TOWN OF CHINO VALLEY
ROAD 2 NORTH
TRAFFIC IMPACT STUDY - REVISION 1

PREPARED FOR:

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7224.62750.01
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REVISION HISTORY

Revision 1

Revision 1 modified the title of the original Traffic Impact Study from *Hawksnest at Chino Valley and Village North Apartments Traffic Impact Study* to *Road 2 North Traffic Impact Study.* The associated DOWL project number was modified from 3122.41430.01 to 7224.62750.01.

Revision 1 includes updating the existing traffic count data to reflect intersection counts acquired in April 2018 at the intersections of SR-89 at Road 2 North and Road 2 North at Road 1 West, and a roadway average daily traffic count (ADT) along each leg of Road 2 North east and west of SR-89.

Additional proposed developments were also analyzed along the Road 2 North corridor. Heritage Farm, Hawksnest Estate, Heritage Place, and Brook Apartments were included in the analysis, in addition to the already analyzed Village North Apartments and Hawksnest at Chino Valley.

Intersection level of service (LOS) and roadway improvement recommendations were updated to reflect the updated traffic data and development generated trips.

1.0 INTRODUCTION

1.1 Purpose of Report and Study Objectives

The purpose of this report is to provide a preliminary Traffic Impact Study (TIS) for developments along Road 2 North, near the intersection of SR-89 and Road 2 North, in Chino Valley, Arizona. This report updates the analyses detailed in the *Hawksnest and Village North Traffic Impact Study* (June 2017).

There are six proposed developments being analyzed along Road 2 North between Road 1 West and Road 1 East. Five of the developments are between Road 1 West and SR-89 and include:

- Heritage Farm,
- Heritage Place,
- Hawksnest Estate,
- Hawksnest at Chino Valley, and
- Brook Apartments.

The sixth development, Village North apartments, is located between SR-89 and Road 1 East.

This report provides a preliminary analysis of the SR-89 and Road 2 North intersection and the surrounding roadway network in their existing condition and under expected traffic conditions with the developments. Preliminary recommendations for roadway and intersection improvements and recommendations for additional analysis have been provided.

2.0 PROPOSED DEVELOPMENT

2.1 Site Location

The developments are located on Road 2 North, near the intersection of SR-89 in the Town of Chino Valley (Town). A depiction of the location of the developments relative to the adjacent transportation system is provided in Figure 1. The existing developments have been labeled in green, while the proposed developments are labeled and outlined in red.

2.2 Land use and Intensity

The developments are proposed to be constructed on undeveloped land. Each site is currently proceeding through the Town's rezoning process.

- Heritage Farm is proposed to be a 144-lot subdivision, on approximately 89-acres, with access to Road 2 North and Road 1 West.
- Heritage Place is an 11.86-acre business park, with 12-lots, and access to Road 2 North.

- Hawksnest Estate is a 124-lot residential subdivision, on approximately 78-acres, with access to Road 2 North. It is important to note that the current Hawksnest Estate plan originally used to prepare this analysis depicted 150-lots on approximately 92-acres. However, the limits of Hawksnest at Chino Valley are now proposed to be developed over a portion of the 150-lot subdivision. Therefore, the number of lots for Hawksnest Estate was reduced by the percentage of land Hawksnest at Chino Valley will occupy.
- Hawksnest at Chino Valley is proposed to be developed at a density of 15 dwelling units/acre, across 29 separate buildings, on 14.9-acres, with access to Road 2 North.
- Brooks Apartments is proposed to be developed at a density of 28 dwelling units/acre, across 4 separate buildings, on 6.85-acres. One access will be provided to Road 2 North through the Heritage Place Business Park.
- Village North is proposed to be developed at a density of 17 dwelling units/acre, across 18 separate buildings, on 9.2-acres, with access to Road 2 North.

2.3 Development Phasing

The timeline for buildout of each development has not been established at the time this study was prepared. The developments have either completed or are in the progress of completing the rezoning process. Some of the developments are proposed to be completed in multiple phases. This study does not consider the phasing of the developments and only analyzes the study area with all the developments in their completed state.

Hawksnest is proposed to be developed in two phases. Phase 1 will include 32 one-bedroom and 80 two-bedroom units in 14 buildings on 8.60 acres. Also included in Phase 1 will be a separate reception and clubhouse building. For this phase, 248 parking stalls will be provided to serve the residential units. Phase 2 will include 32 one-bedroom and 80 two-bedroom units in 14 buildings on 6.3 acres. For Phase 2, 226 parking stalls will be provided to serve the residential units. Parking calculations were completed by the developer.

Village North is proposed to be developed in three phases. Phase 1 will consist of 8 one-bedroom, 56 two-bedroom, and 8 three-bedroom units in nine buildings; and will provide 151 parking stalls. Phase 2 will consist of 4 one-bedroom, 20 two-bedroom, and 4 three-bedroom units in three buildings; and will provide 58 parking stalls. Phase 3 will include 16 one-bedroom, 24 two-bedroom, and 16 three-bedroom units in six buildings; and will provide 107 parking stalls. Parking calculations were completed by the developer.

3.0 STUDY AREA CONDITIONS

3.1 Study Area

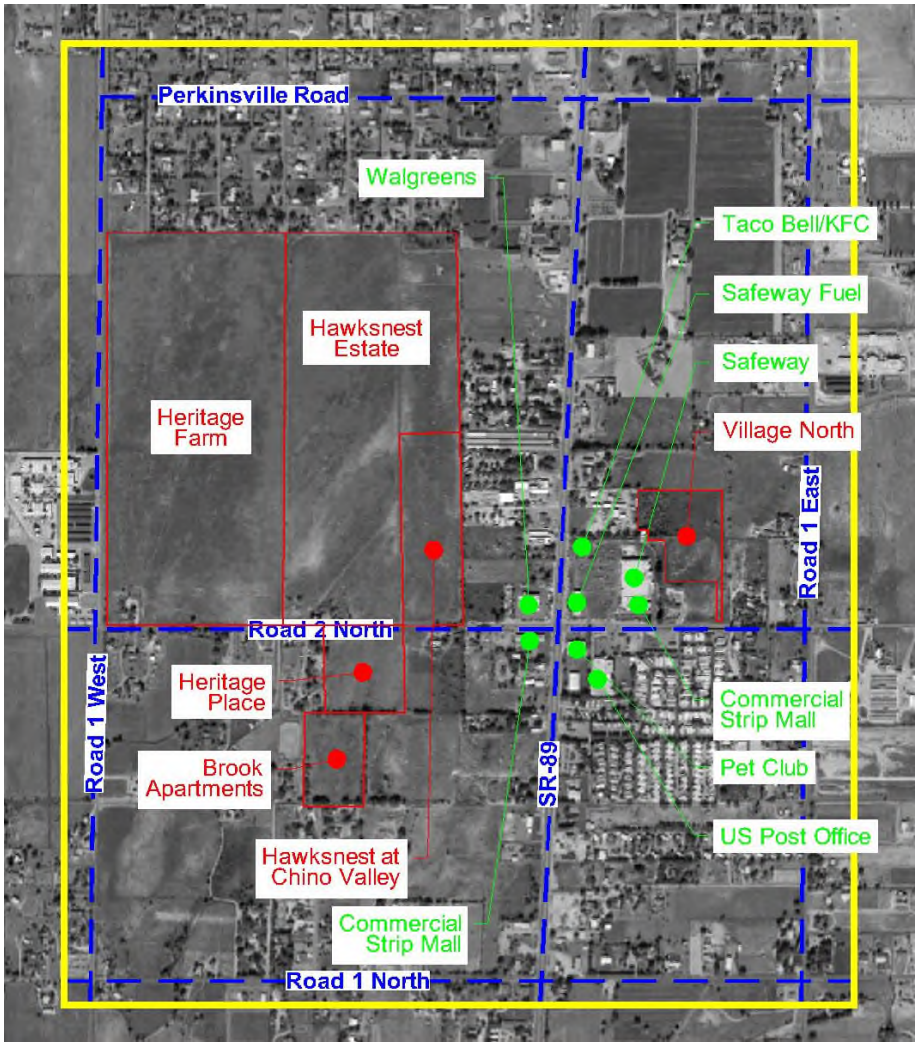
The study area for this TIS is depicted in Figure 1 by the yellow boundary. The primary focus of analysis is at the intersection of SR-89 and Road 2 North. Roadways that may be affected by the developments within a one mile radius are also being reviewed, and include SR-89, Road 2 North, Perkinsville Road to the north, Road 1 North to the south, Road 1 West to the west, and Road 1 east to the east.

3.2 Existing Land Use

The primary study area is located at the intersection of SR-89 and Road 2 North. The land use at this intersection is mainly commercial with some residential. Notable commercial properties include a Walgreens on the northwest corner; a commercial strip mall on the southwest corner; a United States Post Office and Pet Club on the southeast corner; and a Taco Bell/KFC, Safeway Grocery Store and Gas Station, and a commercial strip mall on the northeast corner. The locations of these commercial properties have been labeled in green in Figure 1.

Vacant land is also present in the study area, which may be developed in the future. The zoning at the study intersection is mainly Commercial Heavy (CH) to the west of SR-89 and Commercial Light (CL) to the east of SR-89. Outside of the study area, on the northwest corner of Road 1 West and Road 2 North is Del Rio Elementary and Heritage Middle School. Sidewalks are currently not extended to the schools.

Figure 1 – Development Locations and Study Area



4.0 ANALYSIS OF EXISTING CONDITIONS

4.1 Physical Characteristics

Roadway Characteristics
Existing roadway characteristics were determined using aerial photography, and are summarized in Figure 2.

West of SR-89, Road 2 North is fully improved along the north side of the road (curb, gutter, sidewalk), with a right-turn lane provided for westbound traffic. At approximately 700-ft, the turn-lane abruptly ends and Road 2 North becomes a two-lane 24-ft wide asphalt roadway with no shoulders. Approximately 200 feet west of SR-89, Road 2 North widens for eastbound traffic to allow for the addition of an eastbound left-turn lane and a shared through/right-turn lane. The posted speed limit is 35 miles per hour (mph).

East of SR-89, Road 2 North is fully improved with curb, gutter, and sidewalk for approximately 200-ft with a single eastbound thru lane and separate westbound left, thru, and right lanes. Along the north side of the road, roadside improvements extend approximately 700 feet east of SR-89 and continue to include left-turn and right-turn auxiliary lanes for westbound traffic. Beyond this section, Road 2 North narrows to a two-lane 24-ft wide asphalt roadway with no shoulders. The posted speed limit is 25 mph.

SR-89 is a five-lane state highway with two 12-ft lanes in each direction and one 14-ft two-way left-turn lane (TWLTL). Dedicated left-turn and right-turn lanes are provided for both the northbound and southbound traffic at Road 2 North. Right-turn lanes are also provided for the commercial developments in advance of the intersection. The posted is 45 mph.

Road 1 West, Road 1 East, Road 1 South, and Perkinsville Road are each two-lane unimproved asphalt roadways with limited development along them. North of the study intersection, Perkinsville Road has the most existing development consisting of mainly residential homes west of SR-89. The intersection of Perkinsville Road has recently been upgraded to a multi-lane roundabout.

Figure 2 – Roadway Characteristic Summary

Roadway	Through Lanes	Lane Width (ft)	Speed Limit (mph)	Turn Lanes*
SR-89	5	12	45	TWLTL & RTL's
Road 2 North	2	12	35 (West of SR-89) 25 (East of SR-89)	LTL's & RTL's at SR-89
Road 1 North	2	12	30	None
Perkinsville	2	12	25	Roundabout at SR-89
Road 1 West	2	12	30	None
Road 1 East	2	12	30	None

**LTL=Left-Turn Lane; RTL=Right-Turn Lane*

Traffic Control Devices

The intersection of SR-89 and Road 2 North is controlled by a traffic signal maintained by the Arizona Department of Transportation (ADOT). Left-turns are controlled with protective and permissive phases triggered through video detection on each leg.

The intersection of Perkinsville Road was recently upgraded to a multi-lane roundabout at SR-89. All other intersections in the study area are stop controlled on the minor approaches, except the intersections of Road 2 North and Road 1 West, Road 1 South and Road 1 West, and Road 1 South and Road 1 East, which are all-way stop controlled intersections. A future project will upgrade the intersection of SR-89 and Road 1 North to a traffic signal.

Pedestrian/Bicycle Facilities

There are no dedicated bicycle facilities within the study area.

Sidewalks are provided along portions of SR-89 and along the north side Road 2 North adjacent to the commercial developments. Pedestrian actuated crossing indicators are provided at the intersection of SR-98 and Road 2 North for each leg.

4.2 Traffic Volumes

Existing ADT volumes were acquired from ADOT, the Town, and through roadway traffic counts conducted by DOWL along Road 2 North. Intersection counts were also conducted by DOWL at the intersections of SR-89 at Road 2 North and Road 2 North at Road 1 West. ADT volumes from the surrounding roadways are shown in Figure 3. The *ITE Trip Generation Manual, 8th Edition* (Trip Manual) was used to develop existing trips for the existing developments; those rates can be seen in Figure 4. Seasonal adjustment factors were not applied to the traffic counts. Figure 5 shows the existing traffic volumes estimated using the available traffic data.

Figure 3 – Existing ADT's

Roadway	From	To	ADT
SR-89	Road 1 North	Road 2 North	21,982
SR-89	Road 2 North	Perkinsville	19,687
Road 2 North	Road 1 West	SR-89	2,148*
Road 2 North	SR-89	Road 1 East	6,298*
Road 1 North	Road 1 West	SR-89	807
Road 1 North	SR-89	Road 1 East	1,699
Perkinsville	Road 1 West	SR-89	2,395
Perkinsville	SR-89	Road 1 East	2,395
Road 1 West	Road 1 North	Road 2 North	794
Road 1 West	Road 2 North	Perkinsville	1,487
Road 1 East	Road 1 North	Road 2 North	1,776
Road 1 East	Road 2 North	Perkinsville	2,046

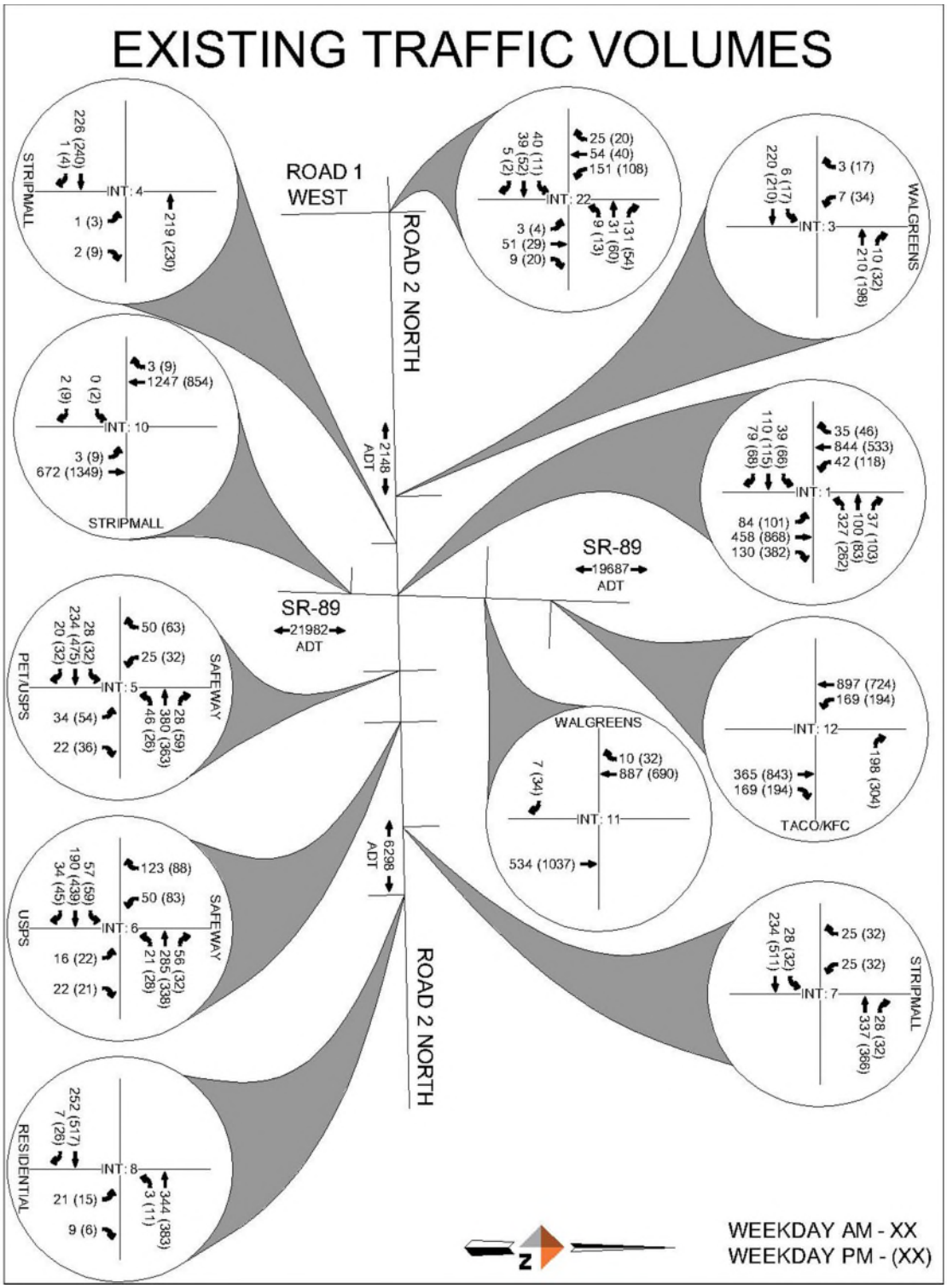
*From DOWL conducted traffic count in April 2018

Figure 4 – Trip Generation Rates

ITE Code	Description	Unit	Size	Wkday Rate	Wkday Trips	AM Rate	AM Trips	PM Rate	PM Trips
210	Single Family Detached Housing	Houses	53	9.57	507	0.75	40	1.1	58
732	US Post Office	1,000 SF	20	108.19	2164	8.21	164	11.12	222
820	Shopping Center (SW Corner)	1,000 SF	12	42.94	515	1	12	3.73	45
820	Shopping Center (Pet Store)	1,000 SF	10	42.94	429	1	10	3.73	37
820	Shopping Center (Safeway Strip)	1,000 SF	18	42.94	773	1	18	3.73	67
850	Supermarket (Safeway)	1,000 SF	60	102.24	6134	3.59	215	10.5	630
881	Pharmacy/Drugstore with Drive-Through Window (Walgreens)	1,000 SF	16	88.16	1411	2.66	43	10.35	166
934	Fast-Food Restaurant with Window (Taco Bell/KFC)	1,000 SF	3	168.56	506	12.16	36	13.87	42
944	Gasoline/Service Station (Safeway)	Fueling Stations	16	496.12	7938	49.35	790	33.84	541

ITE Code	Description	Unit	Size	Wkday In	Wkday Out	AM In	AM Out	PM In	PM Out
210	Single Family Detached Housing	Houses	53	254	254	10	30	37	21
732	US Post Office	1,000 SF	20	1082	1082	85	79	113	109
820	Shopping Center (SW Corner)	1,000 SF	12	258	258	7	5	22	23
820	Shopping Center (Pet Store)	1,000 SF	10	215	215	6	4	18	19
820	Shopping Center (Safeway Strip)	1,000 SF	18	387	387	11	7	33	34
850	Supermarket (Safeway)	1,000 SF	60	3067	3067	131	84	321	309
881	Pharmacy/Drugstore with Drive-Through Window (Walgreens)	1,000 SF	16	706	706	26	17	81	85
934	Fast-Food Restaurant with Window (Taco Bell/KFC)	1,000 SF	3	253	253	18	18	22	20
944	Gasoline/Service Station (Safeway)	Fueling Stations	16	3969	3969	403	387	271	271

Figure 5 – Existing Estimated Traffic Volumes



4.3 Intersection Level of Service

Intersection capacity analyses have been conducted using the procedures outlined in the *Highway Capacity Manual* (HCM), as appropriate, and through the use of *Synchro 8* traffic signal timing and analysis software and based on HCM delay, capacity, and level-of-service calculations. Calculation forms for the analyses are contained in Appendix A. In accordance with the HCM procedures, Level-of-Service (LOS) has been determined by estimating the average vehicular delay of the intersections and the intersection movements. The range of traffic delays associated with each LOS is presented in Figure 6 for both signalized and unsignalized intersections. It should be noted that delay thresholds for a given LOS for unsignalized intersections are lower than those given for signalized intersections. This difference, as explained in the HCM, is to account for the greater variability in delay associated with unsignalized movements in addition to different driver exceptions associated with each type of intersection control, with the expectation that signalized intersections are designed to carry higher traffic volumes and therefore will experience greater delay than an unsignalized intersection.

Figure 6 – Level of Service Criteria (HCM)

LOS	Signalized Intersection Average Delay (sec / veh)	Unsignalized Intersection Average Delay (sec / veh)
A	≤ 10	≤ 10
B	> 10 to 20	> 10 to 15
C	> 20 to 35	> 15 to 25
D	> 35 to 55	> 25 to 35
E	> 55 to 80	> 35 to 50
F	> 80	> 50

The delay and LOS analysis of the study intersections is summarized in Figure 7, and indicates that all the existing study intersections operate at a satisfactory LOS C or better in their current configuration and volumes for both the AM and PM peak hours.

Figure 7 – Existing Level of Service

Node	Signalized Intersection	AM Peak			PM Peak		
		Delay (sec)	HCM LOS	Volume to Capacity Ratio	Delay (sec)	HCM LOS	Volume to Capacity Ratio
1	SR 89 at Road 2 North	23.9	C	0.88	20.5	C	0.83

Node	Unsignalized Intersection	Worst Case Approach			
		AM Peak		PM Peak	
		Delay (sec)	HCM LOS	Delay (sec)	HCM LOS
3	Road 2 North and Walgreens	11.5	B	11.3	B
4	Road 2 North and Strip Mall (SW)	10.5	B	10.6	B
5	Road 2 North and Safeway/Pet/USPS	15.5	C	23.0	C
6	Road 2 North and Safeway/USPS	17.3	C	25.1	C
7	Road 2 North and Safeway Strip Mall	13.8	B	19.3	C
8	Road 2 North and Residential	13.4	B	18.9	C
10	SR-89 and Strip Mall (SW)	9.5	A	15.8	C
11	SR-89 and Walgreens	21.1	B	11.3	B
12	SR-89 and Taco Bell/KFC	10.6	B	12.2	B
22	Road 2 North at Road 1 West	8.7	A	8.2	A

An additional but separate measure of effectiveness (MOE) for intersection LOS analysis has been included in this study; the *intersection capacity utilization level-of-service* (ICU LOS) calculation. This measure of effectiveness is based on procedures outlined in *Intersection Capacity Utilization: Evaluation Procedures for Intersections and Interchanges, 2003 ED* developed for use with the Synchro Traffic Signal and Intersection Analysis software. The ICU factor is characterized as a means to measure an intersection's capacity through the review of saturation (similar to reviewing critical volumes to saturation flow rates) to determine the expected or potential reserve capacity at an intersection, independent of delay, allowing for a slightly different picture of the intersection's operation. *It should be cautioned, however, that this method of analysis is not yet nationally recognized as a viable method of intersection analysis. As such, the values reported by this method are presented for information only, and are not intended to replace or supersede the LOS values as developed by the HCM.* The range of reserve capacity associated with each ICU LOS is presented in Figure 8 for both signalized and unsignalized intersections. ICU values calculated for the study intersections are included in the worksheets located within the appendix of this report and are not specifically identified herein. The analysis indicates an ICU LOS of A for all unsignalized intersections in current conditions. However, for the intersection of SR-89 and Road 2 North the ICU LOS is expected to reach D, indicating that

the intersection can be expected to operate with sufficient reserve capacity and that most traffic can be served through one signal cycle. However, due to traffic volumes served by this intersection, accidents, sub optimal signal timings, and lane closures are likely to cause congestion.

Figure 8 – Level of Service Criteria (ICU)

LOS	ICU (Estimate of Reserve Capacity)
A	≤ 55.0%
B	> 55% to 64.0%
C	> 64% to 73.0%
D	> 73% to 82.0%
E	> 82% to 91.0%
F	> 91% to 100.0%
G	> 100% to 109.0%
H	> 109%

4.4 Safety (Traffic, Bicycle & Pedestrian)

Crash data was not analyzed as part of this preliminary study. During the field review, the area around the intersection of SR-89 and Road 2 North appeared to have sporadic pedestrian activity. There is a residential development in the southeast quadrant of the intersection which has a sidewalk connection to SR-89, but no sidewalk connection to Road 2 North. Extending the sidewalk between residential areas commercial areas, and schools should be considered to improve pedestrian safety.

There does not appear to be any dedicated bicycling facilities in the Town. As roadways are improved and widened, the addition of dedicated bicycle lanes should be considered to improve bicycle safety and encourage ridership.

5.0 PROJECTED TRAFFIC

5.1 Site Traffic Forecasting

Future traffic volumes were developed using the ITE Trip Generation Manual. Figure 9 shows the trips expected to be generated by each of the proposed developments. The trips generated by the developments were distributed east and west along Road 2 North to match existing traffic patterns. Discussions with the Town of Chino Valley suggested that traffic uses Road 1 West and Road 1 East as an alternate to SR-89 during peak hours. Figure 10 depicts the traffic distribution percentages while Figure 11 depicts the distributed trip volumes.

Figure 9 – Trip Generation Rates

ITE Code	Development	Unit	Size	Wkday Rate	Wkday Trips	AM Rate	AM Trips	PM Rate	PM Trips
223	Village North	Units	154	6.65	1024	0.3	46	0.39	60
223	Hawksnest at CV	Units	224	6.65	1490	0.3	67	0.39	87
210	Hawksnest Estate	Units	126	9.57	1206	0.75	95	1.01	127
750	Heritage Place	Acres	11.9	195.11	2314	25.65	304	28.28	335
210	Heritage Farm	Units	144	9.57	1378	0.75	108	1.01	145
223	Brook Apartments	Units	192	6.65	1277	0.3	58	0.39	75

ITE Code	Description	Unit	Size	AM In	AM Out	PM In	PM Out
223	Village North	Units	154	14	32	35	25
223	Hawksnest at CV	Units	224	21	46	50	37
210	Hawksnest Estate	Units	126	24	71	80	47
750	Heritage Place	Acres	11.9	280	24	50	285
210	Heritage Farm	Units	144	27	81	91	54
223	Brook Apartments	Units	192	18	40	44	32

5.2 Total Traffic

The combined existing traffic and estimated development traffic volumes are depicted in Figure 12.

6.0 Traffic and Improvement Analysis

6.1 Site Access

The proposed developments will be accessed from Road 2 North with one access from Road 1 West to Heritage Farm. Based on the estimated traffic volumes, left-turn lanes would be warranted at each development, except for Heritage Farm, and a right turn lane would be warranted at the Brook Apartment/Heritage Place access per the ADOT *Traffic Engineering Guidelines and Processes, Section 200 – Traffic Studies*. Due to the density and proximity of accesses along Road 2 North, constructing a two-way-left-turn-lane (TWLTL) along Road 2 North between Road 1 West and SR-89 and between SR-89 and Road 1 East is recommended. Available sight distance should also be reviewed at the developments driveways. Landscaping should not be provided as to interfere with the required sight distance per the American Association of State Highway and Transportation Officials (AASHTO) *A Policy on Geometric Design of Highways and Streets* (Greenbook).

Figure 10 – Trip Distribution Percentages

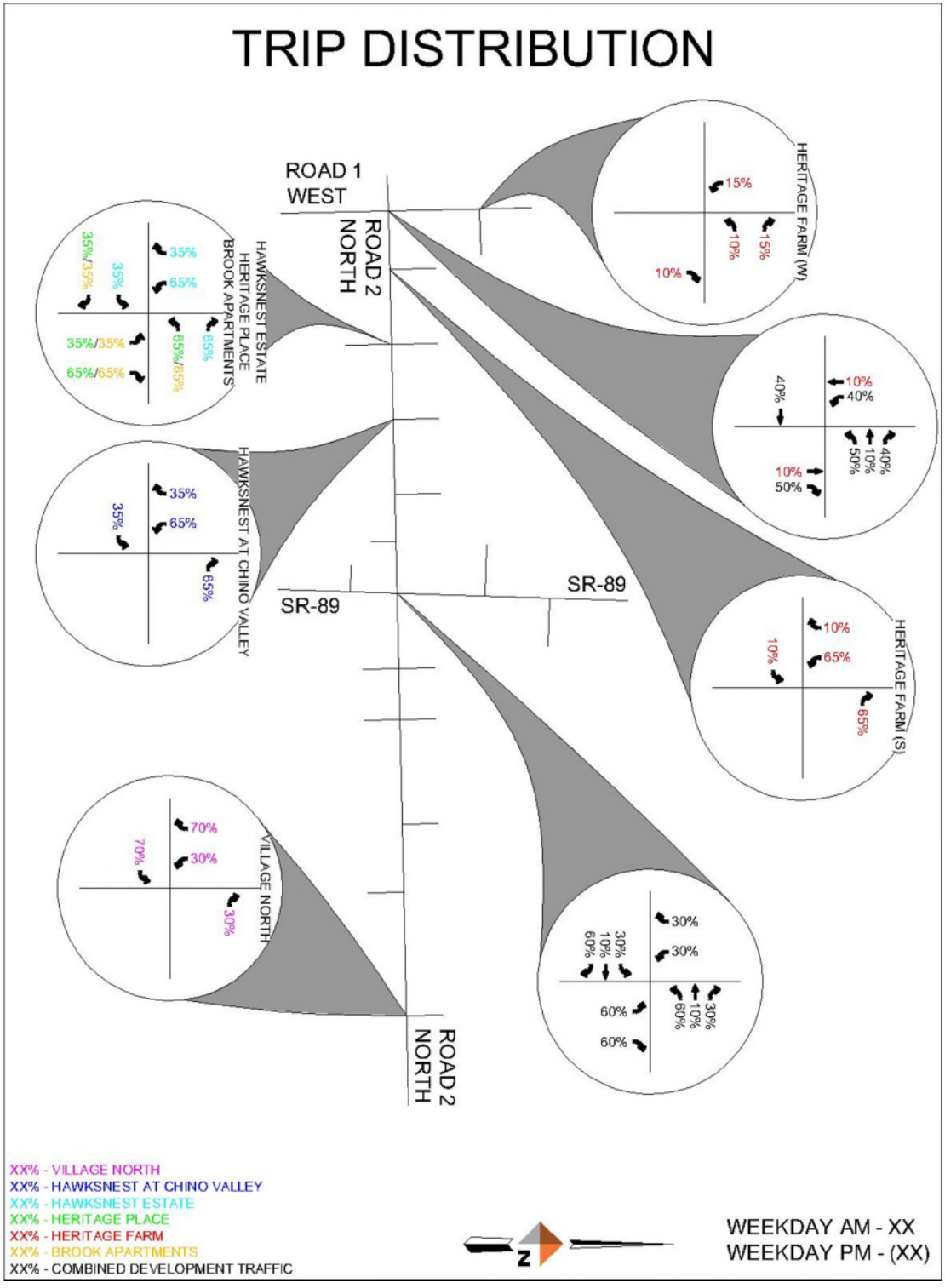


Figure 11 – Trip Distribution Volumes

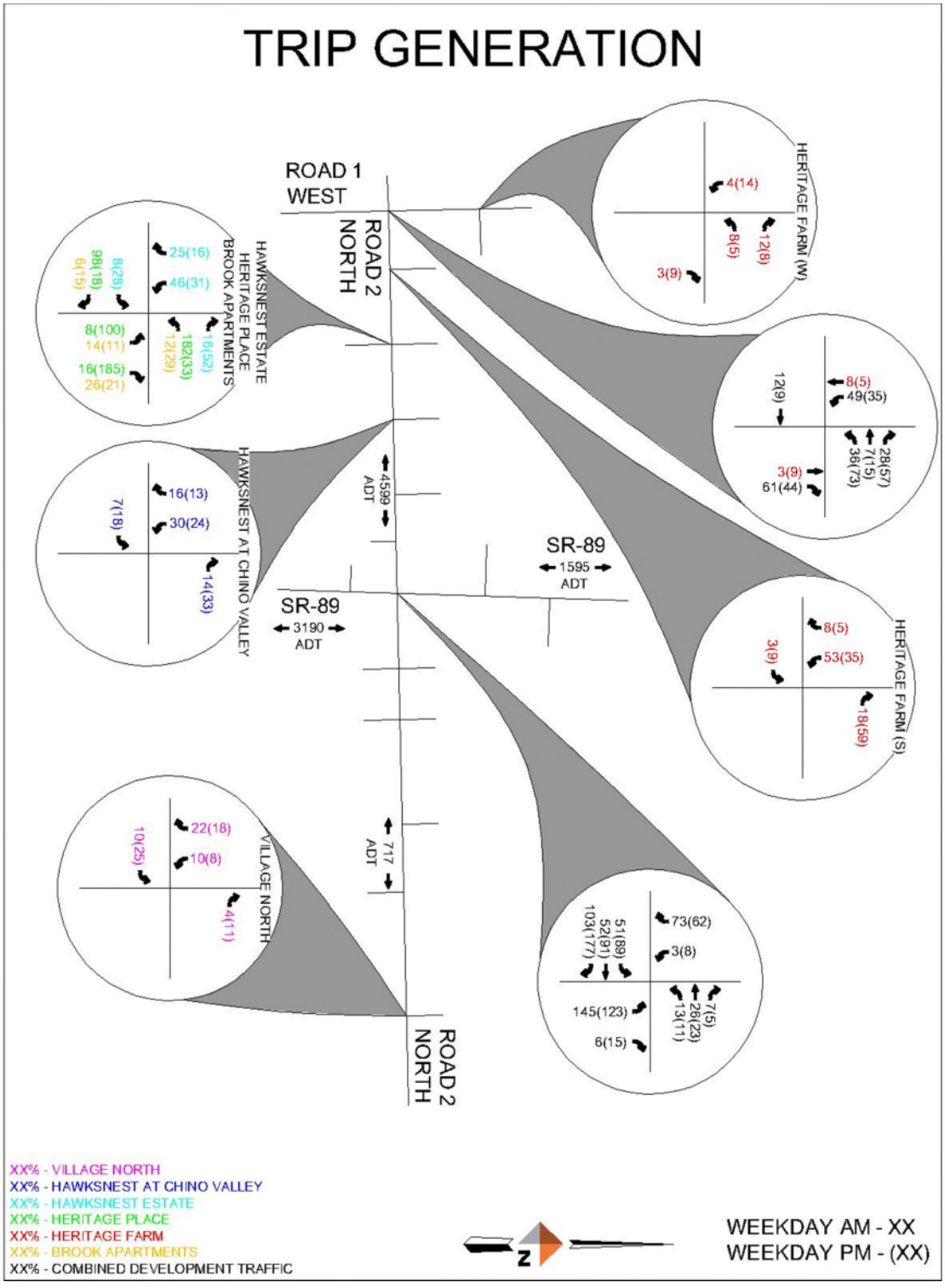
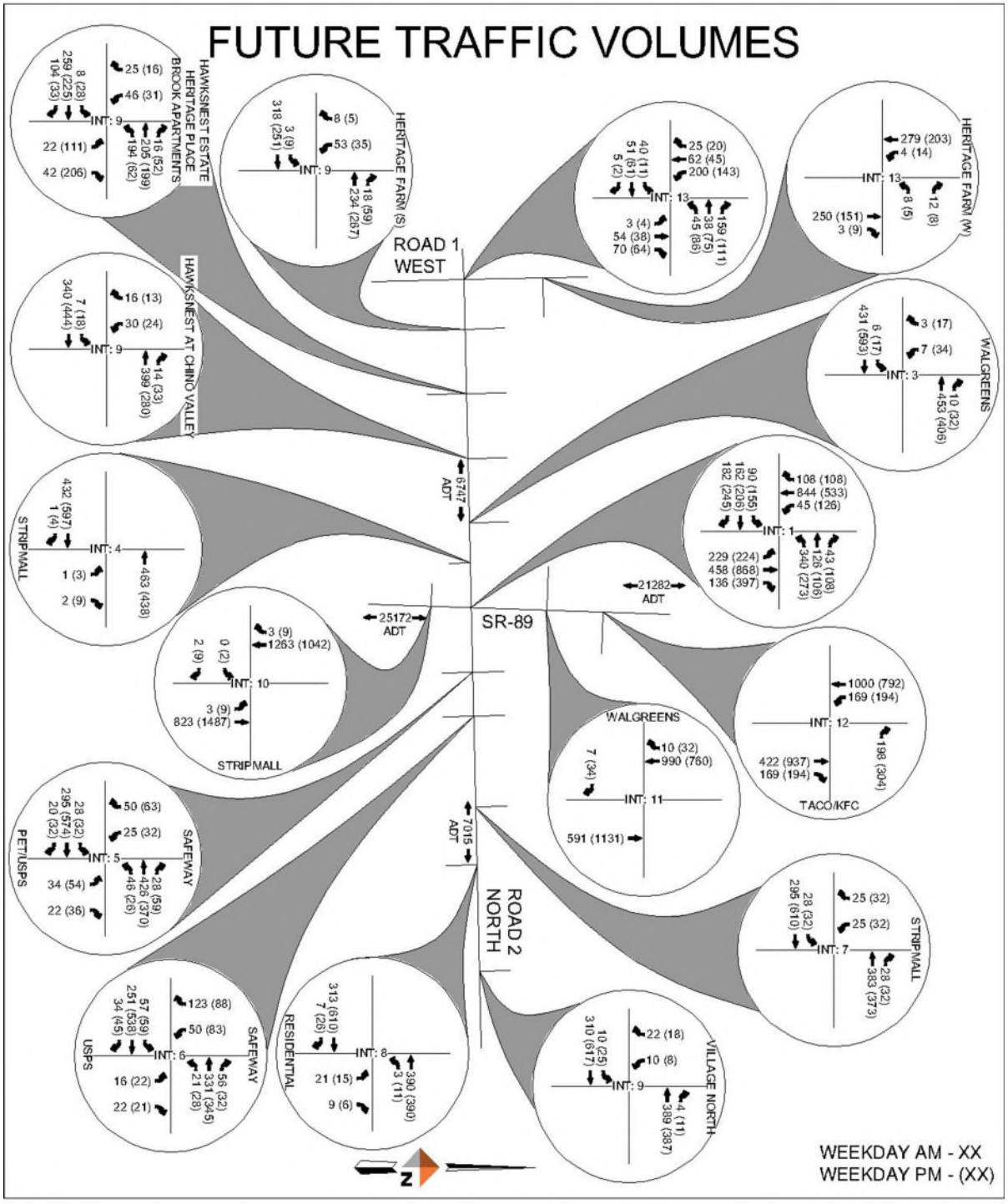


Figure 12 – Projected Future Traffic



6.2 Level of Service Analysis

The delay and LOS analysis of the study intersections is summarized in Figure 13, and indicates that all some of the study intersections operate at a LOS D and F which will require roadway modifications to maintain the existing LOS.

Figure 13 – Future Level of Service

Node	Signalized Intersection	AM Peak			PM Peak		
		Delay (sec)	HCM LOS	Volume to Capacity Ratio	Delay (sec)	HCM LOS	Volume to Capacity Ratio
1	SR 89 at Road 2 North	46.8	D	1.00	41.6	D	1.00

Node	Unsignalized Intersection	Worst Case Approach			
		AM Peak		PM Peak	
		Delay (sec)	HCM LOS	Delay (sec)	HCM LOS
1	SR 89 and Road 2 North	46.8	D	41.6	D
3	Road 2 North and Walgreens	17.7	C	22.7	C
4	Road 2 North and Strip Mall (SW)	13.6	B	15.9	C
5	Road 2 North and Safeway/Pet/USPS	91.6	F	330.5	F
6	Road 2 North and Safeway/USPS	56.9	F	29.6	D
7	Road 2 North and Safeway Strip Mall	15.3	C	895.1	F
8	Road 2 North and Residential	14.9	B	21.4	C
10	SR-89 and Strip Mall (SW)	9.7	A	20.2	C
11	SR-89 and Walgreens	12.7	B	11.7	B
12	SR-89 and Taco Bell/KFC	10.2	B	12.9	B
22	Road 2 North at Road 1 West	9.4	A	8.9	A
30	Road 2 North at Heritage Farm (S)	14.1	B	13.7	B
31	Road 2 North at Heritage Place/Brook	24.7	C	23.3	C
35	Road 2 North at Hawksnest at CV	16.0	C	15.9	C
36	Road 2 North at Village North	12.2	B	16.9	C
38	Road 1 West at Heritage Farm (W)	11.7	B	10.4	B

ICU values calculated for the study intersections are included in the worksheets located within the appendix of this report and are not specifically identified herein. The analysis indicates an ICU LOS of A for most of the unsignalized intersections in future conditions. However, for the intersection of SR-89 and Road 2 North the ICU LOS is F indicating that the intersection approaching is maximum capacity.

6.3 **Roadway Improvements**

SR-89 is an ADOT controlled state highway. Dedicated right-turn lanes and left-turn lanes/TWLTL's are provided at major developments primarily near Road 2 North. It does not appear that any improvements will be required to SR-89.

Road 2 North is a two-lane roadway. Pavement markings for the roadway are only located where the roadway widens to provide turn-lanes at the SR-89 intersection. As part of the construction of the developments, Road 2 North should be widened to three lanes to include a TWLTL. A separate alternate could allow individual dedicated left-turn lanes at each development; however, due to the number of access and their proximity to each other, a TWLTL may function better. A dedicated right-turn lane should be provided at the access to Brook Apartment and Heritage Place.

Adding an additional lane to Road 2 North will require modifications to the intersection of Road 2 North at Road 1 West and Road 2 North at Road 1 East. Road 2 North at Road 1 West is an all-way stop intersection. Road 2 North at Road 1 East is a two-way stop intersection with Road 1 East being stop-controlled. Options for intersection improvements include widening Road 2 North though the intersections to include left-turn lanes or developing a roundabout at each intersection. It should be noted that utilities will need to be relocated to widen the roadway. Input would most likely be necessary from the school district adjacent to the Road 2 North at Road 1 West intersection.

Eastbound Road 2 North, at the intersection of SR-89, should have a dedicated right-turn lane. Currently, the right-turn and through traffic share a lane. The development of this lane would most likely require additional right-of-way and modifications to the parking lot on the southwest corner of SR-89 at Road 2 North.

Based on the recommended improvements described above, an operational analysis was performed on the study intersections. The intersections of Road 2 North at Road 1 West and Road 2 North at Road 1 East were assumed to be modified with a left-turn lane and not a roundabout. A TWLTL was added along the length of Road 2 North from Road 1 West to Road 1 East and a dedicated right-turn lane was provided at SR-89 for eastbound Road 2 North traffic.

The delay and LOS analysis of the study intersections with the recommended improvements is summarized in Figure 14, Most of the intersections LOS was improved with the recommended improvements. The SR-89 at Road 2 North intersection LOS was improved from a D to a C. There are a few existing development accesses that operate at an F during the peak hours. This is mainly due to traffic trying to exit the developments when the westbound Road 2 North queue length extends beyond the accesses.

Figure 14 – Future Level of Service with Recommended Improvements

Node	Signalized Intersection	AM Peak			PM Peak		
		Delay (sec)	HCM LOS	Volume to Capacity Ratio	Delay (sec)	HCM LOS	Volume to Capacity Ratio
1	SR 89 at Road 2 North	31.1	C	1.00	22.6	C	0.93

Node	Unsignalized Intersection	Worst Case Approach			
		AM Peak		PM Peak	
		Delay (sec)	HCM LOS	Delay (sec)	HCM LOS
3	Road 2 North and Walgreens	12.3	B	14.0	B
4	Road 2 North and Strip Mall (SW)	13.6	B	15.9	C
5	Road 2 North and Safeway/Pet/USPS	105.1	F	405.4	F
6	Road 2 North and Safeway/USPS	59.4	F	29.8	D
7	Road 2 North and Safeway Strip Mall	12.0	B	139.7	F
8	Road 2 North and Residential	11.6	B	13.8	B
10	SR-89 and Strip Mall (SW)	9.5	A	12.4	B
11	SR-89 and Walgreens	12.7	B	11.7	B
12	SR-89 and Taco Bell/KFC	10.6	B	12.4	B
22	Road 2 North at Road 1 West	9.5	A	9.1	A
30	Road 2 North at Heritage Farm (S)	11.4	B	11.2	B
31	Road 2 North at Heritage Place/Brook	15.3	C	15.8	C
35	Road 2 North at Hawksnest at CV	12.1	B	12.0	B
36	Road 2 North at Village North	10.7	B	12.5	B
38	Road 1 West at Heritage Farm (W)	11.7	B	10.4	B

The surrounding roadway network of Road 1 West, Road 1 East, Road 1 North, and Perkinsville Road are two-lane asphalt roadways. It is anticipated that a percentage of vehicles from Hawksnest and Village North will use these roadways to avoid the intersection of SR-89 and Road 2 North.

A review of these surrounding roadways indicates that improvements should be made to improve operations and safety. According to the AASHTO Roadside Design Guide (RDG), roadways with a speed limit less than 40 mph and an ADT of 750-1,500 should have a minimum of 7 feet of clear zone from the edge of pavement. Roadways with a speed limit less than 40 mph and an ADT of 1,500-6,000 should have a minimum of 10 feet of clear zone from the edge of pavement. There are numerous utility poles, fences, drainage ditches, irrigation ditches, and other miscellaneous structures that may be in the roadway

clear zone. At multiple intersections there are utility poles that are adjacent to the edge of pavement making it difficult for large vehicles to navigate around the corner. The radius of the pavement edges at the intersections should be reviewed. A minimum radius should be constructed at each intersection, typically 25-feet or 35-feet depending on the design vehicle determined. The Town should also address existing safety concerns along these roadways by removing obstructions in the clear zone. Obstructions that cannot feasibly be moved should have an adequate barrier installed.

These roadways and intersections should also be addressed in the final development analyses since vehicles from these developments are anticipated to use the surrounding roadways. A future project is planned for the intersection of SR-89 at Road 1 North to install a traffic signal.

6.4 **Pedestrian Considerations**

The proposed developments are located within walking distance to multiple commercial properties. Therefore, an increased number of walking pedestrians can be anticipated. Sidewalk should be extended to each of the developments along Road 2 North. Sidewalk ramps meeting the American with Disabilities Act (ADA) and current Public Right-of-Way Accessibility Guidelines (PROWAG) requirements should be installed at each driveway crossing. It appears that adequate pedestrian controls are already present at the intersection of SR-89 and Road 2 North; however, the crosswalk striping has been worn away and should be restriped. The Town should also consider constructing sidewalk from SR-89 to Del Rio Elementary and Heritage Middle School at the intersection of Road 2 North and Road 1 West.

In addition to sidewalks, the installation of bicycle lanes should be considered along Road 2 North. Although bicycle lanes are not currently provided within the study area, it would be recommended to install them on Road 2 North, to connect proposed residential and multi-family developments with existing commercial developments and schools.

6.5 **Traffic Control/Signal Needs**

A stop sign should be provided at the exit of each development driveway and pavement markings should be extended along the frontage of each development.

A traffic signal is provided at the intersection of SR-89 and Road 2 North and a future project will install a traffic signal at SR-89 and Road 1 North. No additional intersections in the study area warrant a traffic signal. After each phase of the developments is completed, traffic counts should be conducted at the intersection of SR-89 and Road 2 North. These traffic counts should be used to re-time the intersection to the optimal length.

7.0 CONCLUSIONS

Multiple developments are proposed along Road 2 North between Road 1 West and Road 1 East. Each of these developments will have an impact on the adjacent roadway network. This report provided a preliminary study for the effect the developments will have. The final reports for each development should consider the individual developments impact to the roadway network.

8.0 RECOMMENDATIONS

To continue to provide a safe and efficient roadway network, improvements and additional analyses are recommended to be completed with the proposed developments. Some of these recommendations should be completed by the Developers, while others may need to be completed by the Town. These recommendations are listed below.

Development Accesses and Road 2 North

- Provide a dedicated left-turn lane for each proposed development at each access. Due to the number of accesses and their proximity, a TWLTL is recommended for Road 2 North from Road 1 West to Road 1 East.
- Provide bicycle lanes along Road 2 North from Road 1 West to Road 1 East.
- Extend sidewalk along both sides of Road 2 North from Road 1 West to Road 1 East and install sidewalk ramps meeting ADA and PROWAG requirements at all intersections and driveways.
- Provide adequate sight visibility at the developments entrances. Ensure landscaping is properly designed and installed to not obstruct sight visibility.
- Widening the intersection of Road 2 North at Road 1 West and Road 2 North at Road 1 East to include left-turn lanes for Road 2 North or, alternately, construct a single lane roundabout at each intersection.

SR-89 and Road 2 North Intersection

- Construct a dedicated right-turn lane for eastbound Road 2 North at SR-89.
- Update striping along Road 2 North at the intersection of SR-89.
- Re-time the intersection of SR-89 and Road 2 North after each developments phase.
- Review available crash data and provide additional safety measures if warranted.

Surrounding Roadways (Road 1 North, Road 1 West, Road 1 East, and Perkinsville)

- Review available clear zone on the surrounding roadway network in the study area. Remove obstructions in the clear or provide adequate barriers if the obstruction cannot be removed.
- Review existing turning radiuses at the surrounding intersections. If radiuses are not large enough to accommodate turning vehicles develop a plan to improve the intersection geometry.

DOWL

430 West Warner Road, Suite B101
Tempe, Arizona 86323

Weather: Clear
Counted By: T. Hufford
Other Notes:

File Name : Road 2 North at SR-89
Site Code : NA
Start Date : 4/5/2018
Page No : 1

Groups Printed- Passenger Vehicles - Commercial Vehicles

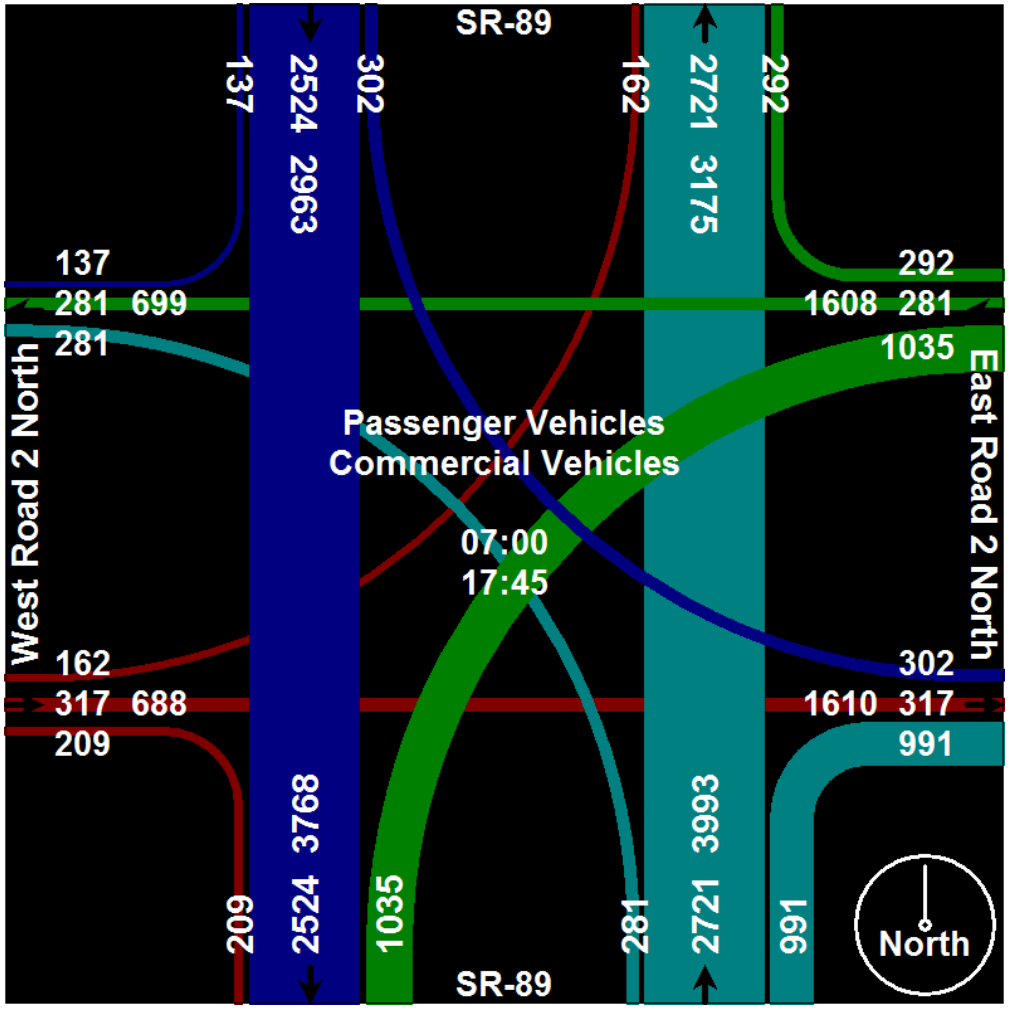
	SR-89 Southbound				East Road 2 North Westbound				SR-89 Northbound				West Road 2 North Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00	7	207	3	217	80	18	9	107	30	102	30	162	4	21	12	37	523
07:15	12	220	20	252	82	39	9	130	33	102	43	178	8	45	31	84	644
07:30	13	245	2	260	81	28	6	115	15	110	28	153	15	40	30	85	613
07:45	10	172	10	192	84	15	13	112	6	144	29	179	12	4	6	22	505
Total	42	844	35	921	327	100	37	464	84	458	130	672	39	110	79	228	2285
08:00	19	159	16	194	60	12	19	91	9	121	29	159	3	15	4	22	466
08:15	7	179	2	188	60	8	7	75	6	142	33	181	6	9	10	25	469
08:30	13	124	3	140	72	8	12	92	4	126	40	170	5	5	6	16	418
08:45	14	154	6	174	42	5	17	64	10	142	45	197	9	10	5	24	459
Total	53	616	27	696	234	33	55	322	29	531	147	707	23	39	25	87	1812
*** BREAK ***																	
16:00	35	125	13	173	64	22	30	116	33	195	109	337	21	28	20	69	695
16:15	24	140	12	176	75	20	19	114	23	210	77	310	17	32	22	71	671
16:30	27	120	19	166	57	21	22	100	28	211	96	335	12	27	12	51	652
16:45	32	148	2	182	66	20	32	118	17	252	100	369	16	28	14	58	727
Total	118	533	46	697	262	83	103	448	101	868	382	1351	66	115	68	249	2745
17:00	27	166	5	198	73	21	30	124	12	233	69	314	9	20	12	41	677
17:15	21	121	16	158	52	15	21	88	20	212	88	320	7	16	9	32	598
17:30	16	152	5	173	52	16	24	92	19	211	86	316	8	9	8	25	606
17:45	25	92	3	120	35	13	22	70	16	208	89	313	10	8	8	26	529
Total	89	531	29	649	212	65	97	374	67	864	332	1263	34	53	37	124	2410
Grand Total	302	2524	137	2963	1035	281	292	1608	281	2721	991	3993	162	317	209	688	9252
Apprch %	10.2	85.2	4.6		64.4	17.5	18.2		7	68.1	24.8		23.5	46.1	30.4		
Total %	3.3	27.3	1.5	32	11.2	3	3.2	17.4	3	29.4	10.7	43.2	1.8	3.4	2.3	7.4	
Passenger Vehicles	302	2524	137	2963	1035	281	292	1608	281	2721	991	3993	162	317	209	688	9252
% Passenger Vehicles	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Commercial Vehicles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Commercial Vehicles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

DOWL

430 West Warner Road, Suite B101
Tempe, Arizona 86323

Weather: Clear
Counted By: T. Hufford
Other Notes:

File Name : Road 2 North at SR-89
Site Code : NA
Start Date : 4/5/2018
Page No : 2



DOWL

430 West Warner Road, Suite B101
Tempe, Arizona 86323

Weather: Clear
Counted By: T. Hufford
Other Notes:

File Name : West Road 2 North at North Road 1 West
Site Code : NA
Start Date : 3/29/2018
Page No : 1

Groups Printed- Passenger Vehicles - Commercial Vehicles

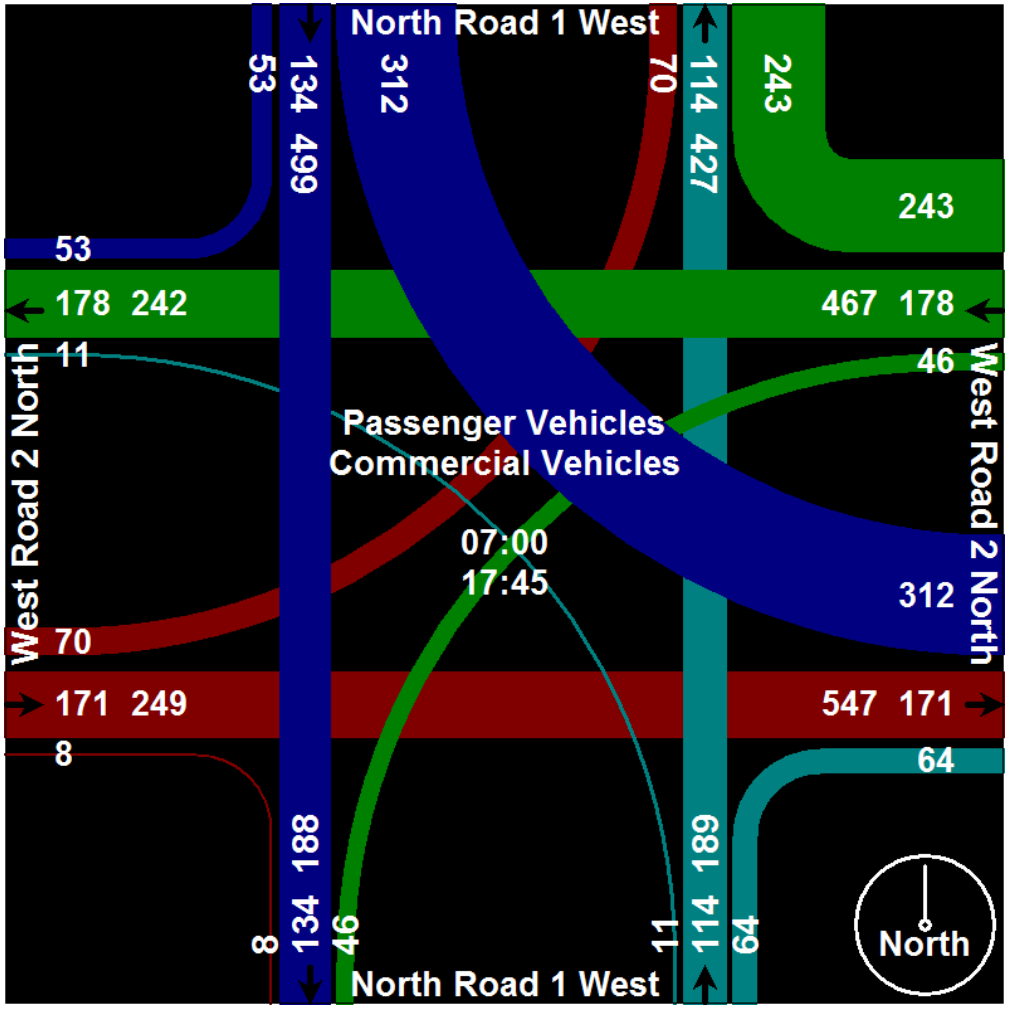
	North Road 1 West Southbound				West Road 2 North Westbound				North Road 1 West Northbound				West Road 2 North Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00	37	14	1	52	1	3	49	53	0	17	2	19	10	7	1	18	142
07:15	70	20	10	100	2	5	64	71	1	20	4	25	22	8	0	30	226
07:30	38	17	11	66	5	14	14	33	2	8	3	13	6	13	3	22	134
07:45	6	3	3	12	1	9	4	14	0	6	0	6	2	11	1	14	46
Total	151	54	25	230	9	31	131	171	3	51	9	63	40	39	5	84	548
08:00	4	3	0	7	1	8	8	17	1	2	1	4	2	10	0	12	40
08:15	4	6	1	11	3	6	2	11	0	3	5	8	4	8	0	12	42
08:30	2	1	1	4	0	4	5	9	0	5	3	8	1	11	0	12	33
08:45	4	1	0	5	3	10	5	18	1	6	5	12	0	9	0	9	44
Total	14	11	2	27	7	28	20	55	2	16	14	32	7	38	0	45	159
*** BREAK ***																	
16:00	63	22	13	98	3	12	30	45	2	11	5	18	6	17	1	24	185
16:15	19	11	3	33	2	14	13	29	0	8	3	11	3	13	1	17	90
16:30	14	2	4	20	2	13	3	18	1	4	7	12	1	15	0	16	66
16:45	12	5	0	17	6	21	8	35	1	6	5	12	1	7	0	8	72
Total	108	40	20	168	13	60	54	127	4	29	20	53	11	52	2	65	413
17:00	15	12	0	27	6	16	8	30	0	2	6	8	1	12	0	13	78
17:15	6	5	2	13	5	15	8	28	1	5	4	10	3	7	0	10	61
17:30	7	3	3	13	3	7	12	22	1	4	8	13	3	12	0	15	63
17:45	11	9	1	21	3	21	10	34	0	7	3	10	5	11	1	17	82
Total	39	29	6	74	17	59	38	114	2	18	21	41	12	42	1	55	284
Grand Total	312	134	53	499	46	178	243	467	11	114	64	189	70	171	8	249	1404
Apprch %	62.5	26.9	10.6		9.9	38.1	52		5.8	60.3	33.9		28.1	68.7	3.2		
Total %	22.2	9.5	3.8	35.5	3.3	12.7	17.3	33.3	0.8	8.1	4.6	13.5	5	12.2	0.6	17.7	
Passenger Vehicles	312	134	53	499	46	178	243	467	11	114	64	189	70	171	8	249	1404
% Passenger Vehicles	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Commercial Vehicles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Commercial Vehicles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

DOWL

430 West Warner Road, Suite B101
Tempe, Arizona 86323

Weather: Clear
Counted By: T. Hufford
Other Notes:

File Name : West Road 2 North at North Road 1 West
Site Code : NA
Start Date : 3/29/2018
Page No : 2



Weather: NA
Serial Number: 019565
Installed By: T. Hufford
Other Comments:

DOWL

430 West Warner Road, Suite B101
Tempe, Arizona 85284

Site Code: East Road 2 North
Date Printed: 12-Apr-18
Date Start: 29-Mar-18
Date End: 05-Apr-18
Latitude: 34' 45.6190 North
Longitude: 112' 27.0430 West

Start	26-Mar-18		Tue		Wed		Thu		Fri		Sat		Sun		Week Average	
Time	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB
12:00 AM	*	*	*	*	*	*	*	*	22	42	25	56	29	48	25	49
01:00	*	*	*	*	*	*	*	*	9	32	14	32	13	33	12	32
02:00	*	*	*	*	*	*	*	*	13	14	15	26	2	12	10	17
03:00	*	*	*	*	*	*	*	*	4	15	5	11	5	6	5	11
04:00	*	*	*	*	*	*	*	*	7	10	5	6	5	9	6	8
05:00	*	*	*	*	*	*	*	*	11	2	7	1	8	3	9	2
06:00	*	*	*	*	*	*	*	*	48	8	22	3	22	4	31	5
07:00	*	*	*	*	*	*	*	*	96	16	51	22	47	15	65	18
08:00	*	*	*	*	*	*	*	*	206	51	83	23	64	60	118	45
09:00	*	*	*	*	*	*	*	*	**266**	83	152	61	130	77	183	74
10:00	*	*	*	*	*	*	*	*	208	126	209	147	191	123	203	132
11:00	*	*	*	*	*	*	*	*	236	**157**	**236**	**244**	**196**	**144**	**223**	**182**
12:00 PM	*	*	*	*	*	*	211	190	**247**	234	263	226	**208**	156	232	202
01:00	*	*	*	*	*	*	220	217	238	235	**298**	235	200	**229**	**239**	229
02:00	*	*	*	*	*	*	219	208	234	271	227	236	190	212	218	232
03:00	*	*	*	*	*	*	190	245	213	230	214	**247**	185	194	200	229
04:00	*	*	*	*	*	*	232	315	218	266	194	239	166	198	202	254
05:00	*	*	*	*	*	*	**263**	347	243	**320**	191	247	172	209	217	**281**
06:00	*	*	*	*	*	*	250	379	204	315	170	222	154	196	194	278
07:00	*	*	*	*	*	*	193	**388**	198	313	197	217	121	173	177	273
08:00	*	*	*	*	*	*	171	260	165	229	173	209	128	169	159	217
09:00	*	*	*	*	*	*	121	166	129	188	100	157	73	117	106	157
10:00	*	*	*	*	*	*	90	118	80	151	70	109	53	100	73	120
11:00	*	*	*	*	*	*	33	76	41	89	51	82	39	42	41	72
Lane	0	0	0	0	0	0	2193	2909	3336	3397	2972	3058	2401	2529	2948	3119
Day	0		0		0		5102		6733		6030		4930		6067	
AM Peak	-	-	-	-	-	-	-	-	09:00	11:00	11:00	11:00	11:00	11:00	11:00	11:00
Vol.	-	-	-	-	-	-	-	-	266	157	236	244	196	144	223	182
PM Peak	-	-	-	-	-	-	17:00	19:00	12:00	17:00	13:00	15:00	12:00	13:00	13:00	17:00
Vol.	-	-	-	-	-	-	263	388	247	320	298	247	208	229	239	281

Weather: NA
Serial Number: 019565
Installed By: T. Hufford
Other Comments:

DOWL

430 West Warner Road, Suite B101
Tempe, Arizona 85284

Site Code: East Road 2 North
Date Printed: 12-Apr-18
Date Start: 29-Mar-18
Date End: 05-Apr-18
Latitude: 34' 45.6190 North
Longitude: 112' 27.0430 West

Start	02-Apr-18		Tue		Wed		Thu		Fri		Sat		Sun		Week Average	
Time	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB
12:00 AM	17	39	13	34	23	42	27	35	*	*	*	*	*	*	20	38
01:00	8	21	15	35	9	23	9	22	*	*	*	*	*	*	10	25
02:00	2	9	7	15	5	14	1	11	*	*	*	*	*	*	4	12
03:00	2	3	4	6	4	6	4	9	*	*	*	*	*	*	4	6
04:00	10	1	12	4	11	4	12	5	*	*	*	*	*	*	11	4
05:00	13	0	18	3	17	2	15	4	*	*	*	*	*	*	16	2
06:00	53	5	48	8	58	13	63	9	*	*	*	*	*	*	56	9
07:00	118	36	128	45	131	36	124	37	*	*	*	*	*	*	125	38
08:00	**233**	61	**322**	**180**	**321**	158	**331**	153	*	*	*	*	*	*	**302**	138
09:00	232	98	301	177	302	**175**	291	157	*	*	*	*	*	*	282	152
10:00	196	111	198	137	213	144	217	141	*	*	*	*	*	*	206	133
11:00	177	**165**	207	153	212	151	209	**158**	*	*	*	*	*	*	201	**157**
12:00 PM	219	192	226	196	199	149	**144**	**117**	*	*	*	*	*	*	197	164
01:00	216	209	248	211	237	205	*	*	*	*	*	*	*	*	234	208
02:00	225	227	195	229	203	168	*	*	*	*	*	*	*	*	208	208
03:00	**232**	244	199	223	205	215	*	*	*	*	*	*	*	*	212	227
04:00	192	243	272	276	**261**	249	*	*	*	*	*	*	*	*	242	256
05:00	199	298	**282**	350	259	**355**	*	*	*	*	*	*	*	*	**247**	334
06:00	210	308	269	**351**	261	354	*	*	*	*	*	*	*	*	247	**338**
07:00	191	**314**	192	316	189	293	*	*	*	*	*	*	*	*	191	308
08:00	142	224	145	233	153	229	*	*	*	*	*	*	*	*	147	229
09:00	107	173	89	173	101	162	*	*	*	*	*	*	*	*	99	169
10:00	70	104	59	102	59	132	*	*	*	*	*	*	*	*	63	113
11:00	36	61	44	79	42	67	*	*	*	*	*	*	*	*	41	69
Lane	3100	3146	3493	3536	3475	3346	1447	858	0	0	0	0	0	0	3365	3337
Day	6246		7029		6821		2305		0		0		0		6702	
AM Peak	08:00	11:00	08:00	08:00	08:00	09:00	08:00	11:00	-	-	-	-	-	-	08:00	11:00
Vol.	233	165	322	180	321	175	331	158	-	-	-	-	-	-	302	157
PM Peak	15:00	19:00	17:00	18:00	16:00	17:00	12:00	12:00	-	-	-	-	-	-	17:00	18:00
Vol.	232	314	282	351	261	355	144	117	-	-	-	-	-	-	247	338

Comb. Total	6246	7029	6821	7407	6733	6030	4930	12769

ADT ADT 6,298 AADT 6,298

Weather: NA
Serial Number: 019564
Installed By: T. Hufford
Other Comments:

DOWL

430 West Warner Road, Suite B101
Tempe, Arizona 85284

Site Code: West Road 2 North
Date Printed: 12-Apr-18
Date Start: 28-Mar-18
Date End: 05-Apr-18
Latitude: 34' 45.6110 North
Longitude: 112' 27.5670 West

Start	26-Mar-18		Tue		Wed		Thu		Fri		Sat		Sun		Week Average	
Time	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB
12:00 AM	*	*	*	*	*	*	0	0	7	2	14	3	8	1	7	2
01:00	*	*	*	*	*	*	0	0	5	3	2	4	5	4	3	3
02:00	*	*	*	*	*	*	0	0	2	0	2	2	5	0	2	0
03:00	*	*	*	*	*	*	0	0	1	1	4	3	1	0	2	1
04:00	*	*	*	*	*	*	0	0	1	1	1	3	0	2	0	2
05:00	*	*	*	*	*	*	0	0	0	3	0	3	2	1	0	2
06:00	*	*	*	*	*	*	0	0	0	7	1	2	0	5	0	4
07:00	*	*	*	*	*	*	0	0	4	18	1	9	10	10	4	9
08:00	*	*	*	*	*	*	1	0	18	38	2	18	6	21	7	19
09:00	*	*	*	*	*	*	0	0	26	52	27	38	19	40	18	32
10:00	*	*	*	*	*	*	0	0	40	67	42	63	44	**55**	32	46
11:00	*	*	*	*	0	0	**2**	**1**	**75**	**97**	**65**	**98**	**48**	51	**38**	**49**
12:00 PM	*	*	*	*	0	0	133	65	85	91	92	**115**	**82**	49	78	64
01:00	*	*	*	*	0	0	86	89	106	**99**	**125**	84	79	**66**	79	68
02:00	*	*	*	*	0	0	84	71	112	80	110	73	62	60	74	57
03:00	*	*	*	*	0	0	69	68	99	77	83	75	66	55	63	55
04:00	*	*	*	*	0	0	131	130	82	80	66	61	70	48	70	64
05:00	*	*	*	*	0	0	**168**	**152**	**122**	96	81	56	58	56	**86**	**72**
06:00	*	*	*	*	0	0	116	109	109	78	71	63	65	36	72	57
07:00	*	*	*	*	0	0	104	93	84	77	88	52	40	37	63	52
08:00	*	*	*	*	0	0	84	61	65	41	65	47	34	34	50	37
09:00	*	*	*	*	0	0	46	21	43	27	34	30	28	21	30	20
10:00	*	*	*	*	0	0	34	16	34	21	34	20	19	12	24	14
11:00	*	*	*	*	0	0	17	8	20	8	22	13	17	5	15	7
Lane	0	0	0	0	0	0	1075	884	1140	1064	1032	935	768	669	817	736
Day	0		0		0		1959		2204		1967		1437		1553	
AM Peak	-	-	-	-	-	-	11:00	11:00	11:00	11:00	11:00	11:00	11:00	10:00	11:00	11:00
Vol.	-	-	-	-	-	-	2	1	75	97	65	98	48	55	38	49
PM Peak	-	-	-	-	-	-	17:00	17:00	17:00	13:00	13:00	12:00	12:00	13:00	17:00	17:00
Vol.	-	-	-	-	-	-	168	152	122	99	125	115	82	66	86	72

DOWL

430 West Warner Road, Suite B101
Tempe, Arizona 85284

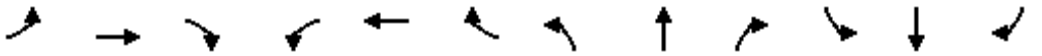
Weather: NA
Serial Number: 019564
Installed By: T. Hufford
Other Comments:

Site Code: West Road 2 North
Date Printed: 12-Apr-18
Date Start: 28-Mar-18
Date End: 05-Apr-18
Latitude: 34' 45.6110 North
Longitude: 112' 27.5670 West

Start	02-Apr-18		Tue		Wed		Thu		Fri		Sat		Sun		Week Average	
Time	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB
12:00 AM	5	1	6	3	6	7	4	1	*	*	*	*	*	*	5	3
01:00	6	3	7	7	3	7	8	3	*	*	*	*	*	*	6	5
02:00	2	2	2	0	0	1	1	0	*	*	*	*	*	*	1	1
03:00	0	0	0	0	2	1	1	4	*	*	*	*	*	*	1	1
04:00	0	2	0	1	1	1	2	0	*	*	*	*	*	*	1	1
05:00	2	0	0	2	0	4	2	4	*	*	*	*	*	*	1	2
06:00	4	6	3	5	4	7	1	5	*	*	*	*	*	*	3	6
07:00	3	19	10	20	11	20	11	27	*	*	*	*	*	*	9	22
08:00	24	26	**185**	**169**	140	143	**182**	**181**	*	*	*	*	*	*	**133**	**130**
09:00	48	49	82	112	**153**	**145**	80	114	*	*	*	*	*	*	91	105
10:00	52	69	52	69	48	79	50	58	*	*	*	*	*	*	50	69
11:00	**62**	**73**	58	71	37	70	53	81	*	*	*	*	*	*	52	74
12:00 PM	84	**91**	74	76	76	57	**19**	**12**	*	*	*	*	*	*	63	59
01:00	97	76	91	95	91	84	*	*	*	*	*	*	*	*	93	85
02:00	81	76	72	78	85	67	*	*	*	*	*	*	*	*	79	74
03:00	101	75	97	74	73	59	*	*	*	*	*	*	*	*	90	69
04:00	79	81	156	120	134	110	*	*	*	*	*	*	*	*	123	104
05:00	99	88	**186**	**147**	**142**	**124**	*	*	*	*	*	*	*	*	**142**	**120**
06:00	**102**	64	112	117	112	110	*	*	*	*	*	*	*	*	109	97
07:00	85	55	116	109	112	96	*	*	*	*	*	*	*	*	104	87
08:00	68	48	60	49	61	38	*	*	*	*	*	*	*	*	63	45
09:00	26	23	37	15	38	22	*	*	*	*	*	*	*	*	34	20
10:00	23	7	32	7	38	18	*	*	*	*	*	*	*	*	31	11
11:00	11	3	15	11	14	5	*	*	*	*	*	*	*	*	13	6
Lane	1064	937	1453	1357	1381	1275	414	490	0	0	0	0	0	0	1297	1196
Day	2001		2810		2656		904		0		0		0		2493	
AM Peak	11:00	11:00	08:00	08:00	09:00	09:00	08:00	08:00	-	-	-	-	-	-	08:00	08:00
Vol.	62	73	185	169	153	145	182	181	-	-	-	-	-	-	133	130
PM Peak	18:00	12:00	17:00	17:00	17:00	17:00	12:00	12:00	-	-	-	-	-	-	17:00	17:00
Vol.	102	91	186	147	142	124	19	12	-	-	-	-	-	-	142	120

Comb. Total	2001	2810	2656	2863	2204	1967	1437	4046

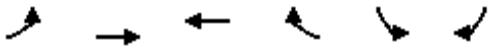
ADT ADT 2,148 AADT 2,148



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	39	110	79	327	100	37	84	458	130	42	844	35
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Lane Width	12	12	12	12	12	12	14	12	12	14	12	12
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	0.94		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1554	1533		1554	1636	1390	1657	3107	1390	1657	3107	1390
Flt Permitted	0.69	1.00		0.38	1.00	1.00	0.16	1.00	1.00	0.43	1.00	1.00
Satd. Flow (perm)	1123	1533		614	1636	1390	283	3107	1390	743	3107	1390
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	42	120	86	355	109	40	91	498	141	46	917	38
RTOR Reduction (vph)	0	38	0	0	0	27	0	0	87	0	0	24
Lane Group Flow (vph)	42	168	0	355	109	13	91	498	54	46	917	14
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8	2		2	6		6
Actuated Green, G (s)	15.7	13.4		27.5	21.2	21.2	29.0	25.9	25.9	27.4	25.1	25.1
Effective Green, g (s)	15.7	13.4		27.5	21.2	21.2	29.0	25.9	25.9	27.4	25.1	25.1
Actuated g/C Ratio	0.23	0.20		0.41	0.31	0.31	0.43	0.38	0.38	0.40	0.37	0.37
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	275	303		389	512	435	184	1188	531	331	1151	515
v/s Ratio Prot	0.01	0.11		c0.14	0.07		c0.02	0.16		0.00	c0.30	
v/s Ratio Perm	0.03			c0.23		0.01	0.19		0.04	0.05		0.01
v/c Ratio	0.15	0.55		0.91	0.21	0.03	0.49	0.42	0.10	0.14	0.80	0.03
Uniform Delay, d1	20.5	24.5		17.1	17.1	16.1	13.1	15.4	13.4	12.4	19.0	13.5
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.3	2.2		25.2	0.2	0.0	2.1	1.1	0.4	0.2	5.8	0.1
Delay (s)	20.8	26.6		42.3	17.3	16.1	15.2	16.5	13.8	12.6	24.8	13.6
Level of Service	C	C		D	B	B	B	B	B	B	C	B
Approach Delay (s)		25.6			34.8			15.8			23.8	
Approach LOS		C			C			B			C	

Intersection Summary			
HCM 2000 Control Delay	23.9	HCM 2010 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	67.7	Sum of lost time (s)	16.0
Intersection Capacity Utilization	74.9%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	6	220	210	10	7	3
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	7	239	228	11	8	3
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)			305			
pX, platoon unblocked						
vC, conflicting volume	239				480	228
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	239				480	228
tC, single (s)	4.2				6.5	6.3
tC, 2 stage (s)						
tF (s)	2.3				3.6	3.4
p0 queue free %	99				99	100
cM capacity (veh/h)	1299				533	799

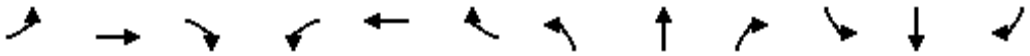
Direction, Lane #	EB 1	WB 1	WB 2	SB 1
Volume Total	242	228	11	9
Volume Left	3	0	0	8
Volume Right	0	0	11	2
cSH	1299	1700	1700	566
Volume to Capacity	0.01	0.13	0.01	0.02
Queue Length 95th (ft)	0	0	0	1
Control Delay (s)	0.1	0.0	0.0	11.5
Lane LOS	A			B
Approach Delay (s)	0.1	0.0		11.5
Approach LOS				B

Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	27.8%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	226	1	0	219	1	2
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	246	1	0	238	1	2
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)				160		
pX, platoon unblocked						
vC, conflicting volume			247		365	246
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			247		365	246
tC, single (s)			4.2		6.9	7.0
tC, 2 stage (s)						
tF (s)			2.3		3.6	3.4
p0 queue free %			100		100	100
cM capacity (veh/h)			1281		594	739

Direction, Lane #	EB 1	WB 1	WB 2	NB 1
Volume Total	246	119	119	2
Volume Left	0	0	0	1
Volume Right	1	0	0	1
cSH	1700	1700	1700	659
Volume to Capacity	0.14	0.07	0.07	0.00
Queue Length 95th (ft)	0	0	0	0
Control Delay (s)	0.0	0.0	0.0	10.5
Lane LOS				B
Approach Delay (s)	0.0	0.0		10.5
Approach LOS				B

Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	23.0%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	28	234	20	46	380	28	34	0	22	25	0	50
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
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
Hourly flow rate (vph)	30	254	22	50	413	30	37	0	24	27	0	54
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		229										
pX, platoon unblocked												
vC, conflicting volume	443			276			687	870	265	863	850	207
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	443			276			687	870	265	863	850	207
tC, single (s)	4.2			4.2			7.6	6.6	7.0	7.6	6.6	7.0
tC, 2 stage (s)												
tF (s)	2.3			2.3			3.6	4.1	3.4	3.6	4.1	3.4
p0 queue free %	97			96			87	100	97	88	100	93
cM capacity (veh/h)	1078			1248			286	261	718	220	268	784

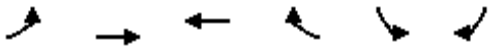
Direction, Lane #	EB 1	WB 1	WB 2	WB 3	NB 1	SB 1
Volume Total	280	163	275	30	30	41
Volume Left	15	25	0	0	18	14
Volume Right	11	0	0	30	12	27
cSH	1078	1248	1700	1700	374	423
Volume to Capacity	0.03	0.04	0.16	0.02	0.08	0.10
Queue Length 95th (ft)	2	3	0	0	7	8
Control Delay (s)	0.7	1.5	0.0	0.0	15.5	14.4
Lane LOS	A	A			C	B
Approach Delay (s)	0.7	0.5			15.5	14.4
Approach LOS					C	B

Intersection Summary				
Average Delay	1.8			
Intersection Capacity Utilization	45.4%	ICU Level of Service		A
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	57	190	34	21	285	56	16	0	11	50	0	123
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
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
Hourly flow rate (vph)	62	207	37	23	310	61	17	0	12	54	0	134
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		395										
pX, platoon unblocked												
vC, conflicting volume	371			243			838	765	225	716	723	310
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	371			243			838	765	225	716	723	310
tC, single (s)	4.2			4.2			7.2	6.6	6.3	7.2	6.6	6.3
tC, 2 stage (s)												
tF (s)	2.3			2.3			3.6	4.1	3.4	3.6	4.1	3.4
p0 queue free %	95			98			92	100	99	83	100	81
cM capacity (veh/h)	1161			1294			216	304	802	316	322	719

Direction, Lane #	EB 1	WB 1	WB 2	WB 3	NB 1	SB 1
Volume Total	256	23	310	61	15	94
Volume Left	31	23	0	0	9	27
Volume Right	18	0	0	61	6	67
cSH	1161	1294	1700	1700	307	525
Volume to Capacity	0.05	0.02	0.18	0.04	0.05	0.18
Queue Length 95th (ft)	4	1	0	0	4	16
Control Delay (s)	1.4	7.8	0.0	0.0	17.3	13.3
Lane LOS	A	A			C	B
Approach Delay (s)	1.4	0.5			17.3	13.3
Approach LOS					C	B

Intersection Summary				
Average Delay	2.7			
Intersection Capacity Utilization	54.4%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	28	234	337	28	25	25
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	30	254	366	30	27	27
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		720				
pX, platoon unblocked						
vC, conflicting volume	397				697	382
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	397				697	382
tC, single (s)	4.2				6.5	6.3
tC, 2 stage (s)						
tF (s)	2.3				3.6	3.4
p0 queue free %	97				93	96
cM capacity (veh/h)	1135				389	655

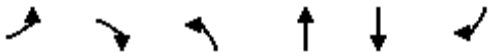
Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	270	382	41
Volume Left	15	0	27
Volume Right	0	15	14
cSH	1135	1700	450
Volume to Capacity	0.03	0.22	0.09
Queue Length 95th (ft)	2	0	7
Control Delay (s)	0.7	0.0	13.8
Lane LOS	A		B
Approach Delay (s)	0.7	0.0	13.8
Approach LOS			B

Intersection Summary			
Average Delay	1.1		
Intersection Capacity Utilization	48.8%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	252	7	3	344	21	9
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	274	8	3	374	23	10
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	930					
pX, platoon unblocked						
vC, conflicting volume			282		658	278
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			282		658	278
tC, single (s)			4.2		6.5	6.3
tC, 2 stage (s)						
tF (s)			2.3		3.6	3.4
p0 queue free %			100		95	99
cM capacity (veh/h)			1253		420	749

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	278	376	28
Volume Left	0	2	23
Volume Right	4	0	5
cSH	1700	1253	455
Volume to Capacity	0.16	0.00	0.06
Queue Length 95th (ft)	0	0	5
Control Delay (s)	0.0	0.1	13.4
Lane LOS		A	B
Approach Delay (s)	0.0	0.1	13.4
Approach LOS			B

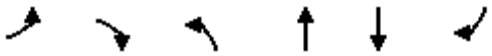
Intersection Summary			
Average Delay		0.6	
Intersection Capacity Utilization		32.3%	ICU Level of Service A
Analysis Period (min)		15	



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	0	2	3	672	1247	3
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	2	3	730	1355	3
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)					149	
pX, platoon unblocked	0.74	0.74	0.74			
vC, conflicting volume	1607	679	1359			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1124	0	789			
tC, single (s)	6.9	7.0	4.2			
tC, 2 stage (s)						
tF (s)	3.6	3.4	2.3			
p0 queue free %	100	100	99			
cM capacity (veh/h)	142	793	590			

Direction, Lane #	EB 1	NB 1	NB 2	NB 3	SB 1	SB 2
Volume Total	1	148	292	292	904	453
Volume Left	0	2	0	0	0	0
Volume Right	1	0	0	0	0	2
cSH	793	590	1700	1700	1700	1700
Volume to Capacity	0.00	0.01	0.17	0.17	0.53	0.27
Queue Length 95th (ft)	0	0	0	0	0	0
Control Delay (s)	9.5	0.2	0.0	0.0	0.0	0.0
Lane LOS	A	A				
Approach Delay (s)	9.5	0.0			0.0	
Approach LOS	A					

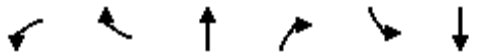
Intersection Summary				
Average Delay	0.0			
Intersection Capacity Utilization	47.5%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	0	7	0	534	887	10
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	8	0	580	964	11
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				TWLTL	TWLTL	
Median storage veh)				2	2	
Upstream signal (ft)				282		
pX, platoon unblocked	0.89					
vC, conflicting volume	1254	482	975			
vC1, stage 1 conf vol	964					
vC2, stage 2 conf vol	290					
vCu, unblocked vol	1046	482	975			
tC, single (s)	6.9	7.0	4.2			
tC, 2 stage (s)	5.9					
tF (s)	3.6	3.4	2.3			
p0 queue free %	100	99	100			
cM capacity (veh/h)	308	517	673			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	8	290	290	482	482	11
Volume Left	0	0	0	0	0	0
Volume Right	8	0	0	0	0	11
cSH	517	1700	1700	1700	1700	1700
Volume to Capacity	0.01	0.17	0.17	0.28	0.28	0.01
Queue Length 95th (ft)	1	0	0	0	0	0
Control Delay (s)	12.1	0.0	0.0	0.0	0.0	0.0
Lane LOS	B					
Approach Delay (s)	12.1	0.0		0.0		
Approach LOS	B					

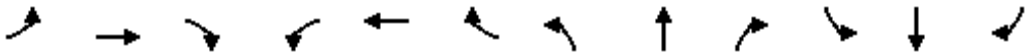
Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	36.6%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	0	198	365	169	169	897
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	215	397	184	184	975
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			TWLTL			TWLTL
Median storage veh)			2			2
Upstream signal (ft)			458			
pX, platoon unblocked	0.98	0.98			0.98	
vC, conflicting volume	1252	198			580	
vC1, stage 1 conf vol	397					
vC2, stage 2 conf vol	855					
vCu, unblocked vol	1210	132			523	
tC, single (s)	6.9	7.0			4.2	
tC, 2 stage (s)	5.9					
tF (s)	3.6	3.4			2.3	
p0 queue free %	100	75			81	
cM capacity (veh/h)	279	857			982	

Direction, Lane #	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	215	198	198	184	184	488	488
Volume Left	0	0	0	0	184	0	0
Volume Right	215	0	0	184	0	0	0
cSH	857	1700	1700	1700	982	1700	1700
Volume to Capacity	0.25	0.12	0.12	0.11	0.19	0.29	0.29
Queue Length 95th (ft)	25	0	0	0	17	0	0
Control Delay (s)	10.6	0.0	0.0	0.0	9.5	0.0	0.0
Lane LOS	B				A		
Approach Delay (s)	10.6	0.0			1.5		
Approach LOS	B						

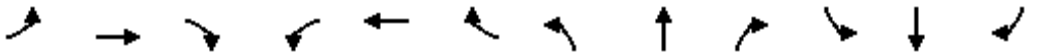
Intersection Summary			
Average Delay	2.1		
Intersection Capacity Utilization	30.9%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	40	39	5	9	31	131	3	51	9	151	54	25
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
Hourly flow rate (vph)	43	42	5	10	34	142	3	55	10	164	59	27

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	67	110	62	154
Volume Left (vph)	22	5	2	82
Volume Right (vph)	3	71	5	14
Hadj (s)	0.16	-0.26	0.08	0.17
Departure Headway (s)	4.7	4.2	4.6	4.6
Degree Utilization, x	0.09	0.13	0.08	0.20
Capacity (veh/h)	715	796	745	751
Control Delay (s)	8.2	7.9	8.0	8.7
Approach Delay (s)	8.2	7.9	8.0	8.7
Approach LOS	A	A	A	A

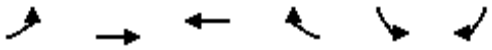
Intersection Summary				
Delay	8.2			
HCM 2010 Level of Service	A			
Intersection Capacity Utilization	46.5%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	66	115	68	262	83	103	101	868	382	118	533	46
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Lane Width	12	12	12	12	12	12	14	12	12	14	12	12
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	0.94		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1554	1544		1554	1636	1390	1657	3107	1390	1657	3107	1390
Flt Permitted	0.70	1.00		0.39	1.00	1.00	0.33	1.00	1.00	0.18	1.00	1.00
Satd. Flow (perm)	1143	1544		639	1636	1390	582	3107	1390	317	3107	1390
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	72	125	74	285	90	112	110	943	415	128	579	50
RTOR Reduction (vph)	0	31	0	0	0	80	0	0	252	0	0	31
Lane Group Flow (vph)	72	168	0	285	90	32	110	943	163	128	579	19
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8	2		2	6		6
Actuated Green, G (s)	15.7	13.4		25.5	19.2	19.2	30.9	26.3	26.3	27.9	24.8	24.8
Effective Green, g (s)	15.7	13.4		25.5	19.2	19.2	30.9	26.3	26.3	27.9	24.8	24.8
Actuated g/C Ratio	0.23	0.20		0.38	0.29	0.29	0.46	0.39	0.39	0.42	0.37	0.37
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	282	309		354	469	398	342	1221	546	194	1151	515
v/s Ratio Prot	0.01	0.11		c0.10	0.06		0.02	c0.30		c0.03	0.19	
v/s Ratio Perm	0.05			c0.21		0.02	0.13		0.12	0.24		0.01
v/c Ratio	0.26	0.54		0.81	0.19	0.08	0.32	0.77	0.30	0.66	0.50	0.04
Uniform Delay, d1	20.5	24.0		16.9	18.0	17.4	10.7	17.7	14.0	13.7	16.3	13.4
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.5	1.9		12.5	0.2	0.1	0.5	4.8	1.4	7.9	1.6	0.1
Delay (s)	21.0	26.0		29.4	18.2	17.5	11.2	22.5	15.4	21.6	17.9	13.6
Level of Service	C	C		C	B	B	B	C	B	C	B	B
Approach Delay (s)		24.6			24.6			19.6			18.2	
Approach LOS		C			C			B			B	

Intersection Summary			
HCM 2000 Control Delay	20.5	HCM 2010 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	66.9	Sum of lost time (s)	16.0
Intersection Capacity Utilization	73.3%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	17	210	138	198	34	17
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	18	228	150	215	37	18
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)			305			
pX, platoon unblocked						
vC, conflicting volume	365				415	150
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	365				415	150
tC, single (s)	4.2				6.5	6.3
tC, 2 stage (s)						
tF (s)	2.3				3.6	3.4
p0 queue free %	98				94	98
cM capacity (veh/h)	1166				575	883

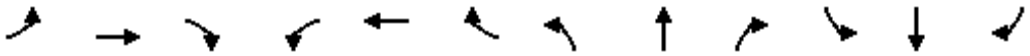
Direction, Lane #	EB 1	WB 1	WB 2	SB 1
Volume Total	238	150	215	46
Volume Left	9	0	0	37
Volume Right	0	0	215	9
cSH	1166	1700	1700	618
Volume to Capacity	0.02	0.09	0.13	0.07
Queue Length 95th (ft)	1	0	0	6
Control Delay (s)	0.5	0.0	0.0	11.3
Lane LOS	A			B
Approach Delay (s)	0.5	0.0		11.3
Approach LOS				B

Intersection Summary			
Average Delay	1.0		
Intersection Capacity Utilization	34.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	240	4	0	230	3	9
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	261	4	0	250	3	10
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)				160		
pX, platoon unblocked						
vC, conflicting volume			265		388	263
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			265		388	263
tC, single (s)			4.2		6.9	7.0
tC, 2 stage (s)						
tF (s)			2.3		3.6	3.4
p0 queue free %			100		99	99
cM capacity (veh/h)			1260		575	721

Direction, Lane #	EB 1	WB 1	WB 2	NB 1
Volume Total	263	125	125	8
Volume Left	0	0	0	3
Volume Right	2	0	0	5
cSH	1700	1700	1700	654
Volume to Capacity	0.15	0.07	0.07	0.01
Queue Length 95th (ft)	0	0	0	1
Control Delay (s)	0.0	0.0	0.0	10.6
Lane LOS				B
Approach Delay (s)	0.0	0.0		10.6
Approach LOS				B

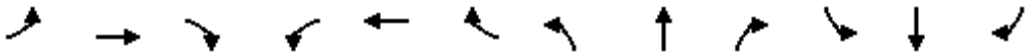
Intersection Summary			
Average Delay	0.2		
Intersection Capacity Utilization	24.0%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	32	475	32	26	363	59	54	0	36	32	0	63
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
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
Hourly flow rate (vph)	35	516	35	28	395	64	59	0	39	35	0	68
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		229										
pX, platoon unblocked				0.99			0.99	0.99	0.99	0.99	0.99	
vC, conflicting volume	459			551			926	1118	534	1093	1072	197
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	459			539			918	1114	522	1088	1066	197
tC, single (s)	4.2			4.2			7.6	6.6	7.0	7.6	6.6	7.0
tC, 2 stage (s)												
tF (s)	2.3			2.3			3.6	4.1	3.4	3.6	4.1	3.4
p0 queue free %	97			97			69	100	92	75	100	91
cM capacity (veh/h)	1064			979			188	185	481	142	198	795

Direction, Lane #	EB 1	WB 1	WB 2	WB 3	NB 1	SB 1
Volume Total	551	146	263	64	49	52
Volume Left	17	14	0	0	29	17
Volume Right	17	0	0	64	20	34
cSH	1064	979	1700	1700	249	311
Volume to Capacity	0.03	0.03	0.15	0.04	0.20	0.17
Queue Length 95th (ft)	3	2	0	0	18	15
Control Delay (s)	0.7	1.1	0.0	0.0	23.0	18.8
Lane LOS	A	A			C	C
Approach Delay (s)	0.7	0.3			23.0	18.8
Approach LOS					C	C

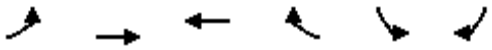
Intersection Summary				
Average Delay	2.3			
Intersection Capacity Utilization	62.7%	ICU Level of Service		B
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	59	439	45	28	338	32	22	0	16	83	0	88
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
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
Hourly flow rate (vph)	64	477	49	30	367	35	24	0	17	90	0	96
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		395										
pX, platoon unblocked												
vC, conflicting volume	402			526			1154	1093	502	1076	1083	367
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	402			526			1154	1093	502	1076	1083	367
tC, single (s)	4.2			4.2			7.2	6.6	6.3	7.2	6.6	6.3
tC, 2 stage (s)												
tF (s)	2.3			2.3			3.6	4.1	3.4	3.6	4.1	3.4
p0 queue free %	94			97			82	100	97	48	100	86
cM capacity (veh/h)	1130			1016			136	192	560	175	195	667

Direction, Lane #	EB 1	WB 1	WB 2	WB 3	NB 1	SB 1
Volume Total	534	30	367	35	21	93
Volume Left	32	30	0	0	12	45
Volume Right	24	0	0	35	9	48
cSH	1130	1016	1700	1700	200	282
Volume to Capacity	0.06	0.03	0.22	0.02	0.10	0.33
Queue Length 95th (ft)	5	2	0	0	9	35
Control Delay (s)	1.1	8.7	0.0	0.0	25.1	24.0
Lane LOS	A	A			D	C
Approach Delay (s)	1.1	0.6			25.1	24.0
Approach LOS					D	C

Intersection Summary				
Average Delay	3.3			
Intersection Capacity Utilization	73.3%	ICU Level of Service	D	
Analysis Period (min)	15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	32	511	366	32	32	32
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	35	555	398	35	35	35
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		720				
pX, platoon unblocked						
vC, conflicting volume	433				1040	415
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	433				1040	415
tC, single (s)	4.2				6.5	6.3
tC, 2 stage (s)						
tF (s)	2.3				3.6	3.4
p0 queue free %	97				86	94
cM capacity (veh/h)	1101				242	627

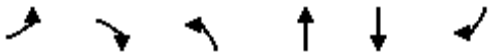
Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	573	415	52
Volume Left	17	0	35
Volume Right	0	17	17
cSH	1101	1700	304
Volume to Capacity	0.03	0.24	0.17
Queue Length 95th (ft)	2	0	15
Control Delay (s)	0.6	0.0	19.3
Lane LOS	A		C
Approach Delay (s)	0.6	0.0	19.3
Approach LOS			C

Intersection Summary			
Average Delay	1.3		
Intersection Capacity Utilization	68.2%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	517	26	11	383	15	6
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	562	28	12	416	16	7
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	930					
pX, platoon unblocked						
vC, conflicting volume			590		1016	576
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			590		1016	576
tC, single (s)			4.2		6.5	6.3
tC, 2 stage (s)						
tF (s)			2.3		3.6	3.4
p0 queue free %			99		94	99
cM capacity (veh/h)			961		255	508

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	576	422	20
Volume Left	0	6	16
Volume Right	14	0	3
cSH	1700	961	278
Volume to Capacity	0.34	0.01	0.07
Queue Length 95th (ft)	0	1	6
Control Delay (s)	0.0	0.3	18.9
Lane LOS		A	C
Approach Delay (s)	0.0	0.3	18.9
Approach LOS			C

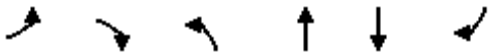
Intersection Summary			
Average Delay		0.5	
Intersection Capacity Utilization		41.5%	ICU Level of Service A
Analysis Period (min)		15	



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	2	9	9	1349	854	9
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	2	10	10	1466	928	10
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)					149	
pX, platoon unblocked	0.86	0.86	0.86			
vC, conflicting volume	1441	469	938			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1196	71	614			
tC, single (s)	6.9	7.0	4.2			
tC, 2 stage (s)						
tF (s)	3.6	3.4	2.3			
p0 queue free %	99	99	99			
cM capacity (veh/h)	146	831	802			

Direction, Lane #	EB 1	NB 1	NB 2	NB 3	SB 1	SB 2
Volume Total	7	298	587	587	619	314
Volume Left	2	5	0	0	0	0
Volume Right	5	0	0	0	0	5
cSH	341	802	1700	1700	1700	1700
Volume to Capacity	0.02	0.01	0.35	0.35	0.36	0.18
Queue Length 95th (ft)	2	1	0	0	0	0
Control Delay (s)	15.8	0.3	0.0	0.0	0.0	0.0
Lane LOS	C	A				
Approach Delay (s)	15.8	0.1			0.0	
Approach LOS	C					

Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	45.0%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	0	34	0	1037	690	32
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	37	0	1127	750	35
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				TWLTL	TWLTL	
Median storage veh)				2	2	
Upstream signal (ft)				282		
pX, platoon unblocked	0.74					
vC, conflicting volume	1314	375	785			
vC1, stage 1 conf vol	750					
vC2, stage 2 conf vol	564					
vCu, unblocked vol	730	375	785			
tC, single (s)	6.9	7.0	4.2			
tC, 2 stage (s)	5.9					
tF (s)	3.6	3.4	2.3			
p0 queue free %	100	94	100			
cM capacity (veh/h)	394	608	798			

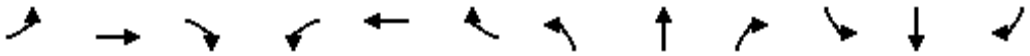
Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	37	564	564	375	375	35
Volume Left	0	0	0	0	0	0
Volume Right	37	0	0	0	0	35
cSH	608	1700	1700	1700	1700	1700
Volume to Capacity	0.06	0.33	0.33	0.22	0.22	0.02
Queue Length 95th (ft)	5	0	0	0	0	0
Control Delay (s)	11.3	0.0	0.0	0.0	0.0	0.0
Lane LOS	B					
Approach Delay (s)	11.3	0.0		0.0		
Approach LOS	B					

Intersection Summary			
Average Delay	0.2		
Intersection Capacity Utilization	34.5%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	0	304	843	194	194	724
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	330	916	211	211	787
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			TWLTL			TWLTL
Median storage veh)			2			2
Upstream signal (ft)			458			
pX, platoon unblocked	0.78	0.78			0.78	
vC, conflicting volume	1732	458			1127	
vC1, stage 1 conf vol	916					
vC2, stage 2 conf vol	815					
vCu, unblocked vol	1367	0			590	
tC, single (s)	6.9	7.0			4.2	
tC, 2 stage (s)	5.9					
tF (s)	3.6	3.4			2.3	
p0 queue free %	100	60			71	
cM capacity (veh/h)	245	830			737	

Direction, Lane #	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	330	458	458	211	211	393	393
Volume Left	0	0	0	0	211	0	0
Volume Right	330	0	0	211	0	0	0
cSH	830	1700	1700	1700	737	1700	1700
Volume to Capacity	0.40	0.27	0.27	0.12	0.29	0.23	0.23
Queue Length 95th (ft)	48	0	0	0	30	0	0
Control Delay (s)	12.2	0.0	0.0	0.0	11.8	0.0	0.0
Lane LOS	B				B		
Approach Delay (s)	12.2	0.0			2.5		
Approach LOS	B						

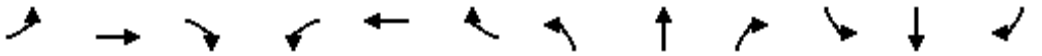
Intersection Summary			
Average Delay	2.7		
Intersection Capacity Utilization	52.4%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	11	52	2	13	60	54	4	29	20	108	40	20
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
Hourly flow rate (vph)	12	57	2	14	65	59	4	32	22	117	43	22

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	64	102	45	113
Volume Left (vph)	6	7	2	59
Volume Right (vph)	1	29	11	11
Hadj (s)	0.13	-0.04	-0.02	0.17
Departure Headway (s)	4.5	4.3	4.4	4.5
Degree Utilization, x	0.08	0.12	0.05	0.14
Capacity (veh/h)	764	803	776	760
Control Delay (s)	7.9	7.9	7.6	8.2
Approach Delay (s)	7.9	7.9	7.6	8.2
Approach LOS	A	A	A	A

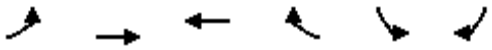
Intersection Summary			
Delay	8.0		
HCM 2010 Level of Service	A		
Intersection Capacity Utilization	32.7%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	90	162	182	340	126	43	229	458	136	45	844	108
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Lane Width	12	12	12	12	12	12	14	12	12	14	12	12
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	0.92		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1554	1506		1554	1636	1390	1657	3107	1390	1657	3107	1390
Flt Permitted	0.67	1.00		0.19	1.00	1.00	0.14	1.00	1.00	0.47	1.00	1.00
Satd. Flow (perm)	1095	1506		315	1636	1390	244	3107	1390	819	3107	1390
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	98	176	198	370	137	47	249	498	148	49	917	117
RTOR Reduction (vph)	0	54	0	0	0	32	0	0	92	0	0	80
Lane Group Flow (vph)	98	320	0	370	137	15	249	498	56	49	917	37
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8	2		2	6		6
Actuated Green, G (s)	21.6	16.8		33.8	25.0	25.0	35.6	29.2	29.2	27.0	24.6	24.6
Effective Green, g (s)	21.6	16.8		33.8	25.0	25.0	35.6	29.2	29.2	27.0	24.6	24.6
Actuated g/C Ratio	0.28	0.22		0.44	0.32	0.32	0.46	0.38	0.38	0.35	0.32	0.32
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	334	326		345	528	448	240	1172	524	311	987	441
v/s Ratio Prot	0.02	0.21		c0.18	0.08		c0.09	0.16		0.00	0.30	
v/s Ratio Perm	0.06			c0.29		0.01	c0.38		0.04	0.05		0.03
v/c Ratio	0.29	0.98		1.07	0.26	0.03	1.04	0.42	0.11	0.16	0.93	0.08
Uniform Delay, d1	21.5	30.1		19.3	19.4	17.9	16.9	17.9	15.6	16.9	25.6	18.5
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.5	44.6		69.1	0.3	0.0	68.2	1.1	0.4	0.2	15.9	0.4
Delay (s)	22.0	74.8		88.4	19.6	18.0	85.1	19.0	16.0	17.1	41.5	18.9
Level of Service	C	E		F	B	B	F	B	B	B	D	B
Approach Delay (s)		63.8			65.4			36.9			37.9	
Approach LOS		E			E			D			D	

Intersection Summary			
HCM 2000 Control Delay	46.8	HCM 2010 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.15		
Actuated Cycle Length (s)	77.4	Sum of lost time (s)	16.0
Intersection Capacity Utilization	94.2%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	6	431	453	10	7	3
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	7	468	492	11	8	3
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)			305			
pX, platoon unblocked	0.88				0.88	0.88
vC, conflicting volume	503				974	492
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	372				905	360
tC, single (s)	4.2				6.5	6.3
tC, 2 stage (s)						
tF (s)	2.3				3.6	3.4
p0 queue free %	99				97	99
cM capacity (veh/h)	1025				264	595

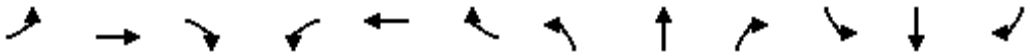
Direction, Lane #	EB 1	WB 1	WB 2	SB 1
Volume Total	472	492	11	9
Volume Left	3	0	0	8
Volume Right	0	0	11	2
cSH	1025	1700	1700	293
Volume to Capacity	0.01	0.29	0.01	0.03
Queue Length 95th (ft)	0	0	0	2
Control Delay (s)	0.1	0.0	0.0	17.7
Lane LOS	A			C
Approach Delay (s)	0.1	0.0		17.7
Approach LOS				C

Intersection Summary			
Average Delay	0.2		
Intersection Capacity Utilization	39.8%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	432	1	0	463	1	2
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	470	1	0	503	1	2
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)				160		
pX, platoon unblocked						
vC, conflicting volume			471		722	470
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			471		722	470
tC, single (s)			4.2		6.9	7.0
tC, 2 stage (s)						
tF (s)			2.3		3.6	3.4
p0 queue free %			100		100	100
cM capacity (veh/h)			1053		351	527

Direction, Lane #	EB 1	WB 1	WB 2	NB 1
Volume Total	470	252	252	2
Volume Left	0	0	0	1
Volume Right	1	0	0	1
cSH	1700	1700	1700	421
Volume to Capacity	0.28	0.15	0.15	0.01
Queue Length 95th (ft)	0	0	0	0
Control Delay (s)	0.0	0.0	0.0	13.6
Lane LOS				B
Approach Delay (s)	0.0	0.0		13.6
Approach LOS				B

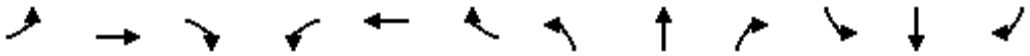
Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	34.8%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	28	295	20	426	380	28	34	0	22	25	0	50
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
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
Hourly flow rate (vph)	30	321	22	463	413	30	37	0	24	27	0	54
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		229										
pX, platoon unblocked												
vC, conflicting volume	443			342			1579	1762	332	1755	1742	207
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	443			342			1579	1762	332	1755	1742	207
tC, single (s)	4.2			4.2			7.6	6.6	7.0	7.6	6.6	7.0
tC, 2 stage (s)												
tF (s)	2.3			2.3			3.6	4.1	3.4	3.6	4.1	3.4
p0 queue free %	97			61			16	100	96	19	100	93
cM capacity (veh/h)	1078			1178			44	47	650	34	48	784

Direction, Lane #	EB 1	WB 1	WB 2	WB 3	NB 1	SB 1
Volume Total	347	369	275	30	30	41
Volume Left	15	232	0	0	18	14
Volume Right	11	0	0	30	12	27
cSH	1078	1178	1700	1700	70	93
Volume to Capacity	0.03	0.39	0.16	0.02	0.44	0.44
Queue Length 95th (ft)	2	48	0	0	43	46
Control Delay (s)	0.7	7.9	0.0	0.0	91.6	71.1
Lane LOS	A	A			F	F
Approach Delay (s)	0.7	4.3			91.6	71.1
Approach LOS					F	F

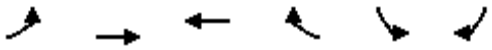
Intersection Summary				
Average Delay	8.1			
Intersection Capacity Utilization	61.7%	ICU Level of Service		B
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	57	251	34	331	285	56	16	0	11	50	0	123
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
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
Hourly flow rate (vph)	62	273	37	360	310	61	17	0	12	54	0	134
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		395										
pX, platoon unblocked												
vC, conflicting volume	371			310			1578	1505	291	1457	1463	310
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	371			310			1578	1505	291	1457	1463	310
tC, single (s)	4.2			4.2			7.2	6.6	6.3	7.2	6.6	6.3
tC, 2 stage (s)												
tF (s)	2.3			2.3			3.6	4.1	3.4	3.6	4.1	3.4
p0 queue free %	95			71			67	100	98	29	100	81
cM capacity (veh/h)	1161			1223			52	79	736	77	84	719

Direction, Lane #	EB 1	WB 1	WB 2	WB 3	NB 1	SB 1
Volume Total	322	360	310	61	15	94
Volume Left	31	360	0	0	9	27
Volume Right	18	0	0	61	6	67
cSH	1161	1223	1700	1700	84	210
Volume to Capacity	0.05	0.29	0.18	0.04	0.18	0.45
Queue Length 95th (ft)	4	31	0	0	15	53
Control Delay (s)	1.3	9.2	0.0	0.0	56.9	35.3
Lane LOS	A	A			F	E
Approach Delay (s)	1.3	4.5			56.9	35.3
Approach LOS					F	E

Intersection Summary				
Average Delay	6.8			
Intersection Capacity Utilization	61.5%	ICU Level of Service	B	
Analysis Period (min)	15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	28	295	383	28	25	25
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	30	321	416	30	27	27
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		720				
pX, platoon unblocked						
vC, conflicting volume	447				813	432
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	447				813	432
tC, single (s)	4.2				6.5	6.3
tC, 2 stage (s)						
tF (s)	2.3				3.6	3.4
p0 queue free %	97				92	96
cM capacity (veh/h)	1088				332	613

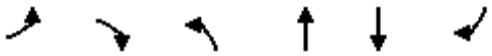
Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	336	432	41
Volume Left	15	0	27
Volume Right	0	15	14
cSH	1088	1700	392
Volume to Capacity	0.03	0.25	0.10
Queue Length 95th (ft)	2	0	9
Control Delay (s)	0.7	0.0	15.3
Lane LOS	A		C
Approach Delay (s)	0.7	0.0	15.3
Approach LOS			C

Intersection Summary			
Average Delay	1.0		
Intersection Capacity Utilization	52.1%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	313	7	3	390	21	9
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	340	8	3	424	23	10
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	930					
pX, platoon unblocked						
vC, conflicting volume			348		774	344
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			348		774	344
tC, single (s)			4.2		6.5	6.3
tC, 2 stage (s)						
tF (s)			2.3		3.6	3.4
p0 queue free %			100		94	99
cM capacity (veh/h)			1184		359	688

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	344	426	28
Volume Left	0	2	23
Volume Right	4	0	5
cSH	1700	1184	392
Volume to Capacity	0.20	0.00	0.07
Queue Length 95th (ft)	0	0	6
Control Delay (s)	0.0	0.1	14.9
Lane LOS		A	B
Approach Delay (s)	0.0	0.1	14.9
Approach LOS			B

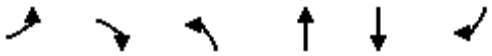
Intersection Summary			
Average Delay		0.5	
Intersection Capacity Utilization		34.9%	ICU Level of Service A
Analysis Period (min)		15	



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	0	2	3	823	1263	3
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	2	3	895	1373	3
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)					149	
pX, platoon unblocked	0.72	0.72	0.72			
vC, conflicting volume	1679	688	1376			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1175	0	757			
tC, single (s)	6.9	7.0	4.2			
tC, 2 stage (s)						
tF (s)	3.6	3.4	2.3			
p0 queue free %	100	100	99			
cM capacity (veh/h)	128	773	592			

Direction, Lane #	EB 1	NB 1	NB 2	NB 3	SB 1	SB 2
Volume Total	1	181	358	358	915	459
Volume Left	0	2	0	0	0	0
Volume Right	1	0	0	0	0	2
cSH	773	592	1700	1700	1700	1700
Volume to Capacity	0.00	0.01	0.21	0.21	0.54	0.27
Queue Length 95th (ft)	0	0	0	0	0	0
Control Delay (s)	9.7	0.2	0.0	0.0	0.0	0.0
Lane LOS	A	A				
Approach Delay (s)	9.7	0.0			0.0	
Approach LOS	A					

Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	48.0%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	0	7	0	591	990	10
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	8	0	642	1076	11
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				TWLTL	TWLTL	
Median storage veh)				2	2	
Upstream signal (ft)				282		
pX, platoon unblocked	0.89					
vC, conflicting volume	1397	538	1087			
vC1, stage 1 conf vol	1076					
vC2, stage 2 conf vol	321					
vCu, unblocked vol	1201	538	1087			
tC, single (s)	6.9	7.0	4.2			
tC, 2 stage (s)	5.9					
tF (s)	3.6	3.4	2.3			
p0 queue free %	100	98	100			
cM capacity (veh/h)	268	475	609			

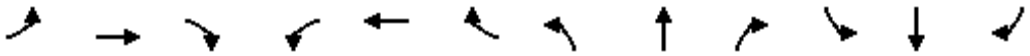
Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	8	321	321	538	538	11
Volume Left	0	0	0	0	0	0
Volume Right	8	0	0	0	0	11
cSH	475	1700	1700	1700	1700	1700
Volume to Capacity	0.02	0.19	0.19	0.32	0.32	0.01
Queue Length 95th (ft)	1	0	0	0	0	0
Control Delay (s)	12.7	0.0	0.0	0.0	0.0	0.0
Lane LOS	B					
Approach Delay (s)	12.7	0.0		0.0		
Approach LOS	B					

Intersection Summary				
Average Delay	0.1			
Intersection Capacity Utilization	39.7%	ICU Level of Service		A
Analysis Period (min)	15			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	0	198	422	169	169	1000
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	215	459	184	184	1087
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			TWLTL			TWLTL
Median storage veh)			2			2
Upstream signal (ft)			458			
pX, platoon unblocked	0.95	0.95			0.95	
vC, conflicting volume	1370	229			642	
vC1, stage 1 conf vol	459					
vC2, stage 2 conf vol	911					
vCu, unblocked vol	1278	74			510	
tC, single (s)	6.9	7.0			4.2	
tC, 2 stage (s)	5.9					
tF (s)	3.6	3.4			2.3	
p0 queue free %	100	76			81	
cM capacity (veh/h)	259	906			963	

Direction, Lane #	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	215	229	229	184	184	543	543
Volume Left	0	0	0	0	184	0	0
Volume Right	215	0	0	184	0	0	0
cSH	906	1700	1700	1700	963	1700	1700
Volume to Capacity	0.24	0.13	0.13	0.11	0.19	0.32	0.32
Queue Length 95th (ft)	23	0	0	0	18	0	0
Control Delay (s)	10.2	0.0	0.0	0.0	9.6	0.0	0.0
Lane LOS	B				A		
Approach Delay (s)	10.2	0.0			1.4		
Approach LOS	B						

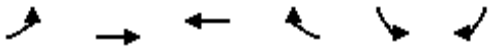
Intersection Summary			
Average Delay	1.9		
Intersection Capacity Utilization	33.3%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	40	51	5	45	38	159	3	54	70	200	62	25
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
Hourly flow rate (vph)	43	55	5	49	41	173	3	59	76	217	67	27

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	80	152	98	190
Volume Left (vph)	22	24	2	109
Volume Right (vph)	3	86	38	14
Hadj (s)	0.15	-0.19	-0.11	0.19
Departure Headway (s)	5.0	4.5	4.6	4.8
Degree Utilization, x	0.11	0.19	0.13	0.25
Capacity (veh/h)	671	740	732	712
Control Delay (s)	8.6	8.6	8.3	9.4
Approach Delay (s)	8.6	8.6	8.3	9.4
Approach LOS	A	A	A	A

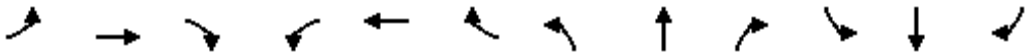
Intersection Summary			
Delay	8.8		
HCM 2010 Level of Service	A		
Intersection Capacity Utilization	51.8%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	3	318	234	18	53	8
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	3	346	254	20	58	9
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	274				616	264
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	274				616	264
tC, single (s)	4.2				6.5	6.3
tC, 2 stage (s)						
tF (s)	2.3				3.6	3.4
p0 queue free %	100				87	99
cM capacity (veh/h)	1261				445	763

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	347	264	62
Volume Left	2	0	58
Volume Right	0	10	4
cSH	1261	1700	458
Volume to Capacity	0.00	0.16	0.14
Queue Length 95th (ft)	0	0	12
Control Delay (s)	0.1	0.0	14.1
Lane LOS	A		B
Approach Delay (s)	0.1	0.0	14.1
Approach LOS			B

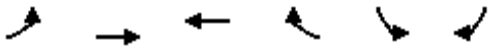
Intersection Summary			
Average Delay	1.3		
Intersection Capacity Utilization	31.2%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	8	259	104	194	205	16	22	0	42	46	0	25
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
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
Hourly flow rate (vph)	9	282	113	211	223	17	24	0	46	50	0	27
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	240			395			1036	1017	338	1054	1065	232
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	240			395			1036	1017	338	1054	1065	232
tC, single (s)	4.2			4.2			7.2	6.6	6.3	7.2	6.6	6.3
tC, 2 stage (s)												
tF (s)	2.3			2.3			3.6	4.1	3.4	3.6	4.1	3.4
p0 queue free %	99			81			86	100	93	69	100	97
cM capacity (veh/h)	1298			1137			169	188	693	159	176	795

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	342	337	35	39
Volume Left	4	105	12	25
Volume Right	57	9	23	14
cSH	1298	1137	336	221
Volume to Capacity	0.01	0.19	0.10	0.17
Queue Length 95th (ft)	1	17	9	15
Control Delay (s)	0.2	4.1	17.0	24.7
Lane LOS	A	A	C	C
Approach Delay (s)	0.2	4.1	17.0	24.7
Approach LOS			C	C

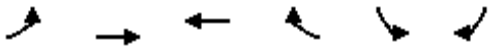
Intersection Summary			
Average Delay	4.0		
Intersection Capacity Utilization	64.6%	ICU Level of Service	C
Analysis Period (min)	15		



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	7	340	399	14	30	16
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	8	370	434	15	33	17
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)			1000			
pX, platoon unblocked						
vC, conflicting volume	449				826	441
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	449				826	441
tC, single (s)	4.2				6.5	6.3
tC, 2 stage (s)						
tF (s)	2.3				3.6	3.4
p0 queue free %	99				90	97
cM capacity (veh/h)	1085				333	606

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	373	441	41
Volume Left	4	0	33
Volume Right	0	8	9
cSH	1085	1700	368
Volume to Capacity	0.01	0.26	0.11
Queue Length 95th (ft)	1	0	9
Control Delay (s)	0.2	0.0	16.0
Lane LOS	A		C
Approach Delay (s)	0.2	0.0	16.0
Approach LOS			C

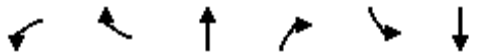
Intersection Summary			
Average Delay	0.8		
Intersection Capacity Utilization	35.5%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	10	310	289	4	10	22
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	11	337	314	4	11	24
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		1230				
pX, platoon unblocked						
vC, conflicting volume	318				675	316
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	318				675	316
tC, single (s)	4.2				6.5	6.3
tC, 2 stage (s)						
tF (s)	2.3				3.6	3.4
p0 queue free %	99				97	97
cM capacity (veh/h)	1214				408	713

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	342	316	23
Volume Left	5	0	11
Volume Right	0	2	12
cSH	1214	1700	526
Volume to Capacity	0.01	0.19	0.04
Queue Length 95th (ft)	1	0	3
Control Delay (s)	0.2	0.0	12.2
Lane LOS	A		B
Approach Delay (s)	0.2	0.0	12.2
Approach LOS			B

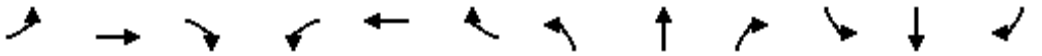
Intersection Summary			
Average Delay	0.5		
Intersection Capacity Utilization	36.5%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	8	12	250	3	4	279
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	9	13	272	3	4	303
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	585	273			275	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	585	273			275	
tC, single (s)	6.5	6.3			4.2	
tC, 2 stage (s)						
tF (s)	3.6	3.4			2.3	
p0 queue free %	98	98			100	
cM capacity (veh/h)	463	753			1260	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	15	273	305
Volume Left	9	0	2
Volume Right	7	2	0
cSH	555	1700	1260
Volume to Capacity	0.03	0.16	0.00
Queue Length 95th (ft)	2	0	0
Control Delay (s)	11.7	0.0	0.1
Lane LOS	B		A
Approach Delay (s)	11.7	0.0	0.1
Approach LOS	B		

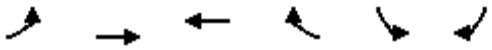
Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	29.4%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	155	206	245	273	106	108	224	868	397	126	533	108
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Lane Width	12	12	12	12	12	12	14	12	12	14	12	12
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	0.92		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1554	1502		1554	1636	1390	1657	3107	1390	1657	3107	1390
Flt Permitted	0.68	1.00		0.17	1.00	1.00	0.25	1.00	1.00	0.21	1.00	1.00
Satd. Flow (perm)	1117	1502		275	1636	1390	428	3107	1390	367	3107	1390
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	168	224	266	297	115	117	243	943	432	137	579	117
RTOR Reduction (vph)	0	61	0	0	0	77	0	0	298	0	0	86
Lane Group Flow (vph)	168	429	0	297	115	40	243	943	134	137	579	31
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8	2		2	6		6
Actuated Green, G (s)	24.6	19.8		32.8	24.0	24.0	29.0	22.0	22.0	23.0	19.0	19.0
Effective Green, g (s)	24.6	19.8		32.8	24.0	24.0	29.0	22.0	22.0	23.0	19.0	19.0
Actuated g/C Ratio	0.35	0.28		0.46	0.34	0.34	0.41	0.31	0.31	0.32	0.27	0.27
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	417	420		289	554	471	296	965	431	192	833	373
v/s Ratio Prot	0.03	0.29		c0.13	0.07		c0.08	c0.30		0.04	0.19	
v/s Ratio Perm	0.11			c0.34		0.03	0.25		0.10	0.19		0.02
v/c Ratio	0.40	1.02		1.03	0.21	0.08	0.82	0.98	0.31	0.71	0.70	0.08
Uniform Delay, d1	16.9	25.5		16.5	16.6	15.9	15.6	24.2	18.6	19.4	23.3	19.4
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.6	49.8		60.3	0.2	0.1	16.5	24.0	1.9	11.8	4.8	0.4
Delay (s)	17.6	75.3		76.8	16.8	16.0	32.1	48.1	20.5	31.2	28.1	19.8
Level of Service	B	E		E	B	B	C	D	C	C	C	B
Approach Delay (s)		60.5			50.3			38.3			27.4	
Approach LOS		E			D			D			C	

Intersection Summary			
HCM 2000 Control Delay	41.6	HCM 2010 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.08		
Actuated Cycle Length (s)	70.8	Sum of lost time (s)	16.0
Intersection Capacity Utilization	91.4%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	17	593	406	198	34	17
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	18	645	441	215	37	18
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)			305			
pX, platoon unblocked	0.99				0.99	0.99
vC, conflicting volume	657				1123	441
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	650				1120	433
tC, single (s)	4.2				6.5	6.3
tC, 2 stage (s)						
tF (s)	2.3				3.6	3.4
p0 queue free %	98				83	97
cM capacity (veh/h)	906				217	608

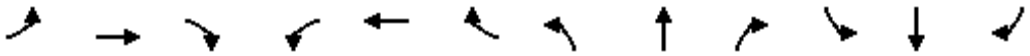
Direction, Lane #	EB 1	WB 1	WB 2	SB 1
Volume Total	654	441	215	46
Volume Left	9	0	0	37
Volume Right	0	0	215	9
cSH	906	1700	1700	249
Volume to Capacity	0.02	0.26	0.13	0.19
Queue Length 95th (ft)	2	0	0	17
Control Delay (s)	0.4	0.0	0.0	22.7
Lane LOS	A			C
Approach Delay (s)	0.4	0.0		22.7
Approach LOS				C

Intersection Summary			
Average Delay	1.0		
Intersection Capacity Utilization	58.8%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	597	4	0	438	3	9
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	649	4	0	476	3	10
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)				160		
pX, platoon unblocked						
vC, conflicting volume			653		889	651
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			653		889	651
tC, single (s)			4.2		6.9	7.0
tC, 2 stage (s)						
tF (s)			2.3		3.6	3.4
p0 queue free %			100		99	98
cM capacity (veh/h)			896		273	399

Direction, Lane #	EB 1	WB 1	WB 2	NB 1
Volume Total	651	238	238	8
Volume Left	0	0	0	3
Volume Right	2	0	0	5
cSH	1700	1700	1700	337
Volume to Capacity	0.38	0.14	0.14	0.02
Queue Length 95th (ft)	0	0	0	2
Control Delay (s)	0.0	0.0	0.0	15.9
Lane LOS				C
Approach Delay (s)	0.0	0.0		15.9
Approach LOS				C

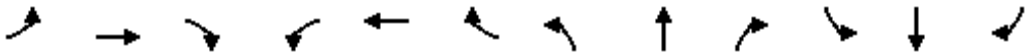
Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	44.4%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	32	574	32	370	363	59	54	0	36	32	0	63
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
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
Hourly flow rate (vph)	35	624	35	402	395	64	59	0	39	35	0	68
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		229										
pX, platoon unblocked				0.97			0.97	0.97	0.97	0.97	0.97	
vC, conflicting volume	459			659			1781	1974	641	1949	1927	197
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	459			631			1790	1990	613	1964	1941	197
tC, single (s)	4.2			4.2			7.6	6.6	7.0	7.6	6.6	7.0
tC, 2 stage (s)												
tF (s)	2.3			2.3			3.6	4.1	3.4	3.6	4.1	3.4
p0 queue free %	97			55			0	100	90	0	100	91
cM capacity (veh/h)	1064			885			27	29	410	20	31	795

Direction, Lane #	EB 1	WB 1	WB 2	WB 3	NB 1	SB 1
Volume Total	659	333	263	64	49	52
Volume Left	17	201	0	0	29	17
Volume Right	17	0	0	64	20	34
cSH	1064	885	1700	1700	43	55
Volume to Capacity	0.03	0.45	0.15	0.04	1.14	0.93
Queue Length 95th (ft)	3	60	0	0	117	104
Control Delay (s)	0.7	9.9	0.0	0.0	330.5	220.8
Lane LOS	A	A			F	F
Approach Delay (s)	0.7	5.0			330.5	220.8
Approach LOS					F	F

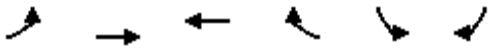
Intersection Summary				
Average Delay	22.1			
Intersection Capacity Utilization	79.2%	ICU Level of Service	D	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	59	538	45	28	345	32	22	0	16	83	0	88
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
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
Hourly flow rate (vph)	64	585	49	30	375	35	24	0	17	90	0	96
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		395										
pX, platoon unblocked												
vC, conflicting volume	410			634			1269	1208	609	1191	1198	375
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	410			634			1269	1208	609	1191	1198	375
tC, single (s)	4.2			4.2			7.2	6.6	6.3	7.2	6.6	6.3
tC, 2 stage (s)												
tF (s)	2.3			2.3			3.6	4.1	3.4	3.6	4.1	3.4
p0 queue free %	94			97			79	100	96	38	100	86
cM capacity (veh/h)	1123			926			113	163	486	144	166	660

Direction, Lane #	EB 1	WB 1	WB 2	WB 3	NB 1	SB 1
Volume Total	641	30	375	35	21	93
Volume Left	32	30	0	0	12	45
Volume Right	24	0	0	35	9	48
cSH	1123	926	1700	1700	167	241
Volume to Capacity	0.06	0.03	0.22	0.02	0.12	0.38
Queue Length 95th (ft)	5	3	0	0	10	43
Control Delay (s)	1.1	9.0	0.0	0.0	29.6	28.9
Lane LOS	A	A			D	D
Approach Delay (s)	1.1	0.6			29.6	28.9
Approach LOS					D	D

Intersection Summary				
Average Delay	3.6			
Intersection Capacity Utilization	79.4%	ICU Level of Service		D
Analysis Period (min)	15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	610	511	373	32	32	32
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	663	555	405	35	35	35
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		720				
pX, platoon unblocked						
vC, conflicting volume	440				2304	423
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	440				2304	423
tC, single (s)	4.2				6.5	6.3
tC, 2 stage (s)						
tF (s)	2.3				3.6	3.4
p0 queue free %	39				0	94
cM capacity (veh/h)	1094				16	620

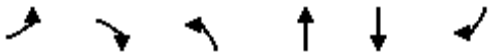
Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	887	423	52
Volume Left	332	0	35
Volume Right	0	17	17
cSH	1094	1700	24
Volume to Capacity	0.61	0.25	2.19
Queue Length 95th (ft)	107	0	163
Control Delay (s)	12.4	0.0	895.1
Lane LOS	B		F
Approach Delay (s)	12.4	0.0	895.1
Approach LOS			F

Intersection Summary			
Average Delay	42.4		
Intersection Capacity Utilization	103.3%	ICU Level of Service	G
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	610	26	11	390	15	6
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	663	28	12	424	16	7
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	930					
pX, platoon unblocked						
vC, conflicting volume			691		1125	677
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			691		1125	677
tC, single (s)			4.2		6.5	6.3
tC, 2 stage (s)						
tF (s)			2.3		3.6	3.4
p0 queue free %			99		93	99
cM capacity (veh/h)			881		219	444

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	677	430	20
Volume Left	0	6	16
Volume Right	14	0	3
cSH	1700	881	239
Volume to Capacity	0.40	0.01	0.08
Queue Length 95th (ft)	0	1	7
Control Delay (s)	0.0	0.3	21.4
Lane LOS		A	C
Approach Delay (s)	0.0	0.3	21.4
Approach LOS			C

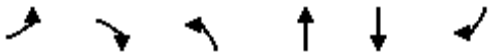
Intersection Summary			
Average Delay		0.5	
Intersection Capacity Utilization		46.6%	ICU Level of Service A
Analysis Period (min)		15	



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	2	9	9	1487	1042	9
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	2	10	10	1616	1133	10
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)					149	
pX, platoon unblocked	0.84	0.84	0.84			
vC, conflicting volume	1696	571	1142			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1448	109	789			
tC, single (s)	6.9	7.0	4.2			
tC, 2 stage (s)						
tF (s)	3.6	3.4	2.3			
p0 queue free %	98	99	99			
cM capacity (veh/h)	97	763	668			

Direction, Lane #	EB 1	NB 1	NB 2	NB 3	SB 1	SB 2
Volume Total	7	328	647	647	755	382
Volume Left	2	5	0	0	0	0
Volume Right	5	0	0	0	0	5
cSH	244	668	1700	1700	1700	1700
Volume to Capacity	0.03	0.01	0.38	0.38	0.44	0.22
Queue Length 95th (ft)	2	1	0	0	0	0
Control Delay (s)	20.2	0.3	0.0	0.0	0.0	0.0
Lane LOS	C	A				
Approach Delay (s)	20.2	0.1			0.0	
Approach LOS	C					

Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	47.9%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	0	34	0	1131	760	32
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	37	0	1229	826	35
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				TWLTL	TWLTL	
Median storage veh)				2	2	
Upstream signal (ft)				282		
pX, platoon unblocked	0.71					
vC, conflicting volume	1441	413	861			
vC1, stage 1 conf vol	826					
vC2, stage 2 conf vol	615					
vCu, unblocked vol	801	413	861			
tC, single (s)	6.9	7.0	4.2			
tC, 2 stage (s)	5.9					
tF (s)	3.6	3.4	2.3			
p0 queue free %	100	94	100			
cM capacity (veh/h)	358	574	746			

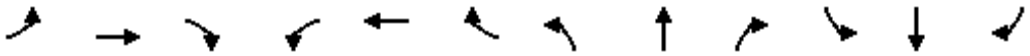
Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	37	615	615	413	413	35
Volume Left	0	0	0	0	0	0
Volume Right	37	0	0	0	0	35
cSH	574	1700	1700	1700	1700	1700
Volume to Capacity	0.06	0.36	0.36	0.24	0.24	0.02
Queue Length 95th (ft)	5	0	0	0	0	0
Control Delay (s)	11.7	0.0	0.0	0.0	0.0	0.0
Lane LOS	B					
Approach Delay (s)	11.7	0.0		0.0		
Approach LOS	B					

Intersection Summary			
Average Delay	0.2		
Intersection Capacity Utilization	37.3%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	0	304	937	194	194	792
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	330	1018	211	211	861
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			TWLTL			TWLTL
Median storage veh)			2			2
Upstream signal (ft)			458			
pX, platoon unblocked	0.74	0.74			0.74	
vC, conflicting volume	1871	509			1229	
vC1, stage 1 conf vol	1018					
vC2, stage 2 conf vol	852					
vCu, unblocked vol	1466	0			595	
tC, single (s)	6.9	7.0			4.2	
tC, 2 stage (s)	5.9					
tF (s)	3.6	3.4			2.3	
p0 queue free %	100	58			70	
cM capacity (veh/h)	227	787			695	

Direction, Lane #	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	330	509	509	211	211	430	430
Volume Left	0	0	0	0	211	0	0
Volume Right	330	0	0	211	0	0	0
cSH	787	1700	1700	1700	695	1700	1700
Volume to Capacity	0.42	0.30	0.30	0.12	0.30	0.25	0.25
Queue Length 95th (ft)	52	0	0	0	32	0	0
Control Delay (s)	12.9	0.0	0.0	0.0	12.4	0.0	0.0
Lane LOS	B				B		
Approach Delay (s)	12.9	0.0			2.4		
Approach LOS	B						

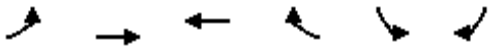
Intersection Summary			
Average Delay	2.6		
Intersection Capacity Utilization	55.2%	ICU Level of Service	B
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	11	61	2	86	75	111	4	38	65	143	45	20
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
Hourly flow rate (vph)	12	66	2	93	82	121	4	41	71	155	49	22

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	73	189	79	138
Volume Left (vph)	6	47	2	78
Volume Right (vph)	1	60	35	11
Hadj (s)	0.13	-0.02	-0.14	0.18
Departure Headway (s)	4.8	4.5	4.6	4.8
Degree Utilization, x	0.10	0.24	0.10	0.18
Capacity (veh/h)	699	755	735	701
Control Delay (s)	8.3	8.9	8.1	8.9
Approach Delay (s)	8.3	8.9	8.1	8.9
Approach LOS	A	A	A	A

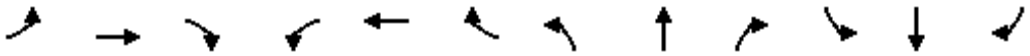
Intersection Summary			
Delay	8.7		
HCM 2010 Level of Service	A		
Intersection Capacity Utilization	49.3%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	9	251	267	59	35	5
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	10	273	290	64	38	5
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	354				615	322
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	354				615	322
tC, single (s)	4.2				6.5	6.3
tC, 2 stage (s)						
tF (s)	2.3				3.6	3.4
p0 queue free %	99				91	99
cM capacity (veh/h)	1177				443	707

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	278	322	41
Volume Left	5	0	38
Volume Right	0	32	3
cSH	1177	1700	454
Volume to Capacity	0.01	0.19	0.09
Queue Length 95th (ft)	1	0	7
Control Delay (s)	0.2	0.0	13.7
Lane LOS	A		B
Approach Delay (s)	0.2	0.0	13.7
Approach LOS			B

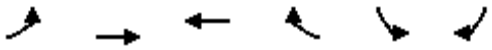
Intersection Summary			
Average Delay	1.0		
Intersection Capacity Utilization	32.2%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	28	225	33	62	199	52	111	0	206	31	0	16
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
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
Hourly flow rate (vph)	30	245	36	67	216	57	121	0	224	34	0	17
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	273			280			720	731	262	927	721	245
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	273			280			720	731	262	927	721	245
tC, single (s)	4.2			4.2			7.2	6.6	6.3	7.2	6.6	6.3
tC, 2 stage (s)												
tF (s)	2.3			2.3			3.6	4.1	3.4	3.6	4.1	3.4
p0 queue free %	98			95			61	100	71	79	100	98
cM capacity (veh/h)	1262			1254			310	317	764	162	321	782

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	278	278	172	26
Volume Left	15	34	60	17
Volume Right	18	28	112	9
cSH	1262	1254	505	222
Volume to Capacity	0.02	0.05	0.34	0.11
Queue Length 95th (ft)	2	4	37	10
Control Delay (s)	0.6	1.4	15.8	23.3
Lane LOS	A	A	C	C
Approach Delay (s)	0.6	1.4	15.8	23.3
Approach LOS			C	C

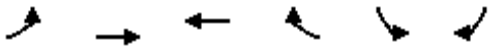
Intersection Summary				
Average Delay	5.2			
Intersection Capacity Utilization	59.6%	ICU Level of Service	B	
Analysis Period (min)	15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	18	444	280	33	24	13
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	20	483	304	36	26	14
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)			1000			
pX, platoon unblocked						
vC, conflicting volume	340				844	322
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	340				844	322
tC, single (s)	4.2				6.5	6.3
tC, 2 stage (s)						
tF (s)	2.3				3.6	3.4
p0 queue free %	98				92	98
cM capacity (veh/h)	1191				322	707

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	492	322	33
Volume Left	10	0	26
Volume Right	0	18	7
cSH	1191	1700	364
Volume to Capacity	0.02	0.19	0.09
Queue Length 95th (ft)	1	0	7
Control Delay (s)	0.3	0.0	15.9
Lane LOS	A		C
Approach Delay (s)	0.3	0.0	15.9
Approach LOS			C

Intersection Summary			
Average Delay	0.8		
Intersection Capacity Utilization	51.2%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	25	617	387	11	8	18
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	27	671	421	12	9	20
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		1230				
pX, platoon unblocked						
vC, conflicting volume	433				1152	427
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	433				1152	427
tC, single (s)	4.2				6.5	6.3
tC, 2 stage (s)						
tF (s)	2.3				3.6	3.4
p0 queue free %	98				96	97
cM capacity (veh/h)	1101				208	617

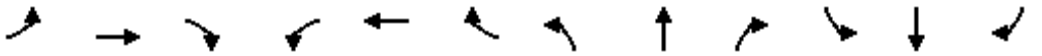
Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	684	427	18
Volume Left	14	0	9
Volume Right	0	6	10
cSH	1101	1700	321
Volume to Capacity	0.02	0.25	0.06
Queue Length 95th (ft)	2	0	5
Control Delay (s)	0.5	0.0	16.9
Lane LOS	A		C
Approach Delay (s)	0.5	0.0	16.9
Approach LOS			C

Intersection Summary			
Average Delay		0.6	
Intersection Capacity Utilization		67.3%	ICU Level of Service C
Analysis Period (min)		15	

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	5	8	151	9	14	203
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	5	9	164	10	15	221
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	420	169			174	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	420	169			174	
tC, single (s)	6.5	6.3			4.2	
tC, 2 stage (s)						
tF (s)	3.6	3.4			2.3	
p0 queue free %	99	99			99	
cM capacity (veh/h)	574	862			1373	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	10	169	228
Volume Left	5	0	8
Volume Right	4	5	0
cSH	674	1700	1373
Volume to Capacity	0.01	0.10	0.01
Queue Length 95th (ft)	1	0	1
Control Delay (s)	10.4	0.0	0.3
Lane LOS	B		A
Approach Delay (s)	10.4	0.0	0.3
Approach LOS	B		

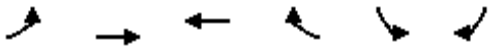
Intersection Summary			
Average Delay		0.4	
Intersection Capacity Utilization		34.1%	ICU Level of Service A
Analysis Period (min)		15	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	90	162	182	340	126	43	229	458	136	45	844	108
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Lane Width	12	12	12	12	12	12	14	12	12	14	12	12
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1554	1636	1390	1554	1636	1390	1657	3107	1390	1657	3107	1390
Flt Permitted	0.67	1.00	1.00	0.40	1.00	1.00	0.14	1.00	1.00	0.47	1.00	1.00
Satd. Flow (perm)	1095	1636	1390	657	1636	1390	252	3107	1390	819	3107	1390
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	98	176	198	370	137	47	249	498	148	49	917	117
RTOR Reduction (vph)	0	0	138	0	0	35	0	0	83	0	0	73
Lane Group Flow (vph)	98	176	60	370	137	12	249	498	65	49	917	44
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)	18.1	13.4	13.4	27.4	18.7	18.7	38.7	32.4	32.4	30.0	27.7	27.7
Effective Green, g (s)	18.1	13.4	13.4	27.4	18.7	18.7	38.7	32.4	32.4	30.0	27.7	27.7
Actuated g/C Ratio	0.24	0.18	0.18	0.37	0.25	0.25	0.52	0.44	0.44	0.40	0.37	0.37
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	296	295	251	363	412	350	264	1358	607	357	1161	519
v/s Ratio Prot	0.02	0.11		c0.14	0.08		c0.09	0.16		0.00	0.30	
v/s Ratio Perm	0.06		0.04	c0.24		0.01	c0.40		0.05	0.05		0.03
v/c Ratio	0.33	0.60	0.24	1.02	0.33	0.03	0.94	0.37	0.11	0.14	0.79	0.08
Uniform Delay, d1	22.6	27.9	26.0	21.8	22.6	20.9	13.6	14.0	12.3	13.5	20.6	15.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.7	3.2	0.5	52.2	0.5	0.0	39.9	0.8	0.4	0.2	5.5	0.3
Delay (s)	23.2	31.1	26.5	74.0	23.1	20.9	53.5	14.7	12.7	13.7	26.1	15.3
Level of Service	C	C	C	E	C	C	D	B	B	B	C	B
Approach Delay (s)		27.5			56.9			25.2			24.4	
Approach LOS		C			E			C			C	

Intersection Summary			
HCM 2000 Control Delay	31.1	HCM 2010 Level of Service	C
HCM 2000 Volume to Capacity ratio	1.07		
Actuated Cycle Length (s)	74.1	Sum of lost time (s)	16.0
Intersection Capacity Utilization	82.1%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	6	431	453	10	7	3
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	7	468	492	11	8	3
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		TWLTL	None			
Median storage veh)		2				
Upstream signal (ft)			305			
pX, platoon unblocked	0.88				0.88	0.88
vC, conflicting volume	503				974	492
vC1, stage 1 conf vol					492	
vC2, stage 2 conf vol					482	
vCu, unblocked vol	362				899	350
tC, single (s)	4.2				6.5	6.3
tC, 2 stage (s)					5.5	
tF (s)	2.3				3.6	3.4
p0 queue free %	99				98	99
cM capacity (veh/h)	1024				484	598

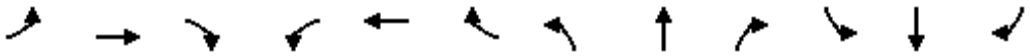
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1
Volume Total	7	468	492	11	9
Volume Left	7	0	0	0	8
Volume Right	0	0	0	11	2
cSH	1024	1700	1700	1700	501
Volume to Capacity	0.01	0.28	0.29	0.01	0.02
Queue Length 95th (ft)	0	0	0	0	1
Control Delay (s)	8.5	0.0	0.0	0.0	12.3
Lane LOS	A				B
Approach Delay (s)	0.1		0.0		12.3
Approach LOS					B

Intersection Summary			
Average Delay	0.2		
Intersection Capacity Utilization	35.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	432	1	0	463	1	2
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	470	1	0	503	1	2
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)				160		
pX, platoon unblocked						
vC, conflicting volume			471		722	470
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			471		722	470
tC, single (s)			4.2		6.9	7.0
tC, 2 stage (s)						
tF (s)			2.3		3.6	3.4
p0 queue free %			100		100	100
cM capacity (veh/h)			1053		351	527

Direction, Lane #	EB 1	WB 1	WB 2	NB 1
Volume Total	470	252	252	2
Volume Left	0	0	0	1
Volume Right	1	0	0	1
cSH	1700	1700	1700	421
Volume to Capacity	0.28	0.15	0.15	0.01
Queue Length 95th (ft)	0	0	0	0
Control Delay (s)	0.0	0.0	0.0	13.6
Lane LOS				B
Approach Delay (s)	0.0	0.0		13.6
Approach LOS				B

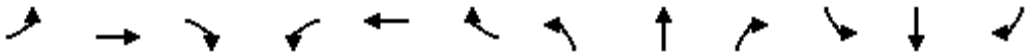
Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	34.8%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	28	295	20	426	380	28	34	0	22	25	0	50
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
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
Hourly flow rate (vph)	30	321	22	463	413	30	37	0	24	27	0	54
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		229										
pX, platoon unblocked				0.92			0.92	0.92	0.92	0.92	0.92	
vC, conflicting volume	443			342			1579	1762	332	1755	1742	207
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	443			237			1587	1786	225	1779	1765	207
tC, single (s)	4.2			4.2			7.6	6.6	7.0	7.6	6.6	7.0
tC, 2 stage (s)												
tF (s)	2.3			2.3			3.6	4.1	3.4	3.6	4.1	3.4
p0 queue free %	97			61			8	100	97	8	100	93
cM capacity (veh/h)	1078			1184			40	41	699	30	43	784

Direction, Lane #	EB 1	WB 1	WB 2	WB 3	NB 1	SB 1
Volume Total	347	369	275	30	30	41
Volume Left	15	232	0	0	18	14
Volume Right	11	0	0	30	12	27
cSH	1078	1184	1700	1700	64	83
Volume to Capacity	0.03	0.39	0.16	0.02	0.48	0.49
Queue Length 95th (ft)	2	47	0	0	47	52
Control Delay (s)	0.7	7.8	0.0	0.0	105.1	84.9
Lane LOS	A	A			F	F
Approach Delay (s)	0.7	4.3			105.1	84.9
Approach LOS					F	F

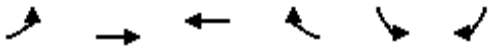
Intersection Summary				
Average Delay	8.9			
Intersection Capacity Utilization	61.7%	ICU Level of Service		B
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	57	251	34	331	285	56	16	0	11	50	0	123
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
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
Hourly flow rate (vph)	62	273	37	360	310	61	17	0	12	54	0	134
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		395										
pX, platoon unblocked				0.96			0.96	0.96	0.96	0.96	0.96	
vC, conflicting volume	371			310			1578	1505	291	1457	1463	310
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	371			264			1581	1506	245	1455	1462	310
tC, single (s)	4.2			4.2			7.2	6.6	6.3	7.2	6.6	6.3
tC, 2 stage (s)												
tF (s)	2.3			2.3			3.6	4.1	3.4	3.6	4.1	3.4
p0 queue free %	95			71			65	100	98	27	100	81
cM capacity (veh/h)	1161			1224			50	76	753	74	81	719

Direction, Lane #	EB 1	WB 1	WB 2	WB 3	NB 1	SB 1
Volume Total	322	360	310	61	15	94
Volume Left	31	360	0	0	9	27
Volume Right	18	0	0	61	6	67
cSH	1161	1224	1700	1700	81	204
Volume to Capacity	0.05	0.29	0.18	0.04	0.18	0.46
Queue Length 95th (ft)	4	31	0	0	16	55
Control Delay (s)	1.3	9.2	0.0	0.0	59.4	36.8
Lane LOS	A	A			F	E
Approach Delay (s)	1.3	4.5			59.4	36.8
Approach LOS					F	E

Intersection Summary				
Average Delay	6.9			
Intersection Capacity Utilization	61.5%	ICU Level of Service	B	
Analysis Period (min)	15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	28	295	383	28	25	25
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	30	321	416	30	27	27
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	TWLTL			
Median storage veh)			2			
Upstream signal (ft)		720				
pX, platoon unblocked						
vC, conflicting volume	447				813	432
vC1, stage 1 conf vol					432	
vC2, stage 2 conf vol					382	
vCu, unblocked vol	447				813	432
tC, single (s)	4.2				6.5	6.3
tC, 2 stage (s)					5.5	
tF (s)	2.3				3.6	3.4
p0 queue free %	97				95	96
cM capacity (veh/h)	1088				532	613

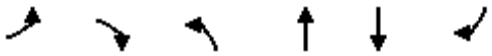
Direction, Lane #	EB 1	EB 2	WB 1	SB 1
Volume Total	30	321	432	41
Volume Left	30	0	0	27
Volume Right	0	0	15	14
cSH	1088	1700	1700	557
Volume to Capacity	0.03	0.19	0.25	0.07
Queue Length 95th (ft)	2	0	0	6
Control Delay (s)	8.4	0.0	0.0	12.0
Lane LOS	A			B
Approach Delay (s)	0.7		0.0	12.0
Approach LOS				B

Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	35.3%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	313	7	3	390	21	9
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	340	8	3	424	23	10
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWLTL			TWLTL		
Median storage veh)	2			2		
Upstream signal (ft)	930					
pX, platoon unblocked						
vC, conflicting volume			348		774	344
vC1, stage 1 conf vol					344	
vC2, stage 2 conf vol					430	
vCu, unblocked vol			348		774	344
tC, single (s)			4.2		6.5	6.3
tC, 2 stage (s)					5.5	
tF (s)			2.3		3.6	3.4
p0 queue free %			100		96	99
cM capacity (veh/h)			1184		553	688

Direction, Lane #	EB 1	WB 1	WB 2	NB 1
Volume Total	344	3	424	28
Volume Left	0	3	0	23
Volume Right	4	0	0	5
cSH	1700	1184	1700	573
Volume to Capacity	0.20	0.00	0.25	0.05
Queue Length 95th (ft)	0	0	0	4
Control Delay (s)	0.0	8.0	0.0	11.6
Lane LOS		A		B
Approach Delay (s)	0.0	0.1		11.6
Approach LOS				B

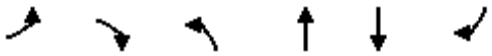
Intersection Summary			
Average Delay	0.4		
Intersection Capacity Utilization	32.3%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	0	2	3	823	1263	3
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	2	3	895	1373	3
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)					149	
pX, platoon unblocked	0.75	0.75	0.75			
vC, conflicting volume	1679	688	1376			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1234	0	828			
tC, single (s)	6.9	7.0	4.2			
tC, 2 stage (s)						
tF (s)	3.6	3.4	2.3			
p0 queue free %	100	100	99			
cM capacity (veh/h)	120	799	574			

Direction, Lane #	EB 1	NB 1	NB 2	NB 3	SB 1	SB 2
Volume Total	1	181	358	358	915	459
Volume Left	0	2	0	0	0	0
Volume Right	1	0	0	0	0	2
cSH	799	574	1700	1700	1700	1700
Volume to Capacity	0.00	0.01	0.21	0.21	0.54	0.27
Queue Length 95th (ft)	0	0	0	0	0	0
Control Delay (s)	9.5	0.2	0.0	0.0	0.0	0.0
Lane LOS	A	A				
Approach Delay (s)	9.5	0.0			0.0	
Approach LOS	A					

Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	48.0%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	0	7	0	591	990	10
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	8	0	642	1076	11
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				TWLTL	TWLTL	
Median storage veh)				2	2	
Upstream signal (ft)				282		
pX, platoon unblocked	0.90					
vC, conflicting volume	1397	538	1087			
vC1, stage 1 conf vol	1076					
vC2, stage 2 conf vol	321					
vCu, unblocked vol	1225	538	1087			
tC, single (s)	6.9	7.0	4.2			
tC, 2 stage (s)	5.9					
tF (s)	3.6	3.4	2.3			
p0 queue free %	100	98	100			
cM capacity (veh/h)	268	475	609			

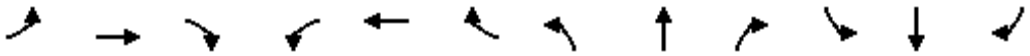
Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	8	321	321	538	538	11
Volume Left	0	0	0	0	0	0
Volume Right	8	0	0	0	0	11
cSH	475	1700	1700	1700	1700	1700
Volume to Capacity	0.02	0.19	0.19	0.32	0.32	0.01
Queue Length 95th (ft)	1	0	0	0	0	0
Control Delay (s)	12.7	0.0	0.0	0.0	0.0	0.0
Lane LOS	B					
Approach Delay (s)	12.7	0.0		0.0		
Approach LOS	B					

Intersection Summary				
Average Delay	0.1			
Intersection Capacity Utilization	39.7%	ICU Level of Service		A
Analysis Period (min)	15			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	0	198	422	169	169	1000
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	215	459	184	184	1087
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			TWLTL			TWLTL
Median storage veh)			2			2
Upstream signal (ft)			458			
pX, platoon unblocked	0.96	0.96			0.96	
vC, conflicting volume	1370	229			642	
vC1, stage 1 conf vol	459					
vC2, stage 2 conf vol	911					
vCu, unblocked vol	1305	119			549	
tC, single (s)	6.9	7.0			4.2	
tC, 2 stage (s)	5.9					
tF (s)	3.6	3.4			2.3	
p0 queue free %	100	75			81	
cM capacity (veh/h)	257	860			946	

Direction, Lane #	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	215	229	229	184	184	543	543
Volume Left	0	0	0	0	184	0	0
Volume Right	215	0	0	184	0	0	0
cSH	860	1700	1700	1700	946	1700	1700
Volume to Capacity	0.25	0.13	0.13	0.11	0.19	0.32	0.32
Queue Length 95th (ft)	25	0	0	0	18	0	0
Control Delay (s)	10.6	0.0	0.0	0.0	9.7	0.0	0.0
Lane LOS	B				A		
Approach Delay (s)	10.6	0.0			1.4		
Approach LOS	B						

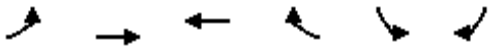
Intersection Summary			
Average Delay	1.9		
Intersection Capacity Utilization	33.3%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	40	51	5	45	38	159	3	54	70	200	62	25
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
Hourly flow rate (vph)	43	55	5	49	41	173	3	59	76	217	67	27

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	SB 1
Volume Total (vph)	80	49	128	98	190
Volume Left (vph)	22	49	0	2	109
Volume Right (vph)	3	0	86	38	14
Hadj (s)	0.15	0.62	-0.35	-0.11	0.19
Departure Headway (s)	5.1	5.9	5.0	4.7	4.9
Degree Utilization, x	0.11	0.08	0.18	0.13	0.26
Capacity (veh/h)	651	572	685	717	699
Control Delay (s)	8.8	8.3	7.8	8.4	9.5
Approach Delay (s)	8.8	7.9		8.4	9.5
Approach LOS	A	A		A	A

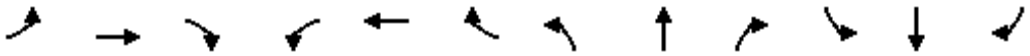
Intersection Summary				
Delay	8.7			
HCM 2010 Level of Service	A			
Intersection Capacity Utilization	56.9%	ICU Level of Service	B	
Analysis Period (min)	15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	3	318	234	18	53	8
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	3	346	254	20	58	9
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		TWLTL	TWLTL			
Median storage veh)		2	2			
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	274				616	264
vC1, stage 1 conf vol					264	
vC2, stage 2 conf vol					352	
vCu, unblocked vol	274				616	264
tC, single (s)	4.2				6.5	6.3
tC, 2 stage (s)					5.5	
tF (s)	2.3				3.6	3.4
p0 queue free %	100				91	99
cM capacity (veh/h)	1261				619	763

Direction, Lane #	EB 1	EB 2	WB 1	SB 1
Volume Total	3	346	264	62
Volume Left	3	0	0	58
Volume Right	0	0	10	4
cSH	1261	1700	1700	627
Volume to Capacity	0.00	0.20	0.16	0.10
Queue Length 95th (ft)	0	0	0	8
Control Delay (s)	7.9	0.0	0.0	11.4
Lane LOS	A			B
Approach Delay (s)	0.1		0.0	11.4
Approach LOS				B

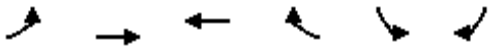
Intersection Summary			
Average Delay	1.1		
Intersection Capacity Utilization	28.6%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	8	259	104	194	205	16	22	0	42	46	0	25
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
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
Hourly flow rate (vph)	9	282	113	211	223	17	24	0	46	50	0	27
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		TWLTL			TWLTL							
Median storage veh)		2			2							
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	240			395			1027	1017	338	998	1065	232
vC1, stage 1 conf vol							355	355		653	653	
vC2, stage 2 conf vol							672	662		345	412	
vCu, unblocked vol	240			395			1027	1017	338	998	1065	232
tC, single (s)	4.2			4.2			7.2	6.6	6.3	7.2	6.6	6.3
tC, 2 stage (s)							6.2	5.6		6.2	5.6	
tF (s)	2.3			2.3			3.6	4.1	3.4	3.6	4.1	3.4
p0 queue free %	99			81			92	100	93	84	100	97
cM capacity (veh/h)	1298			1137			314	334	693	305	299	795

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	9	338	211	232	35	39
Volume Left	9	0	211	0	12	25
Volume Right	0	57	0	9	23	14
cSH	1298	1700	1137	1700	490	389
Volume to Capacity	0.01	0.20	0.19	0.14	0.07	0.10
Queue Length 95th (ft)	1	0	17	0	6	8
Control Delay (s)	7.8	0.0	8.9	0.0	12.9	15.3
Lane LOS	A		A		B	C
Approach Delay (s)	0.2		4.2		12.9	15.3
Approach LOS					B	C

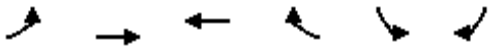
Intersection Summary				
Average Delay	3.5			
Intersection Capacity Utilization	51.3%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	7	340	399	14	30	16
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	8	370	434	15	33	17
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		TWLTL	TWLTL			
Median storage veh)		2	2			
Upstream signal (ft)			1000			
pX, platoon unblocked						
vC, conflicting volume	449				826	441
vC1, stage 1 conf vol					441	
vC2, stage 2 conf vol					385	
vCu, unblocked vol	449				826	441
tC, single (s)	4.2				6.5	6.3
tC, 2 stage (s)					5.5	
tF (s)	2.3				3.6	3.4
p0 queue free %	99				94	97
cM capacity (veh/h)	1085				534	606

Direction, Lane #	EB 1	EB 2	WB 1	SB 1
Volume Total	8	370	441	41
Volume Left	8	0	0	33
Volume Right	0	0	8	9
cSH	1085	1700	1700	547
Volume to Capacity	0.01	0.22	0.26	0.08
Queue Length 95th (ft)	1	0	0	6
Control Delay (s)	8.3	0.0	0.0	12.1
Lane LOS	A			B
Approach Delay (s)	0.2		0.0	12.1
Approach LOS				B

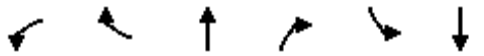
Intersection Summary			
Average Delay	0.7		
Intersection Capacity Utilization	33.7%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	10	310	289	4	10	22
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	11	337	314	4	11	24
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		TWLTL	TWLTL			
Median storage veh)		2	2			
Upstream signal (ft)		1230				
pX, platoon unblocked						
vC, conflicting volume	318				675	316
vC1, stage 1 conf vol					316	
vC2, stage 2 conf vol					359	
vCu, unblocked vol	318				675	316
tC, single (s)	4.2				6.5	6.3
tC, 2 stage (s)					5.5	
tF (s)	2.3				3.6	3.4
p0 queue free %	99				98	97
cM capacity (veh/h)	1214				593	713

Direction, Lane #	EB 1	EB 2	WB 1	SB 1
Volume Total	11	337	316	23
Volume Left	11	0	0	11
Volume Right	0	0	2	12
cSH	1214	1700	1700	650
Volume to Capacity	0.01	0.20	0.19	0.04
Queue Length 95th (ft)	1	0	0	3
Control Delay (s)	8.0	0.0	0.0	10.7
Lane LOS	A			B
Approach Delay (s)	0.2		0.0	10.7
Approach LOS				B

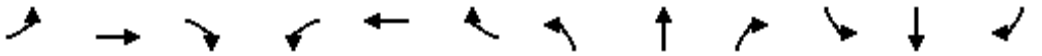
Intersection Summary			
Average Delay	0.5		
Intersection Capacity Utilization	27.7%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	8	12	250	3	4	279
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	9	13	272	3	4	303
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	585	273			275	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	585	273			275	
tC, single (s)	6.5	6.3			4.2	
tC, 2 stage (s)						
tF (s)	3.6	3.4			2.3	
p0 queue free %	98	98			100	
cM capacity (veh/h)	463	753			1260	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	15	273	305
Volume Left	9	0	2
Volume Right	7	2	0
cSH	555	1700	1260
Volume to Capacity	0.03	0.16	0.00
Queue Length 95th (ft)	2	0	0
Control Delay (s)	11.7	0.0	0.1
Lane LOS	B		A
Approach Delay (s)	11.7	0.0	0.1
Approach LOS	B		

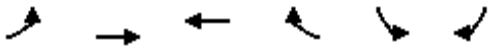
Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	29.4%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	155	206	245	273	106	108	224	868	397	126	533	108
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Lane Width	12	12	12	12	12	12	14	12	12	14	12	12
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1554	1636	1390	1554	1636	1390	1657	3107	1390	1657	3107	1390
Flt Permitted	0.68	1.00	1.00	0.47	1.00	1.00	0.28	1.00	1.00	0.22	1.00	1.00
Satd. Flow (perm)	1117	1636	1390	772	1636	1390	496	3107	1390	390	3107	1390
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	168	224	266	297	115	117	243	943	432	137	579	117
RTOR Reduction (vph)	0	0	191	0	0	88	0	0	278	0	0	81
Lane Group Flow (vph)	168	224	75	297	115	29	243	943	154	137	579	36
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)	17.5	13.6	13.6	19.7	14.7	14.7	26.8	20.8	20.8	21.0	17.9	17.9
Effective Green, g (s)	17.5	13.6	13.6	19.7	14.7	14.7	26.8	20.8	20.8	21.0	17.9	17.9
Actuated g/C Ratio	0.30	0.23	0.23	0.34	0.25	0.25	0.46	0.36	0.36	0.36	0.31	0.31
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	363	380	323	326	411	349	346	1104	494	207	950	425
v/s Ratio Prot	0.03	0.14		c0.08	0.07		c0.07	c0.30		0.04	0.19	
v/s Ratio Perm	0.11		0.05	c0.23		0.02	0.25		0.11	0.20		0.03
v/c Ratio	0.46	0.59	0.23	0.91	0.28	0.08	0.70	0.85	0.31	0.66	0.61	0.08
Uniform Delay, d1	16.1	20.0	18.2	18.0	17.6	16.8	10.7	17.4	13.7	14.2	17.3	14.5
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.9	2.3	0.4	28.3	0.4	0.1	6.3	8.5	1.6	7.7	2.9	0.4
Delay (s)	17.1	22.3	18.6	46.4	18.0	16.9	17.0	25.9	15.3	21.9	20.2	14.9
Level of Service	B	C	B	D	B	B	B	C	B	C	C	B
Approach Delay (s)		19.5			33.7			21.7			19.8	
Approach LOS		B			C			C			B	

Intersection Summary			
HCM 2000 Control Delay	22.6	HCM 2010 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	58.5	Sum of lost time (s)	16.0
Intersection Capacity Utilization	75.2%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	17	593	406	198	34	17
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	18	645	441	215	37	18
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		TWLTL	None			
Median storage veh)		2				
Upstream signal (ft)			305			
pX, platoon unblocked						
vC, conflicting volume	657				1123	441
vC1, stage 1 conf vol					441	
vC2, stage 2 conf vol					682	
vCu, unblocked vol	657				1123	441
tC, single (s)	4.2				6.5	6.3
tC, 2 stage (s)					5.5	
tF (s)	2.3				3.6	3.4
p0 queue free %	98				91	97
cM capacity (veh/h)	908				421	606

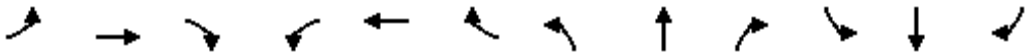
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1
Volume Total	18	645	441	215	46
Volume Left	18	0	0	0	37
Volume Right	0	0	0	215	9
cSH	908	1700	1700	1700	448
Volume to Capacity	0.02	0.38	0.26	0.13	0.10
Queue Length 95th (ft)	2	0	0	0	9
Control Delay (s)	9.0	0.0	0.0	0.0	14.0
Lane LOS	A				B
Approach Delay (s)	0.3		0.0		14.0
Approach LOS					B

Intersection Summary			
Average Delay	0.6		
Intersection Capacity Utilization	43.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	597	4	0	438	3	9
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	649	4	0	476	3	10
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)				160		
pX, platoon unblocked						
vC, conflicting volume			653		889	651
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			653		889	651
tC, single (s)			4.2		6.9	7.0
tC, 2 stage (s)						
tF (s)			2.3		3.6	3.4
p0 queue free %			100		99	98
cM capacity (veh/h)			896		273	399

Direction, Lane #	EB 1	WB 1	WB 2	NB 1
Volume Total	651	238	238	8
Volume Left	0	0	0	3
Volume Right	2	0	0	5
cSH	1700	1700	1700	337
Volume to Capacity	0.38	0.14	0.14	0.02
Queue Length 95th (ft)	0	0	0	2
Control Delay (s)	0.0	0.0	0.0	15.9
Lane LOS				C
Approach Delay (s)	0.0	0.0		15.9
Approach LOS				C

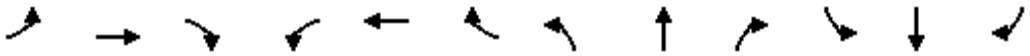
Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	44.4%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	32	574	32	370	363	59	54	0	36	32	0	63
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
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
Hourly flow rate (vph)	35	624	35	402	395	64	59	0	39	35	0	68
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		229										
pX, platoon unblocked				0.90			0.90	0.90	0.90	0.90	0.90	
vC, conflicting volume	459			659			1781	1974	641	1949	1927	197
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	459			563			1813	2028	543	2000	1976	197
tC, single (s)	4.2			4.2			7.6	6.6	7.0	7.6	6.6	7.0
tC, 2 stage (s)												
tF (s)	2.3			2.3			3.6	4.1	3.4	3.6	4.1	3.4
p0 queue free %	97			54			0	100	91	0	100	91
cM capacity (veh/h)	1064			872			24	25	423	17	27	795

Direction, Lane #	EB 1	WB 1	WB 2	WB 3	NB 1	SB 1
Volume Total	659	333	263	64	49	52
Volume Left	17	201	0	0	29	17
Volume Right	17	0	0	64	20	34
cSH	1064	872	1700	1700	38	48
Volume to Capacity	0.03	0.46	0.15	0.04	1.28	1.07
Queue Length 95th (ft)	3	62	0	0	125	116
Control Delay (s)	0.7	10.1	0.0	0.0	405.4	286.6
Lane LOS	A	B			F	F
Approach Delay (s)	0.7	5.1			405.4	286.6
Approach LOS					F	F

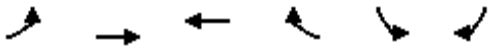
Intersection Summary				
Average Delay	27.1			
Intersection Capacity Utilization	79.2%	ICU Level of Service	D	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	59	538	45	28	345	32	22	0	16	83	0	88
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
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
Hourly flow rate (vph)	64	585	49	30	375	35	24	0	17	90	0	96
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		395										
pX, platoon unblocked				0.98			0.98	0.98	0.98	0.98	0.98	
vC, conflicting volume	410			634			1269	1208	609	1191	1198	375
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	410			620			1265	1203	595	1186	1193	375
tC, single (s)	4.2			4.2			7.2	6.6	6.3	7.2	6.6	6.3
tC, 2 stage (s)												
tF (s)	2.3			2.3			3.6	4.1	3.4	3.6	4.1	3.4
p0 queue free %	94			97			79	100	96	37	100	86
cM capacity (veh/h)	1123			922			112	162	487	143	164	660

Direction, Lane #	EB 1	WB 1	WB 2	WB 3	NB 1	SB 1
Volume Total	641	30	375	35	21	93
Volume Left	32	30	0	0	12	45
Volume Right	24	0	0	35	9	48
cSH	1123	922	1700	1700	166	240
Volume to Capacity	0.06	0.03	0.22	0.02	0.12	0.39
Queue Length 95th (ft)	5	3	0	0	10	43
Control Delay (s)	1.1	9.0	0.0	0.0	29.8	29.2
Lane LOS	A	A			D	D
Approach Delay (s)	1.1	0.6			29.8	29.2
Approach LOS					D	D

Intersection Summary				
Average Delay	3.6			
Intersection Capacity Utilization	79.4%	ICU Level of Service	D	
Analysis Period (min)	15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	610	511	373	32	32	32
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	663	555	405	35	35	35
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	TWLTL			
Median storage veh)			2			
Upstream signal (ft)		720				
pX, platoon unblocked						
vC, conflicting volume	440				2304	423
vC1, stage 1 conf vol					423	
vC2, stage 2 conf vol					1882	
vCu, unblocked vol	440				2304	423
tC, single (s)	4.2				6.5	6.3
tC, 2 stage (s)					5.5	
tF (s)	2.3				3.6	3.4
p0 queue free %	39				29	94
cM capacity (veh/h)	1094				49	620

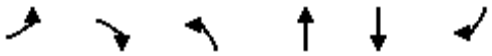
Direction, Lane #	EB 1	EB 2	WB 1	SB 1
Volume Total	663	555	423	52
Volume Left	663	0	0	35
Volume Right	0	0	17	17
cSH	1094	1700	1700	71
Volume to Capacity	0.61	0.33	0.25	0.74
Queue Length 95th (ft)	107	0	0	85
Control Delay (s)	13.2	0.0	0.0	139.7
Lane LOS	B			F
Approach Delay (s)	7.2		0.0	139.7
Approach LOS				F

Intersection Summary			
Average Delay	9.5		
Intersection Capacity Utilization	74.2%	ICU Level of Service	D
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	610	26	11	390	15	6
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	663	28	12	424	16	7
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWLTL			TWLTL		
Median storage veh)	2			2		
Upstream signal (ft)	930					
pX, platoon unblocked						
vC, conflicting volume			691		1125	677
vC1, stage 1 conf vol					677	
vC2, stage 2 conf vol					448	
vCu, unblocked vol			691		1125	677
tC, single (s)			4.2		6.5	6.3
tC, 2 stage (s)					5.5	
tF (s)			2.3		3.6	3.4
p0 queue free %			99		96	99
cM capacity (veh/h)			881		425	444

Direction, Lane #	EB 1	WB 1	WB 2	NB 1
Volume Total	677	12	424	20
Volume Left	0	12	0	16
Volume Right	14	0	0	3
cSH	1700	881	1700	428
Volume to Capacity	0.40	0.01	0.25	0.05
Queue Length 95th (ft)	0	1	0	4
Control Delay (s)	0.0	9.1	0.0	13.8
Lane LOS		A		B
Approach Delay (s)	0.0	0.3		13.8
Approach LOS				B

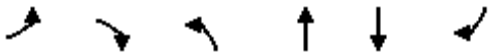
Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	46.6%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	2	9	9	1487	1042	9
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	2	10	10	1616	1133	10
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				TWLTL	TWLTL	
Median storage veh)				2	2	
Upstream signal (ft)					149	
pX, platoon unblocked	0.85	0.85	0.85			
vC, conflicting volume	1696	571	1142			
vC1, stage 1 conf vol	1138					
vC2, stage 2 conf vol	558					
vCu, unblocked vol	1464	139	812			
tC, single (s)	6.9	7.0	4.2			
tC, 2 stage (s)	5.9					
tF (s)	3.6	3.4	2.3			
p0 queue free %	99	99	99			
cM capacity (veh/h)	283	737	661			

Direction, Lane #	EB 1	NB 1	NB 2	NB 3	SB 1	SB 2
Volume Total	7	328	647	647	755	382
Volume Left	2	5	0	0	0	0
Volume Right	5	0	0	0	0	5
cSH	494	661	1700	1700	1700	1700
Volume to Capacity	0.01	0.01	0.38	0.38	0.44	0.22
Queue Length 95th (ft)	1	1	0	0	0	0
Control Delay (s)	12.4	0.3	0.0	0.0	0.0	0.0
Lane LOS	B	A				
Approach Delay (s)	12.4	0.1			0.0	
Approach LOS	B					

Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	47.9%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	0	34	0	1131	760	32
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	37	0	1229	826	35
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				TWLTL	TWLTL	
Median storage veh)				2	2	
Upstream signal (ft)				282		
pX, platoon unblocked	0.73					
vC, conflicting volume	1441	413	861			
vC1, stage 1 conf vol	826					
vC2, stage 2 conf vol	615					
vCu, unblocked vol	857	413	861			
tC, single (s)	6.9	7.0	4.2			
tC, 2 stage (s)	5.9					
tF (s)	3.6	3.4	2.3			
p0 queue free %	100	94	100			
cM capacity (veh/h)	357	574	746			

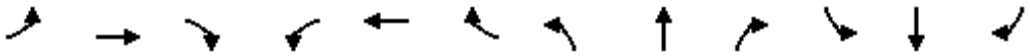
Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	37	615	615	413	413	35
Volume Left	0	0	0	0	0	0
Volume Right	37	0	0	0	0	35
cSH	574	1700	1700	1700	1700	1700
Volume to Capacity	0.06	0.36	0.36	0.24	0.24	0.02
Queue Length 95th (ft)	5	0	0	0	0	0
Control Delay (s)	11.7	0.0	0.0	0.0	0.0	0.0
Lane LOS	B					
Approach Delay (s)	11.7	0.0		0.0		
Approach LOS	B					

Intersection Summary			
Average Delay	0.2		
Intersection Capacity Utilization	37.3%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	0	304	937	194	194	792
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	330	1018	211	211	861
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			TWLTL			TWLTL
Median storage veh)			2			2
Upstream signal (ft)			458			
pX, platoon unblocked	0.76	0.76			0.76	
vC, conflicting volume	1871	509			1229	
vC1, stage 1 conf vol	1018					
vC2, stage 2 conf vol	852					
vCu, unblocked vol	1519	0			678	
tC, single (s)	6.9	7.0			4.2	
tC, 2 stage (s)	5.9					
tF (s)	3.6	3.4			2.3	
p0 queue free %	100	59			68	
cM capacity (veh/h)	220	815			669	

Direction, Lane #	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	330	509	509	211	211	430	430
Volume Left	0	0	0	0	211	0	0
Volume Right	330	0	0	211	0	0	0
cSH	815	1700	1700	1700	669	1700	1700
Volume to Capacity	0.41	0.30	0.30	0.12	0.32	0.25	0.25
Queue Length 95th (ft)	50	0	0	0	34	0	0
Control Delay (s)	12.4	0.0	0.0	0.0	12.8	0.0	0.0
Lane LOS	B				B		
Approach Delay (s)	12.4	0.0			2.5		
Approach LOS	B						

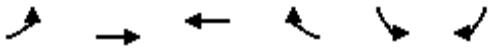
Intersection Summary			
Average Delay	2.6		
Intersection Capacity Utilization	55.2%	ICU Level of Service	B
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	11	61	2	86	75	111	4	38	65	143	45	20
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
Hourly flow rate (vph)	12	66	2	93	82	121	4	41	71	155	49	22

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	SB 1
Volume Total (vph)	73	93	142	79	138
Volume Left (vph)	6	93	0	2	78
Volume Right (vph)	1	0	60	35	11
Hadj (s)	0.13	0.62	-0.18	-0.14	0.18
Departure Headway (s)	5.0	5.7	4.9	4.7	5.0
Degree Utilization, x	0.10	0.15	0.19	0.10	0.19
Capacity (veh/h)	675	599	696	712	682
Control Delay (s)	8.5	8.6	7.9	8.3	9.1
Approach Delay (s)	8.5	8.2		8.3	9.1
Approach LOS	A	A		A	A

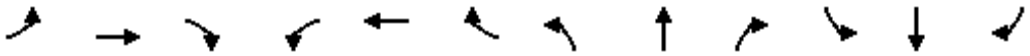
Intersection Summary				
Delay	8.5			
HCM 2010 Level of Service	A			
Intersection Capacity Utilization	39.6%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	9	251	267	59	35	5
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	10	273	290	64	38	5
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		TWLTL	TWLTL			
Median storage veh)		2	2			
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	354				615	322
vC1, stage 1 conf vol					322	
vC2, stage 2 conf vol					292	
vCu, unblocked vol	354				615	322
tC, single (s)	4.2				6.5	6.3
tC, 2 stage (s)					5.5	
tF (s)	2.3				3.6	3.4
p0 queue free %	99				94	99
cM capacity (veh/h)	1177				620	707

Direction, Lane #	EB 1	EB 2	WB 1	SB 1
Volume Total	10	273	322	41
Volume Left	10	0	0	38
Volume Right	0	0	32	3
cSH	1177	1700	1700	625
Volume to Capacity	0.01	0.16	0.19	0.07
Queue Length 95th (ft)	1	0	0	5
Control Delay (s)	8.1	0.0	0.0	11.2
Lane LOS	A			B
Approach Delay (s)	0.3		0.0	11.2
Approach LOS				B

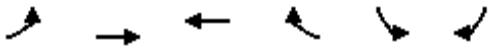
Intersection Summary			
Average Delay	0.8		
Intersection Capacity Utilization	29.1%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	28	225	33	62	199	52	111	0	206	31	0	16
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
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
Hourly flow rate (vph)	30	245	36	67	216	57	121	0	224	34	0	17
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		TWLTL			TWLTL							
Median storage veh)		2			2							
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	273			280			692	731	262	909	721	245
vC1, stage 1 conf vol							323	323		379	379	
vC2, stage 2 conf vol							368	408		529	341	
vCu, unblocked vol	273			280			692	731	262	909	721	245
tC, single (s)	4.2			4.2			7.2	6.6	6.3	7.2	6.6	6.3
tC, 2 stage (s)							6.2	5.6		6.2	5.6	
tF (s)	2.3			2.3			3.6	4.1	3.4	3.6	4.1	3.4
p0 queue free %	98			95			76	100	71	88	100	98
cM capacity (veh/h)	1262			1254			497	470	764	279	468	782

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	30	262	67	245	172	26
Volume Left	30	0	67	0	60	17
Volume Right	0	18	0	28	112	9
cSH	1262	1700	1254	1700	643	358
Volume to Capacity	0.02	0.15	0.05	0.14	0.27	0.07
Queue Length 95th (ft)	2	0	4	0	27	6
Control Delay (s)	7.9	0.0	8.0	0.0	12.6	15.8
Lane LOS	A		A		B	C
Approach Delay (s)	0.8		1.7		12.6	15.8
Approach LOS					B	C

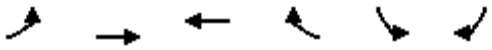
Intersection Summary			
Average Delay	4.2		
Intersection Capacity Utilization	49.6%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	18	444	280	33	24	13
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	20	483	304	36	26	14
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		TWLTL	TWLTL			
Median storage veh)		2	2			
Upstream signal (ft)			1000			
pX, platoon unblocked						
vC, conflicting volume	340				844	322
vC1, stage 1 conf vol					322	
vC2, stage 2 conf vol					522	
vCu, unblocked vol	340				844	322
tC, single (s)	4.2				6.5	6.3
tC, 2 stage (s)					5.5	
tF (s)	2.3				3.6	3.4
p0 queue free %	98				95	98
cM capacity (veh/h)	1191				513	707

Direction, Lane #	EB 1	EB 2	WB 1	SB 1
Volume Total	20	483	322	33
Volume Left	20	0	0	26
Volume Right	0	0	18	7
cSH	1191	1700	1700	545
Volume to Capacity	0.02	0.28	0.19	0.06
Queue Length 95th (ft)	1	0	0	5
Control Delay (s)	8.1	0.0	0.0	12.0
Lane LOS	A			B
Approach Delay (s)	0.3		0.0	12.0
Approach LOS				B

Intersection Summary			
Average Delay	0.6		
Intersection Capacity Utilization	35.4%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	25	617	387	11	8	18
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	27	671	421	12	9	20
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		TWLTL	TWLTL			
Median storage veh)		2	2			
Upstream signal (ft)		1230				
pX, platoon unblocked						
vC, conflicting volume	433				1152	427
vC1, stage 1 conf vol					427	
vC2, stage 2 conf vol					725	
vCu, unblocked vol	433				1152	427
tC, single (s)	4.2				6.5	6.3
tC, 2 stage (s)					5.5	
tF (s)	2.3				3.6	3.4
p0 queue free %	98				98	97
cM capacity (veh/h)	1101				406	617

Direction, Lane #	EB 1	EB 2	WB 1	SB 1
Volume Total	27	671	427	18
Volume Left	27	0	0	9
Volume Right	0	0	6	10
cSH	1101	1700	1700	496
Volume to Capacity	0.02	0.39	0.25	0.04
Queue Length 95th (ft)	2	0	0	3
Control Delay (s)	8.4	0.0	0.0	12.5
Lane LOS	A			B
Approach Delay (s)	0.3		0.0	12.5
Approach LOS				B

Intersection Summary			
Average Delay	0.4		
Intersection Capacity Utilization	45.3%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	5	8	151	9	14	203
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	5	9	164	10	15	221
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	420	169			174	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	420	169			174	
tC, single (s)	6.5	6.3			4.2	
tC, 2 stage (s)						
tF (s)	3.6	3.4			2.3	
p0 queue free %	99	99			99	
cM capacity (veh/h)	574	862			1373	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	10	169	228
Volume Left	5	0	8
Volume Right	4	5	0
cSH	674	1700	1373
Volume to Capacity	0.01	0.10	0.01
Queue Length 95th (ft)	1	0	1
Control Delay (s)	10.4	0.0	0.3
Lane LOS	B		A
Approach Delay (s)	10.4	0.0	0.3
Approach LOS	B		

Intersection Summary			
Average Delay		0.4	
Intersection Capacity Utilization		34.1%	ICU Level of Service A
Analysis Period (min)		15	