Traffic Impact Study
Proposed Dunkin Drive-Through

Albuquerque, New Mexico

Prepared For:

NMR, LLC

HT#L14D002
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I. Executive Summary

This report summarizes the results of a traffic impact study conducted by Kenig, Lindgren, O'Hara, Aboona, Inc. (KLOA, Inc.) for a proposed Dunkin Drive-Through (Dunkin) to be located at 310 Avenida Cesar Chavez SW in Albuquerque, New Mexico. The objectives of the traffic study are as follows:

- Determine the existing vehicular conditions in the study area to establish a base condition.
- Assess the impact that the proposed development will have on traffic conditions in the area.
- Determine any roadway or access modifications and/or improvements that will be necessary to effectively accommodate and mitigate future conditions.

Vehicle, pedestrian, and bicycle counts were conducted during the weekday morning and weekday evening peak periods at the intersections of Avenida Cesar Chavez with 2nd Street, 3rd Street, and 4th Street to determine the peak hour of traffic activity during these time periods.

As proposed, the Dunkin will be approximately 1,700 square feet in size and will provide double drive through lanes that will accommodate 14 vehicles. A total of 16 parking spaces will serve the site. Access to the site will be provided via a right-in/right-out access drive off Avenida Cesar Chavez Road and a full movement access drive off 3rd Street.

Based on the proceeding analyses and recommendations, the following conclusions have been made:

- The proposed Dunkin will be located at 310 Avenida Cesar Chavez SW and will be an approximately 1,700 square-foot building providing a drive-through that will accommodate 14 vehicles and a parking lot with 16 parking spaces.
- Access to the site will be provided via the two full movement access drives off Avenida Cesar Chavez SW and 3rd Street SW.
- The volume of traffic estimated to be generated by Dunkin will be reduced due to the volume of pass-by trips anticipated to be diverted from the existing traffic on Avenida Cesar Chavez SW.
- The access drives are projected to be adequate in accommodating the traffic estimated to be generated by Dunkin and will provide flexible and efficient access to the site.
- As part of the proposed development, stop signs should be provided for outbound traffic from both access drives.
- The drive-through stacking of 14 vehicles will be adequate in accommodating the peak drive-through activity for the coffee shop.

1. Introduction

This report summarizes the results of a traffic study conducted by Kenig, Lindgren, O'Hara, Aboona, Inc. (KLOA, Inc.) for a proposed Dunkin to be located at 310 Avenida Cesar Chavez in Albuquerque, New Mexico. The site, which is currently partly utilized as a heavy vehicle parking lot, is located on the south side of Avenida Cesar Chavez west of 3rd Street. The scoping document for this traffic impact study can be found in the Appendix.

As proposed, the proposed Dunkin will be approximately 1,700 square feet in size and will provide a drive through that will accommodate 14 vehicles. A total of 16 parking spaces will serve the site. Access to the site will be provided via a right-in/right-out access drive off Avenida Cesar Chavez and a full movement access drive off 3rd Street.

Figure 1 shows the location of the site in relation to the area roadway network. **Figure 2** shows an aerial view of the site.

The sections of this report present the following:

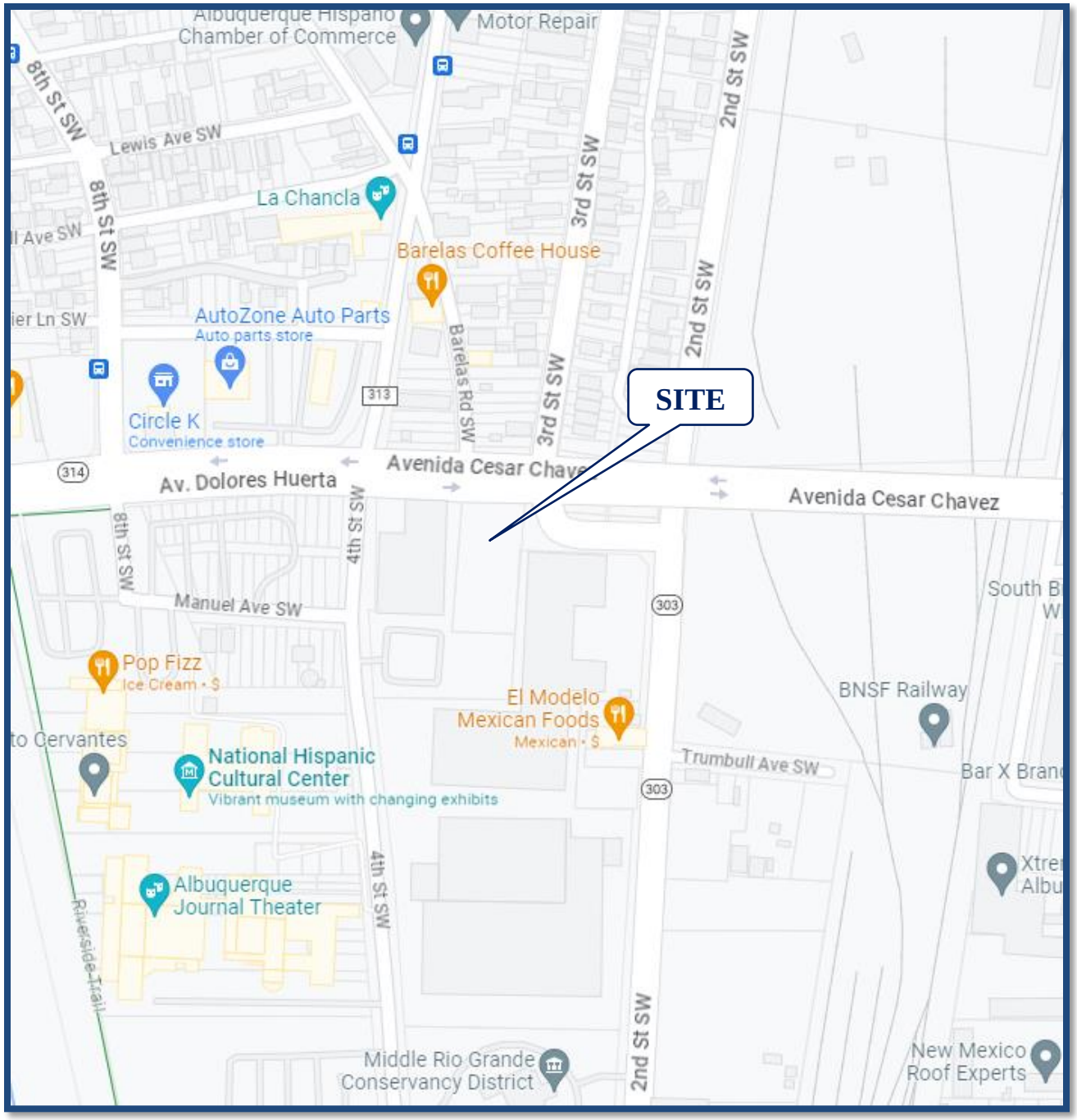
- Existing roadway conditions
- A description of the proposed site
- Directional distribution of the site traffic
- Vehicle trip generation for the site
- Future traffic conditions, including access to the site.
- Traffic analyses for the weekday morning and weekday evening peak hours
- Accident analyzes for the intersections of Avenida Cesar Chavez with 4th Street, 3rd Street, and 2nd Street.
- Recommendations with respect to the adequacy of site access and adjacent roadway system

Traffic capacity analyses were conducted for the weekday morning and weekday evening peak hours for the following conditions:

1. Existing Conditions – Analyzes the capacity of the existing roadway system using existing peak hour traffic volumes in the surrounding area.

2. Year 2024 No-Build Conditions – Analyzes the capacity of the existing roadway system using the ambient area growth, not attributable to any particular development.

3. Year 2024 Total Projected Conditions – Analyzes the capacity of the future roadway system using the projected traffic volumes that include the existing traffic volumes, ambient area growth, and traffic estimated to be generated by the proposed development.



Site Location **Figure 1**

Aerial View of Site **Figure 2**

2. Existing Conditions

The following provides a detailed description of the physical characteristics of the adjacent roadways, including geometry and traffic control, adjacent land uses, and peak hour traffic flows.

Site Location

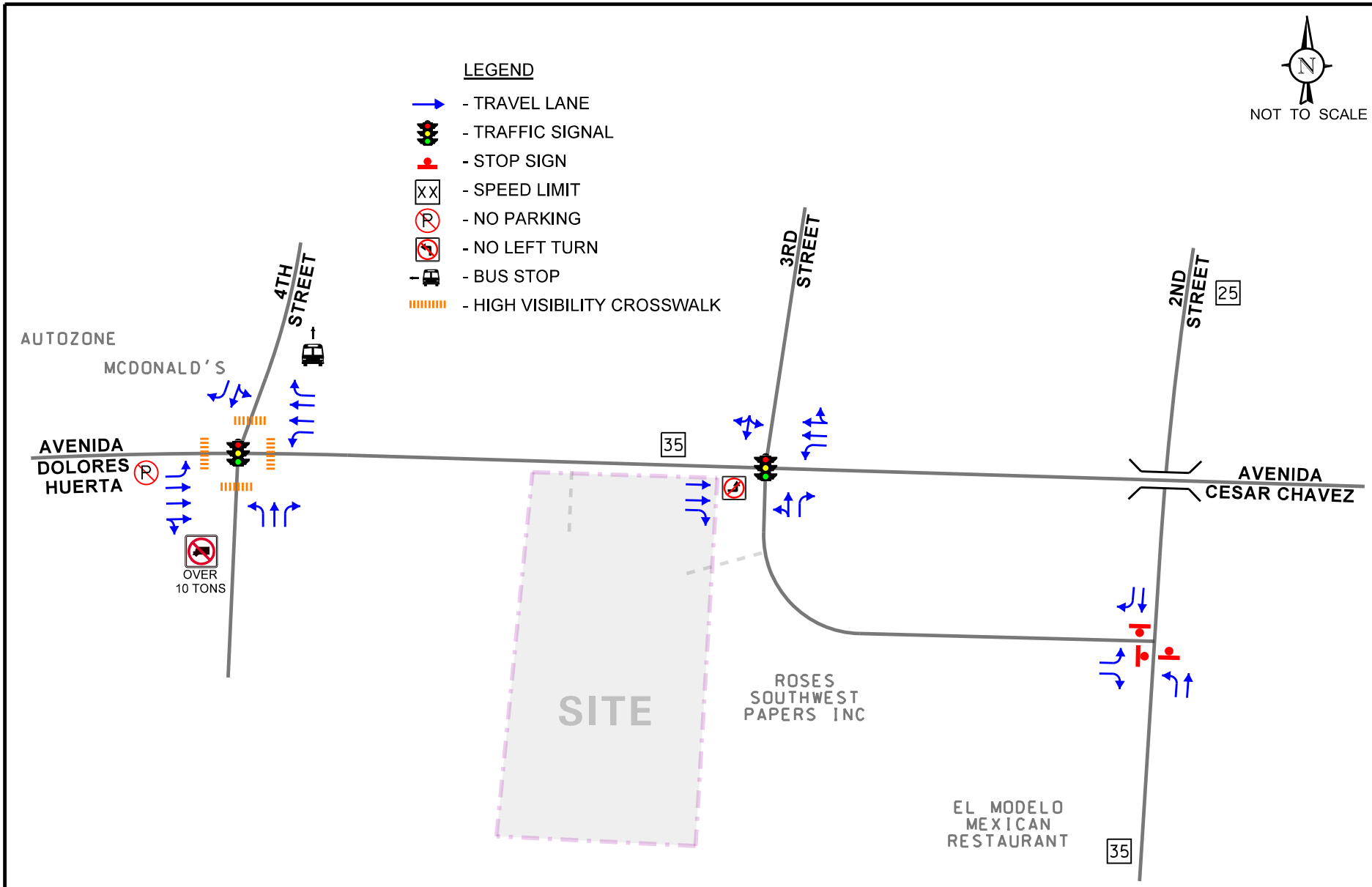
The site of the proposed Dunkin is located on the south side of Avenida Cesar Chavez west of 3rd Street and is currently partly utilized as a heavy vehicle parking lot. Land uses within the vicinity of the site are primarily commercial along Avenida Cesar Chavez SW and include Roses Southwest Papers, Inc. and El Modelo Mexican Restaurants to the east, La Entrada Real Estate to the north, Mc Donald's Restaurant and AutoZone Auto Parts to the north. and Sandra's School of Dance to the south. Land-uses to the north of the commercial corridor consists primarily of residential homes.

Existing Roadway Characteristics

Some of the key characteristics of the existing roadways within the study area are described below and illustrated in **Figure 3**.

Avenida Cesar Chavez SW is an east-west roadway that generally provides two travel lanes in each direction. The roadway is classified as a principal arterial. At its signalized intersection with 4th Street SW, Avenida Cesar Chavez provides an exclusive left-turn lane, two exclusive through lanes, and a shared through/right-turn lane on the eastbound approach and an exclusive left-turn lane, two through lanes, and an exclusive right-turn lane on the westbound approach. High visibility crosswalks and pedestrian signals are provided at all four legs of this intersection. At its signalized intersection with 3rd Street SW, Avenida Cesar Chavez provides two exclusive through lanes and an exclusive right-turn lane on the eastbound approach and an exclusive left-turn lane, a through lane, and a shared through/right-turn lane on the westbound approach. Pedestrian signals are provided at the north and west legs of this intersection. Avenida Cesar Chavez SW is under the jurisdiction of the City of Albuquerque, carries an AADT volume of 29,748 vehicles (NMDOT 2022) and has a posted speed limit of 35 miles per hour.

2nd Street SW is a north-south major collector roadway north of Avenida Cesar Chavez SW and a minor arterial south of it. 2nd Street SW provides one travel lane in each direction. At its unsignalized "T" intersection with 3rd Street SW, 2nd Street SW, provides an exclusive left-turn lane and a through lane on the northbound approach and a through lane and an exclusive right-turn lane on the southbound approach. 2nd Street SW is under the jurisdiction of the City of Albuquerque, carries and AADT of 4,952 vehicles (NMDOT 2022), and has a posted speed limit of 25 miles per hour north of Avenida Cesar Chaves SW and 35 miles per hour south of it.



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Existing Roadway Characteristics

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Figure: 3

3rd Street SW is a north-south major collector roadway that provides one travel lane in each direction. At its signalized intersection with Avenida Cesar Chavez SW, 3rd Street SW, provides a shared left-turn/through lane and an exclusive right-turn lane on the northbound approach and a shared left-turn/through/right-turn lane on the southbound approach. At its unsignalized "T" intersection with 2nd Street SW, 3rd Street SW provides an exclusive left-turn lane and an exclusive right-turn lane on the eastbound approach. 3rd Street SW is under the jurisdiction of the City of Albuquerque, carries and AADT of 1,437 vehicles (NMDOT 2022), and has a posted speed limit of 30 miles per hour.

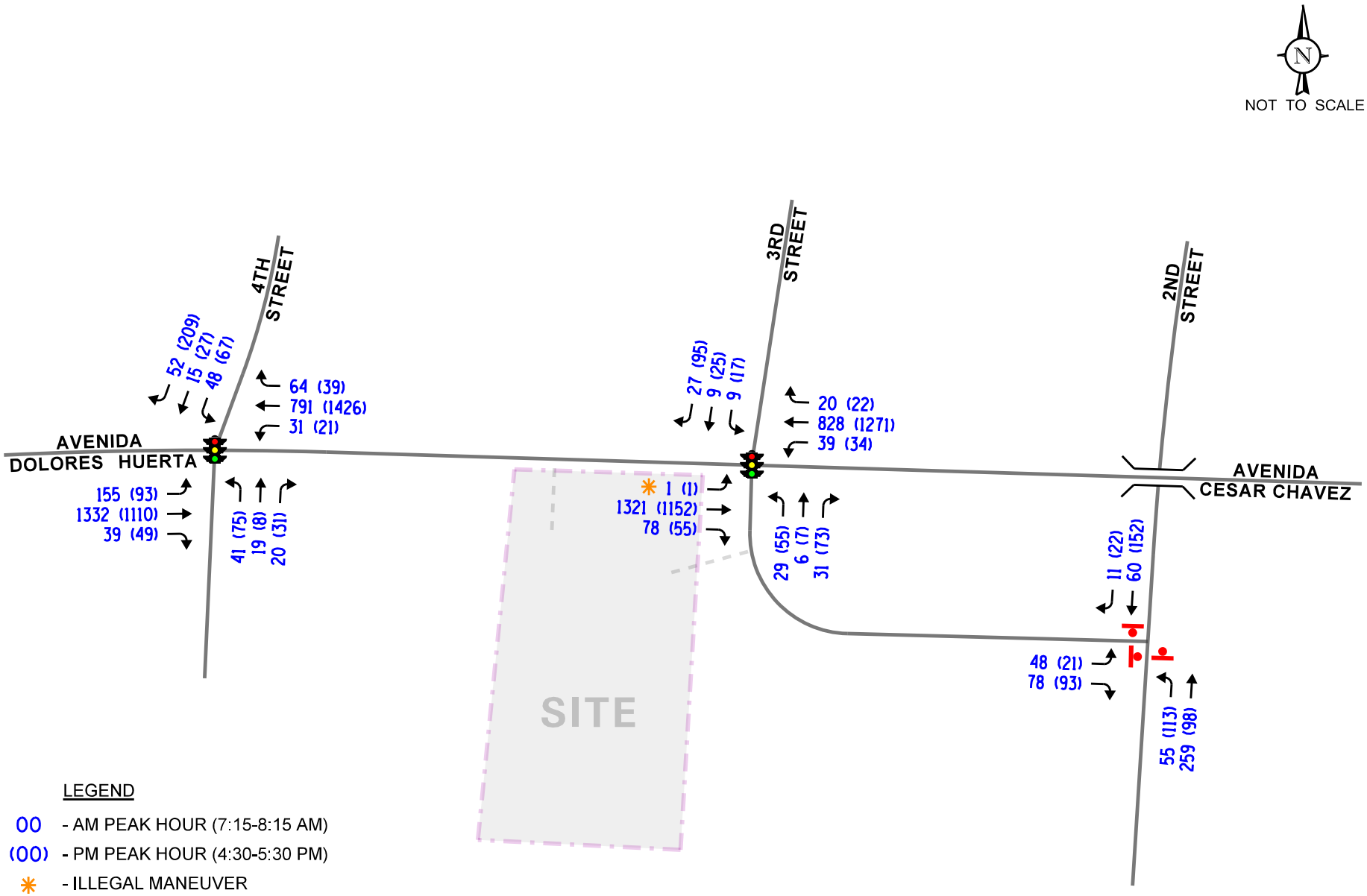
4th Street SW is a north-south minor arterial roadway that provides one travel lane in each direction. At its signalized intersection with Avenida Cesar Chavez SW, 4th Street SW, provides a shared left-turn/through lane and an exclusive right-turn lane on the southbound approach and an exclusive left-turn lane, a through lane, and an exclusive right-turn lane on the northbound approach. 4th Street SW is under the jurisdiction of the City of Albuquerque, carries and AADT of 3,228 vehicles (NMDOT 2022), and has a posted speed limit of 30 miles per hour

Existing Traffic Volumes

In order to determine current vehicle, pedestrian, and bicycle conditions within the study area, peak period traffic, pedestrian, and bicycle counts were conducted during the weekday morning (7:00 A.M. to 9:00 A.M.) and evening (4:00 P.M. to 6:00 P.M.) peak periods on Monday, May 22, 2023 at the following intersections:

- Avenida Cesar Chavez SW with 2nd Street SW
- Avenida Cesar Chavez SW with 3rd Street SW
- Avenida Cesar Chavez SW with 4th Street SW

The results of the traffic counts show that the peak hours generally occur from 7:15 A.M. to 8:15 A.M. during the weekday morning peak hour and 4:30 P.M. and 5:30 P.M. during the weekday evening peak hour. **Figure 4** illustrates the existing peak hour vehicle traffic volumes. Summaries of the traffic counts are included in the Appendix.



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Existing Traffic Volumes

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Figure: 4

Crash Data

KLOA, Inc. obtained crash data from the New Mexico Department of Transportation (NMDOT) for the most recent available past five years (2017 to 2021) for the intersections of Avenida Cesar Chavez SW with 3rd Street SW and 4th Street SW and the intersection of 2nd Street SW with 3rd Street SW. The crash data for the intersections including severity and crash type by year is summarized in **Tables 1** through **3**. As can be seen from Table 1 and based on a review of the crash data, the following was determined:

- During the review period a total of 17 crashes were reported at 4th Street, 32 crashes were reported at 3rd Street, and 6 crashes were reported at 2nd Street.
- Over 85 percent of the crashes occurred during clear weather.
- Over 80 percent of the crashes occurred during daylight.
- Fifty percent of the crashes resulted in property damage only, while approximately forty percent of the crashes resulted in a Class C severity.
- No fatal crashes were reported during the review period.
- No crashes involved a pedestrian or bicyclist.
- The only repetitive crash type was From Same Direction/Both Going Straight or From Same Direction/Rear End Collision.
- The main commonality of crashes were likely rear end collisions of vehicles in both directions along Avenida Cesar Chavez.

Table 1
AVENIDA CESAR CHAVEZ WITH 4th STREET– CRASH SUMMARY

Year	Type of Crash Frequency						
	2017	2018	2019	2020	2021	Total	Average
Property Damage Only	0	3	1	2	2	**8**	**1.6**
Class A Severity	0	0	0	0	0	**0**	**0**
Class B Severity	0	0	0	0	1	**1**	**< 1**
Class C severity	3	2	1	0	2	**8**	**1.6**
Fatalities	0	0	0	0	0	0	0
Total	**3**	**5**	**2**	**2**	**5**	**17**	**3.4**
Other Vehicle – Both Going Straight/Entering At Angle	1	1	0	0	0	**2**	**< 1**
Other Vehicle – Both Turn Left/Entering At Angle	1	0	0	0	0	**1**	**< 1**
Other Vehicle – From Same Direction/Both Going Straight	1	1	0	0	0	**2**	**< 1**
Other Vehicle – From Same Direction/One Stopped	0	1	0	0	0	**1**	**< 1**
Other Vehicle – One Left Turn/Entering At Angle	0	1	1	0	0	**2**	**< 1**
Other Vehicle – From Opposite Direction/One Left Turn	0	0	1	0	0	**1**	**< 1**
Other Vehicle – From Opposite Direction	0	0	0	1	0	**1**	**< 1**
Left Blank	0	1	0	1	5	**7**	**1.4**

Table 2
AVENIDA CESAR CHAVEZ WITH 3rd STREET– CRASH SUMMARY

Year	Type of Crash Frequency						
	2017	2018	2019	2020	2021	Total	Average
Property Damage Only	1	3	4	4	2	**14**	**2.8**
Class A Severity	1	0	0	0	1	**2**	**< 1**
Class B Severity	1	2	1	1	0	**5**	**1**
Class C severity	3	2	3	2	1	**11**	**2.2**
Fatalities	0	0	0	0	0	0	0
Total	**6**	**7**	**8**	**7**	**4**	**32**	**6.4**
Other Vehicle – From Opposite Direction/One Left Turn	1	0	0	0	0	**1**	**< 1**
Other Vehicle – Both Going Straight/Entering At Angle	1	3	0	1	0	**5**	**1**
Other Vehicle – From Same Direction/Both Going Straight	3	1	1	1	0	**6**	**1.2**
Other Vehicle – One Left Turn/Entering At Angle	1	0	1	0	0	**2**	**< 2**
Other Vehicle – From Opposite Direction	0	1	1	2	1	**5**	**1**
Other Vehicle – From Same Direction/Rear End Collision	0	1	3	1	0	**5**	**1**
Other Vehicle – From Same Direction/One Stopped	0	0	2	0	0	**2**	**< 1**
Other Vehicle – One Stopped/Entering At Angle	0	0	0	1	0	**1**	**< 1**
Left Blank	0	1	0	1	3	**5**	**1**

Table 3
AVENIDA CESAR CHAVEZ WITH 2nd STREET– CRASH SUMMARY

Year	Type of Crash Frequency						
	2017	2018	2019	2020	2021	Total	Average
Property Damage Only	0	3	1	0	0	**4**	**< 1**
Class A Severity	0	0	0	0	0	**0**	**0**
Class B Severity	0	1	0	0	0	**1**	**< 1**
Class C severity	0	0	0	0	1	**1**	**< 1**
Fatalities	0	0	0	0	0	0	0
Total	**0**	**4**	**1**	**0**	**1**	**6**	**< 1**
Other Vehicle – From Same Direction/Both Going Straight	0	1	1	0	0	2	**< 1**
Other Vehicle – Both Going Straight/ Entering At Angle	0	1	0	0	0	1	**< 1**
Other Vehicle – One Vehicle/Making a U-Turn	0	1	0	0	0	1	**< 2**
Other Vehicle – From Same Direction/Sideswipe Collision	0	1	0	0	0	1	**< 1**
Left Blank	0	0	0	0	1	1	**< 1**

3. Traffic Characteristics of the Proposed Development

In order to properly evaluate future traffic conditions in the surrounding area, it was necessary to determine the traffic characteristics of the proposed development including the directional distribution and volumes of traffic that it will generate.

Proposed Site and Use Plan

As proposed, Dunkin will be approximately 1,700 square feet in size and will provide double drive-through lanes with stacking for 14 vehicles. A total of 16 parking spaces will serve Dunkin. Five of the parking spaces are located to the north of the proposed building and the remaining eleven spaces will be located west side of the building. Access will be provided via two access drives that will serve the site which consist of the following:

- A right-in/right-out access drive off Avenida Cesar Chavez SW which will be located approximately 245 feet east of 4th Street SW. This access drive will provide one inbound lane and one outbound lane.

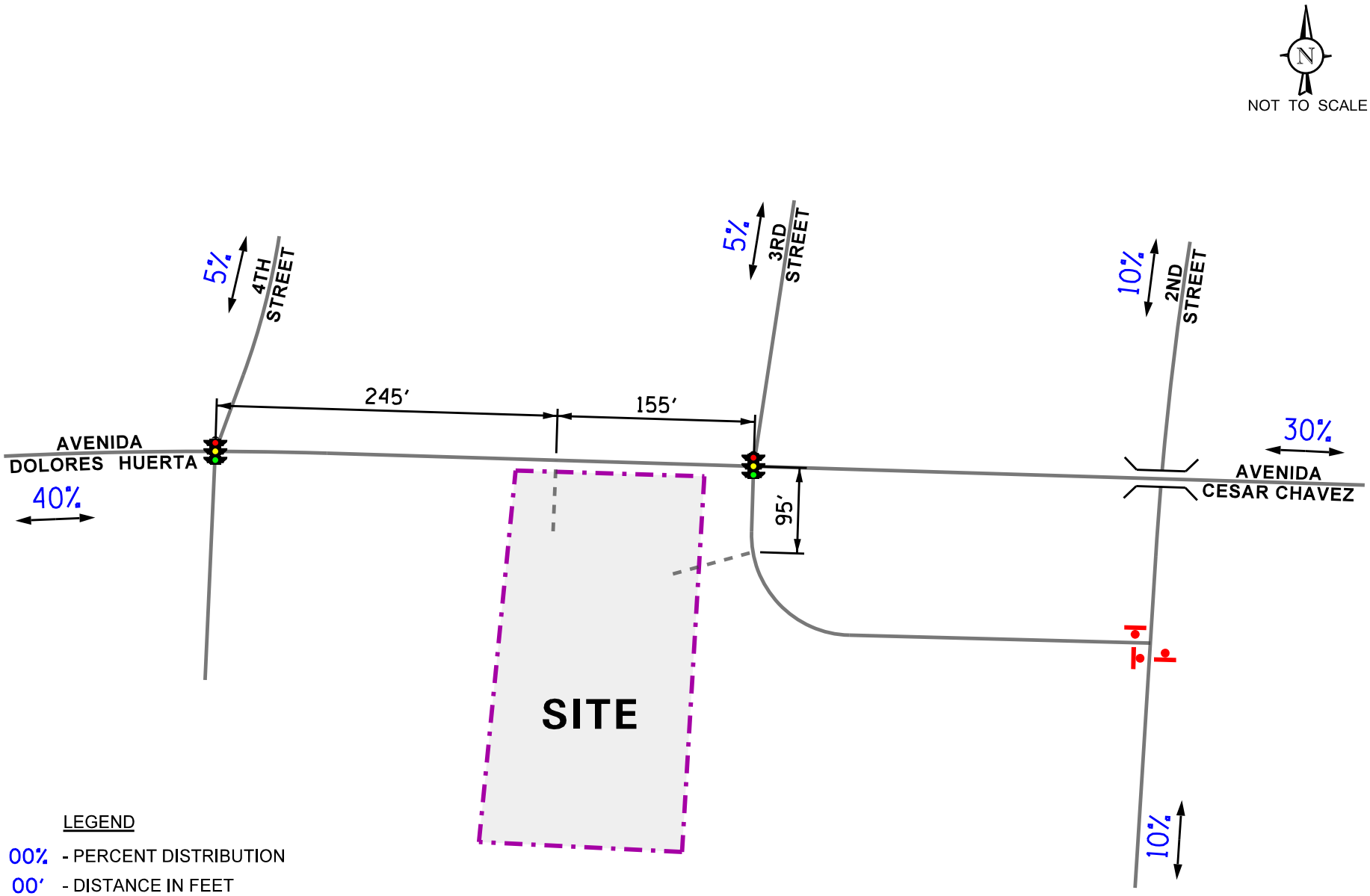
- A full movement access drive off 3rd Street which will be located approximately 95 feet south of Avenida Cesar Chavez SW. This access drive will provide one inbound lane and one outbound lane.

It should be noted that outbound movements from the access drives should be under stop sign control.

A copy of the proposed site plan is included in the Appendix.

Directional Distribution of Site Traffic

The directional distribution of how traffic will approach and depart the site was estimated based on the general travel patterns through the study area derived from the peak hour traffic volumes, in combination with the population information and socioeconomic forecasts provided by the Mid-Region Council of Governments (MRCOG) for the subareas surrounding the site. **Figure 5** shows the established directional distribution for the proposed Dunkin and illustrates the distance in feet between the access drives and the existing roadways.



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Directional Distribution

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Figure: 5

Proposed Site Traffic Generation

The estimate of vehicle traffic to be generated by the proposed Dunkin is based upon the proposed land use types and sizes. The vehicle trip generation was calculated using data published in the Institute of Transportation Engineers (ITE) *Trip Generation Manual*, 11th Edition. Land-Use Code 937 (Coffee/Donut Shop with Drive-Through Window) was utilized. The ITE trip generation sheets are included in the Appendix.

It is important to note that surveys conducted by ITE have shown that a percentage of trips made to coffee/donut shops with drive-through lanes are diverted from the existing traffic on the roadway system. This is particularly true during the weekday morning and weekday evening peak hours when traffic is diverted from work-to-lunch and work-to-home trips. Such diverted trips are referred to as "pass-by" trips. Based on information published by ITE for coffee/donut shops, approximately 85 to 95 percent of trips are pass-by trips. However, in order to provide a conservative analysis, only a 70 percent pass-by reduction was applied to the trips estimated to be generated by Dunkin.

Table 4 shows the estimated vehicle trip generation for the weekday morning peak hour, weekday evening peak hour, and daily trips.

Table 4
ESTIMATED PEAK HOUR VEHICLE TRIP GENERATION

ITE Land Use Code	Type/Size	Weekday Morning Peak Hour			Weekday Evening Peak Hour			Daily Two-Way Trips		
		In	Out	Total	In	Out	Total	In	Out	Total
937	Coffee/Donut Shop with Drive-Through (1,700 s.f.)	74	72	146	33	33	66	454	454	908
70% Pass-By Reduction		*-51*	*-51*	*-102*	*-23*	*-23*	*-46*	*-318*	*-318*	*-636*
	Total New Trips	**23**	**21**	**44**	**10**	**10**	**20**	**136**	**136**	**272**

4. Projected Traffic Conditions

The total projected traffic volumes include the base traffic volumes, increase in background traffic due to growth, and the traffic estimated to be generated by the proposed Dunkin.

Development Traffic Assignment

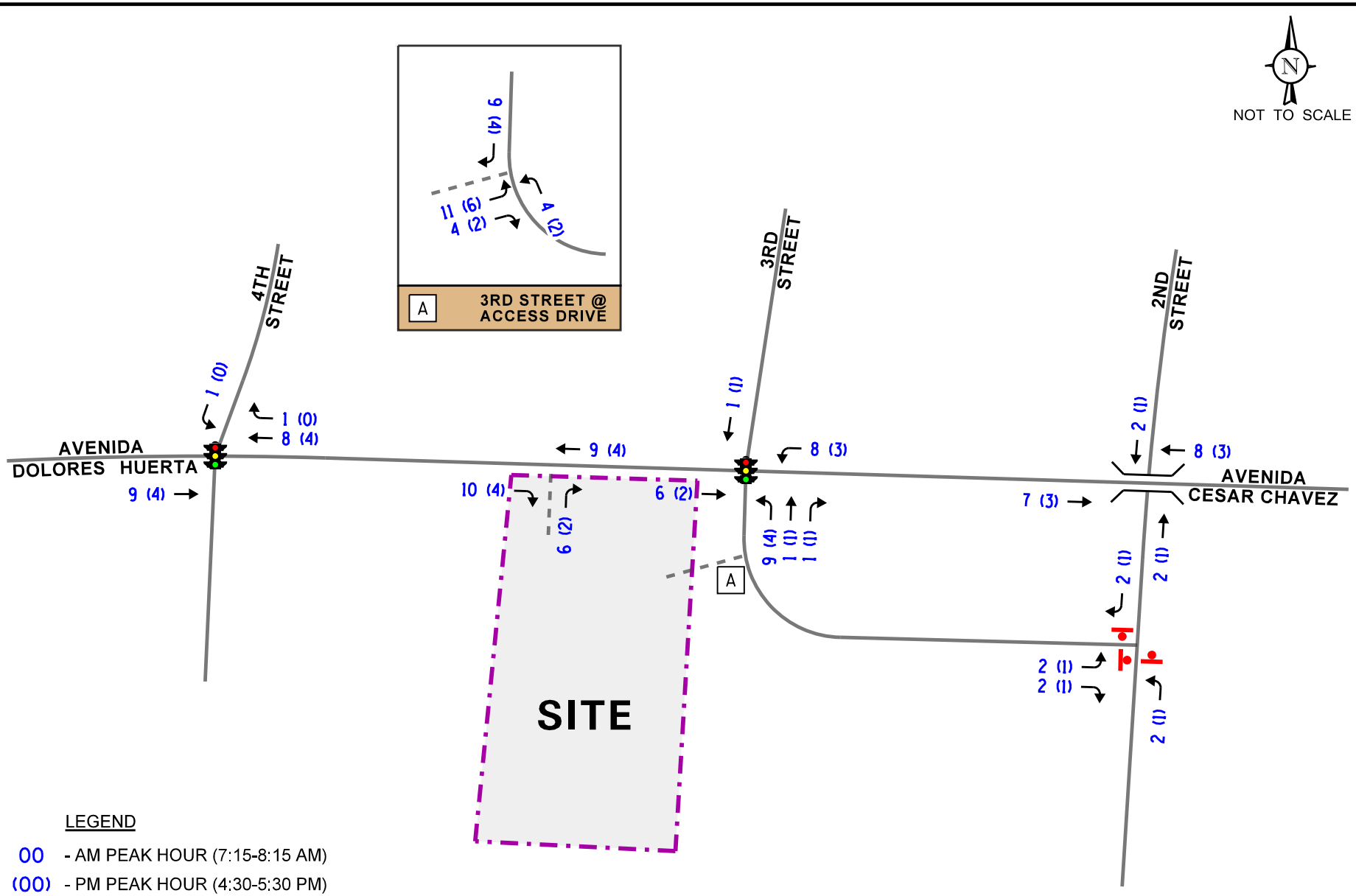
The estimated weekday morning and weekday evening peak hour traffic volumes that will be generated by the proposed Dunkin were assigned to the roadway system in accordance with the previously described directional distribution (Figure 5). **Figure 6** illustrated the traffic assignment of the new passenger vehicle trips and **Figure 7** illustrates the traffic assignment of the pass-by vehicles trips.

Ambient Traffic Growth

The existing traffic volumes were increased by an ambient growth factor of 1.0 percent per year for one year (project completion year) to represent Year 2024 no-build conditions. This background growth was determined from the population information and socioeconomic forecasts provided by the Mid-Region Council of Governments (MRCOG) for the subareas surrounding the site. **Figure 8** shows the Year 2024 no-build traffic volumes.

Year 2024 Total Projected Traffic Volumes

The new and pass-by development-generated traffic (Figures 6 and 7) was added to the no-build traffic volumes (Figure 8) to determine the Year 2024 total projected traffic volumes. These volumes are illustrated in **Figure 9**.



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Site-Generated Traffic Volumes - New Trips

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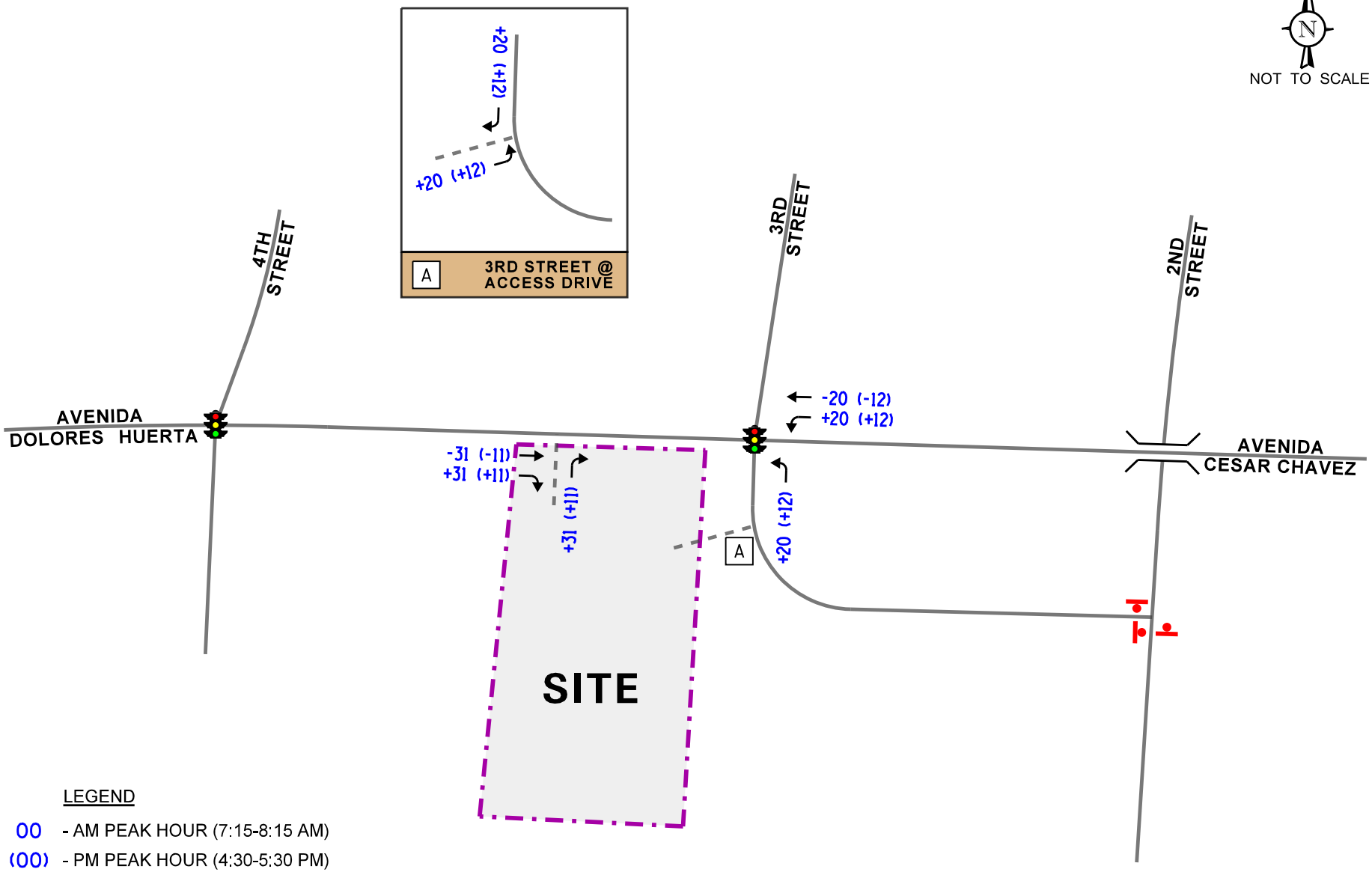
Figure: 6



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Pass-By Traffic Volumes

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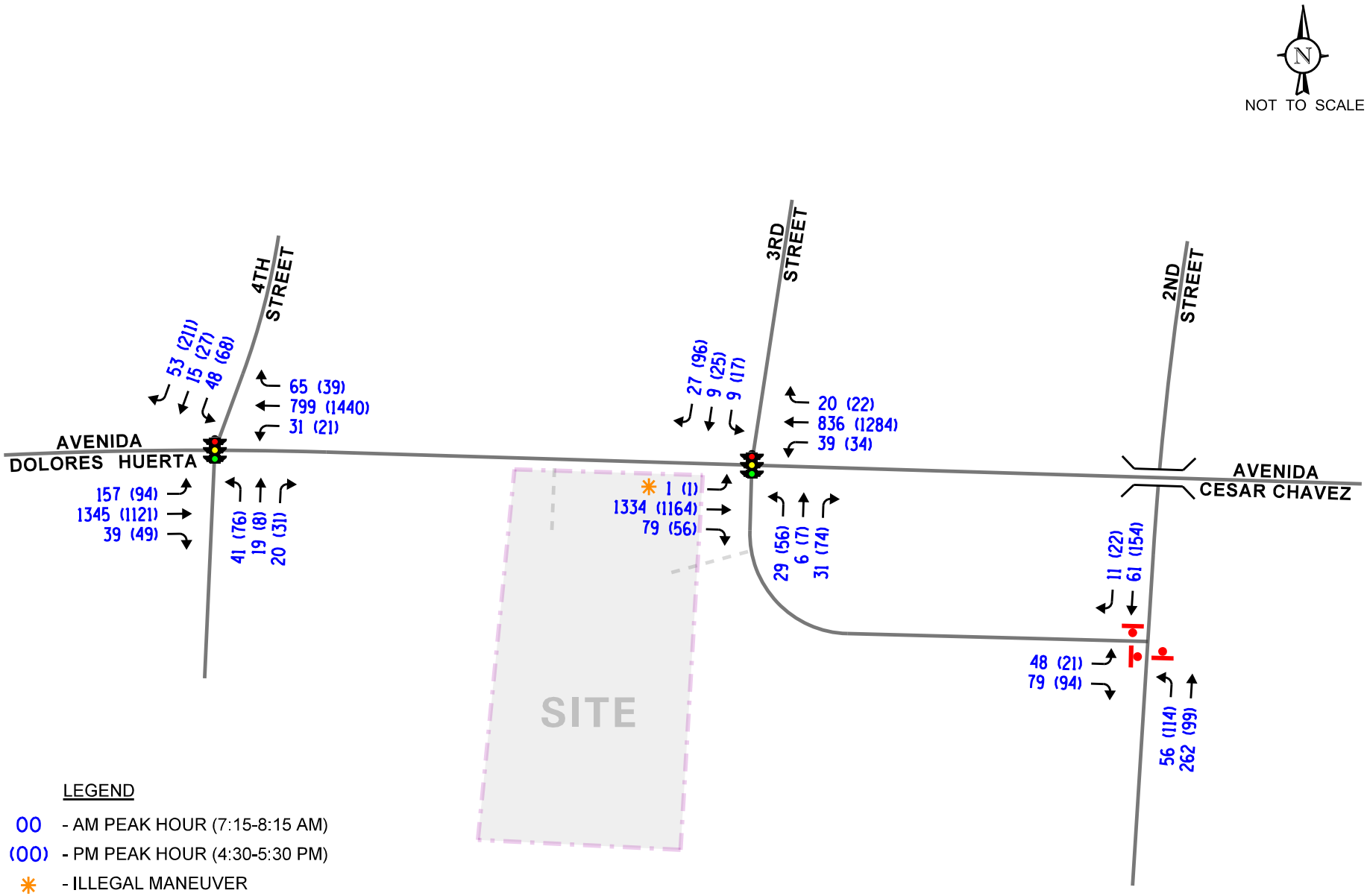

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Year 2024 No-Build Traffic Volumes

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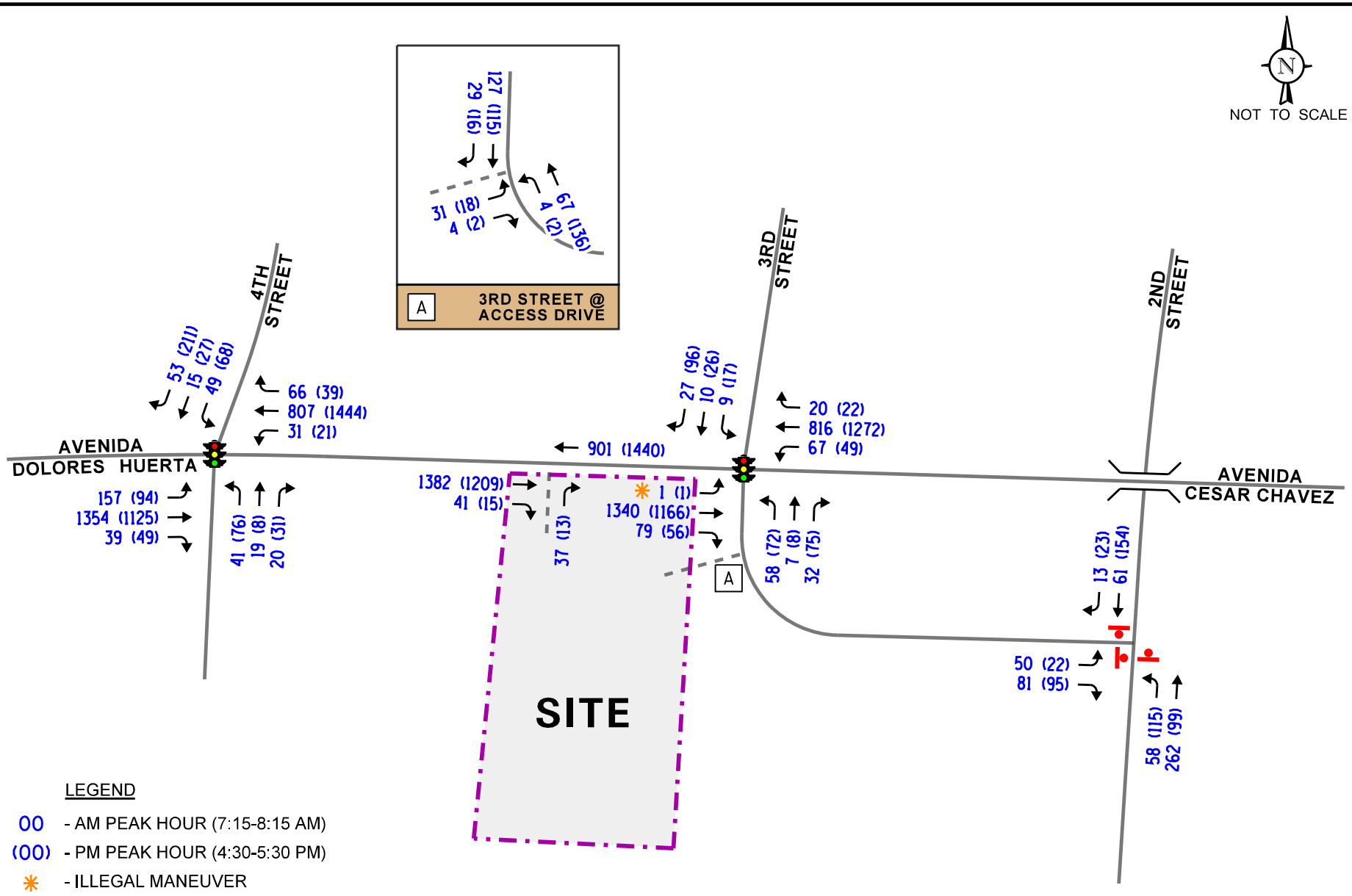

Dunkin Drive-Through
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Year 2024 Total Traffic Volumes

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Job No: 23-158 Figure: 9

5. Traffic Analysis and Recommendations

The following provides an evaluation conducted for the weekday morning and weekday evening peak hours. The analysis includes conducting capacity analyses to determine how well the roadway system and access drives are projected to operate and whether any roadway improvements or modifications are required.

Traffic Analyses

Intersection analyses were performed for the weekday morning and weekday evening peak hours for the existing, no-build, and total projected (Year 2024) traffic volumes.

The traffic analyses were performed using the methodologies outlined in the Transportation Research Board's *Highway Capacity Manual (HCM)*, 6th Edition and analyzed using Synchro/SimTraffic 11 software.

The analyses for the unsignalized intersections determine the average control delay to vehicles at an intersection. Control delay is the elapsed time from a vehicle joining the queue at a stop sign (includes the time required to decelerate to a stop) until its departure from the stop sign and resumption of free flow speed. The methodology analyzes each intersection approach controlled by a stop sign and considers traffic volumes on all approaches and lane characteristics.

The ability of an intersection to accommodate traffic flow is expressed in terms of level of service, which is assigned a letter from A to F based on the average control delay experienced by vehicles passing through the intersection. The *Highway Capacity Manual* definitions for levels of service and the corresponding control delay for signalized intersections and unsignalized intersections are included in the Appendix of this report.

Summaries of the traffic analysis results showing the level of service, overall intersection delay (measured in seconds), volume-to-capacity ratios, and 95th percentile queues for the existing, no-build, and Year 2024 total projected conditions are presented in **Tables 5** through **14**. A discussion of the intersections follows. Summary sheets for the capacity analyses are included in the Appendix.

Table 5
SIGNALIZED – AVENIDA CESAR CHAVEZ WITH 4TH STREET

	Peak Hour	Eastbound		Westbound			Northbound			Southbound		Overall
		L	T/R	L	T	R	L	T	R	L/T	R	
Existing Conditions	Weekday Morning	A 4.2	A 5.9	A 3.7	A 7.6	A 2.1	D 39.9	C 33.1	A 9.2	D 42.5	B 15.9	A 8.0
		A – 5.8		A – 7.0			C – 30.7			C – 30.5		
	Weekday Evening	A 6.3	A 5.9	A 3.4	B 11.8	A 0.9	D 42.6	C 30.2	B 11.4	D 42.9	C 30.6	B 12.2
		A – 5.9		B – 11.4			C – 33.3			C – 34.4		
No-Build Conditions	Weekday Morning	A 4.2	A 5.9	A 3.7	A 7.6	A 2.1	D 39.9	C 33.1	A 9.2	D 42.5	B 15.9	A 8.0
		A – 5.8		A – 7.0			C – 30.7			C – 30.5		
	Weekday Evening	A 6.5	A 6.0	A 3.5	B 12.1	A 0.9	D 42.6	C 30.1	B 11.3	D 42.9	C 30.6	B 12.4
		A – 6.0		B – 11.7			C – 33.4			C – 34.4		
Projected Conditions	Weekday Morning	A 4.4	A 6.0	A 3.8	A 7.7	A 2.2	D 39.7	C 33.0	A 9.1	D 42.4	B 16.1	A 8.1
		A – 5.9		A – 7.2			C – 30.6			C – 30.5		
	Weekday Evening	A 6.5	A 6.0	A 3.5	B 12.1	A 0.9	D 42.6	C 30.1	B 11.3	D 42.9	C 30.6	B 12.4
		A – 6.0		B – 11.7			C – 33.4			C – 34.4		

Letter denotes Level of Service L – Left Turn R – Right Turn
Delay is measured in seconds. T – Through

Table 6
SIGNALIZED – AVENIDA CESAR CHAVEZ SW WITH 4TH STREET SW - V/C RATIO (95TH PERCENTILE QUEUE)

	Peak Hour	Eastbound		Westbound			Northbound			Southbound	
		L	T/R	L	T	R	L	T	R	L/T	R
Existing Conditions	Weekday Morning	0.34 (36 ft)	0.41 (175 ft)	0.13 (10 ft)	0.36 (161 ft)	0.07 (16 ft)	0.32 (53 ft)	0.09 (29 ft)	0.07 (15 ft)	0.43 (73 ft)	0.16 (39 ft)
	Weekday Evening	0.35 (25 ft)	0.32 (138 ft)	0.06 (9 ft)	0.6 (345 ft)	0.04 (6 ft)	0.47 (78 ft)	0.03 (15 ft)	0.09 (22 ft)	0.51 (93 ft)	0.58 (143 ft)
No-Build Conditions	Weekday Morning	0.34 (36 ft)	0.41 (175 ft)	0.13 (10 ft)	0.36 (161 ft)	0.07 (16 ft)	0.32 (53 ft)	0.09 (29 ft)	0.07 (15 ft)	0.43 (73 ft)	0.16 (39 ft)
	Weekday Evening	0.36 (26 ft)	0.32 (140 ft)	0.06 (9 ft)	0.61 (353 ft)	0.04 (6 ft)	0.47 (79 ft)	0.03 (15 ft)	0.09 (22 ft)	0.51 (93 ft)	0.59 (144 ft)
Projected Conditions	Weekday Morning	0.35 (37 ft)	0.42 (180 ft)	0.13 (10 ft)	0.36 (167 ft)	0.07 (17 ft)	0.32 (53 ft)	0.09 (29 ft)	0.07 (15 ft)	0.43 (73 ft)	0.17 (39 ft)
	Weekday Evening	0.36 (26 ft)	0.32 (141 ft)	0.06 (9 ft)	0.61 (353 ft)	0.04 (6 ft)	0.47 (79 ft)	0.03 (15 ft)	0.09 (22 ft)	0.51 (93 ft)	0.59 (144 ft)

Letter denotes Level of Service
Delay is measured in seconds.
L – Left Turn R – Right Turn
T – Through

Table 7
SIGNALIZED – AVENIDA CESAR CHAVEZ SW WITH 3RD STREET SW

	Peak Hour	Eastbound		Westbound		Northbound		Southbound	Overall
		T	R	L	T/R	L/T	R	L/T/R	
Existing Conditions	Weekday Morning	A 4.2	A 1.2	A 6.0	A 3.3	D 35.3	B 15.8	B – 19.2	A 4.7
		A – 4.0		A – 3.4		C – 26.2			
	Weekday Evening	A 6.6	A 1.6	A 6.4	A 9.5	C 31.9	C 20.3	C – 31.7	A 10.0
		A – 6.4		A – 9.4		C – 25.6			
No-Build Conditions	Weekday Morning	A 4.2	A 1.2	A 6.0	A 3.3	D 35.3	B 15.8	B – 19.2	A 4.7
		A – 4.0		A – 3.4		C – 26.2			
	Weekday Evening	A 6.7	A 1.6	A 6.5	A 9.8	C 31.9	C 20.4	C – 31.9	B 10.1
		A – 6.4		A – 9.7		C – 25.7			
Projected Conditions	Weekday Morning	A 6.5	A 1.6	B 16.2	A 5.0	D 37.8	B 13.9	B – 16.7	A 7.2
		A – 6.2		A – 5.8		C – 30.0			
	Weekday Evening	A 6.7	A 1.6	A 7.6	A 9.6	D 35.4	C 20.5	C – 31.8	B 10.3
		A – 6.5		A – 9.5		C – 28.2			

Letter denotes Level of Service L – Left Turn R – Right Turn
Delay is measured in seconds. T – Through

Table 8
SIGNALIZED – AVENIDA CESAR CHAVEZ SW WITH 3RD STREET SW – V/C RATIO (95TH PERCENTILE QUEUE)

	Peak Hour	Eastbound		Westbound		Northbound		Southbound
		T	R	L	T/R	L/T	R	L/T/R
Existing Conditions	**Weekday Morning**	0.49 (181 ft)	0.07 (11 ft)	0.21 (20 ft)	0.34 (98 ft)	0.29 (43 ft)	0.18 (26 ft)	0.25 (36 ft)
	Weekday Evening	0.46 (186 ft)	0.05 (11 ft)	0.14 (19 ft)	0.55 (232 ft)	0.35 (57 ft)	0.28 (51 ft)	0.52 (100 ft)
No-Build Conditions	**Weekday Morning**	0.49 (181 ft)	0.07 (11 ft)	0.21 (20 ft)	0.34 (98 ft)	0.29 (43 ft)	0.18 (26 ft)	0.25 (36 ft)
	Weekday Evening	0.46 (190 ft)	0.05 (12 ft)	0.15 (19 ft)	0.55 (236 ft)	0.36 (58 ft)	0.28 (51 ft)	0.52 (101 ft)
Projected Conditions	**Weekday Morning**	0.55 (233 ft)	0.07 (14 ft)	0.44 (70 ft)	0.36 (121 ft)	0.46 (65 ft)	0.16 (25 ft)	0.21 (35 ft)
	Weekday Evening	0.46 (190 ft)	0.05 (12 ft)	0.21 (28 ft)	0.55 (233 ft)	0.46 (71 ft)	0.28 (52 ft)	0.53 (101 ft)

Letter denotes Level of Service
Delay is measured in seconds.
L – Left Turn
T – Through

Table 9
CAPACITY ANALYSIS RESULTS – EXISTING CONDITIONS

Intersection	Weekday Morning Peak Hour		Weekday Evening Peak Hour	
	LOS	Delay	LOS	Delay
Avenida Cesar Chavez with 2nd Street SW[1]				
• Overall	B	10.5	A	9.6
• Eastbound Left-Turn	A	9.6	A	9.3
• Eastbound Right-Turn	A	8.7	A	9.0
• Northbound Through	A	9.3	B	10.1
• Northbound Left-Turn	B	12.1	A	9.1
• Southbound Through	A	8.8	B	10.1
• Southbound Right-Turn	A	7.4	A	7.5

LOS = Level of Service 1 – All-way stop control.
Delay is measured in seconds.

Table 10
CAPACITY ANALYSIS RESULTS – EXISTING CONDITIONS

Intersection	Weekday Morning Peak Hour		Weekday Evening Peak Hour	
	V/C Ratio	95th Queues (ft)	V/C Ratio	95th Queues (ft)
Avenida Cesar Chavez with 2nd Street SW[1]				
• Eastbound Left-Turn	0.104	8	0.049	5
• Eastbound Right-Turn	0.14	13	0.178	15
• Northbound Through	0.112	10	0.237	23
• Northbound Left-Turn	0.459	60	0.188	18
• Southbound Through	0.113	10	0.295	30
• Southbound Right-Turn	0.018	3	0.037	3

LOS = Level of Service 1 – All-way stop control.
Delay is measured in seconds.

Table 11
CAPACITY ANALYSIS RESULTS – NO-BUILD CONDITIONS

Intersection	Weekday Morning Peak Hour		Weekday Evening Peak Hour	
	LOS	Delay	LOS	Delay
Avenida Cesar Chavez with 2nd Street SW[1]				
• Overall	B	10.6	A	9.6
• Eastbound Left-Turn	A	9.7	A	9.3
• Eastbound Right-Turn	A	8.7	A	9.0
• Northbound Through	A	9.3	B	10.2
• Northbound Left-Turn	B	12.2	A	9.1
• Southbound Through	A	8.9	B	10.2
• Southbound Right-Turn	A	7.5	A	7.5

LOS = Level of Service 1 – All-way stop control.
Delay is measured in seconds.

Table 12
CAPACITY ANALYSIS RESULTS – NO-BUILD CONDITIONS

Intersection	Weekday Morning Peak Hour		Weekday Evening Peak Hour	
	V/C Ratio	95th Queues (ft)	V/C Ratio	95th Queues (ft)
Avenida Cesar Chavez with 2nd Street SW[1]				
• Eastbound Left-Turn	0.104	8	0.049	5
• Eastbound Right-Turn	0.142	13	0.18	15
• Northbound Through	0.113	10	0.239	23
• Northbound Left-Turn	0.466	63	0.19	18
• Southbound Through	0.115	10	0.298	30
• Southbound Right-Turn	0.018	3	0.037	3

LOS = Level of Service 1 – All-way stop control.
Delay is measured in seconds.

Table 13
CAPACITY ANALYSIS RESULTS – PROJECTED CONDITIONS

Intersection	Weekday Morning Peak Hour		Weekday Evening Peak Hour	
	LOS	Delay	LOS	Delay
3rd Street SW with 2nd Street SW[1]				
• Overall	B	10.7	A	9.6
• Eastbound Left-Turn	A	9.7	A	9.4
• Eastbound Right-Turn	A	8.8	A	9.1
• Northbound Through	A	9.3	B	10.2
• Northbound Left-Turn	B	12.3	A	9.1
• Southbound Through	A	8.9	B	10.2
• Southbound Right-Turn	A	7.5	A	7.5
Avenida Cesar Chavez SW with Proposed Right-In/Right-Out Access Drive[2]				
• Northbound Approach	B	12.3	B	11.1
3rd Street SW with Proposed Access Drive[2]				
• Eastbound Approach	A	9.5	A	9.9
• Northbound Left-Turn	A	7.5	A	7.5

LOS = Level of Service
Delay is measured in seconds.
1 – All-way stop control.
2 – One-way stop control.

Table 14
CAPACITY ANALYSIS RESULTS – PROJECTED CONDITIONS

Intersection	Weekday Morning Peak Hour		Weekday Evening Peak Hour	
	V/C Ratio	95th Queues (ft)	V/C Ratio	95th Queues (ft)
3rd Street SW with 2nd Street SW[1]				
• Eastbound Left-Turn	0.108	10	0.051	5
• Eastbound Right-Turn	0.145	13	0.183	18
• Northbound Through	0.117	10	0.242	23
• Northbound Left-Turn	0.468	63	0.19	18
• Southbound Through	0.116	10	0.299	30
• Southbound Right-Turn	0.021	3	0.04	3
Avenida Cesar Chavez SW with Proposed Right-In/Right-Out Access Drive[2]				
• Northbound Approach	0.073	5	0.023	3
3rd Street SW with Proposed Access Drive[2]				
• Eastbound Approach	0.044	3	0.028	3
• Northbound Left-Turn	0.003	0	0.001	0

LOS = Level of Service
Delay is measured in seconds.
1 – All-way stop control.
2 – One-way stop control.

Discussion and Recommendations

The following summarizes how the intersections are projected to operate and identifies any roadway and traffic control improvements necessary to accommodate the generated traffic.

Avenida Cesar Chavez SW with 3rd Street SW

The results of the capacity analysis indicate that overall this intersection currently operates at level of service (LOS) A during the weekday morning and weekday evening peak hours. The eastbound and westbound approaches currently operate at LOS A during both peak hours while the northbound and southbound approaches operate at LOS C or better during the peak hours.

Under Year 2024 no-build and total projected conditions, the intersection is projected to operate at LOS A during the weekday morning peak hour and LOS B during the weekday evening peak hour with increases in delay of less than three seconds. All the approaches are projected to operate at the existing levels of service during both peak hours with increases in delay of less than less than four seconds. The maximum 95th percentile queue for the eastbound through movement is projected to be approximately 235 feet during the weekday morning peak hour that will not extend back to the intersection of 4th Street with Avenida Cesar Chavez. However, the eastbound through movement may extend back to the proposed right-in/right-out access drive but a review of the traffic simulation showed that the queue will clear the intersection during one cycle. The maximum 95th percentile queue for the westbound left-turn movement is projected to be approximately 70 feet during the weekday morning peak hour that can be accommodated within the existing left-turn lane storage provided. As such, this intersection had adequate reserve capacity to accommodate the traffic estimated to be generated by the proposed Dunkin Drive-Through and no roadway improvement or traffic control adjustments will be required.

Avenida Cesar Chavez SW with 4th Street SW

The results of the capacity analysis indicate that overall this intersection currently operates at LOS A during the weekday morning peak hour and LOS B during the weekday evening peak hour. The eastbound and westbound approaches operate at LOS B or better during the peak hours and the northbound and southbound approaches operate at LOS C during both peak hours.

Under Year 2024 no-build and total projected conditions, the intersection and all its approaches are projected to continue operating at the existing levels of service during both peak hours with increases in delay of less than one second. The maximum 95th percentile queue for the westbound through movement is projected to be approximately 355 feet during the weekday evening peak hour and will not extend back to the intersection of Avenida Cesar Chavez with 3rd Street. As such, this intersection has adequate reserve capacity to accommodate the traffic estimated to be generated by the proposed Dunkin Drive-Through and no roadway improvements or traffic control adjustments will be required.

3rd Street SW with 2nd Street SW

The results of the capacity analysis indicate that overall the intersection currently operates at LOS B during the weekday morning and LOS A during the weekday evening peak hour. All the approaches and their critical movements currently operate at LOS B or better during both peak hours.

Under Year 2024 no-build and total projected conditions, the intersections and all its critical movements are projected to continue operating at the same existing levels of service during both peak hours with increases in delay of less than one second. As such, the traffic estimated to be generated by the proposed Dunkin Drive-Through will have a limited impact on the operation of this intersection and no roadway improvements or traffic control adjustments will be required.

Avenida Cesar Chavez SW with Proposed Right-In/Right-Out Access Drive

The results of the capacity analysis indicate that the outbound movement is projected to operate at LOS B during the weekday morning and weekday evening peak hour with a 95th percentile queue of one to two vehicles during both peak hours. As such, this access drive will be adequate to accommodate the traffic estimated to be generated by the proposed Dunkin Drive-Through and will ensure efficient access to the site.

3rd Street SW with Proposed Access Drive

The results of the capacity analysis indicate that the eastbound approach and the northbound left-turn movement are projected to operate at LOS A during the weekday morning and weekday evening peak hours. The maximum 95th percentile queue for the northbound left-turn movement is projected to be one to two vehicles during both peak hours and will not interrupt the traffic flow on 3rd Street. As such, this access drive will be adequate to accommodate the traffic estimated to be generated by the proposed Dunkin Drive-Through and will ensure efficient and flexible access to the site.

On-Site Circulation and Drive-Through Stacking

Based on a review of the site plan, vehicles entering the drive-through facility for the coffee shop will enter at the southwest corner of the building facing east. Vehicles will proceed to the dual ordering boards, place their order, and then proceed to the pay/pick-up window located on the east side of the building. Vehicles will then exit the drive-through from the northeast corner of the building and will be able to proceed either left to the access drive on Avenida Cesar Chavez SW or right to the access drive on 3rd Street SW.

A stop sign should be provided for outbound movements from the drive-through onto the main circulation drive aisles and a “Do Not Enter” sign should be provided at the drive-through exit facing north.

Based on the site plan, the drive-through facility will provide stacking for approximately six vehicles before the ordering boards and eight vehicles from the dual order boards to the pick-up window for a total of 14 stacked vehicles.

Observations conducted by KLOA. Inc at existing coffee shops in the Chicagoland area indicated the following:

- During the weekday morning peak period (6:30 A.M. to 9:00 A.M.), an average queue of seven vehicles and a maximum queue of 12 vehicles were observed.

- During the weekday evening peak period (4:00 P.M. to 6:30 P.M.), an average queue of one vehicle and a maximum queue of two vehicles were observed.

As such, the proposed stacking for 14 vehicles will be adequate in accommodating the average and peak drive-through stacking anticipated for the coffee shop.

6. Conclusion

Based on the proceeding analyses and recommendations, the following conclusions have been made:

- The proposed Dunkin will be located at 310 Avenida Cesar Chavez SW and will be an approximately 1,700 square-foot building providing a drive-through that will accommodate 14 vehicles and a parking lot with 16 parking spaces.

- Access to the site will be provided via the two full movement access drives off Avenida Cesar Chavez SW and 3rd Street SW.

- The volume of traffic estimated to be generated by Dunkin will be reduced due to the volume of pass-by trips anticipated to be diverted from the existing traffic on Avenida Cesar Chavez SW.

- The access drives are projected to be adequate in accommodating the traffic estimated to be generated by Dunkin and will provide flexible and efficient access to the site.

- As part of the proposed development, stop signs should be provided for outbound traffic from both access drives.

- The drive-through stacking of 14 vehicles will be adequate in accommodating the peak drive-through activity for the coffee shop.

Appendix

Scope of Traffic Impact Study
Traffic Count Summary Sheets
Site Plan
ITE Trip Generation Summary Sheets
Level of Service Criteria
Capacity Analysis Summary Sheets

Scope of Traffic Impact Study

SCOPE OF TRAFFIC IMPACT STUDY (TIS)

TO: Brendan May, PE, PTOE
KLOA, Inc.
9575 W. Higgins Road, Suite 400
Rosemont, Illinois 60018

MEETING DATE: Wednesday, April 26, 2023 – Was a virtual meeting held

ATTENDEES: Matthew Grush, P.E. (City of Albuquerque), Brendan May, PE, PTOE (KLOA, Inc.), Luay Aboona, PE, PTOE (KLOA, Inc.) , Jeff Wooten, PE, LEED AP (Wooten Engineering, LLC)

PROJECT: Dunkin Donuts (310 Avenida Cesar Chavez)

REQUESTED CITY ACTION: ___ Zone Change _X_ Site Development Plan

___ Subdivision ___ Building Permit ___ Sector Plan ___ Sector Plan Amendment

___ Curb Cut Permit ___ Conditional Use ___ Annexation ___ Site Plan Amendment

ASSOCIATED APPLICATION: Coffee Shop with Drive-Through Window (1,700 s.f.)

SCOPE OF REPORT:
The Traffic Impact Study should follow the standard report format, which is outlined in the DPM. The following supplemental information is provided for the preparation of this specific study.

1. Trip Generation - Use Trip Generation Manual, 11th Edition.

2. Appropriate study area:
   Signalized Intersections;
   a. Avenida Cesar Chavez with 3rd Street SW
   b. Avenida Cesar Chavez with 4th Street SW

   Unsignalized Intersections;
   a. Avenida Cesar Chavez with 2nd Street SW

   Driveway Intersections: all site drives.- confirmed

3. Intersection turning movement counts
   Study Time – 7-9 a.m. peak hour, 4-6 p.m. peak hour
   Consultant to provide for all intersections listed above.

4. Type of intersection progression and factors to be used.
   Information to be determined from the results of the traffic counts

5. Boundaries of area to be used for trip distribution.
   2 mile radius – commercial;

6. Basis for trip distribution.

Commercial - Use relationship based upon population. Use population data from 2040 Socioeconomic Forecasts, MRCOG – See MRCOG website for most current data.
Commercial -
Ts = (Tt) (Sp) / (Sp)
Ts = Development to Individual Subarea Trips
Tt = Total Trips
Sp = Subarea Population

7. Traffic Assignment. Logical routing on the major street system.

8. Proposed developments which have been approved but not constructed that are to be Included in the analyses. Projects in the area include: N/A

9. Method of intersection capacity analysis - planning or operational (see "2016 Highway Capacity Manual" or equivalent [i.e. HCS, Synchro, Teapac, etc.] as approved by staff). Must use latest version of design software and/or current edition of design manual.
   Implementation Year: 2024

10. Traffic conditions for analysis:
    a. Existing analysis X yes __ no - year (2023);
    b. Phase implementation year(s) without proposed development – N/A
    c. Phase implementation year(s) with proposed development – N/A
    d. Project completion year without proposed development – 2025
    e. Project completion year with proposed development – 2025
    f. Other –

11. Background traffic growth.
    Method: use 10-year historical growth based on standard data from the MRCOG Traffic Flow Maps. Minimum growth rate to be used is 1/2%.

12. Planned (programmed) traffic improvements.
    List planned CIP improvements in study area and projected project implementation year:
    a. N/A

13. Items to be included in the study:
    a. Intersection analysis. Yes
    b. Signal progression - An analysis is required if the driveway analysis indicates a traffic signal is possibly warranted. Analysis Method: N/A
    c. Arterial LOS analysis; No
    d. Recommended street, intersection and signal improvements. Yes
    e. Site design features such as turning lanes, median cuts, queuing requirements and site circulation, including driveway signalization and visibility. Yes
    f. Transportation system impacts.
    g. Other mitigating measures. Yes
    h. Accident analyses X yes __ no; Location(s): Avenida Cesar Chavez with 2nd Street, 3rd Street, 4th Street (5 years)
    i. Weaving analyses __ yes X no; Location(s): N/A

14. Other: N/A

SUBMITTAL REQUIREMENTS:

1. Number of copies of report required
   a. 1 digital copy
2. Submittal Fee – $1300 for up to 3 reviews plus technology fee

The Traffic Impact Study for this development proposal, project name, shall be performed in accordance with the above criteria. If there are any questions regarding the above items, please contact me at 505-924-3362.

P.E. 6/13/2023

Matt Grush, P.E. Date
Senior Engineer
City of Albuquerque, Planning
Transportation Development Section

via: email
C: TIS Task Force Attendees, file

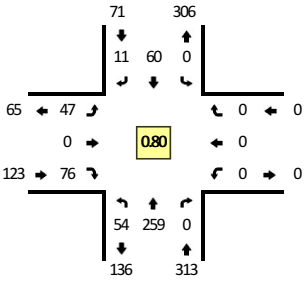
Traffic Count Summary Sheets

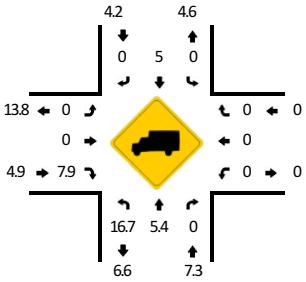
Type of peak hour being reported: System-wide Peak | Method for determining peak hour: Total Entering Volume

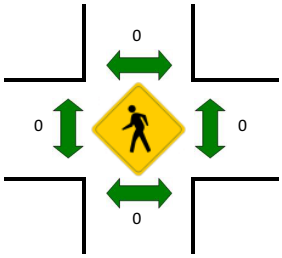
LOCATION: 2nd St SW -- Avenida Cesar Chavez
CITY/STATE: Albuquerque, NM

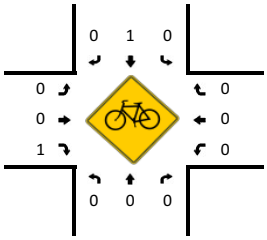
QC JOB #: 16204803
DATE: Tue, May 23 2023

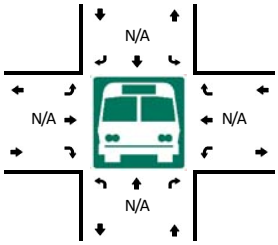
Peak-Hour: 7:15 AM -- 8:15 AM
Peak 15-Min: 7:45 AM -- 8:00 AM

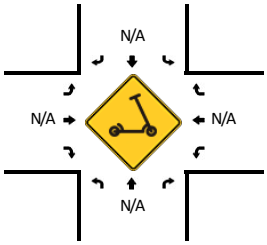












15-Min Count Period Beginning At	2nd St SW (Northbound)				2nd St SW (Southbound)				Avenida Cesar Chavez (Eastbound)				Avenida Cesar Chavez (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	16	41	0	0	0	8	0	0	3	0	11	0	0	0	0	0	79	
7:15 AM	6	53	0	0	0	18	2	0	12	0	18	0	0	0	0	0	109	
7:30 AM	14	72	0	0	0	15	1	0	9	0	16	0	0	0	0	0	127	
7:45 AM	18	85	0	0	0	17	3	0	17	0	18	0	0	0	0	0	158	473
8:00 AM	16	49	0	0	0	10	5	0	9	0	24	0	0	0	0	0	113	507
8:15 AM	9	44	0	0	0	17	1	0	7	0	18	0	0	0	0	0	96	494
8:30 AM	15	33	0	0	0	25	1	0	9	0	33	0	0	0	0	0	116	483
8:45 AM	16	33	0	0	0	17	3	0	10	0	25	0	0	0	0	0	104	429

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	72	340	0	0	0	68	12	0	68	0	72	0	0	0	0	0	632
Heavy Trucks	4	20	0		0	8	0		0	0	0		0	0	0		32
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	4	0		0	0	4		0	0	0		8
Scooters																	

Comments:

Report generated on 7/5/2023 11:24 AM

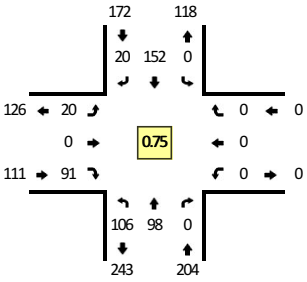
SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

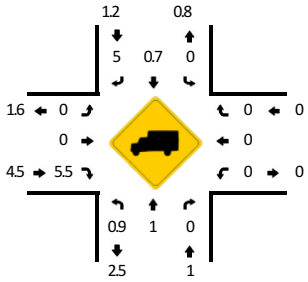
Type of peak hour being reported: System-wide Peak | Method for determining peak hour: Total Entering Volume

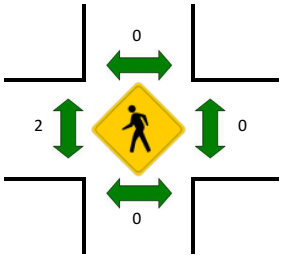
LOCATION: 2nd St SW -- Avenida Cesar Chavez
CITY/STATE: Albuquerque, NM

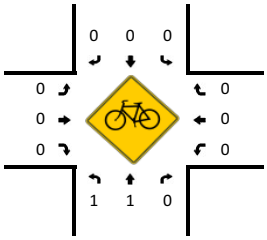
QC JOB #: 16204804
DATE: Mon, May 22 2023

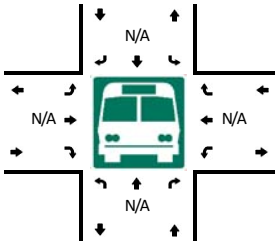
Peak-Hour: 4:30 PM -- 5:30 PM
Peak 15-Min: 4:30 PM -- 4:45 PM

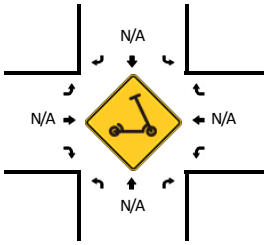












15-Min Count Period Beginning At	2nd St SW (Northbound)				2nd St SW (Southbound)				Avenida Cesar Chavez (Eastbound)				Avenida Cesar Chavez (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	23	24	0	0	0	45	2	0	5	0	19	0	0	0	0	0	118	
4:15 PM	23	34	0	0	0	31	6	0	5	0	22	0	0	0	0	0	121	
4:30 PM	52	38	0	0	0	40	5	0	7	0	21	0	0	0	0	0	163	
4:45 PM	21	21	0	0	0	31	6	0	6	0	21	0	0	0	0	0	106	508
5:00 PM	13	18	0	0	0	49	6	0	2	0	25	0	0	0	0	0	113	503
5:15 PM	20	21	0	0	0	32	3	0	5	0	24	0	0	0	0	0	105	487
5:30 PM	11	16	0	0	0	32	4	0	2	0	18	0	0	0	0	0	83	407
5:45 PM	21	20	0	0	0	29	3	0	5	0	10	0	0	0	0	0	88	389

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	208	152	0	0	0	160	20	0	28	0	84	0	0	0	0	0	652
Heavy Trucks	0	0	0		0	4	0		0	0	0		0	0	0		4
Buses																	
Pedestrians		0				0				8				0			8
Bicycles	0	4	0		0	0	0		0	0	0		0	0	0		4
Scooters																	

Comments:

Report generated on 7/5/2023 11:30 AM

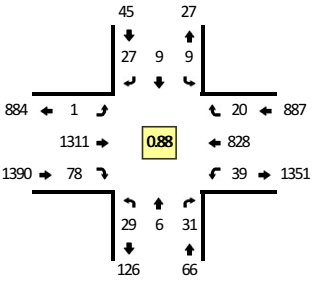
SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

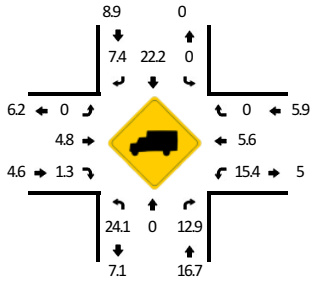
Type of peak hour being reported: System-wide Peak | Method for determining peak hour: Total Entering Volume

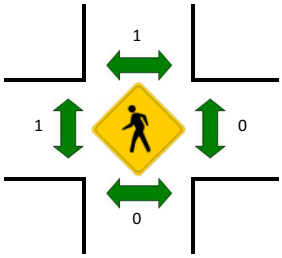
LOCATION: 3rd St SW -- Avenida Cesar Chavez
CITY/STATE: Albuquerque, NM

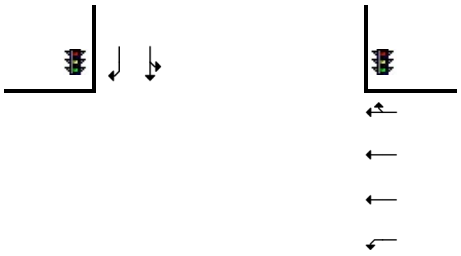
QC JOB #: 16204805
DATE: Tue, May 23 2023

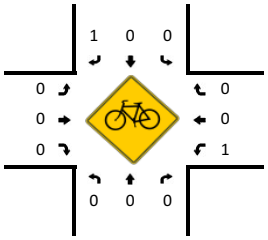
Peak-Hour: 7:15 AM -- 8:15 AM
Peak 15-Min: 7:45 AM -- 8:00 AM

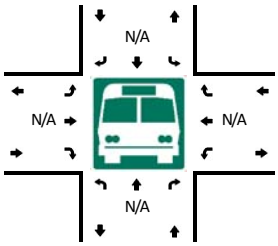


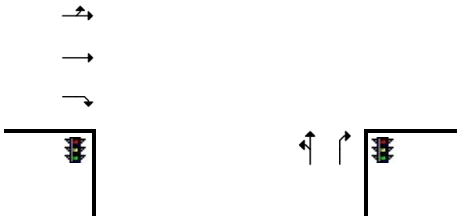


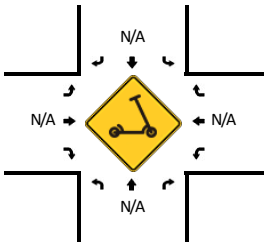












15-Min Count Period Beginning At	3rd St SW (Northbound)				3rd St SW (Southbound)				Avenida Cesar Chavez (Eastbound)				Avenida Cesar Chavez (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	5	1	12	0	2	0	6	0	0	304	10	0	6	151	3	0	500	
7:15 AM	4	0	4	0	1	3	5	0	1	348	17	0	10	183	4	0	580	
7:30 AM	11	1	4	0	0	3	10	0	0	315	18	0	6	198	7	0	573	
7:45 AM	8	5	9	0	4	2	7	0	0	356	25	0	10	249	6	0	681	2334
8:00 AM	6	0	14	0	4	1	5	0	0	292	18	0	13	198	3	0	554	2388
8:15 AM	3	1	7	0	1	1	7	0	1	323	9	0	15	203	6	0	577	2385
8:30 AM	10	1	9	0	4	1	6	0	1	301	21	0	18	200	6	0	578	2390
8:45 AM	5	2	12	0	1	3	5	0	0	291	17	0	14	191	3	0	544	2253

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	32	20	36	0	16	8	28	0	0	1424	100	0	40	996	24	0	2724
Heavy Trucks	4	0	0		0	0	0		0	64	0		0	40	0		108
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		4	0	0		4
Scooters																	

Comments:

Report generated on 7/5/2023 11:24 AM

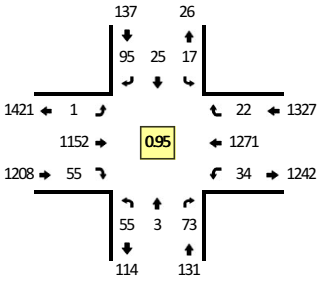
SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

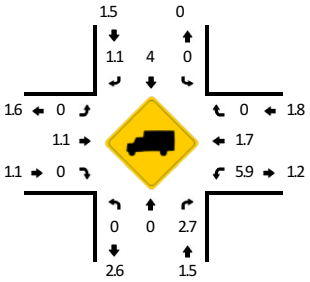
Type of peak hour being reported: System-wide Peak | Method for determining peak hour: Total Entering Volume

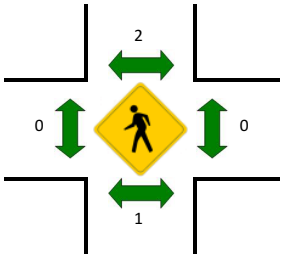
LOCATION: 3rd St SW -- Avenida Cesar Chavez
CITY/STATE: Albuquerque, NM

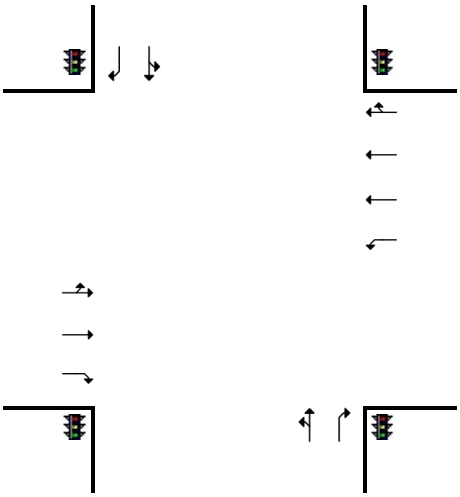
QC JOB #: 16204806
DATE: Tue, May 23 2023

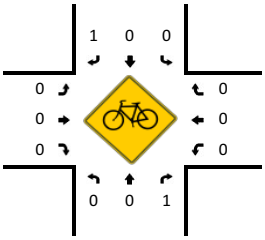
Peak-Hour: 4:30 PM -- 5:30 PM
Peak 15-Min: 4:30 PM -- 4:45 PM

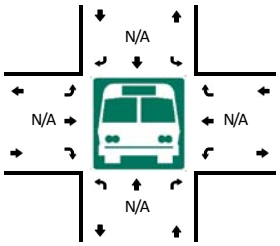


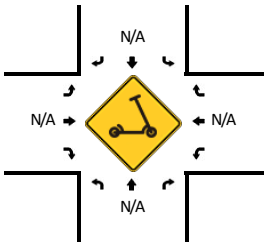












15-Min Count Period Beginning At	3rd St SW (Northbound)				3rd St SW (Southbound)				Avenida Cesar Chavez (Eastbound)				Avenida Cesar Chavez (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	7	2	19	0	5	3	17	1	1	271	14	0	9	335	3	1	688	
4:15 PM	14	1	12	0	3	3	25	0	0	269	11	0	11	310	3	1	663	
4:30 PM	20	0	35	0	2	5	23	0	1	298	14	0	13	321	7	0	739	
4:45 PM	17	0	14	0	3	5	25	0	0	267	12	0	9	313	4	0	669	2759
5:00 PM	9	1	12	0	7	8	20	0	0	326	12	0	8	331	2	0	736	2807
5:15 PM	9	2	12	0	5	7	27	0	0	261	17	0	4	306	9	0	659	2803
5:30 PM	8	0	10	0	1	1	18	0	0	243	8	0	12	300	6	1	608	2672
5:45 PM	10	1	11	0	2	1	17	0	0	225	8	0	5	273	3	0	556	2559

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	80	0	140	0	8	20	92	0	4	1192	56	0	52	1284	28	0	2956
Heavy Trucks	0	0	4		0	0	0		0	28	0		0	24	0		56
Buses																	
Pedestrians		0				4				0				0			4
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 7/5/2023 11:30 AM

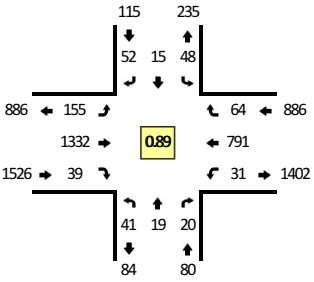
SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

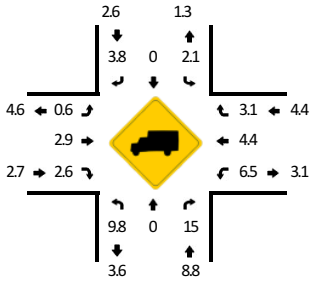
Type of peak hour being reported: System-wide Peak | Method for determining peak hour: Total Entering Volume

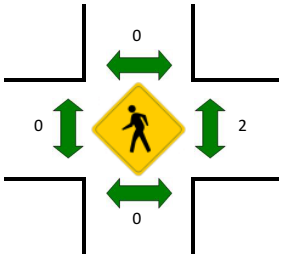
LOCATION: 4th St SW -- Avenida Cesar Chavez
CITY/STATE: Albuquerque, NM

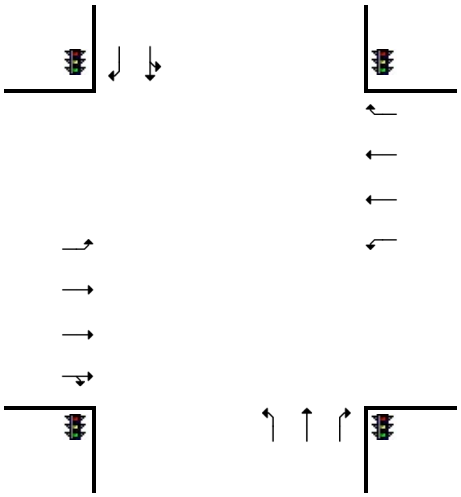
QC JOB #: 16204807
DATE: Tue, May 23 2023

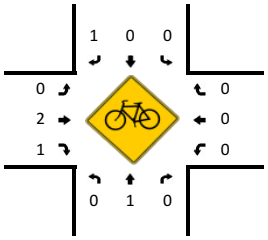
Peak-Hour: 7:15 AM -- 8:15 AM
Peak 15-Min: 7:45 AM -- 8:00 AM

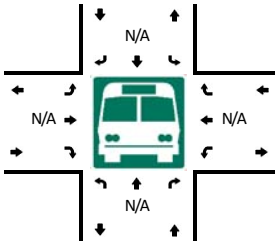


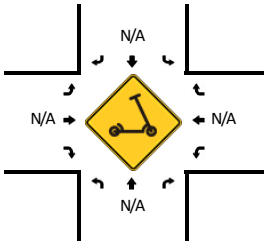












15-Min Count Period Beginning At	4th St SW (Northbound)				4th St SW (Southbound)				Avenida Cesar Chavez (Eastbound)				Avenida Cesar Chavez (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	10	1	2	0	13	1	5	0	36	305	11	3	6	151	6	0	550	
7:15 AM	14	5	6	0	8	1	15	0	32	354	8	1	6	181	8	0	639	
7:30 AM	11	4	4	0	18	4	12	0	35	312	13	1	6	194	13	0	627	
7:45 AM	5	5	4	1	10	4	13	0	45	366	11	0	7	237	23	1	732	2548
8:00 AM	10	5	6	0	12	6	12	0	40	300	7	1	10	179	20	1	609	2607
8:15 AM	4	6	4	0	20	9	22	0	54	309	15	0	5	187	18	1	654	2622
8:30 AM	8	3	5	0	22	3	15	0	42	290	13	0	7	204	13	0	625	2620
8:45 AM	8	2	6	0	9	4	21	0	38	308	5	0	12	184	14	1	612	2500

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	20	20	16	4	40	16	52	0	180	1464	44	0	28	948	92	4	2928
Heavy Trucks	4	0	4		0	0	0		4	44	4		0	44	0		104
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 7/5/2023 11:24 AM

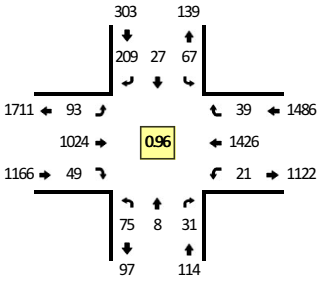
SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

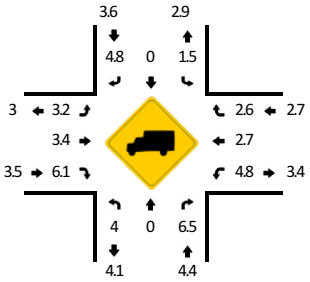
Type of peak hour being reported: System-wide Peak | Method for determining peak hour: Total Entering Volume

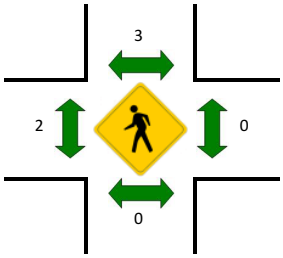
LOCATION: 4th St SW -- Avenida Cesar Chavez
CITY/STATE: Albuquerque, NM

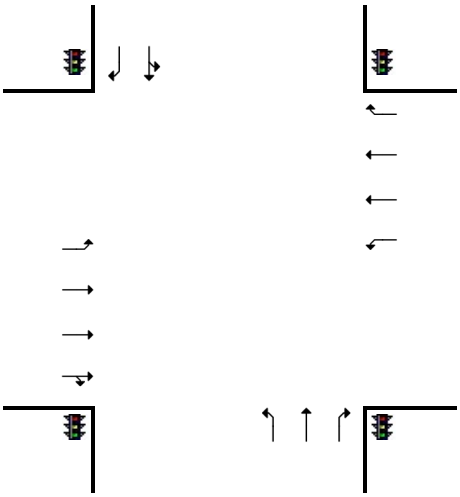
QC JOB #: 16204808
DATE: Tue, May 23 2023

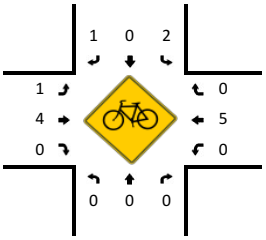
Peak-Hour: 4:30 PM -- 5:30 PM
Peak 15-Min: 4:30 PM -- 4:45 PM

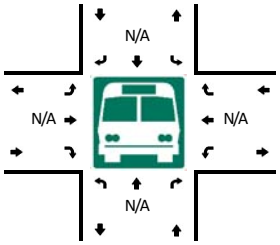


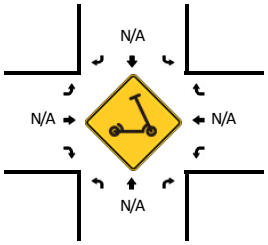












15-Min Count Period Beginning At	4th St SW (Northbound)				4th St SW (Southbound)				Avenida Cesar Chavez (Eastbound)				Avenida Cesar Chavez (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	13	5	10	0	16	4	30	0	19	260	23	1	8	318	13	0	720	
4:15 PM	15	4	7	0	15	5	37	0	24	242	13	0	3	339	14	0	718	
4:30 PM	20	2	11	0	22	7	41	0	32	250	16	0	6	381	11	0	799	
4:45 PM	24	1	13	0	14	7	49	0	15	228	14	0	8	372	13	0	758	2995
5:00 PM	19	4	2	0	20	7	57	0	17	265	9	0	0	335	6	0	741	3016
5:15 PM	12	1	5	0	11	6	62	0	28	281	10	1	7	338	9	0	771	3069
5:30 PM	15	3	10	0	16	7	64	0	15	290	5	0	1	352	6	0	784	3054
5:45 PM	14	4	4	0	10	5	67	0	17	254	8	0	0	331	11	0	725	3021

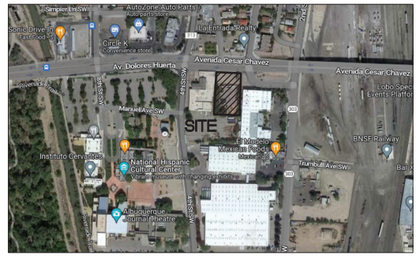
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	80	8	44	0	88	28	164	0	128	1000	64	0	24	1524	44	0	3196
Heavy Trucks	0	0	0		0	0	12		4	32	4		0	32	0		84
Buses																	
Pedestrians		0				0				4				0			4
Bicycles	0	0	0		0	0	0		0	4	0		0	4	0		8
Scooters																	

Comments:

Report generated on 7/5/2023 11:30 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Site Plan



VICINITY MAP

LEGAL DESCRIPTION: TR G-1 PLAT OF SOUTH BARELAS INDUSTRIAL PARK UNIT #2 CONT 0.8394 AC

SITE STUDY 1B

PROPOSED DUNKIN DONUTS

ALBUQUERQUE, NM

TOTAL PARKING SPACES =	16 SPACES
Total Required:	14 spaces
Provided:	16 spaces

NO.	DATE	REMARKS	BY
		REVISIONS	

DESIGN

DESIGNED BY: OG — DATE: JANUARY 2023

DRAWN BY: OG — DATE: JANUARY 2023

JOB NO.: 2023009

CHECKED BY: JW — DATE: JANUARY 2023

Wooten Engineering
1005 21st St SE, Suite 13
Rio Rancho, N.M. 87124
Phone: (505) 980-3560

Dunkin Donuts
310 Avenida Cesar Chavez SW
Albuquerque, NM 87102

SITE PLAN

C1.0

ITE Trip Generation Summary Sheets

Land Use: 937
Coffee/Donut Shop with Drive-Through Window

Description

This land use includes any coffee and donut restaurant that has a drive-through window as well as a walk-in entrance area at which a patron can purchase and consume items. The restaurant sells freshly brewed coffee (along with coffee-related accessories) and a variety of food/drink products such as donuts, bagels, breads, muffins, cakes, sandwiches, wraps, salads, and other hot and cold beverages. The restaurant marketing and sales may emphasize coffee beverages over food (or vice versa).

A coffee/donut shop typically holds long store hours (more than 15 hours) with an early morning opening. Limited indoor seating is generally provided for patrons, but table service is not provided.

Coffee/donut shop without drive-through window (Land Use 936) and coffee/donut shop with drive-through window and no indoor seating (Land Use 938) are related uses.

Additional Data

The sites were surveyed in the 1990s, the 2000s, and the 2010s in California, Colorado, Connecticut, Illinois, Massachusetts, Minnesota, Nevada, New Hampshire, New Jersey, New York, Ontario (CAN), Pennsylvania, Quebec (CAN), Tennessee, Vermont, Washington, and Wisconsin.

Specialized Land Use Data

One study was conducted during the pandemic in 2020. Twelve sites were counted in Illinois and Missouri during the AM and PM adjacent street peak hours. The data have not been incorporated within the overall ITE trip generation database and are not reflected in the data plots for this land use. Consideration for their inclusion will be given for the 12th Edition of *Trip Generation Manual* after additional post-pandemic data are collected. Overall, the pandemic counts yielded an AM adjacent street peak weighted average rate of 84 vehicle trips per 1,000 square feet GFA, roughly equivalent to the pre-pandemic average. The PM adjacent street peak rate was 56 (roughly 40 percent higher than the pre-pandemic value). The higher PM peak rate for these coffee/donut shops conforms with anecdotal observations that with the temporary or permanent closures of many restaurants during the pandemic, the drive-through restaurants that were open did a brisk business even during their off-peak periods.

Source Numbers

594, 599, 615, 617, 618, 621, 622, 635, 639, 712, 714, 725, 726, 728, 853, 854, 892, 903, 928, 959, 979, 982, 1004, 1042, 1044

Coffee/Donut Shop with Drive-Through Window (937)

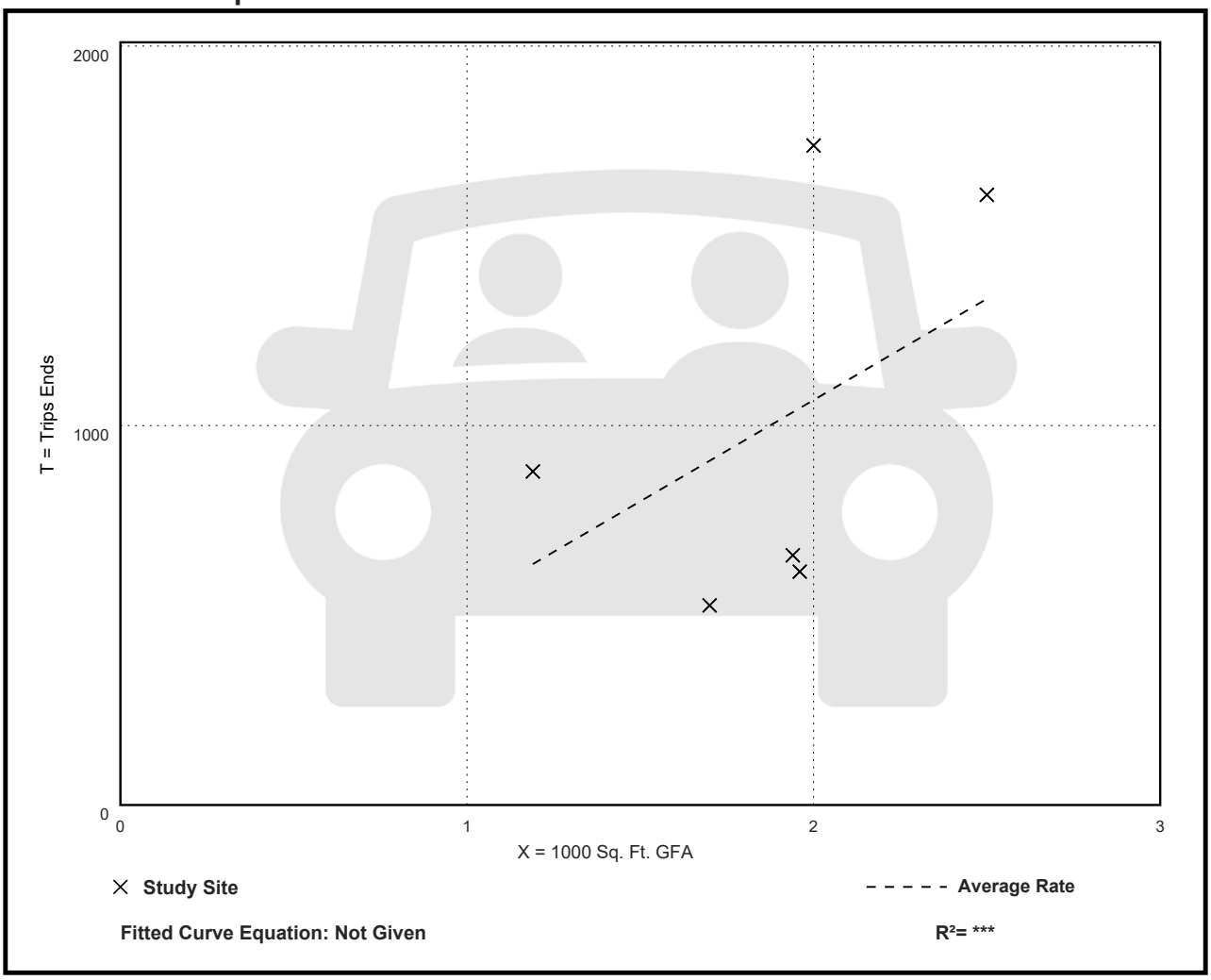
Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Weekday

Setting/Location: General Urban/Suburban
Number of Studies: 6
Avg. 1000 Sq. Ft. GFA: 2
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
533.57	309.41 - 869.00	243.65

Data Plot and Equation



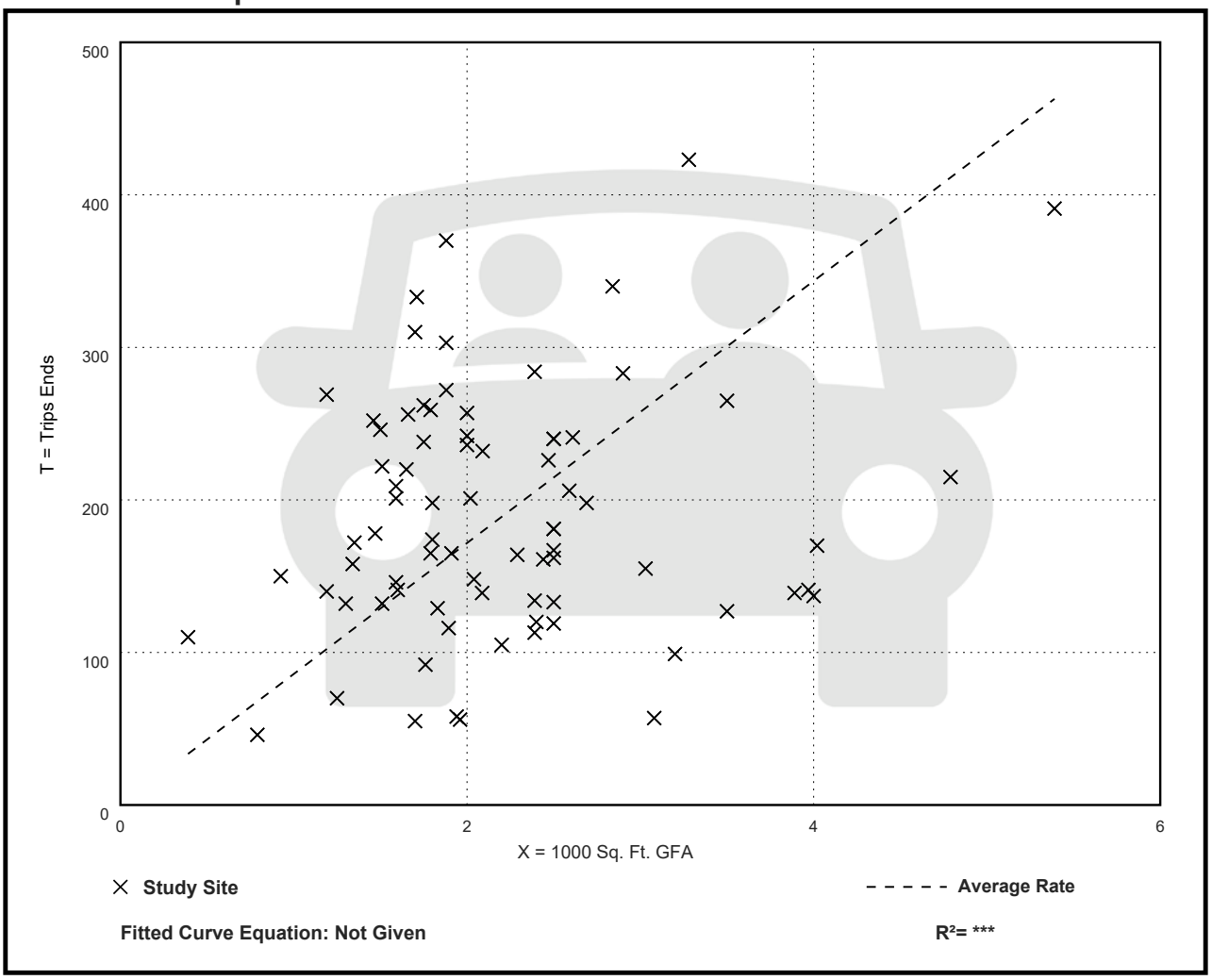
Coffee/Donut Shop with Drive-Through Window (937)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: General Urban/Suburban
Number of Studies: 78
Avg. 1000 Sq. Ft. GFA: 2
Directional Distribution: 51% entering, 49% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
85.88	18.51 - 282.05	44.92

Data Plot and Equation



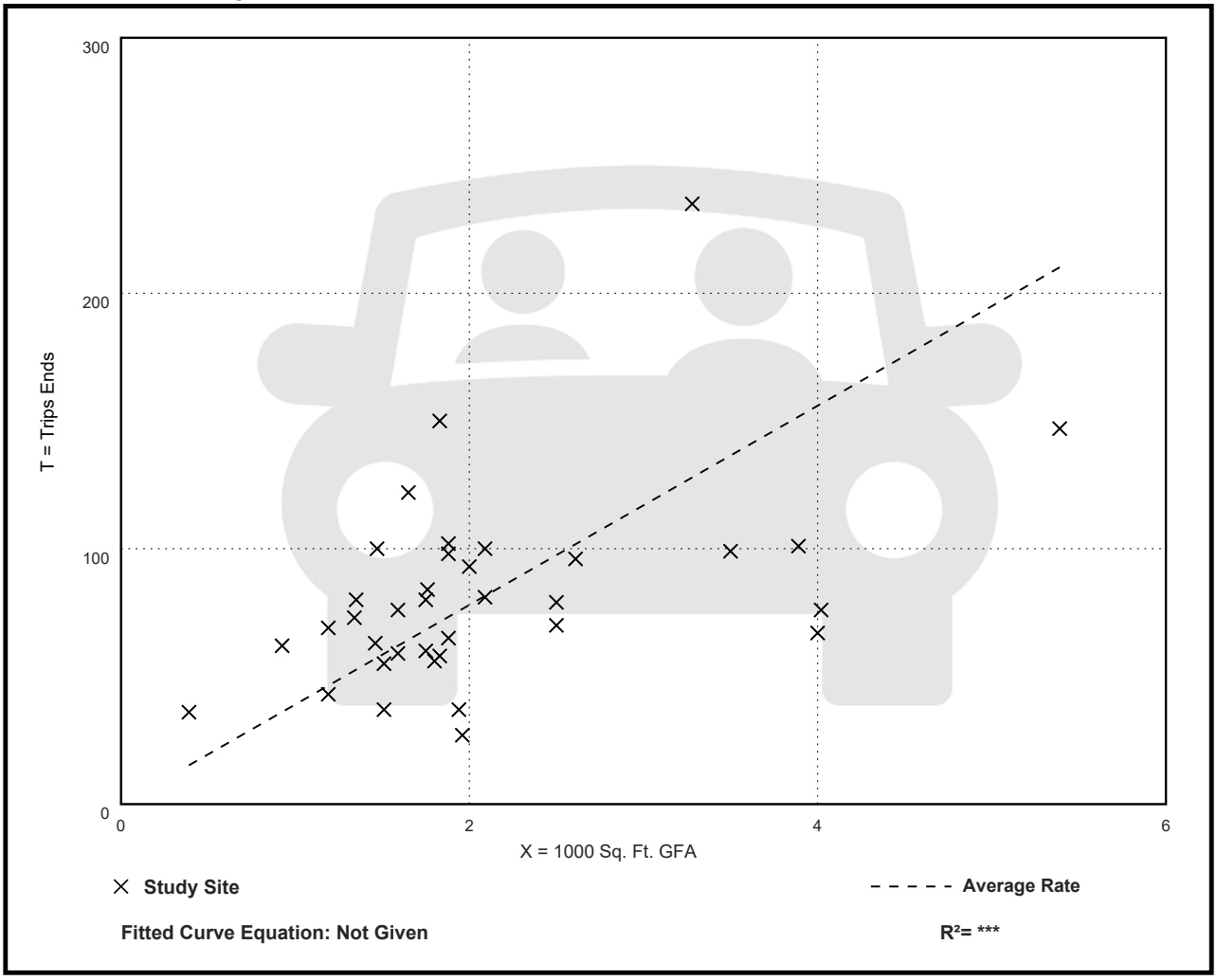
Coffee/Donut Shop with Drive-Through Window (937)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: General Urban/Suburban
Number of Studies: 36
Avg. 1000 Sq. Ft. GFA: 2
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
38.99	13.78 - 92.31	17.79

Data Plot and Equation



Level of Service Criteria

LEVEL OF SERVICE CRITERIA

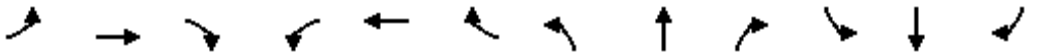
Signalized Intersections		
Level of Service	**Interpretation**	**Average Control Delay (seconds per vehicle)**
A	Favorable progression. Most vehicles arrive during the green indication and travel through the intersection without stopping.	≤10
B	Good progression, with more vehicles stopping than for Level of Service A.	> 10 - 20
C	Individual cycle failures (i.e., one or more queued vehicles are not able to depart as a result of insufficient capacity during the cycle) may begin to appear. Number of vehicles stopping is significant, although many vehicles still pass through the intersection without stopping.	> 20 - 35
D	The volume-to-capacity ratio is high and either progression is ineffective or the cycle length is too long. Many vehicles stop and individual cycle failures are noticeable.	> 35 - 55
E	Progression is unfavorable. The volume-to-capacity ratio is high and the cycle length is long. Individual cycle failures are frequent.	> 55 - 80
F	The volume-to-capacity ratio is very high, progression is very poor, and the cycle length is long. Most cycles fail to clear the queue.	> 80

Unsignalized Intersections	
Level of Service	**Average Total Delay (sec/veh)**
A	0 - 10
B	> 10 - 15
C	> 15 - 25
D	> 25 - 35
E	> 35 - 50
F	> 50

Source: *Highway Capacity Manual*, 6th Edition.

Capacity Analysis Summary Sheets

Existing Weekday Morning Peak Hour

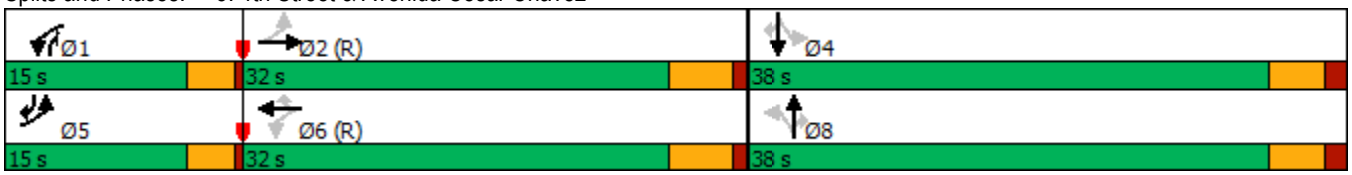


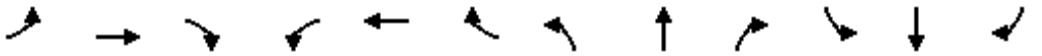
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	155	1332	39	31	791	64	41	19	20	48	15	52
Future Volume (vph)	155	1332	39	31	791	64	41	19	20	48	15	52
Ideal Flow (vphpl)	1900	1900	1900	1900	2000	1900	1900	2000	1900	1900	1900	1900
Storage Length (ft)	260		0	180		145	90		90	0		120
Storage Lanes	1		0	1		1	1		1	0		1
Taper Length (ft)	70			100			120			25		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.996				0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950				0.963	
Satd. Flow (prot)	1787	5016	0	1687	3654	1568	1641	2000	1404	0	1802	1553
Flt Permitted	0.278			0.147			0.711				0.764	
Satd. Flow (perm)	523	5016	0	261	3654	1568	1228	2000	1404	0	1430	1553
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5				71			26			26
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		612			199			208			219	
Travel Time (s)		11.9			3.9			4.7			5.0	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	1%	3%	3%	7%	4%	3%	10%	0%	15%	2%	0%	4%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	174	1541	0	35	889	72	46	21	22	0	71	58
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Perm	NA	pm+ov	Perm	NA	pm+ov
Protected Phases	5	2		1	6			8	1		4	5
Permitted Phases	2			6		6	8		8	4		4
Detector Phase	5	2		1	6	6	8	8	1	4	4	5
Switch Phase												
Minimum Initial (s)	3.0	20.0		3.0	20.0	20.0	8.0	8.0	3.0	8.0	8.0	3.0
Minimum Split (s)	9.5	30.0		9.5	28.0	28.0	38.0	38.0	9.5	38.0	38.0	9.5
Total Split (s)	15.0	32.0		15.0	32.0	32.0	38.0	38.0	15.0	38.0	38.0	15.0
Total Split (%)	17.6%	37.6%		17.6%	37.6%	37.6%	44.7%	44.7%	17.6%	44.7%	44.7%	17.6%
Yellow Time (s)	3.0	4.0		3.0	4.0	4.0	3.5	3.5	3.0	3.5	3.5	3.0
All-Red Time (s)	0.5	1.0		0.5	1.0	1.0	1.5	1.5	0.5	1.5	1.5	0.5
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	3.5	5.0		3.5	5.0	5.0	5.0	5.0	3.5		5.0	3.5
Lead/Lag	Lead	Lag		Lead	Lag	Lag			Lead			Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes			Yes			Yes
Recall Mode	None	C-Max		None	C-Max	C-Max	None	None	None	None	None	None
Act Effct Green (s)	68.5	63.8		64.1	58.2	58.2	9.9	9.9	16.7		9.9	18.3
Actuated g/C Ratio	0.81	0.75		0.75	0.68	0.68	0.12	0.12	0.20		0.12	0.22
v/c Ratio	0.34	0.41		0.13	0.36	0.07	0.32	0.09	0.07		0.43	0.16
Control Delay	4.2	5.9		3.7	7.2	2.1	39.9	33.1	9.2		42.5	15.9
Queue Delay	0.0	0.0		0.0	0.4	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay	4.2	5.9		3.7	7.6	2.1	39.9	33.1	9.2		42.5	15.9
LOS	A	A		A	A	A	D	C	A		D	B
Approach Delay		5.8			7.0			30.7			30.5	
Approach LOS		A			A			C			C	
Queue Length 50th (ft)	16	119		3	97	0	23	10	0		36	13
Queue Length 95th (ft)	36	175		10	161	16	53	29	15		73	39

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Internal Link Dist (ft)		532			119			128			139	
Turn Bay Length (ft)	260			180		145	90		90			120
Base Capacity (vph)	596	3767		405	2502	1095	476	776	411		555	453
Starvation Cap Reductn	0	0		0	969	0	0	0	0		0	0
Spillback Cap Reductn	0	0		0	0	0	0	0	0		0	0
Storage Cap Reductn	0	0		0	0	0	0	0	0		0	0
Reduced v/c Ratio	0.29	0.41		0.09	0.58	0.07	0.10	0.03	0.05		0.13	0.13

Intersection Summary			
Area Type:	Other		
Cycle Length: 85			
Actuated Cycle Length: 85			
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 80			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.43			
Intersection Signal Delay: 8.0		Intersection LOS: A	
Intersection Capacity Utilization 51.7%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 3: 4th Street & Avenida Cesar Chavez



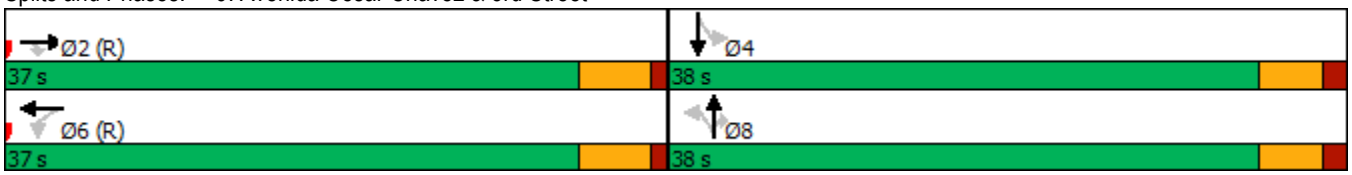


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1321	78	39	828	20	29	6	31	9	9	27
Future Volume (vph)	0	1321	78	39	828	20	29	6	31	9	9	27
Ideal Flow (vphpl)	1900	2000	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		170	50		0	0		70	0		0
Storage Lanes	0		1	1		0	0		1	0		0
Taper Length (ft)	25			40			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.996				0.850		0.918	
Flt Protected				0.950				0.960			0.990	
Satd. Flow (prot)	0	3619	1599	1570	3397	0	0	1523	1429	0	1590	0
Flt Permitted				0.152				0.728			0.921	
Satd. Flow (perm)	0	3619	1599	251	3397	0	0	1155	1429	0	1480	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			74		4				29		31	
Link Speed (mph)		35			35			30			10	
Link Distance (ft)		184			289			130			286	
Travel Time (s)		3.6			5.6			3.0			19.5	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	0%	5%	1%	15%	6%	0%	24%	0%	13%	0%	22%	7%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1501	89	44	964	0	0	40	35	0	51	0
Turn Type		NA	Perm	Perm	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases			2	6			8		8	4		
Detector Phase		2	2	6	6		8	8	8	4	4	
Switch Phase												
Minimum Initial (s)		12.0	12.0	12.0	12.0		8.0	8.0	8.0	8.0	8.0	
Minimum Split (s)		28.0	28.0	28.0	28.0		38.0	38.0	38.0	38.0	38.0	
Total Split (s)		37.0	37.0	37.0	37.0		38.0	38.0	38.0	38.0	38.0	
Total Split (%)		49.3%	49.3%	49.3%	49.3%		50.7%	50.7%	50.7%	50.7%	50.7%	
Yellow Time (s)		4.0	4.0	4.0	4.0		3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)		1.0	1.0	1.0	1.0		1.5	1.5	1.5	1.5	1.5	
Lost Time Adjust (s)		0.0	0.0	0.0	0.0			0.0	0.0		0.0	
Total Lost Time (s)		5.0	5.0	5.0	5.0			5.0	5.0		5.0	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode		C-Max	C-Max	C-Max	C-Max		None	None	None	None	None	
Act Effct Green (s)		63.2	63.2	63.2	63.2			9.0	9.0		9.0	
Actuated g/C Ratio		0.84	0.84	0.84	0.84			0.12	0.12		0.12	
v/c Ratio		0.49	0.07	0.21	0.34			0.29	0.18		0.25	
Control Delay		3.8	1.2	6.0	3.0			35.3	15.8		19.2	
Queue Delay		0.4	0.0	0.0	0.4			0.0	0.0		0.0	
Total Delay		4.2	1.2	6.0	3.3			35.3	15.8		19.2	
LOS		A	A	A	A			D	B		B	
Approach Delay		4.0			3.4			26.2			19.2	
Approach LOS		A			A			C			B	
Queue Length 50th (ft)		113	1	5	59			18	3		9	
Queue Length 95th (ft)		181	11	20	98			43	26		36	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Internal Link Dist (ft)		104			209			50			206	
Turn Bay Length (ft)			170	50					70			
Base Capacity (vph)		3050	1359	211	2864			508	645		668	
Starvation Cap Reductn		856	0	0	1215			0	0		0	
Spillback Cap Reductn		0	0	0	0			0	0		0	
Storage Cap Reductn		0	0	0	0			0	0		0	
Reduced v/c Ratio		0.68	0.07	0.21	0.58			0.08	0.05		0.08	

Intersection Summary			
Area Type:	Other		
Cycle Length: 75			
Actuated Cycle Length: 75			
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Green			
Natural Cycle: 75			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.49			
Intersection Signal Delay: 4.7		Intersection LOS: A	
Intersection Capacity Utilization 60.5%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 9: Avenida Cesar Chavez & 3rd Street



Intersection	
Intersection Delay, s/veh	10.5
Intersection LOS	B

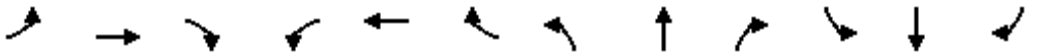
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	48	78	55	259	60	11
Future Vol, veh/h	48	78	55	259	60	11
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles, %	0	8	17	5	5	0
Mvmt Flow	60	98	69	324	75	14
Number of Lanes	1	1	1	1	1	1

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	2	2
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	2	2	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	2	0	2
HCM Control Delay	9	11.6	8.6
HCM LOS	A	B	A

Lane	NBLn1	NBLn2	EBLn1	EBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	100%	0%	0%	0%
Vol Thru, %	0%	100%	0%	0%	100%	0%
Vol Right, %	0%	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	55	259	48	78	60	11
LT Vol	55	0	48	0	0	0
Through Vol	0	259	0	0	60	0
RT Vol	0	0	0	78	0	11
Lane Flow Rate	69	324	60	98	75	14
Geometry Grp	7	7	7	7	7	7
Degree of Util (X)	0.111	0.458	0.103	0.139	0.113	0.018
Departure Headway (Hd)	5.803	5.096	6.186	5.116	5.4	4.608
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	617	706	578	698	662	772
Service Time	3.544	2.836	3.935	2.865	3.153	2.362
HCM Lane V/C Ratio	0.112	0.459	0.104	0.14	0.113	0.018
HCM Control Delay	9.3	12.1	9.6	8.7	8.8	7.4
HCM Lane LOS	A	B	A	A	A	A
HCM 95th-tile Q	0.4	2.4	0.3	0.5	0.4	0.1

Capacity Analysis Summary Sheets

Existing Weekday Evening Peak Hour

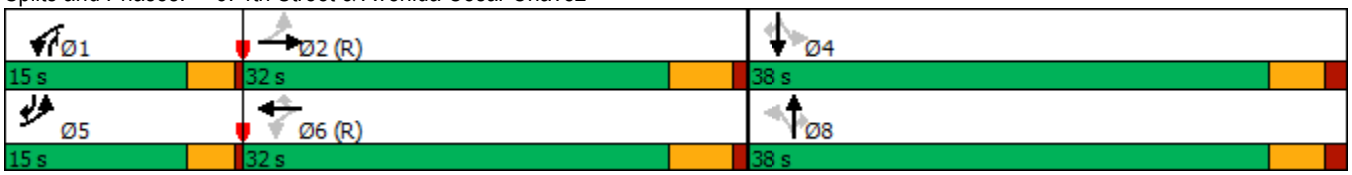


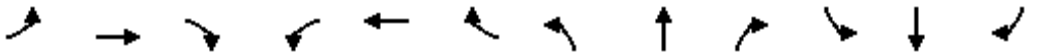
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	93	1110	49	21	1426	39	75	8	31	67	27	209
Future Volume (vph)	93	1110	49	21	1426	39	75	8	31	67	27	209
Ideal Flow (vphpl)	1900	1900	1900	1900	2000	1900	1900	2000	1900	1900	1900	1900
Storage Length (ft)	260		0	180		145	90		90	0		120
Storage Lanes	1		0	1		1	1		1	0		1
Taper Length (ft)	70			100			120			25		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.994				0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950				0.966	
Satd. Flow (prot)	1805	5143	0	1719	3689	1568	1736	2000	1509	0	1810	1538
Flt Permitted	0.115			0.220			0.694				0.783	
Satd. Flow (perm)	218	5143	0	398	3689	1568	1268	2000	1509	0	1467	1538
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		8				71			26			26
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		612			199			208			219	
Travel Time (s)		11.9			3.9			4.7			5.0	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	0%	0%	6%	5%	3%	3%	4%	0%	7%	2%	0%	5%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	97	1207	0	22	1485	41	78	8	32	0	98	218
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Perm	NA	pm+ov	Perm	NA	pm+ov
Protected Phases	5	2		1	6			8	1		4	5
Permitted Phases	2			6		6	8		8	4		4
Detector Phase	5	2		1	6	6	8	8	1	4	4	5
Switch Phase												
Minimum Initial (s)	3.0	20.0		3.0	20.0	20.0	8.0	8.0	3.0	8.0	8.0	3.0
Minimum Split (s)	9.5	30.0		9.5	28.0	28.0	38.0	38.0	9.5	38.0	38.0	9.5
Total Split (s)	15.0	32.0		15.0	32.0	32.0	38.0	38.0	15.0	38.0	38.0	15.0
Total Split (%)	17.6%	37.6%		17.6%	37.6%	37.6%	44.7%	44.7%	17.6%	44.7%	44.7%	17.6%
Yellow Time (s)	3.0	4.0		3.0	4.0	4.0	3.5	3.5	3.0	3.5	3.5	3.0
All-Red Time (s)	0.5	1.0		0.5	1.0	1.0	1.5	1.5	0.5	1.5	1.5	0.5
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	3.5	5.0		3.5	5.0	5.0	5.0	5.0	3.5		5.0	3.5
Lead/Lag	Lead	Lag		Lead	Lag	Lag			Lead			Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes			Yes			Yes
Recall Mode	None	C-Max		None	C-Max	C-Max	None	None	None	None	None	None
Act Effct Green (s)	66.6	62.6		62.8	57.0	57.0	11.2	11.2	17.9		11.2	19.5
Actuated g/C Ratio	0.78	0.74		0.74	0.67	0.67	0.13	0.13	0.21		0.13	0.23
v/c Ratio	0.35	0.32		0.06	0.60	0.04	0.47	0.03	0.09		0.51	0.58
Control Delay	6.3	5.9		3.4	10.2	0.9	42.6	30.2	11.4		42.9	30.6
Queue Delay	0.0	0.0		0.0	1.6	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay	6.3	5.9		3.4	11.8	0.9	42.6	30.2	11.4		42.9	30.6
LOS	A	A		A	B	A	D	C	B		D	C
Approach Delay		5.9			11.4			33.3			34.4	
Approach LOS		A			B			C			C	
Queue Length 50th (ft)	10	89		2	212	0	39	4	2		50	89
Queue Length 95th (ft)	25	138		9	345	6	78	15	22		93	143

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Internal Link Dist (ft)		532			119			128			139	
Turn Bay Length (ft)	260			180		145	90		90			120
Base Capacity (vph)	388	3791		496	2472	1074	492	776	464		569	472
Starvation Cap Reductn	0	0		0	749	0	0	0	0		0	0
Spillback Cap Reductn	0	0		0	0	0	0	0	0		0	0
Storage Cap Reductn	0	0		0	0	0	0	0	0		0	0
Reduced v/c Ratio	0.25	0.32		0.04	0.86	0.04	0.16	0.01	0.07		0.17	0.46

Intersection Summary			
Area Type:	Other		
Cycle Length: 85			
Actuated Cycle Length: 85			
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.60			
Intersection Signal Delay: 12.2		Intersection LOS: B	
Intersection Capacity Utilization 68.7%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 3: 4th Street & Avenida Cesar Chavez



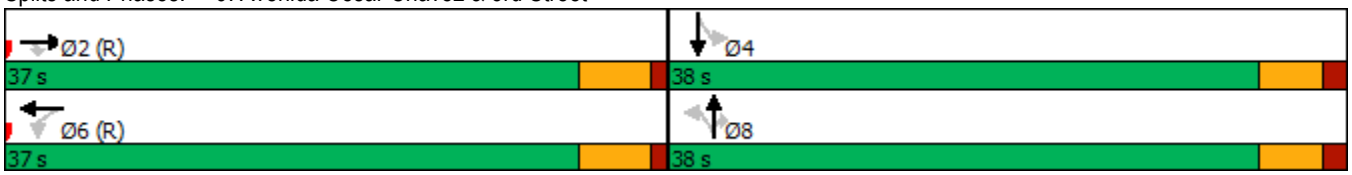


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1152	55	34	1271	22	55	7	73	17	25	95
Future Volume (vph)	0	1152	55	34	1271	22	55	7	73	17	25	95
Ideal Flow (vphpl)	1900	2000	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		170	50		0	0		70	0		0
Storage Lanes	0		1	1		0	0		1	0		0
Taper Length (ft)	25			40			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.997				0.850		0.906	
Flt Protected				0.950				0.957			0.994	
Satd. Flow (prot)	0	3762	1615	1703	3530	0	0	1818	1568	0	1687	0
Flt Permitted				0.200				0.601			0.956	
Satd. Flow (perm)	0	3762	1615	358	3530	0	0	1142	1568	0	1623	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			58		3				29		15	
Link Speed (mph)		35			35			30			10	
Link Distance (ft)		184			289			130			286	
Travel Time (s)		3.6			5.6			3.0			19.5	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	0%	1%	0%	6%	2%	0%	0%	0%	3%	0%	4%	1%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1213	58	36	1361	0	0	65	77	0	144	0
Turn Type		NA	Perm	Perm	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases			2	6			8		8	4		
Detector Phase		2	2	6	6		8	8	8	4	4	
Switch Phase												
Minimum Initial (s)		12.0	12.0	12.0	12.0		8.0	8.0	8.0	8.0	8.0	
Minimum Split (s)		28.0	28.0	28.0	28.0		38.0	38.0	38.0	38.0	38.0	
Total Split (s)		37.0	37.0	37.0	37.0		38.0	38.0	38.0	38.0	38.0	
Total Split (%)		49.3%	49.3%	49.3%	49.3%		50.7%	50.7%	50.7%	50.7%	50.7%	
Yellow Time (s)		4.0	4.0	4.0	4.0		3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)		1.0	1.0	1.0	1.0		1.5	1.5	1.5	1.5	1.5	
Lost Time Adjust (s)		0.0	0.0	0.0	0.0			0.0	0.0		0.0	
Total Lost Time (s)		5.0	5.0	5.0	5.0			5.0	5.0		5.0	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode		C-Max	C-Max	C-Max	C-Max		None	None	None	None	None	
Act Effct Green (s)		52.8	52.8	52.8	52.8			12.2	12.2		12.2	
Actuated g/C Ratio		0.70	0.70	0.70	0.70			0.16	0.16		0.16	
v/c Ratio		0.46	0.05	0.14	0.55			0.35	0.28		0.52	
Control Delay		6.0	1.6	6.4	6.9			31.9	20.3		31.7	
Queue Delay		0.6	0.0	0.0	2.6			0.0	0.0		0.0	
Total Delay		6.6	1.6	6.4	9.5			31.9	20.3		31.7	
LOS		A	A	A	A			C	C		C	
Approach Delay		6.4			9.4			25.6			31.7	
Approach LOS		A			A			C			C	
Queue Length 50th (ft)		103	0	4	127			27	20		56	
Queue Length 95th (ft)		186	11	19	232			57	51		100	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Internal Link Dist (ft)		104			209			50			206	
Turn Bay Length (ft)			170	50					70			
Base Capacity (vph)		2649	1154	252	2486			502	706		722	
Starvation Cap Reductn		926	0	0	965			0	0		0	
Spillback Cap Reductn		0	0	0	0			0	0		0	
Storage Cap Reductn		0	0	0	0			0	0		0	
Reduced v/c Ratio		0.70	0.05	0.14	0.89			0.13	0.11		0.20	

Intersection Summary			
Area Type:	Other		
Cycle Length: 75			
Actuated Cycle Length: 75			
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Green			
Natural Cycle: 70			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.55			
Intersection Signal Delay: 10.0		Intersection LOS: A	
Intersection Capacity Utilization 58.9%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 9: Avenida Cesar Chavez & 3rd Street



Intersection	
Intersection Delay, s/veh	9.6
Intersection LOS	A

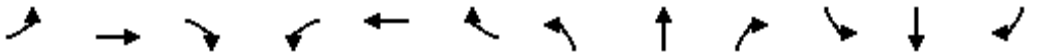
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	21	93	113	98	152	22
Future Vol, veh/h	21	93	113	98	152	22
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75
Heavy Vehicles, %	0	6	1	1	1	5
Mvmt Flow	28	124	151	131	203	29
Number of Lanes	1	1	1	1	1	1

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	2	2
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	2	2	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	2	0	2
HCM Control Delay	9.1	9.6	9.8
HCM LOS	A	A	A

Lane	NBLn1	NBLn2	EBLn1	EBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	100%	0%	0%	0%
Vol Thru, %	0%	100%	0%	0%	100%	0%
Vol Right, %	0%	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	113	98	21	93	152	22
LT Vol	113	0	21	0	0	0
Through Vol	0	98	0	0	152	0
RT Vol	0	0	0	93	0	22
Lane Flow Rate	151	131	28	124	203	29
Geometry Grp	7	7	7	7	7	7
Degree of Util (X)	0.236	0.186	0.049	0.177	0.293	0.037
Departure Headway (Hd)	5.633	5.13	6.243	5.137	5.202	4.566
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	636	696	572	696	689	780
Service Time	3.385	2.882	3.995	2.89	2.955	2.318
HCM Lane V/C Ratio	0.237	0.188	0.049	0.178	0.295	0.037
HCM Control Delay	10.1	9.1	9.3	9	10.1	7.5
HCM Lane LOS	B	A	A	A	B	A
HCM 95th-tile Q	0.9	0.7	0.2	0.6	1.2	0.1

Capacity Analysis Summary Sheets

Year 2024 No-Build Weekday Morning Peak Hour

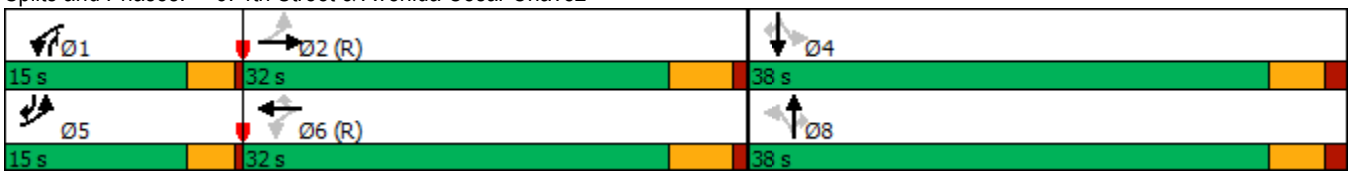


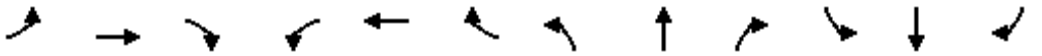
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	155	1332	39	31	791	64	41	19	20	48	15	52
Future Volume (vph)	155	1332	39	31	791	64	41	19	20	48	15	52
Ideal Flow (vphpl)	1900	1900	1900	1900	2000	1900	1900	2000	1900	1900	1900	1900
Storage Length (ft)	260		0	180		145	90		90	0		120
Storage Lanes	1		0	1		1	1		1	0		1
Taper Length (ft)	70			100			120			25		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.996				0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950				0.963	
Satd. Flow (prot)	1787	5016	0	1687	3654	1568	1641	2000	1404	0	1802	1553
Flt Permitted	0.278			0.147			0.711				0.764	
Satd. Flow (perm)	523	5016	0	261	3654	1568	1228	2000	1404	0	1430	1553
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5				71			26			26
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		612			199			208			219	
Travel Time (s)		11.9			3.9			4.7			5.0	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	1%	3%	3%	7%	4%	3%	10%	0%	15%	2%	0%	4%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	174	1541	0	35	889	72	46	21	22	0	71	58
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Perm	NA	pm+ov	Perm	NA	pm+ov
Protected Phases	5	2		1	6			8	1		4	5
Permitted Phases	2			6		6	8		8	4		4
Detector Phase	5	2		1	6	6	8	8	1	4	4	5
Switch Phase												
Minimum Initial (s)	3.0	20.0		3.0	20.0	20.0	8.0	8.0	3.0	8.0	8.0	3.0
Minimum Split (s)	9.5	30.0		9.5	28.0	28.0	38.0	38.0	9.5	38.0	38.0	9.5
Total Split (s)	15.0	32.0		15.0	32.0	32.0	38.0	38.0	15.0	38.0	38.0	15.0
Total Split (%)	17.6%	37.6%		17.6%	37.6%	37.6%	44.7%	44.7%	17.6%	44.7%	44.7%	17.6%
Yellow Time (s)	3.0	4.0		3.0	4.0	4.0	3.5	3.5	3.0	3.5	3.5	3.0
All-Red Time (s)	0.5	1.0		0.5	1.0	1.0	1.5	1.5	0.5	1.5	1.5	0.5
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	3.5	5.0		3.5	5.0	5.0	5.0	5.0	3.5		5.0	3.5
Lead/Lag	Lead	Lag		Lead	Lag	Lag			Lead			Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes			Yes			Yes
Recall Mode	None	C-Max		None	C-Max	C-Max	None	None	None	None	None	None
Act Effct Green (s)	68.5	63.8		64.1	58.2	58.2	9.9	9.9	16.7		9.9	18.3
Actuated g/C Ratio	0.81	0.75		0.75	0.68	0.68	0.12	0.12	0.20		0.12	0.22
v/c Ratio	0.34	0.41		0.13	0.36	0.07	0.32	0.09	0.07		0.43	0.16
Control Delay	4.2	5.9		3.7	7.2	2.1	39.9	33.1	9.2		42.5	15.9
Queue Delay	0.0	0.0		0.0	0.4	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay	4.2	5.9		3.7	7.6	2.1	39.9	33.1	9.2		42.5	15.9
LOS	A	A		A	A	A	D	C	A		D	B
Approach Delay		5.8			7.0			30.7			30.5	
Approach LOS		A			A			C			C	
Queue Length 50th (ft)	16	119		3	97	0	23	10	0		36	13
Queue Length 95th (ft)	36	175		10	161	16	53	29	15		73	39

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Internal Link Dist (ft)		532			119			128			139	
Turn Bay Length (ft)	260			180		145	90		90			120
Base Capacity (vph)	596	3767		405	2502	1095	476	776	411		555	453
Starvation Cap Reductn	0	0		0	969	0	0	0	0		0	0
Spillback Cap Reductn	0	0		0	0	0	0	0	0		0	0
Storage Cap Reductn	0	0		0	0	0	0	0	0		0	0
Reduced v/c Ratio	0.29	0.41		0.09	0.58	0.07	0.10	0.03	0.05		0.13	0.13

Intersection Summary			
Area Type:	Other		
Cycle Length: 85			
Actuated Cycle Length: 85			
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 80			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.43			
Intersection Signal Delay: 8.0		Intersection LOS: A	
Intersection Capacity Utilization 51.7%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 3: 4th Street & Avenida Cesar Chavez



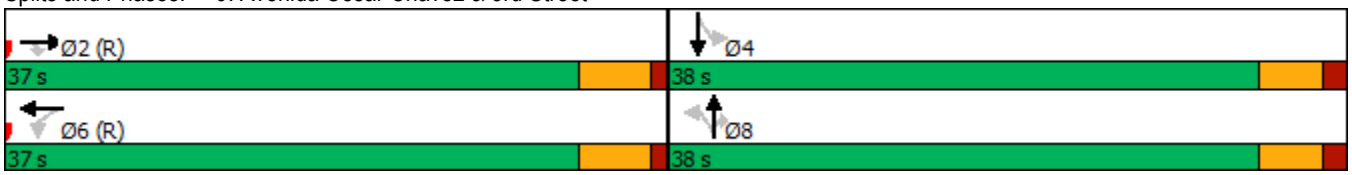


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1321	78	39	828	20	29	6	31	9	9	27
Future Volume (vph)	0	1321	78	39	828	20	29	6	31	9	9	27
Ideal Flow (vphpl)	1900	2000	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		170	50		0	0		70	0		0
Storage Lanes	0		1	1		0	0		1	0		0
Taper Length (ft)	25			40			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.996				0.850		0.918	
Flt Protected				0.950				0.960			0.990	
Satd. Flow (prot)	0	3619	1599	1570	3397	0	0	1523	1429	0	1590	0
Flt Permitted				0.152				0.728			0.921	
Satd. Flow (perm)	0	3619	1599	251	3397	0	0	1155	1429	0	1480	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			74		4				29		31	
Link Speed (mph)		35			35			30			10	
Link Distance (ft)		184			289			130			286	
Travel Time (s)		3.6			5.6			3.0			19.5	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	0%	5%	1%	15%	6%	0%	24%	0%	13%	0%	22%	7%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1501	89	44	964	0	0	40	35	0	51	0
Turn Type		NA	Perm	Perm	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases			2	6			8		8	4		
Detector Phase		2	2	6	6		8	8	8	4	4	
Switch Phase												
Minimum Initial (s)		12.0	12.0	12.0	12.0		8.0	8.0	8.0	8.0	8.0	
Minimum Split (s)		28.0	28.0	28.0	28.0		38.0	38.0	38.0	38.0	38.0	
Total Split (s)		37.0	37.0	37.0	37.0		38.0	38.0	38.0	38.0	38.0	
Total Split (%)		49.3%	49.3%	49.3%	49.3%		50.7%	50.7%	50.7%	50.7%	50.7%	
Yellow Time (s)		4.0	4.0	4.0	4.0		3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)		1.0	1.0	1.0	1.0		1.5	1.5	1.5	1.5	1.5	
Lost Time Adjust (s)		0.0	0.0	0.0	0.0			0.0	0.0		0.0	
Total Lost Time (s)		5.0	5.0	5.0	5.0			5.0	5.0		5.0	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode		C-Max	C-Max	C-Max	C-Max		None	None	None	None	None	
Act Effct Green (s)		63.2	63.2	63.2	63.2			9.0	9.0		9.0	
Actuated g/C Ratio		0.84	0.84	0.84	0.84			0.12	0.12		0.12	
v/c Ratio		0.49	0.07	0.21	0.34			0.29	0.18		0.25	
Control Delay		3.8	1.2	6.0	3.0			35.3	15.8		19.2	
Queue Delay		0.4	0.0	0.0	0.4			0.0	0.0		0.0	
Total Delay		4.2	1.2	6.0	3.3			35.3	15.8		19.2	
LOS		A	A	A	A			D	B		B	
Approach Delay		4.0			3.4			26.2			19.2	
Approach LOS		A			A			C			B	
Queue Length 50th (ft)		113	1	5	59			18	3		9	
Queue Length 95th (ft)		181	11	20	98			43	26		36	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Internal Link Dist (ft)		104			209			50			206	
Turn Bay Length (ft)			170	50					70			
Base Capacity (vph)		3050	1359	211	2864			508	645		668	
Starvation Cap Reductn		856	0	0	1215			0	0		0	
Spillback Cap Reductn		0	0	0	0			0	0		0	
Storage Cap Reductn		0	0	0	0			0	0		0	
Reduced v/c Ratio		0.68	0.07	0.21	0.58			0.08	0.05		0.08	

Intersection Summary			
Area Type:	Other		
Cycle Length: 75			
Actuated Cycle Length: 75			
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Green			
Natural Cycle: 75			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.49			
Intersection Signal Delay: 4.7		Intersection LOS: A	
Intersection Capacity Utilization 60.5%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 9: Avenida Cesar Chavez & 3rd Street



Intersection	
Intersection Delay, s/veh	10.6
Intersection LOS	B

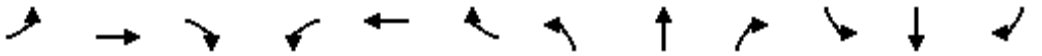
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	48	79	56	262	61	11
Future Vol, veh/h	48	79	56	262	61	11
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles, %	0	8	17	5	5	0
Mvmt Flow	60	99	70	328	76	14
Number of Lanes	1	1	1	1	1	1

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	2	2
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	2	2	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	2	0	2
HCM Control Delay	9.1	11.7	8.7
HCM LOS	A	B	A

Lane	NBLn1	NBLn2	EBLn1	EBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	100%	0%	0%	0%
Vol Thru, %	0%	100%	0%	0%	100%	0%
Vol Right, %	0%	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	56	262	48	79	61	11
LT Vol	56	0	48	0	0	0
Through Vol	0	262	0	0	61	0
RT Vol	0	0	0	79	0	11
Lane Flow Rate	70	328	60	99	76	14
Geometry Grp	7	7	7	7	7	7
Degree of Util (X)	0.113	0.464	0.103	0.141	0.115	0.018
Departure Headway (Hd)	5.808	5.101	6.201	5.131	5.409	4.618
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	617	704	577	696	660	771
Service Time	3.549	2.842	3.951	2.881	3.164	2.372
HCM Lane V/C Ratio	0.113	0.466	0.104	0.142	0.115	0.018
HCM Control Delay	9.3	12.2	9.7	8.7	8.9	7.5
HCM Lane LOS	A	B	A	A	A	A
HCM 95th-tile Q	0.4	2.5	0.3	0.5	0.4	0.1

Capacity Analysis Summary Sheets

Year 2024 No-Build Weekday Evening Peak Hour

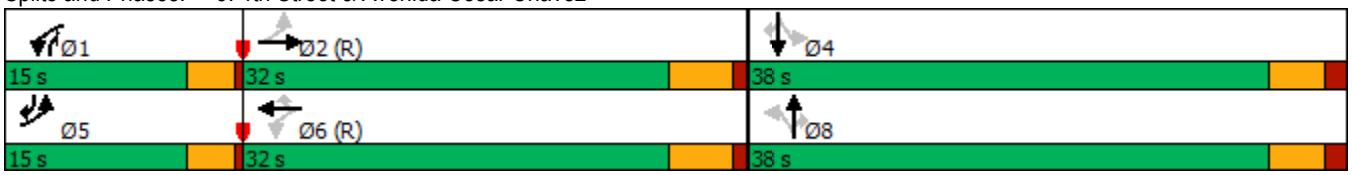


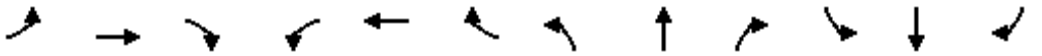
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	94	1121	49	21	1440	39	76	8	31	68	27	211
Future Volume (vph)	94	1121	49	21	1440	39	76	8	31	68	27	211
Ideal Flow (vphpl)	1900	1900	1900	1900	2000	1900	1900	2000	1900	1900	1900	1900
Storage Length (ft)	260		0	180		145	90		90	0		120
Storage Lanes	1		0	1		1	1		1	0		1
Taper Length (ft)	70			100			120			25		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.994				0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950				0.965	
Satd. Flow (prot)	1805	5143	0	1719	3689	1568	1736	2000	1509	0	1808	1538
Flt Permitted	0.111			0.217			0.693				0.783	
Satd. Flow (perm)	211	5143	0	393	3689	1568	1266	2000	1509	0	1467	1538
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		8				71			26			26
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		612			199			208			219	
Travel Time (s)		11.9			3.9			4.7			5.0	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	0%	0%	6%	5%	3%	3%	4%	0%	7%	2%	0%	5%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	98	1219	0	22	1500	41	79	8	32	0	99	220
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Perm	NA	pm+ov	Perm	NA	pm+ov
Protected Phases	5	2		1	6			8	1		4	5
Permitted Phases	2			6		6	8		8	4		4
Detector Phase	5	2		1	6	6	8	8	1	4	4	5
Switch Phase												
Minimum Initial (s)	3.0	20.0		3.0	20.0	20.0	8.0	8.0	3.0	8.0	8.0	3.0
Minimum Split (s)	9.5	30.0		9.5	28.0	28.0	38.0	38.0	9.5	38.0	38.0	9.5
Total Split (s)	15.0	32.0		15.0	32.0	32.0	38.0	38.0	15.0	38.0	38.0	15.0
Total Split (%)	17.6%	37.6%		17.6%	37.6%	37.6%	44.7%	44.7%	17.6%	44.7%	44.7%	17.6%
Yellow Time (s)	3.0	4.0		3.0	4.0	4.0	3.5	3.5	3.0	3.5	3.5	3.0
All-Red Time (s)	0.5	1.0		0.5	1.0	1.0	1.5	1.5	0.5	1.5	1.5	0.5
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	3.5	5.0		3.5	5.0	5.0	5.0	5.0	3.5		5.0	3.5
Lead/Lag	Lead	Lag		Lead	Lag	Lag			Lead			Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes			Yes			Yes
Recall Mode	None	C-Max		None	C-Max	C-Max	None	None	None	None	None	None
Act Effct Green (s)	66.5	62.5		62.6	56.9	56.9	11.3	11.3	18.0		11.3	19.6
Actuated g/C Ratio	0.78	0.74		0.74	0.67	0.67	0.13	0.13	0.21		0.13	0.23
v/c Ratio	0.36	0.32		0.06	0.61	0.04	0.47	0.03	0.09		0.51	0.59
Control Delay	6.5	6.0		3.5	10.4	0.9	42.6	30.1	11.3		42.9	30.6
Queue Delay	0.0	0.0		0.0	1.7	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay	6.5	6.0		3.5	12.1	0.9	42.6	30.1	11.3		42.9	30.6
LOS	A	A		A	B	A	D	C	B		D	C
Approach Delay		6.0			11.7			33.4			34.4	
Approach LOS		A			B			C			C	
Queue Length 50th (ft)	10	91		2	217	0	40	4	2		50	90
Queue Length 95th (ft)	26	140		9	353	6	79	15	22		93	144

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Internal Link Dist (ft)		532			119			128			139	
Turn Bay Length (ft)	260			180		145	90		90			120
Base Capacity (vph)	383	3786		492	2467	1072	491	776	465		569	473
Starvation Cap Reductn	0	0		0	740	0	0	0	0		0	0
Spillback Cap Reductn	0	0		0	0	0	0	0	0		0	0
Storage Cap Reductn	0	0		0	0	0	0	0	0		0	0
Reduced v/c Ratio	0.26	0.32		0.04	0.87	0.04	0.16	0.01	0.07		0.17	0.47

Intersection Summary			
Area Type:	Other		
Cycle Length: 85			
Actuated Cycle Length: 85			
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.61			
Intersection Signal Delay: 12.4		Intersection LOS: B	
Intersection Capacity Utilization 69.2%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 3: 4th Street & Avenida Cesar Chavez



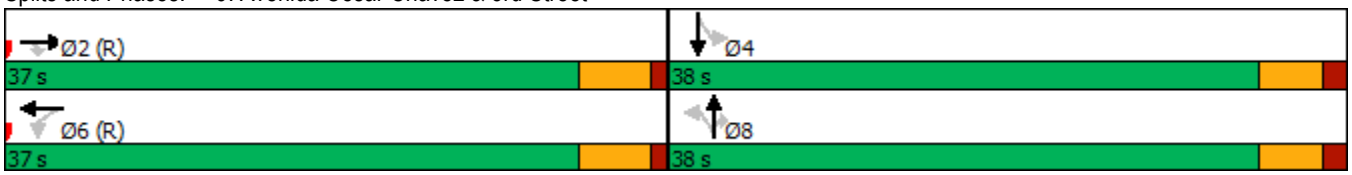


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1164	56	34	1284	22	56	7	74	17	25	96
Future Volume (vph)	0	1164	56	34	1284	22	56	7	74	17	25	96
Ideal Flow (vphpl)	1900	2000	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		170	50		0	0		70	0		0
Storage Lanes	0		1	1		0	0		1	0		0
Taper Length (ft)	25			40			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.997				0.850		0.906	
Flt Protected				0.950				0.957			0.994	
Satd. Flow (prot)	0	3762	1615	1703	3530	0	0	1818	1568	0	1687	0
Flt Permitted				0.197				0.599			0.957	
Satd. Flow (perm)	0	3762	1615	353	3530	0	0	1138	1568	0	1624	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			59		3				29		14	
Link Speed (mph)		35			35			30			10	
Link Distance (ft)		184			289			130			286	
Travel Time (s)		3.6			5.6			3.0			19.5	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	0%	1%	0%	6%	2%	0%	0%	0%	3%	0%	4%	1%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1225	59	36	1375	0	0	66	78	0	145	0
Turn Type		NA	Perm	Perm	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases			2	6			8		8	4		
Detector Phase		2	2	6	6		8	8	8	4	4	
Switch Phase												
Minimum Initial (s)		12.0	12.0	12.0	12.0		8.0	8.0	8.0	8.0	8.0	
Minimum Split (s)		28.0	28.0	28.0	28.0		38.0	38.0	38.0	38.0	38.0	
Total Split (s)		37.0	37.0	37.0	37.0		38.0	38.0	38.0	38.0	38.0	
Total Split (%)		49.3%	49.3%	49.3%	49.3%		50.7%	50.7%	50.7%	50.7%	50.7%	
Yellow Time (s)		4.0	4.0	4.0	4.0		3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)		1.0	1.0	1.0	1.0		1.5	1.5	1.5	1.5	1.5	
Lost Time Adjust (s)		0.0	0.0	0.0	0.0			0.0	0.0		0.0	
Total Lost Time (s)		5.0	5.0	5.0	5.0			5.0	5.0		5.0	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode		C-Max	C-Max	C-Max	C-Max		None	None	None	None	None	
Act Effct Green (s)		52.7	52.7	52.7	52.7			12.3	12.3		12.3	
Actuated g/C Ratio		0.70	0.70	0.70	0.70			0.16	0.16		0.16	
v/c Ratio		0.46	0.05	0.15	0.55			0.36	0.28		0.52	
Control Delay		6.1	1.6	6.5	7.0			31.9	20.4		31.9	
Queue Delay		0.6	0.0	0.0	2.7			0.0	0.0		0.0	
Total Delay		6.7	1.6	6.5	9.8			31.9	20.4		31.9	
LOS		A	A	A	A			C	C		C	
Approach Delay		6.4			9.7			25.7			31.9	
Approach LOS		A			A			C			C	
Queue Length 50th (ft)		105	0	4	130			28	20		56	
Queue Length 95th (ft)		190	12	19	236			58	51		101	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Internal Link Dist (ft)		104			209			50			206	
Turn Bay Length (ft)			170	50					70			
Base Capacity (vph)		2645	1153	248	2483			500	706		722	
Starvation Cap Reductn		919	0	0	956			0	0		0	
Spillback Cap Reductn		0	0	0	0			0	0		0	
Storage Cap Reductn		0	0	0	0			0	0		0	
Reduced v/c Ratio		0.71	0.05	0.15	0.90			0.13	0.11		0.20	

Intersection Summary			
Area Type:	Other		
Cycle Length: 75			
Actuated Cycle Length: 75			
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Green			
Natural Cycle: 70			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.55			
Intersection Signal Delay: 10.1		Intersection LOS: B	
Intersection Capacity Utilization 61.1%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 9: Avenida Cesar Chavez & 3rd Street



Intersection	
Intersection Delay, s/veh	9.6
Intersection LOS	A

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	21	94	114	99	154	22
Future Vol, veh/h	21	94	114	99	154	22
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75
Heavy Vehicles, %	0	6	1	1	1	5
Mvmt Flow	28	125	152	132	205	29
Number of Lanes	1	1	1	1	1	1

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	2	2
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	2	2	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	2	0	2
HCM Control Delay	9.1	9.7	9.9
HCM LOS	A	A	A

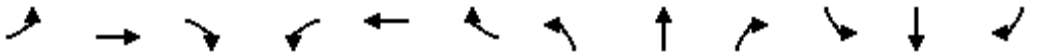
Lane	NBLn1	NBLn2	EBLn1	EBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	100%	0%	0%	0%
Vol Thru, %	0%	100%	0%	0%	100%	0%
Vol Right, %	0%	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	114	99	21	94	154	22
LT Vol	114	0	21	0	0	0
Through Vol	0	99	0	0	154	0
RT Vol	0	0	0	94	0	22
Lane Flow Rate	152	132	28	125	205	29
Geometry Grp	7	7	7	7	7	7
Degree of Util (X)	0.238	0.188	0.049	0.179	0.297	0.037
Departure Headway (Hd)	5.64	5.137	6.255	5.15	5.209	4.573
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	635	696	571	694	688	779
Service Time	3.392	2.889	4.008	2.902	2.962	2.325
HCM Lane V/C Ratio	0.239	0.19	0.049	0.18	0.298	0.037
HCM Control Delay	10.2	9.1	9.3	9	10.2	7.5
HCM Lane LOS	B	A	A	A	B	A
HCM 95th-tile Q	0.9	0.7	0.2	0.6	1.2	0.1

Capacity Analysis Summary Sheets

Year 2024 Total Projected Weekday Morning Peak Hour

Lanes, Volumes, Timings
3: 4th Street & Avenida Cesar Chavez

07/10/2023

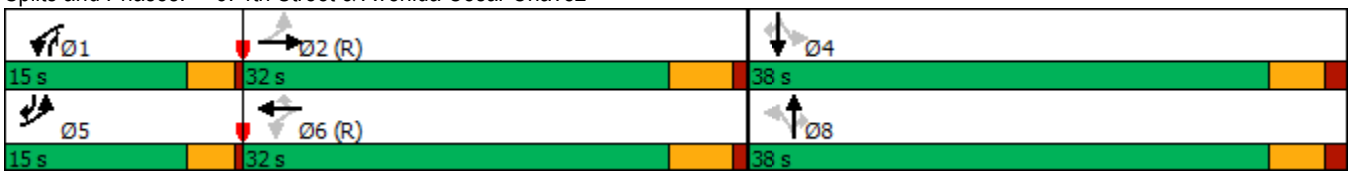


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	157	1354	39	31	807	66	41	19	20	49	15	53
Future Volume (vph)	157	1354	39	31	807	66	41	19	20	49	15	53
Ideal Flow (vphpl)	1900	1900	1900	1900	2000	1900	1900	2000	1900	1900	1900	1900
Storage Length (ft)	260		0	180		145	90		90	0		120
Storage Lanes	1		0	1		1	1		1	0		1
Taper Length (ft)	70			100			120			25		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.996				0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950				0.963	
Satd. Flow (prot)	1787	5016	0	1687	3654	1568	1641	2000	1404	0	1802	1553
Flt Permitted	0.270			0.143			0.710				0.763	
Satd. Flow (perm)	508	5016	0	254	3654	1568	1226	2000	1404	0	1428	1553
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5				71			26			26
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		612			199			208			219	
Travel Time (s)		11.9			3.9			4.7			5.0	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	1%	3%	3%	7%	4%	3%	10%	0%	15%	2%	0%	4%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	176	1565	0	35	907	74	46	21	22	0	72	60
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Perm	NA	pm+ov	Perm	NA	pm+ov
Protected Phases	5	2		1	6			8	1		4	5
Permitted Phases	2			6		6	8		8	4		4
Detector Phase	5	2		1	6	6	8	8	1	4	4	5
Switch Phase												
Minimum Initial (s)	3.0	20.0		3.0	20.0	20.0	8.0	8.0	3.0	8.0	8.0	3.0
Minimum Split (s)	9.5	30.0		9.5	28.0	28.0	38.0	38.0	9.5	38.0	38.0	9.5
Total Split (s)	15.0	32.0		15.0	32.0	32.0	38.0	38.0	15.0	38.0	38.0	15.0
Total Split (%)	17.6%	37.6%		17.6%	37.6%	37.6%	44.7%	44.7%	17.6%	44.7%	44.7%	17.6%
Yellow Time (s)	3.0	4.0		3.0	4.0	4.0	3.5	3.5	3.0	3.5	3.5	3.0
All-Red Time (s)	0.5	1.0		0.5	1.0	1.0	1.5	1.5	0.5	1.5	1.5	0.5
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	3.5	5.0		3.5	5.0	5.0	5.0	5.0	3.5		5.0	3.5
Lead/Lag	Lead	Lag		Lead	Lag	Lag			Lead			Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes			Yes			Yes
Recall Mode	None	C-Max		None	C-Max	C-Max	None	None	None	None	None	None
Act Effct Green (s)	68.5	63.7		64.0	58.1	58.1	10.0	10.0	16.8		10.0	18.4
Actuated g/C Ratio	0.81	0.75		0.75	0.68	0.68	0.12	0.12	0.20		0.12	0.22
v/c Ratio	0.35	0.42		0.13	0.36	0.07	0.32	0.09	0.07		0.43	0.17
Control Delay	4.4	6.0		3.8	7.3	2.2	39.7	33.0	9.1		42.4	16.1
Queue Delay	0.0	0.0		0.0	0.4	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay	4.4	6.0		3.8	7.7	2.2	39.7	33.0	9.1		42.4	16.1
LOS	A	A		A	A	A	D	C	A		D	B
Approach Delay		5.9			7.2			30.6			30.5	
Approach LOS		A			A			C			C	
Queue Length 50th (ft)	16	121		3	100	1	23	10	0		37	14
Queue Length 95th (ft)	37	180		10	167	17	53	29	15		73	39

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Internal Link Dist (ft)		532			119			128			139	
Turn Bay Length (ft)	260			180		145	90		90			120
Base Capacity (vph)	586	3762		400	2495	1093	475	776	412		554	454
Starvation Cap Reductn	0	0		0	957	0	0	0	0		0	0
Spillback Cap Reductn	0	0		0	0	0	0	0	0		0	0
Storage Cap Reductn	0	0		0	0	0	0	0	0		0	0
Reduced v/c Ratio	0.30	0.42		0.09	0.59	0.07	0.10	0.03	0.05		0.13	0.13

Intersection Summary			
Area Type:	Other		
Cycle Length: 85			
Actuated Cycle Length: 85			
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 80			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.43			
Intersection Signal Delay: 8.1		Intersection LOS: A	
Intersection Capacity Utilization 52.2%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 3: 4th Street & Avenida Cesar Chavez

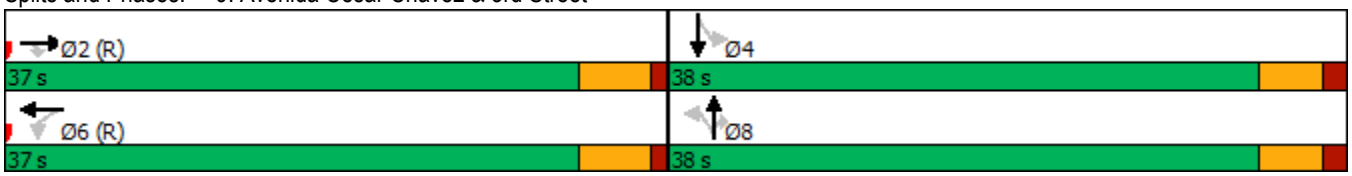


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1340	79	67	816	20	58	7	32	9	10	27
Future Volume (vph)	0	1340	79	67	816	20	58	7	32	9	10	27
Ideal Flow (vphpl)	1900	2000	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		170	50		0	0		70	0		0
Storage Lanes	0		1	1		0	0		1	0		0
Taper Length (ft)	25			40			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.996				0.850		0.920	
Flt Protected				0.950				0.957			0.990	
Satd. Flow (prot)	0	3619	1599	1570	3397	0	0	1498	1429	0	1590	0
Flt Permitted				0.137				0.712			0.930	
Satd. Flow (perm)	0	3619	1599	226	3397	0	0	1114	1429	0	1494	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			73		4				29		31	
Link Speed (mph)		35			35			30			10	
Link Distance (ft)		184			289			130			286	
Travel Time (s)		3.6			5.6			3.0			19.5	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	0%	5%	1%	15%	6%	0%	24%	0%	13%	0%	22%	7%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1523	90	76	950	0	0	74	36	0	52	0
Turn Type		NA	Perm	Perm	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases			2	6			8		8	4		
Detector Phase		2	2	6	6		8	8	8	4	4	
Switch Phase												
Minimum Initial (s)		12.0	12.0	12.0	12.0		8.0	8.0	8.0	8.0	8.0	
Minimum Split (s)		28.0	28.0	28.0	28.0		38.0	38.0	38.0	38.0	38.0	
Total Split (s)		37.0	37.0	37.0	37.0		38.0	38.0	38.0	38.0	38.0	
Total Split (%)		49.3%	49.3%	49.3%	49.3%		50.7%	50.7%	50.7%	50.7%	50.7%	
Yellow Time (s)		4.0	4.0	4.0	4.0		3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)		1.0	1.0	1.0	1.0		1.5	1.5	1.5	1.5	1.5	
Lost Time Adjust (s)		0.0	0.0	0.0	0.0			0.0	0.0		0.0	
Total Lost Time (s)		5.0	5.0	5.0	5.0			5.0	5.0		5.0	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode		C-Max	C-Max	C-Max	C-Max		None	None	None	None	None	
Act Effct Green (s)		57.7	57.7	57.7	57.7			10.9	10.9		10.9	
Actuated g/C Ratio		0.77	0.77	0.77	0.77			0.15	0.15		0.15	
v/c Ratio		0.55	0.07	0.44	0.36			0.46	0.16		0.21	
Control Delay		5.9	1.6	16.2	4.5			37.8	13.9		16.7	
Queue Delay		0.6	0.0	0.0	0.5			0.0	0.0		0.0	
Total Delay		6.5	1.6	16.2	5.0			37.8	13.9		16.7	
LOS		A	A	B	A			D	B		B	
Approach Delay		6.2			5.8			30.0			16.7	
Approach LOS		A			A			C			B	
Queue Length 50th (ft)		138	2	12	68			32	3		9	
Queue Length 95th (ft)		233	14	#70	121			65	25		35	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Internal Link Dist (ft)		104			209			50			206	
Turn Bay Length (ft)			170	50					70			
Base Capacity (vph)		2784	1247	174	2614			490	645		674	
Starvation Cap Reductn		773	0	0	1134			0	0		0	
Spillback Cap Reductn		0	0	0	0			0	0		0	
Storage Cap Reductn		0	0	0	0			0	0		0	
Reduced v/c Ratio		0.76	0.07	0.44	0.64			0.15	0.06		0.08	

Intersection Summary			
Area Type:	Other		
Cycle Length: 75			
Actuated Cycle Length: 75			
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.55			
Intersection Signal Delay: 7.2		Intersection LOS: A	
Intersection Capacity Utilization 67.9%		ICU Level of Service C	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 9: Avenida Cesar Chavez & 3rd Street



Intersection	
Intersection Delay, s/veh	10.7
Intersection LOS	B

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	50	81	58	262	61	13
Future Vol, veh/h	50	81	58	262	61	13
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles, %	0	8	17	5	5	0
Mvmt Flow	63	101	73	328	76	16
Number of Lanes	1	1	1	1	1	1

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	2	2
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	2	2	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	2	0	2
HCM Control Delay	9.1	11.8	8.7
HCM LOS	A	B	A

Lane	NBLn1	NBLn2	EBLn1	EBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	100%	0%	0%	0%
Vol Thru, %	0%	100%	0%	0%	100%	0%
Vol Right, %	0%	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	58	262	50	81	61	13
LT Vol	58	0	50	0	0	0
Through Vol	0	262	0	0	61	0
RT Vol	0	0	0	81	0	13
Lane Flow Rate	72	328	62	101	76	16
Geometry Grp	7	7	7	7	7	7
Degree of Util (X)	0.117	0.466	0.108	0.145	0.115	0.021
Departure Headway (Hd)	5.826	5.118	6.212	5.142	5.43	4.638
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	615	701	576	695	657	767
Service Time	3.569	2.861	3.964	2.893	3.187	2.395
HCM Lane V/C Ratio	0.117	0.468	0.108	0.145	0.116	0.021
HCM Control Delay	9.3	12.3	9.7	8.8	8.9	7.5
HCM Lane LOS	A	B	A	A	A	A
HCM 95th-tile Q	0.4	2.5	0.4	0.5	0.4	0.1

Intersection	
Int Delay, s/veh	0.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1382	41	0	901	0	37
Future Vol, veh/h	1382	41	0	901	0	37
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	5	0	0	6	0	0
Mvmt Flow	1455	43	0	948	0	39

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	749
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.3
Pot Cap-1 Maneuver	-	-	0	-	0	*534
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		1
Mov Cap-1 Maneuver	-	-	-	-	-	*534
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	12.3
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	534	-	-	-
HCM Lane V/C Ratio	0.073	-	-	-
HCM Control Delay (s)	12.3	-	-	-
HCM Lane LOS	B	-	-	-
HCM 95th %tile Q(veh)	0.2	-	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	31	4	4	67	127	29
Future Vol, veh/h	31	4	4	67	127	29
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	10	8	0
Mvmt Flow	33	4	4	71	134	31

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	229	150	165	0	-	0
Stage 1	150	-	-	-	-	-
Stage 2	79	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	817	970	1448	-	-	-
Stage 1	919	-	-	-	-	-
Stage 2	949	-	-	-	-	-
Platoon blocked, %	1	1	1	-	-	-
Mov Cap-1 Maneuver	815	970	1448	-	-	-
Mov Cap-2 Maneuver	815	-	-	-	-	-
Stage 1	916	-	-	-	-	-
Stage 2	949	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.5	0.4	0
HCM LOS	A		

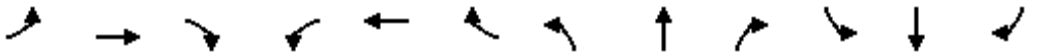
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1448	-	830	-	-
HCM Lane V/C Ratio	0.003	-	0.044	-	-
HCM Control Delay (s)	7.5	0	9.5	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Capacity Analysis Summary Sheets

Year 2024 Total Projected Weekday Evening Peak Hour

Lanes, Volumes, Timings
3: 4th Street & Avenida Cesar Chavez

07/10/2023

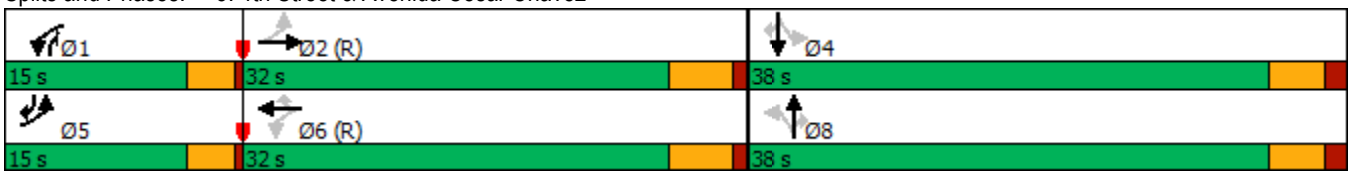


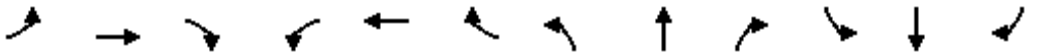
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	94	1125	49	21	1444	39	76	8	31	68	27	211
Future Volume (vph)	94	1125	49	21	1444	39	76	8	31	68	27	211
Ideal Flow (vphpl)	1900	1900	1900	1900	2000	1900	1900	2000	1900	1900	1900	1900
Storage Length (ft)	260		0	180		145	90		90	0		120
Storage Lanes	1		0	1		1	1		1	0		1
Taper Length (ft)	70			100			120			25		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.994				0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950				0.965	
Satd. Flow (prot)	1805	5143	0	1719	3689	1568	1736	2000	1509	0	1808	1538
Flt Permitted	0.111			0.216			0.693				0.783	
Satd. Flow (perm)	211	5143	0	391	3689	1568	1266	2000	1509	0	1467	1538
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		8				71			26			26
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		612			199			208			219	
Travel Time (s)		11.9			3.9			4.7			5.0	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	0%	0%	6%	5%	3%	3%	4%	0%	7%	2%	0%	5%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	98	1223	0	22	1504	41	79	8	32	0	99	220
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Perm	NA	pm+ov	Perm	NA	pm+ov
Protected Phases	5	2		1	6			8	1		4	5
Permitted Phases	2			6		6	8		8	4		4
Detector Phase	5	2		1	6	6	8	8	1	4	4	5
Switch Phase												
Minimum Initial (s)	3.0	20.0		3.0	20.0	20.0	8.0	8.0	3.0	8.0	8.0	3.0
Minimum Split (s)	9.5	30.0		9.5	28.0	28.0	38.0	38.0	9.5	38.0	38.0	9.5
Total Split (s)	15.0	32.0		15.0	32.0	32.0	38.0	38.0	15.0	38.0	38.0	15.0
Total Split (%)	17.6%	37.6%		17.6%	37.6%	37.6%	44.7%	44.7%	17.6%	44.7%	44.7%	17.6%
Yellow Time (s)	3.0	4.0		3.0	4.0	4.0	3.5	3.5	3.0	3.5	3.5	3.0
All-Red Time (s)	0.5	1.0		0.5	1.0	1.0	1.5	1.5	0.5	1.5	1.5	0.5
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	3.5	5.0		3.5	5.0	5.0	5.0	5.0	3.5		5.0	3.5
Lead/Lag	Lead	Lag		Lead	Lag	Lag			Lead			Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes			Yes			Yes
Recall Mode	None	C-Max		None	C-Max	C-Max	None	None	None	None	None	None
Act Effct Green (s)	66.5	62.5		62.6	56.9	56.9	11.3	11.3	18.0		11.3	19.6
Actuated g/C Ratio	0.78	0.74		0.74	0.67	0.67	0.13	0.13	0.21		0.13	0.23
v/c Ratio	0.36	0.32		0.06	0.61	0.04	0.47	0.03	0.09		0.51	0.59
Control Delay	6.5	6.0		3.5	10.4	0.9	42.6	30.1	11.3		42.9	30.6
Queue Delay	0.0	0.0		0.0	1.7	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay	6.5	6.0		3.5	12.1	0.9	42.6	30.1	11.3		42.9	30.6
LOS	A	A		A	B	A	D	C	B		D	C
Approach Delay		6.0			11.7			33.4			34.4	
Approach LOS		A			B			C			C	
Queue Length 50th (ft)	10	91		2	218	0	40	4	2		50	90
Queue Length 95th (ft)	26	141		9	353	6	79	15	22		93	144

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Internal Link Dist (ft)		532			119			128			139	
Turn Bay Length (ft)	260			180		145	90		90			120
Base Capacity (vph)	383	3786		491	2467	1072	491	776	465		569	473
Starvation Cap Reductn	0	0		0	739	0	0	0	0		0	0
Spillback Cap Reductn	0	0		0	0	0	0	0	0		0	0
Storage Cap Reductn	0	0		0	0	0	0	0	0		0	0
Reduced v/c Ratio	0.26	0.32		0.04	0.87	0.04	0.16	0.01	0.07		0.17	0.47

Intersection Summary			
Area Type:	Other		
Cycle Length: 85			
Actuated Cycle Length: 85			
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.61			
Intersection Signal Delay: 12.4		Intersection LOS: B	
Intersection Capacity Utilization 69.3%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 3: 4th Street & Avenida Cesar Chavez



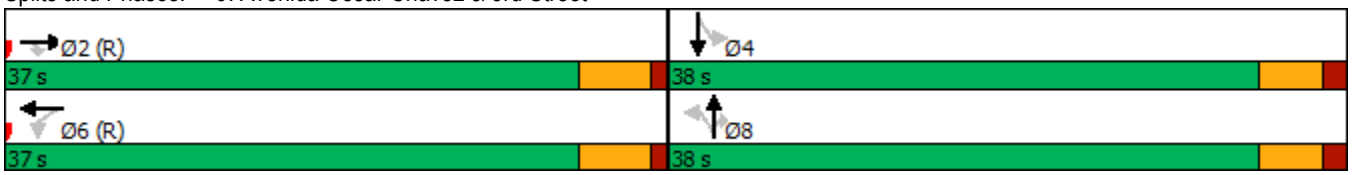


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1166	56	49	1272	22	72	8	75	17	26	96
Future Volume (vph)	0	1166	56	49	1272	22	72	8	75	17	26	96
Ideal Flow (vphpl)	1900	2000	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		170	50		0	0		70	0		0
Storage Lanes	0		1	1		0	0		1	0		0
Taper Length (ft)	25			40			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.997				0.850		0.907	
Flt Protected				0.950				0.957			0.994	
Satd. Flow (prot)	0	3762	1615	1703	3530	0	0	1818	1568	0	1689	0
Flt Permitted				0.196				0.593			0.954	
Satd. Flow (perm)	0	3762	1615	351	3530	0	0	1127	1568	0	1621	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			59		3				29		15	
Link Speed (mph)		35			35			30			10	
Link Distance (ft)		184			289			130			286	
Travel Time (s)		3.6			5.6			3.0			19.5	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	0%	1%	0%	6%	2%	0%	0%	0%	3%	0%	4%	1%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1227	59	52	1362	0	0	84	79	0	146	0
Turn Type		NA	Perm	Perm	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases			2	6			8		8	4		
Detector Phase		2	2	6	6		8	8	8	4	4	
Switch Phase												
Minimum Initial (s)		12.0	12.0	12.0	12.0		8.0	8.0	8.0	8.0	8.0	
Minimum Split (s)		28.0	28.0	28.0	28.0		38.0	38.0	38.0	38.0	38.0	
Total Split (s)		37.0	37.0	37.0	37.0		38.0	38.0	38.0	38.0	38.0	
Total Split (%)		49.3%	49.3%	49.3%	49.3%		50.7%	50.7%	50.7%	50.7%	50.7%	
Yellow Time (s)		4.0	4.0	4.0	4.0		3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)		1.0	1.0	1.0	1.0		1.5	1.5	1.5	1.5	1.5	
Lost Time Adjust (s)		0.0	0.0	0.0	0.0			0.0	0.0		0.0	
Total Lost Time (s)		5.0	5.0	5.0	5.0			5.0	5.0		5.0	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode		C-Max	C-Max	C-Max	C-Max		None	None	None	None	None	
Act Effct Green (s)		52.7	52.7	52.7	52.7			12.3	12.3		12.3	
Actuated g/C Ratio		0.70	0.70	0.70	0.70			0.16	0.16		0.16	
v/c Ratio		0.46	0.05	0.21	0.55			0.46	0.28		0.53	
Control Delay		6.1	1.6	7.6	7.0			35.4	20.5		31.8	
Queue Delay		0.6	0.0	0.0	2.6			0.0	0.0		0.0	
Total Delay		6.7	1.6	7.6	9.6			35.4	20.5		31.8	
LOS		A	A	A	A			D	C		C	
Approach Delay		6.5			9.5			28.2			31.8	
Approach LOS		A			A			C			C	
Queue Length 50th (ft)		106	0	7	128			36	21		57	
Queue Length 95th (ft)		190	12	28	233			71	52		101	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Internal Link Dist (ft)		104			209			50			206	
Turn Bay Length (ft)			170	50					70			
Base Capacity (vph)		2645	1153	246	2483			495	706		721	
Starvation Cap Reductn		918	0	0	962			0	0		0	
Spillback Cap Reductn		0	0	0	0			0	0		0	
Storage Cap Reductn		0	0	0	0			0	0		0	
Reduced v/c Ratio		0.71	0.05	0.21	0.90			0.17	0.11		0.20	

Intersection Summary			
Area Type:	Other		
Cycle Length: 75			
Actuated Cycle Length: 75			
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Green			
Natural Cycle: 70			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.55			
Intersection Signal Delay: 10.3		Intersection LOS: B	
Intersection Capacity Utilization 68.1%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 9: Avenida Cesar Chavez & 3rd Street



Intersection	
Intersection Delay, s/veh	9.6
Intersection LOS	A

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	22	95	115	99	154	23
Future Vol, veh/h	22	95	115	99	154	23
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75
Heavy Vehicles, %	0	6	1	1	1	5
Mvmt Flow	29	127	153	132	205	31
Number of Lanes	1	1	1	1	1	1

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	2	2
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	2	2	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	2	0	2
HCM Control Delay	9.2	9.7	9.8
HCM LOS	A	A	A

Lane	NBLn1	NBLn2	EBLn1	EBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	100%	0%	0%	0%
Vol Thru, %	0%	100%	0%	0%	100%	0%
Vol Right, %	0%	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	115	99	22	95	154	23
LT Vol	115	0	22	0	0	0
Through Vol	0	99	0	0	154	0
RT Vol	0	0	0	95	0	23
Lane Flow Rate	153	132	29	127	205	31
Geometry Grp	7	7	7	7	7	7
Degree of Util (X)	0.241	0.189	0.051	0.181	0.298	0.039
Departure Headway (Hd)	5.653	5.149	6.263	5.157	5.221	4.585
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	633	694	570	693	686	777
Service Time	3.402	2.899	4.018	2.912	2.973	2.337
HCM Lane V/C Ratio	0.242	0.19	0.051	0.183	0.299	0.04
HCM Control Delay	10.2	9.1	9.4	9.1	10.2	7.5
HCM Lane LOS	B	A	A	A	B	A
HCM 95th-tile Q	0.9	0.7	0.2	0.7	1.2	0.1

Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1209	15	0	1440	0	13
Future Vol, veh/h	1209	15	0	1440	0	13
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	0	0	2	0	0
Mvmt Flow	1273	16	0	1516	0	14

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	645
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.3
Pot Cap-1 Maneuver	-	-	0	-	0	*607
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		1
Mov Cap-1 Maneuver	-	-	-	-	-	*607
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	607	-	-	-
HCM Lane V/C Ratio	0.023	-	-	-
HCM Control Delay (s)	11.1	-	-	-
HCM Lane LOS	B	-	-	-
HCM 95th %tile Q(veh)	0.1	-	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	18	2	2	136	115	16
Future Vol, veh/h	18	2	2	136	115	16
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	2	3	0
Mvmt Flow	19	2	2	143	121	17

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	277	130	138	0	-	0
Stage 1	130	-	-	-	-	-
Stage 2	147	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	741	963	1471	-	-	-
Stage 1	921	-	-	-	-	-
Stage 2	885	-	-	-	-	-
Platoon blocked, %	1	1	1	-	-	-
Mov Cap-1 Maneuver	741	963	1471	-	-	-
Mov Cap-2 Maneuver	741	-	-	-	-	-
Stage 1	920	-	-	-	-	-
Stage 2	885	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1471	-	758	-	-
HCM Lane V/C Ratio	0.001	-	0.028	-	-
HCM Control Delay (s)	7.5	0	9.9	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-