Traffic Impact Study
SAMS Academy
Albuquerque, NM
July 2021

Prepared for:

Development Management Consultants
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The technical material and data contained in this document were prepared by the undersigned, whose seal as a Professional Engineer, licensed to practice in the State of New Mexico, is affixed below.

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07/22/2021

TABLE OF CONTENTS

APPENDICES

APPENDIX A – Traffic Scoping Requirements
APPENDIX B – Existing & Projected Traffic Data
APPENDIX C – Trip Generation Data
APPENDIX D – LOS Worksheets
APPENDIX E – Traffic Signal Warrant Study

LIST OF TABLES

LIST OF FIGURES

1.0 EXECUTIVE SUMMARY

1.1 Purpose of Study

This report documents the results of a Traffic Impact Study (TIS) and Neighborhood Impact Assessment (NIA) for the proposed SAMS Academy (Southwest Aeronautics, Mathematics and Science) charter school located at 6441 Ventana Rd. N.W. in Albuquerque, New Mexico. The purpose of this TIS is to assess traffic operations associated with traffic generated by this proposed project on the adjacent transportation network, specifically Irving Blvd. and Universe Blvd.

This study evaluated both the existing and proposed conditions of the corridor adjacent to the proposed site entrance, and was conducted in accordance with the City of Albuquerque Development Process Manual (COA DPM) Article 7-5 Traffic Studies. Study requirements were established through a traffic scoping meeting held with the City Traffic Engineer and utilizing information summarized in the Traffic Scoping Form (TSF, see Appendix A).

1.2 Principal Findings

Key findings of this analysis are summarized as follows:

1. Site-generated traffic is not expected to cause significant, adverse impacts to the adjacent roadway network including the traffic signalized intersections along Irving Blvd.
2. Adverse neighborhood impacts relative to idling and queuing traffic at the school site would not be expected to occur as the student loading zones are fully on site. Furthermore, the site is consistent with existing pedestrian, bicycle, and transit facilities.
3. Traffic queuing and delays occur for the westbound left turns on Ventana Rd. at Universe Blvd. under existing conditions. A traffic signal warrant study (TSWS) of the Universe/Ventana intersection met certain warranting criteria but further analysis would be needed to determine whether signalization would be justified.

1.3 Conclusions & Recommendations

This analysis has demonstrated that significant detrimental traffic impacts associated with the proposed charter middle/high school are not expected to occur on the adjacent transportation system and the location is consistent with adjacent land uses as well as transportation services. The following recommendations are offered concerning access modifications.

1. Construct a right-in/right-out (RIRO) driveway on Irving Blvd.
2. Construct a full access driveway on Ventana Rd. at Scottsdale Ave.
3. Maintain 2 separate, internal circulation and student drop-off zones.
4. Maintain 2 separate, internal circulation and student drop-off zones.
5. Direct traffic to the respective areas including student drop-off and parking, parent, staff, and visitor parking.
6. No off-site improvements were identified.

See Section 9 of this report for details of these recommendations.

2.0 INTRODUCTION

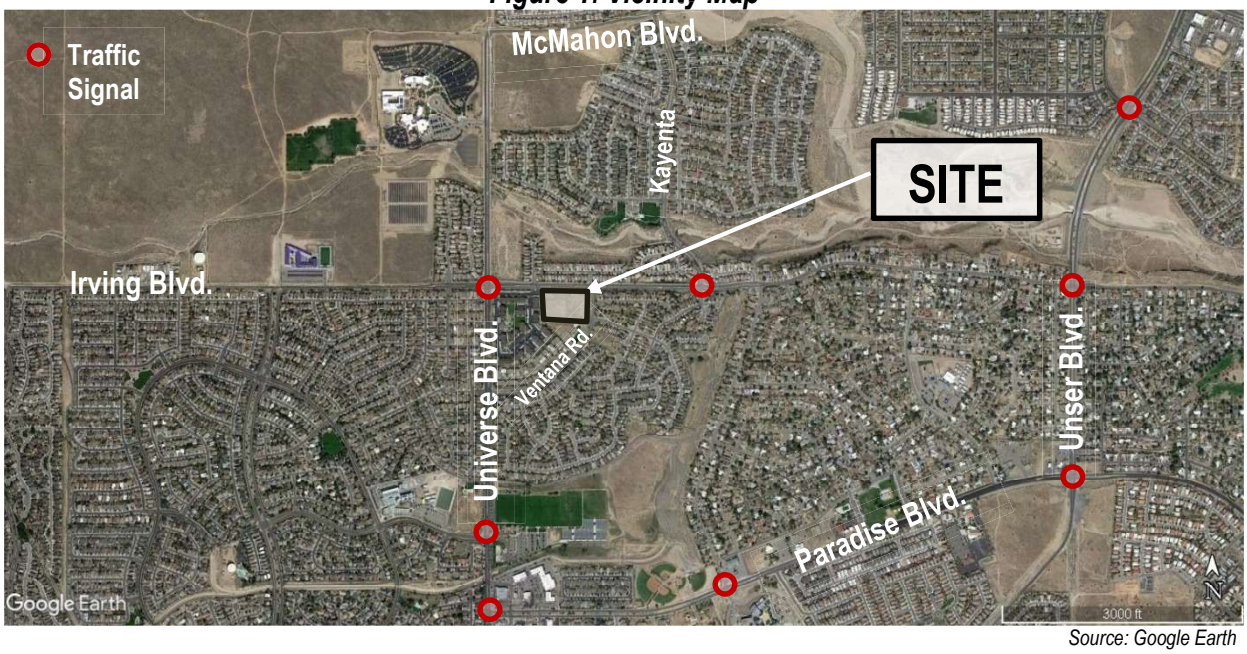
2.1 Description of Proposed Project

The project consists of the construction of a new 36,800 square foot (s.f.) building to serve as a charter school for middle and high school students grades 6 through 12. Access is proposed via a right-in/right-out (RIRO) driveway on Irving Blvd. and a full access driveway at the Ventana Rd./Scottsdale Ave. intersection. Operations are projected to commence in year 2022.

2.2 Project Location

The project is located at 6441 Ventana Rd. Northwest in Albuquerque in the southwest quadrant of Irving Blvd. and Ventana Rd. as depicted in Figure 1.

Figure 1: Vicinity Map



Source: Google Earth

2.3 Study Area

The study area encompasses the site and adjacent roadways including Irving Blvd., and Universe Blvd., and Ventana Rd. Included in the analysis are the traffic signalized intersections of Irving at Universe and Irving at Kayenta Rd.

2.4 Scope of Analysis

Primary tasks incorporated into this analysis include:

A. **Data Collection** – including traffic volume counts, other roadway network parameters, and regional data for the traffic analysis.

B. **Traffic Operations Analysis** – utilizing the collected data, computerized models were developed in *Synchro 10* software for analysis utilizing *Highway Capacity Manual (HCM)* procedures.

C. **Geometric Evaluation** – consideration of safe access measures such as auxiliary lanes and/or access geometry to mitigate traffic impacts, if necessary.

2.5 Planned Developments or Projects in the Vicinity

No imminent developments have been identified in the study area.

3.0 EXISTING CONDITIONS

3.1 Current Land Use & Zoning

The environs are generally urban and built up with mixed developments in the area consisting predominantly of residential and institutional land uses. Some undeveloped tracts exist in the vicinity, and extensive undeveloped areas lie northwest and south of the site. Following are the designations by the COA Integrated Development Ordinance (IDO).

1. Land use designation: Vacant;
2. Property zone: Residential Multi-Family Low Density (R-ML) for residential uses, but could also include civic and institutional uses (formerly SU-1 zoning for church and related facilities or residential uses);
3. Nearest designated Activity Centers: CNM (Universe), Volcano Heights (developing);
4. Community Planning Area: Northwest Mesa;
5. Corridor: none;
6. Major Transit: none.

3.2 Existing Roadway System

The existing traffic network is illustrated in Figure 2 and described below. These routes are under the jurisdiction of the City of Albuquerque (COA) with designations as shown on the Functional Classification in the Albuquerque Metropolitan Planning Area by the Mid-Region Council of Governments (MRCOG).

3.2.1 Irving Blvd.

3.2.1 Irving Blvd is a Major Urban Collector not principal arterial

Designated as a Community Principal Arterial, the route has a posted speed of 35 mph and consists of four travel lanes, a 15' raised median, bike lanes, curb & gutter, and sidewalks or asphalt trails. Average Weekday Traffic (AWDT) east of Universe for year 2019 was 4,000. Intersection approach lighting exists at the signalized intersections.

3.2.2 Universe Blvd.

3.2.2 Universe Blvd. Typo 35' should be 35 mph.

A Minor Arterial roadway, Universe has a posted speed of 35' and consists of 4 travel lanes, variable-width raised median, curb & gutter, sidewalk along the west side and an asphalt bike trail on the east side. The $AWDT_{2019}$ south of Irving was 16,600. Universe is designated for future bike lanes.

3.2.3 Ventana Rd.

3.2.3 Ventana Rd. describe as a local urban street.

This is a local route serving residential subdivisions and a public park. The road transitions from 4 travel lanes with a raised median to a 2-la

3.2.3 Kayenta Pl. renumber as 3.2.4 describe as a local urban street.

3.2.3 Kayenta Pl.

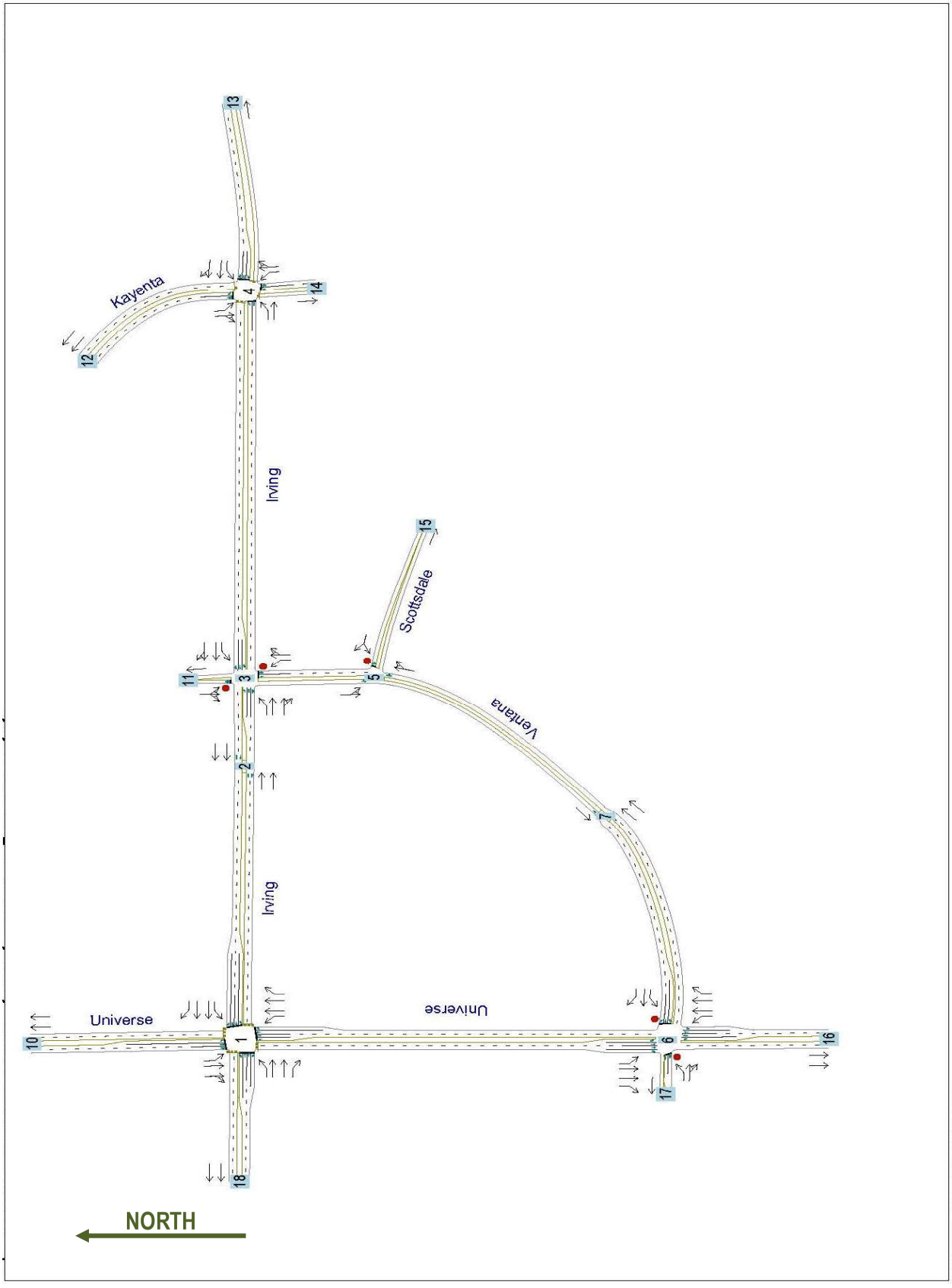
Kayenta is a local route connecting with McMahon Blvd. and serving residential subdivisions and a public park with 4 travel lanes and a raised median.

3.3 Existing Traffic Data

3.3.1 Turning Movement Counts and Adjustments

Turning movement counts (TMCs) were collected on April 15, 2021 during the AM (7-9 a.m.) and PM (4-6 p.m.) peak periods for use in analyzing traffic operations at the study intersections. Given the diverse nature of this network, the respective peak hour start times for the corridor varied. Detailed reports of the TMC data are contained in Appendix B.

Figure 2: Study Area Traffic Network



Consideration was given to traffic impacts associated with the COVID-19 pandemic and government-mandated closures. MRCOG has been periodically monitoring traffic patterns and reported that, in the spring of 2020, traffic volumes had dropped by 32.5% overall throughout the metro area. The following data sources were utilized to derive adjustment factors to adjust for the COVID-19 closures. Three 48-hour traffic volume counts collected by MRCOG in 2019 were used to compare the AM and PM peak hours, revealing that the manual TMC data was between 11% and 33% lower than the volume counts (these count locations are shown in Appendix B).

Therefore, certain adjustments to these TMCs accounting for reduced travel demand were considered as follows. Adjustment factors were applied to the TMC data to expand it and replicate pre-COVID19 traffic for network analysis, varying by location and by time period and ranging from 1.01 to 1.40. Adjusted peak hour traffic volumes derived for this analysis along the study network are presented in Figures 3 and 4, representing baseline conditions for analysis.

	Location	AM Factor	PM Factor
a.	Irving East of Universe	1.34	1.12
b.	Irving West of Universe	1.44	1.42
c.	Irving / Kayenta	1.35	1.35
d.	Universe North of Irving	1.35	1.17
e.	Universe / Ventana	1.40	1.35

3.3.2 Traffic Distribution Summary

Utilizing these adjusted traffic count volumes, directional distribution of traffic at the site is tabulated in Table 1. Because site access is surrounded by residential uses and served by regional routes, background traffic should reflect regional travel patterns and it deemed unnecessary to employ regional gravity distribution models. Therefore, these distribution values were applied to new trips generated by the proposed project (see Appendix C).

Table 1: Trip Distribution Summary

Intersection and Traffic Movement	Inbound		Outbound	
	AM	PM	AM	PM
Irving/Universe	32.3%	20.0%	12.9%	25.7%
Irving/Ventana	0.3%	0.2%	0.3%	3.3%
Irving/Kayenta	54.5%	49.5%	43.9%	42.7%
Ventana/Scottsdale	0.0%	0.0%	3.7%	8.0%
Universe/Ventana	12.8%	30.3%	39.2%	20.4%
Total	**100%**	**100%**	**100%**	**100%**

3.4 Existing Roadway/Intersection Capacity

An analysis of the study intersections was conducted for the existing and baseline (adjusted) conditions as described in Section 6.1 of this report. These were analyzed with the existing uncoordinated traffic signal timing plans as provided in Appendix B. While the signalized intersections operated at satisfactory levels of service (LOS) D or above as summarized in Table 5, certain lane groups and/or unsignalized intersections fell below LOS D as shown in the worksheets contained in Appendix D.

Figure 3: AM Peak Hour Volumes (Baseline)

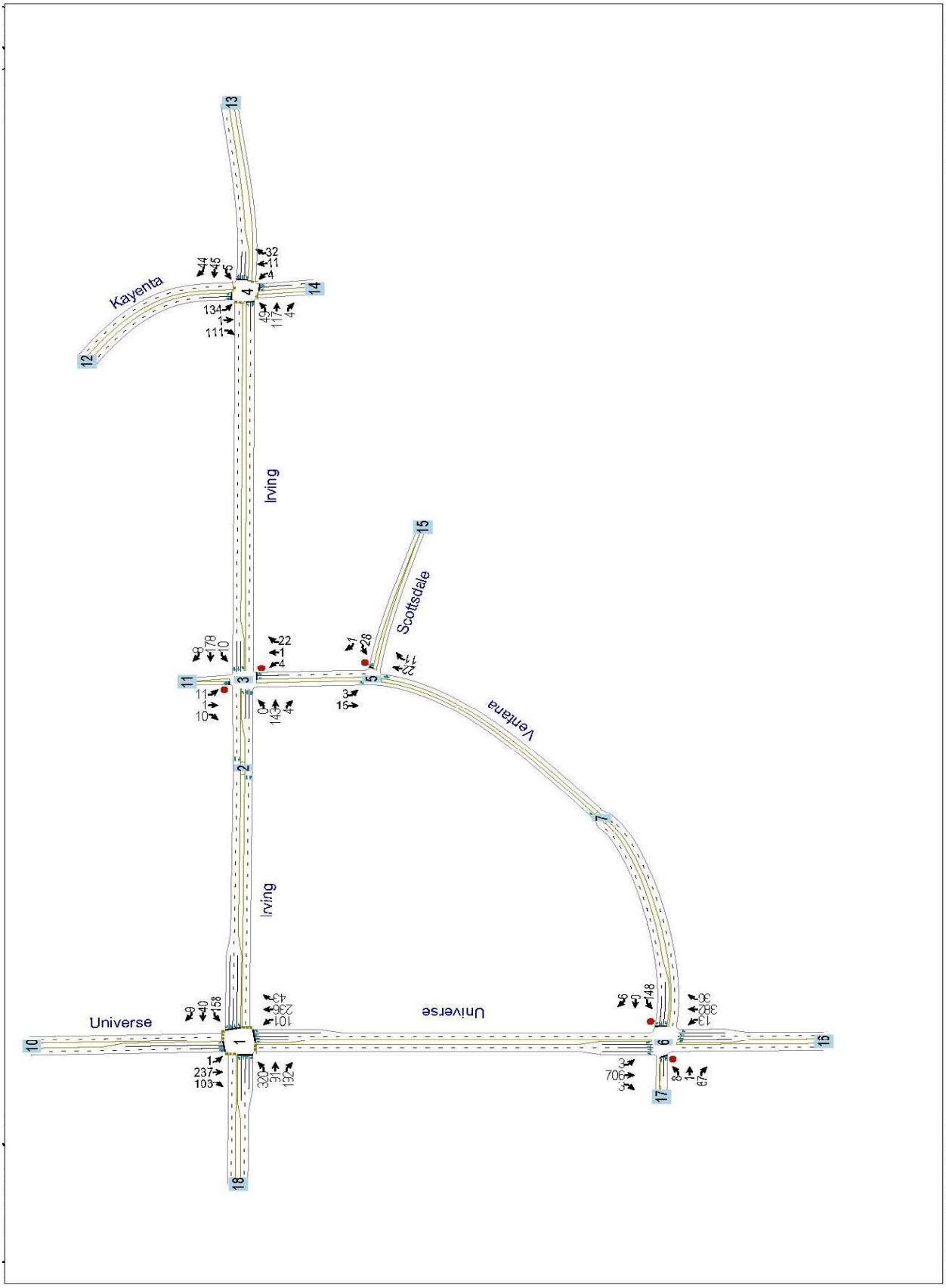
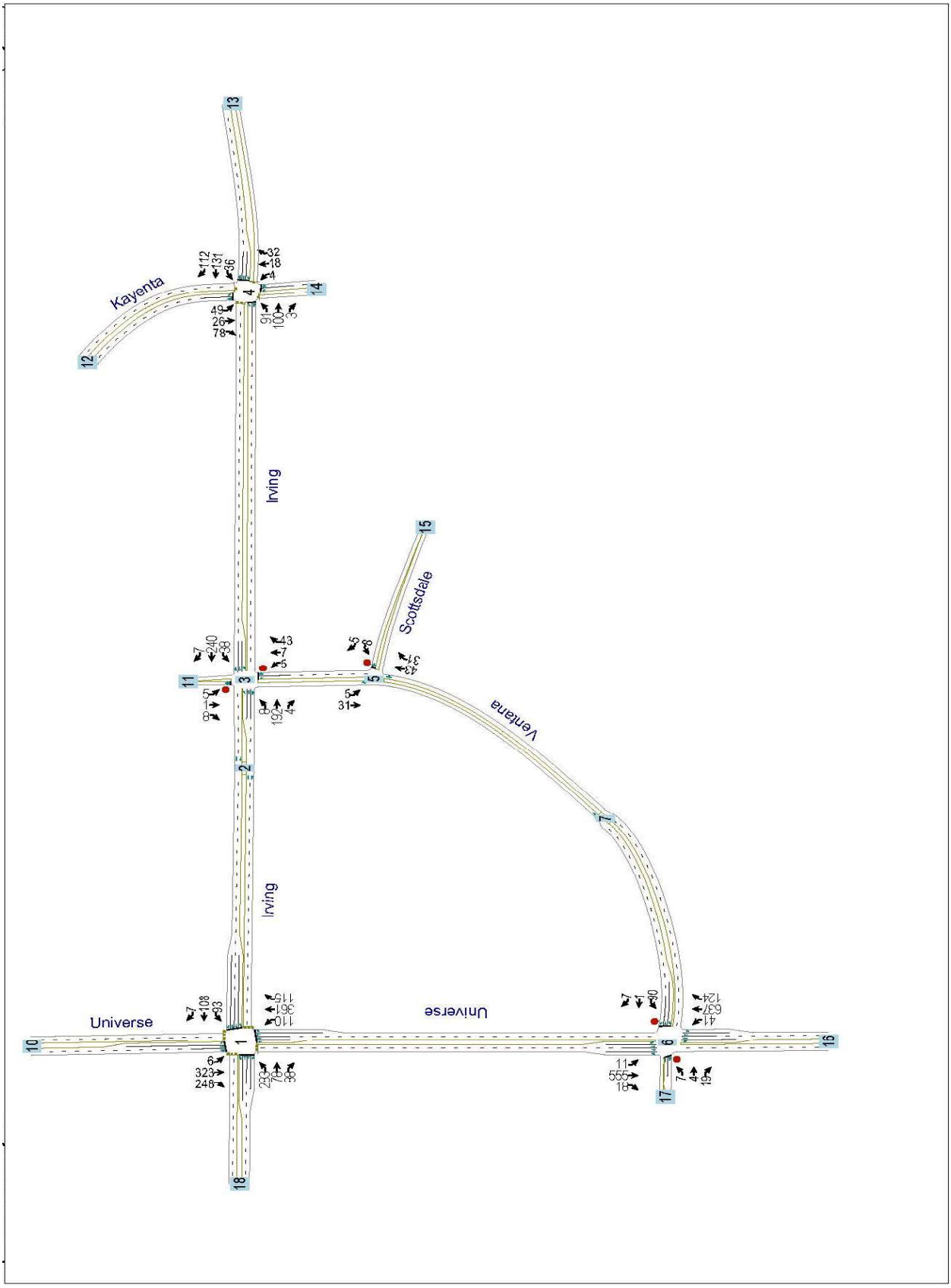


Figure 4: PM Peak Hour Volumes (Baseline)



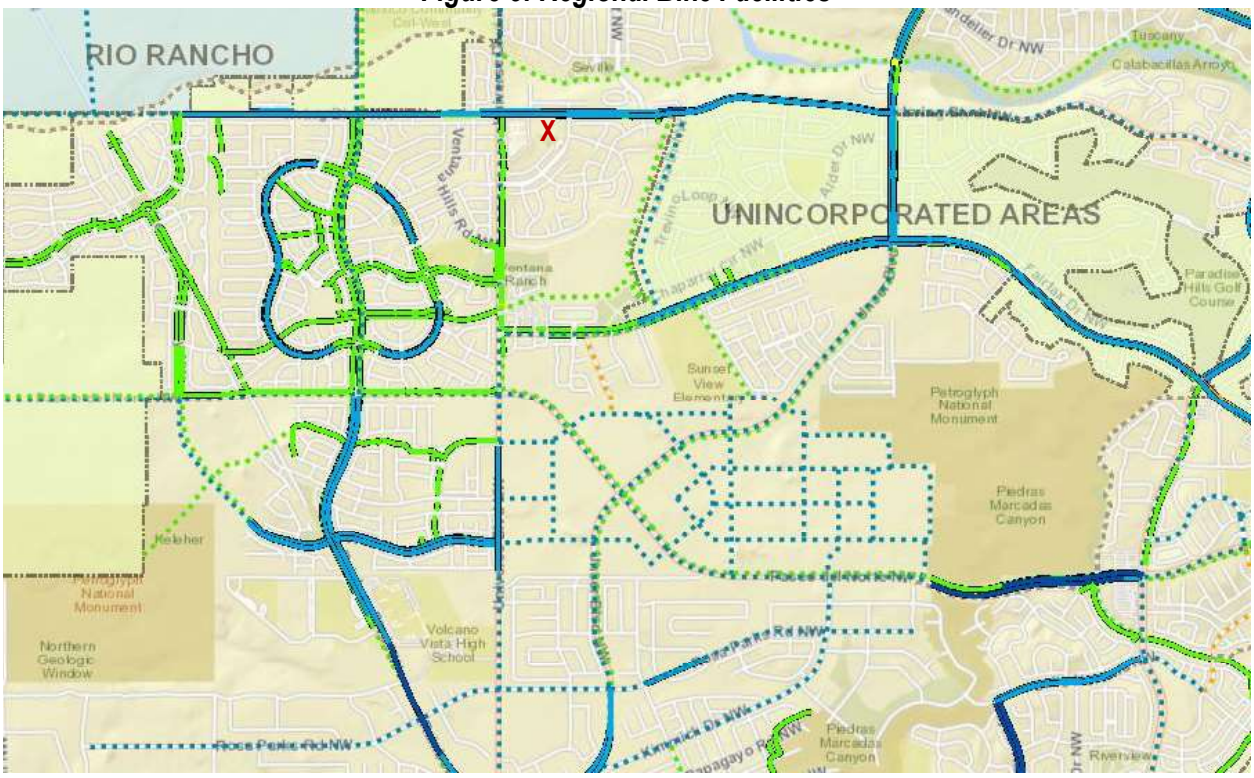
3.5 Existing Transit Service

Ventana Ranch Commuter Route 162 runs with 40-minute headways during peak times through Ventana Ranch via Rainbow Blvd. to Irving, east to Universe, then north to the CNM Universe campus. Bus stops nearest to the project site are located at the Irving/Universe intersection. Information regarding public transit usage by the school was not available. Thus, while this route provides an opportunity for staff and students who dwell in West Albuquerque to utilize the service to the site, trip reductions attributed to transit ridership were not included in the analysis as it was expected to be low.

3.6 Bicycle & Pedestrian Facilities

Existing bike and pedestrian infrastructure in the area is extensive with sidewalks along most streets and an extensive network of bike lanes trails as depicted in Figure 5.

Figure 5: Regional Bike Facilities

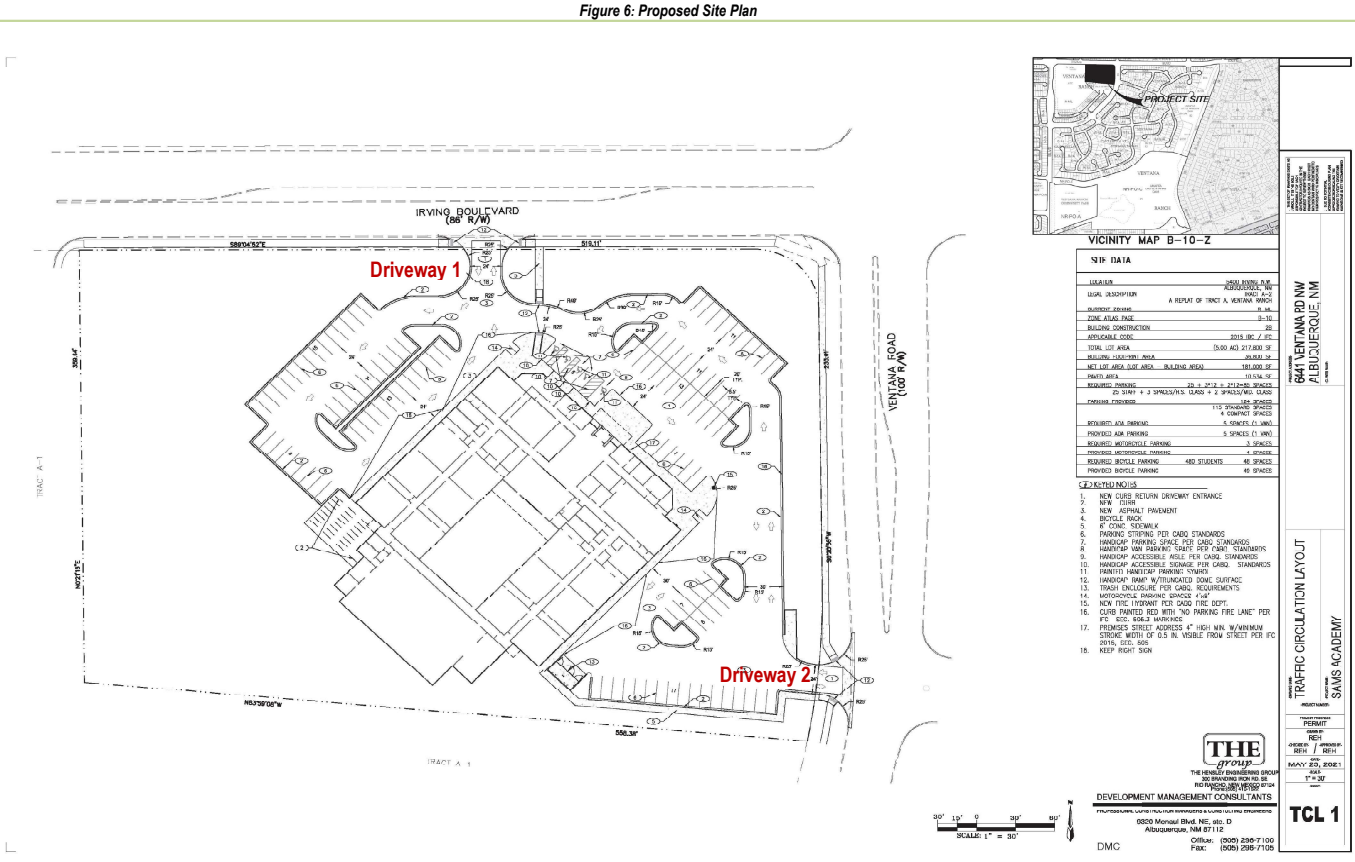


4.0 PROPOSED SITE TRAFFIC CHARACTERISTICS

4.1 Proposed Project Phasing and Timing

The existing charter school for middle and high school students, grades 6 through 12 currently resides at the Double Eagle airport and encompasses about 170 high school students, 60 middle school student, and 25 staff. The school's goal is to commence construction in summer 2021 and start of classes by early 2022 in the proposed 36,800 s.f. building as illustrated in Figure 6.

Figure 6: Proposed Site Plan



4.2 Site Access and Circulation

4.2.1 driveway 1 describe as a partial access

As shown on Figure 6, existing access occurs via:

1. Driveway 1 – a proposed 2-lane (24'-26' wide), right-in/right-out (RIRO) paved driveway on the north side at Irving;
2. Driveway 2 – a proposed 2-lane (24'-26' wide), full-service paved driveway on the south east side aligned with the Ventana/Scottsdale intersection.
3. Both driveways will have return radii to facilitate smooth transitions.
4. Two student parking zones are designated
    a. Northwest lot – traffic will enter from Irving making right turns into the site and circulating in a counter-clockwise direction to access the drop-off zone on the north side of the building in order to discharge students on the right side;
    b. Southeast lot – traffic will enter from Ventana making right turns into the site and circulating in a counter-clockwise direction to access the drop-off zone on the south side of the building in order to discharge students on the right side;
    c. Staff and visitors will be directed toward the northeast parking area to provide separation from student parking and drop-off activities.

4.2.2 driveway 2 change full-service to full-access

4.3 Trip Generation

Institute of Transportation Engineers Trip Generation, 10th Edition (ITE, 2017) was used to estimate traffic generated by the proposed development. The peak of the adjacent street was selected for the calculations indicative of urban/suburban traffic patterns for typical AM and PM peak periods (i.e., 7-9 a.m., 4-6 p.m., respectively). The proposed land use consisted of a middle/high school with a capacity of 300 students, split 25% middle and 75% high school grades based on existing enrollment. ITE land use (LU) codes include:

1. LU 522 Middle School/Junior High School
2. LU 530 High School

The following steps and assumptions were applied to the data:

1. The "peak hour of the adjacent street traffic" was the criterion selected for the calculations as this would most likely be impacted by site traffic during typical AM and PM peak periods given the characteristics of the proposed land uses. In the vicinity of the site, Irving Blvd. is urban/suburban in nature and thus "general urban/suburban" data were selected;
2. Students were used for the independent variables as the floor ratios vary widely in the database;
3. Fitted equations were not available for all land uses and thus average rates were used for consistency;
4. Pass-by or internal trips are not inherent to the proposed use and thus did not apply;
5. Transit trip reductions were not accounted for as the proposed use was not considered highly conducive to transit.

The calculated site traffic volume estimates are contained in Appendix C and summarized in Table 2 below.

Table 2: Estimated Site Trip Generation

ITE Code	Quantity	Units	Daily Total	AM			PM		
				Enter	Exit	Total	Enter	Exit	Total
522	75	Students	276	24	20	44	6	7	13
530	225	Students	718	78	39	117	15	17	32
Totals	**300**		**994**	**102**	**59**	**161**	**21**	**24**	**45**

4.4 Site Traffic Distribution and Assignment

Distribution of proposed site trips was made in proportion to the directional distribution percentages inherent to the study network at the external nodes (trip distribution percentages derived from the traffic counts contained in Appendix B are presented in Table 1). Those distribution percentages were applied to the estimated site trips in Table 2, and proposed trips were then assigned to the traffic network via the site driveways in the following proportions:

Table 3: Driveway distribution

Driveway 1	% In	% Out	Trips In	Trips Out
AM Peak	70	30	71	17
PM Peak	20	25	4	6
Driveway 2	**% In**	**% Out**	**Trips In**	**Trips Out**
AM Peak	30	70	30	41
PM Peak	80	75	16	18

These proportions were dictated by the directional flows on the traffic network and the limited access of RIRO at Driveway 1. The distributed trips and resulting intersection peak hour volumes are shown in the map views as well as on the "Future Volume" rows in the level of service worksheets contained in Appendix D.

5.0 FUTURE TRAFFIC CONDITIONS

5.1 Background Traffic Projection

The project was initiated in 2021, which constituted the baseline condition to which the adjustments for COVID-19 closures were applied. Construction and opening is projected to be completed in year 2022, which was established as the Implementation Year. A Horizon Year analysis was included incorporating the Implementation Year plus 10 years, and thus traffic was projected to year 2032 for the horizon analysis.

Average Week Day Traffic (AWDT) data and observed (recorded) traffic volume counts were obtained from the MRCOG Transportation Analysis & Querying Application (TAQA), see Appendix B. Trend line analysis was used to calculate growth rates as follows:

1. *Irving Blvd*: Negative growth rates were exhibited along Irving, thus a minimum rate of 0.5% per year was applied yielding growth factors of 1.01 and 1.06 for the implementation and horizon years, respectively.
2. *Universe Blvd*.:
    a. An exceptionally high growth rate north of Irving was exhibited by the trend line given the significant differential at the extreme ends of the range;
    b. While the area along the Universe Blvd. corridor is largely developed, much vacant land remains in the vicinity and Universe Blvd. is a principal arterial serving regional traffic and thus substantial growth could be expected.
    c. A growth rate of +3.0% per year was selected for analysis as the intermediate range extending from 2013 through 2018 appeared to be more consistent;
    d. This yielded growth factors of 1.03 and 1.38 for the implementation and horizon years, respectively;
    e. South of Ventana, the trendline along Universe was 1.5% per year, yielding growth factors of 1.02 and 1.18 for the implementation and horizon years, respectively.

3. *Adjacent Streets*:
    a. A growth rate of 0.5% per year was applied to the residential streets with some remaining developable lands including Ventana and Kayenta, yielding growth factors of 1.01 and 1.06 for the implementation and horizon years, respectively;
    b. Growth rates were not applied to built-out residential areas such as Kayenta south of Irving and Ventana (Country Knoll) west of Universe.

The calculated growth factors were input into the traffic models and applied to expand background traffic volumes for analysis of the forecast traffic scenarios (see Appendix B for historic traffic data and projections). It should also be noted that the calculated growth rate was not indicative of statewide economic and related traffic growth but reflected local and regional activity in recent years. The recession associated with COVID-19 pandemic closures could be expected to negatively impact economic growth and therefore these growth rate may not be expected to continue unaltered but may result in a somewhat conservative traffic forecast estimate.

6.0 TRANSPORTATION ANALYSIS

6.1 Site Traffic Operations Analysis

Intersection "nodes" constrain the capacity of a roadway segment, and therefore the baseline capacity of the study intersections were analyzed using the *Highway Capacity Manual 6th Edition (HCM)* methodology. The Level of Service (LOS) for an intersection is determined by the computed or measured delay and is defined for each minor movement at signalized, unsignalized, and roundabout intersections. LOS is assigned a letter grade from A (best) through F (worst), as summarized in Table 4 for signalized and unsignalized intersections. Signalized intersection have higher levels of delays due to higher volumes and driver expectation of greater delays. LOS D is generally considered acceptable in urban areas with right-of-way constraints; however, COA DPM Table 7.5.88 provides additional LOS criteria by location and corridor type.

Table 4: Intersection Level of Service (LOS) Criteria (HCM 6th Ed.)

LOS[1]	Signalized Control Delay (sec/veh)	Unsignalized Control Delay (sec/veh)
A	0 – 10	0 – 10
B	10 – 20	10 – 15
C	20 – 35	15 – 25
D	35 – 55	25 – 35
E	55 – 80	35 – 50
F	> 80	> 50

[1]For Volume-to-Capacity Ratio (V/C) ≤1.0; LOS = F for V/C > 1.

Synchro 10 software package by *Trafficware Ltd.* was utilized to compute the results in HCM format. Traffic signal timing settings for the signalized intersections on Osuna Rd. were provided by COA Traffic Engineering staff and input into the traffic models for analysis. These intersections are not currently coordinated but are running free and pedestrian phases are not set to recall.

Capacity analyses were computed using the same, systematic method so results could be compared for the following alternative scenarios:

1. **Scenario 1: Baseline (2021)** – baseline traffic adjusted to represent "normal" conditions without COVID-19 impacts, representing the baseline for analysis.
2. **Scenario 2: Implementation Year NO-Build (2022)** – baseline conditions plus background traffic growth without development, representing the implementation year operating conditions.
3. **Scenario 3: Opening Year BUILD (2022)** – existing traffic plus background traffic growth and completion of development.
4. **Scenario 5: Horizon NO-Build (2032)** – existing traffic conditions plus background traffic growth without development, representing the horizon year operating conditions.
5. **Scenario 6: Horizon BUILD (2032)** – forecast conditions including background traffic growth and site traffic, to assess forecast traffic operations with developed conditions.

Computed results are contained in Appendix D and summarized in Table 5.

6.2 Assessment of Impacts

Conclusions drawn from these capacity analysis results include:

1. Per COA DPM Table 7.5.88, LOS D applies for arterials outside of Centers.
2. Overall, the study intersections operated with satisfactory LOS for all scenarios including developed conditions with the exception of the WBL at Universe/Ventana.
    a. High through volumes on Universe coupled with substantial WBL traffic lead to this condition.
    b. Residences south of Ventana Rd. that wish to travel south are constrained at this intersection; alternative access would involve out-of-direction travel.
3. Slight increases in intersection delay resulted from background traffic growth and from the addition of site traffic, however, some delays actually decreased as a result of more balanced lane group flow rates.
4. Site traffic did not degrade LOS for any affected movement in the Implementation Year.
5. The Site driveways operated at satisfactory LOS as shown in Table 5.
6. For the Horizon Year scenario, the WBL queue at Universe/Ventana extended beyond the storage lane capacity by 1-2 vehicles, though queue blocking should not be an issue as WBT traffic was negligible.

Because traffic operations functioned at acceptable LOSs for all scenarios as summarized in Table 5, no mitigation measures were identified for analysis or implementation. Residential traffic at Universe/Ventana may seek alternate access to the south or alter travel patterns in order to avoid the delay during peak hours.

The existing signal timing plans at Irving/Universe and Irving/Kayenta do not include left-turn phasing. As demand increases, additional capacity could be allocated through traffic signal timing adjustments and/or addition of left-turn phasing where needed.

6.3 Traffic Signal Warrant Study (TSWS)

A TSWS was not identified as part of the project study scope, but an evaluation was made as to whether the Universe/Irving intersection might warrant traffic signalization due to the delay experienced by the WBL traffic. This TSWS followed Chapter 4C of the 2009 *Manual on Uniform Traffic Control Devices* (MUTCD). Of the nine warrants defined in the MUTCD, only Warrants 2, 3, 6, and 8 were evaluated as follows.

*Table 5: LOS Summary for Alternative Concepts**

		AM Peak						PM Peak					
		Intersection		Max. (worst-case movement)				Intersection		Max. (worst-case movement)			
Scenario	Intersection	Delay	LOS	V/C	Delay	LOS	Dir.	Delay	LOS	V/C	Delay	LOS	Dir.
Baseline (2021)	**1 – Existing Traffic-Adjusted (NO-Build)**												
	Irving/Universe	12.8	B	0.59	17.1	B	EBL	12.5	B	0.48	15.2	B	EBL
	Irving/Ventana	1.4	(3)	0.009	11.2	B	NBL	1.9	(3)	0.011	12.4	B	NBL
	Irving/Kayenta	12.1	B	0.45	20.4	C	SBL	8.4	A	0.44	19.0	B	SBR
	Ventana/Scottsdale	3.5	(3)	0.039	9.0	A	WBL	1.3	(3)	0.019	9.1	A	WBL
	Universe/Ventana	7.8	(3)	0.781	64.1	F	WBL	5.4	(3)	0.714	77.8	F	WBL
Opening Year (2022)	**2 – Implementation Year NO-Build**												
	Irving/Universe	12.9	B	0.60	17.2	B	EBL	12.6	B	0.49	15.4	B	EBL
	Irving/Ventana	1.4	(3)	0.009	11.2	B	NBL	1.9	(3)	0.011	12.4	B	NBL
	Irving/Kayenta	12.2	B	0.45	20.4	C	SBL	8.4	A	0.45	19.0	B	SBR
	Ventana/Scottsdale	3.5	(3)	0.039	9.0	A	WBL	1.3	(3)	0.019	9.1	A	WBL
	Universe/Ventana	8.3	(3)	0.809	69.8	F	WBL	5.8	(3)	0.749	85.5	F	WBL
	3 – Implementation Year BUILD												
	Irving/Universe	12.9	B	0.61	17.4	B	EBL	12.6	B	0.49	15.5	B	EBL
	Irving/DW1	0.3	(3)	0.015	8.8	A	NBR	0.1	(3)	0.007	8.9	A	NBR
	Irving/Ventana	2.6	(3)	0.033	13.7	B	NBL	2.2	(3)	0.025	12.9	B	NBL
	Irving/Kayenta	12.3	B	0.45	20.3	C	SBL	8.4	A	0.46	19.1	B	SBR
	Ventana/Scottsdale	4.1	(3)	0.046	9.6	A	WBL	2.4	(3)	0.028	9.4	A	EBL
	Universe/Ventana	12.2	(3)	0.934	94.2	F	WBL	6.5	(3)	0.790	92.7	F	WBL
Horizon Year (2032)	**4 – Horizon NO-Build**												
	Irving/Universe	13.0	B	0.56	16.2	B	EBL	14.7	B	0.57	28.9	C	NBL
	Irving/Ventana	1.4	(3)	0.007	10.8	B	NBL	1.9	(3)	0.011	12.7	B	NBL
	Irving/Kayenta	12.1	B	0.43	17.4	B	SBL	8.5	A	0.47	19.1	B	SBR
	Ventana/Scottsdale	3.5	(3)	0.035	8.9	A	WBL	1.2	(3)	0.019	9.1	A	WBL
	Universe/Ventana	12.5	(3)	0.981	117.0	F	WBL	10.9	(3)	1.056	184.9	F	WBL
	5 – Horizon BUILD												
	Irving/Universe	13.0	B	0.56	16.4	B	EBL	14.7	B	0.57	28.9	C	NBL
	Irving/DW1	0.3	(3)	0.015	8.9	A	NBR	0.1	(3)	0.007	8.9	A	NBR
	Irving/Ventana	2.5	(3)	0.025	12.7	B	NBL	2.2	(3)	0.025	13.2	B	NBL
	Irving/Kayenta	12.2	B	0.43	20.3	C	SBL	8.5	A	0.49	19.2	B	SBR
	Ventana/Scottsdale	4.1	(3)	0.041	9.6	A	WBL	2.3	(3)	0.029	9.5	A	EBL
	Universe/Ventana	18.6	(3)	1.124	159.8	F	WBL	12.3	(3)	1.111	202.5	F	WBL

*Notes:
1. Delay is measured in seconds/vehicle
2. V/C = volume-to-capacity ratio for traffic movement
3. Only critical movement LOS at unsignalized intersections is reported.

1. Warrant 1, Eight-Hour Vehicular Volume. Sufficient data were not collected for this study as it was not considered part of the scope.
2. Warrant 2, Four-Hour Vehicular Volume. Four hours of traffic data were collected for this study.
3. Warrant 3, Peak Hour. Significant delays are experienced under existing and forecast conditions for the WBL at this intersection in the AM and PM peak periods.
4. Warrant 4, Pedestrian Volume. Not applicable.
5. Warrant 5, School Crossing. Though the project involves a new school, a designated crossing of Universe Blvd. does not exist and would not be anticipated.
6. Warrant 6, Coordinated Signal System. The intersection could be coordinated with the Universe Blvd. signal as well as others to the south.
7. Warrant 7, Crash Experience. Not considered part of the scope.
8. Warrant 8, Roadway Network. Existing traffic flows are already organized by virtue of the existing coordinated traffic signal network and therefore this warrant did not apply.
9. Warrant 9, Intersection Near a Grade Crossing. A rail crossing does not exist in the vicinity and thus Warrant 9 did not apply.

A speed study was not conducted and it was therefore assumed that the 85th percentile speed was the same as the posted speed of 35 mph. The results of the TSWS are summarized in Table 6 below. Data and documentation are provided in Appendix E.

Table 6: Summary of Traffic Signal Warrants

Warrant	MET (✓) NOT Met (×)
1 – Eight Hour Vehicular Volume	**n.a.**
2 – Four-Hour Vehicular Volume	×
3 – Peak Hour Delay/Volumes	×
4 – Pedestrian Volume	**n.a.**
5 – School Crossing	**n.a.**
6 – Coordinated Signal System	✓
7 – Crash Experience	**n.a.**
8 – Roadway Network	×
9 – Grade Crossing	**n.a.**

Several considerations relative to this evaluation follow.

1. Warrants 2 & 3, traffic volumes on the minor street approach (Ventana) were insufficient under existing conditions to meet warranting criteria.
2. Warrant 6 – met by virtue of the roadway geometry; not sufficient to justify a new signal without evaluating the Universe Blvd. corridor from Paradise Blvd. to Irving Blvd.
3. Warrant 8 – not met.
4. Indirect travel may result during peak access periods, and the Ventana/Irving intersection provides an opportunity. School access is typically most intense during opening and discharge times, though the discharge occurs earlier than the PM peak of the roadway and should have less impact as a result.
5. All-way stop-control (AWSC) would not be appropriate on a principal arterial roadway.

6.4 Neighborhood Impact Assessment (NIA) Considerations

As outlined in the Scope of Traffic Impact Study (TIS, Appendix A) and as referenced in the COA DPM Part 7-5(F), this report has addressed NIA issues with respect to school sites as follows.

6.4.1 Baseline Community Data

Section 3 of this report identified existing conditions with respect to adjacent land uses, traffic patterns and volumes, and multimodal options including transit, bike and pedestrian facilities.

6.4.2 Analysis of Neighborhood Impacts

Following is a summary of the key considerations addressed in this evaluation.

1. Existing bicycle and pedestrian routes and circulation will be maintained.
2. Conflict points between pedestrians and automobiles would be minimal due to the availability of these existing facilities.
3. New sidewalk will be installed along Ventana
4. Existing transit service (Route 162) to Irving/U
5. Noise and air quality impacts due to idling vehicles would not be expected for the following reasons:
   a. Student drop-off and pick-up activities will take place on site rather than on the adjacent roadways.
   b. The provision of 2 driveways and drop-off zones will avoid concentration of these activities at one location.
   c. Site design separates student drop-off or student driver traffic from parent/staff/visitor traffic as described in Section 4.2 of this report and thus further facilitates access.
   d. Calculated delay and traffic queues were low for the affected intersections with the exception of the Universe/Ventana WBL, which exhibited delay for baseline no-build conditions.

6.4.2.3 Describe the width of sidewalk and landscape buffer as per COA DPM requirement of a local street

In summary, the site will provide ample access and have internal measures to promote efficient circulation, therefore it is not expected to adversely affect adjacent neighborhoods.

7.0 SITE ACCESS REQUIREMENTS

7.1.1 describe as partial-access. Driveway #1 shall have a Valley Gutter as per COA Std. Dwg. 2420

7.1 Site Access

1. Driveway 1: 24' wide (minimum), 2-lane right-in/right-out (RIRO) paved driveway on the north side at Irving.
2. Driveway 2: 24' wide (minimum), 2-lane full-service pav with the Ventana/Scottsdale intersection.
3. Both driveways will have return radii to facilitate smooth transitions.
4. Concrete aprons will be included to maintain drainage.
5. Access ramps will be necessary across both driveways.
6. New 6' sidewalk will be installed along the Ventana Rd. frontage.
7. Internal traffic circulation patterns should be conveyed to staff, parents, and visitors; these could be facilitated through pavement arrows and signs that designate the drop-off and parking areas.

7.1.2 describe as full-access. driveway #2 shall be as per Private Entrance detail COA Std Dwg 2426

7.1.4 change Concrete aprons to Concrete Valley Gutters

7.1.6 sidewalk 5 feet wide with a 5 to 6 feet wide landscape buffer

7.2 Off-Site Access

1. No off-site improvements were identified in this analysis.

2. Future traffic signal modifications at the Irving/Unser intersection, such as signal timing and addition of left-turn phasing, could be necessitated as development to the west occurs; this situation should be monitored with future projects.

8.0 SUMMARY OF FINDINGS

Key findings of this analysis are summarized as follows:

1. Site-generated traffic is not expected to cause significant, adverse impacts to the adjacent roadway network including the traffic signalized intersections along on Irving Blvd.
2. Adverse neighborhood impacts relative to idling and queuing traffic at the school site would not be expected to occur. Furthermore, the site is consistent with existing pedestrian, bicycle, and transit facilities.
3. Some traffic delay and queuing currently exists for westbound left turns on Ventana Rd. approaching Universe Blvd.; this would be slightly increased by site traffic.
4. A traffic signal warrant study (TSWS) of the Universe/Ventana intersection met certain warranting criteria but additional analysis would be needed to properly determine whether this intersection will meet the traffic signal warranting criteria; this condition should be monitored for future consideration.

9.0 RECOMMENDATIONS & MITIGATION MEASURES

This analysis has demonstrated that significant detrimental traffic impacts associated with the proposed charter middle/high school are not expected to occur on the adjacent transportation system. The following recommendations are offered concerning site access modifications.

9.1 On-Site Access Driveways

9.1.1 Driveway #1 describe as partial access with valley gutter

1. Provide a 24' wide (minimum), 2-lane right-in/right-out (RIRO) paved driveway on the north side at Irving with return radii, conc

9.1.2 driveway #2 describe as full access with valley gutter

2. Provide a 24' wide (minimum), 2-lane full-service paved driveway on the south east side aligned with the Ventana/Scottsdale intersection with return radii, concrete apron, and accessible ramps.
3. Install concrete sidewalk along the Ventana Rd. frontage.

9.1.3 define the sidewalk with as 5 feet with landscape buffer of 5 to6 feet wide.

4. Maintain 2 separate, internal circulation and student drop-off zones.
5. Direct traffic to the respective areas including student drop-off and parking, parent, staff, and visitor parking.
6. No off-site improvements were identified.

9.2 Traffic Management Considerations

1. The use of parent and student carpools should be encouraged.
2. It may be beneficial to reducing traffic peaks if high and middle school start times could be staggered.
3. Staff and students may be encouraged to utilize existing transit route 162 to the school site.

APPENDIX A
Traffic Scoping Requirements

City of Albuquerque

Planning Department

Development Review Services Division

Traffic Scoping Form (REV 07/2020)

Project Title: SAMS Academy

Building Permit #: _____ Hydrology File #: _____

Zone Atlas Page: A,B-10 DRB#: _____ EPC#: _____ Work Order#: _____

Legal Description: Tract A-2 Bulk Land Plat for Tracts A-1 & A-2 (a replat of Tract A, Ventana Ranch)

Development Street Address: n.a. (Irving Blvd. / Ventana Rd.

Applicant: Development Management Consultants for SAMS Academy Contact: Steve Hernandez

Address: 9320 Menaul Blvd. NE, Suite D, Albuquerque, NM 87112

Phone#: 505-296-7100 Fax#: 505-296-7105

E-mail: steve@dmcnm.com

Development Information

Build out/Implementation Year: 2022 Current/Proposed Zoning: R-ML (fmrly. SU-1)

Project Type: New: (X) Change of Use: ( ) Same Use/Unchanged: ( ) Same Use/Increased Activity: ( )

Proposed Use (mark all that apply): Residential: ( ) Office: ( ) Retail: ( ) Mixed-Use: ( )

Describe development and Uses:

New charter school for middle/high school grades 6-12.

Days and Hours of Operation (if known): 7a - 5p M-F w/some extra-curricular activities

Facility

Building Size (sq. ft.): 36,800

Number of Residential Units: _____

Number of Commercial Units: _____

Traffic Considerations

ITE Trip Generation Land Use Code 522 (mid. school), 530 (high school); assumed half each

Expected Number of Daily Visitors/Patrons (if known):* 630

Expected Number of Employees (if known):* _____

Expected Number of Delivery Trucks/Buses per Day (if known):* _____

Trip Generations during PM/AM Peak Hour (if known):* 40 PM, 197 AM (based on sq. ft. of building)

Driveway(s) Located on: Street Name Irving Blvd., Ventana Rd.

Adjacent Roadway(s) Posted Speed: Street Name Irving Blvd. Posted Speed 35

Street Name Ventana Rd. Posted Speed 30

** If these values are not known, assumptions will be made by City staff. Depending on the assumptions, a full TIS may be required*

Roadway Information (adjacent to site)

Comprehensive Plan Corridor Designation/Functional Classification: Irving = Major Collector, Ventana = Local
(arterial, collecdtor, local, main street)

Comprehensive Plan Center Designation: None
(urban center, employment center, activity center)

Jurisdiction of roadway (NMDOT, City, County): City

Adjacent Roadway(s) Traffic Volume: 4,000 (2019) Volume-to-Capacity Ratio (v/c): AM=0.42EB, 0.14WB
(if applicable) PM=0.26EB, 0.41WB

Adjacent Transit Service(s): ABQ Ride Route 162 Nearest Transit Stop(s): Irving/Universe

Is site within 660 feet of Premium Transit?: No

Current/Proposed Bicycle Infrastructure: Bike lanes on Irving
(bike lanes, trails)

Current/Proposed Sidewalk Infrastructure: Existing asphalt trail on Irving, sidewalk not available on Ventana

Relevant Web-sites for Filling out Roadway Information:

City GIS Information: http://www.cabq.gov/gis/advanced-map-viewer

Comprehensive Plan Corridor/Designation:https://abc-zone.com/document/abc-comp-plan-chapter-5-land-use (map after Page 5-5)

Road Corridor Classification: https://www.mrcog-nm.gov/DocumentCenter/View/1920/Long-Range-Roadway-System-LRRS-PDF?bidId=

Traffic Volume and V/C Ratio: https://www.mrcog-nm.gov/285/Traffic-Counts and https://public.mrcog-nm.gov/taqa/

Bikeways: http://documents.cabq.gov/planning/adopted-longrange-plans/BTFP/Final/BTFP%20FINAL_Jun25.pdf (Map Pages 75 to 81)

TIS Determination

Note: Changes made to development proposals / assumptions, from the information provided above, will result in a new TIS determination.

Traffic Impact Study (TIS) Required: Yes [✓] No [ ]

Thresholds Met? Yes [✓] No [ ]

Mitigating Reasons for Not Requiring TIS: Previously Studied: [ ]

Notes:

M [illegible] P.E. 4/13/2021

TRAFFIC ENGINEER DATE

Submittal

The Scoping Form must be submitted as part of any building permit application, DRB application, or EPC application. See the Development Process Manual Chapter 7.4 for additional information.

Submit by email to plndrs@cabq.gov and to the City Traffic Engineer mgrush@cabq.gov. Call 924-3362 for information.

Site Plan/Traffic Scoping Checklist

Site plan, building size in sq. ft. (show new, existing, remodel), to include the following items as applicable:

1. Access -- location and width of driveways
2. Sidewalks (Check DPM and IDO for sidewalk requirements. Also, Centers have wider sidewalk requirements.)
3. Bike Lanes (check for designated bike routes, long range bikeway system) *(check MRCOG Bikeways and Trails in the 2040 MTP map)*
4. Location of nearby multi-use trails, if applicable *(check MRCOG Bikeways and Trails in the 2040 MTP map)*
5. Location of nearby transit stops, transit stop amenities (eg. bench, shelter). Note if site is within 660 feet of premium transit.
6. Adjacent roadway(s) configuration (number of lanes, lane widths, turn bays, medians, etc.)
7. Distance from access point(s) to nearest adjacent driveways/intersections.
8. Note if site is within a Center and more specifically if it is within an Urban Center.
9. Note if site is adjacent to a Main Street.
10. Identify traffic volumes on adjacent roadway per MRCOG information. If site generates more than 100 vehicles per hour, identify volume to capacity (v/c) ratio on this form.

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Albuquerque, NM 87120
505.508.3374
www.civiltransformations.com

Minutes

To: Distribution

From: Timothy D. Simmons, PE, PTOE

Date: April 14, 2021

Re: Scoping Meeting – Traffic Impact Study/NIA for SAMS Academy

---

A virtual meeting was held on this date to discuss the traffic study requirements for the proposed project located in the southwest quadrant of the Irving Blvd./Ventana Rd. intersection in Albuquerque, NM. This scoping meeting was held in accordance with the City of Albuquerque (COA) Development Process Manual (DPM). The following individuals participated:

- Matthew Grush, PE – COA Traffic Engineer
- Steven Hernandez – Development Management Consultants
- Tim Simmons, PE, PTOE – Transportation and Traffic Engineer

- With reference to the previously emailed Traffic Scoping Form (TSF), Tim provided an overview of the project location, conceptual site plan, and proposed land use consisting of charter mid/high school for grades 7 – 12.
- Matthew previously noted that a TIS with NIA additional coverage is required.
- Steven gave a summary of the proposed school:
  - Conceptual plan shows a gymnasium but this is not budgeted so the building footprint and site plan may change.
  - Student/staff population consists of 170 HS, 60 MS, 25 Staff.
  - Capacity of the school will be limited to 300 students.
  - Student count will be used for the independent variable to estimate trips.
  - Schedule includes ground-breaking in June 2021 and start of classes by early 2022.
  - The parcel includes space in the south and west for storm drainage detention.
  - A vacant area south of the property is an undeveloped part of the neighborhood park.
- Study intersections will include:
  - Irving/Universe
  - Irving/Ventana
  - Irving/Kayenta
  - Universe/Ventana
  - Ventana/Scottsdale
- Access considerations:
  - Primary access will be via Ventana Rd. opposite Scottsdale Ave.
  - A secondary right-in/right-out (RIRO) access is proposed on Irving Blvd.
  - Student drop-off is proposed at a portico in the center front of the building.
  - Discussion focused on designating student drop-off circulation in a counter-clockwise direction so that students can be dropped off at the building on the right side of the vehicle; this should provide for more queueing space and reduce conflicts, and will be coordinated with the school administration.

- Neighborhood Impact Assessment:
    - Efforts were discussed to minimize potential neighborhood impacts due to vehicle queuing, idling and associated noise and air quality.
    - It was agreed that these elements are difficult to measure, and modern vehicles pollute less than older models.
    - These will be addressed qualitatively and may include on-site mitigation measures, if applicable.

END OF MEETING MINUTES

These meeting minutes represent a summary of the items discussed. Any corrections or revisions should be directed to the author within 5 business days, after which time they will be considered as final.

Prepared by:

April 14, 2021
Date:

Distribution: Attendees

APPENDIX B
Existing & Projected Traffic Data

Civil Transformations Inc.

2929 Coors Blvd. NW, Suite 309
Albuquerque, NM 87120
Transforming Infrastructure Needs into Sustainable Solutions

SAMS Academy
Traffic Impact Study & NIA
Turning Movement Counts

File Name : 1-Irving-Universe
Site Code : 1
Start Date : 4/15/2021
Page No : 1

Groups Printed- Cars - Trucks

	UNIVERSE From North					IRVING From East					UNIVERSE From South					IRVING From West					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	0	65	14	0	79	20	3	1	0	24	1	23	5	0	29	45	4	14	0	63	195
07:15 AM	1	58	24	1	84	33	5	2	0	40	3	46	8	0	57	49	12	27	0	88	269
07:30 AM	0	68	28	0	96	35	15	2	4	56	33	39	9	0	81	60	19	28	0	107	340
07:45 AM	0	60	29	1	90	31	8	1	3	43	32	53	7	0	92	67	24	50	2	143	368
Total	1	251	95	2	349	119	31	6	7	163	69	161	29	0	259	221	59	119	2	401	1172
08:00 AM	0	51	22	0	73	19	2	2	0	23	7	37	8	2	54	46	8	28	0	82	232
08:15 AM	1	48	20	0	69	18	6	5	0	29	3	35	9	0	47	39	7	12	0	58	203
08:30 AM	1	45	17	0	63	18	11	3	0	32	9	50	8	0	67	41	9	9	0	59	221
08:45 AM	1	33	17	0	51	9	4	2	0	15	6	49	9	0	64	42	12	6	0	60	190
Total	3	177	76	0	256	64	23	12	0	99	25	171	34	2	232	168	36	55	0	259	846
*** BREAK ***																					
04:00 PM	1	59	43	0	103	21	12	5	0	38	16	79	27	1	123	40	11	23	0	74	338
04:15 PM	1	60	70	0	131	17	11	0	1	29	18	70	14	0	102	43	13	12	0	68	330
04:30 PM	1	49	64	0	114	14	18	0	0	32	23	62	23	0	108	41	15	10	0	66	320
04:45 PM	2	70	46	0	118	16	22	0	0	38	20	69	16	0	105	53	16	18	0	87	348
Total	5	238	223	0	466	68	63	5	1	137	77	280	80	1	438	177	55	63	0	295	1336
05:00 PM	2	70	52	0	124	26	23	3	0	52	21	76	24	0	121	46	16	16	2	80	377
05:15 PM	1	82	67	0	150	14	27	2	0	43	19	72	20	0	111	45	12	14	0	71	375
05:30 PM	0	54	47	0	101	27	24	1	0	52	25	63	29	0	117	55	11	14	0	80	350
05:45 PM	3	62	47	0	112	19	19	2	0	40	21	64	27	0	112	41	18	13	0	72	336
Total	6	268	213	0	487	86	93	8	0	187	86	275	100	0	461	187	57	57	2	303	1438
Grand Total	15	934	607	2	1558	337	210	31	8	586	257	887	243	3	1390	753	207	294	4	1258	4792
Apprch %	1	59.9	39	0.1		57.5	35.8	5.3	1.4		18.5	63.8	17.5	0.2		59.9	16.5	23.4	0.3		
Total %	0.3	19.5	12.7	0	32.5	7	4.4	0.6	0.2	12.2	5.4	18.5	5.1	0.1	29	15.7	4.3	6.1	0.1	26.3	
Cars	14	924	597	2	1537	330	208	29	8	575	254	872	237	3	1366	744	205	291	4	1244	4722
% Cars	93.3	98.9	98.4	100	98.7	97.9	99	93.5	100	98.1	98.8	98.3	97.5	100	98.3	98.8	99	99	100	98.9	98.5
Trucks	1	10	10	0	21	7	2	2	0	11	3	15	6	0	24	9	2	3	0	14	70
% Trucks	6.7	1.1	1.6	0	1.3	2.1	1	6.5	0	1.9	1.2	1.7	2.5	0	1.7	1.2	1	1	0	1.1	1.5

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SAMS Academy
Traffic Impact Study & NIA
Turning Movement Counts

File Name : 1-Irving-Universe
Site Code : 1
Start Date : 4/15/2021

	UNIVERSE From North					IRVING From East					UNIVERSE From South					IRVING From West					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
07:15 AM	**1**	58	24	**1**	84	33	5	**2**	0	40	3	46	8	0	57	49	12	27	0	88	269
07:30 AM	0	**68**	28	0	**96**	**35**	**15**	2	**4**	**56**	**33**	39	**9**	0	81	60	19	28	0	107	340
07:45 AM	0	60	**29**	1	90	31	8	1	3	43	32	**53**	7	0	**92**	**67**	**24**	**50**	**2**	**143**	**368**
08:00 AM	0	51	22	0	73	19	2	2	0	23	7	37	8	**2**	54	46	8	28	0	82	232
Total Volume	1	237	103	2	343	118	30	7	7	162	75	175	32	2	284	222	63	133	2	420	1209
% App. Total	0.3	69.1	30	0.6		72.8	18.5	4.3	4.3		26.4	61.6	11.3	0.7		52.9	15	31.7	0.5		
PHF	.250	.871	.888	.500	.893	.843	.500	.875	.438	.723	.568	.825	.889	.250	.772	.828	.656	.665	.250	.734	.821
Cars	0	234	98	2	334	115	30	6	7	158	73	172	29	2	276	219	62	132	2	415	1183
% Cars	0	98.7	95.1	100	97.4	97.5	100	85.7	100	97.5	97.3	98.3	90.6	100	97.2	98.6	98.4	99.2	100	98.8	97.8
Trucks	1	3	5	0	9	3	0	1	0	4	2	3	3	0	8	3	1	1	0	5	26
% Trucks	100	1.3	4.9	0	2.6	2.5	0	14.3	0	2.5	2.7	1.7	9.4	0	2.8	1.4	1.6	0.8	0	1.2	2.2
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	**2**	70	46	0	118	16	22	0	0	38	20	69	16	0	105	53	**16**	**18**	0	**87**	348
05:00 PM	2	70	52	0	124	26	23	**3**	0	**52**	21	**76**	24	0	**121**	46	16	16	**2**	80	**377**
05:15 PM	1	**82**	**67**	0	**150**	14	**27**	2	0	43	19	72	20	0	111	45	12	14	0	71	375
05:30 PM	0	54	47	0	101	**27**	24	1	0	52	**25**	63	**29**	0	117	**55**	11	14	0	80	350
Total Volume	5	276	212	0	493	83	96	6	0	185	85	280	89	0	454	199	55	62	2	318	1450
% App. Total	1	56	43	0		44.9	51.9	3.2	0		18.7	61.7	19.6	0		62.6	17.3	19.5	0.6		
PHF	.625	.841	.791	.000	.822	.769	.889	.500	.000	.889	.850	.921	.767	.000	.938	.905	.859	.861	.250	.914	.962
Cars	5	274	212	0	491	82	95	6	0	183	85	277	88	0	450	198	55	61	2	316	1440
% Cars	100	99.3	100	0	99.6	98.8	99.0	100	0	98.9	100	98.9	98.9	0	99.1	99.5	100	98.4	100	99.4	99.3
Trucks	0	2	0	0	2	1	1	0	0	2	0	3	1	0	4	1	0	1	0	2	10
% Trucks	0	0.7	0	0	0.4	1.2	1.0	0	0	1.1	0	1.1	1.1	0	0.9	0.5	0	1.6	0	0.6	0.7

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SAMS Academy
Traffic Impact Study & NIA
Turning Movement Counts

File Name : 3-Irving-Ventana
Site Code : 3
Start Date : 4/15/2021
Page No : 1

Groups Printed- Cars - Trucks

	VENTANA From North					IRVING From East					VENTANA From South					IRVING From West					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	0	0	1	0	1	1	19	0	0	20	0	1	4	0	5	0	13	0	0	13	39
07:15 AM	5	1	2	0	8	1	37	2	0	40	1	0	2	0	3	0	21	0	0	21	72
07:30 AM	2	0	5	0	7	2	40	1	0	43	1	0	3	0	4	0	36	1	2	39	93
07:45 AM	0	0	0	0	0	2	29	2	0	33	1	1	7	0	9	0	30	2	0	32	74
Total	7	1	8	0	16	6	125	5	0	136	3	2	16	0	21	0	100	3	2	105	278
08:00 AM	1	0	0	0	1	2	21	1	2	26	0	0	4	0	4	0	15	0	2	17	48
08:15 AM	1	0	1	0	2	1	26	0	0	27	0	0	7	0	7	0	21	0	0	21	57
08:30 AM	6	0	0	0	6	3	24	1	0	28	0	0	8	0	8	2	19	1	0	22	64
08:45 AM	2	0	1	0	3	2	14	1	0	17	0	0	7	0	7	0	19	0	0	19	46
Total	10	0	2	0	12	8	85	3	2	98	0	0	26	0	26	2	74	1	2	79	215
*** BREAK ***																					
04:00 PM	2	1	1	0	4	4	37	2	0	43	2	1	10	0	13	1	28	1	0	30	90
04:15 PM	3	1	0	0	4	7	29	1	2	39	0	2	10	0	12	0	25	2	0	27	82
04:30 PM	1	0	0	0	1	3	34	2	0	39	0	0	5	0	5	0	39	1	0	40	85
04:45 PM	3	0	1	0	4	9	39	4	0	52	0	0	7	0	7	1	38	1	0	40	103
Total	9	2	2	0	13	23	139	9	2	173	2	3	32	0	37	2	130	5	0	137	360
05:00 PM	2	1	1	0	4	7	43	1	0	51	0	2	12	0	14	0	39	0	0	39	108
05:15 PM	1	0	0	0	1	6	43	0	0	49	0	1	7	0	8	2	30	1	0	33	91
05:30 PM	0	0	3	0	3	5	44	2	0	51	4	1	7	0	12	2	37	2	2	43	109
05:45 PM	1	0	2	0	3	10	48	2	0	60	0	1	6	0	7	2	36	0	1	39	109
Total	4	1	6	0	11	28	178	5	0	211	4	5	32	0	41	6	142	3	3	154	417
*** BREAK ***																					
Grand Total	30	4	18	0	52	65	527	22	4	618	9	10	106	0	125	10	446	12	7	475	1270
Apprch %	57.7	7.7	34.6	0		10.5	85.3	3.6	0.6		7.2	8	84.8	0		2.1	93.9	2.5	1.5		
Total %	2.4	0.3	1.4	0	4.1	5.1	41.5	1.7	0.3	48.7	0.7	0.8	8.3	0	9.8	0.8	35.1	0.9	0.6	37.4	
Cars	30	4	18	0	52	63	517	20	4	604	9	10	105	0	124	9	438	9	7	463	1243
% Cars	100	100	100	0	100	96.9	98.1	90.9	100	97.7	100	100	99.1	0	99.2	90	98.2	75	100	97.5	97.9
Trucks	0	0	0	0	0	2	10	2	0	14	0	0	1	0	1	1	8	3	0	12	27
% Trucks	0	0	0	0	0	3.1	1.9	9.1	0	2.3	0	0	0.9	0	0.8	10	1.8	25	0	2.5	2.1

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Transforming Infrastructure Needs into Sustainable Solutions

SAMS Academy
Traffic Impact Study & NIA
Turning Movement Counts

File Name : 3-Irving-Ventana
Site Code : 3
Start Date : 4/15/2021
Page No : 2

	VENTANA From North					IRVING From East					VENTANA From South					IRVING From West					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
07:15 AM	**5**	**1**	2	0	**8**	1	37	**2**	0	40	**1**	0	2	0	3	0	21	0	0	21	72
07:30 AM	2	0	**5**	0	7	**2**	**40**	1	0	**43**	1	0	3	0	4	0	**36**	1	**2**	**39**	**93**
07:45 AM	0	0	0	0	0	2	29	2	0	33	1	**1**	**7**	0	**9**	0	30	**2**	0	32	74
08:00 AM	1	0	0	0	1	2	21	1	**2**	26	0	0	4	0	4	0	15	0	2	17	48
Total Volume	8	1	7	0	16	7	127	6	2	142	3	1	16	0	20	0	102	3	4	109	287
% App. Total	50	6.2	43.8	0		4.9	89.4	4.2	1.4		15	5	80	0		0	93.6	2.8	3.7		
PHF	.400	.250	.350	.000	.500	.875	.794	.750	.250	.826	.750	.250	.571	.000	.556	.000	.708	.375	.500	.699	.772
Cars	8	1	7	0	16	5	124	5	2	136	3	1	15	0	19	0	99	2	4	105	276
% Cars	100	100	100	0	100	71.4	97.6	83.3	100	95.8	100	100	93.8	0	95.0	0	97.1	66.7	100	96.3	96.2
Trucks	0	0	0	0	0	2	3	1	0	6	0	0	1	0	1	0	3	1	0	4	11
% Trucks	0	0	0	0	0	28.6	2.4	16.7	0	4.2	0	0	6.3	0	5.0	0	2.9	33.3	0	3.7	3.8
Peak Hour Analysis From 12:00 PM to 06:00 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	**2**	**1**	1	0	**4**	7	43	1	0	51	0	**2**	**12**	0	**14**	0	**39**	0	0	39	108
05:15 PM	1	0	0	0	1	6	43	0	0	49	0	1	7	0	8	**2**	30	1	0	33	91
05:30 PM	0	0	**3**	0	3	5	44	**2**	0	51	**4**	1	7	0	12	2	37	**2**	**2**	**43**	**109**
05:45 PM	1	0	2	0	3	**10**	**48**	2	0	**60**	0	1	6	0	7	2	36	0	1	39	109
Total Volume	4	1	6	0	11	28	178	5	0	211	4	5	32	0	41	6	142	3	3	154	417
% App. Total	36.4	9.1	54.5	0		13.3	84.4	2.4	0		9.8	12.2	78	0		3.9	92.2	1.9	1.9		
PHF	.500	.250	.500	.000	.688	.700	.927	.625	.000	.879	.250	.625	.667	.000	.732	.750	.910	.375	.375	.895	.956
Cars	4	1	6	0	11	28	177	4	0	209	4	5	32	0	41	6	140	3	3	152	413
% Cars	100	100	100	0	100	100	99.4	80.0	0	99.1	100	100	100	0	100	100	98.6	100	100	98.7	99.0
Trucks	0	0	0	0	0	0	1	1	0	2	0	0	0	0	0	0	2	0	0	2	4
% Trucks	0	0	0	0	0	0	0.6	20.0	0	0.9	0	0	0	0	0	0	1.4	0	0	1.3	1.0

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SAMS Academy
Traffic Impact Study & NIA
Turning Movement Counts

File Name : 4-irving-kayenta
Site Code : 4
Start Date : 4/15/2021
Page No : 1

Groups Printed- Cars - Trucks

	KAYENTA From North					IRVING From East					KAYENTA From South					IRVING From West					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	19	3	16	0	38	2	6	4	0	12	0	3	3	0	6	8	9	1	0	18	74
07:15 AM	5	1	26	0	32	1	7	4	0	12	4	2	7	0	13	6	22	0	0	28	85
07:30 AM	25	0	26	2	53	0	19	13	0	32	0	4	6	0	10	9	31	0	0	40	135
07:45 AM	27	0	23	0	50	2	9	7	0	18	0	2	9	0	11	9	25	2	0	36	115
Total	76	4	91	2	173	5	41	28	0	74	4	11	25	0	40	32	87	3	0	122	409
08:00 AM	22	0	15	0	37	2	10	16	1	29	2	0	4	1	7	8	11	0	1	20	93
08:15 AM	25	1	18	0	44	1	7	8	0	16	1	2	5	1	9	10	20	1	0	31	100
08:30 AM	26	0	16	0	42	5	11	18	0	34	0	2	0	0	2	11	23	0	0	34	112
08:45 AM	10	4	7	0	21	0	9	14	1	24	1	2	2	0	5	9	16	1	1	27	77
Total	83	5	56	0	144	8	37	56	2	103	4	6	11	2	23	38	70	2	2	112	382
*** BREAK ***																					
04:00 PM	6	6	14	0	26	5	18	22	0	45	1	2	4	0	7	18	17	0	1	36	114
04:15 PM	11	5	17	0	33	11	28	15	0	54	1	1	9	0	11	17	21	1	0	39	137
04:30 PM	14	5	11	0	30	5	21	20	0	46	0	7	7	0	14	25	20	0	0	45	135
04:45 PM	5	3	16	0	24	4	24	21	0	49	1	3	4	0	8	12	21	1	0	34	115
Total	36	19	58	0	113	25	91	78	0	194	3	13	24	0	40	72	79	2	1	154	501
*** BREAK ***																					
Grand Total	195	28	205	2	430	38	169	162	2	371	11	30	60	2	103	142	236	7	3	388	1292
Apprch %	45.3	6.5	47.7	0.5		10.2	45.6	43.7	0.5		10.7	29.1	58.3	1.9		36.6	60.8	1.8	0.8		
Total %	15.1	2.2	15.9	0.2	33.3	2.9	13.1	12.5	0.2	28.7	0.9	2.3	4.6	0.2	8	11	18.3	0.5	0.2	30	
Cars	190	28	201	2	421	38	164	155	2	359	11	30	60	2	103	140	230	7	3	380	1263
% Cars	97.4	100	98	100	97.9	100	97	95.7	100	96.8	100	100	100	100	100	98.6	97.5	100	100	97.9	97.8
Trucks	5	0	4	0	9	0	5	7	0	12	0	0	0	0	0	2	6	0	0	8	29
% Trucks	2.6	0	2	0	2.1	0	3	4.3	0	3.2	0	0	0	0	0	1.4	2.5	0	0	2.1	2.2

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SAMS Academy
Traffic Impact Study & NIA
Turning Movement Counts

File Name : 4-irving-kayenta
Site Code : 4
Start Date : 4/15/2021
Page No : 2

	KAYENTA From North					IRVING From East					KAYENTA From South					IRVING From West					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	25	0	**26**	**2**	**53**	0	**19**	13	0	**32**	0	**4**	6	0	10	9	**31**	0	0	**40**	**135**
07:45 AM	**27**	0	23	0	50	**2**	9	7	0	18	0	2	**9**	0	**11**	9	25	**2**	0	36	115
08:00 AM	22	0	15	0	37	2	10	**16**	**1**	29	**2**	0	4	**1**	7	8	11	0	**1**	20	93
08:15 AM	25	**1**	18	0	44	1	7	8	0	16	1	2	5	1	9	**10**	20	1	0	31	100
Total Volume	99	1	82	2	184	5	45	44	1	95	3	8	24	2	37	36	87	3	1	127	443
% App. Total	53.8	0.5	44.6	1.1		5.3	47.4	46.3	1.1		8.1	21.6	64.9	5.4		28.3	68.5	2.4	0.8		
PHF	.917	.250	.788	.250	.868	.625	.592	.688	.250	.742	.375	.500	.667	.500	.841	.900	.702	.375	.250	.794	.820
Cars	94	1	79	2	176	5	40	41	1	87	3	8	24	2	37	35	82	3	1	121	421
% Cars	94.9	100	96.3	100	95.7	100	88.9	93.2	100	91.6	100	100	100	100	100	97.2	94.3	100	100	95.3	95.0
Trucks	5	0	3	0	8	0	5	3	0	8	0	0	0	0	0	1	5	0	0	6	22
% Trucks	5.1	0	3.7	0	4.3	0	11.1	6.8	0	8.4	0	0	0	0	0	2.8	5.7	0	0	4.7	5.0
Peak Hour Analysis From 12:00 PM to 06:00 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:00 PM																					
04:00 PM	6	**6**	14	0	26	5	18	**22**	0	45	**1**	2	4	0	7	18	17	0	**1**	36	114
04:15 PM	11	5	**17**	0	**33**	**11**	**28**	15	0	**54**	1	1	**9**	0	11	17	**21**	**1**	0	39	**137**
04:30 PM	**14**	5	11	0	30	5	21	20	0	46	0	**7**	7	0	**14**	**25**	20	0	0	**45**	135
04:45 PM	5	3	16	0	24	4	24	21	0	49	1	3	4	0	8	12	21	1	0	34	115
Total Volume	36	19	58	0	113	25	91	78	0	194	3	13	24	0	40	72	79	2	1	154	501
% App. Total	31.9	16.8	51.3	0		12.9	46.9	40.2	0		7.5	32.5	60	0		46.8	51.3	1.3	0.6		
PHF	.643	.792	.853	.000	.856	.568	.813	.886	.000	.898	.750	.464	.667	.000	.714	.720	.940	.500	.250	.856	.914
Cars	36	19	57	0	112	25	91	77	0	193	3	13	24	0	40	71	79	2	1	153	498
% Cars	100	100	98.3	0	99.1	100	100	98.7	0	99.5	100	100	100	0	100	98.6	100	100	100	99.4	99.4
Trucks	0	0	1	0	1	0	0	1	0	1	0	0	0	0	0	1	0	0	0	1	3
% Trucks	0	0	1.7	0	0.9	0	0	1.3	0	0.5	0	0	0	0	0	1.4	0	0	0	0.6	0.6

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Transforming Infrastructure Needs into Sustainable Solutions

Sandia Ranch Project
Traffic Impact Study
Turning Movement Counts

File Name : 5-Ventana-Scottsdale
Site Code : 5
Start Date : 4/15/2021
Page No : 1

Groups Printed- Cars - Trucks

	VENTANA From North					SCOTTSDALE From East					VENTANA From South					SCOTTSDALE From West					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	1	3	0	0	4	6	0	1	0	7	0	3	1	0	4	0	0	0	0	0	15
07:15 AM	0	2	0	0	2	4	0	0	0	4	0	4	2	1	7	0	0	0	0	0	13
07:30 AM	0	3	0	0	3	6	0	0	0	6	0	5	2	0	7	0	0	0	0	0	16
07:45 AM	1	2	0	0	3	1	0	0	0	1	0	2	2	0	4	0	0	0	0	0	8
Total	2	10	0	0	12	17	0	1	0	18	0	14	7	1	22	0	0	0	0	0	52
08:00 AM	1	4	0	0	5	4	0	0	0	4	0	6	1	0	7	0	0	0	0	0	16
08:15 AM	0	2	0	0	2	9	0	1	0	10	0	3	3	1	7	0	0	0	0	0	19
08:30 AM	1	4	0	0	5	2	0	1	0	3	0	2	2	2	6	0	0	0	0	0	14
08:45 AM	0	0	0	0	0	2	0	0	0	2	0	5	1	0	6	0	0	0	0	0	8
Total	2	10	0	0	12	17	0	2	0	19	0	16	7	3	26	0	0	0	0	0	57
*** BREAK ***																					
04:00 PM	0	6	0	0	6	3	0	2	0	5	0	11	8	1	20	0	0	0	0	0	31
04:15 PM	4	6	0	0	10	2	0	2	0	4	0	10	5	1	16	0	0	0	0	0	30
04:30 PM	0	4	0	0	4	1	0	0	0	1	0	6	8	0	14	0	0	0	0	0	19
04:45 PM	0	7	0	0	7	0	0	0	0	0	0	5	2	0	7	0	0	0	0	0	14
Total	4	23	0	0	27	6	0	4	0	10	0	32	23	2	57	0	0	0	0	0	94
*** BREAK ***																					
Grand Total	8	43	0	0	51	40	0	7	0	47	0	62	37	6	105	0	0	0	0	0	203
Apprch %	15.7	84.3	0	0		85.1	0	14.9	0		0	59	35.2	5.7		0	0	0	0		
Total %	3.9	21.2	0	0	25.1	19.7	0	3.4	0	23.2	0	30.5	18.2	3	51.7	0	0	0	0	0	
Cars	8	40	0	0	48	39	0	7	0	46	0	61	36	6	103	0	0	0	0	0	197
% Cars	100	93	0	0	94.1	97.5	0	100	0	97.9	0	98.4	97.3	100	98.1	0	0	0	0	0	97
Trucks	0	3	0	0	3	1	0	0	0	1	0	1	1	0	2	0	0	0	0	0	6
% Trucks	0	7	0	0	5.9	2.5	0	0	0	2.1	0	1.6	2.7	0	1.9	0	0	0	0	0	3

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Transforming Infrastructure Needs into Sustainable Solutions

Sandia Ranch Project
Traffic Impact Study
Turning Movement Counts

File Name : 5-Ventana-Scottsdale
Site Code : 5
Start Date : 4/15/2021
Page No : 2

	VENTANA From North					SCOTTSDALE From East					VENTANA From South					SCOTTSDALE From West					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	0	3	0	0	3	6	0	0	0	6	0	5	2	0	**7**	0	0	0	0	0	16
07:45 AM	**1**	2	0	0	3	1	0	0	0	1	0	2	2	0	4	0	0	0	0	0	8
08:00 AM	1	**4**	0	0	**5**	4	0	0	0	4	0	**6**	1	0	7	0	0	0	0	0	16
08:15 AM	0	2	0	0	2	**9**	0	**1**	0	**10**	0	3	**3**	**1**	7	0	0	0	0	0	**19**
Total Volume	2	11	0	0	13	20	0	1	0	21	0	16	8	1	25	0	0	0	0	0	59
% App. Total	15.4	84.6	0	0		95.2	0	4.8	0		0	64	32	4		0	0	0	0		
PHF	.500	.688	.000	.000	.650	.556	.000	.250	.000	.525	.000	.667	.667	.250	.893	.000	.000	.000	.000	.000	.776
Cars	2	9	0	0	11	19	0	1	0	20	0	15	7	1	23	0	0	0	0	0	54
% Cars	100	81.8	0	0	84.6	95.0	0	100	0	95.2	0	93.8	87.5	100	92.0	0	0	0	0	0	91.5
Trucks	0	2	0	0	2	1	0	0	0	1	0	1	1	0	2	0	0	0	0	0	5
% Trucks	0	18.2	0	0	15.4	5.0	0	0	0	4.8	0	6.3	12.5	0	8.0	0	0	0	0	0	8.5
Peak Hour Analysis From 12:00 PM to 06:00 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:00 PM																					
04:00 PM	0	6	0	0	6	**3**	0	**2**	0	**5**	0	**11**	**8**	**1**	**20**	0	0	0	0	0	**31**
04:15 PM	**4**	6	0	0	**10**	2	0	2	0	4	0	10	5	1	16	0	0	0	0	0	30
04:30 PM	0	4	0	0	4	1	0	0	0	1	0	6	8	0	14	0	0	0	0	0	19
04:45 PM	0	**7**	0	0	7	0	0	0	0	0	0	5	2	0	7	0	0	0	0	0	14
Total Volume	4	23	0	0	27	6	0	4	0	10	0	32	23	2	57	0	0	0	0	0	94
% App. Total	14.8	85.2	0	0		60	0	40	0		0	56.1	40.4	3.5		0	0	0	0		
PHF	.250	.821	.000	.000	.675	.500	.000	.500	.000	.500	.000	.727	.719	.500	.713	.000	.000	.000	.000	.000	.758
Cars	4	22	0	0	26	6	0	4	0	10	0	32	23	2	57	0	0	0	0	0	93
% Cars	100	95.7	0	0	96.3	100	0	100	0	100	0	100	100	100	100	0	0	0	0	0	98.9
Trucks	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
% Trucks	0	4.3	0	0	3.7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.1

Civil Transformations Inc.

2929 Coors Blvd. NW, Suite 309
Albuquerque, NM 87120
Transforming Infrastructure Needs into Sustainable Solutions

SAMS Academy
Traffic Impact Study & NIA
Turning Movement Counts

File Name : 6-Universe-Ventana
Site Code : 6
Start Date : 4/15/2021
Page No : 1

Groups Printed- Cars - Trucks

	UNIVERSE From North					VENTANA From East					UNIVERSE From South					VENTANA From West					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	2	98	0	0	100	23	0	0	0	23	2	31	2	0	35	1	0	13	0	14	172
07:15 AM	0	127	0	0	127	39	0	0	0	39	2	56	3	0	61	1	0	15	0	16	243
07:30 AM	0	137	1	0	138	27	0	2	0	29	1	87	5	0	93	1	0	15	0	16	276
07:45 AM	1	139	0	1	141	21	0	2	0	23	2	81	11	1	95	2	1	11	0	14	273
Total	3	501	1	1	506	110	0	4	0	114	7	255	21	1	284	5	1	54	0	60	964
08:00 AM	1	101	1	0	103	19	0	0	0	19	4	49	7	0	60	2	0	7	0	9	191
08:15 AM	0	86	3	0	89	13	0	0	0	13	1	53	9	0	63	1	0	2	0	3	168
08:30 AM	0	81	1	1	83	23	0	0	0	23	1	70	17	0	88	2	1	7	0	10	204
08:45 AM	0	56	0	0	56	18	0	1	0	19	2	64	12	2	80	1	0	1	0	2	157
Total	1	324	5	1	331	73	0	1	0	74	8	236	45	2	291	6	1	17	0	24	720
*** BREAK ***																					
04:00 PM	1	96	2	1	100	13	0	0	0	13	8	127	30	0	165	4	0	1	0	5	283
04:15 PM	2	86	2	0	90	10	0	1	0	11	8	104	17	0	129	1	0	6	0	7	237
04:30 PM	1	74	2	0	77	13	0	2	0	15	14	113	30	0	157	3	0	6	0	9	258
04:45 PM	2	96	2	0	100	12	0	2	0	14	8	102	23	1	134	1	0	1	0	2	250
Total	6	352	8	1	367	48	0	5	0	53	38	446	100	1	585	9	0	14	0	23	1028
05:00 PM	0	126	1	0	127	27	0	0	0	27	7	127	23	0	157	0	0	2	0	2	313
05:15 PM	3	101	7	0	111	12	0	2	0	14	7	115	19	2	143	1	1	6	0	8	276
05:30 PM	2	94	3	1	100	15	0	1	0	16	11	113	28	0	152	4	1	4	0	9	277
05:45 PM	3	90	2	0	95	13	1	2	0	16	5	117	22	0	144	0	1	2	0	3	258
Total	8	411	13	1	433	67	1	5	0	73	30	472	92	2	596	5	3	14	0	22	1124
Grand Total	18	1588	27	4	1637	298	1	15	0	314	83	1409	258	6	1756	25	5	99	0	129	3836
Apprch %	1.1	97	1.6	0.2		94.9	0.3	4.8	0		4.7	80.2	14.7	0.3		19.4	3.9	76.7	0		
Total %	0.5	41.4	0.7	0.1	42.7	7.8	0	0.4	0	8.2	2.2	36.7	6.7	0.2	45.8	0.7	0.1	2.6	0	3.4	
Cars	17	1569										1385									
% Cars	94.4	98.8	96.3	100	98.7	98	100	93.3	0	97.8	97.6	98.3	99.6	100	98.5	100	100	97	0	97.7	98.5
Trucks	1	19	1	0	21	6	0	1	0	7	2	24	1	0	27	0	0	3	0	3	58
% Trucks	5.6	1.2	3.7	0	1.3	2	0	6.7	0	2.2	2.4	1.7	0.4	0	1.5	0	0	3	0	2.3	1.5

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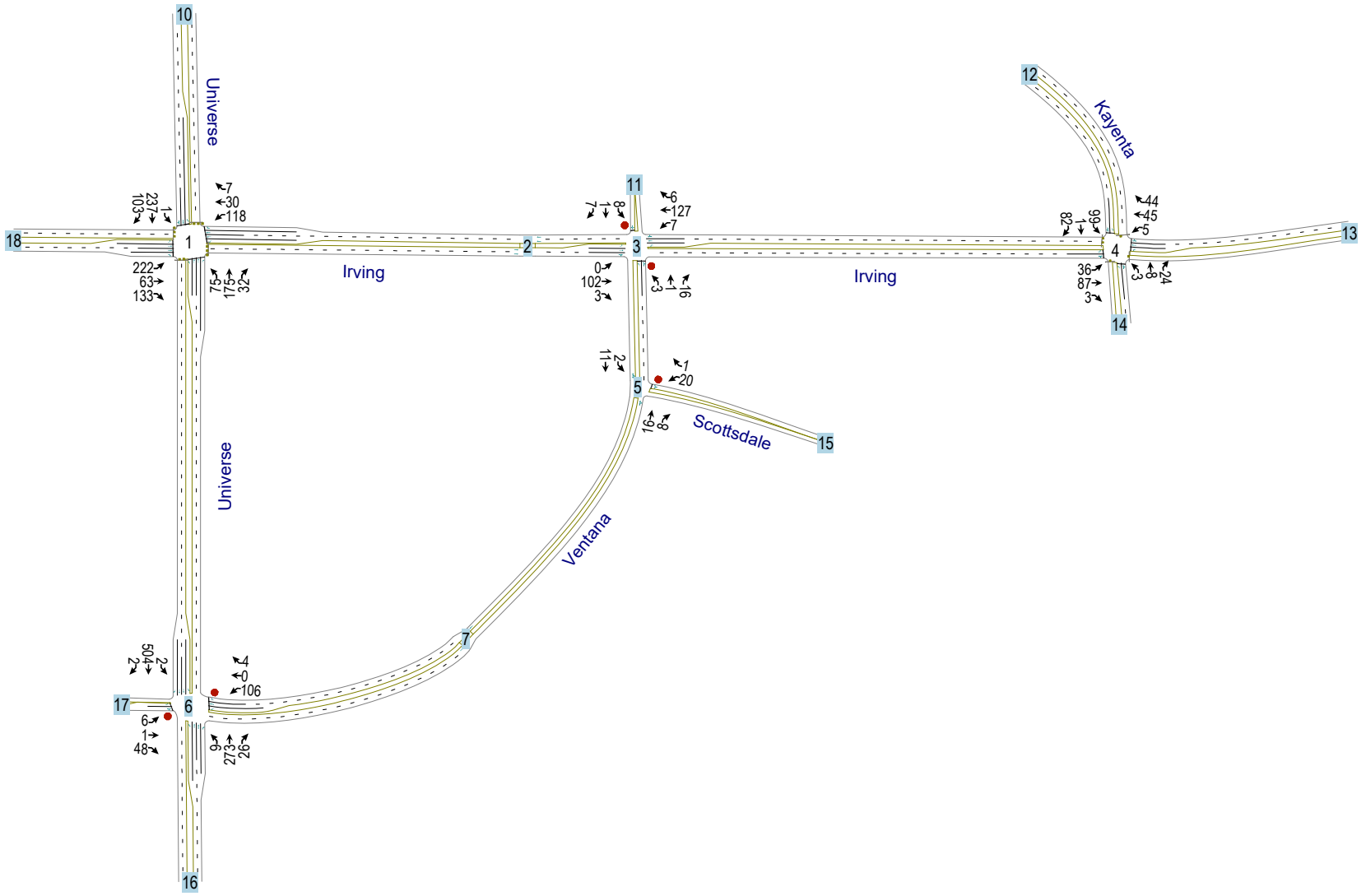
File Name : 6-Universe-Ventana
Site Code : 6
Start Date : 4/15/2021
Page No : 2

	UNIVERSE From North					VENTANA From East					UNIVERSE From South					VENTANA From West					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
07:15 AM	0	127	0	0	127	**39**	0	0	0	**39**	2	56	3	0	61	1	0	**15**	0	**16**	243
07:30 AM	0	137	**1**	0	138	27	0	**2**	0	29	1	**87**	5	0	93	1	0	15	0	16	**276**
07:45 AM	**1**	**139**	0	**1**	**141**	21	0	2	0	23	2	81	**11**	**1**	**95**	**2**	**1**	11	0	14	273
08:00 AM	1	101	1	0	103	19	0	0	0	19	**4**	49	7	0	60	2	0	7	0	9	191
Total Volume	2	504	2	1	509	106	0	4	0	110	9	273	26	1	309	6	1	48	0	55	983
% App. Total	0.4	99	0.4	0.2		96.4	0	3.6	0		2.9	88.3	8.4	0.3		10.9	1.8	87.3	0		
PHF	.500	.906	.500	.250	.902	.679	.000	.500	.000	.705	.563	.784	.591	.250	.813	.750	.250	.800	.000	.859	.890
Cars	2	497	2	1	502	105	0	3	0	108	9	265	26	1	301	6	1	46	0	53	964
% Cars	100	98.6	100	100	98.6	99.1	0	75.0	0	98.2	100	97.1	100	100	97.4	100	100	95.8	0	96.4	98.1
Trucks	0	7	0	0	7	1	0	1	0	2	0	8	0	0	8	0	0	2	0	2	19
% Trucks	0	1.4	0	0	1.4	0.9	0	25.0	0	1.8	0	2.9	0	0	2.6	0	0	4.2	0	3.6	1.9
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	0	**126**	1	0	**127**	**27**	0	0	0	**27**	7	**127**	23	0	**157**	0	0	2	0	2	**313**
05:15 PM	**3**	101	**7**	0	111	12	0	**2**	0	14	7	115	19	**2**	143	1	**1**	**6**	0	8	276
05:30 PM	2	94	3	**1**	100	15	0	1	0	16	**11**	113	**28**	0	152	**4**	1	4	0	**9**	277
05:45 PM	3	90	2	0	95	13	**1**	2	0	16	5	117	22	0	144	0	1	2	0	3	258
Total Volume	8	411	13	1	433	67	1	5	0	73	30	472	92	2	596	5	3	14	0	22	1124
% App. Total	1.8	94.9	3	0.2		91.8	1.4	6.8	0		5	79.2	15.4	0.3		22.7	13.6	63.6	0		
PHF	.667	.815	.464	.250	.852	.620	.250	.625	.000	.676	.682	.929	.821	.250	.949	.313	.750	.583	.000	.611	.898
Cars	8	406	12	1	427	65	1	5	0	71	30	468	92	2	592	5	3	14	0	22	1112
% Cars	100	98.8	92.3	100	98.6	97.0	100	100	0	97.3	100	99.2	100	100	99.3	100	100	100	0	100	98.9
Trucks	0	5	1	0	6	2	0	0	0	2	0	4	0	0	4	0	0	0	0	0	12
% Trucks	0	1.2	7.7	0	1.4	3.0	0	0	0	2.7	0	0.8	0	0	0.7	0	0	0	0	0	1.1

COGID	Route	FuncClass	FromLocation	StartDate	Capac_NB	Capac_SB	Capac_EB	Capac_WB	DailyVol	DayVol_NB	DayVol_SB	DayVol_EB	DayVol_WB	DDS	AM Time	AMHrVol	AMDirSplit	AM_Vol_NB	AM_Vol_SB	AM_Vol_EB	AM_Vol_WB	PMTime	PMHrVol	PMDirSplit	PM_Vol_NB	PM_Vol_SB	PM_Vol_EB	PM_Vol_WB	VC_AM_NB	VC_AM_SB	VC_AM_EB	VC_AM_WB	VC_PM_NB	VC_PM_SB	VC_PM_EB	VC_PM_WB
20157	KEYENTA BLVD.	Urban Collector	NORTH OF IRVING	2017-02-211	675	675	0	0	4134	2190	1944	0	0	0.5	630	336	0.64	120	216	0	0	1800	335	0.72	242	93	0	0	0.18	0.32	0	0	0.36	0.14	0	0
20235	IRVING	Urban Collector	EAST OF UNIVERSE	2019-09-177	0	0	675	675	4148	0	0	2015	2133	0.5	730	345	0.6	0	0	138	207	1700	420	0.51	0	0	212	208	0	0	0.2	0.31	0	0	0.31	0.31
20260	IRVING	Urban Collector	WEST OF LYON	2019-04-081	0	0	675	675	6296	0	0	3330	2966	0.5	700	599	0.74	0	0	440	159	1715	588	0.6	0	0	236	352	0	0	0.65	0.24	0	0	0.35	0.52
20368	LA PAZ	Urban Collector	SOUTH OF IRVING	2017-09-181	675	675	0	0	1056	502	554	0	0	0.5	745	148	0.64	53	95	0	0	1515	120	0.61	73	47	0	0	0.08	0.14	0	0	0.11	0.07	0	0
20377	UNIVERSE	Urban Minor Arterial	NORTH OF PARADISE	2019-09-171	1630	1630	0	0	17430	8550	8880	0	0	0.5	645	1472	0.76	349	1123	0	0	1700	1600	0.63	1014	586	0	0	0.21	0.69	0	0	0.62	0.36	0	0
20555	IRVING	Urban Collector	EAST OF RAINBOW	2014-03-181	0	0	675	675	5462	0	0	2908	2554	0.5	700	482	0.78	0	0	376	106	1700	534	0.58	0	0	223	311	0	0	0.56	0.16	0	0	0.33	0.46
20555	IRVING	Urban Collector	WEST OF UNIVERSE	2017-12-051	0	0	675	675	5658	0	0	2846	2812	0.5	715	514	0.7	0	0	362	152	1700	564	0.6	0	0	226	338	0	0	0.54	0.22	0	0	0.34	0.5
20557	IRVING	Urban Collector	WEST OF LAPAZ	2019-04-087	0	0	675	675	4728	0	0	2410	2318	0.5	700	378	0.75	0	0	283	95	1715	457	0.61	0	0	177	280	0	0	0.42	0.14	0	0	0.26	0.41
20663	UNIVERSE	Urban Minor Arterial	NORTH OF IRVING	2019-09-171	750	750	0	0	13012	6528	6484	0	0	0.5	800	823	0.66	546	277	0	0	1715	1205	0.52	628	577	0	0	0.73	0.37	0	0	0.84	0.77	0	0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237
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1
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63
133
75
175
32
2
Irving
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6
127
7
7
1
8
0
102
3
3
1
16
3
Irving
12
Kayenta
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82
1
99
4
36
87
3
8
24
13
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11
2
1
20
5
16
8
Scottsdale
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Universe
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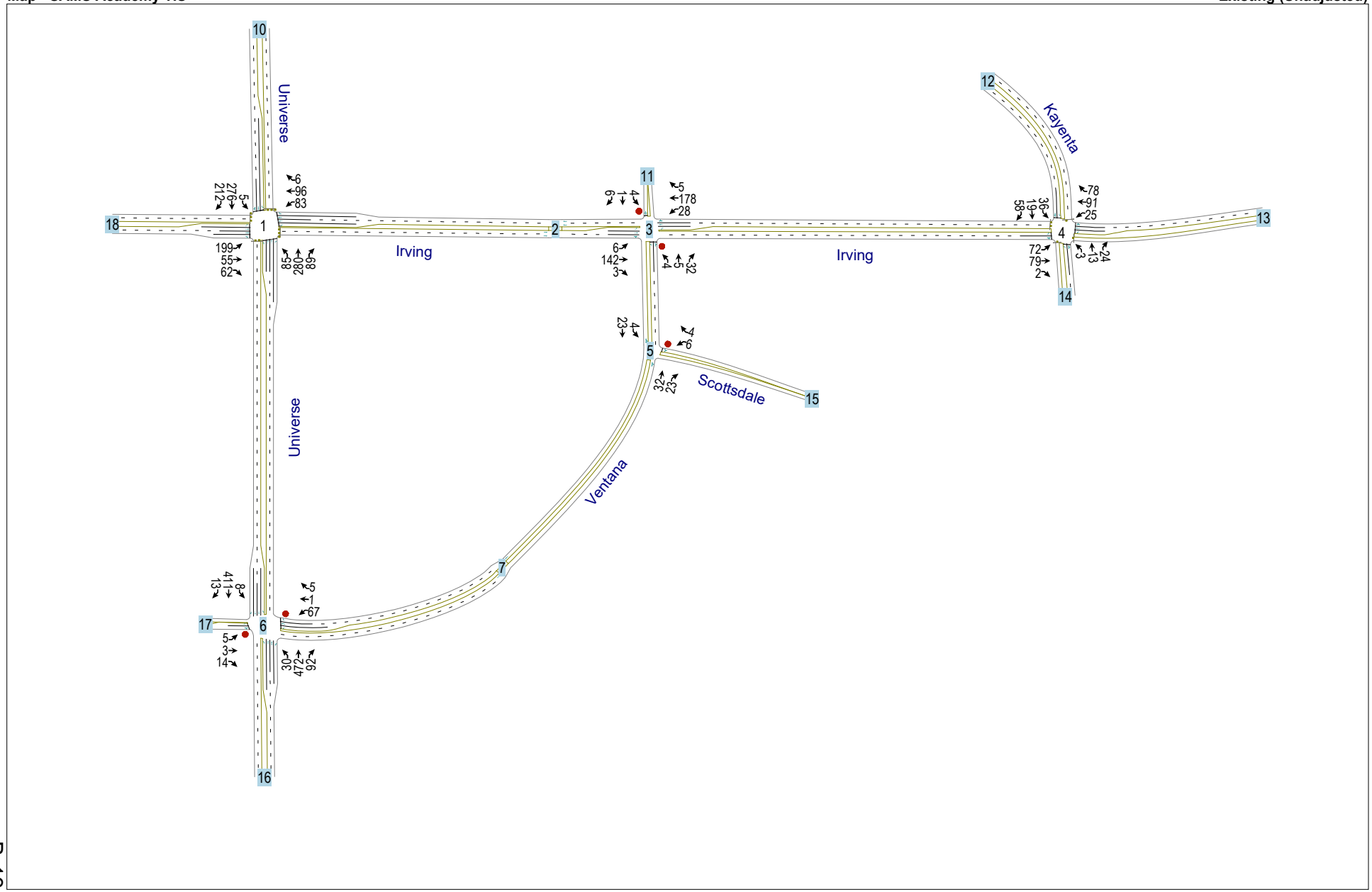
10
Universe
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Kayenta
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18
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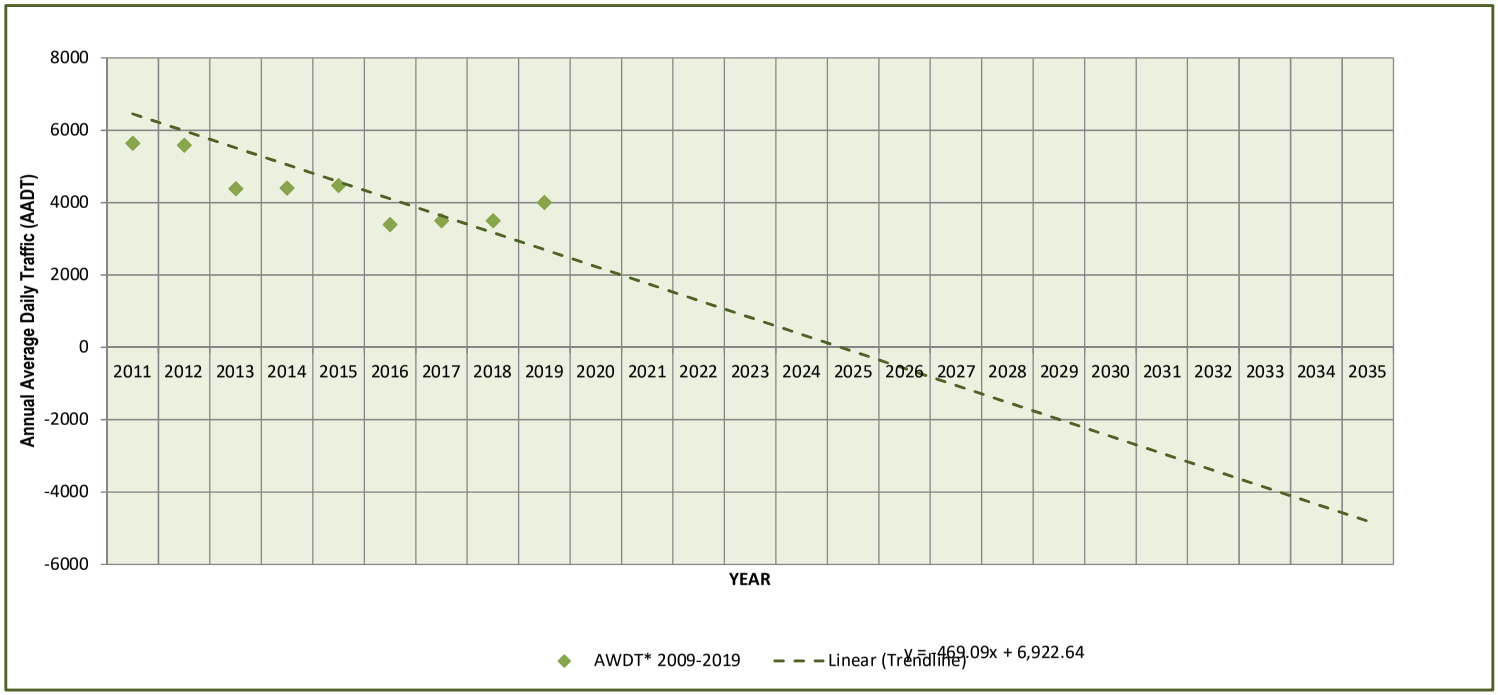
3
4
13
Irving
Irving
14
5
Scottsdale
15
Universe
Ventana
7
17
6
16

COGID	Route	FromLocation	ToLocation	AWDT16	AWDT15	AWDT14	AWDT13	AWDT12	AWDT11	AWDT10	AWDT09	AWDT08	AWDT07	AWDT06	AWDT05	AWDT04	AWDT03	AWDT02	AWDT01	AWDT00
20157	KEYENTA BLVD.	NORTH OF IRVING	SOUTH OF MCMAHON	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20235	IRVING	EAST OF UNIVERSE	WEST OF KEYENA BLVD.	3395	4468	4398	4380	5587	5643	8315	8323	8298	8980	4828	5761	5566	6352	0	0	0
20260	IRVING	EAST OF LA PAZ	WEST OF LYON	5819	6249	6151	6126	7594	7671	10834	10845	10813	13731	13396	13108	9136	5467	5344	5198	3591
20368	LA PAZ	NORTH OF PARADISE	SOUTH OF IRVING	851	837	824	640	645	652	867	868	865	1166	1138	1113	1076	715	618	601	429
20377	UNIVERSE	NORTH OF PARADISE BLVD.	SOUTH OF IRVING	15751	13308	13098	13046	13051	13183	13411	14457	14414	14271	10375	10152	9809	4404	4305	4188	0
20555	IRVING	EAST OF RAINBOW	WEST OF UNIVERSE	5972	5872	5779	5636	5681	5738	5934	5940	5922	3659	3570	3493	3375	3264	0	0	0
20557	IRVING	EAST OF UNIVERSE	WEST OF LAPAZ	5965	4468	4398	4380	5587	5643	8315	8323	8298	8980	4828	5761	5566	6352	0	0	0
20663	UNIVERSE	NORTH OF IRVING	SOUTH OF MCMAHON BLVD.	9277	8449	8316	8283	3677	3714	3778	3782	2313	2290	2234	808	781	755	739	0	0
Standard Disclaimer																				
Data is not warrantied.																				

PROJECT: SAMS Academy TIS

Background Traffic Projection - Irving East of Universe

YEAR	AWDT* 2009-2019	TRENDLINE
2009	8323	*7392*
2010	8315	*6923*
2011	5643	*6454*
2012	5587	*5984*
2013	4380	*5515*
2014	4398	*5046*
2015	4468	*4577*
2016	3395	*4108*
2017	3500	*3639*
2018	3500	*3170*
2019	4000	*2701*
2020		*2232*
2021		*1763*
2022		*1294*
2023		*824*
2024		*355*
2025		*-114*
2026		*-583*
2027		*-1052*
2028		*-1521*
2029		*-1990*
2030		*-2459*
2031		*-2928*
2032		*-3397*
2033		*-3866*
2034		*-4336*
2035		*-4805*
	-4323	-12196 growth
	-432.30	-469.09 rate



G_1 = -7.07% 2009-2019 AADT compounded annual rate

G_2 = *-9.58% 2009-2019 Trendline compounded annual rate*

G_3 = 1.02% 2010-2035 UNM/BBER population projection for Bernalillo County

Use 0.5% / year traffic growth rate for Irving

Comments:

Minimum growth rate per COA/DPM; limited developable land E. of Universe, but more developable land west.

GF_1= 1.01 Growth Factor to Year 2022

GF_{11}= 1.06 Growth Factor to Year 2032

***Source(s):**

2009-2016 = MRCOG Transportation Analysis and Querying Application (TAQA) via www.taqa.mrcog-nm.gov/taqa/

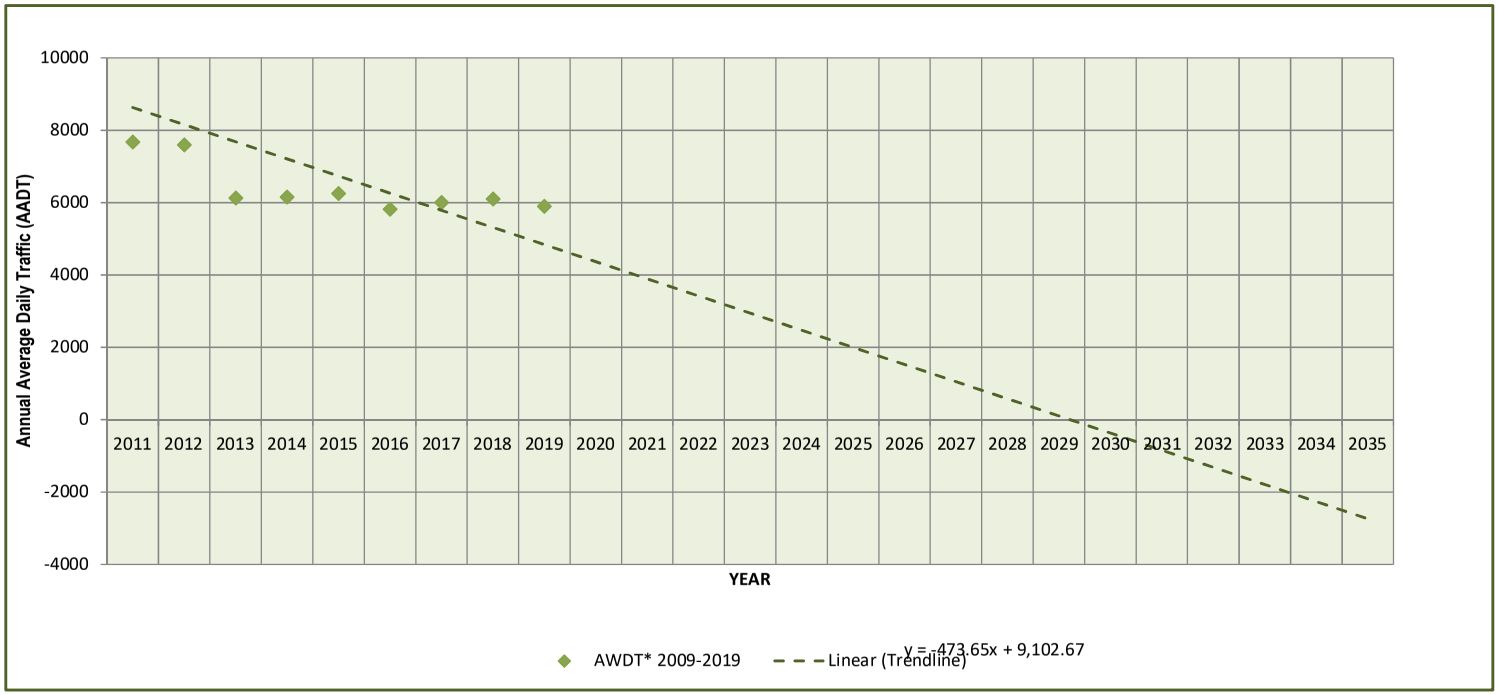
2017-2019 = "MRCOG Traffic Flows for the Greater Albuquerque Area"

(Irving Blvd., COGID #20235)

PROJECT: SAMS Academy TIS

Background Traffic Projection - Irving East of La Paz

YEAR	AWDT* 2009-2019	TRENDLINE
2009	10845	*9576*
2010	10834	*9103*
2011	7671	*8629*
2012	7594	*8155*
2013	6126	*7682*
2014	6151	*7208*
2015	6249	*6734*
2016	5819	*6261*
2017	6000	*5787*
2018	6100	*5314*
2019	5900	*4840*
2020		*4366*
2021		*3893*
2022		*3419*
2023		*2945*
2024		*2472*
2025		*1998*
2026		*1524*
2027		*1051*
2028		*577*
2029		*103*
2030		*-370*
2031		*-844*
2032		*-1318*
2033		*-1791*
2034		*-2265*
2035		*-2738*
	-4945	-12315 growth
	-494.50	-473.65 rate



G_1 = -5.91% 2009-2019 AADT compounded annual rate

G_2 = *-6.60% 2009-2019 Trendline compounded annual rate*

G_3 = 1.02% 2010-2035 UNM/BBER population projection for Bernalillo County

Use 0.5% / year traffic growth rate for Irving East

Comments:

Minimum growth rate per COA/DPM; limited developable land E. of Universe, but more developable land west.

GF_4= 1.01 Growth Factor to Year 2022

GF_{14}= 1.06 Growth Factor to Year 2032

***Source(s):**

2009-2016 = MRCOG Transportation Analysis and Querying Application (TAQA) via www.taqa.mrcog-nm.gov/taqa/

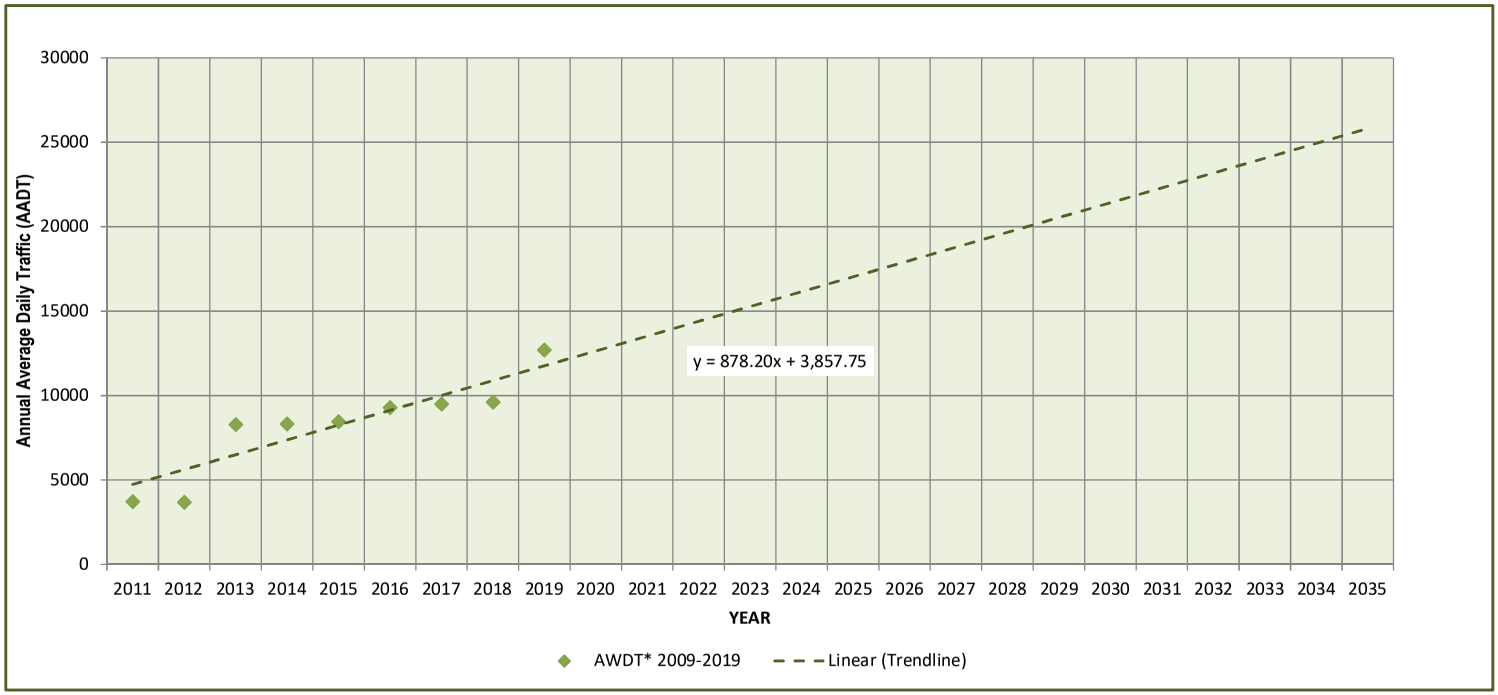
2017-2019 = "MRCOG Traffic Flows for the Greater Albuquerque Area"

(Irving Blvd., COGID #20260)

PROJECT: SAMS Academy TIS

Background Traffic Projection - Universe North of Irving

YEAR	AWDT* 2009-2019	TRENDLINE
2009	3782	*2980*
2010	3778	*3858*
2011	3714	*4736*
2012	3677	*5614*
2013	8283	*6492*
2014	8316	*7371*
2015	8449	*8249*
2016	9277	*9127*
2017	9500	*10005*
2018	9600	*10883*
2019	12700	*11762*
2020		*12640*
2021		*13518*
2022		*14396*
2023		*15274*
2024		*16153*
2025		*17031*
2026		*17909*
2027		*18787*
2028		*19665*
2029		*20544*
2030		*21422*
2031		*22300*
2032		*23178*
2033		*24056*
2034		*24935*
2035		*25813*
	8918	22833 growth
	891.80	878.20 rate



G_1 = 12.88% 2009-2019 AADT compounded annual rate

G_2 = *14.72% 2009-2019 Trendline compounded annual rate*

G_3 = 1.02% 2010-2035 UNM/BBER population projection for Bernalillo County

G_4 = *3.00% 2013-2018 AADT compounded annual rate***

Use 3.0% / yr. traffic growth rate for Universe No

GF_1= **1.03 Growth Factor to Year 2022**

Comments:

GF_{11}= **1.38 Growth Factor to Year 2032**

***Exceptionally high growth in the area, likely to decline as the vicinity is built out; 2013-2018 appears to be more consistent and does not exhibit significant spikes such as 2012-2013 and 2018-2019.*

Source(s):

2009-2016 = MRCOG Transportation Analysis and Querying Application (TAQA) via www.taqa.mrcog-nm.gov/taqa/

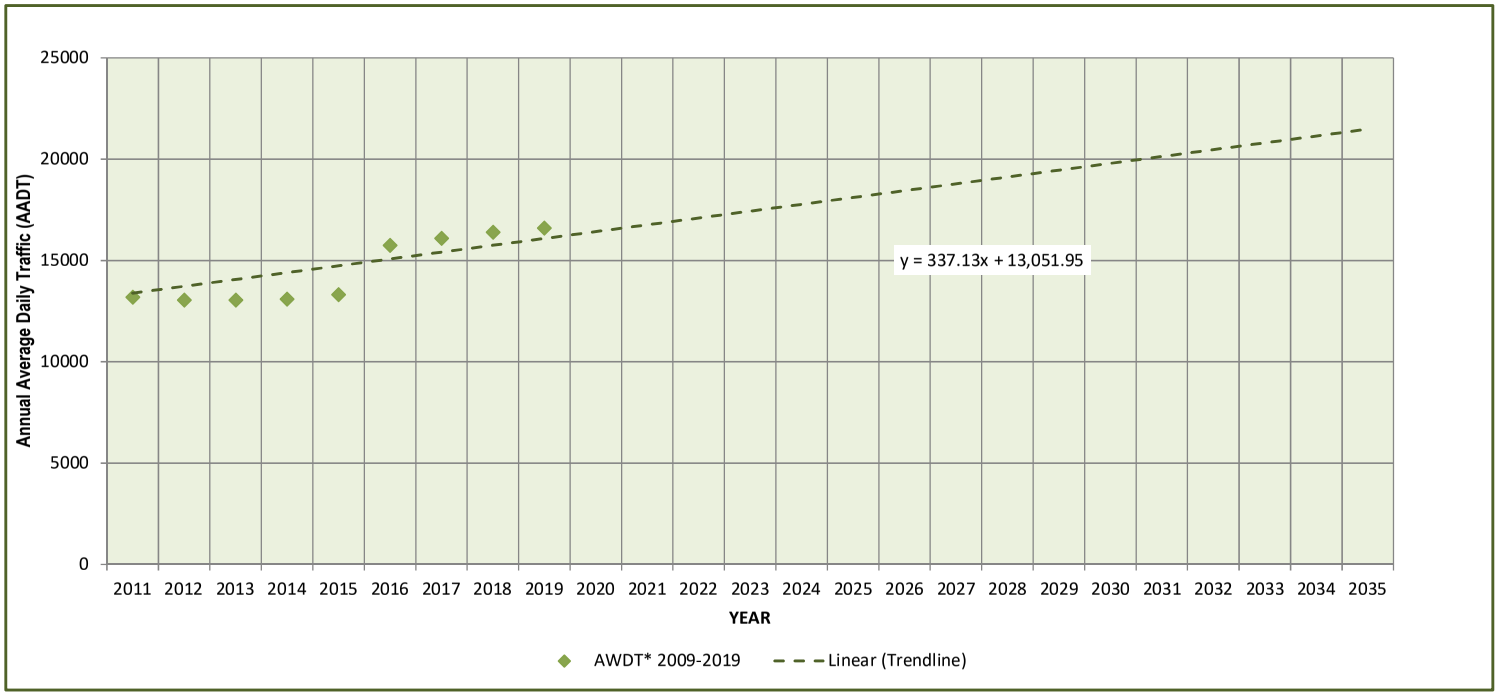
2017-2019 = "MRCOG Traffic Flows for the Greater Albuquerque Area"

(Universe Blvd., COGID #20663)

PROJECT: SAMS Academy TIS

Background Traffic Projection - Universe North of Paradise

YEAR	AWDT* 2009-2019	TRENDLINE
2009	14457	*12715*
2010	13411	*13052*
2011	13183	*13389*
2012	13051	*13726*
2013	13046	*14063*
2014	13098	*14400*
2015	13308	*14738*
2016	15751	*15075*
2017	16100	*15412*
2018	16400	*15749*
2019	16600	*16086*
2020		*16423*
2021		*16760*
2022		*17097*
2023		*17435*
2024		*17772*
2025		*18109*
2026		*18446*
2027		*18783*
2028		*19120*
2029		*19457*
2030		*19794*
2031		*20132*
2032		*20469*
2033		*20806*
2034		*21143*
2035		*21480*
	2143	8765 growth
	214.30	337.13 rate



G_1 = 1.39% 2009-2019 AADT compounded annual rate

G_2 = *2.38% 2009-2019 Trendline compounded annual rate*

G_3 = 1.02% 2010-2035 UNM/BBER population projection for Bernalillo County

Use 1.5% / year traffic growth rate for Universe S

Comments:

GF_1= 1.02 Growth Factor to Year 2022

GF_{11}= 1.18 Growth Factor to Year 2032

Source(s):

2009-2016 = MRCOG Transportation Analysis and Querying Application (TAQA) via www.taqa.mrcog-nm.gov/taqa/

2017-2019 = "MRCOG Traffic Flows for the Greater Albuquerque Area"
(Universe Blvd., COGID #20377)

APPENDIX C
Trip Generation Data

Detailed Land Use Data

For 75 Students of SCHOOLMID 1

(522) Middle School/Junior High School

Open Date: 1/10/2022

Project: SAMS Academy

Analysis Date: 4/15/2021

Day / Period	Total Trips	Pass-By Trips	Avg Rate	Min Rate	Max Rate	Std Dev	Avg Size	% Enter	% Exit	Use Eq.	Equation	R2
Weekday Average Daily Trips	276	0	2.13	1.48	2.81	0.46	1079	50	50	True	Ln(T) = 0.79 Ln(X) + 2.21	0.73
Source : Trip Generation Manual 10th Edition												
Weekday AM Peak Hour of Adjacent Street Traffic	44	0	0.58	0.06	1.29	0.32	937	54	46	False		
Source : Trip Generation Manual 10th Edition												
Weekday PM Peak Hour of Adjacent Street Traffic	13	0	0.17	0.06	0.51	0.12	1023	49	51	False		
Source : Trip Generation Manual 10th Edition												

C-1

Detailed Land Use Data

For 225 Students of SCHOOLHIGH 1

(530) High School

Open Date: 1/10/2022

Project: SAMS Academy

Analysis Date: 4/15/2021

Day / Period	Total Trips	Pass-By Trips	Avg Rate	Min Rate	Max Rate	Std Dev	Avg Size	% Enter	% Exit	Use Eq.	Equation	R2
Weekday Average Daily Trips	718	0	2.03	1.19	3.96	0.82	1498	50	50	True	Ln(T) = 0.76 Ln(X) + 2.46	0.6
Source : Trip Generation Manual 10th Edition												
Weekday AM Peak Hour of Adjacent Street Traffic	117	0	0.52	0.03	1.15	0.23	1202	67	33	False		
Source : Trip Generation Manual 10th Edition												
Weekday PM Peak Hour of Adjacent Street Traffic	32	0	0.14	0.03	0.31	0.08	1340	48	52	False		
Source : Trip Generation Manual 10th Edition												

Trip Generation Summary

Alternative: Alternative 1
Phase:
Project: SAMS Academy

Open Date: 1/10/2022
Analysis Date: 4/15/2021

ITE	Land Use		Weekday Average Daily Trips *	Enter	Exit	Total	Weekday AM Peak Hour of Adjacent Street Traffic *	Enter	Exit	Total	Weekday PM Peak Hour of Adjacent Street Traffic *	Enter	Exit	Total
522	SCHOOLMID 1			138	138	276		24	20	44		6	7	13
	75	Students												
530	SCHOOLHIGH 1			359	359	718		78	39	117		15	17	32
	225	Students												
Unadjusted Volume				497	497	994		102	59	161		21	24	45
Internal Capture Trips				0	0	0		0	0	0		0	0	0
Pass-By Trips				0	0	0		0	0	0		0	0	0
Volume Added to Adjacent Streets				497	497	994		102	59	161		21	24	45

Total Weekday Average Daily Trips Internal Capture = 0 Percent
Total Weekday AM Peak Hour of Adjacent Street Traffic Internal Capture = 0 Percent
Total Weekday PM Peak Hour of Adjacent Street Traffic Internal Capture = 0 Percent

C-3

* - Custom rate used for selected time period.

Source: Institute of Transportation Engineers, Trip Generation Manual 10th Edition

Driveway Report : Alternative 1

Project : SAMS Academy
Alternative : Alternative 1

Open Date : 2022-01-10
Analysis Date : 2021-04-15

	% In	% Out	Trips In	Trips Out
Name : Driveway 1				
Description : RIRO Access on Irving				
Weekday Average Daily Trips	0	0	0	0
Weekday AM Peak Hour of Adjacent Street Traffic	70	30	71	17
Weekday PM Peak Hour of Adjacent Street Traffic	20	25	4	6
Name : Driveway 2				
Description : Full access at Ventana/Scottsdale				
Weekday Average Daily Trips	0	0	0	0
Weekday AM Peak Hour of Adjacent Street Traffic	30	70	30	41
Weekday PM Peak Hour of Adjacent Street Traffic	80	75	16	18

Traffic Distribution - SAMS Academy								
Intersection and Traffic Movement	Inbound[1]				Outbound[1]			
	AM	%	PM	%	AM	%	PM	%
Irving/Universe								
SBL	1	0.3%	6	1.4%	-		-	
EBT	92	31.9%	79	18.5%	-		-	
WBT	-		-		40	10.5%	109	24.1%
WBR	-		-		9	2.4%	7	1.5%
Irving/Ventana								
SBT	1	0.3%	1	0.2%	-		-	
EBL	-		-		0	0.0%	8	1.8%
NBT	-		-		1	0.3%	7	1.5%
Irving/Kayenta								
SBR	112	38.9%	79	18.5%	-		-	
WBT	45	15.6%	132	31.0%	-		-	
EBL	-		-		49	12.9%	92	20.4%
EBT	-		-		118	31.1%	101	22.3%
Ventana/Scottsdale								
WBT	0	0.0%	0	0.0%	-		-	
EBT	-		-		14	3.7%	36	8.0%
Universe/Ventana								
NBR	36	12.5%	125	29.3%	-		-	
EBT	1	0.3%	4	0.9%	-		-	
WBL					149	39.2%	91	20.1%
WBT					0	0.0%	1	0.2%
Total Volumes	**288**	100%	**426**	100%	**380**	100%	**452**	100%

[1] *Source: 2022AMX & 2022PMX traffic volumes.*

Development: SAMS Academy

Driveway: 1 Driveway 1 (Node 21)

Origin #	Route	To		From	
		Distribution %	Trips	Distribution %	Trips
1	Origin 1 (Node 10) to Driveway 1 (Node 21)	0.15	0	0.00	---
2	Driveway 1 (Node 21) to Origin 2 (Node 11)	0.00	---	0.00	0
3	Driveway 1 (Node 21) to Origin 3 (Node 12)	0.00	---	9.19	5
4	Driveway 1 (Node 21) to Origin 4 (Node 13)	0.00	---	22.14	13
6	Origin 6 (Node 16) to Driveway 1 (Node 21)	56.85	58	0.00	---
7	Origin 7 (Node 17) to Driveway 1 (Node 21)	1.17	1	0.00	---
8	Origin 8 (Node 18) to Driveway 1 (Node 21)	13.41	14	0.00	---

Development: SAMS Academy

Driveway: 2 Driveway 2 (Node 22)

Origin #	Route	To		From	
		Distribution %	Trips	Distribution %	Trips
1	Driveway 2 (Node 22) to Origin 1 (Node 10)	0.00	---	1.69	1
2	Driveway 2 (Node 22) to Origin 2 (Node 11)	0.15	0	0.19	0
3	Driveway 2 (Node 22) to Origin 3 (Node 12)	16.33	17	9.19	5
4	Driveway 2 (Node 22) to Origin 4 (Node 13)	6.56	7	22.14	13
5	Driveway 2 (Node 22) to Origin 5 (Node 15)	0.00	0	0.00	0
6	Driveway 2 (Node 22) to Origin 6 (Node 16)	5.25	5	27.95	16
7	Driveway 2 (Node 22) to Origin 7 (Node 17)	0.15	0	0.00	0
8	Driveway 2 (Node 22) to Origin 8 (Node 18)	0.00	---	7.50	4

Development: SAMS Academy

Driveway: 1 Driveway 1 (Node 21)

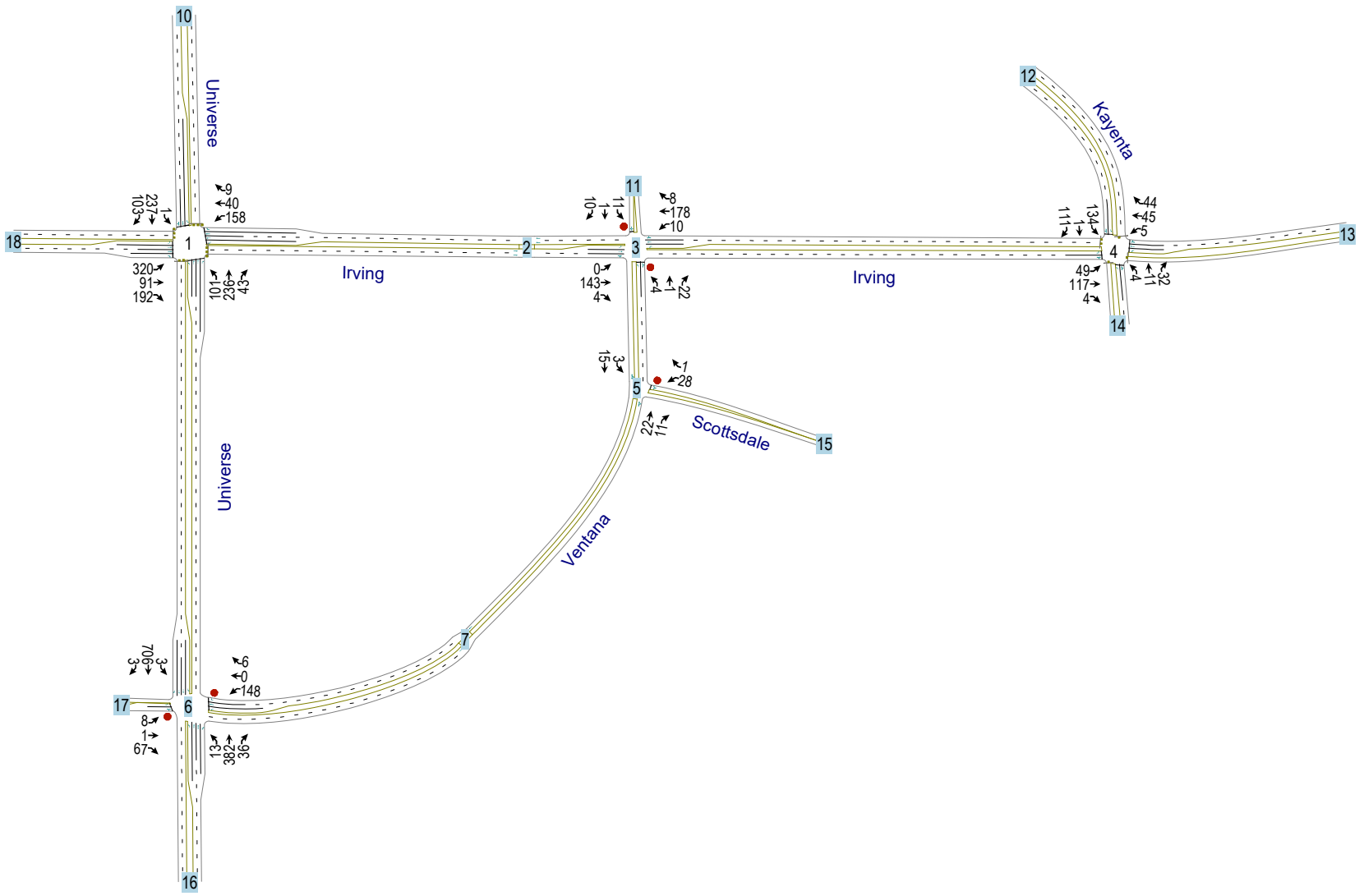
Origin #	Route	To		From	
		Distribution %	Trips	Distribution %	Trips
1	Origin 1 (Node 10) to Driveway 1 (Node 21)	1.41	0	0.00	---
2	Driveway 1 (Node 21) to Origin 2 (Node 11)	0.00	---	1.50	0
3	Driveway 1 (Node 21) to Origin 3 (Node 12)	0.00	---	10.50	3
4	Driveway 1 (Node 21) to Origin 4 (Node 13)	0.00	---	11.50	3
8	Origin 8 (Node 18) to Driveway 1 (Node 21)	18.54	4	0.00	---

Development: SAMS Academy

Driveway: 2 Driveway 2 (Node 22)

Origin #	Route	To		From	
		Distribution %	Trips	Distribution %	Trips
1	Driveway 2 (Node 22) to Origin 1 (Node 10)	0.00	---	1.50	0
2	Driveway 2 (Node 22) to Origin 2 (Node 11)	0.23	0	1.50	0
3	Driveway 2 (Node 22) to Origin 3 (Node 12)	18.54	4	10.00	2
4	Driveway 2 (Node 22) to Origin 4 (Node 13)	30.99	7	11.00	3
5	Driveway 2 (Node 22) to Origin 5 (Node 15)	0.00	0	8.00	2
6	Driveway 2 (Node 22) to Origin 6 (Node 16)	29.34	6	20.00	5
7	Driveway 2 (Node 22) to Origin 7 (Node 17)	0.94	0	0.50	0
8	Driveway 2 (Node 22) to Origin 8 (Node 18)	0.00	---	24.00	6

APPENDIX D
LOS Worksheets


10
Universe
9
40
158
237
103
1
18
1
320
91
192
101
236
43
2
Irving
11
10
11
1
8
178
10
0
143
4
3
4
1
22
Irving
12
Kayenta
44
45
5
111
134
1
4
49
117
4
4
11
32
13
14
15
3
1
28
5
22
17
Scottsdale
Universe
Ventana
7
70
9
3
3
6
0
148
17
6
8
1
67
13
382
36
16

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	320	91	192	158	40	9	101	236	43	1	237	103
Future Volume (veh/h)	320	91	192	158	40	9	101	236	43	1	237	103
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	390	111	234	193	49	11	123	288	52	1	289	126
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	656	1370	611	529	1370	611	441	1370	611	495	936	398
Arrive On Green	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39
Sat Flow, veh/h	1343	3554	1585	1036	3554	1585	971	3554	1585	1040	2428	1033
Grp Volume(v), veh/h	390	111	234	193	49	11	123	288	52	1	210	205
Grp Sat Flow(s),veh/h/ln	1343	1777	1585	1036	1777	1585	971	1777	1585	1040	1777	1684
Q Serve(g_s), s	12.2	1.0	5.1	7.0	0.4	0.2	4.9	2.6	1.0	0.0	3.9	4.1
Cycle Q Clear(g_c), s	12.7	1.0	5.1	7.9	0.4	0.2	9.0	2.6	1.0	2.6	3.9	4.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.61
Lane Grp Cap(c), veh/h	656	1370	611	529	1370	611	441	1370	611	495	685	649
V/C Ratio(X)	0.59	0.08	0.38	0.37	0.04	0.02	0.28	0.21	0.09	0.00	0.31	0.32
Avail Cap(c_a), veh/h	656	1370	611	529	1370	611	441	1370	611	495	685	649
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.1	9.4	10.6	11.9	9.2	9.1	13.5	9.9	9.4	10.7	10.3	10.3
Incr Delay (d2), s/veh	3.9	0.1	1.8	1.9	0.0	0.1	1.6	0.3	0.3	0.0	1.2	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	6.4	0.6	3.1	2.8	0.2	0.1	1.9	1.6	0.6	0.0	2.6	2.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	17.1	9.5	12.5	13.8	9.2	9.2	15.0	10.2	9.6	10.8	11.4	11.6
LnGrp LOS	B	A	B	B	A	A	B	B	A	B	B	B
Approach Vol, veh/h		735			253			463			416	
Approach Delay, s/veh		14.5			12.7			11.4			11.5	
Approach LOS		B			B			B			B	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		24.0		24.0		24.0		24.0				
Change Period (Y+Rc), s		5.5		5.5		5.5		5.5				
Max Green Setting (Gmax), s		18.5		18.5		18.5		18.5				
Max Q Clear Time (g_c+I1), s		14.7		11.0		9.9		6.1				
Green Ext Time (p_c), s		1.1		1.1		0.7		1.3				

Intersection Summary												
HCM 6th Ctrl Delay			12.8									
HCM 6th LOS			B									

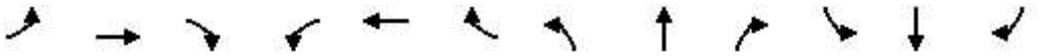
Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	143	4	10	178	8	4	1	22	11	1	10
Future Vol, veh/h	0	143	4	10	178	8	4	1	22	11	1	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	77	77	77	77	77	77	77	77	77	77	77	77
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	186	5	13	231	10	5	1	29	14	1	13

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	241	0	0	191	0	0	331	456	96	356	453	121
Stage 1	-	-	-	-	-	-	189	189	-	262	262	-
Stage 2	-	-	-	-	-	-	142	267	-	94	191	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	1323	-	-	1380	-	-	599	499	942	575	501	908
Stage 1	-	-	-	-	-	-	795	743	-	720	690	-
Stage 2	-	-	-	-	-	-	846	687	-	902	741	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1323	-	-	1380	-	-	585	495	942	553	496	908
Mov Cap-2 Maneuver	-	-	-	-	-	-	585	495	-	553	496	-
Stage 1	-	-	-	-	-	-	795	743	-	720	684	-
Stage 2	-	-	-	-	-	-	824	681	-	873	741	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.4	9.4	10.6
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	585	906	1323	-	-	1380	-	-	668
HCM Lane V/C Ratio	0.009	0.033	-	-	-	0.009	-	-	0.043
HCM Control Delay (s)	11.2	9.1	0	-	-	7.6	-	-	10.6
HCM Lane LOS	B	A	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0	0.1	0	-	-	0	-	-	0.1



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	49	117	4	5	45	44	4	11	32	134	1	111
Future Volume (veh/h)	49	117	4	5	45	44	4	11	32	134	1	111
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	60	143	5	6	55	54	5	13	39	163	1	135
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	910	1099	38	859	1103	956	286	79	236	364	2	301
Arrive On Green	0.61	0.61	0.61	0.61	0.61	0.61	0.19	0.19	0.19	0.19	0.19	0.19
Sat Flow, veh/h	1284	1796	63	1240	1803	1563	1253	412	1236	1352	12	1575
Grp Volume(v), veh/h	60	0	148	6	54	55	5	0	52	163	0	136
Grp Sat Flow(s),veh/h/ln	1284	0	1859	1240	1777	1589	1253	0	1648	1352	0	1587
Q Serve(g_s), s	1.0	0.0	1.7	0.1	0.6	0.7	0.2	0.0	1.3	5.8	0.0	3.8
Cycle Q Clear(g_c), s	1.7	0.0	1.7	1.8	0.6	0.7	4.0	0.0	1.3	7.1	0.0	3.8
Prop In Lane	1.00		0.03	1.00		0.98	1.00		0.75	1.00		0.99
Lane Grp Cap(c), veh/h	910	0	1137	859	1087	972	286	0	314	364	0	303
V/C Ratio(X)	0.07	0.00	0.13	0.01	0.05	0.06	0.02	0.00	0.17	0.45	0.00	0.45
Avail Cap(c_a), veh/h	910	0	1137	859	1087	972	517	0	618	614	0	595
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	4.3	0.0	4.1	4.5	3.9	4.0	19.9	0.0	17.1	20.1	0.0	18.1
Incr Delay (d2), s/veh	0.1	0.0	0.2	0.0	0.1	0.1	0.0	0.0	0.1	0.3	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.4	0.0	0.8	0.0	0.3	0.3	0.1	0.0	0.9	3.1	0.0	2.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	4.4	0.0	4.4	4.5	4.0	4.1	19.9	0.0	17.2	20.4	0.0	18.5
LnGrp LOS	A	A	A	A	A	A	B	A	B	C	A	B
Approach Vol, veh/h		208			115			57			299	
Approach Delay, s/veh		4.4			4.1			17.5			19.6	
Approach LOS		A			A			B			B	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		36.0		14.7		36.0		14.7				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		31.0		19.0		31.0		19.0				
Max Q Clear Time (g_c+I1), s		3.7		6.0		3.8		9.1				
Green Ext Time (p_c), s		1.4		0.1		0.8		0.6				

Intersection Summary												
HCM 6th Ctrl Delay			12.1									
HCM 6th LOS			B									

Intersection	
Int Delay, s/veh	3.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	28	1	22	11	3	15
Future Vol, veh/h	28	1	22	11	3	15
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	78	78	78	78	78	78
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	36	1	28	14	4	19

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	62	35	0	0	42	0
Stage 1	35	-	-	-	-	-
Stage 2	27	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	944	1038	-	-	1567	-
Stage 1	987	-	-	-	-	-
Stage 2	996	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	941	1038	-	-	1567	-
Mov Cap-2 Maneuver	941	-	-	-	-	-
Stage 1	987	-	-	-	-	-
Stage 2	993	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9	0	1.2
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	944	1567	-
HCM Lane V/C Ratio	-	-	0.039	0.002	-
HCM Control Delay (s)	-	-	9	7.3	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

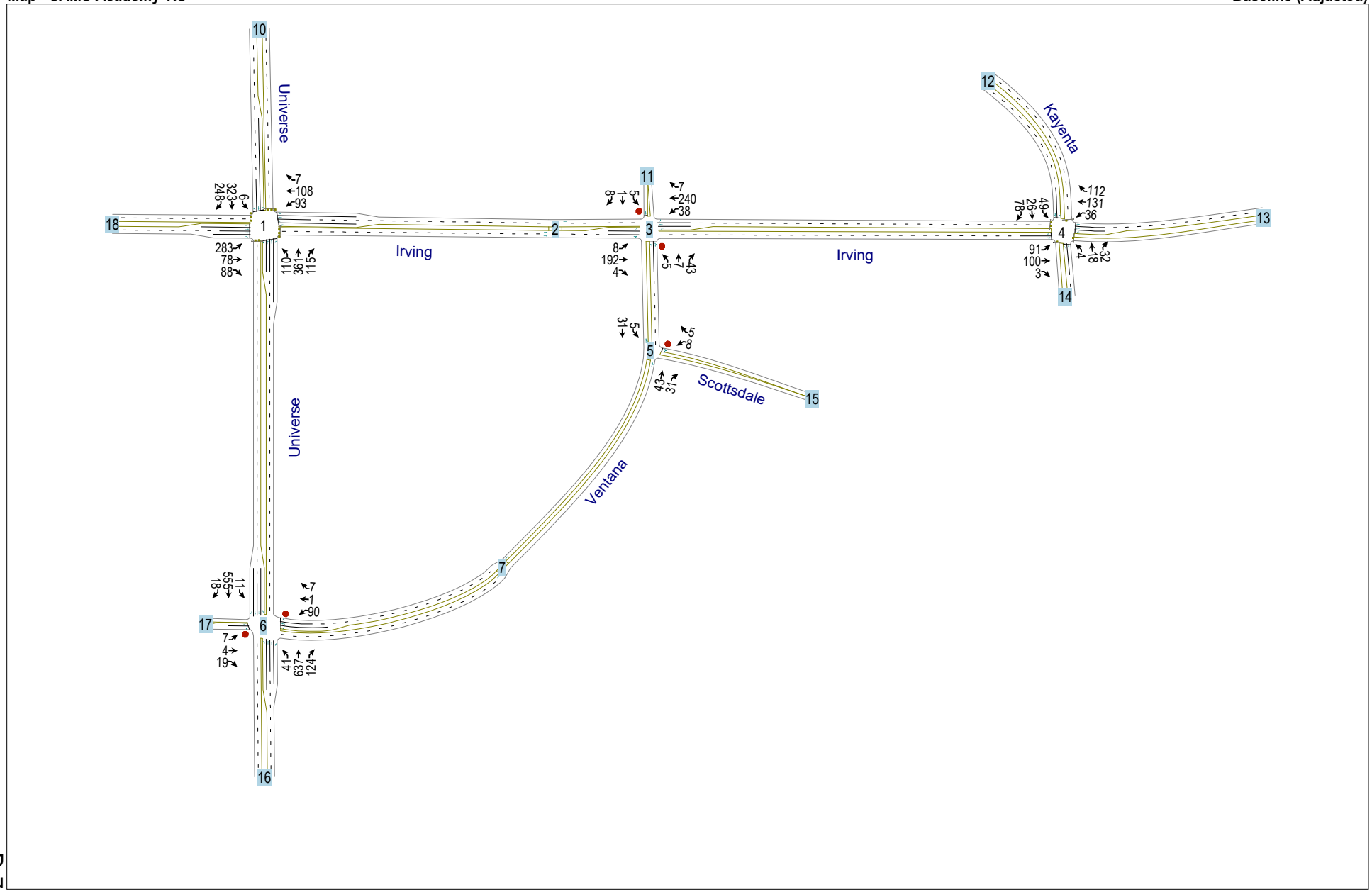
Intersection	
Int Delay, s/veh	7.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	8	1	67	148	0	6	13	382	36	3	706	3
Future Vol, veh/h	8	1	67	148	0	6	13	382	36	3	706	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	90	-	-	150	-	0	160	-	140	150	-	150
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	9	1	75	166	0	7	15	429	40	3	793	3

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1044	1298	397	862	1261	215	796	0	0	469	0	0
Stage 1	799	799	-	459	459	-	-	-	-	-	-	-
Stage 2	245	499	-	403	802	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	183	160	602	249	169	790	822	-	-	1089	-	-
Stage 1	345	396	-	551	565	-	-	-	-	-	-	-
Stage 2	737	542	-	595	395	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	179	157	602	213	165	790	822	-	-	1089	-	-
Mov Cap-2 Maneuver	179	157	-	213	165	-	-	-	-	-	-	-
Stage 1	339	395	-	541	555	-	-	-	-	-	-	-
Stage 2	717	532	-	518	394	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	13.7	62	0.3	0
HCM LOS	B	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	WBLn3	SBL	SBT	SBR
Capacity (veh/h)	822	-	-	179	578	213	-	790	1089	-	-
HCM Lane V/C Ratio	0.018	-	-	0.05	0.132	0.781	-	0.009	0.003	-	-
HCM Control Delay (s)	9.5	-	-	26.2	12.2	64.1	0	9.6	8.3	-	-
HCM Lane LOS	A	-	-	D	B	F	A	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.2	0.5	5.5	-	0	0	-	-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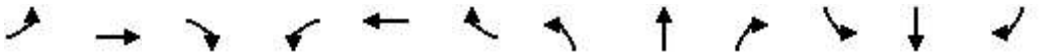


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	283	78	88	93	108	7	110	361	115	6	323	248
Future Volume (veh/h)	283	78	88	93	108	7	110	361	115	6	323	248
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	295	81	92	97	112	7	115	376	120	6	336	258
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	615	1370	611	600	1370	611	358	1370	611	432	744	560
Arrive On Green	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39
Sat Flow, veh/h	1273	3554	1585	1212	3554	1585	823	3554	1585	901	1931	1454
Grp Volume(v), veh/h	295	81	92	97	112	7	115	376	120	6	309	285
Grp Sat Flow(s),veh/h/ln	1273	1777	1585	1212	1777	1585	823	1777	1585	901	1777	1609
Q Serve(g_s), s	9.2	0.7	1.8	2.6	1.0	0.1	5.8	3.5	2.4	0.2	6.2	6.4
Cycle Q Clear(g_c), s	10.1	0.7	1.8	3.3	1.0	0.1	12.2	3.5	2.4	3.7	6.2	6.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.90
Lane Grp Cap(c), veh/h	615	1370	611	600	1370	611	358	1370	611	432	685	620
V/C Ratio(X)	0.48	0.06	0.15	0.16	0.08	0.01	0.32	0.27	0.20	0.01	0.45	0.46
Avail Cap(c_a), veh/h	615	1370	611	600	1370	611	358	1370	611	432	685	620
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.6	9.3	9.6	10.3	9.4	9.1	15.6	10.1	9.8	11.4	11.0	11.0
Incr Delay (d2), s/veh	2.7	0.1	0.5	0.6	0.1	0.0	2.4	0.5	0.7	0.1	2.1	2.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	4.5	0.4	1.1	1.2	0.6	0.1	2.1	2.1	1.4	0.1	4.1	3.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	15.2	9.4	10.1	10.9	9.5	9.1	17.9	10.6	10.5	11.5	13.1	13.5
LnGrp LOS	B	A	B	B	A	A	B	B	B	B	B	B
Approach Vol, veh/h		468			216			611			600	
Approach Delay, s/veh		13.2			10.1			12.0			13.3	
Approach LOS		B			B			B			B	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		24.0		24.0		24.0		24.0				
Change Period (Y+Rc), s		5.5		5.5		5.5		5.5				
Max Green Setting (Gmax), s		18.5		18.5		18.5		18.5				
Max Q Clear Time (g_c+I1), s		12.1		14.2		5.3		8.4				
Green Ext Time (p_c), s		1.0		1.0		0.8		1.8				

Intersection Summary												
HCM 6th Ctrl Delay			12.5									
HCM 6th LOS			B									

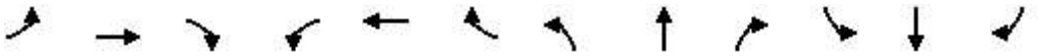
Intersection	
Int Delay, s/veh	1.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	8	192	4	38	240	7	5	7	43	5	1	8
Future Vol, veh/h	8	192	4	38	240	7	5	7	43	5	1	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	8	200	4	40	250	7	5	7	45	5	1	8

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	257	0	0	204	0	0	424	555	102	454	554	129
Stage 1	-	-	-	-	-	-	218	218	-	334	334	-
Stage 2	-	-	-	-	-	-	206	337	-	120	220	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	1305	-	-	1365	-	-	514	438	933	489	439	897
Stage 1	-	-	-	-	-	-	764	721	-	653	642	-
Stage 2	-	-	-	-	-	-	777	640	-	872	720	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1305	-	-	1365	-	-	494	423	933	447	424	897
Mov Cap-2 Maneuver	-	-	-	-	-	-	494	423	-	447	424	-
Stage 1	-	-	-	-	-	-	759	717	-	649	623	-
Stage 2	-	-	-	-	-	-	746	621	-	817	716	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	1	10	10.9
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	494	798	1305	-	-	1365	-	-	623
HCM Lane V/C Ratio	0.011	0.065	0.006	-	-	0.029	-	-	0.023
HCM Control Delay (s)	12.4	9.8	7.8	-	-	7.7	-	-	10.9
HCM Lane LOS	B	A	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0	0.2	0	-	-	0.1	-	-	0.1



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	91	100	3	36	131	112	4	18	32	49	26	78
Future Volume (veh/h)	91	100	3	36	131	112	4	18	32	49	26	78
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	100	110	3	40	144	123	4	20	35	54	29	86
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	821	1155	32	934	1201	953	268	96	168	321	65	193
Arrive On Green	0.64	0.64	0.64	0.64	0.64	0.64	0.16	0.16	0.16	0.16	0.16	0.16
Sat Flow, veh/h	1112	1812	49	1280	1884	1494	1277	610	1068	1349	416	1233
Grp Volume(v), veh/h	100	0	113	40	135	132	4	0	55	54	0	115
Grp Sat Flow(s),veh/h/ln	1112	0	1861	1280	1777	1601	1277	0	1678	1349	0	1648
Q Serve(g_s), s	1.9	0.0	1.1	0.6	1.5	1.6	0.1	0.0	1.4	1.8	0.0	3.1
Cycle Q Clear(g_c), s	3.5	0.0	1.1	1.7	1.5	1.6	3.2	0.0	1.4	3.2	0.0	3.1
Prop In Lane	1.00		0.03	1.00		0.93	1.00		0.64	1.00		0.75
Lane Grp Cap(c), veh/h	821	0	1187	934	1133	1021	268	0	263	321	0	259
V/C Ratio(X)	0.12	0.00	0.10	0.04	0.12	0.13	0.01	0.00	0.21	0.17	0.00	0.44
Avail Cap(c_a), veh/h	821	0	1187	934	1133	1021	566	0	656	636	0	644
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	4.2	0.0	3.4	3.7	3.5	3.5	20.0	0.0	17.9	19.2	0.0	18.6
Incr Delay (d2), s/veh	0.3	0.0	0.2	0.1	0.2	0.3	0.0	0.0	0.1	0.1	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.6	0.0	0.5	0.2	0.6	0.6	0.1	0.0	0.9	0.9	0.0	2.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	4.5	0.0	3.6	3.8	3.7	3.7	20.0	0.0	18.0	19.3	0.0	19.0
LnGrp LOS	A	A	A	A	A	A	C	A	B	B	A	B
Approach Vol, veh/h		213			307			59			169	
Approach Delay, s/veh		4.0			3.7			18.2			19.1	
Approach LOS		A			A			B			B	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		36.0		12.6		36.0		12.6				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		31.0		19.0		31.0		19.0				
Max Q Clear Time (g_c+I1), s		5.5		5.2		3.7		5.2				
Green Ext Time (p_c), s		1.4		0.1		2.4		0.4				

Intersection Summary												
HCM 6th Ctrl Delay			8.4									
HCM 6th LOS			A									

Intersection	
Int Delay, s/veh	1.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	8	5	43	31	5	31
Future Vol, veh/h	8	5	43	31	5	31
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	76	76	76	76	76	76
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	11	7	57	41	7	41

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	133	78	0	0	98	0
Stage 1	78	-	-	-	-	-
Stage 2	55	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	861	983	-	-	1495	-
Stage 1	945	-	-	-	-	-
Stage 2	968	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	857	983	-	-	1495	-
Mov Cap-2 Maneuver	857	-	-	-	-	-
Stage 1	945	-	-	-	-	-
Stage 2	963	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.1	0	1
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	901	1495	-
HCM Lane V/C Ratio	-	-	0.019	0.004	-
HCM Control Delay (s)	-	-	9.1	7.4	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

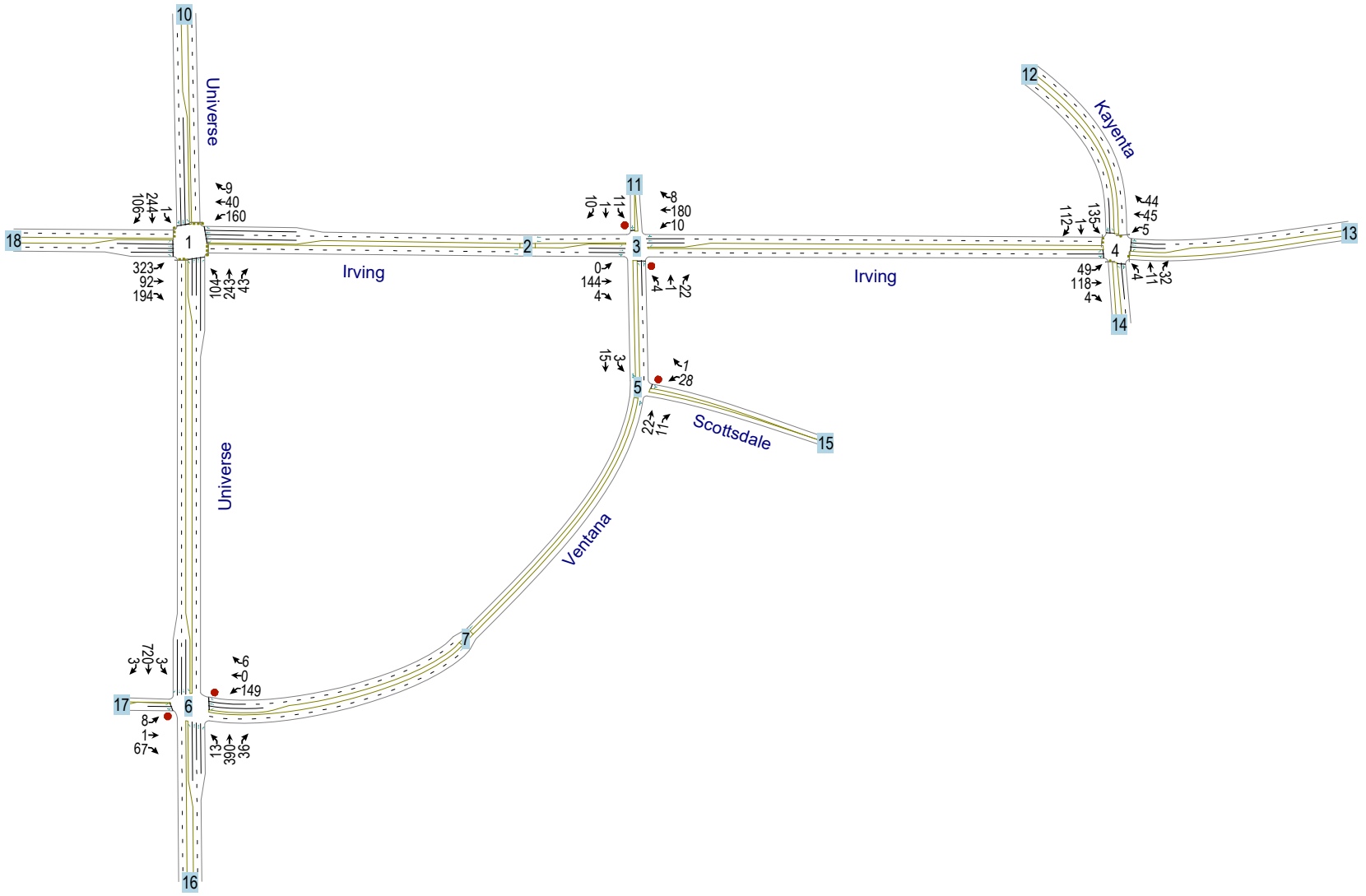
Intersection	
Int Delay, s/veh	5.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	7	4	19	90	1	7	41	637	124	11	555	18
Future Vol, veh/h	7	4	19	90	1	7	41	637	124	11	555	18
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	90	-	-	150	-	0	160	-	140	150	-	150
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	8	4	21	100	1	8	46	708	138	12	617	20

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1088	1579	309	1135	1461	354	637	0	0	846	0	0
Stage 1	641	641	-	800	800	-	-	-	-	-	-	-
Stage 2	447	938	-	335	661	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	170	108	687	157	128	642	943	-	-	787	-	-
Stage 1	430	468	-	345	395	-	-	-	-	-	-	-
Stage 2	560	341	-	653	458	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	159	101	687	140	120	642	943	-	-	787	-	-
Mov Cap-2 Maneuver	159	101	-	140	120	-	-	-	-	-	-	-
Stage 1	409	461	-	328	376	-	-	-	-	-	-	-
Stage 2	525	324	-	617	451	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	19.3	72.6	0.5	0.2
HCM LOS	C	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	WBLn3	SBL	SBT	SBR
Capacity (veh/h)	943	-	-	159	342	140	120	642	787	-	-
HCM Lane V/C Ratio	0.048	-	-	0.049	0.075	0.714	0.009	0.012	0.016	-	-
HCM Control Delay (s)	9	-	-	28.8	16.4	77.8	35.3	10.7	9.6	-	-
HCM Lane LOS	A	-	-	D	C	F	E	B	A	-	-
HCM 95th %tile Q(veh)	0.2	-	-	0.2	0.2	4.1	0	0	0	-	-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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	323	92	194	160	40	9	104	243	43	1	244	106
Future Volume (veh/h)	323	92	194	160	40	9	104	243	43	1	244	106
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	394	112	237	195	49	11	127	296	52	1	298	129
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	656	1370	611	527	1370	611	436	1370	611	490	938	397
Arrive On Green	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39
Sat Flow, veh/h	1343	3554	1585	1032	3554	1585	961	3554	1585	1033	2433	1029
Grp Volume(v), veh/h	394	112	237	195	49	11	127	296	52	1	216	211
Grp Sat Flow(s),veh/h/ln	1343	1777	1585	1032	1777	1585	961	1777	1585	1033	1777	1685
Q Serve(g_s), s	12.4	1.0	5.2	7.1	0.4	0.2	5.1	2.7	1.0	0.0	4.1	4.2
Cycle Q Clear(g_c), s	12.8	1.0	5.2	8.1	0.4	0.2	9.4	2.7	1.0	2.7	4.1	4.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.61
Lane Grp Cap(c), veh/h	656	1370	611	527	1370	611	436	1370	611	490	685	649
V/C Ratio(X)	0.60	0.08	0.39	0.37	0.04	0.02	0.29	0.22	0.09	0.00	0.32	0.33
Avail Cap(c_a), veh/h	656	1370	611	527	1370	611	436	1370	611	490	685	649
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.2	9.4	10.7	11.9	9.2	9.1	13.7	9.9	9.4	10.8	10.3	10.4
Incr Delay (d2), s/veh	4.0	0.1	1.9	2.0	0.0	0.1	1.7	0.4	0.3	0.0	1.2	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	6.6	0.6	3.1	2.8	0.2	0.1	2.0	1.6	0.6	0.0	2.7	2.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	17.2	9.5	12.5	13.9	9.2	9.2	15.3	10.3	9.6	10.8	11.5	11.7
LnGrp LOS	B	A	B	B	A	A	B	B	A	B	B	B
Approach Vol, veh/h		743			255			475			428	
Approach Delay, s/veh		14.6			12.8			11.5			11.6	
Approach LOS		B			B			B			B	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		24.0		24.0		24.0		24.0				
Change Period (Y+Rc), s		5.5		5.5		5.5		5.5				
Max Green Setting (Gmax), s		18.5		18.5		18.5		18.5				
Max Q Clear Time (g_c+I1), s		14.8		11.4		10.1		6.2				
Green Ext Time (p_c), s		1.1		1.1		0.7		1.3				

Intersection Summary												
HCM 6th Ctrl Delay			12.9									
HCM 6th LOS			B									

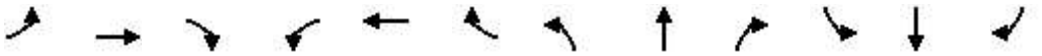
Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	144	4	10	180	8	4	1	22	11	1	10
Future Vol, veh/h	0	144	4	10	180	8	4	1	22	11	1	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	77	77	77	77	77	77	77	77	77	77	77	77
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	187	5	13	234	10	5	1	29	14	1	13

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	244	0	0	192	0	0	334	460	96	359	457	122
Stage 1	-	-	-	-	-	-	190	190	-	265	265	-
Stage 2	-	-	-	-	-	-	144	270	-	94	192	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	1319	-	-	1379	-	-	596	497	942	572	498	906
Stage 1	-	-	-	-	-	-	794	742	-	717	688	-
Stage 2	-	-	-	-	-	-	844	685	-	902	740	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1319	-	-	1379	-	-	582	493	942	550	494	906
Mov Cap-2 Maneuver	-	-	-	-	-	-	582	493	-	550	494	-
Stage 1	-	-	-	-	-	-	794	742	-	717	682	-
Stage 2	-	-	-	-	-	-	822	679	-	873	740	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.4	9.4	10.7
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	582	906	1319	-	-	1379	-	-	665
HCM Lane V/C Ratio	0.009	0.033	-	-	-	0.009	-	-	0.043
HCM Control Delay (s)	11.2	9.1	0	-	-	7.6	-	-	10.7
HCM Lane LOS	B	A	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0	0.1	0	-	-	0	-	-	0.1



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	49	118	4	5	45	44	4	11	32	135	1	112
Future Volume (veh/h)	49	118	4	5	45	44	4	11	32	135	1	112
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	60	144	5	6	55	54	5	13	39	165	1	137
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	908	1097	38	856	1101	955	286	79	238	366	2	303
Arrive On Green	0.61	0.61	0.61	0.61	0.61	0.61	0.19	0.19	0.19	0.19	0.19	0.19
Sat Flow, veh/h	1284	1797	62	1239	1803	1563	1251	412	1236	1352	11	1575
Grp Volume(v), veh/h	60	0	149	6	54	55	5	0	52	165	0	138
Grp Sat Flow(s),veh/h/ln	1284	0	1859	1239	1777	1589	1251	0	1648	1352	0	1587
Q Serve(g_s), s	1.0	0.0	1.7	0.1	0.6	0.7	0.2	0.0	1.3	5.9	0.0	3.9
Cycle Q Clear(g_c), s	1.7	0.0	1.7	1.8	0.6	0.7	4.1	0.0	1.3	7.2	0.0	3.9
Prop In Lane	1.00		0.03	1.00		0.98	1.00		0.75	1.00		0.99
Lane Grp Cap(c), veh/h	908	0	1135	856	1085	970	286	0	317	366	0	305
V/C Ratio(X)	0.07	0.00	0.13	0.01	0.05	0.06	0.02	0.00	0.16	0.45	0.00	0.45
Avail Cap(c_a), veh/h	908	0	1135	856	1085	970	514	0	617	612	0	594
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	4.3	0.0	4.2	4.6	4.0	4.0	19.9	0.0	17.1	20.1	0.0	18.1
Incr Delay (d2), s/veh	0.1	0.0	0.2	0.0	0.1	0.1	0.0	0.0	0.1	0.3	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.4	0.0	0.8	0.0	0.3	0.3	0.1	0.0	0.9	3.1	0.0	2.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	4.5	0.0	4.4	4.6	4.1	4.1	20.0	0.0	17.2	20.4	0.0	18.5
LnGrp LOS	A	A	A	A	A	A	B	A	B	C	A	B
Approach Vol, veh/h		209			115			57			303	
Approach Delay, s/veh		4.4			4.1			17.4			19.6	
Approach LOS		A			A			B			B	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		36.0		14.8		36.0		14.8				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		31.0		19.0		31.0		19.0				
Max Q Clear Time (g_c+I1), s		3.7		6.1		3.8		9.2				
Green Ext Time (p_c), s		1.4		0.1		0.8		0.6				

Intersection Summary												
HCM 6th Ctrl Delay			12.2									
HCM 6th LOS			B									

Intersection	
Int Delay, s/veh	3.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	28	1	22	11	3	15
Future Vol, veh/h	28	1	22	11	3	15
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	78	78	78	78	78	78
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	36	1	28	14	4	19

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	62	35	0	0	42	0
Stage 1	35	-	-	-	-	-
Stage 2	27	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	944	1038	-	-	1567	-
Stage 1	987	-	-	-	-	-
Stage 2	996	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	941	1038	-	-	1567	-
Mov Cap-2 Maneuver	941	-	-	-	-	-
Stage 1	987	-	-	-	-	-
Stage 2	993	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9	0	1.2
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	944	1567	-
HCM Lane V/C Ratio	-	-	0.039	0.002	-
HCM Control Delay (s)	-	-	9	7.3	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

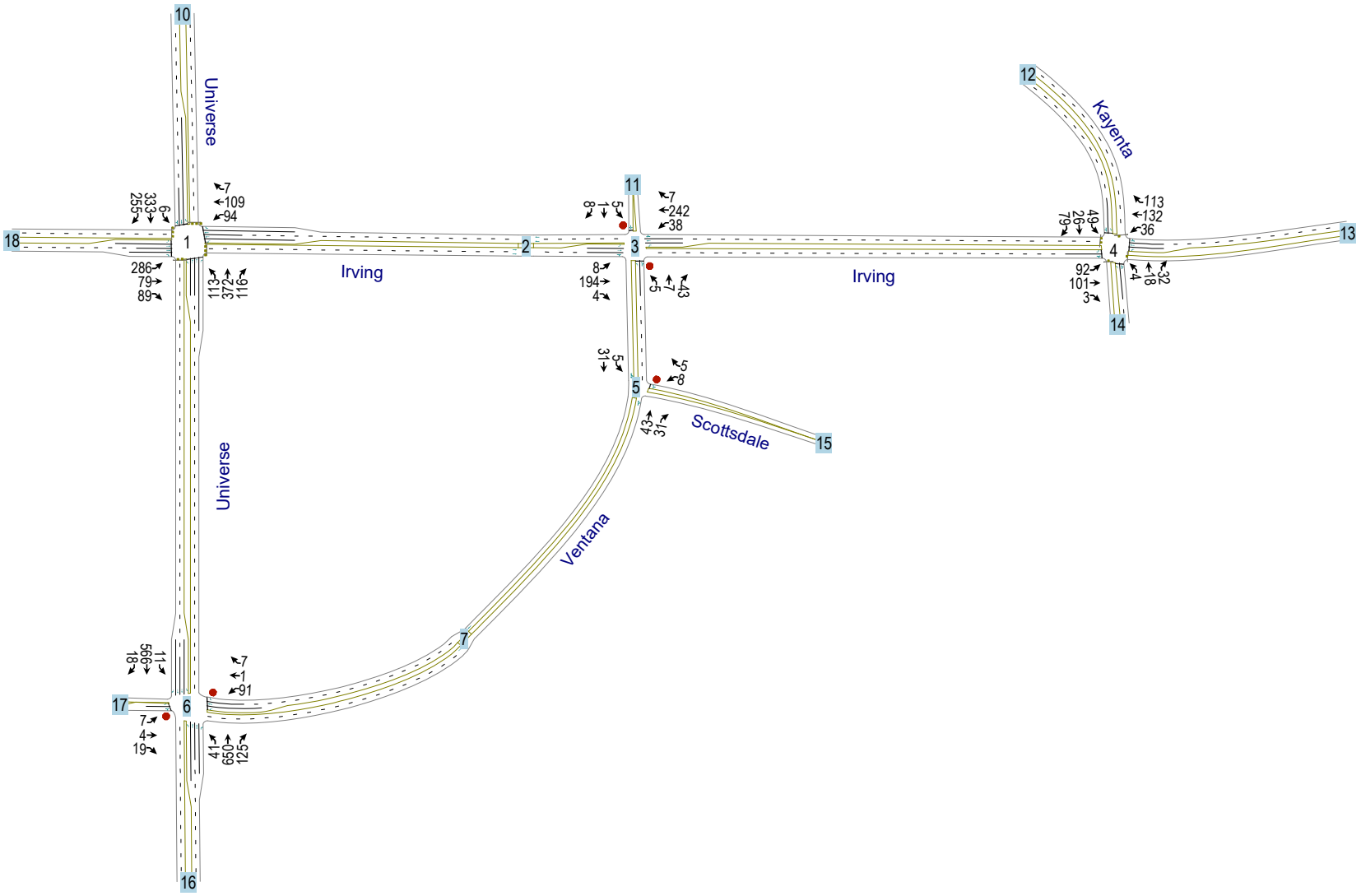
Intersection	
Int Delay, s/veh	8.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	8	1	67	149	0	6	13	390	36	3	720	3
Future Vol, veh/h	8	1	67	149	0	6	13	390	36	3	720	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	90	-	-	150	-	0	160	-	140	150	-	150
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	9	1	75	167	0	7	15	438	40	3	809	3

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1064	1323	405	879	1286	219	812	0	0	478	0	0
Stage 1	815	815	-	468	468	-	-	-	-	-	-	-
Stage 2	249	508	-	411	818	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	177	155	595	242	163	785	810	-	-	1081	-	-
Stage 1	338	389	-	545	560	-	-	-	-	-	-	-
Stage 2	733	537	-	589	388	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	173	152	595	207	159	785	810	-	-	1081	-	-
Mov Cap-2 Maneuver	173	152	-	207	159	-	-	-	-	-	-	-
Stage 1	332	388	-	535	549	-	-	-	-	-	-	-
Stage 2	713	527	-	512	387	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	13.8	67.5	0.3	0
HCM LOS	B	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	WBLn3	SBL	SBT	SBR
Capacity (veh/h)	810	-	-	173	571	207	-	785	1081	-	-
HCM Lane V/C Ratio	0.018	-	-	0.052	0.134	0.809	-	0.009	0.003	-	-
HCM Control Delay (s)	9.5	-	-	26.9	12.3	69.8	0	9.6	8.3	-	-
HCM Lane LOS	A	-	-	D	B	F	A	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.2	0.5	5.8	-	0	0	-	-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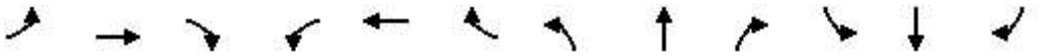


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	286	79	89	94	109	7	113	372	116	6	333	255
Future Volume (veh/h)	286	79	89	94	109	7	113	372	116	6	333	255
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	298	82	93	98	114	7	118	388	121	6	347	266
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	614	1370	611	599	1370	611	350	1370	611	426	744	561
Arrive On Green	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39
Sat Flow, veh/h	1270	3554	1585	1210	3554	1585	809	3554	1585	891	1931	1454
Grp Volume(v), veh/h	298	82	93	98	114	7	118	388	121	6	319	294
Grp Sat Flow(s),veh/h/ln	1270	1777	1585	1210	1777	1585	809	1777	1585	891	1777	1609
Q Serve(g_s), s	9.3	0.7	1.8	2.7	1.0	0.1	6.2	3.6	2.4	0.2	6.4	6.6
Cycle Q Clear(g_c), s	10.3	0.7	1.8	3.4	1.0	0.1	12.8	3.6	2.4	3.8	6.4	6.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.90
Lane Grp Cap(c), veh/h	614	1370	611	599	1370	611	350	1370	611	426	685	620
V/C Ratio(X)	0.49	0.06	0.15	0.16	0.08	0.01	0.34	0.28	0.20	0.01	0.47	0.47
Avail Cap(c_a), veh/h	614	1370	611	599	1370	611	350	1370	611	426	685	620
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.6	9.3	9.6	10.3	9.4	9.1	15.9	10.2	9.8	11.5	11.0	11.1
Incr Delay (d2), s/veh	2.7	0.1	0.5	0.6	0.1	0.0	2.6	0.5	0.7	0.1	2.3	2.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	4.6	0.4	1.1	1.2	0.6	0.1	2.2	2.2	1.4	0.1	4.3	4.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	15.4	9.4	10.2	10.9	9.5	9.1	18.5	10.7	10.5	11.6	13.3	13.7
LnGrp LOS	B	A	B	B	A	A	B	B	B	B	B	B
Approach Vol, veh/h		473			219			627			619	
Approach Delay, s/veh		13.3			10.1			12.1			13.5	
Approach LOS		B			B			B			B	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		24.0		24.0		24.0		24.0				
Change Period (Y+Rc), s		5.5		5.5		5.5		5.5				
Max Green Setting (Gmax), s		18.5		18.5		18.5		18.5				
Max Q Clear Time (g_c+I1), s		12.3		14.8		5.4		8.6				
Green Ext Time (p_c), s		1.0		0.9		0.8		1.9				

Intersection Summary												
HCM 6th Ctrl Delay			12.6									
HCM 6th LOS			B									

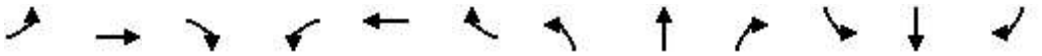
Intersection	
Int Delay, s/veh	1.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	8	194	4	38	242	7	5	7	43	5	1	8
Future Vol, veh/h	8	194	4	38	242	7	5	7	43	5	1	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	8	202	4	40	252	7	5	7	45	5	1	8

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	259	0	0	206	0	0	427	559	103	457	558	130
Stage 1	-	-	-	-	-	-	220	220	-	336	336	-
Stage 2	-	-	-	-	-	-	207	339	-	121	222	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	1303	-	-	1363	-	-	512	436	932	487	437	896
Stage 1	-	-	-	-	-	-	762	720	-	652	640	-
Stage 2	-	-	-	-	-	-	776	638	-	870	718	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1303	-	-	1363	-	-	493	421	932	445	422	896
Mov Cap-2 Maneuver	-	-	-	-	-	-	493	421	-	445	422	-
Stage 1	-	-	-	-	-	-	757	716	-	648	621	-
Stage 2	-	-	-	-	-	-	745	619	-	815	714	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	1	10	10.9
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	493	797	1303	-	-	1363	-	-	621
HCM Lane V/C Ratio	0.011	0.065	0.006	-	-	0.029	-	-	0.023
HCM Control Delay (s)	12.4	9.8	7.8	-	-	7.7	-	-	10.9
HCM Lane LOS	B	A	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0	0.2	0	-	-	0.1	-	-	0.1



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	92	101	3	36	132	113	4	18	32	49	26	79
Future Volume (veh/h)	92	101	3	36	132	113	4	18	32	49	26	79
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	101	111	3	40	145	124	4	20	35	54	29	87
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	819	1155	31	933	1200	953	267	96	168	321	65	194
Arrive On Green	0.64	0.64	0.64	0.64	0.64	0.64	0.16	0.16	0.16	0.16	0.16	0.16
Sat Flow, veh/h	1110	1813	49	1279	1883	1495	1276	610	1068	1349	412	1236
Grp Volume(v), veh/h	101	0	114	40	136	133	4	0	55	54	0	116
Grp Sat Flow(s),veh/h/ln	1110	0	1862	1279	1777	1601	1276	0	1678	1349	0	1648
Q Serve(g_s), s	1.9	0.0	1.2	0.6	1.5	1.6	0.1	0.0	1.4	1.8	0.0	3.1
Cycle Q Clear(g_c), s	3.5	0.0	1.2	1.8	1.5	1.6	3.2	0.0	1.4	3.2	0.0	3.1
Prop In Lane	1.00		0.03	1.00		0.93	1.00		0.64	1.00		0.75
Lane Grp Cap(c), veh/h	819	0	1186	933	1133	1021	267	0	264	321	0	259
V/C Ratio(X)	0.12	0.00	0.10	0.04	0.12	0.13	0.01	0.00	0.21	0.17	0.00	0.45
Avail Cap(c_a), veh/h	819	0	1186	933	1133	1021	565	0	656	636	0	644
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	4.2	0.0	3.4	3.7	3.5	3.5	20.1	0.0	17.9	19.2	0.0	18.6
Incr Delay (d2), s/veh	0.3	0.0	0.2	0.1	0.2	0.3	0.0	0.0	0.1	0.1	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.6	0.0	0.5	0.2	0.6	0.6	0.1	0.0	0.9	0.9	0.0	2.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	4.5	0.0	3.6	3.8	3.7	3.8	20.1	0.0	18.0	19.3	0.0	19.0
LnGrp LOS	A	A	A	A	A	A	C	A	B	B	A	B
Approach Vol, veh/h		215			309			59			170	
Approach Delay, s/veh		4.0			3.7			18.2			19.1	
Approach LOS		A			A			B			B	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		36.0		12.6		36.0		12.6				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		31.0		19.0		31.0		19.0				
Max Q Clear Time (g_c+I1), s		5.5		5.2		3.8		5.2				
Green Ext Time (p_c), s		1.4		0.1		2.5		0.4				

Intersection Summary												
HCM 6th Ctrl Delay			8.4									
HCM 6th LOS			A									

Intersection	
Int Delay, s/veh	1.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	8	5	43	31	5	31
Future Vol, veh/h	8	5	43	31	5	31
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	76	76	76	76	76	76
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	11	7	57	41	7	41

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	133	78	0	0	98	0
Stage 1	78	-	-	-	-	-
Stage 2	55	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	861	983	-	-	1495	-
Stage 1	945	-	-	-	-	-
Stage 2	968	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	857	983	-	-	1495	-
Mov Cap-2 Maneuver	857	-	-	-	-	-
Stage 1	945	-	-	-	-	-
Stage 2	963	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.1	0	1
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	901	1495	-
HCM Lane V/C Ratio	-	-	0.019	0.004	-
HCM Control Delay (s)	-	-	9.1	7.4	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

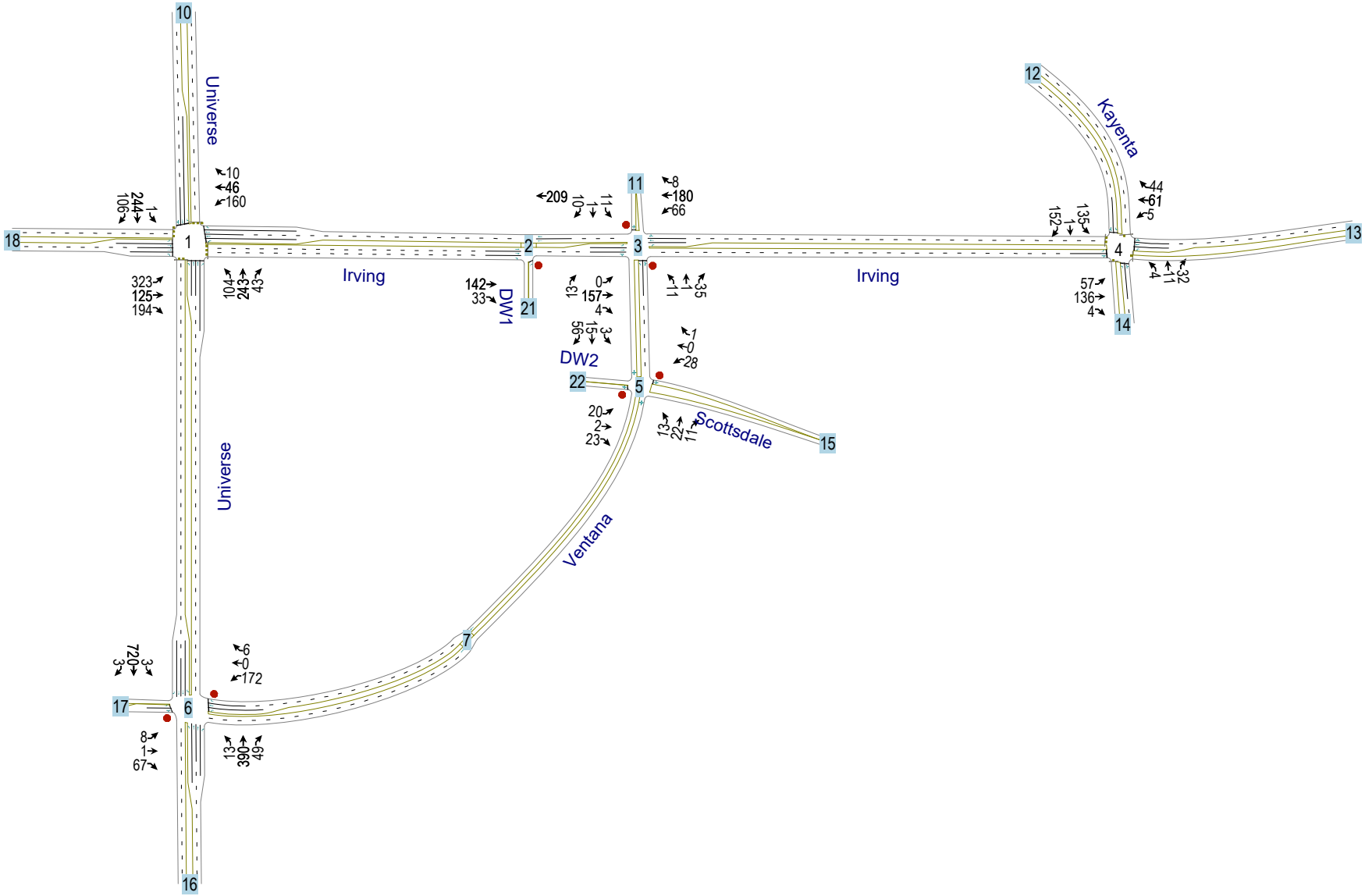
Intersection	
Int Delay, s/veh	5.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	7	4	19	91	1	7	41	650	125	11	566	18
Future Vol, veh/h	7	4	19	91	1	7	41	650	125	11	566	18
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	90	-	-	150	-	0	160	-	140	150	-	150
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	8	4	21	101	1	8	46	722	139	12	629	20

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1107	1606	315	1155	1487	361	649	0	0	861	0	0
Stage 1	653	653	-	814	814	-	-	-	-	-	-	-
Stage 2	454	953	-	341	673	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	165	104	681	152	123	636	933	-	-	776	-	-
Stage 1	423	462	-	338	390	-	-	-	-	-	-	-
Stage 2	555	336	-	647	452	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	154	97	681	135	115	636	933	-	-	776	-	-
Mov Cap-2 Maneuver	154	97	-	135	115	-	-	-	-	-	-	-
Stage 1	402	455	-	321	371	-	-	-	-	-	-	-
Stage 2	520	320	-	611	445	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	19.7	79.7	0.5	0.2
HCM LOS	C	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	WBLn3	SBL	SBT	SBR
Capacity (veh/h)	933	-	-	154	333	135	115	636	776	-	-
HCM Lane V/C Ratio	0.049	-	-	0.051	0.077	0.749	0.01	0.012	0.016	-	-
HCM Control Delay (s)	9.1	-	-	29.6	16.7	85.5	36.6	10.7	9.7	-	-
HCM Lane LOS	A	-	-	D	C	F	E	B	A	-	-
HCM 95th %tile Q(veh)	0.2	-	-	0.2	0.2	4.4	0	0	0	-	-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Scottsdale
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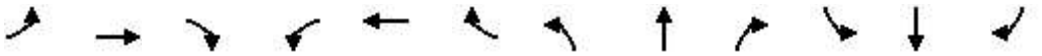


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	323	92	194	160	40	9	104	243	43	1	244	106
Future Volume (veh/h)	323	125	194	160	46	10	104	243	43	1	244	106
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	394	152	237	195	56	12	127	296	52	1	298	129
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	651	1370	611	506	1370	611	436	1370	611	490	938	397
Arrive On Green	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39
Sat Flow, veh/h	1333	3554	1585	995	3554	1585	961	3554	1585	1033	2433	1029
Grp Volume(v), veh/h	394	152	237	195	56	12	127	296	52	1	216	211
Grp Sat Flow(s),veh/h/ln	1333	1777	1585	995	1777	1585	961	1777	1585	1033	1777	1685
Q Serve(g_s), s	12.6	1.3	5.2	7.5	0.5	0.2	5.1	2.7	1.0	0.0	4.1	4.2
Cycle Q Clear(g_c), s	13.0	1.3	5.2	8.8	0.5	0.2	9.4	2.7	1.0	2.7	4.1	4.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.61
Lane Grp Cap(c), veh/h	651	1370	611	506	1370	611	436	1370	611	490	685	649
V/C Ratio(X)	0.61	0.11	0.39	0.39	0.04	0.02	0.29	0.22	0.09	0.00	0.32	0.33
Avail Cap(c_a), veh/h	651	1370	611	506	1370	611	436	1370	611	490	685	649
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.3	9.5	10.7	12.3	9.2	9.1	13.7	9.9	9.4	10.8	10.3	10.4
Incr Delay (d2), s/veh	4.2	0.2	1.9	2.2	0.1	0.1	1.7	0.4	0.3	0.0	1.2	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	6.6	0.8	3.1	2.9	0.3	0.1	2.0	1.6	0.6	0.0	2.7	2.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	17.4	9.6	12.5	14.5	9.3	9.2	15.3	10.3	9.6	10.8	11.5	11.7
LnGrp LOS	B	A	B	B	A	A	B	B	A	B	B	B
Approach Vol, veh/h		783			263			475			428	
Approach Delay, s/veh		14.4			13.2			11.5			11.6	
Approach LOS		B			B			B			B	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		24.0		24.0		24.0		24.0				
Change Period (Y+Rc), s		5.5		5.5		5.5		5.5				
Max Green Setting (Gmax), s		18.5		18.5		18.5		18.5				
Max Q Clear Time (g_c+I1), s		15.0		11.4		10.8		6.2				
Green Ext Time (p_c), s		1.2		1.1		0.7		1.3				

Intersection Summary												
HCM 6th Ctrl Delay			12.9									
HCM 6th LOS			B									

Intersection	
Int Delay, s/veh	0.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	142	0	0	202	0	0
Future Vol, veh/h	142	33	0	209	0	13
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	154	36	0	227	0	14

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	77
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.32
Pot Cap-1 Maneuver	-	-	0	-	0	968
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	968
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	8.8
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	968	-	-	-
HCM Lane V/C Ratio	0.015	-	-	-
HCM Control Delay (s)	8.8	-	-	-
HCM Lane LOS	A	-	-	-
HCM 95th %tile Q(veh)	0	-	-	-

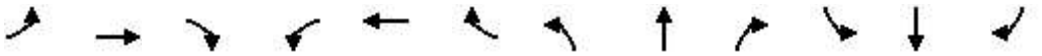
Intersection	
Int Delay, s/veh	2.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	144	4	10	180	8	4	1	22	11	1	10
Future Vol, veh/h	0	157	4	66	180	8	11	1	35	11	1	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	77	77	77	77	77	77	77	77	77	77	77	77
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	204	5	86	234	10	14	1	45	14	1	13

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	244	0	0	209	0	0	497	623	105	514	620	122
Stage 1	-	-	-	-	-	-	207	207	-	411	411	-
Stage 2	-	-	-	-	-	-	290	416	-	103	209	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	1319	-	-	1359	-	-	456	401	929	443	402	906
Stage 1	-	-	-	-	-	-	776	729	-	589	593	-
Stage 2	-	-	-	-	-	-	694	590	-	892	728	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1319	-	-	1359	-	-	427	376	929	400	377	906
Mov Cap-2 Maneuver	-	-	-	-	-	-	427	376	-	400	377	-
Stage 1	-	-	-	-	-	-	776	729	-	589	556	-
Stage 2	-	-	-	-	-	-	639	553	-	847	728	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	2	10.3	12.1
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	427	893	1319	-	-	1359	-	-	534
HCM Lane V/C Ratio	0.033	0.052	-	-	-	0.063	-	-	0.054
HCM Control Delay (s)	13.7	9.3	0	-	-	7.8	-	-	12.1
HCM Lane LOS	B	A	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.1	0.2	0	-	-	0.2	-	-	0.2



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	49	118	4	5	45	44	4	11	32	135	1	112
Future Volume (veh/h)	57	136	4	5	61	44	4	11	32	135	1	152
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	70	166	5	6	74	54	5	13	39	165	1	185
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	889	1099	33	832	1241	828	247	81	242	370	2	309
Arrive On Green	0.61	0.61	0.61	0.61	0.61	0.61	0.20	0.20	0.20	0.20	0.20	0.20
Sat Flow, veh/h	1262	1806	54	1214	2041	1361	1198	412	1236	1352	9	1578
Grp Volume(v), veh/h	70	0	171	6	64	64	5	0	52	165	0	186
Grp Sat Flow(s),veh/h/ln	1262	0	1861	1214	1777	1625	1198	0	1648	1352	0	1586
Q Serve(g_s), s	1.2	0.0	2.0	0.1	0.7	0.8	0.2	0.0	1.3	5.9	0.0	5.4
Cycle Q Clear(g_c), s	2.0	0.0	2.0	2.1	0.7	0.8	5.6	0.0	1.3	7.2	0.0	5.4
Prop In Lane	1.00		0.03	1.00		0.84	1.00		0.75	1.00		0.99
Lane Grp Cap(c), veh/h	889	0	1132	832	1081	989	247	0	322	370	0	310
V/C Ratio(X)	0.08	0.00	0.15	0.01	0.06	0.07	0.02	0.00	0.16	0.45	0.00	0.60
Avail Cap(c_a), veh/h	889	0	1132	832	1081	989	460	0	614	610	0	591
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	4.5	0.0	4.3	4.8	4.1	4.1	21.3	0.0	17.0	20.0	0.0	18.7
Incr Delay (d2), s/veh	0.2	0.0	0.3	0.0	0.1	0.1	0.0	0.0	0.1	0.3	0.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.4	0.0	1.0	0.0	0.3	0.4	0.1	0.0	0.9	3.1	0.0	3.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	4.7	0.0	4.6	4.8	4.2	4.2	21.3	0.0	17.1	20.3	0.0	19.4
LnGrp LOS	A	A	A	A	A	A	C	A	B	C	A	B
Approach Vol, veh/h		241			134			57			351	
Approach Delay, s/veh		4.6			4.2			17.5			19.8	
Approach LOS		A			A			B			B	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		36.0		15.0		36.0		15.0				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		31.0		19.0		31.0		19.0				
Max Q Clear Time (g_c+I1), s		4.0		7.6		4.1		9.2				
Green Ext Time (p_c), s		1.7		0.1		1.0		0.8				

Intersection Summary												
HCM 6th Ctrl Delay			12.3									
HCM 6th LOS			B									

Intersection	
Int Delay, s/veh	4.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	0	28	0	1	0	22	11	3	15	0
Future Vol, veh/h	20	2	23	28	0	1	13	22	11	3	15	56
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	78	92	78	92	78	78	78	78	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	22	2	25	36	0	1	14	28	14	4	19	61

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	122	128	50	134	151	35	80	0	0	42	0	0
Stage 1	58	58	-	63	63	-	-	-	-	-	-	-
Stage 2	64	70	-	71	88	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	853	763	1018	838	741	1038	1518	-	-	1567	-	-
Stage 1	954	847	-	948	842	-	-	-	-	-	-	-
Stage 2	947	837	-	939	822	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	844	754	1018	808	732	1038	1518	-	-	1567	-	-
Mov Cap-2 Maneuver	844	754	-	808	732	-	-	-	-	-	-	-
Stage 1	945	844	-	939	834	-	-	-	-	-	-	-
Stage 2	937	829	-	911	820	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.1	9.6	1.9	0.3
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1518	-	-	919	814	1567	-	-
HCM Lane V/C Ratio	0.009	-	-	0.053	0.046	0.002	-	-
HCM Control Delay (s)	7.4	0	-	9.1	9.6	7.3	0	-
HCM Lane LOS	A	A	-	A	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.2	0.1	0	-	-

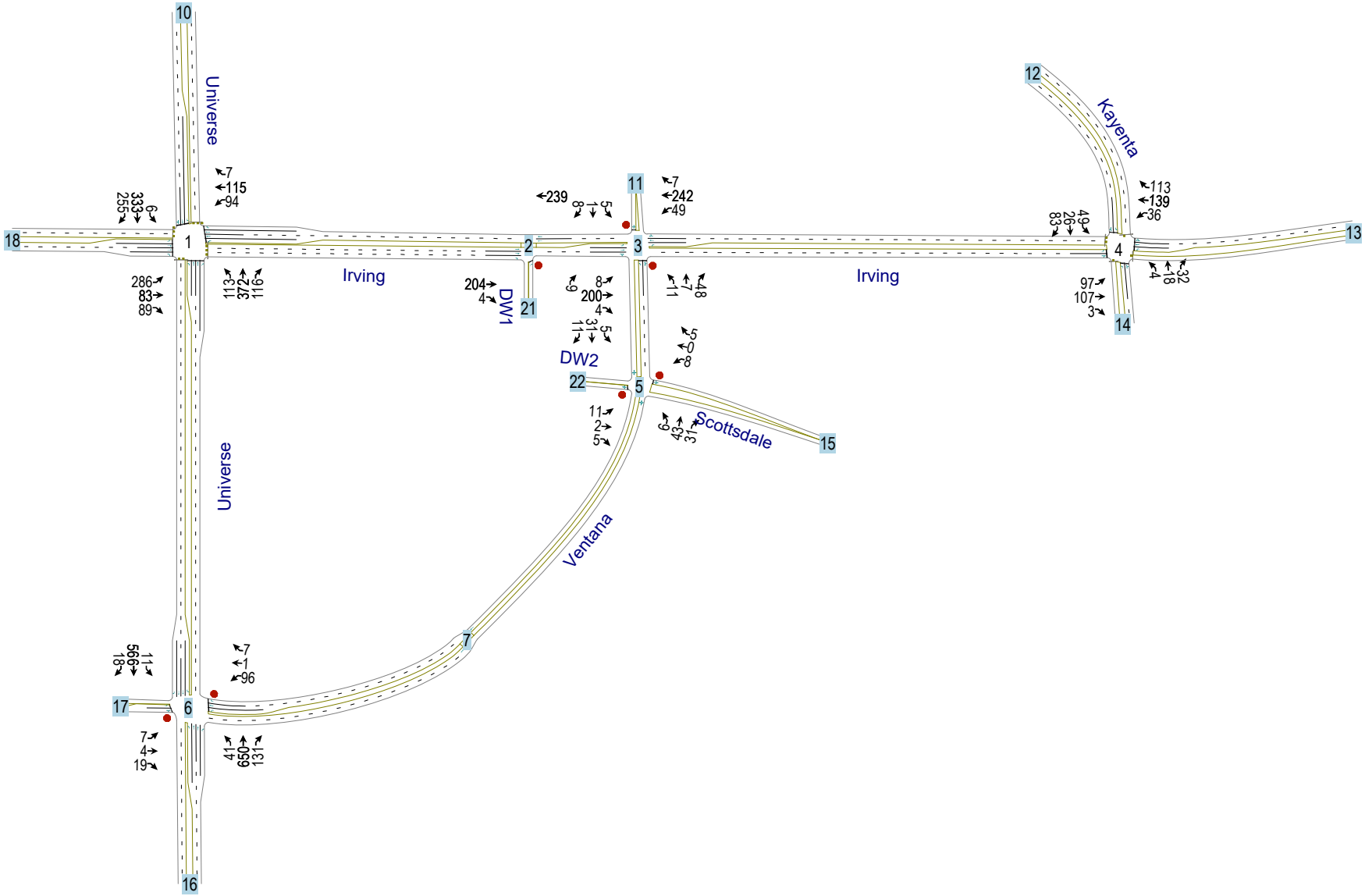
Intersection	
Int Delay, s/veh	12.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	8	1	67	149	0	6	13	390	36	3	720	3
Future Vol, veh/h	8	1	67	172	0	6	13	390	49	3	720	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	90	-	-	150	-	0	160	-	140	150	-	150
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	9	1	75	193	0	7	15	438	55	3	809	3

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1064	1338	405	879	1286	219	812	0	0	493	0	0
Stage 1	815	815	-	468	468	-	-	-	-	-	-	-
Stage 2	249	523	-	411	818	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	177	152	595	242	163	785	810	-	-	1067	-	-
Stage 1	338	389	-	545	560	-	-	-	-	-	-	-
Stage 2	733	529	-	589	388	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	173	149	595	207	159	785	810	-	-	1067	-	-
Mov Cap-2 Maneuver	173	149	-	207	159	-	-	-	-	-	-	-
Stage 1	332	388	-	535	549	-	-	-	-	-	-	-
Stage 2	713	519	-	512	387	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	13.8	91.3	0.3	0
HCM LOS	B	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	WBLn3	SBL	SBT	SBR
Capacity (veh/h)	810	-	-	173	570	207	-	785	1067	-	-
HCM Lane V/C Ratio	0.018	-	-	0.052	0.134	0.934	-	0.009	0.003	-	-
HCM Control Delay (s)	9.5	-	-	26.9	12.3	94.2	0	9.6	8.4	-	-
HCM Lane LOS	A	-	-	D	B	F	A	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.2	0.5	7.7	-	0	0	-	-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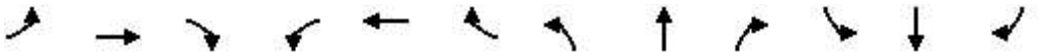


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	286	79	89	94	109	7	113	372	116	6	333	255
Future Volume (veh/h)	286	83	89	94	115	7	113	372	116	6	333	255
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	298	86	93	98	120	7	118	388	121	6	347	266
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	610	1370	611	596	1370	611	350	1370	611	426	744	561
Arrive On Green	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39
Sat Flow, veh/h	1264	3554	1585	1205	3554	1585	809	3554	1585	891	1931	1454
Grp Volume(v), veh/h	298	86	93	98	120	7	118	388	121	6	319	294
Grp Sat Flow(s),veh/h/ln	1264	1777	1585	1205	1777	1585	809	1777	1585	891	1777	1609
Q Serve(g_s), s	9.4	0.7	1.8	2.7	1.0	0.1	6.2	3.6	2.4	0.2	6.4	6.6
Cycle Q Clear(g_c), s	10.5	0.7	1.8	3.4	1.0	0.1	12.8	3.6	2.4	3.8	6.4	6.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.90
Lane Grp Cap(c), veh/h	610	1370	611	596	1370	611	350	1370	611	426	685	620
V/C Ratio(X)	0.49	0.06	0.15	0.16	0.09	0.01	0.34	0.28	0.20	0.01	0.47	0.47
Avail Cap(c_a), veh/h	610	1370	611	596	1370	611	350	1370	611	426	685	620
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.7	9.3	9.6	10.4	9.4	9.1	15.9	10.2	9.8	11.5	11.0	11.1
Incr Delay (d2), s/veh	2.8	0.1	0.5	0.6	0.1	0.0	2.6	0.5	0.7	0.1	2.3	2.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	4.6	0.4	1.1	1.2	0.6	0.1	2.2	2.2	1.4	0.1	4.3	4.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	15.5	9.4	10.2	11.0	9.5	9.1	18.5	10.7	10.5	11.6	13.3	13.7
LnGrp LOS	B	A	B	B	A	A	B	B	B	B	B	B
Approach Vol, veh/h		477			225			627			619	
Approach Delay, s/veh		13.4			10.1			12.1			13.5	
Approach LOS		B			B			B			B	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		24.0		24.0		24.0		24.0				
Change Period (Y+Rc), s		5.5		5.5		5.5		5.5				
Max Green Setting (Gmax), s		18.5		18.5		18.5		18.5				
Max Q Clear Time (g_c+I1), s		12.5		14.8		5.4		8.6				
Green Ext Time (p_c), s		1.0		0.9		0.8		1.9				

Intersection Summary												
HCM 6th Ctrl Delay			12.6									
HCM 6th LOS			B									

Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	204	0	0	233	0	0
Future Vol, veh/h	204	4	0	239	0	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	213	4	0	249	0	6

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	107
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.32
Pot Cap-1 Maneuver	-	-	0	-	0	926
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	926
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	8.9
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	926	-	-	-
HCM Lane V/C Ratio	0.007	-	-	-
HCM Control Delay (s)	8.9	-	-	-
HCM Lane LOS	A	-	-	-
HCM 95th %tile Q(veh)	0	-	-	-

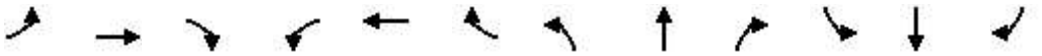
Intersection	
Int Delay, s/veh	2.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	8	194	4	38	242	7	5	7	43	5	1	8
Future Vol, veh/h	8	200	4	49	242	7	11	7	48	5	1	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	8	208	4	51	252	7	11	7	50	5	1	8

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	259	0	0	212	0	0	455	587	106	482	586	130
Stage 1	-	-	-	-	-	-	226	226	-	358	358	-
Stage 2	-	-	-	-	-	-	229	361	-	124	228	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	1303	-	-	1356	-	-	489	420	928	467	421	896
Stage 1	-	-	-	-	-	-	756	716	-	633	626	-
Stage 2	-	-	-	-	-	-	753	624	-	867	714	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1303	-	-	1356	-	-	467	402	928	421	402	896
Mov Cap-2 Maneuver	-	-	-	-	-	-	467	402	-	421	402	-
Stage 1	-	-	-	-	-	-	751	712	-	629	602	-
Stage 2	-	-	-	-	-	-	717	600	-	807	710	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	1.3	10.4	11.1
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	467	796	1303	-	-	1356	-	-	601
HCM Lane V/C Ratio	0.025	0.072	0.006	-	-	0.038	-	-	0.024
HCM Control Delay (s)	12.9	9.9	7.8	-	-	7.8	-	-	11.1
HCM Lane LOS	B	A	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.1	0.2	0	-	-	0.1	-	-	0.1



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	92	101	3	36	132	113	4	18	32	49	26	79
Future Volume (veh/h)	97	107	3	36	139	113	4	18	32	49	26	83
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	107	118	3	40	153	124	4	20	35	54	29	91
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	813	1157	29	925	1227	929	264	96	168	322	63	196
Arrive On Green	0.64	0.64	0.64	0.64	0.64	0.64	0.16	0.16	0.16	0.16	0.16	0.16
Sat Flow, veh/h	1102	1816	46	1270	1927	1458	1272	610	1068	1349	398	1248
Grp Volume(v), veh/h	107	0	121	40	140	137	4	0	55	54	0	120
Grp Sat Flow(s),veh/h/ln	1102	0	1862	1270	1777	1608	1272	0	1678	1349	0	1646
Q Serve(g_s), s	2.1	0.0	1.2	0.6	1.5	1.6	0.1	0.0	1.4	1.8	0.0	3.2
Cycle Q Clear(g_c), s	3.7	0.0	1.2	1.8	1.5	1.6	3.4	0.0	1.4	3.2	0.0	3.2
Prop In Lane	1.00		0.02	1.00		0.91	1.00		0.64	1.00		0.76
Lane Grp Cap(c), veh/h	813	0	1186	925	1132	1024	264	0	264	322	0	259
V/C Ratio(X)	0.13	0.00	0.10	0.04	0.12	0.13	0.02	0.00	0.21	0.17	0.00	0.46
Avail Cap(c_a), veh/h	813	0	1186	925	1132	1024	560	0	655	636	0	643
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	4.2	0.0	3.4	3.8	3.5	3.5	20.2	0.0	17.9	19.2	0.0	18.6
Incr Delay (d2), s/veh	0.3	0.0	0.2	0.1	0.2	0.3	0.0	0.0	0.1	0.1	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.6	0.0	0.5	0.2	0.6	0.6	0.1	0.0	0.9	0.9	0.0	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	4.6	0.0	3.6	3.9	3.7	3.8	20.2	0.0	18.0	19.3	0.0	19.1
LnGrp LOS	A	A	A	A	A	A	C	A	B	B	A	B
Approach Vol, veh/h		228			317			59			174	
Approach Delay, s/veh		4.1			3.8			18.2			19.2	
Approach LOS		A			A			B			B	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		36.0		12.7		36.0		12.7				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		31.0		19.0		31.0		19.0				
Max Q Clear Time (g_c+I1), s		5.7		5.4		3.8		5.2				
Green Ext Time (p_c), s		1.6		0.1		2.5		0.4				

Intersection Summary												
HCM 6th Ctrl Delay			8.4									
HCM 6th LOS			A									

Intersection	
Int Delay, s/veh	2.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	0	8	0	5	0	43	31	5	31	0
Future Vol, veh/h	11	2	5	8	0	5	6	43	31	5	31	11
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	76	76	76	76	76	76	76	76	76	76	76	76
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	14	3	7	11	0	7	8	57	41	7	41	14

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	159	176	48	161	163	78	55	0	0	98	0	0
Stage 1	62	62	-	94	94	-	-	-	-	-	-	-
Stage 2	97	114	-	67	69	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	807	717	1021	804	729	983	1550	-	-	1495	-	-
Stage 1	949	843	-	913	817	-	-	-	-	-	-	-
Stage 2	910	801	-	943	837	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	796	710	1021	790	722	983	1550	-	-	1495	-	-
Mov Cap-2 Maneuver	796	710	-	790	722	-	-	-	-	-	-	-
Stage 1	944	839	-	908	813	-	-	-	-	-	-	-
Stage 2	899	797	-	929	833	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.4	9.3	0.6	0.8
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1550	-	-	836	855	1495	-	-
HCM Lane V/C Ratio	0.005	-	-	0.028	0.02	0.004	-	-
HCM Control Delay (s)	7.3	0	-	9.4	9.3	7.4	0	-
HCM Lane LOS	A	A	-	A	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.1	0	-	-

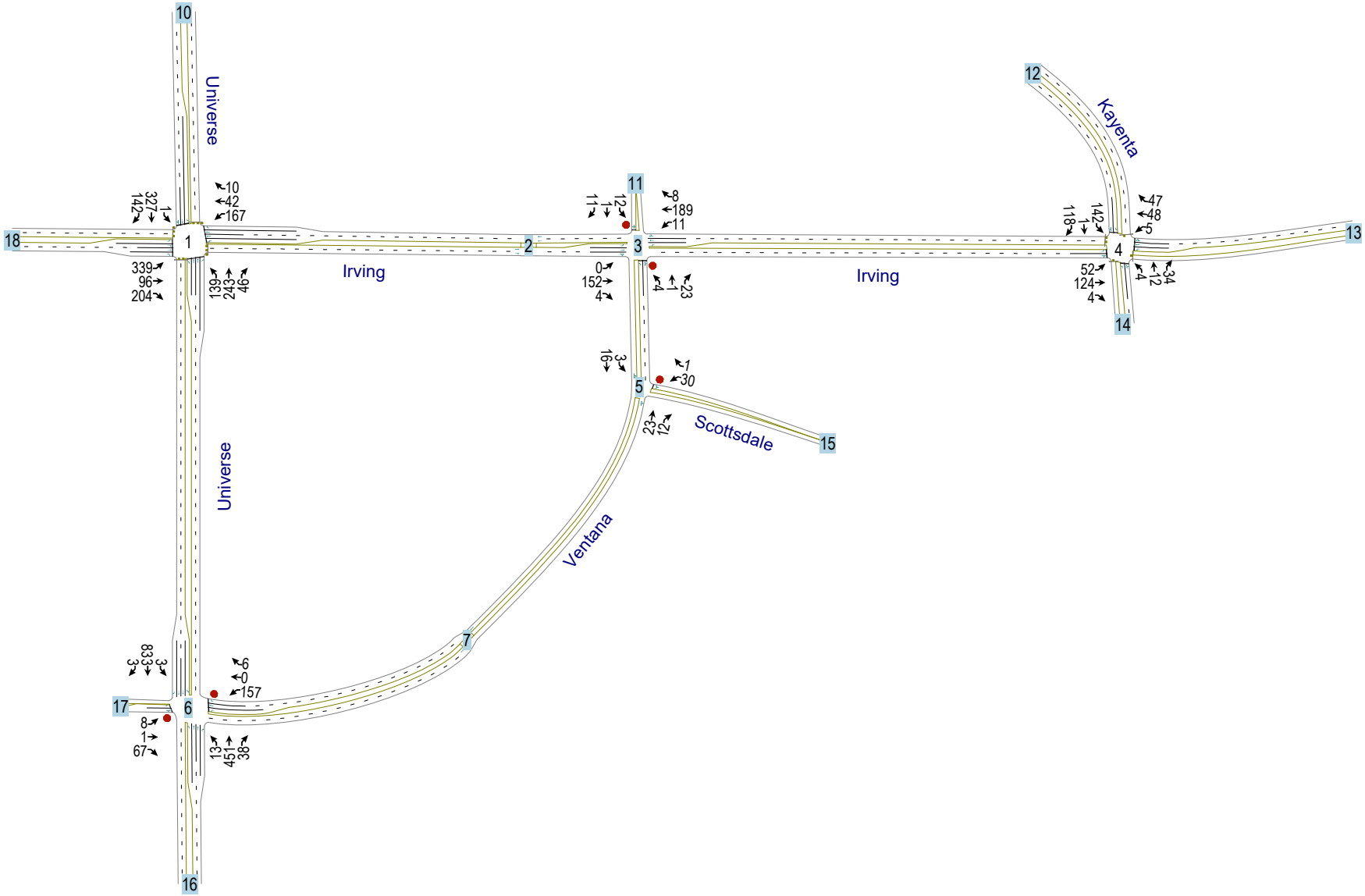
Intersection	
Int Delay, s/veh	6.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	7	4	19	91	1	7	41	650	125	11	566	18
Future Vol, veh/h	7	4	19	96	1	7	41	650	131	11	566	18
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	90	-	-	150	-	0	160	-	140	150	-	150
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	8	4	21	107	1	8	46	722	146	12	629	20

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1107	1613	315	1155	1487	361	649	0	0	868	0	0
Stage 1	653	653	-	814	814	-	-	-	-	-	-	-
Stage 2	454	960	-	341	673	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	165	103	681	152	123	636	933	-	-	772	-	-
Stage 1	423	462	-	338	390	-	-	-	-	-	-	-
Stage 2	555	333	-	647	452	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	154	96	681	135	115	636	933	-	-	772	-	-
Mov Cap-2 Maneuver	154	96	-	135	115	-	-	-	-	-	-	-
Stage 1	402	455	-	321	371	-	-	-	-	-	-	-
Stage 2	520	317	-	611	445	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	19.8	86.6	0.5	0.2
HCM LOS	C	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	WBLn3	SBL	SBT	SBR
Capacity (veh/h)	933	-	-	154	331	135	115	636	772	-	-
HCM Lane V/C Ratio	0.049	-	-	0.051	0.077	0.79	0.01	0.012	0.016	-	-
HCM Control Delay (s)	9.1	-	-	29.6	16.8	92.7	36.6	10.7	9.7	-	-
HCM Lane LOS	A	-	-	D	C	F	E	B	A	-	-
HCM 95th %tile Q(veh)	0.2	-	-	0.2	0.2	4.8	0	0	0	-	-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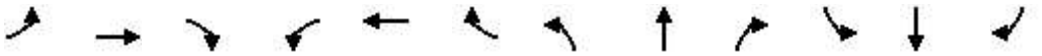


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	339	96	204	167	42	10	139	243	46	1	327	142
Future Volume (veh/h)	339	96	204	167	42	10	139	243	46	1	327	142
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	368	104	222	182	46	11	151	264	50	1	355	154
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	658	1370	611	537	1370	611	398	1370	611	508	935	399
Arrive On Green	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39
Sat Flow, veh/h	1346	3554	1585	1054	3554	1585	891	3554	1585	1066	2426	1035
Grp Volume(v), veh/h	368	104	222	182	46	11	151	264	50	1	258	251
Grp Sat Flow(s),veh/h/ln	1346	1777	1585	1054	1777	1585	891	1777	1585	1066	1777	1684
Q Serve(g_s), s	11.2	0.9	4.8	6.3	0.4	0.2	7.1	2.4	1.0	0.0	5.0	5.2
Cycle Q Clear(g_c), s	11.6	0.9	4.8	7.2	0.4	0.2	12.2	2.4	1.0	2.4	5.0	5.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.61
Lane Grp Cap(c), veh/h	658	1370	611	537	1370	611	398	1370	611	508	685	649
V/C Ratio(X)	0.56	0.08	0.36	0.34	0.03	0.02	0.38	0.19	0.08	0.00	0.38	0.39
Avail Cap(c_a), veh/h	658	1370	611	537	1370	611	398	1370	611	508	685	649
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.8	9.3	10.5	11.6	9.2	9.1	15.1	9.8	9.4	10.6	10.6	10.6
Incr Delay (d2), s/veh	3.4	0.1	1.7	1.7	0.0	0.1	2.7	0.3	0.3	0.0	1.6	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	5.9	0.5	2.9	2.6	0.2	0.1	2.7	1.4	0.6	0.0	3.3	3.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	16.2	9.4	12.2	13.3	9.2	9.2	17.8	10.1	9.6	10.6	12.2	12.4
LnGrp LOS	B	A	B	B	A	A	B	B	A	B	B	B
Approach Vol, veh/h		694			239			465			510	
Approach Delay, s/veh		13.9			12.4			12.6			12.3	
Approach LOS		B			B			B			B	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		24.0		24.0		24.0		24.0				
Change Period (Y+Rc), s		5.5		5.5		5.5		5.5				
Max Green Setting (Gmax), s		18.5		18.5		18.5		18.5				
Max Q Clear Time (g_c+I1), s		13.6		14.2		9.2		7.2				
Green Ext Time (p_c), s		1.3		0.7		0.7		1.5				

Intersection Summary												
HCM 6th Ctrl Delay			13.0									
HCM 6th LOS			B									

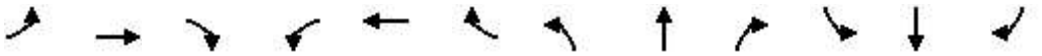
Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	152	4	11	189	8	4	1	23	12	1	11
Future Vol, veh/h	0	152	4	11	189	8	4	1	23	12	1	11
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	165	4	12	205	9	4	1	25	13	1	12

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	214	0	0	169	0	0	294	405	85	317	403	107
Stage 1	-	-	-	-	-	-	167	167	-	234	234	-
Stage 2	-	-	-	-	-	-	127	238	-	83	169	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	1353	-	-	1406	-	-	636	533	957	612	535	926
Stage 1	-	-	-	-	-	-	818	759	-	748	710	-
Stage 2	-	-	-	-	-	-	863	707	-	916	758	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1353	-	-	1406	-	-	623	528	957	591	530	926
Mov Cap-2 Maneuver	-	-	-	-	-	-	623	528	-	591	530	-
Stage 1	-	-	-	-	-	-	818	759	-	748	704	-
Stage 2	-	-	-	-	-	-	843	701	-	891	758	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.4	9.3	10.3
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	623	926	1353	-	-	1406	-	-	704
HCM Lane V/C Ratio	0.007	0.028	-	-	-	0.009	-	-	0.037
HCM Control Delay (s)	10.8	9	0	-	-	7.6	-	-	10.3
HCM Lane LOS	B	A	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0	0.1	0	-	-	0	-	-	0.1



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	52	124	4	5	48	47	4	12	34	142	1	118
Future Volume (veh/h)	52	124	4	5	48	47	4	12	34	142	1	118
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	57	135	4	5	52	51	4	13	37	154	1	128
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	924	1116	33	877	1115	964	283	79	224	357	2	288
Arrive On Green	0.62	0.62	0.62	0.62	0.62	0.62	0.18	0.18	0.18	0.18	0.18	0.18
Sat Flow, veh/h	1291	1807	54	1250	1805	1561	1261	429	1221	1355	12	1575
Grp Volume(v), veh/h	57	0	139	5	51	52	4	0	50	154	0	129
Grp Sat Flow(s),veh/h/ln	1291	0	1861	1250	1777	1589	1261	0	1651	1355	0	1587
Q Serve(g_s), s	0.9	0.0	1.5	0.1	0.6	0.6	0.1	0.0	1.3	5.4	0.0	3.6
Cycle Q Clear(g_c), s	1.6	0.0	1.5	1.6	0.6	0.6	3.8	0.0	1.3	6.7	0.0	3.6
Prop In Lane	1.00		0.03	1.00		0.98	1.00		0.74	1.00		0.99
Lane Grp Cap(c), veh/h	924	0	1149	877	1098	982	283	0	302	357	0	290
V/C Ratio(X)	0.06	0.00	0.12	0.01	0.05	0.05	0.01	0.00	0.17	0.43	0.00	0.44
Avail Cap(c_a), veh/h	924	0	1149	877	1098	982	530	0	625	622	0	601
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	4.1	0.0	4.0	4.3	3.8	3.8	19.9	0.0	17.3	20.1	0.0	18.2
Incr Delay (d2), s/veh	0.1	0.0	0.2	0.0	0.1	0.1	0.0	0.0	0.1	0.3	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.3	0.0	0.7	0.0	0.3	0.3	0.1	0.0	0.8	2.9	0.0	2.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	4.2	0.0	4.2	4.3	3.9	3.9	19.9	0.0	17.4	20.4	0.0	18.6
LnGrp LOS	A	A	A	A	A	A	B	A	B	C	A	B
Approach Vol, veh/h		196			108			54			283	
Approach Delay, s/veh		4.2			3.9			17.6			19.6	
Approach LOS		A			A			B			B	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		36.0		14.2		36.0		14.2				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		31.0		19.0		31.0		19.0				
Max Q Clear Time (g_c+I1), s		3.6		5.8		3.6		8.7				
Green Ext Time (p_c), s		1.3		0.1		0.8		0.6				

Intersection Summary												
HCM 6th Ctrl Delay			12.1									
HCM 6th LOS			B									

Intersection	
Int Delay, s/veh	3.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	30	1	23	12	3	16
Future Vol, veh/h	30	1	23	12	3	16
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	33	1	25	13	3	17

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	55	32	0	0	38	0
Stage 1	32	-	-	-	-	-
Stage 2	23	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	953	1042	-	-	1572	-
Stage 1	991	-	-	-	-	-
Stage 2	1000	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	951	1042	-	-	1572	-
Mov Cap-2 Maneuver	951	-	-	-	-	-
Stage 1	991	-	-	-	-	-
Stage 2	998	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.9	0	1.2
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	954	1572	-
HCM Lane V/C Ratio	-	-	0.035	0.002	-
HCM Control Delay (s)	-	-	8.9	7.3	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

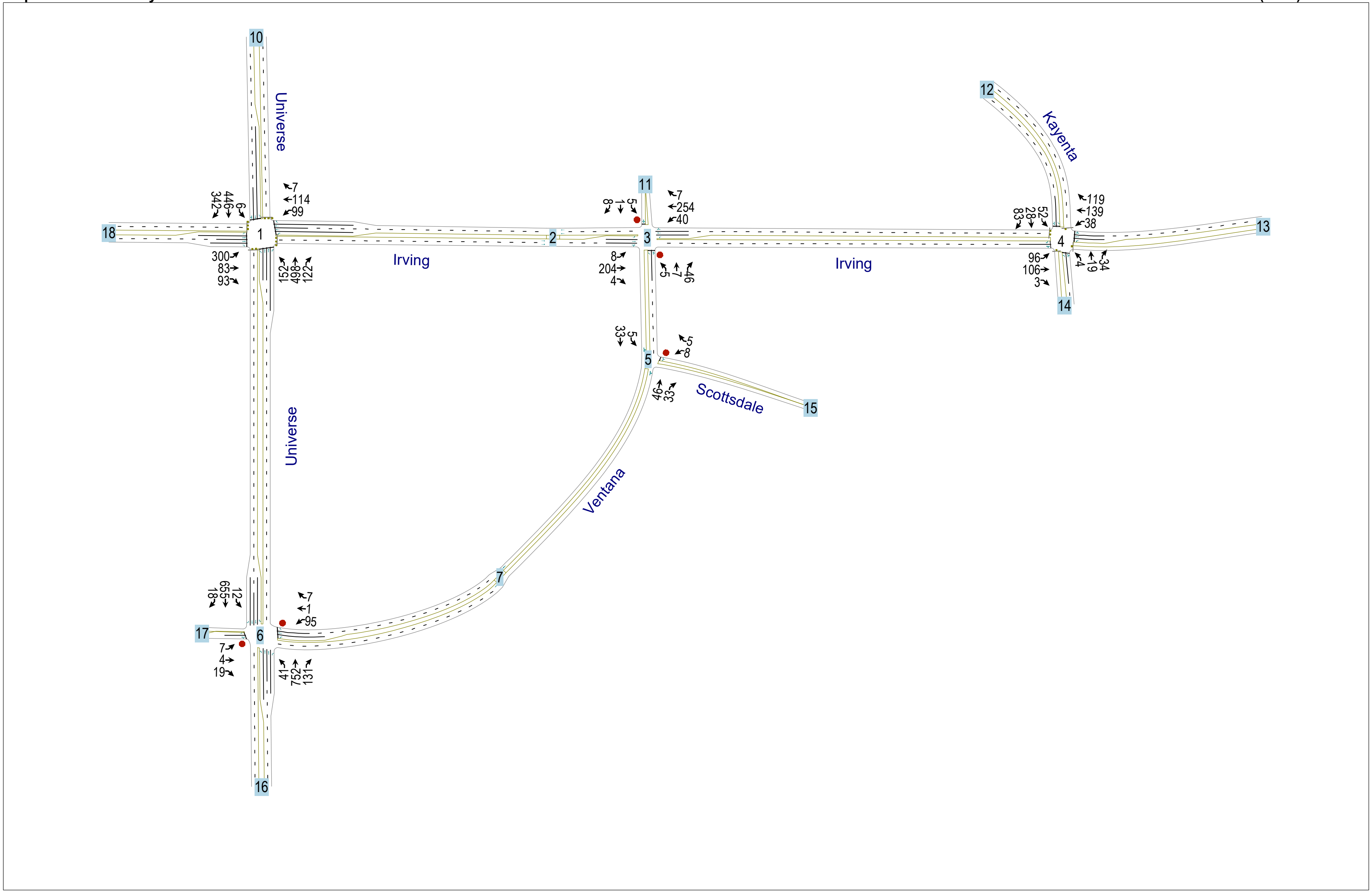
Intersection	
Int Delay, s/veh	12.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	8	1	67	157	0	6	13	451	38	3	833	3
Future Vol, veh/h	8	1	67	157	0	6	13	451	38	3	833	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	90	-	-	150	-	0	160	-	140	150	-	150
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	9	1	73	171	0	7	14	490	41	3	905	3

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1184	1470	453	977	1432	245	908	0	0	531	0	0
Stage 1	911	911	-	518	518	-	-	-	-	-	-	-
Stage 2	273	559	-	459	914	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	145	126	554	205	133	755	745	-	-	1033	-	-
Stage 1	295	351	-	509	531	-	-	-	-	-	-	-
Stage 2	710	509	-	551	350	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	141	123	554	174	130	755	745	-	-	1033	-	-
Mov Cap-2 Maneuver	141	123	-	174	130	-	-	-	-	-	-	-
Stage 1	289	350	-	499	521	-	-	-	-	-	-	-
Stage 2	691	499	-	476	349	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	14.9	113.1	0.3	0
HCM LOS	B	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	WBLn3	SBL	SBT	SBR
Capacity (veh/h)	745	-	-	141	527	174	-	755	1033	-	-
HCM Lane V/C Ratio	0.019	-	-	0.062	0.14	0.981	-	0.009	0.003	-	-
HCM Control Delay (s)	9.9	-	-	32.2	12.9	117	0	9.8	8.5	-	-
HCM Lane LOS	A	-	-	D	B	F	A	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.2	0.5	7.8	-	0	0	-	-


Universe
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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	300	83	93	99	114	7	152	498	122	6	446	342
Future Volume (veh/h)	300	83	93	99	114	7	152	498	122	6	446	342
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	312	86	97	103	119	7	158	519	127	6	465	356
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	611	1370	611	595	1370	611	275	1370	611	370	740	564
Arrive On Green	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39
Sat Flow, veh/h	1265	3554	1585	1201	3554	1585	666	3554	1585	785	1919	1465
Grp Volume(v), veh/h	312	86	97	103	119	7	158	519	127	6	430	391
Grp Sat Flow(s),veh/h/ln	1265	1777	1585	1201	1777	1585	666	1777	1585	785	1777	1607
Q Serve(g_s), s	10.0	0.7	1.9	2.8	1.0	0.1	9.0	5.0	2.6	0.3	9.4	9.5
Cycle Q Clear(g_c), s	11.0	0.7	1.9	3.6	1.0	0.1	18.5	5.0	2.6	5.3	9.4	9.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.91
Lane Grp Cap(c), veh/h	611	1370	611	595	1370	611	275	1370	611	370	685	619
V/C Ratio(X)	0.51	0.06	0.16	0.17	0.09	0.01	0.57	0.38	0.21	0.02	0.63	0.63
Avail Cap(c_a), veh/h	611	1370	611	595	1370	611	275	1370	611	370	685	619
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.9	9.3	9.7	10.4	9.4	9.1	20.4	10.6	9.9	12.5	12.0	12.0
Incr Delay (d2), s/veh	3.0	0.1	0.6	0.6	0.1	0.0	8.4	0.8	0.8	0.1	4.3	4.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	4.9	0.4	1.1	1.3	0.6	0.1	4.0	3.1	1.5	0.1	6.7	6.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	15.9	9.4	10.2	11.0	9.5	9.1	28.9	11.4	10.6	12.6	16.3	16.8
LnGrp LOS	B	A	B	B	A	A	C	B	B	B	B	B
Approach Vol, veh/h		495			229			804			827	
Approach Delay, s/veh		13.7			10.2			14.7			16.5	
Approach LOS		B			B			B			B	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		24.0		24.0		24.0		24.0				
Change Period (Y+Rc), s		5.5		5.5		5.5		5.5				
Max Green Setting (Gmax), s		18.5		18.5		18.5		18.5				
Max Q Clear Time (g_c+I1), s		13.0		20.5		5.6		11.5				
Green Ext Time (p_c), s		1.0		0.0		0.8		2.1				

Intersection Summary												
HCM 6th Ctrl Delay			14.7									
HCM 6th LOS			B									

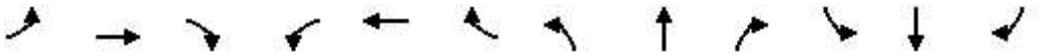
Intersection	
Int Delay, s/veh	1.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	8	204	4	40	254	7	5	7	46	5	1	8
Future Vol, veh/h	8	204	4	40	254	7	5	7	46	5	1	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	8	213	4	42	265	7	5	7	48	5	1	8

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	272	0	0	217	0	0	448	587	109	479	586	136
Stage 1	-	-	-	-	-	-	231	231	-	353	353	-
Stage 2	-	-	-	-	-	-	217	356	-	126	233	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	1288	-	-	1350	-	-	494	420	924	470	421	888
Stage 1	-	-	-	-	-	-	751	712	-	637	629	-
Stage 2	-	-	-	-	-	-	765	628	-	865	711	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1288	-	-	1350	-	-	475	404	924	427	405	888
Mov Cap-2 Maneuver	-	-	-	-	-	-	475	404	-	427	405	-
Stage 1	-	-	-	-	-	-	746	708	-	633	610	-
Stage 2	-	-	-	-	-	-	733	609	-	807	707	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	1	10.1	11.1
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	475	790	1288	-	-	1350	-	-	604
HCM Lane V/C Ratio	0.011	0.07	0.006	-	-	0.031	-	-	0.024
HCM Control Delay (s)	12.7	9.9	7.8	-	-	7.8	-	-	11.1
HCM Lane LOS	B	A	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0	0.2	0	-	-	0.1	-	-	0.1



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	96	106	3	38	139	119	4	19	34	52	28	83
Future Volume (veh/h)	96	106	3	38	139	119	4	19	34	52	28	83
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	105	116	3	42	153	131	4	21	37	57	31	91
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	807	1155	30	927	1196	954	263	96	169	320	66	194
Arrive On Green	0.64	0.64	0.64	0.64	0.64	0.64	0.16	0.16	0.16	0.16	0.16	0.16
Sat Flow, veh/h	1095	1815	47	1273	1879	1499	1269	607	1070	1345	419	1230
Grp Volume(v), veh/h	105	0	119	42	144	140	4	0	58	57	0	122
Grp Sat Flow(s),veh/h/ln	1095	0	1862	1273	1777	1601	1269	0	1678	1345	0	1649
Q Serve(g_s), s	2.1	0.0	1.2	0.6	1.6	1.7	0.1	0.0	1.5	1.9	0.0	3.3
Cycle Q Clear(g_c), s	3.8	0.0	1.2	1.9	1.6	1.7	3.4	0.0	1.5	3.3	0.0	3.3
Prop In Lane	1.00		0.03	1.00		0.94	1.00		0.64	1.00		0.75
Lane Grp Cap(c), veh/h	807	0	1185	927	1131	1019	263	0	265	320	0	261
V/C Ratio(X)	0.13	0.00	0.10	0.05	0.13	0.14	0.02	0.00	0.22	0.18	0.00	0.47
Avail Cap(c_a), veh/h	807	0	1185	927	1131	1019	558	0	655	632	0	643
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	4.3	0.0	3.4	3.8	3.5	3.5	20.2	0.0	17.9	19.3	0.0	18.6
Incr Delay (d2), s/veh	0.3	0.0	0.2	0.1	0.2	0.3	0.0	0.0	0.2	0.1	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.6	0.0	0.5	0.2	0.6	0.6	0.1	0.0	1.0	1.0	0.0	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	4.6	0.0	3.6	3.9	3.7	3.8	20.2	0.0	18.0	19.4	0.0	19.1
LnGrp LOS	A	A	A	A	A	A	C	A	B	B	A	B
Approach Vol, veh/h		224			326			62			179	
Approach Delay, s/veh		4.1			3.8			18.2			19.2	
Approach LOS		A			A			B			B	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		36.0		12.7		36.0		12.7				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		31.0		19.0		31.0		19.0				
Max Q Clear Time (g_c+I1), s		5.8		5.4		3.9		5.3				
Green Ext Time (p_c), s		1.5		0.1		2.6		0.4				

Intersection Summary												
HCM 6th Ctrl Delay			8.5									
HCM 6th LOS			A									

Intersection	
Int Delay, s/veh	1.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	8	5	46	33	5	33
Future Vol, veh/h	8	5	46	33	5	33
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	76	76	76	76	76	76
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	11	7	61	43	7	43

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	140	83	0	0	104	0
Stage 1	83	-	-	-	-	-
Stage 2	57	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	853	976	-	-	1488	-
Stage 1	940	-	-	-	-	-
Stage 2	966	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	849	976	-	-	1488	-
Mov Cap-2 Maneuver	849	-	-	-	-	-
Stage 1	940	-	-	-	-	-
Stage 2	961	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.1	0	1
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	894	1488	-
HCM Lane V/C Ratio	-	-	0.019	0.004	-
HCM Control Delay (s)	-	-	9.1	7.4	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Intersection	
Int Delay, s/veh	10.9

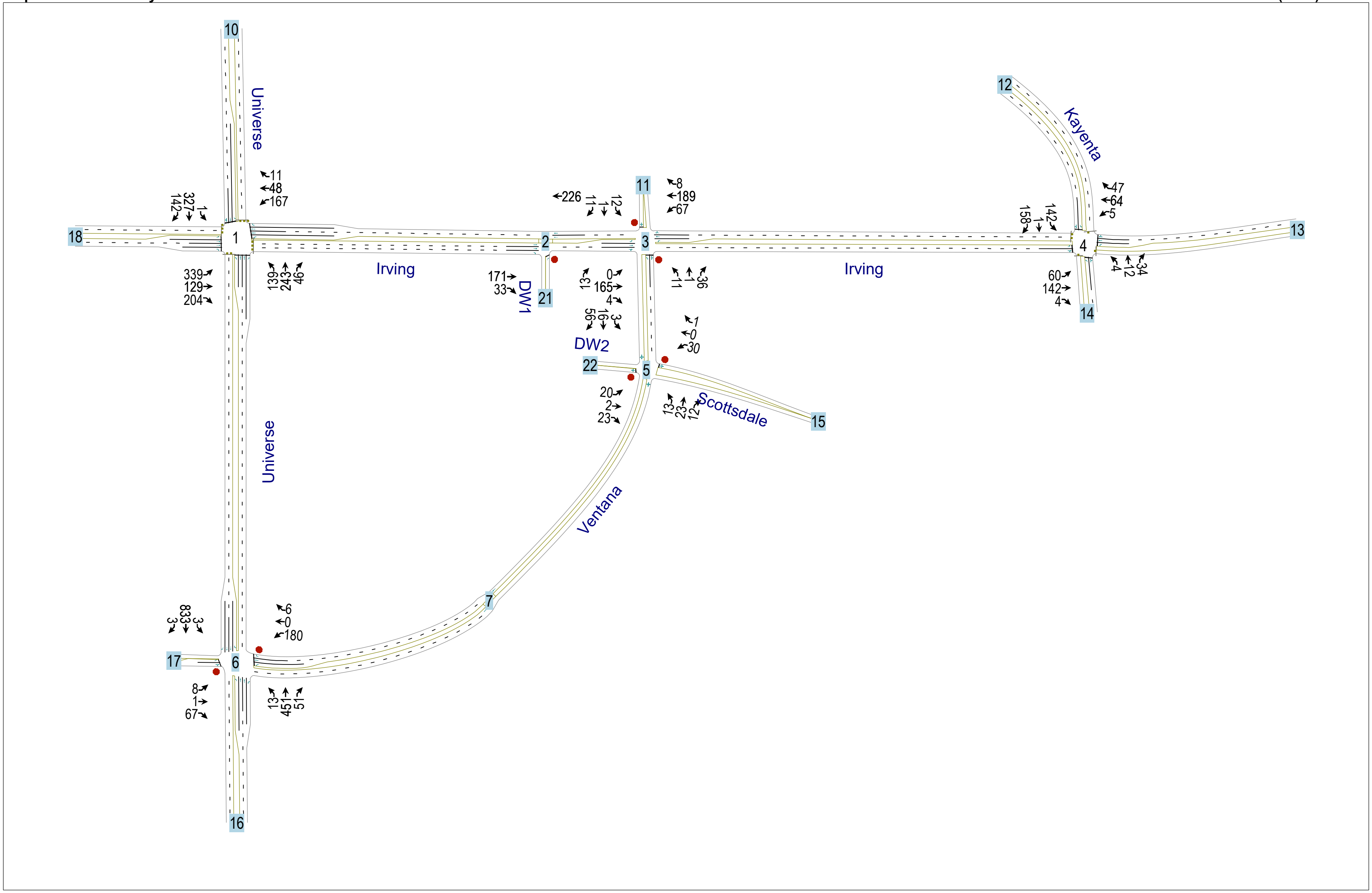
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	7	4	19	95	1	7	41	752	131	12	655	18
Future Vol, veh/h	7	4	19	95	1	7	41	752	131	12	655	18
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	90	-	-	150	-	0	160	-	140	150	-	150
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	8	4	21	106	1	8	46	836	146	13	728	20

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1265	1828	364	1320	1702	418	748	0	0	982	0	0
Stage 1	754	754	-	928	928	-	-	-	-	-	-	-
Stage 2	511	1074	-	392	774	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	126	76	633	115	91	584	856	-	-	699	-	-
Stage 1	367	415	-	288	345	-	-	-	-	-	-	-
Stage 2	514	294	-	604	406	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	116	71	633	~ 100	84	584	856	-	-	699	-	-
Mov Cap-2 Maneuver	116	71	-	~ 100	84	-	-	-	-	-	-	-
Stage 1	347	407	-	272	326	-	-	-	-	-	-	-
Stage 2	478	278	-	567	398	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	24.3	171.8	0.4	0.2
HCM LOS	C	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	WBLn3	SBL	SBT	SBR
Capacity (veh/h)	856	-	-	116	266	100	84	584	699	-	-
HCM Lane V/C Ratio	0.053	-	-	0.067	0.096	1.056	0.013	0.013	0.019	-	-
HCM Control Delay (s)	9.4	-	-	38.3	20	184.9	48.4	11.2	10.2	-	-
HCM Lane LOS	A	-	-	E	C	F	E	B	B	-	-
HCM 95th %tile Q(veh)	0.2	-	-	0.2	0.3	6.6	0	0	0.1	-	-

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


Universe
Irving
Kayenta
DW1
DW2
Scottsdale
Ventana
Universe
Irving

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	339	96	204	167	42	10	139	243	46	1	327	142
Future Volume (veh/h)	339	129	204	167	48	11	139	243	46	1	327	142
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	368	140	222	182	52	12	151	264	50	1	355	154
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	653	1370	611	517	1370	611	398	1370	611	508	935	399
Arrive On Green	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39
Sat Flow, veh/h	1338	3554	1585	1020	3554	1585	891	3554	1585	1066	2426	1035
Grp Volume(v), veh/h	368	140	222	182	52	12	151	264	50	1	258	251
Grp Sat Flow(s),veh/h/ln	1338	1777	1585	1020	1777	1585	891	1777	1585	1066	1777	1684
Q Serve(g_s), s	11.4	1.2	4.8	6.7	0.4	0.2	7.1	2.4	1.0	0.0	5.0	5.2
Cycle Q Clear(g_c), s	11.8	1.2	4.8	7.9	0.4	0.2	12.2	2.4	1.0	2.4	5.0	5.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.61
Lane Grp Cap(c), veh/h	653	1370	611	517	1370	611	398	1370	611	508	685	649
V/C Ratio(X)	0.56	0.10	0.36	0.35	0.04	0.02	0.38	0.19	0.08	0.00	0.38	0.39
Avail Cap(c_a), veh/h	653	1370	611	517	1370	611	398	1370	611	508	685	649
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.9	9.4	10.5	12.0	9.2	9.1	15.1	9.8	9.4	10.6	10.6	10.6
Incr Delay (d2), s/veh	3.5	0.1	1.7	1.9	0.1	0.1	2.7	0.3	0.3	0.0	1.6	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	5.9	0.7	2.9	2.7	0.3	0.1	2.7	1.4	0.6	0.0	3.3	3.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	16.4	9.6	12.2	13.8	9.3	9.2	17.8	10.1	9.6	10.6	12.2	12.4
LnGrp LOS	B	A	B	B	A	A	B	B	A	B	B	B
Approach Vol, veh/h		730			246			465			510	
Approach Delay, s/veh		13.8			12.6			12.6			12.3	
Approach LOS		B			B			B			B	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		24.0		24.0		24.0		24.0				
Change Period (Y+Rc), s		5.5		5.5		5.5		5.5				
Max Green Setting (Gmax), s		18.5		18.5		18.5		18.5				
Max Q Clear Time (g_c+I1), s		13.8		14.2		9.9		7.2				
Green Ext Time (p_c), s		1.4		0.7		0.7		1.5				

Intersection Summary												
HCM 6th Ctrl Delay			13.0									
HCM 6th LOS			B									

Intersection	
Int Delay, s/veh	0.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	171	0	0	219	0	0
Future Vol, veh/h	171	33	0	226	0	13
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	186	36	0	246	0	14

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	93
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.32
Pot Cap-1 Maneuver	-	-	0	-	0	946
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	946
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	8.9
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	946	-	-	-
HCM Lane V/C Ratio	0.015	-	-	-
HCM Control Delay (s)	8.9	-	-	-
HCM Lane LOS	A	-	-	-
HCM 95th %tile Q(veh)	0	-	-	-

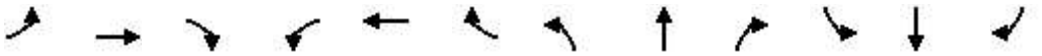
Intersection	
Int Delay, s/veh	2.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	152	4	11	189	8	4	1	23	12	1	11
Future Vol, veh/h	0	165	4	67	189	8	11	1	36	12	1	11
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	179	4	73	205	9	12	1	39	13	1	12

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	214	0	0	183	0	0	430	541	92	446	539	107
Stage 1	-	-	-	-	-	-	181	181	-	356	356	-
Stage 2	-	-	-	-	-	-	249	360	-	90	183	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	1353	-	-	1389	-	-	509	447	947	496	448	926
Stage 1	-	-	-	-	-	-	803	749	-	634	628	-
Stage 2	-	-	-	-	-	-	733	625	-	907	747	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1353	-	-	1389	-	-	482	423	947	455	424	926
Mov Cap-2 Maneuver	-	-	-	-	-	-	482	423	-	455	424	-
Stage 1	-	-	-	-	-	-	803	749	-	634	595	-
Stage 2	-	-	-	-	-	-	684	592	-	868	747	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	2	9.9	11.4
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	482	916	1353	-	-	1389	-	-	591
HCM Lane V/C Ratio	0.025	0.044	-	-	-	0.052	-	-	0.044
HCM Control Delay (s)	12.7	9.1	0	-	-	7.7	-	-	11.4
HCM Lane LOS	B	A	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.1	0.1	0	-	-	0.2	-	-	0.1



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	52	124	4	5	48	47	4	12	34	142	1	118
Future Volume (veh/h)	60	142	4	5	64	47	4	12	34	142	1	158
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	65	154	4	5	70	51	4	13	37	154	1	172
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	905	1116	29	855	1257	836	248	80	228	361	2	294
Arrive On Green	0.62	0.62	0.62	0.62	0.62	0.62	0.19	0.19	0.19	0.19	0.19	0.19
Sat Flow, veh/h	1270	1815	47	1228	2044	1359	1212	429	1221	1355	9	1577
Grp Volume(v), veh/h	65	0	158	5	60	61	4	0	50	154	0	173
Grp Sat Flow(s),veh/h/ln	1270	0	1862	1228	1777	1626	1212	0	1651	1355	0	1586
Q Serve(g_s), s	1.1	0.0	1.8	0.1	0.7	0.8	0.2	0.0	1.3	5.4	0.0	5.0
Cycle Q Clear(g_c), s	1.8	0.0	1.8	1.9	0.7	0.8	5.2	0.0	1.3	6.7	0.0	5.0
Prop In Lane	1.00		0.03	1.00		0.84	1.00		0.74	1.00		0.99
Lane Grp Cap(c), veh/h	905	0	1145	855	1093	1000	248	0	308	361	0	296
V/C Ratio(X)	0.07	0.00	0.14	0.01	0.05	0.06	0.02	0.00	0.16	0.43	0.00	0.59
Avail Cap(c_a), veh/h	905	0	1145	855	1093	1000	479	0	622	619	0	598
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	4.2	0.0	4.1	4.5	3.9	3.9	21.1	0.0	17.2	20.0	0.0	18.7
Incr Delay (d2), s/veh	0.2	0.0	0.3	0.0	0.1	0.1	0.0	0.0	0.1	0.3	0.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.4	0.0	0.8	0.0	0.3	0.3	0.1	0.0	0.8	2.9	0.0	3.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	4.4	0.0	4.3	4.5	4.0	4.0	21.1	0.0	17.3	20.3	0.0	19.4
LnGrp LOS	A	A	A	A	A	A	C	A	B	C	A	B
Approach Vol, veh/h		223			126			54			327	
Approach Delay, s/veh		4.3			4.0			17.6			19.8	
Approach LOS		A			A			B			B	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		36.0		14.4		36.0		14.4				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		31.0		19.0		31.0		19.0				
Max Q Clear Time (g_c+I1), s		3.8		7.2		3.9		8.7				
Green Ext Time (p_c), s		1.6		0.1		0.9		0.7				

Intersection Summary												
HCM 6th Ctrl Delay			12.2									
HCM 6th LOS			B									

Intersection	
Int Delay, s/veh	4.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	0	30	0	1	0	23	12	3	16	0
Future Vol, veh/h	20	2	23	30	0	1	13	23	12	3	16	56
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	22	2	25	33	0	1	14	25	13	3	17	61

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	114	120	48	127	144	32	78	0	0	38	0	0
Stage 1	54	54	-	60	60	-	-	-	-	-	-	-
Stage 2	60	66	-	67	84	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	863	770	1021	846	747	1042	1520	-	-	1572	-	-
Stage 1	958	850	-	951	845	-	-	-	-	-	-	-
Stage 2	951	840	-	943	825	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	855	762	1021	816	739	1042	1520	-	-	1572	-	-
Mov Cap-2 Maneuver	855	762	-	816	739	-	-	-	-	-	-	-
Stage 1	949	848	-	942	837	-	-	-	-	-	-	-
Stage 2	941	832	-	916	823	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.1	9.6	2	0.3
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1520	-	-	927	822	1572	-	-
HCM Lane V/C Ratio	0.009	-	-	0.053	0.041	0.002	-	-
HCM Control Delay (s)	7.4	0	-	9.1	9.6	7.3	0	-
HCM Lane LOS	A	A	-	A	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.2	0.1	0	-	-

Intersection	
Int Delay, s/veh	18.6

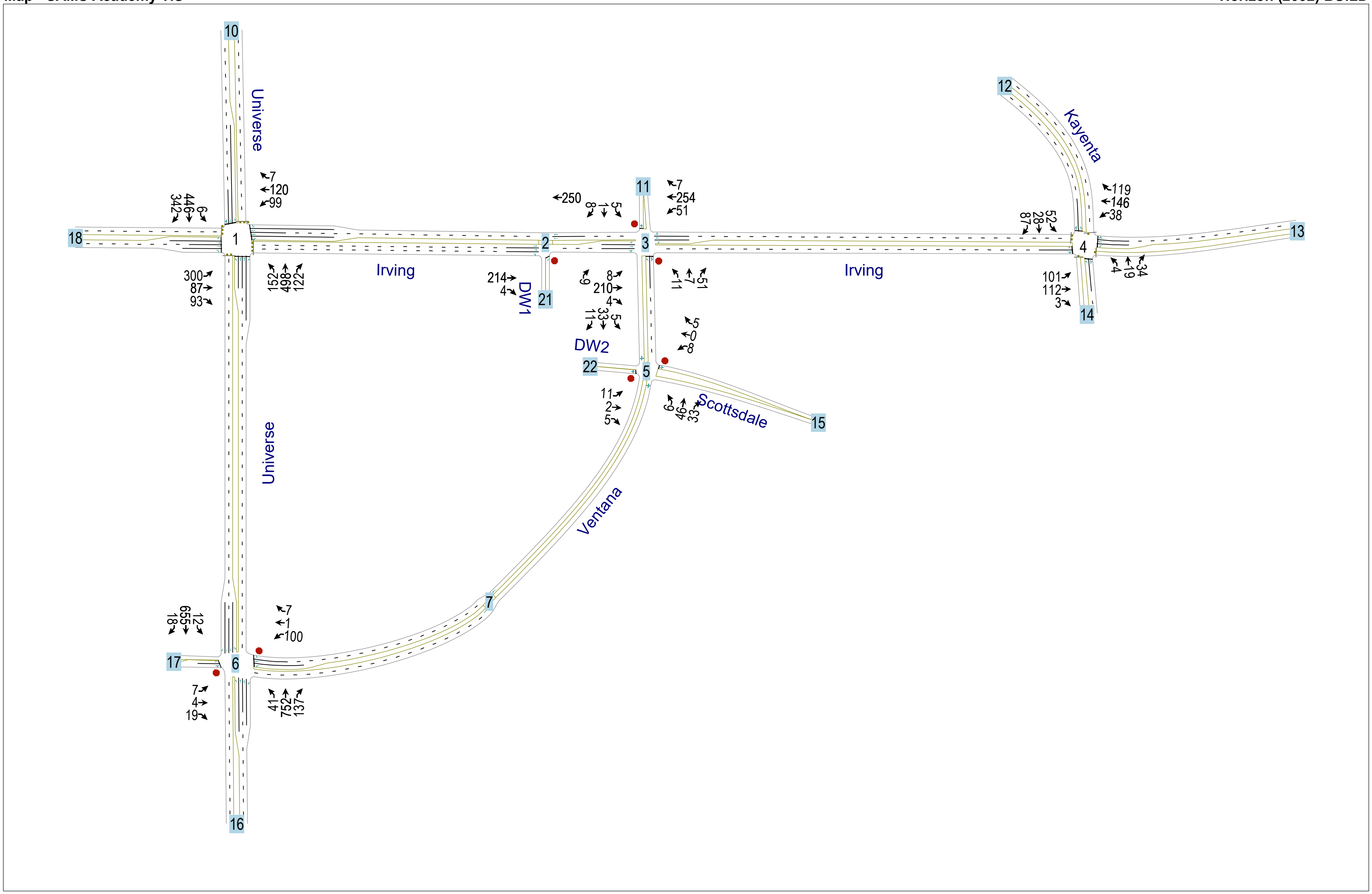
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	8	1	67	157	0	6	13	451	38	3	833	3
Future Vol, veh/h	8	1	67	180	0	6	13	451	51	3	833	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	90	-	-	150	-	0	160	-	140	150	-	150
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	9	1	73	196	0	7	14	490	55	3	905	3

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1184	1484	453	977	1432	245	908	0	0	545	0	0
Stage 1	911	911	-	518	518	-	-	-	-	-	-	-
Stage 2	273	573	-	459	914	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	145	124	554	205	133	755	745	-	-	1020	-	-
Stage 1	295	351	-	509	531	-	-	-	-	-	-	-
Stage 2	710	502	-	551	350	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	141	121	554	~ 174	130	755	745	-	-	1020	-	-
Mov Cap-2 Maneuver	141	121	-	~ 174	130	-	-	-	-	-	-	-
Stage 1	289	350	-	499	521	-	-	-	-	-	-	-
Stage 2	691	492	-	476	349	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	15	155	0.3	0
HCM LOS	C	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	WBLn3	SBL	SBT	SBR
Capacity (veh/h)	745	-	-	141	526	174	-	755	1020	-	-
HCM Lane V/C Ratio	0.019	-	-	0.062	0.141	1.124	-	0.009	0.003	-	-
HCM Control Delay (s)	9.9	-	-	32.2	13	159.8	0	9.8	8.5	-	-
HCM Lane LOS	A	-	-	D	B	F	A	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.2	0.5	10	-	0	0	-	-

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


Universe
Irving
DW1
DW2
Scottsdale
Ventana
Kayenta
Universe
Irving

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	300	83	93	99	114	7	152	498	122	6	446	342
Future Volume (veh/h)	300	87	93	99	120	7	152	498	122	6	446	342
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	312	91	97	103	125	7	158	519	127	6	465	356
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	607	1370	611	591	1370	611	275	1370	611	370	740	564
Arrive On Green	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39
Sat Flow, veh/h	1258	3554	1585	1195	3554	1585	666	3554	1585	785	1919	1465
Grp Volume(v), veh/h	312	91	97	103	125	7	158	519	127	6	430	391
Grp Sat Flow(s),veh/h/ln	1258	1777	1585	1195	1777	1585	666	1777	1585	785	1777	1607
Q Serve(g_s), s	10.1	0.8	1.9	2.9	1.1	0.1	9.0	5.0	2.6	0.3	9.4	9.5
Cycle Q Clear(g_c), s	11.2	0.8	1.9	3.6	1.1	0.1	18.5	5.0	2.6	5.3	9.4	9.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.91
Lane Grp Cap(c), veh/h	607	1370	611	591	1370	611	275	1370	611	370	685	619
V/C Ratio(X)	0.51	0.07	0.16	0.17	0.09	0.01	0.57	0.38	0.21	0.02	0.63	0.63
Avail Cap(c_a), veh/h	607	1370	611	591	1370	611	275	1370	611	370	685	619
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.0	9.3	9.7	10.4	9.4	9.1	20.4	10.6	9.9	12.5	12.0	12.0
Incr Delay (d2), s/veh	3.1	0.1	0.6	0.6	0.1	0.0	8.4	0.8	0.8	0.1	4.3	4.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	4.9	0.5	1.1	1.3	0.6	0.1	4.0	3.1	1.5	0.1	6.7	6.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	16.0	9.4	10.2	11.1	9.5	9.1	28.9	11.4	10.6	12.6	16.3	16.8
LnGrp LOS	B	A	B	B	A	A	C	B	B	B	B	B
Approach Vol, veh/h		500			235			804			827	
Approach Delay, s/veh		13.7			10.2			14.7			16.5	
Approach LOS		B			B			B			B	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		24.0		24.0		24.0		24.0				
Change Period (Y+Rc), s		5.5		5.5		5.5		5.5				
Max Green Setting (Gmax), s		18.5		18.5		18.5		18.5				
Max Q Clear Time (g_c+I1), s		13.2		20.5		5.6		11.5				
Green Ext Time (p_c), s		1.0		0.0		0.8		2.1				

Intersection Summary												
HCM 6th Ctrl Delay			14.7									
HCM 6th LOS			B									

Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	214	0	0	244	0	0
Future Vol, veh/h	214	4	0	250	0	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	223	4	0	260	0	6

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	112
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.32
Pot Cap-1 Maneuver	-	-	0	-	0	920
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	920
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	8.9
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	920	-	-	-
HCM Lane V/C Ratio	0.007	-	-	-
HCM Control Delay (s)	8.9	-	-	-
HCM Lane LOS	A	-	-	-
HCM 95th %tile Q(veh)	0	-	-	-

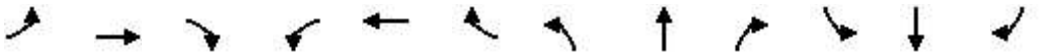
Intersection	
Int Delay, s/veh	2.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	8	204	4	40	254	7	5	7	46	5	1	8
Future Vol, veh/h	8	210	4	51	254	7	11	7	51	5	1	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	8	219	4	53	265	7	11	7	53	5	1	8

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	272	0	0	223	0	0	476	615	112	504	614	136
Stage 1	-	-	-	-	-	-	237	237	-	375	375	-
Stage 2	-	-	-	-	-	-	239	378	-	129	239	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	1288	-	-	1343	-	-	472	405	920	451	406	888
Stage 1	-	-	-	-	-	-	745	708	-	618	615	-
Stage 2	-	-	-	-	-	-	743	614	-	861	706	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1288	-	-	1343	-	-	450	387	920	405	388	888
Mov Cap-2 Maneuver	-	-	-	-	-	-	450	387	-	405	388	-
Stage 1	-	-	-	-	-	-	741	704	-	614	591	-
Stage 2	-	-	-	-	-	-	706	590	-	798	702	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	1.3	10.4	11.3
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	450	789	1288	-	-	1343	-	-	585
HCM Lane V/C Ratio	0.025	0.077	0.006	-	-	0.04	-	-	0.025
HCM Control Delay (s)	13.2	9.9	7.8	-	-	7.8	-	-	11.3
HCM Lane LOS	B	A	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.1	0.2	0	-	-	0.1	-	-	0.1



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	96	106	3	38	139	119	4	19	34	52	28	83
Future Volume (veh/h)	101	112	3	38	146	119	4	19	34	52	28	87
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	111	123	3	42	160	131	4	21	37	57	31	96
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	802	1157	28	919	1219	934	259	96	169	320	64	197
Arrive On Green	0.64	0.64	0.64	0.64	0.64	0.64	0.16	0.16	0.16	0.16	0.16	0.16
Sat Flow, veh/h	1088	1818	44	1265	1916	1467	1264	607	1070	1345	402	1244
Grp Volume(v), veh/h	111	0	126	42	148	143	4	0	58	57	0	127
Grp Sat Flow(s),veh/h/ln	1088	0	1862	1265	1777	1606	1264	0	1678	1345	0	1646
Q Serve(g_s), s	2.2	0.0	1.3	0.7	1.6	1.7	0.1	0.0	1.5	1.9	0.0	3.4
Cycle Q Clear(g_c), s	3.9	0.0	1.3	1.9	1.6	1.7	3.6	0.0	1.5	3.3	0.0	3.4
Prop In Lane	1.00		0.02	1.00		0.91	1.00		0.64	1.00		0.76
Lane Grp Cap(c), veh/h	802	0	1185	919	1131	1022	259	0	266	320	0	261
V/C Ratio(X)	0.14	0.00	0.11	0.05	0.13	0.14	0.02	0.00	0.22	0.18	0.00	0.49
Avail Cap(c_a), veh/h	802	0	1185	919	1131	1022	552	0	654	632	0	642
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	4.3	0.0	3.5	3.8	3.5	3.5	20.3	0.0	17.9	19.3	0.0	18.7
Incr Delay (d2), s/veh	0.4	0.0	0.2	0.1	0.2	0.3	0.0	0.0	0.2	0.1	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.7	0.0	0.5	0.2	0.7	0.7	0.1	0.0	1.0	1.0	0.0	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	4.7	0.0	3.6	3.9	3.8	3.8	20.3	0.0	18.0	19.4	0.0	19.2
LnGrp LOS	A	A	A	A	A	A	C	A	B	B	A	B
Approach Vol, veh/h		237			333			62			184	
Approach Delay, s/veh		4.1			3.8			18.2			19.3	
Approach LOS		A			A			B			B	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		36.0		12.7		36.0		12.7				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		31.0		19.0		31.0		19.0				
Max Q Clear Time (g_c+I1), s		5.9		5.6		3.9		5.4				
Green Ext Time (p_c), s		1.6		0.1		2.7		0.5				

Intersection Summary												
HCM 6th Ctrl Delay			8.5									
HCM 6th LOS			A									

Intersection	
Int Delay, s/veh	2.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	0	8	0	5	0	46	33	5	33	0
Future Vol, veh/h	11	2	5	8	0	5	6	46	33	5	33	11
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	76	76	76	76	76	76	76	76	76	76	76	76
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	14	3	7	11	0	7	8	61	43	7	43	14

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	166	184	50	168	170	83	57	0	0	104	0	0
Stage 1	64	64	-	99	99	-	-	-	-	-	-	-
Stage 2	102	120	-	69	71	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	798	710	1018	796	723	976	1547	-	-	1488	-	-
Stage 1	947	842	-	907	813	-	-	-	-	-	-	-
Stage 2	904	796	-	941	836	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	786	702	1018	782	715	976	1547	-	-	1488	-	-
Mov Cap-2 Maneuver	786	702	-	782	715	-	-	-	-	-	-	-
Stage 1	941	838	-	902	808	-	-	-	-	-	-	-
Stage 2	893	791	-	927	832	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.5	9.3	0.5	0.8
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1547	-	-	827	847	1488	-	-
HCM Lane V/C Ratio	0.005	-	-	0.029	0.02	0.004	-	-
HCM Control Delay (s)	7.3	0	-	9.5	9.3	7.4	0	-
HCM Lane LOS	A	A	-	A	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.1	0	-	-

Intersection	
Int Delay, s/veh	12.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	7	4	19	95	1	7	41	752	131	12	655	18
Future Vol, veh/h	7	4	19	100	1	7	41	752	137	12	655	18
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	90	-	-	150	-	0	160	-	140	150	-	150
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	8	4	21	111	1	8	46	836	152	13	728	20

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1265	1834	364	1320	1702	418	748	0	0	988	0	0
Stage 1	754	754	-	928	928	-	-	-	-	-	-	-
Stage 2	511	1080	-	392	774	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	126	75	633	115	91	584	856	-	-	695	-	-
Stage 1	367	415	-	288	345	-	-	-	-	-	-	-
Stage 2	514	293	-	604	406	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	116	70	633	~ 100	84	584	856	-	-	695	-	-
Mov Cap-2 Maneuver	116	70	-	~ 100	84	-	-	-	-	-	-	-
Stage 1	347	407	-	272	326	-	-	-	-	-	-	-
Stage 2	478	277	-	567	398	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	24.3	188.7	0.4	0.2
HCM LOS	C	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	WBLn3	SBL	SBT	SBR
Capacity (veh/h)	856	-	-	116	264	100	84	584	695	-	-
HCM Lane V/C Ratio	0.053	-	-	0.067	0.097	1.111	0.013	0.013	0.019	-	-
HCM Control Delay (s)	9.4	-	-	38.3	20.1	202.5	48.4	11.2	10.3	-	-
HCM Lane LOS	A	-	-	E	C	F	E	B	B	-	-
HCM 95th %tile Q(veh)	0.2	-	-	0.2	0.3	7.2	0	0	0.1	-	-

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

APPENDIX E
Traffic Signal Warrant Study

Warrants Summary Report

6: Universe & Country

Intersection Information

	Major Street	Minor Street
Street Name	Universe	Ventana
Direction	NB/SB	EB/WB
Number of Lanes	2	2
Approach Speed	35	25

Warrant	Met?	Notes
Warrant 1, Eight-Hour Vehicular Volume		
	No	
Condition A or B Met	No	0 Hours met (8 required)
Condition A and B M	No	0 Hours met (8 required)
Warrant 2, Four-Hour Vehicular Volume		
	No	0 Hours met (4 required)
Warrant 3, Peak Hour		
	No	
Condition A Met?	No	0 Hours met (1 required)
Condition B Met?	No	0 Hours met (1 required)
Warrant 4, Pedestrian Volume		
	No	
Condition A Met?	No	0 Hours met (4 required)
Condition B Met?	No	0 Hours met (1 required)
Warrant 5, School Crossing		
	No	

Warrant 6, Coordinated Signal System

Yes

Warrant 7, Crash Experience

No

Traffic Volume Condi	No	1 Hours met (8 required)
Ped Condition?	No	0 Hours met (8 required)

Warrant 8, Roadway Network

No

Warrant 9, Intersection Near a Grade Crossing

No

AWSC Warrant, Multiway Stop Application

Yes

Condition A Met?	Yes
Condition B Met?	No
Condition C Met?	No

Warrants Summary Report

6: Universe & Country

Intersection Information

	Major Street	Minor Street
Street Name	Universe	Ventana
Direction	NB/SB	EB/WB
Number of Lanes	2	2
Approch Speed	35	25

Warrant	Met?	Notes
Warrant 1, Eight-Hour Vehicular Volume		
	No	
Condition A or B Met'	No	0 Hours met (8 required)
Condition A and B Me	No	0 Hours met (8 required)
Warrant 2, Four-Hour Vehicular Volume		
	No	0 Hours met (4 required)
Warrant 3, Peak Hour		
	No	
Condition A Met?	No	0 Hours met (1 required)
Condition B Met?	No	0 Hours met (1 required)
Warrant 4, Pedestrian Volume		
	No	
Condition A Met?	No	0 Hours met (4 required)
Condition B Met?	No	0 Hours met (1 required)
Warrant 5, School Crossing		
	No	

Warrant 6, Coordinated Signal System

Yes

Warrant 7, Crash Experience

No

Traffic Volume Condi	No	1 Hours met (8 required)
Ped Condition?	No	0 Hours met (8 required)

Warrant 8, Roadway Network

No

Warrant 9, Intersection Near a Grade Crossing

No

AWSC Warrant, Multiway Stop Application

Yes

Condition A Met?	Yes
Condition B Met?	No
Condition C Met?	No

Warrant 1: Eight-hour Vehicular Volume

6: Universe & Country

Intersection Information

Major Street Name:	Universe
Major Street Direction:	NB/SB
Minor Street Direction:	EB/WB

WARRANT 1 MET? No

Details:

Condition A Met?	No	0 Hours met (8 required)
Condition B Met?	No	0 Hours met (8 required)

Hour	Major Street Vehicles (Total of Both Approaches)		High Volume Minor Approach Vehicles		100% Standard Met? Cond. A OR Cond. B		80% Standard Met? Cond. A AND Cond. B	
					Condition A 100% Column	Condition B 100% Column	Condition A 80% Column	Condition B 80% Column
07:00 to 08:00	**788**		**114**		No	No	No	Yes
Condition A	Volume >= 100% column (600)?	Yes	Volume >= 100% column (900)?	No				
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	No				
Condition B	**Volume >= 100% column (900)?**	No	**Volume >= 100% column (100)?**	Yes				
	Volume >= 80% column (720)?	Yes	**Volume >= 80% column (80)?**	Yes				
07:15 to 08:15	**816**		**110**		No	No	No	Yes
Condition A	Volume >= 100% column (600)?	Yes	Volume >= 100% column (900)?	No				
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	No				
Condition B	**Volume >= 100% column (900)?**	No	**Volume >= 100% column (100)?**	Yes				
	Volume >= 80% column (720)?	Yes	**Volume >= 80% column (80)?**	Yes				
07:30 to 08:30	**780**		**84**		No	No	No	Yes
Condition A	Volume >= 100% column (600)?	Yes	Volume >= 100% column (900)?	No				
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	No				
Condition B	**Volume >= 100% column (900)?**	No	**Volume >= 100% column (100)?**	No				
	Volume >= 80% column (720)?	Yes	**Volume >= 80% column (80)?**	Yes				
07:45 to 08:45	**719**		**78**		No	No	No	No
Condition A	Volume >= 100% column (600)?	Yes	Volume >= 100% column (900)?	No				
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	No				
Condition B	**Volume >= 100% column (900)?**	No	**Volume >= 100% column (100)?**	No				
	Volume >= 80% column (720)?	No	**Volume >= 80% column (80)?**	No				

08:00 to 09:00	**619**		**74**		No	No	No	No
Condition A	Volume >= 100% column (600)?	Yes	Volume >= 100% column (900)?	No				
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	No				
Condition B	**Volume >= 100% column (900)?**	No	**Volume >= 100% column (100)?**	No				
	Volume >= 80% column (720)?	No	**Volume >= 80% column (80)?**	No				
08:15 to 09:15	**456**		**55**		No	No	No	No
Condition A	Volume >= 100% column (600)?	No	Volume >= 100% column (900)?	No				
	Volume >= 80% column (480)?	No	Volume >= 80% column (720)?	No				
Condition B	**Volume >= 100% column (900)?**	No	**Volume >= 100% column (100)?**	No				
	Volume >= 80% column (720)?	No	**Volume >= 80% column (80)?**	No				
08:30 to 09:30	**304**		**42**		No	No	No	No
Condition A	Volume >= 100% column (600)?	No	Volume >= 100% column (900)?	No				
	Volume >= 80% column (480)?	No	Volume >= 80% column (720)?	No				
Condition B	**Volume >= 100% column (900)?**	No	**Volume >= 100% column (100)?**	No				
	Volume >= 80% column (720)?	No	**Volume >= 80% column (80)?**	No				
08:45 to 09:45	**134**		**19**		No	No	No	No
Condition A	Volume >= 100% column (600)?	No	Volume >= 100% column (900)?	No				
	Volume >= 80% column (480)?	No	Volume >= 80% column (720)?	No				
Condition B	**Volume >= 100% column (900)?**	No	**Volume >= 100% column (100)?**	No				
	Volume >= 80% column (720)?	No	**Volume >= 80% column (80)?**	No				
16:00 to 17:00	**950**		**53**		No	No	No	No
Condition A	Volume >= 100% column (600)?	Yes	Volume >= 100% column (900)?	No				
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	No				
Condition B	**Volume >= 100% column (900)?**	Yes	**Volume >= 100% column (100)?**	No				
	Volume >= 80% column (720)?	Yes	**Volume >= 80% column (80)?**	No				
16:15 to 17:15	**970**		**67**		No	No	No	No
Condition A	Volume >= 100% column (600)?	Yes	Volume >= 100% column (900)?	No				
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	No				
Condition B	**Volume >= 100% column (900)?**	Yes	**Volume >= 100% column (100)?**	No				
	Volume >= 80% column (720)?	Yes	**Volume >= 80% column (80)?**	No				
16:30 to 17:30	**1,003**		**70**		No	No	No	No
Condition A	Volume >= 100% column (600)?	Yes	Volume >= 100% column (900)?	No				
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	No				
Condition B	**Volume >= 100% column (900)?**	Yes	**Volume >= 100% column (100)?**	No				
	Volume >= 80% column (720)?	Yes	**Volume >= 80% column (80)?**	No				

16:45 to 17:45	**1,020**		**71**		No	No		No	No	
Condition A	Volume >= 100% column (600)?	Yes	Volume >= 100% column (900)?	No						
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	No						
Condition B	**Volume >= 100% column (900)?**	Yes	**Volume >= 100% column (100)?**	No						
	Volume >= 80% column (720)?	Yes	**Volume >= 80% column (80)?**	No						
17:00 to 18:00	**1,026**		**73**		No	No		No	No	
Condition A	Volume >= 100% column (600)?	Yes	Volume >= 100% column (900)?	No						
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	No						
Condition B	**Volume >= 100% column (900)?**	Yes	**Volume >= 100% column (100)?**	No						
	Volume >= 80% column (720)?	Yes	**Volume >= 80% column (80)?**	No						
17:15 to 18:15	**742**		**46**		No	No		No	No	
Condition A	Volume >= 100% column (600)?	Yes	Volume >= 100% column (900)?	No						
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	No						
Condition B	**Volume >= 100% column (900)?**	No	**Volume >= 100% column (100)?**	No						
	Volume >= 80% column (720)?	Yes	**Volume >= 80% column (80)?**	No						
17:30 to 18:30	**490**		**32**		No	No		No	No	
Condition A	Volume >= 100% column (600)?	No	Volume >= 100% column (900)?	No						
	Volume >= 80% column (480)?	Yes	Volume >= 80% column (720)?	No						
Condition B	**Volume >= 100% column (900)?**	No	**Volume >= 100% column (100)?**	No						
	Volume >= 80% column (720)?	No	**Volume >= 80% column (80)?**	No						
17:45 to 18:45	**239**		**16**		No	No		No	No	
Condition A	Volume >= 100% column (600)?	No	Volume >= 100% column (900)?	No						
	Volume >= 80% column (480)?	No	Volume >= 80% column (720)?	No						
Condition B	**Volume >= 100% column (900)?**	No	**Volume >= 100% column (100)?**	No						
	Volume >= 80% column (720)?	No	**Volume >= 80% column (80)?**	No						

Warrant 2: Four-hour Vehicular Volume

6: Universe & Country

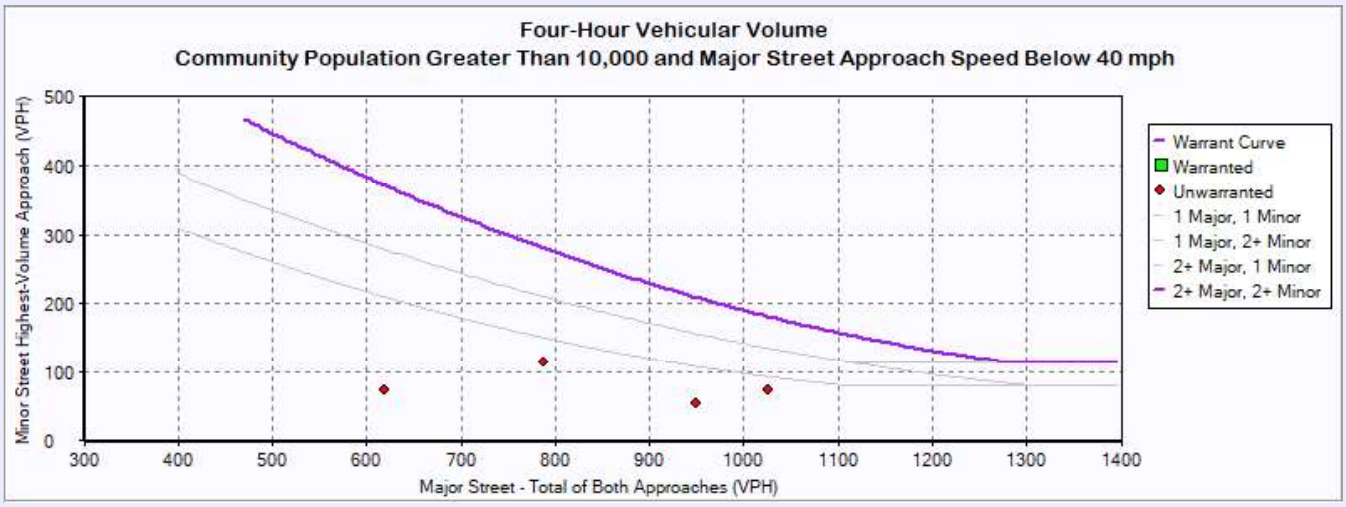
Intersection Information

	Major Street	Minor Street
Street Name	Universe	Ventana
Direction	NB/SB	EB/WB
Number of Lanes	2	2
Approch Speed	35	25

Warrant 2 Met? No

Details:

Notes	0 Hours met (4 required)
Low population	No



Hourly Volumes

Hour	Major Street Total All Approaches (vph)	Minor Street Highest Volume Approach (vph)
00:00:00 - 01:00:00	0.00	0.00
01:00:00 - 02:00:00	0.00	0.00
02:00:00 - 03:00:00	0.00	0.00
03:00:00 - 04:00:00	0.00	0.00
04:00:00 - 05:00:00	0.00	0.00
05:00:00 - 06:00:00	0.00	0.00
06:00:00 - 07:00:00	0.00	0.00
07:00:00 - 08:00:00	788.00	114.00
08:00:00 - 09:00:00	619.00	74.00
09:00:00 - 10:00:00	0.00	0.00
10:00:00 - 11:00:00	0.00	0.00
11:00:00 - 12:00:00	0.00	0.00
12:00:00 - 13:00:00	0.00	0.00
13:00:00 - 14:00:00	0.00	0.00
14:00:00 - 15:00:00	0.00	0.00
15:00:00 - 16:00:00	0.00	0.00
16:00:00 - 17:00:00	950.00	53.00
17:00:00 - 18:00:00	1,026.00	73.00
18:00:00 - 19:00:00	0.00	0.00
19:00:00 - 20:00:00	0.00	0.00
20:00:00 - 21:00:00	0.00	0.00
21:00:00 - 22:00:00	0.00	0.00
22:00:00 - 23:00:00	0.00	0.00
23:00:00 - 00:00:00	0.00	0.00

Warranted Volumes

Hour	Major Street Total All Approaches (vph)	Minor Street Highest Volume Approach (vph)

Warrant 3: Peak Hour

6: Universe & Country

Intersection Information

	Major Street	Minor Street
Street Name	Universe	Ventana
Direction	NB/SB	EB/WB
Number of Lanes	2	2
Approch Speed	35	25

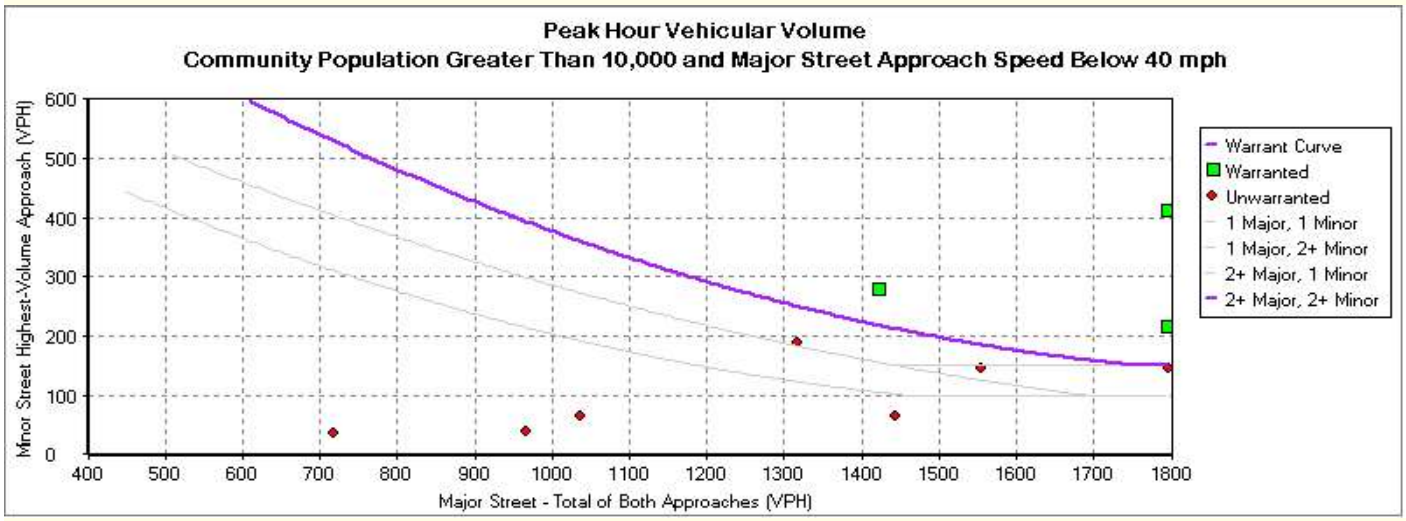
Warrant 3 Met? No

Details

Low Population? No

Condition A Met?	No	**Condition B Met?**	No
Notes	0 Hours met (1 required)	**Notes**	0 Hours met (1 required)

Minor Approach Time Delay Condition Met?	Not Met
Minor Approach Volume Condition Met?	Not Met
Total Entering Intersection Volume Condition Met?	Not Met



Hour	Major Street Total All Approaches (vph)	Minor Street Highest Volume Approach (vph)
7:00	788	114
8:00	619	74
16:00	950	53
17:00	1,026	73

Warrant 4: Pedestrian Volume

6: Universe & Country

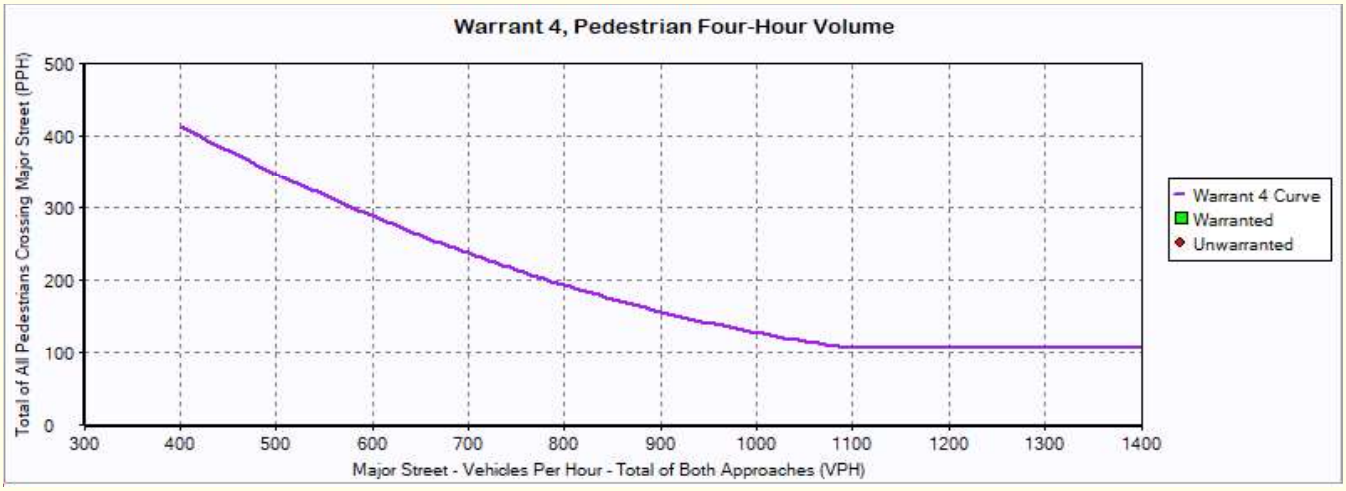
Intersection Information

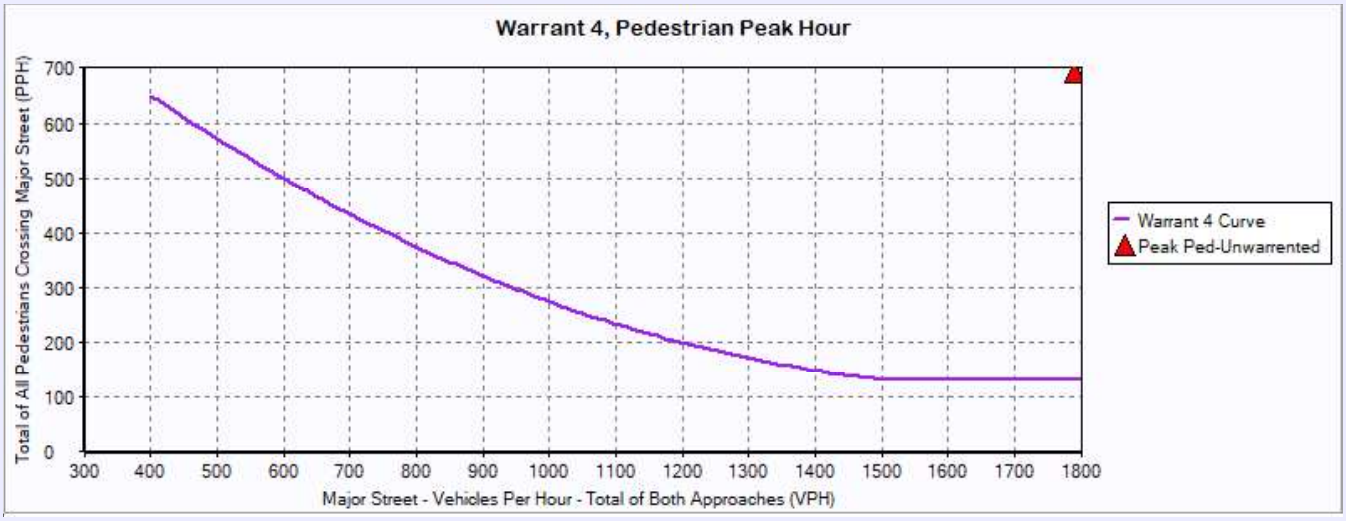
	Major Street	Minor Street
Street Name	Universe	Ventana
Direction	NB/SB	EB/WB
Number of Lanes	2	2
Approch Speed	35	25

WARRANT 4 MET ? **No**

Details

Pedestrian Four Hour Volume Warrant Met?	No		
Pedestrian Peak Hour Warrant Met?	No	Notes	0 Hours met (4 required)
Speed Limit or 85th Percentile Speed on Major Street > 35mph, or Intersection lies within an Isolated Community with Population < 10,000?	No		





Warrant 5: School Crossing

6: Universe & Country

Intersection Information

Major Street Name	Universe
Major Street Direction	NB/SB

WARRANT 5 MET? **No**

Details:

Time Period Interval for Students Crossing (min)	0
Number of Students Crossing in Time Period	0
Number of Adequate Gaps in Time Period	0
Other Remedial Measures Attempted?	No
Adjacent Signal on NB approach?	No
Distance to signal on NB Approach (ft)	-
Adjacent Signal on SB approach?	No
Distance to signal on SB Approach (ft)	-
Will New Signal Restrict Progressive Traffic?	Yes

Warrant 6: Coordinated Signal System

6: Universe & Country

Intersection Information

Major Street Name	Universe
Major Street Direction	NB/SB

WARRANT 6 MET? **Yes**

Details:

Approach Direction & Name	Acceptable Platooning?	Adjacent Coordinating Signal?	Adjacent Intersection Distance
SB Approach (Universe)	No	No	N/A
NB Approach (Universe)	No	No	N/A
WB Approach (Ventana)	No	No	N/A
EB Approach (Country)	No	No	N/A

Unacceptable Platooning? (At least one approach)	Distance to Closest Signal (Must be N/A or > 1000)
Yes	N/A

Warrant 7: Crash Experience

6: Universe & Country

Intersection Information

Major Street Name	Universe
Major Street Direction	NB/SB
Minor Street Direction	EB/WB

WARRANT 7 MET? **No**

Details:

Low Population?	No	Traffic Volume Condition Met?	No
Major Street Speed Limit	35		1 Hours Met (8 Required)
Major Street 85th-% tile Speed	0.00	Ped Volume Condition Met?	No
			0 Hours Met (8 Required)

Qualifying Crashes **0**

Adequate Alternative Trials? No

Hour	Traffic Volumes				Pedestrian Volumes			
	Major Street Vehicles	Minor Street Vehicles	80% Standard Met? A or B		Eastbound Ped Volumes		Westbound Ped Volumes	
			Condition A	Condition B	Peds	> 80?	Peds	> 80?
07:00 to 08:00	788	0	No	No	0	No	0	No
07:15 to 08:15	816	0	No	No	0	No	0	No
07:30 to 08:30	780	0	No	No	0	No	0	No
07:45 to 08:45	719	0	No	No	0	No	0	No
08:00 to 09:00	619	0	No	No	0	No	0	No
08:15 to 09:15	456	0	No	No	0	No	0	No
08:30 to 09:30	304	0	No	No	0	No	0	No
08:45 to 09:45	134	0	No	No	0	No	0	No

16:00 to 17:00	950	0	No	No	0	No	0	No
16:15 to 17:15	970	0	No	No	0	No	0	No
16:30 to 17:30	1,003	0	No	No	0	No	0	No
16:45 to 17:45	1,020	0	No	No	0	No	0	No
17:00 to 18:00	1,026	0	No	No	0	No	0	No
17:15 to 18:15	742	0	No	No	0	No	0	No
17:30 to 18:30	490	0	No	No	0	No	0	No
17:45 to 18:45	239	0	No	No	0	No	0	No

Warrant 8: Roadway Network

6: Universe & Country

Intersection Information

Major Street Name	Universe
Major Street Direction	NB/SB
Minor Street Direction	EB/WB

WARRANT 8 MET? (A or B) No

Details:

Growth Rates % (per year)

	NB	SB	EB	WB
L	0.00	0.50	0.00	0.50
T	3.00	3.00	0.00	0.50
R	0.50	0.00	0.00	0.50

Condition A, Total Entering Volume

Existing Peak Hour	1,121
Years	10.00
Future Peak Hour	1,507
Warrant 1 in 5 Years?	No
Warrant 2 in 5 Years?	No
Warrant 3 in 5 Years?	No

Condition B, Non-normal Business Day

	Existing	Future
Highest Hour	0	0
Second Highest Hour	0	0
Third Highest Hour	0	0
Fourth Highest Hour	0	0
Fifth Highest Hour	0	0
Yearly Growth Rate (%)	3.00	
Years	10.00	

Condition A Met? No **Condition B Met?** No

Warrant 9: Intersection Near a Grade Crossing

6: Universe & Country

Intersection Information

	Major Street	Minor Street
Street Name	Universe	Ventana
Direction	NB/SB	EB/WB
Number of Lanes	2	2
Approch Speed	35	25

WARRANT 9 MET ? **No**

Details

Note **No approach with a railroad grade crossing**

Minor street approach having a grade crossing

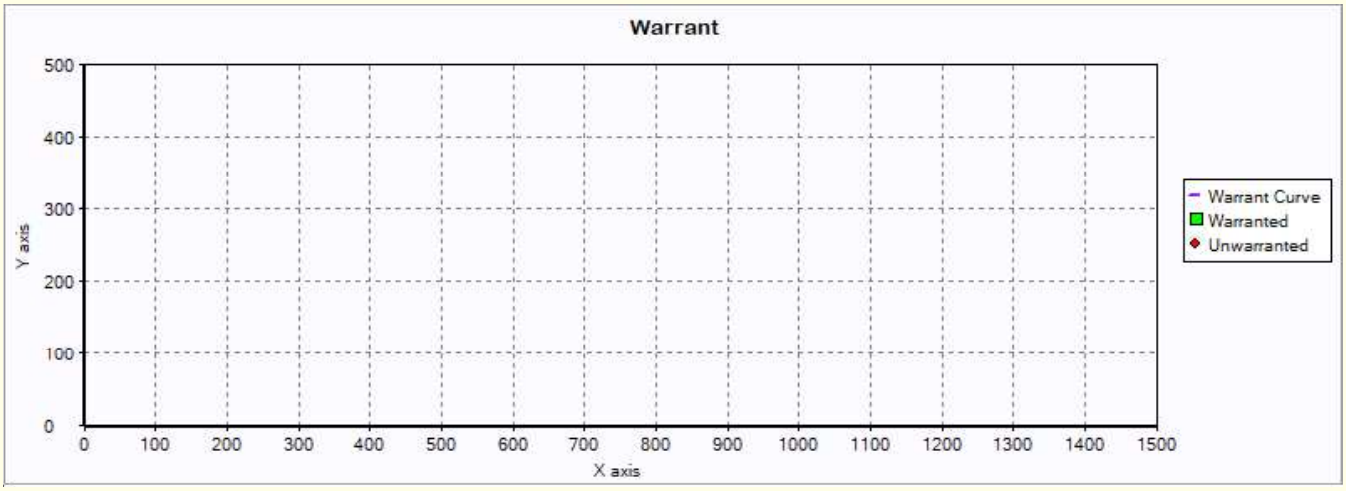
Distance from the center of the track to the stop or yield line — Interpolated

Number of occurences of rail traffic per day — Adjustment Factor

Percentage of high-occupancy buses crossing the track (%) — Adjustment Factor

Percentage of tractor-trailer trucks crossing the track (%) — Adjustment Factor

The rail traffic arrival times are uknown, the highest traffic volume hour of the day is used



Hour	Major Street Total of Both Approaches (vph)	Minor Street Adjusted Volume Crossing Tracks (vph)

All-Way Stop Control Warrant: Multiway Stop Applications

6: Universe & Country

Intersection Information

Major Street Name:	Universe
Major Street Direction:	NB/SB
Minor Street Direction:	EB/WB

AWSC WARRANT MET? **Yes**

Details:

Condition A Met?	Yes	Qualifying Crashes	0
Condition B Met?	No	Major Street 85th %-tile Speed	0.00
Condition C Met?	No	Major Street Speed Limit	35

Notes: 0 Hours Met (8 Required)

Hour	Traffic Volumes		Bicycle Volumes		Ped Volumes		Condition C		
	Major Street	Minor Street	North Bound Bicycle Volumes	East Bound Bicycle Volumes	North Bound Ped Volumes	East Bound Ped Volumes	Major Street: Veh Volume > 300	Minor Street: Avg(Veh + Ped + Bicycle) > 200	Minor Street: Delay > 30