391	910	1185	-	-	1330	-	-
Mov Cap-2 Maneuver	442	392	-	492	391	-	-	-	-	-	-	-
Stage 1	614	616	-	724	694	-	-	-	-	-	-	-
Stage 2	855	694	-	794	614	-	-	-	-	-	-	-

Approach	EB		WB			NB			SB		
HCM Control Delay, s	12.2		0			0.2			0		
HCM LOS	B		A								

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1185	-	-	442	822	-	1330	-	-
HCM Lane V/C Ratio	0.005	-	-	0.026	0.006	-	-	-	-
HCM Control Delay (s)	8.1	-	-	13.4	9.4	0	0	-	-
HCM Lane LOS	A	-	-	B	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0	-	0	-	-

Timings  
4: Redlands Ave & Ramona Expy

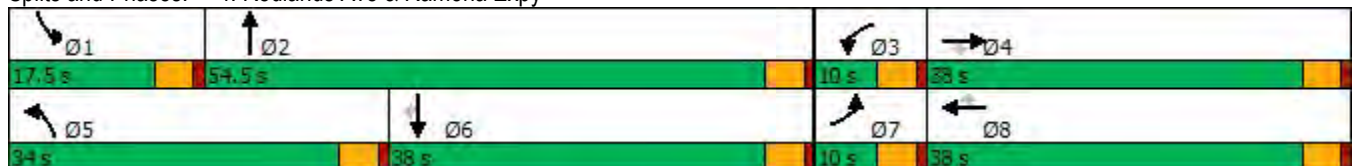
Existing Conditions  
Timing Plan: PM PEAK HOUR

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR	
Lane Configurations												
Traffic Volume (vph)	24	1454	87	62	961	163	17	40	250	62	24	
Future Volume (vph)	24	1454	87	62	961	163	17	40	250	62	24	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	
Protected Phases	7	4		3	8		5	2	1	6		
Permitted Phases			4			8					6	
Detector Phase	7	4	4	3	8	8	5	2	1	6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	9.5	31.5	31.5	9.5	36.5	36.5	9.5	54.5	9.5	22.5	22.5	
Total Split (s)	10.0	38.0	38.0	10.0	38.0	38.0	34.0	54.5	17.5	38.0	38.0	
Total Split (%)	8.3%	31.7%	31.7%	8.3%	31.7%	31.7%	28.3%	45.4%	14.6%	31.7%	31.7%	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	Min	None	Max	Max	
Act Effct Green (s)	5.6	34.0	34.0	5.6	40.7	40.7	6.6	23.8	13.2	37.2	37.2	
Actuated g/C Ratio	0.06	0.36	0.36	0.06	0.43	0.43	0.07	0.25	0.14	0.39	0.39	
v/c Ratio	0.24	0.82	0.14	0.61	0.46	0.22	0.14	0.23	1.05	0.09	0.04	
Control Delay	53.2	33.9	2.1	72.0	23.3	5.3	48.6	12.2	112.5	19.4	0.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	53.2	33.9	2.1	72.0	23.3	5.3	48.6	12.2	112.5	19.4	0.1	
LOS	D	C	A	E	C	A	D	B	F	B	A	
Approach Delay		32.4			23.4			17.4		87.4		
Approach LOS		C			C			B		F		

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 94.9	
Natural Cycle: 130	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.05	
Intersection Signal Delay: 34.2	Intersection LOS: C
Intersection Capacity Utilization 64.0%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 4: Redlands Ave & Ramona Expy



Phasings  
4: Redlands Ave & Ramona Expy

Existing Conditions  
Timing Plan: PM PEAK HOUR



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Protected Phases	7	4		3	8		5	2	1	6	
Permitted Phases			4			8					6
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	31.5	31.5	9.5	36.5	36.5	9.5	54.5	9.5	22.5	22.5
Total Split (s)	10.0	38.0	38.0	10.0	38.0	38.0	34.0	54.5	17.5	38.0	38.0
Total Split (%)	8.3%	31.7%	31.7%	8.3%	31.7%	31.7%	28.3%	45.4%	14.6%	31.7%	31.7%
Maximum Green (s)	5.5	33.5	33.5	5.5	33.5	33.5	29.5	50.0	13.0	33.5	33.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None	None	None	None	Min	None	Max	Max
Walk Time (s)		7.0	7.0		7.0	7.0		7.0			
Flash Dont Walk (s)		19.0	19.0		24.0	24.0		42.0			
Pedestrian Calls (#/hr)		5	5		5	5		5			
90th %ile Green (s)	5.5	33.5	33.5	5.5	33.5	33.5	8.6	49.0	13.0	53.4	53.4
90th %ile Term Code	Max	Max	Max	Max	Max	Max	Gap	Ped	Max	Hold	Hold
70th %ile Green (s)	5.5	33.5	33.5	5.5	33.5	33.5	7.0	27.5	13.0	33.5	33.5
70th %ile Term Code	Max	Max	Max	Max	Hold	Hold	Gap	Hold	Max	MaxR	MaxR
50th %ile Green (s)	0.0	33.5	33.5	5.5	43.5	43.5	0.0	16.0	13.0	33.5	33.5
50th %ile Term Code	Skip	Max	Max	Max	Hold	Hold	Skip	Hold	Max	MaxR	MaxR
30th %ile Green (s)	0.0	33.5	33.5	5.5	43.5	43.5	0.0	16.0	13.0	33.5	33.5
30th %ile Term Code	Skip	Max	Max	Max	Hold	Hold	Skip	Hold	Max	MaxR	MaxR
10th %ile Green (s)	0.0	33.5	33.5	5.5	43.5	43.5	0.0	16.0	13.0	33.5	33.5
10th %ile Term Code	Skip	Max	Max	Max	Hold	Hold	Skip	Hold	Max	MaxR	MaxR

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 94.9  
 Control Type: Actuated-Uncoordinated  
 90th %ile Actuated Cycle: 119  
 70th %ile Actuated Cycle: 97.5  
 50th %ile Actuated Cycle: 86  
 30th %ile Actuated Cycle: 86  
 10th %ile Actuated Cycle: 86

HCM 6th Signalized Intersection Summary  
4: Redlands Ave & Ramona Expy

Existing Conditions  
Timing Plan: PM PEAK HOUR

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	24	1454	87	62	961	163	17	40	65	250	62	24
Future Volume (veh/h)	24	1454	87	62	961	163	17	40	65	250	62	24
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		0.99
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	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	25	1531	92	65	1012	172	18	42	68	263	65	25
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, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	47	1825	553	84	1931	591	37	164	266	266	719	601
Arrive On Green	0.03	0.35	0.35	0.05	0.37	0.37	0.02	0.25	0.25	0.15	0.38	0.38
Sat Flow, veh/h	1810	5187	1572	1810	5187	1587	1810	652	1056	1810	1900	1589
Grp Volume(v), veh/h	25	1531	92	65	1012	172	18	0	110	263	65	25
Grp Sat Flow(s),veh/h/ln	1810	1729	1572	1810	1729	1587	1810	0	1708	1810	1900	1589
Q Serve(g_s), s	1.2	24.0	3.6	3.1	13.5	6.8	0.9	0.0	4.6	12.8	2.0	0.9
Cycle Q Clear(g_c), s	1.2	24.0	3.6	3.1	13.5	6.8	0.9	0.0	4.6	12.8	2.0	0.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.62	1.00		1.00
Lane Grp Cap(c), veh/h	47	1825	553	84	1931	591	37	0	430	266	719	601
V/C Ratio(X)	0.53	0.84	0.17	0.77	0.52	0.29	0.49	0.00	0.26	0.99	0.09	0.04
Avail Cap(c_a), veh/h	112	1962	595	112	1962	600	603	0	965	266	719	601
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(l)	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	42.6	26.4	19.8	41.8	21.7	19.6	42.9	0.0	26.5	37.7	17.7	17.4
Incr Delay (d2), s/veh	9.1	3.2	0.1	20.7	0.2	0.3	9.9	0.0	0.3	52.3	0.2	0.1
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(50%),veh/ln	0.6	9.2	1.2	1.8	4.8	2.2	0.5	0.0	1.8	9.3	0.9	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	51.7	29.6	19.9	62.5	21.9	19.8	52.8	0.0	26.8	90.1	18.0	17.5
LnGrp LOS	D	C	B	E	C	B	D	A	C	F	B	B
Approach Vol, veh/h		1648			1249			128				353
Approach Delay, s/veh		29.4			23.7			30.5				71.7
Approach LOS		C			C			C				E
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	17.5	26.8	8.6	35.7	6.3	38.0	6.8	37.5				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	13.0	50.0	5.5	33.5	29.5	33.5	5.5	33.5				
Max Q Clear Time (g_c+I1), s	14.8	6.6	5.1	26.0	2.9	4.0	3.2	15.5				
Green Ext Time (p_c), s	0.0	0.6	0.0	5.1	0.0	0.4	0.0	6.4				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				31.8								
HCM 6th LOS				C								



Timings  
1: Perris Blvd & Harley Knox Blvd

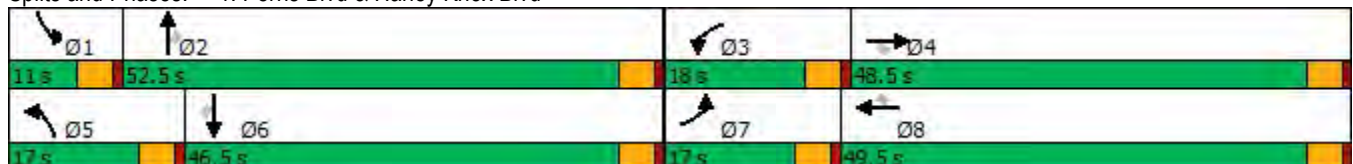
Existing plus Project  
Timing Plan: AM PEAK HOUR

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	180	109	44	6	338	230	178	1063	4	88	675	315
Future Volume (vph)	180	109	44	6	338	230	178	1063	4	88	675	315
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	48.5	48.5	9.5	49.5	49.5	9.5	52.5	52.5	9.5	46.5	46.5
Total Split (s)	17.0	48.5	48.5	18.0	49.5	49.5	17.0	52.5	52.5	11.0	46.5	46.5
Total Split (%)	13.1%	37.3%	37.3%	13.8%	38.1%	38.1%	13.1%	40.4%	40.4%	8.5%	35.8%	35.8%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	Min	None	Min	Min
Act Effct Green (s)	13.4	33.1	33.1	6.1	16.3	16.3	10.1	29.4	29.4	6.8	23.2	23.2
Actuated g/C Ratio	0.16	0.40	0.40	0.07	0.20	0.20	0.12	0.36	0.36	0.08	0.28	0.28
v/c Ratio	0.66	0.08	0.06	0.02	0.35	0.57	0.44	0.62	0.01	0.33	0.50	0.49
Control Delay	49.3	18.0	0.2	47.2	29.0	19.0	41.5	24.9	0.0	46.0	26.5	5.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	49.3	18.0	0.2	47.2	29.0	19.0	41.5	24.9	0.0	46.0	26.5	5.8
LOS	D	B	A	D	C	B	D	C	A	D	C	A
Approach Delay		32.6			25.2			27.2			22.1	
Approach LOS		C			C			C			C	

Intersection Summary

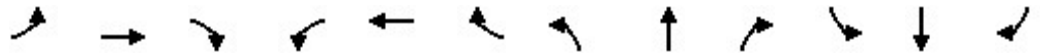
Cycle Length: 130	
Actuated Cycle Length: 82.3	
Natural Cycle: 125	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.66	
Intersection Signal Delay: 25.7	Intersection LOS: C
Intersection Capacity Utilization 56.2%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 1: Perris Blvd & Harley Knox Blvd



Phasings  
1: Perris Blvd & Harley Knox Blvd

Existing plus Project  
Timing Plan: AM PEAK HOUR



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	48.5	48.5	9.5	49.5	49.5	9.5	52.5	52.5	9.5	46.5	46.5
Total Split (s)	17.0	48.5	48.5	18.0	49.5	49.5	17.0	52.5	52.5	11.0	46.5	46.5
Total Split (%)	13.1%	37.3%	37.3%	13.8%	38.1%	38.1%	13.1%	40.4%	40.4%	8.5%	35.8%	35.8%
Maximum Green (s)	12.5	44.0	44.0	13.5	45.0	45.0	12.5	48.0	48.0	6.5	42.0	42.0
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None	None	None	None	Min	Min	None	Min	Min
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		37.0	37.0		38.0	38.0		41.0	41.0		35.0	35.0
Pedestrian Calls (#/hr)		5	5		5	5		5	5		5	5
90th %ile Green (s)	12.5	51.2	51.2	6.3	45.0	45.0	12.5	48.0	48.0	6.5	42.0	42.0
90th %ile Term Code	Max	Hold	Hold	Gap	Ped	Ped	Max	Ped	Ped	Max	Ped	Ped
70th %ile Green (s)	12.5	32.2	32.2	0.0	15.2	15.2	11.1	27.9	27.9	6.5	23.3	23.3
70th %ile Term Code	Max	Hold	Hold	Skip	Gap	Gap	Gap	Gap	Gap	Max	Hold	Hold
50th %ile Green (s)	12.5	29.2	29.2	0.0	12.2	12.2	9.7	24.4	24.4	6.5	21.2	21.2
50th %ile Term Code	Max	Hold	Hold	Skip	Gap	Gap	Gap	Gap	Gap	Max	Hold	Hold
30th %ile Green (s)	12.5	26.9	26.9	0.0	9.9	9.9	8.6	21.3	21.3	6.5	19.2	19.2
30th %ile Term Code	Max	Hold	Hold	Skip	Gap	Gap	Gap	Gap	Gap	Max	Hold	Hold
10th %ile Green (s)	12.5	25.5	25.5	0.0	8.5	8.5	7.3	25.3	25.3	0.0	13.5	13.5
10th %ile Term Code	Max	Hold	Hold	Skip	Gap	Gap	Gap	Hold	Hold	Skip	Gap	Gap

Intersection Summary

Cycle Length: 130  
 Actuated Cycle Length: 82.3  
 Control Type: Actuated-Uncoordinated  
 90th %ile Actuated Cycle: 130  
 70th %ile Actuated Cycle: 80.1  
 50th %ile Actuated Cycle: 73.6  
 30th %ile Actuated Cycle: 68.2  
 10th %ile Actuated Cycle: 59.8

HCM 6th Signalized Intersection Summary  
1: Perris Blvd & Harley Knox Blvd

Existing plus Project  
Timing Plan: AM PEAK HOUR

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	180	109	44	6	338	230	178	1063	4	88	675	315
Future Volume (veh/h)	180	109	44	6	338	230	178	1063	4	88	675	315
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	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	194	117	47	6	363	247	191	1143	4	95	726	339
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, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	238	1223	546	28	1116	346	292	1763	547	209	1640	509
Arrive On Green	0.13	0.34	0.34	0.01	0.22	0.22	0.08	0.34	0.34	0.06	0.32	0.32
Sat Flow, veh/h	1810	3610	1610	3510	5187	1610	3510	5187	1610	3510	5187	1610
Grp Volume(v), veh/h	194	117	47	6	363	247	191	1143	4	95	726	339
Grp Sat Flow(s),veh/h/ln	1810	1805	1610	1755	1729	1610	1755	1729	1610	1755	1729	1610
Q Serve(g_s), s	7.4	1.6	1.4	0.1	4.2	10.1	3.7	13.2	0.1	1.9	7.9	12.9
Cycle Q Clear(g_c), s	7.4	1.6	1.4	0.1	4.2	10.1	3.7	13.2	0.1	1.9	7.9	12.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	238	1223	546	28	1116	346	292	1763	547	209	1640	509
V/C Ratio(X)	0.81	0.10	0.09	0.22	0.33	0.71	0.65	0.65	0.01	0.45	0.44	0.67
Avail Cap(c_a), veh/h	319	2240	999	668	3291	1022	619	3510	1090	322	3072	954
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(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.0	16.0	16.0	35.0	23.5	25.8	31.5	19.8	15.5	32.2	19.3	21.0
Incr Delay (d2), s/veh	11.3	0.0	0.1	3.9	0.2	2.7	2.5	0.4	0.0	1.5	0.2	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(50%),veh/ln	3.7	0.6	0.5	0.1	1.6	3.7	1.6	4.7	0.0	0.8	2.8	4.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	41.3	16.1	16.0	38.8	23.7	28.5	34.0	20.2	15.5	33.8	19.5	22.5
LnGrp LOS	D	B	B	D	C	C	C	C	B	C	B	C
Approach Vol, veh/h		358			616			1338			1160	
Approach Delay, s/veh		29.7			25.8			22.2			21.5	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.7	28.6	5.1	28.5	10.4	26.9	13.8	19.8				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	6.5	48.0	13.5	44.0	12.5	42.0	12.5	45.0				
Max Q Clear Time (g_c+I1), s	3.9	15.2	2.1	3.6	5.7	14.9	9.4	12.1				
Green Ext Time (p_c), s	0.0	8.9	0.0	0.8	0.3	6.2	0.1	3.2				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			23.4									
HCM 6th LOS			C									

Timings  
2: Redlands Ave & Harley Knox Blvd

Existing plus Project  
Timing Plan: AM PEAK HOUR

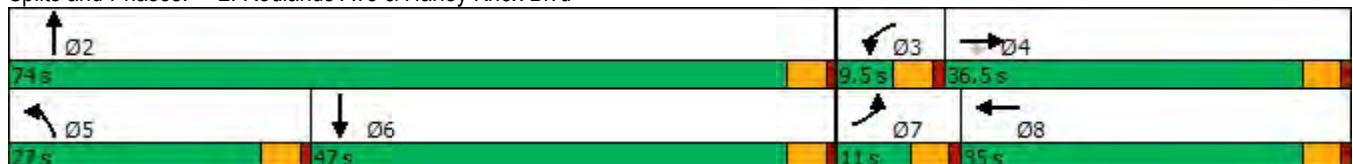


Lane Group	EBL	EBR	NBL	NBT	SBT	Ø3	Ø8
Lane Configurations	↶	↷	↶	↷	↷		
Traffic Volume (vph)	33	188	605	13	4		
Future Volume (vph)	33	188	605	13	4		
Turn Type	Prot	Perm	Prot	NA	NA		
Protected Phases	7		5	2	6	3	8
Permitted Phases		4					
Detector Phase	7	4	5	2	6		
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	36.5	9.5	34.5	47.0	9.5	34.5
Total Split (s)	11.0	36.5	27.0	74.0	47.0	9.5	35.0
Total Split (%)	9.2%	30.4%	22.5%	61.7%	39.2%	8%	29%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5		
Lead/Lag	Lead	Lag	Lead		Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None	None	Min	Min	None	None
Act Effct Green (s)	9.4	8.8	25.1	40.3	10.1		
Actuated g/C Ratio	0.16	0.15	0.42	0.68	0.17		
v/c Ratio	0.12	0.17	0.84	0.01	0.01		
Control Delay	23.8	0.3	31.8	4.6	0.0		
Queue Delay	0.0	0.0	0.0	0.0	0.0		
Total Delay	23.8	0.3	31.8	4.6	0.0		
LOS	C	A	C	A	A		
Approach Delay				31.2			
Approach LOS				C			

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 59.2  
 Natural Cycle: 145  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.84  
 Intersection Signal Delay: 23.6  
 Intersection LOS: C  
 Intersection Capacity Utilization 51.9%  
 ICU Level of Service A  
 Analysis Period (min) 15

Splits and Phases: 2: Redlands Ave & Harley Knox Blvd



Phasings  
2: Redlands Ave & Harley Knox Blvd

Existing plus Project  
Timing Plan: AM PEAK HOUR



Lane Group	EBL	EBR	NBL	NBT	SBT	Ø3	Ø8
Protected Phases	7		5	2	6	3	8
Permitted Phases		4					
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	36.5	9.5	34.5	47.0	9.5	34.5
Total Split (s)	11.0	36.5	27.0	74.0	47.0	9.5	35.0
Total Split (%)	9.2%	30.4%	22.5%	61.7%	39.2%	8%	29%
Maximum Green (s)	6.5	32.0	22.5	69.5	42.5	5.0	30.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lead		Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	Min	Min	None	None
Walk Time (s)		7.0		7.0	7.0		
Flash Dont Walk (s)		23.0		21.0	35.0		
Pedestrian Calls (#/hr)		5		5	5		
90th %ile Green (s)	30.0	30.0	22.5	69.0	42.0	0.0	0.0
90th %ile Term Code	Hold	Ped	Max	Hold	Ped	Skip	Skip
70th %ile Green (s)	0.0	5.5	22.5	32.5	5.5	0.0	5.5
70th %ile Term Code	Skip	Gap	Max	Hold	Gap	Skip	Hold
50th %ile Green (s)	0.0	5.5	22.5	32.5	5.5	0.0	5.5
50th %ile Term Code	Skip	Gap	Max	Hold	Gap	Skip	Hold
30th %ile Green (s)	0.0	5.5	22.5	32.5	5.5	0.0	5.5
30th %ile Term Code	Skip	Gap	Max	Hold	Gap	Skip	Hold
10th %ile Green (s)	0.0	5.5	22.5	32.5	5.5	0.0	5.5
10th %ile Term Code	Skip	Gap	Max	Hold	Gap	Skip	Hold

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 59.2  
 Control Type: Actuated-Uncoordinated  
 90th %ile Actuated Cycle: 108  
 70th %ile Actuated Cycle: 47  
 50th %ile Actuated Cycle: 47  
 30th %ile Actuated Cycle: 47  
 10th %ile Actuated Cycle: 47

# HCM 6th Signalized Intersection Summary

## 2: Redlands Ave & Harley Knox Blvd

Existing plus Project  
Timing Plan: AM PEAK HOUR



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	33	0	188	0	0	0	605	13	0	0	4	11
Future Volume (veh/h)	33	0	188	0	0	0	605	13	0	0	4	11
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	1900	1900	1900	1900	1900	1900	1900	1900	1900	0	1900	1900
Adj Flow Rate, veh/h	35	0	200	0	0	0	644	14	0	0	4	12
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	72	318	269	4	47	0	731	2263	0	0	216	193
Arrive On Green	0.04	0.00	0.17	0.00	0.00	0.00	0.40	0.63	0.00	0.00	0.12	0.12
Sat Flow, veh/h	1810	1900	1610	1810	1900	0	1810	3705	0	0	1900	1610
Grp Volume(v), veh/h	35	0	200	0	0	0	644	14	0	0	4	12
Grp Sat Flow(s),veh/h/ln	1810	1900	1610	1810	1900	0	1810	1805	0	0	1805	1610
Q Serve(g_s), s	0.8	0.0	5.2	0.0	0.0	0.0	14.4	0.1	0.0	0.0	0.1	0.3
Cycle Q Clear(g_c), s	0.8	0.0	5.2	0.0	0.0	0.0	14.4	0.1	0.0	0.0	0.1	0.3
Prop In Lane	1.00		1.00	1.00		0.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h	72	318	269	4	47	0	731	2263	0	0	216	193
V/C Ratio(X)	0.49	0.00	0.74	0.00	0.00	0.00	0.88	0.01	0.00	0.00	0.02	0.06
Avail Cap(c_a), veh/h	269	1391	1179	207	1326	0	932	5742	0	0	1756	1566
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(l)	1.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	20.5	0.0	17.3	0.0	0.0	0.0	12.0	3.1	0.0	0.0	17.0	17.1
Incr Delay (d2), s/veh	5.1	0.0	4.0	0.0	0.0	0.0	8.1	0.0	0.0	0.0	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.0	2.0	0.0	0.0	0.0	5.6	0.0	0.0	0.0	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.6	0.0	21.3	0.0	0.0	0.0	20.2	3.1	0.0	0.0	17.0	17.2
LnGrp LOS	C	A	C	A	A	A	C	A	A	A	B	B
Approach Vol, veh/h		235			0			658				16
Approach Delay, s/veh		22.0			0.0			19.8				17.1
Approach LOS		C						B				B
Timer - Assigned Phs		2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s		31.9	0.0	11.8	22.2	9.7	6.2	5.6				
Change Period (Y+Rc), s		4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s		69.5	5.0	32.0	22.5	42.5	6.5	30.5				
Max Q Clear Time (g_c+I1), s		2.1	0.0	7.2	16.4	2.3	2.8	0.0				
Green Ext Time (p_c), s		0.1	0.0	0.6	1.3	0.0	0.0	0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			20.3									
HCM 6th LOS			C									
<b>Notes</b>												
User approved pedestrian interval to be less than phase max green.												

Intersection												
Int Delay, s/veh	0.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗			↕		↖	↗		↖	↗	
Traffic Vol, veh/h	13	0	16	0	0	0	10	606	0	0	146	40
Future Vol, veh/h	13	0	16	0	0	0	10	606	0	0	146	40
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	1	1	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	110	-	-	-	-	-	305	-	-	80	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	14	0	17	0	0	0	11	645	0	0	155	43

Major/Minor	Minor2		Minor1			Major1			Major2			
Conflicting Flow All	522	845	99	746	866	324	198	0	0	646	0	0
Stage 1	177	177	-	668	668	-	-	-	-	-	-	-
Stage 2	345	668	-	78	198	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.5	6.5	6.9	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	442	302	944	306	293	678	1387	-	-	949	-	-
Stage 1	813	756	-	419	459	-	-	-	-	-	-	-
Stage 2	649	459	-	928	741	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	439	299	944	298	290	677	1387	-	-	948	-	-
Mov Cap-2 Maneuver	439	299	-	298	290	-	-	-	-	-	-	-
Stage 1	806	756	-	415	455	-	-	-	-	-	-	-
Stage 2	644	455	-	911	741	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	11	0	0.1	0
HCM LOS	B	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1387	-	-	439	944	-	948	-	-
HCM Lane V/C Ratio	0.008	-	-	0.032	0.018	-	-	-	-
HCM Control Delay (s)	7.6	-	-	13.5	8.9	0	0	-	-
HCM Lane LOS	A	-	-	B	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.1	-	0	-	-

Timings  
4: Redlands Ave & Ramona Expy

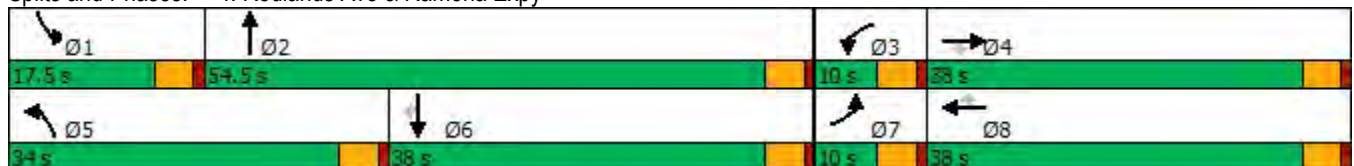
Existing plus Project  
Timing Plan: AM PEAK HOUR

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR	
Lane Configurations												
Traffic Volume (vph)	24	709	41	79	1190	528	45	185	100	46	18	
Future Volume (vph)	24	709	41	79	1190	528	45	185	100	46	18	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	
Protected Phases	7	4		3	8		5	2	1	6		
Permitted Phases			4			8					6	
Detector Phase	7	4	4	3	8	8	5	2	1	6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	9.5	31.5	31.5	9.5	36.5	36.5	9.5	54.5	9.5	22.5	22.5	
Total Split (s)	10.0	38.0	38.0	10.0	38.0	38.0	34.0	54.5	17.5	38.0	38.0	
Total Split (%)	8.3%	31.7%	31.7%	8.3%	31.7%	31.7%	28.3%	45.4%	14.6%	31.7%	31.7%	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	Min	None	Max	Max	
Act Effct Green (s)	5.8	22.9	22.9	5.8	30.2	30.2	8.0	33.1	10.3	37.8	37.8	
Actuated g/C Ratio	0.07	0.26	0.26	0.07	0.34	0.34	0.09	0.38	0.12	0.43	0.43	
v/c Ratio	0.21	0.54	0.08	0.69	0.69	0.60	0.28	0.47	0.49	0.06	0.02	
Control Delay	52.4	29.9	0.3	75.6	29.3	5.8	48.1	23.6	50.0	19.7	0.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	52.4	29.9	0.3	75.6	29.3	5.8	48.1	23.6	50.0	19.7	0.1	
LOS	D	C	A	E	C	A	D	C	D	B	A	
Approach Delay		29.1			24.4			26.6		36.0		
Approach LOS		C			C			C		D		

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 88	
Natural Cycle: 110	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.69	
Intersection Signal Delay: 26.5	Intersection LOS: C
Intersection Capacity Utilization 65.6%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 4: Redlands Ave & Ramona Expy



Phasings  
4: Redlands Ave & Ramona Expy

Existing plus Project  
Timing Plan: AM PEAK HOUR































Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Protected Phases	7	4		3	8		5	2	1	6	
Permitted Phases			4			8					6
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	31.5	31.5	9.5	36.5	36.5	9.5	54.5	9.5	22.5	22.5
Total Split (s)	10.0	38.0	38.0	10.0	38.0	38.0	34.0	54.5	17.5	38.0	38.0
Total Split (%)	8.3%	31.7%	31.7%	8.3%	31.7%	31.7%	28.3%	45.4%	14.6%	31.7%	31.7%
Maximum Green (s)	5.5	33.5	33.5	5.5	33.5	33.5	29.5	50.0	13.0	33.5	33.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None	None	None	None	Min	None	Max	Max
Walk Time (s)		7.0	7.0		7.0	7.0		7.0			
Flash Dont Walk (s)		19.0	19.0		24.0	24.0		42.0			
Pedestrian Calls (#/hr)		5	5		5	5		5			
90th %ile Green (s)	5.5	33.5	33.5	5.5	33.5	33.5	11.5	49.0	13.0	50.5	50.5
90th %ile Term Code	Max	Hold	Hold	Max	Max	Max	Gap	Ped	Max	Hold	Hold
70th %ile Green (s)	5.5	33.5	33.5	5.5	33.5	33.5	9.0	30.0	12.5	33.5	33.5
70th %ile Term Code	Max	Hold	Hold	Max	Max	Max	Gap	Hold	Gap	MaxR	MaxR
50th %ile Green (s)	0.0	23.5	23.5	5.5	33.5	33.5	7.9	30.6	10.8	33.5	33.5
50th %ile Term Code	Skip	Hold	Hold	Max	Max	Max	Gap	Hold	Gap	MaxR	MaxR
30th %ile Green (s)	0.0	16.1	16.1	5.5	26.1	26.1	0.0	20.6	8.4	33.5	33.5
30th %ile Term Code	Skip	Hold	Hold	Max	Gap	Gap	Skip	Hold	Gap	MaxR	MaxR
10th %ile Green (s)	0.0	11.9	11.9	5.5	21.9	21.9	0.0	33.5	0.0	33.5	33.5
10th %ile Term Code	Skip	Gap	Gap	Max	Hold	Hold	Skip	Hold	Skip	MaxR	MaxR

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 88  
 Control Type: Actuated-Uncoordinated  
 90th %ile Actuated Cycle: 119  
 70th %ile Actuated Cycle: 99.5  
 50th %ile Actuated Cycle: 88.4  
 30th %ile Actuated Cycle: 68.6  
 10th %ile Actuated Cycle: 64.4

HCM 6th Signalized Intersection Summary  
4: Redlands Ave & Ramona Expy

Existing plus Project  
Timing Plan: AM PEAK HOUR

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  						 	
Traffic Volume (veh/h)	24	709	41	79	1190	528	45	185	127	100	46	18
Future Volume (veh/h)	24	709	41	79	1190	528	45	185	127	100	46	18
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		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	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	25	731	42	81	1227	544	46	191	131	103	47	19
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	47	1732	526	104	1897	589	69	353	242	132	705	598
Arrive On Green	0.03	0.33	0.33	0.06	0.37	0.37	0.04	0.34	0.34	0.07	0.37	0.37
Sat Flow, veh/h	1810	5187	1576	1810	5187	1610	1810	1050	720	1810	1900	1610
Grp Volume(v), veh/h	25	731	42	81	1227	544	46	0	322	103	47	19
Grp Sat Flow(s),veh/h/ln	1810	1729	1576	1810	1729	1610	1810	0	1770	1810	1900	1610
Q Serve(g_s), s	1.2	9.9	1.6	4.0	17.7	29.2	2.3	0.0	13.3	5.0	1.4	0.7
Cycle Q Clear(g_c), s	1.2	9.9	1.6	4.0	17.7	29.2	2.3	0.0	13.3	5.0	1.4	0.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.41	1.00		1.00
Lane Grp Cap(c), veh/h	47	1732	526	104	1897	589	69	0	595	132	705	598
V/C Ratio(X)	0.54	0.42	0.08	0.78	0.65	0.92	0.67	0.00	0.54	0.78	0.07	0.03
Avail Cap(c_a), veh/h	110	1925	585	110	1925	598	591	0	981	261	705	598
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	43.4	23.3	20.6	42.0	23.8	27.4	42.9	0.0	24.3	41.1	18.3	18.1
Incr Delay (d2), s/veh	9.2	0.2	0.1	27.5	0.7	20.1	10.8	0.0	0.8	9.4	0.2	0.1
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(50%),veh/ln	0.6	3.6	0.6	2.5	6.5	13.1	1.2	0.0	5.4	2.5	0.6	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.6	23.5	20.6	69.5	24.5	47.5	53.6	0.0	25.1	50.5	18.5	18.2
LnGrp LOS	D	C	C	E	C	D	D	A	C	D	B	B
Approach Vol, veh/h		798			1852			368			169	
Approach Delay, s/veh		24.2			33.2			28.7			38.0	
Approach LOS		C			C			C			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.1	34.8	9.7	34.6	7.9	38.0	6.8	37.5				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	13.0	50.0	5.5	33.5	29.5	33.5	5.5	33.5				
Max Q Clear Time (g_c+I1), s	7.0	15.3	6.0	11.9	4.3	3.4	3.2	31.2				
Green Ext Time (p_c), s	0.1	2.0	0.0	4.5	0.1	0.2	0.0	1.8				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				30.7								
HCM 6th LOS				C								

Intersection						
Int Delay, s/veh	3					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	19	2	18	15	3	2
Future Vol, veh/h	19	2	18	15	3	2
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	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	21	2	20	16	3	2

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	23	0	78
Stage 1	-	-	-	-	22
Stage 2	-	-	-	-	56
Critical Hdwy	-	-	4.1	-	6.4
Critical Hdwy Stg 1	-	-	-	-	5.4
Critical Hdwy Stg 2	-	-	-	-	5.4
Follow-up Hdwy	-	-	2.2	-	3.5
Pot Cap-1 Maneuver	-	-	1605	-	930
Stage 1	-	-	-	-	1006
Stage 2	-	-	-	-	972
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1605	-	918
Mov Cap-2 Maneuver	-	-	-	-	863
Stage 1	-	-	-	-	1006
Stage 2	-	-	-	-	959

Approach	EB	WB	NB
HCM Control Delay, s	0	4	8.9
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	933	-	-	1605	-
HCM Lane V/C Ratio	0.006	-	-	0.012	-
HCM Control Delay (s)	8.9	-	-	7.3	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection						
Int Delay, s/veh	2.4					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	21	0	17	33	0	8
Future Vol, veh/h	21	0	17	33	0	8
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	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	23	0	18	36	0	9

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	23	0	95
Stage 1	-	-	-	-	23
Stage 2	-	-	-	-	72
Critical Hdwy	-	-	4.1	-	6.4
Critical Hdwy Stg 1	-	-	-	-	5.4
Critical Hdwy Stg 2	-	-	-	-	5.4
Follow-up Hdwy	-	-	2.2	-	3.5
Pot Cap-1 Maneuver	-	-	1605	-	909
Stage 1	-	-	-	-	1005
Stage 2	-	-	-	-	956
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1605	-	899
Mov Cap-2 Maneuver	-	-	-	-	850
Stage 1	-	-	-	-	1005
Stage 2	-	-	-	-	945

Approach	EB	WB	NB
HCM Control Delay, s	0	2.5	8.4
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1060	-	-	1605	-
HCM Lane V/C Ratio	0.008	-	-	0.012	-
HCM Control Delay (s)	8.4	-	-	7.3	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

Timings  
1: Perris Blvd & Harley Knox Blvd

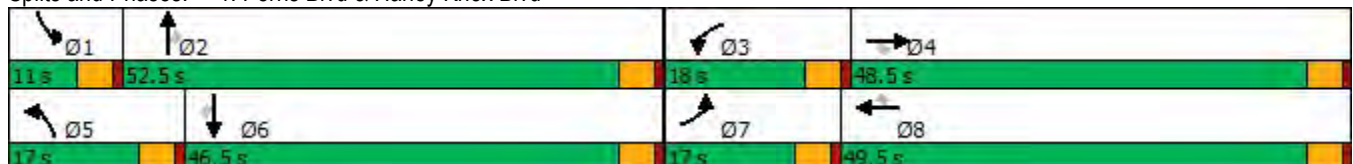
Existing plus Project  
Timing Plan: PM PEAK HOUR

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	300	177	97	6	109	130	78	772	3	164	968	310
Future Volume (vph)	300	177	97	6	109	130	78	772	3	164	968	310
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	48.5	48.5	9.5	49.5	49.5	9.5	52.5	52.5	9.5	46.5	46.5
Total Split (s)	17.0	48.5	48.5	18.0	49.5	49.5	17.0	52.5	52.5	11.0	46.5	46.5
Total Split (%)	13.1%	37.3%	37.3%	13.8%	38.1%	38.1%	13.1%	40.4%	40.4%	8.5%	35.8%	35.8%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	Min	None	Min	Min
Act Effct Green (s)	13.5	29.3	29.3	6.2	12.2	12.2	8.0	27.4	27.4	7.0	29.4	29.4
Actuated g/C Ratio	0.17	0.37	0.37	0.08	0.15	0.15	0.10	0.34	0.34	0.09	0.37	0.37
v/c Ratio	1.10	0.15	0.16	0.03	0.15	0.39	0.25	0.49	0.00	0.60	0.57	0.43
Control Delay	116.6	19.4	3.8	46.0	29.7	8.7	41.4	21.9	0.0	48.6	23.4	4.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	116.6	19.4	3.8	46.0	29.7	8.7	41.4	21.9	0.0	48.6	23.4	4.7
LOS	F	B	A	D	C	A	D	C	A	D	C	A
Approach Delay		67.5			18.9			23.6			22.3	
Approach LOS		E			B			C			C	

Intersection Summary

Cycle Length: 130	
Actuated Cycle Length: 79.7	
Natural Cycle: 145	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.10	
Intersection Signal Delay: 30.7	Intersection LOS: C
Intersection Capacity Utilization 57.9%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 1: Perris Blvd & Harley Knox Blvd



Phasings  
1: Perris Blvd & Harley Knox Blvd

Existing plus Project  
Timing Plan: PM PEAK HOUR



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	48.5	48.5	9.5	49.5	49.5	9.5	52.5	52.5	9.5	46.5	46.5
Total Split (s)	17.0	48.5	48.5	18.0	49.5	49.5	17.0	52.5	52.5	11.0	46.5	46.5
Total Split (%)	13.1%	37.3%	37.3%	13.8%	38.1%	38.1%	13.1%	40.4%	40.4%	8.5%	35.8%	35.8%
Maximum Green (s)	12.5	44.0	44.0	13.5	45.0	45.0	12.5	48.0	48.0	6.5	42.0	42.0
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None	None	None	None	Min	Min	None	Min	Min
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		37.0	37.0		38.0	38.0		41.0	41.0		35.0	35.0
Pedestrian Calls (#/hr)		5	5		5	5		5	5		5	5
90th %ile Green (s)	12.5	51.1	51.1	6.4	45.0	45.0	10.9	48.0	48.0	6.5	43.6	43.6
90th %ile Term Code	Max	Hold	Hold	Gap	Ped	Ped	Gap	Ped	Ped	Max	Hold	Hold
70th %ile Green (s)	12.5	25.0	25.0	0.0	8.0	8.0	8.2	31.0	31.0	6.5	29.3	29.3
70th %ile Term Code	Max	Hold	Hold	Skip	Gap	Gap	Gap	Hold	Hold	Max	Gap	Gap
50th %ile Green (s)	12.5	24.3	24.3	0.0	7.3	7.3	7.4	26.4	26.4	6.5	25.5	25.5
50th %ile Term Code	Max	Hold	Hold	Skip	Gap	Gap	Gap	Hold	Hold	Max	Gap	Gap
30th %ile Green (s)	12.5	23.7	23.7	0.0	6.7	6.7	6.7	22.0	22.0	6.5	21.8	21.8
30th %ile Term Code	Max	Hold	Hold	Skip	Gap	Gap	Gap	Hold	Hold	Max	Gap	Gap
10th %ile Green (s)	12.5	23.1	23.1	0.0	6.1	6.1	0.0	13.2	13.2	6.5	24.2	24.2
10th %ile Term Code	Max	Hold	Hold	Skip	Gap	Gap	Skip	Gap	Gap	Max	Hold	Hold

Intersection Summary

Cycle Length: 130  
 Actuated Cycle Length: 79.7  
 Control Type: Actuated-Uncoordinated  
 90th %ile Actuated Cycle: 130  
 70th %ile Actuated Cycle: 76  
 50th %ile Actuated Cycle: 70.7  
 30th %ile Actuated Cycle: 65.7  
 10th %ile Actuated Cycle: 56.3

HCM 6th Signalized Intersection Summary  
 1: Perris Blvd & Harley Knox Blvd

Existing plus Project  
 Timing Plan: PM PEAK HOUR

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	300	177	97	6	109	130	78	772	3	164	968	310
Future Volume (veh/h)	300	177	97	6	109	130	78	772	3	164	968	310
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	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	337	199	109	7	122	146	88	867	3	184	1088	348
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, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	335	1118	498	32	694	215	210	1743	541	277	1842	571
Arrive On Green	0.18	0.31	0.31	0.01	0.13	0.13	0.06	0.34	0.34	0.08	0.36	0.36
Sat Flow, veh/h	1810	3610	1610	3510	5187	1610	3510	5187	1609	3510	5187	1609
Grp Volume(v), veh/h	337	199	109	7	122	146	88	867	3	184	1088	348
Grp Sat Flow(s),veh/h/ln	1810	1805	1610	1755	1729	1610	1755	1729	1609	1755	1729	1609
Q Serve(g_s), s	12.5	2.7	3.4	0.1	1.4	5.8	1.6	9.0	0.1	3.4	11.6	12.0
Cycle Q Clear(g_c), s	12.5	2.7	3.4	0.1	1.4	5.8	1.6	9.0	0.1	3.4	11.6	12.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	335	1118	498	32	694	215	210	1743	541	277	1842	571
V/C Ratio(X)	1.01	0.18	0.22	0.22	0.18	0.68	0.42	0.50	0.01	0.66	0.59	0.61
Avail Cap(c_a), veh/h	335	2350	1048	701	3454	1072	649	3684	1143	338	3224	1000
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(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.5	17.0	17.3	33.2	26.0	27.9	30.6	17.9	14.9	30.3	17.8	17.9
Incr Delay (d2), s/veh	50.9	0.1	0.2	3.4	0.1	3.7	1.3	0.2	0.0	3.6	0.3	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.6	1.0	1.1	0.1	0.5	2.3	0.7	3.1	0.0	1.5	4.0	4.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	78.5	17.1	17.5	36.6	26.1	31.6	32.0	18.1	14.9	33.9	18.1	19.0
LnGrp LOS	F	B	B	D	C	C	C	B	B	C	B	B
Approach Vol, veh/h		645			275			958			1620	
Approach Delay, s/veh		49.2			29.3			19.4			20.1	
Approach LOS		D			C			B			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.8	27.2	5.1	25.4	8.5	28.5	17.0	13.5				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	6.5	48.0	13.5	44.0	12.5	42.0	12.5	45.0				
Max Q Clear Time (g_c+I1), s	5.4	11.0	2.1	5.4	3.6	14.0	14.5	7.8				
Green Ext Time (p_c), s	0.1	6.4	0.0	1.5	0.1	9.6	0.0	1.2				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			26.0									
HCM 6th LOS			C									

Timings  
2: Redlands Ave & Harley Knox Blvd

Existing plus Project  
Timing Plan: PM PEAK HOUR

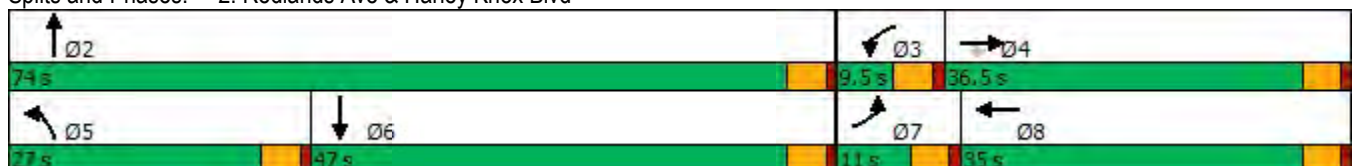


Lane Group	EBL	EBR	NBL	NBT	SBT	Ø3	Ø8
Lane Configurations	↖	↗	↖	↕	↕		
Traffic Volume (vph)	33	311	210	12	10		
Future Volume (vph)	33	311	210	12	10		
Turn Type	Prot	Perm	Prot	NA	NA		
Protected Phases	7		5	2	6	3	8
Permitted Phases		4					
Detector Phase	7	4	5	2	6		
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	36.5	9.5	34.5	47.0	9.5	34.5
Total Split (s)	11.0	36.5	27.0	74.0	47.0	9.5	35.0
Total Split (%)	9.2%	30.4%	22.5%	61.7%	39.2%	8%	29%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5		
Lead/Lag	Lead	Lag	Lead		Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None	None	Min	Min	None	None
Act Effct Green (s)	9.7	9.0	13.4	29.2	10.2		
Actuated g/C Ratio	0.20	0.18	0.27	0.59	0.21		
v/c Ratio	0.11	0.32	0.52	0.01	0.04		
Control Delay	20.3	0.7	24.0	4.9	11.2		
Queue Delay	0.0	0.0	0.0	0.0	0.0		
Total Delay	20.3	0.7	24.0	4.9	11.2		
LOS	C	A	C	A	B		
Approach Delay				23.0	11.2		
Approach LOS				C	B		

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 49.3	
Natural Cycle: 105	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.52	
Intersection Signal Delay: 10.6	Intersection LOS: B
Intersection Capacity Utilization 31.9%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 2: Redlands Ave & Harley Knox Blvd



Phasings  
2: Redlands Ave & Harley Knox Blvd

Existing plus Project  
Timing Plan: PM PEAK HOUR



Lane Group	EBL	EBR	NBL	NBT	SBT	Ø3	Ø8
Protected Phases	7		5	2	6	3	8
Permitted Phases		4					
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	36.5	9.5	34.5	47.0	9.5	34.5
Total Split (s)	11.0	36.5	27.0	74.0	47.0	9.5	35.0
Total Split (%)	9.2%	30.4%	22.5%	61.7%	39.2%	8%	29%
Maximum Green (s)	6.5	32.0	22.5	69.5	42.5	5.0	30.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lead		Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	Min	Min	None	None
Walk Time (s)		7.0		7.0	7.0		
Flash Dont Walk (s)		23.0		21.0	35.0		
Pedestrian Calls (#/hr)		5		5	5		
90th %ile Green (s)	30.0	30.0	22.5	69.0	42.0	0.0	0.0
90th %ile Term Code	Hold	Ped	Max	Hold	Ped	Skip	Skip
70th %ile Green (s)	0.0	5.5	11.7	22.0	5.8	0.0	5.5
70th %ile Term Code	Skip	Gap	Gap	Hold	Gap	Skip	Hold
50th %ile Green (s)	0.0	5.5	10.6	20.7	5.6	0.0	5.5
50th %ile Term Code	Skip	Gap	Gap	Hold	Gap	Skip	Hold
30th %ile Green (s)	0.0	5.5	9.6	19.6	5.5	0.0	5.5
30th %ile Term Code	Skip	Gap	Gap	Hold	Gap	Skip	Hold
10th %ile Green (s)	0.0	5.5	8.2	18.2	5.5	0.0	5.5
10th %ile Term Code	Skip	Gap	Gap	Hold	Gap	Skip	Hold

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 49.3  
 Control Type: Actuated-Uncoordinated  
 90th %ile Actuated Cycle: 108  
 70th %ile Actuated Cycle: 36.5  
 50th %ile Actuated Cycle: 35.2  
 30th %ile Actuated Cycle: 34.1  
 10th %ile Actuated Cycle: 32.7

# HCM 6th Signalized Intersection Summary

## 2: Redlands Ave & Harley Knox Blvd

Existing plus Project  
Timing Plan: PM PEAK HOUR



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	33	0	311	0	0	0	210	12	0	0	10	14
Future Volume (veh/h)	33	0	311	0	0	0	210	12	0	0	10	14
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	1900	1900	1900	1900	1900	1900	1900	1900	1900	0	1900	1900
Adj Flow Rate, veh/h	40	0	375	0	0	0	253	14	0	0	12	17
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	83	564	478	5	245	0	340	1651	0	0	265	236
Arrive On Green	0.05	0.00	0.30	0.00	0.00	0.00	0.19	0.46	0.00	0.00	0.15	0.15
Sat Flow, veh/h	1810	1900	1610	1810	1900	0	1810	3705	0	0	1900	1607
Grp Volume(v), veh/h	40	0	375	0	0	0	253	14	0	0	12	17
Grp Sat Flow(s),veh/h/ln	1810	1900	1610	1810	1900	0	1810	1805	0	0	1805	1607
Q Serve(g_s), s	0.8	0.0	7.8	0.0	0.0	0.0	4.8	0.1	0.0	0.0	0.2	0.3
Cycle Q Clear(g_c), s	0.8	0.0	7.8	0.0	0.0	0.0	4.8	0.1	0.0	0.0	0.2	0.3
Prop In Lane	1.00		1.00	1.00		0.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h	83	564	478	5	245	0	340	1651	0	0	265	236
V/C Ratio(X)	0.48	0.00	0.78	0.00	0.00	0.00	0.74	0.01	0.00	0.00	0.05	0.07
Avail Cap(c_a), veh/h	321	1659	1406	247	1581	0	1111	6845	0	0	2093	1863
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(l)	1.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	17.1	0.0	11.8	0.0	0.0	0.0	14.1	5.4	0.0	0.0	13.4	13.5
Incr Delay (d2), s/veh	4.3	0.0	2.9	0.0	0.0	0.0	3.2	0.0	0.0	0.0	0.1	0.1
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(50%),veh/ln	0.4	0.0	2.6	0.0	0.0	0.0	1.7	0.0	0.0	0.0	0.1	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	21.4	0.0	14.7	0.0	0.0	0.0	17.3	5.4	0.0	0.0	13.5	13.6
LnGrp LOS	C	A	B	A	A	A	B	A	A	A	B	B
Approach Vol, veh/h		415			0			267			29	
Approach Delay, s/veh		15.3			0.0			16.7			13.6	
Approach LOS		B						B			B	
Timer - Assigned Phs		2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s		21.3	0.0	15.4	11.4	9.9	6.2	9.2				
Change Period (Y+Rc), s		4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s		69.5	5.0	32.0	22.5	42.5	6.5	30.5				
Max Q Clear Time (g_c+I1), s		2.1	0.0	9.8	6.8	2.3	2.8	0.0				
Green Ext Time (p_c), s		0.1	0.0	1.2	0.6	0.1	0.0	0.0				

### Intersection Summary

HCM 6th Ctrl Delay	15.8
HCM 6th LOS	B

### Notes

User approved pedestrian interval to be less than phase max green.

Intersection												
Int Delay, s/veh	0.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗			↕		↖	↗		↖	↗	
Traffic Vol, veh/h	27	0	10	0	0	0	6	196	0	0	300	17
Future Vol, veh/h	27	0	10	0	0	0	6	196	0	0	300	17
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	110	-	-	-	-	-	305	-	-	80	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	79	79	79	79	79	79	79	79	79	79	79	79
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	34	0	13	0	0	0	8	248	0	0	380	22

Major/Minor	Minor2		Minor1			Major1			Major2			
Conflicting Flow All	531	655	201	454	666	124	402	0	0	248	0	0
Stage 1	391	391	-	264	264	-	-	-	-	-	-	-
Stage 2	140	264	-	190	402	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.5	6.5	6.9	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	436	388	813	494	383	910	1168	-	-	1330	-	-
Stage 1	610	611	-	724	694	-	-	-	-	-	-	-
Stage 2	854	694	-	799	604	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	434	385	813	484	380	910	1168	-	-	1330	-	-
Mov Cap-2 Maneuver	434	385	-	484	380	-	-	-	-	-	-	-
Stage 1	606	611	-	719	689	-	-	-	-	-	-	-
Stage 2	848	689	-	787	604	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	12.8	0	0.2	0
HCM LOS	B	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1168	-	-	434	813	-	1330	-	-
HCM Lane V/C Ratio	0.007	-	-	0.079	0.016	-	-	-	-
HCM Control Delay (s)	8.1	-	-	14	9.5	0	0	-	-
HCM Lane LOS	A	-	-	B	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.3	0	-	0	-	-

Timings  
4: Redlands Ave & Ramona Expy

Existing plus Project  
Timing Plan: PM PEAK HOUR

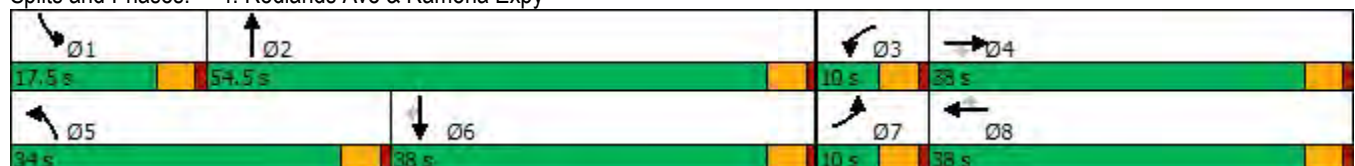


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations	↙	↑↑↑	↘	↙	↑↑↑	↘	↙	↑	↙	↑	↘
Traffic Volume (vph)	25	1454	87	62	961	163	17	40	251	63	28
Future Volume (vph)	25	1454	87	62	961	163	17	40	251	63	28
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2	1	6	
Permitted Phases			4			8					6
Detector Phase	7	4	4	3	8	8	5	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	31.5	31.5	9.5	36.5	36.5	9.5	54.5	9.5	22.5	22.5
Total Split (s)	10.0	38.0	38.0	10.0	38.0	38.0	34.0	54.5	17.5	38.0	38.0
Total Split (%)	8.3%	31.7%	31.7%	8.3%	31.7%	31.7%	28.3%	45.4%	14.6%	31.7%	31.7%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	None	Max	Max
Act Effct Green (s)	5.6	34.0	34.0	5.6	40.7	40.7	6.6	23.8	13.2	37.2	37.2
Actuated g/C Ratio	0.06	0.36	0.36	0.06	0.43	0.43	0.07	0.25	0.14	0.39	0.39
v/c Ratio	0.25	0.82	0.14	0.61	0.46	0.22	0.14	0.23	1.05	0.09	0.04
Control Delay	53.5	33.9	2.1	72.0	23.3	5.3	48.6	12.2	113.5	19.4	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	53.5	33.9	2.1	72.0	23.3	5.3	48.6	12.2	113.5	19.4	0.1
LOS	D	C	A	E	C	A	D	B	F	B	A
Approach Delay		32.4			23.4			17.4		87.1	
Approach LOS		C			C			B		F	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 94.9  
 Natural Cycle: 130  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.05  
 Intersection Signal Delay: 34.3  
 Intersection LOS: C  
 Intersection Capacity Utilization 64.1%  
 ICU Level of Service C  
 Analysis Period (min) 15

Splits and Phases: 4: Redlands Ave & Ramona Expy



Phasings  
4: Redlands Ave & Ramona Expy

Existing plus Project  
Timing Plan: PM PEAK HOUR































Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Protected Phases	7	4		3	8		5	2	1	6	
Permitted Phases			4			8					6
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	31.5	31.5	9.5	36.5	36.5	9.5	54.5	9.5	22.5	22.5
Total Split (s)	10.0	38.0	38.0	10.0	38.0	38.0	34.0	54.5	17.5	38.0	38.0
Total Split (%)	8.3%	31.7%	31.7%	8.3%	31.7%	31.7%	28.3%	45.4%	14.6%	31.7%	31.7%
Maximum Green (s)	5.5	33.5	33.5	5.5	33.5	33.5	29.5	50.0	13.0	33.5	33.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None	None	None	None	Min	None	Max	Max
Walk Time (s)		7.0	7.0		7.0	7.0		7.0			
Flash Dont Walk (s)		19.0	19.0		24.0	24.0		42.0			
Pedestrian Calls (#/hr)		5	5		5	5		5			
90th %ile Green (s)	5.5	33.5	33.5	5.5	33.5	33.5	8.6	49.0	13.0	53.4	53.4
90th %ile Term Code	Max	Max	Max	Max	Max	Max	Gap	Ped	Max	Hold	Hold
70th %ile Green (s)	5.5	33.5	33.5	5.5	33.5	33.5	7.0	27.5	13.0	33.5	33.5
70th %ile Term Code	Max	Max	Max	Max	Hold	Hold	Gap	Hold	Max	MaxR	MaxR
50th %ile Green (s)	0.0	33.5	33.5	5.5	43.5	43.5	0.0	16.0	13.0	33.5	33.5
50th %ile Term Code	Skip	Max	Max	Max	Hold	Hold	Skip	Hold	Max	MaxR	MaxR
30th %ile Green (s)	0.0	33.5	33.5	5.5	43.5	43.5	0.0	16.0	13.0	33.5	33.5
30th %ile Term Code	Skip	Max	Max	Max	Hold	Hold	Skip	Hold	Max	MaxR	MaxR
10th %ile Green (s)	0.0	33.5	33.5	5.5	43.5	43.5	0.0	16.0	13.0	33.5	33.5
10th %ile Term Code	Skip	Max	Max	Max	Hold	Hold	Skip	Hold	Max	MaxR	MaxR

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 94.9  
 Control Type: Actuated-Uncoordinated  
 90th %ile Actuated Cycle: 119  
 70th %ile Actuated Cycle: 97.5  
 50th %ile Actuated Cycle: 86  
 30th %ile Actuated Cycle: 86  
 10th %ile Actuated Cycle: 86

HCM 6th Signalized Intersection Summary  
4: Redlands Ave & Ramona Expy

Existing plus Project  
Timing Plan: PM PEAK HOUR

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  						 	
Traffic Volume (veh/h)	25	1454	87	62	961	163	17	40	65	251	63	28
Future Volume (veh/h)	25	1454	87	62	961	163	17	40	65	251	63	28
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		0.99
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	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	26	1531	92	65	1012	172	18	42	68	264	66	29
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, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	48	1825	553	84	1928	590	37	164	266	266	719	601
Arrive On Green	0.03	0.35	0.35	0.05	0.37	0.37	0.02	0.25	0.25	0.15	0.38	0.38
Sat Flow, veh/h	1810	5187	1572	1810	5187	1587	1810	652	1056	1810	1900	1589
Grp Volume(v), veh/h	26	1531	92	65	1012	172	18	0	110	264	66	29
Grp Sat Flow(s),veh/h/ln	1810	1729	1572	1810	1729	1587	1810	0	1708	1810	1900	1589
Q Serve(g_s), s	1.3	24.0	3.6	3.1	13.5	6.8	0.9	0.0	4.6	12.9	2.0	1.0
Cycle Q Clear(g_c), s	1.3	24.0	3.6	3.1	13.5	6.8	0.9	0.0	4.6	12.9	2.0	1.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.62	1.00		1.00
Lane Grp Cap(c), veh/h	48	1825	553	84	1928	590	37	0	430	266	719	601
V/C Ratio(X)	0.54	0.84	0.17	0.77	0.53	0.29	0.49	0.00	0.26	0.99	0.09	0.05
Avail Cap(c_a), veh/h	112	1962	595	112	1962	600	603	0	965	266	719	601
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	42.6	26.4	19.8	41.8	21.7	19.6	42.9	0.0	26.5	37.7	17.7	17.4
Incr Delay (d2), s/veh	9.0	3.2	0.1	20.7	0.2	0.3	9.9	0.0	0.3	53.4	0.3	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	9.2	1.2	1.8	4.8	2.2	0.5	0.0	1.8	9.4	0.9	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	51.6	29.6	19.9	62.5	22.0	19.9	52.8	0.0	26.8	91.2	18.0	17.6
LnGrp LOS	D	C	B	E	C	B	D	A	C	F	B	B
Approach Vol, veh/h		1649			1249			128				359
Approach Delay, s/veh		29.4			23.8			30.5				71.8
Approach LOS		C			C			C				E
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	17.5	26.8	8.6	35.7	6.3	38.0	6.9	37.4				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	13.0	50.0	5.5	33.5	29.5	33.5	5.5	33.5				
Max Q Clear Time (g_c+I1), s	14.9	6.6	5.1	26.0	2.9	4.0	3.3	15.5				
Green Ext Time (p_c), s	0.0	0.6	0.0	5.1	0.0	0.4	0.0	6.4				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				31.9								
HCM 6th LOS				C								

Intersection						
Int Delay, s/veh	4.5					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	13	1	6	9	13	7
Future Vol, veh/h	13	1	6	9	13	7
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	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	14	1	7	10	14	8

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	15	0	39
Stage 1	-	-	-	-	15
Stage 2	-	-	-	-	24
Critical Hdwy	-	-	4.1	-	6.4
Critical Hdwy Stg 1	-	-	-	-	5.4
Critical Hdwy Stg 2	-	-	-	-	5.4
Follow-up Hdwy	-	-	2.2	-	3.5
Pot Cap-1 Maneuver	-	-	1616	-	978
Stage 1	-	-	-	-	1013
Stage 2	-	-	-	-	1004
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1616	-	974
Mov Cap-2 Maneuver	-	-	-	-	903
Stage 1	-	-	-	-	1013
Stage 2	-	-	-	-	1000

Approach	EB	WB	NB
HCM Control Delay, s	0	2.9	8.9
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	955	-	-	1616	-
HCM Lane V/C Ratio	0.023	-	-	0.004	-
HCM Control Delay (s)	8.9	-	-	7.2	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection						
Int Delay, s/veh	3.4					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	20	0	8	15	0	17
Future Vol, veh/h	20	0	8	15	0	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	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	22	0	9	16	0	18

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	22	0	56
Stage 1	-	-	-	-	22
Stage 2	-	-	-	-	34
Critical Hdwy	-	-	4.1	-	6.4
Critical Hdwy Stg 1	-	-	-	-	5.4
Critical Hdwy Stg 2	-	-	-	-	5.4
Follow-up Hdwy	-	-	2.2	-	3.5
Pot Cap-1 Maneuver	-	-	1607	-	957
Stage 1	-	-	-	-	1006
Stage 2	-	-	-	-	994
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1607	-	951
Mov Cap-2 Maneuver	-	-	-	-	888
Stage 1	-	-	-	-	1006
Stage 2	-	-	-	-	988

Approach	EB	WB	NB
HCM Control Delay, s	0	2.5	8.5
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1061	-	-	1607	-
HCM Lane V/C Ratio	0.017	-	-	0.005	-
HCM Control Delay (s)	8.5	-	-	7.3	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Timings

2024

1: Perris Blvd & Harley Knox Blvd

Timing Plan: AM PEAK HOUR

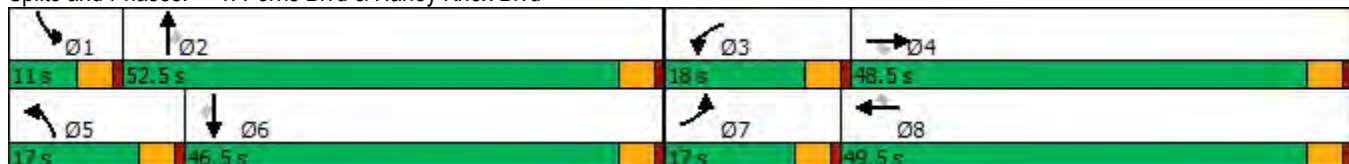


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗	↘↗	↑↑↑	↗	↘↗	↑↑↑	↗	↘↗	↑↑↑	↗
Traffic Volume (vph)	204	201	59	6	400	250	200	1281	10	121	1003	348
Future Volume (vph)	204	201	59	6	400	250	200	1281	10	121	1003	348
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	48.5	48.5	9.5	49.5	49.5	9.5	52.5	52.5	9.5	46.5	46.5
Total Split (s)	17.0	48.5	48.5	18.0	49.5	49.5	17.0	52.5	52.5	11.0	46.5	46.5
Total Split (%)	13.1%	37.3%	37.3%	13.8%	38.1%	38.1%	13.1%	40.4%	40.4%	8.5%	35.8%	35.8%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	Min	None	Min	Min
Act Effct Green (s)	13.1	35.1	35.1	5.9	18.9	18.9	10.9	34.2	34.2	6.8	30.1	30.1
Actuated g/C Ratio	0.14	0.38	0.38	0.06	0.21	0.21	0.12	0.37	0.37	0.07	0.33	0.33
v/c Ratio	0.85	0.16	0.09	0.03	0.40	0.62	0.52	0.71	0.02	0.50	0.63	0.48
Control Delay	71.6	20.4	0.3	51.0	32.2	23.6	46.5	27.7	0.0	53.2	29.1	5.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	71.6	20.4	0.3	51.0	32.2	23.6	46.5	27.7	0.0	53.2	29.1	5.7
LOS	E	C	A	D	C	C	D	C	A	D	C	A
Approach Delay		40.4			29.1			30.0			25.5	
Approach LOS		D			C			C			C	

Intersection Summary

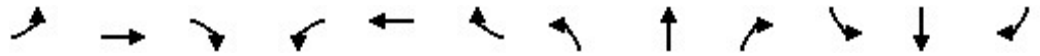
Cycle Length: 130	
Actuated Cycle Length: 91.8	
Natural Cycle: 125	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.85	
Intersection Signal Delay: 29.4	Intersection LOS: C
Intersection Capacity Utilization 62.9%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 1: Perris Blvd & Harley Knox Blvd



Phasings  
1: Perris Blvd & Harley Knox Blvd

2024  
Timing Plan: AM PEAK HOUR



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	48.5	48.5	9.5	49.5	49.5	9.5	52.5	52.5	9.5	46.5	46.5
Total Split (s)	17.0	48.5	48.5	18.0	49.5	49.5	17.0	52.5	52.5	11.0	46.5	46.5
Total Split (%)	13.1%	37.3%	37.3%	13.8%	38.1%	38.1%	13.1%	40.4%	40.4%	8.5%	35.8%	35.8%
Maximum Green (s)	12.5	44.0	44.0	13.5	45.0	45.0	12.5	48.0	48.0	6.5	42.0	42.0
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None	None	None	None	Min	Min	None	Min	Min
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		37.0	37.0		38.0	38.0		41.0	41.0		35.0	35.0
Pedestrian Calls (#/hr)		5	5		5	5		5	5		5	5
90th %ile Green (s)	12.5	51.2	51.2	6.3	45.0	45.0	12.5	48.0	48.0	6.5	42.0	42.0
90th %ile Term Code	Max	Hold	Hold	Gap	Ped	Ped	Max	Max	Max	Max	Max	Max
70th %ile Green (s)	12.5	36.8	36.8	0.0	19.8	19.8	12.5	39.5	39.5	6.5	33.5	33.5
70th %ile Term Code	Max	Hold	Hold	Skip	Gap	Gap	Max	Hold	Hold	Max	Gap	Gap
50th %ile Green (s)	12.5	32.0	32.0	0.0	15.0	15.0	11.0	33.0	33.0	6.5	28.5	28.5
50th %ile Term Code	Max	Hold	Hold	Skip	Gap	Gap	Gap	Hold	Hold	Max	Gap	Gap
30th %ile Green (s)	12.5	29.5	29.5	0.0	12.5	12.5	9.6	28.2	28.2	6.5	25.1	25.1
30th %ile Term Code	Max	Hold	Hold	Skip	Gap	Gap	Gap	Hold	Hold	Max	Gap	Gap
10th %ile Green (s)	12.5	26.7	26.7	0.0	9.7	9.7	8.0	23.4	23.4	6.5	21.9	21.9
10th %ile Term Code	Max	Hold	Hold	Skip	Gap	Gap	Gap	Gap	Gap	Max	Hold	Hold

Intersection Summary

Cycle Length: 130  
 Actuated Cycle Length: 91.8  
 Control Type: Actuated-Uncoordinated  
 90th %ile Actuated Cycle: 130  
 70th %ile Actuated Cycle: 96.3  
 50th %ile Actuated Cycle: 85  
 30th %ile Actuated Cycle: 77.7  
 10th %ile Actuated Cycle: 70.1

HCM 6th Signalized Intersection Summary  
 1: Perris Blvd & Harley Knox Blvd

2024

Timing Plan: AM PEAK HOUR

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	204	201	59	6	400	250	200	1281	10	121	1003	348
Future Volume (veh/h)	204	201	59	6	400	250	200	1281	10	121	1003	348
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	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	219	216	63	6	430	269	215	1377	11	130	1078	374
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, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	255	1281	572	27	1151	357	301	1930	599	201	1782	553
Arrive On Green	0.14	0.35	0.35	0.01	0.22	0.22	0.09	0.37	0.37	0.06	0.34	0.34
Sat Flow, veh/h	1810	3610	1610	3510	5187	1610	3510	5187	1610	3510	5187	1610
Grp Volume(v), veh/h	219	216	63	6	430	269	215	1377	11	130	1078	374
Grp Sat Flow(s),veh/h/ln	1810	1805	1610	1755	1729	1610	1755	1729	1610	1755	1729	1610
Q Serve(g_s), s	10.2	3.6	2.3	0.1	6.1	13.5	5.2	19.6	0.4	3.1	14.9	17.2
Cycle Q Clear(g_c), s	10.2	3.6	2.3	0.1	6.1	13.5	5.2	19.6	0.4	3.1	14.9	17.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	255	1281	572	27	1151	357	301	1930	599	201	1782	553
V/C Ratio(X)	0.86	0.17	0.11	0.22	0.37	0.75	0.71	0.71	0.02	0.65	0.60	0.68
Avail Cap(c_a), veh/h	261	1835	818	547	2696	837	507	2876	893	264	2517	781
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(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.3	19.2	18.7	42.7	28.6	31.5	38.5	23.2	17.2	40.0	23.5	24.3
Incr Delay (d2), s/veh	23.5	0.1	0.1	4.0	0.2	3.2	3.2	0.5	0.0	3.5	0.3	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.9	1.4	0.8	0.1	2.4	5.2	2.2	7.3	0.1	1.4	5.6	6.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	59.8	19.2	18.8	46.7	28.8	34.7	41.7	23.7	17.2	43.4	23.9	25.7
LnGrp LOS	E	B	B	D	C	C	D	C	B	D	C	C
Approach Vol, veh/h		498			705			1603			1582	
Approach Delay, s/veh		37.0			31.2			26.1			25.9	
Approach LOS		D			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.5	36.7	5.2	35.2	11.9	34.2	16.7	23.7				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	6.5	48.0	13.5	44.0	12.5	42.0	12.5	45.0				
Max Q Clear Time (g_c+I1), s	5.1	21.6	2.1	5.6	7.2	19.2	12.2	15.5				
Green Ext Time (p_c), s	0.0	10.6	0.0	1.5	0.3	9.0	0.0	3.7				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			28.1									
HCM 6th LOS			C									

Timings  
2: Redlands Ave & Harley Knox Blvd

2024  
Timing Plan: AM PEAK HOUR

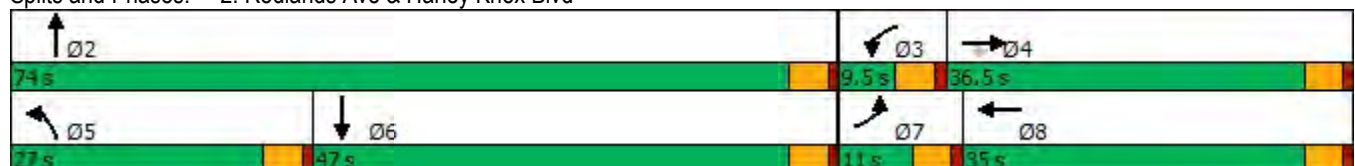


Lane Group	EBL	EBR	NBL	NBT	SBT	Ø3	Ø8
Lane Configurations	↖	↗	↖	↕	↕		
Traffic Volume (vph)	47	238	688	15	4		
Future Volume (vph)	47	238	688	15	4		
Turn Type	Prot	Perm	Prot	NA	NA		
Protected Phases	7		5	2	6	3	8
Permitted Phases		4					
Detector Phase	7	4	5	2	6		
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	36.5	9.5	34.5	47.0	9.5	34.5
Total Split (s)	11.0	36.5	27.0	74.0	47.0	9.5	35.0
Total Split (%)	9.2%	30.4%	22.5%	61.7%	39.2%	8%	29%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5		
Lead/Lag	Lead	Lag	Lead		Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None	None	Min	Min	None	None
Act Effct Green (s)	9.5	9.1	25.1	40.3	10.2		
Actuated g/C Ratio	0.16	0.15	0.42	0.68	0.17		
v/c Ratio	0.17	0.22	0.96	0.01	0.02		
Control Delay	24.3	0.4	46.0	4.7	0.1		
Queue Delay	0.0	0.0	0.0	0.0	0.0		
Total Delay	24.3	0.4	46.0	4.7	0.1		
LOS	C	A	D	A	A		
Approach Delay				45.2	0.1		
Approach LOS				D	A		

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 59.4	
Natural Cycle: 145	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.96	
Intersection Signal Delay: 32.8	Intersection LOS: C
Intersection Capacity Utilization 56.4%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 2: Redlands Ave & Harley Knox Blvd



Phasings  
2: Redlands Ave & Harley Knox Blvd

2024  
Timing Plan: AM PEAK HOUR



Lane Group	EBL	EBR	NBL	NBT	SBT	Ø3	Ø8
Protected Phases	7		5	2	6	3	8
Permitted Phases		4					
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	36.5	9.5	34.5	47.0	9.5	34.5
Total Split (s)	11.0	36.5	27.0	74.0	47.0	9.5	35.0
Total Split (%)	9.2%	30.4%	22.5%	61.7%	39.2%	8%	29%
Maximum Green (s)	6.5	32.0	22.5	69.5	42.5	5.0	30.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lead		Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	Min	Min	None	None
Walk Time (s)		7.0		7.0	7.0		
Flash Dont Walk (s)		23.0		21.0	35.0		
Pedestrian Calls (#/hr)		5		5	5		
90th %ile Green (s)	30.0	30.0	22.5	69.0	42.0	0.0	0.0
90th %ile Term Code	Hold	Ped	Max	Hold	Ped	Skip	Skip
70th %ile Green (s)	6.5	6.5	22.5	32.5	5.5	0.0	0.0
70th %ile Term Code	Max	Hold	Max	Hold	Gap	Skip	Skip
50th %ile Green (s)	0.0	5.5	22.5	32.5	5.5	0.0	5.5
50th %ile Term Code	Skip	Gap	Max	Hold	Gap	Skip	Hold
30th %ile Green (s)	0.0	5.5	22.5	32.5	5.5	0.0	5.5
30th %ile Term Code	Skip	Gap	Max	Hold	Gap	Skip	Hold
10th %ile Green (s)	0.0	5.5	22.5	32.5	5.5	0.0	5.5
10th %ile Term Code	Skip	Gap	Max	Hold	Gap	Skip	Hold

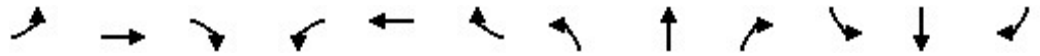
Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 59.4  
 Control Type: Actuated-Uncoordinated  
 90th %ile Actuated Cycle: 108  
 70th %ile Actuated Cycle: 48  
 50th %ile Actuated Cycle: 47  
 30th %ile Actuated Cycle: 47  
 10th %ile Actuated Cycle: 47

HCM 6th Signalized Intersection Summary  
 2: Redlands Ave & Harley Knox Blvd

2024

Timing Plan: AM PEAK HOUR



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑	↗	↖	↗		↖	↑↗			↑↗	
Traffic Volume (veh/h)	47	0	238	0	0	0	688	15	0	0	4	15
Future Volume (veh/h)	47	0	238	0	0	0	688	15	0	0	4	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	1900	1900	1900	1900	1900	1900	1900	1900	1900	0	1900	1900
Adj Flow Rate, veh/h	50	0	253	0	0	0	732	16	0	0	4	16
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	90	381	323	4	119	0	780	2248	0	0	187	166
Arrive On Green	0.05	0.00	0.20	0.00	0.00	0.00	0.43	0.62	0.00	0.00	0.10	0.10
Sat Flow, veh/h	1810	1900	1610	1810	1900	0	1810	3705	0	0	1900	1610
Grp Volume(v), veh/h	50	0	253	0	0	0	732	16	0	0	4	16
Grp Sat Flow(s),veh/h/ln	1810	1900	1610	1810	1900	0	1810	1805	0	0	1805	1610
Q Serve(g_s), s	1.4	0.0	7.6	0.0	0.0	0.0	19.7	0.1	0.0	0.0	0.1	0.5
Cycle Q Clear(g_c), s	1.4	0.0	7.6	0.0	0.0	0.0	19.7	0.1	0.0	0.0	0.1	0.5
Prop In Lane	1.00		1.00	1.00		0.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h	90	381	323	4	119	0	780	2248	0	0	187	166
V/C Ratio(X)	0.56	0.00	0.78	0.00	0.00	0.00	0.94	0.01	0.00	0.00	0.02	0.10
Avail Cap(c_a), veh/h	231	1193	1011	178	1137	0	799	4924	0	0	1505	1343
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	0.00	1.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	23.7	0.0	19.3	0.0	0.0	0.0	13.8	3.6	0.0	0.0	20.5	20.7
Incr Delay (d2), s/veh	5.3	0.0	4.2	0.0	0.0	0.0	18.3	0.0	0.0	0.0	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.0	3.0	0.0	0.0	0.0	9.8	0.0	0.0	0.0	0.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.9	0.0	23.5	0.0	0.0	0.0	32.2	3.6	0.0	0.0	20.6	20.9
LnGrp LOS	C	A	C	A	A	A	C	A	A	A	C	C
Approach Vol, veh/h		303			0			748			20	
Approach Delay, s/veh		24.4			0.0			31.6			20.9	
Approach LOS		C						C			C	
Timer - Assigned Phs		2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s		36.2	0.0	14.7	26.5	9.8	7.0	7.7				
Change Period (Y+Rc), s		4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s		69.5	5.0	32.0	22.5	42.5	6.5	30.5				
Max Q Clear Time (g_c+I1), s		2.1	0.0	9.6	21.7	2.5	3.4	0.0				
Green Ext Time (p_c), s		0.1	0.0	0.8	0.3	0.1	0.0	0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			29.3									
HCM 6th LOS			C									
<b>Notes</b>												
User approved pedestrian interval to be less than phase max green.												

Intersection												
Int Delay, s/veh	0.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗			↕		↖	↗		↖	↗	
Traffic Vol, veh/h	8	0	16	0	0	0	11	695	0	0	227	10
Future Vol, veh/h	8	0	16	0	0	0	11	695	0	0	227	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	1	1	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	110	-	-	-	-	-	305	-	-	80	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	9	0	17	0	0	0	12	739	0	0	241	11

Major/Minor	Minor2		Minor1			Major1		Major2				
Conflicting Flow All	641	1011	126	885	1016	371	252	0	0	740	0	0
Stage 1	247	247	-	764	764	-	-	-	-	-	-	-
Stage 2	394	764	-	121	252	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.5	6.5	6.9	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	364	241	907	243	240	632	1325	-	-	876	-	-
Stage 1	741	706	-	367	416	-	-	-	-	-	-	-
Stage 2	608	416	-	876	702	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	361	239	907	237	238	631	1325	-	-	875	-	-
Mov Cap-2 Maneuver	361	239	-	237	238	-	-	-	-	-	-	-
Stage 1	734	706	-	363	412	-	-	-	-	-	-	-
Stage 2	602	412	-	860	702	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	11.1		0		0.1		0	
HCM LOS	B		A					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1325	-	-	361	907	-	875	-	-
HCM Lane V/C Ratio	0.009	-	-	0.024	0.019	-	-	-	-
HCM Control Delay (s)	7.7	-	-	15.2	9	0	0	-	-
HCM Lane LOS	A	-	-	C	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.1	-	0	-	-

# Timings

## 4: Redlands Ave & Ramona Expy

2024

Timing Plan: AM PEAK HOUR

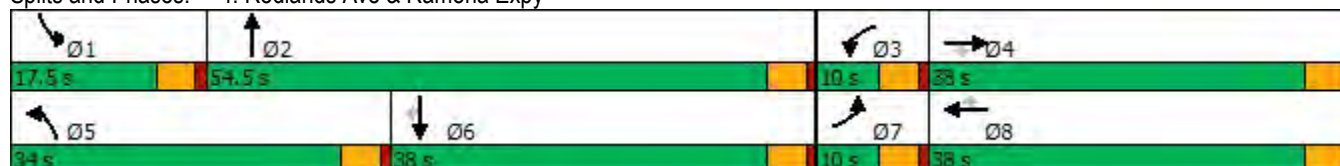


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations	↘	↑↑↑	↗	↘	↑↑↑	↗	↘	↑	↘	↑	↗
Traffic Volume (vph)	23	845	43	105	1501	589	48	222	115	102	29
Future Volume (vph)	23	845	43	105	1501	589	48	222	115	102	29
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2	1	6	
Permitted Phases			4			8					6
Detector Phase	7	4	4	3	8	8	5	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	31.5	31.5	9.5	36.5	36.5	9.5	54.5	9.5	22.5	22.5
Total Split (s)	10.0	38.0	38.0	10.0	38.0	38.0	34.0	54.5	17.5	38.0	38.0
Total Split (%)	8.3%	31.7%	31.7%	8.3%	31.7%	31.7%	28.3%	45.4%	14.6%	31.7%	31.7%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	None	Max	Max
Act Effct Green (s)	5.7	27.6	27.6	5.7	34.5	34.5	8.1	29.2	10.8	37.1	37.1
Actuated g/C Ratio	0.06	0.30	0.30	0.06	0.38	0.38	0.09	0.32	0.12	0.40	0.40
v/c Ratio	0.22	0.56	0.08	0.97	0.79	0.66	0.31	0.63	0.56	0.14	0.04
Control Delay	53.0	29.8	0.3	127.6	31.9	9.6	49.0	29.7	52.4	20.4	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	53.0	29.8	0.3	127.6	31.9	9.6	49.0	29.7	52.4	20.4	0.1
LOS	D	C	A	F	C	A	D	C	D	C	A
Approach Delay		29.0			30.5			31.9		33.0	
Approach LOS		C			C			C		C	

### Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 91.8  
 Natural Cycle: 110  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.97  
 Intersection Signal Delay: 30.4  
 Intersection LOS: C  
 Intersection Capacity Utilization 74.8%  
 ICU Level of Service D  
 Analysis Period (min) 15

### Splits and Phases: 4: Redlands Ave & Ramona Expy



Phasings  
4: Redlands Ave & Ramona Expy

2024  
Timing Plan: AM PEAK HOUR



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Protected Phases	7	4		3	8		5	2	1	6	
Permitted Phases			4			8					6
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	31.5	31.5	9.5	36.5	36.5	9.5	54.5	9.5	22.5	22.5
Total Split (s)	10.0	38.0	38.0	10.0	38.0	38.0	34.0	54.5	17.5	38.0	38.0
Total Split (%)	8.3%	31.7%	31.7%	8.3%	31.7%	31.7%	28.3%	45.4%	14.6%	31.7%	31.7%
Maximum Green (s)	5.5	33.5	33.5	5.5	33.5	33.5	29.5	50.0	13.0	33.5	33.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None	None	None	None	Min	None	Max	Max
Walk Time (s)		7.0	7.0		7.0	7.0		7.0			
Flash Dont Walk (s)		19.0	19.0		24.0	24.0		42.0			
Pedestrian Calls (#/hr)		5	5		5	5		5			
90th %ile Green (s)	5.5	33.5	33.5	5.5	33.5	33.5	11.8	49.0	13.0	50.2	50.2
90th %ile Term Code	Max	Hold	Hold	Max	Max	Max	Gap	Ped	Max	Hold	Hold
70th %ile Green (s)	5.5	33.5	33.5	5.5	33.5	33.5	9.1	29.6	13.0	33.5	33.5
70th %ile Term Code	Max	Hold	Hold	Max	Max	Max	Gap	Hold	Max	MaxR	MaxR
50th %ile Green (s)	0.0	23.5	23.5	5.5	33.5	33.5	8.0	29.8	11.7	33.5	33.5
50th %ile Term Code	Skip	Hold	Hold	Max	Max	Max	Gap	Hold	Gap	MaxR	MaxR
30th %ile Green (s)	0.0	23.5	23.5	5.5	33.5	33.5	0.0	19.5	9.5	33.5	33.5
30th %ile Term Code	Skip	Hold	Hold	Max	Max	Max	Skip	Hold	Gap	MaxR	MaxR
10th %ile Green (s)	0.0	23.5	23.5	5.5	33.5	33.5	0.0	21.9	7.1	33.5	33.5
10th %ile Term Code	Skip	Hold	Hold	Max	Max	Max	Skip	Hold	Gap	MaxR	MaxR

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 91.8  
 Control Type: Actuated-Uncoordinated  
 90th %ile Actuated Cycle: 119  
 70th %ile Actuated Cycle: 99.6  
 50th %ile Actuated Cycle: 88.5  
 30th %ile Actuated Cycle: 76  
 10th %ile Actuated Cycle: 76

HCM 6th Signalized Intersection Summary  
 4: Redlands Ave & Ramona Expy

2024

Timing Plan: AM PEAK HOUR

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	23	845	43	105	1501	589	48	222	140	115	102	29
Future Volume (veh/h)	23	845	43	105	1501	589	48	222	140	115	102	29
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		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	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	24	871	44	108	1547	607	49	229	144	119	105	30
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	45	1729	525	110	1913	594	71	354	223	151	701	594
Arrive On Green	0.03	0.33	0.33	0.06	0.37	0.37	0.04	0.32	0.32	0.08	0.37	0.37
Sat Flow, veh/h	1810	5187	1576	1810	5187	1610	1810	1091	686	1810	1900	1610
Grp Volume(v), veh/h	24	871	44	108	1547	607	49	0	373	119	105	30
Grp Sat Flow(s),veh/h/ln	1810	1729	1576	1810	1729	1610	1810	0	1777	1810	1900	1610
Q Serve(g_s), s	1.2	12.2	1.7	5.4	24.4	33.5	2.4	0.0	16.3	5.9	3.4	1.1
Cycle Q Clear(g_c), s	1.2	12.2	1.7	5.4	24.4	33.5	2.4	0.0	16.3	5.9	3.4	1.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.39	1.00		1.00
Lane Grp Cap(c), veh/h	45	1729	525	110	1913	594	71	0	577	151	701	594
V/C Ratio(X)	0.53	0.50	0.08	0.99	0.81	1.02	0.69	0.00	0.65	0.79	0.15	0.05
Avail Cap(c_a), veh/h	110	1913	581	110	1913	594	588	0	978	259	701	594
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(l)	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	43.7	24.3	20.8	42.6	25.8	28.7	43.1	0.0	26.2	40.8	19.1	18.4
Incr Delay (d2), s/veh	9.3	0.2	0.1	81.2	2.7	42.6	11.5	0.0	1.2	8.8	0.5	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	4.5	0.6	4.7	9.2	18.2	1.3	0.0	6.7	2.9	1.5	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.0	24.5	20.8	123.8	28.5	71.3	54.6	0.0	27.4	49.6	19.6	18.6
LnGrp LOS	D	C	C	F	C	F	D	A	C	D	B	B
Approach Vol, veh/h		939			2262			422			254	
Approach Delay, s/veh		25.0			44.5			30.6			33.6	
Approach LOS		C			D			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.1	34.0	10.0	34.8	8.0	38.0	6.8	38.0				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	13.0	50.0	5.5	33.5	29.5	33.5	5.5	33.5				
Max Q Clear Time (g_c+I1), s	7.9	18.3	7.4	14.2	4.4	5.4	3.2	35.5				
Green Ext Time (p_c), s	0.1	2.3	0.0	5.2	0.1	0.6	0.0	0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			37.6									
HCM 6th LOS			D									

Intersection						
Int Delay, s/veh	0					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	24	0	0	23	0	0
Future Vol, veh/h	24	0	0	23	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	94	94	94	94	94	94
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	26	0	0	24	0	0

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	26	0	50
Stage 1	-	-	-	-	26
Stage 2	-	-	-	-	24
Critical Hdwy	-	-	4.1	-	6.4
Critical Hdwy Stg 1	-	-	-	-	5.4
Critical Hdwy Stg 2	-	-	-	-	5.4
Follow-up Hdwy	-	-	2.2	-	3.5
Pot Cap-1 Maneuver	-	-	1601	-	964
Stage 1	-	-	-	-	1002
Stage 2	-	-	-	-	1004
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1601	-	964
Mov Cap-2 Maneuver	-	-	-	-	898
Stage 1	-	-	-	-	1002
Stage 2	-	-	-	-	1004

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)	-	-	-	1601	-
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	1.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	4	23	0	0	19	2	0	0	0	2	0	4
Future Vol, veh/h	4	23	0	0	19	2	0	0	0	2	0	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	4	24	0	0	20	2	0	0	0	2	0	4

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	22	0	0	24	0	0	55	54	24	53	53	21
Stage 1	-	-	-	-	-	-	32	32	-	21	21	-
Stage 2	-	-	-	-	-	-	23	22	-	32	32	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1607	-	-	1604	-	-	948	841	1058	951	842	1062
Stage 1	-	-	-	-	-	-	990	872	-	1003	882	-
Stage 2	-	-	-	-	-	-	1000	881	-	990	872	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1607	-	-	1604	-	-	942	838	1058	949	839	1062
Mov Cap-2 Maneuver	-	-	-	-	-	-	942	838	-	949	839	-
Stage 1	-	-	-	-	-	-	987	869	-	1000	882	-
Stage 2	-	-	-	-	-	-	996	881	-	987	869	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.1	0	0	8.5
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1607	-	-	1604	-	-	1021
HCM Lane V/C Ratio	-	0.003	-	-	-	-	-	0.006
HCM Control Delay (s)	0	7.2	0	-	0	-	-	8.5
HCM Lane LOS	A	A	A	-	A	-	-	A
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	0

Timings

2024

1: Perris Blvd & Harley Knox Blvd

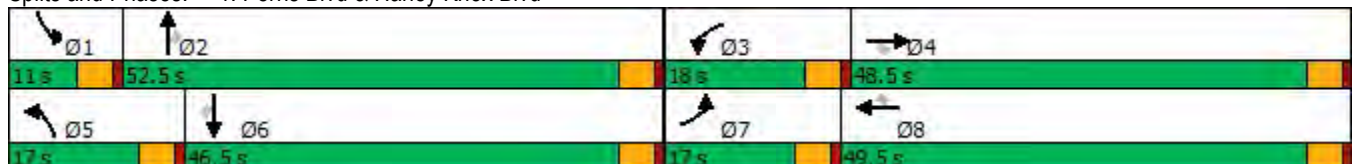
Timing Plan: PM PEAK HOUR

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	342	246	110	6	199	161	114	1161	14	186	1249	351
Future Volume (vph)	342	246	110	6	199	161	114	1161	14	186	1249	351
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	48.5	48.5	9.5	49.5	49.5	9.5	52.5	52.5	9.5	46.5	46.5
Total Split (s)	17.0	48.5	48.5	18.0	49.5	49.5	17.0	52.5	52.5	11.0	46.5	46.5
Total Split (%)	13.1%	37.3%	37.3%	13.8%	38.1%	38.1%	13.1%	40.4%	40.4%	8.5%	35.8%	35.8%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	Min	None	Min	Min
Act Effct Green (s)	13.0	30.6	30.6	5.9	14.4	14.4	9.0	38.6	38.6	6.8	36.4	36.4
Actuated g/C Ratio	0.14	0.33	0.33	0.06	0.16	0.16	0.10	0.42	0.42	0.07	0.40	0.40
v/c Ratio	1.49	0.23	0.20	0.03	0.27	0.50	0.37	0.60	0.02	0.81	0.68	0.48
Control Delay	273.8	23.6	5.2	50.2	34.2	17.0	46.0	23.0	0.1	68.6	26.6	7.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	273.8	23.6	5.2	50.2	34.2	17.0	46.0	23.0	0.1	68.6	26.6	7.6
LOS	F	C	A	D	C	B	D	C	A	E	C	A
Approach Delay		143.2			26.9			24.8			27.2	
Approach LOS		F			C			C			C	

Intersection Summary

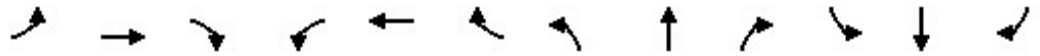
Cycle Length: 130	
Actuated Cycle Length: 91.6	
Natural Cycle: 145	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.49	
Intersection Signal Delay: 46.0	Intersection LOS: D
Intersection Capacity Utilization 66.8%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 1: Perris Blvd & Harley Knox Blvd



Phasings  
1: Perris Blvd & Harley Knox Blvd

2024  
Timing Plan: PM PEAK HOUR



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	48.5	48.5	9.5	49.5	49.5	9.5	52.5	52.5	9.5	46.5	46.5
Total Split (s)	17.0	48.5	48.5	18.0	49.5	49.5	17.0	52.5	52.5	11.0	46.5	46.5
Total Split (%)	13.1%	37.3%	37.3%	13.8%	38.1%	38.1%	13.1%	40.4%	40.4%	8.5%	35.8%	35.8%
Maximum Green (s)	12.5	44.0	44.0	13.5	45.0	45.0	12.5	48.0	48.0	6.5	42.0	42.0
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None	None	None	None	Min	Min	None	Min	Min
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		37.0	37.0		38.0	38.0		41.0	41.0		35.0	35.0
Pedestrian Calls (#/hr)		5	5		5	5		5	5		5	5
90th %ile Green (s)	12.5	51.1	51.1	6.4	45.0	45.0	12.5	48.0	48.0	6.5	42.0	42.0
90th %ile Term Code	Max	Hold	Hold	Gap	Ped	Ped	Max	Max	Max	Max	Max	Max
70th %ile Green (s)	12.5	28.1	28.1	0.0	11.1	11.1	9.5	45.0	45.0	6.5	42.0	42.0
70th %ile Term Code	Max	Hold	Hold	Skip	Gap	Gap	Gap	Hold	Hold	Max	Max	Max
50th %ile Green (s)	12.5	26.3	26.3	0.0	9.3	9.3	8.7	39.1	39.1	6.5	36.9	36.9
50th %ile Term Code	Max	Hold	Hold	Skip	Gap	Gap	Gap	Hold	Hold	Max	Gap	Gap
30th %ile Green (s)	12.5	25.5	25.5	0.0	8.5	8.5	7.8	33.6	33.6	6.5	32.3	32.3
30th %ile Term Code	Max	Hold	Hold	Skip	Gap	Gap	Gap	Hold	Hold	Max	Gap	Gap
10th %ile Green (s)	12.5	24.4	24.4	0.0	7.4	7.4	6.6	26.2	26.2	6.5	26.1	26.1
10th %ile Term Code	Max	Hold	Hold	Skip	Gap	Gap	Gap	Hold	Hold	Max	Gap	Gap

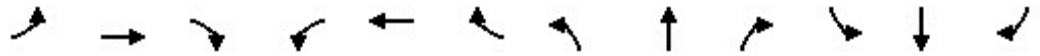
Intersection Summary

Cycle Length: 130  
 Actuated Cycle Length: 91.6  
 Control Type: Actuated-Uncoordinated  
 90th %ile Actuated Cycle: 130  
 70th %ile Actuated Cycle: 93.1  
 50th %ile Actuated Cycle: 85.4  
 30th %ile Actuated Cycle: 79.1  
 10th %ile Actuated Cycle: 70.6

HCM 6th Signalized Intersection Summary  
 1: Perris Blvd & Harley Knox Blvd

2024

Timing Plan: PM PEAK HOUR



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	342	246	110	6	199	161	114	1161	14	186	1249	351
Future Volume (veh/h)	342	246	110	6	199	161	114	1161	14	186	1249	351
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	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	384	276	124	7	224	181	128	1304	16	209	1403	394
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, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	286	1104	492	32	814	253	209	1950	605	288	2068	641
Arrive On Green	0.16	0.31	0.31	0.01	0.16	0.16	0.06	0.38	0.38	0.08	0.40	0.40
Sat Flow, veh/h	1810	3610	1610	3510	5187	1610	3510	5187	1609	3510	5187	1609
Grp Volume(v), veh/h	384	276	124	7	224	181	128	1304	16	209	1403	394
Grp Sat Flow(s),veh/h/ln	1810	1805	1610	1755	1729	1610	1755	1729	1609	1755	1729	1609
Q Serve(g_s), s	12.5	4.6	4.6	0.2	3.0	8.5	2.8	16.6	0.5	4.6	17.7	15.5
Cycle Q Clear(g_c), s	12.5	4.6	4.6	0.2	3.0	8.5	2.8	16.6	0.5	4.6	17.7	15.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	286	1104	492	32	814	253	209	1950	605	288	2068	641
V/C Ratio(X)	1.34	0.25	0.25	0.22	0.28	0.72	0.61	0.67	0.03	0.73	0.68	0.61
Avail Cap(c_a), veh/h	286	2005	894	598	2946	915	554	3143	975	288	2750	853
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(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.4	20.7	20.7	39.0	29.4	31.7	36.4	20.6	15.6	35.5	19.6	19.0
Incr Delay (d2), s/veh	176.8	0.1	0.3	3.5	0.2	3.8	2.9	0.4	0.0	8.8	0.4	1.0
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(50%),veh/ln	19.1	1.8	1.6	0.1	1.2	3.3	1.2	6.0	0.2	2.2	6.3	5.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	210.2	20.8	21.0	42.4	29.6	35.5	39.3	21.0	15.6	44.3	20.1	19.9
LnGrp LOS	F	C	C	D	C	D	D	C	B	D	C	B
Approach Vol, veh/h		784			412			1448			2006	
Approach Delay, s/veh		113.6			32.4			22.6			22.6	
Approach LOS		F			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.0	34.3	5.2	28.7	9.2	36.1	17.0	16.9				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	6.5	48.0	13.5	44.0	12.5	42.0	12.5	45.0				
Max Q Clear Time (g_c+I1), s	6.6	18.6	2.2	6.6	4.8	19.7	14.5	10.5				
Green Ext Time (p_c), s	0.0	10.3	0.0	2.1	0.2	11.7	0.0	2.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				38.8								
HCM 6th LOS				D								

Timings  
2: Redlands Ave & Harley Knox Blvd

2024  
Timing Plan: PM PEAK HOUR

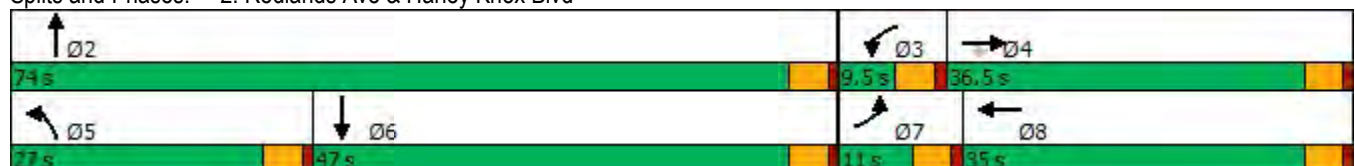


Lane Group	EBL	EBR	NBL	NBT	SBT	Ø3	Ø8
Lane Configurations	↖	↗	↖	↕	↕		
Traffic Volume (vph)	39	406	307	14	11		
Future Volume (vph)	39	406	307	14	11		
Turn Type	Prot	Perm	Prot	NA	NA		
Protected Phases	7		5	2	6	3	8
Permitted Phases		4					
Detector Phase	7	4	5	2	6		
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	36.5	9.5	34.5	47.0	9.5	34.5
Total Split (s)	11.0	36.5	27.0	74.0	47.0	9.5	35.0
Total Split (%)	9.2%	30.4%	22.5%	61.7%	39.2%	8%	29%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5		
Lead/Lag	Lead	Lag	Lead		Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None	None	Min	Min	None	None
Act Effect Green (s)	9.5	9.1	23.5	38.8	10.3		
Actuated g/C Ratio	0.16	0.16	0.40	0.67	0.18		
v/c Ratio	0.16	0.43	0.51	0.01	0.08		
Control Delay	23.2	1.2	22.4	4.8	9.8		
Queue Delay	0.0	0.0	0.0	0.0	0.0		
Total Delay	23.2	1.2	22.4	4.8	9.8		
LOS	C	A	C	A	A		
Approach Delay				21.6	9.8		
Approach LOS				C	A		

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 58.1	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.51	
Intersection Signal Delay: 10.8	Intersection LOS: B
Intersection Capacity Utilization 37.8%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 2: Redlands Ave & Harley Knox Blvd



Phasings  
2: Redlands Ave & Harley Knox Blvd

2024  
Timing Plan: PM PEAK HOUR



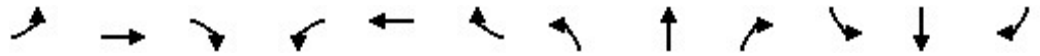
Lane Group	EBL	EBR	NBL	NBT	SBT	Ø3	Ø8
Protected Phases	7		5	2	6	3	8
Permitted Phases		4					
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	36.5	9.5	34.5	47.0	9.5	34.5
Total Split (s)	11.0	36.5	27.0	74.0	47.0	9.5	35.0
Total Split (%)	9.2%	30.4%	22.5%	61.7%	39.2%	8%	29%
Maximum Green (s)	6.5	32.0	22.5	69.5	42.5	5.0	30.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lead		Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	Min	Min	None	None
Walk Time (s)		7.0		7.0	7.0		
Flash Dont Walk (s)		23.0		21.0	35.0		
Pedestrian Calls (#/hr)		5		5	5		
90th %ile Green (s)	30.0	30.0	22.5	69.0	42.0	0.0	0.0
90th %ile Term Code	Hold	Ped	Max	Hold	Ped	Skip	Skip
70th %ile Green (s)	6.5	6.5	18.0	28.4	5.9	0.0	0.0
70th %ile Term Code	Max	Hold	Gap	Hold	Gap	Skip	Skip
50th %ile Green (s)	0.0	5.5	19.8	29.9	5.6	0.0	5.5
50th %ile Term Code	Skip	Gap	Gap	Hold	Gap	Skip	Hold
30th %ile Green (s)	0.0	5.5	22.5	32.5	5.5	0.0	5.5
30th %ile Term Code	Skip	Gap	Max	Hold	Gap	Skip	Hold
10th %ile Green (s)	0.0	5.5	22.5	32.5	5.5	0.0	5.5
10th %ile Term Code	Skip	Gap	Max	Hold	Gap	Skip	Hold

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 58.1  
 Control Type: Actuated-Uncoordinated  
 90th %ile Actuated Cycle: 108  
 70th %ile Actuated Cycle: 43.9  
 50th %ile Actuated Cycle: 44.4  
 30th %ile Actuated Cycle: 47  
 10th %ile Actuated Cycle: 47

HCM 6th Signalized Intersection Summary  
 2: Redlands Ave & Harley Knox Blvd

2024  
 Timing Plan: PM PEAK HOUR



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑	↗	↖	↗		↖	↑↗			↑↗	
Traffic Volume (veh/h)	39	0	406	0	0	0	307	14	0	0	11	28
Future Volume (veh/h)	39	0	406	0	0	0	307	14	0	0	11	28
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	1900	1900	1900	1900	1900	1900	1900	1900	1900	0	1900	1900
Adj Flow Rate, veh/h	47	0	489	0	0	0	370	17	0	0	13	34
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	88	675	572	4	406	0	453	1653	0	0	206	183
Arrive On Green	0.05	0.00	0.36	0.00	0.00	0.00	0.25	0.46	0.00	0.00	0.11	0.11
Sat Flow, veh/h	1810	1900	1610	1810	1900	0	1810	3705	0	0	1900	1606
Grp Volume(v), veh/h	47	0	489	0	0	0	370	17	0	0	13	34
Grp Sat Flow(s),veh/h/ln	1810	1900	1610	1810	1900	0	1810	1805	0	0	1805	1606
Q Serve(g_s), s	1.2	0.0	13.5	0.0	0.0	0.0	9.3	0.1	0.0	0.0	0.3	0.9
Cycle Q Clear(g_c), s	1.2	0.0	13.5	0.0	0.0	0.0	9.3	0.1	0.0	0.0	0.3	0.9
Prop In Lane	1.00		1.00	1.00		0.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h	88	675	572	4	406	0	453	1653	0	0	206	183
V/C Ratio(X)	0.54	0.00	0.85	0.00	0.00	0.00	0.82	0.01	0.00	0.00	0.06	0.19
Avail Cap(c_a), veh/h	244	1262	1069	188	1203	0	845	5207	0	0	1592	1416
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(l)	1.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	22.4	0.0	14.4	0.0	0.0	0.0	17.0	7.1	0.0	0.0	19.0	19.3
Incr Delay (d2), s/veh	5.0	0.0	3.8	0.0	0.0	0.0	3.7	0.0	0.0	0.0	0.1	0.5
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(50%),veh/ln	0.6	0.0	4.8	0.0	0.0	0.0	3.6	0.0	0.0	0.0	0.1	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.4	0.0	18.2	0.0	0.0	0.0	20.7	7.1	0.0	0.0	19.2	19.8
LnGrp LOS	C	A	B	A	A	A	C	A	A	A	B	B
Approach Vol, veh/h		536			0			387			47	
Approach Delay, s/veh		19.0			0.0			20.1			19.6	
Approach LOS		B						C			B	
Timer - Assigned Phs		2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s		26.6	0.0	21.6	16.6	10.0	6.8	14.8				
Change Period (Y+Rc), s		4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s		69.5	5.0	32.0	22.5	42.5	6.5	30.5				
Max Q Clear Time (g_c+I1), s		2.1	0.0	15.5	11.3	2.9	3.2	0.0				
Green Ext Time (p_c), s		0.1	0.0	1.6	0.9	0.2	0.0	0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			19.4									
HCM 6th LOS			B									
<b>Notes</b>												
User approved pedestrian interval to be less than phase max green.												

Intersection												
Int Delay, s/veh	0.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗			↕		↖	↗		↖	↗	
Traffic Vol, veh/h	15	0	9	0	0	0	7	306	0	0	409	4
Future Vol, veh/h	15	0	9	0	0	0	7	306	0	0	409	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	110	-	-	-	-	-	305	-	-	80	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	79	79	79	79	79	79	79	79	79	79	79	79
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	19	0	11	0	0	0	9	387	0	0	518	5

Major/Minor	Minor2		Minor1			Major1			Major2			
Conflicting Flow All	733	926	262	664	928	194	523	0	0	387	0	0
Stage 1	521	521	-	405	405	-	-	-	-	-	-	-
Stage 2	212	405	-	259	523	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.5	6.5	6.9	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	312	271	743	350	270	821	1054	-	-	1183	-	-
Stage 1	512	535	-	599	602	-	-	-	-	-	-	-
Stage 2	776	602	-	729	534	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	310	269	743	342	268	821	1054	-	-	1183	-	-
Mov Cap-2 Maneuver	310	269	-	342	268	-	-	-	-	-	-	-
Stage 1	507	535	-	594	597	-	-	-	-	-	-	-
Stage 2	769	597	-	718	534	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	14.6	0	0.2	0
HCM LOS	B	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1054	-	-	310	743	-	1183	-	-
HCM Lane V/C Ratio	0.008	-	-	0.061	0.015	-	-	-	-
HCM Control Delay (s)	8.4	-	-	17.4	9.9	0	0	-	-
HCM Lane LOS	A	-	-	C	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.2	0	-	0	-	-

Timings  
4: Redlands Ave & Ramona Expy

2024

Timing Plan: PM PEAK HOUR

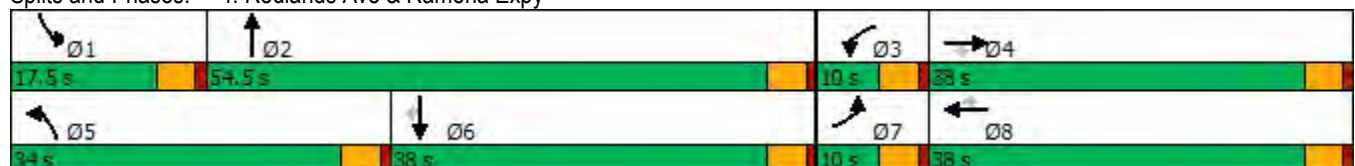


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations	↘	↑↑↑	↗	↘	↑↑↑	↗	↘	↑	↘	↑	↗
Traffic Volume (vph)	25	1823	92	73	1170	189	18	126	301	88	64
Future Volume (vph)	25	1823	92	73	1170	189	18	126	301	88	64
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2	1	6	
Permitted Phases			4			8					6
Detector Phase	7	4	4	3	8	8	5	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	31.5	31.5	9.5	36.5	36.5	9.5	54.5	9.5	22.5	22.5
Total Split (s)	10.0	38.0	38.0	10.0	38.0	38.0	34.0	54.5	17.5	38.0	38.0
Total Split (%)	8.3%	31.7%	31.7%	8.3%	31.7%	31.7%	28.3%	45.4%	14.6%	31.7%	31.7%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	None	Max	Max
Act Effct Green (s)	5.6	34.0	34.0	5.6	40.7	40.7	6.6	23.8	13.2	37.2	37.2
Actuated g/C Ratio	0.06	0.36	0.36	0.06	0.43	0.43	0.07	0.25	0.14	0.39	0.39
v/c Ratio	0.25	1.03	0.15	0.73	0.55	0.25	0.15	0.48	1.26	0.12	0.09
Control Delay	53.5	61.0	2.5	83.5	24.8	5.1	48.7	27.4	183.0	19.7	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	53.5	61.0	2.5	83.5	24.8	5.1	48.7	27.4	183.0	19.7	0.3
LOS	D	E	A	F	C	A	D	C	F	B	A
Approach Delay		58.1			25.2			29.1		125.5	
Approach LOS		E			C			C		F	

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 94.9	
Natural Cycle: 150	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.26	
Intersection Signal Delay: 52.4	Intersection LOS: D
Intersection Capacity Utilization 84.2%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 4: Redlands Ave & Ramona Expy



Phasings  
4: Redlands Ave & Ramona Expy

2024

Timing Plan: PM PEAK HOUR



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Protected Phases	7	4		3	8		5	2	1	6	
Permitted Phases			4			8					6
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	31.5	31.5	9.5	36.5	36.5	9.5	54.5	9.5	22.5	22.5
Total Split (s)	10.0	38.0	38.0	10.0	38.0	38.0	34.0	54.5	17.5	38.0	38.0
Total Split (%)	8.3%	31.7%	31.7%	8.3%	31.7%	31.7%	28.3%	45.4%	14.6%	31.7%	31.7%
Maximum Green (s)	5.5	33.5	33.5	5.5	33.5	33.5	29.5	50.0	13.0	33.5	33.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None	None	None	None	Min	None	Max	Max
Walk Time (s)		7.0	7.0		7.0	7.0		7.0			
Flash Dont Walk (s)		19.0	19.0		24.0	24.0		42.0			
Pedestrian Calls (#/hr)		5	5		5	5		5			
90th %ile Green (s)	5.5	33.5	33.5	5.5	33.5	33.5	8.7	49.0	13.0	53.3	53.3
90th %ile Term Code	Max	Max	Max	Max	Max	Max	Gap	Ped	Max	Hold	Hold
70th %ile Green (s)	5.5	33.5	33.5	5.5	33.5	33.5	7.1	27.6	13.0	33.5	33.5
70th %ile Term Code	Max	Max	Max	Max	Max	Max	Gap	Hold	Max	MaxR	MaxR
50th %ile Green (s)	0.0	33.5	33.5	5.5	43.5	43.5	0.0	16.0	13.0	33.5	33.5
50th %ile Term Code	Skip	Max	Max	Max	Hold	Hold	Skip	Hold	Max	MaxR	MaxR
30th %ile Green (s)	0.0	33.5	33.5	5.5	43.5	43.5	0.0	16.0	13.0	33.5	33.5
30th %ile Term Code	Skip	Max	Max	Max	Hold	Hold	Skip	Hold	Max	MaxR	MaxR
10th %ile Green (s)	0.0	33.5	33.5	5.5	43.5	43.5	0.0	16.0	13.0	33.5	33.5
10th %ile Term Code	Skip	Max	Max	Max	Hold	Hold	Skip	Hold	Max	MaxR	MaxR

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 94.9  
 Control Type: Actuated-Uncoordinated  
 90th %ile Actuated Cycle: 119  
 70th %ile Actuated Cycle: 97.6  
 50th %ile Actuated Cycle: 86  
 30th %ile Actuated Cycle: 86  
 10th %ile Actuated Cycle: 86

HCM 6th Signalized Intersection Summary  
 4: Redlands Ave & Ramona Expy

2024

Timing Plan: PM PEAK HOUR

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	25	1823	92	73	1170	189	18	126	90	301	88	64
Future Volume (veh/h)	25	1823	92	73	1170	189	18	126	90	301	88	64
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		0.99
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	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	26	1919	97	77	1232	199	19	133	95	317	93	67
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	48	1889	573	99	2037	623	38	251	179	256	692	579
Arrive On Green	0.03	0.36	0.36	0.05	0.39	0.39	0.02	0.24	0.24	0.14	0.36	0.36
Sat Flow, veh/h	1810	5187	1572	1810	5187	1588	1810	1030	736	1810	1900	1589
Grp Volume(v), veh/h	26	1919	97	77	1232	199	19	0	228	317	93	67
Grp Sat Flow(s),veh/h/ln	1810	1729	1572	1810	1729	1588	1810	0	1766	1810	1900	1589
Q Serve(g_s), s	1.3	33.5	3.8	3.9	17.4	8.0	1.0	0.0	10.3	13.0	3.0	2.6
Cycle Q Clear(g_c), s	1.3	33.5	3.8	3.9	17.4	8.0	1.0	0.0	10.3	13.0	3.0	2.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.42	1.00		1.00
Lane Grp Cap(c), veh/h	48	1889	573	99	2037	623	38	0	431	256	692	579
V/C Ratio(X)	0.54	1.02	0.17	0.78	0.60	0.32	0.50	0.00	0.53	1.24	0.13	0.12
Avail Cap(c_a), veh/h	108	1889	573	108	2037	623	580	0	960	256	692	579
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(l)	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	44.2	29.2	19.8	42.9	22.2	19.4	44.5	0.0	30.2	39.5	19.5	19.4
Incr Delay (d2), s/veh	9.3	24.7	0.1	27.1	0.5	0.3	9.9	0.0	1.0	136.4	0.4	0.4
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(50%),veh/ln	0.7	16.4	1.3	2.4	6.3	2.7	0.5	0.0	4.3	15.2	1.3	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.5	53.9	19.9	70.0	22.8	19.7	54.5	0.0	31.2	175.9	19.9	19.8
LnGrp LOS	D	F	B	E	C	B	D	A	C	F	B	B
Approach Vol, veh/h		2042			1508			247				477
Approach Delay, s/veh		52.3			24.8			33.0				123.6
Approach LOS		D			C			C				F
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	17.5	26.9	9.5	38.0	6.4	38.0	6.9	40.6				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	13.0	50.0	5.5	33.5	29.5	33.5	5.5	33.5				
Max Q Clear Time (g_c+I1), s	15.0	12.3	5.9	35.5	3.0	5.0	3.3	19.4				
Green Ext Time (p_c), s	0.0	1.4	0.0	0.0	0.0	0.6	0.0	7.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			49.4									
HCM 6th LOS			D									

Intersection						
Int Delay, s/veh	0					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	15	0	0	23	0	0
Future Vol, veh/h	15	0	0	23	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	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	16	0	0	25	0	0

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	16	0	41
Stage 1	-	-	-	-	16
Stage 2	-	-	-	-	25
Critical Hdwy	-	-	4.1	-	6.4
Critical Hdwy Stg 1	-	-	-	-	5.4
Critical Hdwy Stg 2	-	-	-	-	5.4
Follow-up Hdwy	-	-	2.2	-	3.5
Pot Cap-1 Maneuver	-	-	1615	-	975
Stage 1	-	-	-	-	1012
Stage 2	-	-	-	-	1003
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1615	-	975
Mov Cap-2 Maneuver	-	-	-	-	905
Stage 1	-	-	-	-	1012
Stage 2	-	-	-	-	1003

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)	-	-	-	1615	-
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	3.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	1	19	0	0	11	1	0	0	0	5	0	12
Future Vol, veh/h	1	19	0	0	11	1	0	0	0	5	0	12
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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	1	21	0	0	12	1	0	0	0	5	0	13

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	13	0	0	21	0	0	42	36	21	36	36	13
Stage 1	-	-	-	-	-	-	23	23	-	13	13	-
Stage 2	-	-	-	-	-	-	19	13	-	23	23	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1619	-	-	1608	-	-	966	860	1062	975	860	1073
Stage 1	-	-	-	-	-	-	1000	880	-	1013	889	-
Stage 2	-	-	-	-	-	-	1005	889	-	1000	880	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1619	-	-	1608	-	-	953	859	1062	974	859	1073
Mov Cap-2 Maneuver	-	-	-	-	-	-	953	859	-	974	859	-
Stage 1	-	-	-	-	-	-	999	879	-	1012	889	-
Stage 2	-	-	-	-	-	-	993	889	-	999	879	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.4	0	0	8.5
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1619	-	-	1608	-	-	1042
HCM Lane V/C Ratio	-	0.001	-	-	-	-	-	0.018
HCM Control Delay (s)	0	7.2	0	-	0	-	-	8.5
HCM Lane LOS	A	A	A	-	A	-	-	A
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	0.1

Timings  
1: Perris Blvd & Harley Knox Blvd

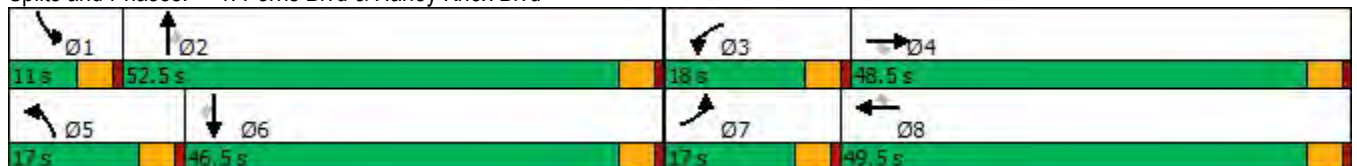
2024 plus Project  
Timing Plan: AM PEAK HOUR

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	204	228	59	6	407	251	203	1281	10	125	1003	348
Future Volume (vph)	204	228	59	6	407	251	203	1281	10	125	1003	348
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	48.5	48.5	9.5	49.5	49.5	9.5	52.5	52.5	9.5	46.5	46.5
Total Split (s)	17.0	48.5	48.5	18.0	49.5	49.5	17.0	52.5	52.5	11.0	46.5	46.5
Total Split (%)	13.1%	37.3%	37.3%	13.8%	38.1%	38.1%	13.1%	40.4%	40.4%	8.5%	35.8%	35.8%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	Min	None	Min	Min
Act Effct Green (s)	13.1	35.2	35.2	5.9	19.0	19.0	10.9	34.3	34.3	6.8	30.1	30.1
Actuated g/C Ratio	0.14	0.38	0.38	0.06	0.21	0.21	0.12	0.37	0.37	0.07	0.33	0.33
v/c Ratio	0.86	0.18	0.09	0.03	0.41	0.62	0.52	0.71	0.02	0.52	0.63	0.49
Control Delay	71.9	20.5	0.3	51.0	32.2	23.6	46.6	27.7	0.0	53.6	29.2	5.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	71.9	20.5	0.3	51.0	32.2	23.6	46.6	27.7	0.0	53.6	29.2	5.9
LOS	E	C	A	D	C	C	D	C	A	D	C	A
Approach Delay		39.4			29.1			30.1			25.8	
Approach LOS		D			C			C			C	

Intersection Summary

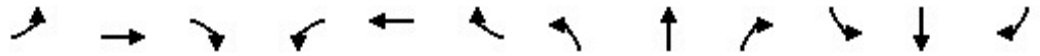
Cycle Length: 130	
Actuated Cycle Length: 91.9	
Natural Cycle: 125	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.86	
Intersection Signal Delay: 29.5	Intersection LOS: C
Intersection Capacity Utilization 63.1%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 1: Perris Blvd & Harley Knox Blvd



Phasings  
1: Perris Blvd & Harley Knox Blvd

2024 plus Project  
Timing Plan: AM PEAK HOUR



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	48.5	48.5	9.5	49.5	49.5	9.5	52.5	52.5	9.5	46.5	46.5
Total Split (s)	17.0	48.5	48.5	18.0	49.5	49.5	17.0	52.5	52.5	11.0	46.5	46.5
Total Split (%)	13.1%	37.3%	37.3%	13.8%	38.1%	38.1%	13.1%	40.4%	40.4%	8.5%	35.8%	35.8%
Maximum Green (s)	12.5	44.0	44.0	13.5	45.0	45.0	12.5	48.0	48.0	6.5	42.0	42.0
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None	None	None	None	Min	Min	None	Min	Min
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		37.0	37.0		38.0	38.0		41.0	41.0		35.0	35.0
Pedestrian Calls (#/hr)		5	5		5	5		5	5		5	5
90th %ile Green (s)	12.5	51.2	51.2	6.3	45.0	45.0	12.5	48.0	48.0	6.5	42.0	42.0
90th %ile Term Code	Max	Hold	Hold	Gap	Ped	Ped	Max	Max	Max	Max	Max	Max
70th %ile Green (s)	12.5	36.9	36.9	0.0	19.9	19.9	12.5	39.5	39.5	6.5	33.5	33.5
70th %ile Term Code	Max	Hold	Hold	Skip	Gap	Gap	Max	Hold	Hold	Max	Gap	Gap
50th %ile Green (s)	12.5	32.1	32.1	0.0	15.1	15.1	11.1	33.1	33.1	6.5	28.5	28.5
50th %ile Term Code	Max	Hold	Hold	Skip	Gap	Gap	Gap	Hold	Hold	Max	Gap	Gap
30th %ile Green (s)	12.5	29.6	29.6	0.0	12.6	12.6	9.7	28.3	28.3	6.5	25.1	25.1
30th %ile Term Code	Max	Hold	Hold	Skip	Gap	Gap	Gap	Hold	Hold	Max	Gap	Gap
10th %ile Green (s)	12.5	26.8	26.8	0.0	9.8	9.8	8.0	23.4	23.4	6.5	21.9	21.9
10th %ile Term Code	Max	Hold	Hold	Skip	Gap	Gap	Gap	Gap	Gap	Max	Hold	Hold

Intersection Summary

Cycle Length: 130  
 Actuated Cycle Length: 91.9  
 Control Type: Actuated-Uncoordinated  
 90th %ile Actuated Cycle: 130  
 70th %ile Actuated Cycle: 96.4  
 50th %ile Actuated Cycle: 85.2  
 30th %ile Actuated Cycle: 77.9  
 10th %ile Actuated Cycle: 70.2

HCM 6th Signalized Intersection Summary  
 1: Perris Blvd & Harley Knox Blvd

2024 plus Project  
 Timing Plan: AM PEAK HOUR

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	204	228	59	6	407	251	203	1281	10	125	1003	348
Future Volume (veh/h)	204	228	59	6	407	251	203	1281	10	125	1003	348
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	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	219	245	63	6	438	270	218	1377	11	134	1078	374
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, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	255	1284	573	27	1155	359	304	1926	598	205	1781	553
Arrive On Green	0.14	0.36	0.36	0.01	0.22	0.22	0.09	0.37	0.37	0.06	0.34	0.34
Sat Flow, veh/h	1810	3610	1610	3510	5187	1610	3510	5187	1610	3510	5187	1610
Grp Volume(v), veh/h	219	245	63	6	438	270	218	1377	11	134	1078	374
Grp Sat Flow(s),veh/h/ln	1810	1805	1610	1755	1729	1610	1755	1729	1610	1755	1729	1610
Q Serve(g_s), s	10.3	4.1	2.3	0.1	6.2	13.6	5.3	19.8	0.4	3.3	15.0	17.3
Cycle Q Clear(g_c), s	10.3	4.1	2.3	0.1	6.2	13.6	5.3	19.8	0.4	3.3	15.0	17.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	255	1284	573	27	1155	359	304	1926	598	205	1781	553
V/C Ratio(X)	0.86	0.19	0.11	0.22	0.38	0.75	0.72	0.71	0.02	0.65	0.61	0.68
Avail Cap(c_a), veh/h	260	1825	814	544	2681	832	504	2860	888	262	2503	777
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(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.6	19.4	18.8	42.9	28.7	31.6	38.7	23.4	17.3	40.1	23.7	24.5
Incr Delay (d2), s/veh	23.8	0.1	0.1	4.0	0.2	3.2	3.2	0.5	0.0	3.8	0.3	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.0	1.6	0.8	0.1	2.4	5.3	2.3	7.4	0.1	1.4	5.6	6.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	60.3	19.5	18.9	46.9	28.9	34.8	41.9	23.9	17.3	43.9	24.0	25.9
LnGrp LOS	E	B	B	D	C	C	D	C	B	D	C	C
Approach Vol, veh/h		527			714			1606			1586	
Approach Delay, s/veh		36.4			31.3			26.3			26.2	
Approach LOS		D			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.6	36.8	5.2	35.5	12.0	34.4	16.8	23.9				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	6.5	48.0	13.5	44.0	12.5	42.0	12.5	45.0				
Max Q Clear Time (g_c+I1), s	5.3	21.8	2.1	6.1	7.3	19.3	12.3	15.6				
Green Ext Time (p_c), s	0.0	10.5	0.0	1.7	0.3	8.9	0.0	3.8				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			28.3									
HCM 6th LOS			C									

Timings  
2: Redlands Ave & Harley Knox Blvd

2024 plus Project  
Timing Plan: AM PEAK HOUR

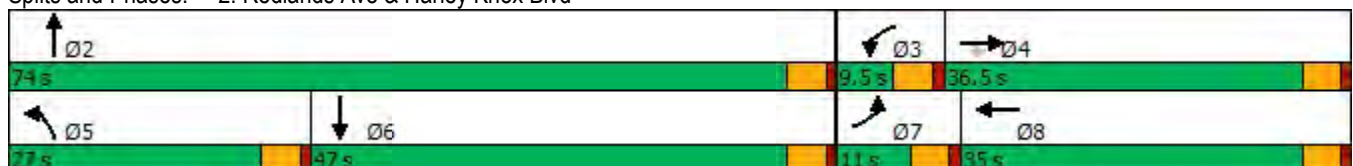


Lane Group	EBL	EBR	NBL	NBT	SBT	Ø3	Ø8
Lane Configurations	↖	↗	↖	↕	↕		
Traffic Volume (vph)	47	269	696	15	4		
Future Volume (vph)	47	269	696	15	4		
Turn Type	Prot	Perm	Prot	NA	NA		
Protected Phases	7		5	2	6	3	8
Permitted Phases		4					
Detector Phase	7	4	5	2	6		
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	36.5	9.5	34.5	47.0	9.5	34.5
Total Split (s)	11.0	36.5	27.0	74.0	47.0	9.5	35.0
Total Split (%)	9.2%	30.4%	22.5%	61.7%	39.2%	8%	29%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5		
Lead/Lag	Lead	Lag	Lead		Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None	None	Min	Min	None	None
Act Effct Green (s)	9.5	9.1	25.1	40.3	10.2		
Actuated g/C Ratio	0.16	0.15	0.42	0.68	0.17		
v/c Ratio	0.17	0.25	0.97	0.01	0.02		
Control Delay	24.3	0.5	48.2	4.7	0.1		
Queue Delay	0.0	0.0	0.0	0.0	0.0		
Total Delay	24.3	0.5	48.2	4.7	0.1		
LOS	C	A	D	A	A		
Approach Delay				47.2	0.1		
Approach LOS				D	A		

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 59.4	
Natural Cycle: 145	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.97	
Intersection Signal Delay: 33.3	Intersection LOS: C
Intersection Capacity Utilization 56.9%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 2: Redlands Ave & Harley Knox Blvd



Phasings  
2: Redlands Ave & Harley Knox Blvd

2024 plus Project  
Timing Plan: AM PEAK HOUR



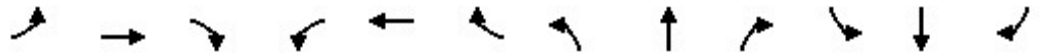
Lane Group	EBL	EBR	NBL	NBT	SBT	Ø3	Ø8
Protected Phases	7		5	2	6	3	8
Permitted Phases		4					
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	36.5	9.5	34.5	47.0	9.5	34.5
Total Split (s)	11.0	36.5	27.0	74.0	47.0	9.5	35.0
Total Split (%)	9.2%	30.4%	22.5%	61.7%	39.2%	8%	29%
Maximum Green (s)	6.5	32.0	22.5	69.5	42.5	5.0	30.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lead		Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	Min	Min	None	None
Walk Time (s)		7.0		7.0	7.0		
Flash Dont Walk (s)		23.0		21.0	35.0		
Pedestrian Calls (#/hr)		5		5	5		
90th %ile Green (s)	30.0	30.0	22.5	69.0	42.0	0.0	0.0
90th %ile Term Code	Hold	Ped	Max	Hold	Ped	Skip	Skip
70th %ile Green (s)	6.5	6.5	22.5	32.5	5.5	0.0	0.0
70th %ile Term Code	Max	Hold	Max	Hold	Gap	Skip	Skip
50th %ile Green (s)	0.0	5.5	22.5	32.5	5.5	0.0	5.5
50th %ile Term Code	Skip	Gap	Max	Hold	Gap	Skip	Hold
30th %ile Green (s)	0.0	5.5	22.5	32.5	5.5	0.0	5.5
30th %ile Term Code	Skip	Gap	Max	Hold	Gap	Skip	Hold
10th %ile Green (s)	0.0	5.5	22.5	32.5	5.5	0.0	5.5
10th %ile Term Code	Skip	Gap	Max	Hold	Gap	Skip	Hold

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 59.4  
 Control Type: Actuated-Uncoordinated  
 90th %ile Actuated Cycle: 108  
 70th %ile Actuated Cycle: 48  
 50th %ile Actuated Cycle: 47  
 30th %ile Actuated Cycle: 47  
 10th %ile Actuated Cycle: 47

HCM 6th Signalized Intersection Summary  
 2: Redlands Ave & Harley Knox Blvd

2024 plus Project  
 Timing Plan: AM PEAK HOUR



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	47	0	269	0	0	0	696	15	0	0	4	15
Future Volume (veh/h)	47	0	269	0	0	0	696	15	0	0	4	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	1900	1900	1900	1900	1900	1900	1900	1900	1900	0	1900	1900
Adj Flow Rate, veh/h	50	0	286	0	0	0	740	16	0	0	4	16
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	89	420	356	3	165	0	768	2199	0	0	180	160
Arrive On Green	0.05	0.00	0.22	0.00	0.00	0.00	0.42	0.61	0.00	0.00	0.10	0.10
Sat Flow, veh/h	1810	1900	1610	1810	1900	0	1810	3705	0	0	1900	1610
Grp Volume(v), veh/h	50	0	286	0	0	0	740	16	0	0	4	16
Grp Sat Flow(s),veh/h/ln	1810	1900	1610	1810	1900	0	1810	1805	0	0	1805	1610
Q Serve(g_s), s	1.4	0.0	8.9	0.0	0.0	0.0	21.1	0.1	0.0	0.0	0.1	0.5
Cycle Q Clear(g_c), s	1.4	0.0	8.9	0.0	0.0	0.0	21.1	0.1	0.0	0.0	0.1	0.5
Prop In Lane	1.00		1.00	1.00		0.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h	89	420	356	3	165	0	768	2199	0	0	180	160
V/C Ratio(X)	0.56	0.00	0.80	0.00	0.00	0.00	0.96	0.01	0.00	0.00	0.02	0.10
Avail Cap(c_a), veh/h	222	1147	972	171	1094	0	768	4735	0	0	1448	1292
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(l)	1.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	24.6	0.0	19.5	0.0	0.0	0.0	14.8	4.1	0.0	0.0	21.5	21.7
Incr Delay (d2), s/veh	5.5	0.0	4.3	0.0	0.0	0.0	23.7	0.0	0.0	0.0	0.0	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(50%),veh/ln	0.7	0.0	3.5	0.0	0.0	0.0	11.5	0.0	0.0	0.0	0.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.1	0.0	23.8	0.0	0.0	0.0	38.5	4.1	0.0	0.0	21.6	22.0
LnGrp LOS	C	A	C	A	A	A	D	A	A	A	C	C
Approach Vol, veh/h		336			0			756			20	
Approach Delay, s/veh		24.8			0.0			37.8			21.9	
Approach LOS		C						D			C	
Timer - Assigned Phs		2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s		36.8	0.0	16.2	27.0	9.8	7.1	9.1				
Change Period (Y+Rc), s		4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s		69.5	5.0	32.0	22.5	42.5	6.5	30.5				
Max Q Clear Time (g_c+I1), s		2.1	0.0	10.9	23.1	2.5	3.4	0.0				
Green Ext Time (p_c), s		0.1	0.0	0.9	0.0	0.1	0.0	0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			33.6									
HCM 6th LOS			C									
<b>Notes</b>												
User approved pedestrian interval to be less than phase max green.												

Intersection												
Int Delay, s/veh	0.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗			↕		↖	↗		↖	↗	
Traffic Vol, veh/h	16	0	18	0	0	0	15	695	0	0	227	41
Future Vol, veh/h	16	0	18	0	0	0	15	695	0	0	227	41
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	1	1	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	110	-	-	-	-	-	305	-	-	80	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	17	0	19	0	0	0	16	739	0	0	241	44

Major/Minor	Minor2		Minor1			Major1		Major2				
Conflicting Flow All	665	1035	143	893	1057	371	285	0	0	740	0	0
Stage 1	263	263	-	772	772	-	-	-	-	-	-	-
Stage 2	402	772	-	121	285	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.5	6.5	6.9	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	349	234	885	239	227	632	1289	-	-	876	-	-
Stage 1	725	694	-	363	412	-	-	-	-	-	-	-
Stage 2	601	412	-	876	679	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	346	231	885	231	224	631	1289	-	-	875	-	-
Mov Cap-2 Maneuver	346	231	-	231	224	-	-	-	-	-	-	-
Stage 1	716	694	-	358	407	-	-	-	-	-	-	-
Stage 2	594	407	-	857	679	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	12.4	0	0.2	0
HCM LOS	B	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1289	-	-	346	885	-	875	-	-
HCM Lane V/C Ratio	0.012	-	-	0.049	0.022	-	-	-	-
HCM Control Delay (s)	7.8	-	-	15.9	9.2	0	0	-	-
HCM Lane LOS	A	-	-	C	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.2	0.1	-	0	-	-

Timings  
4: Redlands Ave & Ramona Expy

2024 plus Project  
Timing Plan: AM PEAK HOUR

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	25	845	43	105	1501	590	48	223	115	102	30
Future Volume (vph)	25	845	43	105	1501	590	48	223	115	102	30
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2	1	6	
Permitted Phases			4			8					6
Detector Phase	7	4	4	3	8	8	5	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	31.5	31.5	9.5	36.5	36.5	9.5	54.5	9.5	22.5	22.5
Total Split (s)	10.0	38.0	38.0	10.0	38.0	38.0	34.0	54.5	17.5	38.0	38.0
Total Split (%)	8.3%	31.7%	31.7%	8.3%	31.7%	31.7%	28.3%	45.4%	14.6%	31.7%	31.7%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	None	Max	Max
Act Effct Green (s)	5.7	27.6	27.6	5.7	34.5	34.5	8.1	29.2	10.8	37.1	37.1
Actuated g/C Ratio	0.06	0.30	0.30	0.06	0.38	0.38	0.09	0.32	0.12	0.40	0.40
v/c Ratio	0.23	0.56	0.08	0.97	0.79	0.66	0.31	0.63	0.56	0.14	0.04
Control Delay	53.3	29.8	0.3	127.6	31.9	9.6	49.0	29.8	52.4	20.4	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	53.3	29.8	0.3	127.6	31.9	9.6	49.0	29.8	52.4	20.4	0.1
LOS	D	C	A	F	C	A	D	C	D	C	A
Approach Delay		29.1			30.4			32.0		32.8	
Approach LOS		C			C			C		C	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 91.8  
 Natural Cycle: 110  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.97  
 Intersection Signal Delay: 30.4  
 Intersection LOS: C  
 Intersection Capacity Utilization 74.8%  
 ICU Level of Service D  
 Analysis Period (min) 15

Splits and Phases: 4: Redlands Ave & Ramona Expy



Phasings  
4: Redlands Ave & Ramona Expy

2024 plus Project  
Timing Plan: AM PEAK HOUR






























Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Protected Phases	7	4		3	8		5	2	1	6	
Permitted Phases			4			8					6
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	31.5	31.5	9.5	36.5	36.5	9.5	54.5	9.5	22.5	22.5
Total Split (s)	10.0	38.0	38.0	10.0	38.0	38.0	34.0	54.5	17.5	38.0	38.0
Total Split (%)	8.3%	31.7%	31.7%	8.3%	31.7%	31.7%	28.3%	45.4%	14.6%	31.7%	31.7%
Maximum Green (s)	5.5	33.5	33.5	5.5	33.5	33.5	29.5	50.0	13.0	33.5	33.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None	None	None	None	Min	None	Max	Max
Walk Time (s)		7.0	7.0		7.0	7.0		7.0			
Flash Dont Walk (s)		19.0	19.0		24.0	24.0		42.0			
Pedestrian Calls (#/hr)		5	5		5	5		5			
90th %ile Green (s)	5.5	33.5	33.5	5.5	33.5	33.5	11.8	49.0	13.0	50.2	50.2
90th %ile Term Code	Max	Hold	Hold	Max	Max	Max	Gap	Ped	Max	Hold	Hold
70th %ile Green (s)	5.5	33.5	33.5	5.5	33.5	33.5	9.1	29.6	13.0	33.5	33.5
70th %ile Term Code	Max	Hold	Hold	Max	Max	Max	Gap	Hold	Max	MaxR	MaxR
50th %ile Green (s)	0.0	23.5	23.5	5.5	33.5	33.5	8.0	29.8	11.7	33.5	33.5
50th %ile Term Code	Skip	Hold	Hold	Max	Max	Max	Gap	Hold	Gap	MaxR	MaxR
30th %ile Green (s)	0.0	23.5	23.5	5.5	33.5	33.5	0.0	19.5	9.5	33.5	33.5
30th %ile Term Code	Skip	Hold	Hold	Max	Max	Max	Skip	Hold	Gap	MaxR	MaxR
10th %ile Green (s)	0.0	23.5	23.5	5.5	33.5	33.5	0.0	21.9	7.1	33.5	33.5
10th %ile Term Code	Skip	Hold	Hold	Max	Max	Max	Skip	Hold	Gap	MaxR	MaxR

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 91.8  
 Control Type: Actuated-Uncoordinated  
 90th %ile Actuated Cycle: 119  
 70th %ile Actuated Cycle: 99.6  
 50th %ile Actuated Cycle: 88.5  
 30th %ile Actuated Cycle: 76  
 10th %ile Actuated Cycle: 76

HCM 6th Signalized Intersection Summary  
4: Redlands Ave & Ramona Expy

2024 plus Project  
Timing Plan: AM PEAK HOUR

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  							
Traffic Volume (veh/h)	25	845	43	105	1501	590	48	223	140	115	102	30
Future Volume (veh/h)	25	845	43	105	1501	590	48	223	140	115	102	30
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		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	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	26	871	44	108	1547	608	49	230	144	119	105	31
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	48	1734	527	109	1910	593	71	354	222	151	700	593
Arrive On Green	0.03	0.33	0.33	0.06	0.37	0.37	0.04	0.32	0.32	0.08	0.37	0.37
Sat Flow, veh/h	1810	5187	1576	1810	5187	1610	1810	1093	684	1810	1900	1610
Grp Volume(v), veh/h	26	871	44	108	1547	608	49	0	374	119	105	31
Grp Sat Flow(s),veh/h/ln	1810	1729	1576	1810	1729	1610	1810	0	1777	1810	1900	1610
Q Serve(g_s), s	1.3	12.2	1.7	5.4	24.4	33.5	2.4	0.0	16.4	5.9	3.4	1.1
Cycle Q Clear(g_c), s	1.3	12.2	1.7	5.4	24.4	33.5	2.4	0.0	16.4	5.9	3.4	1.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.39	1.00		1.00
Lane Grp Cap(c), veh/h	48	1734	527	109	1910	593	71	0	576	151	700	593
V/C Ratio(X)	0.54	0.50	0.08	0.99	0.81	1.03	0.69	0.00	0.65	0.79	0.15	0.05
Avail Cap(c_a), veh/h	109	1910	581	109	1910	593	587	0	977	259	700	593
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(l)	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	43.7	24.2	20.7	42.7	25.9	28.7	43.2	0.0	26.3	40.9	19.2	18.5
Incr Delay (d2), s/veh	9.2	0.2	0.1	81.7	2.7	43.5	11.5	0.0	1.2	8.8	0.5	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	4.5	0.6	4.7	9.3	18.4	1.3	0.0	6.7	2.9	1.5	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.0	24.4	20.8	124.4	28.6	72.3	54.7	0.0	27.6	49.7	19.7	18.7
LnGrp LOS	D	C	C	F	C	F	D	A	C	D	B	B
Approach Vol, veh/h		941			2263			423			255	
Approach Delay, s/veh		25.1			44.9			30.7			33.6	
Approach LOS		C			D			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.1	34.0	10.0	34.9	8.1	38.0	6.9	38.0				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	13.0	50.0	5.5	33.5	29.5	33.5	5.5	33.5				
Max Q Clear Time (g_c+l1), s	7.9	18.4	7.4	14.2	4.4	5.4	3.3	35.5				
Green Ext Time (p_c), s	0.1	2.3	0.0	5.2	0.1	0.6	0.0	0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				37.8								
HCM 6th LOS				D								

Intersection						
Int Delay, s/veh	2.4					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	24	2	18	23	3	2
Future Vol, veh/h	24	2	18	23	3	2
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	94	94	94	94	94	94
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	26	2	19	24	3	2

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	28	0	89 27
Stage 1	-	-	-	-	27 -
Stage 2	-	-	-	-	62 -
Critical Hdwy	-	-	4.1	-	6.4 6.2
Critical Hdwy Stg 1	-	-	-	-	5.4 -
Critical Hdwy Stg 2	-	-	-	-	5.4 -
Follow-up Hdwy	-	-	2.2	-	3.5 3.3
Pot Cap-1 Maneuver	-	-	1599	-	917 1054
Stage 1	-	-	-	-	1001 -
Stage 2	-	-	-	-	966 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1599	-	906 1054
Mov Cap-2 Maneuver	-	-	-	-	856 -
Stage 1	-	-	-	-	1001 -
Stage 2	-	-	-	-	954 -

Approach	EB	WB	NB
HCM Control Delay, s	0	3.2	8.9
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	926	-	-	1599	-
HCM Lane V/C Ratio	0.006	-	-	0.012	-
HCM Control Delay (s)	8.9	-	-	7.3	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

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	4	25	0	17	37	2	0	0	8	2	0	4
Future Vol, veh/h	4	25	0	17	37	2	0	0	8	2	0	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	4	27	0	18	39	2	0	0	9	2	0	4

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	41	0	0	27	0	0	113	112	27	116	111	40
Stage 1	-	-	-	-	-	-	35	35	-	76	76	-
Stage 2	-	-	-	-	-	-	78	77	-	40	35	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1581	-	-	1600	-	-	869	782	1054	865	783	1037
Stage 1	-	-	-	-	-	-	986	870	-	938	836	-
Stage 2	-	-	-	-	-	-	936	835	-	980	870	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1581	-	-	1600	-	-	856	770	1054	849	771	1037
Mov Cap-2 Maneuver	-	-	-	-	-	-	856	770	-	849	771	-
Stage 1	-	-	-	-	-	-	983	867	-	935	826	-
Stage 2	-	-	-	-	-	-	921	825	-	969	867	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	1			2.2			8.4			8.8		
HCM LOS							A			A		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	1054	1581	-	-	1600	-	-	966
HCM Lane V/C Ratio	0.008	0.003	-	-	0.011	-	-	0.007
HCM Control Delay (s)	8.4	7.3	0	-	7.3	0	-	8.8
HCM Lane LOS	A	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0

Timings  
1: Perris Blvd & Harley Knox Blvd

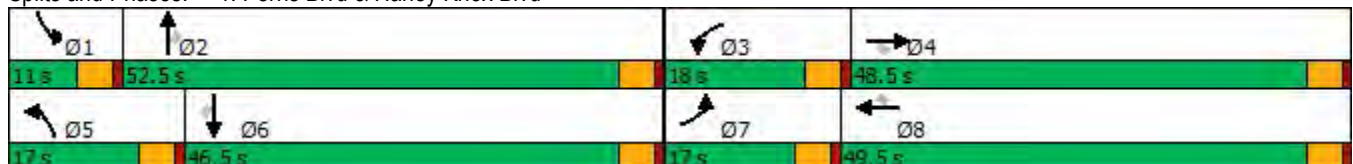
2024 plus Project  
Timing Plan: PM PEAK HOUR

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	342	257	110	6	215	163	125	1163	14	188	1249	351
Future Volume (vph)	342	257	110	6	215	163	125	1163	14	188	1249	351
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	48.5	48.5	9.5	49.5	49.5	9.5	52.5	52.5	9.5	46.5	46.5
Total Split (s)	17.0	48.5	48.5	18.0	49.5	49.5	17.0	52.5	52.5	11.0	46.5	46.5
Total Split (%)	13.1%	37.3%	37.3%	13.8%	38.1%	38.1%	13.1%	40.4%	40.4%	8.5%	35.8%	35.8%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	Min	None	Min	Min
Act Effct Green (s)	13.0	30.8	30.8	5.9	14.7	14.7	9.3	39.0	39.0	6.8	36.5	36.5
Actuated g/C Ratio	0.14	0.33	0.33	0.06	0.16	0.16	0.10	0.42	0.42	0.07	0.40	0.40
v/c Ratio	1.51	0.24	0.20	0.03	0.29	0.51	0.40	0.60	0.02	0.82	0.68	0.48
Control Delay	278.9	23.8	5.2	50.3	34.5	17.2	46.3	23.0	0.1	70.5	26.8	7.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	278.9	23.8	5.2	50.3	34.5	17.2	46.3	23.0	0.1	70.5	26.8	7.6
LOS	F	C	A	D	C	B	D	C	A	E	C	A
Approach Delay		143.8			27.4			25.0			27.7	
Approach LOS		F			C			C			C	

Intersection Summary

Cycle Length: 130	
Actuated Cycle Length: 92.2	
Natural Cycle: 145	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.51	
Intersection Signal Delay: 46.5	Intersection LOS: D
Intersection Capacity Utilization 66.8%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 1: Perris Blvd & Harley Knox Blvd



Phasings  
1: Perris Blvd & Harley Knox Blvd

2024 plus Project  
Timing Plan: PM PEAK HOUR





































Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	48.5	48.5	9.5	49.5	49.5	9.5	52.5	52.5	9.5	46.5	46.5
Total Split (s)	17.0	48.5	48.5	18.0	49.5	49.5	17.0	52.5	52.5	11.0	46.5	46.5
Total Split (%)	13.1%	37.3%	37.3%	13.8%	38.1%	38.1%	13.1%	40.4%	40.4%	8.5%	35.8%	35.8%
Maximum Green (s)	12.5	44.0	44.0	13.5	45.0	45.0	12.5	48.0	48.0	6.5	42.0	42.0
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None	None	None	None	Min	Min	None	Min	Min
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		37.0	37.0		38.0	38.0		41.0	41.0		35.0	35.0
Pedestrian Calls (#/hr)		5	5		5	5		5	5		5	5
90th %ile Green (s)	12.5	51.1	51.1	6.4	45.0	45.0	12.5	48.0	48.0	6.5	42.0	42.0
90th %ile Term Code	Max	Hold	Hold	Gap	Ped	Ped	Max	Max	Max	Max	Max	Max
70th %ile Green (s)	12.5	28.3	28.3	0.0	11.3	11.3	9.9	45.4	45.4	6.5	42.0	42.0
70th %ile Term Code	Max	Hold	Hold	Skip	Gap	Gap	Gap	Hold	Hold	Max	Max	Max
50th %ile Green (s)	12.5	26.6	26.6	0.0	9.6	9.6	9.0	39.6	39.6	6.5	37.1	37.1
50th %ile Term Code	Max	Hold	Hold	Skip	Gap	Gap	Gap	Hold	Hold	Max	Gap	Gap
30th %ile Green (s)	12.5	25.8	25.8	0.0	8.8	8.8	8.1	34.1	34.1	6.5	32.5	32.5
30th %ile Term Code	Max	Hold	Hold	Skip	Gap	Gap	Gap	Hold	Hold	Max	Gap	Gap
10th %ile Green (s)	12.5	24.6	24.6	0.0	7.6	7.6	6.8	26.5	26.5	6.5	26.2	26.2
10th %ile Term Code	Max	Hold	Hold	Skip	Gap	Gap	Gap	Hold	Hold	Max	Gap	Gap

Intersection Summary

Cycle Length: 130  
 Actuated Cycle Length: 92.2  
 Control Type: Actuated-Uncoordinated  
 90th %ile Actuated Cycle: 130  
 70th %ile Actuated Cycle: 93.7  
 50th %ile Actuated Cycle: 86.2  
 30th %ile Actuated Cycle: 79.9  
 10th %ile Actuated Cycle: 71.1

HCM 6th Signalized Intersection Summary  
 1: Perris Blvd & Harley Knox Blvd

2024 plus Project  
 Timing Plan: PM PEAK HOUR

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 		 	  		 	  		 	  	
Traffic Volume (veh/h)	342	257	110	6	215	163	125	1163	14	188	1249	351
Future Volume (veh/h)	342	257	110	6	215	163	125	1163	14	188	1249	351
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	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	384	289	124	7	242	183	140	1307	16	211	1403	394
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, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	282	1105	493	32	825	256	223	1966	610	285	2057	638
Arrive On Green	0.16	0.31	0.31	0.01	0.16	0.16	0.06	0.38	0.38	0.08	0.40	0.40
Sat Flow, veh/h	1810	3610	1610	3510	5187	1610	3510	5187	1609	3510	5187	1609
Grp Volume(v), veh/h	384	289	124	7	242	183	140	1307	16	211	1403	394
Grp Sat Flow(s),veh/h/ln	1810	1805	1610	1755	1729	1610	1755	1729	1609	1755	1729	1609
Q Serve(g_s), s	12.5	4.8	4.6	0.2	3.3	8.6	3.1	16.8	0.5	4.7	17.9	15.7
Cycle Q Clear(g_c), s	12.5	4.8	4.6	0.2	3.3	8.6	3.1	16.8	0.5	4.7	17.9	15.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	282	1105	493	32	825	256	223	1966	610	285	2057	638
V/C Ratio(X)	1.36	0.26	0.25	0.22	0.29	0.71	0.63	0.66	0.03	0.74	0.68	0.62
Avail Cap(c_a), veh/h	282	1983	885	592	2915	905	548	3109	964	285	2720	844
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	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.8	21.0	20.9	39.4	29.7	31.9	36.6	20.6	15.6	36.0	20.0	19.3
Incr Delay (d2), s/veh	183.1	0.1	0.3	3.5	0.2	3.7	2.9	0.4	0.0	9.9	0.5	1.0
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(50%),veh/ln	19.5	1.9	1.6	0.1	1.3	3.4	1.3	6.0	0.2	2.3	6.4	5.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	216.9	21.1	21.2	42.9	29.9	35.6	39.5	21.0	15.6	45.8	20.4	20.3
LnGrp LOS	F	C	C	D	C	D	D	C	B	D	C	C
Approach Vol, veh/h		797			432			1463			2008	
Approach Delay, s/veh		115.4			32.5			22.7			23.1	
Approach LOS		F			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.0	34.8	5.2	29.0	9.6	36.3	17.0	17.2				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	6.5	48.0	13.5	44.0	12.5	42.0	12.5	45.0				
Max Q Clear Time (g_c+I1), s	6.7	18.8	2.2	6.8	5.1	19.9	14.5	10.6				
Green Ext Time (p_c), s	0.0	10.3	0.0	2.2	0.2	11.6	0.0	2.1				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				39.5								
HCM 6th LOS				D								

# Timings

## 2: Redlands Ave & Harley Knox Blvd

2024 plus Project  
Timing Plan: PM PEAK HOUR

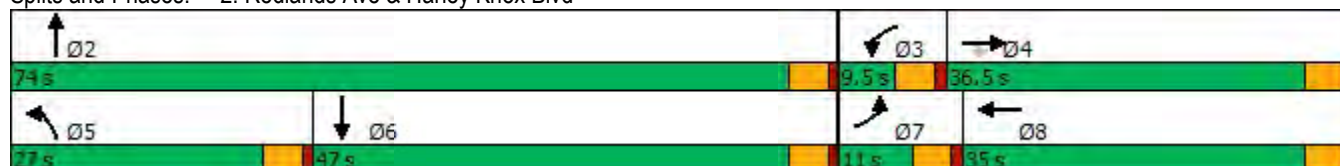


Lane Group	EBL	EBR	NBL	NBT	SBT	Ø3	Ø8
Lane Configurations	↖	↘	↖	↑	↓		
Traffic Volume (vph)	39	419	325	14	11		
Future Volume (vph)	39	419	325	14	11		
Turn Type	Prot	Perm	Prot	NA	NA		
Protected Phases	7		5	2	6	3	8
Permitted Phases		4					
Detector Phase	7	4	5	2	6		
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	36.5	9.5	34.5	47.0	9.5	34.5
Total Split (s)	11.0	36.5	27.0	74.0	47.0	9.5	35.0
Total Split (%)	9.2%	30.4%	22.5%	61.7%	39.2%	8%	29%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5		
Lead/Lag	Lead	Lag	Lead		Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None	None	Min	Min	None	None
Act Effct Green (s)	9.5	9.1	24.2	39.5	10.3		
Actuated g/C Ratio	0.16	0.16	0.41	0.67	0.18		
v/c Ratio	0.16	0.44	0.53	0.01	0.08		
Control Delay	23.7	1.2	22.5	4.7	10.0		
Queue Delay	0.0	0.0	0.0	0.0	0.0		
Total Delay	23.7	1.2	22.5	4.7	10.0		
LOS	C	A	C	A	A		
Approach Delay				21.8	10.0		
Approach LOS				C	A		

### Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 58.7	
Natural Cycle: 125	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.53	
Intersection Signal Delay: 11.0	Intersection LOS: B
Intersection Capacity Utilization 38.6%	ICU Level of Service A
Analysis Period (min) 15	

### Splits and Phases: 2: Redlands Ave & Harley Knox Blvd



Phasings  
2: Redlands Ave & Harley Knox Blvd

2024 plus Project  
Timing Plan: PM PEAK HOUR



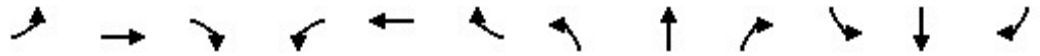
Lane Group	EBL	EBR	NBL	NBT	SBT	Ø3	Ø8
Protected Phases	7		5	2	6	3	8
Permitted Phases		4					
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	36.5	9.5	34.5	47.0	9.5	34.5
Total Split (s)	11.0	36.5	27.0	74.0	47.0	9.5	35.0
Total Split (%)	9.2%	30.4%	22.5%	61.7%	39.2%	8%	29%
Maximum Green (s)	6.5	32.0	22.5	69.5	42.5	5.0	30.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lead		Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	Min	Min	None	None
Walk Time (s)		7.0		7.0	7.0		
Flash Dont Walk (s)		23.0		21.0	35.0		
Pedestrian Calls (#/hr)		5		5	5		
90th %ile Green (s)	30.0	30.0	22.5	69.0	42.0	0.0	0.0
90th %ile Term Code	Hold	Ped	Max	Hold	Ped	Skip	Skip
70th %ile Green (s)	6.5	6.5	19.3	29.7	5.9	0.0	0.0
70th %ile Term Code	Max	Hold	Gap	Hold	Gap	Skip	Skip
50th %ile Green (s)	0.0	5.5	21.9	32.0	5.6	0.0	5.5
50th %ile Term Code	Skip	Gap	Gap	Hold	Gap	Skip	Hold
30th %ile Green (s)	0.0	5.5	22.5	32.5	5.5	0.0	5.5
30th %ile Term Code	Skip	Gap	Max	Hold	Gap	Skip	Hold
10th %ile Green (s)	0.0	5.5	22.5	32.5	5.5	0.0	5.5
10th %ile Term Code	Skip	Gap	Max	Hold	Gap	Skip	Hold

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 58.7  
 Control Type: Actuated-Uncoordinated  
 90th %ile Actuated Cycle: 108  
 70th %ile Actuated Cycle: 45.2  
 50th %ile Actuated Cycle: 46.5  
 30th %ile Actuated Cycle: 47  
 10th %ile Actuated Cycle: 47

HCM 6th Signalized Intersection Summary  
 2: Redlands Ave & Harley Knox Blvd

2024 plus Project  
 Timing Plan: PM PEAK HOUR



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	39	0	419	0	0	0	325	14	0	0	11	28
Future Volume (veh/h)	39	0	419	0	0	0	325	14	0	0	11	28
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	1900	1900	1900	1900	1900	1900	1900	1900	1900	0	1900	1900
Adj Flow Rate, veh/h	47	0	505	0	0	0	392	17	0	0	13	34
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	86	689	584	4	429	0	471	1657	0	0	197	176
Arrive On Green	0.05	0.00	0.36	0.00	0.00	0.00	0.26	0.46	0.00	0.00	0.11	0.11
Sat Flow, veh/h	1810	1900	1610	1810	1900	0	1810	3705	0	0	1900	1606
Grp Volume(v), veh/h	47	0	505	0	0	0	392	17	0	0	13	34
Grp Sat Flow(s),veh/h/ln	1810	1900	1610	1810	1900	0	1810	1805	0	0	1805	1606
Q Serve(g_s), s	1.3	0.0	14.7	0.0	0.0	0.0	10.3	0.1	0.0	0.0	0.3	1.0
Cycle Q Clear(g_c), s	1.3	0.0	14.7	0.0	0.0	0.0	10.3	0.1	0.0	0.0	0.3	1.0
Prop In Lane	1.00		1.00	1.00		0.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h	86	689	584	4	429	0	471	1657	0	0	197	176
V/C Ratio(X)	0.54	0.00	0.86	0.00	0.00	0.00	0.83	0.01	0.00	0.00	0.07	0.19
Avail Cap(c_a), veh/h	233	1204	1020	179	1147	0	806	4968	0	0	1519	1351
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(l)	1.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	23.5	0.0	14.9	0.0	0.0	0.0	17.6	7.4	0.0	0.0	20.2	20.5
Incr Delay (d2), s/veh	5.2	0.0	4.0	0.0	0.0	0.0	3.9	0.0	0.0	0.0	0.1	0.5
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(50%),veh/ln	0.6	0.0	5.3	0.0	0.0	0.0	4.0	0.0	0.0	0.0	0.1	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.7	0.0	18.9	0.0	0.0	0.0	21.5	7.4	0.0	0.0	20.3	21.0
LnGrp LOS	C	A	B	A	A	A	C	A	A	A	C	C
Approach Vol, veh/h		552			0			409			47	
Approach Delay, s/veh		19.8			0.0			20.9			20.8	
Approach LOS		B						C			C	
Timer - Assigned Phs		2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s		27.7	0.0	22.8	17.7	10.0	6.9	15.9				
Change Period (Y+Rc), s		4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s		69.5	5.0	32.0	22.5	42.5	6.5	30.5				
Max Q Clear Time (g_c+l1), s		2.1	0.0	16.7	12.3	3.0	3.3	0.0				
Green Ext Time (p_c), s		0.1	0.0	1.6	0.9	0.2	0.0	0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			20.3									
HCM 6th LOS			C									
<b>Notes</b>												
User approved pedestrian interval to be less than phase max green.												

Intersection												
Int Delay, s/veh	1.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗			↕		↖	↗		↖	↗	
Traffic Vol, veh/h	33	0	15	0	0	0	8	306	0	0	409	17
Future Vol, veh/h	33	0	15	0	0	0	8	306	0	0	409	17
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	110	-	-	-	-	-	305	-	-	80	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	79	79	79	79	79	79	79	79	79	79	79	79
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	42	0	19	0	0	0	10	387	0	0	518	22

Major/Minor	Minor2		Minor1			Major1			Major2			
Conflicting Flow All	743	936	270	666	947	194	540	0	0	387	0	0
Stage 1	529	529	-	407	407	-	-	-	-	-	-	-
Stage 2	214	407	-	259	540	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.5	6.5	6.9	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	307	267	734	349	263	821	1039	-	-	1183	-	-
Stage 1	506	530	-	597	601	-	-	-	-	-	-	-
Stage 2	774	601	-	729	524	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	305	264	734	337	260	821	1039	-	-	1183	-	-
Mov Cap-2 Maneuver	305	264	-	337	260	-	-	-	-	-	-	-
Stage 1	501	530	-	591	595	-	-	-	-	-	-	-
Stage 2	767	595	-	710	524	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	16	0	0.2	0
HCM LOS	C	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1039	-	-	305	734	-	1183	-	-
HCM Lane V/C Ratio	0.01	-	-	0.137	0.026	-	-	-	-
HCM Control Delay (s)	8.5	-	-	18.7	10	0	0	-	-
HCM Lane LOS	A	-	-	C	B	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.5	0.1	-	0	-	-

Timings  
4: Redlands Ave & Ramona Expy

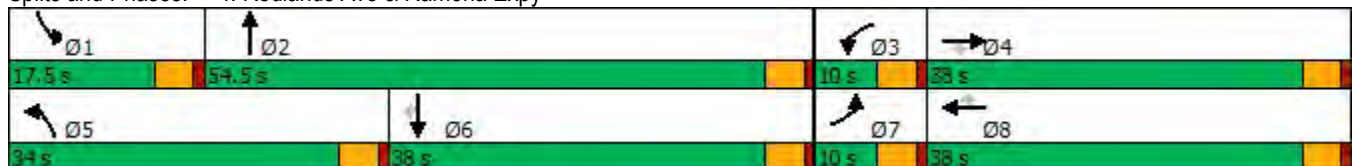
2024 plus Project  
Timing Plan: PM PEAK HOUR

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	26	1823	92	73	1170	189	18	126	302	89	68
Future Volume (vph)	26	1823	92	73	1170	189	18	126	302	89	68
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2	1	6	
Permitted Phases			4			8					6
Detector Phase	7	4	4	3	8	8	5	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	31.5	31.5	9.5	36.5	36.5	9.5	54.5	9.5	22.5	22.5
Total Split (s)	10.0	38.0	38.0	10.0	38.0	38.0	34.0	54.5	17.5	38.0	38.0
Total Split (%)	8.3%	31.7%	31.7%	8.3%	31.7%	31.7%	28.3%	45.4%	14.6%	31.7%	31.7%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	None	Max	Max
Act Effct Green (s)	5.6	34.0	34.0	5.6	40.7	40.7	6.6	23.8	13.2	37.2	37.2
Actuated g/C Ratio	0.06	0.36	0.36	0.06	0.43	0.43	0.07	0.25	0.14	0.39	0.39
v/c Ratio	0.25	1.03	0.15	0.73	0.55	0.25	0.15	0.48	1.27	0.13	0.10
Control Delay	53.8	61.0	2.5	83.5	24.8	5.1	48.7	27.4	184.5	19.8	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	53.8	61.0	2.5	83.5	24.8	5.1	48.7	27.4	184.5	19.8	0.3
LOS	D	E	A	F	C	A	D	C	F	B	A
Approach Delay		58.1			25.2			29.1		125.1	
Approach LOS		E			C			C		F	

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 94.9	
Natural Cycle: 150	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.27	
Intersection Signal Delay: 52.4	Intersection LOS: D
Intersection Capacity Utilization 84.2%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 4: Redlands Ave & Ramona Expy



Phasings  
4: Redlands Ave & Ramona Expy

2024 plus Project  
Timing Plan: PM PEAK HOUR



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Protected Phases	7	4		3	8		5	2	1	6	
Permitted Phases			4			8					6
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	31.5	31.5	9.5	36.5	36.5	9.5	54.5	9.5	22.5	22.5
Total Split (s)	10.0	38.0	38.0	10.0	38.0	38.0	34.0	54.5	17.5	38.0	38.0
Total Split (%)	8.3%	31.7%	31.7%	8.3%	31.7%	31.7%	28.3%	45.4%	14.6%	31.7%	31.7%
Maximum Green (s)	5.5	33.5	33.5	5.5	33.5	33.5	29.5	50.0	13.0	33.5	33.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None	None	None	None	Min	None	Max	Max
Walk Time (s)		7.0	7.0		7.0	7.0		7.0			
Flash Dont Walk (s)		19.0	19.0		24.0	24.0		42.0			
Pedestrian Calls (#/hr)		5	5		5	5		5			
90th %ile Green (s)	5.5	33.5	33.5	5.5	33.5	33.5	8.7	49.0	13.0	53.3	53.3
90th %ile Term Code	Max	Max	Max	Max	Max	Max	Gap	Ped	Max	Hold	Hold
70th %ile Green (s)	5.5	33.5	33.5	5.5	33.5	33.5	7.1	27.6	13.0	33.5	33.5
70th %ile Term Code	Max	Max	Max	Max	Max	Max	Gap	Hold	Max	MaxR	MaxR
50th %ile Green (s)	0.0	33.5	33.5	5.5	43.5	43.5	0.0	16.0	13.0	33.5	33.5
50th %ile Term Code	Skip	Max	Max	Max	Hold	Hold	Skip	Hold	Max	MaxR	MaxR
30th %ile Green (s)	0.0	33.5	33.5	5.5	43.5	43.5	0.0	16.0	13.0	33.5	33.5
30th %ile Term Code	Skip	Max	Max	Max	Hold	Hold	Skip	Hold	Max	MaxR	MaxR
10th %ile Green (s)	0.0	33.5	33.5	5.5	43.5	43.5	0.0	16.0	13.0	33.5	33.5
10th %ile Term Code	Skip	Max	Max	Max	Hold	Hold	Skip	Hold	Max	MaxR	MaxR

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 94.9  
 Control Type: Actuated-Uncoordinated  
 90th %ile Actuated Cycle: 119  
 70th %ile Actuated Cycle: 97.6  
 50th %ile Actuated Cycle: 86  
 30th %ile Actuated Cycle: 86  
 10th %ile Actuated Cycle: 86

HCM 6th Signalized Intersection Summary  
 4: Redlands Ave & Ramona Expy

2024 plus Project  
 Timing Plan: PM PEAK HOUR

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	26	1823	92	73	1170	189	18	126	90	302	89	68
Future Volume (veh/h)	26	1823	92	73	1170	189	18	126	90	302	89	68
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		0.99
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	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	27	1919	97	77	1232	199	19	133	95	318	94	72
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, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	49	1889	573	99	2033	622	38	251	179	256	692	579
Arrive On Green	0.03	0.36	0.36	0.05	0.39	0.39	0.02	0.24	0.24	0.14	0.36	0.36
Sat Flow, veh/h	1810	5187	1572	1810	5187	1588	1810	1030	736	1810	1900	1589
Grp Volume(v), veh/h	27	1919	97	77	1232	199	19	0	228	318	94	72
Grp Sat Flow(s),veh/h/ln	1810	1729	1572	1810	1729	1588	1810	0	1766	1810	1900	1589
Q Serve(g_s), s	1.4	33.5	3.8	3.9	17.4	8.0	1.0	0.0	10.3	13.0	3.0	2.8
Cycle Q Clear(g_c), s	1.4	33.5	3.8	3.9	17.4	8.0	1.0	0.0	10.3	13.0	3.0	2.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.42	1.00		1.00
Lane Grp Cap(c), veh/h	49	1889	573	99	2033	622	38	0	431	256	692	579
V/C Ratio(X)	0.55	1.02	0.17	0.78	0.61	0.32	0.50	0.00	0.53	1.24	0.14	0.12
Avail Cap(c_a), veh/h	108	1889	573	108	2033	622	580	0	960	256	692	579
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(l)	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	44.2	29.2	19.8	42.9	22.3	19.4	44.5	0.0	30.2	39.5	19.6	19.5
Incr Delay (d2), s/veh	9.3	24.7	0.1	27.1	0.5	0.3	9.9	0.0	1.0	138.0	0.4	0.4
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(50%),veh/ln	0.7	16.4	1.3	2.4	6.3	2.7	0.5	0.0	4.3	15.3	1.4	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.5	53.9	19.9	70.0	22.8	19.7	54.5	0.0	31.2	177.5	20.0	19.9
LnGrp LOS	D	F	B	E	C	B	D	A	C	F	B	B
Approach Vol, veh/h		2043			1508			247			484	
Approach Delay, s/veh		52.3			24.8			33.0			123.4	
Approach LOS		D			C			C			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	17.5	26.9	9.5	38.0	6.4	38.0	7.0	40.6				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	13.0	50.0	5.5	33.5	29.5	33.5	5.5	33.5				
Max Q Clear Time (g_c+I1), s	15.0	12.3	5.9	35.5	3.0	5.0	3.4	19.4				
Green Ext Time (p_c), s	0.0	1.4	0.0	0.0	0.0	0.7	0.0	7.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			49.5									
HCM 6th LOS			D									

Intersection						
Int Delay, s/veh	3.4					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	15	1	6	23	13	7
Future Vol, veh/h	15	1	6	23	13	7
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	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	16	1	7	25	14	8

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	17	0	56
Stage 1	-	-	-	-	17
Stage 2	-	-	-	-	39
Critical Hdwy	-	-	4.1	-	6.4
Critical Hdwy Stg 1	-	-	-	-	5.4
Critical Hdwy Stg 2	-	-	-	-	5.4
Follow-up Hdwy	-	-	2.2	-	3.5
Pot Cap-1 Maneuver	-	-	1613	-	957
Stage 1	-	-	-	-	1011
Stage 2	-	-	-	-	989
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1613	-	953
Mov Cap-2 Maneuver	-	-	-	-	889
Stage 1	-	-	-	-	1011
Stage 2	-	-	-	-	985

Approach	EB	WB	NB
HCM Control Delay, s	0	1.5	8.9
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	944	-	-	1613	-
HCM Lane V/C Ratio	0.023	-	-	0.004	-
HCM Control Delay (s)	8.9	-	-	7.2	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection												
Int Delay, s/veh	4.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	1	26	0	8	17	1	0	0	17	5	0	12
Future Vol, veh/h	1	26	0	8	17	1	0	0	17	5	0	12
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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	1	28	0	9	18	1	0	0	18	5	0	13

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	19	0	0	28	0	0	73	67	28	76	67	19
Stage 1	-	-	-	-	-	-	30	30	-	37	37	-
Stage 2	-	-	-	-	-	-	43	37	-	39	30	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1611	-	-	1599	-	-	923	828	1053	919	828	1065
Stage 1	-	-	-	-	-	-	992	874	-	984	868	-
Stage 2	-	-	-	-	-	-	976	868	-	981	874	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1611	-	-	1599	-	-	906	822	1053	898	822	1065
Mov Cap-2 Maneuver	-	-	-	-	-	-	906	822	-	898	822	-
Stage 1	-	-	-	-	-	-	991	873	-	983	863	-
Stage 2	-	-	-	-	-	-	958	863	-	963	873	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.3			2.2			8.5			8.6		
HCM LOS							A			A		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	1053	1611	-	-	1599	-	-	1010
HCM Lane V/C Ratio	0.018	0.001	-	-	0.005	-	-	0.018
HCM Control Delay (s)	8.5	7.2	0	-	7.3	0	-	8.6
HCM Lane LOS	A	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.1

Intersection: 3: Redlands Ave & Nance St

Movement	EB	EB	NB	SB
Directions Served	L	TR	L	TR
Maximum Queue (ft)	38	36	24	4
Average Queue (ft)	12	12	2	0
95th Queue (ft)	37	37	15	3
Link Distance (ft)		848		583
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	110		305	
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 101: West Project Driveway & Nance St

Movement	WB	NB
Directions Served	LT	LR
Maximum Queue (ft)	6	31
Average Queue (ft)	0	5
95th Queue (ft)	4	25
Link Distance (ft)	390	537
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 102: East Project Driveway & Nance St

Movement	WB	NB	SB
Directions Served	LTR	LTR	LTR
Maximum Queue (ft)	6	31	31
Average Queue (ft)	0	7	5
95th Queue (ft)	6	28	23
Link Distance (ft)	848	520	451
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Zone Summary

Zone wide Queuing Penalty: 0
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Intersection: 3: Redlands Ave & Nance St

Movement	EB	EB	NB
Directions Served	L	TR	L
Maximum Queue (ft)	48	31	30
Average Queue (ft)	23	13	4
95th Queue (ft)	48	37	20
Link Distance (ft)	848		
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)	110	305	
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 101: West Project Driveway & Nance St

Movement	NB
Directions Served	LR
Maximum Queue (ft)	32
Average Queue (ft)	14
95th Queue (ft)	39
Link Distance (ft)	537
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 102: East Project Driveway & Nance St

Movement	NB	SB
Directions Served	LTR	LTR
Maximum Queue (ft)	31	31
Average Queue (ft)	14	12
95th Queue (ft)	39	36
Link Distance (ft)	520	451
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Zone Summary

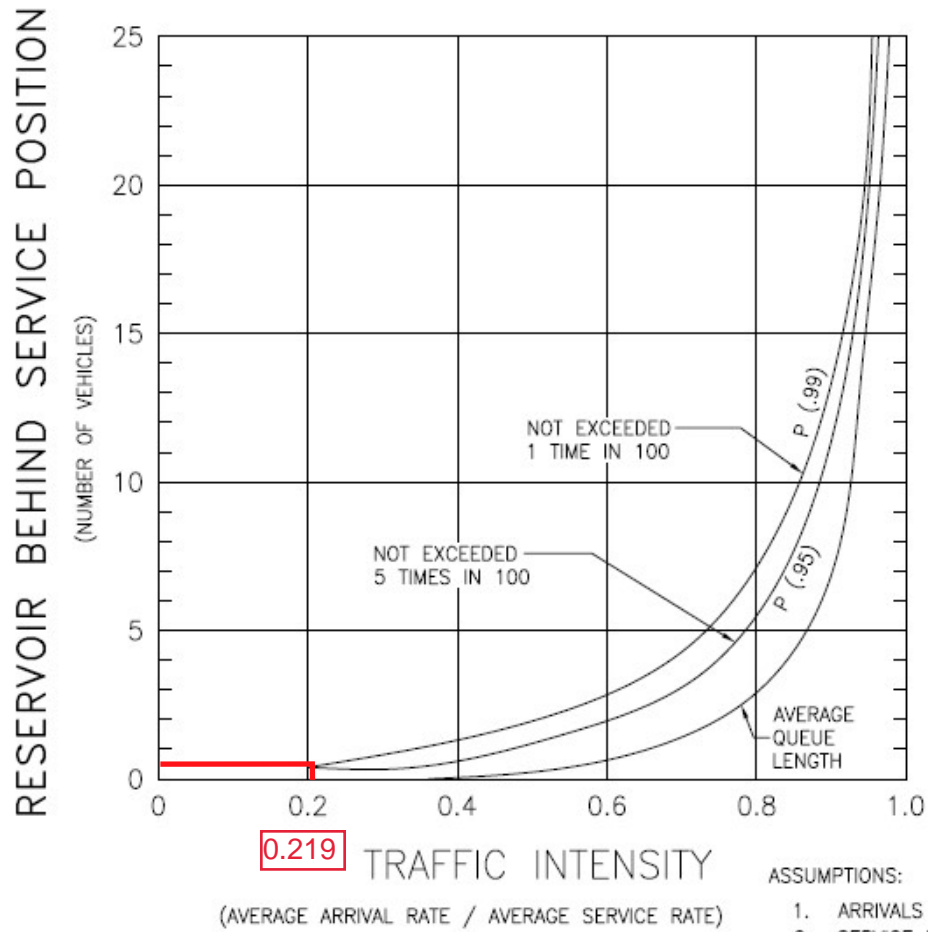
Zone wide Queuing Penalty: 0

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# **Appendix D**

## Crommelin Analysis Worksheet

## RESERVOIR NEEDS VS TRAFFIC INTENSITY



~1 truck

0.219

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# **Appendix E**

## Cumulative Project Data

**Table 1  
Cumulative Development Project Trip Generation Summary**

ID	Land Use	ITE Code	Size/Unit	Daily	AM Peak Hour			PM Peak Hour			
					In	Out	Total	In	Out	Total	
<i>Trip Rates<sup>1</sup></i>											
	Truck Terminal <sup>2</sup>	30	per acre	81.9	2.98	4.30	7.28	2.82	3.73	6.55	
	General Light Industrial	110	per TSF	4.87	0.65	0.09	0.74	0.09	0.56	0.65	
	Manufacturing	140	per TSF	4.75	0.52	0.16	0.68	0.23	0.51	0.74	
	Warehousing	150	per TSF	1.71	0.13	0.04	0.17	0.05	0.13	0.18	
	High-Cube Transload and Short-Term Storage Warehouse	154	per TSF	1.40	0.06	0.02	0.08	0.03	0.07	0.10	
	Single-Family Detached Housing	210	per DU	9.43	0.18	0.52	0.70	0.59	0.35	0.94	
	Multifamily Housing (Low-Rise)	220	per DU	6.74	0.10	0.30	0.40	0.32	0.19	0.51	
	Nursery (Garden Center)	817	per TSF	68.10	1.22	1.22	2.43	3.47	3.47	6.94	
	Shopping Center	820	per TSF	37.01	0.52	0.32	0.84	1.63	1.77	3.40	
	Automated Car Wash <sup>3</sup>	948	per TSF	142.00	3.55	3.55	7.10	7.10	7.10	14.20	
<i>Trip Generation</i>											
P1	Burge Indus 1	110	18.000	TSF	88	12	2	13	2	10	12
				Passenger Vehicles (46.0%/1.0 PCE)	40	5	1	6	1	5	5
				2-Axle Trucks (6.1%/1.5 PCE)	8	1	0	1	0	1	1
				3-Axle Trucks (13.9%/2.0 PCE)	24	3	0	4	0	3	3
				4+-Axle Trucks (34.0%/3.0 PCE)	89	12	2	14	2	10	12
				<b>Burge Indus 1 (PCE)</b>	<b>162</b>	<b>22</b>	<b>3</b>	<b>25</b>	<b>3</b>	<b>19</b>	<b>22</b>
P2	Burge Indus 2	110	43.354	TSF	211	28	4	32	4	24	28
				Passenger Vehicles (46.0%/1.0 PCE)	97	13	2	15	2	11	13
				2-Axle Trucks (6.1%/1.5 PCE)	19	3	0	3	0	2	3
				3-Axle Trucks (13.9%/2.0 PCE)	59	8	1	9	1	7	8
				4+-Axle Trucks (34.0%/3.0 PCE)	215	29	4	33	4	25	29
				<b>Burge Indus 2 (PCE)</b>	<b>390</b>	<b>52</b>	<b>7</b>	<b>59</b>	<b>7</b>	<b>45</b>	<b>52</b>
P3	Duke @ Perry	150	144.000	TSF	246	19	6	24	7	19	26
				Passenger Vehicles (72.5%/1.0 PCE)	179	14	4	18	5	14	19
				2-Axle Trucks (4.6%/1.5 PCE)	17	1	0	2	1	1	2
				3-Axle Trucks (5.7%/2.0 PCE)	28	2	1	3	1	2	3
				4+-Axle Trucks (17.2%/3.0 PCE)	127	10	3	13	4	10	13
				<b>Duke @ Perry (PCE)</b>	<b>351</b>	<b>27</b>	<b>8</b>	<b>35</b>	<b>10</b>	<b>27</b>	<b>37</b>
P4	IDI @ Ramona	154	426.000	TSF	596	26	8	34	12	31	43
				Passenger Vehicles (72.5%/1.0 PCE)	432	19	6	25	9	22	31
				2-Axle Trucks (4.6%/1.5 PCE)	41	2	1	2	1	2	3
				3-Axle Trucks (5.7%/2.0 PCE)	68	3	1	4	1	3	5
				4+-Axle Trucks (17.2%/3.0 PCE)	308	14	4	18	6	16	22
				<b>IDI @ Ramona (PCE)</b>	<b>849</b>	<b>37</b>	<b>11</b>	<b>49</b>	<b>17</b>	<b>44</b>	<b>61</b>
P5	Pulliam Indus	110	16.000	TSF	78	10	1	12	1	9	10
				Passenger Vehicles (46.0%/1.0 PCE)	36	5	1	5	1	4	5
				2-Axle Trucks (6.1%/1.5 PCE)	7	1	0	1	0	1	1
				3-Axle Trucks (13.9%/2.0 PCE)	22	3	0	3	0	2	3
				4+-Axle Trucks (34.0%/3.0 PCE)	79	11	1	12	1	9	11
				<b>Pulliam Indus (PCE)</b>	<b>144</b>	<b>19</b>	<b>3</b>	<b>22</b>	<b>3</b>	<b>17</b>	<b>19</b>
P6	Rider 2 & 4	154	1,373.000	TSF	1,922	85	25	110	38	99	137
				Passenger Vehicles (72.5%/1.0 PCE)	1,394	61	18	80	28	72	100
				2-Axle Trucks (4.6%/1.5 PCE)	133	6	2	8	3	7	9
				3-Axle Trucks (5.7%/2.0 PCE)	219	10	3	13	4	11	16
				4+-Axle Trucks (17.2%/3.0 PCE)	992	44	13	57	20	51	71
				<b>Rider 2 &amp; 4 (PCE)</b>	<b>2,737</b>	<b>120</b>	<b>36</b>	<b>156</b>	<b>55</b>	<b>141</b>	<b>196</b>
P7	Walnut Indu	154	205.000	TSF	287	13	4	16	6	15	21
				Passenger Vehicles (72.5%/1.0 PCE)	208	9	3	12	4	11	15
				2-Axle Trucks (4.6%/1.5 PCE)	20	1	0	1	0	1	1
				3-Axle Trucks (5.7%/2.0 PCE)	33	1	0	2	1	2	2
				4+-Axle Trucks (17.2%/3.0 PCE)	148	7	2	8	3	8	11
				<b>Walnut Indu (PCE)</b>	<b>409</b>	<b>18</b>	<b>5</b>	<b>23</b>	<b>8</b>	<b>21</b>	<b>29</b>
P8	Wilson Ind	154	303.000	TSF	424	19	6	24	8	22	30
				Passenger Vehicles (72.5%/1.0 PCE)	308	14	4	18	6	16	22
				2-Axle Trucks (4.6%/1.5 PCE)	29	1	0	2	1	2	2
				3-Axle Trucks (5.7%/2.0 PCE)	48	2	1	3	1	2	3
				4+-Axle Trucks (17.2%/3.0 PCE)	219	10	3	13	4	11	16
				<b>Wilson Ind (PCE)</b>	<b>604</b>	<b>27</b>	<b>8</b>	<b>35</b>	<b>12</b>	<b>31</b>	<b>43</b>
P9	First Indus (Goodwin)	154	338.000	TSF	473	21	6	27	9	24	34
				Passenger Vehicles (72.5%/1.0 PCE)	343	15	5	20	7	18	25
				2-Axle Trucks (4.6%/1.5 PCE)	33	1	0	2	1	2	2
				3-Axle Trucks (5.7%/2.0 PCE)	54	2	1	3	1	3	4
				4+-Axle Trucks (17.2%/3.0 PCE)	244	11	3	14	5	13	17
				<b>First Indus (Goodwin) (PCE)</b>	<b>674</b>	<b>30</b>	<b>9</b>	<b>39</b>	<b>13</b>	<b>35</b>	<b>48</b>
P10	Canyon Steel (CS)	110	25.000	TSF	122	16	2	19	2	14	16

				Passenger Vehicles (46.0%/1.0 PCE)	56	7	1	9	1	6	7
				2-Axle Trucks (6.1%/1.5 PCE)	11	1	0	2	0	1	1
				3-Axle Trucks (13.9%/2.0 PCE)	34	5	1	5	1	4	5
				4+-Axle Trucks (34.0%/3.0 PCE)	124	17	2	19	2	14	17
				<b>Canyon Steel (CS) (PCE)</b>	<b>225</b>	<b>30</b>	<b>4</b>	<b>34</b>	<b>4</b>	<b>26</b>	<b>30</b>
P11	Truck Terminal	30	9.5 acres		778	28	41	69	27	35	62
				Passenger Vehicles (46.0%/1.0 PCE)	358	13	19	32	12	16	29
				2-Axle Trucks (6.1%/1.5 PCE)	71	3	4	6	2	3	6
				3-Axle Trucks (13.9%/2.0 PCE)	216	8	11	19	7	10	17
				4+-Axle Trucks (34.0%/3.0 PCE)	794	29	42	71	27	36	63
				<b>Truck Terminal (PCE)</b>	<b>1,439</b>	<b>52</b>	<b>75</b>	<b>128</b>	<b>49</b>	<b>66</b>	<b>115</b>
P12	Wilson Ind 1	154	248.000	TSF	347	15	5	20	7	18	25
				Passenger Vehicles (72.5%/1.0 PCE)	252	11	3	14	5	13	18
				2-Axle Trucks (4.6%/1.5 PCE)	24	1	0	1	0	1	2
				3-Axle Trucks (5.7%/2.0 PCE)	40	2	1	2	1	2	3
				4+-Axle Trucks (17.2%/3.0 PCE)	179	8	2	10	4	9	13
				<b>Wilson Ind 1 (PCE)</b>	<b>494</b>	<b>22</b>	<b>6</b>	<b>28</b>	<b>10</b>	<b>25</b>	<b>35</b>
P13	Wilson Ind 2	154	155.000	TSF	217	10	3	12	4	11	16
				Passenger Vehicles (72.5%/1.0 PCE)	157	7	2	9	3	8	11
				2-Axle Trucks (4.6%/1.5 PCE)	15	1	0	1	0	1	1
				3-Axle Trucks (5.7%/2.0 PCE)	25	1	0	1	0	1	2
				4+-Axle Trucks (17.2%/3.0 PCE)	112	5	1	6	2	6	8
				<b>Wilson Ind 2 (PCE)</b>	<b>309</b>	<b>14</b>	<b>4</b>	<b>18</b>	<b>6</b>	<b>16</b>	<b>22</b>
P14	Oleander Cultivation	817	12.985	TSF	884	16	16	32	45	45	90
P15	Integra - Expansion (IT-E)	154	273.000	TSF	382	17	5	22	8	20	27
				Passenger Vehicles (72.5%/1.0 PCE)	277	12	4	16	6	14	20
				2-Axle Trucks (4.6%/1.5 PCE)	26	1	0	2	1	1	2
				3-Axle Trucks (5.7%/2.0 PCE)	44	2	1	2	1	2	3
				4+-Axle Trucks (17.2%/3.0 PCE)	197	9	3	11	4	10	14
				<b>Integra - Expansion (IT-E) (PCE)</b>	<b>544</b>	<b>24</b>	<b>7</b>	<b>31</b>	<b>11</b>	<b>28</b>	<b>39</b>
P16	Holistic Inc. - Marijuana	140	5.000	TSF	24	3	1	4	2	3	5
P17	Marijuana Manufacturing (MM)	140	1.000	TSF	5	1	1	2	1	1	2
P18	Harley Knox 25K	150	12.985	TSF	22	2	1	2	1	2	2
				Passenger Vehicles (72.5%/1.0 PCE)	16	1	0	2	0	1	2
				2-Axle Trucks (4.6%/1.5 PCE)	2	0	0	0	0	0	0
				3-Axle Trucks (5.7%/2.0 PCE)	3	0	0	0	0	0	0
				4+-Axle Trucks (17.2%/3.0 PCE)	11	1	0	1	0	1	1
				<b>Harley Knox 25K (PCE)</b>	<b>32</b>	<b>2</b>	<b>1</b>	<b>3</b>	<b>1</b>	<b>2</b>	<b>3</b>
P19	Patriot Ind Perris and Morgan	150	286.892	TSF	499	38	12	51	16	40	56
				Passenger Vehicles (72.5%/1.0 PCE)	362	27	8	35	11	29	40
				2-Axle Trucks (4.6%/1.5 PCE)	34	3	1	4	1	3	4
				3-Axle Trucks (5.7%/2.0 PCE)	57	4	2	6	2	4	6
				4+-Axle Trucks (17.2%/3.0 PCE)	258	21	6	27	9	21	30
				<b>Patriot Ind Perris and Morgan (PCE)</b>	<b>711</b>	<b>55</b>	<b>17</b>	<b>72</b>	<b>23</b>	<b>57</b>	<b>80</b>
P20	Park Ind	150	31.000	TSF	53	4	1	5	2	4	6
				Passenger Vehicles (72.5%/1.0 PCE)	38	3	1	4	1	3	4
				2-Axle Trucks (4.6%/1.5 PCE)	4	0	0	0	0	0	0
				3-Axle Trucks (5.7%/2.0 PCE)	6	0	0	1	0	0	1
				4+-Axle Trucks (17.2%/3.0 PCE)	27	2	1	3	1	2	3
				<b>Park Ind (PCE)</b>	<b>75</b>	<b>6</b>	<b>2</b>	<b>8</b>	<b>2</b>	<b>6</b>	<b>8</b>
P21	First Harley Knox Ind	154	154.25	TSF	264	20	6	26	8	20	28
				Passenger Vehicles (72.5%/1.0 PCE)	191	15	4	19	6	14	20
				2-Axle Trucks (4.6%/1.5 PCE)	18	1	0	2	1	1	2
				3-Axle Trucks (5.7%/2.0 PCE)	30	2	1	3	1	2	3
				4+-Axle Trucks (17.2%/3.0 PCE)	136	10	3	14	4	10	14
				<b>First Harley Knox Ind (PCE)</b>	<b>376</b>	<b>29</b>	<b>9</b>	<b>37</b>	<b>11</b>	<b>28</b>	<b>40</b>
P22	Kwasizur Indu	150	138	TSF	236	18	5	23	7	18	25
				Passenger Vehicles (72.5%/1.0 PCE)	171	13	4	17	5	13	18
				2-Axle Trucks (4.6%/1.5 PCE)	16	1	0	2	0	1	2
				3-Axle Trucks (5.7%/2.0 PCE)	27	2	1	3	1	2	3
				4+-Axle Trucks (17.2%/3.0 PCE)	122	9	3	12	4	9	13
				<b>Kwasizur Indu (PCE)</b>	<b>336</b>	<b>26</b>	<b>8</b>	<b>33</b>	<b>10</b>	<b>25</b>	<b>35</b>
P23	Calvio Ind	150	43	TSF	74	6	2	7	2	6	8
				Passenger Vehicles (72.5%/1.0 PCE)	53	4	1	5	2	4	6
				2-Axle Trucks (4.6%/1.5 PCE)	5	0	0	1	0	0	1
				3-Axle Trucks (5.7%/2.0 PCE)	8	1	0	1	0	1	1
				4+-Axle Trucks (17.2%/3.0 PCE)	38	3	1	4	1	3	4
				<b>Calvio Ind (PCE)</b>	<b>105</b>	<b>8</b>	<b>2</b>	<b>10</b>	<b>3</b>	<b>8</b>	<b>11</b>
P24	Expressway Industrial	154	347.000	TSF	486	21	6	28	10	25	35
				Passenger Vehicles (72.5%/1.0 PCE)	352	15	5	20	7	18	25
				2-Axle Trucks (4.6%/1.5 PCE)	34	1	0	2	1	2	2

			3-Axle Trucks (5.7%/2.0 PCE)	55	2	1	3	1	3	4
			4+-Axle Trucks (17.2%/3.0 PCE)	251	11	3	14	5	13	18
			<b>Expressway Industrial (PCE)</b>	<b>692</b>	<b>30</b>	<b>9</b>	<b>40</b>	<b>14</b>	<b>36</b>	<b>49</b>
P25	Natwar Ind	154	420.000   TSF	588	26	8	34	12	30	42
			Passenger Vehicles (72.5%/1.0 PCE)	426	19	6	24	9	22	30
			2-Axle Trucks (4.6%/1.5 PCE)	41	2	1	2	1	2	3
			3-Axle Trucks (5.7%/2.0 PCE)	67	3	1	4	1	3	5
			4+-Axle Trucks (17.2%/3.0 PCE)	303	13	4	17	6	16	22
			<b>Natwar Ind (PCE)</b>	<b>837</b>	<b>37</b>	<b>11</b>	<b>48</b>	<b>17</b>	<b>43</b>	<b>60</b>
P26	Serrao Ind	154	3.5   TSF	6	0	0	1	0	0	1
			Passenger Vehicles (72.5%/1.0 PCE)	4	0	0	0	0	0	0
			2-Axle Trucks (4.6%/1.5 PCE)	0	0	0	0	0	0	0
			3-Axle Trucks (5.7%/2.0 PCE)	1	0	0	0	0	0	0
			4+-Axle Trucks (17.2%/3.0 PCE)	3	0	0	0	0	0	0
			<b>Serrao Ind (PCE)</b>	<b>9</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>1</b>
P27	Lakecreek East	154	256   TSF	438	34	10	44	13	33	46
			Passenger Vehicles (72.5%/1.0 PCE)	317	24	7	32	9	24	33
			2-Axle Trucks (4.6%/1.5 PCE)	30	2	1	3	1	2	3
			3-Axle Trucks (5.7%/2.0 PCE)	50	4	1	5	1	4	5
			4+-Axle Trucks (17.2%/3.0 PCE)	226	17	5	22	7	17	24
			<b>Lakecreek East (PCE)</b>	<b>623</b>	<b>48</b>	<b>14</b>	<b>62</b>	<b>18</b>	<b>47</b>	<b>66</b>
P28	Lakecreek West	154	300   TSF	513	39	12	51	15	39	54
			Passenger Vehicles (72.5%/1.0 PCE)	372	28	9	37	11	28	39
			2-Axle Trucks (4.6%/1.5 PCE)	35	3	1	4	1	3	4
			3-Axle Trucks (5.7%/2.0 PCE)	58	4	1	6	2	4	6
			4+-Axle Trucks (17.2%/3.0 PCE)	265	20	6	26	8	20	28
			<b>Lakecreek West (PCE)</b>	<b>731</b>	<b>56</b>	<b>17</b>	<b>73</b>	<b>22</b>	<b>55</b>	<b>77</b>
P29	Chartwell Ind	154	141   TSF	241	18	6	24	7	18	25
			Passenger Vehicles (72.5%/1.0 PCE)	175	13	4	17	5	13	18
			2-Axle Trucks (4.6%/1.5 PCE)	17	1	0	2	0	1	2
			3-Axle Trucks (5.7%/2.0 PCE)	27	2	1	3	1	2	3
			4+-Axle Trucks (17.2%/3.0 PCE)	124	10	3	12	4	9	13
			<b>Chartwell Ind (PCE)</b>	<b>343</b>	<b>26</b>	<b>8</b>	<b>34</b>	<b>10</b>	<b>26</b>	<b>36</b>
P30	SE corner of Perris & Harley Knox	150	345   TSF	590	45	13	59	17	45	62
			Passenger Vehicles (72.5%/1.0 PCE)	428	33	10	43	13	32	45
			2-Axle Trucks (4.6%/1.5 PCE)	41	3	1	4	1	3	4
			3-Axle Trucks (5.7%/2.0 PCE)	67	5	2	7	2	5	7
			4+-Axle Trucks (17.2%/3.0 PCE)	304	23	7	30	9	23	32
			<b>SE corner of Perris &amp; Harley Knox (PCE)</b>	<b>840</b>	<b>64</b>	<b>19</b>	<b>84</b>	<b>25</b>	<b>64</b>	<b>88</b>
P31	Duke @ Patterson and Nance	150	580   TSF	992	76	23	99	29	75	104
			Passenger Vehicles (72.5%/1.0 PCE)	719	55	16	71	21	54	76
			2-Axle Trucks (4.6%/1.5 PCE)	68	5	2	7	2	5	7
			3-Axle Trucks (5.7%/2.0 PCE)	113	9	3	11	3	9	12
			4+-Axle Trucks (17.2%/3.0 PCE)	512	39	12	51	15	39	54
			<b>Duke @ Patterson and Nance (PCE)</b>	<b>1,412</b>	<b>108</b>	<b>32</b>	<b>140</b>	<b>42</b>	<b>107</b>	<b>149</b>
P32	Nance Ind	150	156.78   TSF	272	19	6	25	9	19	28
			<b>Nance Ind (PCE)</b>	<b>420</b>	<b>21</b>	<b>8</b>	<b>29</b>	<b>13</b>	<b>22</b>	<b>35</b>
P33	Lakecreek at Harley Knox	154	143   TSF	245	19	6	24	7	19	26
			Passenger Vehicles (72.5%/1.0 PCE)	177	14	4	18	5	13	19
			2-Axle Trucks (4.6%/1.5 PCE)	17	1	0	2	0	1	2
			3-Axle Trucks (5.7%/2.0 PCE)	28	2	1	3	1	2	3
			4+-Axle Trucks (17.2%/3.0 PCE)	126	10	3	13	4	10	13
			<b>Lakecreek at Harley Knox (PCE)</b>	<b>348</b>	<b>27</b>	<b>8</b>	<b>35</b>	<b>10</b>	<b>26</b>	<b>37</b>
P34	McKay Indus	150	232   TSF	397	30	9	39	12	30	42
			Passenger Vehicles (72.5%/1.0 PCE)	288	22	7	29	8	22	30
			2-Axle Trucks (4.6%/1.5 PCE)	27	2	1	3	1	2	3
			3-Axle Trucks (5.7%/2.0 PCE)	45	3	1	4	1	3	5
			4+-Axle Trucks (17.2%/3.0 PCE)	205	16	5	20	6	16	22
			<b>McKay Indus (PCE)</b>	<b>565</b>	<b>43</b>	<b>13</b>	<b>56</b>	<b>17</b>	<b>43</b>	<b>59</b>
P35	Ramona Gateway Industrial	150	850   TSF	1,454	111	33	145	43	110	153
			Passenger Vehicles (72.5%/1.0 PCE)	1,054	81	24	105	31	80	111
			2-Axle Trucks (4.6%/1.5 PCE)	100	8	2	10	3	8	11
			3-Axle Trucks (5.7%/2.0 PCE)	166	13	4	16	5	13	17
			4+-Axle Trucks (17.2%/3.0 PCE)	750	57	17	75	22	57	79
			<b>Ramona Gateway Industrial (PCE)</b>	<b>2,070</b>	<b>158</b>	<b>47</b>	<b>206</b>	<b>61</b>	<b>157</b>	<b>218</b>
P36	Ramona Gateway Commercial	820	35.000   TSF	1,295	18	11	29	57	62	119

P37	OLC 3	150	879	TSF	1,503	115	34	149	44	114	158
			Passenger Vehicles (72.5%/1.0 PCE)		1,090	83	25	108	32	83	115
			2-Axle Trucks (4.6%/1.5 PCE)		104	8	2	10	3	8	11
			3-Axle Trucks (5.7%/2.0 PCE)		171	13	4	17	5	13	18
			4+-Axle Trucks (17.2%/3.0 PCE)		776	59	18	77	23	59	82
			<b>OLC 3 (PCE)</b>		<b>2,140</b>	<b>164</b>	<b>49</b>	<b>213</b>	<b>63</b>	<b>162</b>	<b>225</b>
P38	RG Indus	150	263	TSF	450	34	10	45	13	34	47
			Passenger Vehicles (72.5%/1.0 PCE)		326	25	7	32	10	25	34
			2-Axle Trucks (4.6%/1.5 PCE)		31	2	1	3	1	2	3
			3-Axle Trucks (5.7%/2.0 PCE)		51	4	1	5	2	4	5
			4+-Axle Trucks (17.2%/3.0 PCE)		232	18	5	23	7	18	24
			<b>RG Indus (PCE)</b>		<b>640</b>	<b>49</b>	<b>15</b>	<b>64</b>	<b>19</b>	<b>49</b>	<b>67</b>
P39	Seefried Indus	150	165	TSF	282	22	6	28	8	21	30
			Passenger Vehicles (72.5%/1.0 PCE)		205	16	5	20	6	16	22
			2-Axle Trucks (4.6%/1.5 PCE)		19	1	0	2	1	1	2
			3-Axle Trucks (5.7%/2.0 PCE)		32	2	1	3	1	2	3
			4+-Axle Trucks (17.2%/3.0 PCE)		146	11	3	14	4	11	15
			<b>Seefried Indus (PCE)</b>		<b>402</b>	<b>31</b>	<b>9</b>	<b>40</b>	<b>12</b>	<b>30</b>	<b>42</b>
P40	Brew Indus	150	62	TSF	106	8	2	11	3	8	11
			Passenger Vehicles (72.5%/1.0 PCE)		77	6	2	8	2	6	8
			2-Axle Trucks (4.6%/1.5 PCE)		7	1	0	1	0	1	1
			3-Axle Trucks (5.7%/2.0 PCE)		12	1	0	1	0	1	1
			4+-Axle Trucks (17.2%/3.0 PCE)		55	4	1	5	2	4	6
			<b>Brew Indus (PCE)</b>		<b>151</b>	<b>12</b>	<b>3</b>	<b>15</b>	<b>4</b>	<b>11</b>	<b>16</b>
P41	Dedeaux Markham	150	88	TSF	150	12	3	15	4	11	16
			Passenger Vehicles (72.5%/1.0 PCE)		109	8	2	11	3	8	11
			2-Axle Trucks (4.6%/1.5 PCE)		10	1	0	1	0	1	1
			3-Axle Trucks (5.7%/2.0 PCE)		17	1	0	2	1	1	2
			4+-Axle Trucks (17.2%/3.0 PCE)		78	6	2	8	2	6	8
			<b>Dedeaux Markham (PCE)</b>		<b>214</b>	<b>16</b>	<b>5</b>	<b>21</b>	<b>6</b>	<b>16</b>	<b>23</b>
P42	March Plaza	820	47.253	TSF	1,749	25	15	40	77	84	161
P43	Cali Express Carwash	948	5.600	TSF	795	20	20	40	40	40	80
P44	Tommy's carwash	948	8.5	TSF	1,207	30	30	60	60	60	121
P45	Pacific Ave	210	131	DU	1,235	24	68	92	78	46	123
P46	Stratford Ranch	210	270	DU	2,546	49	140	189	160	94	254
P47	Barrett Apt	221	228	DU	1,537	22	69	91	73	43	116
P48	DR Horton Citrus and Evans	210	161	DU	1,518	29	83	113	95	56	151
P49	DR Horton Citrus and Dunlap	210	122	DU	1,150	22	63	85	72	42	115
P50	DR Horton Nuevo and Evans	210	75	DU	707	14	39	53	44	26	71
P51	Sterling Villa	220	429	DU	2,891	41	130	172	138	81	219
P52	Nova Homes	210	76	DU	717	14	39	53	45	26	71
P53	Citrus Court	210	111	DU	1,047	20	57	78	66	39	104
P54	John Abel Stratford Ranch	210	90	DU	849	16	47	63	53	31	85
P55	John Abel Stratford Ranch	210	197	DU	1,858	36	102	138	117	69	185
P56	May Ranch Multi-Family	211	308	DU	2,076	30	94	123	99	58	157
			<b>Subtotal City of Perris</b>		<b>40,409</b>	<b>1,479</b>	<b>1,362</b>	<b>2,841</b>	<b>1,747</b>	<b>1,992</b>	<b>3,740</b>
			<b>Subtotal City of Perris (PCE)</b>		<b>47,496</b>	<b>1,940</b>	<b>1,519</b>	<b>3,460</b>	<b>1,935</b>	<b>2,467</b>	<b>4,402</b>
MV1	PEN19-0188 PI Properties No. 67 LLC	210	66	DU	622	12	34	46	39	23	62
MV2	PEN18-0042 Ada Deturcios	210	2	DU	19	0	1	1	1	1	2
MV3	PEN21-0021/0215/0216 Perris at Pentecostal	220	426	DU	2,871	41	130	170	137	80	217
MV4	PEN21-0179/0180/0188/0189 TTM 38242	220	52	DU	350	5	16	21	17	10	27
			<b>Subtotal City of Moreno Valley</b>		<b>3,863</b>	<b>58</b>	<b>181</b>	<b>239</b>	<b>194</b>	<b>114</b>	<b>308</b>
R1	TTM 33978	210	139	DU	1,311	25	72	97	82	48	131
R2	Nuevo Distribution Center	154	1,586.645	TSF	2,221	98	29	127	44	114	159
			Passenger Vehicles (72.5%/1.0 PCE)		1,610	71	21	92	32	83	115
			2-Axle Trucks (4.6%/1.5 PCE)		153	7	2	9	3	8	11
			3-Axle Trucks (5.7%/2.0 PCE)		253	11	3	14	5	13	18
			4+-Axle Trucks (17.2%/3.0 PCE)		1,146	50	15	65	23	59	82
			<b>Nuevo Distribution Center (PCE)</b>		<b>3,163</b>	<b>139</b>	<b>42</b>	<b>181</b>	<b>63</b>	<b>163</b>	<b>226</b>
R3	Majestic Freeway Business Center SP <sup>4</sup>	150	816.142	TSF	1,396	107	32	139	41	106	147
		154	2,264.920	TSF	3,171	140	42	181	63	163	226
			Passenger Vehicles (72.5%/1.0 PCE)		3,311	179	53	232	76	195	271
			2-Axle Trucks (4.6%/1.5 PCE)		315	17	5	22	7	19	26
			3-Axle Trucks (5.7%/2.0 PCE)		521	28	8	36	12	31	43
			4+-Axle Trucks (17.2%/3.0 PCE)		2,356	127	38	165	54	139	193

<b>Majestic Freeway Business Center SP <sup>4</sup> (PCE)</b>	<b>6,503</b>	<b>351</b>	<b>105</b>	<b>456</b>	<b>149</b>	<b>383</b>	<b>532</b>
<b>Subtotal County of Riverside</b>	<b>8,099</b>	<b>369</b>	<b>175</b>	<b>544</b>	<b>231</b>	<b>431</b>	<b>663</b>
<b>Subtotal County of Riverside (PCE)</b>	<b>12,372</b>	<b>622</b>	<b>250</b>	<b>872</b>	<b>336</b>	<b>700</b>	<b>1,035</b>
<b>Total</b>	<b>52,371</b>	<b>1,906</b>	<b>1,717</b>	<b>3,624</b>	<b>2,173</b>	<b>2,538</b>	<b>4,710</b>
<b>Total (PCE)</b>	<b>63,731</b>	<b>2,621</b>	<b>1,950</b>	<b>4,571</b>	<b>2,464</b>	<b>3,280</b>	<b>5,745</b>

**Notes:** TSF = Thousand Square Feet; PCE = Passenger Car Equivalent

<sup>1</sup>Trip rates from the Institute of Transportation Engineers (ITE), *Trip Generation, 11th Edition, 2021*, unless otherwise noted.

<sup>2</sup>Trip rate from ITE 11th Edition unavailable for known project unit (acres); trip rate used from ITE, *Trip Generation, 9th Edition, 2012*.

<sup>3</sup>Trip rates from ITE 11th Edition unavailable for the daily and AM peak period; trip rates derived from the available PM peak period rate assuming the PM peak period represents 10% of daily trips and 200% of AM peak period trips.

<sup>4</sup>Total square footage indicated as 3,721,062 per the Majestic Freeway Business Center Site Plan (attached in this Appendix). Construction of Buildings 5 and 10 and are assumed to be operational based on review of the site; therefore, 640,000 square feet were removed from the total for the purposes of this analysis.

PVCC SP - Projects Completed								
	Industrial Projects	Sq. Ft.	Acres	Location	Entitlement Status	Status	Case Number(s)	Planner
completed	AAA	2,000		10 SE Corner of Harley Knox & Webster	Entitled 2018.8.7	Completed 2021	DRP 16-00012	NP
	BI - Accent Décor	173,000	9	Btw Harley Knox & Nance W of Webster	Entitled 2008.11.25	Completed (April 2018)	DRP 07-09-0018	NP
	Circle Industrial - Tech Style	600,000	31	NW corner of Markham & Redlands	Entitled 2013.11.12	Completed (March 2017)	DRP 13-02-00005	NP
completed	Circle Industrial - Tech Style	211,000	10	NW corner of Nance & Redlands	Entitled 2016.10.17	Completed (2020)	DRP 17-00006	NP
	Duke 2 - Forever 21	669,000	31	SE corner of Indian & Markham	Entitled 2017.10.18	Completed (April 2019)	DRP 16-00008	NP
completed	Duke @ Perris Blvd - Amazon & Coronado	1,070,000	54	E of Perris Blvd btw Markham & Perry	Entitled 2017.8.28	Completed (August 2020)	DRP 17-00002 & CLUP	CP
completed	Duke @ Patterson - Amazon	811,000	37	SE corner of Patterson & Markham	Entitled 2019.1.19	Completed (2020)	DRP 17-00011	NP
	First Perry - Moore Group	240,000	11	SW corner of Perry & Redlands	Entitled 2021.7.11.15	Completed (December 2019)	DRP 16-00013	NP
	Gateway - Kenco (Reynolds)	400,000	22	SE corner of I-215 & Harley Knox	Entitled 2017.1.31	Completed (December 2018)	DRP 16-00003	NP
	General Mills	1,600,000	70	Btw Markham and Ramona W of Indian	Entitled 2009.12.8	Completed (November 2016)	DRP 07-07-0029	NP
	Home Depot (ID)	1,750,000	90	Btw Nance & Markham W of Perris Blvd	Entitled 2011.12.11	Completed (March 2014)	DRP 05-0113	NP
	Home Depot & Essendant	1,700,000	91	E of Redlands north of Perry	Entitled 2012.11.27	Completed (May 2017)	DRP 11-12-0004	NP
	Indian Palms	39,000	2	W of Indian Bw Rider and Walnut	Entitled 2016.1.11	Completed (2009)	DRP 05-0285	NP
	Integra - Amazon	864,000	43	Btw Markham & Nance E of Webster	Entitled 2015.1.27	Completed (December 2018)	DRP 14-02-0014	DS
	Lowe's	1,200,000	120	Btw Ramona & Morgan W of Indian	Entitled 2007.6.20	Completed (2001)	DRP 99-0167	NP
	Markham East - Geodis	460,000	22	NW corner of Redlands & Perry	Entitled 2007.6.20	Completed	DRP 05-0477	NP
completed	MI - Petropac Bicycle	170,000	9	NE corner of Indian & Markham	Entitled 2017.8.16	Completed (October 2021)	DRP 16-00015	NP
	OLC 1 - Ferguson & Penske	1,455,000	69	NW corner of Webster & Ramona	Entitled 2016.1.12	Completed (December 2018)	DRP 12-10-0005	NP
	OLC 2 - H&M	1,037,000	49	NE corner of Patterson & Markham	Entitled 2016.1.12	Completed (December 2019)	DRP 14-01-0015	NP
completed	Phelan Indus - HoesSpot	81,000	4	N. Side of Markham btw Webster & Perris	Entitled 2017.10.10	Complete (2020)	ADPR 16-05202	NP
completed	Rexis (Lockhart 1)	1,200,000	83	SW corner of Rider & Indian	Entitled 2011.7.12	Completed 2022	MMOD 18-05204; DRP NP	50% Public Art Fee
	Ridge - Hanes	1,900,000	90	NW corner of Perris & Morgan	Entitled 2007.3.27	Completed (2012)	DRP 05-0493	NP
completed	Rider 1 - LDC Logistics	350,000	16	SW corner of Rider & Redlands	Entitled 2007.6.20	Completed (2020)	DRP 06-0365	NP
completed	Rider 3 - Sketchers	640,000	30	NW corner of Rider & Redlands	Entitled 2009.3.11	Completed (2020)	DRP 06-0432	NP
	Ross (Oakmont 2)	700,000	37	SW corner of Perris & Markham	Entitled 2007.3.27	Completed (2013)	DRP 05-0192	NP
	Ross	1,600,000	83	SW corner of Indian & Morgan	Entitled date ?	Completed (2002)	?	NP
	Wayfar (Duke 1)	2,000,000	86	NE corner of Indian & Rider	Entitled 2008.8.25	Completed (October 2017)	DRP 06-0417	DS
	Western Brass (Multi-tenants)	494,000	24	NE corner of Harley Knox and Indian	Entitled 2004.7.3	Completed (2007)	DRP 03-0388	NP
completed	Western Ind (PODS)	250,000	25	E. Side of Western Way & City limits	Entitled 2019.12.18	Completed (April 2021)	DRP 19-00003	NP
	Whisper (IDS)	1,700,000	80	NE corner of Perris & Morgan	Entitled 2005.8.17	Completed (2006)	DRP 04-0464	NP
completed	WY (Yakima)	180,000	9	SW corner of Indian & Nance	Entitled 2016.7.20	Completed (December 2021)	DRP 16-00001, MM 2) KP	50% Public Art Fee
	<b>Total</b>	<b>25,446,000</b>	<b>1,357</b>					

PVCC SP - Projects that have started construction								
	Industrial Projects	Sq. Ft.	Acres	Location	Entitlement Status	Status	Case Number(s)	Planner
YES	Burge Indus 1	18,000	2.5	E of Perris Blvd. & N of Commerce Dr	Entitled 2018.8.7	Vertical Constructin	DRP 18-00001	CP
YES	Burge Indus 2	43,354	3	E of Perris Blvd. and S of Commerce Dr	Entitled 2018.8.7	Vertical Constructin	DRP 18-00007	CP
YES	Duke @ Perry	144,000	7	SE corner of Harley Knox and Barrett	Entitled 2013.11.6	Vertical Constructin	DRP 08-0011	CP
YES	ID1 @ Ramona (Grainier)	426,000	24	NW corner of Ramona and Indian	Entitled 2018.11.20	Vertical Constructin	DRP 18-00002	CP
No. far	ID1 - Site 3	2,300,000	217	NE corner of Redlands and Ellis	Entitled 2010.7.13	Grading	DRP 08-01-0007	DS/CP
YES	Pullman	16,000	0.5	1/5 L&R 812 on Commerce Dr. E. of Perris	Entitled 2016.6.20	Vertical Constructin	DRP 16-00078	CP
YES	Rider 2	805,567	39	NE corner of Rider & Redlands	Entitled 2021.7.27	Grading	DRP 19-00004	CP/RG
YES	Rider 4	548,019	33	SE corner of Redlands and Rider	Entitled 2021.7.27	Grading	DRP 19-00006	CP/RG
YES	Walnut Ind	265,000	21	N. Side of Walnut St. btw Indian & Barrett	Entitled 2020.1.30	M/R/G	DRP 19-00005	AG
YES	Wilson Ind (New Age)	303,000	16	E. Side of Wilson S. of Rider St	Entitled 2020.12.2	YCO 3/2022	DRP 19-00007	AG
YES	First Indus (Goodwin)	338,000	15	SE Corner of Rider and Redlands	Entitled 2021.7.7	Grading (April 2022)	DRP 19-00016	AG
	<b>Total</b>	<b>5,146,940</b>	<b>3080.46</b>					

PVCC SP - Projects in Plan Check								
	Industrial Projects	Sq. Ft.	Acres	Location	Entitlement Status	Status	Case Number(s)	Planner
not in	Canon Blvd (CS)	35,000	4	NW of Patterson and California	Entitled 2019.9.20	Plan Check	DRP 18-00006	NP
not in	Truck Terminal	0	9.5	N. side of Markham & E of Perris Blvd	Entitled 2021.10.26	In process	CUP 20-05100	CP/LG
not in	Wilson Ind	248,000	11	SW corner of Rider and Wilson	Entitled 2021.7.7 (8/26/20)	In process	DRP 20-00011	AG
not in	Wilson Ind 2	155,000	7	Wilson S. of Rider St	Entitled 2022.2.2 (2/10/21)	Entitled	DRP 21-00001	AG
	<b>Total</b>	<b>25,000</b>	<b>4</b>					

PVCC SP Projects Entitled								
	Industrial Projects	Sq. Ft.	Acres	Location	Entitlement Status	Status	Case Number(s)	Planner
not in	Oleander Cultivation	12,985	1	1261 Oleander Ave	Entitled 2021.3.3	In process	DRP 18-00012	AG
not in	Integra - Expansion (IT-E)	273,000	10	NE corner of Markham and Webster	Entitled 2019.4.17	Dormant	MMOD 17-05075	DS
not in	Hoistic Inc - Cultivation	5,000	0.1	872 Washington Ave	Entitled 2019.6.19	In process	DRP 18-00009	CP
not in	Marijuana Manufacturing (MM)	1,000	0.5	NW corner of Webster and Washington	Entitled 2019.4.4	In process	ADPR 18-05051; DPR	50% Public Art Fee
not in	Harley Knox 25k	25,000	1	S of Harley Knox btw Patterson & Nevada	Entitled 2021.4.21	In process	DRP 19-00005	NP
not in	Patriot Ind	286,000	15	SW Perris and Morgan	Entitled 2021.8.18 (9/29/20)	In process	DRP 20-00013	CP
not in	Park Ind	31,000	2	SE Patterson and Markham	Entitled 2020.2.5	Dormant	DRP 19-00002	NP
not in	First Harley Knox Ind	154,250	8.1	NW Harley Knox and Redlands	Entitled 2022.3.2	In process	DRP 20-00014	NP
not in	Kwasir Ind	188,000	9	SE corner of Indian and Harley Knox	Entitled 2022.3.2	In process	DRP 20-00019	AG
not in	Kawa Ind	43,000	3	NE corner of Perris and Rider	Entitled 2022.2.16	In process	DRP 21-00007	ME
	<b>Total</b>	<b>969,235</b>	<b>48.12</b>					

South Perris - Entitled Projects								
	Industrial Projects	Sq. Ft.	Acres	Location	Entitlement Status	Status	Case Number(s)	Planner
no	ID1 - Site 1	784,000	36	SW corner of Mountain & Goetz	Entitled 2018.7.23	Dormant	DRP 07-0130	DS
no	ID1 - Site 2	3,448,734	205	SW of Mapes and Goetz	Entitled 2010.7.13	Dormant	DRP 08-04-0006	DS
no	Malbert Cultivation	33,000	3	N. side of Malbert St & W. of Goetz Rd	Entitled 2021.3.17	In process	DRP 17-00008	CP
no	Marijuana Manufacturing	61,000	2	N. side of Malbert St & W. of Goetz Rd	Entitled 2021.11.4	In process	DRP 18-00005	MB
no	Marijuana Manufacturing	12,000	1	S. side of Illinois & E. I-215 Freeway	Entitled 2019.4.17	In process	DRP 18-00006	CP
no	Perris Indus	2,500	0.5	E. side of G St N of Case Rd	Entitled 2018.12.19	In process	DRP 16-00016	CP
	<b>Total</b>	<b>4,341,284</b>						

PVCC SP - In Process								
	Industrial Projects	Sq. Ft.	Acres	Location	Entitlement Status	Status	Case Number(s)	Planner
not in	Excessway Industrial	347,000	16	SW corner of Ramona and Perris	Not entitled	In process	DRP 19-00012	AG
not in	Natar Ind	420,000	23	W. Side of Natar 300' N. of Nandina	Not entitled	In process	DRP 20-00004	NP
not in	Serrao Ind	3,500	0.17	N. Side of Nance Street 600' E. of Webster	Not entitled	In process	DRP 20-00010	NP
not in	Lakereck East	256,000	31	E. Side of Redlands S. of Rider St	Not entitled (1/7/21)	In process	DRP 08-00021	CP
not in	Lakereck West	300,000	20	W. Side of Redlands S. of Rider St	Not entitled (1/7/21)	In process	DRP 20-00020	CP
not in	Chartwell Ind	144,000	6	SW corner of Redlands and Rider	Not entitled (2/18/21)	In process	DRP 21-00003	AG
not in	Harvest Landing MBU	345,000	16	SE corner of Perris & Harley Knox	Not entitled (4/29/2021)	In process	DRP 21-00012	NP
not in	Duke @ Patterson and Nance	580,000	26	NE corner of Patterson and Nance	Not entitled (5/9/2021)	In process	DRP 21-00005	RS
not in	Nance Ind	156,000	8	Btw Harley & Nance	Not entitled (6/18/2021)	In process	DRP 21-00006	ME (RS)
not in	Lakereck at Harley Knox	143,000	11	N. Side of Harley Knox and W. of Perris	Not entitled (6/23/2021)	In process	DRP 21-00008	RS
not in	McKay Indus	232,000	13	NE of Ramona and Indian	Not entitled (9/2/2021)	In process	DRP 21-00011	RS (CH)
not in	Ramona Gateway (35k Com)	850,000	50	S Ramonaa btw Nevada and Webster	Not entitled (10/1/2021)	In process	DRP 21-00013	ME
not in	Lakereck Placenta	588,716	25	NE of Placenta and Wilson	Not entitled (11/1/2021)	In process	DRP 21-00015, SPA 8	MB
not in	Harvest Landing MBU	1,232,200	73	Frontage Road and	Not entitled (12/3/2022)	In process	CUP 22-05005	ME
not in	CLC 3	879,000	40	SW Perris and Markham	Not entitled (2/18/2022)	In process	DRP 22-00006	ME
not in	RG Indus	263,000	11	SW Patterson and Nance	Not entitled (2/17/2022)	In process	DRP 22-00003	LG
not in	Seefield Indus	165,000	7.58	SW Ramona and Breeman	Not entitled (3/29/2022)	In process	DRP 22-00019	AG
not in	Lowe's truck parking expansion	0	11.83	NW Morgan and Indian Avenue	Not entitled (3/11/2022)	In process	DRP 22-00011	AG
	<b>Total</b>	<b>6,822,176</b>						

South Perris - In Process and Entitled Projects								
	Industrial Projects	Sq. Ft.	Acres	Location	Entitlement Status	Status	Case Number(s)	Planner
no	Marijuana Manufacturing/Cul	30,000	6	N. side of Mapes btw Goetz & Alpine	Not entitled	In process	DRP 18-00010	CP
	<b>Total</b>	<b>30,000</b>						

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Preliminary Review								
	Industrial Projects	Sq. Ft.	Acres	Location	Assigned Date	Status	Case Number(s)	Planner
no	GAA Industrial	130,000	10	E. side of Goetz Rd. south of Mountain	4/28/2022		PR 22-05127	AG
no	Self Storage	149,000	10	E. side of Goetz Rd. south of Mountain	3/11/2022		PR 22-05066	AG
no	Walker Indu	13,000	1	N. of Walker btw G and Redlands	3/11/2022		PR 22-05066	RG

no	Scannell Indu	319,000	15 S. side of Mountain west of Goetz Road	3/11/2022	PR 22-05067	NP
YES	Brew Indus	62,000	4 S. side of Harley Knox west of Ferris Blvd	3/29/2022	PR 22-05092	LG
Yes	Dedeaux Markham	88,000	4.06 S. Side of Markham; 800 ft E of Patterson	3/29/2022	PR 22-05089	LG
	<b>Total</b>	<b>761,000</b>				



Projects completed

	Commercial	Sq. Ft.	Acreage	Location	Entitlement Status	Status	Case Number(s)	Planner
1	Perris Crossing	387,993	27	E of I-215 btw Watson and Ethanac Rd	Entitled 2006.4.11	Partially completed (2009)	DPR 04-0621	DS
11	DTSP Mixed Use	10,834	1	SW corner of Tenth and D	Entitled 2017.11.5	Grading	DPR 16-00014	BM
12	7-Eleven	3,000	1	NE corner of Ethanac and Case	Entitled 2017.1.18	Completed (November 2018)	CUP 16-05074	NP
13	Autozone	19,000	2	NE corner of Perris Crossing Center	Entitled 2017.10.4	Completed (December 2018)	ADPR 16-05074	DS
5	Partial MTC	10,000	2.4	SE corner of Ethanac and Trumble	Entitled 2017.3.15	Completed 2020	CUP 16-05168	KP
9	Weinerschnitzel	2,000	1	W side of Perris Blvd & S. of Placentia	Entitled 2017.11.15	Completed (October 2019)	CUP 17-05083	DS
10	Behavioral Health Clinic	37,000	4	NW San Jacinto & Redlands	Entitled 2017.7.19	Completed (June 2019)	CUP 16-05189	BM
	<b>Total</b>	<b>469,827</b>						

Projects that have started construction

	Commercial	Sq. Ft.	Acreage	Location	Entitlement Status	Status	Case Number(s)	Planner
too far	Aldi Market Center	27,000	4.6	West of Perris Blvd and Citrus	Entitled 2020.3.4	Grading	ADPR 19-05039; CUP 1 NP	
<b>YES</b>	3 March Plaza	47,253	8	NW corner of Perris Blvd & Harley Knox	Entitled 2017.3.15	Grading	CUP 16-05165	DS
too far	6 Perris Common	35,000	5.5	SW corner San Jacinto and Redlands	Entitled 2018.4.10	Vertical construction	MAJ MOD 18-05004	NP
too far	7 Perris Plaza - Build-out	173,000	42	NE of Nuevo and Frontage	Entitled	Vertical construction	MIN MOD 17-05178	NP
	<b>Total</b>	<b>255,253</b>	<b>56</b>					

Project in Plan Check

	Commercial	Sq. Ft.	Acreage	Location	Entitlement Status	Status	Case Number(s)	Planner
too far	2 Quick Quack Carwash	3,600	1	E of Case Rd north of Ethanac Rd	Entitled 2018.7.18	Prep for Plan Check	CUP 18-05045	DS
	<b>Total</b>	<b>3,600</b>	<b>1</b>					

In Process and Entitled Projects that are Dormant

	Commercial	Sq. Ft.	Acreage	Location	Entitlement Status	Status	Case Number(s)	Planner
too far	Arco Expansion	3,869	1.4	289 Old Nuevo Road & I-215	Entitled 2015.2.18	Prep for Plan Check	CUP 14-09-0001	DS
<b>YES</b>	14 Cali Express Carwash	5,600	1	NW corner of Ramona and Perris	Entitled 2018.10.18	Prep for Plan Check	CUP 16-05258	DS
too far	4 Motte Town Center (MTC)	484,300	59	SE corner of Ethanac and Trumble	Entitled 2008.5.13	Dormant	DPR 06-0337	DS
too far	8 Perris Venue	643,000	68	SE corner of San Jacinto and Redlands	Entitled 2009.8.13	Dormant	DPR 08-04-0015	KP
no	Gas Station & Carwash	7,000	1.8	4th St and Navajo Rd	Submitted 2019.11.13	In process	CUP 19-05295	AG
too far	Commercial Retail - Spectrum	7,400	2	W of Perris Blvd north of Orange	Submitted 2019.11.18	In process	CUP 19-05301	AG
<b>YES</b>	Tommy's carwash	8,500		E. side of Perris Blvd	Submitted 2020.12.23	In process	CUP 20-05217	RG
too far	Pharmacy	15,000	1.3	S. side of 4th St west of Park St	Submitted 2021.1.7	In process	DPR 20-00022	AG
too far	Mosque	12,000	0.52	NE of Barrett and Orange	Submitted 2021.5.12	In process	CUP 21-05102	RG
	<b>Total</b>	<b>1,731,375</b>						

**PROJECTS THAT HAVE STARTED CONSTRUCTION**

TRACT	DEVELOPER	PROJECT	LOCATION	DU	COM SF	TYPE	ACRE	Approval Date	Status	Planner
16-00014	Talat Dib	DTSP Mixed Use	SW of "D" Street and 10th Street.	15	7,544	APT	0.95	10/15/2017	Completed 2021	BM
31226	Pacific Communities	Pacific Heritage 1	SW Nuevo & McKimball	82	N/A	SFD	20.18	10/15/2003	Vertical construction in process	DS
31650	Sunwest Enterprises		SW Van Wy & De Lines	61	N/A	SFD	15.6	7/13/2004	FTM approved 6-13-2006 - Architecture review MDRP 20-05143	DS
32406	Sunwest Enterprises		SE Bowen & Windflower	15	N/A	SFD	3.5	1/5/2005	FTM approved 11-28-2006 - Architecture review MDRP 20-05143	AG/DS
32497	Pacific Communities	Pacific Ave	SW Orange & Medical	131	N/A	PDO	12.15	10/31/2006	Vertical construction in process	NP
32769	CBM Consulting & Dev, Inc.	Faith Circle	West side of "B" Street, south of 11th St	20	N/A	SFD	4.31	4/20/2006	Final Home Sales 2022	RZ
36648	John Abel	Stratford Ranch	W of Evans Road @ northern City Limits	270	N/A	SFD	65.8	8/29/2017	Vertical construction in process starting 4th quarter 2021	NP
36988	Richmond	GVSP	N of Ethanac Rd & W of Murrieta Rd	169	N/A	SFD	37.65	8/29/2017	30 Plus remaining homes	KP
37014	JD Pierce	Barrett Apt	Btw Barrett & Perris Blvd	228	N/A	APT	13.49	10/25/2016	Grading anticipated 1st quarter 2022 - Major Mod 18-05211; DPR 15-00014	KP
37816	TriPointe	GVSP	730' E of the NW of Goetz & Ethanac	97	N/A	PDO	10.97	2/9/2021	Anticipate Precise Grading 2nd Qtr 2022 - Approve - Park Fee Agreement; ADPR 21-	NP
37722	Richmond	GVSP	NW Green Valley Pkwy & Murrieta Rd	116	N/A	SFD	19.4	2/9/2021	Grading 4th Qtr 2021 - Approve - Park Fee Agreement & TUMF Credit	NP

**1204 Total Units**

**PROJECTS IN PLAN CHECK**

TRACT	DEVELOPER	PROJECT	LOCATION	DU	COM SF	TYPE	ACRE	Approval Date	Status	Planner
31651	DR Horton		SW Nuevo and Wilson	52	N/A	SFD	12.55	7/27/2004	Plan Check; FTM approved 4/10/2017	RG
31157	Palin Enterprises	Parkwest SP	S of Nuevo Road & E. PVSD	529	N/A	SFD	110.2	1/3/2018	Preparing improvement plans	KP
31659	DR Horton		NEC Citrus & Evans	161	N/A	SFD	55.07	7/27/2004	Initiate Plan Check 2nd Quarter 2021 FTM approved 2/28/2006	
32041	DR Horton		NWC Citrus & Dunlap	122	N/A	SFD	40.03	4/24/2007	Initiate Plan Check 2nd Quarter 2021 FTM approved 5/24/2007 Right belo	NP
32666	WSI Mojave Inv/ Richland	Riverwood SP	Mapes & Ethanac	663	N/A	SFD	226.9	12/14/2004	Grading expected 4th Quarter 20222 - Final Map recorded with option in increase	BE
33549	Perris Investment Group	Village Walk	NE Perris & Commercial	129	N/A	SFD	24	1/30/2007	Initiate Plan Check 2nd Quarter 2021 FTM approved 7/27/2011	SC
33338	DR Horton		NWC Nuevo & Evans	75	N/A	SFD	19	4/11/2006	Initiate Plan Check 3rd Quarter 2021; FTM approved 4/24/2007 No Construction	NP
31912	TKC		7th & Clayton vacant land	8	N/A	SFD	2.3		FTM approved 4/24/2007 Plan Check	RG
35062	Sterling Villa	Senior Housing	SE corner of Nuevo and Murrieta	429	N/A	APT	18.54	2/13/2006	In Plan check; Expires 8/4/2022 with AB 1561 (aka DPR 06-0378)	KP

**2168 Total Units**

**FINAL MAP RECORDED OR DA WITH NO FURTHER NEED FOR EXTENSION**

TRACT	DEVELOPER	PROJECT	LOCATION	DU	COM SF	TYPE	ACRE	Approval Date	Status	Planner
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**0 Total Units**

**ENTITLED RESIDENTIAL DEVELOPMENTS**

TRACT	DEVELOPER	PROJECT	LOCATION	DU	COM SF	TYPE	ACRE	Approval Date	Status	Planner
33900	WSI Mojave Inv	Richland	SE Ethanac & McPherson	198	N/A	SFD	116	4/29/2008	Has received various 1 year extensions. Valid until 5/8/2020. EOT19-05029	RZ
33973	County Lands PIP IV		W McPherson & S Ethanac	384	N/A	SFD	153.7	5/27/2008	Has received various 1 year extensions. Valid until 5/27/2019. New EOT 19-05071	RZ
34260	Tristone/David Jeffers		Flame Avenue	22	N/A	SFD	3.06	10/28/2014	Has received various 1 year extensions. Valid until 10/28/2019. EOT18-05252	KP
35103	Howard Industries	Harvest Landing		1,287	N/A	SFD/MFR	169.5	3/10/2011	345 units LDR; 372 units MDR; 250 units MDR; & 889 units HDR	DS
36797	Nova Homes		NEC Wilson & Water	76	N/A	PDO	19.9	10/28/2014	AB 1651 Ext until 4/10/2022; Has received various 1 year extensions. Valid until 10/	IL
37038	Kille Investment Trust	Citrus Court	SW Orange & Dunlap	111	N/A	PDO	14.5	2/28/2017	EOT 19-05325	KP/RG
37181	Metz and A LLC	Villa Verona Apt	NE A & Metz	360	N/A	APT	16.9	8/29/2017	Dormant - DPR 16-00002	NP
17-00005	Lansing Properties	Senior Housing	NW of A & Ellis	141	N/A	APT	4.21	3/26/2019	Dormant - DPR 17-00005	MB
36647	John Abel	Stratford Ranch	W of Evans Road and N of Ramona Exp	90	N/A	SFD	24.1	9/29/2020	Approve	NP
37223	Raintree Investments GVSP	GVSP	Watson & Murrieta	235	N/A	SFD	37.37	2/9/2021	Approve - Park Fee Agreement & TUMF Credit	NP
37262	Raintree Investments GVSP	GVSP	Ethanac & Goetz	191	N/A	SFD	37.36	2/9/2021	Approve - Park Fee Agreement & TUMF Credit	NP
37803	UCI Prop		SWC Metz & A St	145	N/A	SFD	53.15	8/31/2021	Submitted 2019.8	NP
37817	Raintree Investments GVSP	GVSP	NEC of GV Pky & Ethanac 1,500' N of Etha	228	N/A	PDO	25.3	2/9/2021	Approve - Park Fee Agreement	NP
37818	Raintree Investments GVSP	GVSP	NWC of GV Pky and Ethanac	138	N/A	PDO	14.7	2/9/2021	Approve - Park Fee Agreement	NP
37818 - APT	Raintree Investments GVSP	GVSP	NWC of GV Pky and Ethanac	236	N/A	APT	14.1	2/9/2021	Approve - Park Fee Agreement	NP

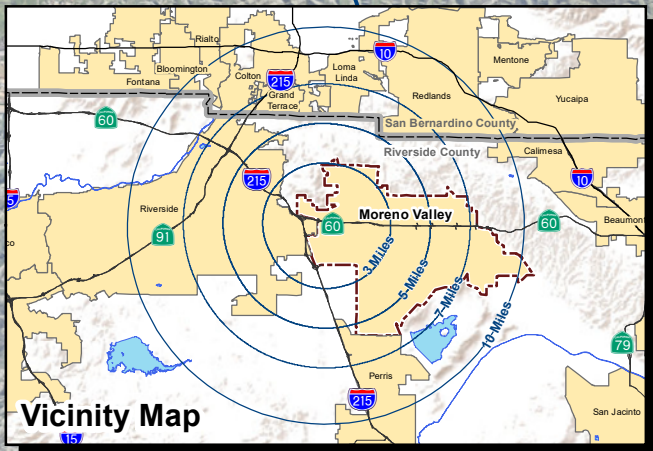
**Total 3842 Total Units**

**IN PROCESS RESIDENTIAL DEVELOPMENTS**

TRACT	DEVELOPER	PROJECT	LOCATION	DU	COM SF	TYPE	ACRE	Approval Date	Status	Planner
37441	Julio Arias	Graham PUD	W of Graham St btw Metz & Weston	32	N/A	PDO	4.16	In process	Entitlement Phase	AG
37904	Pacific Communities	Active Senior	NE McPherson and Mountain	201	N/A	PDO	40.4	In process	Submitted 2021.3 TM 21-05037, DPR 21-0002 & PDO 21-05038	ME
38071	Stratford Ranch		NE Ramona and Evans	197	N/A	SFD	48.6	In process	Submitted 2021.3.1	NP
38308	DTSP UV		G St and 2nd St	39	N/A	MFR	1.8	In process	Submitted 2021.11.12: TPM 21-05271; DPR 21-00018	AG
21-00014	May Ranch		SW Rider and Evans	308	N/A	MFR	16	In process	Submitted 2021.11.12: DPR21-00014, SPA 21-05249; PR 20-05034	ME

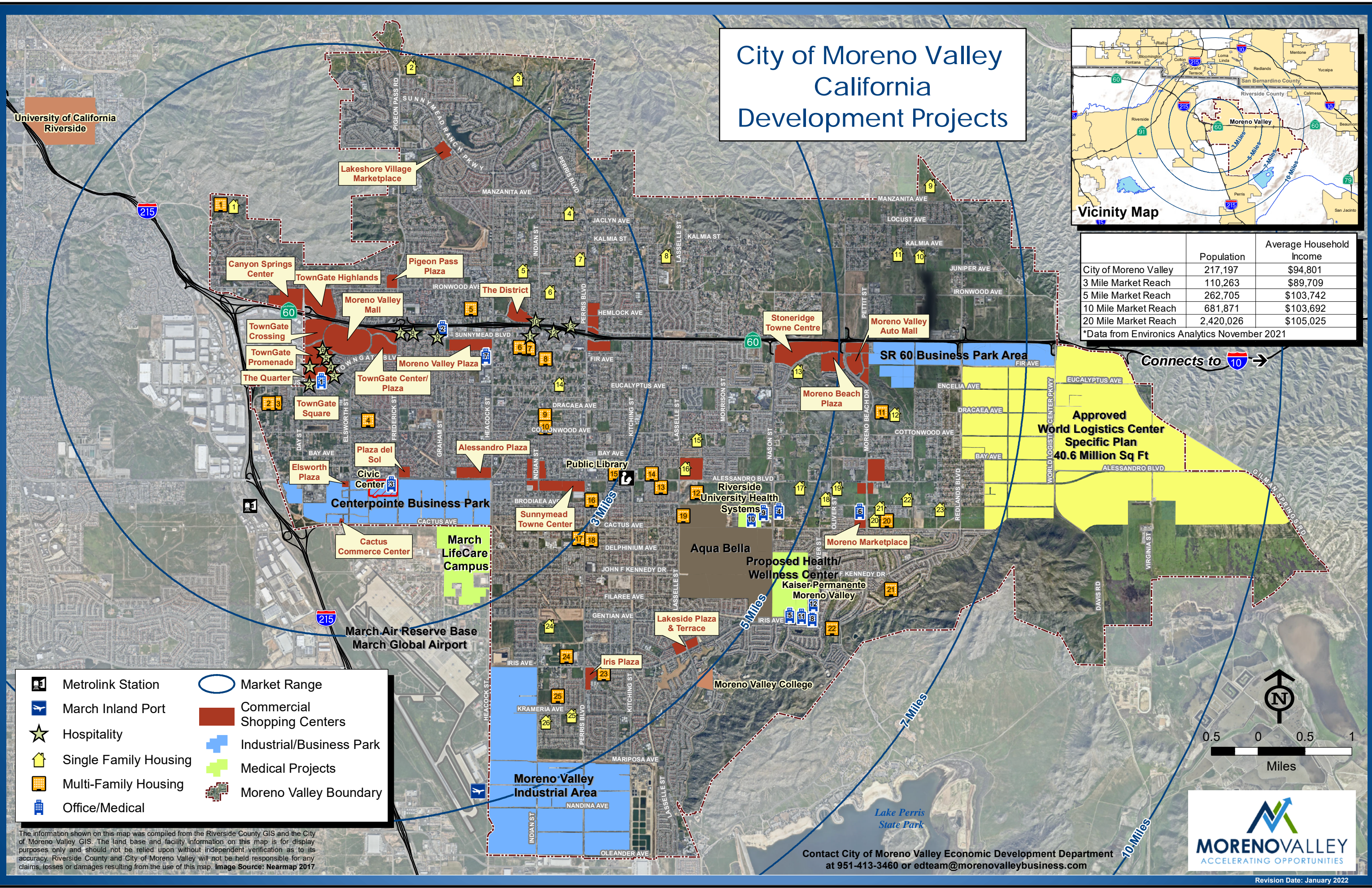
**Total 777 Total Units**

# City of Moreno Valley California Development Projects

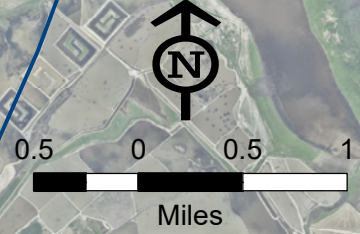


	Population	Average Household Income
City of Moreno Valley	217,197	\$94,801
3 Mile Market Reach	110,263	\$89,709
5 Mile Market Reach	262,705	\$103,742
10 Mile Market Reach	681,871	\$103,692
20 Mile Market Reach	2,420,026	\$105,025

\*Data from Envrionics Analytics November 2021



- Metrolink Station
- March Inland Port
- Hospitality
- Single Family Housing
- Multi-Family Housing
- Office/Medical
- Market Range
- Commercial Shopping Centers
- Industrial/Business Park
- Medical Projects
- Moreno Valley Boundary



The information shown on this map was compiled from the Riverside County GIS and the City of Moreno Valley GIS. The land base and facility information on this map is for display purposes only and should not be relied upon without independent verification as to its accuracy. Riverside County and City of Moreno Valley will not be held responsible for any claims, losses or damages resulting from the use of this map. Image Source: Nearmap 2017

Contact City of Moreno Valley Economic Development Department  
at 951-413-3460 or edteam@morenovalleybusiness.com



# COMMERCIAL development

The City of Moreno Valley is a growing city with a bright future. Strategically located in the Inland Empire of Southern California, with a market area of over two million people and abundant developable land, savvy developers and retailers continue to choose Moreno Valley for growth and success. The City of Moreno Valley is dedicated to fostering new businesses and well-managed growth to create a superb quality of life. *Take a look at what's happening!*



## Commercial Centers

Center Name	Size (sq. ft.)	Traffic Counts (ADT)	
		East/West	North/South
TownGate Highlands	251,900	154,000	21,000
Moreno Valley Mall	1,200,000	154,000	22,900
Stoneridge Towne Centre	579,295	90,000	17,100
TownGate Center/Plaza	465,000	137,000	24,200
Moreno Beach Plaza	350,000	74,000	15,400
Moreno Valley Plaza	341,000	19,500	22,900
TownGate Square	136,000	20,600	22,900
TownGate Crossing	237,000	154,000	22,900
TownGate Promenade	200,000	154,000	22,900
Moreno Beach Marketplace	175,000	74,000	15,400
Lakeside Plaza & Terrace	143,000	20,700	23,600
Lakeshore Village	140,000	20,500	18,000
Alessandro & Lasselle	140,000	16,600	12,100
Moreno Marketplace	93,788	11,900	14,000
Iris Plaza	87,120	16,800	25,900
Elsworth Plaza	30,000	19,000	8,800
Cactus Commerce Center	16,000	43,300	7,700
The District	1,327,645	120,000	33,500
The Quarter	420,485	13,800	22,900

## Office/Medical

Map #	Name	Size (sq. ft.)
1	TownGate Square	170,000
2	Olivewood Plaza	22,758
3	Centerpointe Office Area	258,000
4	Moreno Valley Medical Plaza	217,000
5	Moreno Valley Medical Overlay Area	122,250
6	Renaissance Village	98,400
7	Riverside County Office Building	52,000
8	Fresenius Medical Care	12,000
9	Integrated Care Communities	44,000
10	Riverside University Health System Expansion	1,200,000
11	Kaiser Permanente Master Campus Expansion	800,000
12	Mainstreet Post-acute Care	57,000



## Industrial/Job Centers

Areas	Occupied/Leased (sq. ft.)	Available/Approved (sq. ft.)	Proposed (sq. ft.)
Centerpointe Business Park	5,465,659	957,060	119,800
Moreno Valley Industrial Area	19,001,657	1,311,080	221,859
SR-60 Business Park Area	3,651,264	1,249,121	--
Approved World Logistics Center	--	40,600,000	--



## Hospitality Development

Map #	Hotel Name	# Guest Rooms
<b>TownGate Hotels:</b>		
1	Residence Inn	112
2	Holiday Inn Express	104
3	Fairfield Inn & Suites	106
4	Hilton Garden Inn	126
5	Ayres Suites	127
6	Hampton Inn & Suites	115
<b>Sunnymead Area Hotels</b>		
7	La Quinta Inn & Suites	58
8	Travelers Inn	55
9	Comfort Inn	92
10	Woodsprings Suites	122
11	Econo Lodge	51
12	Hotel XOLA by Wyndham	151
13	Best Western Moreno Hotel & Suites	59



# RESIDENTIAL development



## Single-Family Development: 2,524 Units

Map#	Record	Builder/Applicant	# of Units	Status
1	PEN20-0095/-0096/ PEN21-0066	Shizao Zheng	108	In Process
2	PEN18-0145	KB Homes	97	Under Construction
3	PA04-0019/ PEN18-0252/ PEN18-0210	Redhill Village	213	Approved
4	PEN19-0202/-0208	Bonnful LLC	31	In Process
5	PA14-0031/ PEN18-0144	Right Solutions	7	Plan Check
6	PEN17-0096	Manuel Ruiz	4	Plan Check
7	PA03-0100/ PEN17-0014	Victoria Homes	12	Plan Check
8	PA05-0052/ PEN19-0244	Winchester Associates	105	Plan Check
9	PEN16-0162/ PEN19-0247	Curtis Development	23	Approved
10	PA05-0114/ PEN16-0146/ PEN19-0254	Sussex Capital Group	11	Approved
11	PA05-0115/ PEN16-0147/ PEN19-0255	Sussex Capital Group	57	Approved
12	PEN21-0075/ 0080/0081	Lansing Companies	315	In Process
13	PA04-0146/ PA10-0038/ P15-066&067	Beazer Homes	274	Under Construction
14	PEN19-0190	Alcantar Construction	4	In Process
15	PEN18-0065	Macjones Holdings	31	Approved
16	PEN21-0050	TTM 38098/ Winco Holdings Inc.	195	In Process
17	PEN21-0184/-0185	DR Horton	204	In Process
18	PEN21-0199/ 0203/0204	DR Horton	67	In Process
19	PEN20-0144	Mike McKnight Planning	96	Plan Check
20	PEN18-0080	Hakan Buwan	8	Plan Check
21	PEN18-0154	Michael De La Torre	6	Plan Check
22	PEN18-0053/ PEN18-0092	Cantebury	45	Plan Check
23	PEN21-0145/ 0238 thru 0245	Passco Pacifica	322	In Process
24	PEN16-0095/ PEN20-0016	Mission Pacific Land	221	Under Construction
25	PEN19-0188	PI Properties No. 67 LLC	66	Approved
26	PEN18-0042	Ada Deturcios	2	Plan Check

## Multi-Family Development: 3,377 Units

Map#	Record	Builder/Applicant	# of Units	Status
1	PEN20-0095(GPA) PEN20-0096(CZ)	PEN20-0096 (CZ)	138	In Process
2	PEN20-0057, -058	Apollo IV Dev Grp	51	Approved
3	PEN18-0064	Apollo III Dev Grp	18	Plan Check
4	PEN19-0127, -0128, -0129	JWDA-MS Architects	197	In Process
5	PA14-0027/ PEN20-0019	Design Concepts	39	Under Construction
6	PEN16-0066	Cal Choice Inv. Inc.	20	Approved
7	PA08-0032/ PEN18-0234	Jimmy Lee	12	Approved
8	PEN19-0157	Geri Relich	11	Plan Check
9	PEN21-0112 thru 0115	MORENO VALLEY HOUSING AUTHORITY	32	In Process
10	PEN19-0110-0108- 0109 - 0097	Moreno Valley Housing Authority	80	Plan Check
11	PEN21-0075/ 0080/0081	Lansing Companies	430	In Process
12	PA15-0046/ PEN19-0159	Rocas Grandes	426	Approved
13	PA06-0052/ PEN19-0236	Perris Pacific Company	49	Approved
14	PA13-0062/ PEN16-0120	Creative Design Assoc.	58	Plan Check
15	PEN21-0250 thru 0252	Moreno Rose	64	In Process
16	PA16-0039/ PEN18-0211	Spruce Grove Inc.	272	Plan Check
17	PA14-0015/ PEN18-0032	Century Communities	117	Under Construction
18	PA06-0096/ PEN19-0203	TL Group	52	Plan Check
19	PEN16-0123/ PEN19-0007	Villa Annette, L.P.	220	Under Construction
20	PEN20-0175	RC Hobbs	38	In Process
21	PEN16-0130	ROCI CA Belago	358	Plan Check
22	PA08-0054/ PEN18-0225	Granite Capital	135	Plan Check
23	PEN20-0063, 0065-68	Passco Pacific LLC	82	Approved
24	PEN21-0021/ 0215/0216	PERRIS AT PENTECOSTAL	426	In Process
25	PEN21-0179/ 0180/0188/0189	TTM 38242	52	In Process

*In Process = not yet approved by Planning Commission  
Approved = Planning Commission approval  
Plan Check = Approved plus construction documents in review  
Under Construction*



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edteam@morenovalleybusiness.com  
www.morenovalleybusiness.com  
www.moval.org/simplicity (Check project status)

# FIRST LOGISTICS AT NANDINA AVE FOR LEASE 221,859 SF



24665 NANDINA AVE, MORENO VALLEY 92551

## PROPERTY HIGHLIGHTS:

- 40' Warehouse Clearance
- 6,284 SF of Two-Story Offices
- 220' Secured Truck Court
- All Concrete Truck Court
- 31 Dock High Doors (9'x10')
- 70 Trailer Stalls (14'x53')
- 7" Warehouse Slab
- ESFR Sprinkler System
- 20' Candle LED Warehouse Lighting
- 2000 Amp Electrical Service with 4000 Amp UGPS
- 56' x 60' Typical Bay Spacing
- 2.5% Skylights
- 1 Ground Level Loading Door (12'x14')
- 101 Auto Parking Spaces



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Ontario, CA 91761





# Riverside County Parcel Report

APN(s):307410001

## DISCLAIMER

Maps, permit information and data are to be used for reference purposes only. Map features are approximate, and are not necessarily accurate to surveying or engineering standards. The County of Riverside makes no warranty or guarantee as to the content (the source is often third party), accuracy, timeliness, or completeness of any of the data provided, and assumes no legal responsibility for the information contained on this map. Any use of this product with respect to accuracy and precision shall be the sole responsibility of the user.

## MAPS/IMAGES



## PARCEL

APN	307-410-001-0	Supervisory District	JEFF HEWITT, DISTRICT 5
Previous APN	307410001 307030004	Township/Range	T4SR3W SEC 15 RHO
Owner Name	307410001 MCCANNA HILLS	Elevation	1623 ft
Address	307410001 NOT AVAILABLE	Thomas Bros. Map Page/Grid	PAGE: 778, GRID: B4 PAGE: 778, GRID: B5 PAGE: 778, GRID: C4 PAGE: 778, GRID: C5 PAGE: 778, GRID: D5
Mailing Address	307410001 100 BAYVIEW CIR STE 2000 NEWPORT BEACH CA 92660	Indian Tribal Land	NOT IN A TRIBAL LAND
Legal Description	307410001 Recorded Book/Page: <a href="#">PM 216/62</a> Subdivision Name: PM 32439 Lot/Parcel: 1 Block: Tract Number:	City Boundary	NOT IN A CITY
		City Spheres of influence	NOT IN A CITY SPHERE
Lot Size	307410001	March Joint Powers	NOT IN THE JURISDICTION OF THE MARCH JOINT POWERS

Property	307410001	County Service Area	146- LAKEVIEW/NUEVO/ROMOLAND/HOMELAND
Characteristics	Year Constructed: Baths: Bedrooms: Construction Type: Garage Type: Property Area (sq ft): Roof Type: Stories: Pool: NO Central Cool: NO Central Heat: NO		ST LIGHTING, LIBRARY
Annexation Date	N/A	LAFCO Case	N/A
Proposals	N/A		

**PLANNINGmore...**

Specific Plans	PREISSMAN #246	Historic Preservation Districts	NOT IN A HISTORIC PRESERVATION DISTRICT
Land Use Designations	MDR MHDR OS-C OS-R RR	Agricultural Preserve	NOT IN AN AGRICULTURAL PRESERVE
General Plan Policy Overlays	N/A		
Area Plan (RCIP)	Lakeview / Nuevo	Airport Influence Areas	MARCH AIR RESERVE BASE
General Plan Policy Areas	NOT IN A GENERAL PLAN POLICY AREA	Airport Compatibility Zones	MARCH AIR RESERVE BASE, ZONE D
Zoning Classifications (ORD. 348)	SP ZONE, CZ Number 6981	Zoning Districts and Zoning Areas	NUEVO AREA
Zoning Overlays	NOT IN A ZONING OVERLAY	Community Advisory Councils	NOT IN A COMMUNITY ADVISORY COUNCIL

Residential Permit Stats

<u>SP00246A3 - NOT RECORDED 1</u>			
Expected Units:	80 units		
BRS Permit Units:	Final	Issued	Active
Current Permits:	0	0	0
Cumulative Total:	0	0	0
% of Expected:	0	0	0
<u>SP00246A3 - NOT RECORDED 2</u>			
Expected Units:	69 units		
BRS Permit Units:	Final	Issued	Active
Current Permits:	0	0	0
Cumulative Total:	0	0	0
% of Expected:	0	0	0
<u>SP00246A3 - NOT RECORDED 3</u>			
Expected Units:	0 units		
BRS Permit Units:	Final	Issued	Active
Current Permits:	0	0	0
Cumulative Total:	0	0	0
% of Expected:	0	0	0
<u>SP00246A3 - NOT RECORDED 4</u>			
Expected Units:	0 units		
BRS Permit Units:	Final	Issued	Active
Current Permits:	0	0	0
Cumulative Total:	0	0	0
% of Expected:	0	0	0
<u>SP00246A3 - NOT RECORDED 5</u>			
Expected Units:	156 units		
BRS Permit Units:	Final	Issued	Active
Current Permits:	0	0	0
Cumulative Total:	0	0	0
% of Expected:	0	0	0
<u>SP00246A3 - NOT RECORDED 6</u>			
Expected Units:	100 units		
BRS Permit Units:	Final	Issued	Active

Current Permits:	0	0	0
Cumulative Total:	0	0	0
% of Expected:	0	0	0
<u>SP00246A3 - NOT RECORDED 7</u>			
Expected Units:	108 units		
BRS Permit Units:	Final Issued	Active	
Current Permits:	0	0	0
Cumulative Total:	0	0	0
% of Expected:	0	0	0
<u>SP00246A3 - NOT RECORDED 9</u>			
Expected Units:	0 units		
BRS Permit Units:	Final Issued	Active	
Current Permits:	0	0	0
Cumulative Total:	0	0	0
% of Expected:	0	0	0
<u>SP00246A3 - NOT RECORDED 10</u>			
Expected Units:	0 units		
BRS Permit Units:	Final Issued	Active	
Current Permits:	0	0	0
Cumulative Total:	0	0	0
% of Expected:	0	0	0
<u>SP00246A3 - NOT RECORDED 12</u>			
Expected Units:	0 units		
BRS Permit Units:	Final Issued	Active	
Current Permits:	0	0	0
Cumulative Total:	0	0	0
% of Expected:	0	0	0
<u>SP00246A3 - NOT RECORDED 13</u>			
Expected Units:	188 units		
BRS Permit Units:	Final Issued	Active	
Current Permits:	0	0	0
Cumulative Total:	0	0	0
% of Expected:	0	0	0
<u>SP00246A3 - PARTIALLY RECORDED BY PRE-LMS TRACTS ALL</u>			
Expected Units:	2744 units		
BRS Permit Units:	Final Issued	Active	
Current Permits:	0	0	0
Cumulative Total:	0	0	0
% of Expected:	0	0	0
<u>TR33976 - NOT RECORDED</u>			
Expected Units:	222 units		
BRS Permit Units:	Final Issued	Active	
Current Permits:	0	0	0
Cumulative Total:	0	0	0
% of Expected:	0	0	0
<u>TR33977 - NOT RECORDED</u>			
Expected Units:	340 units		
BRS Permit Units:	Final Issued	Active	
Current Permits:	0	0	0
Cumulative Total:	0	0	0
% of Expected:	0	0	0
<u>TR33978 - NOT RECORDED</u>			
Expected Units:	139 units		
BRS Permit Units:	Final Issued	Active	
Current Permits:	0	0	0
Cumulative Total:	0	0	0
% of Expected:	0	0	0
<u>TR33978M1 - NOT RECORDED</u>			
Expected Units:	139 units		
BRS Permit Units:	Final Issued	Active	
Current Permits:	0	0	0
Cumulative Total:	0	0	0
% of Expected:	0	0	0

**ENVIRONMENTAL more...**

CVMSHCP (Coachella Valley Multi-Species Habitat Conservation Plan) Plan Area	NOT IN A COACHELLA VALLEY MSHCP FEE AREA CONSERVATION AREA	WRMSHCP (Western Riverside County Multi-Species Habitat Conservation Plan) Cell Group	NOT IN A CELL GROUP
CVMSHCP (Coachella Valley Multi-Species Habitat Conservation Plan) Conservation Area	NOT COACHELLA VALLEY CONSERVATION AREA	WRMSHCP Cell Number	NOT IN A CELL NUMBER
CVMSHCP Fluvial Sand Transport Special Provision Areas	NOT IN A FLUVIAL SAND TRANSPORT SPECIAL PROVISION AREA	HANS/ERP (Habitat Acquisition and Negotiation Strategy/Expedited Review Process)	Project: HANS00328 Conserve: NO Status: JPR Approval Notes: Development Intake Num: 00328 LMS Case: HANS00328

<b>Fire</b>			
Fire Hazard Classification (Ord. 787)	HIGH	Fire Responsibility Area	SRA

**DEVELOPMENT FEES**

CVMSHCP (Coachella Valley Multi-Species Habitat Conservation Plan) Fee Area (Ord 875)	NOT IN A COACHELLA VALLEY MSHCP FEE AREA	RBBB (Road & Bridge Benefit District)	NOT IN A ROAD BRIDGE BENEFIT DISTRICT
WRMSHCP (Western Riverside County Multi-Species Habitat Conservation Plan) Fee Area (Ord. 810)	WESTERN RIVERSIDE COUNTY	DIF (Development Impact Fee Area Ord. 659)	LAKEVIEW/NUEVO, AREA 12
Western TUMF (Transportation Uniform Mitigation Fee Ord. 824)	IN OR PARTIALLY WITHIN A TUMF FEE AREA	SKR Fee Area (Stephen's Kagaroo Rat Ord. 663.10)	IN OR PARTIALLY WITHIN THE SKR FEE AREA
Eastern TUMF (Transportation Uniform Mitigation Fee Ord. 673)	NOT IN THE EASTERN TUMF FEE AREA	DA (Development Agreements)	NOT IN A DEVELOPMENT AGREEMENT

**TRANSPORTATION more...**

Circulation Element Ultimate Right-of-Way	IN OR PARTIALLY WITHIN A CIRCULATION ELEMENT RIGHT-OF-WAY	Road Book Page	59
		Transportation Agreements	NOT IN A TRANS AGREEMENT
		CETAP (Community and Environmental Transportation Acceptability Process) Corridors	EAST-WEST CETAP CORRIDOR

**HYDROLOGY**

Flood Plan Review	OUTSIDE FLOODPLAIN, REVIEW NOT REQUIRED	Watershed	SAN JACINTO VALLEY
Water District	EASTERN MUNICIPAL WATER DISTRICT		
Flood Control District	RIVERSIDE COUNTY FLOOD CONTROL DISTRICT		

**GEOLOGIC**

Fault Zone	NOT IN A FAULT ZONE	Paleontological Sensitivity	HIGH SENSITIVITY (HIGH B): SENSITIVITY EQUIVALENT TO HIGH A, BUT IS BASED ON THE OCCURRENCE OF FOSSILS AT A SPECIFIED DEPTH BELOW THE SURFACE. THE CATEGORY HIGH B INDICATES THAT FOSSILS ARE LIKELY TO BE ENCOUNTERED AT OR BELOW FOUR FEET OF DEPTH, AND MAY BE IMPACTED DURING EXCAVATION BY CONSTRUCTION ACTIVITIES.
Faults	NOT IN A FAULT LINE		
Liquefaction Potential	LOW		
Subsidence	SUSCEPTIBLE		

**MISCELLANEOUS**

School District	NUVIEW UNION & PERRIS UNION HIGH
Communities	NUEVO
Lighting (Ord. 655)	ZONE: B
2010 Census Tract	426.20
Farmland	GRAZING LAND

LOCAL IMPORTANCE  
 OTHER LANDS  
 URBAN-BUILT UP LAND

Special Notes PLEASE CONTACT RUSSELL WILLIAMS AT (951) 955-2016 PRIOR TO ANY PROJECT OR PERMIT SUBMITTAL/APPROVAL

Tax Rate Areas  
 098084 - CO FREE LIBRARY  
 098084 - CO STRUCTURE FIRE PROTECTION  
 098084 - CO WASTE RESOURCE MGMT DIST  
 098084 - CSA 146  
 098084 - CSA 152  
 098084 - EMWD  
 098084 - EMWD IMP DIST 13  
 098084 - EMWD IMP DIST A  
 098084 - FLOOD CONTROL ADMIN  
 098084 - FLOOD CONTROL ZN 4  
 098084 - GENERAL  
 098084 - GENERAL PURPOSE  
 098084 - MWD EAST 1301999  
 098084 - PERRIS AREA ELEM SCHOOL FUND  
 098084 - PERRIS VALLEY CEMETERY  
 098084 - RIV CO REGIONAL PARK & OPEN SP  
 098084 - RIVERSIDE CITY COMMUNITY COLLEGE  
 098084 - RIVERSIDE CO OFC OF EDUCATION  
 098084 - SAN JACINTO BASIN RESOURCE CONS  
 098084 - SO. CALIF.,JT(19,30,33,36,37,56)  
 098084 - VAL VERDE UNIFIED  
 098084 - VALLEY HEALTH SYSTEM HOSP DIST

**Department of Environmental Health Permits**

**Septic Permits**

Record Id	Application Date	Plan Check Approved Date	Final Inspection Date	Approved Date
N/A	N/A	N/A	N/A	N/A

**Well Water Permits**

Record Id	PE	Permit Paid Date	Permit Approved Date	Well Finaled Date
N/A	N/A	N/A	N/A	N/A

**PLUS PERMITS & CASES**

**Administrative Cases**

Case	Case Description	Status
N/A	N/A	N/A

**Building and Safety Cases**

Case	Case Description	Status
BGR061312	ROUGH GRADING FOR TR33978 LOTS 1-139	EXPIRED
BGR070599	ROUGH GRADE FOR TR33977 LOTS 1-258 & 282-340	EXPIRED
BGR130168	ROUGH GRADING AND EROSION CONTROL PLAN TR33978, TR3 3978-1, TR33978-2 ALL LOTS	EXPIRED

**Code Cases**

Case	Case Description	Status
CV0906169		Closed - Field
CV1002402		Closed - Field
CV1202885		Closed - RMAP Field
CV1203615		Closed - RMAP Field

CV1500084	Closed - Field
CV1602100	Closed - Field

<b>Fire Cases</b>	
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Case	Case Description	Status
FHAZ0003208		Closed - Verified Non-Billable
FHAZ0102993		Closed - Verified Non-Billable
FHAZ0102994		Closed - Verified Non-Billable
FHAZ0206078		Closed - Verified Non-Billable
FHAZ0206079		Closed - Verified Non-Billable
FHAZ0206080		Closed - Verified Non-Billable
FHAZ0400627		Closed - Verified Non-Billable
FHAZ0400628		Closed - Verified Non-Billable
FHAZ0400629		Closed - Verified Non-Billable
FHAZ0500123		Closed - Verified Non-Billable
FHAZ0500124		Closed - Verified Non-Billable
FHAZ0500125		Closed - Verified Non-Billable
FHAZ0600601		Closed - Verified Non-Billable
FHAZ0705036		Closed - Verified Non-Billable
FHAZ0705037		Closed - Verified Non-Billable
FHAZ0800081		Closed - Verified Non-Billable
FHAZ0903694		Closed - Verified Non-Billable
FHAZ1000977		Closed - Verified Non-Billable
FHAZ1109678		Closed - Verified Non-Billable
FHAZ1204874		Closed - Verified Non-Billable
FHAZ1303925		Closed - Verified Non-Billable
FHAZ1404349		Closed - Verified Non-Billable

FHAZ1501422	Closed - Verified Non-Billable
FHAZ1602505	Closed - Verified Non-Billable
FHAZ1700967	Closed-Verified Billable
FHAZ1801316	Closed - Verified Non-Billable
FHAZ1901617	Closed - Verified Non-Billable
FHAZ9100416	Closed - Verified Non-Billable
FHAZ9401983	Closed - Verified Non-Billable
FHAZ9505519	Closed - Verified Non-Billable
FHAZ9605609	Closed - Verified Non-Billable
FHAZ9702146	Closed - Verified Non-Billable

Planning Cases		
Case	Case Description	Status
CEQ190007	INITIAL STUDY FOR REVISION TO 33978 TENTATIVE TRACT MAP FOR 139 APPROVED LOTS	APPROVED
CFG03185	FISH AND GAME FEE FOR TR32372 & EA39713	PAID
CFG03591	FISH AND GAME FOR PM32439	PAID
CFG03593	F&G FOR EA39988 CZ6981 PM32438 SP246A1 ADD/EIR319	PAID
CFG03901	TR33976 SP246S1	PAID
CFG04793	CALIFORNIA FISH AND GAME FOR EA41431	PAID
CFG04887	CFG FOR TR33976M1	PAID
CZ05433	CHANGE ZONE FROM RR, A-1-20 & R-A-5 TO SP FOR SP 2 46CHANGE ZONE FROM R-R, A-1-20 & R-A-5 TO SP EA 33694, EIR 319, SP 246, CGPA 194 DA 61	HISTORY
CZ06981	CHANGE OF ZONE AMENDMENT TO SP246A1	APPROVED
CZ07536	CZ WITHIN SPECIFIC PLAN NO 246 AMENDMENT NO 2 THE AMENDED PORTION OF THE SPECIFIC PLAN INCLUDES PLAN NING AREAS 14, 18, 19,23,24,26,28,32,37,AND 50	WITHDRAWN
DA00061	DA 61 FOR SP 246 DA FOR SP 246 EA 33694 SP 246, CZ 5433, CGPA 194	WITHDRAWN
EA35346	EA FOR PM 25813 IN SP 239 AND SP 246 ENVIRONMENTAL ASSESSMENT FOR PM 25813 EA 35346 FM 25813, EXT 906, SP 239, SP 246	APPROVED
EA39713	EA FOR TR32372 TO DVIDE 253 AC INTO 708 LOTS	WITHDRAWN
EA39988	NEW EA FOR SP00246A1	WITHDRAWN
EA40451	EA FOR TR33976M1	APPROVED
EA41431	EA FOR CZ07536 SP00246A1	WITHDRAWN
GEO01382	GEO FOR SP00246A1 PM32591 PM32439 PM32438	APPROVED
GEO01570	GEOTECHNICAL FOR TR33976 VILLAGE 1 SOUTH.	APPROVED
GEO01571	GEOTECHNICAL REPORT FOR TR33977 VILLAGE CENTRAL	APPROVED

GEO01572	GEOTECHNICAL REPORT FOR TR33978 VILLAGE NO.	APPROVED
GEO180041	GEO FOR TR33978R01	APPROVED
GPA00194	CHANGE AGRICULTURAL DESIGNATION TO SP EA 33694, EIR 319, SP 246, CZ 5433 DA 61	APPROVED
HANS00328	DEVELOPMENT - CONSERVATION DESCRIBED	APPROVED
HR01179	REVIEW APPLICATION FOR TWO TRACT MAPS	PAID
HR01367	REV APP FOR TRACT FOR 225 SNGL FAM LOTS/19 OPEN SP ACE/1 SCHOOL SITE/1 HWY DENSITY/246 LOTS - SP246 AMEND 1 - TR33976	PAID
PDB03078	GENERAL BIOLOGICAL REPORT	APPROVED
PDB04395	FOCUSED BUOWL SURVEY SURVEY: 3/27/06, 4/9 THRU 14/06 REPORT:5/2/06	APPROVED
PM25813	DIVIDE 1,121 ACRES INTO 8 PARCELS FOR LAND CONVEYANCE PURPOSES DIVIDE 1,121 ACRES INTO 8 PARCELS FOR FINANCING PURPOSES EA 35346 FM 25813, EXT 906, SP 239, SP 246	APPROVED
PM32428	SUBDIVIDE 942 ACRES INTO 28 LOTS (SCHEDULE "I")	APPLIED
PM32438	SCHED I SUBDIVISION OF 942 AC. INTO 30 PARCELS.	APPROVED
PM32439	SCHED I DIVISION OF 942 AC INTO 5 20AC. MIN PARCEL	APPROVED
SP00246	1114 ACRE MASTER PLANNED COMMUNITY FOR 3500 SINGLE FAMILY UNITSSP ON 1,108.6 ACRES FOR 3,088 DU'S ON 671 ACRES, 4 9 ACRES OF COMMERCIAL/MIXED-USE, 282.6 ACRES OF * EA 33694, EIR 319, CZ 5433, CGPA 194 DA 61	HISTORY
SP00246A1	SPECIFIC PLAN AMENDMENT TO SP00246 AMENDMENT #1	APPROVED
SP00246A2	RECONFIGURE PLANNING AREAS 18,19,23,24,28/50	WITHDRAWN
SP00246A3	AMENDMENT TOTHE ADOPTED SP 246 A1 THAT WOULD REMOVE THE MID COUNTY PARKWAY OVERLAY CONDITIONTHAT ALSO AFFECTS TTM33977 AND TTM33978 AND WERE CONCURRENTLY PROCESSED AS MINOR CHANGES	APPROVED
SP00246S1	INCREASE NUMBER OF LOTS FROM 195 TO 208	APPROVED
SP00372		VOID
TR33976	63.4 AC/15 CONDO LOTS(207 UNITS)7 O-S/1 SCHL/4 OS	APPROVED
TR33976M1	MINOR CHANGE TO INCREASE BASIN SIZE	WITHDRAWN
TR33977	SCHED A: 127.73 AC/340 SFR/4 O-S/9 LS O-S/1 PARK	APPROVED
TR33977E02	THE SECOND EXTENSION OF TIME REQUEST FOR TENTATIVE TRACT MAP NO. 33977 PROPOSED TO EXTEND THE MAP'S CURRENT EXPIRATION DATE OF OCTOBER 18, 2017 FOR AN ADDITIONAL 3 YEARS, TO OCTOBER 18, 2020, SUBJECT TO ALL THE PREVIOUSLY APPROVED AND AMENDED CONDITIONS OF APPROVAL WITH TO THE APPLICANT'S CONSENT. THE APPROVED TENTATIVE MAP S A SCHEDULE "A" SUBDIVISION OF 123.07 ACRES INTO 309 RESIDENTIAL LOTS WITH A MINIMUM LOT SIZE OF 5,000 SQ. FT. AND 8 OPEN SPACE LOTS.	APPROVED
TR33977M1		APPLIED
TR33978	51.15 AC/139 SFR LOTS/5 L/S LOTS/2 LOTS PRESV ROCK	APPROVED
TR33978E02	SECOND EXTENSION OF TIME FOR TR33978 PROPOSED TO EXTEND THE MAP'S CURRENT EXPIRATION DATE OF OCTOBER 18, 2017 FOR AN ADDITIONAL 3 YEARS, TO OCTOBER 18, 2020, SUBJECT TO ALL THE PREVIOUSLY APPROVED AND AMENDED CONDITIONS OF APPROVAL WITH TO THE APPLICANT'S CONSENT. THE APPROVED TENTATIVE MAP S A SCHEDULE "A" SUBDIVISION OF 51.15 ACRES INTO 139 RESIDENTIAL LOTS WITH A MINIMUM LOT SIZE OF 6,000 SQ. FT. AND 2 OPEN SPACE LOTS TO PRESERVE NATURAL ROCK OUTCROPPINGS AND 5 OPEN SPACE LOTS FOR COMMON LANDSCAPING. THE MAP INCLUDES THREE PROPOSED PHASES. THE FIRST PHASE IS PROPOSED TO CONTAIN 70 RESIDENTIAL LOTS AND ONE 9.49 ACRE OPEN SPACE LOT. THE OPEN SPACE LOT IN THIS PHASE IS A LARGE HILLSIDE SLOPE THAT IS FRONTED BY A STREET TO MAXIMIZE VISUAL BENEFITS TO THE COMMUNITY. THE SECOND PHASE WILL CONTAIN 64 RESIDENTIAL LOTS. THE FINAL PHASE WILL CONTAIN 5 RESIDENTIAL LOTS, AND ONE OPEN SPACE LOT TO PRESERVE ROCK OUTCROPPINGS.	APPROVED
TR33978M1	MINOR CHANGE 51.15 AC/139 SFR LOTS AND 7 OS LOTS	APPROVED
TR33978R01	1ST REVISION TO 33978 TENTATIVE TRACT MAP FOR 139 APPROVED LOTS	APPROVED

**Survey Cases**

<b>Case</b>	<b>Case Description</b>	<b>Status</b>
FSM33978	SCHED A 51.15 SFR LOTS, PARENT PHASE	PEND CORRECTION
FSM3397801	PHASE 1 OF TR 33978	PEND CORRECTION
FSM3397802	PHASE 2 OF TR 33978	PEND CORRECTION
MAP32438		ISSUED
MAP32439		ISSUED
MAP33977		ISSUED
MAP33978		ISSUED

**Transportation Cases**

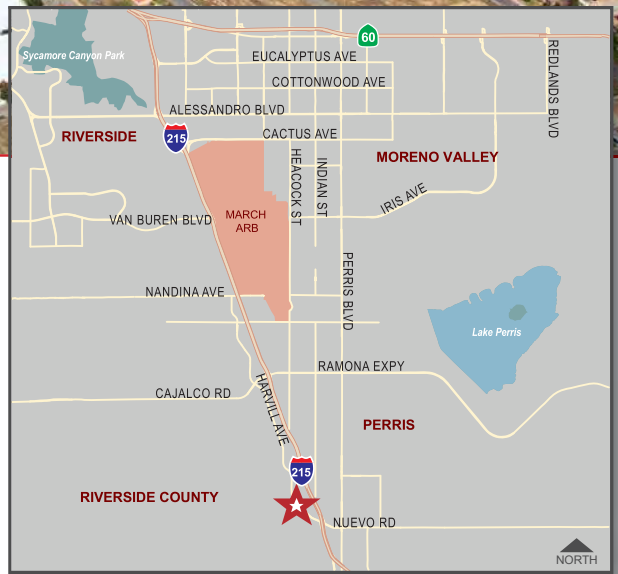
<b>Case</b>	<b>Case Description</b>	<b>Status</b>
BMP130234	CONST NPDES INSP TR33978 LOTS 1-149	VOID
IP130042	TR33978-2 FOOTHILL AVE & WALNUT AVE	ASSIGNED
IP130043	TR33978-1 FOOTHILL AVE & WALNUT AVE	ASSIGNED

# NUEVO

DISTRIBUTION CENTER

## STATE-OF-THE-ART DISTRIBUTION CENTER LOCATED ON 99 ACRES

NUEVO ROAD & HARVILL AVENUE | RIVERSIDE COUNTY, CA



### PROJECT FEATURES:

- State-of-the-Art Industrial Distribution Buildings
- 36' Warehouse Clearance
- Offices to Suit
- Dock High & Grade Level Loading Doors
- Cross Dock Loading Configuration
- Large Secured Concrete Truck Court
- Abundant Trailer Parking
- 2.5% Skylights
- ESFR Fire Sprinkler System
- Foreign Trade Zone #244
- Easy Access to I-215 & SR-60 Freeways
- Located within Riverside County Jurisdiction
- Corporate Neighbors include:
  - Whirlpool, Ross Dress for Less, Lowes,
  - HanesBrands, Philips Lighting, Kia Motors
  - Tesco Foods, Harman Kardon, Skechers

Development, Management & Marketing by:



For further information, please contact:

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# NUEVO

## DISTRIBUTION CENTER

# STATE-OF-THE-ART DISTRIBUTION CENTER LOCATED ON 99 ACRES

NUEVO ROAD & HARVILL AVENUE | RIVERSIDE COUNTY, CA

### CONCEPTUAL SITE PLAN

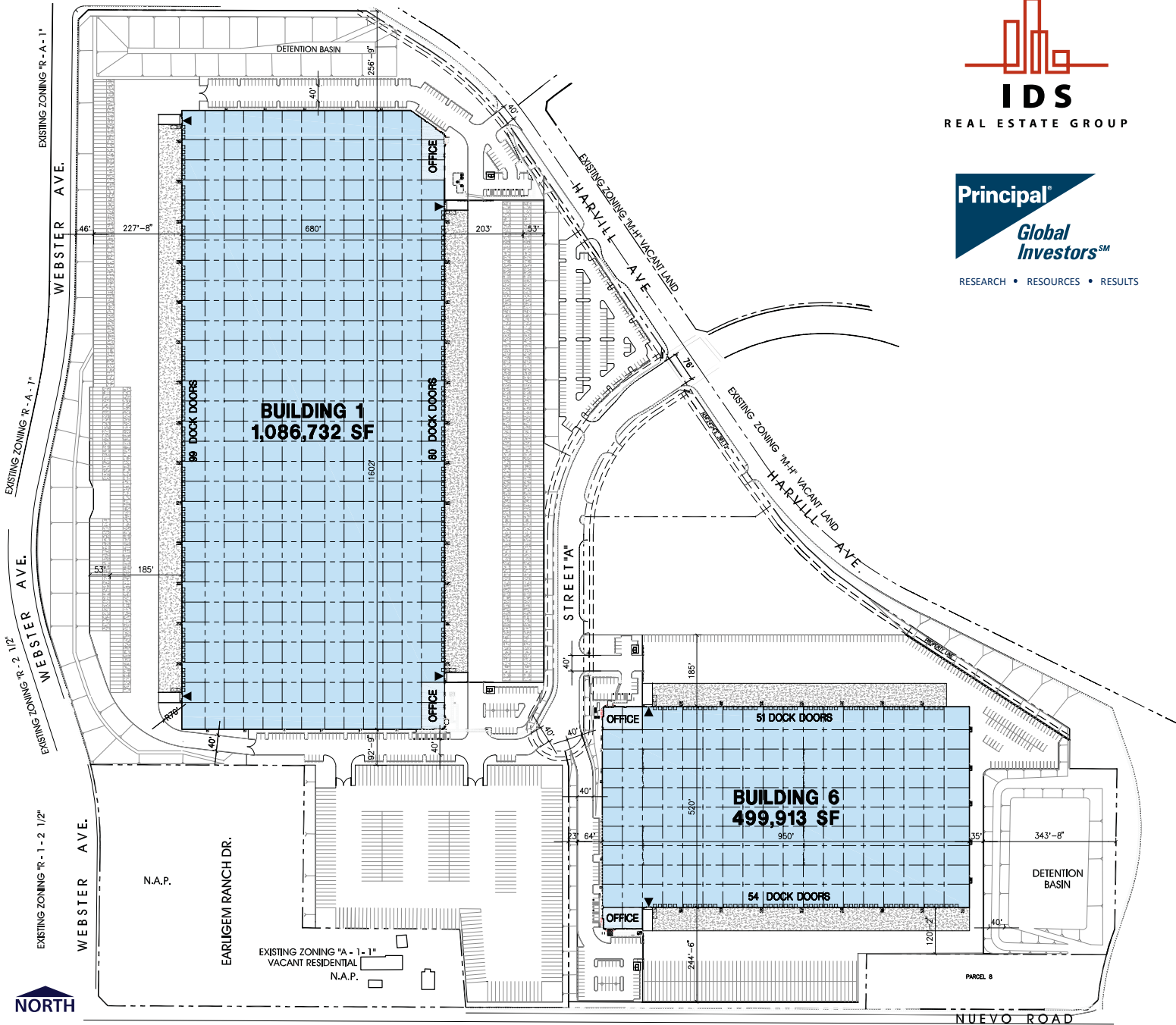
Development, Management & Marketing by:



REAL ESTATE GROUP



RESEARCH • RESOURCES • RESULTS



No warranty or representation, express or implied, is made as to the accuracy of the information contained herein, and same is submitted subject to errors, omissions, change of price, rental or other conditions, withdrawal without notice, and to any specific listing conditions, imposed by our principals. This listing shall not be deemed an offer to lease, sublease or sell such property and, in the event of any transaction for such property, no commission shall be earned by or payable to any cooperating broker except if otherwise provided pursuant to the express terms, rate and conditions of C&W's arrangement with its principal, if, as and when such commission (if any) is actually received from such principal.

For further information, please contact:

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**CITY OF PERRIS  
VMT SCOPING FORM FOR LAND USE PROJECTS**

This Scoping Form acknowledges the City of Perris requirements for the evaluation of transportation impacts under CEQA. The analysis provided in this form should follow the City of Perris TIA Guidelines, dated May 12, 2020.

**I. Project Description**

Tract/Case No.

Project Name:

Project Location:

Project Description:

(Please attach a copy of the project Site Plan)

Current GP Land Use:

Proposed GP Land Use:

Current Zoning:

Proposed Zoning:

If a project requires a General Plan Amendment or Zone change, then additional information and analysis should be provided to ensure the project is consistent with RHNA and RTP/SCS Strategies.

**II. VMT Screening Criteria**

A. Is the Project 100% affordable housing? 

YES		NO	X
-----	--	----	---

 Attachments:

B. Is the Project within 1/2 mile of qualifying transit? 

YES	X	NO	
-----	---	----	--

 Attachments:

C. Is the Project a local serving land use? 

YES		NO	X
-----	--	----	---

 Attachments:

D. Is the Project in a low VMT area? 

YES	X	NO	
-----	---	----	--

 Attachments:

E. Are the Project's Net Daily Trips less than 500 ADT? 

YES	X	NO	
-----	---	----	--

 Attachments:

**Low VMT Area Evaluation:**

Citywide VMT Averages <sup>1</sup>		
Citywide Home-Based VMT =	15.05	VMT/Capita
Citywide Employment-Based VMT =	11.62	VMT/Employee

[WRCOG VMT MAP](#)

Project TAZ	VMT Rate for Project TAZ <sup>1</sup>	Type of Project	
3821	13.39 VMT/Capita	Residential:	
	11.26 VMT/Employee	Non-Residential:	X

<sup>1</sup> Base year (2012) projections from RIVTAM.

**Trip Generation Evaluation:**

Source of Trip Generation:

Project Trip Generation: 

272	Average Daily Trips (ADT)
-----	---------------------------

Internal Trip Credit:	YES	<input type="text"/>	NO	<input checked="" type="checkbox"/>	% Trip Credit:	<input type="text"/>
Pass-By Trip Credit:	YES	<input type="text"/>	NO	<input checked="" type="checkbox"/>	% Trip Credit:	<input type="text"/>
Affordable Housing Credit:	YES	<input type="text"/>	NO	<input checked="" type="checkbox"/>	% Trip Credit:	<input type="text"/>
Existing Land Use Trip Credit:	YES	<input type="text"/>	NO	<input checked="" type="checkbox"/>	Trip Credit:	<input type="text"/>

Net Project Daily Trips: 

272	Average Daily Trips (ADT)
-----	---------------------------

 Attachments:

Does project trip generation warrant an LOS evaluation outside of CEQA? 

YES		NO	X
-----	--	----	---

**III. VMT Screening Summary**

**A. Is the Project presumed to have a less than significant impact on VMT?**

A Project is presumed to have a less than significant impact on VMT if the Project satisfies at least one (1) of the VMT screening criteria.

**Less Than Significant**

**B. Is mitigation required?**

If the Project does not satisfy at least one (1) of the VMT screening criteria, then mitigation is required to reduce the Project's impact on VMT.

**No Mitigation Required**

**C. Is additional VMT modeling required to evaluate Project impacts?**

YES		NO	X
-----	--	----	---

If the Project requires a zone change and/or General Plan Amendment AND generates 2,500 or more net daily trips, then additional VMT modeling using RIVTAM/RIVCOM is required. If the project generates less than 2,500 net daily trips, the Project TAZ VMT Rate can be used for mitigation purposes.

**IV. MITIGATION**

**A. Citywide Average VMT Rate (Threshold of Significance) for Mitigation Purposes:**

N/A	N/A
-----	-----

**B. Unmitigated Project TAZ VMT Rate:**

N/A	N/A
-----	-----

**C. Percentage Reduction Required to Achieve the Citywide Average VMT:**

N/A

**D. VMT Reduction Mitigation Measures:**

Source of VMT Reduction Estimates: \_\_\_\_\_

Project Location Setting \_\_\_\_\_

	VMT Reduction Mitigation Measure:	Estimated VMT Reduction (%)
1.		0.00%
2.		0.00%
3.		0.00%
4.		0.00%
5.		0.00%
6.		0.00%
7.		0.00%
8.		0.00%
9.		0.00%
10.		0.00%
<b>Total VMT Reduction (%)</b>		<b>0.00%</b>

(Attach additional pages, if necessary, and a copy of all mitigation calculations.)

**E. Mitigated Project TAZ VMT Rate:**

N/A	N/A
-----	-----

**F. Is the project presumed to have a less than significant impact with mitigation?**

**N/A**

If the mitigated Project VMT rate is below the Citywide Average Rate, then the Project is presumed to have a less than significant impact with mitigation. If the answer is no, then additional VMT modeling may be required and a potentially significant and unavoidable impact may occur. All mitigation measures identified in Section IV.D. are subject to become Conditions of Approval of the project. Development review and processing fees should be submitted with, or prior to the submittal of this Form. The Planning Department staff will not process the Form prior to fees being paid to the City.

Prepared By		Developer/Applicant	
<b>Company:</b>	Urban Crossroads, Inc.	<b>Company:</b>	Harley Knox 2021 LLC
<b>Contact:</b>	Charlene So	<b>Contact:</b>	Matt Englhard
<b>Address:</b>	1133 Camelback St. #8329, Newport Beach, CA	<b>Address:</b>	11777 San Vicente Blvd STE 780, Los Angeles CA
<b>Phone:</b>	(949) 861-0177	<b>Phone:</b>	
<b>Email:</b>	cso@urbanxroads.com	<b>Email:</b>	
<b>Date:</b>	3/23/2022	<b>Date:</b>	
<b>Approved by:</b>			
<b>Perris Planning Division</b>	<b>Date</b>	<b>Perris City Engineer</b>	<b>Date</b>

March 23, 2022

Mr. Matt Englhard  
Harley Knox LLC  
11777 San Vicente Bl., Suite 780  
Los Angeles, CA 90049

## HARLEY KNOX COMMERCE CENTER (DPR 21-00006) TRIP GENERATION ASSESSMENT

Mr. Matt Englhard,

Urban Crossroads, Inc. is pleased to provide the following Trip Generation Assessment for Harley Knox Commerce Center development which is located at 220-280 East Nance Street in the City of Perris. The purpose of this work effort is to determine whether additional traffic analysis is necessary for the proposed Project based on the City of Perris's Transportation Impact Analysis Guidelines for CEQA (dated May 12, 2020) (City Guidelines).

### PROPOSED PROJECT

The Project is proposed to consist of a 156,780 square foot warehouse building (see Exhibit 1). As such, the trip generation rates used for this analysis are based upon information collected by the Institute of Transportation Engineers (ITE) as provided in their Trip Generation Manual (11<sup>th</sup> Edition, 2021) for the proposed warehousing use (ITE Land Use Code 150) (see Table 1). The following summarizes the proposed land use and vehicle mix:

- Warehousing – ITE Land Use Code 150 has been used to derive site specific trip generation estimates for the proposed Project. The vehicle mix has also been obtained from the latest ITE Trip Generation Manual. The resulting vehicle mix is as follows: AM Peak Hour: 87.0% passenger cars and 13.0% trucks; PM Peak Hour: 85.0% passenger cars and 15.0% trucks; Weekday Daily: 73.0% passenger cars and 27.0% trucks. The truck percentages were further broken down by axle type per the following South Coast Air Quality Management District (SCAQMD) recommended truck mix for “without cold storage” uses: 2-Axle = 16.7%; 3-Axle = 20.7%; 4+-Axle = 62.6%.

TABLE 1: TRIP GENERATION RATES

Land Use <sup>1</sup>	Units <sup>2</sup>	ITE LU Code	AM Peak Hour			PM Peak Hour			Daily
			In	Out	Total	In	Out	Total	
Warehousing <sup>3</sup>	TSF	150	0.131	0.039	0.170	0.050	0.130	0.180	1.710
Passenger Cars			0.116	0.034	0.150	0.042	0.108	0.150	1.110
2-Axle Trucks			0.002	0.001	0.003	0.003	0.002	0.005	0.100
3-Axle Trucks			0.002	0.002	0.004	0.003	0.003	0.006	0.124
4+-Axle Trucks			0.007	0.006	0.013	0.010	0.009	0.019	0.376

<sup>1</sup> Trip Generation & Vehicle Mix Source: Institute of Transportation Engineers (ITE), Trip Generation Manual, Eleventh Edition (2021).

<sup>2</sup> TSF = thousand square feet

<sup>3</sup> Truck Mix: South Coast Air Quality Management District's (SCAQMD) recommended truck mix, by axle type.

Normalized % - Without Cold Storage: 16.7% 2-Axle trucks, 20.7% 3-Axle trucks, 62.6% 4-Axle trucks.

The trip generation summary illustrating daily, and peak hour trip generation estimates for the proposed Project in actual and passenger car equivalent (PCE) vehicles are shown on Table 2. As shown in Table 2, the proposed Project is anticipated to generate a total of 272 trip-ends per day with 25 AM peak hour trips and 28 PM peak hour trips (in actual vehicles). In comparison, the proposed Project is anticipated to generate a total of 420 PCE two-way trips per day with 29 PCE AM peak hour trips and 35 PCE PM peak hour trips.

TABLE 2: PROPOSED PROJECT TRIP GENERATION SUMMARY

Land Use	Quantity Units <sup>1</sup>	AM Peak Hour			PM Peak Hour			Daily
		In	Out	Total	In	Out	Total	
<b>Actual Vehicles:</b>								
Warehouse	156.780 TSF							
Passenger Cars:		18	5	23	7	17	24	176
2-Axle Trucks		0	0	0	0	0	0	16
3-Axle Trucks		0	0	0	0	1	1	20
4+-Axle Trucks		1	1	2	2	1	3	60
Truck Trips (Actual Vehicles)		1	1	2	2	2	4	96
Total Trips (Actual Vehicles) <sup>2</sup>		19	6	25	9	19	28	272
<b>Passenger Car Equivalent (PCE):</b>								
Warehouse	156.780 TSF							
Passenger Cars:		18	5	23	7	17	24	176
2-Axle Trucks (PCE = 1.5)		0	0	0	0	0	0	24
3-Axle Trucks (PCE = 2.0)		0	0	0	0	2	2	40
4+-Axle Trucks (PCE = 3.0)		3	3	6	6	3	9	180
Truck Trips (PCE)		3	3	6	6	5	11	244
Total Trips (PCE) <sup>2</sup>		21	8	29	13	22	35	420

<sup>1</sup> TSF = thousand square feet

<sup>2</sup> Total Trips = Passenger Cars + Truck Trips.

## SITE ACCESS

The proposed Project has two driveways on Harley Knox Boulevard and two driveways on Nance Street (see Exhibit 1).

- The northwest driveway on Harley Knox Boulevard is approximately 40-feet wide and would provide access to trucks and overflow passenger car parking. This driveway will be restricted to right-in/right-out only due to the existing raised median along Harley Knox Boulevard. Trucks will be able to make a right turn in (from the I-215 Freeway) and make a right-turn out (towards Redlands Avenue). 100% of the inbound trucks at this location would result in no more than 2 trucks during the peak hours. As such, a dedicated right turn lane is not recommended.
- The northeast driveway on Harley Knox Boulevard is approximately 32-feet wide and would provide access to passenger cars only. This driveway will also be restricted to right-in/right-out only due to the existing raised median along Harley Knox Boulevard. The County of Riverside's guidelines have been referenced as the City does not have their own LOS traffic study guidelines nor is there any details on right-turn lanes at driveways in the Perris Valley Commerce Center Specific Plan. The County's December 2020 Traffic Study Guidelines identifies that a project right turn volume of 50 or more peak hour trips would warrant the review of whether a right-turn deceleration lane is appropriate for any driveways located along major arterials and secondary street. Based on this criteria, a dedicated right turn lane is also not recommended for the northeast driveway on Harley Knox Boulevard as the inbound trips would fall below the 50 peak hour trips.
- The southwest driveway on Nance Street is approximately 40-feet wide and would provide access to trucks and overflow passenger car parking. This driveway will allow full turn movements (no access restrictions). It should be noted that Perris Boulevard at Nance Street is restricted to right-in/right-out only. Perris Boulevard is also not an identified City truck route, as such, trucks will turn left out of the driveway to utilize Redlands Avenue to either head north to Harley Knox Boulevard or south to access Placentia Avenue for freeway access.
- The southeast driveway on Nance Street is approximately 32-feet wide and would provide access to passenger cars only. This driveway will allow full turn movements.

Truck turns shown on Exhibit 2 show that the proposed Project driveways would adequately accommodate heavy truck turns (WB-67). As such, the proposed Project accommodates adequate site access as currently proposed.

## CONCLUSION

The proposed Project is anticipated to generate fewer than 50 peak hour trips and fewer than 500 two-way trips per day (both for actual vehicles and in PCE). Per the City's Guidelines, no additional traffic operations analysis is necessary.

If you have any questions or comments, I can be reached at (949) 861-0177.

Respectfully submitted,

URBAN CROSSROADS, INC.



Charlene So, PE  
Principal



EXHIBIT 1: PRELIMINARY SITE PLAN

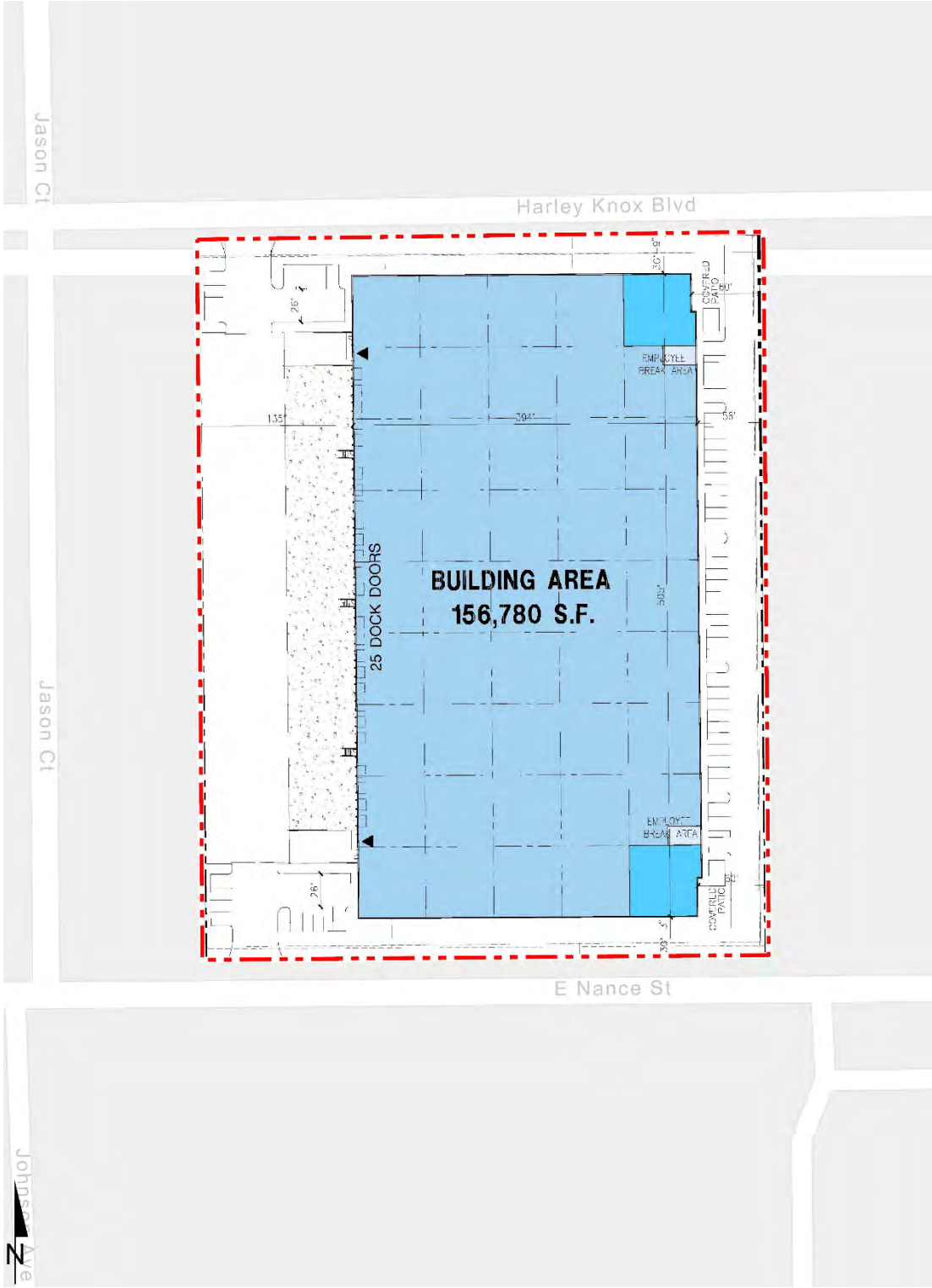
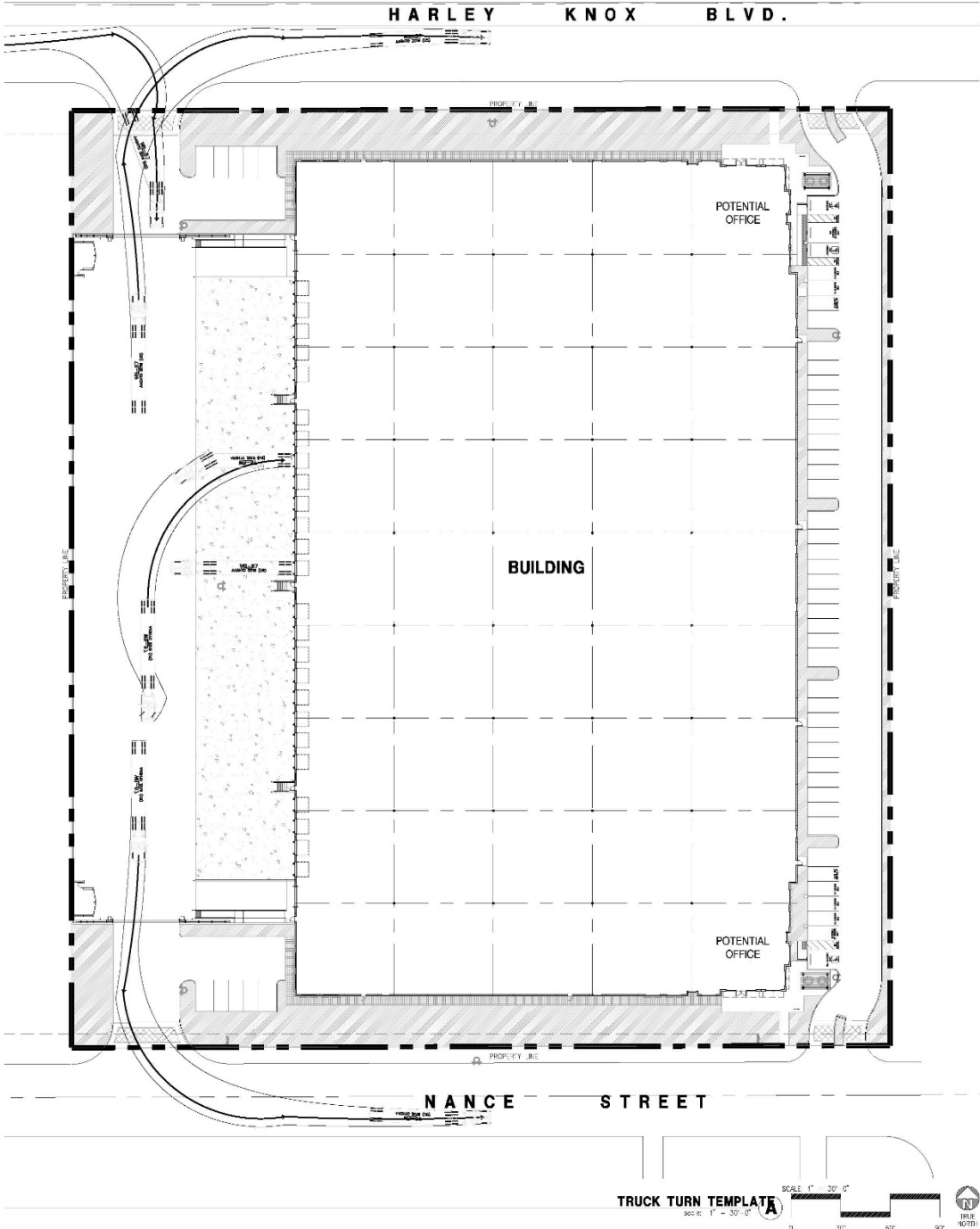


EXHIBIT 2: TRUCK ACCESS



March 25, 2022

Mr. Mathew Evans  
CITY OF PERRIS (Planning Division)  
135 North "D" Street  
Perris, CA 92570

**Subject: Harley Knox Commerce Center (DPR 21-00006) Trip Generation & VMT Screening Assessment Review #2, City of Perris**

**Introduction**

RK ENGINEERING GROUP, INC. (RK) has completed the 2<sup>nd</sup> review of the Trip Generation & VMT Screening Assessment for the proposed Harley Knox Commerce Center project (DPR 21-00006). The project is located at 220-280 East Nance Street on the SEC (Southeast Corner) of Jason Court/Las Palmas and Harley Knox Boulevard in the City of Perris. The project consists of a 156,780 square-foot (SF) warehouse building. Access will be provided to the site from Harley Knox Boulevard and East Nance Street.

RK has reviewed the revised Harley Knox Commerce Center Trip Generation Assessment, prepared by Urban Crossroads, dated March 25, 2022, as well as the VMT Scoping Form for the Project, prepared by Urban Crossroads, dated March 5, 2021, and is acceptable from a technical standpoint.

**Conclusions**

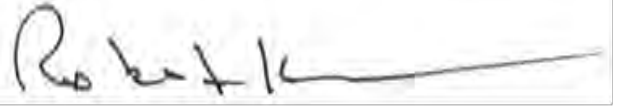
RK has reviewed the Trip Generation Assessment and VMT Scoping Form #2 for the Harley Knox Commerce Center project (DPR 21-00006) and it is approved technically as currently written.

If you have any questions, please call me at (949) 474-0809.

Sincerely,  
RK ENGINEERING GROUP, INC.



Justin Tucker, P.E.  
Principal Engineer



Robert Kahn, PE  
Founding Principal

Registered Civil Engineer 92866

X.C. Kenneth Phung, City of Perris  
Stuart McKibbin, City of Perris  
John Pourkazemi, Tri-Lake Consultants

RK17267  
JN:2126-2022-06



**PROJECT INFORMATION**

**Owner / Applicant**  
PROFICIENCY CAPITAL LLC  
11777 SAN VICENTE BOULEVARD  
SUITE 780  
LOS ANGELES, CA 90049  
TEL: (949) 842-3074  
CONTACT: MATT ENGLHARD

**Applicant Representative**  
HPA, INC.  
18831 BARDEEN AVE. STE 100  
IRVINE, CA 92612  
PHONE: (310) 387-9009  
CONTACT: JOSEPH KIM

**Project Address**  
25264 EAST NANCE STREET  
PERRIS, CA 92571

**Code Analysis**  
2019 CALIFORNIA BUILDING CODE  
2019 CALIFORNIA PLUMBING CODE  
2019 CALIFORNIA MECHANICAL CODE  
2019 CALIFORNIA ELECTRICAL CODE  
2019 CALIFORNIA FIRE CODE  
2019 CALIFORNIA ENERGY CODE  
2019 CALIFORNIA GREEN BUILDING STANDARDS

**Construction Type**  
CONCRETE TILT-UP BUILDING  
BUILDING OCCUPANCY: S-1 / B  
CONSTRUCTION TYPE: III-B

**Zoning**  
ESFR SYSTEM  
LIGHT INDUSTRIAL (LI)

**APN**  
302-100-020 (TR 1)  
302-100-030 (TR 2)  
302-100-031 (TR 2)

**LEGAL DESCRIPTION**

THE LAND REFERRED TO HEREIN BELOW IS SITUATED IN THE CITY OF PERRIS, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA, AND IS DESCRIBED AS FOLLOWS:  
PARCEL NO. 2 OF PARCEL MAP NO. 18,223 IN THE CITY OF PERRIS, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA, AS PER PLAT RECORDED IN BOOK 104 OF PARCEL MAPS, PAGES 43 AND 44 IN THE OFFICE OF THE COUNTY OF RECORDER OF SAID COUNTY.

EXCEPTING THEREFROM THE MOBILE HOME LOCATION THEREON.

ALSO EXCEPTING THEREFROM THAT PORTION OF THE LAND DESCRIBED IN DOCUMENT RECORDED FEBRUARY 03, 2012 AS INSTRUMENT NO. 2012-0051980, OF OFFICIAL RECORDS.

FOR CONVEYANCING PURPOSES ONLY: APN 302-100-020

THE LAND REFERRED TO HEREIN BELOW IS SITUATED IN THE CITY OF PERRIS, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA, AND IS DESCRIBED AS FOLLOWS:  
PARCELS 3 AND 4 OF PARCEL MAP NO. 18,223 ON FILE IN BOOK 104 PAGES 43 AND 44 OF PARCEL MAPS, RECORDS OF RIVERSIDE COUNTY, CALIFORNIA.

EXCEPTING THEREFROM THE PORTION OF THE LAND DESCRIBED IN DOCUMENT RECORDED NOVEMBER 14, 2011 AS INSTRUMENT NOS. 2011-0505929 AND 2011-0506188, BOTH OF OFFICIAL RECORDS.

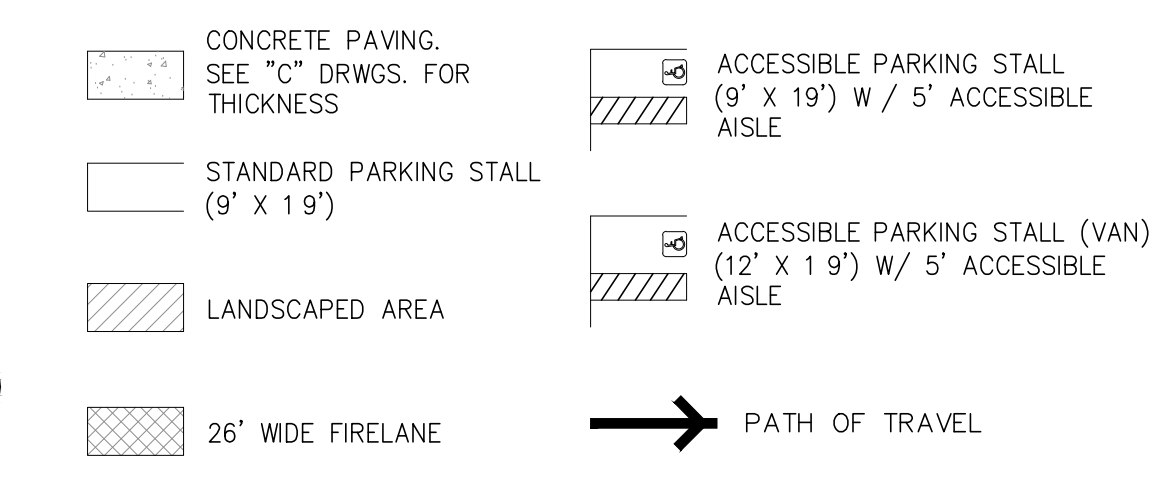
FOR CONVEYANCING PURPOSES ONLY:  
APN 302-100-030-3 (AFFECTS PARCEL 4) AND  
302-100-031-4 (AFFECTS PARCEL 3)

APN:  
302-100-020 (TR 1)  
302-100-030 (TR 2)  
302-100-031 (TR 2)

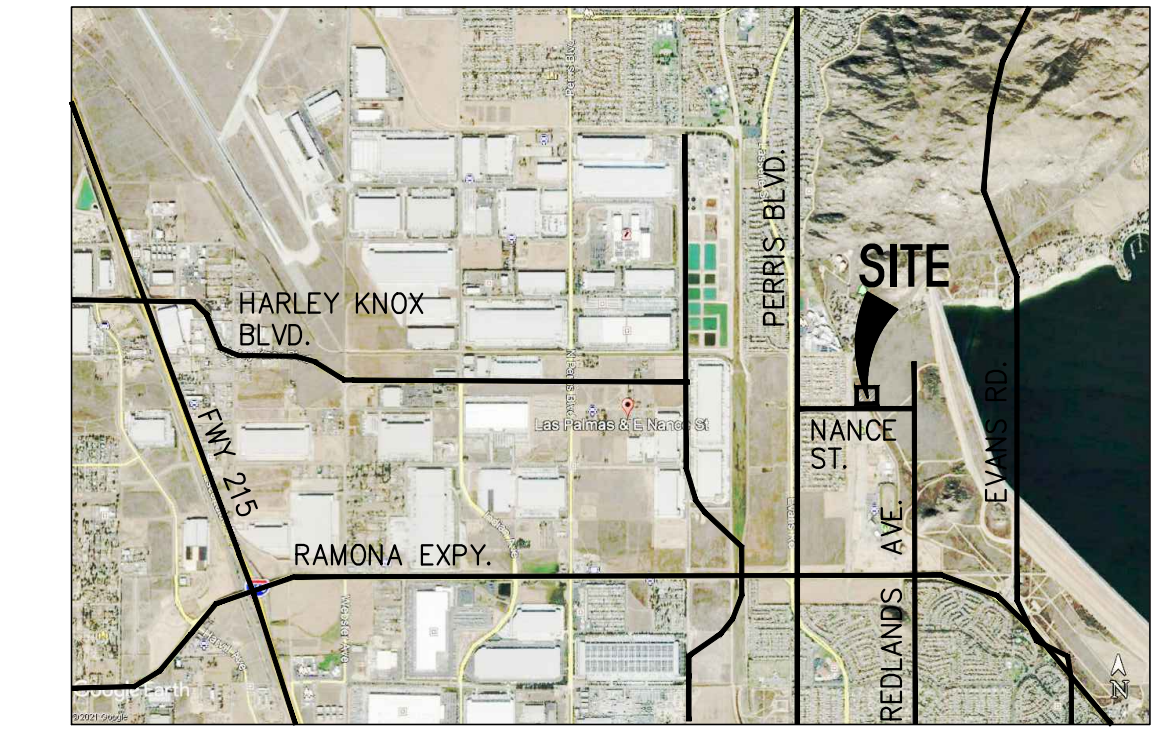
**SITE PLAN KEYNOTES**

- HEAVY BROOM FINISH CONCRETE PAVEMENT.
- ASPHALT CONCRETE (AC) PAVING.
- CONCRETE WALKWAY, MEDIUM BROOM FINISH
- DRIVEWAY APRONS TO BE CONSTRUCTED PROVIDE DECORATIVE COLORED PAVEMENT
- 5'-6"x5'-6"x4" THICK CONCRETE EXTERIOR LANDING PAD TYP. AT ALL EXTERIOR MAN DOORS TO LANDSCAPED AREAS. FINISH TO BE MEDIUM BROOM FINISH. PROVIDE WALK TO PUBLIC WAY OR DRIVE WAY AS REQ. BY CITY INSPECTOR.
- APPROXIMATE LOCATION OF TRANSFORMER. CONTRACTOR TO VERIFY WITH S.C.E.L.
- PROVIDE 8" HIGH METAL GATES W/ KNOX-BOX PER FIRE DEPARTMENT STANDARDS PER DRIVEWAY.
- CONCRETE RAMP W/ 42" HIGH CONCRETE WALL.
- EXTERIOR BIKE RACK TYPICAL.
- 14" HIGH CONCRETE TILT-UP SCREEN WALL. DECORATIVE PILASTERS TO BE PLACED EVERY 100 FEET.
- EXTERIOR CONCRETE STAIR.
- CONCRETE CURB. SEE CIVIL DRAWINGS.
- LANDSCAPE & HARDSCAPE. ALL LANDSCAPE & HARDSCAPE AREAS INDICATED BY SHADING.
- PATIO AREA.
- PRE-CAST CONCRETE WHEEL STOP.
- CONCRETE FILLED GUARD POST "6 DIA. U.N.O. 42" H.
- TRASH ENCLOSURE PER CITY STANDARD. SEE DAB-A4.1 FOR DETAILS.
- ACCESSIBLE ENTRY SIGN.
- ACCESSIBLE PARKING STALL SIGN.
- TRUNCATED DOME.
- APPROXIMATE LOCATION OF FIRE HYDRANT.
- WALL MOUNTED LIGHTING FIXTURE.
- SITE LIGHT POLE W/ CONCRETE BASE.
- NOT USED
- NOT USED
- PUMP HOUSE.
- RAISED PLANTER.
- WALKWAY WITH DG PAVING.
- FUTURE GUARD SHACK.

**SITE LEGEND**



**VICINITY MAP**

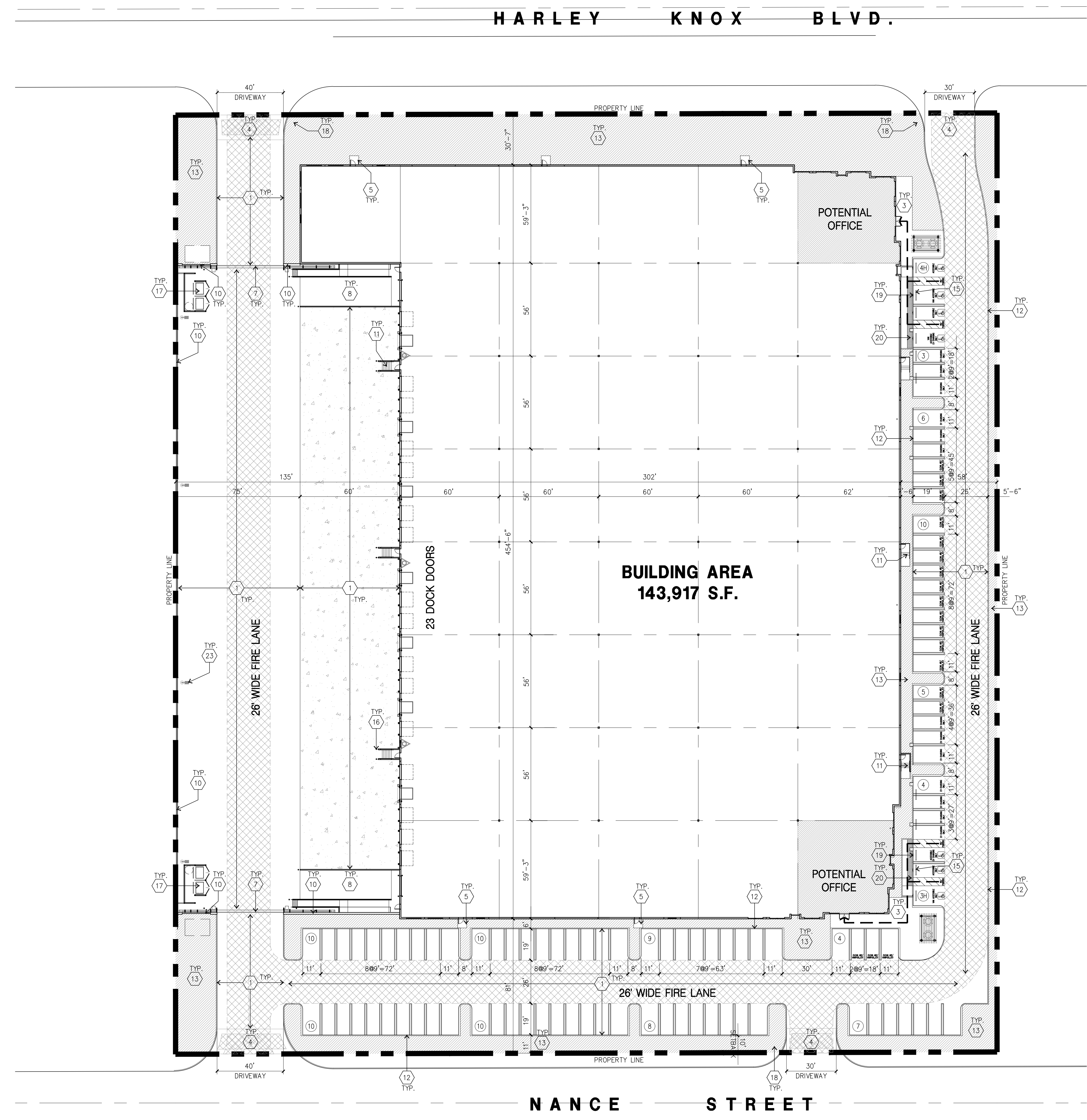


**PROJECT DATA**

<b>SITE AREA</b>	
in sq. ft.	280,238 s.f.
in acres	6.4 ac
<b>BUILDING AREA</b>	
office - 1st floor	4,000 s.f.
office - 2nd floor	4,000 s.f.
warehouse	135,917 s.f.
<b>TOTAL</b>	143,917 s.f.
<b>PVCC-SP DEVELOPMENT STANDARDS FOR LI</b>	Required Provided
<b>MINIMUM LOT SIZE</b>	15,000 SF 280,238
<b>LOT COVERAGE BY STRUCTURE</b>	50% max 49.9%
<b>FLOOR AREA RATIO (FAR)</b>	0.75 0.61
<b>STRUCTURE HEIGHT</b>	50' max
<b>FRONT SETBACK (LOCAL COLLECTOR)-TAKEN FROM WALNUT</b>	20'
	(10'+5' PER 10' OF STRUCTURE HEIGHT OVER 20')
<b>SIDE SETBACK (NON-RESIDENTIAL)</b>	NONE
<b>STREET SIDE SETBACK</b>	20'
	(10'+5' PER 10' OF STRUCTURE HEIGHT OVER 20')
<b>REAR SETBACK (LOADING/UNLOADING ACTIVITIES)</b>	30'
<b>PERIMETER LANDSCAPING (P.M.C. 19.02 AND 19.44.060)</b>	5'
<b>ENTRIES/PARKING/LOADING ENHANCED LANDSCAPE SCREENING</b>	REQUIRED
<b>SITE LANDSCAPE COVERAGE</b>	12%
<b>AUTO PARKING REQUIRED</b>	
Office	27 stalls
Warehouse	
1st 20K @ 1/1,000 sf	20 stalls
2nd 20K @ 1/2,000 sf	10 stalls
Over 40K @ 1/5,000 sf	20 stalls
<b>TOTAL</b>	77 stalls
<b>AUTO PARKING PROVIDED</b>	
Standard	66 stalls
Standard Accessible	5
Standard Accessible EV (Future EVCS)	1
Van Accessible EV (Future EVCS)	1
EV Standard (Future EVCS)	13
Clean air (with no future EV conduit)	18
<b>TOTAL</b>	104 stalls
<b>Zoning Ordinance for City</b>	
Zoning Designation - Perris Valley Commercial	
Center SP (PVCC-SP) - Light Industrial	
<b>MAXIMUM STRUCTURE HEIGHT</b>	
Height - 50', may be increase to a max 100' provided that the front and street side yards area increase at least 1' for every 1' of height increase.	
<b>MAXIMUM FLOOR AREA RATIO</b>	
F.A.R. - .75	
<b>MAXIMUM LOT COVERAGE</b>	
Coverage - 50%	
<b>SETBACKS</b>	
Front Yard	
Harley Knox Blvd. - for structure 20' or less - 10'	
- for structure over 20', additional 5' for each 10'	
Street Side	
Nance St. - 10'	
Interior side/Rear - none, adjoining R zone - 20'	
<b>LANDSCAPE REQUIRED</b>	
Percentage	12%
<b>LANDSCAPE PROVIDED</b>	
Percentage	11.5%
in sq. ft.	32,250 s.f.

**SITE PLAN GENERAL NOTES**

- THE SITE PLAN BASED ON THE SOILS REPORT PREPARED BY: TBD
- IF SOILS ARE EXPANSIVE IN NATURE, USE STEEL REINFORING FOR ALL SITE CONCRETE.
- ALL DIMENSIONS ARE TO THE FACE OF CONCRETE WALL, FACE OF CONCRETE CURB OR GRID LINE U.N.O.
- SEE "C" PLANS FOR ALL CONCRETE CURBS, GUTTERS AND SWALES.
- THE ENTIRE PROJECT SHALL BE PERMANENTLY MAINTAINED WITH AN AUTOMATIC IRRIGATION SYSTEM.
- SEE "C" DRAWINGS FOR POINT OF CONNECTIONS TO OFF-SITE UTILITIES. CONTRACTOR SHALL VERIFY ACTUAL UTILITY LOCATIONS.
- PROVIDE POSITIVE DRAINAGE AWAY FROM BLDG. SEE "C" DRAWINGS.
- CONTRACTOR TO REFER TO "C" DRAWINGS FOR ALL HORIZONTAL CONTROL DIMENSIONS. SITE PLANS ARE FOR GUIDANCE AND STARTING LAYOUT POINTS.
- SEE "C" DRAWINGS FOR FINISH GRADE ELEVATIONS.
- CONCRETE SIDEWALKS TO BE A MINIMUM OF 4" THICK W/ TOOLED JOINTS AT 6' O.C. EXPANSION/CONSTRUCTION JOINTS SHALL BE A MAXIMUM 12' EA. WAY. EXPANSION JOINTS TO HAVE COMPRESSIVE EXPANSION FILLER MATERIAL OF 1/4". FINISH TO BE A MEDIUM BROOM FINISH U.N.O.
- PAINT CURBS AND PROVIDE SIGNS TO INFORM OF FIRE LANES AS REQUIRED BY FIRE DEPARTMENT.
- CONSTRUCTION DOCUMENTS PERTAINING TO THE LANDSCAPE AND IRRIGATION OF THE ENTIRE PROJECT SITE SHALL BE SUBMITTED TO THE BUILDING DEPARTMENT AND APPROVED BY PUBLIC FACILITIES DEVELOPMENT PRIOR TO ISSUANCE OF BUILDING PERMITS.
- PRIOR TO FINAL CITY INSPECTION, THE LANDSCAPE ARCHITECT SHALL SUBMIT A CERTIFICATE OF COMPLETION TO PUBLIC FACILITIES DEVELOPMENT.
- ALL LANDSCAPE AND IRRIGATION DESIGNS SHALL MEET CURRENT CITY STANDARDS, AS LISTED IN GUIDELINES OR AS OBTAINED FROM PUBLIC FACILITIES DEVELOPMENT.
- ALL VERTICAL MOUNTING POLES OF CHAIN LINK FENCING SHALL BE CAPPED.
- LANDSCAPED AREAS SHALL BE DELINEATED WITH A MINIMUM SIX INCHES (6") HIGH CURB.
- ALL CONCRETE TILT-UP WALLS ARE REQUIRED TO PROVIDE ANTI-GRAFFITI COATING.



**OVERALL SITE PLAN**  
scale: 1" = 30'-0"