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LOCAL TRANSPORTATION ASSESSMENT

CARSON TOWNHOMES PROJECT

City of Carson, California
March 27, 2023

Prepared for:
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LLG Ref. 1-22-4465-1

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REVIEWED AND ACCEPTED
3/31/2023
NRL

ATTACHMENT NO. 2

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LOCAL TRANSPORTATION ASSESSMENT

CARSON TOWNHOMES PROJECT

City of Carson, California
March 27, 2023

1.0 INTRODUCTION

1.1 Transportation Assessment Overview

This transportation assessment report has been prepared to identify and evaluate the potential effects on the transportation network resulting from the proposed Carson Townhomes project (the "Project") located in the City of Carson (the "City"). The project site is located at 215 West Carson Street situated along the north side of West Carson Street between Moneta Avenue and Main Street. The proposed project site and general vicinity are shown in ***Figure 1-1***.

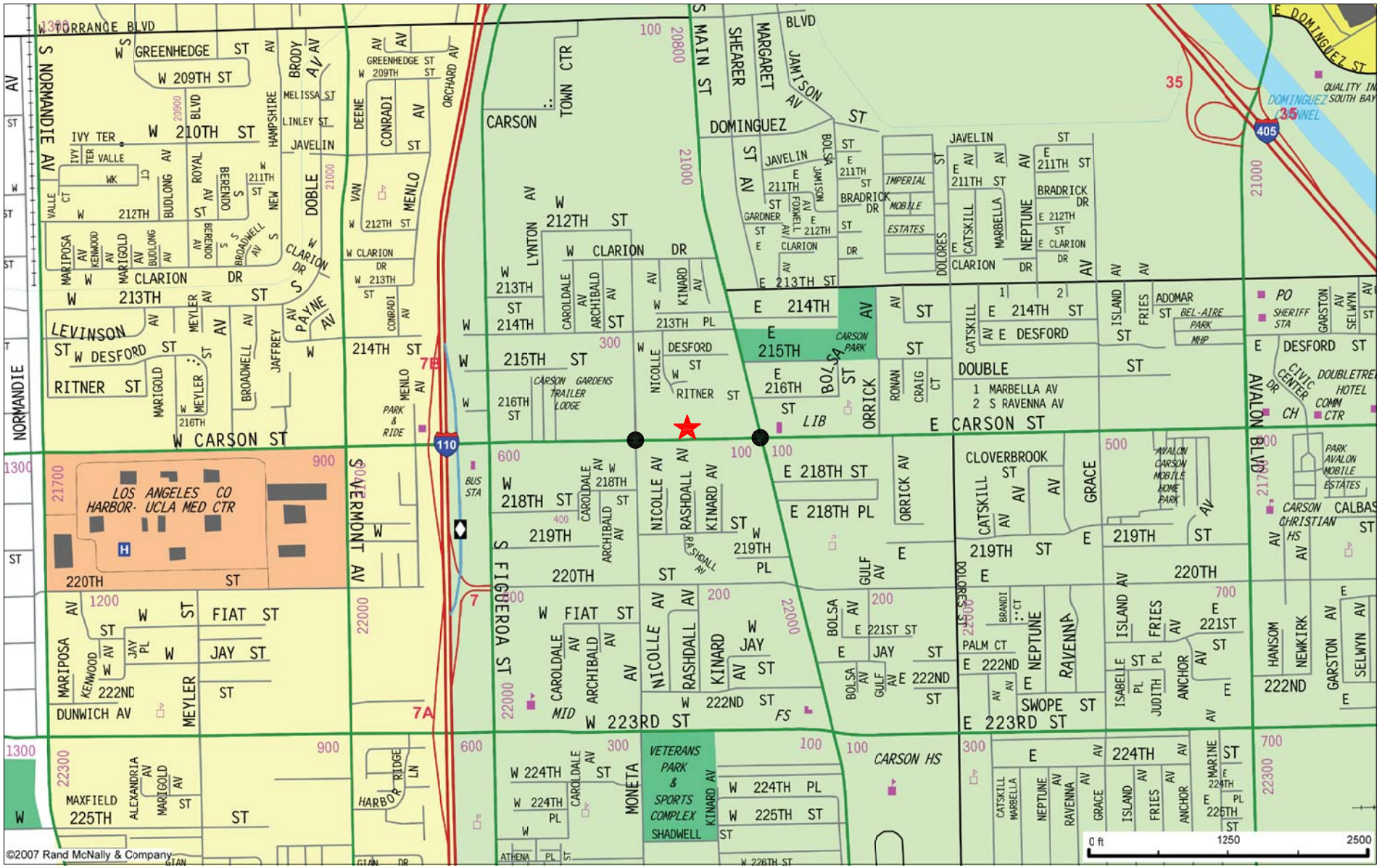
In compliance with the California Environmental Quality Act (CEQA) Sections 15064.3 and 15064.7, the City of Carson utilizes Vehicle Miles Traveled (VMT) for the purpose of analyzing transportation impacts under CEQA. In addition, the City maintains vehicle Level of Service (LOS) standards for local transportation infrastructure for purposes outside of CEQA. The City's requirements identify both CEQA based analysis requirements and non-CEQA based analysis requirements for analyzing the potential transportation impacts of proposed development projects.

Pursuant to the current statutory requirements of the CEQA Guidelines, the proposed project's transportation impacts are determined on the basis of VMT. The VMT assessment and impact conclusions are summarized separately in the "Carson Townhomes Project – Vehicle Miles Traveled Assessment", prepared by Linscott, Law and Greenspan, Engineers in September 2022.

This local transportation assessment evaluates potential project-related effects on intersection operations and Levels of Service (LOS) at three (3) key intersections (including the project driveway) in the vicinity of the project site. The study intersections were determined in consultation with City of Carson staff. This report (i) presents the proposed project's existing transportation network context, (ii) presents existing traffic volumes, (iii) forecasts future cumulative baseline conditions, (iv) forecasts project-generated traffic, (v) assesses the potential for project-related effects on the existing transportation network consistent with the non-CEQA based metrics set forth as requested by City staff, and (vi) recommends transportation network improvement measures, where necessary.

1.2 Study Methodology

The local transportation analysis criteria for this assessment were identified in consultation with City of Carson staff. The analysis criteria were determined based on the City's requirements, the proposed project description and location, and the characteristics of the surrounding transportation



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MAP SOURCE: RAND MCNALLY & COMPANY

Project Site

Study Intersection

Figure 1-1
Vicinity Map

215 West Carson Townhomes Project

system. City of Carson staff confirmed the appropriateness of the analysis criteria when it approved the scoping document. The approved scoping document is attached to this report in ***Appendix A***.

On September 27, 2013, Governor Brown signed Senate Bill (SB) 743 (Steinberg, 2013). Among other things, SB 743 created a process to change the methodology to analyze transportation impacts under CEQA (Public Resources Code Section 21000 and following) in order to promote 1) the reduction of greenhouse gas emissions, 2) the development of multimodal transportation networks, and 3) a diversity of land uses. On December 30, 2013, the State of California Governor's Office of Planning and Research (OPR) released a preliminary evaluation of alternative methods of transportation analysis, which included analysis based on project VMT rather than impacts to intersection Level of Service. OPR issued other draft discussion documents in March 2015 and January 2016, suggesting new revisions to the CEQA Guidelines. Concurrently, OPR developed the *Technical Advisory on Evaluating Transportation Impacts in CEQA*[1] *("Technical Advisory")*, which provides non-binding recommendations on the implementation of VMT methodology and which has significantly informed the way VMT analyses are conducted in the State. In November 2017, OPR submitted the proposed amendments to the CEQA Guidelines to the State's Natural Resources Agency (including the new Guidelines Section 15064.3 which governs how analyses of potential traffic impacts should be conducted). On January 26, 2018, the Natural Resources Agency published a Notice of Rulemaking, commencing the formal rulemaking process for the amendments to the CEQA Guidelines. On December 28, 2018, the California Office of Administrative Law adopted the proposed amendments, formally implementing the use of VMT as the metric for transportation analysis under CEQA. State-wide implementation of the new metric was required by July 1, 2020. The proposed project's CEQA-compliant VMT impact analysis is presented separately in the "Carson Townhomes Project – Vehicle Miles Traveled Assessment", prepared by Linscott, Law and Greenspan, Engineers in September 2022.

The passage of SB 743 and the resulting amendment to the CEQA Guidelines does not prevent agencies from continuing to analyze delay or LOS outside of CEQA review for other transportation planning or analysis purposes (i.e., general plans, impact fee programs, corridor studies, congestion reduction, or ongoing network monitoring). These analysis requirements and LOS standards apply to discretionary approvals of new land use development projects. This assessment utilizes the latest version of the City-approved Highway Capacity Manual (HCM) methodology to evaluate intersection LOS, which is then compared to the City's LOS standards and reviewed for detrimental effects on circulation within the existing transportation network. In conjunction with City staff, a total of three (3) study intersections (including the project driveway) were selected for analysis. The City's requirements also require an analysis of a proposed project's effect on existing pedestrian, bicycle, and transit infrastructure in the vicinity of the project site as well as the provision of multi-modal facilities within the site itself.

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

2.0 PROJECT DESCRIPTION

2.1 Existing Project Site

The proposed project site is located at 215 West Carson Street in the City of Carson. The project site is situated along the north side of West Carson Street between Moneta Avenue and Main Street. The site is bordered by residential uses to the north, West Carson Street to the south, and commercial uses to the east and west. The existing project site comprises of two single-family homes and a 2-unit multi-family building which will be removed to accommodate the proposed project. The project vicinity is shown in *Figure 1-1*.

Vehicular access to the existing project site is currently provided via three driveways on West Carson Street. The existing driveways are located on the north side of West Carson Street along the southerly project frontage and are currently limited to right-turn ingress and egress movements only due the existing raised median on West Carson Street. An aerial photograph of the existing site is presented in ***Figure 2-1***.

2.2 Proposed Project Description

The proposed project consists of the construction of 34 residential townhomes within eight buildings. The proposed residential unit mix consists of 6 two-bedroom units and 28 three-bedroom units. The project will provide common amenities such as a playground area, a 323 square-foot community room and recreation space. Vehicular access is planned to be provided via a single driveway on West Carson Street. A total of 78 parking spaces is planned to be provided for the project. Two bicycle spaces are planned to be provided for the project. The project build-out and occupancy year is anticipated by the year 2024. The site plan for the proposed project is illustrated in ***Figure 2-2***.

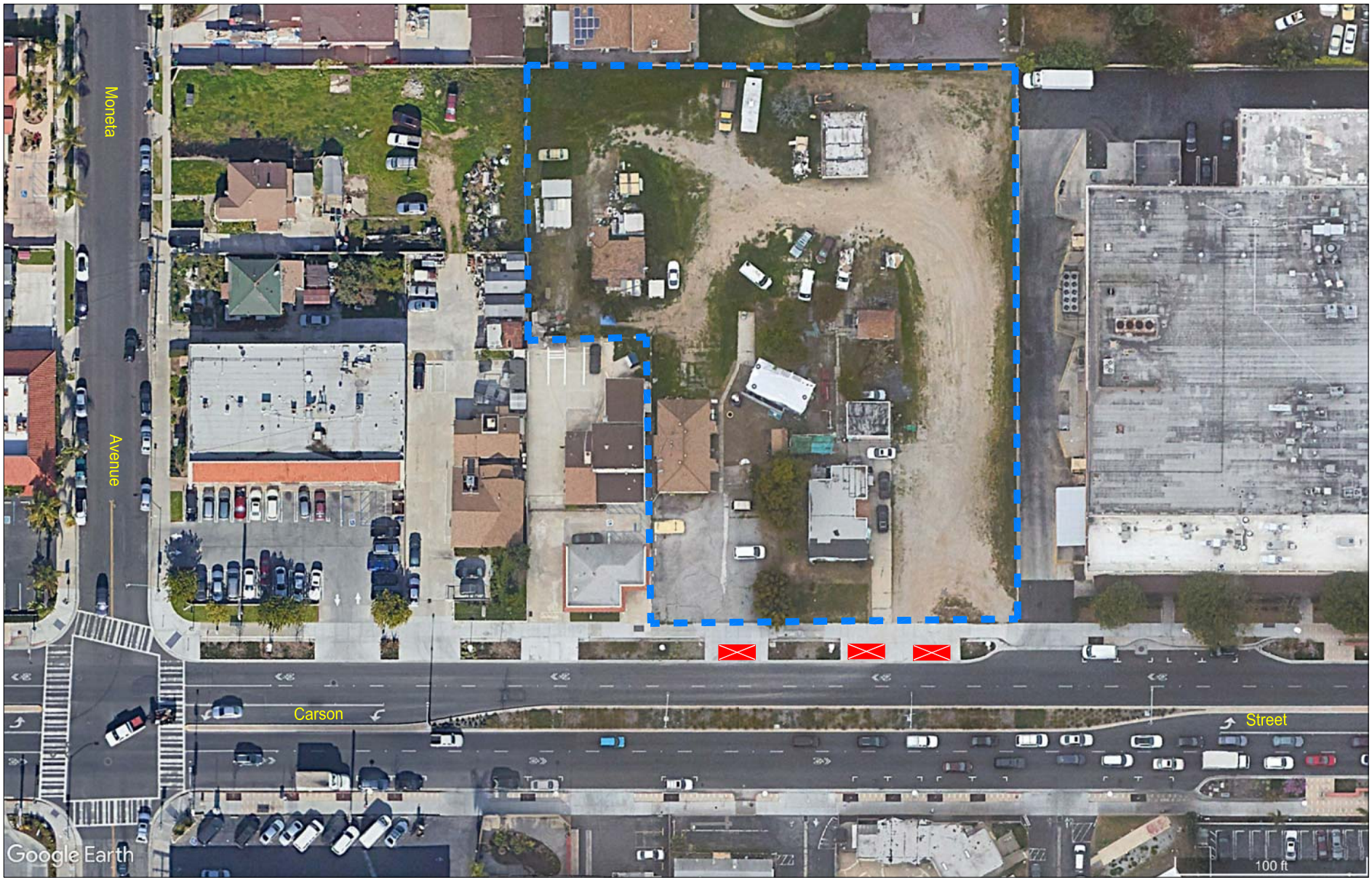
2.3 Project Site Access

2.3.1 *Vehicular Site Access*

As shown in *Figure 2*-2, vehicular access to the proposed project site is planned to be provided via one (1) driveway located on the north side of West Carson Street. The proposed driveway will be located along the southerly project frontage, approximately midway between the easterly and westerly property boundaries. The project driveway is planned to accommodate right-turn ingress and egress movements only due the existing raised median on West Carson Street. "No Stopping Any Time" signs are posted along the north side of West Carson Street both east and west of the proposed driveway.

2.4 Project Parking

The proposed project is planned to provide a total of 78 vehicular parking spaces, consisting of 68 covered spaces (i.e., 2 spaces per unit), 9 standard guest parking spaces, and one handicap van accessible guest space.



MAP SOURCE: GOOGLE EARTH

Project Site

Existing Driveway

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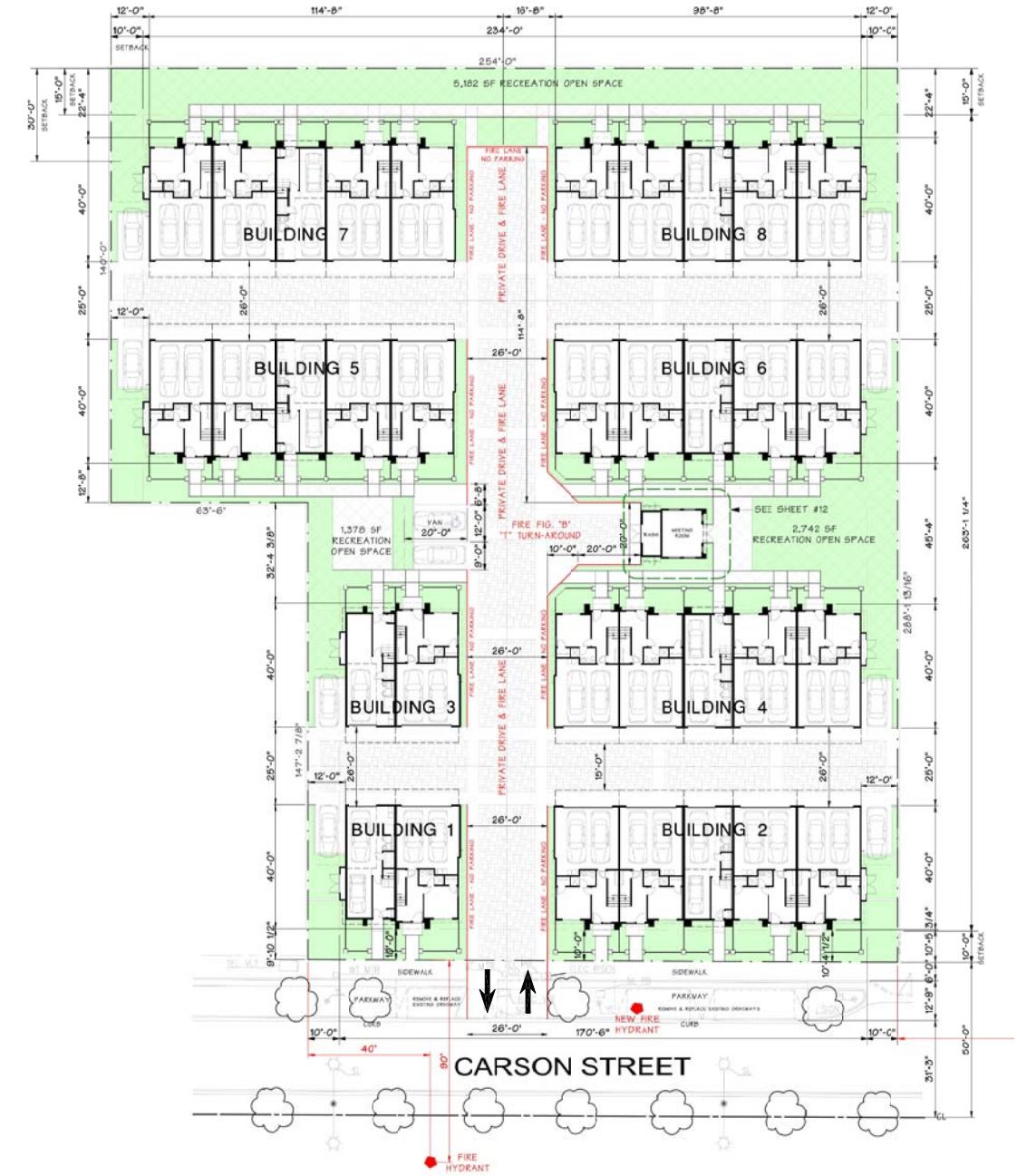
Figure 2-1
Aerial Photograph of the Existing Project Site

215 West Carson Townhomes Project



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SOURCE: RANDY MORRIS ARCHITECT

Figure 2-2
Site Plan

2.5 Project Trip Generation and Distribution

2.5.1 *Project Trip Generation Forecast*

Traffic volumes to be generated by the proposed project were forecast for the weekday AM and PM peak hours, and over a 24-hour period. Trip generation rates provided in the Institute of Transportation Engineers' (ITE) Trip Generation Manual[2] were utilized to forecast project traffic generation for the proposed project. ITE Land Use Code 220 (Multi-Family Housing [Low-Rise]) trip generation rates were used to forecast the traffic volumes expected to be generated by the proposed residential units.

In addition to the proposed project trip generation forecasts, forecasts were also made for the existing, active land use on the project site. ITE Land Use Code 210 (Single-Family Housing) and ITE Land Use Code 220 (Multi-Family Housing [Low-Rise]) trip generation average rates were used to forecast expected traffic generation for the existing, active land use on-site (i.e., one single-family home). These existing trips were applied as a credit towards the proposed project's trip generation forecast.

The trip generation forecast for the proposed project is summarized in ***Table 2-1***. As presented in ***Table 2-1***, the proposed project is expected to generate 12 net new vehicle trips (3 inbound trips and 9 outbound trips) during the weekday AM peak hour. During the weekday PM peak hour, the proposed project is expected to generate 14 net new vehicle trips (9 inbound trips and 5 outbound trips). Over a 24-hour period, the proposed project is forecast to generate 198 net new daily trip ends during a typical weekday (99 inbound trips and 99 outbound trips).

2.5.2 *Project Trip Distribution and Assignment*

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

- The site's proximity to major traffic corridors (i.e., Carson Street, Main Street, etc.);
- Expected localized traffic flow patterns based on adjacent roadway channelization and presence of traffic signals;
- Existing intersection traffic volumes;
- Ingress/egress scheme planned for the proposed project;
- Nearby population and employment centers; and
- Input from City of Carson staff.

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

Table 2-1
PROJECT TRIP GENERATION [1]

LAND USE	SIZE	DAILY TRIP ENDS [2] VOLUMES	AM PEAK HOUR VOLUMES [2] IN	AM PEAK HOUR VOLUMES [2] OUT	AM PEAK HOUR VOLUMES [2] TOTAL	PM PEAK HOUR VOLUMES [2] IN	PM PEAK HOUR VOLUMES [2] OUT	PM PEAK HOUR VOLUMES [2] TOTAL
Proposed Use								
Townhomes [3]	34 DU	230	3	11	14	11	6	17
Subtotal Proposed Use	**34 DU**	**230**	**3**	**11**	**14**	**11**	**6**	**17**
Existing Uses								
Single-Family Housing [4]	(2) DU	(19)	0	(1)	(1)	(1)	(1)	(2)
Townhomes [3]	(2) DU	(13)	0	(1)	(1)	(1)	0	(1)
Subtotal Existing Use		**(32)**	**0**	**(2)**	**(2)**	**(2)**	**(1)**	**(3)**
NET INCREASE		**198**	**3**	**9**	**12**	**9**	**5**	**14**

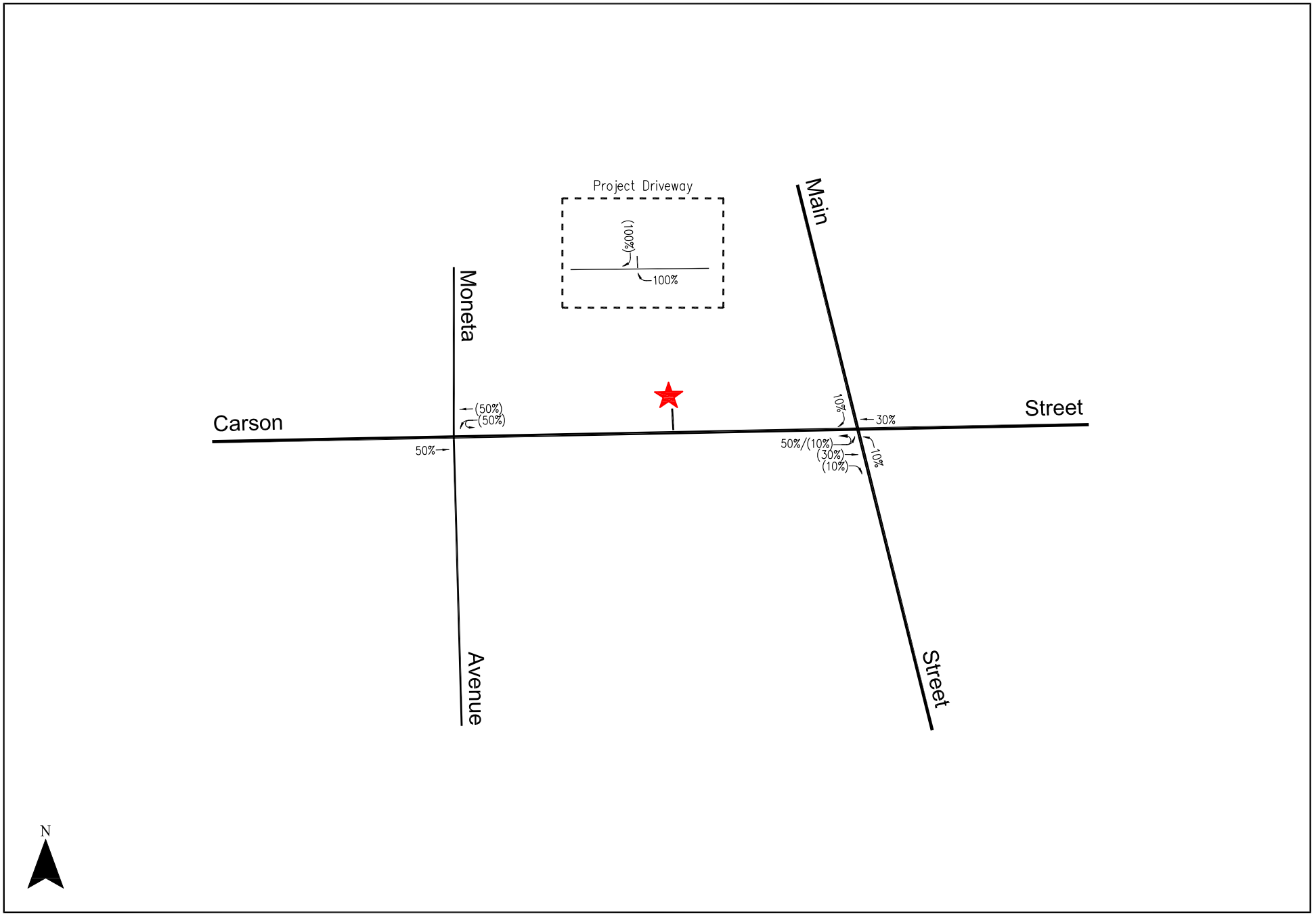
[1] Source: ITE "Trip Generation Manual", 11th Edition, 2021.

[2] Trips are one-way traffic movements, entering or leaving.

[3] ITE Land Use Code 220 (Multifamily Housing [Low-Rise]) trip generation average rates.
- Daily Trip Rate: 6.74 trips/dwelling unit; 50% inbound/50% outbound
- AM Peak Hour Trip Rate: 0.40 trips/dwelling units; 24% inbound/76% outbound
- PM Peak Hour Trip Rate: 0.51 trips/dwelling units; 63% inbound/37% outbound

[4] ITE Land Use Code 210 (Single-Family Detached Housing) trip generation average rates.
- Daily Trip Rate: 9.43 trips/dwelling unit; 50% inbound/50% outbound
- AM Peak Hour Trip Rate: 0.70 trips/dwelling units; 26% inbound/74% outbound
- PM Peak Hour Trip Rate: 0.94 trips/dwelling units; 63% inbound/37% outbound

The traffic volume distribution percentages for the proposed project during AM and PM peak hours at the study intersections are illustrated in ***Figure 2-3***. The forecast AM and PM peak hour net new project traffic volumes (i.e., the combined existing and proposed project volumes) at the study intersections for the AM and PM peak hours for the proposed project are displayed in ***Figure 2-4***. The traffic volume assignments presented in *Figures 2-4* reflect the traffic distribution characteristics shown in *Figure 2-3* and the proposed project traffic generation forecast presented in *Table 2-1*.



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LINSCOTT LAW & GREENSPAN engineers

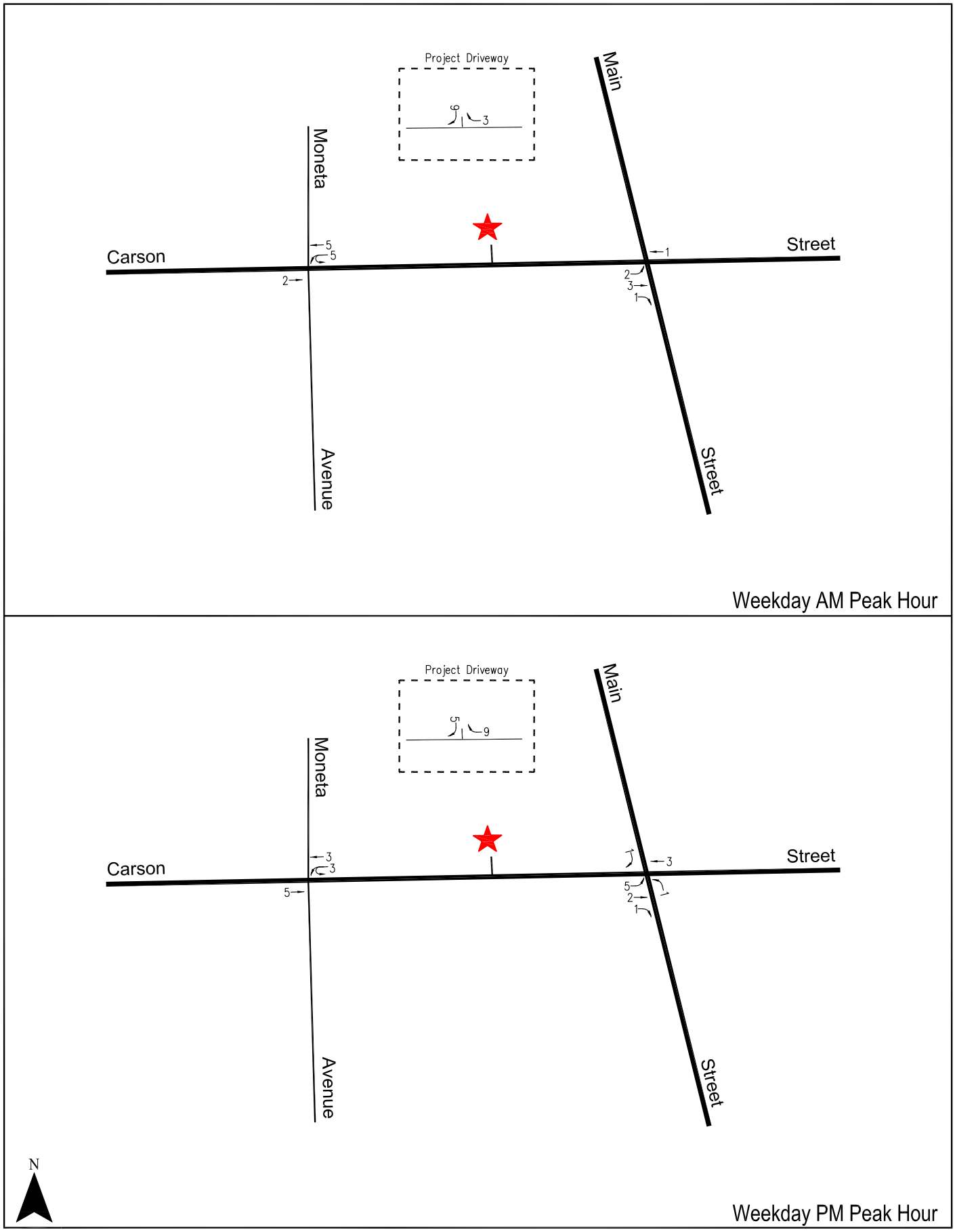
★ Project Site

XX = Inbound Percentage

(XX) = Outbound Percentage

Figure 2-3
Project Trip Distribution

215 West Carson Townhomes Project



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Project Site

Figure 2-4
Project Traffic Volumes

215 West Carson Townhomes Project

3.0 PROJECT SITE CONTEXT

The following sections will provide an overview of the transportation infrastructure in the vicinity of the proposed project, including infrastructure which supports both motorized and non-motorized transportation modes.

3.1 Non-Vehicle Network

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

3.1.1 *Pedestrian System*

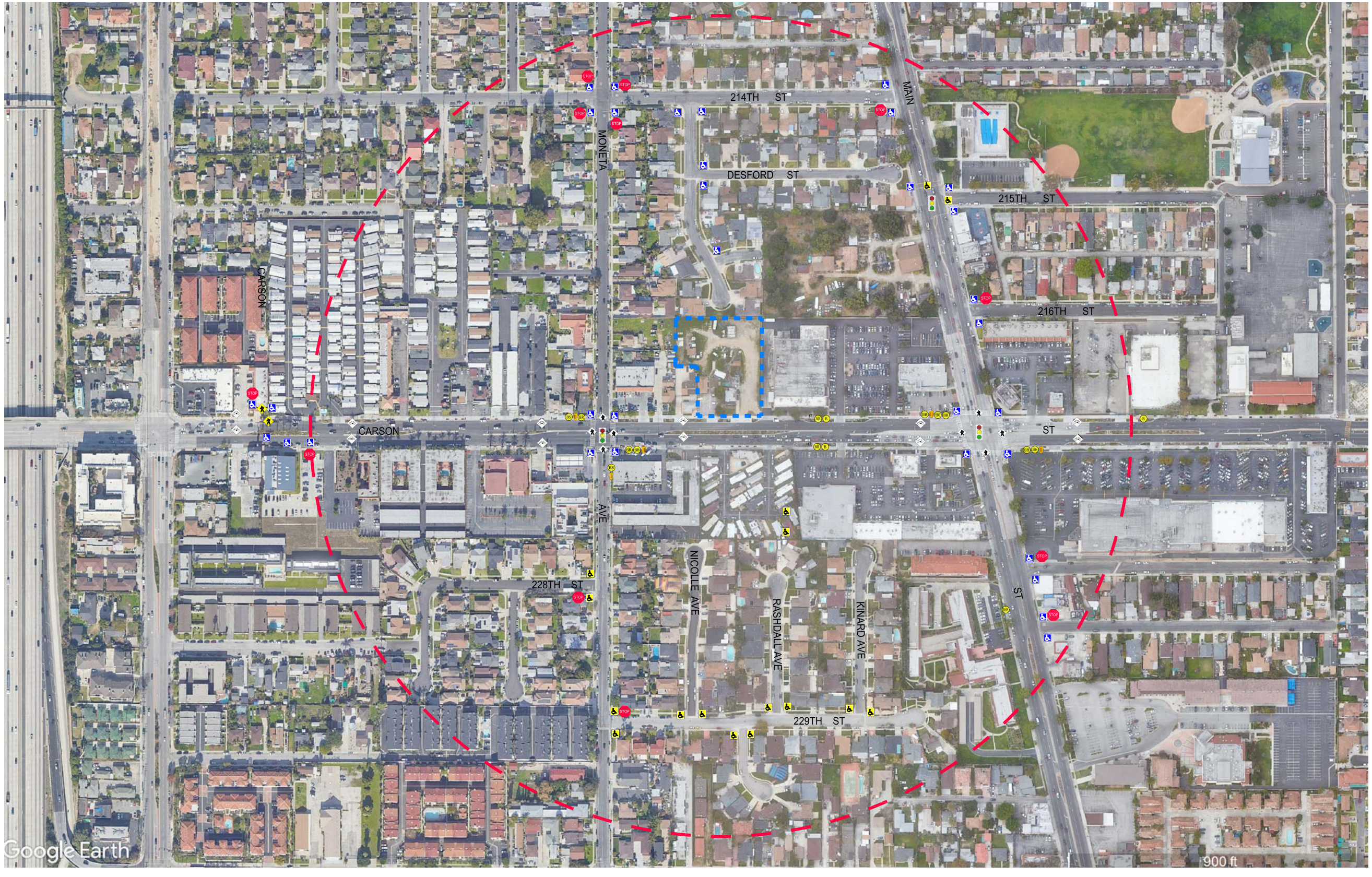
Pedestrian infrastructure consists of facilities such as sidewalks, crosswalks, pedestrian signals, curb access ramps, Americans with Disabilities Act (ADA) compliant tactile warning strips, and curb extensions, among other things. These facilities are generally provided within the study area. Public sidewalks and pedestrian facilities are provided on all streets within the project vicinity, including Carson Street, Main Street, and Moneta Avenue. ***Figure 3-1*** shows the existing pedestrian and transit facilities near the project site.

The project frontage along Carson Street, is currently improved with sidewalk, landscaping strips along the north and south sides of the sidewalk, curb, and gutter. As described in *Section 2.3, Project Site Access*, the proposed project will require construction of a new driveway near the existing driveway location. The driveway will be constructed to City of Carson standards and will maintain public sidewalk access across the driveway opening. The proposed project therefore will not result in the removal, degradation, or loss of access to any existing pedestrian facilities in the vicinity. Additionally, the project will provide an ADA compliant pedestrian walkway connecting the existing public sidewalks surrounding the project site to the walkways within the proposed development.

Walkability indicates walking is readily available as a safe, connected, accessible and pleasant mode of transport. Several criteria are widely accepted as key aspects of walkability of urban areas that should be satisfied. The underlying principle is that pedestrians should not be delayed, diverted, or placed in danger. These criteria include:

- Connectivity: People can walk from one place to another without encountering major obstacles, obstructions, or loss of connectivity.

- Convivial: Pedestrian routes are friendly and attractive, and perceived as such by pedestrians.



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SITE	0.25 MILE RADIUS FROM PROJECT SITE	CROSSWALK	BUS STOP	BIKE ROUTE/SHARROW
SIGNAL	ADA	CROSSWALK YELLOW	BUS STOP WITH BUS BENCH	MAIL BOX
STOP SIGN	ADA YELLOW TRUNCATED DOME	BENCH	BUS STOP WITH BUS BENCH & SHELTER	TRASH
		BIKE RACK		

Figure 3-1
Existing Nearby Pedestrian & Transit Facilities

215 West Carson Townhomes Project

- Conspicuous: Suitable levels of lighting, visibility and surveillance over its entire length, with high quality delineation and signage.

- Comfortable: High quality and well-maintained footpaths of suitable widths, attractive landscaping and architecture, shelter and rest spaces, and a suitable allocation of roadspace to pedestrians.

- Convenient: Walking is a realistic travel choice, partly because of the impact of the other criteria set forth above, but also because walking routes are of a suitable length as a result of land use planning with minimal delays.

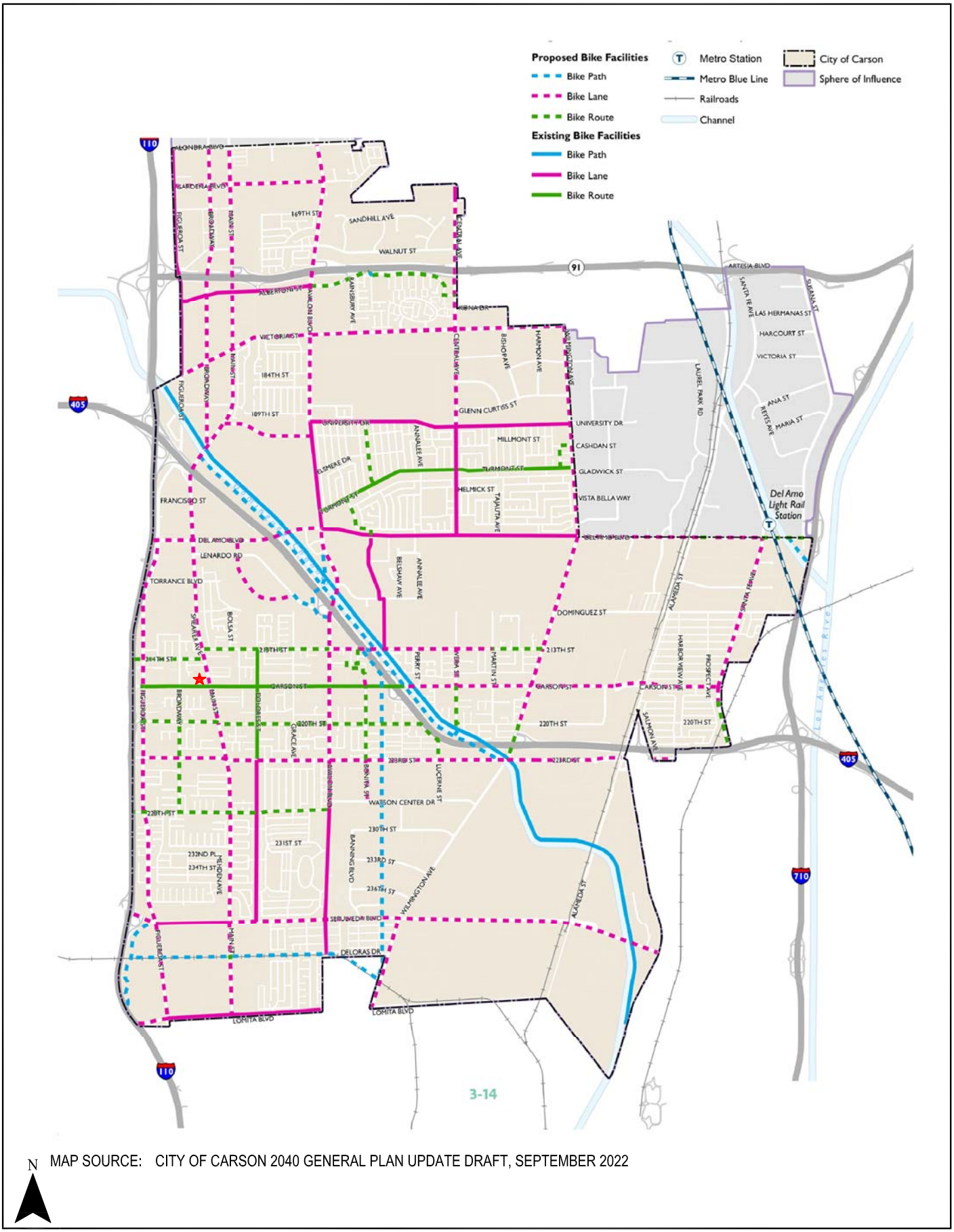
A review of the proposed project pedestrian walkways indicates that these primary characteristics are accommodated within and adjacent to the project. Proposed project features would include landscaped and lighted pedestrian walkways connecting facilities within the site, as well as connections with the adjacent public sidewalks along the project frontage. Street trees and streetscape plantings should be introduced along the same public frontages in accordance with the City's standards. In addition, project signage could include general ground level and wayfinding pedestrian signage around the perimeter of the project site, building identification signs, and other sign types. Wayfinding signs would be located at access points to the on-site amenities and facilities, parking area/s, and building entrances.

3.1.2 *Bicycle System*

Bicycle infrastructure consists of both facilities within the roadway as well as public bicycle parking spaces. The Federal and State transportation systems recognize three primary bikeway facilities: Bicycle Paths (Class I), Bicycle Lanes (Class II), and Bicycle Routes (Class III). Bicycle Paths (Class I) are exclusive car-free facilities that are typically not located within a roadway area. Bicycle Lanes (Class II) are part of the street design that is dedicated only for bicycles and identified by a striped lane separating vehicle lanes from bicycle lanes. Bicycle Routes (Class III) are preferably located on collector and lower volume arterial streets.

Bicycle access to the project site will be facilitated by the City's bicycle roadway network. Existing and proposed bicycle facilities (e.g., Class I Bicycle Path, Class II Bicycle Lanes, Class III Bicycle Routes, Proposed Bicycle Routes, Bicycle Boulevards, etc.) identified in the City's General Plan Update[3] will be located within an approximate one-mile radius from the project site. The location of the proposed bicycle lane network for the City in close proximity to the project site and in the surrounding area is illustrated in ***Figure 3-2***. As shown in *Figure 3-2*, an existing Class III Bicycle Route is provided along Carson Street within the project vicinity. In addition, as shown in *Figure 3-2*, a Class II Bicycle Lane is proposed for Main Street within the project vicinity.

[3] City of Carson 2040 General Plan Update, September 2022.



MAP SOURCE: CITY OF CARSON 2040 GENERAL PLAN UPDATE DRAFT, SEPTEMBER 2022

Project Site

Figure 3-2
City of Carson Proposed Bicycle Network

215 West Carson Townhomes Project

3.2 Transit Network

Public bus transit service in the project vicinity is currently provided by the Metropolitan Transportation Authority (Metro), Long Beach Transit (LBT), and the Torrance Transit (TT). The project site is located within the vicinity of the Los Angeles Metropolitan Transportation Authority (Metro) "J" (Silver) Line Carson Station. The Metro "J" (Silver) Line is a 38-mile bus rapid transit route that runs between El Monte, Downtown Los Angeles and Gardena. A summary of the existing transit routes, including the transit route, destinations and number of buses during the AM and PM peak hours is presented in ***Table 3–1***. The existing public transit routes in the project vicinity are illustrated in ***Figure 3–3***. As summarized in *Table 3-1*, a total of five public transit routes provide service near the project site.

3.3 Vehicle Network

3.3.1 *Roadway Classifications*

The City of Carson utilizes the roadway categories recognized by regional, state and federal transportation agencies. There are four (4) categories in the roadway hierarchy, ranging from freeways with the highest capacity to two-lane undivided roadways with the lowest capacity. The roadway categories are summarized as follows:

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

- *Arterial* roadways are major streets that primarily accommodate regional, subregional, and intra-city travel. Through traffic comprises the bulk of traffic volumes on arterial roadways. In the City of Carson, this roadway type is divided into two categories: Major and Minor arterials. Major arterial roadways are designed to move relatively high volumes of traffic between the freeway and local circulation system. Intersections along major arterials are at-grade and typically signalized. Access from private property and collector streets is limited, as is on-street parking. Minor arterial roadways are similar to major arterials, but serve a more localized function. Minor arterials generally have less access and parking restrictions and a narrower right-of-way than major arterials.

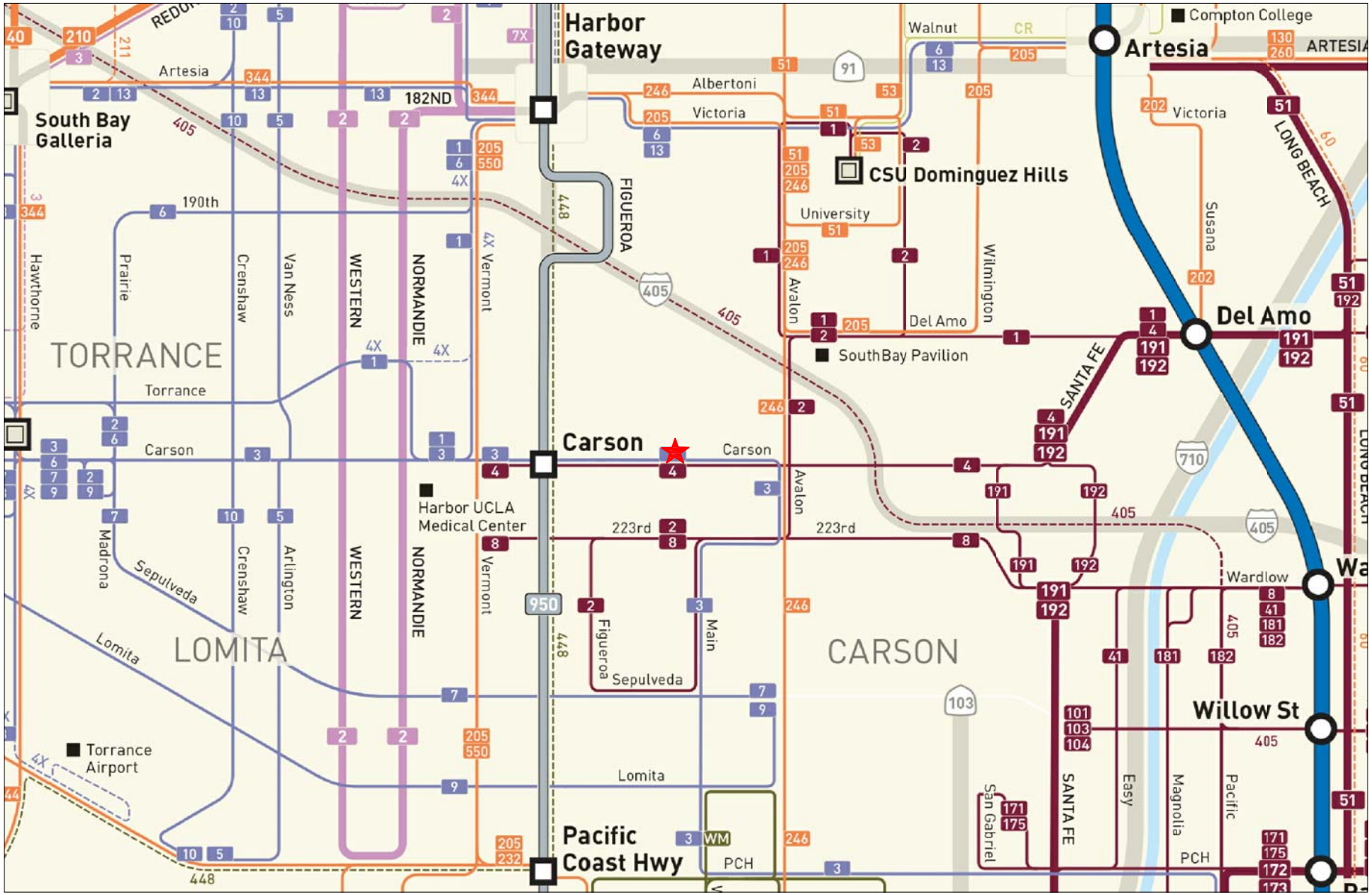
- *Collector* roadways are designed to distribute traffic from higher classified arterial streets to local access streets and adjacent properties.

- *Local* roadways are designed to be low-volume and low-speed streets that provide access to individual properties. Residential streets are generally not intended to handle through traffic.

Table 3-1
EXISTING TRANSIT ROUTES [1]

ROUTE	DESTINATIONS	ROADWAY(S) NEAR SITE	NO. OF BUSES/TRAINS DURING PEAK HOUR		
			DIR	AM	PM
Metro 246	San Pedro to Los Angeles via Wilmington and Carson	Carson Street, Avalon Boulevard	NB SB	2 2	2 2
Metro Silver Line	El Monte to San Pedro via Downtown Los Angeles, Los Angeles and Harbor Gateway	Carson Street, I-110 Freeway Transit Center	NB SB	8 8	8 8
LBT 2	Cal State Dominguez Hills to Figueroa & Carriagedale	Carson Street, Avalon Boulevard	NB SB	2 2	2 2
LBT 4	Carson at Vermont to Del Amo Station	Carson Street, Moneta Avenue, Main Street	EB WB	2 2	2 2
TT 3	Redondo Beach Pier to Downtown Long Beach Station via Carson	Carson Street, Moneta Avenue, Main Street	EB WB	3 3	3 3
TOTAL				34	34

[1] Sources: Los Angeles County Metropolitan Transportation Authority (Metro), Long Beach Transit (LBT), and Torrance Transit (TT) websites, March 2022.



MAP SOURCE: METROPOLITAN TRANSPORTATION AUTHORITY WEBSITE

Project Site

Figure 3-3
Existing Transit Routes

215 West Carson Townhomes Project

3.3.2 *Roadway Descriptions*

Immediate access to the project site is provided via Carson Street. The current lane configurations and traffic control measures at each study intersection is presented in ***Figure 3-4***. Descriptions of the roadways which make up the study area are provided in ***Table 3-2***, including the roadway classification, number of lanes, median types, and speed limits designated by the City of Carson.

3.4 Traffic Count Data

Manual counts of vehicular turning movements were conducted at the following intersections identified for review in consultation with City staff:

1. Moneta Avenue/Carson Street (Signalized)

2. Main Street/Carson Street (Signalized)

3. Project Driveway/Carson Street (Unsignalized)

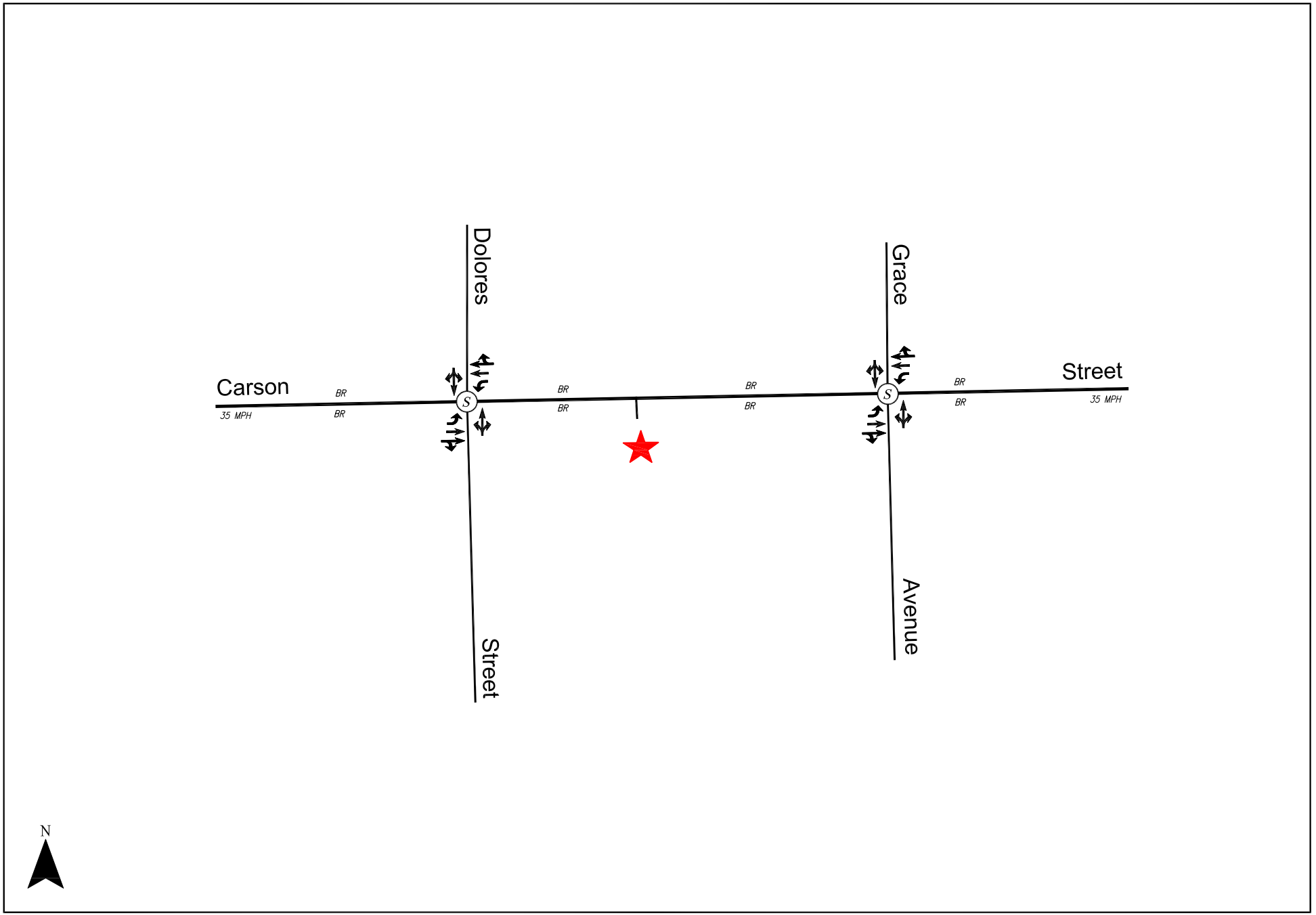
The manual traffic counts were conducted at the two signalized intersections during the weekday morning (AM) and afternoon (PM) commute periods to determine the peak hour traffic volumes. The manual counts were conducted in May 2022 by an independent traffic count subconsultant (City Traffic Counters) at the study intersections on a typical weekday from 7:00 AM to 9:00 AM and from 4:00 PM to 6:00 PM to determine the AM and PM peak commute hours, respectively. In conjunction with the manual turning movement vehicle counts, counts of bicycle and pedestrian volumes were also collected during the peak periods. It is noted that all of the traffic counts were conducted when local schools were in session. The traffic count data for the Project Driveway/Carson Street location were derived from the traffic count data for the adjacent intersections (i.e., the eastbound and westbound volumes from the Moneta Avenue/ Carson Street and Main Street/ Carson Street intersections).

The existing traffic volumes at the study intersections during the weekday AM and PM peak hours are shown in ***Figure 3-5***. Summary data worksheets of the manual traffic counts at the study intersections are contained in ***Appendix B***.

3.5 Cumulative Development Projects

The forecast of future pre-project conditions was prepared in accordance to procedures outlined in Section 15130 of the CEQA Guidelines. Specifically, the CEQA Guidelines provide two (2) options for developing the future traffic volume forecast:

> "(A) A list of past, present, and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the [lead] agency, or
>
> (B) A summary of projections contained in an adopted local, regional or statewide plan, or related planning document, that describes or evaluates conditions



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Project Site

(S) Signalized Intersection

BR Bike Route

Figure 3-4
Existing Lane Configurations

336 East Carson Townhomes Project

Table 3-2
EXISTING ROADWAY DESCRIPTIONS

ROADWAY	CLASSIFICATION [1]	TRAVEL LANES		MEDIAN TYPES [4]	SPEED LIMIT
		DIRECTION [2]	NO. LANES [3]		
Moneta Avenue	Local	NB-SB	2	N/A	30
Carson Street	Major Highway	EB-WB	4 [5]	RMI	35
Main Street	Major Highway	NB-SB	4	RMI	45

Notes:

[1] Street classifications obtained from the *City of Carson Circulation Element 2022* .

[2] Direction of roadways in the project area: NB-SB = northbound and southbound; and EB-WB = eastbound and westbound.

[3] Number of lanes in both directions on the roadway. Variations in number of travel lanes due to time restricted on-street parallel parking are noted below.

[4] Median type of the road: RMI = Raised Median Island; 2WLT = 2-Way Left-Turn Lane; and N/A = Not Applicable.

[5] Class III Bike Route

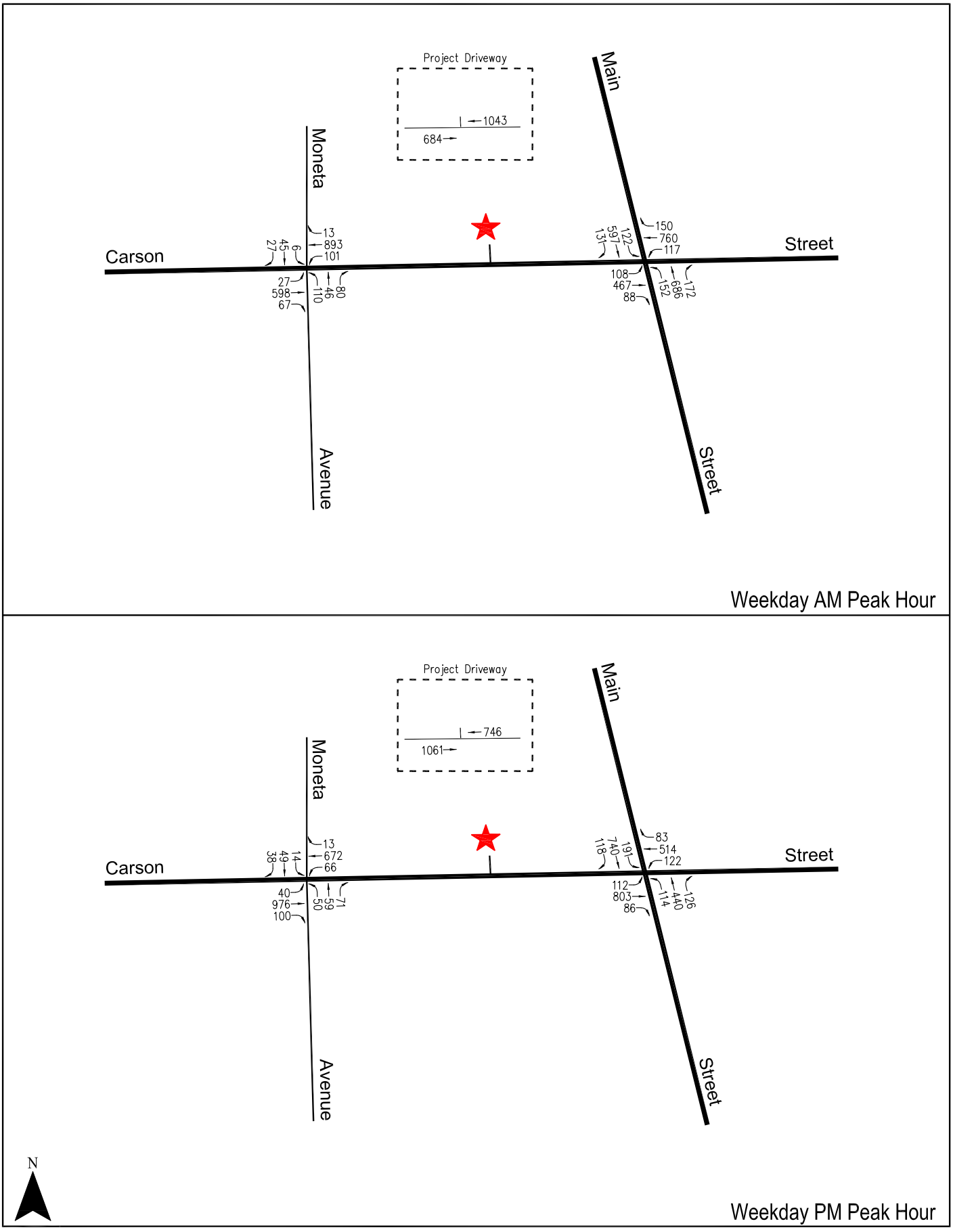

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Figure 3-5
Existing Traffic Volumes

215 West Carson Townhomes Project

contributing to the cumulative effect. Such plans may include: a general plan, regional transportation plan, or plans for the reduction of greenhouse gas emissions. A summary of projections may also be contained in an adopted or certified prior environmental document for such a plan. Such projections may be supplemented with additional information such as a regional modeling program. Any such document shall be referenced and made available to the public at a location specified by the lead agency."

Although the CEQA Guidelines do not strictly apply to the local transportation assessment required by the City of Carson, this transportation analysis provides a highly conservative estimate of future pre-project traffic volumes as it incorporates both the "A" and "B" options outlined in the CEQA Guidelines for purposes of developing the forecast.

3.5.1 *Related Projects*

A forecast of on-street traffic conditions prior to occupancy of the proposed project was prepared by incorporating the potential trips associated with other known development projects (related projects) in the area (i.e., within an approximate 0.50-mile radius from the project site). With this information, the potential impact of the proposed project can be evaluated within the context of the cumulative impacts of all ongoing development. The related projects research was based on information on file with the City of Carson and the County of Los Angeles. The list of related projects in the project site area is presented in ***Table 3-3***. The location of the related projects is shown in ***Figure 3-6***.

Traffic volumes expected to be generated by the related projects were calculated using rates provided in the Institute of Transportation Engineers' (ITE) *Trip Generation Manual*. The related projects' respective traffic generation for the weekday AM and PM peak hours, as well as on a daily basis for a typical weekday, is summarized in *Table 3-4*. The related projects traffic volumes were distributed and assigned to the street system based on the projects' locations in relation to the study intersections, their proximity to major traffic corridors, proposed land uses, nearby population and employment centers, etc. The assignment of the related projects traffic volumes to the study intersections during the weekday AM and PM peak hours are displayed in ***Figure 3-7***.

3.5.2 *Ambient Traffic Growth Factor*

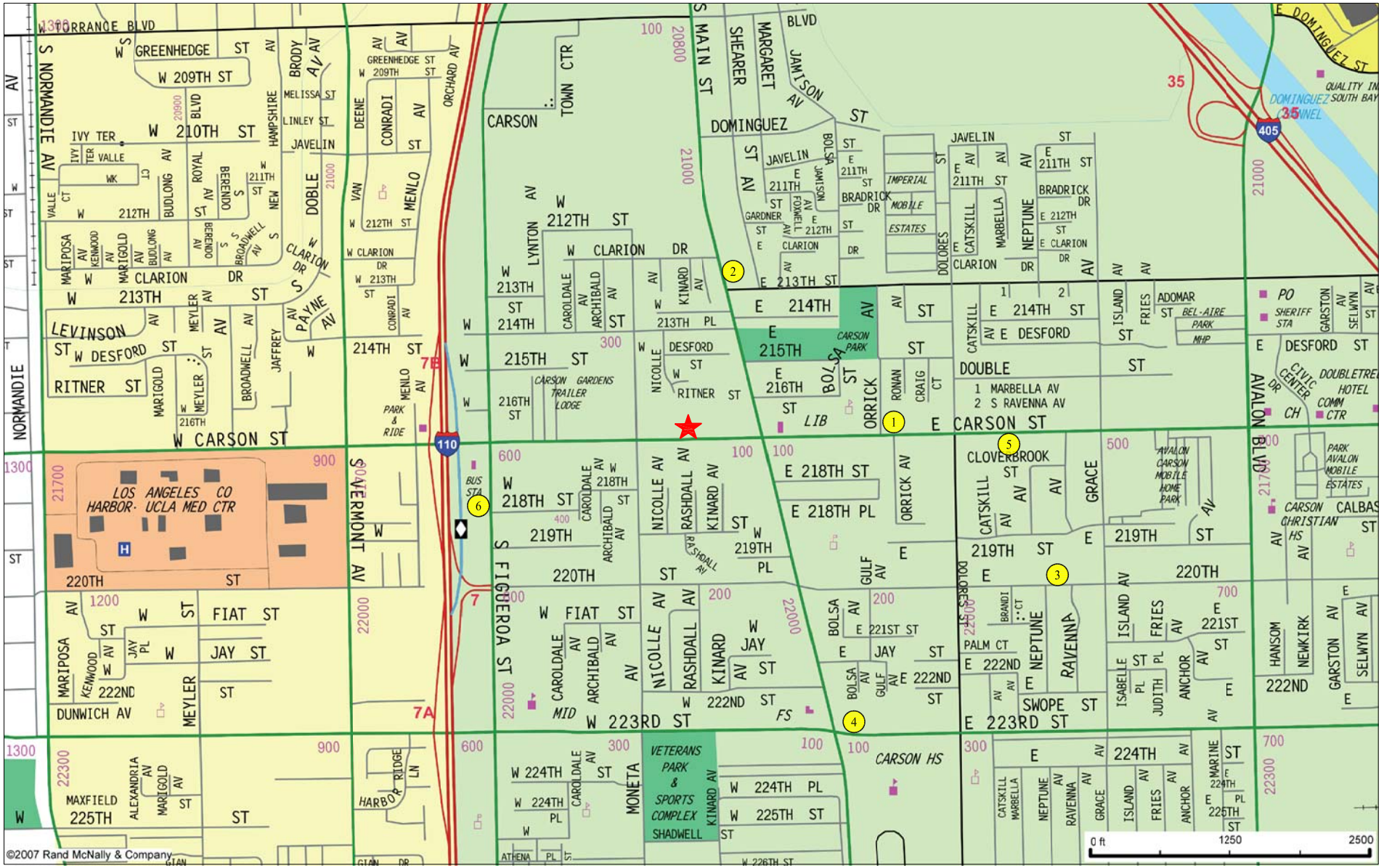
Horizon year background traffic growth estimates have been calculated using an ambient traffic growth factor. The ambient traffic growth factor is intended to include unknown related projects in the study area as well as account for typical growth in traffic volumes due to the development of projects outside the study area. Based on review of the general traffic growth factors provided in the Los Angeles County 2010 Congestion Management Program[4] (CMP) for the project study area (i.e., RSA 19, Palos Verdes), it is anticipated that existing traffic volumes in the vicinity are expected to increase at an annual rate of 0.2% per year between the years 2020 and 2025. An annual growth rate of one percent (1.0%) until the year 2024 (i.e., the anticipated project build-out year) was selected for this analysis. Therefore, application of this one percent (1.0%) ambient growth factor in addition

[4] Los Angeles County Metropolitan Transportation Authority (Metro) 2010 Congestion Management Program.

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

MAP NO.	PROJECT STATUS	PROJECT NAME/NUMBER ADDRESS/LOCATION	LAND USE DATA		PROJECT DATA SOURCE	DAILY TRIP ENDS [2] VOLUMES	AM PEAK HOUR VOLUMES [2]			PM PEAK HOUR VOLUMES [2]		
			LAND-USE	SIZE			IN	OUT	TOTAL	IN	OUT	TOTAL
1	Proposed	Rascals Teriyaki Grill 205 E. Carson Street	Restaurant	2,564 GSF	[3]	275	14	11	25	14	9	23
2	Proposed	Carson Lofts 21240-21250 S. Main Street	Apartments	19 DU	[4]	128	2	6	8	6	4	10
3	Proposed	Cambria Court Residential Project 427 E. 220th Street	Condominiums	35 DU	[4]	236	3	11	14	11	7	18
4	Proposed	123 E. 223rd Street	Condominiums	9 DU	[4]	61	1	3	4	3	2	5
5	Proposed	336 E. Carson Street	Apartments	50 DU	[4]	337	5	15	20	16	10	26
6	Proposed	Birch Specific Plan 21809-21811 S. Figueroa	Condominiums	32 DU	[4]	216	3	10	13	10	6	16
TOTAL						1,253	28	56	84	60	38	98

[1] Source: City of Carson Community Development Planning department, except as noted below and by applying trip rates as provided in the ITE "Trip Generation", 11th Edition, 2021.
[2] Trips are one-way traffic movements, entering or leaving.
[3] ITE Land Use Code 932 (High-Turnover (Sit-Down) Restaurant) trip generation average rates.
[4] ITE Land Use Code 220 (Multifamily Housing (Low-Rise) Not Close to Rail Transit) trip generation average rates.
[5] ITE Land Use Code 221 (Multifamily Housing (Mid-Rise) Not Close to Rail Transit) trip generation average rates.



N

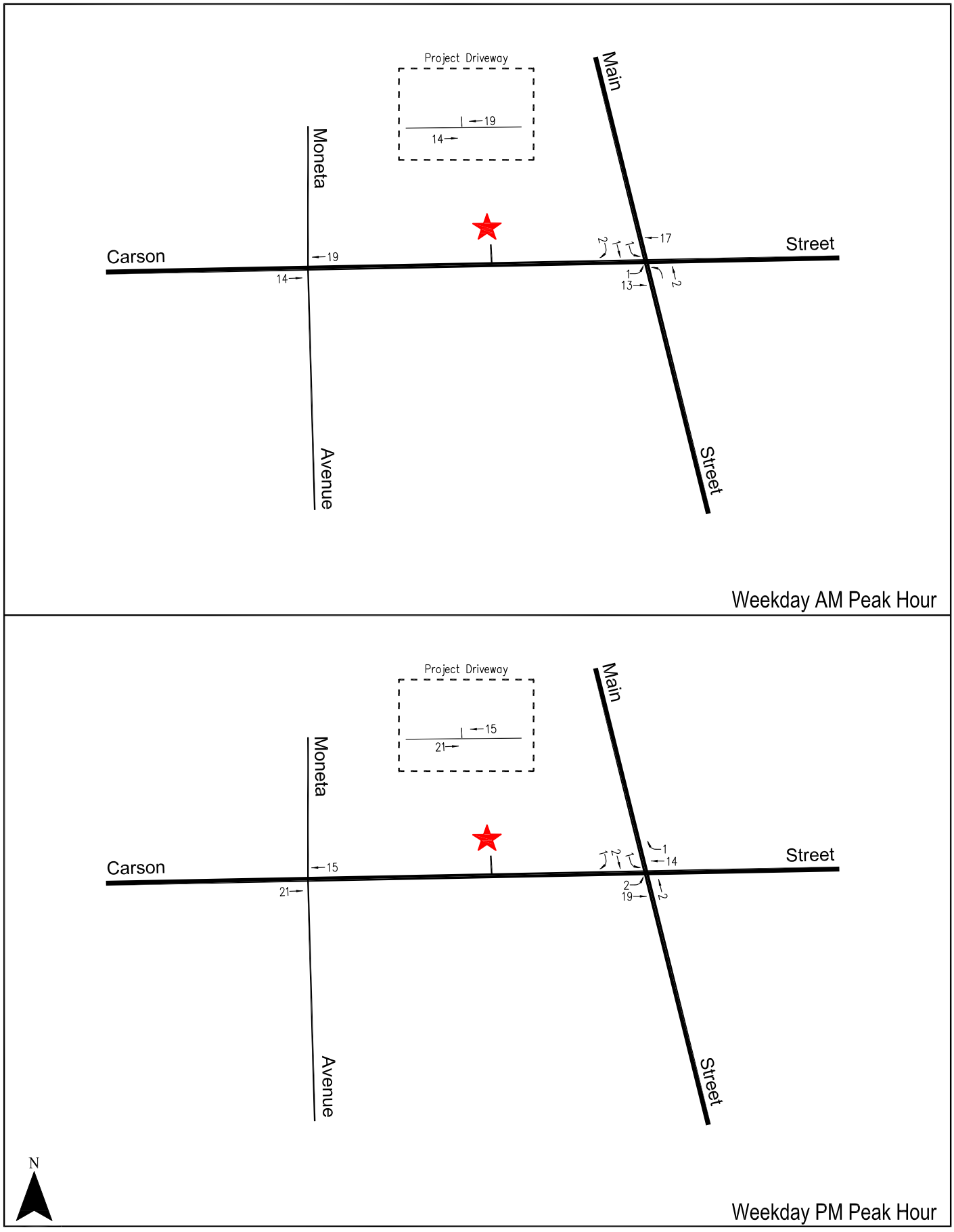
MAP SOURCE: RAND MCNALLY & COMPANY

Project Site

XX Related Project

Figure 3-6
Location of Related Projects

215 West Carson Townhomes Project



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Project Site

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Figure 3-7
Related Projects Traffic Volumes

to the forecast traffic generated by the related projects allows for a conservative forecast of future traffic volumes in the project study area as incorporation of both (i.e., an ambient traffic growth rate and a detailed list of cumulative development projects) is expected to overstate potential future traffic volumes. The cumulative development projects should already be incorporated as part of the growth rate projection per the adopted, local and regional planning documents (i.e., which account for the future population, housing, and employment [socio-economic data] projections).

4.0 INTERSECTION OPERATIONAL ANALYSIS

As part of the discretionary review and approval process, the City has the authority to require a LOS analysis in order to assess the proposed project's consistency with the City's General Plan LOS goals. Specifically, the City requires an operational analysis of intersections in the vicinity of a proposed project in order to evaluate site access and circulation constraints that may be caused or worsened by project-generated traffic. The following section presents the intersection operational (i.e., Level of Service) analyses prepared for the proposed project pursuant to the General Plan LOS standards and transportation infrastructure goals.

4.1 Analysis Methodology

In order to estimate the proposed project's effect on intersection operations, a multi-step process has been utilized. The first step is trip generation, which estimates the total arriving and departing traffic volumes on a peak hour and daily basis. The second step of the forecasting process is trip distribution, which identifies the origins and destinations of inbound and outbound project traffic volumes. These origins and destinations are typically based on demographics and existing/anticipated travel patterns in the study area. The third step is traffic assignment, which involves the allocation of project traffic to study area streets and intersections. Traffic distribution patterns are indicated by general percentage orientation, while traffic assignment allocates specific volume forecasts to individual roadway links and intersection turning movements throughout the study area. The proposed project's forecast trip generation, distribution, and assignment is presented in *Section 2.5* herein. With the forecasting process complete and project traffic assignments developed, the effect of the proposed project is isolated by comparing operational conditions at the selected study intersections using existing and expected future traffic volumes without and with forecast project traffic.

The study intersection LOS was analyzed using the Highway Capacity Manual[5] (HCM) method of analysis. The HCM methodology determines the average control delay (expressed in seconds per vehicle [s/veh]) at the intersection. Average control delay for any particular movement is a function of the capacity of the approach and the degree of saturation. The intersection delay is subsequently assigned a LOS value to describe intersection operations. Level of Service varies from LOS A (free flow conditions) to LOS F (jammed condition). The average control delay for signalized intersections represents the delay attributed to the traffic control facility as compared to a reference travel time in the absence of traffic control, geometric delay, incidents, and the influence of other vehicles. A detailed description of the HCM method and corresponding Level of Service for the signalized study intersections is provided in ***Appendix C***.

For the unsignalized location, the HCM methodology for unsignalized/two-way stop-controlled (TWSC) intersections was utilized for the analysis. The TWSC methodology estimates the average control delay for each minor-street movement (or shared movement) as well as major-street left-

[5] *Highway Capacity Manual 6th Edition*, Transportation Research Board of the National Academies of Sciences-Engineering-Medicine, 2016.

turns and determines the LOS for each constrained movement. A description of the HCM method and corresponding Level of Service for the unsignalized intersection is also provided in *Appendix C*.

The HCM method calculations were prepared using the *Synchro 11* software package which implements the HCM operational methodology. A *Synchro* network was created based on existing conditions field reviews at the study intersections. In addition, specifics such as traffic volume data, lane configurations, available vehicle storage lengths, crosswalk locations, posted speed limits, traffic signal timing and phasing, etc., were coded to complete the existing network. The parameters and assumptions utilized in the analysis were based on the direction provided by City staff.

4.2 Criteria for Intersection Operational Analysis

The relative effect of the added project traffic volumes to be generated by the proposed project during the weekday AM and PM peak hours was evaluated based on analysis of existing and future operating conditions at the study intersections, without and with the proposed project. The previously discussed capacity analysis procedures were utilized to evaluate the delay and service level characteristics at each study intersection.

The City of Carson General Plan has established the minimum acceptable Level of Service (LOS) D for peak hour intersection operations. A traffic operations issue is identified if the addition of the traffic generated from the proposed project results in Triggers an intersection operating at acceptable LOS (i.e., LOS D or better) to operate at unacceptable LOS (i.e., LOS E or F)

Where intersections are found to operate at unacceptable LOS, and the addition of project-generated traffic causes an exceedance of the City's criteria, improvements should be identified to increase performance to pre-project conditions under each scenario.

4.3 Analysis Scenarios

Pursuant to the City's Guidelines and in coordination with City staff, LOS calculations have been prepared for the following scenarios:

[a] Year 2022 Existing conditions.

[b] Year 2022 Existing with project conditions.

[c] Condition [a] plus 1.0 percent (1.0 %) per year annual ambient traffic growth through year 2024 and with completion and occupancy of the related projects (i.e., future cumulative [opening year] without project conditions).

[d] Condition [c] with completion and occupancy of the proposed project.

[e] Condition [d] with implementation of intersection improvement measures, if necessary.

The weekday AM and PM peak hour LOS analysis prepared for the study intersections is summarized in ***Table 4-1***. The calculation data worksheets for the analyzed intersections are provided in *Appendix C*.

4.4 Year 2022 Existing Conditions

4.4.1 *Year 2022 Existing Conditions*

As indicated in column [1] of *Table 4-1*, all of the study intersections currently operate at LOS D or better during the weekday AM and PM peak hours. The existing traffic volumes at the study intersections during the weekday AM and PM peak hours are displayed in *Figures 3-5* and *3-6* respectively.

4.4.2 *Year 2022 Existing With Project Conditions*

As shown in column [2] of *Table 4-1*, application of the City's threshold criteria to the "Existing With Project" scenario indicates that the project-related effects in the delay at the study intersections are not expected to exceed the City's threshold criteria. Incremental delays, but not exceeding the City's criteria, are noted at the study intersections. The existing with project traffic volumes at the study intersections during the weekday AM and PM peak hours are illustrated in ***Figure 4-1***.

4.5 Future Year 2024 Cumulative Conditions

4.5.1 *Future Year 2024 Cumulative Without Project Conditions*

The future year 2024 (opening year) cumulative baseline conditions were forecast based on the addition of traffic generated by the completion and occupancy of the related projects, as well as the growth in traffic due to the combined effects of continuing development, intensification of existing developments and other factors (i.e., ambient growth). The delays at the study intersections are incrementally increased with the addition of ambient traffic and traffic generated by the related projects listed in *Table 3-3*.

As presented in column [3] of *Table 4-1*, all of the study intersections are expected to operate at LOS D or better during the weekday AM and PM peak hours with the addition of growth in ambient traffic and related projects traffic under the future year 2024 without project conditions. The future year 2024 without project (existing plus ambient growth and related projects) traffic volumes at the study intersections during the weekday AM and PM peak hours are illustrated in ***Figure 4-2***.

4.5.2 *Future Year 2024 Cumulative With Project Conditions*

As shown in column [4] of *Table 4-1*, application of the City's threshold criteria to the "Future Year 2024 With Project" scenario indicates that the project-related effects in the delay at the study intersections are not expected to exceed the City's threshold criteria. Incremental delays, but not exceeding the City's criteria, are noted at the study intersections. The future year 2024 with project traffic volumes at the study intersections during the weekday AM and PM peak hours are illustrated in ***Figure 4-3***.

Table 4-1
SUMMARY OF INTERSECTION OPERATIONAL ANALYSIS [a]
DELAYS AND LEVELS OF SERVICE
WEEKDAY AM AND PM PEAK HOURS

				[1]		[2]			[3]		[4]		
NO.	INTERSECTION	TRAFFIC CONTROL	PEAK HOUR	YEAR 2022 EXISTING Delay [b]	LOS [c]	EXISTING W/ PROJECT Delay [b]	LOS [c]	CHANGE Delay [b] [(2)-(1)]	YEAR 2024 FUTURE W/O PROJECT Delay [b]	LOS [c]	YEAR 2024 FUTURE W/ PROJECT Delay [b]	LOS [c]	CHANGE Delay [b] [(4)-(3)]
1	Moneta Avenue/ Carson Street	Signalized	AM	10.0	A	10.0	A	0.0	10.1	B	10.1	B	0.0
			PM	10.4	B	10.4	B	0.0	10.5	B	10.5	B	0.0
2	Main Street/ Carson Street	Signalized	AM	37.8	D	37.8	D	0.0	40.1	D	40.2	D	0.1
			PM	44.8	D	44.8	D	0.0	45.3	D	45.5	D	0.2
3	Project Driveway/ Carson Street	Unsignalized	AM	--	--	12.9	B	0.0	--	--	13.2	B	0.3
			PM	--	--	11.2	B	0.0	--	--	11.3	B	0.1

[a] Intersection analysis based on the Highway Capacity Manual, 6th Edition operational analysis methodologies.

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

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

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

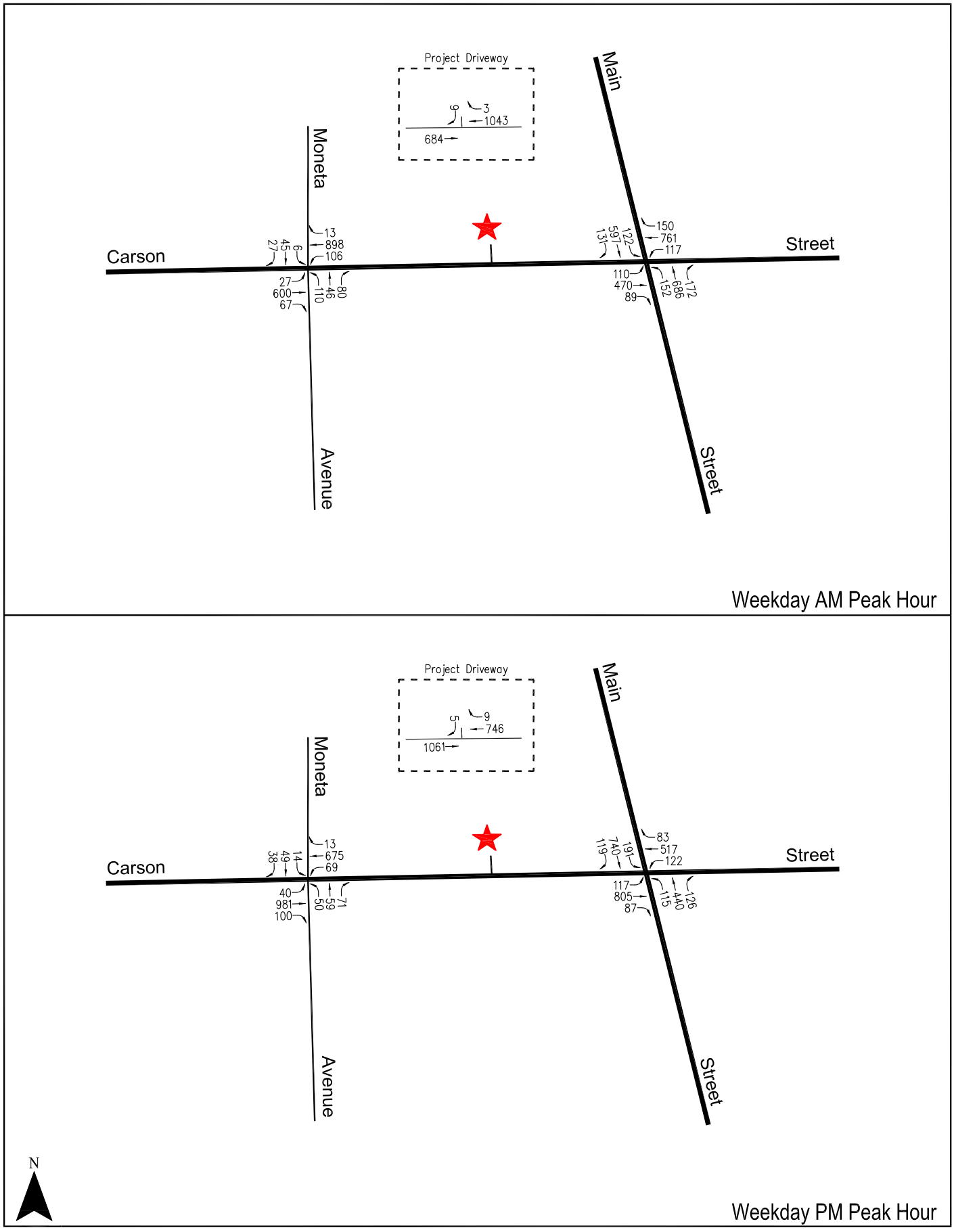

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Figure 4-1
Existing with Project Traffic Volumes

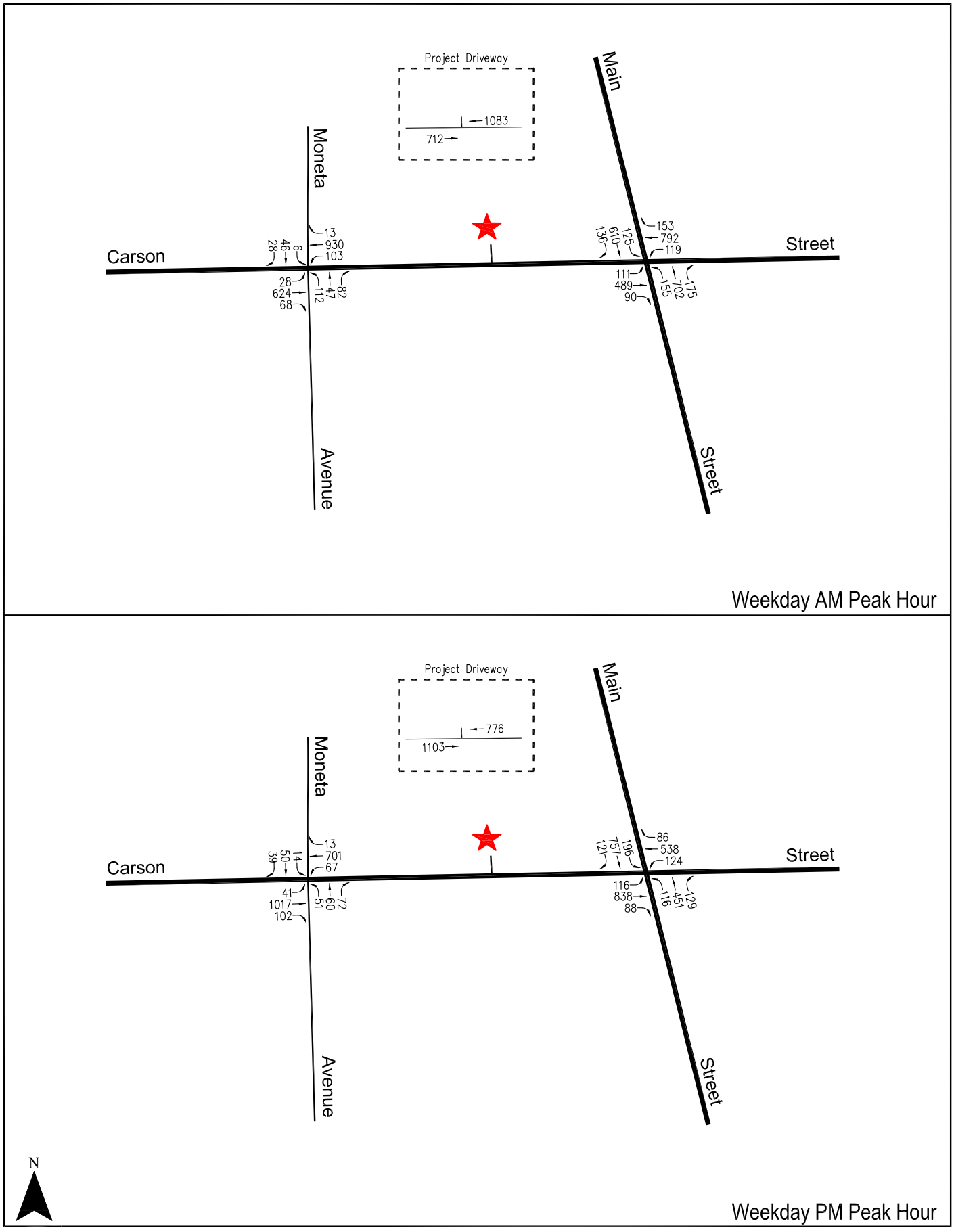

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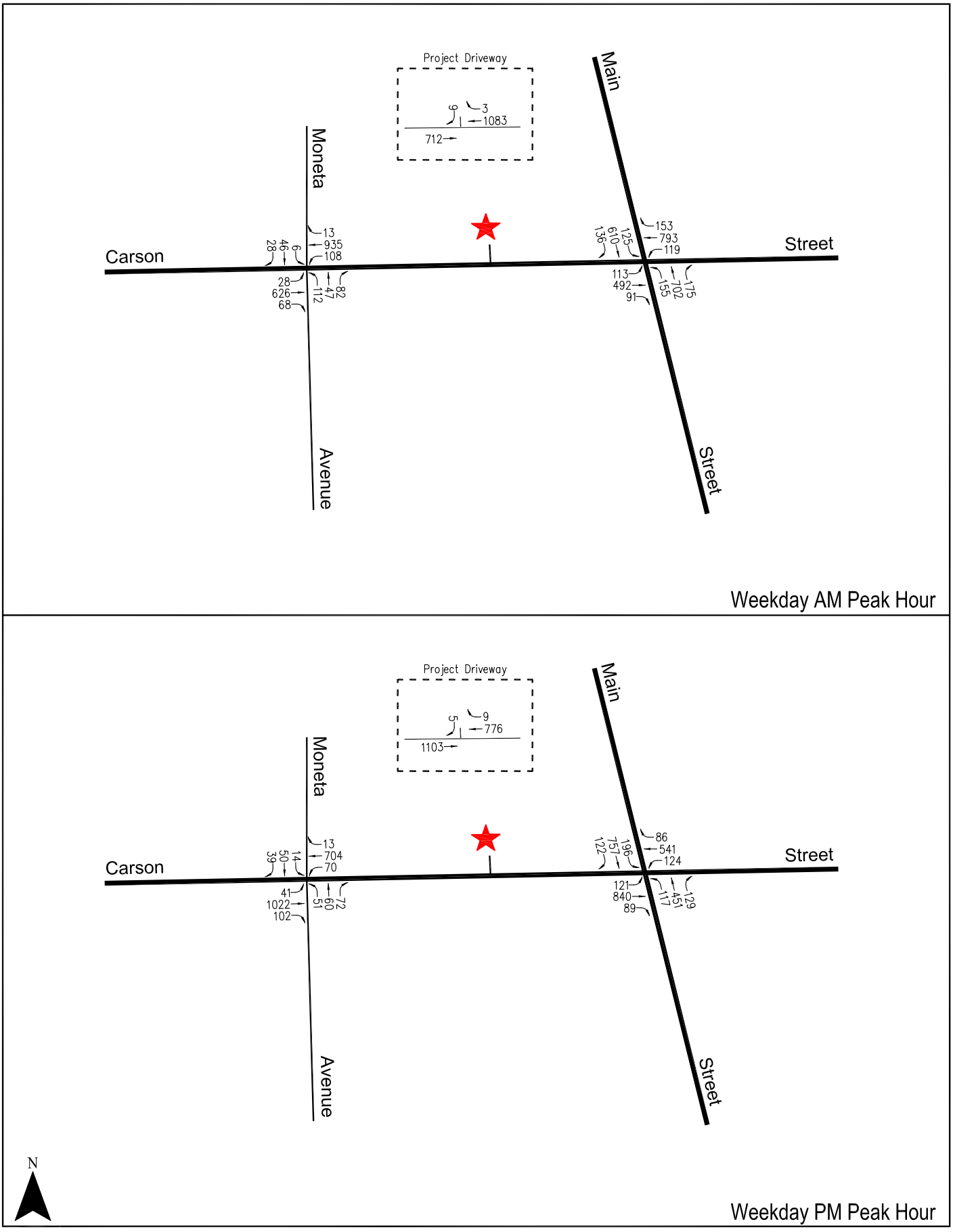
Figure 4-2
Future Year 2024 Without Project Traffic Volumes



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Project Site

Figure 4-3
Future Year 2024 With Project Traffic Volumes

215 West Carson Townhomes Project

4.6 Left-Turn Queuing Analysis

Based on consultation with City staff, an evaluation was conducted to determine whether the project's traffic would contribute to unacceptable queuing at the Moneta Avenue/Carson Street intersection. Specifically, a review was conducted for the westbound left-turn movement on Carson Street at Moneta Avenue.

Pursuant to the City's requirement, the HCM methodology for signalized intersections was utilized to calculate vehicle queuing. The operational analysis reports the 95th percentile queues (in feet) for all approaches for the signalized intersections and the minor street approaches for the unsignalized intersections. The 95th percentile queue is the maximum back of queue with 95th percentile traffic volumes. The HCM 6th Edition methodology worksheets report queues in number of vehicles. As such, an average vehicle length of 25 feet, which includes the length of the vehicle and spacing between vehicles, was assumed for analysis purposes. The reported queues therefore represent the calculated maximum back of queue in feet. The summary of the operational analysis of the study intersections is provided in ***Table 4-2***. The HCM methodology worksheets for the analyzed intersections are contained in *Appendix D.*

As presented in *Table 4-2*, it is concluded the proposed project weekday AM and PM peak hour traffic volumes will not cause or substantially extend the westbound left-turn movement vehicle queuing at the Moneta Avenue/Carson Street intersection.

Table 4-2
SUMMARY OF LEFT-TURN LANE VEHICLE QUEUING [1]
WEEKDAY AM AND PM PEAK HOURS

NO.	INTERSECTION	MOVEMENT	PEAK HOUR	95th PERCENTILE QUEUES [2]			
				YEAR 2022 EXISTING	YEAR 2024 FUTURE PRE-PROJECT	YEAR 2024 FUTURE WITH PROJECT	CHANGE IN QUEUE [3]
1	Moneta Avenue/ Carson Street	WB Left	AM PM	13 15	13 15	13 15	0 0

[1] The Highway Capacity Manual (HCM) methodology for signalized and unsignalized intersections was utilized to calculate vehicle queuing.
[2] The 95th percentile queue is the maximum back of queue with 95th percentile traffic volumes. The HCM methodology worksheets reports queues in number of vehicles, however an average vehicle length of 25 feet was assumed for analysis purposes. The queues reported above therefore represent the calculated maximum back of queue in feet.
[3] Represents the change in calculated maximum back of queue (in feet) in the future conditions due to the addition of project-related traffic (i.e., future pre-project queue lengths subtracted from future with project queue lengths).

5.0 SUMMARY AND CONCLUSIONS

- ***Project Description*** - The proposed project site is located at 215 West Carson Street in the City of Carson.. The proposed project consists of the construction of 34 residential townhomes within eight buildings. The proposed residential unit mix consists of 6 two-bedroom units and 28 three-bedroom units. The project will provide common amenities such as a playground area, a 323 square-foot community room and recreation space. The project build-out and occupancy year is anticipated by the year 2024.

- ***Project Site Access***– Vehicular access is planned to be provided via a single driveway on West Carson Street. The project driveway is planned to accommodate right-turn ingress and egress movements only due the existing raised median on West Carson Street.

- ***Project Parking –*** A total of 78 parking spaces is planned to be provided for the project. Two bicycle spaces are planned to be provided for the project.

- ***Project Trip Generation*** – The proposed project is expected to generate 12 net new vehicle trips (3 inbound trips and 9 outbound trips) during the weekday AM peak hour. During the weekday PM peak hour, the proposed project is expected to generate 14 net new vehicle trips (9 inbound trips and 5 outbound trips). Over a 24-hour period, the proposed project is forecast to generate 198 net new daily trip ends during a typical weekday (99 inbound trips and 99 outbound trips).

- ***Intersection Operational Analysis*** – Three intersections, including the proposed project driveway, were reviewed for consistency with the City of Carson's adopted Level of Service (LOS) standards. The study intersections were evaluated using the City-approved Highway Capacity Manual (HCM) methodology to determine the LOS under existing and future year 2024 cumulative without and with project conditions. Based on application of the City's threshold criteria, the project-related effects in the delay at the study intersections are not expected to exceed the City's threshold criteria.

- ***Left-Turn Queuing Analysis*** – An evaluation was conducted to determine whether the project's traffic would contribute to unacceptable queuing at the westbound left-turn movement on Carson Street at Moneta Avenue. It is concluded the proposed project weekday AM and PM peak hour traffic volumes will not cause or substantially extend the westbound left-turn movement vehicle queuing at the Moneta Avenue/Carson Street intersection.

APPENDIX A

SCOPING DOCUMENT

MEMORANDUM

To:	Nick Lowe City of Carson Public Works	Date:	September 20, 2022
From:	Francesca S. Bravo Linscott, Law & Greenspan, Engineers	LLG Ref:	1-22-4465-1
Subject:	215 West Carson Street Residential Project – Transportation Assessment Scope of Work		

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Linscott, Law & Greenspan, Engineers (LLG) is pleased to submit the following Transportation Impact Analysis Scope of Work for the 215 West Carson Street Residential Project for your review and approval.

Transportation Impact Analysis Scope of Work

A. Project Location: The project site is located at 215 West Carson Street situated along the north side of West Carson Street between Moneta Avenue and Main Street. The project site is currently occupied by two single-family homes and a 2-unit multi-family building which will be removed to accommodate the proposed project. See attached ***Figure 1-1, Vicinity Map***.

B. Project Description: The proposed project consists of the construction of 34 residential dwelling units. Vehicular access is planned to be provided via a single driveway on West Carson Street. The project build-out and occupancy year is anticipated by the year 2024. See attached ***Figure 2-2 – Site Plan***.

C. Project Study Area: The following three (3) locations have been identified for operational evaluation. These study locations will be reviewed as part of the site access studies required for the project. See attached *Figure 1-1 –Vicinity Map.* The existing traffic control of each study location is presented below.

Study Locations

1. Moneta Avenue/Carson Street (Signalized)
2. Project Driveway/Carson Street (Unsignalized)
3. Main Street/Carson Street (Signalized)

D. Project Traffic Generation: Traffic volumes to be generated by the proposed project were forecast for the weekday AM and PM peak hours, and over a 24-hour period. Trip generation rates provided in the Institute of Transportation Engineers' (ITE) *Trip Generation Manual*[1] were utilized to forecast project traffic generation for the proposed project. ITE Land Use Code 220 (Multi-Family Housing [Low-Rise]) trip generation rates were used to forecast the traffic volumes expected to be generated by the proposed residential units. In addition to the proposed project trip generation forecasts, forecasts were also made for the existing, active land use on the project site. ITE Land Use Code 210 (Single-

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

Family Housing) and ITE Land Use Code 220 (Multi-Family Housing [Low-Rise]) trip generation average rates were used to forecast expected traffic generation for the existing, active land use on-site (i.e., one single-family home).

The trip generation forecast for the proposed project is summarized in ***Table 2-1***. As presented in *Table 2-1*, the proposed project is expected to generate 12 net vehicle trips (3 inbound trips and 9 outbound trips) during the weekday AM peak hour. During the weekday PM peak hour, the proposed project is expected to generate 14 net vehicle trips (9 inbound trips and 5 outbound trips). Over a 24-hour period, the proposed project is forecast to generate 197 net daily trip ends during a typical weekday (99 inbound trips and 99 outbound trips).

E. Project Trip Distribution Pattern: See attached ***Figure 7-1 – Project Trip Distribution***.

F. VMT Assessment: It is understood that the City of Carson has not formally adopted VMT methodology, screening criteria, or thresholds for VMT analysis of land use development projects within its jurisdiction. It is further understood that the City intends to generally follow the methodology set forth in the Los Angeles County Public Works Transportation Impact Guidelines (dated July 23, 2020).

Consistent with the recommendations provided by the Governor's Office of Planning and Research (OPR) in the "Technical Advisory on Evaluating Transportation Impacts in CEQA" (December 2018), the County's Guidelines recognize four screening criteria which may be applied to screen proposed projects out of detailed VMT analysis. Proposed projects are not required to satisfy all of the screening criteria in order to screen out of further VMT analysis; satisfaction of one criterion is sufficient for screening purposes. Projects, or project components, which are screened out of detailed VMT assessment based on these criteria are presumed to have less than significant transportation impacts.

<u>Proximity to Transit Screening Criteria</u>

CEQA Guidelines Section 15064.3(b)(1) states in part: "Generally, projects within one-half mile of either an existing major transit stop or a stop along an existing high-quality transit corridor should be presumed to cause a less than significant transportation impact." In keeping with the statutory presumption of less than significant impacts due to nearby high-quality transit, the County's Guidelines include a screening criterion based on proximity to transit. Consistent with the recommendations provided by OPR, the County also notes certain project-specific or location-specific information which might indicate that the presumption is not appropriate. If the answers to the following questions are all no, then the presumption is assumed appropriate and the project can be screened out of further analysis.

- Does the project have a Floor Area Ratio (FAR) less than 0.75?
- Does the project provide more parking than required by the County Code?

- Is the project inconsistent with the SCAG RTP/SCS?
- Does the project replace residential units set aside for lower income households with a smaller number of market-rate residential units?

The project site is located in the vicinity of the Los Angeles Metropolitan Transportation Authority (Metro) "J" (Silver) Line Carson Station. As a bus transit station, the Carson Station qualifies as major transit stop[2]. The proposed project site is located within a one-half mile walking distance of the Carson Station, and therefore meets the statutory requirements to presume less than significant transportation impacts.

The proposed was further reviewed in order to determine if any project-specific or site-specific information indicates that the presumption would not be valid. A detailed review of each question is provided below.

- Does the project have a Floor Area Ratio (FAR) less than 0.75?

  No. Based on information provided by the project Applicant, the project will have an FAR of 1.25, which is greater than 0.75.

- Does the project provide more parking than required by the County Code?

  No. The project's parking supply was compared to the City of Carson's Municipal Code, as the County's Code is not applicable to the project site. Pursuant to Section 9162.21 of the Carson Municipal Code, condominiums/townhomes within a Mixed-Use District are required to provide two covered parking spaces for each unit with 1 or more bedrooms and 1 guest parking space for every 4 units.. Therefore, the Municipal Code parking requirement for the proposed project is 78 parking spaces. The proposed project will provide a total of 78 parking spaces, therefore the project does provide more parking spaces or loading spaces than required by the City of Carson Municipal Code.

- Is the project inconsistent with the SCAG RTP/SCS?

  No. The project site is currently zoned as Mixed-Use-Carson Street (MU-CS). Per the Carson Municipal Code, this designation allows pedestrian-oriented, mixed-use (commercial/residential) development which may include market rate, affordable or senior housing and transit-oriented development. Since the project is consistent with the City's adopted zoning, and is not expected to result in substantial changes to the existing transportation network/infrastructure, it is assumed to be consistent with the land use and transportation network assumptions incorporated in the

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

Southern California Council of Government's (SCAG) Regional Transportation Plan and Sustainable Communities Strategy (RTP/SCS).

- Does the project replace residential units set aside for lower income households with a smaller number of market-rate residential units?

  No. The project will result in the addition of residential housing units as compared to the two existing single-family homes and 2-unit multi-family building.

Based on this review, it is concluded that the answer to all of the four questions is no. According to the County's Guidelines, the project satisfies the proximity to transit screening criteria. Therefore, the project meets the condition to presume less than significant transportation impacts stated in CEQA Guidelines Section 15064.3 and therefore screens out of VMT analysis. A separate VMT assessment memorandum will be prepared for the project for review and approval.

G. Site Access Studies:

Level of Service calculations will be prepared for the study locations for the weekday AM and PM peak hour conditions for the following scenarios:

- Existing conditions
- Opening Year Without Project (Year 2024) conditions
- Opening Year With Project (Year 2024) conditions

Utilize City approved capacity analysis methodologies (i.e., Highway Capacity Manual method) for the Level of Service calculations. The results of these analyses will be reviewed in order to determine the project's effect on LOS at nearby intersections.

The City of Carson General Plan has established the minimum acceptable Level of Service (LOS) D for roadway segment and peak hour intersection operations. A traffic operations issue is identified if the addition of the traffic generated from the proposed project results in any one of the following:

- Triggers an intersection operating at acceptable LOS (LOS D) to operate at unacceptable LOS
- For signalized intersections, a temporary adverse effect would occur if the project would increase the V/C ratio by 0.020 or more for intersections operating at LOS E or F

In addition, westbound left-turn queuing will be reviewed during the peak hours at the Moneta Avenue/Carson Street intersection.

LINSCOTT LAW & GREENSPAN engineers

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

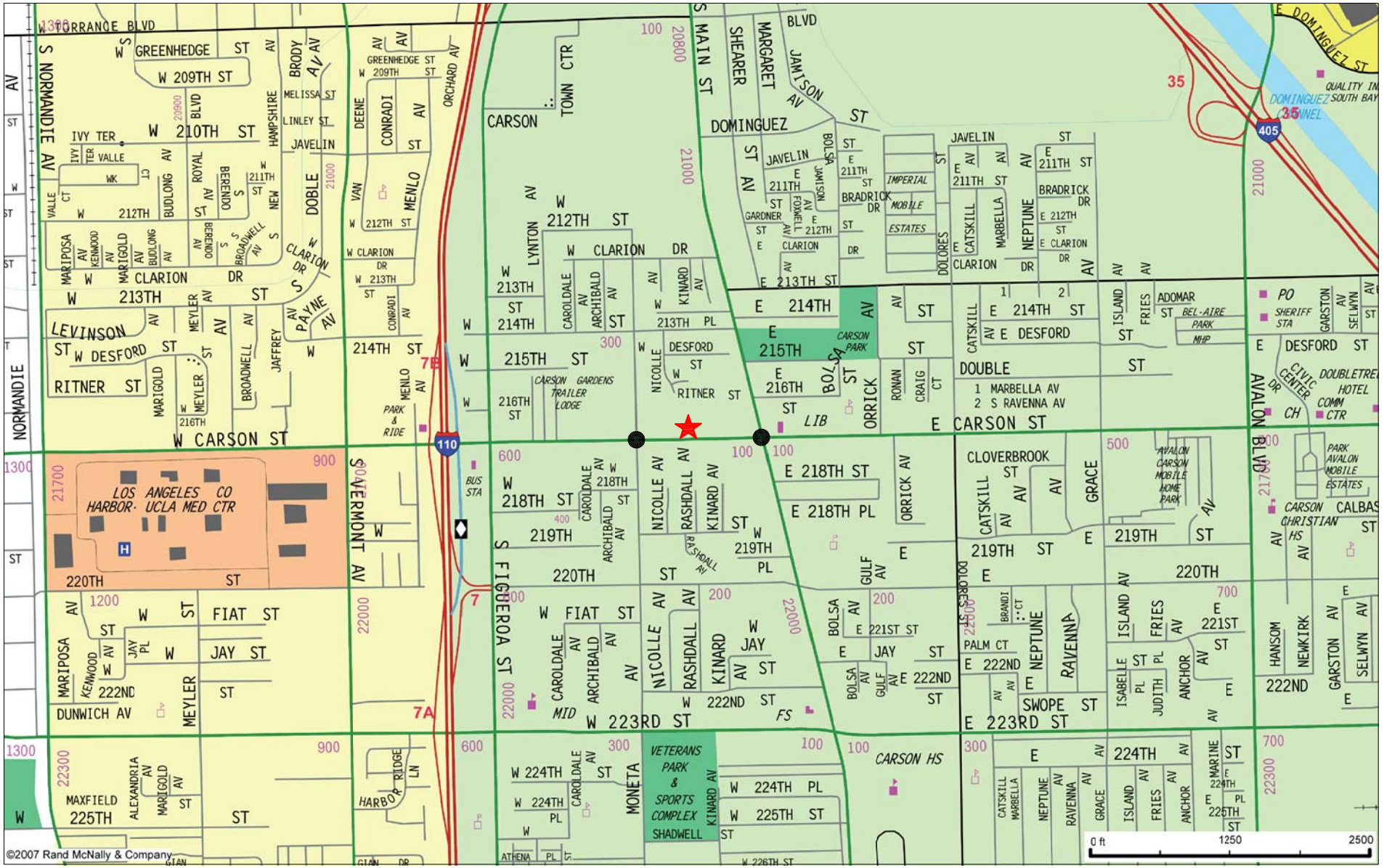
Approved by:

Nicholas Lowe _____ 9/30/2022

City of Carson Date

Attachments

c: File



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MAP SOURCE: RAND MCNALLY & COMPANY

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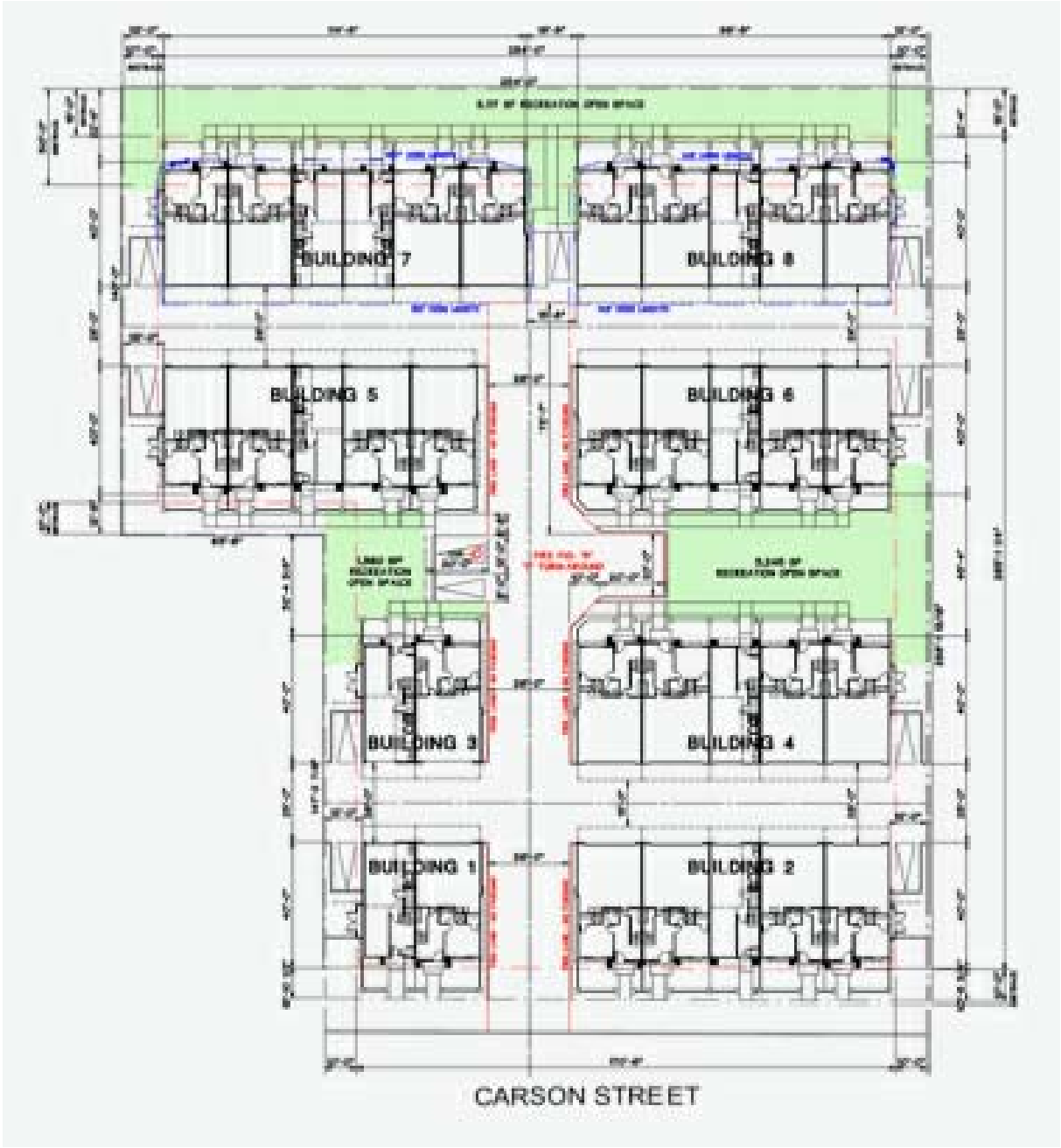
LINSCOTT LAW & GREENSPAN engineers

★ Project Site

● Study Intersection

Figure 1-1
Vicinity Map

215 West Carson Townhomes Project



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LINSCOTT LAW & GREENSPAN engineers

SOURCE: RANDY MORRIS ARCHITECT

Figure 2-2
Conceptual Site Plan

Table 2-1
PROJECT TRIP GENERATION [1]

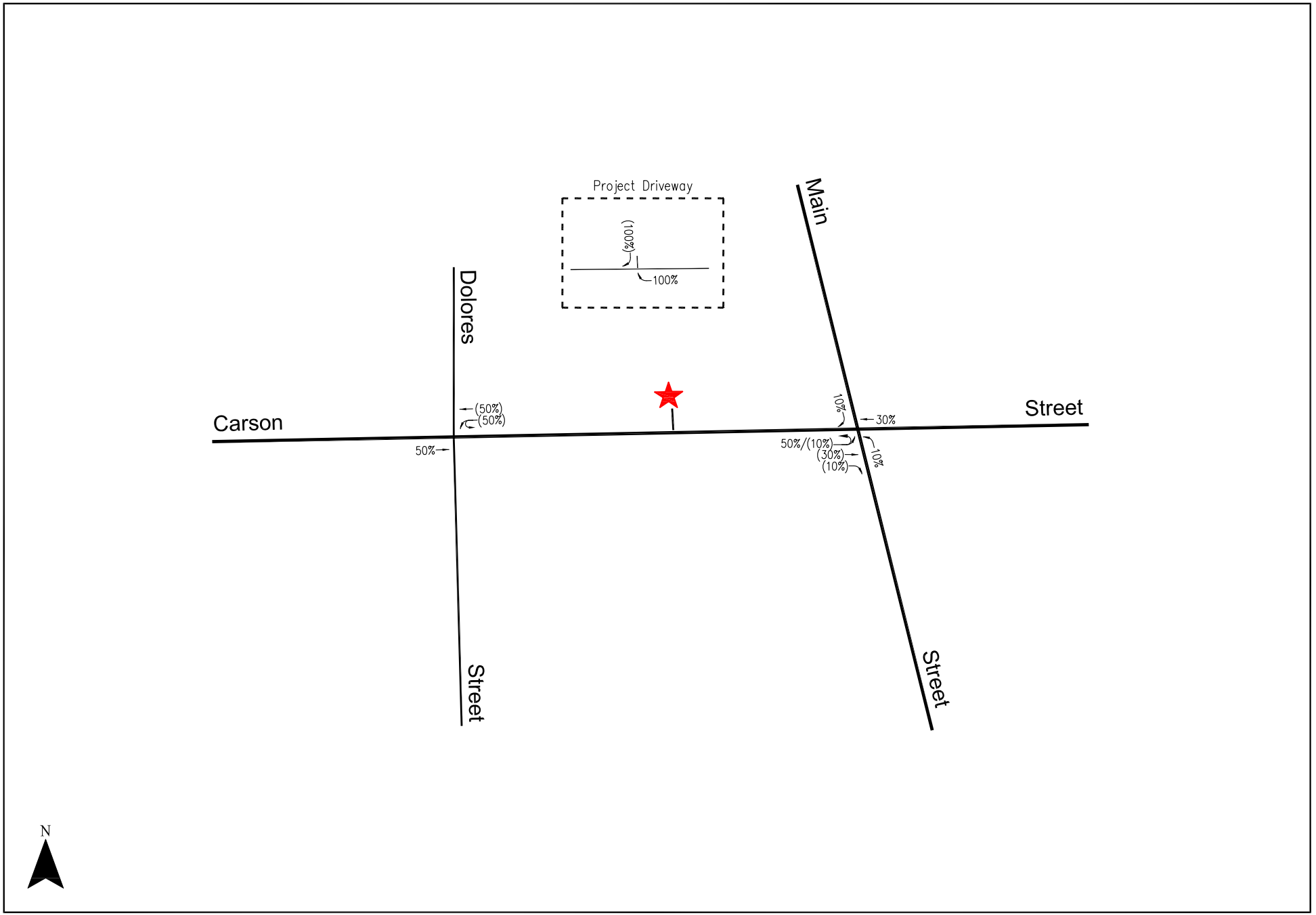
LAND USE	SIZE	DAILY TRIP ENDS [2] VOLUMES	AM PEAK HOUR VOLUMES [2] IN	AM PEAK HOUR VOLUMES [2] OUT	AM PEAK HOUR VOLUMES [2] TOTAL	PM PEAK HOUR VOLUMES [2] IN	PM PEAK HOUR VOLUMES [2] OUT	PM PEAK HOUR VOLUMES [2] TOTAL
Proposed Use								
Townhomes [3]	34 DU	229	3	11	14	11	6	17
Subtotal Proposed Use	**34 DU**	**229**	**3**	**11**	**14**	**11**	**6**	**17**
Existing Uses								
Single-Family Housing [4]	(2) DU	(19)	0	(1)	(1)	(1)	(1)	(2)
Townhomes [3]	(2) DU	(13)	0	(1)	(1)	(1)	0	(1)
Subtotal Existing Use		**(32)**	**0**	**(2)**	**(2)**	**(2)**	**(1)**	**(3)**
NET INCREASE		**197**	**3**	**9**	**12**	**9**	**5**	**14**

[1] Source: ITE "Trip Generation Manual", 11th Edition, 2021.

[2] Trips are one-way traffic movements, entering or leaving.

[3] ITE Land Use Code 220 (Multifamily Housing [Low-Rise]) trip generation average rates.
- Daily Trip Rate: 6.74 trips/dwelling unit; 50% inbound/50% outbound
- AM Peak Hour Trip Rate: 0.40 trips/dwelling units; 24% inbound/76% outbound
- PM Peak Hour Trip Rate: 0.51 trips/dwelling units; 63% inbound/37% outbound

[4] ITE Land Use Code 210 (Single-Family Detached Housing) trip generation average rates.
- Daily Trip Rate: 9.43 trips/dwelling unit; 50% inbound/50% outbound
- AM Peak Hour Trip Rate: 0.70 trips/dwelling units; 26% inbound/74% outbound
- PM Peak Hour Trip Rate: 0.94 trips/dwelling units; 63% inbound/37% outbound



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LINSCOTT LAW & GREENSPAN engineers

★ Project Site

XX = Inbound Percentage

(XX) = Outbound Percentage

Figure 7-1
Project Trip Distribution

215 West Carson Townhomes Project

APPENDIX B

MANUAL TRAFFIC COUNT DATA

CITY TRAFFIC COUNTERS

WWW.CTCOUNTERS.COM

File Name : MonetaAve_CarsonSt
Site Code : 00000000
Start Date : 5/18/2022
Page No : 1

Groups Printed- Vehicles

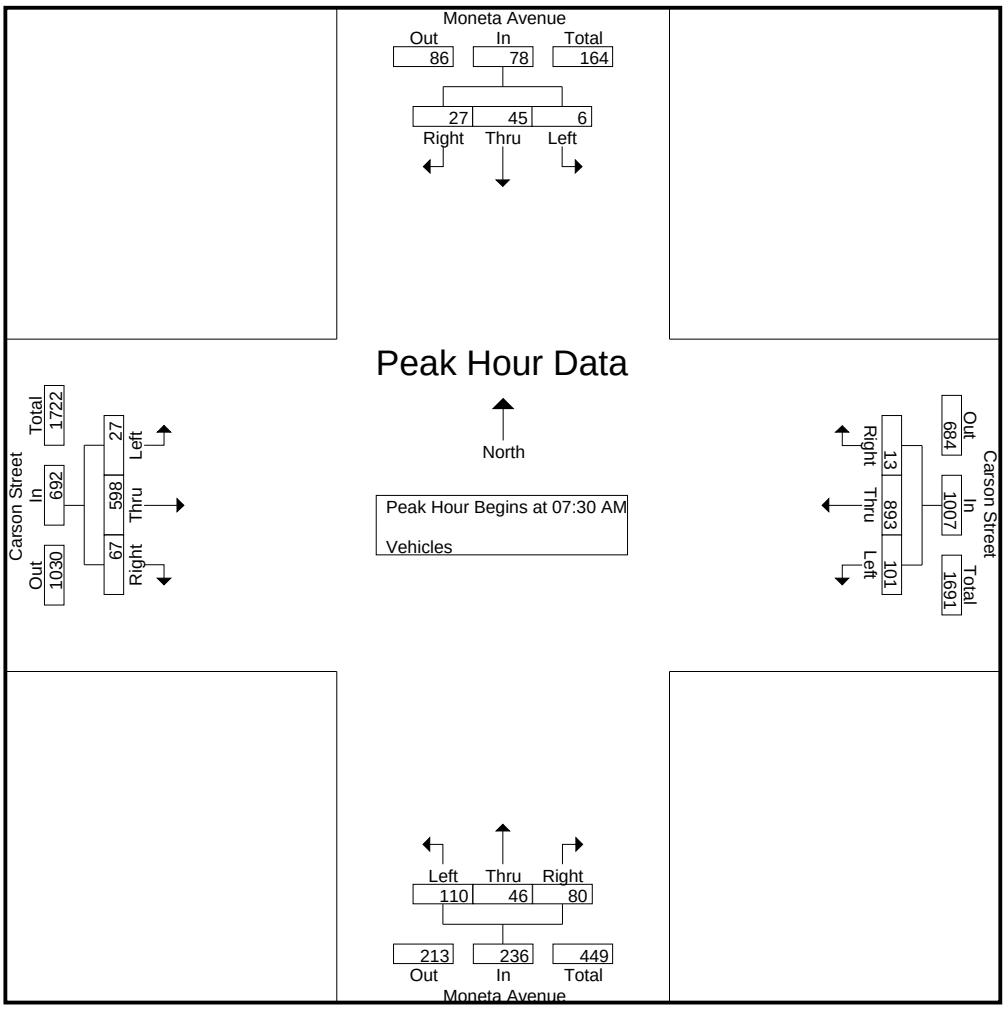
	Moneta Avenue Southbound			Carson Street Westbound			Moneta Avenue Northbound			Carson Street Eastbound			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
07:00 AM	2	2	6	6	178	3	12	6	5	6	62	8	296
07:15 AM	2	5	4	9	229	2	16	9	13	3	85	10	387
07:30 AM	1	8	10	14	211	2	23	6	15	7	133	12	442
07:45 AM	1	9	6	24	197	2	14	11	22	6	147	12	451
Total	6	24	26	53	815	9	65	32	55	22	427	42	1576
08:00 AM	1	20	6	39	226	4	36	17	20	9	151	30	559
08:15 AM	3	8	5	24	259	5	37	12	23	5	167	13	561
08:30 AM	1	8	7	16	176	2	28	20	12	4	118	9	401
08:45 AM	1	7	4	12	170	2	7	4	12	4	120	17	360
Total	6	43	22	91	831	13	108	53	67	22	556	69	1881
04:00 PM	6	18	8	13	141	9	12	14	19	10	222	19	491
04:15 PM	3	11	6	17	156	7	9	12	13	6	244	32	516
04:30 PM	7	16	7	14	136	2	13	7	19	10	235	31	497
04:45 PM	2	15	4	20	145	2	14	17	19	6	251	32	527
Total	18	60	25	64	578	20	48	50	70	32	952	114	2031
05:00 PM	6	15	8	19	165	1	14	5	16	11	240	17	517
05:15 PM	0	13	11	13	169	4	14	34	19	7	253	30	567
05:30 PM	3	9	7	15	158	2	12	12	18	11	244	30	521
05:45 PM	5	12	12	19	180	6	10	8	18	11	239	23	543
Total	14	49	38	66	672	13	50	59	71	40	976	100	2148
Grand Total	44	176	111	274	2896	55	271	194	263	116	2911	325	7636
Apprch %	13.3	53.2	33.5	8.5	89.8	1.7	37.2	26.6	36.1	3.5	86.8	9.7	
Total %	0.6	2.3	1.5	3.6	37.9	0.7	3.5	2.5	3.4	1.5	38.1	4.3	

CITY TRAFFIC COUNTERS

WWW.CTCOUNTERS.COM

File Name : MonetaAve_CarsonSt
Site Code : 00000000
Start Date : 5/18/2022
Page No : 2

	Moneta Avenue Southbound				Carson Street Westbound				Moneta Avenue Northbound				Carson Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	1	8	**10**	19	14	211	2	227	23	6	15	44	7	133	12	152	442
07:45 AM	1	9	6	16	24	197	2	223	14	11	22	47	6	147	12	165	451
08:00 AM	1	**20**	6	**27**	**39**	226	4	269	36	**17**	20	**73**	**9**	151	**30**	**190**	559
08:15 AM	**3**	8	5	16	24	**259**	**5**	**288**	**37**	12	**23**	72	5	**167**	13	185	**561**
Total Volume	6	45	27	78	101	893	13	1007	110	46	80	236	27	598	67	692	2013
% App. Total	7.7	57.7	34.6		10	88.7	1.3		46.6	19.5	33.9		3.9	86.4	9.7		
PHF	.500	.563	.675	.722	.647	.862	.650	.874	.743	.676	.870	.808	.750	.895	.558	.911	.897

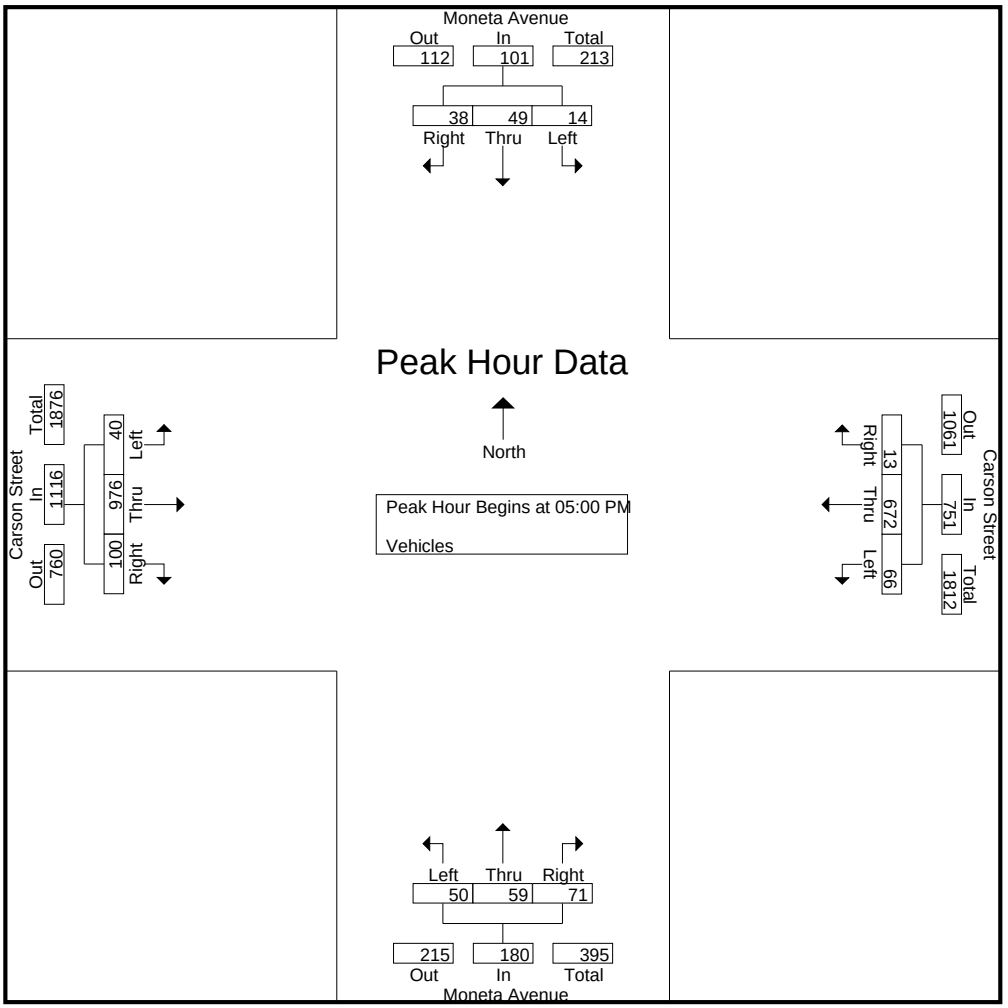


CITY TRAFFIC COUNTERS

WWW.CTCOUNTERS.COM

File Name : MonetaAve_CarsonSt
Site Code : 00000000
Start Date : 5/18/2022
Page No : 3

	Moneta Avenue Southbound				Carson Street Westbound				Moneta Avenue Northbound				Carson Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	**6**	**15**	8	**29**	**19**	165	1	185	**14**	5	16	35	**11**	240	17	268	517
05:15 PM	0	13	11	24	13	169	4	186	14	**34**	**19**	**67**	7	**253**	**30**	**290**	**567**
05:30 PM	3	9	7	19	15	158	2	175	12	12	18	42	11	244	30	285	521
05:45 PM	5	12	**12**	29	19	**180**	**6**	**205**	10	8	18	36	11	239	23	273	543
Total Volume	14	49	38	101	66	672	13	751	50	59	71	180	40	976	100	1116	2148
% App. Total	13.9	48.5	37.6		8.8	89.5	1.7		27.8	32.8	39.4		3.6	87.5	9		
PHF	.583	.817	.792	.871	.868	.933	.542	.916	.893	.434	.934	.672	.909	.964	.833	.962	.947



CITY TRAFFIC COUNTERS

WWW.CTCOUNTERS.COM

File Name : MonetaAve_CarsonSt_BP
Site Code : 00000000
Start Date : 5/18/2022
Page No : 1

Groups Printed- Pedestrians and Bikes

	Moneta Avenue South Leg		Carson Street West Leg		Moneta Avenue North Leg		Carson Street East Leg		
Start Time	Bikes	Peds	Bikes	Peds	Bikes	Peds	Bikes	Peds	Int. Total
07:00 AM	0	3	2	4	0	3	0	1	13
07:15 AM	0	0	0	1	0	1	0	0	2
07:30 AM	0	4	1	1	0	1	0	1	8
07:45 AM	1	2	0	5	0	1	0	2	11
Total	1	9	3	11	0	6	0	4	34
08:00 AM	0	4	0	11	0	0	0	5	20
08:15 AM	0	0	0	2	0	1	0	0	3
08:30 AM	0	2	0	2	0	2	0	5	11
08:45 AM	0	2	0	0	0	1	0	2	5
Total	0	8	0	15	0	4	0	12	39
04:00 PM	0	12	1	5	1	1	0	12	32
04:15 PM	0	1	0	3	0	0	0	2	6
04:30 PM	0	3	0	2	0	0	1	3	9
04:45 PM	0	3	0	1	0	0	1	1	6
Total	0	19	1	11	1	1	2	18	53
05:00 PM	0	1	0	1	0	1	0	1	4
05:15 PM	0	1	0	2	1	2	1	1	8
05:30 PM	0	8	0	3	0	2	0	3	16
05:45 PM	0	5	0	2	2	3	0	2	14
Total	0	15	0	8	3	8	1	7	42
Grand Total	1	51	4	45	4	19	3	41	168
Apprch %	1.9	98.1	8.2	91.8	17.4	82.6	6.8	93.2	
Total %	0.6	30.4	2.4	26.8	2.4	11.3	1.8	24.4	

CITY TRAFFIC COUNTERS

WWW.CTCOUNTERS.COM

File Name : MainSt_CarsonSt
Site Code : 00000000
Start Date : 5/18/2022
Page No : 1

Groups Printed- Vehicles

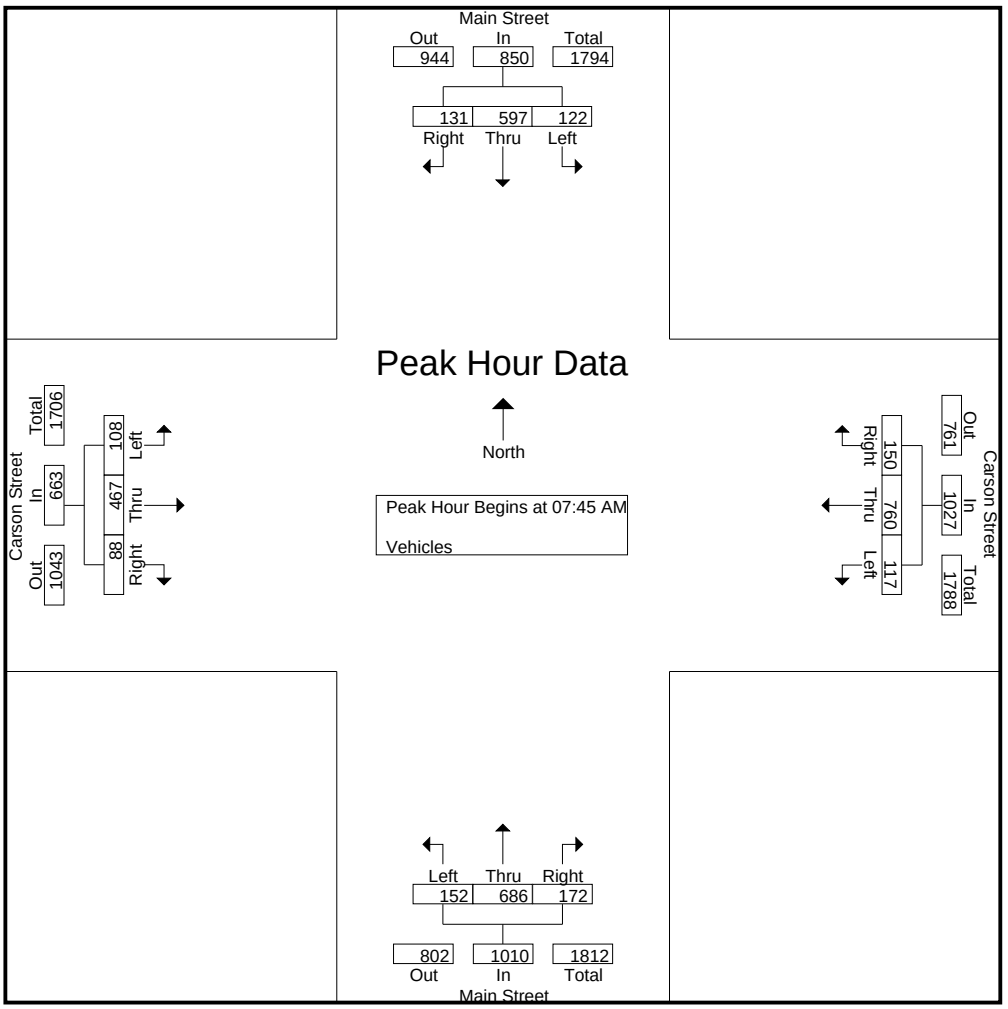
	Main Street Southbound			Carson Street Westbound			Main Street Northbound			Carson Street Eastbound			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
07:00 AM	5	61	19	12	166	14	20	65	20	8	57	9	456
07:15 AM	15	72	23	19	210	13	19	85	13	10	67	12	558
07:30 AM	9	83	19	28	222	15	16	107	24	17	119	18	677
07:45 AM	31	174	38	23	179	38	35	173	45	27	118	21	902
Total	60	390	99	82	777	80	90	430	102	62	361	60	2593
08:00 AM	33	152	49	47	212	51	34	181	47	26	123	25	980
08:15 AM	29	194	30	28	200	36	46	188	38	25	125	29	968
08:30 AM	29	77	14	19	169	25	37	144	42	30	101	13	700
08:45 AM	23	93	14	18	144	26	23	93	23	17	87	13	574
Total	114	516	107	112	725	138	140	606	150	98	436	80	3222
04:00 PM	48	162	26	31	117	22	34	137	42	32	180	27	858
04:15 PM	41	140	30	34	115	22	29	109	36	36	210	28	830
04:30 PM	53	176	33	28	106	17	27	125	39	21	176	27	828
04:45 PM	46	163	21	30	130	19	26	93	20	35	208	26	817
Total	188	641	110	123	468	80	116	464	137	124	774	108	3333
05:00 PM	44	200	29	26	136	28	34	126	42	22	197	16	900
05:15 PM	48	201	35	38	142	19	27	96	25	34	222	17	904
05:30 PM	46	180	21	29	117	15	29	100	28	26	188	23	802
05:45 PM	37	149	42	29	138	19	27	70	21	43	203	30	808
Total	175	730	127	122	533	81	117	392	116	125	810	86	3414
Grand Total	537	2277	443	439	2503	379	463	1892	505	409	2381	334	12562
Apprch %	16.5	69.9	13.6	13.2	75.4	11.4	16.2	66.2	17.7	13.1	76.2	10.7	
Total %	4.3	18.1	3.5	3.5	19.9	3	3.7	15.1	4	3.3	19	2.7	

CITY TRAFFIC COUNTERS

WWW.CTCOUNTERS.COM

File Name : MainSt_CarsonSt
Site Code : 00000000
Start Date : 5/18/2022
Page No : 2

	Main Street Southbound				Carson Street Westbound				Main Street Northbound				Carson Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	31	174	38	243	23	179	38	240	35	173	45	253	27	118	21	166	902
08:00 AM	**33**	152	**49**	234	**47**	**212**	**51**	**310**	34	181	**47**	262	26	123	25	174	**980**
08:15 AM	29	**194**	30	**253**	28	200	36	264	**46**	**188**	38	**272**	25	**125**	**29**	**179**	968
08:30 AM	29	77	14	120	19	169	25	213	37	144	42	223	**30**	101	13	144	700
Total Volume	122	597	131	850	117	760	150	1027	152	686	172	1010	108	467	88	663	3550
% App. Total	14.4	70.2	15.4		11.4	74	14.6		15	67.9	17		16.3	70.4	13.3		
PHF	.924	.769	.668	.840	.622	.896	.735	.828	.826	.912	.915	.928	.900	.934	.759	.926	.906

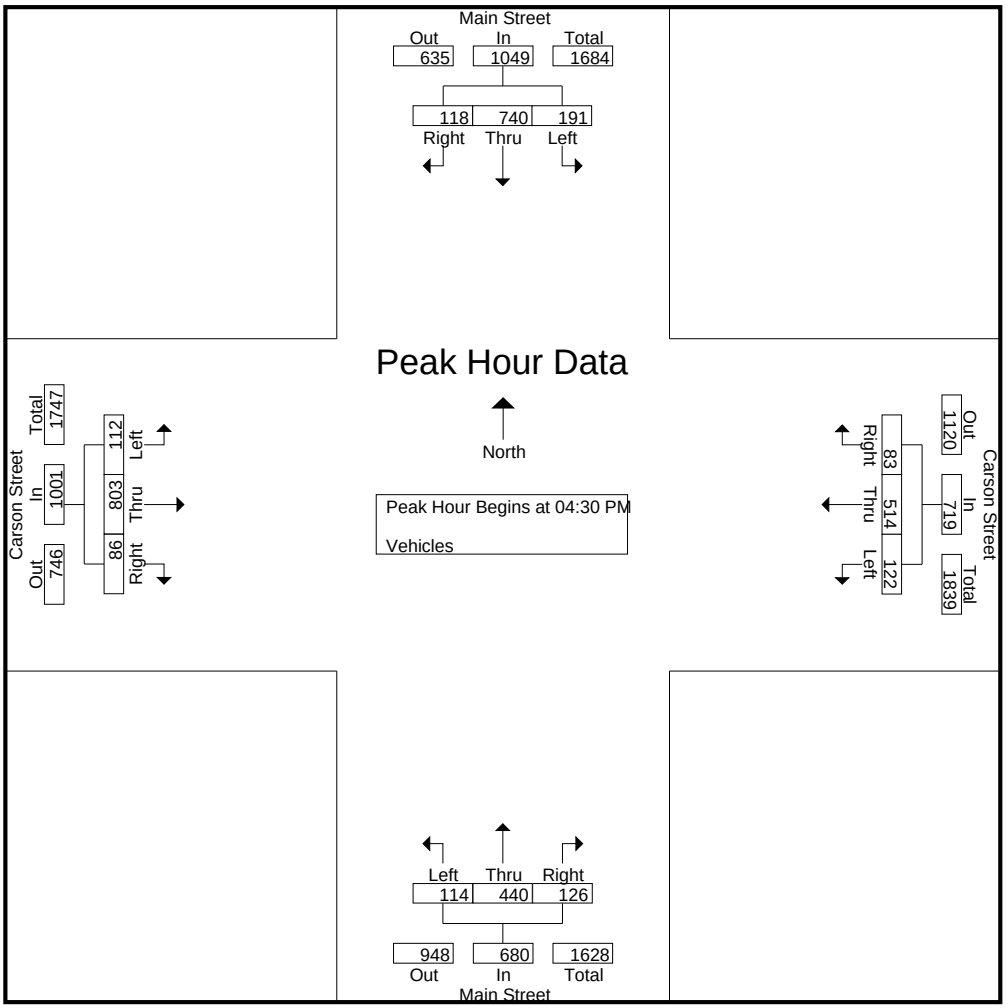


CITY TRAFFIC COUNTERS

WWW.CTCOUNTERS.COM

File Name : MainSt_CarsonSt
Site Code : 00000000
Start Date : 5/18/2022
Page No : 3

	Main Street Southbound				Carson Street Westbound				Main Street Northbound				Carson Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	**53**	176	33	262	28	106	17	151	27	125	39	191	21	176	**27**	224	828
04:45 PM	46	163	21	230	30	130	19	179	26	93	20	139	**35**	208	26	269	817
05:00 PM	44	200	29	273	26	136	**28**	190	**34**	**126**	**42**	**202**	22	197	16	235	900
05:15 PM	48	**201**	**35**	**284**	**38**	**142**	19	**199**	27	96	25	148	34	**222**	17	**273**	**904**
Total Volume	191	740	118	1049	122	514	83	719	114	440	126	680	112	803	86	1001	3449
% App. Total	18.2	70.5	11.2		17	71.5	11.5		16.8	64.7	18.5		11.2	80.2	8.6		
PHF	.901	.920	.843	.923	.803	.905	.741	.903	.838	.873	.750	.842	.800	.904	.796	.917	.954



CITY TRAFFIC COUNTERS

WWW.CTCOUNTERS.COM

File Name : MainSt_CarsonSt_BP
Site Code : 00000000
Start Date : 5/18/2022
Page No : 1

Groups Printed- Pedestrians and Bikes

	Main Street South Leg		Carson Street West Leg		Main Street North Leg		Carson Street East Leg		
Start Time	Bikes	Peds	Bikes	Peds	Bikes	Peds	Bikes	Peds	Int. Total
07:00 AM	1	6	0	0	0	0	0	0	7
07:15 AM	0	1	1	5	0	2	0	2	11
07:30 AM	0	0	0	2	0	2	0	1	5
07:45 AM	0	6	0	2	0	3	0	12	23
Total	1	13	1	9	0	7	0	15	46
08:00 AM	0	0	0	3	0	3	0	8	14
08:15 AM	0	2	0	2	0	6	1	2	13
08:30 AM	0	2	0	7	0	1	0	0	10
08:45 AM	0	0	0	5	0	0	0	5	10
Total	0	4	0	17	0	10	1	15	47
04:00 PM	0	0	0	7	0	6	0	18	31
04:15 PM	0	0	0	1	0	4	1	2	8
04:30 PM	0	0	0	5	1	2	2	3	13
04:45 PM	0	0	0	6	0	2	0	0	8
Total	0	0	0	19	1	14	3	23	60
05:00 PM	0	2	0	3	0	3	2	3	13
05:15 PM	0	3	0	1	1	6	1	2	14
05:30 PM	0	2	0	3	0	2	0	4	11
05:45 PM	1	0	0	1	3	7	2	4	18
Total	1	7	0	8	4	18	5	13	56
Grand Total	2	24	1	53	5	49	9	66	209
Apprch %	7.7	92.3	1.9	98.1	9.3	90.7	12	88	
Total %	1	11.5	0.5	25.4	2.4	23.4	4.3	31.6	

APPENDIX C

HCM AND LEVELS OF SERVICE EXPLANATION
HCM DATA WORKSHEETS – WEEKDAY AM AND PM PEAK HOURS

LEVEL OF SERVICE FOR UNSIGNALIZED INTERSECTIONS

In the *Highway Capacity Manual (HCM)*, published by the Transportation Research Board, 2000, level of service for unsignalized intersections is defined in terms of delay, which is a measure of driver discomfort, frustration, fuel consumption, and lost travel time. The delay experienced by a motorist is made up of a number of factors that relate to control, geometrics, traffic, and incidents. Total delay is the difference between the travel time actually experienced and the reference travel time that would result during base conditions, in the absence of incidents, control, traffic, or geometric delay. Only the portion of total delay attributed to the traffic control measures, either traffic signals or stop signs, is quantified. This delay is called *control delay*. Control delay includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay.

Level of Service criteria for unsignalized intersections are stated in terms of the average control delay per vehicle. The level of service is determined by the computed or measured control delay and is defined for each minor movement. Average control delay for any particular minor movement is a function of the service time for the approach and the degree of utilization. (Level of service is not defined for the intersection as a whole for two-way stop controlled intersections.)

Level of Service Criteria for TWSC/AWSC Intersections

Level of Service	Average Control Delay (Sec/Veh)
A	≤ 10
B	> 10 and ≤ 15
C	> 15 and ≤ 25
D	> 25 and ≤ 35
E	> 35 and ≤ 50
F	> 50

Level of Service (LOS) values are used to describe intersection operations with service levels varying from LOS A (free flow) to LOS F (jammed condition). The following descriptions summarize *HCM* criteria for each level of service:

LOS A describes operations with very low control delay, up to 10 seconds per vehicle.

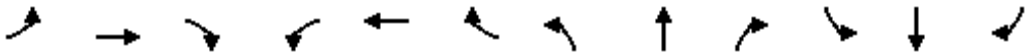
LOS B describes operations with control delay greater than 10 and up to 15 seconds per vehicle.

LOS C describes operations with control delay greater than 15 and up to 25 seconds per vehicle.

LOS D describes operations with control delay greater than 25 and up to 35 seconds per vehicle.

LOS E describes operations with control delay greater than 35 and up to 50 seconds per vehicle.

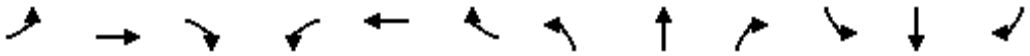
LOS F describes operations with control delay in excess of 50 seconds per vehicle. For two-way stop controlled intersections, LOS F exists when there are insufficient gaps of suitable size to allow side-street demand to safely cross through a major-street traffic stream. This level of service is generally evident from extremely long control delays experienced by side-street traffic and by queuing on the minor-street approaches.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	27	598	67	101	893	13	110	46	80	6	45	27
Future Volume (veh/h)	27	598	67	101	893	13	110	46	80	6	45	27
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	0.98		0.98	0.99		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	29	650	73	110	971	14	120	50	87	7	49	29
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	451	2207	248	502	2459	35	193	76	115	46	242	132
Arrive On Green	0.69	0.69	0.69	1.00	1.00	1.00	0.22	0.22	0.22	0.22	0.22	0.22
Sat Flow, veh/h	571	3219	361	729	3586	52	670	341	517	61	1086	594
Grp Volume(v), veh/h	29	358	365	110	481	504	257	0	0	85	0	0
Grp Sat Flow(s),veh/h/ln	571	1777	1803	729	1777	1861	1528	0	0	1742	0	0
Q Serve(g_s), s	2.0	9.5	9.6	2.7	0.0	0.0	13.7	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	2.0	9.5	9.6	12.3	0.0	0.0	18.5	0.0	0.0	4.8	0.0	0.0
Prop In Lane	1.00		0.20	1.00		0.03	0.47		0.34	0.08		0.34
Lane Grp Cap(c), veh/h	451	1218	1236	502	1218	1276	384	0	0	420	0	0
V/C Ratio(X)	0.06	0.29	0.29	0.22	0.39	0.39	0.67	0.00	0.00	0.20	0.00	0.00
Avail Cap(c_a), veh/h	451	1218	1236	502	1218	1276	510	0	0	565	0	0
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	6.2	7.4	7.4	0.7	0.0	0.0	43.1	0.0	0.0	38.1	0.0	0.0
Incr Delay (d2), s/veh	0.3	0.6	0.6	1.0	1.0	0.9	2.1	0.0	0.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.5	6.3	6.4	0.3	0.6	0.6	11.7	0.0	0.0	3.7	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	6.5	8.0	8.0	1.7	1.0	0.9	45.2	0.0	0.0	38.2	0.0	0.0
LnGrp LOS	A	A	A	A	A	A	D	A	A	D	A	A
Approach Vol, veh/h		752			1095			257			85	
Approach Delay, s/veh		8.0			1.0			45.2			38.2	
Approach LOS		A			A			D			D	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	88.3	31.7	88.3	31.7
Change Period (Y+Rc), s	6.0	5.0	6.0	5.0
Max Green Setting (Gmax), s	72.0	37.0	72.0	37.0
Max Q Clear Time (g_c+I1), s	11.6	20.5	14.3	6.8
Green Ext Time (p_c), s	3.2	1.4	5.2	0.1

Intersection Summary	
HCM 6th Ctrl Delay	10.0
HCM 6th LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	981	100	69	675	13	50	59	71	14	49	38
Future Volume (veh/h)	40	981	100	69	675	13	50	59	71	14	49	38
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	0.99		0.96	0.98		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	43	1066	109	75	734	14	54	64	77	15	53	41
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	568	2316	237	333	2542	48	106	121	123	59	183	125
Arrive On Green	0.71	0.71	0.71	1.00	1.00	1.00	0.20	0.20	0.20	0.20	0.20	0.20
Sat Flow, veh/h	713	3250	332	477	3567	68	345	620	630	129	934	641
Grp Volume(v), veh/h	43	582	593	75	366	382	195	0	0	109	0	0
Grp Sat Flow(s),veh/h/ln	713	1777	1805	477	1777	1858	1594	0	0	1704	0	0
Q Serve(g_s), s	2.2	16.8	16.9	4.8	0.0	0.0	6.6	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	2.2	16.8	16.9	21.6	0.0	0.0	13.0	0.0	0.0	6.5	0.0	0.0
Prop In Lane	1.00		0.18	1.00		0.04	0.28		0.39	0.14		0.38
Lane Grp Cap(c), veh/h	568	1266	1287	333	1266	1324	350	0	0	368	0	0
V/C Ratio(X)	0.08	0.46	0.46	0.23	0.29	0.29	0.56	0.00	0.00	0.30	0.00	0.00
Avail Cap(c_a), veh/h	568	1266	1287	333	1266	1324	523	0	0	551	0	0
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	5.3	7.4	7.4	2.1	0.0	0.0	43.9	0.0	0.0	41.4	0.0	0.0
Incr Delay (d2), s/veh	0.3	1.2	1.2	1.6	0.6	0.6	1.4	0.0	0.0	0.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.6	10.0	10.2	0.6	0.4	0.4	9.2	0.0	0.0	5.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	5.5	8.6	8.6	3.7	0.6	0.6	45.3	0.0	0.0	41.6	0.0	0.0
LnGrp LOS	A	A	A	A	A	A	D	A	A	D	A	A
Approach Vol, veh/h		1218			823			195			109	
Approach Delay, s/veh		8.5			0.8			45.3			41.6	
Approach LOS		A			A			D			D	

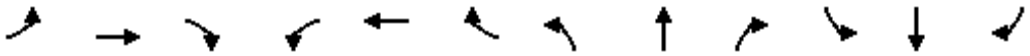
Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	91.5	28.5	91.5	28.5
Change Period (Y+Rc), s	6.0	5.0	6.0	5.0
Max Green Setting (Gmax), s	72.0	37.0	72.0	37.0
Max Q Clear Time (g_c+I1), s	18.9	15.0	23.6	8.5
Green Ext Time (p_c), s	6.1	1.1	4.0	0.1

Intersection Summary	
HCM 6th Ctrl Delay	10.4
HCM 6th LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	27	600	67	106	898	13	110	46	80	6	45	27
Future Volume (veh/h)	27	600	67	106	898	13	110	46	80	6	45	27
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	0.98		0.98	0.99		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	29	652	73	115	976	14	120	50	87	7	49	29
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	450	2208	247	501	2459	35	193	76	115	46	242	132
Arrive On Green	0.69	0.69	0.69	1.00	1.00	1.00	0.22	0.22	0.22	0.22	0.22	0.22
Sat Flow, veh/h	568	3220	360	728	3586	51	670	341	517	61	1086	594
Grp Volume(v), veh/h	29	359	366	115	484	506	257	0	0	85	0	0
Grp Sat Flow(s),veh/h/ln	568	1777	1803	728	1777	1861	1528	0	0	1742	0	0
Q Serve(g_s), s	2.0	9.6	9.6	2.9	0.0	0.0	13.7	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	2.0	9.6	9.6	12.5	0.0	0.0	18.5	0.0	0.0	4.8	0.0	0.0
Prop In Lane	1.00		0.20	1.00		0.03	0.47		0.34	0.08		0.34
Lane Grp Cap(c), veh/h	450	1218	1236	501	1218	1276	384	0	0	420	0	0
V/C Ratio(X)	0.06	0.30	0.30	0.23	0.40	0.40	0.67	0.00	0.00	0.20	0.00	0.00
Avail Cap(c_a), veh/h	450	1218	1236	501	1218	1276	510	0	0	565	0	0
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	6.2	7.4	7.4	0.7	0.0	0.0	43.1	0.0	0.0	38.1	0.0	0.0
Incr Delay (d2), s/veh	0.3	0.6	0.6	1.1	1.0	0.9	2.1	0.0	0.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.5	6.4	6.5	0.3	0.6	0.6	11.7	0.0	0.0	3.7	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	6.5	8.0	8.0	1.8	1.0	0.9	45.2	0.0	0.0	38.2	0.0	0.0
LnGrp LOS	A	A	A	A	A	A	D	A	A	D	A	A
Approach Vol, veh/h		754			1105			257			85	
Approach Delay, s/veh		8.0			1.0			45.2			38.2	
Approach LOS		A			A			D			D	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	88.3	31.7	88.3	31.7
Change Period (Y+Rc), s	6.0	5.0	6.0	5.0
Max Green Setting (Gmax), s	72.0	37.0	72.0	37.0
Max Q Clear Time (g_c+I1), s	11.6	20.5	14.5	6.8
Green Ext Time (p_c), s	3.2	1.4	5.2	0.1

Intersection Summary	
HCM 6th Ctrl Delay	10.0
HCM 6th LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	981	100	69	675	13	50	59	71	14	49	38
Future Volume (veh/h)	40	981	100	69	675	13	50	59	71	14	49	38
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	0.99		0.96	0.98		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	43	1066	109	75	734	14	54	64	77	15	53	41
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	568	2316	237	333	2542	48	106	121	123	59	183	125
Arrive On Green	0.71	0.71	0.71	1.00	1.00	1.00	0.20	0.20	0.20	0.20	0.20	0.20
Sat Flow, veh/h	713	3250	332	477	3567	68	345	620	630	129	934	641
Grp Volume(v), veh/h	43	582	593	75	366	382	195	0	0	109	0	0
Grp Sat Flow(s),veh/h/ln	713	1777	1805	477	1777	1858	1594	0	0	1704	0	0
Q Serve(g_s), s	2.2	16.8	16.9	4.8	0.0	0.0	6.6	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	2.2	16.8	16.9	21.6	0.0	0.0	13.0	0.0	0.0	6.5	0.0	0.0
Prop In Lane	1.00		0.18	1.00		0.04	0.28		0.39	0.14		0.38
Lane Grp Cap(c), veh/h	568	1266	1287	333	1266	1324	350	0	0	368	0	0
V/C Ratio(X)	0.08	0.46	0.46	0.23	0.29	0.29	0.56	0.00	0.00	0.30	0.00	0.00
Avail Cap(c_a), veh/h	568	1266	1287	333	1266	1324	523	0	0	551	0	0
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	5.3	7.4	7.4	2.1	0.0	0.0	43.9	0.0	0.0	41.4	0.0	0.0
Incr Delay (d2), s/veh	0.3	1.2	1.2	1.6	0.6	0.6	1.4	0.0	0.0	0.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.6	10.0	10.2	0.6	0.4	0.4	9.2	0.0	0.0	5.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	5.5	8.6	8.6	3.7	0.6	0.6	45.3	0.0	0.0	41.6	0.0	0.0
LnGrp LOS	A	A	A	A	A	A	D	A	A	D	A	A
Approach Vol, veh/h		1218			823			195			109	
Approach Delay, s/veh		8.5			0.8			45.3			41.6	
Approach LOS		A			A			D			D	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		91.5		28.5		91.5		28.5				
Change Period (Y+Rc), s		6.0		5.0		6.0		5.0				
Max Green Setting (Gmax), s		72.0		37.0		72.0		37.0				
Max Q Clear Time (g_c+I1), s		18.9		15.0		23.6		8.5				
Green Ext Time (p_c), s		6.1		1.1		4.0		0.1				

Intersection Summary												
HCM 6th Ctrl Delay			10.4									
HCM 6th LOS			B									

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	28	624	68	103	930	13	112	47	82	6	46	28
Future Volume (veh/h)	28	624	68	103	930	13	112	47	82	6	46	28
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	0.98		0.98	0.99		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	30	678	74	112	1011	14	122	51	89	7	50	30
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	436	2207	241	486	2453	34	195	76	117	46	243	135
Arrive On Green	0.68	0.68	0.68	1.00	1.00	1.00	0.22	0.22	0.22	0.22	0.22	0.22
Sat Flow, veh/h	550	3229	352	710	3588	50	670	339	519	59	1082	601
Grp Volume(v), veh/h	30	373	379	112	501	524	262	0	0	87	0	0
Grp Sat Flow(s),veh/h/ln	550	1777	1805	710	1777	1861	1528	0	0	1742	0	0
Q Serve(g_s), s	2.2	10.1	10.1	3.0	0.0	0.0	14.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	2.2	10.1	10.1	13.1	0.0	0.0	18.9	0.0	0.0	4.9	0.0	0.0
Prop In Lane	1.00		0.20	1.00		0.03	0.47		0.34	0.08		0.34
Lane Grp Cap(c), veh/h	436	1215	1234	486	1215	1272	387	0	0	424	0	0
V/C Ratio(X)	0.07	0.31	0.31	0.23	0.41	0.41	0.68	0.00	0.00	0.21	0.00	0.00
Avail Cap(c_a), veh/h	436	1215	1234	486	1215	1272	510	0	0	565	0	0
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	6.4	7.6	7.6	0.8	0.0	0.0	43.0	0.0	0.0	37.9	0.0	0.0
Incr Delay (d2), s/veh	0.3	0.7	0.6	1.1	1.0	1.0	2.3	0.0	0.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.5	6.7	6.8	0.3	0.6	0.6	12.0	0.0	0.0	3.8	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	6.7	8.3	8.3	1.9	1.0	1.0	45.3	0.0	0.0	38.0	0.0	0.0
LnGrp LOS	A	A	A	A	A	A	D	A	A	D	A	A
Approach Vol, veh/h		782			1137			262			87	
Approach Delay, s/veh		8.2			1.1			45.3			38.0	
Approach LOS		A			A			D			D	

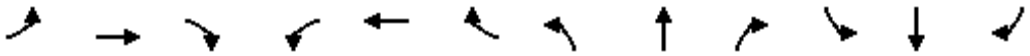
Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	88.0	32.0	88.0	32.0
Change Period (Y+Rc), s	6.0	5.0	6.0	5.0
Max Green Setting (Gmax), s	72.0	37.0	72.0	37.0
Max Q Clear Time (g_c+I1), s	12.1	20.9	15.1	6.9
Green Ext Time (p_c), s	3.4	1.4	5.5	0.1

Intersection Summary	
HCM 6th Ctrl Delay	10.1
HCM 6th LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	41	1017	102	67	701	13	51	60	72	14	50	39
Future Volume (veh/h)	41	1017	102	67	701	13	51	60	72	14	50	39
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	0.99		0.96	0.98		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	45	1105	111	73	762	14	55	65	78	15	54	42
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	554	2317	232	318	2540	47	107	122	124	59	184	127
Arrive On Green	0.71	0.71	0.71	1.00	1.00	1.00	0.20	0.20	0.20	0.20	0.20	0.20
Sat Flow, veh/h	695	3256	327	459	3570	66	348	619	628	126	934	645
Grp Volume(v), veh/h	45	602	614	73	379	397	198	0	0	111	0	0
Grp Sat Flow(s),veh/h/ln	695	1777	1806	459	1777	1859	1595	0	0	1704	0	0
Q Serve(g_s), s	2.4	17.8	17.8	5.1	0.0	0.0	6.6	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	2.4	17.8	17.8	22.9	0.0	0.0	13.2	0.0	0.0	6.6	0.0	0.0
Prop In Lane	1.00		0.18	1.00		0.04	0.28		0.39	0.14		0.38
Lane Grp Cap(c), veh/h	554	1264	1285	318	1264	1322	352	0	0	369	0	0
V/C Ratio(X)	0.08	0.48	0.48	0.23	0.30	0.30	0.56	0.00	0.00	0.30	0.00	0.00
Avail Cap(c_a), veh/h	554	1264	1285	318	1264	1322	524	0	0	551	0	0
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	5.3	7.6	7.6	2.4	0.0	0.0	43.8	0.0	0.0	41.3	0.0	0.0
Incr Delay (d2), s/veh	0.3	1.3	1.3	1.7	0.6	0.6	1.4	0.0	0.0	0.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.6	10.5	10.7	0.7	0.4	0.4	9.4	0.0	0.0	5.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	5.6	8.8	8.8	4.1	0.6	0.6	45.2	0.0	0.0	41.5	0.0	0.0
LnGrp LOS	A	A	A	A	A	A	D	A	A	D	A	A
Approach Vol, veh/h		1261			849			198			111	
Approach Delay, s/veh		8.7			0.9			45.2			41.5	
Approach LOS		A			A			D			D	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	91.4	28.6	91.4	28.6
Change Period (Y+Rc), s	6.0	5.0	6.0	5.0
Max Green Setting (Gmax), s	72.0	37.0	72.0	37.0
Max Q Clear Time (g_c+I1), s	19.8	15.2	24.9	8.6
Green Ext Time (p_c), s	6.5	1.1	4.2	0.1

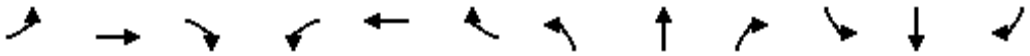
Intersection Summary	
HCM 6th Ctrl Delay	10.5
HCM 6th LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	28	626	68	108	935	13	112	47	82	6	46	28
Future Volume (veh/h)	28	626	68	108	935	13	112	47	82	6	46	28
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	0.98		0.98	0.99		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	30	680	74	117	1016	14	122	51	89	7	50	30
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	434	2208	240	485	2453	34	195	76	117	46	243	135
Arrive On Green	0.68	0.68	0.68	1.00	1.00	1.00	0.22	0.22	0.22	0.22	0.22	0.22
Sat Flow, veh/h	547	3230	351	709	3589	49	670	339	519	59	1082	601
Grp Volume(v), veh/h	30	374	380	117	503	527	262	0	0	87	0	0
Grp Sat Flow(s),veh/h/ln	547	1777	1805	709	1777	1861	1528	0	0	1742	0	0
Q Serve(g_s), s	2.2	10.1	10.1	3.2	0.0	0.0	14.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	2.2	10.1	10.1	13.4	0.0	0.0	18.9	0.0	0.0	4.9	0.0	0.0
Prop In Lane	1.00		0.19	1.00		0.03	0.47		0.34	0.08		0.34
Lane Grp Cap(c), veh/h	434	1215	1234	485	1215	1272	387	0	0	424	0	0
V/C Ratio(X)	0.07	0.31	0.31	0.24	0.41	0.41	0.68	0.00	0.00	0.21	0.00	0.00
Avail Cap(c_a), veh/h	434	1215	1234	485	1215	1272	510	0	0	565	0	0
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	6.4	7.6	7.6	0.8	0.0	0.0	43.0	0.0	0.0	37.9	0.0	0.0
Incr Delay (d2), s/veh	0.3	0.7	0.6	1.2	1.0	1.0	2.3	0.0	0.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.5	6.7	6.8	0.3	0.6	0.6	12.0	0.0	0.0	3.8	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	6.7	8.3	8.3	2.0	1.0	1.0	45.3	0.0	0.0	38.0	0.0	0.0
LnGrp LOS	A	A	A	A	A	A	D	A	A	D	A	A
Approach Vol, veh/h		784			1147			262			87	
Approach Delay, s/veh		8.2			1.1			45.3			38.0	
Approach LOS		A			A			D			D	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		88.0		32.0		88.0		32.0				
Change Period (Y+Rc), s		6.0		5.0		6.0		5.0				
Max Green Setting (Gmax), s		72.0		37.0		72.0		37.0				
Max Q Clear Time (g_c+I1), s		12.1		20.9		15.4		6.9				
Green Ext Time (p_c), s		3.4		1.4		5.6		0.1				

Intersection Summary												
HCM 6th Ctrl Delay			10.1									
HCM 6th LOS			B									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	41	1022	102	70	704	13	51	60	72	14	50	39
Future Volume (veh/h)	41	1022	102	70	704	13	51	60	72	14	50	39
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	0.99		0.96	0.98		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	45	1111	111	76	765	14	55	65	78	15	54	42
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	553	2318	231	316	2540	46	107	122	124	59	184	127
Arrive On Green	0.71	0.71	0.71	1.00	1.00	1.00	0.20	0.20	0.20	0.20	0.20	0.20
Sat Flow, veh/h	693	3258	325	456	3570	65	348	619	628	126	934	645
Grp Volume(v), veh/h	45	605	617	76	381	398	198	0	0	111	0	0
Grp Sat Flow(s),veh/h/ln	693	1777	1807	456	1777	1859	1595	0	0	1704	0	0
Q Serve(g_s), s	2.4	17.9	17.9	5.5	0.0	0.0	6.6	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	2.4	17.9	17.9	23.4	0.0	0.0	13.2	0.0	0.0	6.6	0.0	0.0
Prop In Lane	1.00		0.18	1.00		0.04	0.28		0.39	0.14		0.38
Lane Grp Cap(c), veh/h	553	1264	1285	316	1264	1322	352	0	0	369	0	0
V/C Ratio(X)	0.08	0.48	0.48	0.24	0.30	0.30	0.56	0.00	0.00	0.30	0.00	0.00
Avail Cap(c_a), veh/h	553	1264	1285	316	1264	1322	524	0	0	551	0	0
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	5.3	7.6	7.6	2.5	0.0	0.0	43.8	0.0	0.0	41.3	0.0	0.0
Incr Delay (d2), s/veh	0.3	1.3	1.3	1.8	0.6	0.6	1.4	0.0	0.0	0.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.6	10.6	10.8	0.7	0.4	0.4	9.4	0.0	0.0	5.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	5.6	8.9	8.9	4.3	0.6	0.6	45.2	0.0	0.0	41.5	0.0	0.0
LnGrp LOS	A	A	A	A	A	A	D	A	A	D	A	A
Approach Vol, veh/h		1267			855			198			111	
Approach Delay, s/veh		8.8			0.9			45.2			41.5	
Approach LOS		A			A			D			D	

Timer - Assigned Phs	2		4		6		8					
Phs Duration (G+Y+Rc), s	91.4		28.6		91.4		28.6					
Change Period (Y+Rc), s	6.0		5.0		6.0		5.0					
Max Green Setting (Gmax), s	72.0		37.0		72.0		37.0					
Max Q Clear Time (g_c+I1), s	19.9		15.2		25.4		8.6					
Green Ext Time (p_c), s	6.5		1.1		4.2		0.1					

Intersection Summary												
HCM 6th Ctrl Delay		10.5										
HCM 6th LOS		B										

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	108	467	88	117	760	150	152	686	172	122	597	131
Future Volume (veh/h)	108	467	88	117	760	150	152	686	172	122	597	131
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		0.99	1.00		0.97	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	117	508	96	127	826	163	165	746	187	133	649	142
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	141	1396	621	153	1421	629	192	1041	258	159	999	215
Arrive On Green	0.16	0.79	0.79	0.09	0.40	0.40	0.11	0.26	0.26	0.09	0.24	0.24
Sat Flow, veh/h	1781	3554	1580	1781	3554	1573	1781	4054	1003	1781	4188	901
Grp Volume(v), veh/h	117	508	96	127	826	163	165	625	308	133	525	266
Grp Sat Flow(s),veh/h/ln	1781	1777	1580	1781	1777	1573	1781	1702	1653	1781	1702	1685
Q Serve(g_s), s	7.6	5.1	1.8	8.4	21.8	8.3	10.9	20.1	20.4	8.8	16.7	17.1
Cycle Q Clear(g_c), s	7.6	5.1	1.8	8.4	21.8	8.3	10.9	20.1	20.4	8.8	16.7	17.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.61	1.00		0.53
Lane Grp Cap(c), veh/h	141	1396	621	153	1421	629	192	874	425	159	812	402
V/C Ratio(X)	0.83	0.36	0.15	0.83	0.58	0.26	0.86	0.71	0.73	0.84	0.65	0.66
Avail Cap(c_a), veh/h	223	1396	621	223	1421	629	223	979	475	223	979	484
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.7	8.4	8.0	54.0	28.2	24.1	52.7	40.6	40.7	53.8	41.1	41.3
Incr Delay (d2), s/veh	7.3	0.7	0.5	10.6	1.7	1.0	22.4	2.5	5.5	12.7	1.4	3.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	6.2	3.2	1.2	7.5	14.5	5.8	10.1	13.4	13.7	7.9	11.4	11.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	57.0	9.1	8.5	64.6	29.9	25.1	75.1	43.1	46.2	66.5	42.6	44.5
LnGrp LOS	E	A	A	E	C	C	E	D	D	E	D	D
Approach Vol, veh/h		721			1116			1098			924	
Approach Delay, s/veh		16.8			33.1			48.8			46.6	
Approach LOS		B			C			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.3	52.6	15.7	36.3	14.5	53.5	17.9	34.1
Change Period (Y+Rc), s	5.0	5.5	5.0	5.5	5.0	5.5	5.0	5.5
Max Green Setting (Gmax), s	10.3	34.5	15.0	34.5	15.0	34.5	15.0	34.5
Max Q Clear Time (g_c+I1), s	10.4	7.1	10.8	22.4	9.6	23.8	12.9	19.1
Green Ext Time (p_c), s	0.0	5.5	0.0	6.1	0.0	5.7	0.0	6.0

Intersection Summary	
HCM 6th Ctrl Delay	37.8
HCM 6th LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	117	805	87	122	517	83	115	440	126	191	740	119
Future Volume (veh/h)	117	805	87	122	517	83	115	440	126	191	740	119
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		0.99	1.00		0.96	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	127	875	95	133	562	90	125	478	137	208	804	129
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	154	1335	595	159	1345	593	151	899	248	234	1218	194
Arrive On Green	0.03	0.12	0.12	0.09	0.38	0.38	0.08	0.23	0.23	0.13	0.28	0.28
Sat Flow, veh/h	1781	3554	1585	1781	3554	1567	1781	3936	1084	1781	4425	705
Grp Volume(v), veh/h	127	875	95	133	562	90	125	411	204	208	617	316
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1567	1781	1702	1616	1781	1702	1726
Q Serve(g_s), s	8.5	28.2	6.4	8.8	14.0	4.5	8.3	12.7	13.4	13.8	19.3	19.5
Cycle Q Clear(g_c), s	8.5	28.2	6.4	8.8	14.0	4.5	8.3	12.7	13.4	13.8	19.3	19.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.67	1.00		0.41
Lane Grp Cap(c), veh/h	154	1335	595	159	1345	593	151	778	369	234	937	475
V/C Ratio(X)	0.82	0.66	0.16	0.83	0.42	0.15	0.83	0.53	0.55	0.89	0.66	0.67
Avail Cap(c_a), veh/h	238	1335	595	238	1345	593	238	979	465	238	979	496
HCM Platoon Ratio	0.33	0.33	0.33	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	57.4	45.2	35.6	53.8	27.5	24.6	54.1	40.6	40.9	51.3	38.5	38.6
Incr Delay (d2), s/veh	7.1	2.5	0.6	9.6	1.0	0.5	6.8	0.8	1.8	29.7	1.8	3.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.7	20.0	4.8	7.8	10.1	3.2	7.1	9.2	9.3	12.7	12.8	13.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	64.5	47.7	36.2	63.4	28.5	25.1	60.8	41.4	42.7	81.0	40.3	42.2
LnGrp LOS	E	D	D	E	C	C	E	D	D	F	D	D
Approach Vol, veh/h		1097			785			740			1141	
Approach Delay, s/veh		48.6			34.0			45.0			48.2	
Approach LOS		D			C			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.7	50.6	20.8	32.9	15.4	50.9	15.2	38.5
Change Period (Y+Rc), s	5.0	5.5	5.0	5.5	5.0	5.5	5.0	5.5
Max Green Setting (Gmax), s	10.8	32.5	16.0	34.5	16.0	32.5	16.0	34.5
Max Q Clear Time (g_c+I1), s	10.8	30.2	15.8	15.4	10.5	16.0	10.3	21.5
Green Ext Time (p_c), s	0.0	1.6	0.0	5.2	0.0	4.9	0.0	6.4

Intersection Summary	
HCM 6th Ctrl Delay	44.8
HCM 6th LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	110	470	89	117	761	150	152	686	172	122	597	131
Future Volume (veh/h)	110	470	89	117	761	150	152	686	172	122	597	131
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		0.99	1.00		0.97	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	120	511	97	127	827	163	165	746	187	133	649	142
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	144	1396	621	153	1414	626	192	1041	258	159	999	215
Arrive On Green	0.16	0.79	0.79	0.09	0.40	0.40	0.11	0.26	0.26	0.09	0.24	0.24
Sat Flow, veh/h	1781	3554	1580	1781	3554	1573	1781	4054	1003	1781	4188	901
Grp Volume(v), veh/h	120	511	97	127	827	163	165	625	308	133	525	266
Grp Sat Flow(s),veh/h/ln	1781	1777	1580	1781	1777	1573	1781	1702	1653	1781	1702	1685
Q Serve(g_s), s	7.8	5.2	1.8	8.4	21.9	8.4	10.9	20.1	20.4	8.8	16.7	17.1
Cycle Q Clear(g_c), s	7.8	5.2	1.8	8.4	21.9	8.4	10.9	20.1	20.4	8.8	16.7	17.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.61	1.00		0.53
Lane Grp Cap(c), veh/h	144	1396	621	153	1414	626	192	874	425	159	812	402
V/C Ratio(X)	0.83	0.37	0.16	0.83	0.58	0.26	0.86	0.71	0.73	0.84	0.65	0.66
Avail Cap(c_a), veh/h	223	1396	621	223	1414	626	223	979	475	223	979	484
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.5	8.4	8.0	54.0	28.3	24.3	52.7	40.6	40.7	53.8	41.1	41.3
Incr Delay (d2), s/veh	8.6	0.7	0.5	10.6	1.8	1.0	22.4	2.5	5.5	12.7	1.4	3.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	6.4	3.2	1.2	7.5	14.5	5.9	10.1	13.4	13.7	7.9	11.4	11.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	58.1	9.1	8.5	64.6	30.1	25.3	75.1	43.1	46.2	66.5	42.6	44.5
LnGrp LOS	E	A	A	E	C	C	E	D	D	E	D	D
Approach Vol, veh/h		728			1117			1098			924	
Approach Delay, s/veh		17.1			33.3			48.8			46.6	
Approach LOS		B			C			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.3	52.6	15.7	36.3	14.7	53.3	17.9	34.1
Change Period (Y+Rc), s	5.0	5.5	5.0	5.5	5.0	5.5	5.0	5.5
Max Green Setting (Gmax), s	10.3	34.5	15.0	34.5	15.0	34.5	15.0	34.5
Max Q Clear Time (g_c+I1), s	10.4	7.2	10.8	22.4	9.8	23.9	12.9	19.1
Green Ext Time (p_c), s	0.0	5.5	0.0	6.1	0.0	5.7	0.0	6.0

Intersection Summary	
HCM 6th Ctrl Delay	37.8
HCM 6th LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	117	805	87	122	517	83	115	440	126	191	740	119
Future Volume (veh/h)	117	805	87	122	517	83	115	440	126	191	740	119
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		0.99	1.00		0.96	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	127	875	95	133	562	90	125	478	137	208	804	129
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	154	1335	595	159	1345	593	151	899	248	234	1218	194
Arrive On Green	0.03	0.12	0.12	0.09	0.38	0.38	0.08	0.23	0.23	0.13	0.28	0.28
Sat Flow, veh/h	1781	3554	1585	1781	3554	1567	1781	3936	1084	1781	4425	705
Grp Volume(v), veh/h	127	875	95	133	562	90	125	411	204	208	617	316
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1567	1781	1702	1616	1781	1702	1726
Q Serve(g_s), s	8.5	28.2	6.4	8.8	14.0	4.5	8.3	12.7	13.4	13.8	19.3	19.5
Cycle Q Clear(g_c), s	8.5	28.2	6.4	8.8	14.0	4.5	8.3	12.7	13.4	13.8	19.3	19.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.67	1.00		0.41
Lane Grp Cap(c), veh/h	154	1335	595	159	1345	593	151	778	369	234	937	475
V/C Ratio(X)	0.82	0.66	0.16	0.83	0.42	0.15	0.83	0.53	0.55	0.89	0.66	0.67
Avail Cap(c_a), veh/h	238	1335	595	238	1345	593	238	979	465	238	979	496
HCM Platoon Ratio	0.33	0.33	0.33	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	57.4	45.2	35.6	53.8	27.5	24.6	54.1	40.6	40.9	51.3	38.5	38.6
Incr Delay (d2), s/veh	7.1	2.5	0.6	9.6	1.0	0.5	6.8	0.8	1.8	29.7	1.8	3.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.7	20.0	4.8	7.8	10.1	3.2	7.1	9.2	9.3	12.7	12.8	13.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	64.5	47.7	36.2	63.4	28.5	25.1	60.8	41.4	42.7	81.0	40.3	42.2
LnGrp LOS	E	D	D	E	C	C	E	D	D	F	D	D
Approach Vol, veh/h		1097			785			740			1141	
Approach Delay, s/veh		48.6			34.0			45.0			48.2	
Approach LOS		D			C			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.7	50.6	20.8	32.9	15.4	50.9	15.2	38.5
Change Period (Y+Rc), s	5.0	5.5	5.0	5.5	5.0	5.5	5.0	5.5
Max Green Setting (Gmax), s	10.8	32.5	16.0	34.5	16.0	32.5	16.0	34.5
Max Q Clear Time (g_c+I1), s	10.8	30.2	15.8	15.4	10.5	16.0	10.3	21.5
Green Ext Time (p_c), s	0.0	1.6	0.0	5.2	0.0	4.9	0.0	6.4

Intersection Summary	
HCM 6th Ctrl Delay	44.8
HCM 6th LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	111	489	90	119	792	153	155	702	175	125	610	136
Future Volume (veh/h)	111	489	90	119	792	153	155	702	175	125	610	136
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		0.99	1.00		0.97	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	121	532	98	129	861	166	168	763	190	136	663	148
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	146	1379	613	155	1397	618	195	1051	259	162	1004	220
Arrive On Green	0.11	0.52	0.52	0.09	0.39	0.39	0.11	0.26	0.26	0.09	0.24	0.24
Sat Flow, veh/h	1781	3554	1580	1781	3554	1573	1781	4059	999	1781	4170	916
Grp Volume(v), veh/h	121	532	98	129	861	166	168	638	315	136	539	272
Grp Sat Flow(s),veh/h/ln	1781	1777	1580	1781	1777	1573	1781	1702	1654	1781	1702	1682
Q Serve(g_s), s	8.0	10.9	3.9	8.6	23.3	8.6	11.1	20.5	20.9	9.0	17.1	17.6
Cycle Q Clear(g_c), s	8.0	10.9	3.9	8.6	23.3	8.6	11.1	20.5	20.9	9.0	17.1	17.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.60	1.00		0.54
Lane Grp Cap(c), veh/h	146	1379	613	155	1397	618	195	881	428	162	819	405
V/C Ratio(X)	0.83	0.39	0.16	0.83	0.62	0.27	0.86	0.72	0.73	0.84	0.66	0.67
Avail Cap(c_a), veh/h	223	1379	613	223	1397	618	223	979	476	223	979	484
HCM Platoon Ratio	1.33	1.33	1.33	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	52.6	20.4	18.7	53.9	29.2	24.7	52.6	40.6	40.7	53.7	41.1	41.3
Incr Delay (d2), s/veh	8.5	0.8	0.6	11.3	2.0	1.1	23.2	2.7	5.9	13.7	1.6	3.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	6.8	7.7	2.7	7.7	15.4	6.0	10.3	13.7	14.0	8.1	11.7	12.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	61.2	21.2	19.3	65.2	31.2	25.8	75.8	43.3	46.6	67.4	42.7	44.8
LnGrp LOS	E	C	B	E	C	C	E	D	D	E	D	D
Approach Vol, veh/h		751			1156			1121			947	
Approach Delay, s/veh		27.4			34.2			49.1			46.8	
Approach LOS		C			C			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.4	52.1	15.9	36.6	14.8	52.7	18.1	34.4
Change Period (Y+Rc), s	5.0	5.5	5.0	5.5	5.0	5.5	5.0	5.5
Max Green Setting (Gmax), s	15.0	34.5	15.0	34.5	15.0	34.5	15.0	34.5
Max Q Clear Time (g_c+I1), s	10.6	12.9	11.0	22.9	10.0	25.3	13.1	19.6
Green Ext Time (p_c), s	0.0	5.3	0.0	6.0	0.0	5.3	0.0	6.1

Intersection Summary	
HCM 6th Ctrl Delay	40.1
HCM 6th LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	116	838	88	124	538	86	116	451	129	196	757	121
Future Volume (veh/h)	116	838	88	124	538	86	116	451	129	196	757	121
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		0.99	1.00		0.96	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	126	911	96	135	585	93	126	490	140	213	823	132
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	153	1318	588	161	1334	588	152	907	249	238	1231	196
Arrive On Green	0.03	0.12	0.12	0.09	0.38	0.38	0.09	0.23	0.23	0.13	0.28	0.28
Sat Flow, veh/h	1781	3554	1585	1781	3554	1567	1781	3938	1083	1781	4425	705
Grp Volume(v), veh/h	126	911	96	135	585	93	126	421	209	213	632	323
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1567	1781	1702	1617	1781	1702	1726
Q Serve(g_s), s	8.4	29.5	6.5	8.9	14.8	4.7	8.4	13.0	13.7	14.1	19.7	20.0
Cycle Q Clear(g_c), s	8.4	29.5	6.5	8.9	14.8	4.7	8.4	13.0	13.7	14.1	19.7	20.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.67	1.00		0.41
Lane Grp Cap(c), veh/h	153	1318	588	161	1334	588	152	784	372	238	947	480
V/C Ratio(X)	0.82	0.69	0.16	0.84	0.44	0.16	0.83	0.54	0.56	0.90	0.67	0.67
Avail Cap(c_a), veh/h	238	1318	588	238	1334	588	238	979	465	238	979	496
HCM Platoon Ratio	0.33	0.33	0.33	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	57.4	46.1	36.0	53.7	28.0	24.9	54.0	40.6	40.8	51.2	38.4	38.5
Incr Delay (d2), s/veh	6.8	3.0	0.6	10.3	1.0	0.6	7.1	0.8	1.9	31.7	1.9	3.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	4.6	20.9	4.9	7.9	10.5	3.3	7.2	9.3	9.5	13.1	13.1	13.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	64.2	49.1	36.6	64.0	29.1	25.5	61.2	41.4	42.7	82.9	40.3	42.4
LnGrp LOS	E	D	D	E	C	C	E	D	D	F	D	D
Approach Vol, veh/h		1133			813			756			1168	
Approach Delay, s/veh		49.7			34.5			45.1			48.6	
Approach LOS		D			C			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.9	50.0	21.0	33.1	15.3	50.5	15.2	38.9
Change Period (Y+Rc), s	5.0	5.5	5.0	5.5	5.0	5.5	5.0	5.5
Max Green Setting (Gmax), s	10.9	32.5	16.0	34.5	16.0	32.5	16.0	34.5
Max Q Clear Time (g_c+I1), s	10.9	31.5	16.1	15.7	10.4	16.8	10.4	22.0
Green Ext Time (p_c), s	0.0	0.7	0.0	5.3	0.0	5.0	0.0	6.3

Intersection Summary	
HCM 6th Ctrl Delay	45.3
HCM 6th LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	113	492	91	119	793	153	155	702	175	125	610	136
Future Volume (veh/h)	113	492	91	119	793	153	155	702	175	125	610	136
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		0.99	1.00		0.97	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	123	535	99	129	862	166	168	763	190	136	663	148
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	148	1379	613	155	1393	616	195	1051	259	162	1004	220
Arrive On Green	0.11	0.52	0.52	0.09	0.39	0.39	0.11	0.26	0.26	0.09	0.24	0.24
Sat Flow, veh/h	1781	3554	1580	1781	3554	1573	1781	4059	999	1781	4170	916
Grp Volume(v), veh/h	123	535	99	129	862	166	168	638	315	136	539	272
Grp Sat Flow(s),veh/h/ln	1781	1777	1580	1781	1777	1573	1781	1702	1654	1781	1702	1682
Q Serve(g_s), s	8.1	10.9	4.0	8.6	23.4	8.6	11.1	20.5	20.9	9.0	17.1	17.6
Cycle Q Clear(g_c), s	8.1	10.9	4.0	8.6	23.4	8.6	11.1	20.5	20.9	9.0	17.1	17.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.60	1.00		0.54
Lane Grp Cap(c), veh/h	148	1379	613	155	1393	616	195	881	428	162	819	405
V/C Ratio(X)	0.83	0.39	0.16	0.83	0.62	0.27	0.86	0.72	0.73	0.84	0.66	0.67
Avail Cap(c_a), veh/h	223	1379	613	223	1393	616	223	979	476	223	979	484
HCM Platoon Ratio	1.33	1.33	1.33	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	52.5	20.4	18.7	53.9	29.3	24.8	52.6	40.6	40.7	53.7	41.1	41.3
Incr Delay (d2), s/veh	9.3	0.8	0.6	11.3	2.1	1.1	23.2	2.7	5.9	13.7	1.6	3.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	7.0	7.7	2.7	7.7	15.4	6.1	10.3	13.7	14.0	8.1	11.7	12.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	61.9	21.2	19.3	65.2	31.4	25.9	75.8	43.3	46.6	67.4	42.7	44.8
LnGrp LOS	E	C	B	E	C	C	E	D	D	E	D	D
Approach Vol, veh/h		757			1157			1121			947	
Approach Delay, s/veh		27.6			34.4			49.1			46.8	
Approach LOS		C			C			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.4	52.1	15.9	36.6	15.0	52.5	18.1	34.4
Change Period (Y+Rc), s	5.0	5.5	5.0	5.5	5.0	5.5	5.0	5.5
Max Green Setting (Gmax), s	10.0	34.5	15.0	34.5	15.0	34.5	15.0	34.5
Max Q Clear Time (g_c+I1), s	10.6	12.9	11.0	22.9	10.1	25.4	13.1	19.6
Green Ext Time (p_c), s	0.0	5.3	0.0	6.0	0.0	5.3	0.0	6.1

Intersection Summary	
HCM 6th Ctrl Delay	40.2
HCM 6th LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	121	840	89	124	541	86	117	451	129	196	757	122
Future Volume (veh/h)	121	840	89	124	541	86	117	451	129	196	757	122
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		0.99	1.00		0.96	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	132	913	97	135	588	93	127	490	140	213	823	133
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	160	1318	588	161	1321	583	153	907	249	238	1227	197
Arrive On Green	0.03	0.12	0.12	0.09	0.37	0.37	0.09	0.23	0.23	0.13	0.28	0.28
Sat Flow, veh/h	1781	3554	1585	1781	3554	1567	1781	3938	1083	1781	4420	709
Grp Volume(v), veh/h	132	913	97	135	588	93	127	421	209	213	632	324
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1567	1781	1702	1617	1781	1702	1725
Q Serve(g_s), s	8.8	29.6	6.6	8.9	14.9	4.8	8.4	13.0	13.7	14.1	19.8	20.0
Cycle Q Clear(g_c), s	8.8	29.6	6.6	8.9	14.9	4.8	8.4	13.0	13.7	14.1	19.8	20.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.67	1.00		0.41
Lane Grp Cap(c), veh/h	160	1318	588	161	1321	583	153	784	372	238	945	479
V/C Ratio(X)	0.83	0.69	0.17	0.84	0.45	0.16	0.83	0.54	0.56	0.90	0.67	0.68
Avail Cap(c_a), veh/h	238	1318	588	238	1321	583	238	979	465	238	979	496
HCM Platoon Ratio	0.33	0.33	0.33	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	57.3	46.1	36.0	53.7	28.4	25.2	54.0	40.6	40.8	51.2	38.5	38.5
Incr Delay (d2), s/veh	8.8	3.0	0.6	10.3	1.1	0.6	7.5	0.8	1.9	31.7	1.9	4.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	4.1	20.9	4.9	7.9	10.7	3.3	7.3	9.3	9.5	13.1	13.2	13.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	66.1	49.1	36.6	64.0	29.5	25.8	61.5	41.4	42.7	82.9	40.4	42.5
LnGrp LOS	E	D	D	E	C	C	E	D	D	F	D	D
Approach Vol, veh/h		1142			816			757			1169	
Approach Delay, s/veh		50.0			34.8			45.1			48.7	
Approach LOS		D			C			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.9	50.0	21.0	33.1	15.8	50.1	15.3	38.8
Change Period (Y+Rc), s	5.0	5.5	5.0	5.5	5.0	5.5	5.0	5.5
Max Green Setting (Gmax), s	10.9	32.5	16.0	34.5	16.0	32.5	16.0	34.5
Max Q Clear Time (g_c+I1), s	10.9	31.6	16.1	15.7	10.8	16.9	10.4	22.0
Green Ext Time (p_c), s	0.0	0.7	0.0	5.3	0.0	5.0	0.0	6.3

Intersection Summary	
HCM 6th Ctrl Delay	45.5
HCM 6th LOS	D

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑↱			↱
Traffic Vol, veh/h	0	684	1043	3	0	9
Future Vol, veh/h	0	684	1043	3	0	9
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, %	2	2	2	2	2	2
Mvmt Flow	0	743	1134	3	0	10

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	569
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.32
Pot Cap-1 Maneuver	0	-	-	-	0	465
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	465
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	12.9
HCM LOS			B

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	465
HCM Lane V/C Ratio	-	-	-	0.021
HCM Control Delay (s)	-	-	-	12.9
HCM Lane LOS	-	-	-	B
HCM 95th %tile Q(veh)	-	-	-	0.1

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑			↱
Traffic Vol, veh/h	0	1061	746	9	0	5
Future Vol, veh/h	0	1061	746	9	0	5
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, %	2	2	2	2	2	2
Mvmt Flow	0	1153	811	10	0	5

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	411
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.32
Pot Cap-1 Maneuver	0	-	-	-	0	590
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	590
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	11.2
HCM LOS			B

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	590
HCM Lane V/C Ratio	-	-	-	0.009
HCM Control Delay (s)	-	-	-	11.2
HCM Lane LOS	-	-	-	B
HCM 95th %tile Q(veh)	-	-	-	0

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑			↱
Traffic Vol, veh/h	0	712	1083	0	0	0
Future Vol, veh/h	0	712	1083	0	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, %	2	2	2	2	2	2
Mvmt Flow	0	774	1177	0	0	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	589
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.32
Pot Cap-1 Maneuver	0	-	-	-	0	452
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	452
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

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

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-
HCM Control Delay (s)	-	-	-	0
HCM Lane LOS	-	-	-	A
HCM 95th %tile Q(veh)	-	-	-	-

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑			↱
Traffic Vol, veh/h	0	1103	776	0	0	0
Future Vol, veh/h	0	1103	776	0	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, %	2	2	2	2	2	2
Mvmt Flow	0	1199	843	0	0	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	422
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.32
Pot Cap-1 Maneuver	0	-	-	-	0	580
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	580
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

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

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-
HCM Control Delay (s)	-	-	-	0
HCM Lane LOS	-	-	-	A
HCM 95th %tile Q(veh)	-	-	-	-

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	712	1083	3	0	9
Future Vol, veh/h	0	712	1083	3	0	9
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, %	2	2	2	2	2	2
Mvmt Flow	0	774	1177	3	0	10

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	590
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.32
Pot Cap-1 Maneuver	0	-	-	-	0	451
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	451
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	13.2
HCM LOS			B

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	451
HCM Lane V/C Ratio	-	-	-	0.022
HCM Control Delay (s)	-	-	-	13.2
HCM Lane LOS	-	-	-	B
HCM 95th %tile Q(veh)	-	-	-	0.1

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑			↱
Traffic Vol, veh/h	0	1103	776	9	0	5
Future Vol, veh/h	0	1103	776	9	0	5
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, %	2	2	2	2	2	2
Mvmt Flow	0	1199	843	10	0	5

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	427
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.32
Pot Cap-1 Maneuver	0	-	-	-	0	576
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	576
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	11.3
HCM LOS			B

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	576
HCM Lane V/C Ratio	-	-	-	0.009
HCM Control Delay (s)	-	-	-	11.3
HCM Lane LOS	-	-	-	B
HCM 95th %tile Q(veh)	-	-	-	0