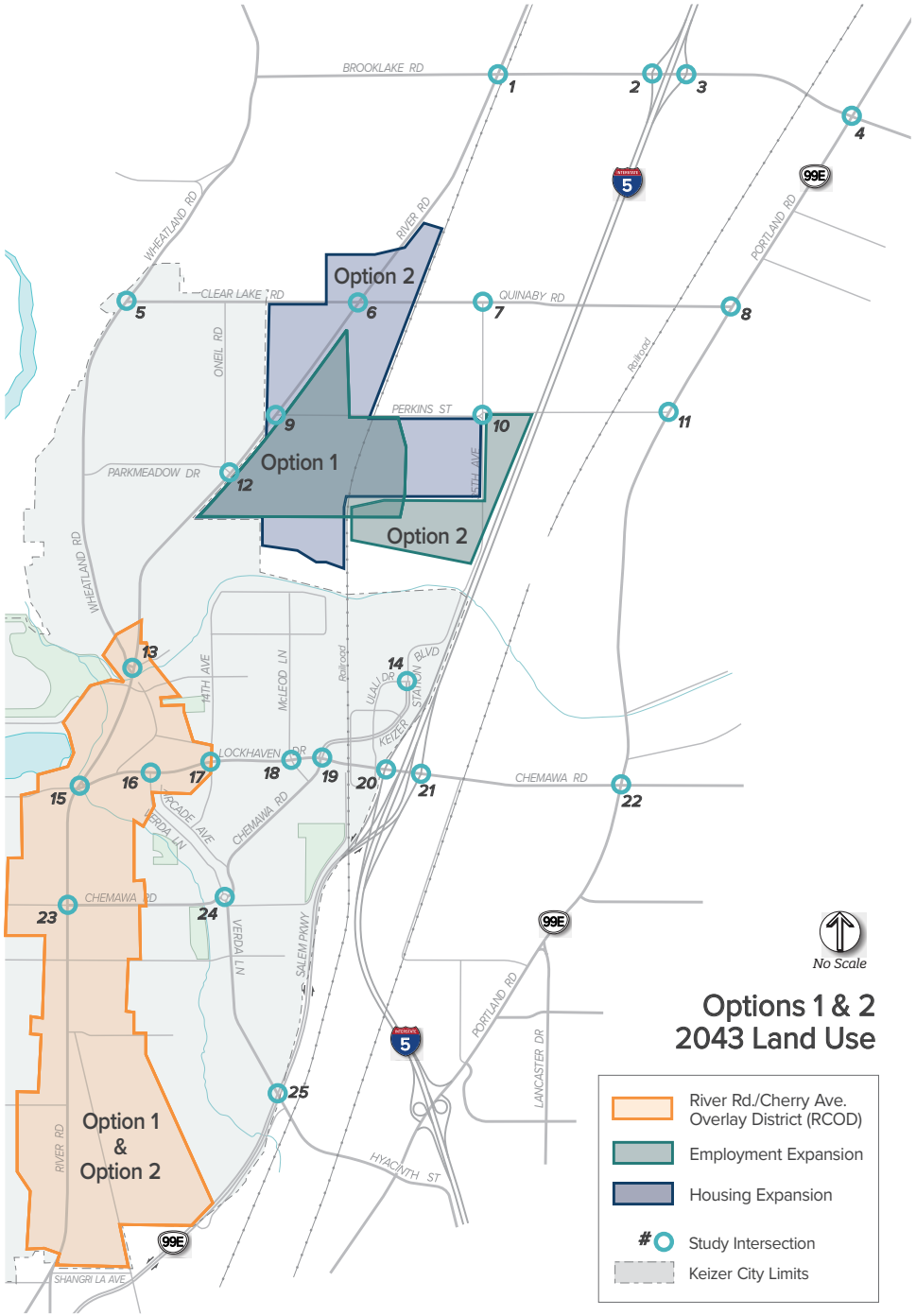
KEIZER GROWTH TRANSPORTATION IMPACTS STUDY

OCTOBER 2020

INTRODUCTION

The purpose of the Keizer Growth Transportation Study is to illustrate the level of investment in the transportation system needed to support conceptual planned expansion of the City's Urban Growth Boundary (UGB).

This study evaluated two candidate sites just north of the City limit that differed in size and mix of proposed land uses that will be referred as Option 1 and Option 2. The study findings estimated the expected magnitude of added vehicular traffic, and flagged portions of the street system that would be expected to require improvements or upgrades to provide safe and convenient access consistent with City standards. Necessary system improvements were tabulated and a rough preliminary cost estimate for each option was developed and compared. To be clear, this study does not recommend or provide the basis for any planned or proposed city growth expansions, it only presents illustrative examples of possible growth options for Keizer, and identifies the trade-offs involved in selected growth sites, and land use mixes for consideration.



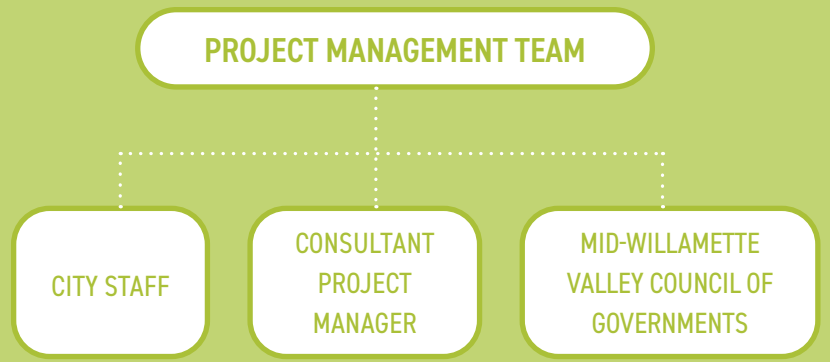
STUDY AREA

The study area for the Keizer Growth Transportation Study is shown in **Figure 1**. Performance assessments were conducted at 25 study intersections across multiple agency jurisdictions.

These locations were selected by the project management team, which included city staff, the consultant project manager, and senior staff from the Mid-Willamette Valley Council of Governments. The two illustrative UGB expansion areas are shown in the map.

The River Road/Cherry Avenue Overlay District (RCOD) includes housing infill that is included in both options.

FIGURE 1. STUDY AREA



STUDY PROCESS

The following technical process was performed in this illustrative study.

1. Two conceptual growth areas on the northern end of the city's UGB were identified.
2. The scale and mix of land use types (housing and employment) for each growth option were defined, consistent with similar existing development in Keizer and Salem.
3. The regional travel forecasting model used by the Mid-Willamette Valley Council of Governments (MWVCOG) was used to estimate traffic growth.
4. The transportation system was assessed to see how it operates today and how that might change with full development trips for each of the two growth options.
5. Based on the performance assessment, a roster of expected added transportation system improvements was identified.
6. The additional investments needed to comply with agency performance standards were identified and evaluated for each option.

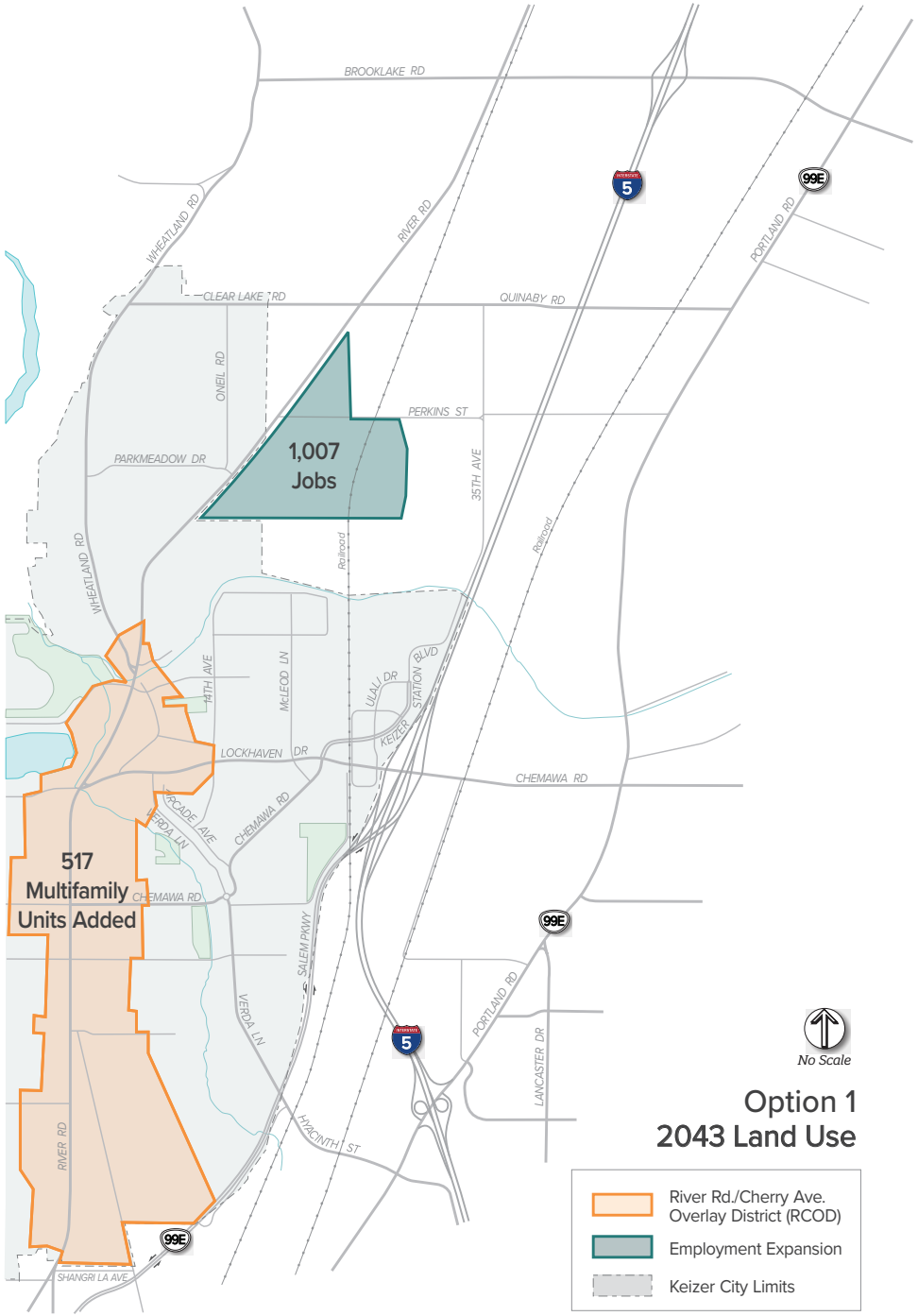
GROWTH OPTIONS

Two conceptual growth options were developed in coordination with the City of Keizer, MWVCOG, and the consultant team. The intent was to develop two options that address the housing needs and projected employment growth in Keizer.

For each option, the City provided a number of housing units and jobs, which was converted to peak hour model trips using trip generation assumptions and the future 2043 Salem-Keizer travel demand model (SKATS). The existing year (2017) and future year (2043) models were used to forecast the transportation impacts of the two options. In the SKATS model, vehicle and transit trips are assigned to the network, while bicycling and walking trips are forecast but not assigned to the network. For this analysis, only vehicle trips are reported.

HOUSING UNITS & JOBS **PEAK HOUR MODEL TRIPS**

◀ *A separate technical memorandum is provided in the appendix with more details regarding the travel forecasting methods and assumptions.*

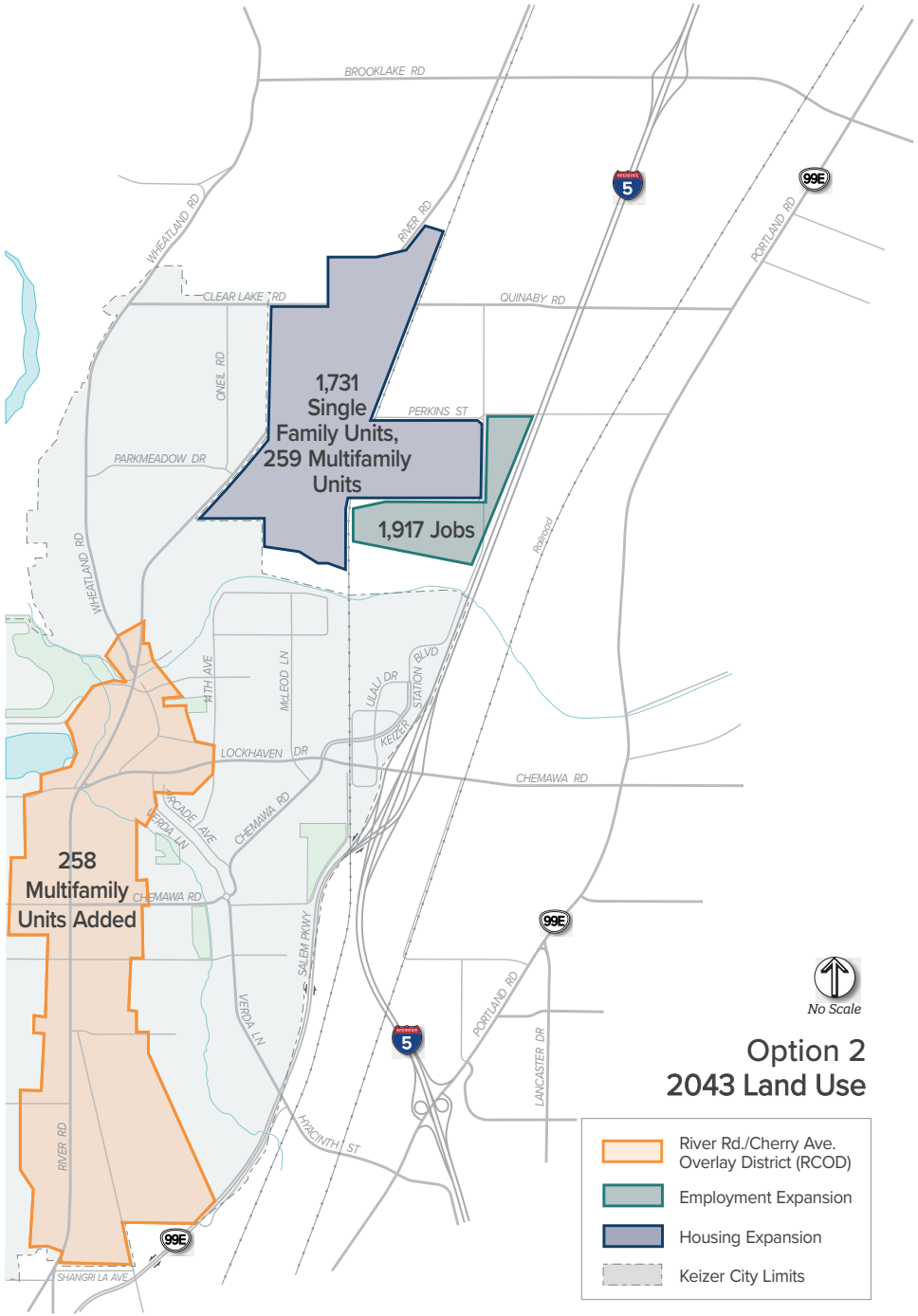


LAND USE OPTION 1

Option 1 includes an additional 517 multi-family housing units within the River Road/Cherry Avenue Overlay District (RCOD) and a small employment expansion outside of the Urban Growth Boundary (UGB) (**Figure 2**). The employment expansion is located outside the northeast corner of the UGB along River Road and covers about 63 acres, split into two thirds industrial and one third commercial land use. This employment growth in the expansion area results in an additional 350 PM peak hour trips added to the future roadway network. Note that the multi-family residential units in the RCOD are included in the baseline future scenario and thus don't add any further trips to the Option 1 expansion.

This development is assumed to be served mostly by existing roadways and new internal site roadways. The employment expansion area would have access to River Road via Perkins Street. The multi-family housing units would be dispersed across the RCOD, with accesses along River Road.

FIGURE 2. LAND USE OPTION 1



LAND USE OPTION 2

Option 2 is a larger expansion of the UGB. This option would expand the UGB in the northeast corner to include both sides of River Road up past Quinaby Road, expanding to I-5 to the east (**Figure 3**). The housing growth includes 258 multi-family units within the RCOD, plus an additional 259 multi-family units and 1,731 single family units in the expansion area. The employment growth includes roughly 120 acres split between industrial (two-thirds) and commercial (one-third). This growth in the expansion area results in an additional 1,660 PM peak hour trips added to the future roadway network - almost five times more than Option 1. Note that the multi-family residential units in the RCOD are included in the baseline future scenario and thus don't add any further trips to Option 2.

The second option will require more transportation infrastructure including roadway connections in the form of new collectors and internal site roadways. This analysis assumes trips access River Road at two new accesses besides Quinaby Road and Perkins Street. One new north-south collector roadway is assumed parallel to River Road in addition to internal site circulation. Trips may also access the site via the east or south on Quinaby Road, Perkins Street, and 35th Avenue.

FIGURE 3. LAND USE OPTION 2

LAND USE OPTION SUMMARY IN EXPANSION AREA*

OPTION 1

EMPLOYMENT EXPANSION

0
MULTI-FAMILY UNITS

0
SINGLE FAMILY UNITS

42
ACRES INDUSTRIAL

19
ACRES COMMERCIAL

350
VEHICLE TRIPS DURING PM PEAK HOUR

OPTION 2

MAJOR HOUSING AND EMPLOYMENT EXPANSION

259
MULTI-FAMILY UNITS

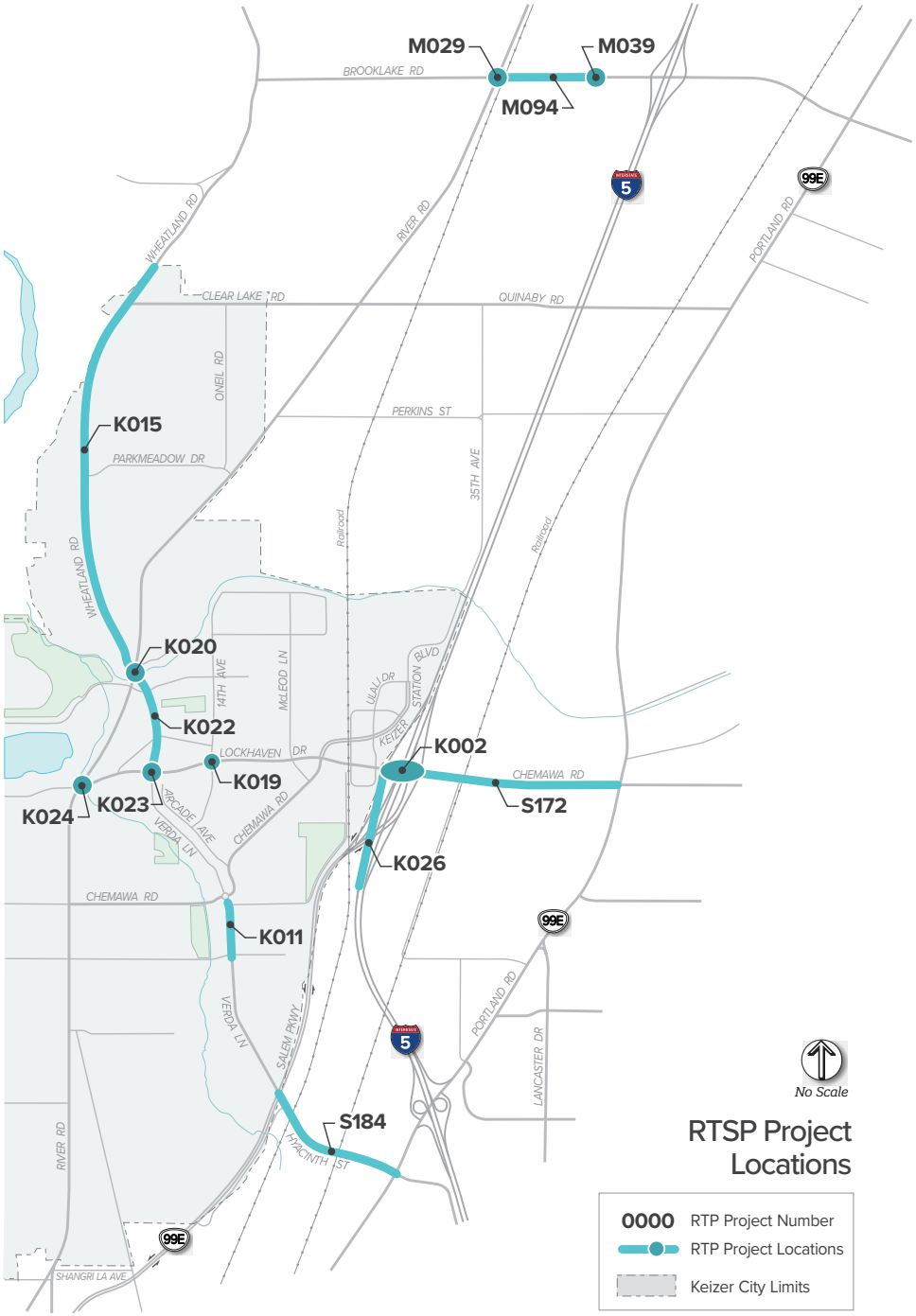
1,731
SINGLE FAMILY UNITS

80
ACRES INDUSTRIAL

40
ACRES COMMERCIAL

1,660
VEHICLE TRIPS DURING PM PEAK HOUR

** Note: This does not include the multi-family units assumed in the RCOD, as previously described.*



REGIONALLY IDENTIFIED SYSTEM IMPROVEMENTS

For the purposes of this study, it was assumed that the growth options would be fully developed by the horizon year of the plan forecast, year 2043. By that time, local agencies are expected to complete a series of transportation improvements to the study area roadway system independent of these growth options moving forward. They are identified in the Regional Transportation System Plan (RTSP), and have been identified as being likely to be funded, which is labeled as "Included" in that plan. The cost for the City of Keizer to complete these projects totaled just over $12 million in 2009. Accounting for inflation, this is about $16 million in 2019. Without these projects, the following intersections would experience severe congestion:

- *River Road / Brooklake Road*
- *River Road / Lockhaven Drive*
- *Verda Lane / Lockhaven Drive*
- *Kafir Drive / 14th Avenue / Lockhaven Drive*
- *Chemawa Road / I-5 SB Ramp*

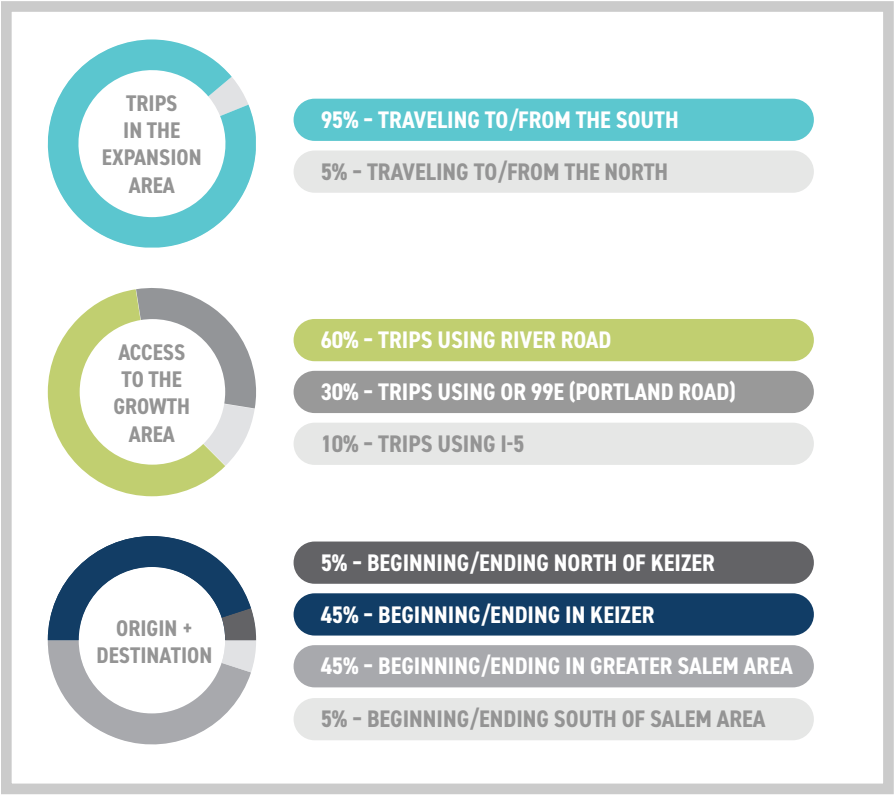
A complete list of the improvements applicable to the study area are included in the Appendix. These future improvements have been assumed to be in place for all future year scenarios.

Note that although existing funding for project K015 (multi-modal improvements) has been reallocated to another project, this project is still anticipated to be funded before the planning horizon year. In addition, this project has no impact on the vehicle capacity analysis.

FIGURE 4. RTSP PROJECT LOCATIONS

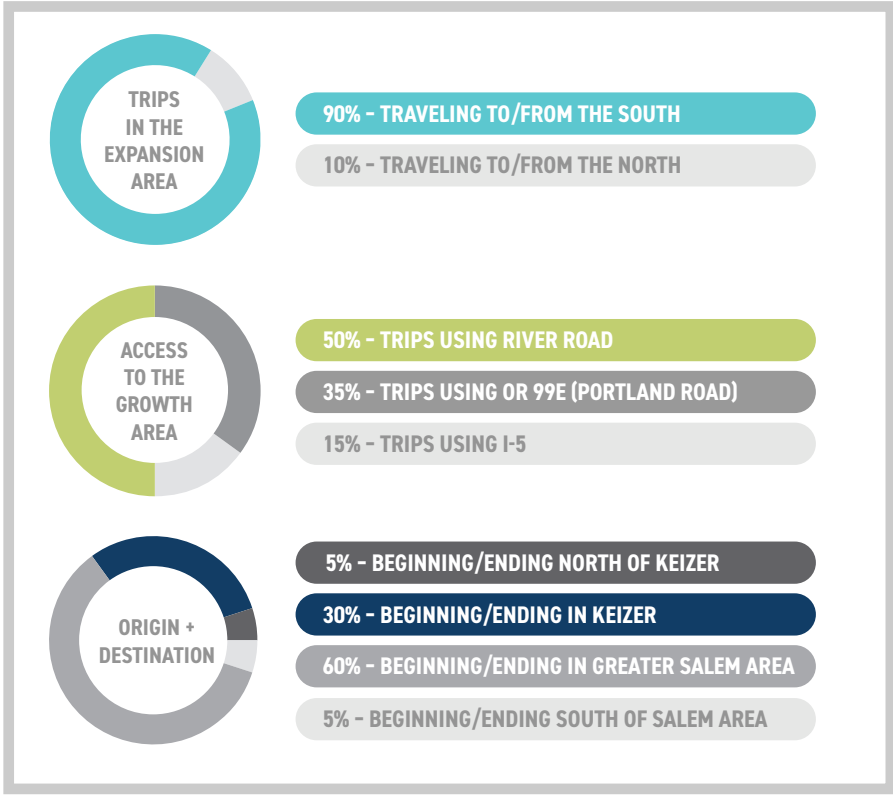
TRIP DISTRIBUTION PATTERNS FOR THE GROWTH AREAS

LAND USE OPTION 1



Under current conditions, there is little existing land use north of Keizer in the expansion area. The 2043 SKATS regional travel demand model was used to determine future travel patterns for this analysis. Land use type, such as proportion of residential vs commercial and industrial uses, impact trip patterns. Residential areas have trips coming into the expansion area during the PM peak hour, while the majority of employment areas have trips leaving the expansion area during the PM peak hour.

LAND USE OPTION 2



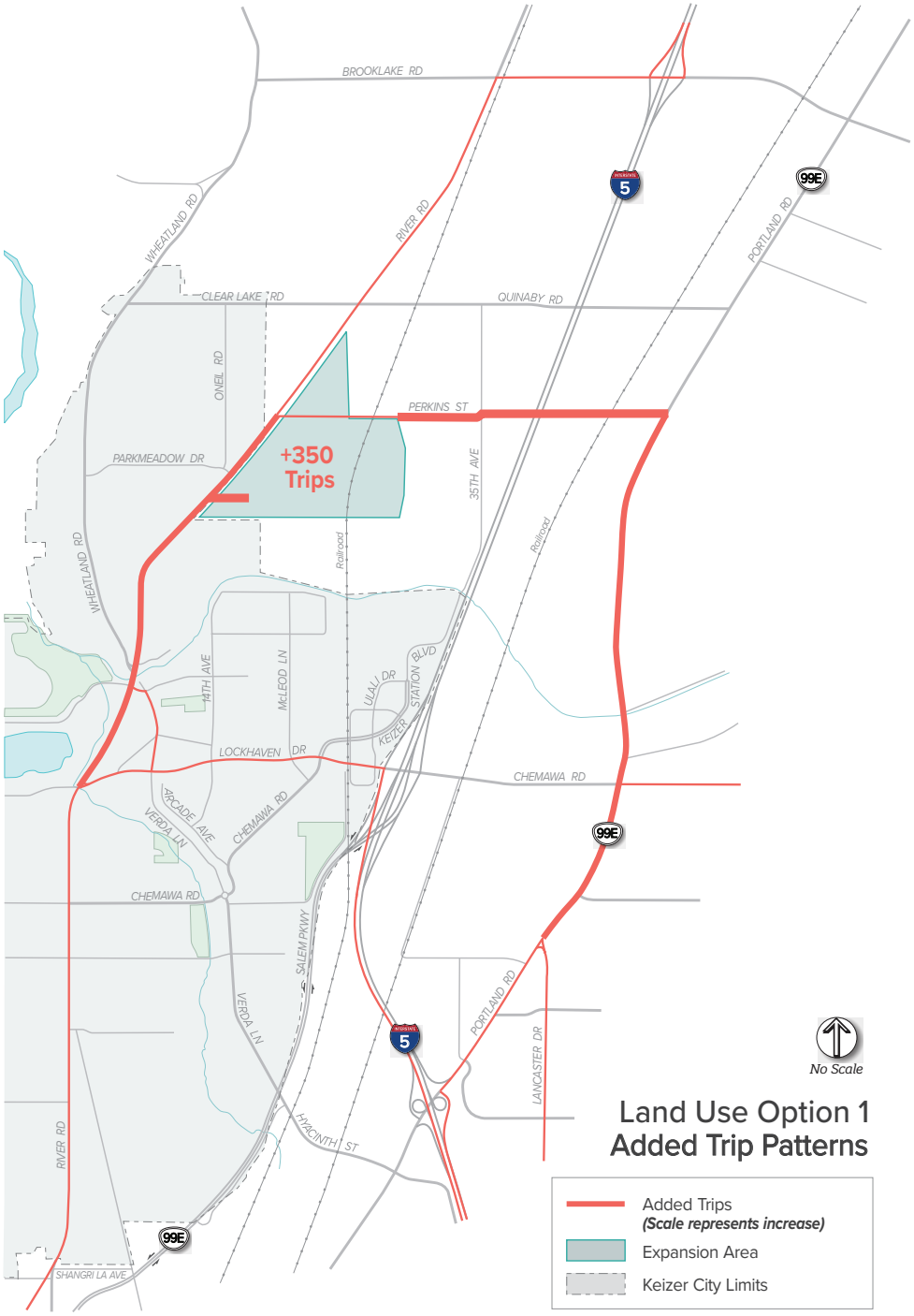
One reason the travel patterns are not the same between the two options is that Option 2 has a larger magnitude of additional trips, so once the Keizer housing or job demand has been filled, more trips are headed to and from the greater Salem area, as well as areas outside of Salem. Further details on trip distribution for the two growth options can be found in the Growth Impacts section.

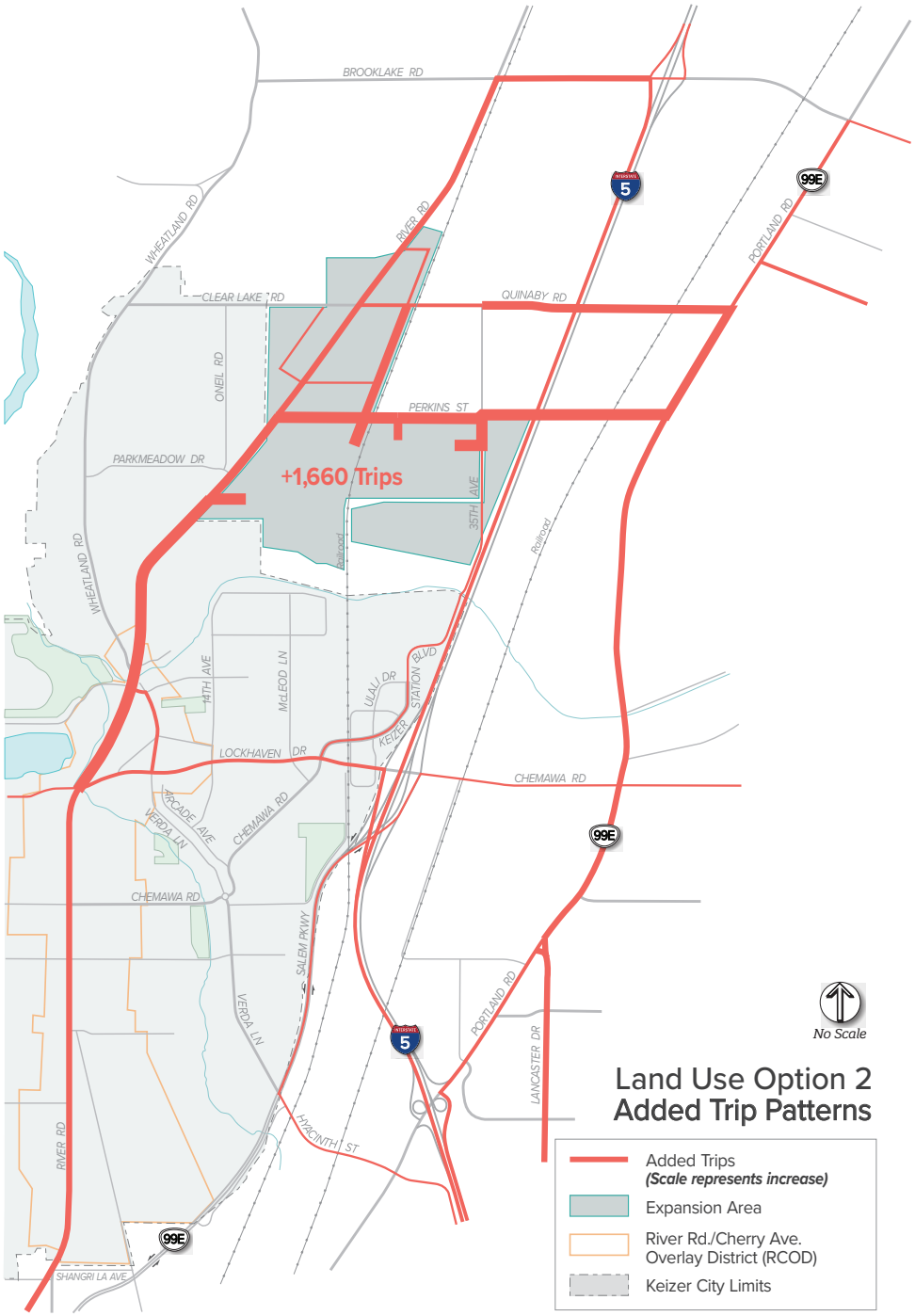
GROWTH IMPACTS

Based on the land use assumptions outlined in the previous section, trip patterns were developed for both of the growth options. These options were compared to a baseline scenario in 2043 that assumed no UGB expansion growth to determine the growth impacts. This modified baseline includes the 517 multi-family units in the River Road/Cherry Avenue Overlay District (RCOD) that are also assumed in Option 1. In Option 2, about half these units are assumed to be in the RCOD and half are located in the expansion area.

The trip patterns and magnitude of volume growth in the PM peak hour for the expansion areas of two options are shown in **Figures 5 and 6**. Generally, Option 1 has a much smaller impact than Option 2. Under Option 1, trips access the expansion area via River Road or Perkins Street, with some volume growth on OR 99E (Portland Road). There is a minor growth in trips on River Road in the RCOD.

FIGURE 5. LAND USE OPTION 1: ADDED TRIP PATTERNS





Land Use Option 2 shows significant growth in the expansion area, with increases in volume along River Road, Quinaby Road, Perkins Street, and OR 99E (Portland Road). There are some volume increases at the Brooklake Road, OR 99E (Portland Road), and Chemawa Road I-5 interchanges.

FIGURE 6. LAND USE OPTION 2: ADDED TRIP PATTERNS

GROWTH IMPACTS ON STUDY AREA ROADWAYS AND INTERSECTIONS

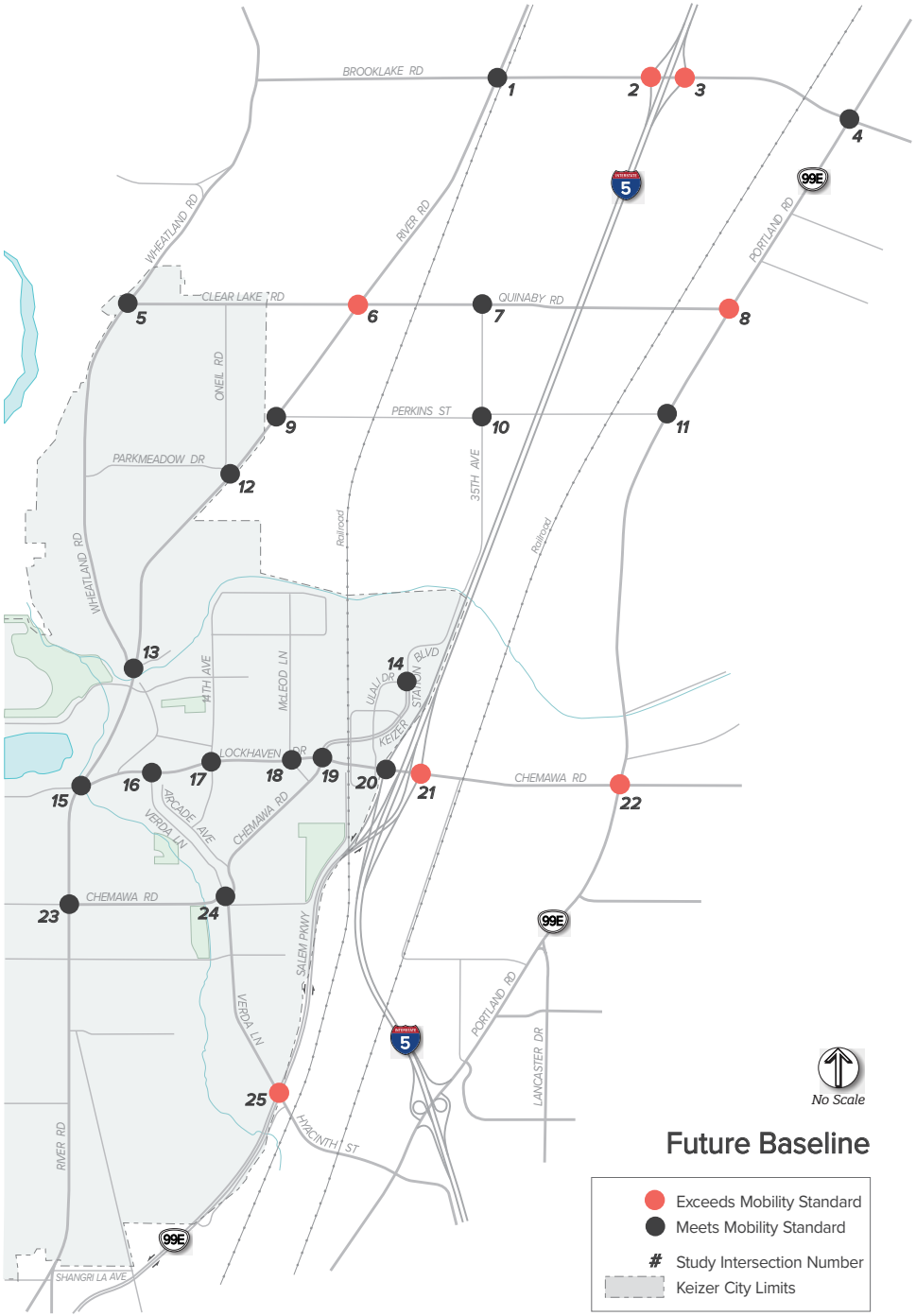
Several roadways adjacent to the location of the growth options will require upgrades to City of Keizer street design standards if and when growth occurs in the future year baseline conditions (meaning without land use options 1 and 2). The operations shown in Figure 7 were analyzed with the assumption that all RTSP projects identified on Page 8 are completed.[1] The roadways that would need improvement beyond the RTSP projects identified on Page 8 are shown in **Table 1**. The extent of the improvements would be limited to the Urban Growth Boundary.

Several study intersections will require upgrades to traffic controls or expanded turn lanes to serve these growth options, as shown in **Figure 7**. These intersections will continue to be severely congested during peak hours with both growth options.

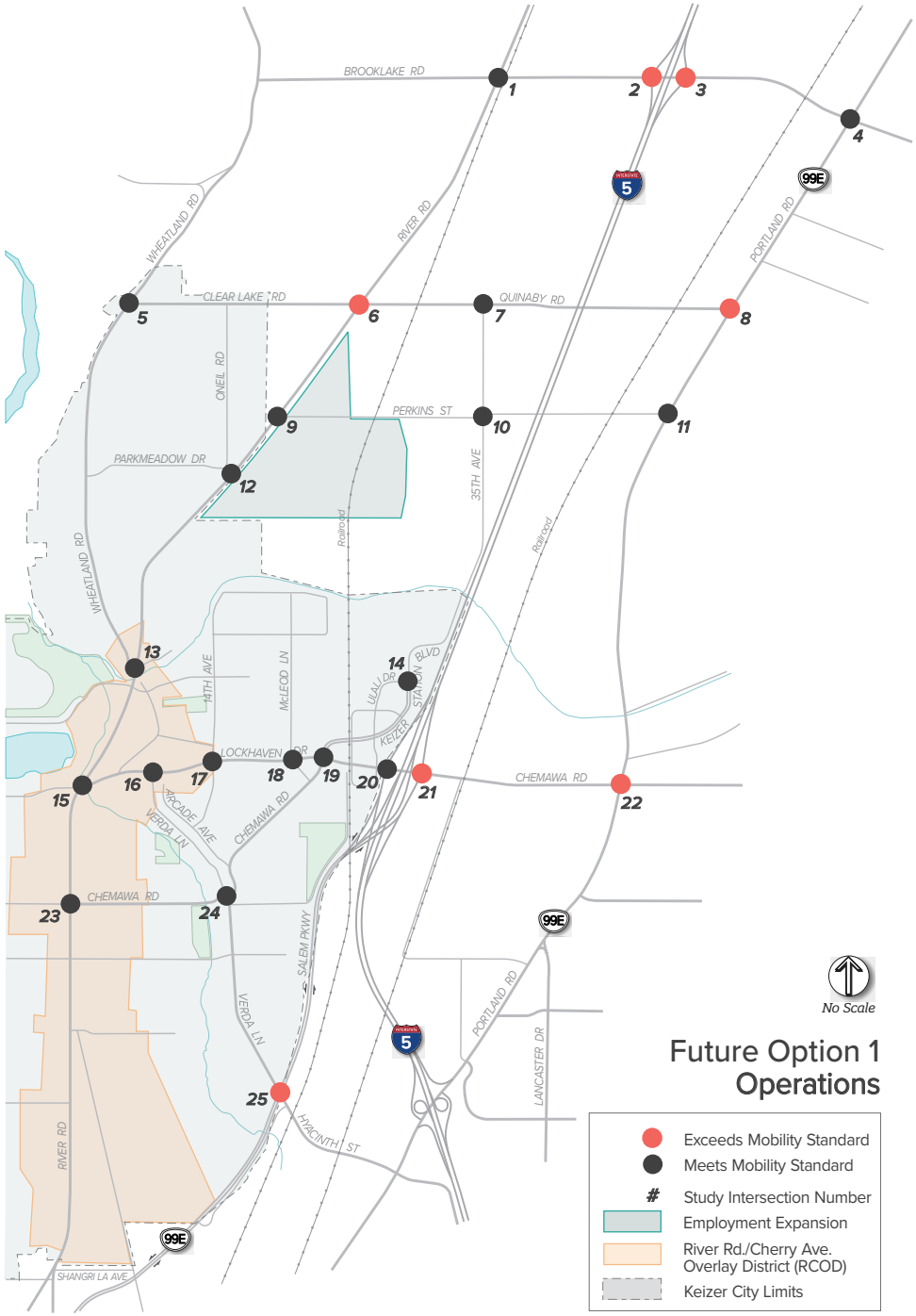
TABLE 1. ROADWAYS IN NEED OF IMPROVEMENT TO SERVE CONCEPTUAL GROWTH OPTIONS

LOCATION	FACILITY UPGRADE REQUIRED TO SERVE GROWTH
Perkins St	Upgrade to City of Keizer standards for minor arterials (3 lanes)
River Rd	Upgrade to City of Keizer standards for major arterials (5 lanes)
Quinaby Rd	Upgrade to City of Keizer standards for minor arterials (3 lanes)

FIGURE 7. FUTURE BASELINE



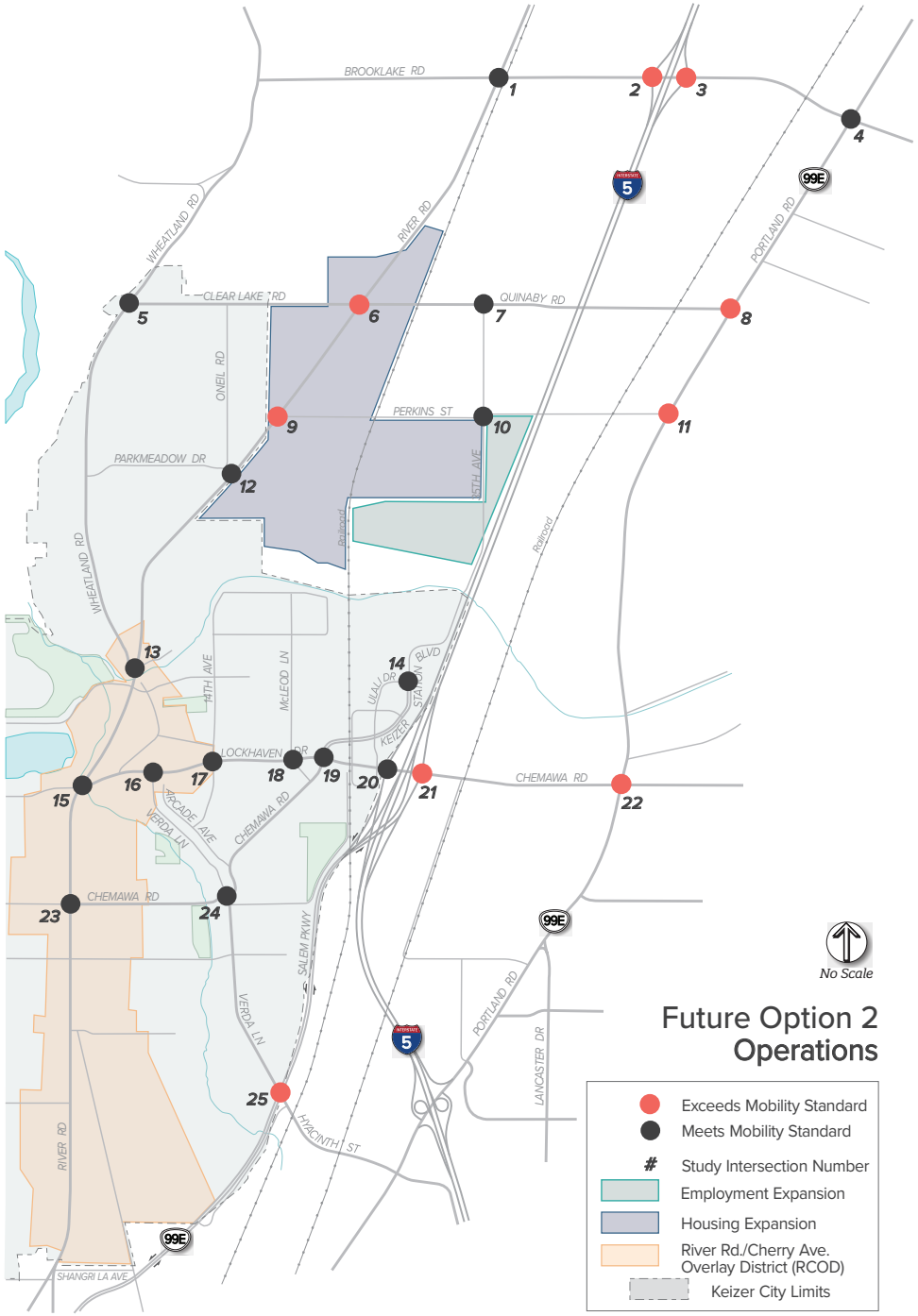
1 City of Keizer design standards - Streets. See page 5 https://evogov.s3.amazonaws.com/media/60/media/17105.pdf



LAND USE OPTION 1

Apart from the study intersections already experiencing significant congestion in the 2043 Baseline scenario, no additional study intersections exceed mobility standards with Option 1, as shown in **Figure 8**. The following section will provide system improvements for the intersections shown to be experiencing significant congestion.

FIGURE 8. LAND USE OPTION 1



LAND USE OPTION 2

Two study intersections experience significant congestion with the growth of Option 2, River Road/Perkins Street and OR 99 E (Portland Road)/Perkins Street, as shown in **Figure 9**. This is tied to the increased growth in trips along Perkins Street due to the adjacent expansion area.

FIGURE 9. LAND USE OPTION 2

SYSTEM INVESTMENTS TO SERVE GROWTH

2043 BASELINE SYSTEM RECOMMENDATIONS

Several study intersections need improvement to serve planned growth even without further UGB expansion. **Table 2** identifies several projects that are recommended for the street network without expansion of the UGB. Each recommended improvement shows an associated cost estimate, and the jurisdiction that would be primarily responsible for the improvement. When traffic signals are installed at intersections #6 and #8, they will operate adequately during peak hours, as shown in the Appendix. Several of the projects in Table 2 were identified by studies conducted after the RTSP project list was adopted. These projects are expected to mitigate growth that occurs by 2043 without expansion of the UGB (baseline conditions).

[1] As part of a previous study done by DKS Associates in 2019, intersection mitigations for the I-5 and Brooklake Road interchange were identified. These improvements include signalization of the two intersections.

[2] Two RTSP projects are identified in the general areas of study intersections 21 and 22, however specific improvements were not specified (see K002 and S172). Further study is recommended to expand the scope of the existing RTSP projects to include improvements at these study intersections as well as the Chemawa Road, OR 99E (Portland Road), and I-5 corridors in this area.

[3] Due to its location on a regionally significant route for motor vehicles and freight, Salem Parkway, additional study is recommended to mitigate intersection #25. Notably, the existing configuration and surrounding land use limits capacity expansion alternatives.

TABLE 2. BASELINE LIST OF INTERSECTION IMPROVEMENTS

INTERSECTION		RECOMMENDED IMPROVEMENT	COST ESTIMATE	JURISDICTION
2	**Brooklake Rd & I-5 SB Ramps**	Improvements from 2019 I-5/Brooklake Study (includes signalization)[1]	$5,400,000	ODOT
3	**Brooklake Rd & I-5 NB Ramps**	Improvements from 2019 I-5/Brooklake Study (includes signalization)[1]		
6	**River Rd & Clear Lake Rd/ Quinaby Rd**	Upgrade to signal control	$1,000,000	County/City
8	**OR 99E (Portland Rd) & Quinaby Rd**	Upgrade to signal control	$1,000,000	ODOT
21	**Chemawa Rd & I-5 NB Ramp**	Future study needed[2]	TBD	ODOT
22	**OR 99E (Portland Rd) & Chemawa Rd/ Hazelgreen Rd**	Future study needed[2]	TBD	ODOT
25	**Salem Pkwy & Verda Ln/ Hyacinth**	Future study needed[3]	TBD	ODOT

OPTION 1 SYSTEM RECOMMENDATIONS

No additional study intersections need improvement with the growth with Option 1 from the baseline scenario. However, several roadways adjacent to the proposed developments in this growth option would require upgrades to City of Keizer standards. Due to the location of Option 1's proposed development, only Perkins Street and River Road would require upgrades to City of Keizer standards. **Table 3** shows the proposed roadway upgrades and planning-level estimated costs.

By widening River Road as described in Table 3, study intersection #6 (River Road & Clear Lake Rd/Quinaby Road) would be mitigated to meet jurisdictional standard with the additional turn lanes on River Road, and therefore would not require an intersection control upgrade to a signal. A comparison of the intersection operations with additional turn lanes versus intersection control upgrades is provided in the Appendix.

Option 1 has a total of $17,000,000 for planning level transportation project costs associated with this expansion (not including future baseline needs identified above).

TABLE 3. OPTION 1 – LIST OF ROADWAY IMPROVEMENTS

ROADWAY	RECOMMENDED IMPROVEMENT[1]	COST ESTIMATE	JURISDICTION
Perkins St	Upgrade to 3 lanes	$5,000,000	County/City
River Rd	Upgrade to 5 lanes	$12,000,000	County/City

[1] Urban upgrades would be constructed to the new city limits (based on expansion area). Cost estimates reflect that distance.

OPTION 2 SYSTEM RECOMMENDATIONS

Two additional intersections need improvement with the growth of Option 2 as compared to the baseline scenario and Option 1. **Table 4** provides recommendations for improvements at these intersections, as well as the associated planning-level cost estimate and the jurisdiction responsible.

Several roadways adjacent to the proposed developments in this growth option would require upgrades to City of Keizer standards. **Table 5** shows the planning level cost estimates for these upgrades.

Study intersection #6 (River Road & Clear Lake Rd/Quinaby Road) would be mitigated to meet the jurisdictional standard with turn lanes constructed on both River Road and Quinaby Road. A comparison of this intersection from upgrading to signal control (recommended baseline improvements), to the construction of turn lanes on River Road only (recommended Option 1 improvements), to the construction of turn lanes on both River Road and Quinaby Road (recommended Option 2 improvements) is found in the Appendix.

Option 2 has a total of $36,500,000 for planning level transportation project costs associated with this expansion (not including future baseline needs identified above).

TABLE 4. OPTION 2 – LIST OF INTERSECTION IMPROVEMENTS

ROADWAY	RECOMMENDED IMPROVEMENT	COST ESTIMATE	JURISDICTION
River Rd & Perkins St	Construct turn lanes	$500,000 (for all three approaches)	Private developers, County, City
OR 99E (Portland Rd) & Perkins St	Upgrade to signal control	$1,000,000	ODOT

TABLE 5. OPTION 2 – LIST OF ROADWAY IMPROVEMENTS

ROADWAY	RECOMMENDED IMPROVEMENT[1]	COST ESTIMATE	JURISDICTION
Perkins St	Upgrade to 3 lanes	$10,000,000	County/City
River Rd	Upgrade to 5 lanes	$19,000,000	County/City
Quinaby Rd	Upgrade to 3 lanes	$6,000,000	County/City

[1] *Urban upgrades would be constructed to the new city limits (based on expansion area). Cost estimates reflect that distance.*

SUMMARY OF FINDINGS

In order to accommodate expected growth in 2043 regardless of the growth options proposed in this study, several study intersections will require upgrades. With the growth in Option 1, the City has the potential to work with developers to fund intersection and roadway improvements as identified in the Baseline scenario. The growth of Option 2 would cause two additional study intersections to experience significant congestion, one of which is likely to be funded by private development.

As shown in **Table 6**, planning level costs for the transportation projects identified total $17,000,000 for Option 1 and $36,500,000 for Option 2. These costs would be in addition to the City of Keizer's Included RTSP projects, which total $16 million in today's dollars, plus the 2043 recommended baseline improvements due to future deficiencies (about $1 million for City of Keizer).

TABLE 6. TOTAL ESTIMATED ROADWAY IMPROVEMENTS COSTS FOR GROWTH OPTIONS

GROWTH OPTION	RECOMMENDED IMPROVEMENTS	TOTAL ESTIMATED COST
Option 1	Widen Perkins Street Widen River Road	$17,000,000
Option 2	Widen Perkins Street Widen River Road Widen Quinaby Road Upgrade River Road & Perkins Street Upgrade Portland Road & Perkins Street	$36,500,000

HOUSEHOLD AND EMPLOYMENT GROWTH BY OPTION

If we continue our analysis to compare the scale of development that was supported by each growth option, we can derive a unit cost for each PM peak hour trip that would be served in the growth area. This provides a fair basis of comparison between these growth options.

For this analysis, both Option 1 and Option 2 were compared to the modified future baseline (includes 517 multi-family households in the RCOD). The following table summarizes the trips added to the growth area, the total cost of improvements, and the cost per additional trip for each option. Note that the Option 1 expansion only contains employment growth, while Option 2 has both single family households and employment growth.

While Option 1 is about half the cost of Option 2, Option 2 supports about five times the amount of trips. Because of this, the cost per trip are lower for Option 2 compared to Option 1. In fact, the cost per additional PM peak hour trip in Option 1 ($48,600) is approximately double the cost in Option 2 ($22,000). This outcome is due to the efficiencies of building out the expansion area in Option 2 and making use of the capacity improvements at the adjacent roadways and intersections that would be needed with any scale of development. Note that both options would also require an active transportation study to identify any needed bicycle and pedestrian facilities.

	GROWTH AREA TRIPS	COST OF IMPROVEMENTS	COST PER TRIP
OPTION 1	350	$17M	$48,600
OPTION 2	1,660	$36.5M	$22,000

These system improvements would likely be funded through a variety of sources, including System Development Charges, development exactions, and funds from local agencies (City of Keizer, Marion County, and ODOT). These trips were estimated from the travel demand model and are typically lower than the number of trips that would be produced from the ITE Trip Generation Manual in a Transportation Impact Analysis (TIA). Once specific developments are selected, a full TIA would need to be performed. Thus, the cost per trip reported here is for reference purposes, not the suggested development fee. For reference, the current Keizer System Development Charge (SDC) fee for a single family house is $1,405, or more generally $2,780 per trip[1]. The costs are intended to provide a scale of investment and to indicate how increased development density in the expansion area can lower costs per trip.

1 City of Keizer, Fees and Charges for Services, July 2019, https://www.keizer.org/media/Departments/Finance/2019-20-%20Fee%20Schedule%207-1-19%20update.pdf

KEIZER GROWTH TRANSPORTATION IMPACTS STUDY

APPENDIX

OCTOBER 2020

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DKS

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SECTION 1. TECHNICAL MODELING MEMORANDUM

DKS 720 SW WASHINGTON STREET, SUITE 500, PORTLAND, OR 97205 • 503.243.3500 • DKSASSOCIATES.COM

TECHNICAL MEMORANDUM

DATE: September 1, 2020

TO: Shane Witham | City of Keizer

FROM: Carl Springer, PE and Amanda Deering, PE | DKS Associates

SUBJECT: Keizer UGB Growth Study – Technical Modeling Memorandum Project # 20018-000

INTRODUCTION

The purpose of this memorandum is to document the methods and assumptions used in the modeling process for the Keizer UGB Growth Study. Details will be provided on land use estimates, trip generation, modeling, and forecasting future volumes. Full analysis and results discussion are provided in the main report document.

LAND USE INPUTS

Two conceptual growth options were developed in coordination with the City of Keizer, the Mid-Willamette Valley Council of Governments (MWVCOG), and the consultant team. The intent was to develop two scenarios to address the housing needs and projected employment growth in Keizer beyond its current Urban Growth Boundary. For each growth scenario, the City provided an estimate of housing units and employment acreage, which was converted to land use inputs for the future 2043 Salem-Keizer travel demand model (SKATS). The existing year (2017) and future year (2043) models were used to forecast the transportation impacts of the two scenarios.

GROWTH OPTIONS

The following growth scenarios were modeled in this study to assess changes in travel demands:

- Modified baseline: 2043 SKATS base future model with the addition of multi-family housing units within the River Road/Cherry Road Overlay District (RCOD)
- Option 1: modified baseline plus a small employment expansion outside of the urban growth boundary (UGB)
- Option 2: housing expansion plus a large employment expansion and outside of the UGB

The expansion areas are depicted in Figure 1 and specific land use inputs from the City for these scenarios are presented in Table 1.

FIGURE 1: GROWTH EXPANSION AREAS

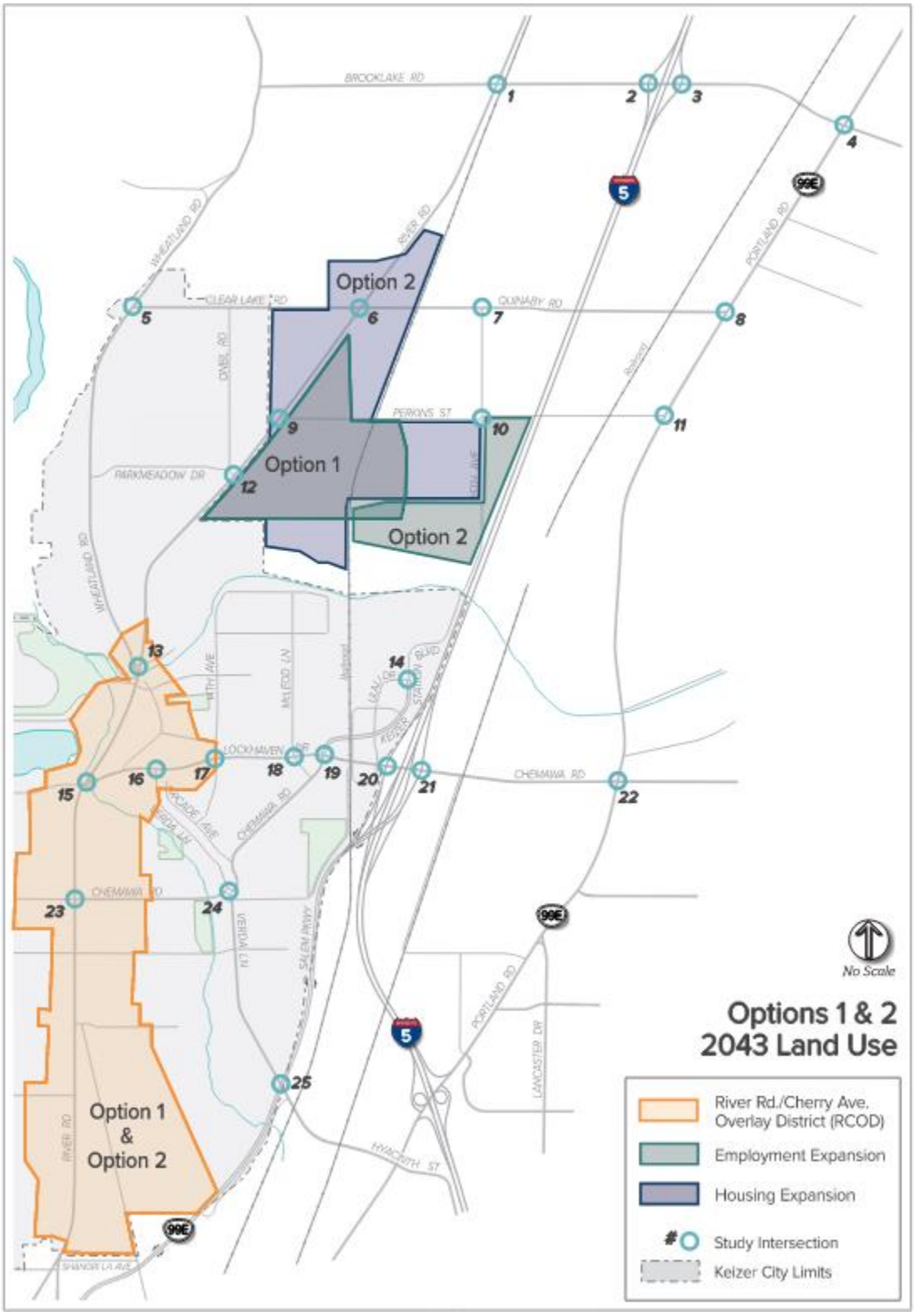


TABLE 1: LAND USE BY SCENARIO

SCENARIO	MULTI-FAMILY UNITS	SINGLE FAMILY UNITS	INDUSTRIAL EMPLOYMENT ACRES	COMMERCIAL EMPLOYMENT ACRES	TOTAL EMPLOYMENT ACRES
MODIFIED BASELINE	517	-	-	-	-
OPTION 1	517	-	42	21	63
OPTION 2	517 [a]	1731	80	40	120

[a] 258 multi-family units in the RCOD, and 259 units in the expansion area

This land use was checked to verify it matches the appropriate housing density and vacancy in the growth areas. It was also reviewed to check that it provides the level of housing specified in the housing needs analysis and that the projected employment matches the anticipated job growth.

MODEL INPUTS

These growth scenario land use quantities were then converted to inputs to the regional travel demand model in the form of households and jobs. These inputs are applied as edits to the land use for each applicable transportation analysis zone (TAZ). Options 1 and 2 involve TAZs that are outside of the UGB and are mostly vacant. The multifamily units in the River Road/Cherry Road Overlay District RCOD are filling in the vacant lots remaining in the otherwise developed TAZs surrounding River Road, within the city limits.

The following assumptions were used to convert commercial and industrial employment acreage to jobs by employment type for input into the model. The rates are in units of jobs per built 1,000 square feet (ksf) and are based off floor area ratios (FARs) and previous land use modeling assumptions.

TABLE 2: EMPLOYEE RATES BASED ON BUILT SQUARE FOOTAGE (JOB/KSF)

LAND USE TYPE	RETAIL	SERVICE	MANUFACTURING	WHOLESALE	TOTAL
COMMERCIAL	0.55	0.85	0.0	1.1	2.5
INDUSTRIAL	0.0	0.0	1.0	0.5	1.5

Using Table 2, the employment acreage was converted to total new jobs and, with new households, were allocated across the appropriate TAZs and were provided as model inputs to the COG. Tables 3 and 4 summarize the detailed model input assumptions. The inputs shown are only the additional households or jobs to be added to the 2043 future baseline SKATS model, and don't reflect total land use numbers for the TAZs. Note that the modified baseline is included in Table 3 to show the multi-family housing growth in the RCOD that was assumed beyond the original SKATS 2043

baseline. The selected zones in TAZs 95-128 represent the RCOD, while TAZs 83-91 represent the expansion areas.

TABLE 3: HOUSING ASSUMPTIONS FOR THE MODIFIED BASELINE AND TWO GROWTH SCENARIOS

ADDED HOUSEHOLDS	MODIFIED BASELINE	OPTION 1		OPTION 2	
TAZ	MULTI-FAMILY UNITS	SINGLE-FAMILY UNITS	MULTI-FAMILY UNITS	SINGLE-FAMILY UNITS	MULTI-FAMILY UNITS
EXPANSION AREA					
83	0	0	0	29	0
84	0	0	0	25	0
85	0	0	0	387	0
86	0	0	0	1174	259
87	0	0	0	45	0
89	0	0	0	1	0
91	0	0	0	70	0
RCOD AREA					
95	200	0	200	0	100
108	56	0	56	0	28
117	14	0	14	0	7
119	76	0	76	0	38
124	24	0	24	0	12
125	66	0	66	0	33
127	36	0	36	0	18
128	45	0	45	0	22
TOTAL	**517**	**0**	**517**	**1731**	**517**

TABLE 4: EMPLOYMENT ASSUMPTIONS FOR TWO GROWTH OPTIONS

ADDED JOBS	MODIFIED BASELINE	OPTION 1					OPTION 2				
TAZ	TOTAL JOBS	*RETAIL*	*SERVICE*	*MANUFAC-TURING*	*WHOLE-SALE*	TOTAL	*RETAIL*	*SERVICE*	*MANUFAC-TURING*	*WHOLE-SALE*	TOTAL
86	0	67	104	253	260	684	192	296	697	732	1917
91	0	34	52	113	124	323	0	0	0	0	0
TOTAL	**0**	**101**	**156**	**366**	**384**	**1007**	**192**	**296**	**697**	**732**	**1917**

UPDATED TRAVEL DEMAND MODELS

The COG used the land use inputs provided by DKS to create three 2043 future year scenario models: the modified baseline, Option 1, and Option 2. These are based off the latest regional travel demand models, with a base year of 2017 and horizon year of 2043. These models include committed transportation improvements from the current Regional Transportation Plan (RTP), and projects from the Cities of Keizer and Salem Transportation System Plans (TSPs). The land use inputs were converted to vehicle trips and assigned to the street network in the transportation model following the trip patterns and methods used in the SKATS models. In addition to the land use, DKS also provided some network edits to the transportation models in the expansion areas where new connections would be needed to support the development.

MODEL STREET NETWORK EDITS

Figures 2 and 3 show the model street network edits that were implemented for Options 1 and 2. The edits included adding new street connections as collectors in the expansion areas, adding new connectors to distribute the development trips, and modifying connector locations so they are not loading directly into study intersections. These edits are high level, with the intention of improving the modeling assignment and properly distributing trips. They do not represent proposed new street alignments or infrastructure.

FIGURE 2: OPTION 1 MODEL NETWORK EDITS

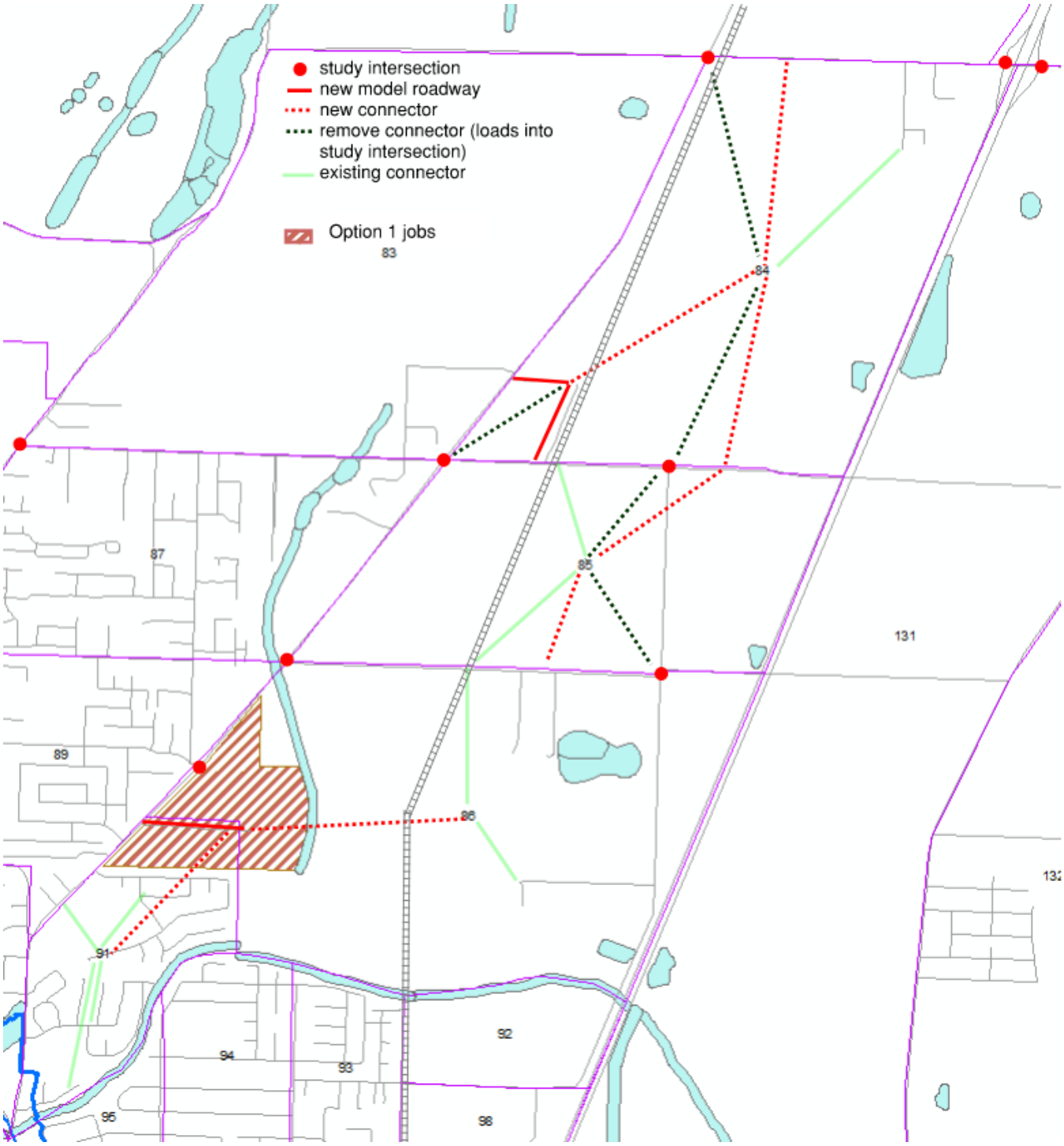
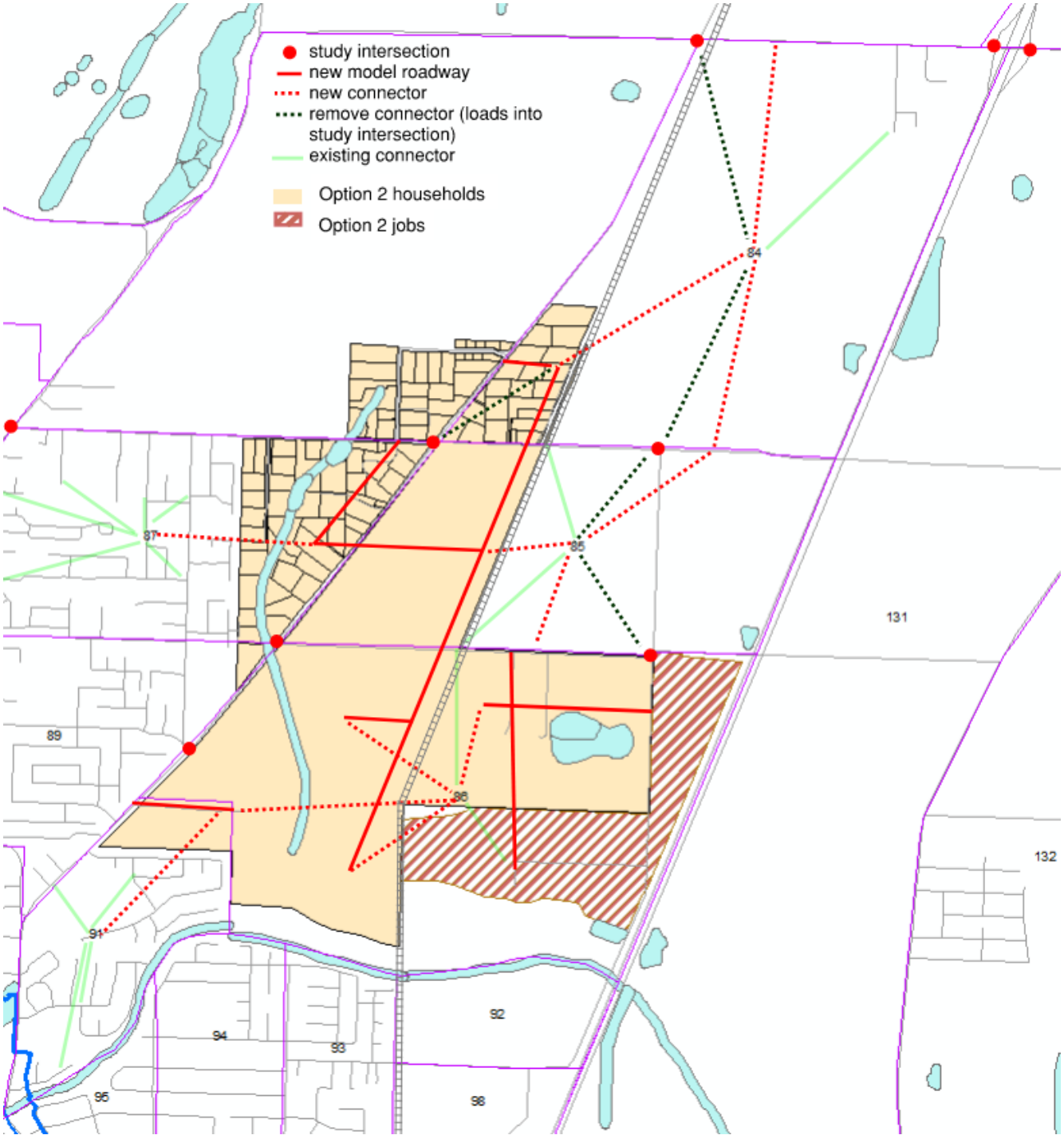


FIGURE 3: OPTION 2 MODEL NETWORK EDITS



MODEL TRAVEL FORECASTS

The three future scenario 2043 SKATS models and the base 2017 SKATS model were used to pull various outputs to support the transportation analysis documented in the main report. These included post-processed 2043 traffic volumes, Highway Capacity Manual (HCM) intersection operations, and growth area travel patterns.

Volume difference plots from the travel demand models were used to develop travel pattern and trip growth distribution figures shown in Figures 4 and 5. These figures show high level distribution of new trips in the expansion areas for Options 1 and 2. The multifamily growth in the RCOD is spread across the corridor and doesn't show significant growth in trips in the area.

Future 2043 traffic volumes at the study intersections were forecasted using the SKATS base and future year models, existing year count data, and post-processed using NCHRP 765 methods[1]. These volumes were used as inputs to the HCM intersection operation analysis performed in Synchro, which informed recommended transportation improvements.

[1] National Cooperative Highway Research Program (NCHRP) Report 765: Analytical Travel Forecasting Approaches for Project-Level Planning and Design, Transportation Research Board, 2014.

FIGURE 4: OPTION 1 GROWTH TRAVEL PATTERNS

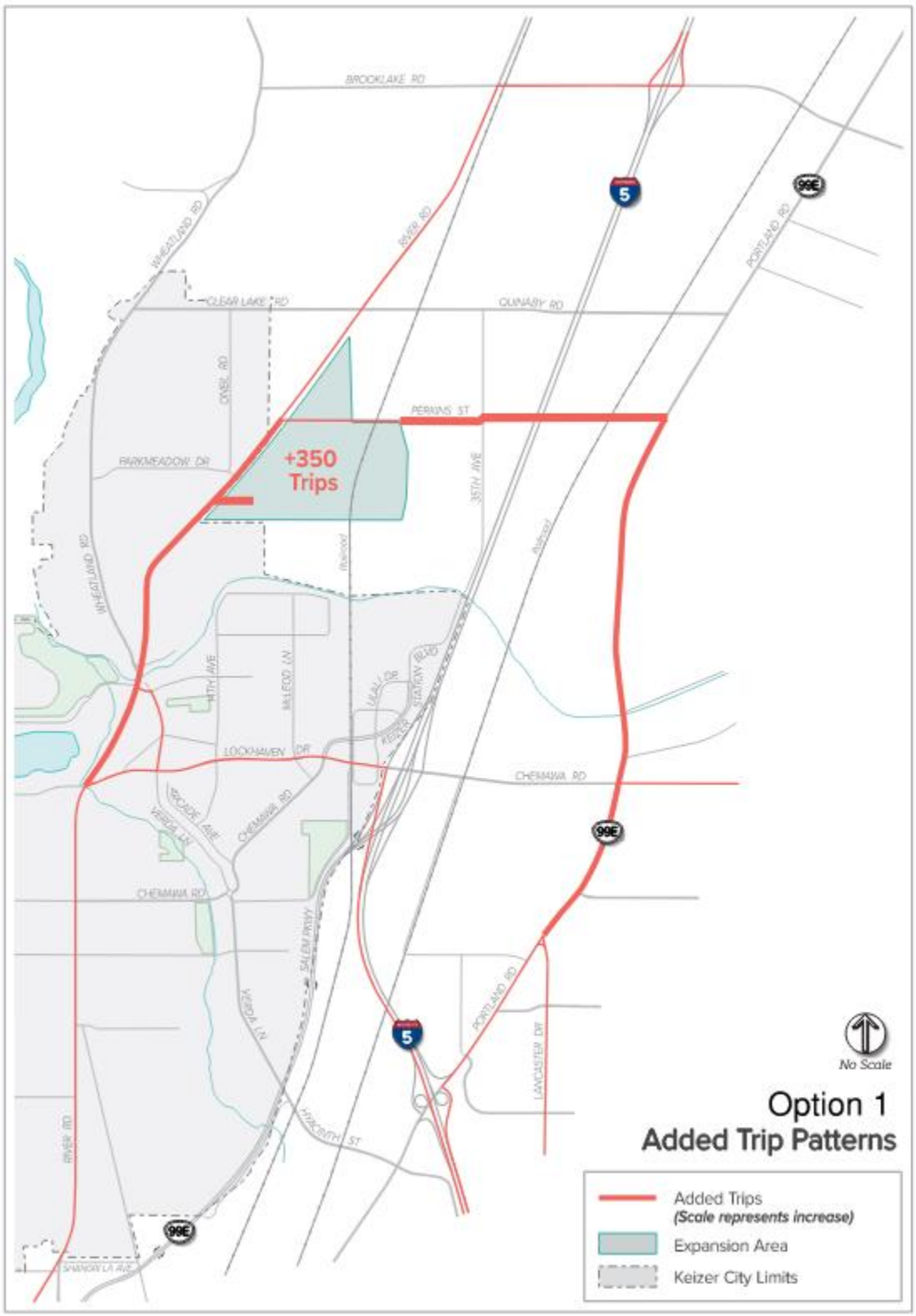
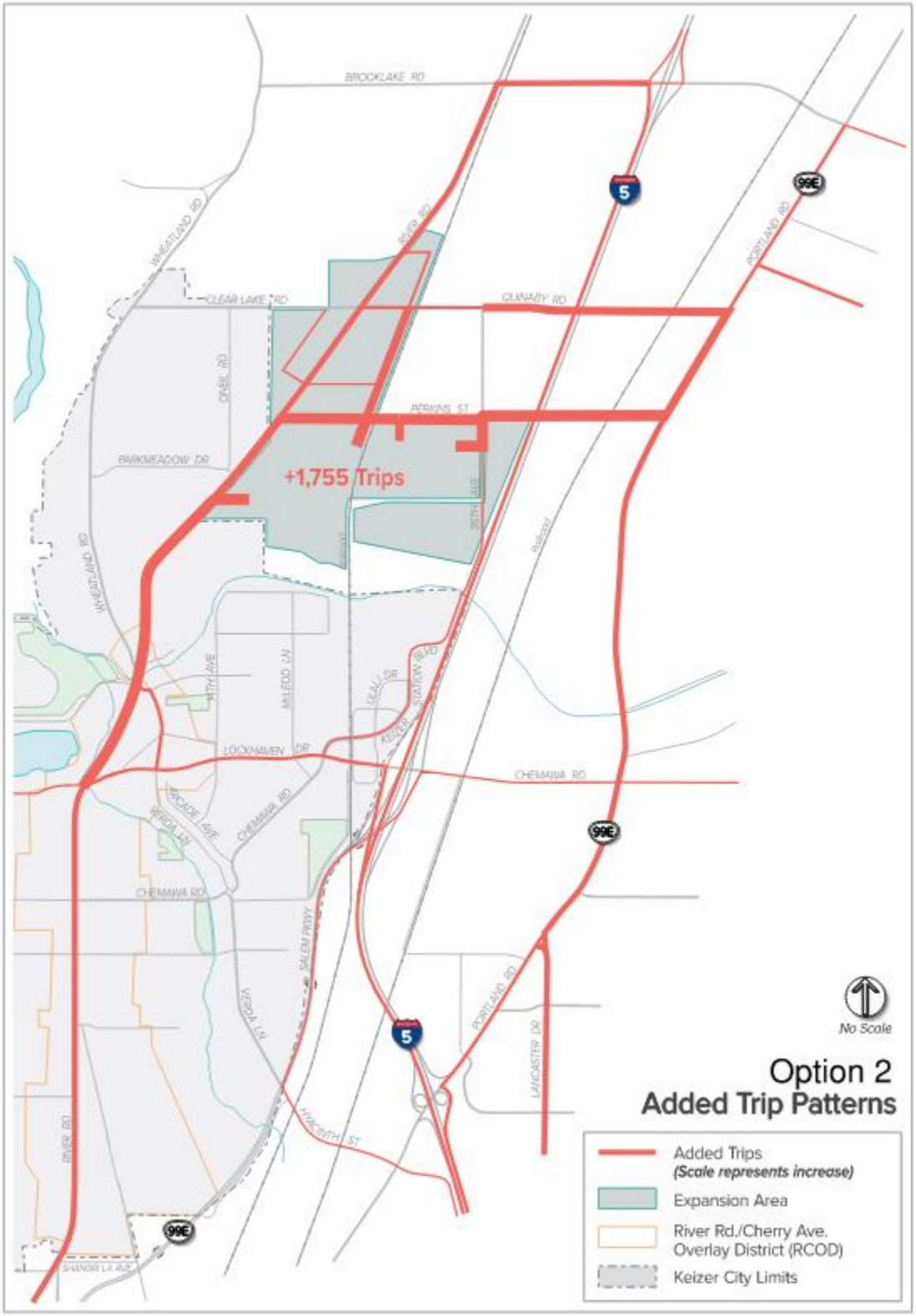


FIGURE 5: OPTION 2 GROWTH TRAVEL PATTERNS



SECTION 2. REGIONAL TRANSPORTATION PLAN PROJECTS

SEE PAGE 8 FOR MAP

REGIONAL TRANSPORTATION PLAN PROJECTS

(SEE PAGE 8 FOR MAP)

RTSP ID	PROJECT NAME	PROJECT DESCRIPTION	JURISDICTION	PLANNING LEVEL COST (2009)
K002	Chemawa Interchange	- Add EB dual right-turn lanes to SB ramp - Add WB dual left-turn lanes to SB ramp - Add SB receiving lane to ramp	City of Keizer ODOT	$550,000
K011	Verda Ln NE: Chemawa Rd NE to Dearborn Ave NE	Widen to 3 lanes, add bike lanes and sidewalks	City of Keizer	$2,200,000
K015	Wheatland Rd N: River Rd N to north City Limits	Widen for continuous bike lanes, separated sidewalks, rain gardens and landscaping	City of Keizer	$2,000,000
K019	Lockhaven Dr @ 14th Ave - Turn Lanes	- Construct a WB right-turn lane on Lockhaven Dr - Modify NB approach (Kafir Dr) and SB approach (14th Ave) to include separate left-turn lane and shared right turn/through lane	City of Keizer	$383,373
K020	Wheatland Rd/River Rd Intersection	Add second NB left-turn lane and protected left-turn signal phase. Lengthen outside southbound lane	City of Keizer	$1,100,000
K021	River Rd at Manzanita St Intersection Realignment	Move intersection approximately 250 feet to the south. Reconstruct McNary Estates Dr and Manzanita St approaches.	City of Keizer	$2,700,000
K022	Verda Ln Extension	Extend Verda Ln from Lockhaven Dr to River Rd	City of Keizer	$2,075,000
K023	Lockhaven Dr/Verda Ln Intersection	Signalize the intersection	City of Keizer	$400,000

K024	River Rd at Lockhaven Dr Intersection Modifications	- Convert WB approach to dual left-turn lanes, a single through lane, and a separate right-turn lane - Convert east/west split phasing to a more conventional protected left-turn phasing	City of Keizer	$500,000
K026	On-ramp to I-5 and Salem Parkway	Widen the existing on-ramp from Chemawa Road to I-5 (SB) from one lane to two lanes.	City of Keizer ODOT	$360,000
S172	Chemawa Rd NE: I-5 to Portland Rd NE	Widen to 4 lanes plus center turn lanes, bike lanes, curbs, gutters, and sidewalks.	City of Salem	$2,511,000
S184	Hyacinth St NE: Salem Parkway NE to Portland Rd NE	Widen to major arterial standards, including 4 travel lanes and a center turn lane with curbs, gutters, sidewalks, bike lanes and intersection modifications	City of Salem	$3,448,000
M029	River Rd NE & Brooklake Rd NE	Signalize and realign intersection	Marion County	$2,500,000
M039	Brooklake Rd N & Huff Ave	Add traffic signal and turn lanes	Marion County	$2,500,000
M094	Brooklake Road: River Road to Huff Avenue	Widen to two lanes in each direction with turn lanes	Marion County	$4,000,000

SECTION 3: INTERSECTION OPERATIONS SUMMARY

Existing

#	Intersection	Jurisdiction	Mobility Standard	Control Type	LOS	Delay	V/C Ratio
1	River Rd & Brooklake Rd	Marion Co	LOS D V/C <= 0.85	AWSC	D	28.1	0.76
2	Brooklake Rd & I-5 SB Ramps	ODOT (OHP)	V/C <= 0.85	TWSC	B/F	12/123	0.46/0.65
3	Brooklake Rd & I-5 NB Ramps	ODOT (OHP)	V/C <= 0.85	TWSC	A/F	10/148	0.31/1.13
4	Portland Rd & Brooklake Rd	ODOT (OHP)	V/C <= 0.95	Signal	B	13.2	0.68
5	Wheatland Rd & Clear Lake Rd	City of Keizer	LOS E V/C <= 0.95	TWSC	A/B	8/11	0.11/0.1
6	River Rd & Clear Lake Rd/Quinaby Rd	Marion Co	LOS E V/C <= 0.85	TWSC	A/C	8/22	0.26/0.36
7	35th Ave & Quinaby Rd	Marion Co	LOS E V/C <= 0.85	TWSC	A/B	7/10	0.07/0.13
8	Portland Rd & Quinaby Rd	ODOT (OHP)	V/C <= 0.95	TWSC	A/C	9/20	0.39/0.25
9	River Rd & Perkins St	Marion Co	LOS E V/C <= 0.85	TWSC	A/C	8/19	0.27/0.39
10	35th Ave & Perkins St	Marion Co	LOS E V/C <= 0.85	TWSC	A/B	7/11	0.06/0.16
11	Portland Rd & Perkins St	ODOT (OHP)	V/C <= 0.95	TWSC	A/C	9/18	0.38/0.19
12	River Rd & Parkmeadow Dr	City of Keizer	LOS E V/C <= 0.95	TWSC	A/C	10/17	0.32/0.31
13	River Rd & Wheatland Rd/Springwood Dr	City of Keizer	LOS D V/C <= 0.95	Signal	C	20.4	0.79
14	Keizer Station Blvd & Ulali Dr	City of Keizer	LOS D	Signal	A	6.1	0.28
15	River Rd & Lockhaven Dr	City of Keizer	V/C < 1.00	Signal	D	43.4	0.77
16	Verda Ln & Lockhaven Dr	City of Keizer	LOS E	TWSC	A/C	10/19	0.48/0.26
17	Kafir Dr/14th Ave & Lockhaven Dr	City of Keizer	V/C < 1.00	Signal	C	24.2	0.99
18	McLeod Ln & Lockhaven Dr	City of Keizer	V/C < 1.00	Signal	C	22	0.59
19	Chemawa Rd & Lockhaven Dr & Keizer Station Blvd	City of Keizer	V/C < 1.00	Signal	D	45.8	0.68
20	Chemawa Rd & I-5 SB Ramp	ODOT (OHP)	V/C <= 0.85	Signal	D	45.1	0.83
21	Chemawa Rd & I-5 NB Ramp	ODOT (OHP)	V/C <= 0.85	Signal	D	35.7	0.89
22	Portland Rd & Chemawa Rd/Hazelgreen Rd	ODOT (OHP)	V/C <= 0.95	Signal	D	52.9	0.84
23	River Rd & Chemawa Rd	City of Keizer	LOS D V/C <= 0.95	Signal	D	44.4	0.82

24	Verda Ln & Chemawa Rd	City of Keizer	V/C < 1.00	RAB	A	9.2	0.54
25	Salem Pkwy & Verda Ln/Hyacinth St	ODOT (OHP)	V/C <= 0.95	Signal	D	54.5	0.78

Future Baseline (no RTP)

#	Intersection	Jurisdiction	Mobility Standard	Control Type	LOS	Delay	V/C Ratio
1	River Rd & Brooklake Rd	Marion Co	LOS D V/C <= 0.85	AWSC	F	62.7	0.97
2	Brooklake Rd & I-5 SB Ramps	ODOT (OHP)	V/C <= 0.85	TWSC	B/F	13/1517	0.49/4
3	Brooklake Rd & I-5 NB Ramps	ODOT (OHP)	V/C <= 0.85	TWSC	B/F	15/1452	0.51/3.82
4	Portland Rd & Brooklake Rd	ODOT (OHP)	V/C <= 0.95	Signal	B	12.1	0.72
5	Wheatland Rd & Clear Lake Rd	City of Keizer	LOS EV/C <= 0.95	TWSC	A/B	8/11	0.13/0.15
6	River Rd & Clear Lake Rd/Quinaby Rd	Marion Co	LOS E V/C <= 0.85	TWSC	A/F	8/151	0.33/1.14
7	35th Ave & Quinaby Rd	Marion Co	LOS EV/C <= 0.85	TWSC	A/B	8/13	0.16/0.24
8	Portland Rd & Quinaby Rd	ODOT (OHP)	V/C <= 0.95	TWSC	B/F	10/140	0.46/1.09
9	River Rd & Perkins St	Marion Co	LOS E V/C <= 0.85	TWSC	A/E	8/41	0.36/0.69
10	35th Ave & Perkins St	Marion Co	LOS EV/C <= 0.85	TWSC	A/C	8/18	0.18/0.36
11	Portland Rd & Perkins St	ODOT (OHP)	V/C <= 0.95	TWSC	A/D	10/31	0.49/0.48
12	River Rd & Parkmeadow Dr	City of Keizer	LOS EV/C <= 0.95	TWSC	B/C	11/24	0.43/0.44
13	River Rd & Wheatland Rd/Springwood Dr	City of Keizer	LOS DV/C <= 0.95	Signal	C	31.7	0.93
14	Keizer Station Blvd & Ulali Dr	City of Keizer	LOS D	Signal	A	6.4	0.30
15	River Rd & Lockhaven Dr	City of Keizer	V/C < 1.00	Signal	D	46.8	0.83
16	Verda Ln & Lockhaven Dr	City of Keizer	V/C < 1.00	TWSC	A/C	9/17	0.46/0.25
17	Kafir Dr/14th Ave & Lockhaven Dr	City of Keizer	V/C < 1.00	Signal	B	13.6	0.81
18	McLeod Ln & Lockhaven Dr	City of Keizer	V/C < 1.00	Signal	C	23.2	0.60
19	Chemawa Rd & Lockhaven Dr & Keizer Station Blvd	City of Keizer	V/C < 1.00	Signal	E	55.5	0.74
20	Chemawa Rd & I-5 SB Ramp	ODOT (OHP)	V/C <= 0.85	Signal	F	91.3	0.95
21	Chemawa Rd & I-5 NB Ramp	ODOT (OHP)	V/C <= 0.85	Signal	F	94.9	1.08
22	Portland Rd & Chemawa Rd/Hazelgreen Rd	ODOT (OHP)	V/C <= 0.95	Signal	F	130.9	1.08
23	River Rd & Chemawa Rd	City of Keizer	LOS DV/C <= 0.95	Signal	D	53.5	0.88
24	Verda Ln & Chemawa Rd	City of Keizer	V/C < 1.00	RAB	a	9.9	0.54
25	Salem Pkwy & Verda Ln/Hyacinth St	ODOT (OHP)	V/C <= 0.95	Signal	F	162	1.21

Future Baseline

#	Intersection	Jurisdiction	Mobility Standard	Control Type	LOS	Delay	V/C Ratio
1	River Rd & Brooklake Rd	Marion Co	LOS D V/C <= 0.85	Signal	B	14.5	0.67
2	Brooklake Rd & I-5 SB Ramps	ODOT (OHP)	V/C <= 0.85	TWSC	B/F	13/1443	0.49/3.85
3	Brooklake Rd & I-5 NB Ramps	ODOT (OHP)	V/C <= 0.85	TWSC	B/F	14/1476	0.5/3.89
4	Portland Rd & Brooklake Rd	ODOT (OHP)	V/C <= 0.95	Signal	B	18.2	0.78
5	Wheatland Rd & Clear Lake Rd	City of Keizer	LOS E V/C <= 0.95	TWSC	A/B	8/11	0.13/0.15
6	River Rd & Clear Lake Rd/Quinaby Rd	Marion Co	LOS EV/C <= 0.85	TWSC	A/F	8/151	0.33/1.14
7	35th Ave & Quinaby Rd	Marion Co	LOS E V/C <= 0.85	TWSC	A/B	8/13	0.16/0.23
8	Portland Rd & Quinaby Rd	ODOT (OHP)	V/C <= 0.95	TWSC	B/F	10/140	0.46/1.09
9	River Rd & Perkins St	Marion Co	LOS E V/C <= 0.85	TWSC	A/E	8/41	0.36/0.69
10	35th Ave & Perkins St	Marion Co	LOS E V/C <= 0.85	TWSC	A/C	8/18	0.18/0.36
11	Portland Rd & Perkins St	ODOT (OHP)	V/C <= 0.95	TWSC	A/D	10/32	0.49/0.49
12	River Rd & Parkmeadow Dr	City of Keizer	LOS E V/C <= 0.95	TWSC	B/C	11/25	0.43/0.46
13	River Rd & Wheatland Rd/Springwood Dr	City of Keizer	LOS D V/C <= 0.95	Signal	C	21	0.56
14	Keizer Station Blvd & Ulali Dr	City of Keizer	LOS D	Signal	A	6	0.30
15	River Rd & Lockhaven Dr	City of Keizer	V/C < 1.00	Signal	D	43	0.67
16	Verda Ln & Lockhaven Dr	City of Keizer	V/C < 1.00	Signal	B	12	0.78
17	Kafir Dr/14th Ave & Lockhaven Dr	City of Keizer	V/C < 1.00	Signal	B	12	0.64
18	McLeod Ln & Lockhaven Dr	City of Keizer	V/C < 1.00	Signal	C	23	0.60
19	Chemawa Rd & Lockhaven Dr & Keizer Station Blvd	City of Keizer	V/C < 1.00	Signal	D	54	0.74
20	Chemawa Rd & I-5 SB Ramp	ODOT (OHP)	V/C <= 0.85	Signal	B	20	0.63
21	Chemawa Rd & I-5 NB Ramp	ODOT (OHP)	V/C <= 0.85	Signal	F	89	1.07
22	Portland Rd & Chemawa Rd/Hazelgreen Rd	ODOT (OHP)	V/C <= 0.95	Signal	F	131	1.08
23	River Rd & Chemawa Rd	City of Keizer	LOS D V/C <= 0.95	Signal	D	54	0.88
24	Verda Ln & Chemawa Rd	City of Keizer	V/C < 1.00	RAB	A	10	0.53
25	Salem Pkwy & Verda Ln/Hyacinth St	ODOT (OHP)	V/C <= 0.95	Signal	F	162	1.21

Land Use Option 1

#	Intersection	Jurisdiction	Mobility Standard	Control Type	LOS	Delay	V/C Ratio
1	River Rd & Brooklake Rd	Marion Co	LOS D V/C <= 0.85	Signal	B	14.4	0.66
2	Brooklake Rd & I-5 SB Ramps	ODOT (OHP)	V/C <= 0.85	TWSC	B/F	14/1591	0.51/4.14
3	Brooklake Rd & I-5 NB Ramps	ODOT (OHP)	V/C <= 0.85	TWSC	B/F	15/1439	0.51/3.79
4	Portland Rd & Brooklake Rd	ODOT (OHP)	V/C <= 0.95	Signal	B	13.0	0.84
5	Wheatland Rd & Clear Lake Rd	City of Keizer	LOS E V/C <= 0.95	TWSC	A/B	8/12	0.13/0.15
6	River Rd & Clear Lake Rd/Quinaby Rd	Marion Co	LOS EV/C <= 0.85	TWSC	A/F	8/92	0.35/0.92
7	35th Ave & Quinaby Rd	Marion Co	LOS E V/C <= 0.85	TWSC	A/B	8/13	0.16/0.25
8	Portland Rd & Quinaby Rd	ODOT (OHP)	V/C <= 0.95	TWSC	A/F	10/129	0.44/1.06
9	River Rd & Perkins St	Marion Co	LOS E V/C <= 0.85	TWSC	A/E	8/39	0.35/0.67
10	35th Ave & Perkins St	Marion Co	LOS E V/C <= 0.85	TWSC	A/C	8/18	0.18/0.39
11	Portland Rd & Perkins St	ODOT (OHP)	V/C <= 0.95	TWSC	A/E	10/43	0.48/0.68
12	River Rd & Parkmeadow Dr	City of Keizer	LOS E V/C <= 0.95	TWSC	B/C	11/23	0.42/0.43
13	River Rd & Wheatland Rd/Springwood Dr	City of Keizer	LOS D V/C <= 0.95	Signal	C	21	0.58
14	Keizer Station Blvd & Ulali Dr	City of Keizer	LOS D	Signal	A	6	0.30
15	River Rd & Lockhaven Dr	City of Keizer	V/C < 1.00	Signal	D	42	0.66
16	Verda Ln & Lockhaven Dr	City of Keizer	V/C < 1.00	Signal	B	11	0.77
17	Kafir Dr/14th Ave & Lockhaven Dr	City of Keizer	V/C < 1.00	Signal	B	12	0.65
18	McLeod Ln & Lockhaven Dr	City of Keizer	V/C < 1.00	Signal	C	23	0.60
19	Chemawa Rd & Lockhaven Dr & Keizer Station Blvd	City of Keizer	V/C < 1.00	Signal	D	54	0.74
20	Chemawa Rd & I-5 SB Ramp	ODOT (OHP)	V/C <= 0.85	Signal	C	21	0.65
21	Chemawa Rd & I-5 NB Ramp	ODOT (OHP)	V/C <= 0.85	Signal	F	96	1.08
22	Portland Rd & Chemawa Rd/Hazelgreen Rd	ODOT (OHP)	V/C <= 0.95	Signal	F	130	1.08
23	River Rd & Chemawa Rd	City of Keizer	LOS D V/C <= 0.95	Signal	D	51	0.87
24	Verda Ln & Chemawa Rd	City of Keizer	V/C < 1.00	RAB	B	10	0.60
25	Salem Pkwy & Verda Ln/Hyacinth St	ODOT (OHP)	V/C <= 0.95	Signal	F	161	1.22

Land Use Option 2

#	Intersection	Jurisdiction	Mobility Standard	Control Type	LOS	Delay	V/C Ratio
1	River Rd & Brooklake Rd	Marion Co	LOS D V/C <= 0.85	Signal	B	16.3	0.75
2	Brooklake Rd & I-5 SB Ramps	ODOT (OHP)	V/C <= 0.85	TWSC	B/F	14/863	0.51/2.53
3	Brooklake Rd & I-5 NB Ramps	ODOT (OHP)	V/C <= 0.85	TWSC	B/F	13/1272	0.44/3.51
4	Portland Rd & Brooklake Rd	ODOT (OHP)	V/C <= 0.95	Signal	B	15.6	0.94
5	Wheatland Rd & Clear Lake Rd	City of Keizer	LOS E V/C <= 0.95	TWSC	A/B	8/12	0.14/0.19
6	River Rd & Clear Lake Rd/Quinaby Rd	Marion Co	LOS EV/C <= 0.85	TWSC	A/F	8/100	0.35/0.97
7	35th Ave & Quinaby Rd	Marion Co	LOS E V/C <= 0.85	TWSC	A/C	8/16	0.25/0.3
8	Portland Rd & Quinaby Rd	ODOT (OHP)	V/C <= 0.95	TWSC	B/F	11/234	0.48/1.33
9	River Rd & Perkins St	Marion Co	LOS EV/C <= 0.85	TWSC	A/F	9/76	0.36/0.92
10	35th Ave & Perkins St	Marion Co	LOS E V/C <= 0.85	TWSC	A/D	8/31	0.23/0.67
11	Portland Rd & Perkins St	ODOT (OHP)	V/C <= 0.95	TWSC	B/F	10/104	0.56/1.01
12	River Rd & Parkmeadow Dr	City of Keizer	LOS E V/C <= 0.95	TWSC	B/D	11/27	0.43/0.5
13	River Rd & Wheatland Rd/Springwood Dr	City of Keizer	LOS D V/C <= 0.95	Signal	C	21	0.61
14	Keizer Station Blvd & Ulali Dr	City of Keizer	LOS D	Signal	A	6	0.30
15	River Rd & Lockhaven Dr	City of Keizer	V/C < 1.00	Signal	D	42	0.66
16	Verda Ln & Lockhaven Dr	City of Keizer	V/C < 1.00	Signal	B	12	0.79
17	Kafir Dr/14th Ave & Lockhaven Dr	City of Keizer	V/C < 1.00	Signal	B	12	0.65
18	McLeod Ln & Lockhaven Dr	City of Keizer	V/C < 1.00	Signal	C	20	0.59
19	Chemawa Rd & Lockhaven Dr & Keizer Station Blvd	City of Keizer	V/C < 1.00	Signal	E	55	0.75
20	Chemawa Rd & I-5 SB Ramp	ODOT (OHP)	V/C <= 0.85	Signal	C	22	0.66
21	Chemawa Rd & I-5 NB Ramp	ODOT (OHP)	V/C <= 0.85	Signal	F	110	1.12
22	Portland Rd & Chemawa Rd/Hazelgreen Rd	ODOT (OHP)	V/C <= 0.95	Signal	F	137	1.08
23	River Rd & Chemawa Rd	City of Keizer	LOS D V/C <= 0.95	Signal	D	54	0.90
24	Verda Ln & Chemawa Rd	City of Keizer	V/C < 1.00	RAB	B	11	0.61
25	Salem Pkwy & Verda Ln/Hyacinth St	ODOT (OHP)	V/C <= 0.95	Signal	F	167	1.23

Mitigations

#	Intersection	Jurisdiction	Mobility Standard	Control Type	LOS	Delay	V/C Ratio	
6	River Rd & Clear Lake Rd/Quinaby Rd	Marion Co	LOS E V/C <= 0.85	TWSC	A/E	8.4/39.7	0.06/0.48	Widened River Road to 3 lanes (added NB and SB Left Turn Lanes), Widened Quinaby Rd to 3 lanes (added WB and EB Left Turn Lanes)
8	Portland Rd & Quinaby Rd	ODOT (OHP)	V/C <= 0.95	TWSC	B/E	10.5/45.0	0.19/0.75	Restripe Portland Rd to allow for two-stage left turn lane
9	River Rd & Perkins St	Marion Co	LOS E V/C <= 0.85	TWSC	A/D	8.5/26.2	0.04/0.56	Widened Perkins to 3 lanes (added WB Left Turn Lane), Widened River Rd to 3 lanes (added SB Left Turn Lane
10	35th Ave & Perkins St	Marion Co	LOS E V/C <= 0.85	TWSC	A/C	7.9/24.2	0.05/0.47	Widened Perkins to 3 lanes (added WB and EB Left Turn Lanes) and realigned to T-intersection
11	Portland Rd & Perkins St	ODOT (OHP)	V/C <= 0.95	TWSC	C	26.0	0.85	Signalized intersection

SECTION 4: SYNCHRO OPERATIONS REPORTS

Intersection	
Intersection Delay, s/veh	21.9
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	87	24	233	109	167	17	99	103	238	149	18
Future Vol, veh/h	5	87	24	233	109	167	17	99	103	238	149	18
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles, %	20	2	0	2	4	4	0	3	3	3	2	0
Mvmt Flow	5	91	25	243	114	174	18	103	107	248	155	19
Number of Lanes	0	1	1	0	1	1	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	2
HCM Control Delay	12.7	22.3	14.5	28.1
HCM LOS	B	C	B	D

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	8%	5%	0%	68%	0%	59%
Vol Thru, %	45%	95%	0%	32%	0%	37%
Vol Right, %	47%	0%	100%	0%	100%	4%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	219	92	24	342	167	405
LT Vol	17	5	0	233	0	238
Through Vol	99	87	0	109	0	149
RT Vol	103	0	24	0	167	18
Lane Flow Rate	228	96	25	356	174	422
Geometry Grp	2	7	7	7	7	2
Degree of Util (X)	0.421	0.218	0.049	0.727	0.305	0.768
Departure Headway (Hd)	6.648	8.197	7.128	7.346	6.313	6.55
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	541	437	501	492	569	553
Service Time	4.709	5.969	4.899	5.1	4.066	4.598
HCM Lane V/C Ratio	0.421	0.22	0.05	0.724	0.306	0.763
HCM Control Delay	14.5	13.3	10.3	27.4	11.8	28.1
HCM Lane LOS	B	B	B	D	B	D
HCM 95th-tile Q	2.1	0.8	0.2	5.9	1.3	6.9

Intersection	
Int Delay, s/veh	7.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	288	453	321	360	0	0	0	0	43	0	293
Future Vol, veh/h	0	288	453	321	360	0	0	0	0	43	0	293
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	180	-	-	-	-	-	-	-	100
Veh in Median Storage, #	-	0	-	-	0	-	-	16974	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	12	9	3	12	0	0	0	0	0	0	10
Mvmt Flow	0	303	477	338	379	0	0	0	0	45	0	308

Major/Minor	Major1			Major2					Minor2		
Conflicting Flow All	-	0	0	780	0	0			1597	1835	379
Stage 1	-	-	-	-	-	-			1055	1055	-
Stage 2	-	-	-	-	-	-			542	780	-
Critical Hdwy	-	-	-	4.13	-	-			6.4	6.5	6.3
Critical Hdwy Stg 1	-	-	-	-	-	-			5.4	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-			5.4	5.5	-
Follow-up Hdwy	-	-	-	2.227	-	-			3.5	4	3.39
Pot Cap-1 Maneuver	0	-	-	833	-	0			118	77	651
Stage 1	0	-	-	-	-	0			338	305	-
Stage 2	0	-	-	-	-	0			587	409	-
Platoon blocked, %		-	-		-						
Mov Cap-1 Maneuver	-	-	-	833	-	-			70	0	651
Mov Cap-2 Maneuver	-	-	-	-	-	-			70	0	-
Stage 1	-	-	-	-	-	-			338	0	-
Stage 2	-	-	-	-	-	-			349	0	-

Approach	EB	WB	SB
HCM Control Delay, s	0	5.8	29.1
HCM LOS			D

Minor Lane/Major Mvmt	EBT	EBR	WBL	WBT	SBLn1	SBLn2
Capacity (veh/h)	-	-	833	-	70	651
HCM Lane V/C Ratio	-	-	0.406	-	0.647	0.474
HCM Control Delay (s)	-	-	12.2	-	122.8	15.4
HCM Lane LOS	-	-	B	-	F	C
HCM 95th %tile Q(veh)	-	-	2	-	2.9	2.5

Intersection	
Int Delay, s/veh	27.8

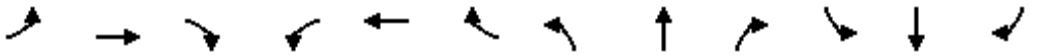
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	140	188	0	0	435	51	214	0	276	0	0	0
Future Vol, veh/h	140	188	0	0	435	51	214	0	276	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	155	-	-	-	-	-	-	-	100	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	16965	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	18	4	0	0	4	0	14	0	4	0	0	0
Mvmt Flow	154	207	0	0	478	56	235	0	303	0	0	0

Major/Minor	Major1			Major2			Minor1		
Conflicting Flow All	534	0	-	-	-	0	1021	1049	207
Stage 1	-	-	-	-	-	-	515	515	-
Stage 2	-	-	-	-	-	-	506	534	-
Critical Hdwy	4.28	-	-	-	-	-	6.54	6.5	6.24
Critical Hdwy Stg 1	-	-	-	-	-	-	5.54	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5.54	5.5	-
Follow-up Hdwy	2.362	-	-	-	-	-	3.626	4	3.336
Pot Cap-1 Maneuver	958	-	0	0	-	-	249	229	828
Stage 1	-	-	0	0	-	-	576	538	-
Stage 2	-	-	0	0	-	-	582	528	-
Platoon blocked, %		-			-	-			
Mov Cap-1 Maneuver	958	-	-	-	-	-	~ 209	0	828
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 209	0	-
Stage 1	-	-	-	-	-	-	483	0	-
Stage 2	-	-	-	-	-	-	582	0	-

Approach	EB	WB	NB
HCM Control Delay, s	4	0	71.2
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	WBT	WBR
Capacity (veh/h)	209	828	958	-	-	-
HCM Lane V/C Ratio	1.125	0.366	0.161	-	-	-
HCM Control Delay (s)	147.9	11.8	9.5	-	-	-
HCM Lane LOS	F	B	A	-	-	-
HCM 95th %tile Q(veh)	11.2	1.7	0.6	-	-	-

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	245	60	150	28	63	17	84	403	17	16	547	253
Future Volume (veh/h)	245	60	150	28	63	17	84	403	17	16	547	253
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1796	1796	1856	1870	1870	1870	1811	1856	1856	1900	1870	1826
Adj Flow Rate, veh/h	258	63	0	29	66	18	88	424	18	17	576	266
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	7	7	3	2	2	2	6	3	3	0	2	5
Cap, veh/h	444	79		168	343	81	323	845	36	432	827	684
Arrive On Green	0.28	0.29	0.00	0.28	0.29	0.28	0.05	0.48	0.45	0.01	0.44	0.44
Sat Flow, veh/h	1127	275	1572	294	1190	281	1725	1767	75	1810	1870	1547
Grp Volume(v), veh/h	321	0	0	113	0	0	88	0	442	17	576	266
Grp Sat Flow(s),veh/h/ln	1402	0	1572	1766	0	0	1725	0	1842	1810	1870	1547
Q Serve(g_s), s	8.8	0.0	0.0	0.0	0.0	0.0	1.6	0.0	9.0	0.3	13.5	6.3
Cycle Q Clear(g_c), s	11.4	0.0	0.0	2.6	0.0	0.0	1.6	0.0	9.0	0.3	13.5	6.3
Prop In Lane	0.80		1.00	0.26		0.16	1.00		0.04	1.00		1.00
Lane Grp Cap(c), veh/h	511	0		576	0	0	323	0	881	432	827	684
V/C Ratio(X)	0.63	0.00		0.20	0.00	0.00	0.27	0.00	0.50	0.04	0.70	0.39
Avail Cap(c_a), veh/h	1035	0		1224	0	0	493	0	1457	676	1479	1224
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.8	0.0	0.0	14.8	0.0	0.0	10.1	0.0	9.8	9.4	12.2	10.2
Incr Delay (d2), s/veh	0.9	0.0	0.0	0.1	0.0	0.0	0.3	0.0	0.6	0.0	1.5	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.4	0.0	0.0	1.0	0.0	0.0	0.5	0.0	2.8	0.1	4.6	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.7	0.0	0.0	14.9	0.0	0.0	10.5	0.0	10.4	9.4	13.7	10.7
LnGrp LOS	B	A		B	A	A	B	A	B	A	B	B
Approach Vol, veh/h		321	A		113			530			859	
Approach Delay, s/veh		18.7			14.9			10.4			12.7	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	4.7	30.0		19.7	6.7	28.0		19.7				
Change Period (Y+Rc), s	4.0	* 5.4		4.5	4.0	* 5.4		4.5				
Max Green Setting (Gmax), s	8.0	* 42		36.5	8.0	* 42		36.5				
Max Q Clear Time (g_c+I1), s	2.3	11.0		13.4	3.6	15.5		4.6				
Green Ext Time (p_c), s	0.0	4.0		1.6	0.0	7.1		0.5				

Intersection Summary	
HCM 6th Ctrl Delay	13.2
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Int Delay, s/veh	2.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	2	1	1	48	1	15	1	65	45	13	146	2
Future Vol, veh/h	2	1	1	48	1	15	1	65	45	13	146	2
Conflicting Peds, #/hr	0	0	2	0	0	0	0	0	2	0	0	2
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	50	100	0	0	0	0	0	2	2	8	0	0
Mvmt Flow	2	1	1	54	1	17	1	73	51	15	164	2

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	307	325	169	301	301	101	168	0	0	126	0	0
Stage 1	197	197	-	103	103	-	-	-	-	-	-	-
Stage 2	110	128	-	198	198	-	-	-	-	-	-	-
Critical Hdwy	7.6	7.5	6.2	7.1	6.5	6.2	4.1	-	-	4.18	-	-
Critical Hdwy Stg 1	6.6	6.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.6	6.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.95	4.9	3.3	3.5	4	3.3	2.2	-	-	2.272	-	-
Pot Cap-1 Maneuver	561	462	880	655	615	960	1422	-	-	1424	-	-
Stage 1	706	587	-	908	814	-	-	-	-	-	-	-
Stage 2	791	635	-	808	741	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	544	454	877	644	605	958	1419	-	-	1421	-	-
Mov Cap-2 Maneuver	544	454	-	644	605	-	-	-	-	-	-	-
Stage 1	704	579	-	905	812	-	-	-	-	-	-	-
Stage 2	775	633	-	794	731	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	11.4	10.8	0.1	0.6
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1419	-	-	570	697	1421	-	-
HCM Lane V/C Ratio	0.001	-	-	0.008	0.103	0.01	-	-
HCM Control Delay (s)	7.5	0	-	11.4	10.8	7.6	0	-
HCM Lane LOS	A	A	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0.3	0	-	-

Intersection	
Int Delay, s/veh	5.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	22	36	16	37	78	60	29	141	22	39	339	42
Future Vol, veh/h	22	36	16	37	78	60	29	141	22	39	339	42
Conflicting Peds, #/hr	0	0	1	1	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	Stop	-	-	None	-	-	None
Storage Length	-	-	30	-	-	50	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	0	6	6	0	0	7	0	2	0	8	1	0
Mvmt Flow	23	37	16	38	80	62	30	145	23	40	349	43

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	708	679	372	695	689	157	392	0	0	168	0	0
Stage 1	451	451	-	217	217	-	-	-	-	-	-	-
Stage 2	257	228	-	478	472	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.56	6.26	7.1	6.5	6.27	4.1	-	-	4.18	-	-
Critical Hdwy Stg 1	6.1	5.56	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.56	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4.054	3.354	3.5	4	3.363	2.2	-	-	2.272	-	-
Pot Cap-1 Maneuver	352	369	665	359	371	876	1178	-	-	1374	-	-
Stage 1	592	564	-	790	727	-	-	-	-	-	-	-
Stage 2	752	708	-	572	562	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	256	345	664	306	347	876	1178	-	-	1374	-	-
Mov Cap-2 Maneuver	256	345	-	306	347	-	-	-	-	-	-	-
Stage 1	575	543	-	768	707	-	-	-	-	-	-	-
Stage 2	602	688	-	500	541	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	17.7	17.5	1.2	0.7
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1178	-	-	305	664	333	876	1374	-	-
HCM Lane V/C Ratio	0.025	-	-	0.196	0.025	0.356	0.071	0.029	-	-
HCM Control Delay (s)	8.1	0	-	19.7	10.6	21.7	9.4	7.7	0	-
HCM Lane LOS	A	A	-	C	B	C	A	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0.7	0.1	1.6	0.2	0.1	-	-

Intersection	
Int Delay, s/veh	3.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	55	40	11	91	71	16
Future Vol, veh/h	55	40	11	91	71	16
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	82	82	82	82	82	82
Heavy Vehicles, %	7	0	0	3	0	0
Mvmt Flow	67	49	13	111	87	20

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	116	0	229	92
Stage 1	-	-	-	-	92	-
Stage 2	-	-	-	-	137	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1485	-	764	971
Stage 1	-	-	-	-	937	-
Stage 2	-	-	-	-	895	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1485	-	757	971
Mov Cap-2 Maneuver	-	-	-	-	757	-
Stage 1	-	-	-	-	937	-
Stage 2	-	-	-	-	887	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.8	10.3
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	789	-	-	1485	-
HCM Lane V/C Ratio	0.134	-	-	0.009	-
HCM Control Delay (s)	10.3	-	-	7.4	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.5	-	-	0	-

Intersection	
Int Delay, s/veh	1.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	30	47	50	370	581	43
Future Vol, veh/h	30	47	50	370	581	43
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	240	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	4	4	5	1	2
Mvmt Flow	32	49	53	389	612	45

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1130	635	657	0	-	0
Stage 1	635	-	-	-	-	-
Stage 2	495	-	-	-	-	-
Critical Hdwy	6.4	6.24	4.14	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.336	2.236	-	-	-
Pot Cap-1 Maneuver	227	475	921	-	-	-
Stage 1	532	-	-	-	-	-
Stage 2	617	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	214	475	921	-	-	-
Mov Cap-2 Maneuver	214	-	-	-	-	-
Stage 1	501	-	-	-	-	-
Stage 2	617	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	19.9	1.1	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	921	-	322	-	-
HCM Lane V/C Ratio	0.057	-	0.252	-	-
HCM Control Delay (s)	9.1	-	19.9	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0.2	-	1	-	-

Intersection	
Int Delay, s/veh	3.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	120	22	193	62	13	380
Future Vol, veh/h	120	22	193	62	13	380
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	1	0	2	2	0	1
Mvmt Flow	138	25	222	71	15	437

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	725	258	0	0	293	0
Stage 1	258	-	-	-	-	-
Stage 2	467	-	-	-	-	-
Critical Hdwy	6.41	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.41	-	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-	-
Follow-up Hdwy	3.509	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	393	786	-	-	1280	-
Stage 1	787	-	-	-	-	-
Stage 2	633	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	387	786	-	-	1280	-
Mov Cap-2 Maneuver	387	-	-	-	-	-
Stage 1	787	-	-	-	-	-
Stage 2	624	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	18.9	0	0.3
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	420	1280	-
HCM Lane V/C Ratio	-	-	0.389	0.012	-
HCM Control Delay (s)	-	-	18.9	7.8	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	1.8	0	-

Intersection	
Int Delay, s/veh	5.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	22	0	25	74	6	0	77	18	6	39	1
Future Vol, veh/h	5	22	0	25	74	6	0	77	18	6	39	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	0	5	0	0	1	0	0	0	0	0	5	0
Mvmt Flow	6	25	0	28	84	7	0	88	20	7	44	1

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	203	167	-	169	157	98	-	0	0	108	0	0
Stage 1	59	59	-	98	98	-	-	-	-	-	-	-
Stage 2	144	108	-	71	59	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.55	-	7.1	6.51	6.2	-	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.55	-	6.1	5.51	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.55	-	6.1	5.51	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4.045	-	3.5	4.009	3.3	-	-	-	2.2	-	-
Pot Cap-1 Maneuver	759	720	0	799	737	963	0	-	-	1495	-	-
Stage 1	958	840	0	913	816	-	0	-	-	-	-	-
Stage 2	864	800	0	944	848	-	0	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	685	716	-	775	733	963	-	-	-	1495	-	-
Mov Cap-2 Maneuver	685	716	-	775	733	-	-	-	-	-	-	-
Stage 1	958	836	-	913	816	-	-	-	-	-	-	-
Stage 2	769	800	-	911	844	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.3	10.7	0	1
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	-	-	710	753	1495	-	-
HCM Lane V/C Ratio	-	-	0.043	0.158	0.005	-	-
HCM Control Delay (s)	-	-	10.3	10.7	7.4	0	-
HCM Lane LOS	-	-	B	B	A	A	-
HCM 95th %tile Q(veh)	-	-	0.1	0.6	0	-	-

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	12	50	67	432	581	24
Future Vol, veh/h	12	50	67	432	581	24
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	0	6	0	4	2	0
Mvmt Flow	13	54	72	465	625	26

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1247	638	651	0	-	0
Stage 1	638	-	-	-	-	-
Stage 2	609	-	-	-	-	-
Critical Hdwy	6.4	6.26	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.354	2.2	-	-	-
Pot Cap-1 Maneuver	193	469	945	-	-	-
Stage 1	530	-	-	-	-	-
Stage 2	547	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	173	469	945	-	-	-
Mov Cap-2 Maneuver	173	-	-	-	-	-
Stage 1	475	-	-	-	-	-
Stage 2	547	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	17.6	1.2	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	945	-	352	-	-
HCM Lane V/C Ratio	0.076	-	0.189	-	-
HCM Control Delay (s)	9.1	0	17.6	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0.2	-	0.7	-	-

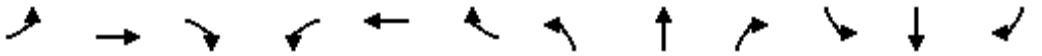
Intersection	
Int Delay, s/veh	4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	32	96	224	223	403	89
Future Vol, veh/h	32	96	224	223	403	89
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	100	-	-	-
Veh in Median Storage, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	3	1	1	1	1	0
Mvmt Flow	36	107	249	248	448	99

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1244	498	547	0	-	0
Stage 1	498	-	-	-	-	-
Stage 2	746	-	-	-	-	-
Critical Hdwy	6.43	6.21	4.11	-	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.309	2.209	-	-	-
Pot Cap-1 Maneuver	191	574	1027	-	-	-
Stage 1	609	-	-	-	-	-
Stage 2	467	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	145	574	1027	-	-	-
Mov Cap-2 Maneuver	278	-	-	-	-	-
Stage 1	462	-	-	-	-	-
Stage 2	467	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	16.5	4.8	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1027	-	453	-	-
HCM Lane V/C Ratio	0.242	-	0.314	-	-
HCM Control Delay (s)	9.6	-	16.5	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0.9	-	1.3	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	7	2	336	13	1	4	528	735	13	10	577	13
Future Volume (veh/h)	7	2	336	13	1	4	528	735	13	10	577	13
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.96	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1870	1900	1900	1900	1900	1885	1885	1900	1885	1885
Adj Flow Rate, veh/h	8	2	365	14	1	4	574	799	14	11	627	14
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	2	0	0	0	0	1	1	0	1	1
Cap, veh/h	258	65	472	34	2	10	656	2201	39	353	1480	33
Arrive On Green	0.15	0.18	0.18	0.02	0.03	0.02	0.21	0.61	0.58	0.01	0.41	0.38
Sat Flow, veh/h	1462	365	2674	1291	92	369	1810	3601	63	1810	3581	80
Grp Volume(v), veh/h	10	0	365	19	0	0	574	397	416	11	313	328
Grp Sat Flow(s),veh/h/ln	1827	0	1337	1752	0	0	1810	1791	1873	1810	1791	1870
Q Serve(g_s), s	0.4	0.0	11.7	1.0	0.0	0.0	16.4	10.0	10.0	0.3	11.2	11.2
Cycle Q Clear(g_c), s	0.4	0.0	11.7	1.0	0.0	0.0	16.4	10.0	10.0	0.3	11.2	11.2
Prop In Lane	0.80		1.00	0.74		0.21	1.00		0.03	1.00		0.04
Lane Grp Cap(c), veh/h	323	0	472	47	0	0	656	1094	1145	353	740	773
V/C Ratio(X)	0.03	0.00	0.77	0.41	0.00	0.00	0.87	0.36	0.36	0.03	0.42	0.42
Avail Cap(c_a), veh/h	345	0	505	117	0	0	807	1094	1145	449	740	773
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.3	0.0	35.3	43.3	0.0	0.0	13.3	8.7	8.8	17.0	18.8	18.8
Incr Delay (d2), s/veh	0.0	0.0	6.0	2.1	0.0	0.0	7.9	0.9	0.9	0.0	1.8	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	4.2	0.4	0.0	0.0	6.8	3.5	3.7	0.1	4.8	5.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.4	0.0	41.3	45.5	0.0	0.0	21.2	9.7	9.7	17.0	20.5	20.5
LnGrp LOS	C	A	D	D	A	A	C	A	A	B	C	C
Approach Vol, veh/h		375			19			1387			652	
Approach Delay, s/veh		41.1			45.5			14.4			20.5	
Approach LOS		D			D			B			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	4.7	59.0		19.9	22.5	41.2		6.4				
Change Period (Y+Rc), s	4.0	7.0		6.0	4.0	7.0		4.5				
Max Green Setting (Gmax), s	5.5	42.5		15.0	26.0	22.0		5.5				
Max Q Clear Time (g_c+I1), s	2.3	12.0		13.7	18.4	13.2		3.0				
Green Ext Time (p_c), s	0.0	0.9		0.1	0.1	0.7		0.0				

Intersection Summary		
HCM 6th Ctrl Delay		20.4
HCM 6th LOS		C

Notes

User approved changes to right turn type.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	111	90	53	122	104	21	33	105	90	10	145	76
Future Volume (veh/h)	111	90	53	122	104	21	33	105	90	10	145	76
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1870	1870	1900	1885	1900
Adj Flow Rate, veh/h	126	102	60	139	118	24	38	119	102	11	165	86
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	0	0	0	0	0	0	0	2	2	0	1	0
Cap, veh/h	591	298	175	571	410	83	679	340	292	651	690	589
Arrive On Green	0.27	0.27	0.27	0.27	0.27	0.27	0.37	0.37	0.37	0.37	0.37	0.37
Sat Flow, veh/h	1266	1112	654	1243	1532	312	1147	930	797	1178	1885	1610
Grp Volume(v), veh/h	126	0	162	139	0	142	38	0	221	11	165	86
Grp Sat Flow(s),veh/h/ln	1266	0	1765	1243	0	1844	1147	0	1727	1178	1885	1610
Q Serve(g_s), s	1.9	0.0	1.6	2.2	0.0	1.3	0.5	0.0	2.0	0.1	1.3	0.8
Cycle Q Clear(g_c), s	3.3	0.0	1.6	3.8	0.0	1.3	1.8	0.0	2.0	2.2	1.3	0.8
Prop In Lane	1.00		0.37	1.00		0.17	1.00		0.46	1.00		1.00
Lane Grp Cap(c), veh/h	591	0	473	571	0	494	679	0	632	651	690	589
V/C Ratio(X)	0.21	0.00	0.34	0.24	0.00	0.29	0.06	0.00	0.35	0.02	0.24	0.15
Avail Cap(c_a), veh/h	1469	0	1697	1432	0	1772	1886	0	2450	1891	2674	2284
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	7.6	0.0	6.4	8.0	0.0	6.3	5.5	0.0	5.0	5.8	4.8	4.6
Incr Delay (d2), s/veh	0.1	0.0	0.2	0.1	0.0	0.1	0.0	0.0	0.1	0.0	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	0.3	0.4	0.0	0.3	0.0	0.0	0.2	0.0	0.1	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	7.7	0.0	6.6	8.1	0.0	6.5	5.5	0.0	5.2	5.8	4.9	4.7
LnGrp LOS	A	A	A	A	A	A	A	A	A	A	A	A
Approach Vol, veh/h		288			281			259			262	
Approach Delay, s/veh		7.1			7.3			5.2			4.9	
Approach LOS		A			A			A			A	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	12.0	9.9	12.0	9.9
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	31.0	21.0	31.0	21.0
Max Q Clear Time (g_c+I1), s	4.2	5.8	4.0	5.3
Green Ext Time (p_c), s	0.2	0.2	0.3	0.2

Intersection Summary	
HCM 6th Ctrl Delay	6.1
HCM 6th LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	147	222	100	243	243	204	119	831	257	196	634	151
Future Volume (vph)	147	222	100	243	243	204	119	831	257	196	634	151
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00	1.00	0.95	1.00	1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.97	1.00	1.00	0.99	1.00	1.00	0.97	1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	0.99	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97	
Flt Protected	0.95	1.00	1.00	0.95	0.99	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1787	1863	1556	1648	1753	1577	1805	3574	1524	1787	3435	
Flt Permitted	0.95	1.00	1.00	0.62	0.93	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1787	1863	1556	1068	1638	1577	1805	3574	1524	1787	3435	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	152	229	103	251	251	210	123	857	265	202	654	156
RTOR Reduction (vph)	0	0	88	0	0	135	0	0	168	0	15	0
Lane Group Flow (vph)	152	229	15	213	289	75	123	857	97	202	795	0
Confl. Peds. (#/hr)	1		7	7		1	5		3	3		5
Confl. Bikes (#/hr)			1									
Heavy Vehicles (%)	1%	2%	1%	3%	2%	1%	0%	1%	3%	1%	1%	3%
Turn Type	Split	NA	Perm	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	7	7			8		5	2		1	6	
Permitted Phases			7	8		8			2			
Actuated Green, G (s)	18.5	18.5	18.5	28.0	28.0	28.0	11.5	45.5	45.5	17.5	51.5	
Effective Green, g (s)	19.5	19.5	19.5	29.0	29.0	29.0	12.0	47.5	47.5	18.0	53.5	
Actuated g/C Ratio	0.15	0.15	0.15	0.22	0.22	0.22	0.09	0.37	0.37	0.14	0.41	
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	4.5	6.0	6.0	4.5	6.0	
Vehicle Extension (s)	1.0	1.0	1.0	1.0	1.0	1.0	0.5	0.5	0.5	0.5	0.5	
Lane Grp Cap (vph)	268	279	233	238	365	351	166	1305	556	247	1413	
v/s Ratio Prot	0.09	c0.12					0.07	c0.24		c0.11	0.23	
v/s Ratio Perm			0.01	c0.20	0.18	0.05			0.06			
v/c Ratio	0.57	0.82	0.07	0.89	0.79	0.21	0.74	0.66	0.17	0.82	0.56	
Uniform Delay, d1	51.3	53.6	47.4	49.0	47.7	41.2	57.5	34.4	28.0	54.4	29.3	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.82	0.51	1.00	1.00	
Incremental Delay, d2	1.6	16.6	0.0	31.2	10.5	0.1	14.3	2.6	0.7	17.7	1.6	
Delay (s)	53.0	70.1	47.5	80.2	58.1	41.3	69.1	30.8	14.9	72.1	30.9	
Level of Service	D	E	D	F	E	D	E	C	B	E	C	
Approach Delay (s)		59.9			59.8			31.2			39.1	
Approach LOS		E			E			C			D	

Intersection Summary			
HCM 2000 Control Delay	43.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	73.2%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

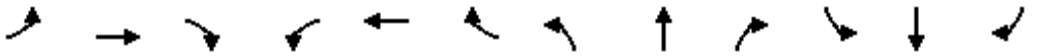
Intersection	
Int Delay, s/veh	1.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	649	81	20	768	61	22
Future Vol, veh/h	649	81	20	768	61	22
Conflicting Peds, #/hr	0	4	4	0	0	2
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	50	-	0	-
Veh in Median Storage, #	0	-	-	0	2	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	4	2	5	2	0	5
Mvmt Flow	683	85	21	808	64	23

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	772	0	1580	732
Stage 1	-	-	-	-	730	-
Stage 2	-	-	-	-	850	-
Critical Hdwy	-	-	4.15	-	6.4	6.25
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.245	-	3.5	3.345
Pot Cap-1 Maneuver	-	-	830	-	121	416
Stage 1	-	-	-	-	481	-
Stage 2	-	-	-	-	422	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	827	-	117	414
Mov Cap-2 Maneuver	-	-	-	-	316	-
Stage 1	-	-	-	-	479	-
Stage 2	-	-	-	-	411	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	19.4
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	337	-	-	827	-
HCM Lane V/C Ratio	0.259	-	-	0.025	-
HCM Control Delay (s)	19.4	-	-	9.5	-
HCM Lane LOS	C	-	-	A	-
HCM 95th %tile Q(veh)	1	-	-	0.1	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	27	610	4	7	767	203	5	24	8	115	20	36
Future Volume (veh/h)	27	610	4	7	767	203	5	24	8	115	20	36
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1841	1841	1900	1870	1870	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	28	629	4	7	791	209	5	25	8	119	21	37
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	4	4	0	2	2	0	0	0	0	0	0
Cap, veh/h	181	1160	7	431	885	234	41	166	44	159	23	364
Arrive On Green	0.02	0.63	0.62	0.01	0.62	0.61	0.23	0.25	0.23	0.23	0.23	0.23
Sat Flow, veh/h	1810	1827	12	1810	1418	375	0	663	177	403	100	1582
Grp Volume(v), veh/h	28	0	633	7	0	1000	38	0	0	140	0	37
Grp Sat Flow(s),veh/h/ln	1810	0	1839	1810	0	1793	840	0	0	503	0	1582
Q Serve(g_s), s	0.6	0.0	19.2	0.1	0.0	47.5	0.0	0.0	0.0	0.0	0.0	1.8
Cycle Q Clear(g_c), s	0.6	0.0	19.2	0.1	0.0	47.5	23.0	0.0	0.0	23.0	0.0	1.8
Prop In Lane	1.00		0.01	1.00		0.21	0.13		0.21	0.85		1.00
Lane Grp Cap(c), veh/h	181	0	1167	431	0	1118	234	0	0	182	0	364
V/C Ratio(X)	0.15	0.00	0.54	0.02	0.00	0.89	0.16	0.00	0.00	0.77	0.00	0.10
Avail Cap(c_a), veh/h	296	0	1167	566	0	1118	234	0	0	182	0	364
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	18.8	0.0	10.2	8.9	0.0	16.1	29.8	0.0	0.0	40.1	0.0	30.4
Incr Delay (d2), s/veh	0.1	0.0	1.8	0.0	0.0	11.0	0.1	0.0	0.0	16.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	7.4	0.1	0.0	20.1	0.7	0.0	0.0	4.3	0.0	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.0	0.0	12.0	8.9	0.0	27.1	29.9	0.0	0.0	56.3	0.0	30.4
LnGrp LOS	B	A	B	A	A	C	C	A	A	E	A	C
Approach Vol, veh/h		661			1007			38			177	
Approach Delay, s/veh		12.3			27.0			29.9			50.9	
Approach LOS		B			C			C			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	4.5	67.5		28.0	5.6	66.4		28.0				
Change Period (Y+Rc), s	4.0	5.0		* 5	4.0	5.0		5.0				
Max Green Setting (Gmax), s	8.0	56.0		* 23	8.0	56.0		22.0				
Max Q Clear Time (g_c+I1), s	2.1	21.2		25.0	2.6	49.5		25.0				
Green Ext Time (p_c), s	0.0	0.9		0.0	0.0	1.3		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		24.2	
HCM 6th LOS		C	

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	45	662	14	30	930	297	10	50	3	131	28	25
Future Volume (veh/h)	45	662	14	30	930	297	10	50	3	131	28	25
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1841	1841	1900	1885	1885	1900	1870	1900	1900	1900	1900
Adj Flow Rate, veh/h	49	720	15	33	1011	323	11	54	3	142	30	27
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	4	4	0	1	1	0	2	0	0	0	0
Cap, veh/h	63	2599	54	42	1943	615	14	94	80	111	96	86
Arrive On Green	0.04	0.74	0.73	0.05	1.00	1.00	0.01	0.05	0.05	0.06	0.10	0.10
Sat Flow, veh/h	1810	3503	73	1810	2660	843	1810	1870	1601	1810	920	828
Grp Volume(v), veh/h	49	359	376	33	678	656	11	54	3	142	0	57
Grp Sat Flow(s),veh/h/ln	1810	1749	1828	1810	1791	1712	1810	1870	1601	1810	0	1748
Q Serve(g_s), s	3.5	8.7	8.7	2.3	0.0	0.0	0.8	3.7	0.2	8.0	0.0	3.9
Cycle Q Clear(g_c), s	3.5	8.7	8.7	2.3	0.0	0.0	0.8	3.7	0.2	8.0	0.0	3.9
Prop In Lane	1.00		0.04	1.00		0.49	1.00		1.00	1.00		0.47
Lane Grp Cap(c), veh/h	63	1297	1356	42	1308	1250	14	94	80	111	0	182
V/C Ratio(X)	0.77	0.28	0.28	0.78	0.52	0.52	0.80	0.58	0.04	1.28	0.00	0.31
Avail Cap(c_a), veh/h	167	1297	1356	111	1308	1250	111	317	271	111	0	296
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.83	0.83	0.83	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	62.2	5.4	5.5	61.6	0.0	0.0	64.4	60.4	58.8	61.0	0.0	53.9
Incr Delay (d2), s/veh	7.2	0.5	0.5	9.4	1.2	1.3	31.7	2.1	0.1	176.4	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	3.0	3.1	1.2	0.4	0.5	0.5	1.8	0.1	9.2	0.0	1.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	69.4	6.0	6.0	71.0	1.2	1.3	96.1	62.5	58.8	237.4	0.0	54.3
LnGrp LOS	E	A	A	E	A	A	F	E	E	F	A	D
Approach Vol, veh/h		784			1367			68			199	
Approach Delay, s/veh		9.9			3.0			67.7			185.0	
Approach LOS		A			A			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.0	100.5	5.0	17.5	8.6	98.9	12.0	10.5
Change Period (Y+Rc), s	4.0	5.0	4.0	4.0	4.0	5.0	4.0	4.0
Max Green Setting (Gmax), s	8.0	75.0	8.0	22.0	12.0	71.0	8.0	22.0
Max Q Clear Time (g_c+I1), s	4.3	10.7	2.8	5.9	5.5	2.0	10.0	5.7
Green Ext Time (p_c), s	0.0	0.9	0.0	0.1	0.0	2.1	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	22.0
HCM 6th LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	121	676	3	466	1154	35	6	104	339	152	73	89
Future Volume (veh/h)	121	676	3	466	1154	35	6	104	339	152	73	89
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1900	1885	1885	1900	1811	1811	1900	1826	1826
Adj Flow Rate, veh/h	126	704	3	485	1202	36	6	108	353	158	76	93
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	3	3	3	0	1	1	0	6	6	0	5	5
Cap, veh/h	174	1824	8	432	2056	62	8	265	386	183	443	370
Arrive On Green	0.10	1.00	1.00	0.12	0.58	0.57	0.00	0.15	0.15	0.10	0.24	0.24
Sat Flow, veh/h	3428	3600	15	3510	3551	106	1810	1811	2640	1810	1826	1526
Grp Volume(v), veh/h	126	345	362	485	606	632	6	108	353	158	76	93
Grp Sat Flow(s),veh/h/ln	1714	1763	1853	1755	1791	1866	1810	1811	1320	1810	1826	1526
Q Serve(g_s), s	4.6	0.0	0.0	16.0	28.0	28.1	0.4	7.0	17.1	11.2	4.3	6.4
Cycle Q Clear(g_c), s	4.6	0.0	0.0	16.0	28.0	28.1	0.4	7.0	17.1	11.2	4.3	6.4
Prop In Lane	1.00		0.01	1.00		0.06	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	174	893	939	432	1037	1080	8	265	386	183	443	370
V/C Ratio(X)	0.72	0.39	0.39	1.12	0.58	0.58	0.74	0.41	0.91	0.86	0.17	0.25
Avail Cap(c_a), veh/h	527	893	939	432	1037	1080	139	265	386	223	443	370
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.94	0.94	0.94	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	57.5	0.0	0.0	57.0	17.4	17.4	64.6	50.4	54.7	57.5	38.9	39.7
Incr Delay (d2), s/veh	2.0	1.2	1.1	81.1	2.4	2.3	37.7	0.4	25.4	21.4	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	0.3	0.3	11.9	11.8	12.3	0.3	3.2	7.0	6.2	1.9	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	59.5	1.2	1.1	138.1	19.8	19.8	102.3	50.8	80.1	79.0	39.0	39.8
LnGrp LOS	E	A	A	F	B	B	F	D	F	E	D	D
Approach Vol, veh/h		833			1723			467			327	
Approach Delay, s/veh		10.0			53.1			73.6			58.5	
Approach LOS		A			D			E			E	

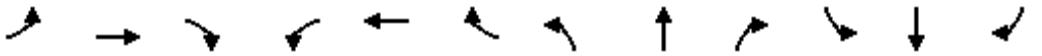
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	20.0	69.9	4.6	35.6	10.6	79.3	17.1	23.0
Change Period (Y+Rc), s	4.0	5.0	4.0	4.0	4.0	5.0	4.0	4.0
Max Green Setting (Gmax), s	16.0	62.0	10.0	25.0	20.0	58.0	16.0	19.0
Max Q Clear Time (g_c+I1), s	18.0	2.0	2.4	8.4	6.6	30.1	13.2	19.1
Green Ext Time (p_c), s	0.0	0.9	0.0	0.1	0.0	1.7	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	45.8
HCM 6th LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	685	923	275	1760	0	0	0	0	166	6	371
Future Volume (veh/h)	0	685	923	275	1760	0	0	0	0	166	6	371
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1856	1885	1885	1885	0				1870	1648	1870
Adj Flow Rate, veh/h	0	714	961	286	1833	0				173	6	386
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96				0.96	0.96	0.96
Percent Heavy Veh, %	0	3	1	1	1	0				2	17	2
Cap, veh/h	0	1689	765	357	2595	0				277	10	508
Arrive On Green	0.00	0.48	0.48	0.20	0.72	0.00				0.16	0.18	0.18
Sat Flow, veh/h	0	3618	1598	1795	3676	0				1519	53	2790
Grp Volume(v), veh/h	0	714	961	286	1833	0				179	0	386
Grp Sat Flow(s),veh/h/ln	0	1763	1598	1795	1791	0				1572	0	1395
Q Serve(g_s), s	0.0	11.3	41.0	13.0	24.7	0.0				9.1	0.0	11.2
Cycle Q Clear(g_c), s	0.0	11.3	41.0	13.0	24.7	0.0				9.1	0.0	11.2
Prop In Lane	0.00		1.00	1.00		0.00				0.97		1.00
Lane Grp Cap(c), veh/h	0	1689	765	357	2595	0				286	0	508
V/C Ratio(X)	0.00	0.42	1.26	0.80	0.71	0.00				0.63	0.00	0.76
Avail Cap(c_a), veh/h	0	1689	765	440	2595	0				753	0	1336
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	14.6	22.3	32.7	6.7	0.0				33.3	0.0	33.2
Incr Delay (d2), s/veh	0.0	0.1	125.7	6.7	0.8	0.0				0.8	0.0	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	4.2	40.3	6.2	7.1	0.0				3.4	0.0	3.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	14.6	148.0	39.4	7.4	0.0				34.1	0.0	34.1
LnGrp LOS	A	B	F	D	A	A				C	A	C
Approach Vol, veh/h		1675			2119						565	
Approach Delay, s/veh		91.1			11.7						34.1	
Approach LOS		F			B						C	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	21.0	45.0		19.6		66.0
Change Period (Y+Rc), s	6.0	6.0		6.0		6.0
Max Green Setting (Gmax), s	15.0	39.0		39.0		39.0
Max Q Clear Time (g_c+I1), s	15.0	43.0		13.2		26.7
Green Ext Time (p_c), s	0.0	0.0		0.3		4.1

Intersection Summary	
HCM 6th Ctrl Delay	45.1
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	194	657	0	0	777	67	1258	0	238	0	0	0
Future Volume (vph)	194	657	0	0	777	67	1258	0	238	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0		4.0	4.0	4.0			
Lane Util. Factor	1.00	0.95			0.95		0.95	0.95	1.00			
Frpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00			
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00			
Frt	1.00	1.00			0.99		1.00	1.00	0.85			
Flt Protected	0.95	1.00			1.00		0.95	0.95	1.00			
Satd. Flow (prot)	1770	3505			3524		1698	1698	1568			
Flt Permitted	0.95	1.00			1.00		0.95	0.95	1.00			
Satd. Flow (perm)	1770	3505			3524		1698	1698	1568			
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	206	699	0	0	827	71	1338	0	253	0	0	0
RTOR Reduction (vph)	0	0	0	0	6	0	0	0	102	0	0	0
Lane Group Flow (vph)	206	699	0	0	892	0	669	669	151	0	0	0
Confl. Peds. (#/hr)			1	1								
Heavy Vehicles (%)	2%	3%	0%	0%	1%	4%	1%	0%	3%	0%	0%	0%
Turn Type	Prot	NA			NA		Perm	NA	Perm			
Protected Phases	5	2			6			4				
Permitted Phases							4		4			
Actuated Green, G (s)	14.3	47.1			26.8		41.3	41.3	41.3			
Effective Green, g (s)	16.3	49.1			28.8		43.3	43.3	43.3			
Actuated g/C Ratio	0.16	0.49			0.29		0.43	0.43	0.43			
Clearance Time (s)	6.0	6.0			6.0		6.0	6.0	6.0			
Vehicle Extension (s)	0.5	0.5			0.5		0.5	0.5	0.5			
Lane Grp Cap (vph)	287	1714			1010		732	732	676			
v/s Ratio Prot	c0.12	0.20			c0.25							
v/s Ratio Perm							c0.39	0.39	0.10			
v/c Ratio	0.72	0.41			0.88		0.91	0.91	0.22			
Uniform Delay, d1	39.9	16.4			34.2		26.8	26.8	18.0			
Progression Factor	1.00	1.00			1.00		1.00	1.00	1.00			
Incremental Delay, d2	7.0	0.1			9.0		15.6	15.6	0.1			
Delay (s)	46.8	16.4			43.2		42.4	42.4	18.0			
Level of Service	D	B			D		D	D	B			
Approach Delay (s)		23.3			43.2			38.5			0.0	
Approach LOS		C			D			D			A	

Intersection Summary			
HCM 2000 Control Delay	35.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	100.4	Sum of lost time (s)	14.0
Intersection Capacity Utilization	91.9%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	99	347	406	56	271	24	365	354	79	60	530	78
Future Volume (veh/h)	99	347	406	56	271	24	365	354	79	60	530	78
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1870	1841	1885	1885	1900	1826	1826	1781	1870	1856
Adj Flow Rate, veh/h	106	373	437	60	291	26	392	381	85	65	570	84
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	4	4	2	4	1	1	0	5	5	8	2	3
Cap, veh/h	147	605	521	88	503	45	281	911	201	123	853	377
Arrive On Green	0.08	0.33	0.33	0.05	0.29	0.27	0.16	0.32	0.29	0.07	0.24	0.24
Sat Flow, veh/h	1753	1841	1585	1753	1705	152	1810	2825	624	1697	3554	1572
Grp Volume(v), veh/h	106	373	437	60	0	317	392	232	234	65	570	84
Grp Sat Flow(s),veh/h/ln	1753	1841	1585	1753	0	1858	1810	1735	1714	1697	1777	1572
Q Serve(g_s), s	4.2	12.1	18.1	2.4	0.0	10.3	11.0	7.4	7.7	2.6	10.3	3.0
Cycle Q Clear(g_c), s	4.2	12.1	18.1	2.4	0.0	10.3	11.0	7.4	7.7	2.6	10.3	3.0
Prop In Lane	1.00		1.00	1.00		0.08	1.00		0.36	1.00		1.00
Lane Grp Cap(c), veh/h	147	605	521	88	0	548	281	559	553	123	853	377
V/C Ratio(X)	0.72	0.62	0.84	0.68	0.00	0.58	1.40	0.42	0.42	0.53	0.67	0.22
Avail Cap(c_a), veh/h	272	675	581	272	0	681	281	636	629	263	1304	577
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.6	20.0	22.0	33.1	0.0	21.3	29.9	18.8	19.1	31.7	24.4	21.6
Incr Delay (d2), s/veh	4.8	1.2	9.3	6.7	0.0	0.7	198.4	0.4	0.4	2.6	0.7	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	4.7	7.2	1.1	0.0	4.0	19.8	2.7	2.8	1.1	4.2	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	36.5	21.2	31.3	39.8	0.0	22.0	228.4	19.2	19.5	34.3	25.1	21.8
LnGrp LOS	D	C	C	D	A	C	F	B	B	C	C	C
Approach Vol, veh/h		916			377			858			719	
Approach Delay, s/veh		27.8			24.9			114.8			25.5	
Approach LOS		C			C			F			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.0	21.0	10.0	24.9	9.2	26.9	7.6	27.3
Change Period (Y+Rc), s	4.5	6.0	4.5	6.0	4.5	6.0	4.5	6.0
Max Green Setting (Gmax), s	10.5	24.0	10.5	24.0	10.5	24.0	10.5	24.0
Max Q Clear Time (g_c+I1), s	13.3	12.3	6.2	12.3	4.6	9.7	4.4	20.1
Green Ext Time (p_c), s	0.0	2.7	0.1	1.0	0.0	1.7	0.0	1.2

Intersection Summary	
HCM 6th Ctrl Delay	52.9
HCM 6th LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	137	217	180	162	268	121	202	1066	108	126	692	81
Future Volume (veh/h)	137	217	180	162	268	121	202	1066	108	126	692	81
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.96	1.00		0.99	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1710	1697	1683	1697	1710	1697	1697	1697	1697	1697	1683	1683
Adj Flow Rate, veh/h	144	228	189	171	282	127	213	1122	114	133	728	85
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	1	2	1	0	1	1	1	1	1	2	2
Cap, veh/h	166	271	218	193	303	245	235	1474	150	153	1303	152
Arrive On Green	0.10	0.16	0.16	0.12	0.18	0.18	0.15	0.50	0.50	0.19	0.91	0.90
Sat Flow, veh/h	1629	1697	1370	1616	1710	1387	1616	2950	299	1616	2880	336
Grp Volume(v), veh/h	144	228	189	171	282	127	213	612	624	133	404	409
Grp Sat Flow(s),veh/h/ln	1629	1697	1370	1616	1710	1387	1616	1612	1638	1616	1599	1617
Q Serve(g_s), s	11.3	17.0	17.5	13.5	21.1	10.8	16.9	39.8	40.0	10.4	6.3	6.4
Cycle Q Clear(g_c), s	11.3	17.0	17.5	13.5	21.1	10.8	16.9	39.8	40.0	10.4	6.3	6.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.18	1.00		0.21
Lane Grp Cap(c), veh/h	166	271	218	193	303	245	235	805	818	153	724	732
V/C Ratio(X)	0.87	0.84	0.87	0.89	0.93	0.52	0.91	0.76	0.76	0.87	0.56	0.56
Avail Cap(c_a), veh/h	194	271	218	242	303	245	360	805	818	186	724	732
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	0.84	0.84	0.84	1.00	1.00	1.00	1.00	1.00	1.00	0.89	0.89	0.89
Uniform Delay (d), s/veh	57.5	53.1	53.3	56.4	52.7	48.5	54.7	26.2	26.3	51.9	3.7	3.7
Incr Delay (d2), s/veh	22.6	17.2	23.9	22.9	33.9	0.9	13.8	6.7	6.6	23.7	2.8	2.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.7	8.5	7.5	6.8	11.9	3.8	7.7	16.3	16.6	4.8	1.8	1.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	80.1	70.2	77.2	79.3	86.6	49.4	68.5	32.9	32.9	75.6	6.4	6.5
LnGrp LOS	F	E	E	E	F	D	E	C	C	E	A	A
Approach Vol, veh/h		561			580			1449			946	
Approach Delay, s/veh		75.1			76.3			38.2			16.2	
Approach LOS		E			E			D			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.3	69.4	19.5	24.7	22.9	62.8	17.3	27.0
Change Period (Y+Rc), s	4.0	4.5	4.0	4.0	4.0	4.5	4.0	4.0
Max Green Setting (Gmax), s	15.0	60.0	19.5	19.0	29.0	46.0	15.5	23.0
Max Q Clear Time (g_c+I1), s	12.4	42.0	15.5	19.5	18.9	8.4	13.3	23.1
Green Ext Time (p_c), s	0.0	1.7	0.0	0.0	0.0	1.1	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	44.4
HCM 6th LOS	D

Intersection	
Intersection Delay, s/veh	9.2
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	482	542	460	133
Demand Flow Rate, veh/h	488	548	465	134
Vehicles Circulating, veh/h	242	299	327	685
Vehicles Exiting, veh/h	577	493	403	162
Ped Vol Crossing Leg, #/h	0	0	2	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	8.4	10.4	9.3	7.5
Approach LOS	A	B	A	A

Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	488	548	465	134
Cap Entry Lane, veh/h	1078	1017	989	686
Entry HV Adj Factor	0.988	0.989	0.989	0.994
Flow Entry, veh/h	482	542	460	133
Cap Entry, veh/h	1065	1006	977	682
V/C Ratio	0.453	0.539	0.471	0.195
Control Delay, s/veh	8.4	10.4	9.3	7.5
LOS	A	B	A	A
95th %tile Queue, veh	2	3	3	1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	38	318	93	253	473	78	184	1090	321	41	898	114
Future Volume (veh/h)	38	318	93	253	473	78	184	1090	321	41	898	114
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1856	1885	1885	1870	1826	1885	1856	1885	1870	1856	1900
Adj Flow Rate, veh/h	39	324	95	258	483	80	188	1112	0	42	916	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	3	1	1	2	5	1	3	1	2	3	0
Cap, veh/h	127	343	289	294	520	423	227	1191		326	1417	
Arrive On Green	0.07	0.18	0.18	0.16	0.28	0.28	0.13	0.34	0.00	0.18	0.40	0.00
Sat Flow, veh/h	1810	1856	1566	1795	1870	1521	1795	3526	1598	1781	3526	1610
Grp Volume(v), veh/h	39	324	95	258	483	80	188	1112	0	42	916	0
Grp Sat Flow(s),veh/h/ln	1810	1856	1566	1795	1870	1521	1795	1763	1598	1781	1763	1610
Q Serve(g_s), s	2.7	22.4	5.1	18.2	32.7	5.2	13.3	39.7	0.0	2.6	27.3	0.0
Cycle Q Clear(g_c), s	2.7	22.4	5.1	18.2	32.7	5.2	13.3	39.7	0.0	2.6	27.3	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	127	343	289	294	520	423	227	1191		326	1417	
V/C Ratio(X)	0.31	0.95	0.33	0.88	0.93	0.19	0.83	0.93		0.13	0.65	
Avail Cap(c_a), veh/h	127	343	289	359	604	491	290	1193		326	1417	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	57.4	52.4	25.9	53.1	45.7	35.8	55.4	41.6	0.0	44.4	31.4	0.0
Incr Delay (d2), s/veh	1.3	34.7	0.7	16.4	18.2	0.1	14.4	14.4	0.0	0.2	2.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	13.6	2.7	9.5	17.6	1.9	6.7	18.5	0.0	1.1	11.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	58.8	87.0	26.6	69.5	63.9	35.9	69.8	56.0	0.0	44.6	33.7	0.0
LnGrp LOS	E	F	C	E	E	D	E	E		D	C	
Approach Vol, veh/h		458			821			1300	A		958	A
Approach Delay, s/veh		72.1			62.9			58.0			34.2	
Approach LOS		E			E			E			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	20.5	56.3	13.2	40.1	28.8	47.9	25.3	28.0
Change Period (Y+Rc), s	5.0	6.0	5.0	5.0	6.0	* 6	5.0	5.0
Max Green Setting (Gmax), s	20.6	41.0	7.0	41.0	19.0	* 42	25.0	23.0
Max Q Clear Time (g_c+I1), s	15.3	29.3	4.7	34.7	4.6	41.7	20.2	24.4
Green Ext Time (p_c), s	0.2	5.0	0.0	0.4	0.0	0.2	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	54.5
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [NBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Intersection Delay, s/veh	41.8
Intersection LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	90	30	265	125	180	25	135	115	240	200	25
Future Vol, veh/h	10	90	30	265	125	180	25	135	115	240	200	25
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles, %	20	2	0	2	4	4	0	3	3	3	2	0
Mvmt Flow	10	94	31	276	130	188	26	141	120	250	208	26
Number of Lanes	0	1	1	0	1	1	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	2
HCM Control Delay	14.6	41	21.2	62.7
HCM LOS	B	E	C	F

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	9%	10%	0%	68%	0%	52%
Vol Thru, %	49%	90%	0%	32%	0%	43%
Vol Right, %	42%	0%	100%	0%	100%	5%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	275	100	30	390	180	465
LT Vol	25	10	0	265	0	240
Through Vol	135	90	0	125	0	200
RT Vol	115	0	30	0	180	25
Lane Flow Rate	286	104	31	406	188	484
Geometry Grp	2	7	7	7	7	2
Degree of Util (X)	0.598	0.269	0.071	0.918	0.369	0.98
Departure Headway (Hd)	7.512	9.302	8.197	8.134	7.093	7.287
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	478	385	436	447	506	499
Service Time	5.574	7.078	5.972	5.891	4.85	5.287
HCM Lane V/C Ratio	0.598	0.27	0.071	0.908	0.372	0.97
HCM Control Delay	21.2	15.5	11.6	53.5	14	62.7
HCM Lane LOS	C	C	B	F	B	F
HCM 95th-tile Q	3.8	1.1	0.2	10.3	1.7	12.9

Intersection	
Int Delay, s/veh	148

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	390	330	395	295	0	0	0	0	190	0	440
Future Vol, veh/h	0	390	330	395	295	0	0	0	0	190	0	440
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	180	-	-	-	-	-	-	-	100
Veh in Median Storage, #	-	0	-	-	0	-	-	16974	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	12	9	3	12	0	0	0	0	0	0	10
Mvmt Flow	0	411	347	416	311	0	0	0	0	200	0	463

Major/Minor	Major1			Major2			Minor2		
Conflicting Flow All	-	0	0	758	0	0	1728	1901	311
Stage 1	-	-	-	-	-	-	1143	1143	-
Stage 2	-	-	-	-	-	-	585	758	-
Critical Hdwy	-	-	-	4.13	-	-	6.4	6.5	6.3
Critical Hdwy Stg 1	-	-	-	-	-	-	5.4	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5.4	5.5	-
Follow-up Hdwy	-	-	-	2.227	-	-	3.5	4	3.39
Pot Cap-1 Maneuver	0	-	-	849	-	0	~ 98	70	711
Stage 1	0	-	-	-	-	0	307	277	-
Stage 2	0	-	-	-	-	0	561	418	-
Platoon blocked, %		-	-		-				
Mov Cap-1 Maneuver	-	-	-	849	-	-	~ 50	0	711
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 50	0	-
Stage 1	-	-	-	-	-	-	307	0	-
Stage 2	-	-	-	-	-	-	286	0	-

Approach	EB	WB	SB
HCM Control Delay, s	0	7.6	$ 470.8
HCM LOS			F

Minor Lane/Major Mvmt	EBT	EBR	WBL	WBT	SBLn1	SBLn2
Capacity (veh/h)	-	-	849	-	50	711
HCM Lane V/C Ratio	-	-	0.49	-	4	0.651
HCM Control Delay (s)	-	-	13.2	-	$ 1517	19
HCM Lane LOS	-	-	B	-	F	C
HCM 95th %tile Q(veh)	-	-	2.7	-	22.1	4.8

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

Intersection	
Int Delay, s/veh	137

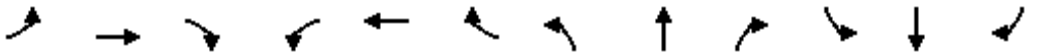
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	350	230	0	0	530	200	160	0	290	0	0	0
Future Vol, veh/h	350	230	0	0	530	200	160	0	290	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	155	-	-	-	-	-	-	-	100	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	16965	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	18	4	0	0	4	0	14	0	4	0	0	0
Mvmt Flow	385	253	0	0	582	220	176	0	319	0	0	0

Major/Minor	Major1			Major2			Minor1		
Conflicting Flow All	802	0	-	-	-	0	1715	1825	253
Stage 1	-	-	-	-	-	-	1023	1023	-
Stage 2	-	-	-	-	-	-	692	802	-
Critical Hdwy	4.28	-	-	-	-	-	6.54	6.5	6.24
Critical Hdwy Stg 1	-	-	-	-	-	-	5.54	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5.54	5.5	-
Follow-up Hdwy	2.362	-	-	-	-	-	3.626	4	3.336
Pot Cap-1 Maneuver	755	-	0	0	-	-	~ 93	78	781
Stage 1	-	-	0	0	-	-	330	316	-
Stage 2	-	-	0	0	-	-	475	399	-
Platoon blocked, %		-			-	-			
Mov Cap-1 Maneuver	755	-	-	-	-	-	~ 46	0	781
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 46	0	-
Stage 1	-	-	-	-	-	-	~ 162	0	-
Stage 2	-	-	-	-	-	-	475	0	-

Approach	EB	WB	NB
HCM Control Delay, s	8.8	0	$ 524.4
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	WBT	WBR
Capacity (veh/h)	46	781	755	-	-	-
HCM Lane V/C Ratio	3.822	0.408	0.509	-	-	-
HCM Control Delay (s)	$ 1451.7	12.8	14.6	-	-	-
HCM Lane LOS	F	B	B	-	-	-
HCM 95th %tile Q(veh)	19.6	2	2.9	-	-	-

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	140	60	295	40	150	55	95	595	40	50	480	390
Future Volume (veh/h)	140	60	295	40	150	55	95	595	40	50	480	390
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1796	1796	1856	1870	1870	1870	1811	1856	1856	1900	1870	1826
Adj Flow Rate, veh/h	147	63	0	42	158	58	100	626	42	53	505	411
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	7	7	3	2	2	2	6	3	3	0	2	5
Cap, veh/h	320	102		128	270	91	389	852	57	344	885	732
Arrive On Green	0.22	0.23	0.00	0.22	0.23	0.22	0.05	0.50	0.47	0.03	0.47	0.47
Sat Flow, veh/h	860	451	1572	185	1195	400	1725	1719	115	1810	1870	1547
Grp Volume(v), veh/h	210	0	0	258	0	0	100	0	668	53	505	411
Grp Sat Flow(s),veh/h/ln	1311	0	1572	1780	0	0	1725	0	1835	1810	1870	1547
Q Serve(g_s), s	0.8	0.0	0.0	0.0	0.0	0.0	1.5	0.0	14.1	0.8	9.5	9.3
Cycle Q Clear(g_c), s	7.1	0.0	0.0	6.3	0.0	0.0	1.5	0.0	14.1	0.8	9.5	9.3
Prop In Lane	0.70		1.00	0.16		0.22	1.00		0.06	1.00		1.00
Lane Grp Cap(c), veh/h	409	0		471	0	0	389	0	910	344	885	732
V/C Ratio(X)	0.51	0.00		0.55	0.00	0.00	0.26	0.00	0.73	0.15	0.57	0.56
Avail Cap(c_a), veh/h	1081	0		1372	0	0	579	0	1620	584	1652	1366
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.4	0.0	0.0	17.1	0.0	0.0	7.6	0.0	9.8	8.7	9.3	9.2
Incr Delay (d2), s/veh	0.7	0.0	0.0	0.7	0.0	0.0	0.3	0.0	1.7	0.2	0.8	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	0.0	0.0	2.4	0.0	0.0	0.4	0.0	4.1	0.2	2.8	2.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.1	0.0	0.0	17.9	0.0	0.0	7.9	0.0	11.4	8.9	10.1	10.2
LnGrp LOS	B	A		B	A	A	A	A	B	A	B	B
Approach Vol, veh/h		210	A		258			768			969	
Approach Delay, s/veh		18.1			17.9			11.0			10.1	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.5	28.1		15.0	6.6	27.0		15.0				
Change Period (Y+Rc), s	4.0	* 5.4		4.5	4.0	* 5.4		4.5				
Max Green Setting (Gmax), s	8.0	* 42		36.5	8.0	* 42		36.5				
Max Q Clear Time (g_c+I1), s	2.8	16.1		9.1	3.5	11.5		8.3				
Green Ext Time (p_c), s	0.0	6.7		1.1	0.1	7.7		1.2				

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

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Int Delay, s/veh	2.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	0	65	0	20	0	70	55	15	180	0
Future Vol, veh/h	0	0	0	65	0	20	0	70	55	15	180	0
Conflicting Peds, #/hr	0	0	2	0	0	0	0	0	2	0	0	2
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	50	100	0	0	0	0	0	2	2	8	0	0
Mvmt Flow	0	0	0	73	0	22	0	79	62	17	202	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	359	381	206	350	350	112	204	0	0	143	0	0
Stage 1	238	238	-	112	112	-	-	-	-	-	-	-
Stage 2	121	143	-	238	238	-	-	-	-	-	-	-
Critical Hdwy	7.6	7.5	6.2	7.1	6.5	6.2	4.1	-	-	4.18	-	-
Critical Hdwy Stg 1	6.6	6.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.6	6.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.95	4.9	3.3	3.5	4	3.3	2.2	-	-	2.272	-	-
Pot Cap-1 Maneuver	517	426	840	608	577	947	1380	-	-	1404	-	-
Stage 1	669	560	-	898	807	-	-	-	-	-	-	-
Stage 2	780	625	-	770	712	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	498	418	837	599	567	945	1377	-	-	1401	-	-
Mov Cap-2 Maneuver	498	418	-	599	567	-	-	-	-	-	-	-
Stage 1	668	551	-	896	805	-	-	-	-	-	-	-
Stage 2	761	624	-	758	701	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	11.4	0	0.6
HCM LOS	A	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1377	-	-	-	655	1401	-	-
HCM Lane V/C Ratio	-	-	-	-	0.146	0.012	-	-
HCM Control Delay (s)	0	-	-	0	11.4	7.6	0	-
HCM Lane LOS	A	-	-	A	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	-	0.5	0	-	-

Intersection	
Int Delay, s/veh	32.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	25	55	20	110	120	100	35	170	80	80	405	30
Future Vol, veh/h	25	55	20	110	120	100	35	170	80	80	405	30
Conflicting Peds, #/hr	0	0	1	1	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	Stop	-	-	None	-	-	None
Storage Length	-	-	30	-	-	50	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	0	6	6	0	0	7	0	2	0	8	1	0
Mvmt Flow	26	57	21	113	124	103	36	175	82	82	418	31

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	948	927	435	926	901	216	449	0	0	257	0	0
Stage 1	598	598	-	288	288	-	-	-	-	-	-	-
Stage 2	350	329	-	638	613	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.56	6.26	7.1	6.5	6.27	4.1	-	-	4.18	-	-
Critical Hdwy Stg 1	6.1	5.56	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.56	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4.054	3.354	3.5	4	3.363	2.2	-	-	2.272	-	-
Pot Cap-1 Maneuver	243	264	613	251	280	811	1122	-	-	1274	-	-
Stage 1	492	485	-	724	677	-	-	-	-	-	-	-
Stage 2	671	639	-	468	486	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	117	232	612	179	246	811	1122	-	-	1274	-	-
Mov Cap-2 Maneuver	117	232	-	179	246	-	-	-	-	-	-	-
Stage 1	473	443	-	696	651	-	-	-	-	-	-	-
Stage 2	456	615	-	360	444	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	35.7	108.3	1	1.2
HCM LOS	E	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1122	-	-	177	612	209	811	1274	-	-
HCM Lane V/C Ratio	0.032	-	-	0.466	0.034	1.135	0.127	0.065	-	-
HCM Control Delay (s)	8.3	0	-	41.9	11.1	151	10.1	8	0	-
HCM Lane LOS	A	A	-	E	B	F	B	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	2.2	0.1	11.3	0.4	0.2	-	-

Intersection	
Int Delay, s/veh	2.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	155	60	15	210	85	25
Future Vol, veh/h	155	60	15	210	85	25
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	82	82	82	82	82	82
Heavy Vehicles, %	7	0	0	3	0	0
Mvmt Flow	189	73	18	256	104	30

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	262	0	518	226
Stage 1	-	-	-	-	226	-
Stage 2	-	-	-	-	292	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1314	-	521	818
Stage 1	-	-	-	-	816	-
Stage 2	-	-	-	-	762	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1314	-	513	818
Mov Cap-2 Maneuver	-	-	-	-	513	-
Stage 1	-	-	-	-	816	-
Stage 2	-	-	-	-	750	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.5	13.4
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	560	-	-	1314	-
HCM Lane V/C Ratio	0.24	-	-	0.014	-
HCM Control Delay (s)	13.4	-	-	7.8	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.9	-	-	0	-

Intersection	
Int Delay, s/veh	19.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	95	115	105	485	645	95
Future Vol, veh/h	95	115	105	485	645	95
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	240	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	4	4	5	1	2
Mvmt Flow	100	121	111	511	679	100

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1462	729	779	0	-	0
Stage 1	729	-	-	-	-	-
Stage 2	733	-	-	-	-	-
Critical Hdwy	6.4	6.24	4.14	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.336	2.236	-	-	-
Pot Cap-1 Maneuver	143	420	829	-	-	-
Stage 1	481	-	-	-	-	-
Stage 2	479	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	124	420	829	-	-	-
Mov Cap-2 Maneuver	124	-	-	-	-	-
Stage 1	417	-	-	-	-	-
Stage 2	479	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	140.1	1.8	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	829	-	202	-	-
HCM Lane V/C Ratio	0.133	-	1.094	-	-
HCM Control Delay (s)	10	-	140.1	-	-
HCM Lane LOS	B	-	F	-	-
HCM 95th %tile Q(veh)	0.5	-	10.4	-	-

Intersection	
Int Delay, s/veh	6.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	150	25	285	75	15	515
Future Vol, veh/h	150	25	285	75	15	515
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	1	0	2	2	0	1
Mvmt Flow	172	29	328	86	17	592

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	997	371	0	0	414	0
Stage 1	371	-	-	-	-	-
Stage 2	626	-	-	-	-	-
Critical Hdwy	6.41	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.41	-	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-	-
Follow-up Hdwy	3.509	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	272	679	-	-	1156	-
Stage 1	700	-	-	-	-	-
Stage 2	535	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	266	679	-	-	1156	-
Mov Cap-2 Maneuver	266	-	-	-	-	-
Stage 1	700	-	-	-	-	-
Stage 2	523	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	41	0	0.2
HCM LOS	E		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	291	1156	-
HCM Lane V/C Ratio	-	-	0.691	0.015	-
HCM Control Delay (s)	-	-	41	8.2	0
HCM Lane LOS	-	-	E	A	A
HCM 95th %tile Q(veh)	-	-	4.7	0	-

Intersection	
Int Delay, s/veh	7.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	25	60	50	75	10	100	95	65	25	45	5
Future Vol, veh/h	5	25	60	50	75	10	100	95	65	25	45	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	0	5	0	0	1	0	0	0	0	0	5	0
Mvmt Flow	6	28	68	57	85	11	114	108	74	28	51	6

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	531	520	54	531	486	145	57	0	0	182	0	0
Stage 1	110	110	-	373	373	-	-	-	-	-	-	-
Stage 2	421	410	-	158	113	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.55	6.2	7.1	6.51	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.55	-	6.1	5.51	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.55	-	6.1	5.51	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4.045	3.3	3.5	4.009	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	462	456	1019	462	483	908	1560	-	-	1405	-	-
Stage 1	900	799	-	652	620	-	-	-	-	-	-	-
Stage 2	614	590	-	849	804	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	358	410	1019	377	434	908	1560	-	-	1405	-	-
Mov Cap-2 Maneuver	358	410	-	377	434	-	-	-	-	-	-	-
Stage 1	826	782	-	599	569	-	-	-	-	-	-	-
Stage 2	473	542	-	747	787	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	11.3	18.1	2.9	2.5
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1560	-	-	673	427	1405	-	-
HCM Lane V/C Ratio	0.073	-	-	0.152	0.359	0.02	-	-
HCM Control Delay (s)	7.5	-	-	11.3	18.1	7.6	0	-
HCM Lane LOS	A	-	-	B	C	A	A	-
HCM 95th %tile Q(veh)	0.2	-	-	0.5	1.6	0.1	-	-

Intersection	
Int Delay, s/veh	2.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	20	95	90	585	705	25
Future Vol, veh/h	20	95	90	585	705	25
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	0	6	0	4	2	0
Mvmt Flow	22	102	97	629	758	27

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1595	772	785	0	-	0
Stage 1	772	-	-	-	-	-
Stage 2	823	-	-	-	-	-
Critical Hdwy	6.4	6.26	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.354	2.2	-	-	-
Pot Cap-1 Maneuver	119	393	843	-	-	-
Stage 1	459	-	-	-	-	-
Stage 2	435	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	98	393	843	-	-	-
Mov Cap-2 Maneuver	98	-	-	-	-	-
Stage 1	378	-	-	-	-	-
Stage 2	435	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	31.2	1.3	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	843	-	258	-	-
HCM Lane V/C Ratio	0.115	-	0.479	-	-
HCM Control Delay (s)	9.8	0	31.2	-	-
HCM Lane LOS	A	A	D	-	-
HCM 95th %tile Q(veh)	0.4	-	2.4	-	-

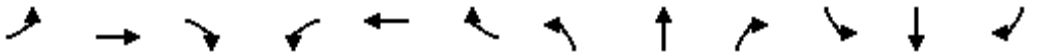
Intersection	
Int Delay, s/veh	4.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	35	100	250	325	570	95
Future Vol, veh/h	35	100	250	325	570	95
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	100	-	-	-
Veh in Median Storage, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	3	1	1	1	1	0
Mvmt Flow	39	111	278	361	633	106

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1603	686	739	0	-	0
Stage 1	686	-	-	-	-	-
Stage 2	917	-	-	-	-	-
Critical Hdwy	6.43	6.21	4.11	-	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.309	2.209	-	-	-
Pot Cap-1 Maneuver	116	449	872	-	-	-
Stage 1	498	-	-	-	-	-
Stage 2	388	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	79	449	872	-	-	-
Mov Cap-2 Maneuver	201	-	-	-	-	-
Stage 1	339	-	-	-	-	-
Stage 2	388	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	23.7	4.8	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	872	-	340	-	-
HCM Lane V/C Ratio	0.319	-	0.441	-	-
HCM Control Delay (s)	11	-	23.7	-	-
HCM Lane LOS	B	-	C	-	-
HCM 95th %tile Q(veh)	1.4	-	2.2	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	5	405	15	5	5	565	900	15	15	775	15
Future Volume (veh/h)	10	5	405	15	5	5	565	900	15	15	775	15
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.96	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1870	1900	1900	1900	1900	1885	1885	1900	1885	1885
Adj Flow Rate, veh/h	11	5	440	16	5	5	614	978	16	16	842	16
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	2	0	0	0	0	1	1	0	1	1
Cap, veh/h	239	108	506	35	11	11	641	2128	35	264	1148	22
Arrive On Green	0.17	0.19	0.19	0.03	0.03	0.03	0.28	0.59	0.56	0.01	0.32	0.29
Sat Flow, veh/h	1263	574	2678	1088	340	340	1810	3606	59	1810	3595	68
Grp Volume(v), veh/h	16	0	440	26	0	0	614	486	508	16	419	439
Grp Sat Flow(s),veh/h/ln	1837	0	1339	1769	0	0	1810	1791	1874	1810	1791	1872
Q Serve(g_s), s	0.7	0.0	14.4	1.3	0.0	0.0	23.3	13.7	13.7	0.6	18.7	18.8
Cycle Q Clear(g_c), s	0.7	0.0	14.4	1.3	0.0	0.0	23.3	13.7	13.7	0.6	18.7	18.8
Prop In Lane	0.69		1.00	0.62		0.19	1.00		0.03	1.00		0.04
Lane Grp Cap(c), veh/h	347	0	506	57	0	0	641	1057	1106	264	572	598
V/C Ratio(X)	0.05	0.00	0.87	0.46	0.00	0.00	0.96	0.46	0.46	0.06	0.73	0.73
Avail Cap(c_a), veh/h	347	0	506	118	0	0	653	1057	1106	355	572	598
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.4	0.0	35.4	43.0	0.0	0.0	21.0	10.4	10.4	22.4	27.2	27.3
Incr Delay (d2), s/veh	0.0	0.0	14.5	2.1	0.0	0.0	24.7	1.4	1.4	0.0	8.1	7.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	5.7	0.6	0.0	0.0	13.0	5.0	5.2	0.2	9.0	9.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.5	0.0	49.9	45.1	0.0	0.0	45.6	11.8	11.8	22.5	35.3	35.1
LnGrp LOS	C	A	D	D	A	A	D	B	B	C	D	D
Approach Vol, veh/h		456			26			1608			874	
Approach Delay, s/veh		49.2			45.1			24.7			35.0	
Approach LOS		D			D			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.0	57.1		21.0	29.4	32.7		6.9				
Change Period (Y+Rc), s	4.0	7.0		6.0	4.0	7.0		4.5				
Max Green Setting (Gmax), s	5.5	42.5		15.0	26.0	22.0		5.5				
Max Q Clear Time (g_c+I1), s	2.6	15.7		16.4	25.3	20.8		3.3				
Green Ext Time (p_c), s	0.0	1.2		0.0	0.0	0.3		0.0				

Intersection Summary		
HCM 6th Ctrl Delay		31.7
HCM 6th LOS		C

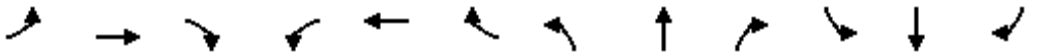
Notes

User approved changes to right turn type.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	125	90	105	125	105	25	45	105	90	10	155	80
Future Volume (veh/h)	125	90	105	125	105	25	45	105	90	10	155	80
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1870	1870	1900	1885	1900
Adj Flow Rate, veh/h	142	102	119	142	119	28	51	119	102	11	176	91
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	0	0	0	0	0	0	0	2	2	0	1	0
Cap, veh/h	621	241	281	550	453	107	630	323	277	610	655	560
Arrive On Green	0.30	0.30	0.30	0.30	0.30	0.30	0.35	0.35	0.35	0.35	0.35	0.35
Sat Flow, veh/h	1260	790	921	1178	1487	350	1130	930	797	1178	1885	1610
Grp Volume(v), veh/h	142	0	221	142	0	147	51	0	221	11	176	91
Grp Sat Flow(s),veh/h/ln	1260	0	1711	1178	0	1837	1130	0	1727	1178	1885	1610
Q Serve(g_s), s	2.2	0.0	2.4	2.5	0.0	1.4	0.8	0.0	2.2	0.2	1.5	0.9
Cycle Q Clear(g_c), s	3.6	0.0	2.4	4.9	0.0	1.4	2.3	0.0	2.2	2.4	1.5	0.9
Prop In Lane	1.00		0.54	1.00		0.19	1.00		0.46	1.00		1.00
Lane Grp Cap(c), veh/h	621	0	521	550	0	560	630	0	600	610	655	560
V/C Ratio(X)	0.23	0.00	0.42	0.26	0.00	0.26	0.08	0.00	0.37	0.02	0.27	0.16
Avail Cap(c_a), veh/h	1387	0	1561	1266	0	1676	1759	0	2326	1787	2539	2169
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	7.4	0.0	6.4	8.3	0.0	6.0	6.2	0.0	5.6	6.5	5.4	5.2
Incr Delay (d2), s/veh	0.1	0.0	0.2	0.1	0.0	0.1	0.0	0.0	0.1	0.0	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.0	0.5	0.4	0.0	0.3	0.1	0.0	0.3	0.0	0.2	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	7.5	0.0	6.6	8.4	0.0	6.1	6.3	0.0	5.8	6.5	5.5	5.2
LnGrp LOS	A	A	A	A	A	A	A	A	A	A	A	A
Approach Vol, veh/h		363			289			272			278	
Approach Delay, s/veh		6.9			7.3			5.9			5.4	
Approach LOS		A			A			A			A	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	12.0	11.0	12.0	11.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	31.0	21.0	31.0	21.0
Max Q Clear Time (g_c+I1), s	4.4	6.9	4.3	5.6
Green Ext Time (p_c), s	0.2	0.2	0.3	0.4

Intersection Summary	
HCM 6th Ctrl Delay	6.4
HCM 6th LOS	A



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	160	260	165	315	225	205	130	835	275	165	725	125
Future Volume (vph)	160	260	165	315	225	205	130	835	275	165	725	125
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00	1.00	0.95	1.00	1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.97	1.00	1.00	0.99	1.00	1.00	0.97	1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	0.99	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	0.99	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1787	1863	1556	1649	1737	1577	1805	3574	1524	1787	3467	
Flt Permitted	0.95	1.00	1.00	0.59	0.83	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1787	1863	1556	1031	1461	1577	1805	3574	1524	1787	3467	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	165	268	170	325	232	211	134	861	284	170	747	129
RTOR Reduction (vph)	0	0	141	0	0	117	0	0	198	0	11	0
Lane Group Flow (vph)	165	268	29	240	317	94	134	861	86	170	865	0
Confl. Peds. (#/hr)	1		7	7		1	5		3	3		5
Confl. Bikes (#/hr)			1									
Heavy Vehicles (%)	1%	2%	1%	3%	2%	1%	0%	1%	3%	1%	1%	3%
Turn Type	Split	NA	Perm	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	7	7			8		5	2		1	6	
Permitted Phases			7	8		8			2			
Actuated Green, G (s)	21.5	21.5	21.5	34.2	34.2	34.2	12.1	37.2	37.2	16.6	41.7	
Effective Green, g (s)	22.5	22.5	22.5	35.2	35.2	35.2	12.6	39.2	39.2	17.1	43.7	
Actuated g/C Ratio	0.17	0.17	0.17	0.27	0.27	0.27	0.10	0.30	0.30	0.13	0.34	
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	4.5	6.0	6.0	4.5	6.0	
Vehicle Extension (s)	1.0	1.0	1.0	1.0	1.0	1.0	0.5	0.5	0.5	0.5	0.5	
Lane Grp Cap (vph)	309	322	269	279	395	427	174	1077	459	235	1165	
v/s Ratio Prot	0.09	c0.14					0.07	c0.24		0.10	c0.25	
v/s Ratio Perm			0.02	c0.23	0.22	0.06			0.06			
v/c Ratio	0.53	0.83	0.11	0.86	0.80	0.22	0.77	0.80	0.19	0.72	0.74	
Uniform Delay, d1	49.0	51.9	45.3	45.1	44.2	36.8	57.3	41.8	33.6	54.2	38.2	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.82	0.51	1.00	1.00	
Incremental Delay, d2	0.9	15.9	0.1	22.0	10.6	0.1	17.2	6.2	0.9	9.0	4.3	
Delay (s)	49.9	67.8	45.4	67.1	54.8	36.9	71.7	40.5	17.9	63.1	42.5	
Level of Service	D	E	D	E	D	D	E	D	B	E	D	
Approach Delay (s)		56.6			53.7			38.7			45.8	
Approach LOS		E			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	46.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	74.6%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

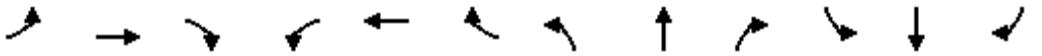
Intersection	
Int Delay, s/veh	1.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	595	30	60	735	25	70
Future Vol, veh/h	595	30	60	735	25	70
Conflicting Peds, #/hr	0	4	4	0	0	2
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	50	-	0	-
Veh in Median Storage, #	0	-	-	0	2	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	4	2	5	2	0	5
Mvmt Flow	626	32	63	774	26	74

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	662	0	1546	648
Stage 1	-	-	-	-	646	-
Stage 2	-	-	-	-	900	-
Critical Hdwy	-	-	4.15	-	6.4	6.25
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.245	-	3.5	3.345
Pot Cap-1 Maneuver	-	-	912	-	127	465
Stage 1	-	-	-	-	526	-
Stage 2	-	-	-	-	400	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	909	-	118	462
Mov Cap-2 Maneuver	-	-	-	-	306	-
Stage 1	-	-	-	-	524	-
Stage 2	-	-	-	-	372	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.7	16.7
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	407	-	-	909	-
HCM Lane V/C Ratio	0.246	-	-	0.069	-
HCM Control Delay (s)	16.7	-	-	9.3	-
HCM Lane LOS	C	-	-	A	-
HCM 95th %tile Q(veh)	1	-	-	0.2	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	795	10	10	905	145	20	55	15	50	20	40
Future Volume (veh/h)	50	795	10	10	905	145	20	55	15	50	20	40
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	0.97		0.96	0.97		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1841	1841	1900	1870	1870	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	52	820	10	10	933	149	21	57	15	52	21	41
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	4	4	0	2	2	0	0	0	0	0	0
Cap, veh/h	301	1377	17	454	1165	186	72	144	33	165	57	161
Arrive On Green	0.02	0.76	0.75	0.01	0.74	0.73	0.10	0.12	0.10	0.10	0.10	0.10
Sat Flow, veh/h	1810	1815	22	1810	1568	250	228	1157	266	997	550	1548
Grp Volume(v), veh/h	52	0	830	10	0	1082	93	0	0	73	0	41
Grp Sat Flow(s),veh/h/ln	1810	0	1837	1810	0	1819	1652	0	0	1548	0	1548
Q Serve(g_s), s	0.7	0.0	19.9	0.1	0.0	37.8	1.3	0.0	0.0	0.0	0.0	2.4
Cycle Q Clear(g_c), s	0.7	0.0	19.9	0.1	0.0	37.8	5.4	0.0	0.0	4.1	0.0	2.4
Prop In Lane	1.00		0.01	1.00		0.14	0.23		0.16	0.71		1.00
Lane Grp Cap(c), veh/h	301	0	1393	454	0	1351	216	0	0	223	0	161
V/C Ratio(X)	0.17	0.00	0.60	0.02	0.00	0.80	0.43	0.00	0.00	0.33	0.00	0.25
Avail Cap(c_a), veh/h	405	0	1393	586	0	1351	410	0	0	404	0	356
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	11.0	0.0	5.3	5.1	0.0	8.2	40.9	0.0	0.0	41.9	0.0	41.2
Incr Delay (d2), s/veh	0.1	0.0	1.9	0.0	0.0	5.1	0.5	0.0	0.0	0.3	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.0	6.2	0.0	0.0	12.7	2.2	0.0	0.0	1.7	0.0	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	11.1	0.0	7.2	5.1	0.0	13.3	41.4	0.0	0.0	42.2	0.0	41.5
LnGrp LOS	B	A	A	A	A	B	D	A	A	D	A	D
Approach Vol, veh/h		882			1092			93			114	
Approach Delay, s/veh		7.4			13.2			41.4			42.0	
Approach LOS		A			B			D			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	4.7	79.9		15.4	6.3	78.3		15.4				
Change Period (Y+Rc), s	4.0	5.0		* 5	4.0	5.0		5.0				
Max Green Setting (Gmax), s	8.0	56.0		* 23	8.0	56.0		22.0				
Max Q Clear Time (g_c+I1), s	2.1	21.9		6.1	2.7	39.8		7.4				
Green Ext Time (p_c), s	0.0	1.2		0.1	0.0	1.9		0.1				

Intersection Summary			
HCM 6th Ctrl Delay		13.6	
HCM 6th LOS		B	

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	45	760	15	30	940	290	15	60	10	135	30	25
Future Volume (veh/h)	45	760	15	30	940	290	15	60	10	135	30	25
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1841	1841	1900	1885	1885	1900	1870	1900	1900	1900	1900
Adj Flow Rate, veh/h	49	826	16	33	1022	315	16	65	11	147	33	27
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	4	4	0	1	1	0	2	0	0	0	0
Cap, veh/h	63	2590	50	42	1951	596	19	101	86	111	101	83
Arrive On Green	0.04	0.74	0.73	0.05	1.00	1.00	0.01	0.05	0.05	0.06	0.10	0.10
Sat Flow, veh/h	1810	3509	68	1810	2686	821	1810	1870	1601	1810	965	790
Grp Volume(v), veh/h	49	412	430	33	678	659	16	65	11	147	0	60
Grp Sat Flow(s),veh/h/ln	1810	1749	1828	1810	1791	1716	1810	1870	1601	1810	0	1755
Q Serve(g_s), s	3.5	10.5	10.5	2.3	0.0	0.0	1.1	4.4	0.9	8.0	0.0	4.1
Cycle Q Clear(g_c), s	3.5	10.5	10.5	2.3	0.0	0.0	1.1	4.4	0.9	8.0	0.0	4.1
Prop In Lane	1.00		0.04	1.00		0.48	1.00		1.00	1.00		0.45
Lane Grp Cap(c), veh/h	63	1291	1350	42	1301	1247	19	101	86	111	0	184
V/C Ratio(X)	0.77	0.32	0.32	0.78	0.52	0.53	0.83	0.64	0.13	1.32	0.00	0.33
Avail Cap(c_a), veh/h	167	1291	1350	111	1301	1247	111	317	271	111	0	297
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.66	0.66	0.66	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	62.2	5.8	5.8	61.6	0.0	0.0	64.2	60.3	58.6	61.0	0.0	53.9
Incr Delay (d2), s/veh	7.2	0.7	0.6	7.6	1.0	1.1	27.3	2.5	0.2	193.6	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	3.7	3.8	1.1	0.4	0.4	0.7	2.2	0.3	9.7	0.0	1.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	69.4	6.5	6.5	69.2	1.0	1.1	91.5	62.8	58.8	254.6	0.0	54.3
LnGrp LOS	E	A	A	E	A	A	F	E	E	F	A	D
Approach Vol, veh/h		891			1370			92			207	
Approach Delay, s/veh		9.9			2.7			67.3			196.6	
Approach LOS		A			A			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.0	100.0	5.4	17.6	8.6	98.4	12.0	11.0
Change Period (Y+Rc), s	4.0	5.0	4.0	4.0	4.0	5.0	4.0	4.0
Max Green Setting (Gmax), s	8.0	75.0	8.0	22.0	12.0	71.0	8.0	22.0
Max Q Clear Time (g_c+I1), s	4.3	12.5	3.1	6.1	5.5	2.0	10.0	6.4
Green Ext Time (p_c), s	0.0	1.1	0.0	0.1	0.0	2.1	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	23.2
HCM 6th LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	165	730	10	455	1130	65	10	105	245	280	90	120
Future Volume (veh/h)	165	730	10	455	1130	65	10	105	245	280	90	120
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1900	1885	1885	1900	1811	1811	1900	1826	1826
Adj Flow Rate, veh/h	172	760	10	474	1177	68	10	109	255	292	94	125
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	3	3	3	0	1	1	0	6	6	0	5	5
Cap, veh/h	220	1850	24	432	1990	115	13	202	294	223	416	347
Arrive On Green	0.13	1.00	1.00	0.12	0.58	0.57	0.01	0.11	0.11	0.12	0.23	0.23
Sat Flow, veh/h	3428	3563	47	3510	3442	199	1810	1811	2638	1810	1826	1526
Grp Volume(v), veh/h	172	376	394	474	612	633	10	109	255	292	94	125
Grp Sat Flow(s),veh/h/ln	1714	1763	1847	1755	1791	1849	1810	1811	1319	1810	1826	1526
Q Serve(g_s), s	6.3	0.0	0.0	16.0	28.5	28.6	0.7	7.4	12.4	16.0	5.4	9.0
Cycle Q Clear(g_c), s	6.3	0.0	0.0	16.0	28.5	28.6	0.7	7.4	12.4	16.0	5.4	9.0
Prop In Lane	1.00		0.03	1.00		0.11	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	220	915	959	432	1035	1069	13	202	294	223	416	347
V/C Ratio(X)	0.78	0.41	0.41	1.10	0.59	0.59	0.79	0.54	0.87	1.31	0.23	0.36
Avail Cap(c_a), veh/h	527	915	959	432	1035	1069	139	265	386	223	416	347
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.93	0.93	0.93	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.8	0.0	0.0	57.0	17.6	17.6	64.5	54.6	56.8	57.0	40.9	42.2
Incr Delay (d2), s/veh	2.1	1.3	1.2	72.2	2.5	2.4	32.0	0.8	12.4	168.3	0.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	0.3	0.3	11.4	12.0	12.4	0.4	3.4	4.6	17.7	2.5	3.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	57.9	1.3	1.2	129.2	20.1	20.0	96.4	55.4	69.2	225.3	41.0	42.5
LnGrp LOS	E	A	A	F	C	C	F	E	E	F	D	D
Approach Vol, veh/h		942			1719			374			511	
Approach Delay, s/veh		11.6			50.1			65.9			146.7	
Approach LOS		B			D			E			F	

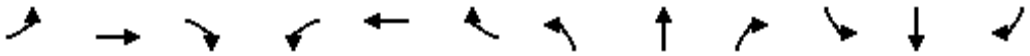
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	20.0	71.5	4.9	33.6	12.3	79.2	20.0	18.5
Change Period (Y+Rc), s	4.0	5.0	4.0	4.0	4.0	5.0	4.0	4.0
Max Green Setting (Gmax), s	16.0	62.0	10.0	25.0	20.0	58.0	16.0	19.0
Max Q Clear Time (g_c+I1), s	18.0	2.0	2.7	11.0	8.3	30.6	18.0	14.4
Green Ext Time (p_c), s	0.0	1.0	0.0	0.1	0.0	1.8	0.0	0.1

Intersection Summary	
HCM 6th Ctrl Delay	55.5
HCM 6th LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	695	1015	480	1820	0	0	0	0	270	15	385
Future Volume (veh/h)	0	695	1015	480	1820	0	0	0	0	270	15	385
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1856	1885	1885	1885	0				1870	1648	1870
Adj Flow Rate, veh/h	0	724	1057	500	1896	0				281	16	401
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96				0.96	0.96	0.96
Percent Heavy Veh, %	0	3	1	1	1	0				2	17	2
Cap, veh/h	0	1509	684	394	2468	0				339	19	634
Arrive On Green	0.00	0.43	0.43	0.22	0.69	0.00				0.21	0.23	0.23
Sat Flow, veh/h	0	3618	1598	1795	3676	0				1489	85	2790
Grp Volume(v), veh/h	0	724	1057	500	1896	0				297	0	401
Grp Sat Flow(s),veh/h/ln	0	1763	1598	1795	1791	0				1574	0	1395
Q Serve(g_s), s	0.0	14.2	41.0	21.0	33.5	0.0				17.3	0.0	12.4
Cycle Q Clear(g_c), s	0.0	14.2	41.0	21.0	33.5	0.0				17.3	0.0	12.4
Prop In Lane	0.00		1.00	1.00		0.00				0.95		1.00
Lane Grp Cap(c), veh/h	0	1509	684	394	2468	0				358	0	634
V/C Ratio(X)	0.00	0.48	1.55	1.27	0.77	0.00				0.83	0.00	0.63
Avail Cap(c_a), veh/h	0	1509	684	394	2468	0				674	0	1194
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	19.7	27.4	37.4	9.8	0.0				36.2	0.0	33.4
Incr Delay (d2), s/veh	0.0	0.1	252.7	140.2	1.4	0.0				1.9	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	5.5	62.5	24.3	11.3	0.0				6.6	0.0	4.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	19.8	280.1	177.6	11.2	0.0				38.1	0.0	33.8
LnGrp LOS	A	B	F	F	B	A				D	A	C
Approach Vol, veh/h		1781			2396						698	
Approach Delay, s/veh		174.3			45.9						35.6	
Approach LOS		F			D						D	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	25.0	45.0		25.8		70.0
Change Period (Y+Rc), s	6.0	6.0		6.0		6.0
Max Green Setting (Gmax), s	19.0	39.0		39.0		39.0
Max Q Clear Time (g_c+I1), s	23.0	43.0		19.3		35.5
Green Ext Time (p_c), s	0.0	0.0		0.5		2.0

Intersection Summary	
HCM 6th Ctrl Delay	91.3
HCM 6th LOS	F



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	245	720	0	0	1110	250	1190	0	505	0	0	0
Future Volume (vph)	245	720	0	0	1110	250	1190	0	505	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0		4.0	4.0	4.0			
Lane Util. Factor	1.00	0.95			0.95		0.95	0.95	1.00			
Frpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00			
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00			
Frt	1.00	1.00			0.97		1.00	1.00	0.85			
Flt Protected	0.95	1.00			1.00		0.95	0.95	1.00			
Satd. Flow (prot)	1770	3505			3457		1698	1698	1568			
Flt Permitted	0.95	1.00			1.00		0.95	0.95	1.00			
Satd. Flow (perm)	1770	3505			3457		1698	1698	1568			
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	261	766	0	0	1181	266	1266	0	537	0	0	0
RTOR Reduction (vph)	0	0	0	0	17	0	0	0	89	0	0	0
Lane Group Flow (vph)	261	766	0	0	1430	0	633	633	448	0	0	0
Confl. Peds. (#/hr)			1	1								
Heavy Vehicles (%)	2%	3%	0%	0%	1%	4%	1%	0%	3%	0%	0%	0%
Turn Type	Prot	NA			NA		Perm	NA	Perm			
Protected Phases	5	2			6			4				
Permitted Phases							4		4			
Actuated Green, G (s)	16.6	51.9			29.3		39.9	39.9	39.9			
Effective Green, g (s)	18.6	53.9			31.3		41.9	41.9	41.9			
Actuated g/C Ratio	0.18	0.52			0.30		0.40	0.40	0.40			
Clearance Time (s)	6.0	6.0			6.0		6.0	6.0	6.0			
Vehicle Extension (s)	0.5	0.5			0.5		0.5	0.5	0.5			
Lane Grp Cap (vph)	317	1820			1042		685	685	632			
v/s Ratio Prot	c0.15	0.22			c0.41							
v/s Ratio Perm							c0.37	0.37	0.29			
v/c Ratio	0.82	0.42			1.37		0.92	0.92	0.71			
Uniform Delay, d1	41.0	15.3			36.2		29.4	29.4	25.8			
Progression Factor	1.00	1.00			1.00		1.00	1.00	1.00			
Incremental Delay, d2	15.0	0.1			173.8		17.9	17.9	3.0			
Delay (s)	56.1	15.4			210.1		47.4	47.4	28.8			
Level of Service	E	B			F		D	D	C			
Approach Delay (s)		25.7			210.1			41.9			0.0	
Approach LOS		C			F			D			A	

Intersection Summary			
HCM 2000 Control Delay	94.9	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.08		
Actuated Cycle Length (s)	103.8	Sum of lost time (s)	14.0
Intersection Capacity Utilization	115.2%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	125	555	415	65	410	35	555	500	140	115	630	125
Future Volume (veh/h)	125	555	415	65	410	35	555	500	140	115	630	125
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1870	1841	1885	1885	1900	1826	1826	1781	1870	1856
Adj Flow Rate, veh/h	134	597	446	70	441	38	597	538	151	124	677	134
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	4	4	2	4	1	1	0	5	5	8	2	3
Cap, veh/h	178	634	546	100	514	44	250	788	220	174	920	407
Arrive On Green	0.10	0.34	0.34	0.06	0.30	0.28	0.14	0.29	0.27	0.10	0.26	0.26
Sat Flow, veh/h	1753	1841	1585	1753	1711	147	1810	2677	748	1697	3554	1572
Grp Volume(v), veh/h	134	597	446	70	0	479	597	348	341	124	677	134
Grp Sat Flow(s),veh/h/ln	1753	1841	1585	1753	0	1859	1810	1735	1691	1697	1777	1572
Q Serve(g_s), s	5.9	25.0	20.4	3.1	0.0	19.3	11.0	14.1	14.3	5.6	13.9	5.5
Cycle Q Clear(g_c), s	5.9	25.0	20.4	3.1	0.0	19.3	11.0	14.1	14.3	5.6	13.9	5.5
Prop In Lane	1.00		1.00	1.00		0.08	1.00		0.44	1.00		1.00
Lane Grp Cap(c), veh/h	178	634	546	100	0	559	250	510	498	174	920	407
V/C Ratio(X)	0.75	0.94	0.82	0.70	0.00	0.86	2.39	0.68	0.69	0.71	0.74	0.33
Avail Cap(c_a), veh/h	242	634	546	242	0	607	250	566	552	234	1161	514
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.8	25.3	23.8	36.8	0.0	26.3	34.3	24.8	25.3	34.6	27.0	23.9
Incr Delay (d2), s/veh	7.3	22.2	9.1	6.3	0.0	10.7	636.7	2.6	2.8	5.1	1.6	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	13.6	8.2	1.4	0.0	9.2	48.7	5.6	5.6	2.5	5.8	1.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	42.1	47.5	32.9	43.2	0.0	37.0	671.0	27.4	28.0	39.7	28.6	24.2
LnGrp LOS	D	D	C	D	A	D	F	C	C	D	C	C
Approach Vol, veh/h		1177			549			1286			935	
Approach Delay, s/veh		41.4			37.8			326.4			29.5	
Approach LOS		D			D			F			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.0	24.6	12.1	27.9	12.2	27.4	8.6	31.4
Change Period (Y+Rc), s	4.5	6.0	4.5	6.0	4.5	6.0	4.5	6.0
Max Green Setting (Gmax), s	10.5	24.0	10.5	24.0	10.5	24.0	10.5	24.0
Max Q Clear Time (g_c+I1), s	13.3	15.9	7.9	21.3	7.6	16.3	5.1	27.0
Green Ext Time (p_c), s	0.0	2.7	0.1	0.6	0.1	2.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	130.9
HCM 6th LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	145	220	205	190	300	130	215	1085	110	145	880	100
Future Volume (veh/h)	145	220	205	190	300	130	215	1085	110	145	880	100
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.96	1.00		0.99	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1710	1697	1683	1697	1710	1697	1697	1697	1697	1697	1683	1683
Adj Flow Rate, veh/h	153	232	216	200	316	137	226	1142	116	153	926	105
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	1	2	1	0	1	1	1	1	1	2	2
Cap, veh/h	175	250	201	222	303	245	248	1421	144	173	1269	144
Arrive On Green	0.11	0.15	0.15	0.14	0.18	0.18	0.15	0.48	0.48	0.21	0.88	0.87
Sat Flow, veh/h	1629	1697	1365	1616	1710	1387	1616	2950	299	1616	2890	328
Grp Volume(v), veh/h	153	232	216	200	316	137	226	623	635	153	512	519
Grp Sat Flow(s),veh/h/ln	1629	1697	1365	1616	1710	1387	1616	1612	1638	1616	1599	1618
Q Serve(g_s), s	12.0	17.6	19.1	15.8	23.0	11.7	17.9	42.5	42.7	11.9	14.1	14.3
Cycle Q Clear(g_c), s	12.0	17.6	19.1	15.8	23.0	11.7	17.9	42.5	42.7	11.9	14.1	14.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.18	1.00		0.20
Lane Grp Cap(c), veh/h	175	250	201	222	303	245	248	777	789	173	702	711
V/C Ratio(X)	0.87	0.93	1.07	0.90	1.04	0.56	0.91	0.80	0.80	0.89	0.73	0.73
Avail Cap(c_a), veh/h	194	250	201	242	303	245	360	777	789	186	702	711
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	0.84	0.84	0.84	1.00	1.00	1.00	1.00	1.00	1.00	0.89	0.89	0.89
Uniform Delay (d), s/veh	57.1	54.8	55.4	55.2	53.5	48.9	54.2	28.5	28.5	50.3	5.3	5.4
Incr Delay (d2), s/veh	25.2	33.5	79.3	30.1	63.8	1.7	16.6	8.6	8.6	30.4	5.9	5.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.2	9.8	11.0	8.3	15.2	4.2	8.4	17.7	18.1	5.7	3.2	3.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	82.4	88.3	134.8	85.3	117.3	50.6	70.8	37.0	37.1	80.7	11.2	11.2
LnGrp LOS	F	F	F	F	F	D	E	D	D	F	B	B
Approach Vol, veh/h		601			653			1484			1184	
Approach Delay, s/veh		103.5			93.5			42.2			20.2	
Approach LOS		F			F			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.9	67.1	21.8	23.1	23.9	61.1	18.0	27.0
Change Period (Y+Rc), s	4.0	4.5	4.0	4.0	4.0	4.5	4.0	4.0
Max Green Setting (Gmax), s	15.9	60.0	19.5	19.0	29.0	46.0	15.5	23.0
Max Q Clear Time (g_c+I1), s	13.9	44.7	17.8	21.1	19.9	16.3	14.0	25.0
Green Ext Time (p_c), s	0.0	1.8	0.0	0.0	0.0	1.4	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	53.5
HCM 6th LOS	D

Intersection	
Intersection Delay, s/veh	9.9
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	489	505	525	206
Demand Flow Rate, veh/h	494	511	530	207
Vehicles Circulating, veh/h	306	367	286	681
Vehicles Exiting, veh/h	582	449	514	197
Ped Vol Crossing Leg, #/h	0	0	2	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	9.4	10.9	9.8	9.0
Approach LOS	A	B	A	A

Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	494	511	530	207
Cap Entry Lane, veh/h	1010	949	1031	689
Entry HV Adj Factor	0.989	0.988	0.990	0.994
Flow Entry, veh/h	489	505	525	206
Cap Entry, veh/h	999	938	1020	685
V/C Ratio	0.489	0.538	0.514	0.300
Control Delay, s/veh	9.4	10.9	9.8	9.0
LOS	A	B	A	A
95th %tile Queue, veh	3	3	3	1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	635	40	450	870	310	95	1195	630	195	905	175
Future Volume (veh/h)	40	635	40	450	870	310	95	1195	630	195	905	175
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1856	1885	1885	1870	1826	1885	1856	1885	1870	1856	1900
Adj Flow Rate, veh/h	41	648	41	459	888	316	97	1219	0	199	923	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	3	1	1	2	5	1	3	1	2	3	0
Cap, veh/h	111	343	289	359	604	492	134	1193		260	1472	
Arrive On Green	0.06	0.18	0.18	0.20	0.32	0.32	0.07	0.34	0.00	0.15	0.42	0.00
Sat Flow, veh/h	1810	1856	1566	1795	1870	1522	1795	3526	1598	1781	3526	1610
Grp Volume(v), veh/h	41	648	41	459	888	316	97	1219	0	199	923	0
Grp Sat Flow(s),veh/h/ln	1810	1856	1566	1795	1870	1522	1795	1763	1598	1781	1763	1610
Q Serve(g_s), s	2.8	24.0	2.3	26.0	42.0	23.1	6.9	44.0	0.0	14.0	26.9	0.0
Cycle Q Clear(g_c), s	2.8	24.0	2.3	26.0	42.0	23.1	6.9	44.0	0.0	14.0	26.9	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	111	343	289	359	604	492	134	1193		260	1472	
V/C Ratio(X)	0.37	1.89	0.14	1.28	1.47	0.64	0.72	1.02		0.76	0.63	
Avail Cap(c_a), veh/h	111	343	289	359	604	492	290	1193		274	1472	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	58.6	53.0	29.4	52.0	44.0	37.6	58.8	43.0	0.0	53.3	29.9	0.0
Incr Delay (d2), s/veh	2.0	412.1	0.2	145.1	220.2	2.2	7.1	31.6	0.0	11.5	2.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	50.3	1.1	26.0	56.0	8.8	3.3	23.2	0.0	6.8	11.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	60.6	465.1	29.6	197.1	264.2	39.8	65.9	74.6	0.0	64.9	31.9	0.0
LnGrp LOS	E	F	C	F	F	D	E	F		E	C	
Approach Vol, veh/h		730			1663			1316	A		1122	A
Approach Delay, s/veh		417.9			203.1			74.0			37.8	
Approach LOS		F			F			E			D	

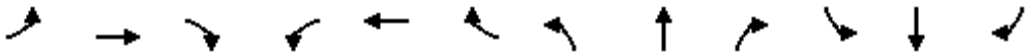
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.7	58.3	12.0	46.0	24.0	48.0	30.0	28.0
Change Period (Y+Rc), s	5.0	6.0	5.0	5.0	6.0	* 6	5.0	5.0
Max Green Setting (Gmax), s	20.6	41.0	7.0	41.0	19.0	* 42	25.0	23.0
Max Q Clear Time (g_c+I1), s	18.9	28.9	4.8	44.0	16.0	46.0	28.0	26.0
Green Ext Time (p_c), s	0.1	5.1	0.0	0.0	0.1	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	162.0
HCM 6th LOS	F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [NBR, SBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	90	30	265	125	180	25	135	115	240	200	25
Future Volume (veh/h)	10	90	30	265	125	180	25	135	115	240	200	25
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1604	1870	1870	1870	1841	1841	1856	1856	1856	1870	1870	1870
Adj Flow Rate, veh/h	10	94	31	276	130	188	26	141	120	250	208	26
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	20	2	2	2	4	4	3	3	3	2	2	2
Cap, veh/h	258	422	139	455	210	304	109	496	386	475	375	43
Arrive On Green	0.31	0.31	0.30	0.31	0.31	0.30	0.54	0.55	0.54	0.54	0.55	0.54
Sat Flow, veh/h	910	1346	444	1266	671	970	75	903	703	695	682	78
Grp Volume(v), veh/h	10	0	125	276	0	318	287	0	0	484	0	0
Grp Sat Flow(s),veh/h/ln	910	0	1790	1266	0	1641	1682	0	0	1455	0	0
Q Serve(g_s), s	0.6	0.0	3.0	12.0	0.0	9.6	0.0	0.0	0.0	6.4	0.0	0.0
Cycle Q Clear(g_c), s	10.2	0.0	3.0	15.0	0.0	9.6	5.3	0.0	0.0	11.7	0.0	0.0
Prop In Lane	1.00		0.25	1.00		0.59	0.09		0.42	0.52		0.05
Lane Grp Cap(c), veh/h	258	0	561	455	0	514	977	0	0	881	0	0
V/C Ratio(X)	0.04	0.00	0.22	0.61	0.00	0.62	0.29	0.00	0.00	0.55	0.00	0.00
Avail Cap(c_a), veh/h	285	0	615	493	0	564	977	0	0	881	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	21.4	0.0	14.8	20.3	0.0	17.2	7.2	0.0	0.0	8.4	0.0	0.0
Incr Delay (d2), s/veh	0.1	0.0	0.2	1.9	0.0	1.8	0.8	0.0	0.0	2.5	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	1.0	3.2	0.0	3.2	1.4	0.0	0.0	2.9	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	21.5	0.0	15.0	22.2	0.0	19.0	7.9	0.0	0.0	10.8	0.0	0.0
LnGrp LOS	C	A	B	C	A	B	A	A	A	B	A	A
Approach Vol, veh/h		135			594			287			484	
Approach Delay, s/veh		15.5			20.5			7.9			10.8	
Approach LOS		B			C			A			B	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		36.0		22.2		36.0		22.2				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		31.5		19.5		31.5		19.5				
Max Q Clear Time (g_c+I1), s		7.3		12.2		13.7		17.0				
Green Ext Time (p_c), s		1.5		0.3		2.7		0.7				

Intersection Summary												
HCM 6th Ctrl Delay			14.5									
HCM 6th LOS			B									

Intersection	
Int Delay, s/veh	141.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	390	330	395	280	0	0	0	0	190	0	440
Future Vol, veh/h	0	390	330	395	280	0	0	0	0	190	0	440
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	180	-	-	-	-	-	-	-	100
Veh in Median Storage, #	-	0	-	-	0	-	-	16974	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	12	9	3	12	0	0	0	0	0	0	10
Mvmt Flow	0	411	347	416	295	0	0	0	0	200	0	463

Major/Minor	Major1			Major2			Minor2		
Conflicting Flow All	-	0	0	758	0	0	1712	1885	295
Stage 1	-	-	-	-	-	-	1127	1127	-
Stage 2	-	-	-	-	-	-	585	758	-
Critical Hdwy	-	-	-	4.13	-	-	6.4	6.5	6.3
Critical Hdwy Stg 1	-	-	-	-	-	-	5.4	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5.4	5.5	-
Follow-up Hdwy	-	-	-	2.227	-	-	3.5	4	3.39
Pot Cap-1 Maneuver	0	-	-	849	-	0	~ 101	71	726
Stage 1	0	-	-	-	-	0	312	282	-
Stage 2	0	-	-	-	-	0	561	418	-
Platoon blocked, %		-	-		-				
Mov Cap-1 Maneuver	-	-	-	849	-	-	~ 52	0	726
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 52	0	-
Stage 1	-	-	-	-	-	-	312	0	-
Stage 2	-	-	-	-	-	-	286	0	-

Approach	EB	WB	SB
HCM Control Delay, s	0	7.7	$ 447.9
HCM LOS			F

Minor Lane/Major Mvmt	EBT	EBR	WBL	WBT	SBLn1	SBLn2
Capacity (veh/h)	-	-	849	-	52	726
HCM Lane V/C Ratio	-	-	0.49	-	3.846	0.638
HCM Control Delay (s)	-	-	13.2	-	$ 1442.6	18.3
HCM Lane LOS	-	-	B	-	F	C
HCM 95th %tile Q(veh)	-	-	2.7	-	21.9	4.6

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

Intersection	
Int Delay, s/veh	148.7

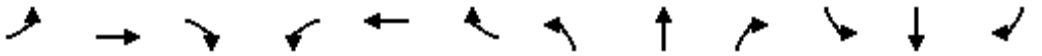
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	350	230	0	0	505	200	170	0	290	0	0	0
Future Vol, veh/h	350	230	0	0	505	200	170	0	290	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	155	-	-	-	-	-	-	-	100	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	16965	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	18	4	0	0	4	0	14	0	4	0	0	0
Mvmt Flow	385	253	0	0	555	220	187	0	319	0	0	0

Major/Minor	Major1			Major2			Minor1		
Conflicting Flow All	775	0	-	-	-	0	1688	1798	253
Stage 1	-	-	-	-	-	-	1023	1023	-
Stage 2	-	-	-	-	-	-	665	775	-
Critical Hdwy	4.28	-	-	-	-	-	6.54	6.5	6.24
Critical Hdwy Stg 1	-	-	-	-	-	-	5.54	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5.54	5.5	-
Follow-up Hdwy	2.362	-	-	-	-	-	3.626	4	3.336
Pot Cap-1 Maneuver	774	-	0	0	-	-	~ 96	81	781
Stage 1	-	-	0	0	-	-	330	316	-
Stage 2	-	-	0	0	-	-	490	411	-
Platoon blocked, %		-			-	-			
Mov Cap-1 Maneuver	774	-	-	-	-	-	~ 48	0	781
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 48	0	-
Stage 1	-	-	-	-	-	-	~ 166	0	-
Stage 2	-	-	-	-	-	-	490	0	-

Approach	EB	WB	NB
HCM Control Delay, s	8.5	0	$ 553.4
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	WBT	WBR
Capacity (veh/h)	48	781	774	-	-	-
HCM Lane V/C Ratio	3.892	0.408	0.497	-	-	-
HCM Control Delay (s)	$ 1475.5	12.8	14.2	-	-	-
HCM Lane LOS	F	B	B	-	-	-
HCM 95th %tile Q(veh)	20.7	2	2.8	-	-	-

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	255	90	295	40	150	55	95	595	40	50	480	390
Future Volume (veh/h)	255	90	295	40	150	55	95	595	40	50	480	390
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1796	1796	1856	1870	1870	1870	1811	1856	1856	1900	1870	1826
Adj Flow Rate, veh/h	268	95	0	42	158	58	100	626	42	53	505	411
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	7	7	3	2	2	2	6	3	3	0	2	5
Cap, veh/h	397	110		122	427	143	313	758	51	248	780	646
Arrive On Green	0.35	0.36	0.00	0.35	0.36	0.35	0.06	0.44	0.42	0.04	0.42	0.42
Sat Flow, veh/h	867	307	1572	181	1189	397	1725	1719	115	1810	1870	1547
Grp Volume(v), veh/h	363	0	0	258	0	0	100	0	668	53	505	411
Grp Sat Flow(s),veh/h/ln	1175	0	1572	1768	0	0	1725	0	1835	1810	1870	1547
Q Serve(g_s), s	13.7	0.0	0.0	0.0	0.0	0.0	2.4	0.0	23.5	1.2	15.8	15.4
Cycle Q Clear(g_c), s	21.7	0.0	0.0	8.0	0.0	0.0	2.4	0.0	23.5	1.2	15.8	15.4
Prop In Lane	0.74		1.00	0.16		0.22	1.00		0.06	1.00		1.00
Lane Grp Cap(c), veh/h	491	0		668	0	0	313	0	809	248	780	646
V/C Ratio(X)	0.74	0.00		0.39	0.00	0.00	0.32	0.00	0.83	0.21	0.65	0.64
Avail Cap(c_a), veh/h	672	0		914	0	0	399	0	1077	381	1098	909
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.8	0.0	0.0	17.7	0.0	0.0	13.2	0.0	18.0	15.2	17.0	16.9
Incr Delay (d2), s/veh	2.3	0.0	0.0	0.3	0.0	0.0	0.4	0.0	4.7	0.3	1.3	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.9	0.0	0.0	3.2	0.0	0.0	0.8	0.0	9.5	0.5	6.2	5.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.1	0.0	0.0	18.0	0.0	0.0	13.6	0.0	22.8	15.6	18.3	18.4
LnGrp LOS	C	A		B	A	A	B	A	C	B	B	B
Approach Vol, veh/h		363	A		258			768			969	
Approach Delay, s/veh		25.1			18.0			21.6			18.2	
Approach LOS		C			B			C			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.6	36.3		30.3	8.4	34.6		30.3				
Change Period (Y+Rc), s	4.5	* 5.4		5.0	4.5	* 5.4		5.0				
Max Green Setting (Gmax), s	7.5	* 42		36.0	7.5	* 42		36.0				
Max Q Clear Time (g_c+I1), s	3.2	25.5		23.7	4.4	17.8		10.0				
Green Ext Time (p_c), s	0.0	5.4		1.6	0.0	7.1		1.2				

Intersection Summary	
HCM 6th Ctrl Delay	20.3
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Int Delay, s/veh	2.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	0	0	0	65	0	20	0	70	55	15	180	0
Future Vol, veh/h	0	0	0	65	0	20	0	70	55	15	180	0
Conflicting Peds, #/hr	0	0	0	2	0	0	0	0	2	2	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	89	92	89	92	89	89	89	89	92
Heavy Vehicles, %	2	2	2	0	2	0	2	2	2	8	0	2
Mvmt Flow	0	0	0	73	0	22	0	79	62	17	202	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	357	379	204	350	348	112	202	0	0	143	0	0
Stage 1	236	236	-	112	112	-	-	-	-	-	-	-
Stage 2	121	143	-	238	236	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.1	6.52	6.2	4.12	-	-	4.18	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.1	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.1	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.5	4.018	3.3	2.218	-	-	2.272	-	-
Pot Cap-1 Maneuver	598	553	837	608	576	947	1370	-	-	1404	-	-
Stage 1	767	710	-	898	803	-	-	-	-	-	-	-
Stage 2	883	779	-	770	710	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	578	544	835	599	567	945	1370	-	-	1401	-	-
Mov Cap-2 Maneuver	578	544	-	599	567	-	-	-	-	-	-	-
Stage 1	767	700	-	896	801	-	-	-	-	-	-	-
Stage 2	862	777	-	758	700	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	11.4	0	0.6
HCM LOS	A	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1370	-	-	-	655	1401	-	-
HCM Lane V/C Ratio	-	-	-	-	0.146	0.012	-	-
HCM Control Delay (s)	0	-	-	0	11.4	7.6	0	-
HCM Lane LOS	A	-	-	A	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	-	0.5	0	-	-

Intersection	
Int Delay, s/veh	32.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	25	55	20	110	120	100	35	170	80	80	405	30
Future Vol, veh/h	25	55	20	110	120	100	35	170	80	80	405	30
Conflicting Peds, #/hr	0	0	1	1	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	Stop	-	-	None	-	-	None
Storage Length	-	-	30	-	-	50	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	0	6	6	0	0	7	0	2	0	8	1	0
Mvmt Flow	26	57	21	113	124	103	36	175	82	82	418	31

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	948	927	435	926	901	216	449	0	0	257	0	0
Stage 1	598	598	-	288	288	-	-	-	-	-	-	-
Stage 2	350	329	-	638	613	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.56	6.26	7.1	6.5	6.27	4.1	-	-	4.18	-	-
Critical Hdwy Stg 1	6.1	5.56	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.56	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4.054	3.354	3.5	4	3.363	2.2	-	-	2.272	-	-
Pot Cap-1 Maneuver	243	264	613	251	280	811	1122	-	-	1274	-	-
Stage 1	492	485	-	724	677	-	-	-	-	-	-	-
Stage 2	671	639	-	468	486	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	117	232	612	179	246	811	1122	-	-	1274	-	-
Mov Cap-2 Maneuver	117	232	-	179	246	-	-	-	-	-	-	-
Stage 1	473	443	-	696	651	-	-	-	-	-	-	-
Stage 2	456	615	-	360	444	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	35.7	108.3	1	1.2
HCM LOS	E	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1122	-	-	177	612	209	811	1274	-	-
HCM Lane V/C Ratio	0.032	-	-	0.466	0.034	1.135	0.127	0.065	-	-
HCM Control Delay (s)	8.3	0	-	41.9	11.1	151	10.1	8	0	-
HCM Lane LOS	A	A	-	E	B	F	B	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	2.2	0.1	11.3	0.4	0.2	-	-

Intersection	
Int Delay, s/veh	2.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	155	50	15	210	80	25
Future Vol, veh/h	155	50	15	210	80	25
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	82	82	82	82	82	82
Heavy Vehicles, %	7	0	0	3	0	0
Mvmt Flow	189	61	18	256	98	30

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	250	0	512	220
Stage 1	-	-	-	-	220	-
Stage 2	-	-	-	-	292	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1327	-	525	825
Stage 1	-	-	-	-	821	-
Stage 2	-	-	-	-	762	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1327	-	517	825
Mov Cap-2 Maneuver	-	-	-	-	517	-
Stage 1	-	-	-	-	821	-
Stage 2	-	-	-	-	750	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.5	13.2
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	567	-	-	1327	-
HCM Lane V/C Ratio	0.226	-	-	0.014	-
HCM Control Delay (s)	13.2	-	-	7.8	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.9	-	-	0	-

Intersection	
Int Delay, s/veh	19.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	95	115	105	485	645	95
Future Vol, veh/h	95	115	105	485	645	95
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	240	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	4	4	5	1	2
Mvmt Flow	100	121	111	511	679	100

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1462	729	779	0	-	0
Stage 1	729	-	-	-	-	-
Stage 2	733	-	-	-	-	-
Critical Hdwy	6.4	6.24	4.14	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.336	2.236	-	-	-
Pot Cap-1 Maneuver	143	420	829	-	-	-
Stage 1	481	-	-	-	-	-
Stage 2	479	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	124	420	829	-	-	-
Mov Cap-2 Maneuver	124	-	-	-	-	-
Stage 1	417	-	-	-	-	-
Stage 2	479	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	140.1	1.8	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	829	-	202	-	-
HCM Lane V/C Ratio	0.133	-	1.094	-	-
HCM Control Delay (s)	10	-	140.1	-	-
HCM Lane LOS	B	-	F	-	-
HCM 95th %tile Q(veh)	0.5	-	10.4	-	-

Intersection	
Int Delay, s/veh	6.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	150	25	285	70	15	515
Future Vol, veh/h	150	25	285	70	15	515
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	1	0	2	2	0	1
Mvmt Flow	172	29	328	80	17	592

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	994	368	0	0	408	0
Stage 1	368	-	-	-	-	-
Stage 2	626	-	-	-	-	-
Critical Hdwy	6.41	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.41	-	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-	-
Follow-up Hdwy	3.509	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	273	682	-	-	1162	-
Stage 1	702	-	-	-	-	-
Stage 2	535	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	267	682	-	-	1162	-
Mov Cap-2 Maneuver	267	-	-	-	-	-
Stage 1	702	-	-	-	-	-
Stage 2	523	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	40.7	0	0.2
HCM LOS	E		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	292	1162	-
HCM Lane V/C Ratio	-	-	0.689	0.015	-
HCM Control Delay (s)	-	-	40.7	8.1	0
HCM Lane LOS	-	-	E	A	A
HCM 95th %tile Q(veh)	-	-	4.7	0	-

Intersection	
Int Delay, s/veh	7.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	25	60	50	75	10	100	95	70	20	45	5
Future Vol, veh/h	5	25	60	50	75	10	100	95	70	20	45	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	0	5	0	0	1	0	0	0	0	0	5	0
Mvmt Flow	6	28	68	57	85	11	114	108	80	23	51	6

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	524	516	54	524	479	148	57	0	0	188	0	0
Stage 1	100	100	-	376	376	-	-	-	-	-	-	-
Stage 2	424	416	-	148	103	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.55	6.2	7.1	6.51	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.55	-	6.1	5.51	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.55	-	6.1	5.51	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4.045	3.3	3.5	4.009	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	467	459	1019	467	487	904	1560	-	-	1398	-	-
Stage 1	911	806	-	649	618	-	-	-	-	-	-	-
Stage 2	612	587	-	859	812	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	364	414	1019	382	439	904	1560	-	-	1398	-	-
Mov Cap-2 Maneuver	364	414	-	382	439	-	-	-	-	-	-	-
Stage 1	836	792	-	596	567	-	-	-	-	-	-	-
Stage 2	471	539	-	760	798	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	11.3	17.9	2.8	2.2
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1560	-	-	677	432	1398	-	-
HCM Lane V/C Ratio	0.073	-	-	0.151	0.355	0.016	-	-
HCM Control Delay (s)	7.5	-	-	11.3	17.9	7.6	0	-
HCM Lane LOS	A	-	-	B	C	A	A	-
HCM 95th %tile Q(veh)	0.2	-	-	0.5	1.6	0.1	-	-

Intersection	
Int Delay, s/veh	3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	20	95	90	585	705	40
Future Vol, veh/h	20	95	90	585	705	40
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	0	6	0	4	2	0
Mvmt Flow	22	102	97	629	758	43

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1603	780	801	0	-	0
Stage 1	780	-	-	-	-	-
Stage 2	823	-	-	-	-	-
Critical Hdwy	6.4	6.26	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.354	2.2	-	-	-
Pot Cap-1 Maneuver	117	389	831	-	-	-
Stage 1	455	-	-	-	-	-
Stage 2	435	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	96	389	831	-	-	-
Mov Cap-2 Maneuver	96	-	-	-	-	-
Stage 1	374	-	-	-	-	-
Stage 2	435	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	31.9	1.3	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	831	-	254	-	-
HCM Lane V/C Ratio	0.116	-	0.487	-	-
HCM Control Delay (s)	9.9	0	31.9	-	-
HCM Lane LOS	A	A	D	-	-
HCM 95th %tile Q(veh)	0.4	-	2.5	-	-

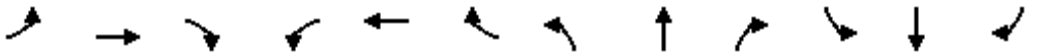
Intersection	
Int Delay, s/veh	4.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	40	100	250	325	555	100
Future Vol, veh/h	40	100	250	325	555	100
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	100	-	-	-
Veh in Median Storage, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	3	1	1	1	1	0
Mvmt Flow	44	111	278	361	617	111

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1590	673	728	0	-	0
Stage 1	673	-	-	-	-	-
Stage 2	917	-	-	-	-	-
Critical Hdwy	6.43	6.21	4.11	-	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.309	2.209	-	-	-
Pot Cap-1 Maneuver	118	457	880	-	-	-
Stage 1	505	-	-	-	-	-
Stage 2	388	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	81	457	880	-	-	-
Mov Cap-2 Maneuver	203	-	-	-	-	-
Stage 1	345	-	-	-	-	-
Stage 2	388	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	24.5	4.8	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	880	-	337	-	-
HCM Lane V/C Ratio	0.316	-	0.462	-	-
HCM Control Delay (s)	11	-	24.5	-	-
HCM Lane LOS	B	-	C	-	-
HCM 95th %tile Q(veh)	1.4	-	2.3	-	-



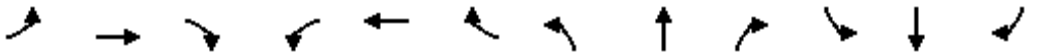
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	5	405	15	5	5	565	905	10	15	775	15
Future Volume (vph)	10	5	405	15	5	5	565	905	10	15	775	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0		4.0	4.0		3.0	4.0	
Lane Util. Factor		1.00	0.88		1.00		0.97	0.95		1.00	0.95	
Frpb, ped/bikes		1.00	0.96		1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Frt		1.00	0.85		0.97		1.00	1.00		1.00	1.00	
Flt Protected		0.97	1.00		0.97		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1837	2663		1711		3502	3564		1805	3564	
Flt Permitted		0.97	1.00		0.97		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1837	2663		1711		3502	3564		1805	3564	
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)	11	5	440	16	5	5	614	984	11	16	842	16
RTOR Reduction (vph)	0	0	399	0	5	0	0	0	0	0	1	0
Lane Group Flow (vph)	0	16	41	0	21	0	614	995	0	16	857	0
Confl. Peds. (#/hr)			7	7			5		4	4		5
Confl. Bikes (#/hr)			1									
Heavy Vehicles (%)	0%	0%	2%	8%	0%	0%	0%	1%	8%	0%	1%	0%
Turn Type	Split	NA	Perm	Split	NA		Prot	NA		Prot	NA	
Protected Phases	4	4		3	3		5	2		1	6	
Permitted Phases			4									
Actuated Green, G (s)		6.3	6.3		2.2		20.6	58.1		1.9	39.4	
Effective Green, g (s)		8.3	8.3		2.7		20.6	61.1		2.9	42.4	
Actuated g/C Ratio		0.09	0.09		0.03		0.23	0.68		0.03	0.47	
Clearance Time (s)		6.0	6.0		4.5		4.0	7.0		4.0	7.0	
Vehicle Extension (s)		1.0	1.0		0.5		0.5	0.5		0.5	0.5	
Lane Grp Cap (vph)		169	245		51		801	2419		58	1679	
v/s Ratio Prot		0.01			c0.01		c0.18	0.28		0.01	c0.24	
v/s Ratio Perm			c0.02									
v/c Ratio		0.09	0.17		0.41		0.77	0.41		0.28	0.51	
Uniform Delay, d1		37.4	37.7		42.9		32.5	6.4		42.5	16.6	
Progression Factor		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.1	0.1		2.0		4.0	0.5		0.9	1.1	
Delay (s)		37.5	37.8		44.9		36.4	7.0		43.5	17.7	
Level of Service		D	D		D		D	A		D	B	
Approach Delay (s)		37.8			44.9			18.2			18.2	
Approach LOS		D			D			B			B	

Intersection Summary			
HCM 2000 Control Delay	21.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	18.5
Intersection Capacity Utilization	56.1%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	125	90	105	125	105	25	45	105	90	10	155	80
Future Volume (veh/h)	125	90	105	125	105	25	45	105	90	10	155	80
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1870	1870	1900	1885	1900
Adj Flow Rate, veh/h	142	102	119	142	119	28	51	119	102	11	176	91
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	0	0	0	0	0	0	0	2	2	0	1	0
Cap, veh/h	621	241	281	550	453	107	630	323	277	610	655	560
Arrive On Green	0.30	0.30	0.30	0.30	0.30	0.30	0.35	0.35	0.35	0.35	0.35	0.35
Sat Flow, veh/h	1260	790	921	1178	1487	350	1130	930	797	1178	1885	1610
Grp Volume(v), veh/h	142	0	221	142	0	147	51	0	221	11	176	91
Grp Sat Flow(s),veh/h/ln	1260	0	1711	1178	0	1837	1130	0	1727	1178	1885	1610
Q Serve(g_s), s	2.2	0.0	2.4	2.5	0.0	1.4	0.8	0.0	2.2	0.2	1.5	0.9
Cycle Q Clear(g_c), s	3.6	0.0	2.4	4.9	0.0	1.4	2.3	0.0	2.2	2.4	1.5	0.9
Prop In Lane	1.00		0.54	1.00		0.19	1.00		0.46	1.00		1.00
Lane Grp Cap(c), veh/h	621	0	521	550	0	560	630	0	600	610	655	560
V/C Ratio(X)	0.23	0.00	0.42	0.26	0.00	0.26	0.08	0.00	0.37	0.02	0.27	0.16
Avail Cap(c_a), veh/h	1387	0	1561	1266	0	1676	1759	0	2326	1787	2539	2169
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	7.4	0.0	6.4	8.3	0.0	6.0	6.2	0.0	5.6	6.5	5.4	5.2
Incr Delay (d2), s/veh	0.1	0.0	0.2	0.1	0.0	0.1	0.0	0.0	0.1	0.0	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	0.4	0.4	0.0	0.3	0.1	0.0	0.3	0.0	0.2	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	7.5	0.0	6.6	8.4	0.0	6.1	6.3	0.0	5.8	6.5	5.5	5.2
LnGrp LOS	A	A	A	A	A	A	A	A	A	A	A	A
Approach Vol, veh/h		363			289			272			278	
Approach Delay, s/veh		6.9			7.3			5.9			5.4	
Approach LOS		A			A			A			A	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	12.0	11.0	12.0	11.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	31.0	21.0	31.0	21.0
Max Q Clear Time (g_c+I1), s	4.4	6.9	4.3	5.6
Green Ext Time (p_c), s	0.2	0.2	0.3	0.3

Intersection Summary	
HCM 6th Ctrl Delay	6.4
HCM 6th LOS	A



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	160	260	165	315	225	205	130	835	275	165	725	125
Future Volume (vph)	160	260	165	315	225	205	130	835	275	165	725	125
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	1.00	0.95	1.00	1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.97	1.00	1.00	0.99	1.00	1.00	0.97	1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1787	1863	1557	3400	1863	1577	1805	3574	1523	1787	3467	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1787	1863	1557	3400	1863	1577	1805	3574	1523	1787	3467	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	165	268	170	325	232	211	134	861	284	170	747	129
RTOR Reduction (vph)	0	0	140	0	0	172	0	0	158	0	8	0
Lane Group Flow (vph)	165	268	30	325	232	39	134	861	126	170	868	0
Confl. Peds. (#/hr)	1		7	7		1	5		3	3		5
Confl. Bikes (#/hr)			1									
Heavy Vehicles (%)	1%	2%	1%	3%	2%	1%	0%	1%	3%	1%	1%	3%
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	3	8		7	4		5	2		1	6	
Permitted Phases			8			4			2			
Actuated Green, G (s)	15.8	23.0	23.0	16.5	23.7	23.7	13.0	59.0	59.0	18.0	64.0	
Effective Green, g (s)	16.8	24.0	24.0	17.5	24.7	24.7	13.5	61.0	61.0	18.5	66.0	
Actuated g/C Ratio	0.12	0.18	0.18	0.13	0.18	0.18	0.10	0.45	0.45	0.14	0.48	
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	4.5	6.0	6.0	4.5	6.0	
Vehicle Extension (s)	1.0	1.0	1.0	1.0	1.0	1.0	0.5	0.5	0.5	0.5	0.5	
Lane Grp Cap (vph)	219	326	272	434	335	284	177	1591	678	241	1670	
v/s Ratio Prot	0.09	c0.14		c0.10	0.12		c0.07	c0.24		c0.10	0.25	
v/s Ratio Perm			0.02			0.02			0.08			
v/c Ratio	0.75	0.82	0.11	0.75	0.69	0.14	0.76	0.54	0.19	0.71	0.52	
Uniform Delay, d1	58.1	54.4	47.5	57.6	52.6	47.2	60.2	27.8	23.0	56.6	24.5	
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	12.2	14.6	0.1	6.1	4.9	0.1	15.0	1.3	0.6	7.4	1.2	
Delay (s)	70.3	69.0	47.6	63.7	57.5	47.3	75.2	29.1	23.6	64.1	25.7	
Level of Service	E	E	D	E	E	D	E	C	C	E	C	
Approach Delay (s)		63.3			57.3			32.7			31.9	
Approach LOS		E			E			C			C	

Intersection Summary			
HCM 2000 Control Delay	42.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	137.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	69.2%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	595	30	60	745	145	25	60	70	165	65	25
Future Volume (veh/h)	20	595	30	60	745	145	25	60	70	165	65	25
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.97	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1841	1841	1826	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	22	626	32	63	784	158	26	65	74	179	71	27
Peak Hour Factor	0.92	0.95	0.95	0.95	0.95	0.92	0.95	0.92	0.95	0.92	0.92	0.92
Percent Heavy Veh, %	2	4	4	5	2	2	2	2	2	2	2	2
Cap, veh/h	252	1075	55	434	935	188	109	191	184	328	104	35
Arrive On Green	0.62	0.62	0.62	0.62	0.62	0.62	0.23	0.24	0.24	0.23	0.24	0.24
Sat Flow, veh/h	595	1736	89	757	1510	304	147	800	770	934	435	148
Grp Volume(v), veh/h	22	0	658	63	0	942	165	0	0	277	0	0
Grp Sat Flow(s),veh/h/ln	595	0	1824	757	0	1814	1717	0	0	1516	0	0
Q Serve(g_s), s	1.7	0.0	12.1	3.0	0.0	23.1	0.0	0.0	0.0	4.7	0.0	0.0
Cycle Q Clear(g_c), s	24.9	0.0	12.1	15.1	0.0	23.1	4.6	0.0	0.0	9.3	0.0	0.0
Prop In Lane	1.00		0.05	1.00		0.17	0.16		0.45	0.65		0.10
Lane Grp Cap(c), veh/h	252	0	1130	434	0	1124	468	0	0	454	0	0
V/C Ratio(X)	0.09	0.00	0.58	0.15	0.00	0.84	0.35	0.00	0.00	0.61	0.00	0.00
Avail Cap(c_a), veh/h	456	0	1756	694	0	1747	878	0	0	809	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	18.3	0.0	6.4	10.9	0.0	8.5	18.1	0.0	0.0	19.8	0.0	0.0
Incr Delay (d2), s/veh	0.1	0.0	0.5	0.2	0.0	2.2	0.5	0.0	0.0	1.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	3.1	0.4	0.0	6.3	1.8	0.0	0.0	3.2	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.5	0.0	6.9	11.0	0.0	10.7	18.6	0.0	0.0	21.1	0.0	0.0
LnGrp LOS	B	A	A	B	A	B	B	A	A	C	A	A
Approach Vol, veh/h		680			1005			165			277	
Approach Delay, s/veh		7.2			10.7			18.6			21.1	
Approach LOS		A			B			B			C	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	17.4	38.9	17.4	38.9
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	27.3	53.7	27.3	53.7
Max Q Clear Time (g_c+I1), s	6.6	26.9	11.3	25.1
Green Ext Time (p_c), s	0.9	5.0	1.5	9.2

Intersection Summary	
HCM 6th Ctrl Delay	11.6
HCM 6th LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	795	10	10	905	145	20	55	15	50	20	40
Future Volume (veh/h)	50	795	10	10	905	145	20	55	15	50	20	40
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	0.98		0.97	0.97		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1841	1841	1900	1870	1900	1900	1900	1900	1885	1900	1900
Adj Flow Rate, veh/h	52	820	10	10	933	149	21	57	15	52	21	41
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	4	4	0	2	0	0	0	0	1	0	0
Cap, veh/h	350	1348	16	435	1360	1145	199	187	49	182	67	131
Arrive On Green	0.02	0.74	0.74	0.01	0.73	0.73	0.13	0.13	0.13	0.12	0.12	0.12
Sat Flow, veh/h	1810	1815	22	1810	1870	1575	1328	1439	379	1304	562	1096
Grp Volume(v), veh/h	52	0	830	10	933	149	21	0	72	52	0	62
Grp Sat Flow(s),veh/h/ln	1810	0	1837	1810	1870	1575	1328	0	1818	1304	0	1658
Q Serve(g_s), s	0.8	0.0	21.2	0.2	27.2	2.9	1.5	0.0	3.6	3.8	0.0	3.4
Cycle Q Clear(g_c), s	0.8	0.0	21.2	0.2	27.2	2.9	4.9	0.0	3.6	7.4	0.0	3.4
Prop In Lane	1.00		0.01	1.00		1.00	1.00		0.21	1.00		0.66
Lane Grp Cap(c), veh/h	350	0	1364	435	1360	1145	199	0	236	182	0	199
V/C Ratio(X)	0.15	0.00	0.61	0.02	0.69	0.13	0.11	0.00	0.31	0.29	0.00	0.31
Avail Cap(c_a), veh/h	453	0	1364	566	1360	1145	332	0	418	325	0	381
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	7.6	0.0	6.0	5.8	7.4	4.1	41.5	0.0	39.4	43.7	0.0	40.2
Incr Delay (d2), s/veh	0.1	0.0	2.0	0.0	2.8	0.2	0.1	0.0	0.3	0.3	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	6.9	0.0	9.4	0.8	0.5	0.0	1.6	1.3	0.0	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	7.6	0.0	8.1	5.8	10.3	4.3	41.6	0.0	39.7	44.0	0.0	40.6
LnGrp LOS	A	A	A	A	B	A	D	A	D	D	A	D
Approach Vol, veh/h		882			1092			93			114	
Approach Delay, s/veh		8.0			9.4			40.1			42.1	
Approach LOS		A			A			D			D	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	4.7	78.3		17.0	6.3	76.7		17.0
Change Period (Y+Rc), s	4.0	5.0		* 5	4.0	5.0		5.0
Max Green Setting (Gmax), s	8.0	56.0		* 23	8.0	56.0		22.0
Max Q Clear Time (g_c+I1), s	2.8	23.2		9.4	2.8	29.2		6.9
Green Ext Time (p_c), s	0.0	1.2		0.1	0.0	1.4		0.1

Intersection Summary	
HCM 6th Ctrl Delay	11.9
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	45	760	15	30	940	280	15	60	5	135	30	25
Future Volume (veh/h)	45	760	15	30	940	280	15	60	5	135	30	25
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1841	1841	1900	1885	1885	1900	1870	1900	1900	1900	1900
Adj Flow Rate, veh/h	49	826	16	33	1022	304	16	65	5	147	33	27
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	4	4	0	1	1	0	2	0	0	0	0
Cap, veh/h	63	2591	50	42	1970	581	19	101	86	111	101	83
Arrive On Green	0.04	0.74	0.73	0.05	1.00	1.00	0.01	0.05	0.05	0.06	0.10	0.10
Sat Flow, veh/h	1810	3509	68	1810	2711	800	1810	1870	1601	1810	965	790
Grp Volume(v), veh/h	49	412	430	33	672	654	16	65	5	147	0	60
Grp Sat Flow(s),veh/h/ln	1810	1749	1828	1810	1791	1721	1810	1870	1601	1810	0	1755
Q Serve(g_s), s	3.5	10.5	10.5	2.3	0.0	0.0	1.1	4.4	0.4	8.0	0.0	4.1
Cycle Q Clear(g_c), s	3.5	10.5	10.5	2.3	0.0	0.0	1.1	4.4	0.4	8.0	0.0	4.1
Prop In Lane	1.00		0.04	1.00		0.47	1.00		1.00	1.00		0.45
Lane Grp Cap(c), veh/h	63	1291	1350	42	1301	1250	19	101	86	111	0	184
V/C Ratio(X)	0.77	0.32	0.32	0.78	0.52	0.52	0.83	0.65	0.06	1.32	0.00	0.33
Avail Cap(c_a), veh/h	167	1291	1350	111	1301	1250	111	317	271	111	0	297
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.66	0.66	0.66	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	62.2	5.8	5.8	61.6	0.0	0.0	64.2	60.3	58.4	61.0	0.0	53.9
Incr Delay (d2), s/veh	7.2	0.7	0.6	7.6	1.0	1.0	27.3	2.6	0.1	193.6	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	3.7	3.8	1.1	0.4	0.4	0.7	2.2	0.2	9.7	0.0	1.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	69.4	6.5	6.5	69.2	1.0	1.0	91.5	62.8	58.5	254.6	0.0	54.3
LnGrp LOS	E	A	A	E	A	A	F	E	E	F	A	D
Approach Vol, veh/h		891			1359			86			207	
Approach Delay, s/veh		9.9			2.7			67.9			196.6	
Approach LOS		A			A			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.0	100.0	5.4	17.6	8.6	98.4	12.0	11.0
Change Period (Y+Rc), s	4.0	5.0	4.0	4.0	4.0	5.0	4.0	4.0
Max Green Setting (Gmax), s	8.0	75.0	8.0	22.0	12.0	71.0	8.0	22.0
Max Q Clear Time (g_c+I1), s	4.3	12.5	3.1	6.1	5.5	2.0	10.0	6.4
Green Ext Time (p_c), s	0.0	1.1	0.0	0.1	0.0	2.1	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	23.2
HCM 6th LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	165	730	5	455	1130	65	10	105	245	275	90	110
Future Volume (veh/h)	165	730	5	455	1130	65	10	105	245	275	90	110
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1900	1885	1885	1900	1811	1811	1900	1826	1826
Adj Flow Rate, veh/h	172	760	5	474	1177	68	10	109	255	286	94	115
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	3	3	3	0	1	1	0	6	6	0	5	5
Cap, veh/h	220	1864	12	432	1990	115	13	202	294	223	416	347
Arrive On Green	0.13	1.00	1.00	0.12	0.58	0.57	0.01	0.11	0.11	0.12	0.23	0.23
Sat Flow, veh/h	3428	3590	24	3510	3442	199	1810	1811	2638	1810	1826	1526
Grp Volume(v), veh/h	172	373	392	474	612	633	10	109	255	286	94	115
Grp Sat Flow(s),veh/h/ln	1714	1763	1851	1755	1791	1849	1810	1811	1319	1810	1826	1526
Q Serve(g_s), s	6.3	0.0	0.0	16.0	28.5	28.6	0.7	7.4	12.4	16.0	5.4	8.2
Cycle Q Clear(g_c), s	6.3	0.0	0.0	16.0	28.5	28.6	0.7	7.4	12.4	16.0	5.4	8.2
Prop In Lane	1.00		0.01	1.00		0.11	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	220	915	961	432	1035	1069	13	202	294	223	416	347
V/C Ratio(X)	0.78	0.41	0.41	1.10	0.59	0.59	0.79	0.54	0.87	1.28	0.23	0.33
Avail Cap(c_a), veh/h	527	915	961	432	1035	1069	139	265	386	223	416	347
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.93	0.93	0.93	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.8	0.0	0.0	57.0	17.6	17.6	64.5	54.6	56.8	57.0	40.9	41.9
Incr Delay (d2), s/veh	2.1	1.3	1.2	72.2	2.5	2.4	32.0	0.8	12.4	157.5	0.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	0.3	0.3	11.4	12.0	12.4	0.4	3.4	4.6	17.0	2.5	3.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	57.9	1.3	1.2	129.2	20.1	20.0	96.4	55.4	69.2	214.5	41.0	42.1
LnGrp LOS	E	A	A	F	C	C	F	E	E	F	D	D
Approach Vol, veh/h		937			1719			374			495	
Approach Delay, s/veh		11.6			50.1			65.9			141.5	
Approach LOS		B			D			E			F	

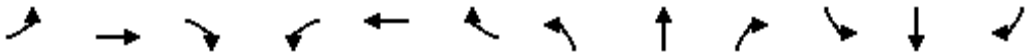
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	20.0	71.5	4.9	33.6	12.3	79.2	20.0	18.5
Change Period (Y+Rc), s	4.0	5.0	4.0	4.0	4.0	5.0	4.0	4.0
Max Green Setting (Gmax), s	16.0	62.0	10.0	25.0	20.0	58.0	16.0	19.0
Max Q Clear Time (g_c+I1), s	18.3	2.0	2.7	10.2	8.3	30.6	18.0	14.4
Green Ext Time (p_c), s	0.0	1.0	0.0	0.1	0.0	1.8	0.0	0.1

Intersection Summary	
HCM 6th Ctrl Delay	54.4
HCM 6th LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	690	1015	480	1805	0	0	0	0	270	15	385
Future Volume (veh/h)	0	690	1015	480	1805	0	0	0	0	270	15	385
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1856	1885	1885	1885	0				1870	1648	1870
Adj Flow Rate, veh/h	0	719	1057	500	1880	0				281	16	401
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96				0.96	0.96	0.96
Percent Heavy Veh, %	0	3	1	1	1	0				2	17	2
Cap, veh/h	0	1483	1183	658	2368	0				352	20	659
Arrive On Green	0.00	0.42	0.42	0.19	0.66	0.00				0.21	0.24	0.24
Sat Flow, veh/h	0	3618	2812	3483	3676	0				1489	85	2790
Grp Volume(v), veh/h	0	719	1057	500	1880	0				297	0	401
Grp Sat Flow(s),veh/h/ln	0	1763	1406	1742	1791	0				1574	0	1395
Q Serve(g_s), s	0.0	11.6	27.2	10.6	29.2	0.0				14.0	0.0	10.0
Cycle Q Clear(g_c), s	0.0	11.6	27.2	10.6	29.2	0.0				14.0	0.0	10.0
Prop In Lane	0.00		1.00	1.00		0.00				0.95		1.00
Lane Grp Cap(c), veh/h	0	1483	1183	658	2368	0				372	0	659
V/C Ratio(X)	0.00	0.48	0.89	0.76	0.79	0.00				0.80	0.00	0.61
Avail Cap(c_a), veh/h	0	1854	1479	938	2368	0				827	0	1467
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	16.4	21.0	29.9	9.4	0.0				29.0	0.0	26.5
Incr Delay (d2), s/veh	0.0	0.1	5.4	1.2	1.8	0.0				1.5	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	4.3	8.9	4.4	9.4	0.0				5.1	0.0	3.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	16.5	26.4	31.1	11.2	0.0				30.5	0.0	26.9
LnGrp LOS	A	B	C	C	B	A				C	A	C
Approach Vol, veh/h		1776			2380						698	
Approach Delay, s/veh		22.4			15.4						28.4	
Approach LOS		C			B						C	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	18.7	36.8		22.4		55.5
Change Period (Y+Rc), s	6.0	6.0		6.0		6.0
Max Green Setting (Gmax), s	12.6	39.0		39.0		39.0
Max Q Clear Time (g_c+I1), s	12.6	29.2		16.0		31.2
Green Ext Time (p_c), s	0.1	1.6		0.5		3.4

Intersection Summary	
HCM 6th Ctrl Delay	19.8
HCM 6th LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	245	715	0	0	1060	250	1225	0	500	0	0	0
Future Volume (vph)	245	715	0	0	1060	250	1225	0	500	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0		4.0	4.0	4.0			
Lane Util. Factor	1.00	0.95			0.95		0.95	0.95	1.00			
Frpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00			
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00			
Frt	1.00	1.00			0.97		1.00	1.00	0.85			
Flt Protected	0.95	1.00			1.00		0.95	0.95	1.00			
Satd. Flow (prot)	1770	3505			3452		1698	1698	1568			
Flt Permitted	0.95	1.00			1.00		0.95	0.95	1.00			
Satd. Flow (perm)	1770	3505			3452		1698	1698	1568			
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	261	761	0	0	1128	266	1303	0	532	0	0	0
RTOR Reduction (vph)	0	0	0	0	18	0	0	0	90	0	0	0
Lane Group Flow (vph)	261	761	0	0	1376	0	651	652	442	0	0	0
Confl. Peds. (#/hr)			1	1								
Heavy Vehicles (%)	2%	3%	0%	0%	1%	4%	1%	0%	3%	0%	0%	0%
Turn Type	Prot	NA			NA		Perm	NA	Perm			
Protected Phases	5	2			6			4				
Permitted Phases							4		4			
Actuated Green, G (s)	16.7	52.0			29.3		41.1	41.1	41.1			
Effective Green, g (s)	18.7	54.0			31.3		43.1	43.1	43.1			
Actuated g/C Ratio	0.18	0.51			0.30		0.41	0.41	0.41			
Clearance Time (s)	6.0	6.0			6.0		6.0	6.0	6.0			
Vehicle Extension (s)	0.5	0.5			0.5		0.5	0.5	0.5			
Lane Grp Cap (vph)	314	1800			1028		696	696	643			
v/s Ratio Prot	c0.15	0.22			c0.40							
v/s Ratio Perm							0.38	0.38	0.28			
v/c Ratio	0.83	0.42			1.34		0.94	0.94	0.69			
Uniform Delay, d1	41.7	15.9			36.9		29.7	29.7	25.5			
Progression Factor	1.00	1.00			1.00		1.00	1.00	1.00			
Incremental Delay, d2	16.2	0.1			158.9		19.6	19.8	2.5			
Delay (s)	57.8	15.9			195.8		49.2	49.5	27.9			
Level of Service	E	B			F		D	D	C			
Approach Delay (s)		26.6			195.8			43.1			0.0	
Approach LOS		C			F			D			A	

Intersection Summary			
HCM 2000 Control Delay	89.2	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.07		
Actuated Cycle Length (s)	105.1	Sum of lost time (s)	14.0
Intersection Capacity Utilization	94.8%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	125	555	415	65	410	35	555	500	140	115	630	125
Future Volume (veh/h)	125	555	415	65	410	35	555	500	140	115	630	125
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1870	1841	1885	1885	1900	1826	1826	1781	1870	1856
Adj Flow Rate, veh/h	134	597	446	70	441	38	597	538	151	124	677	134
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	4	4	2	4	1	1	0	5	5	8	2	3
Cap, veh/h	178	634	546	100	514	44	250	788	220	174	920	407
Arrive On Green	0.10	0.34	0.34	0.06	0.30	0.28	0.14	0.29	0.27	0.10	0.26	0.26
Sat Flow, veh/h	1753	1841	1585	1753	1711	147	1810	2677	748	1697	3554	1572
Grp Volume(v), veh/h	134	597	446	70	0	479	597	348	341	124	677	134
Grp Sat Flow(s),veh/h/ln	1753	1841	1585	1753	0	1859	1810	1735	1691	1697	1777	1572
Q Serve(g_s), s	5.9	25.0	20.4	3.1	0.0	19.3	11.0	14.1	14.3	5.6	13.9	5.5
Cycle Q Clear(g_c), s	5.9	25.0	20.4	3.1	0.0	19.3	11.0	14.1	14.3	5.6	13.9	5.5
Prop In Lane	1.00		1.00	1.00		0.08	1.00		0.44	1.00		1.00
Lane Grp Cap(c), veh/h	178	634	546	100	0	559	250	510	498	174	920	407
V/C Ratio(X)	0.75	0.94	0.82	0.70	0.00	0.86	2.39	0.68	0.69	0.71	0.74	0.33
Avail Cap(c_a), veh/h	242	634	546	242	0	607	250	566	552	234	1161	514
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.8	25.3	23.8	36.8	0.0	26.3	34.3	24.8	25.3	34.6	27.0	23.9
Incr Delay (d2), s/veh	7.3	22.2	9.1	6.3	0.0	10.7	636.7	2.6	2.8	5.1	1.6	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	13.6	8.2	1.4	0.0	9.2	48.7	5.6	5.6	2.5	5.8	1.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	42.1	47.5	32.9	43.2	0.0	37.0	671.0	27.4	28.0	39.7	28.6	24.2
LnGrp LOS	D	D	C	D	A	D	F	C	C	D	C	C
Approach Vol, veh/h		1177			549			1286			935	
Approach Delay, s/veh		41.4			37.8			326.4			29.5	
Approach LOS		D			D			F			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.0	24.6	12.1	27.9	12.2	27.4	8.6	31.4
Change Period (Y+Rc), s	4.5	6.0	4.5	6.0	4.5	6.0	4.5	6.0
Max Green Setting (Gmax), s	10.5	24.0	10.5	24.0	10.5	24.0	10.5	24.0
Max Q Clear Time (g_c+I1), s	13.3	15.9	7.9	21.3	7.6	16.3	5.1	27.0
Green Ext Time (p_c), s	0.0	2.7	0.1	0.6	0.1	2.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	130.9
HCM 6th LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	145	220	205	190	300	130	215	1085	110	145	880	100
Future Volume (veh/h)	145	220	205	190	300	130	215	1085	110	145	880	100
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.96	1.00		0.99	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1710	1697	1683	1697	1710	1697	1697	1697	1697	1697	1683	1683
Adj Flow Rate, veh/h	153	232	216	200	316	137	226	1142	116	153	926	105
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	1	2	1	0	1	1	1	1	1	2	2
Cap, veh/h	175	250	201	222	303	245	248	1421	144	173	1269	144
Arrive On Green	0.11	0.15	0.15	0.14	0.18	0.18	0.15	0.48	0.48	0.21	0.88	0.87
Sat Flow, veh/h	1629	1697	1365	1616	1710	1387	1616	2950	299	1616	2890	328
Grp Volume(v), veh/h	153	232	216	200	316	137	226	623	635	153	512	519
Grp Sat Flow(s),veh/h/ln	1629	1697	1365	1616	1710	1387	1616	1612	1638	1616	1599	1618
Q Serve(g_s), s	12.0	17.6	19.1	15.8	23.0	11.7	17.9	42.5	42.7	11.9	14.1	14.3
Cycle Q Clear(g_c), s	12.0	17.6	19.1	15.8	23.0	11.7	17.9	42.5	42.7	11.9	14.1	14.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.18	1.00		0.20
Lane Grp Cap(c), veh/h	175	250	201	222	303	245	248	777	789	173	702	711
V/C Ratio(X)	0.87	0.93	1.07	0.90	1.04	0.56	0.91	0.80	0.80	0.89	0.73	0.73
Avail Cap(c_a), veh/h	194	250	201	242	303	245	360	777	789	186	702	711
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	0.84	0.84	0.84	1.00	1.00	1.00	1.00	1.00	1.00	0.89	0.89	0.89
Uniform Delay (d), s/veh	57.1	54.8	55.4	55.2	53.5	48.9	54.2	28.5	28.5	50.3	5.3	5.4
Incr Delay (d2), s/veh	25.2	33.5	79.3	30.1	63.8	1.7	16.6	8.6	8.6	30.4	5.9	5.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.2	9.8	11.0	8.3	15.2	4.2	8.4	17.7	18.1	5.7	3.2	3.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	82.4	88.3	134.8	85.3	117.3	50.6	70.8	37.0	37.1	80.7	11.2	11.2
LnGrp LOS	F	F	F	F	F	D	E	D	D	F	B	B
Approach Vol, veh/h		601			653			1484			1184	
Approach Delay, s/veh		103.5			93.5			42.2			20.2	
Approach LOS		F			F			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.9	67.1	21.8	23.1	23.9	61.1	18.0	27.0
Change Period (Y+Rc), s	4.0	4.5	4.0	4.0	4.0	4.5	4.0	4.0
Max Green Setting (Gmax), s	15.9	60.0	19.5	19.0	29.0	46.0	15.5	23.0
Max Q Clear Time (g_c+I1), s	13.9	44.7	17.8	21.1	19.9	16.3	14.0	25.0
Green Ext Time (p_c), s	0.0	1.8	0.0	0.0	0.0	1.4	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	53.5
HCM 6th LOS	D

Intersection	
Intersection Delay, s/veh	9.7
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	474	500	525	206
Demand Flow Rate, veh/h	479	506	530	207
Vehicles Circulating, veh/h	306	367	271	676
Vehicles Exiting, veh/h	577	434	514	197
Ped Vol Crossing Leg, #/h	0	0	2	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	9.2	10.8	9.5	8.9
Approach LOS	A	B	A	A

Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	479	506	530	207
Cap Entry Lane, veh/h	1010	949	1047	692
Entry HV Adj Factor	0.989	0.988	0.990	0.994
Flow Entry, veh/h	474	500	525	206
Cap Entry, veh/h	999	938	1036	688
V/C Ratio	0.474	0.533	0.507	0.299
Control Delay, s/veh	9.2	10.8	9.5	8.9
LOS	A	B	A	A
95th %tile Queue, veh	3	3	3	1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	635	40	450	870	310	95	1195	630	195	905	175
Future Volume (veh/h)	40	635	40	450	870	310	95	1195	630	195	905	175
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1856	1885	1885	1870	1826	1885	1856	1885	1870	1856	1900
Adj Flow Rate, veh/h	41	648	41	459	888	316	97	1219	0	199	923	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	3	1	1	2	5	1	3	1	2	3	0
Cap, veh/h	111	343	289	359	604	492	134	1193		260	1472	
Arrive On Green	0.06	0.18	0.18	0.20	0.32	0.32	0.07	0.34	0.00	0.15	0.42	0.00
Sat Flow, veh/h	1810	1856	1566	1795	1870	1522	1795	3526	1598	1781	3526	1610
Grp Volume(v), veh/h	41	648	41	459	888	316	97	1219	0	199	923	0
Grp Sat Flow(s),veh/h/ln	1810	1856	1566	1795	1870	1522	1795	1763	1598	1781	1763	1610
Q Serve(g_s), s	2.8	24.0	2.3	26.0	42.0	23.1	6.9	44.0	0.0	14.0	26.9	0.0
Cycle Q Clear(g_c), s	2.8	24.0	2.3	26.0	42.0	23.1	6.9	44.0	0.0	14.0	26.9	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	111	343	289	359	604	492	134	1193		260	1472	
V/C Ratio(X)	0.37	1.89	0.14	1.28	1.47	0.64	0.72	1.02		0.76	0.63	
Avail Cap(c_a), veh/h	111	343	289	359	604	492	290	1193		274	1472	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	58.6	53.0	29.4	52.0	44.0	37.6	58.8	43.0	0.0	53.3	29.9	0.0
Incr Delay (d2), s/veh	2.0	412.1	0.2	145.1	220.2	2.2	7.1	31.6	0.0	11.5	2.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	50.3	1.1	26.0	56.0	8.8	3.3	23.2	0.0	6.8	11.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	60.6	465.1	29.6	197.1	264.2	39.8	65.9	74.6	0.0	64.9	31.9	0.0
LnGrp LOS	E	F	C	F	F	D	E	F		E	C	
Approach Vol, veh/h		730			1663			1316	A		1122	A
Approach Delay, s/veh		417.9			203.1			74.0			37.8	
Approach LOS		F			F			E			D	

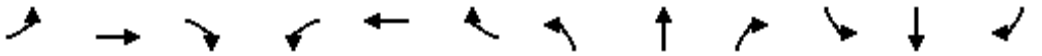
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.7	58.3	12.0	46.0	24.0	48.0	30.0	28.0
Change Period (Y+Rc), s	5.0	6.0	5.0	5.0	6.0	* 6	5.0	5.0
Max Green Setting (Gmax), s	20.6	41.0	7.0	41.0	19.0	* 42	25.0	23.0
Max Q Clear Time (g_c+I1), s	8.8	28.9	4.8	44.0	16.0	46.0	28.0	26.0
Green Ext Time (p_c), s	0.1	5.1	0.0	0.0	0.1	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	162.0
HCM 6th LOS	F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [NBR, SBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	90	30	255	125	185	25	130	115	255	185	25
Future Volume (veh/h)	10	90	30	255	125	185	25	130	115	255	185	25
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1604	1870	1870	1870	1841	1841	1856	1856	1856	1870	1870	1870
Adj Flow Rate, veh/h	10	94	31	266	130	193	26	135	120	266	193	26
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	20	2	2	2	4	4	3	3	3	2	2	2
Cap, veh/h	250	415	137	449	203	302	111	489	397	503	346	43
Arrive On Green	0.31	0.31	0.30	0.31	0.31	0.30	0.54	0.55	0.54	0.54	0.55	0.54
Sat Flow, veh/h	906	1346	444	1266	660	980	78	884	717	735	625	77
Grp Volume(v), veh/h	10	0	125	266	0	323	281	0	0	485	0	0
Grp Sat Flow(s),veh/h/ln	906	0	1790	1266	0	1639	1679	0	0	1438	0	0
Q Serve(g_s), s	0.6	0.0	3.0	11.4	0.0	9.8	0.0	0.0	0.0	6.7	0.0	0.0
Cycle Q Clear(g_c), s	10.4	0.0	3.0	14.5	0.0	9.8	5.1	0.0	0.0	11.8	0.0	0.0
Prop In Lane	1.00		0.25	1.00		0.60	0.09		0.43	0.55		0.05
Lane Grp Cap(c), veh/h	250	0	552	449	0	506	983	0	0	879	0	0
V/C Ratio(X)	0.04	0.00	0.23	0.59	0.00	0.64	0.29	0.00	0.00	0.55	0.00	0.00
Avail Cap(c_a), veh/h	284	0	619	496	0	567	983	0	0	879	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	21.7	0.0	14.9	20.2	0.0	17.4	7.0	0.0	0.0	8.2	0.0	0.0
Incr Delay (d2), s/veh	0.1	0.0	0.2	1.6	0.0	2.0	0.7	0.0	0.0	2.5	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	1.0	3.0	0.0	3.3	1.3	0.0	0.0	2.8	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	21.8	0.0	15.1	21.8	0.0	19.4	7.7	0.0	0.0	10.7	0.0	0.0
LnGrp LOS	C	A	B	C	A	B	A	A	A	B	A	A
Approach Vol, veh/h		135			589			281			485	
Approach Delay, s/veh		15.6			20.5			7.7			10.7	
Approach LOS		B			C			A			B	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		36.0		21.8		36.0		21.8				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		31.5		19.5		31.5		19.5				
Max Q Clear Time (g_c+I1), s		7.1		12.4		13.8		16.5				
Green Ext Time (p_c), s		1.5		0.3		2.8		0.9				

Intersection Summary												
HCM 6th Ctrl Delay			14.4									
HCM 6th LOS			B									

Intersection	
Int Delay, s/veh	148.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	400	355	395	295	0	0	0	0	185	0	440
Future Vol, veh/h	0	400	355	395	295	0	0	0	0	185	0	440
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	180	-	-	-	-	-	-	-	100
Veh in Median Storage, #	-	0	-	-	0	-	-	16974	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	12	9	3	12	0	0	0	0	0	0	10
Mvmt Flow	0	421	374	416	311	0	0	0	0	195	0	463

Major/Minor	Major1			Major2			Minor2		
Conflicting Flow All	-	0	0	795	0	0	1751	1938	311
Stage 1	-	-	-	-	-	-	1143	1143	-
Stage 2	-	-	-	-	-	-	608	795	-
Critical Hdwy	-	-	-	4.13	-	-	6.4	6.5	6.3
Critical Hdwy Stg 1	-	-	-	-	-	-	5.4	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5.4	5.5	-
Follow-up Hdwy	-	-	-	2.227	-	-	3.5	4	3.39
Pot Cap-1 Maneuver	0	-	-	822	-	0	~ 95	66	711
Stage 1	0	-	-	-	-	0	307	277	-
Stage 2	0	-	-	-	-	0	547	402	-
Platoon blocked, %		-	-		-				
Mov Cap-1 Maneuver	-	-	-	822	-	-	~ 47	0	711
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 47	0	-
Stage 1	-	-	-	-	-	-	307	0	-
Stage 2	-	-	-	-	-	-	270	0	-

Approach	EB	WB	SB
HCM Control Delay, s	0	7.9	$ 484.2
HCM LOS			F

Minor Lane/Major Mvmt	EBT	EBR	WBL	WBT	SBLn1	SBLn2
Capacity (veh/h)	-	-	822	-	47	711
HCM Lane V/C Ratio	-	-	0.506	-	4.143	0.651
HCM Control Delay (s)	-	-	13.8	$ 1590.7	19	
HCM Lane LOS	-	-	B	-	F	C
HCM 95th %tile Q(veh)	-	-	2.9	-	21.8	4.8

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

Intersection	
Int Delay, s/veh	132

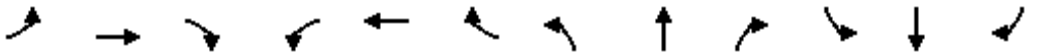
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	350	235	0	0	535	195	155	0	285	0	0	0
Future Vol, veh/h	350	235	0	0	535	195	155	0	285	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	155	-	-	-	-	-	-	-	100	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	16965	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	18	4	0	0	4	0	14	0	4	0	0	0
Mvmt Flow	385	258	0	0	588	214	170	0	313	0	0	0

Major/Minor	Major1			Major2			Minor1		
Conflicting Flow All	802	0	-	-	-	0	1723	1830	258
Stage 1	-	-	-	-	-	-	1028	1028	-
Stage 2	-	-	-	-	-	-	695	802	-
Critical Hdwy	4.28	-	-	-	-	-	6.54	6.5	6.24
Critical Hdwy Stg 1	-	-	-	-	-	-	5.54	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5.54	5.5	-
Follow-up Hdwy	2.362	-	-	-	-	-	3.626	4	3.336
Pot Cap-1 Maneuver	755	-	0	0	-	-	~ 91	77	776
Stage 1	-	-	0	0	-	-	328	314	-
Stage 2	-	-	0	0	-	-	474	399	-
Platoon blocked, %		-			-	-			
Mov Cap-1 Maneuver	755	-	-	-	-	-	~ 45	0	776
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 45	0	-
Stage 1	-	-	-	-	-	-	~ 161	0	-
Stage 2	-	-	-	-	-	-	474	0	-

Approach	EB	WB	NB
HCM Control Delay, s	8.7	0	$ 515.1
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	WBT	WBR
Capacity (veh/h)	45	776	755	-	-	-
HCM Lane V/C Ratio	3.785	0.404	0.509	-	-	-
HCM Control Delay (s)	$ 1438.9	12.7	14.6	-	-	-
HCM Lane LOS	F	B	B	-	-	-
HCM 95th %tile Q(veh)	19	2	2.9	-	-	-

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	140	60	290	40	150	60	90	595	45	60	475	390
Future Volume (veh/h)	140	60	290	40	150	60	90	595	45	60	475	390
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1796	1796	1856	1870	1870	1870	1811	1856	1856	1900	1870	1826
Adj Flow Rate, veh/h	147	63	0	42	158	63	95	626	47	63	500	411
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	7	7	3	2	2	2	6	3	3	0	2	5
Cap, veh/h	315	104		123	280	102	397	832	62	352	883	731
Arrive On Green	0.22	0.24	0.00	0.22	0.24	0.22	0.06	0.49	0.46	0.04	0.47	0.47
Sat Flow, veh/h	829	435	1572	182	1173	427	1725	1705	128	1810	1870	1547
Grp Volume(v), veh/h	210	0	0	263	0	0	95	0	673	63	500	411
Grp Sat Flow(s),veh/h/ln	1264	0	1572	1782	0	0	1725	0	1833	1810	1870	1547
Q Serve(g_s), s	1.2	0.0	0.0	0.0	0.0	0.0	1.5	0.0	15.6	0.9	10.1	10.0
Cycle Q Clear(g_c), s	8.1	0.0	0.0	6.9	0.0	0.0	1.5	0.0	15.6	0.9	10.1	10.0
Prop In Lane	0.70		1.00	0.16		0.24	1.00		0.07	1.00		1.00
Lane Grp Cap(c), veh/h	394	0		471	0	0	397	0	895	352	883	731
V/C Ratio(X)	0.53	0.00		0.56	0.00	0.00	0.24	0.00	0.75	0.18	0.57	0.56
Avail Cap(c_a), veh/h	982	0		1261	0	0	557	0	1505	549	1536	1271
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.5	0.0	0.0	18.0	0.0	0.0	7.7	0.0	10.9	9.1	10.0	9.9
Incr Delay (d2), s/veh	0.8	0.0	0.0	0.8	0.0	0.0	0.2	0.0	1.8	0.2	0.8	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	0.0	0.0	2.7	0.0	0.0	0.4	0.0	4.8	0.3	3.2	2.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.3	0.0	0.0	18.8	0.0	0.0	7.9	0.0	12.7	9.2	10.8	10.9
LnGrp LOS	B	A		B	A	A	A	A	B	A	B	B
Approach Vol, veh/h		210	A		263			768			974	
Approach Delay, s/veh		19.3			18.8			12.1			10.7	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.3	29.6		16.5	7.1	28.7		16.5				
Change Period (Y+Rc), s	4.5	* 5.4		5.0	4.5	* 5.4		5.0				
Max Green Setting (Gmax), s	7.5	* 42		36.0	7.5	* 42		36.0				
Max Q Clear Time (g_c+I1), s	2.9	17.6		10.1	3.5	12.1		8.9				
Green Ext Time (p_c), s	0.0	6.6		1.1	0.0	7.6		1.3				

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

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Int Delay, s/veh	2.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	0	65	0	20	0	80	60	15	180	0
Future Vol, veh/h	0	0	0	65	0	20	0	80	60	15	180	0
Conflicting Peds, #/hr	0	0	0	2	0	0	0	0	2	2	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	89	92	89	92	89	89	89	89	92
Heavy Vehicles, %	2	2	2	0	2	0	2	2	2	8	0	2
Mvmt Flow	0	0	0	73	0	22	0	90	67	17	202	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	371	395	204	364	362	126	202	0	0	159	0	0
Stage 1	236	236	-	126	126	-	-	-	-	-	-	-
Stage 2	135	159	-	238	236	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.1	6.52	6.2	4.12	-	-	4.18	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.1	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.1	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.5	4.018	3.3	2.218	-	-	2.272	-	-
Pot Cap-1 Maneuver	586	542	837	596	565	930	1370	-	-	1385	-	-
Stage 1	767	710	-	883	792	-	-	-	-	-	-	-
Stage 2	868	766	-	770	710	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	565	533	835	588	556	928	1370	-	-	1382	-	-
Mov Cap-2 Maneuver	565	533	-	588	556	-	-	-	-	-	-	-
Stage 1	767	700	-	881	790	-	-	-	-	-	-	-
Stage 2	847	764	-	758	700	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	11.6	0	0.6
HCM LOS	A	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1370	-	-	-	643	1382	-	-
HCM Lane V/C Ratio	-	-	-	-	0.149	0.012	-	-
HCM Control Delay (s)	0	-	-	0	11.6	7.6	0	-
HCM Lane LOS	A	-	-	A	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	-	0.5	0	-	-

Intersection	
Int Delay, s/veh	18.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	25	50	20	75	105	90	35	190	65	80	420	45
Future Vol, veh/h	25	50	20	75	105	90	35	190	65	80	420	45
Conflicting Peds, #/hr	0	0	1	1	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	Stop	-	-	None	-	-	None
Storage Length	-	-	30	-	-	50	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	0	6	6	0	0	7	0	2	0	8	1	0
Mvmt Flow	26	52	21	77	108	93	36	196	67	82	433	46

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	976	955	457	960	945	230	479	0	0	263	0	0
Stage 1	620	620	-	302	302	-	-	-	-	-	-	-
Stage 2	356	335	-	658	643	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.56	6.26	7.1	6.5	6.27	4.1	-	-	4.18	-	-
Critical Hdwy Stg 1	6.1	5.56	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.56	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4.054	3.354	3.5	4	3.363	2.2	-	-	2.272	-	-
Pot Cap-1 Maneuver	232	254	595	238	264	797	1094	-	-	1267	-	-
Stage 1	479	474	-	712	668	-	-	-	-	-	-	-
Stage 2	666	635	-	457	472	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	118	222	594	171	231	797	1094	-	-	1267	-	-
Mov Cap-2 Maneuver	118	222	-	171	231	-	-	-	-	-	-	-
Stage 1	460	432	-	684	642	-	-	-	-	-	-	-
Stage 2	470	610	-	354	430	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	35.5	64.9	1	1.2
HCM LOS	E	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1094	-	-	172	594	202	797	1267	-	-
HCM Lane V/C Ratio	0.033	-	-	0.45	0.035	0.919	0.116	0.065	-	-
HCM Control Delay (s)	8.4	0	-	42	11.3	92.3	10.1	8	0	-
HCM Lane LOS	A	A	-	E	B	F	B	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	2.1	0.1	7.4	0.4	0.2	-	-

Intersection	
Int Delay, s/veh	3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	160	50	15	210	85	30
Future Vol, veh/h	160	50	15	210	85	30
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	82	82	82	82	82	82
Heavy Vehicles, %	7	0	0	3	0	0
Mvmt Flow	195	61	18	256	104	37

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	256	0	518	226
Stage 1	-	-	-	-	226	-
Stage 2	-	-	-	-	292	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1321	-	521	818
Stage 1	-	-	-	-	816	-
Stage 2	-	-	-	-	762	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1321	-	513	818
Mov Cap-2 Maneuver	-	-	-	-	513	-
Stage 1	-	-	-	-	816	-
Stage 2	-	-	-	-	750	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.5	13.4
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	568	-	-	1321	-
HCM Lane V/C Ratio	0.247	-	-	0.014	-
HCM Control Delay (s)	13.4	-	-	7.8	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	1	-	-	0	-

Intersection	
Int Delay, s/veh	18.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	100	110	105	480	610	100
Future Vol, veh/h	100	110	105	480	610	100
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	240	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	4	4	5	1	2
Mvmt Flow	105	116	111	505	642	105

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1422	695	747	0	-	0
Stage 1	695	-	-	-	-	-
Stage 2	727	-	-	-	-	-
Critical Hdwy	6.4	6.24	4.14	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.336	2.236	-	-	-
Pot Cap-1 Maneuver	152	439	852	-	-	-
Stage 1	499	-	-	-	-	-
Stage 2	482	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	132	439	852	-	-	-
Mov Cap-2 Maneuver	132	-	-	-	-	-
Stage 1	434	-	-	-	-	-
Stage 2	482	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	128.5	1.8	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	852	-	208	-	-
HCM Lane V/C Ratio	0.13	-	1.063	-	-
HCM Control Delay (s)	9.9	-	128.5	-	-
HCM Lane LOS	A	-	F	-	-
HCM 95th %tile Q(veh)	0.4	-	10	-	-

Intersection	
Int Delay, s/veh	6.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	145	30	290	75	20	490
Future Vol, veh/h	145	30	290	75	20	490
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	1	0	2	2	0	1
Mvmt Flow	167	34	333	86	23	563

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	985	376	0	0	419	0
Stage 1	376	-	-	-	-	-
Stage 2	609	-	-	-	-	-
Critical Hdwy	6.41	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.41	-	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-	-
Follow-up Hdwy	3.509	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	276	675	-	-	1151	-
Stage 1	696	-	-	-	-	-
Stage 2	545	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	268	675	-	-	1151	-
Mov Cap-2 Maneuver	268	-	-	-	-	-
Stage 1	696	-	-	-	-	-
Stage 2	529	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	38.6	0	0.3
HCM LOS	E		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	299	1151	-
HCM Lane V/C Ratio	-	-	0.673	0.02	-
HCM Control Delay (s)	-	-	38.6	8.2	0
HCM Lane LOS	-	-	E	A	A
HCM 95th %tile Q(veh)	-	-	4.5	0.1	-

Intersection	
Int Delay, s/veh	8.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	60	75	40	100	10	90	100	75	15	45	5
Future Vol, veh/h	5	60	75	40	100	10	90	100	75	15	45	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	0	5	0	0	1	0	0	0	0	0	5	0
Mvmt Flow	6	68	85	45	114	11	102	114	85	17	51	6

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	511	491	54	526	452	157	57	0	0	199	0	0
Stage 1	88	88	-	361	361	-	-	-	-	-	-	-
Stage 2	423	403	-	165	91	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.55	6.2	7.1	6.51	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.55	-	6.1	5.51	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.55	-	6.1	5.51	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4.045	3.3	3.5	4.009	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	476	474	1019	466	505	894	1560	-	-	1385	-	-
Stage 1	925	816	-	662	628	-	-	-	-	-	-	-
Stage 2	613	595	-	842	821	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	357	433	1019	351	462	894	1560	-	-	1385	-	-
Mov Cap-2 Maneuver	357	433	-	351	462	-	-	-	-	-	-	-
Stage 1	857	805	-	613	582	-	-	-	-	-	-	-
Stage 2	451	551	-	697	810	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	12.8	18.3	2.5	1.8
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1560	-	-	619	439	1385	-	-
HCM Lane V/C Ratio	0.066	-	-	0.257	0.388	0.012	-	-
HCM Control Delay (s)	7.5	-	-	12.8	18.3	7.6	0	-
HCM Lane LOS	A	-	-	B	C	A	A	-
HCM 95th %tile Q(veh)	0.2	-	-	1	1.8	0	-	-

Intersection	
Int Delay, s/veh	5.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	30	140	100	570	670	25
Future Vol, veh/h	30	140	100	570	670	25
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	0	6	0	4	2	0
Mvmt Flow	32	151	108	613	720	27

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1563	734	747	0	-	0
Stage 1	734	-	-	-	-	-
Stage 2	829	-	-	-	-	-
Critical Hdwy	6.4	6.26	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.354	2.2	-	-	-
Pot Cap-1 Maneuver	124	414	870	-	-	-
Stage 1	478	-	-	-	-	-
Stage 2	432	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	101	414	870	-	-	-
Mov Cap-2 Maneuver	101	-	-	-	-	-
Stage 1	388	-	-	-	-	-
Stage 2	432	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	43	1.5	0
HCM LOS	E		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	870	-	268	-	-
HCM Lane V/C Ratio	0.124	-	0.682	-	-
HCM Control Delay (s)	9.7	0	43	-	-
HCM Lane LOS	A	A	E	-	-
HCM 95th %tile Q(veh)	0.4	-	4.5	-	-

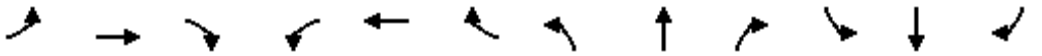
Intersection	
Int Delay, s/veh	4.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	35	100	250	330	545	90
Future Vol, veh/h	35	100	250	330	545	90
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	100	-	-	-
Veh in Median Storage, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	3	1	1	1	1	0
Mvmt Flow	39	111	278	367	606	100

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1579	656	706	0	-	0
Stage 1	656	-	-	-	-	-
Stage 2	923	-	-	-	-	-
Critical Hdwy	6.43	6.21	4.11	-	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.309	2.209	-	-	-
Pot Cap-1 Maneuver	120	467	897	-	-	-
Stage 1	514	-	-	-	-	-
Stage 2	385	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	83	467	897	-	-	-
Mov Cap-2 Maneuver	206	-	-	-	-	-
Stage 1	355	-	-	-	-	-
Stage 2	385	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	22.6	4.7	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	897	-	352	-	-
HCM Lane V/C Ratio	0.31	-	0.426	-	-
HCM Control Delay (s)	10.8	-	22.6	-	-
HCM Lane LOS	B	-	C	-	-
HCM 95th %tile Q(veh)	1.3	-	2.1	-	-



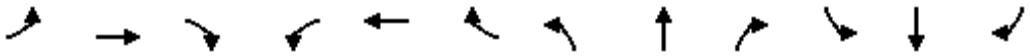
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	5	405	15	5	5	560	905	15	10	845	15
Future Volume (vph)	10	5	405	15	5	5	560	905	15	10	845	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0		4.0	4.0		3.0	4.0	
Lane Util. Factor		1.00	0.88		1.00		0.97	0.95		1.00	0.95	
Frpb, ped/bikes		1.00	0.96		1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Frt		1.00	0.85		0.97		1.00	1.00		1.00	1.00	
Flt Protected		0.97	1.00		0.97		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1837	2663		1711		3502	3560		1805	3564	
Flt Permitted		0.97	1.00		0.97		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1837	2663		1711		3502	3560		1805	3564	
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)	11	5	440	16	5	5	609	984	16	11	918	16
RTOR Reduction (vph)	0	0	399	0	5	0	0	1	0	0	1	0
Lane Group Flow (vph)	0	16	41	0	21	0	609	999	0	11	933	0
Confl. Peds. (#/hr)			7	7			5		4	4		5
Confl. Bikes (#/hr)			1									
Heavy Vehicles (%)	0%	0%	2%	8%	0%	0%	0%	1%	8%	0%	1%	0%
Turn Type	Split	NA	Perm	Split	NA		Prot	NA		Prot	NA	
Protected Phases	4	4		3	3		5	2		1	6	
Permitted Phases			4									
Actuated Green, G (s)		6.3	6.3		2.2		20.3	59.0		1.0	39.7	
Effective Green, g (s)		8.3	8.3		2.7		20.3	62.0		2.0	42.7	
Actuated g/C Ratio		0.09	0.09		0.03		0.23	0.69		0.02	0.47	
Clearance Time (s)		6.0	6.0		4.5		4.0	7.0		4.0	7.0	
Vehicle Extension (s)		1.0	1.0		0.5		0.5	0.5		0.5	0.5	
Lane Grp Cap (vph)		169	245		51		789	2452		40	1690	
v/s Ratio Prot		0.01			c0.01		c0.17	0.28		0.01	c0.26	
v/s Ratio Perm			c0.02									
v/c Ratio		0.09	0.17		0.41		0.77	0.41		0.28	0.55	
Uniform Delay, d1		37.4	37.7		42.9		32.7	6.1		43.3	16.8	
Progression Factor		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.1	0.1		2.0		4.3	0.5		1.4	1.3	
Delay (s)		37.5	37.8		44.9		37.0	6.6		44.6	18.1	
Level of Service		D	D		D		D	A		D	B	
Approach Delay (s)		37.8			44.9			18.1			18.5	
Approach LOS		D			D			B			B	

Intersection Summary			
HCM 2000 Control Delay	21.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	18.5
Intersection Capacity Utilization	57.9%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	125	90	105	125	105	25	45	105	90	10	155	80
Future Volume (veh/h)	125	90	105	125	105	25	45	105	90	10	155	80
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1870	1870	1900	1885	1900
Adj Flow Rate, veh/h	142	102	119	142	119	28	51	119	102	11	176	91
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	0	0	0	0	0	0	0	2	2	0	1	0
Cap, veh/h	621	241	281	550	453	107	630	323	277	610	655	560
Arrive On Green	0.30	0.30	0.30	0.30	0.30	0.30	0.35	0.35	0.35	0.35	0.35	0.35
Sat Flow, veh/h	1260	790	921	1178	1487	350	1130	930	797	1178	1885	1610
Grp Volume(v), veh/h	142	0	221	142	0	147	51	0	221	11	176	91
Grp Sat Flow(s),veh/h/ln	1260	0	1711	1178	0	1837	1130	0	1727	1178	1885	1610
Q Serve(g_s), s	2.2	0.0	2.4	2.5	0.0	1.4	0.8	0.0	2.2	0.2	1.5	0.9
Cycle Q Clear(g_c), s	3.6	0.0	2.4	4.9	0.0	1.4	2.3	0.0	2.2	2.4	1.5	0.9
Prop In Lane	1.00		0.54	1.00		0.19	1.00		0.46	1.00		1.00
Lane Grp Cap(c), veh/h	621	0	521	550	0	560	630	0	600	610	655	560
V/C Ratio(X)	0.23	0.00	0.42	0.26	0.00	0.26	0.08	0.00	0.37	0.02	0.27	0.16
Avail Cap(c_a), veh/h	1387	0	1561	1266	0	1676	1759	0	2326	1787	2539	2169
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	7.4	0.0	6.4	8.3	0.0	6.0	6.2	0.0	5.6	6.5	5.4	5.2
Incr Delay (d2), s/veh	0.1	0.0	0.2	0.1	0.0	0.1	0.0	0.0	0.1	0.0	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	0.4	0.4	0.0	0.3	0.1	0.0	0.3	0.0	0.2	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	7.5	0.0	6.6	8.4	0.0	6.1	6.3	0.0	5.8	6.5	5.5	5.2
LnGrp LOS	A	A	A	A	A	A	A	A	A	A	A	A
Approach Vol, veh/h		363			289			272			278	
Approach Delay, s/veh		6.9			7.3			5.9			5.4	
Approach LOS		A			A			A			A	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	12.0	11.0	12.0	11.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	31.0	21.0	31.0	21.0
Max Q Clear Time (g_c+I1), s	4.4	6.9	4.3	5.6
Green Ext Time (p_c), s	0.2	0.2	0.3	0.3

Intersection Summary	
HCM 6th Ctrl Delay	6.4
HCM 6th LOS	A



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	160	260	175	325	210	190	125	835	275	155	750	120
Future Volume (vph)	160	260	175	325	210	190	125	835	275	155	750	120
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	1.00	0.95	1.00	1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.97	1.00	1.00	0.99	1.00	1.00	0.97	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1787	1863	1557	3400	1863	1577	1805	3574	1523	1787	3474	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1787	1863	1557	3400	1863	1577	1805	3574	1523	1787	3474	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	165	268	180	335	216	196	129	861	284	160	773	124
RTOR Reduction (vph)	0	0	149	0	0	160	0	0	158	0	8	0
Lane Group Flow (vph)	165	268	31	335	216	36	129	861	126	160	889	0
Confl. Peds. (#/hr)	1		7	7		1	5		3	3		5
Confl. Bikes (#/hr)			1									
Heavy Vehicles (%)	1%	2%	1%	3%	2%	1%	0%	1%	3%	1%	1%	3%
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	3	8		7	4		5	2		1	6	
Permitted Phases			8			4			2			
Actuated Green, G (s)	15.8	22.9	22.9	16.9	24.0	24.0	12.7	58.6	58.6	18.1	64.0	
Effective Green, g (s)	16.8	23.9	23.9	17.9	25.0	25.0	13.2	60.6	60.6	18.6	66.0	
Actuated g/C Ratio	0.12	0.17	0.17	0.13	0.18	0.18	0.10	0.44	0.44	0.14	0.48	
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	4.5	6.0	6.0	4.5	6.0	
Vehicle Extension (s)	1.0	1.0	1.0	1.0	1.0	1.0	0.5	0.5	0.5	0.5	0.5	
Lane Grp Cap (vph)	219	325	271	444	339	287	173	1580	673	242	1673	
v/s Ratio Prot	0.09	c0.14		c0.10	0.12		c0.07	c0.24		c0.09	0.26	
v/s Ratio Perm			0.02			0.02			0.08			
v/c Ratio	0.75	0.82	0.12	0.75	0.64	0.12	0.75	0.54	0.19	0.66	0.53	
Uniform Delay, d1	58.1	54.5	47.6	57.4	51.8	46.8	60.3	28.1	23.2	56.2	24.7	
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	12.2	14.8	0.1	6.4	2.9	0.1	14.1	1.4	0.6	5.2	1.2	
Delay (s)	70.3	69.3	47.7	63.8	54.7	46.9	74.4	29.4	23.8	61.4	25.9	
Level of Service	E	E	D	E	D	D	E	C	C	E	C	
Approach Delay (s)		63.3			56.7			32.7			31.3	
Approach LOS		E			E			C			C	

Intersection Summary			
HCM 2000 Control Delay	42.2	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	137.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	68.9%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	600	20	45	740	145	25	50	65	185	45	25
Future Volume (veh/h)	20	600	20	45	740	145	25	50	65	185	45	25
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.97	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1841	1841	1826	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	22	632	21	47	779	158	26	54	68	201	49	27
Peak Hour Factor	0.92	0.95	0.95	0.95	0.95	0.92	0.95	0.92	0.95	0.92	0.92	0.92
Percent Heavy Veh, %	2	4	4	5	2	2	2	2	2	2	2	2
Cap, veh/h	253	1092	36	436	930	189	115	183	189	368	69	35
Arrive On Green	0.62	0.62	0.62	0.62	0.62	0.62	0.23	0.24	0.24	0.23	0.24	0.24
Sat Flow, veh/h	598	1771	59	761	1508	306	163	762	787	1068	289	147
Grp Volume(v), veh/h	22	0	653	47	0	937	148	0	0	277	0	0
Grp Sat Flow(s),veh/h/ln	598	0	1830	761	0	1814	1712	0	0	1504	0	0
Q Serve(g_s), s	1.7	0.0	11.9	2.2	0.0	22.8	0.0	0.0	0.0	5.2	0.0	0.0
Cycle Q Clear(g_c), s	24.5	0.0	11.9	14.1	0.0	22.8	4.1	0.0	0.0	9.3	0.0	0.0
Prop In Lane	1.00		0.03	1.00		0.17	0.18		0.46	0.73		0.10
Lane Grp Cap(c), veh/h	253	0	1128	436	0	1118	472	0	0	459	0	0
V/C Ratio(X)	0.09	0.00	0.58	0.11	0.00	0.84	0.31	0.00	0.00	0.60	0.00	0.00
Avail Cap(c_a), veh/h	465	0	1779	707	0	1764	885	0	0	814	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	18.2	0.0	6.4	10.6	0.0	8.5	17.7	0.0	0.0	19.5	0.0	0.0
Incr Delay (d2), s/veh	0.1	0.0	0.5	0.1	0.0	2.1	0.4	0.0	0.0	1.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	3.0	0.3	0.0	6.1	1.5	0.0	0.0	3.2	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.4	0.0	6.9	10.7	0.0	10.6	18.0	0.0	0.0	20.8	0.0	0.0
LnGrp LOS	B	A	A	B	A	B	B	A	A	C	A	A
Approach Vol, veh/h		675			984			148			277	
Approach Delay, s/veh		7.2			10.6			18.0			20.8	
Approach LOS		A			B			B			C	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	17.4	38.4	17.4	38.4
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	27.3	53.7	27.3	53.7
Max Q Clear Time (g_c+I1), s	6.1	26.5	11.3	24.8
Green Ext Time (p_c), s	0.8	5.0	1.5	9.0

Intersection Summary	
HCM 6th Ctrl Delay	11.4
HCM 6th LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	55	815	20	10	905	140	20	55	15	45	25	40
Future Volume (veh/h)	55	815	20	10	905	140	20	55	15	45	25	40
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	0.98		0.97	0.97		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1841	1841	1900	1870	1900	1900	1900	1900	1885	1900	1900
Adj Flow Rate, veh/h	57	840	21	10	933	144	21	57	15	46	26	41
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	4	4	0	2	0	0	0	0	1	0	0
Cap, veh/h	355	1334	33	419	1365	1149	191	182	48	177	76	119
Arrive On Green	0.02	0.75	0.75	0.01	0.73	0.73	0.13	0.13	0.13	0.12	0.12	0.12
Sat Flow, veh/h	1810	1788	45	1810	1870	1575	1322	1439	379	1304	649	1024
Grp Volume(v), veh/h	57	0	861	10	933	144	21	0	72	46	0	67
Grp Sat Flow(s),veh/h/ln	1810	0	1833	1810	1870	1575	1322	0	1817	1304	0	1673
Q Serve(g_s), s	0.8	0.0	22.5	0.2	26.9	2.7	1.5	0.0	3.6	3.4	0.0	3.7
Cycle Q Clear(g_c), s	0.8	0.0	22.5	0.2	26.9	2.7	5.2	0.0	3.6	7.0	0.0	3.7
Prop In Lane	1.00		0.02	1.00		1.00	1.00		0.21	1.00		0.61
Lane Grp Cap(c), veh/h	355	0	1368	419	1365	1149	191	0	230	177	0	195
V/C Ratio(X)	0.16	0.00	0.63	0.02	0.68	0.13	0.11	0.00	0.31	0.26	0.00	0.34
Avail Cap(c_a), veh/h	457	0	1368	550	1365	1149	327	0	418	325	0	385
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	7.5	0.0	6.1	6.0	7.3	4.0	42.1	0.0	39.7	43.8	0.0	40.7
Incr Delay (d2), s/veh	0.1	0.0	2.2	0.0	2.8	0.2	0.1	0.0	0.3	0.3	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	7.2	0.0	9.3	0.8	0.5	0.0	1.6	1.1	0.0	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	7.5	0.0	8.3	6.0	10.1	4.2	42.2	0.0	40.0	44.1	0.0	41.0
LnGrp LOS	A	A	A	A	B	A	D	A	D	D	A	D
Approach Vol, veh/h		918			1087			93			113	
Approach Delay, s/veh		8.2			9.3			40.5			42.3	
Approach LOS		A			A			D			D	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	4.7	78.6		16.7	6.4	77.0		16.7
Change Period (Y+Rc), s	4.0	5.0		* 5	4.0	5.0		5.0
Max Green Setting (Gmax), s	8.0	56.0		* 23	8.0	56.0		22.0
Max Q Clear Time (g_c+I1), s	2.8	24.5		9.0	2.8	28.9		7.2
Green Ext Time (p_c), s	0.0	1.3		0.1	0.0	1.4		0.1

Intersection Summary	
HCM 6th Ctrl Delay	11.8
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	45	775	15	30	935	290	15	60	10	135	30	25
Future Volume (veh/h)	45	775	15	30	935	290	15	60	10	135	30	25
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1841	1841	1900	1885	1885	1900	1870	1900	1900	1900	1900
Adj Flow Rate, veh/h	49	842	16	33	1016	315	16	65	11	147	33	27
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	4	4	0	1	1	0	2	0	0	0	0
Cap, veh/h	63	2591	49	42	1948	599	19	101	86	111	101	83
Arrive On Green	0.04	0.74	0.73	0.05	1.00	1.00	0.01	0.05	0.05	0.06	0.10	0.10
Sat Flow, veh/h	1810	3511	67	1810	2682	825	1810	1870	1601	1810	965	790
Grp Volume(v), veh/h	49	419	439	33	676	655	16	65	11	147	0	60
Grp Sat Flow(s),veh/h/ln	1810	1749	1829	1810	1791	1716	1810	1870	1601	1810	0	1755
Q Serve(g_s), s	3.5	10.7	10.8	2.3	0.0	0.0	1.1	4.4	0.9	8.0	0.0	4.1
Cycle Q Clear(g_c), s	3.5	10.7	10.8	2.3	0.0	0.0	1.1	4.4	0.9	8.0	0.0	4.1
Prop In Lane	1.00		0.04	1.00		0.48	1.00		1.00	1.00		0.45
Lane Grp Cap(c), veh/h	63	1291	1350	42	1301	1246	19	101	86	111	0	184
V/C Ratio(X)	0.77	0.32	0.32	0.78	0.52	0.53	0.83	0.64	0.13	1.32	0.00	0.33
Avail Cap(c_a), veh/h	167	1291	1350	111	1301	1246	111	317	271	111	0	297
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.67	0.67	0.67	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	62.2	5.9	5.9	61.6	0.0	0.0	64.2	60.3	58.6	61.0	0.0	53.9
Incr Delay (d2), s/veh	7.2	0.7	0.6	7.7	1.0	1.1	27.3	2.5	0.2	193.6	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	3.7	3.9	1.1	0.4	0.4	0.7	2.2	0.3	9.7	0.0	1.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	69.4	6.5	6.5	69.3	1.0	1.1	91.5	62.8	58.8	254.6	0.0	54.3
LnGrp LOS	E	A	A	E	A	A	F	E	E	F	A	D
Approach Vol, veh/h		907			1364			92			207	
Approach Delay, s/veh		9.9			2.7			67.3			196.6	
Approach LOS		A			A			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.0	100.0	5.4	17.6	8.6	98.4	12.0	11.0
Change Period (Y+Rc), s	4.0	5.0	4.0	4.0	4.0	5.0	4.0	4.0
Max Green Setting (Gmax), s	8.0	75.0	8.0	22.0	12.0	71.0	8.0	22.0
Max Q Clear Time (g_c+I1), s	4.3	12.8	3.1	6.1	5.5	2.0	10.0	6.4
Green Ext Time (p_c), s	0.0	1.1	0.0	0.1	0.0	2.1	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	23.2
HCM 6th LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	165	740	15	455	1125	65	10	105	245	275	90	120
Future Volume (veh/h)	165	740	15	455	1125	65	10	105	245	275	90	120
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1900	1885	1885	1900	1811	1811	1900	1826	1826
Adj Flow Rate, veh/h	172	771	16	474	1172	68	10	109	255	286	94	125
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	3	3	3	0	1	1	0	6	6	0	5	5
Cap, veh/h	220	1834	38	432	1989	115	13	202	294	223	416	347
Arrive On Green	0.13	1.00	1.00	0.12	0.58	0.57	0.01	0.11	0.11	0.12	0.23	0.23
Sat Flow, veh/h	3428	3532	73	3510	3441	199	1810	1811	2638	1810	1826	1526
Grp Volume(v), veh/h	172	385	402	474	610	630	10	109	255	286	94	125
Grp Sat Flow(s),veh/h/ln	1714	1763	1842	1755	1791	1849	1810	1811	1319	1810	1826	1526
Q Serve(g_s), s	6.3	0.0	0.0	16.0	28.3	28.4	0.7	7.4	12.4	16.0	5.4	9.0
Cycle Q Clear(g_c), s	6.3	0.0	0.0	16.0	28.3	28.4	0.7	7.4	12.4	16.0	5.4	9.0
Prop In Lane	1.00		0.04	1.00		0.11	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	220	915	957	432	1035	1069	13	202	294	223	416	347
V/C Ratio(X)	0.78	0.42	0.42	1.10	0.59	0.59	0.79	0.54	0.87	1.28	0.23	0.36
Avail Cap(c_a), veh/h	527	915	957	432	1035	1069	139	265	386	223	416	347
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.92	0.92	0.92	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.8	0.0	0.0	57.0	17.5	17.6	64.5	54.6	56.8	57.0	40.9	42.2
Incr Delay (d2), s/veh	2.1	1.3	1.3	72.2	2.5	2.4	32.0	0.8	12.4	157.5	0.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	0.3	0.3	11.4	11.9	12.3	0.4	3.4	4.6	17.0	2.5	3.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	57.9	1.3	1.3	129.2	20.0	20.0	96.4	55.4	69.2	214.5	41.0	42.5
LnGrp LOS	E	A	A	F	B	B	F	E	E	F	D	D
Approach Vol, veh/h		959			1714			374			505	
Approach Delay, s/veh		11.4			50.2			65.9			139.6	
Approach LOS		B			D			E			F	

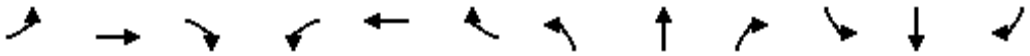
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	20.0	71.5	4.9	33.6	12.3	79.2	20.0	18.5
Change Period (Y+Rc), s	4.0	5.0	4.0	4.0	4.0	5.0	4.0	4.0
Max Green Setting (Gmax), s	16.0	62.0	10.0	25.0	20.0	58.0	16.0	19.0
Max Q Clear Time (g_c+I1), s	18.3	2.0	2.7	11.0	8.3	30.4	18.0	14.4
Green Ext Time (p_c), s	0.0	1.0	0.0	0.1	0.0	1.8	0.0	0.1

Intersection Summary	
HCM 6th Ctrl Delay	54.1
HCM 6th LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	690	1040	500	1805	0	0	0	0	275	15	390
Future Volume (veh/h)	0	690	1040	500	1805	0	0	0	0	275	15	390
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1856	1885	1885	1885	0				1870	1648	1870
Adj Flow Rate, veh/h	0	719	1083	521	1880	0				286	16	406
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96				0.96	0.96	0.96
Percent Heavy Veh, %	0	3	1	1	1	0				2	17	2
Cap, veh/h	0	1502	1198	669	2387	0				353	20	660
Arrive On Green	0.00	0.43	0.43	0.19	0.67	0.00				0.21	0.24	0.24
Sat Flow, veh/h	0	3618	2812	3483	3676	0				1490	83	2790
Grp Volume(v), veh/h	0	719	1083	521	1880	0				302	0	406
Grp Sat Flow(s),veh/h/ln	0	1763	1406	1742	1791	0				1574	0	1395
Q Serve(g_s), s	0.0	12.2	29.7	11.7	30.5	0.0				15.1	0.0	10.7
Cycle Q Clear(g_c), s	0.0	12.2	29.7	11.7	30.5	0.0				15.1	0.0	10.7
Prop In Lane	0.00		1.00	1.00		0.00				0.95		1.00
Lane Grp Cap(c), veh/h	0	1502	1198	669	2387	0				373	0	660
V/C Ratio(X)	0.00	0.48	0.90	0.78	0.79	0.00				0.81	0.00	0.61
Avail Cap(c_a), veh/h	0	1749	1395	885	2387	0				781	0	1384
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	17.1	22.1	31.7	9.7	0.0				30.7	0.0	28.2
Incr Delay (d2), s/veh	0.0	0.1	7.2	2.3	1.7	0.0				1.6	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	4.6	10.1	5.0	10.0	0.0				5.6	0.0	3.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	17.2	29.3	34.0	11.3	0.0				32.4	0.0	28.5
LnGrp LOS	A	B	C	C	B	A				C	A	C
Approach Vol, veh/h		1802			2401						708	
Approach Delay, s/veh		24.5			16.3						30.2	
Approach LOS		C			B						C	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	19.9	39.2		23.6		59.1
Change Period (Y+Rc), s	6.0	6.0		6.0		6.0
Max Green Setting (Gmax), s	13.9	39.0		39.0		39.0
Max Q Clear Time (g_c+I1), s	13.7	31.7		17.1		32.5
Green Ext Time (p_c), s	0.1	1.5		0.5		3.0

Intersection Summary	
HCM 6th Ctrl Delay	21.3
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	250	715	0	0	1115	250	1190	0	505	0	0	0
Future Volume (vph)	250	715	0	0	1115	250	1190	0	505	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0		4.0	4.0	4.0			
Lane Util. Factor	1.00	0.95			0.95		0.95	0.95	1.00			
Frpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00			
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00			
Frt	1.00	1.00			0.97		1.00	1.00	0.85			
Flt Protected	0.95	1.00			1.00		0.95	0.95	1.00			
Satd. Flow (prot)	1770	3505			3457		1698	1698	1568			
Flt Permitted	0.95	1.00			1.00		0.95	0.95	1.00			
Satd. Flow (perm)	1770	3505			3457		1698	1698	1568			
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	266	761	0	0	1186	266	1266	0	537	0	0	0
RTOR Reduction (vph)	0	0	0	0	17	0	0	0	91	0	0	0
Lane Group Flow (vph)	266	761	0	0	1435	0	633	633	446	0	0	0
Confl. Peds. (#/hr)			1	1								
Heavy Vehicles (%)	2%	3%	0%	0%	1%	4%	1%	0%	3%	0%	0%	0%
Turn Type	Prot	NA			NA		Perm	NA	Perm			
Protected Phases	5	2			6			4				
Permitted Phases							4		4			
Actuated Green, G (s)	16.7	52.0			29.3		40.0	40.0	40.0			
Effective Green, g (s)	18.7	54.0			31.3		42.0	42.0	42.0			
Actuated g/C Ratio	0.18	0.52			0.30		0.40	0.40	0.40			
Clearance Time (s)	6.0	6.0			6.0		6.0	6.0	6.0			
Vehicle Extension (s)	0.5	0.5			0.5		0.5	0.5	0.5			
Lane Grp Cap (vph)	318	1819			1040		685	685	633			
v/s Ratio Prot	c0.15	0.22			c0.42							
v/s Ratio Perm							c0.37	0.37	0.28			
v/c Ratio	0.84	0.42			1.38		0.92	0.92	0.71			
Uniform Delay, d1	41.2	15.4			36.4		29.5	29.5	25.8			
Progression Factor	1.00	1.00			1.00		1.00	1.00	1.00			
Incremental Delay, d2	16.4	0.1			177.1		17.9	17.9	2.9			
Delay (s)	57.6	15.4			213.4		47.4	47.4	28.8			
Level of Service	E	B			F		D	D	C			
Approach Delay (s)		26.3			213.4			41.9			0.0	
Approach LOS		C			F			D			A	

Intersection Summary			
HCM 2000 Control Delay	96.3	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.08		
Actuated Cycle Length (s)	104.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	95.6%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	125	560	410	65	415	35	550	495	145	120	635	125
Future Volume (veh/h)	125	560	410	65	415	35	550	495	145	120	635	125
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1870	1841	1885	1885	1900	1826	1826	1781	1870	1856
Adj Flow Rate, veh/h	134	602	441	70	446	38	591	532	156	129	683	134
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	4	4	2	4	1	1	0	5	5	8	2	3
Cap, veh/h	177	637	549	100	518	44	248	772	225	179	923	408
Arrive On Green	0.10	0.35	0.35	0.06	0.30	0.28	0.14	0.29	0.27	0.11	0.26	0.26
Sat Flow, veh/h	1753	1841	1585	1753	1713	146	1810	2648	773	1697	3554	1572
Grp Volume(v), veh/h	134	602	441	70	0	484	591	348	340	129	683	134
Grp Sat Flow(s),veh/h/ln	1753	1841	1585	1753	0	1859	1810	1735	1687	1697	1777	1572
Q Serve(g_s), s	6.0	25.5	20.2	3.1	0.0	19.7	11.0	14.2	14.4	5.9	14.1	5.5
Cycle Q Clear(g_c), s	6.0	25.5	20.2	3.1	0.0	19.7	11.0	14.2	14.4	5.9	14.1	5.5
Prop In Lane	1.00		1.00	1.00		0.08	1.00		0.46	1.00		1.00
Lane Grp Cap(c), veh/h	177	637	549	100	0	562	248	506	492	179	923	408
V/C Ratio(X)	0.76	0.94	0.80	0.70	0.00	0.86	2.38	0.69	0.69	0.72	0.74	0.33
Avail Cap(c_a), veh/h	241	637	549	241	0	603	248	563	547	233	1153	510
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.1	25.5	23.7	37.1	0.0	26.5	34.6	25.2	25.6	34.7	27.2	24.0
Incr Delay (d2), s/veh	7.5	22.8	8.2	6.3	0.0	11.3	633.3	2.8	2.9	6.2	1.7	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	13.9	8.0	1.4	0.0	9.5	48.2	5.7	5.7	2.7	6.0	1.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	42.6	48.3	32.0	43.4	0.0	37.7	667.9	27.9	28.6	40.9	28.9	24.4
LnGrp LOS	D	D	C	D	A	D	F	C	C	D	C	C
Approach Vol, veh/h		1177			554			1279			946	
Approach Delay, s/veh		41.5			38.5			323.8			29.9	
Approach LOS		D			D			F			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.0	24.8	12.1	28.2	12.5	27.4	8.6	31.8
Change Period (Y+Rc), s	4.5	6.0	4.5	6.0	4.5	6.0	4.5	6.0
Max Green Setting (Gmax), s	10.5	24.0	10.5	24.0	10.5	24.0	10.5	24.0
Max Q Clear Time (g_c+I1), s	13.0	16.1	8.0	21.7	7.9	16.4	5.1	27.5
Green Ext Time (p_c), s	0.0	2.7	0.1	0.5	0.1	2.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	129.6
HCM 6th LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	150	225	200	180	295	130	210	1075	110	155	900	110
Future Volume (veh/h)	150	225	200	180	295	130	210	1075	110	155	900	110
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.96	1.00		0.99	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1710	1697	1683	1697	1710	1697	1697	1697	1697	1697	1683	1683
Adj Flow Rate, veh/h	158	237	211	189	311	137	221	1132	116	163	947	116
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	1	2	1	0	1	1	1	1	1	2	2
Cap, veh/h	180	266	215	211	303	245	243	1393	143	182	1257	154
Arrive On Green	0.11	0.16	0.16	0.13	0.18	0.18	0.15	0.47	0.47	0.23	0.88	0.87
Sat Flow, veh/h	1629	1697	1369	1616	1710	1387	1616	2947	302	1616	2862	351
Grp Volume(v), veh/h	158	237	211	189	311	137	221	618	630	163	529	534
Grp Sat Flow(s),veh/h/ln	1629	1697	1369	1616	1710	1387	1616	1612	1637	1616	1599	1613
Q Serve(g_s), s	12.4	17.8	20.0	15.0	23.0	11.7	17.5	42.7	42.9	12.7	15.5	15.6
Cycle Q Clear(g_c), s	12.4	17.8	20.0	15.0	23.0	11.7	17.5	42.7	42.9	12.7	15.5	15.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.18	1.00		0.22
Lane Grp Cap(c), veh/h	180	266	215	211	303	245	243	762	774	182	702	708
V/C Ratio(X)	0.88	0.89	0.98	0.90	1.03	0.56	0.91	0.81	0.81	0.89	0.75	0.75
Avail Cap(c_a), veh/h	194	266	215	242	303	245	360	762	774	186	702	708
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	0.84	0.84	0.84	1.00	1.00	1.00	1.00	1.00	1.00	0.89	0.89	0.89
Uniform Delay (d), s/veh	56.9	53.7	54.6	55.6	53.5	48.9	54.4	29.3	29.4	49.6	5.4	5.5
Incr Delay (d2), s/veh	26.6	24.4	50.7	27.6	59.1	1.7	15.6	9.2	9.2	33.4	6.6	6.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.4	9.4	9.9	7.7	14.8	4.2	8.1	17.9	18.3	6.2	3.4	3.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	83.5	78.1	105.3	83.2	112.6	50.6	70.0	38.5	38.5	82.9	12.0	12.0
LnGrp LOS	F	E	F	F	F	D	E	D	D	F	B	B
Approach Vol, veh/h		606			637			1469			1226	
Approach Delay, s/veh		89.0			90.6			43.3			21.4	
Approach LOS		F			F			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.7	65.9	21.0	24.4	23.5	61.1	18.4	27.0
Change Period (Y+Rc), s	4.0	4.5	4.0	4.0	4.0	4.5	4.0	4.0
Max Green Setting (Gmax), s	15.0	60.0	19.5	19.0	29.0	46.0	15.5	23.0
Max Q Clear Time (g_c+I1), s	14.7	44.9	17.0	22.0	19.5	17.6	14.4	25.0
Green Ext Time (p_c), s	0.0	1.7	0.0	0.0	0.0	1.5	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	51.1
HCM 6th LOS	D

Intersection	
Intersection Delay, s/veh	10.4
Intersection LOS	B

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	505	557	531	123
Demand Flow Rate, veh/h	510	565	536	124
Vehicles Circulating, veh/h	292	368	276	746
Vehicles Exiting, veh/h	578	444	526	187
Ped Vol Crossing Leg, #/h	0	0	2	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	9.5	12.3	9.7	7.9
Approach LOS	A	B	A	A

Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	510	565	536	124
Cap Entry Lane, veh/h	1024	948	1041	645
Entry HV Adj Factor	0.990	0.986	0.990	0.993
Flow Entry, veh/h	505	557	531	123
Cap Entry, veh/h	1014	935	1031	641
V/C Ratio	0.498	0.596	0.515	0.192
Control Delay, s/veh	9.5	12.3	9.7	7.9
LOS	A	B	A	A
95th %tile Queue, veh	3	4	3	1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	640	40	455	850	305	95	1195	625	200	905	210
Future Volume (veh/h)	40	640	40	455	850	305	95	1195	625	200	905	210
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1856	1885	1885	1870	1826	1885	1856	1885	1870	1856	1900
Adj Flow Rate, veh/h	41	653	41	464	867	311	97	1219	0	204	923	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	3	1	1	2	5	1	3	1	2	3	0
Cap, veh/h	111	343	289	359	604	492	134	1193		260	1472	
Arrive On Green	0.06	0.18	0.18	0.20	0.32	0.32	0.07	0.34	0.00	0.15	0.42	0.00
Sat Flow, veh/h	1810	1856	1566	1795	1870	1522	1795	3526	1598	1781	3526	1610
Grp Volume(v), veh/h	41	653	41	464	867	311	97	1219	0	204	923	0
Grp Sat Flow(s),veh/h/ln	1810	1856	1566	1795	1870	1522	1795	1763	1598	1781	1763	1610
Q Serve(g_s), s	2.8	24.0	2.3	26.0	42.0	22.6	6.9	44.0	0.0	14.4	26.9	0.0
Cycle Q Clear(g_c), s	2.8	24.0	2.3	26.0	42.0	22.6	6.9	44.0	0.0	14.4	26.9	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	111	343	289	359	604	492	134	1193		260	1472	
V/C Ratio(X)	0.37	1.91	0.14	1.29	1.43	0.63	0.72	1.02		0.78	0.63	
Avail Cap(c_a), veh/h	111	343	289	359	604	492	290	1193		274	1472	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	58.6	53.0	29.4	52.0	44.0	37.4	58.8	43.0	0.0	53.5	29.9	0.0
Incr Delay (d2), s/veh	2.0	418.6	0.2	150.8	205.0	2.0	7.1	31.6	0.0	13.2	2.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	50.9	1.1	26.6	53.5	8.6	3.3	23.2	0.0	7.1	11.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	60.6	471.6	29.6	202.8	249.0	39.4	65.9	74.6	0.0	66.7	31.9	0.0
LnGrp LOS	E	F	C	F	F	D	E	F		E	C	
Approach Vol, veh/h		735			1642			1316	A		1127	A
Approach Delay, s/veh		424.0			196.3			74.0			38.2	
Approach LOS		F			F			E			D	

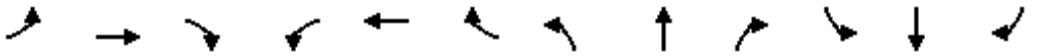
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.7	58.3	12.0	46.0	24.0	48.0	30.0	28.0
Change Period (Y+Rc), s	5.0	6.0	5.0	5.0	6.0	* 6	5.0	5.0
Max Green Setting (Gmax), s	20.6	41.0	7.0	41.0	19.0	* 42	25.0	23.0
Max Q Clear Time (g_c+I1), s	18.9	28.9	4.8	44.0	16.4	46.0	28.0	26.0
Green Ext Time (p_c), s	0.1	5.1	0.0	0.0	0.1	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	160.7
HCM 6th LOS	F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [NBR, SBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	95	30	315	145	195	25	125	145	270	175	25
Future Volume (veh/h)	5	95	30	315	145	195	25	125	145	270	175	25
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1604	1870	1870	1870	1841	1841	1856	1856	1856	1870	1870	1870
Adj Flow Rate, veh/h	5	99	31	328	151	203	26	130	151	281	182	26
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	20	2	2	2	4	4	3	3	3	2	2	2
Cap, veh/h	252	455	143	474	234	315	101	416	438	495	296	39
Arrive On Green	0.33	0.33	0.32	0.33	0.33	0.32	0.52	0.53	0.52	0.52	0.53	0.52
Sat Flow, veh/h	881	1366	428	1260	702	944	67	781	821	751	556	73
Grp Volume(v), veh/h	5	0	130	328	0	354	307	0	0	489	0	0
Grp Sat Flow(s),veh/h/ln	881	0	1793	1260	0	1647	1668	0	0	1380	0	0
Q Serve(g_s), s	0.3	0.0	3.1	15.2	0.0	11.0	0.0	0.0	0.0	8.3	0.0	0.0
Cycle Q Clear(g_c), s	11.3	0.0	3.1	18.3	0.0	11.0	6.2	0.0	0.0	14.5	0.0	0.0
Prop In Lane	1.00		0.24	1.00		0.57	0.08		0.49	0.57		0.05
Lane Grp Cap(c), veh/h	252	0	598	474	0	549	941	0	0	819	0	0
V/C Ratio(X)	0.02	0.00	0.22	0.69	0.00	0.64	0.33	0.00	0.00	0.60	0.00	0.00
Avail Cap(c_a), veh/h	252	0	598	474	0	549	941	0	0	819	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	21.8	0.0	14.4	21.0	0.0	17.1	8.1	0.0	0.0	9.7	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.2	4.3	0.0	2.6	0.9	0.0	0.0	3.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	1.0	4.3	0.0	3.8	1.7	0.0	0.0	3.5	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	21.8	0.0	14.6	25.2	0.0	19.7	9.0	0.0	0.0	12.9	0.0	0.0
LnGrp LOS	C	A	B	C	A	B	A	A	A	B	A	A
Approach Vol, veh/h		135			682			307			489	
Approach Delay, s/veh		14.9			22.4			9.0			12.9	
Approach LOS		B			C			A			B	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		36.0		24.0		36.0		24.0				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		31.5		19.5		31.5		19.5				
Max Q Clear Time (g_c+I1), s		8.2		13.3		16.5		20.3				
Green Ext Time (p_c), s		1.6		0.2		2.7		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			16.3									
HCM 6th LOS			B									

Intersection	
Int Delay, s/veh	58.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	420	400	340	360	0	0	0	0	125	0	465
Future Vol, veh/h	0	420	400	340	360	0	0	0	0	125	0	465
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	180	-	-	-	-	-	-	-	100
Veh in Median Storage, #	-	0	-	-	0	-	-	16974	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	12	9	3	12	0	0	0	0	0	0	10
Mvmt Flow	0	442	421	358	379	0	0	0	0	132	0	489

Major/Minor	Major1			Major2			Minor2		
Conflicting Flow All	-	0	0	863	0	0	1748	1958	379
Stage 1	-	-	-	-	-	-	1095	1095	-
Stage 2	-	-	-	-	-	-	653	863	-
Critical Hdwy	-	-	-	4.13	-	-	6.4	6.5	6.3
Critical Hdwy Stg 1	-	-	-	-	-	-	5.4	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5.4	5.5	-
Follow-up Hdwy	-	-	-	2.227	-	-	3.5	4	3.39
Pot Cap-1 Maneuver	0	-	-	775	-	0	~ 96	64	651
Stage 1	0	-	-	-	-	0	323	292	-
Stage 2	0	-	-	-	-	0	522	374	-
Platoon blocked, %		-	-		-				
Mov Cap-1 Maneuver	-	-	-	775	-	-	~ 52	0	651
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 52	0	-
Stage 1	-	-	-	-	-	-	323	0	-
Stage 2	-	-	-	-	-	-	281	0	-

Approach	EB	WB	SB
HCM Control Delay, s	0	6.6	202.8
HCM LOS			F

Minor Lane/Major Mvmt	EBT	EBR	WBL	WBT	SBLn1	SBLn2
Capacity (veh/h)	-	-	775	-	52	651
HCM Lane V/C Ratio	-	-	0.462	-	2.53	0.752
HCM Control Delay (s)	-	-	13.6	-	$ 862.9	25.3
HCM Lane LOS	-	-	B	-	F	D
HCM 95th %tile Q(veh)	-	-	2.5	-	13.6	6.8

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

Intersection	
Int Delay, s/veh	149.8

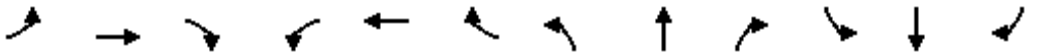
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	325	220	0	0	505	160	195	0	305	0	0	0
Future Vol, veh/h	325	220	0	0	505	160	195	0	305	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	155	-	-	-	-	-	-	-	100	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	16965	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	18	4	0	0	4	0	14	0	4	0	0	0
Mvmt Flow	357	242	0	0	555	176	214	0	335	0	0	0

Major/Minor	Major1			Major2			Minor1		
Conflicting Flow All	731	0	-	-	-	0	1599	1687	242
Stage 1	-	-	-	-	-	-	956	956	-
Stage 2	-	-	-	-	-	-	643	731	-
Critical Hdwy	4.28	-	-	-	-	-	6.54	6.5	6.24
Critical Hdwy Stg 1	-	-	-	-	-	-	5.54	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5.54	5.5	-
Follow-up Hdwy	2.362	-	-	-	-	-	3.626	4	3.336
Pot Cap-1 Maneuver	805	-	0	0	-	-	~ 109	95	792
Stage 1	-	-	0	0	-	-	355	339	-
Stage 2	-	-	0	0	-	-	501	430	-
Platoon blocked, %		-			-	-			
Mov Cap-1 Maneuver	805	-	-	-	-	-	~ 61	0	792
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 61	0	-
Stage 1	-	-	-	-	-	-	~ 198	0	-
Stage 2	-	-	-	-	-	-	501	0	-

Approach	EB	WB	NB
HCM Control Delay, s	7.7	0	$ 503.9
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	WBT	WBR
Capacity (veh/h)	61	792	805	-	-	-
HCM Lane V/C Ratio	3.513	0.423	0.444	-	-	-
HCM Control Delay (s)	$ 1272	12.8	13	-	-	-
HCM Lane LOS	F	B	B	-	-	-
HCM 95th %tile Q(veh)	22.7	2.1	2.3	-	-	-

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	165	90	240	55	165	75	70	550	55	80	525	330
Future Volume (veh/h)	165	90	240	55	165	75	70	550	55	80	525	330
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1796	1796	1856	1870	1870	1870	1811	1856	1856	1900	1870	1826
Adj Flow Rate, veh/h	174	95	0	58	174	79	74	579	58	84	553	347
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	7	7	3	2	2	2	6	3	3	0	2	5
Cap, veh/h	312	133		137	320	131	330	747	75	328	850	703
Arrive On Green	0.28	0.30	0.00	0.28	0.30	0.28	0.05	0.45	0.43	0.05	0.45	0.45
Sat Flow, veh/h	719	450	1572	220	1076	441	1725	1659	166	1810	1870	1547
Grp Volume(v), veh/h	269	0	0	311	0	0	74	0	637	84	553	347
Grp Sat Flow(s),veh/h/ln	1169	0	1572	1738	0	0	1725	0	1826	1810	1870	1547
Q Serve(g_s), s	4.1	0.0	0.0	0.0	0.0	0.0	1.4	0.0	17.7	1.5	13.7	9.5
Cycle Q Clear(g_c), s	13.2	0.0	0.0	9.2	0.0	0.0	1.4	0.0	17.7	1.5	13.7	9.5
Prop In Lane	0.65		1.00	0.19		0.25	1.00		0.09	1.00		1.00
Lane Grp Cap(c), veh/h	426	0		558	0	0	330	0	822	328	850	703
V/C Ratio(X)	0.63	0.00		0.56	0.00	0.00	0.22	0.00	0.77	0.26	0.65	0.49
Avail Cap(c_a), veh/h	829	0		1089	0	0	476	0	1309	474	1342	1110
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.9	0.0	0.0	18.2	0.0	0.0	10.1	0.0	14.0	11.2	12.7	11.5
Incr Delay (d2), s/veh	1.1	0.0	0.0	0.6	0.0	0.0	0.3	0.0	2.3	0.3	1.2	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.3	0.0	0.0	3.5	0.0	0.0	0.4	0.0	6.2	0.5	4.8	2.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	21.0	0.0	0.0	18.9	0.0	0.0	10.3	0.0	16.2	11.5	13.9	12.3
LnGrp LOS	C	A		B	A	A	B	A	B	B	B	B
Approach Vol, veh/h		269	A		311			711			984	
Approach Delay, s/veh		21.0			18.9			15.6			13.1	
Approach LOS		C			B			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.2	31.0		21.8	6.9	31.2		21.8				
Change Period (Y+Rc), s	4.5	* 5.4		5.0	4.5	* 5.4		5.0				
Max Green Setting (Gmax), s	7.5	* 42		36.0	7.5	* 42		36.0				
Max Q Clear Time (g_c+I1), s	3.5	19.7		15.2	3.4	15.7		11.2				
Green Ext Time (p_c), s	0.0	5.9		1.4	0.0	7.4		1.5				

Intersection Summary	
HCM 6th Ctrl Delay	15.6
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Int Delay, s/veh	3.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	0	90	0	20	0	65	55	15	190	0
Future Vol, veh/h	0	0	0	90	0	20	0	65	55	15	190	0
Conflicting Peds, #/hr	0	0	0	2	0	0	0	0	2	2	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	89	92	89	92	89	89	89	89	92
Heavy Vehicles, %	2	2	2	0	2	0	2	2	2	8	0	2
Mvmt Flow	0	0	0	101	0	22	0	73	62	17	213	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	362	384	215	355	353	106	213	0	0	137	0	0
Stage 1	247	247	-	106	106	-	-	-	-	-	-	-
Stage 2	115	137	-	249	247	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.1	6.52	6.2	4.12	-	-	4.18	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.1	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.1	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.5	4.018	3.3	2.218	-	-	2.272	-	-
Pot Cap-1 Maneuver	594	550	825	604	572	954	1357	-	-	1411	-	-
Stage 1	757	702	-	905	807	-	-	-	-	-	-	-
Stage 2	890	783	-	759	702	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	574	541	823	596	563	952	1357	-	-	1408	-	-
Mov Cap-2 Maneuver	574	541	-	596	563	-	-	-	-	-	-	-
Stage 1	757	692	-	903	805	-	-	-	-	-	-	-
Stage 2	869	781	-	747	692	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	12	0	0.6
HCM LOS	A	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1357	-	-	-	639	1408	-	-
HCM Lane V/C Ratio	-	-	-	-	0.193	0.012	-	-
HCM Control Delay (s)	0	-	-	0	12	7.6	0	-
HCM Lane LOS	A	-	-	A	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	-	0.7	0	-	-

Intersection	
Int Delay, s/veh	21.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	25	50	20	90	115	105	30	150	55	80	430	45
Future Vol, veh/h	25	50	20	90	115	105	30	150	55	80	430	45
Conflicting Peds, #/hr	0	0	1	1	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	Stop	-	-	None	-	-	None
Storage Length	-	-	30	-	-	50	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	0	6	6	0	0	7	0	2	0	8	1	0
Mvmt Flow	26	52	21	93	119	108	31	155	57	82	443	46

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	935	904	467	914	899	184	489	0	0	212	0	0
Stage 1	630	630	-	246	246	-	-	-	-	-	-	-
Stage 2	305	274	-	668	653	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.56	6.26	7.1	6.5	6.27	4.1	-	-	4.18	-	-
Critical Hdwy Stg 1	6.1	5.56	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.56	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4.054	3.354	3.5	4	3.363	2.2	-	-	2.272	-	-
Pot Cap-1 Maneuver	248	273	588	256	281	846	1085	-	-	1323	-	-
Stage 1	473	469	-	762	706	-	-	-	-	-	-	-
Stage 2	709	676	-	451	467	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	124	241	587	188	248	846	1085	-	-	1323	-	-
Mov Cap-2 Maneuver	124	241	-	188	248	-	-	-	-	-	-	-
Stage 1	457	429	-	737	683	-	-	-	-	-	-	-
Stage 2	494	654	-	350	427	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	32.6	69.4	1.1	1.1
HCM LOS	D	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1085	-	-	183	587	218	846	1323	-	-
HCM Lane V/C Ratio	0.029	-	-	0.423	0.035	0.969	0.128	0.062	-	-
HCM Control Delay (s)	8.4	0	-	38.3	11.4	99.8	9.9	7.9	0	-
HCM Lane LOS	A	A	-	E	B	F	A	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	1.9	0.1	8.5	0.4	0.2	-	-

Intersection	
Int Delay, s/veh	2.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	180	50	15	330	90	20
Future Vol, veh/h	180	50	15	330	90	20
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	82	82	82	82	82	82
Heavy Vehicles, %	7	0	0	3	0	0
Mvmt Flow	220	61	18	402	110	24

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	281	0	689	251
Stage 1	-	-	-	-	251	-
Stage 2	-	-	-	-	438	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1293	-	415	793
Stage 1	-	-	-	-	795	-
Stage 2	-	-	-	-	655	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1293	-	408	793
Mov Cap-2 Maneuver	-	-	-	-	408	-
Stage 1	-	-	-	-	795	-
Stage 2	-	-	-	-	643	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.3	16.4
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	448	-	-	1293	-
HCM Lane V/C Ratio	0.299	-	-	0.014	-
HCM Control Delay (s)	16.4	-	-	7.8	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	1.2	-	-	0	-

Intersection	
Int Delay, s/veh	33.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	105	115	145	465	615	155
Future Vol, veh/h	105	115	145	465	615	155
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	240	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	4	4	5	1	2
Mvmt Flow	111	121	153	489	647	163

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1524	729	810	0	-	0
Stage 1	729	-	-	-	-	-
Stage 2	795	-	-	-	-	-
Critical Hdwy	6.4	6.24	4.14	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.336	2.236	-	-	-
Pot Cap-1 Maneuver	131	420	807	-	-	-
Stage 1	481	-	-	-	-	-
Stage 2	448	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	~ 106	420	807	-	-	-
Mov Cap-2 Maneuver	~ 106	-	-	-	-	-
Stage 1	390	-	-	-	-	-
Stage 2	448	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	234.1	2.5	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	807	-	174	-	-
HCM Lane V/C Ratio	0.189	-	1.331	-	-
HCM Control Delay (s)	10.5	-	234.1	-	-
HCM Lane LOS	B	-	F	-	-
HCM 95th %tile Q(veh)	0.7	-	13.6	-	-

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

Intersection	
Int Delay, s/veh	14.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	185	30	245	200	35	480
Future Vol, veh/h	185	30	245	200	35	480
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	1	0	2	2	0	1
Mvmt Flow	213	34	282	230	40	552

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1029	397	0	0	512	0
Stage 1	397	-	-	-	-	-
Stage 2	632	-	-	-	-	-
Critical Hdwy	6.41	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.41	-	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-	-
Follow-up Hdwy	3.509	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	260	657	-	-	1064	-
Stage 1	681	-	-	-	-	-
Stage 2	532	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	246	657	-	-	1064	-
Mov Cap-2 Maneuver	246	-	-	-	-	-
Stage 1	681	-	-	-	-	-
Stage 2	503	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	75.8	0	0.6
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	270	1064	-
HCM Lane V/C Ratio	-	-	0.915	0.038	-
HCM Control Delay (s)	-	-	75.8	8.5	0
HCM Lane LOS	-	-	F	A	A
HCM 95th %tile Q(veh)	-	-	8.3	0.1	-

Intersection	
Int Delay, s/veh	12.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	45	100	145	75	10	70	95	165	15	45	5
Future Vol, veh/h	5	45	100	145	75	10	70	95	165	15	45	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	0	5	0	0	1	0	0	0	0	0	5	0
Mvmt Flow	6	51	114	165	85	11	80	108	188	17	51	6

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	498	544	54	533	453	202	57	0	0	296	0	0
Stage 1	88	88	-	362	362	-	-	-	-	-	-	-
Stage 2	410	456	-	171	91	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.55	6.2	7.1	6.51	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.55	-	6.1	5.51	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.55	-	6.1	5.51	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4.045	3.3	3.5	4.009	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	486	442	1019	461	504	844	1560	-	-	1277	-	-
Stage 1	925	816	-	661	627	-	-	-	-	-	-	-
Stage 2	623	563	-	836	821	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	389	408	1019	349	466	844	1560	-	-	1277	-	-
Mov Cap-2 Maneuver	389	408	-	349	466	-	-	-	-	-	-	-
Stage 1	867	805	-	619	587	-	-	-	-	-	-	-
Stage 2	492	528	-	686	810	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	12.1	30.9	1.6	1.8
HCM LOS	B	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1560	-	-	678	391	1277	-	-
HCM Lane V/C Ratio	0.051	-	-	0.251	0.668	0.013	-	-
HCM Control Delay (s)	7.4	-	-	12.1	30.9	7.9	0	-
HCM Lane LOS	A	-	-	B	D	A	A	-
HCM 95th %tile Q(veh)	0.2	-	-	1	4.7	0	-	-

Intersection	
Int Delay, s/veh	15

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	35	190	150	600	660	35
Future Vol, veh/h	35	190	150	600	660	35
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	0	6	0	4	2	0
Mvmt Flow	38	204	161	645	710	38

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1696	729	748	0	-	0
Stage 1	729	-	-	-	-	-
Stage 2	967	-	-	-	-	-
Critical Hdwy	6.4	6.26	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.354	2.2	-	-	-
Pot Cap-1 Maneuver	103	416	870	-	-	-
Stage 1	481	-	-	-	-	-
Stage 2	372	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	73	416	870	-	-	-
Mov Cap-2 Maneuver	73	-	-	-	-	-
Stage 1	342	-	-	-	-	-
Stage 2	372	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	104.3	2	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	870	-	240	-	-
HCM Lane V/C Ratio	0.185	-	1.008	-	-
HCM Control Delay (s)	10.1	0	104.3	-	-
HCM Lane LOS	B	A	F	-	-
HCM 95th %tile Q(veh)	0.7	-	9.6	-	-

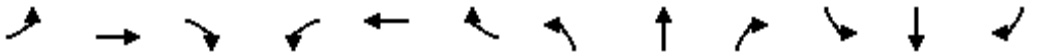
Intersection	
Int Delay, s/veh	4.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	45	100	230	400	575	90
Future Vol, veh/h	45	100	230	400	575	90
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	100	-	-	-
Veh in Median Storage, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	3	1	1	1	1	0
Mvmt Flow	50	111	256	444	639	100

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1645	689	739	0	-	0
Stage 1	689	-	-	-	-	-
Stage 2	956	-	-	-	-	-
Critical Hdwy	6.43	6.21	4.11	-	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.309	2.209	-	-	-
Pot Cap-1 Maneuver	109	447	872	-	-	-
Stage 1	497	-	-	-	-	-
Stage 2	372	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	77	447	872	-	-	-
Mov Cap-2 Maneuver	200	-	-	-	-	-
Stage 1	351	-	-	-	-	-
Stage 2	372	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	26.7	4	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	872	-	323	-	-
HCM Lane V/C Ratio	0.293	-	0.499	-	-
HCM Control Delay (s)	10.8	-	26.7	-	-
HCM Lane LOS	B	-	D	-	-
HCM 95th %tile Q(veh)	1.2	-	2.6	-	-



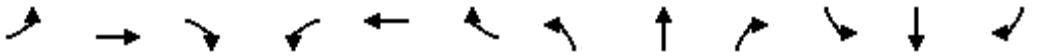
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	5	395	15	5	5	570	1020	15	15	915	15
Future Volume (vph)	15	5	395	15	5	5	570	1020	15	15	915	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0		4.0	4.0		3.0	4.0	
Lane Util. Factor		1.00	0.88		1.00		0.97	0.95		1.00	0.95	
Frpb, ped/bikes		1.00	0.96		1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Frt		1.00	0.85		0.97		1.00	1.00		1.00	1.00	
Flt Protected		0.96	1.00		0.97		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1830	2663		1711		3502	3561		1805	3565	
Flt Permitted		0.96	1.00		0.97		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1830	2663		1711		3502	3561		1805	3565	
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)	16	5	429	16	5	5	620	1109	16	16	995	16
RTOR Reduction (vph)	0	0	389	0	5	0	0	1	0	0	1	0
Lane Group Flow (vph)	0	21	40	0	21	0	620	1124	0	16	1010	0
Confl. Peds. (#/hr)			7	7			5		4	4		5
Confl. Bikes (#/hr)			1									
Heavy Vehicles (%)	0%	0%	2%	8%	0%	0%	0%	1%	8%	0%	1%	0%
Turn Type	Split	NA	Perm	Split	NA		Prot	NA		Prot	NA	
Protected Phases	4	4		3	3		5	2		1	6	
Permitted Phases			4									
Actuated Green, G (s)		6.3	6.3		2.2		20.9	58.1		1.9	39.1	
Effective Green, g (s)		8.3	8.3		2.7		20.9	61.1		2.9	42.1	
Actuated g/C Ratio		0.09	0.09		0.03		0.23	0.68		0.03	0.47	
Clearance Time (s)		6.0	6.0		4.5		4.0	7.0		4.0	7.0	
Vehicle Extension (s)		1.0	1.0		0.5		0.5	0.5		0.5	0.5	
Lane Grp Cap (vph)		168	245		51		813	2417		58	1667	
v/s Ratio Prot		0.01			c0.01		c0.18	0.32		0.01	c0.28	
v/s Ratio Perm			c0.01									
v/c Ratio		0.12	0.16		0.41		0.76	0.47		0.28	0.61	
Uniform Delay, d1		37.5	37.6		42.9		32.2	6.8		42.5	17.8	
Progression Factor		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.1	0.1		2.0		3.8	0.6		0.9	1.6	
Delay (s)		37.6	37.8		44.9		36.1	7.4		43.5	19.4	
Level of Service		D	D		D		D	A		D	B	
Approach Delay (s)		37.8			44.9			17.6			19.8	
Approach LOS		D			D			B			B	

Intersection Summary			
HCM 2000 Control Delay	21.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	18.5
Intersection Capacity Utilization	60.1%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	125	90	110	125	105	25	45	105	90	10	160	80
Future Volume (veh/h)	125	90	110	125	105	25	45	105	90	10	160	80
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1870	1870	1900	1885	1900
Adj Flow Rate, veh/h	142	102	125	142	119	28	51	119	102	11	182	91
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	0	0	0	0	0	0	0	2	2	0	1	0
Cap, veh/h	624	236	290	548	458	108	621	322	276	606	652	557
Arrive On Green	0.31	0.31	0.31	0.31	0.31	0.31	0.35	0.35	0.35	0.35	0.35	0.35
Sat Flow, veh/h	1260	767	940	1172	1487	350	1124	930	797	1178	1885	1610
Grp Volume(v), veh/h	142	0	227	142	0	147	51	0	221	11	182	91
Grp Sat Flow(s),veh/h/ln	1260	0	1707	1172	0	1837	1124	0	1727	1178	1885	1610
Q Serve(g_s), s	2.2	0.0	2.5	2.5	0.0	1.4	0.8	0.0	2.2	0.2	1.6	0.9
Cycle Q Clear(g_c), s	3.6	0.0	2.5	5.0	0.0	1.4	2.4	0.0	2.2	2.4	1.6	0.9
Prop In Lane	1.00		0.55	1.00		0.19	1.00		0.46	1.00		1.00
Lane Grp Cap(c), veh/h	624	0	526	548	0	566	621	0	597	606	652	557
V/C Ratio(X)	0.23	0.00	0.43	0.26	0.00	0.26	0.08	0.00	0.37	0.02	0.28	0.16
Avail Cap(c_a), veh/h	1380	0	1550	1251	0	1668	1739	0	2315	1778	2527	2158
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	7.4	0.0	6.4	8.4	0.0	6.0	6.4	0.0	5.7	6.6	5.5	5.2
Incr Delay (d2), s/veh	0.1	0.0	0.2	0.1	0.0	0.1	0.0	0.0	0.1	0.0	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	0.4	0.4	0.0	0.3	0.1	0.0	0.3	0.0	0.2	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	7.4	0.0	6.6	8.5	0.0	6.1	6.4	0.0	5.8	6.6	5.6	5.3
LnGrp LOS	A	A	A	A	A	A	A	A	A	A	A	A
Approach Vol, veh/h		369			289			272			284	
Approach Delay, s/veh		6.9			7.3			5.9			5.5	
Approach LOS		A			A			A			A	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	12.0	11.1	12.0	11.1
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	31.0	21.0	31.0	21.0
Max Q Clear Time (g_c+I1), s	4.4	7.0	4.4	5.6
Green Ext Time (p_c), s	0.2	0.2	0.3	0.3

Intersection Summary	
HCM 6th Ctrl Delay	6.4
HCM 6th LOS	A



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	170	240	165	320	200	205	120	875	260	155	760	115
Future Volume (vph)	170	240	165	320	200	205	120	875	260	155	760	115
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	1.00	0.95	1.00	1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.97	1.00	1.00	0.99	1.00	1.00	0.97	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1787	1863	1557	3400	1863	1577	1805	3574	1523	1787	3478	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1787	1863	1557	3400	1863	1577	1805	3574	1523	1787	3478	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	175	247	170	330	206	211	124	902	268	160	784	119
RTOR Reduction (vph)	0	0	142	0	0	176	0	0	145	0	7	0
Lane Group Flow (vph)	175	247	28	330	206	35	124	902	123	160	896	0
Confl. Peds. (#/hr)	1		7	7		1	5		3	3		5
Confl. Bikes (#/hr)			1									
Heavy Vehicles (%)	1%	2%	1%	3%	2%	1%	0%	1%	3%	1%	1%	3%
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	3	8		7	4		5	2		1	6	
Permitted Phases			8			4			2			
Actuated Green, G (s)	16.4	21.7	21.7	16.7	22.0	22.0	12.4	60.6	60.6	17.5	65.7	
Effective Green, g (s)	17.4	22.7	22.7	17.7	23.0	23.0	12.9	62.6	62.6	18.0	67.7	
Actuated g/C Ratio	0.13	0.17	0.17	0.13	0.17	0.17	0.09	0.46	0.46	0.13	0.49	
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	4.5	6.0	6.0	4.5	6.0	
Vehicle Extension (s)	1.0	1.0	1.0	1.0	1.0	1.0	0.5	0.5	0.5	0.5	0.5	
Lane Grp Cap (vph)	226	308	257	439	312	264	169	1633	695	234	1718	
v/s Ratio Prot	c0.10	c0.13		0.10	0.11		c0.07	c0.25		c0.09	0.26	
v/s Ratio Perm			0.02			0.02			0.08			
v/c Ratio	0.77	0.80	0.11	0.75	0.66	0.13	0.73	0.55	0.18	0.68	0.52	
Uniform Delay, d1	57.9	55.0	48.6	57.5	53.3	48.5	60.4	27.0	22.0	56.8	23.6	
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	13.9	13.2	0.1	6.3	4.0	0.1	13.2	1.4	0.6	6.4	1.1	
Delay (s)	71.8	68.2	48.6	63.9	57.4	48.6	73.6	28.4	22.5	63.2	24.7	
Level of Service	E	E	D	E	E	D	E	C	C	E	C	
Approach Delay (s)		63.6			57.8			31.5			30.5	
Approach LOS		E			E			C			C	

Intersection Summary			
HCM 2000 Control Delay	41.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	137.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	69.1%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	580	25	50	745	140	25	55	70	185	60	25
Future Volume (veh/h)	20	580	25	50	745	140	25	55	70	185	60	25
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.97	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1841	1841	1826	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	22	611	26	53	784	152	26	60	74	201	65	27
Peak Hour Factor	0.92	0.95	0.95	0.95	0.95	0.92	0.95	0.92	0.95	0.92	0.92	0.92
Percent Heavy Veh, %	2	4	4	5	2	2	2	2	2	2	2	2
Cap, veh/h	241	1070	46	434	929	180	110	195	200	353	90	34
Arrive On Green	0.61	0.61	0.61	0.61	0.61	0.61	0.24	0.25	0.25	0.24	0.25	0.25
Sat Flow, veh/h	598	1752	75	772	1521	295	150	773	794	988	358	137
Grp Volume(v), veh/h	22	0	637	53	0	936	160	0	0	293	0	0
Grp Sat Flow(s),veh/h/ln	598	0	1827	772	0	1816	1718	0	0	1483	0	0
Q Serve(g_s), s	1.8	0.0	12.1	2.6	0.0	24.1	0.0	0.0	0.0	6.0	0.0	0.0
Cycle Q Clear(g_c), s	25.9	0.0	12.1	14.7	0.0	24.1	4.5	0.0	0.0	10.5	0.0	0.0
Prop In Lane	1.00		0.04	1.00		0.16	0.16		0.46	0.69		0.09
Lane Grp Cap(c), veh/h	241	0	1115	434	0	1109	490	0	0	465	0	0
V/C Ratio(X)	0.09	0.00	0.57	0.12	0.00	0.84	0.33	0.00	0.00	0.63	0.00	0.00
Avail Cap(c_a), veh/h	434	0	1703	683	0	1693	852	0	0	777	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	19.5	0.0	6.8	11.2	0.0	9.1	18.0	0.0	0.0	20.1	0.0	0.0
Incr Delay (d2), s/veh	0.2	0.0	0.5	0.1	0.0	2.5	0.4	0.0	0.0	1.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	3.3	0.4	0.0	6.9	1.7	0.0	0.0	3.6	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.7	0.0	7.2	11.3	0.0	11.6	18.4	0.0	0.0	21.5	0.0	0.0
LnGrp LOS	B	A	A	B	A	B	B	A	A	C	A	A
Approach Vol, veh/h		659			989			160			293	
Approach Delay, s/veh		7.7			11.6			18.4			21.5	
Approach LOS		A			B			B			C	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	18.6	39.5	18.6	39.5
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	27.3	53.7	27.3	53.7
Max Q Clear Time (g_c+I1), s	6.5	27.9	12.5	26.1
Green Ext Time (p_c), s	0.9	4.8	1.6	8.9

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	55	810	15	10	905	145	20	50	15	50	20	40
Future Volume (veh/h)	55	810	15	10	905	145	20	50	15	50	20	40
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	0.98		0.97	0.97		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1841	1841	1900	1870	1900	1900	1900	1900	1885	1900	1900
Adj Flow Rate, veh/h	57	835	15	10	933	149	21	52	15	52	21	41
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	4	4	0	2	0	0	0	0	1	0	0
Cap, veh/h	352	1343	24	424	1362	1147	196	180	52	182	66	129
Arrive On Green	0.02	0.74	0.74	0.01	0.73	0.73	0.13	0.13	0.13	0.12	0.12	0.12
Sat Flow, veh/h	1810	1802	32	1810	1870	1575	1328	1406	406	1309	561	1096
Grp Volume(v), veh/h	57	0	850	10	933	149	21	0	67	52	0	62
Grp Sat Flow(s),veh/h/ln	1810	0	1835	1810	1870	1575	1328	0	1812	1309	0	1657
Q Serve(g_s), s	0.8	0.0	22.0	0.2	27.0	2.8	1.5	0.0	3.3	3.8	0.0	3.4
Cycle Q Clear(g_c), s	0.8	0.0	22.0	0.2	27.0	2.8	4.9	0.0	3.3	7.1	0.0	3.4
Prop In Lane	1.00		0.02	1.00		1.00	1.00		0.22	1.00		0.66
Lane Grp Cap(c), veh/h	352	0	1367	424	1362	1147	196	0	231	182	0	195
V/C Ratio(X)	0.16	0.00	0.62	0.02	0.68	0.13	0.11	0.00	0.29	0.29	0.00	0.32
Avail Cap(c_a), veh/h	454	0	1367	556	1362	1147	332	0	417	329	0	381
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	7.5	0.0	6.1	5.9	7.4	4.1	41.7	0.0	39.5	43.7	0.0	40.4
Incr Delay (d2), s/veh	0.1	0.0	2.1	0.0	2.8	0.2	0.1	0.0	0.3	0.3	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	7.1	0.0	9.3	0.8	0.5	0.0	1.5	1.2	0.0	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	7.6	0.0	8.2	5.9	10.2	4.3	41.8	0.0	39.8	44.0	0.0	40.8
LnGrp LOS	A	A	A	A	B	A	D	A	D	D	A	D
Approach Vol, veh/h		907			1092			88			114	
Approach Delay, s/veh		8.2			9.3			40.2			42.2	
Approach LOS		A			A			D			D	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	4.7	78.5		16.8	6.4	76.8		16.8
Change Period (Y+Rc), s	4.0	5.0		* 5	4.0	5.0		5.0
Max Green Setting (Gmax), s	8.0	56.0		* 23	8.0	56.0		22.0
Max Q Clear Time (g_c+I1), s	2.8	24.0		9.1	2.8	29.0		6.9
Green Ext Time (p_c), s	0.0	1.3		0.1	0.0	1.4		0.1

Intersection Summary	
HCM 6th Ctrl Delay	11.8
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	45	775	15	35	940	290	15	60	15	125	30	25
Future Volume (veh/h)	45	775	15	35	940	290	15	60	15	125	30	25
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1841	1841	1900	1885	1885	1900	1870	1900	1900	1900	1900
Adj Flow Rate, veh/h	49	842	16	38	1022	315	16	65	16	136	33	27
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	4	4	0	1	1	0	2	0	0	0	0
Cap, veh/h	63	2578	49	49	1951	596	19	101	86	111	101	83
Arrive On Green	0.04	0.73	0.73	0.05	1.00	1.00	0.01	0.05	0.05	0.06	0.10	0.10
Sat Flow, veh/h	1810	3511	67	1810	2686	821	1810	1870	1601	1810	965	790
Grp Volume(v), veh/h	49	419	439	38	678	659	16	65	16	136	0	60
Grp Sat Flow(s),veh/h/ln	1810	1749	1829	1810	1791	1716	1810	1870	1601	1810	0	1755
Q Serve(g_s), s	3.5	10.9	10.9	2.7	0.0	0.0	1.1	4.4	1.2	8.0	0.0	4.1
Cycle Q Clear(g_c), s	3.5	10.9	10.9	2.7	0.0	0.0	1.1	4.4	1.2	8.0	0.0	4.1
Prop In Lane	1.00		0.04	1.00		0.48	1.00		1.00	1.00		0.45
Lane Grp Cap(c), veh/h	63	1284	1343	49	1301	1247	19	101	86	111	0	184
V/C Ratio(X)	0.77	0.33	0.33	0.78	0.52	0.53	0.83	0.64	0.19	1.22	0.00	0.33
Avail Cap(c_a), veh/h	167	1284	1343	111	1301	1247	111	317	271	111	0	297
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.66	0.66	0.66	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	62.2	6.0	6.0	61.1	0.0	0.0	64.2	60.3	58.8	61.0	0.0	53.9
Incr Delay (d2), s/veh	7.2	0.7	0.6	6.4	1.0	1.1	27.3	2.5	0.4	156.4	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	3.8	4.0	1.3	0.4	0.4	0.7	2.2	0.5	8.5	0.0	1.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	69.4	6.7	6.7	67.5	1.0	1.1	91.5	62.8	59.1	217.4	0.0	54.3
LnGrp LOS	E	A	A	E	A	A	F	E	E	F	A	D
Approach Vol, veh/h		907			1375			97			196	
Approach Delay, s/veh		10.1			2.9			66.9			167.5	
Approach LOS		B			A			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.5	99.5	5.4	17.6	8.6	98.4	12.0	11.0
Change Period (Y+Rc), s	4.0	5.0	4.0	4.0	4.0	5.0	4.0	4.0
Max Green Setting (Gmax), s	8.0	75.0	8.0	22.0	12.0	71.0	8.0	22.0
Max Q Clear Time (g_c+I1), s	4.7	12.9	3.1	6.1	5.5	2.0	10.0	6.4
Green Ext Time (p_c), s	0.0	1.1	0.0	0.1	0.0	2.1	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	20.3
HCM 6th LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	170	740	5	450	1125	65	10	105	255	280	95	130
Future Volume (veh/h)	170	740	5	450	1125	65	10	105	255	280	95	130
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1900	1885	1885	1900	1811	1811	1900	1826	1826
Adj Flow Rate, veh/h	177	771	5	469	1172	68	10	109	266	292	99	135
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	3	3	3	0	1	1	0	6	6	0	5	5
Cap, veh/h	225	1850	12	432	1970	114	13	209	305	223	423	354
Arrive On Green	0.13	1.00	1.00	0.12	0.57	0.56	0.01	0.12	0.12	0.12	0.23	0.23
Sat Flow, veh/h	3428	3591	23	3510	3441	199	1810	1811	2639	1810	1826	1526
Grp Volume(v), veh/h	177	378	398	469	610	630	10	109	266	292	99	135
Grp Sat Flow(s),veh/h/ln	1714	1763	1851	1755	1791	1849	1810	1811	1319	1810	1826	1526
Q Serve(g_s), s	6.5	0.0	0.0	16.0	28.7	28.8	0.7	7.4	12.9	16.0	5.7	9.7
Cycle Q Clear(g_c), s	6.5	0.0	0.0	16.0	28.7	28.8	0.7	7.4	12.9	16.0	5.7	9.7
Prop In Lane	1.00		0.01	1.00		0.11	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	225	908	954	432	1025	1059	13	209	305	223	423	354
V/C Ratio(X)	0.79	0.42	0.42	1.09	0.59	0.60	0.79	0.52	0.87	1.31	0.23	0.38
Avail Cap(c_a), veh/h	527	908	954	432	1025	1059	139	265	386	223	423	354
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.92	0.92	0.92	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.6	0.0	0.0	57.0	18.0	18.1	64.5	54.1	56.5	57.0	40.6	42.1
Incr Delay (d2), s/veh	2.1	1.3	1.2	68.3	2.5	2.5	32.0	0.7	13.9	168.3	0.1	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	0.3	0.3	11.1	12.1	12.5	0.4	3.4	4.9	17.7	2.6	3.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	57.7	1.3	1.2	125.3	20.5	20.5	96.4	54.8	70.4	225.3	40.7	42.3
LnGrp LOS	E	A	A	F	C	C	F	D	E	F	D	D
Approach Vol, veh/h		953			1709			385			526	
Approach Delay, s/veh		11.7			49.3			66.7			143.6	
Approach LOS		B			D			E			F	

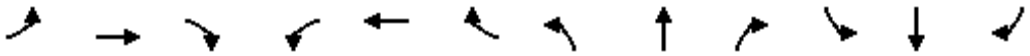
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	20.0	71.0	4.9	34.1	12.5	78.4	20.0	19.0
Change Period (Y+Rc), s	4.0	5.0	4.0	4.0	4.0	5.0	4.0	4.0
Max Green Setting (Gmax), s	16.0	62.0	10.0	25.0	20.0	58.0	16.0	19.0
Max Q Clear Time (g_c+I1), s	18.0	2.0	2.7	11.7	8.5	30.8	18.0	14.9
Green Ext Time (p_c), s	0.0	1.0	0.0	0.1	0.0	1.8	0.0	0.1

Intersection Summary	
HCM 6th Ctrl Delay	55.0
HCM 6th LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱↱	↰↰	↑↑						↲	↱↱
Traffic Volume (veh/h)	0	695	1040	485	1790	0	0	0	0	290	15	410
Future Volume (veh/h)	0	695	1040	485	1790	0	0	0	0	290	15	410
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1856	1885	1885	1885	0				1870	1648	1870
Adj Flow Rate, veh/h	0	724	1083	505	1865	0				302	16	427
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96				0.96	0.96	0.96
Percent Heavy Veh, %	0	3	1	1	1	0				2	17	2
Cap, veh/h	0	1498	1195	651	2361	0				367	19	686
Arrive On Green	0.00	0.42	0.42	0.19	0.66	0.00				0.22	0.25	0.25
Sat Flow, veh/h	0	3618	2812	3483	3676	0				1494	79	2790
Grp Volume(v), veh/h	0	724	1083	505	1865	0				318	0	427
Grp Sat Flow(s),veh/h/ln	0	1763	1406	1742	1791	0				1573	0	1395
Q Serve(g_s), s	0.0	12.5	30.4	11.6	31.2	0.0				16.2	0.0	11.5
Cycle Q Clear(g_c), s	0.0	12.5	30.4	11.6	31.2	0.0				16.2	0.0	11.5
Prop In Lane	0.00		1.00	1.00		0.00				0.95		1.00
Lane Grp Cap(c), veh/h	0	1498	1195	651	2361	0				387	0	686
V/C Ratio(X)	0.00	0.48	0.91	0.78	0.79	0.00				0.82	0.00	0.62
Avail Cap(c_a), veh/h	0	1715	1368	868	2361	0				766	0	1357
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	17.5	22.7	32.6	10.2	0.0				31.0	0.0	28.3
Incr Delay (d2), s/veh	0.0	0.1	7.6	2.2	1.7	0.0				1.7	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	4.7	10.4	5.0	10.5	0.0				6.0	0.0	3.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	17.6	30.3	34.7	11.9	0.0				32.7	0.0	28.6
LnGrp LOS	A	B	C	C	B	A				C	A	C
Approach Vol, veh/h		1807			2370						745	
Approach Delay, s/veh		25.2			16.8						30.4	
Approach LOS		C			B						C	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	19.7	39.8		24.7		59.5
Change Period (Y+Rc), s	6.0	6.0		6.0		6.0
Max Green Setting (Gmax), s	13.6	39.0		39.0		39.0
Max Q Clear Time (g_c+I1), s	13.6	32.4		18.2		33.2
Green Ext Time (p_c), s	0.1	1.4		0.5		2.8

Intersection Summary	
HCM 6th Ctrl Delay	21.9
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	285	700	0	0	1095	315	1180	0	530	0	0	0
Future Volume (vph)	285	700	0	0	1095	315	1180	0	530	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0		4.0	4.0	4.0			
Lane Util. Factor	1.00	0.95			0.95		0.95	0.95	1.00			
Frpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00			
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00			
Frt	1.00	1.00			0.97		1.00	1.00	0.85			
Flt Protected	0.95	1.00			1.00		0.95	0.95	1.00			
Satd. Flow (prot)	1770	3505			3432		1698	1698	1568			
Flt Permitted	0.95	1.00			1.00		0.95	0.95	1.00			
Satd. Flow (perm)	1770	3505			3432		1698	1698	1568			
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	303	745	0	0	1165	335	1255	0	564	0	0	0
RTOR Reduction (vph)	0	0	0	0	24	0	0	0	95	0	0	0
Lane Group Flow (vph)	303	745	0	0	1476	0	627	628	469	0	0	0
Confl. Peds. (#/hr)			1	1								
Heavy Vehicles (%)	2%	3%	0%	0%	1%	4%	1%	0%	3%	0%	0%	0%
Turn Type	Prot	NA			NA		Perm	NA	Perm			
Protected Phases	5	2			6			4				
Permitted Phases							4		4			
Actuated Green, G (s)	18.1	53.3			29.2		40.2	40.2	40.2			
Effective Green, g (s)	20.1	55.3			31.2		42.2	42.2	42.2			
Actuated g/C Ratio	0.19	0.52			0.30		0.40	0.40	0.40			
Clearance Time (s)	6.0	6.0			6.0		6.0	6.0	6.0			
Vehicle Extension (s)	0.5	0.5			0.5		0.5	0.5	0.5			
Lane Grp Cap (vph)	337	1837			1014		679	679	627			
v/s Ratio Prot	c0.17	0.21			c0.43							
v/s Ratio Perm							0.37	0.37	0.30			
v/c Ratio	0.90	0.41			1.46		0.92	0.92	0.75			
Uniform Delay, d1	41.7	15.2			37.1		30.1	30.1	27.1			
Progression Factor	1.00	1.00			1.00		1.00	1.00	1.00			
Incremental Delay, d2	24.7	0.1			210.6		18.0	18.2	4.3			
Delay (s)	66.4	15.2			247.7		48.1	48.3	31.4			
Level of Service	E	B			F		D	D	C			
Approach Delay (s)		30.0			247.7			43.0			0.0	
Approach LOS		C			F			D			A	

Intersection Summary			
HCM 2000 Control Delay	110.2	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.12		
Actuated Cycle Length (s)	105.5	Sum of lost time (s)	14.0
Intersection Capacity Utilization	98.8%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	145	555	435	60	410	35	560	525	130	110	650	140
Future Volume (veh/h)	145	555	435	60	410	35	560	525	130	110	650	140
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1870	1841	1885	1885	1900	1826	1826	1781	1870	1856
Adj Flow Rate, veh/h	156	597	468	65	441	38	602	565	140	118	699	151
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	4	4	2	4	1	1	0	5	5	8	2	3
Cap, veh/h	200	660	568	94	509	44	241	816	202	167	927	410
Arrive On Green	0.11	0.36	0.36	0.05	0.30	0.27	0.13	0.30	0.27	0.10	0.26	0.26
Sat Flow, veh/h	1753	1841	1585	1753	1711	147	1810	2757	681	1697	3554	1572
Grp Volume(v), veh/h	156	597	468	65	0	479	602	355	350	118	699	151
Grp Sat Flow(s),veh/h/ln	1753	1841	1585	1753	0	1859	1810	1735	1703	1697	1777	1572
Q Serve(g_s), s	7.1	25.4	22.2	3.0	0.0	20.1	11.0	14.9	15.1	5.6	14.9	6.5
Cycle Q Clear(g_c), s	7.1	25.4	22.2	3.0	0.0	20.1	11.0	14.9	15.1	5.6	14.9	6.5
Prop In Lane	1.00		1.00	1.00		0.08	1.00		0.40	1.00		1.00
Lane Grp Cap(c), veh/h	200	660	568	94	0	553	241	513	504	167	927	410
V/C Ratio(X)	0.78	0.90	0.82	0.69	0.00	0.87	2.50	0.69	0.69	0.71	0.75	0.37
Avail Cap(c_a), veh/h	234	660	568	234	0	586	241	547	537	226	1120	495
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.5	25.1	24.1	38.4	0.0	27.5	35.8	25.7	26.1	36.1	28.1	24.9
Incr Delay (d2), s/veh	12.5	15.9	9.3	6.7	0.0	12.1	685.4	3.2	3.3	4.9	2.2	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.6	12.7	8.9	1.4	0.0	9.8	50.5	6.1	6.1	2.5	6.4	2.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	48.0	41.0	33.4	45.1	0.0	39.6	721.1	28.9	29.4	41.0	30.2	25.3
LnGrp LOS	D	D	C	D	A	D	F	C	C	D	C	C
Approach Vol, veh/h		1221			544			1307			968	
Approach Delay, s/veh		39.0			40.3			347.9			30.8	
Approach LOS		D			D			F			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.0	25.5	13.4	28.6	12.1	28.4	8.4	33.6
Change Period (Y+Rc), s	4.5	6.0	4.5	6.0	4.5	6.0	4.5	6.0
Max Green Setting (Gmax), s	10.5	24.0	10.5	24.0	10.5	24.0	10.5	24.0
Max Q Clear Time (g_c+I1), s	13.0	16.9	9.1	22.1	7.6	17.1	5.0	27.4
Green Ext Time (p_c), s	0.0	2.6	0.0	0.4	0.1	1.9	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	137.1
HCM 6th LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	155	220	205	190	305	140	210	1110	110	150	915	105
Future Volume (veh/h)	155	220	205	190	305	140	210	1110	110	150	915	105
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.96	1.00		0.99	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1710	1697	1683	1697	1710	1697	1697	1697	1697	1697	1683	1683
Adj Flow Rate, veh/h	163	232	216	200	321	147	221	1168	116	158	963	111
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	1	2	1	0	1	1	1	1	1	2	2
Cap, veh/h	185	260	210	222	303	245	243	1398	139	178	1258	145
Arrive On Green	0.11	0.15	0.15	0.14	0.18	0.18	0.15	0.47	0.47	0.22	0.87	0.86
Sat Flow, veh/h	1629	1697	1368	1616	1710	1387	1616	2957	293	1616	2884	332
Grp Volume(v), veh/h	163	232	216	200	321	147	221	636	648	158	534	540
Grp Sat Flow(s),veh/h/ln	1629	1697	1368	1616	1710	1387	1616	1612	1639	1616	1599	1617
Q Serve(g_s), s	12.8	17.4	19.9	15.8	23.0	12.7	17.5	44.6	44.9	12.3	16.7	16.9
Cycle Q Clear(g_c), s	12.8	17.4	19.9	15.8	23.0	12.7	17.5	44.6	44.9	12.3	16.7	16.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.18	1.00		0.21
Lane Grp Cap(c), veh/h	185	260	210	222	303	245	243	762	774	178	697	705
V/C Ratio(X)	0.88	0.89	1.03	0.90	1.06	0.60	0.91	0.83	0.84	0.89	0.77	0.77
Avail Cap(c_a), veh/h	194	260	210	242	303	245	360	762	774	186	697	705
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	0.84	0.84	0.84	1.00	1.00	1.00	1.00	1.00	1.00	0.89	0.89	0.89
Uniform Delay (d), s/veh	56.7	54.0	55.0	55.2	53.5	49.3	54.4	29.9	29.9	50.0	5.8	5.8
Incr Delay (d2), s/veh	27.9	25.2	64.8	30.1	68.8	2.8	15.6	10.4	10.5	31.9	7.0	7.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.7	9.3	10.6	8.3	15.6	4.6	8.1	18.9	19.3	6.0	3.6	3.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	84.7	79.2	119.9	85.3	122.3	52.1	70.0	40.3	40.4	81.9	12.8	12.8
LnGrp LOS	F	E	F	F	F	D	E	D	D	F	B	B
Approach Vol, veh/h		611			668			1505			1232	
Approach Delay, s/veh		95.0			95.8			44.7			21.7	
Approach LOS		F			F			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.3	65.9	21.8	23.9	23.5	60.7	18.8	27.0
Change Period (Y+Rc), s	4.0	4.5	4.0	4.0	4.0	4.5	4.0	4.0
Max Green Setting (Gmax), s	15.8	60.0	19.5	19.0	29.0	46.0	15.5	23.0
Max Q Clear Time (g_c+I1), s	14.3	46.9	17.8	21.9	19.5	18.9	14.8	25.0
Green Ext Time (p_c), s	0.0	1.8	0.0	0.0	0.0	1.5	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	53.8
HCM 6th LOS	D

Intersection	
Intersection Delay, s/veh	10.6
Intersection LOS	B

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	500	567	541	123
Demand Flow Rate, veh/h	505	575	546	124
Vehicles Circulating, veh/h	297	378	271	756
Vehicles Exiting, veh/h	583	439	531	197
Ped Vol Crossing Leg, #/h	0	0	2	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	9.5	12.9	9.8	8.0
Approach LOS	A	B	A	A

Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	505	575	546	124
Cap Entry Lane, veh/h	1019	938	1047	638
Entry HV Adj Factor	0.990	0.986	0.990	0.993
Flow Entry, veh/h	500	567	541	123
Cap Entry, veh/h	1009	925	1036	634
V/C Ratio	0.495	0.613	0.522	0.194
Control Delay, s/veh	9.5	12.9	9.8	8.0
LOS	A	B	A	A
95th %tile Queue, veh	3	4	3	1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	650	45	450	880	345	90	1200	640	205	900	170
Future Volume (veh/h)	40	650	45	450	880	345	90	1200	640	205	900	170
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1856	1885	1885	1870	1826	1885	1856	1885	1870	1856	1900
Adj Flow Rate, veh/h	41	663	46	459	898	352	92	1224	0	209	918	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	3	1	1	2	5	1	3	1	2	3	0
Cap, veh/h	111	343	289	359	604	492	129	1193		260	1483	
Arrive On Green	0.06	0.18	0.18	0.20	0.32	0.32	0.07	0.34	0.00	0.15	0.42	0.00
Sat Flow, veh/h	1810	1856	1566	1795	1870	1522	1795	3526	1598	1781	3526	1610
Grp Volume(v), veh/h	41	663	46	459	898	352	92	1224	0	209	918	0
Grp Sat Flow(s),veh/h/ln	1810	1856	1566	1795	1870	1522	1795	1763	1598	1781	1763	1610
Q Serve(g_s), s	2.8	24.0	2.6	26.0	42.0	26.5	6.5	44.0	0.0	14.8	26.5	0.0
Cycle Q Clear(g_c), s	2.8	24.0	2.6	26.0	42.0	26.5	6.5	44.0	0.0	14.8	26.5	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	111	343	289	359	604	492	129	1193		260	1483	
V/C Ratio(X)	0.37	1.94	0.16	1.28	1.49	0.72	0.71	1.03		0.80	0.62	
Avail Cap(c_a), veh/h	111	343	289	359	604	492	290	1193		274	1483	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	58.6	53.0	29.8	52.0	44.0	38.7	59.0	43.0	0.0	53.7	29.5	0.0
Incr Delay (d2), s/veh	2.0	431.5	0.3	145.1	227.5	4.3	7.1	32.8	0.0	15.1	2.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	52.1	1.3	26.0	57.2	10.3	3.1	23.4	0.0	7.4	10.9	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	60.6	484.5	30.0	197.1	271.5	43.0	66.2	75.8	0.0	68.8	31.5	0.0
LnGrp LOS	E	F	C	F	F	D	E	F		E	C	
Approach Vol, veh/h		750			1709			1316	A		1127	A
Approach Delay, s/veh		433.5			204.4			75.1			38.4	
Approach LOS		F			F			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.3	58.7	12.0	46.0	24.0	48.0	30.0	28.0
Change Period (Y+Rc), s	5.0	6.0	5.0	5.0	6.0	* 6	5.0	5.0
Max Green Setting (Gmax), s	20.0	41.0	7.0	41.0	19.0	* 42	25.0	23.0
Max Q Clear Time (g_c+I1), s	8.5	28.5	4.8	44.0	16.8	46.0	28.0	26.0
Green Ext Time (p_c), s	0.1	5.2	0.0	0.0	0.1	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	166.6
HCM 6th LOS	F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [NBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Int Delay, s/veh	9.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	25	50	20	90	115	105	30	150	55	80	430	45
Future Vol, veh/h	25	50	20	90	115	105	30	150	55	80	430	45
Conflicting Peds, #/hr	0	0	1	1	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	Stop	-	-	None	-	-	None
Storage Length	100	-	30	100	-	50	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	0	6	6	0	0	7	0	2	0	8	1	0
Mvmt Flow	26	52	21	93	119	108	31	155	57	82	443	46

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	935	904	467	914	899	184	489	0	0	212	0	0
Stage 1	630	630	-	246	246	-	-	-	-	-	-	-
Stage 2	305	274	-	668	653	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.56	6.26	7.1	6.5	6.27	4.1	-	-	4.18	-	-
Critical Hdwy Stg 1	6.1	5.56	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.56	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4.054	3.354	3.5	4	3.363	2.2	-	-	2.272	-	-
Pot Cap-1 Maneuver	248	273	588	256	281	846	1085	-	-	1323	-	-
Stage 1	473	469	-	762	706	-	-	-	-	-	-	-
Stage 2	709	676	-	451	467	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	129	249	587	194	256	846	1085	-	-	1323	-	-
Mov Cap-2 Maneuver	129	249	-	194	256	-	-	-	-	-	-	-
Stage 1	459	440	-	740	686	-	-	-	-	-	-	-
Stage 2	497	656	-	360	438	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	25.1	26.2	1.1	1.1
HCM LOS	D	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBL	SBT	SBR
Capacity (veh/h)	1085	-	-	129	249	587	194	256	846	1323	-	-
HCM Lane V/C Ratio	0.029	-	-	0.2	0.207	0.035	0.478	0.463	0.128	0.062	-	-
HCM Control Delay (s)	8.4	-	-	39.7	23.2	11.4	39.5	30.6	9.9	7.9	-	-
HCM Lane LOS	A	-	-	E	C	B	E	D	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.7	0.8	0.1	2.3	2.3	0.4	0.2	-	-

Intersection	
Int Delay, s/veh	7.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	105	115	145	465	615	155
Future Vol, veh/h	105	115	145	465	615	155
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	240	-	-	-
Veh in Median Storage, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	4	4	5	1	2
Mvmt Flow	111	121	153	489	647	163

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1524	729	810	0	-	0
Stage 1	729	-	-	-	-	-
Stage 2	795	-	-	-	-	-
Critical Hdwy	6.4	6.24	4.14	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.336	2.236	-	-	-
Pot Cap-1 Maneuver	131	420	807	-	-	-
Stage 1	481	-	-	-	-	-
Stage 2	448	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	~ 106	420	807	-	-	-
Mov Cap-2 Maneuver	238	-	-	-	-	-
Stage 1	390	-	-	-	-	-
Stage 2	448	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	45	2.5	0
HCM LOS	E		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	807	-	308	-	-
HCM Lane V/C Ratio	0.189	-	0.752	-	-
HCM Control Delay (s)	10.5	-	45	-	-
HCM Lane LOS	B	-	E	-	-
HCM 95th %tile Q(veh)	0.7	-	5.7	-	-

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

Intersection	
Int Delay, s/veh	4.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	185	30	245	200	35	480
Future Vol, veh/h	185	30	245	200	35	480
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	100	0	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	1	0	2	2	0	1
Mvmt Flow	213	34	282	230	40	552

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1029	397	0	0	512	0
Stage 1	397	-	-	-	-	-
Stage 2	632	-	-	-	-	-
Critical Hdwy	6.41	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.41	-	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-	-
Follow-up Hdwy	3.509	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	260	657	-	-	1064	-
Stage 1	681	-	-	-	-	-
Stage 2	532	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	250	657	-	-	1064	-
Mov Cap-2 Maneuver	377	-	-	-	-	-
Stage 1	681	-	-	-	-	-
Stage 2	512	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	24.1	0	0.6
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	377	657	1064	-
HCM Lane V/C Ratio	-	-	0.564	0.052	0.038	-
HCM Control Delay (s)	-	-	26.2	10.8	8.5	-
HCM Lane LOS	-	-	D	B	A	-
HCM 95th %tile Q(veh)	-	-	3.3	0.2	0.1	-

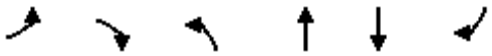
Intersection	
Int Delay, s/veh	9.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	45	100	145	75	10	70	95	165	15	45	5
Future Vol, veh/h	5	45	100	145	75	10	70	95	165	15	45	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	0	5	0	0	1	0	0	0	0	0	5	0
Mvmt Flow	6	51	114	165	85	11	80	108	188	17	51	6

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	498	544	54	533	453	202	57	0	0	296	0	0
Stage 1	88	88	-	362	362	-	-	-	-	-	-	-
Stage 2	410	456	-	171	91	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.55	6.2	7.1	6.51	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.55	-	6.1	5.51	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.55	-	6.1	5.51	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4.045	3.3	3.5	4.009	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	486	442	1019	461	504	844	1560	-	-	1277	-	-
Stage 1	925	816	-	661	627	-	-	-	-	-	-	-
Stage 2	623	563	-	836	821	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	389	408	1019	349	466	844	1560	-	-	1277	-	-
Mov Cap-2 Maneuver	389	408	-	349	466	-	-	-	-	-	-	-
Stage 1	867	805	-	619	587	-	-	-	-	-	-	-
Stage 2	492	528	-	686	810	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	11.9	20.5	1.6	1.8
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1560	-	-	389	696	349	492	1277	-	-
HCM Lane V/C Ratio	0.051	-	-	0.015	0.237	0.472	0.196	0.013	-	-
HCM Control Delay (s)	7.4	0	-	14.4	11.8	24.2	14.1	7.9	0	-
HCM Lane LOS	A	A	-	B	B	C	B	A	A	-
HCM 95th %tile Q(veh)	0.2	-	-	0	0.9	2.4	0.7	0	-	-



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	35	190	150	600	660	35
Future Volume (vph)	35	190	150	600	660	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5			4.5	4.5	
Lane Util. Factor	1.00			1.00	1.00	
Frpb, ped/bikes	0.98			1.00	1.00	
Flpb, ped/bikes	1.00			1.00	1.00	
Frt	0.89			1.00	0.99	
Flt Protected	0.99			0.99	1.00	
Satd. Flow (prot)	1561			1823	1852	
Flt Permitted	0.99			0.61	1.00	
Satd. Flow (perm)	1561			1121	1852	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	38	204	161	645	710	38
RTOR Reduction (vph)	163	0	0	0	2	0
Lane Group Flow (vph)	79	0	0	806	746	0
Confl. Bikes (#/hr)		1				
Heavy Vehicles (%)	0%	6%	0%	4%	2%	0%
Turn Type	Prot		Perm	NA	NA	
Protected Phases	4			2	6	
Permitted Phases			2			
Actuated Green, G (s)	18.0			63.0	63.0	
Effective Green, g (s)	18.0			63.0	63.0	
Actuated g/C Ratio	0.20			0.70	0.70	
Clearance Time (s)	4.5			4.5	4.5	
Lane Grp Cap (vph)	312			784	1296	
v/s Ratio Prot	c0.05				0.40	
v/s Ratio Perm				c0.72		
v/c Ratio	0.25			1.03	0.58	
Uniform Delay, d1	30.3			13.5	6.8	
Progression Factor	1.00			1.00	1.00	
Incremental Delay, d2	1.9			39.5	1.9	
Delay (s)	32.3			53.0	8.6	
Level of Service	C			D	A	
Approach Delay (s)	32.3			53.0	8.6	
Approach LOS	C			D	A	

Intersection Summary			
HCM 2000 Control Delay	31.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	101.6%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			