

City of Colton and City of Grand Terrace

TRAFFIC STUDY REPORT:

BARTON ROAD BRIDGE REMOVAL AND ROAD
CONSTRUCTION PROJECT

FEDERAL AID PROJECT NO. BRLS 5065(024)

FEBRUARY 2020

Submitted to:

Caltrans District 8

Planning and Local Assistance

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JB74055

From: Burton, Aaron P@DOT
To: Carl Winter
Cc: Lynn Hayes; Victor Ortiz
Subject: Colton - 5065(024) - Approved Traffic Report
Date: Thursday, June 25, 2020 1:05:30 PM

Hi Carl,

Caltrans completed its review of the Traffic Report for the City of Colton's project under FPN: 5065(024) and concurs with the content. The Traffic Report is now approved.

Sincerely,

Aaron P. Burton
Senior Environmental Planner
Local Assistance – Environmental Support
Department of Transportation, District 8
464 West Fourth Street, 6th Floor, MS 760
San Bernardino, CA 92401-1400
(909) 383-2841

From: Carl Winter (via Dropbox) <no-reply@dropbox.com>
Sent: Friday, June 19, 2020 11:29 AM
To: Burton, Aaron P@DOT <aaron.burton@dot.ca.gov>
Subject: Carl Winter shared "Barton Bridge Removal Project BRLS 5065(024)" with you

EXTERNAL EMAIL. Links/attachments may not be safe.

Hi Aaron,

Carl Winter (carl.winter@lsa.net) invited you to edit the folder "**Barton Bridge Removal Project BRLS 5065(024)**" on Dropbox.

Carl said:

"Good morning, Please find at this link, the following documents for the Barton Bridge Removal Project, BRLS 5065(024) in the Cities of Colton and Grand Terrace, San Bernardino County, California. Traffic Study

Report (February 2020) Initial Site Assessment (October 2019) Please let me know if you have any issues accessing, viewing or downloading these reports. At your convenience, please confirm your receipt and ability to access or if you require them to be provided in an alternate format Thank you for your attention to this submittal. Carl Winter LSA (951) 781-9310 carl.winter@lsa.net "

[Go to folder](#)

Enjoy!

The Dropbox team



February 13, 2020

Victor Ortiz, PE
City of Colton
Department of Public Works
160 South 10th Street
Colton, CA 92324

Subject: Traffic Study Report for the Barton Road Bridge Removal and Road Construction Project in the City of Colton and City of Grand Terrace

Dear Mr. Ortiz:

KOA is pleased to present the attached Traffic Study report for the Barton Road Bridge Removal and Road Construction Project in the cities of Colton and Grand Terrace. The subject project consists of replacing an existing two-lane bridge on Barton Road, spanned over the abandoned Union Pacific (UPRR) railroad tracks, with filled earthwork and a new at-grade, widened two-lane roadway with roadside pedestrian and bicycle accessways. This report documents the findings of a traffic forecast analysis to determine the future traffic volumes through the area during the Project's planned opening year of 2023, and the regional horizon year of 2045. The traffic study has been prepared to meet the traffic study requirements of the City of Colton and City of Grand Terrace.

The report is being submitted to you for review and processing. Please contact our office if you have any questions regarding the analysis, or if you require any additional information or clarifications to complete your submittal for the other supporting technical studies and/or the environmental document.

It has been a pleasure to prepare this study for the City of Colton and City of Grand Terrace.

Sincerely,
KOA Corporation

A handwritten signature in black ink, appearing to read 'Ming Guan'.

Ming Guan, PE, TE
Project Manager



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1.0 EXECUTIVE SUMMARY

This traffic forecasting and volumes report has been prepared to support the California Environmental Quality Act (CEQA) and National Environmental Policy Act (NEPA) documentation for the Barton Road Bridge Removal and Road Construction Project located in the city of Colton at the southerly city limit with the neighboring city of Grand Terrace. The City of Colton is proposing to replace an existing 175-foot-long by 25-foot-wide, two-lane bridge on Barton Road, located approximately ¼ mile east of La Cadena Drive and ¼ mile west of the I-215 Freeway interchange. The ultimate design will involve filling in the abandoned railroad span, and creating a new at-grade, widened two-lane roadway with roadside pedestrian and bicycle accessways. This traffic analysis provides the results of evaluations of local and regional planning documents, as well as recent field-collected traffic volume data, as the basis for the traffic volumes forecast. The findings of this report will be compiled and submitted to the related subject matter professionals in support of the Project's environmental clearance in order to determine the extent to which the project could contribute to, or is subject to, potential growth-related impacts on environmental resources of concern (e.g., air quality, noise).

The scope of the study includes an existing year (2019) traffic volumes summary, as well as a Build-versus-No Build traffic forecast analysis for the planned opening year of the project (2023) and the 20-year horizon year of 2045. The study area boundary for the traffic forecast analysis includes the 0.33-mile length of roadway west and east of the Barton Road Bridge, including four (4) intermediate and end-node study intersections between S. La Cadena Drive and Grand Terrace Road, which are the most likely to be affected by the bridge removal and road construction project. The study boundaries and forecast timeframes were determined based upon the location of the project in relation to the surrounding roadway system and existing and reasonably foreseeable development.

The appendices of this report contain background material for this study. These materials include traffic counts, analysis material, and other project details.

2.0 INTRODUCTION

Barton Road Bridge was originally built in 1936 as a two-lane bridge over the Union Pacific (UPRR) railroad tracks (one lane in each direction). The bridge has been determined to be structurally unsound and the 25-foot-wide bridge deck does not provide adequate pedestrian or bicycle access. The sidewalk that exists on the bridge has been shut down for safety reasons, and there is no longer a need to span the railroad tracks with a bridge. The Cities of Colton and Grand Terrace, in cooperation with California Department of Transportation (Caltrans), are proposing to remove the bridge (State Bridge No. 54C0379), fill the area over the abandoned railroad track, and replace the bridge with a two-lane at-grade asphalt roadway, widened with bicycle lanes and pedestrian sidewalks, to connect to the existing roadways to the east and west of the existing bridge. There is also the need to provide continuous pedestrian and bicycle access along this stretch of Barton Road through sidewalks and Class II bicycle lanes to meet the requirements of both the Cities of Colton and Grand Terrace.

This traffic forecast and volumes study report documents the traffic volumes data, assumptions and methodologies used to develop the future traffic volumes for the Barton Road Bridge Removal and Road Construction Project. The purpose of the study is to provide a traffic forecast and vehicle mix analysis of the



average daily roadway traffic (ADT) and intersection AM/PM peak hour traffic volumes anticipated under the Project's opening year of 2023, and the regional 20-year horizon/design year of 2045. The findings of this report will provide the requisite technical traffic volumes supporting information for the air and noise analysis components of the environmental document.

Traffic counts were taken at the study intersections in August of 2019 during the weekday AM and PM peak hours, while local schools were in session. ADT traffic counts were conducted in August of 2019 with Vehicle classification. The analysis was completed for the 2019, 2023 and 2045 design year condition.

Project Description

The project site is located on the boundary line between the cities of Colton and Grand Terrace, between the intersections of Terrace Avenue and Grand Terrace Road. Barton Bridge was initially built as a two-lane bridge with a span of 175 feet in length and an approximate width of 25 feet. Located below the existing bridge is an abandoned railroad track with right-of-way still owned by Union Pacific Railroad. The Project Site Plan, figure 1, includes a proposed a new paved roadway with curb and gutter, sidewalks, bike lanes, and any other related curbside improvements. On-street parking will not be permitted on the new section of Barton Road. Full access to the adjacent driveways on both sides of the existing bridge will be maintained as part of the proposed improvements.

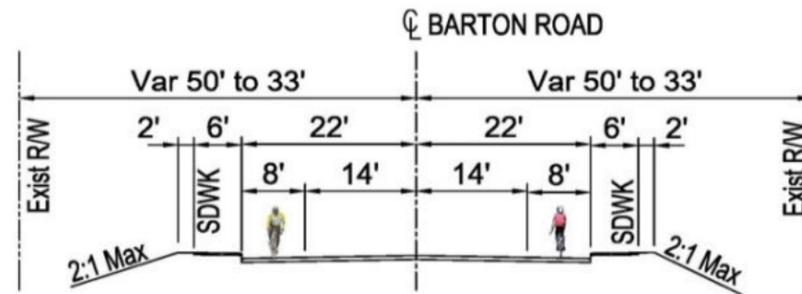
Figure 1 shows a map of the project vicinity location and provides a description of the proposed project, including study area roadways, roadway configuration, and adjacent land use.

Figure 2 illustrates the study area and locations where recent traffic volume counts were collected.

FIGURE 1

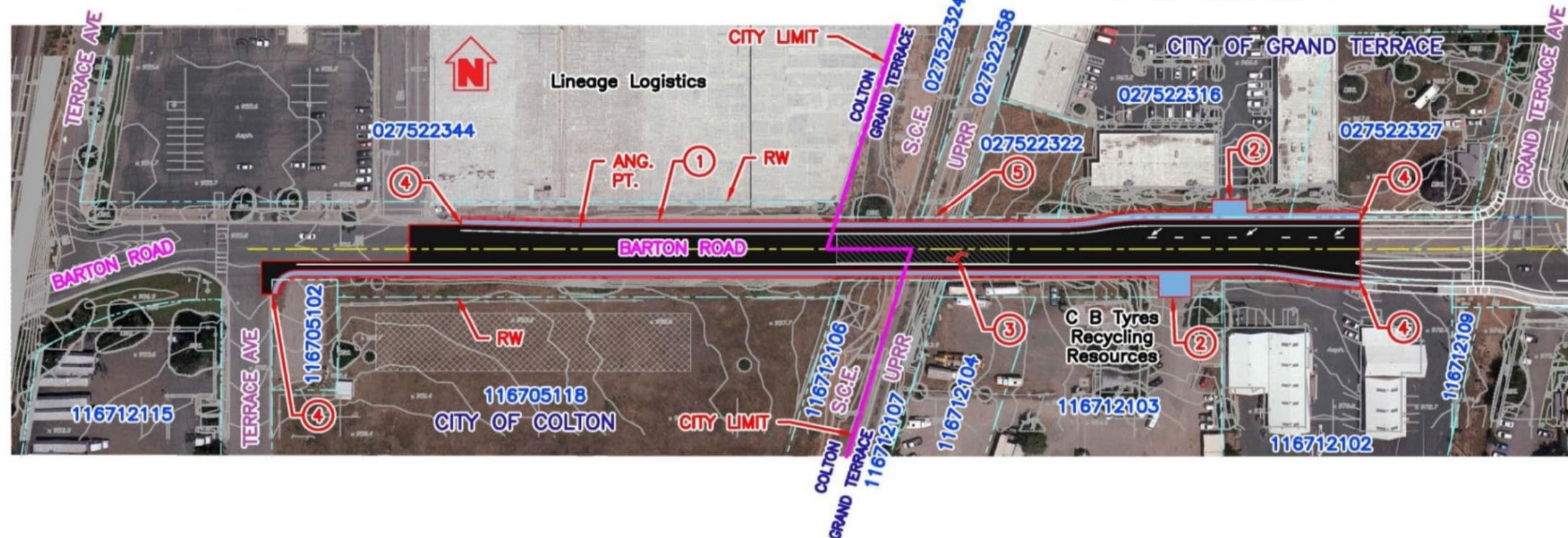
BARTON ROAD BRIDGE REMOVAL AND ROAD CONSTRUCTION PROJECT

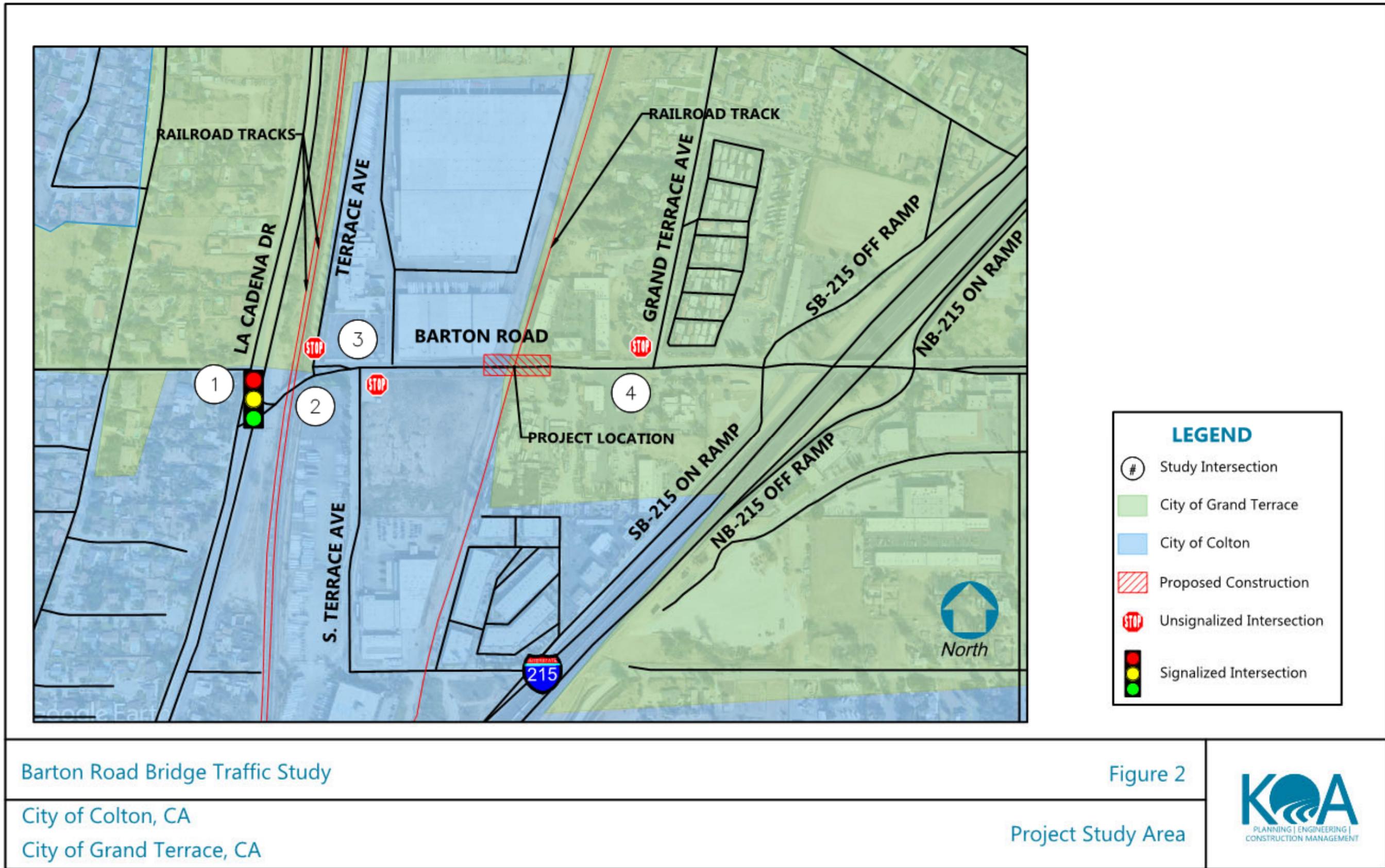
BRIDGE No. 54C-0379
 PROJECT No. BRLS 5065(024)
SITE OVERVIEW



LEGEND:

- ① New Roadway Section
- ② Reconstruct Driveway per City of Grand Terrace Standards
- ③ Remove Bridge, Retaining walls, and abutments
- ④ Join Existing
- ⑤ Provide Drainage Culvert
- ▨ Remove Existing Bridge
- ▩ Potential Staging Site





Barton Road Bridge Traffic Study

Figure 2

City of Colton, CA
 City of Grand Terrace, CA

Project Study Area



3.0 METHODOLOGY

This section documents the methodologies and assumptions used to conduct the quantitative traffic analysis for the final construction alternative. This section contains the following background information:

2.1 Study Timeframes

The study presents average daily traffic volumes (ADT), peak hour traffic volumes, average delay and level of service (LOS) analysis, and queuing analysis for several critical roadways for the following periods:

- Existing Year (2019)
- Opening Year (2023)
- Build Out Year (2045)

2.2 Study Locations

The following roadways are analyzed in this study. Traffic data for these roadways was collected using 24-hour tube traffic counts, conducted in August 2019.

- Barton Road between La Cadena Drive and Grand Terrace Road

In addition, the following intersections in the study area are evaluated. AM and PM peak hour turning movement traffic counts were conducted at these locations in August 2019

- Barton Road and La Cadena Drive
- Barton Road and Terrace Avenue
- Barton Road and S. Terrace Avenue
- Barton Road and Grand Terrace Road

All traffic count data used in this study was collected by Aim TD LCC and is compiled in Appendix A of this report.

2.3 Traffic Analysis Methodologies

Street system operating conditions are typically described in terms of “level of service.” Level of service is a report-card scale used to indicate the quality of traffic flow on roadway segments and at intersections. Level of service (LOS) ranges from LOS A (free flow, little congestion) to LOS F (forced flow, extreme congestion).

Table 1 gives brief definitions of Level of Service.

TABLE 1: LEVEL OF SERVICE DESCRIPTION

Level of Service	Traffic Description
A	Excellent, Light Traffic
B	Good, Light to Moderate Traffic
C	Moderate Traffic, with Insignificant Delay
D	Heavy Traffic, with Significant Delay
E	Severe Congestion and Delay
F	Failed, Indicated Levels Cannot Be Handled

The study was conducted to conform to analysis standards and parameters established by the City of Colton. City guidelines prescribe the use of the *Highway Capacity Manual* (HCM 2016) methodology in determining

the level of service for signalized intersections. The *Highway Capacity Manual* is a publication of the Transportation Research Board, a research agency affiliated with the Federal Government. Chapter 9 of the *HCM* is devoted to analysis of signalized intersections. The methodology in the *HCM 2016* for signalized intersections is based upon measurements or forecasts of control delay for traffic utilizing all approaches to the intersection.

Under the HCM methodology, level of service for signalized intersections is based on the average time (seconds) that vehicles entering an intersection are delayed. Table 2 shows the relationship between level of service and the performance measures for signalized and unsignalized intersections, and lists the HCM delay criteria for signalized and unsignalized intersections.

TABLE 2: INTERSECTION LEVELS OF SERVICE

Level of Service	Signalized Intersection Control Delay (in sec/veh)	Unsignalized Intersection Control Delay (in sec/veh)
A	0 – 10	0 – 10
B	10.1 – 20	10 – 15
C	20.1 – 35	15 – 25
D	35.1 – 55	25 – 35
E	55.1 – 80	35 – 50
F	80.1	50 or more

City of Colton guidelines indicate that LOS D or better is an acceptable level of service for intersections. Any intersection operating at LOS E or F is considered to be unacceptable, which the project may need to implement traffic management measures to provide acceptable levels of service during construction activities.

To determine service levels on study area roadway segments, we compared the appropriate average daily traffic thresholds for level of service to the daily capacity of the study area roadway segments, and the existing and future volumes in the study area. The thresholds for determining level of service used in this analysis are summarized in Table 3 below.

TABLE 3: ROADWAY SEGMENT LEVEL OF SERVICE DEFINITIONS

LOS	V/C	Congestion/Delay	Traffic Description
<i>(Used for surface streets, freeways, expressways and conventional highways)</i>			
"A"	≤0.41	None	Free flow.
"B"	>0.41-0.62	None	Free to stable flow, light to moderate volumes.
"C"	>0.62-0.80	None to minimal	Stable flow, moderate volumes, freedom to maneuver noticeably restricted.
"D"	>0.80-0.92	Minimal to substantial	Approaches unstable flow, heavy volumes, very limited freedom to maneuver.
"E"	>0.92-1.00	Significant	Extremely unstable flow, maneuverability and psychological comfort extremely poor.

This report summarizes the analysis for the existing year 2019, 2023 and 2045 design year under two conditions, including: (1) Existing build, (2) Opening year, and (3) Buildout Year. The use of Synchro/ SimTraffic software was used to determine the Level of Service (LOS) of the study intersection and queuing on the east and west leg of the study intersections. These include 95th percentile queue analysis during peak travel periods/hours. The values for 95th percentile queue represent the queue exceeded during only 5% of the traffic signal cycles, typically once during a typical peak period. These values will be used to evaluate the need to either construct a 4-lane temporary road or have a partial closure with a total of 2 lanes.

4.0 EXISTING CONDITIONS

This section summarizes the existing baseline traffic data, and documents the applied methodologies used to develop the forecast traffic volume projections.

4.1 Roadway System

Streets in the project vicinity that will be affected by the proposed removal of Barton Road Bridge and pavement construction project include La Cadena Drive, Terrace Avenue, Grand Terrace Road, and Barton Road.

4.1.1 La Cadena Drive

La Cadena Drive is a north-south, four-lane roadway divided by a raised median. The posted speed limit in the study area is 50 miles per hour (MPH). La Cadena Drive is the only Divided Major Highway in the city of Grand Terrace and runs along the boundary of the two cities. The roadway continues into downtown Grand Terrace and Laurel Street in the city of Colton; refer to Figure 2. A Divided Major Highway, such as La Cadena Drive, consists of a 120-foot right-of-way with a divided 64-foot improved section and a raised median. La Cadena Drive connects the city of Grand Terrace to the city of Colton to the north and connects to the city of Riverside to the south. According to the Land Use Plans of City of Colton and City of Grand Terrace, the land uses along La Cadena Drive are light industrial and industrial park zones, respectively.

4.1.2 Terrace Avenue

Terrace Avenue is a north-south, two-lane roadway; it is classified as a Local Street in the city of Colton and the city of Grand Terrace. The “prima facie” speed limit for this study area is 25 MPH. Terrace Avenue is divided into two street segments by Barton Road where the north segment extends along the boundary of city of Grand Terrace and city of Colton, and the south segment continues into the city of Colton. This street provides direct access to residential neighborhoods. With a 60-foot right-of-way and a 36-foot improved section, Local Streets have direct residential lots fronting onto them and are the standard street category within residential neighborhoods. According to both City of Colton and City of Grand Terrace Land Use Plan, the land uses along Terrace Avenue are light industrial and industrial park zones, respectively.

4.1.3 Grand Terrace Road

Grand Terrace Road is a north-south, two-lane roadway. It is located approximately 550 feet east of the project site. The posted speed limit in the study area is 25 MPH. Grand Terrace Road is one of the Collector Streets in the city of Grand Terrace and extends partially into the city of Colton and along the boundaries of the two cities; refer to Figure 2. With a 66-foot right-of-way and a 44-foot improved section, this category of highway connects local traffic with residential neighborhoods and the arterial highway network. According to the Land Use Plans of the two cities, the land uses along Grand Terrace Road are medium density residential and industrial zones.

4.1.4 Barton Road

Barton Road is an east-west, four-lane roadway. The posted speed limit in the study area is 40 MPH. This is one of the Major Highways in the city of Grand Terrace and it provides service to non-local commuters as well as limited local access to the public. Major Highways have a 100-foot right-of-way with a 72-foot improved section. The roadway classification is characterized with four travel lanes, minimal curb cuts, and signalized intersections. Barton Road also provides direct access to the regional freeway Interstate 215 and

commercial corridors; it runs along Barton Road through the city of Grand Terrace. Barton Road continues into the city of Colton with most of its land uses designated as general commercial and low density residential zones.

4.2 Existing Lane Configuration

Data including lane configuration, speed limit, roadway classification, and right-of-way were collected and verified in the field for the study roadways. This data was taken into consideration during the evaluation of the existing conditions.

4.2.1 La Cadena Drive and Barton Road

The signalized intersection of La Cadena Drive and Barton Road is located approximately 970 feet west of the existing Barton Road Bridge end. The staggered intersection consists of the following:

- Two northbound lanes and protected left turn lane
- Two southbound lanes and protected left turn lane
- One eastbound lane with a channelized right turn lane

4.2.2 North Leg of Terrace Avenue and Barton Road

The stop-controlled intersection of Terrace Avenue and Barton Road is located approximately 650 feet west of the existing Barton Road Bridge. The staggered intersection consists of the following:

- One southbound lane

4.2.3 South Leg of Terrace Avenue and Barton Road

The stop-controlled intersection of Terrace Avenue and Barton Road is located approximately 650 feet west of the existing Barton Road Bridge. The staggered intersection consists of the following:

- One northbound lane

4.2.4 Grand Terrace Road and Barton Road

The stop-controlled intersection of Grand Terrace Road and Barton Road is located approximately 550 feet east of the existing Barton Road Bridge. The “T” intersection consists of the following:

- One northbound lane
- One southbound lane

5.0 EXISTING CONDITIONS TRAFFIC ANALYSIS

The existing traffic volume data serves as a baseline by which the future traffic volume projections are determined. In accordance with the direction of the City of Colton, a study area spanning the roadway segment on Barton Road between S. La Cadena Drive and Grand Terrace Road was defined, covering the vicinity of the proposed project where a significant traffic impact could occur.

The roadway segment of Barton Road between S. La Cadena Drive and Grand Terrace Road was also analyzed in this study. All traffic count data evaluated in this study was collected by *AimTD, LLC* in August of 2019 and is compiled in Appendix A of this report. Intersection turning movement traffic volume counts collected at study intersections were taken during typical weekday AM and PM peak hours while local schools were in session.

Table 4 below summarizes Average Annual Daily traffic volumes and truck percentage by classification, including sum of all vehicles in each/both directions. Figure 3 illustrates the existing daily and peak hour traffic volumes.

Table 5 presents the resulting study street segment average daily traffic volumes (ADT's) for Year 2019. From the collected ADT counts, we looked at the peak hour volumes for the east- and westbound approaches along Barton Road at Barton Road Bridge; Table 5 summarizes the peak hour counts. Appendix B contains the count data for these locations.

TABLE 4: ANNUAL AVERAGE DAILY TRAFFIC VOLUMES (AADT) AND TRUCK PERCENTAGES

Road Segment:	Barton Road Between S. La Cadena Drive & Grand Terrace Road							
Direction:	Eastbound				Westbound			
Vehicle Type	% of Total	Counts	PCE factor ¹	Total	% of Total	Counts	PCE factor ¹	Total
PASSENGER VEHICLES	80.7%	3,006	1	3006	77.4%	2,760	1	2,760
2-AXLE TRUCKS	10.8%	401	1.97	790	13.0%	464	1.97	914
3+ AXLE TRUCKS	8.5%	318	1.97	627	9.6%	343	1.97	676
	Total:	3,725	Adjusted PCE	4,423	Total:	3,567	Adjusted PCE	4,350
					ADT (2-way):	7,292	Adjusted PCE (2-way)	8,776

Note 1: Passenger car equivalent, HCM 6th Edition, Exhibit 12-27

As shown in Table 5, currently, Barton Road segment operate at acceptable levels of service of B.

TABLE 5: ANNUAL AVERAGE DAILY TRAFFIC VOLUMES (AADT) AND TRUCK PERCENTAGES

Segment	2019 Existing				
	Classification	Capacity	ADT	V/C	LOS
Barton Road Segment	2L Arterial	18,000	7,292	0.41	B

TABLE 6 DAILY PEAK HOUR VOLUMES

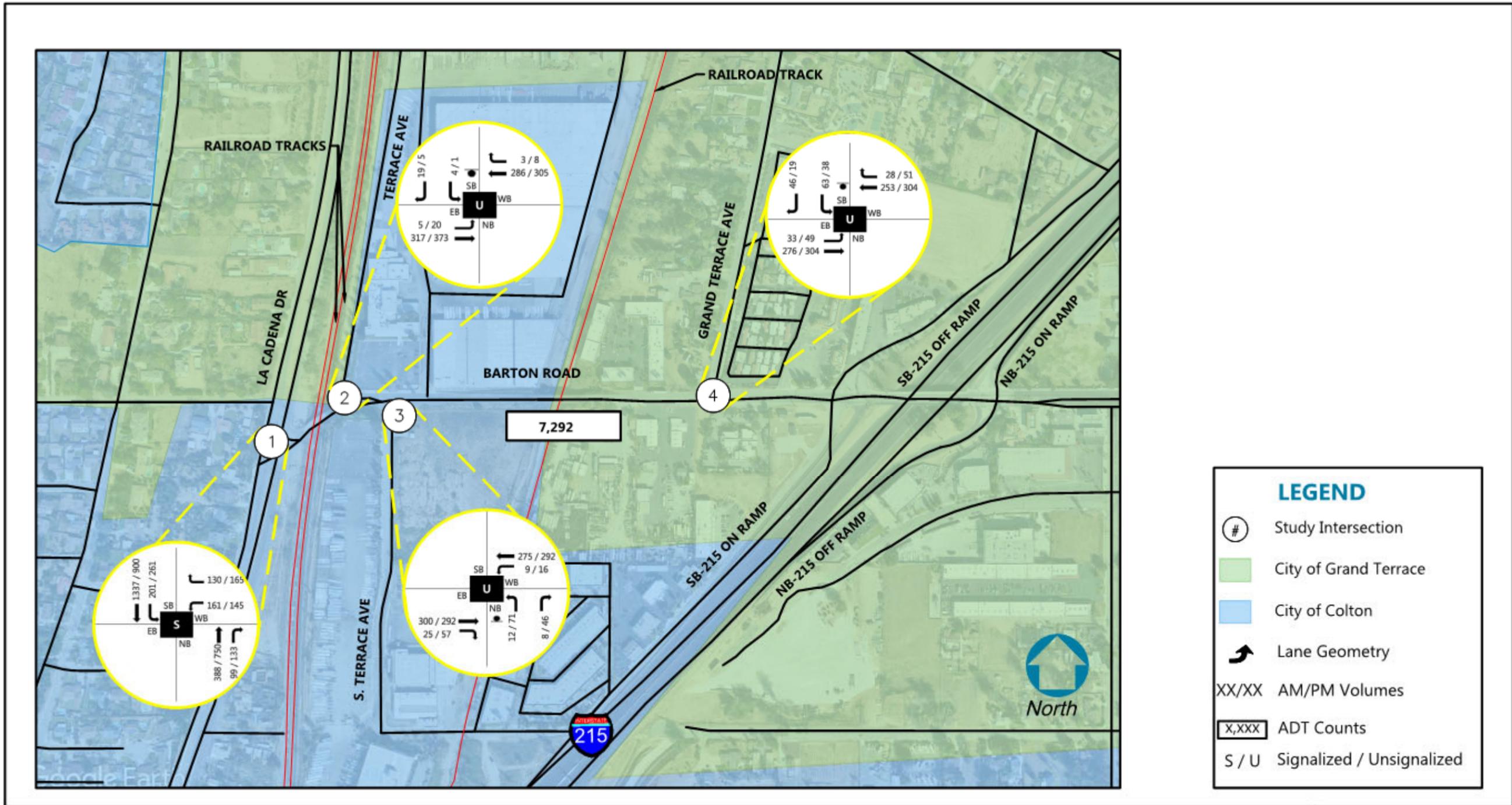
Existing 2018		AM Peak Hour Volume	
Approach Direction		Existing	2023 Est.
Barton Road Segment	EB	302	454
	WB	294	396
Existing 2018		PM Peak Hour Volume	
Approach Direction		Existing	2023 Est.
Barton Road Segment	EB	333	503
	WB	308	426

Table 7 summarizes the results of the intersection level of service analysis for the existing (2019) conditions. As shown in the table, all of the study intersections currently operate at acceptable levels of service in the AM and PM peak hours. Appendix B contains the analysis worksheets for existing conditions.

TABLE 7: EXISTING PEAK HOUR INTERSECTION CONDITIONS

Intersection	Peak Hour	Control	Existing-2019	
			Delay ¹	LOS
Barton Road at La Cadena Drive	AM	Signal	25.3	C
	PM		24.7	C
Barton Road at North Leg Terrace Road	AM	TWSC	12.9	B
	PM		12.4	B
Barton Road at South Leg Terrace Road	AM	TWSC	15.8	C
	PM		22.5	C
Barton Road at Grand Terrace Road	AM	TWSC	12.4	B
	PM		13.8	B

Note 1: Delay is in seconds per vehicle average



Barton Road Bridge Traffic Study

Figure 3

City of Colton, CA
 City of Grand Terrace, CA

Existing Traffic Volumes

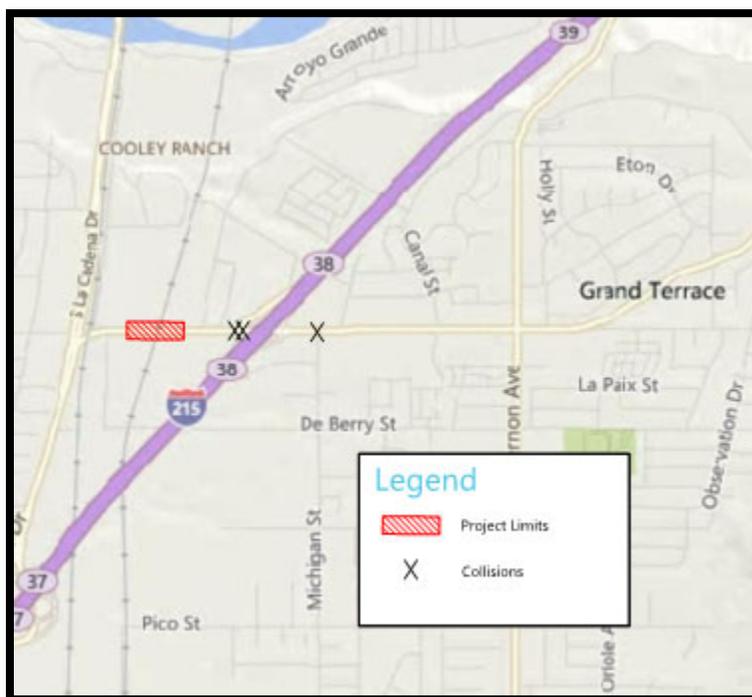


Existing Consolidated Accident Data

As part of the scoping for this traffic forecasting, the City of Colton requested that an accident analysis be conducted to identify any evidence of existing, on-going, or potential future accident problems with respect to the project.

The last available accident data from the last three years (2016–2018) for the study area intersections and roadway segments was obtained from the Transportation Injury Mapping System (TIMS). TIMS is a web-based data query program maintained by researchers at the Safe Transportation Research and Education Center (SafeTREC) at the University of California, Berkeley, which allows searching and mapping of traffic safety and accident data from local agencies, such as the City of Colton and City of Grand Terrace Police Department’s collision records data, which it submits to the California Statewide Integrated Traffic Records System (SWITRS). A data query of the TIMS database revealed that three (3) non-fatal accidents occurred within the study area over the last three years on Barton Road, between La Cadena Drive and Terrace Avenue.

FIGURE 4: REPORTED TRAFFIC COLLISIONS IN PROJECT VICINITY



6.0 FUTURE YEAR CONDITION YEARS 2023 AND 2045

The objective of analyzing the Year 2023 conditions is to estimate the construction year ADT and analyze peak hour traffic conditions to determine traffic impacts and migrations. Buildout year 2045 was analyzed to determine peak hour traffic conditions and traffic impacts.

The 2019 volumes have been adjusted by a total of 6%, with an assumption of 1.47% ambient growth per year to analyze the construction conditions in 2023.

Future Traffic Volumes Forecast Methodology

This section presents an overview of methodologies used in this forecasting. The Southern California Association of Governments’ (SCAG) Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) provides regional growth forecasts used to develop regional plans. The regional growth forecast uses recent and past trends with key demographic and economic assumptions which can be used for regional traffic forecast purposes. SCAG’s Regional Growth Forecast includes three major indicators: population, households and employment. SCAG projects the region will add 3.8 million residents, 1.5 million households, and 2.4 million jobs over the RTP/SCS planning horizon (2012-2040). Population and households are projected to grow at the annual average growth rate of 0.7 percent until 2045, while employment grows at two percent until 2020, and then at 0.7 percent thereafter.

Using the Jurisdictional Forecast table, the values were gathered from the 2012 year and 2040 projected year. As shown on Table 8, the growth rate for population, household, and employment were calculated. Our forecast growth rate for City of Colton and City of Grand Terrace values will be the average of all 3 projected values from both cities.

TABLE 8 - DEMOGRAPHICS AND GROWTH FORECASTS USING SCAG 2012-2040 RTP/SCS

	Population		Household		Employment	
	City of Colton					
Year:	2012	2040	2012	2040	2012	2040
Volume:	52,800	69,100	15,000	20,800	16,800	29,200
Growth Rate (per year):	0.97%		1.17%		1.99%	
	City of Grand Terrace					
Year:	2012	2040	2012	2040	2012	2040
Volume:	12,200	14,200	4,400	5,700	2,200	5,300
Growth Rate (per year):	0.54%		0.93%		3.19%	
	Average Annual Growth Rate:					1.47%

Listings of potential cumulative projects located in the study area that might be developed or under construction within the study time frame were obtained from the City of Colton and City of Grand Terrace. Table 3 shows a list of cumulative developments in the area within a 1.5-mile radius which will add traffic across the bridge in 2023 and 2045. Figure 4 identifies cumulative developments within 1.5 miles from project site. The trip distribution patterns for the cumulative projects were based on engineering judgment throughout the study area.

Table 9 identifies cumulative development projects and Figure 5 shows the locations of all applicable cumulative projects, based on the combined trip generation and distribution.

TABLE 9: LIST OF CUMULATIVE DEVELOPMENTS (WITHIN A 1.5-MILE RADIUS) AND ASSOCIATED DAILY TRIP GENERATION

	City of Colton		Weekday	AM Peak Hour		PM Peak Hour	
				In	Out	In	Out
1	La Cadena Dr. Housing Improvements*	424 Multi-Family Units	2,873	64	156	161	92
		450 Single Family Units	4,375	86	252	289	170
2	Gateway Sign/Station 215*	Commercial Improvements	2,464	76	73	86	82
3	Tropical Ranch Commerce Center*	266,030 SF Warehouse	794	43	16	17	3
4	Roquet Ranch*	Multiple Improvements	10,021	238	581	617	374
5	300 W. Litton	86 Single Family Units	850	17	50	56	33
6	779 S 5th Street	19 Multi-Family Units	129	2	10	7	4
7	Colton Community Soccer Park*	Soccer Park	257	0	0	87	45
City of Grand Terrace							
8	Grand Terrace Town Square*	154,305 SF Retail	9,273	356	292	412	446
9	22394 and 22040 Van Buren Street	17 Two-Story Residential Homes	160	3	10	11	6
10	12569 Michigan Street	Two, One-Story Residential Homes, Two Single Family Lots	5	1	2	1	1
11	11832 and 11834 Burns Avenue	Single Family Residence and Secondary Dwelling Unit	2	1	1	1	0
12	22805 Barton Road	4,453 SF Medical office	160	22	8	14	21
13	22085 Commerce Way	7,403 SF Animal Clinic	164	22	8	18	21
14	22881 Barton Road	2,589 SF Commercial	101	104	99	48	48
		4998 SF Commercial	194				
15	11830 Mt Vernon Ave	35 Condos	237	10	7	13	8
16	Colton Center Street Warehouse*	1901 West Center Street	257	12	5	15	6
17	California Recyclers*	Recycling Center	494	50	24	15	45
18	Barton Road & Vivienda Avenue*	Retail	508	22	21	18	17

* Indicates traffic volumes obtained from the proposed development project's traffic study.

FIGURE 5: CUMULATIVE COMMERCIAL AND RESIDENTIAL PROJECTS IN THE CITIES OF COLTON AND GRAND TERRACE

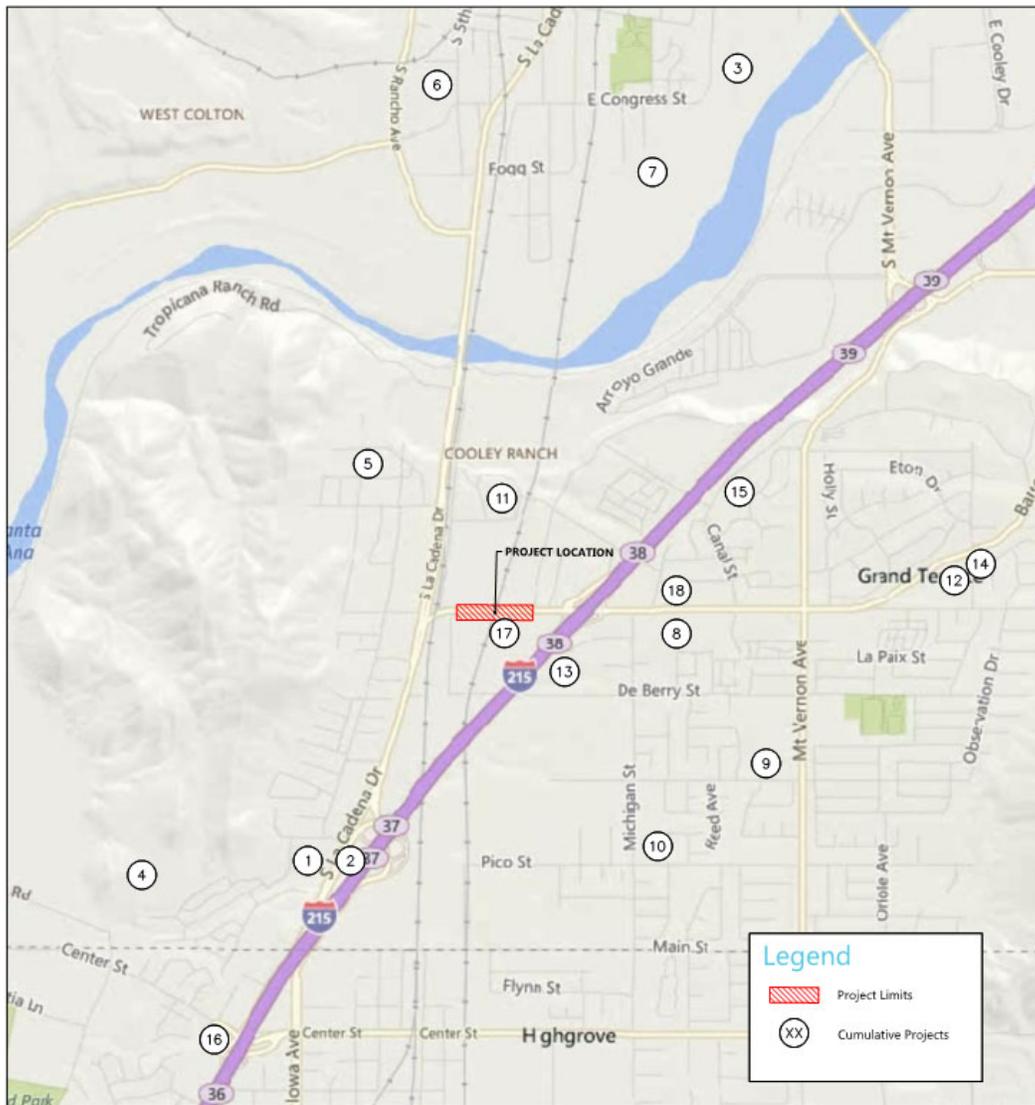


Table 10 shows the 2023 (interpolated), and 2045 (interpolated) volume with the projected SED growth from 2019-2023 and from 2023-2045 projected incremental growth factors.

TABLE 10: OPENING YEAR AND HORIZON YEAR TRAFFIC FORECASTS

Projected 2023				Projected 2045			
EB		WB		EB		WB	
% of Total	Counts	% of Total	Counts	% of Total	Counts	% of Total	Counts
80.7%	6,505	77.4%	5,359	80.7%	9,289	77.4%	7,653
10.8%	868	13.0%	901	10.8%	1,239	13.0%	1,287
8.5%	688	9.6%	666	8.5%	982	9.6%	951
Total	8,060	Total	6,926	Total	11,511	Total	9,891
		ADT	14,986			ADT	21,401

Notes:

- 1 Adjusted per SCAG 2012 RTP baseline
- 2 Vol: Average Daily Traffic Volume (vehicle per day, two-way)
- 3 Average Daily Traffic (vehs/day)

Level of Service Results

Projects trips were added to the existing conditions analysis to provide a project impact analysis for opening year and buildout year. Table 11 identifies level of service for the intersections of Barton Road. Existing conditions at Barton Road at Grand Terrace Road is controlled by an all way stop sign. Future improvements indicate a signal will be installed.

TABLE 11: OPENING YEAR AND HORIZON YEAR TRAFFIC SEGMENT ADT

Intersection	Peak Hour	Control	2023		2045	
			Delay ¹	LOS	Delay ¹	LOS
Barton Road at La Cadena Drive	AM	Signal	52.3	D	52.3	F
	PM		33.3	C	33.3	C
Barton Road at North Leg Terrace Road	AM	TWSC	15.1	C	21.7	C
	PM		15.0	C	25.9	D
Barton Road at South Leg Terrace Road	AM	TWSC	16.2	C	25.9	D
	PM		28.0	D	131.6	F
Barton Road at Grand Terrace Road	AM	Signal	26.9	C	59.9	E
	PM		19.8	B	26.0	C

As shown in the table, all of the study intersections currently operate at acceptable levels of service in the AM and PM peak hours during opening year. Buildout year shows level of service of F at the leg of S Terrace Ave.

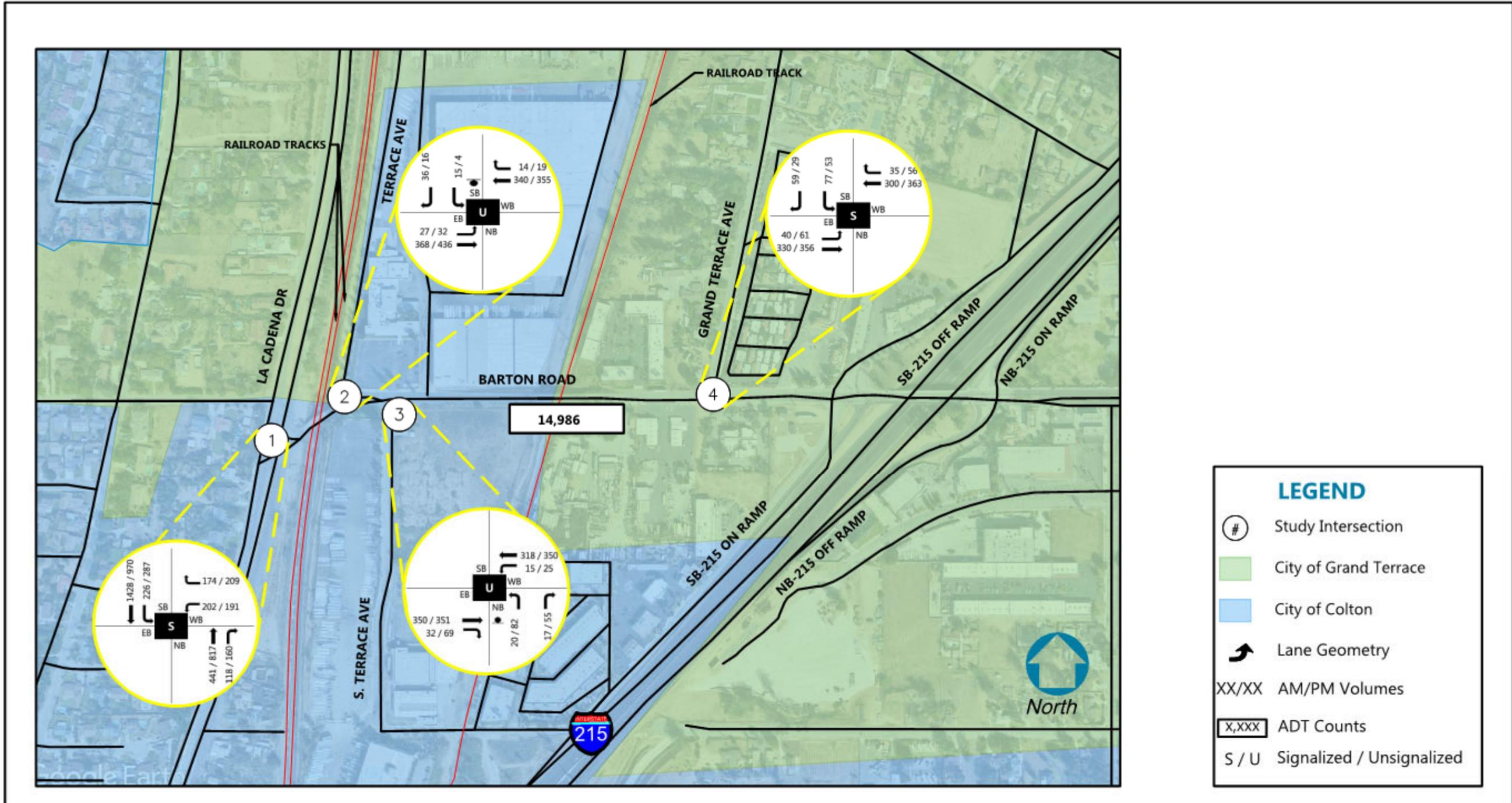
Table 12 shows that Barton Road segment will operate at acceptable levels of service of B during opening year. Buildout year level of service will operate at F.

TABLE 12: OPENING YEAR AND HORIZON YEAR TRAFFIC SEGMENT ADT

Segment	2023 Opening year				
	Classification	Capacity	ADT	V/C	LOS
Barton Road Segment	2L Arterial	18,000	14,986	0.83	D

Segment	2045 Build out year				
	Classification	Capacity	ADT	V/C	LOS
Barton Road Segment	2L Arterial	18,000	21,401	1.19	F

Figures 6 and 7 show the Cumulative Traffic Volumes for Opening Year 2023 and Buildout Year 2045.



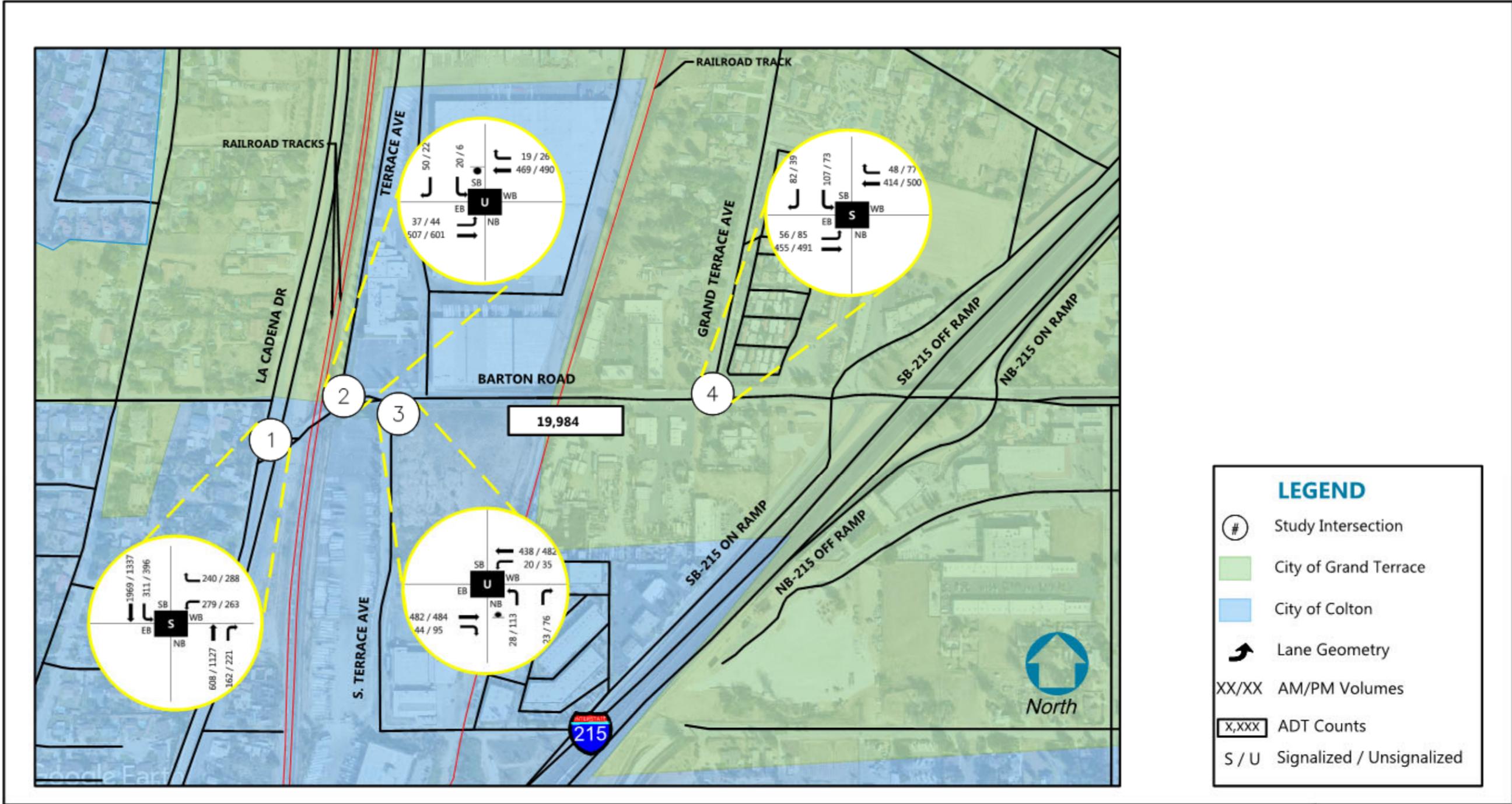
Barton Road Bridge Traffic Study

Figure 6

City of Colton, CA
 City of Grand Terrace, CA

2023 Opening Year Traffic Volumes





Barton Road Bridge Traffic Study

Figure 7

City of Colton, CA
 City of Grand Terrace, CA

2045 Build-out year Traffic Volumes



7.0 TRANSPORTATION MANAGEMENT PLAN (TMP)

Caltrans Transportation Management Plan (TMP) guidelines are used for the planning of construction activities for the maintenance of traffic to reduce congestion and vehicle delay for drivers. These guidelines help establish planned start and stop times for activities for time restricted construction, maintenance/night work that requires temporary lane closures, and re-opening. On Caltrans-maintained freeway and expressway facilities, time of day, week, and number of temporary lane closures allowed is estimated based on a minimum serviceable threshold of 1,500 vehicles per hour per lane (vphpl) in each direction.

From the collected ADT counts, we looked at the peak hour volumes for the east- and westbound approaches along Barton Road. Table 13 summarizes the study location peak hour period per approach for a future year 2023 forecast.

TABLE 13: DAILY PEAK HOUR VOLUMES

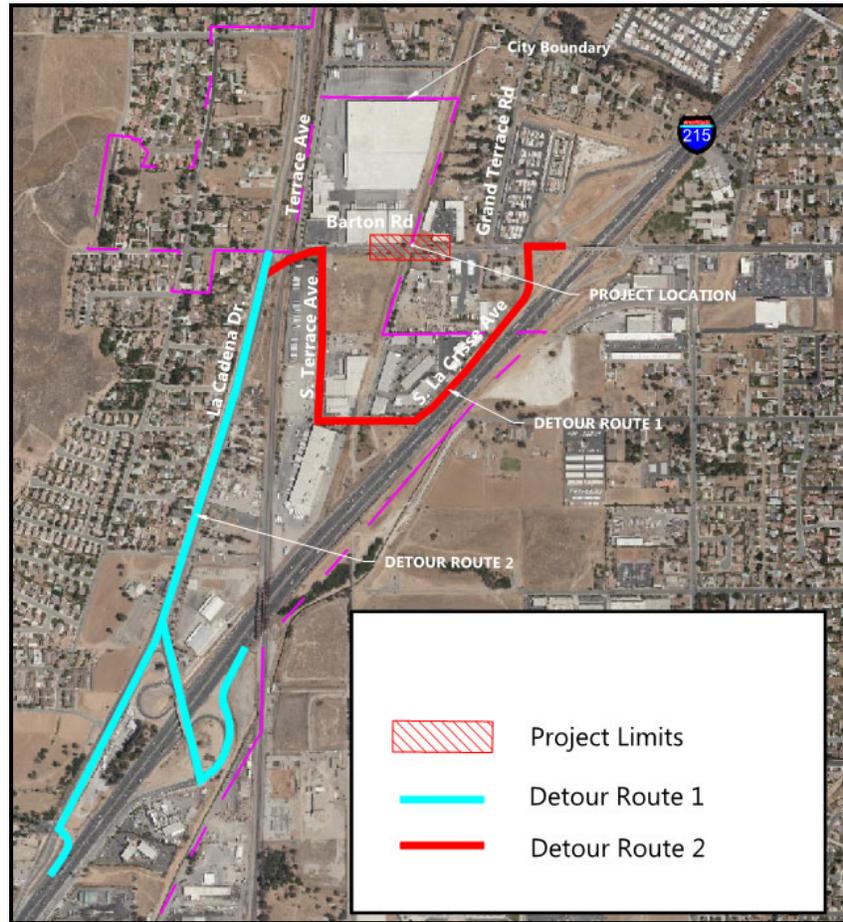
Existing 2019		AM Peak Hour Volume	
Approach Direction/Date		AVG.	2023 EST.
Barton Road Segment	EB	302	382
	WB	294	371
Existing 2019		PM Peak Hour Volume	
Approach Direction/Date		AVG.	2023 EST.
Barton Road Segment	EB	333	416
	WB	308	395

The highest observed peak approach volumes for the eastbound direction occurs during the PM peak hour (333 vehicles) and in the westbound direction occurs during the PM peak hour (308 vehicles). Based on ADT peak volumes counts, there are no periods recorded where volumes in either direction that exceeded 1,500 vehicles per hour.

For the forecasted future average during the AM peak hour the volume is 382 vehicles eastbound, and for the PM peak hour it is 416 vehicles eastbound. A detour alternative would be complying with TMP lane requirements for adequate maintenance of traffic during future year 2023 opening year construction.

Delays are anticipated due to the closure of Barton Road. Traffic detour routes will be in place during construction. Alternatives include detouring vehicles southbound on La Cadena Dr onto the 215 interstate freeway. Alternative 2 detours vehicles onto S. Terrace Ave. and S. La Crisse Ave. Figure 8 shows potential detour routes within the project vicinity. Where existing facilities are impacted, construction will occur in stages to maintain traffic flow. Traffic will then be diverted to the new roadways once construction is complete.

FIGURE 8: DETOUR ROUTES



For the operational and queuing impacts to traffic on Barton Road, the analysis used both Synchro and SimTraffic to calculate the 95th percentile queues for the critical eastbound and westbound approach segments near the bridge to make sure traffic at one intersection does not spill back into the other intersection. Table 14 summarizes the results of the operational analysis for existing conditions compared with the opening alternative and during street closure conditions. The trip distribution patterns for the Barton Road street closure were based on engineering judgment for the study area.

The goal will be to identify any impacts to travel flow and potential queuing issues in the area of the bridge construction traffic control limits. The critical segments for the analysis would focus on the potential impacts both east and west on Barton Road at signalized intersections.

TABLE 14: 2023 OPENING YEAR QUEUE ANALYSIS AT SIGNALIZED INTERSECTIONS

95% in Feet	Storage ¹	No Build	Barton Closure	With Build	No Build	Barton Closure	With Build
		Queue ²					
		AM Peak Hour			PM Peak Hour		
Barton Road at La Cadena Drive							
WBL	350	162	48	154	120	51	158
WBR	100	62	25	55	48	29	111
NBT	1000	176	261	127	323	461	280
NBR	1000	40	10	32	43	21	40
SBL	260	255	38	294	181	50	332
SBT	1000	421	495	386	194	335	189
Barton Road at Grand Terrace Road							
EBL	125	-	14	59	-	32	82
EBT	1000	-	-	239	-	-	226
EBR	150	-	-	-	-	-	-
WBL	125	-	-	-	-	-	-
WBT	1000	-	23	121	-	34	138
WBR	150	-	-	-	-	-	2
NBL	150	-	-	-	-	-	-
NBT	150	-	-	-	-	-	-
NBR	150	-	-	-	-	-	-
SBL	125	-	-	-	-	-	-
SBT	1000	-	13	99	-	19	33
SBR	125	-	-	-	-	-	-

Note 1: Link Storage length is critical upstream distance to neighboring intersection

Note 2: Intersection approach delay in seconds per vehicle average

The peak directional traffic flows are southbound in the AM and northbound in the PM, but as shown in Table 14, the queue lengths for detour route did not extend past the critical link storage lengths to neighboring intersections for Barton Road at La Cadena Drive. Overall, there was no major impact for either the AM or PM peak hours for detour routes.

For Barton Road at Grand Terrace Road, the peak directional traffic flow are eastbound in the PM and westbound in the PM. The queue lengths for detour route did not extend past the critical link storage; therefore, the closure will not result in major impacts to the surrounding area intersections during the construction of the new at-grade Barton Road. Appendix C contains the reports.

8.0 SUMMARY

The purpose of the project is to replace the existing two-lane bridge (approximately 175 feet long by 25 feet wide) on Barton Road over an abandoned Union Pacific Railroad (UPRR) single track railway in the cities of Colton and Grand Terrace with a two-lane at-grade asphalt roadway. Barton Road is within both the cities of Colton and Grand Terrace. Improvements to Barton Road will begin at the east side of the Terrace Avenue intersection in the city of Colton and extend to approximately 100 feet west of the intersection of Grand Terrace Road in the city of Grand Terrace. The curb to curb roadway width of 44 feet widens to approximately 70 feet west of Grand Terrace Road to tie into the improvements being made to the Barton Road/I-215 interchange.

The purpose of this report is to provide requisite technical traffic support information for the air and noise analysis components of the environmental study. This study conducted an assessment of the traffic study analysis for the opening year of 2023 and forecast year of 2045. Traffic counts were taken in August of 2019 during the weekday AM and PM peak hours, while local schools were in session, where significant traffic impact could occur. These locations included four (4) intersections and one (1) segment area. The analysis was completed for the 2019, 2023, and 2045 design year condition.

The methodologies used in this forecasting included the use SCAG's Regional Growth Forecast with the Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) to develop regional project growth rates. The Growth Forecast includes three major indicators: population, households, and employment which was used to interpolate the growth factor. Using the Jurisdictional Forecast table, from the 2012 year and 2040 projected year, we gathered the City of Colton's projected growth rate for each indicator and calculated the average growth which is 1.47%.

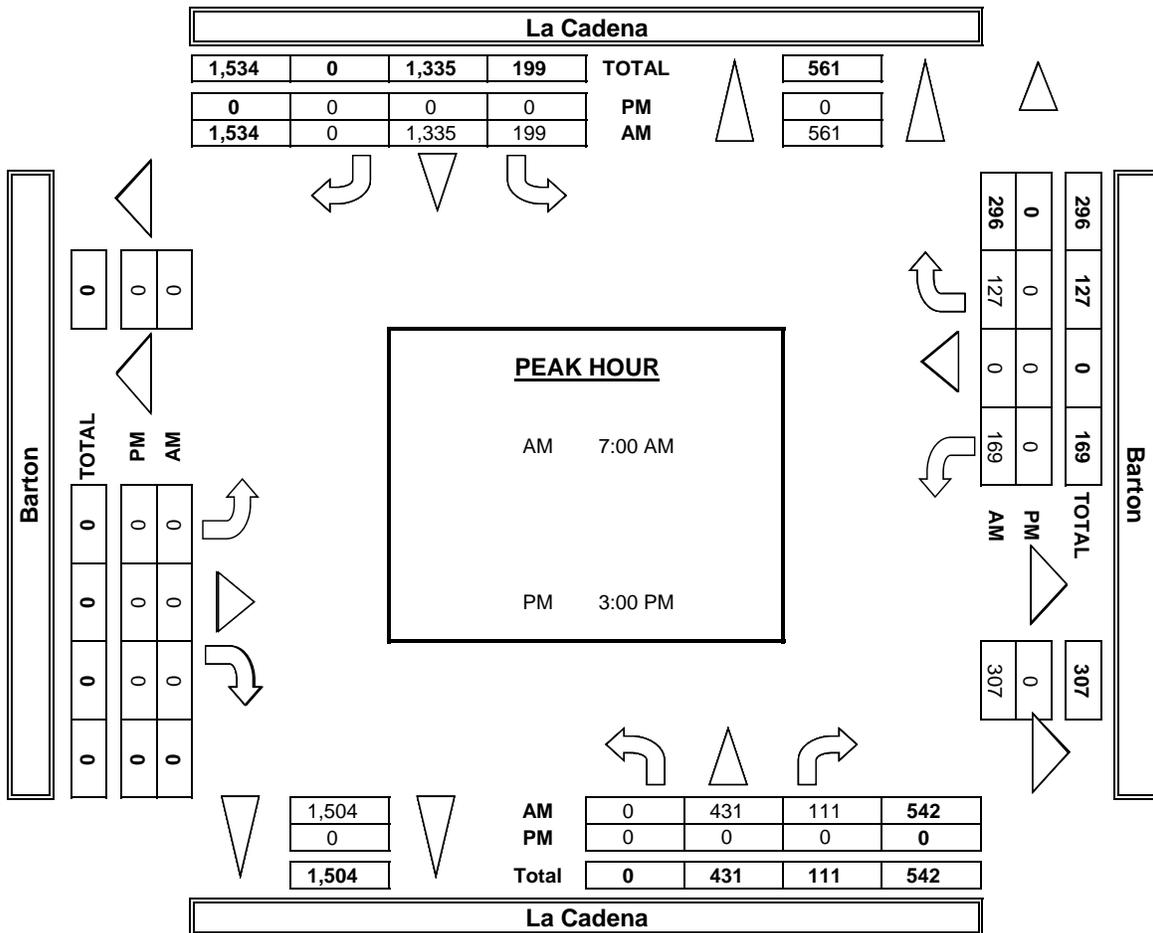
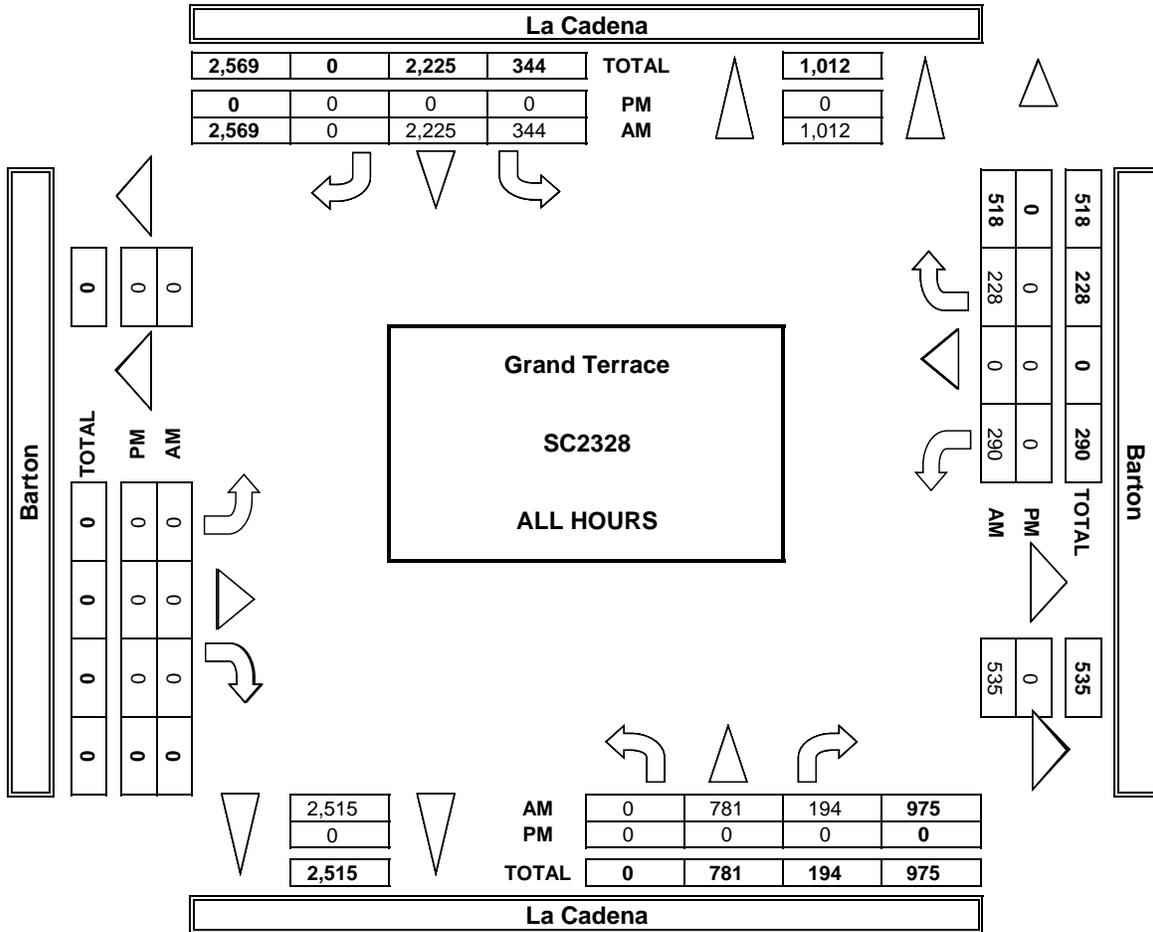
Daily traffic generation data from cumulative development projects in the city of Colton and city of Grand Terrace was collected from each city and from other EIR consultants for a 1.5-mile influence area radius from the proposed Barton Bridge Project location. The projected daily traffic that will potentially cross the at-grade roadway in 2023 and 2045 was developed using the baseline traffic volume counts collected by Aim TD, LLC, and projected forward to account for future additional traffic. An average annual growth rate of 1.47% was then applied to interpolate the opening year of 2023 and forecast year of 2045. The projected ADT counts for 2019, 2023, and 2045 were 7,292; 14,986; and 21,401 vehicles per day, respectively.

Since Barton Road will require closing, delays are anticipated. Traffic detour routes will be in place during construction. Routes include detouring vehicles southbound on La Cadena Dr. onto the 215 interstate freeway and/or detour vehicles onto S. Terrace Ave. and S. La Crisse Ave. It was also determined that no major queuing would spill back on La Cadena Dr. or at Grand Terrace Road. By comparison, the delay is not significantly higher and both intersections will operate at acceptable Level of Service. Therefore, the closure will not result in significant impacts to the surrounding area intersections during the construction of the at-grade Barton Road.



APPENDIX A – TRAFFIC VOLUME COUNTS

AimTD LLC
TURNING MOVEMENT COUNTS



INTERSECTION TURNING MOVEMENT COUNTS

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

DATE: 8/27/19 TUESDAY	LOCATION: NORTH & SOUTH: EAST & WEST:	Grand Terrace La Cadena Barton	PROJECT #: LOCATION #: CONTROL:	SC2328 1 SIGNAL
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PCE Adjusted	NOTES:										AM		▲	
	Class	1	2	3	4	5	6	7	8	9	PM	◀	N	▶
	Factor	1	1.5	2	3	2	2	2	2	2	MD	◀	W	▶
	OTHER										OTHER		S	

LANES:	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			U-TURNS					
	La Cadena			La Cadena			Barton			Barton								
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB	TTL
X	2	1	1	2	X	X	X	X	1	X	1							

	AM																				
	6:30 AM	6:45 AM	7:00 AM	7:15 AM	7:30 AM	7:45 AM	8:00 AM	8:15 AM	8:30 AM	8:45 AM	9:00 AM	9:15 AM	VOLUMES	APPROACH %	APP/DEPART	BEGIN PEAK HR	VOLUMES	APPROACH %	PEAK HR FACTOR	APP/DEPART	
	0	84	25	25	184	0	0	0	0	24	0	28	369								0
	0	114	15	37	220	0	0	0	0	39	0	33	457								0
	0	133	30	32	283	0	0	0	0	42	0	37	556								0
	0	112	37	63	338	0	0	0	0	53	0	34	636								0
	0	99	29	55	435	0	0	0	0	51	0	32	700								0
	0	127	28	66	355	0	0	0	0	50	0	33	657								0
	0	93	41	53	270	0	0	0	0	37	0	30	522								0
	0	96	27	46	272	0	0	0	0	38	0	27	505								0
	0	0	0	0	0	0	0	0	0	0	0	0	0								0
	0	0	0	0	0	0	0	0	0	0	0	0	0								0
	0	0	0	0	0	0	0	0	0	0	0	0	0								0
	0	855	231	376	2,354	0	0	0	0	332	0	254	4,401	0	0	0	0	0	0	0	0
	0%	79%	21%	14%	86%	0%	0%	0%	0%	57%	0%	43%									
	1,086	/	1,109	2,730	/	2,686	0	/	606	586	/	0	0								
	0	7:00 AM			215	1,409	0	0	0	0	0	0	2,549								
	0	470	124	215	1,409	0	0	0	0	195	0	136									
	0%	79%	21%	13%	87%	0%	0%	0%	0%	59%	0%	41%									
	0.913	0.829			0.000			0.951			0.911										
	594	/	606	1,624	/	1,604	0	/	339	331	/	0	0								



INTERSECTION TURNING MOVEMENT COUNTS

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

DATE: 8/27/19 TUESDAY	LOCATION: NORTH & SOUTH: EAST & WEST:	Grand Terrace La Cadena Barton	PROJECT #: LOCATION #: CONTROL:	SC2328 1 SIGNAL
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CLASS 1: PASSENGER VEHICLES	NOTES:	AM PM MD OTHER OTHER	◀ W	▲ N S ▼	E ▶
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LANES:	NORTHBOUND <small>La Cadena</small>			SOUTHBOUND <small>La Cadena</small>			EASTBOUND <small>Barton</small>			WESTBOUND <small>Barton</small>			TOTAL
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	X	2	1	1	2	X	X	X	X	1	X	1	

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

AM	6:30 AM	0	79	12	18	156	0	0	0	15	0	23	303
	6:45 AM	0	96	13	31	194	0	0	0	26	0	25	385
	7:00 AM	0	117	22	30	245	0	0	0	22	0	34	470
	7:15 AM	0	86	30	53	287	0	0	0	39	0	29	524
	7:30 AM	0	81	26	49	386	0	0	0	37	0	30	609
	7:45 AM	0	104	21	51	314	0	0	0	45	0	24	559
	8:00 AM	0	77	22	42	235	0	0	0	28	0	23	427
	8:15 AM	0	65	18	38	234	0	0	0	32	0	17	404
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	705	164	312	2,051	0	0	0	244	0	205	3,681
	APPROACH %	0%	81%	19%	13%	87%	0%	0%	0%	54%	0%	46%	
APP/DEPART	869	/	913	2,363	/	2,295	0	/	473	449	/	0	0
BEGIN PEAK HR	7:00 AM												
VOLUMES	0	388	99	180	1,232	0	0	0	143	0	117	2,162	
APPROACH %	0%	80%	20%	13%	87%	0%	0%	0%	55%	0%	45%		
PEAK HR FACTOR	0.876		0.813		0.000			0.942		0.888			
APP/DEPART	487	/	508	1,415	/	1,375	0	/	279	260	/	0	0

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



INTERSECTION TURNING MOVEMENT COUNTS

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

DATE: 8/27/19 TUESDAY	LOCATION: NORTH & SOUTH: EAST & WEST:	Grand Terrace La Cadena Barton	PROJECT #: LOCATION #: CONTROL:	SC2328 1 SIGNAL
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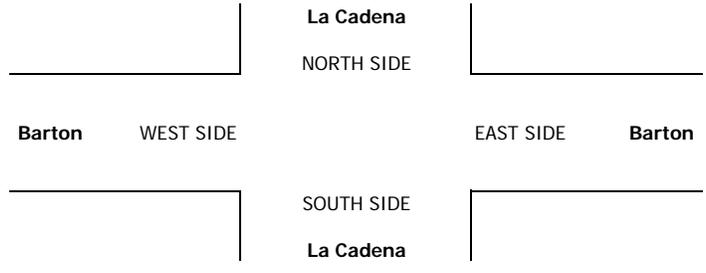
CLASS 2: 2-AXLE WORK VEHICLES/ TRUCKS	NOTES:	AM PM MD OTHER OTHER	◀ W E ▶	▲ N S ▼
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LANES:	NORTHBOUND <small>La Cadena</small>			SOUTHBOUND <small>La Cadena</small>			EASTBOUND <small>Barton</small>			WESTBOUND <small>Barton</small>			TOTAL
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	

U-TURNS				
NB	SB	EB	WB	TTL

AM	6:30 AM	0	1	0	0	11	0	0	0	0	3	0	0	15
	6:45 AM	0	3	1	1	12	0	0	0	2	0	2	21	
	7:00 AM	0	5	2	0	13	0	0	0	6	0	2	28	
	7:15 AM	0	6	2	3	25	0	0	0	4	0	2	42	
	7:30 AM	0	7	0	0	25	0	0	0	5	0	0	37	
	7:45 AM	0	7	0	3	21	0	0	0	1	0	0	32	
	8:00 AM	0	7	3	4	13	0	0	0	3	0	0	30	
	8:15 AM	0	6	1	2	14	0	0	0	4	0	1	28	
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	
	VOLUMES	0	42	9	13	134	0	0	0	0	28	0	7	233
APPROACH %	0%	82%	18%	9%	91%	0%	0%	0%	0%	80%	0%	20%		
APP/DEPART	51	/	49	147	/	162	0	/	22	35	/	0	0	
BEGIN PEAK HR	7:15 AM													
VOLUMES	0	27	5	10	84	0	0	0	0	13	0	2	141	
APPROACH %	0%	84%	16%	11%	89%	0%	0%	0%	0%	87%	0%	13%		
PEAK HR FACTOR	0.800			0.839			0.000			0.625			0.839	
APP/DEPART	32	/	29	94	/	97	0	/	15	15	/	0	0	

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



INTERSECTION TURNING MOVEMENT COUNTS

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

DATE: 8/27/19 TUESDAY	LOCATION: NORTH & SOUTH: EAST & WEST:	Grand Terrace La Cadena Barton	PROJECT #: LOCATION #: CONTROL:	SC2328 1 SIGNAL
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CLASS 3: 3-AXLE TRUCKS	NOTES:	AM PM MD OTHER OTHER	◀ W S ▶ E	▲ N ▼
-------------------------------------	---------------	----------------------------------	-----------------	----------

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

AM	6:30 AM	0	0	0	1	1	0	0	0	0	1	0	1	4	0	0	0	0	0
	6:45 AM	0	1	0	1	0	0	0	0	0	2	0	1	5	0	0	0	0	0
	7:00 AM	0	1	0	0	2	0	0	0	0	1	0	0	4	0	0	0	0	0
	7:15 AM	0	4	0	1	0	0	0	0	0	1	0	0	6	0	0	0	0	0
	7:30 AM	0	2	0	1	1	0	0	0	0	0	0	0	4	0	0	0	0	0
	7:45 AM	0	3	1	1	0	0	0	0	0	0	0	0	5	0	0	0	0	0
	8:00 AM	0	1	0	1	3	0	0	0	0	1	0	0	6	0	0	0	0	0
	8:15 AM	0	2	0	1	3	0	0	0	0	0	0	0	6	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	14	1	7	10	0	0	0	0	6	0	2	40	0	0	0	0	0
	APPROACH %	0%	93%	7%	41%	59%	0%	0%	0%	0%	75%	0%	25%		0	0	0	0	0
APP/DEPART	15	/	16	17	/	16	0	/	8	8	/	0	0	0	0	0	0	0	
BEGIN PEAK HR	7:30 AM																		
VOLUMES	0	8	1	4	7	0	0	0	0	1	0	0	21	0	0	0	0	0	
APPROACH %	0%	89%	11%	36%	64%	0%	0%	0%	0%	100%	0%	0%		0	0	0	0	0	
PEAK HR FACTOR	0.563		0.688		0.000		0.250		0.875										
APP/DEPART	9	/	8	11	/	8	0	/	5	1	/	0	0	0	0	0	0	0	



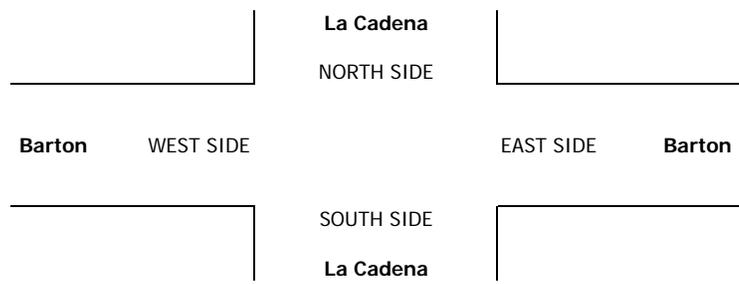
INTERSECTION TURNING MOVEMENT COUNTS

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

DATE: 8/27/19 TUESDAY	LOCATION: NORTH & SOUTH: EAST & WEST:	Grand Terrace La Cadena Barton	PROJECT #: LOCATION #: CONTROL:	SC2328 1 SIGNAL																				
CLASS 4: 4 OR MORE AXLE TRUCKS	NOTES:		<table border="1" style="margin: auto;"> <tr><td>AM</td><td></td><td>▲</td><td></td></tr> <tr><td>PM</td><td></td><td>N</td><td></td></tr> <tr><td>MD</td><td>◀ W</td><td></td><td>E ▶</td></tr> <tr><td>OTHER</td><td></td><td>S</td><td></td></tr> <tr><td>OTHER</td><td></td><td>▼</td><td></td></tr> </table>	AM		▲		PM		N		MD	◀ W		E ▶	OTHER		S		OTHER		▼		
AM		▲																						
PM		N																						
MD	◀ W		E ▶																					
OTHER		S																						
OTHER		▼																						

LANES:	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL	U-TURNS				
	La Cadena			La Cadena			Barton			Barton				NB	SB	EB	WB	TTL
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR						

AM	6:30 AM	0	1	3	1	3	0	0	0	0	0	0	1	9	0	0	0	0	0
	6:45 AM	0	3	0	0	2	0	0	0	0	2	0	1	8	0	0	0	0	0
	7:00 AM	0	2	1	0	4	0	0	0	0	3	0	0	10	0	0	0	0	0
	7:15 AM	0	3	0	1	3	0	0	0	0	2	0	0	9	0	0	0	0	0
	7:30 AM	0	1	1	0	3	0	0	0	0	2	0	0	7	0	0	0	0	0
	7:45 AM	0	2	1	2	3	0	0	0	0	1	0	1	10	0	0	0	0	0
	8:00 AM	0	1	4	1	3	0	0	0	0	0	0	1	10	0	0	0	0	0
	8:15 AM	0	6	1	1	1	0	0	0	0	0	0	2	11	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	19	11	6	22	0	0	0	0	10	0	6	74	0	0	0	0	0
	APPROACH %	0%	63%	37%	21%	79%	0%	0%	0%	0%	63%	0%	38%						
	APP/DEPART	30	/	25	28	/	32	0	/	17	16	/	0	0					
BEGIN PEAK HR	7:30 AM																		
VOLUMES	0	10	7	4	10	0	0	0	0	3	0	4	38						
APPROACH %	0%	59%	41%	29%	71%	0%	0%	0%	0%	43%	0%	57%							
PEAK HR FACTOR	0.607			0.700			0.000			0.875			0.864						
APP/DEPART	17	/	14	14	/	13	0	/	11	7	/	0	0						



INTERSECTION TURNING MOVEMENT COUNTS

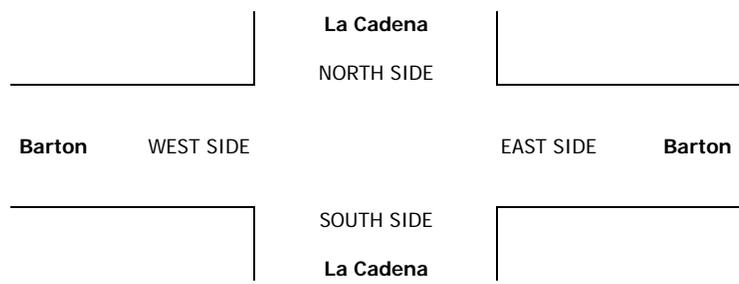
PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: 8/27/19 TUESDAY	LOCATION: NORTH & SOUTH: EAST & WEST:	Grand Terrace La Cadena Barton	PROJECT #: LOCATION #: CONTROL:	SC2328 1 SIGNAL
CLASS 5: RV	NOTES:		AM PM MD OTHER OTHER	▲ N E ► S ▼

LANES:	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL	U-TURNS				
	La Cadena			La Cadena			Barton			Barton				NB	SB	EB	WB	TTL

LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	X	2	1	1	2	X	X	X	X	1	X	1	
6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
BEGIN PEAK HR	6:30 AM												
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
PEAK HR FACTOR	0.000			0.000			0.000			0.000			0.000
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0

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



INTERSECTION TURNING MOVEMENT COUNTS

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

DATE: 8/27/19 TUESDAY	LOCATION: NORTH & SOUTH: EAST & WEST:	Grand Terrace La Cadena Barton	PROJECT #: LOCATION #: CONTROL:	SC2328 1 SIGNAL
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CLASS 6: BUSES	NOTES:	AM PM MD OTHER OTHER	▲ N ◀ W E ▶ S ▼
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	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	La Cadena			La Cadena			Barton			Barton			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	X	2	1	1	2	X	X	X	X	1	X	1	

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

	AM												
	6:30 AM	6:45 AM	7:00 AM	7:15 AM	7:30 AM	7:45 AM	8:00 AM	8:15 AM	8:30 AM	8:45 AM	9:00 AM	9:15 AM	
	0	0	2	1	0	0	0	0	0	1	0	0	4
	0	1	0	1	1	0	0	0	0	0	0	0	3
	0	0	1	1	1	0	0	0	0	0	0	0	3
	0	0	2	0	2	0	0	0	0	0	0	1	5
	0	0	0	2	0	0	0	0	0	0	0	1	3
	0	0	1	1	0	0	0	0	0	0	0	3	5
	0	0	1	0	0	0	0	0	0	1	0	2	4
	0	0	2	0	4	0	0	0	0	0	0	1	7
	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	0	1	9	6	8	0	0	0	0	2	0	8	34
APPROACH %	0%	10%	90%	43%	57%	0%	0%	0%	0%	20%	0%	80%	
APP/DEPART	10	/	9	14	/	10	0	/	15	10	/	0	0
BEGIN PEAK HR	7:30 AM												
VOLUMES	0	0	4	3	4	0	0	0	0	1	0	7	19
APPROACH %	0%	0%	100%	43%	57%	0%	0%	0%	0%	13%	0%	88%	
PEAK HR FACTOR	0.500		0.438			0.000			0.667			0.679	
APP/DEPART	4	/	7	7	/	5	0	/	7	8	/	0	0

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



INTERSECTION TURNING MOVEMENT COUNTS

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

DATE:
Tue, Aug 27, 19

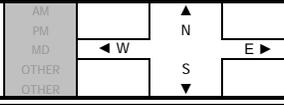
LOCATION:
NORTH & SOUTH:
EAST & WEST:

Grand Terrace
La Cadena
Barton

PROJECT #:
LOCATION #:
CONTROL:

SC2328
1
SIGNAL

NOTES:



Add U-Turns to Left Turns

LANES:	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
2:00 PM	0	114	32	44	124	0	0	0	0	56	0	49	419
2:15 PM	0	110	36	50	146	0	0	0	0	26	0	40	408
2:30 PM	0	131	21	48	170	0	0	0	0	43	0	43	456
2:45 PM	0	141	31	59	209	0	0	0	0	39	0	46	525
3:00 PM	0	146	35	42	176	0	0	0	0	49	0	50	498
3:15 PM	0	152	22	49	197	0	0	0	0	43	0	48	511
3:30 PM	0	153	17	52	212	0	0	0	0	42	0	30	506
3:45 PM	0	170	28	55	211	0	0	0	0	36	0	39	539
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	0	1,117	222	399	1,445	0	0	0	0	334	0	345	3,872
APPROACH %	0%	83%	17%	22%	78%	0%	0%	0%	0%	49%	0%	51%	
APP/DEPART	1,341	/	1,470	1,852	/	1,781	0	/	621	679	/	0	0
BEGIN PEAK HR	3:00 PM												
VOLUMES	0	621	102	198	796	0	0	0	0	170	0	167	2,060
APPROACH %	0%	86%	14%	20%	80%	0%	0%	0%	0%	50%	0%	50%	
PEAK HR FACTOR		0.913			0.933		0.000			0.851			0.952
APP/DEPART	723	/	794	1,000	/	966	0	/	300	337	/	0	0
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	173	33	60	192	0	0	0	0	43	0	34	535
4:15 PM	0	179	24	48	200	0	0	0	0	47	0	33	531
4:30 PM	0	152	24	49	233	0	0	0	0	40	0	31	529
4:45 PM	0	163	23	67	215	0	0	0	0	36	0	40	544
5:00 PM	0	173	31	58	224	0	0	0	0	27	0	34	547
5:15 PM	0	200	17	51	204	0	0	0	0	39	0	37	548
5:30 PM	0	164	26	62	206	0	0	0	0	37	0	36	531
5:45 PM	0	187	24	52	182	0	0	0	0	34	0	42	521
VOLUMES	0	1,391	202	447	1,656	0	0	0	0	303	0	287	4,296
APPROACH %	0%	87%	13%	21%	78%	0%	0%	0%	0%	51%	0%	49%	
APP/DEPART	1,595	/	1,686	2,111	/	1,961	0	/	649	590	/	0	0
BEGIN PEAK HR	4:45 PM												
VOLUMES	0	700	97	238	849	0	0	0	0	139	0	147	2,175
APPROACH %	0%	88%	12%	22%	78%	0%	0%	0%	0%	49%	0%	51%	
PEAK HR FACTOR		0.918			0.965		0.000			0.941			0.987
APP/DEPART	797	/	852	1,092	/	988	0	/	335	286	/	0	0

U-TURNS				
NB	SB	EB	WB	TTL
1	1	0	0	2
1	0	0	0	1
0	0	0	0	0
0	1	0	0	1
0	1	0	0	1
0	0	0	0	0
0	3	0	0	3
0	2	0	0	2
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
2	8	0	0	10

0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
1	1	0	0	2
0	0	0	0	0
1	1	0	0	2
0	1	0	0	1
0	0	0	0	0
0	3	0	0	3
0	1	0	0	1
0	1	0	0	1
2	8	0	0	10

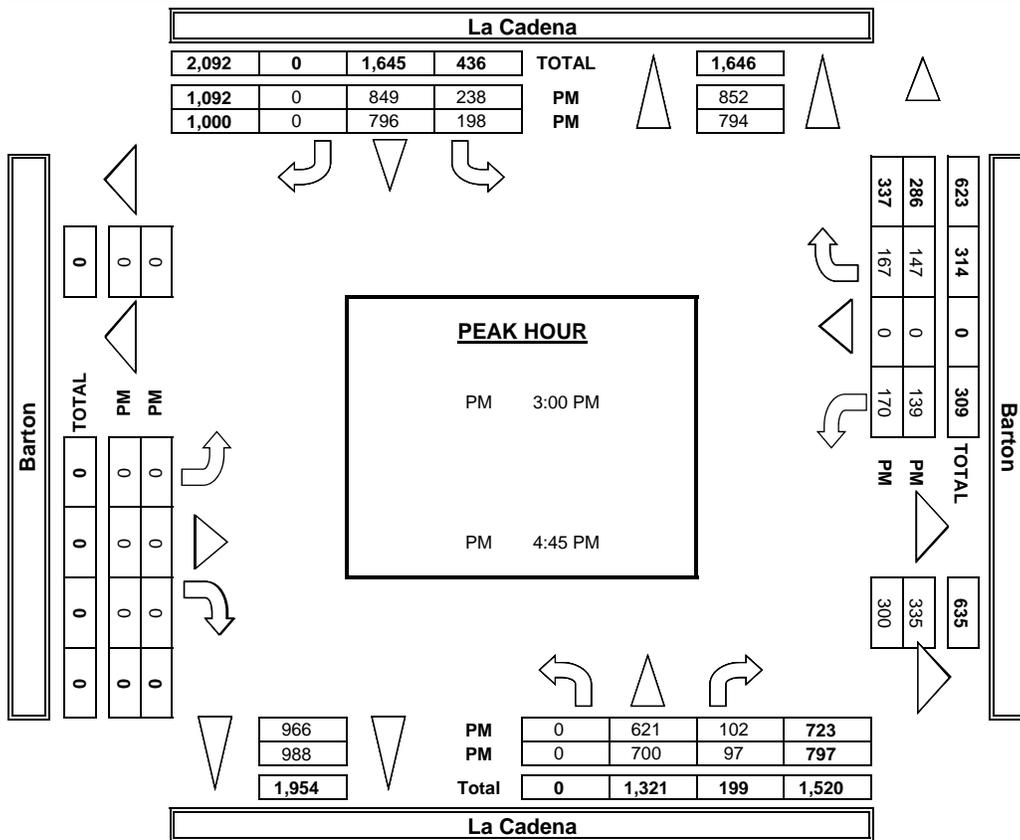
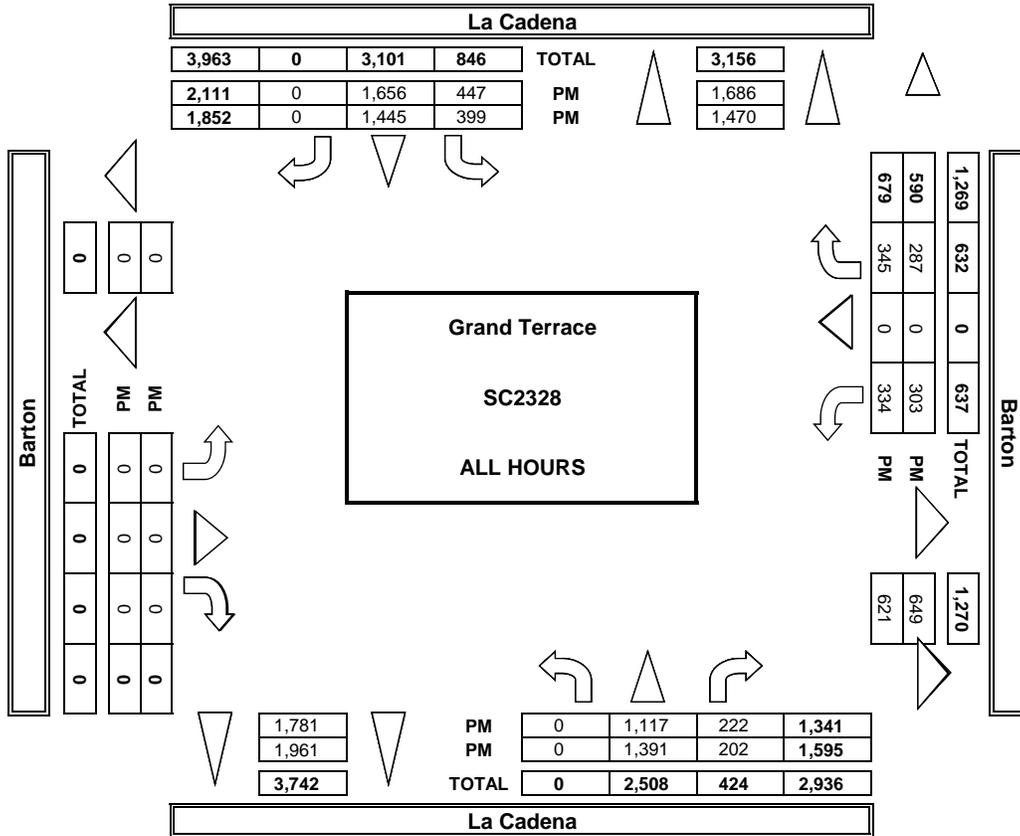


TIME	ALL PED AND BIKE				
	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
2:00 PM	0	0	0	0	0
2:15 PM	0	0	0	0	0
2:30 PM	0	0	0	0	0
2:45 PM	0	0	0	0	0
3:00 PM	0	0	0	0	0
3:15 PM	0	0	0	0	0
3:30 PM	0	0	0	0	0
3:45 PM	0	0	0	0	0
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
TOTAL	0	0	0	0	0
3:00 PM	0	0	0	0	0
3:15 PM	0	0	0	0	0
3:30 PM	0	0	0	0	0
3:45 PM	0	0	0	0	0
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
TOTAL	0	0	0	0	0

TIME	PEDESTRIAN CROSSINGS				
	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
2:00 PM	0	0	0	0	0
2:15 PM	0	0	0	0	0
2:30 PM	0	0	0	0	0
2:45 PM	0	0	0	0	0
3:00 PM	0	0	0	0	0
3:15 PM	0	0	0	0	0
3:30 PM	0	0	0	0	0
3:45 PM	0	0	0	0	0
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
TOTAL	0	0	0	0	0
3:00 PM	0	0	0	0	0
3:15 PM	0	0	0	0	0
3:30 PM	0	0	0	0	0
3:45 PM	0	0	0	0	0
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
TOTAL	0	0	0	0	0

TIME	BICYCLE CROSSINGS				
	NS	SS	ES	WS	TOTAL
2:00 PM	0	0	0	0	0
2:15 PM	0	0	0	0	0
2:30 PM	0	0	0	0	0
2:45 PM	0	0	0	0	0
3:00 PM	0	0	0	0	0
3:15 PM	0	0	0	0	0
3:30 PM	0	0	0	0	0
3:45 PM	0	0	0	0	0
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
TOTAL	0	0	0	0	0
3:00 PM	0	0	0	0	0
3:15 PM	0	0	0	0	0
3:30 PM	0	0	0	0	0
3:45 PM	0	0	0	0	0
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
TOTAL	0	0	0	0	0

AimTD LLC
TURNING MOVEMENT COUNTS



INTERSECTION TURNING MOVEMENT COUNTS

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

DATE: 8/27/19 TUESDAY	LOCATION: NORTH & SOUTH: EAST & WEST:	Grand Terrace La Cadena Barton	PROJECT #: LOCATION #: CONTROL:	SC2328 1 SIGNAL
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PCE Adjusted	NOTES:						AIM PM MD OTHER OTHER	▲ N ◀ W S ▼	E ▶	
	Class	1	2	3	4	5				6
	Factor	1	1.5	2	3	2				2

LANES:	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			U-TURNS					
	La Cadena			La Cadena			Barton			Barton			TOTAL	NB	SB	EB	WB	TTL
	NL X	NT 2	NR 1	SL 1	ST 2	SR X	EL X	ET X	ER X	WL 1	WT X	WR 1						

PM	2:00 PM	0	133	40	48	138	0	0	0	61	0	56	474					0	
	2:15 PM	0	130	54	57	167	0	0	0	27	0	47	481					0	
	2:30 PM	0	144	25	55	195	0	0	0	44	0	48	510					0	
	2:45 PM	0	163	39	66	227	0	0	0	44	0	49	587					0	
	3:00 PM	0	160	41	53	196	0	0	0	50	0	60	559					0	
	3:15 PM	0	168	28	53	210	0	0	0	50	0	53	559					0	
	3:30 PM	0	165	18	60	227	0	0	0	46	0	32	547					0	
	3:45 PM	0	189	31	58	226	0	0	0	41	0	43	587					0	
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0					0	
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0					0	
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0					0		
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0					0		
VOLUMES		0	1,251	274	447	1,584	0	0	0	362	0	385	4,302	0	0	0	0	0	
APPROACH %		0%	82%	18%	22%	78%	0%	0%	0%	48%	0%	52%							
APP/DEPART		1,524	/	1,636	2,031	/	1,946	0	/	721	747	/	0	0					
BEGIN PEAK HR		2:45 PM																	
VOLUMES		0	655	125	230	859	0	0	0	190	0	193	2,251						
APPROACH %		0%	84%	16%	21%	79%	0%	0%	0%	50%	0%	50%							
PEAK HR FACTOR		0.965			0.931			0.000			0.872			0.959					
APP/DEPART		780	/	848	1,089	/	1,049	0	/	355	382	/	0	0					
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0					0	
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0					0	
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0					0	
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0					0	
	4:00 PM	0	184	40	62	209	0	0	0	48	0	39	582					0	
	4:15 PM	0	189	28	52	212	0	0	0	49	0	35	564					0	
	4:30 PM	0	158	26	50	245	0	0	0	48	0	37	563					0	
	4:45 PM	0	169	24	69	223	0	0	0	38	0	44	566					0	
	5:00 PM	0	183	35	61	236	0	0	0	28	0	34	576					0	
	5:15 PM	0	206	17	54	209	0	0	0	42	0	41	568					0	
5:30 PM	0	167	27	62	217	0	0	0	38	0	37	546					0		
5:45 PM	0	198	25	52	189	0	0	0	34	0	43	540					0		
VOLUMES		0	1,454	221	461	1,739	0	0	0	323	0	308	4,504	0	0	0	0	0	
APPROACH %		0%	87%	13%	21%	79%	0%	0%	0%	51%	0%	49%							
APP/DEPART		1,675	/	1,761	2,200	/	2,062	0	/	682	630	/	0	0					
BEGIN PEAK HR		4:00 PM																	
VOLUMES		0	700	118	233	889	0	0	0	182	0	154	2,275						
APPROACH %		0%	86%	14%	21%	79%	0%	0%	0%	54%	0%	46%							
PEAK HR FACTOR		0.912			0.950			0.000			0.970			0.978					
APP/DEPART		818	/	854	1,122	/	1,071	0	/	351	336	/	0	0					



INTERSECTION TURNING MOVEMENT COUNTS

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

DATE: 8/27/19 TUESDAY	LOCATION: NORTH & SOUTH: EAST & WEST:	Grand Terrace La Cadena Barton	PROJECT #: LOCATION #: CONTROL:	SC2328 1 SIGNAL
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CLASS 1: PASSENGER VEHICLES	NOTES:	AM PM MD OTHER OTHER	◀ W E ▶	▲ N S ▼
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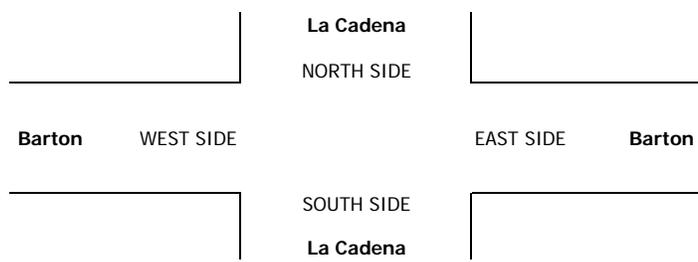
LANES:	NORTHBOUND <small>La Cadena</small>			SOUTHBOUND <small>La Cadena</small>			EASTBOUND <small>Barton</small>			WESTBOUND <small>Barton</small>			TOTAL
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	X	2	1	1	2	X	X	X	X	1	X	1	

U-TURNS				
NB	SB	EB	WB	TTL

PM	2:00 PM	0	92	26	39	108	0	0	0	0	52	0	41	358
	2:15 PM	0	86	18	41	125	0	0	0	0	24	0	33	327
	2:30 PM	0	115	17	43	146	0	0	0	0	41	0	38	400
	2:45 PM	0	118	23	50	186	0	0	0	0	35	0	41	453
	3:00 PM	0	131	26	32	154	0	0	0	0	47	0	42	432
	3:15 PM	0	133	15	45	178	0	0	0	0	35	0	42	448
	3:30 PM	0	136	16	43	193	0	0	0	0	40	0	27	455
	3:45 PM	0	147	25	50	193	0	0	0	0	32	0	33	480
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
VOLUMES	0	958	166	343	1,283	0	0	0	0	306	0	297	3,358	
APPROACH %	0%	85%	15%	21%	79%	0%	0%	0%	0%	51%	0%	49%		
APP/DEPART	1,126	/	1,258	1,629	/	1,591	0	/	509	603	/	0	0	
BEGIN PEAK HR	3:00 PM													
VOLUMES	0	547	82	170	718	0	0	0	0	154	0	144	1,817	
APPROACH %	0%	87%	13%	19%	81%	0%	0%	0%	0%	52%	0%	48%		
PEAK HR FACTOR	0.914			0.908			0.000			0.837			0.942	
APP/DEPART	629	/	693	890	/	872	0	/	252	298	/	0	0	
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	158	25	57	172	0	0	0	0	37	0	29	478
	4:15 PM	0	161	20	43	182	0	0	0	0	43	0	31	480
	4:30 PM	0	141	23	47	220	0	0	0	0	32	0	25	488
	4:45 PM	0	154	21	65	203	0	0	0	0	33	0	36	512
	5:00 PM	0	159	27	55	210	0	0	0	0	26	0	34	511
	5:15 PM	0	190	17	47	198	0	0	0	0	37	0	34	523
5:30 PM	0	158	25	62	192	0	0	0	0	36	0	35	508	
5:45 PM	0	174	22	52	173	0	0	0	0	34	0	41	496	
VOLUMES	0	1,295	180	428	1,550	0	0	0	0	278	0	265	4,005	
APPROACH %	0%	88%	12%	22%	78%	0%	0%	0%	0%	51%	0%	49%		
APP/DEPART	1,477	/	1,567	1,985	/	1,830	0	/	608	543	/	0	0	
BEGIN PEAK HR	4:45 PM													
VOLUMES	0	661	90	229	803	0	0	0	0	132	0	139	2,058	
APPROACH %	0%	88%	12%	22%	78%	0%	0%	0%	0%	49%	0%	51%		
PEAK HR FACTOR	0.907			0.963			0.000			0.954			0.978	
APP/DEPART	751	/	804	1,036	/	935	0	/	319	271	/	0	0	

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

0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
1	1	0	0	2
0	0	0	0	0
1	1	0	0	2
0	1	0	0	1
0	0	0	0	0
0	3	0	0	3
0	0	0	0	0
0	1	0	0	1
2	7	0	0	9



INTERSECTION TURNING MOVEMENT COUNTS

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

DATE: 8/27/19 TUESDAY	LOCATION: NORTH & SOUTH: EAST & WEST:	Grand Terrace La Cadena Barton	PROJECT #: LOCATION #: CONTROL:	SC2328 1 SIGNAL
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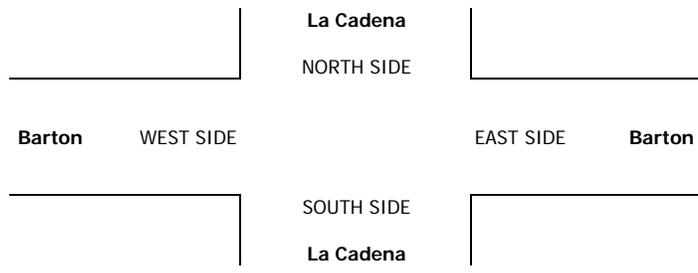
CLASS 3: 3-AXLE TRUCKS	NOTES:	AM PM MD OTHER OTHER	◀ W E ▶	▲ N S ▼
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LANES:	NORTHBOUND <small>La Cadena</small>			SOUTHBOUND <small>La Cadena</small>			EASTBOUND <small>Barton</small>			WESTBOUND <small>Barton</small>			TOTAL
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	X	2	1	1	2	X	X	X	X	1	X	1	

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

PM	2:00 PM	0	7	3	2	4	0	0	0	0	0	0	2	18	0	0	0	0	0
	2:15 PM	0	7	14	0	3	0	0	0	0	0	0	1	25	0	0	0	0	0
	2:30 PM	0	5	1	0	4	0	0	0	0	0	0	0	10	0	0	0	0	0
	2:45 PM	0	6	2	1	4	0	0	0	0	0	0	0	13	0	1	0	0	1
	3:00 PM	0	0	0	1	6	0	0	0	0	0	0	1	8	0	0	0	0	0
	3:15 PM	0	2	1	0	0	0	0	0	0	1	0	0	4	0	0	0	0	0
	3:30 PM	0	4	0	2	4	0	0	0	0	0	0	1	11	0	0	0	0	0
	3:45 PM	0	1	1	1	3	0	0	0	0	0	0	1	7	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
VOLUMES	0	32	22	7	28	0	0	0	0	1	0	6	97	0	1	0	0	1	
APPROACH %	0%	59%	41%	19%	78%	0%	0%	0%	0%	14%	0%	86%							
APP/DEPART	54	/	39	36	/	29	0	/	29	7	/	0	0						
BEGIN PEAK HR	2:00 PM																		
VOLUMES	0	25	20	3	15	0	0	0	0	0	0	3	67	0	0	0	0	0	
APPROACH %	0%	56%	44%	16%	79%	0%	0%	0%	0%	0%	0%	100%							
PEAK HR FACTOR	0.536			0.792			0.000			0.375			0.670						
APP/DEPART	45	/	29	19	/	15	0	/	23	3	/	0	0						
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	4:00 PM	0	4	1	1	1	0	0	0	0	0	0	1	8	0	0	0	0	
	4:15 PM	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	
	4:30 PM	0	0	0	0	1	0	0	0	0	1	0	2	4	0	0	0	0	
	4:45 PM	0	0	0	0	1	0	0	0	0	0	0	1	2	0	0	0	0	
	5:00 PM	0	0	0	2	1	0	0	0	0	0	0	0	3	0	0	0	0	
	5:15 PM	0	2	0	0	1	0	0	0	0	1	0	1	5	0	0	0	0	
5:30 PM	0	0	0	0	4	0	0	0	0	0	0	0	4	0	0	0	0		
5:45 PM	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0		
VOLUMES	0	6	2	3	10	0	0	0	0	2	0	5	28	0	0	0	0		
APPROACH %	0%	75%	25%	23%	77%	0%	0%	0%	0%	29%	0%	71%							
APP/DEPART	8	/	11	13	/	12	0	/	5	7	/	0	0						
BEGIN PEAK HR	4:00 PM																		
VOLUMES	0	4	2	1	3	0	0	0	0	1	0	4	15	0	0	0	0		
APPROACH %	0%	67%	33%	25%	75%	0%	0%	0%	0%	20%	0%	80%							
PEAK HR FACTOR	0.300			0.500			0.000			0.417			0.469						
APP/DEPART	6	/	8	4	/	4	0	/	3	5	/	0	0						

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



INTERSECTION TURNING MOVEMENT COUNTS

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

DATE: 8/27/19 TUESDAY	LOCATION: NORTH & SOUTH: EAST & WEST:	Grand Terrace La Cadena Barton	PROJECT #: LOCATION #: CONTROL:	SC2328 1 SIGNAL
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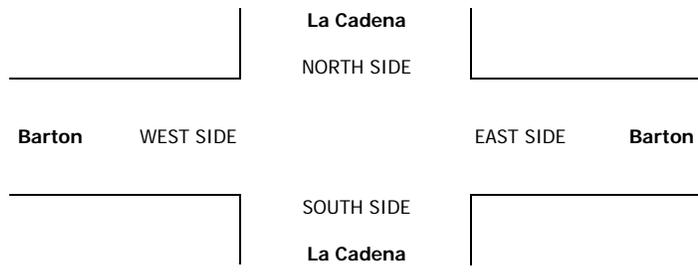
CLASS 5: RV	NOTES:	AM PM MD OTHER OTHER	▲ N ▼	◀ W E ▶
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LANES:	NORTHBOUND <small>La Cadena</small>			SOUTHBOUND <small>La Cadena</small>			EASTBOUND <small>Barton</small>			WESTBOUND <small>Barton</small>			TOTAL
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	X	2	1	1	2	X	X	X	X	1	X	1	

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

PM	2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0	
BEGIN PEAK HR	2:00 PM													
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
PEAK HR FACTOR	0.000			0.000			0.000			0.000			0.000	
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0	
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	
	4:00 PM	0	0	0	0	1	0	0	0	0	0	0	1	
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	
VOLUMES	0	0	0	0	1	0	0	0	0	0	0	0	1	
APPROACH %	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	100%	
APP/DEPART	0	/	0	1	/	1	0	/	0	0	/	0	0	
BEGIN PEAK HR	3:15 PM													
VOLUMES	0	0	0	0	1	0	0	0	0	0	0	0	1	
APPROACH %	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	100%	
PEAK HR FACTOR	0.000			0.250			0.000			0.000			0.250	
APP/DEPART	0	/	0	1	/	1	0	/	0	0	/	0	0	

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



INTERSECTION TURNING MOVEMENT COUNTS

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

DATE: 8/27/19 TUESDAY	LOCATION: NORTH & SOUTH: EAST & WEST:	Grand Terrace La Cadena Barton	PROJECT #: LOCATION #: CONTROL:	SC2328 1 SIGNAL
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CLASS 6:	NOTES:	AM PM MD OTHER OTHER	▲ N ◀ W E ▶ S ▼
BUSES			

LANES:	NORTHBOUND <small>La Cadena</small>			SOUTHBOUND <small>La Cadena</small>			EASTBOUND <small>Barton</small>			WESTBOUND <small>Barton</small>			TOTAL
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	X	2	1	1	2	X	X	X	X	1	X	1	

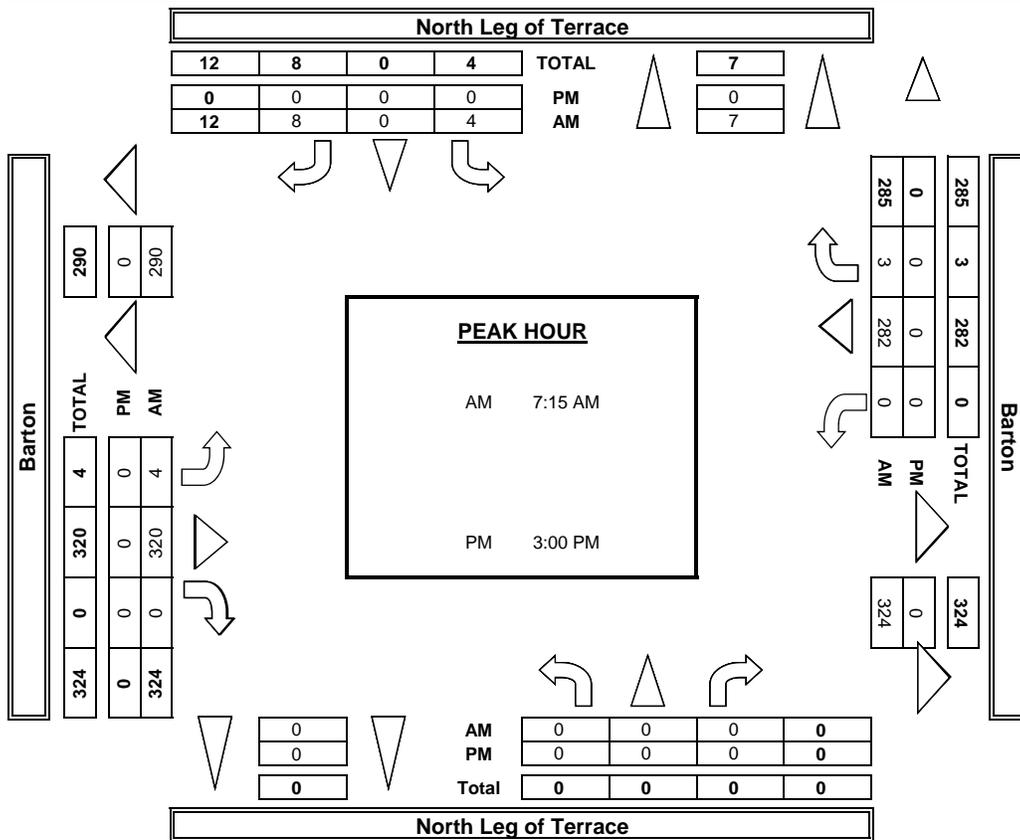
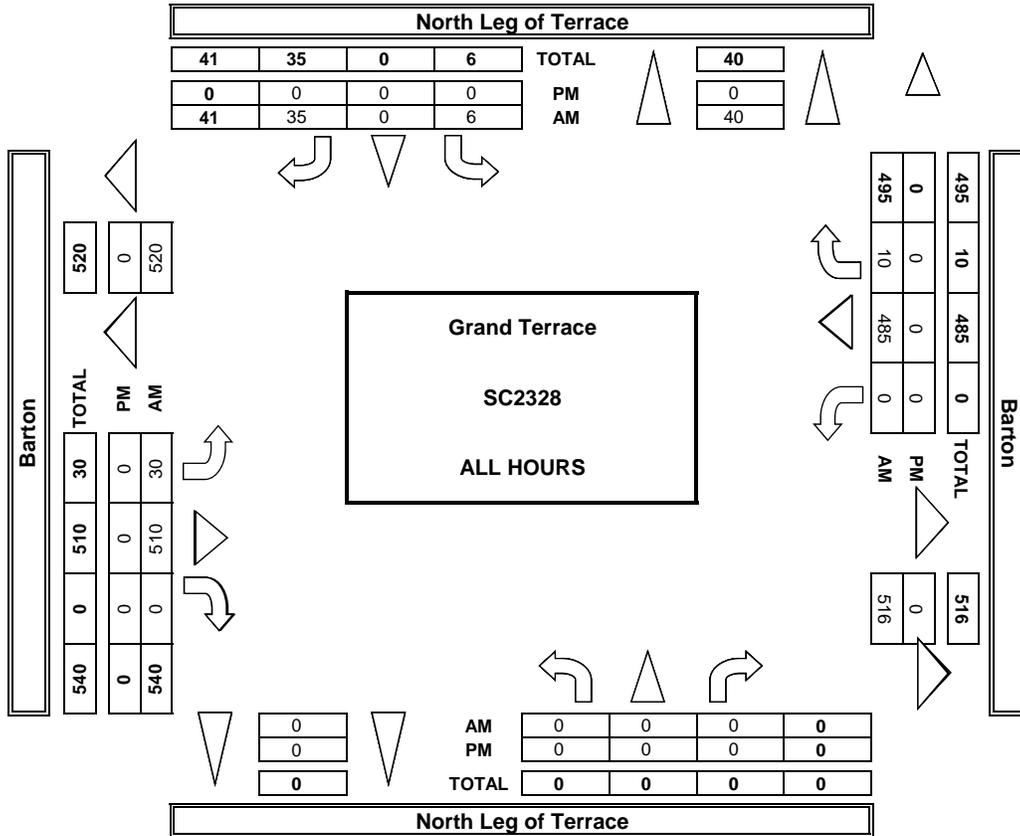
U-TURNS				
NB	SB	EB	WB	TTL
0	0	0	0	0

PM	2:00 PM	0	0	0	0	1	0	0	0	0	2	0	3	6	0	0	0	0	0
	2:15 PM	0	3	0	1	3	0	0	0	0	0	0	0	7	0	0	0	0	0
	2:30 PM	0	1	0	0	0	0	0	0	0	0	0	0	1	2	0	0	0	0
	2:45 PM	0	3	0	3	0	0	0	0	0	0	0	0	0	6	0	0	0	0
	3:00 PM	0	0	0	1	0	0	0	0	0	0	0	0	1	2	0	0	0	0
	3:15 PM	0	1	0	0	0	0	0	0	0	1	0	3	5	0	0	0	0	0
	3:30 PM	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0
	3:45 PM	0	2	1	0	2	0	0	0	0	0	0	0	0	5	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	10	1	6	6	0	0	0	0	3	0	8	34	0	0	0	0	0
	APPROACH %	0%	91%	9%	50%	50%	0%	0%	0%	0%	27%	0%	73%		0	0	0	0	0
	APP/DEPART	11	/	18	12	/	9	0	/	7	11	/	0	0	0	0	0	0	0
BEGIN PEAK HR	2:00 PM													21	0	0	0	0	
VOLUMES	0	7	0	4	4	0	0	0	0	2	0	4	21	0	0	0	0	0	
APPROACH %	0%	100%	0%	50%	50%	0%	0%	0%	0%	33%	0%	67%		0	0	0	0	0	
PEAK HR FACTOR	0.583			0.500			0.000			0.300			0.750	0	0	0	0	0	
APP/DEPART	7	/	11	8	/	6	0	/	4	6	/	0	0	0	0	0	0	0	

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

PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	2	0	0	0	0	0	0	0	0	1	3	0	0	0	0	0
	4:15 PM	0	1	0	0	0	0	0	0	0	0	0	1	2	0	0	0	0	0
	4:30 PM	0	1	0	0	1	0	0	0	0	0	0	0	2	0	0	0	0	0
	4:45 PM	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	2	2	2	1	0	0	0	0	0	0	2	9	0	0	0	0	0
	APPROACH %	0%	50%	50%	67%	33%	0%	0%	0%	0%	0%	0%	100%		0	0	0	0	0
	APP/DEPART	4	/	4	3	/	1	0	/	4	2	/	0	0	0	0	0	0	0
BEGIN PEAK HR	4:00 PM													8	0	0	0	0	
VOLUMES	0	2	2	1	1	0	0	0	0	0	0	2	8	0	0	0	0	0	
APPROACH %	0%	50%	50%	50%	50%	0%	0%	0%	0%	0%	0%	100%		0	0	0	0	0	
PEAK HR FACTOR	0.500			0.500			0.000			0.500			0.667	0	0	0	0	0	
APP/DEPART	4	/	4	2	/	1	0	/	3	2	/	0	0	0	0				

AimTD LLC
TURNING MOVEMENT COUNTS



INTERSECTION TURNING MOVEMENT COUNTS

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

DATE: 8/27/19 TUESDAY	LOCATION: NORTH & SOUTH: EAST & WEST:	Grand Terrace North Leg of Terrace Barton	PROJECT #: LOCATION #: CONTROL:	SC2328 2 STOP S
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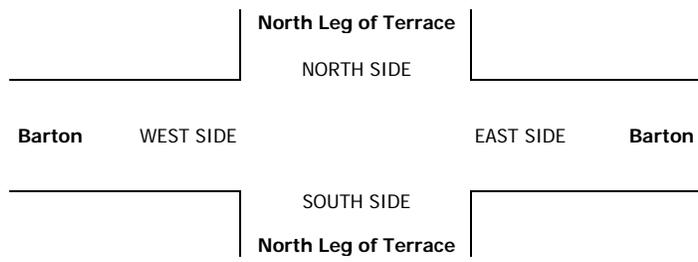
CLASS 1: PASSENGER VEHICLES	NOTES:	AM PM MD OTHER OTHER	◀ W	▲ N S ▼	E ▶
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LANES:	NORTHBOUND <small>North Leg of Terrace</small>			SOUTHBOUND <small>North Leg of Terrace</small>			EASTBOUND <small>Barton</small>			WESTBOUND <small>Barton</small>			TOTAL
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	X	X	X	0	X	0	0	1	X	X	1	1	

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

AM	6:30 AM	0	0	0	0	0	2	14	20	0	0	32	1	69
	6:45 AM	0	0	0	0	0	2	7	36	0	0	51	5	101
	7:00 AM	0	0	0	0	0	2	2	52	0	0	54	0	110
	7:15 AM	0	0	0	0	0	0	2	79	0	0	60	0	141
	7:30 AM	0	0	0	1	0	1	1	64	0	0	71	0	138
	7:45 AM	0	0	0	2	0	1	1	75	0	0	71	1	151
	8:00 AM	0	0	0	0	0	1	0	68	0	0	54	2	125
	8:15 AM	0	0	0	0	0	1	2	55	0	0	48	1	107
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	3	0	10	29	449	0	0	441	10	942
	APPROACH %	0%	0%	0%	23%	0%	77%	6%	94%	0%	0%	98%	2%	
APP/DEPART	0	/	39	13	/	0	478	/	452	451	/	451	0	
BEGIN PEAK HR	7:15 AM													
VOLUMES	0	0	0	3	0	3	4	286	0	0	256	3	555	
APPROACH %	0%	0%	0%	50%	0%	50%	1%	99%	0%	0%	99%	1%		
PEAK HR FACTOR	0.000			0.500			0.895			0.899			0.919	
APP/DEPART	0	/	7	6	/	0	290	/	289	259	/	259	0	

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



INTERSECTION TURNING MOVEMENT COUNTS

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

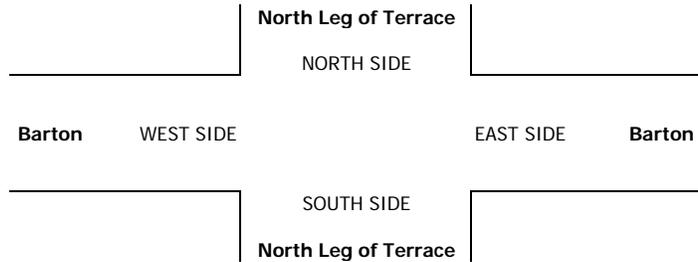
DATE: 8/27/19 TUESDAY	LOCATION: NORTH & SOUTH: EAST & WEST:	Grand Terrace North Leg of Terrace Barton	PROJECT #: LOCATION #: CONTROL:	SC2328 2 STOP S
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CLASS 2: 2-AXLE WORK VEHICLES/ TRUCKS	NOTES:	AM PM MD OTHER OTHER	▲ N E ►	◀ W S ▼
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LANES:	NORTHBOUND <small>North Leg of Terrace</small>			SOUTHBOUND <small>North Leg of Terrace</small>			EASTBOUND <small>Barton</small>			WESTBOUND <small>Barton</small>			TOTAL
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	

U-TURNS				
NB	SB	EB	WB	TTL

AM	6:30 AM	0	0	0	0	0	2	0	0	0	0	1	0	3	0	0	0	0	0
	6:45 AM	0	0	0	0	0	2	1	1	0	0	2	0	6	0	0	0	0	0
	7:00 AM	0	0	0	1	0	7	0	2	0	0	1	0	11	0	0	0	0	0
	7:15 AM	0	0	0	0	0	3	0	5	0	0	4	0	12	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	5	0	5	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	3	0	0	1	0	4	0	0	0	0	0
	8:00 AM	0	0	0	1	0	0	0	4	0	0	1	0	6	0	0	0	0	0
	8:15 AM	0	0	0	0	0	1	0	6	0	0	5	0	12	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	2	0	15	1	21	0	0	20	0	59	0	0	0	0	0
APPROACH %	0%	0%	0%	12%	0%	88%	5%	95%	0%	0%	100%	0%		0	0	0	0	0	
APP/DEPART	0	/	1	17	/	0	22	/	23	20	/	35	0						
BEGIN PEAK HR	6:45 AM																		
VOLUMES	0	0	0	1	0	12	1	8	0	0	12	0	34						
APPROACH %	0%	0%	0%	8%	0%	92%	11%	89%	0%	0%	100%	0%							
PEAK HR FACTOR	0.000			0.406			0.450			0.600			0.708						
APP/DEPART	0	/	1	13	/	0	9	/	9	12	/	24	0						



INTERSECTION TURNING MOVEMENT COUNTS

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

DATE: 8/27/19 TUESDAY	LOCATION: Grand Terrace NORTH & SOUTH: North Leg of Terrace EAST & WEST: Barton	PROJECT #: SC2328 LOCATION #: 2 CONTROL: STOP S
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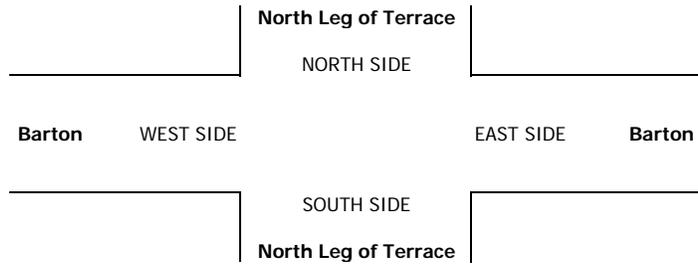
CLASS 3: 3-AXLE TRUCKS	NOTES:	AM PM MD OTHER OTHER	◀ W S ▶ E	▲ N ▼
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LANES:	NORTHBOUND North Leg of Terrace			SOUTHBOUND North Leg of Terrace			EASTBOUND Barton			WESTBOUND Barton			TOTAL
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	X	X	X	0	X	0	0	1	X	X	1	1	

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

AM	6:30 AM	0	0	0	0	0	1	0	0	2	0	4	
	6:45 AM	0	0	0	0	0	2	0	0	1	0	5	
	7:00 AM	0	0	0	0	0	1	0	0	0	0	1	
	7:15 AM	0	0	0	0	0	0	1	0	0	0	1	
	7:30 AM	0	0	0	0	0	0	1	0	0	0	1	
	7:45 AM	0	0	0	0	0	0	2	0	0	0	2	
	8:00 AM	0	0	0	0	0	1	0	0	0	0	1	
	8:15 AM	0	0	0	0	0	0	1	0	0	0	1	
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	
	VOLUMES	0	0	0	0	0	5	0	8	0	0	3	16
APPROACH %	0%	0%	0%	0%	0%	100%	0%	100%	0%	0%	100%	0%	
APP/DEPART	0	/	0	5	/	0	8	/	8	3	/	8	0
BEGIN PEAK HR	6:30 AM												
VOLUMES	0	0	0	0	0	4	0	4	0	0	3	0	11
APPROACH %	0%	0%	0%	0%	0%	100%	0%	100%	0%	0%	100%	0%	
PEAK HR FACTOR	0.000			0.500			0.500			0.375			0.550
APP/DEPART	0	/	0	4	/	0	4	/	4	3	/	7	0

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



INTERSECTION TURNING MOVEMENT COUNTS

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

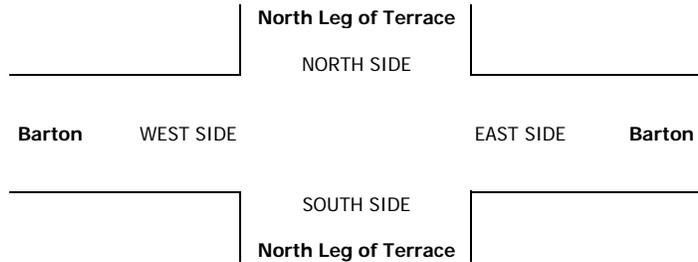
DATE: 8/27/19 TUESDAY	LOCATION: NORTH & SOUTH: EAST & WEST:	Grand Terrace North Leg of Terrace Barton	PROJECT #: LOCATION #: CONTROL:	SC2328 2 STOP S
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CLASS 4: 4 OR MORE AXLE TRUCKS	NOTES:	AM PM MD OTHER OTHER	▲ N ▼	◀ W E ▶
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LANES:	NORTHBOUND <small>North Leg of Terrace</small>			SOUTHBOUND <small>North Leg of Terrace</small>			EASTBOUND <small>Barton</small>			WESTBOUND <small>Barton</small>			TOTAL
	NL X	NT X	NR X	SL 0	ST X	SR 0	EL 0	ET 1	ER X	WL X	WT 1	WR 1	

U-TURNS				
NB	SB	EB	WB	TTL

AM	6:30 AM	0	0	0	0	0	0	3	0	0	0	0	3	0	0	0	0
	6:45 AM	0	0	0	0	0	2	0	1	0	0	2	0	5	0	0	0
	7:00 AM	0	0	0	1	0	2	0	1	0	0	0	0	4	0	0	0
	7:15 AM	0	0	0	0	0	1	0	1	0	0	2	0	4	0	0	0
	7:30 AM	0	0	0	0	0	0	0	2	0	0	2	0	4	0	0	0
	7:45 AM	0	0	0	0	0	0	0	2	0	0	2	0	4	0	0	0
	8:00 AM	0	0	0	0	0	0	0	5	0	0	1	0	6	0	0	0
	8:15 AM	0	0	0	0	0	0	0	2	0	0	2	0	4	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	1	0	5	0	17	0	0	11	0	34	0	0	0
APPROACH %	0%	0%	0%	17%	0%	83%	0%	100%	0%	0%	100%	0%		0	0	0	
APP/DEPART	0	/	0	6	/	0	17	/	18	11	/	16	0	0	0	0	
BEGIN PEAK HR	7:30 AM																
VOLUMES	0	0	0	0	0	0	0	11	0	0	7	0	18				
APPROACH %	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%					
PEAK HR FACTOR	0.000												0.750				
APP/DEPART	0	/	0	0	/	0	11	/	11	7	/	7	0				



INTERSECTION TURNING MOVEMENT COUNTS

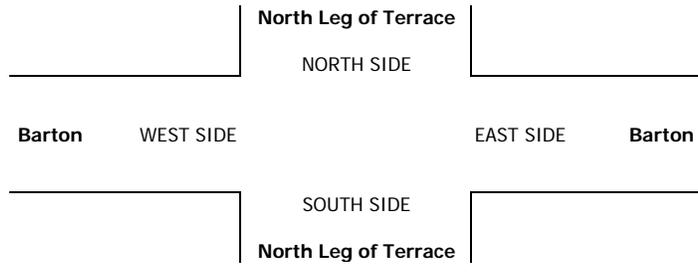
PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: 8/27/19 TUESDAY	LOCATION: NORTH & SOUTH: EAST & WEST:	Grand Terrace North Leg of Terrace Barton	PROJECT #: LOCATION #: CONTROL:	SC2328 2 STOP S
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CLASS 5: RV	NOTES:	AM PM MD OTHER OTHER	▲ N ◀ W S ▶ E
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LANES:	NORTHBOUND <small>North Leg of Terrace</small>			SOUTHBOUND <small>North Leg of Terrace</small>			EASTBOUND <small>Barton</small>			WESTBOUND <small>Barton</small>			TOTAL	U-TURNS				
	NL X	NT X	NR X	SL 0	ST X	SR 0	EL 0	ET 1	ER X	WL X	WT 1	WR 1		NB	SB	EB	WB	TTL

AM	6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0	0	0	0	0	0	
BEGIN PEAK HR	6:30 AM																		
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
PEAK HR FACTOR	0.000			0.000			0.000			0.000			0.000						
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0	0	0	0	0	0	



INTERSECTION TURNING MOVEMENT COUNTS

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

DATE: 8/27/19 TUESDAY	LOCATION: NORTH & SOUTH: EAST & WEST:	Grand Terrace North Leg of Terrace Barton	PROJECT #: LOCATION #: CONTROL:	SC2328 2 STOP S
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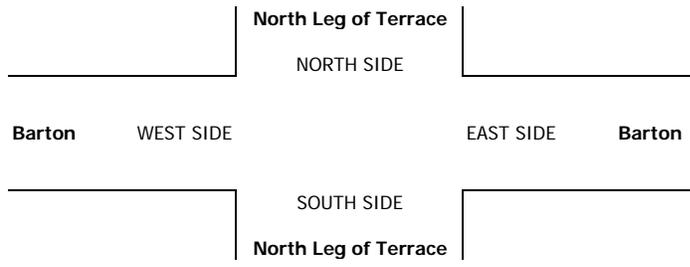
CLASS 6: BUSES	NOTES:	AM PM MD OTHER OTHER	▲ N ◀ W E ▶ S ▼
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LANES:	NORTHBOUND <small>North Leg of Terrace</small>			SOUTHBOUND <small>North Leg of Terrace</small>			EASTBOUND <small>Barton</small>			WESTBOUND <small>Barton</small>			TOTAL
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	X	X	X	0	X	0	0	1	X	X	1	1	

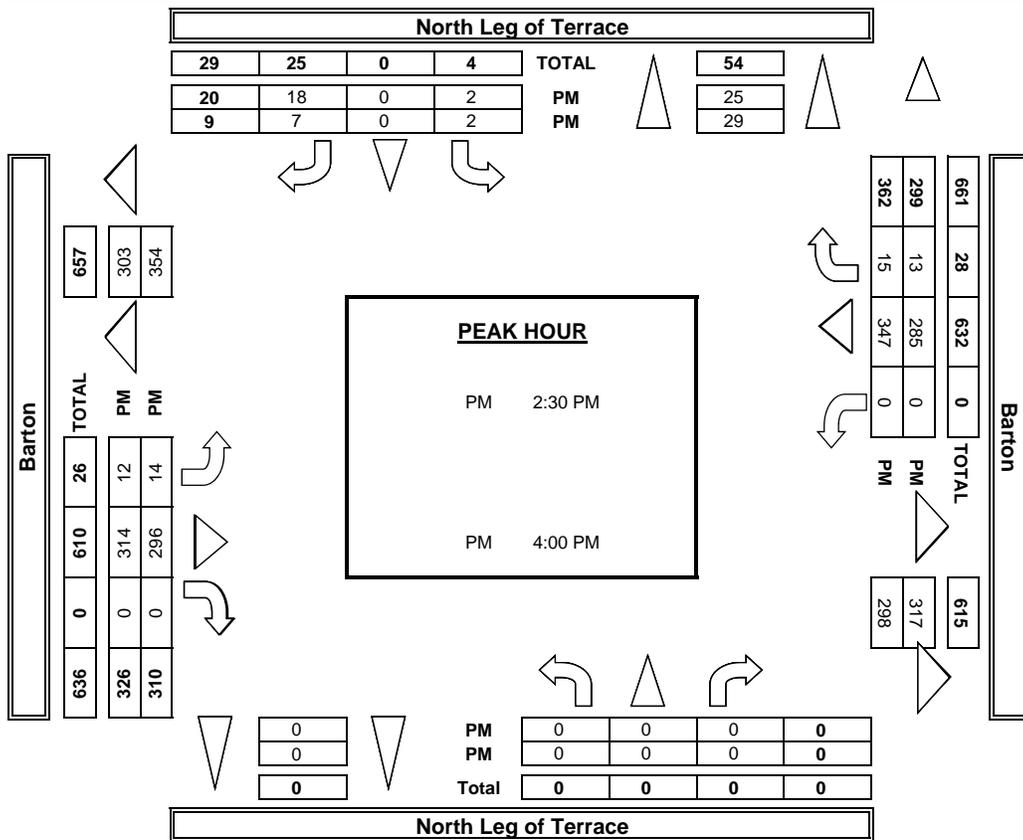
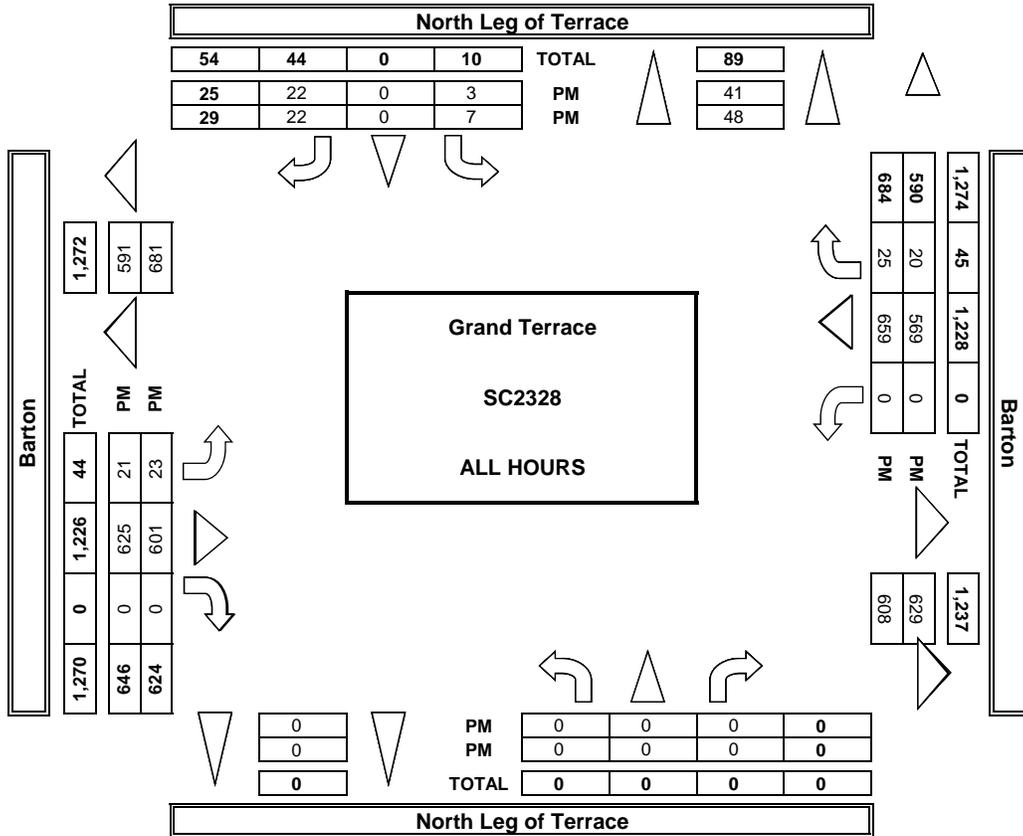
U-TURNS				
NB	SB	EB	WB	TTL
0	0	0	0	0

AM	6:30 AM	0	0	0	0	0	0	0	0	0	1	0	1	
	6:45 AM	0	0	0	0	0	0	0	1	0	0	0	1	
	7:00 AM	0	0	0	0	0	0	0	5	0	0	0	5	
	7:15 AM	0	0	0	0	0	0	0	2	0	0	1	0	3
	7:30 AM	0	0	0	0	0	0	0	2	0	0	1	0	3
	7:45 AM	0	0	0	0	0	0	0	3	0	0	2	0	5
	8:00 AM	0	0	0	0	0	0	0	1	0	0	4	0	5
	8:15 AM	0	0	0	0	0	0	0	1	0	0	1	0	2
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	15	0	0	10	0	25
APPROACH %	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%		
APP/DEPART	0	/	0	0	/	0	15	/	15	10	/	10	0	
BEGIN PEAK HR	7:15 AM													
VOLUMES	0	0	0	0	0	0	0	8	0	0	8	0	16	
APPROACH %	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%		
PEAK HR FACTOR	0.000							0.667			0.500			0.800
APP/DEPART	0	/	0	0	/	0	8	/	8	8	/	8	0	

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



AimTD LLC
TURNING MOVEMENT COUNTS



INTERSECTION TURNING MOVEMENT COUNTS

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

DATE: 8/27/19 TUESDAY	LOCATION: NORTH & SOUTH: EAST & WEST:	Grand Terrace North Leg of Terrace Barton	PROJECT #: LOCATION #: CONTROL:	SC2328 2 STOP S
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PCE Adjusted	NOTES:										AM	▲ N	E ▶		
	Class	1	2	3	4	5	6	7	8	9	10			MD	◀ W
	Factor	1	1.5	2	3	2	2	2	2	2	2			OTHER	S

LANES:	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL	U-TURNS				
	North Leg of Terrace			North Leg of Terrace			Barton			Barton				NB	SB	EB	WB	TTL
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR						
X	X	X	0	X	0	0	0	1	X	X	1	1						

PM	2:00 PM	0	0	0	0	0	0	2	93	0	0	118	1	213					0
	2:15 PM	0	0	0	0	0	5	0	107	0	0	68	6	185					0
	2:30 PM	0	0	0	1	0	0	0	83	0	0	91	4	179					0
	2:45 PM	0	0	0	0	0	2	7	94	0	0	83	7	192					0
	3:00 PM	0	0	0	0	0	1	13	84	0	0	111	5	214					0
	3:15 PM	0	0	0	2	0	5	4	77	0	0	95	5	187					0
	3:30 PM	0	0	0	3	0	10	6	73	0	0	77	2	170					0
	3:45 PM	0	0	0	2	0	2	4	81	0	0	84	1	173					0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0	
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0	
VOLUMES	0	0	0	8	0	24	34	690	0	0	725	31	1,511					0	
APPROACH %	0%	0%	0%	24%	0%	76%	5%	95%	0%	0%	96%	4%						0	
APP/DEPART	0	/	64	32	/	0	724	/	698	756	/	749	0					0	
BEGIN PEAK HR	2:30 PM																		
VOLUMES	0	0	0	3	0	8	23	337	0	0	379	21	770					0	
APPROACH %	0%	0%	0%	24%	0%	76%	6%	94%	0%	0%	95%	5%	0.902					0	
PEAK HR FACTOR	0.000			0.404			0.900			0.861			0.902					0	
APP/DEPART	0	/	44	11	/	0	360	/	340	400	/	387	0					0	
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0					0	
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0					0	
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0					0	
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0					0	
	4:00 PM	0	0	0	1	0	10	4	89	0	0	78	4	185					0
	4:15 PM	0	0	0	0	0	1	9	81	0	0	83	3	176					0
	4:30 PM	0	0	0	1	0	6	1	77	0	0	76	9	170					0
	4:45 PM	0	0	0	0	0	2	2	87	0	0	80	0	170					0
	5:00 PM	0	0	0	0	0	1	2	87	0	0	63	0	152					0
	5:15 PM	0	0	0	0	0	0	0	76	0	0	85	1	162					0
5:30 PM	0	0	0	0	0	1	5	85	0	0	71	2	163					0	
5:45 PM	0	0	0	1	0	2	2	74	0	0	75	4	158					0	
VOLUMES	0	0	0	3	0	23	25	654	0	0	609	22	1,335					0	
APPROACH %	0%	0%	0%	12%	0%	88%	4%	96%	0%	0%	97%	3%						0	
APP/DEPART	0	/	47	26	/	0	679	/	657	631	/	632	0					0	
BEGIN PEAK HR	4:00 PM																		
VOLUMES	0	0	0	2	0	19	16	333	0	0	316	15	701					0	
APPROACH %	0%	0%	0%	10%	0%	90%	5%	95%	0%	0%	95%	5%	0.947					0	
PEAK HR FACTOR	0.000			0.477			0.942			0.968			0.947					0	
APP/DEPART	0	/	31	21	/	0	349	/	335	331	/	335	0					0	



INTERSECTION TURNING MOVEMENT COUNTS

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

DATE: 8/27/19 TUESDAY	LOCATION: NORTH & SOUTH: EAST & WEST:	Grand Terrace North Leg of Terrace Barton	PROJECT #: LOCATION #: CONTROL:	SC2328 2 STOP S
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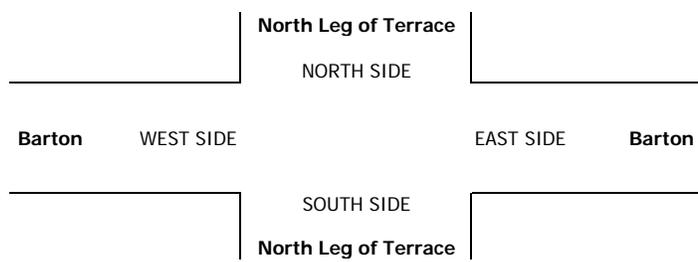
CLASS 1: PASSENGER VEHICLES	NOTES:	AM PM MD OTHER OTHER	◀ W E ▶	▲ N S ▼
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LANES:	NORTHBOUND <small>North Leg of Terrace</small>			SOUTHBOUND <small>North Leg of Terrace</small>			EASTBOUND <small>Barton</small>			WESTBOUND <small>Barton</small>			TOTAL
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	X	X	X	0	X	0	0	1	X	X	1	1	

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

PM	2:00 PM	0	0	0	0	0	0	69	0	0	95	1	165	
	2:15 PM	0	0	0	0	0	3	0	57	0	0	6	118	
	2:30 PM	0	0	0	1	0	0	0	60	0	0	81	143	
	2:45 PM	0	0	0	0	0	2	0	74	0	0	68	149	
	3:00 PM	0	0	0	0	0	1	1	56	0	0	89	149	
	3:15 PM	0	0	0	0	0	3	2	62	0	0	73	142	
	3:30 PM	0	0	0	3	0	8	4	58	0	0	64	139	
	3:45 PM	0	0	0	2	0	2	2	67	0	0	64	138	
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	
VOLUMES	0	0	0	6	0	19	9	503	0	0	586	20	1,143	
APPROACH %	0%	0%	0%	24%	0%	76%	2%	98%	0%	0%	97%	3%		
APP/DEPART	0	/	29	25	/	0	512	/	509	606	/	605	0	
BEGIN PEAK HR	2:30 PM													
VOLUMES	0	0	0	1	0	6	3	252	0	0	311	10	583	
APPROACH %	0%	0%	0%	14%	0%	86%	1%	99%	0%	0%	97%	3%		
PEAK HR FACTOR	0.000			0.583			0.861			0.882			0.978	
APP/DEPART	0	/	13	7	/	0	255	/	253	321	/	317	0	
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	
	4:00 PM	0	0	0	1	0	7	1	77	0	0	57	2	145
	4:15 PM	0	0	0	0	0	1	2	63	0	0	72	1	139
	4:30 PM	0	0	0	1	0	6	1	71	0	0	54	6	139
	4:45 PM	0	0	0	0	0	2	2	82	0	0	65	0	151
	5:00 PM	0	0	0	0	0	1	2	78	0	0	61	0	142
	5:15 PM	0	0	0	0	0	0	0	67	0	0	73	1	141
	5:30 PM	0	0	0	0	0	1	5	83	0	0	69	2	160
	5:45 PM	0	0	0	1	0	2	2	69	0	0	72	4	150
VOLUMES	0	0	0	3	0	20	15	590	0	0	523	16	1,168	
APPROACH %	0%	0%	0%	13%	0%	87%	2%	98%	0%	0%	97%	3%		
APP/DEPART	0	/	31	23	/	0	605	/	594	540	/	543	0	
BEGIN PEAK HR	4:45 PM													
VOLUMES	0	0	0	0	0	4	9	310	0	0	268	3	594	
APPROACH %	0%	0%	0%	0%	0%	100%	3%	97%	0%	0%	99%	1%		
PEAK HR FACTOR	0.000			0.500			0.906			0.916			0.928	
APP/DEPART	0	/	12	4	/	0	319	/	310	271	/	272	0	

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



INTERSECTION TURNING MOVEMENT COUNTS

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

DATE: 8/27/19 TUESDAY	LOCATION: NORTH & SOUTH: EAST & WEST:	Grand Terrace North Leg of Terrace Barton	PROJECT #: LOCATION #: CONTROL:	SC2328 2 STOP S
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CLASS 6:	NOTES:	AM PM MD OTHER OTHER	▲ N ◀ W E ▶ S ▼
BUSES			

LANES:	NORTHBOUND North Leg of Terrace			SOUTHBOUND North Leg of Terrace			EASTBOUND Barton			WESTBOUND Barton			TOTAL
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	X	X	X	0	X	0	0	1	X	X	1	1	

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

PM	2:00 PM	0	0	0	0	0	0	0	0	0	0	5	0	5
	2:15 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
	2:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
	2:45 PM	0	0	0	0	0	0	0	2	0	0	0	0	2
	3:00 PM	0	0	0	0	0	0	0	2	0	0	1	0	3
	3:15 PM	0	0	0	0	0	1	0	0	0	0	3	0	4
	3:30 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
	3:45 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0

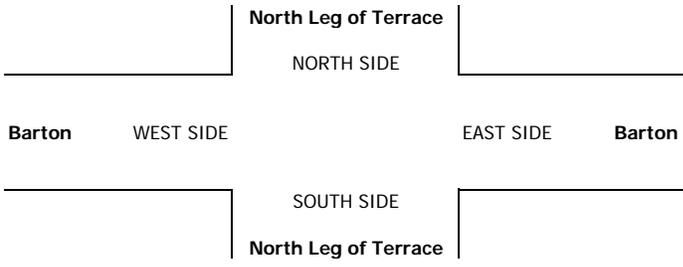
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

VOLUMES	0	0	0	0	0	1	0	7	0	0	10	0	18
APPROACH %	0%	0%	0%	0%	0%	100%	0%	100%	0%	0%	100%	0%	
APP/DEPART	0	/	0	1	/	0	7	/	7	10	/	11	0
BEGIN PEAK HR	2:45 PM												
VOLUMES	0	0	0	0	0	1	0	5	0	0	4	0	10
APPROACH %	0%	0%	0%	0%	0%	100%	0%	100%	0%	0%	100%	0%	
PEAK HR FACTOR	0.000			0.250			0.625			0.333			0.625
APP/DEPART	0	/	0	1	/	0	5	/	5	4	/	5	0

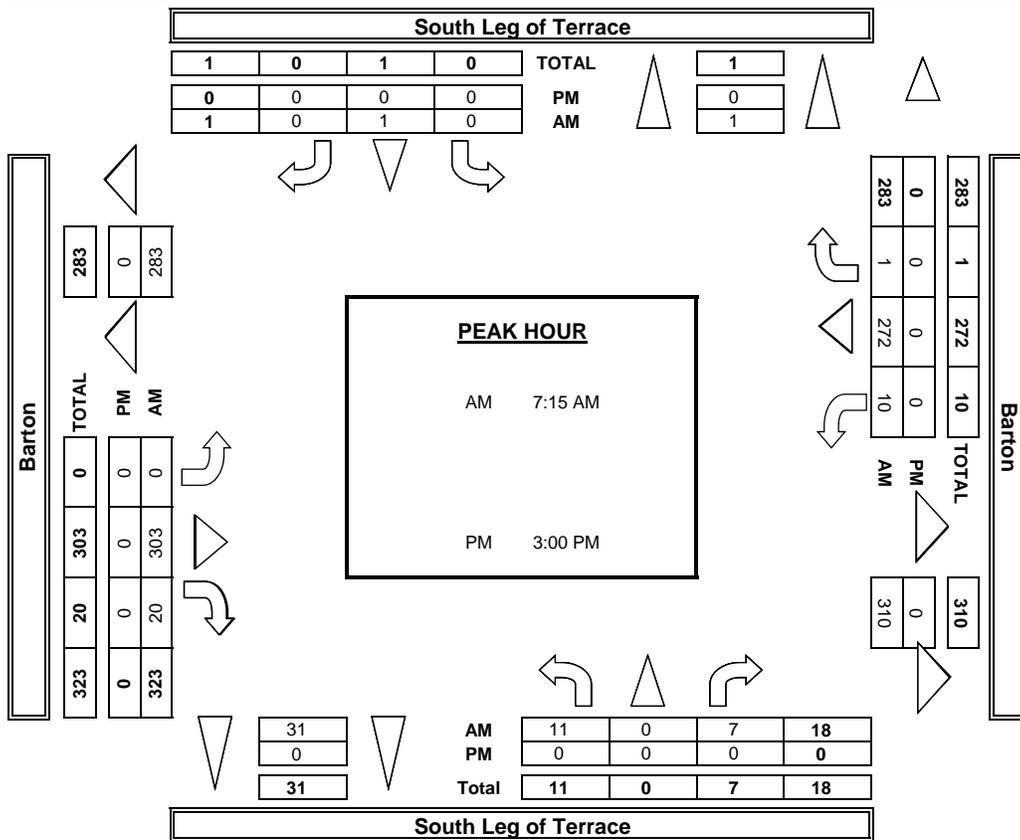
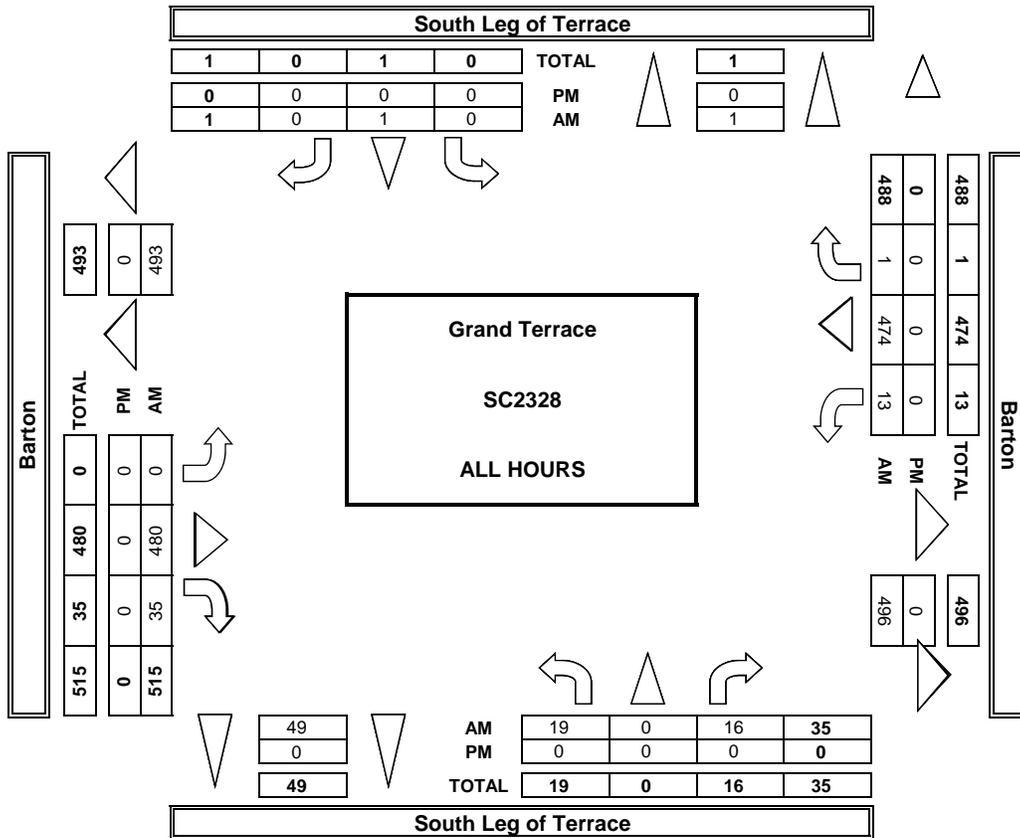
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	2	0	0	1	0	3
	4:15 PM	0	0	0	0	0	0	0	1	0	0	1	0	2
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0

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

VOLUMES	0	0	0	0	0	0	0	4	0	0	2	0	6
APPROACH %	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%	
APP/DEPART	0	/	0	0	/	0	4	/	4	2	/	2	0
BEGIN PEAK HR	4:00 PM												
VOLUMES	0	0	0	0	0	0	0	3	0	0	2	0	5
APPROACH %	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%	
PEAK HR FACTOR	0.000			0.000			0.375			0.500			0.417
APP/DEPART	0	/	0	0	/	0	3	/	3	2	/	2	0



AimTD LLC
TURNING MOVEMENT COUNTS



INTERSECTION TURNING MOVEMENT COUNTS

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

DATE: 8/27/19 TUESDAY	LOCATION: Grand Terrace NORTH & SOUTH: South Leg of Terrace EAST & WEST: Barton	PROJECT #: SC2328 LOCATION #: 3 CONTROL: STOP N/S
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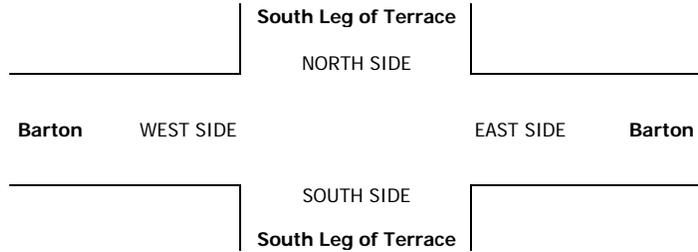
CLASS 1: PASSENGER VEHICLES	NOTES:	AM PM MD OTHER OTHER	◀ W	▲ N S ▼	E ▶
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LANES:	NORTHBOUND <small>South Leg of Terrace</small>			SOUTHBOUND <small>South Leg of Terrace</small>			EASTBOUND <small>Barton</small>			WESTBOUND <small>Barton</small>			TOTAL
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	0	1	0	0	1	0	0	1	0	0	1	0	

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

AM	NORTHBOUND <small>South Leg of Terrace</small>			SOUTHBOUND <small>South Leg of Terrace</small>			EASTBOUND <small>Barton</small>			WESTBOUND <small>Barton</small>			TOTAL
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
6:30 AM	0	0	0	0	0	0	0	18	1	0	33	0	52
6:45 AM	0	0	1	0	0	0	0	35	2	0	56	0	94
7:00 AM	2	0	0	0	0	0	0	51	1	0	52	0	106
7:15 AM	4	0	0	0	0	0	0	77	1	0	56	0	138
7:30 AM	0	0	1	0	0	0	0	63	2	0	69	0	135
7:45 AM	2	0	0	0	1	0	0	74	3	1	70	0	151
8:00 AM	0	0	2	0	0	0	0	62	6	0	56	0	126
8:15 AM	1	0	0	0	0	0	0	54	0	0	48	0	103
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	9	0	4	0	1	0	0	434	16	1	440	0	905
APPROACH %	69%	0%	31%	0%	100%	0%	0%	96%	4%	0%	100%	0%	
APP/DEPART	13	/	0	1	/	18	450	/	438	441	/	449	0
BEGIN PEAK HR	7:15 AM												
VOLUMES	6	0	3	0	1	0	0	276	12	1	251	0	550
APPROACH %	67%	0%	33%	0%	100%	0%	0%	96%	4%	0%	100%	0%	
PEAK HR FACTOR	0.563			0.250			0.923			0.887			0.911
APP/DEPART	9	/	0	1	/	14	288	/	279	252	/	257	0

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



INTERSECTION TURNING MOVEMENT COUNTS

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

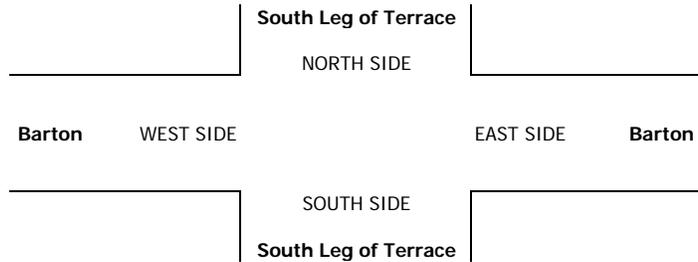
DATE: 8/27/19 TUESDAY	LOCATION: NORTH & SOUTH: EAST & WEST:	Grand Terrace South Leg of Terrace Barton	PROJECT #: LOCATION #: CONTROL:	SC2328 3 STOP N/S
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CLASS 2: 2-AXLE WORK VEHICLES/ TRUCKS	NOTES:	AM PM MD OTHER OTHER	▲ N ◀ W E ▶ S ▼
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LANES:	NORTHBOUND <small>South Leg of Terrace</small>			SOUTHBOUND <small>South Leg of Terrace</small>			EASTBOUND <small>Barton</small>			WESTBOUND <small>Barton</small>			TOTAL
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	0	1	0	0	1	0	0	1	0	0	1	0	

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

AM	6:30 AM	0	0	0	0	0	0	0	1	0	1	0	2	0	0	0	0
	6:45 AM	1	0	1	0	0	0	0	1	0	0	1	0	4	0	0	0
	7:00 AM	0	0	0	0	0	0	0	3	0	0	1	0	4	0	0	0
	7:15 AM	0	0	0	0	0	0	0	4	1	1	4	0	10	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	5	0	5	0	0	0
	7:45 AM	0	0	1	0	0	0	0	3	0	0	1	1	6	0	0	0
	8:00 AM	0	0	0	0	0	0	0	3	2	0	1	0	6	0	0	0
	8:15 AM	1	0	0	0	0	0	0	3	3	0	4	0	11	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	2	0	2	0	0	0	0	17	7	1	18	1	48	0	0	0
APPROACH %	50%	0%	50%	0%	0%	0%	0%	71%	29%	5%	90%	5%		0	0	0	0
APP/DEPART	4	/	1	0	/	8	24	/	19	20	/	20	0				
BEGIN PEAK HR	7:30 AM																
VOLUMES	1	0	1	0	0	0	0	9	5	0	11	1	28				
APPROACH %	50%	0%	50%	0%	0%	0%	0%	64%	36%	0%	92%	8%					
PEAK HR FACTOR	0.500			0.000			0.583			0.600			0.636				
APP/DEPART	2	/	1	0	/	5	14	/	10	12	/	12	0				



INTERSECTION TURNING MOVEMENT COUNTS

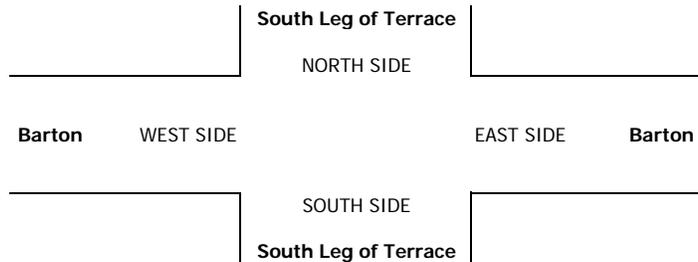
PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: 8/27/19 TUESDAY	LOCATION: NORTH & SOUTH: EAST & WEST:	Grand Terrace South Leg of Terrace Barton	PROJECT #: LOCATION #: CONTROL:	SC2328 3 STOP N/S
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CLASS 3: 3-AXLE TRUCKS	NOTES:	AM PM MD OTHER OTHER	▲ N ▼ S	◀ W E ▶
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LANES:	NORTHBOUND <small>South Leg of Terrace</small>			SOUTHBOUND <small>South Leg of Terrace</small>			EASTBOUND <small>Barton</small>			WESTBOUND <small>Barton</small>			TOTAL	U-TURNS				
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR		NB	SB	EB	WB	TTL

AM	6:30 AM	0	0	0	0	0	0	1	0	0	2	0	3	0	0	0	0	0
	6:45 AM	0	0	0	0	0	0	0	1	0	1	0	2	0	0	0	0	0
	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	5	3	0	3	0	11	0	0	0	0
APPROACH %	0%	0%	0%	0%	0%	0%	0%	63%	38%	0%	100%	0%		0	0	0	0	
APP/DEPART	0	/	0	0	/	3	8	/	5	3	/	3	0	0	0	0	0	
BEGIN PEAK HR	6:30 AM																	
VOLUMES	0	0	0	0	0	0	0	1	3	0	3	0	7	0	0	0	0	
APPROACH %	0%	0%	0%	0%	0%	0%	0%	25%	75%	0%	100%	0%		0	0	0	0	
PEAK HR FACTOR	0.000			0.000			0.500			0.375			0.583					
APP/DEPART	0	/	0	0	/	3	4	/	1	3	/	3	0	0	0	0	0	



INTERSECTION TURNING MOVEMENT COUNTS

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

DATE: 8/27/19 TUESDAY	LOCATION: NORTH & SOUTH: EAST & WEST:	Grand Terrace South Leg of Terrace Barton	PROJECT #: LOCATION #: CONTROL:	SC2328 3 STOP N/S
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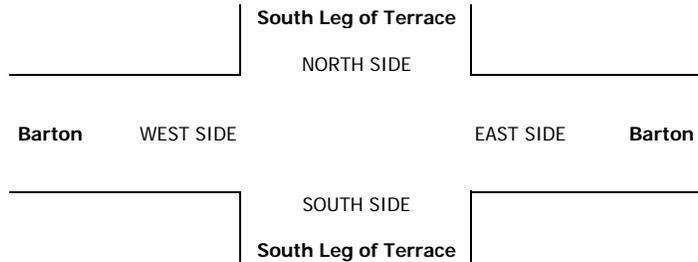
CLASS 4: 4 OR MORE AXLE TRUCKS	NOTES:	AM PM MD OTHER OTHER	▲ N ▼ S	← W E →
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LANES:	NORTHBOUND <small>South Leg of Terrace</small>			SOUTHBOUND <small>South Leg of Terrace</small>			EASTBOUND <small>Barton</small>			WESTBOUND <small>Barton</small>			TOTAL
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	

U-TURNS				
NB	SB	EB	WB	TTL

AM	6:30 AM	0	0	2	0	0	0	0	1	2	0	0	0	5
	6:45 AM	2	0	2	0	0	0	0	0	1	1	0	0	6
	7:00 AM	0	0	2	0	0	0	0	2	0	0	0	0	4
	7:15 AM	1	0	0	0	0	0	0	0	1	2	1	0	5
	7:30 AM	2	0	0	0	0	0	0	1	1	2	0	0	6
	7:45 AM	2	0	3	0	0	0	0	2	0	2	0	0	9
	8:00 AM	0	0	0	0	0	0	0	3	1	2	1	0	7
	8:15 AM	1	0	1	0	0	0	0	0	3	2	1	0	8
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	8	0	10	0	0	0	0	9	9	11	3	0	50
APPROACH %	44%	0%	56%	0%	0%	0%	0%	50%	50%	79%	21%	0%		
APP/DEPART	18	/	0	0	/	20	18	/	19	14	/	11	0	
BEGIN PEAK HR	7:30 AM													
VOLUMES	5	0	4	0	0	0	0	6	5	8	2	0	30	
APPROACH %	56%	0%	44%	0%	0%	0%	0%	55%	45%	80%	20%	0%		
PEAK HR FACTOR	0.450			0.000			0.688			0.833			0.833	
APP/DEPART	9	/	0	0	/	13	11	/	10	10	/	7	0	

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



INTERSECTION TURNING MOVEMENT COUNTS

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

DATE: 8/27/19 TUESDAY	LOCATION: NORTH & SOUTH: EAST & WEST:	Grand Terrace South Leg of Terrace Barton	PROJECT #: LOCATION #: CONTROL:	SC2328 3 STOP N/S
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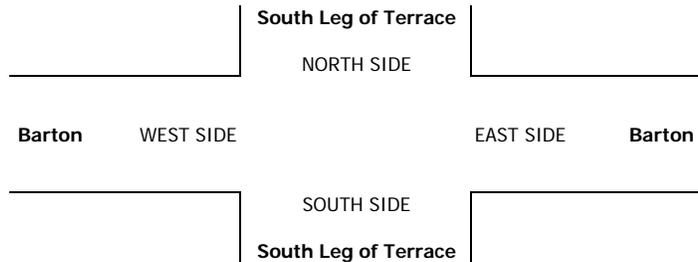
CLASS 5: RV	NOTES:	AM PM MD OTHER OTHER	▲ N ◀ W E ▶ S ▼
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LANES:	NORTHBOUND <small>South Leg of Terrace</small>			SOUTHBOUND <small>South Leg of Terrace</small>			EASTBOUND <small>Barton</small>			WESTBOUND <small>Barton</small>			TOTAL
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	0	1	0	0	1	0	0	1	0	0	1	0	

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

AM	6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0	
BEGIN PEAK HR	6:30 AM													
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
PEAK HR FACTOR	0.000			0.000			0.000			0.000			0.000	
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0	

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



INTERSECTION TURNING MOVEMENT COUNTS

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

DATE: 8/27/19 TUESDAY	LOCATION: NORTH & SOUTH: EAST & WEST:	Grand Terrace South Leg of Terrace Barton	PROJECT #: LOCATION #: CONTROL:	SC2328 3 STOP N/S
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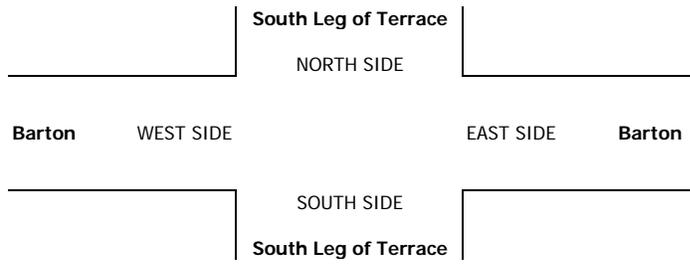
CLASS 6: BUSES	NOTES:	AM PM MD OTHER OTHER	▲ N ◀ W E ▶ S ▼
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LANES:	NORTHBOUND <small>South Leg of Terrace</small>			SOUTHBOUND <small>South Leg of Terrace</small>			EASTBOUND <small>Barton</small>			WESTBOUND <small>Barton</small>			TOTAL
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	0	1	0	0	1	0	0	1	0	0	1	0	

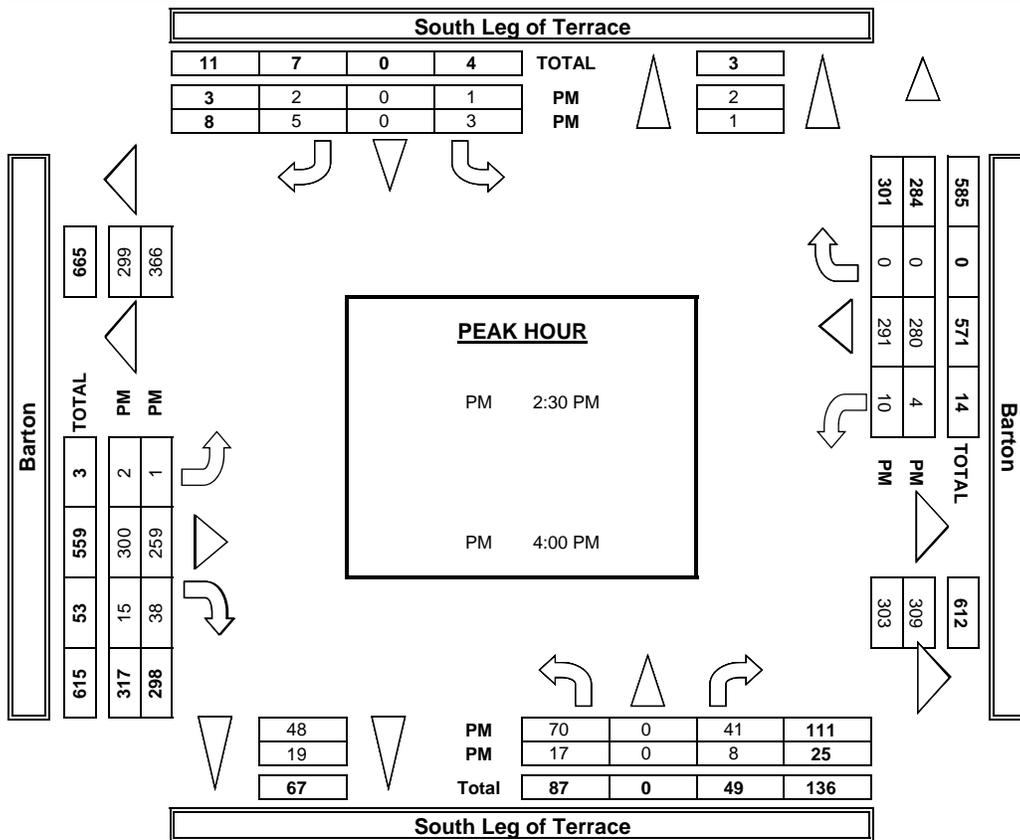
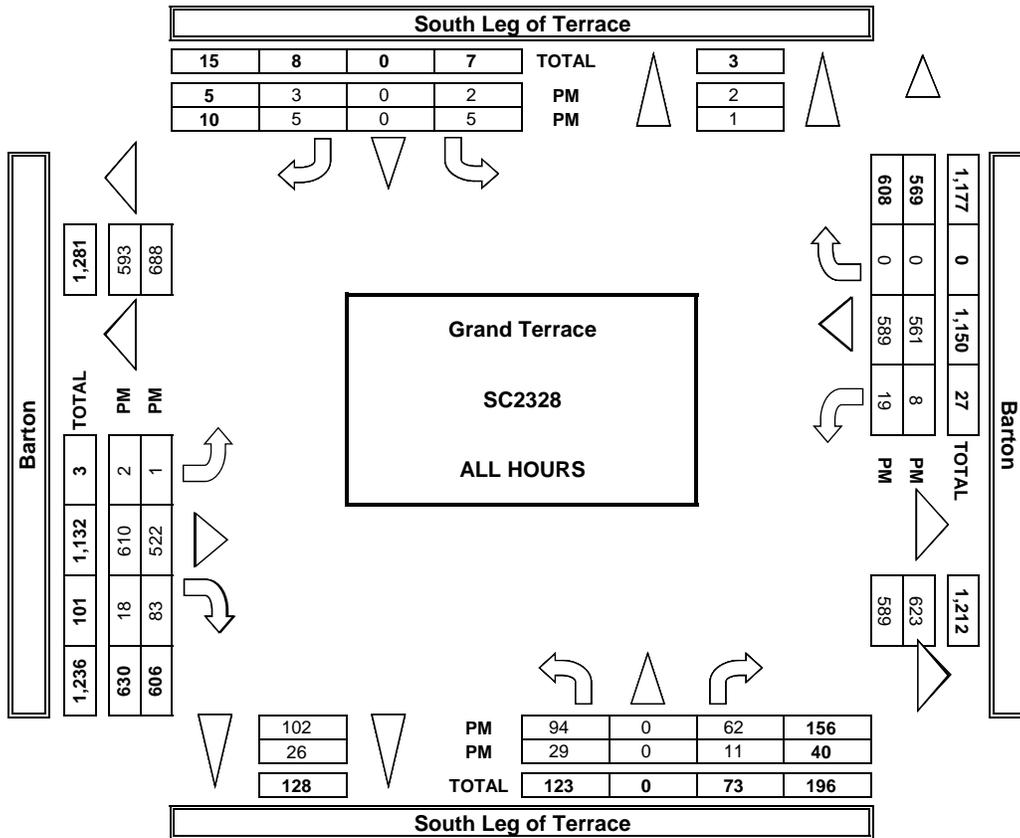
U-TURNS				
NB	SB	EB	WB	TTL
0	0	0	0	0

AM													TOTAL
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
6:30 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
6:45 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
7:00 AM	0	0	0	0	0	0	0	5	0	0	0	0	5
7:15 AM	0	0	0	0	0	0	0	2	0	0	1	0	3
7:30 AM	0	0	0	0	0	0	0	2	0	0	1	0	3
7:45 AM	0	0	0	0	0	0	0	3	0	0	2	0	5
8:00 AM	0	0	0	0	0	0	0	1	0	0	4	0	5
8:15 AM	0	0	0	0	0	0	0	1	0	0	1	0	2
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	0	0	0	0	0	0	0	15	0	0	10	0	25
APPROACH %	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%	
APP/DEPART	0	/	0	0	/	0	15	/	15	10	/	10	0
BEGIN PEAK HR	7:15 AM												
VOLUMES	0	0	0	0	0	0	0	8	0	0	8	0	16
APPROACH %	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%	
PEAK HR FACTOR	0.000			0.000			0.667			0.500			0.800
APP/DEPART	0	/	0	0	/	0	8	/	8	8	/	8	0

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



AimTD LLC
TURNING MOVEMENT COUNTS



INTERSECTION TURNING MOVEMENT COUNTS

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

DATE: 8/27/19 TUESDAY	LOCATION: NORTH & SOUTH: EAST & WEST:	Grand Terrace South Leg of Terrace Barton	PROJECT #: LOCATION #: CONTROL:	SC2328 3 STOP N/S
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PCE Adjusted	NOTES:							AM PM MD OTHER OTHER	◀ W	▲ N S ▼	E ▶
	Class	1	2	3	4	5	6				
	Factor	1	1.5	2	3	2	2				

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

PM	2:00 PM	11	0	11	0	0	0	64	20	13	73	0	191					0
	2:15 PM	10	0	13	2	0	0	70	41	3	71	0	209					0
	2:30 PM	39	0	39	1	0	1	0	62	20	3	63	0	227				0
	2:45 PM	21	0	6	2	0	1	0	70	15	5	71	0	190				0
	3:00 PM	15	0	3	0	0	2	0	74	5	0	85	0	182				0
	3:15 PM	6	0	2	0	0	2	2	72	14	2	97	0	194				0
	3:30 PM	8	0	5	1	0	0	0	81	7	0	90	0	190				0
	3:45 PM	9	0	3	0	0	0	0	74	9	0	90	0	185				0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0				0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0				0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0				0	
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0				0	
VOLUMES		118	0	80	6	0	6	2	565	130	26	637	0	1,567	0	0	0	0
APPROACH %		59%	0%	41%	50%	0%	50%	0%	81%	19%	4%	96%	0%					
APP/DEPART		198	/	2	11	/	156	696	/	650	663	/	760	0				
BEGIN PEAK HR		2:00 PM																
VOLUMES		81	0	68	5	0	2	0	266	96	24	277	0	817				
APPROACH %		54%	0%	46%	69%	0%	31%	0%	74%	26%	8%	92%	0%					
PEAK HR FACTOR		0.479																
APP/DEPART		149	/	0	7	/	120	361	/	338	301	/	359	0				
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0				0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0				0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0				0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0				0
	4:00 PM	15	0	2	1	0	0	1	84	6	0	68	0	176				0
	4:15 PM	2	0	5	0	0	0	0	71	10	8	84	0	179				0
	4:30 PM	3	0	5	0	0	2	1	73	4	1	80	0	169				0
	4:45 PM	4	0	1	0	0	0	0	85	2	0	76	0	167				0
	5:00 PM	3	0	4	1	0	1	0	85	2	3	62	0	160				0
	5:15 PM	1	0	1	0	0	0	0	75	3	3	85	0	167				0
5:30 PM	7	0	0	0	0	0	0	85	0	1	66	0	158				0	
5:45 PM	2	0	0	0	0	0	0	75	0	1	77	0	155				0	
VOLUMES		36	0	18	2	0	3	2	631	26	17	596	0	1,330	0	0	0	0
APPROACH %		67%	0%	33%	40%	0%	60%	0%	96%	4%	3%	97%	0%					
APP/DEPART		54	/	2	5	/	42	659	/	651	612	/	635	0				
BEGIN PEAK HR		4:00 PM																
VOLUMES		24	0	13	1	0	2	2	313	21	9	307	0	690				
APPROACH %		64%	0%	36%	33%	0%	67%	1%	93%	6%	3%	97%	0%					
PEAK HR FACTOR		0.553																
APP/DEPART		37	/	2	3	/	30	336	/	327	315	/	332	0				



INTERSECTION TURNING MOVEMENT COUNTS

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

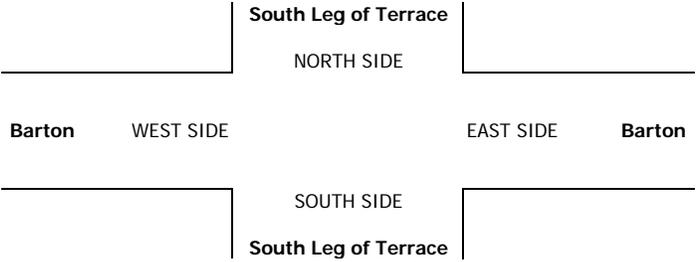
DATE: 8/27/19 TUESDAY	LOCATION: NORTH & SOUTH: EAST & WEST:	Grand Terrace South Leg of Terrace Barton	PROJECT #: LOCATION #: CONTROL:	SC2328 3 STOP N/S
CLASS 5: RV	NOTES:		AM PM MD OTHER OTHER	▲ N ◀ W E ▶ S ▼

LANES:	NORTHBOUND <small>South Leg of Terrace</small>			SOUTHBOUND <small>South Leg of Terrace</small>			EASTBOUND <small>Barton</small>			WESTBOUND <small>Barton</small>			TOTAL
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	0	1	0	0	1	0	0	1	0	0	1	0	

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

PM	2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%		
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0	
BEGIN PEAK HR	2:00 PM													
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%		
PEAK HR FACTOR	0.000			0.000			0.000			0.000			0.000	
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0	
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%		
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0	
BEGIN PEAK HR	3:00 PM													
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%		
PEAK HR FACTOR	0.000			0.000			0.000			0.000			0.000	
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0	

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



INTERSECTION TURNING MOVEMENT COUNTS

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

DATE: 8/27/19 TUESDAY	LOCATION: NORTH & SOUTH: EAST & WEST:	Grand Terrace South Leg of Terrace Barton	PROJECT #: SC2328 LOCATION #: 3 CONTROL: STOP N/S															
CLASS 6:	NOTES:	<table border="1" style="margin: auto;"> <tr> <td style="padding: 2px;">AM</td> <td style="padding: 2px;">▲</td> <td style="padding: 2px;">N</td> </tr> <tr> <td style="padding: 2px;">PM</td> <td style="padding: 2px;">◀</td> <td style="padding: 2px;">W</td> </tr> <tr> <td style="padding: 2px;">MD</td> <td style="padding: 2px;">▶</td> <td style="padding: 2px;">E</td> </tr> <tr> <td style="padding: 2px;">OTHER</td> <td style="padding: 2px;">▼</td> <td style="padding: 2px;">S</td> </tr> <tr> <td style="padding: 2px;">OTHER</td> <td></td> <td></td> </tr> </table>		AM	▲	N	PM	◀	W	MD	▶	E	OTHER	▼	S	OTHER		
AM	▲	N																
PM	◀	W																
MD	▶	E																
OTHER	▼	S																
OTHER																		

LANES:	NORTHBOUND <small>South Leg of Terrace</small>			SOUTHBOUND <small>South Leg of Terrace</small>			EASTBOUND <small>Barton</small>			WESTBOUND <small>Barton</small>			TOTAL
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	0	1	0	0	1	0	0	1	0	0	1	0	

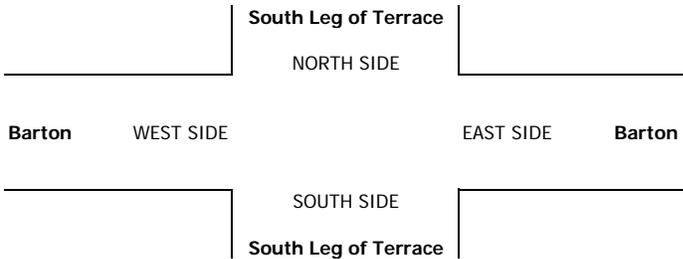
U-TURNS				
NB	SB	EB	WB	TTL
0	0	0	0	0

PM	2:00 PM	0	0	0	0	0	0	0	0	0	5	0	5	0	0	0	0	0	
	2:15 PM	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	
	2:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0
	2:45 PM	0	0	0	0	0	0	0	2	0	0	0	0	2	0	0	0	0	0
	3:00 PM	0	0	0	0	0	0	0	2	0	0	1	0	3	0	0	0	0	0
	3:15 PM	1	0	0	0	0	0	0	0	0	0	2	0	3	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	1	0	0	0	0	0	0	7	0	0	9	0	17	0	0	0	0	0
	APPROACH %	100%	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%		0	0	0	0	0
	APP/DEPART	1	/	0	0	/	0	7	/	7	9	/	10	0	0	0	0	0	0
BEGIN PEAK HR	2:45 PM																		
VOLUMES	1	0	0	0	0	0	0	5	0	0	3	0	9						
APPROACH %	100%	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%							
PEAK HR FACTOR	0.250			0.000			0.625			0.375			0.750						
APP/DEPART	1	/	0	0	/	0	5	/	5	3	/	4	0						

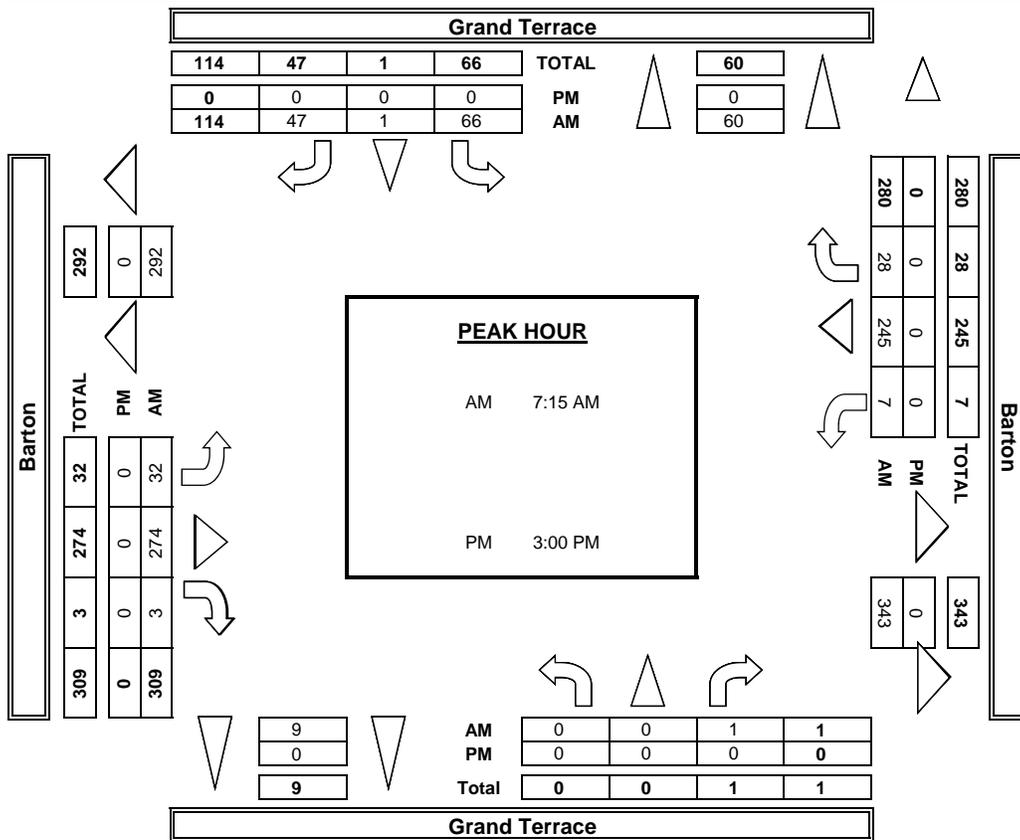
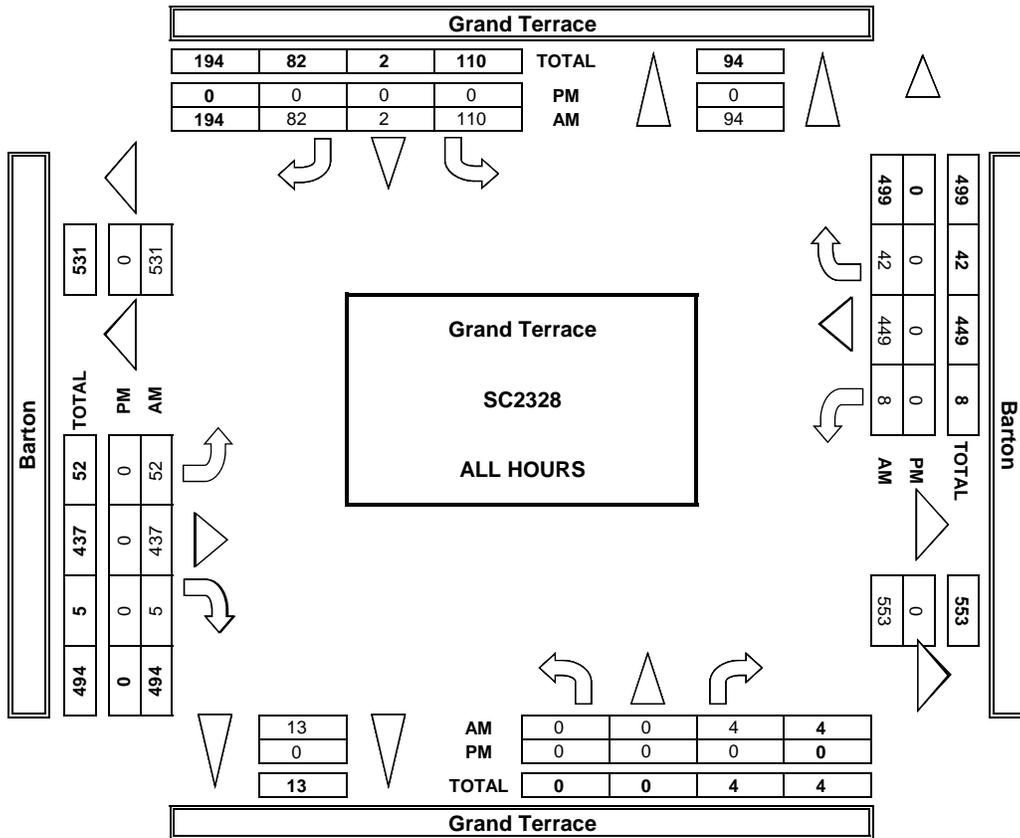
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0	0	0	0	0
0	0	0	0	0
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0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
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0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	4:00 PM	0	0	0	0	0	0	0	2	0	0	1	0	3	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	1	0	0	1	0	2	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	4	0	0	2	0	6	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%		0	0	0	0	0
	APP/DEPART	0	/	0	0	/	0	4	/	4	2	/	2	0	0	0	0	0	0
BEGIN PEAK HR	4:00 PM																		
VOLUMES	0	0	0	0	0	0	0	3	0	0	2	0	5						
APPROACH %	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%							
PEAK HR FACTOR	0.000			0.000			0.375			0.500			0.417						
APP/DEPART	0	/	0	0	/	0	3	/	3	2	/	2	0						

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



AimTD LLC
TURNING MOVEMENT COUNTS



INTERSECTION TURNING MOVEMENT COUNTS

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

DATE: 8/27/19 TUESDAY	LOCATION: NORTH & SOUTH: EAST & WEST:	Grand Terrace Grand Terrace Barton	PROJECT #: LOCATION #: CONTROL:	SC2328 4 STOP S
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PCE Adjusted	NOTES:										AM		▲						
	Class	1	2	3	4	5	6	7	8	9	10	PM	◀	N	▶				
	Factor	1	1.5	2	3	2	2	2	2	2	2	MD	◀	W	▶	E			
OTHER															OTHER	OTHER	S	▼	OTHER

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

AM	Time	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	6:30 AM	0	0	1	12	0	7	3	29	0	0	46	2	100
6:45 AM	0	0	1	12	0	6	3	45	1	0	65	5	137	
7:00 AM	0	0	0	18	0	10	7	70	0	0	55	6	166	
7:15 AM	0	0	0	19	0	14	16	67	0	1	62	6	183	
7:30 AM	0	0	0	23	0	19	13	62	1	3	69	8	196	
7:45 AM	0	0	0	19	0	14	3	98	0	1	74	7	216	
8:00 AM	0	0	1	10	1	3	4	74	2	2	68	10	174	
8:15 AM	0	0	1	7	1	12	10	56	1	1	63	4	155	
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
VOLUMES	0	0	4	119	2	85	58	500	5	8	500	46	1,326	
APPROACH %	0%	0%	100%	58%	1%	41%	10%	89%	1%	1%	90%	8%		
APP/DEPART	4	/	104	206	/	15	562	/	623	554	/	585	0	
BEGIN PEAK HR	7:15 AM													
VOLUMES	0	0	1	70	1	50	35	300	3	7	272	30	769	
APPROACH %	0%	0%	100%	58%	1%	41%	10%	89%	1%	2%	88%	10%		
PEAK HR FACTOR	0.250		0.726			0.837			0.942			0.889		
APP/DEPART	1	/	65	121	/	11	338	/	371	309	/	322	0	

Time	NB	SB	EB	WB	TTL
6:30 AM	0	0	0	0	0
6:45 AM	0	0	0	0	0
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
9:00 AM	0	0	0	0	0
9:15 AM	0	0	0	0	0
TOTAL	0	0	0	0	0



INTERSECTION TURNING MOVEMENT COUNTS

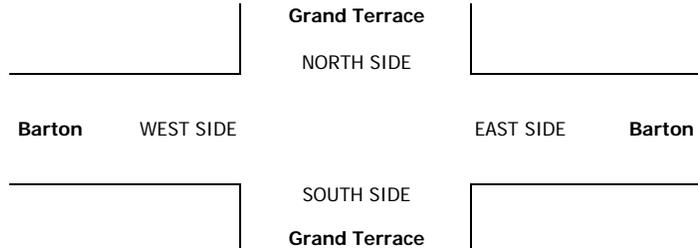
PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: 8/27/19 TUESDAY	LOCATION: NORTH & SOUTH: EAST & WEST:	Grand Terrace Grand Terrace Barton	PROJECT #: LOCATION #: CONTROL:	SC2328 4 STOP S
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CLASS 1: PASSENGER VEHICLES	NOTES:	AM PM MD OTHER OTHER	◀ W S ▶ E	▲ N ▼
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LANES:	NORTHBOUND Grand Terrace			SOUTHBOUND Grand Terrace			EASTBOUND Barton			WESTBOUND Barton			TOTAL	U-TURNS				
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR		NB	SB	EB	WB	TTL

AM	6:30 AM	0	0	1	9	0	7	3	11	0	0	39	0	70	0	0	0	0	0
	6:45 AM	0	0	1	7	0	6	3	27	1	0	55	2	102	0	0	0	0	0
	7:00 AM	0	0	0	12	0	10	5	51	0	0	49	4	131	0	0	0	0	0
	7:15 AM	0	0	0	13	0	12	14	62	0	1	47	6	155	0	0	0	1	1
	7:30 AM	0	0	0	18	0	14	7	57	1	3	61	6	167	0	0	0	1	1
	7:45 AM	0	0	0	19	0	14	3	75	0	1	54	7	173	0	0	0	0	0
	8:00 AM	0	0	1	8	1	3	4	56	2	2	55	5	137	0	0	0	0	0
	8:15 AM	0	0	1	7	1	12	6	46	1	1	38	4	117	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	4	93	2	78	45	385	5	8	398	34	1,052	0	0	0	2	2
APPROACH %	0%	0%	100%	54%	1%	45%	10%	89%	1%	2%	90%	8%							
APP/DEPART	4	/	79	173	/	13	435	/	484	440	/	476	0						
BEGIN PEAK HR	7:15 AM																		
VOLUMES	0	0	1	58	1	43	28	250	3	5	217	24	632						
APPROACH %	0%	0%	100%	57%	1%	42%	10%	89%	1%	2%	88%	10%							
PEAK HR FACTOR	0.250			0.773			0.901			0.886			0.913						
APP/DEPART	1	/	52	102	/	9	281	/	311	248	/	260	0						



INTERSECTION TURNING MOVEMENT COUNTS

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

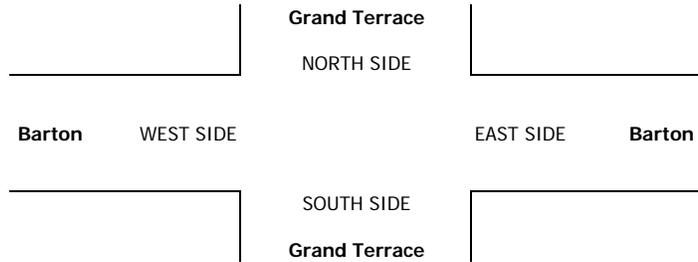
DATE: 8/27/19 TUESDAY	LOCATION: NORTH & SOUTH: EAST & WEST:	Grand Terrace Grand Terrace Barton	PROJECT #: LOCATION #: CONTROL:	SC2328 4 STOP S
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CLASS 2: 2-AXLE WORK VEHICLES/ TRUCKS	NOTES:	AM PM MD OTHER OTHER	▲ N ▼ S	◀ W E ▶
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LANES:	NORTHBOUND <small>Grand Terrace</small>			SOUTHBOUND <small>Grand Terrace</small>			EASTBOUND <small>Barton</small>			WESTBOUND <small>Barton</small>			TOTAL
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	

U-TURNS				
NB	SB	EB	WB	TTL

AM	6:30 AM	0	0	0	2	0	0	0	0	0	0	0	1	3	0	0	0	0	0
	6:45 AM	0	0	0	2	0	0	0	3	0	0	0	1	2	8	0	0	0	0
	7:00 AM	0	0	0	4	0	0	0	2	0	0	0	2	1	9	0	0	0	0
	7:15 AM	0	0	0	4	0	1	1	3	0	0	0	3	0	12	0	0	0	0
	7:30 AM	0	0	0	3	0	2	1	1	0	0	0	3	1	11	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	2	0	0	0	4	0	6	0	0	0	0
	8:00 AM	0	0	0	1	0	0	0	4	0	0	0	4	3	12	0	0	0	0
	8:15 AM	0	0	0	0	0	0	1	2	0	0	0	9	0	12	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	16	0	3	3	17	0	0	26	8	73	0	0	0	0	0
	APPROACH %	0%	0%	0%	84%	0%	16%	15%	85%	0%	0%	76%	24%		0	0	0	0	0
APP/DEPART	0	/	11	19	/	0	20	/	33	34	/	29	0	0	0	0	0	0	
BEGIN PEAK HR	7:30 AM																		
VOLUMES	0	0	0	4	0	2	2	9	0	0	20	4	41	0	0	0	0	0	
APPROACH %	0%	0%	0%	67%	0%	33%	18%	82%	0%	0%	83%	17%		0	0	0	0	0	
PEAK HR FACTOR	0.000			0.300			0.688			0.667			0.854						
APP/DEPART	0	/	6	6	/	0	11	/	13	24	/	22	0	0	0	0	0	0	



INTERSECTION TURNING MOVEMENT COUNTS

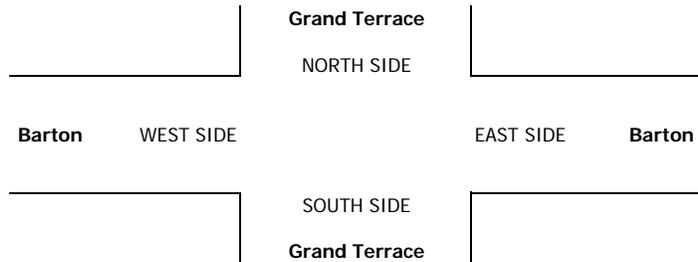
PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: 8/27/19 TUESDAY	LOCATION: NORTH & SOUTH: EAST & WEST:	Grand Terrace Grand Terrace Barton	PROJECT #: LOCATION #: CONTROL:	SC2328 4 STOP S
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CLASS 3: 3-AXLE TRUCKS	NOTES:	AM PM MD OTHER OTHER	▲ N ▼	◀ W E ▶
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LANES:	NORTHBOUND <small>Grand Terrace</small>			SOUTHBOUND <small>Grand Terrace</small>			EASTBOUND <small>Barton</small>			WESTBOUND <small>Barton</small>			TOTAL	U-TURNS				
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR		NB	SB	EB	WB	TTL

AM	6:30 AM	0	0	0	0	0	0	1	0	0	0	1	0	2	0	0	0	0	0
	6:45 AM	0	0	0	1	0	0	0	0	0	0	1	0	2	0	0	0	0	0
	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	2	0	0	0	0	2	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	1	0	0	0	5	0	0	3	0	9	0	0	0	0	0
	APPROACH %	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	100%	0%		0	0	0	0	0
APP/DEPART	0	/	0	1	/	0	5	/	6	3	/	3	0						
BEGIN PEAK HR	6:30 AM																		
VOLUMES	0	0	0	1	0	0	0	1	0	0	3	0	5						
APPROACH %	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	100%	0%							
PEAK HR FACTOR	0.000			0.250			0.250			0.750			0.625						
APP/DEPART	0	/	0	1	/	0	1	/	2	3	/	3	0						



INTERSECTION TURNING MOVEMENT COUNTS

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

DATE: 8/27/19 TUESDAY	LOCATION: NORTH & SOUTH: EAST & WEST:	Grand Terrace Grand Terrace Barton	PROJECT #: LOCATION #: CONTROL:	SC2328 4 STOP S
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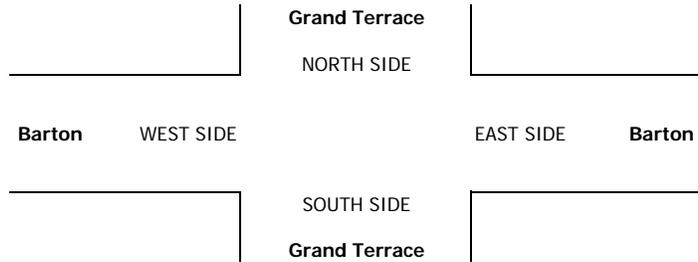
CLASS 4: 4 OR MORE AXLE TRUCKS	NOTES:	AM PM MD OTHER OTHER	▲ N ▼	◀ W E ▶
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LANES:	NORTHBOUND <small>Grand Terrace</small>			SOUTHBOUND <small>Grand Terrace</small>			EASTBOUND <small>Barton</small>			WESTBOUND <small>Barton</small>			TOTAL
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	

U-TURNS				
NB	SB	EB	WB	TTL

AM	6:30 AM	0	0	0	0	0	0	4	0	0	1	0	5	0	0	0	0
	6:45 AM	0	0	0	0	0	0	3	0	0	2	0	5	0	0	0	0
	7:00 AM	0	0	0	0	0	0	4	0	0	1	0	5	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0
	7:30 AM	0	0	0	0	0	0	1	0	0	1	0	2	0	0	0	0
	7:45 AM	0	0	0	0	0	0	4	0	0	2	0	6	0	0	0	0
	8:00 AM	0	0	0	0	0	0	2	0	0	1	0	3	0	0	0	0
	8:15 AM	0	0	0	0	0	0	1	0	0	3	0	4	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	19	0	0	13	0	32	0	0	0
APPROACH %	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%		0	0	0	0
APP/DEPART	0	/	0	0	/	0	19	/	19	13	/	13	0	0	0	0	0
BEGIN PEAK HR	6:30 AM																
VOLUMES	0	0	0	0	0	0	0	11	0	0	6	0	17				
APPROACH %	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%					
PEAK HR FACTOR	0.000			0.000			0.688			0.750			0.850				
APP/DEPART	0	/	0	0	/	0	11	/	11	6	/	6	0				

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



INTERSECTION TURNING MOVEMENT COUNTS

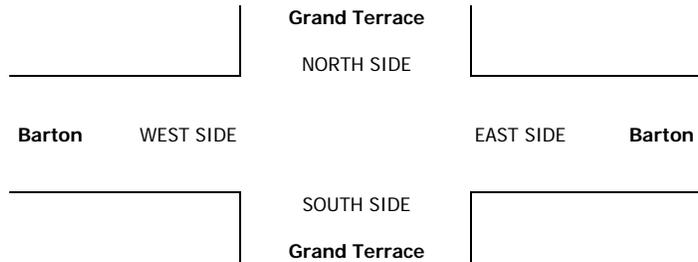
PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: 8/27/19 TUESDAY	LOCATION: NORTH & SOUTH: EAST & WEST:	Grand Terrace Grand Terrace Barton	PROJECT #: LOCATION #: CONTROL:	SC2328 4 STOP S
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CLASS 5: RV	NOTES:	AM PM MD OTHER OTHER	▲ N ◀ W E ▶ S ▼
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LANES:	NORTHBOUND <small>Grand Terrace</small>			SOUTHBOUND <small>Grand Terrace</small>			EASTBOUND <small>Barton</small>			WESTBOUND <small>Barton</small>			TOTAL	U-TURNS				
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR		NB	SB	EB	WB	TTL

AM	6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0	0	0	0	0	0	
BEGIN PEAK HR	6:30 AM																		
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
PEAK HR FACTOR	0.000			0.000			0.000			0.000			0.000						
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0	0	0	0	0	0	



INTERSECTION TURNING MOVEMENT COUNTS

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

DATE: 8/27/19 TUESDAY	LOCATION: NORTH & SOUTH: EAST & WEST:	Grand Terrace Grand Terrace Barton	PROJECT #: LOCATION #: CONTROL:	SC2328 4 STOP S
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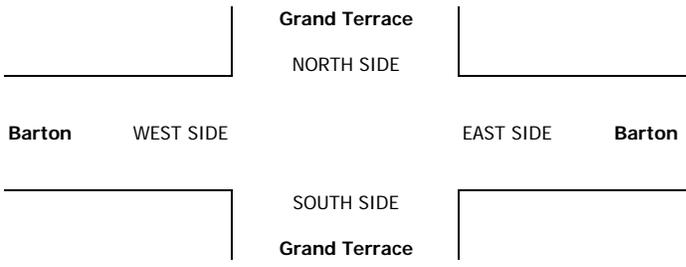
CLASS 6: BUSES	NOTES:	AM PM MD OTHER OTHER	▲ N ◀ W E ▶ S ▼
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LANES:	NORTHBOUND <small>Grand Terrace</small>			SOUTHBOUND <small>Grand Terrace</small>			EASTBOUND <small>Barton</small>			WESTBOUND <small>Barton</small>			TOTAL
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	0	1	0	0	1	0	0	1	0	0	1	0	

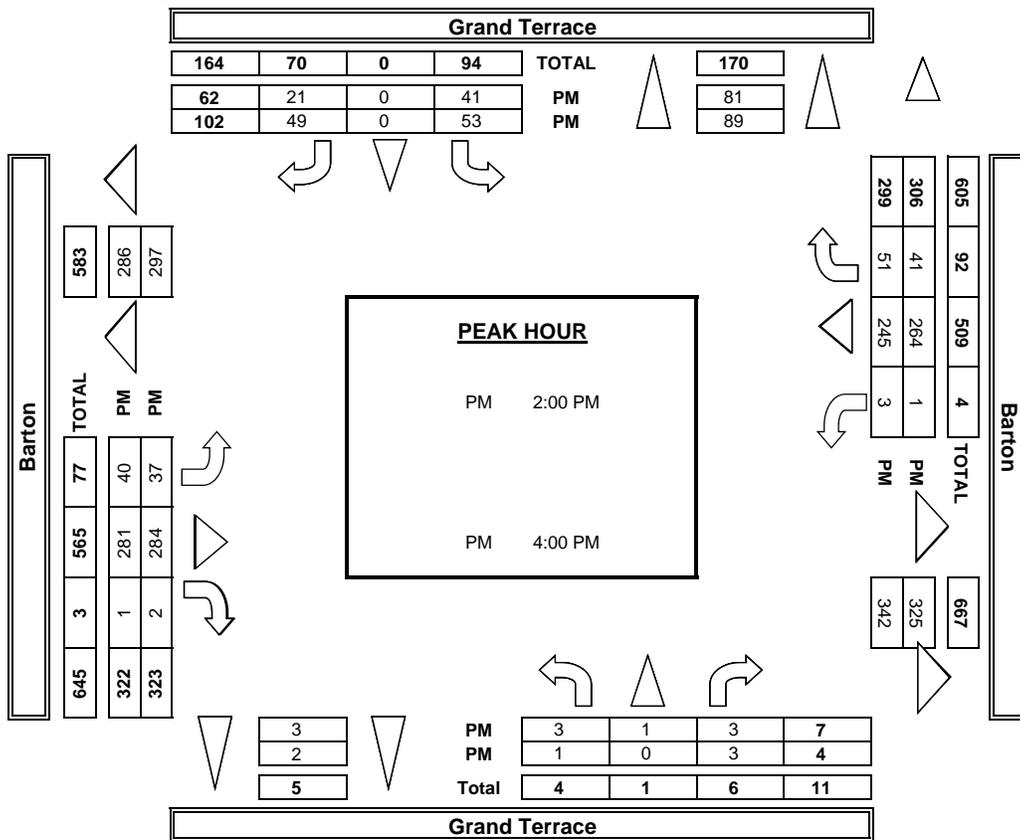
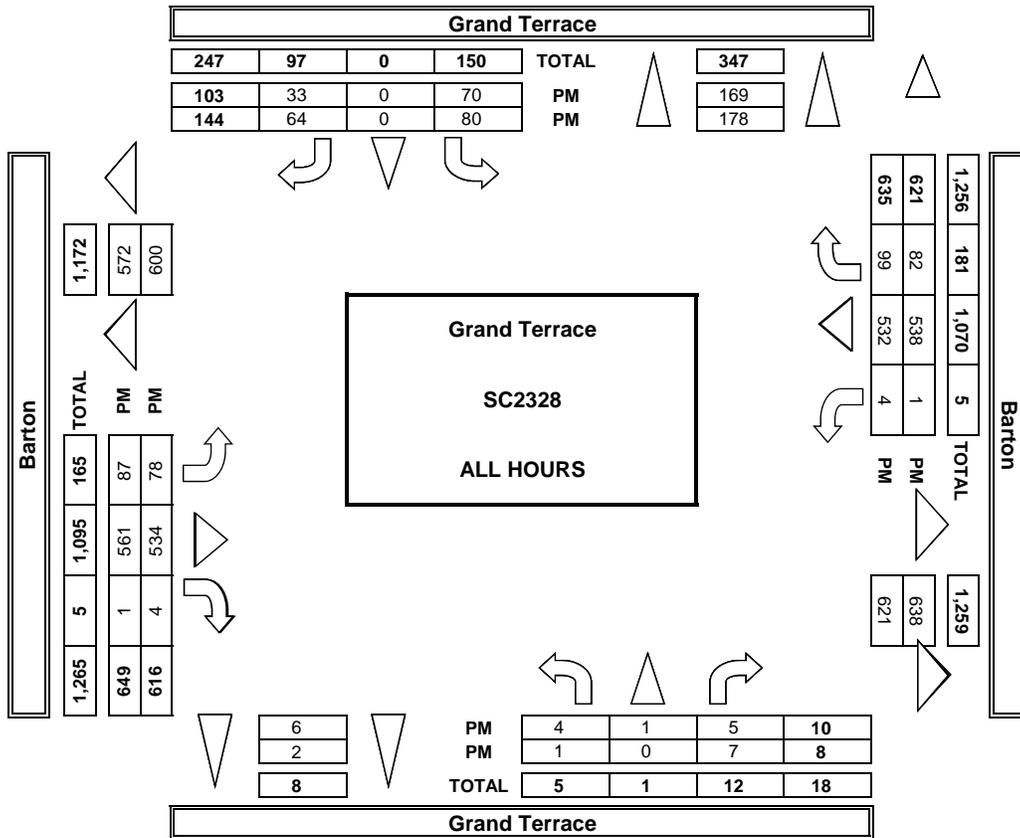
U-TURNS				
NB	SB	EB	WB	TTL
0	0	0	0	0

AM	6:30 AM	0	0	0	0	0	0	2	0	0	0	1	0	3
	6:45 AM	0	0	0	0	0	0	0	2	0	0	0	0	2
	7:00 AM	0	0	0	0	0	0	1	2	0	0	0	0	3
	7:15 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
	7:30 AM	0	0	0	0	0	1	2	0	0	0	0	0	3
	7:45 AM	0	0	0	0	0	0	0	3	0	0	4	0	7
	8:00 AM	0	0	0	0	0	0	0	1	0	0	2	0	3
	8:15 AM	0	0	0	0	0	0	1	1	0	0	1	0	3
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	1	4	11	0	0	9	0	25
APPROACH %	0%	0%	0%	0%	0%	100%	27%	73%	0%	0%	100%	0%		
APP/DEPART	0	/	4	1	/	0	15	/	11	9	/	10	0	
BEGIN PEAK HR	7:30 AM													
VOLUMES	0	0	0	0	0	1	3	5	0	0	7	0	16	
APPROACH %	0%	0%	0%	0%	0%	100%	38%	63%	0%	0%	100%	0%		
PEAK HR FACTOR	0.000			0.250			0.667			0.438			0.571	
APP/DEPART	0	/	3	1	/	0	8	/	5	7	/	8	0	

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



AimTD LLC
TURNING MOVEMENT COUNTS



INTERSECTION TURNING MOVEMENT COUNTS

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

DATE: 8/27/19 TUESDAY	LOCATION: NORTH & SOUTH: EAST & WEST:	Grand Terrace Grand Terrace Barton	PROJECT #: LOCATION #: CONTROL:	SC2328 4 STOP S
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PCE Adjusted	NOTES:										AM PM MD OTHER OTHER	▲ N ◀ W S ▶ E ▼
	Class	1	2	3	4	5	6	7	8	9		
	Factor	1	1.5	2	3	2	2	2	2	2		

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

PM	2:00 PM	1	0	2	11	0	22	16	65	0	0	110	14	240					0							
	2:15 PM	0	0	0	11	0	9	11	76	0	2	58	19	185					0							
	2:30 PM	0	0	0	24	0	14	10	88	0	0	54	18	207					0							
	2:45 PM	2	1	1	13	0	8	3	87	3	1	62	8	187					0							
	3:00 PM	1	0	0	4	0	8	12	72	1	0	84	12	193					0							
	3:15 PM	0	0	0	8	0	0	9	61	0	1	100	14	192					0							
	3:30 PM	0	0	2	11	0	6	14	67	1	0	60	11	171					0							
	3:45 PM	0	0	0	5	0	4	9	71	0	0	62	15	165					0							
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0					0						
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0					0						
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0					0						
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0					0						
	VOLUMES	4	1	5	87	0	69	83	584	5	4	588	110	1,538						0						
	APPROACH %	40%	10%	50%	56%	0%	44%	12%	87%	1%	1%	84%	16%							0						
	APP/DEPART	10	/	194	156	/	9	672	/	676	701	/	661	0						0						
BEGIN PEAK HR	2:00 PM																									
VOLUMES	3	1	3	59	0	53	40	315	3	3	283	58	818						0							
APPROACH %	43%	14%	43%	53%	0%	47%	11%	88%	1%	1%	82%	17%							0							
PEAK HR FACTOR	0.438													0.740	0.909	0.695	0.852									0
APP/DEPART	7	/	99	111	/	6	357	/	376	344	/	338	0						0							
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0							
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0							
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0							
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0							
	4:00 PM	0	0	0	15	0	5	8	80	0	0	72	11	190					0							
	4:15 PM	0	0	1	6	0	4	12	64	0	0	78	12	175					0							
	4:30 PM	1	0	1	11	0	9	8	73	1	0	77	13	193					0							
	4:45 PM	0	0	1	12	0	7	14	80	0	1	66	8	188					0							
	5:00 PM	0	0	2	7	0	3	9	86	0	0	58	4	168					0							
	5:15 PM	0	0	0	5	0	1	10	64	0	0	88	12	179					0							
	5:30 PM	0	0	2	6	0	3	14	71	0	0	72	10	178					0							
	5:45 PM	0	0	0	14	0	5	16	69	0	0	66	15	184					0							
	VOLUMES	1	0	7	75	0	36	90	585	1	1	576	84	1,454						0						
	APPROACH %	13%	0%	88%	67%	0%	33%	13%	87%	0%	0%	87%	13%							0						
	APP/DEPART	8	/	174	111	/	2	675	/	666	661	/	613	0						0						
BEGIN PEAK HR	4:00 PM																									
VOLUMES	1	0	3	43	0	24	42	296	1	1	292	43	745						0							
APPROACH %	25%	0%	75%	64%	0%	36%	12%	87%	0%	0%	87%	13%							0							
PEAK HR FACTOR	0.500													0.838	0.904	0.939	0.965								0	
APP/DEPART	4	/	85	67	/	2	338	/	342	336	/	317	0						0							



INTERSECTION TURNING MOVEMENT COUNTS

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

DATE: 8/27/19 TUESDAY	LOCATION: NORTH & SOUTH: EAST & WEST:	Grand Terrace Grand Terrace Barton	PROJECT #: LOCATION #: CONTROL:	SC2328 4 STOP S
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CLASS 2: 2-AXLE WORK VEHICLES/ TRUCKS	NOTES:	AM PM MD OTHER OTHER	◀ W E ▶	▲ N S ▼
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LANES:	NORTHBOUND Grand Terrace			SOUTHBOUND Grand Terrace			EASTBOUND Barton			WESTBOUND Barton			TOTAL
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	0	1	0	0	1	0	0	1	0	0	1	0	

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

PM	2:00 PM	0	0	0	4	0	2	0	1	0	0	4	1	12	0	0	0	0	0
	2:15 PM	0	0	0	2	0	2	1	7	0	0	5	4	21	0	0	0	0	0
	2:30 PM	0	0	0	4	0	3	2	8	0	0	3	2	22	0	0	0	0	0
	2:45 PM	0	0	0	1	0	0	0	3	1	0	5	1	11	0	0	0	0	0
	3:00 PM	0	0	0	0	0	1	1	3	0	0	4	2	11	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	3	0	0	9	0	12	0	0	0	0	0
	3:30 PM	0	0	0	2	0	1	0	4	0	0	4	1	12	0	0	0	0	0
	3:45 PM	0	0	0	0	0	1	0	3	0	0	3	0	7	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

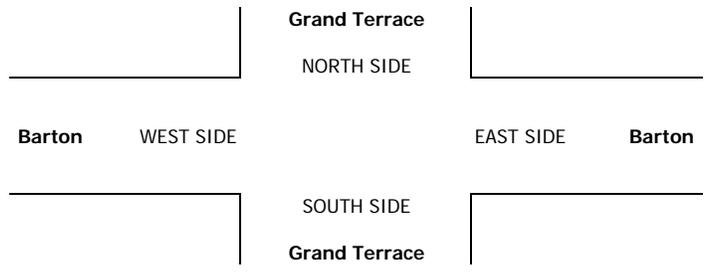
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0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

VOLUMES	0	0	0	13	0	10	4	32	1	0	37	11	108
APPROACH %	0%	0%	0%	57%	0%	43%	11%	86%	3%	0%	77%	23%	
APP/DEPART	0	/	15	23	/	1	37	/	45	48	/	47	0
BEGIN PEAK HR	2:00 PM												
VOLUMES	0	0	0	11	0	7	3	19	1	0	17	8	66
APPROACH %	0%	0%	0%	61%	0%	39%	13%	83%	4%	0%	68%	32%	
PEAK HR FACTOR	0.000			0.643			0.575			0.694			0.750
APP/DEPART	0	/	11	18	/	1	23	/	30	25	/	24	0

PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	1	0	1	0	0	0	0	2	1	5	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	1	3	0	0	7	1	12	0	0	0	0	0
	4:30 PM	0	0	0	2	0	2	0	1	0	0	5	2	12	0	0	0	0	0
	4:45 PM	0	0	0	1	0	1	0	1	0	0	4	0	7	0	0	0	0	0
	5:00 PM	0	0	0	1	0	0	0	2	0	0	1	0	4	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	1	1	0	0	0	0	2	0	0	0	0	0

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

VOLUMES	0	0	0	5	0	4	3	11	0	0	21	4	48
APPROACH %	0%	0%	0%	56%	0%	44%	21%	79%	0%	0%	84%	16%	
APP/DEPART	0	/	7	9	/	0	14	/	16	25	/	25	0
BEGIN PEAK HR	4:00 PM												
VOLUMES	0	0	0	4	0	4	1	5	0	0	18	4	36
APPROACH %	0%	0%	0%	50%	0%	50%	17%	83%	0%	0%	82%	18%	
PEAK HR FACTOR	0.000			0.500			0.375			0.688			0.750
APP/DEPART	0	/	5	8	/	0	6	/	9	22	/	22	0



INTERSECTION TURNING MOVEMENT COUNTS

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

DATE: 8/27/19 TUESDAY	LOCATION: NORTH & SOUTH: EAST & WEST:	Grand Terrace Grand Terrace Barton	PROJECT #: LOCATION #: CONTROL:	SC2328 4 STOP S
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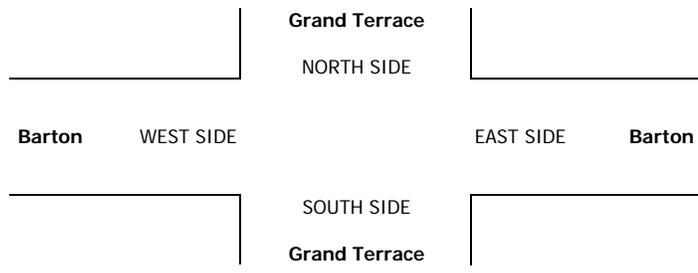
CLASS 5: RV	NOTES:	AM PM MD OTHER OTHER	▲ N ▼ S	◀ W E ▶
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LANES:	NORTHBOUND Grand Terrace			SOUTHBOUND Grand Terrace			EASTBOUND Barton			WESTBOUND Barton			TOTAL
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	0	1	0	0	1	0	0	1	0	0	1	0	

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

PM	2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0	
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0	
BEGIN PEAK HR	2:00 PM													
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0	
PEAK HR FACTOR	0.000			0.000			0.000			0.000			0.000	
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0	
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0	
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0	
BEGIN PEAK HR	3:00 PM													
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0	
PEAK HR FACTOR	0.000			0.000			0.000			0.000			0.000	
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0	

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



INTERSECTION TURNING MOVEMENT COUNTS

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

DATE: 8/27/19 TUESDAY	LOCATION: NORTH & SOUTH: EAST & WEST:	Grand Terrace Grand Terrace Barton	PROJECT #: LOCATION #: CONTROL:	SC2328 4 STOP S
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CLASS 6: BUSES	NOTES:	AM PM MD OTHER OTHER	▲ N ◀ W E ▶ S ▼
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LANES:	NORTHBOUND Grand Terrace			SOUTHBOUND Grand Terrace			EASTBOUND Barton			WESTBOUND Barton			TOTAL
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	0	1	0	0	1	0	0	1	0	0	1	0	

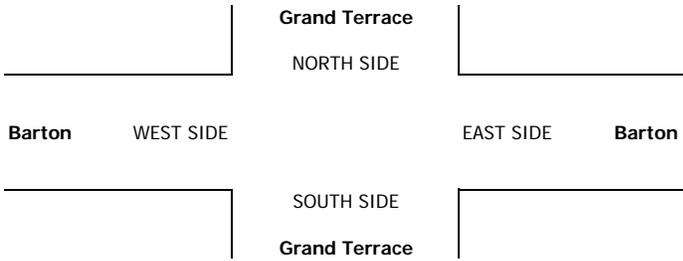
U-TURNS				
NB	SB	EB	WB	TTL
0	0	0	0	0

PM	2:00 PM	0	0	0	0	0	0	0	0	0	0	4	1	5	PM
	2:15 PM	0	0	0	0	0	0	0	1	0	0	1	0	2	
	2:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	1	
	2:45 PM	0	0	0	0	0	0	0	2	0	0	0	0	2	
	3:00 PM	0	0	0	0	0	0	0	2	0	0	1	1	4	
	3:15 PM	0	0	0	0	0	0	0	0	0	0	2	0	2	
	3:30 PM	0	0	0	0	0	0	1	0	0	0	0	0	1	
	3:45 PM	0	0	0	0	0	0	0	1	0	0	0	0	1	
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	VOLUMES	0	0	0	0	0	0	1	6	0	0	9	2	18	
	APPROACH %	0%	0%	0%	0%	0%	0%	14%	86%	0%	0%	82%	18%		
	APP/DEPART	0	/	3	0	/	0	7	/	6	11	/	9	0	
BEGIN PEAK HR	2:00 PM														
VOLUMES	0	0	0	0	0	0	0	3	0	0	6	1	10		
APPROACH %	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	86%	14%			
PEAK HR FACTOR	0.000			0.000			0.375			0.350			0.500		
APP/DEPART	0	/	1	0	/	0	3	/	3	7	/	6	0		

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

PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	PM
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0		
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0		
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0		
	4:00 PM	0	0	0	0	0	0	0	2	0	0	1	0	3	
	4:15 PM	0	0	0	0	0	0	1	0	0	0	1	0	2	
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	5:00 PM	0	0	0	0	0	0	0	1	0	0	0	0	1	
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	VOLUMES	0	0	0	0	0	0	1	3	0	0	2	0	6	
	APPROACH %	0%	0%	0%	0%	0%	0%	25%	75%	0%	0%	100%	0%		
	APP/DEPART	0	/	1	0	/	0	4	/	3	2	/	2	0	
BEGIN PEAK HR	4:00 PM														
VOLUMES	0	0	0	0	0	0	1	2	0	0	2	0	5		
APPROACH %	0%	0%	0%	0%	0%	0%	33%	67%	0%	0%	100%	0%			
PEAK HR FACTOR	0.000			0.000			0.375			0.500			0.417		
APP/DEPART	0	/	1	0	/	0	3	/	2	2	/	2	0		

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



APPENDIX B – SEGMENT VOLUME COUNTS

A816

24-HOUR ROADWAY SEGMENT COUNTS (WITH FHWA CLASSIFICATION)

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

DATE: Tuesday, August 27, 2019
JOB #: SC2328

LOCATION# Grand Terrace
CLASS Barton between Grand Terrace and South Leg of Terrace

AM TIME	EASTBOUND													TOTAL	PM Time	EASTBOUND													TOTAL
	1	2	3	4	5	6	7	8	9	10	11	12	13			1	2	3	4	5	6	7	8	9	10	11	12	13	
0:00	0	5	0	0	1	0	0	0	0	0	0	0	0	6	12:00	2	53	3	1	0	0	0	0	0	0	0	59		
0:15	1	4	1	0	0	2	0	0	1	0	0	0	0	9	12:15	0	30	13	0	3	0	0	0	2	0	0	48		
0:30	0	1	0	0	0	0	0	0	0	0	0	0	0	1	12:30	1	31	4	0	1	1	0	1	1	0	0	40		
0:45	0	2	1	0	0	0	0	0	0	0	0	0	0	3	12:45	0	40	3	0	6	0	0	1	1	0	0	51		
1:00	0	3	0	0	1	0	0	0	0	0	0	0	0	4	13:00	0	31	8	0	4	1	0	0	1	0	0	45		
1:15	0	4	0	0	0	0	0	0	0	0	0	0	0	4	13:15	0	46	4	1	4	5	0	0	2	0	0	62		
1:30	0	9	0	0	0	0	0	0	0	4	0	0	0	13	13:30	0	44	6	2	3	1	0	0	1	0	0	57		
1:45	0	0	1	0	0	0	0	0	0	0	0	0	0	1	13:45	0	45	10	2	2	0	0	0	0	0	0	59		
2:00	0	1	0	0	0	0	0	0	2	0	0	0	0	3	14:00	0	56	5	0	2	1	0	0	3	0	0	67		
2:15	0	1	0	0	0	0	0	0	1	0	0	0	0	2	14:15	2	54	9	1	4	0	0	0	5	0	0	75		
2:30	0	4	0	0	0	0	0	0	0	0	0	0	0	4	14:30	2	70	9	0	5	1	1	0	0	0	1	89		
2:45	0	0	0	0	0	0	0	0	1	0	0	0	0	1	14:45	1	59	16	1	6	0	0	0	1	0	0	84		
3:00	0	1	0	1	0	0	0	0	2	0	0	0	0	4	15:00	2	54	5	1	3	0	0	0	1	0	2	68		
3:15	0	2	0	0	0	0	0	0	1	0	0	0	0	3	15:15	0	49	10	0	4	2	0	0	0	0	0	65		
3:30	0	5	0	0	0	0	0	0	2	0	0	0	0	7	15:30	1	53	11	2	2	0	0	0	0	0	0	69		
3:45	0	5	1	0	0	0	0	0	0	0	0	0	0	6	15:45	1	64	7	1	1	1	0	0	0	0	0	75		
4:00	0	8	3	0	0	0	0	0	1	0	0	0	0	12	16:00	0	74	9	1	3	1	0	0	1	0	0	89		
4:15	0	9	2	0	0	0	0	0	1	0	0	0	0	12	16:15	0	53	6	0	2	0	0	0	0	0	0	61		
4:30	0	1	1	0	0	0	0	0	0	0	0	0	0	2	16:30	0	59	9	0	4	0	0	0	1	0	0	73		
4:45	1	6	0	0	1	1	0	0	0	0	0	0	0	9	16:45	0	74	7	0	1	0	0	0	1	0	1	84		
5:00	0	6	2	0	0	0	0	0	1	0	0	0	0	9	17:00	1	76	9	1	1	0	0	0	0	0	0	88		
5:15	0	6	1	0	1	0	0	1	1	0	0	0	0	10	17:15	1	64	11	0	3	0	0	0	0	0	0	79		
5:30	0	5	1	0	1	0	0	1	1	0	0	0	0	9	17:30	1	70	10	0	1	0	0	0	0	0	0	82		
5:45	0	13	0	0	0	0	0	0	2	0	0	0	0	15	17:45	0	67	5	0	2	0	0	0	0	0	0	74		
6:00	0	13	10	0	2	0	0	0	1	0	0	0	0	26	18:00	0	56	5	0	2	0	0	0	2	0	0	65		
6:15	0	23	4	0	3	0	0	0	0	0	0	0	0	30	18:15	0	46	7	0	1	0	0	1	0	0	0	55		
6:30	1	24	3	0	1	0	1	0	2	0	0	0	0	32	18:30	0	55	8	0	1	1	0	0	0	0	0	65		
6:45	1	43	1	1	2	1	0	0	1	0	0	0	0	50	18:45	1	45	2	1	0	0	0	0	0	0	0	49		
7:00	0	55	4	4	2	0	0	1	2	0	0	0	1	69	19:00	0	37	6	0	2	0	0	0	0	0	0	45		
7:15	0	65	9	1	5	0	0	0	0	0	0	0	0	80	19:15	0	45	3	0	1	0	0	0	1	0	0	50		
7:30	0	59	6	1	3	0	0	0	0	0	0	0	0	69	19:30	0	34	3	0	0	0	0	0	0	0	0	37		
7:45	1	64	9	4	3	0	0	0	2	0	0	0	0	83	19:45	0	34	6	0	1	0	0	0	0	0	0	41		
8:00	0	59	6	0	1	1	0	1	2	0	0	0	0	70	20:00	1	44	5	0	1	1	0	0	0	0	0	52		
8:15	0	51	6	1	1	0	0	0	1	0	0	0	0	60	20:15	0	21	0	0	1	0	0	0	2	0	0	24		
8:30	0	20	5	0	4	0	0	0	0	0	0	0	0	29	20:30	0	28	2	0	0	0	0	1	0	0	0	31		
8:45	1	58	2	0	3	0	0	0	0	0	0	0	0	64	20:45	0	21	2	0	0	0	0	0	3	0	0	26		
9:00	1	39	3	0	1	3	0	0	2	0	0	0	0	49	21:00	0	17	2	0	0	0	0	0	0	0	0	19		
9:15	0	49	3	0	5	0	0	1	1	0	0	0	0	59	21:15	0	23	1	0	0	0	0	0	0	0	0	24		
9:30	0	35	7	0	4	1	0	0	0	0	0	0	0	47	21:30	0	23	2	0	0	0	0	0	2	0	0	27		
9:45	0	31	9	1	6	1	0	0	1	0	0	0	0	49	21:45	0	16	1	0	0	1	0	0	0	0	0	18		
10:00	0	29	8	0	2	0	0	0	0	0	0	0	0	39	22:00	0	10	0	0	0	0	0	0	0	0	0	10		
10:15	0	24	6	0	0	0	0	0	3	1	0	0	0	34	22:15	0	12	1	0	0	0	0	0	1	0	0	14		
10:30	0	27	2	0	3	0	0	0	0	0	0	0	0	32	22:30	0	12	1	0	0	0	0	0	2	0	0	15		
10:45	1	36	6	0	3	2	0	0	6	0	0	0	0	54	22:45	0	9	0	0	0	0	0	1	0	0	0	10		
11:00	1	37	10	0	3	0	0	0	2	0	0	0	0	53	23:00	0	5	2	0	0	0	0	0	0	0	0	7		
11:15	1	31	6	1	2	1	0	0	2	0	0	0	0	44	23:15	0	7	0	0	0	0	0	0	0	0	0	7		
11:30	0	29	6	0	3	2	0	0	3	0	0	0	0	43	23:30	0	10	1	0	0	0	0	0	0	0	0	11		
11:45	0	42	7	2	2	1	0	0	1	0	0	0	0	55	23:45	0	9	0	0	1	0	0	0	1	0	0	11		
TOTAL	10	1,044	152	17	69	16	1	5	53	1	0	0	1	1,369	TOTAL	17	1,935	249	15	78	17	1	5	35	0	2	1	1	2,356

AM PEAK HOUR 7:15 AM
AM PEAK VOLUME 302

PM PEAK HOUR 4:45 PM
PM PEAK VOLUME 333

CLASS 1	Class 1 — Motorcycles	CLASS 8	3 to 4 Axles, Single Trailer
CLASS 2	Passenger Cars	CLASS 9	5 Axles, Single Trailer
CLASS 3	2 Axles, 4-Tire Single Units	CLASS 10	6 or More Axles, Single Trailer
CLASS 4	Buses	CLASS 11	5 or Less Axles, Multi-Trailers
CLASS 5	2 Axles, 6-Tire Single Units	CLASS 12	6 Axles, Multi-Trailers
CLASS 6	3 Axles, Single Unit	CLASS 13	7 or More Axles, Multi-Trailers
CLASS 7	4 or More Axles, Single Unit		

TOTAL: AM+PM	27	2,979	401	32	147	33	2	10	88	1	2	1	2	3,725
% OF TOTAL	0.7%	80.0%	10.8%	0.9%	3.9%	0.9%	0.1%	0.3%	2.4%	0.0%	0.1%	0.0%	0.1%	100.0%

Class	1	2	3	4	5	6	7	8	9	10	11	12	13
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TOTAL: ALL	45	5,721	865	56	347	56	4	24	166	1	3	2	2	7,292
% OF TOTAL	1.2%	153.6%	23.2%	1.5%	9.3%	1.5%	0.1%	0.6%	4.5%	0.0%	0.1%	0.1%	0.1%	100.0%

24-HOUR ROADWAY SEGMENT COUNTS (WITH FHWA CLASSIFICATION)

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

DATE: Tuesday, August 27, 2019
JOB #: SC2328

LOCATION# Grand Terrace
CLASS Barton between Grand Terrace and South Leg of Terrace

AM TIME	WESTBOUND													TOTAL	PM Time	WESTBOUND													TOTAL
	1	2	3	4	5	6	7	8	9	10	11	12	13			1	2	3	4	5	6	7	8	9	10	11	12	13	
0:00	0	2	2	0	1	0	0	0	1	0	0	0	0	6	12:00	1	38	6	0	0	1	0	0	1	0	0	0	47	
0:15	0	5	0	0	0	0	0	0	1	0	0	0	0	6	12:15	0	37	5	0	3	2	1	0	1	0	0	49		
0:30	0	4	2	0	1	0	0	0	0	0	0	0	0	7	12:30	0	33	8	0	7	0	0	0	1	0	0	49		
0:45	0	2	0	1	0	0	0	0	0	0	0	0	0	3	12:45	0	24	6	1	3	0	0	0	1	0	0	35		
1:00	0	4	0	0	0	0	0	0	0	0	0	0	0	4	13:00	1	30	5	0	2	1	0	0	3	0	0	42		
1:15	0	3	0	0	0	0	0	0	0	0	0	0	0	3	13:15	0	36	6	0	3	1	0	0	2	0	0	48		
1:30	0	1	0	0	1	0	0	0	1	0	0	0	0	3	13:30	0	33	11	1	7	0	0	0	0	0	0	52		
1:45	0	5	1	0	0	0	0	0	1	0	0	0	0	7	13:45	0	31	7	0	3	0	0	0	1	0	0	42		
2:00	0	2	0	0	0	0	0	0	4	0	0	0	0	6	14:00	0	76	13	3	10	0	0	2	3	0	0	107		
2:15	0	1	0	0	0	0	0	0	1	0	0	0	0	2	14:15	0	44	10	0	6	1	0	1	0	0	0	62		
2:30	0	3	0	0	1	0	0	0	1	0	0	0	0	5	14:30	0	45	4	0	4	0	0	0	1	0	0	54		
2:45	0	2	0	0	0	0	0	0	0	0	0	0	0	2	14:45	1	47	16	0	5	0	0	0	0	1	0	70		
3:00	0	2	0	0	0	0	0	0	1	0	0	0	0	3	15:00	1	66	13	2	5	1	0	2	1	0	0	91		
3:15	0	5	1	0	0	0	0	0	0	0	0	0	0	6	15:15	1	65	10	3	5	1	0	1	0	0	0	86		
3:30	0	2	2	0	0	0	0	0	0	0	0	0	0	4	15:30	0	48	9	0	3	0	1	0	0	0	0	61		
3:45	0	4	2	0	2	0	0	0	2	0	0	0	0	10	15:45	0	48	13	1	3	1	0	0	0	0	0	66		
4:00	0	5	1	0	0	0	0	0	1	0	0	0	0	7	16:00	0	59	8	0	5	0	0	0	1	0	0	73		
4:15	0	5	0	0	0	0	0	0	1	0	0	0	0	6	16:15	0	62	8	0	5	0	0	0	1	0	0	76		
4:30	0	2	4	0	0	0	0	0	0	0	0	0	0	6	16:30	0	54	11	0	4	2	0	2	0	0	0	73		
4:45	0	10	2	0	0	0	0	0	0	0	0	0	0	12	16:45	1	48	12	0	3	1	0	0	0	0	0	65		
5:00	1	12	2	1	1	2	0	0	0	0	0	0	0	19	17:00	0	54	7	0	1	0	0	0	0	0	0	62		
5:15	0	12	3	0	1	0	0	0	2	0	0	0	0	18	17:15	0	65	9	0	3	2	0	0	1	0	0	80		
5:30	1	18	5	0	2	0	0	0	1	0	0	0	0	27	17:30	0	59	9	0	1	0	0	0	0	0	0	69		
5:45	1	31	6	0	3	0	0	0	1	0	0	0	0	42	17:45	0	61	9	0	2	0	0	0	0	0	0	72		
6:00	0	20	3	0	4	0	0	0	0	0	0	0	0	27	18:00	0	46	3	0	2	0	0	0	0	0	0	51		
6:15	0	23	4	0	2	0	0	0	0	0	0	0	0	29	18:15	0	52	6	0	1	0	0	0	1	0	0	60		
6:30	1	29	6	0	3	0	0	0	1	0	0	0	0	40	18:30	0	41	3	0	0	0	0	0	0	0	0	44		
6:45	0	51	4	0	1	1	0	0	2	0	0	0	0	59	18:45	0	35	6	0	0	0	0	0	0	0	0	41		
7:00	0	49	6	0	7	0	0	0	0	0	0	1	0	63	19:00	0	35	4	0	0	0	0	0	2	0	0	41		
7:15	1	53	10	2	4	0	0	0	1	0	0	0	0	71	19:15	0	36	2	0	0	1	0	1	2	0	0	42		
7:30	0	61	7	1	5	0	0	0	1	0	0	0	0	75	19:30	2	34	6	0	4	0	0	0	1	0	0	47		
7:45	0	60	8	2	6	0	0	0	2	0	0	0	0	78	19:45	1	28	6	0	0	0	0	1	0	0	0	36		
8:00	0	56	7	2	3	0	0	0	2	0	0	0	0	70	20:00	0	34	4	0	1	0	0	0	0	0	0	39		
8:15	0	44	5	1	2	0	0	0	3	0	0	0	0	55	20:15	0	42	6	0	1	0	0	0	0	0	0	49		
8:30	0	36	3	0	3	0	0	0	2	0	0	0	0	44	20:30	0	24	1	0	2	0	0	0	1	0	0	28		
8:45	1	23	9	0	3	1	0	0	2	0	0	0	0	39	20:45	0	21	4	0	2	0	0	0	1	0	0	28		
9:00	1	36	2	0	4	1	0	0	2	0	0	0	0	46	21:00	0	19	5	0	0	0	0	0	0	0	0	24		
9:15	1	29	5	1	4	1	0	0	1	0	0	0	0	42	21:15	0	26	0	0	2	0	0	0	0	0	0	28		
9:30	1	21	5	1	1	0	0	0	2	0	0	0	0	31	21:30	0	18	3	0	0	0	0	0	1	0	0	22		
9:45	0	27	4	0	2	0	0	0	0	0	0	0	0	33	21:45	0	13	4	0	1	0	0	0	0	0	0	18		
10:00	0	25	11	1	2	0	0	0	1	0	0	0	0	40	22:00	0	18	2	0	0	0	0	0	0	0	0	20		
10:15	0	25	6	0	5	1	0	0	1	0	0	0	0	38	22:15	0	10	1	0	0	0	0	0	0	0	0	11		
10:30	0	32	6	0	3	0	0	0	1	0	0	0	0	42	22:30	0	11	1	0	0	0	0	0	1	0	0	13		
10:45	0	28	8	0	1	0	0	0	4	0	0	0	0	41	22:45	0	9	3	0	1	0	0	0	0	0	0	13		
11:00	0	34	6	0	4	0	0	2	2	0	0	0	0	48	23:00	0	9	1	0	0	0	0	0	0	0	0	10		
11:15	0	34	6	0	1	0	0	1	1	0	0	0	0	42	23:15	0	9	1	0	0	0	0	0	0	0	0	10		
11:30	0	29	4	0	3	1	0	1	1	0	0	0	0	39	23:30	0	2	1	0	0	0	0	0	0	0	0	3		
11:45	0	29	7	0	3	0	0	0	0	0	0	0	0	39	23:45	0	11	1	0	1	0	0	0	0	0	0	13		
TOTAL	9	996	175	13	89	8	0	4	50	0	0	1	0	1,345	TOTAL	9	1,746	289	11	111	15	2	10	28	0	1	0	0	2,222

AM PEAK HOUR 7:15 AM
AM PEAK VOLUME 294

PM PEAK HOUR 2:45 PM
PM PEAK VOLUME 308

CLASS 1	Class 1 — Motorcycles	CLASS 8	3 to 4 Axles, Single Trailer
CLASS 2	Passenger Cars	CLASS 9	5 Axles, Single Trailer
CLASS 3	2 Axles, 4-Tire Single Units	CLASS 10	6 or More Axles, Single Trailer
CLASS 4	Buses	CLASS 11	5 or Less Axles, Multi-Trailers
CLASS 5	2 Axles, 6-Tire Single Units	CLASS 12	6 Axles, Multi-Trailers
CLASS 6	3 Axles, Single Unit	CLASS 13	7 or More Axles, Multi-Trailers
CLASS 7	4 or More Axles, Single Unit		

TOTAL: AM+PM	18	2,742	464	24	200	23	2	14	78	0	1	1	0	3,567
% OF TOTAL	0.5%	76.9%	13.0%	0.7%	5.6%	0.6%	0.1%	0.4%	2.2%	0.0%	0.0%	0.0%	0.0%	100.0%

Class	1	2	3	4	5	6	7	8	9	10	11	12	13
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CLASS 1	CLASS 2	CLASS 3	CLASS 4	CLASS 5	CLASS 6	CLASS 7	CLASS 8	CLASS 9	CLASS 10	CLASS 11	CLASS 12	CLASS 13
PASSENGER VEHICLES	2-AXLE TRUCKS	3-AXLE TRUCKS	4 OR MORE AXLE TRUCKS	RV	Buses	4 or More Axles, Single Unit	3 to 4 Axles, Single Trailer	5 Axles, Single Trailer	6 or More Axles, Single Trailer	5 or Less Axles, Multi-Trailers	6 Axles, Multi-Trailers	7 or More Axles, Multi-Trailers
1	1.5	2	2.5	1.5	1.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5

DATE: Tuesday, August 27, 2015
JOB #: SC2328

LOCATION# Grand Terrace
CLASS Barton between Grand Terrace and South Leg of Terrac

AM TIME	EASTBOUND													TOTAL	PM Time	EASTBOUND													TOTAL
	1	2	3	4	5	6	7	8	9	10	11	12	13			1	2	3	4	5	6	7	8	9	10	11	12	13	
0:00	0	8	0	0	2	0	0	0	0	0	0	0	0	9	12:00	2	80	6	3	0	0	0	0	0	0	0	0	90	
0:15	1	6	2	0	0	3	0	0	0	3	0	0	0	15	12:15	0	45	26	0	5	0	0	0	5	0	0	0	81	
0:30	0	2	0	0	0	0	0	0	0	0	0	0	0	2	12:30	1	47	8	0	2	2	0	3	0	0	0	64		
0:45	0	3	2	0	0	0	0	0	0	0	0	0	0	5	12:45	0	60	6	0	9	0	0	3	3	0	0	80		
1:00	0	5	0	0	2	0	0	0	0	0	0	0	0	6	13:00	0	47	16	0	6	2	0	0	3	0	0	73		
1:15	0	6	0	0	0	0	0	0	0	0	0	0	0	6	13:15	0	69	8	3	6	8	0	5	0	0	0	98		
1:30	0	14	0	0	0	0	0	0	10	0	0	0	0	24	13:30	0	66	12	5	5	2	0	0	3	0	0	92		
1:45	0	0	2	0	0	0	0	0	0	0	0	0	0	2	13:45	0	68	20	5	3	0	0	0	0	0	0	96		
2:00	0	2	0	0	0	0	0	0	0	5	0	0	0	7	14:00	0	84	10	0	3	2	0	0	8	0	0	106		
2:15	0	2	0	0	0	0	0	0	0	3	0	0	0	4	14:15	2	81	18	3	6	0	0	0	13	0	0	122		
2:30	0	6	0	0	0	0	0	0	0	0	0	0	0	6	14:30	2	105	18	0	8	2	3	0	0	0	3	139		
2:45	0	0	0	0	0	0	0	0	0	3	0	0	0	3	14:45	1	89	32	3	9	0	0	0	3	0	0	136		
3:00	0	2	0	3	0	0	0	0	0	5	0	0	0	9	15:00	2	81	10	3	5	0	0	0	3	0	5	108		
3:15	0	3	0	0	0	0	0	0	0	3	0	0	0	6	15:15	0	74	20	0	6	3	0	0	0	0	0	103		
3:30	0	8	0	0	0	0	0	0	0	5	0	0	0	13	15:30	1	80	22	5	3	0	0	0	0	0	0	111		
3:45	0	8	2	0	0	0	0	0	0	0	0	0	0	10	15:45	1	96	14	3	2	2	0	0	0	0	0	117		
4:00	0	12	6	0	0	0	0	0	0	3	0	0	0	21	16:00	0	111	18	3	5	2	0	0	3	0	0	140		
4:15	0	14	4	0	0	0	0	0	0	3	0	0	0	20	16:15	0	80	12	0	3	0	0	0	0	0	0	95		
4:30	0	2	2	0	0	0	0	0	0	0	0	0	0	4	16:30	0	89	18	0	6	0	0	0	0	0	0	115		
4:45	1	9	0	0	2	2	0	0	0	0	0	0	0	13	16:45	0	111	14	0	2	0	0	0	3	0	3	132		
5:00	0	9	4	0	0	0	0	0	0	3	0	0	0	16	17:00	1	114	18	3	2	0	0	0	0	0	0	137		
5:15	0	9	2	0	2	0	0	0	0	3	3	0	0	18	17:15	1	96	22	0	5	0	0	0	0	0	0	124		
5:30	0	8	2	0	2	0	0	0	0	3	3	0	0	16	17:30	1	105	20	0	2	0	0	0	0	0	0	128		
5:45	0	20	0	0	0	0	0	0	0	5	0	0	0	25	17:45	0	101	10	0	3	0	0	0	0	0	0	114		
6:00	0	20	20	0	3	0	0	0	0	3	0	0	0	45	18:00	0	84	10	0	3	0	0	0	5	0	0	102		
6:15	0	35	8	0	5	0	0	0	0	0	0	0	0	47	18:15	0	69	14	0	2	0	0	3	0	0	0	87		
6:30	1	36	6	0	2	0	0	0	0	3	0	0	0	52	18:30	0	83	16	0	2	2	0	0	0	0	0	102		
6:45	1	65	2	3	2	0	0	0	0	3	0	0	0	77	18:45	1	68	4	3	0	0	0	0	0	0	0	75		
7:00	0	83	8	10	3	0	0	0	0	3	5	0	0	114	19:00	0	56	12	0	3	0	0	0	0	0	0	71		
7:15	0	98	18	3	8	0	0	0	0	0	0	0	0	126	19:15	0	68	6	0	2	0	0	0	3	0	0	78		
7:30	0	89	12	3	5	0	0	0	0	0	0	0	0	108	19:30	0	51	6	0	0	0	0	0	0	0	0	57		
7:45	1	96	18	10	5	0	0	0	0	5	0	0	0	135	19:45	0	51	12	0	2	0	0	0	0	0	0	65		
8:00	0	89	12	0	2	2	0	0	3	5	0	0	0	111	20:00	1	66	10	0	2	2	0	0	0	0	0	80		
8:15	0	77	12	3	2	0	0	0	0	3	0	0	0	95	20:15	0	32	0	0	2	0	0	5	0	0	0	38		
8:30	0	30	10	0	6	0	0	0	0	0	0	0	0	46	20:30	0	42	4	0	0	0	0	3	0	0	0	49		
8:45	1	87	4	0	5	0	0	0	0	0	0	0	0	97	20:45	0	32	4	0	0	0	0	0	8	0	0	43		
9:00	1	59	6	0	2	5	0	0	0	5	0	0	0	77	21:00	0	26	4	0	0	0	0	0	0	0	0	30		
9:15	0	74	6	0	8	0	0	0	3	3	0	0	0	92	21:15	0	35	2	0	0	0	0	0	0	0	0	37		
9:30	0	53	14	0	6	2	0	0	0	0	0	0	0	74	21:30	0	35	4	0	0	0	0	0	5	0	0	44		
9:45	0	47	18	3	9	2	0	0	0	3	0	0	0	80	21:45	0	24	2	0	0	0	0	0	0	0	0	28		
10:00	0	44	16	0	3	0	0	0	0	0	0	0	0	63	22:00	0	15	0	0	0	0	0	0	0	0	0	15		
10:15	0	36	12	0	0	0	0	0	0	8	3	0	0	58	22:15	0	18	2	0	0	0	0	0	3	0	0	23		
10:30	0	41	4	0	5	0	0	0	0	0	0	0	0	49	22:30	0	18	2	0	0	0	0	0	5	0	0	25		
10:45	1	54	12	0	5	3	0	0	0	15	0	0	0	90	22:45	0	14	0	0	0	0	0	3	0	0	0	16		
11:00	1	56	20	0	5	0	0	0	0	5	0	0	0	86	23:00	0	8	4	0	0	0	0	0	0	0	0	12		
11:15	1	47	12	3	3	2	0	0	0	5	0	0	0	72	23:15	0	11	0	0	0	0	0	0	0	0	0	11		
11:30	0	44	12	0	5	3	0	0	0	8	0	0	0	71	23:30	0	15	2	0	0	0	0	0	0	0	0	17		
11:45	0	63	14	5	3	2	0	0	0	3	0	0	0	89	23:45	0	14	0	0	2	0	0	0	3	0	0	18		
TOTAL	10	1,566	304	43	104	24	3	13	133	3	0	0	3	2,203	TOTAL	17	2,903	498	38	117	26	3	13	88	0	5	3	3,710	

AM PEAK HOUR 7:00 AM
AM PEAK VOLUME 481

PM PEAK HOUR 4:45 PM
PM PEAK VOLUME 520

CLASS 1	Class 1 — Motorcycles	CLASS 8	3 to 4 Axles, Single Trailer
CLASS 2	Passenger Cars	CLASS 9	5 Axles, Single Trailer
CLASS 3	2 Axles, 4-Tire Single Units	CLASS 10	6 or More Axles, Single Trailer
CLASS 4	Buses	CLASS 11	5 or Less Axles, Multi-Trailers
CLASS 5	2 Axles, 6-Tire Single Units	CLASS 12	6 Axles, Multi-Trailers
CLASS 6	3 Axles, Single Unit	CLASS 13	7 or More Axles, Multi-Trailers
CLASS 7	4 or More Axles, Single Unit		

TOTAL: AM+PM	27	4,469	802	80	221	50	5	25	220	3	5	3	5	5,913
% OF TOTAL	0.5%	75.6%	13.6%	1.4%	3.7%	0.8%	0.1%	0.4%	3.7%	0.0%	0.1%	0.0%	0.1%	100.0%
Class	1	2	3	4	5	6	7	8	9	10	11	12	13	
TOTAL: ALL	45	8,582	1,730	140	521	84	10	60	415	3	10	5	10	11,614
% OF TOTAL	0.8%	145.1%	29.3%	2.4%	8.8%	1.4%	0.2%	1.0%	7.0%	0.0%	0.2%	0.1%	0.2%	100.0%

CLASS 1	CLASS 2	CLASS 3	CLASS 4	CLASS 5	CLASS 6	CLASS 7	CLASS 8	CLASS 9	CLASS 10	CLASS 11	CLASS 12	CLASS 13
PASSENGER VEHICLES	2-AXLE TRUCKS	3-AXLE TRUCKS	4 OR MORE AXLE TRUCKS	RV	Buses	4 or More Axles, Single Unit	3 to 4 Axles, Single Trailer	5 Axles, Single Trailer	6 or More Axles, Single Trailer	5 or Less Axles, Multi-Trailers	6 Axles, Multi-Trailers	7 or More Axles, Multi-Trailers
1	1.5	2	2.5	1.5	1.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5

DATE: Tuesday, August 27, 2015
JOB #: SC2328

LOCATION# Grand Terrace
CLASS Barton between Grand Terrace and South Leg of Terrac

AM TIME	EASTBOUND													TOTAL	PM Time	EASTBOUND													TOTAL
	1	2	3	4	5	6	7	8	9	10	11	12	13			1	2	3	4	5	6	7	8	9	10	11	12	13	
0:00	0	3	4	0	2	0	0	0	3	0	0	0	0	11	12:00	1	57	12	0	0	2	0	0	3	0	0	0	74	
0:15	0	8	0	0	0	0	0	0	3	0	0	0	0	10	12:15	0	56	10	0	5	3	3	0	3	0	0	78		
0:30	0	6	4	0	2	0	0	0	0	0	0	0	0	12	12:30	0	50	16	0	11	0	0	0	3	0	0	79		
0:45	0	3	0	3	0	0	0	0	0	0	0	0	0	6	12:45	0	36	12	3	5	0	0	0	3	0	0	58		
1:00	0	6	0	0	0	0	0	0	0	0	0	0	0	6	13:00	1	45	10	0	3	2	0	0	8	0	0	68		
1:15	0	5	0	0	0	0	0	0	0	0	0	0	0	5	13:15	0	54	12	0	5	2	0	0	5	0	0	77		
1:30	0	2	0	0	2	0	0	0	3	0	0	0	0	6	13:30	0	50	22	3	11	0	0	0	0	0	0	85		
1:45	0	8	2	0	0	0	0	0	3	0	0	0	0	12	13:45	0	47	14	0	5	0	0	0	3	0	0	68		
2:00	0	3	0	0	0	0	0	0	10	0	0	0	0	13	14:00	0	114	26	8	15	0	0	5	8	0	0	175		
2:15	0	2	0	0	0	0	0	0	3	0	0	0	0	4	14:15	0	66	20	0	9	2	0	3	0	0	0	99		
2:30	0	5	0	0	2	0	0	0	3	0	0	0	0	9	14:30	0	68	8	0	6	0	0	3	0	0	3	87		
2:45	0	3	0	0	0	0	0	0	0	0	0	0	0	3	14:45	1	71	32	0	8	0	0	0	0	0	0	111		
3:00	0	3	0	0	0	0	0	0	3	0	0	0	0	6	15:00	1	99	26	5	8	2	0	5	3	0	5	153		
3:15	0	8	2	0	0	0	0	0	0	0	0	0	0	10	15:15	1	98	20	8	8	2	0	3	0	0	0	138		
3:30	0	3	4	0	0	0	0	0	0	0	0	0	0	7	15:30	0	72	18	0	5	0	0	3	0	0	0	97		
3:45	0	6	4	0	3	0	0	0	5	0	0	0	0	18	15:45	0	72	26	3	5	2	0	0	0	0	0	107		
4:00	0	8	2	0	0	0	0	0	3	0	0	0	0	12	16:00	0	89	16	0	8	0	0	0	3	0	0	115		
4:15	0	8	0	0	0	0	0	0	3	0	0	0	0	10	16:15	0	93	16	0	8	0	0	0	3	0	0	119		
4:30	0	3	8	0	0	0	0	0	0	0	0	0	0	11	16:30	0	81	22	0	6	3	0	5	0	0	0	117		
4:45	0	15	4	0	0	0	0	0	0	0	0	0	0	19	16:45	1	72	24	0	5	2	0	0	0	0	3	106		
5:00	1	18	4	3	2	3	0	0	0	0	0	0	0	30	17:00	0	81	14	0	2	0	0	0	0	0	0	97		
5:15	0	18	6	0	2	0	0	0	5	0	0	0	0	31	17:15	0	98	18	0	5	3	0	0	3	0	0	126		
5:30	1	27	10	0	3	0	0	0	3	0	0	0	0	44	17:30	0	89	18	0	2	0	0	0	0	0	0	108		
5:45	1	47	12	0	5	0	0	0	3	0	0	0	0	67	17:45	0	92	18	0	3	0	0	0	0	0	0	113		
6:00	0	30	6	0	6	0	0	0	0	0	0	0	0	42	18:00	0	69	6	0	3	0	0	0	0	0	0	78		
6:15	0	35	8	0	3	0	0	0	0	0	0	0	0	46	18:15	0	78	12	0	2	0	0	0	3	0	0	94		
6:30	1	44	12	0	5	0	0	0	3	0	0	0	0	64	18:30	0	62	6	0	0	0	0	0	0	0	0	68		
6:45	0	77	8	0	2	2	0	0	5	0	0	0	0	93	18:45	0	53	12	0	0	0	0	0	0	0	0	65		
7:00	0	74	12	0	11	0	0	0	0	0	0	0	3	99	19:00	0	53	8	0	0	0	0	0	5	0	0	66		
7:15	1	80	20	5	6	0	0	0	3	0	0	0	0	114	19:15	0	54	4	0	0	2	0	3	5	0	0	67		
7:30	0	92	14	3	8	0	0	0	3	0	0	0	0	118	19:30	2	51	12	0	6	0	0	0	3	0	0	74		
7:45	0	90	16	5	9	0	0	0	5	0	0	0	0	125	19:45	1	42	12	0	0	0	0	3	0	0	0	58		
8:00	0	84	14	5	5	0	0	0	5	0	0	0	0	113	20:00	0	51	8	0	2	0	0	0	0	0	0	61		
8:15	0	66	10	3	3	0	0	0	8	0	0	0	0	89	20:15	0	63	12	0	2	0	0	0	0	0	0	77		
8:30	0	54	6	0	5	0	0	0	5	0	0	0	0	70	20:30	0	36	2	0	3	0	0	0	3	0	0	44		
8:45	1	35	18	0	5	2	0	0	5	0	0	0	0	65	20:45	0	32	8	0	3	0	0	0	3	0	0	45		
9:00	1	54	4	0	6	2	0	0	5	0	0	0	0	72	21:00	0	29	10	0	0	0	0	0	0	0	0	39		
9:15	1	44	10	3	6	2	0	0	3	0	0	0	0	67	21:15	0	39	0	0	3	0	0	0	0	0	0	42		
9:30	1	32	10	3	2	0	0	0	5	0	0	0	0	52	21:30	0	27	6	0	0	0	0	0	3	0	0	36		
9:45	0	41	8	0	3	0	0	0	0	0	0	0	0	52	21:45	0	20	8	0	2	0	0	0	0	0	0	29		
10:00	0	38	22	3	3	0	0	0	3	0	0	0	0	68	22:00	0	27	4	0	0	0	0	0	0	0	0	31		
10:15	0	38	12	0	8	2	0	0	3	0	0	0	0	61	22:15	0	15	2	0	0	0	0	0	0	0	0	17		
10:30	0	48	12	0	5	0	0	0	3	0	0	0	0	67	22:30	0	17	2	0	0	0	0	0	3	0	0	21		
10:45	0	42	16	0	2	0	0	0	10	0	0	0	0	70	22:45	0	14	6	0	2	0	0	0	0	0	0	21		
11:00	0	51	12	0	6	0	0	0	5	5	0	0	0	79	23:00	0	14	2	0	0	0	0	0	0	0	0	16		
11:15	0	51	12	0	2	0	0	0	3	0	0	0	0	67	23:15	0	14	2	0	0	0	0	0	0	0	0	16		
11:30	0	44	8	0	5	2	0	0	3	0	0	0	0	63	23:30	0	3	2	0	0	0	0	0	0	0	0	5		
11:45	0	44	14	0	5	0	0	0	0	0	0	0	0	62	23:45	0	17	2	0	2	0	0	0	0	0	0	20		
TOTAL	9	1,494	350	33	134	12	0	0	10	125	0	0	3	2,169	TOTAL	9	2,619	578	28	167	23	5	25	70	0	5	3	3,533	

AM PEAK HOUR 7:15 AM
AM PEAK VOLUME 470

PM PEAK HOUR 2:45 PM
PM PEAK VOLUME 498

CLASS 1	Class 1 — Motorcycles	CLASS 8	3 to 4 Axles, Single Trailer
CLASS 2	Passenger Cars	CLASS 9	5 Axles, Single Trailer
CLASS 3	2 Axles, 4-Tire Single Units	CLASS 10	6 or More Axles, Single Trailer
CLASS 4	Buses	CLASS 11	5 or Less Axles, Multi-Trailers
CLASS 5	2 Axles, 6-Tire Single Units	CLASS 12	6 Axles, Multi-Trailers
CLASS 6	3 Axles, Single Unit	CLASS 13	7 or More Axles, Multi-Trailers
CLASS 7	4 or More Axles, Single Unit		

TOTAL: AM+PM	18	4,113	928	60	300	35	5	35	195	0	5	3	5	5,701
% OF TOTAL	0.3%	72.1%	16.3%	1.1%	5.3%	0.6%	0.1%	0.6%	3.4%	0.0%	0.1%	0.0%	0.1%	100.0%
Class	1	2	3	4	5	6	7	8	9	10	11	12	13	

APPENDIX C – REPORT SHEETS

Lanes, Volumes, Timings

3: La Cadena Dr

02/13/2020

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			 			 
Traffic Volume (vph)	174	141	470	132	218	1403
Future Volume (vph)	174	141	470	132	218	1403
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	16	12	12	12	12
Storage Length (ft)	0	50		0	255	
Storage Lanes	1	1		1	1	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	0.95
Fr _t		0.850		0.850		
Fl _t Protected	0.950				0.950	
Satd. Flow (prot)	1626	1664	3282	1404	1641	3343
Fl _t Permitted	0.950				0.950	
Satd. Flow (perm)	1626	1664	3282	1404	1641	3343
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		120		147		
Link Speed (mph)	30		45			45
Link Distance (ft)	358		762			1134
Travel Time (s)	8.1		11.5			17.2
Peak Hour Factor	0.95	0.95	0.90	0.90	0.82	0.82
Heavy Vehicles (%)	11%	10%	10%	15%	10%	8%
Adj. Flow (vph)	183	148	522	147	266	1711
Shared Lane Traffic (%)						
Lane Group Flow (vph)	183	148	522	147	266	1711
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	0.85	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Turn Type	Prot	Perm	NA	Perm	Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8		2		
Minimum Split (s)	22.5	22.5	22.5	22.5	9.5	22.5
Total Split (s)	30.0	30.0	40.0	40.0	25.0	65.0
Total Split (%)	31.6%	31.6%	42.1%	42.1%	26.3%	68.4%
Maximum Green (s)	25.5	25.5	35.5	35.5	20.5	60.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	3.0	3.0	3.0	3.0	3.0	3.0
Total Lost Time (s)	7.5	7.5	7.5	7.5	7.5	7.5
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Walk Time (s)	7.0	7.0	7.0	7.0		7.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0		11.0
Pedestrian Calls (#/hr)	0	0	0	0		0
Act Effect Green (s)	22.5	22.5	32.5	32.5	17.5	57.5

Lanes, Volumes, Timings

3: La Cadena Dr

02/13/2020

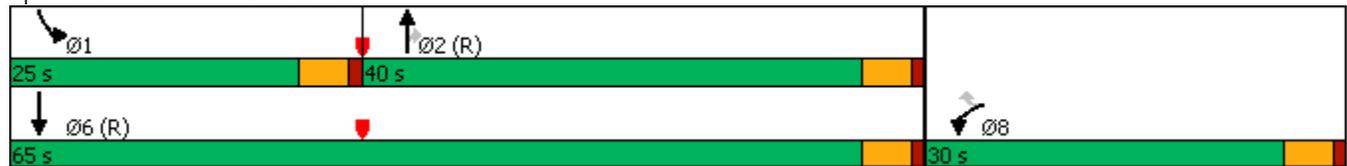


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Actuated g/C Ratio	0.24	0.24	0.34	0.34	0.18	0.61
v/c Ratio	0.48	0.31	0.47	0.25	0.88	0.85
Control Delay	36.0	10.3	26.1	5.1	68.1	20.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.0	10.3	26.1	5.1	68.1	20.3
LOS	D	B	C	A	E	C
Approach Delay	24.5		21.5			26.8
Approach LOS	C		C			C
Queue Length 50th (ft)	95	13	128	0	157	404
Queue Length 95th (ft)	162	62	176	40	#255	421
Internal Link Dist (ft)	278		682			1054
Turn Bay Length (ft)		50			255	
Base Capacity (vph)	385	485	1122	577	302	2023
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.48	0.31	0.47	0.25	0.88	0.85

Intersection Summary

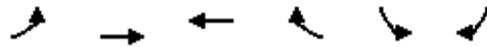
Area Type: Other
 Cycle Length: 95
 Actuated Cycle Length: 95
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green
 Natural Cycle: 70
 Control Type: Pretimed
 Maximum v/c Ratio: 0.88
 Intersection Signal Delay: 25.3
 Intersection LOS: C
 Intersection Capacity Utilization 60.9%
 ICU Level of Service B
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 3: La Cadena Dr



Lanes, Volumes, Timings
6: Barton Rd & Terrance Ave

02/13/2020



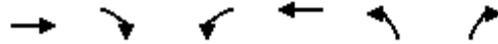
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑	↗	↘	
Traffic Volume (vph)	6	346	310	3	5	29
Future Volume (vph)	6	346	310	3	5	29
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t				0.850	0.886	
Fl _t Protected		0.999			0.992	
Satd. Flow (prot)	0	1723	1727	1615	954	0
Fl _t Permitted		0.999			0.992	
Satd. Flow (perm)	0	1723	1727	1615	954	0
Link Speed (mph)		35	35		30	
Link Distance (ft)		358	193		706	
Travel Time (s)		7.0	3.8		16.0	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.75	0.75
Heavy Vehicles (%)	20%	10%	10%	0%	25%	84%
Adj. Flow (vph)	7	384	344	3	7	39
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	391	344	3	46	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	33.0%
Analysis Period (min)	15
	ICU Level of Service A

Lanes, Volumes, Timings
7: Terrance Ave & Barton Rd

02/13/2020



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑			↑	↑	
Traffic Volume (vph)	319	38	21	291	20	15
Future Volume (vph)	319	38	21	291	20	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	16	12	12	12	16	16
Grade (%)	0%			2%	0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.986				0.942	
Flt Protected				0.997	0.972	
Satd. Flow (prot)	1885	0	0	1639	1267	0
Flt Permitted				0.997	0.972	
Satd. Flow (perm)	1885	0	0	1639	1267	0
Link Speed (mph)	35			35	30	
Link Distance (ft)	193			1279	557	
Travel Time (s)	3.8			24.9	12.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.63	0.63
Heavy Vehicles (%)	8%	52%	89%	9%	50%	63%
Adj. Flow (vph)	347	41	23	316	32	24
Shared Lane Traffic (%)						
Lane Group Flow (vph)	388	0	0	339	56	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	16	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	0.85	1.00	1.01	1.01	0.85	0.85
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	42.6%
ICU Level of Service	A
Analysis Period (min)	15

Lanes, Volumes, Timings
10: Barton Rd & Grand Terrance Road

02/13/2020

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	36	301	0	0	279	30	0	0	0	66	0	48
Future Volume (vph)	36	301	0	0	279	30	0	0	0	66	0	48
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	16	12	12	12	12	16	12	16
Grade (%)		2%			0%			0%			0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t					0.987							0.865
Fl _t Protected		0.995								0.950		
Satd. Flow (prot)	0	1707	0	0	1864	0	0	0	0	1894	0	0
Fl _t Permitted		0.995								0.950		
Satd. Flow (perm)	0	1707	0	0	1864	0	0	0	0	1894	0	0
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		1279			238			67			665	
Travel Time (s)		24.9			4.6			1.5			15.1	
Peak Hour Factor	0.88	0.88	0.92	0.92	0.93	0.93	0.92	0.92	0.92	0.75	0.92	0.75
Heavy Vehicles (%)	15%	9%	2%	2%	14%	14%	2%	2%	2%	8%	2%	7%
Adj. Flow (vph)	41	342	0	0	300	32	0	0	0	88	0	64
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	383	0	0	332	0	0	0	0	88	64	0
Enter Blocked Intersection	No	No	No	No	No	No						
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			16			16	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.00	0.85	1.00	1.00	1.00	1.00	0.85	1.00	0.85
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization Err%	ICU Level of Service H											
Analysis Period (min)	15											

Lanes, Volumes, Timings

3: La Cadena Dr

02/13/2020

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	154	186	818	170	186	975
Future Volume (vph)	154	186	818	170	186	975
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	16	12	12	12	12
Storage Length (ft)	0	50		0	255	
Storage Lanes	1	1		1	1	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	0.95
Fr _t		0.850		0.850		
Fl _t Protected	0.950				0.950	
Satd. Flow (prot)	1656	1578	3223	1223	1612	3252
Fl _t Permitted	0.950				0.950	
Satd. Flow (perm)	1656	1578	3223	1223	1612	3252
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		198		185		
Link Speed (mph)	30		45			45
Link Distance (ft)	358		688			1197
Travel Time (s)	8.1		10.4			18.1
Peak Hour Factor	0.94	0.94	0.92	0.92	0.96	0.96
Heavy Vehicles (%)	9%	16%	12%	32%	12%	11%
Adj. Flow (vph)	164	198	889	185	194	1016
Shared Lane Traffic (%)						
Lane Group Flow (vph)	164	198	889	185	194	1016
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	0.85	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Turn Type	Prot	Perm	NA	Perm	Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8		2		
Minimum Split (s)	22.5	22.5	22.5	22.5	9.5	22.5
Total Split (s)	25.0	25.0	30.0	30.0	20.0	50.0
Total Split (%)	33.3%	33.3%	40.0%	40.0%	26.7%	66.7%
Maximum Green (s)	20.5	20.5	25.5	25.5	15.5	45.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	3.0	3.0	3.0	3.0	3.0	3.0
Total Lost Time (s)	7.5	7.5	7.5	7.5	7.5	7.5
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Walk Time (s)	7.0	7.0	7.0	7.0		7.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0		11.0
Pedestrian Calls (#/hr)	0	0	0	0		0
Act Effect Green (s)	17.5	17.5	22.5	22.5	12.5	42.5

Lanes, Volumes, Timings
3: La Cadena Dr

02/13/2020



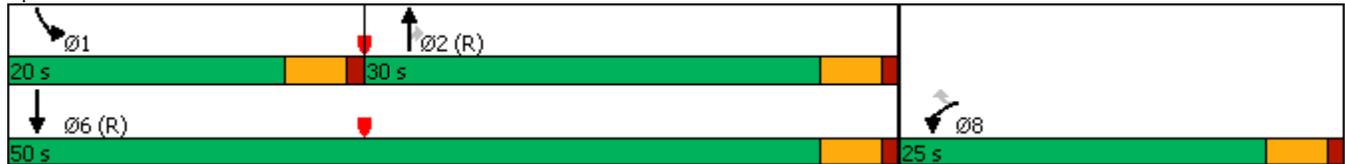
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Actuated g/C Ratio	0.23	0.23	0.30	0.30	0.17	0.57
v/c Ratio	0.42	0.38	0.92	0.37	0.72	0.55
Control Delay	28.5	6.3	42.0	5.9	47.2	11.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	28.5	6.3	42.0	5.9	47.2	11.7
LOS	C	A	D	A	D	B
Approach Delay	16.4		35.8			17.4
Approach LOS	B		D			B
Queue Length 50th (ft)	65	0	208	0	87	143
Queue Length 95th (ft)	120	48	#323	43	#181	194
Internal Link Dist (ft)	278		608			1117
Turn Bay Length (ft)		50			255	
Base Capacity (vph)	386	520	966	496	268	1842
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.42	0.38	0.92	0.37	0.72	0.55

Intersection Summary

Area Type: Other
 Cycle Length: 75
 Actuated Cycle Length: 75
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green
 Natural Cycle: 70
 Control Type: Pretimed
 Maximum v/c Ratio: 0.92
 Intersection Signal Delay: 24.7
 Intersection LOS: C
 Intersection Capacity Utilization 60.2%
 ICU Level of Service B
 Analysis Period (min) 15

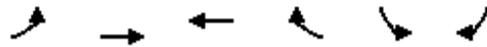
95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 3: La Cadena Dr



Lanes, Volumes, Timings
6: Barton Rd & Terrance Ave

02/13/2020



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑	↗	↘	
Traffic Volume (vph)	28	426	333	13	2	6
Future Volume (vph)	28	426	333	13	2	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t				0.850	0.899	
Fl _t Protected		0.997			0.988	
Satd. Flow (prot)	0	1587	1696	991	1436	0
Fl _t Permitted		0.997			0.988	
Satd. Flow (perm)	0	1587	1696	991	1436	0
Link Speed (mph)		35	35		30	
Link Distance (ft)		358	193		706	
Travel Time (s)		7.0	3.8		16.0	
Peak Hour Factor	0.94	0.94	0.92	0.92	0.50	0.50
Heavy Vehicles (%)	55%	17%	12%	63%	10%	20%
Adj. Flow (vph)	30	453	362	14	4	12
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	483	362	14	16	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	54.8%
ICU Level of Service	A
Analysis Period (min)	15

Lanes, Volumes, Timings
7: Terrance Ave & Barton Rd

02/13/2020



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑			↑	↑	
Traffic Volume (vph)	280	92	23	314	81	60
Future Volume (vph)	280	92	23	314	81	60
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	16	12	12	12	16	16
Grade (%)	0%			2%	0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.967				0.943	
Flt Protected				0.997	0.972	
Satd. Flow (prot)	1691	0	0	1676	1611	0
Flt Permitted				0.997	0.972	
Satd. Flow (perm)	1691	0	0	1676	1611	0
Link Speed (mph)	35			35	30	
Link Distance (ft)	193			1279	557	
Travel Time (s)	3.8			24.9	12.7	
Peak Hour Factor	0.95	0.95	0.87	0.87	0.62	0.62
Heavy Vehicles (%)	11%	60%	38%	10%	17%	30%
Adj. Flow (vph)	295	97	26	361	131	97
Shared Lane Traffic (%)						
Lane Group Flow (vph)	392	0	0	387	228	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	16	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	0.85	1.00	1.01	1.01	0.85	0.85
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	50.3%
ICU Level of Service	A
Analysis Period (min)	15

Lanes, Volumes, Timings
 10: Barton Rd & Grand Terrance Road

02/13/2020



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↔		↘	↙
Traffic Volume (vph)	52	330	335	57	44	23
Future Volume (vph)	52	330	335	57	44	23
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	16	12	16	16
Grade (%)		2%	0%		0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.980		0.953	
Flt Protected		0.993			0.968	
Satd. Flow (prot)	0	1689	1851	0	1508	0
Flt Permitted		0.993			0.968	
Satd. Flow (perm)	0	1689	1851	0	1508	0
Link Speed (mph)		35	35		30	
Link Distance (ft)		1279	238		665	
Travel Time (s)		24.9	4.6		15.1	
Peak Hour Factor	0.90	0.90	0.92	0.92	0.86	0.86
Heavy Vehicles (%)	8%	11%	13%	20%	29%	37%
Adj. Flow (vph)	58	367	364	62	51	27
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	425	426	0	78	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		16	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	0.85	1.00	0.85	0.85
Turning Speed (mph)	15			9	15	9
Sign Control		Stop	Stop		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	55.2%
ICU Level of Service	B
Analysis Period (min)	15

Lanes, Volumes, Timings

3: La Cadena Dr

02/13/2020

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			 			 
Traffic Volume (vph)	40	32	842	13	23	1641
Future Volume (vph)	40	32	842	13	23	1641
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	16	12	12	12	12
Storage Length (ft)	0	50		0	255	
Storage Lanes	1	1		1	1	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	0.95
Fr _t		0.850		0.850		
Fl _t Protected	0.950				0.950	
Satd. Flow (prot)	1626	1664	3282	1404	1641	3343
Fl _t Permitted	0.950				0.950	
Satd. Flow (perm)	1626	1664	3282	1404	1641	3343
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		34		14		
Link Speed (mph)	30		45			45
Link Distance (ft)	358		762			1379
Travel Time (s)	8.1		11.5			20.9
Peak Hour Factor	0.95	0.95	0.90	0.90	0.82	0.82
Heavy Vehicles (%)	11%	10%	10%	15%	10%	8%
Adj. Flow (vph)	42	34	936	14	28	2001
Shared Lane Traffic (%)						
Lane Group Flow (vph)	42	34	936	14	28	2001
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	0.85	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Turn Type	Prot	Perm	NA	Perm	Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8		2		
Minimum Split (s)	22.5	22.5	22.5	22.5	9.5	22.5
Total Split (s)	25.0	25.0	50.0	50.0	15.0	65.0
Total Split (%)	27.8%	27.8%	55.6%	55.6%	16.7%	72.2%
Maximum Green (s)	20.5	20.5	45.5	45.5	10.5	60.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	3.0	3.0	3.0	3.0	3.0	3.0
Total Lost Time (s)	7.5	7.5	7.5	7.5	7.5	7.5
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Walk Time (s)	7.0	7.0	7.0	7.0		7.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0		11.0
Pedestrian Calls (#/hr)	0	0	0	0		0
Act Effect Green (s)	17.5	17.5	42.5	42.5	7.5	57.5

Lanes, Volumes, Timings

3: La Cadena Dr

02/13/2020

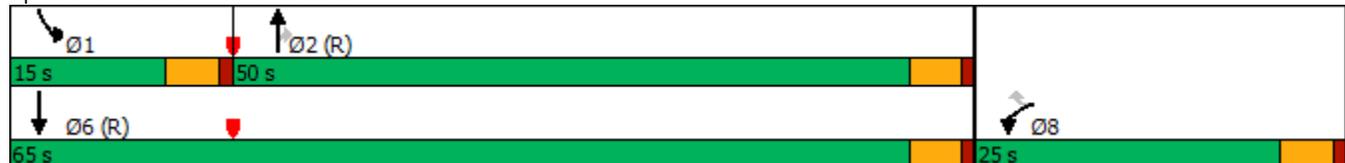


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Actuated g/C Ratio	0.19	0.19	0.47	0.47	0.08	0.64
v/c Ratio	0.13	0.10	0.60	0.02	0.21	0.94
Control Delay	31.4	11.3	19.6	6.3	42.4	25.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	31.4	11.3	19.6	6.3	42.4	25.1
LOS	C	B	B	A	D	C
Approach Delay	22.4		19.4			25.3
Approach LOS	C		B			C
Queue Length 50th (ft)	20	0	198	0	15	483
Queue Length 95th (ft)	48	25	261	10	38	495
Internal Link Dist (ft)	278		682			1299
Turn Bay Length (ft)		50			255	
Base Capacity (vph)	316	350	1549	670	136	2135
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.13	0.10	0.60	0.02	0.21	0.94

Intersection Summary

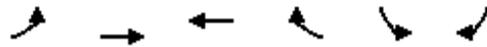
Area Type:	Other
Cycle Length:	90
Actuated Cycle Length:	90
Offset:	0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle:	80
Control Type:	Pretimed
Maximum v/c Ratio:	0.94
Intersection Signal Delay:	23.4
Intersection LOS:	C
Intersection Capacity Utilization	62.0%
ICU Level of Service	B
Analysis Period (min)	15

Splits and Phases: 3: La Cadena Dr



Lanes, Volumes, Timings
6: Barton Rd & Terrance Ave

02/13/2020



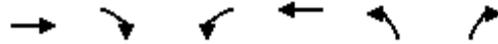
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑	↗	↘	
Traffic Volume (vph)	8	28	46	8	22	29
Future Volume (vph)	8	28	46	8	22	29
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t				0.850	0.923	
Fl _t Protected		0.989			0.979	
Satd. Flow (prot)	0	1674	1727	1615	1081	0
Fl _t Permitted		0.989			0.979	
Satd. Flow (perm)	0	1674	1727	1615	1081	0
Link Speed (mph)		35	35		30	
Link Distance (ft)		358	193		706	
Travel Time (s)		7.0	3.8		16.0	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.75	0.75
Heavy Vehicles (%)	20%	10%	10%	0%	25%	84%
Adj. Flow (vph)	9	31	51	9	29	39
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	40	51	9	68	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	18.4%
Analysis Period (min)	15
	ICU Level of Service A

Lanes, Volumes, Timings
7: Terrance Ave & Barton Rd

02/13/2020



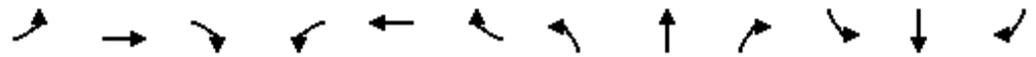
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	15	32	24	15	35	7
Future Volume (vph)	15	32	24	15	35	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	16	12	12	12	16	16
Grade (%)	0%			2%	0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.907				0.978	
Flt Protected				0.970	0.960	
Satd. Flow (prot)	1413	0	0	1151	1329	0
Flt Permitted				0.970	0.960	
Satd. Flow (perm)	1413	0	0	1151	1329	0
Link Speed (mph)	35			35	30	
Link Distance (ft)	193			1279	807	
Travel Time (s)	3.8			24.9	18.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.63	0.63
Heavy Vehicles (%)	8%	52%	89%	9%	50%	63%
Adj. Flow (vph)	16	35	26	16	56	11
Shared Lane Traffic (%)						
Lane Group Flow (vph)	51	0	0	42	67	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	16	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	0.85	1.00	1.01	1.01	0.85	0.85
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	18.8%
ICU Level of Service	A
Analysis Period (min)	15

Lanes, Volumes, Timings
10: Barton Rd & Grand Terrance Road

02/13/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	11	15	0	0	37	35	0	0	0	39	0	4
Future Volume (vph)	11	15	0	0	37	35	0	0	0	39	0	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	16	12	12	12	12	16	12	16
Grade (%)		2%			0%			0%			0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t					0.934							0.988
Fl _t Protected		0.979										0.956
Satd. Flow (prot)	0	1650	0	0	1764	0	0	1863	0	0	1663	0
Fl _t Permitted												0.956
Satd. Flow (perm)	0	1685	0	0	1764	0	0	1863	0	0	1663	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					38							73
Link Speed (mph)		35			35			30				30
Link Distance (ft)		1279			363			228				665
Travel Time (s)		24.9			7.1			5.2				15.1
Peak Hour Factor	0.88	0.88	0.92	0.92	0.93	0.93	0.92	0.92	0.92	0.75	0.92	0.75
Heavy Vehicles (%)	15%	9%	2%	2%	14%	14%	2%	2%	2%	8%	2%	7%
Adj. Flow (vph)	13	17	0	0	40	38	0	0	0	52	0	5
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	30	0	0	78	0	0	0	0	0	57	0
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.00	0.85	1.00	1.00	1.00	1.00	0.85	1.00	0.85
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1		1	1	
Detector Template	Left	Thru										
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	100		20	100		20	100		20	100	
Detector 1 Type	Cl+Ex	Cl+Ex										
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm	NA		NA						Split	NA	
Protected Phases		4			8			2			6	6
Permitted Phases	4			8			2					
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	22.5	22.5		25.0	25.0		25.0	25.0		25.0	25.0	
Total Split (s)	40.0	40.0		40.0	40.0		25.0	25.0		25.0	25.0	

Lanes, Volumes, Timings
 10: Barton Rd & Grand Terrance Road

02/13/2020

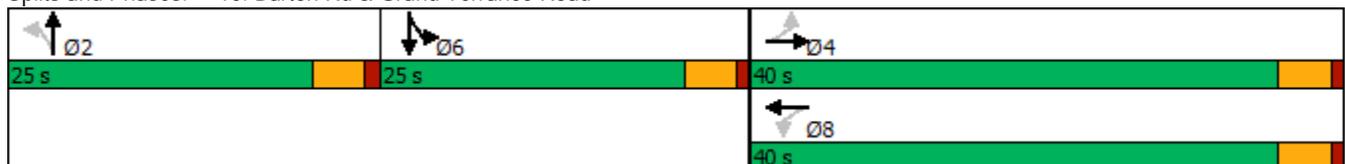


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (%)	44.4%	44.4%		44.4%	44.4%		27.8%	27.8%		27.8%	27.8%	
Maximum Green (s)	35.5	35.5		35.5	35.5		20.5	20.5		20.5	20.5	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		4.5			4.5			4.5			4.5	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Min	Min		Min	Min	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		6.4			6.4						5.9	
Actuated g/C Ratio		0.26			0.26						0.24	
v/c Ratio		0.07			0.16						0.13	
Control Delay		9.6			7.0						4.0	
Queue Delay		0.0			0.0						0.0	
Total Delay		9.6			7.0						4.0	
LOS		A			A						A	
Approach Delay		9.6			7.0						4.0	
Approach LOS		A			A						A	
Queue Length 50th (ft)		2			2						0	
Queue Length 95th (ft)		14			23						13	
Internal Link Dist (ft)		1199			283			148			585	
Turn Bay Length (ft)												
Base Capacity (vph)		1685			1764						1434	
Starvation Cap Reductn		0			0						0	
Spillback Cap Reductn		0			0						0	
Storage Cap Reductn		0			0						0	
Reduced v/c Ratio		0.02			0.04						0.04	

Intersection Summary

Area Type:	Other
Cycle Length:	90
Actuated Cycle Length:	24.8
Natural Cycle:	75
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.16
Intersection Signal Delay:	6.4
Intersection LOS:	A
Intersection Capacity Utilization:	19.7%
ICU Level of Service:	A
Analysis Period (min):	15

Splits and Phases: 10: Barton Rd & Grand Terrance Road



Lanes, Volumes, Timings

3: La Cadena Dr

02/13/2020

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	45	51	958	33	38	1233
Future Volume (vph)	45	51	958	33	38	1233
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	16	12	12	12	12
Storage Length (ft)	0	50		0	255	
Storage Lanes	1	1		1	1	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	0.95
Fr _t		0.850		0.850		
Fl _t Protected	0.950				0.950	
Satd. Flow (prot)	1626	1664	3282	1404	1641	3343
Fl _t Permitted	0.950				0.950	
Satd. Flow (perm)	1626	1664	3282	1404	1641	3343
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		54		37		
Link Speed (mph)	30		45			45
Link Distance (ft)	358		1109			1552
Travel Time (s)	8.1		16.8			23.5
Peak Hour Factor	0.95	0.95	0.90	0.90	0.82	0.82
Heavy Vehicles (%)	11%	10%	10%	15%	10%	8%
Adj. Flow (vph)	47	54	1064	37	46	1504
Shared Lane Traffic (%)						
Lane Group Flow (vph)	47	54	1064	37	46	1504
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	0.85	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Turn Type	Prot	Perm	NA	Perm	Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8		2		
Minimum Split (s)	22.5	22.5	22.5	22.5	9.5	22.5
Total Split (s)	30.0	30.0	40.0	40.0	25.0	65.0
Total Split (%)	31.6%	31.6%	42.1%	42.1%	26.3%	68.4%
Maximum Green (s)	25.5	25.5	35.5	35.5	20.5	60.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	3.0	3.0	3.0	3.0	3.0	3.0
Total Lost Time (s)	7.5	7.5	7.5	7.5	7.5	7.5
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Walk Time (s)	7.0	7.0	7.0	7.0		7.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0		11.0
Pedestrian Calls (#/hr)	0	0	0	0		0
Act Effect Green (s)	22.5	22.5	32.5	32.5	17.5	57.5

Lanes, Volumes, Timings
3: La Cadena Dr

02/13/2020

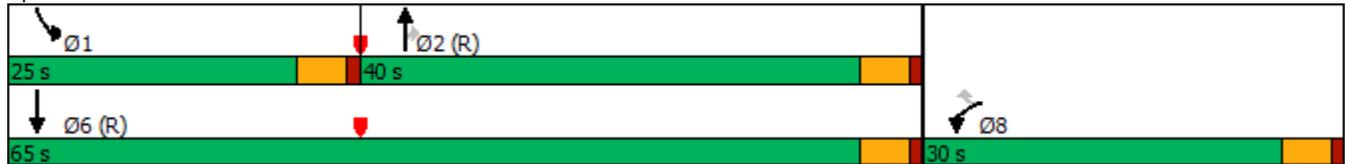


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Actuated g/C Ratio	0.24	0.24	0.34	0.34	0.18	0.61
v/c Ratio	0.12	0.12	0.95	0.07	0.15	0.74
Control Delay	29.6	9.1	48.4	7.6	34.1	16.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.6	9.1	48.4	7.6	34.1	16.4
LOS	C	A	D	A	C	B
Approach Delay	18.7		47.0			16.9
Approach LOS	B		D			B
Queue Length 50th (ft)	22	0	324	0	24	315
Queue Length 95th (ft)	51	29	#461	21	50	335
Internal Link Dist (ft)	278		1029			1472
Turn Bay Length (ft)		50			255	
Base Capacity (vph)	385	435	1122	504	302	2023
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.12	0.12	0.95	0.07	0.15	0.74

Intersection Summary

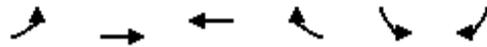
Area Type: Other
 Cycle Length: 95
 Actuated Cycle Length: 95
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green
 Natural Cycle: 65
 Control Type: Pretimed
 Maximum v/c Ratio: 0.95
 Intersection Signal Delay: 29.0 Intersection LOS: C
 Intersection Capacity Utilization 50.8% ICU Level of Service A
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 3: La Cadena Dr



Lanes, Volumes, Timings
6: Barton Rd & Terrance Ave

02/13/2020



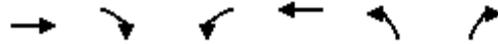
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑	↗	↘	
Traffic Volume (vph)	25	48	80	19	22	17
Future Volume (vph)	25	48	80	19	22	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t				0.850	0.940	
Fl _t Protected		0.983			0.973	
Satd. Flow (prot)	0	1646	1727	1615	1150	0
Fl _t Permitted		0.983			0.973	
Satd. Flow (perm)	0	1646	1727	1615	1150	0
Link Speed (mph)		35	35		30	
Link Distance (ft)		358	193		706	
Travel Time (s)		7.0	3.8		16.0	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.75	0.75
Heavy Vehicles (%)	20%	10%	10%	0%	25%	84%
Adj. Flow (vph)	28	53	89	21	29	23
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	81	89	21	52	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	20.6%
ICU Level of Service	A
Analysis Period (min)	15

Lanes, Volumes, Timings
7: Terrance Ave & Barton Rd

02/13/2020



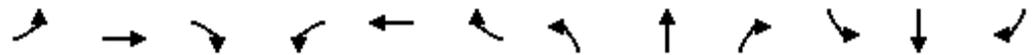
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑			↑	↑	
Traffic Volume (vph)	15	69	42	15	105	44
Future Volume (vph)	15	69	42	15	105	44
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	16	12	12	12	16	16
Grade (%)	0%			2%	0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.889				0.960	
Flt Protected				0.964	0.966	
Satd. Flow (prot)	1327	0	0	1077	1298	0
Flt Permitted				0.964	0.966	
Satd. Flow (perm)	1327	0	0	1077	1298	0
Link Speed (mph)	35			35	30	
Link Distance (ft)	193			1279	557	
Travel Time (s)	3.8			24.9	12.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.63	0.63
Heavy Vehicles (%)	8%	52%	89%	9%	50%	63%
Adj. Flow (vph)	16	75	46	16	167	70
Shared Lane Traffic (%)						
Lane Group Flow (vph)	91	0	0	62	237	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	16	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	0.85	1.00	1.01	1.01	0.85	0.85
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	25.0%
ICU Level of Service	A
Analysis Period (min)	15

Lanes, Volumes, Timings
10: Barton Rd & Grand Terrance Road

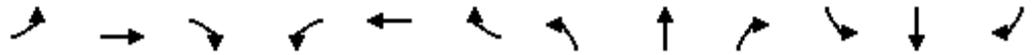
02/13/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	52	16	0	0	56	73	0	0	0	25	0	0
Future Volume (vph)	52	16	0	0	56	73	0	0	0	25	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	16	12	12	12	12	16	12	16
Grade (%)		2%			0%			0%			0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t					0.924							
Fl _t Protected		0.963									0.950	
Satd. Flow (prot)	0	1595	0	0	1745	0	0	1863	0	0	1671	0
Fl _t Permitted		0.688									0.950	
Satd. Flow (perm)	0	1139	0	0	1745	0	0	1863	0	0	1671	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					78							
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		1279			356			165			665	
Travel Time (s)		24.9			6.9			3.8			15.1	
Peak Hour Factor	0.88	0.88	0.92	0.92	0.93	0.93	0.92	0.92	0.92	0.75	0.92	0.75
Heavy Vehicles (%)	15%	9%	2%	2%	14%	14%	2%	2%	2%	8%	2%	7%
Adj. Flow (vph)	59	18	0	0	60	78	0	0	0	33	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	77	0	0	138	0	0	0	0	0	33	0
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.00	0.85	1.00	1.00	1.00	1.00	0.85	1.00	0.85
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1		1	1	
Detector Template	Left	Thru										
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	100		20	100		20	100		20	100	
Detector 1 Type	Cl+Ex	Cl+Ex										
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm	NA		NA						Split	NA	
Protected Phases		4			8			2		6	6	
Permitted Phases	4			8			2					
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	22.5	22.5		22.5	22.5		22.5	22.5		22.5	22.5	
Total Split (s)	40.0	40.0		40.0	40.0		25.0	25.0		25.0	25.0	

Lanes, Volumes, Timings
 10: Barton Rd & Grand Terrance Road

02/13/2020

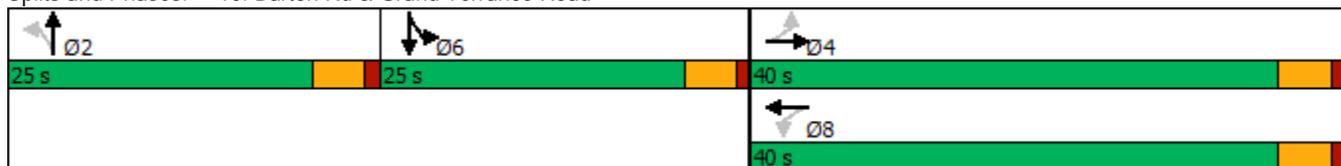


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (%)	44.4%	44.4%		44.4%	44.4%		27.8%	27.8%		27.8%	27.8%	
Maximum Green (s)	35.5	35.5		35.5	35.5		20.5	20.5		20.5	20.5	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		4.5			4.5			4.5			4.5	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Min	Min		Min	Min	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		7.5			7.5						6.4	
Actuated g/C Ratio		0.25			0.25						0.21	
v/c Ratio		0.28			0.28						0.10	
Control Delay		13.4			7.3						12.2	
Queue Delay		0.0			0.0						0.0	
Total Delay		13.4			7.3						12.2	
LOS		B			A						B	
Approach Delay		13.4			7.3						12.2	
Approach LOS		B			A						B	
Queue Length 50th (ft)		11			8						5	
Queue Length 95th (ft)		32			34						19	
Internal Link Dist (ft)		1199			276			85			585	
Turn Bay Length (ft)												
Base Capacity (vph)		1137			1742						1159	
Starvation Cap Reductn		0			0						0	
Spillback Cap Reductn		0			0						0	
Storage Cap Reductn		0			0						0	
Reduced v/c Ratio		0.07			0.08						0.03	

Intersection Summary

Area Type:	Other
Cycle Length:	90
Actuated Cycle Length:	30.6
Natural Cycle:	70
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.28
Intersection Signal Delay:	9.9
Intersection LOS:	A
Intersection Capacity Utilization:	27.0%
ICU Level of Service:	A
Analysis Period (min):	15

Splits and Phases: 10: Barton Rd & Grand Terrance Road



Lanes, Volumes, Timings

3: La Cadena Dr

02/13/2020

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			 			 
Traffic Volume (vph)	202	174	441	118	226	1428
Future Volume (vph)	202	174	441	118	226	1428
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	16	12	12	12	12
Storage Length (ft)	0	50		0	255	
Storage Lanes	1	1		1	1	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	0.95
Fr _t		0.850		0.850		
Fl _t Protected	0.950				0.950	
Satd. Flow (prot)	1626	1743	3282	1442	1656	3343
Fl _t Permitted	0.950				0.950	
Satd. Flow (perm)	1626	1743	3282	1442	1656	3343
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		161		131		
Link Speed (mph)	30		45			45
Link Distance (ft)	358		721			906
Travel Time (s)	8.1		10.9			13.7
Peak Hour Factor	0.95	0.95	0.90	0.90	0.82	0.82
Heavy Vehicles (%)	11%	5%	10%	12%	9%	8%
Adj. Flow (vph)	213	183	490	131	276	1741
Shared Lane Traffic (%)						
Lane Group Flow (vph)	213	183	490	131	276	1741
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	0.85	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Turn Type	Prot	Perm	NA	Perm	Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8		2		
Minimum Split (s)	22.5	22.5	22.5	22.5	9.5	22.5
Total Split (s)	25.0	25.0	35.0	35.0	15.0	50.0
Total Split (%)	33.3%	33.3%	46.7%	46.7%	20.0%	66.7%
Maximum Green (s)	20.5	20.5	30.5	30.5	10.5	45.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	3.0	3.0	3.0	3.0	3.0	3.0
Total Lost Time (s)	7.5	7.5	7.5	7.5	7.5	7.5
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Walk Time (s)	7.0	7.0	7.0	7.0		7.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0		11.0
Pedestrian Calls (#/hr)	0	0	0	0		0
Act Effect Green (s)	17.5	17.5	27.5	27.5	7.5	42.5

Opening Year AM

Lanes, Volumes, Timings

3: La Cadena Dr

02/13/2020

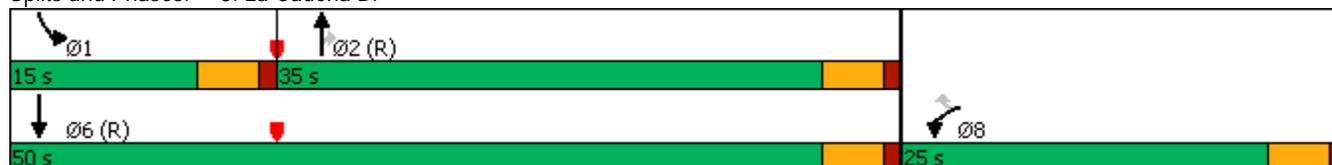


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Actuated g/C Ratio	0.23	0.23	0.37	0.37	0.10	0.57
v/c Ratio	0.56	0.35	0.41	0.21	1.67	0.92
Control Delay	32.0	7.9	19.0	4.3	354.6	24.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.0	7.9	19.0	4.3	354.6	24.5
LOS	C	A	B	A	F	C
Approach Delay	20.9		15.9			69.7
Approach LOS	C		B			E
Queue Length 50th (ft)	88	8	87	0	-191	352
Queue Length 95th (ft)	154	55	127	32	#294	386
Internal Link Dist (ft)	278		641			826
Turn Bay Length (ft)		50			255	
Base Capacity (vph)	379	530	1203	611	165	1894
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.56	0.35	0.41	0.21	1.67	0.92

Intersection Summary

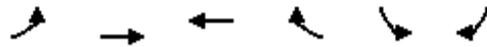
Area Type: Other
 Cycle Length: 75
 Actuated Cycle Length: 75
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green
 Natural Cycle: 70
 Control Type: Pretimed
 Maximum v/c Ratio: 1.67
 Intersection Signal Delay: 52.3
 Intersection LOS: D
 Intersection Capacity Utilization 63.2%
 ICU Level of Service B
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 3: La Cadena Dr



Lanes, Volumes, Timings
6: Barton Rd & Terrace Ave

02/13/2020



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑	↗	↘	
Traffic Volume (vph)	27	368	340	14	15	36
Future Volume (vph)	27	368	340	14	15	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t				0.850	0.905	
Fl _t Protected		0.997			0.986	
Satd. Flow (prot)	0	1711	1759	1615	1017	0
Fl _t Permitted		0.997			0.986	
Satd. Flow (perm)	0	1711	1759	1615	1017	0
Link Speed (mph)		35	35		30	
Link Distance (ft)		358	193		706	
Travel Time (s)		7.0	3.8		16.0	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.75	0.75
Heavy Vehicles (%)	20%	10%	8%	0%	25%	84%
Adj. Flow (vph)	30	409	378	16	20	48
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	439	378	16	68	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	51.6%
Analysis Period (min)	15
	ICU Level of Service A

Lanes, Volumes, Timings
7: S Terrance Ave & Barton Rd

02/13/2020



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	350	32	15	318	20	17
Future Volume (vph)	350	32	15	318	20	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	16	12	12	12	16	16
Grade (%)	0%			2%	0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.989				0.938	
Flt Protected				0.998	0.974	
Satd. Flow (prot)	1906	0	0	1668	1262	0
Flt Permitted				0.998	0.974	
Satd. Flow (perm)	1906	0	0	1668	1262	0
Link Speed (mph)	35			35	30	
Link Distance (ft)	193			1279	557	
Travel Time (s)	3.8			24.9	12.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.63	0.63
Heavy Vehicles (%)	8%	52%	89%	9%	50%	63%
Adj. Flow (vph)	380	35	16	346	32	27
Shared Lane Traffic (%)						
Lane Group Flow (vph)	415	0	0	362	59	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	16	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	0.85	1.00	1.01	1.01	0.85	0.85
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	38.9%
ICU Level of Service	A
Analysis Period (min)	15

Lanes, Volumes, Timings
10: Barton Rd & Grand Terrance Rd

02/13/2020

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	40	330	0	0	300	35	0	0	0	77	0	59
Future Volume (vph)	40	330	0	0	300	35	0	0	0	77	0	59
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	16	12	12	12	12	16	12	16
Storage Length (ft)	90		0	90		90	0		0	0		0
Storage Lanes	1		0	1		1	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t						0.850						0.941
Fl _t Protected	0.950											0.972
Satd. Flow (prot)	1570	1743	0	1863	3589	1599	0	1900	0	0	1616	0
Fl _t Permitted	0.950											0.824
Satd. Flow (perm)	1570	1743	0	1863	3589	1599	0	1900	0	0	1370	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						121						121
Link Speed (mph)		35			35			30				30
Link Distance (ft)		1279			238			74				665
Travel Time (s)		24.9			4.6			1.7				15.1
Peak Hour Factor	0.88	0.88	0.92	0.92	0.93	0.93	0.92	0.92	0.92	0.75	0.92	0.75
Heavy Vehicles (%)	15%	9%	2%	2%	14%	1%	0%	0%	0%	8%	0%	7%
Adj. Flow (vph)	45	375	0	0	323	38	0	0	0	103	0	79
Shared Lane Traffic (%)												
Lane Group Flow (vph)	45	375	0	0	323	38	0	0	0	0	182	0
Enter Blocked Intersection	No	No	No	No	No	No						
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0				0
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	0.85	1.00	1.00	1.00	1.00	0.85	1.00	0.85
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1	1	1	1		1	1	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100	20	20	100		20	100	
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	100		20	100	20	20	100		20	100	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Turn Type	Prot	NA		Prot	NA	Perm				Perm	NA	
Protected Phases	5	2		1	6			3				4
Permitted Phases						6	3			4		
Detector Phase	5	2		1	6	6	3	3		4		4
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0		5.0

Opening Year AM

Lanes, Volumes, Timings
 10: Barton Rd & Grand Terrance Rd

02/13/2020

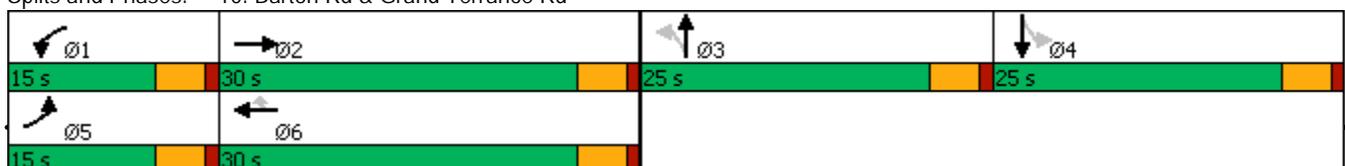


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	9.5	22.5		9.5	22.5	22.5	22.5	22.5		22.5	22.5	
Total Split (s)	15.0	30.0		15.0	30.0	30.0	25.0	25.0		25.0	25.0	
Total Split (%)	15.8%	31.6%		15.8%	31.6%	31.6%	26.3%	26.3%		26.3%	26.3%	
Maximum Green (s)	10.5	25.5		10.5	25.5	25.5	20.5	20.5		20.5	20.5	
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	3.0	3.0		3.0	3.0	3.0		3.0			3.0	
Total Lost Time (s)	7.5	7.5		7.5	7.5	7.5		7.5			7.5	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lead		Lag	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	Max		None	Max	Max	Max	Max		None	None	
Walk Time (s)		7.0			7.0	7.0	7.0	7.0		7.0	7.0	
Flash Dont Walk (s)		11.0			11.0	11.0	11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)		0			0	0	0	0		0	0	
Act Effect Green (s)	4.7	30.3			22.9	22.9						6.7
Actuated g/C Ratio	0.06	0.39			0.29	0.29						0.09
v/c Ratio	0.48	0.55			0.31	0.07						0.79
Control Delay	55.1	22.3			24.5	0.2						38.8
Queue Delay	0.0	0.0			0.0	0.0						0.0
Total Delay	55.1	22.3			24.5	0.2						38.8
LOS	E	C			C	A						D
Approach Delay		25.9			22.0							38.8
Approach LOS		C			C							D
Queue Length 50th (ft)	23	134			67	0						31
Queue Length 95th (ft)	58	239			121	0						99
Internal Link Dist (ft)		1199			158			1				585
Turn Bay Length (ft)	90					90						
Base Capacity (vph)	154	678			1058	556						407
Starvation Cap Reductn	0	0			0	0						0
Spillback Cap Reductn	0	0			0	0						0
Storage Cap Reductn	0	0			0	0						0
Reduced v/c Ratio	0.29	0.55			0.31	0.07						0.45

Intersection Summary

Area Type:	Other
Cycle Length:	95
Actuated Cycle Length:	77.8
Natural Cycle:	80
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	0.79
Intersection Signal Delay:	26.9
Intersection LOS:	C
Intersection Capacity Utilization:	48.2%
ICU Level of Service:	A
Analysis Period (min):	15

Splits and Phases: 10: Barton Rd & Grand Terrance Rd



Lanes, Volumes, Timings

3: La Cadena Dr

02/13/2020

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	191	209	817	160	287	970
Future Volume (vph)	191	209	817	160	287	970
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	16	12	12	12	12
Storage Length (ft)	0	20		0	255	
Storage Lanes	1	1		1	1	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	0.95
Fr _t		0.850		0.850		
Fl _t Protected	0.950				0.950	
Satd. Flow (prot)	1671	1606	3252	1468	1626	3282
Fl _t Permitted	0.950				0.950	
Satd. Flow (perm)	1671	1606	3252	1468	1626	3282
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		113		174		
Link Speed (mph)	30		45			45
Link Distance (ft)	358		853			894
Travel Time (s)	8.1		12.9			13.5
Peak Hour Factor	0.94	0.94	0.92	0.92	0.96	0.96
Heavy Vehicles (%)	8%	14%	11%	10%	11%	10%
Adj. Flow (vph)	203	222	888	174	299	1010
Shared Lane Traffic (%)						
Lane Group Flow (vph)	203	222	888	174	299	1010
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	0.85	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Turn Type	Prot	Perm	NA	Perm	Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8		2		
Minimum Split (s)	22.5	22.5	22.5	22.5	9.5	22.5
Total Split (s)	25.0	25.0	35.0	35.0	20.0	55.0
Total Split (%)	31.3%	31.3%	43.8%	43.8%	25.0%	68.8%
Maximum Green (s)	20.5	20.5	30.5	30.5	15.5	50.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	3.0	3.0	3.0	3.0	3.0	3.0
Total Lost Time (s)	7.5	7.5	7.5	7.5	7.5	7.5
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Walk Time (s)	7.0	7.0	7.0	7.0		7.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0		11.0
Pedestrian Calls (#/hr)	0	0	0	0		0
Act Effect Green (s)	17.5	17.5	27.5	27.5	12.5	47.5

Opening Year PM

Lanes, Volumes, Timings

3: La Cadena Dr

02/13/2020

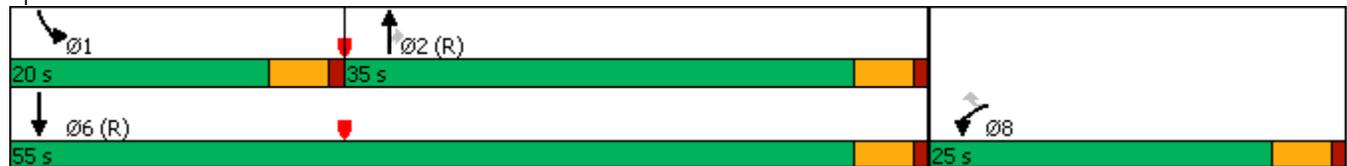


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Actuated g/C Ratio	0.22	0.22	0.34	0.34	0.16	0.59
v/c Ratio	0.56	0.51	0.79	0.28	1.18	0.52
Control Delay	34.5	18.2	30.2	4.5	146.5	10.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	34.5	18.2	30.2	4.5	146.5	10.7
LOS	C	B	C	A	F	B
Approach Delay	26.0		26.0			41.7
Approach LOS	C		C			D
Queue Length 50th (ft)	91	46	207	0	-182	141
Queue Length 95th (ft)	158	111	280	40	#332	189
Internal Link Dist (ft)	278		773			814
Turn Bay Length (ft)		20			255	
Base Capacity (vph)	365	439	1117	618	254	1948
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.56	0.51	0.79	0.28	1.18	0.52

Intersection Summary

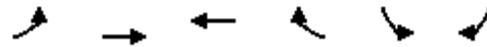
Area Type: Other
 Cycle Length: 80
 Actuated Cycle Length: 80
 Offset: 54 (68%), Referenced to phase 2:NBT and 6:SBT, Start of Green
 Natural Cycle: 80
 Control Type: Pretimed
 Maximum v/c Ratio: 1.18
 Intersection Signal Delay: 33.3
 Intersection LOS: C
 Intersection Capacity Utilization 67.8%
 ICU Level of Service C
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 3: La Cadena Dr



Lanes, Volumes, Timings
6: Barton Rd & Terrace Ave

02/13/2020



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑	↗	↘	
Traffic Volume (vph)	32	436	436	32	4	16
Future Volume (vph)	32	436	436	32	4	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t				0.850	0.892	
Fl _t Protected		0.997			0.990	
Satd. Flow (prot)	0	1596	1712	991	1398	0
Fl _t Permitted		0.997			0.990	
Satd. Flow (perm)	0	1596	1712	991	1398	0
Link Speed (mph)		35	35		30	
Link Distance (ft)		358	193		706	
Travel Time (s)		7.0	3.8		16.0	
Peak Hour Factor	0.94	0.94	0.92	0.92	0.50	0.50
Heavy Vehicles (%)	55%	16%	11%	63%	100%	0%
Adj. Flow (vph)	34	464	474	35	8	32
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	498	474	35	40	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	59.3%
ICU Level of Service	B
Analysis Period (min)	15

Lanes, Volumes, Timings
7: S Terrance Ave & Barton Rd

02/13/2020



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	351	69	25	350	82	55
Future Volume (vph)	351	69	25	350	82	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	16	12	12	12	16	16
Grade (%)	0%			2%	0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.978				0.946	
Flt Protected				0.997	0.971	
Satd. Flow (prot)	1768	0	0	1676	1618	0
Flt Permitted				0.997	0.971	
Satd. Flow (perm)	1768	0	0	1676	1618	0
Link Speed (mph)	35			35	30	
Link Distance (ft)	193			1279	557	
Travel Time (s)	3.8			24.9	12.7	
Peak Hour Factor	0.95	0.95	0.87	0.87	0.63	0.63
Heavy Vehicles (%)	11%	60%	38%	10%	17%	30%
Adj. Flow (vph)	369	73	29	402	130	87
Shared Lane Traffic (%)						
Lane Group Flow (vph)	442	0	0	431	217	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	16	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	0.85	1.00	1.01	1.01	0.85	0.85
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	53.6%
ICU Level of Service	A
Analysis Period (min)	15

Lanes, Volumes, Timings
10: Barton Rd & Grand Terrance Road

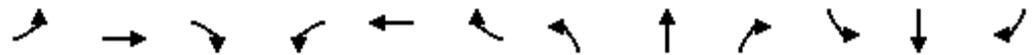
02/13/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	61	356	0	0	363	56	0	0	0	53	0	29
Future Volume (vph)	61	356	0	0	363	56	0	0	0	53	0	29
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	16	12	16
Storage Length (ft)	90		0	90		90	0		0	0		0
Storage Lanes	1		0	1		1	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Flt						0.850						0.952
Flt Protected	0.950											0.969
Satd. Flow (prot)	1671	1712	0	1863	3195	1346	0	1863	0	0	1330	0
Flt Permitted	0.950											
Satd. Flow (perm)	1671	1712	0	1863	3195	1346	0	1863	0	0	1372	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						121						121
Link Speed (mph)		35			35			30				30
Link Distance (ft)		1279			238			87				665
Travel Time (s)		24.9			4.6			2.0				15.1
Peak Hour Factor	0.90	0.90	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.86	0.92	0.86
Heavy Vehicles (%)	8%	11%	100%	2%	13%	20%	2%	2%	2%	29%	2%	37%
Adj. Flow (vph)	68	396	0	0	395	61	0	0	0	62	0	34
Shared Lane Traffic (%)												
Lane Group Flow (vph)	68	396	0	0	395	61	0	0	0	0	96	0
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		12			12			0				0
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane								Yes				
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.85	1.00	0.85
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1	1	1	1		1	1	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100	20	20	100		20	100	
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	100		20	100	20	20	100		20	100	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Turn Type	Prot	NA		Prot	NA	Perm				Perm	NA	
Protected Phases	5	2		1	6			3				4
Permitted Phases						6	3			4		
Detector Phase	5	2		1	6	6	3	3		4	4	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0	

Lanes, Volumes, Timings
 10: Barton Rd & Grand Terrance Road

02/13/2020

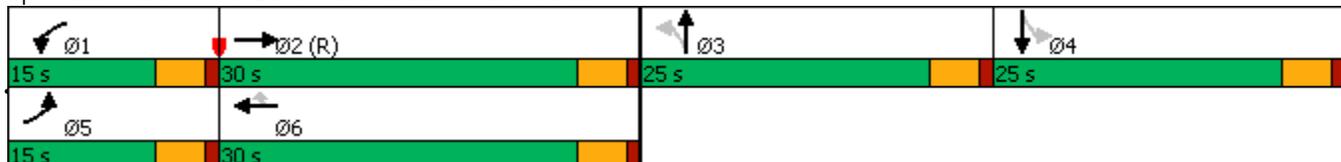


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	9.5	22.5		9.5	22.5	22.5	25.0	25.0		25.0	25.0	
Total Split (s)	15.0	30.0		15.0	30.0	30.0	25.0	25.0		25.0	25.0	
Total Split (%)	15.8%	31.6%		15.8%	31.6%	31.6%	26.3%	26.3%		26.3%	26.3%	
Maximum Green (s)	10.5	25.5		10.5	25.5	25.5	20.5	20.5		20.5	20.5	
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	3.0	3.0		3.0	3.0	3.0		3.0			3.0	
Total Lost Time (s)	7.5	7.5		7.5	7.5	7.5		7.5			7.5	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lead		Lag	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	C-Max		None	Max	Max	Max	Max		None	None	
Walk Time (s)		7.0			7.0	7.0	7.0	7.0		7.0	7.0	
Flash Dont Walk (s)		11.0			11.0	11.0	11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)		0			0	0	0	0		0	0	
Act Effct Green (s)	6.2	53.4			41.7	41.7						3.6
Actuated g/C Ratio	0.07	0.56			0.44	0.44						0.04
v/c Ratio	0.62	0.41			0.28	0.09						0.57
Control Delay	66.7	14.5			20.3	0.4						18.7
Queue Delay	0.0	0.0			0.0	0.0						0.0
Total Delay	66.7	14.5			20.3	0.4						18.7
LOS	E	B			C	A						B
Approach Delay		22.2			17.6							18.7
Approach LOS		C			B							B
Queue Length 50th (ft)	41	131			82	0						0
Queue Length 95th (ft)	82	226			138	2						33
Internal Link Dist (ft)		1199			158			7				585
Turn Bay Length (ft)	90					90						
Base Capacity (vph)	140	962			1403	658						351
Starvation Cap Reductn	0	0			0	0						0
Spillback Cap Reductn	0	0			0	0						0
Storage Cap Reductn	0	0			0	0						0
Reduced v/c Ratio	0.49	0.41			0.28	0.09						0.27

Intersection Summary

Area Type: Other
 Cycle Length: 95
 Actuated Cycle Length: 95
 Offset: 0 (0%), Referenced to phase 2:EBT, Start of Green
 Natural Cycle: 85
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.62
 Intersection Signal Delay: 19.8
 Intersection LOS: B
 Intersection Capacity Utilization 46.4%
 ICU Level of Service A
 Analysis Period (min) 15

Splits and Phases: 10: Barton Rd & Grand Terrance Road



Lanes, Volumes, Timings

3: La Cadena Dr

02/13/2020

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			 			 
Traffic Volume (vph)	279	240	1127	221	311	1969
Future Volume (vph)	279	240	1127	221	311	1969
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	16	12	12	12	12
Storage Length (ft)	0	50		0	255	
Storage Lanes	1	1		1	1	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	0.95
Fr _t		0.850		0.850		
Fl _t Protected	0.950				0.950	
Satd. Flow (prot)	1626	1664	3282	1404	1641	3343
Fl _t Permitted	0.950				0.950	
Satd. Flow (perm)	1626	1664	3282	1404	1641	3343
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		100		219		
Link Speed (mph)	30		45			45
Link Distance (ft)	358		721			906
Travel Time (s)	8.1		10.9			13.7
Peak Hour Factor	0.95	0.95	0.90	0.90	0.82	0.82
Heavy Vehicles (%)	11%	10%	10%	15%	10%	8%
Adj. Flow (vph)	294	253	1252	246	379	2401
Shared Lane Traffic (%)						
Lane Group Flow (vph)	294	253	1252	246	379	2401
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	0.85	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Turn Type	Prot	Perm	NA	Perm	Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8		2		
Minimum Split (s)	22.5	22.5	22.5	22.5	5.5	22.5
Total Split (s)	30.0	30.0	55.0	55.0	30.0	80.0
Total Split (%)	26.1%	26.1%	47.8%	47.8%	26.1%	69.6%
Maximum Green (s)	25.5	25.5	50.5	50.5	25.5	75.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	3.0	3.0	3.0	3.0	3.0	3.0
Total Lost Time (s)	7.5	7.5	7.5	7.5	7.5	7.5
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Walk Time (s)	7.0	7.0	7.0	7.0		7.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0		11.0
Pedestrian Calls (#/hr)	0	0	0	0		0
Act Effect Green (s)	22.5	22.5	47.5	47.5	22.5	77.5

Lanes, Volumes, Timings

3: La Cadena Dr

02/13/2020

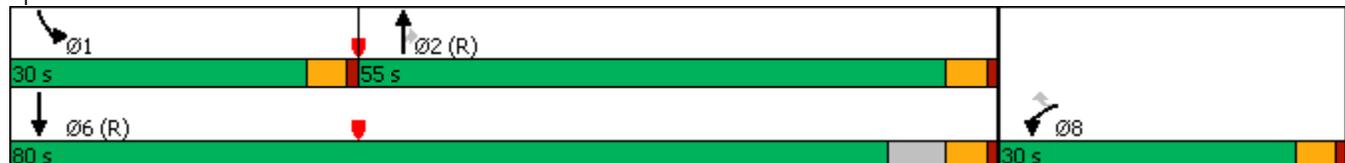


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Actuated g/C Ratio	0.20	0.20	0.41	0.41	0.20	0.67
v/c Ratio	0.92	0.62	0.92	0.35	1.18	1.07
Control Delay	80.7	32.8	44.5	5.6	149.9	59.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	80.7	32.8	44.5	5.6	149.9	59.6
LOS	F	C	D	A	F	E
Approach Delay	58.5		38.1			71.9
Approach LOS	E		D			E
Queue Length 50th (ft)	216	103	455	12	-337	-1034
Queue Length 95th (ft)	#382	193	#602	63	#459	#984
Internal Link Dist (ft)	278		641			826
Turn Bay Length (ft)		50			255	
Base Capacity (vph)	318	406	1355	708	321	2252
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.92	0.62	0.92	0.35	1.18	1.07

Intersection Summary

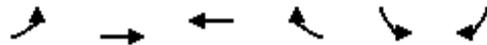
Area Type: Other
 Cycle Length: 115
 Actuated Cycle Length: 115
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green
 Natural Cycle: 150
 Control Type: Pretimed
 Maximum v/c Ratio: 1.18
 Intersection Signal Delay: 59.9
 Intersection LOS: E
 Intersection Capacity Utilization 82.6%
 ICU Level of Service E
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 3: La Cadena Dr



Lanes, Volumes, Timings
6: Barton Rd & Terrace Ave

02/13/2020



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑	↗	↘	
Traffic Volume (vph)	37	507	469	19	20	50
Future Volume (vph)	37	507	469	19	20	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t				0.850	0.904	
Fl _t Protected		0.997			0.986	
Satd. Flow (prot)	0	1712	1727	1615	1014	0
Fl _t Permitted		0.997			0.986	
Satd. Flow (perm)	0	1712	1727	1615	1014	0
Link Speed (mph)		35	35		30	
Link Distance (ft)		358	193		706	
Travel Time (s)		7.0	3.8		16.0	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.75	0.75
Heavy Vehicles (%)	20%	10%	10%	0%	25%	84%
Adj. Flow (vph)	41	563	521	21	27	67
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	604	521	21	94	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	67.6%
Analysis Period (min)	15
	ICU Level of Service C

Lanes, Volumes, Timings
7: S Terrance Ave & Barton Rd

02/13/2020



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑			↑	↑	
Traffic Volume (vph)	482	44	20	438	28	23
Future Volume (vph)	482	44	20	438	28	23
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	16	12	12	12	16	16
Grade (%)	0%			2%	0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t	0.989				0.938	
Fl _t Protected				0.998	0.974	
Satd. Flow (prot)	1907	0	0	1668	1262	0
Fl _t Permitted				0.998	0.974	
Satd. Flow (perm)	1907	0	0	1668	1262	0
Link Speed (mph)	35			35	30	
Link Distance (ft)	193			1279	557	
Travel Time (s)	3.8			24.9	12.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.63	0.63
Heavy Vehicles (%)	8%	52%	89%	9%	50%	63%
Adj. Flow (vph)	524	48	22	476	44	37
Shared Lane Traffic (%)						
Lane Group Flow (vph)	572	0	0	498	81	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	16	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	0.85	1.00	1.01	1.01	0.85	0.85
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	49.3%
ICU Level of Service	A
Analysis Period (min)	15

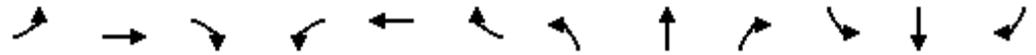
Lanes, Volumes, Timings
10: Barton Rd & Grand Terrance Rd

02/13/2020

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	56	455	0	0	414	48	0	0	0	107	0	82
Future Volume (vph)	56	455	0	0	414	48	0	0	0	107	0	82
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	16	12	12	12	12	16	12	16
Storage Length (ft)	90		0	90		90	0		0	0		0
Storage Lanes	1		0	1		1	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t						0.850						0.942
Fl _t Protected	0.950											0.972
Satd. Flow (prot)	1770	1863	0	1863	4011	1583	0	1863	0	0	1706	0
Fl _t Permitted	0.950											0.950
Satd. Flow (perm)	1770	1863	0	1863	4011	1583	0	1863	0	0	1667	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						121						121
Link Speed (mph)		35			35			30				30
Link Distance (ft)		1279			238			74				665
Travel Time (s)		24.9			4.6			1.7				15.1
Peak Hour Factor	0.88	0.88	0.92	0.92	0.93	0.93	0.92	0.92	0.92	0.75	0.92	0.75
Adj. Flow (vph)	64	517	0	0	445	52	0	0	0	143	0	109
Shared Lane Traffic (%)												
Lane Group Flow (vph)	64	517	0	0	445	52	0	0	0	0	252	0
Enter Blocked Intersection	No	No	No	No	No	No						
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0				0
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	0.85	1.00	1.00	1.00	1.00	0.85	1.00	0.85
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1	1	1	1		1	1	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100	20	20	100		20	100	
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	100		20	100	20	20	100		20	100	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Turn Type	Prot	NA		Prot	NA	Perm				Perm	NA	
Protected Phases	5	2		1	6			3				4
Permitted Phases						6	3			4		
Detector Phase	5	2		1	6	6	3	3		4		4
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Minimum Split (s)	9.5	22.5		9.5	22.5	22.5	22.5	22.5		22.5	22.5	

Lanes, Volumes, Timings
10: Barton Rd & Grand Terrance Rd

02/13/2020

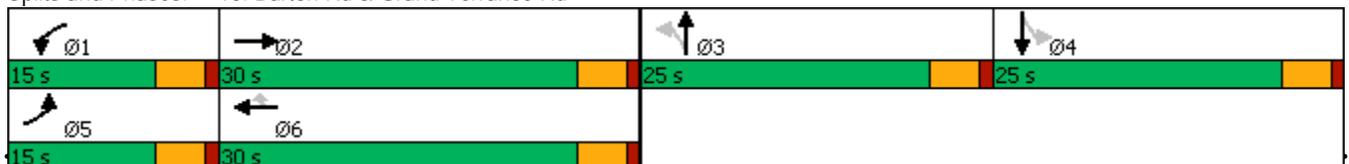


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	15.0	30.0		15.0	30.0	30.0	25.0	25.0		25.0	25.0	
Total Split (%)	15.8%	31.6%		15.8%	31.6%	31.6%	26.3%	26.3%		26.3%	26.3%	
Maximum Green (s)	10.5	25.5		10.5	25.5	25.5	20.5	20.5		20.5	20.5	
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	3.0	3.0		3.0	3.0	3.0		3.0			3.0	
Total Lost Time (s)	7.5	7.5		7.5	7.5	7.5		7.5			7.5	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lead		Lag	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	Max		None	Max	Max	None	None		None	None	
Walk Time (s)		7.0			7.0	7.0	7.0	7.0		7.0	7.0	
Flash Dont Walk (s)		11.0			11.0	11.0	11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)		0			0	0	0	0		0	0	
Act Effct Green (s)	4.6	31.5			24.5	24.5						8.1
Actuated g/C Ratio	0.08	0.57			0.44	0.44						0.15
v/c Ratio	0.44	0.48			0.25	0.07						0.72
Control Delay	36.1	9.5			12.7	0.2						25.0
Queue Delay	0.0	0.0			0.0	0.0						0.0
Total Delay	36.1	9.5			12.7	0.2						25.0
LOS	D	A			B	A						C
Approach Delay		12.4			11.4							25.0
Approach LOS		B			B							C
Queue Length 50th (ft)	22	86			53	0						43
Queue Length 95th (ft)	57	185			105	1						111
Internal Link Dist (ft)		1199			158			1				585
Turn Bay Length (ft)	90					90						
Base Capacity (vph)	247	1066			1782	770						625
Starvation Cap Reductn	0	0			0	0						0
Spillback Cap Reductn	0	0			0	0						0
Storage Cap Reductn	0	0			0	0						0
Reduced v/c Ratio	0.26	0.48			0.25	0.07						0.40

Intersection Summary

Area Type:	Other
Cycle Length:	95
Actuated Cycle Length:	55.1
Natural Cycle:	90
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	0.72
Intersection Signal Delay:	14.4
Intersection LOS:	B
Intersection Capacity Utilization:	57.8%
ICU Level of Service:	B
Analysis Period (min):	15

Splits and Phases: 10: Barton Rd & Grand Terrance Rd



Barton Road Existing 09/12/2019 No Build

Lanes, Volumes, Timings

3: La Cadena Dr

02/13/2020

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			 			 
Traffic Volume (vph)	263	288	1127	221	396	1337
Future Volume (vph)	263	288	1127	221	396	1337
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	16	12	12	12	12
Storage Length (ft)	0	20		0	255	
Storage Lanes	1	1		1	1	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	0.95
Fr _t		0.850		0.850		
Fl _t Protected	0.950				0.950	
Satd. Flow (prot)	1656	1578	3223	1223	1612	3252
Fl _t Permitted	0.950				0.950	
Satd. Flow (perm)	1656	1578	3223	1223	1612	3252
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		86		218		
Link Speed (mph)	30		45			45
Link Distance (ft)	358		853			894
Travel Time (s)	8.1		12.9			13.5
Peak Hour Factor	0.94	0.94	0.92	0.92	0.96	0.96
Heavy Vehicles (%)	9%	16%	12%	32%	12%	11%
Adj. Flow (vph)	280	306	1225	240	413	1393
Shared Lane Traffic (%)						
Lane Group Flow (vph)	280	306	1225	240	413	1393
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	0.85	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Turn Type	Prot	Perm	NA	Perm	Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8		2		
Minimum Split (s)	22.5	22.5	22.5	22.5	9.5	22.5
Total Split (s)	30.0	30.0	45.0	45.0	30.0	75.0
Total Split (%)	28.6%	28.6%	42.9%	42.9%	28.6%	71.4%
Maximum Green (s)	25.5	25.5	40.5	40.5	25.5	70.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	3.0	3.0	3.0	3.0	3.0	3.0
Total Lost Time (s)	7.5	7.5	7.5	7.5	7.5	7.5
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Walk Time (s)	7.0	7.0	7.0	7.0		7.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0		11.0
Pedestrian Calls (#/hr)	0	0	0	0		0
Act Effect Green (s)	22.5	22.5	37.5	37.5	22.5	67.5

Lanes, Volumes, Timings
3: La Cadena Dr

02/13/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Actuated g/C Ratio	0.21	0.21	0.36	0.36	0.21	0.64
v/c Ratio	0.79	0.76	1.06	0.42	1.20	0.67
Control Delay	56.5	40.7	79.0	6.9	150.8	13.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	56.5	40.7	79.0	6.9	150.8	13.7
LOS	E	D	E	A	F	B
Approach Delay	48.3		67.2			45.1
Approach LOS	D		E			D
Queue Length 50th (ft)	179	141	~480	10	~337	281
Queue Length 95th (ft)	#308	#266	#613	66	#527	353
Internal Link Dist (ft)	278		773			814
Turn Bay Length (ft)		20			255	
Base Capacity (vph)	354	405	1151	576	345	2090
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.79	0.76	1.06	0.42	1.20	0.67

Intersection Summary

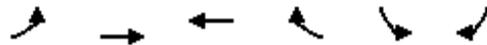
Area Type: Other
 Cycle Length: 105
 Actuated Cycle Length: 105
 Offset: 62 (59%), Referenced to phase 2:NBT and 6:SBT, Start of Green
 Natural Cycle: 130
 Control Type: Pretimed
 Maximum v/c Ratio: 1.20
 Intersection Signal Delay: 53.9
 Intersection LOS: D
 Intersection Capacity Utilization 86.4%
 ICU Level of Service E
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 3: La Cadena Dr



Lanes, Volumes, Timings
6: Barton Rd & Terrace Ave

02/13/2020



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑	↗	↘	
Traffic Volume (vph)	44	601	490	26	6	22
Future Volume (vph)	44	601	490	26	6	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t				0.850	0.894	
Fl _t Protected		0.997			0.989	
Satd. Flow (prot)	0	1711	1727	1615	980	0
Fl _t Permitted		0.997			0.989	
Satd. Flow (perm)	0	1711	1727	1615	980	0
Link Speed (mph)		35	35		30	
Link Distance (ft)		358	193		706	
Travel Time (s)		7.0	3.8		16.0	
Peak Hour Factor	0.94	0.94	0.92	0.92	0.50	0.50
Heavy Vehicles (%)	20%	10%	10%	0%	25%	84%
Adj. Flow (vph)	47	639	533	28	12	44
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	686	533	28	56	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	73.2%
ICU Level of Service	D
Analysis Period (min)	15

Lanes, Volumes, Timings
7: S Terrance Ave & Barton Rd

02/13/2020



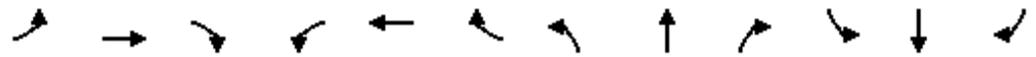
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	484	95	35	482	113	76
Future Volume (vph)	484	95	35	482	113	76
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	16	12	12	12	16	16
Grade (%)	0%			2%	0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.978				0.946	
Flt Protected				0.997	0.971	
Satd. Flow (prot)	1769	0	0	1676	1618	0
Flt Permitted				0.997	0.971	
Satd. Flow (perm)	1769	0	0	1676	1618	0
Link Speed (mph)	35			35	30	
Link Distance (ft)	193			1279	557	
Travel Time (s)	3.8			24.9	12.7	
Peak Hour Factor	0.95	0.95	0.87	0.87	0.63	0.63
Heavy Vehicles (%)	11%	60%	38%	10%	17%	30%
Adj. Flow (vph)	509	100	40	554	179	121
Shared Lane Traffic (%)						
Lane Group Flow (vph)	609	0	0	594	300	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	16	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	0.85	1.00	1.01	1.01	0.85	0.85
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	71.7%
ICU Level of Service	C
Analysis Period (min)	15

Lanes, Volumes, Timings
10: Barton Rd & Grand Terrance Road

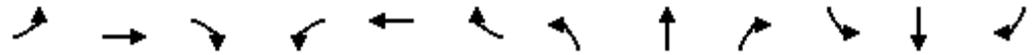
02/13/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	85	491	0	0	500	77	0	0	0	73	0	39
Future Volume (vph)	85	491	0	0	500	77	0	0	0	73	0	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	16	12	16
Storage Length (ft)	90		0	90		90	0		0	0		0
Storage Lanes	1		0	1		1	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t						0.850						0.953
Fl _t Protected	0.950											0.968
Satd. Flow (prot)	1671	1712	0	1863	3195	1346	0	1863	0	0	1330	0
Fl _t Permitted	0.950											0.802
Satd. Flow (perm)	1671	1712	0	1863	3195	1346	0	1863	0	0	1102	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						121						121
Link Speed (mph)		35			35			30				30
Link Distance (ft)		1279			238			87				665
Travel Time (s)		24.9			4.6			2.0				15.1
Peak Hour Factor	0.90	0.90	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.86	0.92	0.86
Heavy Vehicles (%)	8%	11%	2%	2%	13%	20%	2%	2%	2%	29%	2%	37%
Adj. Flow (vph)	94	546	0	0	543	84	0	0	0	85	0	45
Shared Lane Traffic (%)												
Lane Group Flow (vph)	94	546	0	0	543	84	0	0	0	0	130	0
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		12			12			0				0
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane								Yes				
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.85	1.00	0.85
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1	1	1	1		1	1	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100	20	20	100		20	100	
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	100		20	100	20	20	100		20	100	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Turn Type	Prot	NA		Prot	NA	Perm				Perm	NA	
Protected Phases	5	2		1	6			3				4
Permitted Phases						6	3			4		
Detector Phase	5	2		1	6	6	3	3		4		4
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0	

Lanes, Volumes, Timings
 10: Barton Rd & Grand Terrance Road

02/13/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	9.5	22.5		9.5	22.5	22.5	22.5	22.5		22.5	22.5	
Total Split (s)	15.0	30.0		15.0	30.0	30.0	25.0	25.0		25.0	25.0	
Total Split (%)	15.8%	31.6%		15.8%	31.6%	31.6%	26.3%	26.3%		26.3%	26.3%	
Maximum Green (s)	10.5	25.5		10.5	25.5	25.5	20.5	20.5		20.5	20.5	
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	3.0	3.0		3.0	3.0	3.0		3.0			3.0	
Total Lost Time (s)	7.5	7.5		7.5	7.5	7.5		7.5			7.5	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lead		Lag	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	C-Max		None	Max	Max	Max	Max		None	None	
Walk Time (s)		7.0			7.0	7.0	7.0	7.0		7.0	7.0	
Flash Dont Walk (s)		11.0			11.0	11.0	11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)		0			0	0	0	0		0	0	
Act Effect Green (s)	8.1	49.6			34.0	34.0						5.4
Actuated g/C Ratio	0.09	0.52			0.36	0.36						0.06
v/c Ratio	0.66	0.61			0.48	0.15						0.74
Control Delay	62.9	20.6			26.9	2.8						33.8
Queue Delay	0.0	0.0			0.0	0.0						0.0
Total Delay	62.9	20.6			26.9	2.8						33.8
LOS	E	C			C	A						C
Approach Delay		26.8			23.7							33.8
Approach LOS		C			C							C
Queue Length 50th (ft)	56	208			127	0						5
Queue Length 95th (ft)	103	382			213	18						61
Internal Link Dist (ft)		1199			158			7				585
Turn Bay Length (ft)	90					90						
Base Capacity (vph)	158	894			1143	559						301
Starvation Cap Reductn	0	0			0	0						0
Spillback Cap Reductn	0	0			0	0						0
Storage Cap Reductn	0	0			0	0						0
Reduced v/c Ratio	0.59	0.61			0.48	0.15						0.43

Intersection Summary

Area Type: Other
 Cycle Length: 95
 Actuated Cycle Length: 95
 Offset: 0 (0%), Referenced to phase 2:EBT, Start of Green
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.74
 Intersection Signal Delay: 26.0
 Intersection LOS: C
 Intersection Capacity Utilization 55.2%
 ICU Level of Service B
 Analysis Period (min) 15

Splits and Phases: 10: Barton Rd & Grand Terrance Road

