Final Traffic Report

SR 303L, Lake Pleasant Parkway to I-17

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EXECUTIVE SUMMARY

Introduction

The Arizona Department of Transportation (ADOT) has initiated an update to the *2006 Final Design Concept Report Estrella Freeway (SR-303L), Happy Valley Road to I-17* (2006 DCR). The 2006 DCR identified the ultimate footprint and alignment for State Route 303 (SR 303L) from Happy Valley Road to Interstate 17 (I-17). The ultimate SR 303L facility is planned to provide four general-purpose lanes and one high occupancy vehicle lane (HOV) in each direction of travel, include service traffic interchanges (TI's) at major cross streets and a full system TI at I-17 with direct connecting ramps between I-17 and SR 303L-to the west.

Since the completion of the 2006 DCR, there have been several projects to develop the corridor. Currently, the segment from Lake Pleasant Parkway to I-17 provides two travel lanes in each direction of travel. SR 303L was constructed to accommodate the implementation of future service TIs at 67th Avenue, 51st Avenue, and 43rd Avenue. Therefore, the existing mainline lanes are future ramps for each TI, and the appropriate space has been accounted for the future mainline lanes.

This report will aid in the traffic operational analysis for the proposed configuration for SR 303L with three general purpose lanes and an auxiliary lane in each direction and will consider the implementation of the system ramps at the I-17/SR303L System TI . Future projects would add a fourth general purpose lane and an HOV lane in each direction of travel, and a direct HOV connection between the south and west legs of the I-17/SR303L System TI. To appropriately evaluate the impacts of the proposed infrastructure, Dove Valley Road and Dixileta Drive TI's, along with the intersection at Sonoran Desert Drive and North Valley Parkway will also be included in the operational analysis.

Traffic Forecast

Traffic forecasts for the study corridor were derived from the Maricopa Association of Governments Regional Travel Demand Model. Several limitations, including imprecise turning movement volumes at major intersections were found. Also, a major consideration in this forecast was the influence of the North Phoenix 3,500 Planned Unit Development site of a massive semiconductor manufacturing plant, which lies north of the SR 303L between 43rd Avenue and 51st Avenue. To improve estimates and to develop design hour traffic volumes, the volumes were post-processed.

The forecasts were conducted at each freeway interchange along SR 303L from Lake Pleasant Parkway to I-17. Forecasts were also completed along the I-17 and freeway interchanges from Dixileta Drive to Dove Valley Road.

Traffic Operational Analysis

Year 2020 Existing

The existing scenario for the traffic operational analysis is used as a base point and shows how the system is operating with today's volumes. The existing roadway network for the operational analysis encompasses SR 303L from Lake Pleasant Parkway to I-17, I-17 from Dixileta Drive to Dove Valley Road, and the intersection at Sonoran Desert Drive and North Valley Parkway.

Year 2040 No Build

No-Build scenarios are often used to determine how future transportation systems operate without planned improvements on specific facilities. To assess the impact of not improving SR 303L, or connecting I-17 with system interchange ramps, on the 2040 transportation system in the influence area, a No-Build scenario was evaluated. The No-Build scenario included the 2040 Base Network, with improvements only at 51st Avenue and 43rd Avenue TI's, and the 2040 traffic volumes.

Analysis of the No-Build scenario clearly shows the improvements to SR 303LSR 303L and its connection to I-17 are needed in 2040 to meet future travel demand.

Year 2040 Build

The SR 303LSR 303L will have three general purpose mainline lanes in both directions from Lake Pleasant Parkway to I-17. There will be full TI's constructed at 67th Avenue, 51st Avenue, 43rd Avenue, and a full system TI at I-17 with direct connecting ramps between I-17 and SR 303L-to the west

The traffic modeling provided a macroscopic analysis and information on the general concept of the interchanges for future conditions. The traffic operational analysis evaluated the peak hour traffic volumes, at a 'microscopic level', to refine and ensure that the improvement alternatives were operationally feasible.

Sensitivity Analysis

A sensitivity analysis was conducted to evaluate the need of the proposed SR-303/I-17 system-to-system flyover ramps. The analysis was performed using Synchro 11 software and the existing geometrical configuration for the I-17 interchange. Three scenarios (all ramps; east-south and north-west ramps; and south-west and east-north ramps) were evaluated for 2030,2035, and 2040.

Year 2020 Existing Results

- From the operations analysis it was observed that I-17 and SR 303L mainlines performed at acceptable traffic conditions.
- The ramps performed at acceptable conditions except for the entrance ramp from SR 303L to SB I -17 that showed a LOS of E during the AM peak hour.
- Delays were observed at the intersection of Sonoran Desert Drive and North Valley Parkway. The overall intersection is performing at an acceptable LOS.

Year 2040 No Build Results

- During both AM and PM peak hours, traffic operations fail for this alternative.
- Demand was not served, and vehicles were not able to enter the network at multiple locations.

Year 2040 Build Results

- Traffic operations for freeway mainline, ramps and intersections operate at acceptable LOS.
- No queuing and no significant delays were observed.
- It was observed that demand was served by the simulation models.

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1. INTRODUCTION

1.1. Background

The Arizona Department of Transportation (ADOT) has initiated the Design Concept Report (DCR) to update the previously prepared *2006 Final Design Concept Report Estrella Freeway (SR 303L), Happy Valley Road to I-17* (2006 DCR).

Since the completion of the 2006 DCR, there have been several developments to the study area. Currently, the segment from Lake Pleasant Parkway to I-17 provides two travel lanes in each direction of travel. SR 303L was constructed to accommodate the implementation of future service TIs at 67th Avenue, 51st Avenue, and 43rd Avenue.

In an effort to update the 2006 DCR, a traffic analysis was conducted to evaluate the existing and future traffic operations along SR 303L. This report details the methods, assumptions, analysis', and results used for and produced from the evaluation.

1.2. Project Location and Influence Area

State Route 303 (SR 303L) is the northwest valley's main travel route as it stretches for approximately 35 miles from Interstate 10 (I-10) to Interstate 17 (I-17). As shown in Figure 1-1, the section of SR 303L included in this project is from Lake Pleasant Parkway to I-17.

Travel patterns and transportation facilities operations are very much influenced by land use growth assumptions for a specific area. To identify future transportation needs it is first necessary to understand the area growth trends. For this purpose, an influence area was established as shown in Figure 1-2. The influence area is the locale with the highest potential influence on the transportation facility by either daily use of the facility or by proximity to the facility. *Section 2: Traffic Forecast* gives further details of the influencing areas and projects.

SR 303L is considered a North/South freeway; however, due to the direction of the section under analysis, this report will refer to northbound (NB) as eastbound (EB) and southbound (SB) as westbound (WB).

Figure 1-1: Project Location

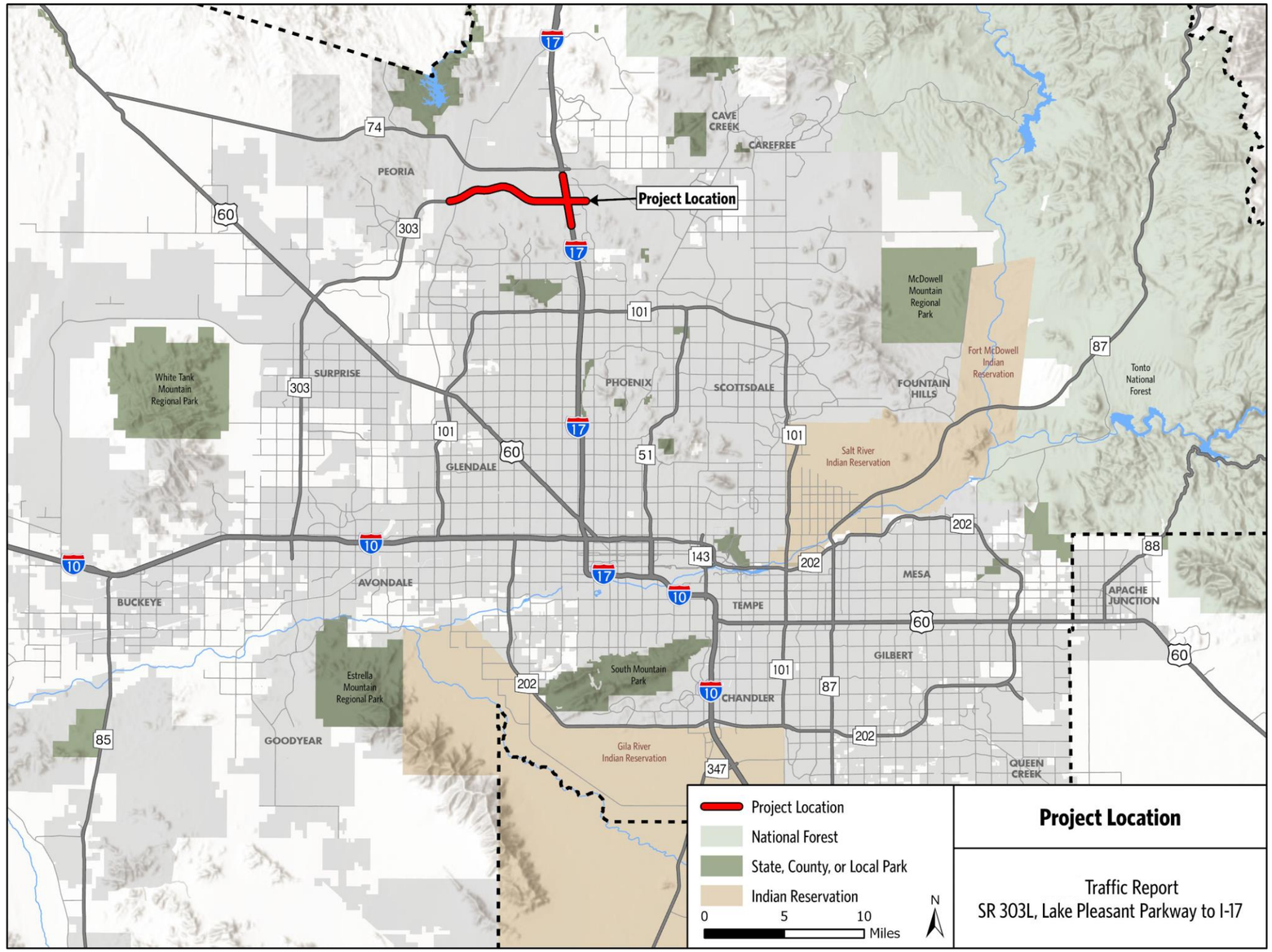
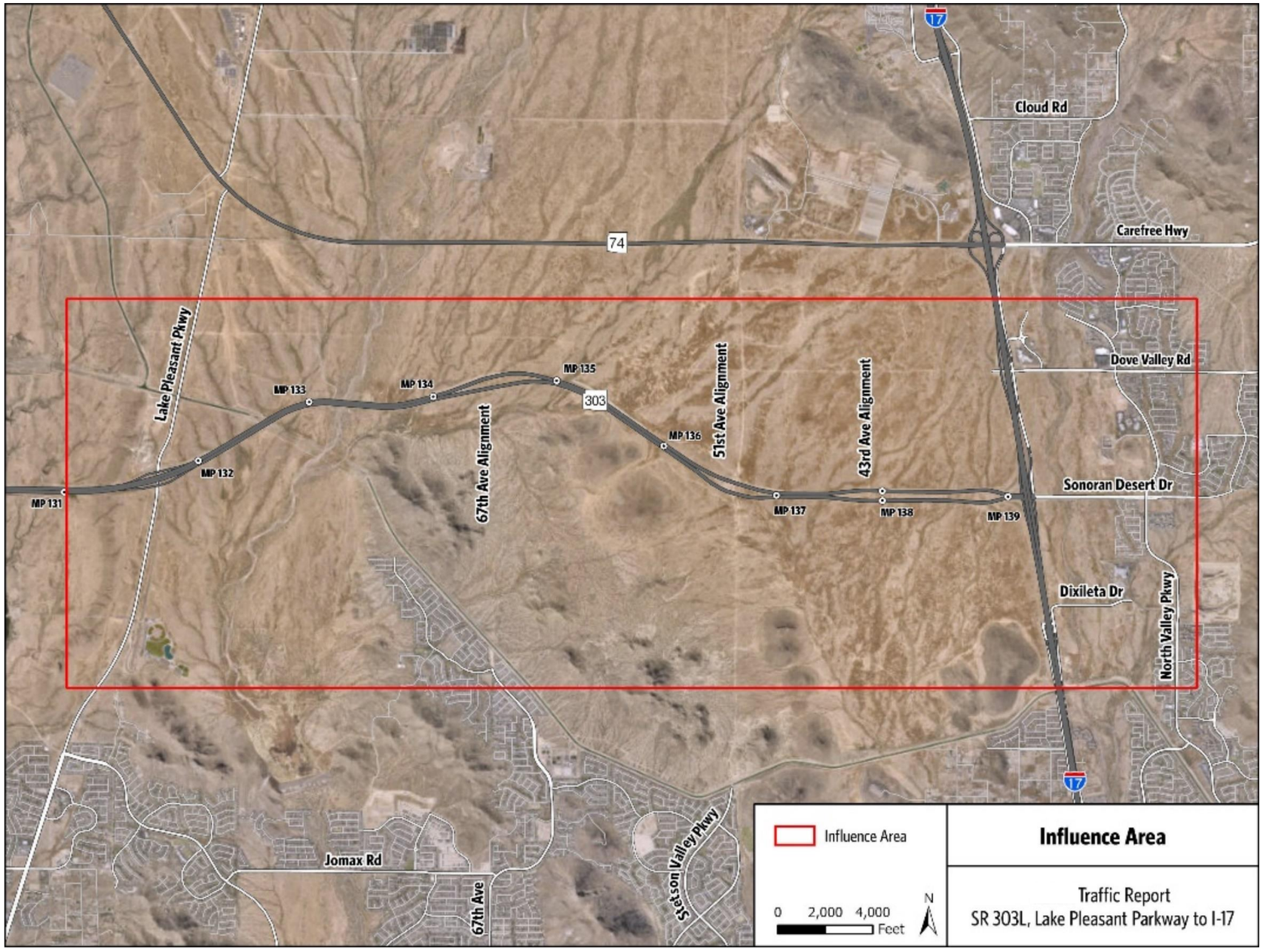


Figure 1-2: Influence Area



2. TRAFFIC FORECAST

2.1. Technical Process and Assumptions

A regional Travel Demand Model (TDM) is a planning tool used to evaluate the current and future transportation needs and assess alternative roadway improvement scenarios based on the land use, socioeconomic data and forecasted growth. It provides an order of magnitude of the travel demand to help identify the location, type and capacity of improvements and evaluate their impact on study roads and surrounding roadways. The current transportation system is often used as the initial roadway system and new improvements are identified based on future demand. The macro scale nature of this tool only provides a planning evaluation for the operation of roadway between intersections or interchanges.

The forecasts were conducted at each freeway interchange along SR 303L from Lake Pleasant Parkway to I-17, forecasts were also completed along the I-17 and freeway interchanges from Dixileta Drive to Dove Valley Road.

A major consideration in this forecast was the influence of the North Phoenix 3,500 Planned Unit Development (PUD) site that is 3,720 acres of vacant State of Arizona Trust Land chosen for the future placement of a massive semiconductor manufacturing plant. The primary campus for the Taiwan Semiconductor Manufacturing Company (TSMC) production facilities will lie north of the SR 303L between 43rd and 51st Avenues. The vacant land east of the main manufacturing campus is slated for mixed residential and commercial development. The vacant land north and west of the TSMC site will become a technology park like the area surrounding the Intel Ocotillo Plant in Chandler, Arizona. These incoming developments will significantly impact traffic in the surrounding transportation network.

Currently the Maricopa Association of Governments (MAG) Travel Demand Model (TDM) does not incorporate these changes for the 2040 model. Necessary information and assumptions were applied to employment and residential data within the impacted Traffic Analyses Zones (TAZs) of the 2040 MAG TDM. The model was then run for the entire region to produce future 2040 demands which were then post processed and used as inputs to the NCHRP traffic forecasting method to predict demand along the SR 303L and I-17 corridors within the study area.

2.1.1. Related Studies

North Phoenix 3,500 Traffic Impact Study (September 2020)

City of Phoenix launched a study to evaluate the traffic impacts due to the proposed North Phoenix 3,500 PUD on the surrounding street network. The study was prepared in conformance with *City of Phoenix Street Planning and Design Guidelines Section 12.1.2 Traffic Impact Studies, December 2009* and in tandem with information provided by the City of Phoenix Street Transportation Department. The objectives of the study were to determine whether the planned street system in the vicinity of the site is adequate to accommodate the increased traffic that results from the proposed development; to recommend additional street improvements or traffic control devices; and evaluate the internal site circulation and provide recommendations if necessary.

Traffic Impact Analysis Report TSMC Fab Site (January 2020)

TSMC in partnership with CTCI Americas Incorporated launched a traffic impact analysis of the proposed TSMC semiconductor fabrication sight. The key goal of the study was to conceptualize a Master Street Design and Phasing Plan, and to ensure the access to the site was built with the necessary capacity to perform at reasonable level of service. This study provides detailed recommendations of exit and entry road configurations into the site. Based on site specific trip generation and distribution estimates, the study identified intersection lane configuration in the vicinity of the TSMC development.

2.1.2. 2020 Travel Demand Model Network

The TDM network in the project influence area includes SR 303L from Lake Pleasant Parkway to I-17, the interchange between SR 303L and I-17, and the intersection at Sonoran Desert Drive and North Valley Parkway. The network also includes the TIs at I-17 and Dixileta Drive and Dove Valley Road. The incoming TSMC site will be nested northwest of the SR 303L and I-17 traffic interchange. It is bounded by SR 74 to the north and the SR 303L to the south. Currently there are no interchanges on SR 303L along the site boundary, but there are interchanges along I-17 at SR 74 and an unconnected interchange at Dove Valley Road. There are currently no paved roads within the future TSMC site.

Figure 2-1 shows the existing network as it is in the MAG TDM. Figure 2-2 presents AADTs on the major roads surrounding the site comparing the MAG TDM AADTs to observed AADTs taken from the ADOT TCDS website. No data from the ADOT Traffic Data Management System (TDMS) older than 2018 were used while a growth factor of 2% per year was applied to any historic count.

As can be seen in Figure 2-3, the MAG TDM tends to overestimate AADTs on higher volume roads within the study area.

Figure 2-1: MAG TDM Existing Network

Figure 2-2: Major Roads AADTs comparison

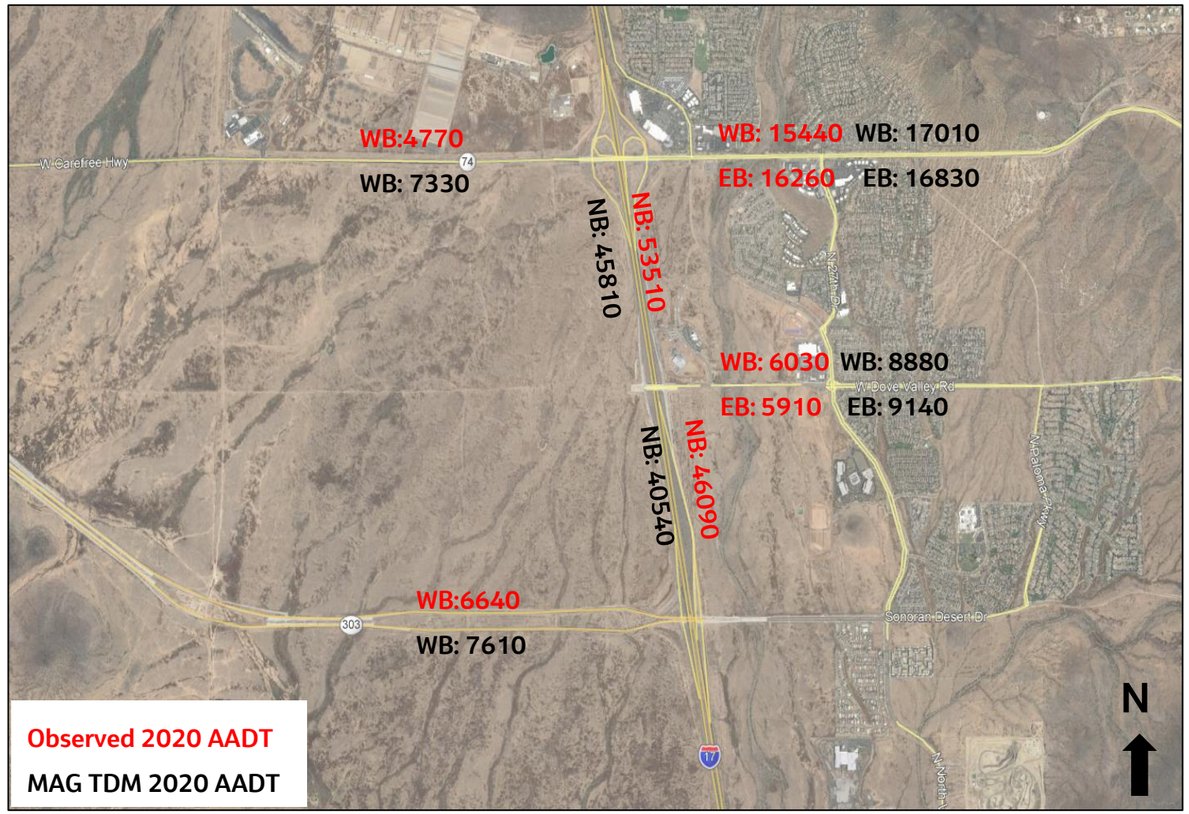
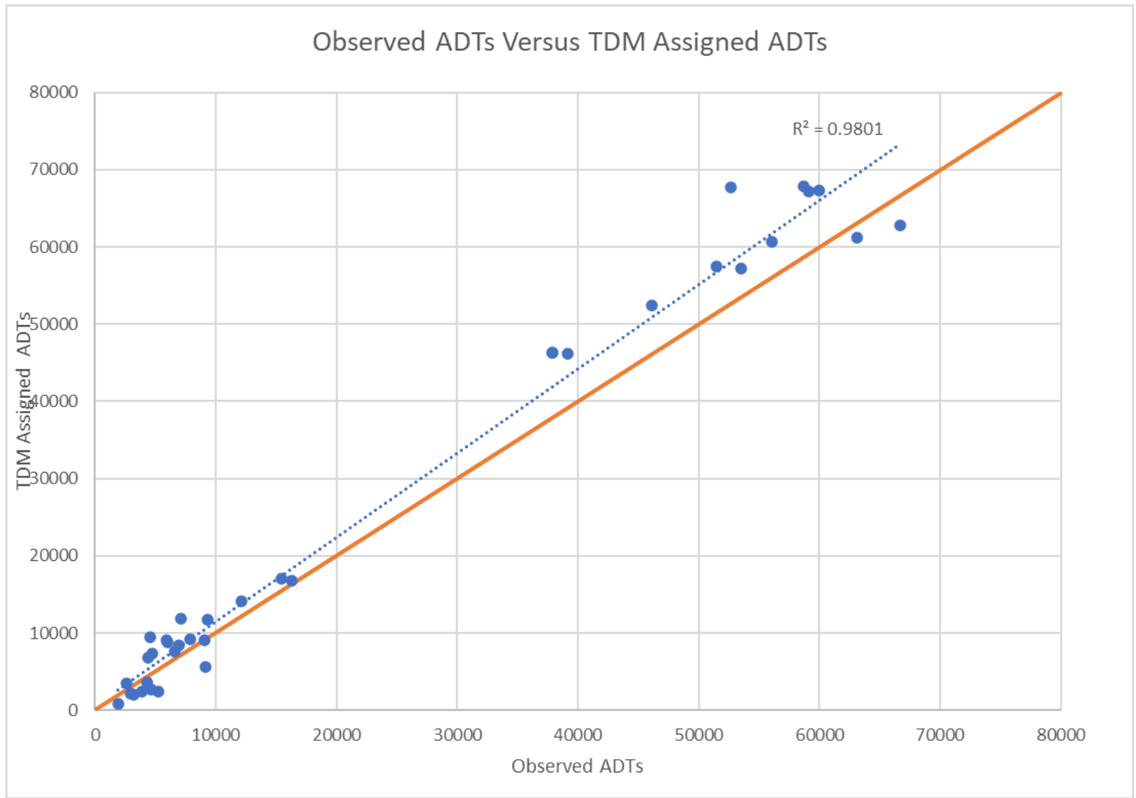


Figure 2-3: Observed Versus Assigned 2020 AADTs Map



2.1.3. Socioeconomic Data

The proposed transportation network within the site breaks the area into seven distinct zones. The zones can be classified by three distinct land use zoning requirements, the technology park, technology campus, and freeway mixed-use. The technology zones are similar, but the technology park has lower building height maximums. Both technology land uses prohibit any residential use. The freeway mixed-use zones allow many commercial uses such as retail, offices, car dealerships, etc. Residential developments are allowed within the mixed-use zones, but single-family dwellings are prohibited. Figure 2-4 through Figure 2-7 show the land use zones and zoning requirements.

2.1.4. Updating TAZs in MAG TDM

The 2040 MAG TDM must be updated to account for the changing employee and residential populations in the site area. First the impacted TAZs were identified within the model, these TAZs are shown in Figure 2-8 along with callouts to the incoming changes to each of the TAZs. This section will describe in detail what socioeconomic data was changed and the process and assumptions used to inform those changes.

Employment Data

The TSMC estimates 12,800 manufacturing employees on the main campus. An additional 3200 professional, scientific, technical services employees are expected to work on the main campus in support of the manufacturing workers – one professional/scientific employee for every four manufacturing employees. On the site west of 51st Avenue, 52 manufacturing employees are projected to work at a gas plant supporting the manufacturing facilities.

The freeway mixed-use zoning TAZs east of the main campus are similar to what is already at the southeast corner of the Interchange between I-17 and Happy Valley Road. The two freeway-mixed-use TAZs east of the main manufacturing campus are assumed to have similar developments put in place with 100 retail workers and 300 general office workers.

Figure 2-4: Land Use Zones Map

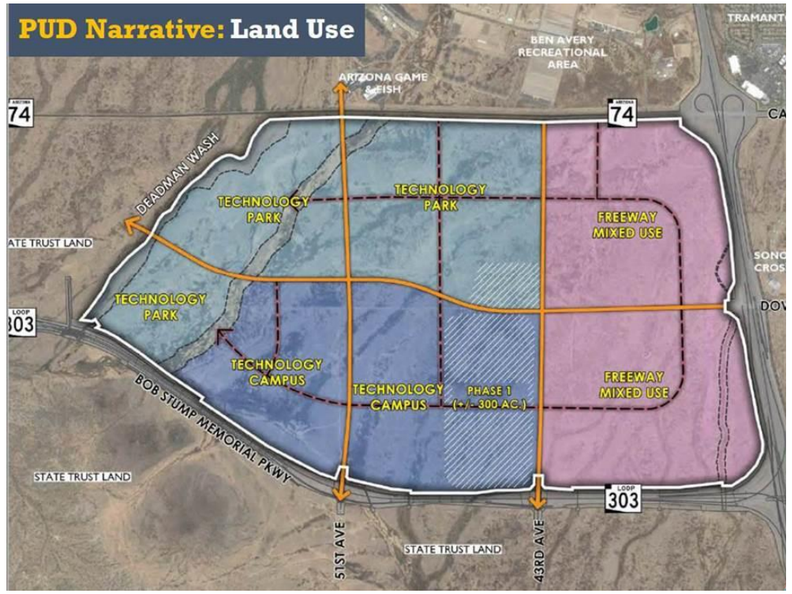


Figure 2-5: Technology Campus Zoning Requirements

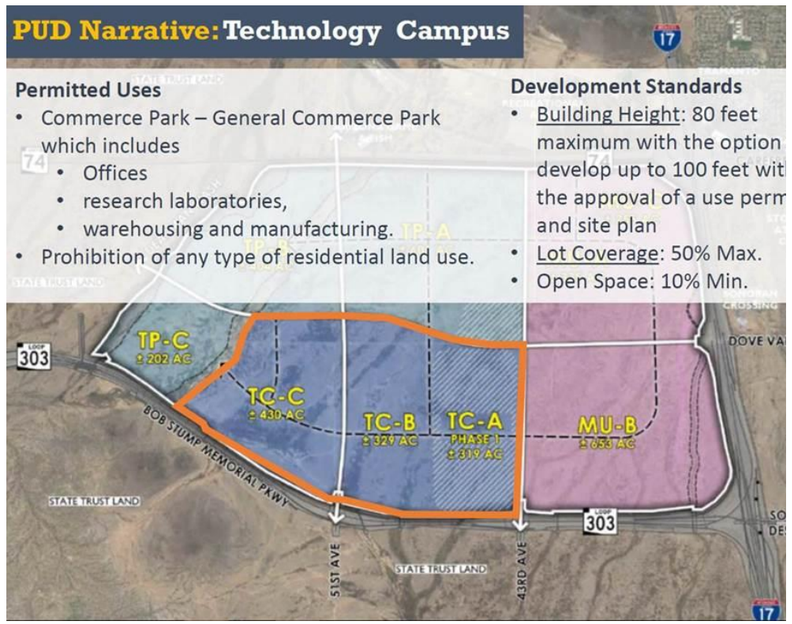


Figure 2-6: Technology Park Zoning Requirements

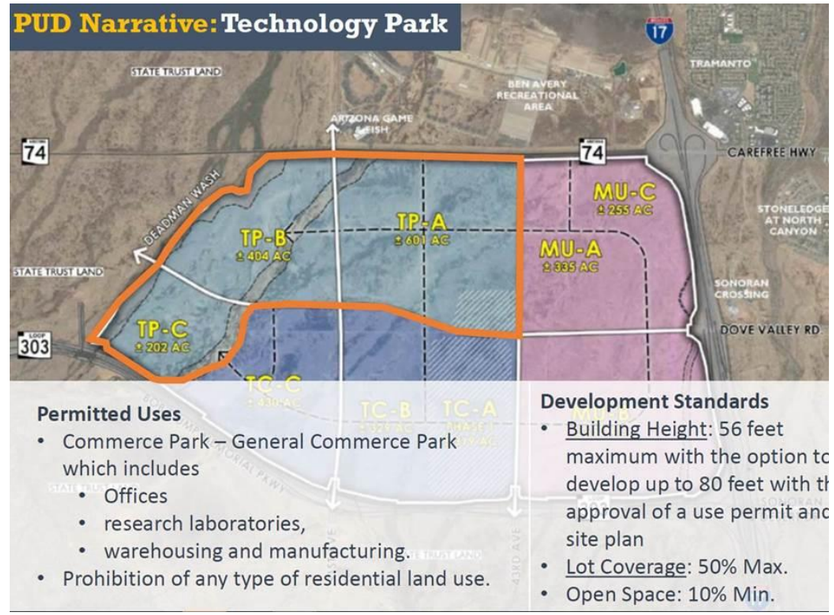
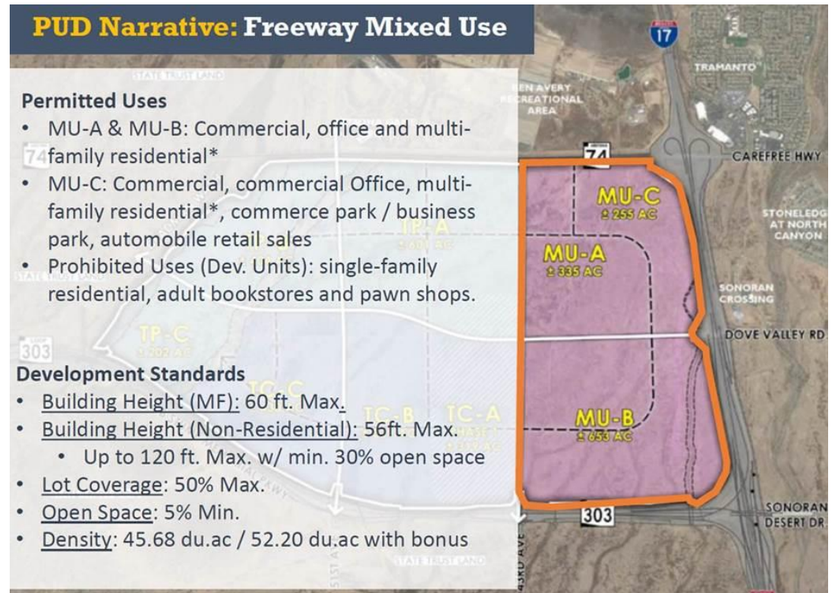


Figure 2-7: Freeway Mixed Use Zoning Requirements



Residential Data

At this time, there are few committed incoming residential developments around the study area, however, the City of Phoenix is confident the area will develop rapidly once the TSMC facility is constructed. Future growth patterns were therefore estimated using the land zoning requirements and accounting for how similar areas have developed in the past.

The zoning requirements prohibit any residential developments on the land where the TSMC plant is being constructed. The freeway mixed-use zones are restricted to only multifamily housing. Each of these mixed-use zones are 500 acres each, and it is assumed as much as 200 acres of this land will be used for parking lots, drainage, etc. Of the remaining 300 acres, 50% are assumed to be available for mixed-use development or 150 acres.

Between retail and office developments it will be assumed that only 10% of the remaining 150 acres will be developed into dwelling units. Assuming 50 dwelling units per acre and 2.75 residents per dwelling unit there is an expected 2000 residents per mixed-use TAZ.

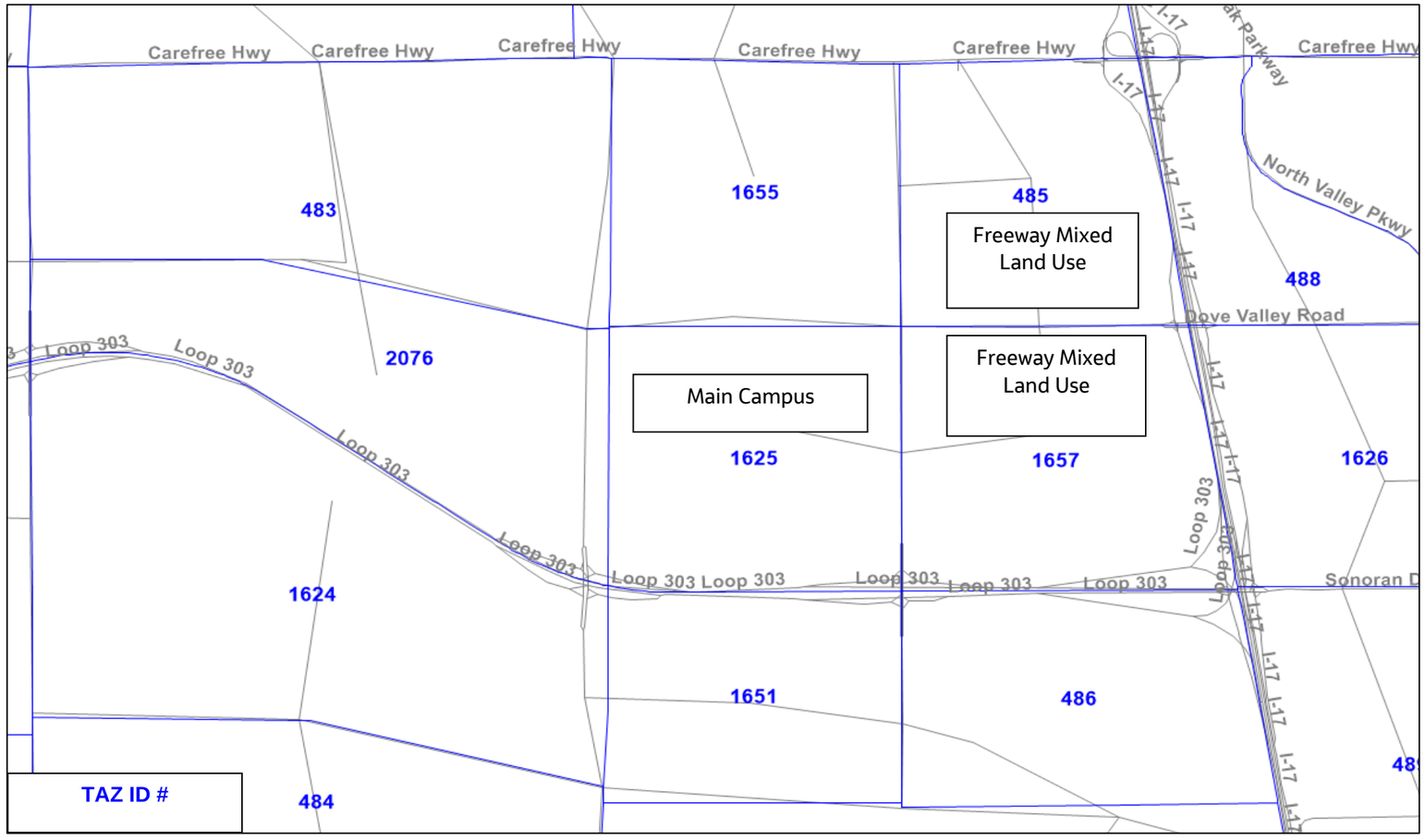
Traffic Forecasting

Traffic forecasts for the Study Corridor were derived from the MAG regional TDM. The specific model used for this study is the four-step model, which is validated to 24-hour count data and verified for model speed estimates. The volumes are derived directly from the MAG model assignments and have several limitations, including imprecise turning movement volume estimates at major intersections. To improve MAG model estimates and to develop design hour traffic volumes, the model estimates for the future year were post-processed. The inputs required for post-processing model estimates using this method are:

1. Base year traffic counts,
2. Base year regional TDM estimates,
3. Future year regional TDM forecasts, and
4. Design hour 30th highest K-factor.

The Travel Forecasting technical memo is provided in *Appendix A*.

Figure 2-8: MAG TDM TAZ's Map



3. CRASH ANALYSIS

3.1. Technical Process and Assumptions

Crash data was obtained from the ADOT Accident Location Identification Surveillance System (ALISS) Crash Database for a 5-year period from January 2015 to December 2019, for SR 303L from mile post (MP) 131.00 (west of Lake Pleasant Parkway TI) to MP 139.11 (start of SR 303L). This was the most recent 5-year crash data available from ADOT.

3.2. Crash Summary

3.2.1. SR 303L Crash Summary

There was a total of 142 crashes between 2015 and 2019 that took place on SR 303L between Lake Pleasant Parkway and I-17 in both the EB and WB directions. Table 3-1 through Table 3-3 summarizes various crash statistics including travel direction, crash severity, and crash manner in an effort to determine any existing crash trends which are discussed below.

- The number of crashes within the SR 303L study limits has increased every year from 2015 to 2019.
- The volume of crashes in the EB direction are slightly higher at 54% when compared to WB at 46%.
- A total of 73% of all crashes within the study limits were no injury. There were no fatal crashes on this segment.
- The majority of crashes on the segment were single vehicle crashes at 55%. Rear-end crashes account for the second most at 23% of total crashes on the segment and sideswipe crashes account for18%.

The directional distribution of crashes on SR 303L is shown in Table 3-1. The distribution is fairly balanced with 76 crashes occurring in the EB direction and 66 in the WB direction.

Table 3-1: Yearly Crash Direction Distribution (SR 303L)

Travel Direction	2015	2016	2017	2018	2019	Grand Total
North/East	6	12	15	16	27	76
South/West	6	10	15	17	18	66
Grand Total	**12**	**22**	**30**	**33**	**45**	**142**

The crash severity of crashes on SR 303L is shown in Table 3-2. The data shows that 103 (73% of the crashes) resulted in no injury. A reported 23% resulted in a possible injury or minor injury and the remaining 6 (7%) of crashes resulted in a suspected serious injury. It should be noted that there were no fatal crashes within the SR 303L study extents in the previous 5 years.

Table 3-2: Yearly Crash Injury Severity Distribution (SR 303L)

Injury Severity	2015	2016	2017	2018	2019	Grand Total
No Injury	7	14	24	24	34	103
Possible Injury	2	3	1	2	6	14
Suspected Minor Injury	3	4	2	7	3	19
Suspected Serious Injury	0	1	3	0	2	6
Grand Total	**12**	**22**	**30**	**33**	**45**	**142**

Table 3-3 shows the crash manner distribution for the SR 303L study limits over the previous 5 years. The data shows that single vehicle crashes make up the largest number of crashes in the corridor at 78 (55%). Single vehicle crashes do not typically make up the most crashes on freeway segments, but in this case, it could perhaps be attributed to the lower vehicle volumes, which would reduce the number of vehicle-to-vehicle crashes. The next two highest crash types are typically the most common crash types on freeway segments, rear-ends and sideswipes with a combined total of 58 (41%).

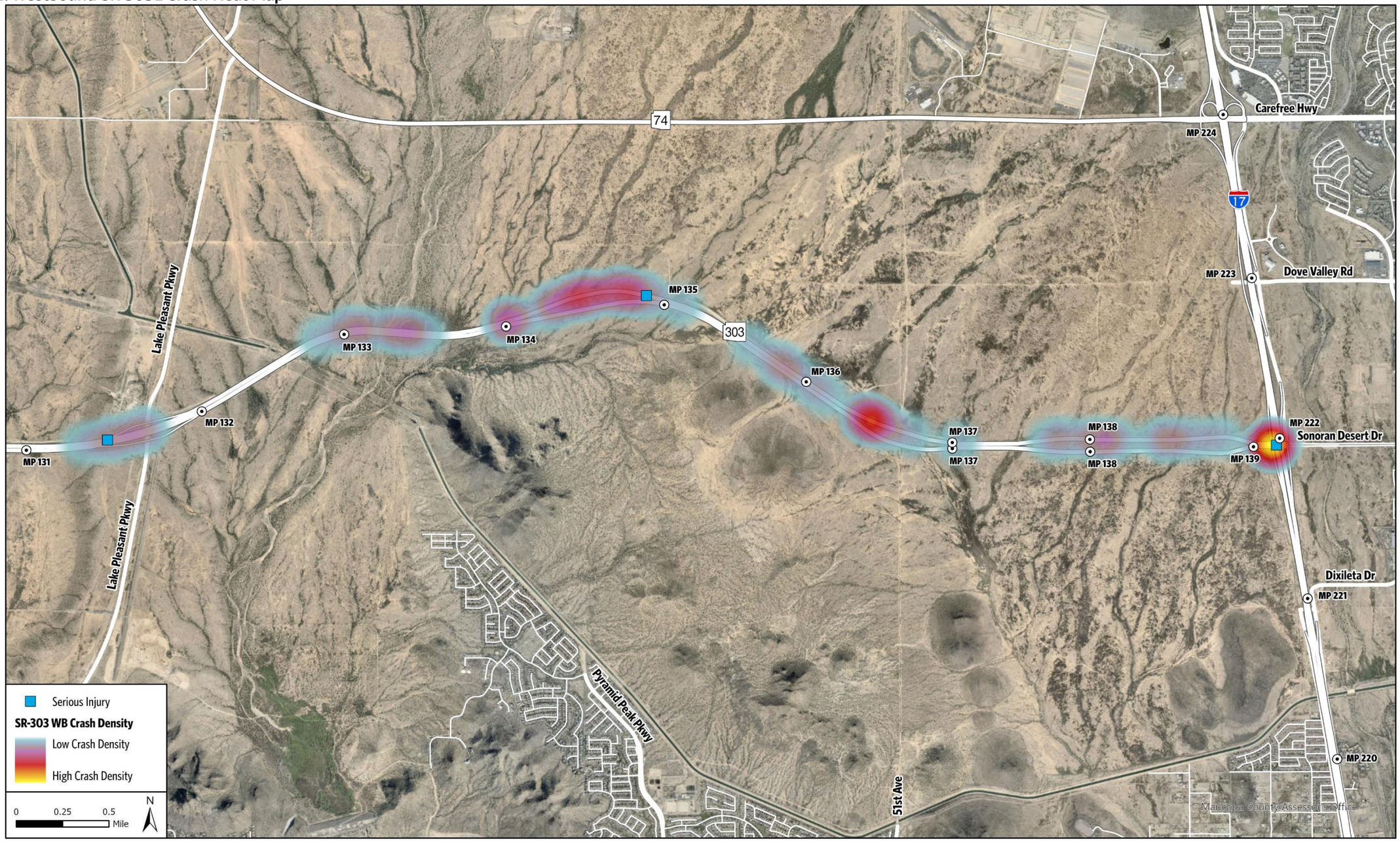
Table 3-3: Yearly Crash Manner Distribution (SR 303L)

Crash Manner	2015	2016	2017	2018	2019	Grand Total
Angle (Front To Side) (Other Than Left Turn)	0	0	1	1	1	3
Other	0	0	0	2	1	3
Rear End	3	5	8	5	11	32
Sideswipe Same Direction	0	2	8	10	6	26
Single Vehicle	9	15	13	15	26	78
Grand Total	**12**	**22**	**30**	**33**	**45**	**142**

Figure 3-1: Eastbound SR 303L Crash Heat Map shows the crash density along SR 303L in the EB direction and identifies the locations of serious injury crashes in the study corridor. Figure 3-2: Westbound SR 303L Crash Heat Map shows the crash density along SR 303L in the WB direction and shows the locations of the serious injury crashes in the study corridor.

Figure 3-1: Eastbound SR 303L Crash Heat Map

Figure 3-2: Westbound SR 303L Crash Heat Map



3.2.2. I-17 Crash Summary

The number of crashes per year which occurred on I-17 between Dove Valley Road and Jomax Road in both the NB and SB direction are summarized in Table 3-4 through Table 3-6. The total number of crashes within the I-17 study limits between January 2015 and December 2019 is 281. Table 3-4 through Table 3-6 summarize various crash statistics including travel direction, crash severity, and crash manner, in an effort to determine any existing crash trends which are discussed below.

- There was a total of 281 crashes that took place on I-17 between Jomax Road and Dove Valley Road between the years 2015 and 2019.
- The number of crashes within the I-17 study limits shows a 40% increase from 2017 to 2019.
- The volume of crashes in the SB direction are slightly higher at 52% when compared to NB at 45%.
- A total of 73% of all crashes within the study limits were no injury. There were 4 fatal crashes on this segment.
- Many crashes on the segment were single vehicle crashes at 36%. Rear-end crashes account for the second most at 31% of total crashes on the segment and sideswipe crashes account for 22%.

The directional distribution of crashes on I-17 is shown in Table 3-4. The distribution is similar in the NB and SB directions 126 (45%) occurring in the NB direction, 147 (52%) in the SB direction and 8 (3%) of the crashes being reported as “unknown”.

Table 3-4: Yearly Travel Direction Distribution (I-17)

Travel Direction	2015	2016	2017	2018	2019	Grand Total
North	21	31	24	28	22	126
South	24	27	20	39	37	147
Unknown	0	0	0	2	6	8
Grand Total	**45**	**58**	**44**	**69**	**65**	**281**

The crash severity of crashes on I-17 is shown in Table 3-5. The majority of crashes which occurred were reported as no injury at 205 (73%). A reported 23% resulted in a possible injury of minor injury and 3% of crashes resulted in a suspected serious injury. There were 4 fatal crashes within the study limits of the I-17 over the previous 5 years, with two occurring in 2015, one in 2016 and one in 2018.

Table 3-5: Yearly Crash Injury Severity Distribution (I-17)

Injury Severity	2015	2016	2017	2018	2019	Grand Total
No Injury	35	42	26	52	50	205
Possible Injury	5	11	10	10	7	43
Suspected Minor Injury	2	2	5	6	6	21
Suspected Serious Injury	1	2	3	0	2	8
Fatal	2	1	0	1	0	4
Grand Total	**45**	**58**	**44**	**69**	**65**	**281**

Table 3-6 shows the crash manner distribution for the I-17 study limits over the previous 5 years. The data shows that single vehicle crashes make up the largest number of crashes in the corridor at 100 (36%), which is similar to the SR 303L segment. The next two highest crash types are typically the most common crash types on freeway segments, rear-ends and sideswipes with 87 (31%) and 63 (22%), respectively.

Table 3-6: Yearly Crash Manner Distribution (I-17)

Crash Manner	2015	2016	2017	2018	2019	Grand Total
Angle (Front To Side) (Other Than Left Turn)	2	2	0	0	0	4
Other	3	5	5	6	8	27
Rear End	14	15	16	22	20	87
Sideswipe Same Direction	7	10	5	23	18	63
Single Vehicle	19	26	18	18	19	100
Grand Total	**45**	**58**	**44**	**69**	**65**	**281**

Figure 3-3: Northbound I-17 Crash Heat Map and Figure 3-4 show the crash density along NB I-17 and SB I-17, respectively. Locations of serious injury and fatal crashes occurred are also provided in these figures.

Figure 3-3: Northbound I-17 Crash Heat Map

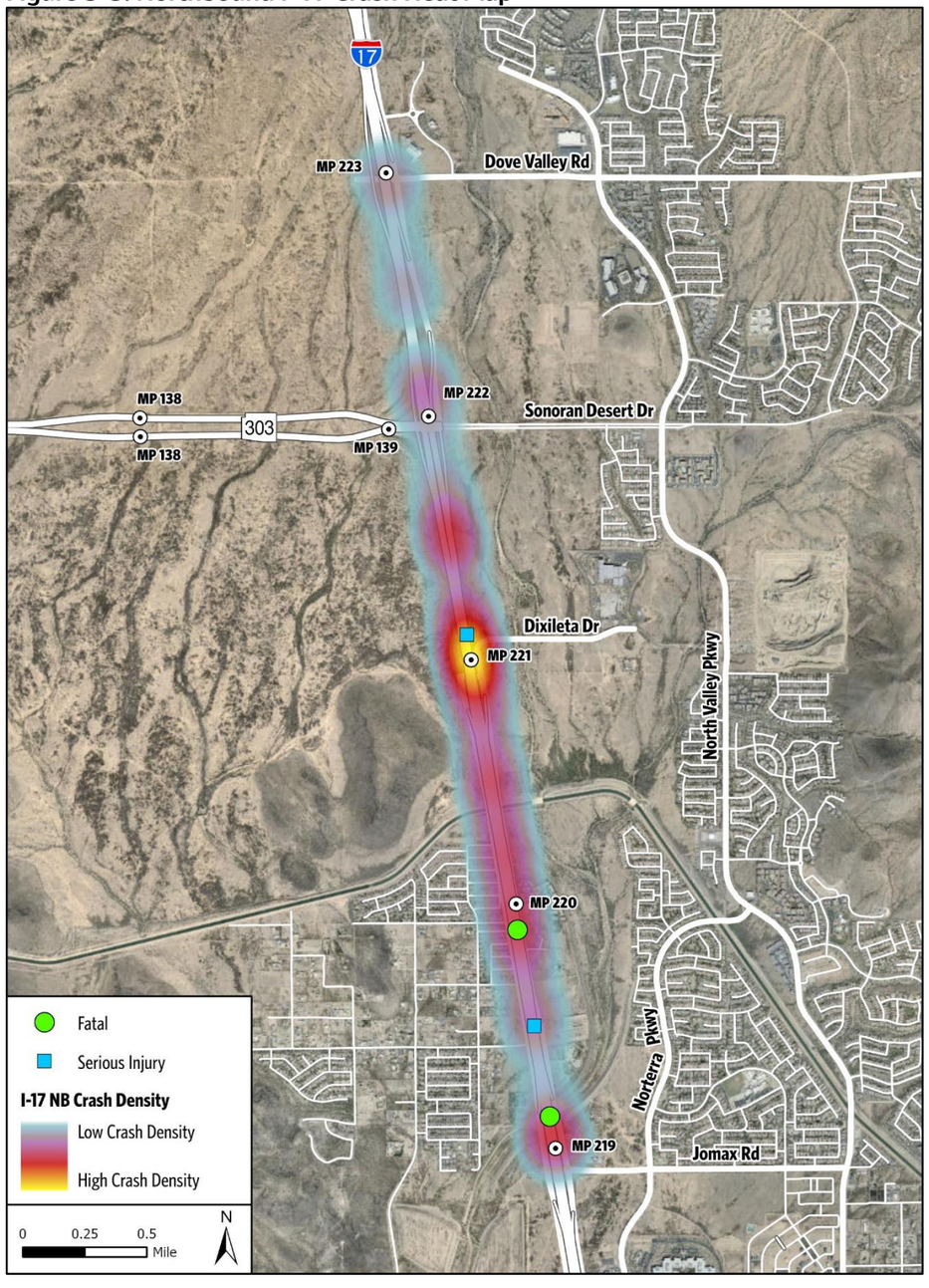
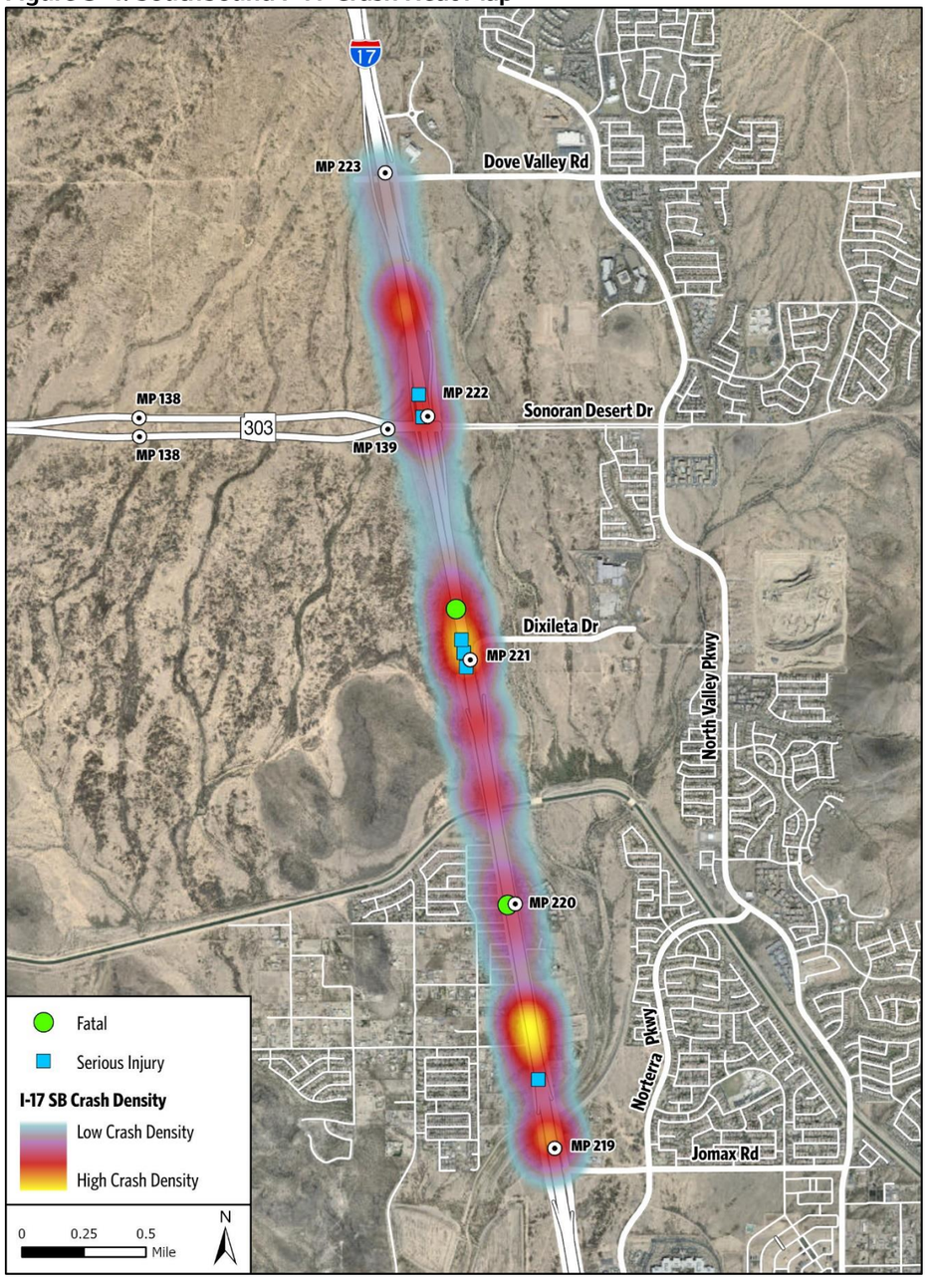


Figure 3-4: Southbound I-17 Crash Heat Map



4. TRAFFIC OPERATIONAL ANALYSIS

4.1. Introduction

As the metro valley continues to grow north and westward, the freeway system must expand to accommodate new traffic operational needs.

An operational analysis has been conducted of the 2020 existing corridor conditions and existing traffic volumes, a 2040 No-Build condition of the existing corridor conditions with the planned 43rd Avenue and 51st Avenue TI's and future traffic volumes, and a 2040 Build condition of the proposed roadway network and future traffic volumes.

4.2. Study Corridor Segments

As stated in the introduction, the limits of the traffic operational analysis extend from Lake Pleasant Parkway to I-17 along SR 303L, Dixileta Drive to Dove Valley Road along I-17, and include the intersection at Sonoran Desert Drive and North Valley Parkway.

The study area for the traffic operational analysis included freeway mainline, ramps, TI intersections, and intersections adjacent to the interchange that are directly affected by the interchange operations. A map of the study area is shown in Figure 1-2.

4.3. Stakeholder Coordination

The regional and operational traffic modeling efforts were coordinated with an advisory group of representatives from various stakeholder agencies including FHWA, ADOT, the Maricopa Association of Governments (MAG), the City of Phoenix, the City of Peoria, Maricopa County of Transportation, the Flood Control District of Maricopa County, and the Arizona State Land Department.

4.4. Existing Corridor Conditions

4.4.1. Roadway Network

The existing roadway network for the operational analysis encompasses SR 303L from Lake Pleasant Parkway to I-17, I-17 from Dixileta Drive to Dove Valley Road, and the intersection at Sonoran Desert Drive and North Valley Parkway.

4.4.1.1. Freeway/Highway and Ramps

The SR 303L corridor study limits stretch from Lake Pleasant Parkway to I-17. The future ramps at the 51st Avenue, and 43rd Avenue TI alignments will be constructed as part of the interim phase and the interchange at 67th Avenue will be constructed as part of this project' s implementation.

The I-17 corridor consists of three general purpose lanes and one HOV lane from Dixileta Drive and Dove Valley Road.

4.4.1.2. Traffic Interchanges

Within the study area, there is one interchange with signalized ramp terminal intersections along SR 303L and, two interchanges with signalized ramp terminal intersections and one interchange with unsignalized ramp terminal intersection along I-17.

The TI with signalized intersections along SR 303L is at Lake Pleasant Parkway, which is a fully functional TI. The signalized interchange along I-17 at Dove Valley Road is a partial interchange with the west leg unconstructed. The signalized TI at I-17 and SR 303L (Sonoran Desert Drive) is fully functional. The unsignalized interchange along I-17 is at Dixileta Drive, which is a partial TI with an NB exit ramp and a SB entrance ramp. Existing signal timings were collected, from the City of Peoria and ADOT, and used for the Synchro analysis of each TI. Refer to *Appendix D* for the existing traffic signal timings and *Appendix C* for VISSIM outputs.

4.4.1.3. Frontage Roads

There are no existing frontage roads along SR 303L.

4.4.1.4. Local Intersections

In addition to the TIs, the intersection at Sonoran Desert Drive and North Valley Parkway was analyzed because it was within the influence area.

4.4.2. Traffic Volumes

The existing traffic volumes for the study were developed based on the AADT obtained from ADOT's TDMS for SR 303L between Lake Pleasant Parkway and I-17. Weekday data was taken from the mainline count system at the count stations along SR 303L and also along I-17 (in the vicinity of the existing I-17 / Sonoran Desert Drive TI) as identified in Table 4-1 below.

Table 4-1: AADT Data from ADOT TDMS (SR 303L)

Count Station ID	Freeway Segment	MP	AADT (2019)	K Factor (%)	D Factor (%)	T Factor (%)
101612	SR 303L, Between Lake Pleasant Pkwy and I-17	135.85	26,433	13	70	9.9
100394	I-17, Between Dixileta Dr and Sonoran Desert Dr	221.11	114,992	9	56	7.3
100395	I-17, Between Sonoran Desert Dr and Sonoran Blvd	222.46	97,424	9	53	7.3

Source: ADOT TDMS

The existing traffic volumes for the study area were developed based on the existing AADT data from ADOT, 2020 ADT's from MAG's TDM and other sources from City of Phoenix.

4.4.3. Roadway Inventory

The existing roadway inventory was based on field review and review of recent aerial photographs. The inventory included the following features:

- Posted speed limits
  - Table 4-2 and Table 4-3 show the existing posted speed limits on SR 303L and I-17, respectively.

Table 4-2: Existing Speed Limits on SR 303L NB & SB

Speed Limit MPH	Starting Mile Post	Ending Mile Post
45	139	138.7
55	138.7	137.6
65	137.6	132

Table 4-3: Existing Speed Limits on I-17 NB & SB

Speed Limit MPH	Starting Mile Post	Ending Mile Post
65	223	220

- Number of lanes
  - The number of lanes on the freeways, arterials, ramps, and frontage roads were obtained from field review and review of aerial photographs.
- Lane configurations at intersections
  - The lane configurations of the intersections at the traffic interchanges and at the key intersections adjacent to the TIs were obtained from field review and review of aerial photographs.
- Turn lane storage lengths
  - The turn lane storage lengths had to be considered for the microsimulation model to simulate the existing conditions more accurately. The storage lengths were obtained from field review and measurements in aerial photographs.
- Traffic control (signalized or unsignalized)
  - The type of traffic control was verified by field review and review of aerial photographs.

4.5. Microsimulation Modeling

The limits of the VISSIM microsimulation traffic model include SR 303L from Lake Pleasant Parkway to the I-17, I-17 from Dixileta Road to Dove Valley Road, and the intersection of Sonoran Desert Drive and North Valley Parkway.

4.5.1. Microsimulation (VISSIM)

The traffic operations analysis was performed using *VISSIM microscopic simulation software version 2021(SP 07)*. The program analyzes traffic operations under a series of constraints, such as lane configuration, traffic composition, traffic control types, and transit stops, among others. For traffic operations, it can provide a diverse array of measures of effectiveness (MOEs), such as average total delay, speeds, densities, travel times and queue lengths.

The detailed calibration of the existing conditions VISSIM analysis is included in *Appendix B.*

4.5.2. Criteria for Traffic Performance

The criteria for level-of-service (LOS) at signalized intersections, unsignalized intersections, basic freeways, multilane highways, merges/diverges, weaving, and ramps are shown in

Table 4-4 through Table 4-9, respectively.

Table 4-4: Unsignalized Intersection LOS Criteria

Level of Service	Description	Average Control Delay (seconds/vehicle)
A	Little or no delay	≤ 10
B	Minor delays	> 10 – 15
C	Average delays	> 15 – 25
D	Moderate delays	> 25 – 35
E	Lengthy delays	> 35 – 50
F	Excessive delays/gridlock	> 50

Source: Highway Capacity Manual, Transportation Research Board, 2016

Table 4-5: Signalized Intersection LOS Criteria

Level of Service	Description	Average Control Delay (seconds/vehicle)
A	Operations with very low delay occurring with favorable progression and/or short cycle length.	≤ 10
B	Operations with low delay occurring with good progression and/or short cycle lengths.	> 10 – 20
C	Operations with average delays resulting from fair progression and/or longer cycle lengths. Individual cycle failures begin to appear.	> 20 – 35
D	Operations with longer delays due to a combination of unfavorable progression, long cycle lengths, or high volume to capacity (v/c) ratios. Many vehicles stop and individual cycle failures are noticeable.	> 35 – 55
E	Operations with high delay values indicating poor progression, long cycle lengths, and high v/c ratios. Individual cycle failures are frequent occurrences. This is considered to be the limit of acceptable delay.	> 55 – 80
F	Operations with delays unacceptable to most drivers occurring due to over saturation, poor progression, or very long cycle lengths.	> 80

Source: Highway Capacity Manual, Transportation Research Board, 2016

Table 4-6: Basic Freeway LOS Criteria

Level of Service	Description	Density (pc/mi/ln)
A	Free-flow operations allow vehicles to be almost completely unimpeded in their ability to maneuver within the traffic stream.	0 – 11
B	The ability to maneuver within the traffic stream is only slightly restricted, and the general level of physical and psychological comfort provided to drivers is still high.	> 11 – 18
C	Freedom to maneuver within the traffic stream is noticeably restricted, and lane changes require more care and vigilance on the part of the driver.	> 18 – 26
D	Freedom to maneuver within the traffic stream is more noticeably limited, and the driver experiences reduced physical and psychological comfort levels.	> 26 – 35
E	Operating at capacity, there are virtually no usable gaps in the traffic stream leaving little room to maneuver.	> 35 – 45
F	Existing demand exceeds capacity causing excessive delay and breakdowns in vehicular flow.	> 45

Source: Highway Capacity Manual, Transportation Research Board, 2016

Table 4-7: Merge/Diverge LOS Criteria

Level of Service	Density (pc/mi/ln)
A	0 – 10
B	> 10 – 20
C	> 20 – 28
D	> 28 – 35
E	> 35
F	Demand Exceeds

Source: Highway Capacity Manual, Transportation Research Board, 2016

Table 4-8: Weaving LOS Criteria

Level of Service	FREEWAY DENSITY (pc/mi/ln)	MULTILANE HIGHWAYS (pc/mi/ln)
A	< 10	≤ 12
B	> 10 – 20	> 12 – 24
C	> 20 – 28	> 24 – 32
D	> 28 – 35	> 32 – 36
E	> 35 – 43	> 36 – 40
F	> 43	> 40

Source: Highway Capacity Manual, Transportation Research Board, 2016

Table 4-9: Ramp LOS Criteria

Level of Service	Density (pc/mi/ln)
A	0 – 10
B	> 10 – 20
C	> 20 – 28
D	> 28 – 35
E	> 35 – 43
F	> 43

Source: Highway Capacity Manual, Transportation Research Board, 2016

The measures of effectiveness (MOE's) obtained from the VISSIM microsimulation model include delay, speed, volume-density, queues, etc. The delay and density are then translated into a LOS description by facility type, based on the 2010 Highway Capacity Manual definitions. LOS is a qualitative measure of the operational efficiency or effectiveness of a roadway. Six (6) LOS are defined and are designated by letters ranging from A through F, with LOS A representing the best range of operating conditions and LOS F representing the worst.

Currently, SR 303L and I-17 is considered urban in character. ADOT Roadway Design Guidelines (RDG) acceptable LOS criteria by facility type are:

- Urban freeway/highway segments – LOS D or better
- Urban traffic interchanges (crossroads and ramps) – LOS D or better

VISSIM output volumes and densities are reported for freeway, weaving, diverge, merge and ramp segments during the AM and PM peak hours. The density outputs were then used to assign the corresponding segment LOS based on criteria provided in HCM 6th Edition, refer to Table 4-10 below.

Table 4-10: Traffic Condition Tiers and LOS

LOS	Color Code	Traffic Conditions
A, B, C	Green	At or near free flow, minimum delay, low traffic density, high level of driver comfort.
D	Yellow	Approaching unstable flow, moderate delay, acceptable level of driver comfort.
E	Orange	Unstable flow, demand at or near capacity, high levels of delay, low level of driver comfort.
F	Red	Highly unstable flow, demand exceeds capacity, excessive delays, little to no driver comfort.

4.6. Existing Operational Analysis

4.6.1. Traffic Operational Analysis

Characteristically, a roadway network experiences the highest volumes of traffic during the AM and PM peak hours of the day and therefore the operational performance of the roadway network using the 2020 traffic conditions for the AM and PM peak hours was used in this alternative evaluation. The AM peak hour ranges from 8:00 to 9:00 AM, and the PM peak hour ranges from 4:00 to 5:00 PM. The existing roadway network, existing peak hour traffic volumes, and LOS are shown in Figure 4-1 through Figure 4-6 and in Table 4-11.

Figure 4-1: Year 2020 Existing AM Peak Hour– Traffic Volumes, Lanes, & LOS (Sheet 1 of 3)

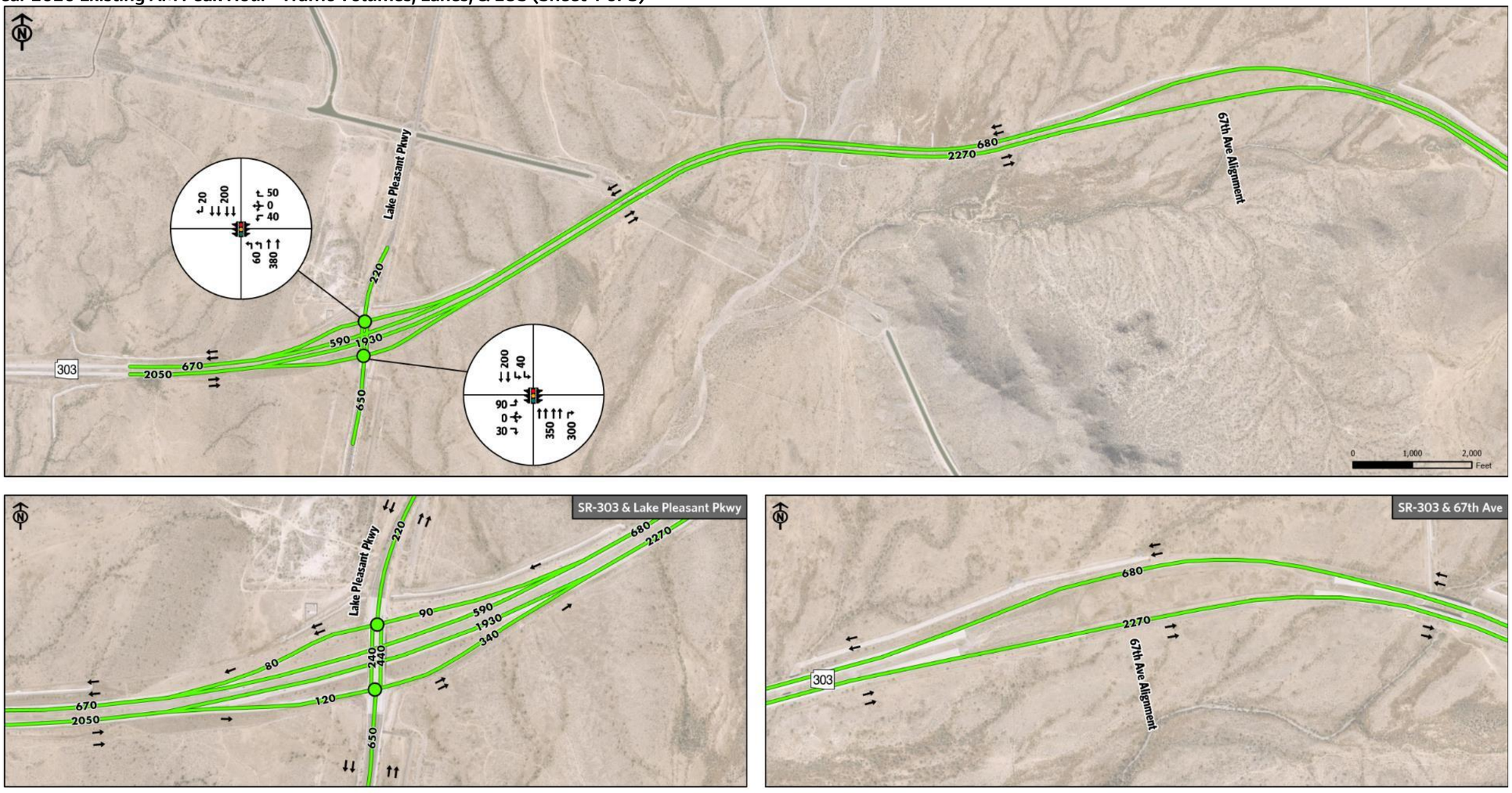


Figure 4-2: Year 2020 Existing AM Peak Hour– Traffic Volumes, Lanes, & LOS (Sheet 2 of 3)

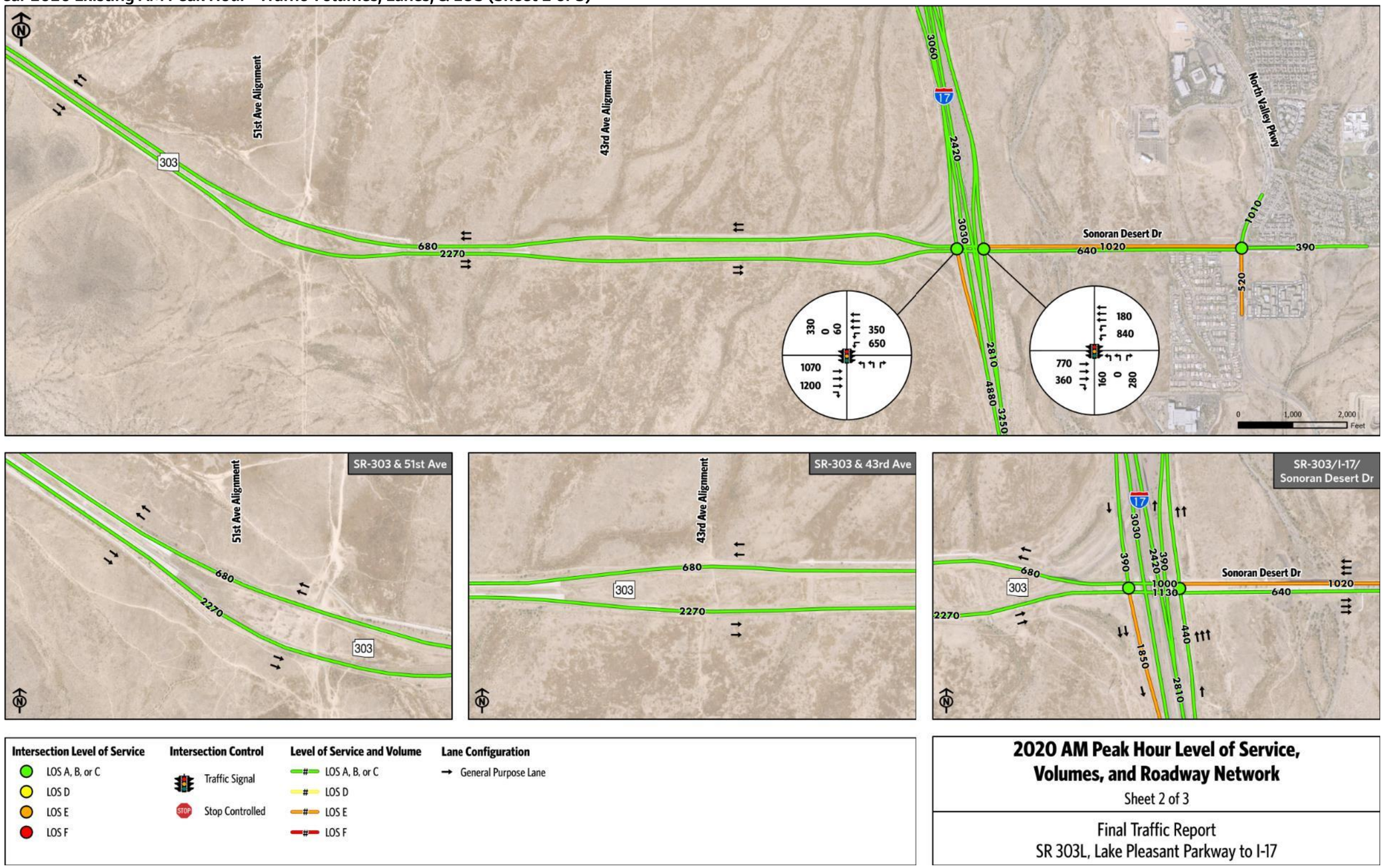


Figure 4-3: Year 2020 Existing AM Peak Hour– Traffic Volumes, Lanes, & LOS (Sheet 3 of 3)

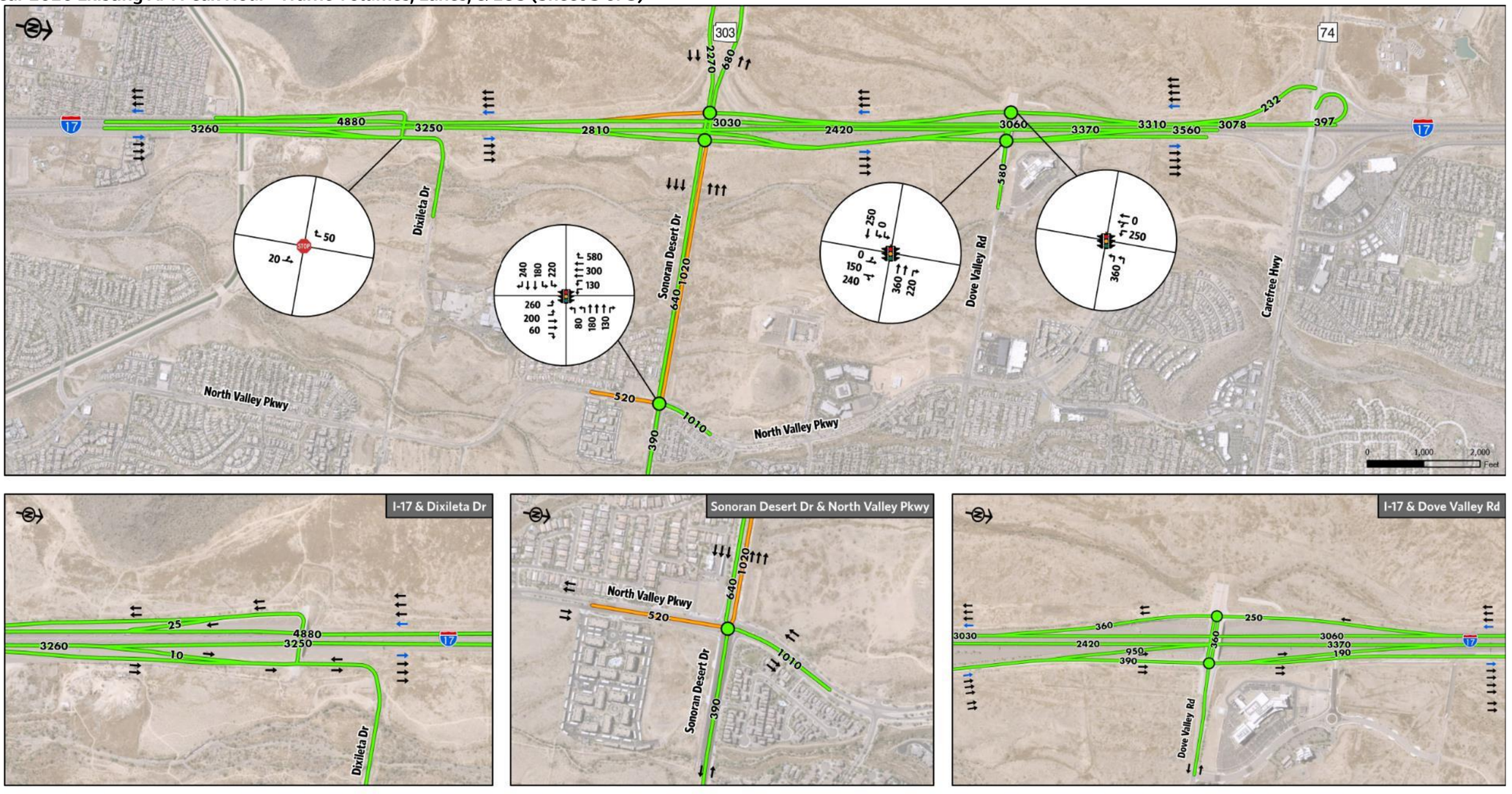


Figure 4-4: Year 2020 Existing PM Peak Hour– Traffic Volumes, Lanes, & LOS (Sheet 1 of 3)

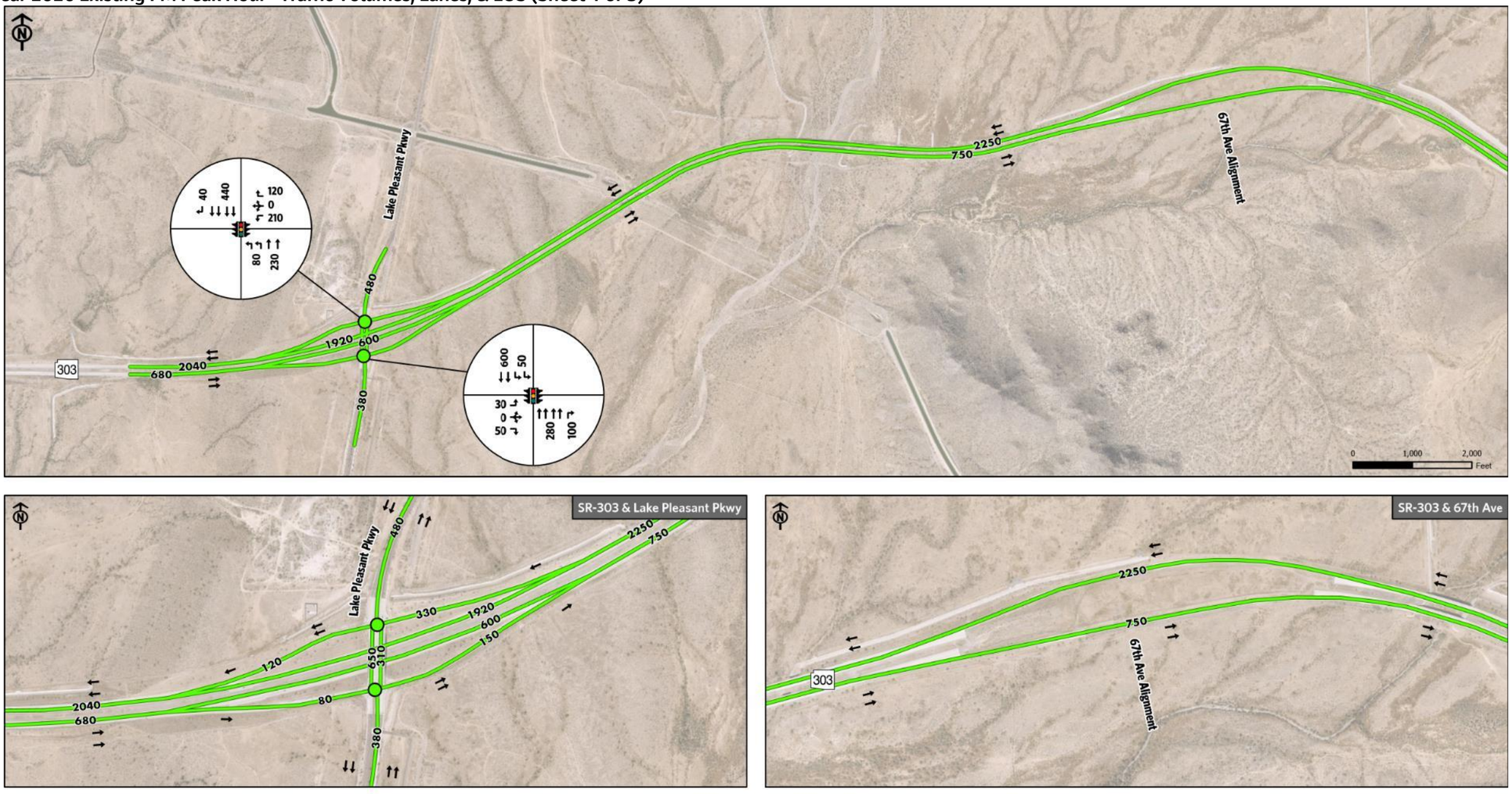


Figure 4-5: Year 2020 Existing PM Peak Hour– Traffic Volumes, Lanes, & LOS (Sheet 2 of 3)

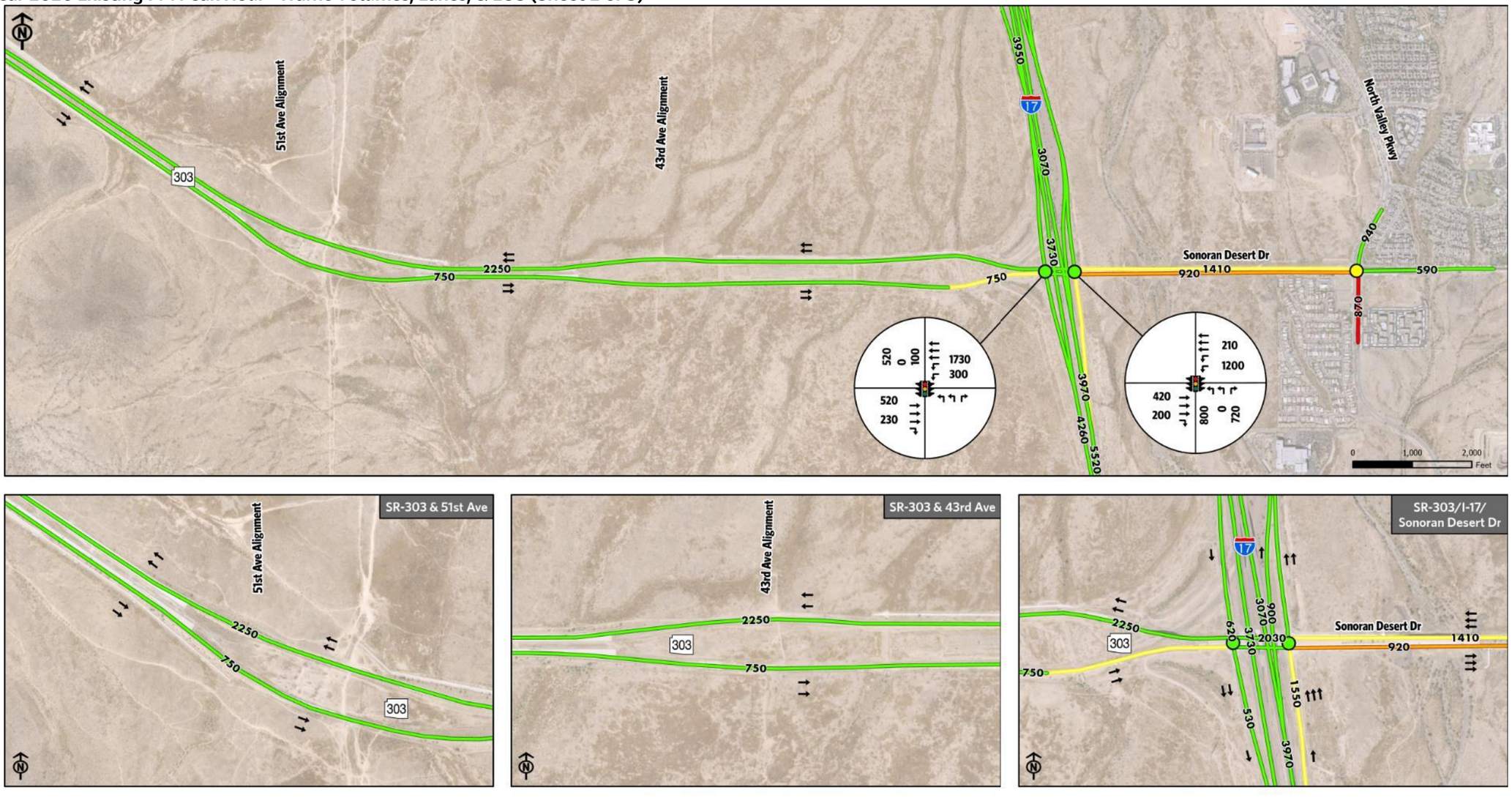


Figure 4-6: Year 2020 Existing PM Peak Hour– Traffic Volumes, Lanes, & LOS (Sheet 3 of 3)

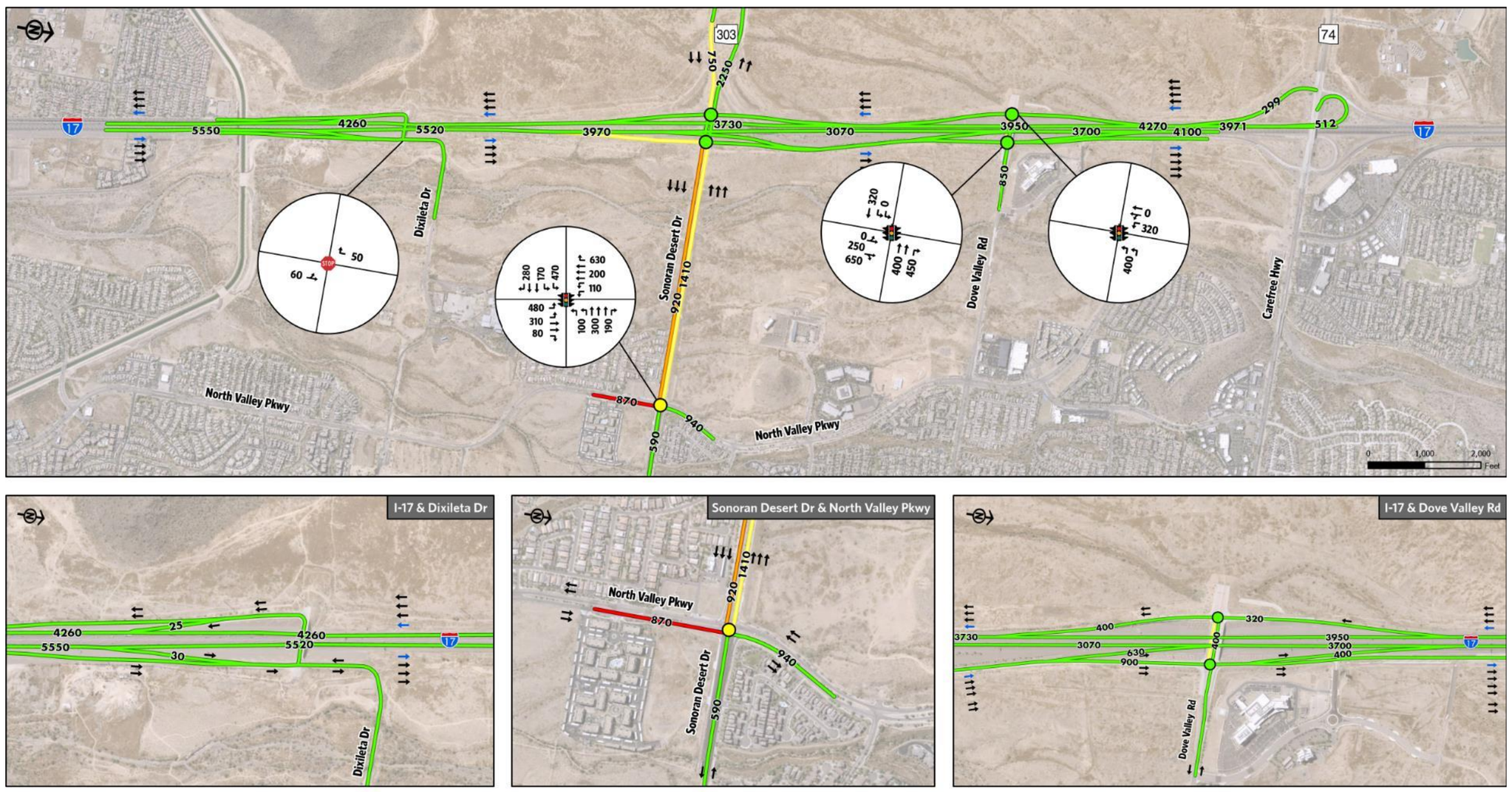


Table 4-11: 2020 Existing Peak Hours LOS for Signalized and Unsignalized Intersections

Intersection	Movement	AM Peak Hour				PM Peak Hour			
		Approach Delay	Approach LOS	Intersection Delay (seconds)	Intersection LOS	Approach Delay	Approach LOS	Intersection Delay (seconds)	Intersection LOS
I-17 SBFR and SR 303/Sonoran Desert Dr	SB	14.6	B	22.8	C	30.0	C	16.8	B
	WB	7.5	A			1.0	A		
	NB	-	-			-	-		
	EB	31.1	C			48.3	D		
I-17 NBFR and SR 303/Sonoran Desert Dr	SB	-	-	21.6	C	-	-	33.9	C
	WB	41.7	D			38.4	D		
	NB	23.9	C			42.9	D		
	EB	2.1	A			1.6	A		
SR 303 WBFR and Lake Pleasant Pkwy	SB	19.3	B	12.6	B	19.89	B	16.3	B
	WB	11.8	B			16.84	B		
	NB	9.5	A			10.19	B		
	EB	-	-			-	-		
SR 303 EBFR and Lake Pleasant Pkwy	SB	8.8	A	13.7	B	10.73	B	12.5	B
	WB	-	-			-	-		
	NB	15.1	B			15.79	B		
	EB	16.2	B			11.72	B		
Sonoran Desert Dr and North Valley Pkwy	SB	30.7	C	34.9	C	33.35	C	54.5	D
	WB	31.7	C			33.44	C		
	NB	46.1	D			87.20	F		
	EB	34.3	C			58.54	E		
I-17 SBFR and Dove Valley Rd	SB	26.4	C	11.3	B	20.39	C	9.8	A
	WB	1.1	A			1.39	A		
	NB	-	-			-	-		
	EB	-	-			-	-		
I-17 NBFR and Dove Valley Rd	SB	-	-	18.9	B	-	-	23.1	C
	WB	16.6	B			21.77	C		
	NB	14.6	B			18.78	B		
	EB	31.2	C			39.32	D		

4.6.2. Discussion of Results

The traffic operations analysis for the existing conditions is based on the existing roadway network and the existing traffic volumes as described in the previous sections. The figures also depict the operations of the freeway segments, merge/diverge areas, weaving areas (if any), the ramp segments, and the intersection LOS within the study area. Further details to links and node results are provided in *Appendix C*.

From the operations analysis it was observed that I-17 and SR 303L mainlines performed at acceptable traffic conditions at or near free flow speeds. The ramps performed at acceptable conditions except for the entrance ramp from Sonoran Desert Drive/SR 303L to SB I -17 that showed a LOS of E during the AM peak hour. This LOS can be attributed to the volume (1,850 vph) of the EB direction, the majority of which is a single movement. The intersections LOS for the intersections within the study are D or better during both AM and PM. Delays were observed at the intersection of Sonoran Desert Drive and North Valley Parkway in the NB and EB movements, however, the overall intersection is performing at acceptable LOS.

4.7. Sensitivity Analysis

A sensitivity analysis was conducted to evaluate the need of the proposed system to system flyover ramps at the interchange of SR 303L and I-17. This analysis was performed using Synchro 11 software and the existing geometrical configuration for the Sonoran Desert Drive/I-17 interchange. The forecasted volumes for these years were rebalanced to account for the geometrical changes in the multiple alternatives that were analyzed.

The years included in the sensitivity analysis are as follows:

- 2030 using forecasted volumes (AM/PM peaks)
- 2035 using forecasted volumes (AM/PM peaks)
- 2040 using forecasted volumes (AM/PM peaks)

The SR 303L and I-17 system ramps analysis scenarios are as follows:

- Include all system ramps (east-south (ES), north-west (NW), east-north (EN), south-west (SW),
- Removing the SW and EN system ramps, and
- Removing the ES and NW system ramps

Scenario 1: This includes the four system ramps and presented the best operational results of all the scenarios studied and an overall LOS of D or better for all the analysis years.

Scenario 2: Removing the SW and EN flyover ramps resulted in failing operational conditions for all the future analysis years. The failing conditions are presented in the SB terminal interchange. Capacity and signal timing/phasing improvements would be required by the year 2030 to obtain an acceptable LOS at this location. It was observed that traffic carried by the proposed flyovers will be conflicting with the heaviest movements at the SB interchange.

Scenario 3: This includes removing the ES and NW ramps. This scenario is the worst performing of the three scenarios evaluated. The NW and ES flyover ramps carry approximately 2800 vehicles. Removing these flyover ramps will result failing operations at both the SB and NB terminals of the interchange.

Including the flyover ramps will improve the operations of the interchange. Refer to Table 4-12 for the sensitivity analysis results which show the delay (in seconds) and LOS.

Table 4-12: Sensitivity Analysis Results

Movement	Scenario 1 - With flyover ramps								Scenario 2 - Without SW and EN Ramps								Scenario 3 - Without ES and NW Ramps							
	I-17 SB at SR-303				I-17 NB at SR-303				I-17 SB at SR-303				I-17 NB at SR-303				I-17 SB at SR-303				I-17 NB at SR-303			
	AM		PM		AM		PM		AM		PM		AM		PM		AM		PM		AM		PM	
	Delay(sec.)-LOS		Delay(sec.)-LOS		Delay(sec.)-LOS		Delay(sec.)-LOS		Delay(sec.)-LOS		Delay(sec.)-LOS		Delay(sec.)-LOS		Delay(sec.)-LOS		Delay(sec.)-LOS		Delay(sec.)-LOS		Delay(sec.)-LOS		Delay(sec.)-LOS	
	Year 2030																							
EB	46.4	D	50.4	D	27.7	C	60.5	E	50.9	D	167.9	F	11.5	B	23.8	C	536.1	F	251.6	F	33.5	C	39.1	D
WB	18.5	B	56.7	E	33.0	C	25.2	C	49.6	D	158.4	F	45.4	D	39.4	D	546.9	F	1209.7	F	52.4	D	125.2	F
NB					40.9	D	107.3	F					46.4	D	55.2	E					319.0	F	729.3	F
SB	39.3	D	56.2	E					47.9	D	55.3	E					32.1	C	35.9	D				
Total	**27.5**	**C**	**54.9**	**D**	**33.2**	**C**	**53.5**	**D**	**49.7**	**D**	**139.6**	**F**	**31.4**	**C**	**37.2**	**D**	**530.4**	**F**	**837.3**	**F**	**162.2**	**F**	**406.5**	**F**
	Year 2035																							
EB	48.6	D	58.4	E	25.0	C	26.7	C	35.0	D	66.4	E	7.2	A	17.8	B	590.6	F	503.1	F	28.5	C	152.9	F
WB	38.9	D	42.2	D	35.1	D	31.9	C	77.0	E	100.4	F	41.4	D	43.1	D	884.4	F	1255.5	F	87.5	F	126.6	F
NB					44.1	D	69.2	E					73.7	E	145.1	F					455.2	F	890.4	F
SB	41.5	D	64.2	E					74.1	E	66.0	E					39.6	D	36.6	D				
Total	**42.3**	**D**	**49.6**	**D**	**34.4**	**C**	**40.7**	**D**	**60.2**	**E**	**80.6**	**F**	**31.8**	**C**	**54.0**	**D**	**714.4**	**F**	**914.9**	**F**	**247.7**	**F**	**511.7**	**F**
	Year 2040																							
EB	46.6	D	45.5	D	43.2	D	38.1	D	80.1	F	71.4	E	16.0	B	20.7	C	1236.3	F	555.8	F	35.4	D	40.7	D
WB	19.0	C	47.1	D	33.5	C	36.3	D	78.1	E	75.5	E	52.6	D	40.6	D	752.6	F	1557.3	F	50.0	D	79.6	E
NB					49.0	D	53.4	D					47.1	D	69.6	E					604.9	F	1099.1	F
SB	39.5	D	44.9	D					42.4	D	86.6	F					37.0	D	37.3	D				
Total	**29.4**	**C**	**46.3**	**D**	**40.2**	**D**	**41.6**	**D**	**70.8**	**E**	**77.1**	**E**	**35.2**	**D**	**39.3**	**D**	**1013.0**	**F**	**1106.5**	**F**	**320.2**	**F**	**674.6**	**F**

HCM 2000 Result

A sensitivity analysis (using Highway Capacity Software Version 7) was also conducted for the year 2030 to evaluate the temporary ramps east of 43rd Avenue which will be in place until the proposed system to system flyover ramps at the interchange of SR 303L and I-17 are constructed.

The analysis indicates that the temporary ramps east of 43rd Avenue will operate at an acceptable LOS until the year 2030. Beyond 2030, the temporary ramps will no longer perform at an acceptable LOS without the implementation of the system interchange. Refer to Table 4-13 for the results of the analysis.

Refer to *Appendix F* for the detailed HCS7 outputs.

Table 4-13: Temporary Ramps - 2030 Sensitivity Analysis Results

Direction	Link Description	Type	AM Peak Hour			PM Peak Hour		
			Volume (vph)	Density (pc/mi/ln)	LOS	Volume (vph)	Density (pc/mi/ln)	LOS
EB	West of 43rd Ave. On-Ramp	Basic	2660	22.1	C	1690	13.4	B
EB	43rd Ave. On-Ramp	Merge	1260	30.6	D	1260	23.7	C
EB	East of 43rd Ave. On Ramp	Basic	3630	35.4	E	2900	24.7	C
WB	East of 43rd Ave. Off-Ramp	Basic	2950	25.3	C	4500	45.0	F
WB	43rd Ave. Off-Ramp	Diverge	1120	29.7	D	1280	41.0	F
WB	West of 43rd Ave. Off-Ramp	Basic	1830	14.5	B	3220	24.7	C

HCS7 Results

4.8. 67th Avenue Interchange Alternatives

Three alternatives for interchange types were considered for the TI at 67th Avenue: a diamond TI, a single-point urban interchange (SPUI) and a diverging diamond interchange (DDI). These alternatives were screened based on qualitative and quantitative screening criteria and performance measures.

The proposed configuration for 67th Avenue is a major arterial with three travel lanes, a bike lane, and a sidewalk in each direction of travel. The 67th Avenue roadway width and lane configuration is consistent with Cross Section B from the City of Phoenix Street Planning and Design Guidelines (December 1, 2009).

The 2006 DCR showed a tight diamond TI with 67th Avenue crossing over SR 303L, and the report included a caveat that the type of interchange and stacking order could change as the design progressed.

Three types of interchanges were selected for consideration at 67th Avenue: A diamond TI, a single-point urban interchange (SPUI) and a diverging diamond interchange (DDI).

4.8.1. Diamond Interchange

The diamond TI includes one-lane parallel type entrance ramps and two-lane parallel type exit ramps. The exit ramps widen to three lanes at the intersections with 67th Avenue, and a refuge island would be constructed at each exit ramp right turn lane to shorten the pedestrian clearance interval.

67th Avenue will have two through lanes, a shared through/right-turn lane, and a right-turn lane in the SB direction approach to the SR 303L ramp terminals; and dual left-turn lanes between the SR 303L ramp terminals.

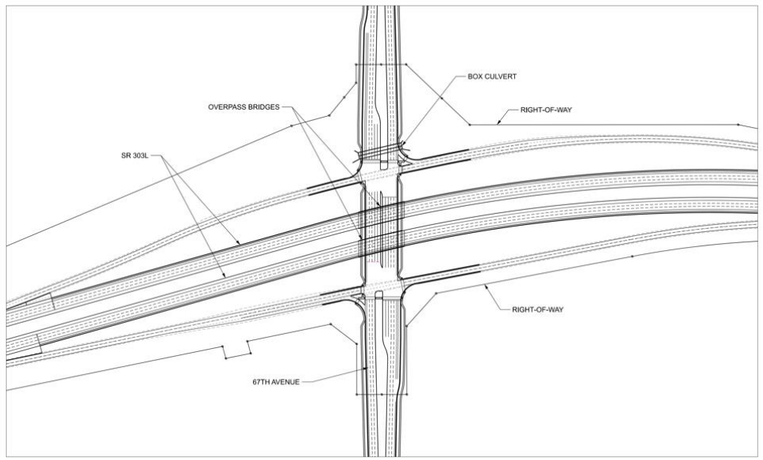
67th Avenue will have three through lanes, and a right-turn lane in the NB direction approach to the SR 303L ramp terminals; and dual left-turn lanes between the SR 303L ramp terminals.

On 67th Avenue, single left turn lanes are warranted by the traffic demand analysis, but dual left-turn lanes would be provided for consistency with the previous DCR.

The EB SR 303L off ramp will consist of a left-turn lane, a through/left-turn lane, and a right-turn lane. The WB SR 303L off ramp will consist of a left-turn lane, a through/left-turn lane, and a right-turn lane.

Figure 4-7: Diamond Interchange shows the preliminary geometric layout of the Diamond Interchange alternative.

Figure 4-7: Diamond Interchange



4.8.2. Single-Point Urban Interchange

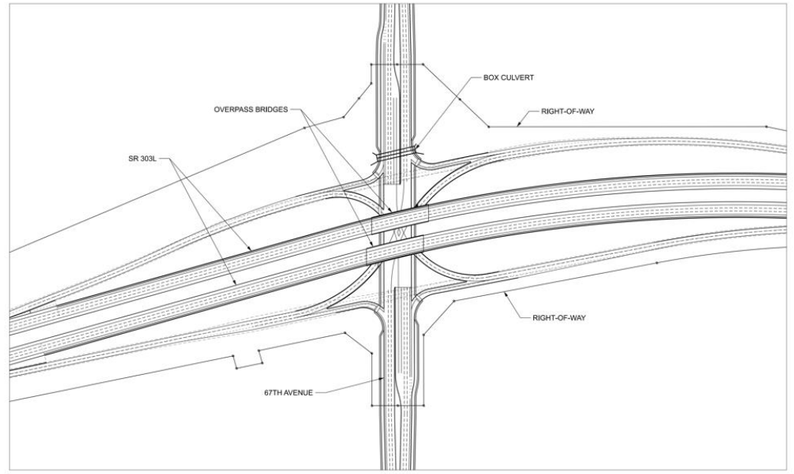
The SPUI includes one-lane parallel type entrance ramps and two-lane parallel type exit ramps. The entrance and exit ramps widen to three lanes at the intersection with 67th Avenue.

67th Avenue, in both directions, will have three through lanes, a right-turn lane, and dual left-turn lanes. On 67th Avenue, single left-turn lanes are warranted by the traffic demand analysis, but dual left-turn lanes will be provided for consistency with the 2006 DCR and to provide for future capacity needs.

Both off-ramps will have a right-turn lane, and dual left-turn lanes.

Figure 4-8: Single-Point Urban Interchange shows the preliminary geometric layout of the SPUI alternative.

Figure 4-8: Single-Point Urban Interchange



4.8.3. Diverging Diamond

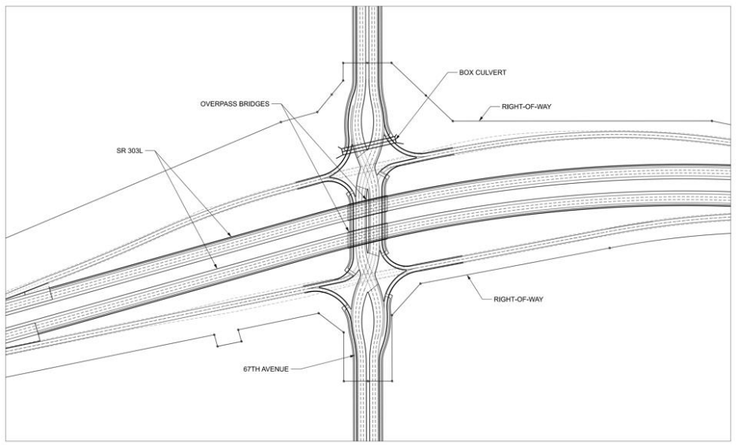
The diverging diamond interchange includes one-lane parallel type entrance ramps and two-lane parallel type exit ramps.

67th Avenue, in both directions, will have three through lanes, a right-turn lane, and a left-turn lane.

Both off-ramps will have a right-turn lane, and a left-turn lane.

Figure 4-9: Diverging Diamond Interchange shows the preliminary geometric layout of the DDI alternative.

Figure 4-9: Diverging Diamond Interchange



4.8.4. Capacity Analysis

These three interchange types were analyzed using Synchro/SimTraffic version 11 software.

The AM and PM peak-hour traffic volumes for the three alternatives are the same and are shown in Table 4-14.

Table 4-14: 67th Avenue TI Peak Hour Traffic Volumes

Intersection	Movement	AM Peak Hour Volume	PM Peak Hour Volume
67th Avenue and SR 303 Westbound	SBR	760	250
	SBT	540	680
	NBT	1040	400
	NBL	50	120
	WBR	360	490
	WBL	70	120
67th Avenue and SR 303 Eastbound	NBR	200	260
	NBT	450	370
	SBT	350	600
	SBL	180	280
	EBR	130	80
	EBL	640	150

Table 4-15 through Table 4-17 shows the results of the Synchro/SimTraffic Analysis. Refer to *Appendix E* for the detailed Synchro/SimTraffic outputs.

4.8.5. Recommendation

The three alternatives that were recommended for further consideration were evaluated based upon criteria grouped into the following categories:

- Total project cost
- Structures
- Drainage and floodplain impacts
- Traffic operational performance
- Multimodal opportunities
- ROW impacts
- Acceptance by the public and agencies
- Incident management
- Interchange type

For the detailed, comprehensive evaluation of the three alternatives, please refer to the *Final DCR: SR 303L, Lake Pleasant Parkway to I-17.*

All of the alternatives operate at an acceptable level of service; however, the diamond and DDI configurations operate slightly better than the SPUI. Although frontage roads are not planned in this area, the diamond TI configuration would best accommodate their implementation in the future should the need arise. The diamond configuration ranked highest or equal to the SPUI and DDI in every other category with the exception of the number of potential vehicle conflicts, but this is offset by an improvement in driver expectancy with the diamond configuration. Based on the results of the comparative analysis, the Diamond TI is the recommended alternative.

Table 4-15: 67th Avenue Diamond Interchange Synchro Results

Diamond Interchange - 67th Avenue and State Route 303 WB Ramp - Year 2040 Operations									
67th Avenue and State Route 303 WB Ramp - Year 2040 Operations	Storage Length (feet)	AM Peak Hour				PM Peak Hour			
		Delay (s/vehicle)	LOS	Max Queue Length (feet)	95th Queue Length (feet)	Delay (s/vehicle)	LOS	Max Queue Length (feet)	95th Queue Length (feet)
Westbound Left	500	22.8	C	97	78	17.3	B	158	121
Westbound Through	500	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Westbound Right	500	36.9	D	98	79	24.2	C	54	31
Westbound Approach	**500**	**34.6**	**C**	**N/A**	**N/A**	**22.8**	**C**	**N/A**	**N/A**
Northbound Left	360	50.5	D	49	44	36.0	D	91	78
Northbound Through	360	8.3	A	31	15	4.6	A	72	44
Northbound Right	360	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Northbound Approach	**360**	**10.2**	**B**	**N/A**	**N/A**	**11.8**	**B**	**N/A**	**N/A**
Southbound Left	325	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Southbound Through	325	10.7	B	75	92	11.7	B	240	211
Southbound Right	325	15.3	B	175	169	11.2	B	74	69
Southbound Approach	**325**	**13.4**	**B**	**N/A**	**N/A**	**11.6**	**B**	**N/A**	**N/A**
Entire Intersection	**N/A**	**15.4**	**B**	**N/A**	**N/A**	**15.0**	**B**	**N/A**	**N/A**
Diamond Interchange - 67th Avenue and State Route 303 EB Ramp - Year 2040 Operations									
67th Avenue and State Route 303 EB Ramp - Year 2040 Operations	Storage Length (feet)	AM Peak Hour				PM Peak Hour			
		Delay (s/vehicle)	LOS	Max Queue Length (feet)	95th Queue Length (feet)	Delay (s/vehicle)	LOS	Max Queue Length (feet)	95th Queue Length (feet)
Eastbound Left	450	29.9	C	232	213	24.6	C	113	103
Eastbound Through	450	29.9	C	222	176	24.6	C	30	34
Eastbound Right	450	20.1	C	N/A	N/A	22.4	C	N/A	N/A
Eastbound Approach	**450**	**28.3**	**C**	**N/A**	**N/A**	**23.9**	**C**	**N/A**	**N/A**
Northbound Left	325	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Northbound Through	325	26.2	C	202	184	14.5	B	102	96
Northbound Right	325	24.7	C	92	71	14.5	B	110	83
Northbound Approach	**325**	**25.7**	**C**	**N/A**	**N/A**	**14.5**	**B**	**N/A**	**N/A**
Southbound Left	360	19.8	B	115	95	13.7	B	116	105
Southbound Through	360	0.7	A	113	91	0.2	A	97	66
Southbound Right	360	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Southbound Approach	**360**	**7.2**	**A**	**N/A**	**N/A**	**4.5**	**A**	**N/A**	**N/A**
Entire Intersection	**N/A**	**21.7**	**C**	**N/A**	**N/A**	**10.7**	**B**	**N/A**	**N/A**

Table 4-16: 67th Avenue Single-Point Urban Interchange Synchro Results

Single-Point Urban Interchange - 67th Avenue and State Route 303 Ramps - Year 2040 Operations									
67th Avenue and State Route 303 Ramps - Year 2040 Operations	Storage Length (feet)	AM Peak Hour				PM Peak Hour			
		Delay (s/vehicle)	LOS	Max Queue Length (feet)	95th Queue Length (feet)	Delay (s/vehicle)	LOS	Max Queue Length (feet)	95th Queue Length (feet)
Eastbound Left	550	33.4	C	228	197	35.7	D	96	88
Eastbound Through	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Eastbound Right	500	34.4	C	N/A	N/A	38.6	D	N/A	N/A
Eastbound Approach	**N/A**	**34.4**	**C**	**N/A**	**N/A**	**38.6**	**D**	**N/A**	**N/A**
Westbound Left	580	24.3	C	53	46	35.2	D	122	79
Westbound Through	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Westbound Right	500	25.8	C	N/A	N/A	36.2	D	N/A	N/A
Westbound Approach	**N/A**	**25.8**	**C**	**N/A**	**N/A**	**36.2**	**D**	**N/A**	**N/A**
Northbound Left	330	34.5	C	74	70	41.3	D	96	78
Northbound Through	N/A	22.0	C	161	129	15.0	B	97	81
Northbound Right	300	0.2	A	N/A	N/A	0.3	A	N/A	N/A
Northbound Approach	**N/A**	**16.7**	**B**	**N/A**	**N/A**	**14.1**	**B**	**N/A**	**N/A**
Southbound Left	330	38.3	D	99	89	38.1	D	201	147
Southbound Through	N/A	23.8	C	183	141	12.5	B	158	126
Southbound Right	300	1.3	A	N/A		0.2	A	N/A	N/A
Southbound Approach	**N/A**	**14.0**	**B**	**N/A**	**N/A**	**15.9**	**B**	**N/A**	**N/A**
Entire Intersection	**N/A**	**20.5**	**C**	**N/A**	**N/A**	**21.5**	**C**	**N/A**	**N/A**

Table 4-17: 67th Avenue Diverging Diamond Interchange Synchro Results

Diverging Diamond Interchange - 67th Avenue and State Route 303 WB Ramp - Year 2040 Operations									
67th Avenue and State Route 303 WB Ramp - Year 2040 Operations	Storage Length (feet)	AM Peak Hour				PM Peak Hour			
		Delay (s/vehicle)	LOS	Max Queue Length (feet)	95th Queue Length (feet)	Delay (s/vehicle)	LOS	Max Queue Length (feet)	95th Queue Length (feet)
Westbound Left	500	17.6	B	104	88	14.0	B	105	108
Westbound Through	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Westbound Right	500	N/A	N/A	259	218	N/A	N/A	168	149
Westbound Approach	**500**	**17.6**	**B**	**N/A**	**N/A**	**14.0**	**B**	**N/A**	**N/A**
Northbound Left	320	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Northbound Through	320	20.3	C	315	305	8.1	A	124	102
Northbound Right	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Northbound Approach	**360**	**20.3**	**C**	**N/A**	**N/A**	**8.1**	**A**	**N/A**	**N/A**
Southbound Left	320	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Southbound Through	320	11.9	B	351	224	16.3	B	292	262
Southbound Right	200	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Southbound Approach	**325**	**11.9**	**B**	**N/A**	**N/A**	**16.3**	**B**	**N/A**	**N/A**
Entire Intersection	**N/A**	**17.4**	**B**	**N/A**	**N/A**	**11.0**	**B**	**N/A**	**N/A**

Diverging Diamond Interchange - 67th Avenue and State Route 303 EB Ramp - Year 2040 Operations									
67th Avenue and State Route 303 EB Ramp - Year 2040 Operations	Storage Length (feet)	AM Peak Hour				PM Peak Hour			
		Delay (s/vehicle)	LOS	Max Queue Length (feet)	95th Queue Length (feet)	Delay (s/vehicle)	LOS	Max Queue Length (feet)	95th Queue Length (feet)
Eastbound Left	500	18.0	B	518	412	14.5	B	194	142
Eastbound Through	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Eastbound Right	500	N/A	N/A	72	59	N/A	N/A	74	75
Eastbound Approach	**450**	**18.0**	**B**	**N/A**	**N/A**	**14.5**	**B**	**N/A**	**N/A**
Northbound Left	320	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Northbound Through	320	19.3	B	236	200	14.7	B	223	198
Northbound Right	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Northbound Approach	**325**	**19.3**	**B**	**N/A**	**N/A**	**14.7**	**B**	**N/A**	**N/A**
Southbound Left	320	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Southbound Through	320	5.8	A	108	88	8.2	A	142	133
Southbound Right	200	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Southbound Approach	**360**	**5.8**	**A**	**N/A**	**N/A**	**8.2**	**A**	**N/A**	**N/A**
Entire Intersection	**N/A**	**15.4**	**B**	**N/A**	**N/A**	**11.2**	**B**	**N/A**	**N/A**

4.9. No-Build Corridor Conditions

4.9.1. Roadway Network

The future corridor conditions for the No-Build condition include new TI's at 51st Avenue and 43rd Avenue. No other improvements are included in the No-Build condition. A brief description of each location is given below.

4.9.1.1. Freeway/Highway and Ramps

The SR 303L will have two general purpose mainline lanes in both directions from Lake Pleasant Parkway to I-17. There will be a EB diverge and WB merge west of 51st Avenue. Between 51st Avenue and 43rd Avenue there will be an auxiliary lane used for weaving on to and off SR 303L in both directions. East of 43rd Avenue there will be a merge and diverge for EB and WB directions, respectively.

I-17 will remain as existing with mainline having three general purpose lanes, one HOV lane and a merge/diverge lane at each TI.

4.9.1.2. Traffic Interchanges

The existing system interchange consist of a diamond TI from I-17 onto SR 303L to the west and Sonoran Desert Drive to the east. In the No-Build scenario, this layout will remain as is.

SR 303L/Lake Pleasant Parkway TI

The existing diamond type TI has four ramps that provide full access between SR 303L and Lake Pleasant Parkway. Lake Pleasant Parkway has two through lanes and dual left turn lanes in each direction between the SR 303L ramp terminals.

SR 303L/51st Avenue TI

The future diamond type TI at 51st Avenue and SR 303L will be included in the No-Build scenario. The 51st Avenue TI will have four ramps that provide full access to SR 303L. 51st Avenue will have two through lanes, a shared through/right turn lane, and a single right-turn lane in the SB direction approach to the SR 303L ramp terminals; and dual left turn lanes between the ramp terminals.

51st Avenue will have three through lanes, and a single right-turn lane in the NB direction approach to the SR 303L ramp terminals; and dual left turn lanes between the ramp terminals.

The EB SR 303L off ramp will consist of a left-turn lane, through/left-turn lane and a right-turn lane. The WB SR 303L off ramp will consist of a left-turn lane, through/right-turn lane, and a right-turn lane.

SR 303L/43rd Avenue TI

The future diamond type TI at 43rd Avenue and SR 303L will be included in the No-Build scenario. The 43rd Avenue TI will have four ramps that provide full access to SR 303L. SR 303L 43rd Avenue will have two through lanes, a shared through/right-turn lane, and a single right-turn lane in the SB direction approach to the SR 303L ramp terminals; and dual left turn lanes between the ramp terminals.

43rd Avenue will have three through lanes, and a single right-turn lane in the NB direction approach to the SR 303L ramp terminals; and dual left turn lanes between the ramp terminals

The EB SR 303L off ramp will consist of a left-turn lane, through/left-turn lane, through/right-turn lane, and a right-turn lane. The WB SR 303L off ramp will consist of a left-turn lane, through/left-turn lane, through/right-turn lane, and a right-turn lane.SR 303L

4.9.1.3. Frontage Roads

There are no frontage roads included in the No-Build condition.

4.9.2. Traffic Volumes

As described in detail in *Section 2: Traffic Forecast*, the daily and peak hour traffic volumes were gathered from the MAG TDM for the 2040 No-Build alternative. Based on the future development conditions the peak-hour traffic data was post processed to address movements the MAG TDM could not account for. The peak-hour traffic volumes were then balanced prior to input into the VISSIM microsimulation model.

4.10.No-Build Operational Analysis

The traffic demand modeling provided a macroscopic analysis of the No-Build condition. The traffic operational analysis evaluated the peak hour traffic volumes at a 'microscopic level'.

The methodology involved in the operational analysis included the following:

- The No-Build signal timings configuration of the interchange intersections and adjacent arterial intersections were optimized using the *Synchro/SimTraffic* version 11 software. These timings were then transferred to the *VISSIM* models. To improve the operations at the signalized intersections, changes to the splits and additional right turn overlaps with left turns were included. The LOS of the intersections and intersection approaches where calculated based on the delays reported by the *VISSIM* models and HCM criteria.
- The AM and PM peak-hour operations of the roadway network system within the study area were modeled using the *VISSIM* microsimulation software and included:
  - SR 303L: mainline, merge/weave areas, ramps, ramp junctions with cross streets, and traffic interchange intersections.
  - I-17: mainline, merge/weave areas, ramps, ramp junctions with cross streets, traffic interchange intersections and an adjacent intersection directly impacted by the interchange operations.

4.10.1. No-Build Traffic Operational Analysis

The post-processed and balanced peak-hour traffic data was used as input into the VISSIM microsimulation model. Traffic operational analysis was conducted for the No-Build scenario.

The No-Build model consists of the 2040 base roadway network and the new 2040 socioeconomic projections were used. Under this scenario, the 51st Avenue and 43rd Avenue TI's on SR 303L were included, but no improvements were made to I-17.

4.10.1.1. Year 2040 No-Build

No-Build scenarios are often used to determine how future transportation systems operate without planned improvements on specific facilities. The No-Build scenario was also evaluated to assess the impact of not constructing the system interchange between SR 303L and I-17 in the 2040 transportation system.

For the Year 2040 No-Build scenario, the peak hour traffic volumes, lane configurations, and LOS of the freeway system and intersection analysis are shown in Figure 4-10 through Figure 4-15 and Table 4-18.

Figure 4-10: Year 2040 No Build AM Peak Hour - Traffic Volumes, Lanes, & LOS (Sheet 1 of 3)

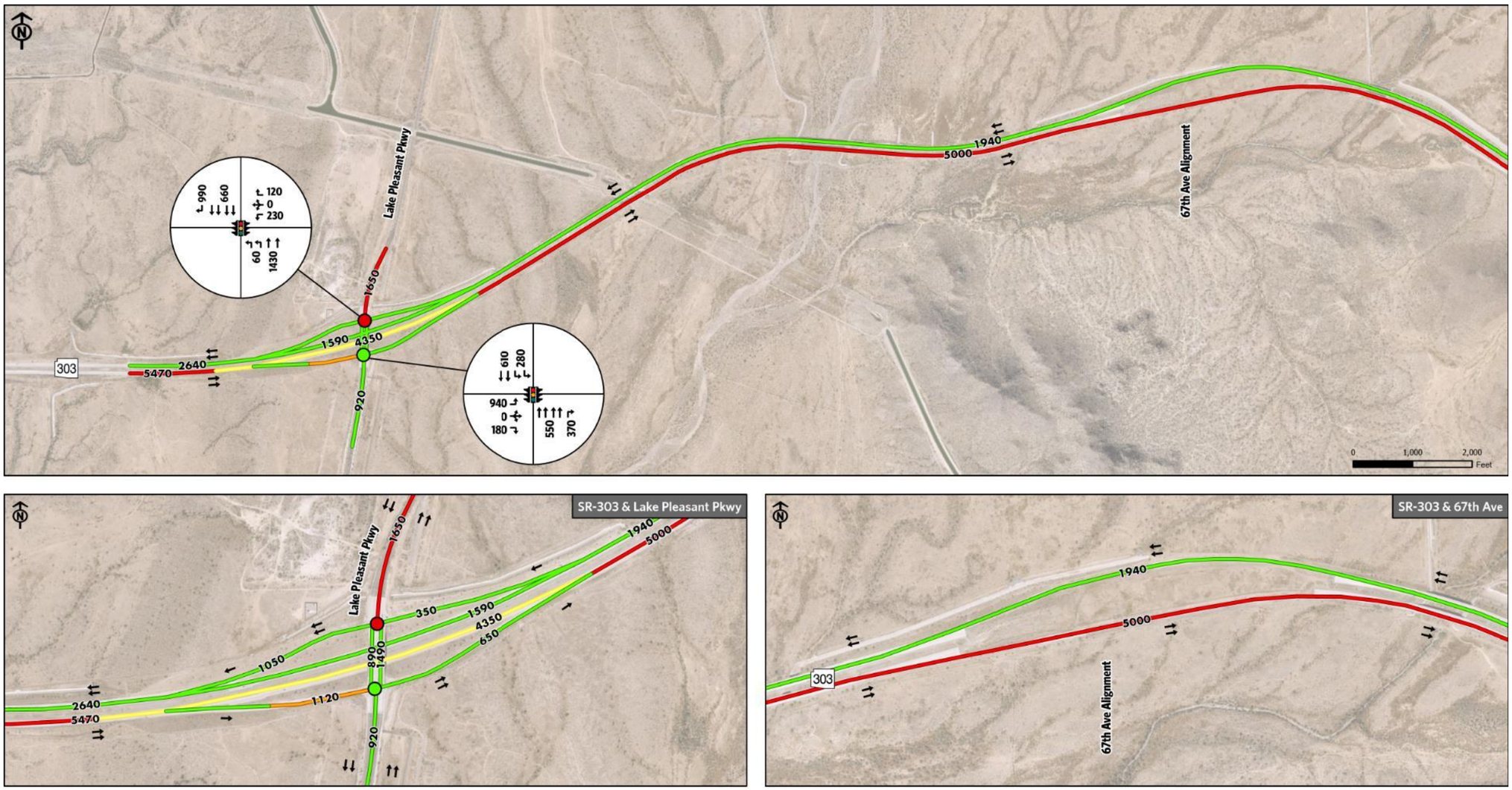


Figure 4-11: Year 2040 No Build AM Peak Hour - Traffic Volumes, Lanes, & LOS (Sheet 2 of 3)

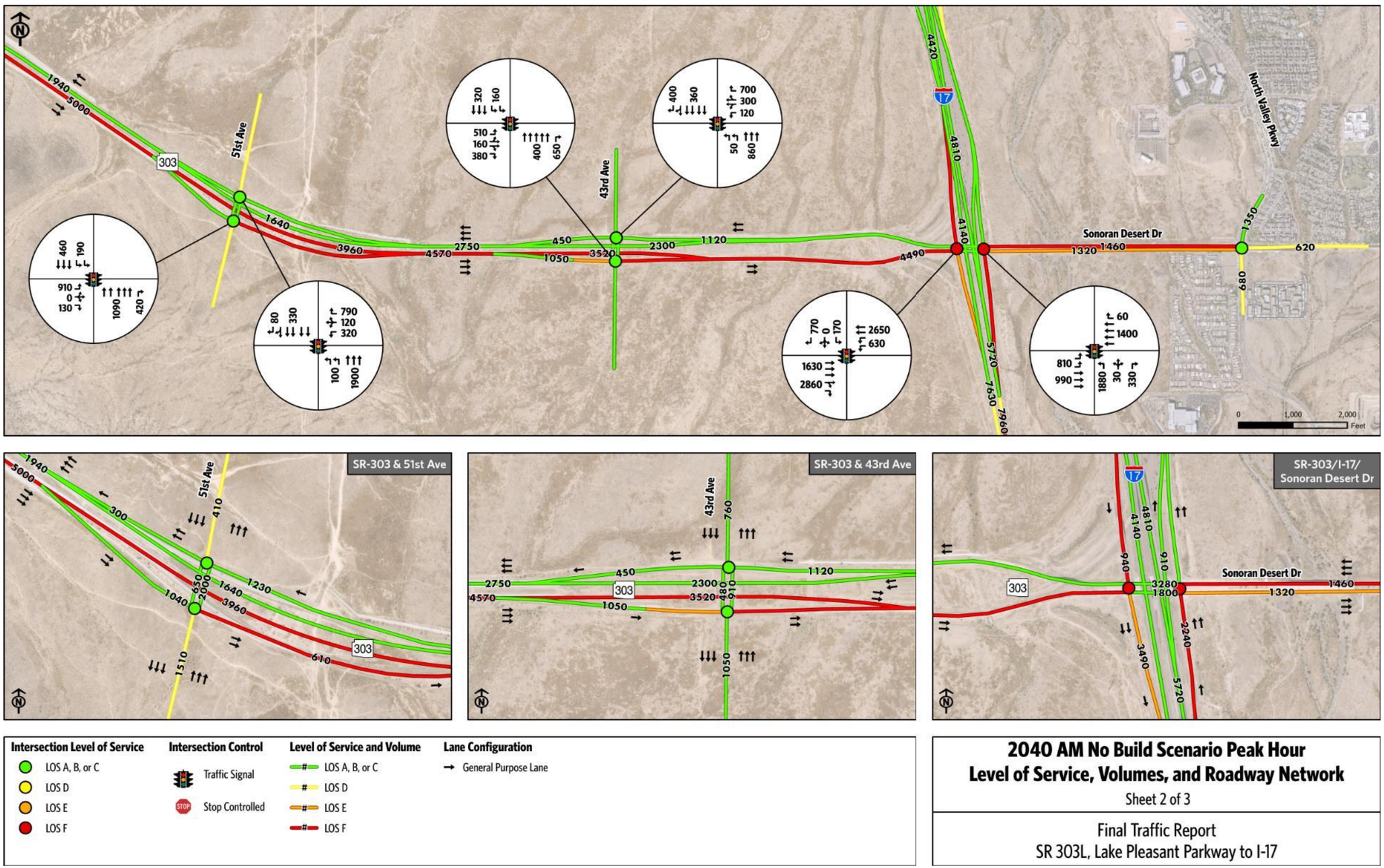
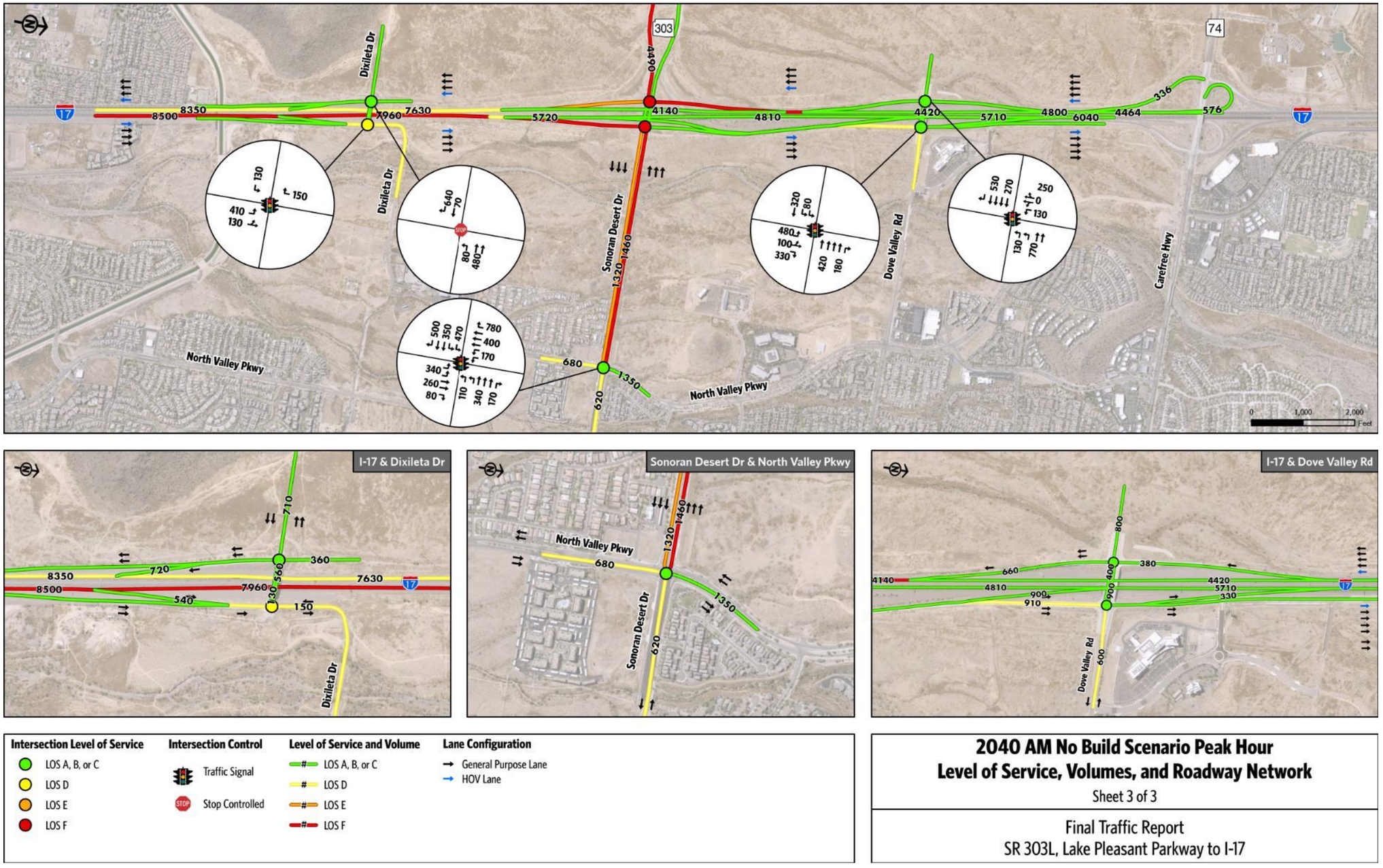


Figure 4-12: Year 2040 No Build AM Peak Hour - Traffic Volumes, Lanes, & LOS (Sheet 3 of 3)



Intersection Level of Service
- LOS A, B, or C
- LOS D
- LOS E
- LOS F

Intersection Control
- Traffic Signal
- Stop Controlled

Level of Service and Volume
- # LOS A, B, or C
- # LOS D
- # LOS E
- # LOS F

Lane Configuration
- General Purpose Lane
- HOV Lane

2040 AM No Build Scenario Peak Hour
Level of Service, Volumes, and Roadway Network
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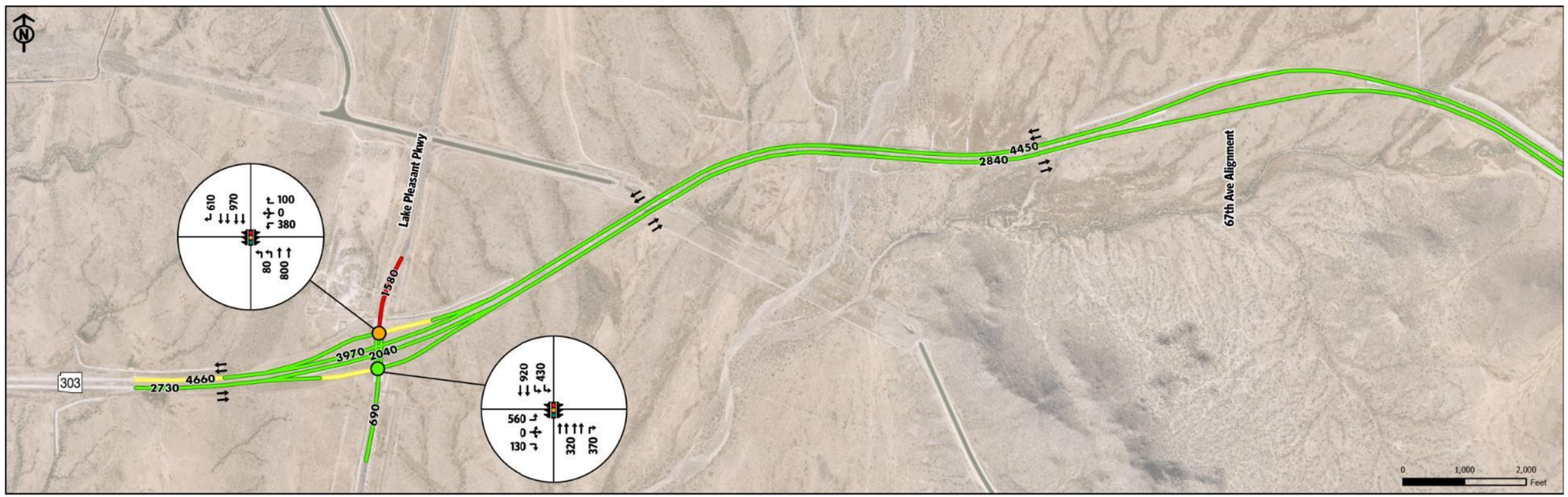
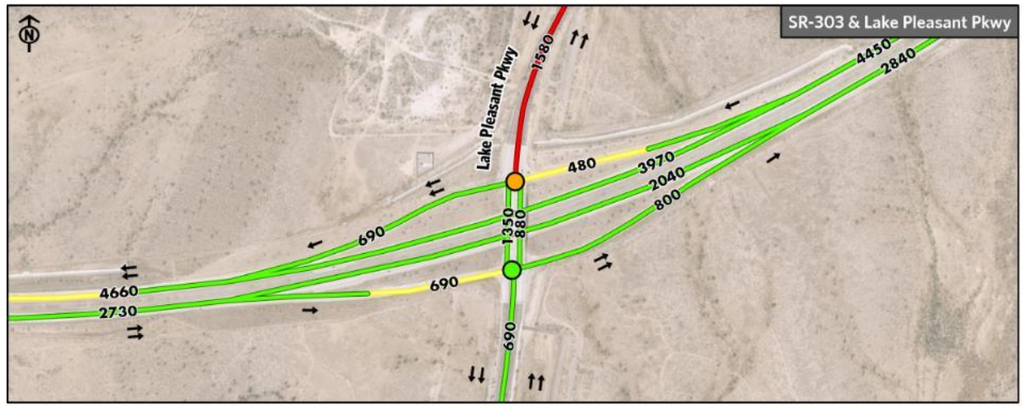
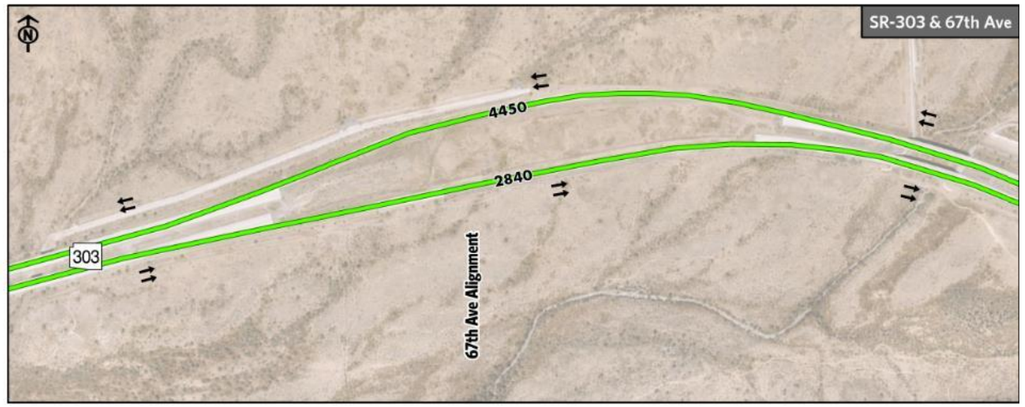
Figure 4-13: Year 2040 No Build Peak Hour PM - Traffic Volumes, Lanes, & LOS (Sheet 1 of 3)







Intersection Level of Service
- LOS A, B, or C
- LOS D
- LOS E
- LOS F

Intersection Control
- Traffic Signal
- Stop Controlled

Level of Service and Volume
- # LOS A, B, or C
- # LOS D
- # LOS E
- # LOS F

Lane Configuration
- → General Purpose Lane

2040 PM No Build Scenario Peak Hour
Level of Service, Volumes, and Roadway Network
Sheet 1 of 3

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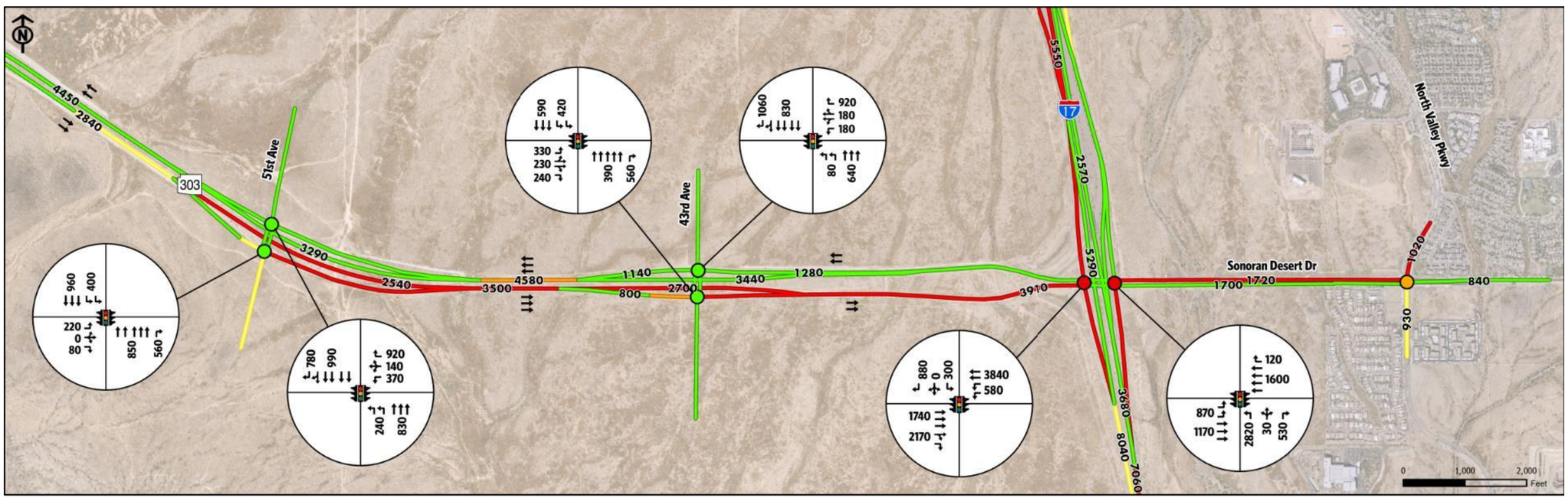
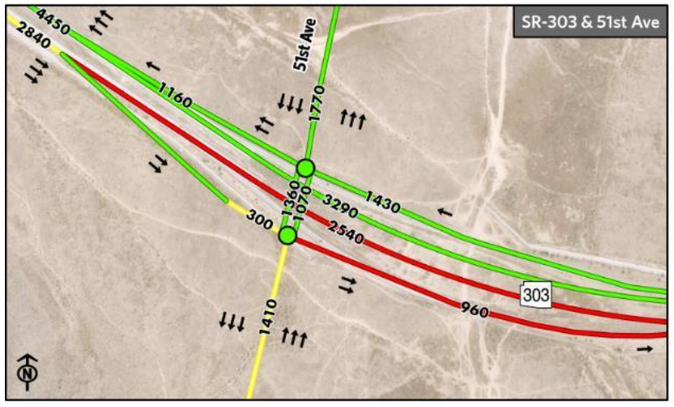
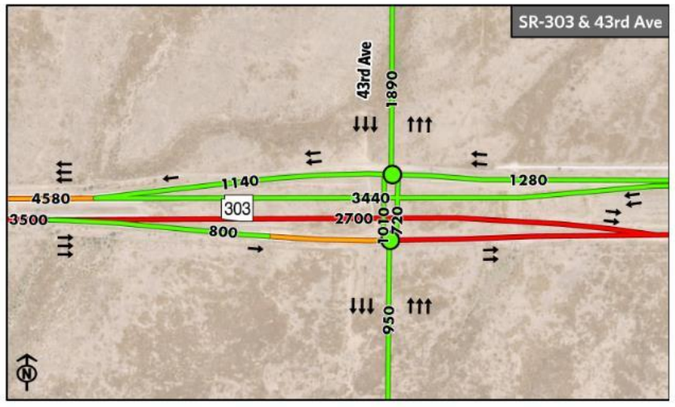
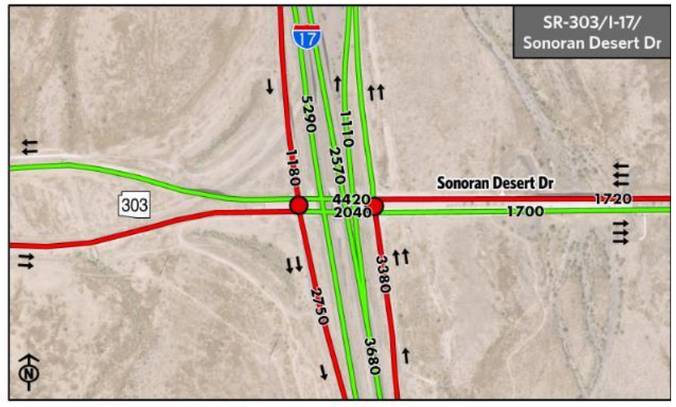
Figure 4-14: Year 2040 No Build Peak Hour PM - Traffic Volumes, Lanes, & LOS (Sheet 2 of 3)









Intersection Level of Service
- LOS A, B, or C
- LOS D
- LOS E
- LOS F

Intersection Control
- Traffic Signal
- Stop Controlled

Level of Service and Volume
- LOS A, B, or C
- LOS D
- LOS E
- LOS F

Lane Configuration
- General Purpose Lane

2040 PM No Build Scenario Peak Hour
Level of Service, Volumes, and Roadway Network
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Figure 4-15: Year 2040 No Build PM Peak Hour - Traffic Volumes, Lanes, & LOS (Sheet 3 of 3)

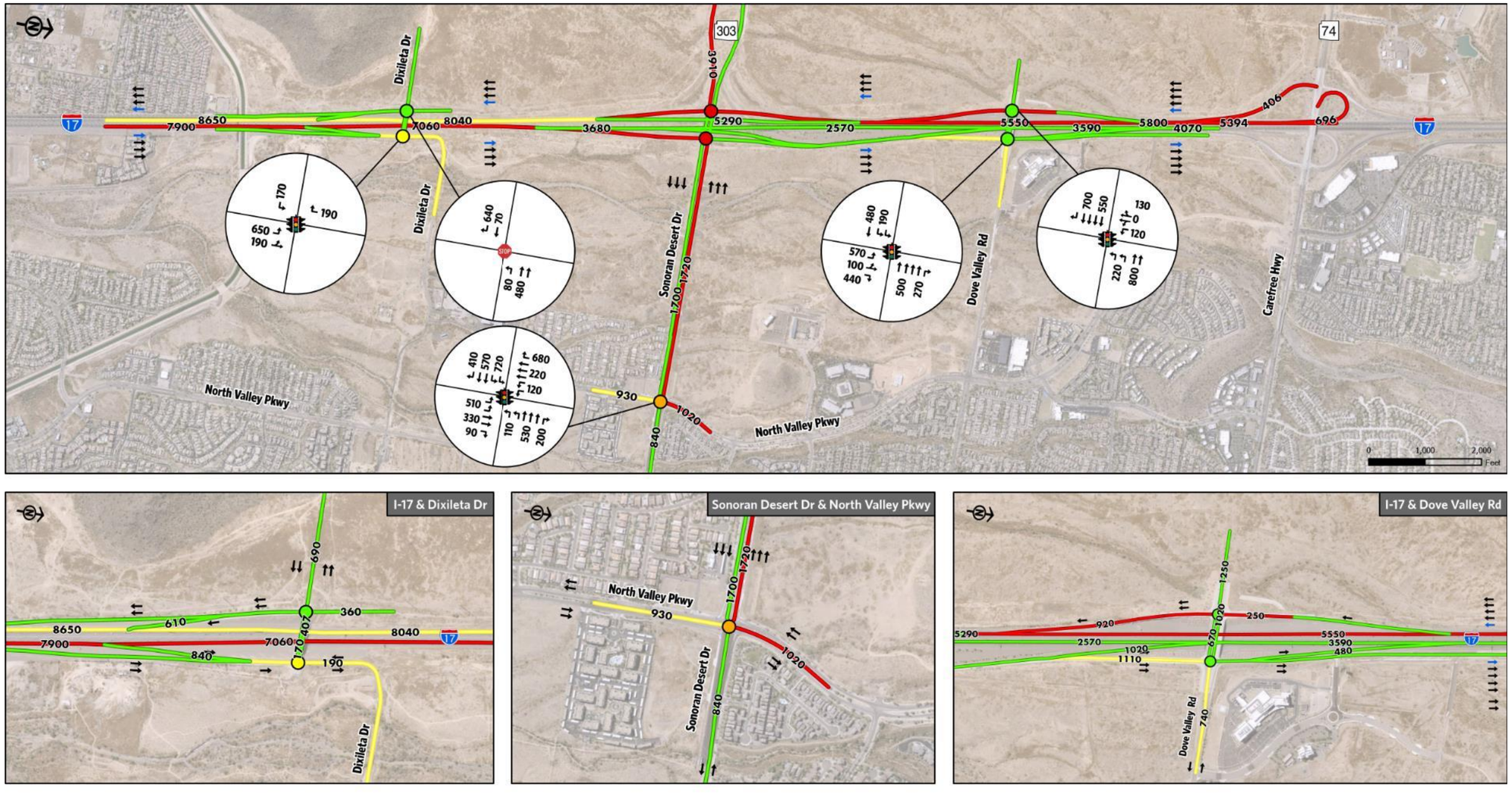


Table 4-18: 2040 No-Build Peak Hours LOS for Signalized and Unsignalized Intersections

Intersection	Movement	AM Peak Hour				PM Peak Hour			
		Approach Delay (seconds)	Approach LOS	Intersection Delay (seconds)	Intersection LOS	Approach Delay (seconds)	Approach LOS	Intersection Delay (seconds)	Intersection LOS
I-17 SBFR and SR 303/Sonoran Desert Dr	SB	116.6	F	94.7	F	273.6	F	111.0	F
	WB	1.4	A			1.4	A		
	NB	-	-			-	-		
	EB	182.2	F			166.9	F		
I-17 NBFR and SR 303/Sonoran Desert Dr	SB	-	-	140.1	F	-	-	125.1	F
	WB	36.0	D			127.4	F		
	NB	482.4	F			255.4	F		
	EB	1.0	A			1.0	A		
SR 303 WBFR and Lake Pleasant Pkwy	SB	186.8	F	80.5	F	93.6	F	57.9	E
	WB	32.1	C			45.1	D		
	NB	2.7	A			0.8	A		
	EB	-	-			-	-		
SR 303 EBFR and Lake Pleasant Pkwy	SB	1.5	A	33.9	C	2.5	A	18.1	B
	WB	-	-			-	-		
	NB	16.2	B			16.5	B		
	EB	80.7	F			46.6	D		
Sonoran Desert Dr and North Valley Pkwy	SB	30.0	C	34.0	C	119.5	F	61.4	E
	WB	36.2	D			29.4	C		
	NB	36.7	D			52.8	D		
	EB	37.2	D			35.1	D		
I-17 SBFR and Dove Valley Rd	SB	22.8	C	10.1	B	96.6	F	21.8	C
	WB	1.5	A			1.8	A		
	NB	-	-			-	-		
	EB	10.7	B			22.7	C		
I-17 NBFR and Dove Valley Rd	SB	-	-	28.4	C	-	-	25.9	C
	WB	40.9	D			40.4	D		
	NB	38.9	D			38.2	D		
	EB	1.1	A			1.3	A		
SR 303 EBFR and 51st St	SB	0.9	A	29.4	C	2.8	A	23.4	C
	WB	-	-			-	-		

Intersection	Movement	AM Peak Hour				PM Peak Hour			
		Approach Delay (seconds)	Approach LOS	Intersection Delay (seconds)	Intersection LOS	Approach Delay (seconds)	Approach LOS	Intersection Delay (seconds)	Intersection LOS
	NB	42.2	D			39.6	D		
	EB	22.2	C			40.1	D		
SR 303 WBFR and 51st St	SB	42.0	D	15.2	B	30.1	C	20.9	C
	WB	23.2	C			23.1	C		
	NB	3.8	A			2.5	A		
	EB	-	-			-	-		
SR 303 EBFR and 43rd St	SB	0.9	A	16.7	B	1.2	A	27.6	C
	WB	-	-			-	-		
	NB	17.8	B			23.4	C		
	EB	26.5	C			68.2	E		
SR 303 WBFR and 43rd St	SB	31.3	C	19.0	B	33.3	C	23.8	C
	WB	21.1	C			18.0	B		
	NB	3.4	A			3.7	A		
	EB	-	-			-	-		
I-17 NBFR and Dixileta Dr/FR Rd	SB	48.9	D	40.9	D	45.7	D	33.3	C
	WB	-	-			-	-		
	NB	49.0	D			44.4	D		
	EB	1.6	A			1.9	A		

4.10.2. Discussion of Results

The traffic operations analysis for the No-Build conditions is based on the existing roadway network with the implementation of the 51st Avenue and 43rd Avenue TIs and the No-Build traffic volumes. In addition, improvements to the Dove Valley Road and Dixileta Drive interchanges were added to the model to ensure traffic reached mainlines. A tabular form of the results is provided in *Appendix C*.

The No-Build scenario showed failing operational conditions for both AM and PM peak hours. A summary of the conditions observed in the microsimulation models is presented below:

AM Peak Hour

- At the NB exit ramp to Sonoran Desert Drive queuing was observed. This queue extends onto the general-purpose lanes on I-17 and to south of the Dixileta Drive interchange. Consequently, traffic on NB I-17 presents slowdowns and vehicles are not able to enter the network.
- The SB exit ramp to Sonoran Desert Drive presented queuing extending to the general-purpose lanes producing slowdowns onto SB I-17 mainline.
- Traffic on the EB SR 303L experienced congestion and queueing that backed up to Lake Pleasant Parkway interchange. The congestion for this segment starts at the EB terminal interchange at SR 303L and I-17.
- Traffic on the WB SR 303L experienced low congestion. However, vehicles traveling on I-17 are not reaching SR 303L WB due to the congestion at I-17 SB exit ramp to Sonoran Desert Drive.
- The SB and NB terminal intersections at I-17 and Sonoran Desert Drive/SR 303L performed at LOS F. At SR 303L and Lake Pleasant Parkway the LOS was E and additional improvements to the SB right turn movement will be required to improve operations at this location. The remaining of the signalized intersections within the network performed at acceptable level of service. However, due to queuing on mainlines the traffic volumes are not reaching the intersections.

PM Peak Hour

- Similar to the AM peak hour traffic, the NB exit ramp to Sonoran Desert Drive presents queuing that backs up onto mainline reaching Dixileta Road interchange. Slowdowns at NB entrance to the network were observed.
- The SB exit ramp to Sonoran Desert Drive presented queuing extending to the general-purpose lanes producing slowdowns onto I-17 SB mainline. This queue extends onto the general-purpose lanes on I-17 and to north of the Dove Valley interchange.
- Traffic on the EB SR 303L experienced congestion and queueing that backed up to 51st Avenue interchange.
- WB traffic on Sonoran Desert Drive experienced congestion and queueing.
- Traffic on the WB SR 303L experienced low congestion except for the weaving segment between 43rd Avenue and 51st Avenue with LOS E. However, vehicles traveling on I-17 are not reaching SR 303L WB due to the congestion at I-17 SB exit ramp to Sonoran Desert Drive.
- The SB and NB terminal intersections at I-17 and SR 303L performed at LOS F. At SR 303L and Lake Pleasant Parkway as well as Sonoran Desert Drive and North Valley Parkway the LOS was E. The back up at the Sonoran Desert Drive and North Valley Parkway was observed mainly on the SB right turn movement.
- It is recommended in general to revise the cycle lengths and splits at all locations

In general, traffic operations fail for this alternative during both AM and PM peak hours. It was observed that demand was not served by the models and therefore vehicles were not able to enter the network at multiple locations. Refer to *Appendix C* for the VISSIM link evaluation results; results show the percentage of demand served by the models at all locations.

4.11.Build Corridor Conditions

4.11.1. Roadway Network

The future corridor conditions for the Build scenario includes a system interchange at the conjunction of SR 303L and I-17. This is in addition to the new TI's at 67th Avenue, 51st Avenue, and 43rd Avenue, and mainline improvements along SR 303L.

A brief description of each location is given below.

4.11.1.1. Freeway/Highway and Ramps

The SR 303L will have three general purpose mainline lanes in both the EB and WB directions from Lake Pleasant Parkway to I-17. There with be a EB diverge and WB merge west of 67th Avenue and 51st Avenue. Between 51st Avenue and 43rd Avenue there will be an auxiliary lane used for weaving on to and off SR 303L in both directions. East of 43rd Avenue there will be a merge and diverge for EB and WB directions, respectively.

The system interchange at SR 303L and I-17 will have two (2) lanes on the NW and SE ramps and one (1) lane on EN and SW ramps.

I-17 mainline will have three general purpose lanes, one HOV lane, a merge/diverge lane at each TI, and an additional capacity lane south of the flyover ramps.

4.11.1.2. Traffic Interchanges

In the Build condition, the system interchange between SR 303L and I-17 will be comprised of freeway interchange ramps for each direction of travel.

SR 303L/Lake Pleasant Parkway TI

The existing diamond type TI has four ramps providing full access between SR 303L and Lake Pleasant Parkway. Lake Pleasant Parkway has two through lanes and dual left turn lanes in each direction between the SR 303L ramp terminals.

SR 303L/67th Avenue TI

Based on the results of the comparative analysis, as described in detail in Section 4.8, the Diamond TI is the recommended alternative. This alternative was coded in the VISSIM model. The future diamond type TI at 67th Avenue and SR 303L will be included in the Build scenario. The 67th Avenue TI will have four ramps that provide full access to SR 303L. 67th Avenue will have two through lanes, a shared through/right-turn lane, and a right-turn lane in the SB direction approach to the SR 303L ramp terminals; and dual left-turn lanes between the SR 303L ramp terminals.

67th Avenue will have three through lanes, and a right-turn lane in the NB direction approach to the SR 303L ramp terminals; and dual left-turn lanes between the SR 303L ramp terminals.

The EB SR 303L off ramp will consist of a left-turn lane, a through/left-turn lane, and a right-turn lane. The WB SR 303L off ramp will consist of a left-turn lane, a through/left-turn lane, and a right-turn lane.

SR 303L/51st Avenue TI

The future diamond type 51st Avenue TI will have four ramps that provide full access to SR 303L. 51st Avenue will have two through lanes, a shared through/right-turn lane, and a single right-turn lane in the SB direction approach to the SR 303L ramp terminals; and dual left turn lanes between the ramp terminals.

51st Avenue will have three through lanes, and a single right-turn lane in the NB direction approach to the SR 303L ramp terminals; and dual left turn lanes between the ramp terminals.

The EB SR 303L off ramp will consist of a left-turn lane, through/left-turn lane and a right-turn lane. The WB SR 303L off ramp will consist of a left-turn lane, through/right-turn lane, and a right-turn lane.

SR 303L/43rd Avenue TI

The future diamond type 43rd Avenue TI will have four ramps that provide full access to SR 303L. 43rd Avenue will have two through lanes, a shared through/right-turn lane, and a single right-turn lane in the SB direction approach to the SR 303L ramp terminals; and dual left turn lanes between the ramp terminals.

43rd Avenue will have three through lanes, and a single right-turn lane in the NB direction approach to the SR 303L ramp terminals; and dual left turn lanes between the ramp terminals

The EB SR 303L off ramp will consist of a left-turn lane, through/left-turn lane, through/right-turn lane, and a right-turn lane. The WB SR 303L off ramp will consist of a left-turn lane, through/left-turn lane, through/right-turn lane, and a right-turn lane.

4.11.1.3. Frontage Roads

There is a one-way frontage road located between 43rd Avenue and 51st Avenue on WB SR 303L that will be included in the No-Build and Build scenarios.

4.11.2. Traffic Volumes

As described in detail in *Section 2: Traffic Forecast*, the traffic volumes for the 2040 Build scenario were gathered from the MAG TDM in conjunction with related studies. Both daily and peak hour design volumes were obtained from this model for the Build scenario. Based on the future development conditions, the peak-hour traffic data was post processed to address movements that the MAG TDM could not account for. The peak-hour traffic volumes were then balanced prior to input into the VISSIM microsimulation model.

4.12.Build Operational Analysis

The traffic operational analysis evaluated the peak hour traffic volumes, at a 'microscopic level', to refine and ensure that the improvement alternatives were operationally feasible. This was an iterative process and considered existing and future roadway characteristics, traffic volumes, traffic control measures, and access spacing.

The methodology involved in the operational analysis included the following:

- The Build signals timings configuration of the interchange intersections and adjacent arterial intersections were optimized using the Synchro/SimTraffic version 11 software. These timings were then transferred to the VISSIM models. To improve the operations at the signalized intersections, changes to the splits and additional right-turn overlaps with left-turns were included. The LOS of the intersections and intersection approaches where calculated based on the delays reported by the VISSIM models and HCM criteria.

- The AM and PM peak-hour operations of the roadway network system within the study area were modeled using the *VISSIM* microsimulation software and included:
  - SR 303L: mainline, merge/weave areas, ramps, ramp junctions with cross streets, and traffic interchange intersections.
  - I-17: mainline, merge/weave areas, ramps, ramp junctions with cross streets, traffic interchange intersections and an adjacent intersection directly impacted by the interchange operations.

4.12.1. Traffic Operational Analysis

The post-processed and balanced peak-hour traffic data was used as input into the VISSIM microsimulation model. Traffic operational analysis was conducted for the Build scenario.

For the Build scenario, the 2040 Base roadway network and the new 2040 socioeconomic projections were used. A general-purpose lane along SR 303L for both directions from I-17 to Lake Pleasant Parkway was added. On I-17, an additional lane was added between Dixileta Drive and Dove Valley Road. At the merge and diverge sections, lane balancing was used to provide safe conditions along the interstate. This scenario will be referred to as the Year 2040 Build. The Build scenario includes the system-to-system flyover ramps at the interchange of SR 303L at I-17.

4.12.1.1. Year 2040 Build

The Build alternative was evaluated using the 2040 peak hour traffic volumes forecast generated by the MAG TDM and additional related studies.

The peak hour traffic volumes for the Build alternative were evaluated using the VISSIM mode for this alternative.

The peak hour traffic volumes, lane configurations, and LOS of the freeway system and intersection analysis are shown in Figure 4-16 through Figure 4-21: Year 2040 Build PM Peak Hour - Traffic Volumes, Lanes, & LOS (Sheet 3 of 3) and Table 4-19.

Figure 4-16: Year 2040 Build AM Peak Hour - Traffic Volumes, Lanes, & LOS (Sheet 1 of 3)

Figure 4-17: Year 2040 Build AM Peak Hour - Traffic Volumes, Lanes, & LOS (Sheet 2 of 3)

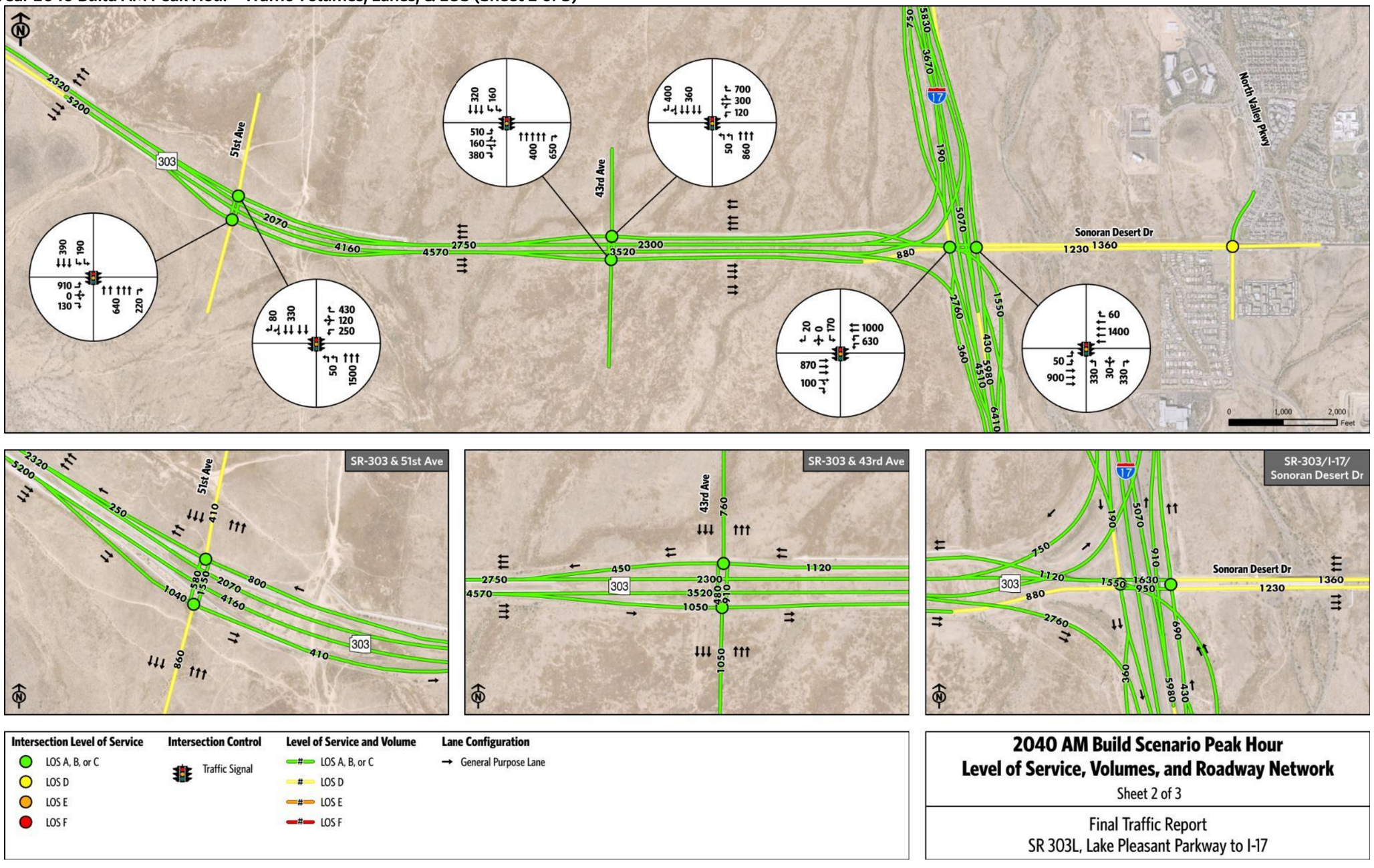


Figure 4-18: Year 2040 Build AM Peak Hour - Traffic Volumes, Lanes, & LOS (Sheet 3 of 3)

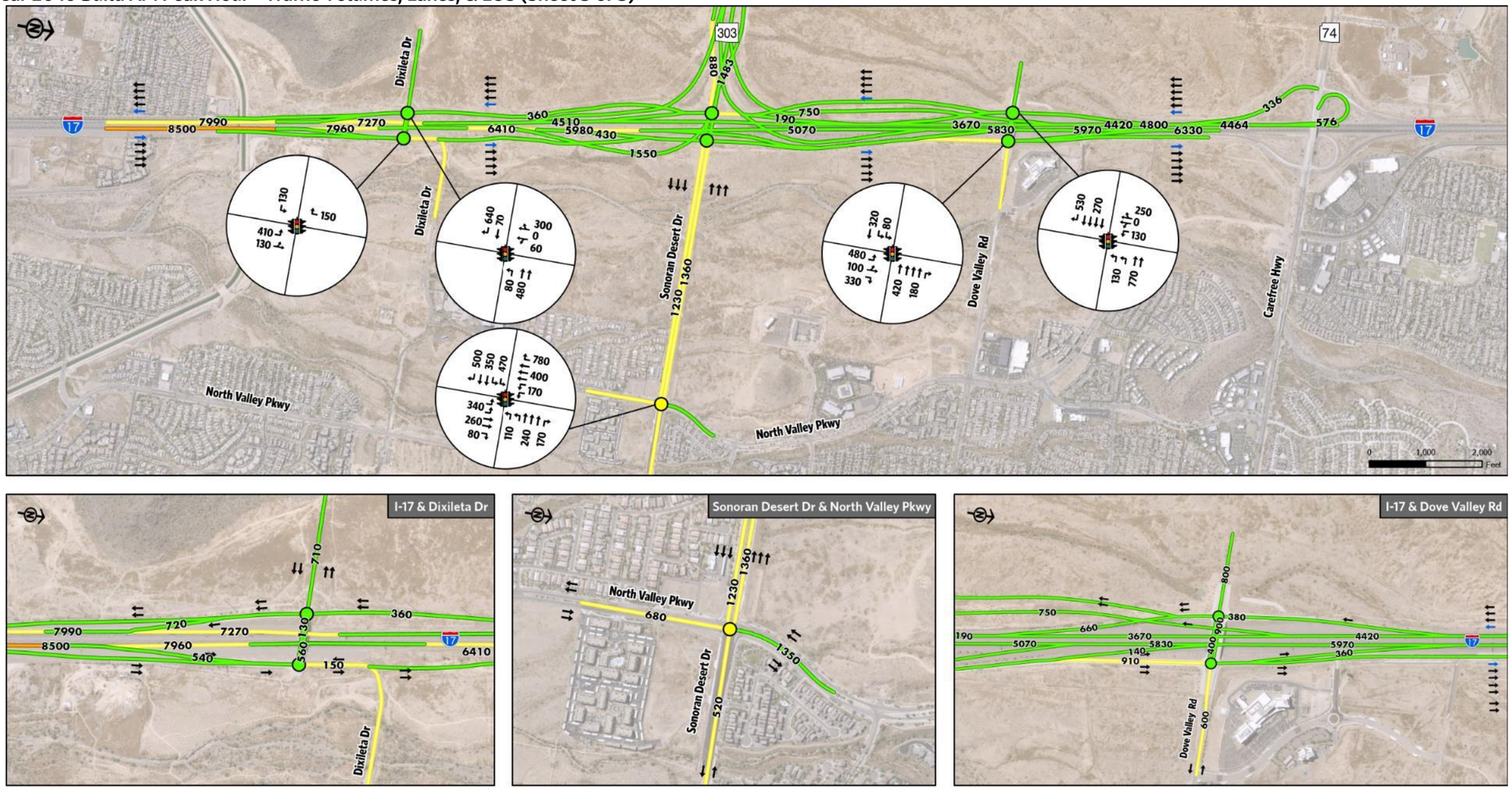


Figure 4-19: Year 2040 Build PM Peak Hour - Traffic Volumes, Lanes, & LOS (Sheet 1 of 3)

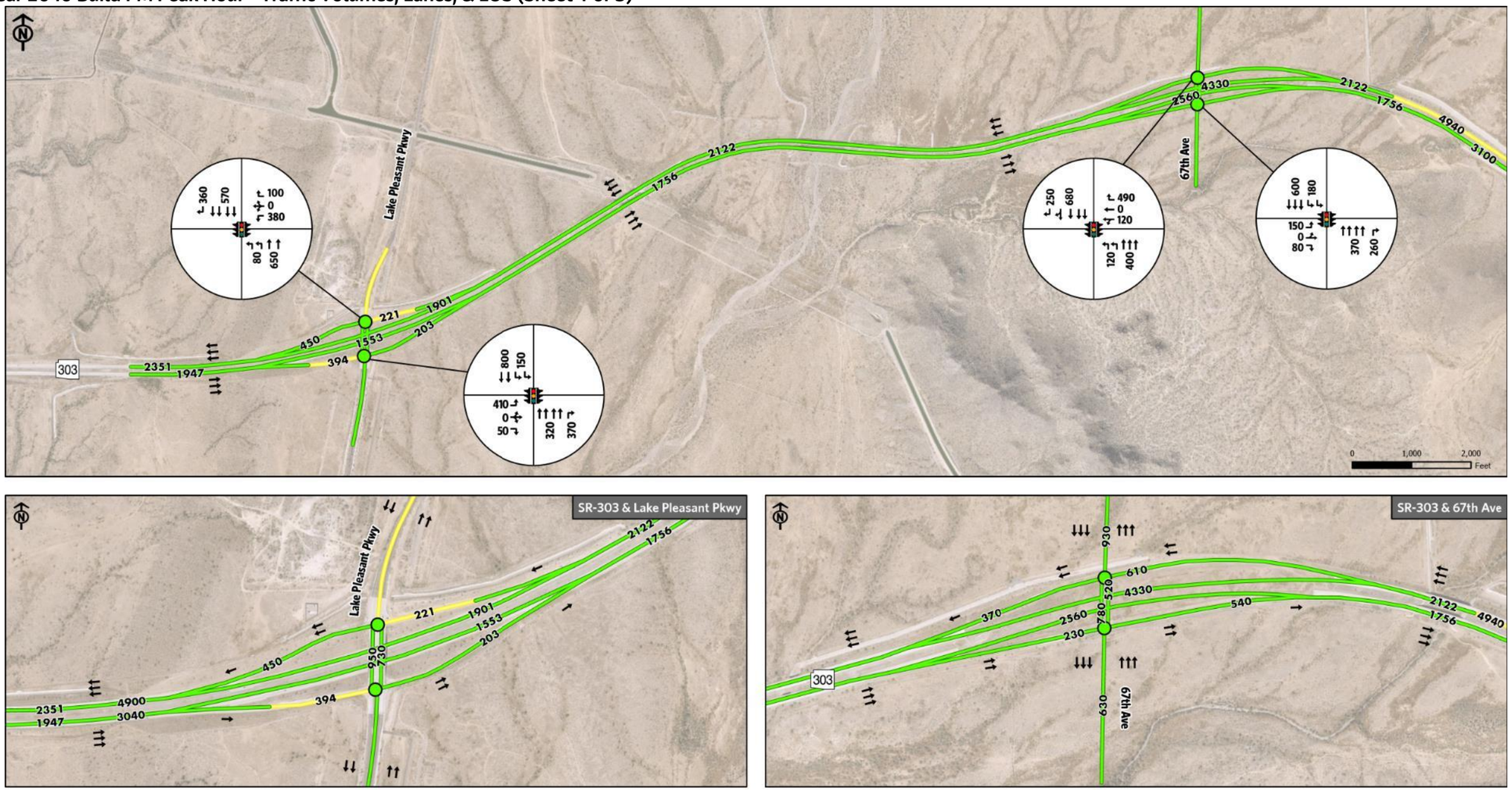


Figure 4-20: Year 2040 Build PM Peak Hour - Traffic Volumes, Lanes, & LOS (Sheet 2 of 3)

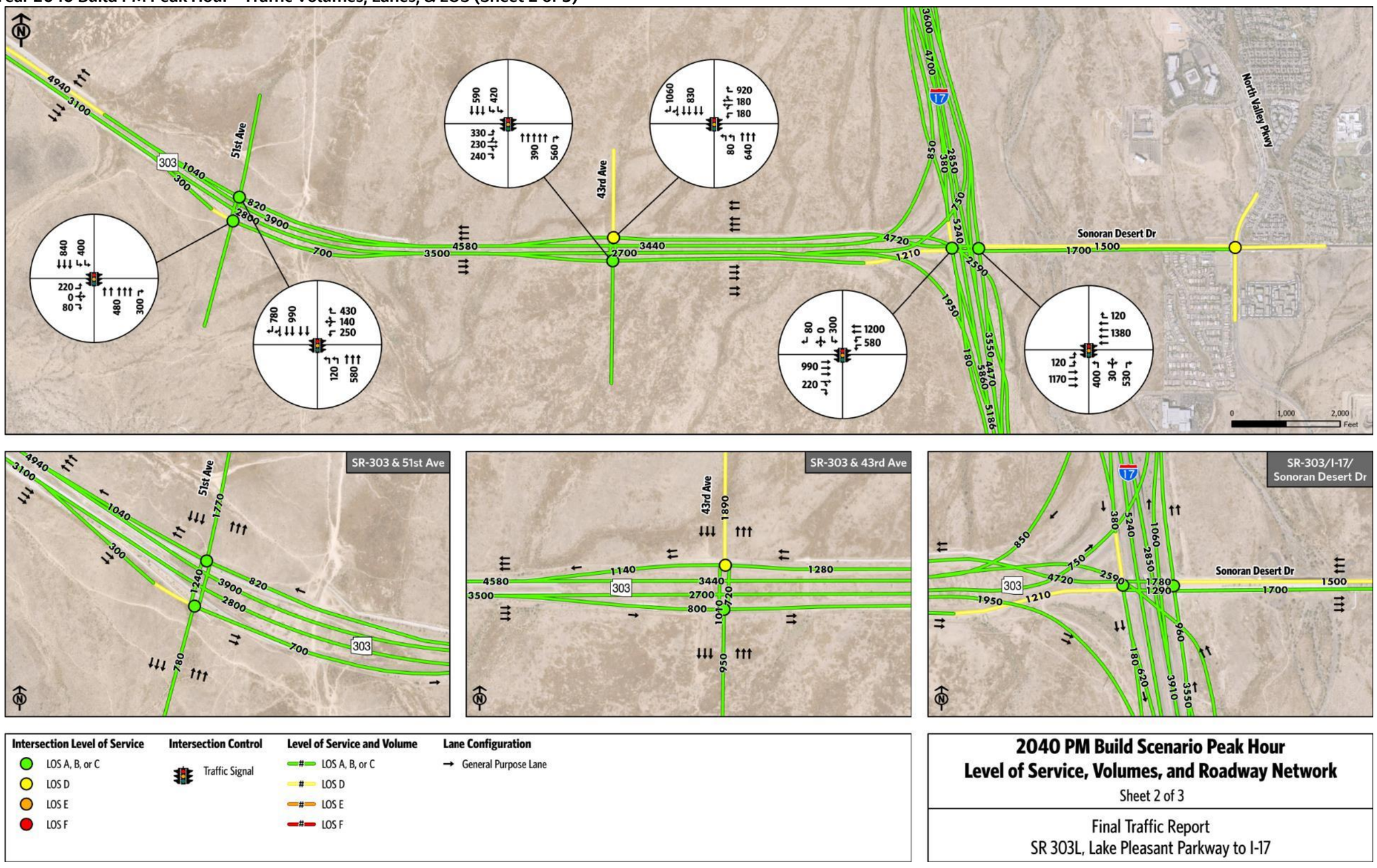
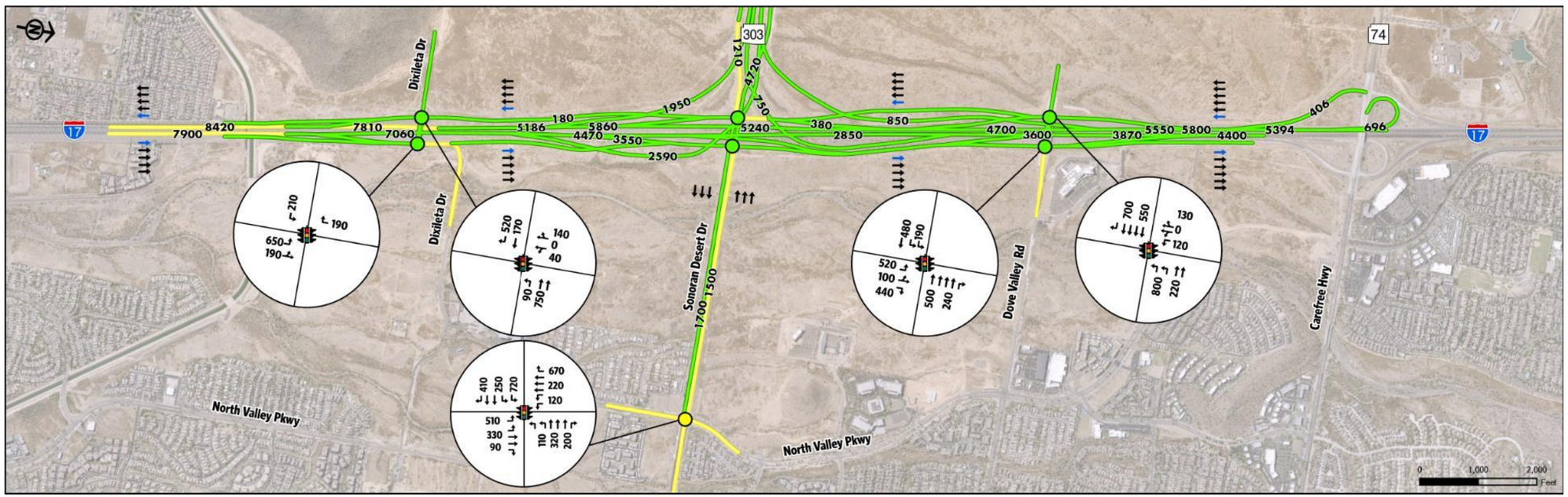
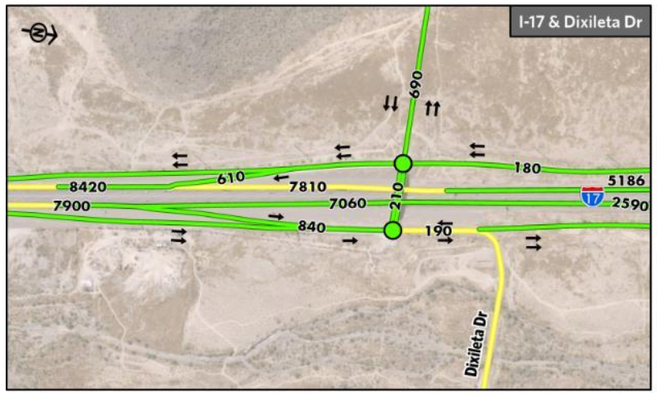
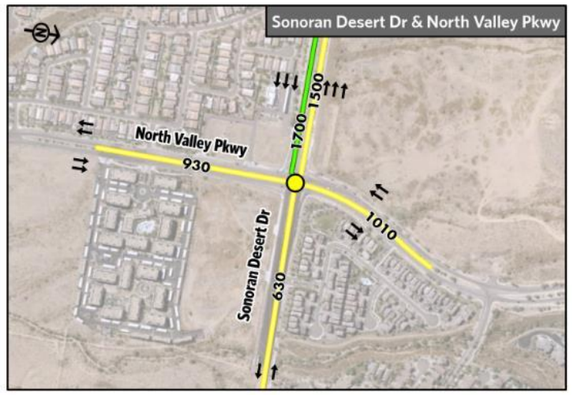
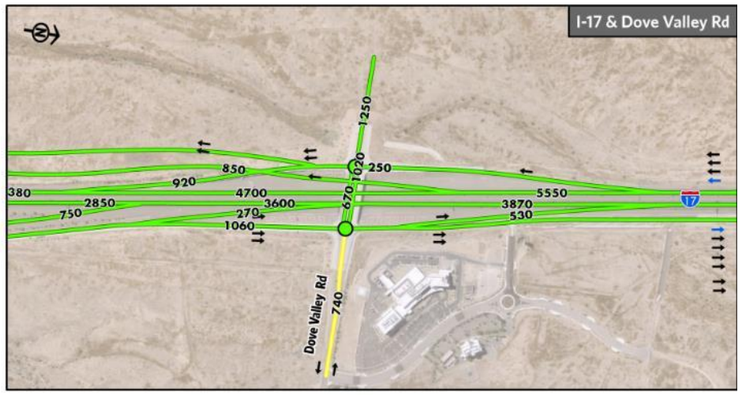


Figure 4-21: Year 2040 Build PM Peak Hour - Traffic Volumes, Lanes, & LOS (Sheet 3 of 3)









Intersection Level of Service
- LOS A, B, or C
- LOS D
- LOS E
- LOS F

Intersection Control
- Traffic Signal

Level of Service and Volume
- LOS A, B, or C
- LOS D
- LOS E
- LOS F

Lane Configuration
- General Purpose Lane
- HOV Lane

2040 PM Build Scenario Peak Hour
Level of Service, Volumes, and Roadway Network
Sheet 3 of 3

Final Traffic Report
SR 303L, Lake Pleasant Parkway to I-17

Table 4-19: 2040 Build Peak Hours LOS for Signalized and Unsignalized Intersections

Intersection	Movement	AM Peak Hour				PM Peak Hour			
		Approach Delay (seconds)	Approach LOS	Intersection Delay (seconds)	Intersection LOS	Approach Delay (seconds)	Approach LOS	Intersection Delay (seconds)	Intersection LOS
I-17 SBFR and SR 303/Sonoran Desert Dr	SB	51.9	D	19.0	B	54.8	D	21.4	C
	WB	1.3	A			1.2	A		
	NB	-	-			-	-		
	EB	44.0	D			40.9	D		
I-17 NBFR and SR 303/Sonoran Desert Dr	SB	-	-	23.0	C	-	-	23.9	C
	WB	35.2	D			37.5	D		
	NB	30.8	C			33.3	C		
	EB	1.0	A			1.0	A		
SR 303 WBFR and Lake Pleasant Pkwy	SB	33.7	C	17.9	B	41.8	D	28.6	C
	WB	33.4	C			45.6	D		
	NB	1.6	A			1.0	A		
	EB	-	-			-	-		
SR 303 EBFR and Lake Pleasant Pkwy	SB	1.2	A	17.9	B	1.7	A	16.2	B
	WB	-	-			-	-		
	NB	16.3	B			16.1	B		
	EB	47.7	D			46.2	D		
Sonoran Desert Dr and North Valley Pkwy	SB	27.2	C	36.9	D	40.6	D	40.5	D
	WB	41.7	D			37.2	D		
	NB	36.9	D			53.4	D		
	EB	44.5	D			34.6	C		
I-17 SBFR and Dove Valley Rd	SB	23.1	C	9.9	A	32.5	C	11.9	B
	WB	1.7	A			1.7	A		
	NB	-	-			-	-		

Intersection	Movement	AM Peak Hour				PM Peak Hour			
		Approach Delay (seconds)	Approach LOS	Intersection Delay (seconds)	Intersection LOS	Approach Delay (seconds)	Approach LOS	Intersection Delay (seconds)	Intersection LOS
	EB	13.3	B			16.6	B		
I-17 NBFR and Dove Valley Rd	SB	-	-	30.4	C	-	-	27.4	C
	WB	42.2	D			40.3	D		
	NB	35.3	D			34.4	C		
	EB	1.6	A			2.0	A		
SR 303 EBFR and 67th St	SB	16.3	B	28.0	C	18.1	B	17.7	B
	WB	-	-			-	-		
	NB	13.4	B			13.3	B		
	EB	49.6	D			28.0	C		
SR 303 WBFR and 67th St	SB	5.8	A	5.4	A	2.2	A	4.6	A
	WB	10.4	B			10.7	B		
	NB	2.9	A			1.8	A		
	EB	-	-			-	-		
SR 303 EBFR and 51st St	SB	0.8	A	23.2	C	1.0	A	13.6	B
	WB	-	-			-	-		
	NB	35.8	D			24.3	C		
	EB	25.0	C			38.4	D		
SR 303 WBFR and 51st St	SB	42.5	D	14.6	B	29.9	C	22.3	C
	WB	24.0	C			23.0	C		
	NB	2.2	A			1.8	A		
	EB	-	-			-	-		
SR 303 EBFR and 43rd St	SB	0.9	A	15.9	B	1.1	A	14.9	B
	WB	-	-			-	-		
	NB	21.9	C			25.9	C		

Intersection	Movement	AM Peak Hour				PM Peak Hour			
		Approach Delay (seconds)	Approach LOS	Intersection Delay (seconds)	Intersection LOS	Approach Delay (seconds)	Approach LOS	Intersection Delay (seconds)	Intersection LOS
	EB	16.5	B			19.0	B		
SR 303 WBFR and 43rd St	SB	31.2	C	21.9	C	35.2	D	27.8	C
	WB	29.1	C			30.3	C		
	NB	5.6	A			3.8	A		
	EB	-	-			-	-		
I-17 SBFR and Dixileta Dr/FR Rd	SB	21.0	C	17.1	B	16.4	B	12.5	B
	WB	0.4	A			0.4	A		
	NB	-	-			-	-		
	EB	28.1	C			26.2	C		
I-17 NBFR and Dixileta Dr/FR Rd	SB	48.0	D	34.4	C	44.8	D	29.9	C
	WB	-	-			-	-		
	NB	34.8	C			30.6	C		
	EB	17.8	B			13.7	B		

4.12.2. Discussion of Results

The traffic operations analysis for the Build conditions includes the implementation of the 67th Avenue, 51st Avenue, 43rd Avenue TIs, and SR 303L/I-17 system-to-system flyover ramps and the Build traffic volumes. In addition, improvements to the Dove Valley Road and Dixileta Drive interchanges were added to the model to ensure traffic reached mainlines.

Traffic operations on I-17 and SR 303L mainlines improved considerable in the Build scenario compared to the No-Build scenario. The Build scenario mainlines showed acceptable operational conditions for all the AM and PM peak hours locations except for the freeway segment south of the NB exit ramp to Dixileta Drive with a LOS of E in the AM peak hour. However, at this location, 99% of the demand was served and no queuing was observed. A summary of the conditions observed in the microsimulation models is presented below:

AM Peak Hour

- Traffic operations on I-17 and SR 303L mainlines improved considerable in the Build scenario compared to the No-Build scenario. All segments showed acceptable LOS except the freeway segment south of the NB exit ramp to Dixileta Drive with a LOS of E.
- Ramps operations for this scenario improved compared to the AM No-Build scenario and all the ramps presented LOS C or better.
- All intersections performed at acceptable level of service of D or higher.

PM Peak Hour

- Traffic operations on I-17 and SR 303L mainlines improved considerable in the Build scenario compared to the No-Build scenario. All segments showed acceptable LOS of D or better.
- Ramp operations for this scenario improved compared to the PM No-Build scenario and all the ramps presented LOS C or better.
- All the intersections performed at acceptable level of service of D or better.

Traffic operations for this alternative during both AM and PM peak hours are acceptable. It was observed that demand was served by the models and therefore vehicles were able to enter the network. In comparison with the No-Build scenario, no queuing and no significant delays were observed in the Build scenario. Refer to *Appendix C* for the VISSIM link evaluation results showing the percentage of demand served by the models at all locations.

5. CONCLUSIONS & RECOMMENDATIONS

5.1. Conclusions

The traffic analysis documents the existing conditions in the study area and presents an analysis of the future 2040 No Build and Build scenarios for the SR 303L freeway.

- The existing roadway network within the study area operates with acceptable LOS below its current capacity.
- Substantial growth is anticipated in the study area especially with the primary campus for the Taiwan Semiconductor Manufacturing Company (TSMC) production facilities which will lie north of the SR 303L between 43rd and 51st Avenues.
- Traffic operations fail for the 2040 No Build alternative during both AM and PM peak hours.
- For the 2040 Build AM Peak Hour alternative, traffic operations on I-17 and SR 303L mainlines all showed acceptable LOS except the freeway segment south of the NB exit ramp to Dixileta Drive which has a LOS of E. Ramp operations for this alternative show that all ramps operated with a LOS C or better. All intersections performed at acceptable level of service of D or better.
- For the 2040 Build PM Peak Hour alternative, traffic operations on I-17 and SR 303L mainlines all showed acceptable LOS of D or better. Ramp operations for this alternative show that all ramps operated with a LOS C or better. All intersections performed at acceptable level of service of D or better.
- Sensitivity analysis showed that system-to-system flyover ramps [east-south (ES), north-west (NW), east-north (EN), south-west (SW)] at the interchange of SR 303L at I-17 will be needed.

5.2. Recommendations

As new developments are constructed and the driver population between SR 303L and I-17 continues to grow, the existing traffic infrastructure will need to be advanced. The results have shown a need for a system interchange at SR 303L and I-17. The following are additional recommendations for the area:

- Include a 3rd general purpose lane on SR 303L in both the EB and WB direction from Lake Pleasant Parkway to I-17.
- Include the four flyover ramps at the I-17 and SR 303L TI. The forecasted traffic exceeds capacity for this interchange and flyover ramps will considerably improve the LOS.
- Include overlaps between the right-turn and left-turn movements at the Sonoran Desert Drive and North Valley Parkway to improve the capacity of this intersection and LOS for future scenarios.
- To improve capacity on I-17, add and additional lane on both sides and include auxiliary lanes at the merge and diverge locations. The forecasted volumes exceed the capacity of the existing I-17 mainline configuration.
- Improve the geometry of the Dixileta Drive TI. The Build scenario did not present an acceptable LOS. It is recommended to upgrade the current stop-controlled intersection to a signalized intersection.
- Improve the Dove Valley Road TI geometry. For this location it is recommended to have two through lanes on each direction and a dedicated WB left turn lane.
- It is recommended in general to revise the cycle lengths and splits at all locations.

APPENDIX A: Traffic Forecasting Memo

Loop 303: Lake Pleasant Parkway to I-17 Interchange Traffic Forecast

Technical Memorandum

Of Methodology and Forecasts

Prepared for

JACOBS®

Prepared By

BURGESS & NIPLE

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Suite 102

Tempe, AZ 85281

July 2021

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Introduction

This memo describes the traffic forecast methodology and results along the Loop 303 freeway corridor surrounding the junction of Loop 303 and Interstate 17 (I-17). The forecasts were conducted at each freeway interchange along Loop 303 from Lake Pleasant Parkway to I-17, forecasts were also done along the I-17 and freeway interchanges from Dixileta Drive to Dove Valley Road.

A major consideration in this forecast was the influence of the North Phoenix 3500 Planned Unit Development (PUD) site that is 3720 acres of vacant State of Arizona Trust Land chosen for the future placement of a massive semiconductor manufacturing plant. The primary campus for the Taiwan Semiconductor Manufacturing Company (TSMC) production facilities will lie north of the Loop 303 between 43rd and 51st Avenues. The vacant land east of the main manufacturing campus is slated for mixed residential and commercial development. The vacant land north and west of the TSMC site will become a technology park like the area surrounding the Intel Ocotillo Plant in Chandler, Arizona. These incoming developments will significantly impact traffic in the surrounding transportation network.

Currently the Maricopa Association of Governments (MAG) Travel Demand Model (TDM) does not incorporate these changes for the 2040 model. This memo will outline the necessary information and assumptions applied to the recommended updates to employment and residential data within the impacted Traffic Analyses Zones (TAZs) of the 2040 MAG TDM. The model was then run for the entire region to produce future 2040 demands which were then post processed used as inputs to the NCHRP traffic forecasting method to predict demand along the Loop 303 and I-17 corridors within the study area.

Related Studies

North Phoenix 3,500 Traffic Impact Study (September 2020)

City of Phoenix launched a study to evaluate the traffic impact due to the proposed North Phoenix 3,500 PUD on the surrounding street network. The study was prepared in conformance with *City of Phoenix Street Planning and Design Guidelines Section 12.1.2 Traffic Impact Studies*, December 2009 in tandem with information provided by the City of Phoenix Street Transportation Department. The objectives of the study were to determine whether the planned street system in the vicinity of the site is adequate to accommodate the increased traffic that results from the proposed development; to recommend additional street improvements or traffic control devices; and evaluate the internal site circulation and provide recommendations if necessary.

Traffic Impact Analysis Report TSMC Fab Site (January 2020)

TSMC in partnership with CTCI Americas Incorporated launched a traffic impact analysis of the proposed TSMC semiconductor fabrication sight. The key goal of the study was to conceptualize a Master Street Design and Phasing Plan, and to ensure the access to the site was built with the necessary capacity to perform at reasonable level of service. This study provides detailed recommendations of exit and entry road configurations into the site.

Existing Network

The study area is outlined in red below in ***Figure 1***, this incorporates Lake Pleasant Parkway, 67th Avenue, 43rd Avenue, 51st Avenue, the interchange between Loop 303 and I-17, and the intersection at Sonoran Desert Drive and North Valley Parkway. This Study will also forecast volumes along I-17 at the interchanges of Dixileta Drive and Dove Valley Road. The incoming TSMC site will be nested northwest of the Loop 303 and I-17 traffic interchange. It is bounded by SR-74 to the north and the Loop 303 to the south. Currently there are no interchanges on Loop 303 along the site boundary, but there are interchanges along I-17 at SR-74 and an unconnected interchange at Dove Valley Road. There are currently no paved roads within the future TSMC site. ***Figure 1*** shows the Study area with the TSMC site and development influence area shown.

Figure 1: Study Area and Site within Transportation Network

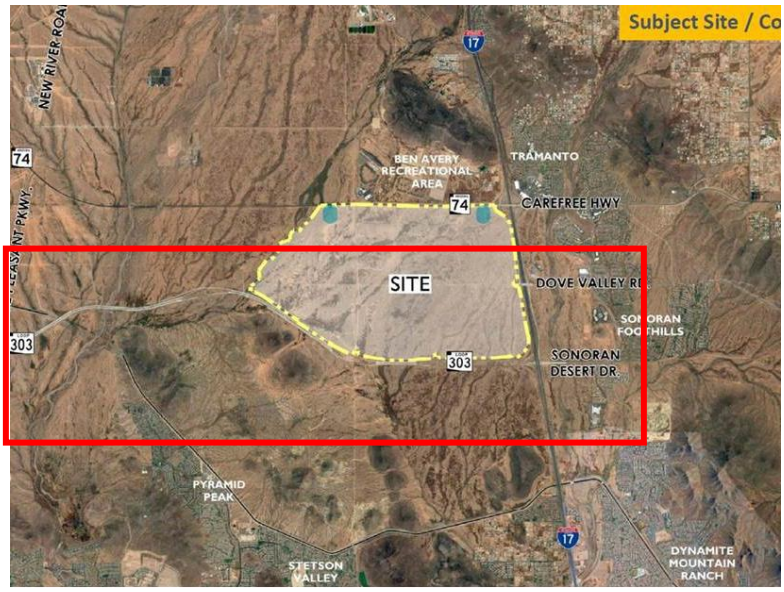


Figure 2 presents Annual Average Daily Traffic (AADTs) on the major roads surrounding the site comparing the MAG TDM AADTs to observed AADTs taken from the Arizona Department of Transportation (ADOT) TCDS website. No data from the ADOT TCDS older than 2018 were used while a growth factor of 2% per year was applied to any historic count.

Figure 2: Observed Versus Assigned 2020 AADTs Map

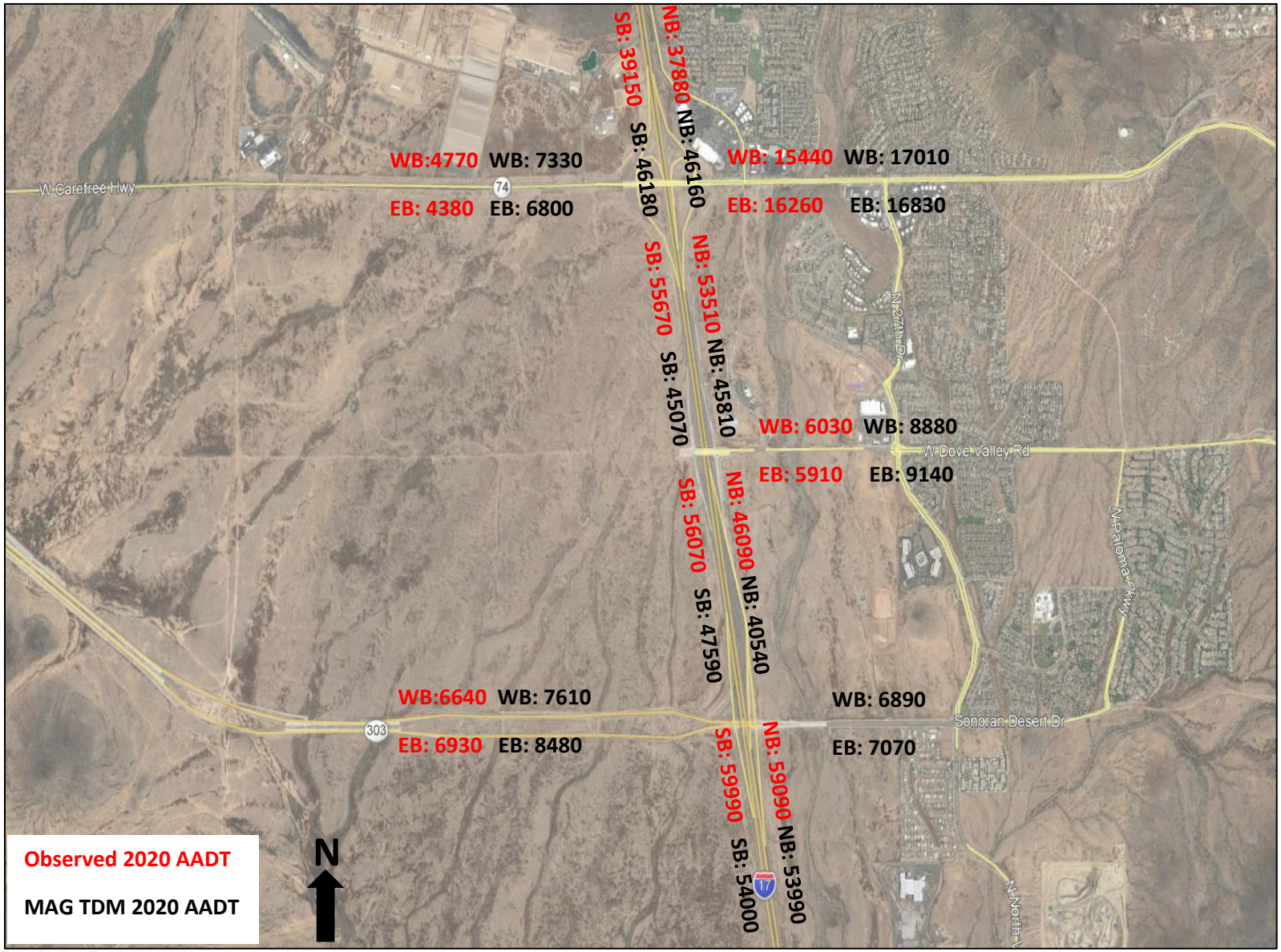
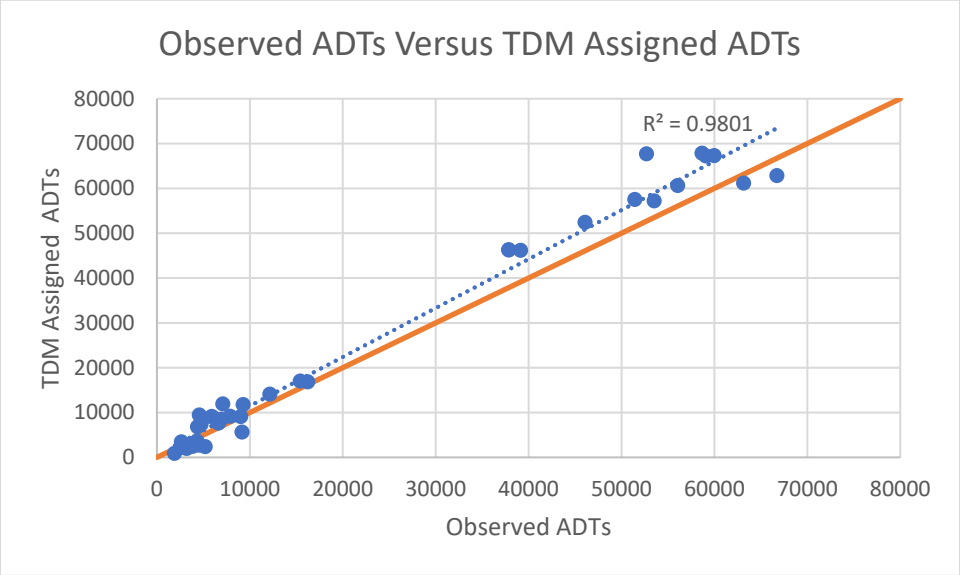


Figure 3: Observed AADTs Versus Modeled AADTs Goodness of Fit



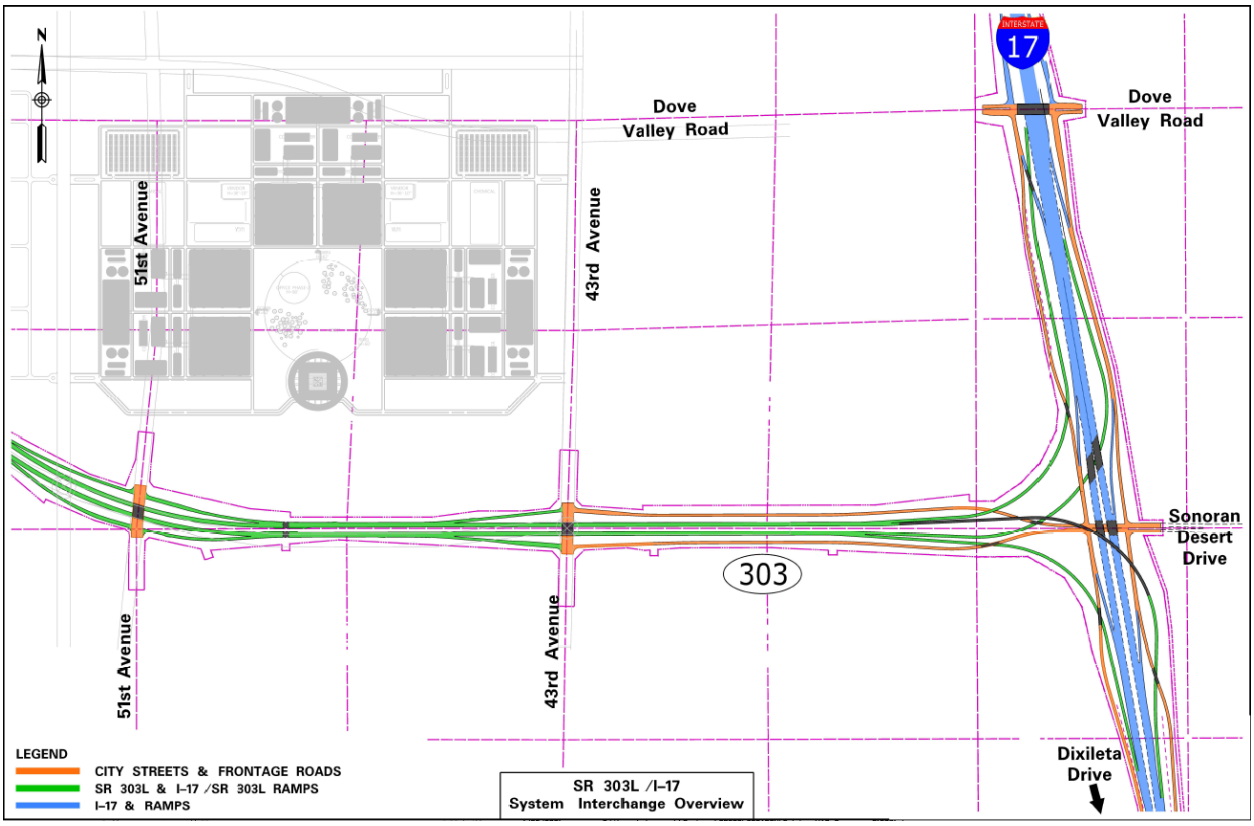
As can be seen in ***Figure 3***, the MAG TDM tends to overestimate AADTs on higher volume roads within the study area.

Peak hour TMCs were collected at the three freeway TIs along I-17 adjacent to the proposed site: State Route 74, Dove Valley Road, and Loop 303. These counts are shown in the figures below and will serve as inputs to the NCHRP traffic forecasting procedure described later.

Future Network

The proposed future network of the Loop 303 and I-17 System Interchange is shown below in ***Figure 4***. Note that there will be new interchanges at 67th Avenue, 51st Avenue, and 43rd Avenue. There will also be flyover ramps between the freeways and frontage roads will connect Loop 303 to Sonoran Desert Drive.

Figure 4: Proposed 2040 Freeway Network



Methodology

Travel Demand Model

The TDM is a regional four-step model maintained by MAG and developed using the travel demand modeling software TransCAD. The TDM is a critical tool to this study for the development of future ADT projections and refined future turning volumes.

A TDM is often referred to as a "regional" model because the roadway network it represents typically spans multiple jurisdictions. TDMs are extensively calibrated and rooted in survey-informed population, employment, and socioeconomic data—all of which influence trip generation and mode choice. The MAG model has a land use component that includes socioeconomic information in the region disaggregated by a traffic analysis zone (TAZ). Each TAZ in the region includes information about housing, population, and employment. Land use estimates for the future are generally derived from Census data and regional

estimates associated with improvements. To develop the future year land use data, MAG utilizes the land use elements of adopted general/comprehensive plans for cities and towns in the region. Future year MAG models also include all programmed and funded roadway improvements in the region. Therefore, model traffic projections consider planned improvements, new developments, and land use changes expected by a specified horizon year.

Socioeconomic Data Updates

The proposed transportation network within the site breaks the area into seven distinct zones as can be seen in ***Figure 5***. The zones can be classified by three distinct land use zoning requirements, the technology park, technology campus, and freeway mixed-use. The technology zones are similar, but the technology park has lower building height maximums. Both technology land uses prohibit any residential use. The freeway mixed-use zones allow many commercial uses such as retail, offices, car dealerships, etc. Residential developments are allowed within the mixed-use zones, but single-family dwellings are prohibited. These land use requirements are summarized in ***Figure 6***, ***Figure 7***,and ***Figure 8***.

Figure 5: Land Use Zones Map

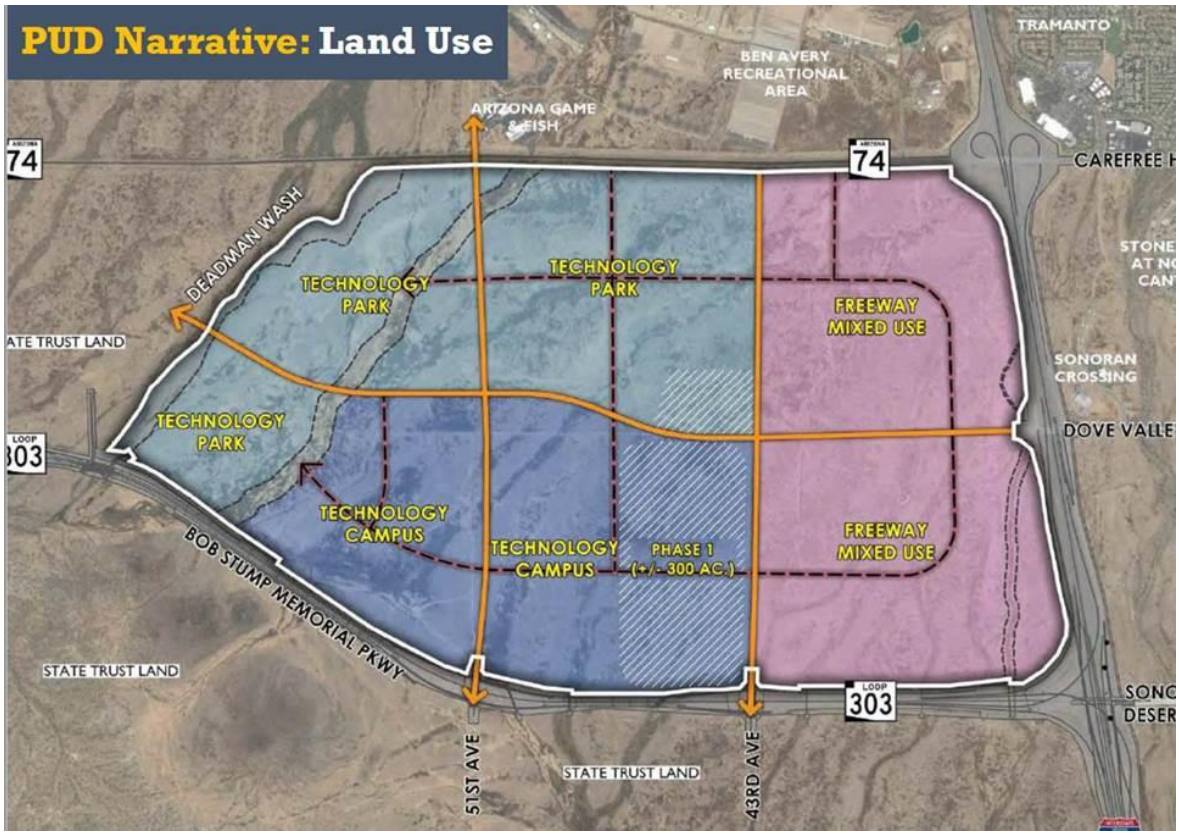


Figure 6: Technology Campus Zoning Requirements

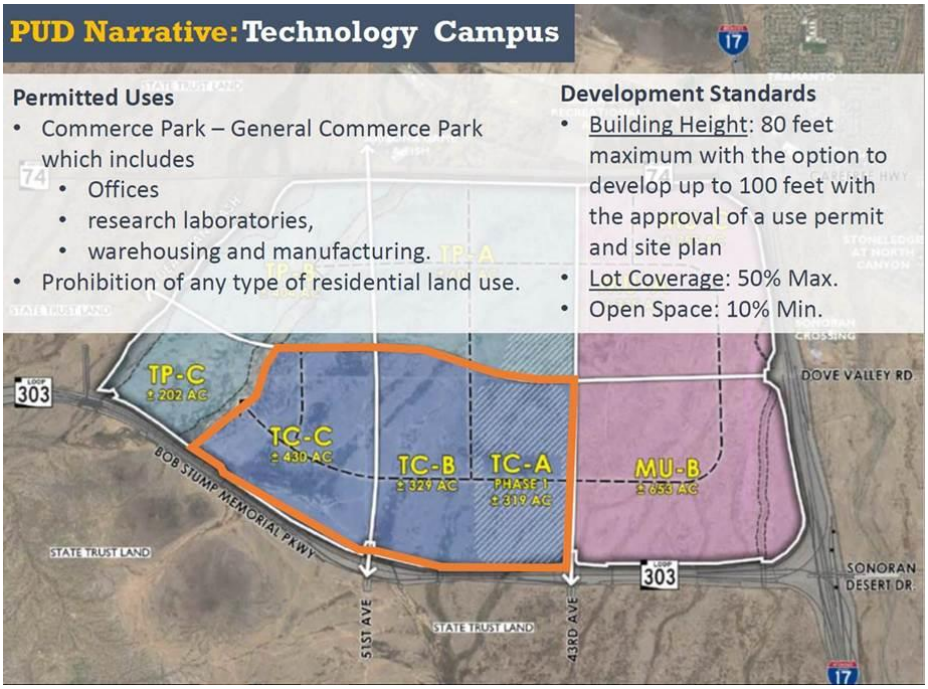


Figure 7: Technology Park Zoning Requirements

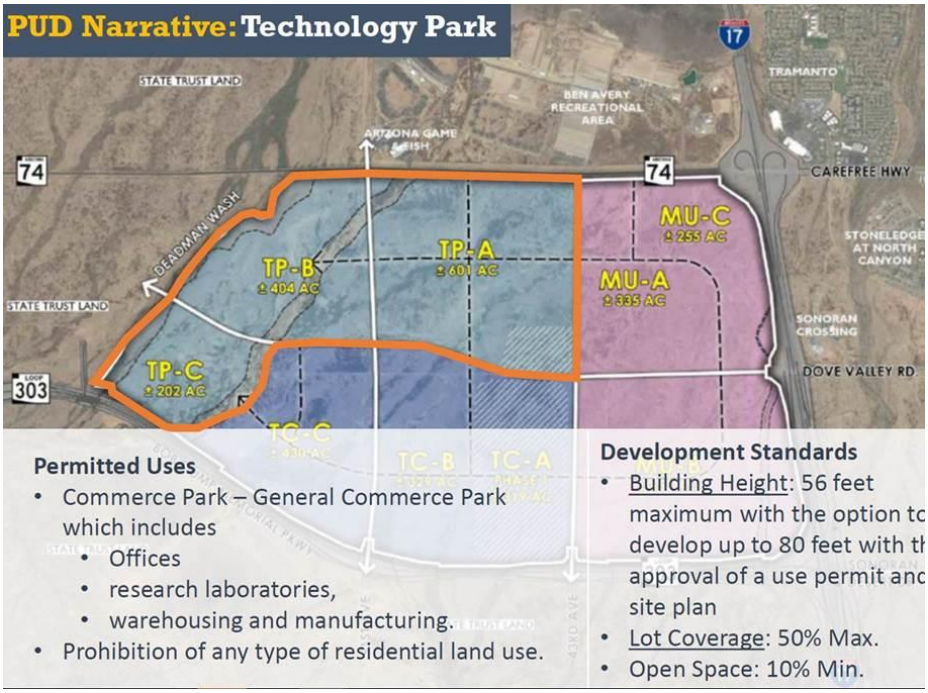
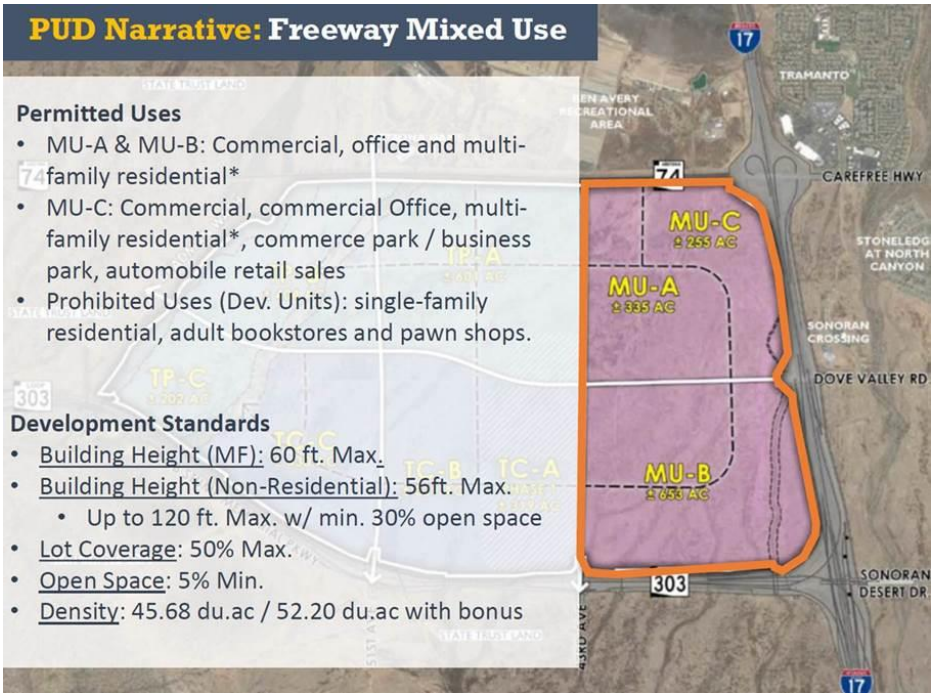


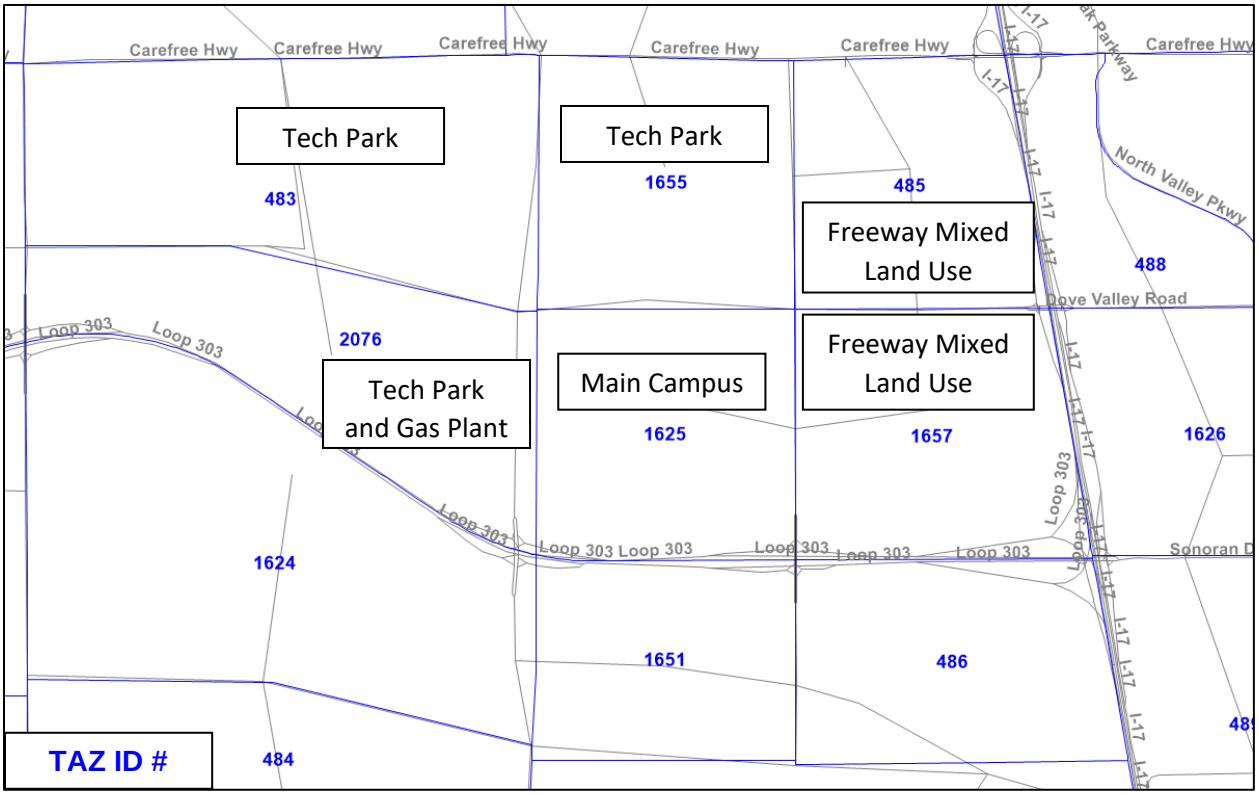
Figure 8: Freeway Mixed Use Zoning Requirements



Updating TAZs in MAG TDM

The 2040 MAG TDM must be updated to account for the changing employee and residential populations in the site area. First the impacted TAZs were identified within the model, these TAZs are shown below in ***Figure 9*** along with callouts to the incoming changes to each of the TAZs. This section will describe in detail what socioeconomic data was changed and the process and assumptions used to inform those changes.

Figure 9: MAG TDM TAZs Map



Employment Data

Employment data was collected using two code systems – one used by the MAG TDM and the other the North American Industry Classification System (NAICS). NAICS code 33 was used for manufacturing jobs, code 44 for retail, code 54 for professional, scientific, technical services and code 55 was used to mean general office employment. NAICS codes can be correlated to employment codes within the MAG TDM as follows:

- RETEMP = NAICS 44
- OFFEMP = NAICS 54, 55
- INDEMP = NAICS 33

The TSMC estimates 12,800 manufacturing employees on the main campus. An additional 3200 professional, scientific, technical services employees are expected to work on the main campus in support of the manufacturing workers – one professional/scientific employee for every four manufacturing employees. On the site west of 51st Avenue, 52 manufacturing employees are projected to work at a gas plant supporting the manufacturing facilities.

The freeway mixed-use zoning TAZs east of the main campus are similar to what is already at the southeast corner of the Interchange between I-17 and Happy Valley Road TAZ #539.The two freeway-mixed-use TAZs east of the main manufacturing campus are assumed to have similar developments put

in place with 100 retail workers and 300 general office workers. Developments within the tech park along the Loop 303 are expected to fill in similar to patterns observed by the Intel Ocotillo Plant, although there are no committed developments at this time, it was assumed the area would fully develop and employment estimates for these zones were built off the assumptions of the prescribed land use requirements and employment rate of similar TAZs.

Residential Data

At this time, there are few committed incoming residential developments around the study area, however, the City of Phoenix is confident the area will develop rapidly once the TSMC facility is constructed. Future growth patterns were therefore estimated using the land zoning requirements and accounting for how similar areas have developed in the past.

The zoning requirements prohibit any residential developments on the land where the TSMC plant is being constructed. The freeway mixed-use zones are restricted to only multifamily housing. Each of these mixed-use zones are 500 acres each, and it is assumed as much as 200 acres of this land will be used for parking lots, drainage, etc. Of the remaining 300 acres, 50% are assumed to be available for mixed-use development or 150 acres. Between retail and office developments it will be assumed that only 10% of the remaining 150 acres will be developed into dwelling units. Assuming 50 dwelling units per acre and 2.75 residents per dwelling unit there is an expected 2000 residents per mixed-use TAZ.

Household income proportions were taken from a residential neighborhood with mixed-use developments adjacent to the Intel Ocotillo Semiconductor plant TAZ #1263. These proportions are described in ***Table 1***. TAZs surrounding the study area that already had residential developments maintained their existing income distribution.

Table 1: Proportions of Households by Income Category

HHINC1	HHINC2	HHINC3	HHINC4	HHINC5
5%	6%	10%	16%	63%

All the changes made to the TAZs impacted by the incoming developments are summarized below in ***Table 2***.

Table 2: Updated TDM TAZs Data Summary

TAZ	RESHH	RETEMP	OFFEMP	INDEMP	HHINC1	HHINC2	HHINC3	HHINC4	HHINC5
483	88	0	6000	0	16	9	10	17	36
485	1600	2100	900	0	80	96	160	256	1008
486	656	46	13	0	45	74	94	101	133
1624	657	9	0	0	192	132	69	102	162
1625	0	0	3200	12800	0	0	0	0	0
1651	138	0	0	0	10	24	30	32	42
1655	0	0	6000	0	0	0	0	0	0
1657	1600	900	2100	0	80	96	160	256	1008
2076	152	0	6000	52	0	0	0	0	0

Traffic Forecasting

Traffic forecasts for the Study Corridor were derived from the MAG regional TDM. The specific model used for this study is the four-step model, which is validated to 24-hour count data and verified for model speed estimates. Typical corridor studies use factors to convert a.m. and p.m. peak period TDM estimates to determine a.m. and p.m. peak hour volume estimates. The volumes are derived directly from the MAG model assignments and have several limitations, including imprecise turning movement volume estimates at major intersections. To improve MAG model estimates and to develop design hour traffic volumes, the model estimates for the future year must therefore be post-processed.

A wide variety of post-processing methodologies are used in the industry and the most common methods are documented in NCHRP 765 Report: Analytical Travel Forecasting Approaches for Project-Level Planning and Design. The report and procedures outlined in the NCHRP 765 report derive from and improve upon the procedures outlined in a prior NCHRP publication, Report 255: Highway Traffic Data for Urbanized Planning and Design. The specific procedure used for forecasting for this study compares existing and future forecasted link volumes from the Maricopa Association of Governments (MAG) Travel Demand Model (TDM) and applies the observed growth to existing year counts via an iterative method to produce future year turning movement and link forecasts. The inputs required for post-processing model estimates using this method are:

1. Base year traffic counts;
2. Base year regional TDM estimates;
3. Future year regional TDM forecasts; and
4. Design hour 30th highest K-factor.

The procedure adjusts the model forecasted link volumes using a combination of ratio and difference methods and subsequently uses an iterative method to determine future turning movement volumes using existing turning movement counts as a basis. A tolerance of 10 percent was used to determine the convergence of the iterative method. The procedure compares the existing year traffic counts to existing year model estimates and refines the future year model forecasts using an iterative process. The

iterative process is designed to minimize the errors identified in the existing year model estimates when compared to the observed traffic counts.

Forecasts

Figure 10 through ***Figure 17*** show the traffic forecasts of each major interchange and intersection within the study area.

Figure 10: Loop 303 and Lake Pleasant Parkway Interchange Forecast

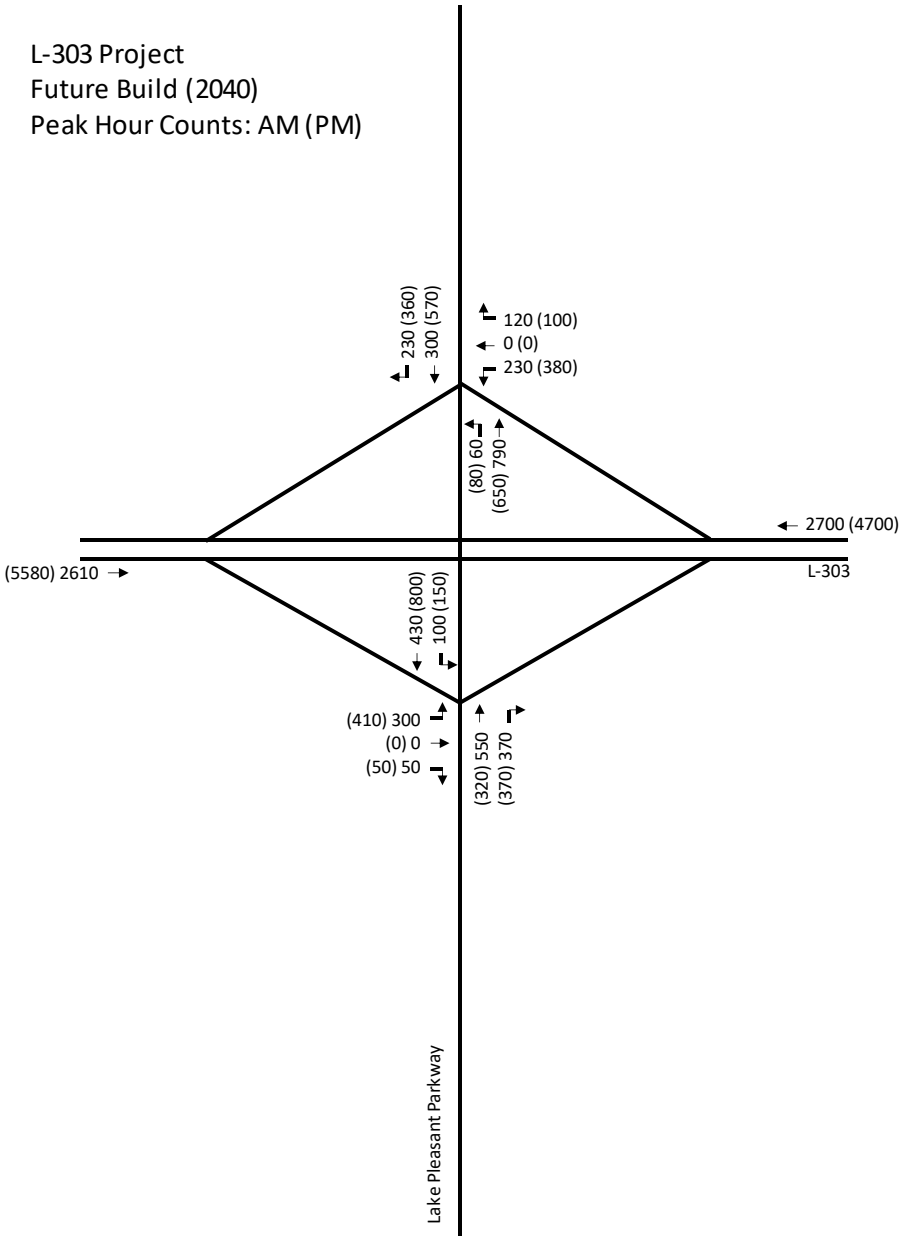


Figure 11: Loop 303 and 67th Avenue Interchange Forecast

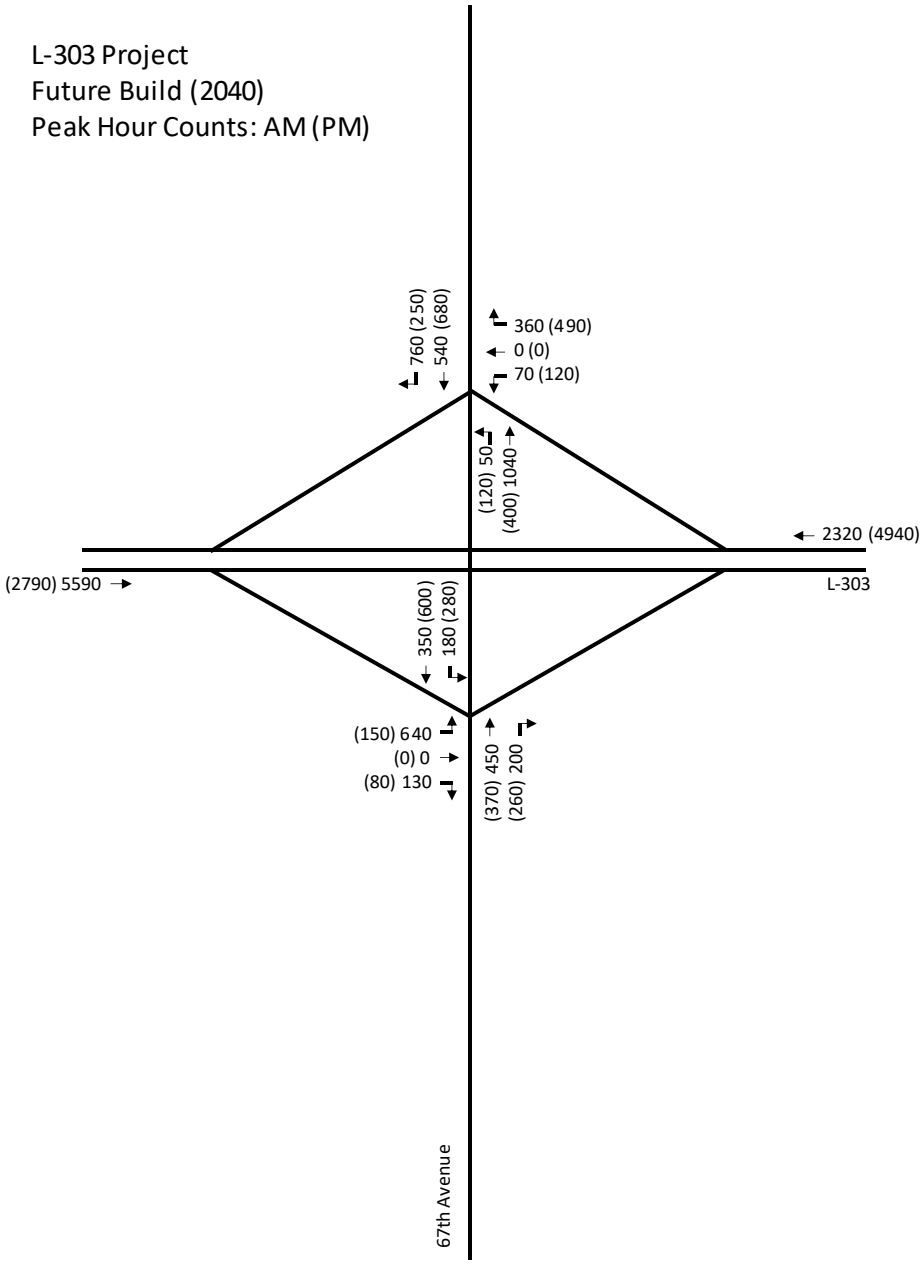


Figure 12: Loop 303 and 51st Avenue Interchange Forecast

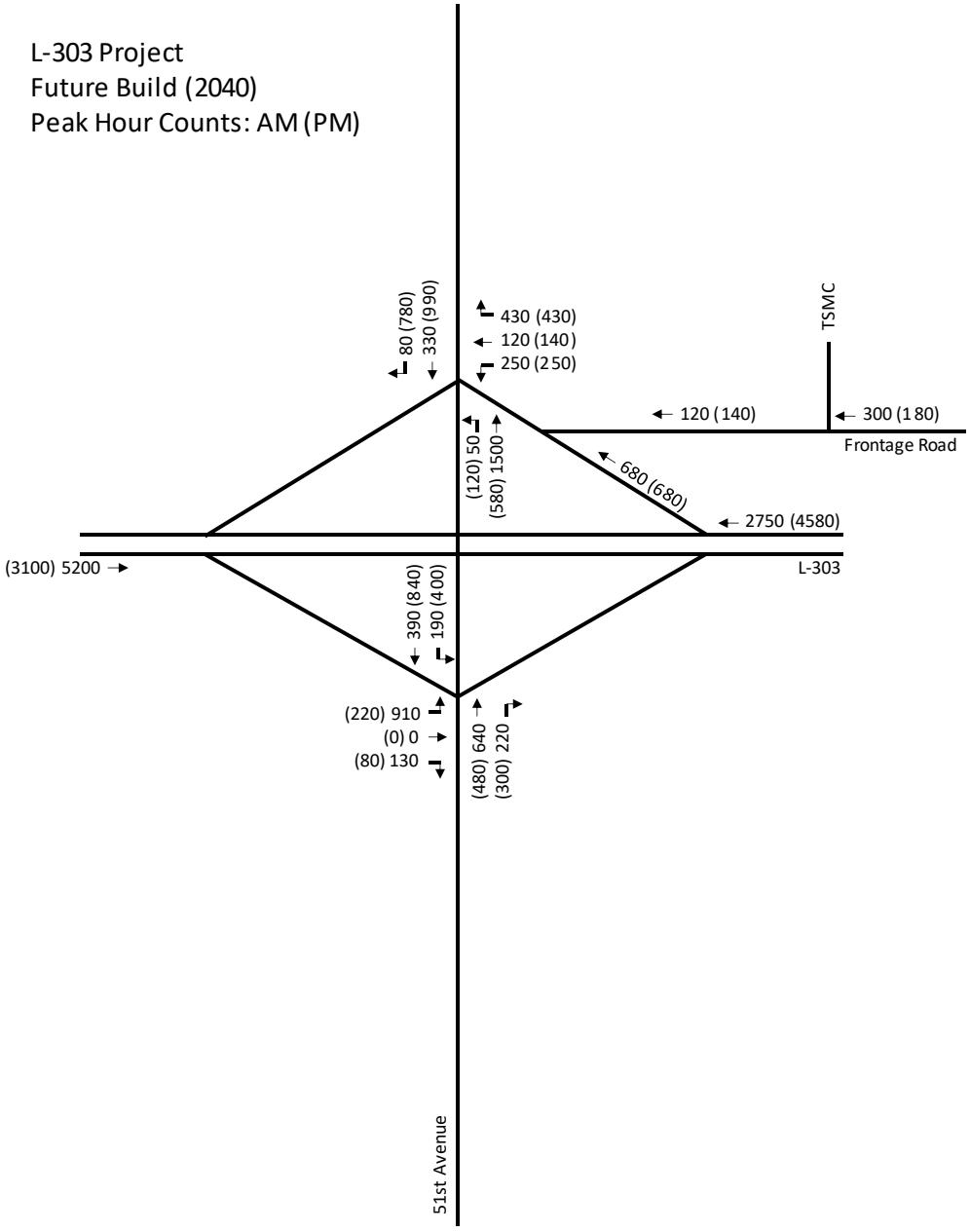


Figure 13: Loop 303 and 43rd Avenue Interchange Forecast

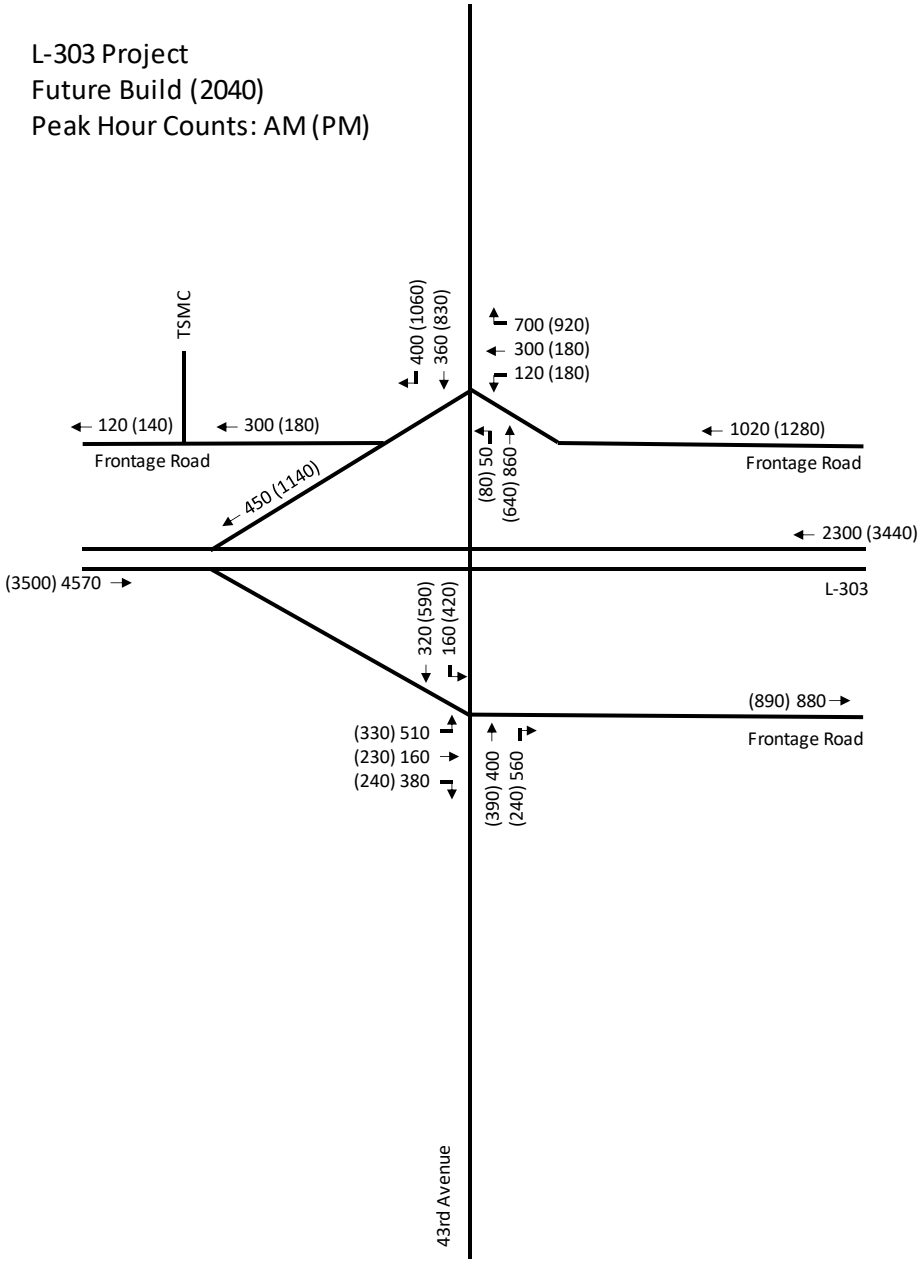


Figure 14: Loop 303 and I-17 Interchange Forecast

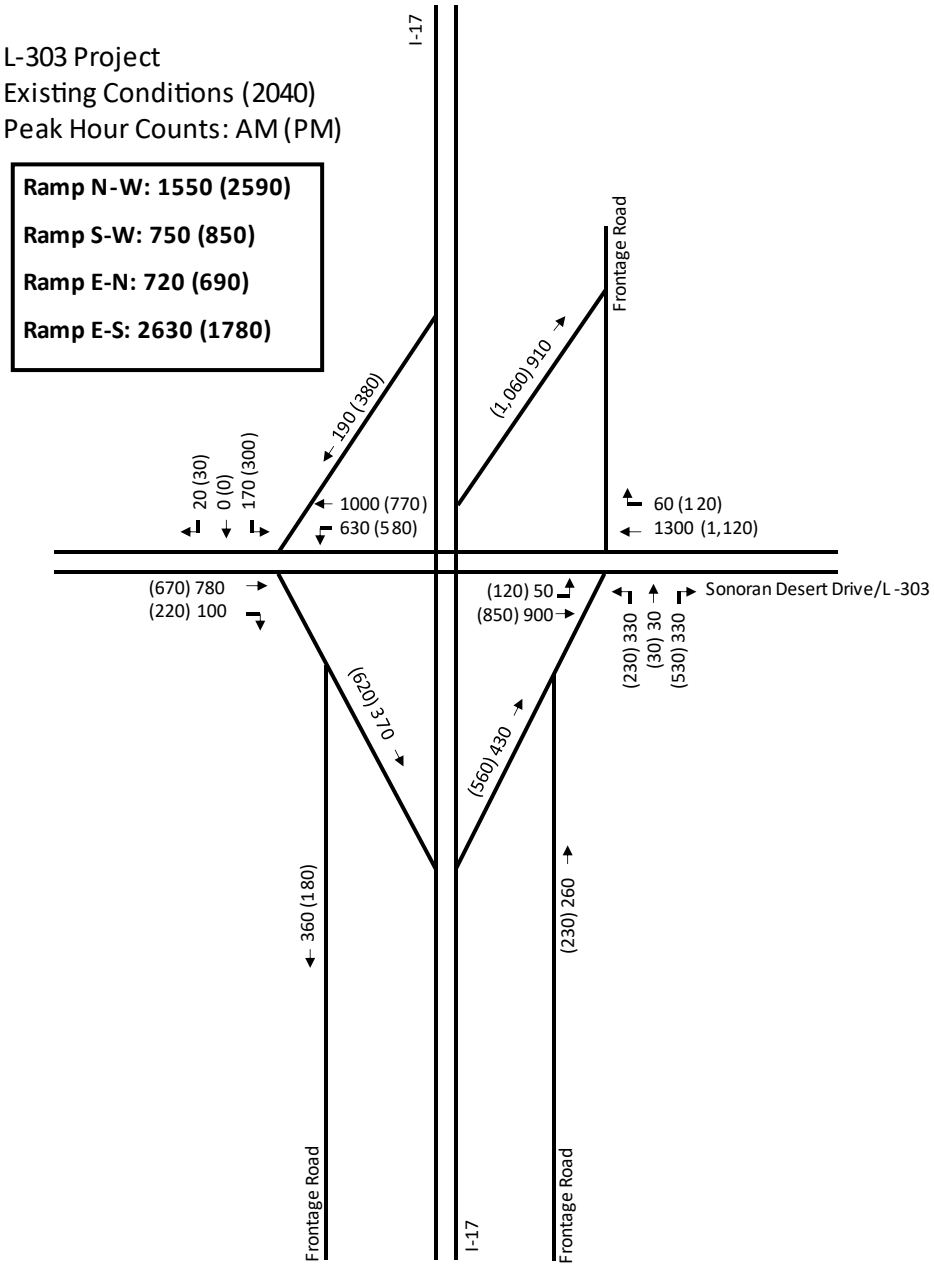


Figure 15: Sonoran Desert Drive and North Valley Parkway Forecast

L-303 Project
Future Build (2040)
Peak Hour Counts: AM (PM)

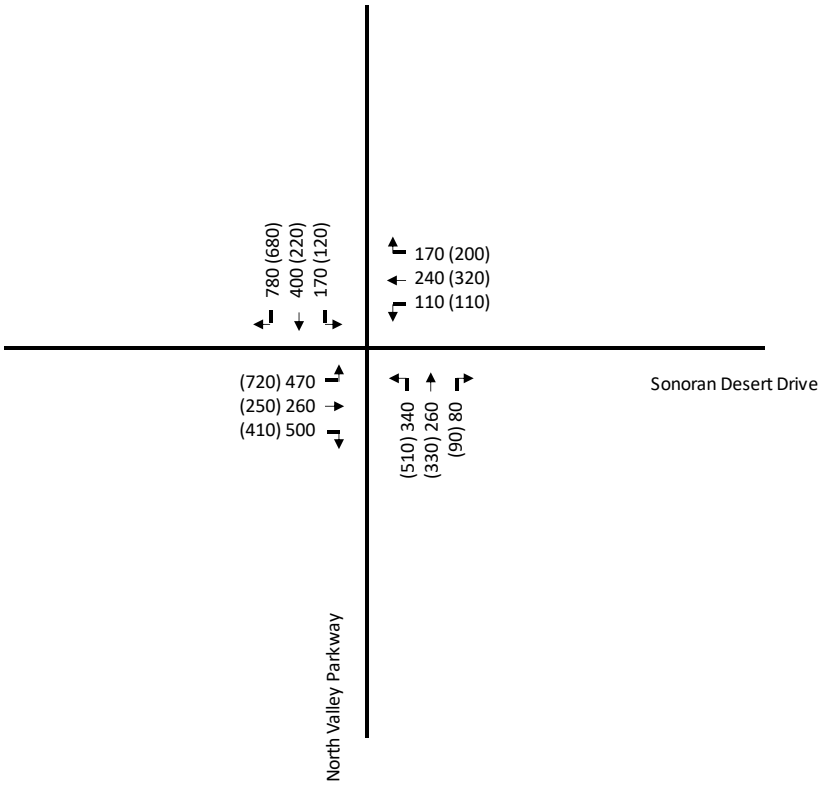


Figure 16: Dove Valley Road and I-17 Interchange Forecast

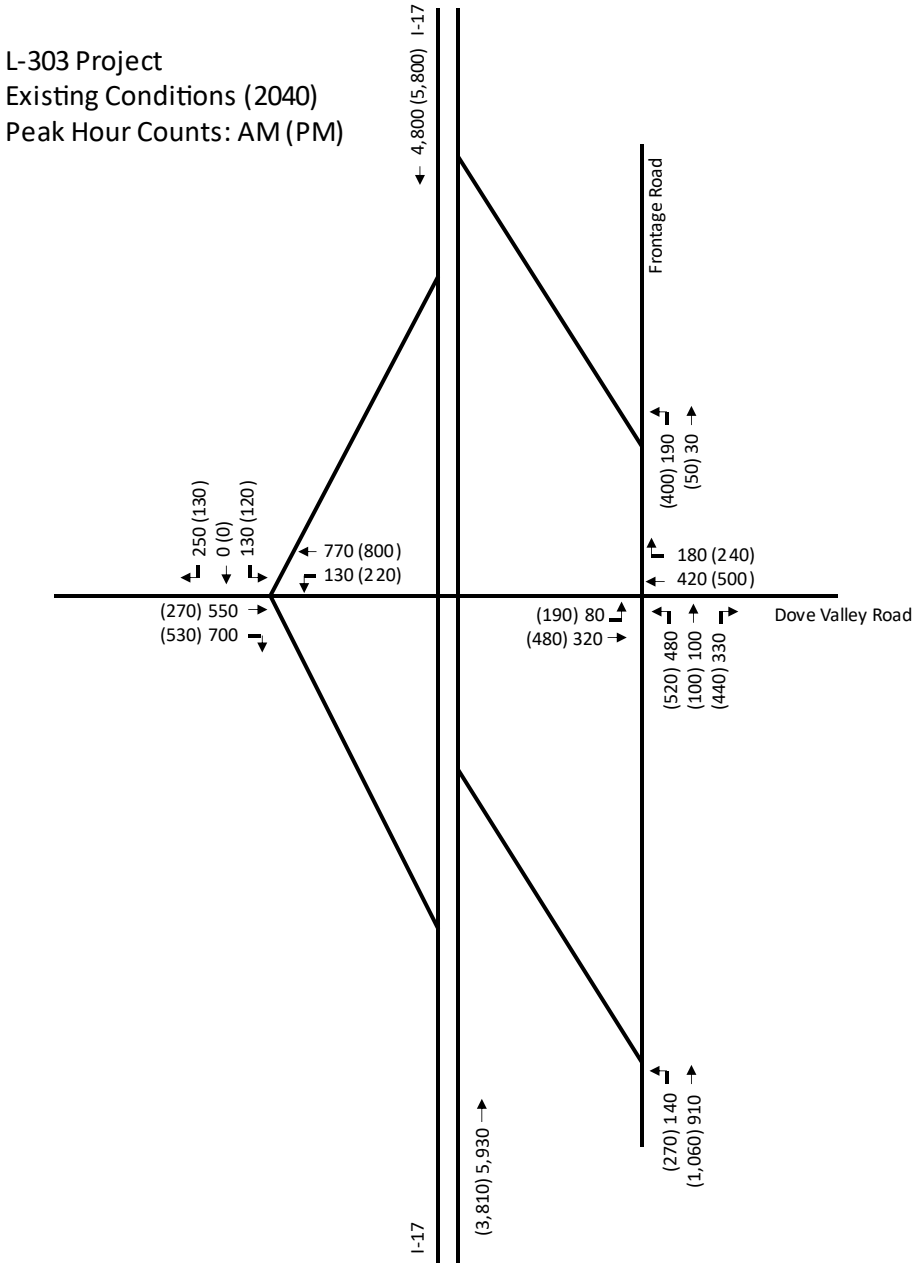
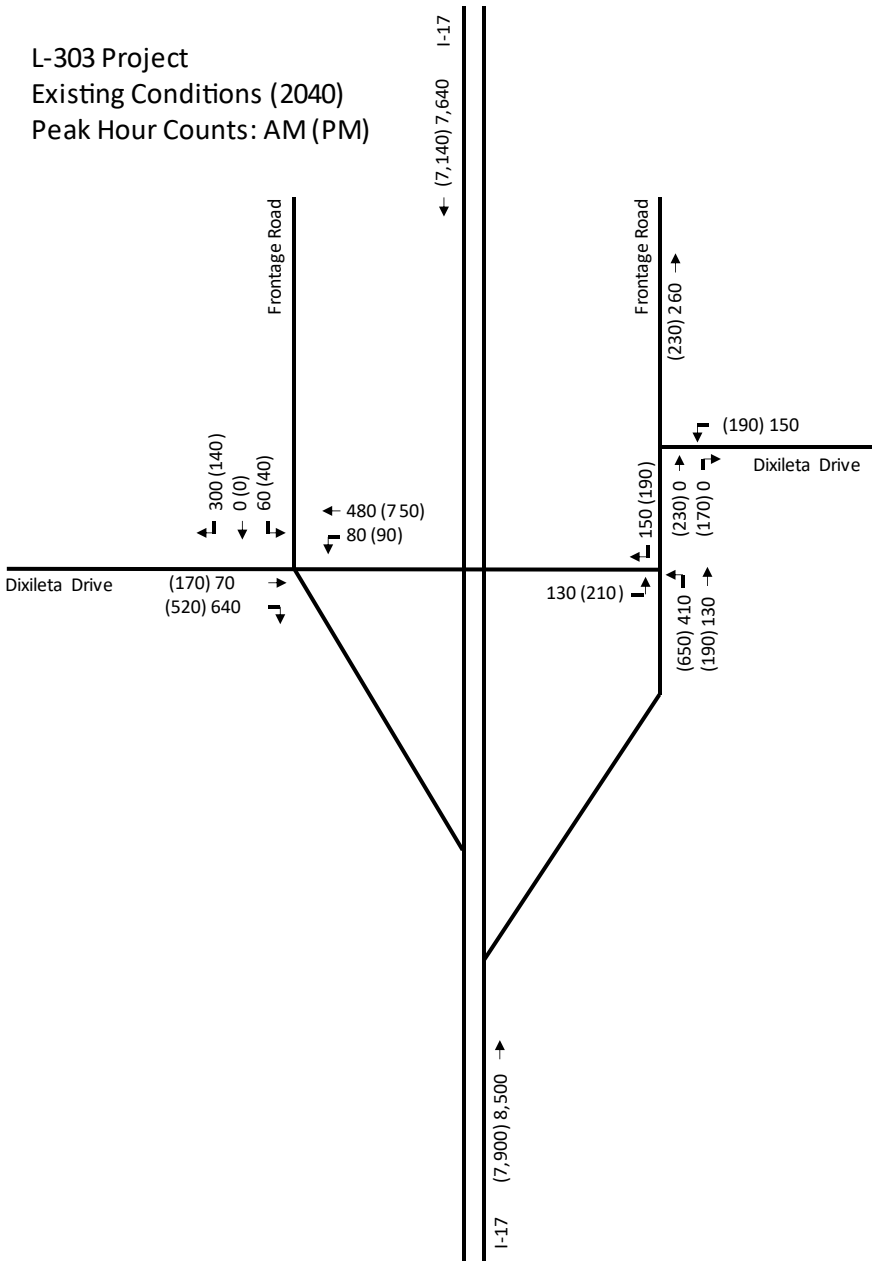


Figure 17: Dixileta Drive and I-17 Interchange Forecast



APPENDIX B: VISSIM Calibration Memo

Technical Memorandum

TO: Tom O' Reilly, ADOT **DATE:** August 16, 2021

FROM: Vinod Eadavalli, Jacobs

SUBJECT: SR 303L, Lake Pleasant Parkway to I-17 – VISSIM Microsimulation Calibration and Validation Memo

COPIES:

1. VISSIM Microsimulation Model Calibration and Validation

The traffic operations analysis was performed using VISSIM microscopic simulation software version 11.00-11. VISSIM is a microscopic, time-step and behavior-based simulation software developed to model urban traffic, transit, rail and pedestrian operations. The program analyzes traffic, transit, rail and pedestrian operations under a series of constraints, such as lane configuration, traffic composition, traffic control types, and transit stops, among others. For traffic operations, it can provide a diverse array of measures of effectiveness (MOEs), such as average total delay, travel times and queue lengths.

Applying the following steps, we have developed a peak hour VISSIM model for the existing year conditions:

- Scale and import background aerial image of the corridor
- Develop network geometry (number of lanes, lane widths, acceleration/deceleration lane lengths)
- Code Desired Speed Decisions
- Code Reduced Speed Areas where appropriate
- Code Priority Rules/ Conflict Areas
- Code input volumes and Routing Decisions (15 minutes of preload (also called as shoulder time period) and 60 min of actual peak hour)
- Run the model to extract results

VISSIM provides a large number of options for outputs, all of which can be tailored to the needs of the user. For this project, one main output file was used: link evaluation and travel time evaluation. From the link evaluation output, the MOEs of throughput, speed and density were selected and from travel time evaluation output, travel times and volumes were selected.

In order to ensure that the build-up and dissipation of the congestion occurs during the peak hour, the simulation was run for 75 minutes. This includes the actual peak hour which is 60

minutes and 15 minutes of pre-load, also called a “shoulder period”, which is a standard practice in microscopic simulation and, recommended by Federal Highway Administration (FHWA).

Furthermore, to prevent the bias caused by an initially empty network, MOEs were always collected only after the simulation had run 15 minutes. MOEs were then aggregated during the peak hour. Whenever the comparison between the model results and the field data fell outside the acceptable ranges set by the guidelines included in FHWA’s Traffic Analysis Toolbox Volume III, adjustments to the model parameters were made and the simulation was run again ten (10) times to determine if the new results fell within the acceptable ranges.

The main objective of the calibration process is to obtain an accurate representation of the field conditions using the existing condition simulation model. Traffic volumes and travel times collected in the field were matched by the model during this process. By adjusting driver parameters and lane change distance, the model was calibrated for traffic volumes and travel times.

Table 1 summarizes the car following parameters used in this model for the respective driving behavior sets that are modified from the default parameters.

Table 1 Car Following Parameters – Observed Vehicles and Distance Observed

Other Car Following Model Parameters (Default Values)		Defaults	Urban	Basic Freeway	Merge	Diverge	Weave	Ramps	Frontage Road
Look Ahead Distance	Min (ft)	0	0	0	0	0	0	0	0
	Max (ft)	820.21	820.21	820.21	820.21	820.21	820.21	820.21	820.21
	Observed Vehicles	2(W99) 4(W74)	4	2	2	2	2	2	2
Look Back Distance	Min (ft)	0	0	0	0	0	0	0	0
	Max (ft)	492.13	492.13	492.13	492.13	492.13	492.13	492.13	492.13
Temporary Lack of Attention	Duration (s)	0	0	0	0	0	0	0	0
	Probability (%)	0%	0%	0%	0%	0%	0%	0%	0%

Table 2 summarizes the lane change parameters used in this model for the respective driving behavior sets that are modified from default parameters.

Table 2 Lane Change Parameters

Lane Change Parameters		Defaults	Urbal Arterial	Ramps	Freeway	Diverge	Merge	Weave
Maxximun Deceleration	Own (ft/s^2)	-13.12	-13.12	-13.12	-13.12	-13.12	-13.12	-13.12
	Trailling Vehicle	-9.84	-9.84	-9.84	-9.84	-9.84	-9.84	-9.84
-1ft/s^2 per distance (ft)	Own (ft/s^2)	100/200 (W74/W99)	100	100	200	100	150	100
	Trailling Vehicle	100/200 (W74/W99)	100	100	200	100	150	100
Accepted Decelaration	Own (ft/s^2)	-3.28	-3.28	-3.28	-3.28	-3.28	-3.28	-3.28
	Trailling Vehicle	-1.64 (W99)/-3.28(W74)	-3.28	-3.28	-1.64	-3.28	-3.28	-3.28
Waiting Time Before Diffusion (s)		60	60	60	60	60	60	60
Min. Headway (front/rear) (ft)		1.64	1.64	1.64	1.64	1.64	1.64	1.64
Safety Distance Reduction Factor		0.6	0.4	0.6	0.35	0.6	0.1	0.3
Maximun Deceleration for Cooperative		-9.84	-9.84	-9.84	-9.84	-9.84	-9.84	-9.84
Overtake Reduce Speed Areas		-	-	-	-	-	-	-
Advance Merging Selected?		Yes	Yes	Yes	Yes	Yes	Yes	Yes

Table 3 summarizes the car following model parameters used in this model for the respective driving behavior sets that are modified from default parameters. Wiedemann 74 and 79 models were used as there are arterial and freeway segments coded into the model.

Table 3 Car Following Model Parameters – Wiedemann 99 and 74 Models

Model	Parameter	Defaults	Urban	Basic Freeway, Ramps	Weaving, Diverge, Frontage Road	Merge
Wiedemann 99 Model Parameters	CC0 (Standstill Distance) (ft)	4.92	NA	4.92	4.92	4.92
	CC1 (Headway Time) (s)	0.9	NA	0.9	3	105:Merge
	CC2 ('Following' Variation) (ft)	13.12	NA	13.12	13.12	13.12
	CC3 (Threshold for Entering 'Following')	-8	NA	-8	-8	-8
	CC4 (Negative 'Following' Threshold)	-0.35	NA	-0.35	-0.35	-0.35
	CC5 (Positive 'Following' Threshold)	0.35	NA	0.35	0.35	0.35
	CC6 (Speed Dependency of Oscilation)	11.44	NA	11.44	11.44	11.44
	CC7 (Oscilation Acceleration) (ft/s^2)	0.82	NA	0.82	0.82	0.82
	CC8 (Standstill Acceleration)(ft/s^2)	11.48	NA	11.48	11.48	11.48
	CC9 (Acceleration at 50 mph)(ft/s^2)	4.92	NA	4.92	4.92	4.92
Wiedemann 74 Model Parameters	Average Standstill Distance (ft)	6.56	6.56	NA	NA	NA
	Additive Part of Safety Distance	2	2	NA	NA	NA
	Multiplic. Part of Safety Distance	3	3	NA	NA	NA

In addition to the global parameters, there are two parameters at link (or rather connector) level that also impact lane changing behavior: lane change, and emergency stop distances. Both values are used to model the lane change behavior for vehicles following their routes. Lane change distance governs the distance upstream of a bifurcation (or a decision point) at which vehicles

begin reacting to it and maneuvering towards their desired lane. The default value (656.2 feet) is unrealistically low at off-ramps with a large portion of exiting traffic. For such locations, the lane change distance has been increased to ensure that modeled behavior is realistic, and the throughput of the movement matched the one measured in the field. A lane change distance of a quarter mile (1,320 feet) to a mile (5,280 feet) was used for each off-ramp connector.

The emergency stop distance represents the distance (also upstream of a bifurcation or decision point) at which vehicles will stop if they have not been able to perform the necessary lane change. It was found that default value of VISSIM produced sufficiently satisfactory results and was, therefore, not modified.

2. Volume Calibration

The average throughput results from the model were compared to the existing traffic volumes used for calibrating the model. The comparison was conducted using an average of ten (10) multiple runs with different random seed numbers. ***Tables 4 – Tables 9*** summarize the calibration results in terms of GEH values and link flows for the peak hour model. The results indicate that the model satisfies the volumes calibration criteria that is mentioned in the FHWA's Traffic Analysis Toolbox Volume III.

Table 4 Peak Hour Link Flows (All Vehicles)

Individual Link Flows (All Vehicles)				
Time	**Flow<700 vph (± 100)**	**700<Flow<2700 vph (± 15%)**	**Flow>2700 vph (± 400)**	**Overall Link Flows**
AM 7:00 - 8:00	100%	100%	100%	100%
PM 4:00 – 6:00	100%	100%	100%	100%

Table 5 Peak Hour Sum of All Link Flows

Sum of Link Flows (All Vehicles)	
AM 8:00 - 9:00	0.4%
PM 4:00 – 6:00	0.6%

Table 6 Peak Hour GEH Statistic for Individual Link Flows

GEH Statistic for Individual Link Flows	
AM 8:00 - 9:00	100%
PM 4:00 – 6:00	100%

Table 7 Peak Hour GEH Statistic of Sum of All Link Flows

GEH Statistic for Sum of All Link Flows (GEH Statistic<4)	
AM 8:00 - 9:00	1.27
PM 4:00 – 6:00	1.92

Table 8 shows the detailed volume calibration results for each of the links in the peak hour model. Based on the results of the calibration process the models satisfy the calibration targets for volumes.

Table 8 AM Volume Calibration Results

SR303 and I-17 Link Evaluation (8:00 AM - 9:00 AM)

Existing Mainlane and Ramps GEH Calibration

Direction	Location	Type	Link Volume (Input) (vph)	Volume (Output) (All Veh) by (vph)	Absolute	% Difference	GEH	GEH < 5	Flow < 700 (+/- 100vph)	<700<Flow<2700 (+/- 15%)	Flow >2700 (+/- 400 vph)
NB I-17 - Mainline	South of Frontage Road to Exit Ramp to Frontage Road	Freeway Segments	3,260	3,259	1	0%	0.02	Yes	N/A	N/A	Yes
	South of Frontage Road to Exit Ramp to Frontage Road	Diverge	3,260	3,243	17	1%	0.30	Yes	N/A	N/A	Yes
	Exit Ramp to Frontage Road to Exit Ramp to SR 303	Freeway Segments	3,250	3,229	21	1%	0.37	Yes	N/A	N/A	Yes
	Exit Ramp to Frontage Road to Exit Ramp to SR 303	Diverge	3,250	3,213	37	1%	0.66	Yes	N/A	N/A	Yes
	Exit Ramp to SR 303 to Exit Ramp to Frontage Road	Freeway Segments	2,810	2,749	61	2%	1.16	Yes	N/A	N/A	Yes
	Exit Ramp to SR 303 to Exit Ramp to Frontage Road	Diverge	2,810	2,805	5	0%	0.09	Yes	N/A	N/A	Yes
	Exit Ramp to Frontage Road to Entrance Ramp from Frontage Road	Freeway Segments	2,420	2,433	-13	-1%	0.27	Yes	N/A	Yes	N/A
	Entrance Ramp from Frontage Road to Entrance Ramp from Dove Valley Road	Freeway Segments	3,370	3,355	15	0%	0.27	Yes	N/A	N/A	Yes
	North of Entrance Ramp from Dove Valley Road	Freeway Segments	3,560	3,555	5	0%	0.09	Yes	N/A	N/A	Yes
SB I-17 - Mainline	North of Entrance Ramp from WB Entrance Ramp from Carefree Hwy	Freeway Segments	2,688	2,688	0	0%	0.00	Yes	N/A	Yes	N/A
	WB Entrance Ramp from Carefree Hwy to SB Entrance Ramp from Carefree Hwy	Freeway Segments	3,088	3,086	2	0%	0.03	Yes	N/A	N/A	Yes
	SB Entrance Ramp from Carefree Hwy to Exit Ramp to Dove Valley Road	Weaving	3,310	3,299	11	0%	0.19	Yes	N/A	N/A	Yes
	Exit Ramp to Dove Valley Road to Entrance Ramp from Dove Valley Road	Freeway Segments	3,060	3,060	0	0%	0.00	Yes	N/A	N/A	Yes
	Entrance Ramp from Dove Valley Road to Exit Ramp to SR 303	Weaving	3,420	3,396	24	1%	0.41	Yes	N/A	N/A	Yes
	Exit Ramp to SR 303 to Entrance Ramp from SR 303	Freeway Segments	3,030	3,033	-3	0%	0.06	Yes	N/A	N/A	Yes
	Entrance Ramp from SR 303 to Entrance Ramp from Frontage Road	Merge	4,880	4,847	33	1%	0.47	Yes	N/A	N/A	Yes
	Entrance Ramp from SR 303 to Entrance Ramp from Frontage Road	Freeway Segments	4,880	4,881	-1	0%	0.02	Yes	N/A	N/A	Yes
	Entrance Ramp from Frontage Road to South of the Frontage Road	Merge	4,880	4,907	-27	-1%	0.38	Yes	N/A	N/A	Yes
	Entrance Ramp from Frontage Road to South of the Frontage Road	Freeway Segments	4,880	4,910	-30	-1%	0.43	Yes	N/A	N/A	Yes
EB SR 303/Sonoran Desert Drive	West of EB Exit Ramp to Lake Pleasant Parkway	Freeway Segments	2,050	2,041	9	0%	0.21	Yes	N/A	Yes	N/A
	West of EB Exit Ramp to Lake Pleasant Parkway	Diverge	2,050	2,042	8	0%	0.18	Yes	N/A	Yes	N/A
	EB Exit Ramp to Lake Pleasant Parkway to EB Entrance Ramp from Lake Pleasant Parkway	Freeway Segments	1,930	1,929	1	0%	0.02	Yes	N/A	Yes	N/A
	EB Entrance Ramp from Lake Pleasant Parkway to SB Terminal at I-17	Merge	2,270	2,224	46	2%	0.96	Yes	N/A	Yes	N/A
	EB Entrance Ramp from Lake Pleasant Parkway to SB Terminal at I-17	Freeway Segments	2,270	2,267	3	0%	0.05	Yes	N/A	Yes	N/A
WB SR 303/Sonoran Desert Drive	SB Terminal at I-17 to WB Exit Ramp to Lake Pleasant Parkway	Freeway Segments	680	672	8	1%	0.30	Yes	Yes	N/A	N/A
	WB Exit Ramp to Lake Pleasant Parkway to WB Entrance Ramp from Lake Pleasant Parkway	Freeway Segments	590	579	11	2%	0.47	Yes	Yes	N/A	N/A
	West of WB Entrance Ramp from Lake Pleasant Parkway	Merge	670	660	10	1%	0.38	Yes	Yes	N/A	N/A
	West of WB Entrance Ramp from Lake Pleasant Parkway	Ramp	670	665	5	1%	0.19	Yes	Yes	N/A	N/A
NB I-17 Ramps	Exit Ramp to Frontage Road	Ramp	10	10	0	4%	0.11	Yes	Yes	N/A	N/A
	Exit Ramp to SR 303/Sonoran Desert Drive	Ramp	440	416	24	5%	1.15	Yes	Yes	N/A	N/A
	Exit Ramp to Frontage Road	Ramp	390	382	8	2%	0.41	Yes	Yes	N/A	N/A
	Entrance Ramp from Frontage Road	Ramp	950	912	38	4%	1.24	Yes	N/A	Yes	N/A
	Entrance Ramp from Dove Valley Road	Ramp	190	194	-4	-2%	0.31	Yes	Yes	N/A	N/A
SB I-17 Ramps	Entrance Ramp from WB Carefree Highway	Ramp	400	399	1	0%	0.06	Yes	Yes	N/A	N/A
	Entrance Ramp from Carefree Highway	Ramp	222	220	3	1%	0.17	Yes	Yes	N/A	N/A
	Exit Ramp to Dove Valley Road	Ramp	250	244	6	2%	0.39	Yes	Yes	N/A	N/A
	Entrance Ramp from Dove Valley Road	Ramp	360	357	3	1%	0.13	Yes	Yes	N/A	N/A
	Exit Ramp to SR 303/Sonoran Desert Drive	Ramp	390	383	7	2%	0.38	Yes	Yes	N/A	N/A
	Entrance Ramp from SR 303/Sonoran Desert Drive	Ramp	1,850	1,831	19	1%	0.44	Yes	N/A	Yes	N/A
	Entrance Ramp from Frontage Road	Ramp	25	26	-1	-3%	0.14	Yes	Yes	N/A	N/A
EB SR 303 Ramps	Exit Ramp to Lake Pleasant Pkwy	Ramp	120	117	3	3%	0.31	Yes	Yes	N/A	N/A
	Entrance Ramp from Lake Pleasant Pkwy	Ramp	340	331	9	3%	0.49	Yes	Yes	N/A	N/A
WB SR 303 Ramps	Exit Ramp to Lake Pleasant Pkwy	Ramp	90	90	0	0%	0.01	Yes	Yes	N/A	N/A
	Entrance Ramp from Lake Pleasant Pkwy	Ramp	80	85	-5	-6%	0.56	Yes	Yes	N/A	N/A

Table 9 PM Volume Calibration Results

SR303 and I-17 Link Evaluation (4:00 PM - 5:00 PM)

Existing Mainlane and Ramps GEH Calibration

Direction	Location	Type	Link Volume (Input) (vph)	Volume (Output) (All Veh) by (vph)	Absolute	% Difference	GEH	GEH < 5	Flow < 700 (+/- 100vph)	<700<Flow<2700 (+/- 15%)	Flow >2700 (+/- 400 vph)
NB I-17 - Mainline	South of Frontage Road to Exit Ramp to Frontage Road	Freeway Segments	5550	5549	1	0%	0.01	Yes	N/A	N/A	Yes
	South of Frontage Road to Exit Ramp to Frontage Road	Diverge	5550	5520	30	1%	0.41	Yes	N/A	N/A	Yes
	Exit Ramp to Frontage Road to Exit Ramp to SR 303	Freeway Segments	5520	5431	89	2%	1.21	Yes	N/A	N/A	Yes
	Exit Ramp to Frontage Road to Exit Ramp to SR 303	Diverge	5520	5433	87	2%	1.17	Yes	N/A	N/A	Yes
	Exit Ramp to SR 303 to Exit Ramp to Frontage Road	Freeway Segments	3970	3831	139	4%	2.23	Yes	N/A	N/A	Yes
	Exit Ramp to SR 303 to Exit Ramp to Frontage Road	Diverge	3970	3971	-1	0%	0.02	Yes	N/A	N/A	Yes
	Exit Ramp to Frontage Road to Entrance Ramp from Frontage Road	Freeway Segments	3070	3074	-4	0%	0.07	Yes	N/A	N/A	Yes
	Entrance Ramp from Frontage Road to Entrance Ramp from Dove Valley Road	Freeway Segments	3700	3689	11	0%	0.18	Yes	N/A	N/A	Yes
	North of Entrance Ramp from Dove Valley Road	Freeway Segments	4100	4104	-4	0%	0.06	Yes	N/A	N/A	Yes
SB I-17 - Mainline	North of Entrance Ramp from WB Entrance Ramp from Carefree Hwy	Freeway Segments	3467	3467	1	0%	0.01	Yes	N/A	N/A	Yes
	WB Entrance Ramp from Carefree Hwy to SB Entrance Ramp from Carefree Hwy	Freeway Segments	3983	3982	2	0%	0.03	Yes	N/A	N/A	Yes
	SB Entrance Ramp from Carefree Hwy to Exit Ramp to Dove Valley Road	Weaving	4270	4256	14	0%	0.21	Yes	N/A	N/A	Yes
	Exit Ramp to Dove Valley Road to Entrance Ramp from Dove Valley Road	Freeway Segments	3950	3944	6	0%	0.10	Yes	N/A	N/A	Yes
	Entrance Ramp from Dove Valley Road to Exit Ramp to SR 303	Weaving	4350	4315	35	1%	0.53	Yes	N/A	N/A	Yes
	Exit Ramp to SR 303 to Entrance Ramp from SR 303	Freeway Segments	3730	3737	-7	0%	0.11	Yes	N/A	N/A	Yes
	Entrance Ramp from SR 303 to Entrance Ramp from Frontage Road	Merge	4260	4236	24	1%	0.38	Yes	N/A	N/A	Yes
	Entrance Ramp from SR 303 to Entrance Ramp from Frontage Road	Freeway Segments	4260	4269	-9	0%	0.14	Yes	N/A	N/A	Yes
	Entrance Ramp from Frontage Road to South of the Frontage Road	Merge	4260	4296	-36	-1%	0.55	Yes	N/A	N/A	Yes
	Entrance Ramp from Frontage Road to South of the Frontage Road	Freeway Segments	4260	4291	-31	-1%	0.48	Yes	N/A	N/A	Yes
EB SR 303/Sonoran Desert Drive	West of EB Exit Ramp to Lake Pleasant Parkway	Freeway Segments	680	674	6	1%	0.22	Yes	Yes	N/A	N/A
	West of EB Exit Ramp to Lake Pleasant Parkway	Diverge	680	678	2	0%	0.07	Yes	Yes	N/A	N/A
	EB Exit Ramp to Lake Pleasant Parkway to EB Entrance Ramp from Lake Pleasant Parkway	Freeway Segments	600	601	-1	0%	0.03	Yes	Yes	N/A	N/A
	EB Entrance Ramp from Lake Pleasant Parkway to SB Terminal at I-17	Merge	750	738	12	2%	0.43	Yes	N/A	Yes	N/A
	EB Entrance Ramp from Lake Pleasant Parkway to SB Terminal at I-17	Freeway Segments	750	753	-3	0%	0.10	Yes	N/A	Yes	N/A
WB SR 303/Sonoran Desert Drive	SB Terminal at I-17 to WB Exit Ramp to Lake Pleasant Parkway	Freeway Segments	2250	2231	19	1%	0.41	Yes	N/A	Yes	N/A
	WB Exit Ramp to Lake Pleasant Parkway to WB Entrance Ramp from Lake Pleasant Parkway	Freeway Segments	1920	1898	22	1%	0.50	Yes	N/A	Yes	N/A
	West of WB Entrance Ramp from Lake Pleasant Parkway	Merge	2040	2009	31	2%	0.69	Yes	N/A	Yes	N/A
	West of WB Entrance Ramp from Lake Pleasant Parkway	Ramp	2040	2020	20	1%	0.45	Yes	N/A	Yes	N/A
NB I-17 Ramps	Exit Ramp to Frontage Road	Ramp	30	29	1	3%	0.17	Yes	Yes	N/A	N/A
	Exit Ramp to SR 303/Sonoran Desert Drive	Ramp	1550	1455	95	6%	2.44	Yes	N/A	Yes	N/A
	Exit Ramp to Frontage Road	Ramp	900	906	-6	-1%	0.19	Yes	N/A	Yes	N/A
	Entrance Ramp from Frontage Road	Ramp	630	602	28	4%	1.11	Yes	Yes	N/A	N/A
	Entrance Ramp from Dove Valley Road	Ramp	400	400	0	0%	0.01	Yes	Yes	N/A	N/A
SB I-17 Ramps	Entrance Ramp from WB Carefree Highway	Ramp	516	514	1	0%	0.06	Yes	Yes	N/A	N/A
	Entrance Ramp from Carefree Highway	Ramp	287	284	3	1%	0.16	Yes	Yes	N/A	N/A
	Exit Ramp to Dove Valley Road	Ramp	320	317	3	1%	0.20	Yes	Yes	N/A	N/A
	Entrance Ramp from Dove Valley Road	Ramp	400	400	0	0%	0.01	Yes	Yes	N/A	N/A
	Exit Ramp to SR 303/Sonoran Desert Drive	Ramp	620	604	16	3%	0.63	Yes	Yes	N/A	N/A
	Entrance Ramp from SR 303/Sonoran Desert Drive	Ramp	530	521	9	2%	0.41	Yes	Yes	N/A	N/A
	Entrance Ramp from Frontage Road	Ramp	25	26	-1	-3%	0.14	Yes	Yes	N/A	N/A
EB SR 303 Ramps	Exit Ramp to Lake Pleasant Pkwy	Ramp	80	79	1	2%	0.14	Yes	Yes	N/A	N/A
	Entrance Ramp from Lake Pleasant Pkwy	Ramp	150	150	0	0%	0.02	Yes	Yes	N/A	N/A
WB SR 303 Ramps	Exit Ramp to Lake Pleasant Pkwy	Ramp	330	328	2	1%	0.10	Yes	Yes	N/A	N/A
	Entrance Ramp from Lake Pleasant Pkwy	Ramp	120	119	1	1%	0.12	Yes	Yes	N/A	N/A

3. Travel Time Calibration

The average travel times calculated from field data were utilized in the calibration process to compare actual travel times to those observed in the model.

During a given simulation run, VISSIM can evaluate average travel times if travel time geofences have been defined in the network and the option "Travel Times" has been selected as part of the evaluation files. For this model, starts and destinations (i.e., the travel time sections) were coded consistently with the beginning and end of the field travel time collected as part of the data collection effort. VISSIM determines the average travel time (including waiting or dwell times) that it takes a vehicle to traverse the origin and destination.

As with the other performance measures, the travel time results from VISSIM were successively compared with field collected data during the calibration process. The comparison was conducted using an average of ten (10) multiple runs with different random seeds.

According to FHWA's Traffic Analysis Toolbox Volume III, a model is reasonably calibrated when the modeled travel times are within 15% (or one minute if higher) of the average field collected travel time for 85% of the cases. The travel time results shown in ***Table 10*** indicate that the peak model generated travel times within 15% (or one minute, if higher) of the average field collected travel times for the four travel time segments where data was collected. Hence, the model is considered reasonably calibrated from a travel time standpoint.

Table 10 Existing Travel Times Comparison

Existing Travel Time Comparison										
Peak Hour	Route	Origin	Destination	Field (sec)	VISSIM (sec)	Difference (sec)	Percent Difference	Within 15%	Within 1 min	Satisfied/ Not Satisfied
8:00 AM - 9:00 AM	EB SR 303	Lake Pleasant Parkway	NB I-17 Terminal Interchange	408	441	33	8%	Yes	Yes	Satisfied
	WB SR 303	NB I-17 Terminal Interchange	Lake Pleasant Parkway	420	445	25	6%	Yes	Yes	Satisfied
	NB I-17	South of Frontage Road Exit Ramp	North of Entrance Ramp from Dove Valley Road	164	173	9	6%	Yes	Yes	Satisfied
	SB I-17	North of Exit Ramp to Dove Vally Road	South of Entrance Ramp from Frontage Road	183	175	8	4%	Yes	Yes	Satisfied
4:00 PM - 5:00 PM	EB SR 303	Lake Pleasant Parkway	NB I-17 Terminal Interchange	432	467	35	8%	Yes	Yes	Satisfied
	WB SR 303	NB I-17 Terminal Interchange	Lake Pleasant Parkway	402	453	51	13%	Yes	Yes	Satisfied
	NB I-17	South of Frontage Road Exit Ramp	North of Entrance Ramp from Dove Valley Road	171	178	7	4%	Yes	Yes	Satisfied
	SB I-17	North of Exit Ramp to Dove Vally Road	South of Entrance Ramp from Frontage Road	165	176	11	7%	Yes	Yes	Satisfied

4. Conclusions

The SR 303 L study corridor presented challenges during the calibration of the microscopic simulation. During the development of the Existing (Base) Model, the following calibration techniques were used:

- Lane change distances were increased appropriately at locations where vehicles were making unrealistically late lane changes to reach their destination (e.g. all off-ramps and select on-ramps).
- The safety distance reduction factor driver behavior parameter at multiple sections were modified to match field observations and to avoid unrealistic behaviors.
- On the eastbound section at the southbound SR 303L at I-17 terminal interchange adjustments to the traffic signals based on engineering judgement were required to match the field travel times. Initially, the models reported longer time for this section compared to the file travel times due to delays at this signal.
- The signals configuration and timings for the models were initially coded based on the traffic plans. Based on aerial imagery and field observations the signals were further adjusted.

Nevertheless, the previously listed challenges were overcome to produce a well-calibrated model. The calibrated AM and PM peak period models satisfy the volume and travel time calibration thresholds; and appear to reasonably reproduce real-world traffic conditions. It is recommended to use these calibrated models to develop the future models for this project.

APPENDIX C: VISSIM Operational Analysis Results

2020 Existing AM Traffic Conditions for Mainline and Ramps

SR303 and I-17 Link Evaluation (8:00 AM - 9:00 AM)

Existing Mainlane and Ramps Results

Location	Type	Volume (Output) (All Veh) by (vph)	Density	Traffic Conditions	Speed
South of Frontage Road to Exit Ramp to Frontage Road	Freeway Segments	3259	12	Green	67
South of Frontage Road to Exit Ramp to Frontage Road	Diverge	3243	10	Green	66
Exit Ramp to Frontage Road to Exit Ramp to SR 303	Freeway Segments	3229	12	Green	66
Exit Ramp to Frontage Road to Exit Ramp to SR 303	Diverge	3213	10	Green	66
Exit Ramp to SR 303 to Exit Ramp to Frontage Road	Freeway Segments	2749	10	Green	66
Exit Ramp to SR 303 to Exit Ramp to Frontage Road	Diverge	2805	8	Green	66
Exit Ramp to Frontage Road to Entrance Ramp from Frontage Road	Freeway Segments	2433	9	Green	67
Entrance Ramp from Frontage Road to Entrance Ramp from Dove Valley Road	Freeway Segments	3355	10	Green	66
North of Entrance Ramp from Dove Valley Road	Freeway Segments	3555	9	Green	67
North of Entrance Ramp from WB Entrance Ramp from Carefree Hwy	Freeway Segments	2688	10	Green	67
WB Entrance Ramp from Carefree Hwy to SB Entrance Ramp from Carefree Hwy	Freeway Segments	3086	9	Green	67
SB Entrance Ramp from Carefree Hwy to Exit Ramp to Dove Valley Road	Weaving	3299	8	Green	67
Exit Ramp to Dove Valley Road to Entrance Ramp from Dove Valley Road	Freeway Segments	3060	10	Green	66
Entrance Ramp from Dove Valley Road to Exit Ramp to SR 303	Weaving	3396	11	Green	62
Exit Ramp to SR 303 to Entrance Ramp from SR 303	Freeway Segments	3033	11	Green	66
Entrance Ramp from SR 303 to Entrance Ramp from Frontage Road	Merge	4847	16	Green	62
Entrance Ramp from SR 303 to Entrance Ramp from Frontage Road	Freeway Segments	4881	19	Green	65
Entrance Ramp from Frontage Road to South of the Frontage Road	Merge	4907	15	Green	65
Entrance Ramp from Frontage Road to South of the Frontage Road	Freeway Segments	4910	19	Green	65
West of EB Exit Ramp to Lake Pleasant Parkway	Freeway Segments	2041	15	Green	66
West of EB Exit Ramp to Lake Pleasant Parkway	Diverge	2042	10	Green	66
EB Exit Ramp to Lake Pleasant Parkway to EB Entrance Ramp from Lake Pleasant Parkway	Freeway Segments	1929	15	Green	66
EB Entrance Ramp from Lake Pleasant Parkway to SB Terminal at I-17	Merge	2224	12	Green	63
EB Entrance Ramp from Lake Pleasant Parkway to SB Terminal at I-17	Freeway Segments	2267	18	Green	63
SB Terminal at I-17 to WB Exit Ramp to Lake Pleasant Parkway	Freeway Segments	672	5	Green	65
WB Exit Ramp to Lake Pleasant Parkway to WB Entrance Ramp from Lake Pleasant Parkway	Freeway Segments	579	4	Green	67
West of WB Entrance Ramp from Lake Pleasant Parkway	Merge	660	3	Green	66
West of WB Entrance Ramp from Lake Pleasant Parkway	Ramp	665	5	Green	67
Exit Ramp to Frontage Road	Ramp	10	0	Green	50
Exit Ramp to SR 303/Sonoran Desert Drive	Ramp	416	8	Green	54
Exit Ramp to Frontage Road	Ramp	382	7	Green	53
Entrance Ramp from Frontage Road	Ramp	912	14	Green	47
Entrance Ramp from Dove Valley Road	Ramp	194	3	Green	55
Entrance Ramp from WB Carefree Highway	Ramp	399	6	Green	67
Entrance Ramp from Carefree Highway	Ramp	220	2	Green	67
Exit Ramp to Dove Valley Road	Ramp	244	5	Green	51
Entrance Ramp from Dove Valley Road	Ramp	357	5	Green	53
Exit Ramp to SR 303/Sonoran Desert Drive	Ramp	383	7	Green	52
Entrance Ramp from SR 303/Sonoran Desert Drive	Ramp	1831	36	Orange	37
Entrance Ramp from Frontage Road	Ramp	26	0	Green	45
Exit Ramp to Lake Pleasant Pkwy	Ramp	117	2	Green	39
Entrance Ramp from Lake Pleasant Pkwy	Ramp	331	4	Green	54
Exit Ramp to Lake Pleasant Pkwy	Ramp	90	1	Green	46
Entrance Ramp from Lake Pleasant Pkwy	Ramp	85	1	Green	56

2020 Existing PM Traffic Conditions for Mainline and Ramps

SR303 and I-17 Link Evaluation (4:00 PM - 5:00 PM)

Existing Mainlane and Ramps Results

Direction	Location	Type	Volume (Output) (All Veh) by (vph)	Density	Traffic Conditions	Speed
NB I-17 - Mainline	South of Frontage Road to Exit Ramp to Frontage Road	Freeway Segments	5549	21	Green	65
	South of Frontage Road to Exit Ramp to Frontage Road	Diverge	5520	17	Green	65
	Exit Ramp to Frontage Road to Exit Ramp to SR 303	Freeway Segments	5431	22	Green	62
	Exit Ramp to Frontage Road to Exit Ramp to SR 303	Diverge	5433	17	Green	62
	Exit Ramp to SR 303 to Exit Ramp to Frontage Road	Freeway Segments	3831	15	Green	63
	Exit Ramp to SR 303 to Exit Ramp to Frontage Road	Diverge	3971	12	Green	65
	Exit Ramp to Frontage Road to Entrance Ramp from Frontage Road	Freeway Segments	3074	12	Green	66
	Entrance Ramp from Frontage Road to Entrance Ramp from Dove Valley Road	Freeway Segments	3689	11	Green	66
	North of Entrance Ramp from Dove Valley Road	Freeway Segments	4104	10	Green	66
SB I-17 - Mainline	North of Entrance Ramp from WB Entrance Ramp from Carefree Hwy	Freeway Segments	3467	13	Green	67
	WB Entrance Ramp from Carefree Hwy to SB Entrance Ramp from Carefree Hwy	Freeway Segments	3982	12	Green	67
	SB Entrance Ramp from Carefree Hwy to Exit Ramp to Dove Valley Road	Weaving	4256	11	Green	66
	Exit Ramp to Dove Valley Road to Entrance Ramp from Dove Valley Road	Freeway Segments	3944	13	Green	66
	Entrance Ramp from Dove Valley Road to Exit Ramp to SR 303	Weaving	4315	16	Green	55
	Exit Ramp to SR 303 to Entrance Ramp from SR 303	Freeway Segments	3737	14	Green	65
	Entrance Ramp from SR 303 to Entrance Ramp from Frontage Road	Merge	4236	13	Green	65
	Entrance Ramp from SR 303 to Entrance Ramp from Frontage Road	Freeway Segments	4269	16	Green	66
	Entrance Ramp from Frontage Road to South of the Frontage Road	Merge	4296	13	Green	65
	Entrance Ramp from Frontage Road to South of the Frontage Road	Freeway Segments	4291	16	Green	66
EB SR 303/Sonoran Desert Drive	West of EB Exit Ramp to Lake Pleasant Parkway	Freeway Segments	674	5	Green	67
	West of EB Exit Ramp to Lake Pleasant Parkway	Diverge	678	3	Green	67
	EB Exit Ramp to Lake Pleasant Parkway to EB Entrance Ramp from Lake Pleasant Parkway	Freeway Segments	601	4	Green	67
	EB Entrance Ramp from Lake Pleasant Parkway to SB Terminal at I-17	Merge	738	4	Green	65
	EB Entrance Ramp from Lake Pleasant Parkway to SB Terminal at I-17	Freeway Segments	753	6	Green	65
WB SR 303/Sonoran Desert Drive	SB Terminal at I-17 to WB Exit Ramp to Lake Pleasant Parkway	Freeway Segments	2231	18	Green	63
	WB Exit Ramp to Lake Pleasant Parkway to WB Entrance Ramp from Lake Pleasant Parkway	Freeway Segments	1898	15	Green	65
	West of WB Entrance Ramp from Lake Pleasant Parkway	Merge	2009	10	Green	65
	West of WB Entrance Ramp from Lake Pleasant Parkway	Ramp	2020	15	Green	65
NB I-17 Ramps	Exit Ramp to Frontage Road	Ramp	29	1	Green	48
	Exit Ramp to SR 303/Sonoran Desert Drive	Ramp	1455	29	Yellow	50
	Exit Ramp to Frontage Road	Ramp	906	18	Green	51
	Entrance Ramp from Frontage Road	Ramp	602	9	Green	52
	Entrance Ramp from Dove Valley Road	Ramp	400	5	Green	55
SB I-17 Ramps	Entrance Ramp from WB Carefree Highway	Ramp	514	8	Green	67
	Entrance Ramp from Carefree Highway	Ramp	284	3	Green	67
	Exit Ramp to Dove Valley Road	Ramp	317	6	Green	51
	Entrance Ramp from Dove Valley Road	Ramp	400	6	Green	50
	Exit Ramp to SR 303/Sonoran Desert Drive	Ramp	604	12	Green	50
	Entrance Ramp from SR 303/Sonoran Desert Drive	Ramp	521	7	Green	51
	Entrance Ramp from Frontage Road	Ramp	26	0	Green	45
EB SR 303 Ramps	Exit Ramp to Lake Pleasant Pkwy	Ramp	79	1	Green	42
	Entrance Ramp from Lake Pleasant Pkwy	Ramp	150	2	Green	54
WB SR 303 Ramps	Exit Ramp to Lake Pleasant Pkwy	Ramp	328	5	Green	43
	Entrance Ramp from Lake Pleasant Pkwy	Ramp	119	2	Green	55

2020 Existing AM Peak Hours Delay/LOS for Intersections

SR303 and I-17 Node Evaluation (8:00 AM - 9:00 AM)

2020 Existing

Delay / LOS

Intersection	Approach Direction	Movement	From Link	To Link	Delay (All Veh) by movement (sec)	Volume (Output) (All Veh) by (vph)	Approach Volume (Output) (vph)	Approach Volume (Input) (vph)	Output / Input	Intersection (vph)	Mvmt. % Approach Volume	Approach % Total Volume	Mvmt. Delay Weighted by Volume	Delay (All Veh) by movement	Delay by Approach	Approach LOS	Intersection Delay	Intersection LOS
I-17 SBFR and SR 303/Sonoran Desert Dr	SB	R	43	39	9.1	323					84%		7.64	9.1				
		T	43	29	0.0	0	384	390	98%		0%	11%	0.00	0.0	14.56	B		
		L	43	37	43.6	61					16%		6.93	43.6				
	WB	R	-	-	-	-								-				
		T	41	39	4.7	351	1017	1000	102%		35%	28%	1.61	4.7	7.54	A		
		L	41	29	9.1	666					65%		5.93	9.1				
	NB	R	-	-	-	-								-				
		T	-	-	-	-	0	-	-			0%		-	-	-	22.80	C
		L	-	-	-	-				3656				-				
	EB	R	117	29	29.0	1195					53%		15.36	29.0				
		T	117	37	33.5	1060	2255	2270	99%		47%	62%	15.73	33.5	31.09	C		
		L	-	-	-	-								-				
I-17 NBFR and SR 303/Sonoran Desert Dr	SB	R	-	-	-	-								-				
		T	-	-	-	-	0	-	-			0%		-	-	-		
		L	-	-	-	-								-				
	WB	R	52	50	11.6	172					17%		1.93	11.6				
		T	52	41	47.8	859	1031	1020	101%		83%	40%	39.79	47.8	41.72	D		
		L	-	-	-	-								-				
	NB	R	49	38	8.9	283					64%		5.73	8.9				
		T	49	50	0.0	0	441	440	100%		0%	17%	0.00	0.0	23.94	C	21.57	C
		L	49	41	50.8	158					36%		18.21	50.8				
	EB	R	-	-	-	-								-				
		T	37	38	0.8	369	1120	1130	99%	2592	33%	43%	0.26	0.8	2.08	A		
		L	37	50	2.7	751					67%		1.82	2.7				
SR 303 WBFR and Lake Pleasant Pkwy	SB	R	21	27	4.4	20					9%		0.40	4.4				
		T	22	20	20.8	200	220	220	100%		91%	29%	18.92	20.8	19.32	B		
		L	-	-	-	-								-				
	WB	R	26	17	4.5	50					54%		2.47	4.5				
		T	26	27	0.0	0	92	90	102%		0%	12%	0.00	0.0	11.83	B		
		L	26	20	20.5	42					46%		9.36	20.5				
	NB	R	-	-	-	-								-				
		T	13	17	7.7	376	443	440	101%		85%	59%	6.56	7.7	9.47	A	12.62	B
		L	13	27	19.2	67					15%		2.91	19.2				
	EB	R	-	-	-	-								-				
		T	-	-	-	-	0	-	-			0%		-	-	-		
		L	-	-	-	-				755				-				
SR 303 EBFR and Lake Pleasant Pkwy	SB	R	-	-	-	-								-				
		T	20	12	6.9	202	243	240	101%		83%	24%	5.76	6.9	8.82	A		
		L	20	14	18.2	41					17%		3.07	18.2				
	WB	R	-	-	-	-								-				
		T	-	-	-	-	0	-	-			0%		-	-	-		
		L	-	-	-	-								-				
	NB	R	16	14	6.4	297					46%		2.92	6.4				
		T	15	13	22.5	352	649	650	100%		54%	64%	12.21	22.5	15.13	B	13.74	B
		L	-	-	-	-								-				
	EB	R	11	12	4.5	29					24%		1.09	4.5				
		T	11	14	0.0	0	119	120	99%	1011	0%	12%	0.00	0.0	16.22	B		
		L	11	13	20.0	90					76%		15.13	20.0				
Sonoran Desert Dr and North Valley Pkwy	SB	R	79	71	20.4	582					57%		11.72	20.4				
		T	78	77	39.5	294	1015	1010	100%		29%	40%	11.45	39.5	30.71	C		
		L	111	72	55.1	139					14%		7.55	55.1				
	WB	R	83	76	6.8	124					32%		2.18	6.8				
		T	82	71	38.6	184	386	390	99%		48%	15%	18.39	38.6	31.69	C		
		L	82	77	55.0	78					20%		11.12	55.0				
	NB	R	81	72	5.3	59					11%		0.59	5.3				
		T	80	76	41.1	198	526	520	101%	2569	38%	20%	15.46	41.1	46.09	D	34.91	C
		L	110	71	58.7	269					51%		30.03	58.7				
	EB	R	73	77	8.0	238					37%		2.97	8.0				
		T	70	72	39.6	178	642	640	100%		28%	25%	10.98	39.6	34.33	C		
		L	95	76	57.9	226					35%		20.38	57.9				
I-17 SBFR and Dove Valley Rd	SB	R	-	-	-	-								-				
		T	106	107	0.0	0	245	250	98%		0%	40%	0.00	0.0	26.37	C		
		L	106	101	26.4	245					100%		26.37	26.4				
	WB	R	-	-	-	-								-				
		T	-	-	-	-	360	360	100%			60%		-	1.12	A		
		L	104	107	1.1	360					100%		1.12	1.1				
	NB	R	-	-	-	-								-				
		T	-	-	-	-	0	-	-			0%		-	-	-		
		L	-	-	-	-								-				
	EB	R	-	-	-	-								-				
		T	-	-	-	-	0	-	-			0%		-	-	-		
		L	-	-	-	-				605				-				
I-17 NBFR and Dove Valley Rd	SB	R	-	-	-	-								-				
		T	-	-	-	-	0	-	-			0%		-	-	-		
		L	-	-	-	-								-				
	WB	R	96	97	5.8	222					39%		2.24	5.8				
		T	94	104	23.4	353	575	580	99%		61%	48%	14.34	23.4	16.58	B		
		L	-	-	-	-								-				
	NB	R	88	103	9.4	230					60%		5.60	9.4				
		T	88	97	22.5	155	385	390	99%	1199	40%	32%	9.04	22.5	14.64	B	18.87	B
		L	88	104	0.0	0					0%		0.00	0.0				
	EB	R	-	-	-	-								-				
		T	101	103	31.2	239	239	250	96%		100%	20%	31.18	31.2	31.18	C		
		L	101	97	0.0	0					0%		0.00	0.0				

2020 Existing PM Peak Hours Delay/LOS for Intersections

SR303 and I-17 Node Evaluation (4:00 PM - 5:00 PM)

2020 Existing

Delay / LOS

Intersection	Approach Direction	Movement	From Link	To Link	Delay (All Veh) by movement (sec)	Volume (Output) (All Veh) by (vph)	Approach Volume (Output) (vph)	Approach Volume (Input) (vph)	Output / Input	Intersection (vph)	Mvmt. % Approach Volume	Approach % Total Volume	Mvmt. Delay Weighted by Volume	Delay (All Veh) by movement	Delay by Approach	Approach LOS	Intersection Delay	Intersection LOS
I-17 SBFR and SR 303/Sonoran Desert Dr	SB	R	43	39	25.8	507					83%		21.50	25.8				
		T	43	29	0.0	0	608	620	98%		0%	18%	0.00	0.0	29.96	C		
		L	43	37	50.9	101					17%		8.46	50.9				
	WB	R	-	-	-	-								-				
		T	41	39	0.9	1720	2018	2030	99%		85%	60%	0.75	0.9	0.97	A		
		L	41	29	1.5	298					15%		0.22	1.5				
	NB	R	-	-	-	-								-				
		T	-	-	-	-	0	-	-			0%		-	-	-		
		L	-	-	-	-				3382				-			16.77	B
	EB	R	117	29	9.3	232					31%		2.86	9.3				
		T	117	37	65.6	524	756	750	101%		69%	22%	45.47	65.6	48.33	D		
		L	-	-	-	-								-				
I-17 NBFR and SR 303/Sonoran Desert Dr	SB	R	-	-	-	-								-				
		T	-	-	-	-	0	-	-			0%		-	-	-		
		L	-	-	-	-								-				
	WB	R	52	50	11.7	200					14%		1.66	11.7				
		T	52	41	42.8	1207	1407	1410	100%		86%	40%	36.70	42.8	38.36	D		
		L	-	-	-	-								-				
	NB	R	49	38	26.0	718					47%		12.22	26.0				
		T	49	50	0.0	0	1530	1550	99%		0%	43%	0.00	0.0	42.91	D		
		L	49	41	57.8	812					53%		30.69	57.8				
	EB	R	-	-	-	-								-				
		T	37	38	1.0	203	624	620	101%	3561	33%	18%	0.34	1.0	1.61	A	33.87	C
		L	37	50	1.9	421					67%		1.27	1.9				
SR 303 WBFR and Lake Pleasant Pkwy	SB	R	21	27	4.3	37					8%		0.33	4.3				
		T	22	20	21.2	444	481	480	100%		92%	43%	19.56	21.2	19.89	B		
		L	-	-	-	-								-				
	WB	R	26	17	5.7	123					37%		2.09	5.7				
		T	26	27	0.0	0	333	330	101%		0%	30%	0.00	0.0	16.84	B		
		L	26	20	23.4	210					63%		14.75	23.4				
	NB	R	-	-	-	-								-				
		T	13	17	6.1	226	310	310	100%	1124	73%	28%	4.47	6.1	10.19	B	16.31	B
		L	13	27	21.1	84					27%		5.72	21.1				
	EB	R	-	-	-	-								-				
		T	-	-	-	-	0	-	-			0%		-	-	-		
		L	-	-	-	-								-				
SR 303 EBFR and Lake Pleasant Pkwy	SB	R	-	-	-	-								-				
		T	20	12	10.0	603	655	650	101%		92%	59%	9.18	10.0	10.73	B		
		L	20	14	19.6	52					8%		1.56	19.6				
	WB	R	-	-	-	-								-				
		T	-	-	-	-	0	-	-			0%		-	-	-		
		L	-	-	-	-								-				
	NB	R	16	14	4.1	100					26%		1.08	4.1				
		T	15	13	20.0	279	379	380	100%		74%	34%	14.71	20.0	15.79	B	12.52	B
		L	-	-	-	-								-				
	EB	R	11	12	5.3	50					63%		3.28	5.3				
		T	11	14	0.0	0	80	80	100%	1114	0%	7%	0.00	0.0	11.72	B		
		L	11	13	22.5	30					38%		8.44	22.5				
Sonoran Desert Dr and North Valley Pkwy	SB	R	79	71	27.6	629					67%		18.41	27.6				
		T	78	77	39.0	199	944	940	100%		21%	29%	8.22	39.0	33.35	C		
		L	111	72	54.7	116					12%		6.72	54.7				
	WB	R	83	76	9.9	183					31%		3.13	9.9				
		T	82	71	40.5	300	581	590	98%		52%	18%	20.92	40.5	33.44	C		
		L	82	77	55.7	98					17%		9.39	55.7				
	NB	R	81	72	14.6	80					9%		1.34	14.6				
		T	80	76	48.8	309	870	870	100%		36%	26%	17.32	48.8	87.20	F		
		L	110	71	124.0	481					55%		68.54	124.0				
	EB	R	73	77	7.7	273					30%		2.34	7.7				
		T	70	72	40.0	170	902	920	98%	3297	19%	27%	7.54	40.0	58.54	E	54.46	D
		L	95	76	95.6	459					51%		48.66	95.6				
I-17 SBFR and Dove Valley Rd	SB	R	-	-	-	-								-				
		T	106	107	0.0	0	319	320	100%		0%	44%	0.00	0.0	20.39	C		
		L	106	101	20.4	319					100%		20.39	20.4				
	WB	R	-	-	-	-								-				
		T	-	-	-	-	402	400	101%			56%		-	1.39	A		
		L	104	107	1.4	402					100%		1.39	1.4				
	NB	R	-	-	-	-								-				
		T	-	-	-	-	0	-	-			0%		-	-	-		
		L	-	-	-	-								-				
	EB	R	-	-	-	-								-				
		T	-	-	-	-	0	-	-			0%		-	-	-		
		L	-	-	-	-				721				-			9.80	A
I-17 NBFR and Dove Valley Rd	SB	R	-	-	-	-								-				
		T	-	-	-	-	0	-	-			0%		-	-	-		
		L	-	-	-	-								-				
	WB	R	96	97	11.7	447					53%		6.21	11.7				
		T	94	104	33.2	394	841	850	99%		47%	41%	15.56	33.2	21.77	C		
		L	-	-	-	-								-				
	NB	R	88	103	18.8	654					72%		13.47	18.8				
		T	88	97	18.7	260	914	900	102%		28%	44%	5.31	18.7	18.78	B		
		L	88	104	0.0	0					0%		0.00	0.0				
	EB	R	-	-	-	-								-				
		T	101	103	39.3	312	312	320	98%		100%	15%	39.32	39.3	39.32	D		
		L	101	97	0.0	0					0%		0.00	0.0				

2040 No-Build AM Traffic Conditions for Mainline and Ramps

SR303 and I-17 Link Evaluation (8:00 AM - 9:00 AM)

PRELIMINAR - 2040 No Build Scenario Mainlane and Ramps Results

Direction	Location		Type	Volume (Input) (All Veh) by (vph)	Volume (Output) (All Veh) by (vph)	Absolute	% Difference	Density	Traffic Conditions	Speed
	From	To								
NB I-17 - Mainline	Beginning of network	Exit Ramp to Dixileta Dr/Frontage Rd	Freeway Segments	8500	3554	4946	58%	99	Red	9
	Beginning of network	Exit Ramp to Dixileta Dr/Frontage Rd	Diverge	8500	3378	5122	60%	80	Red	8
	Exit Ramp to Dixileta Dr/Frontage Rd	Exit Ramp to SR 303	Freeway Segments	7960	3079	4881	61%	95	Red	8
	Exit Ramp to Dixileta Dr/Frontage Rd	Exit Ramp to SR 303	Diverge	7960	3065	4895	61%	36	Orange	17
	Exit Ramp to SR 303	Exit Ramp to Frontage Rd	Freeway Segments	5720	2217	3503	61%	9	Green	61
	Exit Ramp to SR 303	Exit Ramp to Frontage Rd	Diverge	5720	2275	3445	60%	7	Green	65
	Exit Ramp to Frontage Rd	Entrance Ramp from Frontage Road	Freeway Segments	4810	1929	2881	60%	7	Green	66
	Entrance Ramp from Frontage Road	Entrance Ramp from Dove Valley Road	Freeway Segments	5710	2363	3347	59%	7	Green	67
	Entrance Ramp from Dove Valley Road	End of network	Freeway Segments	6040	2669	3371	56%	8	Green	67
SB I-17 - Mainline	Beginning of network	WB Entrance Ramp from Carefree Hwy	Freeway Segments	3888	3891	-3	0%	15	Green	67
	WB Entrance Ramp from Carefree Hwy	SB Entrance Ramp from Carefree Hwy	Freeway Segments	4464	4463	1	0%	13	Green	67
	SB Entrance Ramp from Carefree Hwy	Exit Ramp to Dove Valley Road	Weaving	4800	4783	17	0%	12	Green	66
	Exit Ramp to Dove Valley Road	Entrance Ramp from Dove Valley Road	Freeway Segments	4420	4392	28	1%	15	Green	66
	Entrance Ramp from Dove Valley Road	Exit Ramp to SR 303	Weaving	5080	5005	75	1%	26	Green	38
	Exit Ramp to SR 303	Entrance Ramp from SR 303	Freeway Segments	4140	4135	5	0%	16	Green	63
	Entrance Ramp from SR 303	Entrance Ramp from Dixileta Dr	Merge	7630	5980	1650	22%	23	Green	53
	Entrance Ramp from SR 303	Entrance Ramp from Dixileta Dr	Freeway Segments	7630	5975	1655	22%	32	Yellow	50
	Entrance Ramp from Dixileta Dr	End of network	Merge	8350	6620	1730	21%	39	Orange	38
	Entrance Ramp from Dixileta Dr	End of network	Freeway Segments	8350	6631	1719	21%	27	Yellow	61
EB SR 303/Sonoran Desert Drive	Beginning of network	Exit Ramp to Lake Pleasant Parkway	Freeway Segments	5470	3485	1985	36%	82	Red	21
	Beginning of network	Exit Ramp to Lake Pleasant Parkway	Diverge	5470	3440	2030	37%	82	Red	14
	Exit Ramp to Lake Pleasant Parkway	Entrance Ramp from Lake Pleasant Parkway	Freeway Segments	4350	2621	1729	40%	86	Red	15
	Entrance Ramp from Lake Pleasant Parkway	Exit Ramp to 51st St	Merge	5000	3011	1989	40%	83	Red	12
	Entrance Ramp from Lake Pleasant Parkway	Exit Ramp to 51st St	Freeway Segments	5000	2715	2285	46%	105	Red	13
	Entrance Ramp from Lake Pleasant Parkway	Exit Ramp to 51st St	Diverge	5000	2570	2430	49%	72	Red	12
	Exit Ramp to 51st St	Entrance Ramp from 51st St	Freeway Segments	3960	2038	1922	49%	18	Green	57
	Entrance Ramp from 51st St	Exit Ramp to 43rd St	Weaving	4570	2558	2012	44%	38	Orange	24
	Exit Ramp to 43rd St	Ramp to SR 303/I-17	Freeway Segments	3520	1814	1706	48%	78	Red	12
WB SR 303/Sonoran Desert Drive	Ramp from SR 303/I-17	Entrance Ramp from 43rd St	Freeway Segments	2300	1450	850	37%	15	Green	49
	Entrance Ramp from 43rd St	Exit Ramp to 51st St	Weaving	2750	1841	909	33%	10	Green	59
	Exit Ramp to 51st St	Entrance Ramp from 51st St	Freeway Segments	1640	1121	519	32%	9	Green	65
	Entrance Ramp from 51st St	Exit Ramp to Lake Pleasant Pkwy	Merge	1940	1381	559	29%	7	Green	65
	Entrance Ramp from 51st St	Exit Ramp to Lake Pleasant Pkwy	Freeway Segments	1940	1384	556	29%	10	Green	66
	Exit Ramp to Lake Pleasant Pkwy	Entrance Ramp from Lake Pleasant Pkwy	Freeway Segments	1590	1132	458	29%	9	Green	66
	Entrance Ramp from Lake Pleasant Pkwy	End of Network	Merge	2640	1764	876	33%	9	Green	65
	Entrance Ramp from Lake Pleasant Pkwy	End of Network	Freeway Segments	2640	1777	863	33%	13	Green	66
NB I-17 Ramps	Exit Ramp to Frontage Road		Ramp	540	220	320	59%	5	Green	45
	Exit Ramp to SR 303/Sonoran Desert Drive		Ramp	2240	791	1449	65%	139	Red	6
	Exit Ramp to Frontage Road		Ramp	910	346	564	62%	7	Green	52
	Entrance Ramp from Frontage Road		Ramp	900	422	478	53%	6	Green	53
	Entrance Ramp from Dove Valley Road		Ramp	330	290	40	12%	4	Green	54
SB I-17 Ramps	Entrance Ramp from WB Carefree Highway		Ramp	576	574	2	0%	9	Green	67
	Entrance Ramp from Carefree Highway		Ramp	336	332	4	1%	4	Green	67
	Exit Ramp to Dove Valley Road		Ramp	380	384	-4	-1%	8	Green	50
	Entrance Ramp from Dove Valley Road		Ramp	660	636	24	4%	8	Green	56
	Exit Ramp to SR 303/Sonoran Desert Drive		Ramp	940	897	43	5%	40	Orange	28
	Entrance Ramp from SR 303/Sonoran Desert Drive		Ramp	3490	1868	1622	46%	41	Orange	34
	Entrance Ramp from Dixileta Drive		Ramp	720	700	20	3%	15	Green	40
EB SR 303 Ramps	Exit Ramp to Lake Pleasant Pkwy		Ramp	1120	696	424	38%	16	Green	43
	Entrance Ramp from Lake Pleasant Pkwy		Ramp	650	517	133	20%	16	Green	34
	Exit Ramp to 51st St		Ramp	1040	473	567	55%	4	Green	61
	Entrance Ramp from 51st St		Ramp	610	373	237	39%	11	Green	31
	Exit Ramp to 43rd St		Ramp	1050	572	478	45%	12	Green	48
WB SR 303 Ramps	Entrance Ramp from 43rd St		Ramp	450	359	91	20%	5	Green	52
	Exit Ramp to 51st St		Ramp	1110	646	464	42%	15	Green	44
	Entrance Ramp from 51st St		Ramp	300	204	96	32%	4	Green	44
	Exit Ramp to Lake Pleasant Pkwy		Ramp	350	240	110	32%	4	Green	54
	Entrance Ramp from Lake Pleasant Pkwy		Ramp	1050	631	419	40%	8	Green	54

2040 No-Build PM Traffic Conditions for Mainline and Ramps

SR303 and I-17 Link Evaluation (4:00 PM - 5:00 PM)

PRELIMINAR - 2040 No Build Scenario Mainlane and Ramps Results

Direction	Location		Type	Volume (Input) (All Veh) by (vph)	Volume (Output) (All Veh) by (vph)	Absolute	% Difference	Density	Traffic Conditions	Speed
	From	To								
NB I-17 - Mainline	Beginning of network	Exit Ramp to Dixileta Dr/Frontage Rd	Freeway Segments	7900	2673	5227	66%	112	Red	6
	Beginning of network	Exit Ramp to Dixileta Dr/Frontage Rd	Diverge	7900	2610	5290	67%	90	Red	6
	Exit Ramp to Dixileta Dr/Frontage Rd	Exit Ramp to SR 303	Freeway Segments	7060	2295	4765	67%	106	Red	5
	Exit Ramp to Dixileta Dr/Frontage Rd	Exit Ramp to SR 303	Diverge	7060	2318	4742	67%	27	Green	17
	Exit Ramp to SR 303	Exit Ramp to Frontage Rd	Freeway Segments	3680	1203	2477	67%	5	Green	60
	Exit Ramp to SR 303	Exit Ramp to Frontage Rd	Diverge	3680	1264	2416	66%	4	Green	65
	Exit Ramp to Frontage Rd	Entrance Ramp from Frontage Road	Freeway Segments	2570	881	1689	66%	3	Green	67
	Entrance Ramp from Frontage Road	Entrance Ramp from Dove Valley Road	Freeway Segments	3590	1483	2107	59%	4	Green	66
	Entrance Ramp from Dove Valley Road	End of network	Freeway Segments	4070	1918	2152	53%	6	Green	67
SB I-17 - Mainline	Beginning of network	WB Entrance Ramp from Carefree Hwy	Freeway Segments	4698	4252	446	9%	47	Red	24
	WB Entrance Ramp from Carefree Hwy	SB Entrance Ramp from Carefree Hwy	Freeway Segments	5394	4641	753	14%	61	Red	16
	SB Entrance Ramp from Carefree Hwy	Exit Ramp to Dove Valley Road	Weaving	5800	4816	984	17%	72	Red	12
	Exit Ramp to Dove Valley Road	Entrance Ramp from Dove Valley Road	Freeway Segments	5550	4410	1140	21%	76	Red	13
	Entrance Ramp from Dove Valley Road	Exit Ramp to SR 303	Weaving	6470	5013	1457	23%	92	Red	11
	Exit Ramp to SR 303	Entrance Ramp from SR 303	Freeway Segments	5290	4162	1128	21%	21	Green	52
	Entrance Ramp from SR 303	Entrance Ramp from Dixileta Dr	Merge	8040	5883	2157	27%	34	Yellow	39
	Entrance Ramp from SR 303	Entrance Ramp from Dixileta Dr	Freeway Segments	8040	5911	2129	26%	38	Orange	40
	Entrance Ramp from Dixileta Dr	End of network	Merge	8650	6492	2158	25%	39	Orange	34
	Entrance Ramp from Dixileta Dr	End of network	Freeway Segments	8650	6514	2136	25%	27	Yellow	61
EB SR 303/Sonoran Desert Drive	Beginning of network	Exit Ramp to Lake Pleasant Parkway	Freeway Segments	2730	2682	48	2%	21	Green	64
	Beginning of network	Exit Ramp to Lake Pleasant Parkway	Diverge	2730	2724	6	0%	14	Green	65
	Exit Ramp to Lake Pleasant Parkway	Entrance Ramp from Lake Pleasant Parkway	Freeway Segments	2040	2048	-8	0%	16	Green	66
	Entrance Ramp from Lake Pleasant Parkway	Exit Ramp to 51st St	Merge	2840	2776	64	2%	16	Green	57
	Entrance Ramp from Lake Pleasant Parkway	Exit Ramp to 51st St	Freeway Segments	2840	2801	39	1%	26	Yellow	57
	Entrance Ramp from Lake Pleasant Parkway	Exit Ramp to 51st St	Diverge	2840	2598	242	9%	35	Orange	25
	Exit Ramp to 51st St	Entrance Ramp from 51st St	Freeway Segments	2540	2189	351	14%	72	Red	15
	Entrance Ramp from 51st St	Exit Ramp to 43rd St	Weaving	3500	2693	807	23%	99	Red	9
	Exit Ramp to 43rd St	Ramp to SR 303/I-17	Freeway Segments	2700	1836	864	32%	119	Red	8
WB SR 303/Sonoran Desert Drive	Ramp from SR 303/I-17	Entrance Ramp from 43rd St	Freeway Segments	3440	1840	1600	46%	20	Green	48
	Entrance Ramp from 43rd St	Exit Ramp to 51st St	Weaving	4580	2910	1670	36%	32	Yellow	31
	Exit Ramp to 51st St	Entrance Ramp from 51st St	Freeway Segments	3290	2116	1174	36%	17	Green	61
	Entrance Ramp from 51st St	Exit Ramp to Lake Pleasant Pkwy	Merge	4450	3204	1246	28%	17	Green	63
	Entrance Ramp from 51st St	Exit Ramp to Lake Pleasant Pkwy	Freeway Segments	4450	3214	1236	28%	25	Green	64
	Exit Ramp to Lake Pleasant Pkwy	Entrance Ramp from Lake Pleasant Pkwy	Freeway Segments	3970	2876	1094	28%	22	Green	64
	Entrance Ramp from Lake Pleasant Pkwy	End of Network	Merge	4660	3550	1110	24%	19	Green	61
	Entrance Ramp from Lake Pleasant Pkwy	End of Network	Freeway Segments	4660	3579	1081	23%	29	Yellow	62
NB I-17 Ramps	Exit Ramp to Frontage Road		Ramp	840	300	540	64%	7	Green	44
	Exit Ramp to SR 303/Sonoran Desert Drive		Ramp	3380	1042	2338	69%	123	Red	8
	Exit Ramp to Frontage Road		Ramp	1110	380	730	66%	7	Green	52
	Entrance Ramp from Frontage Road		Ramp	1020	598	422	41%	9	Green	51
	Entrance Ramp from Dove Valley Road		Ramp	480	429	51	11%	6	Green	53
SB I-17 Ramps	Entrance Ramp from WB Carefree Highway		Ramp	696	527	169	24%	76	Red	8
	Entrance Ramp from Carefree Highway		Ramp	406	367	39	10%	47	Red	10
	Exit Ramp to Dove Valley Road		Ramp	250	181	69	28%	4	Green	47
	Entrance Ramp from Dove Valley Road		Ramp	920	792	128	14%	96	Red	8
	Exit Ramp to SR 303/Sonoran Desert Drive		Ramp	1180	890	290	25%	116	Red	8
	Entrance Ramp from SR 303/Sonoran Desert Drive		Ramp	2750	1726	1024	37%	45	Red	31
	Entrance Ramp from Dixileta Drive		Ramp	610	586	24	4%	9	Green	49
EB SR 303 Ramps	Exit Ramp to Lake Pleasant Pkwy		Ramp	690	675	15	2%	12	Green	55
	Entrance Ramp from Lake Pleasant Pkwy		Ramp	800	782	18	2%	12	Green	46
	Exit Ramp to 51st St		Ramp	300	245	55	18%	2	Green	59
	Entrance Ramp from 51st St		Ramp	960	478	482	50%	56	Red	11
	Exit Ramp to 43rd St		Ramp	800	696	104	13%	21	Green	34
WB SR 303 Ramps	Entrance Ramp from 43rd St		Ramp	1140	982	158	14%	15	Green	48
	Exit Ramp to 51st St		Ramp	1290	722	568	44%	27	Green	27
	Entrance Ramp from 51st St		Ramp	1160	682	478	41%	14	Green	36
	Exit Ramp to Lake Pleasant Pkwy		Ramp	480	307	173	36%	6	Green	53
	Entrance Ramp from Lake Pleasant Pkwy		Ramp	690	676	14	2%	9	Green	54

2040 No-Build AM Peak Hours Delay/LOS for Intersections

SR303 and I-17 Node Evaluation (8:00 AM - 9:00 AM)

2040 No Build Scenario

PRELIMINARY - Delay / LOS

Intersection	Approach Direction	Movement	From Link	To Link	Delay (All Veh) by movement (sec)	Volume (Output) (All Veh) by (vph)	Approach Volume (Output) (vph)	Approach Volume (Input) (vph)	Output / Input	Intersection (vph)	Mvmt. % Approach Volume	Approach % Total Volume	Mvmt. Delay Weighted by Volume	Delay (All Veh) by movement	Delay by Approach	Approach LOS	Intersection Delay	Intersection LOS
I-17 SBFR and SR 303/Sonoran Desert Dr	SB	R	43	39	106.7	723					81%		86.62	106.7				
		T	43	29	0.0	0	891	940	95%		0%	18%	0.00	0.0	116.64	F		
		L	43	37	159.2	168					19%		30.02	159.2				
	WB	R	-	-	-	-								-				
		T	41	39	1.0	1443	2075	3280	63%		70%	42%	0.72	1.0	1.37	A		
		L	41	29	2.1	632					30%		0.64	2.1				
	NB	R	-	-	-	-								-				
		T	-	-	-	-	0	-	-			0%		-	-	-	94.67	F
		L	-	-	-	-								-				
	EB	R	117	29	197.8	1276				4953	64%		126.99	197.8				
		T	117	37	154.4	711	1987	4490	44%		36%	40%	55.26	154.4	182.25	F		
		L	-	-	-	-								-				
I-17 NBFR and SR 303/Sonoran Desert Dr	SB	R	-	-	-	-								-				
		T	-	-	-	-	0	-	-			0%		-	-	-	140.10	F
		L	-	-	-	-								-				
	WB	R	52	50	6.9	64					4%		0.30	6.9				
		T	52	41	37.3	1403	1467	1460	100%		96%	47%	35.68	37.3	35.98	D		
		L	-	-	-	-								-				
	NB	R	49	38	528.1	124					15%		81.55	528.1				
		T	49	50	498.7	8	803	2240	36%		1%	26%	4.97	498.7	482.41	F		
		L	49	41	473.8	671					84%		395.89	473.8				
	EB	R	-	-	-	-								-				
		T	37	38	0.6	524	878	1800	49%	3148	60%	28%	0.38	0.6	0.99	A		
		L	37	50	1.5	354					40%		0.61	1.5				
SR 303 WBFR and Lake Pleasant Pkwy	SB	R	21	27	207.0	579					60%		124.72	207.0				
		T	22	20	156.2	382	961	1650	58%		40%	41%	62.10	156.2	186.82	F		
		L	-	-	-	-								-				
	WB	R	26	17	9.8	94					39%		3.84	9.8				
		T	26	27	0.0	0	241	350	69%		0%	10%	0.00	0.0	32.08	C		
		L	26	20	46.3	147					61%		28.24	46.3				
	NB	R	-	-	-	-								-				
		T	13	17	2.8	1098	1162	1490	78%		94%	49%	2.63	2.8	2.70	A		
		L	13	27	1.2	64					6%		0.07	1.2				
	EB	R	-	-	-	-								-				
		T	-	-	-	-	0	-	-			0%		-	-	-	80.54	F
		L	-	-	-	-								-				
SR 303 EBFR and Lake Pleasant Pkwy	SB	R	-	-	-	-								-				
		T	20	12	1.4	363	529	890	59%		69%	24%	0.93	1.4	1.52	A		
		L	20	14	1.9	166					31%		0.59	1.9				
	WB	R	-	-	-	-								-				
		T	-	-	-	-	0	-	-			0%		-	-	-	33.90	C
		L	-	-	-	-								-				
	NB	R	16	14	7.2	361				2167	39%		2.82	7.2				
		T	15	13	21.9	562	923	920	100%		61%	43%	13.35	21.9	16.17	B		
		L	-	-	-	-								-				
	EB	R	11	12	48.8	115					16%		7.85	48.8				
		T	11	14	0.0	0	715	1120	64%		0%	33%	0.00	0.0	80.73	F		
		L	11	13	86.8	600					84%		72.88	86.8				
Sonoran Desert Dr and North Valley Pkwy	SB	R	79	71	24.0	772					57%		13.74	24.0				
		T	78	77	29.2	388	1350	1350	100%		29%	41%	8.40	29.2	30.00	C		
		L	111	72	55.9	190					14%		7.87	55.9				
	WB	R	83	76	6.3	157					25%		1.60	6.3				
		T	82	71	42.9	355	620	620	100%		57%	19%	24.57	42.9	36.24	D		
		L	82	77	57.8	108					17%		10.07	57.8				
	NB	R	81	72	4.2	75					11%		0.47	4.2				
		T	80	76	25.7	264	676	680	99%		39%	21%	10.03	25.7	36.75	D		
		L	110	71	52.7	337					50%		26.25	52.7				
	EB	R	73	77	12.9	231					36%		4.64	12.9				
		T	70	72	54.0	175	640	1320	48%	3286	27%	19%	14.78	54.0	37.20	D	33.97	C
		L	95	76	48.6	234					37%		17.78	48.6				
I-17 SBFR and Dove Valley Rd	SB	R	106	319	8.9	253					67%		5.94	8.9				
		T	106	107	0.0	0	380	380	100%		0%	21%	0.00	0.0	22.82	C		
		L	106	101	50.5	127					33%		16.88	50.5				
	WB	R	-	-	-	-								-				
		T	104	319	1.5	498	622	900	69%		80%	34%	1.18	1.5	1.53	A		
		L	104	107	1.7	124					20%		0.34	1.7				
	NB	R	-	-	-	-								-				
		T	-	-	-	-	0	-	-			0%		-	-	-	10.07	B
		L	-	-	-	-								-				
	EB	R	321	107	1.8	516				1803	64%		1.15	1.8				
		T	322	101	26.7	285	801	800	100%		36%	44%	9.51	26.7	10.66	B		
		L	-	-	-	-								-				
I-17 NBFR and Dove Valley Rd	SB	R	-	-	-	-								-				
		T	-	-	-	-	0	-	-			0%		-	-	-	28.45	C
		L	-	-	-	-								-				
	WB	R	96	97	1.0	188					31%		0.32	1.0				
		T	94	104	59.0	415	603	600	101%		69%	44%	40.58	59.0	40.90	D		
		L	-	-	-	-								-				
	NB	R	333	103	8.6	124					34%		2.93	8.6				
		T	333	97	51.3	34	362	910	40%		9%	26%	4.82	51.3	38.86	D		
		L	333	104	55.2	204					56%		31.10	55.2				
	EB	R	-	-	-	-								-				
		T	101	103	1.0	317	412	400	103%	1377	77%	30%	0.80	1.0	1.08	A	28.45	C
		L	101	97	1.2	95					23%		0.28	1.2				

2040 No-Build AM Peak Hours Delay/LOS for Intersections (Continued)

SR303 and I-17 Node Evaluation (8:00 AM - 9:00 AM)

2040 No Build Scenario

PRELIMINARY - Delay / LOS

Intersection	Approach Direction	Movement	From Link	To Link	Delay (All Veh) by movement (sec)	Volume (Output) (All Veh) by (vph)	Approach Volume (Output) (vph)	Approach Volume (Input) (vph)	Output / Input	Intersection (vph)	Mvmt. % Approach Volume	Approach % Total Volume	Mvmt. Delay Weighted by Volume	Delay (All Veh) by movement	Delay by Approach	Approach LOS	Intersection Delay	Intersection LOS
SR 303 EBFR and 51st St	SB	R	-	-	-	-								-				
		T	242	240	0.4	356	548	650	84%		65%	21%	0.27	0.4	0.87	A		
		L	242	259	1.7	192					35%		0.60	1.7				
	WB	R	-	-	-	-								-				
		T	-	-	-	-	0	-	-			0%		-	-	-	29.37	C
		L	-	-	-	-								-				
	NB	R	238	259	13.4	427				2576	28%		3.80	13.4				
		T	239	241	53.6	1080	1507	1510	100%		72%	59%	38.43	53.6	42.23	D		
		L	-	-	-	-								-				
	EB	R	258	240	13.2	64					12%		1.62	13.2				
		T	258	259	0.0	0	521	1040	50%		0%	20%	0.00	0.0	22.17	C		
		L	258	241	23.4	457					88%		20.55	23.4				
SR 303 WBFR and 51st St	SB	R	245	260	6.4	83					20%		1.29	6.4				
		T	245	242	51.1	327	410	410	100%		80%	15%	40.73	51.1	42.02	D		
		L	-	-	-	-								-				
	WB	R	265	243	13.7	534					63%		8.69	13.7				
		T	265	260	26.3	87	842	1230	68%		10%	30%	2.72	26.3	23.17	C		
		L	265	242	44.8	221					26%		11.76	44.8				
	NB	R	-	-	-	-								-				
		T	241	243	3.9	1436	1539	2000	77%	2791	93%	55%	3.64	3.9	3.77	A	15.24	B
		L	241	260	1.9	103					7%		0.13	1.9				
	EB	R	-	-	-	-								-				
		T	-	-	-	-	0	-				0%		-	-	-		
		L	-	-	-	-								-				
SR 303 EBFR and 43rd St	SB	R	-	-	-	-								-				
		T	283	267	0.6	271	442	480	92%		61%	21%	0.37	0.6	0.88	A		
		L	283	119	1.3	171					39%		0.51	1.3				
	WB	R	-	-	-	-								-				
		T	-	-	-	-	0	-	-			0%		-	-	-	16.70	B
		L	-	-	-	-								-				
	NB	R	269	119	16.8	659				2087	63%		10.51	16.8				
		T	268	282	19.6	392	1051	1050	100%		37%	50%	7.29	19.6	17.80	B		
		L	-	-	-	-								-				
	EB	R	278	267	24.1	211					36%		8.57	24.1				
		T	278	119	62.4	83	594	1050	57%		14%	28%	8.72	62.4	26.53	C		
		L	278	282	18.3	300					51%		9.25	18.3				
SR 303 WBFR and 43rd St	SB	R	271	279	13.5	401					52%		7.08	13.5				
		T	271	283	50.9	363	764	760	101%		48%	35%	24.17	50.9	31.25	C		
		L	-	-	-	-								-				
	WB	R	281	273	10.0	445					62%		6.18	10.0				
		T	281	279	39.5	194	718	1120	64%		27%	33%	10.66	39.5	21.09	C		
		L	281	283	38.6	79					11%		4.25	38.6				
	NB	R	-	-	-	-				2174				-			19.03	B
		T	282	273	3.6	640	692	910	76%		92%	32%	3.29	3.6	3.39	A		
		L	282	279	1.3	52					8%		0.10	1.3				
	EB	R	-	-	-	-								-				
		T	-	-	-	-	0	-				0%		-	-	-		
		L	-	-	-	-								-				
I-17 NBFR and Disileta Dr/FR Rd	SB	R	316	63	48.9	151					100%		48.85	48.9				
		T	-	-	-	-	151	150	101%		33%			-	48.85	D		
		L	-	-	-	-								-				
	WB	R	-	-	-	-								-				
		T	-	-	-	-	0	-	-			0%		-	-	-	40.90	D
		L	-	-	-	-								-				
	NB	R	-	-	-	-				454				-				
		T	330	61	49.1	50	226	540	42%		22%	50%	10.87	49.1	49.00	D		
		L	330	63	49.0	176					78%		38.12	49.0				
	EB	R	-	-	-	-								-				
		T	-	-	-	-	77	130	59%			17%		-	1.56	A		
		L	300	61	1.6	77					100%		1.56	1.6				

2040 No-Build PM Peak Hours Delay/LOS for Intersections

SR303 and I-17 Node Evaluation (4:00 PM - 5:00 PM)

2040 No Build Scenario

PRELIMINARY - Delay / LOS

Intersection	Approach Direction	Movement	From Link	To Link	Delay (All Veh) by movement (sec)	Volume (Output) (All Veh) by (vph)	Approach Volume (Output) (vph)	Approach Volume (Input) (vph)	Output / Input	Intersection (vph)	Mvmt. % Approach Volume	Approach % Total Volume	Mvmt. Delay Weighted by Volume	Delay (All Veh) by movement	Delay by Approach	Approach LOS	Intersection Delay	Intersection LOS
I-17 NBFR and Dove Valley Rd	SB	R	-	-	-	-	0	-	-	1768		0%		-	-	-	25.94	C
		T	-	-	-	-								-				
		L	-	-	-	-								-				
	WB	R	96	97	1.2	244	744	740	101%		33%	42%	0.41	1.2	40.44	D		
		T	94	104	59.6	500					67%		40.03	59.6				
		L	-	-	-	-								-				
	NB	R	333	103	8.8	141	391	1110	35%		36%	22%	3.18	8.8	38.16	D		
		T	333	97	54.4	32					8%		4.45	54.4				
		L	333	104	54.8	218					56%		30.53	54.8				
	EB	R	-	-	-	-	633	670	94%			36%		-	1.34	A		
		T	101	103	1.3	435					69%		0.91	1.3				
		L	101	97	1.4	198					31%		0.43	1.4				
SR 303 EBFR and 51st St	SB	R	-	-	-	-	1235	1360	91%	2806		44%		-	2.77	A	23.44	C
		T	242	240	0.5	846					69%		0.38	0.5				
		L	242	259	7.6	389					31%		2.39	7.6				
	WB	R	-	-	-	-	0	-	-			0%		-	-	-		
		T	-	-	-	-								-				
		L	-	-	-	-								-				
	NB	R	238	259	34.2	491	1301	1410	92%		38%	46%	12.92	34.2	39.61	D		
		T	239	241	42.9	810					62%		26.69	42.9				
		L	-	-	-	-								-				
	EB	R	258	240	27.4	74	270	300	90%		27%	10%	7.52	27.4	40.06	D		
		T	258	259	0.0	0					0%		0.00	0.0				
		L	258	241	44.8	196					73%		32.55	44.8				
SR 303 WBFR and 51st St	SB	R	245	260	18.7	790	1777	1770	100%		44%	48%	8.32	18.7	30.08	C		
		T	245	242	39.2	987					56%		21.75	39.2				
		L	-	-	-	-								-				
	WB	R	265	243	14.1	610	956	1430	67%		64%	26%	8.99	14.1	23.06	C		
		T	265	260	31.8	96					10%		3.19	31.8				
		L	265	242	41.6	250					26%		10.88	41.6				
	NB	R	-	-	-	-	1006	1070	94%	3739		27%		-	2.49	A	20.86	C
		T	241	243	2.4	774					77%		1.88	2.4				
		L	241	260	2.6	232					23%		0.61	2.6				
	EB	R	-	-	-	-	0	-				0%		-	-	-		
		T	-	-	-	-								-				
		L	-	-	-	-								-				
SR 303 EBFR and 43rd St	SB	R	-	-	-	-	947	1010	94%	2609		36%		-	1.16	A	27.56	C
		T	283	267	0.6	519					55%		0.34	0.6				
		L	283	119	1.8	428					45%		0.83	1.8				
	WB	R	-	-	-	-	0	-	-			0%		-	-	-		
		T	-	-	-	-								-				
		L	-	-	-	-								-				
	NB	R	269	119	20.5	571	951	950	100%		60%	36%	12.29	20.5	23.44	C		
		T	268	282	27.9	380					40%		11.15	27.9				
		L	-	-	-	-								-				
	EB	R	278	267	58.3	214	711	800	89%		30%	27%	17.56	58.3	68.24	E		
		T	278	119	98.7	192					27%		26.64	98.7				
		L	278	282	56.0	305					43%		24.03	56.0				
SR 303 WBFR and 43rd St	SB	R	271	279	26.2	1054	1891	1890	100%	3283	56%	58%	14.59	26.2	33.32	C	23.85	C
		T	271	283	42.3	837					44%		18.73	42.3				
		L	-	-	-	-								-				
	WB	R	281	273	10.2	506	707	1280	55%		72%	22%	7.28	10.2	17.99	B		
		T	281	279	37.0	92					13%		4.82	37.0				
		L	281	283	38.2	109					15%		5.89	38.2				
	NB	R	-	-	-	-	685	720	95%		88%	21%	3.52	4.0	3.74	A		
		T	282	273	4.0	604					12%		0.22	1.9				
		L	282	279	1.9	81								-				
	EB	R	-	-	-	-	0	-				0%		-	-	-		
		T	-	-	-	-								-				
		L	-	-	-	-								-				
I-17 NBFR and Dixileta Dr/FR Rd	SB	R	316	63	45.7	189	189	190	99%	670	100%	28%	45.71	45.7	45.71	D	33.29	C
		T	-	-	-	-								-				
		L	-	-	-	-								-				
	WB	R	-	-	-	-	0	-	-			0%		-	-	-		
		T	-	-	-	-								-				
		L	-	-	-	-								-				
	NB	R	-	-	-	-	300	840	36%		21%	45%	8.98	42.1	44.41	D		
		T	330	61	42.1	64					79%		35.43	45.0				
		L	330	63	45.0	236								-				
	EB	R	-	-	-	-	181	170	106%			27%		-	1.89	A		
		T	-	-	-	-								-				
		L	300	61	1.9	181					100%		1.89	1.9				

2040 No-Build PM Peak Hours Delay/LOS for Intersections (Continued)

SR303 and I-17 Node Evaluation (4:00 PM - 5:00 PM)

2040 No Build Scenario

PRELIMINARY - Delay / LOS

Intersection	Approach Direction	Movement	From Link	To Link	Delay (All Veh) by movement (sec)	Volume (Output) (All Veh) by (vph)	Approach Volume (Output)	Approach Volume (Input) (vph)	Output / Input	Intersection (vph)	Mvmt. % Approach Volume	Approach % Total Volume	Mvmt. Delay Weighted by Volume	Delay (All Veh) by movement	Delay by Approach	Approach LOS	Intersection Delay	Intersection LOS
I-17 SBFR and SR 303/Sonoran Desert Dr	SB	R	43	39	263.7	656	892	1180	76%	5500	74%	16%	193.97	263.7	273.58	F	110.98	F
		T	43	29	0.0	0					0%		0.00	0.0				
		L	43	37	300.9	236					26%		79.62	300.9				
	WB	R	-	-	-	-	2433	4420	55%			44%		-	1.36	A		
		T	41	39	1.0	1893					78%		0.79	1.0				
		L	41	29	2.6	540					22%		0.57	2.6				
	NB	R	-	-	-	-	0	-	-			0%		-	-	-		
		T	-	-	-	-								-				
		L	-	-	-	-								-				
	EB	R	117	29	182.2	1220	2175	3910	56%		56%	40%	102.20	182.2	166.91	F		
		T	117	37	147.4	955					44%		64.71	147.4				
		L	-	-	-	-								-				
I-17 NBFR and SR 303/Sonoran Desert Dr	SB	R	-	-	-	-	0	-	-	3923		0%		-	-	-	125.06	F
		T	-	-	-	-								-				
		L	-	-	-	-								-				
	WB	R	52	50	13.8	122	1631	1720	95%		7%	42%	1.03	13.8	127.36	F		
		T	52	41	136.5	1509					93%		126.32	136.5				
		L	-	-	-	-								-				
	NB	R	49	38	146.3	172	1103	3380	33%		16%	28%	22.81	146.3	255.37	F		
		T	49	50	272.9	7					1%		1.73	272.9				
		L	49	41	275.5	924					84%		230.82	275.5				
	EB	R	-	-	-	-	1189	2040	58%			30%		-	1.04	A		
		T	37	38	0.6	715					60%		0.38	0.6				
		L	37	50	1.7	474					40%		0.66	1.7				
SR 303 WBFR and Lake Pleasant Pkwy	SB	R	21	27	86.4	593	1542	1580	98%	2747	38%	56%	33.23	86.4	93.60	F	57.89	E
		T	22	20	98.1	949					62%		60.37	98.1				
		L	-	-	-	-								-				
	WB	R	26	17	8.9	68	310	480	65%		22%	11%	1.94	8.9	45.07	D		
		T	26	27	0.0	0					0%		0.00	0.0				
		L	26	20	55.2	242					78%		43.13	55.2				
	NB	R	-	-	-	-	895	880	102%			33%		-	0.79	A		
		T	13	17	0.7	796					89%		0.64	0.7				
		L	13	27	1.3	99					11%		0.15	1.3				
	EB	R	-	-	-	-	0	-	-			0%		-	-	-		
		T	-	-	-	-								-				
		L	-	-	-	-								-				
SR 303 EBFR and Lake Pleasant Pkwy	SB	R	-	-	-	-	1191	1350	88%	2571		46%		-	2.50	A	18.07	B
		T	20	12	2.2	758					64%		1.40	2.2				
		L	20	14	3.0	433					36%		1.10	3.0				
	WB	R	-	-	-	-	0	-	-			0%		-	-	-		
		T	-	-	-	-								-				
		L	-	-	-	-								-				
	NB	R	16	14	9.4	362	691	690	100%		52%	27%	4.95	9.4	16.47	B		
		T	15	13	24.2	329					48%		11.52	24.2				
		L	-	-	-	-								-				
	EB	R	11	12	9.0	124	689	690	100%		18%	27%	1.62	9.0	46.61	D		
		T	11	14	0.0	0					0%		0.00	0.0				
		L	11	13	54.9	565					82%		44.99	54.9				
Sonoran Desert Dr and North Valley Pkwy	SB	R	79	71	130.9	659	1002	1020	98%	3660	66%	27%	86.10	130.9	119.50	F	61.42	E
		T	78	77	97.5	214					21%		20.83	97.5				
		L	111	72	97.7	129					13%		12.58	97.7				
	WB	R	83	76	8.2	194	836	840	100%		23%	23%	1.91	8.2	29.45	C		
		T	82	71	29.9	535					64%		19.12	29.9				
		L	82	77	65.8	107					13%		8.42	65.8				
	NB	R	81	72	6.2	90	931	930	100%		10%	25%	0.60	6.2	52.77	D		
		T	80	76	51.4	334					36%		18.43	51.4				
		L	110	71	62.0	507					54%		33.75	62.0				
	EB	R	73	77	4.3	203	891	1700	52%		23%	24%	0.99	4.3	35.15	D		
		T	70	72	23.6	305					34%		8.06	23.6				
		L	95	76	60.7	383					43%		26.09	60.7				
I-17 SBFR and Dove Valley Rd	SB	R	106	319	75.6	92	179	250	72%	2085	51%	9%	38.86	75.6	96.57	F	21.83	C
		T	106	107	0.0	0					0%		0.00	0.0				
		L	106	101	118.7	87					49%		57.71	118.7				
	WB	R	-	-	-	-	718	1020	70%			34%		-	1.83	A		
		T	104	319	1.3	501					70%		0.91	1.3				
		L	104	107	3.1	217					30%		0.93	3.1				
	NB	R	-	-	-	-	0	-	-			0%		-	-	-		
		T	-	-	-	-								-				
		L	-	-	-	-								-				
	EB	R	321	107	18.7	645	1188	1250	95%		54%	57%	10.13	18.7	22.66	C		
		T	322	101	27.4	543					46%		12.53	27.4				
		L	-	-	-	-								-				

2040 Build AM Traffic Conditions for Mainline and Ramps

SR303 and I-17 Link Evaluation (8:00 AM - 9:00 AM)

2040 Build Scenario Mainlane and Ramps Results

Direction	Location		Type	Volume (Input) (All Veh) by (vph)	Volume (Output) (All Veh) by (vph)	Absolute	% Difference	Density	Traffic Conditions	Speed
	From	To								
NB I-17 - Mainline	Beginning of network	Exit Ramp to Dixileta Dr/Frontage Rd	Freeway Segments	8500	8421	79	1%	40	Orange	44
	Beginning of network	Exit Ramp to Dixileta Dr/Frontage Rd	Diverge	8500	8257	243	3%	28	Green	50
	Exit Ramp to Dixileta Dr/Frontage Rd	Exit Ramp to WB SR 303	Freeway Segments	7960	7845	115	1%	29	Yellow	55
	Exit Ramp to Dixileta Dr/Frontage Rd	Exit Ramp to WB SR 303	Diverge	7960	7855	105	1%	27	Green	58
	Exit Ramp to WB SR 303	Exit Ramp to SR 303/Sonoran Desert Dr Intch	Freeway Segments	6410	6260	150	2%	27	Yellow	58
	Exit Ramp to WB SR 303	Exit Ramp to SR 303/Sonoran Desert Dr Intch	Diverge	6410	6279	131	2%	22	Green	57
	Exit Ramp to SR 303/Sonoran Desert Dr Intch	Exit Ramp to Frontage Rd	Freeway Segments	5980	5781	199	3%	29	Yellow	50
	Exit Ramp to SR 303/Sonoran Desert Dr Intch	Exit Ramp to Frontage Rd	Diverge	5980	5921	59	1%	21	Green	58
	Exit Ramp to Frontage Rd	Entrance Ramp EB SR 303	Freeway Segments	5070	5030	40	1%	19	Green	64
	Entrance Ramp EB SR 303	Entrance Ramp from Frontage Road	Freeway Segments	5830	5785	45	1%	19	Green	61
	Entrance Ramp from Frontage Road	Entrance Ramp from Dove Valley Road	Freeway Segments	5970	5359	611	10%	17	Green	65
	Entrance Ramp from Dove Valley Road	End of network	Freeway Segments	6330	5727	603	10%	15	Green	65
SB I-17 - Mainline	Beginning of network	WB Entrance Ramp from Carefree Hwy	Freeway Segments	3888	3888	0	0%	15	Green	67
	WB Entrance Ramp from Carefree Hwy	SB Entrance Ramp from Carefree Hwy	Freeway Segments	4464	4462	2	0%	13	Green	67
	SB Entrance Ramp from Carefree Hwy	Exit Ramp to Dove Valley Road	Weaving	4800	4784	16	0%	12	Green	66
	Exit Ramp to Dove Valley Road	WB SR 303 Exit Ramp	Freeway Segments	4420	4393	27	1%	14	Green	64
	WB SR 303 Exit Ramp	Entrance Ramp from Dove Valley Road	Freeway Segments	3670	3685	-15	0%	14	Green	66
	Entrance Ramp from Dove Valley Road	Exit Ramp to SR 303	Weaving	4330	4310	20	0%	15	Green	58
	Exit Ramp to SR 303	Entrance Ramp from SR 303	Freeway Segments	4140	4147	-7	0%	16	Green	65
	Entrance Ramp from SR 303	EB SR 303 Entrance Ramp	Merge	4510	4492	18	0%	14	Green	65
	Entrance Ramp from SR 303	EB SR 303 Entrance Ramp	Freeway Segments	4510	4513	-3	0%	17	Green	65
	EB SR 303 Entrance Ramp	Entrance Ramp from Dixileta Dr	Merge	7270	7199	71	1%	23	Green	53
	EB SR 303 Entrance Ramp	Entrance Ramp from Dixileta Dr	Freeway Segments	7270	7190	80	1%	27	Yellow	53
	Entrance Ramp from Dixileta Dr	End of network	Merge	7990	7890	100	1%	26	Green	50
	Entrance Ramp from Dixileta Dr	End of network	Freeway Segments	7990	7920	70	1%	32	Yellow	50
EB SR 303/Sonoran Desert Drive	Beginning of network	Exit Ramp to Lake Pleasant Parkway	Freeway Segments	5470	5442	28	1%	29	Yellow	63
	Beginning of network	Exit Ramp to Lake Pleasant Parkway	Diverge	5470	5450	20	0%	23	Green	59
	Exit Ramp to Lake Pleasant Parkway	Entrance Ramp from Lake Pleasant Parkway	Freeway Segments	5120	5100	20	0%	27	Yellow	64
	Entrance Ramp from Lake Pleasant Parkway	Exit Ramp to 67th St	Merge	5590	5467	123	2%	24	Green	58
	Entrance Ramp from Lake Pleasant Parkway	Exit Ramp to 67th St	Freeway Segments	5590	5535	55	1%	29	Yellow	63
	Entrance Ramp from Lake Pleasant Parkway	Exit Ramp to 67th St	Diverge	5590	5564	26	0%	22	Green	62
	Exit Ramp to 67th St	Entrance Ramp from 67th St	Freeway Segments	4820	4789	31	1%	25	Green	64
	Entrance Ramp from 67th St	Exit Ramp to 51st St	Merge	5200	5163	37	1%	20	Green	65
	Entrance Ramp from 67th St	Exit Ramp to 51st St	Freeway Segments	5200	5181	19	0%	27	Yellow	64
	Entrance Ramp from 67th St	Exit Ramp to 51st St	Diverge	5200	5160	40	1%	22	Green	58
	Exit Ramp to 51st St	Entrance Ramp from 51st St	Freeway Segments	4160	4141	19	0%	22	Green	63
	Entrance Ramp from 51st St	Exit Ramp to 43rd St	Weaving	4570	4557	13	0%	18	Green	63
	Exit Ramp to 43rd St	NB/SB Exit Ramps to I-17	Freeway Segments	3520	3446	74	2%	19	Green	59
WB SR 303/Sonoran Desert Drive	NB/SB Entrance Ramp from I-17	Entrance Ramp from 43rd St	Freeway Segments	2300	2260	40	2%	13	Green	59
	Entrance Ramp from 43rd St	Exit Ramp to 51st St	Weaving	2750	2710	40	1%	12	Green	56
	Exit Ramp to 51st St	Entrance Ramp from 51st St	Freeway Segments	2070	2040	30	1%	11	Green	63
	Entrance Ramp from 51st St	Exit Ramp to 67th St	Merge	2320	2278	42	2%	9	Green	63
	Entrance Ramp from 51st St	Exit Ramp to 67th St	Freeway Segments	2320	2273	47	2%	12	Green	63
	Entrance Ramp from 51st St	Exit Ramp to 67th St	Diverge	2320	2276	44	2%	9	Green	63
	Exit Ramp to 67th St	Entrance Ramp from 67th St	Freeway Segments	1890	1860	30	2%	10	Green	64
	Entrance Ramp from 67th St	Exit Ramp to Lake Pleasant Pkwy	Diverge	2700	2667	33	1%	10	Green	64
	Entrance Ramp from 67th St	Exit Ramp to Lake Pleasant Pkwy	Freeway Segments	2700	2674	26	1%	14	Green	64
	Exit Ramp to Lake Pleasant Pkwy	Entrance Ramp from Lake Pleasant Pkwy	Freeway Segments	2350	2317	33	1%	12	Green	64
	Entrance Ramp from Lake Pleasant Pkwy	End of Network	Merge	2640	2600	40	2%	10	Green	64
	Entrance Ramp from Lake Pleasant Pkwy	End of Network	Freeway Segments	2640	2624	16	1%	14	Green	64
NB I-17 Ramps	Exit Ramp to Frontage Road		Ramp	540	525	15	3%	11	Green	46
	Exit Ramp to WB SR 303		Ramp	1550	1374	176	11%	11	Green	61
	Exit Ramp to SR 303/Sonoran Desert Drive		Ramp	430	393	37	9%	7	Green	54
	Exit Ramp to Frontage Road		Ramp	910	901	9	1%	19	Green	48
	Entrance Ramp from EB SR 303		Ramp	760	673	87	11%	14	Green	47
	Entrance Ramp from Frontage Road		Ramp	140	130	10	7%	2	Green	59
	Entrance Ramp from Dove Valley Road		Ramp	360	364	-4	-1%	5	Green	55
SB I-17 Ramps	Entrance Ramp from WB Carefree Highway		Ramp	576	574	2	0%	9	Green	67
	Entrance Ramp from Carefree Highway		Ramp	336	333	3	1%	4	Green	67
	Exit Ramp to Dove Valley Road		Ramp	380	375	5	1%	7	Green	51
	Exit Ramp to WB SR 303		Ramp	750	657	93	12%	12	Green	54
	Entrance Ramp from Dove Valley Road		Ramp	660	652	8	1%	8	Green	57
	Exit Ramp to SR 303/Sonoran Desert Drive		Ramp	190	188	2	1%	4	Green	48
	Entrance Ramp from SR 303/Sonoran Desert Drive		Ramp	370	372	-2	0%	5	Green	54
	Entrance Ramp from EB SR 303		Ramp	2760	2317	443	16%	24	Green	48
	Entrance Ramp from Frontage Road		Ramp	720	713	7	1%	10	Green	50
EB SR 303 Ramps	Exit Ramp to Lake Pleasant Pkwy		Ramp	350	339	11	3%	7	Green	51
	Entrance Ramp from Lake Pleasant Pkwy		Ramp	470	462	8	2%	6	Green	53
	Exit Ramp to 67th St		Ramp	770	599	171	22%	6	Green	54
	Entrance Ramp from 67th St		Ramp	380	375	5	1%	5	Green	56
	Exit Ramp to 51st St		Ramp	1040	942	98	9%	8	Green	56
	Entrance Ramp from 51st St		Ramp	410	274	136	33%	5	Green	43
	Exit Ramp to 43rd St		Ramp	1050	1078	-28	-3%	20	Green	54
WB SR 303 Ramps	Entrance Ramp from 43rd St		Ramp	450	416	34	8%	6	Green	51
	Exit Ramp to 51st St		Ramp	680	599	81	12%	16	Green	38
	Entrance Ramp from 51st St		Ramp	250	187	63	25%	3	Green	45
	Exit Ramp to 67th St		Ramp	430	374	56	13%	4	Green	50
	Entrance Ramp from 67th St		Ramp	810	799	11	1%	11	Green	54
	Exit Ramp to Lake Pleasant Pkwy		Ramp	350	344	6	2%	7	Green	52
	Entrance Ramp from Lake Pleasant Pkwy		Ramp	290	290	0	0%	4	Green	55

2040 Build PM Traffic Conditions for Mainline and Ramps

SR303 and I-17 Link Evaluation (4:00 PM - 5:00 PM)

2040 Build Scenario Mainlane and Ramps Results

Direction	Location		Type	Volume (Input) (All Veh) by (vph)	Volume (Output) (All Veh) by (vph)	Absolute	% Difference	Density	Traffic Conditions	Speed
	From	To								
NB I-17 - Mainline	Beginning of network	Exit Ramp to Dixileta Dr/Frontage Rd	Freeway Segments	7900	7857	43	1%	27	Yellow	59
	Beginning of network	Exit Ramp to Dixileta Dr/Frontage Rd	Diverge	7900	7757	143	2%	23	Green	56
	Exit Ramp to Dixileta Dr/Frontage Rd	Exit Ramp to WB SR 303	Freeway Segments	7060	7045	15	0%	24	Green	60
	Exit Ramp to Dixileta Dr/Frontage Rd	Exit Ramp to WB SR 303	Diverge	7060	7054	6	0%	24	Green	59
	Exit Ramp to WB SR 303	Exit Ramp to SR 303/Sonoran Desert Dr Intch	Freeway Segments	4470	4366	104	2%	18	Green	62
	Exit Ramp to WB SR 303	Exit Ramp to SR 303/Sonoran Desert Dr Intch	Diverge	4470	4425	45	1%	14	Green	65
	Exit Ramp to SR 303/Sonoran Desert Dr Intch	Exit Ramp to Frontage Rd	Freeway Segments	3910	3740	170	4%	15	Green	61
	Exit Ramp to SR 303/Sonoran Desert Dr Intch	Exit Ramp to Frontage Rd	Diverge	3910	3901	9	0%	12	Green	65
	Exit Ramp to Frontage Rd	Entrance Ramp EB SR 303	Freeway Segments	2850	2854	-4	0%	11	Green	66
	Entrance Ramp EB SR 303	Entrance Ramp from Frontage Road	Freeway Segments	3600	3604	-4	0%	12	Green	61
	Entrance Ramp from Frontage Road	Entrance Ramp from Dove Valley Road	Freeway Segments	3870	3344	526	14%	10	Green	65
	Entrance Ramp from Dove Valley Road	End of network	Freeway Segments	4400	3872	528	12%	10	Green	65
SB I-17 - Mainline	Beginning of network	WB Entrance Ramp from Carefree Hwy	Freeway Segments	4698	4698	0	0%	18	Green	66
	WB Entrance Ramp from Carefree Hwy	SB Entrance Ramp from Carefree Hwy	Freeway Segments	5394	5392	2	0%	16	Green	66
	SB Entrance Ramp from Carefree Hwy	Exit Ramp to Dove Valley Road	Weaving	5800	5782	18	0%	15	Green	65
	Exit Ramp to Dove Valley Road	WB SR 303 Exit Ramp	Freeway Segments	5550	5519	31	1%	19	Green	59
	WB SR 303 Exit Ramp	Entrance Ramp from Dove Valley Road	Freeway Segments	4700	4708	-8	0%	19	Green	63
	Entrance Ramp from Dove Valley Road	Exit Ramp to SR 303	Weaving	5620	5579	41	1%	27	Green	41
	Exit Ramp to SR 303	Entrance Ramp from SR 303	Freeway Segments	5240	5227	13	0%	21	Green	62
	Entrance Ramp from SR 303	EB SR 303 Entrance Ramp	Merge	5860	5810	50	1%	19	Green	62
	Entrance Ramp from SR 303	EB SR 303 Entrance Ramp	Freeway Segments	5860	5841	19	0%	23	Green	63
	EB SR 303 Entrance Ramp	Entrance Ramp from Dixileta Dr	Merge	7810	7791	19	0%	23	Green	55
	EB SR 303 Entrance Ramp	Entrance Ramp from Dixileta Dr	Freeway Segments	7810	7787	23	0%	28	Yellow	55
	Entrance Ramp from Dixileta Dr	End of network	Merge	8420	8378	42	1%	27	Green	51
	Entrance Ramp from Dixileta Dr	End of network	Freeway Segments	8420	8394	26	0%	32	Yellow	52
EB SR 303/Sonoran Desert Drive	Beginning of network	Exit Ramp to Lake Pleasant Parkway	Freeway Segments	2730	2697	33	1%	13	Green	67
	Beginning of network	Exit Ramp to Lake Pleasant Parkway	Diverge	2730	2721	9	0%	10	Green	67
	Exit Ramp to Lake Pleasant Parkway	Entrance Ramp from Lake Pleasant Parkway	Freeway Segments	2270	2265	5	0%	11	Green	67
	Entrance Ramp from Lake Pleasant Parkway	Exit Ramp to 67th St	Merge	2790	2730	60	2%	11	Green	64
	Entrance Ramp from Lake Pleasant Parkway	Exit Ramp to 67th St	Freeway Segments	2790	2772	18	1%	14	Green	66
	Entrance Ramp from Lake Pleasant Parkway	Exit Ramp to 67th St	Diverge	2790	2789	1	0%	11	Green	66
	Exit Ramp to 67th St	Entrance Ramp from 67th St	Freeway Segments	2560	2546	14	1%	13	Green	66
	Entrance Ramp from 67th St	Exit Ramp to 51st St	Merge	3100	3079	21	1%	12	Green	66
	Entrance Ramp from 67th St	Exit Ramp to 51st St	Freeway Segments	3100	3090	10	0%	16	Green	66
	Entrance Ramp from 67th St	Exit Ramp to 51st St	Diverge	3100	3085	15	0%	12	Green	66
	Exit Ramp to 51st St	Entrance Ramp from 51st St	Freeway Segments	2800	2794	6	0%	14	Green	66
	Entrance Ramp from 51st St	Exit Ramp to 43rd St	Weaving	3500	3492	8	0%	14	Green	64
	Exit Ramp to 43rd St	NB/SB Exit Ramps to I-17	Freeway Segments	2700	2690	10	0%	15	Green	60
WB SR 303/Sonoran Desert Drive	NB/SB Entrance Ramp from I-17	Entrance Ramp from 43rd St	Freeway Segments	3440	3421	19	1%	20	Green	58
	Entrance Ramp from 43rd St	Exit Ramp to 51st St	Weaving	4580	4564	16	0%	19	Green	61
	Exit Ramp to 51st St	Entrance Ramp from 51st St	Freeway Segments	3900	3884	16	0%	21	Green	62
	Entrance Ramp from 51st St	Exit Ramp to 67th St	Merge	4940	4888	52	1%	20	Green	60
	Entrance Ramp from 51st St	Exit Ramp to 67th St	Freeway Segments	4940	4894	46	1%	27	Yellow	60
	Entrance Ramp from 51st St	Exit Ramp to 67th St	Diverge	4940	4906	34	1%	20	Green	62
	Exit Ramp to 67th St	Entrance Ramp from 67th St	Freeway Segments	4330	4308	22	0%	23	Green	62
	Entrance Ramp from 67th St	Exit Ramp to Lake Pleasant Pkwy	Diverge	4700	4667	33	1%	19	Green	62
	Entrance Ramp from 67th St	Exit Ramp to Lake Pleasant Pkwy	Freeway Segments	4700	4680	20	0%	26	Green	61
	Exit Ramp to Lake Pleasant Pkwy	Entrance Ramp from Lake Pleasant Pkwy	Freeway Segments	4220	4192	28	1%	23	Green	61
	Entrance Ramp from Lake Pleasant Pkwy	End of Network	Merge	4660	4625	35	1%	19	Green	61
	Entrance Ramp from Lake Pleasant Pkwy	End of Network	Freeway Segments	4660	4666	-6	0%	25	Green	61
NB I-17 Ramps	Exit Ramp to Frontage Road		Ramp	840	826	14	2%	18	Green	45
	Exit Ramp to WB SR 303		Ramp	2590	2327	263	10%	20	Green	58
	Exit Ramp to SR 303/Sonoran Desert Drive		Ramp	560	531	29	5%	10	Green	54
	Exit Ramp to Frontage Road		Ramp	1060	1052	8	1%	21	Green	50
	Entrance Ramp from EB SR 303		Ramp	750	663	87	12%	14	Green	47
	Entrance Ramp from Frontage Road		Ramp	270	260	10	4%	3	Green	58
	Entrance Ramp from Dove Valley Road		Ramp	530	522	8	1%	7	Green	53
SB I-17 Ramps	Entrance Ramp from WB Carefree Highway		Ramp	696	694	2	0%	10	Green	67
	Entrance Ramp from Carefree Highway		Ramp	406	402	4	1%	5	Green	67
	Exit Ramp to Dove Valley Road		Ramp	250	242	8	3%	5	Green	51
	Exit Ramp to WB SR 303		Ramp	850	754	96	11%	17	Green	44
	Entrance Ramp from Dove Valley Road		Ramp	920	908	12	1%	13	Green	51
	Exit Ramp to SR 303/Sonoran Desert Drive		Ramp	380	372	8	2%	8	Green	46
	Entrance Ramp from SR 303/Sonoran Desert Drive		Ramp	620	612	8	1%	9	Green	51
	Entrance Ramp from EB SR 303		Ramp	1950	1674	276	14%	17	Green	50
	Entrance Ramp from Frontage Road		Ramp	610	604	6	1%	9	Green	50
EB SR 303 Ramps	Exit Ramp to Lake Pleasant Pkwy		Ramp	460	450	10	2%	8	Green	57
	Entrance Ramp from Lake Pleasant Pkwy		Ramp	520	508	12	2%	7	Green	53
	Exit Ramp to 67th St		Ramp	230	185	45	20%	1	Green	66
	Entrance Ramp from 67th St		Ramp	540	536	4	1%	7	Green	55
	Exit Ramp to 51st St		Ramp	300	271	29	10%	2	Green	66
	Entrance Ramp from 51st St		Ramp	700	493	207	30%	9	Green	40
	Exit Ramp to 43rd St		Ramp	800	775	25	3%	14	Green	57
WB SR 303 Ramps	Entrance Ramp from 43rd St		Ramp	1140	1054	86	8%	16	Green	48
	Exit Ramp to 51st St		Ramp	680	609	71	10%	11	Green	57
	Entrance Ramp from 51st St		Ramp	1040	614	426	41%	12	Green	37
	Exit Ramp to 67th St		Ramp	610	539	71	12%	5	Green	50
	Entrance Ramp from 67th St		Ramp	370	367	3	1%	5	Green	55
	Exit Ramp to Lake Pleasant Pkwy		Ramp	480	467	13	3%	9	Green	51
	Entrance Ramp from Lake Pleasant Pkwy		Ramp	440	444	-4	-1%	6	Green	55

2040 Build AM Peak Hours Delay/LOS for Intersections

SR303 and I-17 Node Evaluation (8:00 AM - 9:00 AM)

2040 Build Scenario

Delay / LOS

Intersection	Approach Direction	Movement	From Link	To Link	Delay (All Veh) by movement (sec)	Volume (Output) (All Veh) by (vph)	Approach Volume (Output) (vph)	Approach Volume (Input) (vph)	Output / Input	Intersection (vph)	Mvmt. % Approach Volume	Approach % Total Volume	Mvmt. Delay Weighted by Volume	Delay (All Veh) by movement	Delay by Approach	Approach LOS	Intersection Delay	Intersection LOS
I-17 SBFR and SR 303/Sonoran Desert Dr	SB	R	43	39	22.0	19					10%		2.22	22.0				
		T	43	29	0.0	0	188	190	99%		0%	6%	0.00	0.0	51.94	D		
		L	43	37	55.3	169					90%		49.72	55.3				
	WB	R	-	-	-	-								-				
		T	41	39	0.8	1106	1742	1630	107%		63%	60%	0.49	0.8	1.28	A		
		L	41	29	2.1	636					37%		0.78	2.1				
	NB	R	-	-	-	-								-				
		T	-	-	-	-	0	-	-			0%		-	-	-		
		L	-	-	-	-								-				
	EB	R	117	29	7.5	104					11%		0.79	7.5				
		T	117	37	48.3	885	989	880	112%		89%	34%	43.18	48.3	43.97	D		
		L	-	-	-	-								-				
I-17 NBFR and SR 303/Sonoran Desert Dr	SB	R	-	-	-	-								-				
		T	-	-	-	-	0	-	-			0%		-	-	-		
		L	-	-	-	-								-				
	WB	R	52	50	7.3	60					4%		0.30	7.3				
		T	52	41	36.4	1413	1473	1360	108%		96%	46%	34.90	36.4	35.20	D		
		L	-	-	-	-								-				
	NB	R	49	38	13.7	320					47%		6.47	13.7				
		T	49	50	50.9	27	675	690	98%		4%	21%	2.04	50.9	30.85	C		
		L	49	41	46.0	328					49%		22.34	46.0				
	EB	R	-	-	-	-								-				
		T	37	38	1.0	1004	1057	950	111%		95%	33%	0.91	1.0	0.96	A		
		L	37	50	1.0	53					5%		0.05	1.0				
SR 303 WBFR and Lake Pleasant Pkwy	SB	R	21	27	8.3	234					44%		3.66	8.3				
		T	22	20	53.5	300	534	530	101%		56%	31%	30.03	53.5	33.69	C		
		L	-	-	-	-								-				
	WB	R	26	17	8.5	123					36%		3.04	8.5				
		T	26	27	0.0	0	345	350	99%		0%	20%	0.00	0.0	33.41	C		
		L	26	20	47.2	222					64%		30.37	47.2				
	NB	R	-	-	-	-								-				
		T	13	17	1.7	784	846	850	100%		93%	49%	1.53	1.7	1.62	A		
		L	13	27	1.2	62					7%		0.09	1.2				
	EB	R	-	-	-	-								-				
		T	-	-	-	-	0	-	-			0%		-	-	-		
		L	-	-	-	-								-				
SR 303 EBFR and Lake Pleasant Pkwy	SB	R	-	-	-	-								-				
		T	20	12	1.1	422	523	530	99%		81%	29%	0.92	1.1	1.22	A		
		L	20	14	1.5	101					19%		0.29	1.5				
	WB	R	-	-	-	-								-				
		T	-	-	-	-	0	-	-			0%		-	-	-		
		L	-	-	-	-								-				
	NB	R	16	14	7.1	370					40%		2.84	7.1				
		T	15	13	22.5	549	919	920	100%		60%	51%	13.44	22.5	16.28	B		
		L	-	-	-	-								-				
	EB	R	11	12	18.9	49					14%		2.68	18.9				
		T	11	14	0.0	0	345	350	99%		0%	19%	0.00	0.0	47.67	D		
		L	11	13	52.4	296					86%		44.99	52.4				
Sonoran Desert Dr and North Valley Pkwy	SB	R	79	71	20.3	781					58%		11.75	20.3				
		T	78	77	28.2	387	1348	1350	100%		29%	34%	8.08	28.2	27.21	C		
		L	111	72	55.3	180					13%		7.38	55.3				
	WB	R	83	76	8.6	164					27%		2.27	8.6				
		T	82	71	51.9	345	618	520	119%		56%	16%	28.95	51.9	41.68	D		
		L	82	77	59.3	109					18%		10.46	59.3				
	NB	R	81	72	4.7	79					12%		0.55	4.7				
		T	80	76	23.8	257	681	680	100%		38%	17%	8.99	23.8	36.86	D		
		L	110	71	53.9	345					51%		27.32	53.9				
	EB	R	73	77	27.2	496					37%		10.16	27.2				
		T	70	72	57.0	349	1325	1230	108%		26%	33%	15.01	57.0	44.46	D		
		L	95	76	53.2	480					36%		19.29	53.2				
I-17 SBFR and Dove Valley Rd	SB	R	106	319	9.6	251					67%		6.47	9.6				
		T	106	107	0.0	0	373	380	98%		0%	18%	0.00	0.0	23.07	C		
		L	106	101	50.7	122					33%		16.60	50.7				
	WB	R	-	-	-	-								-				
		T	104	319	1.6	792	925	900	103%		86%	44%	1.40	1.6	1.66	A		
		L	104	107	1.9	133					14%		0.27	1.9				
	NB	R	-	-	-	-								-				
		T	-	-	-	-	0	-	-			0%		-	-	-		
		L	-	-	-	-								-				
	EB	R	321	107	1.9	524					65%		1.25	1.9				
		T	322	101	34.8	279	803	800	100%		35%	38%	12.07	34.8	13.32	B		
		L	-	-	-	-								-				
I-17 NBFR and Dove Valley Rd	SB	R	-	-	-	-								-				
		T	-	-	-	-	0	-	-			0%		-	-	-		
		L	-	-	-	-								-				
	WB	R	96	97	1.1	183					30%		0.33	1.1				
		T	94	104	60.0	421	604	600	101%		70%	31%	41.83	60.0	42.16	D		
		L	-	-	-	-								-				
	NB	R	333	103	11.6	321					35%		4.06	11.6				
		T	333	97	47.6	98	920	910	101%		11%	48%	5.07	47.6	35.31	D		
		L	333	104	48.1	501					54%		26.18	48.1				
	EB	R	-	-	-	-								-				
		T	101	103	1.6	314	401	400	100%		78%	21%	1.28	1.6	1.62	A		
		L	101	97	1.5	87					22%		0.33	1.5				

2040 Build AM Peak Hours Delay/LOS for Intersections (Continued)

SR303 and I-17 Node Evaluation (8:00 AM - 9:00 AM)

2040 Build Scenario

Delay / LOS

Intersection	Approach Direction	Movement	From Link	To Link	Delay (All Veh) by movement (sec)	Volume (Output) (All Veh) by (vph)	Approach Volume (Output) (vph)	Approach Volume (Input) (vph)	Output / Input	Intersection (vph)	Mvmt. % Approach Volume	Approach % Total Volume	Mvmt. Delay Weighted by Volume	Delay (All Veh) by movement	Delay by Approach	Approach LOS	Intersection Delay	Intersection LOS
SR 303 EBFR and 67th St	SB	R	-	-	-	-								-				
		T	127	128	4.7	429	608	530	115%		71%	30%	3.30	4.7	16.28	B		
		L	127	137	44.1	179					29%		12.98	44.1				
	WB	R	-	-	-	-								-				
		T	-	-	-	-	0	-	-			0%		-	-	-		
		L	-	-	-	-								-				
	NB	R	125	137	4.4	202					31%		1.38	4.4				
		T	124	126	17.4	449	651	650	100%	2029	69%	32%	11.98	17.4	13.36	B	28.00	C
		L	-	-	-	-								-				
	EB	R	149	128	4.1	128					17%		0.69	4.1				
		T	149	137	0.0	0	770	770	100%		0%	38%	0.00	0.0	49.63	D		
		L	149	126	58.7	642					83%		48.94	58.7				
SR 303 WBFR and 67th St	SB	R	133	147	9.7	759					58%		5.65	9.7				
		T	133	127	0.4	541	1300	1300	100%		42%	46%	0.17	0.4	5.83	A		
		L	-	-	-	-								-				
	WB	R	235	129	3.4	360					85%		2.91	3.4				
		T	235	147	0.0	0	426	430	99%		0%	15%	0.00	0.0	10.35	B		
		L	235	127	48.0	66					15%		7.44	48.0				
	NB	R	-	-	-	-								-				
		T	126	129	3.0	1036	1088	1090	100%	2814	95%	39%	2.84	3.0	2.94	A	5.40	A
		L	126	147	2.2	52					5%		0.10	2.2				
	EB	R	-	-	-	-								-				
		T	-	-	-	-	0	-				0%		-	-	-		
		L	-	-	-	-								-				
SR 303 EBFR and 51st St	SB	R	-	-	-	-								-				
		T	242	240	0.5	387	575	580	99%		67%	23%	0.32	0.5	0.84	A		
		L	242	259	1.6	188					33%		0.52	1.6				
	WB	R	-	-	-	-								-				
		T	-	-	-	-	0	-	-			0%		-	-	-		
		L	-	-	-	-								-				
	NB	R	238	259	7.2	226					26%		1.91	7.2				
		T	239	241	46.1	632	858	860	100%	2472	74%	35%	33.94	46.1	35.84	D	23.16	C
		L	-	-	-	-								-				
	EB	R	258	240	13.7	132					13%		1.73	13.7				
		T	258	259	0.0	0	1039	1040	100%		0%	42%	0.00	0.0	25.03	C		
		L	258	241	26.7	907					87%		23.29	26.7				
SR 303 WBFR and 51st St	SB	R	245	260	6.0	82					20%		1.20	6.0				
		T	245	242	51.6	329	411	410	100%		80%	15%	41.27	51.6	42.47	D		
		L	-	-	-	-								-				
	WB	R	265	243	11.3	425					54%		6.08	11.3				
		T	265	260	28.9	121	792	800	99%		15%	29%	4.42	28.9	24.02	C		
		L	265	242	43.5	246					31%		13.53	43.5				
	NB	R	-	-	-	-								-				
		T	241	243	2.3	1489	1539	1550	99%	2742	97%	56%	2.19	2.3	2.24	A	14.56	B
		L	241	260	1.4	50					3%		0.05	1.4				
	EB	R	-	-	-	-								-				
		T	-	-	-	-	0	-				0%		-	-	-		
		L	-	-	-	-								-				
SR 303 EBFR and 43rd St	SB	R	-	-	-	-								-				
		T	283	267	0.8	314	474	480	99%		66%	18%	0.50	0.8	0.93	A		
		L	283	119	1.3	160					34%		0.42	1.3				
	WB	R	-	-	-	-								-				
		T	-	-	-	-	0	-	-			0%		-	-	-		
		L	-	-	-	-								-				
	NB	R	269	119	20.4	654					62%		12.72	20.4				
		T	268	282	24.4	396	1050	1050	100%	2635	38%	40%	9.22	24.4	21.94	C	15.85	B
		L	-	-	-	-								-				
	EB	R	278	267	12.7	398					36%		4.55	12.7				
		T	278	119	47.4	174	1111	1050	106%		16%	42%	7.42	47.4	16.47	B		
		L	278	282	9.3	539					49%		4.49	9.3				
SR 303 WBFR and 43rd St	SB	R	271	279	14.0	401					53%		7.44	14.0				
		T	271	283	50.5	356	757	760	100%		47%	27%	23.77	50.5	31.21	C		
		L	-	-	-	-								-				
	WB	R	281	273	24.1	710					63%		15.19	24.1				
		T	281	279	38.6	299	1127	1120	101%		27%	40%	10.23	38.6	29.07	C		
		L	281	283	34.8	118					10%		3.65	34.8				
	NB	R	-	-	-	-								-				
		T	282	273	5.9	890	936	910	103%	2820	95%	33%	5.57	5.9	5.63	A	21.86	C
		L	282	279	1.1	46					5%		0.05	1.1				
	EB	R	-	-	-	-								-				
		T	-	-	-	-	0	-				0%		-	-	-		
		L	-	-	-	-								-				
I-17 SBFR and Dixileta Dr/FR Rd	SB	R	295	299	18.1	303					83%		15.11	18.1				
		T	295	297	0.0	0	363	360	101%		0%	22%	0.00	0.0	21.02	C		
		L	295	300	35.8	60					17%		5.91	35.8				
	WB	R	-	-	-	-								-				
		T	332	299	0.3	470	550	560	98%		85%	34%	0.26	0.3	0.38	A		
		L	332	297	0.9	80				1623	15%		0.13	0.9			17.11	B
	NB	R	-	-	-	-								-				
		T	-	-	-	-	0	-	-			0%		-	-	-		
		L	-	-	-	-								-				
	EB	R	296	297	26.5	637					90%		23.78	26.5				
		T	296	300	41.7	73	710	710	100%		10%	44%	4.29	41.7	28.07	C		
		L	-	-	-	-								-				
I-17 NBFR and Dixileta Dr/FR Rd	SB	R	316	63	48.0	151					100%		47.97	48.0				
		T	-	-	-	-	151	150	101%			19%		-	47.97	D		
		L	-	-	-	-								-				
	WB	R	-	-	-	-								-				
		T	-	-	-	-	0	-	-			0%		-	-	-		
		L	-	-	-	-								-				
	NB	R	-	-	-	-								-				
		T	330	61	34.8	125	524	540	97%	808	24%	65%	8.29	34.8	34.77	C	34.44	C
		L	330	63	34.8	399					76%		26.48	34.8				
	EB	R	-	-	-	-								-				
		T	-	-	-	-	133	130	102%		16%			-	17.78	B		
		L	300	61	17.8	133					100%		17.78	17.8				

2040 Build PM Peak Hours Delay/LOS for Intersections

SR303 and I-17 Node Evaluation (4:00 PM - 5:00 PM)

2040 Build Scenario

Delay / LOS

Intersection	Approach Direction	Movement	From Link	To Link	Delay (All Veh) by movement (sec)	Volume (Output) (All Veh) by (vph)	Approach Volume (Output) (vph)	Approach Volume (Input) (vph)	Output / Input	Intersection (vph)	Mvmt. % Approach Volume	Approach % Total Volume	Mvmt. Delay Weighted by Volume	Delay (All Veh) by movement	Delay by Approach	Approach LOS	Intersection Delay	Intersection LOS
I-17 SBFR and SR 303/Sonoran Desert Dr	SB	R	43	39	26.8	78	374	380	98%	3372	21%	11%	5.59	26.8	54.80	D	21.40	C
		T	43	29	0.0	0					0%		0.00	0.0				
		L	43	37	62.2	296					79%		49.22	62.2				
	WB	R	-	-	-	-	1785	1780	100%					-	1.18	A		
		T	41	39	0.8	1205					68%	53%	0.52	0.8				
		L	41	29	2.0	580					32%		0.66	2.0				
	NB	R	-	-	-	-	0	-	-			0%		-	-	-		
		T	-	-	-	-								-				
		L	-	-	-	-								-				
	EB	R	117	29	10.8	223	1213	1210	100%		18%	36%	1.98	10.8	40.85	D		
		T	117	37	47.6	990					82%		38.87	47.6				
		L	-	-	-	-								-				
I-17 NBFR and SR 303/Sonoran Desert Dr	SB	R	-	-	-	-	0	-	-	3756		0%		-	-	-	23.94	C
		T	-	-	-	-								-				
		L	-	-	-	-								-				
	WB	R	52	50	7.8	116	1506	1500	100%		8%	40%	0.60	7.8	37.52	D		
		T	52	41	40.0	1390					92%		36.93	40.0				
		L	-	-	-	-								-				
	NB	R	49	38	20.2	537	964	960	100%		56%	26%	11.23	20.2	33.31	C		
		T	49	50	53.7	31					3%		1.73	53.7				
		L	49	41	49.6	396					41%		20.36	49.6				
	EB	R	-	-	-	-	1286	970	133%			34%		-	1.00	A		
		T	37	38	1.0	1169					91%		0.91	1.0				
		L	37	50	1.0	117					9%		0.09	1.0				
SR 303 WBFR and Lake Pleasant Pkwy	SB	R	21	27	12.2	364	938	930	101%	2147	39%	44%	4.73	12.2	41.79	D	28.65	C
		T	22	20	60.6	574					61%		37.07	60.6				
		L	-	-	-	-								-				
	WB	R	26	17	9.4	100	473	480	99%		21%	22%	1.99	9.4	45.62	D		
		T	26	27	0.0	0					0%		0.00	0.0				
		L	26	20	55.3	373					79%		43.63	55.3				
	NB	R	-	-	-	-	736	730	101%			34%		-	0.99	A		
		T	13	17	0.9	646					88%		0.83	0.9				
		L	13	27	1.3	90					12%		0.16	1.3				
	EB	R	-	-	-	-	0	-	-			0%		-	-	-		
		T	-	-	-	-								-				
		L	-	-	-	-								-				
SR 303 EBFR and Lake Pleasant Pkwy	SB	R	-	-	-	-	947	950	100%	2098		45%		-	1.74	A	16.22	B
		T	20	12	1.7	794					84%		1.42	1.7				
		L	20	14	2.0	153					16%		0.32	2.0				
	WB	R	-	-	-	-	0	-	-			0%		-	-	-		
		T	-	-	-	-								-				
		L	-	-	-	-								-				
	NB	R	16	14	7.7	365	690	690	100%		53%	33%	4.08	7.7	16.08	B		
		T	15	13	25.5	325					47%		12.00	25.5				
		L	-	-	-	-								-				
	EB	R	11	12	7.0	49	461	460	100%		11%	22%	0.74	7.0	46.19	D		
		T	11	14	0.0	0					0%		0.00	0.0				
		L	11	13	50.8	412					89%		45.44	50.8				
Sonoran Desert Dr and North Valley Pkwy	SB	R	79	71	28.3	668	1012	1010	100%	4277	66%	24%	18.69	28.3	40.64	D	40.54	D
		T	78	77	64.1	217					21%		13.74	64.1				
		L	111	72	65.4	127					13%		8.21	65.4				
	WB	R	83	76	12.3	195	625	630	99%		31%	15%	3.83	12.3	37.21	D		
		T	82	71	42.4	320					51%		21.72	42.4				
		L	82	77	66.2	110					18%		11.66	66.2				
	NB	R	81	72	6.7	91	936	930	101%		10%	22%	0.65	6.7	53.44	D		
		T	80	76	50.4	328					35%		17.65	50.4				
		L	110	71	63.6	517					55%		35.14	63.6				
	EB	R	73	77	8.1	405	1704	1380	123%		24%	40%	1.92	8.1	34.61	C		
		T	70	72	26.1	569					33%		8.71	26.1				
		L	95	76	56.0	730					43%		23.99	56.0				
I-17 SBFR and Dove Valley Rd	SB	R	106	319	8.9	126	240	250	96%	2541	53%	9%	4.67	8.9	32.48	C	11.94	B
		T	106	107	0.0	0					0%		0.00	0.0				
		L	106	101	58.5	114					48%		27.81	58.5				
	WB	R	-	-	-	-	1048	1020	103%			41%		-	1.65	A		
		T	104	319	1.5	825					79%		1.15	1.5				
		L	104	107	2.3	223					21%		0.50	2.3				
	NB	R	-	-	-	-	0	-	-			0%		-	-	-		
		T	-	-	-	-								-				
		L	-	-	-	-								-				
	EB	R	321	107	2.9	691	1253	1250	100%		55%	49%	1.59	2.9	16.61	B		
		T	322	101	33.5	562					45%		15.03	33.5				
		L	-	-	-	-								-				
I-17 NBFR and Dove Valley Rd	SB	R	-	-	-	-	0	-	-	2486		0%		-	-	-	27.39	C
		T	-	-	-	-								-				
		L	-	-	-	-								-				
	WB	R	96	97	1.3	240	748	740	101%		32%	30%	0.41	1.3	40.32	D		
		T	94	104	58.8	508					68%		39.91	58.8				
		L	-	-	-	-								-				
	NB	R	333	103	15.0	430	1065	1060	100%		40%	43%	6.07	15.0	34.35	C		
		T	333	97	47.0	95					9%		4.19	47.0				
		L	333	104	47.5	540					51%		24.09	47.5				
	EB	R	-	-	-	-	673	670	100%			27%		-	2.02	A		
		T	101	103	2.0	479					71%		1.43	2.0				
		L	101	97	2.0	194					29%		0.59	2.0				
SR 303 EBFR and 67th St	SB	R	-	-	-	-	801	780	103%	1668		48%		-	18.09	B	17.70	B
		T	127	128	4.1	520					65%		2.69	4.1				
		L	127	137	43.9	281					35%		15.40	43.9				
	WB	R	-	-	-	-	0	-	-			0%		-	-	-		
		T	-	-	-	-								-				
		L	-	-	-	-								-				
	NB	R	125	137	5.0	263	631	630	100%		42%	38%	2.09	5.0	13.34	B		
		T	124	126	19.3	368					58%		11.25	19.3				
		L	-	-	-	-								-				
	EB	R	149	128	1.3	80	236	230	103%		34%	14%	0.44	1.3	28.03	C		
		T	149	137	0.0	0					0%		0.00	0.0				
		L	149	126	41.7	156					66%		27.59	41.7				

2040 Build PM Peak Hours Delay/LOS for Intersections (Continued)

SR303 and I-17 Node Evaluation (4:00 PM - 5:00 PM)

2040 Build Scenario

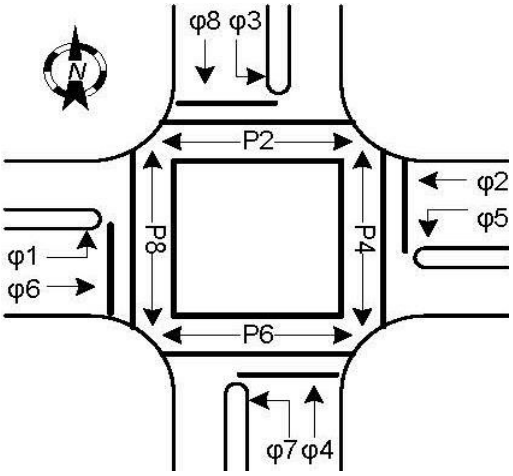
Delay / LOS

Intersection	Approach Direction	Movement	From Link	To Link	Delay (All Veh) by movement (sec)	Volume (Output) (All Veh) by (vph)	Approach Volume (Output) (vph)	Approach Volume (Input) (vph)	Output / Input	Intersection (vph)	Mvmt. % Approach Volume	Approach % Total Volume	Mvmt. Delay Weighted by Volume	Delay (All Veh) by movement	Delay by Approach	Approach LOS	Intersection Delay	Intersection LOS
SR 303 WBFR and 67th St	SB	R	133	147	6.6	247	930	930	100%	2063	27%	45%	1.75	6.6	2.15	A	4.57	A
		T	133	127	0.5	683					73%		0.40	0.5				
		L	-	-	-	-								-				
	WB	R	235	129	2.7	490	608	610	100%		81%	29%	2.21	2.7	10.66	B		
		T	235	147	0.0	0					0%		0.00	0.0				
		L	235	127	43.5	118					19%		8.45	43.5				
	NB	R	-	-	-	-	525	520	101%			25%		-	1.79	A		
		T	126	129	1.1	400					76%		0.87	1.1				
		L	126	147	3.9	125					24%		0.92	3.9				
	EB	R	-	-	-	-	0	-				0%		-	-	-		
		T	-	-	-	-								-				
		L	-	-	-	-								-				
SR 303 EBFR and 51st St	SB	R	-	-	-	-	1239	1240	100%	2316		53%		-	0.96	A	13.62	B
		T	242	240	0.6	842					68%		0.38	0.6				
		L	242	259	1.8	397					32%		0.58	1.8				
	WB	R	-	-	-	-	0	-	-			0%		-	-	-		
		T	-	-	-	-								-				
		L	-	-	-	-								-				
	NB	R	238	259	9.3	305	778	780	100%		39%	34%	3.65	9.3	24.28	C		
		T	239	241	33.9	473					61%		20.63	33.9				
		L	-	-	-	-								-				
	EB	R	258	240	23.5	83	299	300	100%		28%	13%	6.51	23.5	38.36	D		
		T	258	259	0.0	0					0%		0.00	0.0				
		L	258	241	44.1	216					72%		31.85	44.1				
SR 303 WBFR and 51st St	SB	R	245	260	17.8	778	1769	1770	100%	3278	44%	54%	7.84	17.8	29.92	C	22.28	C
		T	245	242	39.4	991					56%		22.08	39.4				
		L	-	-	-	-								-				
	WB	R	265	243	10.9	432	821	820	100%		53%	25%	5.75	10.9	23.00	C		
		T	265	260	28.3	141					17%		4.86	28.3				
		L	265	242	41.0	248					30%		12.40	41.0				
	NB	R	-	-	-	-	688	700	98%			21%		-	1.77	A		
		T	241	243	1.7	572					83%		1.40	1.7				
		L	241	260	2.1	116					17%		0.36	2.1				
	EB	R	-	-	-	-	0	-				0%		-	-	-		
		T	-	-	-	-								-				
		L	-	-	-	-								-				
SR 303 EBFR and 43rd St	SB	R	-	-	-	-	1003	1010	99%	2755		36%		-	1.12	A	14.87	B
		T	283	267	0.6	585					58%		0.36	0.6				
		L	283	119	1.8	418					42%		0.75	1.8				
	WB	R	-	-	-	-	0	-	-			0%		-	-	-		
		T	-	-	-	-								-				
		L	-	-	-	-								-				
	NB	R	269	119	22.4	565	950	950	100%		59%	34%	13.31	22.4	25.88	C		
		T	268	282	31.0	385					41%		12.56	31.0				
		L	-	-	-	-								-				
	EB	R	278	267	10.1	237	802	800	100%		30%	29%	2.99	10.1	19.02	B		
		T	278	119	44.0	232					29%		12.72	44.0				
		L	278	282	8.0	333					42%		3.30	8.0				
SR 303 WBFR and 43rd St	SB	R	271	279	29.8	1061	1886	1890	100%	3889	56%	48%	16.74	29.8	35.20	D	27.77	C
		T	271	283	42.2	825					44%		18.45	42.2				
		L	-	-	-	-								-				
	WB	R	281	273	27.0	933	1284	1280	100%		73%	33%	19.59	27.0	30.30	C		
		T	281	279	39.1	174					14%		5.30	39.1				
		L	281	283	39.2	177					14%		5.40	39.2				
	NB	R	-	-	-	-	719	720	100%			18%		-	3.78	A		
		T	282	273	4.1	641					89%		3.62	4.1				
		L	282	279	1.4	78					11%		0.16	1.4				
	EB	R	-	-	-	-	0	-				0%		-	-	-		
		T	-	-	-	-								-				
		L	-	-	-	-								-				
I-17 SBFR and Dixileta Dr/FR Rd	SB	R	295	299	11.8	145	184	180	102%	1705	79%	11%	9.32	11.8	16.40	B	12.54	B
		T	295	297	0.0	0					0%		0.00	0.0				
		L	295	300	33.4	39					21%		7.08	33.4				
	WB	R	-	-	-	-	833	840	99%			49%		-	0.39	A		
		T	332	299	0.3	742					89%		0.30	0.3				
		L	332	297	0.9	91					11%		0.10	0.9				
	NB	R	-	-	-	-	0	-	-			0%		-	-	-		
		T	-	-	-	-								-				
		L	-	-	-	-								-				
	EB	R	296	297	21.2	516	688	690	100%		75%	40%	15.87	21.2	26.21	C		
		T	296	300	41.4	172					25%		10.34	41.4				
		L	-	-	-	-								-				
I-17 NBFR and Dixileta Dr/FR Rd	SB	R	316	63	44.8	190	190	190	100%	1230	100%	15%	44.85	44.8	44.85	D	29.92	C
		T	-	-	-	-								-				
		L	-	-	-	-								-				
	WB	R	-	-	-	-	0	-	-			0%		-	-	-		
		T	-	-	-	-								-				
		L	-	-	-	-								-				
	NB	R	-	-	-	-	828	840	99%			67%		-	30.64	C		
		T	330	61	31.8	186					22%		7.15	31.8				
		L	330	63	30.3	642					78%		23.49	30.3				
	EB	R	-	-	-	-	212	210	101%			17%		-	13.71	B		
		T	-	-	-	-								-				
		L	300	61	13.7	212					100%		13.71	13.7				

APPENDIX D: Existing Traffic Signal Timings

Traffic Signal Timing

Intersection: LPP & Loop 303
Intersection No.: 209
Effective Date: 4/8/2021



Notes:
intersection is running free

	ϕ 1	ϕ 2	ϕ 3	ϕ 4	ϕ 5	ϕ 6	ϕ 7	ϕ 8
Direction	EBLT	WB	SBLT	NB	WBLT	EB	NBLT	SB
Min Green		8	8	15		8	8	15
Walk I		7		7		7		7
Walk II								
Ped Clr		19		16		19		16
Veh Ext		2.0	2.0	5.0		2.0	2.0	5.0
Max I								
Dynamic Max								
Dynamic Step								
Yellow								
Red Clear								
Min Recall	.	.	.	X	.	.	.	X
Max Recall	.	.	.	.	.	.	.	.
Ped Recall	.	.	.	.	.	.	.	.
Dual Entry	.	X	.	X	.	X	.	X
Left Turn Type		.		.		.		.
Non Act I								
Non ActII								

Ring/Barrier Diagram

R1	2	3 4	
R2	6	7 8	

Pre Emption

pre emp	3	4	5	6
dwell	2,6	4,8	2,6	4,8
exit	3,7	2,6	3,7	2,6

*yellow and red times to follow base timing

Day Plan	*Hour*	*Minute*	*Pattern*	*Split Plan*	ϕ 1	ϕ 2	ϕ 3	ϕ 4	ϕ 5	ϕ 6	ϕ 7	ϕ 8	*Cycle Length*	*Offset*
1	06	00	100											

ASC3 MaxView Timing Sheet

MaxView Controller Information

Controller Number	2730
Controller Name	I-17 @ SR-303
Main St.	I-17
Side St.	SR 303
IP Address	10.15.31.48
NTCIP Receive Port	Automatic
NTCIP Send Port	501
NTCIP Timeout	1000

Sequence

Ring	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	1	2	3	4	9	10	13	14	0	0	0	0	0	0	0	0
2	5	6	7	8	11	12	15	16	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Barrier																

Phase In Use/Ped

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
In Use	X	X	X	X	X	X	.	.	.	.	.	.	.	.	.	.
Exclusive ped	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

Load Switch Assignment

			Dim				Auto Flash		
Channel	Source	Type	G	Y	R	D	Y	R	T
1	1	Phase Vehicle	.	.	.	.	.	X	.
2	2	Phase Vehicle	.	.	.	X	.	X	X
3	3	Phase Vehicle	.	.	.	X	.	X	.
4	4	Phase Vehicle	.	.	.	X	.	X	X
5	5	Phase Vehicle	.	.	.	X	.	X	.
6	6	Phase Vehicle	.	.	.	X	.	X	X
7	7	Phase Vehicle	.	.	.	X	.	X	.
8	8	Phase Vehicle	.	.	.	X	.	X	X
9	2	Phase Pedestrian	.	.	.	.	.	.	.
10	4	Phase Pedestrian	.	.	.	.	.	.	.
11	6	Phase Pedestrian	.	.	.	X	.	.	.
12	8	Phase Pedestrian	.	.	.	X	.	.	.
13	1	Overlap	.	.	.	.	.	X	.
14	2	Overlap	.	.	.	X	.	X	X
15	3	Overlap	.	.	.	.	.	X	.
16	4	Overlap	.	.	.	X	.	X	X

Logic Statement Control			
Statement	Command	Statement	Command
1	.	11	.
2	.	12	.
3	.	13	.
4	.	14	.
5	.	15	.
6	.	16	.
7	.	17	.
8	.	18	.
9	.	19	.
10	.	20	.

Conditional Definition, Statement

Condition	Logic	Peer	Peer Fail State	Element	Descriptor	OP	Test
1	IF	0	F	CTR ON PHASE CHECK	3	IS	ON
2	AND	0	F	VEH RED ON PHASE	5	IS	OFF
3		0	F		0	IS	0
4		0	F		0	IS	0
5		0	F		0	IS	0
6		0	F		0	IS	0
7		0	F		0	IS	0
8		0	F		0	IS	0
9		0	F		0	IS	0
10		0	F		0	IS	0

Then, Statement 1

Execution	Op	Element	Descriptor	Set
1	Then	DET SET VEH 17-32	6	ON
2			0	OFF
3			0	OFF
4			0	OFF
5			0	OFF

Else, Statement 1

Alternate	Op	Element	Descriptor	Set
1	Else		0	OFF
2			0	OFF
3			0	OFF
4			0	OFF
5			0	OFF

Conditional Definition, Statement

Condition	Logic	Peer	Peer Fail State	Element	Descriptor	OP	Test
1	IF	0	F	CTR ON PHASE CHECK	4	IS	ON
2	AND	0	F	VEH RED ON PHASE	1	IS	OFF
3		0	F		0	IS	0
4		0	F		0	IS	0
5		0	F		0	IS	0
6		0	F		0	IS	0
7		0	F		0	IS	0
8		0	F		0	IS	0
9		0	F		0	IS	0
10		0	F		0	IS	0

Then, Statement 2

Execution	Op	Element	Descriptor	Set
1	Then	DET SET VEH 1-16	2	ON
2			0	OFF
3			0	OFF
4			0	OFF
5			0	OFF

Else, Statement 2

Alternate	Op	Element	Descriptor	Set
1	Else		0	OFF
2			0	OFF
3			0	OFF
4			0	OFF
5			0	OFF

Conditional Definition, Statement

Condition	Logic	Peer	Peer Fail State	Element	Descriptor	OP	Test
1	IF	0	F	CTR PHASE TIMING	0	IS	ON
2		0	F		0	IS	0
3		0	F		0	IS	0
4		0	F		0	IS	0
5		0	F		0	IS	0
6		0	F		0	IS	0
7		0	F		0	IS	0
8		0	F		0	IS	0
9		0	F		0	IS	0
10		0	F		0	IS	0

Then, Statement 3

Execution	Op	Element	Descriptor	Set
1	Then	CTR OMIT PHASE	3	ON
2			0	OFF
3			0	OFF
4			0	OFF
5			0	OFF

Else, Statement 3

Alternate	Op	Element	Descriptor	Set
1	Else		0	OFF
2			0	OFF
3			0	OFF
4			0	OFF
5			0	OFF

Conditional Definition, Statement

Condition	Logic	Peer	Peer Fail State	Element	Descriptor	OP	Test
1	IF	0	F	CTR PHASE TIMING	1	IS	ON
2		0	F		0	IS	0
3		0	F		0	IS	0
4		0	F		0	IS	0
5		0	F		0	IS	0
6		0	F		0	IS	0
7		0	F		0	IS	0
8		0	F		0	IS	0
9		0	F		0	IS	0
10		0	F		0	IS	0

Then, Statement 4

Execution	Op	Element	Descriptor	Set
1	Then	CTR OMIT PHASE	4	ON
2			0	OFF
3			0	OFF
4			0	OFF
5			0	OFF

Else, Statement 4

Alternate	Op	Element	Descriptor	Set
1	Else		0	OFF
2			0	OFF
3			0	OFF
4			0	OFF
5			0	OFF

Conditional Definition, Statement

Condition	Logic	Peer	Peer Fail State	Element	Descriptor	OP	Test
1	IF	0	F	VEH OVERLAP	4	IS	OFF
2	OR	0	F	VEH OVERLAP	4	IS	ON
3		0	F		0	IS	0
4		0	F		0	IS	0
5		0	F		0	IS	0
6		0	F		0	IS	0
7		0	F		0	IS	0
8		0	F		0	IS	0
9		0	F		0	IS	0
10		0	F		0	IS	0

Then, Statement 5

Execution	Op	Element	Descriptor	Set
1	Then	OL OMIT OVLP A-P	4	ON
2			0	OFF
3			0	OFF
4			0	OFF
5			0	OFF

Else, Statement 5

Alternate	Op	Element	Descriptor	Set
1	Else		0	OFF
2			0	OFF
3			0	OFF
4			0	OFF
5			0	OFF

Conditional Definition, Statement

Condition	Logic	Peer	Peer Fail State	Element	Descriptor	OP	Test
1	IF	0	F		0	IS	0
2		0	F		0	IS	0
3		0	F		0	IS	0
4		0	F		0	IS	0
5		0	F		0	IS	0
6		0	F		0	IS	0
7		0	F		0	IS	0
8		0	F		0	IS	0
9		0	F		0	IS	0
10		0	F		0	IS	0

Then, Statement 6

Execution	Op	Element	Descriptor	Set
1	Then		0	OFF
2			0	OFF
3			0	OFF
4			0	OFF
5			0	OFF

Else, Statement 6

Alternate	Op	Element	Descriptor	Set
1	Else		0	OFF
2			0	OFF
3			0	OFF
4			0	OFF
5			0	OFF

Conditional Definition, Statement

Condition	Logic	Peer	Peer Fail State	Element	Descriptor	OP	Test
1	IF	0	F		0	IS	0
2		0	F		0	IS	0
3		0	F		0	IS	0
4		0	F		0	IS	0
5		0	F		0	IS	0
6		0	F		0	IS	0
7		0	F		0	IS	0
8		0	F		0	IS	0
9		0	F		0	IS	0
10		0	F		0	IS	0

Then, Statement 7

Execution	Op	Element	Descriptor	Set
1	Then		0	OFF
2			0	OFF
3			0	OFF
4			0	OFF
5			0	OFF

Else, Statement 7

Alternate	Op	Element	Descriptor	Set
1	Else		0	OFF
2			0	OFF
3			0	OFF
4			0	OFF
5			0	OFF

Conditional Definition, Statement

Condition	Logic	Peer	Peer Fail State	Element	Descriptor	OP	Test
1	IF	0	F		0	IS	0
2		0	F		0	IS	0
3		0	F		0	IS	0
4		0	F		0	IS	0
5		0	F		0	IS	0
6		0	F		0	IS	0
7		0	F		0	IS	0
8		0	F		0	IS	0
9		0	F		0	IS	0
10		0	F		0	IS	0

Then, Statement 8

Execution	Op	Element	Descriptor	Set
1	Then		0	OFF
2			0	OFF
3			0	OFF
4			0	OFF
5			0	OFF

Else, Statement 8

Alternate	Op	Element	Descriptor	Set
1	Else		0	OFF
2			0	OFF
3			0	OFF
4			0	OFF
5			0	OFF

Conditional Definition, Statement

Condition	Logic	Peer	Peer Fail State	Element	Descriptor	OP	Test
1	IF	0	F		0	IS	0
2		0	F		0	IS	0
3		0	F		0	IS	0
4		0	F		0	IS	0
5		0	F		0	IS	0
6		0	F		0	IS	0
7		0	F		0	IS	0
8		0	F		0	IS	0
9		0	F		0	IS	0
10		0	F		0	IS	0

Then, Statement 9

Execution	Op	Element	Descriptor	Set
1	Then		0	OFF
2			0	OFF
3			0	OFF
4			0	OFF
5			0	OFF

Else, Statement 9

Alternate	Op	Element	Descriptor	Set
1	Else		0	OFF
2			0	OFF
3			0	OFF
4			0	OFF
5			0	OFF

Conditional Definition, Statement 10

Condition	Logic	Peer	Peer Fail State	Element	Descriptor	OP	Test
1	IF	0	F		0	IS	0
2		0	F		0	IS	0
3		0	F		0	IS	0
4		0	F		0	IS	0
5		0	F		0	IS	0
6		0	F		0	IS	0
7		0	F		0	IS	0
8		0	F		0	IS	0
9		0	F		0	IS	0
10		0	F		0	IS	0

Then, Statement 10

Execution	Op	Element	Descriptor	Set
1	Then		0	OFF
2			0	OFF
3			0	OFF
4			0	OFF
5			0	OFF

Else, Statement 10

Alternate	Op	Element	Descriptor	Set
1	Else		0	OFF
2			0	OFF
3			0	OFF
4			0	OFF
5			0	OFF

Conditional Definition, Statement 11

Condition	Logic	Peer	Peer Fail State	Element	Descriptor	OP	Test
1	IF	0	F		0	IS	0
2		0	F		0	IS	0
3		0	F		0	IS	0
4		0	F		0	IS	0
5		0	F		0	IS	0
6		0	F		0	IS	0
7		0	F		0	IS	0
8		0	F		0	IS	0
9		0	F		0	IS	0
10		0	F		0	IS	0

Then, Statement 11

Execution	Op	Element	Descriptor	Set
1	Then		0	OFF
2			0	OFF
3			0	OFF
4			0	OFF
5			0	OFF

Else, Statement 11

Alternate	Op	Element	Descriptor	Set
1	Else		0	OFF
2			0	OFF
3			0	OFF
4			0	OFF
5			0	OFF

Conditional Definition, Statement 12

Condition	Logic	Peer	Peer Fail State	Element	Descriptor	OP	Test
1	IF	0	F		0	IS	0
2		0	F		0	IS	0
3		0	F		0	IS	0
4		0	F		0	IS	0
5		0	F		0	IS	0
6		0	F		0	IS	0
7		0	F		0	IS	0
8		0	F		0	IS	0
9		0	F		0	IS	0
10		0	F		0	IS	0

Then, Statement 12

Execution	Op	Element	Descriptor	Set
1	Then		0	OFF
2			0	OFF
3			0	OFF
4			0	OFF
5			0	OFF

Else, Statement 12

Alternate	Op	Element	Descriptor	Set
1	Else		0	OFF
2			0	OFF
3			0	OFF
4			0	OFF
5			0	OFF

Conditional Definition, Statement 13

Condition	Logic	Peer	Peer Fail State	Element	Descriptor	OP	Test
1	IF	0	F		0	IS	0
2		0	F		0	IS	0
3		0	F		0	IS	0
4		0	F		0	IS	0
5		0	F		0	IS	0
6		0	F		0	IS	0
7		0	F		0	IS	0
8		0	F		0	IS	0
9		0	F		0	IS	0
10		0	F		0	IS	0

Then, Statement 13

Execution	Op	Element	Descriptor	Set
1	Then		0	OFF
2			0	OFF
3			0	OFF
4			0	OFF
5			0	OFF

Else, Statement 13

Alternate	Op	Element	Descriptor	Set
1	Else		0	OFF
2			0	OFF
3			0	OFF
4			0	OFF
5			0	OFF

Conditional Definition, Statement 14

Condition	Logic	Peer	Peer Fail State	Element	Descriptor	OP	Test
1	IF	0	F		0	IS	0
2		0	F		0	IS	0
3		0	F		0	IS	0
4		0	F		0	IS	0
5		0	F		0	IS	0
6		0	F		0	IS	0
7		0	F		0	IS	0
8		0	F		0	IS	0
9		0	F		0	IS	0
10		0	F		0	IS	0

Then, Statement 14

Execution	Op	Element	Descriptor	Set
1	Then		0	OFF
2			0	OFF
3			0	OFF
4			0	OFF
5			0	OFF

Else, Statement 14

Alternate	Op	Element	Descriptor	Set
1	Else		0	OFF
2			0	OFF
3			0	OFF
4			0	OFF
5			0	OFF

Conditional Definition, Statement 15

Condition	Logic	Peer	Peer Fail State	Element	Descriptor	OP	Test
1	IF	0	F		0	IS	0
2		0	F		0	IS	0
3		0	F		0	IS	0
4		0	F		0	IS	0
5		0	F		0	IS	0
6		0	F		0	IS	0
7		0	F		0	IS	0
8		0	F		0	IS	0
9		0	F		0	IS	0
10		0	F		0	IS	0

Then, Statement 15

Execution	Op	Element	Descriptor	Set
1	Then		0	OFF
2			0	OFF
3			0	OFF
4			0	OFF
5			0	OFF

Else, Statement 15

Alternate	Op	Element	Descriptor	Set
1	Else		0	OFF
2			0	OFF
3			0	OFF
4			0	OFF
5			0	OFF

Conditional Definition, Statement 16

Condition	Logic	Peer	Peer Fail State	Element	Descriptor	OP	Test
1	IF	0	F		0	IS	0
2		0	F		0	IS	0
3		0	F		0	IS	0
4		0	F		0	IS	0
5		0	F		0	IS	0
6		0	F		0	IS	0
7		0	F		0	IS	0
8		0	F		0	IS	0
9		0	F		0	IS	0
10		0	F		0	IS	0

Then, Statement 16

Execution	Op	Element	Descriptor	Set
1	Then		0	OFF
2			0	OFF
3			0	OFF
4			0	OFF
5			0	OFF

Else, Statement 16

Alternate	Op	Element	Descriptor	Set
1	Else		0	OFF
2			0	OFF
3			0	OFF
4			0	OFF
5			0	OFF

Conditional Definition, Statement 17

Condition	Logic	Peer	Peer Fail State	Element	Descriptor	OP	Test
1	IF	0	F		0	IS	0
2		0	F		0	IS	0
3		0	F		0	IS	0
4		0	F		0	IS	0
5		0	F		0	IS	0
6		0	F		0	IS	0
7		0	F		0	IS	0
8		0	F		0	IS	0
9		0	F		0	IS	0
10		0	F		0	IS	0

Then, Statement 17

Execution	Op	Element	Descriptor	Set
1	Then		0	OFF
2			0	OFF
3			0	OFF
4			0	OFF
5			0	OFF

Else, Statement 17

Alternate	Op	Element	Descriptor	Set
1	Else		0	OFF
2			0	OFF
3			0	OFF
4			0	OFF
5			0	OFF

Conditional Definition, Statement 18

Condition	Logic	Peer	Peer Fail State	Element	Descriptor	OP	Test
1	IF	0	F		0	IS	0
2		0	F		0	IS	0
3		0	F		0	IS	0
4		0	F		0	IS	0
5		0	F		0	IS	0
6		0	F		0	IS	0
7		0	F		0	IS	0
8		0	F		0	IS	0
9		0	F		0	IS	0
10		0	F		0	IS	0

Then, Statement 18

Execution	Op	Element	Descriptor	Set
1	Then		0	OFF
2			0	OFF
3			0	OFF
4			0	OFF
5			0	OFF

Else, Statement 18

Alternate	Op	Element	Descriptor	Set
1	Else		0	OFF
2			0	OFF
3			0	OFF
4			0	OFF
5			0	OFF

Conditional Definition, Statement 19

Condition	Logic	Peer	Peer Fail State	Element	Descriptor	OP	Test
1	IF	0	F		0	IS	0
2		0	F		0	IS	0
3		0	F		0	IS	0
4		0	F		0	IS	0
5		0	F		0	IS	0
6		0	F		0	IS	0
7		0	F		0	IS	0
8		0	F		0	IS	0
9		0	F		0	IS	0
10		0	F		0	IS	0

Then, Statement 19

Execution	Op	Element	Descriptor	Set
1	Then		0	OFF
2			0	OFF
3			0	OFF
4			0	OFF
5			0	OFF

Else, Statement 19

Alternate	Op	Element	Descriptor	Set
1	Else		0	OFF
2			0	OFF
3			0	OFF
4			0	OFF
5			0	OFF

Conditional Definition, Statement 20

Condition	Logic	Peer	Peer Fail State	Element	Descriptor	OP	Test
1	IF	0	F		0	IS	0
2		0	F		0	IS	0
3		0	F		0	IS	0
4		0	F		0	IS	0
5		0	F		0	IS	0
6		0	F		0	IS	0
7		0	F		0	IS	0
8		0	F		0	IS	0
9		0	F		0	IS	0
10		0	F		0	IS	0

Then, Statement 20

Execution	Op	Element	Descriptor	Set
1	Then		0	OFF
2			0	OFF
3			0	OFF
4			0	OFF
5			0	OFF

Else, Statement 20

Alternate	Op	Element	Descriptor	Set
1	Else		0	OFF
2			0	OFF
3			0	OFF
4			0	OFF
5			0	OFF

Controller Timing Data

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Min Green	7	12	7	7	12	7	0	0	5	5	5	5	5	5	5	5
Bike Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cond Service Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Delay Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk	7	0	7	7	7	0	0	0	0	10	0	10	0	10	0	10
Walk2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear	18	0	16	15	15	0	0	0	0	16	0	16	0	16	0	16
Ped Clear 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Veh Ext	2.0	2.5	2.5	3.0	2.5	2.5	0.0	0.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Veh Ext2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max1	25	30	35	25	45	15	0	0	35	35	35	35	35	35	35	35
Max2	0	0	20	70	0	0	0	0	40	40	40	40	40	40	40	40
Max3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dynamic Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dynamic Max Step	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	4.3	4.3	4.3	4.3	4.3	4.3	0.0	0.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Red Clear	1.0	3.6	2.1	2.2	1.0	3.5	0.0	0.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Red Max	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red Revert	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Actuations Before	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Added Initial	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Initial	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Time Before Reduce	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cars Before Reduce	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Reduce By	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Min Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Overlap Times

Overlap	Type	Lag GRN	Yellow	Red	Advance GRN
1	Other/Econolite	0.0	0.0	0.0	0.0
2	Other/Econolite	0.0	0.0	0.0	0.0
3	Other/Econolite	0.0	0.0	0.0	0.0
4	Other/Econolite	0.0	0.0	0.0	0.0
5	Other/Econolite	0.0	0.0	0.0	0.0
6	Other/Econolite	0.0	0.0	0.0	0.0
7	Other/Econolite	0.0	0.0	0.0	0.0
8	Other/Econolite	0.0	0.0	0.0	0.0
9	Other/Econolite	0.0	0.0	0.0	0.0
10	Other/Econolite	0.0	0.0	0.0	0.0
11	Other/Econolite	0.0	0.0	0.0	0.0
12	Other/Econolite	0.0	0.0	0.0	0.0
13	Other/Econolite	0.0	0.0	0.0	0.0
14	Other/Econolite	0.0	0.0	0.0	0.0
15	Other/Econolite	0.0	0.0	0.0	0.0
16	Other/Econolite	0.0	0.0	0.0	0.0

Overlap Configuration

Overlap	1															
Phases	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Included	.	.	.	X	X	X	.	.	.	.	.	.	.	.	.	.
Protected	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Modifier	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Ped Protect	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Not Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Lag X Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Lag 2 Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

Overlap	2															
Phases	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Included	.	.	.	X	.	X	.	.	.	.	.	.	.	.	.	.
Protected	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Modifier	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Ped Protect	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Not Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Lag X Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Lag 2 Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

Overlap	3															
Phases	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Included	.	X	X	.	.	.	.	.	.	.	.	.	.	.	.	.
Protected	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Modifier	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Ped Protect	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Not Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Lag X Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Lag 2 Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

Overlap	4															
Phases	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Included	X	X	X	.	.	.	.	.	.	.	.	.	.	.	.	.
Protected	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Modifier	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Ped Protect	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Not Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Lag X Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Lag 2 Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

Overlap	5															
Phases	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Included	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Protected	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Modifier	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Ped Protect	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Not Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Lag X Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Lag 2 Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

Overlap	6															
Phases	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Included	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Protected	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Modifier	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Ped Protect	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Not Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Lag X Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Lag 2 Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

Overlap	7															
Phases	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Included	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Protected	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Modifier	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Ped Protect	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Not Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Lag X Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Lag 2 Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

Overlap	8															
Phases	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Included	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Protected	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Modifier	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Ped Protect	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Not Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Lag X Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Lag 2 Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

Overlap	9															
Phases	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Included	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Protected	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Modifier	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Ped Protect	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Not Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Lag X Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Lag 2 Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

Overlap	10															
Phases	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Included	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Protected	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Modifier	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Ped Protect	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Not Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Lag X Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Lag 2 Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

Overlap	11															
Phases	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Included	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Protected	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Modifier	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Ped Protect	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Not Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Lag X Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Lag 2 Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

Overlap	12															
Phases	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Included	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Protected	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Modifier	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Ped Protect	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Not Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Lag X Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Lag 2 Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

Overlap	13															
Phases	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Included	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Protected	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Modifier	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Ped Protect	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Not Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Lag X Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Lag 2 Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

Overlap	14															
Phases	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Included	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Protected	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Modifier	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Ped Protect	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Not Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Lag X Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Lag 2 Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

Overlap	15															
Phases	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Included	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Protected	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Modifier	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Ped Protect	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Not Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Lag X Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Lag 2 Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

Overlap	16															
Phases	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Included	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Protected	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Modifier	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Ped Protect	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Not Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Lag X Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Lag 2 Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

Phase Table

Phases	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Guar Passage	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Non Act I	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Non Act II	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Dual Entry	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Cond Reservice	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Ped Reservice	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Act Rest in Walk	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Flashing Walk	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Ped Clr thru Yellow	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Ped Clr thru Red	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Immed Gap Red	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

Options

Enable Pretimed Mode	Free Input Enables Pretimed
Disabled	Disabled

Pre-Timed Phases

Phases	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

Phases Recall

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Locking Detector	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Vehicle Detector	.	X	X	.	X	.	.	.	.	.	.	.	.	.	.	.
Ped Detector	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Max Recall	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Soft Recall	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
No Rest	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Added Int Calc	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

Coordination Options

System Source	Hardware	ECPI Coord	Enabled
Transition	Shortway	System Format	Standard
Dwell Add Time	0	Max Select	MaxInhibit
Delay Coord Walk	Disabled	Call Use Ped Time	Enabled
Offset Ref	Lead	Ped Reservice	Disabled
Ped Recall	Disabled	FO Add Initial	Disabled
Local Zero Override	Disabled	Multi Sync	Disabled
Re-sync Count	0	Force Mode	Fixed

Patterns

Pattern	Split #	Cycle	Offset	Phase Splits																VPerm1	VPerm2	VPD	XPatt
				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16				
1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	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
16	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21	21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22	22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23	23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24	24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26	26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27	27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28	28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29	29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30	30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
31	31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
32	32	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
33	33	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
34	34	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
35	35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
36	36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
37	37	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
38	38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
39	39	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
40	40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
41	41	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
42	42	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
43	43	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
44	44	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
45	45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
46	46	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
47	47	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Pattern	Split #	Cycle	Offset	Phase Splits																VPerm1	VPerm2	VPD	XPatt
				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16				
48	48	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
49	49	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
50	50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
51	51	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
52	52	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
53	53	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
54	54	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
55	55	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
56	56	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
57	57	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
58	58	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
59	59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
60	60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
61	61	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
62	62	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
63	63	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
64	64	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
65	65	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
66	66	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
67	67	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
68	68	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
69	69	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
70	70	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
71	71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
72	72	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
73	73	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
74	74	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
75	75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
76	76	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
77	77	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
78	78	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
79	79	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
80	80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
81	81	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
82	82	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
83	83	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
84	84	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
85	85	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
86	86	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
87	87	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
88	88	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
89	89	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
90	90	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
91	91	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
92	92	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
93	93	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
94	94	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
95	95	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
96	96	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
97	97	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
98	98	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
99	99	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
100	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
101	101	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
102	102	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
103	103	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
104	104	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
105	105	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Pattern	Split #	Cycle	Offset	Phase Splits																VPerm1	VPerm2	VPD	XPatt
				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16				
106	106	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
107	107	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
108	108	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
109	109	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
110	110	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
111	111	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
112	112	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
113	113	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
114	114	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
115	115	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
116	116	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
117	117	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
118	118	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
119	119	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
120	120	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Preemption

Preempt	1															
Phase/Overlap	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Track Phases	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Track Overlaps	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Dwell Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Dwell Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Cycle Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Cycle Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Enable Trail	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Exit Call	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Special Function	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Dwell Ped	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Cycle Ped	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Exit Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

Preempt	2															
Phase/Overlap	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Track Phases	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Track Overlaps	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Dwell Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Dwell Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Cycle Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Cycle Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Enable Trail	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Exit Call	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Special Function	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Dwell Ped	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Cycle Ped	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Exit Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

Preempt	3															
Phase/Overlap	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Track Phases	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Track Overlaps	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Dwell Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Dwell Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Cycle Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Cycle Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Enable Trail	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Exit Call	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Special Function	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Dwell Ped	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Cycle Ped	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Exit Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

Preempt	4															
Phase/Overlap	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Track Phases	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Track Overlaps	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Dwell Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Dwell Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Cycle Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Cycle Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Enable Trail	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Exit Call	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Special Function	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Dwell Ped	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Cycle Ped	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Exit Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

Preempt	5															
Phase/Overlap	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Track Phases	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Track Overlaps	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Dwell Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Dwell Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Cycle Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Cycle Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Enable Trail	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Exit Call	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Special Function	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Dwell Ped	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Cycle Ped	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Exit Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

Preempt	6															
Phase/Overlap	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Track Phases	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Track Overlaps	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Dwell Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Dwell Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Cycle Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Cycle Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Enable Trail	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Exit Call	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Special Function	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Dwell Ped	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Cycle Ped	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Exit Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

Preempt	7															
Phase/Overlap	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Track Phases	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Track Overlaps	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Dwell Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Dwell Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Cycle Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Cycle Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Enable Trail	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Exit Call	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Special Function	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Dwell Ped	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Cycle Ped	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Exit Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

Preempt	8															
Phase/Overlap	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Track Phases	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Track Overlaps	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Dwell Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Dwell Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Cycle Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Cycle Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Enable Trail	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Exit Call	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Special Function	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Dwell Ped	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Cycle Ped	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Exit Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

Preempt	9															
Phase/Overlap	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Track Phases	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Track Overlaps	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Dwell Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Dwell Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Cycle Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Cycle Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Enable Trail	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Exit Call	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Special Function	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Dwell Ped	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Cycle Ped	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Exit Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

Preempt	10															
Phase/Overlap	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Track Phases	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Track Overlaps	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Dwell Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Dwell Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Cycle Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Cycle Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Enable Trail	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Exit Call	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Special Function	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Dwell Ped	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Cycle Ped	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Exit Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

Preempt Configuration

Preempt	1	2	3	4	5
Enable	No	No	No	No	No
Term Overlap	Disabled	Disabled	Disabled	Disabled	Disabled
Ped Dark	Disabled	Disabled	Disabled	Disabled	Disabled
Link	0	0	0	0	0
Exit Timing Plan	0	0	0	0	0
Delay	0	0	0	0	0
Duration	0	0	0	0	0
Ped Clear thru Yellow	Disabled	Disabled	Disabled	Disabled	Disabled
Track Clr Reservice	Disabled	Disabled	Disabled	Disabled	Disabled
Exit Fl Color	Red	Green	Green	Green	Green
Reservice Time	0	0	0	0	0
Interlock	Disabled	Disabled	Disabled	Disabled	Disabled
Inhibit	0	0	0	0	0
Clear>Green	Disabled	Disabled	Disabled	Disabled	Disabled
Terminate Phase	Disabled	Disabled	Disabled	Disabled	Disabled
Dwell Flash	Off	Off	Off	Off	Off
Pre Exit to Coord	Disabled	Disabled	Disabled	Disabled	Disabled
Pre Active Output	ON	ON	ON	ON	ON
Other Pri/Preempt	.	.	.	.	.
Pre Active Dwell	Disabled	Disabled	Disabled	Disabled	Disabled
Non-Pri Preempt	.	.	.	.	.

Preempt	6	7	8	9	10
Enable	No	No	No	No	No
Term Overlap	Disabled	Disabled	Disabled	Disabled	Disabled
Ped Dark	Disabled	Disabled	Disabled	Disabled	Disabled
Link	0	0	0	0	0
Exit Timing Plan	0	0	0	0	0
Delay	0	0	0	0	0
Duration	0	0	0	0	0
Ped Clear thru Yellow	Disabled	Disabled	Disabled	Disabled	Disabled
Track Clr Reservice	Disabled	Disabled	Disabled	Disabled	Disabled
Exit Fl Color	Green	Green	Green	Green	Green
Reservice Time	0	0	0	0	0
Interlock	Disabled	Disabled	Disabled	Disabled	Disabled
Inhibit	0	0	0	0	0
Clear>Green	Disabled	Disabled	Disabled	Disabled	Disabled
Terminate Phase	Disabled	Disabled	Disabled	Disabled	Disabled
Dwell Flash	Off	Off	Off	Off	Off
Pre Exit to Coord	Disabled	Disabled	Disabled	Disabled	Disabled
Pre Active Output	ON	ON	ON	ON	ON
Other Pri/Preempt	.	.	.	.	.
Pre Active Dwell	Disabled	Disabled	Disabled	Disabled	Disabled
Non-Pri Preempt	.	.	.	.	.

Preempt Settings

Preempt	1	2	3	4	5	6	7	8	9	10
Detector Lock	.	.	.	.	.	.	.	.	.	.
Preempt Override Fl	.	.	.	.	.	.	.	.	.	.
Preempt Override	.	.	.	.	.	.	.	.	.	.
Flash Dwell	.	.	.	.	.	.	.	.	.	.

Free During Preempt

Preempt	1	2	3	4	5	6	7	8	9	10
Ring 1	.	.	.	.	.	.	.	.	.	.
Ring 2	.	.	.	.	.	.	.	.	.	.
Ring 3	.	.	.	.	.	.	.	.	.	.
Ring 4	.	.	.	.	.	.	.	.	.	.

Preempt Times

Preempt	1	2	3	4	5	6	7	8	9	10
Entrance TM Walk	0	0	0	0	0	0	0	0	0	0
Entrance TM Ped Clr	255	255	255	255	255	255	255	255	255	255
Entrance TM Min Grn	5	5	5	5	5	5	5	5	5	5
Entrance TM Yellow	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Entrance TM Red Clr	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Track Clear - Min Grn	0	0	0	0	0	0	0	0	0	0
Track Clear - Yellow	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Track Clear - Red	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Dwell/Cycl-Min Dwell	0	0	0	0	0	0	0	0	0	0
Dwell/Cycl-Pre Exit	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dwell/Cycl-Max Time	0	0	0	0	0	0	0	0	0	0
Dwell/Cycl-Exit Yellow	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Dwell/Cycl-Exit Red	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0

Enable Preempt Filtering

Preempt	1	2	3	4	5	6	7	8	9	10
Solid	ByPassed	ByPassed	Preempt 3	Preempt 4	Preempt 5	Preempt 6	ByPassed	ByPassed	ByPassed	ByPassed
Pulse	ByPassed	ByPassed	Preempt 7	Preempt 8	Preempt 9	Preempt 10	ByPassed	ByPassed	ByPassed	ByPassed

TSP Plans

TSP	1	2	3	4	5	6
Enabled	Disabled	Disabled	Disabled	Disabled	Disabled	Disabled
Pulsing Signal	Solid	Solid	Solid	Solid	Solid	Solid
Det Lock	No	No	No	No	No	No
Delay Time In Sec	0	0	0	0	0	0
Max Time In Sec	0	0	0	0	0	0
Enabled Reservice	No	No	No	No	No	No
Inhibit Delay	No	No	No	No	No	No
Inhibited By Nic SF	0	0	0	0	0	0
Reservice Cycle	0	0	0	0	0	0
Bus Heading	NB	SB	EB	WB	Not Mapped	Not Mapped
Free Pattern	0	0	0	0	0	0
Split Pattern	0	0	0	0	0	0
Description	on of TSP/S	on of TSP/S	on of TSP/S	on of TSP/S	on of TSP/S	on of TSP/S

TSP/SCP Phases

TSP	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
3	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
4	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
5	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
6	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

TSP Phase Omit

TSP	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
3	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
4	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
5	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
6	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

TSP Ped Omit

TSP	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
3	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
4	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
5	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
6	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

Clock/Calendar Data

Enable Action Plan	0	Sync Reference	Reference Time
Sync Ref Time - Hour	0	Daylight Savings Time	Disable DST
Sync Ref Time - Min	0		

Time Reset Input Set Time - Hour	3
Time Reset Input Set Time - Miin	30
Time Reset Input Set Time - Sec	0

Day Plan 1

Month of Year						Days of Week							Days of Month									
J	F	M	A	M	J	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10
X	X	X	X	X	X	.	X	X	X	X	X	.	X	X	X	X	X	X	X	X	X	X
J	A	S	O	N	D								11	12	13	14	15	16	17	18	19	20
X	X	X	X	X	X								X	X	X	X	X	X	X	X	X	X
													21	22	23	24	25	26	27	28	29	30	31
													X	X	X	X	X	X	X	X	X	X	X

Day Plan 2

Month of Year						Days of Week							Days of Month									
J	F	M	A	M	J	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10
X	X	X	X	X	X	X	.	.	.	.	.	X	X	X	X	X	X	X	X	X	X	X
J	A	S	O	N	D								11	12	13	14	15	16	17	18	19	20
X	X	X	X	X	X								X	X	X	X	X	X	X	X	X	X
													21	22	23	24	25	26	27	28	29	30	31
													X	X	X	X	X	X	X	X	X	X	X

Day Plan 3

Month of Year						Days of Week							Days of Month									
J	F	M	A	M	J	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
J	A	S	O	N	D								11	12	13	14	15	16	17	18	19	20
.	.	.	.	.	.								.	.	.	.	.	.	.	.	.	.
													21	22	23	24	25	26	27	28	29	30	31
													.	.	.	.	.	.	.	.	.	.	.

Day Plan 4

Month of Year						Days of Week							Days of Month									
J	F	M	A	M	J	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
J	A	S	O	N	D								11	12	13	14	15	16	17	18	19	20
.	.	.	.	.	.								.	.	.	.	.	.	.	.	.	.
													21	22	23	24	25	26	27	28	29	30	31
													.	.	.	.	.	.	.	.	.	.	.

Day Plan 5

Month of Year						Days of Week							Days of Month									
J	F	M	A	M	J	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
J	A	S	O	N	D								11	12	13	14	15	16	17	18	19	20
.	.	.	.	.	.								.	.	.	.	.	.	.	.	.	.
													21	22	23	24	25	26	27	28	29	30	31
													.	.	.	.	.	.	.	.	.	.	.

Day Plan 6

Month of Year						Days of Week							Days of Month									
J	F	M	A	M	J	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
J	A	S	O	N	D								11	12	13	14	15	16	17	18	19	20
.	.	.	.	.	.								.	.	.	.	.	.	.	.	.	.
													21	22	23	24	25	26	27	28	29	30	31
													.	.	.	.	.	.	.	.	.	.	.

Day Plan	7

Month of Year						Days of Week							Days of Month									
J	F	M	A	M	J	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
J	A	S	O	N	D								11	12	13	14	15	16	17	18	19	20
.	.	.	.	.	.								.	.	.	.	.	.	.	.	.	.
													21	22	23	24	25	26	27	28	29	30	31
													.	.	.	.	.	.	.	.	.	.	.

Day Plan	8

Month of Year						Days of Week							Days of Month									
J	F	M	A	M	J	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
J	A	S	O	N	D								11	12	13	14	15	16	17	18	19	20
.	.	.	.	.	.								.	.	.	.	.	.	.	.	.	.
													21	22	23	24	25	26	27	28	29	30	31
													.	.	.	.	.	.	.	.	.	.	.

Day Plan	9

Month of Year						Days of Week							Days of Month									
J	F	M	A	M	J	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
J	A	S	O	N	D								11	12	13	14	15	16	17	18	19	20
.	.	.	.	.	.								.	.	.	.	.	.	.	.	.	.
													21	22	23	24	25	26	27	28	29	30	31
													.	.	.	.	.	.	.	.	.	.	.

Day Plans

Day Plan	1			Day Plan	2			Day Plan	3		
Event	Action	Hour	Min.	Event	Action	Hour	Min.	Event	Action	Hour	Min.
1	100	00	00	1	0	00	00	1	0	00	00
2	2	14	30	2	0	00	00	2	0	00	00
3	100	20	00	3	0	00	00	3	0	00	00
4	0	00	00	4	0	00	00	4	0	00	00
5	0	00	00	5	0	00	00	5	0	00	00
6	0	00	00	6	0	00	00	6	0	00	00
7	0	00	00	7	0	00	00	7	0	00	00
8	0	00	00	8	0	00	00	8	0	00	00
9	0	00	00	9	0	00	00	9	0	00	00
10	0	00	00	10	0	00	00	10	0	00	00
11	0	00	00	11	0	00	00	11	0	00	00
12	0	00	00	12	0	00	00	12	0	00	00
13	0	00	00	13	0	00	00	13	0	00	00
14	0	00	00	14	0	00	00	14	0	00	00
15	0	00	00	15	0	00	00	15	0	00	00
16	0	00	00	16	0	00	00	16	0	00	00
17	0	00	00	17	0	00	00	17	0	00	00
18	0	00	00	18	0	00	00	18	0	00	00
19	0	00	00	19	0	00	00	19	0	00	00
20	0	00	00	20	0	00	00	20	0	00	00

Day Plan	4			Day Plan	5			Day Plan	6		
Event	Action	Hour	Min.	Event	Action	Hour	Min.	Event	Action	Hour	Min.
1	0	00	00	1	0	00	00	1	0	00	00
2	0	00	00	2	0	00	00	2	0	00	00
3	0	00	00	3	0	00	00	3	0	00	00
4	0	00	00	4	0	00	00	4	0	00	00
5	0	00	00	5	0	00	00	5	0	00	00
6	0	00	00	6	0	00	00	6	0	00	00
7	0	00	00	7	0	00	00	7	0	00	00
8	0	00	00	8	0	00	00	8	0	00	00
9	0	00	00	9	0	00	00	9	0	00	00
10	0	00	00	10	0	00	00	10	0	00	00
11	0	00	00	11	0	00	00	11	0	00	00
12	0	00	00	12	0	00	00	12	0	00	00
13	0	00	00	13	0	00	00	13	0	00	00
14	0	00	00	14	0	00	00	14	0	00	00
15	0	00	00	15	0	00	00	15	0	00	00
16	0	00	00	16	0	00	00	16	0	00	00
17	0	00	00	17	0	00	00	17	0	00	00
18	0	00	00	18	0	00	00	18	0	00	00
19	0	00	00	19	0	00	00	19	0	00	00
20	0	00	00	20	0	00	00	20	0	00	00

Day Plan	7			Day Plan	8			Day Plan	9		
Event	Action	Hour	Min.	Event	Action	Hour	Min.	Event	Action	Hour	Min.
1	0	00	00	1	0	00	00	1	0	00	00
2	0	00	00	2	0	00	00	2	0	00	00
3	0	00	00	3	0	00	00	3	0	00	00
4	0	00	00	4	0	00	00	4	0	00	00
5	0	00	00	5	0	00	00	5	0	00	00
6	0	00	00	6	0	00	00	6	0	00	00
7	0	00	00	7	0	00	00	7	0	00	00
8	0	00	00	8	0	00	00	8	0	00	00
9	0	00	00	9	0	00	00	9	0	00	00
10	0	00	00	10	0	00	00	10	0	00	00
11	0	00	00	11	0	00	00	11	0	00	00
12	0	00	00	12	0	00	00	12	0	00	00
13	0	00	00	13	0	00	00	13	0	00	00
14	0	00	00	14	0	00	00	14	0	00	00
15	0	00	00	15	0	00	00	15	0	00	00
16	0	00	00	16	0	00	00	16	0	00	00
17	0	00	00	17	0	00	00	17	0	00	00
18	0	00	00	18	0	00	00	18	0	00	00
19	0	00	00	19	0	00	00	19	0	00	00
20	0	00	00	20	0	00	00	20	0	00	00

Detector Plan 1

		Call Phases															
Detector	Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
2	2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
3	3	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
4	4	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
5	5	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
6	6	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	7	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	8	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
9	9	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
10	10	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
11	11	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
12	12	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
13	13	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
14	14	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
15	15	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
16	16	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
17	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
18	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
19	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
20	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
21	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
22	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
23	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
24	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
25	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
26	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
27	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
28	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
29	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
30	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
31	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
32	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
33	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
34	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
35	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
36	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
37	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
38	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
39	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
40	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
41	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
42	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
43	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
44	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
45	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
46	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
47	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
48	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
49	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
50	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
51	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
52	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
53	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
54	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
55	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
56	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
57	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
58	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
59	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
60	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
61	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
62	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
63	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
64	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

Detector Plan 1

Detector	Extend	Call Option	Added Option	Queue Opt	NTCIP Occ
1	0.0	X	.	.	.
2	0.0	X	.	.	.
3	0.0	X	.	.	.
4	0.0	X	.	.	.
5	0.0	X	.	.	.
6	0.0	X	.	.	.
7	0.0	X	.	.	.
8	0.0	X	.	.	.
9	0.0	X	.	.	.
10	0.0	X	.	.	.
11	0.0	X	.	.	.
12	0.0	X	.	.	.
13	0.0	X	.	.	.
14	0.0	X	.	.	.
15	0.0	X	.	.	.
16	0.0	X	.	.	.
17	0.0	X	.	.	.
18	0.0	X	.	.	.
19	0.0	X	.	.	.
20	0.0	X	.	.	.
21	0.0	X	.	.	.
22	0.0	X	.	.	.
23	0.0	X	.	.	.
24	0.0	X	.	.	.
25	0.0	X	.	.	.
26	0.0	X	.	.	.
27	0.0	X	.	.	.
28	0.0	X	.	.	.
29	0.0	X	.	.	.
30	0.0	X	.	.	.
31	0.0	X	.	.	.
32	0.0	X	.	.	.
33	0.0	X	.	.	.
34	0.0	X	.	.	.
35	0.0	X	.	.	.
36	0.0	X	.	.	.
37	0.0	X	.	.	.
38	0.0	X	.	.	.
39	0.0	X	.	.	.
40	0.0	X	.	.	.
41	0.0	X	.	.	.
42	0.0	X	.	.	.
43	0.0	X	.	.	.
44	0.0	X	.	.	.
45	0.0	X	.	.	.
46	0.0	X	.	.	.
47	0.0	X	.	.	.
48	0.0	X	.	.	.
49	0.0	X	.	.	.
50	0.0	X	.	.	.
51	0.0	X	.	.	.
52	0.0	X	.	.	.
53	0.0	X	.	.	.
54	0.0	X	.	.	.
55	0.0	X	.	.	.
56	0.0	X	.	.	.
57	0.0	X	.	.	.
58	0.0	X	.	.	.
59	0.0	X	.	.	.
60	0.0	X	.	.	.
61	0.0	X	.	.	.
62	0.0	X	.	.	.
63	0.0	X	.	.	.
64	0.0	X	.	.	.

Detector Plan 1

Detector	Yellow Lock	Delay Time	Passage Option	X Switch Phase	Queue Limit	Volume Det	Red Lock
1	.	0.0	X	0	0	.	.
2	.	0.0	X	0	0	.	.
3	.	0.0	X	0	0	.	.
4	.	0.0	X	0	0	.	.
5	.	0.0	X	0	0	.	.
6	.	0.0	X	0	0	.	.
7	.	0.0	X	0	0	.	.
8	.	0.0	X	0	0	.	.
9	.	0.0	X	0	0	.	.
10	.	0.0	X	0	0	.	.
11	.	0.0	X	0	0	.	.
12	.	0.0	X	0	0	.	.
13	.	0.0	X	0	0	.	.
14	.	0.0	X	0	0	.	.
15	.	0.0	X	0	0	.	.
16	.	0.0	X	0	0	.	.
17	.	0.0	X	0	0	.	.
18	.	0.0	X	0	0	.	.
19	.	0.0	X	0	0	.	.
20	.	0.0	X	0	0	.	.
21	.	0.0	X	0	0	.	.
22	.	0.0	X	0	0	.	.
23	.	0.0	X	0	0	.	.
24	.	0.0	X	0	0	.	.
25	.	0.0	X	0	0	.	.
26	.	0.0	X	0	0	.	.
27	.	0.0	X	0	0	.	.
28	.	0.0	X	0	0	.	.
29	.	0.0	X	0	0	.	.
30	.	0.0	X	0	0	.	.
31	.	0.0	X	0	0	.	.
32	.	0.0	X	0	0	.	.
33	.	0.0	X	0	0	.	.
34	.	0.0	X	0	0	.	.
35	.	0.0	X	0	0	.	.
36	.	0.0	X	0	0	.	.
37	.	0.0	X	0	0	.	.
38	.	0.0	X	0	0	.	.
39	.	0.0	X	0	0	.	.
40	.	0.0	X	0	0	.	.
41	.	0.0	X	0	0	.	.
42	.	0.0	X	0	0	.	.
43	.	0.0	X	0	0	.	.
44	.	0.0	X	0	0	.	.
45	.	0.0	X	0	0	.	.
46	.	0.0	X	0	0	.	.
47	.	0.0	X	0	0	.	.
48	.	0.0	X	0	0	.	.
49	.	0.0	X	0	0	.	.
50	.	0.0	X	0	0	.	.
51	.	0.0	X	0	0	.	.
52	.	0.0	X	0	0	.	.
53	.	0.0	X	0	0	.	.
54	.	0.0	X	0	0	.	.
55	.	0.0	X	0	0	.	.
56	.	0.0	X	0	0	.	.
57	.	0.0	X	0	0	.	.
58	.	0.0	X	0	0	.	.
59	.	0.0	X	0	0	.	.
60	.	0.0	X	0	0	.	.
61	.	0.0	X	0	0	.	.
62	.	0.0	X	0	0	.	.
63	.	0.0	X	0	0	.	.
64	.	0.0	X	0	0	.	.

Ped Assignment Mode

Ped Det phase Assignment Mode
NTCIP

Econolite Mode Table

Ped Detector	Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	Type	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
2	Type	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.
3	Type	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.
4	Type	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.
5	Type	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.
6	Type	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.
7	Type	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.
8	Type	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.
9	Type	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.
10	Type	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.
11	Type	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.
12	Type	.	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.
13	Type	.	.	.	.	.	.	.	.	.	.	.	.	X	.	.	.
14	Type	.	.	.	.	.	.	.	.	.	.	.	.	.	X	.	.
15	Type	.	.	.	.	.	.	.	.	.	.	.	.	.	.	X	.
16	Type	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	X

ASC3 MaxView Timing Sheet

MaxView Controller Information

Controller Number	2690
Controller Name	I-17 @ Dove Valley Rd
Main St.	I-17
Side St.	Deer Valley
IP Address	10.15.31.49
NTCIP Receive Port	Automatic
NTCIP Send Port	501
NTCIP Timeout	1000

Sequence

Ring	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	1	2	3	4	9	10	13	14	0	0	0	0	0	0	0	0
2	5	6	7	8	11	12	15	16	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Barrier																

Phase In Use/Ped

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
In Use	X	X	.	X	X	.	X	X	.	.	.	.	.	.	.	.
Exclusive ped	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

Load Switch Assignment

			Dim				Auto Flash		
Channel	Source	Type	G	Y	R	D	Y	R	T
1	1	Phase Vehicle	.	.	.	.	.	X	.
2	2	Phase Vehicle	.	.	.	.	.	X	X
3	3	Phase Vehicle	.	.	.	.	.	X	.
4	4	Phase Vehicle	.	.	.	.	.	X	X
5	5	Phase Vehicle	.	.	.	X	.	X	.
6	6	Phase Vehicle	.	.	.	X	.	X	X
7	7	Phase Vehicle	.	.	.	X	.	X	.
8	8	Phase Vehicle	.	.	.	X	.	X	X
9	2	Phase Pedestrian	.	.	.	.	.	.	.
10	4	Phase Pedestrian	.	.	.	.	.	.	.
11	6	Phase Pedestrian	.	.	.	X	.	.	.
12	8	Phase Pedestrian	.	.	.	X	.	.	.
13	1	Overlap	.	.	.	.	.	X	.
14	2	Overlap	.	.	.	X	.	X	X
15	3	Overlap	.	.	.	.	.	X	.
16	4	Overlap	.	.	.	X	.	X	X

Logic Statement Control			
Statement	Command	Statement	Command
1	Enable	11	.
2	Enable	12	.
3	.	13	.
4	.	14	.
5	.	15	.
6	.	16	.
7	.	17	.
8	.	18	.
9	.	19	.
10	.	20	.

Conditional Definition, Statement

Condition	Logic	Peer	Peer Fail State	Element	Descriptor	OP	Test
1	IF	0	F	VEH RED ON PHASE	7	IS	OFF
2	AND	0	F	CTR ON PHASE CHECK	5	IS	ON
3		0	F		0	IS	0
4		0	F		0	IS	0
5		0	F		0	IS	0
6		0	F		0	IS	0
7		0	F		0	IS	0
8		0	F		0	IS	0
9		0	F		0	IS	0
10		0	F		0	IS	0

Then, Statement 1

Execution	Op	Element	Descriptor	Set
1	Then	DET SET VEH 1-16	8	ON
2			0	OFF
3			0	OFF
4			0	OFF
5			0	OFF

Else, Statement 1

Alternate	Op	Element	Descriptor	Set
1	Else		0	OFF
2			0	OFF
3			0	OFF
4			0	OFF
5			0	OFF

Conditional Definition, Statement

Condition	Logic	Peer	Peer Fail State	Element	Descriptor	OP	Test
1	IF	0	F	CTR PHASE TIMING	7	IS	ON
2		0	F		0	IS	0
3		0	F		0	IS	0
4		0	F		0	IS	0
5		0	F		0	IS	0
6		0	F		0	IS	0
7		0	F		0	IS	0
8		0	F		0	IS	0
9		0	F		0	IS	0
10		0	F		0	IS	0

Then, Statement 2

Execution	Op	Element	Descriptor	Set
1	Then	CTR OMIT PHASE	5	ON
2			0	OFF
3			0	OFF
4			0	OFF
5			0	OFF

Else, Statement 2

Alternate	Op	Element	Descriptor	Set
1	Else		0	OFF
2			0	OFF
3			0	OFF
4			0	OFF
5			0	OFF

Conditional Definition, Statement

Condition	Logic	Peer	Peer Fail State	Element	Descriptor	OP	Test
1	IF	0	F		0	IS	0
2		0	F		0	IS	0
3		0	F		0	IS	0
4		0	F		0	IS	0
5		0	F		0	IS	0
6		0	F		0	IS	0
7		0	F		0	IS	0
8		0	F		0	IS	0
9		0	F		0	IS	0
10		0	F		0	IS	0

Then, Statement 3

Execution	Op	Element	Descriptor	Set
1	Then		0	OFF
2			0	OFF
3			0	OFF
4			0	OFF
5			0	OFF

Else, Statement 3

Alternate	Op	Element	Descriptor	Set
1	Else		0	OFF
2			0	OFF
3			0	OFF
4			0	OFF
5			0	OFF

Conditional Definition, Statement

Condition	Logic	Peer	Peer Fail State	Element	Descriptor	OP	Test
1	IF	0	F		0	IS	0
2		0	F		0	IS	0
3		0	F		0	IS	0
4		0	F		0	IS	0
5		0	F		0	IS	0
6		0	F		0	IS	0
7		0	F		0	IS	0
8		0	F		0	IS	0
9		0	F		0	IS	0
10		0	F		0	IS	0

Then, Statement 4

Execution	Op	Element	Descriptor	Set
1	Then		0	OFF
2			0	OFF
3			0	OFF
4			0	OFF
5			0	OFF

Else, Statement 4

Alternate	Op	Element	Descriptor	Set
1	Else		0	OFF
2			0	OFF
3			0	OFF
4			0	OFF
5			0	OFF

Conditional Definition, Statement

Condition	Logic	Peer	Peer Fail State	Element	Descriptor	OP	Test
1	IF	0	F		0	IS	0
2		0	F		0	IS	0
3		0	F		0	IS	0
4		0	F		0	IS	0
5		0	F		0	IS	0
6		0	F		0	IS	0
7		0	F		0	IS	0
8		0	F		0	IS	0
9		0	F		0	IS	0
10		0	F		0	IS	0

Then, Statement 5

Execution	Op	Element	Descriptor	Set
1	Then		0	OFF
2			0	OFF
3			0	OFF
4			0	OFF
5			0	OFF

Else, Statement 5

Alternate	Op	Element	Descriptor	Set
1	Else		0	OFF
2			0	OFF
3			0	OFF
4			0	OFF
5			0	OFF

Conditional Definition, Statement

Condition	Logic	Peer	Peer Fail State	Element	Descriptor	OP	Test
1	IF	0	F		0	IS	0
2		0	F		0	IS	0
3		0	F		0	IS	0
4		0	F		0	IS	0
5		0	F		0	IS	0
6		0	F		0	IS	0
7		0	F		0	IS	0
8		0	F		0	IS	0
9		0	F		0	IS	0
10		0	F		0	IS	0

Then, Statement 6

Execution	Op	Element	Descriptor	Set
1	Then		0	OFF
2			0	OFF
3			0	OFF
4			0	OFF
5			0	OFF

Else, Statement 6

Alternate	Op	Element	Descriptor	Set
1	Else		0	OFF
2			0	OFF
3			0	OFF
4			0	OFF
5			0	OFF

Conditional Definition, Statement

Condition	Logic	Peer	Peer Fail State	Element	Descriptor	OP	Test
1	IF	0	F		0	IS	0
2		0	F		0	IS	0
3		0	F		0	IS	0
4		0	F		0	IS	0
5		0	F		0	IS	0
6		0	F		0	IS	0
7		0	F		0	IS	0
8		0	F		0	IS	0
9		0	F		0	IS	0
10		0	F		0	IS	0

Then, Statement 7

Execution	Op	Element	Descriptor	Set
1	Then		0	OFF
2			0	OFF
3			0	OFF
4			0	OFF
5			0	OFF

Else, Statement 7

Alternate	Op	Element	Descriptor	Set
1	Else		0	OFF
2			0	OFF
3			0	OFF
4			0	OFF
5			0	OFF

Conditional Definition, Statement

Condition	Logic	Peer	Peer Fail State	Element	Descriptor	OP	Test
1	IF	0	F		0	IS	0
2		0	F		0	IS	0
3		0	F		0	IS	0
4		0	F		0	IS	0
5		0	F		0	IS	0
6		0	F		0	IS	0
7		0	F		0	IS	0
8		0	F		0	IS	0
9		0	F		0	IS	0
10		0	F		0	IS	0

Then, Statement 8

Execution	Op	Element	Descriptor	Set
1	Then		0	OFF
2			0	OFF
3			0	OFF
4			0	OFF
5			0	OFF

Else, Statement 8

Alternate	Op	Element	Descriptor	Set
1	Else		0	OFF
2			0	OFF
3			0	OFF
4			0	OFF
5			0	OFF

Conditional Definition, Statement

Condition	Logic	Peer	Peer Fail State	Element	Descriptor	OP	Test
1	IF	0	F		0	IS	0
2		0	F		0	IS	0
3		0	F		0	IS	0
4		0	F		0	IS	0
5		0	F		0	IS	0
6		0	F		0	IS	0
7		0	F		0	IS	0
8		0	F		0	IS	0
9		0	F		0	IS	0
10		0	F		0	IS	0

Then, Statement 9

Execution	Op	Element	Descriptor	Set
1	Then		0	OFF
2			0	OFF
3			0	OFF
4			0	OFF
5			0	OFF

Else, Statement 9

Alternate	Op	Element	Descriptor	Set
1	Else		0	OFF
2			0	OFF
3			0	OFF
4			0	OFF
5			0	OFF

Conditional Definition, Statement 10

Condition	Logic	Peer	Peer Fail State	Element	Descriptor	OP	Test
1	IF	0	F		0	IS	0
2		0	F		0	IS	0
3		0	F		0	IS	0
4		0	F		0	IS	0
5		0	F		0	IS	0
6		0	F		0	IS	0
7		0	F		0	IS	0
8		0	F		0	IS	0
9		0	F		0	IS	0
10		0	F		0	IS	0

Then, Statement 10

Execution	Op	Element	Descriptor	Set
1	Then		0	OFF
2			0	OFF
3			0	OFF
4			0	OFF
5			0	OFF

Else, Statement 10

Alternate	Op	Element	Descriptor	Set
1	Else		0	OFF
2			0	OFF
3			0	OFF
4			0	OFF
5			0	OFF

Conditional Definition, Statement 11

Condition	Logic	Peer	Peer Fail State	Element	Descriptor	OP	Test
1	IF	0	F		0	IS	0
2		0	F		0	IS	0
3		0	F		0	IS	0
4		0	F		0	IS	0
5		0	F		0	IS	0
6		0	F		0	IS	0
7		0	F		0	IS	0
8		0	F		0	IS	0
9		0	F		0	IS	0
10		0	F		0	IS	0

Then, Statement 11

Execution	Op	Element	Descriptor	Set
1	Then		0	OFF
2			0	OFF
3			0	OFF
4			0	OFF
5			0	OFF

Else, Statement 11

Alternate	Op	Element	Descriptor	Set
1	Else		0	OFF
2			0	OFF
3			0	OFF
4			0	OFF
5			0	OFF

Conditional Definition, Statement 12

Condition	Logic	Peer	Peer Fail State	Element	Descriptor	OP	Test
1	IF	0	F		0	IS	0
2		0	F		0	IS	0
3		0	F		0	IS	0
4		0	F		0	IS	0
5		0	F		0	IS	0
6		0	F		0	IS	0
7		0	F		0	IS	0
8		0	F		0	IS	0
9		0	F		0	IS	0
10		0	F		0	IS	0

Then, Statement 12

Execution	Op	Element	Descriptor	Set
1	Then		0	OFF
2			0	OFF
3			0	OFF
4			0	OFF
5			0	OFF

Else, Statement 12

Alternate	Op	Element	Descriptor	Set
1	Else		0	OFF
2			0	OFF
3			0	OFF
4			0	OFF
5			0	OFF

Conditional Definition, Statement 13

Condition	Logic	Peer	Peer Fail State	Element	Descriptor	OP	Test
1	IF	0	F		0	IS	0
2		0	F		0	IS	0
3		0	F		0	IS	0
4		0	F		0	IS	0
5		0	F		0	IS	0
6		0	F		0	IS	0
7		0	F		0	IS	0
8		0	F		0	IS	0
9		0	F		0	IS	0
10		0	F		0	IS	0

Then, Statement 13

Execution	Op	Element	Descriptor	Set
1	Then		0	OFF
2			0	OFF
3			0	OFF
4			0	OFF
5			0	OFF

Else, Statement 13

Alternate	Op	Element	Descriptor	Set
1	Else		0	OFF
2			0	OFF
3			0	OFF
4			0	OFF
5			0	OFF

Conditional Definition, Statement 14

Condition	Logic	Peer	Peer Fail State	Element	Descriptor	OP	Test
1	IF	0	F		0	IS	0
2		0	F		0	IS	0
3		0	F		0	IS	0
4		0	F		0	IS	0
5		0	F		0	IS	0
6		0	F		0	IS	0
7		0	F		0	IS	0
8		0	F		0	IS	0
9		0	F		0	IS	0
10		0	F		0	IS	0

Then, Statement 14

Execution	Op	Element	Descriptor	Set
1	Then		0	OFF
2			0	OFF
3			0	OFF
4			0	OFF
5			0	OFF

Else, Statement 14

Alternate	Op	Element	Descriptor	Set
1	Else		0	OFF
2			0	OFF
3			0	OFF
4			0	OFF
5			0	OFF

Conditional Definition, Statement 15

Condition	Logic	Peer	Peer Fail State	Element	Descriptor	OP	Test
1	IF	0	F		0	IS	0
2		0	F		0	IS	0
3		0	F		0	IS	0
4		0	F		0	IS	0
5		0	F		0	IS	0
6		0	F		0	IS	0
7		0	F		0	IS	0
8		0	F		0	IS	0
9		0	F		0	IS	0
10		0	F		0	IS	0

Then, Statement 15

Execution	Op	Element	Descriptor	Set
1	Then		0	OFF
2			0	OFF
3			0	OFF
4			0	OFF
5			0	OFF

Else, Statement 15

Alternate	Op	Element	Descriptor	Set
1	Else		0	OFF
2			0	OFF
3			0	OFF
4			0	OFF
5			0	OFF

Conditional Definition, Statement 16

Condition	Logic	Peer	Peer Fail State	Element	Descriptor	OP	Test
1	IF	0	F		0	IS	0
2		0	F		0	IS	0
3		0	F		0	IS	0
4		0	F		0	IS	0
5		0	F		0	IS	0
6		0	F		0	IS	0
7		0	F		0	IS	0
8		0	F		0	IS	0
9		0	F		0	IS	0
10		0	F		0	IS	0

Then, Statement 16

Execution	Op	Element	Descriptor	Set
1	Then		0	OFF
2			0	OFF
3			0	OFF
4			0	OFF
5			0	OFF

Else, Statement 16

Alternate	Op	Element	Descriptor	Set
1	Else		0	OFF
2			0	OFF
3			0	OFF
4			0	OFF
5			0	OFF

Conditional Definition, Statement 17

Condition	Logic	Peer	Peer Fail State	Element	Descriptor	OP	Test
1	IF	0	F		0	IS	0
2		0	F		0	IS	0
3		0	F		0	IS	0
4		0	F		0	IS	0
5		0	F		0	IS	0
6		0	F		0	IS	0
7		0	F		0	IS	0
8		0	F		0	IS	0
9		0	F		0	IS	0
10		0	F		0	IS	0

Then, Statement 17

Execution	Op	Element	Descriptor	Set
1	Then		0	OFF
2			0	OFF
3			0	OFF
4			0	OFF
5			0	OFF

Else, Statement 17

Alternate	Op	Element	Descriptor	Set
1	Else		0	OFF
2			0	OFF
3			0	OFF
4			0	OFF
5			0	OFF

Conditional Definition, Statement 18

Condition	Logic	Peer	Peer Fail State	Element	Descriptor	OP	Test
1	IF	0	F		0	IS	0
2		0	F		0	IS	0
3		0	F		0	IS	0
4		0	F		0	IS	0
5		0	F		0	IS	0
6		0	F		0	IS	0
7		0	F		0	IS	0
8		0	F		0	IS	0
9		0	F		0	IS	0
10		0	F		0	IS	0

Then, Statement 18

Execution	Op	Element	Descriptor	Set
1	Then		0	OFF
2			0	OFF
3			0	OFF
4			0	OFF
5			0	OFF

Else, Statement 18

Alternate	Op	Element	Descriptor	Set
1	Else		0	OFF
2			0	OFF
3			0	OFF
4			0	OFF
5			0	OFF

Conditional Definition, Statement 19

Condition	Logic	Peer	Peer Fail State	Element	Descriptor	OP	Test
1	IF	0	F		0	IS	0
2		0	F		0	IS	0
3		0	F		0	IS	0
4		0	F		0	IS	0
5		0	F		0	IS	0
6		0	F		0	IS	0
7		0	F		0	IS	0
8		0	F		0	IS	0
9		0	F		0	IS	0
10		0	F		0	IS	0

Then, Statement 19

Execution	Op	Element	Descriptor	Set
1	Then		0	OFF
2			0	OFF
3			0	OFF
4			0	OFF
5			0	OFF

Else, Statement 19

Alternate	Op	Element	Descriptor	Set
1	Else		0	OFF
2			0	OFF
3			0	OFF
4			0	OFF
5			0	OFF

Conditional Definition, Statement 20

Condition	Logic	Peer	Peer Fail State	Element	Descriptor	OP	Test
1	IF	0	F		0	IS	0
2		0	F		0	IS	0
3		0	F		0	IS	0
4		0	F		0	IS	0
5		0	F		0	IS	0
6		0	F		0	IS	0
7		0	F		0	IS	0
8		0	F		0	IS	0
9		0	F		0	IS	0
10		0	F		0	IS	0

Then, Statement 20

Execution	Op	Element	Descriptor	Set
1	Then		0	OFF
2			0	OFF
3			0	OFF
4			0	OFF
5			0	OFF

Else, Statement 20

Alternate	Op	Element	Descriptor	Set
1	Else		0	OFF
2			0	OFF
3			0	OFF
4			0	OFF
5			0	OFF

Controller Timing Data

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Min Green	10	4	0	20	10	0	10	6	5	5	5	5	5	5	5	5
Bike Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cond Service Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Delay Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk	7	7	0	0	7	0	7	0	0	10	0	10	0	10	0	10
Walk2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear	22	24	0	0	22	0	24	0	0	16	0	16	0	16	0	16
Ped Clear 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Veh Ext	4.5	2.5	2.5	3.0	2.0	2.5	4.5	2.5	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Veh Ext2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max1	30	5	0	45	25	0	45	30	35	35	35	35	35	35	35	35
Max2	40	5	40	40	40	40	40	40	40	40	40	40	40	40	40	40
Max3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dynamic Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dynamic Max Step	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	4.3	3.6	0.0	3.6	4.3	0.0	3.6	3.6	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Red Clear	2.4	1.7	0.0	3.9	2.4	0.0	1.7	3.9	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Red Max	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red Revert	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Actuations Before	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Added Initial	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Initial	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Time Before Reduce	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cars Before Reduce	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Reduce By	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Min Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Overlap Times

Overlap	Type	Lag GRN	Yellow	Red	Advance GRN
1	Other/Econolite	0.0	0.0	0.0	0.0
2	Other/Econolite	0.0	0.0	0.0	0.0
3	Other/Econolite	0.0	0.0	0.0	0.0
4	Other/Econolite	0.0	0.0	0.0	0.0
5	Other/Econolite	0.0	0.0	0.0	0.0
6	Other/Econolite	0.0	0.0	0.0	0.0
7	Other/Econolite	0.0	0.0	0.0	0.0
8	Other/Econolite	0.0	0.0	0.0	0.0
9	Other/Econolite	0.0	0.0	0.0	0.0
10	Other/Econolite	0.0	0.0	0.0	0.0
11	Other/Econolite	0.0	0.0	0.0	0.0
12	Other/Econolite	0.0	0.0	0.0	0.0
13	Other/Econolite	0.0	0.0	0.0	0.0
14	Other/Econolite	0.0	0.0	0.0	0.0
15	Other/Econolite	0.0	0.0	0.0	0.0
16	Other/Econolite	0.0	0.0	0.0	0.0

Overlap Configuration

Overlap	1															
Phases	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Included	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Protected	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Modifier	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Ped Protect	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Not Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Lag X Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Lag 2 Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

Overlap	2															
Phases	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Included	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.
Protected	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Modifier	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Ped Protect	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Not Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Lag X Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Lag 2 Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

Overlap	3															
Phases	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Included	.	.	.	.	.	.	X	X	.	.	.	.	.	.	.	.
Protected	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Modifier	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Ped Protect	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Not Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Lag X Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Lag 2 Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

Overlap	4															
Phases	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Included	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Protected	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Modifier	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Ped Protect	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Not Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Lag X Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Lag 2 Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

Overlap	5															
Phases	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Included	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Protected	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Modifier	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Ped Protect	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Not Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Lag X Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Lag 2 Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

Overlap	6															
Phases	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Included	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Protected	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Modifier	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Ped Protect	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Not Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Lag X Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Lag 2 Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

Overlap	7															
Phases	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Included	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Protected	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Modifier	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Ped Protect	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Not Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Lag X Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Lag 2 Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

Overlap	8															
Phases	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Included	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Protected	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Modifier	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Ped Protect	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Not Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Lag X Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Lag 2 Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

Overlap	9															
Phases	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Included	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Protected	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Modifier	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Ped Protect	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Not Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Lag X Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Lag 2 Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

Overlap	10															
Phases	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Included	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Protected	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Modifier	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Ped Protect	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Not Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Lag X Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Lag 2 Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

Overlap	11															
Phases	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Included	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Protected	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Modifier	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Ped Protect	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Not Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Lag X Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Lag 2 Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

Overlap	12															
Phases	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Included	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Protected	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Modifier	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Ped Protect	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Not Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Lag X Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Lag 2 Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

Overlap	13															
Phases	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Included	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Protected	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Modifier	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Ped Protect	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Not Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Lag X Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Lag 2 Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

Overlap	14															
Phases	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Included	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Protected	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Modifier	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Ped Protect	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Not Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Lag X Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Lag 2 Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

Overlap	15															
Phases	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Included	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Protected	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Modifier	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Ped Protect	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Not Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Lag X Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Lag 2 Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

Overlap	16															
Phases	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Included	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Protected	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Modifier	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Ped Protect	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Not Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Lag X Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Lag 2 Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

Phase Table

Phases	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Guar Passage	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Non Act I	.	X	.	.	.	X	.	.	.	.	.	.	.	.	.	.
Non Act II	.	.	.	X	.	.	.	X	.	.	.	.	.	.	.	.
Dual Entry	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Cond Reservice	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Ped Reservice	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Act Rest in Walk	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Flashing Walk	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Ped Clr thru Yellow	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Ped Clr thru Red	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Immed Gap Red	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

Options

Enable Pretimed Mode	Free Input Enables Pretimed
Disabled	Disabled

Pre-Timed Phases

Phases	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

Phases Recall

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Locking Detector	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Vehicle Detector	.	.	.	X	.	.	X	.	.	.	.	.	.	.	.	.
Ped Detector	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Max Recall	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Soft Recall	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
No Rest	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Added Int Calc	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

Coordination Options

System Source	TBC	ECPI Coord	Enabled
Transition	Shortway	System Format	Standard
Dwell Add Time	0	Max Select	MaxInhibit
Delay Coord Walk	Disabled	Call Use Ped Time	Enabled
Offset Ref	Lead	Ped Reservice	Disabled
Ped Recall	Disabled	FO Add Initial	Disabled
Local Zero Override	Disabled	Multi Sync	Disabled
Re-sync Count	0	Force Mode	Floating

Patterns

Pattern	Split #	Cycle	Offset	Phase Splits																VPerm1	VPerm2	VPD	XPatt
				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16				
1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	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
16	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21	21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22	22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23	23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24	24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26	26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27	27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28	28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29	29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30	30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
31	31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
32	32	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
33	33	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
34	34	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
35	35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
36	36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
37	37	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
38	38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
39	39	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
40	40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
41	41	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
42	42	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
43	43	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
44	44	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
45	45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
46	46	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
47	47	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Pattern	Split #	Cycle	Offset	Phase Splits																VPerm1	VPerm2	VPD	XPatt
				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16				
48	48	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
49	49	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
50	50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
51	51	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
52	52	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
53	53	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
54	54	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
55	55	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
56	56	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
57	57	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
58	58	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
59	59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
60	60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
61	61	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
62	62	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
63	63	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
64	64	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
65	65	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
66	66	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
67	67	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
68	68	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
69	69	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
70	70	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
71	71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
72	72	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
73	73	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
74	74	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
75	75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
76	76	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
77	77	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
78	78	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
79	79	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
80	80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
81	81	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
82	82	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
83	83	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
84	84	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
85	85	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
86	86	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
87	87	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
88	88	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
89	89	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
90	90	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
91	91	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
92	92	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
93	93	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
94	94	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
95	95	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
96	96	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
97	97	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
98	98	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
99	99	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
100	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
101	101	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
102	102	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
103	103	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
104	104	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
105	105	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Pattern	Split #	Cycle	Offset	Phase Splits																VPerm1	VPerm2	VPD	XPatt
				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16				
106	106	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
107	107	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
108	108	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
109	109	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
110	110	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
111	111	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
112	112	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
113	113	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
114	114	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
115	115	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
116	116	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
117	117	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
118	118	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
119	119	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
120	120	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Preemption

Preempt	1															
Phase/Overlap	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Track Phases	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Track Overlaps	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Dwell Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Dwell Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Cycle Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Cycle Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Enable Trail	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Exit Call	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Special Function	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Dwell Ped	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Cycle Ped	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Exit Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

Preempt	2															
Phase/Overlap	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Track Phases	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Track Overlaps	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Dwell Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Dwell Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Cycle Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Cycle Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Enable Trail	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Exit Call	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Special Function	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Dwell Ped	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Cycle Ped	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Exit Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

Preempt	3															
Phase/Overlap	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Track Phases	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Track Overlaps	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Dwell Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Dwell Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Cycle Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Cycle Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Enable Trail	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Exit Call	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Special Function	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Dwell Ped	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Cycle Ped	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Exit Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

Preempt	4															
Phase/Overlap	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Track Phases	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Track Overlaps	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Dwell Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Dwell Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Cycle Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Cycle Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Enable Trail	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Exit Call	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Special Function	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Dwell Ped	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Cycle Ped	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Exit Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

Preempt	5															
Phase/Overlap	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Track Phases	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Track Overlaps	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Dwell Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Dwell Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Cycle Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Cycle Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Enable Trail	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Exit Call	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Special Function	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Dwell Ped	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Cycle Ped	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Exit Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

Preempt	6															
Phase/Overlap	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Track Phases	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Track Overlaps	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Dwell Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Dwell Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Cycle Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Cycle Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Enable Trail	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Exit Call	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Special Function	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Dwell Ped	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Cycle Ped	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Exit Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

Preempt	7															
Phase/Overlap	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Track Phases	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Track Overlaps	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Dwell Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Dwell Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Cycle Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Cycle Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Enable Trail	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Exit Call	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Special Function	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Dwell Ped	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Cycle Ped	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Exit Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

Preempt	8															
Phase/Overlap	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Track Phases	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Track Overlaps	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Dwell Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Dwell Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Cycle Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Cycle Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Enable Trail	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Exit Call	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Special Function	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Dwell Ped	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Cycle Ped	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Exit Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

Preempt	9															
Phase/Overlap	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Track Phases	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Track Overlaps	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Dwell Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Dwell Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Cycle Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Cycle Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Enable Trail	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Exit Call	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Special Function	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Dwell Ped	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Cycle Ped	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Exit Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

Preempt	10															
Phase/Overlap	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Track Phases	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Track Overlaps	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Dwell Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Dwell Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Cycle Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Cycle Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Enable Trail	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Exit Call	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Special Function	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Dwell Ped	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Cycle Ped	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Exit Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

Preempt Configuration

Preempt	1	2	3	4	5
Enable	No	No	No	No	No
Term Overlap	Disabled	Disabled	Disabled	Disabled	Disabled
Ped Dark	Disabled	Disabled	Disabled	Disabled	Disabled
Link	0	0	0	0	0
Exit Timing Plan	0	0	0	0	0
Delay	0	0	0	0	0
Duration	0	0	0	0	0
Ped Clear thru Yellow	Disabled	Disabled	Disabled	Disabled	Disabled
Track Clr Reservice	Disabled	Disabled	Disabled	Disabled	Disabled
Exit Fl Color	Red	Green	Green	Green	Green
Reservice Time	0	0	0	0	0
Interlock	Disabled	Disabled	Disabled	Disabled	Disabled
Inhibit	0	0	0	0	0
Clear>Green	Disabled	Disabled	Disabled	Disabled	Disabled
Terminate Phase	Disabled	Disabled	Disabled	Disabled	Disabled
Dwell Flash	Off	Off	Off	Off	Off
Pre Exit to Coord	Disabled	Disabled	Disabled	Disabled	Disabled
Pre Active Output	ON	ON	ON	ON	ON
Other Pri/Preempt	.	.	.	.	.
Pre Active Dwell	Disabled	Disabled	Disabled	Disabled	Disabled
Non-Pri Preempt	.	.	.	.	.

Preempt	6	7	8	9	10
Enable	No	No	No	No	No
Term Overlap	Disabled	Disabled	Disabled	Disabled	Disabled
Ped Dark	Disabled	Disabled	Disabled	Disabled	Disabled
Link	0	0	0	0	0
Exit Timing Plan	0	0	0	0	0
Delay	0	0	0	0	0
Duration	0	0	0	0	0
Ped Clear thru Yellow	Disabled	Disabled	Disabled	Disabled	Disabled
Track Clr Reservice	Disabled	Disabled	Disabled	Disabled	Disabled
Exit Fl Color	Green	Green	Green	Green	Green
Reservice Time	0	0	0	0	0
Interlock	Disabled	Disabled	Disabled	Disabled	Disabled
Inhibit	0	0	0	0	0
Clear>Green	Disabled	Disabled	Disabled	Disabled	Disabled
Terminate Phase	Disabled	Disabled	Disabled	Disabled	Disabled
Dwell Flash	Off	Off	Off	Off	Off
Pre Exit to Coord	Disabled	Disabled	Disabled	Disabled	Disabled
Pre Active Output	ON	ON	ON	ON	ON
Other Pri/Preempt	.	.	.	.	.
Pre Active Dwell	Disabled	Disabled	Disabled	Disabled	Disabled
Non-Pri Preempt	.	.	.	.	.

Preempt Settings

Preempt	1	2	3	4	5	6	7	8	9	10
Detector Lock	.	.	.	.	.	.	.	.	.	.
Preempt Override Fl	.	.	.	.	.	.	.	.	.	.
Preempt Override	.	.	.	.	.	.	.	.	.	.
Flash Dwell	.	.	.	.	.	.	.	.	.	.

Free During Preempt

Preempt	1	2	3	4	5	6	7	8	9	10
Ring 1	.	.	.	.	.	.	.	.	.	.
Ring 2	.	.	.	.	.	.	.	.	.	.
Ring 3	.	.	.	.	.	.	.	.	.	.
Ring 4	.	.	.	.	.	.	.	.	.	.

Preempt Times

Preempt	1	2	3	4	5	6	7	8	9	10
Entrance TM Walk	0	0	0	0	0	0	0	0	0	0
Entrance TM Ped Clr	255	255	255	255	255	255	255	255	255	255
Entrance TM Min Grn	5	5	5	5	5	5	5	5	5	5
Entrance TM Yellow	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Entrance TM Red Clr	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Track Clear - Min Grn	0	0	0	0	0	0	0	0	0	0
Track Clear - Yellow	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Track Clear - Red	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Dwell/Cycl-Min Dwell	0	0	0	0	0	0	0	0	0	0
Dwell/Cycl-Pre Exit	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dwell/Cycl-Max Time	0	0	0	0	0	0	0	0	0	0
Dwell/Cycl-Exit Yellow	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Dwell/Cycl-Exit Red	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0

Enable Preempt Filtering

Preempt	1	2	3	4	5	6	7	8	9	10
Solid	ByPassed	ByPassed	Preempt 3	Preempt 4	Preempt 5	Preempt 6	ByPassed	ByPassed	ByPassed	ByPassed
Pulse	ByPassed	ByPassed	Preempt 7	Preempt 8	Preempt 9	Preempt 10	ByPassed	ByPassed	ByPassed	ByPassed

TSP Plans

TSP	1	2	3	4	5	6
Enabled	Disabled	Disabled	Disabled	Disabled	Disabled	Disabled
Pulsing Signal	Solid	Solid	Solid	Solid	Solid	Solid
Det Lock	No	No	No	No	No	No
Delay Time In Sec	0	0	0	0	0	0
Max Time In Sec	0	0	0	0	0	0
Enabled Reservice	No	No	No	No	No	No
Inhibit Delay	No	No	No	No	No	No
Inhibited By Nic SF	0	0	0	0	0	0
Reservice Cycle	0	0	0	0	0	0
Bus Heading	NB	SB	EB	WB	Not Mapped	Not Mapped
Free Pattern	0	0	0	0	0	0
Split Pattern	0	0	0	0	0	0
Description	on of TSP/S	on of TSP/S	on of TSP/S	on of TSP/S	on of TSP/S	on of TSP/S

TSP/SCP Phases

TSP	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
3	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
4	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
5	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
6	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

TSP Phase Omit

TSP	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
3	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
4	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
5	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
6	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

TSP Ped Omit

TSP	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
3	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
4	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
5	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
6	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

Clock/Calendar Data

Enable Action Plan	0	Sync Reference	Reference Time
Sync Ref Time - Hour	0	Daylight Savings Time	Disable DST
Sync Ref Time - Min	0		

Time Reset Input Set Time - Hour	3
Time Reset Input Set Time - Miin	30
Time Reset Input Set Time - Sec	0

Day Plan 1

Month of Year						Days of Week							Days of Month									
J	F	M	A	M	J	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10
X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
J	A	S	O	N	D								11	12	13	14	15	16	17	18	19	20
X	X	X	X	X	X								X	X	X	X	X	X	X	X	X	X
													21	22	23	24	25	26	27	28	29	30	31
													X	X	X	X	X	X	X	X	X	X	X

Day Plan 2

Month of Year						Days of Week							Days of Month									
J	F	M	A	M	J	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
J	A	S	O	N	D								11	12	13	14	15	16	17	18	19	20
.	.	.	.	.	.								.	.	.	.	.	.	.	.	.	.
													21	22	23	24	25	26	27	28	29	30	31
													.	.	.	.	.	.	.	.	.	.	.

Day Plan 3

Month of Year						Days of Week							Days of Month									
J	F	M	A	M	J	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
J	A	S	O	N	D								11	12	13	14	15	16	17	18	19	20
.	.	.	.	.	.								.	.	.	.	.	.	.	.	.	.
													21	22	23	24	25	26	27	28	29	30	31
													.	.	.	.	.	.	.	.	.	.	.

Day Plan 4

Month of Year						Days of Week							Days of Month									
J	F	M	A	M	J	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
J	A	S	O	N	D								11	12	13	14	15	16	17	18	19	20
.	.	.	.	.	.								.	.	.	.	.	.	.	.	.	.
													21	22	23	24	25	26	27	28	29	30	31
													.	.	.	.	.	.	.	.	.	.	.

Day Plan 5

Month of Year						Days of Week							Days of Month									
J	F	M	A	M	J	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
J	A	S	O	N	D								11	12	13	14	15	16	17	18	19	20
.	.	.	.	.	.								.	.	.	.	.	.	.	.	.	.
													21	22	23	24	25	26	27	28	29	30	31
													.	.	.	.	.	.	.	.	.	.	.

Day Plan 6

Month of Year						Days of Week							Days of Month									
J	F	M	A	M	J	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
J	A	S	O	N	D								11	12	13	14	15	16	17	18	19	20
.	.	.	.	.	.								.	.	.	.	.	.	.	.	.	.
													21	22	23	24	25	26	27	28	29	30	31
													.	.	.	.	.	.	.	.	.	.	.

Day Plan	7

Month of Year						Days of Week							Days of Month									
J	F	M	A	M	J	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
J	A	S	O	N	D								11	12	13	14	15	16	17	18	19	20
.	.	.	.	.	.								.	.	.	.	.	.	.	.	.	.
													21	22	23	24	25	26	27	28	29	30	31
													.	.	.	.	.	.	.	.	.	.	.

Day Plan	8

Month of Year						Days of Week							Days of Month									
J	F	M	A	M	J	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
J	A	S	O	N	D								11	12	13	14	15	16	17	18	19	20
.	.	.	.	.	.								.	.	.	.	.	.	.	.	.	.
													21	22	23	24	25	26	27	28	29	30	31
													.	.	.	.	.	.	.	.	.	.	.

Day Plan	9

Month of Year						Days of Week							Days of Month									
J	F	M	A	M	J	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
J	A	S	O	N	D								11	12	13	14	15	16	17	18	19	20
.	.	.	.	.	.								.	.	.	.	.	.	.	.	.	.
													21	22	23	24	25	26	27	28	29	30	31
													.	.	.	.	.	.	.	.	.	.	.

Day Plans

Day Plan	1			Day Plan	2			Day Plan	3		
Event	Action	Hour	Min.	Event	Action	Hour	Min.	Event	Action	Hour	Min.
1	100	00	00	1	0	00	00	1	0	00	00
2	0	00	00	2	0	00	00	2	0	00	00
3	0	00	00	3	0	00	00	3	0	00	00
4	0	00	00	4	0	00	00	4	0	00	00
5	0	00	00	5	0	00	00	5	0	00	00
6	0	00	00	6	0	00	00	6	0	00	00
7	0	00	00	7	0	00	00	7	0	00	00
8	0	00	00	8	0	00	00	8	0	00	00
9	0	00	00	9	0	00	00	9	0	00	00
10	0	00	00	10	0	00	00	10	0	00	00
11	0	00	00	11	0	00	00	11	0	00	00
12	0	00	00	12	0	00	00	12	0	00	00
13	0	00	00	13	0	00	00	13	0	00	00
14	0	00	00	14	0	00	00	14	0	00	00
15	0	00	00	15	0	00	00	15	0	00	00
16	0	00	00	16	0	00	00	16	0	00	00
17	0	00	00	17	0	00	00	17	0	00	00
18	0	00	00	18	0	00	00	18	0	00	00
19	0	00	00	19	0	00	00	19	0	00	00
20	0	00	00	20	0	00	00	20	0	00	00

Day Plan	4			Day Plan	5			Day Plan	6		
Event	Action	Hour	Min.	Event	Action	Hour	Min.	Event	Action	Hour	Min.
1	0	00	00	1	0	00	00	1	0	00	00
2	0	00	00	2	0	00	00	2	0	00	00
3	0	00	00	3	0	00	00	3	0	00	00
4	0	00	00	4	0	00	00	4	0	00	00
5	0	00	00	5	0	00	00	5	0	00	00
6	0	00	00	6	0	00	00	6	0	00	00
7	0	00	00	7	0	00	00	7	0	00	00
8	0	00	00	8	0	00	00	8	0	00	00
9	0	00	00	9	0	00	00	9	0	00	00
10	0	00	00	10	0	00	00	10	0	00	00
11	0	00	00	11	0	00	00	11	0	00	00
12	0	00	00	12	0	00	00	12	0	00	00
13	0	00	00	13	0	00	00	13	0	00	00
14	0	00	00	14	0	00	00	14	0	00	00
15	0	00	00	15	0	00	00	15	0	00	00
16	0	00	00	16	0	00	00	16	0	00	00
17	0	00	00	17	0	00	00	17	0	00	00
18	0	00	00	18	0	00	00	18	0	00	00
19	0	00	00	19	0	00	00	19	0	00	00
20	0	00	00	20	0	00	00	20	0	00	00

Day Plan	7			Day Plan	8			Day Plan	9		
Event	Action	Hour	Min.	Event	Action	Hour	Min.	Event	Action	Hour	Min.
1	0	00	00	1	0	00	00	1	0	00	00
2	0	00	00	2	0	00	00	2	0	00	00
3	0	00	00	3	0	00	00	3	0	00	00
4	0	00	00	4	0	00	00	4	0	00	00
5	0	00	00	5	0	00	00	5	0	00	00
6	0	00	00	6	0	00	00	6	0	00	00
7	0	00	00	7	0	00	00	7	0	00	00
8	0	00	00	8	0	00	00	8	0	00	00
9	0	00	00	9	0	00	00	9	0	00	00
10	0	00	00	10	0	00	00	10	0	00	00
11	0	00	00	11	0	00	00	11	0	00	00
12	0	00	00	12	0	00	00	12	0	00	00
13	0	00	00	13	0	00	00	13	0	00	00
14	0	00	00	14	0	00	00	14	0	00	00
15	0	00	00	15	0	00	00	15	0	00	00
16	0	00	00	16	0	00	00	16	0	00	00
17	0	00	00	17	0	00	00	17	0	00	00
18	0	00	00	18	0	00	00	18	0	00	00
19	0	00	00	19	0	00	00	19	0	00	00
20	0	00	00	20	0	00	00	20	0	00	00

Detector Plan 1

		Call Phases															
Detector	Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
2	2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
3	3	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
4	4	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
5	5	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
6	6	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	7	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	8	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
9	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
10	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
11	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
12	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
13	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
14	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
15	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
16	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
17	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
18	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
19	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
20	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
21	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
22	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
23	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
24	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
25	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
26	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
27	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
28	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
29	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
30	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
31	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
32	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
33	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
34	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
35	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
36	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
37	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
38	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
39	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
40	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
41	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
42	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
43	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
44	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
45	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
46	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
47	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
48	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
49	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
50	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
51	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
52	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
53	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
54	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
55	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
56	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
57	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
58	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
59	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
60	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
61	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
62	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
63	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
64	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

Detector Plan 1

Detector	Extend	Call Option	Added Option	Queue Opt	NTCIP Occ
1	0.0	X	.	.	.
2	0.0	X	.	.	.
3	0.0	X	.	.	.
4	0.0	X	.	.	.
5	0.0	X	.	.	.
6	0.0	X	.	.	.
7	0.0	X	.	.	.
8	0.0	X	.	.	.
9	0.0	X	.	.	.
10	0.0	X	.	.	.
11	0.0	X	.	.	.
12	0.0	X	.	.	.
13	0.0	X	.	.	.
14	0.0	X	.	.	.
15	0.0	X	.	.	.
16	0.0	X	.	.	.
17	0.0	X	.	.	.
18	0.0	X	.	.	.
19	0.0	X	.	.	.
20	0.0	X	.	.	.
21	0.0	X	.	.	.
22	0.0	X	.	.	.
23	0.0	X	.	.	.
24	0.0	X	.	.	.
25	0.0	X	.	.	.
26	0.0	X	.	.	.
27	0.0	X	.	.	.
28	0.0	X	.	.	.
29	0.0	X	.	.	.
30	0.0	X	.	.	.
31	0.0	X	.	.	.
32	0.0	X	.	.	.
33	0.0	X	.	.	.
34	0.0	X	.	.	.
35	0.0	X	.	.	.
36	0.0	X	.	.	.
37	0.0	X	.	.	.
38	0.0	X	.	.	.
39	0.0	X	.	.	.
40	0.0	X	.	.	.
41	0.0	X	.	.	.
42	0.0	X	.	.	.
43	0.0	X	.	.	.
44	0.0	X	.	.	.
45	0.0	X	.	.	.
46	0.0	X	.	.	.
47	0.0	X	.	.	.
48	0.0	X	.	.	.
49	0.0	X	.	.	.
50	0.0	X	.	.	.
51	0.0	X	.	.	.
52	0.0	X	.	.	.
53	0.0	X	.	.	.
54	0.0	X	.	.	.
55	0.0	X	.	.	.
56	0.0	X	.	.	.
57	0.0	X	.	.	.
58	0.0	X	.	.	.
59	0.0	X	.	.	.
60	0.0	X	.	.	.
61	0.0	X	.	.	.
62	0.0	X	.	.	.
63	0.0	X	.	.	.
64	0.0	X	.	.	.

Detector Plan 1

Detector	Yellow Lock	Delay Time	Passage Option	X Switch Phase	Queue Limit	Volume Det	Red Lock
1	.	0.0	X	0	0	.	.
2	.	0.0	X	0	0	.	.
3	.	0.0	X	0	0	.	.
4	.	0.0	X	0	0	.	.
5	.	0.0	X	0	0	.	.
6	.	0.0	X	0	0	.	.
7	.	0.0	X	0	0	.	.
8	.	0.0	X	0	0	.	.
9	.	0.0	X	0	0	.	.
10	.	0.0	X	0	0	.	.
11	.	0.0	X	0	0	.	.
12	.	0.0	X	0	0	.	.
13	.	0.0	X	0	0	.	.
14	.	0.0	X	0	0	.	.
15	.	0.0	X	0	0	.	.
16	.	0.0	X	0	0	.	.
17	.	0.0	X	0	0	.	.
18	.	0.0	X	0	0	.	.
19	.	0.0	X	0	0	.	.
20	.	0.0	X	0	0	.	.
21	.	0.0	X	0	0	.	.
22	.	0.0	X	0	0	.	.
23	.	0.0	X	0	0	.	.
24	.	0.0	X	0	0	.	.
25	.	0.0	X	0	0	.	.
26	.	0.0	X	0	0	.	.
27	.	0.0	X	0	0	.	.
28	.	0.0	X	0	0	.	.
29	.	0.0	X	0	0	.	.
30	.	0.0	X	0	0	.	.
31	.	0.0	X	0	0	.	.
32	.	0.0	X	0	0	.	.
33	.	0.0	X	0	0	.	.
34	.	0.0	X	0	0	.	.
35	.	0.0	X	0	0	.	.
36	.	0.0	X	0	0	.	.
37	.	0.0	X	0	0	.	.
38	.	0.0	X	0	0	.	.
39	.	0.0	X	0	0	.	.
40	.	0.0	X	0	0	.	.
41	.	0.0	X	0	0	.	.
42	.	0.0	X	0	0	.	.
43	.	0.0	X	0	0	.	.
44	.	0.0	X	0	0	.	.
45	.	0.0	X	0	0	.	.
46	.	0.0	X	0	0	.	.
47	.	0.0	X	0	0	.	.
48	.	0.0	X	0	0	.	.
49	.	0.0	X	0	0	.	.
50	.	0.0	X	0	0	.	.
51	.	0.0	X	0	0	.	.
52	.	0.0	X	0	0	.	.
53	.	0.0	X	0	0	.	.
54	.	0.0	X	0	0	.	.
55	.	0.0	X	0	0	.	.
56	.	0.0	X	0	0	.	.
57	.	0.0	X	0	0	.	.
58	.	0.0	X	0	0	.	.
59	.	0.0	X	0	0	.	.
60	.	0.0	X	0	0	.	.
61	.	0.0	X	0	0	.	.
62	.	0.0	X	0	0	.	.
63	.	0.0	X	0	0	.	.
64	.	0.0	X	0	0	.	.

Ped Assignment Mode

Ped Det phase Assignment Mode
NTCIP

Econolite Mode Table

Ped Detector	Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	Type	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
2	Type	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.
3	Type	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.
4	Type	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.
5	Type	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.
6	Type	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.
7	Type	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.
8	Type	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.
9	Type	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.
10	Type	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.
11	Type	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.
12	Type	.	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.
13	Type	.	.	.	.	.	.	.	.	.	.	.	.	X	.	.	.
14	Type	.	.	.	.	.	.	.	.	.	.	.	.	.	X	.	.
15	Type	.	.	.	.	.	.	.	.	.	.	.	.	.	.	X	.
16	Type	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	X

Intersection:	SONORAN DESERT @ N. VALLEY PKWY				
Controller ID:	1311.2	**Channel:**	539	**Drop:**	9
System:	TransCore TransSuite TCS				
Controller Type:	Econolite ASC/3 2.55				
TransCore Unified Controller Manager 18.2.1					

City of Phoenix
Traffic Signals Section

Timing Plan 1

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Minimum Green	5	5	5	15	5	5	5	15	0	0	0	0	0	0	0	0
Bicycle Minimum Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Condition Service Minimum Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Delayed Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk	0	8	0	8	0	8	0	8	0	0	0	0	0	0	0	0
Walk 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Clearance	0	26	0	27	0	26	0	27	0	0	0	0	0	0	0	0
Pedestrian Clearance 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Clearance Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Carry Over	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Extension	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Vehicle Extension 2	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max 1	20	30	20	50	20	30	20	50	0	0	0	0	0	0	0	0
Max 2	25	45	25	45	25	45	25	45	0	0	0	0	0	0	0	0
Max 3	30	50	30	55	30	50	30	55	0	0	0	0	0	0	0	0
Dynamic Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dynamic Max Step	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow Change	3.0	4.3	3.0	4.0	3.0	4.3	3.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red Clear	3.3	2.2	3.3	2.0	3.3	2.2	3.3	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red Max	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red Revert	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Actuations Before Gap Reduction	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Seconds Per Actions Added to Initial	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum Added Initial	0	0	0	0	0	0	0	0	30	30	30	30	30	30	30	30
Time Before Gap Reduction	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cars Waiting Before Gap Reduction	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Step To Reduce	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce To Minimum	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Minimum Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Action Plan (MM-5-2)1

Pattern	254	**System Override**	No
Timing Plan	1	**Sequence**	1
Vehicle Detector	1	**Detector Log**	NONE
Flash	No	**Red Rest**	No
Veh Det Diag Plan	1	**Ped Det Diag Plan**	1
Dimming Enable	No		

Phase	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
Ped Recall	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Walk 2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Vehicle Extension	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Vehicle Recall	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Max Recall	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Max 2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Max 3	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Conditional Service	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Phase Omitted	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Special Function	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Auxilliary Function	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

LP 1 - 15	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh
LP 16 - 30	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh
LP 31 - 45	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh
LP 46 - 60	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh
LP 61 - 75	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh
LP 76 - 90	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh
LP 91 - 100	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh					

Action Plan (MM-5-2)4

Pattern	4	**System Override**	No
Timing Plan	1	**Sequence**	1
Vehicle Detector	1	**Detector Log**	NONE
Flash	No	**Red Rest**	No
Veh Det Diag Plan	1	**Ped Det Diag Plan**	1
Dimming Enable	No		

Phase	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
Ped Recall	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Walk 2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Vehicle Extension	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Vehicle Recall	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Max Recall	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Max 2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Max 3	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Conditional Service	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Phase Omitted	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Special Function	.	.	.	X	X	.	.	.	.	.	.	.	.	.	.	.
Auxilliary Function	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

LP 1 - 15	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh
LP 16 - 30	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh
LP 31 - 45	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh
LP 46 - 60	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh
LP 61 - 75	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh
LP 76 - 90	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh
LP 91 - 100	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh						

Action Plan (MM-5-2)5

Pattern	5	**System Override**	No
Timing Plan	1	**Sequence**	1
Vehicle Detector	1	**Detector Log**	NONE
Flash	No	**Red Rest**	No
Veh Det Diag Plan	1	**Ped Det Diag Plan**	1
Dimming Enable	No		

Phase	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
Ped Recall	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Walk 2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Vehicle Extension	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Vehicle Recall	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Max Recall	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Max 2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Max 3	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Conditional Service	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Phase Omitted	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Special Function	.	.	.	X	X	.	.	.	.	.	.	.	.	.	.	.
Auxilliary Function	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

LP 1 - 15	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh
LP 16 - 30	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh
LP 31 - 45	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh
LP 46 - 60	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh
LP 61 - 75	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh
LP 76 - 90	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh
LP 91 - 100	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh	Inh						

Coordination Parameter Data - 4 ()

Coordination Data		Split Sum	120
Use Split Pattern	4		
Cycle Time	120	STD (COS)	
Offset Val	22	Dwell Add Time	0
Actuated Crd Phase	No	Timing Plan	0
Actuated Walk	No	Sequence Num	0
Phase Reservice	No	Action Plan	4
Max Select	MAX1	Force Off	FIXED

Phase Number	1	2	3	4	5	6	7	8
Split	16	40	16	48	16	40	16	48
Preference 1	0	0	0	0	0	0	0	0
Prefercence 2	0	0	0	0	0	0	0	0

Phase Number	9	10	11	12	13	14	15	16
Split	0	0	0	0	0	0	0	0
Preference 1	0	0	0	0	0	0	0	0
Prefercence 2	0	0	0	0	0	0	0	0
Coord Phases	4, 8							

	1	2	3	4
Ring Split Ext	0	0	0	0
Ring Displacement	0	0	0	0
Split Demand	0	0	Xartery Pattern	0

Coordination Parameter Data - 5 ()

Coordination Data		Split Sum	130
Use Split Pattern	5		
Cycle Time	130	STD (COS)	
Offset Val	22	Dwell Add Time	0
Actuated Crd Phase	No	Timing Plan	0
Actuated Walk	No	Sequence Num	0
Phase Reservice	No	Action Plan	5
Max Select	MAX1	Force Off	FIXED

Phase Number	1	2	3	4	5	6	7	8
Split	18	44	18	50	18	44	18	50
Preference 1	0	0	0	0	0	0	0	0
Prefercence 2	0	0	0	0	0	0	0	0

Phase Number	9	10	11	12	13	14	15	16
Split	0	0	0	0	0	0	0	0
Preference 1	0	0	0	0	0	0	0	0
Prefercence 2	0	0	0	0	0	0	0	0
Coord Phases	4, 8							

	1	2	3	4
Ring Split Ext	0	0	0	0
Ring Displacement	0	0	0	0
Split Demand	0	0	Xartery Pattern	0

Day Plans

Day Plan 1

Event	1
Action	1
Hour	0
Minute	0

Day Plan 2

Event	1
Action	1
Hour	0
Minute	0

Time Base Schedule	
Schedule Number	**1**
Day Plan	1
Month	JAN, FEB, MAR, APR, MAY, JUN, JUL, AUG, SEP, OCT, NOV, DEC
Day DOW	MON, TUE, WED, THU, FRI
Day DOM	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31
Schedule Number	**2**
Day Plan	2
Month	JAN, FEB, MAR, APR, MAY, JUN, JUL, AUG, SEP, OCT, NOV, DEC
Day DOW	SUN, SAT
Day DOM	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31

EXCEPTION DAY PROGRAM

Exception Day	1	2	3	4	5	6	7	8	9	10	11	12
Format	Float	Float	Float	Float	Float	Float	Float	Float	Float	Float	Float	Float
Month	0	0	0	0	0	0	0	0	0	0	0	0
DOM Or DOW	0	0	0	0	0	0	0	0	0	0	0	0
WOM Or Year	0	0	0	0	0	0	0	0	0	0	0	0
Day Plan	0	0	0	0	0	0	0	0	0	0	0	0

Exception Day	13	14	15	16	17	18	19	20	21	22	23	24
Format	Float	Float	Float	Float	Float	Float	Float	Float	Float	Float	Float	Float
Month	0	0	0	0	0	0	0	0	0	0	0	0
DOM Or DOW	0	0	0	0	0	0	0	0	0	0	0	0
WOM Or Year	0	0	0	0	0	0	0	0	0	0	0	0
Day Plan	0	0	0	0	0	0	0	0	0	0	0	0

Exception Day	25	26	27	28	29	30	31	32	33	34	35	36
Format	Float	Float	Float	Float	Float	Float	Float	Float	Float	Float	Float	Float
Month	0	0	0	0	0	0	0	0	0	0	0	0
DOM Or DOW	0	0	0	0	0	0	0	0	0	0	0	0
WOM Or Year	0	0	0	0	0	0	0	0	0	0	0	0
Day Plan	0	0	0	0	0	0	0	0	0	0	0	0

CONTROLLER OPTIONS / ACT PRE-TIMED / SIMULTANEOUS GAP TABLE

		Phase	Simultaneous Gap
Unit Red Revert	2.0		
Guaranteed Passage	NONE	**1**	NONE
NON-ACT I Phases	4 8	**2**	NONE
NON-ACT II Phases	NONE	**3**	NONE
Ped Reservice	NONE	**4**	NONE
Rest In Walk	4 8	**5**	NONE
Flashing Walk	NONE	**6**	NONE
Ped Clear Thru Yellow	NONE	**7**	NONE
Ped Clear Thru Red	NONE	**8**	NONE
IGrn + Veh Ext	NONE	**9**	NONE
		10	NONE
Pretimed Operation	NONE	**11**	NONE
Pretimed Phases	NONE	**12**	NONE
		13	NONE
Immediate Gap Reduction	NONE	**14**	NONE
Exclusive Ped Service	NONE	**15**	NONE
Simultaneous Gap Disable	NONE	**16**	NONE
Timing Plans	0		
Conditional Service Enable	NONE		

COORDINATOR OPTIONS

Manual Pattern	0	**Multi Sync**	NO
Interconnect Source	TBC	**Interconnect Format**	PTN
Transition mode	ADDONLY	**ECPI Coordination**	YES
Offset Ref	YELLOW	**Dwell/Add Time**	0
Delay Walk	NO	**Force Off**	FIXED
Force Off Add Initial	NO	**Use Ped Time**	YES
Ped Recall	NO	**Ped Re-Service**	NO
Man Sync Enable	NO	**Local Zero Override**	NO
Resync Count	0	**Max Select**	MAX1

PHASE RECALL OPTIONS

Phase Timing	1	2	3	4
Lock Det	NONE	NONE	NONE	NONE
Veh Recall	4 8	NONE	NONE	NONE
Ped Recall	NONE	NONE	NONE	NONE
Max Recall	NONE	NONE	NONE	NONE
Soft Recall	NONE	NONE	NONE	NONE
No Rest Here	NONE	NONE	NONE	NONE
Added Init Calc	NONE	NONE	NONE	NONE

GUARANTEED MINIMUM TIME DATA

Phase Number	1	2	3	4	5	6	7	8
Min Green (1/10)	1	0	0	0	0	0	0	0
Min Walk	0	0	0	0	0	0	0	0
Min Ped Clr	0	0	0	0	0	0	0	0
Min Ylw Change	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Min Red Clr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Min Red Revert	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Phase Number	9	10	11	12	13	14	15	16
Min Green	0	0	0	0	0	0	0	0
Min Walk	0	0	0	0	0	0	0	0
Min Ped Clr	0	0	0	0	0	0	0	0
Min Ylw Change	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Min Red Clr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Min Red Revert	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

LOAD SWITCH ASSIGN (MMU CHANNEL)

LD Switch	Phase/Ovlp	Type	Dimming	Power	Auto	Together
1	1	Vehicle	NONE	Auto	Red	NONE
2	2	Vehicle	NONE	Auto	Red	NONE
3	3	Vehicle	NONE	Auto	Red	NONE
4	4	Vehicle	NONE	Auto	Red	NONE
5	5	Vehicle	NONE	Auto	Red	NONE
6	6	Vehicle	NONE	Auto	Red	NONE
7	7	Vehicle	NONE	Auto	Red	NONE
8	8	Vehicle	NONE	Auto	Red	NONE
9	0	.	NONE	Auto	.	NONE
10	0	.	NONE	Auto	.	NONE
11	0	.	NONE	Auto	.	NONE
12	0	.	NONE	Auto	.	NONE
13	2	Pedestrian	NONE	Auto	.	NONE
14	4	Pedestrian	NONE	Auto	.	NONE
15	6	Pedestrian	NONE	Auto	.	NONE
16	8	Pedestrian	NONE	Auto	.	NONE

GENERAL SERIAL PORT SETUP

Port Index	Port 2/C50S	Port 3A/C21S	Port 3B/C22S	4	5
Protocol	TERMINAL	NTCIP	ECPIP	TERMINAL	TERMINAL
Enable	NO	NO	NO	NO	NO
Data Rate (BPS)	9600	19200	1200	9600	9600
Data, Parity, Stop	8 N 1	8 N 1	8 N 1	8 N 1	8 N 1
Modem Setup String	NONE	NONE	NONE	NONE	NONE
User					
Comm Port Address	0	0	0	0	0
Detector Address	0	0	0	0	0
Telemetry Resp Delay	0.0	0.0	0.9	0.0	0.0
Duplex	HALF	FULL	FULL	HALF	HALF
Group Addr	0	0	0	0	0
Single Flag Enable	NO	YES	NO	NO	NO
RTS to CTS Delay	0.0	0.0	14.0	0.0	0.0
RTS Turn Off Delay	0.0	0.0	2.0	0.0	0.0
Drop Out Time	10	10	10	10	10
Early RTS	NO	NO	NO	NO	NO
NTCIP Protocol	ntcipNull	ntcipNull	ntcipNull	ntcipNull	ntcipNull
Priority	4	2	3	0	0
Port	0	0	0	0	0

GENERAL ETHERNET PORT SETUP

IP Address	10	225	29	146
Address Mask	255	255	255	248
FTP Server	0	0	0	0
Default Gateway	10	225	29	145
NTCIP UDP Port	50206			
Speed	0			
Mode	0			
Drop Out Timer	300			
Backup Time	0			
Priority	1			
IF Index	0			

Vehicle Detector Plan 1

Detector	1	2	3	4	5	6
Assigned	1	2	3	4	5	6
Switch Phase	0	0	0	0	0	0
Extend Time	0.0	0.0	0.0	0.0	0.0	0.0
Delay Time	0.0	0.0	0.0	0.0	0.0	0.0
Queue Limit	0	0	0	0	0	0
Fail Time	255	255	255	255	255	255
Fail Call Delay	0	0	0	0	0	0
Yellow Lock	No	No	No	No	No	No
Added Option	No	No	No	No	No	No
Call Option	Yes	Yes	Yes	Yes	Yes	Yes
Passage Option	Yes	Yes	Yes	Yes	Yes	Yes
Queue Option	No	No	No	No	No	No
NTCIP	No	No	No	No	No	No
NTCIP Volume	No	No	No	No	No	No
ECPI Log	No	No	No	No	No	No
Red Lock	No	No	No	No	No	No
Called Phases	None	6	None	8	None	2

Detector	7	8	9	10	11	12
Assigned	7	8	9	10	11	12
Switch Phase	0	0	0	0	0	0
Extend Time	0.0	0.0	0.0	0.0	0.0	0.0
Delay Time	0.0	0.0	0.0	0.0	0.0	0.0
Queue Limit	0	0	0	0	0	0
Fail Time	255	255	255	255	255	255
Fail Call Delay	0	0	0	0	0	0
Yellow Lock	No	No	No	No	No	No
Added Option	No	No	No	No	No	No
Call Option	Yes	Yes	No	No	No	No
Passage Option	Yes	Yes	Yes	Yes	Yes	Yes
Queue Option	No	No	No	No	No	No
NTCIP	No	No	No	No	No	No
NTCIP Volume	No	No	No	No	No	No
ECPI Log	No	No	No	No	No	No
Red Lock	No	No	No	No	No	No
Called Phases	None	4	None	None	None	None

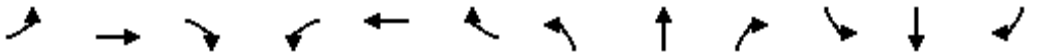
PED AND SYSTEM DETECTOR OPTIONS

Pedestrian								
Ped Phase	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
Ped Det Assign	0	2	0	4	0	6	0	8
Ped Phase	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
Ped Det Assign	0	0	0	0	0	0	0	0

Local System								
Zone Monitor Det	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
System Det Assign	0	0	0	0	0	0	0	0
Zone Monitor Det	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
System Det Assign	0	0	0	0	0	0	0	0

Ped Det Assignment Mode	NTCIP

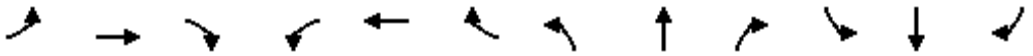
APPENDIX E: Synchro/SimTraffic Operational Analysis Results



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	70	0	360	50	1040	0	0	540	760
Future Volume (vph)	0	0	0	70	0	360	50	1040	0	0	540	760
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				4.0		4.0	4.0	4.0			4.0	4.0
Lane Util. Factor				1.00		1.00	0.97	0.91			*0.75	1.00
Frt				1.00		0.85	1.00	1.00			1.00	0.85
Flt Protected				0.95		1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)				1770		1583	3433	5085			5588	1583
Flt Permitted				0.95		1.00	0.95	1.00			1.00	1.00
Satd. Flow (perm)				1770		1583	3433	5085			5588	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	76	0	391	54	1130	0	0	587	826
RTOR Reduction (vph)	0	0	0	0	0	82	0	0	0	0	0	411
Lane Group Flow (vph)	0	0	0	76	0	309	54	1130	0	0	587	415
Turn Type				Split		Perm	Prot	NA			NA	Perm
Protected Phases				4	4		1	2 1			2	
Permitted Phases						4						2
Actuated Green, G (s)				18.9		18.9	7.1	49.4			38.3	38.3
Effective Green, g (s)				18.9		18.9	7.1	49.4			38.3	38.3
Actuated g/C Ratio				0.25		0.25	0.09	0.65			0.50	0.50
Clearance Time (s)				4.0		4.0	4.0				4.0	4.0
Vehicle Extension (s)				3.0		3.0	3.0				3.0	3.0
Lane Grp Cap (vph)				438		392	319	3292			2804	794
v/s Ratio Prot				0.04			0.02	c0.22			0.11	
v/s Ratio Perm						c0.20						c0.26
v/c Ratio				0.17		0.79	0.17	0.34			0.21	0.52
Uniform Delay, d1				22.6		26.8	31.9	6.1			10.6	12.8
Progression Factor				1.00		1.00	1.58	1.35			1.00	1.00
Incremental Delay, d2				0.2		10.1	0.2	0.1			0.2	2.4
Delay (s)				22.8		36.9	50.5	8.3			10.7	15.3
Level of Service				C		D	D	A			B	B
Approach Delay (s)		0.0			34.6			10.2			13.4	
Approach LOS		A			C			B			B	

Intersection Summary			
HCM 2000 Control Delay	15.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	76.3	Sum of lost time (s)	12.0
Intersection Capacity Utilization	64.3%	ICU Level of Service	C
Analysis Period (min)	15		

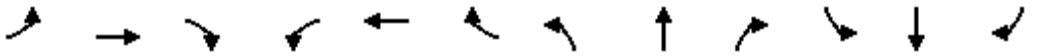
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	640	0	130	0	0	0	0	450	200	180	350	0
Future Volume (vph)	640	0	130	0	0	0	0	450	200	180	350	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0					4.0	4.0	4.0	4.0	
Lane Util. Factor	0.95	0.95	1.00					*0.80	1.00	0.97	0.91	
Frt	1.00	1.00	0.85					1.00	0.85	1.00	1.00	
Flt Protected	0.95	0.95	1.00					1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1681	1681	1583					5961	1583	3433	5085	
Flt Permitted	0.95	0.95	1.00					1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1681	1681	1583					5961	1583	3433	5085	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	696	0	141	0	0	0	0	489	217	196	380	0
RTOR Reduction (vph)	0	0	101	0	0	0	0	0	171	0	0	0
Lane Group Flow (vph)	348	348	40	0	0	0	0	489	46	196	380	0
Turn Type	Split	NA	Perm					NA	Perm	Prot	NA	
Protected Phases	8	8						6		5	6 5	
Permitted Phases			8						6			
Actuated Green, G (s)	21.8	21.8	21.8					16.2	16.2	26.3	46.5	
Effective Green, g (s)	21.8	21.8	21.8					16.2	16.2	26.3	46.5	
Actuated g/C Ratio	0.29	0.29	0.29					0.21	0.21	0.34	0.61	
Clearance Time (s)	4.0	4.0	4.0					4.0	4.0	4.0		
Vehicle Extension (s)	3.0	3.0	3.0					4.7	4.7	4.7		
Lane Grp Cap (vph)	480	480	452					1265	336	1183	3098	
v/s Ratio Prot	c0.21	0.21						c0.08		c0.06	0.07	
v/s Ratio Perm			0.03						0.03			
v/c Ratio	0.72	0.72	0.09					0.39	0.14	0.17	0.12	
Uniform Delay, d1	24.5	24.5	20.0					25.8	24.4	17.4	6.3	
Progression Factor	1.00	1.00	1.00					1.00	1.00	1.13	0.10	
Incremental Delay, d2	5.4	5.4	0.1					0.4	0.4	0.1	0.0	
Delay (s)	29.9	29.9	20.1					26.2	24.7	19.8	0.7	
Level of Service	C	C	C					C	C	B	A	
Approach Delay (s)		28.3			0.0			25.7			7.2	
Approach LOS		C			A			C			A	

Intersection Summary			
HCM 2000 Control Delay	21.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	76.3	Sum of lost time (s)	12.0
Intersection Capacity Utilization	64.3%	ICU Level of Service	C
Analysis Period (min)	15		

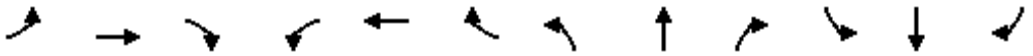
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	120	0	490	120	400	0	0	680	250
Future Volume (vph)	0	0	0	120	0	490	120	400	0	0	680	250
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				4.0		4.0	4.0	4.0			4.0	4.0
Lane Util. Factor				1.00		1.00	0.97	0.91			*0.75	1.00
Frt				1.00		0.85	1.00	1.00			1.00	0.85
Flt Protected				0.95		1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)				1770		1583	3433	5085			5588	1583
Flt Permitted				0.95		1.00	0.95	1.00			1.00	1.00
Satd. Flow (perm)				1770		1583	3433	5085			5588	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	130	0	533	130	435	0	0	739	272
RTOR Reduction (vph)	0	0	0	0	0	248	0	0	0	0	0	159
Lane Group Flow (vph)	0	0	0	130	0	285	130	435	0	0	739	113
Turn Type				Split		Perm	Prot	NA			NA	Perm
Protected Phases				4	4		1	2 1			2	
Permitted Phases						4						2
Actuated Green, G (s)				14.9		14.9	6.7	34.4			23.7	23.7
Effective Green, g (s)				14.9		14.9	6.7	34.4			23.7	23.7
Actuated g/C Ratio				0.26		0.26	0.12	0.60			0.41	0.41
Clearance Time (s)				4.0		4.0	4.0				4.0	4.0
Vehicle Extension (s)				3.0		3.0	3.0				3.0	3.0
Lane Grp Cap (vph)				460		411	401	3052			2311	654
v/s Ratio Prot				0.07			c0.04	0.09			c0.13	
v/s Ratio Perm						c0.18						0.07
v/c Ratio				0.28		0.69	0.32	0.14			0.32	0.17
Uniform Delay, d1				16.9		19.1	23.2	5.0			11.4	10.6
Progression Factor				1.00		1.00	1.53	0.91			1.00	1.00
Incremental Delay, d2				0.3		5.0	0.5	0.0			0.4	0.6
Delay (s)				17.3		24.2	36.0	4.6			11.7	11.2
Level of Service				B		C	D	A			B	B
Approach Delay (s)		0.0			22.8			11.8			11.6	
Approach LOS		A			C			B			B	

Intersection Summary			
HCM 2000 Control Delay	15.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	57.3	Sum of lost time (s)	12.0
Intersection Capacity Utilization	44.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	150	0	80	0	0	0	0	370	260	280	600	0
Future Volume (vph)	150	0	80	0	0	0	0	370	260	280	600	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0					4.0	4.0	4.0	4.0	
Lane Util. Factor	0.95	0.95	1.00					*0.80	1.00	0.97	0.91	
Frt	1.00	1.00	0.85					1.00	0.85	1.00	1.00	
Flt Protected	0.95	0.95	1.00					1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1681	1681	1583					5961	1583	3433	5085	
Flt Permitted	0.95	0.95	1.00					1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1681	1681	1583					5961	1583	3433	5085	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	163	0	87	0	0	0	0	402	283	304	652	0
RTOR Reduction (vph)	0	0	77	0	0	0	0	0	194	0	0	0
Lane Group Flow (vph)	81	82	10	0	0	0	0	402	89	304	652	0
Turn Type	Split	NA	Perm					NA	Perm	Prot	NA	
Protected Phases	8	8						6		5	6 5	
Permitted Phases			8						6			
Actuated Green, G (s)	6.9	6.9	6.9					18.1	18.1	20.3	42.4	
Effective Green, g (s)	6.9	6.9	6.9					18.1	18.1	20.3	42.4	
Actuated g/C Ratio	0.12	0.12	0.12					0.32	0.32	0.35	0.74	
Clearance Time (s)	4.0	4.0	4.0					4.0	4.0	4.0		
Vehicle Extension (s)	3.0	3.0	3.0					4.7	4.7	4.7		
Lane Grp Cap (vph)	202	202	190					1882	500	1216	3762	
v/s Ratio Prot	0.05	c0.05						c0.07		c0.09	0.13	
v/s Ratio Perm			0.01						0.06			
v/c Ratio	0.40	0.41	0.06					0.21	0.18	0.25	0.17	
Uniform Delay, d1	23.3	23.3	22.3					14.4	14.2	13.1	2.2	
Progression Factor	1.00	1.00	1.00					1.00	1.00	1.03	0.08	
Incremental Delay, d2	1.3	1.3	0.1					0.1	0.3	0.2	0.0	
Delay (s)	24.6	24.6	22.4					14.5	14.5	13.7	0.2	
Level of Service	C	C	C					B	B	B	A	
Approach Delay (s)		23.9			0.0			14.5			4.5	
Approach LOS		C			A			B			A	

Intersection Summary			
HCM 2000 Control Delay	10.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.26		
Actuated Cycle Length (s)	57.3	Sum of lost time (s)	12.0
Intersection Capacity Utilization	44.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Intersection: 1: 67th Ave & WB Ramp

Movement	WB	WB	NB	NB	NB	NB	NB	SB	SB	SB	SB	SB
Directions Served	L	R	L	L	T	T	T	T	T	T	T	R
Maximum Queue (ft)	97	98	49	48	29	28	31	26	92	94	75	175
Average Queue (ft)	37	23	22	11	2	1	2	4	34	45	18	95
95th Queue (ft)	78	79	44	38	13	9	15	20	78	92	54	169
Link Distance (ft)	1176		284	284	284	284	284		1247	1247	1247	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)		480						350				500
Storage Blk Time (%)												
Queuing Penalty (veh)												

Intersection: 2: 67th Ave & EB Ramp

Movement	EB	EB	NB	NB	NB	NB	SB	SB	SB	SB	SB	
Directions Served	L	LT	T	T	T	R	L	L	T	T	T	
Maximum Queue (ft)	232	222	49	202	185	92	102	115	97	113	54	
Average Queue (ft)	135	98	2	121	79	42	35	54	46	37	6	
95th Queue (ft)	213	176	17	184	166	71	76	95	91	91	30	
Link Distance (ft)	1137	1137	1287	1287	1287		284	284	284	284	284	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)						315						
Storage Blk Time (%)												
Queuing Penalty (veh)												

Network Summary

Network wide Queuing Penalty: 0

Intersection: 1: 67th Ave & WB Ramp

Movement	WB	WB	NB	NB	NB	NB	NB	SB	SB	SB	SB	SB
Directions Served	L	R	L	L	T	T	T	T	T	T	T	R
Maximum Queue (ft)	158	54	71	91	72	51	30	21	70	240	185	74
Average Queue (ft)	62	5	36	45	12	5	5	1	26	123	78	45
95th Queue (ft)	121	31	62	78	44	25	23	7	58	211	170	69
Link Distance (ft)	1176		284	284	284	284	284		1247	1247	1247	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)		480						350				500
Storage Blk Time (%)												
Queuing Penalty (veh)												

Intersection: 2: 67th Ave & EB Ramp

Movement	EB	EB	NB	NB	NB	NB	SB	SB	SB	SB	SB	
Directions Served	L	LT	T	T	T	R	L	L	T	T	T	
Maximum Queue (ft)	113	30	50	102	52	110	95	116	97	53	30	
Average Queue (ft)	66	13	13	58	21	47	55	61	24	13	2	
95th Queue (ft)	103	34	41	96	49	83	90	105	66	45	14	
Link Distance (ft)	1137	1137	1287	1287	1287		284	284	284	284	284	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)						315						
Storage Blk Time (%)												
Queuing Penalty (veh)												

Network Summary

Network wide Queuing Penalty: 0

Movement	EBL	EBR2	WBL	WBR2	NBL	NBT	NBR2	SBL	SBT	SBR2
Lane Configurations										
Traffic Volume (vph)	640	130	70	360	50	450	200	180	540	760
Future Volume (vph)	640	130	70	360	50	450	200	180	540	760
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	8.0	8.0	8.0	8.0	8.0	8.0	4.0	8.0	8.0	4.0
Lane Util. Factor	0.97	1.00	0.97	1.00	0.97	0.91	1.00	0.97	0.91	1.00
Frt	1.00	0.85	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	1583	3433	1583	3433	5085	1583	3433	5085	1583
Flt Permitted	0.95	1.00	0.95	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	1583	3433	1583	3433	5085	1583	3433	5085	1583
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	711	144	78	400	56	500	222	200	600	844
RTOR Reduction (vph)	0	125	0	290	0	0	0	0	0	0
Lane Group Flow (vph)	711	19	78	110	56	500	222	200	600	844
Turn Type	Prot	Prot	Prot	Perm	Prot	NA	Free	Prot	NA	Free
Protected Phases	4	5	8		5	2		1	6	
Permitted Phases				8			Free			Free
Actuated Green, G (s)	24.7	12.0	24.7	24.7	12.0	30.8	90.0	10.5	29.3	90.0
Effective Green, g (s)	24.7	12.0	24.7	24.7	12.0	30.8	90.0	10.5	29.3	90.0
Actuated g/C Ratio	0.27	0.13	0.27	0.27	0.13	0.34	1.00	0.12	0.33	1.00
Clearance Time (s)	8.0	8.0	8.0	8.0	8.0	8.0		8.0	8.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	942	211	942	434	457	1740	1583	400	1655	1583
v/s Ratio Prot	c0.21	0.01	0.02		0.02	0.10		0.06	0.12	
v/s Ratio Perm				0.07			0.14			c0.53
v/c Ratio	0.75	0.09	0.08	0.25	0.12	0.29	0.14	0.50	0.36	0.53
Uniform Delay, d1	29.9	34.2	24.2	25.5	34.4	21.6	0.0	37.3	23.2	0.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	3.5	0.2	0.0	0.3	0.1	0.4	0.2	1.0	0.6	1.3
Delay (s)	33.4	34.4	24.3	25.8	34.5	22.0	0.2	38.3	23.8	1.3
Level of Service	C	C	C	C	C	C	A	D	C	A
Approach Delay (s)						16.7			14.0	
Approach LOS						B			B	

Intersection Summary			
HCM 2000 Control Delay	20.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	24.0
Intersection Capacity Utilization	65.9%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBR2	WBL	WBR2	NBL	NBT	NBR2	SBL	SBT	SBR2
Lane Configurations										
Traffic Volume (vph)	150	80	120	490	120	370	260	280	680	250
Future Volume (vph)	150	80	120	490	120	370	260	280	680	250
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	8.0	8.0	8.0	8.0	8.0	8.0	4.0	8.0	8.0	4.0
Lane Util. Factor	0.97	1.00	0.97	1.00	0.97	0.91	1.00	0.97	0.91	1.00
Frt	1.00	0.85	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	1583	3433	1583	3433	5085	1583	3433	5085	1583
Flt Permitted	0.95	1.00	0.95	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	1583	3433	1583	3433	5085	1583	3433	5085	1583
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	167	89	133	544	133	411	289	311	756	278
RTOR Reduction (vph)	0	82	0	470	0	0	0	0	0	0
Lane Group Flow (vph)	167	7	133	74	133	411	289	311	756	278
Turn Type	Prot	Prot	Prot	Perm	Prot	NA	Free	Prot	NA	Free
Protected Phases	4	5	8		5	2		1	6	
Permitted Phases				8			Free			Free
Actuated Green, G (s)	12.3	7.0	12.3	12.3	7.0	40.4	90.0	13.3	46.7	90.0
Effective Green, g (s)	12.3	7.0	12.3	12.3	7.0	40.4	90.0	13.3	46.7	90.0
Actuated g/C Ratio	0.14	0.08	0.14	0.14	0.08	0.45	1.00	0.15	0.52	1.00
Clearance Time (s)	8.0	8.0	8.0	8.0	8.0	8.0		8.0	8.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	469	123	469	216	267	2282	1583	507	2638	1583
v/s Ratio Prot	c0.05	0.00	0.04		c0.04	0.08		c0.09	c0.15	
v/s Ratio Perm				0.05			0.18			0.18
v/c Ratio	0.36	0.06	0.28	0.34	0.50	0.18	0.18	0.61	0.29	0.18
Uniform Delay, d1	35.3	38.4	34.9	35.2	39.8	14.9	0.0	35.9	12.2	0.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.5	0.2	0.3	1.0	1.5	0.2	0.3	2.2	0.3	0.2
Delay (s)	35.7	38.6	35.2	36.2	41.3	15.0	0.3	38.1	12.5	0.2
Level of Service	D	D	D	D	D	B	A	D	B	A
Approach Delay (s)						14.1			15.9	
Approach LOS						B			B	

Intersection Summary			
HCM 2000 Control Delay	21.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	24.0
Intersection Capacity Utilization	58.4%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Intersection: 9: 67th Ave & EB Off-Ramp/WB Off-Ramp

Movement	EB	EB	WB	WB	NB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	L	L	L	L	L	T	T	T	L	L	T
Maximum Queue (ft)	228	225	53	31	54	74	118	161	98	99	97	183
Average Queue (ft)	139	145	28	13	29	33	71	76	36	39	66	87
95th Queue (ft)	197	196	46	37	55	70	110	129	76	84	89	141
Link Distance (ft)	654	654	531	531			3039	3039	3039			2470
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)					330	330				330	330	
Storage Blk Time (%)		0										
Queuing Penalty (veh)		1										

Intersection: 9: 67th Ave & EB Off-Ramp/WB Off-Ramp

Movement	SB	SB
Directions Served	T	T
Maximum Queue (ft)	159	145
Average Queue (ft)	79	39
95th Queue (ft)	132	104
Link Distance (ft)	2470	2470
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 201: SR 303L

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 202: Freeway EB

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 301: SR 303L

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 302:

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Network Summary

Network wide Queuing Penalty: 1

Intersection: 9: 67th Ave & EB Off-Ramp/WB Off-Ramp

Movement	EB	EB	WB	WB	NB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	L	L	L	L	L	T	T	T	L	L	T
Maximum Queue (ft)	75	96	122	109	54	96	90	96	97	172	201	98
Average Queue (ft)	55	45	44	40	36	47	48	48	19	72	90	66
95th Queue (ft)	80	88	79	78	64	78	77	81	57	131	147	107
Link Distance (ft)	654	654	531	531			3039	3039	3039			2470
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)					330	330				330	330	
Storage Blk Time (%)												
Queuing Penalty (veh)												

Intersection: 9: 67th Ave & EB Off-Ramp/WB Off-Ramp

Movement	SB	SB
Directions Served	T	T
Maximum Queue (ft)	158	114
Average Queue (ft)	75	40
95th Queue (ft)	126	94
Link Distance (ft)	2470	2470
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 201: SR 303L

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 202: Freeway EB

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 301: SR 303L

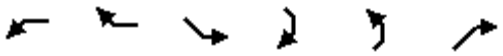
Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 302:

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Network Summary

Network wide Queuing Penalty: 0



Movement	WBL	WBR	SEL	SER	NEL	NER
Lane Configurations						
Traffic Volume (vph)	0	0	640	0	0	450
Future Volume (vph)	0	0	640	0	0	450
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.5			4.5
Lane Util. Factor			1.00			0.76
Frt			1.00			0.85
Flt Protected			0.95			1.00
Satd. Flow (prot)			1770			3610
Flt Permitted			0.95			1.00
Satd. Flow (perm)			1770			3610
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	696	0	0	489
RTOR Reduction (vph)	0	0	79	0	0	302
Lane Group Flow (vph)	0	0	617	0	0	187
Turn Type			Prot			Prot
Protected Phases			1			2
Permitted Phases						
Actuated Green, G (s)			46.6			34.4
Effective Green, g (s)			46.6			34.4
Actuated g/C Ratio			0.52			0.38
Clearance Time (s)			4.5			4.5
Vehicle Extension (s)			3.0			3.0
Lane Grp Cap (vph)			916			1379
v/s Ratio Prot			c0.35			c0.05
v/s Ratio Perm						
v/c Ratio			0.67			0.14
Uniform Delay, d1			16.1			18.1
Progression Factor			1.00			0.50
Incremental Delay, d2			2.0			0.2
Delay (s)			18.0			9.3
Level of Service			B			A
Approach Delay (s)	0.0		18.0		9.3	
Approach LOS	A		B		A	

Intersection Summary			
HCM 2000 Control Delay	14.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	53.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	WBL	WBR	SEL	SET	SER	NWL	NWT	NWR	NEL	NER
Lane Configurations										
Traffic Volume (vph)	540	0	0	1040	0	0	0	0	0	0
Future Volume (vph)	540	0	0	1040	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5			4.5						
Lane Util. Factor	0.94			0.91						
Frt	1.00			1.00						
Flt Protected	0.95			1.00						
Satd. Flow (prot)	4990			5085						
Flt Permitted	0.95			1.00						
Satd. Flow (perm)	4990			5085						
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	587	0	0	1130	0	0	0	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	587	0	0	1130	0	0	0	0	0	0
Turn Type	Prot			NA						
Protected Phases	1			2						
Permitted Phases										
Actuated Green, G (s)	46.6			34.4						
Effective Green, g (s)	46.6			34.4						
Actuated g/C Ratio	0.52			0.38						
Clearance Time (s)	4.5			4.5						
Vehicle Extension (s)	3.0			3.0						
Lane Grp Cap (vph)	2583			1943						
v/s Ratio Prot	c0.12			c0.22						
v/s Ratio Perm										
v/c Ratio	0.23			0.58						
Uniform Delay, d1	11.9			22.1						
Progression Factor	1.00			0.87						
Incremental Delay, d2	0.0			1.1						
Delay (s)	11.9			20.3						
Level of Service	B			C						
Approach Delay (s)	11.9			20.3			0.0		0.0	
Approach LOS	B			C			A		A	

Intersection Summary			
HCM 2000 Control Delay	17.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	59.3%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBR	NWL	NWR	SWL	SWR
Lane Configurations						
Traffic Volume (vph)	0	0	70	0	0	540
Future Volume (vph)	0	0	70	0	0	540
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.5			4.5
Lane Util. Factor			1.00			0.76
Frt			1.00			0.85
Flt Protected			0.95			1.00
Satd. Flow (prot)			1770			3610
Flt Permitted			0.95			1.00
Satd. Flow (perm)			1770			3610
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	76	0	0	587
RTOR Reduction (vph)	0	0	47	0	0	283
Lane Group Flow (vph)	0	0	29	0	0	304
Turn Type			Prot			Prot
Protected Phases			2			1
Permitted Phases						
Actuated Green, G (s)			34.4			46.6
Effective Green, g (s)			34.4			46.6
Actuated g/C Ratio			0.38			0.52
Clearance Time (s)			4.5			4.5
Vehicle Extension (s)			3.0			3.0
Lane Grp Cap (vph)			676			1869
v/s Ratio Prot			c0.02			c0.08
v/s Ratio Perm						
v/c Ratio			0.04			0.16
Uniform Delay, d1			17.5			11.4
Progression Factor			1.00			1.00
Incremental Delay, d2			0.1			0.0
Delay (s)			17.6			11.5
Level of Service			B			B
Approach Delay (s)	0.0		17.6		11.5	
Approach LOS	A		B		B	

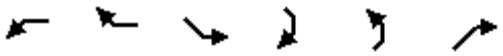
Intersection Summary			
HCM 2000 Control Delay	12.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.11		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	42.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations					↑↑↑			↑↑↑				
Traffic Volume (vph)	0	0	0	0	350	0	0	450	0	0	0	0
Future Volume (vph)	0	0	0	0	350	0	0	450	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.5			4.5				
Lane Util. Factor					0.91			0.91				
Frt					1.00			1.00				
Flt Protected					1.00			1.00				
Satd. Flow (prot)					5085			5085				
Flt Permitted					1.00			1.00				
Satd. Flow (perm)					5085			5085				
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	380	0	0	489	0	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	380	0	0	489	0	0	0	0
Turn Type					NA			NA				
Protected Phases					1			2				
Permitted Phases												
Actuated Green, G (s)					46.6			34.4				
Effective Green, g (s)					46.6			34.4				
Actuated g/C Ratio					0.52			0.38				
Clearance Time (s)					4.5			4.5				
Vehicle Extension (s)					3.0			3.0				
Lane Grp Cap (vph)					2632			1943				
v/s Ratio Prot					c0.07			c0.10				
v/s Ratio Perm												
v/c Ratio					0.14			0.25				
Uniform Delay, d1					11.3			19.0				
Progression Factor					0.51			1.00				
Incremental Delay, d2					0.0			0.3				
Delay (s)					5.8			19.3				
Level of Service					A			B				
Approach Delay (s)		0.0			5.8			19.3			0.0	
Approach LOS		A			A			B			A	

Intersection Summary			
HCM 2000 Control Delay	13.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.19		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	23.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	WBL	WBR	SEL	SER	NEL	NER
Lane Configurations						
Traffic Volume (vph)	0	0	150	0	0	370
Future Volume (vph)	0	0	150	0	0	370
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.5			4.5
Lane Util. Factor			1.00			0.76
Frt			1.00			0.85
Flt Protected			0.95			1.00
Satd. Flow (prot)			1770			3610
Flt Permitted			0.95			1.00
Satd. Flow (perm)			1770			3610
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	163	0	0	402
RTOR Reduction (vph)	0	0	90	0	0	219
Lane Group Flow (vph)	0	0	73	0	0	183
Turn Type			Prot			Prot
Protected Phases			1			2
Permitted Phases						
Actuated Green, G (s)			40.1			40.9
Effective Green, g (s)			40.1			40.9
Actuated g/C Ratio			0.45			0.45
Clearance Time (s)			4.5			4.5
Vehicle Extension (s)			3.0			3.0
Lane Grp Cap (vph)			788			1640
v/s Ratio Prot			c0.04			c0.05
v/s Ratio Perm						
v/c Ratio			0.09			0.11
Uniform Delay, d1			14.4			14.1
Progression Factor			1.00			1.00
Incremental Delay, d2			0.1			0.1
Delay (s)			14.5			14.2
Level of Service			B			B
Approach Delay (s)	0.0		14.5		14.2	
Approach LOS	A		B		B	

Intersection Summary			
HCM 2000 Control Delay	14.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.10		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	24.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	WBL	WBR	SEL	SET	SER	NWL	NWT	NWR	NEL	NER
Lane Configurations										
Traffic Volume (vph)	680	0	0	400	0	0	0	0	0	0
Future Volume (vph)	680	0	0	400	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5			4.5						
Lane Util. Factor	0.94			0.91						
Frt	1.00			1.00						
Flt Protected	0.95			1.00						
Satd. Flow (prot)	4990			5085						
Flt Permitted	0.95			1.00						
Satd. Flow (perm)	4990			5085						
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	739	0	0	435	0	0	0	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	739	0	0	435	0	0	0	0	0	0
Turn Type	Prot			NA						
Protected Phases	1			2						
Permitted Phases										
Actuated Green, G (s)	40.1			40.9						
Effective Green, g (s)	40.1			40.9						
Actuated g/C Ratio	0.45			0.45						
Clearance Time (s)	4.5			4.5						
Vehicle Extension (s)	3.0			3.0						
Lane Grp Cap (vph)	2223			2310						
v/s Ratio Prot	c0.15			c0.09						
v/s Ratio Perm										
v/c Ratio	0.33			0.19						
Uniform Delay, d1	16.2			14.6						
Progression Factor	1.00			0.54						
Incremental Delay, d2	0.1			0.2						
Delay (s)	16.3			8.1						
Level of Service	B			A						
Approach Delay (s)	16.3			8.1			0.0		0.0	
Approach LOS	B			A			A		A	

Intersection Summary			
HCM 2000 Control Delay	13.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.26		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	57.7%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBR	NWL	NWR	SWL	SWR
Lane Configurations						
Traffic Volume (vph)	0	0	120	0	0	680
Future Volume (vph)	0	0	120	0	0	680
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.5			4.5
Lane Util. Factor			1.00			0.76
Frt			1.00			0.85
Flt Protected			0.95			1.00
Satd. Flow (prot)			1770			3610
Flt Permitted			0.95			1.00
Satd. Flow (perm)			1770			3610
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	130	0	0	739
RTOR Reduction (vph)	0	0	71	0	0	410
Lane Group Flow (vph)	0	0	59	0	0	329
Turn Type			Prot			Prot
Protected Phases			2			1
Permitted Phases						
Actuated Green, G (s)			40.9			40.1
Effective Green, g (s)			40.9			40.1
Actuated g/C Ratio			0.45			0.45
Clearance Time (s)			4.5			4.5
Vehicle Extension (s)			3.0			3.0
Lane Grp Cap (vph)			804			1608
v/s Ratio Prot			c0.03			c0.09
v/s Ratio Perm						
v/c Ratio			0.07			0.20
Uniform Delay, d1			13.9			15.2
Progression Factor			1.00			1.00
Incremental Delay, d2			0.2			0.1
Delay (s)			14.0			15.3
Level of Service			B			B
Approach Delay (s)	0.0		14.0		15.3	
Approach LOS	A		B		B	

Intersection Summary			
HCM 2000 Control Delay	15.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.14		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	53.3%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations					↑↑↑			↑↑↑				
Traffic Volume (vph)	0	0	0	0	600	0	0	370	0	0	0	0
Future Volume (vph)	0	0	0	0	600	0	0	370	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.5			4.5				
Lane Util. Factor					0.91			0.91				
Frt					1.00			1.00				
Flt Protected					1.00			1.00				
Satd. Flow (prot)					5085			5085				
Flt Permitted					1.00			1.00				
Satd. Flow (perm)					5085			5085				
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	652	0	0	402	0	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	652	0	0	402	0	0	0	0
Turn Type					NA			NA				
Protected Phases					1			2				
Permitted Phases												
Actuated Green, G (s)					40.1			40.9				
Effective Green, g (s)					40.1			40.9				
Actuated g/C Ratio					0.45			0.45				
Clearance Time (s)					4.5			4.5				
Vehicle Extension (s)					3.0			3.0				
Lane Grp Cap (vph)					2265			2310				
v/s Ratio Prot					c0.13			c0.08				
v/s Ratio Perm												
v/c Ratio					0.29			0.17				
Uniform Delay, d1					15.9			14.5				
Progression Factor					0.52			1.00				
Incremental Delay, d2					0.1			0.2				
Delay (s)					8.2			14.7				
Level of Service					A			B				
Approach Delay (s)		0.0			8.2			14.7			0.0	
Approach LOS		A			A			B			A	

Intersection Summary			
HCM 2000 Control Delay	10.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.23		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	26.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Intersection: 2: NB 67th Avenue

Movement	EB	EB	EB
Directions Served	L	L	R
Maximum Queue (ft)	160	159	50
Average Queue (ft)	78	44	4
95th Queue (ft)	132	111	27
Link Distance (ft)	1382	1382	
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			150
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 3:

Movement	SE	NE	NE	NE
Directions Served	L	R	R	R
Maximum Queue (ft)	115	29	18	27
Average Queue (ft)	79	5	3	3
95th Queue (ft)	97	19	13	17
Link Distance (ft)	70	14	14	14
Upstream Blk Time (%)	31	7	4	2
Queuing Penalty (veh)	199	10	5	3
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 4:

Movement	EB	EB	EB
Directions Served	R	R	R
Maximum Queue (ft)	241	231	247
Average Queue (ft)	195	179	149
95th Queue (ft)	247	237	250
Link Distance (ft)	216	216	216
Upstream Blk Time (%)	8	2	4
Queuing Penalty (veh)	20	5	11
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 5: NB 67th Avenue

Movement	NE
Directions Served	R
Maximum Queue (ft)	76
Average Queue (ft)	60
95th Queue (ft)	85
Link Distance (ft)	57
Upstream Blk Time (%)	10
Queuing Penalty (veh)	36
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 8: SB 67th Avenue

Movement	WB	WB	WB	WB
Directions Served	T	T	T	R
Maximum Queue (ft)	141	226	259	185
Average Queue (ft)	51	12	24	88
95th Queue (ft)	119	81	143	161
Link Distance (ft)	1171	1171	1171	
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				160
Storage Blk Time (%)			0	6
Queuing Penalty (veh)			0	10

Intersection: 9:

Movement	WB	WB	WB	SE	SE	SE
Directions Served	L	L	L	T	T	T
Maximum Queue (ft)	92	89	23	68	54	30
Average Queue (ft)	71	46	4	45	37	29
95th Queue (ft)	88	81	18	55	52	30
Link Distance (ft)	68	68	68	28	28	28
Upstream Blk Time (%)	20	4		62	61	53
Queuing Penalty (veh)	36	6		214	211	184
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 10:

Movement	NW	SW	SW
Directions Served	L	R	R
Maximum Queue (ft)	74	56	18
Average Queue (ft)	37	8	5
95th Queue (ft)	78	29	17
Link Distance (ft)	62	25	25
Upstream Blk Time (%)	4	3	0
Queuing Penalty (veh)	3	6	1
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 11:

Movement	WB	WB	WB
Directions Served	R	R	R
Maximum Queue (ft)	25	52	30
Average Queue (ft)	2	5	2
95th Queue (ft)	13	25	11
Link Distance (ft)	201	201	201
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 12:

Movement	NW	NW	NW	NE	NE	NE
Directions Served	T	T	T	T	T	T
Maximum Queue (ft)	52	56	31	56	76	53
Average Queue (ft)	34	30	9	52	49	17
95th Queue (ft)	56	63	31	57	68	45
Link Distance (ft)	31	31	31	40	40	40
Upstream Blk Time (%)	30	20	4	46	24	1
Queuing Penalty (veh)	35	24	5	70	36	2
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 13: SB 67th Avenue

Movement	SW
Directions Served	R
Maximum Queue (ft)	41
Average Queue (ft)	7
95th Queue (ft)	28
Link Distance (ft)	35
Upstream Blk Time (%)	0
Queuing Penalty (veh)	0
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 16: EB SR 303 On-ramp

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 17: EB SR 303 Off-ramp

Movement	SB	SB
Directions Served	L	R
Maximum Queue (ft)	403	31
Average Queue (ft)	165	8
95th Queue (ft)	315	31
Link Distance (ft)	811	811
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 19: WB SR 303 Off-ramp

Movement	NB	NB
Directions Served	L	R
Maximum Queue (ft)	30	183
Average Queue (ft)	1	53
95th Queue (ft)	10	133
Link Distance (ft)	898	898
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 21: WB SR 303 On-ramp

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Network Summary

Network wide Queuing Penalty: 1134

Intersection: 2: NB 67th Avenue

Movement	EB	EB	EB
Directions Served	L	L	R
Maximum Queue (ft)	155	91	50
Average Queue (ft)	69	16	7
95th Queue (ft)	133	52	31
Link Distance (ft)	1382	1382	
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			150
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 3:

Movement	SE	NE	NE	NE
Directions Served	L	R	R	R
Maximum Queue (ft)	74	34	14	24
Average Queue (ft)	53	4	1	1
95th Queue (ft)	88	15	7	8
Link Distance (ft)	70	14	14	14
Upstream Blk Time (%)	8	13	3	1
Queuing Penalty (veh)	12	16	3	2
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 4:

Movement	EB	EB	EB
Directions Served	R	R	R
Maximum Queue (ft)	54	50	52
Average Queue (ft)	15	12	12
95th Queue (ft)	45	36	41
Link Distance (ft)	216	216	216
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 5: NB 67th Avenue

Movement	NE
Directions Served	R
Maximum Queue (ft)	72
Average Queue (ft)	36
95th Queue (ft)	76
Link Distance (ft)	57
Upstream Blk Time (%)	2
Queuing Penalty (veh)	8
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 8: SB 67th Avenue

Movement	WB	WB	WB
Directions Served	T	T	R
Maximum Queue (ft)	200	166	79
Average Queue (ft)	98	20	12
95th Queue (ft)	175	89	49
Link Distance (ft)	1171	1171	
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			160
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 9:

Movement	WB	WB	WB	SE	SE	SE
Directions Served	L	L	L	T	T	T
Maximum Queue (ft)	92	89	71	70	53	48
Average Queue (ft)	73	48	9	40	34	17
95th Queue (ft)	79	87	36	57	56	43
Link Distance (ft)	68	68	68	28	28	28
Upstream Blk Time (%)	31	5	1	42	34	15
Queuing Penalty (veh)	70	11	2	56	46	20
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 10:

Movement	NW	SW	SW
Directions Served	L	R	R
Maximum Queue (ft)	74	56	18
Average Queue (ft)	54	14	5
95th Queue (ft)	86	37	18
Link Distance (ft)	62	25	25
Upstream Blk Time (%)	6	8	0
Queuing Penalty (veh)	7	19	1
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 11:

Movement	WB	WB	WB
Directions Served	R	R	R
Maximum Queue (ft)	88	52	54
Average Queue (ft)	32	15	17
95th Queue (ft)	68	42	50
Link Distance (ft)	201	201	201
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 12:

Movement	NW	NW	NW	NE	NE	NE
Directions Served	T	T	T	T	T	T
Maximum Queue (ft)	53	54	52	68	56	32
Average Queue (ft)	49	47	26	53	41	7
95th Queue (ft)	56	65	47	61	65	28
Link Distance (ft)	31	31	31	40	40	40
Upstream Blk Time (%)	43	41	23	38	13	0
Queuing Penalty (veh)	87	81	46	47	16	0
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 13: SB 67th Avenue

Movement	SW
Directions Served	R
Maximum Queue (ft)	42
Average Queue (ft)	12
95th Queue (ft)	37
Link Distance (ft)	35
Upstream Blk Time (%)	1
Queuing Penalty (veh)	1
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 16: EB SR 303 On-ramp

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 17: EB SR 303 Off-ramp

Movement	SB	SB
Directions Served	L	R
Maximum Queue (ft)	120	32
Average Queue (ft)	13	12
95th Queue (ft)	54	38
Link Distance (ft)	811	811
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 19: WB SR 303 Off-ramp

Movement	NB	NB
Directions Served	L	R
Maximum Queue (ft)	31	96
Average Queue (ft)	5	23
95th Queue (ft)	22	73
Link Distance (ft)	898	898
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 21: WB SR 303 On-ramp

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Network Summary

Network wide Queuing Penalty: 552

APPENDIX F: HCS7 Results

HCS7 Freeway Facilities Report

Project Information

Analyst	A. Barakovic	Date	3/22/2021
Agency	Jacobs Engineering Group	Analysis Year	2030
Jurisdiction		Time Period Analyzed	AM Peak Hour
Project Description	EB SR 303L: Lake Pleasant Parkway to I-17		

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	3
Total Time Periods	1	Time Period Duration, min	15

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	Mainline	4800	2
2	Merge	Merge	EB on-ramp from 43rd Ave.	1800	2
3	Basic	Basic	Approaching signalized intersection	1600	2

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.901	3141	4800	0.65	71.2	22.1	C

Segment 2: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.901	0.901	4286	1145	4800	2000	0.89	0.57	58.2	58.2	36.8	30.6	D

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.901	4286	4800	0.89	60.5	35.4	E

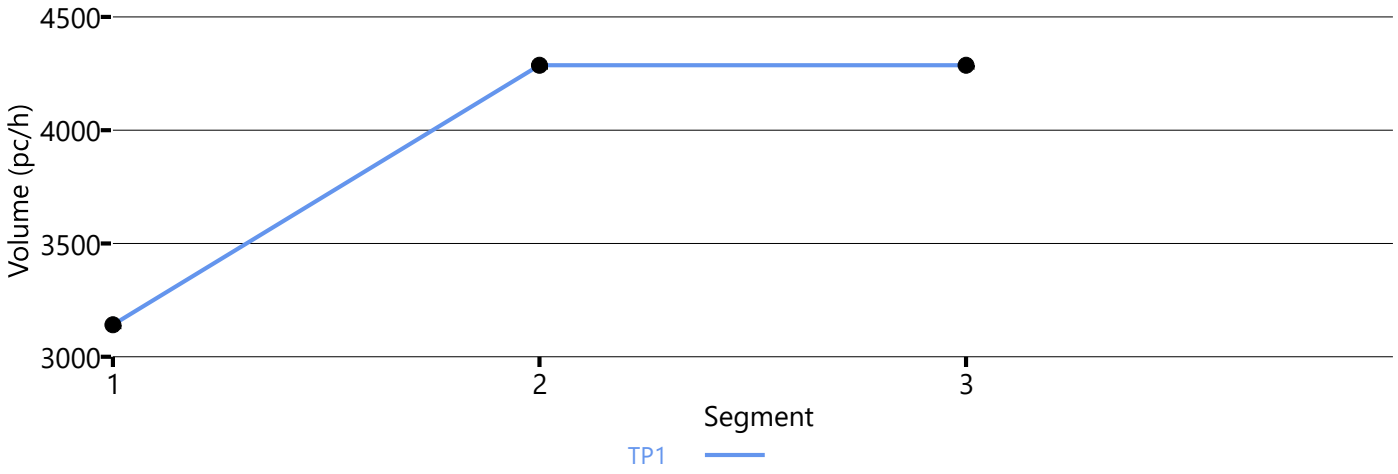
Facility Time Period Results

T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	64.8	27.9	25.2	1.4	D

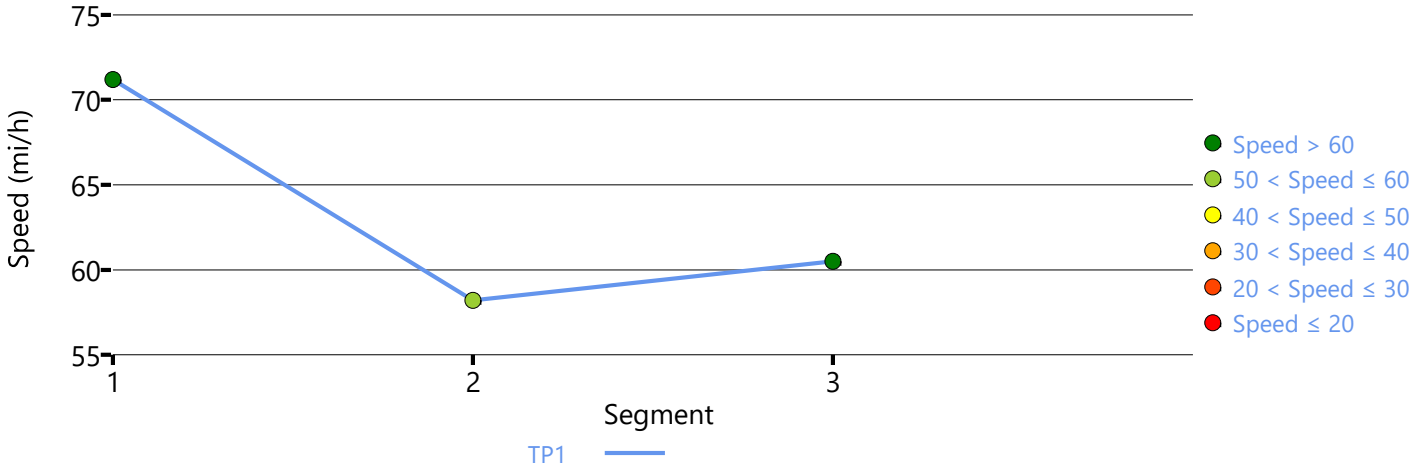
Facility Overall Results

Space Mean Speed, mi/h	64.8	Density, veh/mi/ln	25.2
Average Travel Time, min	1.4	Density, pc/mi/ln	27.9

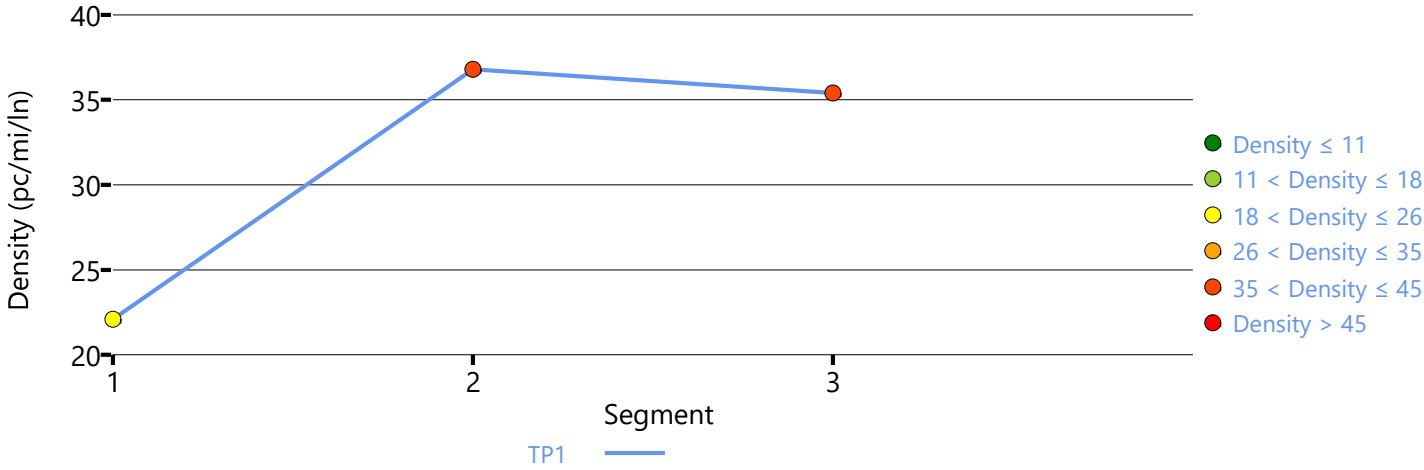
Volume Distribution



Speed Distribution



Density Distribution



HCS7 Freeway Facilities Report

Project Information

Analyst	A. Barakovic	Date	3/22/2021
Agency	Jacobs Engineering Group	Analysis Year	2030
Jurisdiction		Time Period Analyzed	PM Peak Hour
Project Description	EB SR 303L: Lake Pleasant Parkway to I-17		

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	3
Total Time Periods	1	Time Period Duration, min	15

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	Mainline	4800	2
2	Merge	Merge	EB on-ramp from 43rd Ave.	1800	2
3	Basic	Basic	Approaching signalized intersection	1600	2

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.901	1995	4800	0.42	74.7	13.4	B

Segment 2: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.901	0.901	3424	1429	4800	2000	0.71	0.71	63.6	63.6	26.9	23.7	C

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.901	3424	4800	0.71	69.3	24.7	C

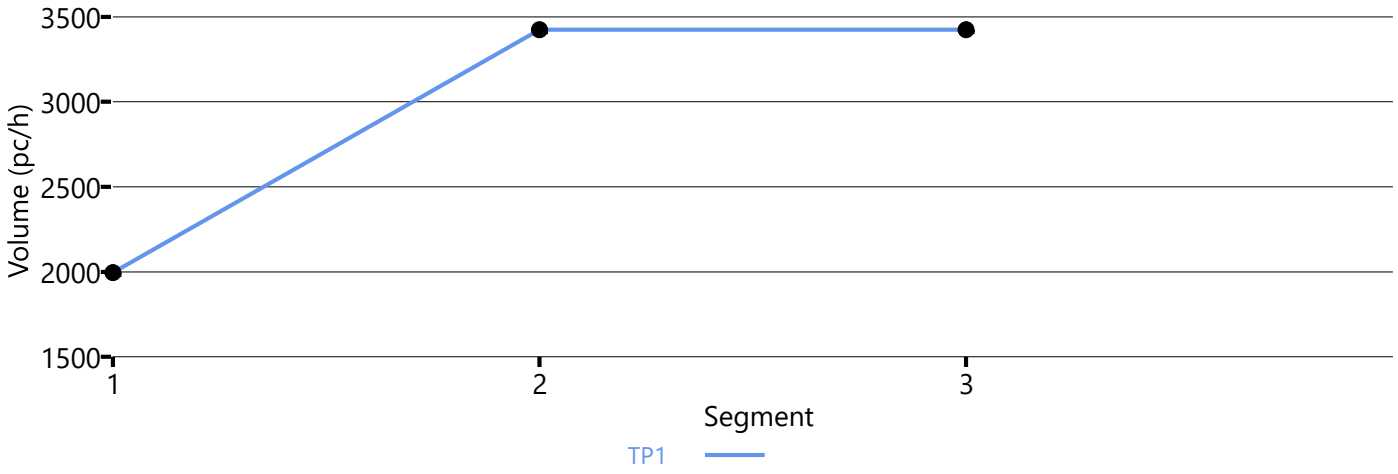
Facility Time Period Results

T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	69.8	18.6	16.8	1.3	C

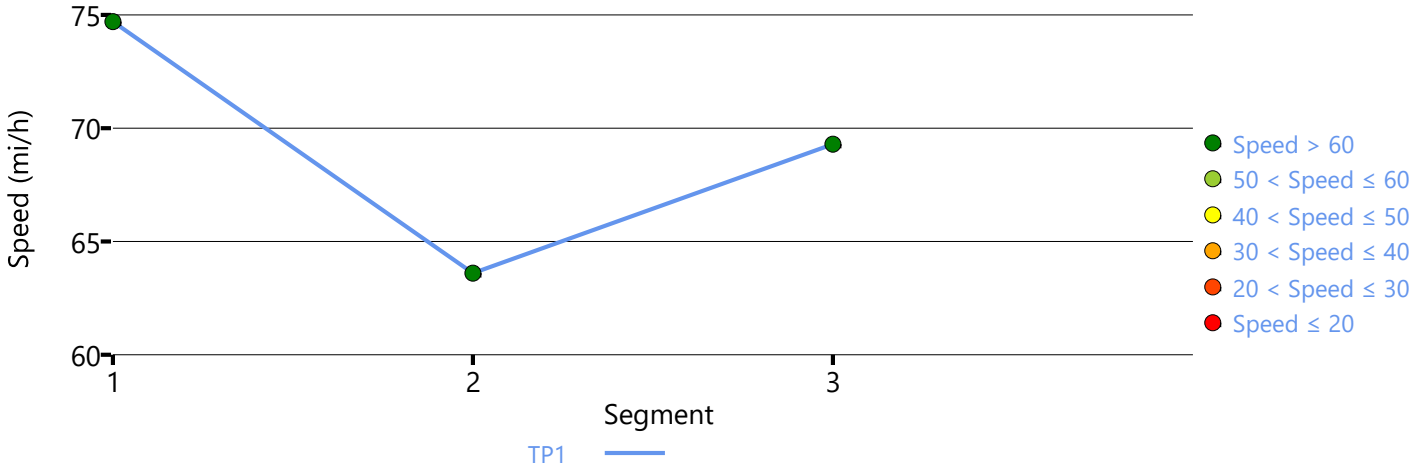
Facility Overall Results

Space Mean Speed, mi/h	69.8	Density, veh/mi/ln	16.8
Average Travel Time, min	1.3	Density, pc/mi/ln	18.6

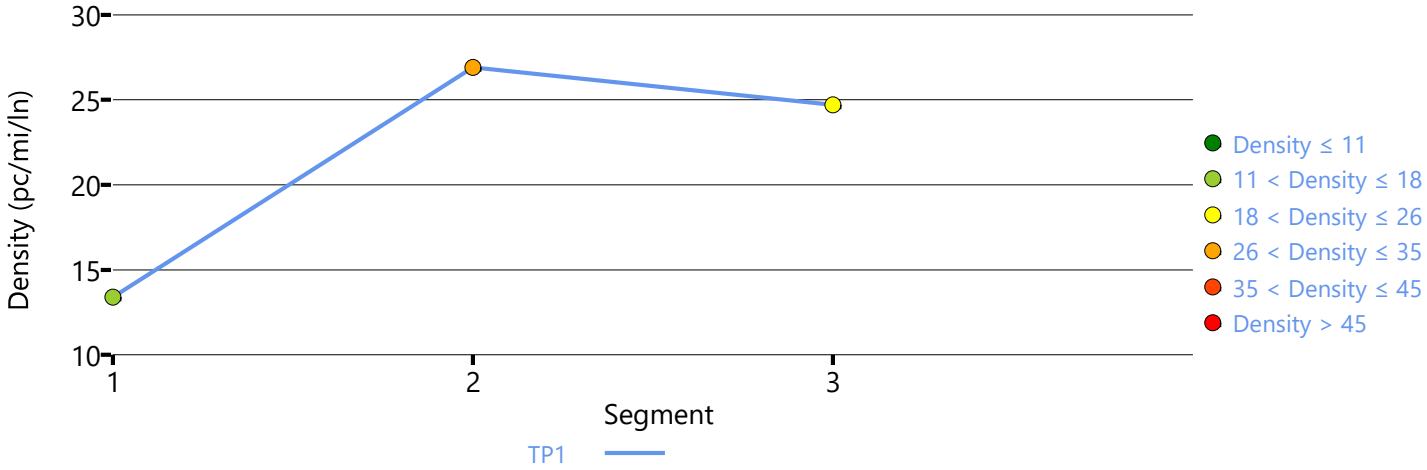
Volume Distribution



Speed Distribution



Density Distribution



HCS7 Freeway Facilities Report

Project Information

Analyst	A. Barakovic	Date	3/22/2021
Agency	Jacobs Engineering Group	Analysis Year	2030
Jurisdiction		Time Period Analyzed	AM Peak Hour
Project Description	EB SR 303L: Lake Pleasant Parkway to I-17		

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	3
Total Time Periods	1	Time Period Duration, min	15

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	Mainline	2600	2
2	Diverge	Diverge	EB on-ramp from 43rd Ave.	500	2
3	Basic	Basic	Approaching signalized intersection	5300	2

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.901	3483	4800	0.73	68.8	25.3	C

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.901	1.000	3483	1191	4800	2000	0.73	0.60	57.5	57.5	30.3	29.7	D

Segment 3: Basic

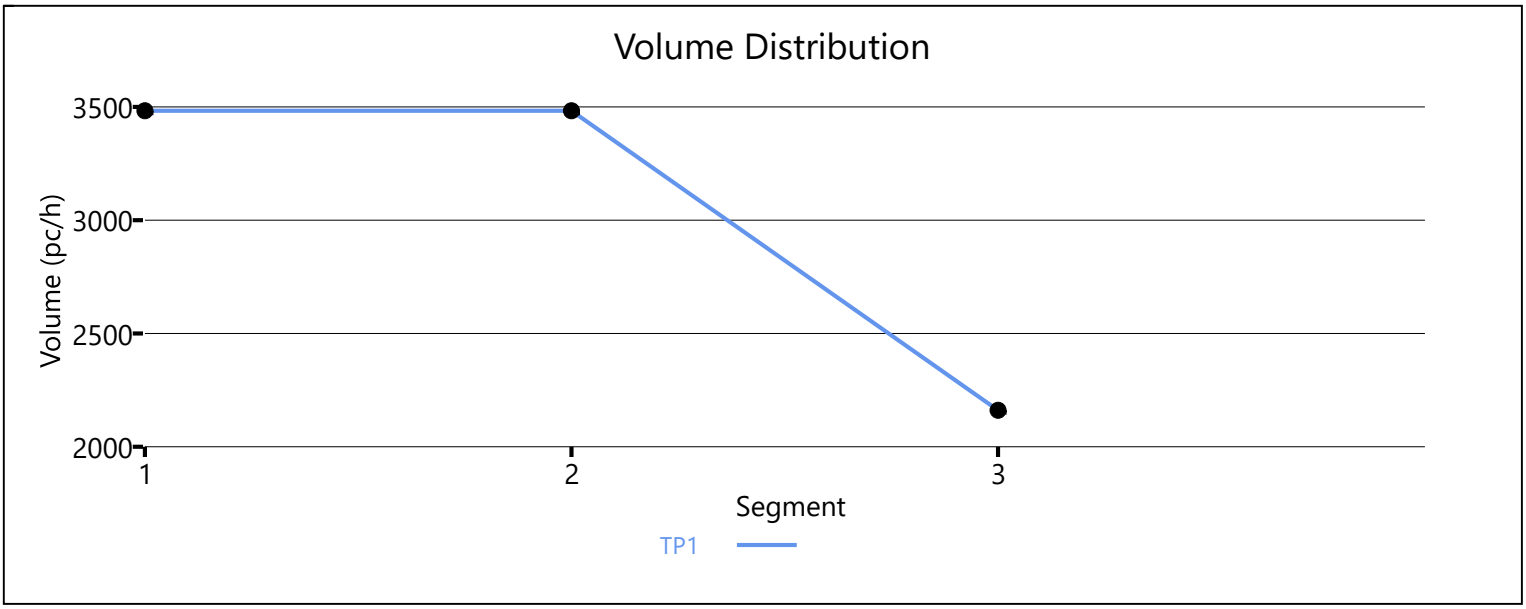
Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.901	2161	4800	0.45	74.6	14.5	B

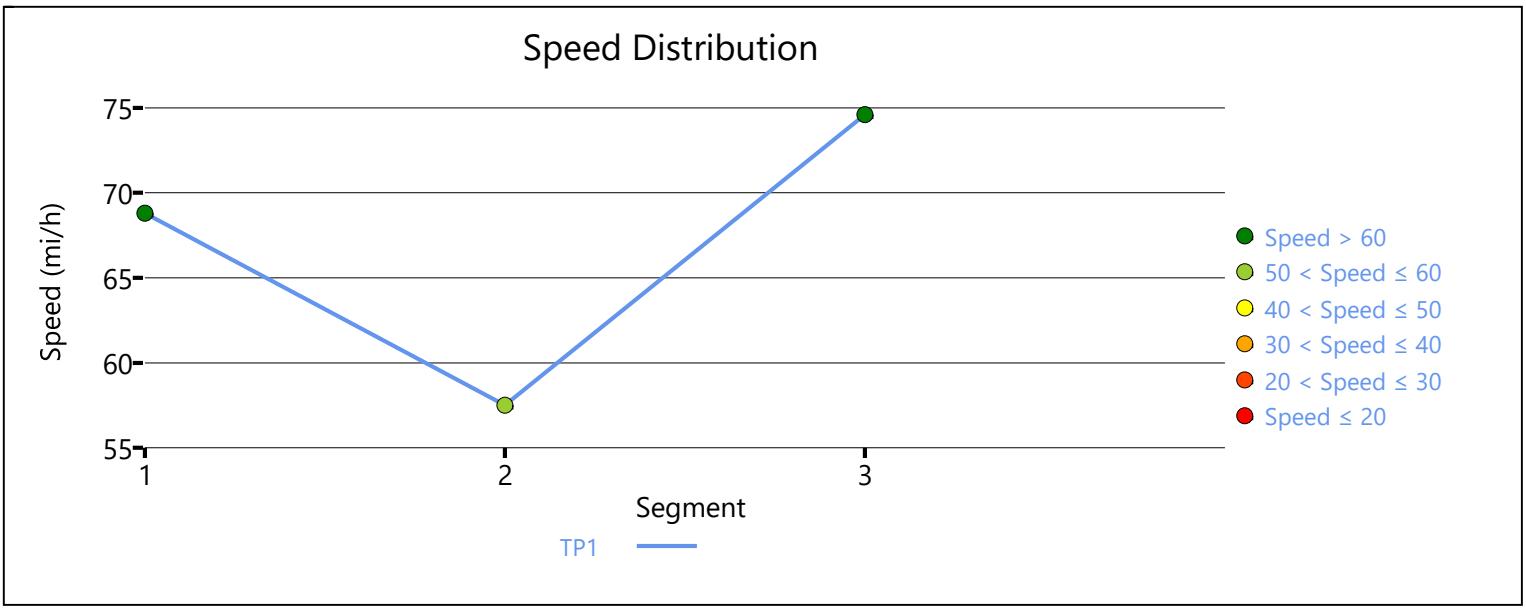
Facility Time Period Results

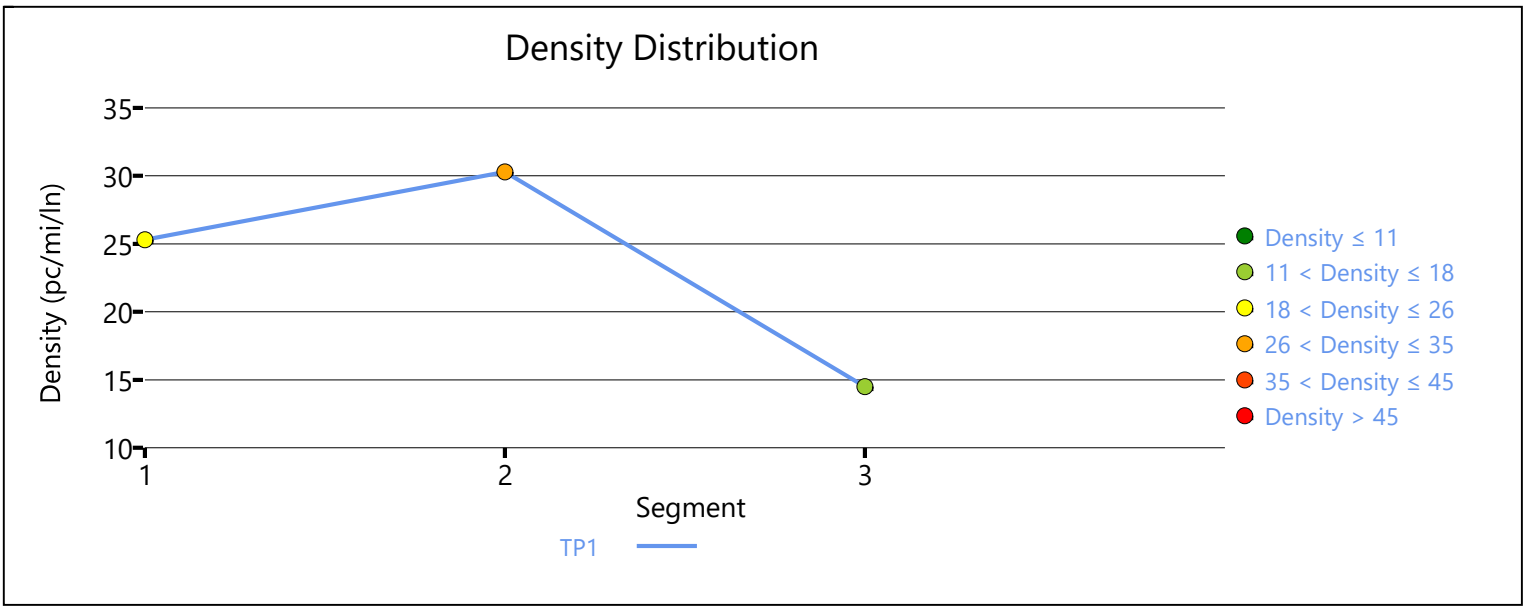
T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	70.5	18.8	17.0	1.4	C

Facility Overall Results

Space Mean Speed, mi/h	70.5	Density, veh/mi/ln	17.0
Average Travel Time, min	1.4	Density, pc/mi/ln	18.8







HCS7 Freeway Facilities Report

Project Information

Analyst	A. Barakovic	Date	3/22/2021
Agency	Jacobs Engineering Group	Analysis Year	2030
Jurisdiction		Time Period Analyzed	AM Peak Hour
Project Description	EB SR 303L: Lake Pleasant Parkway to I-17		

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	3
Total Time Periods	1	Time Period Duration, min	15

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	Mainline	2600	2
2	Diverge	Diverge	EB on-ramp from 43rd Ave.	500	2
3	Basic	Basic	Approaching signalized intersection	5300	2

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.901	5313	4800	1.11	53.3	45.0	F

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.901	1.000	4800	1362	4800	2000	1.11	0.68	57.0	57.0	42.1	41.0	F

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.901	3438	4800	0.79	69.5	24.7	C

Facility Time Period Results

T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	61.5	32.1	28.9	1.6	F

Facility Overall Results

Space Mean Speed, mi/h	61.5	Density, veh/mi/ln	28.9
Average Travel Time, min	1.6	Density, pc/mi/ln	32.1