APPENDIX E

Transportation Impact Analysis

CITY OF GLENDALE, CALIFORNIA
Public Works
Engineering

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CITY OF GLENDALE
INTERDEPARTMENTAL COMMUNICATION

DATE: July 15, 2021

TO: Mark Berry, Principal Development Officer

FROM: Pastor E. Casanova, T.E., Principal Traffic Engineer

SUBJECT: Local Transportation Analysis for the 606 N. Maryland Avenue Residential Project

The Traffic Engineering Section has completed its review of the Local Transportation Analysis (LTA) for the proposed residential project located at 606 N. Maryland Avenue, dated June 22, 2021. The LTA was prepared by Linscott, Law & Greenspan, Engineers. This document provides a summary of the review.

CONCLUSIONS

It has been found that the study has presented an adequate review of the effects of the proposed project on the circulation network, primarily on local access and circulation in the proximity of the project site. Please note the following:

1. We concur with the study determination of no traffic operations issues, as defined in the current City of Glendale Transportation Impact Analysis Guidelines, under opening year plus project and cumulative plus project conditions.

REVIEW OF TECHNICAL CALCULATIONS

Lane Configuration Inputs

Lane configuration inputs on Figure 4-1 of the report were reviewed for accuracy and we concur with the lane configuration inputs.

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Trip Generation Rates and Calculations

Project trip generation inputs and calculations were reviewed and all applied rates are consistent with the data provided in the Institute of Transportation Engineers' *Trip Generation Manual*, 10th Edition. Both trip generation calculations and rates for the proposed project, existing uses, and related projects appear to be accurate based on our review.

Project Trip Assignment

The project trip assignments shown in Figures 8-3 and 8-4 of the report were reviewed for accuracy and we concur with the trip assignments.

Ambient/Background Growth Rates

The current (Year 2010) Metro Congestion Management Program, in its definition of area growth from the Metro regional traffic model, defined growth for the Glendale area to be approximately 0.27 percent of annual traffic growth between the years 2015 and 2030. The use of an annual traffic growth rate of 1.0 percent in the study is conservative.

LEVEL OF SERVICE REVIEW

At the request of the City, Linscott, Law & Greenspan, Engineers analyzed traffic operations at the following six (6) intersections in the vicinity of the project site:

1. Brand Boulevard / Goode Avenue – SR-134 WB Off-Ramp
2. Brand Boulevard / Sanchez Drive – SR-134 EB On-Ramp
3. Brand Boulevard / Doran Street
4. Maryland Avenue / Doran Street
5. Louise Street / Maryland Place
6. Louise Street / Doran Street

The results of the analysis indicate that the addition of forecast project traffic would not result in traffic operations issues at the six study intersections analyzed. The Traffic Section concurs with the study determination of no traffic operations issues at the six study intersections. The general approach to the Level of Service analysis is adequate and we concur with the study's findings.

LINSCOTT LAW & GREENSPAN
engineers

TRANSPORTATION IMPACT ANALYSIS

606 N. MARYLAND AVENUE RESIDENTIAL PROJECT

City of Glendale, California
June 22, 2021

Prepared for:

Cimmarusti Holdings
3061 Riverside Drive
Los Angeles, CA 90039

LLG Ref. 5-17-0343-1

Prepared by:

Jason A. Shender, AICP
Transportation Planner III

Under the Supervision of:

David S. Shender, P.E.
Principal

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TRANSPORTATION IMPACT ANALYSIS

606 N. MARYLAND AVENUE RESIDENTIAL PROJECT

City of Glendale, California
June 22, 2021

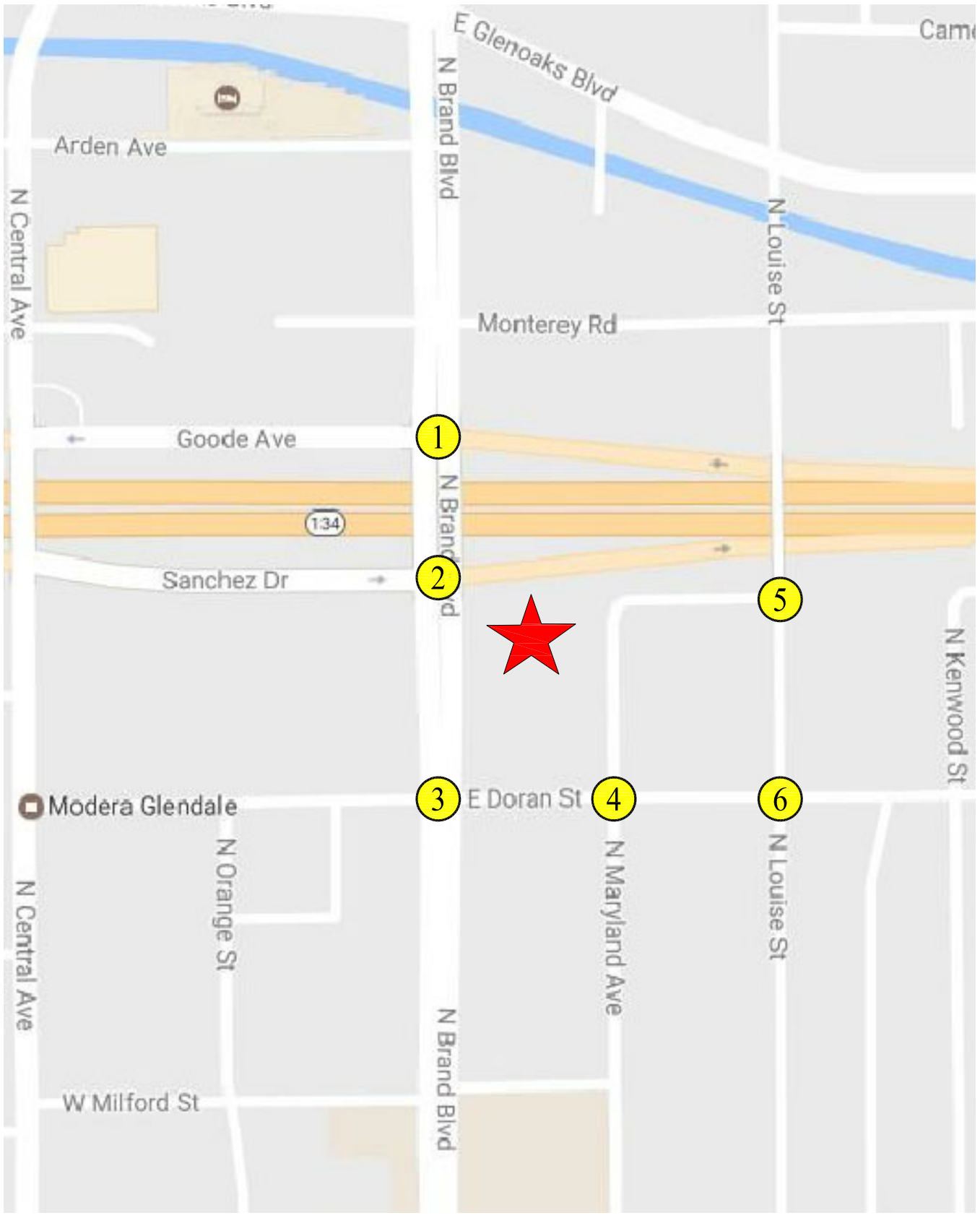
1.0 INTRODUCTION

This transportation impact analysis has been conducted to identify and evaluate the potential transportation impacts of the proposed residential project (the "Project") located at 606 N. Maryland Avenue and 610 N. Brand Boulevard (the "Project Site") in the City of Glendale (the "City"). The Project applicant seeks to construct 295 residential apartment dwelling units. The Project Site is bounded by the SR-134 Eastbound On-Ramp to the north, an existing commercial building and an associated surface parking lot to the south, Brand Boulevard to the west, and Maryland Avenue to the east. The Project Site location and general vicinity are shown in ***Figure 1–1***.

The transportation analysis follows the City's transportation impact analysis guidelines[1] (the "TIA Guidelines"). In compliance with the California Environmental Quality Act (CEQA), the City's Resolution identifies vehicle miles traveled (VMT) as the primary metric for evaluating a project's transportation impacts. In addition, the City's TIA Guidelines require that land use projects continue to perform a Level of Service (LOS) analysis to inform decision makers on the overall transportation effects of a project. This transportation impact analysis provides a VMT assessment for the Project and evaluates potential changes to operations due to Project-related traffic at six study intersections in the vicinity of the Project Site. Per the City's TIA Guidelines, the Highway Capacity Manual[2] (HCM 6th Edition) method was used to determine average control delays and corresponding LOS at the study intersections.

This study (i) presents a VMT assessment for the proposed Project in accordance with Senate Bill 743 (SB 743), (ii) presents existing traffic volumes, (iii) forecasts opening year baseline traffic volumes, (iv) forecasts opening year traffic volumes with the proposed Project, (v) forecasts cumulative baseline traffic volumes, and (vi), forecasts cumulative traffic volumes with the proposed Project.

[1] *City of Glendale Transportation Impact Analysis Guidelines*, City of Glendale, October 2020
[2] *Highway Capacity Manual 6th Edition,* Transportation Research Board of the National Academies of Sciences-Engineering-Medicine, 2016.



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MAP SOURCE: GOOGLE MAPS
PROJECT SITE
XX STUDY INTERSECTION

FIGURE 1-1
VICINITY MAP

LINSCOTT, LAW & GREENSPAN, engineers

606 N. MARYLAND AVENUE RESIDENTIAL PROJECT

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1.1 Study Area

The VMT assessment criteria for this transportation analysis was determined in consultation with City staff, as well as the City's TIA Guidelines. Additionally, six study intersections have been identified for evaluation during the weekday morning and afternoon peak hours. The study intersections were evaluated from 7:00 AM to 9:00 AM and 4:00 PM to 6:00 PM to determine the respective peak commuter hours. The six study intersections provide local access to the study area and define the extent of the boundaries for this transportation operations analysis. Further discussion of the existing street system and study area is provided in Section 4.0.

The general location of the Project in relation to the study locations and surrounding street system is presented in *Figure 1–1*. The transportation analysis study area is generally comprised of those locations which have the greatest potential to experience traffic due to the proposed Project as defined by the Lead Agency. In the transportation engineering practice, the study area generally includes those intersections that are:

a. Immediately adjacent or in close proximity to the Project Site;

b. In the vicinity of the Project Site that are documented to have current or projected future adverse operational issues; and

c. In the vicinity of the Project Site that are forecast to experience a relatively greater percentage of Project-related vehicular turning movements (e.g., at freeway ramp intersections).

The locations selected for analysis were based on the above criteria, the peak-hour vehicle trip generation associated with the proposed Project, the anticipated distribution of Project vehicular trips, and existing intersection/corridor operations.

2.0 PROJECT DESCRIPTION

2.1 Site Location

The Project Site is located at 606 N. Maryland Avenue and 610 N. Brand Boulevard in the City of Glendale. The Project Site is bounded by the SR-134 Eastbound On-Ramp to the north, an existing commercial building and an associated surface parking lot to the south, Brand Boulevard to the west, and Maryland Avenue to the east. The Project Site location and general vicinity are shown in *Figure 1–1*.

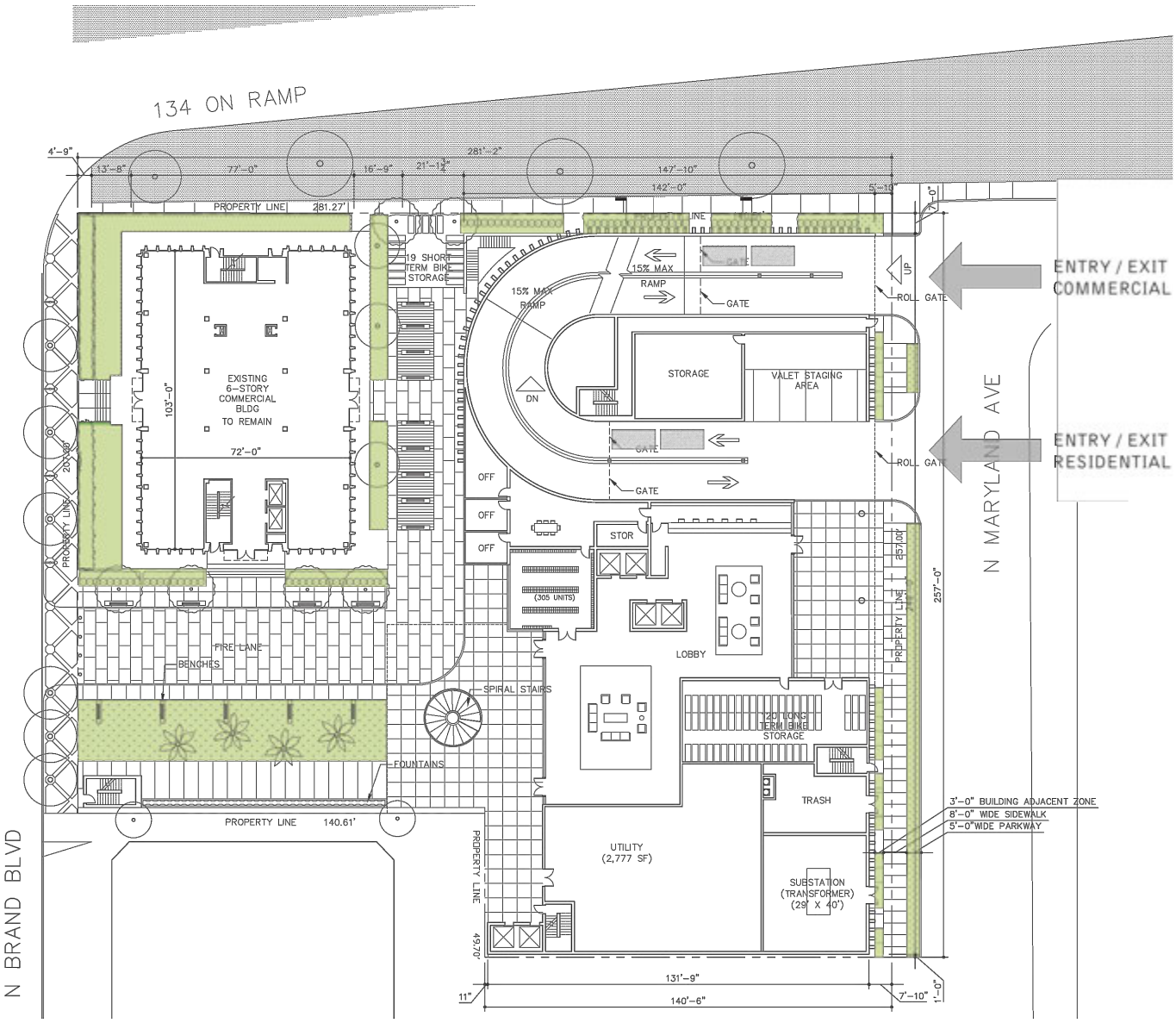
2.2 Existing Project Site

The Project Site is currently occupied by office building providing 5,288 square feet of floor area, and an associated parking structure. The existing Project Site is adjacent to an existing six-story building (the "Chase Building") providing approximately 45,125 square feet of office floor area. Parking for the Chase Building is provided at the existing Project Site. Vehicular access to the existing Project Site is provided via multiple driveways located along Brand Boulevard and Maryland Avenue.

2.3 Project Description

The Project applicant proposes to construct 295 residential apartment dwelling units. Additionally, an on-site parking garage will be constructed in conjunction with the Project. A total of 404 parking spaces will be provided for the Project on four subterranean levels of the on-site parking garage. Additionally, 104 parking spaces will be provided for the adjacent Chase Building on two above-grade levels of the parking structure. Construction and occupancy of the proposed Project is planned to be completed by the year 2024. The site plan for the proposed Project is illustrated in ***Figure 2–1***.

Vehicular access to the Project Site will be provided via Maryland Avenue, along the Project Site's easterly frontage. Further discussion of the Project Site access and circulation schemes is provided in Section 3.0.



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SOURCE: JOHN FRIEDMAN ALICE KIMM ARCHITECTS

FIGURE 2-1
PROJECT SITE PLAN

LINSCOTT, LAW & GREENSPAN, engineers

606 N. MARYLAND AVENUE RESIDENTIAL PROJECT

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3.0 SITE ACCESS AND CIRCULATION

The proposed site access scheme for the Project is displayed in *Figure 2–1*. A description of the proposed site access and circulation scheme is provided in the following subsections.

3.1 Existing Vehicular Site Access

Vehicular access to the existing Project Site is provided via multiple driveways located along Brand Boulevard and Maryland Avenue. Along the east side of Brand Boulevard, vehicular access to the existing site is provided via one inbound only driveway and one outbound only driveway. Along the west side of Maryland Avenue, vehicular access to the existing site is available via one inbound only driveway, two outbound only driveways, and one full access driveway.

3.2 Vehicular Project Site Access

Vehicular access to the Project Site will be provided via two driveways along the west side of Maryland Avenue. The Northerly Maryland Avenue Project driveway will provide access to the two above-grade levels of the on-site parking garage. The Southerly Maryland Avenue Project driveway will provide access to the four subterranean levels of the on-site parking garage. The Project driveways are proposed to accommodate full vehicular access (i.e., left-turn and right-turn ingress and egress turning movements).

4.0 EXISTING STREET SYSTEM

4.1 Regional Highway System

Regional access to the Project Site is provided by the SR-134 (Ventura) Freeway. A brief description of the SR-134 Freeway is provided in the following paragraph.

SR-134 (Ventura) Freeway is an east-west freeway that extends from the Toluca Lake area of the City of Los Angeles to Pasadena. In the Project vicinity, five mainline freeway lanes (four mixed-flow lanes and one carpool lane) are provided on the SR-134 Freeway in each direction. Eastbound and westbound ramps are provided at Central Avenue and Brand Boulevard on the SR-134 Freeway in the Project vicinity.

4.2 Local Roadway System

The following intersections were selected in consultation with City staff for analysis of potential changes in operations due to the proposed Project:

1. Brand Boulevard / Goode Avenue – SR-134 WB Off-Ramp
2. Brand Boulevard / Sanchez Drive – SR-134 EB On-Ramp
3. Brand Boulevard / Doran Street
4. Maryland Avenue / Doran Street
5. Louise Street / Maryland Place
6. Louise Street / Doran Street

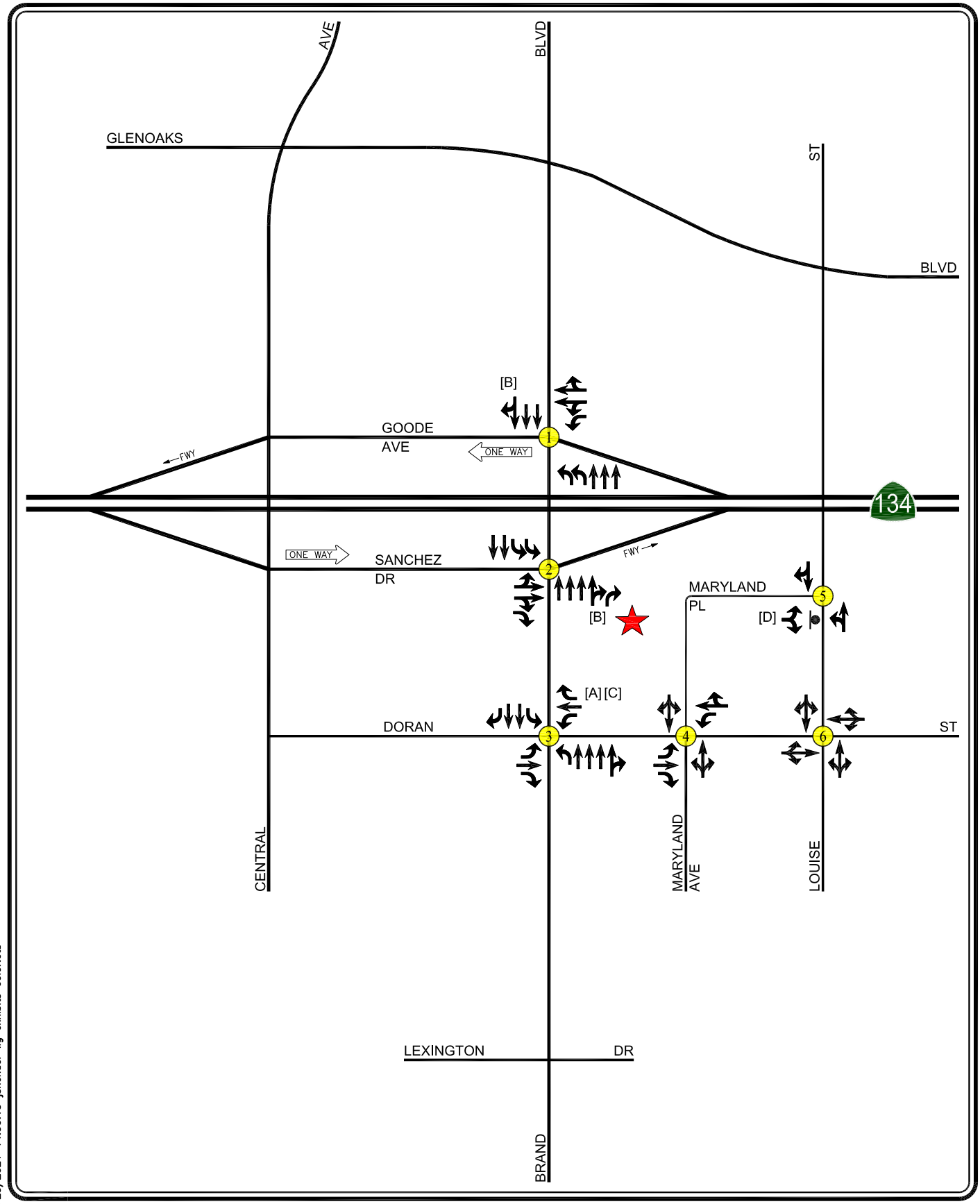
Five of the six study intersections selected for analysis are presently controlled by traffic signals. The Louise Street / Maryland Place intersection is a two-way, stop-controlled intersection (i.e., stop sign facing the eastbound Maryland Place approach). The existing lane configurations at the study intersections are displayed in ***Figure 4–1***.

4.3 Roadway Descriptions

A brief description[3] of the roadways in the Project vicinity is provided in the following paragraphs.

Brand Boulevard is a north-south oriented roadway that borders the Project Site to the west. Within the Project study area, Brand Boulevard is designated as a Major Arterial south of Glenoaks Boulevard, and as a Minor Arterial north of Glenoaks Boulevard in the City of Glendale Circulation Element. Two to three through travel lanes are generally provided in each direction on Brand Boulevard within the Project study area. Separate exclusive left-turn and

[3] For reference, the street descriptions provided include designations under the *City of Glendale General Plan Update Technical Background Report*, October 2005.



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★ PROJECT SITE (XX) STUDY INTERSECTION

NOTE: STUDY INTERSECTIONS ARE SIGNALIZED UNLESS OTHERWISE NOTED

[A] = RIGHT-TURN OVERLAP
[B] = NO RIGHT-TURN ON RED [7:00 - 9:00 AM, 3:00 - 6:00 PM]
[C] = NO RIGHT-TURN ON RED [3:00 - 7:00 PM]
[D] = STOP-CONTROLLED INTERSECTION

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FIGURE 4-1
EXISTING LANE CONFIGURATIONS

606 N. MARYLAND AVENUE RESIDENTIAL PROJECT

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right-turn lanes are generally provided on Brand Boulevard at major intersections. Brand Boulevard is posted for a speed limit of 25 miles per hour south of Glenoaks Boulevard, and a speed limit of 30 miles per hour north of Glenoaks Boulevard in the Project study area.

Maryland Avenue is a north-south oriented roadway that borders the Project Site to the east. Within the Project study area, Maryland Avenue is designated as an Urban Collector south of Doran Street, and as a Local Street north of Doran Street in the City of Glendale Circulation Element. One through travel lane is generally provided in each direction on Maryland Avenue within the Project study area. Maryland Avenue becomes Maryland Place parallel to the SR-134 Freeway. Maryland Avenue is posted for a speed limit of 25 miles per hour in the Project study area.

Louise Street is a north-south oriented roadway located east of the Project Site. Within the Project study area, Louise Street is designated as an Urban Collector south of Glenoaks Boulevard, and as a Neighborhood Collector north of Glenoaks Boulevard in the City of Glendale Circulation Element. One through travel lane is generally provided in each direction on Louise Street within the Project study area. Separate exclusive left-turn lanes are provided on Louise Street at the Glenoaks Boulevard intersection. Louise Street is posted for a speed limit of 25 miles per hour in the Project study area.

Goode Avenue is an east-west oriented roadway located north of the Project Site. Specifically, Goode Avenue is a one-way westbound roadway. Within the Project study area, Goode Avenue is designated as a Major Arterial in the City of Glendale Circulation Element. Two through travel lanes are generally provided on Goode Avenue within the Project study area. A separate exclusive left-turn lane is provided on Goode Avenue at the Central Avenue intersection. Goode Avenue connects the SR-134 Freeway Ramps in the westbound direction between Central Avenue and Brand Boulevard. There is no speed limit posted on Goode Avenue within the Project study area, thus a prima facie speed limit of 25 miles per hour is assumed, consistent with California Vehicle Code Section 22352(b)(1).

Sanchez Drive is an east-west oriented roadway located north of the Project Site. Specifically, Sanchez Drive is a one-way eastbound roadway. Within the Project study area, Sanchez Drive is designated as a Major Arterial in the City of Glendale Circulation Element. Two through travel lanes are generally provided on Sanchez Drive within the Project study area. A separate exclusive right-turn lane is provided on Sanchez Drive at the Brand Boulevard intersection. Sanchez Drive connects the SR-134 Freeway Ramps in the eastbound direction between Central Avenue and Brand Boulevard. There is no speed limit posted on Sanchez Drive within the Project study area, thus a prima facie speed limit of 25 miles per hour is assumed, consistent with California Vehicle Code Section 22352(b)(1).

Doran Street is an east-west oriented roadway located south of the Project Site. Within the Project study area, Doran Street is designated as an Urban Collector in the City of Glendale Circulation Element. One through travel lane is generally provided in each direction on Doran Street within the Project study area. Separate exclusive left-turn and right-turn lanes are

generally provided on Doran Street at major intersections. Doran Street is posted for a speed limit of 25 miles per hour speed limit in the Project study area.

4.4 Public Transit Services

Public transit service within the Project study area is currently provided by the City of Glendale (Glendale Beeline), Los Angeles County Metropolitan Transit Authority (Metro), and the Los Angeles Department of Transportation (LADOT) Transit Commuter Express. A summary of the existing transit service, including the transit route, destinations and peak hour headways is presented in ***Table 4–1***. The existing public transit routes in the Project Site vicinity are illustrated in ***Figure 4–2***. Based on review of the nearby transit routes and stops, the Project will not result in any operational impacts. Transit stops are currently not provided along the Project Site's Brand Boulevard and Maryland Avenue frontages. As the Project will close the existing driveways along the Project Site's Brand Boulevard frontage, transit stops could be moved along the Project Site's frontage without any potential conflicts with vehicles entering and exiting the Project. The Project will not result in transit operational impacts.

4.5 Active Transportation/Safety Review

The Project was reviewed for potential impacts related to active transportation. The Project is located along Brand Boulevard and Maryland Avenue, which provides access and connectivity to pedestrian and bicycle networks in the direct Project vicinity. Sidewalks are provided on all streets within the immediate Project vicinity, and the Project will not alter existing pedestrian infrastructure. Additionally, the Project will close the existing driveways along Brand Boulevard, which will further enhance the pedestrian experience along the Project Site's Brand Boulevard frontage.

While no bicycle infrastructure is provided on Brand Boulevard or Maryland Avenue, the Project will not preclude the City from installing bicycle infrastructure in the future. The Project will provide bicycle parking in accordance with City code. The Project's driveways are located along Maryland Avenue, which is designated as a Local Street north of Doran Street. The driveway placement along Maryland Avenue will allow for vehicular access to the Project Site with limited potential for conflicts with pedestrians and bicyclists. The Project will not increase hazards, and therefore, the Project will not result in a safety impact. Furthermore, emergency access will not be impeded, and adequate emergency access will be provided.

Table 4-1
EXISTING PUBLIC TRANSIT ROUTES [1]

23-Mar-21

ROUTE	DESTINATIONS	ROADWAY(S) NEAR SITE	NO. OF BUSES DURING PEAK HOUR		
			DIR	AM	PM
GB Route 1	Glendale Transportation Center (GTC) to Stocker Square (via North on Central Avenue and South on Brand Boulevard)	Central Avenue, Brand Boulevard	NB SB	3 3	3 3
GB Route 2	Glendale Transportation Center (GTC) to Stocker Square (via North on Brand Boulevard and South on Central Avenue)	Central Avenue, Brand Boulevard	NB SB	3 3	3 3
GB Route 7	Riverside Rancho to Glendale Community College (GCC) (via Western Avenue, Glenoaks Boulevard, Stocker Street, and Glendale Avenue)	Brand Boulevard, Glenoaks Boulevard	EB WB	3 2	2 2
GB Route 11	Glendale Transportation Center (GTC) to Downtown Glendale (via Central Avenue, Brand Boulevard, Wilson Street, and Colorado Street)	Central Avenue, Brand Boulevard, Doran Street	NB SB	4 0	2 2
Metro 92	Sylmar to Downtown Los Angeles (via Glendale Boulevard, Brand Boulevard, and Glenoaks Boulevard)	Brand Boulevard	NB SB	2 3	3 3
Metro 501	Pasadena to North Hollywood (via SR-134 Freeway)	SR-134 Freeway	EB WB	5 5	5 5
CE 549	San Fernando Valley to Pasadena (via Ventura Blvd, Burbank Blvd & SR-134 Freeway)	SR-134 Freeway	EB WB	1 1	1 1
			Total	**38**	**38**

[1] Sources: Glendale Beeline (GB) website, 2021.
Los Angeles County Metropolitan Transportation Authority (Metro) website, 2021.
LADOT Transit Commuter Express (CE) website, 2021.

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SOURCE: METROPOLITAN TRANSPORTATION AUTHORITY
★ PROJECT SITE

FIGURE 4-2
EXISTING PUBLIC TRANSIT ROUTES

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606 N. MARYLAND AVENUE RESIDENTIAL PROJECT

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5.0 VEHICLE MILES TRAVELED ASSESSMENT

5.1 Introduction

VMT is defined as a measurement of miles traveled by vehicles within a specified region and for a specified period of time. VMT is a measure of the use and efficiency of the transportation network. VMTs are calculated based on individual vehicle trips generated and their associated trip lengths. VMT accounts for two-way (round-trip) travel and is often estimated for a typical weekday for the purposes of measuring transportation impacts.

In September 2013, the Governor's Office signed Senate Bill 743 (SB 743), starting a process that fundamentally changes the way transportation impact analysis is conducted under the California Environmental Quality Act (CEQA). Within the State's CEQA Guidelines, these changes include the elimination of auto delay, LOS, and similar measurements of vehicular roadway capacity and traffic congestion as the basis for determining significant traffic impacts. SB 743 identifies VMT as the most appropriate CEQA transportation metric, along with the elimination of auto delay/LOS for CEQA purposes statewide. The justification for this paradigm shift is that LOS impacts lead to improvements that increase roadway capacity and therefore induce more traffic and greenhouse gas emissions.

The City formally adopted VMT as the criteria for determining transportation impacts of development projects in conjunction with the TIA Guidelines, which includes VMT guidelines and thresholds for measuring transportation impacts under CEQA. Accordingly, a VMT assessment has been prepared of the Project's potential VMT impact based on the TIA Guidelines.

5.2 Project VMT

In accordance with TIA Guidelines, a significant VMT impact will occur if the Project generates a home-based VMT per capita exceeding a level of 15% below the existing Citywide average. The City's online VMT mapping tool[4] states that the threshold (i.e., 15% below the existing Citywide average) home-based VMT per capita average for residential projects is 7.39 VMT per capita. Per the City's online mapping tool, the Project's home-based VMT per capita is 6.67 VMT per capita, which is below the threshold of 7.39 VMT per capita. Therefore, the Project will result in a less than significant VMT impact. The output from the City's online VMT mapping tool is provided in ***Appendix A***.

Per the TIA Guidelines, projects that do not result in a significant VMT impact would also result in a less that significant cumulative VMT impact. Accordingly, no mitigation measures related to VMT are required or recommended in conjunction with the Project.

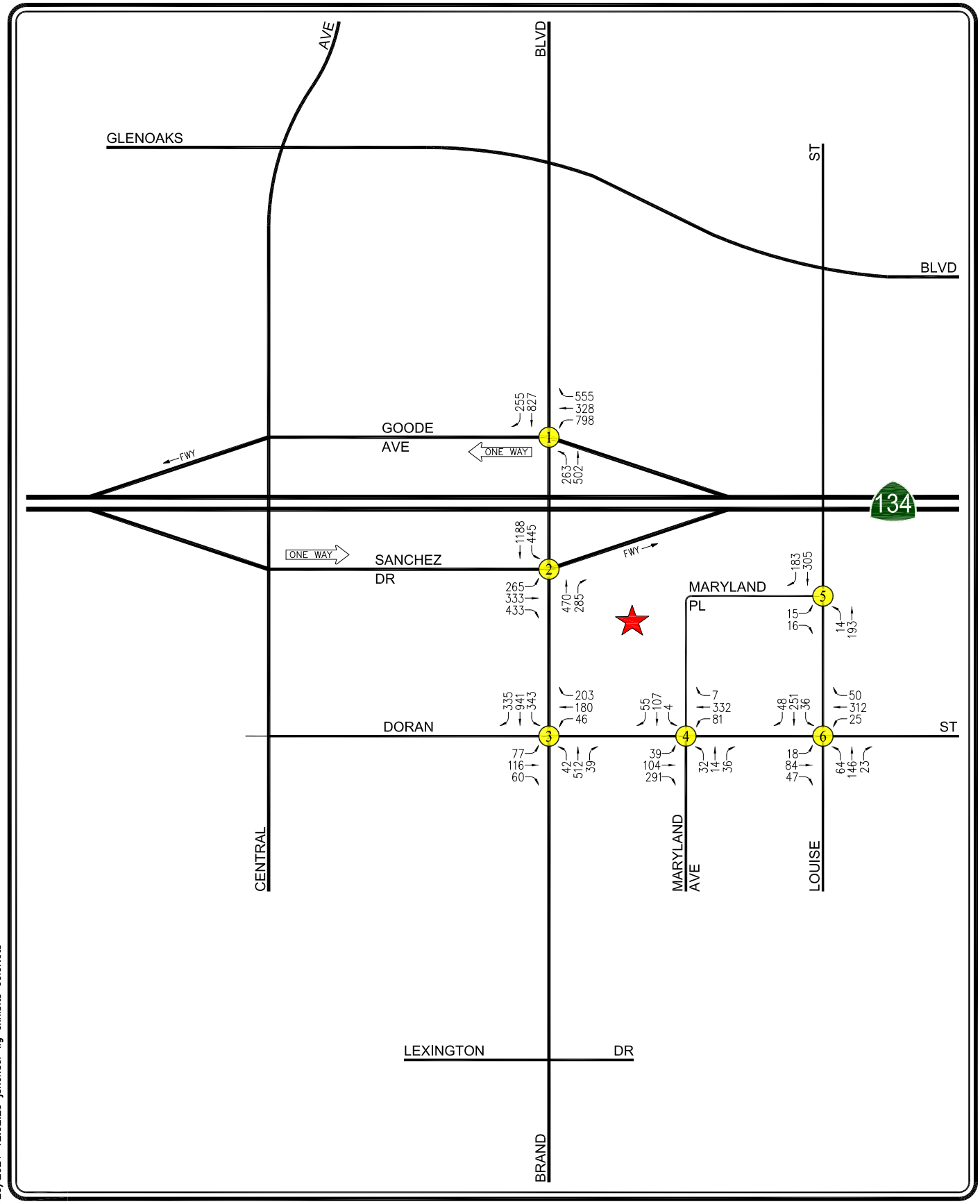
[4] https://kai.maps.arcgis.com/apps/webappviewer/index.html?id=988e2fee837444abae44ade95c824fcb

6.0 TRAFFIC COUNTS

Due to the COVID-19 pandemic, traffic count data could not be collected at the study intersections. In consultation with City staff, historical data at the study intersections, with appropriate adjustments, was utilized to represent current (pre-pandemic) traffic volume conditions at the study intersections during the analyzed peak hours.

Manual traffic counts of vehicular turning movements were conducted on May 31, 2017 at each of the study intersections during the weekday morning and afternoon commuter periods to determine the peak hour traffic volumes. The manual traffic counts at the study intersections were conducted from 7:00 AM to 9:00 AM and 4:00 PM to 6:00 PM to determine the respective peak commuter hours. The AM and PM hour traffic volume data collected at the study intersections in 2017 were increased by a 1.0% annual traffic growth rate through the year 2021 to estimate current year traffic volumes. Further discussion of the annual traffic growth rate is provided in Section 7.2.

The existing traffic volumes at the study intersections during the weekday AM and PM peak hours are shown in ***Figures 6–1*** and ***6–2***, respectively. Summary data worksheets of the manual traffic counts at the study intersections and driveway are contained in ***Appendix B***.



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★ PROJECT SITE

(XX) STUDY INTERSECTION

FIGURE 6-1

EXISTING TRAFFIC VOLUMES

WEEKDAY AM PEAK HOUR

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606 N. MARYLAND AVENUE RESIDENTIAL PROJECT

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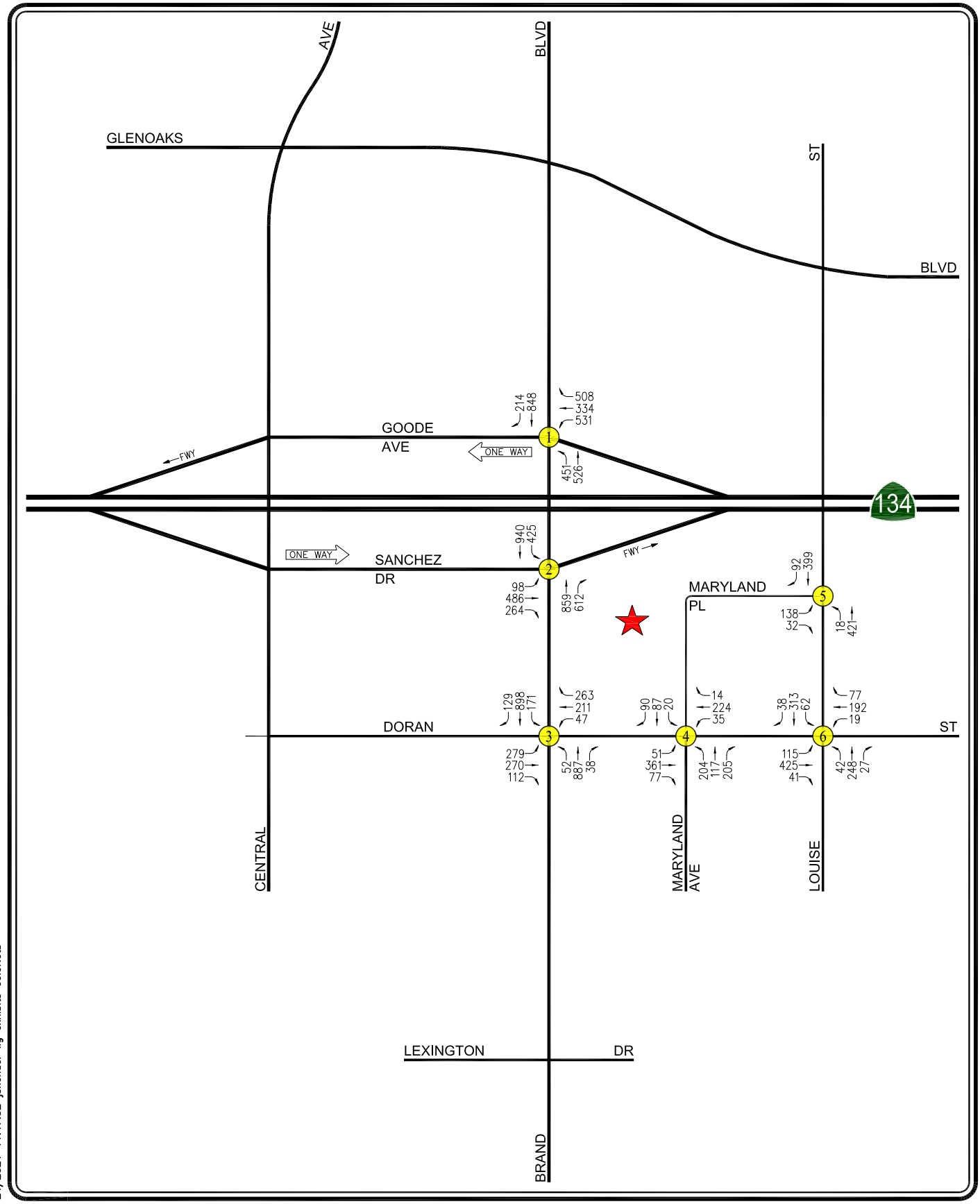

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PROJECT SITE

XX STUDY INTERSECTION

FIGURE 6-2
EXISTING TRAFFIC VOLUMES
WEEKDAY PM PEAK HOUR

LINSCOTT, LAW & GREENSPAN, engineers

606 N. MARYLAND AVENUE RESIDENTIAL PROJECT

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7.0 CUMULATIVE DEVELOPMENT PROJECTS

7.1 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. With this information, the potential effect of the Project can be evaluated within the context of the cumulative effect of all ongoing development. The related projects research was based on information on file at the City's Community Development Department within a 0.5-mile radius of the Project Site. The list of related projects in the Project Site area is presented in ***Table 7–1***. The location of the related projects is shown in ***Figure 7–1***.

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.*[5] 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 7–1*. The distribution of the related projects traffic volumes to the study intersections during the weekday AM and PM peak hours are displayed in ***Figures 7–2*** and ***7–3***, respectively.

As noted in Section 6.0, peak hour traffic volume data was collected at the study intersections in 2017. Many of the related projects listed in *Table 7–1* have been completed. However, as noted in Section 6.0, peak hour traffic volume data was collected at the study intersections in 2017, and these projects had yet to be completed. The completed projects have been included in the Opening Year and Cumulative baselines to provide a complete forecast of on-street traffic conditions prior to occupancy of the proposed Project.

7.2 Ambient Traffic Growth Factor

In order to account for unknown related projects not included in this analysis, the existing traffic volumes were increased at an annual rate of 1.0% per year to and including the year 2024 (i.e., the anticipated year of Project build-out), and to the year 2029 (i.e., Cumulative analysis year). The ambient growth factor was based on general traffic growth factors provided in the *2010 Congestion Management Program for Los Angeles County* ("CMP manual") and determined in consultation with City staff. It is noted that based on review of the general traffic growth factors provided in the CMP manual for the Project study area (i.e., RSA 24, Glendale) it is anticipated that the existing traffic volumes are expected to increase at an annual rate of approximately 0.27% per year between the years 2015 and 2030. Thus, application of an annual growth factor of 1.0% annual growth provides a conservative, worst case forecast of future traffic volumes in the area as it substantially exceeds the annual traffic growth rate published in the CMP manual. Further, it is noted that the CMP manual's traffic growth rate is intended to anticipate future traffic generated by development projects in the Project vicinity.

[5] Institute of Transportation Engineers *Trip Generation Manual*, 10th Edition, Washington, D.C., 2017.

Table 7-1
RELATED PROJECTS LIST AND TRIP GENERATION [1]

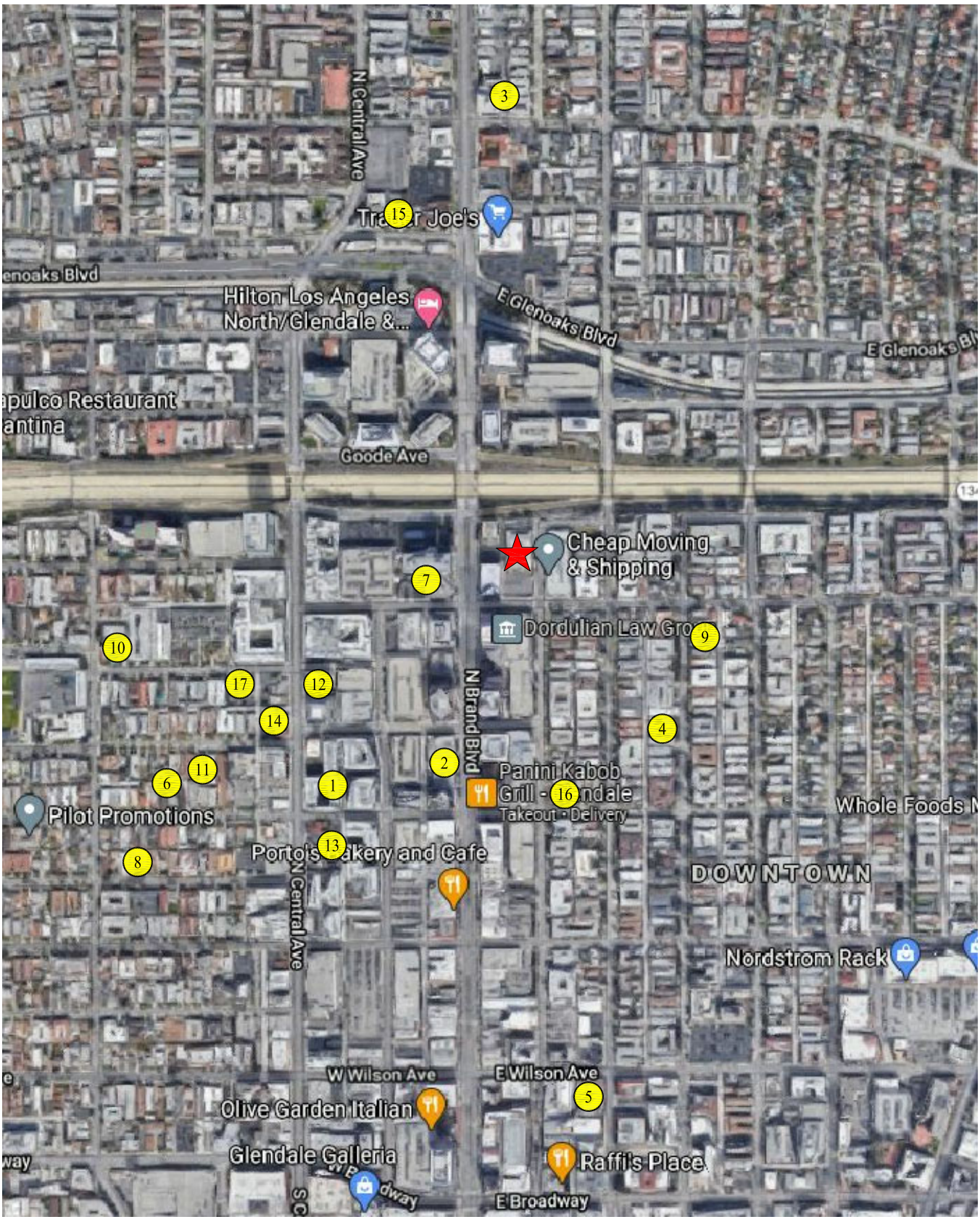
23-Mar-21

MAP NO.	PROJECT NAME/ PROJECT NUMBER	PROJECT STATUS	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	Next on Lex	Completed	275 W. Lexington Drive	Apartments Commercial	489 DU 8,140 GSF	[3] [4]	3,579 307	52 5	173 3	225 8	173 15	101 16	274 31
2	Orange/Milford Project	Approved	413 N. Brand Boulevard	Apartments Commercial	228 DU 5,000 GSF	[5]	1,419	10	92	102	90	38	128
3	aLoft Hotel	Completed	1100-1108 N. Brand Boulevard	Hotel	85 Rooms	[6]	307	24	17	41	5	13	18
4	429 N. Kenwood Street Residential Project	Approved	429-503 N. Kenwood Street	Apartments	21 DU	[3]	154	2	8	10	8	4	12
5	Hotel Louise	Completed	145 N. Louise Street	Hotel	147 Rooms	[7]	1,229	41	28	69	45	43	88
6	352-358 W. Milford Street Affordable Housing Project	Under Construction	352-358 W. Milford Street	Affordable Family Housing Condominiums	32 DU (5) DU	[3] [3]	234 (37)	3 0	12 (2)	15 (2)	11 (2)	7 (1)	18 (3)
7	601-611 N. Brand Boulevard Mixed-Use Project	Proposed	601-611 N. Brand Boulevard	Hotel Commercial	857 Rooms 7,500 GSF	[7] [4]	7,165 283	238 4	165 3	403 7	262 14	252 15	514 29
8	361 Myrtle Street Residential Project	Under Construction	361 Myrtle Street	Condominiums Single-Family Homes	12 DU (2) DU	[3] [8]	88 (19)	1 0	5 (1)	6 (1)	4 (1)	3 (1)	7 (2)
9	534 N. Kenwood Street Residential Project	Under Appeal	534 N. Kenwood Street	Apartments	11 DU	[3]	81	1	4	5	4	2	6
10	373 W. Doran Street Residential Project	Under Construction	373 W. Doran Street	Condominiums Single-Family Home	5 DU (1) DU	[3] [8]	37 (9)	0 0	2 (1)	2 (1)	2 (1)	1 0	3 (1)
11	344 W. Milford Street Residential Project	Completed	344 W. Milford Street	Apartments Single-Family Home	6 DU (1) DU	[3] [8]	44 (9)	1 0	2 (1)	3 (1)	2 (1)	1 0	3 (1)
12	520 N. Central Avenue Residential Project	Under Construction	520 N. Central Avenue	Apartments	99 DU	[3]	725	11	35	46	35	20	55
13	340 N. Central Avenue Office Project	Proposed	340 N. Central Avenue	Office	14,229 GSF	[9]	139	15	2	17	3	13	16
14	515-523 N. Central Avenue Hotel Project	Approved	515-523 N. Central Avenue	Hotel	142 Rooms	[7]	1,187	40	27	67	43	42	85
15	135 W. Glenoaks Boulevard Hotel Project	Stage 1 Approved	135 W. Glenoaks Boulevard	Hotel	219 Rooms	[7]	1,831	61	42	103	67	64	131

Table 7-1 (Continued)
RELATED PROJECTS LIST AND TRIP GENERATION [1]

MAP NO.	PROJECT NAME/ PROJECT NUMBER	PROJECT STATUS	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
16	400 N. Maryland Avenue Affordable Housing Project	Proposed	400 N. Maryland Avenue	Affordable Housing	28 DU	[3]	205	3	10	13	10	6	16
17	314-324 W. Doran Street Affordable Housing Project	Approved	314-324 W. Doran Street	Affordable Housing	33 DU	[3]	242	3	12	15	11	7	18
TOTAL							19,182	515	637	1,152	799	646	1,445

[1] Source: City of Glendale Community Development Department Related Projects List.
[2] Trips are one-way traffic movements, entering or leaving.
[3] ITE Land Use Code 220 (Multifamily Housing [Low-Rise]) trip generation average rates.
[4] ITE Land Use Code 820 (Shopping Center) trip generation average rates.
[5] Source: Brand Mixed-Use Campus Traffic Impact Analysis, prepared by JB & Associates, April 21, 2014.
[6] Source: 1100 N. Brand (aLoft Hotel Building) Traffic Impact Analysis, prepared by JB & Associates, March 28, 2016.
[7] ITE Land Use Code 310 (Hotel) trip generation average rates.
[8] ITE Land Use Code 210 (Single-Family Detached Housing) trip generation average rates.
[9] ITE Land Use Code 710 (General Office Building) trip generation average rates.



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MAP SOURCE: GOOGLE MAPS
PROJECT SITE
(XX) RELATED PROJECT

FIGURE 7-1
LOCATION OF RELATED PROJECTS

LINSCOTT, LAW & GREENSPAN, engineers

606 N. MARYLAND AVENUE RESIDENTIAL PROJECT

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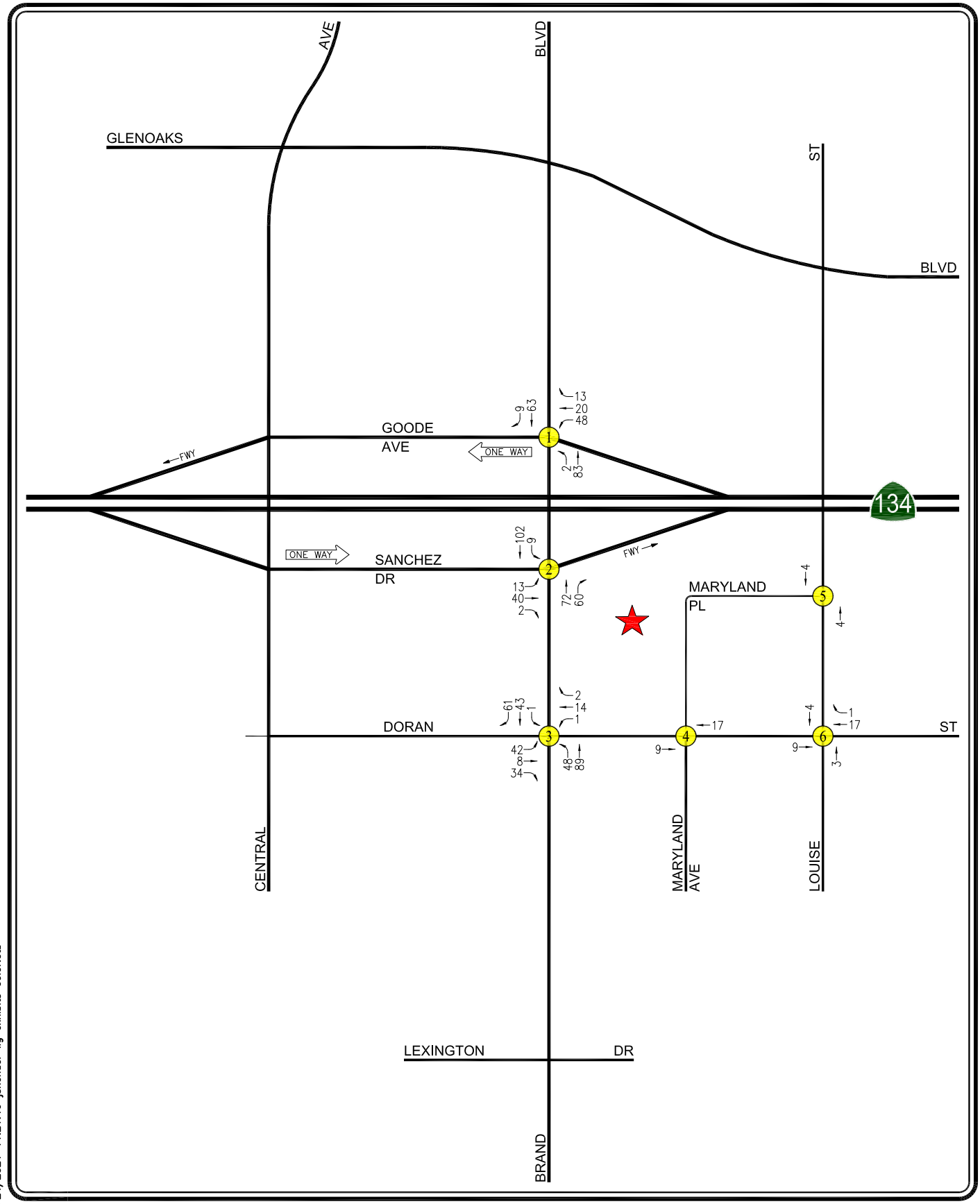

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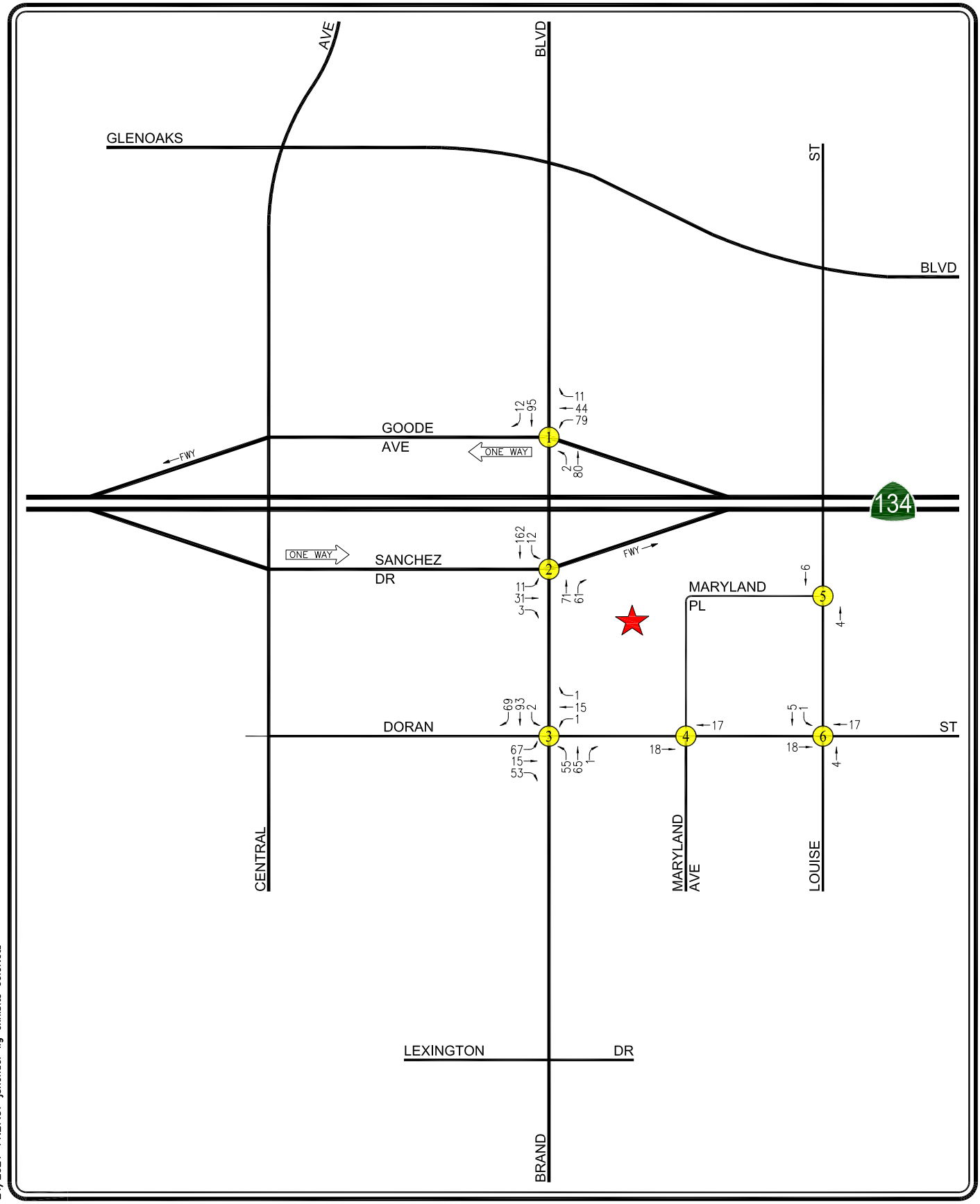
★ PROJECT SITE

(XX) STUDY INTERSECTION

FIGURE 7-2
RELATED PROJECTS TRAFFIC VOLUMES
WEEKDAY AM PEAK HOUR
606 N. MARYLAND AVENUE RESIDENTIAL PROJECT

LINSCOTT, LAW & GREENSPAN, engineers



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(XX) STUDY INTERSECTION

FIGURE 7-3
RELATED PROJECTS TRAFFIC VOLUMES
WEEKDAY PM PEAK HOUR
606 N. MARYLAND AVENUE RESIDENTIAL PROJECT

LINSCOTT, LAW & GREENSPAN, engineers

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In conclusion, the inclusion in this traffic analysis of a forecast of traffic generated by known related projects plus the use of an ambient growth traffic factor based on CMP traffic model data results in a highly conservative estimate of future traffic volumes at the study intersections.

8.0 TRAFFIC FORECASTING METHODOLOGY

In order to evaluate the traffic operational characteristics related to the proposed Project, 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 traffic generation potential is forecast by applying the appropriate vehicle trip generation equations or rates to the Project development tabulation.

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 assignment is typically based on minimization of travel time, which may or may not involve the shortest route, depending on prevailing operating conditions and travel speeds. 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.

With the forecasting process complete and Project traffic assignments developed, the traffic effects of the proposed Project are isolated by comparing operational (i.e., Levels of Service) conditions at the selected key intersections using existing and expected future traffic volumes without and with forecast Project traffic. The need for site-specific and/or cumulative local area traffic improvements can then be evaluated.

8.1 Project Traffic Generation

Traffic volumes expected to be generated by the proposed Project during the weekday AM and PM peak hours, as well as on a daily basis, were estimated using rates published in the ITE *Trip Generation Manual*. ITE Land Use Code 222 (Multifamily Housing [High-Rise]) trip generation average rates were used to forecast the traffic volumes expected to be generated by the Project. ITE Land Use Code 710 (General Office Building) trip generation average rates were used to forecast the traffic volumes generated by the 45,125 square feet of floor area related to the existing Chase Building, for which parking will be provided at the Project Site.

In addition to the trip generation forecasts for the proposed Project (which are essentially an estimate of the number of vehicles that could be expected to enter and exit the Project Site access points), an adjustment was made to the trip generation forecast based on the Project Site's existing land use. The existing land use to be removed is 5,288 square feet of office floor area. ITE Land Use Code 710 (General Office Building) trip generation average rates also were used to estimate the trip reduction related to the existing use from the Project Site.

Lastly, a forecast was made of transit trips. The transit reduction is based on the site's proximity to the various transit lines, as well as the land use characteristics of the Project. As shown in *Table 4–1* and *Figure 4–2*, the Project Site is well served by public transit. A transit adjustment of 5% has been utilized.

While it is anticipated that some Project residents will work in the Chase Building or other nearby office buildings and walk to work, an internal capture walking trip adjustment was not made to provide a conservative forecast of the Project's trip generation.

The trip generation forecast for the Project was submitted for review and approval by City staff. As shown in ***Table 8–1***, the Project is expected to generate 81 net new vehicle trips (16 inbound trips and 65 outbound trips) during the AM peak hour. During the PM peak hour, the proposed Project is expected to generate 95 net new vehicle trips (61 inbound trips and 34 outbound trips). Over a 24-hour period, the proposed Project is forecast to generate 1,198 daily trips ends (approximately 599 inbound trips and 599 outbound trips) during a typical weekday.

8.2 Project Traffic 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., Brand Boulevard, SR-134 Freeway, etc.);
- Expected localized traffic flow patterns based on adjacent roadway channelization and presence of traffic signals;
- Existing intersection traffic volumes;
- Ingress/egress availability at the Project Site assuming the site access and circulation scheme described in Section 3.0;
- The location of existing and proposed parking areas;
- Nearby population and employment centers as well as adjacent residential neighborhoods; and
- Input from City staff.

The general, directional traffic distribution patterns for the existing office building and Chase Building are presented in ***Figure 8–1***. The general, directional traffic distribution patterns for the proposed Project are presented in ***Figure 8–2***. The forecast net new weekday AM and PM peak hour Project traffic volumes at the study intersections associated with the proposed Project are presented in ***Figures 8–3*** and ***8–4***, respectively. The traffic volume assignments presented in *Figures 8–3* and *8–4* reflect the traffic distribution characteristics shown in *Figures 8–1* and *8–2*, and the Project traffic generation forecast presented in *Table 8–1*.

Table 8-1
PROJECT TRIP GENERATION [1]

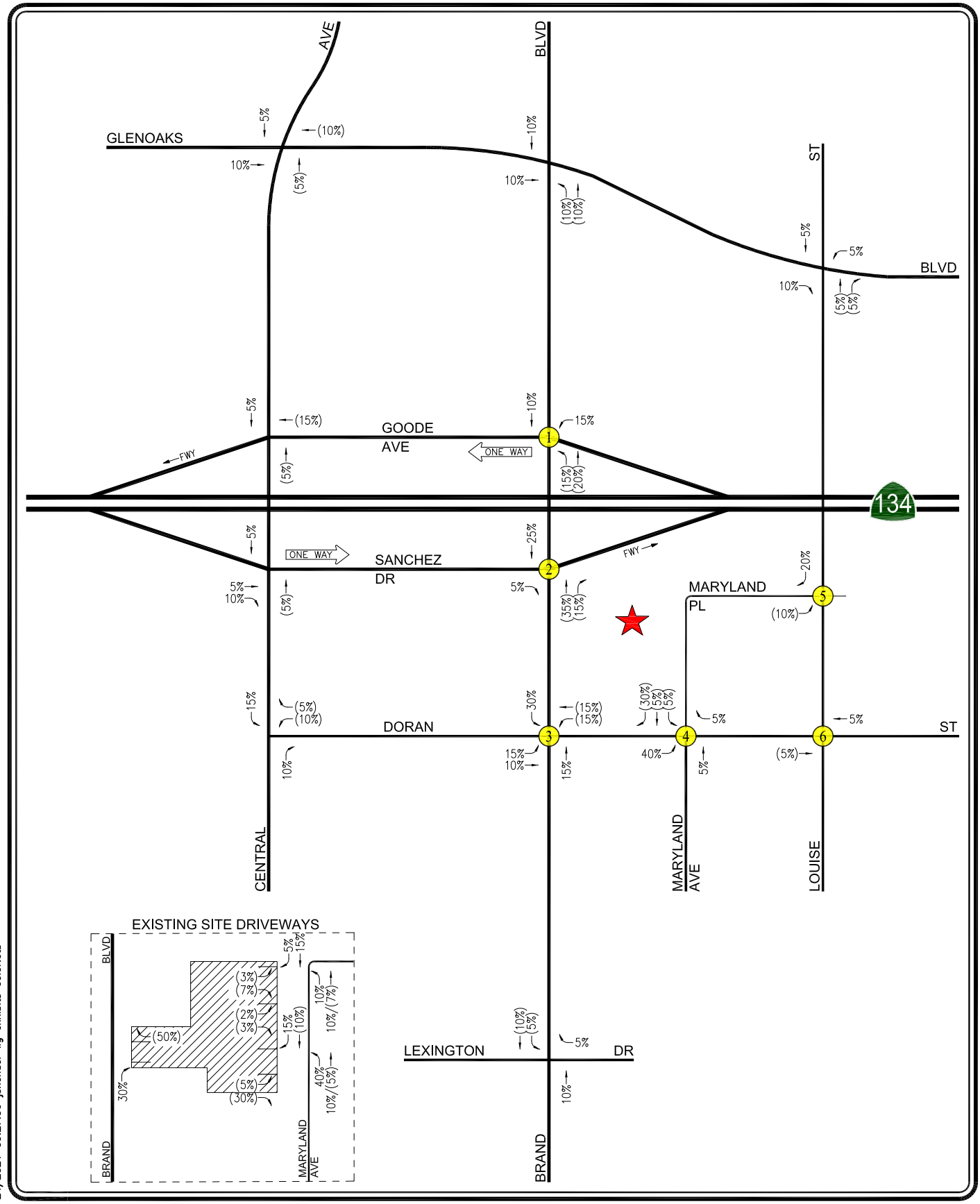
22-Jun-21

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 Project								
Apartments [3]	295 DU	1,313	22	69	91	65	41	106
Existing Office to Remain [4]	45,125 GSF	440	45	7	52	8	44	52
Subtotal		1,753	67	76	143	73	85	158
Transit Trips [5]								
Apartments (5%)		(66)	(1)	(3)	(4)	(3)	(2)	(5)
Existing Office to Remain (5%)		(22)	(2)	0	(2)	0	(2)	(2)
Subtotal		(88)	(3)	(3)	(6)	(3)	(4)	(7)
Subtotal Project Driveway Trips		**1,665**	**64**	**73**	**137**	**70**	**81**	**151**
Existing Site								
Existing Office to Remain [4]	(45,125) GSF	(440)	(45)	(7)	(52)	(8)	(44)	(52)
Existing Office to be Removed [4]	(5,288) GSF	(52)	(5)	(1)	(6)	(1)	(5)	(6)
Subtotal		(492)	(50)	(8)	(58)	(9)	(49)	(58)
Transit Trips [5]								
Existing Office to Remain (5%)		22	2	0	2	0	2	2
Existing Office to be Removed (5%)		3	0	0	0	0	0	0
Subtotal		25	2	0	2	0	2	2
Subtotal Existing Driveway Trips		**(467)**	**(48)**	**(8)**	**(56)**	**(9)**	**(47)**	**(56)**
NET INCREASE DRIVEWAY TRIPS		**1,198**	**16**	**65**	**81**	**61**	**34**	**95**

[1] Source: ITE *Trip Generation Manual,* 10th Edition, 2017.
[2] Trips are one-way traffic movements, entering or leaving.
[3] ITE Land Use Code 222 (Multifamily Housing [High-Rise]) trip generation average rates.
- Daily Trip Rate: 4.45 trips/dwelling unit; 50% inbound/50% outbound
- AM Peak Hour Trip Rate: 0.31 trips/dwelling unit; 24% inbound/76% outbound
- PM Peak Hour Trip Rate: 0.36 trips/dwelling unit; 61% inbound/39% outbound

[4] ITE Land Use Code 710 (General Office Building) trip generation average rates.
- Daily Trip Rate: 9.74 trips/1,000 SF of floor area; 50% inbound/50% outbound
- AM Peak Hour Trip Rate: 1.16 trips/1,000 SF of floor area; 86% inbound/14% outbound
- AM Peak Hour Trip Rate: 1.15 trips/1,000 SF of floor area; 16% inbound/84% outbound

[5] The transit reduction os based on the Project Site's proximity to various bus lines, as well as the land use characteristics of the Project.



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PROJECT SITE
XX STUDY INTERSECTION
= INBOUND PERCENTAGES
(##) = OUTBOUND PERCENTAGES

FIGURE 8-1
PROJECT TRIP DISTRIBUTION
EXISTING SITE

LINSCOTT, LAW & GREENSPAN, engineers

606 N. MARYLAND AVENUE RESIDENTIAL PROJECT

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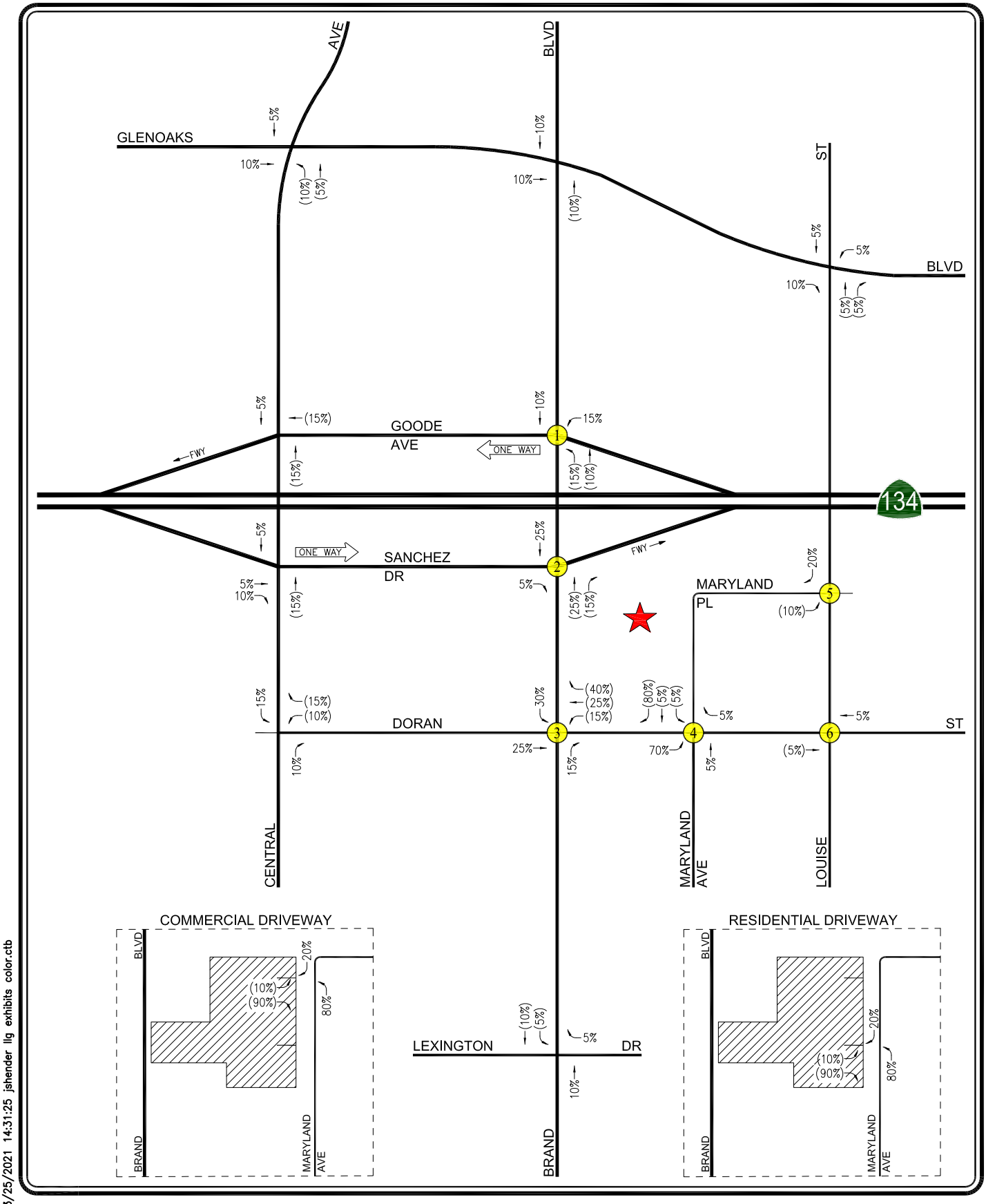

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★ PROJECT SITE
(XX) STUDY INTERSECTION
= INBOUND PERCENTAGES
(##) = OUTBOUND PERCENTAGES

FIGURE 8-2
PROJECT TRIP DISTRIBUTION

LINSCOTT, LAW & GREENSPAN, engineers

606 N. MARYLAND AVENUE RESIDENTIAL PROJECT

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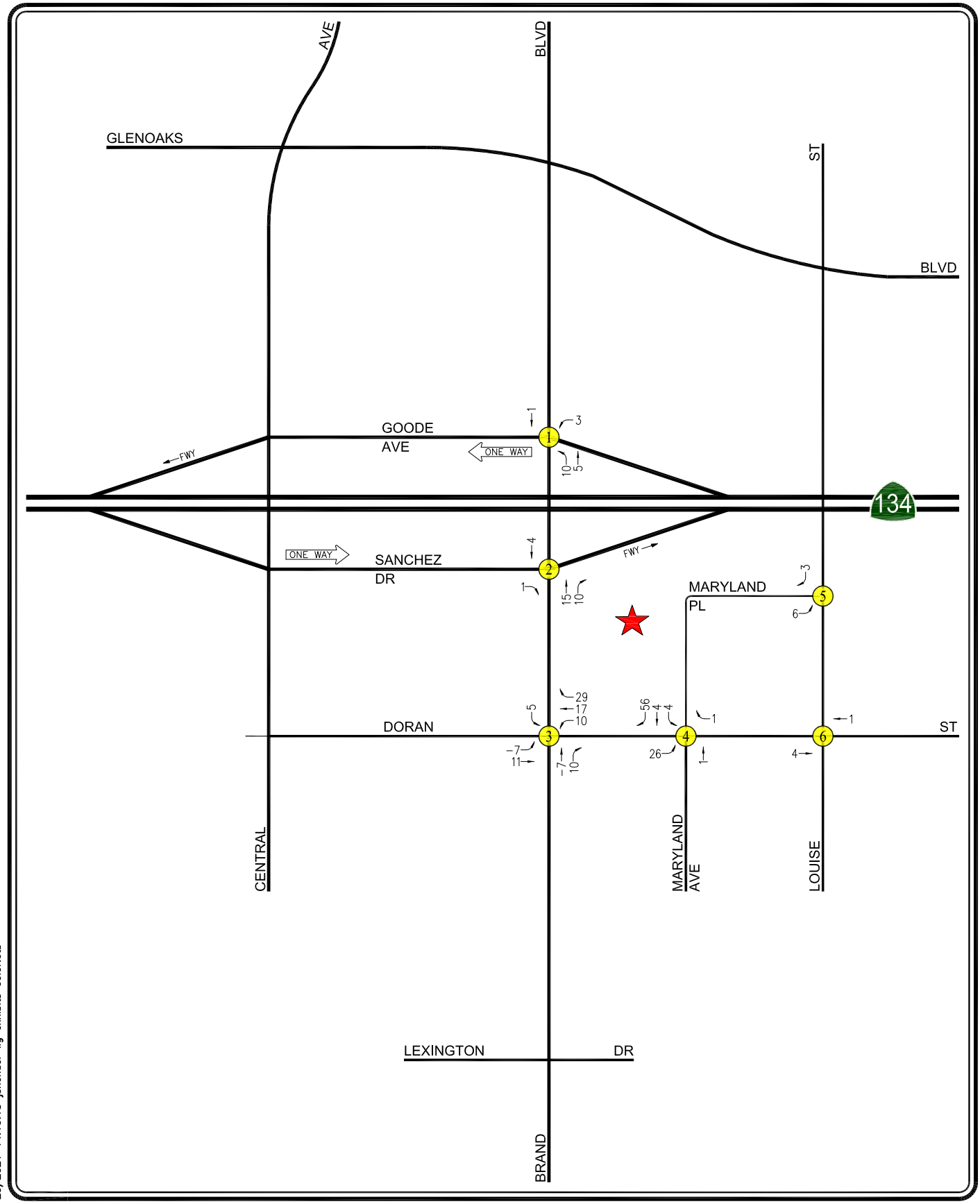

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PROJECT SITE

XX STUDY INTERSECTION

FIGURE 8-3

NET NEW PROJECT TRAFFIC VOLUMES

WEEKDAY AM PEAK HOUR

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606 N. MARYLAND AVENUE RESIDENTIAL PROJECT

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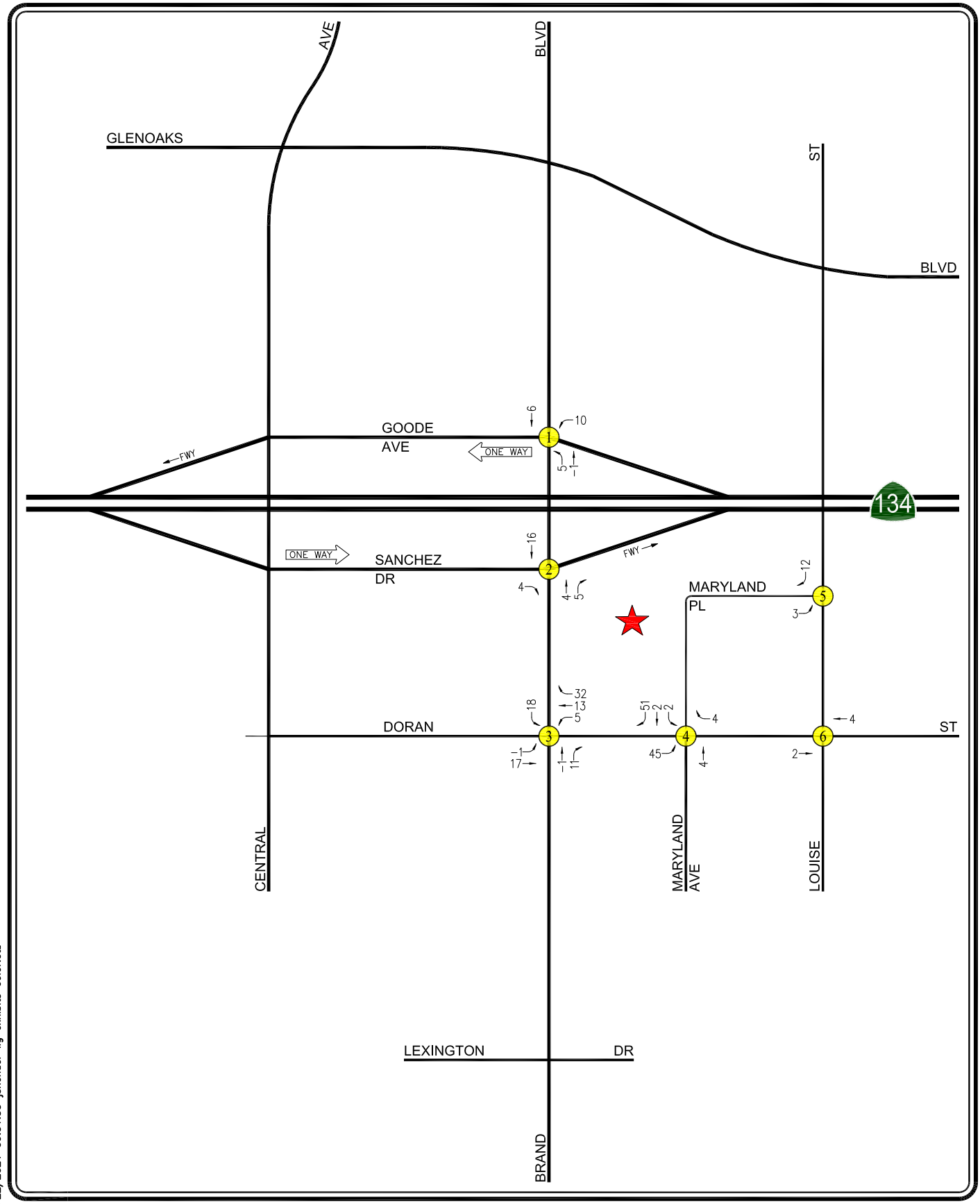

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(XX) STUDY INTERSECTION

FIGURE 8-4

NET NEW PROJECT TRAFFIC VOLUMES

WEEKDAY PM PEAK HOUR

LINSCOTT, LAW & GREENSPAN, engineers

606 N. MARYLAND AVENUE RESIDENTIAL PROJECT

9.0 TRAFFIC OPERATIONS ANALYSIS METHODOLOGY

Operations at the six study intersections were evaluated using the HCM 6th Edition. Specifically, the HCM 6th Edition methodology estimates the average control delay for each of the subject movements and determines the LOS for each constrained movement. The overall intersection average control delay is subsequently assigned a LOS value to describe intersection operations. Intersection analyses were prepared utilizing the *HCS7* software package for the study intersections. The *HCS7* software package implements HCM 6th Edition operational methods.

The Levels of Service under the HCM 6th Edition methodologies for signalized and two-way stop-controlled intersections vary from LOS A (free flow) to LOS F (jammed condition). A description of the HCM 6th Edition method and corresponding LOS are provided in ***Appendix C***.

9.1 Intersection Operations Criteria

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

The potential effects of Project-generated traffic were evaluated using the traffic operations criteria set forth in the City's TIA Guidelines. According to the City's TIA Guidelines, the operations criteria is exceeded if the Project-related increase in delay is equal to or exceeds the thresholds presented in ***Table 9–1***.

Table 9-1
CITY OF GLENDALE
INTERSECTION OPERATIONS CRITERIA

Final Delay	Level of Service	Project Related Increase in Delay
> 35.0 seconds	D, E or F	equal to or greater than 5 seconds

As required by the City, measures may be required whenever traffic generated by the proposed development causes an increase of the analyzed intersection delay by an amount equal to or greater than the values shown above.

9.2 Traffic Operations Analysis Scenarios

LOS calculations have been prepared for the following scenarios for the study intersections:

(a) Existing (2021) conditions.

(b) Condition (a) plus 1.0% annual ambient traffic growth through year 2024 and with completion and occupancy of the related projects (i.e., Opening Year baseline).

(c) Condition (b) with completion and occupancy of the Project.

(d) Condition (b) plus 1.0% annual ambient traffic growth through year 2029 and with completion and occupancy of the related projects (i.e., Cumulative baseline).

(e) Condition (d) with completion and occupancy of the Project.

The traffic volumes for each new condition were added to the volumes in the prior condition to determine the change in capacity utilization at the study intersections.

10.0 TRAFFIC ANALYSIS

The traffic analysis prepared for the study intersections using the HCM 6th Edition methodology and application of the City's traffic operations criteria is summarized in ***Table 10–1***. The *HCS7* data worksheets for the analyzed intersections are contained in *Appendix C*.

10.1 Existing Conditions

10.1.1 *Existing Conditions*

As indicated in column [1] of *Table 10–1*, four of the six study intersections are presently operating at LOS C or better during the weekday AM and PM peak hours under existing conditions. The following intersections are presently operating at LOS D or worse during the peak hour shown below under existing conditions:

- Int. No. 1: Brand Boulevard / Goode Avenue – SR-134 WB Off-Ramp — AM Peak Hour: Delay = 64.2 sec., LOS E; PM Peak Hour: 42.6 sec., LOS D
- Int. No. 5: Louise Street / Maryland Place — PM Peak Hour: Delay = 31.0 sec., LOS D

The existing traffic volumes at the study intersections during the weekday AM and PM peak hours are displayed in *Figures 6–1* and *6–2*, respectively.

10.2 Opening Year Conditions

10.2.1 *Opening Year Baseline Conditions*

The Opening Year 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) through the year 2024. The delay values at the study intersections are incrementally increased with the addition of ambient traffic and traffic generated by the related projects listed in *Table 7–1*.

As presented in column [2] of *Table 10–1*, three of the six study intersections are expected to operate at LOS C or better during the weekday AM and PM peak hours with the addition of growth in ambient traffic and related project traffic under the Opening Year baseline conditions. The following intersections are expected to operate at LOS D or worse during the peak hours shown below under Opening Year baseline conditions:

- Int. No. 1: Brand Boulevard / Goode Avenue – SR-134 WB Off-Ramp — AM Peak Hour: Delay = 78.4 sec., LOS E; PM Peak Hour: Delay = 52.4 sec., LOS D
- Int. No. 2: Brand Boulevard / Sanchez Drive – SR-134 EB On-Ramp — AM Peak Hour: Delay = 35.5 sec., LOS D

Table 10-1
SUMMARY OF DELAY VALUES
AND LEVELS OF SERVICE [A]
WEEKDAY AM AND PM PEAK HOURS

22-Jun-21

NO.	INTERSECTION	PEAK HOUR	[1] YEAR 2021 EXISTING DELAY [B]	[1] LOS [C]	[2] YEAR 2024 OPENING YEAR BASELINE DELAY [B]	[2] LOS [C]	[3] YEAR 2024 OPENING YEAR PLUS PROJECT DELAY [B]	[3] LOS [C]	[3] CHANGE IN DELAY [(4)-(3)]	[3] CRITERIA EXCEEDED [D]	[4] YEAR 2029 CUMULATIVE BASELINE DELAY [B]	[4] LOS [C]	[5] YEAR 2029 CUMULATIVE PLUS PROJECT DELAY [B]	[5] LOS [C]	[5] CHANGE IN DELAY [(4)-(3)]	[5] CRITERIA EXCEEDED [D]
1	Brand Boulevard /	AM	64.2	E	78.4	E	78.6	E	0.2	NO	89.7	F	90.0	F	0.3	NO
	Goode Avenue – SR-134 WB Off-Ramp	PM	42.6	D	52.4	D	52.8	D	0.4	NO	59.0	E	59.5	E	0.5	NO
2	Brand Boulevard /	AM	31.6	C	35.5	D	35.5	D	0.0	NO	38.9	D	38.9	D	0.0	NO
	Sanchez Drive – SR-134 EB On-Ramp	PM	25.6	C	27.2	C	27.2	C	0.0	NO	28.6	C	28.6	C	0.0	NO
3	Brand Boulevard /	AM	30.9	C	33.5	C	33.6	C	0.1	NO	35.7	C	35.7	C	0.0	NO
	Doran Street	PM	30.8	C	34.7	C	35.0	D	0.3	NO	37.0	D	37.5	D	0.5	NO
4	Maryland Avenue /	AM	11.9	B	17.8	B	17.6	B	-0.2	NO	18.3	B	18.2	B	-0.1	NO
	Doran Street	PM	16.6	B	17.5	B	17.7	B	0.2	NO	18.5	B	18.8	B	0.3	NO
5	Louise Street /	AM	13.1	B	13.4	B	14.0	B	0.6	NO	13.9	B	14.5	B	0.6	NO
	Maryland Place [E]	PM	31.0	D	35.5	E	37.0	E	1.5	NO	43.4	E	45.6	E	2.2	NO
6	Louise Street /	AM	13.5	B	13.9	B	13.9	B	0.0	NO	14.2	B	14.2	B	0.0	NO
	Doran Street	PM	17.2	B	18.6	B	18.7	B	0.1	NO	20.3	C	20.5	C	0.2	NO

[A] Pursuant to the *City of Glendale Transportation Impact Analysis Guidelines,* October 2020, the Highway Capacity Manual (HCM) methodology was utilized to calculate delay values and levels of service.

[B] Control delay reported in seconds per vehicle.

[C] Signalized Intersection Levels of Service were based on the following criteria:

Control Delay (s/veh)	LOS
<= 10	A
> 10-20	B
> 20-35	C
> 35-55	D
> 55-80	E
> 80	F

Two-Way Stop-Controlled Intersection Levels of Service were based on the following criteria:

Control Delay (s/veh)	LOS
<= 10	A
> 10-15	B
> 15-25	C
> 25-35	D
> 35-50	E
> 50	F

[D] According to the City of Glendale, intersection operations shall be evaluated based on the following criteria:

Level of Service	Average Total Delay (s/veh)	Project-Related Increase in Delay
D, E, or F	> 35.0	equal to or greater than 5 seconds

[E] Two-Way Stop-Controlled Intersection. Reported values represent the delays (in seconds) associated with the most constrained approach of the intersection.

- Int. No. 5: Louise Street / Maryland Place — PM Peak Hour: Delay = 35.5 sec., LOS E

The Opening Year baseline (existing, ambient growth through year 2024, and related projects) traffic volumes at the study intersections during the weekday AM and PM peak hours are presented in ***Figures 10–1*** and ***10–2***, respectively.

10.2.2 *Opening Year Plus Project Conditions*

The "Opening Year Plus Project" conditions were forecast based on the addition of traffic generated by the Project plus completion and occupancy of related projects. As shown in column [3] of *Table 10–1*, application of the City's threshold criteria to the "Opening Year Plus Project" scenario indicates that the proposed Project is not expected to exceed the operations criteria at any of the six study intersections. Therefore, no measures are required or recommended with respect to these intersections under the "Opening Year Plus Project" conditions. The "Opening Year Plus Project" (existing, ambient growth through year 2024, related projects, and Project) traffic volumes at the study intersections during the weekday AM and PM peak hours are illustrated in ***Figures 10–3*** and ***10–4***, respectively.

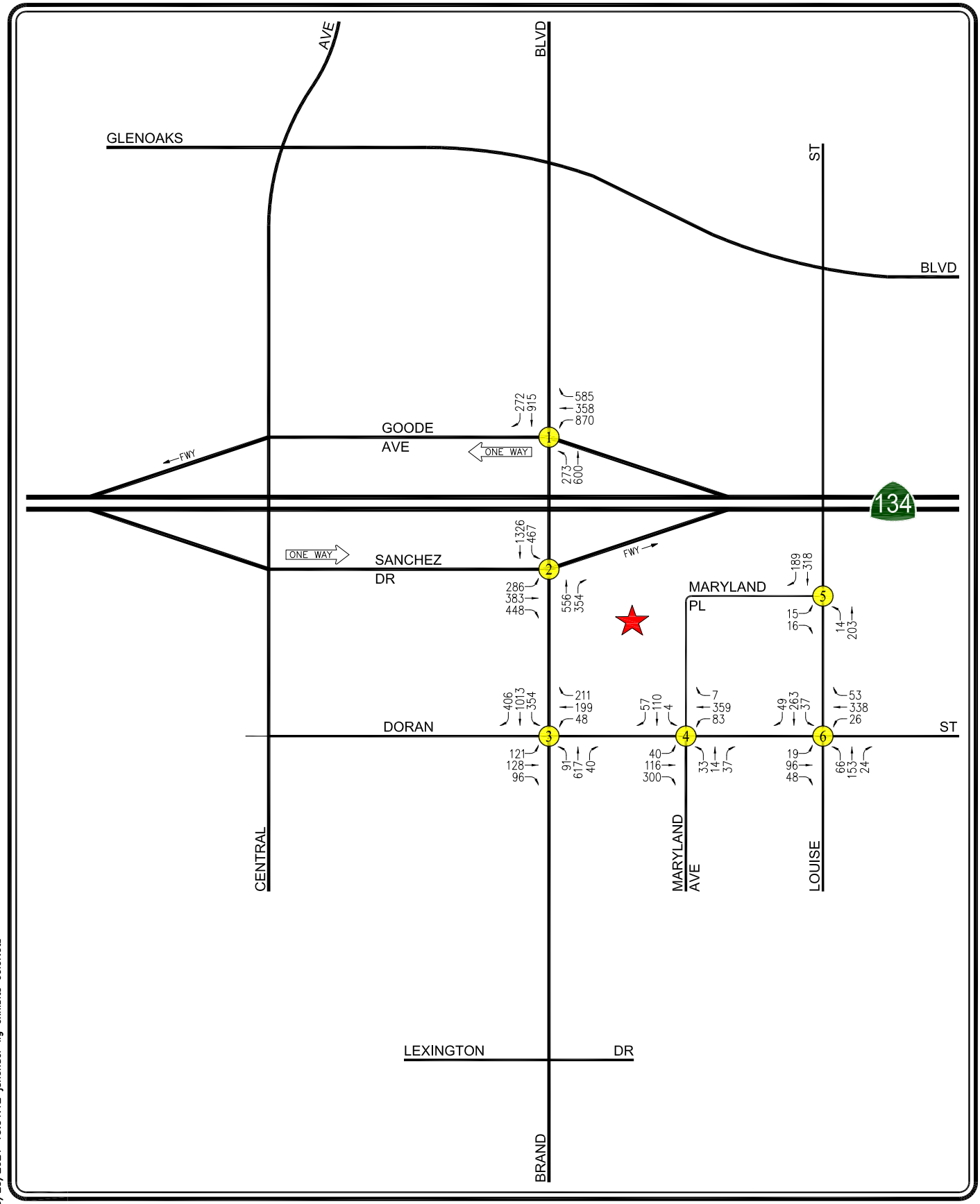
10.3 Cumulative Conditions

10.3.1 *Cumulative Baseline Conditions*

The 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) through the year 2029. The delay values at the study intersections are incrementally increased with the addition of ambient traffic and traffic generated by the related projects listed in *Table 7–1*.

As presented in column [4] of *Table 10–1*, two of the six study intersections are expected to operate at LOS C or better during the weekday AM and PM peak hours with the addition of growth in ambient traffic and related project traffic under the Cumulative baseline conditions. The following intersections are expected to operate at LOS D or worse during the peak hours shown below under Cumulative baseline conditions:

- Int. No. 1: Brand Boulevard / Goode Avenue – SR-134 WB Off-Ramp — AM Peak Hour: Delay = 89.7 sec., LOS F; PM Peak Hour: Delay = 59.0 sec., LOS E
- Int. No. 2: Brand Boulevard / Sanchez Drive – SR-134 EB On-Ramp — AM Peak Hour: Delay = 38.9 sec., LOS D
- Int. No. 3: Brand Boulevard / Doran Street — AM Peak Hour: Delay = 35.7 sec., LOS D; PM Peak Hour: Delay = 37.0 sec., LOS D



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(XX) STUDY INTERSECTION

FIGURE 10-1

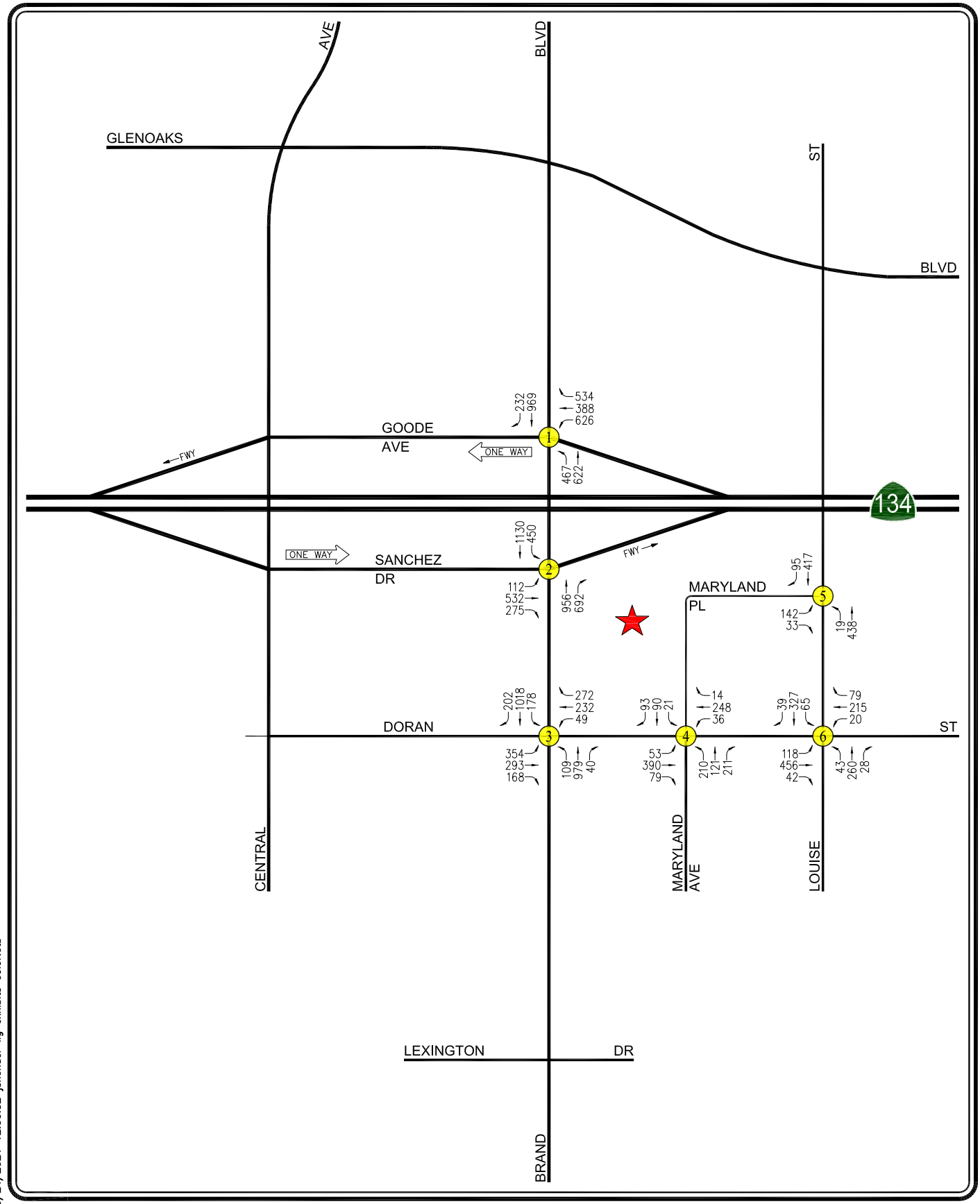
OPENING YEAR TRAFFIC VOLUMES

WEEKDAY AM PEAK HOUR

LINSCOTT, LAW & GREENSPAN, engineers

606 N. MARYLAND AVENUE RESIDENTIAL PROJECT

o:\0343\dwg\f10-1.dwg 03/23/2021 15:51:12 jshender llg exhibits color.ctb



N

NOT TO SCALE

★ PROJECT SITE

(XX) STUDY INTERSECTION

FIGURE 10-2

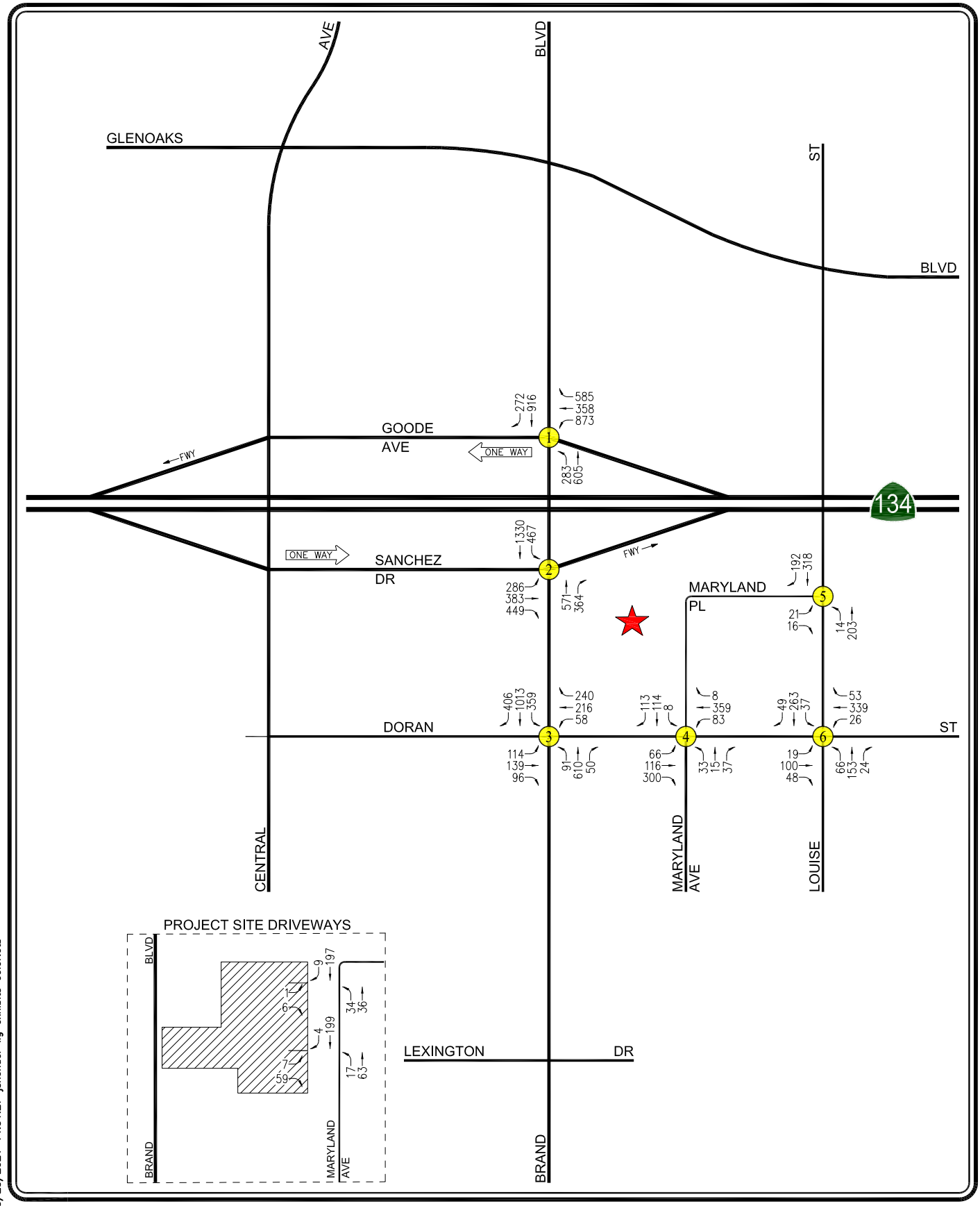
OPENING YEAR TRAFFIC VOLUMES

WEEKDAY PM PEAK HOUR

LINSCOTT, LAW & GREENSPAN, engineers

606 N. MARYLAND AVENUE RESIDENTIAL PROJECT

o:\0343\dwg\f10-2.dwg 03/24/2021 12:00:32 jshender llg exhibits color.ctb



NOT TO SCALE

PROJECT SITE

XX STUDY INTERSECTION

FIGURE 10-3
OPENING YEAR PLUS PROJECT TRAFFIC VOLUMES
WEEKDAY AM PEAK HOUR

LINSCOTT, LAW & GREENSPAN, engineers

606 N. MARYLAND AVENUE RESIDENTIAL PROJECT

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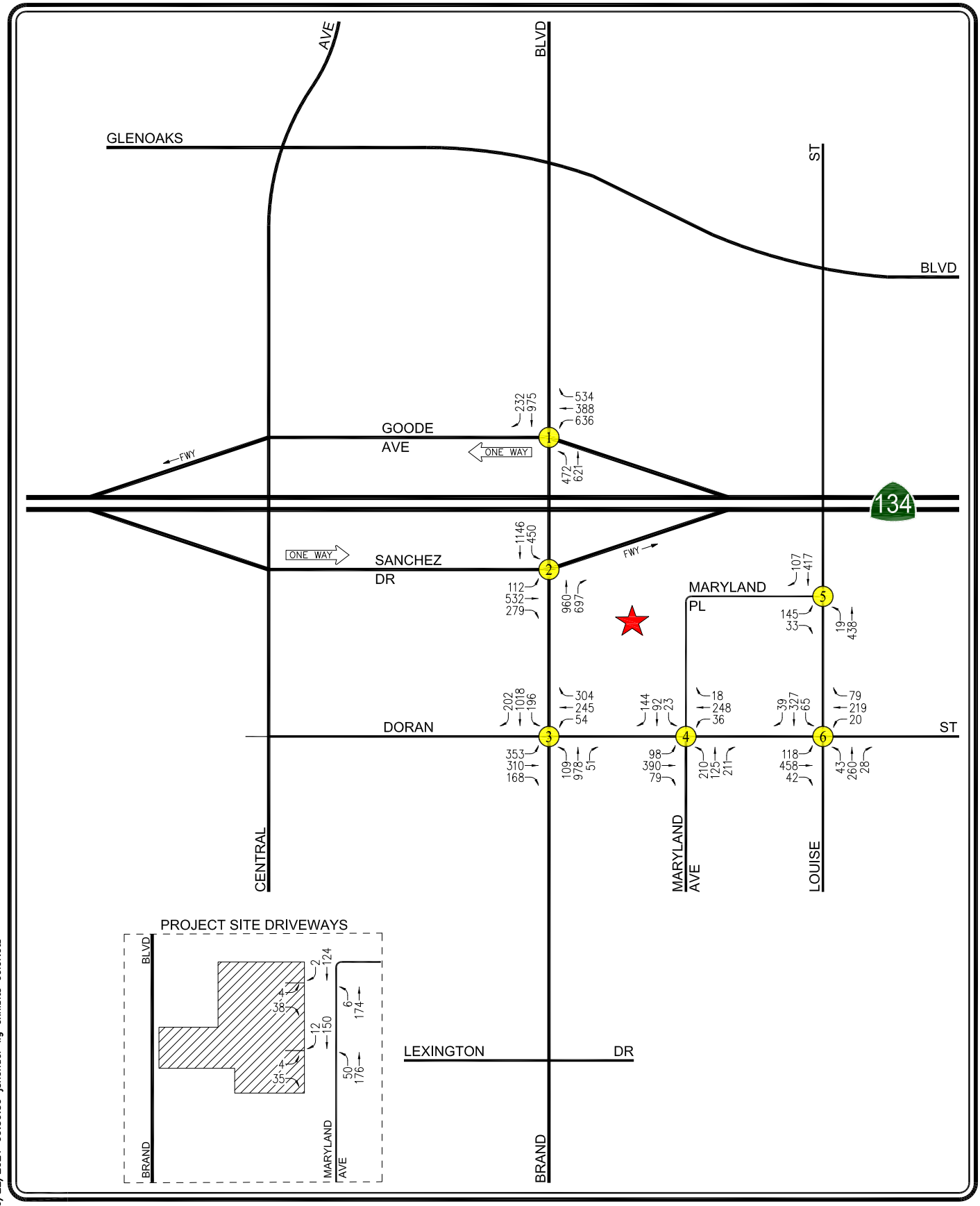


o:\0343\dwg\f10-4.dwg 06/22/2021 09:59:39 jshender llg exhibits color.ctb

N

NOT TO SCALE

★ PROJECT SITE

(XX) STUDY INTERSECTION

FIGURE 10-4
OPENING YEAR PLUS PROJECT TRAFFIC VOLUMES
WEEKDAY PM PEAK HOUR

LINSCOTT, LAW & GREENSPAN, engineers

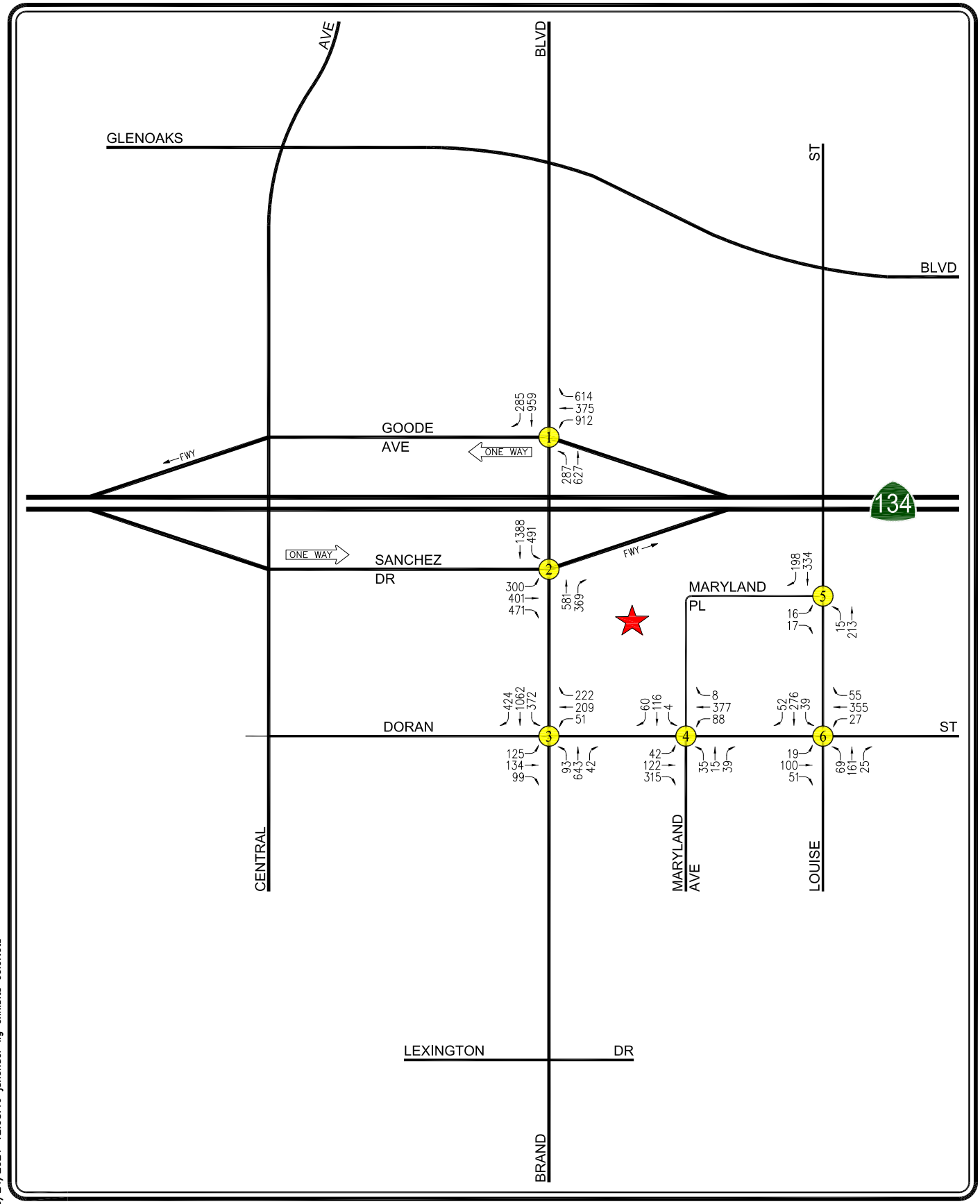
606 N. MARYLAND AVENUE RESIDENTIAL PROJECT

- Int. No. 5: Louise Street / Maryland Place — PM Peak Hour: Delay = 43.4 sec., LOS E

The Cumulative baseline (existing, ambient growth through year 2029, and related projects) traffic volumes at the study intersections during the weekday AM and PM peak hours are presented in ***Figures 10–5*** and ***10–6***, respectively.

10.3.2 *Cumulative Plus Project Conditions*

The "Cumulative Plus Project" conditions were forecast based on the addition of traffic generated by the Project plus completion and occupancy of related projects. As shown in column [5] of *Table 10–1*, application of the City's threshold criteria to the "Cumulative Plus Project" scenario indicates that the proposed Project is not expected to exceed the operations criteria at any of the six study intersections. Therefore, no measures are required or recommended with respect to these intersections under the "Cumulative Plus Project" conditions. The "Cumulative Plus Project" (existing, ambient growth through year 2029, related projects, and Project) traffic volumes at the study intersections during the weekday AM and PM peak hours are illustrated in ***Figures 10–7*** and ***10–8***, respectively.



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N

NOT TO SCALE

★ PROJECT SITE

(XX) STUDY INTERSECTION

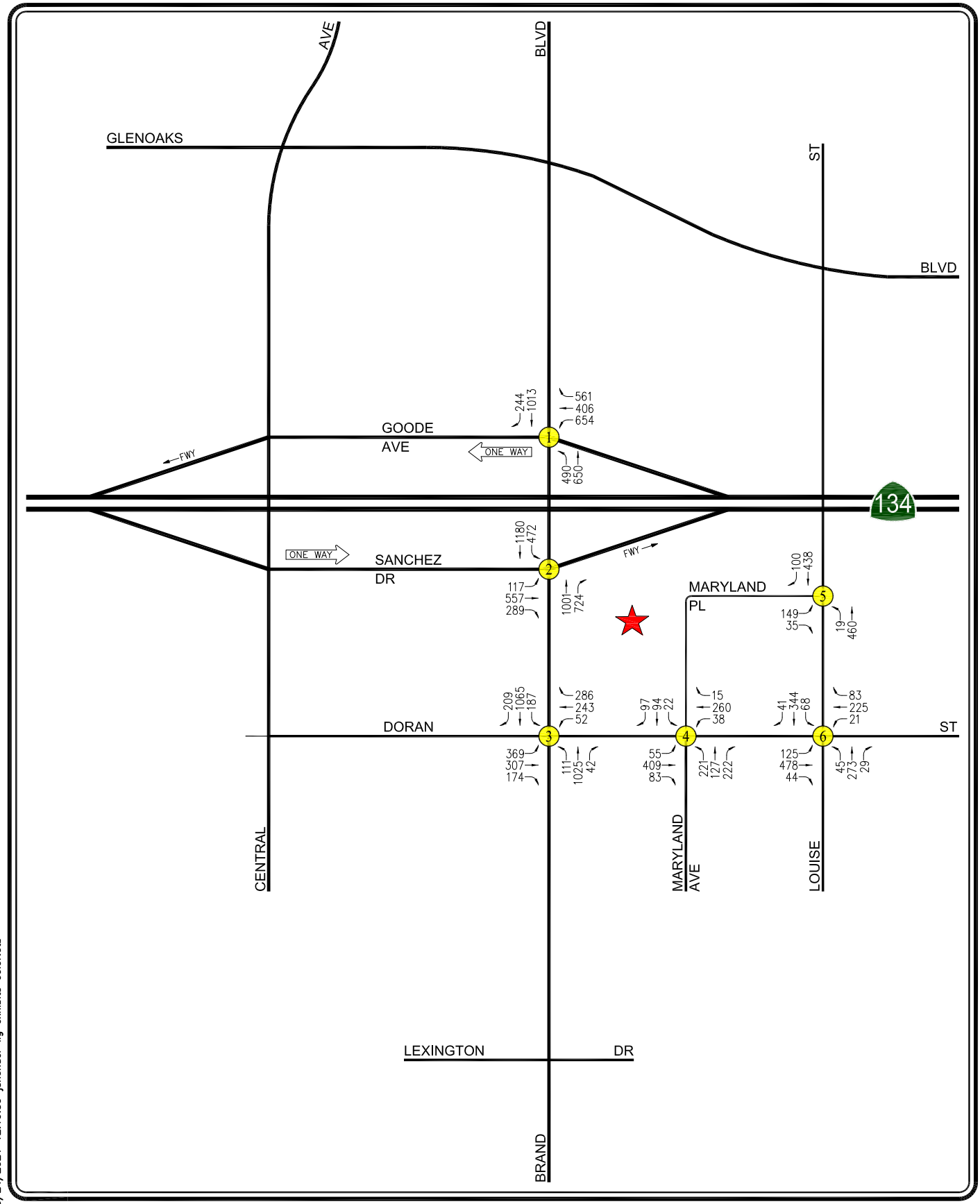
FIGURE 10-5

CUMULATIVE TRAFFIC VOLUMES

WEEKDAY AM PEAK HOUR

LINSCOTT, LAW & GREENSPAN, engineers

606 N. MARYLAND AVENUE RESIDENTIAL PROJECT



N

NOT TO SCALE

★ PROJECT SITE

(XX) STUDY INTERSECTION

FIGURE 10-6

CUMULATIVE TRAFFIC VOLUMES

WEEKDAY PM PEAK HOUR

606 N. MARYLAND AVENUE RESIDENTIAL PROJECT

LINSCOTT, LAW & GREENSPAN, engineers

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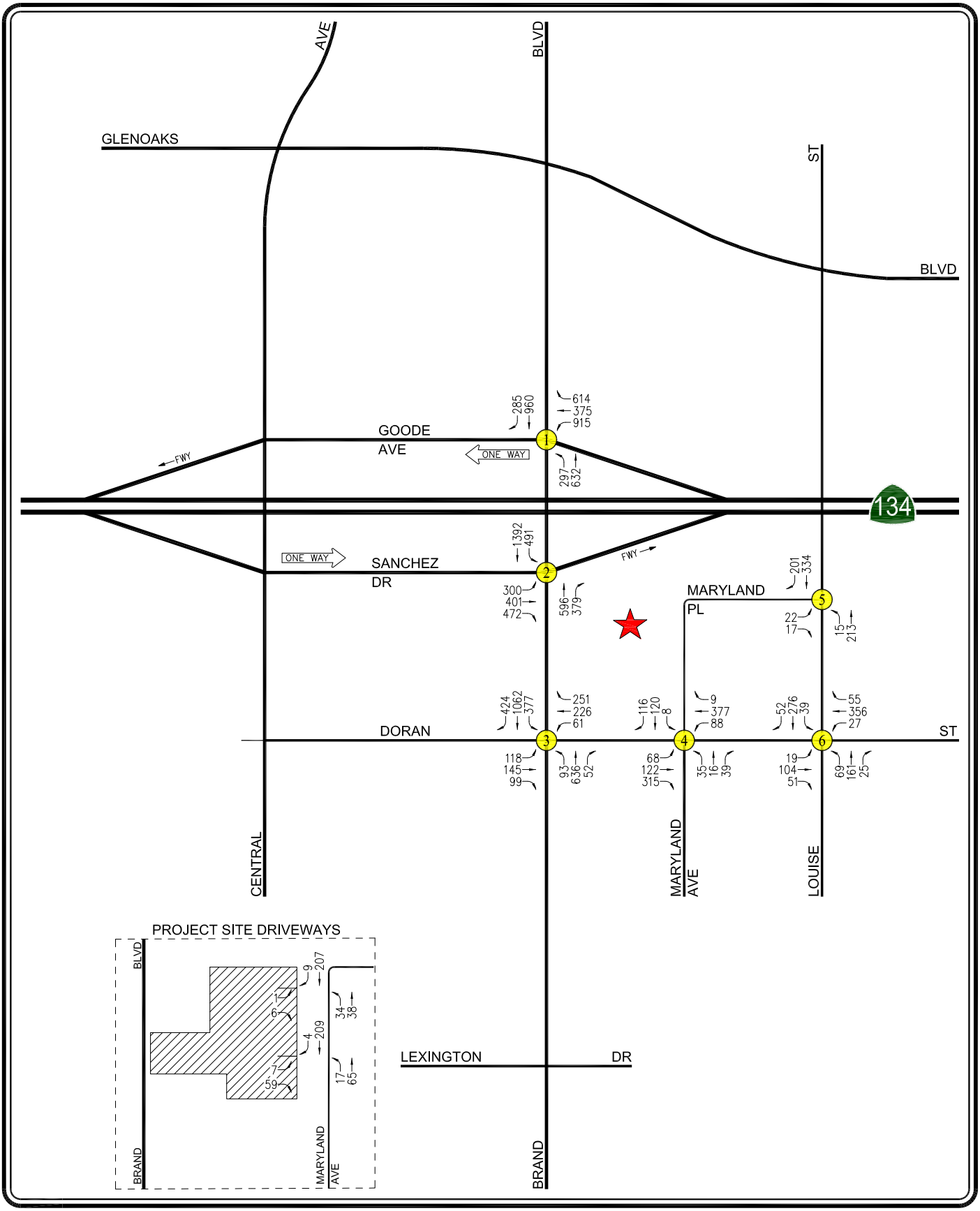

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N

NOT TO SCALE

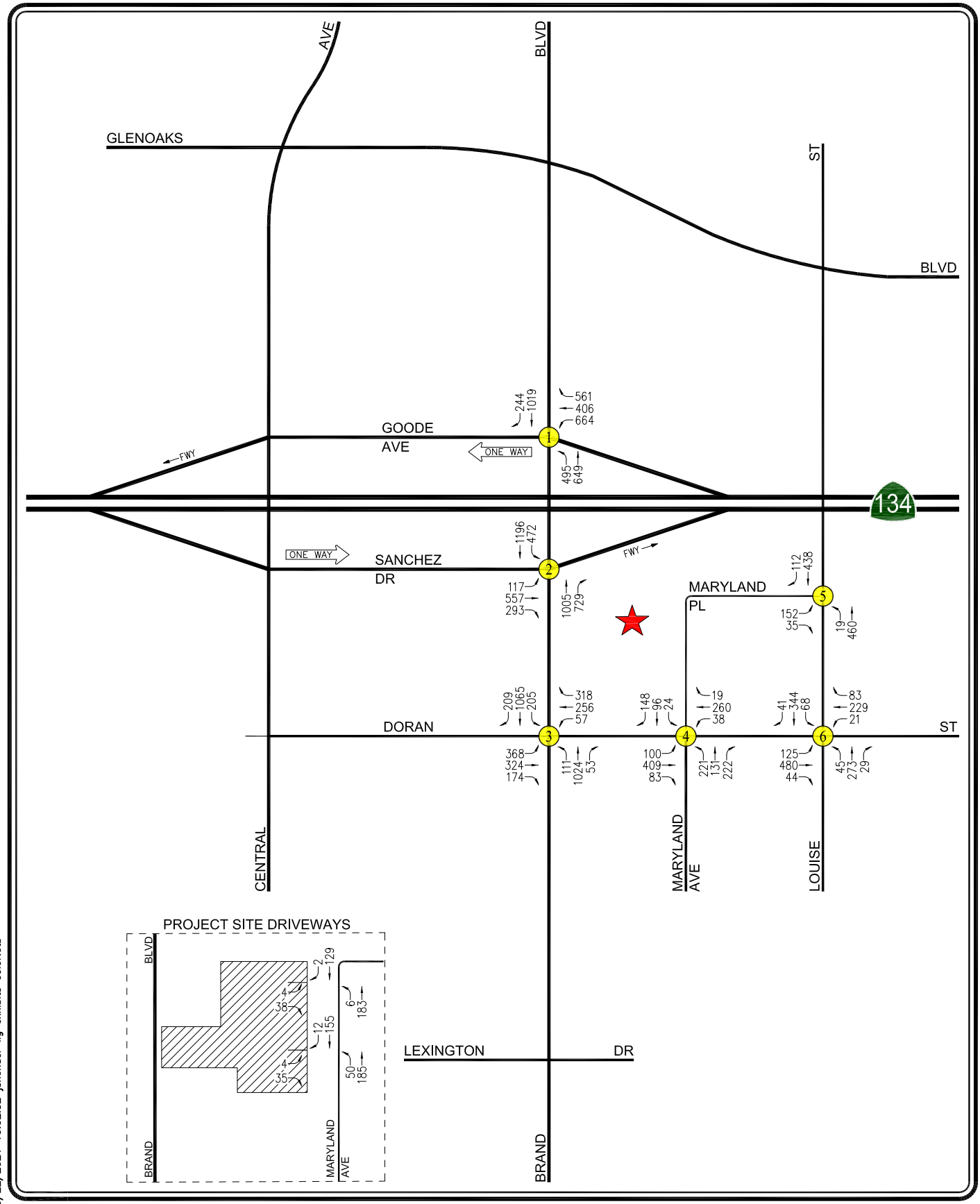
★ PROJECT SITE

(XX) STUDY INTERSECTION

FIGURE 10-7
CUMULATIVE PLUS PROJECT TRAFFIC VOLUMES
WEEKDAY AM PEAK HOUR

LINSCOTT, LAW & GREENSPAN, engineers

606 N. MARYLAND AVENUE RESIDENTIAL PROJECT



PROJECT SITE
STUDY INTERSECTION

N
NOT TO SCALE

FIGURE 10-8
CUMULATIVE PLUS PROJECT TRAFFIC VOLUMES
WEEKDAY PM PEAK HOUR

LINSCOTT, LAW & GREENSPAN, engineers

606 N. MARYLAND AVENUE RESIDENTIAL PROJECT

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11.0 OPERATIONAL ANALYSIS OF PROJECT DRIVEWAYS

An analysis was prepared to evaluate expected operations at the proposed Project driveways on Maryland Avenue. To prepare the analysis, vehicle traffic counts from the HCM 6th Edition LOS analysis were used at the driveway locations. Traffic volumes utilizing the proposed Project driveways were derived based on the forecast AM and PM peak hour trip generation for the Project. The through volumes at the proposed Project driveways were derived from vehicles arriving and departing the adjacent Louise Avenue / Maryland Place intersection. The *HCS7* data worksheets for the analyzed driveways are contained in ***Appendix D***.

Operations at the proposed driveways were evaluated for the Opening Year Plus Project and Cumulative Plus Project conditions to identify the expected operations related to the proposed driveways for the project. As the driveways are expected to be stop-sign controlled (i.e., stop signs facing exiting Project traffic), the analysis was prepared using the unsignalized intersection methodology provided in the HCM 6th Edition. The HCM 6th Edition methodology allows the analysis of turning movements at unsignalized intersections, with the following specific outputs:

- Control delay (measured in vehicles/seconds): Control delay is the estimated time that the average motorist will require to wait prior to completing a specific turning movement at an unsignalized intersection during the analyzed peak hour.

- Level of Service (LOS): A qualitative description of operations at an intersection, ranging from LOS A to F. LOS is defined based on calculated amount of motorist delay.

- 95th Percentile Vehicle Queue: The calculated length of vehicle queues waiting to complete a specific turning movement at an unsignalized intersection during the analyzed peak hour. The 95th percent confidence level indicates that the queue will be at or below this length 95% of the time during the analyzed peak hour.

Control delay, LOS, and 95th Percentile Vehicle Queue calculations have been prepared for the two driveway traffic split scenarios. ***Table 11–1*** provides a summary of the HCM analysis for each traffic split scenario prepared for the two proposed Project driveways during the AM and PM peak hours.

As indicated in *Table 11–1*, the ingress and egress from both proposed Maryland Avenue driveways would operate at good LOS (i.e., LOS B or better) during all analyzed peak hours in the Opening Year Plus Project and Cumulative Plus Project conditions. Additionally, the 95th percentile queuing would also be less than one vehicle for all movements.

Table 11-1
HCM DRIVEWAY ANALYSIS [A]
WEEKDAY AM AND PM PEAK HOURS
PROPOSED PROJECT DRIVEWAYS

25-Mar-21

NO.	INTERSECTION	PEAK HOUR	TRAFFIC MOVEMENT	OPENING YEAR PLUS PROJECT			CUMULATIVE PLUS PROJECT		
				DELAY [B]	LOS [C]	QUEUE [D]	DELAY [B]	LOS [C]	QUEUE [D]
1	Maryland Avenue / Northerly Driveway (Commercial)	AM	NB Left (Inbound)	7.8	A	0.1	7.8	A	0.1
			EB Left/Right (Outbound)	9.6	A	0.0	9.7	A	0.0
		PM	NB Left (Inbound)	7.5	A	0.0	7.5	A	0.0
			EB Left/Right (Outbound)	9.3	A	0.2	9.4	A	0.2
2	Maryland Avenue / Southerly Driveway (Residential)	AM	NB Left (Inbound)	7.7	A	0.0	7.7	A	0.0
			EB Left/Right (Outbound)	10.0	A	0.3	10.0	B	0.3
		PM	NB Left (Inbound)	7.7	A	0.1	7.7	A	0.1
			EB Left/Right (Outbound)	9.6	A	0.2	9.7	A	0.2

[A] Driveway analysis based on the Highway Capacity Manual (HCM) methodology.
[B] Control delay reported in seconds per vehicle.
[C] Unsignalized Intersection Levels of Service were based on the following criteria:

Control Delay (s/veh)	LOS
<= 10	A
> 10-15	B
> 15-25	C
> 25-35	D
> 35-50	E
> 50	F

[D] 95th percentile vehicle queue expressed in number of vehicles.

12.0 CONCLUSIONS

This transportation impact analysis has been prepared to evaluate the potential transportation impacts due to the proposed residential project located at 606 N. Maryland Avenue and 610 N. Brand Boulevard in the City of Glendale. A VMT assessment has been prepared in accordance with the City's TIA Guidelines. Based on the guidance provided in the City's TIA Guidelines, the VMT impacts of the Project are determined to be less than significant.

Per the City's TIA Guidelines, a LOS analysis and other analyses deemed appropriate by the City should be prepared in transportation impact analysis to inform decision makers of the overall transportation effects of a project. Accordingly, six study intersections were identified and analyzed to determine changes in operations following construction and occupancy of the Project. Application of the operations criteria from the City indicate that none of the six study intersections would exceed the operations criteria with the addition of the forecast Project traffic. Accordingly, no traffic measures are required or recommended for the study intersections.

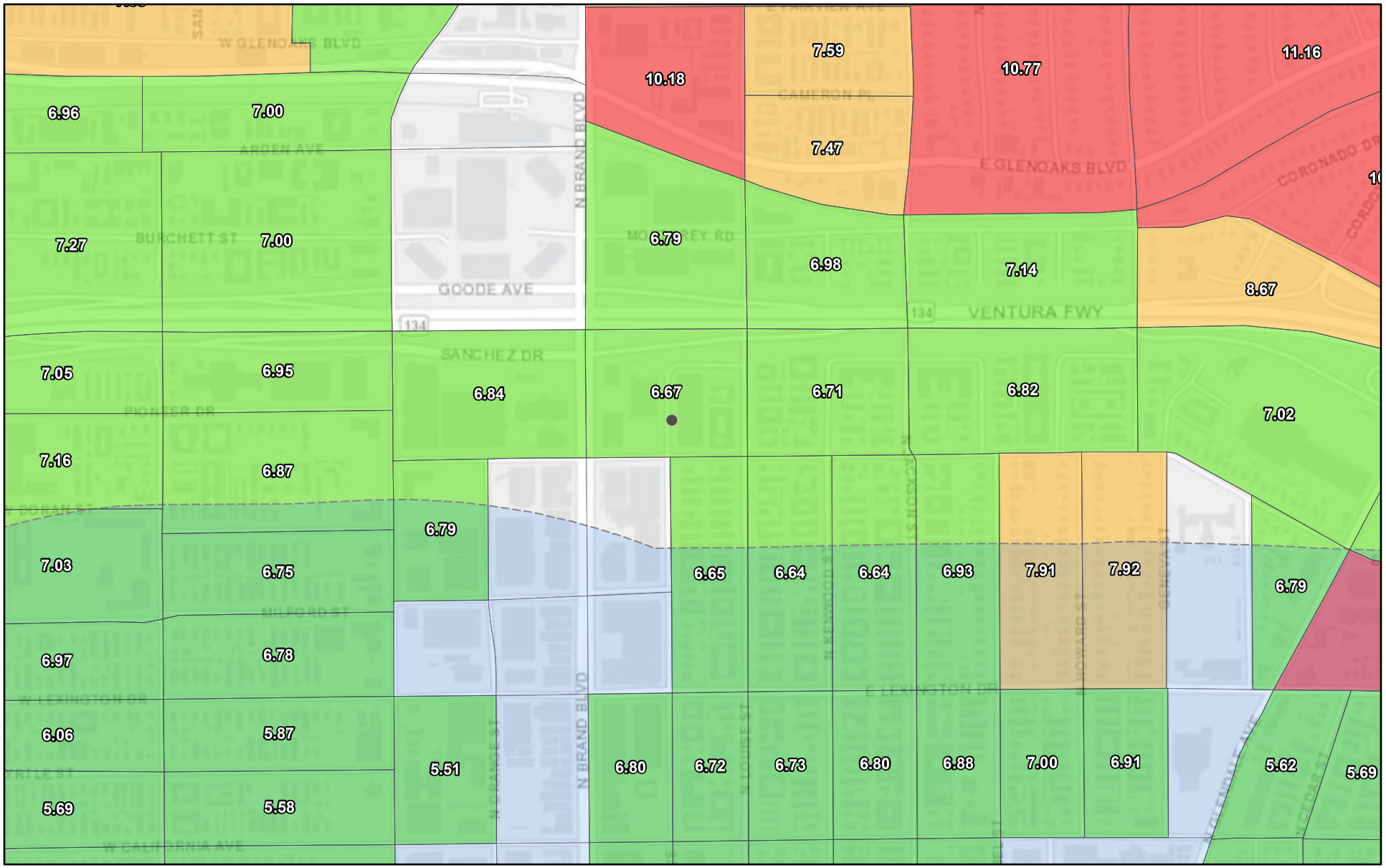
Furthermore, the Project was reviewed for potential impacts related to active transportation and safety. The Project is located along Brand Boulevard, which provides access and connectivity to pedestrian and transit networks in the direct Project vicinity. These connections will be further enhanced upon closure of the existing driveway along the Project Site's Brand Boulevard frontage. The Project will have no impact on existing or future transit, pedestrian, and bicycle networks. The Project will provide bicycle parking in accordance with City Code. Additionally, the Project's driveways have been strategically placed to avoid conflicts with pedestrians, bicyclists, and transit vehicles along the Brand Boulevard corridor.

Finally, an operational analysis of the proposed Project driveways has been prepared to evaluate Project-related traffic entering and exiting the Project Site. The ingress and egress from both proposed Maryland Avenue driveways would operate at good Levels of Service during all analyzed peak hours in the Opening Year Plus Project and Cumulative Plus Project conditions. Additionally, the 95th percentile queuing would also be less than one vehicle for all movements.

APPENDIX A

CITY OF GLENDALE ONLINE VMT MAPPING TOOL OUTPUT

ArcGIS Web Map



3/22/2021, 5:59:28 PM

High Quality Transit Areas

Residential Projects

0% - 85% of Citywide Average (0 to 7.39 VMT; No VMT impact)

1:9,028

0 0.05 0.1 0.2 mi

0 0.1 0.2 0.4 km

Esri, HERE

APPENDIX B

MANUAL TRAFFIC COUNT DATA

Prepared by National Data & Surveying Services

Brand Blvd & SR 134 WB Off Ramp/Goode Ave

Peak Hour Turning Movement Count

ID: 17-5366-006
City: Glendale

Day: Wednesday
Date: 05/31/2017

PEAK HOURS	COUNT PERIODS
07:45 AM - 08:45 AM	07:00 AM - 09:00 AM
NONE	NONE
04:30 PM - 05:30 PM	04:00 PM - 06:00 PM

SOUTHBOUND (Brand Blvd)

	L	T	R	U	Total	
AM	245	795	0	0	1015	AM
NOON	0	0	0	0	0	NOON
PM	206	815	0	0	993	PM

EASTBOUND (SR 134 WB Off Ramp/Goode Ave)

	L	T	R	U	
AM	813	0	960		
NOON	0	0	0		
PM	0	0	0		

	L	T	R	U	
AM	0	0	0	0	0
NOON	0	0	0	0	0
PM	0	0	0	0	0

WESTBOUND (SR 134 WB Off Ramp/Goode Ave)

	L	T	R	U	
AM	488	0	533		
NOON	321	0	315		
PM	510	0	767		

	L	T	R	U	
AM	0.5	1	1.5	0	
NOON	0	0	0	0	
PM	0	0	0	0	

NORTHBOUND (Brand Blvd)

	L	T	R	U	Total	
AM	1562	0	253	482	0	AM
NOON	0	0	0	0	0	NOON
PM	1325	0	433	505	0	PM

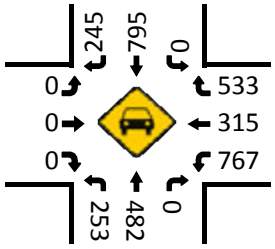
	L	T	R	U	
AM	0	2	3	0	
NOON	0	0	0	0	
PM	0	3	0	0	

CONTROL

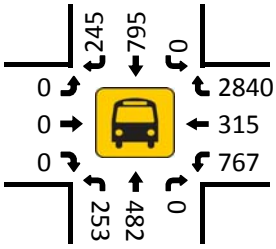
Signalized

		AM	NOON	PM
TEV	3390	0	3278	
PHF		0.96		0.98

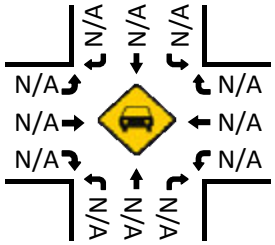
Total Vehicles (AM)



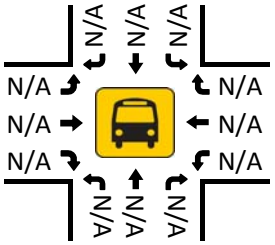
Total Vehicles (AM)



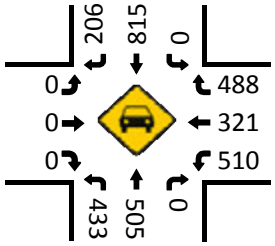
Total Vehicles (Noon)



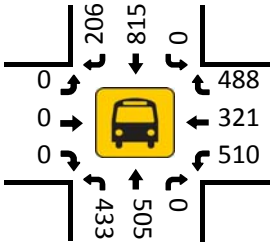
Total Vehicles (Noon)

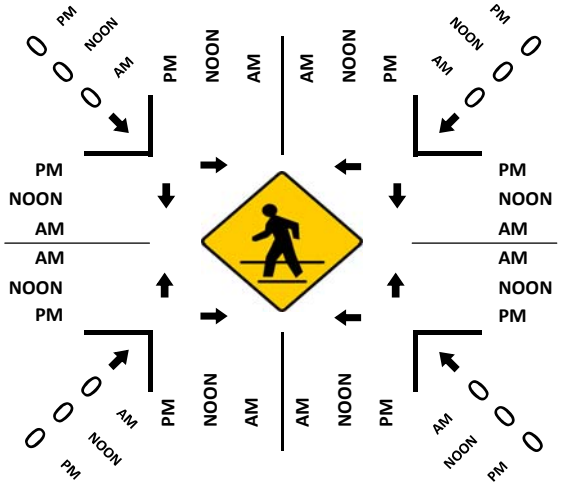


Total Vehicles (PM)



Total Vehicles (PM)





National Data & Surveying Services

Intersection Turning Movement Count

Location: Brand Blvd & SR 134 WB Off Ramp/Goode Ave
City: Glendale
Control: Signalized

Project ID: 17-5366-006
Date: 5/31/2017

Total

NS/EW Streets:	Brand Blvd				Brand Blvd				SR 134 WB Off Ramp/Goode Ave				SR 134 WB Off Ramp/Goode Ave				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	2	3	0	0	0	3	0	0	0	0	0	0	1.5	1	0.5	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	55	71	0	0	0	115	29	0	0	0	0	0	175	72	112	0	629
7:15 AM	57	69	0	0	0	146	42	0	0	0	0	0	192	74	116	0	696
7:30 AM	47	106	0	0	0	178	56	0	0	0	0	0	170	74	112	0	743
7:45 AM	67	136	0	0	0	183	57	0	0	0	0	0	201	85	138	0	867
8:00 AM	63	112	0	0	0	223	61	0	0	0	0	0	202	80	145	0	886
8:15 AM	59	122	0	0	0	198	73	0	0	0	0	0	213	71	129	0	865
8:30 AM	64	112	0	0	0	191	54	0	0	0	0	0	151	79	121	0	772
8:45 AM	44	116	0	0	0	188	51	0	0	0	0	0	189	94	129	0	811
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	456	844	0	0	0	1422	423	0	0	0	0	0	1493	629	1002	0	6269
APPROACH %'s :	35.08%	64.92%	0.00%	0.00%	0.00%	77.07%	22.93%	0.00%					47.79%	20.13%	32.07%	0.00%	
PEAK HR :	07:45 AM - 08:45 AM																TOTAL
PEAK HR VOL :	253	482	0	0	0	795	245	0	0	0	0	0	767	315	533	0	3390
PEAK HR FACTOR :	0.944	0.886	0.000	0.000	0.000	0.891	0.839	0.000	0.000	0.000	0.000	0.000	0.900	0.926	0.919	0.000	0.957
	0.905				0.915								0.946				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	2	3	0	0	0	3	0	0	0	0	0	0	1.5	1	0.5	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	103	121	0	0	0	185	49	0	0	0	0	0	128	53	113	0	752
4:15 PM	94	112	0	0	0	207	51	0	0	0	0	0	139	69	112	0	784
4:30 PM	100	153	0	0	0	207	57	0	0	0	0	0	131	82	103	0	833
4:45 PM	99	140	0	0	0	191	55	0	0	0	0	0	128	76	125	0	814
5:00 PM	109	107	0	0	0	215	54	0	0	0	0	0	123	76	132	0	816
5:15 PM	125	105	0	0	0	202	40	0	0	0	0	0	128	87	128	0	815
5:30 PM	93	112	0	0	0	188	45	1	0	0	0	0	122	87	109	0	757
5:45 PM	106	132	0	0	0	200	42	0	0	0	0	0	153	63	109	0	805
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	829	982	0	0	0	1595	393	1	0	0	0	0	1052	593	931	0	6376
APPROACH %'s :	45.78%	54.22%	0.00%	0.00%	0.00%	80.19%	19.76%	0.05%					40.84%	23.02%	36.14%	0.00%	
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	433	505	0	0	0	815	206	0	0	0	0	0	510	321	488	0	3278
PEAK HR FACTOR :	0.866	0.825	0.000	0.000	0.000	0.948	0.904	0.000	0.000	0.000	0.000	0.000	0.973	0.922	0.924	0.000	0.984
	0.927				0.949								0.961				

Prepared by National Data & Surveying Services

Brand Blvd & SR 134 EB On Ramp/Sanchez Dr

Peak Hour Turning Movement Count

ID: 17-5366-007
City: Glendale

Day: Wednesday
Date: 05/31/2017

PEAK HOURS	COUNT PERIODS
07:30 AM - 08:30 AM	07:00 AM - 09:00 AM
NONE	NONE
04:00 PM - 05:00 PM	04:00 PM - 06:00 PM

SOUTHBOUND (Brand Blvd)

AM	0	1142	428	0	707	AM
NOON	0	0	0	0	0	NOON
PM	0	903	407	1	920	PM

EASTBOUND (SR 134 EB On Ramp/Sanchez Dr)

AM	NOON	PM		
0	0	0		
0	0	0	0	
255	0	94	0.5	
320	0	467	1	
416	0	254	1.5	
AM	NOON	PM		

WESTBOUND (SR 134 EB On Ramp/Sanchez Dr)

PM	NOON	AM	
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
1462	0	1022	
PM	NOON	AM	

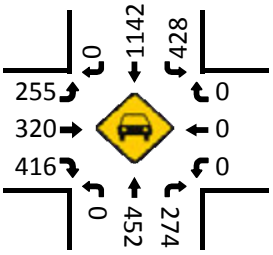
NORTHBOUND (Brand Blvd)

PM	1157	0	0	825	588	PM
NOON	0	0	0	0	0	NOON
AM	1558	0	0	452	274	AM

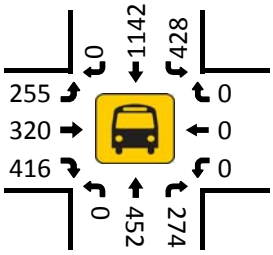
	0	2	2	0
	0	0	3.5	1.5

CONTROL			
Signalized			
TEV	3287	0	3539
	AM	NOON	PM
PHF	0.96		0.98

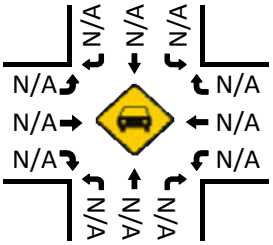
Total Vehicles (AM)



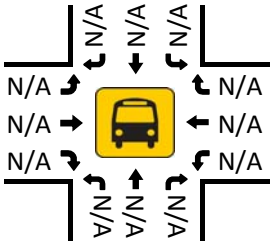
Total Vehicles (AM)



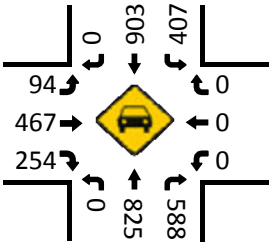
Total Vehicles (Noon)

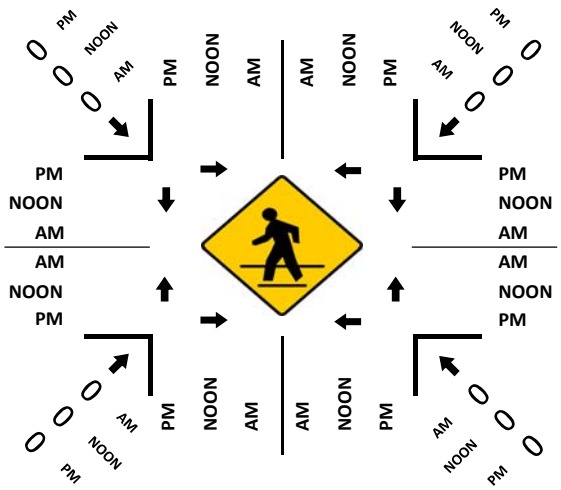


Total Vehicles (Noon)

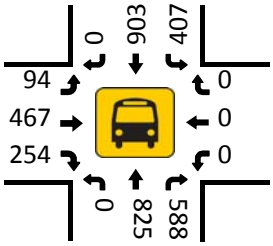


Total Vehicles (PM)





Total Vehicles (PM)



National Data & Surveying Services

Intersection Turning Movement Count

Location: Brand Blvd & SR 134 EB On Ramp/Sanchez Dr
City: Glendale
Control: Signalized

Project ID: 17-5366-007
Date: 5/31/2017

Total

NS/EW Streets:	Brand Blvd				Brand Blvd				SR 134 EB On Ramp/Sanchez Dr				SR 134 EB On Ramp/Sanchez Dr				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	3.5	1.5	0	2	2	0	0	0.5	1	1.5	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	82	59	0	65	225	0	0	41	73	78	0	0	0	0	0	623
7:15 AM	0	92	57	0	87	250	0	0	36	50	64	0	0	0	0	0	636
7:30 AM	0	97	68	0	108	244	0	0	57	84	108	0	0	0	0	0	766
7:45 AM	0	125	68	0	106	275	0	0	77	80	110	0	0	0	0	0	841
8:00 AM	0	115	66	0	109	313	0	0	63	91	96	0	0	0	0	0	853
8:15 AM	0	115	72	0	105	310	0	0	58	65	102	0	0	0	0	0	827
8:30 AM	0	124	61	0	92	248	0	0	61	63	92	0	0	0	0	0	741
8:45 AM	0	101	64	0	100	276	0	0	56	73	93	0	0	0	0	0	763
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	851	515	0	772	2141	0	0	449	579	743	0	0	0	0	0	6050
APPROACH %'s :	0.00%	62.30%	37.70%	0.00%	26.50%	73.50%	0.00%	0.00%	25.35%	32.69%	41.95%	0.00%					
PEAK HR :	07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL :	0	452	274	0	428	1142	0	0	255	320	416	0	0	0	0	0	3287
PEAK HR FACTOR :	0.000	0.904	0.951	0.000	0.982	0.912	0.000	0.000	0.828	0.879	0.945	0.000	0.000	0.000	0.000	0.000	0.963
		0.940				0.930				0.928							

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	3.5	1.5	0	2	2	0	0	0.5	1	1.5	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	0	210	149	0	95	212	0	0	21	122	67	0	0	0	0	0	876
4:15 PM	0	191	135	0	108	240	0	0	16	121	70	0	0	0	0	0	881
4:30 PM	0	216	155	0	106	230	0	1	29	112	52	0	0	0	0	0	901
4:45 PM	0	208	149	0	98	221	0	0	28	112	65	0	0	0	0	0	881
5:00 PM	0	192	151	0	107	226	0	0	24	119	51	0	0	0	0	0	870
5:15 PM	0	211	146	0	108	239	0	0	7	113	61	0	0	0	0	0	885
5:30 PM	0	192	146	0	102	204	0	0	13	117	73	0	0	0	0	0	847
5:45 PM	0	221	144	0	105	252	0	0	24	109	48	0	0	0	0	0	903
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	1641	1175	0	829	1824	0	1	162	925	487	0	0	0	0	0	7044
APPROACH %'s :	0.00%	58.27%	41.73%	0.00%	31.24%	68.73%	0.00%	0.04%	10.29%	58.77%	30.94%	0.00%					
PEAK HR :	04:00 PM - 05:00 PM																TOTAL
PEAK HR VOL :	0	825	588	0	407	903	0	1	94	467	254	0	0	0	0	0	3539
PEAK HR FACTOR :	0.000	0.955	0.948	0.000	0.942	0.941	0.000	0.250	0.810	0.957	0.907	0.000	0.000	0.000	0.000	0.000	0.982
		0.952				0.942				0.970							

Prepared by National Data & Surveying Services

Brand Blvd & Doran St

Peak Hour Turning Movement Count

ID: 17-5366-008
City: Glendale

Day: Wednesday
Date: 05/31/2017

PEAK HOURS

AM: 07:45 AM - 08:45 AM
NOON: NONE
PM: 05:00 PM - 06:00 PM

COUNT PERIODS

AM: 07:00 AM - 09:00 AM
NOON: NONE
PM: 04:00 PM - 06:00 PM

SOUTHBOUND (Brand Blvd)

AM	322	904	328	2	763	AM
NOON	0	0	0	0	0	NOON
PM	124	863	163	1	1374	PM

EASTBOUND (Doran St)

AM	NOON	PM	
535	0	377	⇦
0	0	0	0
74	0	268	1
111	0	259	1
58	0	108	1

WESTBOUND (Doran St)

PM	NOON	AM	
253	0	195	1
203	0	173	1
45	0	44	1
0	0	0	0
458	0	476	⇨

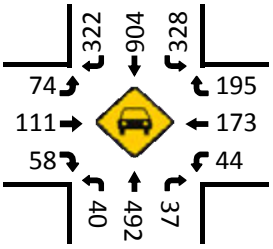
NORTHBOUND (Brand Blvd)

PM	1016	0	50	852	36	PM
NOON	0	0	0	0	0	NOON
AM	1006	0	40	492	37	AM

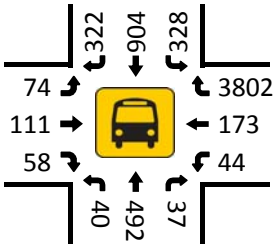
CONTROL: Signalized

TEV	2780 AM	0 NOON	3225 PM
PHF	0.96		0.97

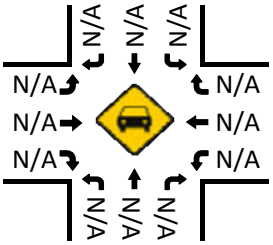
Total Vehicles (AM)



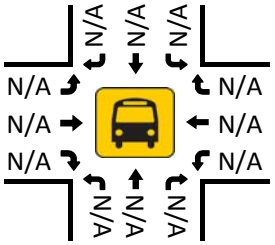
Total Vehicles (AM)



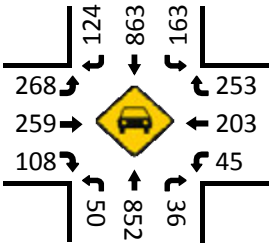
Total Vehicles (Noon)

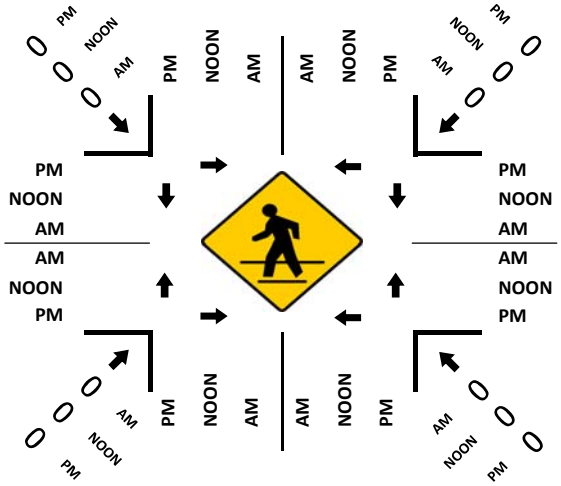


Total Vehicles (Noon)

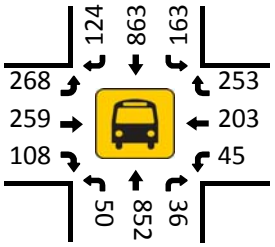


Total Vehicles (PM)





Total Vehicles (PM)



National Data & Surveying Services

Intersection Turning Movement Count

Location: Brand Blvd & Doran St
City: Glendale
Control: Signalized

Project ID: 17-5366-008
Date: 5/31/2017

Total

NS/EW Streets:	Brand Blvd				Brand Blvd				Doran St				Doran St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	4	0	0	1	2	1	0	1	1	1	0	1	1	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	4	80	4	0	58	194	46	0	10	9	9	0	4	16	47	0	481
7:15 AM	4	101	3	0	59	197	51	0	11	16	8	0	3	24	37	0	514
7:30 AM	5	113	2	0	73	212	57	0	8	21	6	0	6	28	43	0	574
7:45 AM	15	142	5	0	88	231	63	0	12	25	15	0	10	41	42	0	689
8:00 AM	6	114	11	0	81	248	90	2	19	27	12	0	8	50	51	0	719
8:15 AM	12	119	12	0	85	230	93	0	24	29	15	0	15	33	57	0	724
8:30 AM	7	117	9	0	74	195	76	0	19	30	16	0	11	49	45	0	648
8:45 AM	15	110	9	0	61	210	79	0	16	22	10	0	10	61	40	0	643
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	68	896	55	0	579	1717	555	2	119	179	91	0	67	302	362	0	4992
APPROACH %'s :	6.67%	87.93%	5.40%	0.00%	20.29%	60.18%	19.45%	0.07%	30.59%	46.02%	23.39%	0.00%	9.17%	41.31%	49.52%	0.00%	
PEAK HR :	07:45 AM - 08:45 AM																TOTAL
PEAK HR VOL :	40	492	37	0	328	904	322	2	74	111	58	0	44	173	195	0	2780
PEAK HR FACTOR :	0.667	0.866	0.771	0.000	0.932	0.911	0.866	0.250	0.771	0.925	0.906	0.000	0.733	0.865	0.855	0.000	0.960
	0.878				0.924				0.893				0.945				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	4	0	0	1	2	1	0	1	1	1	0	1	1	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	13	230	10	0	36	214	37	0	67	50	27	0	9	42	75	0	810
4:15 PM	11	221	5	0	51	223	31	0	65	48	18	0	9	47	37	0	766
4:30 PM	10	247	10	0	55	216	32	0	59	57	22	0	6	41	56	0	811
4:45 PM	9	225	8	0	56	173	31	0	61	45	19	0	5	48	54	0	734
5:00 PM	11	187	18	0	44	211	25	0	81	71	29	0	13	42	63	0	795
5:15 PM	11	212	5	0	30	216	46	0	67	73	30	0	16	57	68	0	831
5:30 PM	15	212	5	0	54	209	27	0	62	67	24	0	6	56	70	0	807
5:45 PM	13	241	8	0	35	227	26	1	58	48	25	0	10	48	52	0	792
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	93	1775	69	0	361	1689	255	1	520	459	194	0	74	381	475	0	6346
APPROACH %'s :	4.80%	91.64%	3.56%	0.00%	15.65%	73.24%	11.06%	0.04%	44.33%	39.13%	16.54%	0.00%	7.96%	40.97%	51.08%	0.00%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	50	852	36	0	163	863	124	1	268	259	108	0	45	203	253	0	3225
PEAK HR FACTOR :	0.833	0.884	0.500	0.000	0.755	0.950	0.674	0.250	0.827	0.887	0.900	0.000	0.703	0.890	0.904	0.000	0.970
	0.895				0.985				0.877				0.888				

Prepared by National Data & Surveying Services

Maryland Ave & Doran St

Peak Hour Turning Movement Count

ID: 17-5366-010
City: Glendale

Day: Wednesday
Date: 05/31/2017

PEAK HOURS	
AM	07:45 AM - 08:45 AM
NOON	NONE
PM	05:00 PM - 06:00 PM

COUNT PERIODS	
AM	07:00 AM - 09:00 AM
NOON	NONE
PM	04:00 PM - 06:00 PM

Maryland Ave — SOUTHBOUND

AM	53	103	4	0	57	AM
NOON	0	0	0	0	0	NOON
PM	86	84	19	0	174	PM

EASTBOUND — Doran St

AM	NOON	PM	
403	0	497	
0	0	0	0
37	0	49	1
100	0	347	1
280	0	74	1

WESTBOUND — Doran St

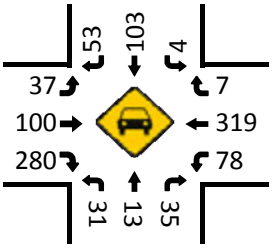
PM	NOON	AM	
13	0	7	0
215	0	319	1
34	0	78	1
0	0	0	0
563	0	139	

NORTHBOUND — Maryland Ave

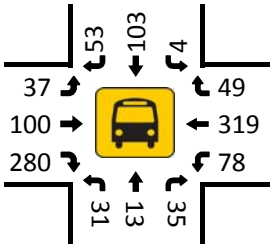
PM	192	0	196	112	197	PM
NOON	0	0	0	0	0	NOON
AM	461	0	31	13	35	AM

CONTROL			
Signalized			
TEV	1060 AM	0 NOON	1426 PM
PHF	0.94		0.91

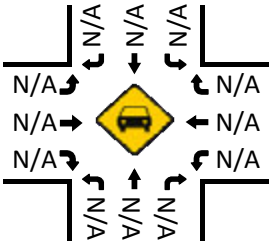
Total Vehicles (AM)



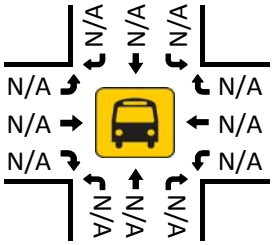
Total Vehicles (AM)



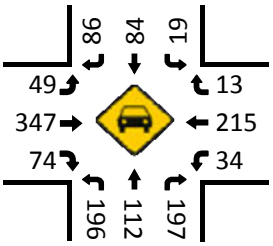
Total Vehicles (Noon)

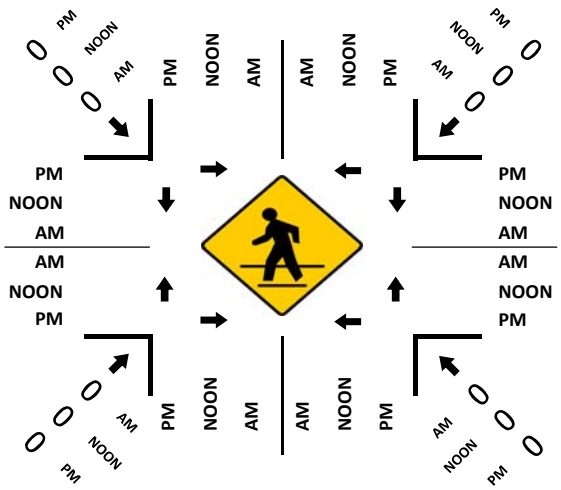


Total Vehicles (Noon)

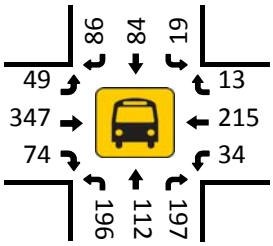


Total Vehicles (PM)





Total Vehicles (PM)



National Data & Surveying Services

Intersection Turning Movement Count

Location: Maryland Ave & Doran St
City: Glendale
Control: Signalized

Project ID: 17-5366-010
Date: 5/31/2017

Total

NS/EW Streets:	Maryland Ave				Maryland Ave				Doran St				Doran St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	1	1	1	0	1	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	11	2	4	0	2	6	4	0	16	15	33	0	7	54	3	0	157
7:15 AM	14	4	4	0	1	11	9	0	8	9	52	0	11	43	3	0	169
7:30 AM	6	3	3	0	4	11	8	0	7	23	58	0	10	60	1	0	194
7:45 AM	5	1	6	0	2	23	8	0	11	22	79	0	19	83	4	0	263
8:00 AM	5	1	10	0	1	25	21	0	9	28	67	0	22	85	1	0	275
8:15 AM	9	8	12	0	1	32	14	0	10	23	78	0	15	80	0	0	282
8:30 AM	12	3	7	0	0	23	10	0	7	27	56	0	22	71	2	0	240
8:45 AM	20	3	9	0	0	26	8	0	15	20	52	0	20	84	5	0	262
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	82	25	55	0	11	157	82	0	83	167	475	0	126	560	19	0	1842
APPROACH %'s :	50.62%	15.43%	33.95%	0.00%	4.40%	62.80%	32.80%	0.00%	11.45%	23.03%	65.52%	0.00%	17.87%	79.43%	2.70%	0.00%	
PEAK HR :	07:45 AM - 08:45 AM																TOTAL
PEAK HR VOL :	31	13	35	0	4	103	53	0	37	100	280	0	78	319	7	0	1060
PEAK HR FACTOR :	0.646	0.406	0.729	0.000	0.500	0.805	0.631	0.000	0.841	0.893	0.886	0.000	0.886	0.938	0.438	0.000	0.940
	0.681				0.851				0.931				0.935				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	1	1	1	0	1	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	50	18	36	0	5	16	29	0	11	77	12	0	6	48	1	0	309
4:15 PM	20	14	28	0	3	29	32	0	16	57	22	0	6	47	2	0	276
4:30 PM	46	19	40	0	6	12	19	0	11	71	31	0	8	45	3	0	311
4:45 PM	43	23	31	0	3	23	18	0	12	67	22	0	6	54	1	0	303
5:00 PM	54	35	57	0	8	25	26	0	21	91	23	0	7	39	5	0	391
5:15 PM	48	29	53	0	4	17	29	0	12	87	14	0	8	61	3	0	365
5:30 PM	61	28	37	0	5	24	11	0	13	96	21	0	8	54	2	0	360
5:45 PM	33	20	50	0	2	18	20	0	3	73	16	0	11	61	3	0	310
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	355	186	332	0	36	164	184	0	99	619	161	0	60	409	20	0	2625
APPROACH %'s :	40.66%	21.31%	38.03%	0.00%	9.38%	42.71%	47.92%	0.00%	11.26%	70.42%	18.32%	0.00%	12.27%	83.64%	4.09%	0.00%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	196	112	197	0	19	84	86	0	49	347	74	0	34	215	13	0	1426
PEAK HR FACTOR :	0.803	0.800	0.864	0.000	0.594	0.840	0.741	0.000	0.583	0.904	0.804	0.000	0.773	0.881	0.650	0.000	0.912
	0.865				0.801				0.870				0.873				

Prepared by National Data & Surveying Services

Louise St & Maryland Pl

Peak Hour Turning Movement Count

ID: 17-5366-012
City: Glendale

Day: Wednesday
Date: 05/31/2017

PEAK HOURS

AM: 07:45 AM - 08:45 AM
NOON: NONE
PM: 05:00 PM - 06:00 PM

COUNT PERIODS

AM: 07:00 AM - 09:00 AM
NOON: NONE
PM: 04:00 PM - 06:00 PM

Louise St

SOUTHBOUND

AM	176	291	1	1	201	AM
NOON	0	0	0	0	0	NOON
PM	88	381	2	0	538	PM

EASTBOUND (Maryland Pl)

AM	NOON	PM	
190	0	105	⇦
0	0	2	↶ 0
13	0	131	↱ 0
1	0	0	→ 1
15	0	31	↴ 0
AM	NOON	PM	

WESTBOUND (Maryland Pl)

PM	NOON	AM	
2	0	3	↰ 0
0	0	1	← 1
0	0	1	↰ 0
0	0	0	↰ 0
2	0	3	⇨
PM	NOON	AM	

CONTROL

1-Way Stop (EB)

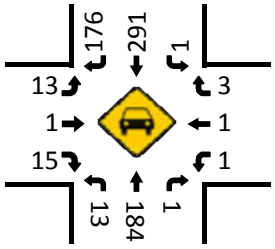
TEV	701 AM	0 NOON	1059 PM
PHF	0.87		0.95

PM	414	2	15	405	0	PM
NOON	0	0	0	0	0	NOON
AM	307	0	13	184	1	AM

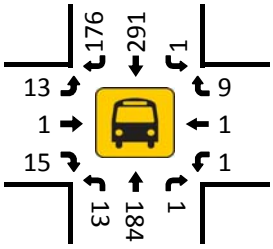
NORTHBOUND

Louise St

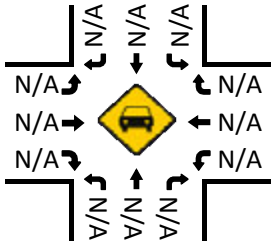
Total Vehicles (AM)



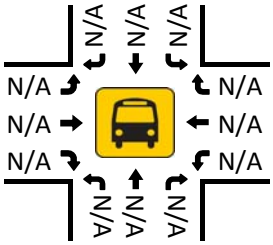
Total Vehicles (AM)



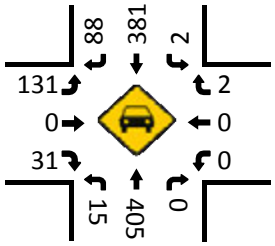
Total Vehicles (Noon)

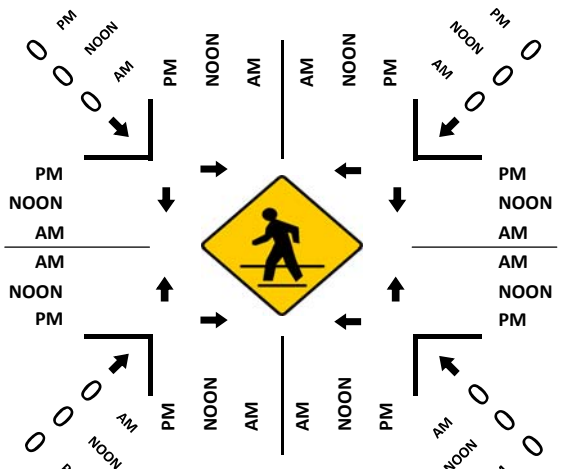


Total Vehicles (Noon)

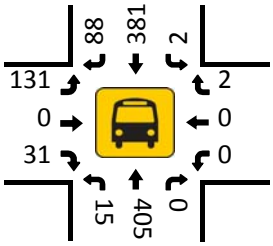


Total Vehicles (PM)





Total Vehicles (PM)



National Data & Surveying Services

Intersection Turning Movement Count

Location: Louise St & Maryland Pl
City: Glendale
Control: 1-Way Stop (EB)

Project ID: 17-5366-012
Date: 5/31/2017

Total

NS/EW Streets:	Louise St				Louise St				Maryland Pl				Maryland Pl				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	20	0	0	0	32	19	1	4	0	1	0	1	0	0	0	78
7:15 AM	2	30	0	0	0	37	23	1	3	0	2	0	0	0	0	0	98
7:30 AM	3	42	0	0	2	50	22	1	2	0	1	0	1	0	2	0	126
7:45 AM	6	51	0	0	0	93	37	0	3	1	8	0	1	0	2	0	202
8:00 AM	3	41	1	0	1	81	44	1	2	0	1	0	0	0	1	0	176
8:15 AM	3	51	0	0	0	61	52	0	5	0	4	0	0	1	0	0	177
8:30 AM	1	41	0	0	0	56	43	0	3	0	2	0	0	0	0	0	146
8:45 AM	3	44	0	1	0	73	38	1	3	0	5	0	0	1	1	0	170
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	21	320	1	1	3	483	278	5	25	1	24	0	3	2	6	0	1173
APPROACH %'s :	6.12%	93.29%	0.29%	0.29%	0.39%	62.81%	36.15%	0.65%	50.00%	2.00%	48.00%	0.00%	27.27%	18.18%	54.55%	0.00%	
PEAK HR :	07:45 AM - 08:45 AM																TOTAL
PEAK HR VOL :	13	184	1	0	1	291	176	1	13	1	15	0	1	1	3	0	701
PEAK HR FACTOR :	0.542	0.902	0.250	0.000	0.250	0.782	0.846	0.250	0.650	0.250	0.469	0.000	0.250	0.250	0.375	0.000	0.868
	0.868				0.902				0.604				0.417				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	2	77	0	0	0	75	19	0	32	0	5	0	0	1	0	0	211
4:15 PM	5	82	0	1	1	99	31	0	25	0	6	0	0	0	0	0	250
4:30 PM	2	78	1	1	0	68	16	0	21	0	5	0	1	0	0	0	193
4:45 PM	4	87	1	3	0	88	16	0	27	0	1	1	0	0	1	0	229
5:00 PM	7	109	0	1	0	96	22	0	31	0	5	1	0	0	0	0	272
5:15 PM	3	107	0	0	0	101	21	0	35	0	11	0	0	0	1	0	279
5:30 PM	3	111	0	1	1	85	25	0	39	0	7	0	0	0	1	0	273
5:45 PM	2	78	0	0	1	99	20	0	26	0	8	1	0	0	0	0	235
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	28	729	2	7	3	711	170	0	236	0	48	3	1	1	3	0	1942
APPROACH %'s :	3.66%	95.17%	0.26%	0.91%	0.34%	80.43%	19.23%	0.00%	82.23%	0.00%	16.72%	1.05%	20.00%	20.00%	60.00%	0.00%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	15	405	0	2	2	381	88	0	131	0	31	2	0	0	2	0	1059
PEAK HR FACTOR :	0.536	0.912	0.000	0.500	0.500	0.943	0.880	0.000	0.840	0.000	0.705	0.500	0.000	0.000	0.500	0.000	0.949
	0.902				0.965				0.891				0.500				

Prepared by National Data & Surveying Services

Louise St & Doran St

Peak Hour Turning Movement Count

ID: 17-5366-013
City: Glendale

Day: Wednesday
Date: 05/31/2017

PEAK HOURS	COUNT PERIODS
07:45 AM - 08:45 AM	07:00 AM - 09:00 AM
NONE	NONE
05:00 PM - 06:00 PM	04:00 PM - 06:00 PM

SOUTHBOUND (Louise St)

	L	T	R	U	Total	
AM	46	241	35	0	205	AM
NOON	0	0	0	0	0	NOON
PM	36	301	60	0	422	PM

EASTBOUND (Doran St)

	L	T	R	U	
AM	407	0	260		
NOON	0	0	0		
PM	0	0	0	0	
AM	17	0	110	0	
NOON	81	0	408	1	
PM	45	0	39	0	

WESTBOUND (Doran St)

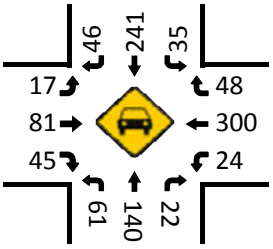
	L	T	R	U	
PM	74	0	48	0	
NOON	184	0	300	1	
AM	18	0	24	0	
PM	0	0	0	0	
NOON	494	0	138		
AM	0	0	1	0	

NORTHBOUND (Louise St)

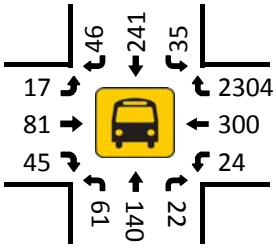
	L	T	R	U	Total	
PM	358	0	40	238	26	PM
NOON	0	0	0	0	0	NOON
AM	310	0	61	140	22	AM

CONTROL			
Signalized			
TEV	1060 AM	0 NOON	1534 PM
PHF	0.90		0.94

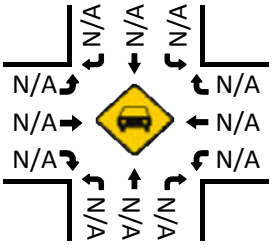
Total Vehicles (AM)



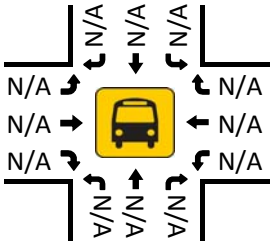
Total Vehicles (AM)



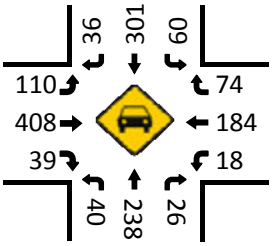
Total Vehicles (Noon)

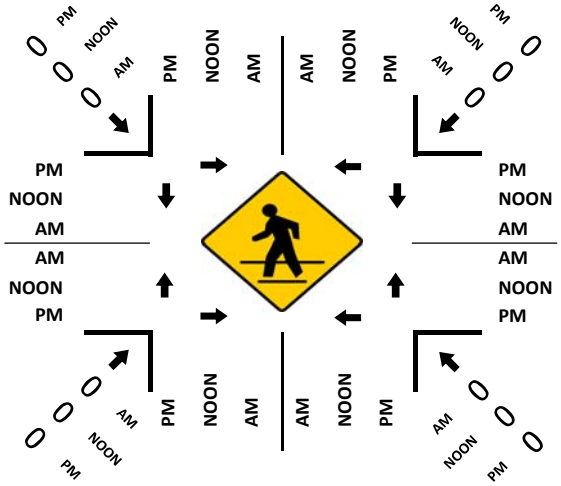


Total Vehicles (Noon)

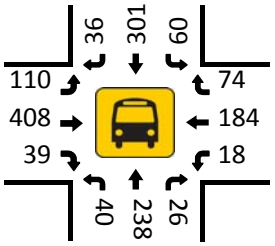


Total Vehicles (PM)





Total Vehicles (PM)



National Data & Surveying Services

Intersection Turning Movement Count

Location: Louise St & Doran St
City: Glendale
Control: Signalized

Project ID: 17-5366-013
Date: 5/31/2017

Total

NS/EW Streets:	Louise St				Louise St				Doran St				Doran St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	14	13	1	0	3	22	9	0	3	17	1	0	2	37	5	0	127
7:15 AM	5	19	4	0	3	31	7	0	3	7	3	0	3	45	8	0	138
7:30 AM	9	29	2	0	6	41	12	0	4	20	4	0	4	47	8	0	186
7:45 AM	10	41	5	0	16	77	17	0	3	21	7	0	4	81	13	0	295
8:00 AM	19	31	6	0	11	59	9	0	4	23	14	0	8	78	15	0	277
8:15 AM	16	39	5	0	4	54	10	0	4	16	14	0	7	70	14	0	253
8:30 AM	16	29	6	0	4	51	10	0	6	21	10	0	5	71	6	0	235
8:45 AM	14	33	10	0	7	57	14	0	3	24	5	0	2	81	6	0	256
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	103	234	39	0	54	392	88	0	30	149	58	0	35	510	75	0	1767
APPROACH %'s :	27.39%	62.23%	10.37%	0.00%	10.11%	73.41%	16.48%	0.00%	12.66%	62.87%	24.47%	0.00%	5.65%	82.26%	12.10%	0.00%	
PEAK HR :	07:45 AM - 08:45 AM																TOTAL
PEAK HR VOL :	61	140	22	0	35	241	46	0	17	81	45	0	24	300	48	0	1060
PEAK HR FACTOR :	0.803	0.854	0.917	0.000	0.547	0.782	0.676	0.000	0.708	0.880	0.804	0.000	0.750	0.926	0.800	0.000	0.898
	0.929				0.732				0.872				0.921				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	5	59	5	0	9	64	8	0	10	87	6	0	4	39	9	0	305
4:15 PM	8	62	8	0	10	76	9	0	19	69	9	0	1	37	8	0	316
4:30 PM	11	52	8	0	9	61	10	0	22	86	9	0	4	37	10	0	319
4:45 PM	5	69	9	0	11	67	10	0	20	72	11	0	2	45	7	0	328
5:00 PM	7	68	10	0	13	74	10	0	24	109	16	0	3	39	24	0	397
5:15 PM	10	64	5	0	15	86	11	0	29	114	6	0	3	46	17	0	406
5:30 PM	10	64	9	0	20	56	3	0	35	95	10	0	5	51	21	0	379
5:45 PM	13	42	2	0	12	85	12	0	22	90	7	0	7	48	12	0	352
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	69	480	56	0	99	569	73	0	181	722	74	0	29	342	108	0	2802
APPROACH %'s :	11.40%	79.34%	9.26%	0.00%	13.36%	76.79%	9.85%	0.00%	18.53%	73.90%	7.57%	0.00%	6.05%	71.40%	22.55%	0.00%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	40	238	26	0	60	301	36	0	110	408	39	0	18	184	74	0	1534
PEAK HR FACTOR :	0.769	0.875	0.650	0.000	0.750	0.875	0.750	0.000	0.786	0.895	0.609	0.000	0.643	0.902	0.771	0.000	0.945
	0.894				0.886				0.935				0.896				

APPENDIX C

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

LEVEL OF SERVICE FOR SIGNALIZED INTERSECTIONS

In the *Highway Capacity Manual (HCM)*, published by the Transportation Research Board, 2010, level of service for signalized intersections is defined in terms of delay, which is a measure of driver discomfort, frustration, fuel consumption, and increased travel time. The delay experienced by a motorist is made up of a number of factors that relate to control, geometrics, traffic, and incidents. Total delay is the difference between the travel time actually experienced and the reference travel time that would result during base conditions: in the absence of traffic control, in the absence of geometric delay, in the absence of incidents, and when there are no other vehicles on the road. Only the portion of total delay attributed to the control facility is quantified. This delay is called *control delay*. Control delay includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay.

Level of Service criteria for traffic signals are stated in terms of the average control delay per vehicle. Delay is a complex measure and is dependent on a number of variables, including the quality of progression, the cycle length, the green ratio, and the *v/c* ratio for the lane group in question.

Level of Service Criteria for Signalized Intersections

Level of Service	Control Delay (Sec/Veh)
A	≤ 10
B	> 10 and ≤ 20
C	> 20 and ≤ 35
D	> 35 and ≤ 55
E	> 55 and ≤ 80
F	> 80

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

LOS A describes operations with very low control delay, up to 10 seconds per vehicle. This level of service occurs when progression is extremely favorable and most vehicles arrive during the green phase. Most vehicles do not stop at all. Short cycle lengths may also contribute to low delay values.

LOS B describes operations with control delay greater than 10 and up to 20 seconds per vehicle. This level generally occurs with good progression, short cycle lengths, or both. More vehicles stop than with LOS A, causing higher levels of delay.

LOS C describes operations with control delay greater than 20 and up to 35 seconds per vehicle. These higher delays may result from fair progression, longer cycle lengths, or both. Individual cycle failures may begin to appear at this level. The number of vehicles stopping is significant at this level, though many still pass through the intersection without stopping.

LOS D describes operations with control delay greater than 35 and up to 55 seconds per vehicle. At LOS D, the influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or high *v/c* ratios. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are noticeable.

LOS E describes operations with control delay greater than 55 and up to 80 seconds per vehicle. This level is considered by many agencies to be the limit of acceptable delay. These high delay values generally indicate poor progression, long cycle lengths, and high *v/c* ratios. Individual cycle failures are frequent occurrences.

LOS F describes operations with control delay in excess of 80 seconds per vehicle. This level, considered to be unacceptable to most drivers, often occurs with oversaturation, that is, when arrival flow rates exceed the capacity of the lane groups. It may also occur at high *v/c* ratios with many individual cycle failures. Poor progression and long cycle lengths may also be major contributing factors to such delay levels.

LEVEL OF SERVICE FOR UNSIGNALIZED INTERSECTIONS

In the *Highway Capacity Manual (HCM)*, published by the Transportation Research Board, 2010, 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.

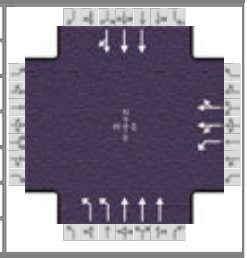
LOS D describes operations with control delay greater than 25 and up to 35 seconds per vehicle.

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.

HCS7 Signalized Intersection Results Summary

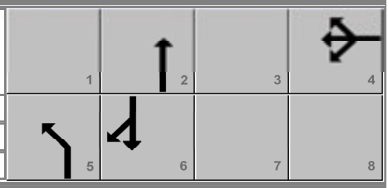
General Information				Intersection Information	
Agency	Linscott, Law & Greenspan			Duration, h	0.250
Analyst	JAS	Analysis Date	Feb 22, 2021	Area Type	Other
Jurisdiction	City of Glendale / Caltrans	Time Period	Existing - AM	PHF	0.96
Urban Street	Brand Boulevard	Analysis Year	2021	Analysis Period	1> 7:45
Intersection	SR-134 WB Off-Ramp -…	File Name	01AM - Existing.xus		
Project Description	606 N. Maryland Avenue Residential				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h				798	328	555	263	502			827	255

Signal Information			
Cycle, s	100.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	10.1	43.2	29.9	0.0	0.0	0.0
Yellow	4.1	4.1	4.1	0.0	0.0	0.0
Red	1.5	2.0	1.0	0.0	0.0	0.0



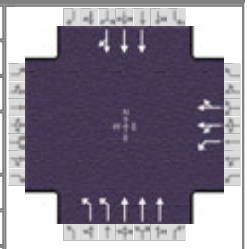
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase				4	5	2		6
Case Number				10.0	2.0	4.0		8.3
Phase Duration, s				35.0	15.7	65.0		49.3
Change Period, (*Y+R c*), s				5.1	5.6	6.1		6.1
Max Allow Headway (*MAH*), s				4.2	3.3	0.0		0.0
Queue Clearance Time (*g s*), s				31.9	9.6			
Green Extension Time (*g e*), s				0.0	0.5	0.0		0.0
Phase Call Probability				1.00	1.00			
Max Out Probability				1.00	0.00			

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement				7	4	14	5	2			6	16
Adjusted Flow Rate (*v*), veh/h				557	616	578	274	523			782	345
Adjusted Saturation Flow Rate (*s*), veh/h/ln				1810	1860	1610	1757	1725			1900	1669
Queue Service Time (*g s*), s				29.9	29.9	29.9	7.6	4.6			16.6	14.8
Cycle Queue Clearance Time (*g c*), s				29.9	29.9	29.9	7.6	4.6			16.6	14.8
Green Ratio (*g/C*)				0.30	0.30	0.30	0.69	0.59			0.43	0.43
Capacity (*c*), veh/h				541	556	481	355	3048			1642	721
Volume-to-Capacity Ratio (*X*)				1.029	1.108	1.201	0.773	0.172			0.476	0.479
Back of Queue (*Q*), ft/ln (95 th percentile)				684.7	853.1	950.4	152.2	78			272.8	255.9
Back of Queue (*Q*), veh/ln (95 th percentile)				27.4	34.1	38.0	6.1	3.1			10.9	10.2
Queue Storage Ratio (*RQ*) (95 th percentile)				0.00	0.00	0.00	0.00	0.00			0.00	0.00
Uniform Delay (*d 1*), s/veh				35.1	35.1	35.1	43.8	9.4			20.3	20.3
Incremental Delay (*d 2*), s/veh				46.4	71.2	108.9	1.4	0.1			1.0	2.3
Initial Queue Delay (*d 3*), s/veh				0.0	0.0	0.0	0.0	0.0			0.0	0.0
Control Delay (*d*), s/veh				81.5	106.2	144.0	45.2	9.5			21.3	22.6
Level of Service (LOS)				F	F	F	D	A			C	C
Approach Delay, s/veh / LOS	0.0			110.8		F	21.8		C	21.7		C
Intersection Delay, s/veh / LOS	64.2						E					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.74	C	2.47	B	1.95	B	1.68	B
Bicycle LOS Score / LOS			1.93	B	0.93	A	1.11	A

HCS7 Signalized Intersection Results Summary

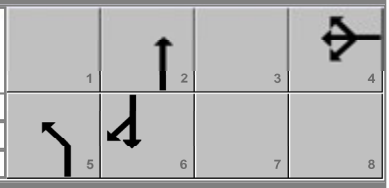
General Information				Intersection Information	
Agency	Linscott, Law & Greenspan			Duration, h	0.250
Analyst	JAS	Analysis Date	Mar 9, 2021	Area Type	Other
Jurisdiction	City of Glendale / Caltrans	Time Period	Opening Year - AM	PHF	0.96
Urban Street	Brand Boulevard	Analysis Year	2024	Analysis Period	1> 7:45
Intersection	SR-134 WB Off-Ramp -…	File Name	01AM - Opening Year.xus		
Project Description	606 N. Maryland Avenue Residential				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h				870	358	585	273	600			915	272

Signal Information			
Cycle, s	100.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	10.4	42.9	29.9	0.0	0.0	0.0
Yellow	4.1	4.1	4.1	0.0	0.0	0.0
Red	1.5	2.0	1.0	0.0	0.0	0.0



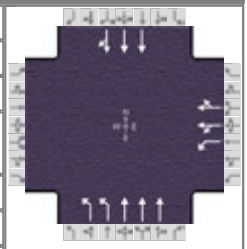
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase				4	5	2		6
Case Number				10.0	2.0	4.0		8.3
Phase Duration, s				35.0	16.0	65.0		49.0
Change Period, ($Y+R_c$), s				5.1	5.6	6.1		6.1
Max Allow Headway (*MAH*), s				4.2	3.3	0.0		0.0
Queue Clearance Time (g_s), s				31.9	9.9			
Green Extension Time (g_e), s				0.0	0.5	0.0		0.0
Phase Call Probability				1.00	1.00			
Max Out Probability				1.00	0.00			

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement				7	4	14	5	2			6	16
Adjusted Flow Rate (*v*), veh/h				607	672	609	284	625			858	379
Adjusted Saturation Flow Rate (*s*), veh/h/ln				1810	1860	1610	1757	1725			1900	1675
Queue Service Time (g_s), s				29.9	29.9	29.9	7.9	5.6			18.7	16.7
Cycle Queue Clearance Time (g_c), s				29.9	29.9	29.9	7.9	5.6			18.7	16.7
Green Ratio (*g/C*)				0.30	0.30	0.30	0.10	0.59			0.43	0.43
Capacity (*c*), veh/h				541	556	481	365	3048			1630	719
Volume-to-Capacity Ratio (*X*)				1.122	1.208	1.266	0.779	0.205			0.526	0.527
Back of Queue (*Q*), ft/ln (95 th percentile)				866	1089.1	1092.8	157.9	95.4			302.3	283.6
Back of Queue (*Q*), veh/ln (95 th percentile)				34.6	43.6	43.7	6.3	3.8			12.1	11.3
Queue Storage Ratio (*RQ*) (95 th percentile)				0.00	0.00	0.00	0.00	0.00			0.00	0.00
Uniform Delay (d_1), s/veh				35.1	35.1	35.1	43.7	9.6			21.0	21.1
Incremental Delay (d_2), s/veh				76.9	109.8	135.3	1.4	0.2			1.2	2.8
Initial Queue Delay (d_3), s/veh				0.0	0.0	0.0	0.0	0.0			0.0	0.0
Control Delay (*d*), s/veh				111.9	144.9	170.4	45.1	9.8			22.3	23.8
Level of Service (LOS)				F	F	F	D	A			C	C
Approach Delay, s/veh / LOS	0.0			142.5		F	20.8		C	22.7		C
Intersection Delay, s/veh / LOS	78.4						E					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.74	C	2.47	B	1.95	B	1.68	B
Bicycle LOS Score / LOS			2.05	B	0.99	A	1.17	A

HCS7 Signalized Intersection Results Summary

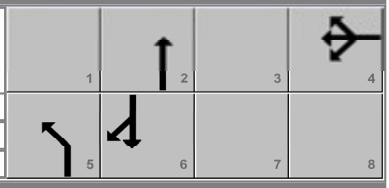
General Information				Intersection Information	
Agency	Linscott, Law & Greenspan			Duration, h	0.250
Analyst	JAS	Analysis Date	Mar 9, 2021	Area Type	Other
Jurisdiction	City of Glendale / Caltrans	Time Period	Opening Year Plus Project - AM	PHF	0.96
Urban Street	Brand Boulevard	Analysis Year	2024	Analysis Period	1> 7:45
Intersection	SR-134 WB Off-Ramp -…	File Name	01AM - Opening Year Plus Project.xus		
Project Description	606 N. Maryland Avenue Residential				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h				873	358	585	283	605			916	272

Signal Information			
Cycle, s	100.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	10.7	42.6	29.9	0.0	0.0	0.0
Yellow	4.1	4.1	4.1	0.0	0.0	0.0
Red	1.5	2.0	1.0	0.0	0.0	0.0



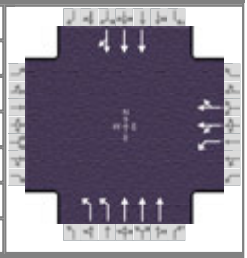
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase				4	5	2		6
Case Number				10.0	2.0	4.0		8.3
Phase Duration, s				35.0	16.3	65.0		48.7
Change Period, ($Y+R_c$), s				5.1	5.6	6.1		6.1
Max Allow Headway (*MAH*), s				4.2	3.3	0.0		0.0
Queue Clearance Time (g_s), s				31.9	10.2			
Green Extension Time (g_e), s				0.0	0.5	0.0		0.0
Phase Call Probability				1.00	1.00			
Max Out Probability				1.00	0.01			

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement				7	4	14	5	2			6	16
Adjusted Flow Rate (*v*), veh/h				609	673	609	295	630			858	379
Adjusted Saturation Flow Rate (*s*), veh/h/ln				1810	1860	1610	1757	1725			1900	1675
Queue Service Time (g_s), s				29.9	29.9	29.9	8.2	5.7			18.7	16.8
Cycle Queue Clearance Time (g_c), s				29.9	29.9	29.9	8.2	5.7			18.7	16.8
Green Ratio (*g/C*)				0.30	0.30	0.30	0.11	0.59			0.43	0.43
Capacity (*c*), veh/h				541	556	481	376	3048			1619	714
Volume-to-Capacity Ratio (*X*)				1.126	1.210	1.266	0.784	0.207			0.530	0.532
Back of Queue (*Q*), ft/ln (95 th percentile)				874.4	1093.8	1092.8	163.7	96.2			304.2	285.5
Back of Queue (*Q*), veh/ln (95 th percentile)				35.0	43.8	43.7	6.5	3.8			12.2	11.4
Queue Storage Ratio (*RQ*) (95 th percentile)				0.00	0.00	0.00	0.00	0.00			0.00	0.00
Uniform Delay (d_1), s/veh				35.1	35.1	35.1	43.5	9.6			21.3	21.3
Incremental Delay (d_2), s/veh				78.3	110.6	135.3	1.4	0.2			1.2	2.8
Initial Queue Delay (d_3), s/veh				0.0	0.0	0.0	0.0	0.0			0.0	0.0
Control Delay (*d*), s/veh				113.3	145.7	170.4	44.9	9.8			22.5	24.1
Level of Service (LOS)				F	F	F	D	A			C	C
Approach Delay, s/veh / LOS	0.0			143.2	F		21.0	C		23.0	C	
Intersection Delay, s/veh / LOS	78.6						E					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.74	C	2.47	B	1.95	B	1.68	B
Bicycle LOS Score / LOS			2.05	B	1.00	A	1.17	A

HCS7 Signalized Intersection Results Summary

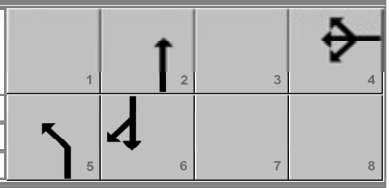
General Information				Intersection Information	
Agency	Linscott, Law & Greenspan			Duration, h	0.250
Analyst	JAS	Analysis Date	Mar 9, 2021	Area Type	Other
Jurisdiction	City of Glendale / Caltrans	Time Period	Cumulative - AM	PHF	0.96
Urban Street	Brand Boulevard	Analysis Year	2029	Analysis Period	1> 7:45
Intersection	SR-134 WB Off-Ramp -…	File Name	01AM - Cumulative.xus		
Project Description	606 N. Maryland Avenue Residential				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h				912	375	614	287	627			959	285

Signal Information			
Cycle, s	100.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	10.8	42.5	29.9	0.0	0.0	0.0
Yellow	4.1	4.1	4.1	0.0	0.0	0.0
Red	1.5	2.0	1.0	0.0	0.0	0.0



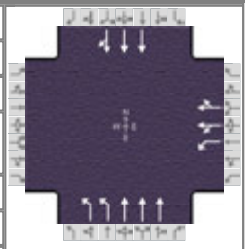
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase				4	5	2		6
Case Number				10.0	2.0	4.0		8.3
Phase Duration, s				35.0	16.4	65.0		48.6
Change Period, (*Y+R c*), s				5.1	5.6	6.1		6.1
Max Allow Headway (*MAH*), s				4.2	3.3	0.0		0.0
Queue Clearance Time (*g s*), s				31.9	10.3			
Green Extension Time (*g e*), s				0.0	0.5	0.0		0.0
Phase Call Probability				1.00	1.00			
Max Out Probability				1.00	0.01			

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement				7	4	14	5	2			6	16
Adjusted Flow Rate (*v*), veh/h				637	704	640	299	653			899	397
Adjusted Saturation Flow Rate (*s*), veh/h/ln				1810	1860	1610	1757	1725			1900	1674
Queue Service Time (*g s*), s				29.9	29.9	29.9	8.3	5.9			19.8	17.9
Cycle Queue Clearance Time (*g c*), s				29.9	29.9	29.9	8.3	5.9			19.8	17.9
Green Ratio (*g/C*)				0.30	0.30	0.30	0.11	0.59			0.42	0.42
Capacity (*c*), veh/h				541	556	481	380	3048			1614	711
Volume-to-Capacity Ratio (*X*)				1.176	1.266	1.328	0.786	0.214			0.557	0.558
Back of Queue (*Q*), ft/ln (95 th percentile)				988.3	1236	1236.1	165.8	100.3			320.9	301.5
Back of Queue (*Q*), veh/ln (95 th percentile)				39.5	49.4	49.4	6.6	4.0			12.8	12.1
Queue Storage Ratio (*RQ*) (95 th percentile)				0.00	0.00	0.00	0.00	0.00			0.00	0.00
Uniform Delay (*d 1*), s/veh				35.1	35.1	35.1	43.5	9.7			21.7	21.7
Incremental Delay (*d 2*), s/veh				97.5	133.6	161.6	1.4	0.2			1.4	3.1
Initial Queue Delay (*d 3*), s/veh				0.0	0.0	0.0	0.0	0.0			0.0	0.0
Control Delay (*d*), s/veh				132.5	168.7	196.7	44.8	9.8			23.1	24.8
Level of Service (LOS)				F	F	F	D	A			C	C
Approach Delay, s/veh / LOS	0.0			166.1		F	20.8		C	23.6		C
Intersection Delay, s/veh / LOS	89.7						F					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.74	C	2.47	B	1.95	B	1.68	B
Bicycle LOS Score / LOS			2.12	B	1.01	A	1.20	A

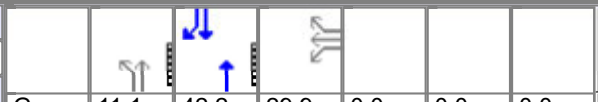
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Linscott, Law & Greenspan			Duration, h	0.250
Analyst	JAS	Analysis Date	Mar 9, 2021	Area Type	Other
Jurisdiction	City of Glendale / Caltrans	Time Period	Cumulative Plus Project - AM	PHF	0.96
Urban Street	Brand Boulevard	Analysis Year	2029	Analysis Period	1> 7:45
Intersection	SR-134 WB Off-Ramp -…	File Name	01AM - Cumulative Plus Project.xus		
Project Description	606 N. Maryland Avenue Residential				

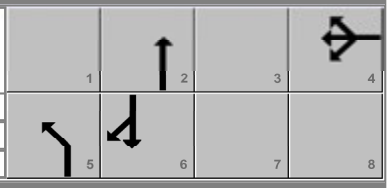


Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h				915	375	614	297	632			960	285

Signal Information			
Cycle, s	100.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



Green	11.1	42.2	29.9	0.0	0.0	0.0
Yellow	4.1	4.1	4.1	0.0	0.0	0.0
Red	1.5	2.0	1.0	0.0	0.0	0.0



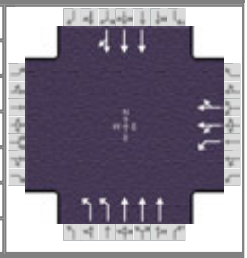
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase				4	5	2		6
Case Number				10.0	2.0	4.0		8.3
Phase Duration, s				35.0	16.7	65.0		48.3
Change Period, ($Y+R_c$), s				5.1	5.6	6.1		6.1
Max Allow Headway (*MAH*), s				4.2	3.3	0.0		0.0
Queue Clearance Time (g_s), s				31.9	10.6			
Green Extension Time (g_e), s				0.0	0.5	0.0		0.0
Phase Call Probability				1.00	1.00			
Max Out Probability				1.00	0.01			

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement				7	4	14	5	2			6	16
Adjusted Flow Rate (*v*), veh/h				639	705	640	309	658			900	397
Adjusted Saturation Flow Rate (*s*), veh/h/ln				1810	1860	1610	1757	1725			1900	1675
Queue Service Time (g_s), s				29.9	29.9	29.9	8.6	6.0			19.9	18.0
Cycle Queue Clearance Time (g_c), s				29.9	29.9	29.9	8.6	6.0			19.9	18.0
Green Ratio (*g/C*)				0.30	0.30	0.30	0.11	0.59			0.42	0.42
Capacity (*c*), veh/h				541	556	481	391	3048			1603	706
Volume-to-Capacity Ratio (*X*)				1.180	1.268	1.328	0.792	0.216			0.561	0.562
Back of Queue (*Q*), ft/ln (95 th percentile)				997.4	1240.9	1236.1	171.4	101.4			322.9	303.5
Back of Queue (*Q*), veh/ln (95 th percentile)				39.9	49.6	49.4	6.9	4.1			12.9	12.1
Queue Storage Ratio (*RQ*) (95 th percentile)				0.00	0.00	0.00	0.00	0.00			0.00	0.00
Uniform Delay (d_1), s/veh				35.1	35.1	35.1	43.3	9.7			21.9	21.9
Incremental Delay (d_2), s/veh				99.0	134.4	161.6	1.4	0.2			1.4	3.2
Initial Queue Delay (d_3), s/veh				0.0	0.0	0.0	0.0	0.0			0.0	0.0
Control Delay (*d*), s/veh				134.0	169.5	196.7	44.7	9.8			23.3	25.1
Level of Service (LOS)				F	F	F	D	A			C	C
Approach Delay, s/veh / LOS	0.0			166.8		F	21.0		C	23.9		C
Intersection Delay, s/veh / LOS	90.0						F					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.74	C	2.47	B	1.95	B	1.69	B
Bicycle LOS Score / LOS			2.12	B	1.02	A	1.20	A

HCS7 Signalized Intersection Results Summary

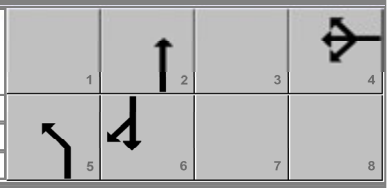
General Information				Intersection Information	
Agency	Linscott, Law & Greenspan			Duration, h	0.250
Analyst	JAS	Analysis Date	Feb 22, 2021	Area Type	Other
Jurisdiction	City of Glendale / Caltrans	Time Period	Existing - PM	PHF	0.98
Urban Street	Brand Boulevard	Analysis Year	2021	Analysis Period	1> 16:30
Intersection	SR-134 WB Off-Ramp -…	File Name	01PM - Existing.xus		
Project Description	606 N. Maryland Avenue Residential				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h				531	334	508	451	526			848	214

Signal Information			
Cycle, s	100.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	19.4	33.9	29.9	0.0	0.0	0.0
Yellow	4.1	4.1	4.1	0.0	0.0	0.0
Red	1.5	2.0	1.0	0.0	0.0	0.0



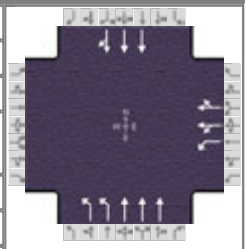
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase				4	5	2		6
Case Number				10.0	2.0	4.0		8.3
Phase Duration, s				35.0	25.0	65.0		40.0
Change Period, (*Y+R c*), s				5.1	5.6	6.1		6.1
Max Allow Headway (*MAH*), s				4.2	3.3	0.0		0.0
Queue Clearance Time (*g s*), s				31.9	14.1			
Green Extension Time (*g e*), s				0.0	0.7	0.0		0.0
Phase Call Probability				1.00	1.00			
Max Out Probability				1.00	0.26			

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement				7	4	14	5	2			6	16
Adjusted Flow Rate (*v*), veh/h				363	520	518	460	537			747	337
Adjusted Saturation Flow Rate (*s*), veh/h/ln				1810	1869	1610	1757	1725			1900	1701
Queue Service Time (*g s*), s				17.6	27.0	29.9	12.1	4.8			15.8	16.3
Cycle Queue Clearance Time (*g c*), s				17.6	27.0	29.9	12.1	4.8			15.8	16.3
Green Ratio (*g/C*)				0.30	0.30	0.30	0.78	0.59			0.34	0.34
Capacity (*c*), veh/h				541	559	481	682	3048			1288	577
Volume-to-Capacity Ratio (*X*)				0.671	0.930	1.077	0.675	0.176			0.580	0.584
Back of Queue (*Q*), ft/ln (95 th percentile)				313.6	541.4	706.1	231.4	80.3			304.5	292.6
Back of Queue (*Q*), veh/ln (95 th percentile)				12.5	21.7	28.2	9.3	3.2			12.2	11.7
Queue Storage Ratio (*RQ*) (95 th percentile)				0.00	0.00	0.00	0.00	0.00			0.00	0.00
Uniform Delay (*d 1*), s/veh				30.7	34.0	35.1	37.4	9.4			27.2	27.2
Incremental Delay (*d 2*), s/veh				3.2	22.3	63.2	2.2	0.1			1.9	4.3
Initial Queue Delay (*d 3*), s/veh				0.0	0.0	0.0	0.0	0.0			0.0	0.0
Control Delay (*d*), s/veh				34.0	56.3	98.2	39.6	9.5			29.1	31.5
Level of Service (LOS)				C	E	F	D	A			C	C
Approach Delay, s/veh / LOS	0.0			66.0		E	23.4		C	29.9		C
Intersection Delay, s/veh / LOS	42.6						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.74	C	2.47	B	1.95	B	1.70	B
Bicycle LOS Score / LOS			1.64	B	1.04	A	1.08	A

HCS7 Signalized Intersection Results Summary

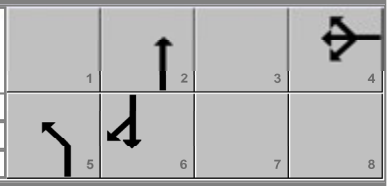
General Information				Intersection Information	
Agency	Linscott, Law & Greenspan			Duration, h	0.250
Analyst	JAS	Analysis Date	Mar 9, 2021	Area Type	Other
Jurisdiction	City of Glendale / Caltrans	Time Period	Opening Year - PM	PHF	0.98
Urban Street	Brand Boulevard	Analysis Year	2024	Analysis Period	1> 16:30
Intersection	SR-134 WB Off-Ramp -…	File Name	01PM - Opening Year.xus		
Project Description	606 N. Maryland Avenue Residential				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h				626	388	534	467	622			969	232

Signal Information			
Cycle, s	100.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	19.4	33.9	29.9	0.0	0.0	0.0
Yellow	4.1	4.1	4.1	0.0	0.0	0.0
Red	1.5	2.0	1.0	0.0	0.0	0.0



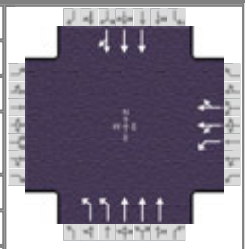
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase				4	5	2		6
Case Number				10.0	2.0	4.0		8.3
Phase Duration, s				35.0	25.0	65.0		40.0
Change Period, ($Y+R_c$), s				5.1	5.6	6.1		6.1
Max Allow Headway (*MAH*), s				4.2	3.3	0.0		0.0
Queue Clearance Time (g_s), s				31.9	14.6			
Green Extension Time (g_e), s				0.0	0.6	0.0		0.0
Phase Call Probability				1.00	1.00			
Max Out Probability				1.00	0.37			

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement				7	4	14	5	2			6	16
Adjusted Flow Rate (*v*), veh/h				428	607	545	477	635			845	381
Adjusted Saturation Flow Rate (*s*), veh/h/ln				1810	1869	1610	1757	1725			1900	1709
Queue Service Time (g_s), s				21.7	29.9	29.9	12.6	5.7			18.5	19.0
Cycle Queue Clearance Time (g_c), s				21.7	29.9	29.9	12.6	5.7			18.5	19.0
Green Ratio (*g/C*)				0.30	0.30	0.30	0.19	0.59			0.34	0.34
Capacity (*c*), veh/h				541	559	481	682	3048			1288	579
Volume-to-Capacity Ratio (*X*)				0.791	1.086	1.132	0.699	0.208			0.656	0.657
Back of Queue (*Q*), ft/ln (95 th percentile)				390.7	809.8	808.7	240.2	97.2			347.9	336.1
Back of Queue (*Q*), veh/ln (95 th percentile)				15.6	32.4	32.3	9.6	3.9			13.9	13.4
Queue Storage Ratio (*RQ*) (95 th percentile)				0.00	0.00	0.00	0.00	0.00			0.00	0.00
Uniform Delay (d_1), s/veh				32.2	35.1	35.1	37.6	9.6			28.1	28.1
Incremental Delay (d_2), s/veh				7.8	63.5	82.4	2.7	0.2			2.6	5.7
Initial Queue Delay (d_3), s/veh				0.0	0.0	0.0	0.0	0.0			0.0	0.0
Control Delay (*d*), s/veh				40.0	98.5	117.5	40.3	9.8			30.7	33.9
Level of Service (LOS)				D	F	F	D	A			C	C
Approach Delay, s/veh / LOS	0.0			89.2		F	22.9		C	31.7		C
Intersection Delay, s/veh / LOS	52.4						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.74	C	2.47	B	1.95	B	1.70	B
Bicycle LOS Score / LOS			1.79	B	1.10	A	1.16	A

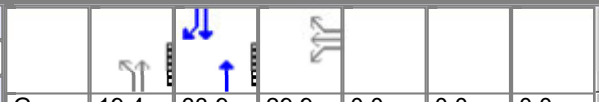
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Linscott, Law & Greenspan			Duration, h	0.250
Analyst	JAS	Analysis Date	Mar 9, 2021	Area Type	Other
Jurisdiction	City of Glendale / Caltrans	Time Period	Opening Year Plus Project - PM	PHF	0.98
Urban Street	Brand Boulevard	Analysis Year	2024	Analysis Period	1> 16:30
Intersection	SR-134 WB Off-Ramp -…	File Name	01PM - Opening Year Plus Project.xus		
Project Description	606 N. Maryland Avenue Residential				

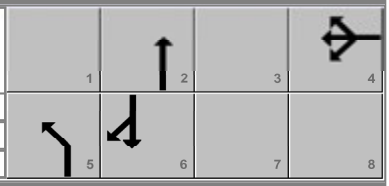


Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h				636	388	534	472	621			975	232

Signal Information			
Cycle, s	100.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



Green	19.4	33.9	29.9	0.0	0.0	0.0
Yellow	4.1	4.1	4.1	0.0	0.0	0.0
Red	1.5	2.0	1.0	0.0	0.0	0.0



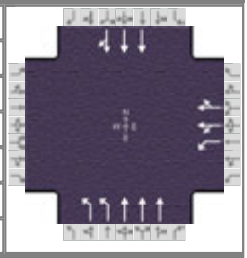
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase				4	5	2		6
Case Number				10.0	2.0	4.0		8.3
Phase Duration, s				35.0	25.0	65.0		40.0
Change Period, ($Y+R_c$), s				5.1	5.6	6.1		6.1
Max Allow Headway (*MAH*), s				4.2	3.3	0.0		0.0
Queue Clearance Time (g_s), s				31.9	14.8			
Green Extension Time (g_e), s				0.0	0.6	0.0		0.0
Phase Call Probability				1.00	1.00			
Max Out Probability				1.00	0.42			

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement				7	4	14	5	2			6	16
Adjusted Flow Rate (*v*), veh/h				435	610	545	482	634			849	383
Adjusted Saturation Flow Rate (*s*), veh/h/ln				1810	1868	1610	1757	1725			1900	1710
Queue Service Time (g_s), s				22.2	29.9	29.9	12.8	5.7			18.6	19.1
Cycle Queue Clearance Time (g_c), s				22.2	29.9	29.9	12.8	5.7			18.6	19.1
Green Ratio (*g/C*)				0.30	0.30	0.30	0.19	0.59			0.34	0.34
Capacity (*c*), veh/h				541	559	481	682	3048			1288	580
Volume-to-Capacity Ratio (*X*)				0.804	1.092	1.132	0.706	0.208			0.659	0.661
Back of Queue (*Q*), ft/ln (95 th percentile)				400.5	822.7	808.7	242.9	97			349.8	338.1
Back of Queue (*Q*), veh/ln (95 th percentile)				16.0	32.9	32.3	9.7	3.9			14.0	13.5
Queue Storage Ratio (*RQ*) (95 th percentile)				0.00	0.00	0.00	0.00	0.00			0.00	0.00
Uniform Delay (d_1), s/veh				32.3	35.1	35.1	37.6	9.6			28.1	28.1
Incremental Delay (d_2), s/veh				8.6	65.6	82.4	2.9	0.2			2.7	5.8
Initial Queue Delay (d_3), s/veh				0.0	0.0	0.0	0.0	0.0			0.0	0.0
Control Delay (*d*), s/veh				40.9	100.7	117.5	40.5	9.8			30.8	34.0
Level of Service (LOS)				D	F	F	D	A			C	C
Approach Delay, s/veh / LOS	0.0			90.1	F		23.0	C		31.8	C	
Intersection Delay, s/veh / LOS	52.8						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.74	C	2.47	B	1.95	B	1.70	B
Bicycle LOS Score / LOS			1.80	B	1.10	A	1.16	A

HCS7 Signalized Intersection Results Summary

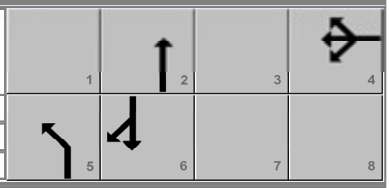
General Information				Intersection Information	
Agency	Linscott, Law & Greenspan			Duration, h	0.250
Analyst	JAS	Analysis Date	Mar 9, 2021	Area Type	Other
Jurisdiction	City of Glendale / Caltrans	Time Period	Cumulative - PM	PHF	0.98
Urban Street	Brand Boulevard	Analysis Year	2029	Analysis Period	1> 16:30
Intersection	SR-134 WB Off-Ramp -…	File Name	01PM - Cumulative.xus		
Project Description	606 N. Maryland Avenue Residential				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h				654	406	561	490	650			1013	244

Signal Information			
Cycle, s	100.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	19.4	33.9	29.9	0.0	0.0	0.0	
Yellow	4.1	4.1	4.1	0.0	0.0	0.0	
Red	1.5	2.0	1.0	0.0	0.0	0.0	



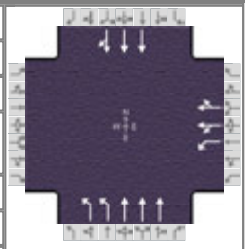
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase				4	5	2		6
Case Number				10.0	2.0	4.0		8.3
Phase Duration, s				35.0	25.0	65.0		40.0
Change Period, (*Y+R c*), s				5.1	5.6	6.1		6.1
Max Allow Headway (*MAH*), s				4.2	3.3	0.0		0.0
Queue Clearance Time (*g s*), s				31.9	15.4			
Green Extension Time (*g e*), s				0.0	0.6	0.0		0.0
Phase Call Probability				1.00	1.00			
Max Out Probability				1.00	0.61			

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement				7	4	14	5	2			6	16
Adjusted Flow Rate (*v*), veh/h				447	635	572	500	663			885	398
Adjusted Saturation Flow Rate (*s*), veh/h/ln				1810	1869	1610	1757	1725			1900	1708
Queue Service Time (*g s*), s				23.0	29.9	29.9	13.4	6.0			19.6	20.1
Cycle Queue Clearance Time (*g c*), s				23.0	29.9	29.9	13.4	6.0			19.6	20.1
Green Ratio (*g/C*)				0.30	0.30	0.30	0.19	0.59			0.34	0.34
Capacity (*c*), veh/h				541	559	481	682	3048			1288	579
Volume-to-Capacity Ratio (*X*)				0.826	1.136	1.189	0.733	0.218			0.687	0.688
Back of Queue (*Q*), ft/ln (95 th percentile)				419	918.7	925.4	253.4	102.1			366.7	354.8
Back of Queue (*Q*), veh/ln (95 th percentile)				16.8	36.7	37.0	10.1	4.1			14.7	14.2
Queue Storage Ratio (*RQ*) (95 th percentile)				0.00	0.00	0.00	0.00	0.00			0.00	0.00
Uniform Delay (*d 1*), s/veh				32.6	35.1	35.1	37.9	9.7			28.5	28.5
Incremental Delay (*d 2*), s/veh				10.2	81.3	104.2	3.6	0.2			3.0	6.5
Initial Queue Delay (*d 3*), s/veh				0.0	0.0	0.0	0.0	0.0			0.0	0.0
Control Delay (*d*), s/veh				42.8	116.4	139.3	41.5	9.9			31.5	35.0
Level of Service (LOS)				D	F	F	D	A			C	D
Approach Delay, s/veh / LOS	0.0			104.4		F	23.4		C	32.6		C
Intersection Delay, s/veh / LOS	59.0						E					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.74	C	2.47	B	1.95	B	1.70	B
Bicycle LOS Score / LOS			1.85	B	1.13	A	1.19	A

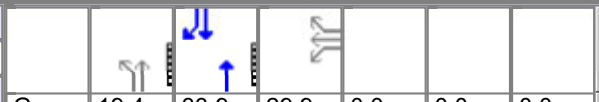
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Linscott, Law & Greenspan			Duration, h	0.250
Analyst	JAS	Analysis Date	Mar 9, 2021	Area Type	Other
Jurisdiction	City of Glendale / Caltrans	Time Period	Cumulative Plus Project - PM	PHF	0.98
Urban Street	Brand Boulevard	Analysis Year	2029	Analysis Period	1> 16:30
Intersection	SR-134 WB Off-Ramp -…	File Name	01PM - Cumulative Plus Project.xus		
Project Description	606 N. Maryland Avenue Residential				

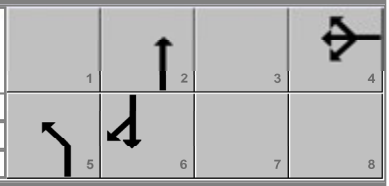


Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h				664	406	561	495	649			1019	244

Signal Information			
Cycle, s	100.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



Green	19.4	33.9	29.9	0.0	0.0	0.0
Yellow	4.1	4.1	4.1	0.0	0.0	0.0
Red	1.5	2.0	1.0	0.0	0.0	0.0



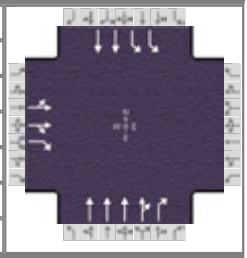
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase				4	5	2		6
Case Number				10.0	2.0	4.0		8.3
Phase Duration, s				35.0	25.0	65.0		40.0
Change Period, ($Y+R_c$), s				5.1	5.6	6.1		6.1
Max Allow Headway (*MAH*), s				4.2	3.3	0.0		0.0
Queue Clearance Time (g_s), s				31.9	15.5			
Green Extension Time (g_e), s				0.0	0.6	0.0		0.0
Phase Call Probability				1.00	1.00			
Max Out Probability				1.00	0.68			

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement				7	4	14	5	2			6	16
Adjusted Flow Rate (*v*), veh/h				454	638	572	505	662			889	400
Adjusted Saturation Flow Rate (*s*), veh/h/ln				1810	1868	1610	1757	1725			1900	1709
Queue Service Time (g_s), s				23.5	29.9	29.9	13.5	6.0			19.7	20.2
Cycle Queue Clearance Time (g_c), s				23.5	29.9	29.9	13.5	6.0			19.7	20.2
Green Ratio (*g/C*)				0.30	0.30	0.30	0.19	0.59			0.34	0.34
Capacity (*c*), veh/h				541	559	481	682	3048			1288	579
Volume-to-Capacity Ratio (*X*)				0.839	1.142	1.189	0.741	0.217			0.690	0.691
Back of Queue (*Q*), ft/ln (95 th percentile)				430	932.8	925.4	256.6	102			368.7	356.9
Back of Queue (*Q*), veh/ln (95 th percentile)				17.2	37.3	37.0	10.3	4.1			14.7	14.3
Queue Storage Ratio (*RQ*) (95 th percentile)				0.00	0.00	0.00	0.00	0.00			0.00	0.00
Uniform Delay (d_1), s/veh				32.8	35.1	35.1	37.9	9.7			28.5	28.5
Incremental Delay (d_2), s/veh				11.2	83.6	104.2	3.8	0.2			3.0	6.6
Initial Queue Delay (d_3), s/veh				0.0	0.0	0.0	0.0	0.0			0.0	0.0
Control Delay (*d*), s/veh				44.0	118.7	139.3	41.8	9.8			31.6	35.2
Level of Service (LOS)				D	F	F	D	A			C	D
Approach Delay, s/veh / LOS	0.0			105.4	F		23.7	C		32.7	C	
Intersection Delay, s/veh / LOS	59.5						E					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.74	C	2.47	B	1.95	B	1.70	B
Bicycle LOS Score / LOS			1.86	B	1.13	A	1.20	A

HCS7 Signalized Intersection Results Summary

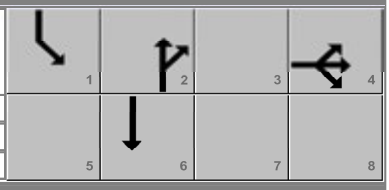
General Information				Intersection Information	
Agency	Linscott, Law & Greenspan			Duration, h	0.250
Analyst	JAS	Analysis Date	2/22/2021	Area Type	Other
Jurisdiction	City of Glendale / Caltrans	Time Period	Existing - AM	PHF	0.96
Urban Street	Brand Boulevard	Analysis Year	2021	Analysis Period	1> 7:30
Intersection	Brand/Sanchez - SR-13…	File Name	02AM - Existing.xus		
Project Description	606 N. Maryland Avenue Residential				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	265	333	433					470	285	445	1188	

Signal Information			
Cycle, s	100.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	15.4	42.9	24.9	0.0	0.0	0.0
Yellow	4.1	4.1	4.1	0.0	0.0	0.0
Red	1.5	2.0	1.0	0.0	0.0	0.0



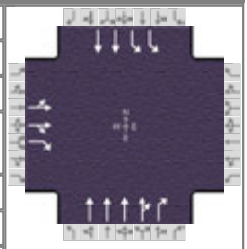
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4				2	1	6
Case Number		11.0				7.3	2.0	4.0
Phase Duration, s		30.0				49.0	21.0	70.0
Change Period, (*Y+R c*), s		5.1				6.1	5.6	6.1
Max Allow Headway (*MAH*), s		4.8				0.0	3.3	0.0
Queue Clearance Time (*g s*), s		26.9					14.8	
Green Extension Time (*g e*), s		0.0				0.0	0.6	0.0
Phase Call Probability		1.00					1.00	
Max Out Probability		1.00					0.42	

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14					2	12	1	6	
Adjusted Flow Rate (*v*), veh/h	320	452	302					588	199	464	1238	
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1821	1805	1610					1852	1610	1757	1809	
Queue Service Time (*g s*), s	16.0	24.9	17.4					4.9	8.1	12.8	18.8	
Cycle Queue Clearance Time (*g c*), s	16.0	24.9	17.4					4.9	8.1	12.8	18.8	
Green Ratio (*g/C*)	0.25	0.25	0.25					0.43	0.43	0.15	0.64	
Capacity (*c*), veh/h	454	449	401					3174	690	543	2312	
Volume-to-Capacity Ratio (*X*)	0.705	1.006	0.754					0.185	0.288	0.854	0.535	
Back of Queue (*Q*), ft/ln (95 th percentile)	306.5	577.9	305.7					96.2	144.1	253.7	291	
Back of Queue (*Q*), veh/ln (95 th percentile)	12.3	23.1	12.2					3.8	5.8	10.1	11.6	
Queue Storage Ratio (*RQ*) (95 th percentile)	0.00	0.00	0.00					0.00	0.00	0.00	0.00	
Uniform Delay (*d 1*), s/veh	34.2	37.6	34.7					17.7	18.6	41.2	9.9	
Incremental Delay (*d 2*), s/veh	5.1	44.0	8.1					0.1	1.1	7.2	0.9	
Initial Queue Delay (*d 3*), s/veh	0.0	0.0	0.0					0.0	0.0	0.0	0.0	
Control Delay (*d*), s/veh	39.3	81.6	42.9					17.9	19.7	48.4	10.8	
Level of Service (LOS)	D	F	D					B	B	D	B	
Approach Delay, s/veh / LOS	58.1	E		0.0			18.3	B		21.0	C	
Intersection Delay, s/veh / LOS	31.6						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.61	C	2.74	C	1.68	B	1.95	B
Bicycle LOS Score / LOS	1.37	A			0.81	A	1.89	B

HCS7 Signalized Intersection Results Summary

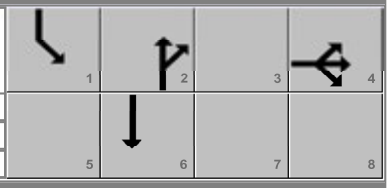
General Information				Intersection Information	
Agency	Linscott, Law & Greenspan			Duration, h	0.250
Analyst	JAS	Analysis Date	Mar 9, 2021	Area Type	Other
Jurisdiction	City of Glendale / Caltrans	Time Period	Opening Year - AM	PHF	0.96
Urban Street	Brand Boulevard	Analysis Year	2024	Analysis Period	1> 7:30
Intersection	Brand/Sanchez - SR-13…	File Name	02AM - Opening Year.xus		
Project Description	606 N. Maryland Avenue Residential				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	286	383	448					556	354	467	1326	

Signal Information			
Cycle, s	100.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	16.1	42.2	24.9	0.0	0.0	0.0
Yellow	4.1	4.1	4.1	0.0	0.0	0.0
Red	1.5	2.0	1.0	0.0	0.0	0.0



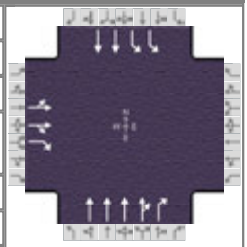
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4				2	1	6
Case Number		11.0				7.3	2.0	4.0
Phase Duration, s		30.0				48.3	21.7	70.0
Change Period, ($Y+R_c$), s		5.1				6.1	5.6	6.1
Max Allow Headway (*MAH*), s		4.8				0.0	3.3	0.0
Queue Clearance Time (g_s), s		26.9					15.5	
Green Extension Time (g_e), s		0.0				0.0	0.6	0.0
Phase Call Probability		1.00					1.00	
Max Out Probability		1.00					0.65	

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14					2	12	1	6	
Adjusted Flow Rate (*v*), veh/h	358	493	313					701	247	486	1381	
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1824	1809	1610					1850	1610	1757	1809	
Queue Service Time (g_s), s	18.3	24.9	18.1					6.0	10.5	13.5	22.3	
Cycle Queue Clearance Time (g_c), s	18.3	24.9	18.1					6.0	10.5	13.5	22.3	
Green Ratio (*g/C*)	0.25	0.25	0.25					0.42	0.42	0.16	0.64	
Capacity (*c*), veh/h	454	451	401					3125	680	564	2312	
Volume-to-Capacity Ratio (*X*)	0.788	1.094	0.780					0.224	0.363	0.862	0.598	
Back of Queue (*Q*), ft/ln (95 th percentile)	356.9	711	321					118.1	188.5	266.5	335.8	
Back of Queue (*Q*), veh/ln (95 th percentile)	14.3	28.4	12.8					4.7	7.5	10.7	13.4	
Queue Storage Ratio (*RQ*) (95 th percentile)	0.00	0.00	0.00					0.00	0.00	0.00	0.00	
Uniform Delay (d_1), s/veh	35.1	37.6	35.0					18.4	19.7	40.9	10.5	
Incremental Delay (d_2), s/veh	9.2	70.2	9.8					0.2	1.5	8.3	1.1	
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0					0.0	0.0	0.0	0.0	
Control Delay (*d*), s/veh	44.3	107.8	44.8					18.6	21.2	49.2	11.7	
Level of Service (LOS)	D	F	D					B	C	D	B	
Approach Delay, s/veh / LOS	71.3	E		0.0			19.3	B		21.5	C	
Intersection Delay, s/veh / LOS	35.5						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.61	C	2.74	C	1.69	B	1.95	B
Bicycle LOS Score / LOS	1.45	A			0.88	A	2.03	B

HCS7 Signalized Intersection Results Summary

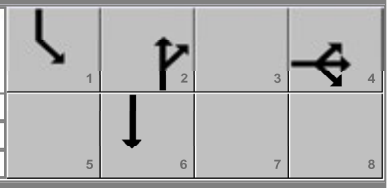
General Information				Intersection Information	
Agency	Linscott, Law & Greenspan			Duration, h	0.250
Analyst	JAS	Analysis Date	Mar 9, 2021	Area Type	Other
Jurisdiction	City of Glendale / Caltrans	Time Period	Opening Year Plus Project - AM	PHF	0.96
Urban Street	Brand Boulevard	Analysis Year	2024	Analysis Period	1> 7:30
Intersection	Brand/Sanchez - SR-13…	File Name	02AM - Opening Year Plus Project.xus		
Project Description	606 N. Maryland Avenue Residential				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	286	383	449					571	364	467	1330	

Signal Information			
Cycle, s	100.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	16.1	42.2	24.9	0.0	0.0	0.0	
Yellow	4.1	4.1	4.1	0.0	0.0	0.0	
Red	1.5	2.0	1.0	0.0	0.0	0.0	



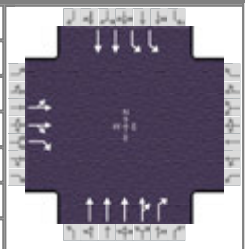
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4				2	1	6
Case Number		11.0				7.3	2.0	4.0
Phase Duration, s		30.0				48.3	21.7	70.0
Change Period, ($Y+R_c$), s		5.1				6.1	5.6	6.1
Max Allow Headway (*MAH*), s		4.8				0.0	3.3	0.0
Queue Clearance Time (g_s), s		26.9					15.5	
Green Extension Time (g_e), s		0.0				0.0	0.6	0.0
Phase Call Probability		1.00					1.00	
Max Out Probability		1.00					0.65	

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14					2	12	1	6	
Adjusted Flow Rate (*v*), veh/h	358	493	313					720	254	486	1385	
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1824	1809	1610					1850	1610	1757	1809	
Queue Service Time (g_s), s	18.3	24.9	18.1					6.2	10.8	13.5	22.4	
Cycle Queue Clearance Time (g_c), s	18.3	24.9	18.1					6.2	10.8	13.5	22.4	
Green Ratio (*g/C*)	0.25	0.25	0.25					0.42	0.42	0.16	0.64	
Capacity (*c*), veh/h	454	451	401					3125	680	564	2312	
Volume-to-Capacity Ratio (*X*)	0.788	1.095	0.782					0.230	0.373	0.862	0.599	
Back of Queue (*Q*), ft/ln (95 th percentile)	356.9	712.4	322					121.6	193.7	266.5	337.3	
Back of Queue (*Q*), veh/ln (95 th percentile)	14.3	28.5	12.9					4.9	7.7	10.7	13.5	
Queue Storage Ratio (*RQ*) (95 th percentile)	0.00	0.00	0.00					0.00	0.00	0.00	0.00	
Uniform Delay (d_1), s/veh	35.1	37.6	35.0					18.5	19.8	40.9	10.6	
Incremental Delay (d_2), s/veh	9.2	70.5	9.9					0.2	1.6	8.3	1.2	
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0					0.0	0.0	0.0	0.0	
Control Delay (*d*), s/veh	44.3	108.1	44.9					18.7	21.4	49.2	11.7	
Level of Service (LOS)	D	F	D					B	C	D	B	
Approach Delay, s/veh / LOS	71.5	E		0.0			19.4	B		21.5	C	
Intersection Delay, s/veh / LOS	35.5						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.61	C	2.74	C	1.69	B	1.95	B
Bicycle LOS Score / LOS	1.45	A			0.89	A	2.03	B

HCS7 Signalized Intersection Results Summary

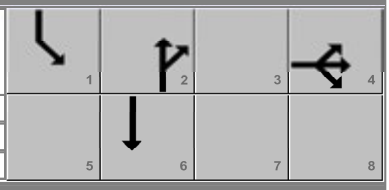
General Information				Intersection Information	
Agency	Linscott, Law & Greenspan			Duration, h	0.250
Analyst	JAS	Analysis Date	Mar 9, 2021	Area Type	Other
Jurisdiction	City of Glendale / Caltrans	Time Period	Cumulative - AM	PHF	0.96
Urban Street	Brand Boulevard	Analysis Year	2029	Analysis Period	1> 7:30
Intersection	Brand/Sanchez - SR-13…	File Name	02AM - Cumulative.xus		
Project Description	606 N. Maryland Avenue Residential				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	300	401	471					581	369	491	1388	

Signal Information			
Cycle, s	100.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	16.7	41.6	24.9	0.0	0.0	0.0
Yellow	4.1	4.1	4.1	0.0	0.0	0.0
Red	1.5	2.0	1.0	0.0	0.0	0.0



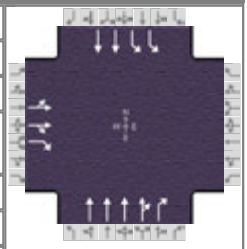
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4				2	1	6
Case Number		11.0				7.3	2.0	4.0
Phase Duration, s		30.0				47.7	22.3	70.0
Change Period, (*Y+R c*), s		5.1				6.1	5.6	6.1
Max Allow Headway (*MAH*), s		4.8				0.0	3.3	0.0
Queue Clearance Time (*g s*), s		26.9					16.2	
Green Extension Time (*g e*), s		0.0				0.0	0.5	0.0
Phase Call Probability		1.00					1.00	
Max Out Probability		1.00					1.00	

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14					2	12	1	6	
Adjusted Flow Rate (*v*), veh/h	375	517	329					732	258	511	1446	
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1824	1809	1610					1850	1610	1757	1809	
Queue Service Time (*g s*), s	19.5	24.9	19.3					6.4	11.1	14.2	24.0	
Cycle Queue Clearance Time (*g c*), s	19.5	24.9	19.3					6.4	11.1	14.2	24.0	
Green Ratio (*g/C*)	0.25	0.25	0.25					0.42	0.42	0.17	0.64	
Capacity (*c*), veh/h	454	450	401					3077	670	587	2312	
Volume-to-Capacity Ratio (*X*)	0.826	1.147	0.820					0.238	0.385	0.871	0.625	
Back of Queue (*Q*), ft/ln (95 th percentile)	383.8	805.4	346.9					125.7	198.6	280.4	357.9	
Back of Queue (*Q*), veh/ln (95 th percentile)	15.4	32.2	13.9					5.0	7.9	11.2	14.3	
Queue Storage Ratio (*RQ*) (95 th percentile)	0.00	0.00	0.00					0.00	0.00	0.00	0.00	
Uniform Delay (*d 1*), s/veh	35.5	37.6	35.4					18.9	20.3	40.6	10.9	
Incremental Delay (*d 2*), s/veh	12.1	89.3	12.9					0.2	1.7	9.6	1.3	
Initial Queue Delay (*d 3*), s/veh	0.0	0.0	0.0					0.0	0.0	0.0	0.0	
Control Delay (*d*), s/veh	47.6	126.9	48.4					19.1	22.0	50.2	12.1	
Level of Service (LOS)	D	F	D					B	C	D	B	
Approach Delay, s/veh / LOS	81.4	F		0.0			19.9	B		22.1	C	
Intersection Delay, s/veh / LOS	38.9						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.61	C	2.74	C	1.69	B	1.95	B
Bicycle LOS Score / LOS	1.49	A			0.90	A	2.10	B

HCS7 Signalized Intersection Results Summary

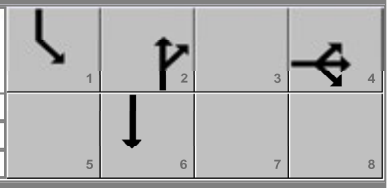
General Information				Intersection Information	
Agency	Linscott, Law & Greenspan			Duration, h	0.250
Analyst	JAS	Analysis Date	Mar 9, 2021	Area Type	Other
Jurisdiction	City of Glendale / Caltrans	Time Period	Cumulative Plus Project - AM	PHF	0.96
Urban Street	Brand Boulevard	Analysis Year	2029	Analysis Period	1> 7:30
Intersection	Brand/Sanchez - SR-13…	File Name	02AM - Cumulative Plus Project.xus		
Project Description	606 N. Maryland Avenue Residential				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	300	401	472					596	379	491	1392	

Signal Information			
Cycle, s	100.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	16.7	41.6	24.9	0.0	0.0	0.0
Yellow	4.1	4.1	4.1	0.0	0.0	0.0
Red	1.5	2.0	1.0	0.0	0.0	0.0



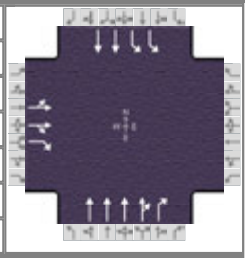
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4				2	1	6
Case Number		11.0				7.3	2.0	4.0
Phase Duration, s		30.0				47.7	22.3	70.0
Change Period, ($Y+R_c$), s		5.1				6.1	5.6	6.1
Max Allow Headway (*MAH*), s		4.8				0.0	3.3	0.0
Queue Clearance Time (g_s), s		26.9					16.2	
Green Extension Time (g_e), s		0.0				0.0	0.5	0.0
Phase Call Probability		1.00					1.00	
Max Out Probability		1.00					1.00	

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14					2	12	1	6	
Adjusted Flow Rate (*v*), veh/h	375	517	329					751	265	511	1450	
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1824	1809	1610					1850	1610	1757	1809	
Queue Service Time (g_s), s	19.5	24.9	19.3					6.6	11.5	14.2	24.1	
Cycle Queue Clearance Time (g_c), s	19.5	24.9	19.3					6.6	11.5	14.2	24.1	
Green Ratio (*g/C*)	0.25	0.25	0.25					0.42	0.42	0.17	0.64	
Capacity (*c*), veh/h	454	450	401					3077	670	587	2312	
Volume-to-Capacity Ratio (*X*)	0.826	1.148	0.822					0.244	0.395	0.871	0.627	
Back of Queue (*Q*), ft/ln (95 th percentile)	383.8	806.9	347.9					129.5	203.7	280.4	358.8	
Back of Queue (*Q*), veh/ln (95 th percentile)	15.4	32.3	13.9					5.2	8.1	11.2	14.4	
Queue Storage Ratio (*RQ*) (95 th percentile)	0.00	0.00	0.00					0.00	0.00	0.00	0.00	
Uniform Delay (d_1), s/veh	35.5	37.6	35.5					19.0	20.4	40.6	10.9	
Incremental Delay (d_2), s/veh	12.1	89.6	13.1					0.2	1.7	9.6	1.3	
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0					0.0	0.0	0.0	0.0	
Control Delay (*d*), s/veh	47.6	127.2	48.5					19.2	22.2	50.2	12.2	
Level of Service (LOS)	D	F	D					B	C	D	B	
Approach Delay, s/veh / LOS	81.5	F		0.0			20.0	B		22.1	C	
Intersection Delay, s/veh / LOS	38.9						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.61	C	2.74	C	1.69	B	1.95	B
Bicycle LOS Score / LOS	1.50	A			0.91	A	2.11	B

HCS7 Signalized Intersection Results Summary

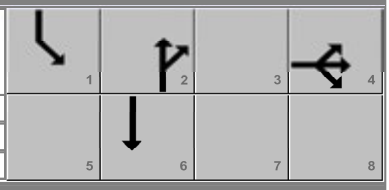
General Information				Intersection Information	
Agency	Linscott, Law & Greenspan			Duration, h	0.250
Analyst	JAS	Analysis Date	2/22/2021	Area Type	Other
Jurisdiction	City of Glendale / Caltrans	Time Period	Existing - PM	PHF	0.98
Urban Street	Brand Boulevard	Analysis Year	2021	Analysis Period	1> 16:00
Intersection	Brand/Sanchez - SR-13…	File Name	02PM - Existing.xus		
Project Description	606 N. Maryland Avenue Residential				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	98	486	264					859	612	425	940	

Signal Information			
Cycle, s	100.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	14.7	45.3	23.2	0.0	0.0	0.0
Yellow	4.1	4.1	4.1	0.0	0.0	0.0
Red	1.5	2.0	1.0	0.0	0.0	0.0



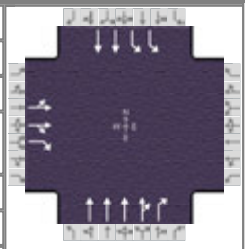
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4				2	1	6
Case Number		11.0				7.3	2.0	4.0
Phase Duration, s		28.3				51.4	20.3	71.7
Change Period, ($Y+R_c$), s		5.1				6.1	5.6	6.1
Max Allow Headway (*MAH*), s		4.7				0.0	3.3	0.0
Queue Clearance Time (g_s), s		21.8					14.0	
Green Extension Time (g_e), s		1.4				0.0	0.7	0.0
Phase Call Probability		1.00					1.00	
Max Out Probability		1.00					0.07	

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14					2	12	1	6	
Adjusted Flow Rate (*v*), veh/h	310	375	180					1083	418	434	959	
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1870	1831	1610					1845	1610	1757	1809	
Queue Service Time (g_s), s	15.2	19.8	9.7					9.4	19.2	12.0	12.4	
Cycle Queue Clearance Time (g_c), s	15.2	19.8	9.7					9.4	19.2	12.0	12.4	
Green Ratio (*g/C*)	0.23	0.23	0.23					0.45	0.45	0.15	0.66	
Capacity (*c*), veh/h	433	424	373					3342	729	518	2374	
Volume-to-Capacity Ratio (*X*)	0.715	0.884	0.484					0.324	0.574	0.837	0.404	
Back of Queue (*Q*), ft/ln (95 th percentile)	301.1	408.4	176.3					181.7	307.9	233.1	205	
Back of Queue (*Q*), veh/ln (95 th percentile)	12.0	16.3	7.1					7.3	12.3	9.3	8.2	
Queue Storage Ratio (*RQ*) (95 th percentile)	0.00	0.00	0.00					0.00	0.00	0.00	0.00	
Uniform Delay (d_1), s/veh	35.4	37.1	33.2					17.5	20.2	41.5	8.0	
Incremental Delay (d_2), s/veh	5.1	17.8	1.2					0.3	3.3	4.0	0.5	
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0					0.0	0.0	0.0	0.0	
Control Delay (*d*), s/veh	40.4	54.9	34.4					17.8	23.5	45.4	8.5	
Level of Service (LOS)	D	D	C					B	C	D	A	
Approach Delay, s/veh / LOS	45.5	D		0.0			19.4	B		20.0	C	
Intersection Delay, s/veh / LOS	25.6						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.61	C	2.74	C	1.68	B	1.95	B
Bicycle LOS Score / LOS	1.20	A			1.11	A	1.64	B

HCS7 Signalized Intersection Results Summary

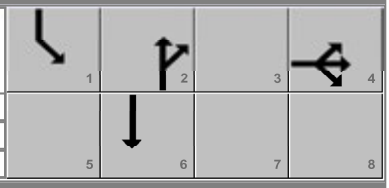
General Information				Intersection Information	
Agency	Linscott, Law & Greenspan			Duration, h	0.250
Analyst	JAS	Analysis Date	Mar 9, 2021	Area Type	Other
Jurisdiction	City of Glendale / Caltrans	Time Period	Opening Year - PM	PHF	0.98
Urban Street	Brand Boulevard	Analysis Year	2024	Analysis Period	1> 16:00
Intersection	Brand/Sanchez - SR-13…	File Name	02PM - Opening Year.xus		
Project Description	606 N. Maryland Avenue Residential				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	112	532	275					956	692	450	1130	

Signal Information			
Cycle, s	100.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	15.4	43.5	24.3	0.0	0.0	0.0
Yellow	4.1	4.1	4.1	0.0	0.0	0.0
Red	1.5	2.0	1.0	0.0	0.0	0.0



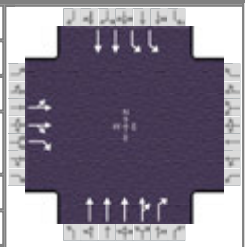
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4				2	1	6
Case Number		11.0				7.3	2.0	4.0
Phase Duration, s		29.4				49.6	21.0	70.6
Change Period, ($Y+R_c$), s		5.1				6.1	5.6	6.1
Max Allow Headway (*MAH*), s		4.7				0.0	3.3	0.0
Queue Clearance Time (g_s), s		23.7					14.7	
Green Extension Time (g_e), s		0.6				0.0	0.7	0.0
Phase Call Probability		1.00					1.00	
Max Out Probability		1.00					0.26	

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14					2	12	1	6	
Adjusted Flow Rate (*v*), veh/h	341	408	188					1209	473	459	1153	
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1869	1834	1610					1844	1610	1757	1809	
Queue Service Time (g_s), s	16.9	21.7	10.0					11.1	23.5	12.7	16.6	
Cycle Queue Clearance Time (g_c), s	16.9	21.7	10.0					11.1	23.5	12.7	16.6	
Green Ratio (*g/C*)	0.24	0.24	0.24					0.44	0.44	0.15	0.64	
Capacity (*c*), veh/h	454	446	392					3209	701	540	2333	
Volume-to-Capacity Ratio (*X*)	0.751	0.916	0.480					0.377	0.675	0.850	0.494	
Back of Queue (*Q*), ft/ln (95 th percentile)	332.8	457.2	181.2					209	371.2	249.6	261.9	
Back of Queue (*Q*), veh/ln (95 th percentile)	13.3	18.3	7.2					8.4	14.8	10.0	10.5	
Queue Storage Ratio (*RQ*) (95 th percentile)	0.00	0.00	0.00					0.00	0.00	0.00	0.00	
Uniform Delay (d_1), s/veh	35.0	36.8	32.4					19.1	22.6	41.2	9.3	
Incremental Delay (d_2), s/veh	6.8	23.0	1.1					0.3	5.2	6.3	0.8	
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0					0.0	0.0	0.0	0.0	
Control Delay (*d*), s/veh	41.9	59.8	33.5					19.4	27.8	47.5	10.0	
Level of Service (LOS)	D	E	C					B	C	D	B	
Approach Delay, s/veh / LOS	48.0	D		0.0			21.8	C		20.7	C	
Intersection Delay, s/veh / LOS	27.2						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.61	C	2.74	C	1.68	B	1.95	B
Bicycle LOS Score / LOS	1.26	A			1.18	A	1.82	B

HCS7 Signalized Intersection Results Summary

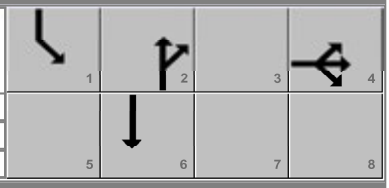
General Information				Intersection Information	
Agency	Linscott, Law & Greenspan			Duration, h	0.250
Analyst	JAS	Analysis Date	Jun 22, 2021	Area Type	Other
Jurisdiction	City of Glendale / Caltrans	Time Period	Opening Year Plus Project - PM	PHF	0.98
Urban Street	Brand Boulevard	Analysis Year	2024	Analysis Period	1> 16:00
Intersection	Brand/Sanchez - SR-13…	File Name	02PM - Opening Year Plus Project.xus		
Project Description	606 N. Maryland Avenue Residential				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	112	532	279					960	697	450	1146	

Signal Information			
Cycle, s	100.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	15.4	43.5	24.4	0.0	0.0	0.0
Yellow	4.1	4.1	4.1	0.0	0.0	0.0
Red	1.5	2.0	1.0	0.0	0.0	0.0



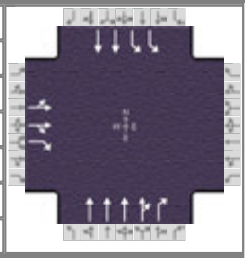
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4				2	1	6
Case Number		11.0				7.3	2.0	4.0
Phase Duration, s		29.5				49.6	21.0	70.5
Change Period, ($Y+R_c$), s		5.1				6.1	5.6	6.1
Max Allow Headway (*MAH*), s		4.7				0.0	3.3	0.0
Queue Clearance Time (g_s), s		23.8					14.7	
Green Extension Time (g_e), s		0.6				0.0	0.7	0.0
Phase Call Probability		1.00					1.00	
Max Out Probability		1.00					0.27	

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14					2	12	1	6	
Adjusted Flow Rate (*v*), veh/h	341	410	191					1214	477	459	1169	
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1869	1834	1610					1844	1610	1757	1809	
Queue Service Time (g_s), s	16.9	21.8	10.2					11.1	23.8	12.7	17.0	
Cycle Queue Clearance Time (g_c), s	16.9	21.8	10.2					11.1	23.8	12.7	17.0	
Green Ratio (*g/C*)	0.24	0.24	0.24					0.43	0.43	0.15	0.64	
Capacity (*c*), veh/h	455	447	392					3206	700	540	2331	
Volume-to-Capacity Ratio (*X*)	0.750	0.917	0.486					0.379	0.681	0.850	0.502	
Back of Queue (*Q*), ft/ln (95 th percentile)	332.6	459.9	184.1					210.4	375.2	249.7	266.6	
Back of Queue (*Q*), veh/ln (95 th percentile)	13.3	18.4	7.4					8.4	15.0	10.0	10.7	
Queue Storage Ratio (*RQ*) (95 th percentile)	0.00	0.00	0.00					0.00	0.00	0.00	0.00	
Uniform Delay (d_1), s/veh	35.0	36.8	32.4					19.1	22.7	41.2	9.3	
Incremental Delay (d_2), s/veh	6.8	23.3	1.1					0.3	5.3	6.3	0.8	
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0					0.0	0.0	0.0	0.0	
Control Delay (*d*), s/veh	41.8	60.1	33.6					19.5	28.0	47.5	10.1	
Level of Service (LOS)	D	E	C					B	C	D	B	
Approach Delay, s/veh / LOS	48.1	D		0.0			21.9	C		20.7	C	
Intersection Delay, s/veh / LOS	27.2						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.61	C	2.74	C	1.68	B	1.95	B
Bicycle LOS Score / LOS	1.26	A			1.19	A	1.83	B

HCS7 Signalized Intersection Results Summary

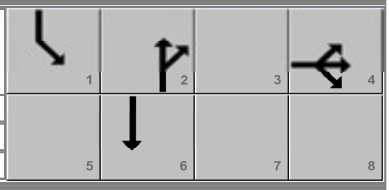
General Information				Intersection Information	
Agency	Linscott, Law & Greenspan			Duration, h	0.250
Analyst	JAS	Analysis Date	Mar 9, 2021	Area Type	Other
Jurisdiction	City of Glendale / Caltrans	Time Period	Cumulative - PM	PHF	0.98
Urban Street	Brand Boulevard	Analysis Year	2029	Analysis Period	1> 16:00
Intersection	Brand/Sanchez - SR-13…	File Name	02PM - Cumulative.xus		
Project Description	606 N. Maryland Avenue Residential				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	117	557	289					1001	724	472	1180	

Signal Information			
Cycle, s	100.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	15.9	42.4	24.9	0.0	0.0	0.0
Yellow	4.1	4.1	4.1	0.0	0.0	0.0
Red	1.5	2.0	1.0	0.0	0.0	0.0



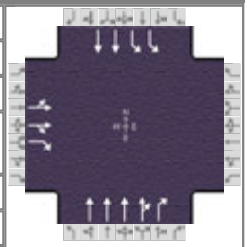
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4				2	1	6
Case Number		11.0				7.3	2.0	4.0
Phase Duration, s		30.0				48.5	21.5	70.0
Change Period, ($Y+R_c$), s		5.1				6.1	5.6	6.1
Max Allow Headway (*MAH*), s		4.7				0.0	3.3	0.0
Queue Clearance Time (g_s), s		24.9					15.4	
Green Extension Time (g_e), s		0.0				0.0	0.6	0.0
Phase Call Probability		1.00					1.00	
Max Out Probability		1.00					0.59	

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14					2	12	1	6	
Adjusted Flow Rate (*v*), veh/h	357	428	198					1265	495	482	1204	
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1869	1834	1610					1844	1610	1757	1809	
Queue Service Time (g_s), s	17.8	22.9	10.5					11.9	25.6	13.4	18.0	
Cycle Queue Clearance Time (g_c), s	17.8	22.9	10.5					11.9	25.6	13.4	18.0	
Green Ratio (*g/C*)	0.25	0.25	0.25					0.42	0.42	0.16	0.64	
Capacity (*c*), veh/h	465	456	401					3127	683	560	2312	
Volume-to-Capacity Ratio (*X*)	0.768	0.938	0.493					0.405	0.725	0.860	0.521	
Back of Queue (*Q*), ft/ln (95 th percentile)	349.9	491.7	189.9					222.8	404.6	263.7	280.5	
Back of Queue (*Q*), veh/ln (95 th percentile)	14.0	19.7	7.6					8.9	16.2	10.5	11.2	
Queue Storage Ratio (*RQ*) (95 th percentile)	0.00	0.00	0.00					0.00	0.00	0.00	0.00	
Uniform Delay (d_1), s/veh	34.9	36.8	32.2					20.0	24.0	40.9	9.8	
Incremental Delay (d_2), s/veh	7.8	27.3	1.1					0.4	6.6	8.0	0.8	
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0					0.0	0.0	0.0	0.0	
Control Delay (*d*), s/veh	42.7	64.1	33.3					20.4	30.6	49.0	10.6	
Level of Service (LOS)	D	E	C					C	C	D	B	
Approach Delay, s/veh / LOS	50.1	D		0.0			23.3	C		21.6	C	
Intersection Delay, s/veh / LOS	28.6						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.61	C	2.74	C	1.68	B	1.95	B
Bicycle LOS Score / LOS	1.30	A			1.21	A	1.88	B

HCS7 Signalized Intersection Results Summary

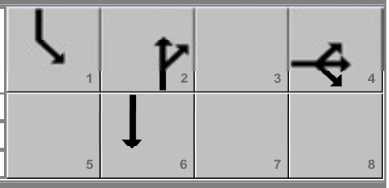
General Information				Intersection Information	
Agency	Linscott, Law & Greenspan			Duration, h	0.250
Analyst	JAS	Analysis Date	Jun 22, 2021	Area Type	Other
Jurisdiction	City of Glendale / Caltrans	Time Period	Cumulative Plus Project - PM	PHF	0.98
Urban Street	Brand Boulevard	Analysis Year	2029	Analysis Period	1> 16:00
Intersection	Brand/Sanchez - SR-13…	File Name	02PM - Cumulative Plus Project.xus		
Project Description	606 N. Maryland Avenue Residential				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	117	557	293					1005	729	472	1196	

Signal Information			
Cycle, s	100.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	15.9	42.4	24.9	0.0	0.0	0.0
Yellow	4.1	4.1	4.1	0.0	0.0	0.0
Red	1.5	2.0	1.0	0.0	0.0	0.0



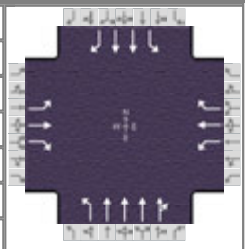
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4				2	1	6
Case Number		11.0				7.3	2.0	4.0
Phase Duration, s		30.0				48.5	21.5	70.0
Change Period, ($Y+R_c$), s		5.1				6.1	5.6	6.1
Max Allow Headway (*MAH*), s		4.7				0.0	3.3	0.0
Queue Clearance Time (g_s), s		25.0					15.4	
Green Extension Time (g_e), s		0.0				0.0	0.6	0.0
Phase Call Probability		1.00					1.00	
Max Out Probability		1.00					0.60	

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14					2	12	1	6	
Adjusted Flow Rate (*v*), veh/h	357	429	200					1271	498	482	1220	
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1869	1833	1610					1844	1610	1757	1809	
Queue Service Time (g_s), s	17.7	23.0	10.7					12.0	25.8	13.4	18.4	
Cycle Queue Clearance Time (g_c), s	17.7	23.0	10.7					12.0	25.8	13.4	18.4	
Green Ratio (*g/C*)	0.25	0.25	0.25					0.42	0.42	0.16	0.64	
Capacity (*c*), veh/h	465	457	401					3125	682	560	2312	
Volume-to-Capacity Ratio (*X*)	0.768	0.940	0.500					0.407	0.731	0.860	0.528	
Back of Queue (*Q*), ft/ln (95 th percentile)	349.8	495.1	192.4					224	408.5	263.7	285.9	
Back of Queue (*Q*), veh/ln (95 th percentile)	14.0	19.8	7.7					9.0	16.3	10.5	11.4	
Queue Storage Ratio (*RQ*) (95 th percentile)	0.00	0.00	0.00					0.00	0.00	0.00	0.00	
Uniform Delay (d_1), s/veh	34.9	36.8	32.2					20.1	24.1	41.0	9.8	
Incremental Delay (d_2), s/veh	7.8	27.8	1.2					0.4	6.8	8.1	0.9	
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0					0.0	0.0	0.0	0.0	
Control Delay (*d*), s/veh	42.7	64.6	33.4					20.5	30.8	49.0	10.7	
Level of Service (LOS)	D	E	C					C	C	D	B	
Approach Delay, s/veh / LOS	50.3	D		0.0			23.4	C		21.5	C	
Intersection Delay, s/veh / LOS	28.6						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.61	C	2.74	C	1.68	B	1.95	B
Bicycle LOS Score / LOS	1.30	A			1.22	A	1.89	B

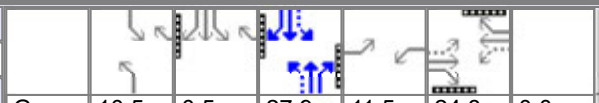
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Linscott, Law & Greenspan			Duration, h	0.250
Analyst	JAS	Analysis Date	Feb 23, 2021	Area Type	Other
Jurisdiction	City of Glendale	Time Period	Existing - AM	PHF	0.96
Urban Street	Brand Boulevard	Analysis Year	2021	Analysis Period	1> 7:45
Intersection	Brand / Doran	File Name	03AM - Existing.xus		
Project Description	606 N. Maryland Avenue Residential				

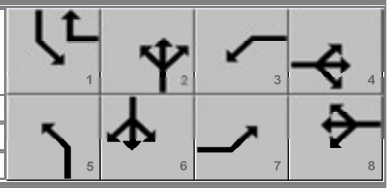


Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	77	116	60	46	180	203	42	512	39	343	941	335

Signal Information			
Cycle, s	100.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



Green	10.5	0.5	27.9	11.5	24.8	0.0
Yellow	3.5	3.5	3.5	3.5	3.5	0.0
Red	1.0	1.0	1.6	1.0	2.7	0.0



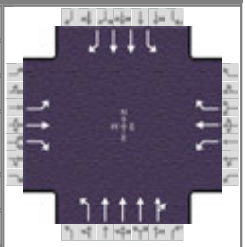
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	7	4	3	8	5	2	1	6
Case Number	1.1	3.0	1.1	3.0	1.1	4.0	1.1	3.0
Phase Duration, s	16.0	31.0	16.0	31.0	15.0	33.0	20.0	38.0
Change Period, (*Y+R c*), s	4.5	6.2	4.5	6.2	4.5	5.1	4.5	5.1
Max Allow Headway (*MAH*), s	4.3	6.3	4.3	6.3	4.3	0.0	4.3	0.0
Queue Clearance Time (*g s*), s	5.0	7.1	3.7	11.0	3.5		15.4	
Green Extension Time (*g e*), s	0.1	4.5	0.0	4.0	0.0	0.0	0.0	0.0
Phase Call Probability	1.00	1.00	1.00	1.00	1.00		1.00	
Max Out Probability	0.10	0.17	0.01	0.31	0.03		1.00	

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate (*v*), veh/h	80	121	63	48	188	211	44	433	141	357	980	349
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1810	1900	1610	1810	1900	1610	1810	1900	1806	1810	1809	1610
Queue Service Time (*g s*), s	3.0	5.1	3.0	1.7	8.2	9.0	1.5	5.9	6.1	13.4	24.9	18.6
Cycle Queue Clearance Time (*g c*), s	3.0	5.1	3.0	1.7	8.2	9.0	1.5	5.9	6.1	13.4	24.9	18.6
Green Ratio (*g/C*)	0.36	0.25	0.25	0.36	0.25	0.40	0.38	0.28	0.28	0.45	0.33	0.33
Capacity (*c*), veh/h	457	471	399	508	471	649	297	1590	504	538	1190	530
Volume-to-Capacity Ratio (*X*)	0.175	0.256	0.157	0.094	0.398	0.326	0.147	0.272	0.279	0.664	0.824	0.659
Back of Queue (*Q*), ft/ln (95 th percentile)	57.6	109.5	55.1	33.6	177.5	157.3	29.9	125	128	250.6	436.9	317.3
Back of Queue (*Q*), veh/ln (95 th percentile)	2.3	4.4	2.2	1.3	7.1	6.3	1.2	5.0	5.1	10.0	17.5	12.7
Queue Storage Ratio (*RQ*) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (*d 1*), s/veh	21.8	30.2	29.4	21.1	31.4	20.5	22.0	28.1	28.2	19.1	30.9	28.7
Incremental Delay (*d 2*), s/veh	0.2	0.6	0.4	0.1	1.2	0.6	0.2	0.4	1.4	3.1	6.5	6.3
Initial Queue Delay (*d 3*), 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
Control Delay (*d*), s/veh	22.0	30.8	29.8	21.2	32.5	21.1	22.3	28.6	29.6	22.2	37.4	35.0
Level of Service (LOS)	C	C	C	C	C	C	C	C	C	C	D	D
Approach Delay, s/veh / LOS	27.9	C		25.9	C		28.3	C		33.7	C	
Intersection Delay, s/veh / LOS	30.9						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.60	C	2.73	C	2.14	B	2.14	B
Bicycle LOS Score / LOS	0.92	A	1.22	A	0.74	A	1.88	B

HCS7 Signalized Intersection Results Summary

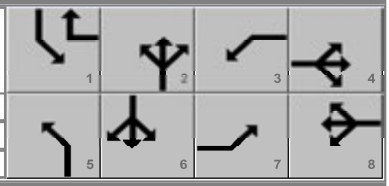
General Information				Intersection Information	
Agency	Linscott, Law & Greenspan			Duration, h	0.250
Analyst	JAS	Analysis Date	Mar 10, 2021	Area Type	Other
Jurisdiction	City of Glendale	Time Period	Opening Year - AM	PHF	0.96
Urban Street	Brand Boulevard	Analysis Year	2024	Analysis Period	1> 7:45
Intersection	Brand / Doran	File Name	03AM - Opening Year.xus		
Project Description	606 N. Maryland Avenue Residential				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	121	128	96	48	199	211	91	617	40	354	1013	406

Signal Information			
Cycle, s	100.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	10.5	0.5	27.9	11.5	24.8	0.0	
Yellow	3.5	3.5	3.5	3.5	3.5	0.0	
Red	1.0	1.0	1.6	1.0	2.7	0.0	



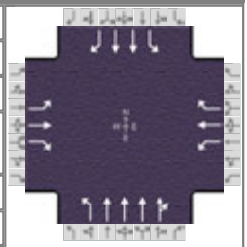
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	7	4	3	8	5	2	1	6
Case Number	1.1	3.0	1.1	3.0	1.1	4.0	1.1	3.0
Phase Duration, s	16.0	31.0	16.0	31.0	15.0	33.0	20.0	38.0
Change Period, (*Y+R c*), s	4.5	6.2	4.5	6.2	4.5	5.1	4.5	5.1
Max Allow Headway (*MAH*), s	4.3	6.3	4.3	6.3	4.3	0.0	4.3	0.0
Queue Clearance Time (*g s*), s	6.8	7.7	3.8	11.4	5.4		16.0	
Green Extension Time (*g e*), s	0.1	5.1	0.1	4.5	0.1	0.0	0.0	0.0
Phase Call Probability	1.00	1.00	1.00	1.00	1.00		1.00	
Max Out Probability	0.67	0.23	0.02	0.39	0.45		1.00	

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate (*v*), veh/h	126	133	100	50	207	220	95	517	168	369	1055	423
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1810	1900	1610	1810	1900	1610	1810	1900	1819	1810	1809	1610
Queue Service Time (*g s*), s	4.8	5.7	5.0	1.8	9.2	9.4	3.4	7.2	7.3	14.0	27.6	23.9
Cycle Queue Clearance Time (*g c*), s	4.8	5.7	5.0	1.8	9.2	9.4	3.4	7.2	7.3	14.0	27.6	23.9
Green Ratio (*g/C*)	0.36	0.25	0.25	0.36	0.25	0.40	0.38	0.28	0.28	0.45	0.33	0.33
Capacity (*c*), veh/h	442	471	399	499	471	649	280	1590	507	511	1190	530
Volume-to-Capacity Ratio (*X*)	0.285	0.283	0.250	0.100	0.440	0.339	0.339	0.325	0.331	0.722	0.887	0.798
Back of Queue (*Q*), ft/ln (95 th percentile)	93.2	121.8	90.7	35.2	196.8	164.7	78.6	151.7	155.6	266.1	489.7	407.9
Back of Queue (*Q*), veh/ln (95 th percentile)	3.7	4.9	3.6	1.4	7.9	6.6	3.1	6.1	6.2	10.6	19.6	16.3
Queue Storage Ratio (*RQ*) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (*d 1*), s/veh	22.5	30.4	30.1	21.2	31.7	20.6	23.6	28.6	28.6	19.6	31.8	30.5
Incremental Delay (*d 2*), s/veh	0.4	0.7	0.7	0.1	1.4	0.7	0.7	0.5	1.7	5.0	9.9	11.9
Initial Queue Delay (*d 3*), 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
Control Delay (*d*), s/veh	22.9	31.1	30.8	21.3	33.1	21.3	24.3	29.1	30.4	24.5	41.7	42.4
Level of Service (LOS)	C	C	C	C	C	C	C	C	C	C	D	D
Approach Delay, s/veh / LOS	28.1	C		26.4	C		28.8	C		38.4	D	
Intersection Delay, s/veh / LOS	33.5						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.60	C	2.73	C	2.14	B	2.14	B
Bicycle LOS Score / LOS	1.08	A	1.27	A	0.81	A	2.01	B

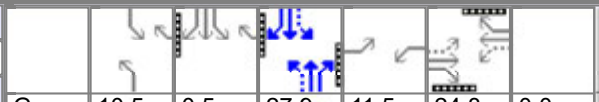
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Linscott, Law & Greenspan			Duration, h	0.250
Analyst	JAS	Analysis Date	Mar 10, 2021	Area Type	Other
Jurisdiction	City of Glendale	Time Period	Opening Year Plus Project - AM	PHF	0.96
Urban Street	Brand Boulevard	Analysis Year	2024	Analysis Period	1> 7:45
Intersection	Brand / Doran	File Name	03AM - Opening Year Plus Project.xus		
Project Description	606 N. Maryland Avenue Residential				

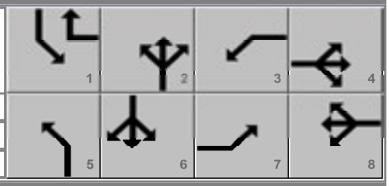


Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	114	139	96	58	216	240	91	610	50	359	1013	406

Signal Information			
Cycle, s	100.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



Green	10.5	0.5	27.9	11.5	24.8	0.0
Yellow	3.5	3.5	3.5	3.5	3.5	0.0
Red	1.0	1.0	1.6	1.0	2.7	0.0



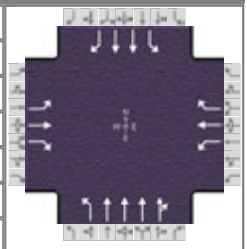
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	7	4	3	8	5	2	1	6
Case Number	1.1	3.0	1.1	3.0	1.1	4.0	1.1	3.0
Phase Duration, s	16.0	31.0	16.0	31.0	15.0	33.0	20.0	38.0
Change Period, ($Y+R_c$), s	4.5	6.2	4.5	6.2	4.5	5.1	4.5	5.1
Max Allow Headway (*MAH*), s	4.3	6.3	4.3	6.3	4.3	0.0	4.3	0.0
Queue Clearance Time (g_s), s	6.5	8.2	4.2	13.0	5.4		16.2	
Green Extension Time (g_e), s	0.1	5.5	0.1	4.5	0.1	0.0	0.0	0.0
Phase Call Probability	1.00	1.00	1.00	1.00	1.00		1.00	
Max Out Probability	0.51	0.29	0.03	0.51	0.45		1.00	

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate (*v*), veh/h	119	145	100	60	225	250	95	520	168	374	1055	423
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1810	1900	1610	1810	1900	1610	1810	1900	1799	1810	1809	1610
Queue Service Time (g_s), s	4.5	6.2	5.0	2.2	10.1	11.0	3.4	7.2	7.4	14.2	27.6	23.9
Cycle Queue Clearance Time (g_c), s	4.5	6.2	5.0	2.2	10.1	11.0	3.4	7.2	7.4	14.2	27.6	23.9
Green Ratio (*g/C*)	0.36	0.25	0.25	0.36	0.25	0.40	0.38	0.28	0.28	0.45	0.33	0.33
Capacity (*c*), veh/h	429	471	399	490	471	649	280	1590	502	510	1190	530
Volume-to-Capacity Ratio (*X*)	0.277	0.307	0.250	0.123	0.478	0.385	0.339	0.327	0.334	0.734	0.887	0.798
Back of Queue (*Q*), ft/ln (95 th percentile)	87.4	133.3	90.7	42.7	212.1	191.2	78.6	152.6	155.9	271.6	489.7	407.9
Back of Queue (*Q*), veh/ln (95 th percentile)	3.5	5.3	3.6	1.7	8.5	7.6	3.1	6.1	6.2	10.9	19.6	16.3
Queue Storage Ratio (*RQ*) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d_1), s/veh	22.5	30.6	30.1	21.3	32.1	21.1	23.6	28.6	28.7	19.7	31.8	30.5
Incremental Delay (d_2), s/veh	0.3	0.8	0.7	0.1	1.6	0.8	0.7	0.5	1.8	5.4	9.9	11.9
Initial Queue Delay (d_3), 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
Control Delay (*d*), s/veh	22.9	31.4	30.8	21.5	33.7	21.9	24.3	29.1	30.5	25.1	41.7	42.4
Level of Service (LOS)	C	C	C	C	C	C	C	C	C	C	D	D
Approach Delay, s/veh / LOS	28.5	C		26.8	C		28.8	C		38.5	D	
Intersection Delay, s/veh / LOS	33.6						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.60	C	2.73	C	2.14	B	2.14	B
Bicycle LOS Score / LOS	1.09	A	1.37	A	0.81	A	2.02	B

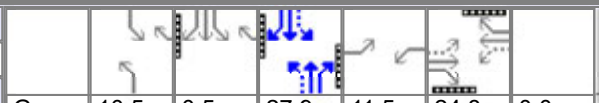
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Linscott, Law & Greenspan			Duration, h	0.250
Analyst	JAS	Analysis Date	Mar 10, 2021	Area Type	Other
Jurisdiction	City of Glendale	Time Period	Cumulative - AM	PHF	0.96
Urban Street	Brand Boulevard	Analysis Year	2029	Analysis Period	1> 7:45
Intersection	Brand / Doran	File Name	03AM - Cumulative.xus		
Project Description	606 N. Maryland Avenue Residential				

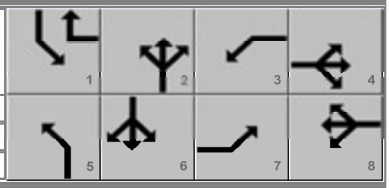


Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	125	134	99	51	209	222	93	643	42	372	1062	424

Signal Information			
Cycle, s	100.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



Green	10.5	0.5	27.9	11.5	24.8	0.0
Yellow	3.5	3.5	3.5	3.5	3.5	0.0
Red	1.0	1.0	1.6	1.0	2.7	0.0



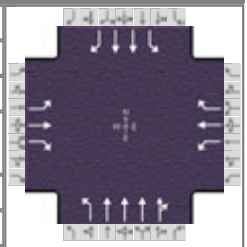
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	7	4	3	8	5	2	1	6
Case Number	1.1	3.0	1.1	3.0	1.1	4.0	1.1	3.0
Phase Duration, s	16.0	31.0	16.0	31.0	15.0	33.0	20.0	38.0
Change Period, (*Y+R c*), s	4.5	6.2	4.5	6.2	4.5	5.1	4.5	5.1
Max Allow Headway (*MAH*), s	4.3	6.3	4.3	6.3	4.3	0.0	4.3	0.0
Queue Clearance Time (*g s*), s	6.9	8.0	3.9	12.0	5.5		16.9	
Green Extension Time (*g e*), s	0.1	5.3	0.1	4.6	0.1	0.0	0.0	0.0
Phase Call Probability	1.00	1.00	1.00	1.00	1.00		1.00	
Max Out Probability	0.77	0.26	0.02	0.44	0.49		1.00	

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate (*v*), veh/h	130	140	103	53	218	231	97	539	175	388	1106	442
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1810	1900	1610	1810	1900	1610	1810	1900	1818	1810	1809	1610
Queue Service Time (*g s*), s	4.9	6.0	5.1	1.9	9.7	10.0	3.5	7.5	7.7	14.9	29.6	25.4
Cycle Queue Clearance Time (*g c*), s	4.9	6.0	5.1	1.9	9.7	10.0	3.5	7.5	7.7	14.9	29.6	25.4
Green Ratio (*g/C*)	0.36	0.25	0.25	0.36	0.25	0.40	0.38	0.28	0.28	0.45	0.33	0.33
Capacity (*c*), veh/h	435	471	399	494	471	649	269	1590	507	504	1190	530
Volume-to-Capacity Ratio (*X*)	0.300	0.296	0.258	0.108	0.462	0.356	0.360	0.339	0.345	0.769	0.929	0.834
Back of Queue (*Q*), ft/ln (95 th percentile)	96.5	128.1	93.7	37.4	205.9	174.8	104.3	158.9	163	288.1	534.7	436.5
Back of Queue (*Q*), veh/ln (95 th percentile)	3.9	5.1	3.7	1.5	8.2	7.0	4.2	6.4	6.5	11.5	21.4	17.5
Queue Storage Ratio (*RQ*) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (*d 1*), s/veh	22.6	30.5	30.2	21.2	31.9	20.8	23.9	28.7	28.8	19.9	32.4	31.0
Incremental Delay (*d 2*), s/veh	0.4	0.7	0.7	0.1	1.5	0.7	0.8	0.6	1.9	7.1	13.9	14.3
Initial Queue Delay (*d 3*), 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
Control Delay (*d*), s/veh	23.0	31.3	30.9	21.3	33.4	21.5	24.7	29.3	30.6	27.0	46.3	45.3
Level of Service (LOS)	C	C	C	C	C	C	C	C	C	C	D	D
Approach Delay, s/veh / LOS	28.3	C		26.7	C		29.0	C		42.2	D	
Intersection Delay, s/veh / LOS	35.7						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.60	C	2.73	C	2.14	B	2.14	B
Bicycle LOS Score / LOS	1.10	A	1.32	A	0.82	A	2.08	B

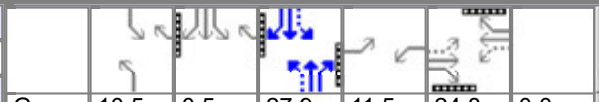
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Linscott, Law & Greenspan			Duration, h	0.250
Analyst	JAS	Analysis Date	Mar 10, 2021	Area Type	Other
Jurisdiction	City of Glendale	Time Period	Cumulative Plus Project - AM	PHF	0.96
Urban Street	Brand Boulevard	Analysis Year	2029	Analysis Period	1> 7:45
Intersection	Brand / Doran	File Name	03AM - Cumulative Plus Project.xus		
Project Description	606 N. Maryland Avenue Residential				

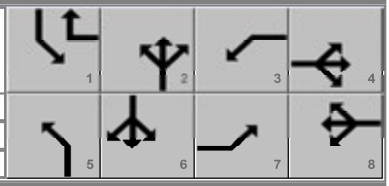


Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	118	145	99	61	226	251	93	636	52	377	1062	424

Signal Information			
Cycle, s	100.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



Green	10.5	0.5	27.9	11.5	24.8	0.0
Yellow	3.5	3.5	3.5	3.5	3.5	0.0
Red	1.0	1.0	1.6	1.0	2.7	0.0



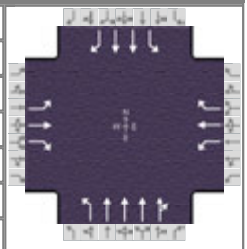
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	7	4	3	8	5	2	1	6
Case Number	1.1	3.0	1.1	3.0	1.1	4.0	1.1	3.0
Phase Duration, s	16.0	31.0	16.0	31.0	15.0	33.0	20.0	38.0
Change Period, ($Y+R_c$), s	4.5	6.2	4.5	6.2	4.5	5.1	4.5	5.1
Max Allow Headway (*MAH*), s	4.3	6.3	4.3	6.3	4.3	0.0	4.3	0.0
Queue Clearance Time (g_s), s	6.6	8.5	4.3	13.6	5.5		17.1	
Green Extension Time (g_e), s	0.1	5.7	0.1	4.6	0.1	0.0	0.0	0.0
Phase Call Probability	1.00	1.00	1.00	1.00	1.00		1.00	
Max Out Probability	0.60	0.32	0.04	0.57	0.49		1.00	

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate (*v*), veh/h	123	151	103	64	235	261	97	542	175	393	1106	442
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1810	1900	1610	1810	1900	1610	1810	1900	1800	1810	1809	1610
Queue Service Time (g_s), s	4.6	6.5	5.1	2.3	10.6	11.6	3.5	7.6	7.8	15.1	29.6	25.4
Cycle Queue Clearance Time (g_c), s	4.6	6.5	5.1	2.3	10.6	11.6	3.5	7.6	7.8	15.1	29.6	25.4
Green Ratio (*g/C*)	0.36	0.25	0.25	0.36	0.25	0.40	0.38	0.28	0.28	0.45	0.33	0.33
Capacity (*c*), veh/h	422	471	399	485	471	649	269	1590	502	503	1190	530
Volume-to-Capacity Ratio (*X*)	0.292	0.321	0.258	0.131	0.500	0.403	0.360	0.341	0.348	0.781	0.929	0.834
Back of Queue (*Q*), ft/ln (95 th percentile)	90.8	139.5	93.7	45.1	221	199.4	104.3	159.9	163.3	294.5	534.7	436.5
Back of Queue (*Q*), veh/ln (95 th percentile)	3.6	5.6	3.7	1.8	8.8	8.0	4.2	6.4	6.5	11.8	21.4	17.5
Queue Storage Ratio (*RQ*) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d_1), s/veh	22.7	30.7	30.2	21.4	32.3	21.3	23.9	28.7	28.8	20.0	32.4	31.0
Incremental Delay (d_2), s/veh	0.4	0.8	0.7	0.1	1.8	0.9	0.8	0.6	1.9	7.8	13.9	14.3
Initial Queue Delay (d_3), 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
Control Delay (*d*), s/veh	23.0	31.5	30.9	21.5	34.0	22.1	24.7	29.3	30.7	27.8	46.3	45.3
Level of Service (LOS)	C	C	C	C	C	C	C	C	C	C	D	D
Approach Delay, s/veh / LOS	28.6	C		27.1	C		29.1	C		42.3	D	
Intersection Delay, s/veh / LOS	35.7						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.60	C	2.73	C	2.14	B	2.14	B
Bicycle LOS Score / LOS	1.11	A	1.41	A	0.82	A	2.09	B

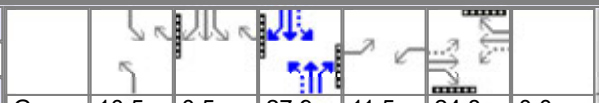
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Linscott, Law & Greenspan			Duration, h	0.250
Analyst	JAS	Analysis Date	Feb 23, 2021	Area Type	Other
Jurisdiction	City of Glendale	Time Period	Existing - PM	PHF	0.97
Urban Street	Brand Boulevard	Analysis Year	2021	Analysis Period	1> 17:00
Intersection	Brand / Doran	File Name	03PM - Existing.xus		
Project Description	606 N. Maryland Avenue Residential				

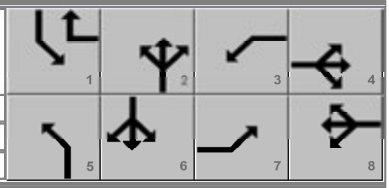


Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	279	270	112	47	211	263	52	887	38	171	898	129

Signal Information			
Cycle, s	100.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



Green	10.5	0.5	27.9	11.5	24.8	0.0
Yellow	3.5	3.5	3.5	3.5	3.5	0.0
Red	1.0	1.0	1.6	1.0	2.7	0.0



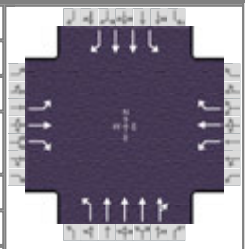
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	7	4	3	8	5	2	1	6
Case Number	1.1	3.0	1.1	3.0	1.1	4.0	1.1	3.0
Phase Duration, s	16.0	31.0	16.0	31.0	15.0	33.0	20.0	38.0
Change Period, ($Y+R_c$), s	4.5	6.2	4.5	6.2	4.5	5.1	4.5	5.1
Max Allow Headway (*MAH*), s	4.3	6.3	4.3	6.3	4.3	0.0	4.3	0.0
Queue Clearance Time (g_s), s	13.5	14.9	3.8	14.1	3.9		7.9	
Green Extension Time (g_e), s	0.0	4.9	0.0	5.2	0.1	0.0	0.3	0.0
Phase Call Probability	1.00	1.00	1.00	1.00	1.00		1.00	
Max Out Probability	1.00	0.72	0.02	0.67	0.06		0.09	

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate (*v*), veh/h	288	278	115	48	218	271	54	719	234	176	926	133
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1810	1900	1610	1810	1900	1610	1810	1900	1845	1810	1809	1610
Queue Service Time (g_s), s	11.5	12.9	5.8	1.8	9.7	12.1	1.9	10.4	10.5	5.9	23.1	6.0
Cycle Queue Clearance Time (g_c), s	11.5	12.9	5.8	1.8	9.7	12.1	1.9	10.4	10.5	5.9	23.1	6.0
Green Ratio (*g/C*)	0.36	0.25	0.25	0.36	0.25	0.40	0.38	0.28	0.28	0.45	0.33	0.33
Capacity (*c*), veh/h	435	471	399	391	471	649	310	1590	515	456	1190	530
Volume-to-Capacity Ratio (*X*)	0.662	0.591	0.289	0.124	0.462	0.418	0.173	0.452	0.456	0.386	0.778	0.251
Back of Queue (*Q*), ft/ln (95 th percentile)	235.7	261.9	106.1	34.2	205.5	206.4	36.8	213.4	219.5	112.6	404.3	111.6
Back of Queue (*Q*), veh/ln (95 th percentile)	9.4	10.5	4.2	1.4	8.2	8.3	1.5	8.5	8.8	4.5	16.2	4.5
Queue Storage Ratio (*RQ*) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d_1), s/veh	25.5	33.1	30.5	22.0	31.9	21.4	21.8	29.7	29.8	17.6	30.3	24.5
Incremental Delay (d_2), s/veh	3.7	3.0	0.8	0.1	1.5	0.9	0.3	0.9	2.9	0.5	5.0	1.1
Initial Queue Delay (d_3), 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
Control Delay (*d*), s/veh	29.2	36.2	31.3	22.1	33.4	22.3	22.0	30.7	32.7	18.2	35.3	25.7
Level of Service (LOS)	C	D	C	C	C	C	C	C	C	B	D	C
Approach Delay, s/veh / LOS	32.4	C		26.8	C		30.7	C		31.8	C	
Intersection Delay, s/veh / LOS	30.8						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.60	C	2.73	C	2.14	B	2.14	B
Bicycle LOS Score / LOS	1.61	B	1.37	A	0.90	A	1.51	B

HCS7 Signalized Intersection Results Summary

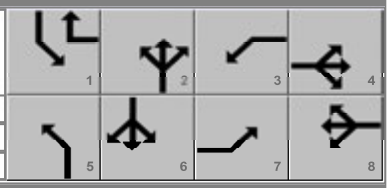
General Information				Intersection Information	
Agency	Linscott, Law & Greenspan			Duration, h	0.250
Analyst	JAS	Analysis Date	Mar 10, 2021	Area Type	Other
Jurisdiction	City of Glendale	Time Period	Opening Year - PM	PHF	0.97
Urban Street	Brand Boulevard	Analysis Year	2024	Analysis Period	1> 17:00
Intersection	Brand / Doran	File Name	03PM - Opening Year.xus		
Project Description	606 N. Maryland Avenue Residential				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	354	293	168	49	232	272	109	979	40	178	1018	202

Signal Information			
Cycle, s	100.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	10.5	0.5	27.9	11.5	24.8	0.0	
Yellow	3.5	3.5	3.5	3.5	3.5	0.0	
Red	1.0	1.0	1.6	1.0	2.7	0.0	



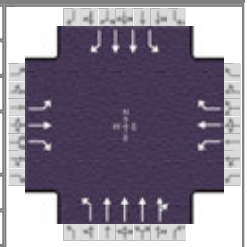
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	7	4	3	8	5	2	1	6
Case Number	1.1	3.0	1.1	3.0	1.1	4.0	1.1	3.0
Phase Duration, s	16.0	31.0	16.0	31.0	15.0	33.0	20.0	38.0
Change Period, (*Y+R c*), s	4.5	6.2	4.5	6.2	4.5	5.1	4.5	5.1
Max Allow Headway (*MAH*), s	4.3	6.3	4.3	6.3	4.3	0.0	4.3	0.0
Queue Clearance Time (*g s*), s	13.5	16.2	3.8	14.6	6.1		8.2	
Green Extension Time (*g e*), s	0.0	4.9	0.1	5.5	0.1	0.0	0.3	0.0
Phase Call Probability	1.00	1.00	1.00	1.00	1.00		1.00	
Max Out Probability	1.00	0.84	0.02	0.75	0.86		0.11	

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate (*v*), veh/h	365	302	173	51	239	280	112	792	258	184	1049	208
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1810	1900	1610	1810	1900	1610	1810	1900	1847	1810	1809	1610
Queue Service Time (*g s*), s	11.5	14.2	9.1	1.8	10.8	12.6	4.1	11.6	11.7	6.2	27.4	10.0
Cycle Queue Clearance Time (*g c*), s	11.5	14.2	9.1	1.8	10.8	12.6	4.1	11.6	11.7	6.2	27.4	10.0
Green Ratio (*g/C*)	0.36	0.25	0.25	0.36	0.25	0.40	0.38	0.28	0.28	0.45	0.33	0.33
Capacity (*c*), veh/h	419	471	399	374	471	649	281	1590	515	441	1190	530
Volume-to-Capacity Ratio (*X*)	0.871	0.641	0.434	0.135	0.508	0.432	0.400	0.498	0.501	0.416	0.882	0.393
Back of Queue (*Q*), ft/ln (95 th percentile)	224.8	286.4	167	35.7	224.5	213.1	121.2	233.6	240.7	117.9	485.1	186.3
Back of Queue (*Q*), veh/ln (95 th percentile)	9.0	11.5	6.7	1.4	9.0	8.5	4.8	9.3	9.6	4.7	19.4	7.5
Queue Storage Ratio (*RQ*) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (*d 1*), s/veh	30.3	33.6	31.7	22.2	32.3	21.6	23.8	30.2	30.2	18.0	31.7	25.9
Incremental Delay (*d 2*), s/veh	17.8	4.1	1.6	0.2	1.8	1.0	0.9	1.1	3.5	0.6	9.6	2.2
Initial Queue Delay (*d 3*), 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
Control Delay (*d*), s/veh	48.1	37.7	33.3	22.4	34.2	22.6	24.7	31.3	33.7	18.6	41.3	28.0
Level of Service (LOS)	D	D	C	C	C	C	C	C	C	B	D	C
Approach Delay, s/veh / LOS	41.3	D		27.4	C		31.2	C		36.5	D	
Intersection Delay, s/veh / LOS	34.7						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.60	C	2.73	C	2.14	B	2.14	B
Bicycle LOS Score / LOS	1.87	B	1.43	A	0.97	A	1.68	B

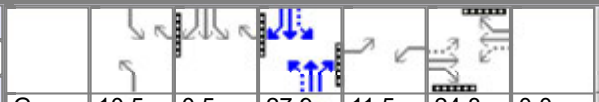
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Linscott, Law & Greenspan			Duration, h	0.250
Analyst	JAS	Analysis Date	Jun 22, 2021	Area Type	Other
Jurisdiction	City of Glendale	Time Period	Opening Year Plus Project - PM	PHF	0.97
Urban Street	Brand Boulevard	Analysis Year	2024	Analysis Period	1> 17:00
Intersection	Brand / Doran	File Name	03PM - Opening Year Plus Project.xus		
Project Description	606 N. Maryland Avenue Residential				

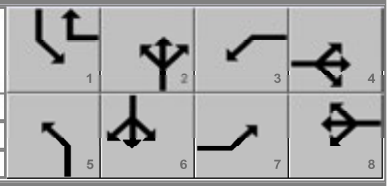


Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	353	310	168	54	245	304	109	978	51	196	1018	202

Signal Information			
Cycle, s	100.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



Green	10.5	0.5	27.9	11.5	24.8	0.0
Yellow	3.5	3.5	3.5	3.5	3.5	0.0
Red	1.0	1.0	1.6	1.0	2.7	0.0



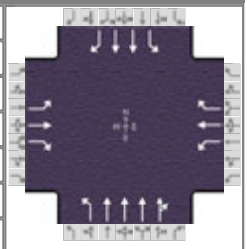
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	7	4	3	8	5	2	1	6
Case Number	1.1	3.0	1.1	3.0	1.1	4.0	1.1	3.0
Phase Duration, s	16.0	31.0	16.0	31.0	15.0	33.0	20.0	38.0
Change Period, ($Y+R_c$), s	4.5	6.2	4.5	6.2	4.5	5.1	4.5	5.1
Max Allow Headway (*MAH*), s	4.3	6.3	4.3	6.3	4.3	0.0	4.3	0.0
Queue Clearance Time (g_s), s	13.5	17.2	4.0	16.4	6.1		8.9	
Green Extension Time (g_e), s	0.0	4.7	0.1	5.0	0.1	0.0	0.4	0.0
Phase Call Probability	1.00	1.00	1.00	1.00	1.00		1.00	
Max Out Probability	1.00	0.92	0.02	0.87	0.86		0.20	

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate (*v*), veh/h	364	320	173	56	253	313	112	801	260	202	1049	208
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1810	1900	1610	1810	1900	1610	1810	1900	1833	1810	1809	1610
Queue Service Time (g_s), s	11.5	15.2	9.1	2.0	11.5	14.4	4.1	11.8	11.9	6.9	27.4	10.0
Cycle Queue Clearance Time (g_c), s	11.5	15.2	9.1	2.0	11.5	14.4	4.1	11.8	11.9	6.9	27.4	10.0
Green Ratio (*g/C*)	0.36	0.25	0.25	0.36	0.25	0.40	0.38	0.28	0.28	0.45	0.33	0.33
Capacity (*c*), veh/h	409	471	399	362	471	649	281	1590	511	439	1190	530
Volume-to-Capacity Ratio (*X*)	0.889	0.678	0.434	0.154	0.536	0.483	0.400	0.504	0.508	0.460	0.882	0.393
Back of Queue (*Q*), ft/ln (95 th percentile)	237.2	305.3	167	39.6	236.9	238	121.2	236	242.5	131.7	485.1	186.3
Back of Queue (*Q*), veh/ln (95 th percentile)	9.5	12.2	6.7	1.6	9.5	9.5	4.8	9.4	9.7	5.3	19.4	7.5
Queue Storage Ratio (*RQ*) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d_1), s/veh	30.5	34.0	31.7	22.5	32.6	22.1	23.8	30.2	30.3	18.3	31.7	25.9
Incremental Delay (d_2), s/veh	20.7	5.1	1.6	0.2	2.2	1.2	0.9	1.1	3.6	0.8	9.6	2.2
Initial Queue Delay (d_3), 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
Control Delay (*d*), s/veh	51.2	39.1	33.3	22.7	34.8	23.3	24.7	31.4	33.8	19.1	41.3	28.0
Level of Service (LOS)	D	D	C	C	C	C	C	C	C	B	D	C
Approach Delay, s/veh / LOS	43.1	D		27.9	C		31.3	C		36.3	D	
Intersection Delay, s/veh / LOS	35.0						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.60	C	2.73	C	2.14	B	2.14	B
Bicycle LOS Score / LOS	1.90	B	1.51	B	0.97	A	1.69	B

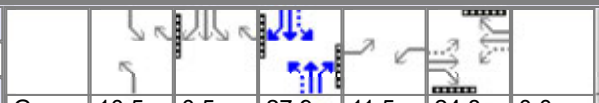
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Linscott, Law & Greenspan			Duration, h	0.250
Analyst	JAS	Analysis Date	Mar 10, 2021	Area Type	Other
Jurisdiction	City of Glendale	Time Period	Cumulative - PM	PHF	0.97
Urban Street	Brand Boulevard	Analysis Year	2029	Analysis Period	1> 17:00
Intersection	Brand / Doran	File Name	03PM - Cumulative.xus		
Project Description	606 N. Maryland Avenue Residential				

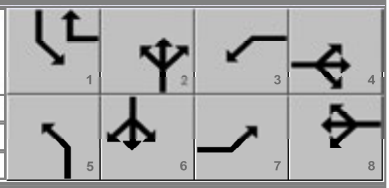


Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	369	307	174	52	243	286	111	1025	42	187	1065	209

Signal Information			
Cycle, s	100.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



Green	10.5	0.5	27.9	11.5	24.8	0.0
Yellow	3.5	3.5	3.5	3.5	3.5	0.0
Red	1.0	1.0	1.6	1.0	2.7	0.0



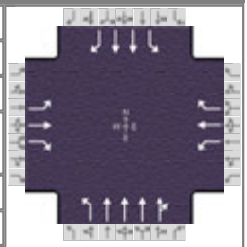
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	7	4	3	8	5	2	1	6
Case Number	1.1	3.0	1.1	3.0	1.1	4.0	1.1	3.0
Phase Duration, s	16.0	31.0	16.0	31.0	15.0	33.0	20.0	38.0
Change Period, (*Y+R c*), s	4.5	6.2	4.5	6.2	4.5	5.1	4.5	5.1
Max Allow Headway (*MAH*), s	4.3	6.3	4.3	6.3	4.3	0.0	4.3	0.0
Queue Clearance Time (*g s*), s	13.5	17.0	3.9	15.4	6.2		8.5	
Green Extension Time (*g e*), s	0.0	4.7	0.1	5.4	0.1	0.0	0.4	0.0
Phase Call Probability	1.00	1.00	1.00	1.00	1.00		1.00	
Max Out Probability	1.00	0.90	0.02	0.81	0.92		0.15	

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate (*v*), veh/h	380	316	179	54	251	295	114	830	270	193	1098	215
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1810	1900	1610	1810	1900	1610	1810	1900	1847	1810	1809	1610
Queue Service Time (*g s*), s	11.5	15.0	9.4	1.9	11.4	13.4	4.2	12.3	12.4	6.5	29.2	10.4
Cycle Queue Clearance Time (*g c*), s	11.5	15.0	9.4	1.9	11.4	13.4	4.2	12.3	12.4	6.5	29.2	10.4
Green Ratio (*g/C*)	0.36	0.25	0.25	0.36	0.25	0.40	0.38	0.28	0.28	0.45	0.33	0.33
Capacity (*c*), veh/h	411	471	399	364	471	649	271	1590	515	433	1190	530
Volume-to-Capacity Ratio (*X*)	0.926	0.672	0.449	0.147	0.532	0.454	0.423	0.522	0.525	0.445	0.922	0.407
Back of Queue (*Q*), ft/ln (95 th percentile)	278.7	302	173.9	38	235	223.9	124.7	243.9	251.9	124.9	526.5	192.8
Back of Queue (*Q*), veh/ln (95 th percentile)	11.1	12.1	7.0	1.5	9.4	9.0	5.0	9.8	10.1	5.0	21.1	7.7
Queue Storage Ratio (*RQ*) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (*d 1*), s/veh	31.3	33.9	31.8	22.4	32.6	21.8	24.1	30.4	30.4	18.3	32.3	26.0
Incremental Delay (*d 2*), s/veh	26.9	4.9	1.7	0.2	2.1	1.1	1.0	1.2	3.8	0.7	13.1	2.3
Initial Queue Delay (*d 3*), 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
Control Delay (*d*), s/veh	58.3	38.8	33.5	22.6	34.7	22.9	25.1	31.6	34.2	19.0	45.4	28.3
Level of Service (LOS)	E	D	C	C	C	C	C	C	C	B	D	C
Approach Delay, s/veh / LOS	46.2	D		27.8	C		31.6	C		39.6	D	
Intersection Delay, s/veh / LOS	37.0						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.60	C	2.73	C	2.14	B	2.14	B
Bicycle LOS Score / LOS	1.93	B	1.48	A	0.99	A	1.73	B

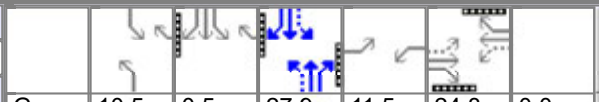
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Linscott, Law & Greenspan			Duration, h	0.250
Analyst	JAS	Analysis Date	Jun 22, 2021	Area Type	Other
Jurisdiction	City of Glendale	Time Period	Cumulative Plus Project - PM	PHF	0.97
Urban Street	Brand Boulevard	Analysis Year	2029	Analysis Period	1> 17:00
Intersection	Brand / Doran	File Name	03PM - Cumulative Plus Project.xus		
Project Description	606 N. Maryland Avenue Residential				

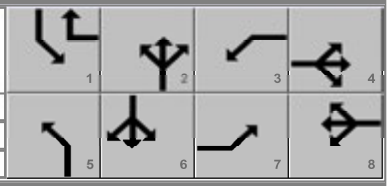


Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	368	324	174	57	256	318	111	1024	53	205	1065	209

Signal Information			
Cycle, s	100.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



Green	10.5	0.5	27.9	11.5	24.8	0.0
Yellow	3.5	3.5	3.5	3.5	3.5	0.0
Red	1.0	1.0	1.6	1.0	2.7	0.0



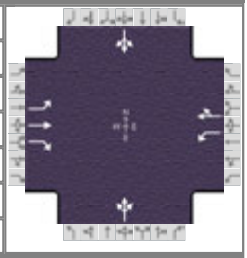
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	7	4	3	8	5	2	1	6
Case Number	1.1	3.0	1.1	3.0	1.1	4.0	1.1	3.0
Phase Duration, s	16.0	31.0	16.0	31.0	15.0	33.0	20.0	38.0
Change Period, ($Y+R_c$), s	4.5	6.2	4.5	6.2	4.5	5.1	4.5	5.1
Max Allow Headway (*MAH*), s	4.3	6.3	4.3	6.3	4.3	0.0	4.3	0.0
Queue Clearance Time (g_s), s	13.5	18.0	4.1	17.3	6.2		9.2	
Green Extension Time (g_e), s	0.0	4.4	0.1	4.8	0.1	0.0	0.4	0.0
Phase Call Probability	1.00	1.00	1.00	1.00	1.00		1.00	
Max Out Probability	1.00	0.97	0.03	0.93	0.92		0.27	

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate (*v*), veh/h	379	334	179	59	264	328	114	839	272	211	1098	215
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1810	1900	1610	1810	1900	1610	1810	1900	1834	1810	1809	1610
Queue Service Time (g_s), s	11.5	16.0	9.4	2.1	12.1	15.3	4.2	12.4	12.5	7.2	29.2	10.4
Cycle Queue Clearance Time (g_c), s	11.5	16.0	9.4	2.1	12.1	15.3	4.2	12.4	12.5	7.2	29.2	10.4
Green Ratio (*g/C*)	0.36	0.25	0.25	0.36	0.25	0.40	0.38	0.28	0.28	0.45	0.33	0.33
Capacity (*c*), veh/h	401	471	399	352	471	649	271	1590	512	432	1190	530
Volume-to-Capacity Ratio (*X*)	0.946	0.709	0.449	0.167	0.560	0.505	0.423	0.527	0.531	0.490	0.922	0.407
Back of Queue (*Q*), ft/ln (95 th percentile)	291.9	322.2	173.9	41.9	247.7	249.3	124.7	246.6	253.5	138.8	526.5	192.8
Back of Queue (*Q*), veh/ln (95 th percentile)	11.7	12.9	7.0	1.7	9.9	10.0	5.0	9.9	10.1	5.6	21.1	7.7
Queue Storage Ratio (*RQ*) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d_1), s/veh	31.5	34.3	31.8	22.7	32.8	22.4	24.1	30.5	30.5	18.7	32.3	26.0
Incremental Delay (d_2), s/veh	31.4	6.1	1.7	0.2	2.5	1.3	1.0	1.3	3.9	0.9	13.1	2.3
Initial Queue Delay (d_3), 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
Control Delay (*d*), s/veh	63.0	40.4	33.5	22.9	35.4	23.7	25.1	31.7	34.4	19.5	45.4	28.3
Level of Service (LOS)	E	D	C	C	D	C	C	C	C	B	D	C
Approach Delay, s/veh / LOS	48.6	D		28.4	C		31.7	C		39.4	D	
Intersection Delay, s/veh / LOS	37.5						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.60	C	2.73	C	2.14	B	2.14	B
Bicycle LOS Score / LOS	1.96	B	1.56	B	0.99	A	1.75	B

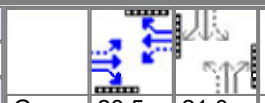
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Linscott, Law & Greenspan			Duration, h	0.250
Analyst	JAS	Analysis Date	Mar 4, 2021	Area Type	Other
Jurisdiction	City of Glendale	Time Period	Existing - AM	PHF	0.94
Urban Street	Doran Street	Analysis Year	2021	Analysis Period	1> 7:45
Intersection	Maryland / Doran	File Name	04AM - Existing.xus		
Project Description	606 N. Maryland Avenue Residential				

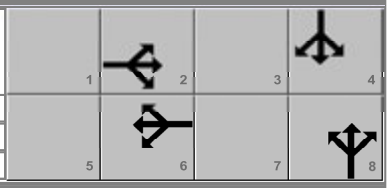


Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	39	104	291	81	332	7	32	14	36	4	107	55

Signal Information			
Cycle, s	60.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



Green	28.5	21.0	0.0	0.0	0.0	0.0
Yellow	3.6	3.6	0.0	0.0	0.0	0.0
Red	1.5	1.8	0.0	0.0	0.0	0.0



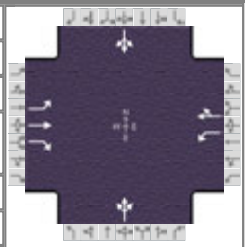
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2		6		8		4
Case Number		5.0		6.0		8.0		8.0
Phase Duration, s		33.6		33.6		26.4		26.4
Change Period, (*Y+R c*), s		5.1		5.1		5.4		5.4
Max Allow Headway (*MAH*), s		0.0		0.0		4.3		4.3
Queue Clearance Time (*g s*), s						4.0		6.3
Green Extension Time (*g e*), s		0.0		0.0		0.9		0.8
Phase Call Probability						1.00		1.00
Max Out Probability						0.00		0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (*v*), veh/h	41	111	310	86	361			87			177	
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1037	1900	1610	1303	1893			1520			1789	
Queue Service Time (*g s*), s	1.6	1.9	7.5	2.4	7.4			0.0			0.0	
Cycle Queue Clearance Time (*g c*), s	9.1	1.9	7.5	4.3	7.4			2.0			4.3	
Green Ratio (*g/C*)	0.47	0.47	0.47	0.47	0.47			0.35			0.35	
Capacity (*c*), veh/h	484	902	765	696	899			615			688	
Volume-to-Capacity Ratio (*X*)	0.086	0.123	0.405	0.124	0.401			0.142			0.257	
Back of Queue (*Q*), ft/ln (95 th percentile)	18	35.4	120.5	30.6	137.2			34.5			73.6	
Back of Queue (*Q*), veh/ln (95 th percentile)	0.7	1.4	4.8	1.2	5.5			1.4			2.9	
Queue Storage Ratio (*RQ*) (95 th percentile)	0.00	0.00	0.00	0.00	0.00			0.00			0.00	
Uniform Delay (*d 1*), s/veh	13.2	8.8	10.2	10.0	10.2			13.3			14.1	
Incremental Delay (*d 2*), s/veh	0.3	0.3	1.6	0.4	1.3			0.1			0.2	
Initial Queue Delay (*d 3*), s/veh	0.0	0.0	0.0	0.0	0.0			0.0			0.0	
Control Delay (*d*), s/veh	13.5	9.1	11.8	10.4	11.6			13.4			14.3	
Level of Service (LOS)	B	A	B	B	B			B			B	
Approach Delay, s/veh / LOS	11.3	B		11.3	B		13.4	B		14.3	B	
Intersection Delay, s/veh / LOS	11.9						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.69	B	1.69	B	1.92	B	2.11	B
Bicycle LOS Score / LOS	1.25	A	1.22	A	0.63	A	0.78	A

HCS7 Signalized Intersection Results Summary

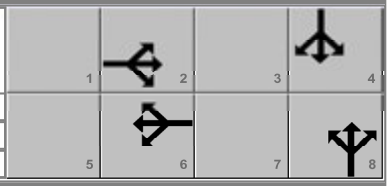
General Information				Intersection Information	
Agency	Linscott, Law & Greenspan			Duration, h	0.250
Analyst	JAS	Analysis Date	Mar 10, 2021	Area Type	Other
Jurisdiction	City of Glendale	Time Period	Opening Year - AM	PHF	0.94
Urban Street	Doran Street	Analysis Year	2024	Analysis Period	1> 7:45
Intersection	Maryland / Doran	File Name	04AM - Opening Year.xus		
Project Description	606 N. Maryland Avenue Residential				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	40	116	300	83	359	7	33	14	37	4	110	57

Signal Information			
Cycle, s	60.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	19.9	29.6	0.0	0.0	0.0	0.0	
Yellow	3.6	3.6	0.0	0.0	0.0	0.0	
Red	1.5	1.8	0.0	0.0	0.0	0.0	



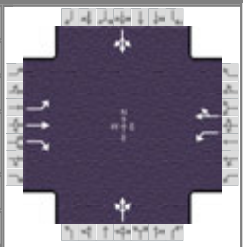
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2		6		8		4
Case Number		5.0		6.0		8.0		8.0
Phase Duration, s		25.0		25.0		35.0		35.0
Change Period, ($Y+R_c$), s		5.1		5.1		5.4		5.4
Max Allow Headway (*MAH*), s		0.0		0.0		4.3		4.3
Queue Clearance Time (g_s), s						3.6		5.4
Green Extension Time (g_e), s		0.0		0.0		1.0		1.0
Phase Call Probability						1.00		1.00
Max Out Probability						0.00		0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (*v*), veh/h	43	123	319	88	389			89			182	
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1010	1900	1610	1288	1893			1499			1789	
Queue Service Time (g_s), s	2.2	2.8	9.9	3.2	10.4			0.0			0.0	
Cycle Queue Clearance Time (g_c), s	12.6	2.8	9.9	5.9	10.4			1.6			3.4	
Green Ratio (*g/C*)	0.33	0.33	0.33	0.33	0.33			0.49			0.49	
Capacity (*c*), veh/h	280	630	534	487	628			823			944	
Volume-to-Capacity Ratio (*X*)	0.152	0.196	0.598	0.181	0.620			0.109			0.193	
Back of Queue (*Q*), ft/ln (95 th percentile)	26.7	55.9	184.5	44.4	215.3			25.2			53.9	
Back of Queue (*Q*), veh/ln (95 th percentile)	1.1	2.2	7.4	1.8	8.6			1.0			2.2	
Queue Storage Ratio (*RQ*) (95 th percentile)	0.00	0.00	0.00	0.00	0.00			0.00			0.00	
Uniform Delay (d_1), s/veh	22.2	14.3	16.7	16.5	16.9			8.1			8.6	
Incremental Delay (d_2), s/veh	1.1	0.7	4.9	0.8	4.6			0.1			0.1	
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0			0.0			0.0	
Control Delay (*d*), s/veh	23.3	15.0	21.6	17.3	21.4			8.2			8.7	
Level of Service (LOS)	C	B	C	B	C			A			A	
Approach Delay, s/veh / LOS	20.1	C		20.7	C		8.2	A		8.7	A	
Intersection Delay, s/veh / LOS	17.8						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.69	B	1.69	B	1.90	B	2.09	B
Bicycle LOS Score / LOS	1.29	A	1.28	A	0.64	A	0.79	A

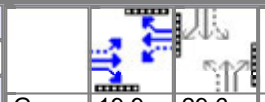
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Linscott, Law & Greenspan			Duration, h	0.250
Analyst	JAS	Analysis Date	Mar 10, 2021	Area Type	Other
Jurisdiction	City of Glendale	Time Period	Opening Year Plus Project - AM	PHF	0.94
Urban Street	Doran Street	Analysis Year	2024	Analysis Period	1> 7:45
Intersection	Maryland / Doran	File Name	04AM - Opening Year Plus Project.xus		
Project Description	606 N. Maryland Avenue Residential				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	66	116	300	83	359	8	33	15	37	8	114	113

Signal Information			
Cycle, s	60.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



							1	2	3	4
Green	19.9	29.6	0.0	0.0	0.0	0.0	5	6	7	8
Yellow	3.6	3.6	0.0	0.0	0.0	0.0				
Red	1.5	1.8	0.0	0.0	0.0	0.0				

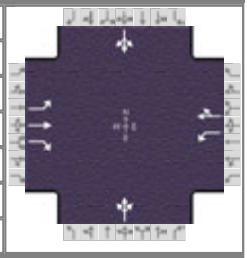
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2		6		8		4
Case Number		5.0		6.0		8.0		8.0
Phase Duration, s		25.0		25.0		35.0		35.0
Change Period, ($Y+R_c$), s		5.1		5.1		5.4		5.4
Max Allow Headway (*MAH*), s		0.0		0.0		4.4		4.4
Queue Clearance Time (g_s), s						3.6		7.1
Green Extension Time (g_e), s		0.0		0.0		1.4		1.3
Phase Call Probability						1.00		1.00
Max Out Probability						0.00		0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (*v*), veh/h	70	123	319	88	390			90			250	
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1009	1900	1610	1288	1893			1472			1743	
Queue Service Time (g_s), s	3.8	2.8	9.9	3.2	10.4			0.0			0.0	
Cycle Queue Clearance Time (g_c), s	14.2	2.8	9.9	5.9	10.4			1.6			5.1	
Green Ratio (*g/C*)	0.33	0.33	0.33	0.33	0.33			0.49			0.49	
Capacity (*c*), veh/h	279	630	534	487	628			809			922	
Volume-to-Capacity Ratio (*X*)	0.251	0.196	0.598	0.181	0.622			0.112			0.271	
Back of Queue (*Q*), ft/ln (95 th percentile)	46.1	55.9	184.5	44.4	215.9			25.5			77.7	
Back of Queue (*Q*), veh/ln (95 th percentile)	1.8	2.2	7.4	1.8	8.6			1.0			3.1	
Queue Storage Ratio (*RQ*) (95 th percentile)	0.00	0.00	0.00	0.00	0.00			0.00			0.00	
Uniform Delay (d_1), s/veh	22.9	14.3	16.7	16.5	16.9			8.1			9.0	
Incremental Delay (d_2), s/veh	2.1	0.7	4.9	0.8	4.6			0.1			0.2	
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0			0.0			0.0	
Control Delay (*d*), s/veh	25.0	15.0	21.6	17.3	21.5			8.2			9.1	
Level of Service (LOS)	C	B	C	B	C			A			A	
Approach Delay, s/veh / LOS	20.5	C		20.7	C		8.2	A		9.1	A	
Intersection Delay, s/veh / LOS	17.6						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.69	B	1.69	B	1.90	B	2.09	B
Bicycle LOS Score / LOS	1.33	A	1.28	A	0.64	A	0.90	A

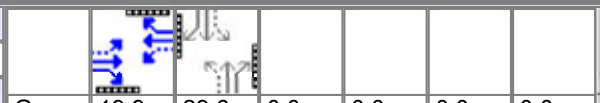
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Linscott, Law & Greenspan			Duration, h	0.250
Analyst	JAS	Analysis Date	Mar 10, 2021	Area Type	Other
Jurisdiction	City of Glendale	Time Period	Cumulative - AM	PHF	0.94
Urban Street	Doran Street	Analysis Year	2029	Analysis Period	1> 7:45
Intersection	Maryland / Doran	File Name	04AM - Cumulative.xus		
Project Description	606 N. Maryland Avenue Residential				

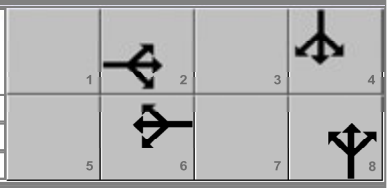


Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	42	122	315	88	377	8	35	15	39	4	116	60

Signal Information			
Cycle, s	60.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



Green	19.9	29.6	0.0	0.0	0.0	0.0
Yellow	3.6	3.6	0.0	0.0	0.0	0.0
Red	1.5	1.8	0.0	0.0	0.0	0.0



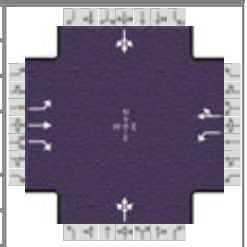
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2		6		8		4
Case Number		5.0		6.0		8.0		8.0
Phase Duration, s		25.0		25.0		35.0		35.0
Change Period, ($Y+R_c$), s		5.1		5.1		5.4		5.4
Max Allow Headway (*MAH*), s		0.0		0.0		4.3		4.3
Queue Clearance Time (g_s), s						3.7		5.6
Green Extension Time (g_e), s		0.0		0.0		1.1		1.1
Phase Call Probability						1.00		1.00
Max Out Probability						0.00		0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (*v*), veh/h	45	130	335	94	410			95			191	
Adjusted Saturation Flow Rate (*s*), veh/h/ln	992	1900	1610	1280	1893			1494			1789	
Queue Service Time (g_s), s	2.4	2.9	10.5	3.4	11.1			0.0			0.0	
Cycle Queue Clearance Time (g_c), s	13.5	2.9	10.5	6.3	11.1			1.7			3.6	
Green Ratio (*g/C*)	0.33	0.33	0.33	0.33	0.33			0.49			0.49	
Capacity (*c*), veh/h	266	630	534	482	628			821			944	
Volume-to-Capacity Ratio (*X*)	0.168	0.206	0.627	0.194	0.652			0.115			0.203	
Back of Queue (*Q*), ft/ln (95 th percentile)	28.8	59	196.3	47.7	228.4			26.7			57.2	
Back of Queue (*Q*), veh/ln (95 th percentile)	1.2	2.4	7.9	1.9	9.1			1.1			2.3	
Queue Storage Ratio (*RQ*) (95 th percentile)	0.00	0.00	0.00	0.00	0.00			0.00			0.00	
Uniform Delay (d_1), s/veh	22.9	14.4	16.9	16.7	17.1			8.1			8.6	
Incremental Delay (d_2), s/veh	1.4	0.7	5.5	0.9	5.2			0.1			0.1	
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0			0.0			0.0	
Control Delay (*d*), s/veh	24.2	15.1	22.4	17.6	22.3			8.2			8.7	
Level of Service (LOS)	C	B	C	B	C			A			A	
Approach Delay, s/veh / LOS	20.7	C		21.4	C		8.2	A		8.7	A	
Intersection Delay, s/veh / LOS	18.3						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.69	B	1.69	B	1.90	B	2.09	B
Bicycle LOS Score / LOS	1.33	A	1.32	A	0.64	A	0.80	A

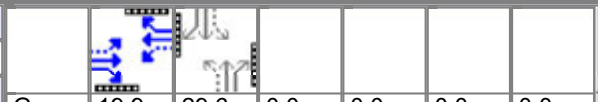
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Linscott, Law & Greenspan			Duration, h	0.250
Analyst	JAS	Analysis Date	Mar 10, 2021	Area Type	Other
Jurisdiction	City of Glendale	Time Period	Cumulative Plus Project - AM	PHF	0.94
Urban Street	Doran Street	Analysis Year	2029	Analysis Period	1> 7:45
Intersection	Maryland / Doran	File Name	04AM - Cumulative Plus Project.xus		
Project Description	606 N. Maryland Avenue Residential				

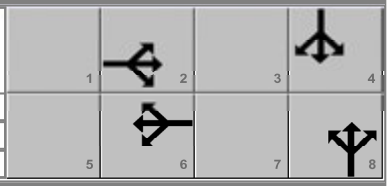


Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	68	122	315	88	377	9	35	16	39	8	120	116

Signal Information			
Cycle, s	60.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



Green	19.9	29.6	0.0	0.0	0.0	0.0	
Yellow	3.6	3.6	0.0	0.0	0.0	0.0	
Red	1.5	1.8	0.0	0.0	0.0	0.0	



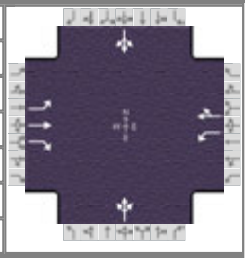
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2		6		8		4
Case Number		5.0		6.0		8.0		8.0
Phase Duration, s		25.0		25.0		35.0		35.0
Change Period, ($Y+R_c$), s		5.1		5.1		5.4		5.4
Max Allow Headway (*MAH*), s		0.0		0.0		4.4		4.4
Queue Clearance Time (g_s), s						3.7		7.3
Green Extension Time (g_e), s		0.0		0.0		1.4		1.4
Phase Call Probability						1.00		1.00
Max Out Probability						0.00		0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (*v*), veh/h	72	130	335	94	411			96			260	
Adjusted Saturation Flow Rate (*s*), veh/h/ln	991	1900	1610	1280	1892			1467			1744	
Queue Service Time (g_s), s	4.0	2.9	10.5	3.4	11.1			0.0			0.0	
Cycle Queue Clearance Time (g_c), s	15.2	2.9	10.5	6.3	11.1			1.7			5.3	
Green Ratio (*g/C*)	0.33	0.33	0.33	0.33	0.33			0.49			0.49	
Capacity (*c*), veh/h	265	630	534	482	628			807			922	
Volume-to-Capacity Ratio (*X*)	0.273	0.206	0.627	0.194	0.654			0.119			0.281	
Back of Queue (*Q*), ft/ln (95 th percentile)	49	59	196.3	47.7	229.1			27.1			81.4	
Back of Queue (*Q*), veh/ln (95 th percentile)	2.0	2.4	7.9	1.9	9.2			1.1			3.3	
Queue Storage Ratio (*RQ*) (95 th percentile)	0.00	0.00	0.00	0.00	0.00			0.00			0.00	
Uniform Delay (d_1), s/veh	23.6	14.4	16.9	16.7	17.1			8.1			9.0	
Incremental Delay (d_2), s/veh	2.5	0.7	5.5	0.9	5.3			0.1			0.2	
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0			0.0			0.0	
Control Delay (*d*), s/veh	26.1	15.1	22.4	17.6	22.4			8.2			9.2	
Level of Service (LOS)	C	B	C	B	C			A			A	
Approach Delay, s/veh / LOS	21.2	C		21.5	C		8.2	A		9.2	A	
Intersection Delay, s/veh / LOS	18.2						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.69	B	1.69	B	1.90	B	2.09	B
Bicycle LOS Score / LOS	1.37	A	1.32	A	0.65	A	0.92	A

HCS7 Signalized Intersection Results Summary

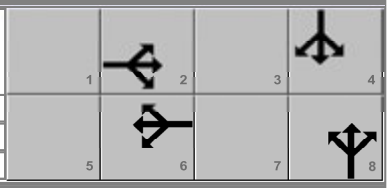
General Information				Intersection Information	
Agency	Linscott, Law & Greenspan			Duration, h	0.250
Analyst	JAS	Analysis Date	Mar 4, 2021	Area Type	Other
Jurisdiction	City of Glendale	Time Period	Existing - PM	PHF	0.91
Urban Street	Doran Street	Analysis Year	2021	Analysis Period	1> 17:00
Intersection	Maryland / Doran	File Name	04PM - Existing.xus		
Project Description	606 N. Maryland Avenue Residential				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	51	361	77	35	224	14	204	117	205	20	87	90

Signal Information			
Cycle, s	60.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	19.9	29.6	0.0	0.0	0.0	0.0	
Yellow	3.6	3.6	0.0	0.0	0.0	0.0	
Red	1.5	1.8	0.0	0.0	0.0	0.0	



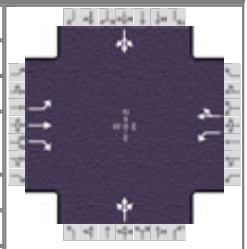
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2		6		8		4
Case Number		5.0		6.0		8.0		8.0
Phase Duration, s		25.0		25.0		35.0		35.0
Change Period, ($Y+R_c$), s		5.1		5.1		5.4		5.4
Max Allow Headway (*MAH*), s		0.0		0.0		4.5		4.5
Queue Clearance Time (g_s), s						20.8		6.3
Green Extension Time (g_e), s		0.0		0.0		2.6		3.9
Phase Call Probability						1.00		1.00
Max Out Probability						0.40		0.02

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (*v*), veh/h	56	397	85	38	262			578			216	
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1136	1900	1610	1003	1880			1498			1709	
Queue Service Time (g_s), s	2.4	10.6	2.2	2.0	6.5			14.5			0.0	
Cycle Queue Clearance Time (g_c), s	8.9	10.6	2.2	12.6	6.5			18.8			4.3	
Green Ratio (*g/C*)	0.33	0.33	0.33	0.33	0.33			0.49			0.49	
Capacity (*c*), veh/h	374	630	534	276	624			822			909	
Volume-to-Capacity Ratio (*X*)	0.150	0.630	0.158	0.139	0.419			0.703			0.238	
Back of Queue (*Q*), ft/ln (95 th percentile)	31.2	219.4	38.3	24.2	132.2			250.4			65.9	
Back of Queue (*Q*), veh/ln (95 th percentile)	1.2	8.8	1.5	1.0	5.3			10.0			2.6	
Queue Storage Ratio (*RQ*) (95 th percentile)	0.00	0.00	0.00	0.00	0.00			0.00			0.00	
Uniform Delay (d_1), s/veh	19.0	16.9	14.1	22.3	15.6			12.3			8.8	
Incremental Delay (d_2), s/veh	0.8	4.7	0.6	1.1	2.1			2.7			0.1	
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0			0.0			0.0	
Control Delay (*d*), s/veh	19.9	21.7	14.8	23.3	17.6			15.0			8.9	
Level of Service (LOS)	B	C	B	C	B			B			A	
Approach Delay, s/veh / LOS	20.4	C		18.4	B		15.0	B		8.9	A	
Intersection Delay, s/veh / LOS	16.6						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.69	B	1.69	B	1.90	B	2.09	B
Bicycle LOS Score / LOS	1.37	A	0.98	A	1.44	A	0.84	A

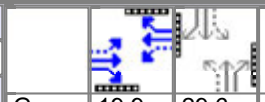
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Linscott, Law & Greenspan			Duration, h	0.250
Analyst	JAS	Analysis Date	Mar 10, 2021	Area Type	Other
Jurisdiction	City of Glendale	Time Period	Opening Year - PM	PHF	0.91
Urban Street	Doran Street	Analysis Year	2024	Analysis Period	1> 17:00
Intersection	Maryland / Doran	File Name	04PM - Opening Year.xus		
Project Description	606 N. Maryland Avenue Residential				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	53	390	79	36	248	14	210	121	211	21	90	93

Signal Information			
Cycle, s	60.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



							1	2	3	4
Green	19.9	29.6	0.0	0.0	0.0	0.0	5	6	7	8
Yellow	3.6	3.6	0.0	0.0	0.0	0.0				
Red	1.5	1.8	0.0	0.0	0.0	0.0				

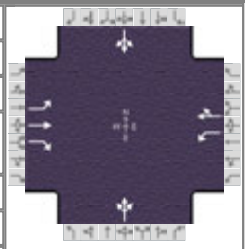
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2		6		8		4
Case Number		5.0		6.0		8.0		8.0
Phase Duration, s		25.0		25.0		35.0		35.0
Change Period, ($Y+R_c$), s		5.1		5.1		5.4		5.4
Max Allow Headway (*MAH*), s		0.0		0.0		4.5		4.5
Queue Clearance Time (g_s), s						21.9		6.4
Green Extension Time (g_e), s		0.0		0.0		2.5		4.0
Phase Call Probability						1.00		1.00
Max Out Probability						0.52		0.02

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (*v*), veh/h	58	429	87	40	288			596			224	
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1109	1900	1610	974	1882			1494			1712	
Queue Service Time (g_s), s	2.6	11.7	2.3	2.2	7.2			15.4			0.0	
Cycle Queue Clearance Time (g_c), s	9.9	11.7	2.3	13.9	7.2			19.9			4.4	
Green Ratio (*g/C*)	0.33	0.33	0.33	0.33	0.33			0.49			0.49	
Capacity (*c*), veh/h	354	630	534	253	624			820			911	
Volume-to-Capacity Ratio (*X*)	0.165	0.680	0.163	0.156	0.461			0.726			0.246	
Back of Queue (*Q*), ft/ln (95 th percentile)	33.4	241.2	39.4	25.9	149			263.6			68.6	
Back of Queue (*Q*), veh/ln (95 th percentile)	1.3	9.6	1.6	1.0	6.0			10.5			2.7	
Queue Storage Ratio (*RQ*) (95 th percentile)	0.00	0.00	0.00	0.00	0.00			0.00			0.00	
Uniform Delay (d_1), s/veh	19.7	17.3	14.2	23.3	15.8			12.5			8.8	
Incremental Delay (d_2), s/veh	1.0	5.8	0.7	1.3	2.4			3.2			0.1	
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0			0.0			0.0	
Control Delay (*d*), s/veh	20.7	23.1	14.8	24.6	18.3			15.8			9.0	
Level of Service (LOS)	C	C	B	C	B			B			A	
Approach Delay, s/veh / LOS	21.6	C		19.0	B		15.8	B		9.0	A	
Intersection Delay, s/veh / LOS	17.5						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.69	B	1.69	B	1.90	B	2.09	B
Bicycle LOS Score / LOS	1.43	A	1.03	A	1.47	A	0.86	A

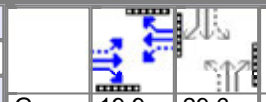
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Linscott, Law & Greenspan			Duration, h	0.250
Analyst	JAS	Analysis Date	Jun 22, 2021	Area Type	Other
Jurisdiction	City of Glendale	Time Period	Opening Year Plus Project - PM	PHF	0.91
Urban Street	Doran Street	Analysis Year	2024	Analysis Period	1> 17:00
Intersection	Maryland / Doran	File Name	04PM - Opening Year Plus Project.xus		
Project Description	606 N. Maryland Avenue Residential				

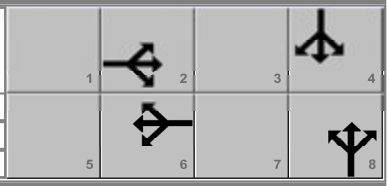


Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	98	390	79	36	248	18	210	125	211	23	92	144

Signal Information			
Cycle, s	60.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



Green	19.9	29.6	0.0	0.0	0.0	0.0
Yellow	3.6	3.6	0.0	0.0	0.0	0.0
Red	1.5	1.8	0.0	0.0	0.0	0.0



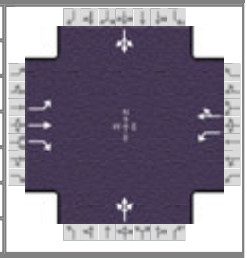
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2		6		8		4
Case Number		5.0		6.0		8.0		8.0
Phase Duration, s		25.0		25.0		35.0		35.0
Change Period, ($Y+R_c$), s		5.1		5.1		5.4		5.4
Max Allow Headway (*MAH*), s		0.0		0.0		4.5		4.5
Queue Clearance Time (g_s), s						22.7		8.0
Green Extension Time (g_e), s		0.0		0.0		2.5		4.4
Phase Call Probability						1.00		1.00
Max Out Probability						0.65		0.05

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (*v*), veh/h	108	429	87	40	292			600			285	
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1104	1900	1610	974	1877			1465			1701	
Queue Service Time (g_s), s	5.1	11.7	2.3	2.2	7.4			14.7			0.0	
Cycle Queue Clearance Time (g_c), s	12.5	11.7	2.3	13.9	7.4			20.7			6.0	
Green Ratio (*g/C*)	0.33	0.33	0.33	0.33	0.33			0.49			0.49	
Capacity (*c*), veh/h	350	630	534	253	623			806			905	
Volume-to-Capacity Ratio (*X*)	0.308	0.680	0.163	0.156	0.469			0.744			0.315	
Back of Queue (*Q*), ft/ln (95 th percentile)	66.3	241.2	39.4	25.9	152			271.8			91.2	
Back of Queue (*Q*), veh/ln (95 th percentile)	2.7	9.6	1.6	1.0	6.1			10.9			3.6	
Queue Storage Ratio (*RQ*) (95 th percentile)	0.00	0.00	0.00	0.00	0.00			0.00			0.00	
Uniform Delay (d_1), s/veh	20.8	17.3	14.2	23.3	15.9			12.7			9.2	
Incremental Delay (d_2), s/veh	2.3	5.8	0.7	1.3	2.5			3.8			0.2	
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0			0.0			0.0	
Control Delay (*d*), s/veh	23.1	23.1	14.8	24.6	18.4			16.5			9.4	
Level of Service (LOS)	C	C	B	C	B			B			A	
Approach Delay, s/veh / LOS	22.0	C		19.1	B		16.5	B		9.4	A	
Intersection Delay, s/veh / LOS	17.7						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.69	B	1.69	B	1.90	B	2.09	B
Bicycle LOS Score / LOS	1.52	B	1.04	A	1.48	A	0.96	A

HCS7 Signalized Intersection Results Summary

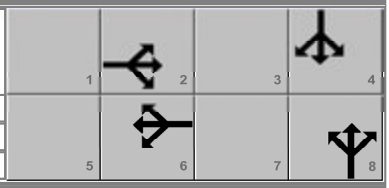
General Information				Intersection Information	
Agency	Linscott, Law & Greenspan			Duration, h	0.250
Analyst	JAS	Analysis Date	Mar 10, 2021	Area Type	Other
Jurisdiction	City of Glendale	Time Period	Cumulative - PM	PHF	0.91
Urban Street	Doran Street	Analysis Year	2029	Analysis Period	1> 17:00
Intersection	Maryland / Doran	File Name	04PM - Cumulative.xus		
Project Description	606 N. Maryland Avenue Residential				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	55	409	83	38	260	15	221	127	222	22	94	97

Signal Information			
Cycle, s	60.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	19.9	29.6	0.0	0.0	0.0	0.0	
Yellow	3.6	3.6	0.0	0.0	0.0	0.0	
Red	1.5	1.8	0.0	0.0	0.0	0.0	



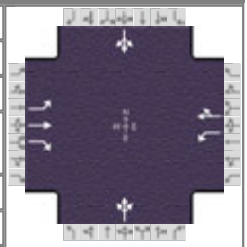
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2		6		8		4
Case Number		5.0		6.0		8.0		8.0
Phase Duration, s		25.0		25.0		35.0		35.0
Change Period, ($Y+R_c$), s		5.1		5.1		5.4		5.4
Max Allow Headway (*MAH*), s		0.0		0.0		4.5		4.5
Queue Clearance Time (g_s), s						23.9		6.7
Green Extension Time (g_e), s		0.0		0.0		2.2		4.3
Phase Call Probability						1.00		1.00
Max Out Probability						0.79		0.03

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (*v*), veh/h	60	449	91	42	302			626			234	
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1094	1900	1610	956	1882			1487			1717	
Queue Service Time (g_s), s	2.8	12.4	2.4	2.4	7.7			17.2			0.0	
Cycle Queue Clearance Time (g_c), s	10.5	12.4	2.4	14.8	7.7			21.9			4.7	
Green Ratio (*g/C*)	0.33	0.33	0.33	0.33	0.33			0.49			0.49	
Capacity (*c*), veh/h	343	630	534	239	624			817			913	
Volume-to-Capacity Ratio (*X*)	0.176	0.713	0.171	0.175	0.484			0.767			0.256	
Back of Queue (*Q*), ft/ln (95 th percentile)	35.3	256.3	41.6	28.2	158.4			289.9			72.2	
Back of Queue (*Q*), veh/ln (95 th percentile)	1.4	10.3	1.7	1.1	6.3			11.6			2.9	
Queue Storage Ratio (*RQ*) (95 th percentile)	0.00	0.00	0.00	0.00	0.00			0.00			0.00	
Uniform Delay (d_1), s/veh	20.1	17.6	14.2	24.0	16.0			13.1			8.9	
Incremental Delay (d_2), s/veh	1.1	6.8	0.7	1.6	2.7			4.4			0.1	
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0			0.0			0.0	
Control Delay (*d*), s/veh	21.3	24.3	14.9	25.6	18.6			17.5			9.0	
Level of Service (LOS)	C	C	B	C	B			B			A	
Approach Delay, s/veh / LOS	22.6	C		19.5	B		17.5	B		9.0	A	
Intersection Delay, s/veh / LOS	18.5						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.69	B	1.69	B	1.90	B	2.09	B
Bicycle LOS Score / LOS	1.48	A	1.06	A	1.52	B	0.87	A

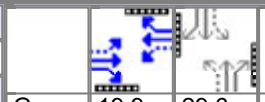
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Linscott, Law & Greenspan			Duration, h	0.250
Analyst	JAS	Analysis Date	Jun 22, 2021	Area Type	Other
Jurisdiction	City of Glendale	Time Period	Cumulative Plus Project - PM	PHF	0.91
Urban Street	Doran Street	Analysis Year	2029	Analysis Period	1> 17:00
Intersection	Maryland / Doran	File Name	04PM - Cumulative Plus Project.xus		
Project Description	606 N. Maryland Avenue Residential				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	100	409	83	38	260	19	221	131	222	24	96	148

Signal Information			
Cycle, s	60.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



							1	2	3	4
Green	19.9	29.6	0.0	0.0	0.0	0.0	5	6	7	8
Yellow	3.6	3.6	0.0	0.0	0.0	0.0				
Red	1.5	1.8	0.0	0.0	0.0	0.0				

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2		6		8		4
Case Number		5.0		6.0		8.0		8.0
Phase Duration, s		25.0		25.0		35.0		35.0
Change Period, ($Y+R_c$), s		5.1		5.1		5.4		5.4
Max Allow Headway (*MAH*), s		0.0		0.0		4.5		4.5
Queue Clearance Time (g_s), s						24.9		8.2
Green Extension Time (g_e), s		0.0		0.0		2.0		4.7
Phase Call Probability						1.00		1.00
Max Out Probability						0.97		0.06

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (*v*), veh/h	110	449	91	42	307			631			295	
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1090	1900	1610	956	1877			1458			1711	
Queue Service Time (g_s), s	5.4	12.4	2.4	2.4	7.8			16.7			0.0	
Cycle Queue Clearance Time (g_c), s	13.2	12.4	2.4	14.8	7.8			22.9			6.2	
Green Ratio (*g/C*)	0.33	0.33	0.33	0.33	0.33			0.49			0.49	
Capacity (*c*), veh/h	339	630	534	239	623			802			909	
Volume-to-Capacity Ratio (*X*)	0.324	0.713	0.171	0.175	0.492			0.786			0.324	
Back of Queue (*Q*), ft/ln (95 th percentile)	69.3	256.3	41.6	28.2	161.5			299.8			94.7	
Back of Queue (*Q*), veh/ln (95 th percentile)	2.8	10.3	1.7	1.1	6.5			12.0			3.8	
Queue Storage Ratio (*RQ*) (95 th percentile)	0.00	0.00	0.00	0.00	0.00			0.00			0.00	
Uniform Delay (d_1), s/veh	21.3	17.6	14.2	24.0	16.0			13.3			9.3	
Incremental Delay (d_2), s/veh	2.5	6.8	0.7	1.6	2.8			5.2			0.2	
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0			0.0			0.0	
Control Delay (*d*), s/veh	23.8	24.3	14.9	25.6	18.8			18.5			9.5	
Level of Service (LOS)	C	C	B	C	B			B			A	
Approach Delay, s/veh / LOS	22.9	C		19.6	B		18.5	B		9.5	A	
Intersection Delay, s/veh / LOS	18.8						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.69	B	1.69	B	1.90	B	2.09	B
Bicycle LOS Score / LOS	1.56	B	1.06	A	1.53	B	0.97	A

HCS7 Two-Way Stop-Control Report

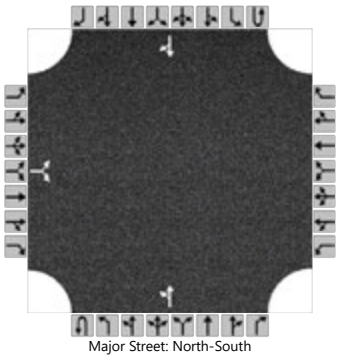
General Information

Analyst	JAS
Agency/Co.	Linscott, Law & Greenspan
Date Performed	2/22/2021
Analysis Year	2021
Time Analyzed	Existing - AM
Intersection Orientation	North-South
Project Description	606 N. Maryland Avenue Residential

Site Information

Intersection	Louise/Maryland
Jurisdiction	City of Glendale
East/West Street	Maryland Place
North/South Street	Louise Street
Peak Hour Factor	0.87
Analysis Time Period (hrs)	0.25

Lanes



Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	0	0	0	0	1	0	0	0	1	0
Configuration			LR							LT						TR
Volume (veh/h)		15		16						14	193				305	183
Percent Heavy Vehicles (%)		3		3						3						
Proportion Time Blocked																
Percent Grade (%)		0														
Right Turn Channelized																
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1		6.2						4.1						
Critical Headway (sec)		6.43		6.23						4.13						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		3.53		3.33						2.23						

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			36							16						
Capacity, c (veh/h)			478							1005						
v/c Ratio			0.07							0.02						
95% Queue Length, Q_{95} (veh)			0.2							0.0						
Control Delay (s/veh)			13.1							8.6						
Level of Service (LOS)			B							A						
Approach Delay (s/veh)		13.1								0.7						
Approach LOS		B														

HCS7 Two-Way Stop-Control Report

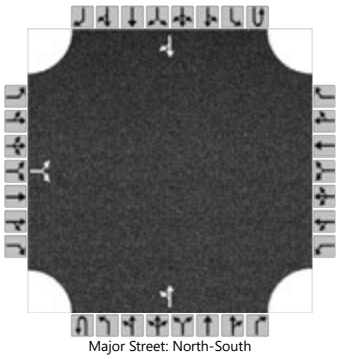
General Information

Analyst	JAS
Agency/Co.	Linscott, Law & Greenspan
Date Performed	3/10/2021
Analysis Year	2024
Time Analyzed	Opening Year - AM
Intersection Orientation	North-South
Project Description	606 N. Maryland Avenue Residential

Site Information

Intersection	Louise/Maryland
Jurisdiction	City of Glendale
East/West Street	Maryland Place
North/South Street	Louise Street
Peak Hour Factor	0.87
Analysis Time Period (hrs)	0.25

Lanes



Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	0	0	0	0	1	0	0	0	1	0
Configuration			LR							LT						TR
Volume (veh/h)		15		16						14	203				318	189
Percent Heavy Vehicles (%)		3		3						3						
Proportion Time Blocked																
Percent Grade (%)		0														
Right Turn Channelized																
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1		6.2						4.1						
Critical Headway (sec)		6.43		6.23						4.13						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		3.53		3.33						2.23						

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			36							16						
Capacity, c (veh/h)			462							987						
v/c Ratio			0.08							0.02						
95% Queue Length, Q_{95} (veh)			0.2							0.0						
Control Delay (s/veh)			13.4							8.7						
Level of Service (LOS)			B							A						
Approach Delay (s/veh)		13.4								0.7						
Approach LOS		B														

HCS7 Two-Way Stop-Control Report

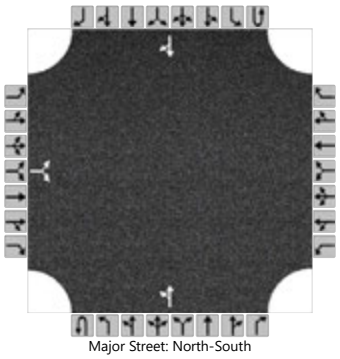
General Information

Analyst	JAS
Agency/Co.	Linscott, Law & Greenspan
Date Performed	3/10/2021
Analysis Year	2024
Time Analyzed	Opening Year + Proj - AM
Intersection Orientation	North-South
Project Description	606 N. Maryland Avenue Residential

Site Information

Intersection	Louise/Maryland
Jurisdiction	City of Glendale
East/West Street	Maryland Place
North/South Street	Louise Street
Peak Hour Factor	0.87
Analysis Time Period (hrs)	0.25

Lanes



Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	0	0	0	0	1	0	0	0	1	0
Configuration			LR							LT						TR
Volume (veh/h)		21		16						14	203				318	192
Percent Heavy Vehicles (%)		3		3						3						
Proportion Time Blocked																
Percent Grade (%)		0														
Right Turn Channelized																
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1		6.2						4.1						
Critical Headway (sec)		6.43		6.23						4.13						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		3.53		3.33						2.23						

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			43							16						
Capacity, c (veh/h)			444							984						
v/c Ratio			0.10							0.02						
95% Queue Length, Q_{95} (veh)			0.3							0.0						
Control Delay (s/veh)			14.0							8.7						
Level of Service (LOS)			B							A						
Approach Delay (s/veh)		14.0								0.7						
Approach LOS		B														

HCS7 Two-Way Stop-Control Report

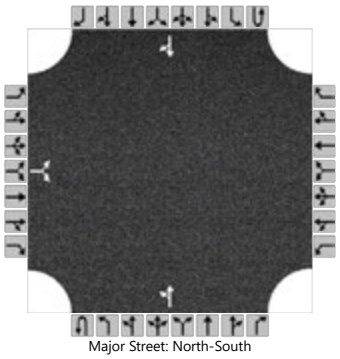
General Information

Analyst	JAS
Agency/Co.	Linscott, Law & Greenspan
Date Performed	3/10/2021
Analysis Year	2029
Time Analyzed	Cumulative - AM
Intersection Orientation	North-South
Project Description	606 N. Maryland Avenue Residential

Site Information

Intersection	Louise/Maryland
Jurisdiction	City of Glendale
East/West Street	Maryland Place
North/South Street	Louise Street
Peak Hour Factor	0.87
Analysis Time Period (hrs)	0.25

Lanes



Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	0	0	0	0	1	0	0	0	1	0
Configuration			LR							LT						TR
Volume (veh/h)		16		17						15	213				334	198
Percent Heavy Vehicles (%)		3		3						3						
Proportion Time Blocked																
Percent Grade (%)		0														
Right Turn Channelized																
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1		6.2						4.1						
Critical Headway (sec)		6.43		6.23						4.13						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		3.53		3.33						2.23						

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			38							17						
Capacity, c (veh/h)			442							963						
v/c Ratio			0.09							0.02						
95% Queue Length, Q_{95} (veh)			0.3							0.1						
Control Delay (s/veh)			13.9							8.8						
Level of Service (LOS)			B							A						
Approach Delay (s/veh)		13.9								0.8						
Approach LOS		B														

HCS7 Two-Way Stop-Control Report

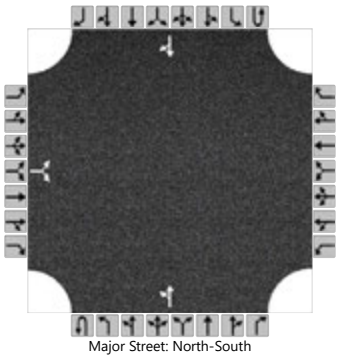
General Information

Analyst	JAS
Agency/Co.	Linscott, Law & Greenspan
Date Performed	3/10/2021
Analysis Year	2029
Time Analyzed	Cumulative + Project - AM
Intersection Orientation	North-South
Project Description	606 N. Maryland Avenue Residential

Site Information

Intersection	Louise/Maryland
Jurisdiction	City of Glendale
East/West Street	Maryland Place
North/South Street	Louise Street
Peak Hour Factor	0.87
Analysis Time Period (hrs)	0.25

Lanes



Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	0	0	0	0	1	0	0	0	1	0
Configuration			LR							LT						TR
Volume (veh/h)		22		17						15	213				334	201
Percent Heavy Vehicles (%)		3		3						3						
Proportion Time Blocked																
Percent Grade (%)		0														
Right Turn Channelized																
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1		6.2						4.1						
Critical Headway (sec)		6.43		6.23						4.13						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		3.53		3.33						2.23						

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			45							17						
Capacity, c (veh/h)			425							960						
v/c Ratio			0.11							0.02						
95% Queue Length, Q_{95} (veh)			0.4							0.1						
Control Delay (s/veh)			14.5							8.8						
Level of Service (LOS)			B							A						
Approach Delay (s/veh)		14.5								0.8						
Approach LOS		B														

HCS7 Two-Way Stop-Control Report

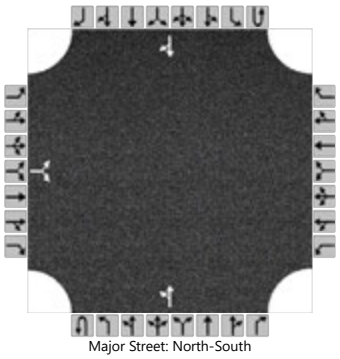
General Information

Analyst	JAS
Agency/Co.	Linscott, Law & Greenspan
Date Performed	2/22/2021
Analysis Year	2021
Time Analyzed	Existing - PM
Intersection Orientation	North-South
Project Description	606 N. Maryland Avenue Residential

Site Information

Intersection	Louise/Maryland
Jurisdiction	City of Glendale
East/West Street	Maryland Place
North/South Street	Louise Street
Peak Hour Factor	0.95
Analysis Time Period (hrs)	0.25

Lanes



Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	0	0	0	0	1	0	0	0	1	0
Configuration			LR							LT						TR
Volume (veh/h)		138		32						18	421				399	92
Percent Heavy Vehicles (%)		3		3						3						
Proportion Time Blocked																
Percent Grade (%)		0														
Right Turn Channelized																
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1		6.2						4.1						
Critical Headway (sec)		6.43		6.23						4.13						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		3.53		3.33						2.23						

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			179							19						
Capacity, c (veh/h)			312							1044						
v/c Ratio			0.57							0.02						
95% Queue Length, Q_{95} (veh)			3.4							0.1						
Control Delay (s/veh)			31.0							8.5						
Level of Service (LOS)			D							A						
Approach Delay (s/veh)		31.0								0.5						
Approach LOS		D														

HCS7 Two-Way Stop-Control Report

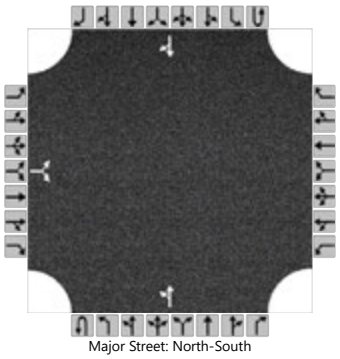
General Information

Analyst	JAS
Agency/Co.	Linscott, Law & Greenspan
Date Performed	3/10/2021
Analysis Year	2024
Time Analyzed	Opening Year - PM
Intersection Orientation	North-South
Project Description	606 N. Maryland Avenue Residential

Site Information

Intersection	Louise/Maryland
Jurisdiction	City of Glendale
East/West Street	Maryland Place
North/South Street	Louise Street
Peak Hour Factor	0.95
Analysis Time Period (hrs)	0.25

Lanes



Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	0	0	0	0	1	0	0	0	1	0
Configuration			LR							LT						TR
Volume (veh/h)		142		33						19	438				417	95
Percent Heavy Vehicles (%)		3		3						3						
Proportion Time Blocked																
Percent Grade (%)		0														
Right Turn Channelized																
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1		6.2						4.1						
Critical Headway (sec)		6.43		6.23						4.13						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		3.53		3.33						2.23						

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			184							20						
Capacity, c (veh/h)			295							1024						
v/c Ratio			0.62							0.02						
95% Queue Length, Q_{95} (veh)			3.9							0.1						
Control Delay (s/veh)			35.5							8.6						
Level of Service (LOS)			E							A						
Approach Delay (s/veh)		35.5								0.6						
Approach LOS		E														

HCS7 Two-Way Stop-Control Report

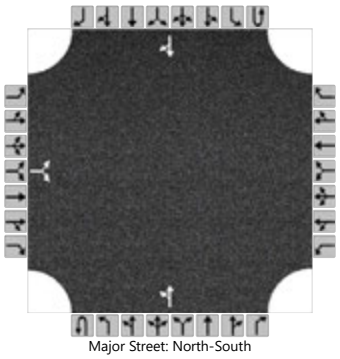
General Information

Analyst	JAS
Agency/Co.	Linscott, Law & Greenspan
Date Performed	3/10/2021
Analysis Year	2024
Time Analyzed	Opening Year + Proj - PM
Intersection Orientation	North-South
Project Description	606 N. Maryland Avenue Residential

Site Information

Intersection	Louise/Maryland
Jurisdiction	City of Glendale
East/West Street	Maryland Place
North/South Street	Louise Street
Peak Hour Factor	0.95
Analysis Time Period (hrs)	0.25

Lanes



Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	0	0	0	0	1	0	0	0	1	0
Configuration			LR							LT						TR
Volume (veh/h)		145		33						19	438				417	107
Percent Heavy Vehicles (%)		3		3						3						
Proportion Time Blocked																
Percent Grade (%)		0														
Right Turn Channelized																
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1		6.2						4.1						
Critical Headway (sec)		6.43		6.23						4.13						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		3.53		3.33						2.23						

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			187							20						
Capacity, c (veh/h)			292							1013						
v/c Ratio			0.64							0.02						
95% Queue Length, Q_{95} (veh)			4.1							0.1						
Control Delay (s/veh)			37.0							8.6						
Level of Service (LOS)			E							A						
Approach Delay (s/veh)		37.0								0.6						
Approach LOS		E														

HCS7 Two-Way Stop-Control Report

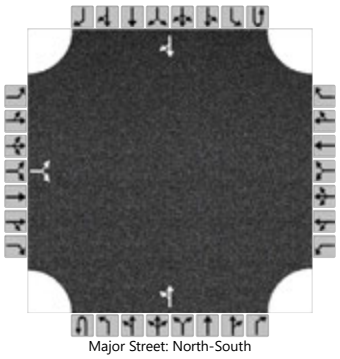
General Information

Analyst	JAS
Agency/Co.	Linscott, Law & Greenspan
Date Performed	3/10/2021
Analysis Year	2029
Time Analyzed	Cumulative - PM
Intersection Orientation	North-South
Project Description	606 N. Maryland Avenue Residential

Site Information

Intersection	Louise/Maryland
Jurisdiction	City of Glendale
East/West Street	Maryland Place
North/South Street	Louise Street
Peak Hour Factor	0.95
Analysis Time Period (hrs)	0.25

Lanes



Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	0	0	0	0	1	0	0	0	1	0
Configuration			LR							LT						TR
Volume (veh/h)		149		35						19	460				438	100
Percent Heavy Vehicles (%)		3		3						3						
Proportion Time Blocked																
Percent Grade (%)		0														
Right Turn Channelized																
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1		6.2						4.1						
Critical Headway (sec)		6.43		6.23						4.13						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		3.53		3.33						2.23						

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			194							20						
Capacity, c (veh/h)			277							1001						
v/c Ratio			0.70							0.02						
95% Queue Length, Q_{95} (veh)			4.8							0.1						
Control Delay (s/veh)			43.4							8.7						
Level of Service (LOS)			E							A						
Approach Delay (s/veh)		43.4								0.6						
Approach LOS		E														

HCS7 Two-Way Stop-Control Report

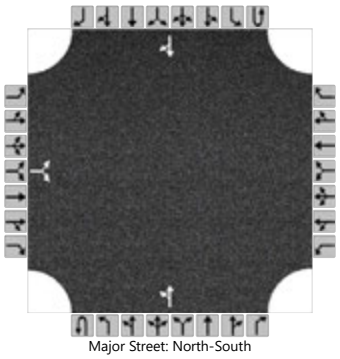
General Information

Analyst	JAS
Agency/Co.	Linscott, Law & Greenspan
Date Performed	3/10/2021
Analysis Year	2029
Time Analyzed	Cumulative + Project - PM
Intersection Orientation	North-South
Project Description	606 N. Maryland Avenue Residential

Site Information

Intersection	Louise/Maryland
Jurisdiction	City of Glendale
East/West Street	Maryland Place
North/South Street	Louise Street
Peak Hour Factor	0.95
Analysis Time Period (hrs)	0.25

Lanes



Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	0	0	0	0	1	0	0	0	1	0
Configuration			LR							LT						TR
Volume (veh/h)		152		35						19	460				438	112
Percent Heavy Vehicles (%)		3		3						3						
Proportion Time Blocked																
Percent Grade (%)		0														
Right Turn Channelized																
Median Type | Storage		Undivided														

Critical and Follow-up Headways

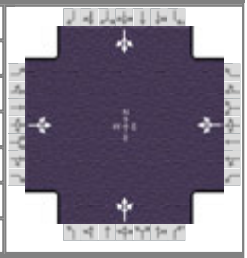
Base Critical Headway (sec)		7.1		6.2						4.1						
Critical Headway (sec)		6.43		6.23						4.13						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		3.53		3.33						2.23						

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			197							20						
Capacity, c (veh/h)			274							990						
v/c Ratio			0.72							0.02						
95% Queue Length, Q_{95} (veh)			5.0							0.1						
Control Delay (s/veh)			45.6							8.7						
Level of Service (LOS)			E							A						
Approach Delay (s/veh)		45.6								0.6						
Approach LOS		E														

HCS7 Signalized Intersection Results Summary

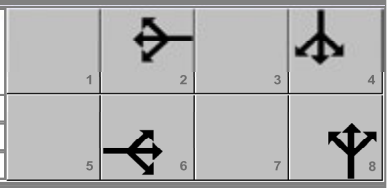
General Information				Intersection Information	
Agency	Linscott, Law & Greenspan			Duration, h	0.250
Analyst	JAS	Analysis Date	Mar 4, 2021	Area Type	Other
Jurisdiction	City of Glendale	Time Period	Existing - AM	PHF	0.90
Urban Street	Doran Street	Analysis Year	2021	Analysis Period	1> 7:45
Intersection	Louise / Doran	File Name	06AM - Existing.xus		
Project Description	606 N. Maryland Avenue Residential				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	18	84	47	25	312	50	64	146	23	36	251	48

Signal Information			
Cycle, s	60.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	25.2	25.1	0.0	0.0	0.0	0.0
Yellow	3.6	3.6	0.0	0.0	0.0	0.0
Red	1.2	1.3	0.0	0.0	0.0	0.0



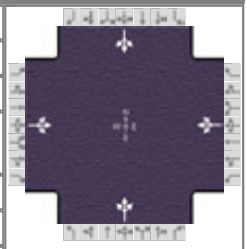
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		6		2		8		4
Case Number		8.0		8.0		8.0		8.0
Phase Duration, s		30.0		30.0		30.0		30.0
Change Period, ($Y+R_c$), s		4.8		4.8		4.9		4.9
Max Allow Headway (*MAH*), s		0.0		0.0		4.3		4.3
Queue Clearance Time (g_s), s						7.7		10.8
Green Extension Time (g_e), s		0.0		0.0		2.5		2.3
Phase Call Probability						1.00		1.00
Max Out Probability						0.02		0.05

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	1	6	16	5	2	12	3	8	18	7	4	14
Adjusted Flow Rate (*v*), veh/h		166			430			259			372	
Adjusted Saturation Flow Rate (*s*), veh/h/ln		1708			1829			1611			1794	
Queue Service Time (g_s), s		0.0			0.0			0.0			0.0	
Cycle Queue Clearance Time (g_c), s		3.5			10.5			5.7			8.8	
Green Ratio (*g/C*)		0.42			0.42			0.42			0.42	
Capacity (*c*), veh/h		784			832			750			817	
Volume-to-Capacity Ratio (*X*)		0.211			0.517			0.345			0.456	
Back of Queue (*Q*), ft/ln (95 th percentile)		63.5			198.1			97.4			151.1	
Back of Queue (*Q*), veh/ln (95 th percentile)		2.5			7.9			3.9			6.0	
Queue Storage Ratio (*RQ*) (95 th percentile)		0.00			0.00			0.00			0.00	
Uniform Delay (d_1), s/veh		11.1			13.1			11.8			12.7	
Incremental Delay (d_2), s/veh		0.6			2.3			0.3			0.4	
Initial Queue Delay (d_3), s/veh		0.0			0.0			0.0			0.0	
Control Delay (*d*), s/veh		11.7			15.4			12.1			13.1	
Level of Service (LOS)		B			B			B			B	
Approach Delay, s/veh / LOS	11.7		B	15.4		B	12.1		B	13.1		B
Intersection Delay, s/veh / LOS	13.5						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.68	B	1.68	B	1.69	B	1.69	B
Bicycle LOS Score / LOS	0.76	A	1.20	A	0.91	A	1.10	A

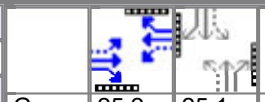
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Linscott, Law & Greenspan			Duration, h	0.250
Analyst	JAS	Analysis Date	Mar 11, 2021	Area Type	Other
Jurisdiction	City of Glendale	Time Period	Opening Year - AM	PHF	0.90
Urban Street	Doran Street	Analysis Year	2024	Analysis Period	1> 7:45
Intersection	Louise / Doran	File Name	06AM - Opening Year.xus		
Project Description	606 N. Maryland Avenue Residential				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	19	96	48	26	338	53	66	153	24	37	263	49

Signal Information			
Cycle, s	60.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



							1	2	3	4
Green	25.2	25.1	0.0	0.0	0.0	0.0	5	6	7	8
Yellow	3.6	3.6	0.0	0.0	0.0	0.0				
Red	1.2	1.3	0.0	0.0	0.0	0.0				

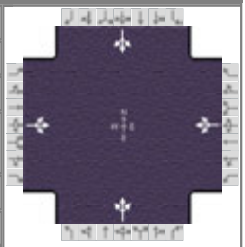
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		6		2		8		4
Case Number		8.0		8.0		8.0		8.0
Phase Duration, s		30.0		30.0		30.0		30.0
Change Period, ($Y+R_c$), s		4.8		4.8		4.9		4.9
Max Allow Headway (*MAH*), s		0.0		0.0		4.3		4.3
Queue Clearance Time (g_s), s						8.1		11.2
Green Extension Time (g_e), s		0.0		0.0		2.6		2.4
Phase Call Probability						1.00		1.00
Max Out Probability						0.03		0.07

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	1	6	16	5	2	12	3	8	18	7	4	14
Adjusted Flow Rate (*v*), veh/h		181			463			270			388	
Adjusted Saturation Flow Rate (*s*), veh/h/ln		1713			1829			1608			1793	
Queue Service Time (g_s), s		0.0			0.0			0.0			0.0	
Cycle Queue Clearance Time (g_c), s		3.9			11.6			6.1			9.2	
Green Ratio (*g/C*)		0.42			0.42			0.42			0.42	
Capacity (*c*), veh/h		787			832			749			817	
Volume-to-Capacity Ratio (*X*)		0.230			0.557			0.360			0.475	
Back of Queue (*Q*), ft/ln (95 th percentile)		70.3			215.2			102.3			159	
Back of Queue (*Q*), veh/ln (95 th percentile)		2.8			8.6			4.1			6.4	
Queue Storage Ratio (*RQ*) (95 th percentile)		0.00			0.00			0.00			0.00	
Uniform Delay (d_1), s/veh		11.2			13.4			11.9			12.8	
Incremental Delay (d_2), s/veh		0.7			2.7			0.3			0.4	
Initial Queue Delay (d_3), s/veh		0.0			0.0			0.0			0.0	
Control Delay (*d*), s/veh		11.9			16.1			12.2			13.3	
Level of Service (LOS)		B			B			B			B	
Approach Delay, s/veh / LOS	11.9	B		16.1	B		12.2	B		13.3	B	
Intersection Delay, s/veh / LOS	13.9						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.68	B	1.68	B	1.69	B	1.69	B
Bicycle LOS Score / LOS	0.79	A	1.25	A	0.93	A	1.13	A

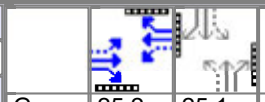
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Linscott, Law & Greenspan			Duration, h	0.250
Analyst	JAS	Analysis Date	Mar 11, 2021	Area Type	Other
Jurisdiction	City of Glendale	Time Period	Opening Year Plus Project - AM	PHF	0.90
Urban Street	Doran Street	Analysis Year	2024	Analysis Period	1> 7:45
Intersection	Louise / Doran	File Name	06AM - Opening Year Plus Project.xus		
Project Description	606 N. Maryland Avenue Residential				

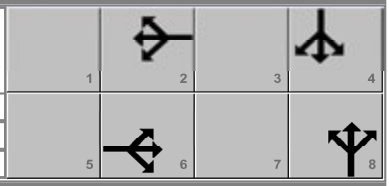


Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	19	100	48	26	339	53	66	153	24	37	263	49

Signal Information			
Cycle, s	60.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



Green	25.2	25.1	0.0	0.0	0.0	0.0
Yellow	3.6	3.6	0.0	0.0	0.0	0.0
Red	1.2	1.3	0.0	0.0	0.0	0.0



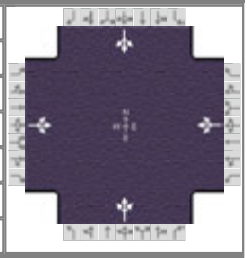
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		6		2		8		4
Case Number		8.0		8.0		8.0		8.0
Phase Duration, s		30.0		30.0		30.0		30.0
Change Period, ($Y+R_c$), s		4.8		4.8		4.9		4.9
Max Allow Headway (*MAH*), s		0.0		0.0		4.3		4.3
Queue Clearance Time (g_s), s						8.1		11.2
Green Extension Time (g_e), s		0.0		0.0		2.6		2.4
Phase Call Probability						1.00		1.00
Max Out Probability						0.03		0.07

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	1	6	16	5	2	12	3	8	18	7	4	14
Adjusted Flow Rate (*v*), veh/h		186			464			270			388	
Adjusted Saturation Flow Rate (*s*), veh/h/ln		1719			1829			1608			1793	
Queue Service Time (g_s), s		0.0			0.0			0.0			0.0	
Cycle Queue Clearance Time (g_c), s		4.0			11.6			6.1			9.2	
Green Ratio (*g/C*)		0.42			0.42			0.42			0.42	
Capacity (*c*), veh/h		789			832			749			817	
Volume-to-Capacity Ratio (*X*)		0.235			0.558			0.360			0.475	
Back of Queue (*Q*), ft/ln (95 th percentile)		72.1			215.7			102.3			159	
Back of Queue (*Q*), veh/ln (95 th percentile)		2.9			8.6			4.1			6.4	
Queue Storage Ratio (*RQ*) (95 th percentile)		0.00			0.00			0.00			0.00	
Uniform Delay (d_1), s/veh		11.2			13.5			11.9			12.8	
Incremental Delay (d_2), s/veh		0.7			2.7			0.3			0.4	
Initial Queue Delay (d_3), s/veh		0.0			0.0			0.0			0.0	
Control Delay (*d*), s/veh		11.9			16.2			12.2			13.3	
Level of Service (LOS)		B			B			B			B	
Approach Delay, s/veh / LOS	11.9	B		16.2	B		12.2	B		13.3	B	
Intersection Delay, s/veh / LOS	13.9						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.68	B	1.68	B	1.69	B	1.69	B
Bicycle LOS Score / LOS	0.79	A	1.25	A	0.93	A	1.13	A

HCS7 Signalized Intersection Results Summary

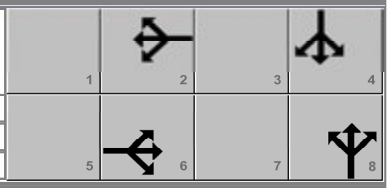
General Information				Intersection Information	
Agency	Linscott, Law & Greenspan			Duration, h	0.250
Analyst	JAS	Analysis Date	Mar 11, 2021	Area Type	Other
Jurisdiction	City of Glendale	Time Period	Cumulative - AM	PHF	0.90
Urban Street	Doran Street	Analysis Year	2029	Analysis Period	1> 7:45
Intersection	Louise / Doran	File Name	06AM - Cumulative.xus		
Project Description	606 N. Maryland Avenue Residential				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	19	100	51	27	355	55	69	161	25	39	276	52

Signal Information			
Cycle, s	60.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	25.2	25.1	0.0	0.0	0.0	0.0
Yellow	3.6	3.6	0.0	0.0	0.0	0.0
Red	1.2	1.3	0.0	0.0	0.0	0.0



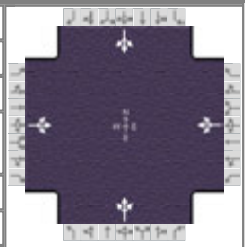
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		6		2		8		4
Case Number		8.0		8.0		8.0		8.0
Phase Duration, s		30.0		30.0		30.0		30.0
Change Period, ($Y+R_c$), s		4.8		4.8		4.9		4.9
Max Allow Headway (*MAH*), s		0.0		0.0		4.3		4.3
Queue Clearance Time (g_s), s						8.5		11.8
Green Extension Time (g_e), s		0.0		0.0		2.7		2.5
Phase Call Probability						1.00		1.00
Max Out Probability						0.04		0.10

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	1	6	16	5	2	12	3	8	18	7	4	14
Adjusted Flow Rate (*v*), veh/h		189			486			283			408	
Adjusted Saturation Flow Rate (*s*), veh/h/ln		1714			1828			1602			1790	
Queue Service Time (g_s), s		0.0			0.0			0.0			0.0	
Cycle Queue Clearance Time (g_c), s		4.1			12.3			6.5			9.8	
Green Ratio (*g/C*)		0.42			0.42			0.42			0.42	
Capacity (*c*), veh/h		787			832			747			815	
Volume-to-Capacity Ratio (*X*)		0.240			0.584			0.380			0.500	
Back of Queue (*Q*), ft/ln (95 th percentile)		73.7			227			108.5			170	
Back of Queue (*Q*), veh/ln (95 th percentile)		2.9			9.1			4.3			6.8	
Queue Storage Ratio (*RQ*) (95 th percentile)		0.00			0.00			0.00			0.00	
Uniform Delay (d_1), s/veh		11.3			13.7			12.0			13.0	
Incremental Delay (d_2), s/veh		0.7			3.0			0.3			0.5	
Initial Queue Delay (d_3), s/veh		0.0			0.0			0.0			0.0	
Control Delay (*d*), s/veh		12.0			16.7			12.3			13.5	
Level of Service (LOS)		B			B			B			B	
Approach Delay, s/veh / LOS	12.0		B	16.7		B	12.3		B	13.5		B
Intersection Delay, s/veh / LOS	14.2						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.68	B	1.68	B	1.69	B	1.69	B
Bicycle LOS Score / LOS	0.80	A	1.29	A	0.96	A	1.16	A

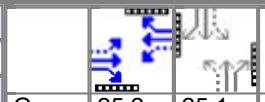
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Linscott, Law & Greenspan			Duration, h	0.250
Analyst	JAS	Analysis Date	Mar 11, 2021	Area Type	Other
Jurisdiction	City of Glendale	Time Period	Cumulative Plus Project - AM	PHF	0.90
Urban Street	Doran Street	Analysis Year	2029	Analysis Period	1> 7:45
Intersection	Louise / Doran	File Name	06AM - Cumulative Plus Project.xus		
Project Description	606 N. Maryland Avenue Residential				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	19	104	51	27	356	55	69	161	25	39	276	52

Signal Information			
Cycle, s	60.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



							1	2	3	4
Green	25.2	25.1	0.0	0.0	0.0	0.0	5	6	7	8
Yellow	3.6	3.6	0.0	0.0	0.0	0.0				
Red	1.2	1.3	0.0	0.0	0.0	0.0				

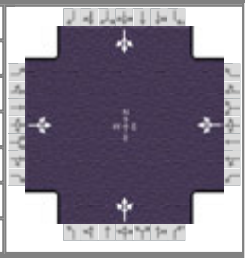
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		6		2		8		4
Case Number		8.0		8.0		8.0		8.0
Phase Duration, s		30.0		30.0		30.0		30.0
Change Period, ($Y+R_c$), s		4.8		4.8		4.9		4.9
Max Allow Headway (*MAH*), s		0.0		0.0		4.3		4.3
Queue Clearance Time (g_s), s						8.5		11.8
Green Extension Time (g_e), s		0.0		0.0		2.7		2.5
Phase Call Probability						1.00		1.00
Max Out Probability						0.04		0.10

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	1	6	16	5	2	12	3	8	18	7	4	14
Adjusted Flow Rate (*v*), veh/h		193			487			283			408	
Adjusted Saturation Flow Rate (*s*), veh/h/ln		1719			1828			1602			1790	
Queue Service Time (g_s), s		0.0			0.0			0.0			0.0	
Cycle Queue Clearance Time (g_c), s		4.2			12.3			6.5			9.8	
Green Ratio (*g/C*)		0.42			0.42			0.42			0.42	
Capacity (*c*), veh/h		789			832			747			815	
Volume-to-Capacity Ratio (*X*)		0.245			0.585			0.380			0.500	
Back of Queue (*Q*), ft/ln (95 th percentile)		75.7			227.5			108.5			170	
Back of Queue (*Q*), veh/ln (95 th percentile)		3.0			9.1			4.3			6.8	
Queue Storage Ratio (*RQ*) (95 th percentile)		0.00			0.00			0.00			0.00	
Uniform Delay (d_1), s/veh		11.3			13.7			12.0			13.0	
Incremental Delay (d_2), s/veh		0.7			3.0			0.3			0.5	
Initial Queue Delay (d_3), s/veh		0.0			0.0			0.0			0.0	
Control Delay (*d*), s/veh		12.0			16.7			12.3			13.5	
Level of Service (LOS)		B			B			B			B	
Approach Delay, s/veh / LOS	12.0		B	16.7		B	12.3		B	13.5		B
Intersection Delay, s/veh / LOS	14.2						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.68	B	1.68	B	1.69	B	1.69	B
Bicycle LOS Score / LOS	0.81	A	1.29	A	0.96	A	1.16	A

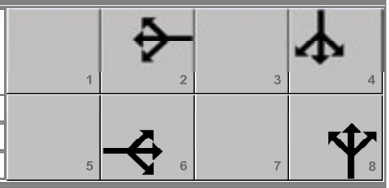
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Linscott, Law & Greenspan			Duration, h	0.250
Analyst	JAS	Analysis Date	Mar 4, 2021	Area Type	Other
Jurisdiction	City of Glendale	Time Period	Existing - PM	PHF	0.94
Urban Street	Doran Street	Analysis Year	2021	Analysis Period	1> 17:00
Intersection	Louise / Doran	File Name	06PM - Existing.xus		
Project Description	606 N. Maryland Avenue Residential				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	115	425	41	19	192	77	42	248	27	62	313	38

Signal Information			
Cycle, s	60.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

							
Green	25.2	25.1	0.0	0.0	0.0	0.0	
Yellow	3.6	3.6	0.0	0.0	0.0	0.0	
Red	1.2	1.3	0.0	0.0	0.0	0.0	

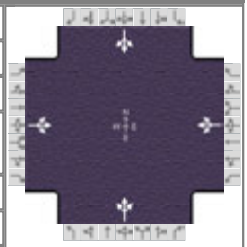
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		6		2		8		4
Case Number		8.0		8.0		8.0		8.0
Phase Duration, s		30.0		30.0		30.0		30.0
Change Period, ($Y+R_c$), s		4.8		4.8		4.9		4.9
Max Allow Headway (*MAH*), s		0.0		0.0		4.3		4.3
Queue Clearance Time (g_s), s						9.7		13.1
Green Extension Time (g_e), s		0.0		0.0		3.0		2.7
Phase Call Probability						1.00		1.00
Max Out Probability						0.07		0.16

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	1	6	16	5	2	12	3	8	18	7	4	14
Adjusted Flow Rate (*v*), veh/h		618			306			337			439	
Adjusted Saturation Flow Rate (*s*), veh/h/ln		1690			1780			1761			1747	
Queue Service Time (g_s), s		12.7			0.0			0.0			3.0	
Cycle Queue Clearance Time (g_c), s		19.8			7.1			7.7			11.1	
Green Ratio (*g/C*)		0.42			0.42			0.42			0.42	
Capacity (*c*), veh/h		782			811			805			800	
Volume-to-Capacity Ratio (*X*)		0.791			0.378			0.419			0.549	
Back of Queue (*Q*), ft/ln (95 th percentile)		332.2			130			133.3			189.2	
Back of Queue (*Q*), veh/ln (95 th percentile)		13.3			5.2			5.3			7.6	
Queue Storage Ratio (*RQ*) (95 th percentile)		0.00			0.00			0.00			0.00	
Uniform Delay (d_1), s/veh		15.6			12.1			12.4			13.3	
Incremental Delay (d_2), s/veh		8.0			1.3			0.3			0.8	
Initial Queue Delay (d_3), s/veh		0.0			0.0			0.0			0.0	
Control Delay (*d*), s/veh		23.6			13.5			12.7			14.1	
Level of Service (LOS)		C			B			B			B	
Approach Delay, s/veh / LOS	23.6	C		13.5	B		12.7	B		14.1	B	
Intersection Delay, s/veh / LOS	17.2						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.68	B	1.68	B	1.69	B	1.69	B
Bicycle LOS Score / LOS	1.51	B	0.99	A	1.04	A	1.21	A

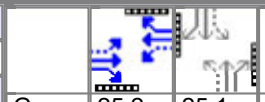
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Linscott, Law & Greenspan			Duration, h	0.250
Analyst	JAS	Analysis Date	Mar 11, 2021	Area Type	Other
Jurisdiction	City of Glendale	Time Period	Opening Year - PM	PHF	0.94
Urban Street	Doran Street	Analysis Year	2024	Analysis Period	1> 17:00
Intersection	Louise / Doran	File Name	06PM - Opening Year.xus		
Project Description	606 N. Maryland Avenue Residential				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	118	456	42	20	215	79	43	260	28	65	327	39

Signal Information			
Cycle, s	60.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



							1	2	3	4
Green	25.2	25.1	0.0	0.0	0.0	0.0	5	6	7	8
Yellow	3.6	3.6	0.0	0.0	0.0	0.0				
Red	1.2	1.3	0.0	0.0	0.0	0.0				

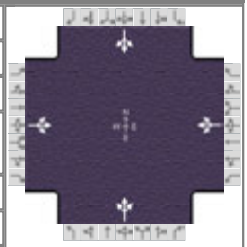
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		6		2		8		4
Case Number		8.0		8.0		8.0		8.0
Phase Duration, s		30.0		30.0		30.0		30.0
Change Period, ($Y+R_c$), s		4.8		4.8		4.9		4.9
Max Allow Headway (*MAH*), s		0.0		0.0		4.3		4.3
Queue Clearance Time (g_s), s						10.1		13.9
Green Extension Time (g_e), s		0.0		0.0		3.1		2.8
Phase Call Probability						1.00		1.00
Max Out Probability						0.09		0.21

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	1	6	16	5	2	12	3	8	18	7	4	14
Adjusted Flow Rate (*v*), veh/h		655			334			352			459	
Adjusted Saturation Flow Rate (*s*), veh/h/ln		1686			1788			1760			1742	
Queue Service Time (g_s), s		14.2			0.0			0.0			3.8	
Cycle Queue Clearance Time (g_c), s		22.0			7.8			8.1			11.9	
Green Ratio (*g/C*)		0.42			0.42			0.42			0.42	
Capacity (*c*), veh/h		780			815			804			798	
Volume-to-Capacity Ratio (*X*)		0.840			0.410			0.438			0.575	
Back of Queue (*Q*), ft/ln (95 th percentile)		371.5			144.6			140.7			199.2	
Back of Queue (*Q*), veh/ln (95 th percentile)		14.9			5.8			5.6			8.0	
Queue Storage Ratio (*RQ*) (95 th percentile)		0.00			0.00			0.00			0.00	
Uniform Delay (d_1), s/veh		16.2			12.4			12.5			13.5	
Incremental Delay (d_2), s/veh		10.6			1.5			0.4			1.0	
Initial Queue Delay (d_3), s/veh		0.0			0.0			0.0			0.0	
Control Delay (*d*), s/veh		26.8			13.9			12.9			14.5	
Level of Service (LOS)		C			B			B			B	
Approach Delay, s/veh / LOS	26.8	C		13.9	B		12.9	B		14.5	B	
Intersection Delay, s/veh / LOS	18.6						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.68	B	1.68	B	1.69	B	1.69	B
Bicycle LOS Score / LOS	1.57	B	1.04	A	1.07	A	1.24	A

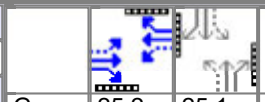
HCS7 Signalized Intersection Results Summary

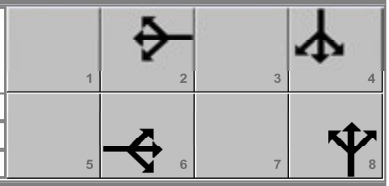
General Information				Intersection Information	
Agency	Linscott, Law & Greenspan			Duration, h	0.250
Analyst	JAS	Analysis Date	Mar 11, 2021	Area Type	Other
Jurisdiction	City of Glendale	Time Period	Opening Year Plus Project - PM	PHF	0.94
Urban Street	Doran Street	Analysis Year	2024	Analysis Period	1> 17:00
Intersection	Louise / Doran	File Name	06PM - Opening Year Plus Project.xus		
Project Description	606 N. Maryland Avenue Residential				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	118	458	42	20	219	79	43	260	28	65	327	39

Signal Information			
Cycle, s	60.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



							
Green	25.2	25.1	0.0	0.0	0.0	0.0	
Yellow	3.6	3.6	0.0	0.0	0.0	0.0	
Red	1.2	1.3	0.0	0.0	0.0	0.0	

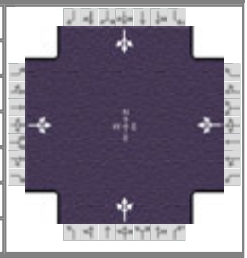
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		6		2		8		4
Case Number		8.0		8.0		8.0		8.0
Phase Duration, s		30.0		30.0		30.0		30.0
Change Period, ($Y+R_c$), s		4.8		4.8		4.9		4.9
Max Allow Headway (*MAH*), s		0.0		0.0		4.3		4.3
Queue Clearance Time (g_s), s						10.1		13.9
Green Extension Time (g_e), s		0.0		0.0		3.1		2.8
Phase Call Probability						1.00		1.00
Max Out Probability						0.09		0.21

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	1	6	16	5	2	12	3	8	18	7	4	14
Adjusted Flow Rate (*v*), veh/h		657			338			352			459	
Adjusted Saturation Flow Rate (*s*), veh/h/ln		1685			1790			1760			1742	
Queue Service Time (g_s), s		14.2			0.0			0.0			3.8	
Cycle Queue Clearance Time (g_c), s		22.1			8.0			8.1			11.9	
Green Ratio (*g/C*)		0.42			0.42			0.42			0.42	
Capacity (*c*), veh/h		779			815			804			798	
Volume-to-Capacity Ratio (*X*)		0.844			0.415			0.438			0.575	
Back of Queue (*Q*), ft/ln (95 th percentile)		374.2			147			140.7			199.2	
Back of Queue (*Q*), veh/ln (95 th percentile)		15.0			5.9			5.6			8.0	
Queue Storage Ratio (*RQ*) (95 th percentile)		0.00			0.00			0.00			0.00	
Uniform Delay (d_1), s/veh		16.3			12.4			12.5			13.5	
Incremental Delay (d_2), s/veh		10.8			1.6			0.4			1.0	
Initial Queue Delay (d_3), s/veh		0.0			0.0			0.0			0.0	
Control Delay (*d*), s/veh		27.1			14.0			12.9			14.5	
Level of Service (LOS)		C			B			B			B	
Approach Delay, s/veh / LOS	27.1	C		14.0	B		12.9	B		14.5	B	
Intersection Delay, s/veh / LOS	18.7						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.68	B	1.68	B	1.69	B	1.69	B
Bicycle LOS Score / LOS	1.57	B	1.05	A	1.07	A	1.24	A

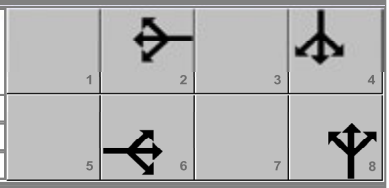
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Linscott, Law & Greenspan			Duration, h	0.250
Analyst	JAS	Analysis Date	Mar 11, 2021	Area Type	Other
Jurisdiction	City of Glendale	Time Period	Cumulative - PM	PHF	0.94
Urban Street	Doran Street	Analysis Year	2029	Analysis Period	1> 17:00
Intersection	Louise / Doran	File Name	06PM - Cumulative.xus		
Project Description	606 N. Maryland Avenue Residential				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	125	478	44	21	225	83	45	273	29	68	344	41

Signal Information					EB			WB			NB			SB		
Cycle, s	60.0	Reference Phase	2													
Offset, s	0	Reference Point	End	Green	25.2	25.1	0.0	0.0	0.0	0.0						
Uncoordinated	No	Simult. Gap E/W	On	Yellow	3.6	3.6	0.0	0.0	0.0	0.0						
Force Mode	Fixed	Simult. Gap N/S	On	Red	1.2	1.3	0.0	0.0	0.0	0.0						



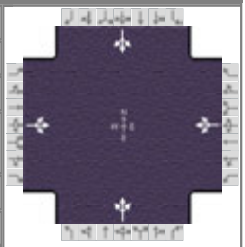
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		6		2		8		4
Case Number		8.0		8.0		8.0		8.0
Phase Duration, s		30.0		30.0		30.0		30.0
Change Period, ($Y+R_c$), s		4.8		4.8		4.9		4.9
Max Allow Headway (*MAH*), s		0.0		0.0		4.3		4.3
Queue Clearance Time (g_s), s						10.6		14.8
Green Extension Time (g_e), s		0.0		0.0		3.3		2.8
Phase Call Probability						1.00		1.00
Max Out Probability						0.12		0.29

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	1	6	16	5	2	12	3	8	18	7	4	14
Adjusted Flow Rate (*v*), veh/h		688			350			369			482	
Adjusted Saturation Flow Rate (*s*), veh/h/ln		1677			1783			1756			1737	
Queue Service Time (g_s), s		15.9			0.0			0.0			4.3	
Cycle Queue Clearance Time (g_c), s		24.2			8.3			8.6			12.8	
Green Ratio (*g/C*)		0.42			0.42			0.42			0.42	
Capacity (*c*), veh/h		776			813			802			796	
Volume-to-Capacity Ratio (*X*)		0.887			0.431			0.460			0.606	
Back of Queue (*Q*), ft/ln (95 th percentile)		417.7			153.8			149.5			212.2	
Back of Queue (*Q*), veh/ln (95 th percentile)		16.7			6.2			6.0			8.5	
Queue Storage Ratio (*RQ*) (95 th percentile)		0.00			0.00			0.00			0.00	
Uniform Delay (d_1), s/veh		16.9			12.5			12.6			13.8	
Incremental Delay (d_2), s/veh		14.2			1.7			0.4			1.3	
Initial Queue Delay (d_3), s/veh		0.0			0.0			0.0			0.0	
Control Delay (*d*), s/veh		31.1			14.2			13.1			15.1	
Level of Service (LOS)		C			B			B			B	
Approach Delay, s/veh / LOS	31.1	C		14.2	B		13.1	B		15.1	B	
Intersection Delay, s/veh / LOS	20.3						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.68	B	1.68	B	1.69	B	1.69	B
Bicycle LOS Score / LOS	1.62	B	1.07	A	1.10	A	1.28	A

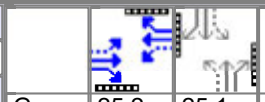
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Linscott, Law & Greenspan			Duration, h	0.250
Analyst	JAS	Analysis Date	Mar 11, 2021	Area Type	Other
Jurisdiction	City of Glendale	Time Period	Cumulative Plus Project - PM	PHF	0.94
Urban Street	Doran Street	Analysis Year	2029	Analysis Period	1> 17:00
Intersection	Louise / Doran	File Name	06PM - Cumulative Plus Project.xus		
Project Description	606 N. Maryland Avenue Residential				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	125	480	44	21	229	83	45	273	29	68	344	41

Signal Information			
Cycle, s	60.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



							1	2	3	4
Green	25.2	25.1	0.0	0.0	0.0	0.0	5	6	7	8
Yellow	3.6	3.6	0.0	0.0	0.0	0.0				
Red	1.2	1.3	0.0	0.0	0.0	0.0				

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		6		2		8		4
Case Number		8.0		8.0		8.0		8.0
Phase Duration, s		30.0		30.0		30.0		30.0
Change Period, ($Y+R_c$), s		4.8		4.8		4.9		4.9
Max Allow Headway (*MAH*), s		0.0		0.0		4.3		4.3
Queue Clearance Time (g_s), s						10.6		14.8
Green Extension Time (g_e), s		0.0		0.0		3.3		2.8
Phase Call Probability						1.00		1.00
Max Out Probability						0.12		0.29

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	1	6	16	5	2	12	3	8	18	7	4	14
Adjusted Flow Rate (*v*), veh/h		690			354			369			482	
Adjusted Saturation Flow Rate (*s*), veh/h/ln		1676			1784			1756			1737	
Queue Service Time (g_s), s		15.9			0.0			0.0			4.3	
Cycle Queue Clearance Time (g_c), s		24.3			8.4			8.6			12.8	
Green Ratio (*g/C*)		0.42			0.42			0.42			0.42	
Capacity (*c*), veh/h		775			813			802			796	
Volume-to-Capacity Ratio (*X*)		0.890			0.436			0.460			0.606	
Back of Queue (*Q*), ft/ln (95 th percentile)		421.1			156.3			149.5			212.2	
Back of Queue (*Q*), veh/ln (95 th percentile)		16.8			6.3			6.0			8.5	
Queue Storage Ratio (*RQ*) (95 th percentile)		0.00			0.00			0.00			0.00	
Uniform Delay (d_1), s/veh		16.9			12.5			12.6			13.8	
Incremental Delay (d_2), s/veh		14.6			1.7			0.4			1.3	
Initial Queue Delay (d_3), s/veh		0.0			0.0			0.0			0.0	
Control Delay (*d*), s/veh		31.5			14.2			13.1			15.1	
Level of Service (LOS)		C			B			B			B	
Approach Delay, s/veh / LOS	31.5	C		14.2	B		13.1	B		15.1	B	
Intersection Delay, s/veh / LOS	20.5						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.68	B	1.68	B	1.69	B	1.69	B
Bicycle LOS Score / LOS	1.63	B	1.07	A	1.10	A	1.28	A

APPENDIX D

DRIVEWAY HCM DATA WORKSHEETS – AM AND PM PEAK HOURS

HCS7 Two-Way Stop-Control Report

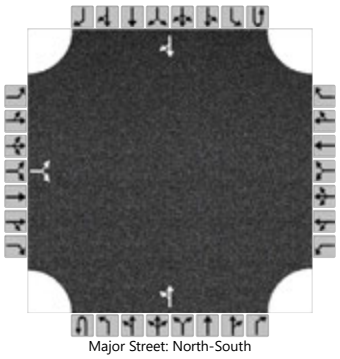
General Information

Analyst	JAS
Agency/Co.	Linscott, Law & Greenspan
Date Performed	3/25/2021
Analysis Year	2024
Time Analyzed	Opening Year + Proj - AM
Intersection Orientation	North-South
Project Description	606 N. Maryland Avenue Residential

Site Information

Intersection	Maryland / Southerly Dwy
Jurisdiction	City of Glendale
East/West Street	Southerly Driveway
North/South Street	Maryland Avenue
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	0	0	0	0	1	0	0	0	1	0
Configuration			LR							LT						TR
Volume (veh/h)		7		59						17	63				199	4
Percent Heavy Vehicles (%)		3		3						3						
Proportion Time Blocked																
Percent Grade (%)		0														
Right Turn Channelized																
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1		6.2						4.1						
Critical Headway (sec)		6.43		6.23						4.13						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		3.53		3.33						2.23						

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			72							18						
Capacity, c (veh/h)			798							1343						
v/c Ratio			0.09							0.01						
95% Queue Length, Q_{95} (veh)			0.3							0.0						
Control Delay (s/veh)			10.0							7.7						
Level of Service (LOS)			A							A						
Approach Delay (s/veh)		10.0								1.7						
Approach LOS		A														

HCS7 Two-Way Stop-Control Report

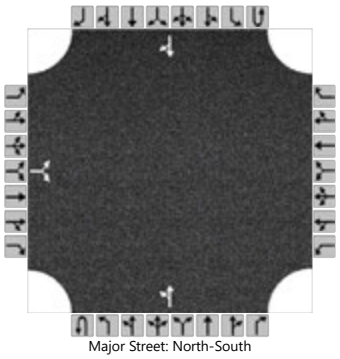
General Information

Analyst	JAS
Agency/Co.	Linscott, Law & Greenspan
Date Performed	3/25/2021
Analysis Year	2029
Time Analyzed	Cumulative + Project - AM
Intersection Orientation	North-South
Project Description	606 N. Maryland Avenue Residential

Site Information

Intersection	Maryland / Southerly Dwy
Jurisdiction	City of Glendale
East/West Street	Southerly Driveway
North/South Street	Maryland Avenue
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	0	0	0	0	1	0	0	0	1	0
Configuration			LR							LT						TR
Volume (veh/h)		7		59						17	65				209	4
Percent Heavy Vehicles (%)		3		3						3						
Proportion Time Blocked																
Percent Grade (%)		0														
Right Turn Channelized																
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1		6.2						4.1						
Critical Headway (sec)		6.43		6.23						4.13						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		3.53		3.33						2.23						

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			72							18						
Capacity, c (veh/h)			787							1330						
v/c Ratio			0.09							0.01						
95% Queue Length, Q_{95} (veh)			0.3							0.0						
Control Delay (s/veh)			10.0							7.7						
Level of Service (LOS)			B							A						
Approach Delay (s/veh)		10.0								1.7						
Approach LOS		B														

HCS7 Two-Way Stop-Control Report

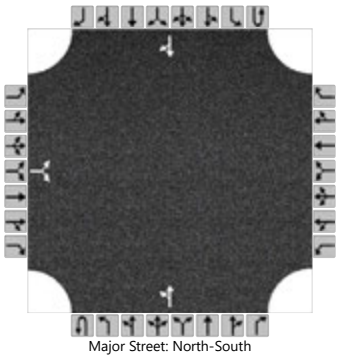
General Information

Analyst	JAS
Agency/Co.	Linscott, Law & Greenspan
Date Performed	3/25/2021
Analysis Year	2024
Time Analyzed	Opening Year + Proj - PM
Intersection Orientation	North-South
Project Description	606 N. Maryland Avenue Residential

Site Information

Intersection	Maryland / Southerly Dwy
Jurisdiction	City of Glendale
East/West Street	Southerly Driveway
North/South Street	Maryland Avenue
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	0	0	0	0	1	0	0	0	1	0
Configuration			LR							LT						TR
Volume (veh/h)		4		35						50	176				150	12
Percent Heavy Vehicles (%)		3		3						3						
Proportion Time Blocked																
Percent Grade (%)		0														
Right Turn Channelized																
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1		6.2						4.1						
Critical Headway (sec)		6.43		6.23						4.13						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		3.53		3.33						2.23						

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			42							54						
Capacity, c (veh/h)			817							1394						
v/c Ratio			0.05							0.04						
95% Queue Length, Q_{95} (veh)			0.2							0.1						
Control Delay (s/veh)			9.6							7.7						
Level of Service (LOS)			A							A						
Approach Delay (s/veh)		9.6								2.0						
Approach LOS		A														

HCS7 Two-Way Stop-Control Report

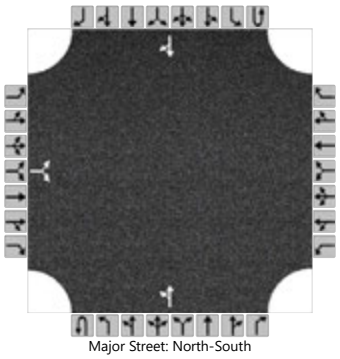
General Information

Analyst	JAS
Agency/Co.	Linscott, Law & Greenspan
Date Performed	3/25/2021
Analysis Year	2029
Time Analyzed	Cumulative + Project - PM
Intersection Orientation	North-South
Project Description	606 N. Maryland Avenue Residential

Site Information

Intersection	Maryland / Southerly Dwy
Jurisdiction	City of Glendale
East/West Street	Southerly Driveway
North/South Street	Maryland Avenue
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	0	0	0	0	1	0	0	0	1	0
Configuration			LR							LT						TR
Volume (veh/h)		4		35						50	185				155	12
Percent Heavy Vehicles (%)		3		3						3						
Proportion Time Blocked																
Percent Grade (%)		0														
Right Turn Channelized																
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1		6.2						4.1						
Critical Headway (sec)		6.43		6.23						4.13						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		3.53		3.33						2.23						

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			42							54						
Capacity, c (veh/h)			809							1388						
v/c Ratio			0.05							0.04						
95% Queue Length, Q_{95} (veh)			0.2							0.1						
Control Delay (s/veh)			9.7							7.7						
Level of Service (LOS)			A							A						
Approach Delay (s/veh)		9.7								1.9						
Approach LOS		A														