GLASSBORO-CAMDEN LINE

ATTACHMENT 5

Traffic Analysis Technical Report

Glassboro-Camden Line EIS

November 2020

Prepared by:

STV 100 Years

Prepared for:

DELAWARE RIVER PORT AUTHORITY of Pennsylvania & New Jersey

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NJ TRANSIT

Project information contained in this document, including estimated limits of disturbance that could result with construction or operation of the proposed GCL, is based on conceptual design parameters that represent a reasonably conservative basis for conducting environmental analyses. As the proposed GCL is advanced through preliminary engineering and construction, efforts will continue to be made to further refine the design and minimize the project footprint. These refinements may result in the potential to avoid and further reduce the adverse effects outlined in this document and as described within this Environmental Impact Statement.

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Acronyms

AADT	Annual Average Daily Traffic
ADA	Americans with Disabilities Act
ATR	Automatic traffic recorder
DRPA	Delaware River Port Authority
DVRPC	Delaware Valley Regional Planning Commission
GCL	Glassboro-Camden Line
HCM	Highway Capacity Manual
LOD	Limits of Disturbance
LOS	Level-of-service
LRT	Light Rail Transit
LTS	Level of Traffic Stress
NJDOT	New Jersey Department of Transportation
PATCO	Port Authority Transit Corporation
STOPS	Simplified Trips-on-Project Software
TMC	Turning movement counts
VHT	Vehicle-hours traveled
VMF	Vehicle Maintenance Facility
VMT	Vehicle-miles traveled
WRTC	Walter Rand Transportation Center

1 INTRODUCTION

The Delaware River Port Authority (DRPA) and New Jersey Transit (NJ TRANSIT) are currently preparing a Draft Environmental Impact Statement (Draft EIS) to assess impacts of initiating the new Glassboro-Camden Line (GCL) light rail transit service. The purpose of this Traffic Analysis Report is to document existing traffic conditions in the study area and provide a preliminary determination of traffic impacts in the future opening year of 2025 and design year of 2040. Two scenarios were analyzed for each future design year – a No-Action scenario that only reflects projected background growth in the region, and a future with the GCL that includes projected background growth and induced growth from the GCL. Results of the analysis were used to identify candidate strategies to mitigate anticipated impacts to the greater transportation network within the project area.

1.1 Project Description

The GCL Project is a proposed 18-mile expansion of transit service in Southern New Jersey that would traverse eleven communities between Camden City and Glassboro Borough. These communities, listed from north to south, include the following within Camden County - Camden City, Gloucester City, and Brooklawn Borough - and the following communities within Gloucester County - Westville Borough, Woodbury City, Woodbury Heights Borough, Deptford Township, Wenonah Borough, Mantua Township, Pitman Borough, and Glassboro Borough (see Figure 1, "Regional Study Area," and Figure 2, "Corridor Study Area.").

The GCL would restore passenger rail service primarily within an existing Conrail freight right-of-way (ROW) using light rail vehicles similar to the NJ TRANSIT River LINE. The light rail would operate on new dedicated tracks with peak service operating every 15 minutes. There would be two dedicated tracks in Camden and one dedicated track between Camden and Woodbury with a passing siding in Westville and Woodbury. South of Woodbury, the GCL would operate on one new dedicated GCL track and share one track with Conrail. On this shared track, GCL trains would operate during the day and evening hours, with Conrail trains operating in the late evening and overnight.

The proposed project would provide 14 new transit stations in addition to an existing station at the Walter Rand Transportation Center (WRTC) and two vehicle maintenance facilities. With the proposed project, existing levels of freight operations would be unaffected as the current single freight track would remain undisturbed.

The Glassboro-to-Camden corridor comprises substantial railroad ROW and existing rail infrastructure, which interconnects communities in southern New Jersey. Historically, these communities developed around passenger rail service that once had been available in the Glassboro-to-Camden corridor, but which has not been operating since the 1960s. The GCL would reinstate public transportation among these communities and connect them with the broader, regional public transportation network to allow residents access throughout the corridor and to important regional employment centers.

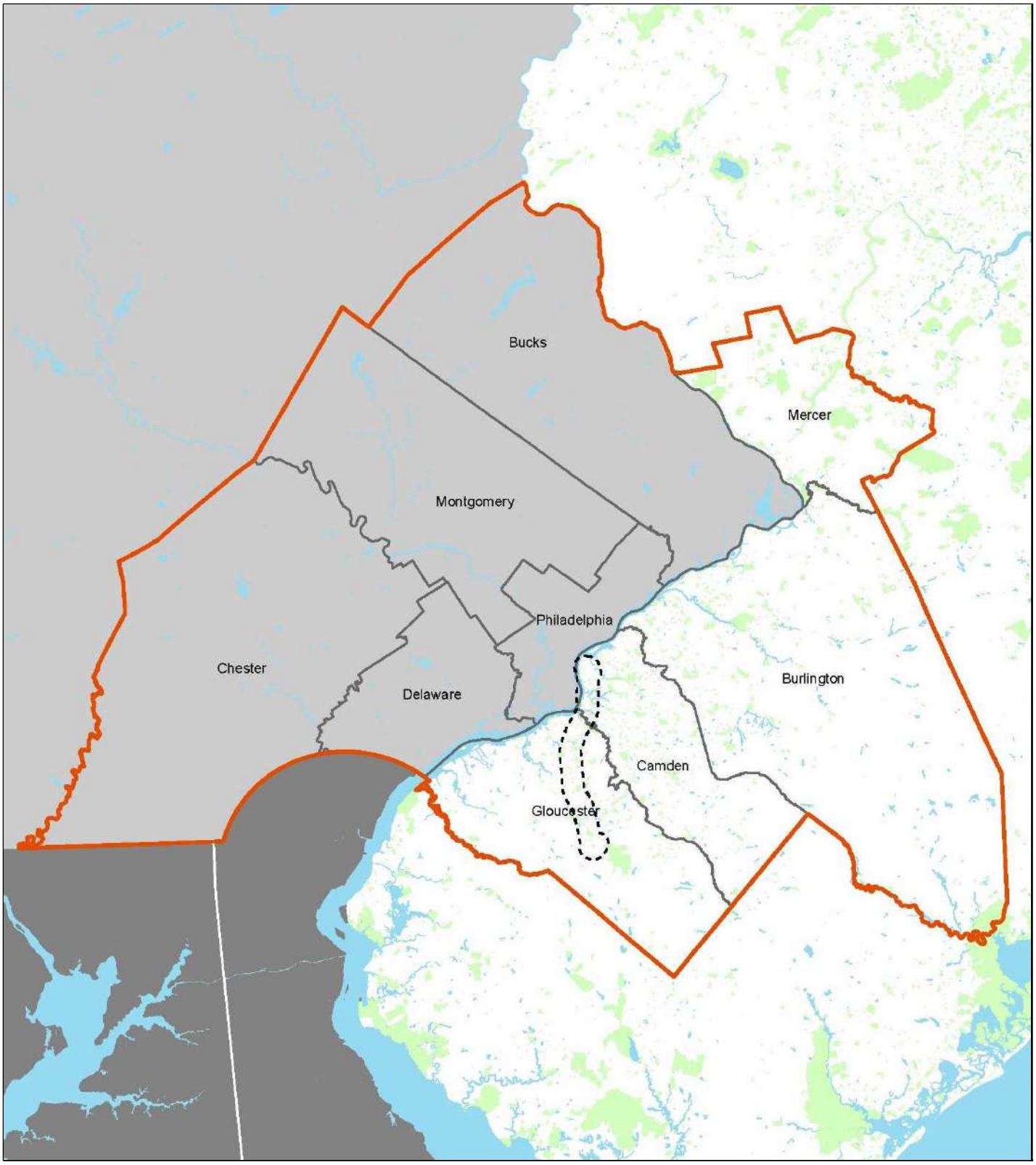

Figure 1: Regional Study Area

Source: GCL Project Team, 2020.

GCL
GLASSBORO-CAMDEN LINE

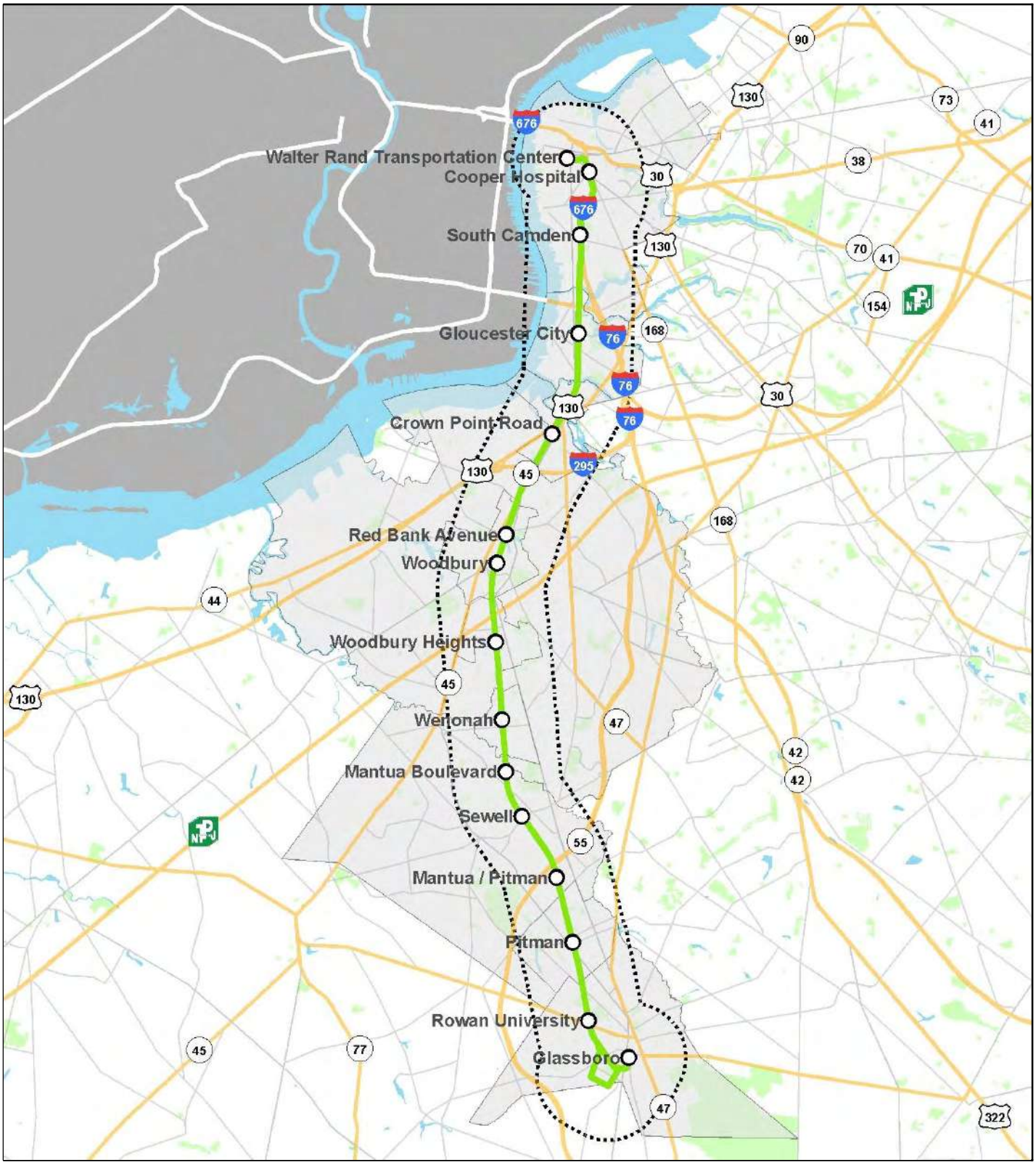

Figure 2: Corridor Study Area

Legend

- Proposed GCL Station
- Proposed GCL Alignment
- Corridor Study Area
- Municipalities Serviced

N

0 0.75 1.5 3
Miles

Source: GCL Project Team, 2020.

GCL
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2 PRINCIPAL CONCLUSIONS

The Traffic Analysis Technical Report analyzes roadway impacts (highways, local streets, grade crossings, and bus-GCL transfers), parking impacts (GCL-generated parking demand, public parking, and private parking), impacts to pedestrian and bicycle access (bicycle facilities and pedestrian facilities), and rail freight operations. The report finds that the GCL would result in reductions in traffic volumes on major roadways that parallel the GCL, such as I-295, I-676, and NJ 55, based on projections by DVRPC's Glassboro-Camden Line Regional Model and the GCL Project Team. Impacts to local streets near the GCL include reduction of lanes widths, slight relocation of roadways, and full closures of one-way streets affecting local circulation patterns; street circulation patterns would be most-heavily affected in Gloucester City. At-grade crossings could potentially have significant impacts on the roadway network adjacent to the GCL. In the portion of the GCL alignment that assumes the construction of additional rail trackage, the right-of-way width will expand, resulting in a wider roadway at-grade crossing. In many cases, this would result in the relocation of existing gates and flashers. At some locations, the existing gates and flashers are outdated and will need to be upgraded or replaced. As a result of several bus routes proposed to include new stops at or close to proposed GCL stations, it is projected that approximately 2,700 transfers will occur to/from GCL by 2040.

Parking facilities are proposed at eight stations, resulting in approximately 2,685 new parking spaces being available in 2025 and 4,310 spaces in 2040. In total, approximately 236 public spaces are anticipated to be lost. In total, approximately 140 private spaces are anticipated to be lost. In locations where no new parking is provided, municipalities may be able to control parking demand and behavior through parking charges, regulation, and enforcement. Such analysis is not included in this report.

The evaluation of bicycle access determined that the GCL would provide opportunity for existing on-road bicycle lane connections. Most roadways and intersections adjacent to or approaching station areas would have appropriate pedestrian accommodations. Except for Sewell Station, "walk-up" stations generally would provide some level of pedestrian accommodation or can be improved through the installation of sidewalk, striping of crosswalks (with associated traffic control devices), or installation of pedestrian signals where necessary.

Under the current configuration of the proposed GCL alignment, existing freight operations would be unaffected. Consideration will be given during future phases of operations planning to develop strategies that will allow for track sharing both north and south of Woodbury to accommodate potential increases in freight traffic.

3 TRANSPORTATION TRENDS

3.1 Regional Modeling

Regional transportation modeling is a tool regions use to understand, document, and project how people travel at the regional scale. Regional transportation models can provide context for projects such as the proposed GCL. DVRPC, the metropolitan planning organization for the Philadelphia region, includes the two counties in the GCL study area: Camden and Gloucester Counties. Using their regional transportation model – Travel Improvement Model (TIM v2.3) – DVRPC developed a Glassboro-Camden Line Regional Model, which projects existing and future No-Action travel patterns, trip origins and destinations, and corridor level travel times. For the future with the GCL, the GCL Project Team used the Federal Transit Administration's Simplified Trips-on-Project Software (STOPS) model (version 1.50). The project area was divided into nine analysis districts – three in Camden County and six in Gloucester County. Travel patterns in the study area are comprised of intra-study-area travel (both trip origination and destination within the study area) and external travel (either trip origin or destination outside the study area). Regional model output from DVRPC and the GCL Project Team is provided in Appendix 5-A, "DVRPC and STOPS Model Information," of this Report.

3.2 Travel Patterns

The following observations and predictions are based upon analysis of existing and projected travel patterns in the study area, assuming service begins in 2025 and the future design year is 2040:

- Population and employment in the study area are projected to increase in future years, with most trips within the study area completed by automobile.
- In 2015, there were approximately 621,000 vehicle-miles traveled (VMT) within the study area during the AM peak period from 6 AM to 10 AM each weekday. By 2040, that number is expected to increase by approximately six percent to over 659,000 VMT.[1] VMT in the PM peak period of 3 PM to 7 PM is expected to increase by approximately seven percent from 705,000 to 754,000 over the same period. Most of this growth will occur as intra-suburban travel.
- Time spent commuting in the study area is increasing, with the overall increase in vehicle-hours traveled (VHT) in Gloucester County outpacing the study area. AM peak-period VHT is expected to increase by approximately 17 percent in Gloucester County communities and remain relatively flat in Camden County communities between 2015 and 2040. PM peak-period VHT increases between 2015 and 2040 are forecasted at approximately 17 percent in Gloucester County communities and three (3) percent in Camden County communities.
- Gloucester County is growing rapidly compared to Camden County and other areas in the greater region, both in terms of trips destined for Gloucester County and trips produced from Gloucester County.

[1] DVRPC Glassboro-Camden Line Regional Model results

- Existing and projected travel behavior demonstrates that the study area population is increasingly mobile with respect to work destinations and daily travel. By 2040, the greatest overall absolute and percentage increases in daily person-trips produced and attracted would likely occur between low-density suburban areas of Gloucester County that are difficult to service with transit and GCL corridor communities such as Woodbury, Mantua Township, and Glassboro.
- Planned developments at higher education institutions such as Rowan University and Rutgers University-Camden will be significant drivers of work- and school-related trips in the study area. Traffic volumes in the Borough of Glassboro are projected to grow by about 21 percent based on daily VMT data, due in large part to anticipated growth at Rowan University. Household size is anticipated to remain relatively consistent from the existing to future scenarios, except where higher-education institution developments are planned.

3.3 Travel Times

Another measure of the way in which people travel and predictor of preferred transportation mode is travel time. Within the study area, which has diverse geographic work locations, limited transit access, recurring traffic congestion, and growing population, it can be expected that average travel times would increase. Mean travel time data for work-related trips in both counties from the U.S. Census Bureau's American Community Survey is shown in Table 1, "Mean Travel Time (Minutes) for Study Area Work-Related Trips (2010 vs. 2016)." Overall, the two-county region has seen a 4.7 percent overall increase in average commute time from 2010 to 2016.

Table 1: Mean Travel Time (Minutes) for Study Area Work-Related Trips (2010 vs. 2016)

County	2010	2016
Camden	27.0	28.1
Gloucester	28.0	29.4
Average	**27.5**	**28.8**

Source: US Census Bureau, American Community Survey, 2013 and 2016

4 TRANSPORTATION FACILITIES AND OPERATIONS

The highway network in the corridor study area is under the jurisdiction of various regional, state, and local agencies, including the New Jersey Department of Transportation (NJDOT), New Jersey Turnpike Authority (NJTA), DRPA, and County and municipal agencies. NJDOT oversees highways in New Jersey; DRPA operates and maintains highways and bridges that cross the Delaware River in the study area; and the Counties and local municipalities maintain County and local roadways. Major roadways within the study area are summarized below.

Major freeways include the following:

- I-676 – A north-south freeway providing access to downtown City of Camden and several major highways via its connection to US Route 30, and continuing access to Pennsylvania via the Benjamin Franklin Bridge.
- I-76 – An east-west freeway providing access from Camden County to Pennsylvania via the Walt Whitman Bridge.
- I-295 – A northeast-southwest freeway that provides access to inner-ring suburbs between Trenton, NJ, and Wilmington, DE.
- New Jersey Turnpike – A northeast-southwest freeway parallel to I-295 with more distantly spaced interchanges, which provides access between northern Delaware and the New York metropolitan area. The existing Turnpike ingress and egress points do not provide access to any roadways within the study area.
- NJ 55 – A north-south freeway that provides access from Deptford Township within the study area to Glassboro, Clayton, Vineland, and Millville with connections to State, County, and local roadways for continuing access to Cape May.

The primary freeway spine in the study area is I-676/I-295/I-76, generally known as the North-South Freeway. The trunk of this roadway, from the Benjamin Franklin Bridge south to its split with NJ 55, experiences recurring congestion in both the AM and PM peak periods. This route serves as a key approach to both the Walt Whitman and Benjamin Franklin Bridges over the Delaware River into Pennsylvania, the most heavily used bridges in the region. The confluence of these major highways is at an interchange that is under construction and known as "I-295/I-76/Route 42 Direct Connection," where reconstruction is ongoing and scheduled for completion in 2023.[2]

[2] http://www.state.nj.us/transportation/commuter/roads/rt295/

5 PUBLIC TRANSPORTATION SYSTEM

Two agencies operate and maintain public transit systems in or adjacent to the study area: DRPA's PATCO and NJ TRANSIT. Existing public transit operations include heavy rail, light rail, commuter rail, bus, and ferry services. Major routes within the existing transit network in the study area are summarized below, many of which are shown on Figure 3, "Existing Public Transit Network." Additional information on the existing public transit network and changes to the network can be found in Attachment 6, "Transit Analysis Tech Report."

5.1 PATCO Speedline

This 14.2-mile heavy rail operation located between Philadelphia, PA, and Lindenwold, NJ, opened originally as the "Camden Bridge Line" in 1936 between Broadway in Camden, NJ, and the intersection of 8th and Market Streets in Philadelphia. It was later extended to its present terminus in 1969. The line serves the northern and eastern edges of the study area. PATCO maintains 13 stations on its route, nine in New Jersey and four in Center City Philadelphia. In New Jersey, PATCO connects with the NJ TRANSIT River LINE at WRTC in Camden. The Camden and Lindenwold Stations offer connections to various NJ TRANSIT bus lines. PATCO provides 24-hour rail service, 7 days per week, and accommodates approximately 38,000 daily boardings. The total annual ridership in 2016 was 10.65 million passengers.[3]

5.2 NJ TRANSIT

As New Jersey's public transportation corporation, NJ TRANSIT operates within a service area covering 5,325 square miles in New Jersey, New York, and Pennsylvania. NJ TRANSIT operates 255 bus lines and 12 rail lines statewide, accommodating approximately 277 million passenger-trips each year. This agency is the nation's third largest provider of bus, light rail transit, and commuter rail.[4]

[3] http://www.drpa.org/pdfs/ar2016.pdf
[4] http://www.njtransit.com

Figure 3: Existing Public Transit Network

Legend

- Proposed GCL Station
- Proposed GCL Alignment
- PATCO
- Atlantic City Line
- River Line

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0 0.75 1.5 3
Miles

Source: GCL Project Team, 2020.

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5.3 NJ TRANSIT Bus Services

NJ TRANSIT bus service, Woodbury, New Jersey

Approximately 30 bus lines operate within the corridor study area, providing service between Southern New Jersey and the WRTC. Approximately half of these routes provide continuing service to Central Philadelphia, with destinations including Race Street, Arch Street, and the Greyhound Terminal located at the intersection of Filbert Street and 9th Street. The numerous bus services that operate through the WRTC continue to destinations in Camden, Gloucester, Salem, Cumberland, Atlantic, and Cape May Counties in NJ. Bus service frequencies vary by location and time-of-day, with some bus lines running as frequently as five per hour and others as infrequently as two or three total trips per day. Table 2, "NJ TRANSIT Bus Service Average Headways (Minutes)," shows the terminal points and approximate headways for NJ TRANSIT bus service in the study area in the inbound (towards Camden/Philadelphia) and outbound directions. The table represents the most significant services within the study area. The service schedule results in 40-50 buses arriving at WRTC during peak travel times. Within the region, approximately 78,000 daily trips occur.

Table 2: NJ TRANSIT Bus Service Average Headways (Minutes)

Route	Terminal Points	Early Morning (4am-7am)	AM Peak (7am-9am)	Midday (9am-4pm)	PM Peak (4pm-6pm)	Evening (6pm-12am)	Saturday	Sunday
Inbound to Camden/Philadelphia								
317	Asbury Park, NJ - PHL	90	60	140	120	180	120	120
400	Sicklerville, NJ - PHL	15	15	15	40	52	25	40
401	Salem, NJ - PHL	45	120	140	60	180	120	84
402	Pennsville, NJ - PHL	45	40	210	—	90	180	300
403	Turnersville, NJ - Camden	20	30	30	40	72	50	68
404	Cherry Hill, NJ - PHL	36	24	35	24	72	43	70
405	Cherry Hill, NJ - Camden	180	40	42	30	60	60	60
406	Berlin, NJ - PHL	90	20	28	30	60	60	70
407	Moorestown, NJ - Camden	36	40	42	40	72	60	60
408	Millville, NJ - PHL	30	120	60	60	360	108	120
409	Trenton, NJ - PHL	23	24	30	40	60	57	57
410	Bridgeton, NJ - PHL	45	60	70	60	120	57	82
412	Sewell, NJ - PHL	45	40	60	60	120	113	—
413	Burlington, NJ - Camden	60	60	47	60	120	64	64
414	Moorestown, NJ - Camden	180	60	—	—	—	—	—
417	Mt. Holly, NJ - PHL	90	120	—	—	—	—	—
418	Trenton - Camden	—	—	—	120	—	—	—
419	Burlington, NJ - Camden	60	40	60	40	72	58	58

Table 2: NJ TRANSIT Bus Service Average Headways (Minutes) (continued)

Route	Terminal Points	Early Morning (4am-7am)	AM Peak (7am-9am)	Midday (9am-4pm)	PM Peak (4pm-6pm)	Evening (6pm-12am)	Saturday	Sunday
Inbound to Camden/Philadelphia (continued)								
450	Cherry Hill, NJ - Camden	36	30	47	60	90	74	75
451	Voorhees, NJ - Camden	180	60	70	40	—	—	—
452	Pennsauken, NJ - Camden	90	24	30	30	52	60	60
453	Camden, NJ - Camden	180	30	70	60	360	56	—
455	Cherry Hill, NJ - Camden	180	40	60	40	120	64	90
457	Moorestown, NJ - Camden	60	30	60	40	120	64	—
463	Sicklerville, NJ - Woodbury, NJ	90	60	70	120	180	—	—
551	Atlantic City, NJ - PHL	30	30	47	30	28	38	38
Outbound from Camden/Philadelphia								
317	Asbury Park, NJ - PHL	90	180	45	180	180	127.5	128
400	Sicklerville, NJ - PHL	36	26	7	18	23	27	43
401	**Salem, NJ - PHL**	**180**	**180**	**60**	**45**	**45**	**90**	**104**
402	**Pennsville, NJ - PHL**	**60**	**—**	**90**	**60**	**90**	**210**	**330**
403	Turnersville, NJ - Camden	60	36	12	36	26	155	50
404	Cherry Hill, NJ - PHL	45	30	14	30	30	46	70
405	Cherry Hill, NJ - Camden	180	60	20	45	60	60	11
406	Berlin, NJ - PHL	26	26	15	45	23	57	68
407	Moorestown, NJ - Camden	60	60	17	60	26	60	60
408	**Millville, NJ - PHL**	**60**	**90**	**26**	**60**	**60**	**108**	**113**
409	**Trenton, NJ - PHL**	**36**	**20**	**15**	**45**	**26**	**57**	**57**
410	**Bridgeton, NJ - PHL**	**180**	**90**	**26**	**60**	**60**	**64**	**77**
412	**Sewell, NJ - PHL**	**60**	**60**	**26**	**60**	**45**	**103**	**—**
413	Burlington, NJ - Camden	90	60	26	90	36	60	60
414	Moorestown, NJ - Camden	—	—	—	60	—	—	—
417	Mt. Holly, NJ - PHL	—	—	—	45	—	—	—
418	Camden, NJ-Trenton	—	—	—	—	180	—	—
419	Burlington, NJ - Camden	60	90	26	90	26	58	58
450	Cherry Hill, NJ - Camden	90	60	20	60	60	74	74
451	Voorhees, NJ - Camden	180	90	36	90	—	—	—
452	Pennsauken, NJ - Camden	90	45	12	45	26	60	60
453	Camden, NJ - Camden	180	45	30	90	180	56	—
455	Cherry Hill, NJ - Camden	90	90	26	90	36	60	70
457	Moorestown, NJ - Camden	90	60	26	60	60	56	—
463	Sicklerville, NJ - Woodbury, NJ	90	90	30	180	180	—	—
551	Atlantic City, NJ - PHL	36	45	20	45	20	37	37

Notes: -PHL = 6th Street and Race Street or Greyhound Station in Philadelphia, PA
-All transit routes terminating at PHL also stop at WRTC
-Shaded/bolded rows: Route runs parallel to proposed GCL alignment

Source: NJ TRANSIT bus schedules accessed online, October 2017

5.4 NJ TRANSIT River LINE

NJ TRANSIT River LINE, Camden, New Jersey

The River LINE light rail system provides service from Trenton to Camden, where riders can transfer to PATCO or NJ TRANSIT bus services. The line is 34 miles long and has 21 stations. Typical service frequency is approximately 15 minutes during peak periods and 30 minutes during off-peak periods. The River LINE operates between approximately 5:45 AM and 10:00 PM on weekdays and Sundays and extends service until approximately 1:00 AM on Saturdays (into Sunday morning).[5]

Average daily ridership on the River LINE during fiscal year 2016 for weekdays, Saturdays, and Sundays was 8748, 5647, and 3946 passengers, respectively. The total annual ridership for fiscal year 2017 was 2.75 million passengers. The proposed GCL would merge with the River LINE and share tracks and the platform at WRTC.

5.5 NJ TRANSIT Atlantic City Line

The Atlantic City Line is a commuter rail line providing service between Atlantic City, NJ, and Philadelphia 30th Street Station, stopping at nine stations. It makes 13 eastbound trips and 13 westbound trips daily, with an average duration of approximately 95 minutes. Average daily weekday ridership in fiscal year 2016 was 2300 passengers.[6] The total annual ridership for fiscal year 2016 was approximately 800,000 passengers. The Atlantic City Line connects with River LINE service at the Pennsauken Transit Center and with the PATCO Speedline at the Lindenwold Station.[7]

5.6 RiverLink Ferry Service

The RiverLink Ferry provides seasonal service across the Delaware River, linking the Camden Waterfront with Penn's Landing in Philadelphia. The ferry is owned and operated by the Delaware River Waterfront Corporation. The RiverLink Ferry operates on a daily schedule between Memorial Day and Labor Day and on weekends only earlier in May and later in September. Operating hours are typically from 9:30 AM until 6:00 PM on weekdays and until 7:00 PM on weekends, with departures every 30 minutes from Camden and every hour from Philadelphia. The RiverLink Ferry terminal in Camden is within walking distance to connections with other transit services, including the NJ TRANSIT River LINE via the Aquarium Station and

[5] http://www.njtransit.com/pdf/bus/T0343.pdf
[6] http://www.rtforty.com
[7] http://www.njtransit.com/pdf/rail/R0090.pdf

both the River LINE and PATCO via the WRTC.[8] The ferry is not included in the DVRPC modeling efforts due to seasonal activity and comparatively low ridership.

5.7 Local Shuttles

Within the study area, local shuttles provide transit services in the area immediately surrounding some stations. Shuttles are not included in the DVRPC modeling efforts due to comparatively low ridership.

5.8 Pureland North-South Shuttle

South Jersey Transportation Authority operates the Pureland North-South Shuttle, a reservation-based free bus service that connects the WRTC in Camden with the Pureland Industrial Park in Logan Township, including stops in Westville and Woodbury. This scheduled service operates Monday-Friday, with three buses daily, linked with 1st Shift, 2nd Shift, and 3rd Shift operations at Pureland. This service provides connections to numerous NJ TRANSIT bus routes and the River LINE and PATCO services via the WRTC.

5.9 Pureland East-West Shuttle

NJ TRANSIT operates the Pureland East-West Shuttle, a bus service that connects Sicklerville with Pureland Industrial Park in Logan Township, including multiple stops in Glassboro. This scheduled service operates 10 buses daily, Monday through Friday, with headways of approximately one hour between 5:00 AM and 6:30 PM. The service provides connections to numerous NJ TRANSIT bus routes at several stops along the fixed route.

5.10 Pitman Shuttle

The Borough of Pitman offers a shuttle bus to its residents, mainly for transporting senior citizens to different activities. This shuttle is offered Monday through Thursday from 9:00 AM to 12:30 PM. The route the shuttle takes winds through town, making stops at houses, apartment complexes, parks, and shopping centers (http://nebula.wsimg.com).

5.11 Rowan University Shuttle

Rowan University offers two shuttle services for its students, faculty, and staff. One shuttle connects its Glassboro and Camden campuses. This shuttle runs between 7:00 AM and 11:00 PM, Monday through Thursday, with 18 departures in each direction. The schedule is reduced on Fridays, operating between 7:00 AM and 6:00 PM, with 12 southbound and 13 northbound departures.[9] The Rowan University at Camden stop is at the Camden Academic Building, which is near the WRTC. At the Glassboro campus, the shuttle stops at Robinson Hall, approximately 0.25 miles from the proposed GCL Rowan University Station.

At the Glassboro campus, a shuttle operates on a loop within the campus, connecting major University facilities and buildings. The shuttle service is intended to provide a safe transportation option for Rowan

[8] http://www.riverlinkferry.org
[9] https://rowanu.com/#shuttle

University students, faculty, and staff during evening and nighttime hours. The shuttle runs between 7:00 AM and 1:00 AM while the college is in session. The loop includes existing stops at Parking Lot A, which is adjacent to the proposed GCL Rowan University Station, and at the Rowan Boulevard Apartments, which is within approximately 0.40 miles from the proposed Glassboro Station.[10]

[10] http://sites.rowan.edu

6 TRAFFIC DATA COLLECTION

To better understand the potential roadway impacts the proposed GCL would have on the surrounding area, a number of roadways and key intersections were selected for detailed traffic analysis. Google Earth was used to visually determine the roadways and intersections near the GCL corridor likely to be affected. The listing of candidate roadways and intersections were then categorized based on several characteristics, such as nearest proposed station, presence of at-grade rail crossing, jurisdiction of the roadway, signalization of the intersection, and a perceived level of congestion. From this initial screening, 42 intersections were chosen for further analysis.

6.1 Traffic Counts

Both NJDOT and DVRPC maintain large active traffic data collection programs. These data reports were obtained from each agency and mapped using GIS software to determine the level of coverage within the study area. NJDOT primarily provided 48 hour automatic traffic recorder (ATR) volume counts on major state roadways such as NJ 45, NJ 47, US 130, and US 322. DVRPC provided ATR volume count data throughout the study area and provided extensive manual intersection turning movement counts (TMC) within the City of Camden. Locations for additional traffic data collection were selected and divided into manual TMCs and ATR counts.

TMCs were conducted on Tuesdays, Wednesdays, and Thursdays in order to accurately capture typical weekday traffic patterns and volumes within the project area. A morning peak period (7:00 AM – 9:00 AM) and an evening peak period (4:00 PM – 6:00 PM) were selected based on preliminary assessment of available data.

42 key intersections are included as part of this analysis and include data compiled in a few different methods. 16 intersections were counted in 2013 and were recounted in October 2017; the 2017 counts included 30 minute counts during each AM and PM peak period. These 30 minute counts were doubled to create peak-hour volumes. 21 intersections were counted in 2013 and have not been recounted since then. Five key intersections not counted in 2013 have been added to the list of intersections to be analyzed due to land use changes along the corridor and were counted during the full 2 hour AM and PM peak periods.

ATRs were used to observe traffic volumes over 48 hour periods. They were placed primarily along roadways with adjacent at-grade railroad track crossings and between key intersections. These intersections were selected based on their proximity to proposed GCL stations and whether a given at-grade crossing was estimated to have a large impact on the surrounding area. 11 locations counted previously have been recounted, and four new locations were added.

Growth rates were calculated for each modeling district using a comparison of previous-year and 2017 volumes for TMC and ATR locations within each given district along the corridor where data is available. For TMC and ATR locations in each district where counts were conducted previously but not in 2017, these growth rates were applied to establish base-year 2017 volumes.

A complete summary of traffic data is available in Appendix 5-B, “Traffic Volume Data.”

6.2 Field Inventory

A limited amount of new and rehabilitative construction has taken place within the study area in recent years, resulting in modifications to roadways and intersections. These changes are focused around the Rowan University area in Glassboro, the expansion of Cooper Hospital in Camden, and a road diet project on NJ 45 in Woodbury. As a result of these recent projects, some field inventories and confirmations of lane configurations and signal timings were necessary. Additional field reviews at other intersections were conducted to confirm similar information based on preliminary operational analyses of existing conditions and known roadway improvements since 2013. The five intersections counted during full AM and PM peak periods in 2017 were reviewed in the field, as well.

6.3 Signal Timings

Traffic signal data were collected using various methods. First, letters were prepared and distributed to NJDOT, Camden County, Gloucester County, and several municipalities within the study area requesting signal timing directives. In some cases, information provided to the GCL Project Team was outdated or did not match the lane configuration or signal phasing observed in the field. In these circumstances, field reconnaissance was conducted to make certain that the GCL Project Team had the proper inputs for traffic modeling purposes. Signal timings used in the analysis are available in Appendix 5-C, “Traffic Signal Timing Data.”

7 TRAFFIC ANALYSIS METHODOLOGY

Traffic analyses were conducted according to one of several different methodologies, depending on the location and the perceived degree of impact to traffic operation. Analysis tools were chosen for the strengths in analyzing the specific traffic impacts under consideration.

7.1 Basis of Analysis

During the course of the GCL study, the project team considered several alternate operating plans for the light rail service, with trains proposed to operate as frequently as every 7.5 minutes during the peak. Ultimately an operating plan was advanced with trains operating every 15 minutes during the peak, similar to the operation of the River LINE today, to minimize the infrastructure needed in the north half of the corridor and to protect space for current and future freight service.

For purposes of this Traffic Analysis Report, the maximum level of GCL service (peak service of 7.5-minute headways) was assumed. This maximum level of service represents the "worst case scenario" in terms of potential traffic impacts, as detailed below.

- **Walter Rand Transportation Center:** Traffic impacts at WRTC were examined using a VISSIM model (see Section 7.2, "Operational Modeling," below) to capture the impacts of frequent train crossings on the roadway network near WRTC. The maximum operating scenario for GCL (7.5 min peak headways) would have more train movements (16 GCL trips and 8 River LINE trips in both directions) than the 15-min headway scenario (8 GCL trips and 8 River LINE trips in both directions) and therefore would have the greatest potential impacts.
- **Grade Crossings:** Traffic impacts at grade crossings were examined (see Section 7.7, "Grade Crossings," below) to capture the impacts of frequent train crossings on the roadway network near crossings. The maximum operating scenario for GCL (7.5 min peak headways) would have twice as many train movements (16 total in both directions) than the 15-min headway scenario (8 total in both directions) and therefore would have the greatest potential impacts.
- **Ridership and Park-and-Ride:** The maximum operating scenario for GCL (7.5 min peak headways) would generate 8% more ridership overall and 16% more park-and-ride trips than the 15-minute headway scenario. These additional park-and-ride trips represent approximately 300 extra cars arriving at park-and-ride lots during the morning peak across the corridor.
- **Traffic Growth and Intersection Analysis:** Growth in traffic levels at the studied intersections were estimated using the change in Vehicle Miles Traveled (VMT) to generate traffic growth factors (see Sections 7.4, "Modeling Results," and 7.5, "Intersection Analysis"). As the maximum operating scenario for GCL (7.5 min peak headways) would generate greater transit usage, it would also generate lower VMT than the 15-min headway scenario. Following the methodology described in Section 7.4 and 7.5, the maximum operating scenario produces growth factors that are no more than 0.5% lower than the factors that would be generated under the 15-min headway scenario.

Although this would represent lower traffic levels overall, the differential is small; at the highest volume intersections with volumes of approximately 2,800 cars per hour during the peak hour, a 0.5% reduction would translate to only 14 fewer cars. These small reductions would be offset by the additional park-and-ride trips described above. Additionally, the first two analysis areas described above, where traffic is impacted by the number of train movements, show that the maximum operating scenario has the greatest traffic impacts.

7.2 Operational Modeling

In most of the study area, key intersections near proposed station locations were analyzed using Synchro® (Version 9.1, build 903) traffic capacity analysis software, consistent with guidance contained within the Transportation Research Board's Highway Capacity Manual (HCM) to determine delay-based level-of-service (LOS). At the WRTC, where light rail, bus transit, private vehicle, and bicycle/pedestrian traffic combine to form a large and complex transit hub, a VISSIM Version 5.40 micro-simulation model was used. Finally, at-grade rail crossings were analyzed to estimate delays resulting from the addition of light rail trains and the associated blockages using an Excel-based queuing model to determine maximum queue lengths and average delays per vehicle, converted to LOS. Traffic data described in Section 6, "Traffic Data Collection," such as traffic volumes, roadway geometries, and traffic signal timings, were used as inputs in operational modeling efforts. Each of these modeling efforts is described below in the methodology, with results reported in the existing conditions and future conditions sections of this report.

7.3 Modeling Scenarios

The baseline traffic conditions were established using existing signal timings and 2017 traffic volumes. Analysis of the traffic data revealed that AM and PM peak hours varied across different municipalities within the study area, but ultimately township-level peak hours were modeled for the baseline conditions. Table 3, "Peak Hours by Municipality," shows the AM and PM peak hours used in the analysis throughout the study area, by municipality.

Table 3: Peak Hours by Municipality

Municipality	AM Peak Hour	PM Peak Hour
Camden	8:00 AM to 9:00 AM	4:00 PM to 5:00 PM
Gloucester City	8:00 AM to 9:00 AM	4:00 PM to 5:00 PM
Westville	8:00 AM to 9:00 AM	5:00 PM to 6:00 PM
Woodbury	8:00 AM to 9:00 AM	4:00 PM to 5:00 PM
Woodbury Heights	8:00 AM to 9:00 AM	4:00 PM to 5:00 PM
Wenonah	7:30 AM to 8:30 AM	4:30 PM to 5:30 PM
Mantua	7:30 AM to 8:30 AM	4:30 PM to 5:30 PM
Sewell	7:30 AM to 8:30 AM	4:30 PM to 5:30 PM
Pitman	8:00 AM to 9:00 AM	4:00 PM to 5:00 PM
Glassboro	8:00 AM to 9:00 AM	4:00 PM to 5:00 PM

Source: GCL Team Traffic Analysis, 2017

7.4 Modeling Results

DVRPC regional modeling produced data outputs used for the traffic impact analysis effort. One of the key model outputs is a series of district-level traffic volume growth factors from the base condition to future-year scenarios. The individual districts are shown on Figure 4, "Proposed GCL Modeling Districts." For the purposes of this report, growth factors were developed based on VMT figures assuming an opening year of 2025 and a design year of 2040. In each future year, two separate factors estimate the average growth in traffic volumes assuming one of two scenarios: a No-Action condition that projects background growth in the region, and a future with the GCL that accounts for additional vehicle and train traffic that would be generated by it. To develop growth factors, Existing Conditions (2015) and No-Build (2025 and 2040) data were provided by DVRPC, while Build (2025 and 2040) data were provide by the STOPS model. These rates were adjusted to provide a growth factor applying an existing year of 2017. The regional model traffic growth factors are shown in Table 4, "AM/PM Future-Year Growth Factors (Growth from 2017)."

Table 4: AM/PM Future-Year Growth Factors (Growth from 2017)

Modeling District	2025 No-Action		2025 Build		2040 No-Action		2040 Build	
	AM	PM	AM	PM	AM	PM	AM	PM
Camden	1.004	1.015	1.067	1.070	1.019	1.029	1.147	1.139
South Camden	0.952	0.995	1.053	1.042	0.969	1.012	1.100	1.080
Gloucester City	0.884	0.953	1.031	1.041	0.903	0.969	1.100	1.103
Westville	1.020	1.011	1.004	1.016	1.044	1.034	1.045	1.059
Woodbury	1.071	1.060	1.062	1.051	1.105	1.090	1.088	1.074
Woodbury Heights	1.025	1.039	1.006	0.999	1.079	1.094	1.025	1.016
Wenonah	1.063	1.073	0.859	0.930	1.153	1.155	0.872	0.941
Pitman	1.063	1.052	0.931	0.975	1.124	1.102	0.943	0.987
Glassboro	1.085	1.089	0.989	0.999	1.188	1.178	1.001	1.010

Source: DVRPC's Glassboro-Camden Line Regional Model, 2017; STOPS Model, 2018

In order to be conservative in the analysis, any modeling district that had a future-year No-Action growth rate below 1.000 for a given peak hour was modeled with no growth by applying a 1.000 rate. In addition to the future-year growth factors, ridership projections for the GCL system in the future with the proposed GCL allowed for drive-access trips to the system's "park-and-ride" lots to be estimated.

Table 5, "GCL Ridership and Drive-Access Model Results – AM Boardings," presents the total daily boardings, total AM peak-period boardings, AM peak-hour boardings, and AM peak-hour drive-access boardings (including both "park-and-ride" and "kiss-and-ride" trips) for each GCL Station developed from the model results. Table 6, "GCL Ridership and Drive-Access Model Results – PM Alightings," presents the total daily alightings, total PM peak-period alightings, PM peak-hour alightings, and PM peak-hour drive-access alightings (including both "park-and-ride" and "kiss-and-ride" trips) for each GCL Station developed from the model results. AM period alighting and PM period boarding data is presented in Appendix 5-A, "DVRPC and STOPS Model Information." This data was used to develop the number of peak-hour trips to GCL parking facilities (presented in Appendix 5-A, "DVRPC and STOPS Model Information"), which was

used by the GCL Project Team to incorporate the impacts of the GCL parking facilities on the LOS of the local intersections in each municipality, as described in the following section.

Figure 4: Proposed GCL Modeling Districts

Legend
- Proposed GCL Station
- Proposed GCL Alignment
- Proposed GCL Modeling Districts

N

0 0.75 1.5 3
Miles

Source: GCL Project Team, 2020.

GCL
GLASSBORO-CAMDEN LINE

Table 5: GCL Ridership and Drive-Access Model Results - AM Boardings

Station	2025				2040			
	Daily Boardings	Peak-Period Boardings	Peak-Hour Boardings	Peak-Hour Boardings from Drive Trip	Daily Boardings	Peak-Period Boardings	Peak-Hour Boardings	Peak-Hour Boardings from Drive Trip
Walter Rand	4,503	585	212	0	4.772	639	177	1
Cooper Hosp.	758	127	42	1	811	206	46	1
South Camden	928	215	119	16	1,097	239	127	24
Gloucester City	757	509	90	10	788	581	95	16
Crown Pt. Rd.	898	197	160	70	951	222	164	72
Red Bank Ave	1,439	375	214	61	1,554	425	202	63
Woodbury	1,367	204	232	110	1,439	219	266	122
Woodbury Hts.	605	259	83	24	636	257	82	26
Wenonah	443	725	65	5	471	832	70	5
Mantua Blvd	633	668	120	72	691	630	136	82
Sewell	627	501	63	2	688	513	71	2
Mantua-Pitm.	780	282	163	116	839	298	186	134
Pitman	564	370	69	3	602	396	76	3
Rowan Univ.	1,224	132	41	3	1,395	143	66	3
Glassboro	945	663	187	83	1,034	552	205	91
Totals	**16,470**	**5,812**	**1,860**	**575**	**17,768**	**6,153**	**1,969**	**644**

Table 6: GCL Ridership and Drive-Access Model Results - PM Alightings

Station	2025				2040			
	Daily Alightings	Peak-Period Alightings	Peak-Hour Alightings	Peak-Hour Alightings from Drive Trip	Daily Alightings	Peak-Period Alightings	Peak-Hour Alightings	Peak-Hour Alightings from Drive Trip
Walter Rand	4,503	605	181	1	4,772	655	188	1
Cooper Hosp.	758	222	43	1	811	255	48	1
South Camden	928	205	110	18	1,097	223	125	23
Gloucester City	757	506	76	11	788	569	77	15
Crown Pt. Rd.	898	205	142	56	951	232	147	54
Red Bank Ave	1,439	386	165	42	1,554	412	170	47
Woodbury	1,367	194	200	84	1,439	215	221	94
Woodbury Hts.	605	255	69	18	636	254	69	20
Wenonah	443	740	52	4	471	819	58	4
Mantua Blvd	633	612	104	59	691	628	111	64
Sewell	627	527	55	1	688	543	63	1
Mantua-Pitm.	780	282	137	94	839	286	154	109
Pitman	564	407	55	3	602	462	60	3
Rowan Univ.	1,224	161	60	3	1,395	178	69	3
Glassboro	945	670	163	73	1,034	698	177	76
Totals	**16,471**	**5,977**	**1,614**	**465**	**17,768**	**6,429**	**1,736**	**516**

Methodology to determine the percentage of boardings occurring during AM and PM peak hours relative to daily boardings is based on hourly distributions of traffic volumes along certain roadway segments in the study area. Details on the methodology can be found in Appendix 5-A, "DVRPC and STOPS Model Information."

7.5 Intersection Analysis

The methodology for evaluating localized traffic impacts focuses on identifying significant impacts in the operation of roadway intersections, primarily using the LOS metric. Significant impacts are defined using delays and associated LOS calculated in accordance with the HCM. This analysis provides a quantitative measure to characterize operational conditions within a traffic stream, generally in terms of such service measures-of-effectiveness (MOEs) as speed and travel time, freedom to maneuver, traffic interruptions, and comfort and convenience.

Six LOS are defined for each facility with letters A to F designating each category, where LOS A represents the best operating conditions and LOS F the worst. Each LOS represents a range of operating conditions and drivers' perceptions of those conditions.

LOS A through LOS D is considered acceptable, and LOS E or LOS F is considered unacceptable. A significant impact is defined as:

- Deterioration in intersection operations from marginally acceptable LOS D to unacceptable LOS E or LOS F
- Deterioration from LOS E to LOS F
- A significant increase in vehicle delays with LOS F
- Deterioration in intersection operations from LOS B or better to LOS D or worse

The GCL Project Team focused the analysis of transportation conditions at the key intersections and roadways adjacent to or within proximity of proposed station areas. These are locations that are typically impacted by the initiation of light rail service, as the roadways and bicycle and pedestrian facilities are most directly impacted by passenger flows to and from stations. In other instances, the anticipated GCL operations would result in delays related to grade crossing protections such as gates and flashers.

Intersections that exhibit high levels of delay and congestion in future-year projections are analyzed to determine the most likely cause of the congestion. In some locations, a queue of left-turning vehicles would exceed the length of the storage turning lane, or the current number of lanes would not provide the roadway capacity required to accommodate projected future roadway volumes. Potential mitigations for these conditions are suggested in Section 12, "Local Station Area Roadway Impacts and Proposed Mitigations."

High Street at Main Street, Glassboro, New Jersey

Throughout the study area, 42 intersections were screened and selected for data collection and analysis, as described in Section 6, "Traffic Data Collection." Synchro® was applied to determine delay and LOS for overall intersection conditions, each intersection approach, and individual movements within each approach. The Synchro® network was coded using a roadway shape file to ensure accurate relative locations of intersections. Roadway geometry and lane configurations were taken from signal plans and aerial photographs and verified through field reconnaissance as necessary. In several locations, recent construction resulted in updated lane configurations compared to the most recent plans and aerial images. Traffic signal timings were taken from directives, field videos, and manual field measurements, as described in Section 6.3, "Signal Timings." Traffic volumes, peak-hour factors, and heavy-vehicle percentages were taken from data collected as part of the traffic count program or from readily-available agency data. The output metrics selected for analysis were LOS and delay reported by approach and overall at the intersection.

Future scenarios selected for analysis in this traffic analysis effort include 2025 No-Action, 2025 GCL, 2040 No-Action, and 2040 GCL for both the AM and PM peak hours. District-level growth factors were applied to each movement at the key intersections. In addition, the regional model provided a ridership estimate at each station by mode. The number of drive trips was used to determine induced demand on the roadway system attributable to GCL parking. Additional drive trips were determined to be kiss-and-ride trips, which generate a trip arriving and a trip departing from a station during each peak period.[11] Drive-access trip totals for each station are provided in Appendix 5-A, "DVRPC and STOPS Model Information." Maps displaying distribution of peak-hour drive-access trips within the local road network for each applicable station are provided in Appendix 5-D, "Parking Patterns." All Synchro reports can be found in Appendix 5-E, "Synchro Results."

[11] STOPS model output, 2018

7.6 Walter Rand Transportation Center

Walter Rand Transportation Center, Camden, New Jersey

In the City of Camden, existing River LINE light rail service operates in or adjacent to roadway traffic, with a complex system of roadway/rail traffic signals. The traffic signals give priority to all train movements to ensure smooth light rail operations into and out of the WRTC. Using the assumption that this priority would continue with the GCL, a micro-simulation model was developed to accurately capture existing operations and determine future impacts in the area. VISSIM traffic simulation software was chosen for this effort because, as a time-step and behavior-based model, it can analyze traffic under unique schemes of lane configurations, traffic composition and signal controllers, including pre-emption. The model replicates the movement of individual vehicles, light rail trains, and pedestrians.

The area modeled using VISSIM is along MLK Boulevard between Broadway and Haddon Avenue. This includes three signalized intersections on MLK Boulevard: Broadway, 6th Street/Garage Access (to allow access to the parking garage from MLK Boulevard near 6th Street), and Haddon Avenue. The rail network is modeled as far west as the River LINE WRTC Station platform. In addition to traditional traffic counts and volume flow techniques, accommodations for the high volume of NJ TRANSIT buses into and around WRTC were included in the modeling. Bus schedules were analyzed and aggregated to assume heavy vehicle volumes and percentages at each of the turning movements within the VISSIM analysis area. Results of the analysis are presented using the same key metrics selected elsewhere, which are signal delay and LOS reported by approach and overall intersection.

The VISSIM model uses links and connectors to define roadway geometry. A combination of aerial photographs and field visits were used to verify roadway configuration and scale. The following parameters (list is not all-encompassing) also served as inputs during development of the VISSIM simulation: traffic volumes, traffic speeds, signal timings. Recent installation of a bicycle lane along MLK Boulevard was included during model development.

Intersection traffic volumes were derived from manual TMCs at the MLK Boulevard intersections with Haddon Avenue, 6th Street/Garage Access, and Broadway. Based on the traffic count information, it was determined that the AM peak hour in the study area occurs from 7:45 to 8:45 AM and the PM peak hour from 4:00 to 5:00 PM. The 35 MPH posted speed limit was used to develop the vehicle speed distribution in the simulation. Prevailing speeds of the existing River LINE operation were determined through light rail transit time tables and field video recordings. The average speeds used in the model were 10 mph between WRTC and Broadway and 12 mph from Broadway to Haddon Avenue. Existing bus volumes and movements were also added to the model. The light rail transit vehicles are included in the model using the combined existing River LINE and proposed GCL schedules.

The traffic signal timings, including light rail transit pre-emption sequences, used in the model were obtained from NJ TRANSIT. The traffic counts collected served as inputs to the VISSIM model and were used in conjunction with routing decisions in order to define the number of vehicles following specific paths through the network. "Routing decisions" is a feature in VISSIM that establishes not only the percentage of turning vehicles but also the point along a roadway at which drivers start making the decision to change lanes and follow a particular route. Routing decisions play an important role in modeling driver behavior and, as a result, in the operational characteristics of the model. Default values for other parameters were primarily used in the VISSIM model.

7.7 Grade Crossings

The proposed GCL runs mostly at-grade south of the City of Camden along the Conrail freight line. The alignment crosses roadways at-grade at 38 public roadways and one private driveway location, requiring an analysis of the potential impacts on vehicular traffic due to the higher frequency of train crossings with the GCL. Flashing warning lights and crossing gates would need to be installed, upgraded, relocated, or replaced at these locations.

Elm Street Conrail grade crossing, Woodbury Heights, New Jersey

Existing at-grade crossings were inventoried and screened to identify locations with the highest potential impact in the future with the GCL. For each of the at-grade crossings identified in the screening process, a detailed delay analysis was conducted in the peak periods that used a cumulative capacity-demand method to estimate maximum queue lengths and a railroad at-grade crossing delay calculation method to estimate control delays per vehicle.[12] Traffic data used in the analysis is based on new 2017 counts at 17 locations and 2013 data from the remainder with growth factors applied. Spillover resulting from queues that would be longer than the time between train blockages was accounted for in the analysis. Delays were converted to LOS assuming signalized control using thresholds provided in the HCM.

[12] Okitsu, et al, 2010

8 EXISTING CONDITIONS SUMMARY

The existing conditions are intended to estimate a baseline level of traffic operations, which provides a high-level screening tool to identify intersections that may require mitigation under future conditions. Results are summarized according to each of the various analysis methodologies described in Section 7, "Traffic Analysis Methodology."

8.1 Intersection Analysis

Throughout the study area, numerous intersections were identified where an individual approach does not perform well under existing peak traffic conditions. However, reporting of the existing conditions scenario is primarily focused on overall LOS and delay at each intersection. Table 7, "Existing Conditions Overall Intersection Results," shows the total intersection volumes, LOS, and delays measured in seconds per vehicle for the AM and PM peak hours for the intersections analyzed under existing conditions outside of the City of Camden. Section 8.2, "Walter Rand Transportation Center," describes intersections within the City. Intersections are generally listed from north to south, and district boundaries are shown on Figure 4, "Proposed GCL Modeling Districts."

Table 7: Existing Conditions Overall Intersection Results

Intersection Municipality	AM Peak Hour			PM Peak Hour		
	Volume	LOS	Delay (sec)	Volume	LOS	Delay (sec)
Haddon Ave at Cooper Plaza Camden	1,259	B	14.1	1,429	C	31.6
Broadway at Ferry Ave-Jasper St South Camden	538	B	15.2	785	B	18.2
N. Broadway at Hudson St Gloucester City	312	B	19.6	352	C	20.2
S. Broadway (CR 551) at Monmouth St Gloucester City	734	B	19.7	672	B	17.7
Market St (CR 537 S.) at S. Broadway (CR 551) Gloucester City	1,360	C	28.9	1,032	C	26.9
S. Broadway (CR 551) at Koehler St Gloucester City	293	B	11.7	533	B	12.9
Broadway (CR 551) at Delsea Drive (NJ 47) Westville	1,712	F	276.4	1,738	B	13.1
Broadway Blvd (CR 551) at E. Olive Street Westville	850	B	15.7	984	B	15.1
N. Broad Street at Edith Ave Woodbury	895	A	3.6	1,265	A	6.0
E. Red Bank Ave at N. Evergreen Ave (CR 650) Woodbury	1,632	B	19.1	2,294	D	40.4
E. Red Bank Ave at N. Broad St (NJ 45) Woodbury	2,232	C	30.4	2,222	C	26.9
Cooper St (CR 534) at S. Broad St (NJ 45) Woodbury	2,082	D	38.0	2,172	D	36.5
Cooper St (CR 534) at S. Evergreen Ave (CR 553) Woodbury	1,598	C	32.4	2,459	D	46.7

Table 7: Existing Conditions Overall Intersection Results (continued)

Intersection Municipality	AM Peak Hour			PM Peak Hour		
	Volume	LOS	Delay (sec)	Volume	LOS	Delay (sec)
S. Broad St (NJ 45) at E. Barber Ave Woodbury	1,064	C	25.9	1,956	C	32.9
E. Barber Ave at S. Evergreen Ave (CR 553) Woodbury	1,842	E	66.7	2,214	F	97.2
Mantua Blvd (CR 676) at Center St Sewell	1,496	B	12.7	1,860	B	17.8
Tylers Mill Rd at Glassboro Rd Mantua	2,382	C	31.8	2,564	C	24.6
Lambs Rd at Main St Mantua	726	B	14.6	1,026	B	13.6
Woodbury Glassboro Rd and Lambs Rd Mantua	1,975	F	98.8	2,461	D	47.6
Broadway (CR 551) at Holly Ave Pitman	649	B	15.1	1,013	B	17.3
Pitman Ave (CR 639) at S. Broadway (CR 553A) Pitman	436	A	6.3	638	A	8.9
Bowe Blvd at Carpenter St (CR 682) Glassboro	1,406	B	16.3	1,723	B	16.7
Mullica Hill Rd (US 322) at Bowe Blvd Glassboro	1,858	F	189.6	2,292	F	111.0
Delsea Dr (NJ 47) at High Street (US 322) Glassboro	1,683	C	27.3	2,189	C	27.7
High St E. at S. Main St (CR 553) Glassboro	1,402	C	26.2	1,794	D	43.2
Master St at Ferry Ave South Camden	517	A	Unsig.	576	A	Unsig.
Broadway (CR 551) at Duncan Ave Westville	556	A	Unsig.	596	A	Unsig.
N. Broad Street at Park Ave Woodbury	1,313	A	Unsig.	1,622	A	Unsig.
E. Barber Ave at Railroad Ave Woodbury	754	A	Unsig.	890	B	Unsig.
Cooper St (CR 534) at Railroad Ave Woodbury	643	A	Unsig.	1,309	A	Unsig.
Elm Ave (652) at W. Jersey Ave Woodbury Heights	876	B	Unsig.	952	B	Unsig.
N. East Ave at E. Mantua Ave (CR 632) Wenonah	868	A	Unsig.	809	A	Unsig.
Atlantic Ave at Center St Mantua	622	A	Unsig.	1,006	A	Unsig.
Tylers Mill Rd at Main St Mantua	525	A	Unsig.	852	A	Unsig.
S Broadway (CR 551) at Laurel Ave Pitman	453	A	Unsig.	741	A	Unsig.
Bowe Blvd at N. Campus Dr Glassboro	1,027	A	Unsig.	1,446	A	Unsig.
Ellis St at Sewell St Glassboro	596	A	Unsig.	712	A	Unsig.

Table 7: Existing Conditions Overall Intersection Results (continued)

Intersection Municipality	AM Peak Hour			PM Peak Hour		
	Volume	LOS	Delay (sec)	Volume	LOS	Delay (sec)
High St at Academy St Glassboro	695	A	Unsig.	604	A	Unsig.
Main St at Union St/Church St Glassboro	636	B	Unsig.	736	B	Unsig.

Source: GCL Project Team Traffic Analysis, 2017.

Of the 25 signalized intersections analyzed using Synchro, four intersections currently operate with unacceptable LOS E or LOS F during at least one peak hour, while the other intersections operate at an acceptable LOS D or better. The intersection of Broadway Boulevard and Delsea Drive (NJ 47) in Westville results in a LOS F during the AM peak hour, primarily due to the operation of the northbound right-turn movement, where a queue persists throughout most of the peak hour. During the AM and PM peak hours, the intersection of East Barber Avenue and Evergreen Avenue in Woodbury performs with overall LOS E and F, respectively.

14 intersections analyzed within the study area are unsignalized, all of which perform with adequate LOS A or B under existing conditions. Delay values are not provided for these locations, as the values are low. These intersections are shown in Table 7, “Existing Conditions Overall Intersection Results,” in a separate north-to-south grouping after the signalized intersections.

8.2 Walter Rand Transportation Center

The three intersections within the VISSIM study area largely perform with an acceptable LOS under existing conditions. Results of the VISSIM model analysis under existing conditions for three intersections in Camden along MLK Boulevard are shown in Table 8, “Existing Conditions VISSIM Results along MLK Blvd.” Along MLK Boulevard, the southbound approach at Haddon Avenue performs with LOS E in the AM peak hour. During the PM peak hour, the same intersection performs with an acceptable overall LOS C.

Table 8: Existing Conditions VISSIM Results along MLK Blvd

Intersection	Approach	AM Peak Hour			PM Peak Hour		
		Volume	Delay(s)	LOS	Volume	Delay(s)	LOS
Haddon Ave	EB	481	27.8	C	909	24.1	C
	SB	401	55.5	E	577	51.2	D
	WB	1,172	45.6	D	403	33.8	C
	NB	511	50.2	D	673	36.5	D
	Total	**2,565**	**44.7**	**D**	**2,562**	**35.0**	**C**
Cooper Hospital Driveway/S. 6th St	NB	158	38.8	D	153	38.1	D
	EB	324	6.2	A	845	7.8	A
	WB	1,007	17.7	B	418	18.9	B
	Total	**1,489**	**17.4**	**B**	**1,416**	**14.4**	**B**
Broadway	NB	219	18.5	B	252	20.1	C
	EB	296	14.3	B	783	16.4	B
	SB	253	21.5	C	311	23.1	C
	WB	770	25.3	C	321	20.9	C
	Total	**1,538**	**21.6**	**C**	**1,667**	**19.1**	**B**

Source: GCL Project Team Traffic Analysis, 2017.

8.3 Existing Roadway At-Grade Crossings

There are 39 existing at-grade roadway crossings along the proposed GCL alignment (listed in Table 9, "Grade Crossing Inventory and Screening"). Existing rail operations are limited to infrequent freight rail operations, which generally operate between eight and 10 trains per day, causing a blockage of approximately three to five minutes per train, particularly north of Woodbury. Due to the infrequent and random nature of the blockages, the existing delay per vehicle averaged throughout the day is low. There is anecdotal evidence that unit trains approaching the Eagle Point Refinery on the freight rail alignment reverse into the refinery, blocking NJ 45 and US 130 for periods of up to 45 minutes. However, these at-grade crossings are not part of the GCL alignment.

A screening process was applied to analyze the 39 GCL at-grade crossings to identify locations with the highest potential impact on vehicular traffic and that warrant additional analysis based on the future with the GCL. The screening process was based on four main factors:

- Daily traffic volumes – At-grade crossings on roadways with higher traffic volumes would have a greater impact on queuing and delay. Available Annual Average Daily Traffic (AADT) data is from the updated ATR or TMC traffic counts, where available. Locations not counted in 2017 were grown to 2017 using the growth rates discussed above. Traffic volumes were estimated for minor roadways where data was unavailable.
- Peak-hour volumes – Typical peak-hour traffic volumes range between eight (8) and 12 percent of the daily traffic volumes. Additional consideration was given to at-grade crossings where available traffic data indicated roadways experiencing peak-hour traffic higher than the typical ranges.

- Distance to nearest intersecting street – Locations with nearby intersections would be more greatly affected by queuing. This was evaluated from aerial photography.
- Presence of traffic signal within 500 feet – Nearby traffic signals would be more greatly affected by queuing and require pre-emptive coordination with GCL signals. This was evaluated from aerial photography and verified by field visits.

Using the data available, 16 locations were identified as having high potential impacts. These screened at-grade crossings, selected for more detailed analysis with the GCL, are indicated by bold text in Table 9, "Grade Crossing Inventory and Screening."

Table 9: Grade Crossing Inventory and Screening

Road Name, Township	AADT	AM Peak Volume	PM Peak Volume	Signal within 500'?	Dist. To Nearest Street (ft)	Potential Impact
Carl Miller Blvd, Camden	1,720	140	170	Yes	300	Medium
Essex St, Gloucester City *	900	74	90	Yes	20	Medium
Morris St, Gloucester City *	900	74	90	No	20	Low
Mercer St, Gloucester City	310	30	30	Yes	20	Medium
Middlesex St, Gloucester City *	1,000	82	100	No	20	Medium
Chambers St, Gloucester City	240	20	20	Yes	20	Medium
Hudson St & Paul St, Gloucester City	690	70	40	Yes	20	Medium
Monmouth St, Gloucester City	640	40	40	Yes	50	Low
Cumberland St, Gloucester City *	1,000	82	100	Yes	50	Medium
Market St, Gloucester City	**7,370**	**410**	**530**	**Yes**	**140**	**High**
Powell St, Gloucester City *	1,000	80	100	No	400	Low
Koehler St, Gloucester City	2,140	170	180	Yes	140	Medium
River Dr, Westville	2,260	350	200	No	180	Medium
Crown Point Road, Westville *	2,940	310	170	No	50	Medium
Olive St, Westville *	**5,670**	**460**	**490**	**Yes**	**40**	**High**
Park Ave, Deptford *	3,320	230	330	No	20	Medium
Edith Ave, Woodbury *	680	50	60	Yes	50	Low
Cooper St, Woodbury	**13,920**	**990**	**1,140**	**No**	**60**	**High**
East Barber Ave, Woodbury	**6,560**	**380**	**550**	**No**	**50**	**High**
Elm Ave, Woodbury Heights	**9,980**	**750**	**880**	**No**	**30**	**High**
Maple St, Wenonah	**6,730**	**580**	**670**	**No**	**70**	**High**
Mantua Ave, Wenonah	**12,030**	**880**	**840**	**No**	**70**	**High**
Willow St, Wenonah	290	30	30	No	80	Low
Mantua Blvd, Sewell	6,690	560	700	No	520	**High**
Cumberland Ave, Mantua *	1,060	90	110	No	20	Medium
Center St, Mantua	**11,270**	**780**	**1,000**	**No**	**30**	**High**
Tylers Mill Road, Mantua	**4,610**	**440**	**460**	**No**	**1,000**	Medium
Lambs Rd, Mantua - Pitman	**8,760**	**710**	**890**	**No**	**800**	**High**
E Holly Ave, Pitman *	3,800	280	380	No	20	Medium

Table 9: Grade Crossing Inventory and Screening (continued)

Road Name, Township	AADT	AM Peak Volume	PM Peak Volume	Signal within 500'?	Dist. To Nearest Street (ft)	Potential Impact
Pitman Ave, Pitman *	**1,700**	**90**	**210**	**Yes**	**10**	**High**
S Broadway, Pitman	**6,830**	**490**	**650**	**No**	**30**	**High**
Carpenter St, Pitman/Glassboro	**5,760**	**640**	**680**	**No**	**40**	**High**
Bowe Blvd, Glassboro	**15,890**	**1,040**	**1,250**	**No**	**480**	**High**
Mullica Hill Road, Glassboro	**12,920**	**710**	**950**	**No**	**90**	**High**
University Road, Glassboro *	4,770	390	480	No	70	Medium
Ellis St, Glassboro *	**5,480**	**370**	**480**	**No**	**360**	**High**
Wilmer St, Glassboro *	1,060	90	110	No	330	Low
Union Street, Glassboro	1,790	140	190	No	60	Medium
South Main Street, Glassboro	**6,230**	**510**	**530**	**No**	**1,000**	**High**

Source: GCL Project Team Traffic Analysis, 2017

*Traffic data not available; traffic volume estimated in field

9 FUTURE YEAR NO-ACTION CONDITION SUMMARY

The No-Action scenarios were developed to estimate future background traffic levels without the GCL. This was developed to be used as a comparison to traffic with the GCL. In each of the various traffic analyses, the district-level growth factors shown in Table 4, "AM/PM Future-Year Growth Factors (Growth from 2017)," were applied to create a 2025 opening-day and a 2040 design-year scenario. Ridership forecasts on existing transit services were calculated for the No-Action condition and can be found in the Transit Technical Memo and Operations Plan dated March 2018.

9.1 Intersection Analysis (No-Action Condition)

The GCL Regional Travel Model anticipates relatively low growth in population and employment in the communities near the northern end of the GCL alignment. As a result, traffic conditions are not expected to degrade significantly at the intersections and roadways in this portion of the study area. However, towards the southern portion of the study area, where traffic volumes are projected to grow nearly 20 percent by 2040, LOS drops to E or F at selected intersections. Often, projects evaluating future traffic scenarios presume that improvements to the transportation network will occur regardless of the project. During the modeling process, for the No-Action scenarios, traffic signal splits were optimized, but cycle lengths were not adjusted. It is recognized that plans to improve roadway geometry or additional changes to signal timings may arise, however no plans have been identified for these intersections.

A potential US 322 by-pass is in preliminary concept planning that would traverse around downtown Glassboro. While the proposed project could potentially reduce through traffic along Mullica Hill Road, which has an at-grade crossing with the proposed GCL project, the horizon year for the bypass is unknown.

The results of the No-Action scenario at the chosen intersections are presented in Table 10, "Opening Year 2025 No-Action Conditions Overall Intersection Results," for 2025 and Table 11, "Future Year 2040 No-Action Conditions Overall Intersection Results," for 2040. Failing intersections include the intersection of Broadway Boulevard and Delsea Drive (NJ 47) in Westville, which continues to operate at a LOS F during the AM peak hour in both 2025 and 2040 due to the northbound right-turn movement, where a queue persists throughout most of the peak hour. The intersection of E. Barber Avenue and S. Evergreen Avenue in Woodbury degrades from LOS E to LOS F in the AM peak hour by 2025, and delays continue to mount by 2040. Overall LOS in the AM peak hour at the intersection of Mullica Hill Road (US 322) and Bowe Boulevard in Glassboro, which is a LOS F under existing conditions, stays at LOS F through 2025 and 2040. A reduction in delay is realized in 2025 by implementing signal timing optimization, but a substantial increase in delay is seen in 2040, due in large part to the growth proposed at Rowan University. The eastbound approach of this intersection is particularly sensitive to traffic growth.

Table 10: Opening Year 2025 No-Action Conditions Overall Intersection Results

Intersection Municipality	AM Peak Hour			PM Peak Hour		
	Volume	LOS	Delay (sec)	Volume	LOS	Delay (sec)
Haddon Ave and Cooper Plaza Camden	1,259	B	15.1	1,444	C	23.4
Broadway and Ferry Ave-Jasper St South Camden	538	B	15.0	785	B	18.2
N Broadway at Hudson St Gloucester City	312	B	19.6	352	C	20.2
S. Broadway (CR 551) at Monmouth St Gloucester City	734	B	19.7	803	B	17.7
Market St (CR 537 S) at S. Broadway (CR551) Gloucester City	1360	C	28.9	1,032	C	26.9
S. Broadway (CR 551) at Koehler St Gloucester City	293	B	11.7	533	B	12.9
Broadway Blvd (CR 551) at Delsea Dr (NJ 47) Westville	1,747	F	257.6	1,756	B	12.1
Broadway Blvd (CR 551) at E. Olive St Westville	867	B	15.9	994	B	15.1
N. Broad St at Edith Ave Woodbury	920	A	3.6	1,277	A	6.0
E. Red Bank Ave at N. Evergreen Ave (CR 650) Woodbury	1,678	C	21.9	2,315	D	42.6
E. Red Bank Ave at N. Broad St (NJ 45) Woodbury	2,388	C	33.1	2,356	C	28.5
Cooper St (CR 534) at S. Broad St (NJ 45) Woodbury	2,228	D	39.7	2,302	D	38.0
Cooper St (CR 534) at S. Evergreen Ave (CR 553) Woodbury	1,678	B	17.5	2,482	D	49.0
S. Broad St (NJ 45) at E. Barber Ave Woodbury	1,094	C	31.0	1,974	C	33.0
E. Barber Ave at S. Evergreen Ave (CR 553) Woodbury	1,971	F	80.2	2,346	F	104.4
Mantua Blvd (CR 676) at Center St Sewell	1,586	B	13.9	1,953	B	19.9
Tylers Mill Rd at Glassboro Rd Mantua	2,525	C	34.1	2,692	C	25.2
Lambs Rd at Main St Mantua	754	B	14.8	1,046	B	13.7
Woodbury Glassboro Rd and Lambs Rd Mantua	2,094	C	33.8	2,584	C	31.2
Broadway Blvd (CR 551) at Holly Ave Pitman	673	B	15.2	1,032	B	17.4
Pitman Ave (CR 639) at S. Broadway (CR 553A) Pitman	462	A	6.3	670	A	9.1
Bowe Blvd at Carpenter St (CR 682) Glassboro	1,499	B	16.4	1,853	B	15.8

Table 10: Opening Year 2025 No-Action Conditions Overall Intersection Results (continued)

Intersection Municipality	AM Peak Hour			PM Peak Hour		
	Volume	LOS	Delay (sec)	Volume	LOS	Delay (sec)
Mullica Hill Rd (US 322) at Bowe Blvd Glassboro	2,025	F	122.1	2,498	F	126.0
Delsea Dr (NJ 47) at High St (US 322) Glassboro	1794	C	27.4	2,354	C	29.9
High St E. at S. Main St (CR 553) Glassboro	1529	C	21.6	1,955	C	32.9
Master St and Ferry Ave South Camden	517	A	Unsig.	576	A	Unsig.
Broadway Blvd (CR 551) at Duncan Ave Westville	567	A	Unsig.	601	A	Unsig.
N. Broad Street at Park Ave Woodbury	1,350	A	Unsig.	1,637	A	Unsig.
E. Barber Ave at Railroad Ave Woodbury	807	A	Unsig.	944	B	Unsig.
Cooper St (CR 534) at Railroad Ave Woodbury	660	A	Unsig.	1,322	A	Unsig.
Elm Ave (CR 652) at W. Jersey Ave Woodbury Heights	821	A	Unsig.	910	B	Unsig.
N. East Ave at E. Mantua Ave (CR 632) Wenonah	600	A	Unsig.	707	A	Unsig.
Atlantic Ave at Center St Mantua	647	A	Unsig.	1,025	A	Unsig.
Tylers Mill Rd at Main St Mantua	545	A	Unsig.	868	A	Unsig.
S. Broadway (CR 551) at Laurel Ave Pitman	470	A	Unsig.	755	A	Unsig.
Bowe Blvd at N. Campus Dr Glassboro	1,114	A	Unsig.	1,576	A	Unsig.
Ellis St at Sewell St Glassboro	635	A	Unsig.	765	A	Unsig.
High St at Academy St Glassboro	741	A	Unsig.	651	A	Unsig.
Main St at Union St/Church St Glassboro	678	B	Unsig.	792	B	Unsig.

Source: GCL Project Team Traffic Analysis, 2018

Table 11: Future Year 2040 No-Action Conditions Overall Intersection Results

Intersection Municipality	AM Peak Hour			PM Peak Hour		
	Volume	LOS	Delay (sec)	Volume	LOS	Delay (sec)
Haddon Ave and Cooper Plaza Camden	1,284	B	15.3	1,472	C	24.2
Broadway and Ferry Ave-Jasper St South Camden	538	B	15.0	792	B	18.3
N Broadway at Hudson St Gloucester City	312	B	19.6	352	C	20.2
S. Broadway (CR 551) at Monmouth St Gloucester City	734	B	19.7	803	B	17.7
Market St (CR 537 S) at S. Broadway (CR551) Gloucester City	1,360	C	28.9	1,032	C	26.9
S. Broadway (CR 551) at Koehler St Gloucester City	293	B	11.7	533	B	12.9
Broadway Blvd (CR 551) at Delsea Dr (NJ 47) Westville	1,780	F	185.8	1,791	B	12.5
Broadway Blvd (CR 551) at E. Olive St Westville	884	B	16.1	1,013	B	15.3
N. Broad St at Edith Ave Woodbury	945	A	3.6	1,312	A	6.1
E. Red Bank Ave at N. Evergreen Ave (CR 650) Woodbury	1,723	C	22.1	2,380	D	40.9
E. Red Bank Ave at N. Broad St (NJ 45) Woodbury	2,456	D	35.6	2,422	C	29.9
Cooper St (CR 534) at S. Broad St (NJ 45) Woodbury	2,289	D	43.5	2,367	D	42.3
Cooper St (CR 534) at S. Evergreen Ave (CR 553) Woodbury	1,687	B	18.2	2,551	D	48.7
S. Broad St (NJ 45) at E. Barber Ave Woodbury	1,124	D	43.5	2,029	C	34.0
E. Barber Ave at S. Evergreen Ave (CR 553) Woodbury	2,026	E	58.3	2,413	E	70.0
Mantua Blvd (CR 676) at Center St Sewell	1,675	B	14.9	2,046	C	22.5
Tylers Mill Rd at Glassboro Rd Mantua	2,667	D	45.2	2,821	C	27.9
Lambs Rd at Main St Mantua	812	B	15.0	1,094	B	13.9
Woodbury Glassboro Rd and Lambs Rd Mantua	2,212	D	36.9	2,707	C	32.5
Broadway Blvd (CR 551) at Holly Ave Pitman	727	B	15.4	1,080	B	17.8
Pitman Ave (CR 639) at S. Broadway (CR 553A) Pitman	488	A	6.9	702	A	9.2
Bowe Blvd at Carpenter St (CR 682) Glassboro	1,645	B	18.3	1,998	B	16.6
Mullica Hill Rd (US 322) at Bowe Blvd Glassboro	2,212	F	119.1	2,705	F	105.0

Table 11: Future Year 2040 No-Action Conditions Overall Intersection Results (continued)

Intersection Municipality	AM Peak Hour			PM Peak Hour		
	Volume	LOS	Delay (sec)	Volume	LOS	Delay (sec)
Delsea Dr (NJ 47) at High St (US 322) Glassboro	1,969	C	29.9	2,539	C	32.2
High St E. at S. Main St (CR 553) Glassboro	1,669	C	25.1	2,117	D	40.1
Master St and Ferry Ave South Camden	517	A	Unsig.	582	A	Unsig.
Broadway Blvd (CR 551) at Duncan Ave Westville	578	A	Unsig.	614	A	Unsig.
N. Broad Street at Park Ave Woodbury	1386	A	Unsig.	1,683	A	Unsig.
E. Barber Ave at Railroad Ave Woodbury	830	B	Unsig.	969	B	Unsig.
Cooper St (CR 534) at Railroad Ave Woodbury	733	A	Unsig.	1,358	A	Unsig.
Elm Ave (CR 652) at W. Jersey Ave Woodbury Heights	860	A	Unsig.	961	B	Unsig.
N. East Ave at E. Mantua Ave (CR 632) Wenonah	649	A	Unsig.	764	A	Unsig.
Atlantic Ave at Center St Mantua	682	A	Unsig.	1,072	A	Unsig.
Tylers Mill Rd at Main St Mantua	574	A	Unsig.	909	A	Unsig.
S. Broadway (CR 551) at Laurel Ave Pitman	495	A	Unsig.	790	A	Unsig.
Bowe Blvd at N. Campus Dr Glassboro	1,222	A	Unsig.	1,706	A	Unsig.
Ellis St at Sewell St Glassboro	697	A	Unsig.	827	A	Unsig.
High St at Academy St Glassboro	794	A	Unsig.	700	A	Unsig.
Main St at Union St/Church St Glassboro	720	B	Unsig.	853	B	Unsig.

Source: GCL Team Traffic Analysis, 2018

9.2 Walter Rand Transportation Center

Tracks Approaching WRTC, Camden, New Jersey

For the WRTC VISSIM analysis area, LOS results are reported by approach for the three signalized intersections along MLK Boulevard, as shown in Table 12, "2025 No-Action VISSIM Results at MLK Blvd. Intersections," and Table 13, "2040 No-Action VISSIM Results at MLK Blvd. Intersections." No signal timing changes were assumed within the VISSIM analysis area to maintain the complex light rail signal pre-emption system.

Minimal changes in delay result when comparing existing 2017 conditions to the 2025 and 2040 No-Action results during both the AM and PM peak hours. The maximum change in delay for any approach at the three intersections is approximately three seconds, and the maximum change in overall intersection delay is approximately two seconds. LOS results change but are coincidental because the small changes in delay cross thresholds between LOS categories.

Overall intersection LOS at the Haddon Avenue intersection changes from C to D between 2017 and 2025 and stays at D through 2040. The southbound approach at this intersection operates at LOS E in 2017 and 2025 but improves to LOS D in 2040. The westbound approach at the Cooper Hospital Driveway intersection changes from LOS B in 2017 to LOS C in 2025 but changes to back to LOS B in 2040. The westbound approach at the Broadway intersection changes from LOS C in 2017 to LOS B in 2025 but changes back to LOS C in 2040.

Table 12: 2025 No-Action VISSIM Results at MLK Blvd. Intersections

Intersection	Approach	AM Peak Hour			PM Peak Hour		
		Volume	Delay (sec)	LOS	Volume	Delay (sec)	LOS
Haddon Ave	EB	481	27.9	C	925	23.1	C
	SB	401	55.5	E	590	53.3	D
	WB	1,172	45.6	D	412	33.8	C
	NB	511	50.2	D	684	36.9	D
	Total	**2,565**	**44.7**	**D**	**2,611**	**35.2**	**D**
Cooper Hospital Driveway/S. 6th St	NB	158	38.7	D	157	38.8	D
	EB	324	6.2	A	863	7.5	A
	WB	1007	17.7	B	422	23.3	C
	Total	**1,489**	**17.4**	**B**	**1,442**	**15.5**	**B**
Broadway	NB	219	18.5	B	259	20.2	C
	EB	296	14.3	B	800	16.5	B
	SB	253	21.5	C	316	23.3	C
	WB	770	25.2	C	323	18.4	B
	Total	**1,538**	**21.5**	**C**	**1,698**	**18.7**	**B**

Source: GCL Project Team Traffic Analysis, 2018

Table 13: 2040 No-Action VISSIM Results at MLK Blvd. Intersections

Intersection	Approach	AM Peak Hour			PM Peak Hour		
		Volume	Delay (sec)	LOS	Volume	Delay (sec)	LOS
Haddon Ave	EB	494	24.7	C	939	26.0	C
	SB	410	53.7	D	599	52.7	D
	WB	1,195	44.6	D	416	34.0	C
	NB	525	47.3	D	693	38.1	D
	Total	**2,624**	**42.8**	**D**	**2,647**	**36.5**	**D**
Cooper Hospital Driveway/6th St.	NB	163	39.4	D	158	38.7	D
	EB	332	6.2	A	870	7.8	A
	WB	1,027	17.7	B	431	19.0	B
	Total	**1,522**	**17.5**	**B**	**1,459**	**14.5**	**B**
Broadway	NB	225	19.0	B	260	20.4	C
	EB	303	14.5	B	808	16.0	B
	SB	259	21.9	C	319	23.1	C
	WB	784	23.3	C	328	21.2	C
	Total	**1,571**	**20.8**	**C**	**1,715**	**19.0**	**B**

Source: GCL Project Team Traffic Analysis, 2018

9.3 Grade Crossings

Railroad freight operations are currently relatively infrequent from the perspective of grade crossing closures (less than one per hour), and this frequency is not anticipated to increase to a significantly higher level. Therefore, with no GCL light rail operations, the frequency of grade crossing closures would remain at a similar order of magnitude into the future, and the projected increase in traffic volumes in the future would account for nearly all additional projected delay.

10 FUTURE YEAR WITH THE GCL SUMMARY

Per DVRPC's growth factors, presented in Table 4, "AM/PM Future-Year Growth Factors (Growth from 2017)," projected traffic in the future with the GCL is higher than in the No-Action Scenario at the northern end of the alignment (from Camden to Gloucester City) and at the southern end of the alignment (from Pitman and Glassboro). However, projected traffic in the future with the GCL is lower than in the No-Action Scenario from Westville to Sewell because of the assumed number of drivers switching to the proposed GCL. These two factors result in changes, as defined in Section 7.1, "Operational Modelling," to the operations of roadway intersections. Additional information on forecasted ridership on existing services and the GCL can be found in the Transit Technical Memo and Operations Plan dated March 2018.

10.1 Intersection Analysis (with the Proposed GCL)

The LOS intersection results for the future with the GCL are presented in Table 14, "Future Year 2025 GCL Overall Intersection Results," and in Table 15, "Future Year 2040 GCL Overall Intersection Results." Due to the reduction in traffic for the future with the GCL noted above, roadway and intersection delays with the GCL are generally lower compared to the No-Action condition at locations where no new trips would be generated by GCL stations and parking facilities; they are generally higher compared to the No-Action condition at locations where new drive access trips would be anticipated as a direct result of the proposed GCL parking facilities. However, several locations experienced negative traffic growth in the future with the GCL but also generate traffic due to parking facility activity. Further, optimization of traffic signal timing splits was included as part of the analysis and is reflected in the results. A more detailed discussion on intersections with unfavorable operations is below.

The intersection of Broadway Boulevard and Delsea Drive (NJ 47) in Westville would continue, as shown in the No-Action results, to operate at a LOS F during the AM peak hour for the year 2025 as well as 2040, primarily due to the northbound right-turn movement where a queue persists throughout most of the peak hour. The intersection of East Barber Avenue and South Evergreen Avenue in Woodbury operates at a LOS E for the 2025 AM peak, LOS F in the 2025 PM peak, and LOS E in the 2040 PM peak. High demand exists for the eastbound, northbound, and southbound approaches relative to the available lane use, resulting in volumes exceeding capacity and substantial delay. In the 2040 AM condition, although the overall intersection operates at acceptable LOS D, high demand exists for the westbound and northbound approaches. The intersection of Cooper Street and S. Evergreen Avenue in Woodbury operates at LOS E in the 2025 PM peak, primarily due to high demand and approach LOS E for the eastbound and southbound approaches. The LOS at the intersection of Mullica Hill Road (US 322) and Bowe Boulevard in Glassboro operates at LOS F during both peak hours in the No-Action condition and future with the GCL in 2025 and 2040, due in large part to the growth proposed at Rowan University. The eastbound approach is still particularly sensitive to traffic growth, as noted above. All other intersections operate with acceptable LOS D or better in both AM and PM peaks in 2025 and 2040.

Table 14: Future Year 2025 GCL Overall Intersection Results

Intersection Municipality	AM Peak Hour			PM Peak Hour		
	Volume	LOS	Delay (sec)	Volume	LOS	Delay (sec)
Haddon Ave and Cooper Plaza Camden	1,246	B	15.0	1,429	B	18.6
Broadway and Ferry Ave-Jasper St South Camden	502	B	14.6	769	B	18.0
N Broadway at Hudson St Gloucester City	268	B	19.4	328	C	20.1
S. Broadway (CR 551) at Monmouth St Gloucester City	630	B	19.3	626	B	17.3
Market St (CR 537 S) at S. Broadway (CR551) Gloucester City	1,168	C	24.3	959	C	25.9
S. Broadway (CR 551) at Koehler St Gloucester City	252	B	11.5	496	B	12.9
Broadway Blvd (CR 551) at Delsea Dr (NJ 47) Westville	1,756	F	248.6	1,763	B	12.9
Broadway Blvd (CR 551) at E. Olive St Westville	854	B	15.7	984	B	15.1
N. Broad St at Edith Ave Woodbury	959	A	3.6	1,330	A	6.2
E. Red Bank Ave at N. Evergreen Ave (CR 650) Woodbury	1,739	C	22.3	2,414	E	56.6
E. Red Bank Ave at N. Broad St (NJ 45) Woodbury	2,443	D	35.1	2,386	C	28.8
Cooper St (CR 534) at S. Broad St (NJ 45) Woodbury	2,251	D	41.1	2,313	D	42.6
Cooper St (CR 534) at S. Evergreen Ave (CR 553) Woodbury	1,767	B	18.4	2,637	E	57.2
S. Broad St (NJ 45) at E. Barber Ave Woodbury	1,141	D	37.1	2,066	D	37.8
E. Barber Ave at S. Evergreen Ave (CR 553) Woodbury	1,964	E	79.3	2,334	F	131.8
Mantua Blvd (CR 676) at Center St Sewell	1543	B	13.5	1,935	B	19.4
Tylers Mill Rd at Glassboro Rd Mantua	2,538	C	33.8	2,694	C	25.0
Lambs Rd at Main St Mantua	765	B	14.8	1,069	B	13.8
Woodbury Glassboro Rd and Lambs Rd Mantua	2,127	C	34.3	2,601	C	32.6
Broadway Blvd (CR 551) at Holly Ave Pitman	682	B	15.3	1,056	B	17.7
Pitman Ave (CR 639) at S. Broadway (CR 553A) Pitman	460	A	6.3	666	A	9.1
Bowe Blvd at Carpenter St (CR 682) Glassboro	1,503	B	16.5	1,842	B	15.8

Table 14: Future Year 2025 GCL Overall Intersection Results (continued)

Intersection Municipality	AM Peak Hour			PM Peak Hour		
	Volume	LOS	Delay (sec)	Volume	LOS	Delay (sec)
Mullica Hill Rd (US 322) at Bowe Blvd Glassboro	1,983	F	114.3	2,452	F	118.9
Delsea Dr (NJ 47) at High St (US 322) Glassboro	1,733	C	27.4	2,345	C	29.7
High St E. at S. Main St (CR 553) Glassboro	1,557	C	21.6	1,976	D	38.8
Master St and Ferry Ave South Camden	490	A	Unsig.	573	A	Unsig.
Broadway Blvd (CR 551) at Duncan Ave Westville	610	A	Unsig.	636	A	Unsig.
N. Broad Street at Park Ave Woodbury	1,395	A	Unsig.	1,705	A	Unsig.
E. Barber Ave at Railroad Ave Woodbury	801	A	Unsig.	935	B	Unsig.
Cooper St (CR 534) at Railroad Ave Woodbury	750	A	Unsig.	1,429	A	Unsig.
Elm Ave (CR 652) at W. Jersey Ave Woodbury Heights	892	B	Unsig.	978	C	Unsig.
N. East Ave at E. Mantua Ave (CR 632) Wenonah	896	A	Unsig.	842	A	Unsig.
Atlantic Ave at Center St Mantua	641	A	Unsig.	1,047	A	Unsig.
Tylers Mill Rd at Main St Mantua	553	A	Unsig.	888	A	Unsig.
S. Broadway (CR 551) at Laurel Ave Pitman	481	A	Unsig.	777	A	Unsig.
Bowe Blvd at N. Campus Dr Glassboro	1,096	A	Unsig.	1,547	A	Unsig.
Ellis St at Sewell St Glassboro	635	A	Unsig.	762	A	Unsig.
High St at Academy St Glassboro	743	A	Unsig.	646	A	Unsig.
Main St at Union St/Church St Glassboro	719	B	Unsig.	823	B	Unsig.

Source: GCL Team Traffic Analysis, 2018

Table 15: Future Year 2040 GCL Overall Intersection Results

Intersection Municipality	AM Peak Hour			PM Peak Hour		
	Volume	LOS	Delay (sec)	Volume	LOS	Delay (sec)
Haddon Ave and Cooper Plaza Camden	1,259	B	15.1	1,443	C	23.5
Broadway and Ferry Ave-Jasper St South Camden	514	B	14.7	777	B	18.1
N Broadway at Hudson St Gloucester City	270	B	19.4	331	C	20.1
S. Broadway (CR 551) at Monmouth St Gloucester City	639	B	19.6	633	B	17.4
Market St (CR 537 S) at S. Broadway (CR551) Gloucester City	1,184	C	24.6	971	C	26.1
S. Broadway (CR 551) at Koehler St Gloucester City	256	B	11.5	502	B	12.8
Broadway Blvd (CR 551) at Delsea Dr (NJ 47) Westville	1,800	F	177.0	1,791	B	13.0
Broadway Blvd (CR 551) at E. Olive St Westville	871	B	15.9	999	B	15.6
N. Broad St at Edith Ave Woodbury	983	A	3.6	1,357	A	6.2
E. Red Bank Ave at N. Evergreen Ave (CR 650) Woodbury	1,780	C	22.8	2,468	E	47.8
E. Red Bank Ave at N. Broad St (NJ 45) Woodbury	2,505	D	36.9	2,441	C	30.3
Cooper St (CR 534) at S. Broad St (NJ 45) Woodbury	2,289	D	41.6	2,368	D	42.5
Cooper St (CR 534) at S. Evergreen Ave (CR 553) Woodbury	1,785	B	19.0	2,699	D	53.7
S. Broad St (NJ 45) at E. Barber Ave Woodbury	1,164	D	40.4	2,110	D	38.4
E. Barber Ave at S. Evergreen Ave (CR 553) Woodbury	2,014	D	52.9	2,386	E	64.1
Mantua Blvd (CR 676) at Center St Sewell	1,645	B	14.5	2,051	C	21.6
Tylers Mill Rd at Glassboro Rd Mantua	2,653	D	38.2	2,798	C	27.9
Lambs Rd at Main St Mantua	797	B	15.0	1,108	B	13.9
Woodbury Glassboro Rd and Lambs Rd Mantua	2,184	D	35.5	2,703	C	32.4
Broadway Blvd (CR 551) at Holly Ave Pitman	713	B	15.4	1,094	B	18.0
Pitman Ave (CR 639) at S. Broadway (CR 553A) Pitman	507	A	7.1	690	A	9.1

Table 15: Future Year 2040 GCL Overall Intersection Results (continued)

Intersection Municipality	AM Peak Hour			PM Peak Hour		
	Volume	LOS	Delay (sec)	Volume	LOS	Delay (sec)
Bowe Blvd at Carpenter St (CR 682) Glassboro	1,613	B	17.9	1,962	B	19.7
Mullica Hill Rd (US 322) at Bowe Blvd Glassboro	2,130	F	102.4	2,611	F	87.1
Delsea Dr (NJ 47) at High St (US 322) Glassboro	1,866	C	29.0	2,494	C	34.5
High St E. at S. Main St (CR 553) Glassboro	1,677	C	24.8	2,102	D	49.9
Master St and Ferry Ave South Camden	564	A	Unsig.	583	A	Unsig.
Broadway Blvd (CR 551) at Duncan Ave Westville	624	A	Unsig.	643	A	Unsig.
N. Broad Street at Park Ave Woodbury	1,429	B	Unsig.	1,742	A	Unsig.
E. Barber Ave at Railroad Ave Woodbury	820	A	Unsig.	956	B	Unsig.
Cooper St (CR 534) at Railroad Ave Woodbury	776	A	Unsig.	1,466	A	Unsig.
Elm Ave (CR 652) at W. Jersey Ave Woodbury Heights	930	B	Unsig.	1,022	B	Unsig.
N. East Ave at E. Mantua Ave (CR 632) Wenonah	953	A	Unsig.	891	A	Unsig.
Atlantic Ave at Center St Mantua	686	A	Unsig.	1,110	A	Unsig.
Tylers Mill Rd at Main St Mantua	577	A	Unsig.	920	A	Unsig.
S. Broadway (CR 551) at Laurel Ave Pitman	622	A	Unsig.	805	A	Unsig.
Bowe Blvd at N. Campus Dr Glassboro	1,178	A	Unsig.	1,647	A	Unsig.
Ellis St at Sewell St Glassboro	683	A	Unsig.	812	A	Unsig.
High St at Academy St Glassboro	798	A	Unsig.	688	A	Unsig.
Main St at Union St/Church St Glassboro	773	B	Unsig.	875	C	Unsig.

Source: GCL Team Traffic Analysis, 2018

10.2 Walter Rand Transportation Center

For the WRTC VISSIM analysis area, LOS results are reported by approach for the three signalized intersections along MLK Boulevard, as shown in Table 16, "2025 GCL VISSIM Results at MLK Blvd. Intersections," and Table 17, "2040 GCL VISSIM Results at MLK Blvd. Intersections." Several movements

at these intersections would operate with unacceptable LOS of E or F. Mitigation measures, presented in Section 12, "Local Station Area Roadway Impacts and Proposed Mitigations," are anticipated to improve LOS in the VISSIM analysis area.

Table 16: 2025 GCL VISSIM Results at MLK Blvd. Intersections

Intersection	Approach	AM Peak Hour			PM Peak Hour		
		Volume	Delay (sec)	LOS	Volume	Delay (sec)	LOS
Haddon Ave	EB	464	27.1	C	923	24.9	C
	SB	398	65.9	E	579	57.7	E
	WB	1,080	72	E	410	36.4	D
	NB	507	68.1	E	672	48	D
	Total	**2,449**	**61.7**	**E**	**2,584**	**40.1**	**D**
Cooper Hospital Driveway/S. 6th St	NB	158	80.8	F	154	75.1	E
	EB	331	5.9	A	855	6.2	A
	WB	930	36.9	D	426	25.8	C
	Total	**1,419**	**34.6**	**C**	**1,435**	**19.4**	**B**
Broadway	NB	217	18.7	B	250	20.4	C
	EB	304	11	B	795	13.7	B
	SB	250	24.7	C	309	26.7	C
	WB	697	40.8	D	322	42.7	D
	Total	**1,468**	**28.6**	**C**	**1,676**	**22.7**	**C**

Source: GCL Project Team, Traffic Analysis, 2018

Table 17: 2040 GCL VISSIM Results at MLK Blvd. Intersections

Intersection	Approach	AM Peak Hour			PM Peak Hour		
		Volume	Delay (sec)	LOS	Volume	Delay (sec)	LOS
Haddon Ave.	EB	497	26.2	C	950	23.2	C
	SB	406	60.4	E	585	57.7	E
	WB	1,164	60.3	E	415	35.9	D
	NB	516	59.3	E	680	52.4	D
	Total	**2,583**	**53.6**	**D**	**2,630**	**40.4**	**D**
Cooper Hospital Driveway/ S. 6th St	NB	160	79.3	E	156	77.6	E
	EB	353	5.1	A	864	6	A
	WB	997	36.1	D	430	23	C
	Total	**1,510**	**33.4**	**C**	**1,450**	**18.7**	**B**
Broadway	NB	221	18.4	B	254	20	B
	EB	308	11.3	B	804	14.2	B
	SB	255	25.5	C	312	27	C
	WB	759	46.8	D	324	48	D
	Total	**1,543**	**32.1**	**C**	**1,694**	**23.9**	**C**

Source: GCL Project Team Traffic Analysis, 2018

10.3 Roadway At-Grade Crossings

The proposed GCL operations include up to 16 trains per hour (eight per direction) during the peak hour, with trains running continuously from 5:00 AM to 12:00 AM. The Project Team estimates that delays at grade crossings resulting from GCL service will range between 40 and 80 seconds for each train movement and corresponding gate activation. The variance is based on factors including, but not limited to, anticipated operating speed, time required for raising/lowering crossing gates, and proximity to stations.

Table 18, "Traffic Impacts at Grade Crossings 2025 Build," and Table 19, "Traffic Impacts at Grade Crossings with the GCL 2040," present the anticipated 2025 and 2040 LOS, respectively, at at-grade crossings in the future with the GCL. The at-grade crossings listed are those identified as "high impact" in Table 9, "Grade Crossing Inventory and Screening." Also included with the LOS results are the expected traffic volume at the approach with the highest traffic volume; anticipated vehicle delay (in seconds); and maximum anticipated queue length (feet). At-grade crossing delays vary widely along the GCL corridor due to train blockage time, roadway traffic volume, and other factors that may reduce roadway capacity, such as heavy pedestrian crossing activity. These at-grade crossings would effectively be new traffic control devices, and delay is measured in seconds. Any comparison to existing LOS must consider that there is no light rail service currently.

The results of the analysis reveal that there would be minor delays throughout the corridor, with most at-grade crossings operating at LOS A or LOS B with delays up to 21 seconds per vehicle. The grade crossing at Bowe Boulevard in Glassboro would operate at LOS B with an approximate 18.5 second delay per vehicle in the AM period of the 2025 future with the GCL, which decreases to just under 12 seconds in 2040. The most significant delays would be at the Mullica Hill Road (US 322) grade crossing in Glassboro, which would operate at LOS E with approximately 72.5 seconds of delay per vehicle in the PM peak hour of the 2040 future with the GCL. This delay is largely due to a high volume of traffic leaving Rowan University. Queues over one-quarter mile could result at both crossings.

Impacts at grade crossings may be mitigated through several potential countermeasures. To a small degree, adaptations in driver behavior may reduce delay if drivers seek alternative routes, such as those in Woodbury, where nearby parallel routes feature grade separation. The analysis of anticipated impacts also conservatively estimates train schedules with no overlapping northbound and southbound movements. Where the GCL movements coincide, roadway blockage time may be overestimated by this analysis. At locations where queuing is expected to impact nearby intersections, potential mitigation measures that could reduce delays at impacted at-grade crossings include: installing "Do Not Block the Box" signing and pavement markings to encourage motorists to keep intersections clear; and physical roadway improvements where extensive queueing and delays are expected, such as US 322 near Bowe Boulevard. Other grade crossings should be coordinated with adjacent signals to optimize traffic flow.

Table 18: Traffic Impacts at Grade Crossings 2025 Build

Roadway Name Closest Station	AM Peak Hour				PM Peak Hour			
	Volume	Delay (sec)	Max Queue (ft)	LOS	Volume	Delay (sec)	Max Queue (ft)	LOS
Market St Gloucester City	182	6.73	83	A	241	6.42	122	A
Olive St Crown Point Road	219	6.35	110	A	241	6.46	121	A
Cooper St Woodbury	851	20.27	1,217	C	714	16.75	538	B
E. Barber Ave Woodbury	200	6.67	88	A	311	6.44	104	A
Elm Ave Woodbury	361	7.50	177	A	442	7.03	171	A
Maple St Wenonah	359	6.48	182	A	350	6.98	202	A
Mantua Ave Wenonah	395	7.38	293	A	396	7.32	165	A
Center St Mantua	460	6.54	207	A	534	6.50	201	A
Lambs Road Mantua - Pitman	314	7.48	150	A	377	6.71	191	A
Pitman Ave Pitman	72	10.13	56	B	146	10.73	103	B
S. Broadway Pitman	273	7.09	144	A	440	6.13	241	A
Carpenter St Glassboro	577	9.23	530	A	600	8.86	481	A
Bowe Blvd Glassboro	643	11.96	749	B	622	10.78	502	B
Mullica Hill Rd Glassboro	426	18.04	493	B	522	43.97	925	D
Ellis Street Glassboro	226	6.67	112	A	282	6.28	134	A
South Main Street Glassboro	332	6.99	165	A	361	7.06	128	A

Source: GCL Project Team Grade Crossing Analysis, 2018

Table 19: Traffic Impacts at Grade Crossings with the GCL 2040

Roadway Name Closest Station	AM Peak Hour				PM Peak Hour			
	Volume	Delay (sec)	Max Queue (ft)	LOS	Volume	Delay (sec)	Max Queue (ft)	LOS
Market St Gloucester City	185	6.74	85	A	244	6.44	124	A
Olive St Crown Point Road	225	6.37	114	A	248	6.48	125	A
Cooper St Woodbury	867	20.64	1,270	C	727	16.99	556	B
E. Barber Ave Woodbury	205	6.69	90	A	318	6.47	107	A
Elm Ave Woodbury	370	7.55	183	A	452	7.08	175	A
Maple St Wenonah	383	6.55	198	A	371	7.08	219	A
Mantua Ave Wenonah	435	7.66	341	A	433	7.53	185	A
Center St Mantua	491	6.71	227	A	566	6.68	218	A
Lambs Road Mantua - Pitman	334	7.59	162	A	393	6.80	202	A
Pitman Ave Pitman	77	10.16	60	B	154	10.78	109	B
S. Broadway Pitman	285	7.16	152	A	456	6.21	253	A
Carpenter St Glassboro	621	9.79	616	A	639	9.30	544	A
Bowe Blvd Glassboro	716	18.40	1,357	B	685	11.84	629	B
Mullica Hill Rd Glassboro	475	25.52	754	C	574	72.47	1,798	**E**
Ellis Street Glassboro	251	6.76	128	A	311	6.41	151	A
South Main Street Glassboro	360	7.14	183	A	390	7.23	143	A

Source: GCL Project Team Grade Crossing Analysis, 2018

11 AFFECTED ENVIRONMENT – GENERAL IMPACTS

11.1 Roadway Impacts

Anticipated direct impacts to roadways as a result of the proposed GCL vary by type of facility. The GCL traffic analysis anticipates that most GCL project-related impacts would be localized on the streets, at-grade crossings, and selected signalized intersections adjacent to or in the immediate proximity of the proposed GCL. A more detailed description of local impacts and mitigations can be found in Section 12, "Local Station Area Roadway Impacts and Proposed Mitigations."

11.1.1 Highways

Major roadways that parallel the GCL, such as I-295, I-676, and NJ 55, would see reductions in traffic volumes based on projections by DVRPC's Glassboro-Camden Line Regional Model and the GCL Project Team. VMT would be reduced by approximately two percent in both the AM and PM peak hours in build-years 2025 and 2040. Reductions in overall VMT traveled can be seen in Appendix 5-A, "DVRPC and STOPS Model Information."

11.1.2 Local Streets

Many of the impacts to the highway and street networks are summarized in Sections 9.1, "Intersection Analysis (No-Action condition)," and 10.1, "Intersection Analysis (with the Proposed GCL)," of this report, where operational models estimate LOS. Impacts to local streets near the GCL include reduction of lanes widths, slight relocation of roadways, and full closures of one-way streets affecting local circulation patterns. Street circulation patterns are most-heavily affected in Gloucester City, which is discussed in Section 12.2, "Gloucester City."

11.1.3 Grade Crossings

As discussed throughout this report, at-grade crossings could potentially have significant impacts on the roadway network adjacent to the GCL. In the portion of the GCL alignment that assumes the construction of additional rail trackage, the right-of-way width will expand, resulting in a wider roadway at-grade crossing. In many cases, this would result in the relocation of existing gates and flashers. At some locations, the existing gates and flashers are outdated and will need to be upgraded or replaced.

11.1.4 Bus-GCL Transfers

Several of the bus routes shown in Table 2, "NJ TRANSIT Bus Service Average Headways (Minutes)," are proposed to include new stops at or close to proposed GCL stations. As a result, transfers are expected to occur. A meeting occurred between STV and NJ TRANSIT on January 10, 2018, to discuss the proposed transfers between existing bus routes and future GCL stations. Table 20, "Bus Route Transfers at Proposed GCL Stations," shows the proposed GCL stations that are planned to provide transfer options and the bus routes that would service them. All transfers are anticipated to be mid-route for each respective bus route, per the terminus points for each route shown in Table 2, "NJ TRANSIT Bus Service Average Headways (Minutes),". The only potential exception is the transfer between bus route 463 and the GCL

Red Bank Avenue station. Bus route 463 has a western terminus at the intersection of Red Bank Avenue at Broad Street in Woodbury; the proposed GCL Red Bank Avenue station would be located adjacent to the intersection of Red Bank Avenue and Washington Avenue, approximately 0.20 miles to the east of Broad Street. It is projected that approximately 2,700 transfers will occur to/from GCL by 2040.

Table 20: Bus Route Transfers at Proposed GCL Stations

Station	Connecting Buses
South Camden	450, 453
Gloucester City	401, 402, 408, 410, 412, 457
Crown Point Road	401, 402, 410, 412
Red Bank Ave	401, 402, 410, 412, 455, 463
Woodbury	455
Pitman	313, 408, 412
Rowan	313, 412
Glassboro	313, 408, 412

Source: GCL Project Team Grade Crossing Analysis, 2018

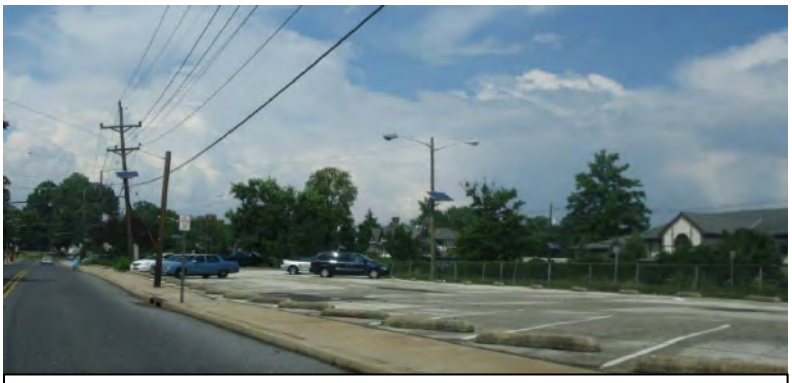
11.1.5 Signalized Intersections

There are signalized intersections adjacent to the proposed GCL alignment in numerous locations (particularly in Gloucester City). 12 of the intersections chosen for the at-grade crossing analysis – see Table 9, "Grade Crossing Inventory and Screening"– are signalized and adjacent to the alignment. Design standards and regulations may require that these signalized intersections be coordinated with GCL light rail track signal equipment. In selected locations, the GCL signal pre-emption priority may be given to the GCL light rail vehicles to ensure smooth and continuous train operations.

11.2 Parking

11.2.1 GCL Parking Demand and Mitigations

Demand for new parking was developed using results of the STOPS Model. The model considered both unconstrained and constrained parking scenarios in order to estimate boardings and alightings by mode at each station. Proposed parking facilities were sized by using the number of passenger vehicle trips at each station. In some locations, existing parking facilities would be modified or new parking facilities constructed in conjunction with potential developments.



Existing Public Parking Facility, Woodbury, New Jersey

Construction of new parking facilities are tied closely to assumptions regarding local development and redevelopment around proposed station areas. For the purposes of this report, parking analyses are

limited to facilities that are expected to primarily serve GCL riders. Parking facilities are proposed at eight stations, resulting in approximately 2,685 new parking spaces being available in 2025 and 4,310 spaces in 2040. The type and size of proposed GCL parking facilities are shown in Table 21, "Proposed GCL Parking Facilities." Parking facilities identified as "GCL" will be constructed for the GCL Project. Facilities identified as "Shared" are planned as part of municipal redevelopment master plans. Peak-hour trips generated by each station have been estimated from ridership data generated by the STOPS Model.

The results of the parking analysis have been incorporated into the traffic analysis results in Section 10, "Future Year with the GCL Summary," for the 2025 opening-day and 2040 design-year conditions. This analysis accounts for vehicle trips generated by proposed GCL facilities. New developments that propose shared parking facilities would require additional traffic analyses to accommodate trips generated by separate development efforts. Additional parking information can be found in the Transit Technical Memo and Operations Plan.

Table 21: Proposed GCL Parking Facilities

Station	Facility Type	2025 Parking	2040 Parking	Exclusive (GCL) vs. Shared
South Camden	Surface	100	100	GCL
Gloucester City	Surface	160	160	GCL
Crown Point Road	Surface	325	325	GCL
Red Bank Avenue	Surface	200	500	Shared
Woodbury	Garage	600	1,200	Shared
Woodbury Heights	Surface	25	25	GCL
Mantua Blvd	Surface	300	300	GCL
Mantua-Pitman	Garage	475	1,200	GCL
Glassboro	Garage	500	500	Shared
	Total	**2,685**	**4,310**	

Source: GCL Project Team Station Area Planning, 2018

11.2.2 Parking Impacts

The remainder of this parking analysis focuses on impacts to existing parking facilities within the proposed Limits of Disturbance (LOD) provided in 2019. Property surveys and detailed engineering drawings should be prepared in order to determine a more accurate parking impact assessment. This preliminary determination indicates that approximately 376 existing public and private parking spaces would be displaced by the proposed GCL, as described in Section 11.2.3, "Public Parking," and Section 11.2.4, "Private Parking." With the proposed 2,685 spaces and 4,310 spaces in years 2025 and 2040, respectively, this yields a net parking increase of approximately 2,309 spaces and 3,934 spaces in the project area. The parking impacts were not divided into Americans with Disabilities Act (ADA) accessible and non-ADA accessible spaces, but this should also be considered during future development phases of the project.

11.2.3 Public Parking

Public parking is an important accommodation because it supports surrounding businesses and economic activity and provides access to public facilities and services. Public parking capacity along the GCL corridor was estimated using Google Earth. Impacts to parking were assessed based on the 2019 LOD, overlaying

the LOD and aerial imagery to quantify the number of parking spaces affected. The estimated number and location of public parking spaces affected is shown in Table 22, "Public Parking Impacts (Approximate)." In total, approximately 233 public parking spaces are anticipated to be lost.

Walter Rand Transportation Center

The proposed GCL would result in an impact to public parking at the Walter Rand Transportation Center (WRTC) in order to accommodate station and pedestrian infrastructure, resulting in the removal of approximately 40 parking spaces. The parking lot located at S. 5th Street and Federal Street is currently owned by the City of Camden and serves the Walter Rand Transportation Center. There are no other parking facilities proposed at this station. The ridership model estimates that there would not be any daily boardings from car trips at the Walter Rand Transportation Center. While impacts to public parking have been minimized to the extent practicable, it is anticipated that the proposed GCL could result in the displacement of parking for up to 40 spaces at WRTC. Field observations indicate that adequate parking would be available at the station. Parking surveys would be conducted as part of preliminary engineering, and mitigation (e.g. creation of new parking spaces) would be developed as necessary.

Woodbury

The proposed GCL would result in impacts to public parking at the proposed Woodbury Station in order to accommodate station and pedestrian infrastructure, resulting in the loss of a total of approximately 125 spaces. The station design would impact a public surface lot adjacent to Green Avenue, impacting approximately 95 parking spaces, and a public surface lot adjacent to Railroad Avenue, impacting 30 spaces. Also, the ridership model estimates that there would be approximately 356 daily boardings from car trips at the proposed Woodbury station. Conceptual design of the Woodbury station was developed in consultation with the Mayor and select city officials and staff from the City of Woodbury and located according to the City's adopted redevelopment plans. Impacts to parking were minimized to the extent practicable. There are no parking facilities proposed at this station as a part of the proposed GCL, however it is anticipated that a public parking garage would be constructed resulting in 600 new spaces by 2025, and expanding to 1,200 spaces by 2040 as a part of municipal redevelopment plans. While the proposed GCL would result in the total removal of approximately 125 parking spaces and result in increased demand for parking, it is anticipated that there would be a total net gain of approximately 475 parking spaces by 2025, and 1,075 parking spaces by 2040. Therefore, no parking impacts are anticipated.

Wenonah

The proposed GCL would result in impacts to public parking at the proposed Wenonah station in order to accommodate station and pedestrian infrastructure, resulting in the loss of approximately 11 parking spaces. The ridership model estimates that there would not be any daily boardings from car trips at the Wenonah station. The station design would impact a portion of the surface lot adjacent to East Ave which currently serves as a general purpose public lot. The conceptual design for the proposed Wenonah station was developed in consultation with the Mayor and select borough officials and staff from the Borough of Wenonah and minimized impacts to parking to the extent practicable. There are no parking facilities

proposed as part of the proposed GCL at this station. . Field observations indicate that adequate parking would be available at the station. Parking surveys would be conducted as part of preliminary engineering, and mitigation (e.g. creation of new parking spaces) would be developed as necessary.

Pitman

The proposed GCL would result in impacts to public parking in the vicinity of the proposed Pitman station. Approximately 57 existing head in parking spaces currently used as general purpose public parking would be replaced by approximately 67 angled parking spaces as a part of the proposed GCL resulting in a net increase of approximately 10 public parking spaces. Conceptual design of the Pitman station was developed in consultation with the Mayor and select borough officials and staff from the Borough of Pitman and impacts to parking were minimized to the extent practicable. The ridership model estimates that there would not be any daily boardings from car trips at the Pitman station. Given the ridership model estimates and the reconfiguration of the existing parking lot, the proposed GCL is not anticipated to impact public parking at this station.

Table 22: Public Parking Impacts (Approximate)

Nearest Station	Location	Type	Loss (spaces)
Walter Rand	City of Camden Lot 50 – S. 5th St. at Federal St	pull-in	40
Woodbury	Surface lots adjacent to Green Ave and Laurel St	pull-in	95
	Surface lot adjacent to Railroad Ave	angle	30
Wenonah	Surface lot adjacent to East Ave	pull-in	11
Pitman	Parking along W. Jersey Ave	pull-in	57
	Total		**233**

Source: GCL Team Analysis, 2018

11.2.4 Private Parking

Impacts on private parking facilities were also considered. The alignment attempts to minimize impacts to private property, including private parking. The estimated number and location of private parking spaces affected are shown in Table 23, “Private Parking Impacts (Approximate).” In total, approximately 132 private parking spaces are anticipated to be lost. In locations where no new parking is provided, municipalities may be able to control parking demand and behavior through parking charges, regulation, permitting, and enforcement. Such analysis is not included in this report.

Cooper Hospital

The proposed GCL would result in impacts to private parking in the vicinity of the proposed Cooper Hospital Station. The proposed elevated viaduct structure would remove approximately 20 spaces from a surface lot currently used for the Cooper Health Sciences Campus. The conceptual design for this structure was developed in consultation with board of directors of Cooper Hospital, and the impact to parking facilities at this location was minimized to the extent practicable. Field observations indicate that adequate parking would be available at the station. Parking surveys would be conducted as part of preliminary engineering, and mitigation (e.g. creation of new parking spaces) would be developed as necessary.

Crown Point Road

The proposed GCL would result in an impact to private parking in the vicinity of the proposed Crown Point Road station, resulting in a total loss of approximately 26 parking spaces. As currently contemplated, the GCL would remove 18 spaces on a property adjacent an apartment complex at 300 Broadway, as well as 8 spaces located at 368 Broadway serving a social services organization. As part of the proposed GCL, the Crown Point Road station would introduce approximately 325 parking spaces for a total net increase of approximately 299 parking spaces. The conceptual design for the station has been developed in consultation with the Mayor and select borough officials, and staff from the Borough of Westville, and the potential impacts to existing parking at the station have been minimized to the extent practicable. The ridership model estimates that there would be approximately 169 daily boardings from car trips at the Crown Point Road station, resulting in approximately 52 percent utilization of proposed parking facilities. Based on this estimated demand for parking, there would be no displacement of parking as a result of the proposed GCL at this location.

Woodbury Heights

The proposed GCL would affect private parking approximately half a mile north of the proposed Woodbury Heights station resulting in the removal of approximately 10 existing parking spaces. This i would affect a portion of two surface parking lots currently used for an animal hospital and a car dealership. The conceptual design of the GCL alignment through Woodbury Heights was developed in consultation with the Mayor and select borough officials and staff from the Borough of Woodbury Heights, and the impacts to existing parking have been minimized to the extent practicable. No other parking facilities are proposed in the immediate vicinity of the proposed station and therefore, it is anticipated that proposed GCL could result in the displacement of parking for up to 10 drivers at this location. Field observations indicate that adequate parking would be available at the station. Parking surveys would be conducted as part of preliminary engineering, and mitigation (e.g. creation of new parking spaces) would be developed as necessary.

Pitman

The proposed GCL would result in an impact to private parking in the vicinity of the proposed Pitman station to accommodate station and pedestrian infrastructure, resulting in the removal of approximately 50 existing parking spaces. This lot, owned by Conrail, is currently vacant and is used for parking and storage of cars. The design of the proposed Pitman station has been developed in consultation with the Mayor and select borough officials and staff from the Borough of Pitman Borough, and the impacts to existing parking have been minimized to the extent practicable. The proposed Pitman station as currently designed includes a loading area along Commerce Ave, however no parking facilities are proposed at this location as a part of the GCL. Based on the removal of existing parking, it is anticipated that the proposed GCL could result in the displacement of parking for up to 50 drivers at this location. Field observations indicate that adequate parking would be available at the station. Parking surveys would be conducted as part of preliminary engineering, and mitigation (e.g. creation of new parking spaces) would be developed as necessary. Rowan University

The proposed GCL would result in an impact to parking at the proposed Rowan University station to accommodate station infrastructure, resulting in the removal of three parking spaces in an existing Rowan University parking lot[13]. The conceptual design of the Rowan University station was developed in consultation with the president and appointed staff of Rowan University and impacts to existing parking have been minimized to the extent practicable. There is no parking proposed at this station. The ridership model estimates that there would not be any daily boardings from car trips at the Rowan University station. Based on this estimated demand for parking and removal of existing parking, it is anticipated that the proposed GCL could result in the displacement of parking for up to three drivers at this location. Field observations indicate that adequate parking would be available at the station to accommodate the estimated demand for three drivers. Parking surveys would be conducted as part of preliminary engineering, and mitigation (e.g. creation of new parking spaces) would be developed as necessary.

Glassboro

The proposed GCL would result in impacts to parking in the vicinity of the proposed Glassboro station, resulting in the reduction of 23 existing parking spaces. Approximately 20 parking spaces would be removed at 137 S. Main Street currently serving the Bethlehem United Christ Church to accommodate the GCL Alignment, and approximately three spaces would be removed at 102 S. Main Street/38 S. Main Street currently serving housing to accommodate station and pedestrian infrastructure. The conceptual design of the GCL alignment through Glassboro and the proposed Glassboro station were developed in consultation with the Mayor and select borough officials and staff from the Borough of Glassboro and impacts to parking have been minimized to the extent practicable. While not a part of the proposed GCL per se, it is anticipated that a 500-space parking garage would be constructed in the vicinity of the Glassboro station as a part of municipal redevelopment plans. While the proposed GCL would result

[13] Since parking analyses were conducted, a portion of the impacted lot has been converted into a school building, therefore there may not be an impact to parking at this location. The impact to three parking spaces identified by this analysis is presented here as a worst case scenario with regards to parking impacts at this location.

directly in a total loss of 23 parking spaces, it is anticipated that there would be a total net increase in parking of approximately 477 spaces at the proposed Glassboro station. In addition, the ridership model estimates that there would be approximately 284 daily boardings from car trips at the Glassboro station, resulting in 57 percent utilization of proposed parking facilities including the proposed parking garage. Therefore, no parking impacts are anticipated at this location.

Table 23: Private Parking Impacts (Approximate)

Nearest Station	Location	Type	Loss (spaces)
Cooper Hospital	Haddon Ave at Newton Ave	pull-in and parallel	20
Crown Point Road	Parking adjacent to vacant properties – between 368 Broadway and 300 Broadway	pull-in and angle	18
	368 Broadway	pull-in	8
Woodbury Heights	207 and 241 Glassboro Rd	pull-in	10
Pitman	Vacant surface lot on Commerce Ave	pull-in and storage	50
Rowan University	Rowan University Lot A	pull-in	3
Glassboro	137 S. Main St	pull-in	20
	102 and 38 S. Main St	pull-in	3
	Totals		**132**

Source: GCL Team Analysis, 2018

11.3 Pedestrian and Bicycle Access

Because the corridor traverses areas of varying environments, including urban, suburban, and rural, bicycle and pedestrian access to station areas is often consistent with the degree of cycling and pedestrian activity typically present in the surrounding context. The GCL Project Team examined existing bicycle and pedestrian connections to the proposed station areas to understand where non-motorized traffic is presently accommodated and where unmet demand may exist.

Pedestrian Cross Walk, Mantua Township, New Jersey

11.3.1 Bicycle Facilities

Study area roadways within ¼ miles of each proposed station area were analyzed using the Bicycle Level of Traffic Stress (LTS) method.[14] This metric measures a cyclist's potential comfort level given current roadway conditions. Different cyclists have different tolerances for stress resulting from traffic volumes,

[14] http://www.northeastern.edu/peter.furth/criteria-for-level-of-traffic-stress/; http://transweb.sjsu.edu/project/1005.html

prevailing speeds, and proximity of automobile traffic (shoulder/bike lane/path availability, width, and offset). The LTS metric is based on the Dutch concept of low-stress bicycle facilities. In general, lower-stress facilities have increased separation between cyclists and vehicular traffic and/or have lower vehicular speeds and traffic volumes. Higher-stress environments generally involve cyclists riding in close proximity to traffic, along multi-lane roadways, and adjacent to higher-speed and/or higher-volume vehicular traffic – conditions that are typically undesirable for the majority of cyclists.

Based on an analysis of the criteria, the LTS for a given roadway segment is classified into one of four categories, as described below.

- **LTS 1 (Most Users):** Suitable for almost all cyclists, including children. On LTS 1 links, cyclists are either physically separated from traffic or on a shared street with low speed differential.
- **LTS 2 (Most Adults):** Suitable for most adults but demands more attention than might be expected from children. Similar cross-sections to LTS 1 but with more likeliness for interaction with motor vehicles.
- **LTS 3 (Enthusiastic Riders):** Welcoming level for many people currently riding bikes in the country. Cyclists either ride in an exclusive on-street lane next to moderate-speed vehicular traffic or on shared lanes on non-multi-lane streets.
- **LTS 4 (Experienced Riders):** Suitable only for the most experienced riders or not suitable for any riders. Roadway is characterized by high vehicular travel speeds, multiple vehicular travel lanes, and/or a lack of dedicated bicycle facilities.

The LTS was evaluated for each roadway listed in Table 24, "Roadway Bicycle LTS," in the study area. The study team assessed major roadways and key minor roadways in the study area using a variety of data sources, including GIS data files, NJDOT Straight Line Diagrams, and traffic data from NJDOT. The results of the LTS analysis area listed are shown in Table 24, "Roadway Bicycle LTS,".

Table 24: Roadway Bicycle LTS

Station	Roadway	Route #	Limits from	Limits to	Segment LTS
WRTC	Federal St	CR 537	S. 3rd St	Haddon Ave	1
	Broadway	CR 551	Cooper St	Washington St	1
	MLK Blvd	-	Federal St	Haddon Ave	2
	S. 5th St	-	MLK Blvd	Washington St	1
	West St/N. 5th St	-	Cooper St	Federal St	1
Cooper Hospital	Newton Ave	-	MLK Blvd	Pine St	1
	S. 9th St	-	Haddon Ave	Cherry St	1
	Haddon Ave	-	Cooper Plaza	Spruce St	2
South Camden	Carl Miller Blvd	-	Broadway (CR 551)	Phillips St	2
	Ferry Ave	-	Broadway (CR 551)	S. 8th Ave	2
Gloucester City	W. Railroad Ave	-	Chambers Ave	Bergen St	1
	Bergen St	-	N. Sussex St	W. Railroad Ave	1
	Market St	-	Broadway (CR 551)	N. Johnson Blvd	1

	Cumberland St	-	Broadway (CR 551)	N. Johnson Blvd	1
	Champion Rd	-	Bergen St	Broadway (CR 551)	1
	Monmouth St	-	Atlantic St	S. Johnson Blvd	1
	S. Railroad Ave	-	Monmouth St	Cumberland St	1
Crown Point Rd	Broadway	CR 551	Delsea Dr (NJ 47)	Oak Ave	3
Red Bank Ave	Red Bank Ave	CR 644	N. Broad St (NJ 45)	Roosevelt Ave	2
Woodbury	Green Ave	-	Cooper St (CR 534)	E. Barber Ave	1
	Railroad Ave	-	Cooper St (CR 534)	E. Barber Ave	1
	Laurel St	-	Hunter St	Cooper St (CR 534)	1
	Cooper St	CR 534	S. Broad St (NJ 45)	Woodland Ave	2
Woodbury Heights	W. Jersey Ave	-	Maple Ave	Beech Ave	1
	Elm Ave	-	4th St	W. Jersey Ave	1
	Central Ave	-	4th St	W. Jersey Ave	1
Wenonah	N. West Ave	-	W. Buttonwood Ave	W. Mantua Ave	1
	N. East Ave	-	E. Elm St	W. Mantua Ave	1
	E. Mantua Ave	-	N. East Ave	S. Princeton Ave	2
	W. Mantua Ave	-	N. Jefferson Ave	N. West Ave	2
	E. Poplar St	-	N. East Ave	N. Stockton Ave	1
	W. Poplar St	-	N. Lincoln Ave	N. West Ave	1
Mantua Blvd	Mantua Blvd	CR 676	Florida Ave	Cape May Ave	4

Table 24: Roadway Bicycle LTS (continued)

Station	Roadway	Route #	Limits from	Limits to	Segment LTS
Sewell	Center St	CR 603	New St	Grandview Dr	4
	E. Atlantic Ave	-	Salem Ave	Warren Ave	1
	W. Atlantic Ave	-	Salem Ave	Warren Ave	1
Mantua - Pitman	Lambs Rd	CR 635	Woodbury Glassboro Rd (CR 553)	Rambo Rd	4
Pitman	Pitman Ave	-	S. Broadway	S. Fernwood Ave	2
	E. Holly Ave	CR 624	N. Broadway	S. Fernwood Ave	2
	W. Holly Ave	CR 624	S. Oak Ave	N. Broadway	2
	Commerce Ave	-	E. Holly Ave (CR 624)	Pitman Ave	2
	Simpson Ave	-	E. Holly Ave (CR 624)	Pitman Ave	1
Rowan Univ.	Mullica Hill Rd	US 322	Bowe Blvd	Memorial Cir	3
Glassboro	Academy St S.	-	High St E.	Grove St	2
	S. Main St	CR 553	New St E.	Union St	2

Source: GCL Project Team Bicycle Facility Analysis, 2018

While most roadways adjacent to or approaching proposed station areas are either LTS 1 and 2, some corridors result in LTS 3 or 4. Each roadway that is LTS 3 or 4 is detailed below, but most locations with high LTS values can be attributed to higher speed limits or traffic volumes.

- Broadway (CR 551) from Delsea Drive (NJ 47) to Oak Avenue near the Crown Point Road station area is LTS 3 due to the posted speed limit (30 mph), presence of commercial land uses, and an AADT of 5436 (2009 data).

- Mantua Boulevard (CR 676) from Florida Avenue to Cape May Avenue near the Mantua Boulevard station area is LTS 4 due to the posted speed limit (40 mph).
- Center Street (CR 603) from New Street to Grandview Drive near the Sewell Station area is LTS 4 due to the posted speed limit (35 mph).
- Lambs Road (CR 635) from Woodbury Glassboro Road (CR 553) to Rambo Road near the Mantua – Pitman Station area is LTS 4 due to the posted speed limit (40 mph).
- US 322 from Bowe Boulevard to Memorial Circle near the Rowan University Station area is LTS 3 due to the posted speed limit (30 mph).

The GCL project strives to encourage the use of non-motorized travel options to access the proposed stations. Existing and proposed multi-use trail investments within the study area include the following (per DVRPC[15]):

- MLK Boulevard Waterfront Connection – Existing on-road bicycle lanes along MLK Boulevard between Riverside Drive and Haddon Avenue. This facility is located nearly adjacent to the proposed WRTC station.
- Cooper River Trail South (Pine Street Bike Lanes) – Existing on-road bicycle lanes along Pine Street east of Haddon Avenue in the vicinity of the proposed Cooper Hospital Station. A proposed connection to this facility exists along Haddon Avenue and Mount Ephraim Avenue (Camden Greenways) as well.
- NJ 45 Bicycle Lanes – Existing reconfiguration of NJ 45 in Woodbury, employing a road diet to include bicycle lanes approaching the intersection with Red Bank Avenue and extending south through downtown Woodbury. This facility is located near the proposed Woodbury and Red Bank Avenue stations.
- Camden/Gloucester County Light Rail with Trail – Planned regional off-road trail adjacent to the GCL alignment from Camden south to Glassboro.
- Dinosaur Trail – An initial segment of this trail is currently in the "pipeline" (active planning/design), extending north from the vicinity of the proposed Rowan University Station north/northwest to NJ 55 near the Pitman Golf Course. Additional phases of this project include connections north to Blackwood.
- Monroe Township Bicycle Path – Existing off-road path between Delsea Drive (NJ 47) and Blue Bell Road. An extension of this existing facility is proposed west from Delsea Drive into Glassboro, terminating along Sewell Street at the Bridgeton Secondary near the proposed Glassboro Maintenance Facility.
- Bridgeton Secondary – Off-road trail currently in planning – provides a direct link into Glassboro, connecting to the proposed Camden/Gloucester County Light Rail with Trail

[15] https://www.dvrpc.org/webmaps/thecircuit/

11.3.2 Pedestrian Facilities

The GCL Project Team evaluated the accommodations for pedestrians at each proposed station. The evaluation included a review of presence of sidewalks, crosswalks, and pedestrian signals along roadways and at intersections approaching or in the vicinity of station areas. The facility inventory also included an identification of locations where specific needs were apparent to improve accessibility and safety for pedestrians traveling to/from the station areas. The results of the pedestrian facility inventory are detailed in Table 25, “Pedestrian Facility Summary.”

Table 25: Pedestrian Facility Summary

Station	Route	Sidewalk	Identified Needs
WRTC	Federal St	Y	
	Broadway	Y	
	MLK Blvd	Y	Improve crosswalk striping/visibility at 5th St.
	S. 5th St	Y	
	West St/N. 5th St	Y	
Cooper Hospital	Newton Ave	Y	
	S. 9th St	Y	Mark new crosswalk on north leg at Line St with traffic calming measures. Re-install marked crosswalk on west leg of intersection at Trenton Ave.
	Haddon Ave	Y	
South Camden	Carl Miller Blvd	Y	
	Ferry Ave	Y	
Gloucester City	W. Railroad Ave	Y	
	S. Fillmore St	Y	
	Market St	Y	
	Cumberland St	Y	
	Champion Rd	Y	
	Monmouth St	Y	
	S. Railroad Ave	Y	
Crown Point Road	Broadway	Y	Install new marked crossing at Willow Street with traffic calming measures. Construct traffic calming measures at existing crossings at Birch Ave and at Woodbine Ave.
Red Bank Avenue	Red Bank Ave	Y	
Woodbury	Green Ave	Y	
	Railroad Ave	Y	
	Laurel St	Y	
	Cooper St	Y	
Woodbury Heights	W. Jersey Ave	Y	Install new traffic calming measures at Central Ave.
	Elm Ave	Y	
	Central Ave	Y	
Wenonah	N. West Ave	Y (SB only)	
	N. East Ave	Y (NB only)	
	E. Mantua Ave	Y	
	W. Mantua Ave	Y	
	E. Poplar St	Y	
	W. Poplar St	Y	
Mantua Boulevard	Mantua Blvd	N	

Table 25: Pedestrian Facility Summary (continued)

Station	Route	Sidewalk	Identified Needs
Sewell	Center St	Y	Construct traffic calming measures at existing crossings. Reduce curb radii where possible. Construct new sidewalk on north side of road between W. Atlantic Ave and existing sidewalk west of intersection. Install new advance and at-crossing pedestrian warning signs in both directions.
	E. Atlantic Ave	N	Construct new sidewalk on east side of road to the north of Center St to connect to existing sidewalk at Essex Ave. Construct new sidewalk to connect existing termini north and south of Sussex Ave.
	W. Atlantic Ave	N	Construct new sidewalk north of Center St along west side of road to connect to existing sidewalk, and extend sidewalk to Cumberland Avenue.
Mantua – Pitman	Lambs Rd	N	
Pitman	Pitman Ave	Y	
	E. Holly Ave	Y	
	W. Holly Ave	Y	
	Commerce Ave	Y	
	Simpson Ave	Y	
Rowan University	US 322	Y (WB only)	Install new crosswalk on west leg of intersection at Girard Ave N. with traffic calming measures. Install marked crossing with traffic calming measures at Rowan University Townhomes (approx. 380' east of grade crossing).
Glassboro	Academy St S.	Y	
	S. Main St	Y	Install marked crossing at Wilmer St with traffic calming measures.

Source: GCL Project Team Pedestrian Facility Analysis, 2018

Most roadways and intersections adjacent to or approaching station areas have appropriate pedestrian accommodations. Except for Sewell Station, "walk-up" stations generally provide some level of pedestrian accommodation or can be improved through the installation of sidewalk, striping of crosswalks (with associated traffic control devices), or installation of pedestrian signals where necessary.

11.4 Rail Freight Operations

The proposed GCL alignment primarily follows the existing Conrail freight right-of-way between Camden and Glassboro. Between Morgan Boulevard in Camden (where the GCL aerial alignment would merge with the Conrail right-of-way) and Woodbury, GCL and Conrail trains would operate in parallel to each other on dedicated tracks. South of Woodbury, GCL trains would operate during the day and evening hours, with Conrail trains operating in the late evening and overnight. One new GCL track would be constructed between Camden and Woodbury, with a passing siding (two GCL tracks) constructed in Westville; one new track would be constructed south of Woodbury.

Under this configuration, existing freight operations would be not or minimally affected; the primary impact would be that Conrail trains operating south of Woodbury (no more than one per day) would need to shift schedules to operate in the late evening or overnight only. The GCL project would maintain existing Conrail capacity between Camden and would preserve space for the future construction of a second Conrail track.

12 LOCAL STATION AREA ROADWAY IMPACTS AND PROPOSED MITIGATIONS

Direct impacts from the proposed GCL on the roadway network can be categorized as follows:

- Impacts based on the need for a physical closure or permanent blockage of roadways or streets due to location of GCL alignment
- Impacts based on deteriorating LOS at intersections adjacent to the GCL alignment, attributable to increased traffic volumes due to dedicated GCL parking facilities (the pattern of drive-access trips is shown in Appendix 5-E, "Synchro Results")
- Impacts based on increased train volume from GCL operations at existing at-grade crossings where effective capacity of roadways is reduced and queuing and delays would result

Each of these potential impacts were analyzed using different methodologies described in Section 7, "Traffic Analysis Methodology," of this report (e.g., LOS degrades from B or better to D or worse, LOS degrades from D to E, LOS degrades from E to F, or delay increases significantly while already at LOS F). Results of various traffic analyses under Existing, future No-Action, and future with the GCL conditions were presented in Section 8, Existing Conditions Summary," Section 9, "Future Year No-Action Condition Summary," and Section 10, "Future Year With the GCL Summary," respectively. This section focuses on the comparison of the results of the No-Action and GCL scenarios in order to identify impacts. All roadway impacts are shown in Table 26, "Roadway Impacts and Proposed Mitigations," along with proposed mitigations. Traffic analyses using these mitigations were performed, and a discussion of resulting MOEs are presented in Section 12.10, "Results of Mitigation."

Table 26: Roadway Impacts and Proposed Mitigations

	Location	GCL Roadway Impact (2040 No-Action vs. 2040 Build)	Peak Hour Impact	Proposed Mitigation
1.	Haddon Avenue at MLK Boulevard, Camden	Southbound left-turn movement drops from LOS D to LOS E.	AM	• Create two eastbound left-turn lanes. • Allow southbound right turn during the eastbound left turn. • Adjust GCL preemption dwelling phase: EB/WB thru→WB LT/thru, followed by EB/WB thru • Maintain background cycle throughout GCL preemption. • Adjust signal timing. • Allow westbound right turn after pedestrian phase. • Add westbound channelized right turn to allow right during NB/SB phase. • Restripe the northbound approach for continuous exclusive right-turn lane. • Remove westbound bike lane.
		Southbound right-turn movement drops from LOS C to LOS E.	AM	
		Westbound left-turn movement drops from LOS C to LOS F.	AM	
		Northbound left-turn movement drops from LOS D to LOS F.	AM	
		Northbound through movement drops from LOS D to LOS E.	AM	
		Eastbound left-turn movement drops from LOS D to LOS F.	PM	
		Southbound left-turn movement drops from LOS D to LOS E.	PM	
		Southbound through movement drops from LOS D to LOS E.	PM	
		Southbound right-turn movement drops from LOS C to LOS E.	PM	
		Westbound left-turn movement drops from LOS C to LOS F.	PM	
		Westbound right-turn movement drops from LOS C to LOS E.	PM	
		Northbound left-turn movement drops from LOS D to LOS E.	PM	
		Northbound through movement drops from LOS D to LOS E.	PM	
2.	6th Street/ Garage at MLK Boulevard, Camden	Northbound right-turn movement drops from LOS C to LOS E.	AM	• Adjust cycle length. • Adjust the signal timing. • Adjust the westbound right-turn GCL preemption existing phase. • Provide exclusive westbound right-turn lane. • Maintain two westbound through lanes with exclusive left-turn lane. • Reconfigure the NB/SB pedestrian crosswalk to have a two-stage pedestrian phase, so westbound right turn is allowed during the northbound right turn and westbound left turn phase. • Remove westbound bike lane.
		Westbound left-turn movement drops from LOS C to LOS E.	AM	
		Westbound right-turn movement drops from LOS C to LOS E.	AM	
		Northbound right-turn movement drops from LOS D to LOS E.	PM	

Table 26: Roadway Impacts and Proposed Mitigations (continued)

	Location	GCL Roadway Impact (2040 No-Action vs. 2040 Build)	Peak Hour Impact	Proposed Mitigation
3.	Broadway at MLK Boulevard, Camden	Westbound right-turn movement drops from LOS C to LOS F.	AM	• Provide two dedicated westbound thru lanes. • Provide a dedicated right-turn lane for bus use only. • Channelize westbound right turn lane to allow westbound right turns during the NB/SB phase. • Remove east side NB/SB pedestrian crosswalk and pedestrian signal. • Remove westbound bike lane.
		Westbound right-turn movement drops from LOS C to LOS F.	PM	
4.	South Railroad Avenue, Gloucester City	Proposed Limit-of-Disturbance encroaches on roadway.	AM/ PM	Change two-way roadway operation to one-way travel northbound.
5.	Woodbine Avenue, Westville	Proposed alignment encroaches on roadway causing it to be narrowed from 24-feet to approximately 22-feet in width.	AM/ PM	No mitigation proposed
6.	Olive Street Grade Crossing, Westville	Propagating eastbound queue approaching crossing would extend through intersection at Olive Street/NJ 45	AM/ PM	Coordinate intersection traffic signal with grade crossing equipment.
7.	Green Avenue, Woodbury	Proposed alignment encroaches on one-way Green Avenue causing it to narrow from 17-feet to approximately 13-feet.	AM/ PM	No mitigation proposed
8.	E. Red Bank Avenue at N. Evergreen Avenue, Woodbury	Overall LOS drops from D to E.	PM	No mitigation proposed
9.	Mullica Hill Road (US 322) Grade Crossing, Glassboro	LOS E on the westbound approach	PM	Widen US 322 to be a three-lane roadway, with two lanes westbound and one lane eastbound.
10.	Bowe Boulevard Grade Crossing, Glassboro	Propagating northbound queue approaching crossing would extend through intersection at US 322/Bowe Boulevard	AM	Widen Bowe Boulevard to be a three-lane roadway, with two lanes northbound and one lane southbound.
11.	Zane Street, Glassboro	Proposed alignment would make this roadway a dead-end or cul-de-sac.	AM/ PM	No mitigation proposed

Table 26: Roadway Impacts and Proposed Mitigations (continued)

	Location	GCL Roadway Impact (2040 No-Action vs. 2040 Build)	Peak Hour Impact	Proposed Mitigation
12.	Wilmer Street at Main Street, Glassboro	Proposed new station access point will change a 3-legged intersection to 4-legged, resulting in new turning movements.	AM/ PM	No mitigation proposed

Source: GCL Team Traffic Analysis, 2018

The E. Red Bank Avenue/N. Evergreen Avenue intersection in Woodbury meets the threshold for significant impact because LOS drops from D to E during the PM peak. However, the overall intersection delay increase by approximately seven seconds, so mitigation beyond signal timing optimization is not justified at this intersection.

12.1 Walter Rand Transportation Center

The signalized intersections adjacent to the WRTC would be heavily affected by the increase in light rail transit (LRT) traffic. The traffic signals presently operate with pre-emption priority for the River LINE light rail transit service. The addition of 16 peak-hour LRT trips from the proposed GCL would result in extensive queuing and delay along MLK Boulevard without mitigation strategies.

Broadway at River LINE tracks, Camden, New Jersey

A redesign of the WRTC bus terminal is currently being studied by NJ TRANSIT. This future project, which is not part of the GCL, may impact bus traffic in the area, especially the bus driveway that crosses the River LINE tracks. As GCL design advances, coordination will continue with NJ TRANSIT to accommodate both projects, as appropriate. Candidate potential mitigation strategies for three key intersections along MLK Boulevard are included below.

12.1.1 5th Street at Federal Street

The proposed construction of a third track at the WRTC would have a physical impact on the intersection of 5th Street and Federal Street. Specifically, the eastbound right-turn movement would be a grade crossing in the proposed condition. Because this movement currently functions with a no-turn-on-red restriction, no significant changes to traffic operations or LOS are anticipated.

12.1.2 Haddon Avenue at MLK Boulevard

Presently, westbound traffic in the AM peak hour generates significant queuing, which is projected to increase with additional light rail transit movements. More specifically, additional light rail transit activity resulting from anticipated GCL operations would create expanded impacts to westbound drivers seeking to turn right onto Haddon Avenue from MLK Boulevard. The westbound left-turn movement from MLK Boulevard onto Haddon Avenue also operates with poor LOS presently, and the LOS is projected to degrade further with future traffic growth. Proposed mitigations could include the following:

- Increasing the effective green time for the westbound leading left-turn phase
- Abandoning background cycle length and coordination and instead allowing the pre-emption exit phases to vary between the southbound left-turn movement, northbound through movement, and eastbound left-turn movement
- Allowing the southbound right-turn movement as an overlap during the eastbound left-turn phase
- Restriping one eastbound through lane to provide a second left-turn lane
- Reassigning one northbound through lane as a northbound right-turn lane with channelization
- Restriping all northbound approach lanes from four 13-foot lanes to five 10.5-foot lanes in order to add a northbound right-turn lane with channelization
- Providing a westbound channelized right-turn lane, allowing this movement to process more vehicles during the northbound through phase
- Considering prohibition of the eastbound left-turn movement and detouring traffic via Washington Street, 7th Street, and Haddon Avenue

12.1.3 6th Street/Garage Access at MLK Boulevard

To accommodate a new bike lane along MLK Boulevard, the dedicated westbound right-turn lane – which had a dedicated signal phase – was converted to a shared through and right-turn lane. The right-turn signal phase still operates in this new configuration. This lane configuration is not typical, because a vehicle waiting to turn right when a train is passing has no protection from through traffic.

The proposed GCL is anticipated to cause blockages that are three times longer than the existing condition for westbound drivers turning right (during peak hour), causing the intersection to operate poorly. Proposed mitigations at this intersection include the following:

- Reconfiguring the pedestrian crosswalk to cross westbound MLK Blvd west of the garage entrance, thereby eliminating the conflict between westbound right turns and pedestrians
- Reconfiguring the pedestrian crosswalk to cross westbound MLK Blvd west of the garage entrance, thereby eliminating the conflict between westbound right turns and pedestrians
- Providing a dedicated westbound right-turn lane to access the garage. This would require removing a portion of the bike lane along westbound MLK Boulevard.

- Changing signal pre-emption to exit to the westbound left-turn/overlapping northbound right-turn phase
- Removing or restriping the bike lane as shared roadway space to provide a protected westbound right-turn lane
- Allowing the westbound right-turn movement to proceed during the northbound right-turn phase (except when pre-empted by light rail movements)
- Shortening the cycle length from 90 seconds to 60 seconds and allowing excess eastbound and westbound capacity to go to the westbound left-turn and northbound right-turn movements

12.1.4 Broadway at MLK Boulevard

Currently, the westbound right-turn movement functions poorly due to high volumes of buses and pedestrians, and conflicts with the River LINE. With the proposed GCL, the number of pedestrians and the number light rail trains would increase, resulting in further delays for the westbound right-turn movement. Potential mitigations at this intersection include the following:

- Removing a portion of the bike lane to provide an exclusive westbound right-turn lane
- Striping a channelized westbound right-turn lane and allowing the turn movement to proceed simultaneously with the northbound through movement.
- Designating the westbound right-turn lane as bus-only
- Removing the crosswalk on the east side of the intersection and directing pedestrians to cross MLK Boulevard on the west side of the intersection

12.2 Gloucester City

The Gloucester City Station location would be located adjacent to a storage facility between Cumberland Street and Market Street. Due to the track alignment just north of the station, South Railroad Avenue will have to be narrowed between Cumberland Street and Little Somerset Street, requiring it to become a one-way road northbound. This change in traffic direction on this segment of South Railroad Avenue would not result in significant adverse impacts to traffic in this area.

S. Railroad Ave. at Cumberland St., Gloucester City, New Jersey

12.3 Crown Point Road

12.3.1 Woodbine Avenue

The proposed Crown Point Road Station, a center island station with tracks on either side, would encroach on the one-way, southbound part of Woodbine Avenue. The roadway, which is approximately 24 feet in width, would be narrowed to approximately 22 feet in width. No mitigation is required for this minor impact.

12.3.2 Olive Street Grade Crossing

While the Olive Street at-grade crossing is projected to have acceptable LOS, the maximum propagating queue during the AM and PM peaks eastbound along Olive Street would extend through the signalized NJ 45/Olive Street intersection. The signal should be adjusted and coordinated with the at-grade crossing equipment.

12.4 Woodbury

The proposed Woodbury Station is located near the center of Woodbury. In the City of Woodbury's redevelopment plan, 1,200 parking spaces are proposed for GCL riders and others. The additional trips generated by the proposed parking facilities would impact the surrounding street network. The impacts of the Woodbury redevelopment plan are not considered in this traffic analysis and should be studied in a separate effort.

12.4.1 Green Avenue

Green Avenue is a one-way, southbound street that is approximately 17 feet wide. The dimensions of the proposed track encroach on to the street, reducing roadway width to 13 feet, which is sufficient to continue one-way street circulation and access to a senior care facility. The existing passenger loading zone for the senior care facility would be relocated by the project to the area directly east of the existing location, thus maintaining its current function.

12.5 Wenonah

The proposed Wenonah Station affects parking along North West Avenue and North East Avenue immediately adjacent to the station, as discussed in Section 11.2, "Parking." However, the proposed station would not encroach on the roadway travel lanes, and, as a result, street circulation is not expected to be affected.

12.6 Mantua-Pitman

The proposed Mantua-Pitman Station includes a new surface parking lot and new parking structure that will provide 1,225 new parking spaces for GCL riders. As noted in Table 5, "GCL Ridership and Drive-Access Model Results – AM Boardings," this is expected to generate 1,100 drive trips each day by 2040. All adverse impacts to operations at key signalized intersections can be mitigated with signal timing optimization.

12.7 Pitman

Parking along West Jersey Avenue would be affected by the proposed double-track alignment, as discussed in Section 11.2, "Parking," but street functionality and circulation would not be affected.

12.8 Rowan University

12.8.1 Mullica Hill Road (US 322) Grade Crossing

US 322 provides access through Glassboro, and local access to Rowan University. Currently, the roadway operates poorly – particularly the westbound approach in the PM peak hour. The proposed GCL would result in blockages, which would reduce roadway capacity and contribute to increased delays. Queues are expected to extend through the signal at South Campus Drive. Potential mitigation includes adding an additional westbound through lane starting at a point east of the crossing, continues through the intersection with Bowe Boulevard, and narrows back to a single westbound lane beyond the intersection.

Mullica Hill Road Grade Crossing, Glassboro, New Jersey

As discussed in Section 9.1, "Intersection Analysis (No-Action Condition)," a potential US 322 by-pass is in preliminary concept planning that would traverse around downtown Glassboro south of the current US 322 alignment. This project could potentially reduce through traffic along Mullica Hill Road at the proposed GCL at-grade crossing. However, the horizon year for this project is not currently known.

Although the intersection of US 322 and Bowe Boulevard does not meet the threshold for significant impacts, providing a second westbound through lane that extends from the grade crossing through the intersection will coincidentally improve operations. AM peak delay under 2040 build conditions would be reduced from approximately 102 seconds to approximately 62 seconds (change in LOS from F to E). PM peak delay would be reduced from approximately 87 seconds to approximately 67 seconds (change in LOS from F to E).

12.8.2 Bowe Boulevard Grade Crossing

While the LOS is acceptable at this at-grade crossing, the maximum propagating queue northbound during the AM Peak would extend through the US 322/Bowe Boulevard intersection. Bowe Boulevard should be widened to provide two northbound through lanes approaching and through the grade crossing, and the right-most lane would drop at the downstream driveway.

12.9 Glassboro

The planned expansion at Rowan University is expected to generate high levels of growth through the design year (2040), as reflected in DVRPC's growth factors, as shown in Table 4, "AM/PM Future-Year Growth Factors (Growth from 2017)". Potential plans for redevelopment around the Glassboro Station were not considered during this traffic analysis and should be analyzed in a separate effort.

12.9.1 Zane Street

The proposed double-tracking in this section coincides with a portion of Zane Street. It is unclear whether the existing gravel roadway is a legal roadway, or an encroachment on Conrail right-of-way. Under the proposed plan, Zane Street should be terminated as an official dead end or cul-de-sac at the Conrail right-of-way line.

12.9.2 Wilmer Street at Main Street

The proposed Glassboro Station includes a new roadway for vehicular station access that extends from Wilmer and Main Street east to Academy Street. The proposed extension is a two-way road, and may potentially warrant a signal at Wilmer and Main Street.

12.9.3 Wilmer Street Extension

The proposed Wilmer Street Extension could act as a shorter route for traffic along Main Street or Wilmer Street destined for residences or businesses along Academy Street. This would reduce traffic volumes at the signalized intersection of Main Street and High Street, but could potentially increase traffic along the stop-controlled approach on Academy Street at High Street. Signalization may be justified if new and diverted traffic volumes prove sufficient.

12.10 Results of Mitigation

Proposed mitigation strategies include a variety of improvements, such as signal timing adjustments and intersection relocations. Mitigation would be required where the LOS between the 2040 No-Action Scenario and the 2040 future with the GCL meets thresholds for significant impacts, as defined in Section 7, "Traffic Analysis Methodology." No intersections outside of Camden meet this threshold except for the intersection of E. Red Bank Avenue and N. Evergreen Avenue in Woodbury, where LOS drops from D to E during the 2040 PM peak. As discussed in Section 12, "Local Station Area Roadway Impacts and Proposed Mitigations," the increase in overall intersection delay at this location is seven seconds, and the change in LOS is due to the future No-Action delay being close to the threshold between LOS D and LOS E. As a result, no mitigation beyond signal timing optimization at this intersection is recommended.

All three signalized intersections in Camden, which are included in the VISSIM analysis area, are complex due to existing signal pre-emption for the River LINE. Potential impacts at intersections outside of the VISSIM analysis area were often mitigated with signal optimization; however, this was not possible and ineffective at the three signalized Camden intersection, particularly during proposed peak-hour GCL service. The westbound right-turn movement at the MLK Boulevard intersections with Haddon Ave and

with Broadway would operate with unacceptable LOS. In addition, in order to operate both the existing River LINE and the proposed GCL through the VISSIM analysis area, changes to the signal timing and pre-emption cycles are needed. The mitigation strategies described in Section 12, "Local Station Area Roadway Impacts and Proposed Mitigations," generate a LOS of D or better for all approaches, as shown in Table 27, "2025 GCL Build VISSIM Results at MLK Blvd. Intersections with Mitigations," and Table 28, "2040 GCL Build VISSIM Results at MLK Blvd. Intersections with Mitigations."

Table 27: 2025 GCL Build VISSIM Results at MLK Blvd. Intersections with Mitigations

Intersection	Approach	AM Peak Hour			PM Peak Hour		
		Volume	Delay (sec)	LOS	Volume	Delay (sec)	LOS
Haddon Ave	EB	468	29.3	C	979	23.7	C
	SB	403	46.9	D	587	47.6	D
	WB	1,156	21.6	C	402	19.2	B
	NB	505	37	D	676	24.7	C
	Total	**2,532**	**30.1**	**C**	**2,644**	**28.6**	**C**
Cooper Hospital Driveway/S. 6th St	NB	160	37	D	155	39.1	D
	EB	325	7.2	A	850	7.5	A
	WB	995	14	B	441	12.8	B
	Total	**1,480**	**15**	**B**	**1,446**	**12.5**	**B**
Broadway	NB	218	15.9	B	252	17.4	B
	EB	302	12.9	B	789	16.5	B
	SB	253	18.6	B	311	17.2	B
	WB	746	12.4	B	325	16.6	B
	Total	**1,519**	**14**	**B**	**1,677**	**16.8**	**B**

Source: GCL Project Team, Traffic Analysis, 2018

Table 28: 2040 GCL Build VISSIM Results at MLK Blvd. Intersections with Mitigations

Intersection	Approach	AM Peak Hour			PM Peak Hour		
		Volume	Delay (sec)	LOS	Volume	Delay (sec)	LOS
Haddon Ave.	EB	491	31.2	C	997	21.9	C
	SB	409	48.1	D	595	46.9	D
	WB	1,176	22.5	C	407	18.7	B
	NB	510	30.9	C	684	23.8	C
	Total	**2,586**	**29.9**	**C**	**2,683**	**27.4**	**C**
Cooper Hospital Driveway	NB	162	31.2	C	157	39.3	D
	EB	350	7.1	A	858	7.3	A
	WB	1,013	14.9	B	444	12.7	B
	Total	**1,525**	**14.8**	**B**	**1,459**	**12.4**	**B**
Broadway	NB	222	16.1	B	256	18.4	B
	EB	306	13.3	B	797	16.6	B
	SB	257	18.5	B	315	17.6	B
	WB	758	11.5	B	326	15.9	B
	Total	**1,543**	**13.7**	**B**	**1,694**	**16.9**	**B**

Source: GCL Project Team Traffic Analysis, 2018

Appendix 5A: DVRPC and STOPS Model Information

Future No-Action model outputs are from the Delaware Valley Regional Planning Commission's (DVRPC) Glassboro-Camden Line (GCL) Regional Model, based on the Travel Improvement Model (TIM v2.3), which was used to determine travel patterns, trip origins/destinations, and corridor-level travel times. Future Build-model outputs incorporate FTA's STOPS model, which considers future transit facilities.

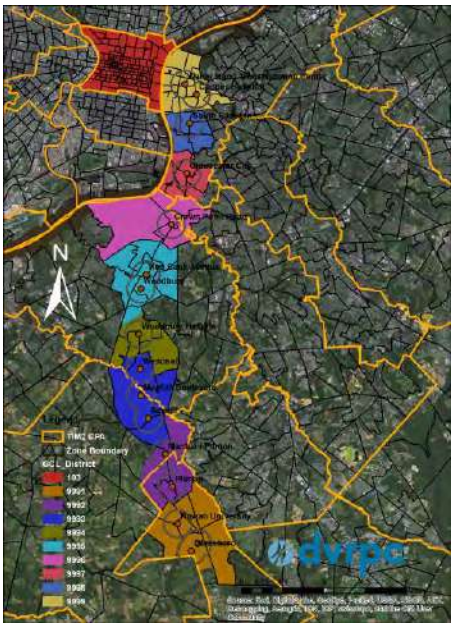
It should be noted that during the refinement of the proposed GCL, the project team considered several operating plans for the light rail service, with trains proposed to operate as frequently as every 7.5 minutes during the peak. Ultimately an operating plan was advanced with trains operating every 15 minutes during the peak, similar to the operation of the River LINE today, to minimize the infrastructure needed in the north half of the corridor and to protect space for current and future freight service. For the models and analyses presented in this appendix, the maximum level of service (peak service of 7.5-minute headways) was assumed as this generally represents the "worst case scenario" in terms of potential impacts.

Travel districts were developed early in the project collaboratively between the GCL Project Team and DVRPC to ensure that geographic units provided the granularity in the data necessary for a useful analysis and integrated well with DVRPC's existing model for ease of data production. Table 5A-1, "Modeling District List" below shows the District numbers and the associated names used for the analysis. Figure 5A-1, "Modeling District Map" shows the district map.

Table 5A-1: Modeling District List

District Name	District Number
Camden	9999
South Camden	9998
Gloucester City	9997
Westville	9996
Woodbury	9995
Woodbury Heights	9994
Wenonah	9993
Pitman	9992
Glassboro	9991

Figure 5A-1: Modeling District Map



GCL Growth Factors

Some intersection counts were conducted in 2013, while others were conducted in 2017. To account for this discrepancy, the growth rates in Table 5A-2, "AM/PM Existing Condition Growth Rates from 2013-2017" below were used to grow the volumes from 2013 to 2017 when needed. Growth rates were established based on turning movement count (TMC) and automated traffic recorder (ATR) volume data. Both types of data were considered when determining the growth factor used to project volumes from 2013 to 2017. These values were derived to determine the appropriate peak hour for analysis in each district. Engineering judgement and assessments of site-specific conditions were applied to determine the appropriate growth rates to use based off the TMC and ATR data received.

Table 5A-2: AM/PM Existing-Condition Growth Rates from 2013-2017

	TMC		ATR Growth Factors	Growth Rates Used
District	AM Average Growth Factors	PM Average Growth Factors		
Camden	1.10	1.14	1.00	1.10 (1.14)*
South Camden	1.10	1.14	1.00	1.10 (1.14)*
Gloucester	2.24	0.95	0.97	1
Westville	0.99	1.19	1.08	1.08
Woodbury	1.28	1.08	1.05	1.08
Woodbury Heights	N/A	N/A	1.11	1.11
Wenonah	1.59	1.27	N/A	1.59
Pitman	1.57	1.18	1.06	1.06
Glassboro	1.32	1.46	1.06	1.06

*AM (PM)

GCL Ridership Forecasts

The ridership of the proposed GCL project was estimated using the Simplified Trips-on-Project Software (STOPS) Model, a travel demand estimation model developed by the Federal Transit Administration (FTA). Like conventional regional travel demand models, STOPS applies a modal choice process to estimate transit trip tables and performs transit assignment to estimate transit volumes on transit routes. The STOPS model also uses similar input data as regional demand models, including, but not limited to, demographic data, highway and transit service data, and trip table data.

There are key distinctions between the STOPS and conventional models. Firstly, origin-destination trip tables are derived from the United States Census Bureau's (USCB) American Community Survey (ACS) data rather than estimated through the trip generation and distribution process, avoiding the effort to calibrate and validate these model elements. Secondly, the representation of transit levels-of-service are derived from the timetable data in the General Transit Feed Specification (GTFS) format. Most major transit operators around the country maintain and dissimilate the GTFS datasets for public uses. This eliminates the effort to develop and validate the transit networks. Thirdly, while the major parameters of the model were estimated using national data and experience, the model provides flexibility to adjust the parameters to match local transit volume data. With these features, the STOPS model can be applied quickly for ridership estimation of a transit project.

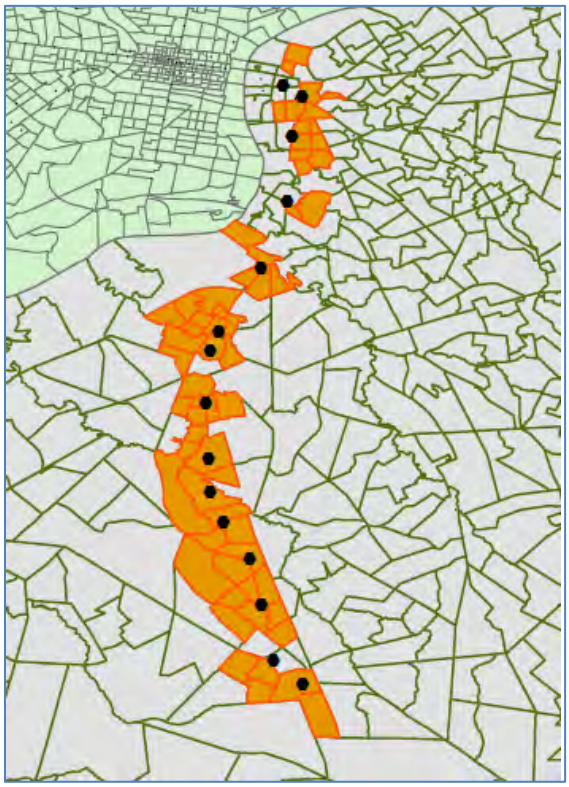
In addition to the STOPS model, a special procedure was applied to estimate the GCL ridership associated with the trips made by Rowan University students and staff traveling between the University's Glassboro campus and downtown Camden, where another campus exists. An inter-campus shuttle bus service currently operates between the Glassboro campus and Camden. The GCL will provide more frequent service than that by the current shuttle bus. The GCL is expected to carry a significant number of passengers traveling between Glassboro and Camden. A pivot-point analysis was used to forecast the GCL passengers associated with this special travel segment.

STOPS Model Application

STOPS was used to predict the GCL ridership generated by residents in the DVRPC region for daily travel. The execution of the STOPS model requires various input data that need to be acquired and assembled. These include data as listed below.

1. USCB ACS Data: The 2006-2010 Census ACS datasets for the states of New Jersey and Pennsylvania were provided to the study team by FTA, accompanied with the STOPS model package. To enhance model precision, some census geographic zones (census tract blocks) in the GCL corridor were subdivided in the analysis, as shown in Figure 5A-2, "Split Traffic Zones."

Figure 5A-2: Split Traffic Zones



2. Transit Service GTFS Data: The current-year (2017) GTFS datasets of the five major transit operators in the region were collected or downloaded from the transit operators. These include the following sets of GTFS data:
    - NJ TRANSIT Bus
    - NJ TRANSIT Rail
    - PATCO
    - SEPTA Rail
    - SEPTA Bus

3. GCL Operation Data: The operation data of the GCL line, such as station-to-station run times and headways by time period, were encoded and merged into the NJ TRANSIT Rail GTFS dataset for the GCL build scenario.

4. Zonal Population and Employment Data: The zonal population and employment data for the three forecast years (2015 base, 2025, and 2040) and the associated geographic zone layer file (in ERSI shape file format) were provided by DVRPC. Some of the traffic zones in the GCL corridor were split to enhance the precision of the zonal demographic data in the GCL corridor, following the split Census zones as mentioned before. The demographic data of the split zones are derived according to observed relative development among the split zones

5. Station Location Data: The location of each GCL station was specified in a station file in ERSI shape file format. The data regarding the availability of park-and-ride facilities and station type (e.g. at-grade, 1 or 2 levels up/down, etc.) are also specified in the station file.

6. Highway Network Skim Data: The zonal highway travel time and travel distance skim matrix files for each of the forecast years are provided by DVRPC from the 2015, 2025, and 2040 scenarios of TIM v2.3. These files are converted to ASCII file format as required by the STOPS model. Tables showing these travel times by transit and auto are shown below.
7. Transit Ridership Data: The ridership of various existing rail lines and bus lines in the region and region-wide total transit ridership are specified in the model.

The STOPS model was performed for following scenarios:

- 2015 No-Action
- 2025 No-Action
- 2025 Build
- 2040 No-Action
- 2040 Build

The STOPS model produced detailed travel demand and ridership forecast outputs, which include:

- Daily ridership of individual transit routes
- Station volumes by access mode
- Station-to-station trip tables
- District-to-district new transit trip tables
- Reduction of person-miles of travel on highway network

These outputs allow the study team to conduct detailed ridership analyses and associated traffic analyses in the study corridor.

Table 5A-3: Current Peak-Period Transit Travel Times (2015)

Total Time (minutes)	*To*		
From	Glassboro	Woodbury	Walter Rand
Glassboro	-	78.8	83.4
Woodbury	54.2	-	43.4
Walter Rand	94.0	50.8	-

Table 5A-4: Current Peak-Period Auto Travel Times (2015)

Total Time (minutes) AM Peak (PM Peak)	*To*		
From	Glassboro	Woodbury	Walter Rand
Glassboro	-	18.6 (18.0)	33.6 (27.4)
Woodbury	16.9 (19.9)	-	20.5 (17.1)
Walter Rand	22.3 (32.8)	13.6 (19.9)	-

Table 5A-5: Projected Peak-Period Transit Travel Times – No-Action Alternative (2025)

Total Time (minutes)	*To*		
From	Glassboro	Woodbury	Walter Rand
Glassboro	-	78.8	83.4
Woodbury	54.2	-	43.4
Walter Rand	94.0	50.8	-

Table 5A-6: Projected Peak-Period Auto Travel Times – No-Action Alternative (2025)

Total Time (minutes) AM Peak (PM Peak)	*To*		
From	Glassboro	Woodbury	Walter Rand
Glassboro	-	19.1 (18.7)	37.0 (29.6)
Woodbury	17.4 (20.7)	-	23.4 (18.5)
Walter Rand	22.8 (34.3)	14.1 (21,1)	-

Table 5A-7: Projected Peak-Period Transit Travel Times – Build Alternative (2025)

Total Time (minutes)	*To*		
From	Glassboro	Woodbury	Walter Rand
Glassboro	-	30.2	49.6
Woodbury	30.2	-	26.5
Walter Rand	49.6	26.5	-

Table 5A-8: Projected Peak-Period Transit Travel Times – No-Action Alternative (2040)

Total Time (minutes)	*To*		
From	Glassboro	Woodbury	Walter Rand
Glassboro	-	78.8	83.4
Woodbury	54.2	-	43.4
Walter Rand	94.0	50.8	-

Table 5A-9: Projected Peak-Period Auto Travel Times – No-Action Alternative (2040)

Total Time (minutes) AM Peak (PM Peak)	*To*		
From	Glassboro	Woodbury	Walter Rand
Glassboro	-	19.8 (19.3)	38.4 (30.4)
Woodbury	17.9 (21.3)	-	24.4 (18.9)
Walter Rand	23.2 (35.4)	14.2 (21.9)	-

Table 5A-10: Projected Peak-Period Transit Travel Times – Build Alternative (2040)

Total Time (minutes)	*To*		
From	Glassboro	Woodbury	Walter Rand
Glassboro	-	30.2	49.6
Woodbury	30.2	-	26.5
Walter Rand	49.6	26.5	-

Travel Demand Analysis

For other travel demand outputs that are typically received from a regional travel demand model, a cooperative methodology was developed between the GCL Project Team responsible for ridership forecasting and the travel demand modelling group at DVRPC. DVRPC provided the Project Team with key regional demographic and travel demand data, including:

- Census-tract level ACS data to help refine the base data in the STOPS model to a smaller geographic level, as mentioned above;
- Zonal population and employment data for the three forecast years (2015 base, 2025, and 2040) to associate demographic data with the designated corridor and districts, as mentioned above;
- Zonal highway travel time and travel distance skim matrix files for each of the forecast years, as mentioned above; and
- Forecasted vehicle-miles traveled (VMT) and vehicle-hours traveled (VHT) for each of the forecast years by district to form the baseline for the Traffic Growth Factors.

The GCL Traffic Analysis is built on the application of growth factors at the district level to traffic counts performed by the GCL team. The VMT and VHT data developed by DVRPC, as described above, provided the basis for the district-level growth factors between the forecast years (2015, 2025, 2040) for the No-Build scenario across the periods of the day (AM peak, mid-day, PM peak, night-time). To develop Build-scenario growth factors, the STOPS model was used to forecast the expected reduction in VMT in each district due to the introduction of the GCL in both 2025 and 2040. These reductions were applied to the No-Build data, using assumptions from the No-Build condition as appropriate to distribute the Build-condition VMT and VHT reductions for different periods of the day, as the STOPS model only considers daily totals. In this way, the Project Team was able to develop Build-scenario VMT and VHT estimates by district (required for the Air Quality and Noise analyses) and the resulting Build-scenario growth factors (required for the Traffic Analysis).

Rowan University Ridership

A pivot-point analysis was used to estimate the number of GCL passengers traveling between the Rowan University campus in Glassboro and downtown Camden. The analysis first establishes the base-year (2017) daily ridership of the existing service. According to data obtained from Rowan University, the shuttle bus service carried approximately 280 passengers on a typical weekday in 2016, which was applied as base ridership.

Next, the raw growth factors of ridership for the forecast years were specified based on the projected growth of student enrollment. In 2016, the university reported total enrollment of 16,100 students. The university set a 10-year enrollment target of 25,600, which is a 60% increase from 2016. In the past two years, student enrollment grew by about 10%, from 16,100 in 2016 to 18,400 in 2018[1]. In this pivot-point analysis, growth factors were set to be 30% and 50% for years 2025 and 2040, respectively.

The analysis subsequently examines ridership impacts due to service improvement of the GCL compared to current service. The main improvement of the GCL compared to the current shuttle bus service will be service frequency. Currently, the shuttle bus service operates 18 bus trips in each direction on a typical weekday from 7am to 11pm, with average headways of more than 50 minutes. The GCL is planned to operate with headways of 7.5 minutes during peak periods and 15 minutes during off-peak periods. This service plan is equivalent to an average service headway of about 10 minutes.

[1] *Information from Rowan University web page "https://sites.rowan.edu/fastfacts/index.html" and news article "http://www.philly.com/philly/education/20160213_Rowan_nears_enrollment_target_years_ahead_of_schedule.html".*

According to data compiled in a research study[2], ridership elasticity with respect to service frequency ranges between 0.3 and 1.0. The same study also reveals that the level of ridership is typically most sensitive to frequency changes in areas with infrequent service. In the pivot-point analysis, an arc-elasticity[3] of 0.85 is assumed.

Table 5A-11, "Ridership Sensitivity – Changing Headways" shows results of a sensitivity analysis on daily ridership based on different headways. Per the base and new service headways of 50 and 10 minutes, respectively, ridership is estimated to increase by approximately 250% due to improvement of service frequency.

Table 5A-11: Ridership Sensitivity - Changing Headways

Year	7.5-Minute Headway	10-Minute Headway		15-Minute Headway	
	Daily Ridership	Daily Ridership	% Change From 2017	Daily Ridership	% Change From 2017
2025	16,470	15,754	-4.3	15,132	-8.1*
2040	17,768	17,016	-4.2	16,349	-8.0**

*4.0% reduction from 10-minute headway
**3.9% reduction from 10-minute headway

Given the raw growth factors and the elasticity factor of service frequency, it is estimated that the GCL passenger volumes between the Rowan University campus in Glassboro and downtown Camden would be 1,265 in year 2025 and 1,460 in year 2040. It is also assumed that the passenger volumes in the Camden area split between the Walter Rand Transportation Center (GC-WRTC) and Cooper Hospital station in a ratio of 2:1.

GCL Ridership Forecast Results

The total ridership of the GCL project was derived by combining the ridership results of the STOPS model and the pivot-point analysis. Tables 5A-14 through 5A-23 summarize the station boarding and alighting volumes by access mode for years 2025 and 2040, respectively. Drive trips are broken out by kiss-and-ride (KnR; drop-off/pick-up at station, resulting in a drive trip entering and leaving during the same visit) and park-and-ride (PnR; entering or leaving trip during given time, with opposite-type trip at another point later in the day). The daily ridership of the GCL was forecasted to be approximately 16,500 in year 2025 and 17,800 in year 2040. As expected, large transfer volumes are forecasted at the GC-WRTC Station, with most transferring to the PATCO Speedline towards Philadelphia. Passenger volumes at the Woodbury and Red Bank Avenue stations are also expected to be substantial, with significant transfer and drive-

[2] *Transit Cooperative Research Model (TCRP) Report 95*. "Chapter 9: Traveler Response to Transportation System Changes: Transit Scheduling and Frequency." 2004. p. 9-5

[3] *Arc-elasticity ϵ is defined as $((Q_2 - Q_1)(P_1 + P_2))/((P_2 - P_1)(Q_1 + Q_2))$, where Q_1 and Q_2 are ridership before and after, and P_1 and P_2 are the headway before and after.*

access volumes. Of the forecasted total GCL ridership, about 60 percent will be new transit trips, with the remainder transferring from other modes.

Methodology to determine the percentage of boardings and alightings occurring during AM and PM peak hours relative to daily boardings and alightings is based on traffic volume data along a set of 13 roadway segments throughout the study area. AM and PM peak-hour traffic volumes along these segments were determined from the hourly volume data over the course of a 24-hour period. Multi-hour AM and PM peak-period volumes were calculated similarly. The sum of all 13 peak-hour volumes was divided by the sum of all multi-hour peak-period volumes to determine the percentage of peak-period volume that occurs during the highest hour. Similar 24-hour and multi-hour peak-period boarding and alighting data was calculated for each station, and these percentages were factored into the multi-hour peak-period boarding and alighting data to determine the AM peak-hour boarding in the PM peak-hour alighting totals.

Table 5A-12: 2025 GCL Ridership at Each Station by Trip Type - Daily

	Boarding					Alighting				
Station	**Walk**	**KnR**	**PnR**	**Transfer**	**Total**	**Walk**	**KnR**	**PnR**	**Transfer**	**Total**
Glassboro	489	88	278	90	945	489	88	278	90	945
Rowan Univ.	1,210	14	0	0	1,224	1,210	14	0	0	1,224
Pitman	474	13	0	77	564	474	13	0	77	564
Mantua-Pitman	240	76	464	0	780	240	76	464	0	780
Sewell	620	7	0	0	627	620	7	0	0	627
Mantua Blvd	329	49	255	0	633	329	49	255	0	633
Wenonah	333	21	0	89	443	333	21	0	89	443
Woodbury Heights	493	33	63	16	605	493	33	63	16	605
Woodbury	629	84	359	295	1,367	629	84	359	295	1,367
Red Bank Ave	788	63	174	414	1,439	788	63	174	414	1,439
Crown Point Road	493	58	216	131	898	493	58	216	131	898
Gloucester City	521	17	83	136	757	521	17	83	136	757
S. Camden	737	42	124	25	928	737	42	124	25	928
Cooper Hospital	370	6	0	382	758	370	6	0	382	758
GC-WRTC	739	5	0	3759	4,503	739	5	0	3759	4,503
Total	**8,465**	**576**	**2,016**	**5,414**	**16,470**	**8,465**	**576**	**2,016**	**5,414**	**16,470**

Table 5A-13: 2025 GCL Ridership at Each Station by Trip Type – AM Period (Multi-Hour)

	Boarding					Alighting				
Station	**Walk**	**KnR**	**PnR**	**Transfer**	**Total**	**Walk**	**KnR**	**PnR**	**Transfer**	**Total**
Glassboro	275	62	197	51	585	33	0	0	6	39
Rowan Univ.	117	10	0	0	127	756	0	0	0	756
Pitman	177	9	0	29	215	134	0	0	22	155
Mantua-Pitman	144	51	314	0	509	25	0	0	0	25
Sewell	192	5	0	0	197	203	0	0	0	203
Mantua Blvd	151	36	188	0	375	76	0	0	0	76
Wenonah	149	15	0	40	204	75	0	0	20	96
Woodbury Heights	178	26	49	6	259	143	0	0	5	148
Woodbury	259	65	279	121	725	148	0	0	69	217
Red Bank Ave	313	51	140	165	668	236	0	0	124	360
Crown Point Road	224	46	171	60	501	66	0	0	17	83
Gloucester City	200	5	25	52	282	173	0	0	45	219
S. Camden	311	12	37	11	370	172	0	0	6	177
Cooper Hospital	64	2	0	66	132	191	0	0	197	388
GC-WRTC	109	1	0	553	663	472	0	0	2,399	2,870
Total	**2,862**	**398**	**1,400**	**1,152**	**5,812**	**2,902**	**0**	**0**	**2,911**	**5,812**

Table 5A-14: 2025 GCL Ridership at Each Station by Trip Type – AM Peak Hour

	Boarding					Alighting				
Station	**Walk**	**KnR**	**PnR**	**Transfer**	**Total**	**Walk**	**KnR**	**PnR**	**Transfer**	**Total**
Glassboro	88	20	63	16	187	11	0	0	2	13
Rowan Univ.	37	3	0	0	41	242	0	0	0	242
Pitman	57	3	0	9	69	43	0	0	7	50
Mantua-Pitman	46	16	100	0	163	8	0	0	0	8
Sewell	61	2	0	0	63	65	0	0	0	65
Mantua Blvd	48	12	60	0	120	24	0	0	0	24
Wenonah	48	5	0	13	65	24	0	0	6	31
Woodbury Heights	57	8	16	2	83	46	0	0	1	47
Woodbury	83	21	89	39	232	47	0	0	22	70
Red Bank Ave	100	16	45	53	214	76	0	0	40	115
Crown Point Road	72	15	55	19	160	21	0	0	6	27
Gloucester City	64	2	8	17	90	55	0	0	14	70
S. Camden	99	4	12	3	119	55	0	0	2	57
Cooper Hospital	21	1	0	21	42	61	0	0	63	124
GC-WRTC	35	0	0	177	212	151	0	0	768	919
Total	**916**	**127**	**448**	**369**	**1,860**	**928**	**0**	**0**	**931**	**1,860**

Table 5A-15: 2025 GCL Ridership at Each Station by Trip Type – PM Period (Multi-Hour)

	Boarding					Alighting				
Station	**Walk**	**KnR**	**PnR**	**Transfer**	**Total**	**Walk**	**KnR**	**PnR**	**Transfer**	**Total**
Glassboro	47	0	0	9	55	283	65	205	52	605
Rowan Univ.	561	0	0	0	561	212	10	0	0	222
Pitman	159	0	0	26	185	168	10	0	27	205
Mantua-Pitman	21	0	0	0	21	159	49	298	0	506
Sewell	214	0	0	0	214	200	4	0	0	205
Mantua Blvd	62	0	0	0	62	168	35	182	0	386
Wenonah	84	0	0	22	107	141	15	0	38	194
Woodbury Heights	156	0	0	5	161	182	23	44	6	255
Woodbury	175	0	0	82	258	292	59	251	137	740
Red Bank Ave	244	0	0	128	373	300	41	113	158	612
Crown Point Road	105	0	0	28	133	254	44	162	67	527
Gloucester City	230	0	0	60	290	192	7	33	50	282
S. Camden	249	0	0	8	258	329	17	50	11	407
Cooper Hospital	230	0	0	237	467	78	2	0	81	161
GC-WRTC	465	0	0	2,368	2,833	110	2	0	558	670
Total	**3,003**	**0**	**0**	**2,974**	**5,977**	**3,070**	**383**	**1,339**	**1,186**	**5,977**

Table 5A-16: 2025 GCL Ridership at Each Station by Trip Type – PM Peak Hour

	Boarding					Alighting				
Station	**Walk**	**KnR**	**PnR**	**Transfer**	**Total**	**Walk**	**KnR**	**PnR**	**Transfer**	**Total**
Glassboro	13	0	0	2	15	76	18	55	14	163
Rowan Univ.	152	0	0	0	152	57	3	0	0	60
Pitman	43	0	0	7	50	45	3	0	7	55
Mantua-Pitman	6	0	0	0	6	43	13	80	0	137
Sewell	58	0	0	0	58	54	1	0	0	55
Mantua Blvd	17	0	0	0	17	45	9	49	0	104
Wenonah	23	0	0	6	29	38	4	0	10	52
Woodbury Heights	42	0	0	1	44	49	6	12	2	69
Woodbury	47	0	0	22	70	79	16	68	37	200
Red Bank Ave	66	0	0	35	101	81	11	30	43	165
Crown Point Road	28	0	0	8	36	69	12	44	18	142
Gloucester City	62	0	0	16	78	52	2	9	14	76
S. Camden	67	0	0	2	70	89	5	13	3	110
Cooper Hospital	62	0	0	64	126	21	1	0	22	43
GC-WRTC	126	0	0	639	765	30	1	0	151	181
Total	**811**	**0**	**0**	**803**	**1,614**	**829**	**103**	**361**	**320**	**1,614**

Table 5A-17: 2040 GCL Ridership at Each Station by Trip Type - Daily

Daily										
	Boarding					Alighting				
Station	**Walk**	**KnR**	**PnR**	**Transfer**	**Total**	**Walk**	**KnR**	**PnR**	**Transfer**	**Total**
Glassboro	535	96	307	96	1,034	535	96	307	96	1,034
Rowan Univ.	1,380	15	0	0	1,395	1,380	15	0	0	1,395
Pitman	504	14	0	84	602	504	14	0	84	602
Mantua-Pitman	266	81	492	0	839	266	81	492	0	839
Sewell	681	7	0	0	688	681	7	0	0	688
Mantua Blvd	357	54	280	0	691	357	54	280	0	691
Wenonah	352	22	0	97	471	352	22	0	97	471
Woodbury Heights	518	35	66	17	636	518	35	66	17	636
Woodbury	651	89	385	314	1,439	651	89	385	314	1,439
Red Bank Ave	866	65	183	440	1,554	866	65	183	440	1,554
Crown Point Road	516	60	228	147	951	516	60	228	147	951
Gloucester City	535	18	93	142	788	535	18	93	142	788
S. Camden	901	42	128	26	1,097	901	42	128	26	1,097
Cooper Hospital	410	6	0	395	811	410	6	0	395	811
GC-WRTC	822	5	0	3945	4,772	822	5	0	3945	4,772
Total	**9,294**	**609**	**2,162**	**5,703**	**17,768**	**9,294**	**609**	**2,162**	**5,703**	**17,768**

Table 5A-18: 2040 GCL Ridership at Each Station by Trip Type – AM Period (Multi-Hour)

	Boarding					Alighting				
Station	**Walk**	**KnR**	**PnR**	**Transfer**	**Total**	**Walk**	**KnR**	**PnR**	**Transfer**	**Total**
Glassboro	302	67	216	54	639	34	0	0	6	40
Rowan Univ.	195	11	0	0	206	718	0	0	0	718
Pitman	196	10	0	33	239	139	0	0	23	163
Mantua-Pitman	162	59	360	0	581	19	0	0	0	19
Sewell	217	5	0	0	222	217	0	0	0	217
Mantua Blvd	168	42	215	0	425	95	0	0	0	95
Wenonah	159	17	0	44	219	78	0	0	21	100
Woodbury Heights	171	28	53	6	257	166	0	0	5	171
Woodbury	304	72	310	147	832	122	0	0	59	181
Red Bank Ave	287	52	145	146	630	284	0	0	144	428
Crown Point Road	226	47	177	64	513	61	0	0	17	78
Gloucester City	197	8	41	52	298	170	0	0	45	215
S. Camden	312	18	56	9	396	202	0	0	6	208
Cooper Hospital	71	3	0	69	143	202	0	0	195	397
GC-WRTC	95	2	0	455	552	539	0	0	2,586	3,124
Total	**3,062**	**440**	**1,573**	**1,078**	**6,153**	**3,045**	**0**	**0**	**3,108**	**6,153**

Table 5A-19: 2040 GCL Ridership at Each Station by Trip Type – AM Peak Hour

	Boarding					Alighting				
Station	**Walk**	**KnR**	**PnR**	**Transfer**	**Total**	**Walk**	**KnR**	**PnR**	**Transfer**	**Total**
Glassboro	97	22	69	17	205	11	0	0	2	13
Rowan Univ.	63	3	0	0	66	230	0	0	0	230
Pitman	63	3	0	10	76	45	0	0	7	52
Mantua-Pitman	52	19	115	0	186	6	0	0	0	6
Sewell	69	2	0	0	71	70	0	0	0	70
Mantua Blvd	54	13	69	0	136	30	0	0	0	30
Wenonah	51	5	0	14	70	25	0	0	7	32
Woodbury Heights	55	9	17	2	82	53	0	0	2	55
Woodbury	97	23	99	47	266	39	0	0	19	58
Red Bank Ave	92	17	46	47	202	91	0	0	46	137
Crown Point Road	72	15	57	21	164	19	0	0	6	25
Gloucester City	63	3	13	17	95	54	0	0	14	69
S. Camden	100	6	18	3	127	65	0	0	2	66
Cooper Hospital	23	1	0	22	46	65	0	0	62	127
GC-WRTC	30	1	0	146	177	172	0	0	827	1,000
Total	**980**	**141**	**503**	**345**	**1,969**	**974**	**0**	**0**	**994**	**1,969**

Table 5A-20: 2040 GCL Ridership at Each Station by Trip Type – PM Period (Multi-Hour)

	Boarding					Alighting				
Station	**Walk**	**KnR**	**PnR**	**Transfer**	**Total**	**Walk**	**KnR**	**PnR**	**Transfer**	**Total**
Glassboro	42	0	0	7	49	316	67	215	57	655
Rowan Univ.	591	0	0	0	591	244	10	0	0	255
Pitman	166	0	0	28	194	183	10	0	30	223
Mantua-Pitman	20	0	0	0	20	164	57	348	0	569
Sewell	237	0	0	0	237	227	5	0	0	232
Mantua Blvd	77	0	0	0	77	174	39	200	0	412
Wenonah	93	0	0	26	119	157	16	0	43	215
Woodbury Heights	186	0	0	6	192	174	26	49	6	254
Woodbury	148	0	0	71	219	317	66	284	153	819
Red Bank Ave	320	0	0	163	483	302	45	127	154	628
Crown Point Road	104	0	0	30	134	266	42	159	76	543
Gloucester City	231	0	0	61	292	182	9	47	48	286
S. Camden	345	0	0	10	354	366	21	64	11	462
Cooper Hospital	249	0	0	240	489	89	3	0	86	178
GC-WRTC	514	0	0	2,465	2,979	120	3	0	575	698
Total	**3,323**	**0**	**0**	**3,107**	**6,429**	**3,281**	**418**	**1,492**	**1,238**	**6,429**

Table 5A-21: 2040 GCL Ridership at Each Station by Trip Type – PM Peak Hour

	Boarding					Alighting				
Station	**Walk**	**KnR**	**PnR**	**Transfer**	**Total**	**Walk**	**KnR**	**PnR**	**Transfer**	**Total**
Glassboro	11	0	0	2	13	85	18	58	15	177
Rowan Univ.	160	0	0	0	160	66	3	0	0	69
Pitman	45	0	0	7	52	49	3	0	8	60
Mantua-Pitman	5	0	0	0	5	44	15	94	0	154
Sewell	64	0	0	0	64	61	1	0	0	63
Mantua Blvd	21	0	0	0	21	47	10	54	0	111
Wenonah	25	0	0	7	32	42	4	0	12	58
Woodbury Heights	50	0	0	2	52	47	7	13	2	69
Woodbury	40	0	0	19	59	86	18	77	41	221
Red Bank Ave	86	0	0	44	130	82	12	34	41	170
Crown Point Road	28	0	0	8	36	72	11	43	20	147
Gloucester City	62	0	0	17	79	49	2	13	13	77
S. Camden	93	0	0	3	96	99	6	17	3	125
Cooper Hospital	67	0	0	65	132	24	1	0	23	48
GC-WRTC	139	0	0	666	804	32	1	0	155	188
Total	**897**	**0**	**0**	**839**	**1,736**	**886**	**113**	**403**	**334**	**1,736**

Table 5A-22, “2025 Forecast GCL Station-to-Station Daily Passenger Volumes” and Table 5A-23, “2040 Forecast GCL Station-to-Station Daily Passenger Volumes” display the GCL station-to-station passenger volumes for year 2025 and 2040, respectively. The five station-to-station origin-destination pairs with the highest passenger volumes (in order from highest to lowest based on year-2040 activity) are between GC-WRTC and the following stations: South Camden, Red Bank Avenue, Woodbury, Rowan University, and Crown Point Road. The tables reveal that most passengers ride the GCL to the stations with major employment centers, university campuses, and the WRTC station. There is also a moderate number of passengers using the Red Bank Avenue station, reflecting an ease of transferring at the Red Bank Avenue station and the proximity of GCL stations to various town centers along the corridor.

Table 5A-22: 2025 Forecast GCL Station-to-Station Daily Passenger Volumes

	Glassboro	Rowan Univ.	Pitman	Mantua/Pitman	Sewell	Mantua Blvd	Wenonah	Woodberry Hgts	Woodbury	Red Bank Ave	Crown Point Rd	Gloucester City	S. Camden	Cooper Hospital	GC-WRTC	Total
Glassboro	0	221	76	62	54	25	13	19	36	79	23	19	23	21	274	945
Rowan Univ.	221	0	102	28	14	7	13	10	38	22	11	23	4	220	511	1,224
Pitman	76	102	0	24	65	44	22	17	19	33	4	8	13	17	120	564
Mantua/Pitman	62	28	24	0	70	32	12	39	34	40	39	10	18	45	326	779
Sewell	54	14	65	70	0	45	25	98	33	32	49	15	8	11	106	625
Mantua Blvd	25	7	44	32	45	0	12	24	63	64	13	13	2	31	258	633
Wenonah	13	13	22	12	25	12	0	49	48	66	7	24	10	18	124	443
Woodberry Hgts	19	10	17	39	98	24	49	0	68	59	11	12	6	19	174	605
Woodbury	36	38	19	34	33	63	48	68	0	168	87	56	32	85	598	1,366
Red Bank Ave	79	22	33	40	32	64	66	59	168	0	103	56	39	72	607	1,441
Crown Point Rd	23	11	4	39	49	13	7	11	87	103	0	51	29	45	426	898
Gloucster City	19	23	8	10	15	13	24	12	56	56	51	0	69	44	357	757
S. Camden	23	4	13	18	8	2	10	6	32	39	29	69	0	90	583	926
Cooper Hospital	21	220	17	45	11	31	18	19	85	72	45	44	90	0	39	757
GC-WRTC	274	511	120	326	106	258	124	174	598	607	426	357	583	39	0	4,505
Total	945	1,224	564	779	625	633	443	605	1,366	1,441	898	757	926	757	4,505	16,470

Table 5A-23: 2040 Forecast GCL Station-to-Station Daily Passenger Volumes

	Glassboro	Rowan Univ.	Pitman	Mantua/Pitman	Sewell	Mantua Blvd	Wenonah	Woodberry Hgts	Woodbury	Red Bank Ave	Crown Point Rd	Gloucester City	S. Camden	Cooper Hospital	GC-WRTC	Total
Glassboro	0	254	82	68	61	28	14	21	39	90	25	21	27	22	285	1,032
Rowan Univ.	254	0	115	34	17	8	14	11	42	24	12	25	5	253	583	1,394
Pitman	82	115	0	26	70	48	24	18	20	35	5	8	17	17	121	602
Mantua/Pitman	68	34	26	0	79	36	13	43	37	45	42	11	25	47	336	839
Sewell	61	17	70	79	0	51	28	107	36	37	54	16	8	12	114	686
Mantua Blvd	28	8	48	36	51	0	13	26	67	72	15	14	2	34	280	691
Wenonah	14	14	24	13	28	13	0	51	51	73	8	25	14	19	128	472
Woodberry Hgts	21	11	18	43	107	26	51	0	70	64	12	13	8	20	176	637
Woodbury	39	42	20	37	36	67	51	70	0	185	91	58	37	88	622	1,439
Red Bank Ave	90	24	35	45	37	72	73	64	185	0	116	60	56	74	627	1,555
Crown Point Rd	25	12	5	42	54	15	8	12	91	116	0	53	43	45	433	950
Gloucster City	21	25	8	11	16	14	25	13	58	60	53	0	86	44	358	789
S. Camden	27	5	17	25	8	2	14	8	37	56	43	86	0	101	673	1,097
Cooper Hospital	22	253	17	47	12	34	19	20	88	74	45	44	101	0	39	811
GC-WRTC	285	583	121	336	114	280	128	176	622	627	433	358	673	39	0	4,773
Total	1,032	1,394	602	839	686	691	472	637	1,439	1,555	950	789	1,097	811	4,773	17,768

GCL Drive Trip Generation

Table 5A-24: GCL Peak-Hour Drive-Access Trips at Each Station

	2025				2040			
Station	**AM In**	**AM Out**	**PM In**	**PM Out**	**AM In**	**AM Out**	**PM In**	**PM Out**
Glassboro	83	20	18	73	91	22	18	76
Rowan Univ.	3	3	3	3	3	3	3	3
Pitman	3	3	3	3	3	3	3	3
Mantua-Pitman	117	16	13	94	134	19	15	109
Sewell	2	2	1	1	2	2	1	1
Mantua Blvd	72	12	9	59	82	13	10	64
Wenonah	5	5	4	4	5	5	4	4
Woodberry Heights	24	8	6	18	26	9	7	20
Woodbury	110	21	16	84	122	23	18	94
Red Bank Ave	61	16	11	42	63	17	12	47
Crown Point Rd	70	15	12	56	72	15	11	54
Gloucester City	9	2	2	11	16	3	2	15
S. Camden	16	4	5	18	24	6	6	23
Cooper Hospital	1	1	1	1	1	1	1	1
GC-WRTC	0	0	1	1	1	1	1	1

GCL VMT and VHT

Table 5A-25: 2013 GCL Peak-Period VMT & VHT

	AM (6-10am)		PM (3-7pm)	
District	**Total VMT**	**Total VHT**	**Total VMT**	**Total VHT**
Camden	95,024	2,841	99,618	3,168
South Camden	51,163	1,371	59,020	1,636
Gloucester City	79,837	2,384	94,893	3,420
Westville	90,907	3,201	109,189	3,710
Woodbury	118,318	3,454	133,242	4,031
Woodbury Heights	37,994	1,050	39,907	1,132
Wenonah	36,435	1,135	41,296	1,363
Pitman	66,059	1,780	76,260	2,072
Glassboro	43,344	1,505	47,406	1,658
Total	**619,082**	**18,721**	**700,830**	**22,190**

Table 5A-26: 2015 GCL Peak-Period VMT & VHT

	AM (6-10am)		PM (3-7pm)	
District	**Total VMT**	**Total VHT**	**Total VMT**	**Total VHT**
Camden	95,117	2,849	99,988	3,192
South Camden	50,532	1,343	58,944	1,632
Gloucester City	77,416	2,351	93,763	3,385
Westville	91,346	3,198	109,500	3,719
Woodbury	120,373	3,525	135,212	4,108
Woodbury Heights	38,226	1,062	40,286	1,147
Wenonah	36,999	1,162	42,032	1,402
Pitman	67,079	1,820	77,238	2,121
Glassboro	44,239	1,545	48,426	1,704
Total	**621,334**	**18,859**	**705,392**	**22,414**

Table 5A-27: 2017 GCL Peak-Period VMT & VHT

	AM (6-10am)		PM (3-7pm)	
District	**Total VMT**	**Total VHT**	**Total VMT**	**Total VHT**
Camden	95,211	2,858	100,361	3,218
South Camden	49,909	1,316	58,870	1,628
Gloucester City	75,070	2,319	92,647	3,352
Westville	91,789	3,195	109,812	3,729
Woodbury	122,466	3,599	137,212	4,186
Woodbury Heights	38,461	1,075	40,670	1,164
Wenonah	37,572	1,191	42,782	1,443
Pitman	68,116	1,862	78,230	2,172
Glassboro	45,154	1,587	49,468	1,752
Total	**623,749**	**19,003**	**710,052**	**22,644**

Table 5A-28: 2025 No-Action GCL
Peak-Period VMT & VHT

	AM (6-10am)		PM (3-7pm)	
District	**Total VMT**	**Total VHT**	**Total VMT**	**Total VHT**
Camden	95,587	2,892	101,863	3,321
South Camden	47,492	1,212	58,570	1,611
Gloucester City	66,373	2,195	88,313	3,219
Westville	93,580	3,184	111,070	3,768
Woodbury	131,204	3,907	145,511	4,515
Woodbury Heights	39,413	1,127	42,239	1,230
Wenonah	39,954	1,313	45,918	1,618
Pitman	72,426	2,039	82,323	2,386
Glassboro	49,002	1,765	53,865	1,955
Total	**635,031**	**19,635**	**729,674**	**23,623**

Table 5A-29: 2040 No-Action GCL
Peak-Period VMT & VHT

	AM (6-10am)		PM (3-7pm)	
District	**Total VMT**	**Total VHT**	**Total VMT**	**Total VHT**
Camden	97,067	2,965	103,281	3,391
South Camden	48,350	1,241	59,605	1,656
Gloucester City	67,789	2,294	89,764	3,353
Westville	95,861	3,379	113,595	3,970
Woodbury	135,310	4,127	149,554	4,733
Woodbury Heights	41,482	1,220	44,497	1,325
Wenonah	43,332	1,501	49,404	1,831
Pitman	76,535	2,243	86,188	2,628
Glassboro	53,628	1,987	58,281	2,178
Total	**659,353**	**20,957**	**754,170**	**25,066**

Table 5A-30: 2025 Build GCL
Peak-Period VMT & VHT

	AM (6-10am)		PM (3-7pm)	
District	**Total VMT**	**Total VHT**	**Total VMT**	**Total VHT**
Camden	93,863	2,839	99,882	3,256
South Camden	46,201	1,178	57,087	1,570
Gloucester City	64,019	2,122	85,608	3,130
Westville	92,064	3,135	109,327	3,710
Woodbury	129,800	3,865	143,898	4,464
Woodbury Heights	38,411	1,098	41,088	1,195
Wenonah	38,455	1,262	44,196	1,556
Pitman	71,512	2,013	81,273	2,355
Glassboro	47,998	1,728	52,712	1,911
Total	**622,323**	**19,240**	**715,072**	**23,147**

Table 5A-31: 2040 Build GCL
Peak-Period VMT & VHT

	AM (6-10am)		PM (3-7pm)	
District	**Total VMT**	**Total VHT**	**Total VMT**	**Total VHT**
Camden	95,231	2,907	101,181	3,322
South Camden	46,940	1,203	57,993	1,611
Gloucester City	65,256	2,213	86,867	3,256
Westville	94,254	3,327	111,757	3,907
Woodbury	133,801	4,080	147,828	4,677
Woodbury Heights	40,410	1,187	43,271	1,287
Wenonah	41,699	1,442	47,536	1,760
Pitman	75,526	2,213	85,034	2,592
Glassboro	52,505	1,945	56,997	2,128
Total	**645,622**	**20,517**	**738,465**	**24,540**

Table 5A-32: 2025 GCL Peak-Period VMT Composites

	AM (6-10am)			PM (3-7pm)		
District	**2017 VMT**	**2025 No-Action VMT**	**2025 Build VMT**	**2017 VMT**	**2025 No-Action VMT**	**2025 Build VMT**
Camden	95,211	95,587	93,863	100,361	101,863	99,882
South Camden	49,909	47,492	46,201	58,870	58,570	57,087
Gloucester City	75,070	66,373	64,019	92,647	88,313	85,608
Westville	91,789	93,580	92,064	109,812	111,070	109,327
Woodbury	122,466	131,204	129,800	137,212	145,511	143,898
Woodbury Heights	38,461	39,413	38,411	40,670	42,239	41,088
Wenonah	37,572	39,954	38,455	42,782	45,918	44,196
Pitman	68,116	72,426	71,512	78,230	82,323	81,273
Glassboro	45,154	49,002	47,998	49,468	53,865	52,712
Total	**623,749**	**635,031**	**622,323**	**710,052**	**729,674**	**715,072**
% Change in Total VMT from 2017		***1.81%***	***-0.23%****		***2.76%***	***0.71%****

* 2.01% decrease in VMT between 2025 No-Action and Build condition for both AM and PM peaks

Table 5A-33: 2040 GCL Peak-Period VMT Composites

	AM (6-10am)			PM (3-7pm)		
District	**2017 VMT**	**2040 No-Action VMT**	**2040 Build VMT**	**2017 VMT**	**2040 No-Action VMT**	**2040 Build VMT**
Camden	95,211	97,067	95,231	100,361	103,281	101,181
South Camden	49,909	48,350	46,940	58,870	59,605	57,993
Gloucester City	75,070	67,789	65,256	92,647	89,764	86,867
Westville	91,789	95,861	94,254	109,812	113,595	111,757
Woodbury	122,466	135,310	133,801	137,212	149,554	147,828
Woodbury Heights	38,461	41,482	40,410	40,670	44,497	43,271
Wenonah	37,572	43,332	41,699	42,782	49,404	47,536
Pitman	68,116	76,535	75,526	78,230	86,188	85,034
Glassboro	45,154	53,628	52,505	49,468	58,281	56,997
Total	**623,749**	**659,353**	**645,622**	**710,052**	**754,170**	**738,465**
% Change in Total VMT from 2017		***5.71%***	***3.51%****		***6.21%***	***4.00%****

*2.08% decrease in VMT between 2040 No-Action and Build condition for both AM and PM peaks

Appendix 5B: Traffic Volume Data

File Name: M:\Final Data\TQC 2017\Projects\2017-029-139-Glassboro-Camden Light Rail\TMC\Stage 2\029-01.ppd
Start Date: 10/3/2017
Start Time: 7:30:00 AM
Site Code: 029-01
Comment 1: Total
Comment 2:
Comment 3:
Comment 4:

Start Time	Broadway Southbound				Monmouth Street Westbound				Broadway Northbound				Monmouth Street Eastbound			
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds
07:30 AM	10	64	24	0	10	6	4	0	4	158	2	0	10	48	6	0
07:45 AM	2	86	16	0	24	10	2	0	0	184	10	0	10	32	6	0
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	4	174	8	0	2	0	2	0	2	60	4	0	10	26	14	0
04:45 PM	16	158	2	0	2	2	0	0	2	92	14	0	18	30	24	0

Start Time	Broadway Southbound				Monmouth Street Westbound				Broadway Northbound				Monmouth Street Eastbound				Sum
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
Total AM	12	150	40	0	34	16	6	0	10	342	12	0	20	80	12	0	734
Total PM	20	332	10	0	4	2	2	0	4	158	18	0	28	56	38	0	672

File Name: M:\Final Data\TQC 2017\Projects\2017-029-139-Glassboro-Camden Light Rail\TMC\Stage 2\029-02.ppd
Start Date: 10/3/2017
Start Time: 7:30:00 AM
Site Code: 029-02
Comment 1: Total
Comment 2:
Comment 3:
Comment 4:

Start Time	Broadway Southbound				Market St Westbound				Broadway Northbound				Market St Eastbound			
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds
07:30 AM	52	62	10	0	24	64	68	0	4	132	66	0	16	96	6	0
07:45 AM	89	108	6	0	28	46	46	0	2	160	88	0	22	156	16	0
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	46	122	10	0	86	66	24	0	6	73	30	0	10	88	14	0
04:45 PM	64	126	12	0	36	54	42	0	8	92	24	0	8	44	10	0

Start Time	Broadway Southbound				Market St Westbound				Broadway Northbound				Market St Eastbound				Total
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
Total AM	112	170	18	0	52	132	114	0	6	112	132	0	38	252	22	0	1360
Total PM	110	250	22	0	82	120	66	0	12	162	54	0	18	132	24	0	1032

File Name: M:\Final Data\TQC 2017\Projects\2017-029-139-Glassboro-Camden Light Rail\TMC\Stage 2\029-03.ppd
Start Date: 10/3/2017
Start Time: 7:30:00 AM
Site Code: 029-03
Comment 1: Total
Comment 2:
Comment 3:
Comment 4:

	Broadway Westbound			Delsea Dr Northbound			Broadway Eastbound		
Start Time	Left	Thru	Peds	Left	Right	Peds	Thru	Right	Peds
07:30 AM	94	36	0	0	470	0	234	4	0
07:45 AM	110	64	0	0	460	0	234	6	0
08:00 AM	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0
09:00 AM	0	0	0	0	0	0	0	0	0
09:15 AM	0	0	0	0	0	0	0	0	0
09:30 AM	0	0	0	0	0	0	0	0	0
09:45 AM	0	0	0	0	0	0	0	0	0
10:00 AM	0	0	0	0	0	0	0	0	0
10:15 AM	0	0	0	0	0	0	0	0	0
10:30 AM	0	0	0	0	0	0	0	0	0
10:45 AM	0	0	0	0	0	0	0	0	0
11:00 AM	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0
12:00 PM	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	0
01:00 PM	0	0	0	0	0	0	0	0	0
01:15 PM	0	0	0	0	0	0	0	0	0
01:30 PM	0	0	0	0	0	0	0	0	0
01:45 PM	0	0	0	0	0	0	0	0	0
02:00 PM	0	0	0	0	0	0	0	0	0
02:15 PM	0	0	0	0	0	0	0	0	0
02:30 PM	0	0	0	0	0	0	0	0	0
02:45 PM	0	0	0	0	0	0	0	0	0
03:00 PM	0	0	0	0	0	0	0	0	0
03:15 PM	0	0	0	0	0	0	0	0	0
03:30 PM	0	0	0	0	0	0	0	0	0
03:45 PM	0	0	0	0	0	0	0	0	0
04:00 PM	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0
04:30 PM	392	174	0	0	214	0	124	4	0
04:45 PM	368	156	0	0	174	0	124	8	0

	Broadway Westbound			Delsea Dr Northbound			Broadway Eastbound			Total
Start Time	Left	Thru	Peds	Left	Right	Peds	Thru	Right	Peds	
Peak (AM)	204	100	0	0	930	0	468	10	0	1712
Peak (PM)	760	330	0	0	388	0	248	12	0	1738

File Name: M:\Final Data\TQC 2017\Projects\2017-029-139-Glassboro-Camden Light Rail\TMC\Stage 2\029-04.ppd
Start Date: 10/3/2017
Start Time: 7:30:00 AM
Site Code: 029-04
Comment 1: Total
Comment 2:
Comment 3:
Comment 4:

	Broadway Southbound				E Olive St Westbound				Broadway Northbound				E Olive St Eastbound			
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds
07:30 AM	16	2	16	0	0	70	24	0	14	170	12	0	40	64	0	0
07:45 AM	24	4	36	0	0	60	4	0	14	126	18	0	40	102	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	20	158	12	0	14	58	12	0	10	66	8	0	26	58	22	0
04:45 PM	14	124	14	0	6	60	4	0	20	90	20	0	34	112	22	0

	Broadway Southbound				E Olive St Westbound				Broadway Northbound				E Olive St Eastbound				Total
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
Total (AM)	40	6	52	0	0	130	28	0	28	296	30	0	80	166	0	0	830
Total (PM)	34	282	26	0	20	118	16	0	30	156	28	0	60	170	44	0	984

File Name: M:\Final Data\TQC 2017\Projects\2017-029-139-Glassboro-Camden Light Rail\TMC\Stage 2\029-05.ppd
Start Date: 10/3/2017
Start Time: 7:30:00 AM
Site Code: 029-05
Comment 1: Total
Comment 2:
Comment 3:
Comment 4:

	N Broad St Southbound				E Red Bank Ave Westbound				N Broad St Northbound				W Red Bank Ave Eastbound			
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds
07:30 AM	48	206	24	0	38	142	28	0	64	282	68	0	12	150	44	0
07:45 AM	58	210	30	0	30	190	34	0	72	250	60	0	12	134	46	0
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	112	224	20	0	48	134	46	0	60	222	64	0	40	156	38	0
04:45 PM	82	242	14	0	46	92	30	0	52	214	52	0	44	148	42	0

	N Broad St Southbound				E Red Bank Ave Westbound				N Broad St Northbound				W Red Bank Ave Eastbound				
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Total
Total (AM)	106	416	54	0	68	332	62	0	136	532	128	0	24	284	90	0	2232
Total (PM)	194	466	34	0	94	226	76	0	112	436	116	0	84	304	80	0	2222

File Name: M:\Final Data\TQC 2017\Projects\2017-029-139-Glassboro-Camden Light Rail\TMC\Stage 2\029-06.ppd
Start Date: 10/3/2017
Start Time: 7:30:00 AM
Site Code: 029-06
Comment 1: Total
Comment 2:
Comment 3:
Comment 4:

	N Broad St Southbound				Cooper St Westbound				N Broad St Northbound				Delaware St Eastbound			
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds
07:30 AM	26	188	24	0	32	136	6	0	34	338	28	0	64	180	26	0
07:45 AM	26	196	26	0	40	148	26	0	24	310	12	0	60	136	14	0
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	34	278	54	0	62	138	20	0	26	206	32	0	60	126	16	0
04:45 PM	22	278	68	0	60	165	22	0	30	244	30	0	38	138	24	0

	N Broad St Southbound				Cooper St Westbound				N Broad St Northbound				Delaware St Eastbound				
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Total
Total (AM)	54	380	50	0	72	306	26	0	58	614	40	0	184	278	40	0	2082
Total (PM)	56	534	102	0	102	288	42	0	56	450	62	0	98	264	40	0	2172

File Name: M:\Final Data\TQC 2017\Projects\2017-029-139-Glassboro-Camden Light Rail\TMC\Stage 2\029-08.ppd
Start Date: 10/3/2017
Start Time: 7:30:00 AM
Site Code: 029-08
Comment 1: Total
Comment 2:
Comment 3:
Comment 4:

	Marlton Blvd Southbound				Center St Westbound				Marlton Blvd Northbound				Center St Eastbound			
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds
07:30 AM	48	82	8	0	8	114	36	0	14	62	16	0	14	224	36	0
07:45 AM	44	96	8	0	20	130	70	0	30	98	14	0	35	220	56	0
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	52	110	26	0	6	222	52	0	108	104	16	0	14	164	80	0
04:45 PM	100	108	20	0	16	196	36	0	96	74	6	0	20	118	72	0

	Marlton Blvd Southbound				Center St Westbound				Marlton Blvd Northbound				Center St Eastbound				
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Sum
Total (AM)	92	182	16	0	28	244	106	0	44	160	30	0	49	444	92	0	1438
Total (PM)	152	218	46	0	22	418	110	0	204	178	22	0	34	282	152	0	1640

File Name: M:\Final Data\TQC 2017\Projects\2017-029-139-Glassboro-Camden Light Rail\TMC\Stage 2\029-07.ppd
Start Date: 10/3/2017
Start Time: 7:30:00 AM
Site Code: 029-07
Comment 1: Total
Comment 2:
Comment 3:
Comment 4:

	S Evergreen Ave Southbound				E Barber Ave Westbound				S Evergreen Ave Northbound				E Barber Ave Eastbound			
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds
07:30 AM	102	152	28	0	36	112	68	0	6	240	48	0	18	104	28	0
07:45 AM	40	162	18	0	72	120	48	0	24	292	34	0	10	74	6	0
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	78	306	16	0	62	60	24	0	22	244	64	0	22	116	32	0
04:45 PM	64	322	18	0	78	50	38	0	6	244	74	0	48	168	20	0

	S Evergreen Ave Southbound				E Barber Ave Westbound				S Evergreen Ave Northbound				E Barber Ave Eastbound				
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Total
Total (AM)	142	314	46	0	108	172	116	0	30	532	82	0	28	178	34	0	1202
Total (PM)	142	628	34	0	140	110	62	0	28	488	138	0	68	284	52	0	2214

File Name: M:\Final Data\TQC 2017\Projects\2017-029-139-Glassboro-Camden Light Rail\TMC\Stage 2\029-09.ppd
Start Date: 10/3/2017
Start Time: 7:30:00 AM
Site Code: 029-09
Comment 1: Total
Comment 2:
Comment 3:
Comment 4:

	Glassboro Rd Southbound				Tyles Mill Rd Westbound				Glassboro Rd Northbound				Tyles Mill Rd Eastbound			
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds
07:30 AM	52	248	4	0	0	114	74	0	40	320	0	0	40	88	20	0
07:45 AM	56	284	12	0	2	104	116	0	24	406	0	0	52	62	25	0
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	82	444	42	0	6	62	86	0	44	330	6	0	28	76	38	0
04:45 PM	70	564	18	0	4	88	74	0	40	322	4	0	20	108	36	0

	Glassboro Rd Southbound				Tyles Mill Rd Westbound				Glassboro Rd Northbound				Tyles Mill Rd Eastbound				
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Total
Total (AM)	88	532	16	0	2	218	190	0	64	986	0	0	92	148	40	0	2382
Total (PM)	152	1008	60	0	10	150	160	0	84	652	10	0	48	176	74	0	2564

File Name: M:\Final Data\TQC 2017\Projects\2017-029-139-Glassboro-Camden Light Rail\TMC\Stage 2\029-10.ppd
Start Date: 10/3/2017
Start Time: 7:30:00 AM
Site Code: 029-10
Comment 1: Total
Comment 2:
Comment 3:
Comment 4:

	S Broadway Southbound			Pitman Ave Westbound			S Broadway Northbound		
Start Time	Left	Thru	Peds	Left	Right	Peds	Thru	Right	Peds
07:30 AM	8	98	0	36	8	0	80	10	0
07:45 AM	14	82	0	14	20	0	86	0	0
08:00 AM	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0
09:00 AM	0	0	0	0	0	0	0	0	0
09:15 AM	0	0	0	0	0	0	0	0	0
09:30 AM	0	0	0	0	0	0	0	0	0
09:45 AM	0	0	0	0	0	0	0	0	0
10:00 AM	0	0	0	0	0	0	0	0	0
10:15 AM	0	0	0	0	0	0	0	0	0
10:30 AM	0	0	0	0	0	0	0	0	0
10:45 AM	0	0	0	0	0	0	0	0	0
11:00 AM	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0
12:00 PM	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	0
01:00 PM	0	0	0	0	0	0	0	0	0
01:15 PM	0	0	0	0	0	0	0	0	0
01:30 PM	0	0	0	0	0	0	0	0	0
01:45 PM	0	0	0	0	0	0	0	0	0
02:00 PM	0	0	0	0	0	0	0	0	0
02:15 PM	0	0	0	0	0	0	0	0	0
02:30 PM	0	0	0	0	0	0	0	0	0
02:45 PM	0	0	0	0	0	0	0	0	0
03:00 PM	0	0	0	0	0	0	0	0	0
03:15 PM	0	0	0	0	0	0	0	0	0
03:30 PM	0	0	0	0	0	0	0	0	0
03:45 PM	0	0	0	0	0	0	0	0	0
04:00 PM	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0
04:30 PM	18	128	0	54	24	0	114	10	0
04:45 PM	18	102	0	50	30	0	82	8	0

	S Broadway Southbound			Pitman Ave Westbound			S Broadway Northbound			
Start Time	Left	Thru	Peds	Left	Right	Peds	Thru	Right	Peds	Total
Total (AM)	22	180	0	50	28	0	146	10	0	436
Total (PM)	36	230	0	104	54	0	196	18	0	638

File Name: M:\Final Data\TQC 2017\Projects\2017-029-139-Glassboro-Camden Light Rail\TMC\Stage 2\029-12.ppd
Start Date: 10/3/2017
Start Time: 7:30:00 AM
Site Code: 029-12
Comment 1: Total
Comment 2:
Comment 3:
Comment 4:

	N Main St Southbound				High St E Westbound				N Main St Northbound				High St W Eastbound			
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds
07:30 AM	18	90	52	0	26	122	38	0	8	156	16	0	64	86	10	0
07:45 AM	6	60	48	0	22	148	42	0	8	166	16	0	60	126	4	0
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	64	126	96	0	20	128	44	0	6	150	40	0	82	150	8	0
04:45 PM	52	138	72	0	28	168	40	0	4	142	30	0	76	144	6	0

	N Main St Southbound				High St E Westbound				N Main St Northbound				High St W Eastbound				Total
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
Total (AM)	24	150	100	0	48	270	80	0	16	322	22	0	124	212	14	0	1102
Total (PM)	106	264	168	0	48	296	84	0	10	292	70	0	158	294	14	0	1796

File Name: M:\Final Data\TQC 2017\Projects\2017-029-139-Glassboro-Camden Light Rail\TMC\Stage 2\029-11.ppd
Start Date: 10/3/2017
Start Time: 7:30:00 AM
Site Code: 029-11
Comment 1: Total
Comment 2:
Comment 3:
Comment 4:

	Joseph L Bowe Blvd Southbound				Mullica Hill Rd Westbound				N Harvard Rd Northbound				Mullica Hill Rd Eastbound			
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds
07:30 AM	44	42	88	0	0	150	56	0	14	46	0	0	278	168	2	0
07:45 AM	44	62	124	0	0	130	88	0	26	76	0	0	238	182	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	66	36	242	0	2	194	78	0	30	46	4	0	208	176	4	0
04:45 PM	88	44	272	0	4	192	100	0	16	70	4	0	292	210	2	0

	Joseph L Bowe Blvd Southbound				Mullica Hill Rd Westbound				N Harvard Rd Northbound				Mullica Hill Rd Eastbound				Total
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
Total (AM)	88	104	212	0	0	280	144	0	40	122	0	0	516	350	2	0	1858
Total (PM)	156	80	514	0	6	386	178	0	46	116	8	0	410	386	6	0	2392

File Name: M:\Final Data\TQC 2017\Projects\2017-029-139-Glassboro-Camden Light Rail\TMC\Stage 2\029-13.ppd
Start Date: 10/3/2017
Start Time: 7:30:00 AM
Site Code: 029-13
Comment 1: Total
Comment 2:
Comment 3:
Comment 4:

	Broadway Southbound			Duncan Ave Westbound			Broadway Northbound		
Start Time	Left	Thru	Peds	Left	Right	Peds	Thru	Right	Peds
07:30 AM	8	34	0	2	16	0	238	12	0
07:45 AM	12	52	0	2	10	0	170	0	0
08:00 AM	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0
09:00 AM	0	0	0	0	0	0	0	0	0
09:15 AM	0	0	0	0	0	0	0	0	0
09:30 AM	0	0	0	0	0	0	0	0	0
09:45 AM	0	0	0	0	0	0	0	0	0
10:00 AM	0	0	0	0	0	0	0	0	0
10:15 AM	0	0	0	0	0	0	0	0	0
10:30 AM	0	0	0	0	0	0	0	0	0
10:45 AM	0	0	0	0	0	0	0	0	0
11:00 AM	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0
12:00 PM	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	0
01:00 PM	0	0	0	0	0	0	0	0	0
01:15 PM	0	0	0	0	0	0	0	0	0
01:30 PM	0	0	0	0	0	0	0	0	0
01:45 PM	0	0	0	0	0	0	0	0	0
02:00 PM	0	0	0	0	0	0	0	0	0
02:15 PM	0	0	0	0	0	0	0	0	0
02:30 PM	0	0	0	0	0	0	0	0	0
02:45 PM	0	0	0	0	0	0	0	0	0
03:00 PM	0	0	0	0	0	0	0	0	0
03:15 PM	0	0	0	0	0	0	0	0	0
03:30 PM	0	0	0	0	0	0	0	0	0
03:45 PM	0	0	0	0	0	0	0	0	0
04:00 PM	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0
04:30 PM	6	178	0	6	8	0	106	2	0
04:45 PM	6	158	0	2	10	0	110	4	0

	Broadway Southbound			Duncan Ave Westbound			Broadway Northbound			
Start Time	Left	Thru	Peds	Left	Right	Peds	Thru	Right	Peds	Total
Total (AM)	20	86	0	4	26	0	408	12	0	556
Total (PM)	12	336	0	8	18	0	216	6	0	596

File Name: M:\Final Data\TQC 2017\Projects\2017-029-139-Glassboro-Camden Light Rail\TMC\Stage 2\029-14.ppd
Start Date: 10/3/2017
Start Time: 7:30:00 AM
Site Code: 029-14
Comment 1: Total
Comment 2:
Comment 3:
Comment 4:

	Railroad Ave Southbound				E Barber Ave Westbound				Railroad Ave Northbound				E Barber Ave Eastbound			
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds
07:30 AM	14	8	18	0	13	126	14	0	0	82	54	0	6	86	0	0
07:45 AM	4	14	6	0	22	134	28	0	0	80	40	0	4	34	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	8	54	24	0	12	100	10	0	8	54	62	0	2	82	2	0
04:45 PM	26	64	38	0	20	102	16	0	2	24	76	0	4	102	2	0

	Railroad Ave Southbound				E Barber Ave Westbound				Railroad Ave Northbound				E Barber Ave Eastbound				
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Total
Total (AM)	18	22	18	0	82	390	82	0	0	180	96	0	10	120	0	0	754
Total (PM)	32	118	62	0	32	202	26	0	8	78	138	0	6	184	4	0	956

File Name: M:\Final Data\TQC 2017\Projects\2017-029-139-Glassboro-Camden Light Rail\TMC\Stage 2\029-15.ppd
Start Date: 10/3/2017
Start Time: 7:30:00 AM
Site Code: 029-15
Comment 1: Total
Comment 2:
Comment 3:
Comment 4:

	Cooper Hospital Driveway		MLK Blvd Westbound				S 6th Street Northbound		MLK Blvd Eastbound		
Start Time	Right	Peds	Left	Thru	Right	Peds	Right	Peds	Thru	Right	Peds
07:30 AM	0	0	64	346	26	0	120	0	168	8	0
07:45 AM	0	0	96	385	34	0	66	0	142	6	0
08:00 AM	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0
09:00 AM	0	0	0	0	0	0	0	0	0	0	0
09:15 AM	0	0	0	0	0	0	0	0	0	0	0
09:30 AM	0	0	0	0	0	0	0	0	0	0	0
09:45 AM	0	0	0	0	0	0	0	0	0	0	0
10:00 AM	0	0	0	0	0	0	0	0	0	0	0
10:15 AM	0	0	0	0	0	0	0	0	0	0	0
10:30 AM	0	0	0	0	0	0	0	0	0	0	0
10:45 AM	0	0	0	0	0	0	0	0	0	0	0
11:00 AM	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0	0	0
12:00 PM	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	0	0	0
01:00 PM	0	0	0	0	0	0	0	0	0	0	0
01:15 PM	0	0	0	0	0	0	0	0	0	0	0
01:30 PM	0	0	0	0	0	0	0	0	0	0	0
01:45 PM	0	0	0	0	0	0	0	0	0	0	0
02:00 PM	0	0	0	0	0	0	0	0	0	0	0
02:15 PM	0	0	0	0	0	0	0	0	0	0	0
02:30 PM	0	0	0	0	0	0	0	0	0	0	0
02:45 PM	0	0	0	0	0	0	0	0	0	0	0
03:00 PM	0	0	0	0	0	0	0	0	0	0	0
03:15 PM	0	0	0	0	0	0	0	0	0	0	0
03:30 PM	0	0	0	0	0	0	0	0	0	0	0
03:45 PM	0	0	0	0	0	0	0	0	0	0	0
04:00 PM	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	2	0	24	134	22	0	118	0	516	2	0
04:45 PM	0	0	16	128	22	0	68	0	392	4	0

	Cooper Hospital Driveway		MLK Blvd Westbound				S 6th Street Northbound		MLK Blvd Eastbound			
Start Time	Right	Peds	Left	Thru	Right	Peds	Right	Peds	Thru	Right	Peds	Total
Total (AM)	0	0	160	734	62	0	186	0	310	14	0	1466
Total (PM)	2	0	40	262	44	0	186	0	908	6	0	1448

File Name: M:\Final Data\TQC 2017\Projects\2017-029-139-Glassboro-Camden Light Rail\TMC\Stage 2\029-16.ppd
Start Date: 10/3/2017
Start Time: 7:00:00 AM
Site Code: 029-16
Comment 1: Total
Comment 2:
Comment 3:
Comment 4:

	Haddon Avenue Southbound				Cooper Plaza Westbound				Haddon Avenue Northbound				Benson Street Eastbound			
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds
07:00 AM	5	34	29	0	2	4	3	0	37	34	2	0	25	1	6	0
07:15 AM	2	46	28	0	3	0	5	0	61	46	9	0	27	1	12	0
07:30 AM	9	51	36	0	6	1	7	0	44	58	6	0	73	0	24	0
07:45 AM	10	77	33	0	1	1	6	0	45	93	7	0	45	2	19	0
08:00 AM	10	57	26	0	1	0	12	0	61	91	4	0	37	2	14	0
08:15 AM	8	56	41	0	3	1	6	0	59	89	5	0	19	0	12	0
08:30 AM	9	65	36	0	3	2	7	0	46	75	7	0	46	0	11	0
08:45 AM	8	51	33	0	3	1	13	0	53	90	7	0	35	0	13	0
09:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00 PM	4	104	39	0	8	4	46	0	25	71	1	0	48	0	22	0
04:15 PM	1	88	30	0	15	1	49	0	27	93	4	0	56	2	24	0
04:30 PM	7	77	26	0	17	1	66	0	18	79	1	0	52	2	21	0
04:45 PM	5	88	22	0	11	1	56	0	16	66	4	0	45	1	25	0
05:00 PM	4	67	28	0	16	0	55	0	18	91	3	0	55	1	29	0
05:15 PM	4	72	26	0	9	1	43	0	18	96	3	0	37	1	23	0
05:30 PM	9	47	24	0	7	0	37	0	24	41	2	0	49	0	24	0
05:45 PM	9	46	26	0	4	1	22	0	27	39	2	0	35	0	21	0

	Haddon Avenue Southbound				Cooper Plaza Westbound				Haddon Avenue Northbound				Benson Street Eastbound				
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Total
07:45 AM	10	77	33	0	1	1	6	0	45	93	7	0	45	2	19	0	
08:00 AM	10	57	26	0	1	0	12	0	61	91	4	0	37	2	14	0	
08:15 AM	8	56	41	0	3	1	6	0	59	89	5	0	19	0	12	0	
08:30 AM	9	65	36	0	3	2	7	0	46	75	7	0	46	0	11	0	
AM Total	37	275	136	0	8	4	31	0	150	348	23	0	147	4	56	0	1219
04:15 PM	1	88	30	0	15	1	49	0	27	93	4	0	56	2	24	0	
04:30 PM	7	77	26	0	17	1	66	0	18	79	1	0	52	2	21	0	
04:45 PM	5	88	22	0	11	1	56	0	16	66	4	0	45	1	25	0	
05:00 PM	4	67	28	0	16	0	55	0	18	91	3	0	55	1	29	0	
PM Total	17	320	106	0	59	3	226	0	80	371	12	0	208	6	99	0	1429

File Name: M:\Final Data\TQC 2017\Projects\2017-029-139-Glassboro-Camden Light Rail\TMC\Stage 2\029-17.ppd
Start Date: 10/3/2017
Start Time: 7:00:00 AM
Site Code: 029-17
Comment 1: Total
Comment 2:
Comment 3:
Comment 4:

	Broadway Southbound					Ferry Ave Westbound					Broadway Northbound					Jasper St Eastbound					Ferry Ave From Northwest				
Start Time	Left	Thru	Right	Hard Right	Peds	Left	Thru	Bear Right	Right	Peds	Left	Bear Left	Thru	Right	Peds	Hard Left	Left	Thru	Right	Peds	Hard Left	Bear Left	Bear Right	Hard Right	Peds
07:00 AM	5	10	0	1	0	10	6	15	9	0	0	5	9	2	0	0	0	0	0	0	0	3	1	1	0
07:15 AM	6	13	5	3	0	6	6	23	6	0	1	9	14	2	0	0	0	0	0	0	0	3	11	4	0
07:30 AM	3	7	11	1	0	4	20	17	4	0	1	8	13	6	0	0	0	0	0	0	0	2	17	3	2	0
07:45 AM	5	16	6	0	0	6	25	19	7	0	1	19	17	6	0	0	0	0	0	0	0	1	33	8	4	0
08:00 AM	7	12	3	2	0	3	0	22	8	0	2	10	18	10	0	0	0	0	0	0	0	1	11	0	1	0
08:15 AM	11	14	2	1	0	7	6	19	11	0	3	9	12	7	0	0	0	0	0	0	0	2	6	3	1	0
08:30 AM	8	13	1	2	0	9	7	29	12	0	1	3	20	2	0	0	0	0	0	0	0	0	16	4	0	0
08:45 AM	7	16	2	2	0	6	3	8	12	0	0	7	17	11	0	0	0	0	0	0	0	1	11	4	0	0
09:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00 PM	13	34	4	5	0	7	5	12	11	0	2	0	24	10	0	0	0	0	0	0	2	25	21	1	0	
04:15 PM	16	35	5	3	0	10	3	11	17	0	0	3	17	6	0	0	0	0	0	0	5	24	22	2	0	
04:30 PM	16	45	5	5	0	10	7	13	14	0	1	7	23	10	0	0	0	0	0	0	4	25	36	2	0	
04:45 PM	15	37	2	3	0	4	4	8	12	0	2	2	22	12	0	0	0	0	0	0	3	22	36	2	0	
05:00 PM	12	34	2	7	0	9	6	8	11	0	0	2	18	7	0	0	0	0	0	0	4	31	39	5	0	
05:15 PM	9	35	3	1	0	6	6	3	15	0	0	4	12	8	0	0	0	0	0	0	1	23	17	0	0	
05:30 PM	11	26	3	2	0	4	5	14	8	0	0	4	17	6	0	0	0	0	0	0	4	16	7	0	0	
05:45 PM	8	30	1	2	0	5	6	13	12	0	1	1	21	8	0	0	0	0	0	0	0	15	8	0	0	

	Broadway Southbound					Ferry Ave Westbound					Broadway Northbound					Jasper St Eastbound					Ferry Ave From Northwest					Totals
Start Time	Left	Thru	Right	Hard Right	Peds	Left	Thru	Bear Right	Right	Peds	Left	Bear Left	Thru	Right	Peds	Hard Left	Left	Thru	Right	Peds	Hard Left	Bear Left	Bear Right	Hard Right	Peds	
07:45 AM	5	16	6	0	0	6	25	19	7	0	1	19	17	6	0	0	0	0	0	0	1	33	8	4	0	
08:00 AM	7	12	3	2	0	3	0	22	8	0	2	10	18	10	0	0	0	0	0	0	1	11	0	1	0	
08:15 AM	11	14	2	1	0	7	6	19	11	0	3	9	12	7	0	0	0	0	0	0	2	6	3	1	0	
08:30 AM	8	13	1	2	0	9	7	29	12	0	1	3	20	2	0	0	0	0	0	0	0	16	4	0	0	
AM Total	31	55	14	5	0	25	44	89	38	0	7	41	67	25	0	0	0	0	0	0	4	66	15	6	0	538
04:15 PM	16	35	5	3	0	10	3	11	17	0	0	3	17	6	0	0	0	0	0	0	5	24	22	2	0	
04:30 PM	16	45	5	5	0	10	7	13	14	0	1	7	23	10	0	0	0	0	0	0	4	25	36	2	0	
04:45 PM	15	37	2	3	0	4	4	8	12	0	2	2	22	12	0	0	0	0	0	0	3	22	36	2	0	
05:00 PM	12	34	2	7	0	9	6	8	11	0	0	2	18	7	0	0	0	0	0	0	4	31	39	5	0	
PM Total	59	151	14	18	0	33	22	40	54	0	3	14	80	35	0	0	0	0	0	0	16	102	133	11	0	789

File Name: M:\Final Data\TQC 2017\Projects\2017-029-139-Glassboro-Camden Light Rail\TMC\Stage 2\029-18.ppd
Start Date: 10/3/2017
Start Time: 7:00:00 AM
Site Code: 029-18
Comment 1: Total
Comment 2:
Comment 3:
Comment 4:

	Nixle St Southbound					Ferry Ave Westbound					Nixle St Northbound					Ferry Ave Eastbound				
Start Time	Left	Thru	Right	Peds		Left	Thru	Right	Peds		Left	Thru	Right	Peds		Left	Thru	Right	Peds	
07:00 AM	2	5	0	0		3	25	6	0		19	4	6	0		1	19	2	0	
07:15 AM	1	6	1	0		7	29	4	0		30	6	2	0		1	19	7	0	
07:30 AM	2	16	2	0		7	23	4	0		24	9	4	0		1	18	6	0	
07:45 AM	3	16	2	0		3	32	5	0		29	8	7	0		2	32	11	0	
08:00 AM	0	13	0	0		6	30	4	0		22	18	4	0		0	30	6	0	
08:15 AM	1	5	2	0		8	32	3	0		24	11	4	0		0	16	6	0	
08:30 AM	1	14	2	0		7	30	4	0		29	11	1	0		1	29	11	0	
08:45 AM	7	6	1	0		11	19	6	0		14	3	4	0		2	26	6	0	
09:00 AM	0	6	0	0		6	0	0	0		0	6	0	0		0	0	0	0	
09:15 AM	0	6	0	0		0	0	0	0		0	6	0	0		0	0	0	0	
09:30 AM	0	6	0	0		0	0	0	0		0	6	0	0		0	0	0	0	
09:45 AM	0	6	0	0		0	0	0	0		0	6	0	0		0	0	0	0	
10:00 AM	0	6	0	0		0	0	0	0		0	6	0	0		0	0	0	0	
10:15 AM	0	6	0	0		0	0	0	0		0	6	0	0		0	0	0	0	
10:30 AM	0	6	0	0		0	0	0	0		0	6	0	0		0	0	0	0	
10:45 AM	0	6	0	0		0	0	0	0		0	6	0	0		0	0	0	0	
11:00 AM	0	6	0	0		0	0	0	0		0	6	0	0		0	0	0	0	
11:15 AM	0	6	0	0		0	0	0	0		0	6	0	0		0	0	0	0	
11:30 AM	0	6	0	0		0	0	0	0		0	6	0	0		0	0	0	0	
11:45 AM	0	6	0	0		0	0	0	0		0	6	0	0		0	0	0	0	
12:00 PM	0	6	0	0		0	0	0	0		0	6	0	0		0	0	0	0	
12:15 PM	0	6	0	0		0	0	0	0		0	6	0	0		0	0	0	0	
12:30 PM	0	6	0	0		0	0	0	0		0	6	0	0		0	0	0	0	
12:45 PM	0	6	0	0		0	0	0	0		0	6	0	0		0	0	0	0	
01:00 PM	0	6	0	0		0	0	0	0		0	6	0	0		0	0	0	0	
01:15 PM	0	6	0	0		0	0	0	0		0	6	0	0		0	0	0	0	
01:30 PM	0	6	0	0		0	0	0	0		0	6	0	0		0	0	0	0	
01:45 PM	0	6	0	0		0	0	0	0		0	6	0	0		0	0	0	0	
02:00 PM	0	6	0	0		0	0	0	0		0	6	0	0		0	0	0	0	
02:15 PM	0	6	0	0		0	0	0	0		0	6	0	0		0	0	0	0	
02:30 PM	0	6	0	0		0	0	0	0		0	6	0	0		0	0	0	0	
02:45 PM	0	6	0	0		0	0	0	0		0	6	0	0		0	0	0	0	
03:00 PM	0	6	0	0		0	0	0	0		0	6	0	0		0	0	0	0	
03:15 PM	0	6	0	0		0	0	0	0		0	6	0	0		0	0	0	0	
03:30 PM	0	6	0	0		0	0	0	0		0	6	0	0		0	0	0	0	
03:45 PM	0	6	0	0		0	0	0	0		0	6	0	0		0	0	0	0	
04:00 PM	1	14	0	0		8	25	5	0		11	12	6	0		1	42	20	0	
04:15 PM	0	11	1	0		7	37	6	0		18	13	10	0		2	32	17	0	
04:30 PM	0	16	3	0		9	27	5	0		29	12	4	0		1	36	16	0	
04:45 PM	0	11	4	0		11	24	1	0		7	18	8	0		4	28	10	0	
05:00 PM	0	7	3	0		8	21	5	0		11	15	5	0		3	33	12	0	
05:15 PM	0	12	1	0		13	15	6	0		23	16	9	0		2	28	10	0	
05:30 PM	1	11	2	0		23	25	2	0		19	15	4	0		3	23	8	0	
05:45 PM	2	16	1	0		15	33	6	0		15	19	6	0		2	17	6	0	

	Nixle St Southbound					Ferry Ave Westbound					Nixle St Northbound					Ferry Ave Eastbound					Total
Start Time	Left	Thru	Right	Peds		Left	Thru	Right	Peds		Left	Thru	Right	Peds		Left	Thru	Right	Peds		
07:45 AM	3	16	2	0		3	32	5	0		29	8	7	0		2	32	11	0		
08:00 AM	0	13	0	0		6	30	4	0		22	18	4	0		0	30	6	0		
08:15 AM	1	5	2	0		8	32	3	0		24	11	4	0		0	16	6	0		
08:30 AM	1	14	2	0		7	30	4	0		29	11	1	0		1	29	11	0		
Total AM	5	48	6	0		24	124	16	0		104	48	16	0		3	107	34	0		527
04:00 PM	1	14	0	0		8	25	5	0		11	12	6	0		1	42	20	0		
04:15 PM	0	11	1	0		7	37	6	0		18	13	10	0		2	32	17	0		
04:30 PM	0	16	3	0		9	27	5	0		29	12	4	0		1	36	16	0		
04:45 PM	0	11	4	0		11	24	1	0		7	18	8	0		4	28	10	0		
Total PM	1	48	8	0		35	113	17	0		65	55	28	0		8	138	63	0		376

File Name: M:\Final Data\TQC 2017\Projects\2017-029-139-Glassboro-Camden Light Rail\TMC\Stage 2\029-19.ppd
Start Date: 10/3/2017
Start Time: 7:00:00 AM
Site Code: 029-19
Comment 1: Total
Comment 2:
Comment 3:
Comment 4:

Start Time	Woodbury Glassboro Rd Southbound				Landis Rd Westbound				Woodbury Glassboro Rd Northbound				Landis Rd Eastbound			
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds
07:00 AM	6	83	11	0	5	16	0	0	3	143	3	0	60	32	7	0
07:15 AM	7	77	15	0	6	27	1	0	5	212	3	0	53	31	11	0
07:30 AM	13	116	24	0	4	23	2	0	12	230	7	0	60	34	8	0
07:45 AM	21	109	35	0	5	32	1	0	9	191	2	0	55	27	3	0
08:00 AM	13	101	25	0	1	33	1	0	9	175	4	0	65	33	7	0
08:15 AM	23	98	23	0	2	29	1	0	13	160	2	0	54	36	7	0
08:30 AM	11	127	31	0	4	23	1	0	8	132	5	0	39	46	6	0
08:45 AM	9	108	30	0	5	29	3	0	7	133	4	0	45	37	4	0
09:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00 PM	14	186	37	0	3	37	4	0	10	140	3	0	49	32	12	0
04:15 PM	17	167	52	0	4	35	4	0	13	152	5	0	53	43	9	0
04:30 PM	13	170	59	0	7	38	1	0	13	160	3	0	25	46	11	0
04:45 PM	22	234	64	0	5	39	2	0	11	145	7	0	33	34	9	0
05:00 PM	17	209	62	0	6	42	4	0	16	130	17	0	40	66	15	0
05:15 PM	31	233	67	0	5	38	2	0	8	141	4	0	43	34	10	0
05:30 PM	29	199	69	0	4	38	2	0	16	134	1	0	50	39	10	0
05:45 PM	17	160	52	0	3	41	3	0	9	104	4	0	40	31	10	0

Start Time	Woodbury Glassboro Rd Southbound				Landis Rd Westbound				Woodbury Glassboro Rd Northbound				Landis Rd Eastbound				Total
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
07:30 AM	13	116	24	0	4	23	2	0	12	230	7	0	60	34	8	0	
07:45 AM	21	109	35	0	5	32	1	0	9	191	2	0	55	27	3	0	
08:00 AM	13	101	25	0	1	33	1	0	9	175	4	0	65	33	7	0	
08:15 AM	23	98	23	0	2	29	1	0	13	160	2	0	54	36	7	0	
Total (AM)	69	424	107	0	12	117	5	0	43	756	15	0	234	130	25	0	1977
04:45 PM	22	234	64	0	5	39	2	0	11	145	7	0	33	34	9	0	
05:00 PM	17	209	62	0	6	42	4	0	16	130	17	0	40	66	15	0	
05:15 PM	31	233	67	0	5	38	2	0	8	141	4	0	43	34	10	0	
05:30 PM	29	199	69	0	4	38	2	0	16	134	1	0	50	39	10	0	
Total (PM)	99	675	262	0	20	157	10	0	51	550	29	0	166	173	44	0	2451

File Name: M:\Final Data\TQC 2017\Projects\2017-029-139-Glassboro-Camden Ligh
Start Date: 10/3/2017
Start Time: 7:00:00 AM
Site Code: 029-20
Comment 1: Total
Comment 2:
Comment 3:
Comment 4:

Start Time	Rowe Blvd Southbound			N Campus Dr Westbound			Rowe Blvd Northbound		
	Left	Thru	Peds	Left	Right	Peds	Thru	Right	Peds
07:00 AM	1	58	0	2	0	0	78	12	0
07:15 AM	0	107	0	1	0	0	93	37	0
07:30 AM	0	97	0	1	4	0	164	33	0
07:45 AM	6	118	0	1	3	0	156	37	0
08:00 AM	0	70	0	0	3	0	100	15	0
08:15 AM	1	86	0	0	1	0	88	10	0
08:30 AM	1	57	0	1	4	0	124	20	0
08:45 AM	0	73	0	1	1	0	127	20	0
09:00 AM	0	0	0	0	0	0	0	0	0
09:15 AM	0	0	0	0	0	0	0	0	0
09:30 AM	0	0	0	0	0	0	0	0	0
09:45 AM	0	0	0	0	0	0	0	0	0
10:00 AM	0	0	0	0	0	0	0	0	0
10:15 AM	0	0	0	0	0	0	0	0	0
10:30 AM	0	0	0	0	0	0	0	0	0
10:45 AM	0	0	0	0	0	0	0	0	0
11:00 AM	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0
12:00 PM	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	0
01:00 PM	0	0	0	0	0	0	0	0	0
01:15 PM	0	0	0	0	0	0	0	0	0
01:30 PM	0	0	0	0	0	0	0	0	0
01:45 PM	0	0	0	0	0	0	0	0	0
02:00 PM	0	0	0	0	0	0	0	0	0
02:15 PM	0	0	0	0	0	0	0	0	0
02:30 PM	0	0	0	0	0	0	0	0	0
02:45 PM	0	0	0	0	0	0	0	0	0
03:00 PM	0	0	0	0	0	0	0	0	0
03:15 PM	0	0	0	0	0	0	0	0	0
03:30 PM	0	0	0	0	0	0	0	0	0
03:45 PM	0	0	0	0	0	0	0	0	0
04:00 PM	6	124	0	6	0	0	118	4	0
04:15 PM	0	145	0	1	8	0	130	14	0
04:30 PM	2	162	0	1	21	0	148	27	0
04:45 PM	5	259	0	1	27	0	164	25	0
05:00 PM	2	148	0	0	11	0	127	11	0
05:15 PM	0	130	0	1	5	0	108	9	0
05:30 PM	0	157	0	0	0	0	144	10	0
05:45 PM	0	156	0	0	0	0	139	12	0

Start Time	Rowe Blvd Southbound			N Campus Dr Westbound			Rowe Blvd Northbound			Total
	Left	Thru	Peds	Left	Right	Peds	Thru	Right	Peds	
07:15 AM	6	107	0	1	0	0	93	37	0	
07:30 AM	0	97	0	1	4	0	164	33	0	
07:45 AM	6	118	0	1	3	0	156	37	0	
08:00 AM	0	70	0	0	3	0	100	15	0	
Total (AM)	6	392	0	3	10	0	513	122	0	1330
04:15 PM	0	145	0	1	8	0	130	14	0	
04:30 PM	2	162	0	1	21	0	148	27	0	
04:45 PM	5	259	0	1	27	0	164	25	0	
05:00 PM	2	148	0	0	11	0	127	11	0	
Total (PM)	9	714	0	3	67	0	569	77	0	1439

File Name: 002-Ellis St & Sewell
Start Date: 9/12/2013
Start Time: 7:00:00 AM
Site Code: 00000002
Comment 1: Counter: DRT
Comment 2: Weather: Clear
Comment 3:
Comment 4:

	Sewell St				Ellis St				Sewell St				Ellis St			
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds
07:00 AM	0	0	0	0	0	30	4	0	3	0	19	0	8	40	0	0
07:15 AM	0	0	0	0	0	59	7	0	2	0	16	0	10	37	0	0
07:30 AM	0	0	0	0	0	59	6	0	5	0	22	0	11	58	0	0
07:45 AM	0	0	0	0	0	66	4	0	8	0	6	0	13	53	0	0
08:00 AM	0	0	0	0	0	57	8	0	6	0	21	0	20	46	0	0
08:15 AM	0	0	0	0	0	43	8	0	5	0	11	0	16	61	0	0
08:30 AM	0	0	0	0	0	35	3	0	6	0	11	0	19	54	0	0
08:45 AM	0	0	0	0	0	24	3	0	5	0	10	0	12	68	0	0
04:00 PM	0	0	0	0	0	57	6	0	2	0	21	0	13	69	0	0
04:15 PM	0	0	0	0	0	63	5	0	4	0	19	0	21	77	0	0
04:30 PM	0	0	0	0	0	61	7	0	6	0	18	0	17	67	0	0
04:45 PM	0	0	0	0	0	56	8	0	6	0	8	0	16	94	0	0
05:00 PM	0	0	0	0	0	46	10	0	11	0	15	0	20	65	0	0
05:15 PM	0	0	0	0	0	57	1	0	7	0	11	0	20	61	0	0
05:30 PM	0	0	0	0	0	63	8	0	4	0	16	0	17	72	0	0
05:45 PM	0	0	0	0	0	42	11	0	7	0	7	0	19	49	0	0
07:15 AM	0	0	0	0	0	59	7	0	2	0	16	0	10	37	0	0
07:30 AM	0	0	0	0	0	59	6	0	5	0	22	0	11	58	0	0
07:45 AM	0	0	0	0	0	66	4	0	8	0	6	0	13	53	0	0
08:00 AM	0	0	0	0	0	57	8	0	6	0	21	0	20	46	0	0
AM Peak Hour	**0**	**0**	**0**	**0**	**0**	**242**	**27**	**0**	**22**	**0**	**65**	**0**	**53**	**197**	**0**	**0**
PHF (by movement)						0.92	0.78		0.66		0.74		0.66	0.85		
Truck % (by approach)						10.3%	7.5%		13.5%		4.6%		18.9%	3.6%		
PHF (by approach)						0.96				0.80				0.91		
Truck % (by approach)						10.1%				6.8%				6.9%		
PHF (overall)								0.93								
Truck % (overall)								8.2%								
04:00 PM	0	0	0	0	0	57	6	0	2	0	21	0	13	69	0	0
04:15 PM	0	0	0	0	0	63	5	0	4	0	19	0	21	77	0	0
04:30 PM	0	0	0	0	0	61	7	0	6	0	18	0	17	67	0	0
04:45 PM	0	0	0	0	0	56	8	0	6	0	8	0	16	94	0	0
PM Peak Hour	**0**	**0**	**0**	**0**	**0**	**162**	**20**	**0**	**19**	**0**	**34**	**0**	**55**	**182**	**0**	**0**
PHF (by movement)						0.65	0.59		0.75		0.40		0.65	0.48		
Truck % (by approach)						5.5%	14.9%		0.0%		32.4%		3.6%	3.8%		
PHF (by approach)						0.86				0.54				0.54		
Truck % (by approach)						6.6%				20.8%				3.8%		
PHF (overall)								0.62								
Truck % (overall)								6.8%								

Growth Rates Used: 1.00

File Name: 007-Bowe & Carpenter.ppd
Start Date: 9/17/2013
Start Time: 7:00:00 AM
Site Code: 00000007
Comment 1: Counter: PH/RAS
Comment 2: Weather: Clear
Comment 3:
Comment 4:

	Bowe Blvd				Carpenter St				Bowe Blvd				Carpenter St			
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds
07:00 AM	3	61	3	0	2	17	24	0	6	37	3	0	13	14	8	0
07:15 AM	12	87	5	0	4	27	43	0	30	48	6	0	25	18	4	0
07:30 AM	11	166	18	0	5	30	56	1	36	48	8	0	37	34	17	0
07:45 AM	5	134	18	0	4	23	28	0	37	56	3	0	30	27	12	0
08:00 AM	13	91	4	0	0	20	13	0	17	70	8	0	13	29	7	0
08:15 AM	12	66	6	0	1	15	6	0	12	60	10	0	20	20	8	0
08:30 AM	4	81	4	0	4	19	12	0	7	46	13	0	7	22	11	0
08:45 AM	8	73	18	0	3	27	14	0	15	45	12	0	24	32	28	0
04:00 PM	20	109	12	1	22	12	31	0	19	114	18	0	13	31	16	0
04:15 PM	20	124	16	1	31	15	34	4	25	130	17	19	12	21	16	0
04:30 PM	17	102	13	7	13	31	33	5	24	112	15	7	17	16	23	1
04:45 PM	23	102	19	1	25	37	32	2	30	124	21	0	11	34	12	2
05:00 PM	23	89	11	2	15	20	14	3	20	91	13	4	14	17	23	2
05:15 PM	16	105	7	0	12	31	31	0	21	112	19	5	8	29	21	0
05:30 PM	21	86	13	1	12	25	29	1	14	111	10	0	16	13	52	0
05:45 PM	20	94	8	0	6	15	36	0	19	120	11	1	18	27	27	2
07:00 AM	3	61	3	0	2	17	24	0	6	37	3	0	13	14	8	0
07:15 AM	12	87	5	0	4	27	43	0	30	48	6	0	25	18	4	0
07:30 AM	11	166	18	0	5	30	56	1	36	48	8	0	37	34	17	0
07:45 AM	5	134	18	0	4	23	28	0	37	56	3	0	30	27	12	0
AM Peak Hour	**40**	**478**	**46**	**0**	**14**	**100**	**140**	**1**	**120**	**222**	**24**	**0**	**105**	**107**	**40**	**0**
PHF (by movement)	0.88	0.72	0.63		0.65	0.84	0.62	0.25	0.81	0.99	0.72		0.71	0.79	0.69	
Truck % (by approach)	0.0%	2.1%	0.0%		0.0%	8.0%	0.7%	0.0%	0.0%	1.8%	0.0%		4.8%	8.4%	12.4%	
PHF (by approach)		0.72				0.69				0.95				0.72		
Truck % (by approach)		1.8%				3.5%				1.1%				7.5%		
PHF (overall)								0.77								
Truck % (overall)								2.9%								
04:15 PM	20	124	16	1	31	15	34	4	25	130	17	19	12	21	16	0
04:30 PM	17	102	13	7	13	31	33	5	24	112	15	7	17	16	23	1
04:45 PM	23	102	19	1	25	37	32	2	30	124	21	0	11	34	12	2
05:00 PM	23	89	11	2	15	20	14	3	20	91	13	4	14	17	23	2
PM Peak Hour	**87**	**397**	**29**	**1**	**30**	**75**	**95**	**1**	**94**	**343**	**39**	**0**	**40**	**68**	**100**	**2**
PHF (by movement)	0.81	0.80	0.38	0.04	0.24	0.48	0.70	0.05	0.46	0.66	0.46	0.00	0.59	0.53	1.07	0.25
Truck % (by approach)	0.0%	2.4%	0.0%	0.0%	0.0%	2.8%	0.0%	0.0%	0.0%	1.2%	2.5%	0.0%	0.0%	1.5%	0.0%	0.0%
PHF (by approach)		0.60				0.51				0.58				0.90		
Truck % (by approach)		1.8%				1.0%				1.1%				0.5%		
PHF (overall)								0.64								
Truck % (overall)								1.2%								

Growth Rate Used: 1.00

File Name: 010-Broadway & Holly.ppd
Start Date: 7/24/2013
Start Time: 7:00:00 AM
Site Code: 00000010
Comment 1: Counter: Turner
Comment 2: Weather: Sunny
Comment 3:
Comment 4:

	Broadway Blvd From North				Holly Ave From East				Broadway Blvd From South				Holly Ave From West			
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds
07:00 AM	1	15	6	0	0	0	0	0	0	0	0	0	2	15	4	0
07:15 AM	5	22	8	0	7	14	1	0	4	25	7	0	4	21	5	0
07:30 AM	2	19	15	0	7	23	3	0	1	21	12	0	5	38	10	0
07:45 AM	2	31	8	0	19	30	5	0	1	29	13	0	10	29	7	0
08:00 AM	6	39	6	0	17	35	2	0	3	32	3	0	3	32	8	0
08:15 AM	3	21	12	0	15	18	3	0	1	33	6	0	3	33	4	0
08:30 AM	0	30	13	0	27	18	3	0	6	36	6	0	11	28	5	0
08:45 AM	0	32	18	0	23	30	7	0	2	41	4	0	10	31	4	0
09:00 AM	0	0	0	0	18	29	6	0	2	31	11	0	0	0	0	0
03:45 PM	0	0	0	0	0	0	0	0	6	40	8	0	10	35	8	0
04:00 PM	7	39	12	0	15	29	6	0	3	35	10	0	13	34	6	0
04:15 PM	7	53	15	0	13	33	16	0	4	47	7	0	22	50	9	0
04:30 PM	4	41	17	0	12	27	12	0	8	47	6	0	16	50	6	0
04:45 PM	14	58	15	0	18	33	4	0	3	39	4	0	20	42	5	0
05:00 PM	11	52	22	0	19	39	15	0	10	45	6	0	16	40	5	0
05:15 PM	7	58	14	0	16	29	10	0	3	34	8	0	19	38	5	0
AM Peak Hour	**16**	**111**	**38**	**0**	**51**	**102**	**12**	**0**	**10**	**107**	**35**	**0**	**22**	**120**	**31**	**0**
PHF (by movement)	0.63	0.71	0.64		0.67	0.73	0.55		0.56	0.84	0.69		0.56	0.78	0.81	
Truck % (by approach)	6.3%	1.8%	2.6%		0.0%	3.9%	0.0%		0.0%	2.8%	2.9%		4.5%	3.3%	0.0%	
PHF (by approach)		0.80				0.76				0.89				0.82		
Truck % (by approach)		2.4%				2.4%				2.8%				2.9%		
PHF (overall)								0.87								
Truck % (overall)								2.6%								
04:30 PM	4	41	17	0	12	27	12	0	8	47	6	0	16	50	6	0
04:45 PM	14	58	15	0	18	33	4	0	3	39	4	0	20	42	5	0
05:00 PM	11	52	22	0	19	39	15	0	10	45	6	0	16	40	5	0
05:15 PM	7	58	14	0	16	29	10	0	3	34	8	0	19	38	5	0
PM Peak Hour	**32**	**189**	**51**	**0**	**53**	**101**	**29**	**0**	**16**	**118**	**19**	**0**	**55**	**121**	**16**	**0**
PHF (by movement)	0.86	0.72	0.57		0.69	0.64	0.48		0.42	0.63	0.56		0.68	0.61	0.63	
Truck % (by approach)	3.1%	1.2%	0.0%		0.0%	2.0%	0.0%		0.0%	0.8%	0.0%		0.0%	2.5%	0.0%	
PHF (by approach)		0.72				0.62				0.62				0.67		
Truck % (by approach)		1.2%				1.1%				0.7%				1.8%		
PHF (overall)								0.79								
Truck % (overall)								1.2%								

Growth Rate Used: 1.06

File Name: 011-Laurel & Broadway.ppd
Start Date: 7/24/2013
Start Time: 7:00:00 AM
Site Code: 00000011
Comment 1: Counter: TS
Comment 2: Weather: Sunny
Comment 3:
Comment 4:

	Broadway Blvd				Laurel Ave				Broadway Blvd				Laurel Ave			
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds
07:00 AM	2	38	2	0	0	0	0	0	0	39	4	0	5	0	21	0
07:15 AM	8	21	0	0	0	0	0	0	0	29	6	0	8	0	27	0
07:30 AM	8	22	0	0	0	0	0	0	0	42	4	0	11	0	19	0
07:45 AM	10	38	0	0	0	0	0	0	0	42	7	0	7	0	22	0
08:00 AM	16	31	0	0	0	0	0	0	0	38	11	0	5	0	23	0
08:15 AM	7	21	0	0	0	0	0	0	0	41	5	0	6	0	22	1
08:30 AM	10	36	0	0	0	0	0	0	0	57	11	0	10	0	18	0
08:45 AM	13	38	0	0	0	0	0	0	0	48	15	0	7	0	18	0
04:00 PM	24	48	0	0	0	0	0	0	0	66	23	0	5	0	13	0
04:15 PM	25	63	0	0	0	0	0	0	0	53	19	0	14	0	14	0
04:30 PM	29	56	0	0	0	0	0	0	0	57	19	0	15	0	20	0
04:45 PM	27	57	0	0	0	0	0	0	0	67	18	0	7	0	15	0
05:00 PM	25	59	0	0	0	0	0	0	0	45	18	0	7	0	14	0
05:15 PM	21	71	0	0	0	0	0	0	0	67	18	0	10	0	16	0
05:30 PM	21	55	0	0	0	0	0	0	0	52	30	0	14	0	17	0
05:45 PM	24	61	0	0	0	0	0	0	0	51	34	0	15	0	20	0
AM Peak Hour	**42**	**110**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**153**	**29**	**0**	**32**	**0**	**91**	**0**
PHF (by movement)	0.67	0.76								0.90	0.68		0.73		0.86	
Truck % (by approach)	4.7%	4.5%								4.6%	0.0%		0.0%		1.1%	
PHF (by approach)		0.82								0.91				0.88		
Truck % (by approach)		4.6%								3.9%				0.8%		
PHF (overall)								0.91								
Truck % (overall)								3.3%								
04:30 PM	29	56	0	0	0	0	0	0	0	57	19	0	15	0	20	0
04:45 PM	27	57	0	0	0	0	0	0	0	67	18	0	7	0	15	0
05:00 PM	25	59	0	0	0	0	0	0	0	45	18	0	7	0	14	0
05:15 PM	21	71	0	0	0	0	0	0	0	67	18	0	10	0	16	0
PM Peak Hour	**67**	**188**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**176**	**62**	**0**	**38**	**0**	**53**	**0**
PHF (by movement)	0.83	0.66								0.83	1.07		0.64		0.66	
Truck % (by approach)	1.5%	4.3%								2.9%	0.0%		2.6%		0.0%	
PHF (by approach)		0.69								0.74				0.85		
Truck % (by approach)		3.5%								2.0%				1.1%		
PHF (overall)								0.74								
Truck % (overall)								2.5%								

Growth Rate Used: 1.06

File Name: 012-Lambs & Main.ppd
Start Date: 8/6/2013
Start Time: 7:00:00 AM
Site Code: 00000012
Comment 1: Counter: TS
Comment 2: Weather: Sunny
Comment 3:
Comment 4:

	Main St				Lambs Road				Broadway				Lambs Road			
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds
07:00 AM	6	18	6	0	12	22	8	0	17	29	3	0	2	31	6	0
07:15 AM	13	8	5	0	5	16	5	0	26	38	1	0	4	35	11	0
07:30 AM	6	26	7	0	3	17	7	0	17	32	3	0	1	46	10	0
07:45 AM	7	34	8	0	2	23	11	0	25	41	7	0	6	36	12	0
08:00 AM	6	22	7	0	10	21	4	0	19	32	1	0	2	47	8	0
08:15 AM	6	19	12	0	6	36	11	0	23	26	10	0	5	43	11	0
08:30 AM	12	33	6	1	8	30	10	0	17	35	3	0	7	47	8	0
08:45 AM	8	32	14	0	7	33	7	1	12	35	1	0	4	45	10	0
04:00 PM	20	45	21	0	12	37	15	0	11	23	1	0	7	32	11	0
04:15 PM	11	36	12	0	7	57	28	0	13	29	10	0	6	39	7	0
04:30 PM	7	41	12	0	3	57	25	0	14	16	6	0	3	37	8	0
04:45 PM	12	38	7	0	7	63	19	0	14	28	7	0	2	53	11	0
05:00 PM	15	49	7	0	5	73	24	0	7	29	8	0	3	43	14	0
05:15 PM	14	57	15	1	5	59	20	0	15	23	5	1	4	33	14	1
05:30 PM	7	56	5	0	5	67	38	0	16	34	7	0	1	37	10	1
05:45 PM	13	53	12	0	2	60	29	0	11	27	11	1	4	38	11	0
07:30 AM	6	20	7	0	3	17	7	0	17	32	3	0	1	46	10	0
07:45 AM	7	34	8	0	2	23	11	0	25	41	7	0	6	36	12	0
08:00 AM	6	22	7	0	10	21	4	0	19	32	1	0	2	47	8	0
08:15 AM	6	19	12	0	6	36	11	0	23	26	10	0	5	43	11	0
AM Peak Hour	**33**	**85**	**29**	**0**	**20**	**77**	**28**	**0**	**82**	**143**	**13**	**0**	**14**	**163**	**40**	**0**
PHF (by movement)	1.11	0.63	0.81		0.53	0.54	0.65		0.80	0.87	0.33		0.54	0.88	0.86	
Truck % (by approach)	12.2%	5.9%	10.5%		9.9%	5.2%	10.9%		0.0%	0.0%	7.9%		0.0%	7.4%	5.0%	
PHF (by approach)		0.73				0.59				0.80				0.92		
Truck % (by approach)		8.2%				7.2%				0.4%				6.4%		
PHF (overall)								0.85								
Truck % (overall)								5.6%								
04:30 PM	7	41	12	0	3	57	25	0	14	16	6	0	3	37	8	0
04:45 PM	12	38	7	0	7	63	19	0	14	28	7	0	2	53	11	0
05:00 PM	15	49	7	0	5	73	24	0	7	29	8	0	3	43	14	0
05:15 PM	14	57	15	1	5	59	20	0	15	23	5	1	4	33	14	1
PM Peak Hour	**34**	**160**	**32**	**1**	**13**	**187**	**84**	**0**	**35**	**84**	**23**	**2**	**10**	**106**	**34**	**2**
PHF (by movement)	0.57	0.70	0.54	0.25	0.43	0.64	0.82		0.59	0.73	0.69	0.50	0.56	0.50	0.62	0.50
Truck % (by approach)	2.9%	1.2%	15.7%	0.0%	7.9%	1.6%	0.0%		2.9%	1.2%	0.0%	0.0%	0.0%	3.8%	2.9%	0.0%
PHF (by approach)		0.65				0.69				0.74				0.58		
Truck % (by approach)		3.5%				1.4%				1.4%				3.3%		
PHF (overall)								0.72								
Truck % (overall)								2.4%								

Growth Rate Used: 1.00

File Name: 013-Tyler Mill & Main.ppd
Start Date: 8/7/2013
Start Time: 7:15:00 AM
Site Code: 00000013
Comment 1: Counter: TS
Comment 2: Weather: Overcast/Rain
Comment 3:
Comment 4:

	Main Street From North				Tyler Mill Road From East				Main Street From South				Tyler Mill Road From West			
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds
07:15 AM	0	12	12	1	27	1	0	0	1	46	0	0	0	0	0	0
07:30 AM	0	21	25	0	39	0	1	0	2	34	0	0	0	0	3	0
07:45 AM	0	23	38	0	37	0	0	0	1	46	0	0	0	0	0	0
08:00 AM	0	29	35	0	39	0	0	0	2	54	2	0	0	0	0	0
08:15 AM	1	20	32	2	34	0	0	0	2	50	0	0	0	0	0	0
08:30 AM	2	24	24	2	31	0	0	0	1	39	0	0	0	0	1	0
08:45 AM	1	20	33	0	33	0	0	0	1	42	0	0	0	1	1	0
09:00 AM	0	12	11	0	22	0	0	0	0	27	0	0	0	0	0	0
04:00 PM	0	69	36	0	46	0	1	0	3	53	0	0	0	0	0	0
04:15 PM	0	63	53	0	50	1	1	0	1	30	0	0	0	0	0	0
04:30 PM	0	48	45	0	38	0	2	0	1	48	0	0	0	0	0	0
04:45 PM	0	91	55	0	57	0	3	0	1	43	0	0	0	0	0	0
05:00 PM	0	71	52	0	56	0	2	0	0	40	0	0	0	0	0	0
05:15 PM	0	71	45	0	54	0	2	0	2	36	0	0	0	0	0	0
05:30 PM	0	72	45	0	52	1	2	0	1	50	0	0	0	0	0	0
05:45 PM	0	63	56	0	35	0	2	0	0	38	0	0	0	0	0	0
07:30 AM	0	21	25	0	39	0	1	0	2	34	0	0	0	0	3	0
07:45 AM	0	23	38	0	37	0	0	0	1	46	0	0	0	0	0	0
08:00 AM	0	29	35	0	39	0	0	0	2	54	2	0	0	0	0	0
08:15 AM	1	20	32	2	34	0	0	0	2	50	0	0	0	0	0	0
AM Peak Hour	**1**	**93**	**130**	**2**	**149**	**0**	**1**	**0**	**7**	**183**	**2**	**0**	**0**	**0**	**3**	**0**
PHF (by movement)	0.25	0.81	0.85	0.25	0.95		0.25		0.88	0.85	0.25				0.25	
Truck % (by approach)	0.0%	0.0%	0.0%	0.0%	4.0%		0.0%		0.0%	4.4%	0.0%				0.0%	
PHF (by approach)		0.89				0.93				0.83				0.25		
Truck % (by approach)		0.0%				4.0%				4.1%				0.0%		
PHF (overall)								0.89								
Truck % (overall)								2.4%								
04:30 PM	0	48	45	0	38	0	2	0	1	46	0	0	0	0	0	0
04:45 PM	0	91	55	0	57	0	3	0	1	43	0	0	0	0	0	0
05:00 PM	0	71	52	0	56	0	2	0	0	40	0	0	0	0	0	0
05:15 PM	0	71	45	0	54	0	2	0	2	36	0	0	0	0	0	0
PM Peak Hour	**0**	**206**	**145**	**0**	**141**	**1**	**6**	**0**	**3**	**124**	**0**	**0**	**0**	**0**	**0**	**0**
PHF (by movement)		0.56	0.68		0.62		0.50		0.38	0.68						
Truck % (by approach)		3.4%	2.8%		4.3%	0.0%	0.0%		0.0%	3.2%						
PHF (by approach)		0.60				0.61				0.65						
Truck % (by approach)		3.1%				4.0%				3.1%						
PHF (overall)								0.62								
Truck % (overall)								3.4%								

Growth Rate Used: 1.0%

File Name: 015-Atlantic & Center.ppd
Start Date: 8/7/2013
Start Time: 7:00:00 AM
Site Code: 00000000
Comment 1: Counter: DeJohn
Comment 2: Weather: Overcast/Rain
Comment 3:
Comment 4:

	Atlantic Ave				Center St				Atlantic Ave				Center St			
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds
07:00 AM	0	0	0	0	1	40	0	0	0	0	3	0	2	55	0	0
07:15 AM	1	0	1	0	0	39	0	0	1	0	3	0	1	76	0	0
07:30 AM	0	0	0	0	0	53	0	0	0	0	7	0	4	89	0	0
07:45 AM	0	1	1	0	0	54	0	0	1	0	3	0	3	109	0	0
08:00 AM	2	0	0	0	4	50	0	0	2	0	5	0	2	106	0	0
08:15 AM	2	0	0	0	0	61	1	0	2	0	2	0	3	88	1	0
08:30 AM	1	0	0	0	0	56	0	0	0	0	1	0	1	89	0	0
08:45 AM	1	0	0	0	1	56	1	0	1	0	1	0	2	92	0	0
04:00 PM	2	1	1	0	0	130	1	0	2	0	4	0	4	85	2	0
04:15 PM	2	1	2	0	2	154	4	0	2	0	2	0	6	90	3	0
04:30 PM	3	0	4	0	7	102	0	0	4	1	4	0	1	101	4	0
04:45 PM	4	1	0	0	2	133	2	2	1	0	3	0	5	107	2	0
05:00 PM	2	0	4	0	3	122	1	0	2	2	2	0	2	96	4	0
05:15 PM	3	2	1	0	4	130	2	0	0	0	5	0	2	86	4	1
05:30 PM	5	3	3	0	4	103	0	0	3	1	6	2	3	96	4	0
05:45 PM	6	0	2	0	1	100	0	0	4	1	6	0	7	88	4	1
07:30 AM	0	0	0	0	0	53	0	0	0	0	7	0	4	89	0	0
07:45 AM	0	1	1	0	0	54	0	0	1	0	3	0	3	109	0	0
08:00 AM	2	0	0	0	4	50	0	0	2	0	5	0	2	106	0	0
08:15 AM	2	0	0	0	0	61	1	0	2	0	2	0	3	88	1	0
AM Peak Hour	**3**	**1**	**2**	**0**	**4**	**196**	**0**	**0**	**4**	**0**	**19**	**0**	**11**	**381**	**0**	**0**
PHF (by movement)	0.38	0.25	0.50		0.25	0.80	0.00		0.50		0.64		0.63	0.87	0.00	
Truck % (by approach)	31.4%	94.3%	47.2%		47.2%	7.1%			47.2%		5.2%		18.9%	4.2%		
PHF (by approach)		0.75				0.80				0.79				0.87		
Truck % (by approach)		47.2%				9.0%				12.9%				4.6%		
PHF (overall)								0.90								
Truck % (overall)								6.4%								
04:30 PM	3	0	4	0	7	102	0	0	4	1	4	0	1	101	4	0
04:45 PM	4	1	0	0	2	133	2	2	1	0	3	0	5	107	2	0
05:00 PM	2	0	4	0	3	122	1	0	2	2	2	0	2	96	4	0
05:15 PM	3	2	1	0	4	130	2	0	0	0	5	0	2	86	4	1
PM Peak Hour	**15**	**5**	**6**	**0**	**10**	**333**	**2**	**0**	**7**	**2**	**18**	**2**	**13**	**271**	**13**	**2**
PHF (by movement)	0.88	0.63	0.38		0.32	0.63	0.25	0.00	0.44	0.25	0.85		0.60	0.63	0.75	0.50
Truck % (by approach)	0.0%	0.0%	0.0%		0.0%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%	0.0%	1.5%	0.0%	0.0%
PHF (by approach)		0.89				0.82				0.78				0.65		
Truck % (by approach)		0.0%				0.0%				0.0%				1.3%		
PHF (overall)								0.67								
Truck % (overall)								0.6%								

Growth Rate Used: 1.00

File Name: 018- East & Mantua.ppd
Start Date: 9/25/2013
Start Time: 7:00:00 AM
Site Code: 00000029
Comment 1: Counter:AF
Comment 2: Weather:Clear
Comment 3:
Comment 4:

	N East Ave				E Mantua Ave				N East Ave				E Mantua Ave			
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds
07:00 AM	1	0	1	3	0	29	0	0	1	0	0	2	0	73	0	2
07:15 AM	0	0	1	0	0	42	0	0	1	0	0	0	0	93	2	0
07:30 AM	0	0	1	0	0	39	0	2	0	0	0	0	0	153	0	1
07:45 AM	0	1	1	0	1	56	1	0	0	0	0	2	1	90	1	0
08:00 AM	0	0	1	0	1	53	0	0	1	1	1	3	2	65	0	3
08:15 AM	3	0	1	3	0	41	0	2	4	0	0	27	1	65	2	2
08:30 AM	18	3	14	0	3	50	0	0	0	0	0	0	1	70	2	0
08:45 AM	4	0	2	1	0	39	0	4	2	1	1	0	2	60	1	1
04:00 PM	6	1	1	0	1	109	1	0	1	0	0	0	3	83	4	0
04:15 PM	4	2	3	0	1	85	2	0	3	1	1	0	2	49	2	0
04:30 PM	7	0	1	0	1	81	1	0	3	0	1	0	2	61	2	0
04:45 PM	3	0	2	0	2	94	0	0	1	0	3	0	3	81	0	0
05:00 PM	2	0	1	0	0	85	0	0	0	2	1	0	0	53	1	0
05:15 PM	2	0	2	0	1	100	0	0	0	0	1	0	1	75	2	0
05:30 PM	3	0	1	0	0	70	1	0	1	0	0	0	1	91	0	0
05:45 PM	1	0	0	0	2	95	3	0	0	0	1	0	4	96	1	0
07:00 AM	1	0	1	3	0	29	0	0	1	0	0	2	0	73	0	2
07:15 AM	0	0	1	0	0	42	0	0	1	0	0	0	0	93	2	0
07:30 AM	0	0	1	0	0	39	0	2	0	0	0	0	0	153	0	1
07:45 AM	0	1	1	0	1	56	1	0	0	0	0	2	1	90	1	0
AM Peak Hour	**0**	**1**	**4**	**0**	**2**	**191**	**1**	**2**	**2**	**1**	**1**	**5**	**3**	**401**	**3**	**4**
PHF (by movement)	0.00	0.25	1.00	0.00	0.50	0.85	0.25	0.25	0.50			0.63	0.75	0.68	0.38	0.50
Truck % (by approach)		0.0%	23.6%		47.2%	4.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.7%	0.0%	0.0%
PHF (by approach)		0.25				0.84				0.75				0.67		
Truck % (by approach)		18.9%				5.1%				0.0%				3.6%		
PHF (overall)								0.79								
Truck % (overall)								4.2%								
04:15 PM	4	2	3	0	1	85	2	0	3	1	1	0	2	49	2	0
04:30 PM	7	0	1	0	1	81	1	0	3	0	1	0	2	61	2	0
04:45 PM	3	0	2	0	2	94	0	0	1	0	3	0	3	81	0	0
05:00 PM	2	0	1	0	0	85	0	0	0	2	1	0	0	53	1	0
PM Peak Hour	**6**	**0**	**3**	**0**	**3**	**265**	**4**	**0**	**1**	**0**	**2**	**0**	**6**	**263**	**3**	**0**
PHF (by movement)	0.21	0.00	0.25		0.13	0.70	0.50		0.08	0.00	0.17		0.50	0.82	0.38	
Truck % (by approach)	0.0%		0.0%		0.0%	1.5%	0.0%		0.0%		0.0%		0.0%	2.3%	0.0%	
PHF (by approach)		0.25				0.71				0.15				0.81		
Truck % (by approach)		0.0%				1.5%				0.0%				2.2%		
PHF (overall)								0.73								
Truck % (overall)								1.8%								

Growth Rate Used: 1.00

File Name: 022-Elm & W Jersey.ppd
Start Date: 9/17/2013
Start Time: 4:00:00 PM
Site Code: 00000020
Comment 1: Counter: DRT
Comment 2: Weather: Clear
Comment 3:
Comment 4:

	W. Jersey Ave				Elm Ave				W. Jersey Ave				Elm Ave			
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds
07:15 AM	3	9	18	0	4	43	13	0	31	3	1	0	0	65	1	0
07:30 AM	6	4	21	0	16	73	17	0	50	3	0	0	1	65	3	0
07:45 AM	7	9	17	0	4	82	16	0	47	7	0	0	2	43	1	0
08:00 AM	7	8	16	0	4	52	7	0	40	1	1	0	1	62	5	0
08:15 AM	4	9	18	0	10	77	8	0	37	2	2	0	0	65	1	0
08:30 AM	2	8	10	0	9	50	8	0	23	7	1	0	0	43	0	0
08:45 AM	2	4	6	0	4	48	9	0	22	6	1	0	1	42	2	0
09:00 AM	7	8	10	0	7	33	9	0	21	2	4	0	3	47	0	0
04:00 PM	7	10	8	0	10	71	32	0	23	4	3	0	3	71	1	0
04:15 PM	8	18	9	0	18	69	42	0	19	0	2	0	2	56	1	0
04:30 PM	8	10	16	0	7	70	51	0	32	6	1	0	1	65	0	0
04:45 PM	8	11	14	0	8	73	36	0	20	1	2	0	3	51	1	0
05:00 PM	3	24	12	0	11	52	40	0	20	4	3	0	2	56	1	0
05:15 PM	13	19	9	0	11	57	38	0	24	2	0	0	1	70	2	0
05:30 PM	6	14	11	0	12	70	39	0	24	2	2	0	4	61	1	0
05:45 PM	9	11	9	0	7	64	42	0	34	2	1	0	0	52	1	0
07:15 AM	3	9	18	0	4	43	13	0	31	3	1	0	0	65	1	0
07:30 AM	6	4	21	0	16	73	17	0	50	3	0	0	1	65	3	0
07:45 AM	7	9	17	0	4	82	16	0	47	7	0	0	2	43	1	0
08:00 AM	7	8	16	0	4	52	7	0	40	1	1	0	1	62	5	0
AM Peak Hour	**23**	**30**	**69**	**0**	**34**	**284**	**47**	**0**	**173**	**13**	**3**	**0**	**4**	**236**	**11**	**0**
PHF (by movement)	0.88	0.84	0.82		0.53	0.86	0.70		0.87	0.50	0.75		0.00	0.90	0.69	
Truck % (by approach)	0.0%	0.0%	1.5%		0.0%	1.4%	0.0%		0.0%	0.0%	0.0%		0.0%	0.4%	0.0%	
PHF (by approach)		0.95				0.87				0.89				0.90		
Truck % (by approach)		0.8%				1.1%				0.0%				0.4%		
PHF (overall)								0.89								
Truck % (overall)								0.6%								
04:15 PM	8	18	9	0	18	69	42	0	19	0	2	0	2	56	1	0
04:30 PM	8	10	16	0	7	70	51	0	32	6	1	0	1	65	0	0
04:45 PM	8	11	14	0	8	73	36	0	20	1	2	0	3	51	1	0
05:00 PM	3	24	12	0	11	52	40	0	20	4	3	0	2	56	1	0
PM Peak Hour	**28**	**44**	**29**	**0**	**30**	**191**	**119**	**0**	**83**	**7**	**3**	**0**	**6**	**183**	**4**	**0**
PHF (by movement)	0.88	0.45	0.46		0.42	0.68	0.58		0.65	0.30	0.25		0.42	0.70	1.00	
Truck % (by approach)	0.0%	2.3%	3.5%		0.0%	2.1%	1.7%		1.2%	0.0%	0.0%		0.0%	0.5%	0.0%	
PHF (by approach)		0.63				0.86				0.80				0.73		
Truck % (by approach)		2.0%				1.8%				1.1%				0.5%		
PHF (overall)								0.68								
Truck % (overall)								1.4%								

Growth Rate Used: 1.11

File Name: 024-S. Broad & E Barber.ppd
Start Date: 8/13/2013
Start Time: 7:00:00 AM
Site Code: 00000024
Comment 1: Counter: TS
Comment 2: Weather: Clear
Comment 3:
Comment 4:

	S. Broad St From North				E Barber Ave From East				S. Broad St From South				E Barber Ave From West			
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds
07:00 AM	0	83	3	0	2	3	15	0	3	202	0	0	1	3	2	0
07:15 AM	2	59	3	0	5	4	9	0	5	233	1	2	0	4	4	0
07:30 AM	0	13	0	1	1	0	0	1	10	170	0	0	0	13	4	0
07:45 AM	1	89	10	0	2	13	28	0	6	176	2	0	3	9	0	0
08:00 AM	2	30	2	0	1	4	9	0	10	141	3	0	1	11	2	0
08:15 AM	0	69	5	0	8	9	15	0	5	147	0	0	4	8	11	0
08:30 AM	1	31	4	0	5	6	10	0	2	165	5	0	0	1	2	0
08:45 AM	0	28	2	0	2	2	8	1	3	163	5	0	5	5	1	0
04:00 PM	1	170	21	0	9	23	31	0	19	168	8	0	6	10	4	1
04:15 PM	1	180	11	0	11	12	33	0	14	148	5	0	6	25	1	0
04:30 PM	10	178	10	0	13	16	43	0	14	173	11	0	11	44	8	0
04:45 PM	3	185	11	0	11	15	46	0	13	180	6	0	3	25	10	0
05:00 PM	3	191	6	0	14	36	37	0	12	137	3	0	11	24	6	0
05:15 PM	4	189	2	0	15	24	37	0	17	158	9	0	4	38	9	0
05:30 PM	2	192	6	0	9	32	41	0	16	165	12	0	8	21	5	0
05:45 PM	2	166	12	0	8	18	41	0	17	145	8	0	10	23	9	0
07:15 AM	2	59	3	0	5	4	9	0	5	233	1	2	0	4	4	0
07:30 AM	0	13	0	1	1	0	0	1	10	170	0	0	0	13	4	0
07:45 AM	1	89	10	0	2	13	28	0	6	176	2	0	3	9	0	0
08:00 AM	2	30	2	0	1	4	9	0	10	141	3	0	1	11	2	0
AM Peak Hour	**5**	**191**	**15**	**1**	**10**	**22**	**45**	**1**	**31**	**720**	**6**	**2**	**4**	**37**	**11**	**0**
PHF (by movement)	0.63	0.84	0.39	0.25	0.45	0.42	0.40	0.25	0.81	0.77	0.50	0.25	0.33	0.71	0.63	
Truck % (by approach)	18.5%	1.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.2%	2.3%	0.0%	0.0%	0.0%	0.0%	18.5%	
PHF (by approach)		0.84				0.45				0.79				0.75		
Truck % (by approach)		1.9%				0.0%				2.5%				3.9%		
PHF (overall)								0.81								
Truck % (overall)								2.3%								
04:30 PM	10	178	10	0	13	16	43	0	14	173	11	0	11	44	8	0
04:45 PM	3	185	11	0	11	15	46	0	13	180	6	0	3	25	10	0
05:00 PM	3	191	6	0	14	36	37	0	12	137	3	0	11	24	6	0
05:15 PM	4	189	2	0	15	24	37	0	17	158	9	0	4	38	9	0
PM Peak Hour	**9**	**548**	**21**	**0**	**31**	**75**	**119**	**0**	**51**	**468**	**28**	**0**	**22**	**81**	**23**	**0**
PHF (by movement)	0.22	0.72	0.48		0.52	0.52	0.64		0.73	0.63	0.65		0.50	0.46	0.58	
Truck % (by approach)	0.0%	1.1%	4.9%		6.4%	1.3%	2.5%		2.6%	1.3%	7.1%		0.0%	0.0%	0.0%	
PHF (by approach)		0.72				0.65				0.68				0.50		
Truck % (by approach)		1.2%				2.7%				1.6%				0.0%		
PHF (overall)								0.69								
Truck % (overall)								1.5%								

Growth Rate Used: 1.08

File Name: 025-Cooper & Evergreen.ppd
Start Date: 8/15/2013
Start Time: 7:00:00 AM
Site Code: 00000025
Comment 1: Counter: DeJohn
Comment 2: Weather: Clear
Comment 3:
Comment 4:

	Evergreen Ave From North				Cooper St From East				Evergreen Ave From South				Cooper St From West			
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds
07:00 AM	3	36	8	0	12	72	22	0	18	100	6	0	2	31	1	2
07:15 AM	3	50	9	0	10	100	31	1	18	112	3	0	5	64	5	0
07:30 AM	0	51	9	0	11	104	22	0	25	112	4	1	2	44	5	0
07:45 AM	3	68	9	0	13	127	37	0	23	106	11	0	5	58	0	0
08:00 AM	4	65	10	0	13	119	29	0	12	80	9	0	2	46	3	1
08:15 AM	2	70	4	0	19	116	37	0	22	93	6	0	4	68	6	0
08:30 AM	5	59	6	0	14	138	35	0	18	90	9	0	5	48	5	1
08:45 AM	6	80	5	0	13	114	42	0	29	96	6	0	5	80	1	0
04:00 PM	6	129	27	0	10	108	58	0	59	77	5	0	12	113	9	0
04:15 PM	8	148	17	0	9	134	45	0	54	67	8	0	9	121	2	0
04:30 PM	6	112	17	0	12	135	55	0	55	86	3	0	8	153	2	0
04:45 PM	1	164	23	0	11	130	63	0	35	86	3	0	6	148	5	0
05:00 PM	6	124	11	0	8	63	44	0	44	94	5	0	15	134	2	0
05:15 PM	3	137	8	0	8	126	50	0	68	85	9	0	8	165	4	0
05:30 PM	4	140	19	0	11	97	31	0	60	107	8	0	14	136	8	0
05:45 PM	5	134	13	0	8	93	42	0	41	114	16	0	3	158	8	0
07:15 AM	3	50	9	0	10	100	31	1	18	112	3	0	5	64	5	0
07:30 AM	0	51	9	0	11	104	22	0	25	112	4	1	2	44	5	0
07:45 AM	3	68	9	0	13	127	37	0	23	106	11	0	5	58	0	0
08:00 AM	4	65	10	0	13	119	29	0	12	80	9	0	2	46	3	1
AM Peak Hour	**11**	**233**	**36**	**0**	**46**	**450**	**119**	**1**	**78**	**410**	**27**	**1**	**15**	**213**	**14**	**1**
PHF (by movement)	0.63	0.86	0.92		0.90	0.88	0.81	0.25	0.78	0.91	0.63	0.25	0.70	0.83	0.65	0.25
Truck % (by approach)	0.0%	3.4%	2.8%		2.2%	4.4%	7.6%	0.0%	5.1%	1.5%	3.7%	0.0%	13.2%	6.1%	0.0%	0.0%
PHF (by approach)		0.88				0.87				0.91				0.82		
Truck % (by approach)		3.2%				4.9%				2.1%				6.2%		
PHF (overall)								0.90								
Truck % (overall)								3.9%								
04:30 PM	6	112	17	0	12	135	55	0	55	86	3	0	8	153	2	0
04:45 PM	1	164	23	0	11	130	63	0	35	86	3	0	6	148	5	0
05:00 PM	6	124	11	0	8	63	44	0	44	94	5	0	15	134	2	0
05:15 PM	3	137	8	0	8	126	50	0	68	85	9	0	8	165	4	0
PM Peak Hour	**13**	**411**	**40**	**0**	**25**	**316**	**123**	**0**	**170**	**307**	**32**	**0**	**25**	**459**	**13**	**0**
PHF (by movement)	0.50	0.63	0.44		0.53	0.59	0.49		0.62	0.82	0.94		0.41	0.69	0.90	
Truck % (by approach)	0.0%	0.5%	0.0%		0.0%	0.3%	0.0%		1.2%	1.3%	0.0%		4.0%	1.7%	0.0%	
PHF (by approach)		0.62				0.57				0.79				0.71		
Truck % (by approach)		0.4%				0.2%				1.2%				1.8%		
PHF (overall)								0.72								
Truck % (overall)								0.9%								

Growth Rate Used: 1.08

File Name: 026-Cooper & RR Ave.ppd
Start Date: 8/14/2013
Start Time: 7:00:00 AM
Site Code: 00000026
Comment 1: Counter: A. Feeley
Comment 2: Weather: Clear
Comment 3:
Comment 4:

	Railroad Ave From North				Cooper St From East				Railroad Ave From South				Cooper St From West			
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds
07:00 AM	0	0	0	0	0	86	5	0	8	0	8	0	8	51	0	0
07:15 AM	0	0	0	0	0	85	11	0	6	0	6	0	4	43	0	0
07:30 AM	0	0	0	0	0	100	9	0	18	0	13	0	6	54	0	0
07:45 AM	0	0	0	0	0	125	4	0	15	0	25	0	8	58	0	0
08:00 AM	0	0	0	0	0	39	2	0	4	0	5	0	1	19	0	0
08:15 AM	0	0	0	0	0	31	3	0	10	0	3	0	8	12	0	1
08:30 AM	0	0	0	0	0	48	2	0	10	0	5	0	5	26	0	0
08:45 AM	0	0	0	0	0	69	10	0	10	1	21	0	13	41	0	0
04:00 PM	0	0	0	0	0	108	24	0	29	0	3	0	33	162	0	0
04:15 PM	0	0	0	0	0	114	29	0	28	0	4	0	26	131	0	0
04:30 PM	0	0	0	0	0	87	28	0	18	0	4	0	44	153	0	0
04:45 PM	0	0	0	0	0	112	27	0	22	0	6	0	29	124	0	0
05:00 PM	0	0	0	0	0	125	26	0	30	0	3	0	26	163	0	0
05:15 PM	0	0	0	0	0	105	30	0	22	0	1	0	30	135	0	0
05:30 PM	0	0	0	0	0	96	22	0	31	0	4	0	19	144	0	0
05:45 PM	0	0	0	0	0	93	22	0	35	0	4	0	13	126	0	0
07:15 AM	0	0	0	0	0	85	11	0	6	0	6	0	4	43	0	0
07:30 AM	0	0	0	0	0	100	9	0	18	0	13	0	6	54	0	0
07:45 AM	0	0	0	0	0	125	4	0	15	0	25	0	8	58	0	0
08:00 AM	0	0	0	0	0	39	2	0	4	0	5	0	1	19	0	0
AM Peak Hour	**0**	**0**	**0**	**0**	**0**	**350**	**26**	**0**	**45**	**0**	**50**	**0**	**19**	**175**	**0**	**0**
PHF (by movement)						0.70	0.60		0.62		0.50		0.64	0.75		
Truck % (by approach)						0.9%	0.0%		0.0%		0.0%		0.0%	1.7%		
PHF (by approach)						0.73				0.59				0.74		
Truck % (by approach)						0.8%				0.0%				1.5%		
PHF (overall)								0.71								
Truck % (overall)								0.9%								
04:30 PM	0	0	0	0	0	87	28	0	18	0	4	0	44	153	0	0
04:45 PM	0	0	0	0	0	112	27	0	22	0	6	0	29	124	0	0
05:00 PM	0	0	0	0	0	125	26	0	30	0	3	0	26	163	0	0
05:15 PM	0	0	0	0	0	105	30	0	22	0	1	0	30	135	0	0
PM Peak Hour	**0**	**0**	**0**	**0**	**0**	**294**	**73**	**0**	**87**	**0**	**10**	**0**	**63**	**465**	**0**	**0**
PHF (by movement)						0.59	0.61		0.72		0.38		0.35	0.62		
Truck % (by approach)						1.4%	0.0%		0.0%		0.0%		1.6%	3.5%		
PHF (by approach)						0.61				0.73				0.59		
Truck % (by approach)						1.1%				0.0%				3.2%		
PHF (overall)								0.62								
Truck % (overall)								2.0%								

Growth Rate Used: 1.08

File Name: 028-evergreen & red bank.ppd
Start Date: 7/23/2013
Start Time: 7:00:00 AM
Site Code: 00000028
Comment 1: Counter: Tyler
Comment 2: Weather:
Comment 3:
Comment 4:

	Evergreen Ave				Red Bank Ave				Evergreen Ave				Red Bank Ave			
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds
07:00 AM	6	26	11	0	11	39	4	0	0	110	24	0	9	41	6	0
07:15 AM	6	19	10	0	11	89	16	0	13	114	25	0	15	55	9	0
07:30 AM	4	30	14	0	15	78	8	0	14	134	23	0	22	78	14	0
07:45 AM	13	46	9	0	16	72	19	0	14	126	27	0	16	68	13	0
08:00 AM	10	55	10	0	9	65	9	0	16	102	37	0	15	52	18	2
08:15 AM	8	56	16	0	6	72	13	0	16	92	30	0	26	89	16	0
08:30 AM	6	65	14	0	8	59	16	0	18	87	33	0	18	52	13	0
08:45 AM	11	53	10	0	13	68	21	0	19	80	45	0	25	48	10	0
04:00 PM	13	100	12	0	4	95	26	0	21	66	14	0	52	113	14	0
04:15 PM	11	78	6	0	6	84	24	0	21	79	28	0	67	111	17	0
04:30 PM	3	106	16	0	6	91	27	0	28	86	30	0	54	109	23	0
04:45 PM	9	109	15	0	5	76	19	0	17	75	43	0	59	104	16	2
05:00 PM	12	103	24	0	9	94	18	0	27	73	31	0	67	119	9	0
05:15 PM	10	139	15	0	11	86	18	0	32	69	31	0	67	117	12	0
05:30 PM	5	136	15	0	8	84	22	0	18	73	42	0	43	92	15	0
05:45 PM	12	122	12	0	4	84	18	0	23	64	26	0	30	102	14	0
07:15 AM	6	19	10	0	11	89	16	0	13	114	25	0	15	55	9	0
07:30 AM	4	30	14	0	15	78	8	0	14	134	23	0	22	78	14	0
07:45 AM	13	46	9	0	16	72	19	0	14	126	27	0	16	68	13	0
08:00 AM	10	55	10	0	9	65	9	0	16	102	37	0	15	52	18	2
AM Peak Hour	**33**	**151**	**42**	**0**	**51**	**303**	**52**	**0**	**57**	**476**	**111**	**0**	**68**	**253**	**54**	**2**
PHF (by movement)	0.65	0.69	0.75		0.78	0.86	0.67		0.88	0.89	0.76		0.79	0.81	0.74	0.25
Truck % (by approach)	0.0%	1.3%	4.7%		5.9%	0.3%	0.0%		0.0%	0.6%	0.0%		0.0%	0.4%	0.0%	0.0%
PHF (by approach)		0.76				0.88				0.94				0.83		
Truck % (by approach)		1.8%				1.0%				0.5%				0.3%		
PHF (overall)								0.94								
Truck % (overall)								0.7%								
04:30 PM	3	106	16	0	6	91	27	0	28	86	30	0	54	109	23	0
04:45 PM	9	109	15	0	5	76	19	0	17	75	43	0	59	104	16	2
05:00 PM	12	103	24	0	9	94	18	0	27	73	31	0	67	119	9	0
05:15 PM	10	139	15	0	11	86	18	0	32	69	31	0	67	117	12	0
PM Peak Hour	**30**	**397**	**42**	**0**	**23**	**255**	**58**	**0**	**73**	**206**	**99**	**0**	**140**	**310**	**41**	**0**
PHF (by movement)	0.64	0.71	0.44		0.53	0.68	0.54		0.57	0.60	0.58		0.52	0.85	0.45	0.00
Truck % (by approach)	3.3%	2.8%	0.0%		4.4%	2.7%	1.7%		0.0%	1.0%	0.0%		0.0%	0.0%	2.4%	
PHF (by approach)		0.72				0.68				0.65				0.63		
Truck % (by approach)		2.8%				2.7%				0.5%				0.2%		
PHF (overall)								0.69								
Truck % (overall)								1.4%								

Growth Rate Used: 1.08

File Name: 030-Broad & Park.ppd
Start Date: 8/1/2013
Start Time: 7:15:00 AM
Site Code: 00000003
Comment 1: Counter: Amanda
Comment 2: Weather: Overcast
Comment 3:
Comment 4:

	N. Broad St				Park Ave				N. Broad St				Park Ave			
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds
07:15 AM	0	78	40	0	19	0	3	0	6	164	0	0	0	1	0	0
07:30 AM	0	111	53	0	26	0	1	0	16	161	0	0	0	0	0	0
07:45 AM	0	134	39	0	22	0	0	0	10	145	0	0	0	0	0	0
08:00 AM	0	110	43	0	27	0	0	0	12	137	0	0	0	0	0	0
08:15 AM	0	158	48	0	32	0	0	0	6	123	0	0	0	0	0	0
08:30 AM	0	121	44	0	24	0	1	0	16	125	0	0	0	0	0	0
08:45 AM	0	147	55	0	29	0	1	0	9	106	0	0	0	0	0	0
04:00 PM	0	121	58	0	52	0	1	0	15	133	1	0	0	0	0	0
04:15 PM	0	150	64	0	46	0	0	0	23	119	0	0	0	0	0	0
04:30 PM	0	165	71	0	63	0	0	0	19	159	0	0	0	0	0	0
04:45 PM	0	121	55	0	35	0	1	0	15	129	0	0	0	0	1	0
05:00 PM	0	156	77	0	49	0	0	0	11	148	0	0	0	0	0	0
05:15 PM	0	145	65	0	54	0	0	0	21	121	0	0	0	0	1	0
05:30 PM	0	144	69	0	48	0	2	0	8	111	0	0	0	0	0	0
05:45 PM	0	137	53	0	42	0	0	0	9	105	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	78	40	0	19	0	3	0	6	164	0	0	0	1	0	0
07:30 AM	0	111	53	0	26	0	1	0	16	161	0	0	0	0	0	0
07:45 AM	0	134	39	0	22	0	0	0	10	145	0	0	0	0	0	0
08:00 AM	0	110	43	0	27	0	0	0	12	137	0	0	0	0	0	0
AM Peak Hour	**0**	**513**	**183**	**0**	**107**	**0**	**1**	**0**	**44**	**566**	**0**	**0**	**0**	**0**	**0**	**0**
PHF (by movement)		0.96	0.86		0.99		0.08		0.68	0.86				0.00		
Truck % (by approach)		2.5%	2.2%		0.0%		92.6%		0.0%	0.4%						
PHF (by approach)		1.01				1.00				0.86				0.00		
Truck % (by approach)		2.4%				0.9%				0.3%						
PHF (overall)								0.96								
Truck % (overall)								1.4%								
04:30 PM	0	165	71	0	63	0	0	0	19	159	0	0	0	0	0	0
04:45 PM	0	121	55	0	35	0	1	0	15	129	0	0	0	0	1	0
05:00 PM	0	156	77	0	49	0	0	0	11	148	0	0	0	0	0	0
05:15 PM	0	145	65	0	54	0	0	0	21	121	0	0	0	0	1	0
PM Peak Hour	**0**	**281**	**113**	**0**	**90**	**0**	**2**	**0**	**16**	**216**	**0**	**0**	**0**	**0**	**0**	**0**
PHF (by movement)		0.42	0.37		0.36		0.50		0.20	0.34					0.00	
Truck % (by approach)		1.1%	2.6%		1.1%		0.0%		0.0%	3.7%						
PHF (by approach)		0.42				0.37				0.33				0.00		
Truck % (by approach)		1.5%				1.1%				3.4%						
PHF (overall)								0.38								
Truck % (overall)								2.1%								

Growth Rate Used: 1.08

File Name: 031-Broad & Edith.ppd
Start Date: 7/30/2013
Start Time: 7:00:00 AM
Site Code: 00000031
Comment 1: Counter: A Chan
Comment 2: Weather: Sunny
Comment 3:
Comment 4:

	Broad Street				Edith Street				Broad Street				Edith Street			
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds
07:00 AM	0	84	2	0	5	0	3	0	4	154	0	0	0	0	0	0
07:15 AM	0	84	1	0	2	0	4	0	4	151	0	0	0	0	0	0
07:30 AM	0	91	4	0	1	0	6	0	0	136	0	0	0	0	0	0
07:45 AM	0	107	2	0	3	0	5	0	3	114	0	0	0	0	0	0
08:00 AM	1	99	1	0	1	0	2	0	1	104	0	0	0	0	0	0
08:15 AM	0	131	10	0	3	1	8	0	4	146	0	0	0	0	0	0
08:30 AM	0	146	8	0	6	0	9	0	3	113	0	0	0	0	0	0
08:45 AM	0	146	5	0	2	0	12	0	21	95	0	0	0	0	0	0
04:00 PM	0	140	2	0	5	0	17	0	17	146	0	0	0	0	0	0
04:15 PM	0	141	5	0	5	0	15	0	6	148	0	0	0	0	0	0
04:30 PM	0	141	10	0	9	0	11	0	6	154	0	0	0	0	0	0
04:45 PM	0	161	1	0	4	0	11	0	11	144	0	0	0	0	0	0
05:00 PM	0	145	6	0	5	0	12	0	4	138	0	0	0	0	0	0
05:15 PM	0	163	4	0	5	0	17	0	9	141	0	0	0	0	0	0
05:30 PM	0	172	6	0	1	0	16	0	5	143	0	0	0	0	0	0
05:45 PM	0	163	1	0	1	0	17	0	4	130	0	0	0	0	0	0
07:15 AM	0	84	1	0	2	0	4	0	4	151	0	0	0	0	0	0
07:30 AM	0	91	4	0	1	0	6	0	0	136	0	0	0	0	0	0
07:45 AM	0	107	2	0	3	0	5	0	3	114	0	0	0	0	0	0
08:00 AM	1	99	1	0	1	0	2	0	1	104	0	0	0	0	0	0
AM Peak Hour	**1**	**381**	**9**	**0**	**6**	**0**	**18**	**0**	**9**	**505**	**0**	**0**	**0**	**0**	**0**	**0**
PHF (by movement)	0.25	0.89	0.50		0.50		0.75		0.50	0.84						
Truck % (by approach)	0.0%	2.6%	0.0%		0.0%		21.8%		0.0%	3.2%						
PHF (by approach)			0.90			0.75				0.83						
Truck % (by approach)			2.6%			15.4%				3.1%						
PHF (overall)								0.94								
Truck % (overall)								3.2%								
04:30 PM	0	141	10	0	9	0	11	0	6	154	0	0	0	0	0	0
04:45 PM	0	161	1	0	4	0	11	0	11	144	0	0	0	0	0	0
05:00 PM	0	145	6	0	5	0	12	0	4	138	0	0	0	0	0	0
05:15 PM	0	163	4	0	5	0	17	0	9	141	0	0	0	0	0	0
PM Peak Hour	**0**	**498**	**12**	**0**	**6**	**0**	**51**	**0**	**18**	**414**	**0**	**0**	**0**	**0**	**0**	**0**
PHF (by movement)		0.76	0.31		0.22		0.73		0.43	0.67						
Truck % (by approach)		0.8%	0.0%		0.0%		3.9%		0.0%	2.2%						
PHF (by approach)			0.76			0.64				0.67						
Truck % (by approach)			0.8%			3.4%				2.1%						
PHF (overall)								0.73								
Truck % (overall)								1.5%								

Growth Rate Used: 1.03

File Name: 037-Koehler & Broadway.ppd
Start Date: 7/31/2013
Start Time: 7:00:00 AM
Site Code: 00000037
Comment 1: Counter: Tyler
Comment 2: Weather: Sunny
Comment 3:
Comment 4:

	Broadway				Koehler St				Broadway				Koehler St			
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds
07:00 AM	0	27	1	0	3	0	4	0	2	24	0	0	0	0	0	0
07:15 AM	0	21	2	0	2	0	6	0	4	36	2	0	0	0	1	0
07:30 AM	1	17	2	0	0	0	4	0	5	48	0	0	0	2	1	0
07:45 AM	0	16	4	0	2	1	3	0	7	47	0	0	0	4	1	0
08:00 AM	0	14	3	0	2	0	2	0	7	47	0	0	1	5	3	0
08:15 AM	0	10	4	0	1	0	0	0	3	18	0	0	0	0	0	0
08:30 AM	2	28	2	0	4	4	2	0	1	24	3	0	0	1	0	0
08:45 AM	0	23	1	0	3	0	6	0	0	27	0	0	1	2	1	0
04:00 PM	0	64	7	0	7	1	6	0	12	55	0	0	0	5	0	0
04:15 PM	0	75	7	0	7	0	6	0	10	52	0	0	0	3	3	0
04:30 PM	0	45	8	0	4	0	4	0	4	31	0	0	0	5	6	0
04:45 PM	0	66	7	0	6	0	7	0	8	37	0	0	0	7	3	0
05:00 PM	0	60	5	0	3	0	8	0	11	30	0	0	0	7	3	0
05:15 PM	0	44	5	0	6	0	5	0	4	23	0	0	1	4	3	0
05:30 PM	0	44	7	0	7	0	8	0	7	35	0	0	0	3	0	0
05:45 PM	0	38	3	0	3	0	7	0	6	44	0	0	0	0	1	0
07:00 AM	0	27	1	0	3	0	4	0	2	24	0	0	0	0	0	0
07:15 AM	0	21	2	0	2	0	6	0	4	36	2	0	0	0	1	0
07:30 AM	1	17	2	0	0	0	4	0	5	48	0	0	0	2	1	0
07:45 AM	0	16	4	0	2	1	3	0	7	47	0	0	0	4	1	0
AM Peak Hour	**1**	**68**	**11**	**0**	**6**	**1**	**15**	**0**	**23**	**178**	**2**	**0**	**1**	**11**	**6**	**0**
PHF (by movement)	0.25	0.63	0.69		0.50	0.25	0.63		0.82	0.93	0.25			0.69	1.50	
Truck % (by approach)	0.0%	1.5%	0.0%		0.0%	0.0%	0.0%		0.0%	8.4%	0.0%		0.0%	9.1%	0.0%	
PHF (by approach)			0.71				0.69				0.94				0.90	
Truck % (by approach)			1.3%				0.0%				7.4%				5.6%	
PHF (overall)								0.85								
Truck % (overall)								5.3%								
04:15 PM	0	75	7	0	7	0	6	0	10	52	0	0	0	3	3	0
04:30 PM	0	45	8	0	4	0	4	0	4	31	0	0	0	5	6	0
04:45 PM	0	66	7	0	6	0	7	0	8	37	0	0	0	7	3	0
05:00 PM	0	60	5	0	3	0	8	0	11	30	0	0	0	7	3	0
PM Peak Hour	**0**	**126**	**15**	**0**	**16**	**0**	**20**	**0**	**17**	**102**	**0**	**0**	**1**	**7**	**4**	**0**
PHF (by movement)		0.42	0.47		0.57		0.63		0.30	0.49				0.29	0.17	
Truck % (by approach)		11.1%	0.0%		6.3%		0.0%		0.0%	4.9%			0.0%	0.0%	0.0%	
PHF (by approach)			0.43				0.69				0.48				0.27	
Truck % (by approach)			9.9%				2.8%				4.2%				0.0%	
PHF (overall)								0.47								
Truck % (overall)								6.5%								

Growth Rate Used: 1

File Name: 111-Union & Main PM.ppd
Start Date: 10/3/2013
Start Time: 4:00:00 PM
Site Code: 00000111
Comment 1: Counter: BB
Comment 2: Weather: Clear
Comment 3:
Comment 4:

	Broadway				Pitman Ave				Broadway				Pitman Ave			
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds
07:00 AM	1	2	18	0	27	4	1	0	0	4	0	0	1	2	1	0
07:15 AM	2	3	37	0	52	8	0	0	1	8	1	0	1	5	3	0
07:30 AM	2	4	43	0	60	10	0	0	1	11	1	0	1	6	4	0
07:45 AM	3	5	55	0	78	12	0	0	1	14	1	0	2	7	5	0
08:00 AM	3	5	55	0	78	12	0	0	1	14	1	0	2	7	5	0
08:15 AM	2	4	43	0	60	10	1	0	1	11	1	0	1	6	4	0
08:30 AM	2	3	37	0	52	8	0	0	1	8	1	0	1	5	3	0
08:45 AM	1	2	18	0	27	4	0	0	0	4	0	0	1	2	1	0
04:00 PM	6	18	48	0	56	8	1	0	1	14	4	0	2	1	2	0
04:15 PM	2	12	57	0	77	12	0	0	0	4	0	0	1	6	6	0
04:30 PM	1	25	67	0	52	6	0	0	6	11	0	0	0	12	6	0
04:45 PM	5	22	69	0	36	5	0	0	1	46	2	0	4	10	8	0
05:00 PM	3	14	63	0	54	13	0	0	0	13	2	0	1	13	3	0
05:15 PM	4	20	55	0	50	14	1	0	2	15	0	0	1	1	2	0
05:30 PM	0	19	46	0	58	6	0	0	0	8	3	0	1	12	4	0
05:45 PM	4	21	56	0	60	4	0	0	0	18	0	0	1	11	2	0
07:00 AM	1	2	18	0	27	4	1	0	0	4	0	0	1	2	1	0
07:15 AM	2	3	37	0	52	8	0	0	1	8	1	0	1	5	3	0
07:30 AM	2	4	43	0	60	10	0	0	1	11	1	0	1	6	4	0
07:45 AM	3	5	55	0	78	12	0	0	1	14	1	0	2	7	5	0
AM Peak Hour	**11**	**18**	**191**		**269**	**41**	**0**	**0**	**4**	**47**	**4**	**0**	**6**	**27**	**18**	**0**
PHF (by movement)	0.83	0.85	0.87		0.86	0.89	0.00		1.00	0.85	1.00		0.75	0.89	0.85	
Truck % (by approach)	0.0%	0.0%	0.0%		0.0%	0.0%			0.0%	0.0%	0.0%		0.0%	0.0%	0.0%	
PHF (by approach)		0.86				0.86				0.87				0.86		
Truck % (by approach)		0.0%				0.0%				0.0%				0.0%		
PHF (overall)								0.86								
Truck % (overall)								0.0%								
04:15 PM	2	12	57	0	77	12	0	0	0	4	0	0	1	6	6	0
04:30 PM	1	25	67	0	52	6	0	0	6	11	0	0	0	12	6	0
04:45 PM	5	22	69	0	36	5	0	0	1	46	2	0	4	10	8	0
05:00 PM	3	14	63	0	54	13	0	0	0	13	2	0	1	13	3	0
PM Peak Hour	**8**	**60**	**157**	**0**	**169**	**24**	**1**	**0**	**2**	**41**	**3**	**0**	**3**	**23**	**8**	**0**
PHF (by movement)	0.40	0.59	0.57		0.54	0.48			0.08	0.23	0.38		0.19	0.46	0.25	
Truck % (by approach)	11.8%	1.7%	0.6%		1.8%	4.1%	0.0%		0.0%	0.0%	0.0%		0.0%	0.0%	0.0%	
PHF (by approach)		0.59				0.54				0.24				0.39		
Truck % (by approach)		1.3%				2.1%				0.0%				0.0%		
PHF (overall)								0.60								
Truck % (overall)								1.4%								

Growth Rate Used: 1.06

File Name: 377-Broadway & Hudson.ppd
Start Date: 8/27/2013
Start Time: 7:00:00 AM
Site Code: 00000377
Comment 1: Counter: Bueno
Comment 2: Weather: Clear
Comment 3:
Comment 4:

	Broadway From North				Hudson From Southeast				Broadway From South				Chambers St From East			
Start Time	Hard Right	Thru		Peds	Right	Left	Hard Left	Peds		Thru	Left	Peds	Hard Right	Bear Right	Hard Left	Peds
07:00 AM	2	13		0	5	7	2	4		28	0	0	0	4	2	1
07:15 AM	1	24		2	3	11	2	6		38	5	0	0	0	2	1
07:30 AM	1	13		0	9	5	1	3		30	5	0	0	1	2	0
07:45 AM	3	22		0	9	15	4	0		31	5	0	1	1	5	0
08:00 AM	1	18		2	7	12	1	1		31	5	0	0	1	0	1
08:15 AM	1	20		0	8	8	0	7		34	6	0	0	6	3	1
08:30 AM	4	23		0	7	11	1	7		28	3	0	0	3	0	0
08:45 AM	2	14		0	6	11	4	4		35	0	0	2	1	0	4
04:00 PM	3	68		0	9	13	7	0		36	4	0	0	3	1	0
04:15 PM	0	71		0	17	9	2	0		40	6	0	1	4	3	0
04:30 PM	3	77		0	4	14	2	0		30	7	0	1	3	2	0
04:45 PM	0	65		0	8	18	2	0		39	11	0	0	4	2	0
05:00 PM	3	76		0	8	16	2	0		33	7	0	1	2	0	0
05:15 PM	2	56		0	17	11	3	0		25	6	0	0	2	0	0
05:30 PM	2	50		0	11	15	5	0		33	5	0	0	2	0	0
05:45 PM	2	35		0	19	10	1	0		26	7	0	0	3	0	0
07:00 AM	2	13	0	0	5	7	2	4	0	28	0	0	0	4	2	1
07:15 AM	1	24	0	2	3	11	2	6	0	38	5	0	0	0	2	1
07:30 AM	1	13	0	0	9	5	1	3	0	30	5	0	0	1	2	0
07:45 AM	3	22	0	0	9	15	4	0	0	31	5	0	1	1	5	0
AM Peak Hour	**6**	**77**	**0**	**4**	**28**	**43**	**8**	**10**	**0**	**130**	**20**	**0**	**1**	**3**	**9**	**2**
PHF (by movement)	0.50	0.80		0.50	0.78	0.72	0.50	0.42		0.86	1.00		0.25	0.19	0.45	0.50
Truck % (by approach)	200.0%	0.0%		0.0%	0.0%	0.0%	0.0%	0.0%		0.0%	0.0%		100.0%	0.0%	77.8%	0.0%
PHF (by approach)		0.81				0.79				0.97				0.54		
Truck % (by approach)		13.8%				0.0%				0.0%				53.3%		
PHF (overall)								0.89								
Truck % (overall)								5.9%								
04:15 PM	0	71	0	0	17	9	2	0	0	40	6	0	1	4	3	0
04:30 PM	3	77	0	0	4	14	2	0	0	30	7	0	1	3	2	0
04:45 PM	0	65	0	0	8	18	2	0	0	39	11	0	0	4	2	0
05:00 PM	3	76	0	0	8	16	2	0	0	33	7	0	1	2	0	0
PM Peak Hour	**6**	**141**	**0**	**0**	**37**	**36**	**9**	**0**	**0**	**84**	**18**	**0**	**0**	**7**	**0**	**0**
PHF (by movement)	0.50	0.46			0.69	0.50	1.13			0.53	0.41		0.00	0.44	0.00	
Truck % (by approach)	166.7%	0.0%			0.0%	0.0%	11.1%			0.0%	0.0%			0.0%		
PHF (by approach)		0.46				0.82				0.51				0.22		
Truck % (by approach)		6.8%				1.1%				0.0%				0.0%		
PHF (overall)								0.57								
Truck % (overall)								3.2%								

Growth Rate Used: 1

File Name: 444-Academy & High
Start Date: 9/12/2013
Start Time: 7:00:00 AM
Site Code: 00000444
Comment 1: Counter: AWB
Comment 2: Weather: Clear
Comment 3:
Comment 4:

	Academy Street				High Street				Academy Street				High Street			
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds
07:00 AM	10	5	2	0	2	47	2	0	2	22	5	0	1	37	8	0
07:15 AM	6	11	3	0	12	70	3	0	3	24	0	0	1	32	8	0
07:30 AM	13	4	2	0	8	89	0	0	2	16	1	0	0	31	10	0
07:45 AM	5	8	2	0	10	82	4	0	2	21	4	0	1	40	11	0
08:00 AM	7	2	1	0	10	52	4	0	6	10	1	0	4	64	6	0
08:15 AM	7	4	3	0	2	48	7	0	4	11	3	0	1	45	16	0
08:30 AM	6	4	3	0	3	47	1	0	6	14	4	0	2	46	4	0
08:45 AM	7	7	4	0	4	46	1	0	2	18	3	0	1	41	4	0
04:00 PM	13	10	3	0	11	48	10	0	4	12	2	0	2	87	4	0
04:15 PM	14	15	8	0	7	72	8	0	11	15	4	0	1	69	13	0
04:30 PM	14	18	7	0	14	64	5	0	10	8	6	0	5	81	16	0
04:45 PM	6	15	10	0	8	53	6	0	4	14	8	0	1	78	10	0
05:00 PM	17	17	10	0	12	72	10	0	10	13	3	0	3	87	8	0
05:15 PM	17	15	16	0	8	59	3	0	10	17	2	0	3	64	6	0
05:30 PM	13	11	4	0	11	56	2	0	8	13	2	0	4	53	12	0
05:45 PM	13	14	3	0	12	51	5	0	11	15	5	0	4	65	10	0
07:15 AM	6	11	3	0	12	70	3	0	3	24	0	0	1	32	8	0
07:30 AM	13	4	2	0	8	89	0	0	2	16	1	0	0	31	10	0
07:45 AM	5	8	2	0	10	82	4	0	2	21	4	0	1	40	11	0
08:00 AM	7	2	1	0	10	52	4	0	6	10	1	0	4	64	6	0
AM Peak Hour	**32**	**25**	**8**	**0**	**39**	**293**	**12**	**0**	**14**	**71**	**6**	**0**	**6**	**166**	**35**	**0**
PHF (by movement)	0.63	0.60	0.67		0.84	0.82	0.69		0.54	0.73	0.38		0.38	0.65	0.83	
Truck % (by approach)	0.0%	3.9%	0.0%		5.1%	4.4%	0.0%		7.3%	0.0%	0.0%		0.0%	4.8%	0.0%	
PHF (by approach)		0.82				0.88				0.83				0.70		
Truck % (by approach)		1.5%				4.4%				1.1%				3.9%		
PHF (overall)								0.93								
Truck % (overall)								3.5%								
04:00 PM	13	10	3	0	11	48	10	0	4	12	2	0	2	87	4	0
04:15 PM	14	15	8	0	7	72	8	0	11	15	4	0	1	69	13	0
04:30 PM	14	18	7	0	14	64	5	0	10	8	6	0	5	81	16	0
04:45 PM	6	15	10	0	8	53	6	0	4	14	8	0	1	78	10	0
PM Peak Hour	**42**	**39**	**23**	**0**	**31**	**166**	**11**	**0**	**29**	**45**	**10**	**0**	**12**	**181**	**28**	**0**
PHF (by movement)	0.77	0.54	0.61		0.56	0.58	0.28		0.68	0.75	0.28		0.50	0.82	0.43	
Truck % (by approach)	2.4%	2.5%	4.3%		0.0%	4.8%	0.0%		0.0%	0.0%	10.5%		0.0%	6.1%	0.0%	
PHF (by approach)		0.67				0.59				0.70				0.54		
Truck % (by approach)		2.5%				3.9%				1.2%				5.0%		
PHF (overall)								0.62								
Truck % (overall)								3.7%								

Growth Rate Used 1.0%

File Name: 039-Delsea drive at High Street
Start Date: 9/22/2010*
Start Time:
Site Code:
Comment 1: DVRPC #88321
Comment 2: J:\21138A- PATCO EIS\Tra\Traffic Counts\DVRPC\PDFs\manual_turning_movement
Comment 3:
Comment 4:

	Delsea Drive (47/322) From North				High St (322) From East				Delsea Drive (47) From South				High Street From West			
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds
07:15 AM	13	63	41	0	63	61	11	0	14	93	3	0	4	24	11	0
07:30 AM	12	67	37	0	95	63	8	0	6	114	10	0	3	43	9	0
07:45 AM	21	80	24	0	100	90	13	0	14	92	8	0	4	32	6	0
08:00 AM	16	81	41	0	47	46	9	0	9	87	11	0	7	47	19	0
08:15 AM	12	82	42	0	58	36	10	0	14	93	8	0	3	33	21	0
08:30 AM	17	90	32	0	47	37	12	0	13	95	8	0	4	18	19	0
08:45 AM	18	93	38	0	78	24	14	0	17	101	9	0	7	20	16	0
09:00 AM	16	89	29	0	78	23	12	0	10	94	8	0	7	22	24	0
04:00 PM	23	124	73	0	54	42	13	0	14	135	7	0	11	51	18	0
04:15 PM	23	121	63	0	69	53	13	0	10	102	11	0	12	59	32	0
04:30 PM	34	123	88	0	50	56	13	0	14	103	6	0	8	78	36	0
04:45 PM	27	104	92	0	58	31	10	0	19	105	14	0	7	68	28	0
05:00 PM	33	120	80	0	33	34	17	0	29	133	13	0	10	70	19	0
05:15 PM	33	128	80	0	40	39	8	0	17	112	7	0	9	54	18	0
05:30 PM	26	132	64	0	54	57	11	0	19	108	10	0	6	43	16	0
05:45 PM	22	148	65	0	47	44	10	0	7	129	11	0	19	53	23	0
07:15 AM	13	63	41	0	63	61	11	0	14	93	3	0	4	24	11	0
07:30 AM	12	67	37	0	95	63	8	0	6	114	10	0	3	43	9	0
07:45 AM	21	80	24	0	100	90	13	0	14	92	8	0	4	32	6	0
08:00 AM	16	81	41	0	47	46	9	0	9	87	11	0	7	47	19	0
AM Peak Hour	**62**	**291**	**143**	**0**	**305**	**280**	**41**	**0**	**43**	**386**	**32**	**0**	**19**	**147**	**44**	**0**
PHF (by movement)	0.74	0.90	0.87		0.76	0.72	0.77		0.75	0.84	0.73		0.71	0.79	0.59	
Truck % (by approach)																
PHF (by approach)		0.90				0.75				0.89				0.73		
Truck % (by approach)		0.0%				0.0%				0.0%				0.0%		
PHF (overall)								0.91								
Truck % (overall)								0.0%								
04:00 PM	21	112	66	0	49	38	12	0	13	122	6	0	10	46	17	0
04:15 PM	21	109	57	0	62	46	12	0	9	92	10	0	11	53	29	0
04:30 PM	31	111	79	0	45	50	12	0	13	93	5	0	7	70	32	0
04:45 PM	24	94	83	0	52	28	9	0	16	95	13	0	6	81	25	0
PM Peak Hour	**97**	**426**	**285**	**0**	**208**	**164**	**45**	**0**	**51**	**402**	**34**	**0**	**34**	**230**	**103**	**0**
PHF (by movement)	0.78	0.95	0.86		0.84	0.82	0.94		0.80	0.82	0.65		0.77	0.82	0.80	
Truck % (by approach)																
PHF (by approach)		0.91				0.85				0.86				0.84		
Truck % (by approach)		0.0%				0.0%				0.0%				0.0%		
PHF (overall)								0.95								
Truck % (overall)								0.0%								

Growth Rate Used: 1.11
* Note: Traffic Volumes for this intersection are from 2010; Similar process was used to find growth from 2010 to 2017

File Name: 102-MLK & Broadway.ppd
Start Date: 7/30/2013
Start Time: 7:00:00 AM
Site Code: 00000036
Comment 1: Counter: DVRPC
Comment 2: Weather: Sunny
Comment 3:
Comment 4:

	Broadway				Pitman Ave				Broadway				Pitman Ave			
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds
07:00 AM	0	28	1	0	2	6	4	0	0	23	2	0	0	25	0	0
07:15 AM	1	42	1	0	2	10	2	0	0	35	1	0	1	40	2	0
07:30 AM	0	44	1	0	4	14	3	0	0	45	2	0	0	45	1	0
07:45 AM	4	43	4	0	7	28	6	0	0	58	3	0	1	189	7	0
08:00 AM	4	75	7	0	8	52	2	0	0	113	6	0	1	220	11	0
08:15 AM	4	87	6	0	10	72	12	0	0	95	8	0	1	271	19	0
08:30 AM	0	43	10	0	20	64	4	0	0	58	4	0	0	107	3	0
08:45 AM	3	85	4	0	13	70	2	0	0	48	2	0	1	149	14	0
04:00 PM	1	47	6	0	6	48	2	0	1	64	3	0	0	25	3	0
04:15 PM	1	41	5	0	7	35	3	0	2	88	5	0	0	14	1	0
04:30 PM	3	65	8	0	7	88	2	0	1	168	3	0	0	55	2	0
04:45 PM	2	67	8	0	1	70	1	0	0	95	1	0	0	34	3	0
05:00 PM	1	92	8	0	7	75	0	0	1	131	2	0	0	65	7	0
05:15 PM	0	83	2	0	7	105	3	0	1	129	3	0	0	80	8	0
05:30 PM	6	83	6	0	15	91	3	0	7	81	13	0	0	81	8	0
05:45 PM	1	42	16	0	14	65	8	0	1	50	8	0	0	83	16	0
07:00 AM	0	28	1	0	2	6	4	0	0	23	2	0	0	25	0	0
07:15 AM	1	42	1	0	2	10	2	0	0	35	1	0	1	40	2	0
07:30 AM	0	44	1	0	4	14	3	0	0	45	2	0	0	45	1	0
07:45 AM	4	43	4	0	7	28	8	0	0	58	3	0	1	189	7	0
AM Peak Hour	**10**	**204**	**13**	**0**	**21**	**103**	**15**	**0**	**0**	**252**	**12**	**0**	**3**	**404**	**21**	**0**
PHF (by movement)	0.56	1.18	0.75		0.79	0.94	0.50			1.08	0.92		0.75	0.85	0.79	
Truck % (by approach)	0.0%	0.0%	0.0%		0.0%	0.0%	0.0%			0.0%	0.0%		0.0%	0.0%	0.0%	
PHF (by approach)	1.10				0.84				1.07				0.66			
Truck % (by approach)	0.0%				0.0%				0.0%				0.0%			
PHF (overall)	0.82															
Truck % (overall)	0.0%															
04:15 PM	1	41	5	0	7	35	3	0	2	88	5	0	0	14	1	0
04:30 PM	3	65	8	0	7	88	2	0	1	168	3	0	0	55	2	0
04:45 PM	2	67	8	0	1	70	1	0	0	95	1	0	0	34	3	0
05:00 PM	1	92	8	0	7	75	0	0	1	131	2	0	0	65	7	0
PM Peak Hour	**7**	**200**	**24**	**0**	**35**	**261**	**15**	**0**	**0**	**260**	**24**	**0**	**0**	**244**	**32**	**0**
PHF (by movement)	0.50	0.56	0.75		1.29	0.74	1.08		1.00	0.39	1.31			0.94	1.17	
Truck % (by approach)	0.0%	0.0%	0.0%		0.0%	0.0%	0.0%		0.0%	0.0%	0.0%			0.0%	0.0%	
PHF (by approach)	0.59				0.80				0.43				0.96			
Truck % (by approach)	0.0%				0.0%				0.0%				0.0%			
PHF (overall)	0.70															
Truck % (overall)	0.0%															

Growth Factor Used: (AM) 1.1
Growth Factor Used: (PM) 1.14

File Name: 103-Haddon & MLK-3\101-mlk & haddon.ppd
Start Date: 10/22/2013
Start Time: 7:15:00 AM
Site Code: 00000001
Comment 1: Counter: RAS
Comment 2: Weather: Clear
Comment 3:
Comment 4:

	Haddon Ave From North				MLK From East				Haddon Ave From South				Haddon Ave to Parking Garage		MLK From West			
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Cars	Buses	Right	Thru	Left	Peds
07:15 AM	29	37	32	0	24	104	22	0	14	30	14	2	19	7	18	40	10	0
07:30 AM	32	53	29	0	37	212	29	0	40	54	14	0	9	7	14	100	10	0
07:45 AM	34	64	34	0	69	212	29	0	32	73	15	0	21	2	12	86	21	0
08:00 AM	20	75	47	0	84	186	34	0	23	75	20	0	25	3	22	57	18	0
08:15 AM	43	86	39	0	56	264	31	0	17	114	26	0	72	6	26	79	17	0
08:30 AM	41	62	29	0	84	210	53	0	26	77	33	0	41	3	26	66	18	0
08:45 AM	36	65	44	0	40	172	56	0	20	63	30	0	20	6	21	56	14	0
09:00 AM	37	73	35	0	52	169	45	0	26	40	12	0	43	6	10	37	10	0
04:00 PM	0	86	92	0	22	52	15	0	89	70	6	3	1	5	30	210	35	0
04:15 PM	0	55	64	0	17	52	17	0	79	60	17	1	6	6	23	166	34	0
04:30 PM	0	62	96	0	10	50	17	0	104	80	15	0	2	6	24	200	24	0
04:45 PM	0	64	87	0	22	54	14	0	103	63	17	0	7	3	34	133	30	0
05:00 PM	0	48	83	0	19	55	8	0	79	46	9	0	1	7	36	170	25	0
05:15 PM	0	49	47	0	14	48	16	0	56	81	14	0	2	7	29	100	29	0
05:30 PM	2	51	38	0	11	41	10	0	87	44	11	0	1	7	17	97	27	0
05:45 PM	6	26	23	0	9	56	14	0	58	41	8	0	3	5	16	73	17	0
07:15 AM	29	37	32	0	24	104	22	0	14	30	14	2	19	7	18	40	10	0
07:30 AM	32	53	29	0	37	212	29	0	40	54	14	0	9	7	14	100	10	0
07:45 AM	34	64	34	0	69	212	29	0	32	73	15	0	21	2	12	86	21	0
08:00 AM	20	75	47	0	84	186	34	0	23	75	20	0	25	3	22	57	18	0
AM Peak Hour	**129**	**277**	**149**	**0**	**246**	**875**	**122**	**0**	**111**	**316**	**76**	**0**	**127**	**18**	**76**	**322**	**65**	**0**
PHF (by movement)	0.94	0.93	0.78		0.74	1.03	0.90		0.70	1.06	0.96	0.00	1.25	0.67	0.86	0.80	0.78	
Truck % (by approach)	1.6%	1.1%	2.7%		0.0%	0.3%	0.8%		1.8%	4.4%	9.2%		0.0%	0.0%	14.5%	1.2%	0.0%	
PHF (by approach)	0.98				1.00				1.05				1.04					
Truck % (by approach)	1.6%				0.3%				4.6%				2.8%					
PHF (overall)	1.04																	
Truck % (overall)	1.8%																	
04:15 PM	0	55	64	0	17	52	17	0	79	60	17	1	6	5	23	166	34	0
04:30 PM	0	62	96	0	10	50	17	0	104	80	15	0	2	6	24	200	24	0
04:45 PM	0	64	87	0	22	54	14	0	103	63	17	0	7	3	34	133	30	0
05:00 PM	0	48	83	0	19	55	8	0	79	46	9	0	1	7	36	170	25	0
PM Peak Hour	**8**	**127**	**107**	**0**	**34**	**145**	**40**	**0**	**201**	**166**	**33**	**0**	**7**	**18**	**62**	**270**	**73**	**0**
PHF (by movement)		0.50	0.28		0.39	0.66	0.58		0.48	0.52	0.48	0.00	0.25	0.67	0.42	0.34	0.53	
Truck % (by approach)	0.0%	0.8%	1.9%		2.9%	1.4%	0.0%		2.5%	0.6%	21.2%		0.0%	0.0%	0.0%	1.1%	1.4%	
PHF (by approach)	0.38				0.62				0.50				0.39					
Truck % (by approach)	1.2%				1.4%				3.2%				0.8%					
PHF (overall)	0.46																	
Truck % (overall)	1.8%																	

Growth Factors Used (AM): 1.1
Growth Factors Used (PM): 1.14

Appendix 5C: Traffic Signal Timing Data

Figure 5C-1 – Intersections Modeled

Intersections Modeled for Glassboro-Camden LRT

ID	Intersection		Township	Sycnhro Control Type
3	High St E	S Main Street (Rte 553)	Glassboro, NJ	Pretimed
5	Delsea Dr (Rte 47)	High Street (322)	Glassboro - Glassboro, NJ	Actuated-Uncoordinated
6	Mullica Hill Rd (Rte 322)	Bowe Blvd	Rowan University - Glassboro, NJ	Semi-Actuated
8	Bowe Blvd	Carpenter St (682)	Rowan University - Glassboro, NJ	Actuated-Uncoordinated
10	Pitman Ave (639)	S Broadway (553A)	Pitman - Pitman, NJ	Actuated-Uncoordinated
11	Broadway Blvd (551)	Holly Ave	Pitman - Pitman, NJ	Pretimed
12	Lambs Rd	Main St	Mantua Pitman - Mantua, NJ	Pretimed
14	Lambs Rd	Glassboro Road	Mantua Pitman - Mantua, NJ	Actuated-Coordinated
15	Tylers Mill Road	Glassboro Road	Mantua Pitman - Mantua, NJ	Actuated-Uncoordinated
17	Mantua Blvd (676)	Center St	Sewell - Sewell, NJ	Actuated-Uncoordinated
20	East Barber Ave	S Evergreen Ave (553)	Cooper Street - Woodbury, NJ	Semi-Actuated
22	S Broad St (Rte 45)	E Barber Ave	Cooper Street - Woodbury, NJ	Actuated-Coordinated
23	Cooper Street (CR 534)	S Broad St (Rte 45)	Cooper Street - Woodbury, NJ	Actuated-Coordinated
25	Cooper Street (CR 534)	S Evergreen Ave (553)	Cooper Street - Woodbury, NJ	Actuated-Uncoordinated
26	E Red Bank Ave	N Broad Street (Rte 45)	Red Bank Avenue - Woodbury, NJ	Semi-Actuated
27	E Red Bank Ave	N Evergreen Ave (650)	Red Bank Avenue - Woodbury, NJ	Actuated-Uncoordinated
28	N. Broad Street	Edith Ave	Red Bank Avenue - Woodbury, NJ	Semi-Actuated
30	Broadway Blvd (551)	E. Olive Street	Crown Point Road - Westville, NJ	Pretimed
32	Broadway Blvd (551)	Delsea Drive (47)	Crown Point Road - Westville, NJ	Semi-Actuated
33	S Broadway (551)	Koehler St	Gloucester City, NJ	Pretimed
34	Market Street (537 S)	South Broadway (551)	Gloucester City, NJ	Pretimed
35	S Broadway (551)	Monmouth Street	Gloucester City, NJ	Pretimed
36	N Broadway	Hudson St	Gloucester City, NJ	Pretimed
37	N Broadway	Ferry Ave/Jasper	South Camden, NJ	Pretimed
39	Martin Luther King Blvd	South 6th St	Camden, NJ	Actuated-Prempted
40	Haddon Ave	Cooper Plaza	Camden, NJ	Actuated-Uncoordinated
102	Martin Luther King Blvd	Broadway	Camden, NJ	Actuated-Prempted
103	Martin Luther King Blvd	Haddon Ave	Camden, NJ	Actuated-Prempted
1	Ellis St	Sewell St	Glassboro, NJ	Unsignalized
2	Main St	Union St & Church St	Glassboro, NJ	Unsignalized
4	High St	Academy St	Glassboro, NJ	Unsignalized
7	Bowe Blvd	N Campus Dr	Glassboro, NJ	Unsignalized
9	S Broadway (551) at	Laurel Ave	Pitman - Pitman, NJ	Unsignalized
13	Tylers Mill	Road at Main Street	Mantua Pitman - Mantua, NJ	Unsignalized
16	Atlantic Ave	Center St	Sewell - Sewell, NJ	Unsignalized
18	N East Ave	Ave at E Mantua Ave (632)	Wenoah, NJ	Unsignalized
19	Elm Ave	W Jersey Ave	Woodbury Heights, NJ	Unsignalized
21	East Barber	Ave at Railroad Ave	Woodbury , NJ	Unsignalized
24	Cooper Street	CR 534) at Railroad Ave	Woodbury, NJ	Unsignalized
29	N. Broad Street	Street at Park Ave	Woodbury, NJ	Unsignalized
31	Broadway Blvd	Duncan Ave	Westville, NJ	Unsignalized
38	Ferry Ave	Master St	South Camden, NJ	Unsignalized

Intersection 3:

Intersection ID : 4

TIMING SCHEDULE
Main Street & High Street
Borough of Glassboro, Gloucester County
Field Timing Collected 1/3/2018

Phase		Time (s)
1) Main Street ROW	G	24
	Y	4
	R	2
2) High Street ROW	G	24
	Y	4
	R	2
Cycle Length		**60**

Intersection 5:

Intersection ID :

TIMING SCHEDULE
Delsea Drive & High Street
Borough of Glassboro, Gloucester County
Field Timing and Video Collected 10/31/2013

Phase		Time (s)
1) Delsea Dr SB Lead	G	8 -12
	Y	3
	R	0
2) Delsea Dr ROW	G	71 -67
	Y	4
	R	2
3) High St ROW	G	26
	Y	4
	R	2
Cycle Length		**120**

Intersection 6:

Intersection ID :

TIMING SCHEDULE
Mullica Hill Road & Bowe Blvd
Borough of Glassboro, Gloucester County
Field Timing Collected 1/3/2018

Phase		Time (s)
1) Mullica Hill EB Lead	G	7
	Y	3
	R	0
2) Mullica Hill ROW	G	42
	Y	3
	R	2
3) Bowe Blvd ROW	G	9 -18
	Y	3
	R	2
Cycle Length		**71**

Intersection 8:

TF06-02

TIMING SCHEDULE
Carpenter Street (CR682)&
Joseph Bowe Blvd/Heston Road
Borough of Glassboro, Gloucester County
Normal Operation
(40-78 sec Cycle)

	Signal Indications				
Phase	Bowe/Barger 1-6	CR682 7-12	X-CR682 13-16	X-Bowe/Barger 17-20	Time (Sec.)
ϕ2 Bowe/Barger	G	R	H	H	7-26
Change	Y	R	H	H	4
Clearance	R	R	H	H	2
ϕ4 Carpenter	R	G	WM	H	7-26
Ped. Clearance	R	G	FLH	H	14
Change	R	Y	H	H	4
Clearance	R	R	H	H	2
Emergency Flash	R	Y	Dark	Dark	

Notes:
1. The Manual Control Shall Be Disconnected
2. Memory Circuits Shall be Disconnected
3. The Vehicle Extension Shall Be Set At 4 Seconds
4. The Controller Shall Rest in ϕ4

TF06-02

TIMING SCHEDULE
Carpenter Street (CR682) &
Joseph Bowe Blvd/ Heston Road
Borough of Glassboro, Gloucester County
Pedestrian Actuation
(59-78 Sec cycle)

	Signal Indications				
Phase	Bowe/Barger 1-6	CR682 7-12	X-CR682 13-16	X-Bowe/Barger 17-20	Time (Sec.)
ϕ2 Bowe/Barger	G	R	WM	H	13
Ped. Clearance	G	R	FLH	H	13
Change	Y	R	H	H	4
Clearance	R	R	H	H	2
ϕ4 Carpenter	R	G	H	WM	7-26
Ped. Clearance	R	G	H	FLH	14
Change	R	Y	H	H	4
Clearance	R	R	H	H	2
Emergency Flash	R	Y	Dark	Dark	

Notes:
1. The Manual Control Shall Be Disconnected
2. Memory Circuits Shall be Disconnected
3. The Vehicle Extension Shall Be Set At 4 Seconds
4. The Controller Shall Rest in ϕ4

Intersection 10:

TF-15-07

Timing Schedule
Broadway (CR 553A) and Pitman Avenue (CR 639)
Borough of Pitman

Variable Cycle (50-73 seconds)
Normal Timing

Signal faces

	CR 553A 1-6	CR 639 7, 8, 9	X-CR 639 14-15	X-CR 553A 10-13	Time (Seconds)
Phase Ø2 CR 553A	G	R	WM	H	10
Pedestrian Clearance	G	R	FH	H	18
Vehicle Extension	G	R	H	H	0-7
Change	Y	R	H	H	4
Clearance	R	R	H	H	2
Ø4 CR 639	R	G	H	H	10-26
Change	R	Y	H	H	4
Clearance	R	R	H	H	2
Emergency Flash	Y	R	DARK	DARK	

Notes:

1. The manual control and memory circuit are to be disconnected.
2. The vehicle extension is to be set at 2 seconds.
3. The signal shall rest at the end of Ø2 Green.

TF-15-07

Timing Schedule
Broadway (CR 553A) and Pitman Avenue (CR 639)
Borough of Pitman

Variable Cycle (66-73 Seconds)
Pedestrian Actuation

Signal Faces

	CR 553A 1-6	CR 639 7, 8, 9	X-CR 639 14-15	X-CR 553A 10-13	Time (seconds)
Phase Ø2 CR 553A	G	R	WM	H	10
Pedestrian Clearance	G	R	FH	H	18
Vehicle Extension	G	R	H	H	0-7
Change	Y	R	H	H	4
Clearance	R	R	H	H	2
Ø4 CR 639	R	G	H	WM	10
Pedestrian Clearance	R	G	H	FH	16
Change	R	Y	H	H	4
Clearance	R	R	H	H	2
Emergency Flash	Y	R	DARK	DARK	

Notes:

1. The manual control and memory circuit are to be disconnected.
2. The vehicle extension is to be set at 2 seconds.
3. The signal shall rest at the end of Ø2 Green.

Intersection 11:

Gloucester County
TF-15-04

Timing Schedule
Broadway (CR 553 Alt) and Holly Avenue (CR 624)
Borough of Pitman
74 Second Cycle - Pretimed

Phase	Broadway 2,3,5,6	Holly 8,9,11,14,17	X-Holly 1,12,4,16	X-Broadway 7,13,10,15	Time (Sec.)
ϕ2 Broadway	G	R	WM	H	19
Ped. Clearance	G	R	FLH	H	11
Change	Y	R	H	H	4
Clearance	R	R	H	H	2
ϕ6 Holly	R	G	H	WM	20
Ped. Clearance	R	G	H	FLH	12
Change	R	Y	H	H	4
Clearance	R	R	H	H	2
Notes:					
Emergency Flash	Flash Y	Flash R	Dark	Dark	

Intersection 12:

Intersection ID : 12

TIMING SCHEDULE
Lambs Road & Broadway/Main Street
Mantua Township, Gloucester County
Field Timing Collected 8/6/2013

Phase		**Time (s)**
1) Lambs Rd ROW	G	38
	Y	3
	R	2
2) Main St ROW	G	22
	Y	3
	R	2
Cycle Length		**70**

Intersection 14:

Intersection ID :

TIMING SCHEDULE
Lambs Road & Woodbury Glassboro Rd
Mantua Township, Gloucester County
Field Timing Collected 1/3/2018

Phase		Time (s)
1) Lambs Rd Lead Lefts	G	7
	Y	3
	R	0
2) Lambs Rd EB ROW	G	4
	Y	3
	R	0
3) Lambs Rd ROW	G	10 -21
	Y	5
	R	2
4) Woodbury Glassboro Rd Lead Lefts	G	7
	Y	3
	R	0
2) Woodbury Glassboro Rd ROW	G	28 -42
	Y	5
	R	2
Cycle Length		**79 -104**

Intersection 15:

Intersection ID : 133

TIMING SCHEDULE
Tylers Mill Road & Woodbury Glassboro Rd
Mantua Township, Gloucester County
Field Timing Collected 1/3/2018

Phase		Time (s)
1) Tylers Mill Rd Lead Lefts	G	7
	Y	3
	R	0
2) Tylers Mill Rd ROW	G	18 -25
	Y	5
	R	2
3) Woodbury Glassboro Rd Lead Lefts	G	7
	Y	3
	R	0
4) Woodbury Glassboro Rd ROW	G	28 -42
	Y	5
	R	2
Cycle Length		**80 -101**

Intersection 17:

County Route 603 and
County Route 676
Mantua Township
Gloucester County

Variable Cycle length

Normal Operation--No Pedestrian Actuation

PHASE		Signal Faces 1,2,3,5 11,13,14	6,8,9 17,20,21	7,10 18,19	4,22 12,15	TIME (SECONDS)
Φ1	CR 603	G	R	H	H	10-34
	Change	Y	R	H	H	4
	Clearance	R	R	H	H	2
Φ2	CR 676	R	G	H	H	10-44
	Change	R	Y	H	H	4
	Clearance	R	R	H	H	2

Operation with Pedestrian Actuation

PHASE		Signal Faces 1,2,3,5 11,13,14	6,8,9 17,20,21	7,10 18,19	4,22 12,15	TIME (SECONDS)
Φ1	CR 603	G	R	WK	H	7
	Pedestrian Clearance	G	R	FL-H	H	10
	Vehicle extension	G	R	H	H	0-17
	Change	Y	R	H	H	4
	Clearance	R	R	H	H	2
Φ2	CR 676	R	G	H	WK	7
	Pedestrian Clearance	R	G	H	FL-H	10
	Vehicle Extension	R	G	H	H	0-27
	Change	R	Y	H	H	4
	Clearance	R	R	H	H	2

The manual control is to be disconnected.

The vehicle extension is to be set at 2 seconds.

The memory circuit is to be disconnected.

Signal to rest in red when there are no actuations.

Main Street (CR 603) to flash yellow.

Mantua Bouleverd (CR 676) to flash red.

Intersection 20:

Intersection ID :

TIMING SCHEDULE
Barber Ave & Evergreen Ave
Borough of Woodbury, Gloucester County
Field Timing Collected 1/3/2018

Phase		Time (s)
1) Barber Ave Lead Lefts	G	9
	Y	3
	R	0
2) Barber Ave ROW	G	20
	Y	3
	R	2
3) Evergreen Ave Lead Lefts	G	6
	Y	3
	R	0
4) Evergreen Ave ROW	G	34
	Y	3
	R	2
Cycle Length		**85**

Intersection 22:

Intersection ID :

TIMING SCHEDULE
Broad Street & East Barber Ave.
Borough of Woodbury, Gloucester County
Field Timing Collected 1/3/2018

Phase		Time (s)	
1) Broad St NB Lead	G	5	* can skip
	Y	3	
	R	0	
2) Broad St ROW	G	42 -47	
	Y	3	
	R	3	
3) East Barber ROW	G	25 -28	
	Y	3	
	R	3	
Cycle Length		**87 -95**	

Intersection 23:

Intersection ID :

TIMING SCHEDULE
Broad Street & Cooper Street
Borough of Woodbury, Gloucester County
Field Timing Collected 1/3/2018

Phase		Time (s)
1) Broad St Lead Lefts	G	5
	Y	3
	R	0
2) Broad St ROW	G	41
	Y	3
	R	2
3) Cooper St Lead Lefts	G	6 -9
	Y	3
	R	0
4) Cooper St ROW	G	18
	Y	3
	R	2
Cycle Length		**86 -89**

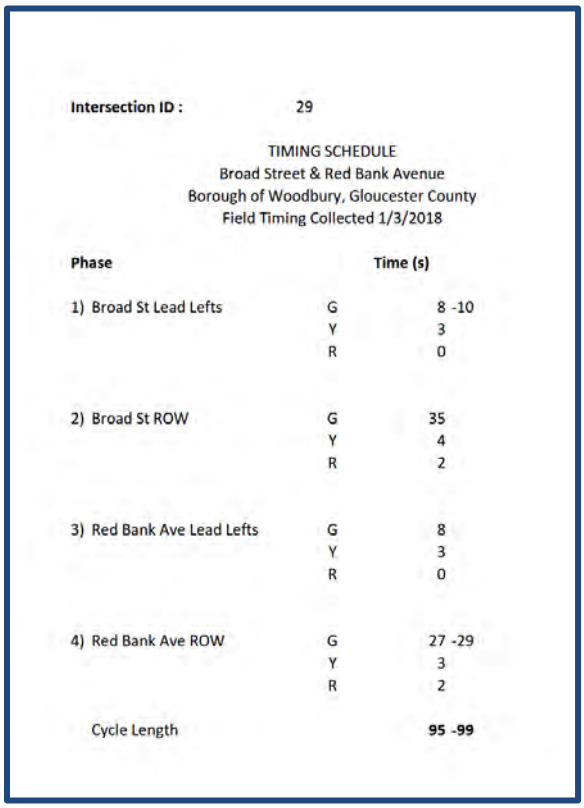
Intersection 25:

Intersection ID : 25

TIMING SCHEDULE
Cooper Street & Evergreen Ave
Borough of Woodbury, Gloucester County
Field Timing Collected 1/3/2018

Phase		Time (s)
1) Cooper St WB Lead	G	7
	Y	3
	R	0
2) Cooper St ROW	G	34
	Y	4
	R	2
3) Evergreen Ave ROW	G	34
	Y	4
	R	2
Cycle Length		**90**

Intersection 26:

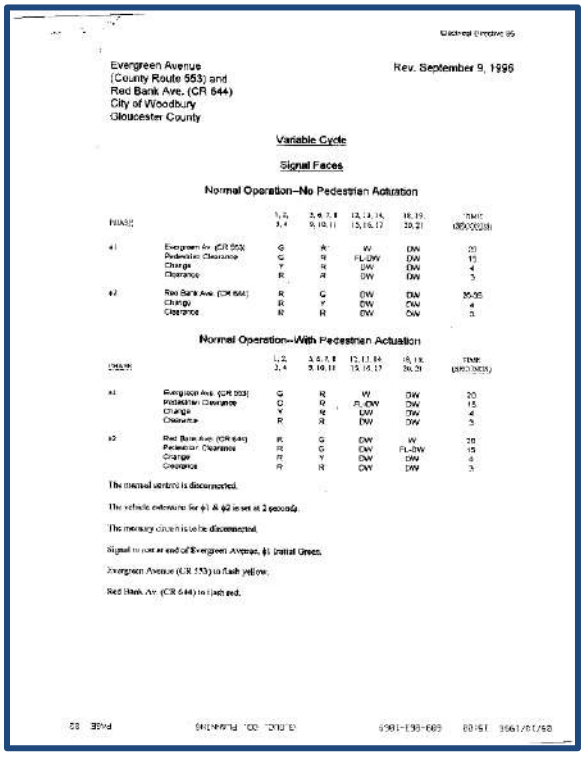


Intersection ID : 29

TIMING SCHEDULE
Broad Street & Red Bank Avenue
Borough of Woodbury, Gloucester County
Field Timing Collected 1/3/2018

Phase		Time (s)
1) Broad St Lead Lefts	G	8 -10
	Y	3
	R	0
2) Broad St ROW	G	35
	Y	4
	R	2
3) Red Bank Ave Lead Lefts	G	8
	Y	3
	R	0
4) Red Bank Ave ROW	G	27 -29
	Y	3
	R	2
Cycle Length		**95 -99**

Intersection 27:



Evergreen Avenue
(County Route 553) and
Red Bank Ave. (CR 644)
City of Woodbury
Gloucester County

Rev. September 9, 1996

Variable Cycle

Signal Faces

Normal Operation--No Pedestrian Actuation

Normal Operation--With Pedestrian Actuation

Intersection 28:

Intersection ID :

TIMING SCHEDULE
Edith Ave & N. Broad Street
Borough of Woodbury, Gloucester County

Phase		Time (s)
1) Edith Ave ROW	G	7 -10
	Y	3
	R	3
2) N. Broad St ROW	G	70 -67
	Y	4
	R	3
Cycle Length		**90**

Intersection 30:

Intersection ID :

TIMING SCHEDULE
Olive St & Broadway
Westville, Gloucester County

Phase		Time (s)
1) Olive St ROW	G	19
	Y	4
	R	1
2) Broadway ROW	G	30
	Y	5
	R	1
Cycle Length		**60**

Intersection 32:

Intersection ID :

TIMING SCHEDULE
Delsea Dr & Broadway
Westville, Gloucester County
Field Timing Collected 1/3/2018

Phase		Time (s)
1) Delsea Dr ROW	G	44 -48
	Y	4
	R	2
2) Broadway ROW	G	11 -16
	Y	3
	R	2
Cycle Length		**66 -75**

Intersection 33:

Intersection ID :

TIMING SCHEDULE
Koehler St & S Broadway
Gloucester City, Gloucester County

Phase		Time (s)
1) Koehler St ROW	G	25
	Y	3
	R	4
2) Broadway ROW	G	36
	Y	3
	R	4
Cycle Length		**75**

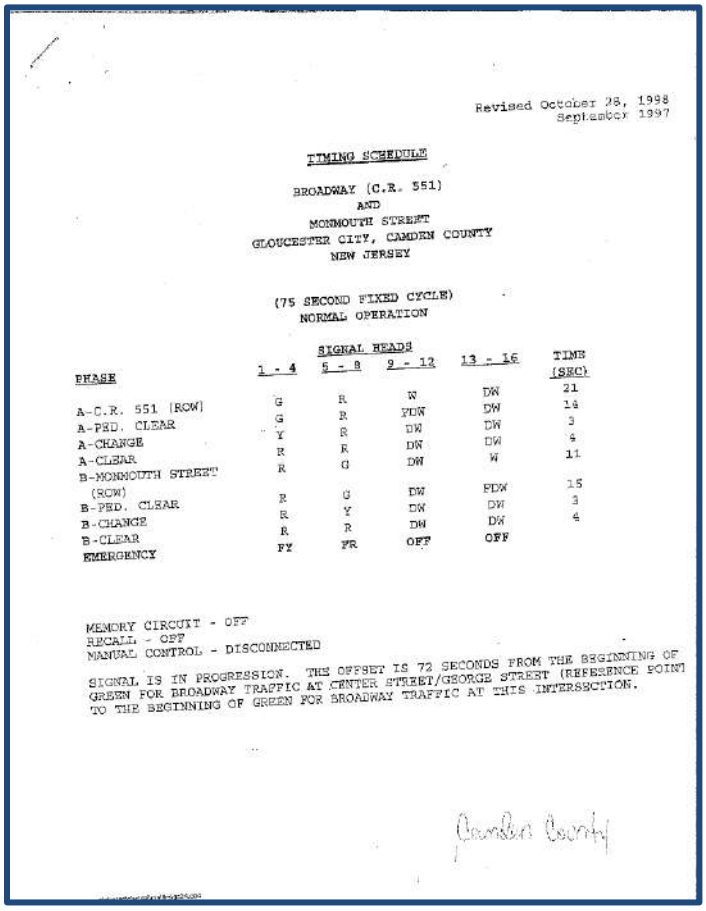
Intersection 34:

Intersection ID :

TIMING SCHEDULE
Market St & S Broadway
Gloucester City, Gloucester County

Phase		**Time (s)**
1) Market St ROW	G	27
	Y	3
	R	6
2) Broadway ROW	G	30
	Y	3
	R	6
Cycle Length		**75**

Intersection 35:



Revised October 28, 1998
September 1997

TIMING SCHEDULE

BROADWAY (C.R. 551)
AND
MONMOUTH STREET
GLOUCESTER CITY, CAMDEN COUNTY
NEW JERSEY

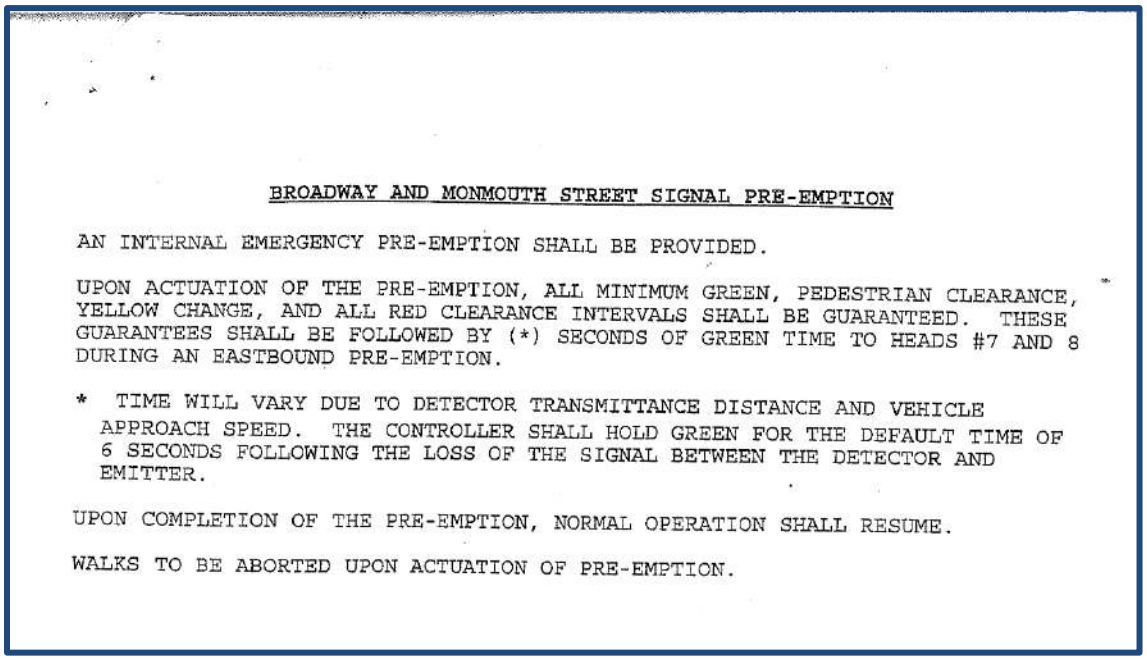
(75 SECOND FIXED CYCLE)
NORMAL OPERATION

PHASE	SIGNAL HEADS 1 - 4	5 - 8	9 - 12	13 - 16	TIME (SEC)
A-C.R. 551 (ROW)	G	R	W	DW	21
A-PED. CLEAR	G	R	FDW	DW	14
A-CHANGE	Y	R	DW	DW	3
A-CLEAR	R	R	DW	DW	4
B-MONMOUTH STREET (ROW)	R	G	DW	W	11
B-PED. CLEAR	R	G	DW	FDW	15
B-CHANGE	R	Y	DW	DW	3
B-CLEAR	R	R	DW	DW	4
EMERGENCY	FY	FR	OFF	OFF	

MEMORY CIRCUIT - OFF
RECALL - OFF
MANUAL CONTROL - DISCONNECTED

SIGNAL IS IN PROGRESSION. THE OFFSET IS 72 SECONDS FROM THE BEGINNING OF GREEN FOR BROADWAY TRAFFIC AT CENTER STREET/GEORGE STREET (REFERENCE POINT) TO THE BEGINNING OF GREEN FOR BROADWAY TRAFFIC AT THIS INTERSECTION.

Camden County



BROADWAY AND MONMOUTH STREET SIGNAL PRE-EMPTION

AN INTERNAL EMERGENCY PRE-EMPTION SHALL BE PROVIDED.

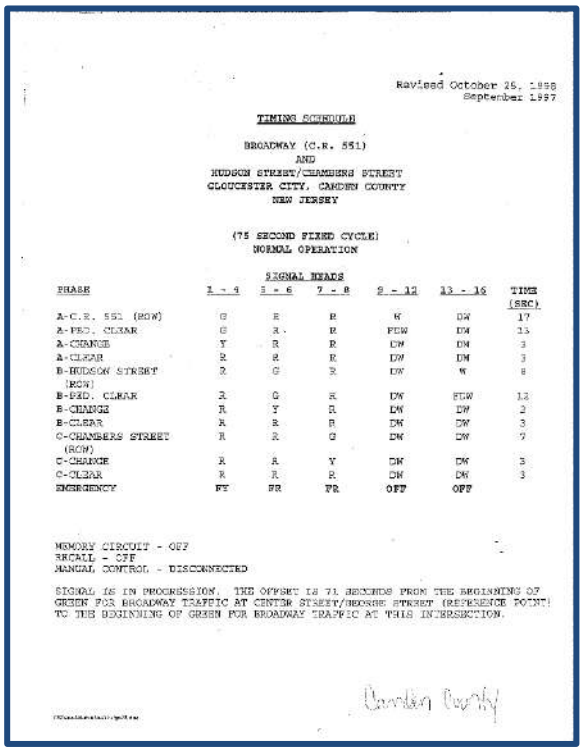
UPON ACTUATION OF THE PRE-EMPTION, ALL MINIMUM GREEN, PEDESTRIAN CLEARANCE, YELLOW CHANGE, AND ALL RED CLEARANCE INTERVALS SHALL BE GUARANTEED. THESE GUARANTEES SHALL BE FOLLOWED BY (*) SECONDS OF GREEN TIME TO HEADS #7 AND 8 DURING AN EASTBOUND PRE-EMPTION.

* TIME WILL VARY DUE TO DETECTOR TRANSMITTANCE DISTANCE AND VEHICLE APPROACH SPEED. THE CONTROLLER SHALL HOLD GREEN FOR THE DEFAULT TIME OF 6 SECONDS FOLLOWING THE LOSS OF THE SIGNAL BETWEEN THE DETECTOR AND EMITTER.

UPON COMPLETION OF THE PRE-EMPTION, NORMAL OPERATION SHALL RESUME.

WALKS TO BE ABORTED UPON ACTUATION OF PRE-EMPTION.

Intersection 36:



Revised October 25, 1998
September 1997

TIMING SCHEDULE

BROADWAY (C.R. 551)
AND
HUDSON STREET/CHAMBERS STREET
CLOUCESTER CITY, CAMDEN COUNTY
NEW JERSEY

(75 SECOND FIXED CYCLE)
NORMAL OPERATION

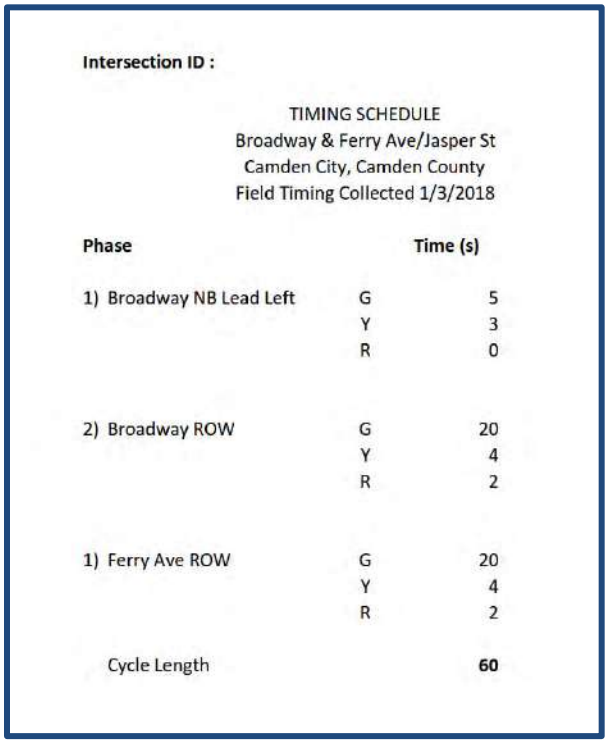
PHASE	SIGNAL HEADS 1 - 4	5 - 6	7 - 8	9 - 12	13 - 16	TIME (SEC)
A-C.R. 551 (ROW)	G	R	R	R	DW	17
A-PED. CLEAR	G	R	R	FDW	DW	13
A-CHANGE	Y	R	R	DW	DW	3
A-CLEAR	R	R	R	DW	DW	3
B-HUDSON STREET (ROW)	R	G	R	DW	W	8
B-PED. CLEAR	R	G	R	DW	FDW	13
B-CHANGE	R	Y	R	DW	DW	2
B-CLEAR	R	R	R	DW	DW	3
C-CHAMBERS STREET (ROW)	R	R	G	DW	DW	7
C-CHANGE	R	R	Y	DW	DW	3
C-CLEAR	R	R	R	DW	DW	3
EMERGENCY	FY	FR	FR	OFF	OFF	

MEMORY CIRCUIT - OFF
RECALL - OFF
MANUAL CONTROL - DISCONNECTED

SIGNAL IS IN PROGRESSION. THE OFFSET IS 71 SECONDS FROM THE BEGINNING OF GREEN FOR BROADWAY TRAFFIC AT CENTER STREET/GEORGE STREET (REFERENCE POINT) TO THE BEGINNING OF GREEN FOR BROADWAY TRAFFIC AT THIS INTERSECTION.

Camden County

Intersection 37:



Intersection ID :

TIMING SCHEDULE
Broadway & Ferry Ave/Jasper St
Camden City, Camden County
Field Timing Collected 1/3/2018

Phase		Time (s)
1) Broadway NB Lead Left	G	5
	Y	3
	R	0
2) Broadway ROW	G	20
	Y	4
	R	2
1) Ferry Ave ROW	G	20
	Y	4
	R	2
Cycle Length		**60**

Intersection 39:

Intersection ID :

TIMING SCHEDULE
Dr. Martin Luther King Blvd & 6th St (Cooper Hospital Driveway)
Camden City, Camden County
Field Timing Collected 1/3/2018

Phase		Time (s)
1) MLK Blvd ROW	G	102
	Y	3
	R	2
2) 6th St ROW	G	28
	Y	3
	R	2
Cycle Length		**140**

Intersection 40

Intersection ID :

TIMING SCHEDULE
Haddon Ave & Cooper Plaza
Camden City, Camden County
Field Timing Collected 1/3/2018

Phase		Time (s)
1) Haddon Ave NB Lead Left	G	4
	Y	2
	R	0
2) Haddon Ave ROW	G	30
	Y	3
	R	3
2) Cooper Plaza ROW	G	7 -20
	Y	3
	R	3
Cycle Length		**55 -68**

Intersection 102:

Intersection ID :

TIMING SCHEDULE
Dr. Martin Luther King Blvd & Haddon Ave
Camden City, Camden County
Field Timing Collected 1/3/2018

Phase		Time (s)	
1) MLK Blvd Left Turns	G	22	
	Y	3	
	R	2	
2) Broadway ROW	G	38	
	Y	3	
	R	2	
3) Haddon Ave SB ROW	G	24	
	Y	3	
	R	2	
4) Haddon Ave NB ROW	G	36	
	Y	3	
	R	2	
# Train (when actuated)	Y	3	*** Cycle jumps to Phase 2 following this phase**
	R	2	
Cycle Length		**140**	

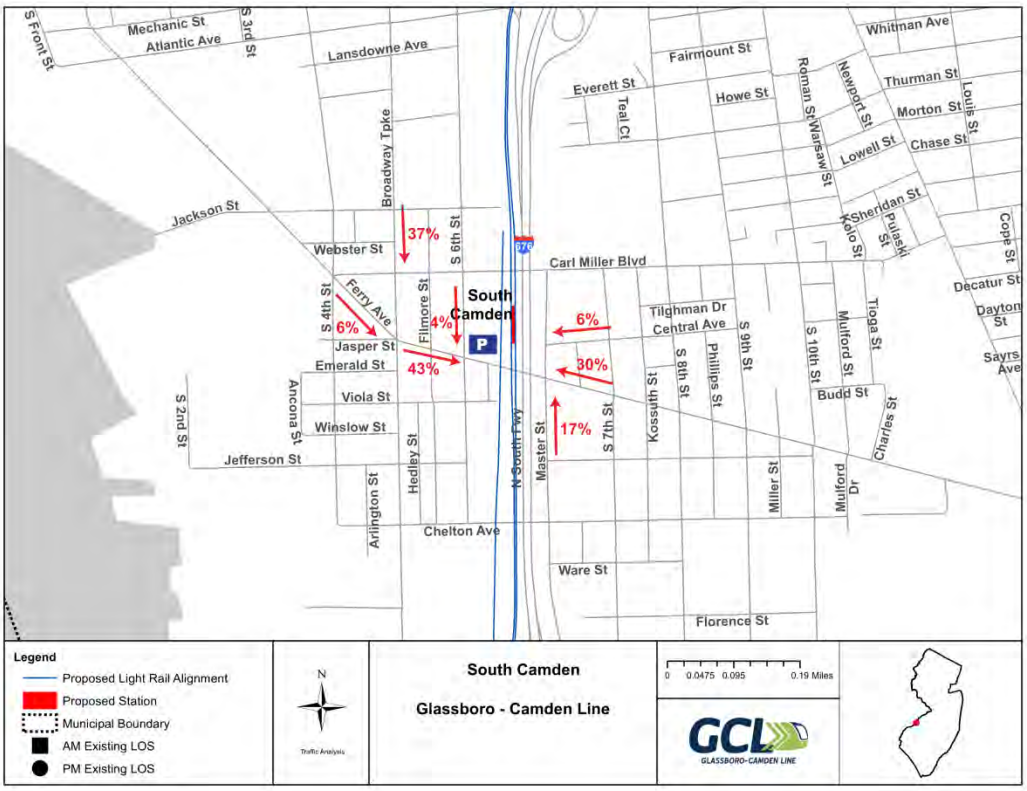
Intersection 103:

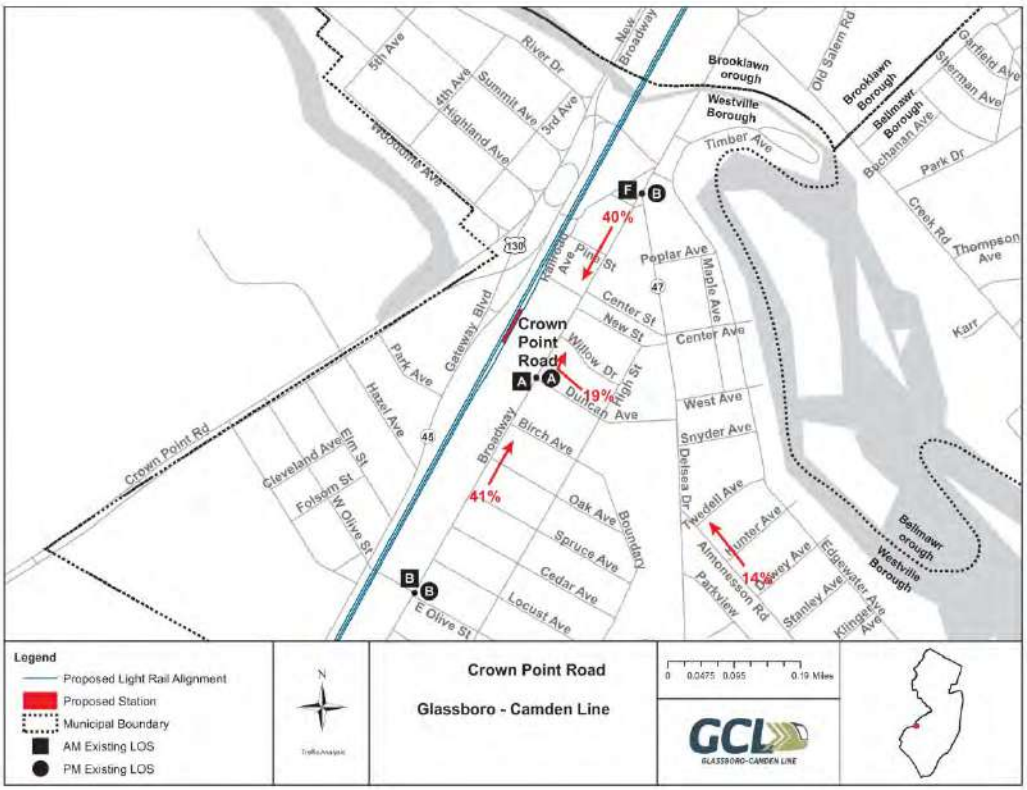
Intersection ID :

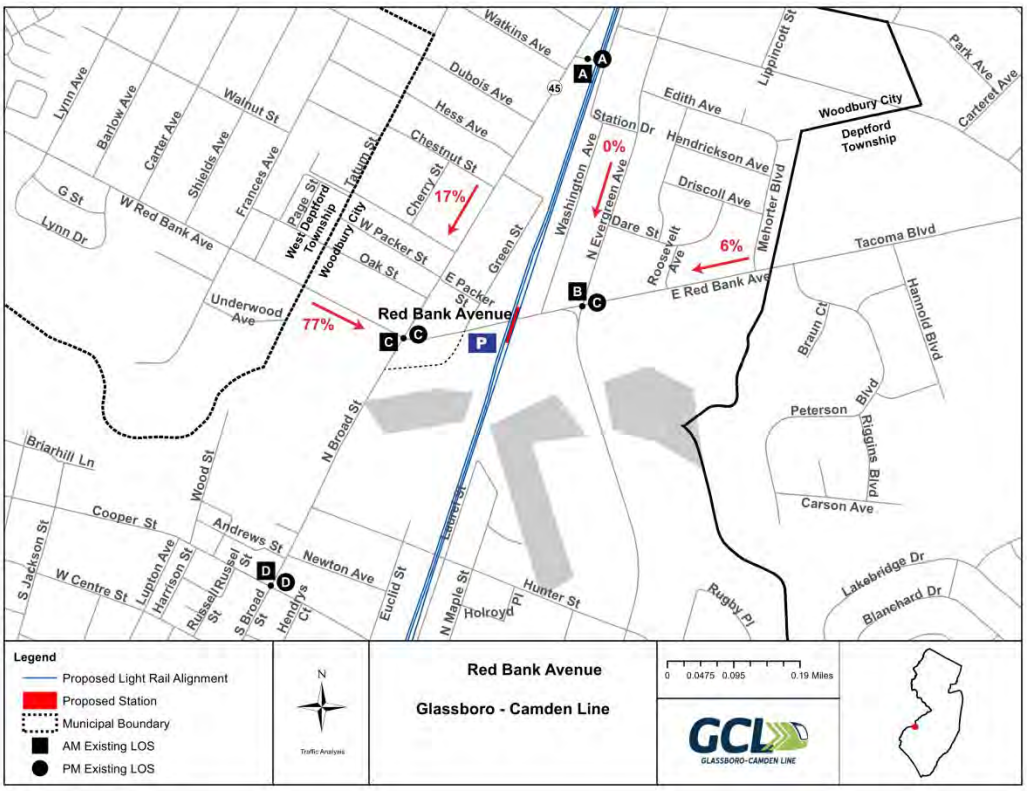
TIMING SCHEDULE
Dr. Martin Luther King Blvd & Broadway
Camden City, Camden County
Field Timing Collected 1/3/2018

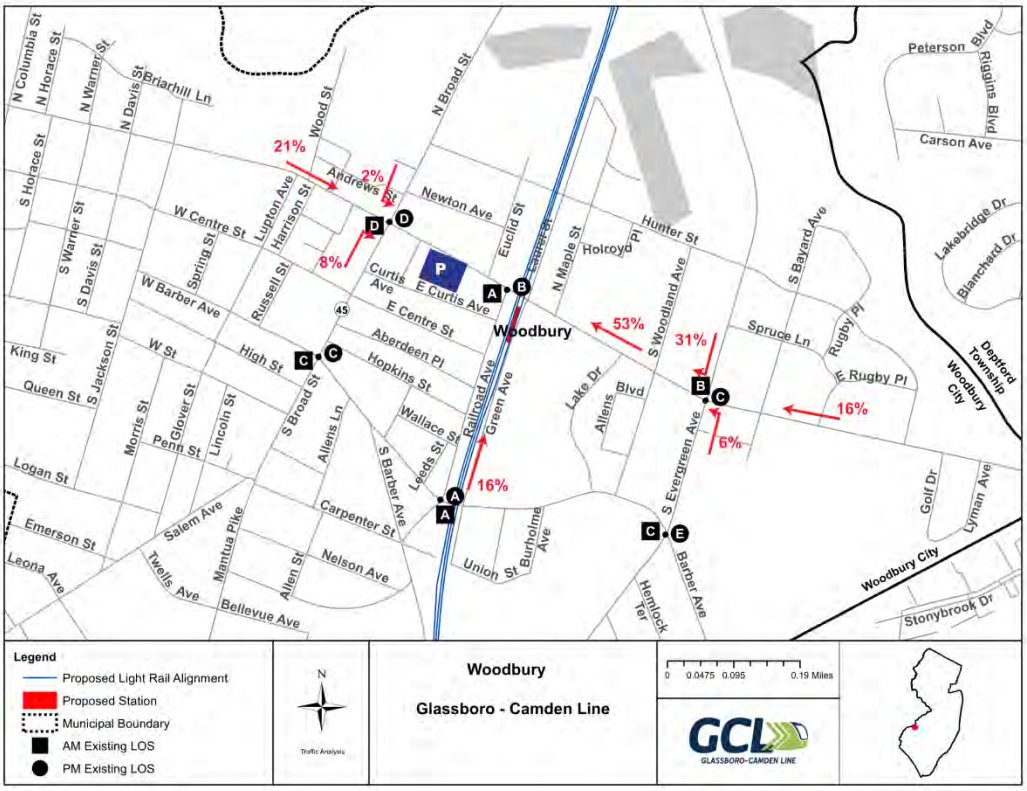
Phase		Time (s)
1) MLK Blvd ROW	G	41
	Y	3
	R	2
2) Broadway ROW	G	28
	Y	3
	R	0
2) Broadway SB Lag Left	G	8
	Y	3
	R	2
# Train (when actuated)	Y	3
	R	18
Cycle Length		**90 -108**

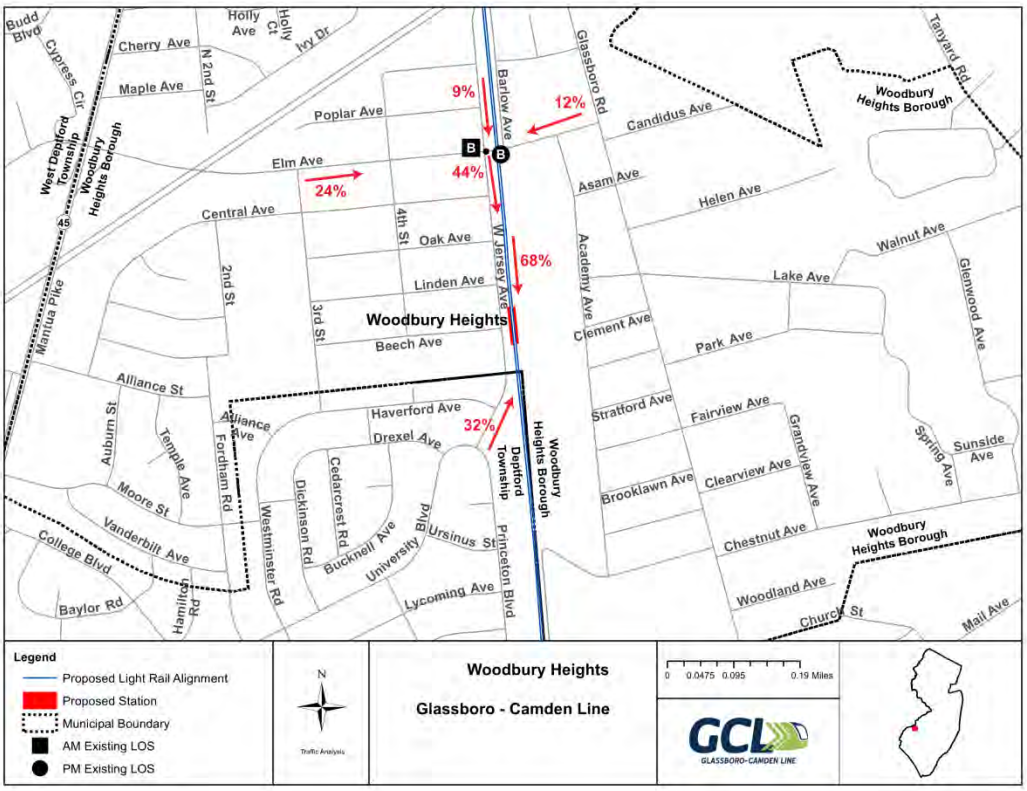
Appendix 5D: Parking Patterns

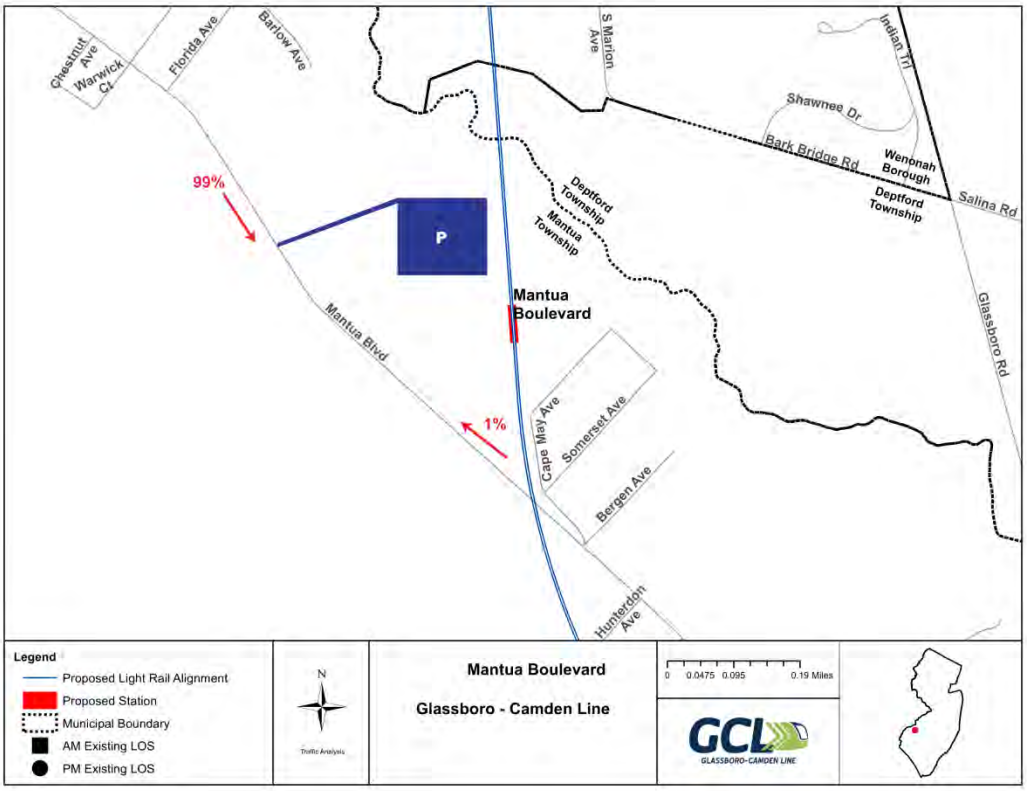

S Front St
Mechanic St
Atlantic Ave
S 3rd St
Lansdowne Ave
Broadway Tpke
Jackson St
Webster St
37%
S 6th St
Carl Miller Blvd
Everett St
Teal Ct
Fairmount St
Howe St
Roman St
Warsaw St
Newport St
Whitman Ave
Thurman St
Morton St
Louis St
Lowell St
Chase St
Sheridan St
Ohio St
Pulaski St
Cope St
Decatur St
Dayton St
Sayrs Ave
Ferry Ave
S 4th St
6%
Jasper St
Emerald St
43%
Filmore St
4%
South Camden
P
6%
30%
Tilghman Dr
Central Ave
S 8th St
Phillips St
S 9th St
S 10th St
Mulford St
Tioga St
Budd St
Charles St
Viola St
Winslow St
Jefferson St
S 2nd St
Ancona St
Hedley St
Arlington St
Chelton Ave
N South Fwy
Master St
17%
S 7th St
Kossuth St
Miller St
Mulford Dr
Ware St
Florence St
Legend
Proposed Light Rail Alignment
Proposed Station
Municipal Boundary
AM Existing LOS
PM Existing LOS
N
South Camden
Glassboro - Camden Line
0 0.0475 0.095 0.19 Miles
GCL
GLASSBORO-CAMDEN LINE

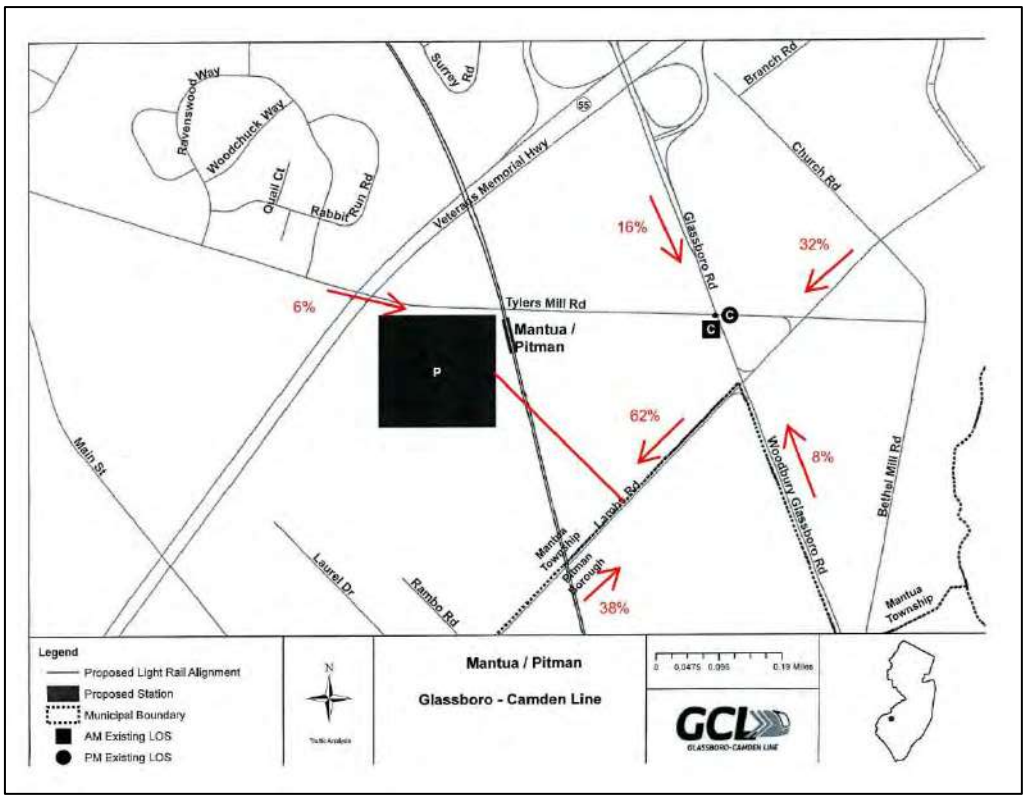

5th Ave
River Dr
New Broadway
Old Salem Rd
Brooklawn orough
Westville Borough
Brooklawn Borough
Bellmawr Borough
Garfield Ave
Sherman Ave
Buchanan Ave
Park Dr
Timber Ave
4th Ave
Summit Ave
3rd Ave
Highland Ave
Wenonah Ave
Creek Rd
Thompson Ave
Karr
F
B
40%
Kimball Ave
Pine St
Poplar Ave
Maple Ave
130
47
Center St
New St
Center Ave
Crown Point Road
A
A
Willow Dr
High St
19%
Duncan Ave
Gateway Blvd
Park Ave
Hazel Ave
West Ave
Snyder Ave
Crown Point Rd
Cleveland Ave
Elm St
Folsom St
W Olive St
45
Broadway
Birch Ave
Delsea Dr
Twedell Ave
Hunter Ave
41%
Oak Ave
Boundary
Spruce Ave
Cedar Ave
Locust Ave
B
B
E Olive St
Almonesson Rd
Parkview
Conway Ave
Edgewater Ave
Stanley Ave
Kingsley Ave
Bellmawr orough
Westville Borough
Legend
Proposed Light Rail Alignment
Proposed Station
Municipal Boundary
AM Existing LOS
PM Existing LOS
N
Crown Point Road
Glassboro - Camden Line
0 0.0475 0.095 0.19 Miles
GCL
GLASSBORO-CAMDEN LINE

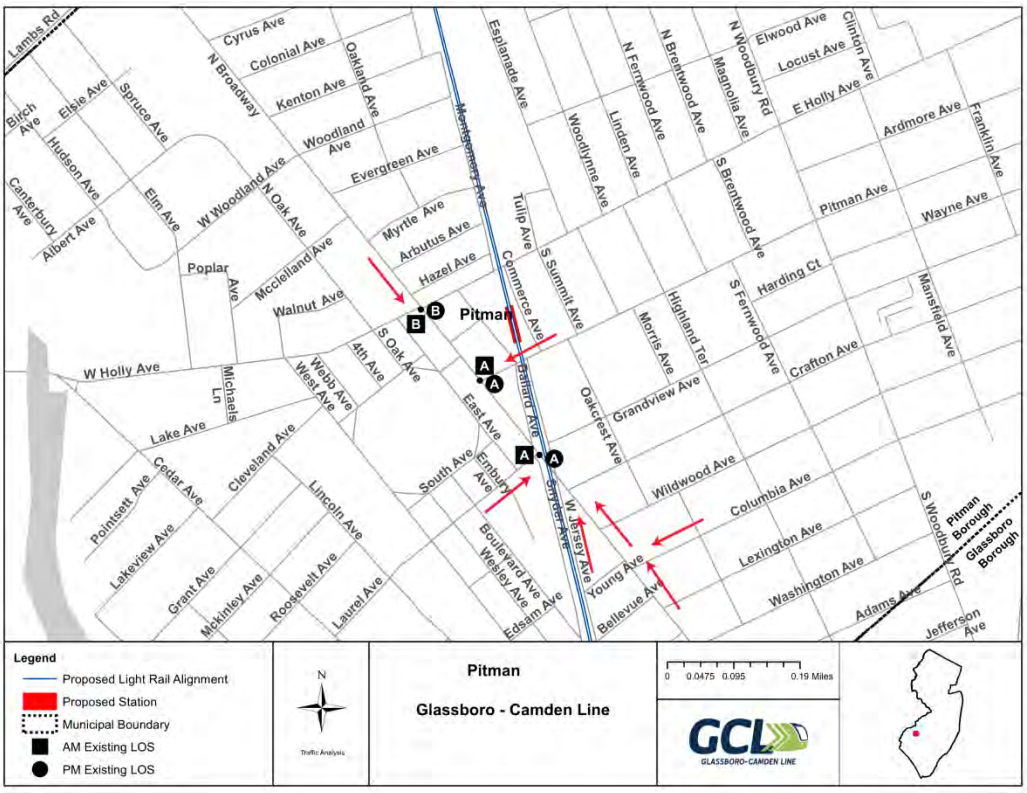

Red Bank Avenue
Glassboro - Camden Line
Legend
Proposed Light Rail Alignment
Proposed Station
Municipal Boundary
AM Existing LOS
PM Existing LOS
0 0.0475 0.095 0.19 Miles
GCL
GLASSBORO-CAMDEN LINE
Watkins Ave
Dubois Ave
Hess Ave
Chestnut St
Walnut St
Lynn Ave
Barlow Ave
Carter Ave
Shields Ave
Frances Ave
Tatum St
Cherry St
Green St
Oak St
E Packer St
W Packer St
W Red Bank Ave
G St
Lynn Dr
Underwood Ave
Page St
West Deptford Township
Woodbury City
Washington Ave
N Evergreen Ave
Station Dr
Edith Ave
Lippincott St
Park Ave
Carteret Ave
Woodbury City
Deptford Township
Hendrickson Ave
Driscoll Ave
Dare St
Roosevelt Ave
Mehorter Blvd
Tacoma Blvd
E Red Bank Ave
Braun Ct
Hannold Blvd
Peterson Blvd
Riggins Blvd
Carson Ave
Lakebridge Dr
Blanchard Dr
Rugby Pl
Hunter St
Holroyd Pl
N Maple St
Euclid St
Lester St
N Broad St
Wood St
Briarhill Ln
Cooper St
Andrews St
Newton Ave
W Centre St
S Jackson St
Lupton Ave
Harrison St
Russel/Russel St
S Broad St
Hendrys Ct
17%
77%
6%
0%
A
B
C
D
P
45

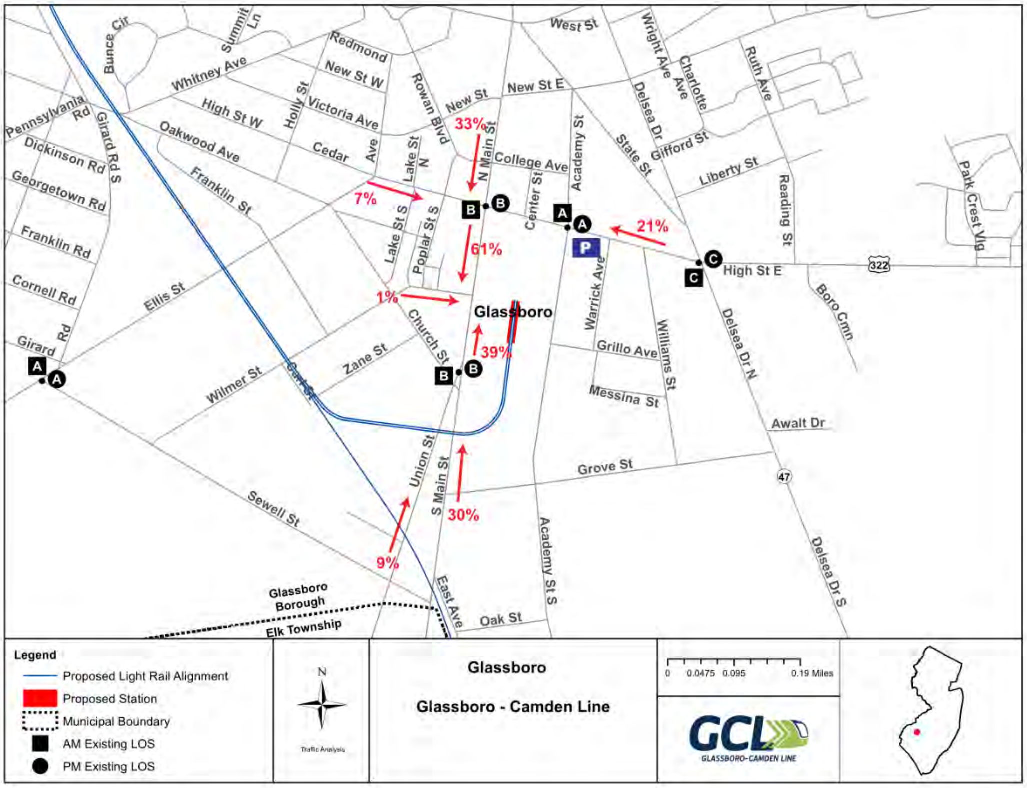

Woodbury
Legend
Proposed Light Rail Alignment
Proposed Station
Municipal Boundary
AM Existing LOS
PM Existing LOS
0 0.0475 0.095 0.19 Miles
GCL
GLASSBORO-CAMDEN LINE
N Columbia St
N Horace St
N Warner St
N Davis St
Briarhill Ln
Wood St
N Broad St
Peterson Blvd
Riggins Blvd
Carson Ave
Lakebridge Dr
Blanchard Dr
S Horace St
S Warner St
S Davis St
W Centre St
Lupton Ave
Harrison St
Andrews St
Newton Ave
Euclid St
Lester St
N Maple St
Holroyd Pl
Hunter St
S Bayard Ave
Spring St
Russell St
W Barber Ave
Curtis Ave
E Curtis Ave
E Centre St
Aberdeen Pl
Hopkins St
S Woodland Ave
Spruce Ln
Rugby Pl
E Rugby Pl
Deptford Township
Woodbury City
King St
W St
High St
Queen St
S Jackson St
Morris St
Glover St
Penn St
Lincoln St
S Broad St
Allens Ln
Wallace St
Railroad Ave
Green Ave
Lake Dr
Allens Blvd
S Evergreen Ave
Golf Dr
Lyman Ave
Logan St
Emerson St
Salem Ave
Mantua Pike
Carpenter St
S Barber Ave
Leeds St
Leona Ave
Twells Ave
Allen St
Nelson Ave
Union St
Burholme Ave
Hemlock Ter
Barber Ave
Bellevue Ave
Stonybrook Dr
21%
2%
8%
53%
31%
16%
6%
16%
A
B
C
D
E
P
45


Budd Blvd
Cypress Cir
Cherry Ave
Holly Ave
Holly Ct
Ivy Dr
N 2nd St
Maple Ave
Poplar Ave
Elm Ave
Central Ave
West Deptford Township
Woodbury Heights Borough
Mantua Pike
2nd St
4th St
3rd St
Oak Ave
Linden Ave
Beech Ave
Woodbury Heights
Barlow Ave
W Jersey Ave
Glassboro Rd
9%
12%
24%
44%
68%
32%
Candidus Ave
Asam Ave
Helen Ave
Academy Ave
Clement Ave
Park Ave
Lake Ave
Walnut Ave
Glenwood Ave
Tanyard Rd
Woodbury Heights Borough
Alliance St
Alliance Ave
Haverford Ave
Drexel Ave
Auburn St
Temple Ave
Fordham Rd
Moore St
Vanderbilt Ave
College Blvd
Baylor Rd
Hamilton Rd
Westminster Rd
Dickinson Rd
Cedarcrest Rd
Bucknell Ave
University Blvd
Ursinus St
Princeton Blvd
Lycoming Ave
Deptford Township
Woodbury Heights Borough
Stratford Ave
Fairview Ave
Brooklawn Ave
Clearview Ave
Grandview Ave
Spring Ave
Sunside Ave
Chestnut Ave
Woodland Ave
Church St
Mail Ave
Legend
Proposed Light Rail Alignment
Proposed Station
Municipal Boundary
AM Existing LOS
PM Existing LOS
N
Traffic Analysis
Woodbury Heights
Glassboro - Camden Line
0 0.0475 0.095 0.19 Miles
GCL
GLASSBORO-CAMDEN LINE


Chestnut Ave
Warwick Ct
Florida Ave
Barlow Ave
S Marion Ave
Indian Trl
Shawnee Dr
Bark Bridge Rd
Wenonah Borough
Deptford Township
Salina Rd
Deptford Township
Mantua Township
99%
P
Mantua Boulevard
Mantua Blvd
1%
Cape May Ave
Somerset Ave
Bergen Ave
Glassboro Rd
Hunterdon Ave
Legend
Proposed Light Rail Alignment
Proposed Station
Municipal Boundary
AM Existing LOS
PM Existing LOS
N
Traffic Analysis
Mantua Boulevard
Glassboro - Camden Line
0 0.0475 0.095 0.19 Miles
GCL
GLASSBORO-CAMDEN LINE


Ravenswood Way
Woodchuck Way
Quail Ct
Rabbit Run Rd
Surrey Rd
Veterans Memorial Hwy
Branch Rd
Church Rd
Glassboro Rd
16%
32%
6%
Tylers Mill Rd
Mantua / Pitman
C
P
62%
8%
Main St
Laurel Dr
Rambo Rd
Lambs Rd
Mantua Township
Pitman Borough
38%
Woodbury Glassboro Rd
Bethel Mill Rd
Mantua Township
Legend
Proposed Light Rail Alignment
Proposed Station
Municipal Boundary
AM Existing LOS
PM Existing LOS
N
Traffic Analysis
Mantua / Pitman
Glassboro - Camden Line
0 0.0475 0.095 0.19 Miles
GCL
GLASSBORO-CAMDEN LINE


Lambs Rd
Cyrus Ave
Colonial Ave
Oakland Ave
N Broadway
Kenton Ave
Woodland Ave
Evergreen Ave
Esplanade Ave
Montgomery Ave
Tulip Ave
Cennmerce Ave
S Summit Ave
Woodlynne Ave
Linden Ave
N Fernwood Ave
N Brentwood Ave
N Woodbury Rd
Magnolia Ave
Elwood Ave
Locust Ave
Clinton Ave
E Holly Ave
Ardmore Ave
Franklin Ave
Pitman Ave
Wayne Ave
S Brentwood Ave
Harding Ct
S Fernwood Ave
Crafton Ave
Mansfield Ave
Highland Ter
Morris Ave
Grandview Ave
Oakcrest Ave
Ballard Ave
Birch Ave
Elsie Ave
Spruce Ave
Hudson Ave
Canterbury Ave
Albert Ave
Elm Ave
W Woodland Ave
N Oak Ave
Myrtle Ave
Arbutus Ave
Hazel Ave
Poplar Ave
Mcclelland Ave
Walnut Ave
Pitman
W Holly Ave
Michaels Ln
Webb Ave
West Ave
4th Ave
S Oak Ave
East Ave
South Ave
Embury Ave
Lake Ave
Cedar Ave
Cleveland Ave
Pointsett Ave
Lakeview Ave
Grant Ave
Mckinley Ave
Roosevelt Ave
Lincoln Ave
Laurel Ave
Boulevard Ave
Wesley Ave
Edsam Ave
W Jersey Ave
Snyder Ave
Young Ave
Bellevue Ave
Wildwood Ave
Columbia Ave
Lexington Ave
Washington Ave
Adams Ave
S Woodbury Rd
Pitman Borough
Glassboro Borough
Jefferson Ave
Legend
Proposed Light Rail Alignment
Proposed Station
Municipal Boundary
AM Existing LOS
PM Existing LOS
N
Traffic Analysis
Pitman
Glassboro - Camden Line
0 0.0475 0.095 0.19 Miles
GCL
GLASSBORO-CAMDEN LINE


33%
7%
61%
21%
1%
39%
30%
9%
Glassboro
Legend
Proposed Light Rail Alignment
Proposed Station
Municipal Boundary
AM Existing LOS
PM Existing LOS
Glassboro
Glassboro - Camden Line
0.19 Miles
GCL
GLASSBORO-CAMDEN LINE

Appendix 5E: Synchro Results

Table of Contents

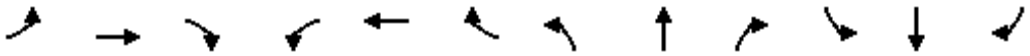
List of Key Intersections by Node Number

Node ID	Intersection Name	Control Type
3	High St E at S Main Street (Rte 553)	Signalized
5	Delsea Dr (Rte 47) at High Street (322)	Signalized
6	Mullica Hill Rd (Rte 322) at Bowe Blvd	Signalized
8	Bowe Blvd at Carpenter St (682)	Signalized
10	Pitman Ave (639) at S Broadway (553A)	Signalized
11	Broadway Blvd (551) at Holly Ave	Signalized
12	Lambs Road at Main St	Signalized
14	Lambs Rd at Glassboro Rd	Signalized
15	Tylers Mill Road at Glassboro Road	Signalized
17	Mantua Blvd (676) at Center St	Signalized
20	East Barber Ave at S Evergreen Ave (553)	Signalized
22	S Broad St (Rte 45) at E Barber Ave	Signalized
23	Cooper Street (CR534) at S Broad St (Rte 45)	Signalized
25	Cooper Street (CR 534) at S Evergreen Ave (553)	Signalized
26	E Red Bank Ave at N Broad Street (Rte 45)	Signalized
27	E Red Bank Ave at N Evergreen Ave (650)	Signalized
28	N. Broad Street at Edith Ave	Signalized
30	Broadway Blvd (551) at E. Olive Street	Signalized
32	Broadway Blvd (551) at Delsea Drive (47)	Signalized
33	S Broadway (551) at Koehler St	Signalized
34	Market Street (537 S) at South Broadway (551)	Signalized
35	S Broadway (551) at Monmouth Street	Signalized
36	N Broadway at Hudson St	Signalized
37	N Broadway at Ferry Avenue/Jasper Street	Signalized
39	Martin Luther King Blvd at South 6th Street	Signalized
40	Haddon Avenue at Benson Ave/ Cooper Plaza	Signalized
1	Ellis St at Sewell St	Unsignalized
2	Main St at Union St & Church St	Unsignalized
4	High St at Academy St	Unsignalized
7	Bowe Blvd at N Campus Dr	Unsignalized
9	S Broadway (551) at Laurel Ave	Unsignalized
13	Tylers Mill Road at Main Street	Unsignalized
16	Atlantic Ave at Center St	Unsignalized
18	N East Av at E Mantua Ave (632)	Unsignalized
19	Elm Ave (652) at W Jersey Ave	Unsignalized
21	East Barber Ave at Railroad Ave	Unsignalized
24	Cooper Street (CR 534 at Railroad Ave	Unsignalized
29	N. Broad Street at Park Ave	Unsignalized
31	Broadway Blvd (551) at Duncan Ave	Unsignalized
38	Ferry Ave at Master St	Unsignalized

Appendix 5E-1: 2017 Existing AM

Signalized

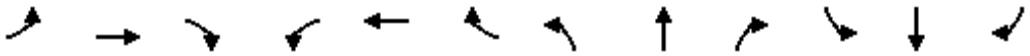
Synchro Results



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	124	212	14	48	270	80	16	322	32	24	150	110
Future Volume (vph)	124	212	14	48	270	80	16	322	32	24	150	110
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	8	11	12	8	11	12	12	16	12	12	16	12
Total Lost time (s)		6.0			6.0		6.0	6.0		6.0	6.0	
Lane Util. Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.99			0.97		1.00	0.99		1.00	0.93	
Flt Protected		0.98			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1760			1742		1770	2084		1770	1971	
Flt Permitted		0.64			0.92		0.56	1.00		0.41	1.00	
Satd. Flow (perm)		1137			1617		1039	2084		766	1971	
Peak-hour factor, PHF	0.80	0.80	0.80	0.94	0.80	0.80	0.80	0.84	0.90	0.80	0.92	0.85
Adj. Flow (vph)	155	265	18	51	338	100	20	383	36	30	163	129
RTOR Reduction (vph)	0	2	0	0	16	0	0	5	0	0	47	0
Lane Group Flow (vph)	0	436	0	0	473	0	20	414	0	30	245	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		24.0			24.0		24.0	24.0		24.0	24.0	
Effective Green, g (s)		24.0			24.0		24.0	24.0		24.0	24.0	
Actuated g/C Ratio		0.40			0.40		0.40	0.40		0.40	0.40	
Clearance Time (s)		6.0			6.0		6.0	6.0		6.0	6.0	
Lane Grp Cap (vph)		454			646		415	833		306	788	
v/s Ratio Prot								c0.20			0.12	
v/s Ratio Perm		c0.38			0.29		0.02			0.04		
v/c Ratio		0.96			0.73		0.05	0.50		0.10	0.31	
Uniform Delay, d1		17.5			15.3		11.0	13.5		11.2	12.3	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		33.2			7.2		0.2	2.1		0.6	1.0	
Delay (s)		50.8			22.5		11.2	15.6		11.9	13.4	
Level of Service		D			C		B	B		B	B	
Approach Delay (s)		50.8			22.5			15.4			13.2	
Approach LOS		D			C			B			B	

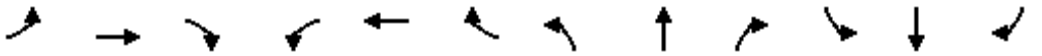
Intersection Summary			
HCM 2000 Control Delay	26.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	72.2%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



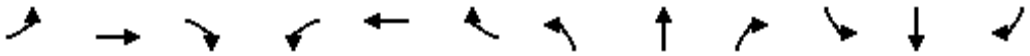
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	40	131	17	37	232	273	29	346	39	128	260	56
Future Volume (vph)	40	131	17	37	232	273	29	346	39	128	260	56
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0	6.0	6.0	6.0		3.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	1.00	0.85	1.00	0.98		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1830		1770	1863	1583	1770	1833		1770	1808	
Flt Permitted	0.29	1.00		0.51	1.00	1.00	0.54	1.00		0.38	1.00	
Satd. Flow (perm)	545	1830		945	1863	1583	999	1833		701	1808	
Peak-hour factor, PHF	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.84	0.80	0.87	0.90	0.80
Growth Factor (vph)	106%	106%	106%	106%	106%	106%	106%	106%	106%	106%	106%	106%
Adj. Flow (vph)	53	174	23	49	307	362	38	437	52	156	306	74
RTOR Reduction (vph)	0	4	0	0	0	141	0	3	0	0	7	0
Lane Group Flow (vph)	53	193	0	49	307	221	38	486	0	156	373	0
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA		pm+pt	NA	
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	26.0	26.0		26.0	26.0	26.0	67.0	67.0		79.1	79.1	
Effective Green, g (s)	26.0	26.0		26.0	26.0	26.0	67.0	67.0		79.1	79.1	
Actuated g/C Ratio	0.22	0.22		0.22	0.22	0.22	0.57	0.57		0.68	0.68	
Clearance Time (s)	6.0	6.0		6.0	6.0	6.0	6.0	6.0		3.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	121	406		209	413	351	571	1048		556	1221	
v/s Ratio Prot		0.11			c0.16			c0.26		0.02	c0.21	
v/s Ratio Perm	0.10			0.05		0.14	0.04			0.17		
v/c Ratio	0.44	0.48		0.23	0.74	0.63	0.07	0.46		0.28	0.31	
Uniform Delay, d1	39.3	39.6		37.4	42.4	41.2	11.1	14.6		8.0	7.8	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	2.5	0.9		0.6	7.1	3.7	0.0	0.3		0.3	0.1	
Delay (s)	41.8	40.5		38.0	49.5	44.9	11.2	14.9		8.3	7.9	
Level of Service	D	D		D	D	D	B	B		A	A	
Approach Delay (s)		40.8			46.4			14.6			8.0	
Approach LOS		D			D			B			A	

Intersection Summary			
HCM 2000 Control Delay	27.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	117.1	Sum of lost time (s)	15.0
Intersection Capacity Utilization	158.0%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



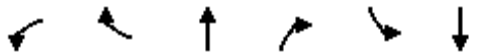
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	516	350	2	0	280	144	40	122	0	88	104	212
Future Volume (vph)	516	350	2	0	280	144	40	122	0	88	104	212
Ideal Flow (vphpl)	1200	1200	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	10	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	3.0	5.0			5.0			5.0			5.0	5.0
Lane Util. Factor	1.00	1.00			1.00			1.00			1.00	1.00
Frt	1.00	1.00			0.95			1.00			1.00	0.85
Flt Protected	0.95	1.00			1.00			0.99			0.98	1.00
Satd. Flow (prot)	1043	1097			1771			1840			1821	1583
Flt Permitted	0.25	1.00			1.00			0.86			0.77	1.00
Satd. Flow (perm)	273	1097			1771			1607			1430	1583
Peak-hour factor, PHF	0.85	0.80	0.80	0.80	0.90	0.80	0.80	0.80	0.80	0.81	0.80	0.90
Adj. Flow (vph)	607	438	2	0	311	180	50	152	0	109	130	236
RTOR Reduction (vph)	0	0	0	0	35	0	0	0	0	0	0	174
Lane Group Flow (vph)	607	441	0	0	456	0	0	203	0	0	239	62
Turn Type	pm+pt	NA			NA		Perm	NA		Perm	NA	Perm
Protected Phases	7	4			8			2			6	
Permitted Phases	4			8			2			6		6
Actuated Green, G (s)	29.9	29.9			19.6			14.3			14.3	14.3
Effective Green, g (s)	29.9	29.9			19.6			14.3			14.3	14.3
Actuated g/C Ratio	0.55	0.55			0.36			0.26			0.26	0.26
Clearance Time (s)	3.0	5.0			5.0			5.0			5.0	5.0
Vehicle Extension (s)	3.0	3.0			3.0			3.0			3.0	3.0
Lane Grp Cap (vph)	254	605			640			423			377	417
v/s Ratio Prot	c0.32	0.40			0.26							
v/s Ratio Perm	c0.99							0.13			c0.17	0.04
v/c Ratio	2.39	0.73			0.71			0.48			0.63	0.15
Uniform Delay, d1	10.0	9.1			14.9			16.8			17.6	15.3
Progression Factor	1.00	1.00			1.00			1.00			1.00	1.00
Incremental Delay, d2	637.4	4.4			3.7			0.9			3.5	0.2
Delay (s)	647.3	13.5			18.6			17.7			21.1	15.5
Level of Service	F	B			B			B			C	B
Approach Delay (s)		380.6			18.6			17.7			18.3	
Approach LOS		F			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	189.6	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.93		
Actuated Cycle Length (s)	54.2	Sum of lost time (s)	13.0
Intersection Capacity Utilization	99.8%	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 (vph)	37	99	97	129	92	13	23	205	111	42	442	37
Future Volume (vph)	37	99	97	129	92	13	23	205	111	42	442	37
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.93		1.00	0.98		1.00	0.95		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1724		1770	1827		1770	1766		1770	1841	
Flt Permitted	0.67	1.00		0.59	1.00		0.21	1.00		0.43	1.00	
Satd. Flow (perm)	1252	1724		1094	1827		399	1766		800	1841	
Peak-hour factor, PHF	0.80	0.80	0.80	0.80	0.84	0.80	0.80	0.80	0.81	0.80	0.80	0.80
Growth Factor (vph)	106%	106%	106%	106%	106%	106%	106%	106%	106%	106%	106%	106%
Adj. Flow (vph)	49	131	129	171	116	17	30	272	145	56	586	49
RTOR Reduction (vph)	0	58	0	0	9	0	0	21	0	0	3	0
Lane Group Flow (vph)	49	202	0	171	124	0	30	396	0	56	632	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			4			2			2	
Permitted Phases	4			4			2			2		
Actuated Green, G (s)	22.7	22.7		22.7	22.7		26.1	26.1		26.1	26.1	
Effective Green, g (s)	22.7	22.7		22.7	22.7		26.1	26.1		26.1	26.1	
Actuated g/C Ratio	0.37	0.37		0.37	0.37		0.43	0.43		0.43	0.43	
Clearance Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Vehicle Extension (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)	467	643		408	682		171	758		343	790	
v/s Ratio Prot		0.12			0.07			0.22			c0.34	
v/s Ratio Perm	0.04			c0.16			0.08			0.07		
v/c Ratio	0.10	0.31		0.42	0.18		0.18	0.52		0.16	0.80	
Uniform Delay, d1	12.4	13.5		14.2	12.8		10.7	12.8		10.6	15.1	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.1	0.4		1.0	0.2		0.7	0.8		0.3	6.0	
Delay (s)	12.6	13.9		15.1	13.0		11.4	13.6		11.0	21.1	
Level of Service	B	B		B	B		B	B		B	C	
Approach Delay (s)		13.7			14.2			13.5			20.3	
Approach LOS		B			B			B			C	

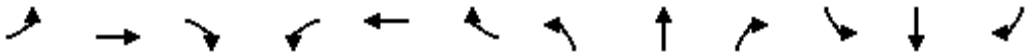
Intersection Summary			
HCM 2000 Control Delay	16.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	60.8	Sum of lost time (s)	12.0
Intersection Capacity Utilization	87.0%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	50	28	146	10	22	180
Future Volume (vph)	50	28	146	10	22	180
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0		6.0			6.0
Lane Util. Factor	1.00		1.00			1.00
Frt	0.95		0.99			1.00
Flt Protected	0.97		1.00			0.99
Satd. Flow (prot)	1712		1846			1852
Flt Permitted	0.97		1.00			0.96
Satd. Flow (perm)	1712		1846			1787
Peak-hour factor, PHF	0.93	0.80	0.80	0.80	0.80	0.80
Adj. Flow (vph)	54	35	182	12	28	225
RTOR Reduction (vph)	31	0	3	0	0	0
Lane Group Flow (vph)	58	0	193	0	0	253
Turn Type	Prot		NA		Perm	NA
Protected Phases	4		2			2
Permitted Phases					2	
Actuated Green, G (s)	5.4		28.7			28.7
Effective Green, g (s)	5.4		28.7			28.7
Actuated g/C Ratio	0.12		0.62			0.62
Clearance Time (s)	6.0		6.0			6.0
Vehicle Extension (s)	2.0		2.0			2.0
Lane Grp Cap (vph)	200		1149			1112
v/s Ratio Prot	c0.03		0.10			
v/s Ratio Perm						c0.14
v/c Ratio	0.29		0.17			0.23
Uniform Delay, d1	18.6		3.7			3.8
Progression Factor	1.00		1.00			1.00
Incremental Delay, d2	0.3		0.0			0.0
Delay (s)	18.9		3.7			3.9
Level of Service	B		A			A
Approach Delay (s)	18.9		3.7			3.9
Approach LOS	B		A			A

Intersection Summary			
HCM 2000 Control Delay	6.3	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.24		
Actuated Cycle Length (s)	46.1	Sum of lost time (s)	12.0
Intersection Capacity Utilization	46.2%	ICU Level of Service	A
Analysis Period (min)	15		

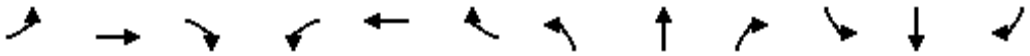
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	29	112	21	11	95	47	33	100	9	36	104	15
Future Volume (vph)	29	112	21	11	95	47	33	100	9	36	104	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0			6.0			6.0			6.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frt		0.98			0.96			0.99			0.99	
Flt Protected		0.99			1.00			0.99			0.99	
Satd. Flow (prot)		1814			1779			1824			1817	
Flt Permitted		0.92			0.97			0.89			0.90	
Satd. Flow (perm)		1686			1738			1643			1647	
Peak-hour factor, PHF	0.81	0.80	0.80	0.80	0.80	0.80	0.80	0.84	0.80	0.80	0.80	0.80
Growth Factor (vph)	106%	106%	106%	106%	106%	106%	106%	106%	106%	106%	106%	106%
Adj. Flow (vph)	38	148	28	15	126	62	44	126	12	48	138	20
RTOR Reduction (vph)	0	7	0	0	22	0	0	4	0	0	5	0
Lane Group Flow (vph)	0	207	0	0	181	0	0	178	0	0	201	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		6			6			2			2	
Permitted Phases	6			6			2			2		
Actuated Green, G (s)		32.0			32.0			30.0			30.0	
Effective Green, g (s)		32.0			32.0			30.0			30.0	
Actuated g/C Ratio		0.43			0.43			0.41			0.41	
Clearance Time (s)		6.0			6.0			6.0			6.0	
Lane Grp Cap (vph)		729			751			666			667	
v/s Ratio Prot												
v/s Ratio Perm		c0.12			0.10			0.11			c0.12	
v/c Ratio		0.28			0.24			0.27			0.30	
Uniform Delay, d1		13.6			13.3			14.7			14.9	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		1.0			0.8			1.0			1.2	
Delay (s)		14.6			14.1			15.7			16.1	
Level of Service		B			B			B			B	
Approach Delay (s)		14.6			14.1			15.7			16.1	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	15.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.29		
Actuated Cycle Length (s)	74.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	61.7%	ICU Level of Service	B
Analysis Period (min)	15		

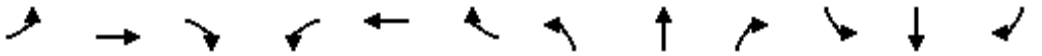
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	38	154	13	26	73	19	12	135	77	27	80	31
Future Volume (vph)	38	154	13	26	73	19	12	135	77	27	80	31
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.97		1.00	0.94		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1839		1770	1804		1770	1756		1770	1785	
Flt Permitted	0.68	1.00		0.63	1.00		0.66	1.00		0.51	1.00	
Satd. Flow (perm)	1269	1839		1174	1804		1236	1756		941	1785	
Peak-hour factor, PHF	0.86	0.88	0.80	0.80	0.83	0.80	0.80	0.87	0.80	0.84	0.80	0.80
Growth Factor (vph)	106%	106%	106%	106%	106%	106%	106%	106%	106%	106%	106%	106%
Adj. Flow (vph)	47	186	17	34	93	25	16	164	102	34	106	41
RTOR Reduction (vph)	0	5	0	0	11	0	0	32	0	0	20	0
Lane Group Flow (vph)	47	198	0	34	107	0	16	234	0	34	127	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	38.0	38.0		38.0	38.0		22.0	22.0		22.0	22.0	
Effective Green, g (s)	38.0	38.0		38.0	38.0		22.0	22.0		22.0	22.0	
Actuated g/C Ratio	0.54	0.54		0.54	0.54		0.31	0.31		0.31	0.31	
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)	688	998		637	979		388	551		295	561	
v/s Ratio Prot		c0.11			0.06			c0.13			0.07	
v/s Ratio Perm	0.04			0.03			0.01			0.04		
v/c Ratio	0.07	0.20		0.05	0.11		0.04	0.42		0.12	0.23	
Uniform Delay, d1	7.6	8.2		7.5	7.8		16.7	19.0		17.1	17.7	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.2	0.4		0.2	0.2		0.2	2.4		0.8	0.9	
Delay (s)	7.8	8.6		7.7	8.0		16.9	21.4		17.9	18.7	
Level of Service	A	A		A	A		B	C		B	B	
Approach Delay (s)		8.5			7.9			21.1			18.5	
Approach LOS		A			A			C			B	

Intersection Summary			
HCM 2000 Control Delay	14.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.28		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	63.8%	ICU Level of Service	B
Analysis Period (min)	15		

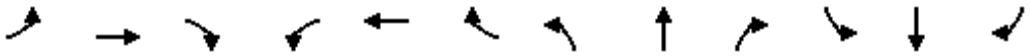
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	234	134	31	12	130	5	43	776	10	69	424	107
Future Volume (vph)	234	134	31	12	130	5	43	776	10	69	424	107
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	7.0		3.0	7.0	7.0	3.0	7.0		3.0	7.0	7.0
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.95		1.00	0.95	1.00
Frt	1.00	0.97		1.00	1.00	0.85	1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	1810		1770	1863	1583	1770	3532		1770	3539	1583
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1770	1810		1770	1863	1583	1770	3532		1770	3539	1583
Peak-hour factor, PHF	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Adj. Flow (vph)	292	168	39	15	162	6	54	970	12	86	530	134
RTOR Reduction (vph)	0	8	0	0	0	5	0	1	0	0	0	69
Lane Group Flow (vph)	293	199	0	15	163	1	54	982	0	86	530	65
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8						6
Actuated Green, G (s)	7.0	22.2		1.4	16.6	16.6	6.4	45.8		7.6	47.0	47.0
Effective Green, g (s)	7.0	22.2		1.4	16.6	16.6	6.4	45.8		7.6	47.0	47.0
Actuated g/C Ratio	0.07	0.23		0.01	0.17	0.17	0.07	0.47		0.08	0.48	0.48
Clearance Time (s)	3.0	7.0		3.0	7.0	7.0	3.0	7.0		3.0	7.0	7.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	127	414		25	318	270	116	1667		138	1714	767
v/s Ratio Prot	c0.17	c0.11		0.01	0.09		0.03	c0.28		c0.05	0.15	
v/s Ratio Perm						0.00						0.04
v/c Ratio	2.31	0.48		0.60	0.51	0.00	0.47	0.59		0.62	0.31	0.08
Uniform Delay, d1	45.0	32.4		47.5	36.5	33.3	43.7	18.7		43.3	15.2	13.4
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	612.2	0.9		33.2	1.4	0.0	2.9	1.5		8.5	0.5	0.2
Delay (s)	657.2	33.3		80.7	37.9	33.3	46.6	20.3		51.8	15.6	13.7
Level of Service	F	C		F	D	C	D	C		D	B	B
Approach Delay (s)		398.9			41.3			21.6			19.4	
Approach LOS		F			D			C			B	

Intersection Summary			
HCM 2000 Control Delay	98.8	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	97.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	65.7%	ICU Level of Service	C
Analysis Period (min)	15		

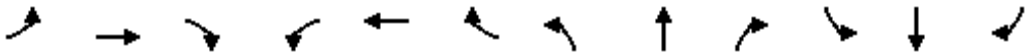
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	92	148	46	2	218	190	64	986	0	88	532	16
Future Volume (vph)	92	148	46	2	218	190	64	986	0	88	532	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	7.0		3.0	7.0		3.0	7.0		3.0	7.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frt	1.00	0.96		1.00	0.93		1.00	1.00		1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1792		1770	1742		1770	3539		1770	3524	
Flt Permitted	0.16	1.00		0.62	1.00		0.30	1.00		0.12	1.00	
Satd. Flow (perm)	306	1792		1148	1742		556	3539		219	3524	
Peak-hour factor, PHF	0.80	0.87	0.80	0.80	0.80	0.91	0.80	0.90	0.80	0.80	0.80	0.80
Adj. Flow (vph)	115	170	58	2	272	209	80	1096	0	110	665	20
RTOR Reduction (vph)	0	10	0	0	25	0	0	0	0	0	3	0
Lane Group Flow (vph)	115	218	0	3	457	0	80	1096	0	110	682	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	37.8	33.5		29.0	27.7		39.5	34.1		39.5	34.1	
Effective Green, g (s)	37.8	33.5		29.0	27.7		39.5	34.1		39.5	34.1	
Actuated g/C Ratio	0.40	0.36		0.31	0.29		0.42	0.36		0.42	0.36	
Clearance Time (s)	3.0	7.0		3.0	7.0		3.0	7.0		3.0	7.0	
Vehicle Extension (s)	3.0	2.0		3.0	2.0		3.0	2.0		3.0	2.0	
Lane Grp Cap (vph)	232	636		361	511		302	1279		180	1274	
v/s Ratio Prot	c0.04	0.12		0.00	c0.26		0.02	c0.31		c0.03	0.19	
v/s Ratio Perm	0.16			0.00			0.10			0.22		
v/c Ratio	0.50	0.34		0.01	0.89		0.26	0.86		0.61	0.54	
Uniform Delay, d1	20.6	22.3		22.6	31.9		17.1	27.8		20.0	23.8	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.7	0.1		0.0	17.4		0.5	5.7		6.0	0.2	
Delay (s)	22.3	22.4		22.7	49.3		17.5	33.5		26.0	24.1	
Level of Service	C	C		C	D		B	C		C	C	
Approach Delay (s)		22.4			49.1			32.4			24.3	
Approach LOS		C			D			C			C	

Intersection Summary			
HCM 2000 Control Delay	31.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	94.3	Sum of lost time (s)	20.0
Intersection Capacity Utilization	80.3%	ICU Level of Service	D
Analysis Period (min)	15		

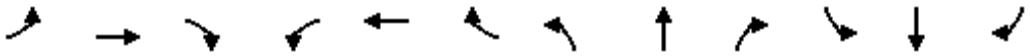
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	42	444	92	26	244	106	44	180	30	90	182	16
Future Volume (vph)	42	444	92	26	244	106	44	180	30	90	182	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.97		1.00	0.95		1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1815		1770	1772		1770	1826		1770	1840	
Flt Permitted	0.49	1.00		0.28	1.00		0.58	1.00		0.57	1.00	
Satd. Flow (perm)	920	1815		522	1772		1081	1826		1053	1840	
Peak-hour factor, PHF	0.87	0.80	0.80	0.80	0.88	0.80	0.80	0.81	0.87	0.80	0.80	0.80
Adj. Flow (vph)	48	555	115	32	277	132	55	222	34	112	228	20
RTOR Reduction (vph)	0	6	0	0	15	0	0	9	0	0	5	0
Lane Group Flow (vph)	48	664	0	33	395	0	55	247	0	113	243	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		1			1			2			2	
Permitted Phases	1			1			2			2		
Actuated Green, G (s)	29.0	29.0		29.0	29.0		13.6	13.6		13.6	13.6	
Effective Green, g (s)	29.0	29.0		29.0	29.0		13.6	13.6		13.6	13.6	
Actuated g/C Ratio	0.53	0.53		0.53	0.53		0.25	0.25		0.25	0.25	
Clearance Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	488	964		277	941		269	454		262	458	
v/s Ratio Prot		c0.37			0.22			c0.14			0.13	
v/s Ratio Perm	0.05			0.06			0.05			0.11		
v/c Ratio	0.10	0.69		0.12	0.42		0.20	0.54		0.43	0.53	
Uniform Delay, d1	6.3	9.5		6.4	7.7		16.2	17.8		17.2	17.7	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.0	1.6		0.1	0.1		0.1	0.7		0.4	0.6	
Delay (s)	6.4	11.1		6.5	7.8		16.4	18.5		17.7	18.3	
Level of Service	A	B		A	A		B	B		B	B	
Approach Delay (s)		10.8			7.7			18.1			18.1	
Approach LOS		B			A			B			B	

Intersection Summary			
HCM 2000 Control Delay	12.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	54.6	Sum of lost time (s)	12.0
Intersection Capacity Utilization	69.5%	ICU Level of Service	C
Analysis Period (min)	15		

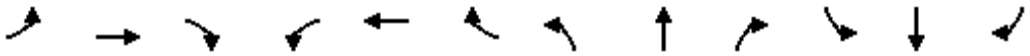
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	28	178	34	108	232	116	30	532	82	142	314	46
Future Volume (vph)	28	178	34	108	232	116	30	532	82	142	314	46
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1500	1500	1900	1500	1500	1900
Total Lost time (s)	3.0	7.0		3.0	7.0		3.0	6.0		3.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.95		1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1818		1770	1772		1397	1437		1397	1440	
Flt Permitted	0.23	1.00		0.41	1.00		0.38	1.00		0.12	1.00	
Satd. Flow (perm)	437	1818		763	1772		558	1437		178	1440	
Peak-hour factor, PHF	0.83	0.80	0.80	0.90	0.84	0.88	0.80	0.92	0.80	0.84	0.88	0.80
Adj. Flow (vph)	34	222	42	120	276	132	38	578	102	169	357	58
RTOR Reduction (vph)	0	8	0	0	20	0	0	7	0	0	7	0
Lane Group Flow (vph)	34	258	0	120	388	0	38	674	0	169	408	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	22.9	17.7		26.5	19.5		39.1	33.1		39.1	33.1	
Effective Green, g (s)	22.9	17.7		26.5	19.5		39.1	33.1		39.1	33.1	
Actuated g/C Ratio	0.28	0.21		0.32	0.24		0.47	0.40		0.47	0.40	
Clearance Time (s)	3.0	7.0		3.0	7.0		3.0	6.0		3.0	6.0	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	204	388		329	417		324	574		172	575	
v/s Ratio Prot	0.01	0.14		c0.03	c0.22		0.01	c0.47		c0.07	0.28	
v/s Ratio Perm	0.04			0.09			0.05			0.39		
v/c Ratio	0.17	0.67		0.36	0.93		0.12	1.17		0.98	0.71	
Uniform Delay, d1	22.7	29.8		20.8	31.0		12.4	24.8		17.9	20.8	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.1	3.3		0.3	27.1		0.1	95.6		63.0	3.4	
Delay (s)	22.8	33.2		21.0	58.1		12.4	120.4		80.9	24.3	
Level of Service	C	C		C	E		B	F		F	C	
Approach Delay (s)		32.0			49.7			114.7			40.7	
Approach LOS		C			D			F			D	

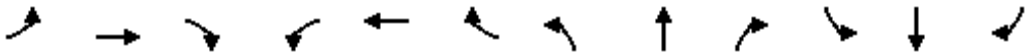
Intersection Summary			
HCM 2000 Control Delay	66.7	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.02		
Actuated Cycle Length (s)	82.8	Sum of lost time (s)	19.0
Intersection Capacity Utilization	96.0%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	33	4	41	19	9	6	645	28	14	171	5
Future Volume (vph)	10	33	4	41	19	9	6	645	28	14	171	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0			6.0		3.0	6.0		3.0	6.0	
Lane Util. Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.99			0.98		1.00	0.99		1.00	1.00	
Flt Protected		0.99			0.97		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1823			1778		1770	1851		1770	1855	
Flt Permitted		0.94			0.80		0.61	1.00		0.09	1.00	
Satd. Flow (perm)		1729			1469		1138	1851		173	1855	
Peak-hour factor, PHF	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.81	0.80	0.80	0.80
Growth Factor (vph)	108%	108%	108%	108%	108%	108%	108%	108%	108%	108%	108%	108%
Adj. Flow (vph)	14	45	5	55	26	12	8	871	37	19	231	7
RTOR Reduction (vph)	0	4	0	0	6	0	0	1	0	0	1	0
Lane Group Flow (vph)	0	60	0	0	87	0	8	907	0	19	237	0
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		25.0			25.0		53.7	52.5		56.3	53.8	
Effective Green, g (s)		25.0			25.0		53.7	52.5		56.3	53.8	
Actuated g/C Ratio		0.26			0.26		0.57	0.55		0.59	0.57	
Clearance Time (s)		6.0			6.0		3.0	6.0		3.0	6.0	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		455			386		651	1022		144	1050	
v/s Ratio Prot							0.00	c0.49		c0.00	0.13	
v/s Ratio Perm		0.03			c0.06		0.01			0.07		
v/c Ratio		0.13			0.23		0.01	0.89		0.13	0.23	
Uniform Delay, d1		26.7			27.4		9.0	18.6		16.0	10.2	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.1			0.3		0.0	11.3		0.4	0.5	
Delay (s)		26.9			27.7		9.0	30.0		16.5	10.7	
Level of Service		C			C		A	C		B	B	
Approach Delay (s)		26.9			27.7			29.8			11.2	
Approach LOS		C			C			C			B	

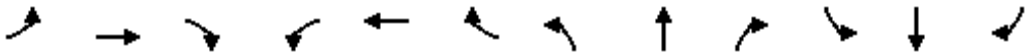
Intersection Summary			
HCM 2000 Control Delay	25.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	69.3%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	164	278	40	72	306	26	58	614	40	54	380	50
Future Volume (vph)	164	278	40	72	306	26	58	614	40	54	380	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	6.0		3.0	6.0		3.0	5.0		3.0	5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.99		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1824		1770	1839		1770	1844		1770	1827	
Flt Permitted	0.20	1.00		0.29	1.00		0.31	1.00		0.10	1.00	
Satd. Flow (perm)	373	1824		547	1839		586	1844		196	1827	
Peak-hour factor, PHF	0.97	0.90	0.80	0.80	0.88	0.80	0.80	0.90	0.80	0.80	0.88	0.80
Adj. Flow (vph)	169	309	50	90	348	32	72	682	50	68	432	62
RTOR Reduction (vph)	0	6	0	0	4	0	0	3	0	0	6	0
Lane Group Flow (vph)	169	353	0	90	377	0	73	729	0	68	489	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	28.4	20.0		23.8	17.7		43.1	38.1		43.1	38.1	
Effective Green, g (s)	28.4	20.0		23.8	17.7		43.1	38.1		43.1	38.1	
Actuated g/C Ratio	0.33	0.23		0.28	0.21		0.50	0.44		0.50	0.44	
Clearance Time (s)	3.0	6.0		3.0	6.0		3.0	5.0		3.0	5.0	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	259	423		237	377		361	815		189	807	
v/s Ratio Prot	c0.06	0.19		0.03	c0.21		0.01	c0.40		c0.02	0.27	
v/s Ratio Perm	0.15			0.08			0.09			0.16		
v/c Ratio	0.65	0.83		0.38	1.00		0.20	0.89		0.36	0.61	
Uniform Delay, d1	22.8	31.5		24.2	34.2		12.3	22.2		16.2	18.3	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	4.4	12.7		0.4	46.4		0.1	12.0		0.4	0.9	
Delay (s)	27.3	44.2		24.6	80.6		12.4	34.2		16.6	19.2	
Level of Service	C	D		C	F		B	C		B	B	
Approach Delay (s)		38.8			69.9			32.2			18.9	
Approach LOS		D			E			C			B	

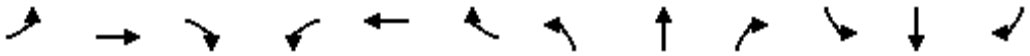
Intersection Summary			
HCM 2000 Control Delay	38.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	86.2	Sum of lost time (s)	17.0
Intersection Capacity Utilization	81.5%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	13	190	14	106	403	42	24	367	70	32	209	10
Future Volume (vph)	13	190	14	106	403	42	24	367	70	32	209	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0		3.0	5.0		6.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.99		1.00	0.97		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1843		1770	1837		1770	1813		1770	1849	
Flt Permitted	0.42	1.00		0.46	1.00		0.56	1.00		0.26	1.00	
Satd. Flow (perm)	773	1843		855	1837		1035	1813		477	1849	
Peak-hour factor, PHF	0.80	0.83	0.80	0.81	0.88	0.90	0.80	0.91	0.80	0.92	0.86	0.80
Growth Factor (vph)	108%	108%	108%	108%	108%	108%	108%	108%	108%	108%	108%	108%
Adj. Flow (vph)	18	247	19	141	495	50	32	436	94	38	262	14
RTOR Reduction (vph)	0	3	0	0	4	0	0	9	0	0	2	0
Lane Group Flow (vph)	18	263	0	141	541	0	32	522	0	38	274	0
Turn Type	Perm	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases		4		3	8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	21.7	21.7		30.1	30.1		24.8	24.8		24.8	24.8	
Effective Green, g (s)	21.7	21.7		30.1	30.1		24.8	24.8		24.8	24.8	
Actuated g/C Ratio	0.33	0.33		0.46	0.46		0.38	0.38		0.38	0.38	
Clearance Time (s)	5.0	5.0		3.0	5.0		6.0	6.0		6.0	6.0	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	254	606		465	839		389	682		179	695	
v/s Ratio Prot		0.14		0.02	c0.29			c0.29			0.15	
v/s Ratio Perm	0.02			0.11			0.03			0.08		
v/c Ratio	0.07	0.43		0.30	0.64		0.08	0.77		0.21	0.39	
Uniform Delay, d1	15.2	17.3		10.8	13.8		13.2	18.0		13.9	15.1	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.0	0.2		0.1	1.3		0.0	4.6		0.2	0.1	
Delay (s)	15.2	17.5		11.0	15.1		13.3	22.6		14.1	15.2	
Level of Service	B	B		B	B		B	C		B	B	
Approach Delay (s)		17.3			14.2			22.1			15.1	
Approach LOS		B			B			C			B	

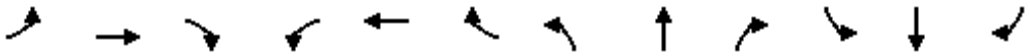
Intersection Summary			
HCM 2000 Control Delay	17.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	65.9	Sum of lost time (s)	14.0
Intersection Capacity Utilization	84.4%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	24	284	90	68	332	62	136	532	128	106	416	54
Future Volume (vph)	24	284	90	68	332	62	136	532	128	106	416	54
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	5.0		3.0	5.0		3.0	6.0	6.0	3.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	0.95	
Frt	1.00	0.96		1.00	0.97		1.00	1.00	0.85	1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	1797		1770	1814		1770	1863	1583	1770	3476	
Flt Permitted	0.22	1.00		0.23	1.00		0.36	1.00	1.00	0.13	1.00	
Satd. Flow (perm)	417	1797		420	1814		665	1863	1583	245	3476	
Peak-hour factor, PHF	0.86	0.92	0.95	0.80	0.90	0.80	0.93	0.88	0.80	0.84	0.82	0.80
Adj. Flow (vph)	28	309	95	85	369	78	146	605	160	126	507	68
RTOR Reduction (vph)	0	12	0	0	8	0	0	0	102	0	10	0
Lane Group Flow (vph)	28	393	0	85	439	0	146	605	58	126	565	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		
Actuated Green, G (s)	29.5	25.2		32.9	26.9		41.7	32.6	32.6	41.1	32.3	
Effective Green, g (s)	29.5	25.2		32.9	26.9		41.7	32.6	32.6	41.1	32.3	
Actuated g/C Ratio	0.33	0.28		0.37	0.30		0.47	0.36	0.36	0.46	0.36	
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	6.0	6.0	3.0	6.0	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Lane Grp Cap (vph)	202	505		244	544		421	677	575	262	1253	
v/s Ratio Prot	0.01	0.22		c0.02	c0.24		0.04	c0.32		c0.05	0.16	
v/s Ratio Perm	0.04			0.10			0.13		0.04	0.17		
v/c Ratio	0.14	0.78		0.35	0.81		0.35	0.89	0.10	0.48	0.45	
Uniform Delay, d1	21.6	29.6		20.3	29.0		14.2	26.9	18.8	17.5	21.9	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.1	6.8		0.3	8.1		0.2	13.9	0.0	0.5	0.1	
Delay (s)	21.7	36.4		20.6	37.1		14.4	40.8	18.9	18.0	22.0	
Level of Service	C	D		C	D		B	D	B	B	C	
Approach Delay (s)		35.4			34.4			32.7			21.3	
Approach LOS		D			C			C			C	

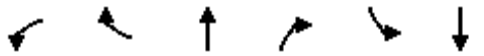
Intersection Summary			
HCM 2000 Control Delay	30.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	89.6	Sum of lost time (s)	17.0
Intersection Capacity Utilization	78.4%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



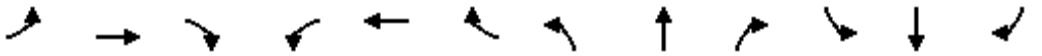
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	49	231	62	47	278	46	102	436	52	39	138	31
Future Volume (vph)	49	231	62	47	278	46	102	436	52	39	138	31
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.97		1.00	0.98		1.00	0.98		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1803		1770	1821		1770	1833		1770	1811	
Flt Permitted	0.36	1.00		0.38	1.00		0.62	1.00		0.29	1.00	
Satd. Flow (perm)	669	1803		716	1821		1148	1833		545	1811	
Peak-hour factor, PHF	0.80	0.81	0.80	0.80	0.86	0.80	0.80	0.89	0.88	0.80	0.80	0.80
Growth Factor (vph)	108%	108%	108%	108%	108%	108%	108%	108%	108%	108%	108%	108%
Adj. Flow (vph)	66	308	84	63	349	62	138	529	64	53	186	42
RTOR Reduction (vph)	0	13	0	0	9	0	0	4	0	0	7	0
Lane Group Flow (vph)	66	379	0	63	402	0	138	589	0	53	221	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			2			1			1	
Permitted Phases	2			2			1			1		
Actuated Green, G (s)	24.3	24.3		24.3	24.3		35.2	35.2		35.2	35.2	
Effective Green, g (s)	24.3	24.3		24.3	24.3		35.2	35.2		35.2	35.2	
Actuated g/C Ratio	0.33	0.33		0.33	0.33		0.48	0.48		0.48	0.48	
Clearance Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	221	596		236	602		549	877		261	867	
v/s Ratio Prot		0.21			c0.22			c0.32			0.12	
v/s Ratio Perm	0.10			0.09			0.12			0.10		
v/c Ratio	0.30	0.64		0.27	0.67		0.25	0.67		0.20	0.25	
Uniform Delay, d1	18.3	20.8		18.1	21.1		11.3	14.7		11.1	11.4	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.3	1.6		0.2	2.2		1.1	4.1		1.7	0.7	
Delay (s)	18.5	22.5		18.3	23.3		12.4	18.8		12.8	12.1	
Level of Service	B	C		B	C		B	B		B	B	
Approach Delay (s)		21.9			22.7			17.6			12.2	
Approach LOS		C			C			B			B	

Intersection Summary			
HCM 2000 Control Delay	19.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	73.5	Sum of lost time (s)	14.0
Intersection Capacity Utilization	103.7%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



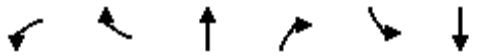
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	16	7	450	8	8	340
Future Volume (vph)	16	7	450	8	8	340
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0		7.0			7.0
Lane Util. Factor	1.00		1.00			1.00
Frt	0.96		1.00			1.00
Flt Protected	0.97		1.00			1.00
Satd. Flow (prot)	1728		1858			1860
Flt Permitted	0.97		1.00			0.98
Satd. Flow (perm)	1728		1858			1834
Peak-hour factor, PHF	0.80	0.80	0.84	0.80	0.80	0.89
Growth Factor (vph)	108%	108%	108%	108%	108%	108%
Adj. Flow (vph)	22	9	579	11	11	413
RTOR Reduction (vph)	9	0	1	0	0	0
Lane Group Flow (vph)	22	0	589	0	0	424
Turn Type	Prot		NA		Perm	NA
Protected Phases	8		2			6
Permitted Phases					6	
Actuated Green, G (s)	4.4		74.3			74.3
Effective Green, g (s)	4.4		74.3			74.3
Actuated g/C Ratio	0.05		0.81			0.81
Clearance Time (s)	6.0		7.0			7.0
Vehicle Extension (s)	2.0		2.0			2.0
Lane Grp Cap (vph)	82		1505			1486
v/s Ratio Prot	c0.01		c0.32			
v/s Ratio Perm						0.23
v/c Ratio	0.27		0.39			0.29
Uniform Delay, d1	42.1		2.4			2.1
Progression Factor	1.00		1.00			1.00
Incremental Delay, d2	0.7		0.1			0.0
Delay (s)	42.8		2.5			2.2
Level of Service	D		A			A
Approach Delay (s)	42.8		2.5			2.2
Approach LOS	D		A			A

Intersection Summary			
HCM 2000 Control Delay	3.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	91.7	Sum of lost time (s)	13.0
Intersection Capacity Utilization	72.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	80	166	0	0	130	28	28	296	30	40	6	46
Future Volume (vph)	80	166	0	0	130	28	28	296	30	40	6	46
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0			6.0			6.0	6.0
Lane Util. Factor		1.00			1.00			1.00			1.00	1.00
Frt		1.00			0.98			0.99			1.00	0.85
Flt Protected		0.98			1.00			1.00			0.96	1.00
Satd. Flow (prot)		1833			1818			1833			1784	1583
Flt Permitted		0.83			1.00			0.98			0.63	1.00
Satd. Flow (perm)		1538			1818			1797			1179	1583
Peak-hour factor, PHF	0.80	0.80	0.80	0.80	0.80	0.80	0.83	0.85	0.80	0.80	0.90	0.80
Adj. Flow (vph)	100	208	0	0	162	35	34	348	38	50	7	58
RTOR Reduction (vph)	0	0	0	0	13	0	0	6	0	0	0	29
Lane Group Flow (vph)	0	308	0	0	185	0	0	414	0	0	57	29
Turn Type	Perm	NA			NA		Perm	NA		Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		6
Actuated Green, G (s)		20.0			20.0			30.0			30.0	30.0
Effective Green, g (s)		20.0			20.0			30.0			30.0	30.0
Actuated g/C Ratio		0.33			0.33			0.49			0.49	0.49
Clearance Time (s)		5.0			5.0			6.0			6.0	6.0
Lane Grp Cap (vph)		504			596			883			579	778
v/s Ratio Prot					0.10							
v/s Ratio Perm		c0.20						c0.23			0.05	0.02
v/c Ratio		0.61			0.31			0.47			0.10	0.04
Uniform Delay, d1		17.2			15.3			10.2			8.3	8.0
Progression Factor		1.00			1.00			1.00			1.00	1.00
Incremental Delay, d2		5.4			1.4			1.8			0.3	0.1
Delay (s)		22.7			16.7			12.0			8.6	8.1
Level of Service		C			B			B			A	A
Approach Delay (s)		22.7			16.7			12.0			8.4	
Approach LOS		C			B			B			A	

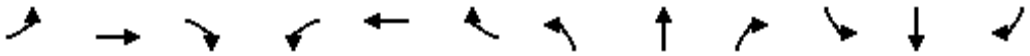
Intersection Summary			
HCM 2000 Control Delay	15.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	61.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	80.0%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	930	468	10	204	100
Future Volume (vph)	0	930	468	10	204	100
Ideal Flow (vphpl)	1900	1200	1900	1900	1900	1900
Total Lost time (s)		6.0	5.0	5.0	5.0	5.0
Lane Util. Factor		1.00	1.00	1.00	1.00	1.00
Frt		0.86	1.00	0.85	1.00	1.00
Flt Protected		1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)		1018	1863	1583	1770	1863
Flt Permitted		1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)		1018	1863	1583	1770	1863
Peak-hour factor, PHF	0.80	0.80	0.80	0.94	0.84	0.84
Adj. Flow (vph)	0	1162	585	11	243	119
RTOR Reduction (vph)	0	0	0	2	0	0
Lane Group Flow (vph)	0	1163	585	9	243	119
Turn Type		Perm	NA	Perm	Prot	NA
Protected Phases			4		6	
Permitted Phases		2		4		6
Actuated Green, G (s)		48.0	16.0	16.0	49.0	49.0
Effective Green, g (s)		48.0	16.0	16.0	49.0	49.0
Actuated g/C Ratio		0.64	0.21	0.21	0.65	0.65
Clearance Time (s)		6.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)		3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		651	397	337	1156	1217
v/s Ratio Prot			c0.31		0.14	
v/s Ratio Perm		c1.14		0.01		0.06
v/c Ratio		1.79	1.47	0.03	0.21	0.10
Uniform Delay, d1		13.5	29.5	23.3	5.2	4.8
Progression Factor		1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2		360.1	226.4	0.0	0.1	0.0
Delay (s)		373.6	255.9	23.4	5.3	4.8
Level of Service		F	F	C	A	A
Approach Delay (s)	373.6		251.6			5.2
Approach LOS	F		F			A

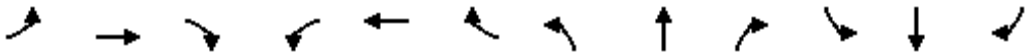
Intersection Summary			
HCM 2000 Control Delay	276.4	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.71		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	125.0%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group



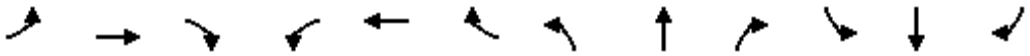
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	3	6	0	17	0	7	0	153	18	9	80	0
Future Volume (vph)	3	6	0	17	0	7	0	153	18	9	80	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0			7.0			7.0			7.0	
Lane Util. Factor	1.00	1.00			1.00			1.00			1.00	
Frt	1.00	1.00			0.96			0.99			1.00	
Flt Protected	0.95	1.00			0.97			1.00			1.00	
Satd. Flow (prot)	1770	1863			1727			1835			1854	
Flt Permitted	0.74	1.00			0.86			1.00			0.97	
Satd. Flow (perm)	1374	1863			1528			1835			1803	
Peak-hour factor, PHF	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.81	0.80	0.80	0.80	0.80
Adj. Flow (vph)	4	8	0	21	0	9	0	189	22	11	100	0
RTOR Reduction (vph)	0	0	0	0	20	0	0	6	0	0	0	0
Lane Group Flow (vph)	4	8	0	0	10	0	0	206	0	0	111	0
Turn Type	Perm	NA		Perm	NA			NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8						6		
Actuated Green, G (s)	25.0	25.0			25.0			36.0			36.0	
Effective Green, g (s)	25.0	25.0			25.0			36.0			36.0	
Actuated g/C Ratio	0.33	0.33			0.33			0.48			0.48	
Clearance Time (s)	7.0	7.0			7.0			7.0			7.0	
Lane Grp Cap (vph)	458	621			509			880			865	
v/s Ratio Prot		0.00						c0.11				
v/s Ratio Perm	0.00				c0.01						0.06	
v/c Ratio	0.01	0.01			0.02			0.23			0.13	
Uniform Delay, d1	16.7	16.7			16.8			11.4			10.8	
Progression Factor	1.00	1.00			1.00			1.00			0.82	
Incremental Delay, d2	0.0	0.0			0.1			0.6			0.2	
Delay (s)	16.7	16.8			16.8			12.1			9.0	
Level of Service	B	B			B			B			A	
Approach Delay (s)		16.8			16.8			12.1			9.0	
Approach LOS		B			B			B			A	

Intersection Summary			
HCM 2000 Control Delay	11.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.15		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	62.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



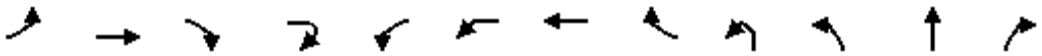
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	38	254	22	52	132	114	6	312	132	112	170	16
Future Volume (vph)	38	254	22	52	132	114	6	312	132	112	170	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		9.0			9.0			9.0			9.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frt		0.99			0.95			0.96			0.99	
Flt Protected		0.99			0.99			1.00			0.98	
Satd. Flow (prot)		1834			1747			1781			1816	
Flt Permitted		0.91			0.83			0.99			0.62	
Satd. Flow (perm)		1675			1463			1770			1141	
Peak-hour factor, PHF	0.80	0.80	0.82	0.80	0.86	0.80	0.91	0.91	0.80	0.86	0.80	0.80
Adj. Flow (vph)	48	318	27	65	153	142	7	343	165	130	212	20
RTOR Reduction (vph)	0	0	0	0	0	0	0	23	0	0	3	0
Lane Group Flow (vph)	0	393	0	0	361	0	0	492	0	0	360	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		27.0			27.0			30.0			30.0	
Effective Green, g (s)		27.0			27.0			30.0			30.0	
Actuated g/C Ratio		0.36			0.36			0.40			0.40	
Clearance Time (s)		9.0			9.0			9.0			9.0	
Lane Grp Cap (vph)		603			526			708			456	
v/s Ratio Prot												
v/s Ratio Perm		0.23			c0.25			0.28			c0.32	
v/c Ratio		0.65			0.69			0.70			0.79	
Uniform Delay, d1		20.1			20.4			18.7			19.7	
Progression Factor		1.00			1.00			1.01			1.39	
Incremental Delay, d2		5.4			7.1			5.6			12.9	
Delay (s)		25.5			27.5			24.5			40.3	
Level of Service		C			C			C			D	
Approach Delay (s)		25.5			27.5			24.5			40.3	
Approach LOS		C			C			C			D	

Intersection Summary			
HCM 2000 Control Delay	28.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	97.9%	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 (vph)	20	80	12	34	16	6	10	342	12	12	150	40
Future Volume (vph)	20	80	12	34	16	6	10	342	12	12	150	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		7.0			7.0			7.0			6.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frt		0.99			0.98			1.00			0.97	
Flt Protected		0.99			0.97			1.00			1.00	
Satd. Flow (prot)		1820			1780			1852			1808	
Flt Permitted		0.94			0.78			0.99			0.97	
Satd. Flow (perm)		1733			1435			1833			1752	
Peak-hour factor, PHF	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Adj. Flow (vph)	25	100	15	42	20	8	12	428	15	15	188	50
RTOR Reduction (vph)	0	6	0	0	5	0	0	2	0	0	12	0
Lane Group Flow (vph)	0	134	0	0	66	0	0	454	0	0	241	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		26.0			26.0			35.0			36.0	
Effective Green, g (s)		26.0			26.0			35.0			36.0	
Actuated g/C Ratio		0.35			0.35			0.47			0.48	
Clearance Time (s)		7.0			7.0			7.0			6.0	
Lane Grp Cap (vph)		600			497			855			840	
v/s Ratio Prot												
v/s Ratio Perm		c0.08			0.05			c0.25			0.14	
v/c Ratio		0.22			0.13			0.53			0.29	
Uniform Delay, d1		17.4			16.8			14.2			11.8	
Progression Factor		1.00			1.00			1.60			1.00	
Incremental Delay, d2		0.9			0.6			1.7			0.9	
Delay (s)		18.2			17.3			24.4			12.6	
Level of Service		B			B			C			B	
Approach Delay (s)		18.2			17.3			24.4			12.6	
Approach LOS		B			B			C			B	

Intersection Summary			
HCM 2000 Control Delay	19.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	62.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

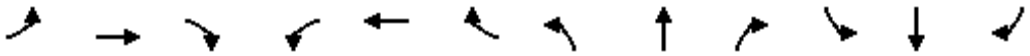


Movement	EBL	EBT	EBR	EBR2	WBL2	WBL	WBT	WBR	NBL2	NBL	NBT	NBR
Lane Configurations												
Traffic Volume (vph)	4	66	21	6	25	44	89	38	7	41	67	25
Future Volume (vph)	4	66	21	6	25	44	89	38	7	41	67	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0					6.0				6.0	
Lane Util. Factor		1.00					1.00				1.00	
Frt		0.96					0.97				0.98	
Flt Protected		1.00					0.98				0.98	
Satd. Flow (prot)		1789					1782				1788	
Flt Permitted		0.99					0.84				0.88	
Satd. Flow (perm)		1767					1525				1593	
Peak-hour factor, PHF	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Adj. Flow (vph)	5	82	26	8	31	55	111	48	9	51	84	31
RTOR Reduction (vph)	0	4	0	0	0	0	15	0	0	0	13	0
Lane Group Flow (vph)	0	118	0	0	0	0	230	0	0	0	162	0
Turn Type	Perm	NA			Perm	Perm	NA		pm+pt	pm+pt	NA	
Protected Phases		4					8		5	5	2	
Permitted Phases	4				8	8			2	2		
Actuated Green, G (s)		20.0					20.0				28.0	
Effective Green, g (s)		20.0					20.0				28.0	
Actuated g/C Ratio		0.33					0.33				0.47	
Clearance Time (s)		6.0					6.0				6.0	
Lane Grp Cap (vph)		589					508				759	
v/s Ratio Prot											c0.02	
v/s Ratio Perm		0.07					c0.15				0.08	
v/c Ratio		0.20					0.45				0.21	
Uniform Delay, d1		14.3					15.7				9.5	
Progression Factor		1.00					1.00				1.00	
Incremental Delay, d2		0.8					2.9				0.6	
Delay (s)		15.1					18.6				10.1	
Level of Service		B					B				B	
Approach Delay (s)		15.1					18.6				10.1	
Approach LOS		B					B				B	

Intersection Summary			
HCM 2000 Control Delay	15.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.34		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	38.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBL	SBT	SBR	SBR2
Lane Configurations				
Traffic Volume (vph)	31	55	14	5
Future Volume (vph)	31	55	14	5
Ideal Flow (vphpl)	1900	1900	1900	1900
Total Lost time (s)		6.0		
Lane Util. Factor		1.00		
Frt		0.98		
Flt Protected		0.99		
Satd. Flow (prot)		1791		
Flt Permitted		0.87		
Satd. Flow (perm)		1587		
Peak-hour factor, PHF	0.80	0.80	0.80	0.80
Adj. Flow (vph)	39	69	18	6
RTOR Reduction (vph)	0	3	0	0
Lane Group Flow (vph)	0	129	0	0
Turn Type	Perm	NA		
Protected Phases		6		
Permitted Phases	6			
Actuated Green, G (s)		20.0		
Effective Green, g (s)		20.0		
Actuated g/C Ratio		0.33		
Clearance Time (s)		6.0		
Lane Grp Cap (vph)		529		
v/s Ratio Prot				
v/s Ratio Perm		c0.08		
v/c Ratio		0.24		
Uniform Delay, d1		14.5		
Progression Factor		1.00		
Incremental Delay, d2		1.1		
Delay (s)		15.6		
Level of Service		B		
Approach Delay (s)		15.6		
Approach LOS		B		

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	310	14	160	734	62	0	0	186	0	0	0
Future Volume (vph)	0	310	14	160	734	62	0	0	186	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0		5.0	5.0				5.0			
Lane Util. Factor		0.91		1.00	0.95				1.00			
Frt		0.99		1.00	0.99				0.86			
Flt Protected		1.00		0.95	1.00				1.00			
Satd. Flow (prot)		5051		1770	3498				1611			
Flt Permitted		1.00		0.50	1.00				1.00			
Satd. Flow (perm)		5051		940	3498				1611			
Peak-hour factor, PHF	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.92	0.92	0.92
Adj. Flow (vph)	0	388	18	200	918	78	0	0	232	0	0	0
RTOR Reduction (vph)	0	2	0	0	2	0	0	0	222	0	0	0
Lane Group Flow (vph)	0	404	0	200	994	0	0	0	11	0	0	0
Turn Type		NA		Perm	NA				Perm			
Protected Phases		4			8							
Permitted Phases				8					2			
Actuated Green, G (s)		103.0		103.0	103.0				5.5			
Effective Green, g (s)		103.0		103.0	103.0				5.5			
Actuated g/C Ratio		0.87		0.87	0.87				0.05			
Clearance Time (s)		5.0		5.0	5.0				5.0			
Vehicle Extension (s)		3.0		3.0	3.0				3.0			
Lane Grp Cap (vph)		4390		817	3040				74			
v/s Ratio Prot		0.08			c0.28							
v/s Ratio Perm				0.21					c0.01			
v/c Ratio		0.09		0.24	0.33				0.15			
Uniform Delay, d1		1.1		1.3	1.4				54.2			
Progression Factor		1.00		1.00	1.00				1.00			
Incremental Delay, d2		0.0		0.7	0.3				0.9			
Delay (s)		1.1		2.0	1.7				55.2			
Level of Service		A		A	A				E			
Approach Delay (s)		1.1			1.8			55.2			0.0	
Approach LOS		A			A			E			A	

Intersection Summary			
HCM 2000 Control Delay	8.4	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	118.5	Sum of lost time (s)	10.0
Intersection Capacity Utilization	26.4%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	37	275	136	190	348	23	147	4	56	8	4	31
Future Volume (vph)	37	275	136	190	348	23	147	4	56	8	4	31
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	2.0	6.0	6.0	2.0	6.0			6.0			6.0	6.0
Lane Util. Factor	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	0.99			0.96			1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00			0.97			0.97	1.00
Satd. Flow (prot)	1770	1863	1583	1770	1845			1733			1803	1583
Flt Permitted	0.45	1.00	1.00	0.49	1.00			0.78			0.81	1.00
Satd. Flow (perm)	830	1863	1583	922	1845			1400			1513	1583
Peak-hour factor, PHF	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Adj. Flow (vph)	46	344	170	238	435	29	184	5	70	10	5	39
RTOR Reduction (vph)	0	0	88	0	3	0	0	21	0	0	0	30
Lane Group Flow (vph)	46	344	82	238	461	0	0	238	0	0	15	9
Turn Type	pm+pt	NA	Perm	pm+pt	NA		Perm	NA		Perm	NA	Perm
Protected Phases	1	6		5	2			4			8	
Permitted Phases	6		6	2			4			8		8
Actuated Green, G (s)	33.3	31.0	31.0	36.7	32.7			15.0			15.0	15.0
Effective Green, g (s)	33.3	31.0	31.0	36.7	32.7			15.0			15.0	15.0
Actuated g/C Ratio	0.52	0.48	0.48	0.57	0.51			0.23			0.23	0.23
Clearance Time (s)	2.0	6.0	6.0	2.0	6.0			6.0			6.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			3.0			3.0	3.0
Lane Grp Cap (vph)	465	902	766	581	942			328			354	371
v/s Ratio Prot	0.00	0.18		c0.03	c0.25							
v/s Ratio Perm	0.05		0.05	0.21				c0.17			0.01	0.01
v/c Ratio	0.10	0.38	0.11	0.41	0.49			0.72			0.04	0.02
Uniform Delay, d1	7.6	10.4	9.0	7.0	10.2			22.6			18.9	18.9
Progression Factor	1.00	1.00	1.00	1.00	1.00			1.00			1.00	1.00
Incremental Delay, d2	0.1	1.2	0.3	0.5	1.8			7.7			0.0	0.0
Delay (s)	7.7	11.7	9.3	7.4	12.0			30.3			19.0	18.9
Level of Service	A	B	A	A	B			C			B	B
Approach Delay (s)		10.6			10.5			30.3			18.9	
Approach LOS		B			B			C			B	

Intersection Summary			
HCM 2000 Control Delay	14.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	64.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	56.8%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	WBL	WBR	WBR2	NBL	NBT	SBT	SBR	NWL	NWT	NWR
Lane Configurations										
Traffic Volume (vph)	8	43	28	20	130	77	6	9	3	1
Future Volume (vph)	8	43	28	20	130	77	6	9	3	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0		6.0		6.0	6.0			6.0	
Lane Util. Factor	1.00		0.95		1.00	1.00			1.00	
Frt	0.87		0.85		1.00	0.99			0.99	
Flt Protected	0.99		1.00		0.99	1.00			0.97	
Satd. Flow (prot)	1613		1504		1852	1843			1786	
Flt Permitted	0.99		1.00		0.97	1.00			0.97	
Satd. Flow (perm)	1613		1504		1798	1843			1786	
Peak-hour factor, PHF	0.80	0.80	0.80	0.99	0.86	0.80	0.80	0.80	0.80	0.80
Adj. Flow (vph)	10	54	35	20	151	96	8	11	4	1
RTOR Reduction (vph)	62	0	28	0	0	4	0	0	0	0
Lane Group Flow (vph)	6	0	3	0	171	100	0	0	16	0
Turn Type	Prot		Perm	Perm	NA	NA		Perm	NA	
Protected Phases	8				1	1			2	
Permitted Phases			8	1				2		
Actuated Green, G (s)	7.0		7.0		30.0	30.0			20.0	
Effective Green, g (s)	7.0		7.0		30.0	30.0			20.0	
Actuated g/C Ratio	0.09		0.09		0.40	0.40			0.27	
Clearance Time (s)	6.0		6.0		6.0	6.0			6.0	
Lane Grp Cap (vph)	150		140		719	737			476	
v/s Ratio Prot	c0.00					0.05				
v/s Ratio Perm			0.00		c0.10				0.01	
v/c Ratio	0.04		0.02		0.24	0.14			0.03	
Uniform Delay, d1	30.9		30.9		14.9	14.3			20.3	
Progression Factor	1.00		1.00		1.00	1.00			1.00	
Incremental Delay, d2	0.5		0.3		0.8	0.4			0.1	
Delay (s)	31.5		31.2		15.7	14.7			20.5	
Level of Service	C		C		B	B			C	
Approach Delay (s)	31.4				15.7	14.7			20.5	
Approach LOS	C				B	B			C	

Intersection Summary			
HCM 2000 Control Delay	19.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.14		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	62.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Appendix 5E-2: 2017 Existing AM

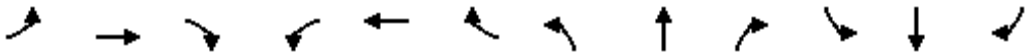
Unsignalized

Synchro Results

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	182	49	25	224	61	21
Future Volume (Veh/h)	182	49	25	224	61	21
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.85	0.80	0.80	0.92	0.80	0.80
Hourly flow rate (vph)	227	65	33	258	81	28
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			292		584	260
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			292		584	260
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			97		82	96
cM capacity (veh/h)			1270		462	779

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	292	291	109
Volume Left	0	33	81
Volume Right	65	0	28
cSH	1700	1270	516
Volume to Capacity	0.17	0.03	0.21
Queue Length 95th (ft)	0	2	20
Control Delay (s)	0.0	1.1	13.8
Lane LOS		A	B
Approach Delay (s)	0.0	1.1	13.8
Approach LOS			B

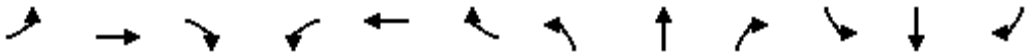
Intersection Summary			
Average Delay	2.6		
Intersection Capacity Utilization	42.2%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Yield			Stop			Yield	
Traffic Volume (vph)	17	25	6	0	39	254	4	44	4	180	17	10
Future Volume (vph)	17	25	6	0	39	254	4	44	4	180	17	10
Peak Hour Factor	0.85	0.89	0.80	0.80	0.89	0.86	0.99	0.85	0.99	0.87	0.85	0.83
Hourly flow rate (vph)	21	30	8	0	46	313	4	55	4	219	21	13

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	59	359	63	253
Volume Left (vph)	21	0	4	219
Volume Right (vph)	8	313	4	13
Hadj (s)	0.02	-0.49	0.01	0.18
Departure Headway (s)	5.2	4.3	5.3	5.1
Degree Utilization, x	0.09	0.43	0.09	0.36
Capacity (veh/h)	621	783	613	654
Control Delay (s)	8.7	10.6	8.8	11.0
Approach Delay (s)	8.7	10.6	8.8	11.0
Approach LOS	A	B	A	B

Intersection Summary			
Delay	10.4		
Level of Service	B		
Intersection Capacity Utilization	44.3%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	32	154	6	11	271	36	6	66	13	8	24	29
Future Volume (Veh/h)	32	154	6	11	271	36	6	66	13	8	24	29
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.83	0.80	0.80	0.80	0.82	0.84	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	41	204	8	15	350	45	8	87	17	11	32	38
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		643			1031							
pX, platoon unblocked	0.86						0.86	0.86		0.86	0.86	0.86
vC, conflicting volume	395			212			746	715	208	753	696	372
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	214			212			623	586	208	631	565	188
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	96			99			97	75	98	96	91	95
cM capacity (veh/h)	1165			1358			292	346	832	258	356	734

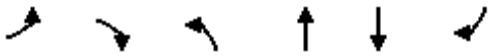
Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	253	410	112	81
Volume Left	41	15	8	11
Volume Right	8	45	17	38
cSH	1165	1358	374	440
Volume to Capacity	0.04	0.01	0.30	0.18
Queue Length 95th (ft)	3	1	31	17
Control Delay (s)	1.6	0.4	18.7	15.0
Lane LOS	A	A	C	C
Approach Delay (s)	1.6	0.4	18.7	15.0
Approach LOS			C	C

Intersection Summary			
Average Delay	4.5		
Intersection Capacity Utilization	37.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (veh/h)	0	10	503	122	0	392
Future Volume (Veh/h)	0	10	503	122	0	392
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	0	13	629	153	0	490
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						1081
pX, platoon unblocked						
vC, conflicting volume	1196	706			629	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1196	706			629	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	97			100	
cM capacity (veh/h)	206	436			953	

Direction, Lane #	NW 1	NE 1	SW 1
Volume Total	13	782	490
Volume Left	0	0	0
Volume Right	13	153	0
cSH	436	1700	1700
Volume to Capacity	0.03	0.46	0.29
Queue Length 95th (ft)	2	0	0
Control Delay (s)	13.5	0.0	0.0
Lane LOS	B		
Approach Delay (s)	13.5	0.0	0.0
Approach LOS	B		

Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	43.9%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	85	30	27	142	103	40
Future Volume (Veh/h)	85	30	27	142	103	40
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.86	0.80	0.80	0.90	0.80	0.80
Hourly flow rate (vph)	105	40	36	167	136	53
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)					693	
pX, platoon unblocked						
vC, conflicting volume	402	162	189			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	402	162	189			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	82	95	97			
cM capacity (veh/h)	589	882	1385			

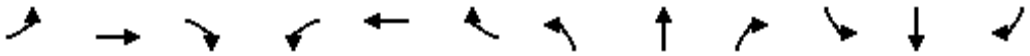
Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	145	203	189
Volume Left	105	36	0
Volume Right	40	0	53
cSH	648	1385	1700
Volume to Capacity	0.22	0.03	0.11
Queue Length 95th (ft)	21	2	0
Control Delay (s)	12.1	1.5	0.0
Lane LOS	B	A	
Approach Delay (s)	12.1	1.5	0.0
Approach LOS	B		

Intersection Summary			
Average Delay	3.9		
Intersection Capacity Utilization	34.8%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	1	134	170	6	104	80
Future Volume (Veh/h)	1	134	170	6	104	80
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.80	0.91	0.83	0.80	0.80	0.80
Hourly flow rate (vph)	1	156	217	8	138	106
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	603	221			225	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	603	221			225	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	81			90	
cM capacity (veh/h)	415	819			1344	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	157	225	244
Volume Left	1	0	138
Volume Right	156	8	0
cSH	814	1700	1344
Volume to Capacity	0.19	0.13	0.10
Queue Length 95th (ft)	18	0	9
Control Delay (s)	10.5	0.0	4.9
Lane LOS	B		A
Approach Delay (s)	10.5	0.0	4.9
Approach LOS	B		

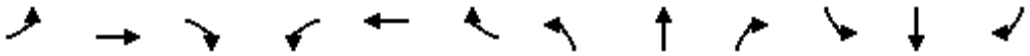
Intersection Summary			
Average Delay	4.5		
Intersection Capacity Utilization	39.3%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	360	10	0	186	4	18	0	4	2	1	3
Future Volume (Veh/h)	0	360	10	0	186	4	18	0	4	2	1	3
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.80	0.87	0.80	0.80	0.91	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	0	439	13	0	217	5	24	0	5	3	1	4
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)					1030							
pX, platoon unblocked												
vC, conflicting volume	222			452			670	668	446	670	672	220
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	222			452			670	668	446	670	672	220
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			93	100	99	99	100	100
cM capacity (veh/h)	1347			1109			368	379	613	368	377	820

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	452	222	29	8
Volume Left	0	0	24	3
Volume Right	13	5	5	4
cSH	1347	1109	396	510
Volume to Capacity	0.00	0.00	0.07	0.02
Queue Length 95th (ft)	0	0	6	1
Control Delay (s)	0.0	0.0	14.8	12.2
Lane LOS			B	B
Approach Delay (s)	0.0	0.0	14.8	12.2
Approach LOS			B	B

Intersection Summary				
Average Delay	0.7			
Intersection Capacity Utilization	30.7%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	344	4	1	176	2	1	1	5	4	1	3
Future Volume (Veh/h)	3	344	4	1	176	2	1	1	5	4	1	3
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.80	0.80	0.80	0.80	0.84	0.80	0.80	0.80	0.80	0.99	0.80	0.80
Hourly flow rate (vph)	6	684	8	2	333	4	2	2	10	6	2	6
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	337			692			1046	1041	688	1050	1043	335
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	337			692			1046	1041	688	1050	1043	335
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			99	99	98	97	99	99
cM capacity (veh/h)	1222			903			202	228	446	198	228	707

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	698	339	14	14
Volume Left	6	2	2	6
Volume Right	8	4	10	6
cSH	1222	903	341	294
Volume to Capacity	0.00	0.00	0.04	0.05
Queue Length 95th (ft)	0	0	3	4
Control Delay (s)	0.1	0.1	16.0	17.8
Lane LOS	A	A	C	C
Approach Delay (s)	0.1	0.1	16.0	17.8
Approach LOS			C	C

Intersection Summary				
Average Delay	0.6			
Intersection Capacity Utilization	42.4%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	209	4	46	222	26	2	13	148	63	26	20
Future Volume (Veh/h)	10	209	4	46	222	26	2	13	148	63	26	20
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.80	0.90	0.80	0.80	0.80	0.80	0.80	0.80	0.84	0.84	0.84	0.83
Hourly flow rate (vph)	14	258	6	64	308	36	3	18	196	83	34	27
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	344			264			787	761	261	948	746	326
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	344			264			787	761	261	948	746	326
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			95			99	94	75	49	89	96
cM capacity (veh/h)	1215			1300			261	315	778	164	321	715

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	278	408	217	144
Volume Left	14	64	3	83
Volume Right	6	36	196	27
cSH	1215	1300	677	222
Volume to Capacity	0.01	0.05	0.32	0.65
Queue Length 95th (ft)	1	4	35	99
Control Delay (s)	0.5	1.7	12.8	47.0
Lane LOS	A	A	B	E
Approach Delay (s)	0.5	1.7	12.8	47.0
Approach LOS			B	E

Intersection Summary				
Average Delay	9.9			
Intersection Capacity Utilization	61.7%	ICU Level of Service	B	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	126	0	32	260	42	0	132	94	18	22	18
Future Volume (Veh/h)	10	126	0	32	260	42	0	132	94	18	22	18
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.80	0.80	0.80	0.80	0.88	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	13	158	0	40	295	53	0	165	118	23	28	23
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	348			158			622	612	158	786	586	322
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	348			158			622	612	158	786	586	322
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			97			100	58	87	87	93	97
cM capacity (veh/h)	1211			1422			355	392	887	175	406	719

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	171	388	283	74
Volume Left	13	40	0	23
Volume Right	0	53	118	23
cSH	1211	1422	511	319
Volume to Capacity	0.01	0.03	0.55	0.23
Queue Length 95th (ft)	1	2	83	22
Control Delay (s)	0.7	1.0	20.4	19.7
Lane LOS	A	A	C	C
Approach Delay (s)	0.7	1.0	20.4	19.7
Approach LOS			C	C

Intersection Summary			
Average Delay	8.5		
Intersection Capacity Utilization	50.8%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	157	17	23	313	44	41
Future Volume (Veh/h)	157	17	23	313	44	41
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	212	23	31	423	59	55
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	1023					
pX, platoon unblocked						
vC, conflicting volume			235		708	224
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			235		708	224
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			98		85	93
cM capacity (veh/h)			1332		392	816

Direction, Lane #	EB 1	WB 1	WB 2	NB 1
Volume Total	235	31	423	114
Volume Left	0	31	0	59
Volume Right	23	0	0	55
cSH	1700	1332	1700	523
Volume to Capacity	0.14	0.02	0.25	0.22
Queue Length 95th (ft)	0	2	0	21
Control Delay (s)	0.0	7.8	0.0	13.8
Lane LOS		A		B
Approach Delay (s)	0.0	0.5		13.8
Approach LOS				B

Intersection Summary			
Average Delay	2.3		
Intersection Capacity Utilization	29.8%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	4	84	543	40	157	388
Future Volume (Veh/h)	4	84	543	40	157	388
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.80	0.87	0.92	0.80	0.83	0.81
Hourly flow rate (vph)	5	104	637	54	204	517
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			776			
pX, platoon unblocked	0.94	0.94			0.94	
vC, conflicting volume	1562	637			691	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1566	579			636	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	94	78			77	
cM capacity (veh/h)	88	482			887	

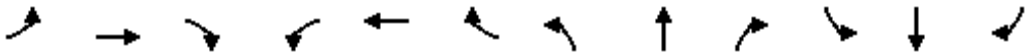
Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	109	637	54	204	517
Volume Left	5	0	0	204	0
Volume Right	104	0	54	0	0
cSH	400	1700	1700	887	1700
Volume to Capacity	0.27	0.37	0.03	0.23	0.30
Queue Length 95th (ft)	27	0	0	22	0
Control Delay (s)	17.3	0.0	0.0	10.3	0.0
Lane LOS	C			B	
Approach Delay (s)	17.3	0.0		2.9	
Approach LOS	C				

Intersection Summary			
Average Delay	2.6		
Intersection Capacity Utilization	56.1%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	4	26	408	12	20	86
Future Volume (Veh/h)	4	26	408	12	20	86
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.86
Hourly flow rate (vph)	5	33	510	15	25	100
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	668	518			525	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	668	518			525	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	99	94			98	
cM capacity (veh/h)	413	558			1042	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	38	525	125
Volume Left	5	0	25
Volume Right	33	15	0
cSH	533	1700	1042
Volume to Capacity	0.07	0.31	0.02
Queue Length 95th (ft)	6	0	2
Control Delay (s)	12.3	0.0	1.9
Lane LOS	B		A
Approach Delay (s)	12.3	0.0	1.9
Approach LOS	B		

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	100	36	26	133	18	95	40	16	2	42	6
Future Volume (Veh/h)	3	100	36	26	133	18	95	40	16	2	42	6
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	3	109	39	28	145	20	103	43	17	2	46	7
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		1173										
pX, platoon unblocked												
vC, conflicting volume	165			148			376	356	128	384	365	155
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	165			148			376	356	128	384	365	155
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			98			81	92	98	100	92	99
cM capacity (veh/h)	1413			1434			532	558	921	522	551	891

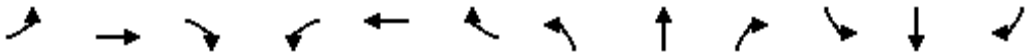
Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	151	193	163	55
Volume Left	3	28	103	2
Volume Right	39	20	17	7
cSH	1413	1434	563	578
Volume to Capacity	0.00	0.02	0.29	0.10
Queue Length 95th (ft)	0	1	30	8
Control Delay (s)	0.2	1.2	14.0	11.9
Lane LOS	A	A	B	B
Approach Delay (s)	0.2	1.2	14.0	11.9
Approach LOS			B	B

Intersection Summary				
Average Delay	5.7			
Intersection Capacity Utilization	42.2%	ICU Level of Service	A	
Analysis Period (min)	15			

Appendix 5E-3: 2017 Existing PM

Signalized

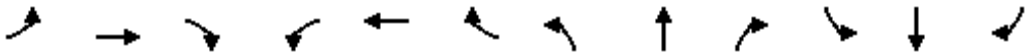
Synchro Results



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	158	294	14	40	294	84	10	292	70	106	264	168
Future Volume (vph)	158	294	14	40	294	84	10	292	70	106	264	168
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	8	11	12	8	11	12	12	16	12	12	16	12
Total Lost time (s)		5.0			5.0		5.0	5.0		5.0	5.0	
Lane Util. Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		1.00			0.97		1.00	0.97		1.00	0.94	
Flt Protected		0.98			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1764			1744		1770	2057		1770	1981	
Flt Permitted		0.63			0.93		0.35	1.00		0.39	1.00	
Satd. Flow (perm)		1121			1625		647	2057		718	1981	
Peak-hour factor, PHF	0.89	0.83	0.80	0.86	0.80	0.80	0.80	0.81	0.94	0.82	0.95	0.87
Adj. Flow (vph)	178	354	18	47	368	105	12	360	74	129	278	193
RTOR Reduction (vph)	0	2	0	0	15	0	0	12	0	0	41	0
Lane Group Flow (vph)	0	548	0	0	505	0	13	422	0	129	430	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		25.0			25.0		25.0	25.0		25.0	25.0	
Effective Green, g (s)		25.0			25.0		25.0	25.0		25.0	25.0	
Actuated g/C Ratio		0.42			0.42		0.42	0.42		0.42	0.42	
Clearance Time (s)		5.0			5.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)		467			677		269	857		299	825	
v/s Ratio Prot								0.21			c0.22	
v/s Ratio Perm		c0.49			0.31		0.02			0.18		
v/c Ratio		1.17			0.75		0.05	0.49		0.43	0.52	
Uniform Delay, d1		17.5			14.8		10.4	12.8		12.4	13.0	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		98.9			7.3		0.3	2.0		4.5	2.3	
Delay (s)		116.4			22.1		10.8	14.9		16.9	15.4	
Level of Service		F			C		B	B		B	B	
Approach Delay (s)		116.4			22.1			14.7			15.7	
Approach LOS		F			C			B			B	

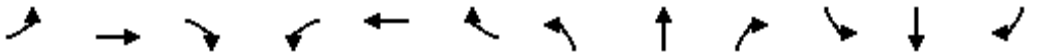
Intersection Summary			
HCM 2000 Control Delay	43.2	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	104.5%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group



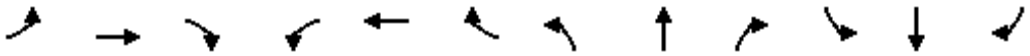
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	102	228	34	45	163	207	34	399	51	283	423	96
Future Volume (vph)	102	228	34	45	163	207	34	399	51	283	423	96
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0	6.0	6.0	6.0		3.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	1.00	0.85	1.00	0.98		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1826		1770	1863	1583	1770	1830		1770	1806	
Flt Permitted	0.47	1.00		0.22	1.00	1.00	0.43	1.00		0.31	1.00	
Satd. Flow (perm)	877	1826		406	1863	1583	797	1830		579	1806	
Peak-hour factor, PHF	0.80	0.82	0.80	0.94	0.82	0.80	0.80	0.84	0.80	0.87	0.90	0.80
Growth Factor (vph)	106%	106%	106%	106%	106%	106%	106%	106%	106%	106%	106%	106%
Adj. Flow (vph)	135	295	45	51	211	274	45	504	68	345	498	127
RTOR Reduction (vph)	0	5	0	0	0	156	0	4	0	0	8	0
Lane Group Flow (vph)	135	335	0	51	211	118	45	568	0	345	617	0
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA		pm+pt	NA	
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	26.0	26.0		26.0	26.0	26.0	67.0	67.0		81.7	81.7	
Effective Green, g (s)	26.0	26.0		26.0	26.0	26.0	67.0	67.0		81.7	81.7	
Actuated g/C Ratio	0.22	0.22		0.22	0.22	0.22	0.56	0.56		0.68	0.68	
Clearance Time (s)	6.0	6.0		6.0	6.0	6.0	6.0	6.0		3.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	190	396		88	404	343	446	1024		511	1232	
v/s Ratio Prot		c0.18			0.11			0.31		c0.07	0.34	
v/s Ratio Perm	0.15			0.13		0.07	0.06			c0.39		
v/c Ratio	0.71	0.85		0.58	0.52	0.34	0.10	0.55		0.68	0.50	
Uniform Delay, d1	43.4	44.9		42.0	41.4	39.6	12.3	16.8		10.8	9.2	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	11.8	15.3		8.9	1.2	0.6	0.1	0.7		3.5	0.3	
Delay (s)	55.2	60.2		50.9	42.6	40.2	12.4	17.5		14.3	9.5	
Level of Service	E	E		D	D	D	B	B		B	A	
Approach Delay (s)		58.8			42.2			17.1			11.2	
Approach LOS		E			D			B			B	

Intersection Summary			
HCM 2000 Control Delay	27.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	119.7	Sum of lost time (s)	15.0
Intersection Capacity Utilization	175.0%	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 (vph)	410	386	6	6	386	178	46	116	8	156	80	514
Future Volume (vph)	410	386	6	6	386	178	46	116	8	156	80	514
Ideal Flow (vphpl)	1200	1200	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	10	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	3.0	5.0			5.0			5.0			5.0	5.0
Lane Util. Factor	1.00	1.00			1.00			1.00			1.00	1.00
Frt	1.00	1.00			0.96			0.99			1.00	0.85
Flt Protected	0.95	1.00			1.00			0.99			0.97	1.00
Satd. Flow (prot)	1043	1095			1783			1826			1803	1583
Flt Permitted	0.25	1.00			0.99			0.71			0.65	1.00
Satd. Flow (perm)	279	1095			1774			1309			1203	1583
Peak-hour factor, PHF	0.83	0.82	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.90
Adj. Flow (vph)	494	471	8	8	482	222	58	145	10	195	100	571
RTOR Reduction (vph)	0	1	0	0	24	0	0	2	0	0	0	312
Lane Group Flow (vph)	494	478	0	0	690	0	0	211	0	0	295	259
Turn Type	pm+pt	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases	7	4			8			2			6	
Permitted Phases	4			8			2			6		6
Actuated Green, G (s)	40.8	40.8			30.8			18.0			18.0	18.0
Effective Green, g (s)	40.8	40.8			30.8			18.0			18.0	18.0
Actuated g/C Ratio	0.59	0.59			0.45			0.26			0.26	0.26
Clearance Time (s)	3.0	5.0			5.0			5.0			5.0	5.0
Vehicle Extension (s)	3.0	3.0			3.0			3.0			3.0	3.0
Lane Grp Cap (vph)	243	649			794			342			314	414
v/s Ratio Prot	c0.21	0.44										
v/s Ratio Perm	c1.00				0.39			0.16			c0.25	0.16
v/c Ratio	2.03	0.74			0.87			0.62			0.94	0.63
Uniform Delay, d1	13.5	10.1			17.2			22.4			24.9	22.4
Progression Factor	1.00	1.00			1.00			1.00			1.00	1.00
Incremental Delay, d2	479.0	4.4			10.0			3.3			34.7	3.0
Delay (s)	492.4	14.5			27.2			25.6			59.6	25.4
Level of Service	F	B			C			C			E	C
Approach Delay (s)		257.1			27.2			25.6			37.0	
Approach LOS		F			C			C			D	

Intersection Summary			
HCM 2000 Control Delay	111.0	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.77		
Actuated Cycle Length (s)	68.8	Sum of lost time (s)	13.0
Intersection Capacity Utilization	106.1%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



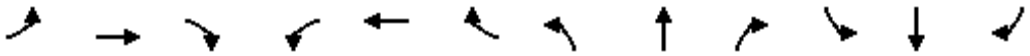
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	62	94	48	120	87	84	66	445	91	55	398	75
Future Volume (vph)	62	94	48	120	87	84	66	445	91	55	398	75
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.95		1.00	0.93		1.00	0.97		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1768		1770	1726		1770	1811		1770	1818	
Flt Permitted	0.62	1.00		0.64	1.00		0.28	1.00		0.23	1.00	
Satd. Flow (perm)	1150	1768		1189	1726		514	1811		423	1818	
Peak-hour factor, PHF	0.80	0.80	0.80	0.95	0.80	0.80	0.84	0.92	0.83	0.80	0.87	0.86
Growth Factor (vph)	106%	106%	106%	106%	106%	106%	106%	106%	106%	106%	106%	106%
Adj. Flow (vph)	82	125	64	134	115	111	83	513	116	73	485	92
RTOR Reduction (vph)	0	31	0	0	58	0	0	9	0	0	7	0
Lane Group Flow (vph)	82	158	0	134	168	0	83	620	0	73	570	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			4			2			2	
Permitted Phases	4			4			2			2		
Actuated Green, G (s)	21.8	21.8		21.8	21.8		26.0	26.0		26.0	26.0	
Effective Green, g (s)	21.8	21.8		21.8	21.8		26.0	26.0		26.0	26.0	
Actuated g/C Ratio	0.36	0.36		0.36	0.36		0.43	0.43		0.43	0.43	
Clearance Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Vehicle Extension (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)	419	644		433	629		223	787		183	790	
v/s Ratio Prot		0.09			0.10			c0.34			0.31	
v/s Ratio Perm	0.07			c0.11			0.16			0.17		
v/c Ratio	0.20	0.25		0.31	0.27		0.37	0.79		0.40	0.72	
Uniform Delay, d1	13.0	13.3		13.6	13.4		11.4	14.5		11.6	13.9	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.3	0.3		0.6	0.3		1.4	5.6		1.9	3.5	
Delay (s)	13.3	13.5		14.2	13.7		12.8	20.1		13.5	17.4	
Level of Service	B	B		B	B		B	C		B	B	
Approach Delay (s)		13.5			13.9			19.2			17.0	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	16.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	59.8	Sum of lost time (s)	12.0
Intersection Capacity Utilization	91.5%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	104	54	196	18	36	230
Future Volume (vph)	104	54	196	18	36	230
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0		6.0			6.0
Lane Util. Factor	1.00		1.00			1.00
Frt	0.96		0.99			1.00
Flt Protected	0.97		1.00			0.99
Satd. Flow (prot)	1724		1841			1850
Flt Permitted	0.97		1.00			0.93
Satd. Flow (perm)	1724		1841			1734
Peak-hour factor, PHF	0.81	0.91	0.80	0.80	0.80	0.80
Adj. Flow (vph)	128	59	245	22	45	288
RTOR Reduction (vph)	28	0	4	0	0	0
Lane Group Flow (vph)	159	0	264	0	0	333
Turn Type	Prot		NA		Perm	NA
Protected Phases	4		2			2
Permitted Phases					2	
Actuated Green, G (s)	10.6		28.0			28.0
Effective Green, g (s)	10.6		28.0			28.0
Actuated g/C Ratio	0.21		0.55			0.55
Clearance Time (s)	6.0		6.0			6.0
Vehicle Extension (s)	2.0		2.0			2.0
Lane Grp Cap (vph)	361		1018			959
v/s Ratio Prot	c0.09		0.14			
v/s Ratio Perm						c0.19
v/c Ratio	0.44		0.26			0.35
Uniform Delay, d1	17.4		5.9			6.2
Progression Factor	1.00		1.00			1.00
Incremental Delay, d2	0.3		0.0			0.1
Delay (s)	17.7		5.9			6.3
Level of Service	B		A			A
Approach Delay (s)	17.7		5.9			6.3
Approach LOS	B		A			A

Intersection Summary			
HCM 2000 Control Delay	8.9	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	50.6	Sum of lost time (s)	12.0
Intersection Capacity Utilization	61.6%	ICU Level of Service	B
Analysis Period (min)	15		

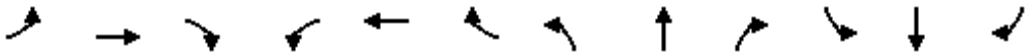
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	21	159	66	38	119	60	24	153	23	63	196	34
Future Volume (vph)	21	159	66	38	119	60	24	153	23	63	196	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0			6.0			6.0			6.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frt		0.96			0.96			0.98			0.98	
Flt Protected		1.00			0.99			0.99			0.99	
Satd. Flow (prot)		1788			1780			1820			1810	
Flt Permitted		0.96			0.90			0.92			0.87	
Satd. Flow (perm)		1723			1608			1688			1594	
Peak-hour factor, PHF	0.88	0.86	0.88	0.80	0.81	0.85	0.80	0.88	0.80	0.80	0.90	0.80
Growth Factor (vph)	106%	106%	106%	106%	106%	106%	106%	106%	106%	106%	106%	106%
Adj. Flow (vph)	25	196	80	50	156	75	32	184	30	83	231	45
RTOR Reduction (vph)	0	18	0	0	18	0	0	7	0	0	7	0
Lane Group Flow (vph)	0	283	0	0	263	0	0	239	0	0	352	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		6			6			2			2	
Permitted Phases	6			6			2			2		
Actuated Green, G (s)		32.0			32.0			30.0			30.0	
Effective Green, g (s)		32.0			32.0			30.0			30.0	
Actuated g/C Ratio		0.43			0.43			0.41			0.41	
Clearance Time (s)		6.0			6.0			6.0			6.0	
Lane Grp Cap (vph)		745			695			684			646	
v/s Ratio Prot												
v/s Ratio Perm		c0.16			0.16			0.14			c0.22	
v/c Ratio		0.38			0.38			0.35			0.54	
Uniform Delay, d1		14.3			14.3			15.2			16.8	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		1.5			1.6			1.4			3.3	
Delay (s)		15.7			15.8			16.7			20.1	
Level of Service		B			B			B			C	
Approach Delay (s)		15.7			15.8			16.7			20.1	
Approach LOS		B			B			B			C	

Intersection Summary			
HCM 2000 Control Delay	17.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	74.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	64.7%	ICU Level of Service	C
Analysis Period (min)	15		

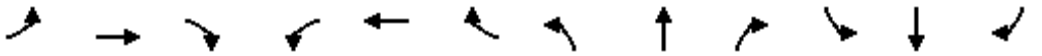
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	38	163	14	91	237	22	30	95	45	36	155	42
Future Volume (vph)	38	163	14	91	237	22	30	95	45	36	155	42
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.99		1.00	0.95		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1840		1770	1838		1770	1772		1770	1801	
Flt Permitted	0.54	1.00		0.62	1.00		0.53	1.00		0.65	1.00	
Satd. Flow (perm)	1000	1840		1146	1838		979	1772		1211	1801	
Peak-hour factor, PHF	0.80	0.82	0.80	0.88	0.86	0.80	0.83	0.88	0.87	0.82	0.84	0.80
Growth Factor (vph)	106%	106%	106%	106%	106%	106%	106%	106%	106%	106%	106%	106%
Adj. Flow (vph)	50	211	19	110	292	29	38	114	55	47	196	56
RTOR Reduction (vph)	0	5	0	0	5	0	0	25	0	0	14	0
Lane Group Flow (vph)	50	225	0	110	316	0	38	144	0	47	238	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	38.0	38.0		38.0	38.0		22.0	22.0		22.0	22.0	
Effective Green, g (s)	38.0	38.0		38.0	38.0		22.0	22.0		22.0	22.0	
Actuated g/C Ratio	0.54	0.54		0.54	0.54		0.31	0.31		0.31	0.31	
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)	542	998		622	997		307	556		380	566	
v/s Ratio Prot		0.12			c0.17			0.08			c0.13	
v/s Ratio Perm	0.05			0.10			0.04			0.04		
v/c Ratio	0.09	0.23		0.18	0.32		0.12	0.26		0.12	0.42	
Uniform Delay, d1	7.7	8.3		8.1	8.8		17.1	17.9		17.1	19.0	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.3	0.5		0.6	0.8		0.8	1.1		0.7	2.3	
Delay (s)	8.0	8.9		8.7	9.7		17.9	19.0		17.8	21.2	
Level of Service	A	A		A	A		B	B		B	C	
Approach Delay (s)		8.7			9.4			18.8			20.7	
Approach LOS		A			A			B			C	

Intersection Summary					
HCM 2000 Control Delay	13.6	HCM 2000 Level of Service		B	
HCM 2000 Volume to Capacity ratio	0.35				
Actuated Cycle Length (s)	70.0	Sum of lost time (s)		10.0	
Intersection Capacity Utilization	107.5%	ICU Level of Service		G	
Analysis Period (min)	15				

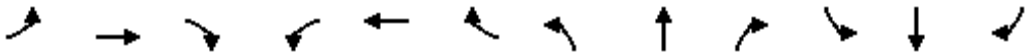
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	166	173	44	20	158	10	45	559	29	96	875	286
Future Volume (vph)	166	173	44	20	158	10	45	559	29	96	875	286
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	7.0		3.0	7.0	7.0	3.0	7.0		3.0	7.0	7.0
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.95		1.00	0.95	1.00
Frt	1.00	0.97		1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	1806		1770	1863	1583	1770	3513		1770	3539	1583
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1770	1806		1770	1863	1583	1770	3513		1770	3539	1583
Peak-hour factor, PHF	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Adj. Flow (vph)	208	216	55	25	198	12	56	699	36	120	1094	358
RTOR Reduction (vph)	0	9	0	0	0	11	0	4	0	0	0	177
Lane Group Flow (vph)	208	262	0	25	198	2	56	731	0	120	1094	181
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8						6
Actuated Green, G (s)	7.0	21.8		2.6	17.4	17.4	5.5	42.8		7.0	44.3	44.3
Effective Green, g (s)	7.0	21.8		2.6	17.4	17.4	5.5	42.8		7.0	44.3	44.3
Actuated g/C Ratio	0.07	0.23		0.03	0.18	0.18	0.06	0.45		0.07	0.47	0.47
Clearance Time (s)	3.0	7.0		3.0	7.0	7.0	3.0	7.0		3.0	7.0	7.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	131	417		48	344	292	103	1596		131	1664	744
v/s Ratio Prot	c0.12	c0.14		0.01	0.11		0.03	0.21		c0.07	c0.31	
v/s Ratio Perm						0.00						0.11
v/c Ratio	1.59	0.63		0.52	0.58	0.01	0.54	0.46		0.92	0.66	0.24
Uniform Delay, d1	43.6	32.6		45.2	35.0	31.4	43.1	17.7		43.3	19.1	14.9
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	297.5	2.9		9.8	2.3	0.0	5.8	0.9		53.3	2.0	0.8
Delay (s)	341.1	35.5		55.0	37.4	31.4	48.9	18.7		96.6	21.2	15.7
Level of Service	F	D		E	D	C	D	B		F	C	B
Approach Delay (s)		168.2			38.9			20.8			25.7	
Approach LOS		F			D			C			C	

Intersection Summary			
HCM 2000 Control Delay	47.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	94.2	Sum of lost time (s)	20.0
Intersection Capacity Utilization	63.4%	ICU Level of Service	B
Analysis Period (min)	15		

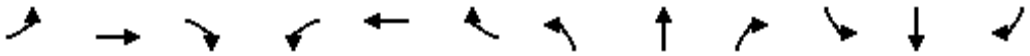
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	48	176	74	10	150	160	84	652	10	132	1008	60
Future Volume (vph)	48	176	74	10	150	160	84	652	10	132	1008	60
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	7.0		3.0	7.0		3.0	7.0		3.0	7.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frt	1.00	0.95		1.00	0.93		1.00	1.00		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1778		1770	1723		1770	3530		1770	3503	
Flt Permitted	0.27	1.00		0.52	1.00		0.14	1.00		0.28	1.00	
Satd. Flow (perm)	511	1778		977	1723		257	3530		519	3503	
Peak-hour factor, PHF	0.84	0.83	0.80	0.80	0.86	0.92	0.81	0.91	0.80	0.80	0.97	0.80
Adj. Flow (vph)	57	212	92	12	174	174	104	716	12	165	1039	75
RTOR Reduction (vph)	0	15	0	0	36	0	0	1	0	0	5	0
Lane Group Flow (vph)	57	290	0	13	312	0	104	728	0	165	1109	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	29.5	25.3		22.4	21.2		40.3	35.0		44.1	36.9	
Effective Green, g (s)	29.5	25.3		22.4	21.2		40.3	35.0		44.1	36.9	
Actuated g/C Ratio	0.33	0.29		0.25	0.24		0.45	0.39		0.50	0.42	
Clearance Time (s)	3.0	7.0		3.0	7.0		3.0	7.0		3.0	7.0	
Vehicle Extension (s)	3.0	2.0		3.0	2.0		3.0	2.0		3.0	2.0	
Lane Grp Cap (vph)	245	507		257	411		207	1392		359	1457	
v/s Ratio Prot	c0.01	c0.16		0.00	c0.18		0.03	0.21		c0.04	c0.32	
v/s Ratio Perm	0.06			0.01			0.20			0.19		
v/c Ratio	0.23	0.57		0.05	0.76		0.50	0.52		0.46	0.76	
Uniform Delay, d1	21.3	27.1		25.0	31.4		15.9	20.5		13.0	22.1	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.5	1.0		0.1	7.0		1.9	0.2		0.9	2.2	
Delay (s)	21.8	28.0		25.1	38.4		17.8	20.6		14.0	24.3	
Level of Service	C	C		C	D		B	C		B	C	
Approach Delay (s)		27.1			37.9			20.3			23.0	
Approach LOS		C			D			C			C	

Intersection Summary			
HCM 2000 Control Delay	24.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	88.7	Sum of lost time (s)	20.0
Intersection Capacity Utilization	77.5%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



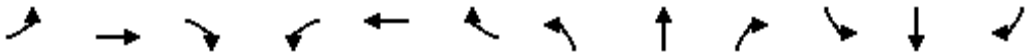
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	34	302	152	24	418	110	204	178	22	152	218	46
Future Volume (vph)	34	302	152	24	418	110	204	178	22	152	218	46
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.95		1.00	0.97		1.00	0.98		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1768		1770	1800		1770	1829		1770	1814	
Flt Permitted	0.23	1.00		0.30	1.00		0.50	1.00		0.61	1.00	
Satd. Flow (perm)	420	1768		550	1800		931	1829		1141	1814	
Peak-hour factor, PHF	0.80	0.84	0.82	0.80	0.87	0.80	0.80	0.86	0.80	0.80	0.81	0.81
Adj. Flow (vph)	42	360	185	30	480	138	255	207	28	190	269	57
RTOR Reduction (vph)	0	19	0	0	10	0	0	7	0	0	10	0
Lane Group Flow (vph)	43	526	0	30	608	0	255	228	0	190	316	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		1			1			2			2	
Permitted Phases	1			1			2			2		
Actuated Green, G (s)	27.9	27.9		27.9	27.9		24.9	24.9		24.9	24.9	
Effective Green, g (s)	27.9	27.9		27.9	27.9		24.9	24.9		24.9	24.9	
Actuated g/C Ratio	0.43	0.43		0.43	0.43		0.38	0.38		0.38	0.38	
Clearance Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	180	761		236	775		357	702		438	697	
v/s Ratio Prot		0.30			c0.34			0.12			0.17	
v/s Ratio Perm	0.10			0.05			c0.27			0.17		
v/c Ratio	0.24	0.69		0.13	0.78		0.71	0.33		0.43	0.45	
Uniform Delay, d1	11.7	15.0		11.1	15.9		16.9	14.0		14.7	14.9	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.3	2.2		0.1	4.8		5.6	0.1		0.3	0.2	
Delay (s)	12.0	17.2		11.2	20.7		22.5	14.1		15.0	15.0	
Level of Service	B	B		B	C		C	B		B	B	
Approach Delay (s)		16.8			20.2			18.5			15.0	
Approach LOS		B			C			B			B	

Intersection Summary			
HCM 2000 Control Delay	17.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	64.8	Sum of lost time (s)	12.0
Intersection Capacity Utilization	69.3%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	29	117	26	146	81	47	26	580	50	26	665	18
Future Volume (vph)	29	117	26	146	81	47	26	580	50	26	665	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0			6.0		3.0	6.0		3.0	6.0	
Lane Util. Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.98			0.98		1.00	0.99		1.00	1.00	
Flt Protected		0.99			0.97		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1810			1775		1770	1838		1770	1854	
Flt Permitted		0.90			0.66		0.16	1.00		0.16	1.00	
Satd. Flow (perm)		1637			1197		305	1838		306	1854	
Peak-hour factor, PHF	0.83	0.80	0.80	0.88	0.80	0.88	0.80	0.90	0.81	0.80	0.97	0.80
Growth Factor (vph)	108%	108%	108%	108%	108%	108%	108%	108%	108%	108%	108%	108%
Adj. Flow (vph)	38	158	35	179	109	58	35	696	67	35	740	24
RTOR Reduction (vph)	0	7	0	0	8	0	0	3	0	0	1	0
Lane Group Flow (vph)	0	224	0	0	338	0	35	760	0	35	763	0
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		27.8			27.8		52.2	49.2		52.2	49.2	
Effective Green, g (s)		27.8			27.8		52.2	49.2		52.2	49.2	
Actuated g/C Ratio		0.29			0.29		0.55	0.52		0.55	0.52	
Clearance Time (s)		6.0			6.0		3.0	6.0		3.0	6.0	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		479			350		213	951		214	960	
v/s Ratio Prot							c0.01	c0.41		0.01	0.41	
v/s Ratio Perm		0.14			c0.28		0.08			0.08		
v/c Ratio		0.47			0.97		0.16	0.80		0.16	0.79	
Uniform Delay, d1		27.5			33.1		14.1	18.8		14.1	18.8	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.7			38.8		0.4	7.0		0.4	6.8	
Delay (s)		28.3			71.9		14.5	25.8		14.4	25.5	
Level of Service		C			E		B	C		B	C	
Approach Delay (s)		28.3			71.9			25.3			25.0	
Approach LOS		C			E			C			C	

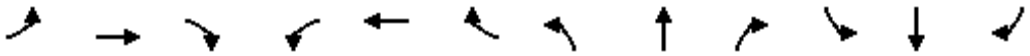
Intersection Summary			
HCM 2000 Control Delay	32.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	90.2%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	98	264	40	142	286	42	56	450	82	56	554	102
Future Volume (vph)	98	264	40	142	286	42	56	450	82	56	554	102
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	5.0		3.0	5.0		3.0	5.0		3.0	5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.98		1.00	0.97		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1822		1770	1827		1770	1816		1770	1816	
Flt Permitted	0.22	1.00		0.20	1.00		0.11	1.00		0.25	1.00	
Satd. Flow (perm)	416	1822		374	1827		204	1816		469	1816	
Peak-hour factor, PHF	0.82	0.91	0.80	0.80	0.80	0.80	0.80	0.95	0.86	0.80	0.91	0.83
Adj. Flow (vph)	120	290	50	178	358	52	70	474	95	70	609	123
RTOR Reduction (vph)	0	7	0	0	6	0	0	8	0	0	8	0
Lane Group Flow (vph)	120	333	0	178	405	0	70	561	0	70	724	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	24.4	17.9		28.4	19.9		43.3	38.3		43.3	38.3	
Effective Green, g (s)	24.4	17.9		28.4	19.9		43.3	38.3		43.3	38.3	
Actuated g/C Ratio	0.28	0.21		0.33	0.23		0.51	0.45		0.51	0.45	
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	5.0		3.0	5.0	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	221	380		262	424		194	811		312	811	
v/s Ratio Prot	0.04	0.18		c0.07	c0.22		c0.02	0.31		0.01	c0.40	
v/s Ratio Perm	0.11			0.16			0.16			0.10		
v/c Ratio	0.54	0.88		0.68	0.95		0.36	0.69		0.22	0.89	
Uniform Delay, d1	24.5	32.8		22.4	32.5		15.8	19.0		12.7	21.8	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.5	19.1		5.4	31.8		0.4	2.1		0.1	11.9	
Delay (s)	26.0	51.9		27.9	64.3		16.2	21.0		12.9	33.7	
Level of Service	C	D		C	E		B	C		B	C	
Approach Delay (s)		45.2			53.3			20.5			31.8	
Approach LOS		D			D			C			C	

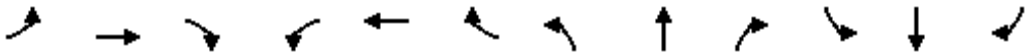
Intersection Summary			
HCM 2000 Control Delay	36.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	85.7	Sum of lost time (s)	16.0
Intersection Capacity Utilization	78.7%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	13	538	33	190	406	34	18	315	181	52	482	15
Future Volume (vph)	13	538	33	190	406	34	18	315	181	52	482	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		3.0	6.0		6.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.99		1.00	0.94		1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1844		1770	1840		1770	1750		1770	1854	
Flt Permitted	0.39	1.00		0.11	1.00		0.12	1.00		0.14	1.00	
Satd. Flow (perm)	725	1844		203	1840		228	1750		259	1854	
Peak-hour factor, PHF	0.80	0.91	0.80	0.84	0.84	0.80	0.80	0.94	0.80	0.80	0.82	0.80
Growth Factor (vph)	108%	108%	108%	108%	108%	108%	108%	108%	108%	108%	108%	108%
Adj. Flow (vph)	18	639	45	244	522	46	24	362	244	70	635	20
RTOR Reduction (vph)	0	3	0	0	4	0	0	27	0	0	1	0
Lane Group Flow (vph)	18	681	0	244	564	0	24	579	0	70	654	0
Turn Type	Perm	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases		4		3	8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	33.7	33.7		43.7	43.7		32.7	32.7		32.7	32.7	
Effective Green, g (s)	33.7	33.7		43.7	43.7		32.7	32.7		32.7	32.7	
Actuated g/C Ratio	0.38	0.38		0.49	0.49		0.37	0.37		0.37	0.37	
Clearance Time (s)	6.0	6.0		3.0	6.0		6.0	6.0		6.0	6.0	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	276	702		224	909		84	647		95	685	
v/s Ratio Prot		0.37		c0.09	0.31			0.33			c0.35	
v/s Ratio Perm	0.02			c0.45			0.11			0.27		
v/c Ratio	0.07	0.97		1.09	0.62		0.29	0.89		0.74	0.95	
Uniform Delay, d1	17.4	26.9		21.4	16.3		19.6	26.2		24.1	27.1	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.0	26.2		86.0	1.0		0.7	14.5		22.3	23.4	
Delay (s)	17.4	53.0		107.4	17.3		20.3	40.7		46.4	50.5	
Level of Service	B	D		F	B		C	D		D	D	
Approach Delay (s)		52.1			44.3			40.0			50.1	
Approach LOS		D			D			D			D	

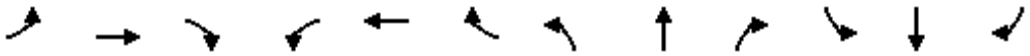
Intersection Summary			
HCM 2000 Control Delay	46.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.07		
Actuated Cycle Length (s)	88.4	Sum of lost time (s)	15.0
Intersection Capacity Utilization	104.1%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	84	304	80	94	226	76	112	436	116	194	466	34
Future Volume (vph)	84	304	80	94	226	76	112	436	116	194	466	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	6.0		3.0	6.0		3.0	6.0	6.0	3.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	0.95	
Frt	1.00	0.97		1.00	0.96		1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	1803		1770	1786		1770	1863	1583	1770	3503	
Flt Permitted	0.35	1.00		0.22	1.00		0.33	1.00	1.00	0.25	1.00	
Satd. Flow (perm)	648	1803		406	1786		618	1863	1583	473	3503	
Peak-hour factor, PHF	0.80	0.89	0.86	0.90	0.90	0.80	0.80	0.94	0.80	0.84	0.80	0.80
Adj. Flow (vph)	105	342	93	104	251	95	140	464	145	231	582	42
RTOR Reduction (vph)	0	10	0	0	14	0	0	0	96	0	5	0
Lane Group Flow (vph)	105	425	0	104	332	0	140	464	49	231	621	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		
Actuated Green, G (s)	29.8	24.0		29.6	23.9		37.6	29.1	29.1	39.2	29.9	
Effective Green, g (s)	29.8	24.0		29.6	23.9		37.6	29.1	29.1	39.2	29.9	
Actuated g/C Ratio	0.35	0.28		0.34	0.28		0.44	0.34	0.34	0.46	0.35	
Clearance Time (s)	3.0	6.0		3.0	6.0		3.0	6.0	6.0	3.0	6.0	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Lane Grp Cap (vph)	299	502		229	495		383	629	535	355	1216	
v/s Ratio Prot	0.02	c0.24		c0.03	0.19		0.04	c0.25		c0.07	0.18	
v/s Ratio Perm	0.10			0.13			0.12		0.03	0.23		
v/c Ratio	0.35	0.85		0.45	0.67		0.37	0.74	0.09	0.65	0.51	
Uniform Delay, d1	20.1	29.3		20.9	27.6		15.1	25.1	19.5	16.3	22.3	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.3	12.0		0.5	2.8		0.2	3.9	0.0	3.2	0.2	
Delay (s)	20.3	41.3		21.4	30.4		15.3	29.0	19.5	19.6	22.4	
Level of Service	C	D		C	C		B	C	B	B	C	
Approach Delay (s)		37.2			28.3			24.6			21.7	
Approach LOS		D			C			C			C	

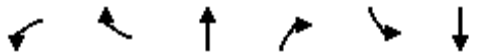
Intersection Summary			
HCM 2000 Control Delay	26.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	86.1	Sum of lost time (s)	18.0
Intersection Capacity Utilization	77.1%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



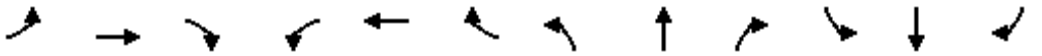
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	54	410	226	76	317	29	125	278	96	64	418	31
Future Volume (vph)	54	410	226	76	317	29	125	278	96	64	418	31
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.95		1.00	0.99		1.00	0.96		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1762		1770	1836		1770	1786		1770	1843	
Flt Permitted	0.42	1.00		0.12	1.00		0.20	1.00		0.33	1.00	
Satd. Flow (perm)	785	1762		227	1836		371	1786		610	1843	
Peak-hour factor, PHF	0.80	0.94	0.92	0.80	0.92	0.80	0.80	0.88	0.81	0.80	0.82	0.80
Growth Factor (vph)	108%	108%	108%	108%	108%	108%	108%	108%	108%	108%	108%	108%
Adj. Flow (vph)	73	471	265	103	372	39	169	341	128	86	551	42
RTOR Reduction (vph)	0	23	0	0	4	0	0	14	0	0	3	0
Lane Group Flow (vph)	73	713	0	103	407	0	169	455	0	86	590	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			2			1			1	
Permitted Phases	2			2			1			1		
Actuated Green, G (s)	39.5	39.5		39.5	39.5		35.2	35.2		35.2	35.2	
Effective Green, g (s)	39.5	39.5		39.5	39.5		35.2	35.2		35.2	35.2	
Actuated g/C Ratio	0.45	0.45		0.45	0.45		0.40	0.40		0.40	0.40	
Clearance Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	349	784		101	817		147	708		242	731	
v/s Ratio Prot		0.40			0.22			0.25			0.32	
v/s Ratio Perm	0.09			c0.45			c0.46			0.14		
v/c Ratio	0.21	0.91		1.02	0.50		1.15	0.64		0.36	0.81	
Uniform Delay, d1	15.0	22.9		24.6	17.5		26.8	21.7		18.8	23.7	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.1	14.1		95.0	0.2		120.1	4.5		4.0	9.3	
Delay (s)	15.2	37.0		119.6	17.7		146.8	26.1		22.8	33.0	
Level of Service	B	D		F	B		F	C		C	C	
Approach Delay (s)		35.1			38.1			58.1			31.7	
Approach LOS		D			D			E			C	

Intersection Summary			
HCM 2000 Control Delay	40.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.08		
Actuated Cycle Length (s)	88.7	Sum of lost time (s)	14.0
Intersection Capacity Utilization	120.6%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



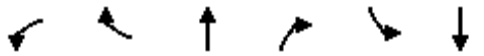
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	45	21	515	27	19	544
Future Volume (vph)	45	21	515	27	19	544
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0		7.0			7.0
Lane Util. Factor	1.00		1.00			1.00
Frt	0.96		0.99			1.00
Flt Protected	0.97		1.00			1.00
Satd. Flow (prot)	1725		1848			1859
Flt Permitted	0.97		1.00			0.96
Satd. Flow (perm)	1725		1848			1797
Peak-hour factor, PHF	0.80	0.80	0.94	0.80	0.80	0.94
Growth Factor (vph)	108%	108%	108%	108%	108%	108%
Adj. Flow (vph)	61	28	592	36	26	625
RTOR Reduction (vph)	19	0	2	0	0	0
Lane Group Flow (vph)	70	0	626	0	0	651
Turn Type	Prot		NA		Perm	NA
Protected Phases	8		2			6
Permitted Phases					6	
Actuated Green, G (s)	6.9		70.0			70.0
Effective Green, g (s)	6.9		70.0			70.0
Actuated g/C Ratio	0.08		0.78			0.78
Clearance Time (s)	6.0		7.0			7.0
Vehicle Extension (s)	2.0		2.0			2.0
Lane Grp Cap (vph)	132		1438			1399
v/s Ratio Prot	c0.04		0.34			
v/s Ratio Perm						c0.36
v/c Ratio	0.53		0.44			0.47
Uniform Delay, d1	39.9		3.3			3.5
Progression Factor	1.00		1.00			1.00
Incremental Delay, d2	1.8		0.1			0.1
Delay (s)	41.7		3.4			3.5
Level of Service	D		A			A
Approach Delay (s)	41.7		3.4			3.5
Approach LOS	D		A			A

Intersection Summary			
HCM 2000 Control Delay	6.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	89.9	Sum of lost time (s)	13.0
Intersection Capacity Utilization	72.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	60	170	44	20	118	16	30	156	28	34	282	26
Future Volume (vph)	60	170	44	20	118	16	30	156	28	34	282	26
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0			6.0			6.0	6.0
Lane Util. Factor		1.00			1.00			1.00			1.00	1.00
Frt		0.98			0.99			0.98			1.00	0.85
Flt Protected		0.99			0.99			0.99			0.99	1.00
Satd. Flow (prot)		1802			1823			1817			1852	1583
Flt Permitted		0.89			0.93			0.92			0.94	1.00
Satd. Flow (perm)		1624			1703			1677			1750	1583
Peak-hour factor, PHF	0.80	0.82	0.80	0.80	0.85	0.80	0.80	0.80	0.80	0.82	0.90	0.80
Adj. Flow (vph)	75	207	55	25	139	20	38	195	35	41	313	32
RTOR Reduction (vph)	0	11	0	0	7	0	0	9	0	0	0	17
Lane Group Flow (vph)	0	326	0	0	177	0	0	259	0	0	354	16
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		6
Actuated Green, G (s)		20.0			20.0			30.0			30.0	30.0
Effective Green, g (s)		20.0			20.0			30.0			30.0	30.0
Actuated g/C Ratio		0.33			0.33			0.49			0.49	0.49
Clearance Time (s)		5.0			5.0			6.0			6.0	6.0
Lane Grp Cap (vph)		532			558			824			860	778
v/s Ratio Prot												
v/s Ratio Perm		c0.20			0.10			0.15			c0.20	0.01
v/c Ratio		0.61			0.32			0.31			0.41	0.02
Uniform Delay, d1		17.2			15.4			9.3			9.9	8.0
Progression Factor		1.00			1.00			1.00			1.00	1.00
Incremental Delay, d2		5.2			1.5			1.0			1.5	0.0
Delay (s)		22.4			16.9			10.3			11.3	8.0
Level of Service		C			B			B			B	A
Approach Delay (s)		22.4			16.9			10.3			11.0	
Approach LOS		C			B			B			B	

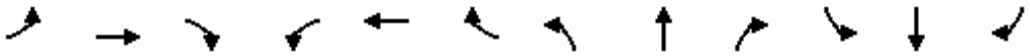
Intersection Summary			
HCM 2000 Control Delay	15.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	61.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	80.0%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	388	248	12	760	330
Future Volume (vph)	0	388	248	12	760	330
Ideal Flow (vphpl)	1900	1200	1900	1900	1900	1900
Total Lost time (s)		6.0	5.0	5.0	6.0	6.0
Lane Util. Factor		1.00	1.00	1.00	1.00	1.00
Frt		0.86	1.00	0.85	1.00	1.00
Flt Protected		1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)		1018	1863	1583	1770	1863
Flt Permitted		1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)		1018	1863	1583	1770	1863
Peak-hour factor, PHF	0.80	0.85	0.97	0.80	0.93	0.89
Adj. Flow (vph)	0	456	256	15	817	371
RTOR Reduction (vph)	0	194	0	11	0	0
Lane Group Flow (vph)	0	262	256	4	817	371
Turn Type		Perm	NA	Perm	Prot	NA
Protected Phases			4		6	
Permitted Phases		2		4		6
Actuated Green, G (s)		28.1	12.6	12.6	28.1	28.1
Effective Green, g (s)		28.1	12.6	12.6	28.1	28.1
Actuated g/C Ratio		0.54	0.24	0.24	0.54	0.54
Clearance Time (s)		6.0	5.0	5.0	6.0	6.0
Vehicle Extension (s)		3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		553	454	385	962	1012
v/s Ratio Prot			c0.14		c0.46	
v/s Ratio Perm		0.26		0.00		0.20
v/c Ratio		0.47	0.56	0.01	0.85	0.37
Uniform Delay, d1		7.3	17.1	14.8	10.0	6.7
Progression Factor		1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2		0.6	1.6	0.0	7.1	0.2
Delay (s)		7.9	18.7	14.8	17.1	7.0
Level of Service		A	B	B	B	A
Approach Delay (s)	7.9		18.5			13.9
Approach LOS	A		B			B

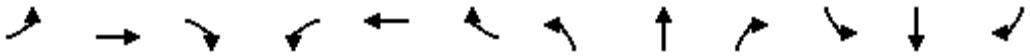
Intersection Summary			
HCM 2000 Control Delay	13.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	51.7	Sum of lost time (s)	11.0
Intersection Capacity Utilization	64.3%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



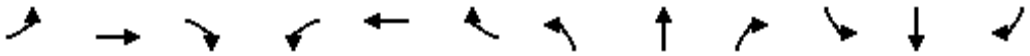
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	22	0	25	0	20	0	148	33	27	243	0
Future Volume (vph)	15	22	0	25	0	20	0	148	33	27	243	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0			7.0			7.0			7.0	
Lane Util. Factor	1.00	1.00			1.00			1.00			1.00	
Frt	1.00	1.00			0.94			0.98			1.00	
Flt Protected	0.95	1.00			0.97			1.00			1.00	
Satd. Flow (prot)	1770	1863			1703			1817			1854	
Flt Permitted	0.72	1.00			0.86			1.00			0.95	
Satd. Flow (perm)	1342	1863			1501			1817			1777	
Peak-hour factor, PHF	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.84	0.82	0.80
Adj. Flow (vph)	19	28	0	31	0	25	0	185	41	32	296	0
RTOR Reduction (vph)	0	0	0	0	37	0	0	10	0	0	0	0
Lane Group Flow (vph)	19	28	0	0	19	0	0	216	0	0	328	0
Turn Type	Perm	NA		Perm	NA			NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8						6		
Actuated Green, G (s)	25.0	25.0			25.0			36.0			36.0	
Effective Green, g (s)	25.0	25.0			25.0			36.0			36.0	
Actuated g/C Ratio	0.33	0.33			0.33			0.48			0.48	
Clearance Time (s)	7.0	7.0			7.0			7.0			7.0	
Lane Grp Cap (vph)	447	621			500			872			852	
v/s Ratio Prot		c0.02						0.12				
v/s Ratio Perm	0.01				0.01						c0.18	
v/c Ratio	0.04	0.05			0.04			0.25			0.38	
Uniform Delay, d1	16.9	16.9			16.9			11.5			12.4	
Progression Factor	1.00	1.00			1.00			1.00			0.89	
Incremental Delay, d2	0.2	0.1			0.1			0.7			1.0	
Delay (s)	17.1	17.1			17.0			12.2			12.0	
Level of Service	B	B			B			B			B	
Approach Delay (s)		17.1			17.0			12.2			12.0	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	12.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.25		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	67.8%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	18	132	24	82	100	66	12	162	54	110	250	22
Future Volume (vph)	18	132	24	82	100	66	12	162	54	110	250	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		9.0			9.0			9.0			9.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frt		0.98			0.97			0.97			0.99	
Flt Protected		0.99			0.98			1.00			0.99	
Satd. Flow (prot)		1819			1767			1794			1820	
Flt Permitted		0.94			0.81			0.96			0.83	
Satd. Flow (perm)		1711			1462			1726			1526	
Peak-hour factor, PHF	0.80	0.80	0.80	0.80	0.83	0.85	0.80	0.92	0.83	0.89	0.89	0.80
Adj. Flow (vph)	22	165	30	102	120	78	15	176	65	124	281	28
RTOR Reduction (vph)	0	0	0	0	0	0	0	16	0	0	4	0
Lane Group Flow (vph)	0	218	0	0	301	0	0	240	0	0	429	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		27.0			27.0			30.0			30.0	
Effective Green, g (s)		27.0			27.0			30.0			30.0	
Actuated g/C Ratio		0.36			0.36			0.40			0.40	
Clearance Time (s)		9.0			9.0			9.0			9.0	
Lane Grp Cap (vph)		615			526			690			610	
v/s Ratio Prot												
v/s Ratio Perm		0.13			c0.21			0.14			c0.28	
v/c Ratio		0.35			0.57			0.35			0.70	
Uniform Delay, d1		17.6			19.3			15.7			18.8	
Progression Factor		1.00			1.00			0.90			1.79	
Incremental Delay, d2		1.6			4.5			1.4			6.0	
Delay (s)		19.2			23.8			15.4			39.6	
Level of Service		B			C			B			D	
Approach Delay (s)		19.2			23.8			15.4			39.6	
Approach LOS		B			C			B			D	

Intersection Summary			
HCM 2000 Control Delay	26.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	104.4%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

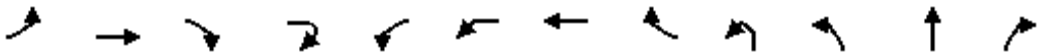


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	28	56	38	4	2	2	4	158	18	20	332	10
Future Volume (vph)	28	56	38	4	2	2	4	158	18	20	332	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		7.0			7.0			7.0			6.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frt		0.96			0.96			0.99			1.00	
Flt Protected		0.99			0.98			1.00			1.00	
Satd. Flow (prot)		1764			1754			1833			1850	
Flt Permitted		0.94			0.90			0.99			0.98	
Satd. Flow (perm)		1670			1615			1816			1812	
Peak-hour factor, PHF	0.80	0.80	0.80	0.83	0.80	0.80	0.80	0.87	0.80	0.80	0.82	0.80
Adj. Flow (vph)	35	70	48	5	2	2	5	182	22	25	405	12
RTOR Reduction (vph)	0	22	0	0	2	0	0	6	0	0	2	0
Lane Group Flow (vph)	0	131	0	0	9	0	0	204	0	0	441	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		26.0			26.0			35.0			36.0	
Effective Green, g (s)		26.0			26.0			35.0			36.0	
Actuated g/C Ratio		0.35			0.35			0.47			0.48	
Clearance Time (s)		7.0			7.0			7.0			6.0	
Lane Grp Cap (vph)		578			559			847			869	
v/s Ratio Prot												
v/s Ratio Perm		c0.08			0.01			0.11			c0.24	
v/c Ratio		0.23			0.02			0.24			0.51	
Uniform Delay, d1		17.4			16.1			12.0			13.4	
Progression Factor		1.00			1.00			1.78			1.00	
Incremental Delay, d2		0.9			0.1			0.6			2.1	
Delay (s)		18.3			16.1			22.0			15.5	
Level of Service		B			B			C			B	
Approach Delay (s)		18.3			16.1			22.0			15.5	
Approach LOS		B			B			C			B	

Intersection Summary			
HCM 2000 Control Delay	17.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	62.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBL	WBR	WBR2	NBL	NBT	SBT	SBR	NWT
Lane Configurations								
Traffic Volume (vph)	9	47	47	18	84	141	6	7
Future Volume (vph)	9	47	47	18	84	141	6	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0		6.0		6.0	6.0		6.0
Lane Util. Factor	1.00		0.95		1.00	1.00		1.00
Frt	0.87		0.85		1.00	0.99		1.00
Flt Protected	0.99		1.00		0.99	1.00		1.00
Satd. Flow (prot)	1612		1504		1849	1852		1863
Flt Permitted	0.99		1.00		0.95	1.00		1.00
Satd. Flow (perm)	1612		1504		1768	1852		1863
Peak-hour factor, PHF	0.80	0.80	0.80	0.99	0.80	0.80	0.80	0.80
Adj. Flow (vph)	11	59	59	18	105	176	8	9
RTOR Reduction (vph)	69	0	48	0	0	2	0	0
Lane Group Flow (vph)	7	0	5	0	123	182	0	9
Turn Type	Prot		Perm	Perm	NA	NA		NA
Protected Phases	8				1	1		2
Permitted Phases			8	1				
Actuated Green, G (s)	7.0		7.0		30.0	30.0		20.0
Effective Green, g (s)	7.0		7.0		30.0	30.0		20.0
Actuated g/C Ratio	0.09		0.09		0.40	0.40		0.27
Clearance Time (s)	6.0		6.0		6.0	6.0		6.0
Lane Grp Cap (vph)	150		140		707	740		496
v/s Ratio Prot	c0.00					c0.10		c0.00
v/s Ratio Perm			0.00		0.07			
v/c Ratio	0.05		0.04		0.17	0.25		0.02
Uniform Delay, d1	31.0		30.9		14.5	15.0		20.3
Progression Factor	1.00		1.00		1.00	1.00		1.00
Incremental Delay, d2	0.6		0.5		0.5	0.8		0.1
Delay (s)	31.6		31.4		15.0	15.8		20.3
Level of Service	C		C		B	B		C
Approach Delay (s)	31.5				15.0	15.8		20.3
Approach LOS	C				B	B		C

Intersection Summary			
HCM 2000 Control Delay	20.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.14		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	62.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

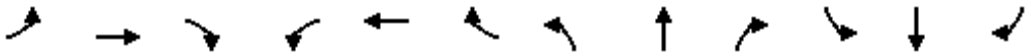


Movement	EBL	EBT	EBR	EBR2	WBL2	WBL	WBT	WBR	NBL2	NBL	NBT	NBR
Lane Configurations												
Traffic Volume (vph)	16	102	133	11	33	22	40	54	3	14	80	35
Future Volume (vph)	16	102	133	11	33	22	40	54	3	14	80	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0					6.0				6.0	
Lane Util. Factor		1.00					1.00				1.00	
Frt		0.93					0.95				0.96	
Flt Protected		1.00					0.98				0.99	
Satd. Flow (prot)		1720					1739				1784	
Flt Permitted		0.97					0.77				0.95	
Satd. Flow (perm)		1680					1361				1703	
Peak-hour factor, PHF	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Adj. Flow (vph)	20	128	166	14	41	28	50	68	4	18	100	44
RTOR Reduction (vph)	0	3	0	0	0	0	34	0	0	0	22	0
Lane Group Flow (vph)	0	325	0	0	0	0	153	0	0	0	144	0
Turn Type	Perm	NA			Perm	Perm	NA		pm+pt	pm+pt	NA	
Protected Phases		4					8		5	5	2	
Permitted Phases	4				8	8			2	2		
Actuated Green, G (s)		20.0					20.0				28.0	
Effective Green, g (s)		20.0					20.0				28.0	
Actuated g/C Ratio		0.33					0.33				0.47	
Clearance Time (s)		6.0					6.0				6.0	
Lane Grp Cap (vph)		560					453				801	
v/s Ratio Prot											c0.01	
v/s Ratio Perm		c0.19					0.11				0.07	
v/c Ratio		0.58					0.34				0.18	
Uniform Delay, d1		16.5					15.0				9.3	
Progression Factor		1.00					1.00				1.00	
Incremental Delay, d2		4.4					2.0				0.5	
Delay (s)		20.9					17.0				9.8	
Level of Service		C					B				A	
Approach Delay (s)		20.9					17.0				9.8	
Approach LOS		C					B				A	

Intersection Summary			
HCM 2000 Control Delay	18.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	57.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBL	SBT	SBR	SBR2
Lane Configurations				
Traffic Volume (vph)	59	151	14	18
Future Volume (vph)	59	151	14	18
Ideal Flow (vphpl)	1900	1900	1900	1900
Total Lost time (s)		6.0		
Lane Util. Factor		1.00		
Frt		0.98		
Flt Protected		0.99		
Satd. Flow (prot)		1807		
Flt Permitted		0.88		
Satd. Flow (perm)		1601		
Peak-hour factor, PHF	0.80	0.80	0.80	0.80
Adj. Flow (vph)	74	189	18	22
RTOR Reduction (vph)	0	5	0	0
Lane Group Flow (vph)	0	299	0	0
Turn Type	Perm	NA		
Protected Phases		6		
Permitted Phases	6			
Actuated Green, G (s)		20.0		
Effective Green, g (s)		20.0		
Actuated g/C Ratio		0.33		
Clearance Time (s)		6.0		
Lane Grp Cap (vph)		533		
v/s Ratio Prot				
v/s Ratio Perm		c0.19		
v/c Ratio		0.56		
Uniform Delay, d1		16.4		
Progression Factor		1.00		
Incremental Delay, d2		4.2		
Delay (s)		20.6		
Level of Service		C		
Approach Delay (s)		20.6		
Approach LOS		C		

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	908	6	40	262	44	0	0	186	0	0	0
Future Volume (vph)	0	908	6	40	262	44	0	0	186	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0		5.0	5.0				5.0			
Lane Util. Factor		0.91		1.00	0.95				1.00			
Frt		1.00		1.00	0.98				0.86			
Flt Protected		1.00		0.95	1.00				1.00			
Satd. Flow (prot)		5080		1770	3463				1611			
Flt Permitted		1.00		0.23	1.00				1.00			
Satd. Flow (perm)		5080		431	3463				1611			
Peak-hour factor, PHF	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Adj. Flow (vph)	0	1135	8	50	328	55	0	0	232	0	0	0
RTOR Reduction (vph)	0	0	0	0	6	0	0	0	125	0	0	0
Lane Group Flow (vph)	0	1143	0	50	377	0	0	0	108	0	0	0
Turn Type		NA		Perm	NA				Perm			
Protected Phases		4			8							
Permitted Phases				8					2			
Actuated Green, G (s)		102.2		102.2	102.2				13.3			
Effective Green, g (s)		102.2		102.2	102.2				13.3			
Actuated g/C Ratio		0.81		0.81	0.81				0.11			
Clearance Time (s)		5.0		5.0	5.0				5.0			
Vehicle Extension (s)		3.0		3.0	3.0				3.0			
Lane Grp Cap (vph)		4136		350	2820				170			
v/s Ratio Prot		c0.22			0.11							
v/s Ratio Perm				0.12					c0.07			
v/c Ratio		0.28		0.14	0.13				0.63			
Uniform Delay, d1		2.8		2.4	2.4				53.8			
Progression Factor		1.00		1.00	1.00				1.00			
Incremental Delay, d2		0.2		0.9	0.1				7.5			
Delay (s)		3.0		3.3	2.5				61.3			
Level of Service		A		A	A				E			
Approach Delay (s)		3.0			2.6			61.3			0.0	
Approach LOS		A			A			E			A	

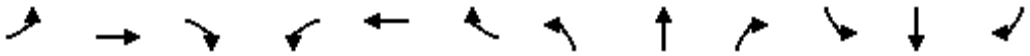
Intersection Summary			
HCM 2000 Control Delay	10.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	125.5	Sum of lost time (s)	10.0
Intersection Capacity Utilization	37.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	17	340	106	83	271	12	208	6	99	59	8	220
Future Volume (vph)	17	340	106	83	271	12	208	6	99	59	8	220
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	2.0	6.0	6.0	2.0	6.0			6.0			6.0	6.0
Lane Util. Factor	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	0.99			0.96			1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00			0.97			0.96	1.00
Satd. Flow (prot)	1770	1863	1583	1770	1851			1726			1784	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00			0.75			0.62	1.00
Satd. Flow (perm)	1770	1863	1583	1770	1851			1336			1153	1583
Peak-hour factor, PHF	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Adj. Flow (vph)	21	425	132	104	339	15	260	8	124	74	10	275
RTOR Reduction (vph)	0	0	73	0	2	0	0	25	0	0	0	196
Lane Group Flow (vph)	21	425	60	104	352	0	0	367	0	0	84	79
Turn Type	Prot	NA	Perm	Prot	NA		Perm	NA		Perm	NA	Perm
Protected Phases	1	6		5	2			4			8	
Permitted Phases			6				4			8		8
Actuated Green, G (s)	1.6	31.2	31.2	4.0	33.6			19.8			19.8	19.8
Effective Green, g (s)	1.6	31.2	31.2	4.0	33.6			19.8			19.8	19.8
Actuated g/C Ratio	0.02	0.45	0.45	0.06	0.49			0.29			0.29	0.29
Clearance Time (s)	2.0	6.0	6.0	2.0	6.0			6.0			6.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			3.0			3.0	3.0
Lane Grp Cap (vph)	41	842	715	102	901			383			330	454
v/s Ratio Prot	0.01	c0.23		c0.06	0.19							
v/s Ratio Perm			0.04					c0.27			0.07	0.05
v/c Ratio	0.51	0.50	0.08	1.02	0.39			0.96			0.25	0.17
Uniform Delay, d1	33.3	13.4	10.8	32.5	11.2			24.2			18.9	18.5
Progression Factor	1.00	1.00	1.00	1.00	1.00			1.00			1.00	1.00
Incremental Delay, d2	10.4	2.2	0.2	94.5	1.3			34.8			0.4	0.2
Delay (s)	43.7	15.6	11.0	127.0	12.5			59.0			19.3	18.6
Level of Service	D	B	B	F	B			E			B	B
Approach Delay (s)		15.5			38.5			59.0			18.8	
Approach LOS		B			D			E			B	

Intersection Summary			
HCM 2000 Control Delay	31.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	69.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	61.5%	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 (vph)	68	284	52	140	150	62	28	488	138	142	628	34
Future Volume (vph)	68	284	52	140	150	62	28	488	138	142	628	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1500	1500	1900	1500	1500	1900
Total Lost time (s)	3.0	5.0		3.0	5.0		3.0	5.0		3.0	5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.95		1.00	0.97		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1635		1770	1775		1397	1420		1397	1458	
Flt Permitted	0.51	1.00		0.18	1.00		0.12	1.00		0.12	1.00	
Satd. Flow (perm)	950	1635		333	1775		173	1420		173	1458	
Peak-hour factor, PHF	0.80	0.86	0.80	0.90	0.89	0.80	0.80	0.93	0.89	0.84	0.94	0.88
Adj. Flow (vph)	85	330	65	156	169	78	35	525	155	169	668	39
RTOR Reduction (vph)	0	8	0	0	19	0	0	13	0	0	2	0
Lane Group Flow (vph)	85	387	0	156	228	0	35	667	0	169	705	0
Parking (#/hr)		0										
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	27.8	20.6		31.4	22.4		40.0	34.0		40.0	34.0	
Effective Green, g (s)	27.8	20.6		31.4	22.4		40.0	34.0		40.0	34.0	
Actuated g/C Ratio	0.32	0.24		0.37	0.26		0.47	0.40		0.47	0.40	
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	5.0		3.0	5.0	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	377	393		273	464		166	564		166	579	
v/s Ratio Prot	0.02	c0.24		c0.06	0.13		0.01	0.47		c0.07	c0.48	
v/s Ratio Perm	0.05			0.15			0.08			0.40		
v/c Ratio	0.23	0.98		0.57	0.49		0.21	1.18		1.02	1.22	
Uniform Delay, d1	20.6	32.3		20.4	26.8		17.3	25.8		19.4	25.8	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.1	40.7		1.8	0.3		0.2	99.5		74.7	112.7	
Delay (s)	20.7	73.1		22.2	27.1		17.6	125.3		94.1	138.5	
Level of Service	C	E		C	C		B	F		F	F	
Approach Delay (s)		63.8			25.2			120.1			129.9	
Approach LOS		E			C			F			F	

Intersection Summary			
HCM 2000 Control Delay	97.2	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.05		
Actuated Cycle Length (s)	85.6	Sum of lost time (s)	16.0
Intersection Capacity Utilization	94.0%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Appendix 5E-4: 2017 Existing PM

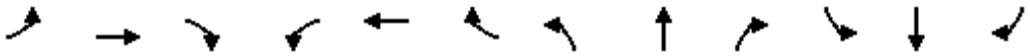
Unsignalized

Synchro Results

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	284	62	26	220	62	18
Future Volume (Veh/h)	284	62	26	220	62	18
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.81	0.80	0.81	0.95	0.80	0.80
Hourly flow rate (vph)	372	82	34	245	82	24
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			454		726	413
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			454		726	413
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			97		78	96
cM capacity (veh/h)			1107		379	639

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	454	279	106
Volume Left	0	34	82
Volume Right	82	0	24
cSH	1700	1107	418
Volume to Capacity	0.27	0.03	0.25
Queue Length 95th (ft)	0	2	25
Control Delay (s)	0.0	1.3	16.5
Lane LOS		A	C
Approach Delay (s)	0.0	1.3	16.5
Approach LOS			C

Intersection Summary			
Average Delay	2.5		
Intersection Capacity Utilization	46.8%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Yield			Stop			Yield	
Traffic Volume (vph)	22	27	7	1	30	209	6	70	8	227	73	14
Future Volume (vph)	22	27	7	1	30	209	6	70	8	227	73	14
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.87	0.80	0.80
Hourly flow rate (vph)	29	36	9	1	40	277	8	93	11	277	97	19

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	74	318	112	393
Volume Left (vph)	29	1	8	277
Volume Right (vph)	9	277	11	19
Hadj (s)	0.04	-0.49	-0.01	0.15
Departure Headway (s)	5.9	4.9	5.6	5.3
Degree Utilization, x	0.12	0.44	0.17	0.58
Capacity (veh/h)	535	677	573	651
Control Delay (s)	9.7	11.7	9.7	15.2
Approach Delay (s)	9.7	11.7	9.7	15.2
Approach LOS	A	B	A	C

Intersection Summary				
Delay	12.8			
Level of Service	B			
Intersection Capacity Utilization	53.0%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	26	168	11	10	154	28	9	41	26	22	36	39
Future Volume (Veh/h)	26	168	11	10	154	28	9	41	26	22	36	39
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	34	223	15	13	204	37	12	54	34	29	48	52
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		643			1031							
pX, platoon unblocked												
vC, conflicting volume	241			238			623	566	230	608	554	222
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	241			238			623	566	230	608	554	222
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	97			99			96	87	96	92	89	94
cM capacity (veh/h)	1326			1329			332	419	809	343	425	817

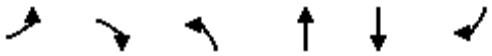
Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	272	254	100	129
Volume Left	34	13	12	29
Volume Right	15	37	34	52
cSH	1326	1329	483	494
Volume to Capacity	0.03	0.01	0.21	0.26
Queue Length 95th (ft)	2	1	19	26
Control Delay (s)	1.2	0.5	14.4	14.9
Lane LOS	A	A	B	B
Approach Delay (s)	1.2	0.5	14.4	14.9
Approach LOS			B	B

Intersection Summary			
Average Delay	5.0		
Intersection Capacity Utilization	36.6%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (veh/h)	0	65	570	77	0	734
Future Volume (Veh/h)	0	65	570	77	0	734
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	0	81	713	96	0	918
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						1081
pX, platoon unblocked	0.83					
vC, conflicting volume	1679	761			713	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1715	761			713	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	80			100	
cM capacity (veh/h)	83	405			887	

Direction, Lane #	NW 1	NE 1	SW 1
Volume Total	81	809	918
Volume Left	0	0	0
Volume Right	81	96	0
cSH	405	1700	1700
Volume to Capacity	0.20	0.48	0.54
Queue Length 95th (ft)	18	0	0
Control Delay (s)	16.1	0.0	0.0
Lane LOS	C		
Approach Delay (s)	16.1	0.0	0.0
Approach LOS	C		

Intersection Summary			
Average Delay	0.7		
Intersection Capacity Utilization	45.4%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	60	37	68	220	227	87
Future Volume (Veh/h)	60	37	68	220	227	87
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.80	0.80	0.96	0.88	0.86	0.88
Hourly flow rate (vph)	80	49	75	265	280	105
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)					693	
pX, platoon unblocked						
vC, conflicting volume	748	332	385			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	748	332	385			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	78	93	94			
cM capacity (veh/h)	356	709	1173			

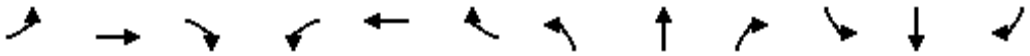
Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	129	340	385
Volume Left	80	75	0
Volume Right	49	0	105
cSH	439	1173	1700
Volume to Capacity	0.29	0.06	0.23
Queue Length 95th (ft)	30	5	0
Control Delay (s)	16.6	2.3	0.0
Lane LOS	C	A	
Approach Delay (s)	16.6	2.3	0.0
Approach LOS	C		

Intersection Summary			
Average Delay	3.4		
Intersection Capacity Utilization	50.5%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	8	191	150	3	194	258
Future Volume (Veh/h)	8	191	150	3	194	258
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.80	0.88	0.87	0.80	0.93	0.80
Hourly flow rate (vph)	11	230	183	4	221	342
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	969	185			187	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	969	185			187	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	95	73			84	
cM capacity (veh/h)	236	857			1387	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	241	187	563
Volume Left	11	0	221
Volume Right	230	4	0
cSH	765	1700	1387
Volume to Capacity	0.31	0.11	0.16
Queue Length 95th (ft)	34	0	14
Control Delay (s)	11.8	0.0	4.2
Lane LOS	B		A
Approach Delay (s)	11.8	0.0	4.2
Approach LOS	B		

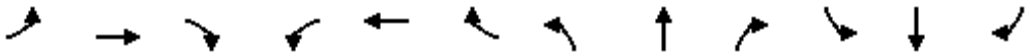
Intersection Summary			
Average Delay	5.2		
Intersection Capacity Utilization	57.3%	ICU Level of Service	B
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	13	373	14	7	482	14	11	3	9	10	2	11
Future Volume (Veh/h)	13	373	14	7	482	14	11	3	9	10	2	11
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.81	0.92	0.80	0.80	0.83	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	17	430	19	9	616	19	15	4	12	13	3	15
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)					1030							
pX, platoon unblocked	0.89						0.89	0.89		0.89	0.89	0.89
vC, conflicting volume	635			449			1134	1126	440	1131	1126	626
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	531			449			1090	1082	440	1087	1082	521
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	98			99			91	98	98	92	98	97
cM capacity (veh/h)	925			1111			162	189	617	163	189	496

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	466	644	31	31
Volume Left	17	9	15	13
Volume Right	19	19	12	15
cSH	925	1111	232	247
Volume to Capacity	0.02	0.01	0.13	0.13
Queue Length 95th (ft)	1	1	11	11
Control Delay (s)	0.5	0.2	22.9	21.7
Lane LOS	A	A	C	C
Approach Delay (s)	0.5	0.2	22.9	21.7
Approach LOS			C	C

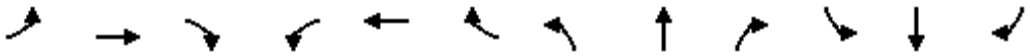
Intersection Summary				
Average Delay	1.5			
Intersection Capacity Utilization	40.8%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	250	6	1	333	10	6	2	4	6	0	14
Future Volume (Veh/h)	5	250	6	1	333	10	6	2	4	6	0	14
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.80	0.84	0.80	0.80	0.90	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	8	378	10	2	470	16	10	3	6	10	0	22
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	486			388			903	889	383	888	886	478
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	486			388			903	889	383	888	886	478
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			100			96	99	99	96	100	96
cM capacity (veh/h)	1077			1170			247	280	664	258	281	587

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	396	488	19	32
Volume Left	8	2	10	10
Volume Right	10	16	6	22
cSH	1077	1170	315	420
Volume to Capacity	0.01	0.00	0.06	0.08
Queue Length 95th (ft)	1	0	5	6
Control Delay (s)	0.2	0.1	17.2	14.3
Lane LOS	A	A	C	B
Approach Delay (s)	0.2	0.1	17.2	14.3
Approach LOS			C	B

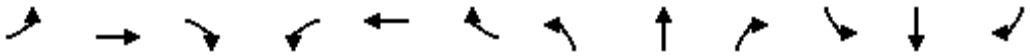
Intersection Summary			
Average Delay	1.0		
Intersection Capacity Utilization	33.7%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	214	7	145	223	32	6	12	85	45	57	28
Future Volume (Veh/h)	4	214	7	145	223	32	6	12	85	45	57	28
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.80	0.87	0.80	0.80	0.86	0.83	0.80	0.80	0.80	0.82	0.80	0.80
Hourly flow rate (vph)	6	273	10	201	288	43	8	17	118	61	79	39
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	331			283			1080	1023	278	1128	1006	310
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	331			283			1080	1023	278	1128	1006	310
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			84			93	91	84	51	61	95
cM capacity (veh/h)	1228			1279			114	198	761	126	202	731

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	289	532	143	179
Volume Left	6	201	8	61
Volume Right	10	43	118	39
cSH	1228	1279	459	193
Volume to Capacity	0.00	0.16	0.31	0.93
Queue Length 95th (ft)	0	14	33	185
Control Delay (s)	0.2	4.2	16.3	97.7
Lane LOS	A	A	C	F
Approach Delay (s)	0.2	4.2	16.3	97.7
Approach LOS			C	F

Intersection Summary			
Average Delay	19.3		
Intersection Capacity Utilization	62.0%	ICU Level of Service	B
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	184	4	32	202	26	8	78	138	32	118	62
Future Volume (Veh/h)	6	184	4	32	202	26	8	78	138	32	118	62
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.88	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	7	230	5	40	253	33	10	98	173	40	148	78
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	286			235			748	612	232	818	598	270
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	286			235			748	612	232	818	598	270
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			97			95	75	79	78	63	90
cM capacity (veh/h)	1276			1332			205	393	807	182	401	769

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	242	326	281	266
Volume Left	7	40	10	40
Volume Right	5	33	173	78
cSH	1276	1332	549	385
Volume to Capacity	0.01	0.03	0.51	0.69
Queue Length 95th (ft)	0	2	72	125
Control Delay (s)	0.3	1.2	18.3	32.7
Lane LOS	A	A	C	D
Approach Delay (s)	0.3	1.2	18.3	32.7
Approach LOS			C	D

Intersection Summary				
Average Delay	12.8			
Intersection Capacity Utilization	58.6%	ICU Level of Service		B
Analysis Period (min)	15			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	515	116	100	385	14	82
Future Volume (Veh/h)	515	116	100	385	14	82
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.88	0.80	0.93	0.86	0.80	0.80
Hourly flow rate (vph)	632	157	116	483	19	111
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	1023					
pX, platoon unblocked			0.89		0.89	0.89
vC, conflicting volume			789		1426	710
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			699		1416	610
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			85		83	75
cM capacity (veh/h)			797		115	439

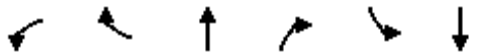
Direction, Lane #	EB 1	WB 1	WB 2	NB 1
Volume Total	789	116	483	130
Volume Left	0	116	0	19
Volume Right	157	0	0	111
cSH	1700	797	1700	310
Volume to Capacity	0.46	0.15	0.28	0.42
Queue Length 95th (ft)	0	13	0	50
Control Delay (s)	0.0	10.3	0.0	24.7
Lane LOS		B		C
Approach Delay (s)	0.0	2.0		24.7
Approach LOS				C

Intersection Summary			
Average Delay	2.9		
Intersection Capacity Utilization	59.2%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	1	179	498	59	240	525
Future Volume (Veh/h)	1	179	498	59	240	525
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.80	0.80	0.88	0.80	0.87	0.89
Hourly flow rate (vph)	1	242	611	80	298	637
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			776			
pX, platoon unblocked	0.92	0.92			0.92	
vC, conflicting volume	1844	611			691	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1874	534			621	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	98	52			66	
cM capacity (veh/h)	48	503			883	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	243	611	80	298	637
Volume Left	1	0	0	298	0
Volume Right	242	0	80	0	0
cSH	484	1700	1700	883	1700
Volume to Capacity	0.50	0.36	0.05	0.34	0.37
Queue Length 95th (ft)	69	0	0	37	0
Control Delay (s)	19.7	0.0	0.0	11.1	0.0
Lane LOS	C			B	
Approach Delay (s)	19.7	0.0		3.5	
Approach LOS	C				

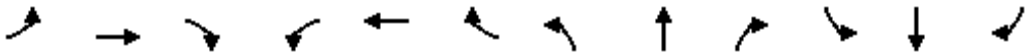
Intersection Summary			
Average Delay	4.3		
Intersection Capacity Utilization	64.7%	ICU Level of Service	C
Analysis Period (min)	15		



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	8	18	216	6	12	336
Future Volume (Veh/h)	8	18	216	6	12	336
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.99	0.80	0.92	0.80	0.80	0.92
Hourly flow rate (vph)	8	23	235	8	15	365
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	634	239			243	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	634	239			243	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	98	97			99	
cM capacity (veh/h)	438	800			1323	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	31	243	380
Volume Left	8	0	15
Volume Right	23	8	0
cSH	659	1700	1323
Volume to Capacity	0.05	0.14	0.01
Queue Length 95th (ft)	4	0	1
Control Delay (s)	10.7	0.0	0.4
Lane LOS	B		A
Approach Delay (s)	10.7	0.0	0.4
Approach LOS	B		

Intersection Summary			
Average Delay	0.7		
Intersection Capacity Utilization	37.4%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	138	63	35	113	15	59	61	29	1	46	8
Future Volume (Veh/h)	8	138	63	35	113	15	59	61	29	1	46	8
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	9	150	68	38	123	16	64	66	32	1	50	9
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		1178										
pX, platoon unblocked												
vC, conflicting volume	139			218			443	417	184	474	443	131
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	139			218			443	417	184	474	443	131
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			97			86	87	96	100	90	99
cM capacity (veh/h)	1445			1352			467	509	858	423	492	919

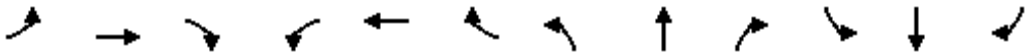
Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	227	177	162	60
Volume Left	9	38	64	1
Volume Right	68	16	32	9
cSH	1445	1352	533	527
Volume to Capacity	0.01	0.03	0.30	0.11
Queue Length 95th (ft)	0	2	32	10
Control Delay (s)	0.3	1.8	14.7	12.7
Lane LOS	A	A	B	B
Approach Delay (s)	0.3	1.8	14.7	12.7
Approach LOS			B	B

Intersection Summary				
Average Delay	5.7			
Intersection Capacity Utilization	44.3%	ICU Level of Service	A	
Analysis Period (min)	15			

Appendix 5E-5: 2025 No-Build AM

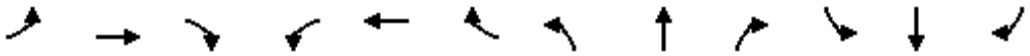
Signalized

Synchro Results



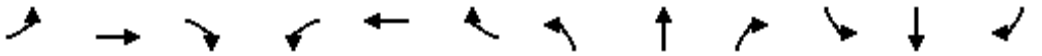
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	124	212	14	48	270	80	16	322	32	24	150	110
Future Volume (vph)	124	212	14	48	270	80	16	322	32	24	150	110
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	8	11	12	8	11	12	12	16	12	12	16	12
Total Lost time (s)		6.0			6.0		6.0	6.0		6.0	6.0	
Lane Util. Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.99			0.97		1.00	0.99		1.00	0.93	
Flt Protected		0.98			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1760			1742		1770	2084		1770	1971	
Flt Permitted		0.65			0.91		0.48	1.00		0.29	1.00	
Satd. Flow (perm)		1164			1595		899	2084		541	1971	
Peak-hour factor, PHF	0.80	0.80	0.80	0.94	0.80	0.80	0.80	0.84	0.90	0.80	0.92	0.85
Growth Factor (vph)	109%	109%	109%	109%	109%	109%	109%	109%	109%	109%	109%	109%
Adj. Flow (vph)	169	289	19	56	368	109	22	418	39	33	178	141
RTOR Reduction (vph)	0	3	0	0	16	0	0	5	0	0	48	0
Lane Group Flow (vph)	0	474	0	0	518	0	22	452	0	33	271	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		29.0			29.0		19.0	19.0		19.0	19.0	
Effective Green, g (s)		29.0			29.0		19.0	19.0		19.0	19.0	
Actuated g/C Ratio		0.48			0.48		0.32	0.32		0.32	0.32	
Clearance Time (s)		6.0			6.0		6.0	6.0		6.0	6.0	
Lane Grp Cap (vph)		562			770		284	659		171	624	
v/s Ratio Prot								c0.22			0.14	
v/s Ratio Perm		c0.41			0.32		0.02			0.06		
v/c Ratio		0.84			0.67		0.08	0.69		0.19	0.43	
Uniform Delay, d1		13.5			11.9		14.4	17.9		14.9	16.2	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		14.4			4.6		0.5	5.7		2.5	2.2	
Delay (s)		27.9			16.5		14.9	23.6		17.4	18.4	
Level of Service		C			B		B	C		B	B	
Approach Delay (s)		27.9			16.5			23.2			18.3	
Approach LOS		C			B			C			B	

Intersection Summary			
HCM 2000 Control Delay	21.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	77.8%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	40	131	17	37	232	273	29	346	39	128	260	56
Future Volume (vph)	40	131	17	37	232	273	29	346	39	128	260	56
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0	6.0	6.0	6.0		3.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	1.00	0.85	1.00	0.98		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1831		1770	1863	1583	1770	1833		1770	1808	
Flt Permitted	0.28	1.00		0.50	1.00	1.00	0.52	1.00		0.35	1.00	
Satd. Flow (perm)	522	1831		925	1863	1583	976	1833		656	1808	
Peak-hour factor, PHF	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.84	0.80	0.87	0.90	0.80
Growth Factor (vph)	113%	113%	113%	113%	113%	113%	113%	113%	113%	113%	113%	113%
Adj. Flow (vph)	56	185	24	52	328	386	41	465	55	166	326	79
RTOR Reduction (vph)	0	4	0	0	0	143	0	3	0	0	7	0
Lane Group Flow (vph)	57	205	0	52	328	243	41	517	0	166	398	0
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA		pm+pt	NA	
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	28.0	28.0		28.0	28.0	28.0	67.0	67.0		78.0	78.0	
Effective Green, g (s)	28.0	28.0		28.0	28.0	28.0	67.0	67.0		78.0	78.0	
Actuated g/C Ratio	0.24	0.24		0.24	0.24	0.24	0.57	0.57		0.66	0.66	
Clearance Time (s)	6.0	6.0		6.0	6.0	6.0	6.0	6.0		3.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	123	434		219	442	375	554	1040		509	1195	
v/s Ratio Prot		0.11			c0.18			c0.28		0.02	c0.22	
v/s Ratio Perm	0.11			0.06		0.15	0.04			0.19		
v/c Ratio	0.46	0.47		0.24	0.74	0.65	0.07	0.50		0.33	0.33	
Uniform Delay, d1	38.6	38.7		36.4	41.7	40.5	11.5	15.4		9.1	8.7	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	2.7	0.8		0.6	6.6	3.8	0.1	0.4		0.4	0.2	
Delay (s)	41.3	39.5		36.9	48.3	44.4	11.6	15.7		9.5	8.9	
Level of Service	D	D		D	D	D	B	B		A	A	
Approach Delay (s)		39.9			45.5			15.4			9.0	
Approach LOS		D			D			B			A	

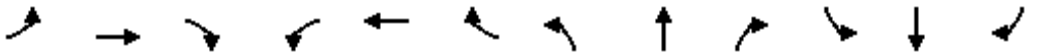
Intersection Summary			
HCM 2000 Control Delay	27.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	118.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	164.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	516	350	2	0	280	144	40	122	0	88	104	212
Future Volume (vph)	516	350	2	0	280	144	40	122	0	88	104	212
Ideal Flow (vphpl)	1200	1200	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	10	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	3.0	5.0			5.0			5.0			5.0	5.0
Lane Util. Factor	1.00	1.00			1.00			1.00			1.00	1.00
Frt	1.00	1.00			0.95			1.00			1.00	0.85
Flt Protected	0.95	1.00			1.00			0.99			0.98	1.00
Satd. Flow (prot)	1043	1097			1771			1840			1821	1583
Flt Permitted	0.11	1.00			1.00			0.53			0.61	1.00
Satd. Flow (perm)	125	1097			1771			990			1133	1583
Peak-hour factor, PHF	0.85	0.80	0.80	0.80	0.90	0.80	0.80	0.80	0.80	0.81	0.80	0.90
Growth Factor (vph)	109%	109%	109%	109%	109%	109%	109%	109%	109%	109%	109%	109%
Adj. Flow (vph)	662	477	3	0	339	196	54	166	0	118	142	257
RTOR Reduction (vph)	0	0	0	0	16	0	0	0	0	0	0	192
Lane Group Flow (vph)	662	480	0	0	519	0	0	221	0	0	260	65
Turn Type	pm+pt	NA			NA		Perm	NA		Perm	NA	Perm
Protected Phases	7	4			8			2			6	
Permitted Phases	4			8			2			6		6
Actuated Green, G (s)	93.0	93.0			32.0			27.0			27.0	27.0
Effective Green, g (s)	93.0	93.0			32.0			27.0			27.0	27.0
Actuated g/C Ratio	0.72	0.72			0.25			0.21			0.21	0.21
Clearance Time (s)	3.0	5.0			5.0			5.0			5.0	5.0
Vehicle Extension (s)	3.0	3.0			3.0			3.0			3.0	3.0
Lane Grp Cap (vph)	498	784			435			205			235	328
v/s Ratio Prot	c0.59	0.44			0.29							
v/s Ratio Perm	c0.36							0.22			c0.23	0.04
v/c Ratio	1.33	0.61			1.19			1.08			1.11	0.20
Uniform Delay, d1	31.3	9.4			49.0			51.5			51.5	42.6
Progression Factor	1.00	1.00			1.00			1.00			1.00	1.00
Incremental Delay, d2	161.6	1.4			107.7			85.1			90.2	0.3
Delay (s)	192.9	10.8			156.7			136.6			141.7	42.9
Level of Service	F	B			F			F			F	D
Approach Delay (s)		116.4			156.7			136.6			92.6	
Approach LOS		F			F			F			F	

Intersection Summary			
HCM 2000 Control Delay	122.1	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.30		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	107.6%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

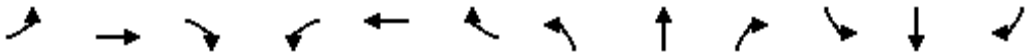


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	37	99	97	129	92	13	23	205	111	42	442	37
Future Volume (vph)	37	99	97	129	92	13	23	205	111	42	442	37
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.93		1.00	0.98		1.00	0.95		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1725		1770	1827		1770	1765		1770	1841	
Flt Permitted	0.67	1.00		0.57	1.00		0.19	1.00		0.41	1.00	
Satd. Flow (perm)	1241	1725		1053	1827		350	1765		764	1841	
Peak-hour factor, PHF	0.80	0.80	0.80	0.80	0.84	0.80	0.80	0.80	0.81	0.80	0.80	0.80
Growth Factor (vph)	113%	113%	113%	113%	113%	113%	113%	113%	113%	113%	113%	113%
Adj. Flow (vph)	52	140	137	182	124	18	32	290	155	59	624	52
RTOR Reduction (vph)	0	58	0	0	8	0	0	33	0	0	5	0
Lane Group Flow (vph)	52	219	0	182	134	0	32	412	0	59	671	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			4			2			2	
Permitted Phases	4			4			2			2		
Actuated Green, G (s)	21.0	21.0		21.0	21.0		25.7	25.7		25.7	25.7	
Effective Green, g (s)	21.0	21.0		21.0	21.0		25.7	25.7		25.7	25.7	
Actuated g/C Ratio	0.36	0.36		0.36	0.36		0.44	0.44		0.44	0.44	
Clearance Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Vehicle Extension (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)	443	617		376	653		153	772		334	806	
v/s Ratio Prot		0.13			0.07			0.23			c0.36	
v/s Ratio Perm	0.04			c0.17			0.09			0.08		
v/c Ratio	0.12	0.36		0.48	0.20		0.21	0.53		0.18	0.83	
Uniform Delay, d1	12.6	13.9		14.6	13.1		10.2	12.1		10.1	14.6	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.2	0.5		1.3	0.2		0.9	0.9		0.3	7.7	
Delay (s)	12.8	14.4		16.0	13.3		11.1	13.0		10.4	22.3	
Level of Service	B	B		B	B		B	B		B	C	
Approach Delay (s)		14.1			14.8			12.9			21.3	
Approach LOS		B			B			B			C	

Intersection Summary			
HCM 2000 Control Delay	16.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	58.7	Sum of lost time (s)	12.0
Intersection Capacity Utilization	89.4%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	50	28	146	10	22	180
Future Volume (vph)	50	28	146	10	22	180
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0		6.0			6.0
Lane Util. Factor	1.00		1.00			1.00
Frt	0.95		0.99			1.00
Flt Protected	0.97		1.00			0.99
Satd. Flow (prot)	1712		1847			1853
Flt Permitted	0.97		1.00			0.96
Satd. Flow (perm)	1712		1847			1786
Peak-hour factor, PHF	0.93	0.80	0.80	0.80	0.80	0.80
Growth Factor (vph)	106%	106%	106%	106%	106%	106%
Adj. Flow (vph)	57	37	193	13	29	238
RTOR Reduction (vph)	33	0	3	0	0	0
Lane Group Flow (vph)	61	0	203	0	0	268
Turn Type	Prot		NA		Perm	NA
Protected Phases	4		2			2
Permitted Phases					2	
Actuated Green, G (s)	5.3		28.8			28.8
Effective Green, g (s)	5.3		28.8			28.8
Actuated g/C Ratio	0.11		0.62			0.62
Clearance Time (s)	6.0		6.0			6.0
Vehicle Extension (s)	2.0		2.0			2.0
Lane Grp Cap (vph)	196		1153			1115
v/s Ratio Prot	c0.04		0.11			
v/s Ratio Perm						c0.15
v/c Ratio	0.31		0.18			0.24
Uniform Delay, d1	18.7		3.6			3.8
Progression Factor	1.00		1.00			1.00
Incremental Delay, d2	0.3		0.0			0.0
Delay (s)	19.1		3.7			3.9
Level of Service	B		A			A
Approach Delay (s)	19.1		3.7			3.9
Approach LOS	B		A			A

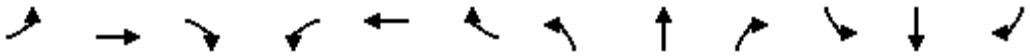
Intersection Summary			
HCM 2000 Control Delay	6.3	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.25		
Actuated Cycle Length (s)	46.1	Sum of lost time (s)	12.0
Intersection Capacity Utilization	47.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	29	112	21	11	95	47	33	100	9	36	104	15
Future Volume (vph)	29	112	21	11	95	47	33	100	9	36	104	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0			6.0			6.0			6.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frt		0.98			0.96			0.99			0.99	
Flt Protected		0.99			1.00			0.99			0.99	
Satd. Flow (prot)		1814			1779			1825			1817	
Flt Permitted		0.92			0.97			0.89			0.89	
Satd. Flow (perm)		1684			1739			1640			1641	
Peak-hour factor, PHF	0.81	0.80	0.80	0.80	0.80	0.80	0.80	0.84	0.80	0.80	0.80	0.80
Growth Factor (vph)	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	39	154	29	15	131	65	45	131	12	50	143	21
RTOR Reduction (vph)	0	7	0	0	22	0	0	4	0	0	5	0
Lane Group Flow (vph)	0	215	0	0	189	0	0	184	0	0	209	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		6			6			2			2	
Permitted Phases	6			6			2			2		
Actuated Green, G (s)		32.0			32.0			30.0			30.0	
Effective Green, g (s)		32.0			32.0			30.0			30.0	
Actuated g/C Ratio		0.43			0.43			0.41			0.41	
Clearance Time (s)		6.0			6.0			6.0			6.0	
Lane Grp Cap (vph)		728			752			664			665	
v/s Ratio Prot												
v/s Ratio Perm		c0.13			0.11			0.11			c0.13	
v/c Ratio		0.29			0.25			0.28			0.31	
Uniform Delay, d1		13.7			13.4			14.7			15.0	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		1.0			0.8			1.0			1.2	
Delay (s)		14.7			14.2			15.8			16.2	
Level of Service		B			B			B			B	
Approach Delay (s)		14.7			14.2			15.8			16.2	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	15.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	74.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	61.7%	ICU Level of Service	B
Analysis Period (min)	15		

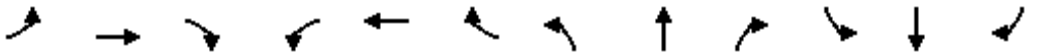
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	38	154	13	26	73	19	12	135	77	27	80	31
Future Volume (vph)	38	154	13	26	73	19	12	135	77	27	80	31
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.97		1.00	0.94		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1839		1770	1804		1770	1756		1770	1784	
Flt Permitted	0.68	1.00		0.63	1.00		0.66	1.00		0.49	1.00	
Satd. Flow (perm)	1263	1839		1166	1804		1229	1756		912	1784	
Peak-hour factor, PHF	0.86	0.88	0.80	0.80	0.83	0.80	0.80	0.87	0.80	0.84	0.80	0.80
Growth Factor (vph)	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	49	192	18	36	97	26	16	171	106	35	110	43
RTOR Reduction (vph)	0	5	0	0	12	0	0	32	0	0	20	0
Lane Group Flow (vph)	49	206	0	36	111	0	17	245	0	35	133	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	38.0	38.0		38.0	38.0		22.0	22.0		22.0	22.0	
Effective Green, g (s)	38.0	38.0		38.0	38.0		22.0	22.0		22.0	22.0	
Actuated g/C Ratio	0.54	0.54		0.54	0.54		0.31	0.31		0.31	0.31	
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)	685	998		632	979		386	551		286	560	
v/s Ratio Prot		c0.11			0.06			c0.14			0.07	
v/s Ratio Perm	0.04			0.03			0.01			0.04		
v/c Ratio	0.07	0.21		0.06	0.11		0.04	0.45		0.12	0.24	
Uniform Delay, d1	7.6	8.2		7.5	7.8		16.7	19.1		17.1	17.8	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.2	0.5		0.2	0.2		0.2	2.6		0.9	1.0	
Delay (s)	7.8	8.7		7.7	8.0		16.9	21.7		18.0	18.8	
Level of Service	A	A		A	A		B	C		B	B	
Approach Delay (s)		8.5			8.0			21.5			18.6	
Approach LOS		A			A			C			B	

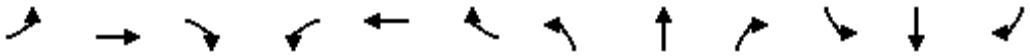
Intersection Summary			
HCM 2000 Control Delay	14.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.29		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	64.7%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	234	134	31	12	130	5	43	776	10	69	424	107
Future Volume (vph)	234	134	31	12	130	5	43	776	10	69	424	107
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	7.0		3.0	7.0	7.0	3.0	7.0		3.0	7.0	7.0
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.95		1.00	0.95	1.00
Frt	1.00	0.97		1.00	1.00	0.85	1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	1810		1770	1863	1583	1770	3533		1770	3539	1583
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1770	1810		1770	1863	1583	1770	3533		1770	3539	1583
Peak-hour factor, PHF	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Growth Factor (vph)	106%	106%	106%	106%	106%	106%	106%	106%	106%	106%	106%	106%
Adj. Flow (vph)	310	178	41	16	172	7	57	1028	13	91	562	142
RTOR Reduction (vph)	0	8	0	0	0	6	0	1	0	0	0	88
Lane Group Flow (vph)	310	211	0	16	172	1	57	1040	0	91	562	54
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8						6
Actuated Green, G (s)	20.6	31.4		2.8	13.6	13.6	6.2	35.3		7.5	36.6	36.6
Effective Green, g (s)	20.6	31.4		2.8	13.6	13.6	6.2	35.3		7.5	36.6	36.6
Actuated g/C Ratio	0.21	0.32		0.03	0.14	0.14	0.06	0.36		0.08	0.38	0.38
Clearance Time (s)	3.0	7.0		3.0	7.0	7.0	3.0	7.0		3.0	7.0	7.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	375	585		51	261	221	113	1285		136	1335	597
v/s Ratio Prot	c0.18	0.12		0.01	c0.09		0.03	c0.29		c0.05	0.16	
v/s Ratio Perm						0.00						0.03
v/c Ratio	0.83	0.36		0.31	0.66	0.00	0.50	0.81		0.67	0.42	0.09
Uniform Delay, d1	36.5	25.1		46.2	39.5	35.9	43.9	27.8		43.5	22.4	19.5
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	13.8	0.4		3.5	5.9	0.0	3.5	5.6		11.8	1.0	0.3
Delay (s)	50.3	25.5		49.7	45.4	35.9	47.4	33.4		55.3	23.3	19.8
Level of Service	D	C		D	D	D	D	C		E	C	B
Approach Delay (s)		40.1			45.4			34.1			26.4	
Approach LOS		D			D			C			C	

Intersection Summary			
HCM 2000 Control Delay	33.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	97.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	68.2%	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 (vph)	92	148	46	2	218	190	64	986	0	88	532	16
Future Volume (vph)	92	148	46	2	218	190	64	986	0	88	532	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	7.0		3.0	7.0		3.0	7.0		3.0	7.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frt	1.00	0.96		1.00	0.94		1.00	1.00		1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1792		1770	1742		1770	3539		1770	3524	
Flt Permitted	0.14	1.00		0.61	1.00		0.28	1.00		0.13	1.00	
Satd. Flow (perm)	260	1792		1134	1742		516	3539		237	3524	
Peak-hour factor, PHF	0.80	0.87	0.80	0.80	0.80	0.91	0.80	0.90	0.80	0.80	0.80	0.80
Growth Factor (vph)	106%	106%	106%	106%	106%	106%	106%	106%	106%	106%	106%	106%
Adj. Flow (vph)	122	180	61	3	289	221	85	1161	0	117	705	21
RTOR Reduction (vph)	0	12	0	0	30	0	0	0	0	0	3	0
Lane Group Flow (vph)	122	229	0	3	480	0	85	1161	0	117	723	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	34.4	30.1		27.4	26.1		36.8	31.5		36.8	31.5	
Effective Green, g (s)	34.4	30.1		27.4	26.1		36.8	31.5		36.8	31.5	
Actuated g/C Ratio	0.39	0.34		0.31	0.30		0.42	0.36		0.42	0.36	
Clearance Time (s)	3.0	7.0		3.0	7.0		3.0	7.0		3.0	7.0	
Vehicle Extension (s)	3.0	2.0		3.0	2.0		3.0	2.0		3.0	2.0	
Lane Grp Cap (vph)	192	611		361	515		290	1263		191	1258	
v/s Ratio Prot	c0.04	0.13		0.00	c0.28		0.02	c0.33		c0.04	0.21	
v/s Ratio Perm	0.21			0.00			0.10			0.22		
v/c Ratio	0.64	0.38		0.01	0.93		0.29	0.92		0.61	0.58	
Uniform Delay, d1	20.4	21.9		21.0	30.2		16.2	27.1		19.3	22.9	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	6.7	0.1		0.0	23.8		0.6	10.5		5.7	0.4	
Delay (s)	27.1	22.1		21.0	54.0		16.7	37.7		25.0	23.3	
Level of Service	C	C		C	D		B	D		C	C	
Approach Delay (s)		23.8			53.8			36.2			23.6	
Approach LOS		C			D			D			C	

Intersection Summary			
HCM 2000 Control Delay	34.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	88.2	Sum of lost time (s)	20.0
Intersection Capacity Utilization	83.4%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	42	444	92	26	244	106	44	180	30	90	182	16
Future Volume (vph)	42	444	92	26	244	106	44	180	30	90	182	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.97		1.00	0.95		1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1815		1770	1773		1770	1825		1770	1840	
Flt Permitted	0.46	1.00		0.23	1.00		0.56	1.00		0.54	1.00	
Satd. Flow (perm)	860	1815		432	1773		1045	1825		1010	1840	
Peak-hour factor, PHF	0.87	0.80	0.80	0.80	0.88	0.80	0.80	0.81	0.87	0.80	0.80	0.80
Growth Factor (vph)	106%	106%	106%	106%	106%	106%	106%	106%	106%	106%	106%	106%
Adj. Flow (vph)	51	588	122	34	294	140	58	236	37	119	241	21
RTOR Reduction (vph)	0	9	0	0	21	0	0	7	0	0	4	0
Lane Group Flow (vph)	51	701	0	34	413	0	58	266	0	119	258	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		1			1			2			2	
Permitted Phases	1			1			2			2		
Actuated Green, G (s)	28.8	28.8		28.8	28.8		15.5	15.5		15.5	15.5	
Effective Green, g (s)	28.8	28.8		28.8	28.8		15.5	15.5		15.5	15.5	
Actuated g/C Ratio	0.51	0.51		0.51	0.51		0.28	0.28		0.28	0.28	
Clearance Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	439	928		220	906		287	502		278	506	
v/s Ratio Prot		c0.39			0.23			c0.15			0.14	
v/s Ratio Perm	0.06			0.08			0.06			0.12		
v/c Ratio	0.12	0.76		0.15	0.46		0.20	0.53		0.43	0.51	
Uniform Delay, d1	7.1	10.9		7.3	8.8		15.7	17.3		16.8	17.2	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.0	3.1		0.1	0.1		0.1	0.5		0.4	0.4	
Delay (s)	7.2	14.1		7.4	8.9		15.8	17.9		17.1	17.6	
Level of Service	A	B		A	A		B	B		B	B	
Approach Delay (s)		13.6			8.8			17.5			17.4	
Approach LOS		B			A			B			B	

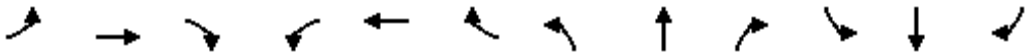
Intersection Summary			
HCM 2000 Control Delay	13.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	56.3	Sum of lost time (s)	12.0
Intersection Capacity Utilization	72.3%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	28	178	34	108	232	116	30	532	82	142	314	46
Future Volume (vph)	28	178	34	108	232	116	30	532	82	142	314	46
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1500	1500	1900	1500	1500	1900
Total Lost time (s)	3.0	7.0		3.0	7.0		3.0	6.0		3.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.95		1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1818		1770	1773		1397	1437		1397	1440	
Flt Permitted	0.26	1.00		0.29	1.00		0.37	1.00		0.11	1.00	
Satd. Flow (perm)	493	1818		534	1773		541	1437		159	1440	
Peak-hour factor, PHF	0.83	0.80	0.80	0.90	0.84	0.88	0.80	0.92	0.80	0.84	0.88	0.80
Growth Factor (vph)	107%	107%	107%	107%	107%	107%	107%	107%	107%	107%	107%	107%
Adj. Flow (vph)	36	238	45	128	296	141	40	619	110	181	382	62
RTOR Reduction (vph)	0	8	0	0	19	0	0	7	0	0	7	0
Lane Group Flow (vph)	36	275	0	128	418	0	40	722	0	181	437	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	20.5	15.1		27.1	18.7		43.0	37.0		43.0	37.0	
Effective Green, g (s)	20.5	15.1		27.1	18.7		43.0	37.0		43.0	37.0	
Actuated g/C Ratio	0.24	0.18		0.31	0.22		0.50	0.43		0.50	0.43	
Clearance Time (s)	3.0	7.0		3.0	7.0		3.0	6.0		3.0	6.0	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	197	318		297	385		329	617		165	618	
v/s Ratio Prot	0.01	0.15		c0.05	c0.24		0.01	c0.50		c0.08	0.30	
v/s Ratio Perm	0.03			0.09			0.05			0.47		
v/c Ratio	0.18	0.86		0.43	1.09		0.12	1.17		1.10	0.71	
Uniform Delay, d1	26.2	34.5		22.4	33.7		11.7	24.5		19.0	20.1	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.2	20.2		0.4	71.0		0.1	92.8		98.4	3.0	
Delay (s)	26.4	54.7		22.7	104.7		11.8	117.4		117.3	23.1	
Level of Service	C	D		C	F		B	F		F	C	
Approach Delay (s)		51.5			86.1			111.9			50.4	
Approach LOS		D			F			F			D	

Intersection Summary			
HCM 2000 Control Delay	80.2	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.09		
Actuated Cycle Length (s)	86.1	Sum of lost time (s)	19.0
Intersection Capacity Utilization	101.0%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

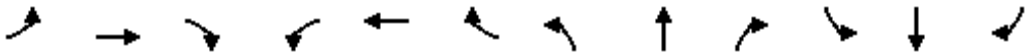
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	33	4	41	19	9	6	645	28	14	171	5
Future Volume (vph)	10	33	4	41	19	9	6	645	28	14	171	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0			6.0		3.0	6.0		3.0	6.0	
Lane Util. Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.99			0.98		1.00	0.99		1.00	1.00	
Flt Protected		0.99			0.97		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1821			1778		1770	1851		1770	1855	
Flt Permitted		0.94			0.80		0.61	1.00		0.08	1.00	
Satd. Flow (perm)		1730			1466		1131	1851		152	1855	
Peak-hour factor, PHF	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.81	0.80	0.80	0.80
Growth Factor (vph)	111%	111%	111%	111%	111%	111%	111%	111%	111%	111%	111%	108%
Adj. Flow (vph)	14	46	6	57	26	12	8	895	38	19	237	7
RTOR Reduction (vph)	0	4	0	0	6	0	0	1	0	0	1	0
Lane Group Flow (vph)	0	62	0	0	89	0	8	932	0	19	243	0
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		25.0			25.0		49.0	48.0		51.0	49.0	
Effective Green, g (s)		25.0			25.0		49.0	48.0		51.0	49.0	
Actuated g/C Ratio		0.28			0.28		0.54	0.53		0.57	0.54	
Clearance Time (s)		6.0			6.0		3.0	6.0		3.0	6.0	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		480			407		622	987		122	1009	
v/s Ratio Prot							0.00	c0.50		c0.00	0.13	
v/s Ratio Perm		0.04			c0.06		0.01			0.08		
v/c Ratio		0.13			0.22		0.01	0.94		0.16	0.24	
Uniform Delay, d1		24.3			25.0		9.4	19.7		17.7	10.7	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.1			0.3		0.0	17.9		0.6	0.6	
Delay (s)		24.5			25.3		9.4	37.7		18.3	11.3	
Level of Service		C			C		A	D		B	B	
Approach Delay (s)		24.5			25.3			37.4			11.8	
Approach LOS		C			C			D			B	

Intersection Summary			
HCM 2000 Control Delay	31.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	70.4%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



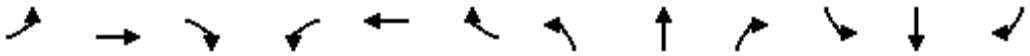
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	164	278	40	72	306	26	58	614	40	54	380	50
Future Volume (vph)	164	278	40	72	306	26	58	614	40	54	380	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	6.0		3.0	6.0		3.0	5.0		3.0	5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.99		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1824		1770	1839		1770	1843		1770	1827	
Flt Permitted	0.18	1.00		0.25	1.00		0.29	1.00		0.10	1.00	
Satd. Flow (perm)	339	1824		475	1839		538	1843		187	1827	
Peak-hour factor, PHF	0.97	0.90	0.80	0.80	0.88	0.80	0.80	0.90	0.80	0.80	0.88	0.80
Growth Factor (vph)	107%	107%	107%	107%	107%	107%	107%	107%	107%	107%	107%	107%
Adj. Flow (vph)	181	331	54	96	372	35	78	730	54	72	462	67
RTOR Reduction (vph)	0	6	0	0	4	0	0	3	0	0	6	0
Lane Group Flow (vph)	181	379	0	96	403	0	78	781	0	72	523	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	28.0	22.0		25.4	20.7		44.9	39.9		44.9	39.9	
Effective Green, g (s)	28.0	22.0		25.4	20.7		44.9	39.9		44.9	39.9	
Actuated g/C Ratio	0.32	0.25		0.29	0.23		0.51	0.45		0.51	0.45	
Clearance Time (s)	3.0	6.0		3.0	6.0		3.0	5.0		3.0	5.0	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	204	452		204	429		342	829		184	822	
v/s Ratio Prot	c0.06	0.21		0.02	0.22		0.01	c0.42		c0.02	0.29	
v/s Ratio Perm	c0.22			0.11			0.10			0.18		
v/c Ratio	0.89	0.84		0.47	0.94		0.23	0.94		0.39	0.64	
Uniform Delay, d1	26.3	31.6		24.6	33.3		12.7	23.2		17.7	18.8	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	33.0	12.3		0.6	28.1		0.1	18.4		0.5	1.2	
Delay (s)	59.3	43.9		25.2	61.4		12.8	41.6		18.2	20.0	
Level of Service	E	D		C	E		B	D		B	B	
Approach Delay (s)		48.8			54.5			39.0			19.7	
Approach LOS		D			D			D			B	

Intersection Summary			
HCM 2000 Control Delay	39.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	88.6	Sum of lost time (s)	17.0
Intersection Capacity Utilization	85.8%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



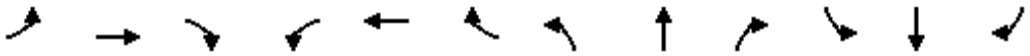
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	13	190	14	106	403	42	24	367	70	32	209	10
Future Volume (vph)	13	190	14	106	403	42	24	367	70	32	209	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0		3.0	5.0		6.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.99		1.00	0.97		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1843		1770	1837		1770	1813		1770	1849	
Flt Permitted	0.42	1.00		0.45	1.00		0.55	1.00		0.23	1.00	
Satd. Flow (perm)	776	1843		842	1837		1022	1813		429	1849	
Peak-hour factor, PHF	0.80	0.83	0.80	0.81	0.88	0.90	0.80	0.91	0.80	0.92	0.86	0.80
Growth Factor (vph)	111%	111%	111%	111%	111%	111%	111%	111%	111%	111%	111%	111%
Adj. Flow (vph)	18	254	19	145	508	52	33	448	97	39	270	14
RTOR Reduction (vph)	0	4	0	0	6	0	0	12	0	0	3	0
Lane Group Flow (vph)	18	269	0	145	554	0	33	533	0	39	281	0
Turn Type	Perm	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases		4		3	8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	20.2	20.2		28.6	28.6		22.4	22.4		22.4	22.4	
Effective Green, g (s)	20.2	20.2		28.6	28.6		22.4	22.4		22.4	22.4	
Actuated g/C Ratio	0.33	0.33		0.46	0.46		0.36	0.36		0.36	0.36	
Clearance Time (s)	5.0	5.0		3.0	5.0		6.0	6.0		6.0	6.0	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	252	600		469	847		369	655		154	668	
v/s Ratio Prot		0.15		0.03	c0.30			c0.29			0.15	
v/s Ratio Perm	0.02			0.12			0.03			0.09		
v/c Ratio	0.07	0.45		0.31	0.65		0.09	0.81		0.25	0.42	
Uniform Delay, d1	14.4	16.5		10.1	12.9		13.1	17.9		13.9	14.9	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.0	0.2		0.1	1.4		0.0	7.3		0.3	0.2	
Delay (s)	14.5	16.7		10.2	14.3		13.1	25.2		14.2	15.1	
Level of Service	B	B		B	B		B	C		B	B	
Approach Delay (s)		16.6			13.4			24.5			15.0	
Approach LOS		B			B			C			B	

Intersection Summary			
HCM 2000 Control Delay	17.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	62.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	85.9%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



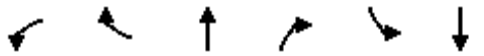
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	24	284	90	68	332	62	136	532	128	106	416	54
Future Volume (vph)	24	284	90	68	332	62	136	532	128	106	416	54
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	5.0		3.0	5.0		3.0	6.0	6.0	3.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	0.95	
Frt	1.00	0.96		1.00	0.97		1.00	1.00	0.85	1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	1797		1770	1814		1770	1863	1583	1770	3477	
Flt Permitted	0.17	1.00		0.19	1.00		0.34	1.00	1.00	0.11	1.00	
Satd. Flow (perm)	320	1797		346	1814		635	1863	1583	214	3477	
Peak-hour factor, PHF	0.86	0.92	0.95	0.80	0.90	0.80	0.93	0.88	0.80	0.84	0.82	0.80
Growth Factor (vph)	107%	107%	107%	107%	107%	107%	107%	107%	107%	107%	107%	107%
Adj. Flow (vph)	30	330	101	91	395	83	156	647	171	135	543	72
RTOR Reduction (vph)	0	12	0	0	8	0	0	0	106	0	11	0
Lane Group Flow (vph)	30	419	0	91	470	0	156	647	65	135	604	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		
Actuated Green, G (s)	30.1	25.7		33.3	27.3		43.0	34.8	34.8	43.0	34.8	
Effective Green, g (s)	30.1	25.7		33.3	27.3		43.0	34.8	34.8	43.0	34.8	
Actuated g/C Ratio	0.33	0.28		0.36	0.30		0.47	0.38	0.38	0.47	0.38	
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	6.0	6.0	3.0	6.0	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Lane Grp Cap (vph)	174	503		218	540		399	707	600	239	1319	
v/s Ratio Prot	0.01	0.23		c0.03	c0.26		0.03	c0.35		c0.05	0.17	
v/s Ratio Perm	0.05			0.12			0.15		0.04	0.21		
v/c Ratio	0.17	0.83		0.42	0.87		0.39	0.92	0.11	0.56	0.46	
Uniform Delay, d1	22.6	31.0		21.4	30.5		14.5	27.0	18.4	18.4	21.4	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.2	10.9		0.5	13.9		0.2	16.2	0.0	1.8	0.1	
Delay (s)	22.8	41.9		21.9	44.4		14.7	43.2	18.4	20.2	21.5	
Level of Service	C	D		C	D		B	D	B	C	C	
Approach Delay (s)		40.6			40.8			34.3			21.2	
Approach LOS		D			D			C			C	

Intersection Summary			
HCM 2000 Control Delay	33.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	91.7	Sum of lost time (s)	17.0
Intersection Capacity Utilization	81.9%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



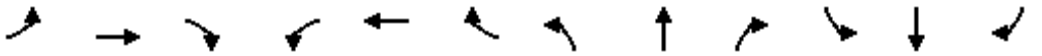
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	49	231	62	47	278	46	102	436	52	39	138	31
Future Volume (vph)	49	231	62	47	278	46	102	436	52	39	138	31
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.97		1.00	0.98		1.00	0.98		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1803		1770	1820		1770	1833		1770	1811	
Flt Permitted	0.30	1.00		0.32	1.00		0.61	1.00		0.30	1.00	
Satd. Flow (perm)	550	1803		602	1820		1142	1833		565	1811	
Peak-hour factor, PHF	0.80	0.81	0.80	0.80	0.86	0.80	0.80	0.89	0.88	0.80	0.80	0.80
Growth Factor (vph)	111%	111%	111%	111%	111%	111%	111%	111%	111%	111%	111%	111%
Adj. Flow (vph)	68	317	86	65	359	64	142	544	66	54	191	43
RTOR Reduction (vph)	0	12	0	0	8	0	0	4	0	0	8	0
Lane Group Flow (vph)	68	391	0	65	415	0	142	606	0	54	226	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			2			1			1	
Permitted Phases	2			2			1			1		
Actuated Green, G (s)	26.2	26.2		26.2	26.2		45.2	45.2		45.2	45.2	
Effective Green, g (s)	26.2	26.2		26.2	26.2		45.2	45.2		45.2	45.2	
Actuated g/C Ratio	0.31	0.31		0.31	0.31		0.53	0.53		0.53	0.53	
Clearance Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	168	553		184	558		604	970		299	958	
v/s Ratio Prot		0.22			c0.23			c0.33			0.12	
v/s Ratio Perm	0.12			0.11			0.12			0.10		
v/c Ratio	0.40	0.71		0.35	0.74		0.24	0.62		0.18	0.24	
Uniform Delay, d1	23.4	26.2		23.0	26.6		10.8	14.1		10.5	10.8	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.6	3.4		0.4	4.7		0.9	3.0		1.3	0.6	
Delay (s)	24.0	29.6		23.4	31.3		11.7	17.2		11.8	11.4	
Level of Service	C	C		C	C		B	B		B	B	
Approach Delay (s)		28.8			30.2			16.1			11.5	
Approach LOS		C			C			B			B	

Intersection Summary			
HCM 2000 Control Delay	21.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	85.4	Sum of lost time (s)	14.0
Intersection Capacity Utilization	105.0%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	16	7	450	8	8	340
Future Volume (vph)	16	7	450	8	8	340
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0		7.0			7.0
Lane Util. Factor	1.00		1.00			1.00
Frt	0.96		1.00			1.00
Flt Protected	0.97		1.00			1.00
Satd. Flow (prot)	1725		1858			1860
Flt Permitted	0.97		1.00			0.98
Satd. Flow (perm)	1725		1858			1834
Peak-hour factor, PHF	0.80	0.80	0.84	0.80	0.80	0.89
Growth Factor (vph)	111%	111%	111%	111%	111%	111%
Adj. Flow (vph)	22	10	595	11	11	424
RTOR Reduction (vph)	10	0	1	0	0	0
Lane Group Flow (vph)	22	0	605	0	0	435
Turn Type	Prot		NA		Perm	NA
Protected Phases	8		2			6
Permitted Phases					6	
Actuated Green, G (s)	4.2		73.8			73.8
Effective Green, g (s)	4.2		73.8			73.8
Actuated g/C Ratio	0.05		0.81			0.81
Clearance Time (s)	6.0		7.0			7.0
Vehicle Extension (s)	2.0		2.0			2.0
Lane Grp Cap (vph)	79		1506			1487
v/s Ratio Prot	c0.01		c0.33			
v/s Ratio Perm						0.24
v/c Ratio	0.28		0.40			0.29
Uniform Delay, d1	41.9		2.4			2.1
Progression Factor	1.00		1.00			1.00
Incremental Delay, d2	0.7		0.1			0.0
Delay (s)	42.7		2.5			2.2
Level of Service	D		A			A
Approach Delay (s)	42.7		2.5			2.2
Approach LOS	D		A			A

Intersection Summary			
HCM 2000 Control Delay	3.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	91.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	72.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



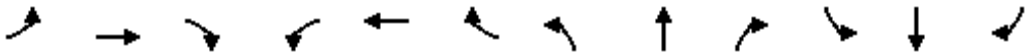
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	80	166	0	0	130	28	28	296	30	40	6	46
Future Volume (vph)	80	166	0	0	130	28	28	296	30	40	6	46
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0			6.0			6.0	6.0
Lane Util. Factor		1.00			1.00			1.00			1.00	1.00
Frt		1.00			0.98			0.99			1.00	0.85
Flt Protected		0.98			1.00			1.00			0.96	1.00
Satd. Flow (prot)		1833			1818			1833			1784	1583
Flt Permitted		0.82			1.00			0.98			0.63	1.00
Satd. Flow (perm)		1533			1818			1797			1170	1583
Peak-hour factor, PHF	0.80	0.80	0.80	0.80	0.80	0.80	0.83	0.85	0.80	0.80	0.90	0.80
Growth Factor (vph)	102%	102%	102%	102%	102%	102%	102%	102%	102%	102%	102%	102%
Adj. Flow (vph)	102	212	0	0	166	36	34	355	38	51	7	59
RTOR Reduction (vph)	0	0	0	0	13	0	0	6	0	0	0	30
Lane Group Flow (vph)	0	314	0	0	189	0	0	421	0	0	58	29
Turn Type	Perm	NA			NA		Perm	NA		Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		6
Actuated Green, G (s)		20.0			20.0			30.0			30.0	30.0
Effective Green, g (s)		20.0			20.0			30.0			30.0	30.0
Actuated g/C Ratio		0.33			0.33			0.49			0.49	0.49
Clearance Time (s)		5.0			5.0			6.0			6.0	6.0
Lane Grp Cap (vph)		502			596			883			575	778
v/s Ratio Prot					0.10							
v/s Ratio Perm		c0.20						c0.23			0.05	0.02
v/c Ratio		0.63			0.32			0.48			0.10	0.04
Uniform Delay, d1		17.3			15.4			10.3			8.3	8.0
Progression Factor		1.00			1.00			1.00			1.00	1.00
Incremental Delay, d2		5.8			1.4			1.8			0.4	0.1
Delay (s)		23.1			16.8			12.1			8.6	8.1
Level of Service		C			B			B			A	A
Approach Delay (s)		23.1			16.8			12.1			8.4	
Approach LOS		C			B			B			A	

Intersection Summary			
HCM 2000 Control Delay	15.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	61.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	80.0%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

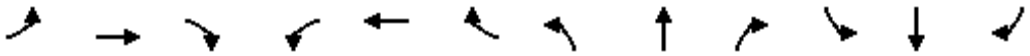
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	930	468	10	204	100
Future Volume (vph)	0	930	468	10	204	100
Ideal Flow (vphpl)	1900	1200	1900	1900	1900	1900
Total Lost time (s)		6.0	5.0	5.0	5.0	5.0
Lane Util. Factor		1.00	1.00	1.00	1.00	1.00
Frt		0.86	1.00	0.85	1.00	1.00
Flt Protected		1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)		1018	1863	1583	1770	1863
Flt Permitted		1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)		1018	1863	1583	1770	1863
Peak-hour factor, PHF	0.80	0.80	0.80	0.94	0.84	0.84
Growth Factor (vph)	102%	102%	102%	102%	102%	102%
Adj. Flow (vph)	0	1186	597	11	248	121
RTOR Reduction (vph)	0	0	0	2	0	0
Lane Group Flow (vph)	0	1186	597	9	248	121
Turn Type		Perm	NA	Perm	Prot	NA
Protected Phases			4		6	
Permitted Phases		2		4		6
Actuated Green, G (s)		108.0	31.0	31.0	109.0	109.0
Effective Green, g (s)		108.0	31.0	31.0	109.0	109.0
Actuated g/C Ratio		0.72	0.21	0.21	0.73	0.73
Clearance Time (s)		6.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)		3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		732	385	327	1286	1353
v/s Ratio Prot			c0.32		0.14	
v/s Ratio Perm		c1.17		0.01		0.06
v/c Ratio		1.62	1.55	0.03	0.19	0.09
Uniform Delay, d1		21.0	59.5	47.5	6.5	6.0
Progression Factor		1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2		285.4	260.3	0.0	0.1	0.0
Delay (s)		306.4	319.8	47.5	6.6	6.0
Level of Service		F	F	D	A	A
Approach Delay (s)	306.4		314.9			6.4
Approach LOS	F		F			A

Intersection Summary			
HCM 2000 Control Delay	257.6	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.60		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	127.3%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



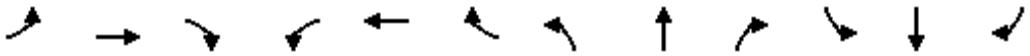
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	3	6	0	17	0	7	0	153	18	9	80	0
Future Volume (vph)	3	6	0	17	0	7	0	153	18	9	80	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0			7.0			7.0			7.0	
Lane Util. Factor	1.00	1.00			1.00			1.00			1.00	
Frt	1.00	1.00			0.96			0.99			1.00	
Flt Protected	0.95	1.00			0.97			1.00			1.00	
Satd. Flow (prot)	1770	1863			1727			1835			1854	
Flt Permitted	0.74	1.00			0.86			1.00			0.97	
Satd. Flow (perm)	1374	1863			1528			1835			1803	
Peak-hour factor, PHF	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.81	0.80	0.80	0.80	0.80
Adj. Flow (vph)	4	8	0	21	0	9	0	189	22	11	100	0
RTOR Reduction (vph)	0	0	0	0	20	0	0	6	0	0	0	0
Lane Group Flow (vph)	4	8	0	0	10	0	0	206	0	0	111	0
Turn Type	Perm	NA		Perm	NA			NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8						6		
Actuated Green, G (s)	25.0	25.0			25.0			36.0			36.0	
Effective Green, g (s)	25.0	25.0			25.0			36.0			36.0	
Actuated g/C Ratio	0.33	0.33			0.33			0.48			0.48	
Clearance Time (s)	7.0	7.0			7.0			7.0			7.0	
Lane Grp Cap (vph)	458	621			509			880			865	
v/s Ratio Prot		0.00						c0.11				
v/s Ratio Perm	0.00				c0.01						0.06	
v/c Ratio	0.01	0.01			0.02			0.23			0.13	
Uniform Delay, d1	16.7	16.7			16.8			11.4			10.8	
Progression Factor	1.00	1.00			1.00			1.00			0.82	
Incremental Delay, d2	0.0	0.0			0.1			0.6			0.2	
Delay (s)	16.7	16.8			16.8			12.1			9.0	
Level of Service	B	B			B			B			A	
Approach Delay (s)		16.8			16.8			12.1			9.0	
Approach LOS		B			B			B			A	

Intersection Summary			
HCM 2000 Control Delay	11.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.15		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	62.5%	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 (vph)	38	254	22	52	132	114	6	312	132	112	170	16
Future Volume (vph)	38	254	22	52	132	114	6	312	132	112	170	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		9.0			9.0			9.0			9.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frt		0.99			0.95			0.96			0.99	
Flt Protected		0.99			0.99			1.00			0.98	
Satd. Flow (prot)		1834			1747			1781			1816	
Flt Permitted		0.91			0.83			0.99			0.62	
Satd. Flow (perm)		1675			1463			1770			1141	
Peak-hour factor, PHF	0.80	0.80	0.82	0.80	0.86	0.80	0.91	0.91	0.80	0.86	0.80	0.80
Adj. Flow (vph)	48	318	27	65	153	142	7	343	165	130	212	20
RTOR Reduction (vph)	0	0	0	0	0	0	0	23	0	0	3	0
Lane Group Flow (vph)	0	393	0	0	361	0	0	492	0	0	360	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		27.0			27.0			30.0			30.0	
Effective Green, g (s)		27.0			27.0			30.0			30.0	
Actuated g/C Ratio		0.36			0.36			0.40			0.40	
Clearance Time (s)		9.0			9.0			9.0			9.0	
Lane Grp Cap (vph)		603			526			708			456	
v/s Ratio Prot												
v/s Ratio Perm		0.23			c0.25			0.28			c0.32	
v/c Ratio		0.65			0.69			0.70			0.79	
Uniform Delay, d1		20.1			20.4			18.7			19.7	
Progression Factor		1.00			1.00			1.01			1.39	
Incremental Delay, d2		5.4			7.1			5.6			12.9	
Delay (s)		25.5			27.5			24.5			40.3	
Level of Service		C			C			C			D	
Approach Delay (s)		25.5			27.5			24.5			40.3	
Approach LOS		C			C			C			D	

Intersection Summary			
HCM 2000 Control Delay	28.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	97.9%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

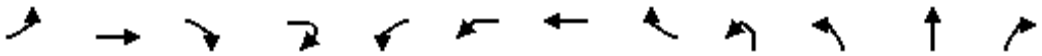


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	20	80	12	34	16	6	10	342	12	12	150	40
Future Volume (vph)	20	80	12	34	16	6	10	342	12	12	150	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		7.0			7.0			7.0			6.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frt		0.99			0.98			1.00			0.97	
Flt Protected		0.99			0.97			1.00			1.00	
Satd. Flow (prot)		1820			1780			1852			1808	
Flt Permitted		0.94			0.78			0.99			0.97	
Satd. Flow (perm)		1733			1435			1833			1752	
Peak-hour factor, PHF	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Adj. Flow (vph)	25	100	15	42	20	8	12	428	15	15	188	50
RTOR Reduction (vph)	0	6	0	0	5	0	0	2	0	0	12	0
Lane Group Flow (vph)	0	134	0	0	66	0	0	454	0	0	241	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		26.0			26.0			35.0			36.0	
Effective Green, g (s)		26.0			26.0			35.0			36.0	
Actuated g/C Ratio		0.35			0.35			0.47			0.48	
Clearance Time (s)		7.0			7.0			7.0			6.0	
Lane Grp Cap (vph)		600			497			855			840	
v/s Ratio Prot												
v/s Ratio Perm		c0.08			0.05			c0.25			0.14	
v/c Ratio		0.22			0.13			0.53			0.29	
Uniform Delay, d1		17.4			16.8			14.2			11.8	
Progression Factor		1.00			1.00			1.60			1.00	
Incremental Delay, d2		0.9			0.6			1.7			0.9	
Delay (s)		18.2			17.3			24.4			12.6	
Level of Service		B			B			C			B	
Approach Delay (s)		18.2			17.3			24.4			12.6	
Approach LOS		B			B			C			B	

Intersection Summary			
HCM 2000 Control Delay	19.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	62.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBL	WBR	WBR2	NBL	NBT	SBT	SBR	NWL	NWT	NWR
Lane Configurations										
Traffic Volume (vph)	8	43	28	20	130	77	6	9	3	1
Future Volume (vph)	8	43	28	20	130	77	6	9	3	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0		6.0		6.0	6.0			6.0	
Lane Util. Factor	1.00		0.95		1.00	1.00			1.00	
Frt	0.87		0.85		1.00	0.99			0.99	
Flt Protected	0.99		1.00		0.99	1.00			0.97	
Satd. Flow (prot)	1613		1504		1852	1843			1786	
Flt Permitted	0.99		1.00		0.97	1.00			0.97	
Satd. Flow (perm)	1613		1504		1798	1843			1786	
Peak-hour factor, PHF	0.80	0.80	0.80	0.99	0.86	0.80	0.80	0.80	0.80	0.80
Adj. Flow (vph)	10	54	35	20	151	96	8	11	4	1
RTOR Reduction (vph)	62	0	28	0	0	4	0	0	0	0
Lane Group Flow (vph)	6	0	3	0	171	100	0	0	16	0
Turn Type	Prot		Perm	Perm	NA	NA		Perm	NA	
Protected Phases	8				1	1			2	
Permitted Phases			8	1				2		
Actuated Green, G (s)	7.0		7.0		30.0	30.0			20.0	
Effective Green, g (s)	7.0		7.0		30.0	30.0			20.0	
Actuated g/C Ratio	0.09		0.09		0.40	0.40			0.27	
Clearance Time (s)	6.0		6.0		6.0	6.0			6.0	
Lane Grp Cap (vph)	150		140		719	737			476	
v/s Ratio Prot	c0.00					0.05				
v/s Ratio Perm			0.00		c0.10				0.01	
v/c Ratio	0.04		0.02		0.24	0.14			0.03	
Uniform Delay, d1	30.9		30.9		14.9	14.3			20.3	
Progression Factor	1.00		1.00		1.00	1.00			1.00	
Incremental Delay, d2	0.5		0.3		0.8	0.4			0.1	
Delay (s)	31.5		31.2		15.7	14.7			20.5	
Level of Service	C		C		B	B			C	
Approach Delay (s)	31.4				15.7	14.7			20.5	
Approach LOS	C				B	B			C	

Intersection Summary			
HCM 2000 Control Delay	19.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.14		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	62.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

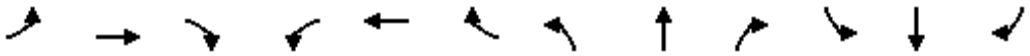


Movement	EBL	EBT	EBR	EBR2	WBL2	WBL	WBT	WBR	NBL2	NBL	NBT	NBR
Lane Configurations												
Traffic Volume (vph)	4	66	21	6	25	44	89	38	7	41	67	25
Future Volume (vph)	4	66	21	6	25	44	89	38	7	41	67	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0					6.0				6.0	
Lane Util. Factor		1.00					1.00				1.00	
Frt		0.96					0.97				0.98	
Flt Protected		1.00					0.98				0.98	
Satd. Flow (prot)		1789					1782				1788	
Flt Permitted		0.99					0.84				0.87	
Satd. Flow (perm)		1768					1529				1590	
Peak-hour factor, PHF	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Adj. Flow (vph)	5	82	26	8	31	55	111	48	9	51	84	31
RTOR Reduction (vph)	0	4	0	0	0	0	14	0	0	0	13	0
Lane Group Flow (vph)	0	118	0	0	0	0	231	0	0	0	162	0
Turn Type	Perm	NA			Perm	Perm	NA		pm+pt	pm+pt	NA	
Protected Phases		4					8		5	5	2	
Permitted Phases	4				8	8			2	2		
Actuated Green, G (s)		21.0					21.0				27.0	
Effective Green, g (s)		21.0					21.0				27.0	
Actuated g/C Ratio		0.35					0.35				0.45	
Clearance Time (s)		6.0					6.0				6.0	
Lane Grp Cap (vph)		618					535				732	
v/s Ratio Prot											c0.02	
v/s Ratio Perm		0.07					c0.15				0.08	
v/c Ratio		0.19					0.43				0.22	
Uniform Delay, d1		13.6					14.9				10.1	
Progression Factor		1.00					1.00				1.00	
Incremental Delay, d2		0.7					2.5				0.7	
Delay (s)		14.3					17.5				10.8	
Level of Service		B					B				B	
Approach Delay (s)		14.3					17.5				10.8	
Approach LOS		B					B				B	

Intersection Summary			
HCM 2000 Control Delay	15.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.34		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	38.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBL	SBT	SBR	SBR2
Lane Configurations				
Traffic Volume (vph)	31	55	14	5
Future Volume (vph)	31	55	14	5
Ideal Flow (vphpl)	1900	1900	1900	1900
Total Lost time (s)		6.0		
Lane Util. Factor		1.00		
Frt		0.98		
Flt Protected		0.99		
Satd. Flow (prot)		1791		
Flt Permitted		0.87		
Satd. Flow (perm)		1582		
Peak-hour factor, PHF	0.80	0.80	0.80	0.80
Adj. Flow (vph)	39	69	18	6
RTOR Reduction (vph)	0	3	0	0
Lane Group Flow (vph)	0	129	0	0
Turn Type	Perm	NA		
Protected Phases		6		
Permitted Phases	6			
Actuated Green, G (s)		19.0		
Effective Green, g (s)		19.0		
Actuated g/C Ratio		0.32		
Clearance Time (s)		6.0		
Lane Grp Cap (vph)		500		
v/s Ratio Prot				
v/s Ratio Perm		c0.08		
v/c Ratio		0.26		
Uniform Delay, d1		15.3		
Progression Factor		1.00		
Incremental Delay, d2		1.3		
Delay (s)		16.5		
Level of Service		B		
Approach Delay (s)		16.5		
Approach LOS		B		

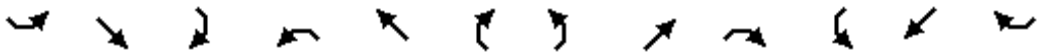
Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	310	14	160	734	62	0	0	186	0	0	0
Future Volume (vph)	0	310	14	160	734	62	0	0	186	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0		5.0	5.0				5.0			
Lane Util. Factor		0.91		1.00	0.95				1.00			
Frt		0.99		1.00	0.99				0.86			
Flt Protected		1.00		0.95	1.00				1.00			
Satd. Flow (prot)		5051		1770	3498				1611			
Flt Permitted		1.00		0.50	1.00				1.00			
Satd. Flow (perm)		5051		940	3498				1611			
Peak-hour factor, PHF	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.92	0.92	0.92
Adj. Flow (vph)	0	388	18	200	918	78	0	0	232	0	0	0
RTOR Reduction (vph)	0	1	0	0	2	0	0	0	221	0	0	0
Lane Group Flow (vph)	0	405	0	200	994	0	0	0	12	0	0	0
Turn Type		NA		Perm	NA				Perm			
Protected Phases		4			8							
Permitted Phases				8					2			
Actuated Green, G (s)		92.1		92.1	92.1				5.5			
Effective Green, g (s)		92.1		92.1	92.1				5.5			
Actuated g/C Ratio		0.86		0.86	0.86				0.05			
Clearance Time (s)		5.0		5.0	5.0				5.0			
Vehicle Extension (s)		3.0		3.0	3.0				3.0			
Lane Grp Cap (vph)		4323		804	2994				82			
v/s Ratio Prot		0.08			c0.28							
v/s Ratio Perm				0.21					c0.01			
v/c Ratio		0.09		0.25	0.33				0.15			
Uniform Delay, d1		1.2		1.4	1.6				48.8			
Progression Factor		1.00		1.00	1.00				1.00			
Incremental Delay, d2		0.0		0.7	0.3				0.8			
Delay (s)		1.3		2.2	1.9				49.6			
Level of Service		A		A	A				D			
Approach Delay (s)		1.3			1.9			49.6			0.0	
Approach LOS		A			A			D			A	

Intersection Summary			
HCM 2000 Control Delay	7.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	107.6	Sum of lost time (s)	10.0
Intersection Capacity Utilization	26.4%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	37	275	136	190	348	23	147	4	56	8	4	31
Future Volume (vph)	37	275	136	190	348	23	147	4	56	8	4	31
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	2.0	6.0	6.0	2.0	6.0			6.0			6.0	6.0
Lane Util. Factor	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	0.99			0.96			1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00			0.97			0.97	1.00
Satd. Flow (prot)	1770	1863	1583	1770	1845			1733			1803	1583
Flt Permitted	0.50	1.00	1.00	0.46	1.00			0.78			0.81	1.00
Satd. Flow (perm)	925	1863	1583	849	1845			1400			1501	1583
Peak-hour factor, PHF	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Adj. Flow (vph)	46	344	170	238	435	29	184	5	70	10	5	39
RTOR Reduction (vph)	0	0	102	0	3	0	0	21	0	0	0	30
Lane Group Flow (vph)	46	344	68	238	461	0	0	238	0	0	15	9
Turn Type	pm+pt	NA	Perm	pm+pt	NA		Perm	NA		Perm	NA	Perm
Protected Phases	1	6		5	2			4			8	
Permitted Phases	6		6	2			4			8		8
Actuated Green, G (s)	27.4	25.1	25.1	35.5	31.2			14.9			14.9	14.9
Effective Green, g (s)	27.4	25.1	25.1	35.5	31.2			14.9			14.9	14.9
Actuated g/C Ratio	0.44	0.40	0.40	0.57	0.50			0.24			0.24	0.24
Clearance Time (s)	2.0	6.0	6.0	2.0	6.0			6.0			6.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			3.0			3.0	3.0
Lane Grp Cap (vph)	437	749	636	606	922			334			358	377
v/s Ratio Prot	0.00	0.18		c0.05	c0.25							
v/s Ratio Perm	0.04		0.04	0.17				c0.17			0.01	0.01
v/c Ratio	0.11	0.46	0.11	0.39	0.50			0.71			0.04	0.02
Uniform Delay, d1	10.1	13.7	11.7	6.9	10.4			21.8			18.3	18.2
Progression Factor	1.00	1.00	1.00	1.00	1.00			1.00			1.00	1.00
Incremental Delay, d2	0.1	2.0	0.3	0.4	1.9			7.0			0.0	0.0
Delay (s)	10.2	15.7	12.0	7.4	12.3			28.8			18.3	18.2
Level of Service	B	B	B	A	B			C			B	B
Approach Delay (s)		14.1			10.6			28.8			18.2	
Approach LOS		B			B			C			B	

Intersection Summary			
HCM 2000 Control Delay	15.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	62.4	Sum of lost time (s)	14.0
Intersection Capacity Utilization	56.8%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Appendix 5E-6: 2025 No-Build AM

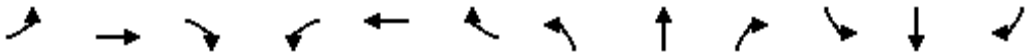
Unsignalized

Synchro Results

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	182	49	25	224	61	21
Future Volume (Veh/h)	182	49	25	224	61	21
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.85	0.80	0.80	0.92	0.80	0.80
Hourly flow rate (vph)	242	69	35	275	86	30
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			311		622	276
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			311		622	276
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			97		80	96
cM capacity (veh/h)			1249		438	762

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	311	310	116
Volume Left	0	35	86
Volume Right	69	0	30
cSH	1700	1249	492
Volume to Capacity	0.18	0.03	0.24
Queue Length 95th (ft)	0	2	23
Control Delay (s)	0.0	1.1	14.6
Lane LOS		A	B
Approach Delay (s)	0.0	1.1	14.6
Approach LOS			B

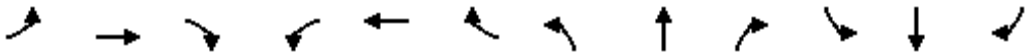
Intersection Summary			
Average Delay	2.8		
Intersection Capacity Utilization	44.3%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Yield			Stop			Yield	
Traffic Volume (vph)	17	25	6	0	39	254	4	44	4	180	17	10
Future Volume (vph)	17	25	6	0	39	254	4	44	4	180	17	10
Peak Hour Factor	0.85	0.89	0.80	0.80	0.89	0.86	0.99	0.85	0.99	0.87	0.85	0.83
Hourly flow rate (vph)	23	32	8	0	50	334	5	58	5	234	23	14

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	63	384	68	271
Volume Left (vph)	23	0	5	234
Volume Right (vph)	8	334	5	14
Hadj (s)	0.03	-0.49	0.00	0.18
Departure Headway (s)	5.4	4.4	5.4	5.3
Degree Utilization, x	0.09	0.47	0.10	0.40
Capacity (veh/h)	601	768	584	640
Control Delay (s)	8.9	11.4	9.0	11.7
Approach Delay (s)	8.9	11.4	9.0	11.7
Approach LOS	A	B	A	B

Intersection Summary				
Delay	11.1			
Level of Service	B			
Intersection Capacity Utilization	46.3%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	32	154	6	11	271	36	6	66	13	8	24	29
Future Volume (Veh/h)	32	154	6	11	271	36	6	66	13	8	24	29
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.83	0.80	0.80	0.80	0.82	0.84	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	44	218	8	16	373	48	8	93	18	11	34	41
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		643			1031							
pX, platoon unblocked	0.85						0.85	0.85		0.85	0.85	0.85
vC, conflicting volume	421			226			797	763	222	804	743	397
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	227			226			671	630	222	678	607	199
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	96			99			97	71	98	95	90	94
cM capacity (veh/h)	1137			1342			262	321	818	227	331	714

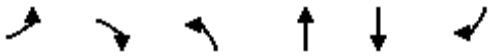
Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	270	437	119	86
Volume Left	44	16	8	11
Volume Right	8	48	18	41
cSH	1137	1342	347	412
Volume to Capacity	0.04	0.01	0.34	0.21
Queue Length 95th (ft)	3	1	37	19
Control Delay (s)	1.7	0.4	20.7	16.0
Lane LOS	A	A	C	C
Approach Delay (s)	1.7	0.4	20.7	16.0
Approach LOS			C	C

Intersection Summary				
Average Delay	4.9			
Intersection Capacity Utilization	39.0%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (veh/h)	0	10	503	122	0	392
Future Volume (Veh/h)	0	10	503	122	0	392
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	0	14	685	166	0	534
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						1081
pX, platoon unblocked						
vC, conflicting volume	1302	768			685	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1302	768			685	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	97			100	
cM capacity (veh/h)	177	402			908	

Direction, Lane #	NW 1	NE 1	SW 1
Volume Total	14	851	534
Volume Left	0	0	0
Volume Right	14	166	0
cSH	402	1700	1700
Volume to Capacity	0.03	0.50	0.31
Queue Length 95th (ft)	3	0	0
Control Delay (s)	14.3	0.0	0.0
Lane LOS	B		
Approach Delay (s)	14.3	0.0	0.0
Approach LOS	B		

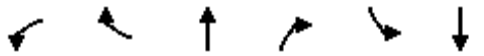
Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	46.9%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	85	30	27	142	103	40
Future Volume (Veh/h)	85	30	27	142	103	40
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.86	0.80	0.80	0.90	0.80	0.80
Hourly flow rate (vph)	109	41	37	174	142	55
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)					693	
pX, platoon unblocked						
vC, conflicting volume	418	170	197			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	418	170	197			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	81	95	97			
cM capacity (veh/h)	576	874	1376			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	150	211	197
Volume Left	109	37	0
Volume Right	41	0	55
cSH	635	1376	1700
Volume to Capacity	0.24	0.03	0.12
Queue Length 95th (ft)	23	2	0
Control Delay (s)	12.4	1.5	0.0
Lane LOS	B	A	
Approach Delay (s)	12.4	1.5	0.0
Approach LOS	B		

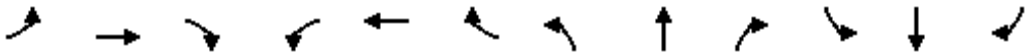
Intersection Summary			
Average Delay	3.9		
Intersection Capacity Utilization	35.7%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	1	134	170	6	104	80
Future Volume (Veh/h)	1	134	170	6	104	80
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.80	0.91	0.83	0.80	0.80	0.80
Hourly flow rate (vph)	1	162	225	8	143	110
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	625	229			233	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	625	229			233	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	80			89	
cM capacity (veh/h)	401	810			1335	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	163	233	253
Volume Left	1	0	143
Volume Right	162	8	0
cSH	805	1700	1335
Volume to Capacity	0.20	0.14	0.11
Queue Length 95th (ft)	19	0	9
Control Delay (s)	10.6	0.0	4.9
Lane LOS	B		A
Approach Delay (s)	10.6	0.0	4.9
Approach LOS	B		

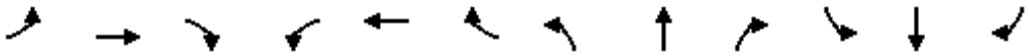
Intersection Summary			
Average Delay	4.6		
Intersection Capacity Utilization	40.4%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	360	10	0	186	4	18	0	4	2	1	3
Future Volume (Veh/h)	0	360	10	0	186	4	18	0	4	2	1	3
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.80	0.87	0.80	0.80	0.91	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	0	455	14	0	225	6	25	0	6	3	1	4
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)					1030							
pX, platoon unblocked												
vC, conflicting volume	231			469			694	693	462	696	697	228
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	231			469			694	693	462	696	697	228
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			93	100	99	99	100	100
cM capacity (veh/h)	1337			1093			354	367	600	353	365	811

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	469	231	31	8
Volume Left	0	0	25	3
Volume Right	14	6	6	4
cSH	1337	1093	385	494
Volume to Capacity	0.00	0.00	0.08	0.02
Queue Length 95th (ft)	0	0	7	1
Control Delay (s)	0.0	0.0	15.2	12.4
Lane LOS			C	B
Approach Delay (s)	0.0	0.0	15.2	12.4
Approach LOS			C	B

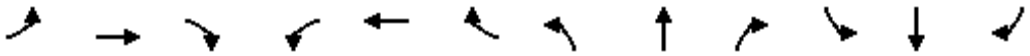
Intersection Summary				
Average Delay	0.8			
Intersection Capacity Utilization	31.5%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	344	4	1	176	2	1	1	5	4	1	3
Future Volume (Veh/h)	3	344	4	1	176	2	1	1	5	4	1	3
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.80	0.80	0.80	0.80	0.84	0.80	0.80	0.80	0.80	0.99	0.80	0.80
Hourly flow rate (vph)	4	473	6	1	230	3	1	1	7	4	1	4
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	233			479			722	719	476	725	720	232
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	233			479			722	719	476	725	720	232
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			100	100	99	99	100	100
cM capacity (veh/h)	1335			1083			339	353	589	335	352	808

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	483	234	9	9
Volume Left	4	1	1	4
Volume Right	6	3	7	4
cSH	1335	1083	509	456
Volume to Capacity	0.00	0.00	0.02	0.02
Queue Length 95th (ft)	0	0	1	2
Control Delay (s)	0.1	0.0	12.2	13.1
Lane LOS	A	A	B	B
Approach Delay (s)	0.1	0.0	12.2	13.1
Approach LOS			B	B

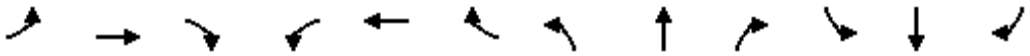
Intersection Summary				
Average Delay	0.4			
Intersection Capacity Utilization	32.4%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	209	4	46	222	26	2	13	148	63	26	20
Future Volume (Veh/h)	10	209	4	46	222	26	2	13	148	63	26	20
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.80	0.90	0.80	0.80	0.80	0.80	0.80	0.80	0.84	0.84	0.84	0.83
Hourly flow rate (vph)	13	242	5	60	289	34	3	17	183	78	32	25
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	323			247			738	714	244	888	699	306
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	323			247			738	714	244	888	699	306
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			95			99	95	77	58	91	97
cM capacity (veh/h)	1237			1319			287	337	794	187	344	734

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	260	383	203	135
Volume Left	13	60	3	78
Volume Right	5	34	183	25
cSH	1237	1319	697	248
Volume to Capacity	0.01	0.05	0.29	0.54
Queue Length 95th (ft)	1	4	30	74
Control Delay (s)	0.5	1.6	12.3	35.5
Lane LOS	A	A	B	E
Approach Delay (s)	0.5	1.6	12.3	35.5
Approach LOS			B	E

Intersection Summary				
Average Delay	8.2			
Intersection Capacity Utilization	58.7%	ICU Level of Service	B	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	126	0	32	260	42	0	132	94	18	22	18
Future Volume (Veh/h)	10	126	0	32	260	42	0	132	94	18	22	18
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.80	0.80	0.80	0.80	0.88	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	13	169	0	43	316	56	0	177	126	24	29	24
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	372			169			664	653	169	840	625	344
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	372			169			664	653	169	840	625	344
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			97			100	52	86	84	92	97
cM capacity (veh/h)	1186			1409			330	371	875	148	385	699

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	182	415	303	77
Volume Left	13	43	0	24
Volume Right	0	56	126	24
cSH	1186	1409	488	283
Volume to Capacity	0.01	0.03	0.62	0.27
Queue Length 95th (ft)	1	2	104	27
Control Delay (s)	0.7	1.1	23.7	22.4
Lane LOS	A	A	C	C
Approach Delay (s)	0.7	1.1	23.7	22.4
Approach LOS			C	C

Intersection Summary			
Average Delay	9.7		
Intersection Capacity Utilization	53.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	157	17	23	313	44	41
Future Volume (Veh/h)	157	17	23	313	44	41
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	218	24	32	434	61	57
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	1023					
pX, platoon unblocked						
vC, conflicting volume			242		728	230
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			242		728	230
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			98		84	93
cM capacity (veh/h)			1324		381	809

Direction, Lane #	EB 1	WB 1	WB 2	NB 1
Volume Total	242	32	434	118
Volume Left	0	32	0	61
Volume Right	24	0	0	57
cSH	1700	1324	1700	512
Volume to Capacity	0.14	0.02	0.26	0.23
Queue Length 95th (ft)	0	2	0	22
Control Delay (s)	0.0	7.8	0.0	14.1
Lane LOS		A		B
Approach Delay (s)	0.0	0.5		14.1
Approach LOS				B

Intersection Summary			
Average Delay	2.3		
Intersection Capacity Utilization	30.4%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	4	84	543	40	157	388
Future Volume (Veh/h)	4	84	543	40	157	388
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.80	0.87	0.92	0.80	0.83	0.81
Hourly flow rate (vph)	6	107	655	56	210	532
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			776			
pX, platoon unblocked	0.93	0.93			0.93	
vC, conflicting volume	1607	655			711	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1615	593			653	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	93	77			76	
cM capacity (veh/h)	81	471			870	

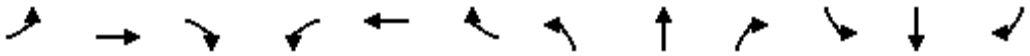
Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	113	655	56	210	532
Volume Left	6	0	0	210	0
Volume Right	107	0	56	0	0
cSH	375	1700	1700	870	1700
Volume to Capacity	0.30	0.39	0.03	0.24	0.31
Queue Length 95th (ft)	31	0	0	24	0
Control Delay (s)	18.7	0.0	0.0	10.5	0.0
Lane LOS	C			B	
Approach Delay (s)	18.7	0.0		3.0	
Approach LOS	C				

Intersection Summary			
Average Delay	2.8		
Intersection Capacity Utilization	57.4%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	4	26	408	12	20	86
Future Volume (Veh/h)	4	26	408	12	20	86
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.86
Hourly flow rate (vph)	5	33	520	15	26	102
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	682	528			535	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	682	528			535	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	99	94			97	
cM capacity (veh/h)	405	551			1033	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	38	535	128
Volume Left	5	0	26
Volume Right	33	15	0
cSH	526	1700	1033
Volume to Capacity	0.07	0.31	0.03
Queue Length 95th (ft)	6	0	2
Control Delay (s)	12.4	0.0	1.9
Lane LOS	B		A
Approach Delay (s)	12.4	0.0	1.9
Approach LOS	B		

Intersection Summary			
Average Delay	1.0		
Intersection Capacity Utilization	32.6%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	100	36	26	133	18	95	40	16	2	42	6
Future Volume (Veh/h)	3	100	36	26	133	18	95	40	16	2	42	6
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	3	109	39	28	145	20	103	43	17	2	46	7
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		1173										
pX, platoon unblocked												
vC, conflicting volume	165			148			376	356	128	384	365	155
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	165			148			376	356	128	384	365	155
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			98			81	92	98	100	92	99
cM capacity (veh/h)	1413			1434			532	558	921	522	551	891

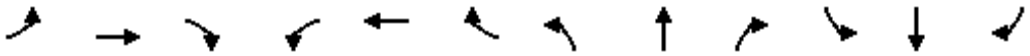
Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	151	193	163	55
Volume Left	3	28	103	2
Volume Right	39	20	17	7
cSH	1413	1434	563	578
Volume to Capacity	0.00	0.02	0.29	0.10
Queue Length 95th (ft)	0	1	30	8
Control Delay (s)	0.2	1.2	14.0	11.9
Lane LOS	A	A	B	B
Approach Delay (s)	0.2	1.2	14.0	11.9
Approach LOS			B	B

Intersection Summary				
Average Delay	5.7			
Intersection Capacity Utilization	42.2%	ICU Level of Service	A	
Analysis Period (min)	15			

Appendix 5E-7: 2025 No-Build PM

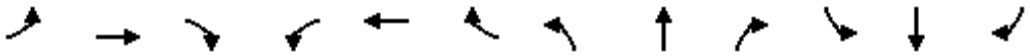
Signalized

Synchro Results



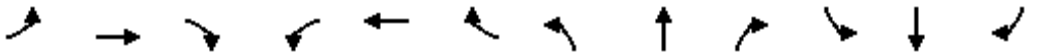
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	158	294	14	40	294	84	10	292	70	106	264	168
Future Volume (vph)	158	294	14	40	294	84	10	292	70	106	264	168
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	8	11	12	8	11	12	12	16	12	12	16	12
Total Lost time (s)		5.0			5.0		5.0	5.0		5.0	5.0	
Lane Util. Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		1.00			0.97		1.00	0.97		1.00	0.94	
Flt Protected		0.98			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1764			1744		1770	2057		1770	1981	
Flt Permitted		0.65			0.91		0.19	1.00		0.24	1.00	
Satd. Flow (perm)		1165			1602		356	2057		448	1981	
Peak-hour factor, PHF	0.89	0.83	0.80	0.86	0.80	0.80	0.80	0.81	0.94	0.82	0.95	0.87
Growth Factor (vph)	109%	109%	109%	109%	109%	109%	109%	109%	109%	109%	109%	109%
Adj. Flow (vph)	194	386	19	51	401	114	14	393	81	141	303	210
RTOR Reduction (vph)	0	2	0	0	14	0	0	12	0	0	39	0
Lane Group Flow (vph)	0	597	0	0	552	0	14	462	0	141	474	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		34.0			34.0		21.0	21.0		21.0	21.0	
Effective Green, g (s)		34.0			34.0		21.0	21.0		21.0	21.0	
Actuated g/C Ratio		0.52			0.52		0.32	0.32		0.32	0.32	
Clearance Time (s)		5.0			5.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)		609			837		115	664		144	640	
v/s Ratio Prot								0.22			0.24	
v/s Ratio Perm		c0.51			0.34		0.04			c0.31		
v/c Ratio		0.98			0.66		0.12	0.70		0.98	0.74	
Uniform Delay, d1		15.2			11.3		15.5	19.2		21.8	19.6	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		32.0			4.1		2.2	6.0		69.7	7.6	
Delay (s)		47.2			15.3		17.7	25.2		91.5	27.1	
Level of Service		D			B		B	C		F	C	
Approach Delay (s)		47.2			15.3			25.0			41.0	
Approach LOS		D			B			C			D	

Intersection Summary			
HCM 2000 Control Delay	32.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	111.0%	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 (vph)	102	228	34	45	163	207	34	399	51	283	423	96
Future Volume (vph)	102	228	34	45	163	207	34	399	51	283	423	96
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0	6.0	6.0	6.0		3.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	1.00	0.85	1.00	0.98		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1826		1770	1863	1583	1770	1830		1770	1806	
Flt Permitted	0.45	1.00		0.19	1.00	1.00	0.38	1.00		0.28	1.00	
Satd. Flow (perm)	837	1826		355	1863	1583	715	1830		530	1806	
Peak-hour factor, PHF	0.80	0.82	0.80	0.94	0.82	0.80	0.80	0.84	0.80	0.87	0.90	0.80
Growth Factor (vph)	114%	114%	114%	114%	114%	114%	114%	114%	114%	114%	114%	114%
Adj. Flow (vph)	145	317	48	55	227	295	48	542	73	371	536	137
RTOR Reduction (vph)	0	5	0	0	0	156	0	4	0	0	8	0
Lane Group Flow (vph)	145	360	0	55	227	139	48	611	0	371	665	0
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA		pm+pt	NA	
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	26.8	26.8		26.8	26.8	26.8	67.0	67.0		80.0	80.0	
Effective Green, g (s)	26.8	26.8		26.8	26.8	26.8	67.0	67.0		80.0	80.0	
Actuated g/C Ratio	0.23	0.23		0.23	0.23	0.23	0.56	0.56		0.67	0.67	
Clearance Time (s)	6.0	6.0		6.0	6.0	6.0	6.0	6.0		3.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	188	411		80	420	357	403	1032		461	1216	
v/s Ratio Prot		c0.20			0.12			0.33		c0.07	0.37	
v/s Ratio Perm	0.17			0.15		0.09	0.07			c0.47		
v/c Ratio	0.77	0.88		0.69	0.54	0.39	0.12	0.59		0.80	0.55	
Uniform Delay, d1	43.1	44.4		42.2	40.6	39.1	12.1	17.0		12.9	10.0	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	17.6	18.5		21.8	1.4	0.7	0.1	0.9		9.8	0.5	
Delay (s)	60.7	62.9		63.9	42.0	39.8	12.2	17.9		22.7	10.5	
Level of Service	E	E		E	D	D	B	B		C	B	
Approach Delay (s)		62.3			42.9			17.5			14.9	
Approach LOS		E			D			B			B	

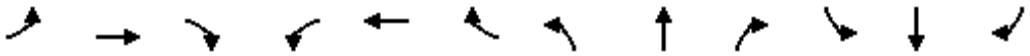
Intersection Summary			
HCM 2000 Control Delay	29.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	118.8	Sum of lost time (s)	15.0
Intersection Capacity Utilization	175.0%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	410	386	6	6	386	178	46	116	8	156	80	514
Future Volume (vph)	410	386	6	6	386	178	46	116	8	156	80	514
Ideal Flow (vphpl)	1200	1200	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	10	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	3.0	5.0			5.0			5.0			5.0	5.0
Lane Util. Factor	1.00	1.00			1.00			1.00			1.00	1.00
Frt	1.00	1.00			0.96			0.99			1.00	0.85
Flt Protected	0.95	1.00			1.00			0.99			0.97	1.00
Satd. Flow (prot)	1043	1096			1783			1826			1803	1583
Flt Permitted	0.14	1.00			0.99			0.50			0.56	1.00
Satd. Flow (perm)	151	1096			1774			920			1047	1583
Peak-hour factor, PHF	0.83	0.82	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.90
Growth Factor (vph)	109%	109%	109%	109%	109%	109%	109%	109%	109%	109%	109%	109%
Adj. Flow (vph)	538	513	8	8	526	243	63	158	11	213	109	623
RTOR Reduction (vph)	0	0	0	0	13	0	0	2	0	0	0	407
Lane Group Flow (vph)	538	521	0	0	764	0	0	231	0	0	322	217
Turn Type	pm+pt	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases	7	4			8			2			6	
Permitted Phases	4			8			2			6		6
Actuated Green, G (s)	80.0	80.0			43.0			30.0			30.0	30.0
Effective Green, g (s)	80.0	80.0			43.0			30.0			30.0	30.0
Actuated g/C Ratio	0.67	0.67			0.36			0.25			0.25	0.25
Clearance Time (s)	3.0	5.0			5.0			5.0			5.0	5.0
Vehicle Extension (s)	3.0	3.0			3.0			3.0			3.0	3.0
Lane Grp Cap (vph)	353	730			635			230			261	395
v/s Ratio Prot	c0.43	0.48										
v/s Ratio Perm	c0.58				0.43			0.25			c0.31	0.14
v/c Ratio	1.52	0.71			1.20			1.00			1.23	0.55
Uniform Delay, d1	32.7	12.7			38.5			45.0			45.0	39.1
Progression Factor	1.00	1.00			1.00			1.00			1.00	1.00
Incremental Delay, d2	249.8	3.3			105.6			59.9			133.8	1.6
Delay (s)	282.6	16.0			144.1			104.9			178.8	40.7
Level of Service	F	B			F			F			F	D
Approach Delay (s)		151.4			144.1			104.9			87.7	
Approach LOS		F			F			F			F	

Intersection Summary			
HCM 2000 Control Delay	126.0	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.48		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	114.2%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

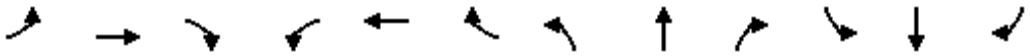


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	62	94	48	120	87	84	66	445	91	55	398	75
Future Volume (vph)	62	94	48	120	87	84	66	445	91	55	398	75
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.95		1.00	0.93		1.00	0.97		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1769		1770	1725		1770	1811		1770	1818	
Flt Permitted	0.56	1.00		0.62	1.00		0.30	1.00		0.25	1.00	
Satd. Flow (perm)	1037	1769		1159	1725		551	1811		473	1818	
Peak-hour factor, PHF	0.80	0.80	0.80	0.95	0.80	0.80	0.84	0.92	0.83	0.80	0.87	0.86
Growth Factor (vph)	114%	114%	114%	114%	114%	114%	114%	114%	114%	114%	114%	114%
Adj. Flow (vph)	88	134	68	144	124	120	90	551	125	78	522	99
RTOR Reduction (vph)	0	23	0	0	43	0	0	11	0	0	9	0
Lane Group Flow (vph)	88	179	0	144	201	0	90	665	0	78	612	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			4			2			2	
Permitted Phases	4			4			2			2		
Actuated Green, G (s)	21.7	21.7		21.7	21.7		37.8	37.8		37.8	37.8	
Effective Green, g (s)	21.7	21.7		21.7	21.7		37.8	37.8		37.8	37.8	
Actuated g/C Ratio	0.30	0.30		0.30	0.30		0.53	0.53		0.53	0.53	
Clearance Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Vehicle Extension (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)	314	536		351	523		291	957		250	961	
v/s Ratio Prot		0.10			0.12			c0.37			0.34	
v/s Ratio Perm	0.08			c0.12			0.16			0.16		
v/c Ratio	0.28	0.33		0.41	0.38		0.31	0.69		0.31	0.64	
Uniform Delay, d1	19.0	19.3		19.8	19.6		9.5	12.6		9.5	12.0	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.7	0.5		1.1	0.6		0.8	2.4		1.0	1.6	
Delay (s)	19.6	19.8		20.9	20.3		10.3	14.9		10.5	13.5	
Level of Service	B	B		C	C		B	B		B	B	
Approach Delay (s)		19.7			20.5			14.4			13.2	
Approach LOS		B			C			B			B	

Intersection Summary			
HCM 2000 Control Delay	15.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	71.5	Sum of lost time (s)	12.0
Intersection Capacity Utilization	93.8%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	104	54	196	18	36	230
Future Volume (vph)	104	54	196	18	36	230
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0		6.0			6.0
Lane Util. Factor	1.00		1.00			1.00
Frt	0.96		0.99			1.00
Flt Protected	0.97		1.00			0.99
Satd. Flow (prot)	1725		1841			1850
Flt Permitted	0.97		1.00			0.93
Satd. Flow (perm)	1725		1841			1725
Peak-hour factor, PHF	0.81	0.91	0.80	0.80	0.80	0.80
Growth Factor (vph)	105%	105%	105%	105%	105%	100%
Adj. Flow (vph)	135	62	257	24	47	288
RTOR Reduction (vph)	25	0	4	0	0	0
Lane Group Flow (vph)	172	0	277	0	0	335
Turn Type	Prot		NA		Perm	NA
Protected Phases	4		2			2
Permitted Phases					2	
Actuated Green, G (s)	10.8		28.0			28.0
Effective Green, g (s)	10.8		28.0			28.0
Actuated g/C Ratio	0.21		0.55			0.55
Clearance Time (s)	6.0		6.0			6.0
Vehicle Extension (s)	2.0		2.0			2.0
Lane Grp Cap (vph)	366		1014			950
v/s Ratio Prot	c0.10		0.15			
v/s Ratio Perm						c0.19
v/c Ratio	0.47		0.27			0.35
Uniform Delay, d1	17.5		6.0			6.4
Progression Factor	1.00		1.00			1.00
Incremental Delay, d2	0.3		0.1			0.1
Delay (s)	17.8		6.1			6.4
Level of Service	B		A			A
Approach Delay (s)	17.8		6.1			6.4
Approach LOS	B		A			A

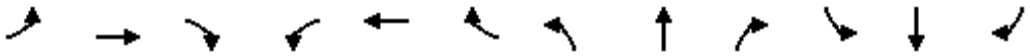
Intersection Summary			
HCM 2000 Control Delay	9.1	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	50.8	Sum of lost time (s)	12.0
Intersection Capacity Utilization	63.7%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	21	159	66	38	119	60	24	153	23	63	196	34
Future Volume (vph)	21	159	66	38	119	60	24	153	23	63	196	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0			6.0			6.0			6.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frt		0.96			0.96			0.98			0.98	
Flt Protected		1.00			0.99			0.99			0.99	
Satd. Flow (prot)		1789			1780			1820			1810	
Flt Permitted		0.96			0.89			0.92			0.87	
Satd. Flow (perm)		1720			1604			1689			1592	
Peak-hour factor, PHF	0.88	0.86	0.88	0.80	0.81	0.85	0.80	0.88	0.80	0.80	0.90	0.80
Growth Factor (vph)	108%	108%	108%	108%	108%	108%	108%	108%	108%	108%	108%	108%
Adj. Flow (vph)	26	200	81	51	159	76	32	188	31	85	235	46
RTOR Reduction (vph)	0	18	0	0	18	0	0	7	0	0	7	0
Lane Group Flow (vph)	0	289	0	0	268	0	0	244	0	0	359	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		6			6			2			2	
Permitted Phases	6			6			2			2		
Actuated Green, G (s)		32.0			32.0			30.0			30.0	
Effective Green, g (s)		32.0			32.0			30.0			30.0	
Actuated g/C Ratio		0.43			0.43			0.41			0.41	
Clearance Time (s)		6.0			6.0			6.0			6.0	
Lane Grp Cap (vph)		743			693			684			645	
v/s Ratio Prot												
v/s Ratio Perm		c0.17			0.17			0.14			c0.23	
v/c Ratio		0.39			0.39			0.36			0.56	
Uniform Delay, d1		14.3			14.3			15.3			16.9	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		1.5			1.6			1.5			3.4	
Delay (s)		15.9			15.9			16.7			20.3	
Level of Service		B			B			B			C	
Approach Delay (s)		15.9			15.9			16.7			20.3	
Approach LOS		B			B			B			C	

Intersection Summary			
HCM 2000 Control Delay	17.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	74.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	65.2%	ICU Level of Service	C
Analysis Period (min)	15		

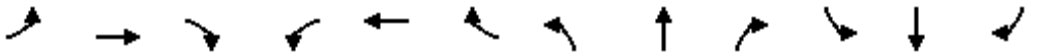
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	38	163	14	91	237	22	30	95	45	36	155	42
Future Volume (vph)	38	163	14	91	237	22	30	95	45	36	155	42
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.99		1.00	0.95		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1840		1770	1837		1770	1772		1770	1801	
Flt Permitted	0.53	1.00		0.61	1.00		0.52	1.00		0.64	1.00	
Satd. Flow (perm)	989	1840		1142	1837		968	1772		1201	1801	
Peak-hour factor, PHF	0.80	0.82	0.80	0.88	0.86	0.80	0.83	0.88	0.87	0.82	0.84	0.80
Growth Factor (vph)	108%	108%	108%	108%	108%	108%	108%	108%	108%	108%	108%	108%
Adj. Flow (vph)	51	215	19	112	298	30	39	117	56	47	199	57
RTOR Reduction (vph)	0	5	0	0	5	0	0	25	0	0	14	0
Lane Group Flow (vph)	51	229	0	112	323	0	39	148	0	47	242	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	38.0	38.0		38.0	38.0		22.0	22.0		22.0	22.0	
Effective Green, g (s)	38.0	38.0		38.0	38.0		22.0	22.0		22.0	22.0	
Actuated g/C Ratio	0.54	0.54		0.54	0.54		0.31	0.31		0.31	0.31	
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)	536	998		619	997		304	556		377	566	
v/s Ratio Prot		0.12			c0.18			0.08			c0.13	
v/s Ratio Perm	0.05			0.10			0.04			0.04		
v/c Ratio	0.10	0.23		0.18	0.32		0.13	0.27		0.12	0.43	
Uniform Delay, d1	7.7	8.4		8.1	8.9		17.1	18.0		17.1	19.0	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.4	0.5		0.6	0.9		0.9	1.2		0.7	2.3	
Delay (s)	8.1	8.9		8.8	9.7		18.0	19.1		17.8	21.4	
Level of Service	A	A		A	A		B	B		B	C	
Approach Delay (s)		8.7			9.5			18.9			20.8	
Approach LOS		A			A			B			C	

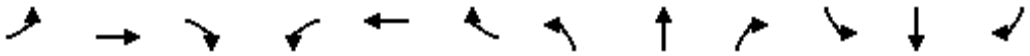
Intersection Summary					
HCM 2000 Control Delay	13.7	HCM 2000 Level of Service		B	
HCM 2000 Volume to Capacity ratio	0.36				
Actuated Cycle Length (s)	70.0	Sum of lost time (s)		10.0	
Intersection Capacity Utilization	108.1%	ICU Level of Service		G	
Analysis Period (min)	15				

c Critical Lane Group



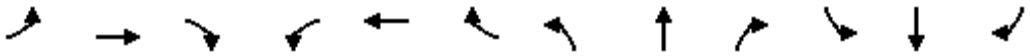
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	166	173	44	20	158	10	45	559	29	96	875	286
Future Volume (vph)	166	173	44	20	158	10	45	559	29	96	875	286
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	7.0		3.0	7.0	7.0	3.0	7.0		3.0	7.0	7.0
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.95		1.00	0.95	1.00
Frt	1.00	0.97		1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	1806		1770	1863	1583	1770	3513		1770	3539	1583
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1770	1806		1770	1863	1583	1770	3513		1770	3539	1583
Peak-hour factor, PHF	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Growth Factor (vph)	105%	105%	105%	105%	105%	105%	105%	105%	105%	105%	105%	105%
Adj. Flow (vph)	218	227	58	26	207	13	59	734	38	126	1148	375
RTOR Reduction (vph)	0	9	0	0	0	11	0	4	0	0	0	183
Lane Group Flow (vph)	218	276	0	26	207	2	59	768	0	126	1148	192
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8						6
Actuated Green, G (s)	14.6	27.4		2.7	15.5	15.5	5.4	34.6		11.0	40.2	40.2
Effective Green, g (s)	14.6	27.4		2.7	15.5	15.5	5.4	34.6		11.0	40.2	40.2
Actuated g/C Ratio	0.15	0.29		0.03	0.16	0.16	0.06	0.36		0.11	0.42	0.42
Clearance Time (s)	3.0	7.0		3.0	7.0	7.0	3.0	7.0		3.0	7.0	7.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	270	517		49	301	256	99	1270		203	1486	664
v/s Ratio Prot	c0.12	0.15		0.01	c0.11		0.03	0.22		c0.07	c0.32	
v/s Ratio Perm						0.00						0.12
v/c Ratio	0.81	0.53		0.53	0.69	0.01	0.60	0.60		0.62	0.77	0.29
Uniform Delay, d1	39.2	28.8		45.9	37.8	33.7	44.1	25.0		40.4	23.8	18.3
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	16.0	1.1		10.6	6.4	0.0	9.3	2.1		5.8	4.0	1.1
Delay (s)	55.2	29.8		56.5	44.2	33.7	53.4	27.1		46.1	27.8	19.4
Level of Service	E	C		E	D	C	D	C		D	C	B
Approach Delay (s)		40.8			45.0			29.0			27.3	
Approach LOS		D			D			C			C	

Intersection Summary			
HCM 2000 Control Delay	31.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	95.7	Sum of lost time (s)	20.0
Intersection Capacity Utilization	65.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	48	176	74	10	150	160	84	652	10	132	1008	60
Future Volume (vph)	48	176	74	10	150	160	84	652	10	132	1008	60
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	7.0		3.0	7.0		3.0	7.0		3.0	7.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frt	1.00	0.95		1.00	0.93		1.00	1.00		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1778		1770	1723		1770	3530		1770	3503	
Flt Permitted	0.25	1.00		0.48	1.00		0.14	1.00		0.26	1.00	
Satd. Flow (perm)	458	1778		885	1723		258	3530		484	3503	
Peak-hour factor, PHF	0.84	0.83	0.80	0.80	0.86	0.92	0.81	0.91	0.80	0.80	0.97	0.80
Growth Factor (vph)	105%	105%	105%	105%	105%	105%	105%	105%	105%	105%	105%	105%
Adj. Flow (vph)	60	223	97	13	183	183	109	752	13	173	1091	79
RTOR Reduction (vph)	0	19	0	0	45	0	0	1	0	0	6	0
Lane Group Flow (vph)	60	301	0	13	321	0	109	764	0	173	1164	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	23.8	19.9		18.6	17.3		34.3	28.9		37.7	30.6	
Effective Green, g (s)	23.8	19.9		18.6	17.3		34.3	28.9		37.7	30.6	
Actuated g/C Ratio	0.31	0.26		0.24	0.22		0.44	0.37		0.49	0.40	
Clearance Time (s)	3.0	7.0		3.0	7.0		3.0	7.0		3.0	7.0	
Vehicle Extension (s)	3.0	2.0		3.0	2.0		3.0	2.0		3.0	2.0	
Lane Grp Cap (vph)	207	458		228	386		220	1321		354	1388	
v/s Ratio Prot	c0.01	0.17		0.00	c0.19		0.03	0.22		c0.04	c0.33	
v/s Ratio Perm	0.07			0.01			0.19			0.19		
v/c Ratio	0.29	0.66		0.06	0.83		0.50	0.58		0.49	0.84	
Uniform Delay, d1	19.9	25.6		22.5	28.6		14.6	19.3		11.8	21.1	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.8	2.6		0.1	13.6		1.8	0.4		1.1	4.4	
Delay (s)	20.7	28.2		22.6	42.1		16.4	19.7		12.9	25.5	
Level of Service	C	C		C	D		B	B		B	C	
Approach Delay (s)		27.0			41.4			19.3			23.9	
Approach LOS		C			D			B			C	

Intersection Summary			
HCM 2000 Control Delay	25.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	77.2	Sum of lost time (s)	20.0
Intersection Capacity Utilization	79.8%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

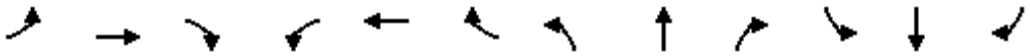


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	34	302	152	24	418	110	204	178	22	152	218	46
Future Volume (vph)	34	302	152	24	418	110	204	178	22	152	218	46
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.95		1.00	0.97		1.00	0.98		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1768		1770	1801		1770	1830		1770	1814	
Flt Permitted	0.19	1.00		0.26	1.00		0.48	1.00		0.59	1.00	
Satd. Flow (perm)	358	1768		489	1801		887	1830		1102	1814	
Peak-hour factor, PHF	0.80	0.84	0.82	0.80	0.87	0.80	0.80	0.86	0.80	0.80	0.81	0.81
Growth Factor (vph)	105%	105%	105%	105%	105%	105%	105%	105%	105%	105%	105%	105%
Adj. Flow (vph)	45	378	195	32	504	144	268	217	29	200	283	60
RTOR Reduction (vph)	0	20	0	0	11	0	0	6	0	0	9	0
Lane Group Flow (vph)	45	553	0	32	637	0	268	240	0	200	334	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		1			1			2			2	
Permitted Phases	1			1			2			2		
Actuated Green, G (s)	30.2	30.2		30.2	30.2		27.7	27.7		27.7	27.7	
Effective Green, g (s)	30.2	30.2		30.2	30.2		27.7	27.7		27.7	27.7	
Actuated g/C Ratio	0.43	0.43		0.43	0.43		0.40	0.40		0.40	0.40	
Clearance Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	154	763		211	778		351	725		436	718	
v/s Ratio Prot		0.31			c0.35			0.13			0.18	
v/s Ratio Perm	0.13			0.07			c0.30			0.18		
v/c Ratio	0.29	0.72		0.15	0.82		0.76	0.33		0.46	0.47	
Uniform Delay, d1	12.9	16.4		12.1	17.4		18.3	14.7		15.6	15.6	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.4	2.9		0.1	6.4		8.6	0.1		0.3	0.2	
Delay (s)	13.3	19.3		12.2	23.8		26.8	14.8		15.8	15.8	
Level of Service	B	B		B	C		C	B		B	B	
Approach Delay (s)		18.9			23.3			21.1			15.8	
Approach LOS		B			C			C			B	

Intersection Summary			
HCM 2000 Control Delay	19.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	69.9	Sum of lost time (s)	12.0
Intersection Capacity Utilization	72.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

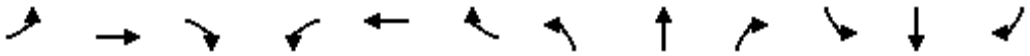
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	29	117	26	146	81	47	26	580	50	26	665	18
Future Volume (vph)	29	117	26	146	81	47	26	580	50	26	665	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0			6.0		3.0	6.0		3.0	6.0	
Lane Util. Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.98			0.98		1.00	0.99		1.00	1.00	
Flt Protected		0.99			0.97		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1810			1775		1770	1838		1770	1854	
Flt Permitted		0.90			0.66		0.15	1.00		0.15	1.00	
Satd. Flow (perm)		1639			1209		274	1838		278	1854	
Peak-hour factor, PHF	0.83	0.80	0.80	0.88	0.80	0.88	0.80	0.90	0.81	0.80	0.97	0.80
Growth Factor (vph)	109%	109%	109%	109%	109%	109%	109%	109%	109%	109%	109%	109%
Adj. Flow (vph)	38	159	35	181	110	58	35	702	67	35	747	25
RTOR Reduction (vph)	0	7	0	0	8	0	0	3	0	0	1	0
Lane Group Flow (vph)	0	225	0	0	341	0	35	766	0	35	771	0
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		26.6			26.6		48.4	45.4		48.4	45.4	
Effective Green, g (s)		26.6			26.6		48.4	45.4		48.4	45.4	
Actuated g/C Ratio		0.30			0.30		0.54	0.50		0.54	0.50	
Clearance Time (s)		6.0			6.0		3.0	6.0		3.0	6.0	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		484			357		197	927		199	935	
v/s Ratio Prot							c0.01	c0.42		0.01	0.42	
v/s Ratio Perm		0.14			c0.28		0.09			0.09		
v/c Ratio		0.46			0.96		0.18	0.83		0.18	0.82	
Uniform Delay, d1		25.9			31.1		14.2	18.9		14.2	18.9	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.7			35.8		0.4	8.3		0.4	8.2	
Delay (s)		26.6			67.0		14.7	27.3		14.6	27.1	
Level of Service		C			E		B	C		B	C	
Approach Delay (s)		26.6			67.0			26.7			26.5	
Approach LOS		C			E			C			C	

Intersection Summary			
HCM 2000 Control Delay	33.0	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)	15.0
Intersection Capacity Utilization	90.9%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



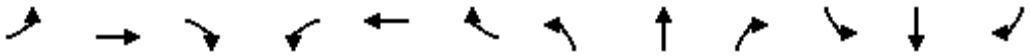
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	98	264	40	142	286	42	56	450	82	56	554	102
Future Volume (vph)	98	264	40	142	286	42	56	450	82	56	554	102
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	5.0		3.0	5.0		3.0	5.0		3.0	5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.98		1.00	0.97		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1822		1770	1827		1770	1816		1770	1816	
Flt Permitted	0.20	1.00		0.20	1.00		0.10	1.00		0.23	1.00	
Satd. Flow (perm)	373	1822		381	1827		187	1816		432	1816	
Peak-hour factor, PHF	0.82	0.91	0.80	0.80	0.80	0.80	0.80	0.95	0.86	0.80	0.91	0.83
Growth Factor (vph)	106%	106%	106%	106%	106%	106%	106%	106%	106%	106%	106%	106%
Adj. Flow (vph)	127	308	53	188	379	56	74	502	101	74	645	130
RTOR Reduction (vph)	0	7	0	0	6	0	0	8	0	0	8	0
Lane Group Flow (vph)	127	354	0	188	429	0	74	595	0	74	767	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	24.0	20.0		28.0	22.0		44.8	39.8		44.8	39.8	
Effective Green, g (s)	24.0	20.0		28.0	22.0		44.8	39.8		44.8	39.8	
Actuated g/C Ratio	0.28	0.23		0.32	0.25		0.52	0.46		0.52	0.46	
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	5.0		3.0	5.0	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	167	419		218	463		187	832		300	832	
v/s Ratio Prot	0.03	0.19		c0.06	c0.23		c0.02	0.33		0.01	c0.42	
v/s Ratio Perm	0.17			0.22			0.18			0.11		
v/c Ratio	0.76	0.85		0.86	0.93		0.40	0.71		0.25	0.92	
Uniform Delay, d1	27.7	31.9		25.3	31.6		16.5	18.9		12.8	22.0	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	16.6	13.9		27.0	24.2		0.5	2.4		0.2	15.2	
Delay (s)	44.3	45.8		52.2	55.8		17.0	21.4		13.0	37.3	
Level of Service	D	D		D	E		B	C		B	D	
Approach Delay (s)		45.4			54.8			20.9			35.1	
Approach LOS		D			D			C			D	

Intersection Summary			
HCM 2000 Control Delay	38.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	86.8	Sum of lost time (s)	16.0
Intersection Capacity Utilization	82.3%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



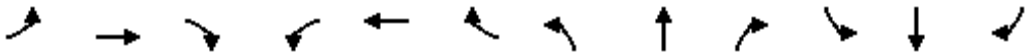
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	13	538	33	190	406	34	18	315	181	52	482	15
Future Volume (vph)	13	538	33	190	406	34	18	315	181	52	482	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		3.0	6.0		6.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.99		1.00	0.94		1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1844		1770	1840		1770	1750		1770	1854	
Flt Permitted	0.41	1.00		0.11	1.00		0.12	1.00		0.12	1.00	
Satd. Flow (perm)	762	1844		207	1840		227	1750		232	1854	
Peak-hour factor, PHF	0.80	0.91	0.80	0.84	0.84	0.80	0.80	0.94	0.80	0.80	0.82	0.80
Growth Factor (vph)	109%	109%	109%	109%	109%	109%	109%	109%	109%	109%	109%	109%
Adj. Flow (vph)	18	644	45	247	527	46	25	365	247	71	641	20
RTOR Reduction (vph)	0	3	0	0	3	0	0	27	0	0	1	0
Lane Group Flow (vph)	18	686	0	247	570	0	25	585	0	71	660	0
Turn Type	Perm	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases		4		3	8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	33.0	33.0		45.0	45.0		32.8	32.8		32.8	32.8	
Effective Green, g (s)	33.0	33.0		45.0	45.0		32.8	32.8		32.8	32.8	
Actuated g/C Ratio	0.37	0.37		0.50	0.50		0.37	0.37		0.37	0.37	
Clearance Time (s)	6.0	6.0		3.0	6.0		6.0	6.0		6.0	6.0	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	280	677		260	922		82	639		84	677	
v/s Ratio Prot		0.37		c0.10	0.31			0.33			c0.36	
v/s Ratio Perm	0.02			c0.38			0.11			0.31		
v/c Ratio	0.06	1.01		0.95	0.62		0.30	0.92		0.85	0.97	
Uniform Delay, d1	18.4	28.4		22.9	16.2		20.4	27.2		26.2	28.1	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.0	38.1		41.3	0.9		0.8	17.5		48.9	28.0	
Delay (s)	18.4	66.5		64.3	17.1		21.1	44.6		75.1	56.1	
Level of Service	B	E		E	B		C	D		E	E	
Approach Delay (s)		65.3			31.3			43.7			57.9	
Approach LOS		E			C			D			E	

Intersection Summary			
HCM 2000 Control Delay	49.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.99		
Actuated Cycle Length (s)	89.8	Sum of lost time (s)	15.0
Intersection Capacity Utilization	105.0%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



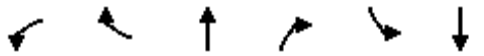
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	84	304	80	94	226	76	112	436	116	194	466	34
Future Volume (vph)	84	304	80	94	226	76	112	436	116	194	466	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	6.0		3.0	6.0		3.0	6.0	6.0	3.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	0.95	
Frt	1.00	0.97		1.00	0.96		1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	1803		1770	1786		1770	1863	1583	1770	3503	
Flt Permitted	0.33	1.00		0.19	1.00		0.32	1.00	1.00	0.21	1.00	
Satd. Flow (perm)	608	1803		355	1786		604	1863	1583	394	3503	
Peak-hour factor, PHF	0.80	0.89	0.86	0.90	0.90	0.80	0.80	0.94	0.80	0.84	0.80	0.80
Growth Factor (vph)	106%	106%	106%	106%	106%	106%	106%	106%	106%	106%	106%	106%
Adj. Flow (vph)	111	362	99	111	266	101	148	492	154	245	617	45
RTOR Reduction (vph)	0	10	0	0	14	0	0	0	102	0	5	0
Lane Group Flow (vph)	111	451	0	111	353	0	148	492	52	245	657	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		
Actuated Green, G (s)	30.6	25.3		30.6	25.3		37.6	29.8	29.8	41.4	31.7	
Effective Green, g (s)	30.6	25.3		30.6	25.3		37.6	29.8	29.8	41.4	31.7	
Actuated g/C Ratio	0.35	0.29		0.35	0.29		0.43	0.34	0.34	0.47	0.36	
Clearance Time (s)	3.0	6.0		3.0	6.0		3.0	6.0	6.0	3.0	6.0	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Lane Grp Cap (vph)	281	517		208	512		361	630	535	336	1260	
v/s Ratio Prot	0.02	c0.25		c0.03	0.20		0.04	c0.26		c0.08	0.19	
v/s Ratio Perm	0.11			0.15			0.14		0.03	0.26		
v/c Ratio	0.40	0.87		0.53	0.69		0.41	0.78	0.10	0.73	0.52	
Uniform Delay, d1	20.7	29.9		21.6	27.9		16.0	26.2	19.9	16.8	22.2	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.3	14.5		1.3	3.1		0.3	5.8	0.0	6.6	0.2	
Delay (s)	21.0	44.4		22.9	31.0		16.3	32.0	20.0	23.4	22.4	
Level of Service	C	D		C	C		B	C	B	C	C	
Approach Delay (s)		39.9			29.1			26.7			22.7	
Approach LOS		D			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	28.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	88.1	Sum of lost time (s)	18.0
Intersection Capacity Utilization	80.3%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



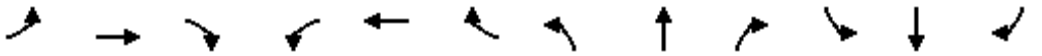
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	54	410	226	76	317	29	125	278	96	64	418	31
Future Volume (vph)	54	410	226	76	317	29	125	278	96	64	418	31
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.95		1.00	0.99		1.00	0.96		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1762		1770	1836		1770	1787		1770	1843	
Flt Permitted	0.42	1.00		0.12	1.00		0.19	1.00		0.32	1.00	
Satd. Flow (perm)	775	1762		224	1836		356	1787		596	1843	
Peak-hour factor, PHF	0.80	0.94	0.92	0.80	0.92	0.80	0.80	0.88	0.81	0.80	0.82	0.80
Growth Factor (vph)	109%	109%	109%	109%	109%	109%	109%	109%	109%	109%	109%	109%
Adj. Flow (vph)	74	475	268	104	376	40	170	344	129	87	556	42
RTOR Reduction (vph)	0	22	0	0	4	0	0	14	0	0	3	0
Lane Group Flow (vph)	74	721	0	104	412	0	170	459	0	87	595	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			2			1			1	
Permitted Phases	2			2			1			1		
Actuated Green, G (s)	42.0	42.0		42.0	42.0		37.0	37.0		37.0	37.0	
Effective Green, g (s)	42.0	42.0		42.0	42.0		37.0	37.0		37.0	37.0	
Actuated g/C Ratio	0.45	0.45		0.45	0.45		0.40	0.40		0.40	0.40	
Clearance Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	350	795		101	829		141	710		237	733	
v/s Ratio Prot		0.41			0.22			0.26			0.32	
v/s Ratio Perm	0.10			c0.47			c0.48			0.15		
v/c Ratio	0.21	0.91		1.03	0.50		1.21	0.65		0.37	0.81	
Uniform Delay, d1	15.5	23.7		25.5	18.0		28.0	22.7		19.7	24.9	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.1	13.7		97.8	0.2		141.5	4.5		4.3	9.5	
Delay (s)	15.6	37.3		123.3	18.2		169.5	27.2		24.1	34.4	
Level of Service	B	D		F	B		F	C		C	C	
Approach Delay (s)		35.4			39.2			64.8			33.1	
Approach LOS		D			D			E			C	

Intersection Summary			
HCM 2000 Control Delay	42.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.11		
Actuated Cycle Length (s)	93.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	121.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	45	21	515	27	19	544
Future Volume (vph)	45	21	515	27	19	544
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0		7.0			7.0
Lane Util. Factor	1.00		1.00			1.00
Frt	0.96		0.99			1.00
Flt Protected	0.97		1.00			1.00
Satd. Flow (prot)	1723		1848			1859
Flt Permitted	0.97		1.00			0.96
Satd. Flow (perm)	1723		1848			1798
Peak-hour factor, PHF	0.80	0.80	0.94	0.80	0.80	0.94
Growth Factor (vph)	109%	109%	109%	109%	109%	109%
Adj. Flow (vph)	61	29	597	37	26	631
RTOR Reduction (vph)	19	0	2	0	0	0
Lane Group Flow (vph)	71	0	632	0	0	657
Turn Type	Prot		NA		Perm	NA
Protected Phases	8		2			6
Permitted Phases					6	
Actuated Green, G (s)	6.6		70.0			70.0
Effective Green, g (s)	6.6		70.0			70.0
Actuated g/C Ratio	0.07		0.78			0.78
Clearance Time (s)	6.0		7.0			7.0
Vehicle Extension (s)	2.0		2.0			2.0
Lane Grp Cap (vph)	126		1443			1404
v/s Ratio Prot	c0.04		0.34			
v/s Ratio Perm						c0.37
v/c Ratio	0.56		0.44			0.47
Uniform Delay, d1	40.1		3.3			3.4
Progression Factor	1.00		1.00			1.00
Incremental Delay, d2	3.0		0.1			0.1
Delay (s)	43.1		3.3			3.5
Level of Service	D		A			A
Approach Delay (s)	43.1		3.3			3.5
Approach LOS	D		A			A

Intersection Summary			
HCM 2000 Control Delay	6.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	89.6	Sum of lost time (s)	13.0
Intersection Capacity Utilization	72.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



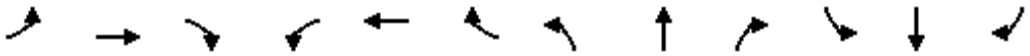
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	60	170	44	20	118	16	30	156	28	34	282	26
Future Volume (vph)	60	170	44	20	118	16	30	156	28	34	282	26
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0			6.0			6.0	6.0
Lane Util. Factor		1.00			1.00			1.00			1.00	1.00
Frt		0.98			0.99			0.98			1.00	0.85
Flt Protected		0.99			0.99			0.99			0.99	1.00
Satd. Flow (prot)		1801			1823			1817			1852	1583
Flt Permitted		0.89			0.93			0.92			0.94	1.00
Satd. Flow (perm)		1625			1705			1677			1748	1583
Peak-hour factor, PHF	0.80	0.82	0.80	0.80	0.85	0.80	0.80	0.80	0.80	0.82	0.90	0.80
Growth Factor (vph)	101%	101%	101%	101%	101%	101%	101%	101%	101%	101%	101%	101%
Adj. Flow (vph)	76	209	56	25	140	20	38	197	35	42	316	33
RTOR Reduction (vph)	0	11	0	0	7	0	0	9	0	0	0	17
Lane Group Flow (vph)	0	330	0	0	178	0	0	261	0	0	358	16
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		6
Actuated Green, G (s)		20.0			20.0			30.0			30.0	30.0
Effective Green, g (s)		20.0			20.0			30.0			30.0	30.0
Actuated g/C Ratio		0.33			0.33			0.49			0.49	0.49
Clearance Time (s)		5.0			5.0			6.0			6.0	6.0
Lane Grp Cap (vph)		532			559			824			859	778
v/s Ratio Prot												
v/s Ratio Perm		c0.20			0.10			0.16			c0.20	0.01
v/c Ratio		0.62			0.32			0.32			0.42	0.02
Uniform Delay, d1		17.3			15.4			9.3			9.9	8.0
Progression Factor		1.00			1.00			1.00			1.00	1.00
Incremental Delay, d2		5.3			1.5			1.0			1.5	0.0
Delay (s)		22.6			16.9			10.3			11.4	8.0
Level of Service		C			B			B			B	A
Approach Delay (s)		22.6			16.9			10.3			11.1	
Approach LOS		C			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	15.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	61.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	80.0%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

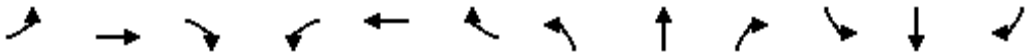
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	388	248	12	760	330
Future Volume (vph)	0	388	248	12	760	330
Ideal Flow (vphpl)	1900	1200	1900	1900	1900	1900
Total Lost time (s)		6.0	5.0	5.0	6.0	6.0
Lane Util. Factor		1.00	1.00	1.00	1.00	1.00
Frt		0.86	1.00	0.85	1.00	1.00
Flt Protected		1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)		1018	1863	1583	1770	1863
Flt Permitted		1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)		1018	1863	1583	1770	1863
Peak-hour factor, PHF	0.80	0.85	0.97	0.80	0.93	0.89
Growth Factor (vph)	101%	101%	101%	101%	101%	101%
Adj. Flow (vph)	0	461	258	15	825	374
RTOR Reduction (vph)	0	82	0	10	0	0
Lane Group Flow (vph)	0	379	258	5	825	374
Turn Type		Perm	NA	Perm	Prot	NA
Protected Phases			4		6	
Permitted Phases		2		4		6
Actuated Green, G (s)		32.7	11.4	11.4	32.7	32.7
Effective Green, g (s)		32.7	11.4	11.4	32.7	32.7
Actuated g/C Ratio		0.59	0.21	0.21	0.59	0.59
Clearance Time (s)		6.0	5.0	5.0	6.0	6.0
Vehicle Extension (s)		3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		604	385	327	1050	1105
v/s Ratio Prot			c0.14		c0.47	
v/s Ratio Perm		0.37		0.00		0.20
v/c Ratio		0.63	0.67	0.01	0.79	0.34
Uniform Delay, d1		7.3	20.1	17.4	8.5	5.7
Progression Factor		1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2		2.0	4.5	0.0	3.9	0.2
Delay (s)		9.3	24.7	17.4	12.5	5.9
Level of Service		A	C	B	B	A
Approach Delay (s)	9.3		24.3			10.4
Approach LOS	A		C			B

Intersection Summary			
HCM 2000 Control Delay	12.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	55.1	Sum of lost time (s)	11.0
Intersection Capacity Utilization	64.9%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



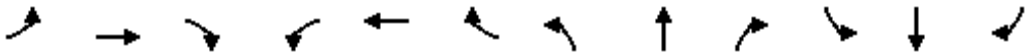
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	22	0	25	0	20	0	148	33	27	243	0
Future Volume (vph)	15	22	0	25	0	20	0	148	33	27	243	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0			7.0			7.0			7.0	
Lane Util. Factor	1.00	1.00			1.00			1.00			1.00	
Frt	1.00	1.00			0.94			0.98			1.00	
Flt Protected	0.95	1.00			0.97			1.00			1.00	
Satd. Flow (prot)	1770	1863			1703			1817			1854	
Flt Permitted	0.72	1.00			0.86			1.00			0.95	
Satd. Flow (perm)	1342	1863			1501			1817			1777	
Peak-hour factor, PHF	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.84	0.82	0.80
Adj. Flow (vph)	19	28	0	31	0	25	0	185	41	32	296	0
RTOR Reduction (vph)	0	0	0	0	37	0	0	10	0	0	0	0
Lane Group Flow (vph)	19	28	0	0	19	0	0	216	0	0	328	0
Turn Type	Perm	NA		Perm	NA			NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8						6		
Actuated Green, G (s)	25.0	25.0			25.0			36.0			36.0	
Effective Green, g (s)	25.0	25.0			25.0			36.0			36.0	
Actuated g/C Ratio	0.33	0.33			0.33			0.48			0.48	
Clearance Time (s)	7.0	7.0			7.0			7.0			7.0	
Lane Grp Cap (vph)	447	621			500			872			852	
v/s Ratio Prot		c0.02						0.12				
v/s Ratio Perm	0.01				0.01						c0.18	
v/c Ratio	0.04	0.05			0.04			0.25			0.38	
Uniform Delay, d1	16.9	16.9			16.9			11.5			12.4	
Progression Factor	1.00	1.00			1.00			1.00			0.89	
Incremental Delay, d2	0.2	0.1			0.1			0.7			1.0	
Delay (s)	17.1	17.1			17.0			12.2			12.0	
Level of Service	B	B			B			B			B	
Approach Delay (s)		17.1			17.0			12.2			12.0	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	12.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.25		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	67.8%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	18	132	24	82	100	66	12	162	54	110	250	22
Future Volume (vph)	18	132	24	82	100	66	12	162	54	110	250	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		9.0			9.0			9.0			9.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frt		0.98			0.97			0.97			0.99	
Flt Protected		0.99			0.98			1.00			0.99	
Satd. Flow (prot)		1819			1767			1794			1820	
Flt Permitted		0.94			0.81			0.96			0.83	
Satd. Flow (perm)		1711			1462			1726			1526	
Peak-hour factor, PHF	0.80	0.80	0.80	0.80	0.83	0.85	0.80	0.92	0.83	0.89	0.89	0.80
Adj. Flow (vph)	22	165	30	102	120	78	15	176	65	124	281	28
RTOR Reduction (vph)	0	0	0	0	0	0	0	16	0	0	4	0
Lane Group Flow (vph)	0	218	0	0	301	0	0	240	0	0	429	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		27.0			27.0			30.0			30.0	
Effective Green, g (s)		27.0			27.0			30.0			30.0	
Actuated g/C Ratio		0.36			0.36			0.40			0.40	
Clearance Time (s)		9.0			9.0			9.0			9.0	
Lane Grp Cap (vph)		615			526			690			610	
v/s Ratio Prot												
v/s Ratio Perm		0.13			c0.21			0.14			c0.28	
v/c Ratio		0.35			0.57			0.35			0.70	
Uniform Delay, d1		17.6			19.3			15.7			18.8	
Progression Factor		1.00			1.00			0.90			1.79	
Incremental Delay, d2		1.6			4.5			1.4			6.0	
Delay (s)		19.2			23.8			15.4			39.6	
Level of Service		B			C			B			D	
Approach Delay (s)		19.2			23.8			15.4			39.6	
Approach LOS		B			C			B			D	

Intersection Summary			
HCM 2000 Control Delay	26.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	104.4%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

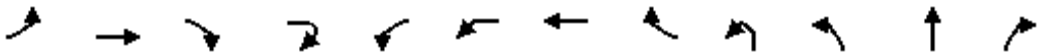


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	28	56	38	4	2	2	4	158	18	20	332	10
Future Volume (vph)	28	56	38	4	2	2	4	158	18	20	332	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		7.0			7.0			7.0			6.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frt		0.96			0.96			0.99			1.00	
Flt Protected		0.99			0.98			1.00			1.00	
Satd. Flow (prot)		1764			1754			1833			1850	
Flt Permitted		0.94			0.90			0.99			0.98	
Satd. Flow (perm)		1670			1615			1816			1812	
Peak-hour factor, PHF	0.80	0.80	0.80	0.83	0.80	0.80	0.80	0.87	0.80	0.80	0.82	0.80
Adj. Flow (vph)	35	70	48	5	2	2	5	182	22	25	405	12
RTOR Reduction (vph)	0	22	0	0	2	0	0	6	0	0	2	0
Lane Group Flow (vph)	0	131	0	0	9	0	0	204	0	0	441	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		26.0			26.0			35.0			36.0	
Effective Green, g (s)		26.0			26.0			35.0			36.0	
Actuated g/C Ratio		0.35			0.35			0.47			0.48	
Clearance Time (s)		7.0			7.0			7.0			6.0	
Lane Grp Cap (vph)		578			559			847			869	
v/s Ratio Prot												
v/s Ratio Perm		c0.08			0.01			0.11			c0.24	
v/c Ratio		0.23			0.02			0.24			0.51	
Uniform Delay, d1		17.4			16.1			12.0			13.4	
Progression Factor		1.00			1.00			1.78			1.00	
Incremental Delay, d2		0.9			0.1			0.6			2.1	
Delay (s)		18.3			16.1			22.0			15.5	
Level of Service		B			B			C			B	
Approach Delay (s)		18.3			16.1			22.0			15.5	
Approach LOS		B			B			C			B	

Intersection Summary			
HCM 2000 Control Delay	17.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	62.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBL	WBR	WBR2	NBL	NBT	SBT	SBR	NWT
Lane Configurations								
Traffic Volume (vph)	9	47	47	18	84	141	6	7
Future Volume (vph)	9	47	47	18	84	141	6	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0		6.0		6.0	6.0		6.0
Lane Util. Factor	1.00		0.95		1.00	1.00		1.00
Frt	0.87		0.85		1.00	0.99		1.00
Flt Protected	0.99		1.00		0.99	1.00		1.00
Satd. Flow (prot)	1612		1504		1849	1852		1863
Flt Permitted	0.99		1.00		0.95	1.00		1.00
Satd. Flow (perm)	1612		1504		1768	1852		1863
Peak-hour factor, PHF	0.80	0.80	0.80	0.99	0.80	0.80	0.80	0.80
Adj. Flow (vph)	11	59	59	18	105	176	8	9
RTOR Reduction (vph)	69	0	48	0	0	2	0	0
Lane Group Flow (vph)	7	0	5	0	123	182	0	9
Turn Type	Prot		Perm	Perm	NA	NA		NA
Protected Phases	8				1	1		2
Permitted Phases			8	1				
Actuated Green, G (s)	7.0		7.0		30.0	30.0		20.0
Effective Green, g (s)	7.0		7.0		30.0	30.0		20.0
Actuated g/C Ratio	0.09		0.09		0.40	0.40		0.27
Clearance Time (s)	6.0		6.0		6.0	6.0		6.0
Lane Grp Cap (vph)	150		140		707	740		496
v/s Ratio Prot	c0.00					c0.10		c0.00
v/s Ratio Perm			0.00		0.07			
v/c Ratio	0.05		0.04		0.17	0.25		0.02
Uniform Delay, d1	31.0		30.9		14.5	15.0		20.3
Progression Factor	1.00		1.00		1.00	1.00		1.00
Incremental Delay, d2	0.6		0.5		0.5	0.8		0.1
Delay (s)	31.6		31.4		15.0	15.8		20.3
Level of Service	C		C		B	B		C
Approach Delay (s)	31.5				15.0	15.8		20.3
Approach LOS	C				B	B		C

Intersection Summary			
HCM 2000 Control Delay	20.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.14		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	62.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	EBR2	WBL2	WBL	WBT	WBR	NBL2	NBL	NBT	NBR
Lane Configurations												
Traffic Volume (vph)	16	102	133	11	33	22	40	54	3	14	80	35
Future Volume (vph)	16	102	133	11	33	22	40	54	3	14	80	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0					6.0				6.0	
Lane Util. Factor		1.00					1.00				1.00	
Frt		0.93					0.95				0.96	
Flt Protected		1.00					0.98				0.99	
Satd. Flow (prot)		1720					1739				1784	
Flt Permitted		0.97					0.77				0.95	
Satd. Flow (perm)		1680					1361				1703	
Peak-hour factor, PHF	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Adj. Flow (vph)	20	128	166	14	41	28	50	68	4	18	100	44
RTOR Reduction (vph)	0	3	0	0	0	0	34	0	0	0	22	0
Lane Group Flow (vph)	0	325	0	0	0	0	153	0	0	0	144	0
Turn Type	Perm	NA			Perm	Perm	NA		pm+pt	pm+pt	NA	
Protected Phases		4					8		5	5	2	
Permitted Phases	4				8	8			2	2		
Actuated Green, G (s)		20.0					20.0				28.0	
Effective Green, g (s)		20.0					20.0				28.0	
Actuated g/C Ratio		0.33					0.33				0.47	
Clearance Time (s)		6.0					6.0				6.0	
Lane Grp Cap (vph)		560					453				801	
v/s Ratio Prot											c0.01	
v/s Ratio Perm		c0.19					0.11				0.07	
v/c Ratio		0.58					0.34				0.18	
Uniform Delay, d1		16.5					15.0				9.3	
Progression Factor		1.00					1.00				1.00	
Incremental Delay, d2		4.4					2.0				0.5	
Delay (s)		20.9					17.0				9.8	
Level of Service		C					B				A	
Approach Delay (s)		20.9					17.0				9.8	
Approach LOS		C					B				A	

Intersection Summary			
HCM 2000 Control Delay	18.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	57.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBL	SBT	SBR	SBR2
Lane Configurations				
Traffic Volume (vph)	59	151	14	18
Future Volume (vph)	59	151	14	18
Ideal Flow (vphpl)	1900	1900	1900	1900
Total Lost time (s)		6.0		
Lane Util. Factor		1.00		
Frt		0.98		
Flt Protected		0.99		
Satd. Flow (prot)		1807		
Flt Permitted		0.88		
Satd. Flow (perm)		1601		
Peak-hour factor, PHF	0.80	0.80	0.80	0.80
Adj. Flow (vph)	74	189	18	22
RTOR Reduction (vph)	0	5	0	0
Lane Group Flow (vph)	0	299	0	0
Turn Type	Perm	NA		
Protected Phases		6		
Permitted Phases	6			
Actuated Green, G (s)		20.0		
Effective Green, g (s)		20.0		
Actuated g/C Ratio		0.33		
Clearance Time (s)		6.0		
Lane Grp Cap (vph)		533		
v/s Ratio Prot				
v/s Ratio Perm		c0.19		
v/c Ratio		0.56		
Uniform Delay, d1		16.4		
Progression Factor		1.00		
Incremental Delay, d2		4.2		
Delay (s)		20.6		
Level of Service		C		
Approach Delay (s)		20.6		
Approach LOS		C		

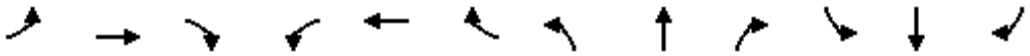
Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	908	6	40	262	44	0	0	186	0	0	0
Future Volume (vph)	0	908	6	40	262	44	0	0	186	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0		5.0	5.0				5.0			
Lane Util. Factor		0.91		1.00	0.95				1.00			
Frt		1.00		1.00	0.98				0.86			
Flt Protected		1.00		0.95	1.00				1.00			
Satd. Flow (prot)		5080		1770	3462				1611			
Flt Permitted		1.00		0.22	1.00				1.00			
Satd. Flow (perm)		5080		417	3462				1611			
Peak-hour factor, PHF	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Growth Factor (vph)	101%	101%	101%	101%	101%	101%	101%	101%	101%	101%	101%	101%
Adj. Flow (vph)	0	1146	8	50	331	56	0	0	235	0	0	0
RTOR Reduction (vph)	0	0	0	0	5	0	0	0	55	0	0	0
Lane Group Flow (vph)	0	1154	0	51	382	0	0	0	180	0	0	0
Turn Type		NA		Perm	NA				Perm			
Protected Phases		4			8							
Permitted Phases				8					2			
Actuated Green, G (s)		76.2		76.2	76.2				16.4			
Effective Green, g (s)		76.2		76.2	76.2				16.4			
Actuated g/C Ratio		0.74		0.74	0.74				0.16			
Clearance Time (s)		5.0		5.0	5.0				5.0			
Vehicle Extension (s)		3.0		3.0	3.0				3.0			
Lane Grp Cap (vph)		3772		309	2571				257			
v/s Ratio Prot		c0.23			0.11							
v/s Ratio Perm				0.12					c0.11			
v/c Ratio		0.31		0.17	0.15				0.70			
Uniform Delay, d1		4.4		3.9	3.8				40.8			
Progression Factor		1.00		1.00	1.00				1.00			
Incremental Delay, d2		0.2		1.1	0.1				8.4			
Delay (s)		4.6		5.0	3.9				49.2			
Level of Service		A		A	A				D			
Approach Delay (s)		4.6			4.1			49.2			0.0	
Approach LOS		A			A			D			A	

Intersection Summary			
HCM 2000 Control Delay	10.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	102.6	Sum of lost time (s)	10.0
Intersection Capacity Utilization	37.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	17	340	106	83	271	12	208	6	99	59	8	220
Future Volume (vph)	17	340	106	83	271	12	208	6	99	59	8	220
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	2.0	6.0	6.0	2.0	6.0			6.0			6.0	6.0
Lane Util. Factor	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	0.99			0.96			1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00			0.97			0.96	1.00
Satd. Flow (prot)	1770	1863	1583	1770	1851			1726			1784	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00			0.75			0.61	1.00
Satd. Flow (perm)	1770	1863	1583	1770	1851			1336			1142	1583
Peak-hour factor, PHF	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Growth Factor (vph)	101%	101%	101%	101%	101%	101%	101%	101%	101%	101%	101%	101%
Adj. Flow (vph)	21	429	134	105	342	15	263	8	125	74	10	278
RTOR Reduction (vph)	0	0	82	0	2	0	0	26	0	0	0	188
Lane Group Flow (vph)	21	429	52	105	355	0	0	370	0	0	84	90
Turn Type	Prot	NA	Perm	Prot	NA		Perm	NA		Perm	NA	Perm
Protected Phases	1	6		5	2			4			8	
Permitted Phases			6				4			8		8
Actuated Green, G (s)	1.5	24.6	24.6	4.6	27.7			20.8			20.8	20.8
Effective Green, g (s)	1.5	24.6	24.6	4.6	27.7			20.8			20.8	20.8
Actuated g/C Ratio	0.02	0.38	0.38	0.07	0.43			0.33			0.33	0.33
Clearance Time (s)	2.0	6.0	6.0	2.0	6.0			6.0			6.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			3.0			3.0	3.0
Lane Grp Cap (vph)	41	716	608	127	801			434			371	514
v/s Ratio Prot	0.01	c0.23		c0.06	0.19							
v/s Ratio Perm			0.03					c0.28			0.07	0.06
v/c Ratio	0.51	0.60	0.08	0.83	0.44			0.85			0.23	0.18
Uniform Delay, d1	30.9	15.8	12.5	29.3	12.7			20.2			15.7	15.5
Progression Factor	1.00	1.00	1.00	1.00	1.00			1.00			1.00	1.00
Incremental Delay, d2	10.4	3.7	0.3	33.6	1.8			14.8			0.3	0.2
Delay (s)	41.3	19.4	12.8	63.0	14.5			35.0			16.1	15.6
Level of Service	D	B	B	E	B			C			B	B
Approach Delay (s)		18.7			25.5			35.0			15.7	
Approach LOS		B			C			C			B	

Intersection Summary			
HCM 2000 Control Delay	23.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	64.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	62.0%	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 (vph)	68	284	52	140	150	62	28	488	138	142	628	34
Future Volume (vph)	68	284	52	140	150	62	28	488	138	142	628	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1500	1500	1900	1500	1500	1900
Total Lost time (s)	3.0	5.0		3.0	5.0		3.0	5.0		3.0	5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.95		1.00	0.97		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1635		1770	1775		1397	1420		1397	1459	
Flt Permitted	0.45	1.00		0.21	1.00		0.11	1.00		0.11	1.00	
Satd. Flow (perm)	834	1635		384	1775		159	1420		159	1459	
Peak-hour factor, PHF	0.80	0.86	0.80	0.90	0.89	0.80	0.80	0.93	0.89	0.84	0.94	0.88
Growth Factor (vph)	106%	106%	106%	106%	106%	106%	106%	106%	106%	106%	106%	106%
Adj. Flow (vph)	90	350	69	165	179	82	37	556	164	179	708	41
RTOR Reduction (vph)	0	8	0	0	19	0	0	12	0	0	2	0
Lane Group Flow (vph)	90	411	0	165	242	0	37	708	0	179	747	0
Parking (#/hr)		0										
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	24.8	17.6		28.4	19.4		43.0	37.0		43.0	37.0	
Effective Green, g (s)	24.8	17.6		28.4	19.4		43.0	37.0		43.0	37.0	
Actuated g/C Ratio	0.29	0.21		0.33	0.23		0.50	0.43		0.50	0.43	
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	5.0		3.0	5.0	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	320	336		273	402		166	613		166	630	
v/s Ratio Prot	0.02	c0.25		c0.06	0.14		0.02	0.50		c0.08	c0.51	
v/s Ratio Perm	0.06			0.14			0.10			0.46		
v/c Ratio	0.28	1.22		0.60	0.60		0.22	1.15		1.08	1.19	
Uniform Delay, d1	22.9	34.0		22.6	29.7		16.3	24.3		18.9	24.3	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.2	124.3		2.6	1.8		0.2	86.9		92.3	98.8	
Delay (s)	23.1	158.3		25.2	31.4		16.5	111.2		111.2	123.1	
Level of Service	C	F		C	C		B	F		F	F	
Approach Delay (s)		134.3			29.0			106.6			120.8	
Approach LOS		F			C			F			F	

Intersection Summary			
HCM 2000 Control Delay	104.4	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.11		
Actuated Cycle Length (s)	85.6	Sum of lost time (s)	16.0
Intersection Capacity Utilization	98.7%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Appendix 5E-8: 2025 No-Build PM

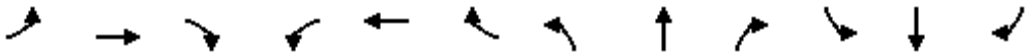
Unsignalized

Synchro Results

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	284	62	26	220	62	18
Future Volume (Veh/h)	284	62	26	220	62	18
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.81	0.80	0.81	0.95	0.80	0.80
Hourly flow rate (vph)	400	88	37	264	88	26
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			488		782	444
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			488		782	444
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			97		75	96
cM capacity (veh/h)			1075		350	614

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	488	301	114
Volume Left	0	37	88
Volume Right	88	0	26
cSH	1700	1075	388
Volume to Capacity	0.29	0.03	0.29
Queue Length 95th (ft)	0	3	30
Control Delay (s)	0.0	1.3	18.1
Lane LOS		A	C
Approach Delay (s)	0.0	1.3	18.1
Approach LOS			C

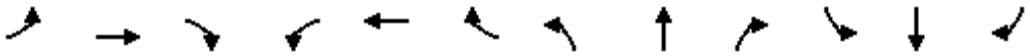
Intersection Summary			
Average Delay	2.7		
Intersection Capacity Utilization	49.8%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Yield			Stop			Yield	
Traffic Volume (vph)	22	27	7	1	30	209	6	70	8	227	73	14
Future Volume (vph)	22	27	7	1	30	209	6	70	8	227	73	14
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.87	0.80	0.80
Hourly flow rate (vph)	31	38	10	1	43	298	9	100	11	297	104	20

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	79	342	120	421
Volume Left (vph)	31	1	9	297
Volume Right (vph)	10	298	11	20
Hadj (s)	0.04	-0.49	-0.01	0.15
Departure Headway (s)	6.1	5.1	5.8	5.4
Degree Utilization, x	0.13	0.48	0.19	0.63
Capacity (veh/h)	501	658	549	637
Control Delay (s)	10.0	12.7	10.1	17.3
Approach Delay (s)	10.0	12.7	10.1	17.3
Approach LOS	B	B	B	C

Intersection Summary				
Delay	14.2			
Level of Service	B			
Intersection Capacity Utilization	56.0%	ICU Level of Service	B	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	26	168	11	10	154	28	9	41	26	22	36	39
Future Volume (Veh/h)	26	168	11	10	154	28	9	41	26	22	36	39
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	37	239	16	14	219	40	13	58	37	31	51	56
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		643			1031							
pX, platoon unblocked												
vC, conflicting volume	259			255			670	608	247	654	596	239
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	259			255			670	608	247	654	596	239
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	97			99			96	85	95	90	87	93
cM capacity (veh/h)	1306			1310			302	394	792	312	401	800

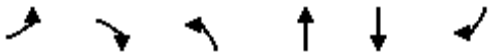
Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	292	273	108	138
Volume Left	37	14	13	31
Volume Right	16	40	37	56
cSH	1306	1310	456	465
Volume to Capacity	0.03	0.01	0.24	0.30
Queue Length 95th (ft)	2	1	23	31
Control Delay (s)	1.2	0.5	15.3	16.0
Lane LOS	A	A	C	C
Approach Delay (s)	1.2	0.5	15.3	16.0
Approach LOS			C	C

Intersection Summary			
Average Delay	5.4		
Intersection Capacity Utilization	38.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (veh/h)	0	65	570	77	0	734
Future Volume (Veh/h)	0	65	570	77	0	734
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	0	89	777	105	0	1000
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						1081
pX, platoon unblocked	0.83					
vC, conflicting volume	1830	830			777	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1899	830			777	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	76			100	
cM capacity (veh/h)	63	370			839	

Direction, Lane #	NW 1	NE 1	SW 1
Volume Total	89	882	1000
Volume Left	0	0	0
Volume Right	89	105	0
cSH	370	1700	1700
Volume to Capacity	0.24	0.52	0.59
Queue Length 95th (ft)	23	0	0
Control Delay (s)	17.8	0.0	0.0
Lane LOS	C		
Approach Delay (s)	17.8	0.0	0.0
Approach LOS	C		

Intersection Summary			
Average Delay	0.8		
Intersection Capacity Utilization	48.8%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	60	37	68	220	227	87
Future Volume (Veh/h)	60	37	68	220	227	87
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.80	0.80	0.96	0.88	0.86	0.88
Hourly flow rate (vph)	81	50	77	270	285	107
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)					693	
pX, platoon unblocked						
vC, conflicting volume	762	338	392			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	762	338	392			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	77	93	93			
cM capacity (veh/h)	348	704	1167			

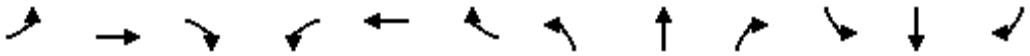
Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	131	347	392
Volume Left	81	77	0
Volume Right	50	0	107
cSH	431	1167	1700
Volume to Capacity	0.30	0.07	0.23
Queue Length 95th (ft)	32	5	0
Control Delay (s)	17.0	2.3	0.0
Lane LOS	C	A	
Approach Delay (s)	17.0	2.3	0.0
Approach LOS	C		

Intersection Summary			
Average Delay	3.5		
Intersection Capacity Utilization	51.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	8	191	150	3	194	258
Future Volume (Veh/h)	8	191	150	3	194	258
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.80	0.88	0.87	0.80	0.93	0.80
Hourly flow rate (vph)	11	234	186	4	225	348
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	986	188			190	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	986	188			190	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	95	73			84	
cM capacity (veh/h)	230	854			1384	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	245	190	573
Volume Left	11	0	225
Volume Right	234	4	0
cSH	761	1700	1384
Volume to Capacity	0.32	0.11	0.16
Queue Length 95th (ft)	35	0	15
Control Delay (s)	12.0	0.0	4.2
Lane LOS	B		A
Approach Delay (s)	12.0	0.0	4.2
Approach LOS	B		

Intersection Summary			
Average Delay	5.3		
Intersection Capacity Utilization	58.2%	ICU Level of Service	B
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	13	373	14	7	482	14	11	3	9	10	2	11
Future Volume (Veh/h)	13	373	14	7	482	14	11	3	9	10	2	11
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.81	0.92	0.80	0.80	0.83	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	17	438	19	9	627	19	15	4	12	14	3	15
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)					1030							
pX, platoon unblocked	0.88						0.88	0.88		0.88	0.88	0.88
vC, conflicting volume	646			457			1152	1146	448	1150	1146	636
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	532			457			1106	1098	448	1103	1098	521
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	98			99			90	98	98	91	98	97
cM capacity (veh/h)	914			1104			155	183	611	157	183	490

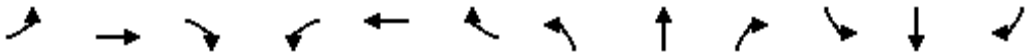
Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	474	655	31	32
Volume Left	17	9	15	14
Volume Right	19	19	12	15
cSH	914	1104	225	235
Volume to Capacity	0.02	0.01	0.14	0.14
Queue Length 95th (ft)	1	1	12	12
Control Delay (s)	0.5	0.2	23.6	22.7
Lane LOS	A	A	C	C
Approach Delay (s)	0.5	0.2	23.6	22.7
Approach LOS			C	C

Intersection Summary				
Average Delay	1.6			
Intersection Capacity Utilization	41.4%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	250	6	1	333	10	6	2	4	6	0	14
Future Volume (Veh/h)	5	250	6	1	333	10	6	2	4	6	0	14
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.80	0.84	0.80	0.80	0.90	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	7	330	8	1	411	14	8	3	6	8	0	19
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	425			338			787	775	334	776	772	418
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	425			338			787	775	334	776	772	418
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			100			97	99	99	97	100	97
cM capacity (veh/h)	1134			1221			298	327	708	308	328	635

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	345	426	17	27
Volume Left	7	1	8	8
Volume Right	8	14	6	19
cSH	1134	1221	382	483
Volume to Capacity	0.01	0.00	0.04	0.06
Queue Length 95th (ft)	0	0	3	4
Control Delay (s)	0.2	0.0	14.9	12.9
Lane LOS	A	A	B	B
Approach Delay (s)	0.2	0.0	14.9	12.9
Approach LOS			B	B

Intersection Summary				
Average Delay	0.8			
Intersection Capacity Utilization	30.7%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	214	7	145	223	32	6	12	85	45	57	28
Future Volume (Veh/h)	4	214	7	145	223	32	6	12	85	45	57	28
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.80	0.87	0.80	0.80	0.86	0.83	0.80	0.80	0.80	0.82	0.80	0.80
Hourly flow rate (vph)	5	261	9	192	275	41	8	16	113	58	76	37
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	316			270			1030	976	266	1076	960	296
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	316			270			1030	976	266	1076	960	296
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			85			94	92	85	59	65	95
cM capacity (veh/h)	1244			1293			131	213	773	140	218	744

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	275	508	137	171
Volume Left	5	192	8	58
Volume Right	9	41	113	37
cSH	1244	1293	485	211
Volume to Capacity	0.00	0.15	0.28	0.81
Queue Length 95th (ft)	0	13	29	148
Control Delay (s)	0.2	4.1	15.3	69.5
Lane LOS	A	A	C	F
Approach Delay (s)	0.2	4.1	15.3	69.5
Approach LOS			C	F

Intersection Summary				
Average Delay	14.8			
Intersection Capacity Utilization	59.9%	ICU Level of Service	B	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	184	4	32	202	26	8	78	138	32	118	62
Future Volume (Veh/h)	6	184	4	32	202	26	8	78	138	32	118	62
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.88	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	7	244	5	42	268	34	11	103	183	42	156	82
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	302			249			790	646	246	864	632	285
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	302			249			790	646	246	864	632	285
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			97			94	73	77	74	59	89
cM capacity (veh/h)	1259			1317			182	375	792	162	383	754

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	256	344	297	280
Volume Left	7	42	11	42
Volume Right	5	34	183	82
cSH	1259	1317	525	361
Volume to Capacity	0.01	0.03	0.57	0.78
Queue Length 95th (ft)	0	2	87	159
Control Delay (s)	0.3	1.2	20.4	42.2
Lane LOS	A	A	C	E
Approach Delay (s)	0.3	1.2	20.4	42.2
Approach LOS			C	E

Intersection Summary			
Average Delay	15.6		
Intersection Capacity Utilization	61.7%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	515	116	100	385	14	82
Future Volume (Veh/h)	515	116	100	385	14	82
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.88	0.80	0.93	0.86	0.80	0.80
Hourly flow rate (vph)	638	158	117	488	19	112
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	1023					
pX, platoon unblocked			0.87		0.87	0.87
vC, conflicting volume			796		1439	717
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			693		1430	602
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			85		83	74
cM capacity (veh/h)			787		110	436

Direction, Lane #	EB 1	WB 1	WB 2	NB 1
Volume Total	796	117	488	131
Volume Left	0	117	0	19
Volume Right	158	0	0	112
cSH	1700	787	1700	305
Volume to Capacity	0.47	0.15	0.29	0.43
Queue Length 95th (ft)	0	13	0	52
Control Delay (s)	0.0	10.4	0.0	25.4
Lane LOS		B		D
Approach Delay (s)	0.0	2.0		25.4
Approach LOS				D

Intersection Summary			
Average Delay	3.0		
Intersection Capacity Utilization	59.6%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	1	179	498	59	240	525
Future Volume (Veh/h)	1	179	498	59	240	525
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.80	0.80	0.88	0.80	0.87	0.89
Hourly flow rate (vph)	1	244	617	80	301	643
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			776			
pX, platoon unblocked	0.92	0.92			0.92	
vC, conflicting volume	1862	617			697	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1894	540			627	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	98	51			66	
cM capacity (veh/h)	46	498			878	

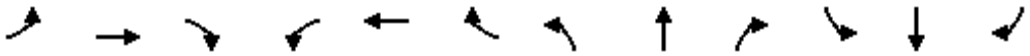
Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	245	617	80	301	643
Volume Left	1	0	0	301	0
Volume Right	244	0	80	0	0
cSH	479	1700	1700	878	1700
Volume to Capacity	0.51	0.36	0.05	0.34	0.38
Queue Length 95th (ft)	71	0	0	38	0
Control Delay (s)	20.1	0.0	0.0	11.2	0.0
Lane LOS	C			B	
Approach Delay (s)	20.1	0.0		3.6	
Approach LOS	C				

Intersection Summary			
Average Delay	4.4		
Intersection Capacity Utilization	65.2%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	8	18	216	6	12	336
Future Volume (Veh/h)	8	18	216	6	12	336
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.99	0.80	0.92	0.80	0.80	0.92
Hourly flow rate (vph)	8	23	237	8	15	369
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	640	241			245	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	640	241			245	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	98	97			99	
cM capacity (veh/h)	435	798			1321	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	31	245	384
Volume Left	8	0	15
Volume Right	23	8	0
cSH	656	1700	1321
Volume to Capacity	0.05	0.14	0.01
Queue Length 95th (ft)	4	0	1
Control Delay (s)	10.8	0.0	0.4
Lane LOS	B		A
Approach Delay (s)	10.8	0.0	0.4
Approach LOS	B		

Intersection Summary			
Average Delay	0.7		
Intersection Capacity Utilization	37.7%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	138	63	35	113	15	59	61	29	1	46	8
Future Volume (Veh/h)	8	138	63	35	113	15	59	61	29	1	46	8
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	9	150	68	38	123	16	64	66	32	1	50	9
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		1178										
pX, platoon unblocked												
vC, conflicting volume	139			218			443	417	184	474	443	131
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	139			218			443	417	184	474	443	131
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			97			86	87	96	100	90	99
cM capacity (veh/h)	1445			1352			467	509	858	423	492	919

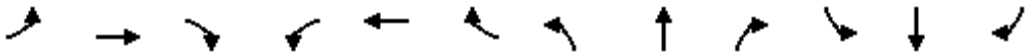
Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	227	177	162	60
Volume Left	9	38	64	1
Volume Right	68	16	32	9
cSH	1445	1352	533	527
Volume to Capacity	0.01	0.03	0.30	0.11
Queue Length 95th (ft)	0	2	32	10
Control Delay (s)	0.3	1.8	14.7	12.7
Lane LOS	A	A	B	B
Approach Delay (s)	0.3	1.8	14.7	12.7
Approach LOS			B	B

Intersection Summary				
Average Delay	5.7			
Intersection Capacity Utilization	44.3%	ICU Level of Service	A	
Analysis Period (min)	15			

Appendix 5E-9: 2025 Build AM

Signalized

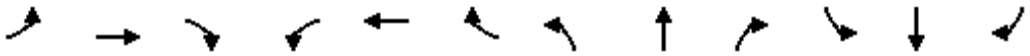
Synchro Results



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	132	226	21	69	288	85	18	350	38	26	187	117
Future Volume (vph)	132	226	21	69	288	85	18	350	38	26	187	117
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	8	11	12	8	11	12	12	16	12	12	16	12
Total Lost time (s)		6.0			6.0		6.0	6.0		6.0	6.0	
Lane Util. Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.99			0.97		1.00	0.99		1.00	0.94	
Flt Protected		0.98			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1757			1741		1770	2082		1770	1983	
Flt Permitted		0.65			0.89		0.45	1.00		0.29	1.00	
Satd. Flow (perm)		1169			1555		840	2082		536	1983	
Peak-hour factor, PHF	0.80	0.80	0.80	0.94	0.80	0.80	0.80	0.84	0.90	0.80	0.92	0.85
Adj. Flow (vph)	165	282	26	73	360	106	22	417	42	32	203	138
RTOR Reduction (vph)	0	4	0	0	14	0	0	6	0	0	41	0
Lane Group Flow (vph)	0	470	0	0	525	0	23	453	0	33	300	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		29.0			29.0		19.0	19.0		19.0	19.0	
Effective Green, g (s)		29.0			29.0		19.0	19.0		19.0	19.0	
Actuated g/C Ratio		0.48			0.48		0.32	0.32		0.32	0.32	
Clearance Time (s)		6.0			6.0		6.0	6.0		6.0	6.0	
Lane Grp Cap (vph)		565			751		266	659		169	627	
v/s Ratio Prot								c0.22			0.15	
v/s Ratio Perm		c0.40			0.34		0.03			0.06		
v/c Ratio		0.83			0.70		0.09	0.69		0.20	0.48	
Uniform Delay, d1		13.4			12.1		14.4	17.9		14.9	16.5	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		13.4			5.3		0.6	5.8		2.6	2.6	
Delay (s)		26.8			17.4		15.0	23.7		17.5	19.1	
Level of Service		C			B		B	C		B	B	
Approach Delay (s)		26.8			17.4			23.3			19.0	
Approach LOS		C			B			C			B	

Intersection Summary			
HCM 2000 Control Delay	21.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	71.3%	ICU Level of Service	C
Analysis Period (min)	15		

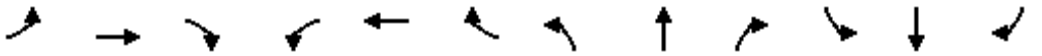
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	45	148	19	42	262	309	33	391	44	145	294	63
Future Volume (vph)	45	148	19	42	262	309	33	391	44	145	294	63
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0	6.0	6.0	6.0		3.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	1.00	0.85	1.00	0.98		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1831		1770	1863	1583	1770	1833		1770	1808	
Flt Permitted	0.28	1.00		0.50	1.00	1.00	0.52	1.00		0.35	1.00	
Satd. Flow (perm)	522	1831		925	1863	1583	975	1833		656	1808	
Peak-hour factor, PHF	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.84	0.80	0.87	0.90	0.80
Adj. Flow (vph)	56	185	24	52	328	386	41	465	55	167	327	79
RTOR Reduction (vph)	0	4	0	0	0	143	0	3	0	0	7	0
Lane Group Flow (vph)	56	205	0	53	328	243	41	517	0	167	399	0
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA		pm+pt	NA	
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	28.0	28.0		28.0	28.0	28.0	67.0	67.0		78.0	78.0	
Effective Green, g (s)	28.0	28.0		28.0	28.0	28.0	67.0	67.0		78.0	78.0	
Actuated g/C Ratio	0.24	0.24		0.24	0.24	0.24	0.57	0.57		0.66	0.66	
Clearance Time (s)	6.0	6.0		6.0	6.0	6.0	6.0	6.0		3.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	123	434		219	442	375	553	1040		509	1195	
v/s Ratio Prot		0.11			c0.18			c0.28		0.02	c0.22	
v/s Ratio Perm	0.11			0.06		0.15	0.04			0.19		
v/c Ratio	0.46	0.47		0.24	0.74	0.65	0.07	0.50		0.33	0.33	
Uniform Delay, d1	38.5	38.7		36.4	41.7	40.5	11.5	15.4		9.1	8.7	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	2.7	0.8		0.6	6.6	3.8	0.1	0.4		0.4	0.2	
Delay (s)	41.1	39.5		37.0	48.3	44.4	11.6	15.7		9.5	8.9	
Level of Service	D	D		D	D	D	B	B		A	A	
Approach Delay (s)		39.8			45.5			15.4			9.1	
Approach LOS		D			D			B			A	

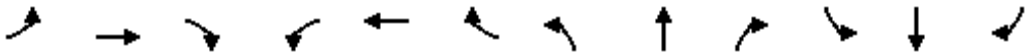
Intersection Summary			
HCM 2000 Control Delay	27.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	118.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	164.1%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	551	373	2	0	299	154	43	130	0	94	111	226
Future Volume (vph)	551	373	2	0	299	154	43	130	0	94	111	226
Ideal Flow (vphpl)	1200	1200	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	10	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	3.0	5.0			5.0			5.0			5.0	5.0
Lane Util. Factor	1.00	1.00			1.00			1.00			1.00	1.00
Frt	1.00	1.00			0.95			1.00			1.00	0.85
Flt Protected	0.95	1.00			1.00			0.99			0.98	1.00
Satd. Flow (prot)	1043	1097			1770			1840			1821	1583
Flt Permitted	0.11	1.00			1.00			0.55			0.61	1.00
Satd. Flow (perm)	125	1097			1770			1022			1140	1583
Peak-hour factor, PHF	0.85	0.80	0.80	0.80	0.90	0.80	0.80	0.80	0.80	0.81	0.80	0.90
Adj. Flow (vph)	648	466	2	0	332	192	54	162	0	116	139	251
RTOR Reduction (vph)	0	0	0	0	16	0	0	0	0	0	0	191
Lane Group Flow (vph)	648	469	0	0	509	0	0	217	0	0	255	60
Turn Type	pm+pt	NA			NA		Perm	NA		Perm	NA	Perm
Protected Phases	7	4			8			2			6	
Permitted Phases	4			8			2			6		6
Actuated Green, G (s)	93.0	93.0			32.0			27.0			27.0	27.0
Effective Green, g (s)	93.0	93.0			32.0			27.0			27.0	27.0
Actuated g/C Ratio	0.72	0.72			0.25			0.21			0.21	0.21
Clearance Time (s)	3.0	5.0			5.0			5.0			5.0	5.0
Vehicle Extension (s)	3.0	3.0			3.0			3.0			3.0	3.0
Lane Grp Cap (vph)	498	784			435			212			236	328
v/s Ratio Prot	c0.58	0.43			0.29							
v/s Ratio Perm	c0.35							0.21			c0.22	0.04
v/c Ratio	1.30	0.60			1.17			1.02			1.08	0.18
Uniform Delay, d1	31.3	9.2			49.0			51.5			51.5	42.4
Progression Factor	1.00	1.00			1.00			1.00			1.00	1.00
Incremental Delay, d2	149.7	1.2			98.8			68.1			81.6	0.3
Delay (s)	181.0	10.4			147.8			119.6			133.1	42.7
Level of Service	F	B			F			F			F	D
Approach Delay (s)		109.4			147.8			119.6			88.3	
Approach LOS		F			F			F			F	

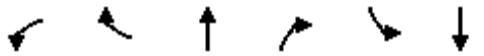
Intersection Summary			
HCM 2000 Control Delay	114.3	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.28		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	105.6%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	42	112	110	146	104	15	26	232	126	48	500	42
Future Volume (vph)	42	112	110	146	104	15	26	232	126	48	500	42
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.93		1.00	0.98		1.00	0.95		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1724		1770	1826		1770	1765		1770	1841	
Flt Permitted	0.67	1.00		0.53	1.00		0.22	1.00		0.42	1.00	
Satd. Flow (perm)	1240	1724		984	1826		415	1765		783	1841	
Peak-hour factor, PHF	0.80	0.80	0.80	0.80	0.84	0.80	0.80	0.80	0.81	0.80	0.80	0.80
Adj. Flow (vph)	52	140	138	182	124	19	32	290	156	60	625	52
RTOR Reduction (vph)	0	45	0	0	7	0	0	26	0	0	4	0
Lane Group Flow (vph)	53	233	0	183	136	0	33	420	0	60	674	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			4			2			2	
Permitted Phases	4			4			2			2		
Actuated Green, G (s)	23.5	23.5		23.5	23.5		34.1	34.1		34.1	34.1	
Effective Green, g (s)	23.5	23.5		23.5	23.5		34.1	34.1		34.1	34.1	
Actuated g/C Ratio	0.34	0.34		0.34	0.34		0.49	0.49		0.49	0.49	
Clearance Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Vehicle Extension (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)	418	582		332	616		203	864		383	901	
v/s Ratio Prot		0.14			0.07			0.24			c0.37	
v/s Ratio Perm	0.04			c0.19			0.08			0.08		
v/c Ratio	0.13	0.40		0.55	0.22		0.16	0.49		0.16	0.75	
Uniform Delay, d1	16.0	17.7		18.8	16.5		9.8	11.9		9.8	14.3	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.2	0.6		2.4	0.2		0.5	0.6		0.3	3.7	
Delay (s)	16.1	18.3		21.2	16.7		10.4	12.5		10.1	17.9	
Level of Service	B	B		C	B		B	B		B	B	
Approach Delay (s)		17.9			19.2			12.3			17.3	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	16.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	69.6	Sum of lost time (s)	12.0
Intersection Capacity Utilization	89.7%	ICU Level of Service	E
Analysis Period (min)	15		

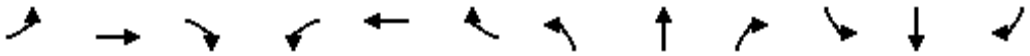
c Critical Lane Group



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	53	29	154	11	23	190
Future Volume (vph)	53	29	154	11	23	190
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0		6.0			6.0
Lane Util. Factor	1.00		1.00			1.00
Frt	0.95		0.99			1.00
Flt Protected	0.97		1.00			0.99
Satd. Flow (prot)	1713		1846			1853
Flt Permitted	0.97		1.00			0.96
Satd. Flow (perm)	1713		1846			1786
Peak-hour factor, PHF	0.93	0.80	0.80	0.80	0.80	0.80
Adj. Flow (vph)	57	36	192	14	29	238
RTOR Reduction (vph)	32	0	3	0	0	0
Lane Group Flow (vph)	61	0	204	0	0	267
Turn Type	Prot		NA		Perm	NA
Protected Phases	4		2			2
Permitted Phases					2	
Actuated Green, G (s)	5.3		28.8			28.8
Effective Green, g (s)	5.3		28.8			28.8
Actuated g/C Ratio	0.11		0.62			0.62
Clearance Time (s)	6.0		6.0			6.0
Vehicle Extension (s)	2.0		2.0			2.0
Lane Grp Cap (vph)	196		1153			1115
v/s Ratio Prot	c0.04		0.11			
v/s Ratio Perm						c0.15
v/c Ratio	0.31		0.18			0.24
Uniform Delay, d1	18.7		3.6			3.8
Progression Factor	1.00		1.00			1.00
Incremental Delay, d2	0.3		0.0			0.0
Delay (s)	19.1		3.7			3.9
Level of Service	B		A			A
Approach Delay (s)	19.1		3.7			3.9
Approach LOS	B		A			A

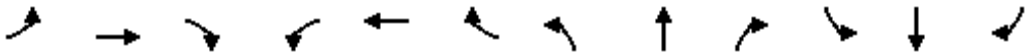
Intersection Summary			
HCM 2000 Control Delay	6.3	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.25		
Actuated Cycle Length (s)	46.1	Sum of lost time (s)	12.0
Intersection Capacity Utilization	47.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	32	125	23	12	106	52	37	112	10	40	116	17
Future Volume (vph)	32	125	23	12	106	52	37	112	10	40	116	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0			6.0			6.0			6.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frt		0.98			0.96			0.99			0.99	
Flt Protected		0.99			1.00			0.99			0.99	
Satd. Flow (prot)		1814			1780			1824			1817	
Flt Permitted		0.92			0.97			0.89			0.89	
Satd. Flow (perm)		1681			1739			1637			1641	
Peak-hour factor, PHF	0.81	0.80	0.80	0.80	0.80	0.80	0.80	0.84	0.80	0.80	0.80	0.80
Adj. Flow (vph)	40	156	29	15	132	65	46	133	12	50	145	21
RTOR Reduction (vph)	0	7	0	0	22	0	0	4	0	0	5	0
Lane Group Flow (vph)	0	218	0	0	191	0	0	188	0	0	211	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		6			6			2			2	
Permitted Phases	6			6			2			2		
Actuated Green, G (s)		32.0			32.0			30.0			30.0	
Effective Green, g (s)		32.0			32.0			30.0			30.0	
Actuated g/C Ratio		0.43			0.43			0.41			0.41	
Clearance Time (s)		6.0			6.0			6.0			6.0	
Lane Grp Cap (vph)		726			752			663			665	
v/s Ratio Prot												
v/s Ratio Perm		c0.13			0.11			0.12			c0.13	
v/c Ratio		0.30			0.25			0.28			0.32	
Uniform Delay, d1		13.7			13.4			14.8			15.0	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		1.1			0.8			1.1			1.2	
Delay (s)		14.8			14.2			15.9			16.3	
Level of Service		B			B			B			B	
Approach Delay (s)		14.8			14.2			15.9			16.3	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	15.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.31		
Actuated Cycle Length (s)	74.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	61.7%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



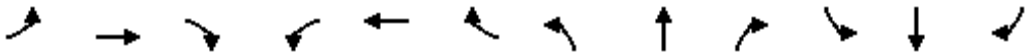
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	42	172	15	29	82	21	13	151	86	30	89	35
Future Volume (vph)	42	172	15	29	82	21	13	151	86	30	89	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.97		1.00	0.94		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1838		1770	1805		1770	1756		1770	1783	
Flt Permitted	0.68	1.00		0.62	1.00		0.66	1.00		0.48	1.00	
Satd. Flow (perm)	1261	1838		1163	1805		1227	1756		898	1783	
Peak-hour factor, PHF	0.86	0.88	0.80	0.80	0.83	0.80	0.80	0.87	0.80	0.84	0.80	0.80
Adj. Flow (vph)	49	195	19	36	99	26	16	174	108	36	111	44
RTOR Reduction (vph)	0	5	0	0	12	0	0	32	0	0	21	0
Lane Group Flow (vph)	49	209	0	36	113	0	16	250	0	36	134	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	38.0	38.0		38.0	38.0		22.0	22.0		22.0	22.0	
Effective Green, g (s)	38.0	38.0		38.0	38.0		22.0	22.0		22.0	22.0	
Actuated g/C Ratio	0.54	0.54		0.54	0.54		0.31	0.31		0.31	0.31	
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)	684	997		631	979		385	551		282	560	
v/s Ratio Prot		c0.11			0.06			c0.14			0.08	
v/s Ratio Perm	0.04			0.03			0.01			0.04		
v/c Ratio	0.07	0.21		0.06	0.12		0.04	0.45		0.13	0.24	
Uniform Delay, d1	7.6	8.3		7.5	7.8		16.7	19.2		17.1	17.8	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.2	0.5		0.2	0.2		0.2	2.7		0.9	1.0	
Delay (s)	7.8	8.7		7.7	8.0		16.9	21.9		18.1	18.8	
Level of Service	A	A		A	A		B	C		B	B	
Approach Delay (s)		8.6			8.0			21.6			18.7	
Approach LOS		A			A			C			B	

Intersection Summary			
HCM 2000 Control Delay	14.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	64.9%	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 (vph)	250	142	34	13	143	5	55	817	11	73	446	138
Future Volume (vph)	250	142	34	13	143	5	55	817	11	73	446	138
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	7.0		3.0	7.0	7.0	3.0	7.0		3.0	7.0	7.0
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.95		1.00	0.95	1.00
Frt	1.00	0.97		1.00	1.00	0.85	1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	1808		1770	1863	1583	1770	3532		1770	3539	1583
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1770	1808		1770	1863	1583	1770	3532		1770	3539	1583
Peak-hour factor, PHF	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Adj. Flow (vph)	312	178	42	16	179	6	69	1021	14	91	558	172
RTOR Reduction (vph)	0	9	0	0	0	5	0	1	0	0	0	108
Lane Group Flow (vph)	313	212	0	16	179	1	69	1034	0	91	558	65
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8						6
Actuated Green, G (s)	20.3	31.6		2.8	14.1	14.1	6.3	35.1		7.5	36.3	36.3
Effective Green, g (s)	20.3	31.6		2.8	14.1	14.1	6.3	35.1		7.5	36.3	36.3
Actuated g/C Ratio	0.21	0.33		0.03	0.15	0.15	0.06	0.36		0.08	0.37	0.37
Clearance Time (s)	3.0	7.0		3.0	7.0	7.0	3.0	7.0		3.0	7.0	7.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	370	588		51	270	230	114	1278		136	1324	592
v/s Ratio Prot	c0.18	0.12		0.01	c0.10		0.04	c0.29		c0.05	0.16	
v/s Ratio Perm						0.00						0.04
v/c Ratio	0.85	0.36		0.31	0.66	0.00	0.61	0.81		0.67	0.42	0.11
Uniform Delay, d1	36.8	25.0		46.2	39.2	35.4	44.1	27.9		43.5	22.5	19.8
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	16.1	0.4		3.5	6.0	0.0	8.8	5.6		11.8	1.0	0.4
Delay (s)	53.0	25.4		49.7	45.2	35.5	52.9	33.5		55.3	23.5	20.2
Level of Service	D	C		D	D	D	D	C		E	C	C
Approach Delay (s)		41.5			45.3			34.7			26.3	
Approach LOS		D			D			C			C	

Intersection Summary			
HCM 2000 Control Delay	34.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	97.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	68.5%	ICU Level of Service	C
Analysis Period (min)	15		

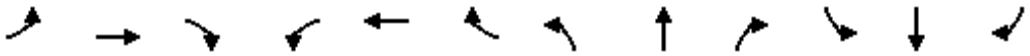
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	97	156	55	2	230	200	68	1041	0	93	579	17
Future Volume (vph)	97	156	55	2	230	200	68	1041	0	93	579	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	7.0		3.0	7.0		3.0	7.0		3.0	7.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frt	1.00	0.96		1.00	0.94		1.00	1.00		1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1785		1770	1742		1770	3539		1770	3524	
Flt Permitted	0.14	1.00		0.61	1.00		0.27	1.00		0.13	1.00	
Satd. Flow (perm)	265	1785		1127	1742		495	3539		237	3524	
Peak-hour factor, PHF	0.80	0.87	0.80	0.80	0.80	0.91	0.80	0.90	0.80	0.80	0.80	0.80
Adj. Flow (vph)	121	179	69	2	288	220	85	1157	0	116	724	21
RTOR Reduction (vph)	0	14	0	0	30	0	0	0	0	0	3	0
Lane Group Flow (vph)	121	234	0	3	478	0	85	1157	0	116	742	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	34.4	30.1		27.4	26.1		36.8	31.5		36.8	31.5	
Effective Green, g (s)	34.4	30.1		27.4	26.1		36.8	31.5		36.8	31.5	
Actuated g/C Ratio	0.39	0.34		0.31	0.30		0.42	0.36		0.42	0.36	
Clearance Time (s)	3.0	7.0		3.0	7.0		3.0	7.0		3.0	7.0	
Vehicle Extension (s)	3.0	2.0		3.0	2.0		3.0	2.0		3.0	2.0	
Lane Grp Cap (vph)	193	609		359	515		283	1263		191	1258	
v/s Ratio Prot	c0.04	0.13		0.00	c0.27		0.02	c0.33		c0.04	0.21	
v/s Ratio Perm	0.21			0.00			0.11			0.22		
v/c Ratio	0.63	0.38		0.01	0.93		0.30	0.92		0.61	0.59	
Uniform Delay, d1	20.3	22.0		21.0	30.2		16.2	27.1		19.2	23.1	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	6.2	0.1		0.0	22.8		0.6	10.3		5.4	0.5	
Delay (s)	26.6	22.2		21.0	53.0		16.8	37.3		24.6	23.6	
Level of Service	C	C		C	D		B	D		C	C	
Approach Delay (s)		23.6			52.8			35.9			23.7	
Approach LOS		C			D			D			C	

Intersection Summary			
HCM 2000 Control Delay	33.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	88.2	Sum of lost time (s)	20.0
Intersection Capacity Utilization	83.1%	ICU Level of Service	E
Analysis Period (min)	15		

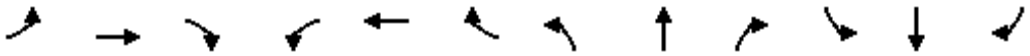
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	43	458	95	27	252	109	45	186	31	93	188	16
Future Volume (vph)	43	458	95	27	252	109	45	186	31	93	188	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.97		1.00	0.95		1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1815		1770	1773		1770	1825		1770	1841	
Flt Permitted	0.47	1.00		0.24	1.00		0.58	1.00		0.56	1.00	
Satd. Flow (perm)	881	1815		453	1773		1078	1825		1043	1841	
Peak-hour factor, PHF	0.87	0.80	0.80	0.80	0.88	0.80	0.80	0.81	0.87	0.80	0.80	0.80
Adj. Flow (vph)	49	572	119	34	286	136	56	230	36	116	235	20
RTOR Reduction (vph)	0	9	0	0	22	0	0	7	0	0	4	0
Lane Group Flow (vph)	49	683	0	34	400	0	56	259	0	116	251	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		1			1			2			2	
Permitted Phases	1			1			2			2		
Actuated Green, G (s)	27.8	27.8		27.8	27.8		15.2	15.2		15.2	15.2	
Effective Green, g (s)	27.8	27.8		27.8	27.8		15.2	15.2		15.2	15.2	
Actuated g/C Ratio	0.51	0.51		0.51	0.51		0.28	0.28		0.28	0.28	
Clearance Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	445	917		228	896		297	504		288	508	
v/s Ratio Prot		c0.38			0.23			c0.14			0.14	
v/s Ratio Perm	0.06			0.08			0.05			0.11		
v/c Ratio	0.11	0.74		0.15	0.45		0.19	0.51		0.40	0.49	
Uniform Delay, d1	7.1	10.8		7.3	8.7		15.2	16.8		16.2	16.7	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.0	2.9		0.1	0.1		0.1	0.4		0.3	0.3	
Delay (s)	7.2	13.7		7.4	8.8		15.3	17.2		16.5	17.0	
Level of Service	A	B		A	A		B	B		B	B	
Approach Delay (s)		13.3			8.7			16.8			16.8	
Approach LOS		B			A			B			B	

Intersection Summary			
HCM 2000 Control Delay	13.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	55.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	70.7%	ICU Level of Service	C
Analysis Period (min)	15		

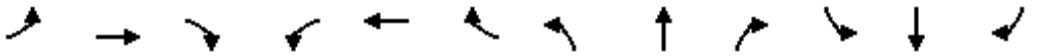
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	189	36	115	246	127	32	568	87	151	334	49
Future Volume (vph)	30	189	36	115	246	127	32	568	87	151	334	49
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1500	1500	1900	1500	1500	1900
Total Lost time (s)	3.0	7.0		3.0	7.0		3.0	6.0		3.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.95		1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1818		1770	1771		1397	1437		1397	1440	
Flt Permitted	0.26	1.00		0.29	1.00		0.37	1.00		0.11	1.00	
Satd. Flow (perm)	493	1818		542	1771		545	1437		159	1440	
Peak-hour factor, PHF	0.83	0.80	0.80	0.90	0.84	0.88	0.80	0.92	0.80	0.84	0.88	0.80
Adj. Flow (vph)	36	236	45	128	293	144	40	617	109	180	380	61
RTOR Reduction (vph)	0	8	0	0	20	0	0	7	0	0	7	0
Lane Group Flow (vph)	36	273	0	128	417	0	40	719	0	180	434	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	20.5	15.1		27.1	18.7		43.0	37.0		43.0	37.0	
Effective Green, g (s)	20.5	15.1		27.1	18.7		43.0	37.0		43.0	37.0	
Actuated g/C Ratio	0.24	0.18		0.31	0.22		0.50	0.43		0.50	0.43	
Clearance Time (s)	3.0	7.0		3.0	7.0		3.0	6.0		3.0	6.0	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	197	318		298	384		331	617		165	618	
v/s Ratio Prot	0.01	0.15		c0.04	c0.24		0.01	c0.50		c0.08	0.30	
v/s Ratio Perm	0.03			0.09			0.05			0.47		
v/c Ratio	0.18	0.86		0.43	1.09		0.12	1.16		1.09	0.70	
Uniform Delay, d1	26.2	34.5		22.3	33.7		11.7	24.5		18.9	20.1	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.2	19.2		0.4	71.3		0.1	90.9		96.4	3.0	
Delay (s)	26.4	53.6		22.7	105.0		11.8	115.5		115.4	23.0	
Level of Service	C	D		C	F		B	F		F	C	
Approach Delay (s)		50.5			86.4			110.0			49.8	
Approach LOS		D			F			F			D	

Intersection Summary			
HCM 2000 Control Delay	79.3	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.08		
Actuated Cycle Length (s)	86.1	Sum of lost time (s)	19.0
Intersection Capacity Utilization	100.8%	ICU Level of Service	G
Analysis Period (min)	15		

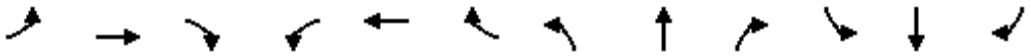
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	11	38	5	47	22	10	7	749	32	16	198	6
Future Volume (vph)	11	38	5	47	22	10	7	749	32	16	198	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0			6.0		3.0	6.0		3.0	6.0	
Lane Util. Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.99			0.98		1.00	0.99		1.00	1.00	
Flt Protected		0.99			0.97		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1822			1778		1770	1851		1770	1854	
Flt Permitted		0.94			0.80		0.60	1.00		0.08	1.00	
Satd. Flow (perm)		1732			1465		1119	1851		152	1854	
Peak-hour factor, PHF	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.81	0.80	0.80	0.80
Adj. Flow (vph)	14	48	6	59	28	12	9	936	40	20	248	8
RTOR Reduction (vph)	0	4	0	0	6	0	0	1	0	0	1	0
Lane Group Flow (vph)	0	64	0	0	94	0	9	975	0	20	255	0
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		25.0			25.0		49.0	48.0		51.0	49.0	
Effective Green, g (s)		25.0			25.0		49.0	48.0		51.0	49.0	
Actuated g/C Ratio		0.28			0.28		0.54	0.53		0.57	0.54	
Clearance Time (s)		6.0			6.0		3.0	6.0		3.0	6.0	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		481			406		616	987		122	1009	
v/s Ratio Prot							0.00	c0.53		c0.00	0.14	
v/s Ratio Perm		0.04			c0.06		0.01			0.09		
v/c Ratio		0.13			0.23		0.01	0.99		0.16	0.25	
Uniform Delay, d1		24.4			25.1		9.4	20.7		19.8	10.8	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.1			0.3		0.0	25.8		0.6	0.6	
Delay (s)		24.5			25.4		9.4	46.5		20.4	11.4	
Level of Service		C			C		A	D		C	B	
Approach Delay (s)		24.5			25.4			46.1			12.1	
Approach LOS		C			C			D			B	

Intersection Summary			
HCM 2000 Control Delay	37.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	72.2%	ICU Level of Service	C
Analysis Period (min)	15		

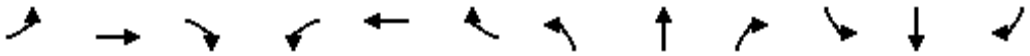
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	174	318	42	78	329	28	62	652	51	60	404	53
Future Volume (vph)	174	318	42	78	329	28	62	652	51	60	404	53
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	6.0		3.0	6.0		3.0	5.0		3.0	5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.99		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1826		1770	1839		1770	1840		1770	1828	
Flt Permitted	0.18	1.00		0.22	1.00		0.29	1.00		0.10	1.00	
Satd. Flow (perm)	339	1826		404	1839		545	1840		186	1828	
Peak-hour factor, PHF	0.97	0.90	0.80	0.80	0.88	0.80	0.80	0.90	0.80	0.80	0.88	0.80
Adj. Flow (vph)	179	353	52	98	374	35	78	724	64	75	459	66
RTOR Reduction (vph)	0	6	0	0	4	0	0	4	0	0	6	0
Lane Group Flow (vph)	179	400	0	98	405	0	78	784	0	75	519	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	28.0	22.0		25.4	20.7		45.0	40.0		45.0	40.0	
Effective Green, g (s)	28.0	22.0		25.4	20.7		45.0	40.0		45.0	40.0	
Actuated g/C Ratio	0.32	0.25		0.29	0.23		0.51	0.45		0.51	0.45	
Clearance Time (s)	3.0	6.0		3.0	6.0		3.0	5.0		3.0	5.0	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	203	452		188	429		345	829		183	824	
v/s Ratio Prot	c0.06	0.22		0.03	c0.22		0.01	c0.43		c0.02	0.28	
v/s Ratio Perm	0.22			0.12			0.10			0.18		
v/c Ratio	0.88	0.88		0.52	0.94		0.23	0.95		0.41	0.63	
Uniform Delay, d1	26.2	32.1		24.8	33.4		12.7	23.3		17.8	18.7	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	32.3	17.9		1.2	29.3		0.1	19.0		0.5	1.1	
Delay (s)	58.5	50.0		26.0	62.7		12.8	42.3		18.4	19.8	
Level of Service	E	D		C	E		B	D		B	B	
Approach Delay (s)		52.6			55.6			39.7			19.6	
Approach LOS		D			E			D			B	

Intersection Summary			
HCM 2000 Control Delay	41.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	88.7	Sum of lost time (s)	17.0
Intersection Capacity Utilization	86.1%	ICU Level of Service	E
Analysis Period (min)	15		

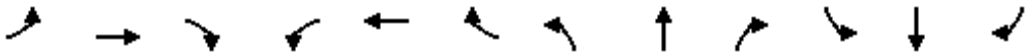
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	21	221	17	122	480	48	34	421	80	37	240	46
Future Volume (vph)	21	221	17	122	480	48	34	421	80	37	240	46
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0		3.0	5.0		6.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.99		1.00	0.97		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1842		1770	1838		1770	1813		1770	1815	
Flt Permitted	0.37	1.00		0.43	1.00		0.48	1.00		0.21	1.00	
Satd. Flow (perm)	685	1842		809	1838		895	1813		393	1815	
Peak-hour factor, PHF	0.80	0.83	0.80	0.81	0.88	0.90	0.80	0.91	0.80	0.92	0.86	0.80
Adj. Flow (vph)	26	266	21	151	545	53	42	463	100	40	279	58
RTOR Reduction (vph)	0	4	0	0	5	0	0	12	0	0	11	0
Lane Group Flow (vph)	26	283	0	151	593	0	43	551	0	40	326	0
Turn Type	Perm	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases		4		3	8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	20.2	20.2		28.6	28.6		22.5	22.5		22.5	22.5	
Effective Green, g (s)	20.2	20.2		28.6	28.6		22.5	22.5		22.5	22.5	
Actuated g/C Ratio	0.33	0.33		0.46	0.46		0.36	0.36		0.36	0.36	
Clearance Time (s)	5.0	5.0		3.0	5.0		6.0	6.0		6.0	6.0	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	222	599		456	846		324	656		142	657	
v/s Ratio Prot		0.15		0.03	c0.32			c0.30			0.18	
v/s Ratio Perm	0.04			0.12			0.05			0.10		
v/c Ratio	0.12	0.47		0.33	0.70		0.13	0.84		0.28	0.50	
Uniform Delay, d1	14.7	16.7		10.2	13.3		13.3	18.1		14.1	15.4	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.1	0.2		0.2	2.2		0.1	8.9		0.4	0.2	
Delay (s)	14.8	16.9		10.4	15.5		13.3	27.0		14.5	15.6	
Level of Service	B	B		B	B		B	C		B	B	
Approach Delay (s)		16.7			14.5			26.1			15.5	
Approach LOS		B			B			C			B	

Intersection Summary			
HCM 2000 Control Delay	18.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	62.1	Sum of lost time (s)	14.0
Intersection Capacity Utilization	88.9%	ICU Level of Service	E
Analysis Period (min)	15		

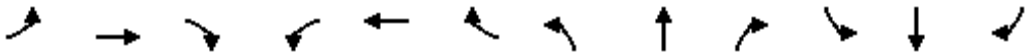
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	25	349	96	72	365	69	144	565	136	123	442	57
Future Volume (vph)	25	349	96	72	365	69	144	565	136	123	442	57
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	5.0		3.0	5.0		3.0	6.0	6.0	3.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	0.95	
Frt	1.00	0.97		1.00	0.97		1.00	1.00	0.85	1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	1804		1770	1814		1770	1863	1583	1770	3477	
Flt Permitted	0.17	1.00		0.14	1.00		0.34	1.00	1.00	0.11	1.00	
Satd. Flow (perm)	310	1804		260	1814		635	1863	1583	213	3477	
Peak-hour factor, PHF	0.86	0.92	0.95	0.80	0.90	0.80	0.93	0.88	0.80	0.84	0.82	0.80
Adj. Flow (vph)	29	379	101	90	406	86	155	642	170	146	539	71
RTOR Reduction (vph)	0	10	0	0	8	0	0	0	106	0	11	0
Lane Group Flow (vph)	29	470	0	90	484	0	155	642	64	146	599	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		
Actuated Green, G (s)	31.7	27.2		34.7	28.7		43.2	35.0	35.0	43.2	35.0	
Effective Green, g (s)	31.7	27.2		34.7	28.7		43.2	35.0	35.0	43.2	35.0	
Actuated g/C Ratio	0.34	0.29		0.37	0.31		0.46	0.37	0.37	0.46	0.37	
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	6.0	6.0	3.0	6.0	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Lane Grp Cap (vph)	175	525		193	557		393	698	593	235	1302	
v/s Ratio Prot	0.01	0.26		c0.03	c0.27		0.03	c0.34		c0.05	0.17	
v/s Ratio Perm	0.05			0.14			0.15		0.04	0.23		
v/c Ratio	0.17	0.90		0.47	0.87		0.39	0.92	0.11	0.62	0.46	
Uniform Delay, d1	22.5	31.7		21.9	30.6		15.1	27.9	19.0	19.2	22.1	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.2	17.2		0.7	13.2		0.2	16.9	0.0	3.6	0.1	
Delay (s)	22.6	49.0		22.6	43.7		15.3	44.7	19.1	22.8	22.2	
Level of Service	C	D		C	D		B	D	B	C	C	
Approach Delay (s)		47.5			40.5			35.5			22.3	
Approach LOS		D			D			D			C	

Intersection Summary			
HCM 2000 Control Delay	35.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	93.4	Sum of lost time (s)	17.0
Intersection Capacity Utilization	83.3%	ICU Level of Service	E
Analysis Period (min)	15		

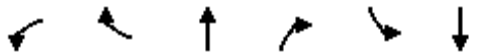
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	56	266	71	54	323	53	117	500	60	45	158	36
Future Volume (vph)	56	266	71	54	323	53	117	500	60	45	158	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.97		1.00	0.98		1.00	0.98		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1803		1770	1821		1770	1833		1770	1811	
Flt Permitted	0.28	1.00		0.31	1.00		0.61	1.00		0.28	1.00	
Satd. Flow (perm)	523	1803		585	1821		1132	1833		524	1811	
Peak-hour factor, PHF	0.80	0.81	0.80	0.80	0.86	0.80	0.80	0.89	0.88	0.80	0.80	0.80
Adj. Flow (vph)	70	328	89	68	376	66	146	562	68	56	198	45
RTOR Reduction (vph)	0	12	0	0	8	0	0	4	0	0	8	0
Lane Group Flow (vph)	70	405	0	68	434	0	146	626	0	56	235	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			2			1			1	
Permitted Phases	2			2			1			1		
Actuated Green, G (s)	26.8	26.8		26.8	26.8		44.2	44.2		44.2	44.2	
Effective Green, g (s)	26.8	26.8		26.8	26.8		44.2	44.2		44.2	44.2	
Actuated g/C Ratio	0.32	0.32		0.32	0.32		0.52	0.52		0.52	0.52	
Clearance Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	164	568		184	574		588	953		272	941	
v/s Ratio Prot		0.22			c0.24			c0.34			0.13	
v/s Ratio Perm	0.13			0.12			0.13			0.11		
v/c Ratio	0.43	0.71		0.37	0.76		0.25	0.66		0.21	0.25	
Uniform Delay, d1	23.0	25.7		22.6	26.2		11.2	14.9		11.0	11.3	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.7	3.5		0.5	5.0		1.0	3.5		1.7	0.6	
Delay (s)	23.7	29.2		23.0	31.2		12.3	18.4		12.7	11.9	
Level of Service	C	C		C	C		B	B		B	B	
Approach Delay (s)		28.4			30.1			17.2			12.0	
Approach LOS		C			C			B			B	

Intersection Summary			
HCM 2000 Control Delay	22.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	106.8%	ICU Level of Service	G
Analysis Period (min)	15		

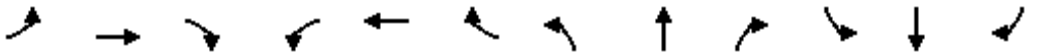
c Critical Lane Group



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	18	8	516	9	9	390
Future Volume (vph)	18	8	516	9	9	390
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0		7.0			7.0
Lane Util. Factor	1.00		1.00			1.00
Frt	0.96		1.00			1.00
Flt Protected	0.97		1.00			1.00
Satd. Flow (prot)	1726		1858			1860
Flt Permitted	0.97		1.00			0.98
Satd. Flow (perm)	1726		1858			1834
Peak-hour factor, PHF	0.80	0.80	0.84	0.80	0.80	0.89
Adj. Flow (vph)	22	10	614	11	11	438
RTOR Reduction (vph)	10	0	1	0	0	0
Lane Group Flow (vph)	23	0	624	0	0	449
Turn Type	Prot		NA		Perm	NA
Protected Phases	8		2			6
Permitted Phases					6	
Actuated Green, G (s)	4.2		73.3			73.3
Effective Green, g (s)	4.2		73.3			73.3
Actuated g/C Ratio	0.05		0.81			0.81
Clearance Time (s)	6.0		7.0			7.0
Vehicle Extension (s)	2.0		2.0			2.0
Lane Grp Cap (vph)	80		1504			1485
v/s Ratio Prot	c0.01		c0.34			
v/s Ratio Perm						0.24
v/c Ratio	0.29		0.42			0.30
Uniform Delay, d1	41.7		2.5			2.2
Progression Factor	1.00		1.00			1.00
Incremental Delay, d2	0.7		0.1			0.0
Delay (s)	42.5		2.5			2.2
Level of Service	D		A			A
Approach Delay (s)	42.5		2.5			2.2
Approach LOS	D		A			A

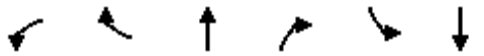
Intersection Summary			
HCM 2000 Control Delay	3.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	90.5	Sum of lost time (s)	13.0
Intersection Capacity Utilization	72.5%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	80	167	0	0	131	28	28	298	30	40	6	46
Future Volume (vph)	80	167	0	0	131	28	28	298	30	40	6	46
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0			6.0			6.0	6.0
Lane Util. Factor		1.00			1.00			1.00			1.00	1.00
Frt		1.00			0.98			0.99			1.00	0.85
Flt Protected		0.98			1.00			1.00			0.96	1.00
Satd. Flow (prot)		1833			1819			1833			1784	1583
Flt Permitted		0.83			1.00			0.98			0.63	1.00
Satd. Flow (perm)		1538			1819			1797			1177	1583
Peak-hour factor, PHF	0.80	0.80	0.80	0.80	0.80	0.80	0.83	0.85	0.80	0.80	0.90	0.80
Adj. Flow (vph)	100	209	0	0	164	35	34	351	38	50	7	58
RTOR Reduction (vph)	0	0	0	0	13	0	0	6	0	0	0	29
Lane Group Flow (vph)	0	309	0	0	186	0	0	417	0	0	57	29
Turn Type	Perm	NA			NA		Perm	NA		Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		6
Actuated Green, G (s)		20.0			20.0			30.0			30.0	30.0
Effective Green, g (s)		20.0			20.0			30.0			30.0	30.0
Actuated g/C Ratio		0.33			0.33			0.49			0.49	0.49
Clearance Time (s)		5.0			5.0			6.0			6.0	6.0
Lane Grp Cap (vph)		504			596			883			578	778
v/s Ratio Prot					0.10							
v/s Ratio Perm		c0.20						c0.23			0.05	0.02
v/c Ratio		0.61			0.31			0.47			0.10	0.04
Uniform Delay, d1		17.2			15.4			10.3			8.3	8.0
Progression Factor		1.00			1.00			1.00			1.00	1.00
Incremental Delay, d2		5.5			1.4			1.8			0.3	0.1
Delay (s)		22.7			16.7			12.1			8.6	8.1
Level of Service		C			B			B			A	A
Approach Delay (s)		22.7			16.7			12.1			8.4	
Approach LOS		C			B			B			A	

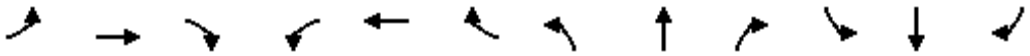
Intersection Summary			
HCM 2000 Control Delay	15.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	61.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	80.0%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	936	477	10	205	128
Future Volume (vph)	0	936	477	10	205	128
Ideal Flow (vphpl)	1900	1200	1900	1900	1900	1900
Total Lost time (s)		6.0	5.0	5.0	5.0	5.0
Lane Util. Factor		1.00	1.00	1.00	1.00	1.00
Frt		0.86	1.00	0.85	1.00	1.00
Flt Protected		1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)		1018	1863	1583	1770	1863
Flt Permitted		1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)		1018	1863	1583	1770	1863
Peak-hour factor, PHF	0.80	0.80	0.80	0.94	0.84	0.84
Adj. Flow (vph)	0	1170	596	11	244	152
RTOR Reduction (vph)	0	0	0	2	0	0
Lane Group Flow (vph)	0	1170	596	9	244	152
Turn Type		Perm	NA	Perm	Prot	NA
Protected Phases			4		6	
Permitted Phases		2		4		6
Actuated Green, G (s)		108.0	31.0	31.0	109.0	109.0
Effective Green, g (s)		108.0	31.0	31.0	109.0	109.0
Actuated g/C Ratio		0.72	0.21	0.21	0.73	0.73
Clearance Time (s)		6.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)		3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		732	385	327	1286	1353
v/s Ratio Prot			c0.32		0.14	
v/s Ratio Perm		c1.15		0.01		0.08
v/c Ratio		1.60	1.55	0.03	0.19	0.11
Uniform Delay, d1		21.0	59.5	47.5	6.5	6.1
Progression Factor		1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2		275.7	259.2	0.0	0.1	0.0
Delay (s)		296.7	318.7	47.5	6.6	6.1
Level of Service		F	F	D	A	A
Approach Delay (s)	296.7		313.8			6.4
Approach LOS	F		F			A

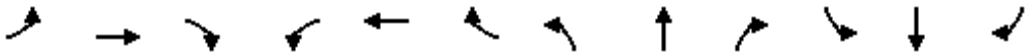
Intersection Summary			
HCM 2000 Control Delay	248.6	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.59		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	126.0%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group



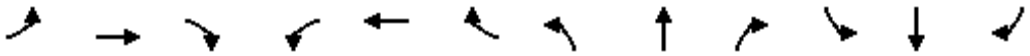
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	3	5	0	15	0	6	0	131	15	8	69	0
Future Volume (vph)	3	5	0	15	0	6	0	131	15	8	69	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0			7.0			7.0			7.0	
Lane Util. Factor	1.00	1.00			1.00			1.00			1.00	
Frt	1.00	1.00			0.96			0.99			1.00	
Flt Protected	0.95	1.00			0.97			1.00			0.99	
Satd. Flow (prot)	1770	1863			1727			1836			1853	
Flt Permitted	0.74	1.00			0.86			1.00			0.97	
Satd. Flow (perm)	1378	1863			1537			1836			1806	
Peak-hour factor, PHF	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.81	0.80	0.80	0.80	0.80
Adj. Flow (vph)	4	6	0	19	0	8	0	162	19	10	86	0
RTOR Reduction (vph)	0	0	0	0	18	0	0	6	0	0	0	0
Lane Group Flow (vph)	4	6	0	0	9	0	0	175	0	0	96	0
Turn Type	Perm	NA		Perm	NA			NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8						6		
Actuated Green, G (s)	25.0	25.0			25.0			36.0			36.0	
Effective Green, g (s)	25.0	25.0			25.0			36.0			36.0	
Actuated g/C Ratio	0.33	0.33			0.33			0.48			0.48	
Clearance Time (s)	7.0	7.0			7.0			7.0			7.0	
Lane Grp Cap (vph)	459	621			512			881			866	
v/s Ratio Prot		0.00						c0.10				
v/s Ratio Perm	0.00				c0.01						0.05	
v/c Ratio	0.01	0.01			0.02			0.20			0.11	
Uniform Delay, d1	16.7	16.7			16.8			11.2			10.7	
Progression Factor	1.00	1.00			1.00			1.00			0.83	
Incremental Delay, d2	0.0	0.0			0.1			0.5			0.2	
Delay (s)	16.7	16.7			16.8			11.7			9.1	
Level of Service	B	B			B			B			A	
Approach Delay (s)		16.7			16.8			11.7			9.1	
Approach LOS		B			B			B			A	

Intersection Summary			
HCM 2000 Control Delay	11.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.12		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	62.5%	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 (vph)	33	218	19	45	113	98	5	268	113	96	146	14
Future Volume (vph)	33	218	19	45	113	98	5	268	113	96	146	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		9.0			9.0			9.0			9.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frt		0.99			0.95			0.96			0.99	
Flt Protected		0.99			0.99			1.00			0.98	
Satd. Flow (prot)		1834			1747			1781			1816	
Flt Permitted		0.92			0.87			1.00			0.67	
Satd. Flow (perm)		1691			1531			1774			1242	
Peak-hour factor, PHF	0.80	0.80	0.82	0.80	0.86	0.80	0.91	0.91	0.80	0.86	0.80	0.80
Adj. Flow (vph)	41	272	23	56	131	122	5	295	141	112	182	18
RTOR Reduction (vph)	0	0	0	0	0	0	0	23	0	0	3	0
Lane Group Flow (vph)	0	337	0	0	310	0	0	418	0	0	310	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		27.0			27.0			30.0			30.0	
Effective Green, g (s)		27.0			27.0			30.0			30.0	
Actuated g/C Ratio		0.36			0.36			0.40			0.40	
Clearance Time (s)		9.0			9.0			9.0			9.0	
Lane Grp Cap (vph)		608			551			709			496	
v/s Ratio Prot												
v/s Ratio Perm		0.20			c0.20			0.24			c0.25	
v/c Ratio		0.55			0.56			0.59			0.62	
Uniform Delay, d1		19.2			19.3			17.7			18.0	
Progression Factor		1.00			1.00			1.01			1.40	
Incremental Delay, d2		3.6			4.1			3.6			5.8	
Delay (s)		22.8			23.4			21.4			31.0	
Level of Service		C			C			C			C	
Approach Delay (s)		22.8			23.4			21.4			31.0	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	24.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	95.0%	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 (vph)	17	69	10	29	14	5	9	294	10	10	129	34
Future Volume (vph)	17	69	10	29	14	5	9	294	10	10	129	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		7.0			7.0			7.0			6.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frt		0.99			0.99			1.00			0.97	
Flt Protected		0.99			0.97			1.00			1.00	
Satd. Flow (prot)		1820			1784			1852			1808	
Flt Permitted		0.95			0.80			0.99			0.97	
Satd. Flow (perm)		1743			1475			1836			1761	
Peak-hour factor, PHF	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Adj. Flow (vph)	21	86	12	36	18	6	11	368	12	12	161	42
RTOR Reduction (vph)	0	6	0	0	4	0	0	2	0	0	12	0
Lane Group Flow (vph)	0	114	0	0	56	0	0	390	0	0	205	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		26.0			26.0			35.0			36.0	
Effective Green, g (s)		26.0			26.0			35.0			36.0	
Actuated g/C Ratio		0.35			0.35			0.47			0.48	
Clearance Time (s)		7.0			7.0			7.0			6.0	
Lane Grp Cap (vph)		604			511			856			845	
v/s Ratio Prot												
v/s Ratio Perm		c0.07			0.04			c0.21			0.12	
v/c Ratio		0.19			0.11			0.46			0.24	
Uniform Delay, d1		17.1			16.6			13.6			11.5	
Progression Factor		1.00			1.00			1.67			1.00	
Incremental Delay, d2		0.7			0.4			1.4			0.7	
Delay (s)		17.8			17.1			24.1			12.2	
Level of Service		B			B			C			B	
Approach Delay (s)		17.8			17.1			24.1			12.2	
Approach LOS		B			B			C			B	

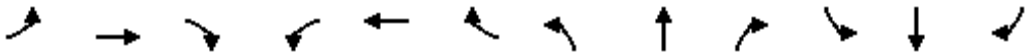
Intersection Summary			
HCM 2000 Control Delay	19.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.34		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	62.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	EBR2	WBL2	WBL	WBT	WBR	NBL2	NBL	NBT	NBR
Lane Configurations												
Traffic Volume (vph)	4	62	20	6	23	41	83	35	7	38	62	23
Future Volume (vph)	4	62	20	6	23	41	83	35	7	38	62	23
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0					6.0				6.0	
Lane Util. Factor		1.00					1.00				1.00	
Frt		0.96					0.97				0.98	
Flt Protected		1.00					0.98				0.98	
Satd. Flow (prot)		1787					1783				1787	
Flt Permitted		0.99					0.85				0.88	
Satd. Flow (perm)		1766					1539				1598	
Peak-hour factor, PHF	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Adj. Flow (vph)	5	78	25	8	29	51	104	44	9	48	78	29
RTOR Reduction (vph)	0	5	0	0	0	0	14	0	0	0	13	0
Lane Group Flow (vph)	0	111	0	0	0	0	214	0	0	0	151	0
Turn Type	Perm	NA			Perm	Perm	NA		pm+pt	pm+pt	NA	
Protected Phases		4					8		5	5	2	
Permitted Phases	4				8	8			2	2		
Actuated Green, G (s)		21.0					21.0				27.0	
Effective Green, g (s)		21.0					21.0				27.0	
Actuated g/C Ratio		0.35					0.35				0.45	
Clearance Time (s)		6.0					6.0				6.0	
Lane Grp Cap (vph)		618					538				734	
v/s Ratio Prot											c0.02	
v/s Ratio Perm		0.06					c0.14				0.08	
v/c Ratio		0.18					0.40				0.21	
Uniform Delay, d1		13.5					14.7				10.0	
Progression Factor		1.00					1.00				1.00	
Incremental Delay, d2		0.6					2.2				0.6	
Delay (s)		14.2					16.9				10.6	
Level of Service		B					B				B	
Approach Delay (s)		14.2					16.9				10.6	
Approach LOS		B					B				B	

Intersection Summary			
HCM 2000 Control Delay	14.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.31		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	36.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBL	SBT	SBR	SBR2
Lane Configurations				
Traffic Volume (vph)	29	51	13	5
Future Volume (vph)	29	51	13	5
Ideal Flow (vphpl)	1900	1900	1900	1900
Total Lost time (s)		6.0		
Lane Util. Factor		1.00		
Frt		0.98		
Flt Protected		0.99		
Satd. Flow (prot)		1791		
Flt Permitted		0.88		
Satd. Flow (perm)		1593		
Peak-hour factor, PHF	0.80	0.80	0.80	0.80
Adj. Flow (vph)	36	64	16	6
RTOR Reduction (vph)	0	3	0	0
Lane Group Flow (vph)	0	119	0	0
Turn Type	Perm	NA		
Protected Phases		6		
Permitted Phases	6			
Actuated Green, G (s)		19.0		
Effective Green, g (s)		19.0		
Actuated g/C Ratio		0.32		
Clearance Time (s)		6.0		
Lane Grp Cap (vph)		504		
v/s Ratio Prot				
v/s Ratio Perm		c0.07		
v/c Ratio		0.24		
Uniform Delay, d1		15.1		
Progression Factor		1.00		
Incremental Delay, d2		1.1		
Delay (s)		16.2		
Level of Service		B		
Approach Delay (s)		16.2		
Approach LOS		B		

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	307	14	158	726	61	0	0	184	0	0	0
Future Volume (vph)	0	307	14	158	726	61	0	0	184	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0		5.0	5.0				5.0			
Lane Util. Factor		0.91		1.00	0.95				1.00			
Frt		0.99		1.00	0.99				0.86			
Flt Protected		1.00		0.95	1.00				1.00			
Satd. Flow (prot)		5051		1770	3498				1611			
Flt Permitted		1.00		0.51	1.00				1.00			
Satd. Flow (perm)		5051		944	3498				1611			
Peak-hour factor, PHF	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.92	0.92	0.92
Adj. Flow (vph)	0	384	18	198	908	76	0	0	230	0	0	0
RTOR Reduction (vph)	0	1	0	0	2	0	0	0	218	0	0	0
Lane Group Flow (vph)	0	401	0	198	982	0	0	0	12	0	0	0
Turn Type		NA		Perm	NA				Perm			
Protected Phases		4			8							
Permitted Phases				8					2			
Actuated Green, G (s)		92.2		92.2	92.2				5.5			
Effective Green, g (s)		92.2		92.2	92.2				5.5			
Actuated g/C Ratio		0.86		0.86	0.86				0.05			
Clearance Time (s)		5.0		5.0	5.0				5.0			
Vehicle Extension (s)		3.0		3.0	3.0				3.0			
Lane Grp Cap (vph)		4324		808	2994				82			
v/s Ratio Prot		0.08			c0.28							
v/s Ratio Perm				0.21					c0.01			
v/c Ratio		0.09		0.25	0.33				0.14			
Uniform Delay, d1		1.2		1.4	1.6				48.8			
Progression Factor		1.00		1.00	1.00				1.00			
Incremental Delay, d2		0.0		0.7	0.3				0.8			
Delay (s)		1.3		2.1	1.8				49.7			
Level of Service		A		A	A				D			
Approach Delay (s)		1.3			1.9			49.7			0.0	
Approach LOS		A			A			D			A	

Intersection Summary			
HCM 2000 Control Delay	7.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	107.7	Sum of lost time (s)	10.0
Intersection Capacity Utilization	26.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	37	272	135	188	344	23	145	4	55	8	4	31
Future Volume (vph)	37	272	135	188	344	23	145	4	55	8	4	31
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	2.0	6.0	6.0	2.0	6.0			6.0			6.0	6.0
Lane Util. Factor	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	0.99			0.96			1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00			0.97			0.97	1.00
Satd. Flow (prot)	1770	1863	1583	1770	1845			1733			1803	1583
Flt Permitted	0.50	1.00	1.00	0.46	1.00			0.78			0.80	1.00
Satd. Flow (perm)	929	1863	1583	858	1845			1400			1498	1583
Peak-hour factor, PHF	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Adj. Flow (vph)	46	340	169	235	430	29	181	5	69	10	5	39
RTOR Reduction (vph)	0	0	101	0	3	0	0	21	0	0	0	30
Lane Group Flow (vph)	46	340	68	235	456	0	0	234	0	0	15	9
Turn Type	pm+pt	NA	Perm	pm+pt	NA		Perm	NA		Perm	NA	Perm
Protected Phases	1	6		5	2			4			8	
Permitted Phases	6		6	2			4			8		8
Actuated Green, G (s)	27.4	25.1	25.1	35.5	31.2			14.8			14.8	14.8
Effective Green, g (s)	27.4	25.1	25.1	35.5	31.2			14.8			14.8	14.8
Actuated g/C Ratio	0.44	0.40	0.40	0.57	0.50			0.24			0.24	0.24
Clearance Time (s)	2.0	6.0	6.0	2.0	6.0			6.0			6.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			3.0			3.0	3.0
Lane Grp Cap (vph)	439	750	637	611	923			332			355	376
v/s Ratio Prot	0.00	0.18		c0.05	c0.25							
v/s Ratio Perm	0.04		0.04	0.17				c0.17			0.01	0.01
v/c Ratio	0.10	0.45	0.11	0.38	0.49			0.70			0.04	0.02
Uniform Delay, d1	10.0	13.6	11.6	6.9	10.3			21.7			18.3	18.2
Progression Factor	1.00	1.00	1.00	1.00	1.00			1.00			1.00	1.00
Incremental Delay, d2	0.1	2.0	0.3	0.4	1.9			6.6			0.0	0.0
Delay (s)	10.1	15.6	11.9	7.3	12.2			28.4			18.3	18.2
Level of Service	B	B	B	A	B			C			B	B
Approach Delay (s)		14.0			10.5			28.4			18.3	
Approach LOS		B			B			C			B	

Intersection Summary			
HCM 2000 Control Delay	15.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	62.3	Sum of lost time (s)	14.0
Intersection Capacity Utilization	56.3%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	WBL	WBR	WBR2	NBL	NBT	SBT	SBR	NWL	NWT	NWR
Lane Configurations										
Traffic Volume (vph)	7	37	24	17	112	66	5	8	3	1
Future Volume (vph)	7	37	24	17	112	66	5	8	3	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0		6.0		6.0	6.0			6.0	
Lane Util. Factor	1.00		0.95		1.00	1.00			1.00	
Frt	0.87		0.85		1.00	0.99			0.99	
Flt Protected	0.99		1.00		0.99	1.00			0.97	
Satd. Flow (prot)	1614		1504		1852	1846			1786	
Flt Permitted	0.99		1.00		0.97	1.00			0.97	
Satd. Flow (perm)	1614		1504		1804	1846			1786	
Peak-hour factor, PHF	0.80	0.80	0.80	0.99	0.86	0.80	0.80	0.80	0.80	0.80
Adj. Flow (vph)	9	46	30	17	130	82	6	10	4	1
RTOR Reduction (vph)	53	0	24	0	0	4	0	0	0	0
Lane Group Flow (vph)	5	0	3	0	147	85	0	0	15	0
Turn Type	Prot		Perm	Perm	NA	NA		Perm	NA	
Protected Phases	8				1	1			2	
Permitted Phases			8	1				2		
Actuated Green, G (s)	7.0		7.0		30.0	30.0			20.0	
Effective Green, g (s)	7.0		7.0		30.0	30.0			20.0	
Actuated g/C Ratio	0.09		0.09		0.40	0.40			0.27	
Clearance Time (s)	6.0		6.0		6.0	6.0			6.0	
Lane Grp Cap (vph)	150		140		721	738			476	
v/s Ratio Prot	c0.00					0.05				
v/s Ratio Perm			0.00		c0.08				0.01	
v/c Ratio	0.04		0.02		0.20	0.12			0.03	
Uniform Delay, d1	30.9		30.9		14.7	14.2			20.3	
Progression Factor	1.00		1.00		1.00	1.00			1.00	
Incremental Delay, d2	0.4		0.2		0.6	0.3			0.1	
Delay (s)	31.4		31.1		15.3	14.5			20.5	
Level of Service	C		C		B	B			C	
Approach Delay (s)	31.3				15.3	14.5			20.5	
Approach LOS	C				B	B			C	

Intersection Summary			
HCM 2000 Control Delay	19.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.12		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	62.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Appendix 5E-10: 2025 Build AM

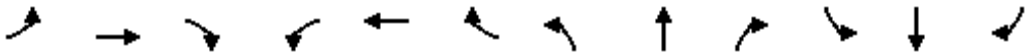
Unsignalized

Synchro Results

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	206	55	28	253	69	24
Future Volume (Veh/h)	206	55	28	253	69	24
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.85	0.80	0.80	0.92	0.80	0.80
Hourly flow rate (vph)	242	69	35	275	86	30
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			311		622	276
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			311		622	276
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			97		80	96
cM capacity (veh/h)			1249		438	762

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	311	310	116
Volume Left	0	35	86
Volume Right	69	0	30
cSH	1700	1249	492
Volume to Capacity	0.18	0.03	0.24
Queue Length 95th (ft)	0	2	23
Control Delay (s)	0.0	1.1	14.6
Lane LOS		A	B
Approach Delay (s)	0.0	1.1	14.6
Approach LOS			B

Intersection Summary			
Average Delay	2.8		
Intersection Capacity Utilization	44.3%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Yield			Stop			Yield	
Traffic Volume (vph)	19	28	7	0	44	312	5	57	5	210	21	11
Future Volume (vph)	19	28	7	0	44	312	5	57	5	210	21	11
Peak Hour Factor	0.85	0.89	0.80	0.80	0.89	0.86	0.99	0.85	0.99	0.87	0.85	0.83
Hourly flow rate (vph)	22	31	9	0	49	363	5	67	5	241	25	13

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	62	412	77	279
Volume Left (vph)	22	0	5	241
Volume Right (vph)	9	363	5	13
Hadj (s)	0.02	-0.49	0.01	0.18
Departure Headway (s)	5.5	4.5	5.5	5.4
Degree Utilization, x	0.09	0.52	0.12	0.42
Capacity (veh/h)	584	760	572	628
Control Delay (s)	9.1	12.2	9.3	12.1
Approach Delay (s)	9.1	12.2	9.3	12.1
Approach LOS	A	B	A	B

Intersection Summary				
Delay	11.7			
Level of Service	B			
Intersection Capacity Utilization	48.3%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	36	174	7	12	307	41	7	75	15	9	27	33
Future Volume (Veh/h)	36	174	7	12	307	41	7	75	15	9	27	33
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.83	0.80	0.80	0.80	0.82	0.84	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	43	218	9	15	374	49	9	94	19	11	34	41
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		643			1031							
pX, platoon unblocked	0.85						0.85	0.85		0.85	0.85	0.85
vC, conflicting volume	423			227			795	762	222	803	742	398
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	229			227			668	628	222	677	605	200
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	96			99			97	71	98	95	90	94
cM capacity (veh/h)	1135			1341			264	322	817	227	332	713

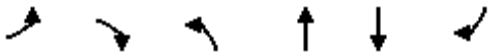
Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	270	438	122	86
Volume Left	43	15	9	11
Volume Right	9	49	19	41
cSH	1135	1341	349	413
Volume to Capacity	0.04	0.01	0.35	0.21
Queue Length 95th (ft)	3	1	38	19
Control Delay (s)	1.6	0.4	20.7	16.0
Lane LOS	A	A	C	C
Approach Delay (s)	1.6	0.4	20.7	16.0
Approach LOS			C	C

Intersection Summary				
Average Delay	4.9			
Intersection Capacity Utilization	39.2%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (veh/h)	0	11	537	130	0	418
Future Volume (Veh/h)	0	11	537	130	0	418
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	0	14	671	163	0	523
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						1081
pX, platoon unblocked						
vC, conflicting volume	1276	752			671	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1276	752			671	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	97			100	
cM capacity (veh/h)	184	410			919	

Direction, Lane #	NW 1	NE 1	SW 1
Volume Total	14	834	523
Volume Left	0	0	0
Volume Right	14	163	0
cSH	410	1700	1700
Volume to Capacity	0.03	0.49	0.31
Queue Length 95th (ft)	3	0	0
Control Delay (s)	14.1	0.0	0.0
Lane LOS	B		
Approach Delay (s)	14.1	0.0	0.0
Approach LOS	B		

Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	46.2%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	95	33	30	161	117	45
Future Volume (Veh/h)	95	33	30	161	117	45
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.86	0.80	0.80	0.90	0.80	0.80
Hourly flow rate (vph)	110	41	38	179	146	56
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)					693	
pX, platoon unblocked						
vC, conflicting volume	429	174	202			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	429	174	202			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	81	95	97			
cM capacity (veh/h)	567	869	1370			

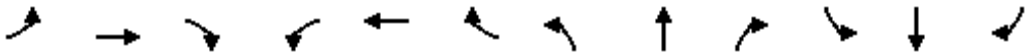
Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	151	217	202
Volume Left	110	38	0
Volume Right	41	0	56
cSH	626	1370	1700
Volume to Capacity	0.24	0.03	0.12
Queue Length 95th (ft)	23	2	0
Control Delay (s)	12.6	1.5	0.0
Lane LOS	B	A	
Approach Delay (s)	12.6	1.5	0.0
Approach LOS	B		

Intersection Summary			
Average Delay	3.9		
Intersection Capacity Utilization	36.3%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	1	150	190	7	116	89
Future Volume (Veh/h)	1	150	190	7	116	89
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.80	0.91	0.83	0.80	0.80	0.80
Hourly flow rate (vph)	1	165	229	9	145	111
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	634	234			238	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	634	234			238	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	80			89	
cM capacity (veh/h)	395	806			1329	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	166	238	256
Volume Left	1	0	145
Volume Right	165	9	0
cSH	801	1700	1329
Volume to Capacity	0.21	0.14	0.11
Queue Length 95th (ft)	19	0	9
Control Delay (s)	10.7	0.0	5.0
Lane LOS	B		A
Approach Delay (s)	10.7	0.0	5.0
Approach LOS	B		

Intersection Summary			
Average Delay	4.6		
Intersection Capacity Utilization	40.9%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	393	11	0	203	4	20	0	4	2	1	3
Future Volume (Veh/h)	0	393	11	0	203	4	20	0	4	2	1	3
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.80	0.87	0.80	0.80	0.91	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	0	452	14	0	223	5	25	0	5	3	1	4
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)					1030							
pX, platoon unblocked												
vC, conflicting volume	228			466			689	687	459	690	692	226
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	228			466			689	687	459	690	692	226
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			93	100	99	99	100	100
cM capacity (veh/h)	1340			1095			357	370	602	357	367	814

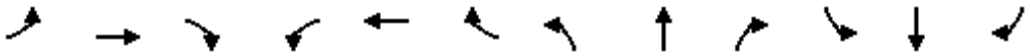
Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	466	228	30	8
Volume Left	0	0	25	3
Volume Right	14	5	5	4
cSH	1340	1095	383	499
Volume to Capacity	0.00	0.00	0.08	0.02
Queue Length 95th (ft)	0	0	6	1
Control Delay (s)	0.0	0.0	15.2	12.3
Lane LOS			C	B
Approach Delay (s)	0.0	0.0	15.2	12.3
Approach LOS			C	B

Intersection Summary				
Average Delay	0.8			
Intersection Capacity Utilization	31.4%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	564	7	2	289	3	2	2	8	7	2	5
Future Volume (Veh/h)	5	564	7	2	289	3	2	2	8	7	2	5
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.80	0.80	0.80	0.80	0.84	0.80	0.80	0.80	0.80	0.99	0.80	0.80
Hourly flow rate (vph)	6	705	9	3	344	4	3	3	10	7	3	6
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	348			714			1081	1076	710	1085	1078	346
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	348			714			1081	1076	710	1085	1078	346
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			98	99	98	96	99	99
cM capacity (veh/h)	1211			886			190	218	434	186	217	697

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	720	351	16	16
Volume Left	6	3	3	7
Volume Right	9	4	10	6
cSH	1211	886	304	267
Volume to Capacity	0.00	0.00	0.05	0.06
Queue Length 95th (ft)	0	0	4	5
Control Delay (s)	0.1	0.1	17.5	19.4
Lane LOS	A	A	C	C
Approach Delay (s)	0.1	0.1	17.5	19.4
Approach LOS			C	C

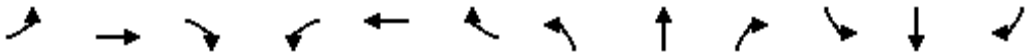
Intersection Summary				
Average Delay	0.7			
Intersection Capacity Utilization	43.4%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	11	233	10	54	247	29	4	15	166	70	31	22
Future Volume (Veh/h)	11	233	10	54	247	29	4	15	166	70	31	22
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.80	0.90	0.80	0.80	0.80	0.80	0.80	0.80	0.84	0.84	0.84	0.83
Hourly flow rate (vph)	14	259	13	68	309	36	5	19	198	83	37	27
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	345			272			802	774	266	964	763	327
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	345			272			802	774	266	964	763	327
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			95			98	94	74	48	88	96
cM capacity (veh/h)	1214			1291			252	308	773	158	313	714

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	286	413	222	147
Volume Left	14	68	5	83
Volume Right	13	36	198	27
cSH	1214	1291	658	216
Volume to Capacity	0.01	0.05	0.34	0.68
Queue Length 95th (ft)	1	4	37	107
Control Delay (s)	0.5	1.7	13.2	51.0
Lane LOS	A	A	B	F
Approach Delay (s)	0.5	1.7	13.2	51.0
Approach LOS			B	F

Intersection Summary				
Average Delay	10.6			
Intersection Capacity Utilization	62.7%	ICU Level of Service	B	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	11	134	0	34	276	45	0	140	100	19	23	19
Future Volume (Veh/h)	11	134	0	34	276	45	0	140	100	19	23	19
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.80	0.80	0.80	0.80	0.88	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	14	168	0	43	314	56	0	175	125	24	29	24
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	370			168			662	652	168	836	624	342
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	370			168			662	652	168	836	624	342
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			97			100	53	86	84	92	97
cM capacity (veh/h)	1189			1410			330	371	876	150	385	701

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	182	413	300	77
Volume Left	14	43	0	24
Volume Right	0	56	125	24
cSH	1189	1410	488	286
Volume to Capacity	0.01	0.03	0.61	0.27
Queue Length 95th (ft)	1	2	102	27
Control Delay (s)	0.7	1.1	23.4	22.2
Lane LOS	A	A	C	C
Approach Delay (s)	0.7	1.1	23.4	22.2
Approach LOS			C	C

Intersection Summary			
Average Delay	9.6		
Intersection Capacity Utilization	53.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	191	19	26	417	50	47
Future Volume (Veh/h)	191	19	26	417	50	47
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	239	24	33	521	63	59
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	1023					
pX, platoon unblocked						
vC, conflicting volume			263		838	251
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			263		838	251
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			97		81	93
cM capacity (veh/h)			1301		328	788

Direction, Lane #	EB 1	WB 1	WB 2	NB 1
Volume Total	263	33	521	122
Volume Left	0	33	0	63
Volume Right	24	0	0	59
cSH	1700	1301	1700	457
Volume to Capacity	0.15	0.03	0.31	0.27
Queue Length 95th (ft)	0	2	0	27
Control Delay (s)	0.0	7.8	0.0	15.7
Lane LOS		A		C
Approach Delay (s)	0.0	0.5		15.7
Approach LOS				C

Intersection Summary			
Average Delay	2.3		
Intersection Capacity Utilization	34.3%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	5	96	623	46	180	445
Future Volume (Veh/h)	5	96	623	46	180	445
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.80	0.87	0.92	0.80	0.83	0.81
Hourly flow rate (vph)	6	110	677	58	217	549
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			776			
pX, platoon unblocked	0.92	0.92			0.92	
vC, conflicting volume	1660	677			735	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1673	609			672	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	92	76			74	
cM capacity (veh/h)	72	457			849	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	116	677	58	217	549
Volume Left	6	0	0	217	0
Volume Right	110	0	58	0	0
cSH	359	1700	1700	849	1700
Volume to Capacity	0.32	0.40	0.03	0.26	0.32
Queue Length 95th (ft)	34	0	0	25	0
Control Delay (s)	19.8	0.0	0.0	10.7	0.0
Lane LOS	C			B	
Approach Delay (s)	19.8	0.0		3.0	
Approach LOS	C				

Intersection Summary			
Average Delay	2.9		
Intersection Capacity Utilization	59.0%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	4	39	439	12	23	93
Future Volume (Veh/h)	4	39	439	12	23	93
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.86
Hourly flow rate (vph)	5	49	549	15	29	108
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	722	556			564	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	722	556			564	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	99	91			97	
cM capacity (veh/h)	382	530			1008	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	54	564	137
Volume Left	5	0	29
Volume Right	49	15	0
cSH	512	1700	1008
Volume to Capacity	0.11	0.33	0.03
Queue Length 95th (ft)	9	0	2
Control Delay (s)	12.9	0.0	2.0
Lane LOS	B		A
Approach Delay (s)	12.9	0.0	2.0
Approach LOS	B		

Intersection Summary			
Average Delay	1.3		
Intersection Capacity Utilization	34.7%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	94	34	24	127	17	92	37	15	2	39	6
Future Volume (Veh/h)	3	94	34	24	127	17	92	37	15	2	39	6
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	3	102	37	26	138	18	100	40	16	2	42	7
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		1173										
pX, platoon unblocked												
vC, conflicting volume	156			139			354	334	120	362	344	147
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	156			139			354	334	120	362	344	147
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			98			82	93	98	100	93	99
cM capacity (veh/h)	1424			1445			554	574	931	545	567	900

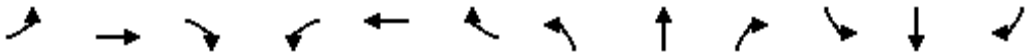
Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	142	182	156	51
Volume Left	3	26	100	2
Volume Right	37	18	16	7
cSH	1424	1445	584	596
Volume to Capacity	0.00	0.02	0.27	0.09
Queue Length 95th (ft)	0	1	27	7
Control Delay (s)	0.2	1.2	13.4	11.6
Lane LOS	A	A	B	B
Approach Delay (s)	0.2	1.2	13.4	11.6
Approach LOS			B	B

Intersection Summary				
Average Delay	5.5			
Intersection Capacity Utilization	40.8%	ICU Level of Service	A	
Analysis Period (min)	15			

Appendix 5E-11: 2025 Build PM

Signalized

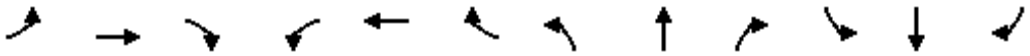
Synchro Results



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	169	315	16	47	315	90	16	337	90	113	288	180
Future Volume (vph)	169	315	16	47	315	90	16	337	90	113	288	180
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	8	11	12	8	11	12	12	16	12	12	16	12
Total Lost time (s)		6.0			6.0		6.0	6.0		6.0	6.0	
Lane Util. Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		1.00			0.97		1.00	0.97		1.00	0.94	
Flt Protected		0.98			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1764			1743		1770	2052		1770	1983	
Flt Permitted		0.65			0.91		0.22	1.00		0.21	1.00	
Satd. Flow (perm)		1159			1588		401	2052		397	1983	
Peak-hour factor, PHF	0.89	0.83	0.80	0.86	0.80	0.80	0.80	0.81	0.94	0.82	0.95	0.87
Adj. Flow (vph)	190	380	20	55	394	112	20	416	96	138	303	207
RTOR Reduction (vph)	0	2	0	0	13	0	0	12	0	0	35	0
Lane Group Flow (vph)	0	588	0	0	549	0	20	500	0	138	475	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		35.0			35.0		23.0	23.0		23.0	23.0	
Effective Green, g (s)		35.0			35.0		23.0	23.0		23.0	23.0	
Actuated g/C Ratio		0.50			0.50		0.33	0.33		0.33	0.33	
Clearance Time (s)		6.0			6.0		6.0	6.0		6.0	6.0	
Lane Grp Cap (vph)		579			794		131	674		130	651	
v/s Ratio Prot								0.24			0.24	
v/s Ratio Perm		c0.51			0.35		0.05			c0.35		
v/c Ratio		1.02			0.69		0.15	0.74		1.06	0.73	
Uniform Delay, d1		17.5			13.4		16.6	20.9		23.5	20.8	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		41.4			4.9		2.5	7.2		96.3	7.1	
Delay (s)		58.9			18.3		19.1	28.1		119.8	27.8	
Level of Service		E			B		B	C		F	C	
Approach Delay (s)		58.9			18.3			27.7			47.4	
Approach LOS		E			B			C			D	

Intersection Summary			
HCM 2000 Control Delay	38.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.03		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	103.5%	ICU Level of Service	G
Analysis Period (min)	15		

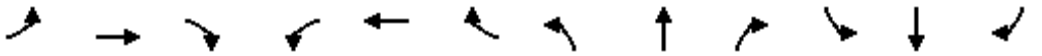
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	116	259	39	51	185	235	39	453	58	321	480	109
Future Volume (vph)	116	259	39	51	185	235	39	453	58	321	480	109
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0	6.0	6.0	6.0		3.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	1.00	0.85	1.00	0.98		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1825		1770	1863	1583	1770	1829		1770	1806	
Flt Permitted	0.45	1.00		0.19	1.00	1.00	0.39	1.00		0.29	1.00	
Satd. Flow (perm)	841	1825		355	1863	1583	720	1829		534	1806	
Peak-hour factor, PHF	0.80	0.82	0.80	0.94	0.82	0.80	0.80	0.84	0.80	0.87	0.90	0.80
Adj. Flow (vph)	145	316	49	54	226	294	49	539	72	369	533	136
RTOR Reduction (vph)	0	5	0	0	0	156	0	4	0	0	8	0
Lane Group Flow (vph)	145	360	0	54	226	138	49	608	0	369	661	0
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA		pm+pt	NA	
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	26.8	26.8		26.8	26.8	26.8	67.0	67.0		80.0	80.0	
Effective Green, g (s)	26.8	26.8		26.8	26.8	26.8	67.0	67.0		80.0	80.0	
Actuated g/C Ratio	0.23	0.23		0.23	0.23	0.23	0.56	0.56		0.67	0.67	
Clearance Time (s)	6.0	6.0		6.0	6.0	6.0	6.0	6.0		3.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	189	411		80	420	357	406	1031		463	1216	
v/s Ratio Prot		c0.20			0.12			0.33		c0.07	0.37	
v/s Ratio Perm	0.17			0.15		0.09	0.07			c0.47		
v/c Ratio	0.77	0.88		0.68	0.54	0.39	0.12	0.59		0.80	0.54	
Uniform Delay, d1	43.1	44.4		42.0	40.5	39.0	12.1	16.9		12.7	10.0	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	16.9	18.5		20.2	1.3	0.7	0.1	0.9		9.2	0.5	
Delay (s)	59.9	62.9		62.2	41.9	39.7	12.3	17.8		21.9	10.5	
Level of Service	E	E		E	D	D	B	B		C	B	
Approach Delay (s)		62.1			42.7			17.4			14.6	
Approach LOS		E			D			B			B	

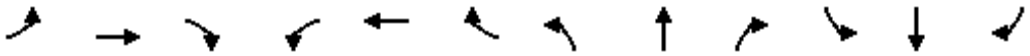
Intersection Summary			
HCM 2000 Control Delay	29.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	118.8	Sum of lost time (s)	15.0
Intersection Capacity Utilization	175.0%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	439	413	6	6	413	190	49	124	9	167	86	550
Future Volume (vph)	439	413	6	6	413	190	49	124	9	167	86	550
Ideal Flow (vphpl)	1200	1200	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	10	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	3.0	5.0			5.0			5.0			5.0	5.0
Lane Util. Factor	1.00	1.00			1.00			1.00			1.00	1.00
Frt	1.00	1.00			0.96			0.99			1.00	0.85
Flt Protected	0.95	1.00			1.00			0.99			0.97	1.00
Satd. Flow (prot)	1043	1095			1783			1826			1803	1583
Flt Permitted	0.14	1.00			0.99			0.51			0.57	1.00
Satd. Flow (perm)	151	1095			1774			947			1053	1583
Peak-hour factor, PHF	0.83	0.82	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Adj. Flow (vph)	529	504	8	8	516	238	61	155	11	209	108	688
RTOR Reduction (vph)	0	0	0	0	12	0	0	1	0	0	0	421
Lane Group Flow (vph)	529	512	0	0	750	0	0	226	0	0	317	267
Turn Type	pm+pt	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases	7	4			8			2			6	
Permitted Phases	4			8			2			6		6
Actuated Green, G (s)	87.0	87.0			46.0			33.0			33.0	33.0
Effective Green, g (s)	87.0	87.0			46.0			33.0			33.0	33.0
Actuated g/C Ratio	0.67	0.67			0.35			0.25			0.25	0.25
Clearance Time (s)	3.0	5.0			5.0			5.0			5.0	5.0
Vehicle Extension (s)	3.0	3.0			3.0			3.0			3.0	3.0
Lane Grp Cap (vph)	361	732			627			240			267	401
v/s Ratio Prot	c0.43	0.47										
v/s Ratio Perm	c0.55				0.42			0.24			c0.30	0.17
v/c Ratio	1.47	0.70			1.20			0.94			1.19	0.67
Uniform Delay, d1	35.2	13.4			42.0			47.5			48.5	43.6
Progression Factor	1.00	1.00			1.00			1.00			1.00	1.00
Incremental Delay, d2	224.1	2.9			103.1			41.2			115.5	4.2
Delay (s)	259.3	16.3			145.1			88.7			164.0	47.7
Level of Service	F	B			F			F			F	D
Approach Delay (s)		139.8			145.1			88.7			84.4	
Approach LOS		F			F			F			F	

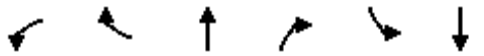
Intersection Summary			
HCM 2000 Control Delay	118.9	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.42		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	112.4%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	70	107	54	136	99	95	75	505	103	62	451	85
Future Volume (vph)	70	107	54	136	99	95	75	505	103	62	451	85
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.95		1.00	0.93		1.00	0.97		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1769		1770	1726		1770	1811		1770	1818	
Flt Permitted	0.56	1.00		0.62	1.00		0.30	1.00		0.26	1.00	
Satd. Flow (perm)	1041	1769		1160	1726		556	1811		477	1818	
Peak-hour factor, PHF	0.80	0.80	0.80	0.95	0.80	0.80	0.84	0.92	0.83	0.80	0.87	0.86
Adj. Flow (vph)	88	134	68	143	124	119	89	549	124	78	518	99
RTOR Reduction (vph)	0	23	0	0	43	0	0	11	0	0	9	0
Lane Group Flow (vph)	88	179	0	143	200	0	89	662	0	78	608	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			4			2			2	
Permitted Phases	4			4			2			2		
Actuated Green, G (s)	21.7	21.7		21.7	21.7		37.7	37.7		37.7	37.7	
Effective Green, g (s)	21.7	21.7		21.7	21.7		37.7	37.7		37.7	37.7	
Actuated g/C Ratio	0.30	0.30		0.30	0.30		0.53	0.53		0.53	0.53	
Clearance Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Vehicle Extension (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)	316	537		352	524		293	956		251	959	
v/s Ratio Prot		0.10			0.12			c0.37			0.33	
v/s Ratio Perm	0.08			c0.12			0.16			0.16		
v/c Ratio	0.28	0.33		0.41	0.38		0.30	0.69		0.31	0.63	
Uniform Delay, d1	18.9	19.2		19.7	19.6		9.5	12.5		9.5	12.0	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.7	0.5		1.0	0.6		0.8	2.4		1.0	1.5	
Delay (s)	19.6	19.7		20.8	20.2		10.3	14.9		10.5	13.5	
Level of Service	B	B		C	C		B	B		B	B	
Approach Delay (s)		19.7			20.4			14.4			13.2	
Approach LOS		B			C			B			B	

Intersection Summary			
HCM 2000 Control Delay	15.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	71.4	Sum of lost time (s)	12.0
Intersection Capacity Utilization	93.7%	ICU Level of Service	F
Analysis Period (min)	15		

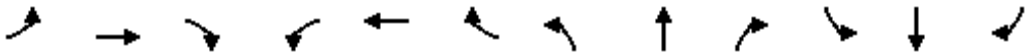
c Critical Lane Group



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	109	56	204	19	38	240
Future Volume (vph)	109	56	204	19	38	240
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0		6.0			6.0
Lane Util. Factor	1.00		1.00			1.00
Frt	0.96		0.99			1.00
Flt Protected	0.97		1.00			0.99
Satd. Flow (prot)	1725		1841			1850
Flt Permitted	0.97		1.00			0.93
Satd. Flow (perm)	1725		1841			1726
Peak-hour factor, PHF	0.81	0.91	0.80	0.80	0.80	0.80
Adj. Flow (vph)	135	62	255	24	48	300
RTOR Reduction (vph)	25	0	4	0	0	0
Lane Group Flow (vph)	172	0	275	0	0	348
Turn Type	Prot		NA		Perm	NA
Protected Phases	4		2			2
Permitted Phases					2	
Actuated Green, G (s)	10.8		28.0			28.0
Effective Green, g (s)	10.8		28.0			28.0
Actuated g/C Ratio	0.21		0.55			0.55
Clearance Time (s)	6.0		6.0			6.0
Vehicle Extension (s)	2.0		2.0			2.0
Lane Grp Cap (vph)	366		1014			951
v/s Ratio Prot	c0.10		0.15			
v/s Ratio Perm						c0.20
v/c Ratio	0.47		0.27			0.37
Uniform Delay, d1	17.5		6.0			6.4
Progression Factor	1.00		1.00			1.00
Incremental Delay, d2	0.3		0.1			0.1
Delay (s)	17.8		6.1			6.5
Level of Service	B		A			A
Approach Delay (s)	17.8		6.1			6.5
Approach LOS	B		A			A

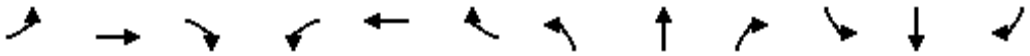
Intersection Summary			
HCM 2000 Control Delay	9.1	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	50.8	Sum of lost time (s)	12.0
Intersection Capacity Utilization	64.3%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



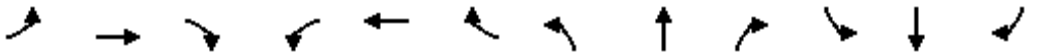
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	23	176	73	42	131	66	27	169	25	70	216	38
Future Volume (vph)	23	176	73	42	131	66	27	169	25	70	216	38
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0			6.0			6.0			6.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frt		0.96			0.96			0.98			0.98	
Flt Protected		1.00			0.99			0.99			0.99	
Satd. Flow (prot)		1789			1780			1820			1809	
Flt Permitted		0.96			0.89			0.92			0.87	
Satd. Flow (perm)		1721			1597			1679			1587	
Peak-hour factor, PHF	0.88	0.86	0.88	0.80	0.81	0.85	0.80	0.88	0.80	0.80	0.90	0.80
Adj. Flow (vph)	26	205	83	52	162	78	34	192	31	88	240	48
RTOR Reduction (vph)	0	18	0	0	18	0	0	7	0	0	7	0
Lane Group Flow (vph)	0	296	0	0	275	0	0	250	0	0	369	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		6			6			2			2	
Permitted Phases	6			6			2			2		
Actuated Green, G (s)		32.0			32.0			30.0			30.0	
Effective Green, g (s)		32.0			32.0			30.0			30.0	
Actuated g/C Ratio		0.43			0.43			0.41			0.41	
Clearance Time (s)		6.0			6.0			6.0			6.0	
Lane Grp Cap (vph)		744			690			680			643	
v/s Ratio Prot												
v/s Ratio Perm		0.17			c0.17			0.15			c0.23	
v/c Ratio		0.40			0.40			0.37			0.57	
Uniform Delay, d1		14.4			14.4			15.4			17.0	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		1.6			1.7			1.5			3.7	
Delay (s)		16.0			16.1			16.9			20.7	
Level of Service		B			B			B			C	
Approach Delay (s)		16.0			16.1			16.9			20.7	
Approach LOS		B			B			B			C	

Intersection Summary			
HCM 2000 Control Delay	17.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	74.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	65.8%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	42	180	15	101	262	24	33	105	50	40	171	46
Future Volume (vph)	42	180	15	101	262	24	33	105	50	40	171	46
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.99		1.00	0.95		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1841		1770	1838		1770	1772		1770	1801	
Flt Permitted	0.52	1.00		0.61	1.00		0.51	1.00		0.64	1.00	
Satd. Flow (perm)	977	1841		1136	1838		952	1772		1193	1801	
Peak-hour factor, PHF	0.80	0.82	0.80	0.88	0.86	0.80	0.83	0.88	0.87	0.82	0.84	0.80
Adj. Flow (vph)	52	220	19	115	305	30	40	119	57	49	204	58
RTOR Reduction (vph)	0	5	0	0	5	0	0	25	0	0	14	0
Lane Group Flow (vph)	53	234	0	115	330	0	40	151	0	49	248	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	38.0	38.0		38.0	38.0		22.0	22.0		22.0	22.0	
Effective Green, g (s)	38.0	38.0		38.0	38.0		22.0	22.0		22.0	22.0	
Actuated g/C Ratio	0.54	0.54		0.54	0.54		0.31	0.31		0.31	0.31	
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)	530	999		616	997		299	556		374	566	
v/s Ratio Prot		0.13			c0.18			0.09			c0.14	
v/s Ratio Perm	0.05			0.10			0.04			0.04		
v/c Ratio	0.10	0.23		0.19	0.33		0.13	0.27		0.13	0.44	
Uniform Delay, d1	7.7	8.4		8.1	8.9		17.2	18.0		17.2	19.1	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.4	0.6		0.7	0.9		0.9	1.2		0.7	2.4	
Delay (s)	8.1	8.9		8.8	9.8		18.1	19.2		17.9	21.5	
Level of Service	A	A		A	A		B	B		B	C	
Approach Delay (s)		8.8			9.6			19.0			21.0	
Approach LOS		A			A			B			C	

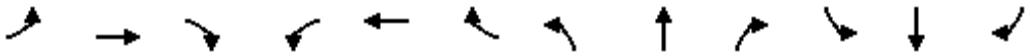
Intersection Summary			
HCM 2000 Control Delay	13.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	109.1%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	194	185	53	21	165	10	48	582	30	100	912	301
Future Volume (vph)	194	185	53	21	165	10	48	582	30	100	912	301
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	7.0		3.0	7.0	7.0	3.0	7.0		3.0	7.0	7.0
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.95		1.00	0.95	1.00
Frt	1.00	0.97		1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	1801		1770	1863	1583	1770	3513		1770	3539	1583
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1770	1801		1770	1863	1583	1770	3513		1770	3539	1583
Peak-hour factor, PHF	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Adj. Flow (vph)	242	231	66	26	206	12	60	728	38	125	1140	376
RTOR Reduction (vph)	0	10	0	0	0	11	0	4	0	0	0	184
Lane Group Flow (vph)	243	287	0	26	206	2	60	762	0	125	1140	192
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8						6
Actuated Green, G (s)	16.5	29.4		2.8	15.7	15.7	5.7	33.6		11.2	39.1	39.1
Effective Green, g (s)	16.5	29.4		2.8	15.7	15.7	5.7	33.6		11.2	39.1	39.1
Actuated g/C Ratio	0.17	0.30		0.03	0.16	0.16	0.06	0.35		0.12	0.40	0.40
Clearance Time (s)	3.0	7.0		3.0	7.0	7.0	3.0	7.0		3.0	7.0	7.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	301	545		51	301	256	104	1216		204	1426	638
v/s Ratio Prot	c0.14	0.16		0.01	c0.11		0.03	0.22		c0.07	c0.32	
v/s Ratio Perm						0.00						0.12
v/c Ratio	0.81	0.53		0.51	0.68	0.01	0.58	0.63		0.61	0.80	0.30
Uniform Delay, d1	38.7	28.0		46.4	38.3	34.1	44.5	26.5		40.8	25.5	19.7
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	14.6	0.9		7.8	6.3	0.0	7.5	2.4		5.4	4.8	1.2
Delay (s)	53.3	29.0		54.2	44.6	34.1	52.0	28.9		46.2	30.3	20.9
Level of Service	D	C		D	D	C	D	C		D	C	C
Approach Delay (s)		39.9			45.1			30.6			29.3	
Approach LOS		D			D			C			C	

Intersection Summary			
HCM 2000 Control Delay	32.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	97.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	68.8%	ICU Level of Service	C
Analysis Period (min)	15		

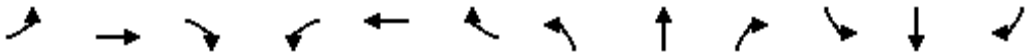
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	50	183	78	10	156	167	93	694	10	138	1052	63
Future Volume (vph)	50	183	78	10	156	167	93	694	10	138	1052	63
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	7.0		3.0	7.0		3.0	7.0		3.0	7.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frt	1.00	0.95		1.00	0.92		1.00	1.00		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1777		1770	1723		1770	3530		1770	3503	
Flt Permitted	0.25	1.00		0.48	1.00		0.14	1.00		0.25	1.00	
Satd. Flow (perm)	467	1777		893	1723		258	3530		473	3503	
Peak-hour factor, PHF	0.84	0.83	0.80	0.80	0.86	0.92	0.81	0.91	0.80	0.80	0.97	0.80
Adj. Flow (vph)	60	220	98	12	181	182	115	763	12	172	1085	79
RTOR Reduction (vph)	0	19	0	0	45	0	0	1	0	0	6	0
Lane Group Flow (vph)	60	299	0	13	318	0	115	775	0	173	1158	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	23.8	19.9		18.6	17.3		34.3	28.9		37.7	30.6	
Effective Green, g (s)	23.8	19.9		18.6	17.3		34.3	28.9		37.7	30.6	
Actuated g/C Ratio	0.31	0.26		0.24	0.22		0.44	0.37		0.49	0.40	
Clearance Time (s)	3.0	7.0		3.0	7.0		3.0	7.0		3.0	7.0	
Vehicle Extension (s)	3.0	2.0		3.0	2.0		3.0	2.0		3.0	2.0	
Lane Grp Cap (vph)	209	458		229	386		220	1321		350	1388	
v/s Ratio Prot	c0.01	0.17		0.00	c0.18		0.04	0.22		c0.05	c0.33	
v/s Ratio Perm	0.07			0.01			0.20			0.20		
v/c Ratio	0.29	0.65		0.06	0.82		0.52	0.59		0.49	0.83	
Uniform Delay, d1	19.9	25.6		22.5	28.5		14.7	19.4		11.9	21.0	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.8	2.5		0.1	12.7		2.2	0.4		1.1	4.3	
Delay (s)	20.7	28.1		22.6	41.2		16.9	19.8		13.0	25.3	
Level of Service	C	C		C	D		B	B		B	C	
Approach Delay (s)		26.9			40.6			19.4			23.7	
Approach LOS		C			D			B			C	

Intersection Summary			
HCM 2000 Control Delay	25.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	77.2	Sum of lost time (s)	20.0
Intersection Capacity Utilization	79.5%	ICU Level of Service	D
Analysis Period (min)	15		

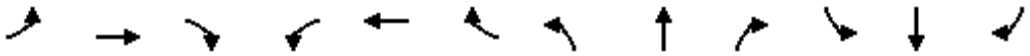
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	35	314	158	25	435	115	212	185	23	158	227	48
Future Volume (vph)	35	314	158	25	435	115	212	185	23	158	227	48
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.95		1.00	0.97		1.00	0.98		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1768		1770	1800		1770	1830		1770	1814	
Flt Permitted	0.20	1.00		0.27	1.00		0.48	1.00		0.59	1.00	
Satd. Flow (perm)	371	1768		505	1800		894	1830		1107	1814	
Peak-hour factor, PHF	0.80	0.84	0.82	0.80	0.87	0.80	0.80	0.86	0.80	0.80	0.81	0.81
Adj. Flow (vph)	44	374	193	31	500	144	265	215	29	198	280	59
RTOR Reduction (vph)	0	20	0	0	11	0	0	6	0	0	9	0
Lane Group Flow (vph)	44	547	0	31	633	0	265	238	0	198	330	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		1			1			2			2	
Permitted Phases	1			1			2			2		
Actuated Green, G (s)	29.9	29.9		29.9	29.9		27.0	27.0		27.0	27.0	
Effective Green, g (s)	29.9	29.9		29.9	29.9		27.0	27.0		27.0	27.0	
Actuated g/C Ratio	0.43	0.43		0.43	0.43		0.39	0.39		0.39	0.39	
Clearance Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	161	767		219	781		350	717		433	710	
v/s Ratio Prot		0.31			c0.35			0.13			0.18	
v/s Ratio Perm	0.12			0.06			c0.30			0.18		
v/c Ratio	0.27	0.71		0.14	0.81		0.76	0.33		0.46	0.46	
Uniform Delay, d1	12.5	16.0		11.8	17.0		18.1	14.6		15.5	15.6	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.3	2.6		0.1	6.0		8.1	0.1		0.3	0.2	
Delay (s)	12.9	18.6		11.9	23.1		26.2	14.7		15.8	15.8	
Level of Service	B	B		B	C		C	B		B	B	
Approach Delay (s)		18.2			22.5			20.7			15.8	
Approach LOS		B			C			C			B	

Intersection Summary			
HCM 2000 Control Delay	19.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	68.9	Sum of lost time (s)	12.0
Intersection Capacity Utilization	71.5%	ICU Level of Service	C
Analysis Period (min)	15		

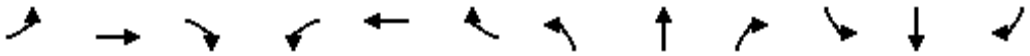
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	72	298	55	147	158	66	29	513	145	152	663	36
Future Volume (vph)	72	298	55	147	158	66	29	513	145	152	663	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1500	1500	1900	1500	1500	1900
Total Lost time (s)	3.0	7.0		3.0	7.0		3.0	6.0		3.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.96		1.00	0.96		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1819		1770	1783		1397	1417		1397	1458	
Flt Permitted	0.47	1.00		0.24	1.00		0.11	1.00		0.11	1.00	
Satd. Flow (perm)	880	1819		454	1783		159	1417		159	1458	
Peak-hour factor, PHF	0.83	0.80	0.80	0.90	0.84	0.88	0.80	0.92	0.80	0.84	0.88	0.80
Adj. Flow (vph)	87	372	69	163	188	75	36	558	181	181	753	45
RTOR Reduction (vph)	0	7	0	0	16	0	0	14	0	0	2	0
Lane Group Flow (vph)	87	435	0	163	247	0	36	725	0	181	796	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	21.8	14.6		25.4	16.4		43.0	37.0		43.0	37.0	
Effective Green, g (s)	21.8	14.6		25.4	16.4		43.0	37.0		43.0	37.0	
Actuated g/C Ratio	0.25	0.17		0.30	0.19		0.50	0.43		0.50	0.43	
Clearance Time (s)	3.0	7.0		3.0	7.0		3.0	6.0		3.0	6.0	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	298	310		273	341		166	612		166	630	
v/s Ratio Prot	0.02	c0.24		c0.06	0.14		0.02	0.51		c0.08	c0.55	
v/s Ratio Perm	0.05			0.11			0.09			0.47		
v/c Ratio	0.29	1.40		0.60	0.72		0.22	1.19		1.09	1.26	
Uniform Delay, d1	25.1	35.5		24.3	32.5		17.3	24.3		19.0	24.3	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.2	199.2		2.3	6.3		0.2	99.2		96.1	130.8	
Delay (s)	25.3	234.7		26.6	38.8		17.5	123.5		115.1	155.1	
Level of Service	C	F		C	D		B	F		F	F	
Approach Delay (s)		200.2			34.1			118.6			147.7	
Approach LOS		F			C			F			F	

Intersection Summary			
HCM 2000 Control Delay	131.8	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.19		
Actuated Cycle Length (s)	85.6	Sum of lost time (s)	19.0
Intersection Capacity Utilization	100.7%	ICU Level of Service	G
Analysis Period (min)	15		

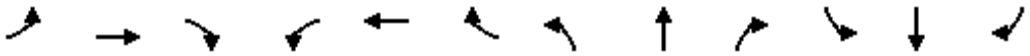
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	33	133	30	166	92	53	30	660	57	30	762	20
Future Volume (vph)	33	133	30	166	92	53	30	660	57	30	762	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0			6.0		3.0	6.0		3.0	6.0	
Lane Util. Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.98			0.98		1.00	0.99		1.00	1.00	
Flt Protected		0.99			0.97		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1809			1775		1770	1838		1770	1854	
Flt Permitted		0.89			0.65		0.11	1.00		0.12	1.00	
Satd. Flow (perm)		1631			1189		210	1838		221	1854	
Peak-hour factor, PHF	0.83	0.80	0.80	0.88	0.80	0.88	0.80	0.90	0.81	0.80	0.97	0.80
Adj. Flow (vph)	40	166	38	189	115	60	38	733	70	38	786	25
RTOR Reduction (vph)	0	8	0	0	8	0	0	4	0	0	1	0
Lane Group Flow (vph)	0	236	0	0	356	0	38	800	0	38	810	0
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		27.0			27.0		48.0	45.0		48.0	45.0	
Effective Green, g (s)		27.0			27.0		48.0	45.0		48.0	45.0	
Actuated g/C Ratio		0.30			0.30		0.53	0.50		0.53	0.50	
Clearance Time (s)		6.0			6.0		3.0	6.0		3.0	6.0	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		489			356		164	919		169	927	
v/s Ratio Prot							c0.01	0.43		0.01	c0.44	
v/s Ratio Perm		0.14			c0.30		0.12			0.11		
v/c Ratio		0.48			1.00		0.23	0.87		0.22	0.87	
Uniform Delay, d1		25.8			31.5		15.6	19.9		15.4	20.0	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.8			47.9		0.7	11.0		0.7	11.2	
Delay (s)		26.5			79.4		16.4	30.9		16.1	31.2	
Level of Service		C			E		B	C		B	C	
Approach Delay (s)		26.5			79.4			30.3			30.5	
Approach LOS		C			E			C			C	

Intersection Summary			
HCM 2000 Control Delay	37.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	94.7%	ICU Level of Service	F
Analysis Period (min)	15		

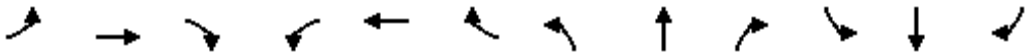
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	103	281	42	156	318	46	59	473	87	59	582	107
Future Volume (vph)	103	281	42	156	318	46	59	473	87	59	582	107
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	6.0		3.0	6.0		3.0	5.0		3.0	5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.98		1.00	0.97		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1822		1770	1827		1770	1816		1770	1816	
Flt Permitted	0.19	1.00		0.25	1.00		0.10	1.00		0.21	1.00	
Satd. Flow (perm)	355	1822		458	1827		192	1816		397	1816	
Peak-hour factor, PHF	0.82	0.91	0.80	0.80	0.80	0.80	0.80	0.95	0.86	0.80	0.91	0.83
Adj. Flow (vph)	126	309	52	195	398	58	74	498	101	74	640	129
RTOR Reduction (vph)	0	7	0	0	6	0	0	8	0	0	8	0
Lane Group Flow (vph)	126	355	0	195	450	0	74	591	0	74	761	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	27.0	21.0		29.0	22.0		43.8	38.8		43.8	38.8	
Effective Green, g (s)	27.0	21.0		29.0	22.0		43.8	38.8		43.8	38.8	
Actuated g/C Ratio	0.30	0.24		0.33	0.25		0.49	0.44		0.49	0.44	
Clearance Time (s)	3.0	6.0		3.0	6.0		3.0	5.0		3.0	5.0	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	203	430		252	452		183	793		273	793	
v/s Ratio Prot	0.04	0.19		c0.06	c0.25		c0.02	0.33		0.02	c0.42	
v/s Ratio Perm	0.15			0.19			0.18			0.12		
v/c Ratio	0.62	0.83		0.77	1.00		0.40	0.74		0.27	0.96	
Uniform Delay, d1	24.7	32.2		24.2	33.4		18.2	20.9		14.4	24.2	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	4.2	11.7		12.6	40.9		0.5	3.3		0.2	22.0	
Delay (s)	28.9	43.8		36.8	74.2		18.7	24.2		14.6	46.3	
Level of Service	C	D		D	E		B	C		B	D	
Approach Delay (s)		40.0			63.0			23.6			43.5	
Approach LOS		D			E			C			D	

Intersection Summary			
HCM 2000 Control Delay	42.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	88.8	Sum of lost time (s)	17.0
Intersection Capacity Utilization	83.1%	ICU Level of Service	E
Analysis Period (min)	15		

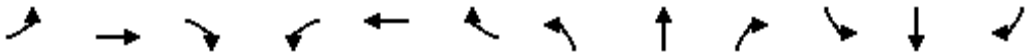
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	41	624	42	216	463	39	21	358	205	59	547	22
Future Volume (vph)	41	624	42	216	463	39	21	358	205	59	547	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0		3.0	5.0		6.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.99		1.00	0.94		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1843		1770	1840		1770	1750		1770	1851	
Flt Permitted	0.36	1.00		0.10	1.00		0.11	1.00		0.11	1.00	
Satd. Flow (perm)	676	1843		182	1840		196	1750		208	1851	
Peak-hour factor, PHF	0.80	0.91	0.80	0.84	0.84	0.80	0.80	0.94	0.80	0.80	0.82	0.80
Adj. Flow (vph)	51	686	52	257	551	49	26	381	256	74	667	28
RTOR Reduction (vph)	0	2	0	0	3	0	0	24	0	0	1	0
Lane Group Flow (vph)	51	737	0	257	597	0	26	613	0	74	694	0
Turn Type	Perm	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases		4		3	8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	38.0	38.0		51.0	51.0		38.0	38.0		38.0	38.0	
Effective Green, g (s)	38.0	38.0		51.0	51.0		38.0	38.0		38.0	38.0	
Actuated g/C Ratio	0.38	0.38		0.51	0.51		0.38	0.38		0.38	0.38	
Clearance Time (s)	5.0	5.0		3.0	5.0		6.0	6.0		6.0	6.0	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	256	700		251	938		74	665		79	703	
v/s Ratio Prot		0.40		c0.10	0.32			0.35			c0.37	
v/s Ratio Perm	0.08			c0.42			0.13			0.36		
v/c Ratio	0.20	1.05		1.02	0.64		0.35	0.92		0.94	0.99	
Uniform Delay, d1	20.8	31.0		28.4	17.8		22.2	29.6		29.8	30.8	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.1	48.6		63.1	1.0		1.1	18.0		78.5	30.3	
Delay (s)	20.9	79.6		91.5	18.8		23.2	47.6		108.3	61.0	
Level of Service	C	E		F	B		C	D		F	E	
Approach Delay (s)		75.8			40.6			46.6			65.6	
Approach LOS		E			D			D			E	

Intersection Summary			
HCM 2000 Control Delay	57.2	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.04		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	108.9%	ICU Level of Service	G
Analysis Period (min)	15		

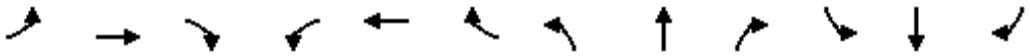
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	88	328	84	99	270	87	118	458	122	206	490	36
Future Volume (vph)	88	328	84	99	270	87	118	458	122	206	490	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	5.0		3.0	5.0		3.0	6.0	6.0	3.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	0.95	
Frt	1.00	0.97		1.00	0.96		1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	1804		1770	1788		1770	1863	1583	1770	3503	
Flt Permitted	0.28	1.00		0.20	1.00		0.29	1.00	1.00	0.21	1.00	
Satd. Flow (perm)	523	1804		380	1788		532	1863	1583	383	3503	
Peak-hour factor, PHF	0.80	0.89	0.86	0.90	0.90	0.80	0.80	0.94	0.80	0.84	0.80	0.80
Adj. Flow (vph)	110	369	98	110	300	109	148	487	152	245	612	45
RTOR Reduction (vph)	0	11	0	0	15	0	0	0	105	0	5	0
Lane Group Flow (vph)	110	456	0	110	394	0	148	487	48	245	653	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		
Actuated Green, G (s)	32.0	25.9		32.0	25.9		34.6	26.4	26.4	34.6	26.4	
Effective Green, g (s)	32.0	25.9		32.0	25.9		34.6	26.4	26.4	34.6	26.4	
Actuated g/C Ratio	0.38	0.31		0.38	0.31		0.41	0.32	0.32	0.41	0.32	
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	6.0	6.0	3.0	6.0	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Lane Grp Cap (vph)	291	558		246	553		341	588	499	294	1106	
v/s Ratio Prot	0.03	c0.25		c0.03	0.22		0.04	0.26		c0.08	0.19	
v/s Ratio Perm	0.12			0.14			0.14		0.03	c0.26		
v/c Ratio	0.38	0.82		0.45	0.71		0.43	0.83	0.10	0.83	0.59	
Uniform Delay, d1	17.9	26.7		18.6	25.5		16.1	26.5	20.2	18.6	24.1	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.3	8.6		0.5	3.6		0.3	8.9	0.0	17.3	0.6	
Delay (s)	18.2	35.2		19.0	29.2		16.4	35.4	20.2	35.8	24.6	
Level of Service	B	D		B	C		B	D	C	D	C	
Approach Delay (s)		32.0			27.0			28.9			27.7	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	28.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	83.6	Sum of lost time (s)	17.0
Intersection Capacity Utilization	80.4%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	61	468	257	86	360	33	142	316	109	73	474	35
Future Volume (vph)	61	468	257	86	360	33	142	316	109	73	474	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.95		1.00	0.99		1.00	0.96		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1762		1770	1836		1770	1786		1770	1843	
Flt Permitted	0.40	1.00		0.10	1.00		0.17	1.00		0.30	1.00	
Satd. Flow (perm)	746	1762		177	1836		312	1786		555	1843	
Peak-hour factor, PHF	0.80	0.94	0.92	0.80	0.92	0.80	0.80	0.88	0.81	0.80	0.82	0.80
Adj. Flow (vph)	76	498	279	108	391	41	178	359	135	91	578	44
RTOR Reduction (vph)	0	22	0	0	4	0	0	14	0	0	3	0
Lane Group Flow (vph)	76	755	0	108	428	0	178	480	0	91	619	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			2			1			1	
Permitted Phases	2			2			1			1		
Actuated Green, G (s)	42.0	42.0		42.0	42.0		37.0	37.0		37.0	37.0	
Effective Green, g (s)	42.0	42.0		42.0	42.0		37.0	37.0		37.0	37.0	
Actuated g/C Ratio	0.45	0.45		0.45	0.45		0.40	0.40		0.40	0.40	
Clearance Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	336	795		79	829		124	710		220	733	
v/s Ratio Prot		0.43			0.23			0.27			0.34	
v/s Ratio Perm	0.10			c0.61			c0.57			0.16		
v/c Ratio	0.23	0.95		1.37	0.52		1.44	0.68		0.41	0.84	
Uniform Delay, d1	15.6	24.5		25.5	18.2		28.0	23.1		20.2	25.4	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.1	20.2		227.0	0.2		235.7	5.1		5.7	11.5	
Delay (s)	15.7	44.7		252.5	18.5		263.7	28.2		25.8	36.8	
Level of Service	B	D		F	B		F	C		C	D	
Approach Delay (s)		42.1			65.3			90.6			35.4	
Approach LOS		D			E			F			D	

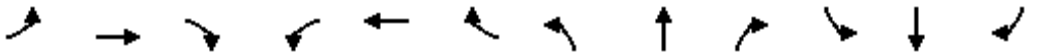
Intersection Summary			
HCM 2000 Control Delay	56.6	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.39		
Actuated Cycle Length (s)	93.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	124.0%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	51	24	585	31	22	617
Future Volume (vph)	51	24	585	31	22	617
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0		7.0			7.0
Lane Util. Factor	1.00		1.00			1.00
Frt	0.96		0.99			1.00
Flt Protected	0.97		1.00			1.00
Satd. Flow (prot)	1724		1848			1859
Flt Permitted	0.97		1.00			0.96
Satd. Flow (perm)	1724		1848			1791
Peak-hour factor, PHF	0.80	0.80	0.94	0.80	0.80	0.94
Adj. Flow (vph)	64	30	622	39	28	656
RTOR Reduction (vph)	19	0	2	0	0	0
Lane Group Flow (vph)	75	0	659	0	0	684
Turn Type	Prot		NA		Perm	NA
Protected Phases	8		2			6
Permitted Phases					6	
Actuated Green, G (s)	6.6		70.0			70.0
Effective Green, g (s)	6.6		70.0			70.0
Actuated g/C Ratio	0.07		0.78			0.78
Clearance Time (s)	6.0		7.0			7.0
Vehicle Extension (s)	2.0		2.0			2.0
Lane Grp Cap (vph)	126		1443			1399
v/s Ratio Prot	c0.04		0.36			
v/s Ratio Perm						c0.38
v/c Ratio	0.59		0.46			0.49
Uniform Delay, d1	40.2		3.3			3.5
Progression Factor	1.00		1.00			1.00
Incremental Delay, d2	4.9		0.1			0.1
Delay (s)	45.1		3.4			3.6
Level of Service	D		A			A
Approach Delay (s)	45.1		3.4			3.6
Approach LOS	D		A			A

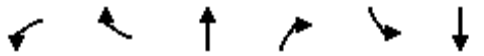
Intersection Summary			
HCM 2000 Control Delay	6.2	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	89.6	Sum of lost time (s)	13.0
Intersection Capacity Utilization	72.5%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	60	170	44	20	118	16	30	156	28	34	282	26
Future Volume (vph)	60	170	44	20	118	16	30	156	28	34	282	26
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0			6.0			6.0	6.0
Lane Util. Factor		1.00			1.00			1.00			1.00	1.00
Frt		0.98			0.99			0.98			1.00	0.85
Flt Protected		0.99			0.99			0.99			0.99	1.00
Satd. Flow (prot)		1802			1823			1817			1852	1583
Flt Permitted		0.89			0.93			0.92			0.94	1.00
Satd. Flow (perm)		1624			1703			1677			1750	1583
Peak-hour factor, PHF	0.80	0.82	0.80	0.80	0.85	0.80	0.80	0.80	0.80	0.82	0.90	0.80
Adj. Flow (vph)	75	207	55	25	139	20	38	195	35	41	313	32
RTOR Reduction (vph)	0	11	0	0	7	0	0	9	0	0	0	17
Lane Group Flow (vph)	0	326	0	0	177	0	0	259	0	0	354	16
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		6
Actuated Green, G (s)		20.0			20.0			30.0			30.0	30.0
Effective Green, g (s)		20.0			20.0			30.0			30.0	30.0
Actuated g/C Ratio		0.33			0.33			0.49			0.49	0.49
Clearance Time (s)		5.0			5.0			6.0			6.0	6.0
Lane Grp Cap (vph)		532			558			824			860	778
v/s Ratio Prot												
v/s Ratio Perm		c0.20			0.10			0.15			c0.20	0.01
v/c Ratio		0.61			0.32			0.31			0.41	0.02
Uniform Delay, d1		17.2			15.4			9.3			9.9	8.0
Progression Factor		1.00			1.00			1.00			1.00	1.00
Incremental Delay, d2		5.2			1.5			1.0			1.5	0.0
Delay (s)		22.4			16.9			10.3			11.3	8.0
Level of Service		C			B			B			B	A
Approach Delay (s)		22.4			16.9			10.3			11.0	
Approach LOS		C			B			B			B	

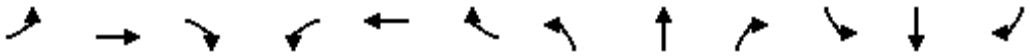
Intersection Summary			
HCM 2000 Control Delay	15.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	61.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	80.0%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	388	270	12	759	334
Future Volume (vph)	0	388	270	12	759	334
Ideal Flow (vphpl)	1900	1200	1900	1900	1900	1900
Total Lost time (s)		6.0	5.0	5.0	5.0	5.0
Lane Util. Factor		1.00	1.00	1.00	1.00	1.00
Frt		0.86	1.00	0.85	1.00	1.00
Flt Protected		1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)		1018	1863	1583	1770	1863
Flt Permitted		1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)		1018	1863	1583	1770	1863
Peak-hour factor, PHF	0.80	0.85	0.97	0.80	0.93	0.89
Adj. Flow (vph)	0	456	278	15	816	375
RTOR Reduction (vph)	0	0	0	8	0	0
Lane Group Flow (vph)	0	456	278	7	816	375
Turn Type		Perm	NA	Perm	Prot	NA
Protected Phases			4		6	
Permitted Phases		2		4		6
Actuated Green, G (s)		34.9	12.7	12.7	35.9	35.9
Effective Green, g (s)		34.9	12.7	12.7	35.9	35.9
Actuated g/C Ratio		0.60	0.22	0.22	0.61	0.61
Clearance Time (s)		6.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)		3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		606	403	343	1084	1141
v/s Ratio Prot			c0.15		c0.46	
v/s Ratio Perm		0.45		0.00		0.20
v/c Ratio		0.75	0.69	0.02	0.75	0.33
Uniform Delay, d1		8.7	21.1	18.1	8.2	5.5
Progression Factor		1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2		5.3	4.9	0.0	3.0	0.2
Delay (s)		13.9	26.0	18.1	11.2	5.7
Level of Service		B	C	B	B	A
Approach Delay (s)	13.9		25.6			9.4
Approach LOS	B		C			A

Intersection Summary			
HCM 2000 Control Delay	12.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	58.6	Sum of lost time (s)	11.0
Intersection Capacity Utilization	64.6%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

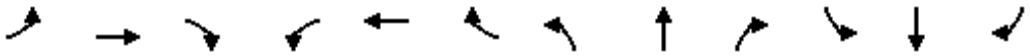


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	14	20	0	23	0	19	0	138	31	25	226	0
Future Volume (vph)	14	20	0	23	0	19	0	138	31	25	226	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0			7.0			7.0			7.0	
Lane Util. Factor	1.00	1.00			1.00			1.00			1.00	
Frt	1.00	1.00			0.94			0.98			1.00	
Flt Protected	0.95	1.00			0.97			1.00			1.00	
Satd. Flow (prot)	1770	1863			1702			1816			1854	
Flt Permitted	0.72	1.00			0.86			1.00			0.96	
Satd. Flow (perm)	1346	1863			1509			1816			1781	
Peak-hour factor, PHF	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.84	0.82	0.80
Adj. Flow (vph)	18	25	0	29	0	24	0	172	39	30	276	0
RTOR Reduction (vph)	0	0	0	0	35	0	0	11	0	0	0	0
Lane Group Flow (vph)	18	25	0	0	18	0	0	201	0	0	306	0
Turn Type	Perm	NA		Perm	NA			NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8						6		
Actuated Green, G (s)	25.0	25.0			25.0			36.0			36.0	
Effective Green, g (s)	25.0	25.0			25.0			36.0			36.0	
Actuated g/C Ratio	0.33	0.33			0.33			0.48			0.48	
Clearance Time (s)	7.0	7.0			7.0			7.0			7.0	
Lane Grp Cap (vph)	448	621			503			871			854	
v/s Ratio Prot		c0.01						0.11				
v/s Ratio Perm	0.01				0.01						c0.17	
v/c Ratio	0.04	0.04			0.04			0.23			0.36	
Uniform Delay, d1	16.9	16.9			16.9			11.4			12.2	
Progression Factor	1.00	1.00			1.00			1.00			0.91	
Incremental Delay, d2	0.2	0.1			0.1			0.6			0.9	
Delay (s)	17.1	17.0			17.0			12.0			12.1	
Level of Service	B	B			B			B			B	
Approach Delay (s)		17.0			17.0			12.0			12.1	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	12.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.23		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	65.3%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

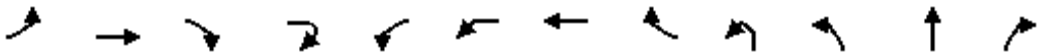
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	17	123	22	76	93	61	11	151	50	102	233	20
Future Volume (vph)	17	123	22	76	93	61	11	151	50	102	233	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		9.0			9.0			9.0			9.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frt		0.98			0.97			0.97			0.99	
Flt Protected		0.99			0.98			1.00			0.99	
Satd. Flow (prot)		1820			1768			1794			1821	
Flt Permitted		0.94			0.81			0.96			0.83	
Satd. Flow (perm)		1721			1460			1732			1533	
Peak-hour factor, PHF	0.80	0.80	0.82	0.80	0.83	0.85	0.80	0.92	0.83	0.89	0.89	0.80
Adj. Flow (vph)	21	154	27	95	112	72	14	164	60	115	262	25
RTOR Reduction (vph)	0	0	0	0	0	0	0	16	0	0	3	0
Lane Group Flow (vph)	0	202	0	0	279	0	0	222	0	0	399	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		27.0			27.0			30.0			30.0	
Effective Green, g (s)		27.0			27.0			30.0			30.0	
Actuated g/C Ratio		0.36			0.36			0.40			0.40	
Clearance Time (s)		9.0			9.0			9.0			9.0	
Lane Grp Cap (vph)		619			525			692			613	
v/s Ratio Prot												
v/s Ratio Perm		0.12			c0.19			0.13			c0.26	
v/c Ratio		0.33			0.53			0.32			0.65	
Uniform Delay, d1		17.4			19.0			15.5			18.3	
Progression Factor		1.00			1.00			0.90			1.82	
Incremental Delay, d2		1.4			3.8			1.2			4.8	
Delay (s)		18.8			22.8			15.2			38.1	
Level of Service		B			C			B			D	
Approach Delay (s)		18.8			22.8			15.2			38.1	
Approach LOS		B			C			B			D	

Intersection Summary			
HCM 2000 Control Delay	25.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	18.0
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 (vph)	26	52	35	4	2	2	4	147	17	19	309	9
Future Volume (vph)	26	52	35	4	2	2	4	147	17	19	309	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		7.0			7.0			7.0			6.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frt		0.96			0.96			0.99			1.00	
Flt Protected		0.99			0.98			1.00			1.00	
Satd. Flow (prot)		1764			1754			1833			1851	
Flt Permitted		0.94			0.90			0.99			0.98	
Satd. Flow (perm)		1671			1619			1816			1814	
Peak-hour factor, PHF	0.80	0.80	0.80	0.83	0.80	0.80	0.80	0.87	0.80	0.80	0.82	0.80
Adj. Flow (vph)	32	65	44	5	2	2	5	169	21	24	377	11
RTOR Reduction (vph)	0	22	0	0	2	0	0	6	0	0	2	0
Lane Group Flow (vph)	0	120	0	0	9	0	0	189	0	0	410	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		26.0			26.0			35.0			36.0	
Effective Green, g (s)		26.0			26.0			35.0			36.0	
Actuated g/C Ratio		0.35			0.35			0.47			0.48	
Clearance Time (s)		7.0			7.0			7.0			6.0	
Lane Grp Cap (vph)		579			561			847			870	
v/s Ratio Prot												
v/s Ratio Perm		c0.07			0.01			0.10			c0.23	
v/c Ratio		0.21			0.02			0.22			0.47	
Uniform Delay, d1		17.3			16.1			11.9			13.1	
Progression Factor		1.00			1.00			1.80			1.00	
Incremental Delay, d2		0.8			0.1			0.6			1.8	
Delay (s)		18.1			16.1			22.0			14.9	
Level of Service		B			B			C			B	
Approach Delay (s)		18.1			16.1			22.0			14.9	
Approach LOS		B			B			C			B	

Intersection Summary			
HCM 2000 Control Delay	17.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	62.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

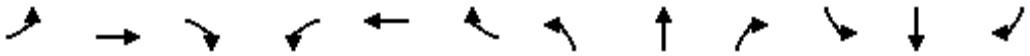


Movement	EBL	EBT	EBR	EBR2	WBL2	WBL	WBT	WBR	NBL2	NBL	NBT	NBR
Lane Configurations												
Traffic Volume (vph)	16	100	130	32	3	21	40	53	18	14	78	34
Future Volume (vph)	16	100	130	32	3	21	40	53	18	14	78	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0					6.0				6.0	
Lane Util. Factor		1.00					1.00				1.00	
Frt		0.92					0.94				0.97	
Flt Protected		1.00					0.99				0.99	
Satd. Flow (prot)		1711					1731				1783	
Flt Permitted		0.98					0.89				0.90	
Satd. Flow (perm)		1679					1558				1615	
Peak-hour factor, PHF	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Adj. Flow (vph)	20	125	162	40	4	26	50	66	22	18	98	42
RTOR Reduction (vph)	0	8	0	0	0	0	44	0	0	0	19	0
Lane Group Flow (vph)	0	340	0	0	0	0	102	0	0	0	163	0
Turn Type	Perm	NA			Perm	Perm	NA		pm+pt	pm+pt	NA	
Protected Phases		4					8		5	5	2	
Permitted Phases	4				8	8			2	2		
Actuated Green, G (s)		20.0					20.0				28.0	
Effective Green, g (s)		20.0					20.0				28.0	
Actuated g/C Ratio		0.33					0.33				0.47	
Clearance Time (s)		6.0					6.0				6.0	
Lane Grp Cap (vph)		559					519				767	
v/s Ratio Prot											c0.02	
v/s Ratio Perm		c0.20					0.07				0.08	
v/c Ratio		0.61					0.20				0.21	
Uniform Delay, d1		16.7					14.3				9.5	
Progression Factor		1.00					1.00				1.00	
Incremental Delay, d2		4.9					0.8				0.6	
Delay (s)		21.6					15.1				10.1	
Level of Service		C					B				B	
Approach Delay (s)		21.6					15.1				10.1	
Approach LOS		C					B				B	

Intersection Summary			
HCM 2000 Control Delay	18.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	44.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBL	SBT	SBR	SBR2
Lane Configurations				
Traffic Volume (vph)	58	147	14	11
Future Volume (vph)	58	147	14	11
Ideal Flow (vphpl)	1900	1900	1900	1900
Total Lost time (s)		6.0		
Lane Util. Factor		1.00		
Frt		0.99		
Flt Protected		0.99		
Satd. Flow (prot)		1812		
Flt Permitted		0.87		
Satd. Flow (perm)		1591		
Peak-hour factor, PHF	0.80	0.80	0.80	0.80
Adj. Flow (vph)	72	184	18	14
RTOR Reduction (vph)	0	3	0	0
Lane Group Flow (vph)	0	286	0	0
Turn Type	Perm	NA		
Protected Phases		6		
Permitted Phases	6			
Actuated Green, G (s)		20.0		
Effective Green, g (s)		20.0		
Actuated g/C Ratio		0.33		
Clearance Time (s)		6.0		
Lane Grp Cap (vph)		530		
v/s Ratio Prot				
v/s Ratio Perm		c0.18		
v/c Ratio		0.54		
Uniform Delay, d1		16.3		
Progression Factor		1.00		
Incremental Delay, d2		3.9		
Delay (s)		20.2		
Level of Service		C		
Approach Delay (s)		20.2		
Approach LOS		C		

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	907	6	40	262	44	0	0	186	0	0	0
Future Volume (vph)	0	907	6	40	262	44	0	0	186	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0		5.0	5.0				5.0			
Lane Util. Factor		0.91		1.00	0.95				1.00			
Frt		1.00		1.00	0.98				0.86			
Flt Protected		1.00		0.95	1.00				1.00			
Satd. Flow (prot)		5080		1770	3463				1611			
Flt Permitted		1.00		0.23	1.00				1.00			
Satd. Flow (perm)		5080		424	3463				1611			
Peak-hour factor, PHF	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.92	0.92	0.92
Adj. Flow (vph)	0	1134	8	50	328	55	0	0	232	0	0	0
RTOR Reduction (vph)	0	0	0	0	5	0	0	0	59	0	0	0
Lane Group Flow (vph)	0	1142	0	50	378	0	0	0	174	0	0	0
Turn Type		NA		Perm	NA				Perm			
Protected Phases		4			8							
Permitted Phases				8					2			
Actuated Green, G (s)		79.2		79.2	79.2				16.3			
Effective Green, g (s)		79.2		79.2	79.2				16.3			
Actuated g/C Ratio		0.75		0.75	0.75				0.15			
Clearance Time (s)		5.0		5.0	5.0				5.0			
Vehicle Extension (s)		3.0		3.0	3.0				3.0			
Lane Grp Cap (vph)		3813		318	2599				248			
v/s Ratio Prot		c0.22			0.11							
v/s Ratio Perm				0.12					c0.11			
v/c Ratio		0.30		0.16	0.15				0.70			
Uniform Delay, d1		4.2		3.7	3.7				42.3			
Progression Factor		1.00		1.00	1.00				1.00			
Incremental Delay, d2		0.2		1.1	0.1				8.6			
Delay (s)		4.4		4.8	3.8				50.9			
Level of Service		A		A	A				D			
Approach Delay (s)		4.4			3.9			50.9			0.0	
Approach LOS		A			A			D			A	

Intersection Summary			
HCM 2000 Control Delay	10.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	105.5	Sum of lost time (s)	10.0
Intersection Capacity Utilization	37.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	17	340	106	83	271	12	208	6	99	59	8	220
Future Volume (vph)	17	340	106	83	271	12	208	6	99	59	8	220
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	2.0	6.0	6.0	2.0	6.0			6.0			6.0	6.0
Lane Util. Factor	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	0.99			0.96			1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00			0.97			0.96	1.00
Satd. Flow (prot)	1770	1863	1583	1770	1851			1726			1784	1583
Flt Permitted	0.52	1.00	1.00	0.37	1.00			0.75			0.61	1.00
Satd. Flow (perm)	973	1863	1583	692	1851			1336			1141	1583
Peak-hour factor, PHF	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Adj. Flow (vph)	21	425	132	104	339	15	260	8	124	74	10	275
RTOR Reduction (vph)	0	0	81	0	2	0	0	27	0	0	0	184
Lane Group Flow (vph)	21	425	52	104	352	0	0	365	0	0	84	91
Turn Type	pm+pt	NA	Perm	pm+pt	NA		Perm	NA		Perm	NA	Perm
Protected Phases	1	6		5	2			4			8	
Permitted Phases	6		6	2			4			8		8
Actuated Green, G (s)	25.7	24.3	24.3	28.9	25.9			20.5			20.5	20.5
Effective Green, g (s)	25.7	24.3	24.3	28.9	25.9			20.5			20.5	20.5
Actuated g/C Ratio	0.42	0.39	0.39	0.47	0.42			0.33			0.33	0.33
Clearance Time (s)	2.0	6.0	6.0	2.0	6.0			6.0			6.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			3.0			3.0	3.0
Lane Grp Cap (vph)	422	732	622	375	775			443			378	525
v/s Ratio Prot	0.00	c0.23		c0.01	0.19							
v/s Ratio Perm	0.02		0.03	0.12				c0.27			0.07	0.06
v/c Ratio	0.05	0.58	0.08	0.28	0.45			0.82			0.22	0.17
Uniform Delay, d1	10.7	14.7	11.8	9.8	12.9			19.0			14.9	14.6
Progression Factor	1.00	1.00	1.00	1.00	1.00			1.00			1.00	1.00
Incremental Delay, d2	0.0	3.3	0.3	0.4	1.9			11.7			0.3	0.2
Delay (s)	10.7	18.1	12.0	10.2	14.8			30.7			15.2	14.8
Level of Service	B	B	B	B	B			C			B	B
Approach Delay (s)		16.4			13.7			30.7			14.9	
Approach LOS		B			B			C			B	

Intersection Summary			
HCM 2000 Control Delay	18.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	61.8	Sum of lost time (s)	14.0
Intersection Capacity Utilization	61.5%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	WBL	WBR	WBR2	NBL	NBT	SBT	SBR	NWT
Lane Configurations								
Traffic Volume (vph)	8	44	44	17	78	131	6	7
Future Volume (vph)	8	44	44	17	78	131	6	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0		6.0		6.0	6.0		6.0
Lane Util. Factor	1.00		0.95		1.00	1.00		1.00
Frt	0.87		0.85		1.00	0.99		1.00
Flt Protected	0.99		1.00		0.99	1.00		1.00
Satd. Flow (prot)	1611		1504		1849	1851		1863
Flt Permitted	0.99		1.00		0.95	1.00		1.00
Satd. Flow (perm)	1611		1504		1771	1851		1863
Peak-hour factor, PHF	0.80	0.80	0.80	0.99	0.80	0.80	0.80	0.80
Adj. Flow (vph)	10	55	55	17	98	164	8	9
RTOR Reduction (vph)	64	0	44	0	0	2	0	0
Lane Group Flow (vph)	7	0	5	0	115	170	0	9
Turn Type	Prot		Perm	Perm	NA	NA		NA
Protected Phases	8				1	1		2
Permitted Phases			8	1				
Actuated Green, G (s)	7.0		7.0		30.0	30.0		20.0
Effective Green, g (s)	7.0		7.0		30.0	30.0		20.0
Actuated g/C Ratio	0.09		0.09		0.40	0.40		0.27
Clearance Time (s)	6.0		6.0		6.0	6.0		6.0
Lane Grp Cap (vph)	150		140		708	740		496
v/s Ratio Prot	c0.00					c0.09		c0.00
v/s Ratio Perm			0.00		0.06			
v/c Ratio	0.04		0.03		0.16	0.23		0.02
Uniform Delay, d1	31.0		30.9		14.4	14.9		20.3
Progression Factor	1.00		1.00		1.00	1.00		1.00
Incremental Delay, d2	0.6		0.4		0.5	0.7		0.1
Delay (s)	31.5		31.4		14.9	15.6		20.3
Level of Service	C		C		B	B		C
Approach Delay (s)	31.4				14.9	15.6		20.3
Approach LOS	C				B	B		C

Intersection Summary			
HCM 2000 Control Delay	20.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.13		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	62.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Appendix 5E-12: 2025 Build PM

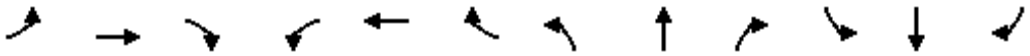
Unsignalized

Synchro Results

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	322	70	29	250	70	20
Future Volume (Veh/h)	322	70	29	250	70	20
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.85	0.80	0.80	0.92	0.80	0.80
Hourly flow rate (vph)	379	88	36	272	88	25
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			467		767	423
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			467		767	423
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			97		75	96
cM capacity (veh/h)			1094		358	631

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	467	308	113
Volume Left	0	36	88
Volume Right	88	0	25
cSH	1700	1094	396
Volume to Capacity	0.27	0.03	0.29
Queue Length 95th (ft)	0	3	29
Control Delay (s)	0.0	1.3	17.7
Lane LOS		A	C
Approach Delay (s)	0.0	1.3	17.7
Approach LOS			C

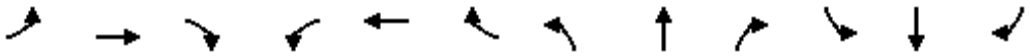
Intersection Summary			
Average Delay	2.7		
Intersection Capacity Utilization	49.2%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Yield			Stop			Yield	
Traffic Volume (vph)	25	31	8	1	34	242	7	81	9	279	89	16
Future Volume (vph)	25	31	8	1	34	242	7	81	9	279	89	16
Peak Hour Factor	0.85	0.89	0.80	0.80	0.89	0.86	0.99	0.85	0.99	0.87	0.85	0.83
Hourly flow rate (vph)	29	35	10	1	38	281	7	95	9	321	105	19

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	74	320	111	445
Volume Left (vph)	29	1	7	321
Volume Right (vph)	10	281	9	19
Hadj (s)	0.03	-0.49	0.00	0.15
Departure Headway (s)	6.1	5.1	5.7	5.3
Degree Utilization, x	0.12	0.45	0.18	0.66
Capacity (veh/h)	503	654	555	650
Control Delay (s)	9.9	12.2	9.9	18.0
Approach Delay (s)	9.9	12.2	9.9	18.0
Approach LOS	A	B	A	C

Intersection Summary			
Delay	14.5		
Level of Service	B		
Intersection Capacity Utilization	57.6%	ICU Level of Service	B
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	29	191	12	11	175	32	10	47	29	25	41	44
Future Volume (Veh/h)	29	191	12	11	175	32	10	47	29	25	41	44
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.83	0.80	0.80	0.80	0.82	0.84	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	35	239	15	14	213	38	13	59	36	31	51	55
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		643			1031							
pX, platoon unblocked												
vC, conflicting volume	251			254			657	596	246	642	584	232
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	251			254			657	596	246	642	584	232
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	97			99			96	85	95	90	87	93
cM capacity (veh/h)	1314			1311			310	402	792	319	408	807

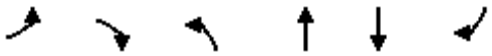
Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	289	265	108	137
Volume Left	35	14	13	31
Volume Right	15	38	36	55
cSH	1314	1311	461	472
Volume to Capacity	0.03	0.01	0.23	0.29
Queue Length 95th (ft)	2	1	22	30
Control Delay (s)	1.2	0.5	15.2	15.7
Lane LOS	A	A	C	C
Approach Delay (s)	1.2	0.5	15.2	15.7
Approach LOS			C	C

Intersection Summary				
Average Delay	5.3			
Intersection Capacity Utilization	38.8%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (veh/h)	0	70	610	82	0	785
Future Volume (Veh/h)	0	70	610	82	0	785
Sign Control	Yield		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	0	88	763	103	0	981
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						1081
pX, platoon unblocked	0.83					
vC, conflicting volume	1796	814			763	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1856	814			763	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	77			100	
cM capacity (veh/h)	67	378			850	

Direction, Lane #	NW 1	NE 1	SW 1
Volume Total	88	866	981
Volume Left	0	0	0
Volume Right	88	103	0
cSH	378	1700	850
Volume to Capacity	0.23	0.51	0.00
Queue Length 95th (ft)	22	0	0
Control Delay (s)	17.4	0.0	0.0
Lane LOS	C		
Approach Delay (s)	17.4	0.0	0.0
Approach LOS	C		

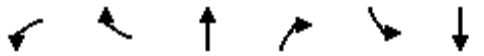
Intersection Summary			
Average Delay	0.8		
Intersection Capacity Utilization	48.1%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	66	41	75	245	253	96
Future Volume (Veh/h)	66	41	75	245	253	96
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.86	0.80	0.80	0.90	0.80	0.80
Hourly flow rate (vph)	77	51	94	272	316	120
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)					693	
pX, platoon unblocked						
vC, conflicting volume	836	376	436			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	836	376	436			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	75	92	92			
cM capacity (veh/h)	309	670	1124			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	128	366	436
Volume Left	77	94	0
Volume Right	51	0	120
cSH	394	1124	1700
Volume to Capacity	0.33	0.08	0.26
Queue Length 95th (ft)	35	7	0
Control Delay (s)	18.5	2.8	0.0
Lane LOS	C	A	
Approach Delay (s)	18.5	2.8	0.0
Approach LOS	C		

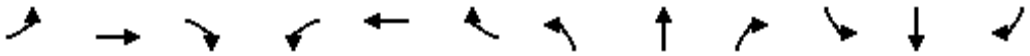
Intersection Summary			
Average Delay	3.7		
Intersection Capacity Utilization	52.4%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	9	211	166	3	214	285
Future Volume (Veh/h)	9	211	166	3	214	285
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.80	0.91	0.83	0.80	0.80	0.80
Hourly flow rate (vph)	11	232	200	4	268	356
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1094	202			204	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1094	202			204	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	94	72			80	
cM capacity (veh/h)	190	839			1368	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	243	204	624
Volume Left	11	0	268
Volume Right	232	4	0
cSH	727	1700	1368
Volume to Capacity	0.33	0.12	0.20
Queue Length 95th (ft)	37	0	18
Control Delay (s)	12.4	0.0	4.7
Lane LOS	B		A
Approach Delay (s)	12.4	0.0	4.7
Approach LOS	B		

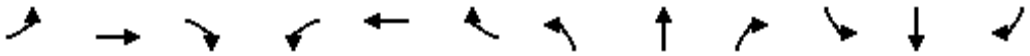
Intersection Summary			
Average Delay	5.6		
Intersection Capacity Utilization	59.3%	ICU Level of Service	B
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	14	412	15	8	532	15	12	3	10	11	2	12
Future Volume (Veh/h)	14	412	15	8	532	15	12	3	10	11	2	12
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.80	0.87	0.80	0.80	0.91	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	18	474	19	10	585	19	15	4	13	14	3	15
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)					1030							
pX, platoon unblocked	0.98						0.98	0.98		0.98	0.98	0.98
vC, conflicting volume	604			493			1150	1144	484	1149	1144	594
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	582			493			1142	1135	484	1140	1135	572
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	98			99			91	98	98	91	98	97
cM capacity (veh/h)	968			1071			163	192	583	164	192	507

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	511	614	32	32
Volume Left	18	10	15	14
Volume Right	19	19	13	15
cSH	968	1071	236	245
Volume to Capacity	0.02	0.01	0.14	0.13
Queue Length 95th (ft)	1	1	12	11
Control Delay (s)	0.5	0.3	22.6	21.9
Lane LOS	A	A	C	C
Approach Delay (s)	0.5	0.3	22.6	21.9
Approach LOS			C	C

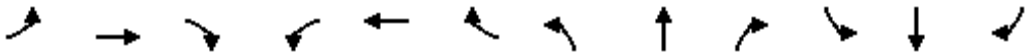
Intersection Summary				
Average Delay	1.6			
Intersection Capacity Utilization	42.2%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	7	331	8	1	440	13	8	3	5	8	0	19
Future Volume (Veh/h)	7	331	8	1	440	13	8	3	5	8	0	19
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.80	0.80	0.80	0.80	0.84	0.80	0.80	0.80	0.80	0.99	0.80	0.80
Hourly flow rate (vph)	9	414	10	1	524	16	10	4	6	8	0	24
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	540			424			995	979	419	979	976	532
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	540			424			995	979	419	979	976	532
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			100			95	98	99	96	100	96
cM capacity (veh/h)	1028			1135			212	248	634	223	249	547

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	433	541	20	32
Volume Left	9	1	10	8
Volume Right	10	16	6	24
cSH	1028	1135	275	401
Volume to Capacity	0.01	0.00	0.07	0.08
Queue Length 95th (ft)	1	0	6	6
Control Delay (s)	0.3	0.0	19.1	14.7
Lane LOS	A	A	C	B
Approach Delay (s)	0.3	0.0	19.1	14.7
Approach LOS			C	B

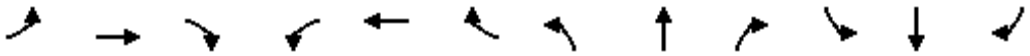
Intersection Summary				
Average Delay	1.0			
Intersection Capacity Utilization	34.4%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	241	9	164	251	36	11	15	98	51	65	32
Future Volume (Veh/h)	5	241	9	164	251	36	11	15	98	51	65	32
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.80	0.90	0.80	0.80	0.80	0.80	0.80	0.80	0.84	0.84	0.84	0.83
Hourly flow rate (vph)	6	268	11	205	314	45	14	19	117	61	77	39
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	359			279			1110	1054	274	1158	1038	336
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	359			279			1110	1054	274	1158	1038	336
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			84			87	90	85	48	60	94
cM capacity (veh/h)	1200			1284			107	189	765	118	193	706

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	285	564	150	177
Volume Left	6	205	14	61
Volume Right	11	45	117	39
cSH	1200	1284	391	183
Volume to Capacity	0.01	0.16	0.38	0.97
Queue Length 95th (ft)	0	14	44	195
Control Delay (s)	0.2	4.1	19.8	110.7
Lane LOS	A	A	C	F
Approach Delay (s)	0.2	4.1	19.8	110.7
Approach LOS			C	F

Intersection Summary			
Average Delay	21.2		
Intersection Capacity Utilization	62.8%	ICU Level of Service	B
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	193	4	34	212	27	8	82	145	34	124	65
Future Volume (Veh/h)	6	193	4	34	212	27	8	82	145	34	124	65
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.80	0.80	0.80	0.80	0.88	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	8	241	5	43	241	34	10	103	181	43	155	81
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	275			246			762	620	244	836	606	258
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	275			246			762	620	244	836	606	258
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			97			95	73	77	75	61	90
cM capacity (veh/h)	1288			1320			195	388	795	171	396	781

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	254	318	294	279
Volume Left	8	43	10	43
Volume Right	5	34	181	81
cSH	1288	1320	540	373
Volume to Capacity	0.01	0.03	0.54	0.75
Queue Length 95th (ft)	0	3	81	148
Control Delay (s)	0.3	1.3	19.3	38.2
Lane LOS	A	A	C	E
Approach Delay (s)	0.3	1.3	19.3	38.2
Approach LOS			C	E

Intersection Summary				
Average Delay	14.7			
Intersection Capacity Utilization	61.9%	ICU Level of Service	B	
Analysis Period (min)	15			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	629	132	114	445	16	93
Future Volume (Veh/h)	629	132	114	445	16	93
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	786	165	143	556	20	116
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	1023					
pX, platoon unblocked			0.87		0.87	0.87
vC, conflicting volume			951		1710	868
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			869		1742	775
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			79		69	67
cM capacity (veh/h)			675		65	347

Direction, Lane #	EB 1	WB 1	WB 2	NB 1
Volume Total	951	143	556	136
Volume Left	0	143	0	20
Volume Right	165	0	0	116
cSH	1700	675	1700	212
Volume to Capacity	0.56	0.21	0.33	0.64
Queue Length 95th (ft)	0	20	0	95
Control Delay (s)	0.0	11.8	0.0	48.0
Lane LOS		B		E
Approach Delay (s)	0.0	2.4		48.0
Approach LOS				E

Intersection Summary			
Average Delay	4.6		
Intersection Capacity Utilization	64.1%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	1	203	565	67	272	596
Future Volume (Veh/h)	1	203	565	67	272	596
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.80	0.87	0.92	0.80	0.83	0.81
Hourly flow rate (vph)	1	233	614	84	328	736
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			776			
pX, platoon unblocked	0.91	0.91			0.91	
vC, conflicting volume	2006	614			698	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2056	527			619	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	97	54			63	
cM capacity (veh/h)	35	502			875	

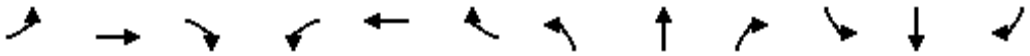
Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	234	614	84	328	736
Volume Left	1	0	0	328	0
Volume Right	233	0	84	0	0
cSH	474	1700	1700	875	1700
Volume to Capacity	0.49	0.36	0.05	0.37	0.43
Queue Length 95th (ft)	67	0	0	44	0
Control Delay (s)	19.8	0.0	0.0	11.6	0.0
Lane LOS	C			B	
Approach Delay (s)	19.8	0.0		3.6	
Approach LOS	C				

Intersection Summary			
Average Delay	4.2		
Intersection Capacity Utilization	67.4%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	8	20	221	6	23	359
Future Volume (Veh/h)	8	20	221	6	23	359
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.86
Hourly flow rate (vph)	10	25	276	8	29	417
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	755	280			284	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	755	280			284	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	97	97			98	
cM capacity (veh/h)	368	759			1278	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	35	284	446
Volume Left	10	0	29
Volume Right	25	8	0
cSH	582	1700	1278
Volume to Capacity	0.06	0.17	0.02
Queue Length 95th (ft)	5	0	2
Control Delay (s)	11.6	0.0	0.7
Lane LOS	B		A
Approach Delay (s)	11.6	0.0	0.7
Approach LOS	B		

Intersection Summary			
Average Delay	1.0		
Intersection Capacity Utilization	45.5%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	9	138	66	34	111	15	59	59	28	1	45	8
Future Volume (Veh/h)	9	138	66	34	111	15	59	59	28	1	45	8
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	10	150	72	37	121	16	64	64	30	1	49	9
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		1173										
pX, platoon unblocked												
vC, conflicting volume	137			222			442	417	186	471	445	129
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	137			222			442	417	186	471	445	129
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			97			86	87	96	100	90	99
cM capacity (veh/h)	1447			1347			468	509	856	427	490	921

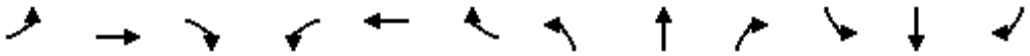
Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	232	174	158	59
Volume Left	10	37	64	1
Volume Right	72	16	30	9
cSH	1447	1347	531	527
Volume to Capacity	0.01	0.03	0.30	0.11
Queue Length 95th (ft)	1	2	31	9
Control Delay (s)	0.4	1.8	14.6	12.7
Lane LOS	A	A	B	B
Approach Delay (s)	0.4	1.8	14.6	12.7
Approach LOS			B	B

Intersection Summary				
Average Delay	5.6			
Intersection Capacity Utilization	42.8%	ICU Level of Service	A	
Analysis Period (min)	15			

Appendix 5E-13: 2040 No-Build AM

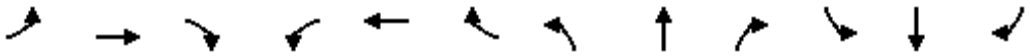
Signalized

Synchro Results



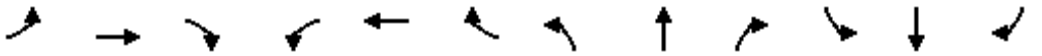
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	124	212	14	48	270	80	16	322	32	24	150	110
Future Volume (vph)	124	212	14	48	270	80	16	322	32	24	150	110
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	8	11	12	8	11	12	12	16	12	12	16	12
Total Lost time (s)		6.0			6.0		6.0	6.0		6.0	6.0	
Lane Util. Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.99			0.97		1.00	0.99		1.00	0.93	
Flt Protected		0.98			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1760			1742		1770	2084		1770	1971	
Flt Permitted		0.63			0.90		0.41	1.00		0.21	1.00	
Satd. Flow (perm)		1133			1583		757	2084		392	1971	
Peak-hour factor, PHF	0.80	0.80	0.80	0.94	0.80	0.80	0.80	0.84	0.90	0.80	0.92	0.85
Growth Factor (vph)	119%	119%	119%	119%	119%	119%	119%	119%	119%	119%	119%	119%
Adj. Flow (vph)	184	315	21	61	402	119	24	456	42	36	194	154
RTOR Reduction (vph)	0	2	0	0	14	0	0	5	0	0	44	0
Lane Group Flow (vph)	0	518	0	0	568	0	24	493	0	36	304	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		34.0			34.0		19.0	19.0		19.0	19.0	
Effective Green, g (s)		34.0			34.0		19.0	19.0		19.0	19.0	
Actuated g/C Ratio		0.52			0.52		0.29	0.29		0.29	0.29	
Clearance Time (s)		6.0			6.0		6.0	6.0		6.0	6.0	
Lane Grp Cap (vph)		592			828		221	609		114	576	
v/s Ratio Prot								c0.24			0.15	
v/s Ratio Perm		c0.46			0.36		0.03			0.09		
v/c Ratio		0.87			0.69		0.11	0.81		0.32	0.53	
Uniform Delay, d1		13.6			11.5		16.8	21.3		17.9	19.2	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		16.4			4.6		1.0	11.1		7.1	3.4	
Delay (s)		30.0			16.1		17.8	32.4		25.1	22.7	
Level of Service		C			B		B	C		C	C	
Approach Delay (s)		30.0			16.1			31.8			22.9	
Approach LOS		C			B			C			C	

Intersection Summary			
HCM 2000 Control Delay	25.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	84.0%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	40	131	17	37	232	273	29	346	39	128	260	56
Future Volume (vph)	40	131	17	37	232	273	29	346	39	128	260	56
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0	6.0	6.0	6.0		3.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	1.00	0.85	1.00	0.98		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1831		1770	1863	1583	1770	1833		1770	1808	
Flt Permitted	0.22	1.00		0.46	1.00	1.00	0.51	1.00		0.32	1.00	
Satd. Flow (perm)	416	1831		854	1863	1583	941	1833		591	1808	
Peak-hour factor, PHF	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.84	0.80	0.87	0.90	0.80
Growth Factor (vph)	124%	124%	124%	124%	124%	124%	124%	124%	124%	124%	124%	124%
Adj. Flow (vph)	62	203	26	57	360	423	45	511	60	182	358	87
RTOR Reduction (vph)	0	4	0	0	0	142	0	3	0	0	7	0
Lane Group Flow (vph)	62	225	0	57	360	281	45	568	0	182	438	0
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA		pm+pt	NA	
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	27.9	27.9		27.9	27.9	27.9	67.0	67.0		78.0	78.0	
Effective Green, g (s)	27.9	27.9		27.9	27.9	27.9	67.0	67.0		78.0	78.0	
Actuated g/C Ratio	0.24	0.24		0.24	0.24	0.24	0.57	0.57		0.66	0.66	
Clearance Time (s)	6.0	6.0		6.0	6.0	6.0	6.0	6.0		3.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	98	433		202	440	374	534	1041		470	1196	
v/s Ratio Prot		0.12			c0.19			c0.31		c0.03	0.24	
v/s Ratio Perm	0.15			0.07		0.18	0.05			0.23		
v/c Ratio	0.63	0.52		0.28	0.82	0.75	0.08	0.55		0.39	0.37	
Uniform Delay, d1	40.4	39.2		36.8	42.6	41.8	11.5	15.9		9.8	8.9	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	12.6	1.1		0.8	11.3	8.3	0.1	0.6		0.5	0.2	
Delay (s)	53.0	40.3		37.6	53.9	50.0	11.6	16.5		10.4	9.1	
Level of Service	D	D		D	D	D	B	B		B	A	
Approach Delay (s)		43.0			50.8			16.1			9.5	
Approach LOS		D			D			B			A	

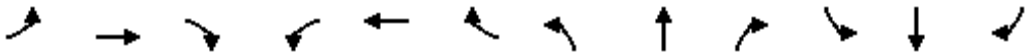
Intersection Summary			
HCM 2000 Control Delay	29.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	117.9	Sum of lost time (s)	15.0
Intersection Capacity Utilization	167.9%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	516	350	2	0	280	144	40	122	0	88	104	212
Future Volume (vph)	516	350	2	0	280	144	40	122	0	88	104	212
Ideal Flow (vphpl)	1200	1200	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	10	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	3.0	5.0			5.0			5.0			5.0	5.0
Lane Util. Factor	1.00	1.00			1.00			1.00			1.00	1.00
Frt	1.00	1.00			0.96			1.00			1.00	0.85
Flt Protected	0.95	1.00			1.00			0.99			0.98	1.00
Satd. Flow (prot)	1043	1097			1779			1840			1821	1583
Flt Permitted	0.11	1.00			1.00			0.56			0.61	1.00
Satd. Flow (perm)	122	1097			1779			1042			1142	1583
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.90	0.93	0.93	0.93	0.93	0.93	0.93	0.90
Growth Factor (vph)	119%	119%	119%	119%	119%	119%	119%	119%	119%	119%	119%	119%
Adj. Flow (vph)	660	448	3	0	370	184	51	156	0	113	133	280
RTOR Reduction (vph)	0	0	0	0	13	0	0	0	0	0	0	221
Lane Group Flow (vph)	660	451	0	0	541	0	0	207	0	0	246	59
Turn Type	pm+pt	NA			NA		Perm	NA		Perm	NA	Perm
Protected Phases	7	4			8			2			6	
Permitted Phases	4			8			2			6		6
Actuated Green, G (s)	94.0	94.0			33.0			26.0			26.0	26.0
Effective Green, g (s)	94.0	94.0			33.0			26.0			26.0	26.0
Actuated g/C Ratio	0.72	0.72			0.25			0.20			0.20	0.20
Clearance Time (s)	3.0	5.0			5.0			5.0			5.0	5.0
Vehicle Extension (s)	3.0	3.0			3.0			3.0			3.0	3.0
Lane Grp Cap (vph)	499	793			451			208			228	316
v/s Ratio Prot	c0.59	0.41			0.30							
v/s Ratio Perm	c0.37							0.20			c0.22	0.04
v/c Ratio	1.32	0.57			1.20			1.00			1.08	0.19
Uniform Delay, d1	31.5	8.5			48.5			51.9			52.0	43.2
Progression Factor	1.00	1.00			1.00			1.00			1.00	1.00
Incremental Delay, d2	158.7	0.9			109.1			60.7			82.2	0.3
Delay (s)	190.2	9.4			157.6			112.6			134.2	43.5
Level of Service	F	A			F			F			F	D
Approach Delay (s)		116.8			157.6			112.6			85.9	
Approach LOS		F			F			F			F	

Intersection Summary			
HCM 2000 Control Delay	119.1	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.30		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	121.1%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

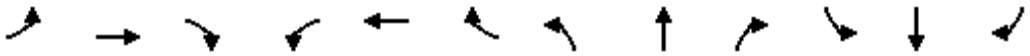


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	37	99	97	129	92	13	23	205	111	42	442	37
Future Volume (vph)	37	99	97	129	92	13	23	205	111	42	442	37
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.93		1.00	0.98		1.00	0.95		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1724		1770	1827		1770	1765		1770	1841	
Flt Permitted	0.66	1.00		0.49	1.00		0.18	1.00		0.39	1.00	
Satd. Flow (perm)	1226	1724		907	1827		331	1765		718	1841	
Peak-hour factor, PHF	0.80	0.80	0.80	0.80	0.84	0.80	0.80	0.80	0.81	0.80	0.80	0.80
Growth Factor (vph)	124%	124%	124%	124%	124%	124%	124%	124%	124%	124%	124%	124%
Adj. Flow (vph)	57	153	150	200	136	20	36	318	170	65	685	57
RTOR Reduction (vph)	0	45	0	0	7	0	0	26	0	0	4	0
Lane Group Flow (vph)	57	258	0	200	149	0	36	462	0	65	738	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			4			2			2	
Permitted Phases	4			4			2			2		
Actuated Green, G (s)	24.1	24.1		24.1	24.1		36.0	36.0		36.0	36.0	
Effective Green, g (s)	24.1	24.1		24.1	24.1		36.0	36.0		36.0	36.0	
Actuated g/C Ratio	0.33	0.33		0.33	0.33		0.50	0.50		0.50	0.50	
Clearance Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Vehicle Extension (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)	409	576		303	610		165	881		358	919	
v/s Ratio Prot		0.15			0.08			0.26			c0.40	
v/s Ratio Perm	0.05			c0.22			0.11			0.09		
v/c Ratio	0.14	0.45		0.66	0.24		0.22	0.52		0.18	0.80	
Uniform Delay, d1	16.8	18.8		20.5	17.4		10.1	12.2		9.9	15.1	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.2	0.8		5.8	0.3		0.9	0.7		0.3	5.4	
Delay (s)	17.0	19.5		26.3	17.7		11.1	13.0		10.3	20.5	
Level of Service	B	B		C	B		B	B		B	C	
Approach Delay (s)		19.1			22.5			12.9			19.7	
Approach LOS		B			C			B			B	

Intersection Summary			
HCM 2000 Control Delay	18.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	72.1	Sum of lost time (s)	12.0
Intersection Capacity Utilization	92.5%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	50	28	146	10	22	180
Future Volume (vph)	50	28	146	10	22	180
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0		6.0			6.0
Lane Util. Factor	1.00		1.00			1.00
Frt	0.95		0.99			1.00
Flt Protected	0.97		1.00			0.99
Satd. Flow (prot)	1712		1847			1853
Flt Permitted	0.97		1.00			0.96
Satd. Flow (perm)	1712		1847			1780
Peak-hour factor, PHF	0.93	0.80	0.80	0.80	0.80	0.80
Growth Factor (vph)	112%	112%	112%	112%	112%	112%
Adj. Flow (vph)	60	39	204	14	31	252
RTOR Reduction (vph)	33	0	4	0	0	0
Lane Group Flow (vph)	66	0	214	0	0	283
Turn Type	Prot		NA		Perm	NA
Protected Phases	4		2			2
Permitted Phases					2	
Actuated Green, G (s)	7.6		28.4			28.4
Effective Green, g (s)	7.6		28.4			28.4
Actuated g/C Ratio	0.16		0.59			0.59
Clearance Time (s)	6.0		6.0			6.0
Vehicle Extension (s)	2.0		2.0			2.0
Lane Grp Cap (vph)	271		1092			1053
v/s Ratio Prot	c0.04		0.12			
v/s Ratio Perm						c0.16
v/c Ratio	0.24		0.20			0.27
Uniform Delay, d1	17.7		4.5			4.8
Progression Factor	1.00		1.00			1.00
Incremental Delay, d2	0.2		0.0			0.1
Delay (s)	17.9		4.6			4.8
Level of Service	B		A			A
Approach Delay (s)	17.9		4.6			4.8
Approach LOS	B		A			A

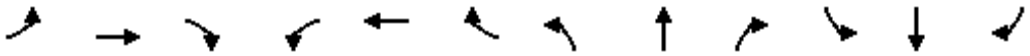
Intersection Summary			
HCM 2000 Control Delay	6.9	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.26		
Actuated Cycle Length (s)	48.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	49.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	29	112	21	11	95	47	33	100	9	36	104	15
Future Volume (vph)	29	112	21	11	95	47	33	100	9	36	104	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0			6.0			6.0			6.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frt		0.98			0.96			0.99			0.99	
Flt Protected		0.99			1.00			0.99			0.99	
Satd. Flow (prot)		1814			1779			1824			1817	
Flt Permitted		0.91			0.97			0.88			0.89	
Satd. Flow (perm)		1674			1736			1629			1636	
Peak-hour factor, PHF	0.81	0.80	0.80	0.80	0.80	0.80	0.80	0.84	0.80	0.80	0.80	0.80
Growth Factor (vph)	116%	116%	116%	116%	116%	116%	116%	116%	116%	116%	116%	116%
Adj. Flow (vph)	42	162	30	16	138	68	48	138	13	52	151	22
RTOR Reduction (vph)	0	7	0	0	22	0	0	4	0	0	5	0
Lane Group Flow (vph)	0	227	0	0	200	0	0	195	0	0	220	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		6			6			2			2	
Permitted Phases	6			6			2			2		
Actuated Green, G (s)		32.0			32.0			30.0			30.0	
Effective Green, g (s)		32.0			32.0			30.0			30.0	
Actuated g/C Ratio		0.43			0.43			0.41			0.41	
Clearance Time (s)		6.0			6.0			6.0			6.0	
Lane Grp Cap (vph)		723			750			660			663	
v/s Ratio Prot												
v/s Ratio Perm		c0.14			0.12			0.12			c0.13	
v/c Ratio		0.31			0.27			0.30			0.33	
Uniform Delay, d1		13.8			13.5			14.9			15.1	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		1.1			0.9			1.1			1.3	
Delay (s)		14.9			14.3			16.0			16.4	
Level of Service		B			B			B			B	
Approach Delay (s)		14.9			14.3			16.0			16.4	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	15.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	74.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	61.7%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



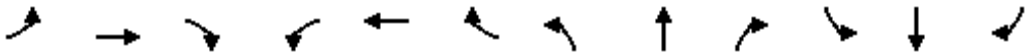
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	38	154	13	26	73	19	12	135	77	27	80	31
Future Volume (vph)	38	154	13	26	73	19	12	135	77	27	80	31
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.97		1.00	0.94		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1839		1770	1803		1770	1756		1770	1785	
Flt Permitted	0.67	1.00		0.62	1.00		0.66	1.00		0.47	1.00	
Satd. Flow (perm)	1255	1839		1154	1803		1220	1756		871	1785	
Peak-hour factor, PHF	0.86	0.88	0.80	0.80	0.83	0.80	0.80	0.87	0.80	0.84	0.80	0.80
Growth Factor (vph)	116%	116%	116%	116%	116%	116%	116%	116%	116%	116%	116%	116%
Adj. Flow (vph)	51	203	19	38	102	28	17	180	112	37	116	45
RTOR Reduction (vph)	0	5	0	0	13	0	0	32	0	0	20	0
Lane Group Flow (vph)	51	217	0	38	117	0	17	260	0	37	141	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	38.0	38.0		38.0	38.0		22.0	22.0		22.0	22.0	
Effective Green, g (s)	38.0	38.0		38.0	38.0		22.0	22.0		22.0	22.0	
Actuated g/C Ratio	0.54	0.54		0.54	0.54		0.31	0.31		0.31	0.31	
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)	681	998		626	978		383	551		273	561	
v/s Ratio Prot		c0.12			0.07			c0.15			0.08	
v/s Ratio Perm	0.04			0.03			0.01			0.04		
v/c Ratio	0.07	0.22		0.06	0.12		0.04	0.47		0.14	0.25	
Uniform Delay, d1	7.6	8.3		7.6	7.8		16.7	19.3		17.2	17.9	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.2	0.5		0.2	0.3		0.2	2.9		1.0	1.1	
Delay (s)	7.8	8.8		7.7	8.1		16.9	22.2		18.2	18.9	
Level of Service	A	A		A	A		B	C		B	B	
Approach Delay (s)		8.6			8.0			21.9			18.8	
Approach LOS		A			A			C			B	

Intersection Summary			
HCM 2000 Control Delay	15.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.31		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	66.0%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

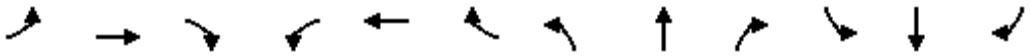
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	234	134	31	12	130	5	43	776	10	69	424	107
Future Volume (vph)	234	134	31	12	130	5	43	776	10	69	424	107
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	7.0		3.0	7.0	7.0	3.0	7.0		3.0	7.0	7.0
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.95		1.00	0.95	1.00
Frt	1.00	0.97		1.00	1.00	0.85	1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	1811		1770	1863	1583	1770	3532		1770	3539	1583
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1770	1811		1770	1863	1583	1770	3532		1770	3539	1583
Peak-hour factor, PHF	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Growth Factor (vph)	112%	112%	112%	112%	112%	112%	112%	112%	112%	112%	112%	112%
Adj. Flow (vph)	328	188	43	17	182	7	60	1086	14	97	594	150
RTOR Reduction (vph)	0	8	0	0	0	6	0	1	0	0	0	94
Lane Group Flow (vph)	328	223	0	17	182	1	60	1099	0	97	594	56
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8						6
Actuated Green, G (s)	20.6	32.0		2.8	14.2	14.2	6.3	34.2		8.0	35.9	35.9
Effective Green, g (s)	20.6	32.0		2.8	14.2	14.2	6.3	34.2		8.0	35.9	35.9
Actuated g/C Ratio	0.21	0.33		0.03	0.15	0.15	0.06	0.35		0.08	0.37	0.37
Clearance Time (s)	3.0	7.0		3.0	7.0	7.0	3.0	7.0		3.0	7.0	7.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	375	597		51	272	231	114	1245		145	1309	585
v/s Ratio Prot	c0.19	0.12		0.01	c0.10		0.03	c0.31		c0.05	0.17	
v/s Ratio Perm						0.00						0.04
v/c Ratio	0.87	0.37		0.33	0.67	0.00	0.53	0.88		0.67	0.45	0.09
Uniform Delay, d1	37.0	24.8		46.2	39.2	35.4	43.9	29.5		43.2	23.1	19.9
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	19.7	0.4		3.8	6.1	0.0	4.3	9.3		11.1	1.1	0.3
Delay (s)	56.6	25.2		50.0	45.3	35.4	48.2	38.8		54.3	24.3	20.3
Level of Service	E	C		D	D	D	D	D		D	C	C
Approach Delay (s)		43.7			45.3			39.3			27.0	
Approach LOS		D			D			D			C	

Intersection Summary			
HCM 2000 Control Delay	36.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	97.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	70.7%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



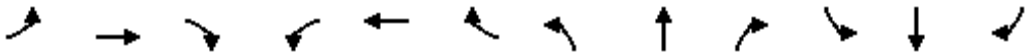
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	92	148	46	2	218	190	64	986	0	88	532	16
Future Volume (vph)	92	148	46	2	218	190	64	986	0	88	532	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	7.0		3.0	7.0		3.0	7.0		3.0	7.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frt	1.00	0.96		1.00	0.93		1.00	1.00		1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1793		1770	1731		1770	3539		1770	3524	
Flt Permitted	0.14	1.00		0.60	1.00		0.27	1.00		0.12	1.00	
Satd. Flow (perm)	253	1793		1120	1731		494	3539		219	3524	
Peak-hour factor, PHF	0.80	0.87	0.80	0.80	0.93	0.91	0.80	0.90	0.80	0.80	0.80	0.80
Growth Factor (vph)	112%	112%	112%	112%	112%	112%	112%	112%	112%	112%	112%	112%
Adj. Flow (vph)	129	191	64	3	263	234	90	1227	0	123	745	22
RTOR Reduction (vph)	0	12	0	0	35	0	0	0	0	0	3	0
Lane Group Flow (vph)	129	243	0	3	462	0	90	1227	0	123	764	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	36.4	32.0		27.8	26.4		38.2	32.6		41.0	34.0	
Effective Green, g (s)	36.4	32.0		27.8	26.4		38.2	32.6		41.0	34.0	
Actuated g/C Ratio	0.39	0.34		0.30	0.28		0.41	0.35		0.44	0.37	
Clearance Time (s)	3.0	7.0		3.0	7.0		3.0	7.0		3.0	7.0	
Vehicle Extension (s)	3.0	2.0		3.0	2.0		3.0	2.0		3.0	2.0	
Lane Grp Cap (vph)	213	616		344	491		279	1240		213	1288	
v/s Ratio Prot	c0.05	0.14		0.00	c0.27		0.02	c0.35		c0.04	0.22	
v/s Ratio Perm	0.19			0.00			0.11			0.21		
v/c Ratio	0.61	0.39		0.01	0.94		0.32	0.99		0.58	0.59	
Uniform Delay, d1	21.4	23.2		22.9	32.5		17.5	30.0		20.4	23.9	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	4.8	0.2		0.0	26.2		0.7	22.7		3.8	0.5	
Delay (s)	26.2	23.3		22.9	58.7		18.2	52.7		24.1	24.4	
Level of Service	C	C		C	E		B	D		C	C	
Approach Delay (s)		24.3			58.5			50.4			24.4	
Approach LOS		C			E			D			C	

Intersection Summary			
HCM 2000 Control Delay	41.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	93.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	86.4%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	42	444	92	26	244	106	44	180	30	90	182	16
Future Volume (vph)	42	444	92	26	244	106	44	180	30	90	182	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.97		1.00	0.95		1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1815		1770	1773		1770	1825		1770	1841	
Flt Permitted	0.44	1.00		0.20	1.00		0.52	1.00		0.50	1.00	
Satd. Flow (perm)	817	1815		381	1773		974	1825		940	1841	
Peak-hour factor, PHF	0.87	0.80	0.80	0.80	0.88	0.80	0.80	0.81	0.87	0.80	0.80	0.80
Growth Factor (vph)	112%	112%	112%	112%	112%	112%	112%	112%	112%	112%	112%	112%
Adj. Flow (vph)	54	622	129	36	311	148	62	249	39	126	255	22
RTOR Reduction (vph)	0	9	0	0	21	0	0	7	0	0	4	0
Lane Group Flow (vph)	54	742	0	36	438	0	62	281	0	126	273	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		1			1			2			2	
Permitted Phases	1			1			2			2		
Actuated Green, G (s)	31.2	31.2		31.2	31.2		16.5	16.5		16.5	16.5	
Effective Green, g (s)	31.2	31.2		31.2	31.2		16.5	16.5		16.5	16.5	
Actuated g/C Ratio	0.52	0.52		0.52	0.52		0.28	0.28		0.28	0.28	
Clearance Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	426	948		199	926		269	504		259	508	
v/s Ratio Prot		c0.41			0.25			c0.15			0.15	
v/s Ratio Perm	0.07			0.09			0.06			0.13		
v/c Ratio	0.13	0.78		0.18	0.47		0.23	0.56		0.49	0.54	
Uniform Delay, d1	7.3	11.5		7.5	9.0		16.7	18.5		18.1	18.4	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.0	3.9		0.2	0.1		0.2	0.8		0.5	0.6	
Delay (s)	7.3	15.5		7.7	9.2		16.9	19.2		18.6	18.9	
Level of Service	A	B		A	A		B	B		B	B	
Approach Delay (s)		14.9			9.1			18.8			18.8	
Approach LOS		B			A			B			B	

Intersection Summary			
HCM 2000 Control Delay	14.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	59.7	Sum of lost time (s)	12.0
Intersection Capacity Utilization	75.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

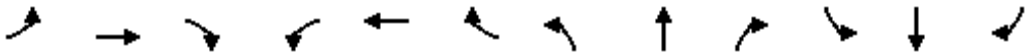


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	28	178	34	108	232	116	30	532	82	142	314	46
Future Volume (vph)	28	178	34	108	232	116	30	532	82	142	314	46
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1500	1500	1900	1500	1500	1900
Total Lost time (s)	3.0	7.0		3.0	7.0		3.0	6.0		3.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.95		1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1818		1770	1766		1397	1441		1397	1440	
Flt Permitted	0.14	1.00		0.27	1.00		0.43	1.00		0.16	1.00	
Satd. Flow (perm)	265	1818		502	1766		625	1441		239	1440	
Peak-hour factor, PHF	0.83	0.80	0.80	0.90	0.93	0.88	0.80	0.92	0.93	0.84	0.88	0.80
Growth Factor (vph)	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	37	245	47	132	274	145	41	636	97	186	392	63
RTOR Reduction (vph)	0	5	0	0	13	0	0	4	0	0	4	0
Lane Group Flow (vph)	37	287	0	132	406	0	41	729	0	186	452	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	35.1	28.1		39.1	30.1		76.7	70.7		84.2	75.2	
Effective Green, g (s)	35.1	28.1		39.1	30.1		76.7	70.7		84.2	75.2	
Actuated g/C Ratio	0.26	0.20		0.28	0.22		0.56	0.51		0.61	0.55	
Clearance Time (s)	3.0	7.0		3.0	7.0		3.0	6.0		3.0	6.0	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	144	372		226	387		382	742		235	788	
v/s Ratio Prot	0.01	0.16		c0.04	c0.23		0.00	c0.51		c0.06	0.31	
v/s Ratio Perm	0.05			0.13			0.06			0.42		
v/c Ratio	0.26	0.77		0.58	1.05		0.11	0.98		0.79	0.57	
Uniform Delay, d1	40.9	51.6		39.0	53.6		14.2	32.7		21.7	20.5	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.3	8.8		2.5	59.0		0.0	28.5		15.5	0.6	
Delay (s)	41.3	60.3		41.5	112.6		14.3	61.2		37.2	21.1	
Level of Service	D	E		D	F		B	E		D	C	
Approach Delay (s)		58.2			95.6			58.7			25.8	
Approach LOS		E			F			E			C	

Intersection Summary			
HCM 2000 Control Delay	58.3	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.97		
Actuated Cycle Length (s)	137.3	Sum of lost time (s)	19.0
Intersection Capacity Utilization	103.1%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	33	4	41	19	9	6	645	28	14	171	5
Future Volume (vph)	10	33	4	41	19	9	6	645	28	14	171	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0			6.0		3.0	6.0		3.0	6.0	
Lane Util. Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.99			0.98		1.00	0.99		1.00	1.00	
Flt Protected		0.99			0.97		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1821			1777		1770	1851		1770	1855	
Flt Permitted		0.94			0.80		0.60	1.00		0.08	1.00	
Satd. Flow (perm)		1731			1466		1124	1851		152	1855	
Peak-hour factor, PHF	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.81	0.80	0.80	0.80
Growth Factor (vph)	114%	114%	114%	114%	114%	114%	114%	114%	114%	114%	114%	114%
Adj. Flow (vph)	14	47	6	58	27	13	9	919	39	20	244	7
RTOR Reduction (vph)	0	4	0	0	6	0	0	1	0	0	1	0
Lane Group Flow (vph)	0	63	0	0	92	0	9	957	0	20	250	0
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		25.0			25.0		49.0	48.0		51.0	49.0	
Effective Green, g (s)		25.0			25.0		49.0	48.0		51.0	49.0	
Actuated g/C Ratio		0.28			0.28		0.54	0.53		0.57	0.54	
Clearance Time (s)		6.0			6.0		3.0	6.0		3.0	6.0	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		480			407		619	987		122	1009	
v/s Ratio Prot							0.00	c0.52		c0.00	0.13	
v/s Ratio Perm		0.04			c0.06		0.01			0.09		
v/c Ratio		0.13			0.23		0.01	0.97		0.16	0.25	
Uniform Delay, d1		24.4			25.0		9.4	20.3		18.9	10.8	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.1			0.3		0.0	22.1		0.6	0.6	
Delay (s)		24.5			25.3		9.4	42.4		19.5	11.4	
Level of Service		C			C		A	D		B	B	
Approach Delay (s)		24.5			25.3			42.1			12.0	
Approach LOS		C			C			D			B	

Intersection Summary			
HCM 2000 Control Delay	34.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	71.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

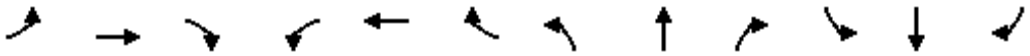


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	164	278	40	72	306	26	58	614	40	54	380	50
Future Volume (vph)	164	278	40	72	306	26	58	614	40	54	380	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	6.0		3.0	6.0		3.0	5.0		3.0	5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.99		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1829		1770	1841		1770	1846		1770	1827	
Flt Permitted	0.19	1.00		0.26	1.00		0.27	1.00		0.10	1.00	
Satd. Flow (perm)	357	1829		478	1841		506	1846		190	1827	
Peak-hour factor, PHF	0.97	0.90	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.80	0.88	0.80
Growth Factor (vph)	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	186	340	47	85	362	31	69	726	47	74	475	69
RTOR Reduction (vph)	0	5	0	0	3	0	0	3	0	0	6	0
Lane Group Flow (vph)	186	382	0	85	390	0	69	770	0	74	538	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	28.1	22.1		25.5	20.8		44.3	39.3		44.3	39.3	
Effective Green, g (s)	28.1	22.1		25.5	20.8		44.3	39.3		44.3	39.3	
Actuated g/C Ratio	0.32	0.25		0.29	0.24		0.50	0.45		0.50	0.45	
Clearance Time (s)	3.0	6.0		3.0	6.0		3.0	5.0		3.0	5.0	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	210	458		207	434		326	823		185	814	
v/s Ratio Prot	c0.06	0.21		0.02	0.21		0.01	c0.42		c0.02	0.29	
v/s Ratio Perm	c0.22			0.10			0.09			0.18		
v/c Ratio	0.89	0.83		0.41	0.90		0.21	0.94		0.40	0.66	
Uniform Delay, d1	26.0	31.3		24.1	32.6		12.9	23.2		17.5	19.2	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	32.1	11.8		0.5	20.4		0.1	17.4		0.5	1.6	
Delay (s)	58.1	43.1		24.6	53.0		13.1	40.6		18.1	20.7	
Level of Service	E	D		C	D		B	D		B	C	
Approach Delay (s)		47.9			47.9			38.3			20.4	
Approach LOS		D			D			D			C	

Intersection Summary			
HCM 2000 Control Delay	37.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	88.1	Sum of lost time (s)	17.0
Intersection Capacity Utilization	87.7%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

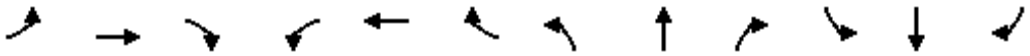
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	13	190	14	106	403	42	24	367	70	32	209	10
Future Volume (vph)	13	190	14	106	403	42	24	367	70	32	209	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0		3.0	5.0		6.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.99		1.00	0.97		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1843		1770	1837		1770	1813		1770	1849	
Flt Permitted	0.40	1.00		0.44	1.00		0.54	1.00		0.21	1.00	
Satd. Flow (perm)	738	1843		823	1837		1005	1813		399	1849	
Peak-hour factor, PHF	0.80	0.83	0.80	0.81	0.88	0.90	0.80	0.91	0.80	0.92	0.86	0.80
Growth Factor (vph)	114%	114%	114%	114%	114%	114%	114%	114%	114%	114%	114%	114%
Adj. Flow (vph)	19	261	20	149	522	53	34	460	100	40	277	14
RTOR Reduction (vph)	0	4	0	0	5	0	0	12	0	0	3	0
Lane Group Flow (vph)	19	277	0	149	570	0	34	548	0	40	288	0
Turn Type	Perm	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases		4		3	8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	20.2	20.2		28.6	28.6		22.5	22.5		22.5	22.5	
Effective Green, g (s)	20.2	20.2		28.6	28.6		22.5	22.5		22.5	22.5	
Actuated g/C Ratio	0.33	0.33		0.46	0.46		0.36	0.36		0.36	0.36	
Clearance Time (s)	5.0	5.0		3.0	5.0		6.0	6.0		6.0	6.0	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	240	599		461	846		364	656		144	669	
v/s Ratio Prot		0.15		0.03	c0.31			c0.30			0.16	
v/s Ratio Perm	0.03			0.12			0.03			0.10		
v/c Ratio	0.08	0.46		0.32	0.67		0.09	0.84		0.28	0.43	
Uniform Delay, d1	14.5	16.6		10.2	13.1		13.1	18.1		14.0	15.0	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.1	0.2		0.1	1.7		0.0	8.6		0.4	0.2	
Delay (s)	14.6	16.8		10.3	14.8		13.1	26.7		14.4	15.1	
Level of Service	B	B		B	B		B	C		B	B	
Approach Delay (s)		16.7			13.9			26.0			15.0	
Approach LOS		B			B			C			B	

Intersection Summary			
HCM 2000 Control Delay	18.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	62.1	Sum of lost time (s)	14.0
Intersection Capacity Utilization	87.4%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



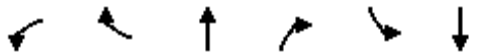
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	24	284	90	68	332	62	136	532	128	106	416	54
Future Volume (vph)	24	284	90	68	332	62	136	532	128	106	416	54
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	5.0		3.0	5.0		3.0	6.0	6.0	3.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	0.95	
Frt	1.00	0.96		1.00	0.98		1.00	1.00	0.85	1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	1797		1770	1820		1770	1863	1583	1770	3477	
Flt Permitted	0.23	1.00		0.18	1.00		0.31	1.00	1.00	0.13	1.00	
Satd. Flow (perm)	431	1797		327	1820		582	1863	1583	250	3477	
Peak-hour factor, PHF	0.93	0.92	0.95	0.93	0.90	0.93	0.93	0.90	0.93	0.84	0.82	0.80
Growth Factor (vph)	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	28	340	104	80	406	73	161	650	151	139	558	74
RTOR Reduction (vph)	0	12	0	0	7	0	0	0	98	0	11	0
Lane Group Flow (vph)	28	432	0	80	472	0	161	650	53	139	621	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		
Actuated Green, G (s)	27.8	24.8		33.9	27.9		38.9	30.3	30.3	37.9	29.8	
Effective Green, g (s)	27.8	24.8		33.9	27.9		38.9	30.3	30.3	37.9	29.8	
Actuated g/C Ratio	0.32	0.29		0.39	0.32		0.45	0.35	0.35	0.44	0.35	
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	6.0	6.0	3.0	6.0	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Lane Grp Cap (vph)	185	516		230	588		380	654	555	252	1200	
v/s Ratio Prot	0.01	0.24		c0.02	c0.26		0.04	c0.35		c0.05	0.18	
v/s Ratio Perm	0.04			0.11			0.15		0.03	0.19		
v/c Ratio	0.15	0.84		0.35	0.80		0.42	0.99	0.10	0.55	0.52	
Uniform Delay, d1	21.2	28.9		18.7	26.7		14.7	27.9	18.8	18.7	22.5	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.1	10.8		0.3	7.4		0.3	33.4	0.0	1.5	0.2	
Delay (s)	21.3	39.7		19.1	34.1		15.0	61.3	18.8	20.2	22.7	
Level of Service	C	D		B	C		B	E	B	C	C	
Approach Delay (s)		38.6			31.9			46.9			22.2	
Approach LOS		D			C			D			C	

Intersection Summary			
HCM 2000 Control Delay	35.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	86.3	Sum of lost time (s)	17.0
Intersection Capacity Utilization	83.3%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



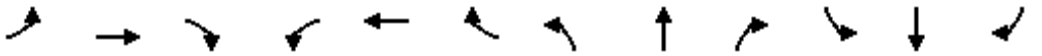
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	49	231	62	47	278	46	102	436	52	39	138	31
Future Volume (vph)	49	231	62	47	278	46	102	436	52	39	138	31
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.97		1.00	0.98		1.00	0.98		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1803		1770	1820		1770	1833		1770	1812	
Flt Permitted	0.29	1.00		0.32	1.00		0.61	1.00		0.29	1.00	
Satd. Flow (perm)	537	1803		593	1820		1134	1833		534	1812	
Peak-hour factor, PHF	0.80	0.81	0.80	0.80	0.86	0.80	0.80	0.89	0.88	0.80	0.80	0.80
Growth Factor (vph)	114%	114%	114%	114%	114%	114%	114%	114%	114%	114%	114%	114%
Adj. Flow (vph)	70	325	88	67	369	66	145	558	67	56	197	44
RTOR Reduction (vph)	0	12	0	0	8	0	0	4	0	0	8	0
Lane Group Flow (vph)	70	401	0	67	427	0	145	621	0	56	233	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			2			1			1	
Permitted Phases	2			2			1			1		
Actuated Green, G (s)	26.6	26.6		26.6	26.6		44.2	44.2		44.2	44.2	
Effective Green, g (s)	26.6	26.6		26.6	26.6		44.2	44.2		44.2	44.2	
Actuated g/C Ratio	0.31	0.31		0.31	0.31		0.52	0.52		0.52	0.52	
Clearance Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	168	565		186	570		591	955		278	944	
v/s Ratio Prot		0.22			c0.23			c0.34			0.13	
v/s Ratio Perm	0.13			0.11			0.13			0.10		
v/c Ratio	0.42	0.71		0.36	0.75		0.25	0.65		0.20	0.25	
Uniform Delay, d1	23.0	25.7		22.5	26.1		11.1	14.7		10.9	11.2	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.6	3.5		0.4	4.7		1.0	3.4		1.6	0.6	
Delay (s)	23.6	29.2		23.0	30.8		12.1	18.1		12.5	11.8	
Level of Service	C	C		C	C		B	B		B	B	
Approach Delay (s)		28.4			29.8			17.0			11.9	
Approach LOS		C			C			B			B	

Intersection Summary			
HCM 2000 Control Delay	22.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	84.8	Sum of lost time (s)	14.0
Intersection Capacity Utilization	106.3%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	16	7	450	8	8	340
Future Volume (vph)	16	7	450	8	8	340
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0		7.0			7.0
Lane Util. Factor	1.00		1.00			1.00
Frt	0.96		1.00			1.00
Flt Protected	0.97		1.00			1.00
Satd. Flow (prot)	1726		1858			1860
Flt Permitted	0.97		1.00			0.98
Satd. Flow (perm)	1726		1858			1834
Peak-hour factor, PHF	0.80	0.80	0.84	0.80	0.80	0.89
Growth Factor (vph)	114%	114%	114%	114%	114%	114%
Adj. Flow (vph)	23	10	611	11	11	436
RTOR Reduction (vph)	10	0	1	0	0	0
Lane Group Flow (vph)	23	0	621	0	0	447
Turn Type	Prot		NA		Perm	NA
Protected Phases	8		2			6
Permitted Phases					6	
Actuated Green, G (s)	4.2		73.3			73.3
Effective Green, g (s)	4.2		73.3			73.3
Actuated g/C Ratio	0.05		0.81			0.81
Clearance Time (s)	6.0		7.0			7.0
Vehicle Extension (s)	2.0		2.0			2.0
Lane Grp Cap (vph)	80		1504			1485
v/s Ratio Prot	c0.01		c0.33			
v/s Ratio Perm						0.24
v/c Ratio	0.29		0.41			0.30
Uniform Delay, d1	41.7		2.5			2.2
Progression Factor	1.00		1.00			1.00
Incremental Delay, d2	0.7		0.1			0.0
Delay (s)	42.5		2.5			2.2
Level of Service	D		A			A
Approach Delay (s)	42.5		2.5			2.2
Approach LOS	D		A			A

Intersection Summary			
HCM 2000 Control Delay	3.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	90.5	Sum of lost time (s)	13.0
Intersection Capacity Utilization	72.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



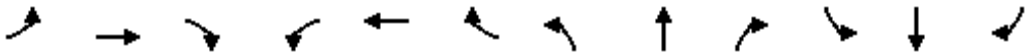
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	80	166	0	0	130	28	28	296	30	40	6	46
Future Volume (vph)	80	166	0	0	130	28	28	296	30	40	6	46
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0			6.0			6.0	6.0
Lane Util. Factor		1.00			1.00			1.00			1.00	1.00
Frt		1.00			0.98			0.99			1.00	0.85
Flt Protected		0.98			1.00			1.00			0.96	1.00
Satd. Flow (prot)		1833			1819			1833			1784	1583
Flt Permitted		0.82			1.00			0.98			0.62	1.00
Satd. Flow (perm)		1530			1819			1796			1159	1583
Peak-hour factor, PHF	0.80	0.80	0.80	0.80	0.80	0.80	0.83	0.85	0.80	0.80	0.90	0.80
Growth Factor (vph)	104%	104%	104%	104%	104%	104%	104%	104%	104%	104%	104%	104%
Adj. Flow (vph)	104	216	0	0	169	36	35	362	39	52	7	60
RTOR Reduction (vph)	0	0	0	0	13	0	0	6	0	0	0	30
Lane Group Flow (vph)	0	320	0	0	192	0	0	430	0	0	59	30
Turn Type	Perm	NA			NA		Perm	NA		Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		6
Actuated Green, G (s)		20.0			20.0			30.0			30.0	30.0
Effective Green, g (s)		20.0			20.0			30.0			30.0	30.0
Actuated g/C Ratio		0.33			0.33			0.49			0.49	0.49
Clearance Time (s)		5.0			5.0			6.0			6.0	6.0
Lane Grp Cap (vph)		501			596			883			570	778
v/s Ratio Prot					0.11							
v/s Ratio Perm		c0.21						c0.24			0.05	0.02
v/c Ratio		0.64			0.32			0.49			0.10	0.04
Uniform Delay, d1		17.4			15.4			10.4			8.3	8.0
Progression Factor		1.00			1.00			1.00			1.00	1.00
Incremental Delay, d2		6.1			1.4			1.9			0.4	0.1
Delay (s)		23.5			16.8			12.3			8.7	8.1
Level of Service		C			B			B			A	A
Approach Delay (s)		23.5			16.8			12.3			8.4	
Approach LOS		C			B			B			A	

Intersection Summary			
HCM 2000 Control Delay	16.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	61.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	80.0%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

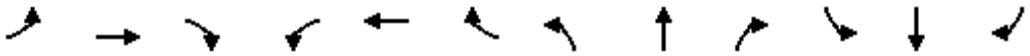
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	930	468	10	204	100
Future Volume (vph)	0	930	468	10	204	100
Ideal Flow (vphpl)	1900	1200	1900	1900	1900	1900
Total Lost time (s)		6.0	5.0	5.0	5.0	5.0
Lane Util. Factor		1.00	1.00	1.00	1.00	1.00
Frt		0.86	1.00	0.85	1.00	1.00
Flt Protected		1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)		1018	1863	1583	1770	1863
Flt Permitted		1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)		1018	1863	1583	1770	1863
Peak-hour factor, PHF	0.93	0.93	0.93	0.94	0.84	0.84
Growth Factor (vph)	104%	104%	104%	104%	104%	104%
Adj. Flow (vph)	0	1040	523	11	253	124
RTOR Reduction (vph)	0	0	0	2	0	0
Lane Group Flow (vph)	0	1040	523	9	253	124
Turn Type		Perm	NA	Perm	Prot	NA
Protected Phases			4		6	
Permitted Phases		2		4		6
Actuated Green, G (s)		110.0	29.0	29.0	111.0	111.0
Effective Green, g (s)		110.0	29.0	29.0	111.0	111.0
Actuated g/C Ratio		0.73	0.19	0.19	0.74	0.74
Clearance Time (s)		6.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)		3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		746	360	306	1309	1378
v/s Ratio Prot			c0.28		0.14	
v/s Ratio Perm		c1.02		0.01		0.07
v/c Ratio		1.39	1.45	0.03	0.19	0.09
Uniform Delay, d1		20.0	60.5	49.1	5.9	5.4
Progression Factor		1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2		185.5	218.7	0.0	0.1	0.0
Delay (s)		205.5	279.2	49.1	6.0	5.5
Level of Service		F	F	D	A	A
Approach Delay (s)	205.5		274.5			5.8
Approach LOS	F		F			A

Intersection Summary			
HCM 2000 Control Delay	185.8	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.41		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	129.6%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



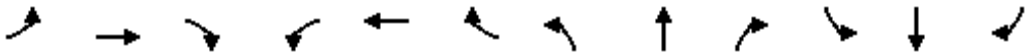
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	3	6	0	17	0	7	0	153	18	9	80	0
Future Volume (vph)	3	6	0	17	0	7	0	153	18	9	80	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0			7.0			7.0			7.0	
Lane Util. Factor	1.00	1.00			1.00			1.00			1.00	
Frt	1.00	1.00			0.96			0.99			1.00	
Flt Protected	0.95	1.00			0.97			1.00			1.00	
Satd. Flow (prot)	1770	1863			1727			1835			1854	
Flt Permitted	0.74	1.00			0.86			1.00			0.97	
Satd. Flow (perm)	1374	1863			1528			1835			1803	
Peak-hour factor, PHF	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.81	0.80	0.80	0.80	0.80
Adj. Flow (vph)	4	8	0	21	0	9	0	189	22	11	100	0
RTOR Reduction (vph)	0	0	0	0	20	0	0	6	0	0	0	0
Lane Group Flow (vph)	4	8	0	0	10	0	0	206	0	0	111	0
Turn Type	Perm	NA		Perm	NA			NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8						6		
Actuated Green, G (s)	25.0	25.0			25.0			36.0			36.0	
Effective Green, g (s)	25.0	25.0			25.0			36.0			36.0	
Actuated g/C Ratio	0.33	0.33			0.33			0.48			0.48	
Clearance Time (s)	7.0	7.0			7.0			7.0			7.0	
Lane Grp Cap (vph)	458	621			509			880			865	
v/s Ratio Prot		0.00						c0.11				
v/s Ratio Perm	0.00				c0.01						0.06	
v/c Ratio	0.01	0.01			0.02			0.23			0.13	
Uniform Delay, d1	16.7	16.7			16.8			11.4			10.8	
Progression Factor	1.00	1.00			1.00			1.00			0.84	
Incremental Delay, d2	0.0	0.0			0.1			0.6			0.2	
Delay (s)	16.7	16.8			16.8			12.1			9.3	
Level of Service	B	B			B			B			A	
Approach Delay (s)		16.8			16.8			12.1			9.3	
Approach LOS		B			B			B			A	

Intersection Summary			
HCM 2000 Control Delay	11.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.15		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	62.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



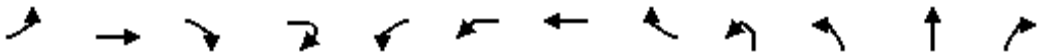
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	38	254	22	52	132	114	6	312	132	112	170	16
Future Volume (vph)	38	254	22	52	132	114	6	312	132	112	170	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		9.0			9.0			9.0			9.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frt		0.99			0.95			0.96			0.99	
Flt Protected		0.99			0.99			1.00			0.98	
Satd. Flow (prot)		1834			1747			1781			1815	
Flt Permitted		0.91			0.83			0.99			0.60	
Satd. Flow (perm)		1675			1463			1770			1114	
Peak-hour factor, PHF	0.80	0.80	0.82	0.80	0.86	0.80	0.91	0.91	0.80	0.90	0.93	0.93
Adj. Flow (vph)	48	318	27	65	153	142	7	343	165	124	183	17
RTOR Reduction (vph)	0	0	0	0	0	0	0	23	0	0	2	0
Lane Group Flow (vph)	0	393	0	0	361	0	0	492	0	0	322	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		27.0			27.0			30.0			30.0	
Effective Green, g (s)		27.0			27.0			30.0			30.0	
Actuated g/C Ratio		0.36			0.36			0.40			0.40	
Clearance Time (s)		9.0			9.0			9.0			9.0	
Lane Grp Cap (vph)		603			526			708			445	
v/s Ratio Prot												
v/s Ratio Perm		0.23			c0.25			0.28			c0.29	
v/c Ratio		0.65			0.69			0.70			0.72	
Uniform Delay, d1		20.1			20.4			18.7			19.0	
Progression Factor		1.00			1.00			1.01			1.44	
Incremental Delay, d2		5.4			7.1			5.6			9.7	
Delay (s)		25.5			27.5			24.5			37.0	
Level of Service		C			C			C			D	
Approach Delay (s)		25.5			27.5			24.5			37.0	
Approach LOS		C			C			C			D	

Intersection Summary			
HCM 2000 Control Delay	28.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	97.9%	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 (vph)	20	80	12	34	16	6	10	342	12	12	150	40
Future Volume (vph)	20	80	12	34	16	6	10	342	12	12	150	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		7.0			7.0			7.0			6.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frt		0.99			0.98			1.00			0.97	
Flt Protected		0.99			0.97			1.00			1.00	
Satd. Flow (prot)		1820			1780			1852			1808	
Flt Permitted		0.94			0.78			0.99			0.97	
Satd. Flow (perm)		1733			1435			1833			1752	
Peak-hour factor, PHF	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Adj. Flow (vph)	25	100	15	42	20	8	12	428	15	15	188	50
RTOR Reduction (vph)	0	6	0	0	5	0	0	2	0	0	12	0
Lane Group Flow (vph)	0	134	0	0	66	0	0	454	0	0	241	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		26.0			26.0			35.0			36.0	
Effective Green, g (s)		26.0			26.0			35.0			36.0	
Actuated g/C Ratio		0.35			0.35			0.47			0.48	
Clearance Time (s)		7.0			7.0			7.0			6.0	
Lane Grp Cap (vph)		600			497			855			840	
v/s Ratio Prot												
v/s Ratio Perm		c0.08			0.05			c0.25			0.14	
v/c Ratio		0.22			0.13			0.53			0.29	
Uniform Delay, d1		17.4			16.8			14.2			11.8	
Progression Factor		1.00			1.00			1.60			1.00	
Incremental Delay, d2		0.9			0.6			1.7			0.9	
Delay (s)		18.2			17.3			24.4			12.6	
Level of Service		B			B			C			B	
Approach Delay (s)		18.2			17.3			24.4			12.6	
Approach LOS		B			B			C			B	

Intersection Summary			
HCM 2000 Control Delay	19.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	62.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

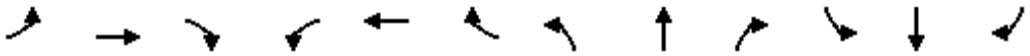


Movement	EBL	EBT	EBR	EBR2	WBL2	WBL	WBT	WBR	NBL2	NBL	NBT	NBR
Lane Configurations												
Traffic Volume (vph)	4	66	21	6	25	44	89	38	7	41	67	25
Future Volume (vph)	4	66	21	6	25	44	89	38	7	41	67	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0					6.0				6.0	
Lane Util. Factor		1.00					1.00				1.00	
Frt		0.96					0.97				0.98	
Flt Protected		1.00					0.98				0.98	
Satd. Flow (prot)		1789					1782				1788	
Flt Permitted		0.99					0.84				0.87	
Satd. Flow (perm)		1768					1529				1590	
Peak-hour factor, PHF	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Adj. Flow (vph)	5	82	26	8	31	55	111	48	9	51	84	31
RTOR Reduction (vph)	0	4	0	0	0	0	14	0	0	0	13	0
Lane Group Flow (vph)	0	118	0	0	0	0	231	0	0	0	162	0
Turn Type	Perm	NA			Perm	Perm	NA		pm+pt	pm+pt	NA	
Protected Phases		4					8		5	5	2	
Permitted Phases	4				8	8			2	2		
Actuated Green, G (s)		21.0					21.0				27.0	
Effective Green, g (s)		21.0					21.0				27.0	
Actuated g/C Ratio		0.35					0.35				0.45	
Clearance Time (s)		6.0					6.0				6.0	
Lane Grp Cap (vph)		618					535				732	
v/s Ratio Prot											c0.02	
v/s Ratio Perm		0.07					c0.15				0.08	
v/c Ratio		0.19					0.43				0.22	
Uniform Delay, d1		13.6					14.9				10.1	
Progression Factor		1.00					1.00				1.00	
Incremental Delay, d2		0.7					2.5				0.7	
Delay (s)		14.3					17.5				10.8	
Level of Service		B					B				B	
Approach Delay (s)		14.3					17.5				10.8	
Approach LOS		B					B				B	

Intersection Summary			
HCM 2000 Control Delay	15.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.34		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	38.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

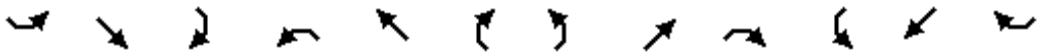
Movement	SBL	SBT	SBR	SBR2
Lane Configurations				
Traffic Volume (vph)	31	55	14	5
Future Volume (vph)	31	55	14	5
Ideal Flow (vphpl)	1900	1900	1900	1900
Total Lost time (s)		6.0		
Lane Util. Factor		1.00		
Frt		0.98		
Flt Protected		0.99		
Satd. Flow (prot)		1791		
Flt Permitted		0.87		
Satd. Flow (perm)		1582		
Peak-hour factor, PHF	0.80	0.80	0.80	0.80
Adj. Flow (vph)	39	69	18	6
RTOR Reduction (vph)	0	3	0	0
Lane Group Flow (vph)	0	129	0	0
Turn Type	Perm	NA		
Protected Phases		6		
Permitted Phases	6			
Actuated Green, G (s)		19.0		
Effective Green, g (s)		19.0		
Actuated g/C Ratio		0.32		
Clearance Time (s)		6.0		
Lane Grp Cap (vph)		500		
v/s Ratio Prot				
v/s Ratio Perm		c0.08		
v/c Ratio		0.26		
Uniform Delay, d1		15.3		
Progression Factor		1.00		
Incremental Delay, d2		1.3		
Delay (s)		16.5		
Level of Service		B		
Approach Delay (s)		16.5		
Approach LOS		B		

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	310	14	160	734	62	0	0	186	0	0	0
Future Volume (vph)	0	310	14	160	734	62	0	0	186	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0		5.0	5.0				5.0			
Lane Util. Factor		0.91		1.00	0.95				1.00			
Frt		0.99		1.00	0.99				0.86			
Flt Protected		1.00		0.95	1.00				1.00			
Satd. Flow (prot)		5052		1770	3498				1611			
Flt Permitted		1.00		0.50	1.00				1.00			
Satd. Flow (perm)		5052		933	3498				1611			
Peak-hour factor, PHF	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.92	0.92	0.92
Growth Factor (vph)	102%	102%	102%	102%	102%	102%	102%	102%	102%	102%	102%	102%
Adj. Flow (vph)	0	395	18	204	936	79	0	0	237	0	0	0
RTOR Reduction (vph)	0	1	0	0	2	0	0	0	225	0	0	0
Lane Group Flow (vph)	0	412	0	204	1013	0	0	0	12	0	0	0
Turn Type		NA		Perm	NA				Perm			
Protected Phases		4			8							
Permitted Phases				8					2			
Actuated Green, G (s)		91.9		91.9	91.9				5.5			
Effective Green, g (s)		91.9		91.9	91.9				5.5			
Actuated g/C Ratio		0.86		0.86	0.86				0.05			
Clearance Time (s)		5.0		5.0	5.0				5.0			
Vehicle Extension (s)		3.0		3.0	3.0				3.0			
Lane Grp Cap (vph)		4322		798	2993				82			
v/s Ratio Prot		0.08			c0.29							
v/s Ratio Perm				0.22					c0.01			
v/c Ratio		0.10		0.26	0.34				0.15			
Uniform Delay, d1		1.2		1.4	1.6				48.7			
Progression Factor		1.00		1.00	1.00				1.00			
Incremental Delay, d2		0.0		0.8	0.3				0.8			
Delay (s)		1.3		2.2	1.9				49.5			
Level of Service		A		A	A				D			
Approach Delay (s)		1.3			1.9			49.5			0.0	
Approach LOS		A			A			D			A	

Intersection Summary			
HCM 2000 Control Delay	7.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	107.4	Sum of lost time (s)	10.0
Intersection Capacity Utilization	26.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	37	275	136	190	348	23	147	4	56	8	4	31
Future Volume (vph)	37	275	136	190	348	23	147	4	56	8	4	31
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	2.0	6.0	6.0	2.0	6.0			6.0			6.0	6.0
Lane Util. Factor	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	0.99			0.96			1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00			0.97			0.97	1.00
Satd. Flow (prot)	1770	1863	1583	1770	1846			1733			1803	1583
Flt Permitted	0.49	1.00	1.00	0.45	1.00			0.78			0.81	1.00
Satd. Flow (perm)	917	1863	1583	833	1846			1399			1500	1583
Peak-hour factor, PHF	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Growth Factor (vph)	102%	102%	102%	102%	102%	102%	102%	102%	102%	102%	102%	102%
Adj. Flow (vph)	47	351	173	242	444	29	187	5	71	10	5	40
RTOR Reduction (vph)	0	0	104	0	3	0	0	21	0	0	0	30
Lane Group Flow (vph)	47	351	69	242	470	0	0	242	0	0	15	10
Turn Type	pm+pt	NA	Perm	pm+pt	NA		Perm	NA		Perm	NA	Perm
Protected Phases	1	6		5	2			4			8	
Permitted Phases	6		6	2			4			8		8
Actuated Green, G (s)	27.4	25.1	25.1	35.5	31.2			15.1			15.1	15.1
Effective Green, g (s)	27.4	25.1	25.1	35.5	31.2			15.1			15.1	15.1
Actuated g/C Ratio	0.44	0.40	0.40	0.57	0.50			0.24			0.24	0.24
Clearance Time (s)	2.0	6.0	6.0	2.0	6.0			6.0			6.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			3.0			3.0	3.0
Lane Grp Cap (vph)	432	746	634	598	920			337			361	381
v/s Ratio Prot	0.00	0.19		c0.05	c0.25							
v/s Ratio Perm	0.04		0.04	0.18				c0.17			0.01	0.01
v/c Ratio	0.11	0.47	0.11	0.40	0.51			0.72			0.04	0.03
Uniform Delay, d1	10.2	13.8	11.7	7.1	10.6			21.8			18.2	18.1
Progression Factor	1.00	1.00	1.00	1.00	1.00			1.00			1.00	1.00
Incremental Delay, d2	0.1	2.1	0.3	0.4	2.0			7.1			0.0	0.0
Delay (s)	10.3	16.0	12.1	7.5	12.6			28.9			18.3	18.2
Level of Service	B	B	B	A	B			C			B	B
Approach Delay (s)		14.3			10.9			28.9			18.2	
Approach LOS		B			B			C			B	

Intersection Summary			
HCM 2000 Control Delay	15.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	62.6	Sum of lost time (s)	14.0
Intersection Capacity Utilization	57.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBL	WBR	WBR2	NBL	NBT	SBT	SBR	NWL	NWT	NWR
Lane Configurations										
Traffic Volume (vph)	8	43	28	20	130	77	6	9	3	1
Future Volume (vph)	8	43	28	20	130	77	6	9	3	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0		6.0		6.0	6.0			6.0	
Lane Util. Factor	1.00		0.95		1.00	1.00			1.00	
Frt	0.87		0.85		1.00	0.99			0.99	
Flt Protected	0.99		1.00		0.99	1.00			0.97	
Satd. Flow (prot)	1613		1504		1852	1843			1786	
Flt Permitted	0.99		1.00		0.97	1.00			0.97	
Satd. Flow (perm)	1613		1504		1798	1843			1786	
Peak-hour factor, PHF	0.80	0.80	0.80	0.99	0.86	0.80	0.80	0.80	0.80	0.80
Adj. Flow (vph)	10	54	35	20	151	96	8	11	4	1
RTOR Reduction (vph)	62	0	28	0	0	4	0	0	0	0
Lane Group Flow (vph)	6	0	3	0	171	100	0	0	16	0
Turn Type	Prot		Perm	Perm	NA	NA		Perm	NA	
Protected Phases	8				1	1			2	
Permitted Phases			8	1				2		
Actuated Green, G (s)	7.0		7.0		30.0	30.0			20.0	
Effective Green, g (s)	7.0		7.0		30.0	30.0			20.0	
Actuated g/C Ratio	0.09		0.09		0.40	0.40			0.27	
Clearance Time (s)	6.0		6.0		6.0	6.0			6.0	
Lane Grp Cap (vph)	150		140		719	737			476	
v/s Ratio Prot	c0.00					0.05				
v/s Ratio Perm			0.00		c0.10				0.01	
v/c Ratio	0.04		0.02		0.24	0.14			0.03	
Uniform Delay, d1	30.9		30.9		14.9	14.3			20.3	
Progression Factor	1.00		1.00		1.00	1.00			1.00	
Incremental Delay, d2	0.5		0.3		0.8	0.4			0.1	
Delay (s)	31.5		31.2		15.7	14.7			20.5	
Level of Service	C		C		B	B			C	
Approach Delay (s)	31.4				15.7	14.7			20.5	
Approach LOS	C				B	B			C	

Intersection Summary			
HCM 2000 Control Delay	19.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.14		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	62.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Appendix 5E-14: 2040 No-Build AM

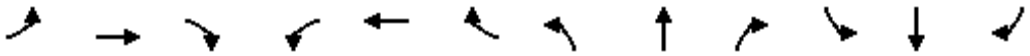
Unsignalized

Synchro Results

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	182	49	25	224	61	21
Future Volume (Veh/h)	182	49	25	224	61	21
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.85	0.80	0.80	0.92	0.80	0.80
Hourly flow rate (vph)	266	76	39	302	95	33
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			342		684	304
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			342		684	304
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			97		76	96
cM capacity (veh/h)			1217		401	736

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	342	341	128
Volume Left	0	39	95
Volume Right	76	0	33
cSH	1700	1217	454
Volume to Capacity	0.20	0.03	0.28
Queue Length 95th (ft)	0	2	29
Control Delay (s)	0.0	1.2	16.0
Lane LOS		A	C
Approach Delay (s)	0.0	1.2	16.0
Approach LOS			C

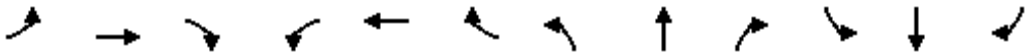
Intersection Summary			
Average Delay	3.0		
Intersection Capacity Utilization	47.7%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Yield			Stop			Yield	
Traffic Volume (vph)	17	25	6	0	39	254	4	44	4	180	17	10
Future Volume (vph)	17	25	6	0	39	254	4	44	4	180	17	10
Peak Hour Factor	0.85	0.89	0.80	0.80	0.89	0.86	0.99	0.85	0.99	0.87	0.85	0.83
Hourly flow rate (vph)	25	35	9	0	54	366	5	64	5	257	25	15

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	69	420	74	297
Volume Left (vph)	25	0	5	257
Volume Right (vph)	9	366	5	15
Hadj (s)	0.03	-0.49	0.01	0.18
Departure Headway (s)	5.6	4.6	5.6	5.4
Degree Utilization, x	0.11	0.53	0.12	0.45
Capacity (veh/h)	574	748	558	623
Control Delay (s)	9.2	12.7	9.4	12.7
Approach Delay (s)	9.2	12.7	9.4	12.7
Approach LOS	A	B	A	B

Intersection Summary			
Delay	12.1		
Level of Service	B		
Intersection Capacity Utilization	49.5%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	32	154	6	11	271	36	6	66	13	8	24	29
Future Volume (Veh/h)	32	154	6	11	271	36	6	66	13	8	24	29
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.83	0.80	0.80	0.80	0.82	0.84	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	48	239	9	17	410	53	9	102	20	12	37	45
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		643			1031							
pX, platoon unblocked	0.82						0.82	0.82		0.82	0.82	0.82
vC, conflicting volume	463			248			874	836	244	881	814	436
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	241			248			739	694	244	748	668	209
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	96			99			96	64	97	93	87	93
cM capacity (veh/h)	1092			1318			222	285	795	183	295	685

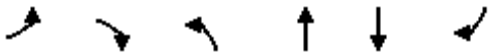
Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	296	480	131	94
Volume Left	48	17	9	12
Volume Right	9	53	20	45
cSH	1092	1318	309	366
Volume to Capacity	0.04	0.01	0.42	0.26
Queue Length 95th (ft)	3	1	51	25
Control Delay (s)	1.7	0.4	25.0	18.2
Lane LOS	A	A	C	C
Approach Delay (s)	1.7	0.4	25.0	18.2
Approach LOS			C	C

Intersection Summary				
Average Delay	5.7			
Intersection Capacity Utilization	42.1%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (veh/h)	0	10	503	122	0	392
Future Volume (Veh/h)	0	10	503	122	0	392
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	0	15	748	181	0	583
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						1081
pX, platoon unblocked						
vC, conflicting volume	1422	838			748	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1422	838			748	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	96			100	
cM capacity (veh/h)	150	366			861	

Direction, Lane #	NW 1	NE 1	SW 1
Volume Total	15	929	583
Volume Left	0	0	0
Volume Right	15	181	0
cSH	366	1700	1700
Volume to Capacity	0.04	0.55	0.34
Queue Length 95th (ft)	3	0	0
Control Delay (s)	15.3	0.0	0.0
Lane LOS	C		
Approach Delay (s)	15.3	0.0	0.0
Approach LOS	C		

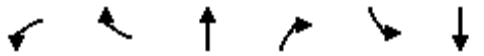
Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	50.3%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	85	30	27	142	103	40
Future Volume (Veh/h)	85	30	27	142	103	40
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.86	0.80	0.80	0.90	0.80	0.80
Hourly flow rate (vph)	115	44	39	183	149	58
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)					693	
pX, platoon unblocked						
vC, conflicting volume	439	178	207			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	439	178	207			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	79	95	97			
cM capacity (veh/h)	559	865	1364			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	159	222	207
Volume Left	115	39	0
Volume Right	44	0	58
cSH	619	1364	1700
Volume to Capacity	0.26	0.03	0.12
Queue Length 95th (ft)	25	2	0
Control Delay (s)	12.8	1.6	0.0
Lane LOS	B	A	
Approach Delay (s)	12.8	1.6	0.0
Approach LOS	B		

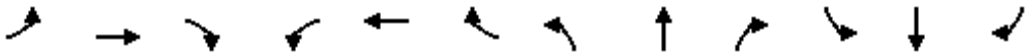
Intersection Summary			
Average Delay	4.1		
Intersection Capacity Utilization	37.1%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	1	134	170	6	104	80
Future Volume (Veh/h)	1	134	170	6	104	80
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.80	0.91	0.83	0.80	0.80	0.80
Hourly flow rate (vph)	1	171	238	9	151	116
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	660	242			247	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	660	242			247	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	79			89	
cM capacity (veh/h)	379	796			1319	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	172	247	267
Volume Left	1	0	151
Volume Right	171	9	0
cSH	791	1700	1319
Volume to Capacity	0.22	0.15	0.11
Queue Length 95th (ft)	21	0	10
Control Delay (s)	10.8	0.0	5.0
Lane LOS	B		A
Approach Delay (s)	10.8	0.0	5.0
Approach LOS	B		

Intersection Summary			
Average Delay	4.7		
Intersection Capacity Utilization	42.0%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	360	10	0	186	4	18	0	4	2	1	3
Future Volume (Veh/h)	0	360	10	0	186	4	18	0	4	2	1	3
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.80	0.87	0.80	0.80	0.91	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	0	480	15	0	237	6	26	0	6	3	1	4
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)					1030							
pX, platoon unblocked												
vC, conflicting volume	243			495			732	730	488	734	735	240
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	243			495			732	730	488	734	735	240
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			92	100	99	99	100	99
cM capacity (veh/h)	1323			1069			334	349	580	333	347	799

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	495	243	32	8
Volume Left	0	0	26	3
Volume Right	15	6	6	4
cSH	1323	1069	363	473
Volume to Capacity	0.00	0.00	0.09	0.02
Queue Length 95th (ft)	0	0	7	1
Control Delay (s)	0.0	0.0	15.9	12.7
Lane LOS			C	B
Approach Delay (s)	0.0	0.0	15.9	12.7
Approach LOS			C	B

Intersection Summary				
Average Delay	0.8			
Intersection Capacity Utilization	32.7%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	344	4	1	176	2	1	1	5	4	1	3
Future Volume (Veh/h)	3	344	4	1	176	2	1	1	5	4	1	3
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.80	0.80	0.80	0.80	0.84	0.80	0.80	0.80	0.80	0.99	0.80	0.80
Hourly flow rate (vph)	4	512	6	1	249	3	1	1	7	5	1	4
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	252			518			780	777	515	783	778	250
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	252			518			780	777	515	783	778	250
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			100	100	99	98	100	99
cM capacity (veh/h)	1313			1048			309	327	560	306	326	788

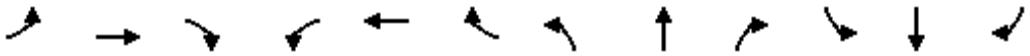
Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	522	253	9	10
Volume Left	4	1	1	5
Volume Right	6	3	7	4
cSH	1313	1048	479	408
Volume to Capacity	0.00	0.00	0.02	0.02
Queue Length 95th (ft)	0	0	1	2
Control Delay (s)	0.1	0.0	12.7	14.0
Lane LOS	A	A	B	B
Approach Delay (s)	0.1	0.0	12.7	14.0
Approach LOS			B	B

Intersection Summary				
Average Delay	0.4			
Intersection Capacity Utilization	34.3%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	209	4	46	222	26	2	13	148	63	26	20
Future Volume (Veh/h)	10	209	4	46	222	26	2	13	148	63	26	20
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.80	0.90	0.80	0.80	0.80	0.80	0.80	0.80	0.84	0.84	0.84	0.83
Hourly flow rate (vph)	14	253	5	63	302	35	3	18	192	82	34	26
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	337			258			772	746	256	930	732	320
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	337			258			772	746	256	930	732	320
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			95			99	94	75	52	90	96
cM capacity (veh/h)	1222			1307			268	321	783	171	328	721

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	272	400	213	142
Volume Left	14	63	3	82
Volume Right	5	35	192	26
cSH	1222	1307	682	229
Volume to Capacity	0.01	0.05	0.31	0.62
Queue Length 95th (ft)	1	4	33	91
Control Delay (s)	0.5	1.6	12.7	43.3
Lane LOS	A	A	B	E
Approach Delay (s)	0.5	1.6	12.7	43.3
Approach LOS			B	E

Intersection Summary				
Average Delay	9.4			
Intersection Capacity Utilization	60.9%	ICU Level of Service	B	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	126	0	32	260	42	0	132	94	18	22	18
Future Volume (Veh/h)	10	126	0	32	260	42	0	132	94	18	22	18
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.80	0.80	0.80	0.80	0.88	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	14	173	0	44	325	58	0	182	129	25	30	25
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	383			173			683	672	173	863	643	354
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	383			173			683	672	173	863	643	354
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			97			100	50	85	82	92	96
cM capacity (veh/h)	1175			1404			318	361	871	137	375	690

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	187	427	311	80
Volume Left	14	44	0	25
Volume Right	0	58	129	25
cSH	1175	1404	477	268
Volume to Capacity	0.01	0.03	0.65	0.30
Queue Length 95th (ft)	1	2	115	30
Control Delay (s)	0.7	1.1	25.6	24.1
Lane LOS	A	A	D	C
Approach Delay (s)	0.7	1.1	25.6	24.1
Approach LOS			D	C

Intersection Summary			
Average Delay	10.4		
Intersection Capacity Utilization	55.2%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	157	17	23	313	44	41
Future Volume (Veh/h)	157	17	23	313	44	41
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	224	24	33	446	63	58
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	1023					
pX, platoon unblocked						
vC, conflicting volume			248		748	236
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			248		748	236
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			97		83	93
cM capacity (veh/h)			1318		370	803

Direction, Lane #	EB 1	WB 1	WB 2	NB 1
Volume Total	248	33	446	121
Volume Left	0	33	0	63
Volume Right	24	0	0	58
cSH	1700	1318	1700	499
Volume to Capacity	0.15	0.03	0.26	0.24
Queue Length 95th (ft)	0	2	0	24
Control Delay (s)	0.0	7.8	0.0	14.5
Lane LOS		A		B
Approach Delay (s)	0.0	0.5		14.5
Approach LOS				B

Intersection Summary			
Average Delay	2.4		
Intersection Capacity Utilization	31.1%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	4	84	543	40	157	388
Future Volume (Veh/h)	4	84	543	40	157	388
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.80	0.87	0.92	0.80	0.83	0.81
Hourly flow rate (vph)	6	110	673	57	216	546
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			776			
pX, platoon unblocked	0.92	0.92			0.92	
vC, conflicting volume	1651	673			730	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1663	606			667	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	92	76			75	
cM capacity (veh/h)	74	460			853	

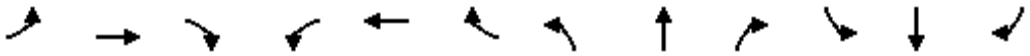
Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	116	673	57	216	546
Volume Left	6	0	0	216	0
Volume Right	110	0	57	0	0
cSH	362	1700	1700	853	1700
Volume to Capacity	0.32	0.40	0.03	0.25	0.32
Queue Length 95th (ft)	34	0	0	25	0
Control Delay (s)	19.6	0.0	0.0	10.6	0.0
Lane LOS	C			B	
Approach Delay (s)	19.6	0.0		3.0	
Approach LOS	C				

Intersection Summary			
Average Delay	2.8		
Intersection Capacity Utilization	58.7%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	4	26	408	12	20	86
Future Volume (Veh/h)	4	26	408	12	20	86
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.86
Hourly flow rate (vph)	5	34	530	16	26	104
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	694	538			546	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	694	538			546	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	99	94			97	
cM capacity (veh/h)	398	543			1023	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	39	546	130
Volume Left	5	0	26
Volume Right	34	16	0
cSH	519	1700	1023
Volume to Capacity	0.08	0.32	0.03
Queue Length 95th (ft)	6	0	2
Control Delay (s)	12.5	0.0	1.9
Lane LOS	B		A
Approach Delay (s)	12.5	0.0	1.9
Approach LOS	B		

Intersection Summary			
Average Delay	1.0		
Intersection Capacity Utilization	33.1%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	100	36	26	133	18	95	40	16	2	42	6
Future Volume (Veh/h)	3	100	36	26	133	18	95	40	16	2	42	6
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	3	109	39	28	145	20	103	43	17	2	46	7
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		1173										
pX, platoon unblocked												
vC, conflicting volume	165			148			376	356	128	384	365	155
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	165			148			376	356	128	384	365	155
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			98			81	92	98	100	92	99
cM capacity (veh/h)	1413			1434			532	558	921	522	551	891

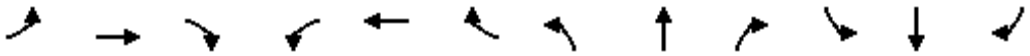
Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	151	193	163	55
Volume Left	3	28	103	2
Volume Right	39	20	17	7
cSH	1413	1434	563	578
Volume to Capacity	0.00	0.02	0.29	0.10
Queue Length 95th (ft)	0	1	30	8
Control Delay (s)	0.2	1.2	14.0	11.9
Lane LOS	A	A	B	B
Approach Delay (s)	0.2	1.2	14.0	11.9
Approach LOS			B	B

Intersection Summary				
Average Delay	5.7			
Intersection Capacity Utilization	42.2%	ICU Level of Service	A	
Analysis Period (min)	15			

Appendix 5E-15: 2040 No-Build PM

Signalized

Synchro Results

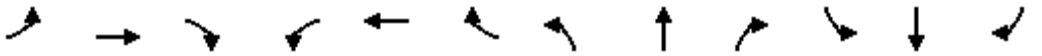


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	158	294	14	40	294	84	10	292	70	106	264	168
Future Volume (vph)	158	294	14	40	294	84	10	292	70	106	264	168
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	8	11	12	8	11	12	12	16	12	12	16	12
Total Lost time (s)		5.0			5.0		5.0	5.0		5.0	5.0	
Lane Util. Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		1.00			0.97		1.00	0.97		1.00	0.94	
Flt Protected		0.98			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1763			1744		1770	2057		1770	1981	
Flt Permitted		0.61			0.91		0.21	1.00		0.21	1.00	
Satd. Flow (perm)		1101			1599		392	2057		392	1981	
Peak-hour factor, PHF	0.90	0.93	0.93	0.86	0.80	0.80	0.80	0.81	0.94	0.93	0.95	0.87
Growth Factor (vph)	118%	118%	118%	118%	118%	118%	118%	118%	118%	118%	118%	118%
Adj. Flow (vph)	207	373	18	55	434	124	15	425	88	134	328	228
RTOR Reduction (vph)	0	2	0	0	15	0	0	12	0	0	42	0
Lane Group Flow (vph)	0	596	0	0	598	0	15	501	0	134	514	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		31.0			31.0		19.0	19.0		19.0	19.0	
Effective Green, g (s)		31.0			31.0		19.0	19.0		19.0	19.0	
Actuated g/C Ratio		0.52			0.52		0.32	0.32		0.32	0.32	
Clearance Time (s)		5.0			5.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)		568			826		124	651		124	627	
v/s Ratio Prot								0.24			0.26	
v/s Ratio Perm		c0.54			0.37		0.04			c0.34		
v/c Ratio		1.05			0.72		0.12	0.77		1.08	0.82	
Uniform Delay, d1		14.5			11.2		14.6	18.5		20.5	18.9	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		51.4			5.5		2.0	8.5		104.1	11.5	
Delay (s)		65.9			16.7		16.6	27.0		124.6	30.4	
Level of Service		E			B		B	C		F	C	
Approach Delay (s)		65.9			16.7			26.7			48.7	
Approach LOS		E			B			C			D	

Intersection Summary			
HCM 2000 Control Delay	40.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.06		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	117.5%	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 (vph)	102	228	34	45	163	207	34	399	51	283	423	96
Future Volume (vph)	102	228	34	45	163	207	34	399	51	283	423	96
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0	6.0	6.0	6.0		3.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	1.00	0.85	1.00	0.98		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1827		1770	1863	1583	1770	1830		1770	1806	
Flt Permitted	0.40	1.00		0.21	1.00	1.00	0.36	1.00		0.25	1.00	
Satd. Flow (perm)	754	1827		388	1863	1583	664	1830		470	1806	
Peak-hour factor, PHF	0.93	0.93	0.93	0.94	0.82	0.80	0.80	0.84	0.80	0.87	0.90	0.80
Growth Factor (vph)	123%	123%	123%	123%	123%	123%	123%	123%	123%	123%	123%	123%
Adj. Flow (vph)	135	302	45	59	244	318	52	584	78	400	578	148
RTOR Reduction (vph)	0	5	0	0	0	156	0	4	0	0	8	0
Lane Group Flow (vph)	135	342	0	59	245	162	52	658	0	400	718	0
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA		pm+pt	NA	
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	26.0	26.0		26.0	26.0	26.0	67.0	67.0		81.0	81.0	
Effective Green, g (s)	26.0	26.0		26.0	26.0	26.0	67.0	67.0		81.0	81.0	
Actuated g/C Ratio	0.22	0.22		0.22	0.22	0.22	0.56	0.56		0.68	0.68	
Clearance Time (s)	6.0	6.0		6.0	6.0	6.0	6.0	6.0		3.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	164	399		84	407	345	373	1030		440	1229	
v/s Ratio Prot		c0.19			0.13			0.36		c0.08	0.40	
v/s Ratio Perm	0.18			0.15		0.10	0.08			c0.53		
v/c Ratio	0.82	0.86		0.70	0.60	0.47	0.14	0.64		0.91	0.58	
Uniform Delay, d1	44.3	44.7		42.9	41.8	40.5	12.3	17.7		14.5	10.1	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	27.1	16.5		23.3	2.5	1.0	0.2	1.3		22.3	0.7	
Delay (s)	71.4	61.2		66.2	44.4	41.5	12.5	19.1		36.7	10.8	
Level of Service	E	E		E	D	D	B	B		D	B	
Approach Delay (s)		64.1			45.0			18.6			20.0	
Approach LOS		E			D			B			C	

Intersection Summary			
HCM 2000 Control Delay	32.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	119.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	175.0%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



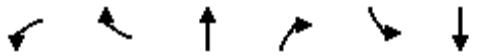
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	410	386	6	6	386	178	46	116	8	156	80	514
Future Volume (vph)	410	386	6	6	386	178	46	116	8	156	80	514
Ideal Flow (vphpl)	1200	1200	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	10	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	3.0	5.0			5.0			5.0			5.0	5.0
Lane Util. Factor	1.00	1.00			1.00			1.00			1.00	1.00
Frt	1.00	1.00			0.96			0.99			1.00	0.85
Flt Protected	0.95	1.00			1.00			0.99			0.97	1.00
Satd. Flow (prot)	1043	1095			1783			1826			1803	1583
Flt Permitted	0.14	1.00			0.99			0.54			0.57	1.00
Satd. Flow (perm)	153	1095			1773			999			1069	1583
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.90
Growth Factor (vph)	118%	118%	118%	118%	118%	118%	118%	118%	118%	118%	118%	118%
Adj. Flow (vph)	520	490	8	8	490	226	58	147	10	198	102	674
RTOR Reduction (vph)	0	1	0	0	14	0	0	2	0	0	0	459
Lane Group Flow (vph)	520	497	0	0	710	0	0	213	0	0	300	215
Turn Type	pm+pt	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases	7	4			8			2			6	
Permitted Phases	4			8			2			6		6
Actuated Green, G (s)	81.0	81.0			41.0			29.0			29.0	29.0
Effective Green, g (s)	81.0	81.0			41.0			29.0			29.0	29.0
Actuated g/C Ratio	0.68	0.68			0.34			0.24			0.24	0.24
Clearance Time (s)	3.0	5.0			5.0			5.0			5.0	5.0
Vehicle Extension (s)	3.0	3.0			3.0			3.0			3.0	3.0
Lane Grp Cap (vph)	377	739			605			241			258	382
v/s Ratio Prot	c0.42	0.45										
v/s Ratio Perm	c0.51				0.40			0.21			c0.28	0.14
v/c Ratio	1.38	0.67			1.17			0.89			1.16	0.56
Uniform Delay, d1	32.2	11.6			39.5			43.9			45.5	39.9
Progression Factor	1.00	1.00			1.00			1.00			1.00	1.00
Incremental Delay, d2	186.6	2.4			94.8			29.7			107.3	1.9
Delay (s)	218.7	14.0			134.3			73.6			152.8	41.8
Level of Service	F	B			F			E			F	D
Approach Delay (s)		118.6			134.3			73.6			76.0	
Approach LOS		F			F			E			E	

Intersection Summary			
HCM 2000 Control Delay	105.0	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.35		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	122.2%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

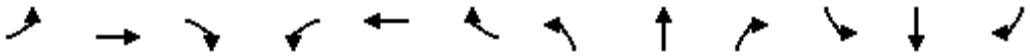
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	62	94	48	120	87	84	66	445	91	55	398	75
Future Volume (vph)	62	94	48	120	87	84	66	445	91	55	398	75
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.95		1.00	0.93		1.00	0.97		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1768		1770	1726		1770	1811		1770	1818	
Flt Permitted	0.51	1.00		0.59	1.00		0.27	1.00		0.23	1.00	
Satd. Flow (perm)	958	1768		1090	1726		504	1811		423	1818	
Peak-hour factor, PHF	0.80	0.80	0.80	0.95	0.80	0.80	0.84	0.92	0.83	0.80	0.87	0.86
Growth Factor (vph)	123%	123%	123%	123%	123%	123%	123%	123%	123%	123%	123%	123%
Adj. Flow (vph)	95	145	74	155	134	129	97	595	135	85	563	107
RTOR Reduction (vph)	0	23	0	0	43	0	0	11	0	0	9	0
Lane Group Flow (vph)	95	196	0	155	220	0	97	719	0	85	661	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			4			2			2	
Permitted Phases	4			4			2			2		
Actuated Green, G (s)	21.2	21.2		21.2	21.2		40.2	40.2		40.2	40.2	
Effective Green, g (s)	21.2	21.2		21.2	21.2		40.2	40.2		40.2	40.2	
Actuated g/C Ratio	0.29	0.29		0.29	0.29		0.55	0.55		0.55	0.55	
Clearance Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Vehicle Extension (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)	276	510		314	498		276	991		231	995	
v/s Ratio Prot		0.11			0.13			c0.40			0.36	
v/s Ratio Perm	0.10			c0.14			0.19			0.20		
v/c Ratio	0.34	0.38		0.49	0.44		0.35	0.73		0.37	0.66	
Uniform Delay, d1	20.6	20.9		21.6	21.3		9.3	12.5		9.4	11.8	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.0	0.7		1.7	0.9		1.1	2.8		1.4	1.8	
Delay (s)	21.6	21.5		23.3	22.1		10.4	15.3		10.8	13.6	
Level of Service	C	C		C	C		B	B		B	B	
Approach Delay (s)		21.6			22.6			14.7			13.3	
Approach LOS		C			C			B			B	

Intersection Summary			
HCM 2000 Control Delay	16.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	73.4	Sum of lost time (s)	12.0
Intersection Capacity Utilization	96.4%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	104	54	196	18	36	230
Future Volume (vph)	104	54	196	18	36	230
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0		6.0			6.0
Lane Util. Factor	1.00		1.00			1.00
Frt	0.96		0.99			1.00
Flt Protected	0.97		1.00			0.99
Satd. Flow (prot)	1724		1841			1850
Flt Permitted	0.97		1.00			0.92
Satd. Flow (perm)	1724		1841			1721
Peak-hour factor, PHF	0.81	0.91	0.80	0.80	0.80	0.80
Growth Factor (vph)	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	141	65	270	25	50	316
RTOR Reduction (vph)	25	0	4	0	0	0
Lane Group Flow (vph)	181	0	291	0	0	366
Turn Type	Prot		NA		Perm	NA
Protected Phases	4		2			2
Permitted Phases					2	
Actuated Green, G (s)	10.9		28.0			28.0
Effective Green, g (s)	10.9		28.0			28.0
Actuated g/C Ratio	0.21		0.55			0.55
Clearance Time (s)	6.0		6.0			6.0
Vehicle Extension (s)	2.0		2.0			2.0
Lane Grp Cap (vph)	369		1012			946
v/s Ratio Prot	c0.10		0.16			
v/s Ratio Perm						c0.21
v/c Ratio	0.49		0.29			0.39
Uniform Delay, d1	17.6		6.1			6.5
Progression Factor	1.00		1.00			1.00
Incremental Delay, d2	0.4		0.1			0.1
Delay (s)	17.9		6.2			6.6
Level of Service	B		A			A
Approach Delay (s)	17.9		6.2			6.6
Approach LOS	B		A			A

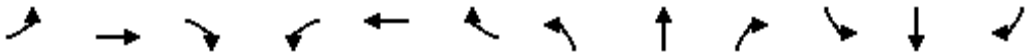
Intersection Summary			
HCM 2000 Control Delay	9.2	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	50.9	Sum of lost time (s)	12.0
Intersection Capacity Utilization	66.8%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	21	159	66	38	119	60	24	153	23	63	196	34
Future Volume (vph)	21	159	66	38	119	60	24	153	23	63	196	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0			6.0			6.0			6.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frt		0.96			0.96			0.98			0.98	
Flt Protected		1.00			0.99			0.99			0.99	
Satd. Flow (prot)		1789			1780			1820			1810	
Flt Permitted		0.96			0.89			0.92			0.87	
Satd. Flow (perm)		1717			1594			1679			1586	
Peak-hour factor, PHF	0.88	0.86	0.88	0.80	0.81	0.85	0.80	0.88	0.80	0.80	0.90	0.80
Growth Factor (vph)	113%	113%	113%	113%	113%	113%	113%	113%	113%	113%	113%	113%
Adj. Flow (vph)	27	209	85	54	166	80	34	196	32	89	246	48
RTOR Reduction (vph)	0	18	0	0	18	0	0	7	0	0	7	0
Lane Group Flow (vph)	0	303	0	0	282	0	0	255	0	0	376	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		6			6			2			2	
Permitted Phases	6			6			2			2		
Actuated Green, G (s)		32.0			32.0			30.0			30.0	
Effective Green, g (s)		32.0			32.0			30.0			30.0	
Actuated g/C Ratio		0.43			0.43			0.41			0.41	
Clearance Time (s)		6.0			6.0			6.0			6.0	
Lane Grp Cap (vph)		742			689			680			642	
v/s Ratio Prot												
v/s Ratio Perm		0.18			c0.18			0.15			c0.24	
v/c Ratio		0.41			0.41			0.38			0.59	
Uniform Delay, d1		14.5			14.5			15.4			17.2	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		1.7			1.8			1.6			3.9	
Delay (s)		16.1			16.3			17.0			21.0	
Level of Service		B			B			B			C	
Approach Delay (s)		16.1			16.3			17.0			21.0	
Approach LOS		B			B			B			C	

Intersection Summary			
HCM 2000 Control Delay	17.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	74.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	66.5%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



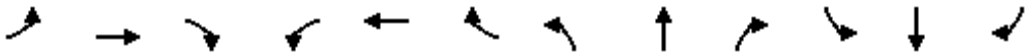
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	38	163	14	91	237	22	30	95	45	36	155	42
Future Volume (vph)	38	163	14	91	237	22	30	95	45	36	155	42
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.99		1.00	0.95		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1840		1770	1837		1770	1773		1770	1801	
Flt Permitted	0.52	1.00		0.61	1.00		0.50	1.00		0.63	1.00	
Satd. Flow (perm)	966	1840		1129	1837		936	1773		1181	1801	
Peak-hour factor, PHF	0.80	0.82	0.80	0.88	0.86	0.80	0.83	0.88	0.87	0.82	0.84	0.80
Growth Factor (vph)	113%	113%	113%	113%	113%	113%	113%	113%	113%	113%	113%	113%
Adj. Flow (vph)	54	225	20	117	311	31	41	122	58	50	209	59
RTOR Reduction (vph)	0	5	0	0	5	0	0	25	0	0	14	0
Lane Group Flow (vph)	54	240	0	117	337	0	41	155	0	50	254	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	38.0	38.0		38.0	38.0		22.0	22.0		22.0	22.0	
Effective Green, g (s)	38.0	38.0		38.0	38.0		22.0	22.0		22.0	22.0	
Actuated g/C Ratio	0.54	0.54		0.54	0.54		0.31	0.31		0.31	0.31	
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)	524	998		612	997		294	557		371	566	
v/s Ratio Prot		0.13			c0.18			0.09			c0.14	
v/s Ratio Perm	0.06			0.10			0.04			0.04		
v/c Ratio	0.10	0.24		0.19	0.34		0.14	0.28		0.13	0.45	
Uniform Delay, d1	7.7	8.4		8.2	9.0		17.2	18.0		17.2	19.2	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.4	0.6		0.7	0.9		1.0	1.2		0.8	2.6	
Delay (s)	8.1	9.0		8.9	9.9		18.2	19.3		17.9	21.7	
Level of Service	A	A		A	A		B	B		B	C	
Approach Delay (s)		8.8			9.6			19.1			21.1	
Approach LOS		A			A			B			C	

Intersection Summary			
HCM 2000 Control Delay	13.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	109.6%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

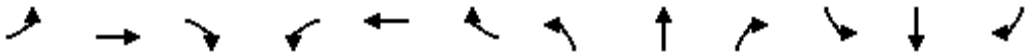
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	166	173	44	20	158	10	45	559	29	96	875	286
Future Volume (vph)	166	173	44	20	158	10	45	559	29	96	875	286
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	7.0		3.0	7.0	7.0	3.0	7.0		3.0	7.0	7.0
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.95		1.00	0.95	1.00
Frt	1.00	0.97		1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	1806		1770	1863	1583	1770	3513		1770	3539	1583
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1770	1806		1770	1863	1583	1770	3513		1770	3539	1583
Peak-hour factor, PHF	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Growth Factor (vph)	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	228	238	60	28	217	14	62	769	40	132	1203	393
RTOR Reduction (vph)	0	9	0	0	0	12	0	4	0	0	0	184
Lane Group Flow (vph)	228	290	0	28	217	2	62	805	0	132	1203	209
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8						6
Actuated Green, G (s)	14.9	26.0		4.0	15.1	15.1	5.4	33.8		11.6	40.0	40.0
Effective Green, g (s)	14.9	26.0		4.0	15.1	15.1	5.4	33.8		11.6	40.0	40.0
Actuated g/C Ratio	0.16	0.27		0.04	0.16	0.16	0.06	0.35		0.12	0.42	0.42
Clearance Time (s)	3.0	7.0		3.0	7.0	7.0	3.0	7.0		3.0	7.0	7.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	276	492		74	294	250	100	1244		215	1483	663
v/s Ratio Prot	c0.13	0.16		0.02	c0.12		0.04	0.23		c0.07	c0.34	
v/s Ratio Perm						0.00						0.13
v/c Ratio	0.83	0.59		0.38	0.74	0.01	0.62	0.65		0.61	0.81	0.32
Uniform Delay, d1	39.0	30.1		44.5	38.3	33.8	44.0	25.8		39.8	24.4	18.5
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	17.9	1.8		3.2	9.3	0.0	10.9	2.6		5.1	4.9	1.2
Delay (s)	56.9	31.9		47.7	47.6	33.9	54.9	28.4		44.9	29.3	19.8
Level of Service	E	C		D	D	C	D	C		D	C	B
Approach Delay (s)		42.7			46.8			30.3			28.3	
Approach LOS		D			D			C			C	

Intersection Summary			
HCM 2000 Control Delay	32.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	95.4	Sum of lost time (s)	20.0
Intersection Capacity Utilization	67.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



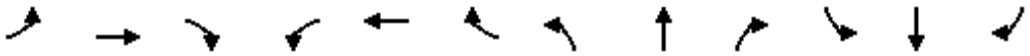
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	48	176	74	10	150	160	84	652	10	132	1008	60
Future Volume (vph)	48	176	74	10	150	160	84	652	10	132	1008	60
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	7.0		3.0	7.0		3.0	7.0		3.0	7.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frt	1.00	0.95		1.00	0.93		1.00	1.00		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1778		1770	1723		1770	3530		1770	3503	
Flt Permitted	0.22	1.00		0.47	1.00		0.13	1.00		0.22	1.00	
Satd. Flow (perm)	408	1778		873	1723		234	3530		406	3503	
Peak-hour factor, PHF	0.84	0.83	0.80	0.80	0.86	0.92	0.81	0.91	0.80	0.80	0.97	0.80
Growth Factor (vph)	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	63	233	102	14	192	191	114	788	14	182	1143	82
RTOR Reduction (vph)	0	16	0	0	40	0	0	1	0	0	6	0
Lane Group Flow (vph)	63	319	0	14	343	0	114	801	0	182	1220	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	29.1	24.8		22.1	20.8		37.2	31.9		44.5	36.2	
Effective Green, g (s)	29.1	24.8		22.1	20.8		37.2	31.9		44.5	36.2	
Actuated g/C Ratio	0.33	0.28		0.25	0.24		0.42	0.36		0.51	0.41	
Clearance Time (s)	3.0	7.0		3.0	7.0		3.0	7.0		3.0	7.0	
Vehicle Extension (s)	3.0	2.0		3.0	2.0		3.0	2.0		3.0	2.0	
Lane Grp Cap (vph)	217	503		233	409		192	1285		355	1447	
v/s Ratio Prot	c0.02	0.18		0.00	c0.20		c0.04	0.23		c0.06	c0.35	
v/s Ratio Perm	0.08			0.01			0.22			0.20		
v/c Ratio	0.29	0.63		0.06	0.84		0.59	0.62		0.51	0.84	
Uniform Delay, d1	21.5	27.4		24.7	31.8		17.7	22.9		13.2	23.1	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.7	1.9		0.1	13.5		4.9	0.7		1.3	4.5	
Delay (s)	22.2	29.3		24.9	45.3		22.6	23.6		14.4	27.6	
Level of Service	C	C		C	D		C	C		B	C	
Approach Delay (s)		28.2			44.6			23.5			25.9	
Approach LOS		C			D			C			C	

Intersection Summary			
HCM 2000 Control Delay	27.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	87.6	Sum of lost time (s)	20.0
Intersection Capacity Utilization	82.2%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



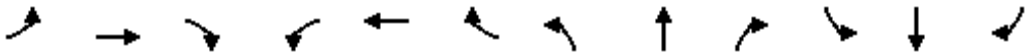
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	34	302	152	24	418	110	204	178	22	152	218	46
Future Volume (vph)	34	302	152	24	418	110	204	178	22	152	218	46
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.95		1.00	0.97		1.00	0.98		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1768		1770	1801		1770	1830		1770	1814	
Flt Permitted	0.16	1.00		0.24	1.00		0.46	1.00		0.57	1.00	
Satd. Flow (perm)	300	1768		438	1801		849	1830		1064	1814	
Peak-hour factor, PHF	0.80	0.84	0.82	0.80	0.87	0.80	0.80	0.86	0.80	0.80	0.81	0.81
Growth Factor (vph)	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%	110%
Adj. Flow (vph)	47	395	204	33	529	151	280	228	30	209	296	62
RTOR Reduction (vph)	0	20	0	0	11	0	0	5	0	0	9	0
Lane Group Flow (vph)	47	579	0	33	669	0	281	253	0	209	349	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		1			1			2			2	
Permitted Phases	1			1			2			2		
Actuated Green, G (s)	32.4	32.4		32.4	32.4		30.1	30.1		30.1	30.1	
Effective Green, g (s)	32.4	32.4		32.4	32.4		30.1	30.1		30.1	30.1	
Actuated g/C Ratio	0.43	0.43		0.43	0.43		0.40	0.40		0.40	0.40	
Clearance Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	130	768		190	783		343	739		429	732	
v/s Ratio Prot		0.33			c0.37			0.14			0.19	
v/s Ratio Perm	0.16			0.08			c0.33			0.20		
v/c Ratio	0.36	0.75		0.17	0.85		0.82	0.34		0.49	0.48	
Uniform Delay, d1	14.1	17.7		12.9	18.9		19.8	15.4		16.5	16.4	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.6	3.7		0.2	8.7		13.4	0.1		0.3	0.2	
Delay (s)	14.7	21.4		13.0	27.6		33.2	15.5		16.8	16.6	
Level of Service	B	C		B	C		C	B		B	B	
Approach Delay (s)		20.9			26.9			24.7			16.6	
Approach LOS		C			C			C			B	

Intersection Summary			
HCM 2000 Control Delay	22.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	74.5	Sum of lost time (s)	12.0
Intersection Capacity Utilization	74.7%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	29	117	26	146	81	47	26	580	50	26	665	18
Future Volume (vph)	29	117	26	146	81	47	26	580	50	26	665	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0			6.0		3.0	6.0		3.0	6.0	
Lane Util. Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.98			0.98		1.00	0.99		1.00	1.00	
Flt Protected		0.99			0.97		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1810			1772		1770	1838		1770	1854	
Flt Permitted		0.90			0.64		0.14	1.00		0.14	1.00	
Satd. Flow (perm)		1643			1171		257	1838		260	1854	
Peak-hour factor, PHF	0.83	0.80	0.80	0.90	0.93	0.93	0.80	0.90	0.81	0.80	0.97	0.80
Growth Factor (vph)	112%	112%	112%	112%	112%	112%	112%	112%	112%	112%	112%	112%
Adj. Flow (vph)	39	164	36	182	98	57	36	722	69	36	768	25
RTOR Reduction (vph)	0	7	0	0	8	0	0	3	0	0	1	0
Lane Group Flow (vph)	0	232	0	0	329	0	36	788	0	36	792	0
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		26.0			26.0		49.0	46.0		49.0	46.0	
Effective Green, g (s)		26.0			26.0		49.0	46.0		49.0	46.0	
Actuated g/C Ratio		0.29			0.29		0.54	0.51		0.54	0.51	
Clearance Time (s)		6.0			6.0		3.0	6.0		3.0	6.0	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		474			338		190	939		191	947	
v/s Ratio Prot							c0.01	c0.43		0.01	0.43	
v/s Ratio Perm		0.14			c0.28		0.10			0.10		
v/c Ratio		0.49			0.97		0.19	0.84		0.19	0.84	
Uniform Delay, d1		26.5			31.7		14.3	18.8		14.3	18.8	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.8			41.6		0.5	8.9		0.5	8.7	
Delay (s)		27.3			73.3		14.8	27.7		14.8	27.4	
Level of Service		C			E		B	C		B	C	
Approach Delay (s)		27.3			73.3			27.1			26.9	
Approach LOS		C			E			C			C	

Intersection Summary			
HCM 2000 Control Delay	34.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	93.1%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

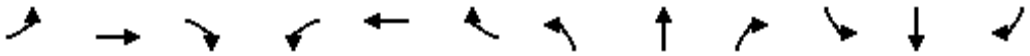


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	98	264	40	142	286	42	56	450	82	56	554	102
Future Volume (vph)	98	264	40	142	286	42	56	450	82	56	554	102
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	5.0		3.0	5.0		3.0	5.0		3.0	5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.98		1.00	0.97		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1821		1770	1827		1770	1816		1770	1816	
Flt Permitted	0.21	1.00		0.18	1.00		0.10	1.00		0.22	1.00	
Satd. Flow (perm)	392	1821		339	1827		183	1816		413	1816	
Peak-hour factor, PHF	0.82	0.91	0.80	0.80	0.80	0.80	0.80	0.95	0.86	0.80	0.91	0.83
Growth Factor (vph)	109%	109%	109%	109%	109%	109%	109%	109%	109%	109%	109%	109%
Adj. Flow (vph)	130	316	54	193	390	57	76	516	104	76	664	134
RTOR Reduction (vph)	0	7	0	0	6	0	0	8	0	0	8	0
Lane Group Flow (vph)	130	364	0	193	441	0	76	612	0	76	790	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	23.0	19.0		29.0	22.0		45.7	40.7		45.7	40.7	
Effective Green, g (s)	23.0	19.0		29.0	22.0		45.7	40.7		45.7	40.7	
Actuated g/C Ratio	0.26	0.22		0.33	0.25		0.52	0.46		0.52	0.46	
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	5.0		3.0	5.0	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	165	394		226	458		185	842		292	842	
v/s Ratio Prot	0.04	0.20		c0.07	c0.24		c0.02	0.34		0.01	c0.44	
v/s Ratio Perm	0.17			0.21			0.19			0.12		
v/c Ratio	0.79	0.92		0.85	0.96		0.41	0.73		0.26	0.94	
Uniform Delay, d1	29.4	33.6		24.1	32.4		17.1	19.0		13.0	22.3	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	20.1	26.7		24.7	32.3		0.5	2.7		0.2	17.4	
Delay (s)	49.5	60.3		48.8	64.7		17.6	21.7		13.1	39.7	
Level of Service	D	E		D	E		B	C		B	D	
Approach Delay (s)		57.5			59.9			21.2			37.4	
Approach LOS		E			E			C			D	

Intersection Summary			
HCM 2000 Control Delay	42.3	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	87.7	Sum of lost time (s)	16.0
Intersection Capacity Utilization	84.1%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	13	538	33	190	406	34	18	315	181	52	482	15
Future Volume (vph)	13	538	33	190	406	34	18	315	181	52	482	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		3.0	6.0		6.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.99		1.00	0.94		1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1845		1770	1840		1770	1750		1770	1854	
Flt Permitted	0.40	1.00		0.11	1.00		0.13	1.00		0.13	1.00	
Satd. Flow (perm)	746	1845		201	1840		236	1750		236	1854	
Peak-hour factor, PHF	0.80	0.91	0.80	0.84	0.84	0.80	0.80	0.94	0.80	0.93	0.93	0.93
Growth Factor (vph)	112%	112%	112%	112%	112%	112%	112%	112%	112%	112%	112%	112%
Adj. Flow (vph)	18	662	46	253	541	48	25	375	253	63	580	18
RTOR Reduction (vph)	0	2	0	0	3	0	0	27	0	0	1	0
Lane Group Flow (vph)	18	706	0	253	586	0	25	601	0	63	597	0
Turn Type	Perm	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases		4		3	8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	34.0	34.0		46.0	46.0		31.6	31.6		31.6	31.6	
Effective Green, g (s)	34.0	34.0		46.0	46.0		31.6	31.6		31.6	31.6	
Actuated g/C Ratio	0.38	0.38		0.51	0.51		0.35	0.35		0.35	0.35	
Clearance Time (s)	6.0	6.0		3.0	6.0		6.0	6.0		6.0	6.0	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	283	700		260	944		83	617		83	653	
v/s Ratio Prot		0.38		c0.10	0.32			c0.34			0.32	
v/s Ratio Perm	0.02			c0.40			0.11			0.27		
v/c Ratio	0.06	1.01		0.97	0.62		0.30	0.97		0.76	0.91	
Uniform Delay, d1	17.7	27.8		23.7	15.6		21.0	28.6		25.6	27.7	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.0	36.0		47.8	0.9		0.7	29.4		29.1	17.0	
Delay (s)	17.7	63.8		71.5	16.5		21.7	58.0		54.7	44.7	
Level of Service	B	E		E	B		C	E		D	D	
Approach Delay (s)		62.6			33.0			56.6			45.7	
Approach LOS		E			C			E			D	

Intersection Summary			
HCM 2000 Control Delay	48.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.00		
Actuated Cycle Length (s)	89.6	Sum of lost time (s)	15.0
Intersection Capacity Utilization	107.5%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

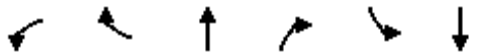


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	84	304	80	94	226	76	112	436	116	194	466	34
Future Volume (vph)	84	304	80	94	226	76	112	436	116	194	466	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	6.0		3.0	6.0		3.0	6.0	6.0	3.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	0.95	
Frt	1.00	0.97		1.00	0.96		1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	1803		1770	1786		1770	1863	1583	1770	3503	
Flt Permitted	0.31	1.00		0.18	1.00		0.30	1.00	1.00	0.20	1.00	
Satd. Flow (perm)	582	1803		331	1786		562	1863	1583	373	3503	
Peak-hour factor, PHF	0.80	0.89	0.86	0.90	0.90	0.80	0.80	0.94	0.80	0.84	0.80	0.80
Growth Factor (vph)	109%	109%	109%	109%	109%	109%	109%	109%	109%	109%	109%	109%
Adj. Flow (vph)	114	372	101	114	274	104	153	506	158	252	635	46
RTOR Reduction (vph)	0	10	0	0	14	0	0	0	104	0	5	0
Lane Group Flow (vph)	114	463	0	114	364	0	153	506	54	252	676	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		
Actuated Green, G (s)	31.2	25.9		31.2	25.9		38.7	30.3	30.3	41.3	31.6	
Effective Green, g (s)	31.2	25.9		31.2	25.9		38.7	30.3	30.3	41.3	31.6	
Actuated g/C Ratio	0.35	0.29		0.35	0.29		0.43	0.34	0.34	0.46	0.35	
Clearance Time (s)	3.0	6.0		3.0	6.0		3.0	6.0	6.0	3.0	6.0	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Lane Grp Cap (vph)	274	523		201	518		357	632	537	324	1240	
v/s Ratio Prot	0.02	c0.26		c0.03	0.20		0.04	0.27		c0.08	0.19	
v/s Ratio Perm	0.12			0.16			0.15		0.03	c0.27		
v/c Ratio	0.42	0.89		0.57	0.70		0.43	0.80	0.10	0.78	0.55	
Uniform Delay, d1	20.9	30.2		21.9	28.2		16.0	26.7	20.1	17.6	23.0	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.4	15.9		2.2	3.5		0.3	6.8	0.0	10.2	0.3	
Delay (s)	21.3	46.2		24.1	31.7		16.3	33.5	20.2	27.9	23.3	
Level of Service	C	D		C	C		B	C	C	C	C	
Approach Delay (s)		41.3			30.0			27.7			24.5	
Approach LOS		D			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	29.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	89.2	Sum of lost time (s)	18.0
Intersection Capacity Utilization	82.0%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

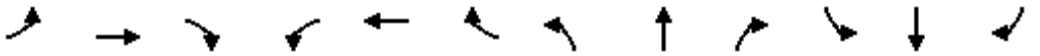
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	54	410	226	76	317	29	125	278	96	64	418	31
Future Volume (vph)	54	410	226	76	317	29	125	278	96	64	418	31
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.95		1.00	0.99		1.00	0.96		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1762		1770	1836		1770	1786		1770	1843	
Flt Permitted	0.40	1.00		0.13	1.00		0.20	1.00		0.33	1.00	
Satd. Flow (perm)	750	1762		240	1836		368	1786		613	1843	
Peak-hour factor, PHF	0.80	0.94	0.92	0.93	0.92	0.80	0.90	0.88	0.81	0.80	0.82	0.80
Growth Factor (vph)	112%	112%	112%	112%	112%	112%	112%	112%	112%	112%	112%	112%
Adj. Flow (vph)	76	489	275	92	386	41	156	354	133	90	571	43
RTOR Reduction (vph)	0	27	0	0	5	0	0	18	0	0	4	0
Lane Group Flow (vph)	76	737	0	92	422	0	156	469	0	90	610	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			2			1			1	
Permitted Phases	2			2			1			1		
Actuated Green, G (s)	31.0	31.0		31.0	31.0		30.0	30.0		30.0	30.0	
Effective Green, g (s)	31.0	31.0		31.0	31.0		30.0	30.0		30.0	30.0	
Actuated g/C Ratio	0.41	0.41		0.41	0.41		0.40	0.40		0.40	0.40	
Clearance Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	310	728		99	758		147	714		245	737	
v/s Ratio Prot		c0.42			0.23			0.26			0.33	
v/s Ratio Perm	0.10			0.38			c0.42			0.15		
v/c Ratio	0.25	1.01		0.93	0.56		1.06	0.66		0.37	0.83	
Uniform Delay, d1	14.4	22.0		21.0	16.8		22.5	18.3		15.8	20.2	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.2	36.5		66.3	0.5		91.5	4.7		4.2	10.4	
Delay (s)	14.5	58.5		87.3	17.3		114.0	23.0		20.0	30.6	
Level of Service	B	E		F	B		F	C		C	C	
Approach Delay (s)		54.5			29.7			45.1			29.2	
Approach LOS		D			C			D			C	

Intersection Summary			
HCM 2000 Control Delay	40.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.04		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	123.0%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	45	21	515	27	19	544
Future Volume (vph)	45	21	515	27	19	544
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0		7.0			7.0
Lane Util. Factor	1.00		1.00			1.00
Frt	0.96		0.99			1.00
Flt Protected	0.97		1.00			1.00
Satd. Flow (prot)	1724		1848			1859
Flt Permitted	0.97		1.00			0.96
Satd. Flow (perm)	1724		1848			1794
Peak-hour factor, PHF	0.80	0.80	0.94	0.80	0.80	0.94
Growth Factor (vph)	112%	112%	112%	112%	112%	112%
Adj. Flow (vph)	63	29	614	38	27	648
RTOR Reduction (vph)	19	0	2	0	0	0
Lane Group Flow (vph)	73	0	650	0	0	675
Turn Type	Prot		NA		Perm	NA
Protected Phases	8		2			6
Permitted Phases					6	
Actuated Green, G (s)	6.6		70.0			70.0
Effective Green, g (s)	6.6		70.0			70.0
Actuated g/C Ratio	0.07		0.78			0.78
Clearance Time (s)	6.0		7.0			7.0
Vehicle Extension (s)	2.0		2.0			2.0
Lane Grp Cap (vph)	126		1443			1401
v/s Ratio Prot	c0.04		0.35			
v/s Ratio Perm						c0.38
v/c Ratio	0.58		0.45			0.48
Uniform Delay, d1	40.2		3.3			3.4
Progression Factor	1.00		1.00			1.00
Incremental Delay, d2	4.4		0.1			0.1
Delay (s)	44.5		3.4			3.5
Level of Service	D		A			A
Approach Delay (s)	44.5		3.4			3.5
Approach LOS	D		A			A

Intersection Summary			
HCM 2000 Control Delay	6.1	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	89.6	Sum of lost time (s)	13.0
Intersection Capacity Utilization	72.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



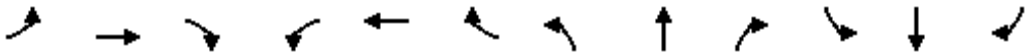
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	60	170	44	20	118	16	30	156	28	34	282	26
Future Volume (vph)	60	170	44	20	118	16	30	156	28	34	282	26
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0			6.0			6.0	6.0
Lane Util. Factor		1.00			1.00			1.00			1.00	1.00
Frt		0.98			0.99			0.98			1.00	0.85
Flt Protected		0.99			0.99			0.99			0.99	1.00
Satd. Flow (prot)		1802			1822			1817			1852	1583
Flt Permitted		0.89			0.93			0.91			0.94	1.00
Satd. Flow (perm)		1628			1706			1673			1745	1583
Peak-hour factor, PHF	0.80	0.82	0.80	0.80	0.85	0.80	0.80	0.80	0.80	0.82	0.90	0.80
Growth Factor (vph)	103%	103%	103%	103%	103%	103%	103%	103%	103%	103%	103%	103%
Adj. Flow (vph)	77	214	57	26	143	21	39	201	36	43	323	33
RTOR Reduction (vph)	0	11	0	0	7	0	0	9	0	0	0	17
Lane Group Flow (vph)	0	337	0	0	183	0	0	267	0	0	366	16
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		6
Actuated Green, G (s)		20.0			20.0			30.0			30.0	30.0
Effective Green, g (s)		20.0			20.0			30.0			30.0	30.0
Actuated g/C Ratio		0.33			0.33			0.49			0.49	0.49
Clearance Time (s)		5.0			5.0			6.0			6.0	6.0
Lane Grp Cap (vph)		533			559			822			858	778
v/s Ratio Prot												
v/s Ratio Perm		c0.21			0.11			0.16			c0.21	0.01
v/c Ratio		0.63			0.33			0.33			0.43	0.02
Uniform Delay, d1		17.4			15.4			9.4			10.0	8.0
Progression Factor		1.00			1.00			1.00			1.00	1.00
Incremental Delay, d2		5.6			1.6			1.1			1.6	0.0
Delay (s)		23.0			17.0			10.4			11.5	8.0
Level of Service		C			B			B			B	A
Approach Delay (s)		23.0			17.0			10.4			11.2	
Approach LOS		C			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	15.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	61.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	80.0%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

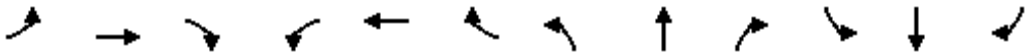
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	388	248	12	760	330
Future Volume (vph)	0	388	248	12	760	330
Ideal Flow (vphpl)	1900	1200	1900	1900	1900	1900
Total Lost time (s)		6.0	5.0	5.0	6.0	6.0
Lane Util. Factor		1.00	1.00	1.00	1.00	1.00
Frt		0.86	1.00	0.85	1.00	1.00
Flt Protected		1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)		1018	1863	1583	1770	1863
Flt Permitted		1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)		1018	1863	1583	1770	1863
Peak-hour factor, PHF	0.80	0.85	0.97	0.80	0.93	0.89
Growth Factor (vph)	103%	103%	103%	103%	103%	103%
Adj. Flow (vph)	0	470	263	15	842	382
RTOR Reduction (vph)	0	79	0	10	0	0
Lane Group Flow (vph)	0	391	263	5	842	382
Turn Type		Perm	NA	Perm	Prot	NA
Protected Phases			4		6	
Permitted Phases		2		4		6
Actuated Green, G (s)		32.9	11.4	11.4	32.9	32.9
Effective Green, g (s)		32.9	11.4	11.4	32.9	32.9
Actuated g/C Ratio		0.59	0.21	0.21	0.59	0.59
Clearance Time (s)		6.0	5.0	5.0	6.0	6.0
Vehicle Extension (s)		3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		605	384	326	1053	1108
v/s Ratio Prot			c0.14		c0.48	
v/s Ratio Perm		0.38		0.00		0.21
v/c Ratio		0.65	0.68	0.01	0.80	0.34
Uniform Delay, d1		7.4	20.3	17.5	8.7	5.7
Progression Factor		1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2		2.4	5.0	0.0	4.3	0.2
Delay (s)		9.8	25.3	17.5	13.0	5.9
Level of Service		A	C	B	B	A
Approach Delay (s)	9.8		24.9			10.8
Approach LOS	A		C			B

Intersection Summary			
HCM 2000 Control Delay	12.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	55.3	Sum of lost time (s)	11.0
Intersection Capacity Utilization	66.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



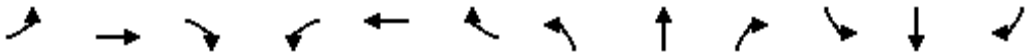
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	22	0	25	0	20	0	148	33	27	243	0
Future Volume (vph)	15	22	0	25	0	20	0	148	33	27	243	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0			7.0			7.0			7.0	
Lane Util. Factor	1.00	1.00			1.00			1.00			1.00	
Frt	1.00	1.00			0.94			0.98			1.00	
Flt Protected	0.95	1.00			0.97			1.00			1.00	
Satd. Flow (prot)	1770	1863			1703			1817			1854	
Flt Permitted	0.72	1.00			0.86			1.00			0.95	
Satd. Flow (perm)	1342	1863			1501			1817			1777	
Peak-hour factor, PHF	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.84	0.82	0.80
Adj. Flow (vph)	19	28	0	31	0	25	0	185	41	32	296	0
RTOR Reduction (vph)	0	0	0	0	37	0	0	10	0	0	0	0
Lane Group Flow (vph)	19	28	0	0	19	0	0	216	0	0	328	0
Turn Type	Perm	NA		Perm	NA			NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8						6		
Actuated Green, G (s)	25.0	25.0			25.0			36.0			36.0	
Effective Green, g (s)	25.0	25.0			25.0			36.0			36.0	
Actuated g/C Ratio	0.33	0.33			0.33			0.48			0.48	
Clearance Time (s)	7.0	7.0			7.0			7.0			7.0	
Lane Grp Cap (vph)	447	621			500			872			852	
v/s Ratio Prot		c0.02						0.12				
v/s Ratio Perm	0.01				0.01						c0.18	
v/c Ratio	0.04	0.05			0.04			0.25			0.38	
Uniform Delay, d1	16.9	16.9			16.9			11.5			12.4	
Progression Factor	1.00	1.00			1.00			1.00			0.89	
Incremental Delay, d2	0.2	0.1			0.1			0.7			1.0	
Delay (s)	17.1	17.1			17.0			12.2			12.0	
Level of Service	B	B			B			B			B	
Approach Delay (s)		17.1			17.0			12.2			12.0	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	12.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.25		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	67.8%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	18	132	24	82	100	66	12	162	54	110	250	22
Future Volume (vph)	18	132	24	82	100	66	12	162	54	110	250	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		9.0			9.0			9.0			9.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frt		0.98			0.97			0.97			0.99	
Flt Protected		0.99			0.98			1.00			0.99	
Satd. Flow (prot)		1819			1767			1794			1820	
Flt Permitted		0.94			0.81			0.96			0.83	
Satd. Flow (perm)		1711			1462			1726			1526	
Peak-hour factor, PHF	0.80	0.80	0.80	0.80	0.83	0.85	0.80	0.92	0.83	0.89	0.89	0.80
Adj. Flow (vph)	22	165	30	102	120	78	15	176	65	124	281	28
RTOR Reduction (vph)	0	0	0	0	0	0	0	16	0	0	4	0
Lane Group Flow (vph)	0	218	0	0	301	0	0	240	0	0	429	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		27.0			27.0			30.0			30.0	
Effective Green, g (s)		27.0			27.0			30.0			30.0	
Actuated g/C Ratio		0.36			0.36			0.40			0.40	
Clearance Time (s)		9.0			9.0			9.0			9.0	
Lane Grp Cap (vph)		615			526			690			610	
v/s Ratio Prot												
v/s Ratio Perm		0.13			c0.21			0.14			c0.28	
v/c Ratio		0.35			0.57			0.35			0.70	
Uniform Delay, d1		17.6			19.3			15.7			18.8	
Progression Factor		1.00			1.00			0.90			1.79	
Incremental Delay, d2		1.6			4.5			1.4			6.0	
Delay (s)		19.2			23.8			15.4			39.6	
Level of Service		B			C			B			D	
Approach Delay (s)		19.2			23.8			15.4			39.6	
Approach LOS		B			C			B			D	

Intersection Summary			
HCM 2000 Control Delay	26.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	104.4%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

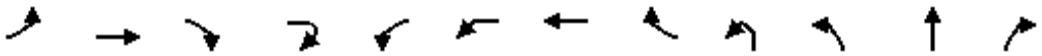


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	28	56	38	4	2	2	4	158	18	20	332	10
Future Volume (vph)	28	56	38	4	2	2	4	158	18	20	332	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		7.0			7.0			7.0			6.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frt		0.96			0.96			0.99			1.00	
Flt Protected		0.99			0.98			1.00			1.00	
Satd. Flow (prot)		1764			1754			1833			1850	
Flt Permitted		0.94			0.90			0.99			0.98	
Satd. Flow (perm)		1670			1615			1816			1812	
Peak-hour factor, PHF	0.80	0.80	0.80	0.83	0.80	0.80	0.80	0.87	0.80	0.80	0.82	0.80
Adj. Flow (vph)	35	70	48	5	2	2	5	182	22	25	405	12
RTOR Reduction (vph)	0	22	0	0	2	0	0	6	0	0	2	0
Lane Group Flow (vph)	0	131	0	0	9	0	0	204	0	0	441	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		26.0			26.0			35.0			36.0	
Effective Green, g (s)		26.0			26.0			35.0			36.0	
Actuated g/C Ratio		0.35			0.35			0.47			0.48	
Clearance Time (s)		7.0			7.0			7.0			6.0	
Lane Grp Cap (vph)		578			559			847			869	
v/s Ratio Prot												
v/s Ratio Perm		c0.08			0.01			0.11			c0.24	
v/c Ratio		0.23			0.02			0.24			0.51	
Uniform Delay, d1		17.4			16.1			12.0			13.4	
Progression Factor		1.00			1.00			1.78			1.00	
Incremental Delay, d2		0.9			0.1			0.6			2.1	
Delay (s)		18.3			16.1			22.0			15.5	
Level of Service		B			B			C			B	
Approach Delay (s)		18.3			16.1			22.0			15.5	
Approach LOS		B			B			C			B	

Intersection Summary			
HCM 2000 Control Delay	17.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	62.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBL	WBR	WBR2	NBL	NBT	SBT	SBR	NWT
Lane Configurations								
Traffic Volume (vph)	9	47	47	18	84	141	6	7
Future Volume (vph)	9	47	47	18	84	141	6	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0		6.0		6.0	6.0		6.0
Lane Util. Factor	1.00		0.95		1.00	1.00		1.00
Frt	0.87		0.85		1.00	0.99		1.00
Flt Protected	0.99		1.00		0.99	1.00		1.00
Satd. Flow (prot)	1612		1504		1849	1852		1863
Flt Permitted	0.99		1.00		0.95	1.00		1.00
Satd. Flow (perm)	1612		1504		1768	1852		1863
Peak-hour factor, PHF	0.80	0.80	0.80	0.99	0.80	0.80	0.80	0.80
Adj. Flow (vph)	11	59	59	18	105	176	8	9
RTOR Reduction (vph)	69	0	48	0	0	2	0	0
Lane Group Flow (vph)	7	0	5	0	123	182	0	9
Turn Type	Prot		Perm	Perm	NA	NA		NA
Protected Phases	8				1	1		2
Permitted Phases			8	1				
Actuated Green, G (s)	7.0		7.0		30.0	30.0		20.0
Effective Green, g (s)	7.0		7.0		30.0	30.0		20.0
Actuated g/C Ratio	0.09		0.09		0.40	0.40		0.27
Clearance Time (s)	6.0		6.0		6.0	6.0		6.0
Lane Grp Cap (vph)	150		140		707	740		496
v/s Ratio Prot	c0.00					c0.10		c0.00
v/s Ratio Perm			0.00		0.07			
v/c Ratio	0.05		0.04		0.17	0.25		0.02
Uniform Delay, d1	31.0		30.9		14.5	15.0		20.3
Progression Factor	1.00		1.00		1.00	1.00		1.00
Incremental Delay, d2	0.6		0.5		0.5	0.8		0.1
Delay (s)	31.6		31.4		15.0	15.8		20.3
Level of Service	C		C		B	B		C
Approach Delay (s)	31.5				15.0	15.8		20.3
Approach LOS	C				B	B		C

Intersection Summary			
HCM 2000 Control Delay	20.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.14		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	62.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



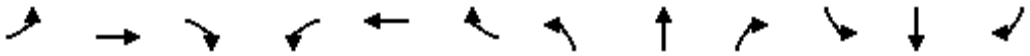
Movement	EBL	EBT	EBR	EBR2	WBL2	WBL	WBT	WBR	NBL2	NBL	NBT	NBR
Lane Configurations												
Traffic Volume (vph)	16	102	133	11	33	22	40	54	3	14	80	35
Future Volume (vph)	16	102	133	11	33	22	40	54	3	14	80	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0					6.0				6.0	
Lane Util. Factor		1.00					1.00				1.00	
Frt		0.93					0.95				0.96	
Flt Protected		1.00					0.98				0.99	
Satd. Flow (prot)		1719					1740				1785	
Flt Permitted		0.97					0.76				0.95	
Satd. Flow (perm)		1680					1352				1704	
Peak-hour factor, PHF	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Growth Factor (vph)	101%	101%	101%	101%	101%	101%	101%	101%	101%	101%	101%	101%
Adj. Flow (vph)	20	129	168	14	42	28	50	68	4	18	101	44
RTOR Reduction (vph)	0	3	0	0	0	0	34	0	0	0	21	0
Lane Group Flow (vph)	0	328	0	0	0	0	155	0	0	0	146	0
Turn Type	Perm	NA			Perm	Perm	NA		pm+pt	pm+pt	NA	
Protected Phases		4					8		5	5	2	
Permitted Phases	4				8	8			2	2		
Actuated Green, G (s)		20.0					20.0				28.0	
Effective Green, g (s)		20.0					20.0				28.0	
Actuated g/C Ratio		0.33					0.33				0.47	
Clearance Time (s)		6.0					6.0				6.0	
Lane Grp Cap (vph)		560					450				801	
v/s Ratio Prot											c0.02	
v/s Ratio Perm		c0.20					0.11				0.07	
v/c Ratio		0.59					0.34				0.18	
Uniform Delay, d1		16.6					15.1				9.3	
Progression Factor		1.00					1.00				1.00	
Incremental Delay, d2		4.4					2.1				0.5	
Delay (s)		21.0					17.1				9.8	
Level of Service		C					B				A	
Approach Delay (s)		21.0					17.1				9.8	
Approach LOS		C					B				A	

Intersection Summary			
HCM 2000 Control Delay	18.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	57.6%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	SBL	SBT	SBR	SBR2
Lane Configurations				
Traffic Volume (vph)	59	151	14	18
Future Volume (vph)	59	151	14	18
Ideal Flow (vphpl)	1900	1900	1900	1900
Total Lost time (s)		6.0		
Lane Util. Factor		1.00		
Frt		0.98		
Flt Protected		0.99		
Satd. Flow (prot)		1807		
Flt Permitted		0.88		
Satd. Flow (perm)		1602		
Peak-hour factor, PHF	0.80	0.80	0.80	0.80
Growth Factor (vph)	101%	101%	101%	101%
Adj. Flow (vph)	74	191	18	23
RTOR Reduction (vph)	0	5	0	0
Lane Group Flow (vph)	0	301	0	0
Turn Type	Perm	NA		
Protected Phases		6		
Permitted Phases	6			
Actuated Green, G (s)		20.0		
Effective Green, g (s)		20.0		
Actuated g/C Ratio		0.33		
Clearance Time (s)		6.0		
Lane Grp Cap (vph)		534		
v/s Ratio Prot				
v/s Ratio Perm		c0.19		
v/c Ratio		0.56		
Uniform Delay, d1		16.4		
Progression Factor		1.00		
Incremental Delay, d2		4.3		
Delay (s)		20.7		
Level of Service		C		
Approach Delay (s)		20.7		
Approach LOS		C		

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	908	6	40	262	44	0	0	186	0	0	0
Future Volume (vph)	0	908	6	40	262	44	0	0	186	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0		5.0	5.0				5.0			
Lane Util. Factor		0.91		1.00	0.95				1.00			
Frt		1.00		1.00	0.98				0.86			
Flt Protected		1.00		0.95	1.00				1.00			
Satd. Flow (prot)		5080		1770	3462				1611			
Flt Permitted		1.00		0.22	1.00				1.00			
Satd. Flow (perm)		5080		406	3462				1611			
Peak-hour factor, PHF	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Growth Factor (vph)	103%	103%	103%	103%	103%	103%	103%	103%	103%	103%	103%	103%
Adj. Flow (vph)	0	1169	8	52	337	57	0	0	239	0	0	0
RTOR Reduction (vph)	0	0	0	0	6	0	0	0	54	0	0	0
Lane Group Flow (vph)	0	1177	0	52	388	0	0	0	185	0	0	0
Turn Type		NA		Perm	NA				Perm			
Protected Phases		4			8							
Permitted Phases				8					2			
Actuated Green, G (s)		77.2		77.2	77.2				16.9			
Effective Green, g (s)		77.2		77.2	77.2				16.9			
Actuated g/C Ratio		0.74		0.74	0.74				0.16			
Clearance Time (s)		5.0		5.0	5.0				5.0			
Vehicle Extension (s)		3.0		3.0	3.0				3.0			
Lane Grp Cap (vph)		3767		301	2567				261			
v/s Ratio Prot		c0.23			0.11							
v/s Ratio Perm				0.13					c0.12			
v/c Ratio		0.31		0.17	0.15				0.71			
Uniform Delay, d1		4.5		4.0	3.9				41.3			
Progression Factor		1.00		1.00	1.00				1.00			
Incremental Delay, d2		0.2		1.2	0.1				8.8			
Delay (s)		4.7		5.2	4.0				50.1			
Level of Service		A		A	A				D			
Approach Delay (s)		4.7			4.2			50.1			0.0	
Approach LOS		A			A			D			A	

Intersection Summary			
HCM 2000 Control Delay	10.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	104.1	Sum of lost time (s)	10.0
Intersection Capacity Utilization	38.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	17	340	106	83	271	12	208	6	99	59	8	220
Future Volume (vph)	17	340	106	83	271	12	208	6	99	59	8	220
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	2.0	6.0	6.0	2.0	6.0			6.0			6.0	6.0
Lane Util. Factor	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	0.99			0.96			1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00			0.97			0.96	1.00
Satd. Flow (prot)	1770	1863	1583	1770	1851			1726			1784	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00			0.75			0.61	1.00
Satd. Flow (perm)	1770	1863	1583	1770	1851			1334			1135	1583
Peak-hour factor, PHF	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Growth Factor (vph)	103%	103%	103%	103%	103%	103%	103%	103%	103%	103%	103%	103%
Adj. Flow (vph)	22	438	136	107	349	15	268	8	127	76	10	283
RTOR Reduction (vph)	0	0	84	0	2	0	0	26	0	0	0	190
Lane Group Flow (vph)	22	438	52	107	362	0	0	377	0	0	86	93
Turn Type	Prot	NA	Perm	Prot	NA		Perm	NA		Perm	NA	Perm
Protected Phases	1	6		5	2			4			8	
Permitted Phases			6				4			8		8
Actuated Green, G (s)	1.5	24.6	24.6	4.6	27.7			21.1			21.1	21.1
Effective Green, g (s)	1.5	24.6	24.6	4.6	27.7			21.1			21.1	21.1
Actuated g/C Ratio	0.02	0.38	0.38	0.07	0.43			0.33			0.33	0.33
Clearance Time (s)	2.0	6.0	6.0	2.0	6.0			6.0			6.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			3.0			3.0	3.0
Lane Grp Cap (vph)	41	712	605	126	797			437			372	519
v/s Ratio Prot	0.01	c0.24		c0.06	0.20							
v/s Ratio Perm			0.03					c0.28			0.08	0.06
v/c Ratio	0.54	0.62	0.09	0.85	0.45			0.86			0.23	0.18
Uniform Delay, d1	31.1	16.0	12.7	29.5	12.9			20.2			15.7	15.4
Progression Factor	1.00	1.00	1.00	1.00	1.00			1.00			1.00	1.00
Incremental Delay, d2	12.8	4.0	0.3	38.3	1.9			15.9			0.3	0.2
Delay (s)	43.9	20.0	13.0	67.8	14.8			36.2			16.0	15.6
Level of Service	D	B	B	E	B			D			B	B
Approach Delay (s)		19.3			26.8			36.2			15.7	
Approach LOS		B			C			D			B	

Intersection Summary			
HCM 2000 Control Delay	24.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	64.3	Sum of lost time (s)	14.0
Intersection Capacity Utilization	62.9%	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 (vph)	68	284	52	140	150	62	28	488	138	142	628	34
Future Volume (vph)	68	284	52	140	150	62	28	488	138	142	628	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1500	1500	1900	1500	1500	1900
Total Lost time (s)	3.0	5.0		3.0	5.0		3.0	5.0		3.0	5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.95		1.00	0.97		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1638		1770	1775		1397	1421		1397	1459	
Flt Permitted	0.35	1.00		0.15	1.00		0.15	1.00		0.13	1.00	
Satd. Flow (perm)	645	1638		276	1775		221	1421		198	1459	
Peak-hour factor, PHF	0.80	0.93	0.93	0.90	0.89	0.80	0.80	0.93	0.90	0.93	0.94	0.90
Growth Factor (vph)	109%	109%	109%	109%	109%	109%	109%	109%	109%	109%	109%	109%
Adj. Flow (vph)	93	333	61	170	184	84	38	572	167	166	728	41
RTOR Reduction (vph)	0	5	0	0	14	0	0	9	0	0	1	0
Lane Group Flow (vph)	93	389	0	170	254	0	38	730	0	166	768	0
Parking (#/hr)		0										
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	36.0	27.0		36.0	27.0		65.1	59.1		70.9	62.0	
Effective Green, g (s)	36.0	27.0		36.0	27.0		65.1	59.1		70.9	62.0	
Actuated g/C Ratio	0.30	0.22		0.30	0.22		0.54	0.49		0.59	0.52	
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	5.0		3.0	5.0	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	277	368		194	399		178	699		205	753	
v/s Ratio Prot	0.03	c0.24		c0.07	0.14		0.01	0.51		c0.06	c0.53	
v/s Ratio Perm	0.08			0.20			0.10			0.42		
v/c Ratio	0.34	1.06		0.88	0.64		0.21	1.04		0.81	1.02	
Uniform Delay, d1	31.6	46.5		34.7	42.1		18.5	30.4		21.0	29.0	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.3	62.4		32.0	2.4		0.2	46.3		19.5	37.7	
Delay (s)	31.9	108.9		66.6	44.5		18.7	76.8		40.5	66.7	
Level of Service	C	F		E	D		B	E		D	E	
Approach Delay (s)		94.2			53.1			73.9			62.1	
Approach LOS		F			D			E			E	

Intersection Summary			
HCM 2000 Control Delay	70.0	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.02		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	101.1%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Appendix 5E-16: 2040 No-Build PM

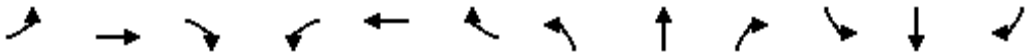
Unsignalized

Synchro Results

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	284	62	26	220	62	18
Future Volume (Veh/h)	284	62	26	220	62	18
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.81	0.80	0.81	0.95	0.80	0.80
Hourly flow rate (vph)	431	95	39	285	95	28
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			526		842	478
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			526		842	478
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			96		71	95
cM capacity (veh/h)			1041		322	587

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	526	324	123
Volume Left	0	39	95
Volume Right	95	0	28
cSH	1700	1041	359
Volume to Capacity	0.31	0.04	0.34
Queue Length 95th (ft)	0	3	37
Control Delay (s)	0.0	1.4	20.2
Lane LOS		A	C
Approach Delay (s)	0.0	1.4	20.2
Approach LOS			C

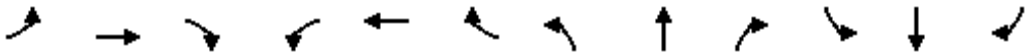
Intersection Summary			
Average Delay	3.0		
Intersection Capacity Utilization	53.2%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Yield			Stop			Yield	
Traffic Volume (vph)	22	27	7	1	30	209	6	70	8	227	73	14
Future Volume (vph)	22	27	7	1	30	209	6	70	8	227	73	14
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.87	0.80	0.80
Hourly flow rate (vph)	34	42	11	2	46	321	9	108	12	321	112	22

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	87	369	129	455
Volume Left (vph)	34	2	9	321
Volume Right (vph)	11	321	12	22
Hadj (s)	0.04	-0.49	-0.01	0.15
Departure Headway (s)	6.3	5.3	6.0	5.6
Degree Utilization, x	0.15	0.54	0.22	0.71
Capacity (veh/h)	474	636	523	620
Control Delay (s)	10.5	14.3	10.7	20.8
Approach Delay (s)	10.5	14.3	10.7	20.8
Approach LOS	B	B	B	C

Intersection Summary				
Delay	16.4			
Level of Service	C			
Intersection Capacity Utilization	59.3%	ICU Level of Service	B	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	26	168	11	10	154	28	9	41	26	22	36	39
Future Volume (Veh/h)	26	168	11	10	154	28	9	41	26	22	36	39
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	40	258	17	15	237	43	14	63	40	34	55	60
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		643			1031							
pX, platoon unblocked	1.00						1.00	1.00		1.00	1.00	1.00
vC, conflicting volume	280			275			722	656	266	706	644	258
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	280			275			722	656	266	706	643	258
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	97			99			95	83	95	88	85	92
cM capacity (veh/h)	1283			1288			271	369	772	280	375	780

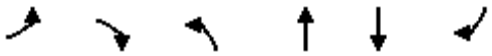
Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	315	295	117	149
Volume Left	40	15	14	34
Volume Right	17	43	40	60
cSH	1283	1288	426	432
Volume to Capacity	0.03	0.01	0.27	0.35
Queue Length 95th (ft)	2	1	28	38
Control Delay (s)	1.3	0.5	16.6	17.7
Lane LOS	A	A	C	C
Approach Delay (s)	1.3	0.5	16.6	17.7
Approach LOS			C	C

Intersection Summary				
Average Delay	5.8			
Intersection Capacity Utilization	41.4%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (veh/h)	0	65	570	77	0	734
Future Volume (Veh/h)	0	65	570	77	0	734
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	0	96	841	114	0	1083
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						1081
pX, platoon unblocked	0.79					
vC, conflicting volume	1981	898			841	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2106	898			841	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	72			100	
cM capacity (veh/h)	45	338			794	

Direction, Lane #	NW 1	NE 1	SW 1
Volume Total	96	955	1083
Volume Left	0	0	0
Volume Right	96	114	0
cSH	338	1700	1700
Volume to Capacity	0.28	0.56	0.64
Queue Length 95th (ft)	29	0	0
Control Delay (s)	19.8	0.0	0.0
Lane LOS	C		
Approach Delay (s)	19.8	0.0	0.0
Approach LOS	C		

Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	52.3%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	60	37	68	220	227	87
Future Volume (Veh/h)	60	37	68	220	227	87
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.80	0.80	0.96	0.88	0.86	0.88
Hourly flow rate (vph)	85	52	80	283	298	112
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)					693	
pX, platoon unblocked						
vC, conflicting volume	797	354	410			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	797	354	410			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	74	92	93			
cM capacity (veh/h)	331	690	1149			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	137	363	410
Volume Left	85	80	0
Volume Right	52	0	112
cSH	412	1149	1700
Volume to Capacity	0.33	0.07	0.24
Queue Length 95th (ft)	36	6	0
Control Delay (s)	18.0	2.4	0.0
Lane LOS	C	A	
Approach Delay (s)	18.0	2.4	0.0
Approach LOS	C		

Intersection Summary			
Average Delay	3.7		
Intersection Capacity Utilization	53.1%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	8	191	150	3	194	258
Future Volume (Veh/h)	8	191	150	3	194	258
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.80	0.88	0.87	0.80	0.93	0.80
Hourly flow rate (vph)	11	245	195	4	236	364
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1033	197			199	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1033	197			199	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	95	71			83	
cM capacity (veh/h)	213	844			1373	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	256	199	600
Volume Left	11	0	236
Volume Right	245	4	0
cSH	749	1700	1373
Volume to Capacity	0.34	0.12	0.17
Queue Length 95th (ft)	38	0	15
Control Delay (s)	12.3	0.0	4.3
Lane LOS	B		A
Approach Delay (s)	12.3	0.0	4.3
Approach LOS	B		

Intersection Summary			
Average Delay	5.4		
Intersection Capacity Utilization	60.5%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	13	373	14	7	482	14	11	3	9	10	2	11
Future Volume (Veh/h)	13	373	14	7	482	14	11	3	9	10	2	11
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.81	0.92	0.80	0.80	0.83	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	18	458	20	10	656	20	16	4	13	14	3	16
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)					1030							
pX, platoon unblocked	0.83						0.83	0.83		0.83	0.83	0.83
vC, conflicting volume	676			478			1208	1200	468	1205	1200	666
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	512			478			1149	1140	468	1146	1140	500
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	98			99			88	98	98	90	98	97
cM capacity (veh/h)	878			1084			136	163	595	138	163	476

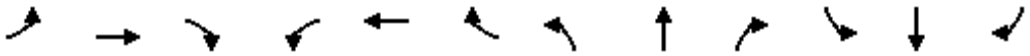
Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	496	686	33	33
Volume Left	18	10	16	14
Volume Right	20	20	13	16
cSH	878	1084	201	215
Volume to Capacity	0.02	0.01	0.16	0.15
Queue Length 95th (ft)	2	1	14	13
Control Delay (s)	0.6	0.2	26.4	24.8
Lane LOS	A	A	D	C
Approach Delay (s)	0.6	0.2	26.4	24.8
Approach LOS			D	C

Intersection Summary			
Average Delay	1.7		
Intersection Capacity Utilization	42.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	250	6	1	333	10	6	2	4	6	0	14
Future Volume (Veh/h)	5	250	6	1	333	10	6	2	4	6	0	14
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.80	0.84	0.80	0.80	0.90	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	8	357	9	2	444	15	9	3	6	9	0	21
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	459			366			854	840	362	840	838	452
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	459			366			854	840	362	840	838	452
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			100			97	99	99	97	100	97
cM capacity (veh/h)	1102			1193			267	299	683	278	300	608

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	374	461	18	30
Volume Left	8	2	9	9
Volume Right	9	15	6	21
cSH	1102	1193	343	448
Volume to Capacity	0.01	0.00	0.05	0.07
Queue Length 95th (ft)	1	0	4	5
Control Delay (s)	0.3	0.1	16.1	13.6
Lane LOS	A	A	C	B
Approach Delay (s)	0.3	0.1	16.1	13.6
Approach LOS			C	B

Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	32.4%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	214	7	145	223	32	6	12	85	45	57	28
Future Volume (Veh/h)	4	214	7	145	223	32	6	12	85	45	57	28
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.80	0.87	0.80	0.80	0.86	0.83	0.80	0.80	0.80	0.93	0.93	0.93
Hourly flow rate (vph)	6	275	10	203	290	43	8	17	119	54	69	34
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	333			285			1078	1031	280	1137	1014	312
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	333			285			1078	1031	280	1137	1014	312
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			84			93	91	84	56	65	95
cM capacity (veh/h)	1226			1277			121	195	759	123	200	729

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	291	536	144	157
Volume Left	6	203	8	54
Volume Right	10	43	119	34
cSH	1226	1277	464	189
Volume to Capacity	0.00	0.16	0.31	0.83
Queue Length 95th (ft)	0	14	33	148
Control Delay (s)	0.2	4.2	16.2	78.4
Lane LOS	A	A	C	F
Approach Delay (s)	0.2	4.2	16.2	78.4
Approach LOS			C	F

Intersection Summary				
Average Delay	15.0			
Intersection Capacity Utilization	62.4%	ICU Level of Service	B	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	184	4	32	202	26	8	78	138	32	118	62
Future Volume (Veh/h)	6	184	4	32	202	26	8	78	138	32	118	62
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.88	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.93	0.93	0.93
Hourly flow rate (vph)	7	251	5	44	275	35	11	106	188	38	138	73
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	310			256			790	666	254	889	650	292
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	310			256			790	666	254	889	650	292
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			97			94	71	76	75	63	90
cM capacity (veh/h)	1250			1309			192	366	785	151	373	747

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	263	354	305	249
Volume Left	7	44	11	38
Volume Right	5	35	188	73
cSH	1250	1309	520	346
Volume to Capacity	0.01	0.03	0.59	0.72
Queue Length 95th (ft)	0	3	93	133
Control Delay (s)	0.3	1.3	21.3	38.0
Lane LOS	A	A	C	E
Approach Delay (s)	0.3	1.3	21.3	38.0
Approach LOS			C	E

Intersection Summary			
Average Delay	14.1		
Intersection Capacity Utilization	63.2%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	515	116	100	385	14	82
Future Volume (Veh/h)	515	116	100	385	14	82
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.88	0.80	0.93	0.86	0.80	0.80
Hourly flow rate (vph)	655	162	120	501	20	115
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	1023					
pX, platoon unblocked			0.87		0.87	0.87
vC, conflicting volume			817		1477	736
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			711		1473	618
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			84		80	73
cM capacity (veh/h)			769		102	424

Direction, Lane #	EB 1	WB 1	WB 2	NB 1
Volume Total	817	120	501	135
Volume Left	0	120	0	20
Volume Right	162	0	0	115
cSH	1700	769	1700	289
Volume to Capacity	0.48	0.16	0.29	0.47
Queue Length 95th (ft)	0	14	0	59
Control Delay (s)	0.0	10.5	0.0	28.0
Lane LOS		B		D
Approach Delay (s)	0.0	2.0		28.0
Approach LOS				D

Intersection Summary			
Average Delay	3.2		
Intersection Capacity Utilization	61.0%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	1	179	498	59	240	525
Future Volume (Veh/h)	1	179	498	59	240	525
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.80	0.80	0.88	0.80	0.87	0.89
Hourly flow rate (vph)	1	251	634	83	309	661
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			776			
pX, platoon unblocked	0.91	0.91			0.91	
vC, conflicting volume	1913	634			717	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1952	551			642	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	98	48			64	
cM capacity (veh/h)	41	487			860	

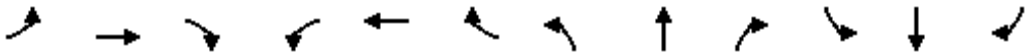
Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	252	634	83	309	661
Volume Left	1	0	0	309	0
Volume Right	251	0	83	0	0
cSH	467	1700	1700	860	1700
Volume to Capacity	0.54	0.37	0.05	0.36	0.39
Queue Length 95th (ft)	79	0	0	41	0
Control Delay (s)	21.4	0.0	0.0	11.5	0.0
Lane LOS	C			B	
Approach Delay (s)	21.4	0.0		3.7	
Approach LOS	C				

Intersection Summary			
Average Delay	4.6		
Intersection Capacity Utilization	66.7%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	8	18	216	6	12	336
Future Volume (Veh/h)	8	18	216	6	12	336
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.99	0.80	0.92	0.80	0.80	0.92
Hourly flow rate (vph)	8	23	242	8	15	376
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	652	246			250	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	652	246			250	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	98	97			99	
cM capacity (veh/h)	428	793			1316	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	31	250	391
Volume Left	8	0	15
Volume Right	23	8	0
cSH	650	1700	1316
Volume to Capacity	0.05	0.15	0.01
Queue Length 95th (ft)	4	0	1
Control Delay (s)	10.8	0.0	0.4
Lane LOS	B		A
Approach Delay (s)	10.8	0.0	0.4
Approach LOS	B		

Intersection Summary			
Average Delay	0.7		
Intersection Capacity Utilization	38.2%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	138	63	35	113	15	59	61	29	1	46	8
Future Volume (Veh/h)	8	138	63	35	113	15	59	61	29	1	46	8
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	9	152	69	38	124	16	65	67	32	1	51	9
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		1178										
pX, platoon unblocked												
vC, conflicting volume	140			221			447	420	186	478	447	132
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	140			221			447	420	186	478	447	132
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			97			86	87	96	100	90	99
cM capacity (veh/h)	1443			1348			463	506	856	419	489	917

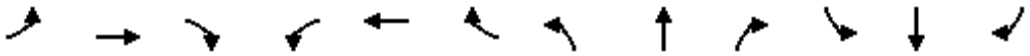
Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	230	178	164	61
Volume Left	9	38	65	1
Volume Right	69	16	32	9
cSH	1443	1348	529	524
Volume to Capacity	0.01	0.03	0.31	0.12
Queue Length 95th (ft)	0	2	33	10
Control Delay (s)	0.3	1.8	14.8	12.8
Lane LOS	A	A	B	B
Approach Delay (s)	0.3	1.8	14.8	12.8
Approach LOS			B	B

Intersection Summary			
Average Delay	5.7		
Intersection Capacity Utilization	44.6%	ICU Level of Service	A
Analysis Period (min)	15		

Appendix 5E-17: 2040 Build AM

Signalized

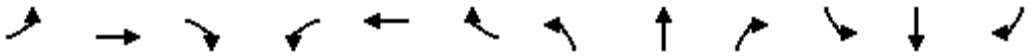
Synchro Results



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	142	243	22	74	310	92	20	376	42	28	202	126
Future Volume (vph)	142	243	22	74	310	92	20	376	42	28	202	126
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	8	11	12	8	11	12	12	16	12	12	16	12
Total Lost time (s)		6.0			6.0		6.0	6.0		6.0	6.0	
Lane Util. Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.99			0.97		1.00	0.99		1.00	0.94	
Flt Protected		0.98			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1757			1741		1770	2081		1770	1984	
Flt Permitted		0.64			0.88		0.40	1.00		0.22	1.00	
Satd. Flow (perm)		1141			1543		741	2081		414	1984	
Peak-hour factor, PHF	0.80	0.80	0.80	0.94	0.80	0.80	0.80	0.84	0.90	0.80	0.92	0.85
Adj. Flow (vph)	178	304	28	79	388	115	25	448	47	35	220	148
RTOR Reduction (vph)	0	4	0	0	15	0	0	6	0	0	41	0
Lane Group Flow (vph)	0	507	0	0	567	0	25	489	0	35	327	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		30.0			30.0		18.0	18.0		18.0	18.0	
Effective Green, g (s)		30.0			30.0		18.0	18.0		18.0	18.0	
Actuated g/C Ratio		0.50			0.50		0.30	0.30		0.30	0.30	
Clearance Time (s)		6.0			6.0		6.0	6.0		6.0	6.0	
Lane Grp Cap (vph)		570			771		222	624		124	595	
v/s Ratio Prot								c0.23			0.17	
v/s Ratio Perm		c0.44			0.37		0.03			0.08		
v/c Ratio		0.89			0.74		0.11	0.78		0.28	0.55	
Uniform Delay, d1		13.5			11.9		15.2	19.2		16.1	17.6	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		18.4			6.2		1.0	9.5		5.6	3.6	
Delay (s)		31.9			18.0		16.2	28.7		21.7	21.2	
Level of Service		C			B		B	C		C	C	
Approach Delay (s)		31.9			18.0			28.1			21.3	
Approach LOS		C			B			C			C	

Intersection Summary			
HCM 2000 Control Delay	24.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	76.0%	ICU Level of Service	D
Analysis Period (min)	15		

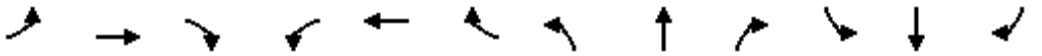
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	49	159	21	45	282	332	35	421	47	156	316	68
Future Volume (vph)	49	159	21	45	282	332	35	421	47	156	316	68
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0	6.0	6.0	6.0		3.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	1.00	0.85	1.00	0.98		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1830		1770	1863	1583	1770	1833		1770	1808	
Flt Permitted	0.24	1.00		0.47	1.00	1.00	0.51	1.00		0.32	1.00	
Satd. Flow (perm)	449	1830		873	1863	1583	949	1833		602	1808	
Peak-hour factor, PHF	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.84	0.80	0.87	0.90	0.80
Adj. Flow (vph)	61	199	26	56	352	415	44	501	59	179	351	85
RTOR Reduction (vph)	0	4	0	0	0	143	0	3	0	0	7	0
Lane Group Flow (vph)	61	221	0	56	353	272	44	557	0	179	429	0
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA		pm+pt	NA	
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	28.4	28.4		28.4	28.4	28.4	67.0	67.0		78.0	78.0	
Effective Green, g (s)	28.4	28.4		28.4	28.4	28.4	67.0	67.0		78.0	78.0	
Actuated g/C Ratio	0.24	0.24		0.24	0.24	0.24	0.57	0.57		0.66	0.66	
Clearance Time (s)	6.0	6.0		6.0	6.0	6.0	6.0	6.0		3.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	107	438		209	446	379	537	1037		475	1191	
v/s Ratio Prot		0.12			c0.19			c0.30		c0.03	0.24	
v/s Ratio Perm	0.14			0.06		0.17	0.05			0.22		
v/c Ratio	0.57	0.51		0.27	0.79	0.72	0.08	0.54		0.38	0.36	
Uniform Delay, d1	39.6	38.9		36.6	42.2	41.3	11.7	16.0		9.9	9.0	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	7.1	0.9		0.7	9.3	6.4	0.1	0.5		0.5	0.2	
Delay (s)	46.8	39.8		37.2	51.5	47.7	11.8	16.6		10.4	9.2	
Level of Service	D	D		D	D	D	B	B		B	A	
Approach Delay (s)		41.3			48.6			16.2			9.6	
Approach LOS		D			D			B			A	

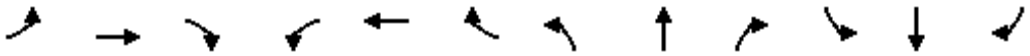
Intersection Summary			
HCM 2000 Control Delay	29.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	118.4	Sum of lost time (s)	15.0
Intersection Capacity Utilization	167.4%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	592	401	2	0	321	165	46	140	0	101	119	243
Future Volume (vph)	592	401	2	0	321	165	46	140	0	101	119	243
Ideal Flow (vphpl)	1200	1200	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	10	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	3.0	5.0			5.0			5.0			5.0	5.0
Lane Util. Factor	1.00	1.00			1.00			1.00			1.00	1.00
Frt	1.00	1.00			0.96			1.00			1.00	0.85
Flt Protected	0.95	1.00			1.00			0.99			0.98	1.00
Satd. Flow (prot)	1043	1097			1779			1840			1821	1583
Flt Permitted	0.11	1.00			1.00			0.58			0.62	1.00
Satd. Flow (perm)	125	1097			1779			1079			1153	1583
Peak-hour factor, PHF	0.93	0.80	0.93	0.93	0.90	0.93	0.93	0.93	0.93	0.93	0.93	0.90
Adj. Flow (vph)	637	501	2	0	357	177	49	151	0	109	128	270
RTOR Reduction (vph)	0	0	0	0	15	0	0	0	0	0	0	218
Lane Group Flow (vph)	637	503	0	0	519	0	0	200	0	0	237	52
Turn Type	pm+pt	NA			NA		Perm	NA		Perm	NA	Perm
Protected Phases	7	4			8			2			6	
Permitted Phases	4			8			2			6		6
Actuated Green, G (s)	87.0	87.0			32.0			23.0			23.0	23.0
Effective Green, g (s)	87.0	87.0			32.0			23.0			23.0	23.0
Actuated g/C Ratio	0.72	0.72			0.27			0.19			0.19	0.19
Clearance Time (s)	3.0	5.0			5.0			5.0			5.0	5.0
Vehicle Extension (s)	3.0	3.0			3.0			3.0			3.0	3.0
Lane Grp Cap (vph)	488	795			474			206			220	303
v/s Ratio Prot	c0.57	0.46			0.29							
v/s Ratio Perm	c0.38							0.19			c0.21	0.03
v/c Ratio	1.31	0.63			1.10			0.97			1.08	0.17
Uniform Delay, d1	29.4	8.4			44.0			48.2			48.5	40.5
Progression Factor	1.00	1.00			1.00			1.00			1.00	1.00
Incremental Delay, d2	151.7	1.7			69.8			54.1			82.7	0.3
Delay (s)	181.1	10.0			113.8			102.3			131.2	40.8
Level of Service	F	B			F			F			F	D
Approach Delay (s)		105.6			113.8			102.3			83.1	
Approach LOS		F			F			F			F	

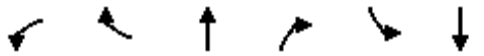
Intersection Summary			
HCM 2000 Control Delay	102.4	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.29		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	112.6%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	45	120	118	157	112	16	28	249	135	51	537	45
Future Volume (vph)	45	120	118	157	112	16	28	249	135	51	537	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.93		1.00	0.98		1.00	0.95		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1724		1770	1826		1770	1765		1770	1841	
Flt Permitted	0.66	1.00		0.50	1.00		0.19	1.00		0.39	1.00	
Satd. Flow (perm)	1229	1724		923	1826		349	1765		732	1841	
Peak-hour factor, PHF	0.80	0.80	0.80	0.80	0.84	0.80	0.80	0.80	0.81	0.80	0.80	0.80
Adj. Flow (vph)	56	150	148	196	133	20	35	311	167	64	671	56
RTOR Reduction (vph)	0	45	0	0	7	0	0	26	0	0	4	0
Lane Group Flow (vph)	56	253	0	196	146	0	35	452	0	64	723	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			4			2			2	
Permitted Phases	4			4			2			2		
Actuated Green, G (s)	24.1	24.1		24.1	24.1		35.6	35.6		35.6	35.6	
Effective Green, g (s)	24.1	24.1		24.1	24.1		35.6	35.6		35.6	35.6	
Actuated g/C Ratio	0.34	0.34		0.34	0.34		0.50	0.50		0.50	0.50	
Clearance Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Vehicle Extension (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)	413	579		310	613		173	876		363	914	
v/s Ratio Prot		0.15			0.08			0.26			c0.39	
v/s Ratio Perm	0.05			c0.21			0.10			0.09		
v/c Ratio	0.14	0.44		0.63	0.24		0.20	0.52		0.18	0.79	
Uniform Delay, d1	16.6	18.5		20.1	17.2		10.1	12.2		10.0	15.0	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.2	0.7		4.7	0.3		0.8	0.7		0.3	5.0	
Delay (s)	16.8	19.2		24.7	17.5		10.9	12.9		10.3	20.0	
Level of Service	B	B		C	B		B	B		B	B	
Approach Delay (s)		18.8			21.5			12.8			19.2	
Approach LOS		B			C			B			B	

Intersection Summary			
HCM 2000 Control Delay	17.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	71.7	Sum of lost time (s)	12.0
Intersection Capacity Utilization	91.8%	ICU Level of Service	F
Analysis Period (min)	15		

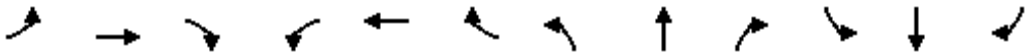
c Critical Lane Group



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	56	31	161	12	24	198
Future Volume (vph)	56	31	161	12	24	198
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0		6.0			6.0
Lane Util. Factor	1.00		1.00			1.00
Frt	0.95		0.99			1.00
Flt Protected	0.97		1.00			0.99
Satd. Flow (prot)	1712		1845			1853
Flt Permitted	0.97		1.00			0.96
Satd. Flow (perm)	1712		1845			1782
Peak-hour factor, PHF	0.93	0.80	0.80	0.80	0.80	0.80
Adj. Flow (vph)	60	39	201	15	30	248
RTOR Reduction (vph)	33	0	4	0	0	0
Lane Group Flow (vph)	66	0	212	0	0	278
Turn Type	Prot		NA		Perm	NA
Protected Phases	4		2			2
Permitted Phases					2	
Actuated Green, G (s)	7.6		28.4			28.4
Effective Green, g (s)	7.6		28.4			28.4
Actuated g/C Ratio	0.16		0.59			0.59
Clearance Time (s)	6.0		6.0			6.0
Vehicle Extension (s)	2.0		2.0			2.0
Lane Grp Cap (vph)	271		1091			1054
v/s Ratio Prot	c0.04		0.12			
v/s Ratio Perm						c0.16
v/c Ratio	0.24		0.19			0.26
Uniform Delay, d1	17.7		4.5			4.7
Progression Factor	1.00		1.00			1.00
Incremental Delay, d2	0.2		0.0			0.0
Delay (s)	17.9		4.6			4.8
Level of Service	B		A			A
Approach Delay (s)	17.9		4.6			4.8
Approach LOS	B		A			A

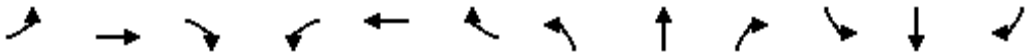
Intersection Summary			
HCM 2000 Control Delay	6.9	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.26		
Actuated Cycle Length (s)	48.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	48.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



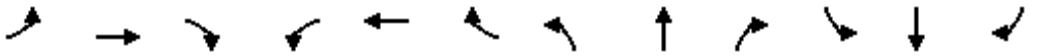
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	34	131	24	13	111	55	38	117	10	42	121	17
Future Volume (vph)	34	131	24	13	111	55	38	117	10	42	121	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0			6.0			6.0			6.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frt		0.98			0.96			0.99			0.99	
Flt Protected		0.99			1.00			0.99			0.99	
Satd. Flow (prot)		1815			1779			1825			1818	
Flt Permitted		0.91			0.97			0.88			0.89	
Satd. Flow (perm)		1675			1736			1630			1632	
Peak-hour factor, PHF	0.81	0.80	0.80	0.80	0.80	0.80	0.80	0.84	0.80	0.80	0.80	0.80
Adj. Flow (vph)	42	164	30	16	139	69	48	139	12	52	151	21
RTOR Reduction (vph)	0	7	0	0	22	0	0	4	0	0	5	0
Lane Group Flow (vph)	0	229	0	0	202	0	0	196	0	0	220	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		6			6			2			2	
Permitted Phases	6			6			2			2		
Actuated Green, G (s)		32.0			32.0			30.0			30.0	
Effective Green, g (s)		32.0			32.0			30.0			30.0	
Actuated g/C Ratio		0.43			0.43			0.41			0.41	
Clearance Time (s)		6.0			6.0			6.0			6.0	
Lane Grp Cap (vph)		724			750			660			661	
v/s Ratio Prot												
v/s Ratio Perm		c0.14			0.12			0.12			c0.13	
v/c Ratio		0.32			0.27			0.30			0.33	
Uniform Delay, d1		13.8			13.5			14.9			15.1	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		1.1			0.9			1.2			1.4	
Delay (s)		15.0			14.4			16.0			16.5	
Level of Service		B			B			B			B	
Approach Delay (s)		15.0			14.4			16.0			16.5	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	15.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	74.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	61.7%	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 (vph)	44	180	15	30	85	22	14	157	90	31	93	36
Future Volume (vph)	44	180	15	30	85	22	14	157	90	31	93	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.97		1.00	0.94		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1839		1770	1803		1770	1755		1770	1785	
Flt Permitted	0.67	1.00		0.62	1.00		0.66	1.00		0.47	1.00	
Satd. Flow (perm)	1255	1839		1152	1803		1220	1755		869	1785	
Peak-hour factor, PHF	0.86	0.88	0.80	0.80	0.83	0.80	0.80	0.87	0.80	0.84	0.80	0.80
Adj. Flow (vph)	51	205	19	38	102	28	18	180	112	37	116	45
RTOR Reduction (vph)	0	5	0	0	13	0	0	32	0	0	20	0
Lane Group Flow (vph)	51	219	0	38	117	0	18	261	0	37	141	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	38.0	38.0		38.0	38.0		22.0	22.0		22.0	22.0	
Effective Green, g (s)	38.0	38.0		38.0	38.0		22.0	22.0		22.0	22.0	
Actuated g/C Ratio	0.54	0.54		0.54	0.54		0.31	0.31		0.31	0.31	
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)	681	998		625	978		383	551		273	561	
v/s Ratio Prot		c0.12			0.07			c0.15			0.08	
v/s Ratio Perm	0.04			0.03			0.01			0.04		
v/c Ratio	0.07	0.22		0.06	0.12		0.05	0.47		0.14	0.25	
Uniform Delay, d1	7.6	8.3		7.6	7.8		16.7	19.3		17.2	17.9	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.2	0.5		0.2	0.3		0.2	2.9		1.0	1.1	
Delay (s)	7.8	8.8		7.8	8.1		16.9	22.2		18.2	18.9	
Level of Service	A	A		A	A		B	C		B	B	
Approach Delay (s)		8.6			8.0			21.9			18.8	
Approach LOS		A			A			C			B	

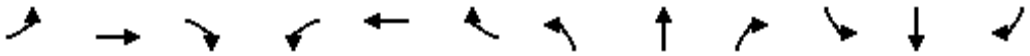
Intersection Summary			
HCM 2000 Control Delay	15.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.31		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	65.8%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	261	148	36	13	150	6	58	854	11	76	466	147
Future Volume (vph)	261	148	36	13	150	6	58	854	11	76	466	147
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	7.0		3.0	7.0	7.0	3.0	7.0		3.0	7.0	7.0
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.95		1.00	0.95	1.00
Frt	1.00	0.97		1.00	1.00	0.85	1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	1808		1770	1863	1583	1770	3532		1770	3539	1583
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1770	1808		1770	1863	1583	1770	3532		1770	3539	1583
Peak-hour factor, PHF	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Adj. Flow (vph)	326	185	45	16	188	8	72	1068	14	95	582	184
RTOR Reduction (vph)	0	9	0	0	0	7	0	1	0	0	0	116
Lane Group Flow (vph)	326	221	0	16	188	1	73	1081	0	95	583	68
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8						6
Actuated Green, G (s)	20.6	32.1		2.8	14.3	14.3	6.4	35.5		6.6	35.7	35.7
Effective Green, g (s)	20.6	32.1		2.8	14.3	14.3	6.4	35.5		6.6	35.7	35.7
Actuated g/C Ratio	0.21	0.33		0.03	0.15	0.15	0.07	0.37		0.07	0.37	0.37
Clearance Time (s)	3.0	7.0		3.0	7.0	7.0	3.0	7.0		3.0	7.0	7.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	375	598		51	274	233	116	1292		120	1302	582
v/s Ratio Prot	c0.18	0.12		0.01	c0.10		0.04	c0.31		c0.05	0.16	
v/s Ratio Perm						0.00						0.04
v/c Ratio	0.87	0.37		0.31	0.69	0.01	0.63	0.84		0.79	0.45	0.12
Uniform Delay, d1	36.9	24.7		46.2	39.2	35.3	44.1	28.1		44.5	23.2	20.2
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	18.8	0.4		3.5	7.0	0.0	10.2	6.6		29.0	1.1	0.4
Delay (s)	55.7	25.1		49.7	46.2	35.3	54.4	34.7		73.5	24.3	20.6
Level of Service	E	C		D	D	D	D	C		E	C	C
Approach Delay (s)		43.0			46.0			35.9			28.9	
Approach LOS		D			D			D			C	

Intersection Summary			
HCM 2000 Control Delay	36.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	97.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	70.5%	ICU Level of Service	C
Analysis Period (min)	15		

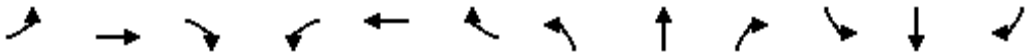
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	101	163	59	2	240	209	71	1088	0	97	606	18
Future Volume (vph)	101	163	59	2	240	209	71	1088	0	97	606	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	7.0		3.0	7.0		3.0	7.0		3.0	7.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frt	1.00	0.96		1.00	0.93		1.00	1.00		1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1784		1770	1731		1770	3539		1770	3524	
Flt Permitted	0.14	1.00		0.60	1.00		0.26	1.00		0.12	1.00	
Satd. Flow (perm)	262	1784		1114	1731		486	3539		217	3524	
Peak-hour factor, PHF	0.80	0.87	0.80	0.80	0.93	0.91	0.80	0.90	0.80	0.80	0.80	0.80
Adj. Flow (vph)	126	187	74	2	258	230	89	1209	0	121	758	22
RTOR Reduction (vph)	0	14	0	0	35	0	0	0	0	0	3	0
Lane Group Flow (vph)	126	247	0	3	453	0	89	1209	0	121	778	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	35.4	31.0		26.8	25.4		38.5	32.9		41.3	34.3	
Effective Green, g (s)	35.4	31.0		26.8	25.4		38.5	32.9		41.3	34.3	
Actuated g/C Ratio	0.38	0.34		0.29	0.28		0.42	0.36		0.45	0.37	
Clearance Time (s)	3.0	7.0		3.0	7.0		3.0	7.0		3.0	7.0	
Vehicle Extension (s)	3.0	2.0		3.0	2.0		3.0	2.0		3.0	2.0	
Lane Grp Cap (vph)	214	599		333	476		280	1261		214	1309	
v/s Ratio Prot	c0.04	0.14		0.00	c0.26		0.02	c0.34		c0.04	0.22	
v/s Ratio Perm	0.18			0.00			0.11			0.21		
v/c Ratio	0.59	0.41		0.01	0.95		0.32	0.96		0.57	0.59	
Uniform Delay, d1	21.6	23.6		23.3	32.9		17.0	29.0		19.6	23.4	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	4.1	0.2		0.0	29.1		0.7	16.1		3.4	0.5	
Delay (s)	25.7	23.8		23.3	62.0		17.6	45.2		23.0	23.9	
Level of Service	C	C		C	E		B	D		C	C	
Approach Delay (s)		24.4			61.7			43.3			23.8	
Approach LOS		C			E			D			C	

Intersection Summary			
HCM 2000 Control Delay	38.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	92.3	Sum of lost time (s)	20.0
Intersection Capacity Utilization	85.5%	ICU Level of Service	E
Analysis Period (min)	15		

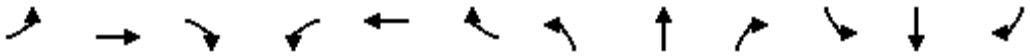
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	46	488	101	29	268	117	48	198	33	99	200	18
Future Volume (vph)	46	488	101	29	268	117	48	198	33	99	200	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.97		1.00	0.95		1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1815		1770	1772		1770	1825		1770	1839	
Flt Permitted	0.45	1.00		0.21	1.00		0.54	1.00		0.52	1.00	
Satd. Flow (perm)	831	1815		399	1772		997	1825		968	1839	
Peak-hour factor, PHF	0.87	0.80	0.80	0.80	0.88	0.80	0.80	0.81	0.87	0.80	0.80	0.80
Adj. Flow (vph)	53	610	126	36	305	146	60	244	38	124	250	22
RTOR Reduction (vph)	0	9	0	0	21	0	0	7	0	0	4	0
Lane Group Flow (vph)	53	727	0	36	430	0	60	275	0	124	269	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		1			1			2			2	
Permitted Phases	1			1			2			2		
Actuated Green, G (s)	30.1	30.1		30.1	30.1		16.0	16.0		16.0	16.0	
Effective Green, g (s)	30.1	30.1		30.1	30.1		16.0	16.0		16.0	16.0	
Actuated g/C Ratio	0.52	0.52		0.52	0.52		0.28	0.28		0.28	0.28	
Clearance Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	430	940		206	918		274	502		266	506	
v/s Ratio Prot		c0.40			0.24			c0.15			0.15	
v/s Ratio Perm	0.06			0.09			0.06			0.13		
v/c Ratio	0.12	0.77		0.17	0.47		0.22	0.55		0.47	0.53	
Uniform Delay, d1	7.2	11.3		7.4	8.9		16.2	18.0		17.5	17.9	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.0	3.7		0.1	0.1		0.1	0.7		0.5	0.5	
Delay (s)	7.3	14.9		7.6	9.0		16.4	18.6		18.0	18.4	
Level of Service	A	B		A	A		B	B		B	B	
Approach Delay (s)		14.4			8.9			18.2			18.3	
Approach LOS		B			A			B			B	

Intersection Summary			
HCM 2000 Control Delay	14.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	58.1	Sum of lost time (s)	12.0
Intersection Capacity Utilization	74.0%	ICU Level of Service	D
Analysis Period (min)	15		

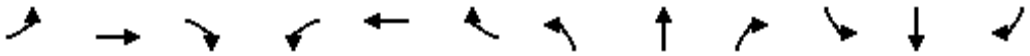
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	194	37	118	252	130	33	583	89	155	343	50
Future Volume (vph)	30	194	37	118	252	130	33	583	89	155	343	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1500	1500	1900	1500	1500	1900
Total Lost time (s)	3.0	7.0		3.0	7.0		3.0	6.0		3.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.95		1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1818		1770	1766		1397	1442		1397	1440	
Flt Permitted	0.16	1.00		0.26	1.00		0.42	1.00		0.17	1.00	
Satd. Flow (perm)	297	1818		488	1766		611	1442		243	1440	
Peak-hour factor, PHF	0.83	0.80	0.80	0.90	0.93	0.90	0.80	0.92	0.93	0.93	0.88	0.80
Adj. Flow (vph)	36	242	46	131	271	144	41	634	96	167	390	62
RTOR Reduction (vph)	0	6	0	0	15	0	0	4	0	0	4	0
Lane Group Flow (vph)	36	283	0	131	400	0	41	726	0	167	449	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	30.3	25.1		37.1	28.9		71.1	65.1		76.5	67.8	
Effective Green, g (s)	30.3	25.1		37.1	28.9		71.1	65.1		76.5	67.8	
Actuated g/C Ratio	0.24	0.20		0.29	0.23		0.56	0.51		0.60	0.53	
Clearance Time (s)	3.0	7.0		3.0	7.0		3.0	6.0		3.0	6.0	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	131	359		233	402		379	739		225	769	
v/s Ratio Prot	0.01	0.16		c0.04	c0.23		0.01	c0.50		c0.05	0.31	
v/s Ratio Perm	0.05			0.12			0.06			0.39		
v/c Ratio	0.27	0.79		0.56	1.00		0.11	0.98		0.74	0.58	
Uniform Delay, d1	38.9	48.4		35.4	48.9		13.2	30.3		19.8	20.0	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.4	10.2		1.8	43.5		0.0	28.5		10.9	0.7	
Delay (s)	39.3	58.6		37.2	92.4		13.2	58.9		30.7	20.7	
Level of Service	D	E		D	F		B	E		C	C	
Approach Delay (s)		56.4			79.2			56.4			23.4	
Approach LOS		E			E			E			C	

Intersection Summary			
HCM 2000 Control Delay	52.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	126.9	Sum of lost time (s)	19.0
Intersection Capacity Utilization	102.8%	ICU Level of Service	G
Analysis Period (min)	15		

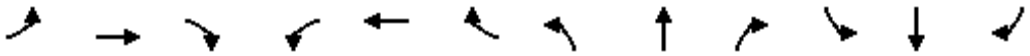
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	12	39	5	48	22	11	7	763	33	16	202	6
Future Volume (vph)	12	39	5	48	22	11	7	763	33	16	202	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0			6.0		3.0	6.0		3.0	6.0	
Lane Util. Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.99			0.98		1.00	0.99		1.00	1.00	
Flt Protected		0.99			0.97		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1822			1776		1770	1851		1770	1854	
Flt Permitted		0.94			0.80		0.60	1.00		0.08	1.00	
Satd. Flow (perm)		1726			1461		1114	1851		152	1854	
Peak-hour factor, PHF	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.81	0.80	0.80	0.80
Adj. Flow (vph)	15	49	6	60	28	14	9	954	41	20	252	8
RTOR Reduction (vph)	0	4	0	0	7	0	0	1	0	0	1	0
Lane Group Flow (vph)	0	66	0	0	96	0	9	994	0	20	260	0
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		25.0			25.0		49.0	48.0		51.0	49.0	
Effective Green, g (s)		25.0			25.0		49.0	48.0		51.0	49.0	
Actuated g/C Ratio		0.28			0.28		0.54	0.53		0.57	0.54	
Clearance Time (s)		6.0			6.0		3.0	6.0		3.0	6.0	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		479			405		613	987		122	1009	
v/s Ratio Prot							0.00	c0.54		c0.00	0.14	
v/s Ratio Perm		0.04			c0.07		0.01			0.09		
v/c Ratio		0.14			0.24		0.01	1.01		0.16	0.26	
Uniform Delay, d1		24.4			25.1		9.4	21.0		19.9	10.9	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.1			0.3		0.0	30.3		0.6	0.6	
Delay (s)		24.5			25.4		9.4	51.3		20.6	11.5	
Level of Service		C			C		A	D		C	B	
Approach Delay (s)		24.5			25.4			50.9			12.1	
Approach LOS		C			C			D			B	

Intersection Summary			
HCM 2000 Control Delay	40.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	73.0%	ICU Level of Service	C
Analysis Period (min)	15		

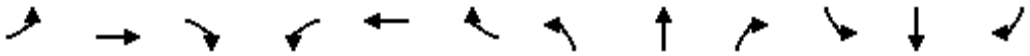
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	178	328	44	80	338	28	63	668	54	61	413	54
Future Volume (vph)	178	328	44	80	338	28	63	668	54	61	413	54
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	6.0		3.0	6.0		3.0	5.0		3.0	5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.99		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1826		1770	1838		1770	1839		1770	1827	
Flt Permitted	0.18	1.00		0.19	1.00		0.28	1.00		0.10	1.00	
Satd. Flow (perm)	340	1826		362	1838		529	1839		184	1827	
Peak-hour factor, PHF	0.97	0.90	0.80	0.80	0.93	0.80	0.80	0.90	0.80	0.80	0.88	0.80
Adj. Flow (vph)	184	364	55	100	363	35	79	742	68	76	469	68
RTOR Reduction (vph)	0	6	0	0	4	0	0	4	0	0	6	0
Lane Group Flow (vph)	184	413	0	100	394	0	79	806	0	76	531	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	27.9	21.9		25.3	20.6		45.4	40.4		45.4	40.4	
Effective Green, g (s)	27.9	21.9		25.3	20.6		45.4	40.4		45.4	40.4	
Actuated g/C Ratio	0.31	0.25		0.28	0.23		0.51	0.45		0.51	0.45	
Clearance Time (s)	3.0	6.0		3.0	6.0		3.0	5.0		3.0	5.0	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	202	449		177	425		339	834		182	829	
v/s Ratio Prot	c0.06	c0.23		0.03	0.21		0.01	c0.44		c0.02	0.29	
v/s Ratio Perm	0.22			0.13			0.11			0.19		
v/c Ratio	0.91	0.92		0.56	0.93		0.23	0.97		0.42	0.64	
Uniform Delay, d1	26.8	32.7		25.2	33.5		12.7	23.6		18.4	18.7	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	38.8	23.4		2.5	25.9		0.1	22.9		0.6	1.3	
Delay (s)	65.6	56.1		27.7	59.3		12.8	46.6		18.9	20.0	
Level of Service	E	E		C	E		B	D		B	B	
Approach Delay (s)		59.0			53.0			43.6			19.9	
Approach LOS		E			D			D			B	

Intersection Summary			
HCM 2000 Control Delay	43.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	89.0	Sum of lost time (s)	17.0
Intersection Capacity Utilization	87.8%	ICU Level of Service	E
Analysis Period (min)	15		

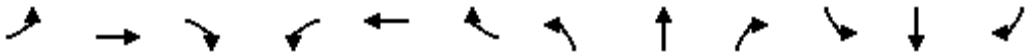
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	22	227	17	125	494	49	35	431	82	38	246	50
Future Volume (vph)	22	227	17	125	494	49	35	431	82	38	246	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0		3.0	5.0		6.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.99		1.00	0.97		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1843		1770	1838		1770	1813		1770	1812	
Flt Permitted	0.34	1.00		0.42	1.00		0.47	1.00		0.20	1.00	
Satd. Flow (perm)	639	1843		790	1838		869	1813		370	1812	
Peak-hour factor, PHF	0.80	0.83	0.80	0.81	0.88	0.90	0.80	0.91	0.80	0.92	0.86	0.80
Adj. Flow (vph)	28	273	21	154	561	54	44	474	102	41	286	62
RTOR Reduction (vph)	0	4	0	0	5	0	0	12	0	0	12	0
Lane Group Flow (vph)	28	290	0	154	610	0	44	565	0	41	337	0
Turn Type	Perm	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases		4		3	8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	20.2	20.2		28.6	28.6		22.8	22.8		22.8	22.8	
Effective Green, g (s)	20.2	20.2		28.6	28.6		22.8	22.8		22.8	22.8	
Actuated g/C Ratio	0.32	0.32		0.46	0.46		0.37	0.37		0.37	0.37	
Clearance Time (s)	5.0	5.0		3.0	5.0		6.0	6.0		6.0	6.0	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	206	596		446	842		317	662		135	662	
v/s Ratio Prot		0.16		0.03	c0.33			c0.31			0.19	
v/s Ratio Perm	0.04			0.13			0.05			0.11		
v/c Ratio	0.14	0.49		0.35	0.72		0.14	0.85		0.30	0.51	
Uniform Delay, d1	14.9	16.9		10.4	13.7		13.2	18.3		14.1	15.4	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.1	0.2		0.2	2.6		0.1	10.0		0.5	0.2	
Delay (s)	15.0	17.2		10.6	16.3		13.3	28.3		14.6	15.7	
Level of Service	B	B		B	B		B	C		B	B	
Approach Delay (s)		17.0			15.2			27.2			15.5	
Approach LOS		B			B			C			B	

Intersection Summary			
HCM 2000 Control Delay	19.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	62.4	Sum of lost time (s)	14.0
Intersection Capacity Utilization	90.6%	ICU Level of Service	E
Analysis Period (min)	15		

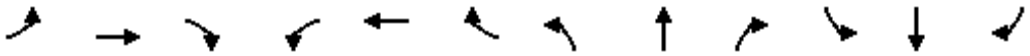
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	26	358	98	74	374	70	148	579	139	126	453	59
Future Volume (vph)	26	358	98	74	374	70	148	579	139	126	453	59
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	5.0		3.0	5.0		3.0	6.0	6.0	3.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	0.95	
Frt	1.00	0.97		1.00	0.97		1.00	1.00	0.85	1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	1804		1770	1814		1770	1863	1583	1770	3476	
Flt Permitted	0.16	1.00		0.14	1.00		0.32	1.00	1.00	0.11	1.00	
Satd. Flow (perm)	292	1804		253	1814		599	1863	1583	213	3476	
Peak-hour factor, PHF	0.86	0.92	0.95	0.80	0.90	0.80	0.93	0.88	0.80	0.84	0.82	0.80
Adj. Flow (vph)	30	389	103	92	416	88	159	658	174	150	552	74
RTOR Reduction (vph)	0	9	0	0	8	0	0	0	109	0	11	0
Lane Group Flow (vph)	30	483	0	93	496	0	159	658	65	150	615	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		
Actuated Green, G (s)	32.4	27.9		35.6	29.5		44.3	35.6	35.6	43.1	35.0	
Effective Green, g (s)	32.4	27.9		35.6	29.5		44.3	35.6	35.6	43.1	35.0	
Actuated g/C Ratio	0.34	0.29		0.38	0.31		0.47	0.38	0.38	0.46	0.37	
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	6.0	6.0	3.0	6.0	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Lane Grp Cap (vph)	170	531		192	565		387	700	595	230	1284	
v/s Ratio Prot	0.01	0.27		c0.03	c0.27		c0.04	c0.35		c0.06	0.18	
v/s Ratio Perm	0.05			0.15			0.15		0.04	0.24		
v/c Ratio	0.18	0.91		0.48	0.88		0.41	0.94	0.11	0.65	0.48	
Uniform Delay, d1	22.8	32.2		22.2	30.9		15.2	28.5	19.2	20.1	22.9	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.2	19.0		0.7	14.1		0.3	20.2	0.0	5.0	0.1	
Delay (s)	22.9	51.2		22.9	45.0		15.4	48.7	19.3	25.0	23.0	
Level of Service	C	D		C	D		B	D	B	C	C	
Approach Delay (s)		49.6			41.5			38.2			23.4	
Approach LOS		D			D			D			C	

Intersection Summary			
HCM 2000 Control Delay	36.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	94.7	Sum of lost time (s)	17.0
Intersection Capacity Utilization	84.8%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	58	272	73	55	331	54	120	512	61	46	162	36
Future Volume (vph)	58	272	73	55	331	54	120	512	61	46	162	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.97		1.00	0.98		1.00	0.98		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1803		1770	1821		1770	1833		1770	1812	
Flt Permitted	0.27	1.00		0.31	1.00		0.61	1.00		0.27	1.00	
Satd. Flow (perm)	505	1803		569	1821		1127	1833		498	1812	
Peak-hour factor, PHF	0.80	0.81	0.80	0.80	0.86	0.80	0.80	0.89	0.88	0.80	0.80	0.80
Adj. Flow (vph)	72	336	91	69	385	68	150	575	69	58	202	45
RTOR Reduction (vph)	0	12	0	0	7	0	0	4	0	0	8	0
Lane Group Flow (vph)	73	415	0	69	446	0	150	640	0	58	240	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			2			1			1	
Permitted Phases	2			2			1			1		
Actuated Green, G (s)	27.4	27.4		27.4	27.4		44.2	44.2		44.2	44.2	
Effective Green, g (s)	27.4	27.4		27.4	27.4		44.2	44.2		44.2	44.2	
Actuated g/C Ratio	0.32	0.32		0.32	0.32		0.52	0.52		0.52	0.52	
Clearance Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	161	577		182	582		581	946		257	935	
v/s Ratio Prot		0.23			c0.24			c0.35			0.13	
v/s Ratio Perm	0.14			0.12			0.13			0.12		
v/c Ratio	0.45	0.72		0.38	0.77		0.26	0.68		0.23	0.26	
Uniform Delay, d1	23.1	25.7		22.5	26.2		11.6	15.4		11.3	11.5	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.7	3.7		0.5	5.4		1.1	3.9		2.0	0.7	
Delay (s)	23.9	29.5		23.0	31.6		12.6	19.3		13.4	12.2	
Level of Service	C	C		C	C		B	B		B	B	
Approach Delay (s)		28.6			30.5			18.0			12.4	
Approach LOS		C			C			B			B	

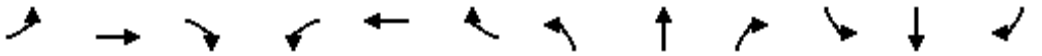
Intersection Summary			
HCM 2000 Control Delay	22.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	85.6	Sum of lost time (s)	14.0
Intersection Capacity Utilization	108.0%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	19	8	529	9	9	400
Future Volume (vph)	19	8	529	9	9	400
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0		7.0			7.0
Lane Util. Factor	1.00		1.00			1.00
Frt	0.96		1.00			1.00
Flt Protected	0.97		1.00			1.00
Satd. Flow (prot)	1728		1858			1861
Flt Permitted	0.97		1.00			0.98
Satd. Flow (perm)	1728		1858			1834
Peak-hour factor, PHF	0.80	0.80	0.84	0.80	0.80	0.89
Adj. Flow (vph)	24	10	630	11	11	449
RTOR Reduction (vph)	10	0	1	0	0	0
Lane Group Flow (vph)	24	0	640	0	0	460
Turn Type	Prot		NA		Perm	NA
Protected Phases	8		2			6
Permitted Phases					6	
Actuated Green, G (s)	4.2		72.9			72.9
Effective Green, g (s)	4.2		72.9			72.9
Actuated g/C Ratio	0.05		0.81			0.81
Clearance Time (s)	6.0		7.0			7.0
Vehicle Extension (s)	2.0		2.0			2.0
Lane Grp Cap (vph)	80		1503			1483
v/s Ratio Prot	c0.01		c0.34			
v/s Ratio Perm						0.25
v/c Ratio	0.31		0.43			0.31
Uniform Delay, d1	41.5		2.5			2.2
Progression Factor	1.00		1.00			1.00
Incremental Delay, d2	0.8		0.1			0.0
Delay (s)	42.3		2.6			2.2
Level of Service	D		A			A
Approach Delay (s)	42.3		2.6			2.2
Approach LOS	D		A			A

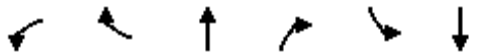
Intersection Summary			
HCM 2000 Control Delay	3.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	90.1	Sum of lost time (s)	13.0
Intersection Capacity Utilization	72.5%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	82	170	0	0	133	29	29	303	31	41	6	47
Future Volume (vph)	82	170	0	0	133	29	29	303	31	41	6	47
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0			6.0			6.0	6.0
Lane Util. Factor		1.00			1.00			1.00			1.00	1.00
Frt		1.00			0.98			0.99			1.00	0.85
Flt Protected		0.98			1.00			1.00			0.96	1.00
Satd. Flow (prot)		1833			1818			1832			1784	1583
Flt Permitted		0.82			1.00			0.98			0.63	1.00
Satd. Flow (perm)		1532			1818			1796			1168	1583
Peak-hour factor, PHF	0.80	0.80	0.80	0.80	0.80	0.80	0.83	0.85	0.80	0.80	0.90	0.80
Adj. Flow (vph)	102	212	0	0	166	36	35	356	39	51	7	59
RTOR Reduction (vph)	0	0	0	0	13	0	0	6	0	0	0	30
Lane Group Flow (vph)	0	316	0	0	189	0	0	424	0	0	58	29
Turn Type	Perm	NA			NA		Perm	NA		Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		6
Actuated Green, G (s)		20.0			20.0			30.0			30.0	30.0
Effective Green, g (s)		20.0			20.0			30.0			30.0	30.0
Actuated g/C Ratio		0.33			0.33			0.49			0.49	0.49
Clearance Time (s)		5.0			5.0			6.0			6.0	6.0
Lane Grp Cap (vph)		502			596			883			574	778
v/s Ratio Prot					0.10							
v/s Ratio Perm		c0.21						c0.24			0.05	0.02
v/c Ratio		0.63			0.32			0.48			0.10	0.04
Uniform Delay, d1		17.4			15.4			10.3			8.3	8.0
Progression Factor		1.00			1.00			1.00			1.00	1.00
Incremental Delay, d2		5.9			1.4			1.9			0.4	0.1
Delay (s)		23.2			16.8			12.2			8.6	8.1
Level of Service		C			B			B			A	A
Approach Delay (s)		23.2			16.8			12.2			8.4	
Approach LOS		C			B			B			A	

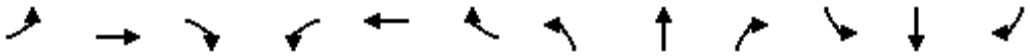
Intersection Summary			
HCM 2000 Control Delay	15.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	61.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	80.0%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	953	486	10	209	132
Future Volume (vph)	0	953	486	10	209	132
Ideal Flow (vphpl)	1900	1200	1900	1900	1900	1900
Total Lost time (s)		6.0	5.0	5.0	5.0	5.0
Lane Util. Factor		1.00	1.00	1.00	1.00	1.00
Frt		0.86	1.00	0.85	1.00	1.00
Flt Protected		1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)		1018	1863	1583	1770	1863
Flt Permitted		1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)		1018	1863	1583	1770	1863
Peak-hour factor, PHF	0.80	0.93	0.93	0.94	0.84	0.84
Adj. Flow (vph)	0	1025	523	11	249	157
RTOR Reduction (vph)	0	0	0	2	0	0
Lane Group Flow (vph)	0	1025	523	9	249	157
Turn Type		Perm	NA	Perm	Prot	NA
Protected Phases			4		6	
Permitted Phases		2		4		6
Actuated Green, G (s)		101.0	28.0	28.0	102.0	102.0
Effective Green, g (s)		101.0	28.0	28.0	102.0	102.0
Actuated g/C Ratio		0.72	0.20	0.20	0.73	0.73
Clearance Time (s)		6.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)		3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		734	372	316	1289	1357
v/s Ratio Prot			c0.28		0.14	
v/s Ratio Perm		c1.01		0.01		0.08
v/c Ratio		1.40	1.41	0.03	0.19	0.12
Uniform Delay, d1		19.5	56.0	45.1	6.0	5.6
Progression Factor		1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2		186.7	198.1	0.0	0.1	0.0
Delay (s)		206.2	254.1	45.1	6.1	5.7
Level of Service		F	F	D	A	A
Approach Delay (s)	206.2		249.8			5.9
Approach LOS	F		F			A

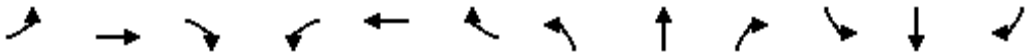
Intersection Summary			
HCM 2000 Control Delay	176.6	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.40		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	128.2%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group



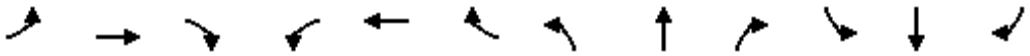
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	3	5	0	15	0	6	0	133	16	8	70	0
Future Volume (vph)	3	5	0	15	0	6	0	133	16	8	70	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0			7.0			7.0			7.0	
Lane Util. Factor	1.00	1.00			1.00			1.00			1.00	
Frt	1.00	1.00			0.96			0.99			1.00	
Flt Protected	0.95	1.00			0.97			1.00			0.99	
Satd. Flow (prot)	1770	1863			1727			1835			1853	
Flt Permitted	0.74	1.00			0.86			1.00			0.97	
Satd. Flow (perm)	1378	1863			1537			1835			1807	
Peak-hour factor, PHF	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.81	0.80	0.80	0.80	0.80
Adj. Flow (vph)	4	6	0	19	0	8	0	164	20	10	88	0
RTOR Reduction (vph)	0	0	0	0	18	0	0	6	0	0	0	0
Lane Group Flow (vph)	4	6	0	0	9	0	0	178	0	0	98	0
Turn Type	Perm	NA		Perm	NA			NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8						6		
Actuated Green, G (s)	25.0	25.0			25.0			36.0			36.0	
Effective Green, g (s)	25.0	25.0			25.0			36.0			36.0	
Actuated g/C Ratio	0.33	0.33			0.33			0.48			0.48	
Clearance Time (s)	7.0	7.0			7.0			7.0			7.0	
Lane Grp Cap (vph)	459	621			512			880			867	
v/s Ratio Prot		0.00						c0.10				
v/s Ratio Perm	0.00				c0.01						0.05	
v/c Ratio	0.01	0.01			0.02			0.20			0.11	
Uniform Delay, d1	16.7	16.7			16.8			11.2			10.7	
Progression Factor	1.00	1.00			1.00			1.00			0.82	
Incremental Delay, d2	0.0	0.0			0.1			0.5			0.2	
Delay (s)	16.7	16.7			16.8			11.8			9.0	
Level of Service	B	B			B			B			A	
Approach Delay (s)		16.7			16.8			11.8			9.0	
Approach LOS		B			B			B			A	

Intersection Summary			
HCM 2000 Control Delay	11.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.13		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	62.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



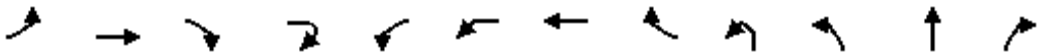
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	33	221	19	45	115	99	5	272	115	98	148	14
Future Volume (vph)	33	221	19	45	115	99	5	272	115	98	148	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		9.0			9.0			9.0			9.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frt		0.99			0.95			0.96			0.99	
Flt Protected		0.99			0.99			1.00			0.98	
Satd. Flow (prot)		1835			1748			1781			1816	
Flt Permitted		0.92			0.87			1.00			0.67	
Satd. Flow (perm)		1693			1532			1773			1231	
Peak-hour factor, PHF	0.80	0.80	0.82	0.80	0.86	0.80	0.91	0.91	0.80	0.86	0.80	0.80
Adj. Flow (vph)	41	276	23	56	134	124	5	299	144	114	185	18
RTOR Reduction (vph)	0	0	0	0	0	0	0	23	0	0	3	0
Lane Group Flow (vph)	0	340	0	0	314	0	0	425	0	0	314	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		27.0			27.0			30.0			30.0	
Effective Green, g (s)		27.0			27.0			30.0			30.0	
Actuated g/C Ratio		0.36			0.36			0.40			0.40	
Clearance Time (s)		9.0			9.0			9.0			9.0	
Lane Grp Cap (vph)		609			551			709			492	
v/s Ratio Prot												
v/s Ratio Perm		0.20			c0.20			0.24			c0.26	
v/c Ratio		0.56			0.57			0.60			0.64	
Uniform Delay, d1		19.2			19.3			17.8			18.1	
Progression Factor		1.00			1.00			1.01			1.40	
Incremental Delay, d2		3.7			4.2			3.7			6.2	
Delay (s)		22.9			23.6			21.7			31.5	
Level of Service		C			C			C			C	
Approach Delay (s)		22.9			23.6			21.7			31.5	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	24.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	95.0%	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 (vph)	17	70	10	30	14	5	9	298	10	10	131	35
Future Volume (vph)	17	70	10	30	14	5	9	298	10	10	131	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		7.0			7.0			7.0			6.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frt		0.99			0.99			1.00			0.97	
Flt Protected		0.99			0.97			1.00			1.00	
Satd. Flow (prot)		1820			1784			1852			1807	
Flt Permitted		0.95			0.80			0.99			0.97	
Satd. Flow (perm)		1744			1463			1836			1761	
Peak-hour factor, PHF	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Adj. Flow (vph)	21	88	12	38	18	6	11	372	12	12	164	44
RTOR Reduction (vph)	0	6	0	0	4	0	0	2	0	0	12	0
Lane Group Flow (vph)	0	116	0	0	58	0	0	395	0	0	209	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		26.0			26.0			35.0			36.0	
Effective Green, g (s)		26.0			26.0			35.0			36.0	
Actuated g/C Ratio		0.35			0.35			0.47			0.48	
Clearance Time (s)		7.0			7.0			7.0			6.0	
Lane Grp Cap (vph)		604			507			856			845	
v/s Ratio Prot												
v/s Ratio Perm		c0.07			0.04			c0.22			0.12	
v/c Ratio		0.19			0.11			0.46			0.25	
Uniform Delay, d1		17.1			16.7			13.6			11.5	
Progression Factor		1.00			1.00			1.67			1.00	
Incremental Delay, d2		0.7			0.5			1.4			0.7	
Delay (s)		17.9			17.1			24.1			12.2	
Level of Service		B			B			C			B	
Approach Delay (s)		17.9			17.1			24.1			12.2	
Approach LOS		B			B			C			B	

Intersection Summary			
HCM 2000 Control Delay	19.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	62.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

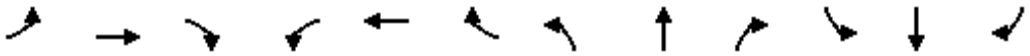


Movement	EBL	EBT	EBR	EBR2	WBL2	WBL	WBT	WBR	NBL2	NBL	NBT	NBR
Lane Configurations												
Traffic Volume (vph)	4	63	20	6	24	41	84	36	7	39	63	24
Future Volume (vph)	4	63	20	6	24	41	84	36	7	39	63	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0					6.0				6.0	
Lane Util. Factor		1.00					1.00				1.00	
Frt		0.96					0.97				0.98	
Flt Protected		1.00					0.98				0.98	
Satd. Flow (prot)		1788					1783				1787	
Flt Permitted		0.99					0.85				0.88	
Satd. Flow (perm)		1767					1537				1595	
Peak-hour factor, PHF	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Adj. Flow (vph)	5	79	25	8	30	51	105	45	9	49	79	30
RTOR Reduction (vph)	0	5	0	0	0	0	14	0	0	0	13	0
Lane Group Flow (vph)	0	112	0	0	0	0	217	0	0	0	154	0
Turn Type	Perm	NA			Perm	Perm	NA		pm+pt	pm+pt	NA	
Protected Phases		4					8		5	5	2	
Permitted Phases	4				8	8			2	2		
Actuated Green, G (s)		21.0					21.0				27.0	
Effective Green, g (s)		21.0					21.0				27.0	
Actuated g/C Ratio		0.35					0.35				0.45	
Clearance Time (s)		6.0					6.0				6.0	
Lane Grp Cap (vph)		618					537				733	
v/s Ratio Prot											c0.02	
v/s Ratio Perm		0.06					c0.14				c0.08	
v/c Ratio		0.18					0.40				0.21	
Uniform Delay, d1		13.5					14.8				10.0	
Progression Factor		1.00					1.00				1.00	
Incremental Delay, d2		0.6					2.2				0.7	
Delay (s)		14.2					17.0				10.7	
Level of Service		B					B				B	
Approach Delay (s)		14.2					17.0				10.7	
Approach LOS		B					B				B	

Intersection Summary			
HCM 2000 Control Delay	14.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.31		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	37.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBL	SBT	SBR	SBR2
Lane Configurations				
Traffic Volume (vph)	29	52	13	5
Future Volume (vph)	29	52	13	5
Ideal Flow (vphpl)	1900	1900	1900	1900
Total Lost time (s)		6.0		
Lane Util. Factor		1.00		
Frt		0.98		
Flt Protected		0.99		
Satd. Flow (prot)		1792		
Flt Permitted		0.88		
Satd. Flow (perm)		1594		
Peak-hour factor, PHF	0.80	0.80	0.80	0.80
Adj. Flow (vph)	36	65	16	6
RTOR Reduction (vph)	0	3	0	0
Lane Group Flow (vph)	0	120	0	0
Turn Type	Perm	NA		
Protected Phases		6		
Permitted Phases	6			
Actuated Green, G (s)		19.0		
Effective Green, g (s)		19.0		
Actuated g/C Ratio		0.32		
Clearance Time (s)		6.0		
Lane Grp Cap (vph)		504		
v/s Ratio Prot				
v/s Ratio Perm		0.08		
v/c Ratio		0.24		
Uniform Delay, d1		15.1		
Progression Factor		1.00		
Incremental Delay, d2		1.1		
Delay (s)		16.3		
Level of Service		B		
Approach Delay (s)		16.3		
Approach LOS		B		

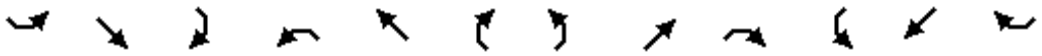
Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	310	14	160	735	62	0	0	186	0	0	0
Future Volume (vph)	0	310	14	160	735	62	0	0	186	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0		5.0	5.0				5.0			
Lane Util. Factor		0.91		1.00	0.95				1.00			
Frt		0.99		1.00	0.99				0.86			
Flt Protected		1.00		0.95	1.00				1.00			
Satd. Flow (prot)		5051		1770	3498				1611			
Flt Permitted		1.00		0.50	1.00				1.00			
Satd. Flow (perm)		5051		940	3498				1611			
Peak-hour factor, PHF	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.92	0.92	0.92
Adj. Flow (vph)	0	388	18	200	919	78	0	0	232	0	0	0
RTOR Reduction (vph)	0	1	0	0	2	0	0	0	221	0	0	0
Lane Group Flow (vph)	0	405	0	200	995	0	0	0	12	0	0	0
Turn Type		NA		Perm	NA				Perm			
Protected Phases		4			8							
Permitted Phases				8					2			
Actuated Green, G (s)		92.1		92.1	92.1				5.5			
Effective Green, g (s)		92.1		92.1	92.1				5.5			
Actuated g/C Ratio		0.86		0.86	0.86				0.05			
Clearance Time (s)		5.0		5.0	5.0				5.0			
Vehicle Extension (s)		3.0		3.0	3.0				3.0			
Lane Grp Cap (vph)		4323		804	2994				82			
v/s Ratio Prot		0.08			c0.28							
v/s Ratio Perm				0.21					c0.01			
v/c Ratio		0.09		0.25	0.33				0.15			
Uniform Delay, d1		1.2		1.4	1.6				48.8			
Progression Factor		1.00		1.00	1.00				1.00			
Incremental Delay, d2		0.0		0.7	0.3				0.8			
Delay (s)		1.3		2.2	1.9				49.6			
Level of Service		A		A	A				D			
Approach Delay (s)		1.3			1.9			49.6			0.0	
Approach LOS		A			A			D			A	

Intersection Summary			
HCM 2000 Control Delay	7.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	107.6	Sum of lost time (s)	10.0
Intersection Capacity Utilization	26.5%	ICU Level of Service	A
Analysis Period (min)	15		

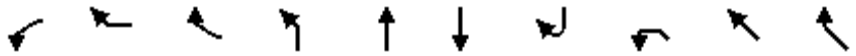
c Critical Lane Group



Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	37	275	136	190	348	23	147	4	56	8	4	31
Future Volume (vph)	37	275	136	190	348	23	147	4	56	8	4	31
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	2.0	6.0	6.0	2.0	6.0			6.0			6.0	6.0
Lane Util. Factor	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	0.99			0.96			1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00			0.97			0.97	1.00
Satd. Flow (prot)	1770	1863	1583	1770	1845			1733			1803	1583
Flt Permitted	0.50	1.00	1.00	0.46	1.00			0.78			0.81	1.00
Satd. Flow (perm)	925	1863	1583	849	1845			1400			1501	1583
Peak-hour factor, PHF	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Adj. Flow (vph)	46	344	170	238	435	29	184	5	70	10	5	39
RTOR Reduction (vph)	0	0	102	0	3	0	0	21	0	0	0	30
Lane Group Flow (vph)	46	344	68	238	461	0	0	238	0	0	15	9
Turn Type	pm+pt	NA	Perm	pm+pt	NA		Perm	NA		Perm	NA	Perm
Protected Phases	1	6		5	2			4			8	
Permitted Phases	6		6	2			4			8		8
Actuated Green, G (s)	27.4	25.1	25.1	35.5	31.2			14.9			14.9	14.9
Effective Green, g (s)	27.4	25.1	25.1	35.5	31.2			14.9			14.9	14.9
Actuated g/C Ratio	0.44	0.40	0.40	0.57	0.50			0.24			0.24	0.24
Clearance Time (s)	2.0	6.0	6.0	2.0	6.0			6.0			6.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			3.0			3.0	3.0
Lane Grp Cap (vph)	437	749	636	606	922			334			358	377
v/s Ratio Prot	0.00	0.18		c0.05	c0.25							
v/s Ratio Perm	0.04		0.04	0.17				c0.17			0.01	0.01
v/c Ratio	0.11	0.46	0.11	0.39	0.50			0.71			0.04	0.02
Uniform Delay, d1	10.1	13.7	11.7	6.9	10.4			21.8			18.3	18.2
Progression Factor	1.00	1.00	1.00	1.00	1.00			1.00			1.00	1.00
Incremental Delay, d2	0.1	2.0	0.3	0.4	1.9			7.0			0.0	0.0
Delay (s)	10.2	15.7	12.0	7.4	12.3			28.8			18.3	18.2
Level of Service	B	B	B	A	B			C			B	B
Approach Delay (s)		14.1			10.6			28.8			18.2	
Approach LOS		B			B			C			B	

Intersection Summary			
HCM 2000 Control Delay	15.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	62.4	Sum of lost time (s)	14.0
Intersection Capacity Utilization	56.8%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	WBL	WBR	WBR2	NBL	NBT	SBT	SBR	NWL	NWT	NWR
Lane Configurations										
Traffic Volume (vph)	7	37	24	17	113	67	5	8	3	1
Future Volume (vph)	7	37	24	17	113	67	5	8	3	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0		6.0		6.0	6.0			6.0	
Lane Util. Factor	1.00		0.95		1.00	1.00			1.00	
Frt	0.87		0.85		1.00	0.99			0.99	
Flt Protected	0.99		1.00		0.99	1.00			0.97	
Satd. Flow (prot)	1614		1504		1852	1846			1786	
Flt Permitted	0.99		1.00		0.97	1.00			0.97	
Satd. Flow (perm)	1614		1504		1805	1846			1786	
Peak-hour factor, PHF	0.80	0.80	0.80	0.99	0.86	0.80	0.80	0.80	0.80	0.80
Adj. Flow (vph)	9	46	30	17	131	84	6	10	4	1
RTOR Reduction (vph)	53	0	24	0	0	4	0	0	0	0
Lane Group Flow (vph)	5	0	3	0	148	86	0	0	15	0
Turn Type	Prot		Perm	Perm	NA	NA		Perm	NA	
Protected Phases	8				1	1			2	
Permitted Phases			8	1				2		
Actuated Green, G (s)	7.0		7.0		30.0	30.0			20.0	
Effective Green, g (s)	7.0		7.0		30.0	30.0			20.0	
Actuated g/C Ratio	0.09		0.09		0.40	0.40			0.27	
Clearance Time (s)	6.0		6.0		6.0	6.0			6.0	
Lane Grp Cap (vph)	150		140		722	738			476	
v/s Ratio Prot	c0.00					0.05				
v/s Ratio Perm			0.00		c0.08				0.01	
v/c Ratio	0.04		0.02		0.20	0.12			0.03	
Uniform Delay, d1	30.9		30.9		14.7	14.2			20.3	
Progression Factor	1.00		1.00		1.00	1.00			1.00	
Incremental Delay, d2	0.4		0.2		0.6	0.3			0.1	
Delay (s)	31.4		31.1		15.3	14.5			20.5	
Level of Service	C		C		B	B			C	
Approach Delay (s)	31.3				15.3	14.5			20.5	
Approach LOS	C				B	B			C	

Intersection Summary			
HCM 2000 Control Delay	19.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.12		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	62.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Appendix 5E-18: 2040 Build AM

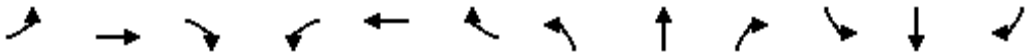
Unsignalized

Synchro Results

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	221	60	30	272	74	26
Future Volume (Veh/h)	221	60	30	272	74	26
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.85	0.80	0.80	0.92	0.80	0.80
Hourly flow rate (vph)	260	75	38	296	93	33
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			335		670	298
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			335		670	298
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			97		77	96
cM capacity (veh/h)			1224		409	742

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	335	334	126
Volume Left	0	38	93
Volume Right	75	0	33
cSH	1700	1224	464
Volume to Capacity	0.20	0.03	0.27
Queue Length 95th (ft)	0	2	27
Control Delay (s)	0.0	1.2	15.6
Lane LOS		A	C
Approach Delay (s)	0.0	1.2	15.6
Approach LOS			C

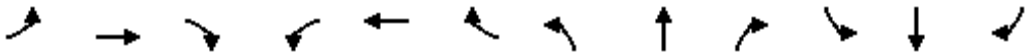
Intersection Summary			
Average Delay	3.0		
Intersection Capacity Utilization	46.9%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Yield			Stop			Yield	
Traffic Volume (vph)	21	30	7	0	47	336	5	61	5	226	23	12
Future Volume (vph)	21	30	7	0	47	336	5	61	5	226	23	12
Peak Hour Factor	0.85	0.89	0.80	0.80	0.89	0.86	0.99	0.85	0.99	0.87	0.85	0.83
Hourly flow rate (vph)	25	34	9	0	53	391	5	72	5	260	27	14

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	68	444	82	301
Volume Left (vph)	25	0	5	260
Volume Right (vph)	9	391	5	14
Hadj (s)	0.03	-0.49	0.01	0.18
Departure Headway (s)	5.7	4.6	5.7	5.5
Degree Utilization, x	0.11	0.57	0.13	0.46
Capacity (veh/h)	560	743	548	613
Control Delay (s)	9.4	13.6	9.6	13.1
Approach Delay (s)	9.4	13.6	9.6	13.1
Approach LOS	A	B	A	B

Intersection Summary			
Delay	12.7		
Level of Service	B		
Intersection Capacity Utilization	51.0%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	39	187	7	13	329	44	7	80	16	10	29	35
Future Volume (Veh/h)	39	187	7	13	329	44	7	80	16	10	29	35
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.83	0.80	0.80	0.80	0.82	0.84	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	47	234	9	16	401	52	9	100	20	13	36	44
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		643			1031							
pX, platoon unblocked	0.83						0.83	0.83		0.83	0.83	0.83
vC, conflicting volume	453			243			854	818	238	862	796	427
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	238			243			721	677	238	730	651	207
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	96			99			96	66	98	93	88	94
cM capacity (veh/h)	1103			1323			232	294	800	193	304	692

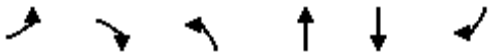
Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	290	469	129	93
Volume Left	47	16	9	13
Volume Right	9	52	20	44
cSH	1103	1323	319	373
Volume to Capacity	0.04	0.01	0.40	0.25
Queue Length 95th (ft)	3	1	47	24
Control Delay (s)	1.7	0.4	23.7	17.8
Lane LOS	A	A	C	C
Approach Delay (s)	1.7	0.4	23.7	17.8
Approach LOS			C	C

Intersection Summary				
Average Delay	5.5			
Intersection Capacity Utilization	41.8%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (veh/h)	0	11	577	140	0	450
Future Volume (Veh/h)	0	11	577	140	0	450
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	0	14	721	175	0	563
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						1081
pX, platoon unblocked						
vC, conflicting volume	1372	808			721	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1372	808			721	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	96			100	
cM capacity (veh/h)	161	381			881	

Direction, Lane #	NW 1	NE 1	SW 1
Volume Total	14	896	563
Volume Left	0	0	0
Volume Right	14	175	0
cSH	381	1700	1700
Volume to Capacity	0.04	0.53	0.33
Queue Length 95th (ft)	3	0	0
Control Delay (s)	14.8	0.0	0.0
Lane LOS	B		
Approach Delay (s)	14.8	0.0	0.0
Approach LOS	B		

Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	48.9%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	99	35	31	168	122	47
Future Volume (Veh/h)	99	35	31	168	122	47
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.86	0.80	0.80	0.90	0.80	0.80
Hourly flow rate (vph)	115	44	39	187	153	59
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)					693	
pX, platoon unblocked						
vC, conflicting volume	448	182	212			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	448	182	212			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	79	95	97			
cM capacity (veh/h)	552	860	1358			

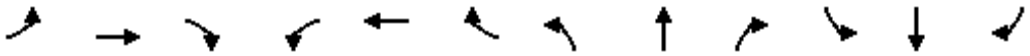
Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	159	226	212
Volume Left	115	39	0
Volume Right	44	0	59
cSH	613	1358	1700
Volume to Capacity	0.26	0.03	0.12
Queue Length 95th (ft)	26	2	0
Control Delay (s)	12.9	1.5	0.0
Lane LOS	B	A	
Approach Delay (s)	12.9	1.5	0.0
Approach LOS	B		

Intersection Summary			
Average Delay	4.0		
Intersection Capacity Utilization	37.5%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	1	156	198	7	121	93
Future Volume (Veh/h)	1	156	198	7	121	93
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.80	0.91	0.83	0.80	0.80	0.80
Hourly flow rate (vph)	1	171	239	9	151	116
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	662	244			248	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	662	244			248	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	78			89	
cM capacity (veh/h)	378	795			1318	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	172	248	267
Volume Left	1	0	151
Volume Right	171	9	0
cSH	790	1700	1318
Volume to Capacity	0.22	0.15	0.11
Queue Length 95th (ft)	21	0	10
Control Delay (s)	10.8	0.0	5.0
Lane LOS	B		A
Approach Delay (s)	10.8	0.0	5.0
Approach LOS	B		

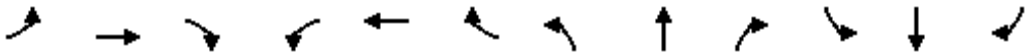
Intersection Summary			
Average Delay	4.7		
Intersection Capacity Utilization	42.1%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	420	12	0	217	5	21	0	5	2	1	3
Future Volume (Veh/h)	0	420	12	0	217	5	21	0	5	2	1	3
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.80	0.87	0.80	0.80	0.91	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	0	483	15	0	238	6	26	0	6	3	1	4
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)					1030							
pX, platoon unblocked												
vC, conflicting volume	244			498			736	734	490	738	739	241
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	244			498			736	734	490	738	739	241
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			92	100	99	99	100	99
cM capacity (veh/h)	1322			1066			332	347	578	330	345	798

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	498	244	32	8
Volume Left	0	0	26	3
Volume Right	15	6	6	4
cSH	1322	1066	361	471
Volume to Capacity	0.00	0.00	0.09	0.02
Queue Length 95th (ft)	0	0	7	1
Control Delay (s)	0.0	0.0	15.9	12.8
Lane LOS			C	B
Approach Delay (s)	0.0	0.0	15.9	12.8
Approach LOS			C	B

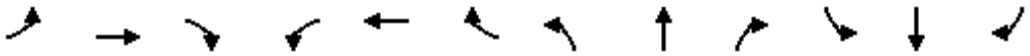
Intersection Summary				
Average Delay	0.8			
Intersection Capacity Utilization	32.8%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	602	7	2	308	3	2	2	9	7	2	5
Future Volume (Veh/h)	5	602	7	2	308	3	2	2	9	7	2	5
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.80	0.80	0.80	0.80	0.84	0.80	0.80	0.80	0.80	0.99	0.80	0.80
Hourly flow rate (vph)	6	753	9	3	367	4	3	3	11	7	3	6
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	371			762			1152	1146	758	1157	1149	369
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	371			762			1152	1146	758	1157	1149	369
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			100			98	98	97	96	98	99
cM capacity (veh/h)	1188			850			170	197	407	166	197	677

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	768	374	17	16
Volume Left	6	3	3	7
Volume Right	9	4	11	6
cSH	1188	850	284	241
Volume to Capacity	0.01	0.00	0.06	0.07
Queue Length 95th (ft)	0	0	5	5
Control Delay (s)	0.1	0.1	18.5	21.0
Lane LOS	A	A	C	C
Approach Delay (s)	0.1	0.1	18.5	21.0
Approach LOS			C	C

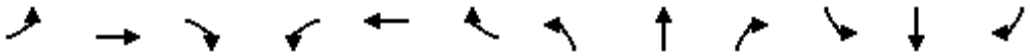
Intersection Summary				
Average Delay	0.7			
Intersection Capacity Utilization	45.5%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	12	242	11	56	258	30	4	16	173	73	32	23
Future Volume (Veh/h)	12	242	11	56	258	30	4	16	173	73	32	23
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.80	0.90	0.80	0.80	0.80	0.80	0.80	0.80	0.84	0.93	0.93	0.93
Hourly flow rate (vph)	15	269	14	70	323	38	5	20	206	78	34	25
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	361			283			830	807	276	1004	795	342
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	361			283			830	807	276	1004	795	342
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			95			98	93	73	46	89	96
cM capacity (veh/h)	1198			1279			242	294	763	145	299	701

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	298	431	231	137
Volume Left	15	70	5	78
Volume Right	14	38	206	25
cSH	1198	1279	644	199
Volume to Capacity	0.01	0.05	0.36	0.69
Queue Length 95th (ft)	1	4	41	107
Control Delay (s)	0.5	1.8	13.7	55.4
Lane LOS	A	A	B	F
Approach Delay (s)	0.5	1.8	13.7	55.4
Approach LOS			B	F

Intersection Summary			
Average Delay	10.6		
Intersection Capacity Utilization	64.8%	ICU Level of Service	C
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	11	137	0	35	283	46	0	144	102	20	24	20
Future Volume (Veh/h)	11	137	0	35	283	46	0	144	102	20	24	20
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.80	0.80	0.80	0.80	0.88	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	14	171	0	44	322	58	0	180	128	25	30	25
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	380			171			678	667	171	856	638	351
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	380			171			678	667	171	856	638	351
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			97			100	50	85	82	92	96
cM capacity (veh/h)	1178			1406			321	363	873	140	378	692

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	185	424	308	80
Volume Left	14	44	0	25
Volume Right	0	58	128	25
cSH	1178	1406	480	272
Volume to Capacity	0.01	0.03	0.64	0.29
Queue Length 95th (ft)	1	2	111	30
Control Delay (s)	0.7	1.1	25.0	23.6
Lane LOS	A	A	C	C
Approach Delay (s)	0.7	1.1	25.0	23.6
Approach LOS			C	C

Intersection Summary			
Average Delay	10.2		
Intersection Capacity Utilization	54.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	196	20	27	433	52	48
Future Volume (Veh/h)	196	20	27	433	52	48
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	245	25	34	541	65	60
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	1023					
pX, platoon unblocked						
vC, conflicting volume			270		866	258
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			270		866	258
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			97		79	92
cM capacity (veh/h)			1293		315	781

Direction, Lane #	EB 1	WB 1	WB 2	NB 1
Volume Total	270	34	541	125
Volume Left	0	34	0	65
Volume Right	25	0	0	60
cSH	1700	1293	1700	441
Volume to Capacity	0.16	0.03	0.32	0.28
Queue Length 95th (ft)	0	2	0	29
Control Delay (s)	0.0	7.9	0.0	16.3
Lane LOS		A		C
Approach Delay (s)	0.0	0.5		16.3
Approach LOS				C

Intersection Summary			
Average Delay	2.4		
Intersection Capacity Utilization	35.3%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	5	99	638	47	184	456
Future Volume (Veh/h)	5	99	638	47	184	456
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.80	0.87	0.92	0.80	0.83	0.81
Hourly flow rate (vph)	6	114	693	59	222	563
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			776			
pX, platoon unblocked	0.92	0.92			0.92	
vC, conflicting volume	1700	693			752	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1718	620			684	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	91	75			73	
cM capacity (veh/h)	66	447			834	

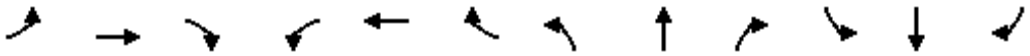
Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	120	693	59	222	563
Volume Left	6	0	0	222	0
Volume Right	114	0	59	0	0
cSH	348	1700	1700	834	1700
Volume to Capacity	0.35	0.41	0.03	0.27	0.33
Queue Length 95th (ft)	38	0	0	27	0
Control Delay (s)	20.7	0.0	0.0	10.9	0.0
Lane LOS	C			B	
Approach Delay (s)	20.7	0.0		3.1	
Approach LOS	C				

Intersection Summary			
Average Delay	3.0		
Intersection Capacity Utilization	60.2%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	4	41	448	12	24	94
Future Volume (Veh/h)	4	41	448	12	24	94
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.86
Hourly flow rate (vph)	5	51	560	15	30	109
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	736	568			575	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	736	568			575	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	99	90			97	
cM capacity (veh/h)	374	523			998	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	56	575	139
Volume Left	5	0	30
Volume Right	51	15	0
cSH	505	1700	998
Volume to Capacity	0.11	0.34	0.03
Queue Length 95th (ft)	9	0	2
Control Delay (s)	13.0	0.0	2.1
Lane LOS	B		A
Approach Delay (s)	13.0	0.0	2.1
Approach LOS	B		

Intersection Summary			
Average Delay	1.3		
Intersection Capacity Utilization	35.7%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	95	35	25	130	17	96	38	15	2	40	7
Future Volume (Veh/h)	3	95	35	25	130	17	96	38	15	2	40	7
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	3	103	38	27	141	18	104	41	16	2	43	8
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		1173										
pX, platoon unblocked												
vC, conflicting volume	159			141			362	341	122	368	351	150
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	159			141			362	341	122	368	351	150
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			98			81	93	98	100	92	99
cM capacity (veh/h)	1420			1442			546	569	929	537	562	896

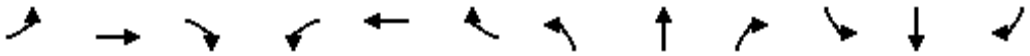
Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	144	186	161	53
Volume Left	3	27	104	2
Volume Right	38	18	16	8
cSH	1420	1442	575	594
Volume to Capacity	0.00	0.02	0.28	0.09
Queue Length 95th (ft)	0	1	29	7
Control Delay (s)	0.2	1.2	13.7	11.7
Lane LOS	A	A	B	B
Approach Delay (s)	0.2	1.2	13.7	11.7
Approach LOS			B	B

Intersection Summary				
Average Delay	5.6			
Intersection Capacity Utilization	41.4%	ICU Level of Service	A	
Analysis Period (min)	15			

Appendix 5E-19: 2040 Build PM

Signalized

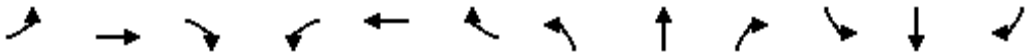
Synchro Results



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	180	335	17	50	335	96	16	358	96	121	307	191
Future Volume (vph)	180	335	17	50	335	96	16	358	96	121	307	191
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	8	11	12	8	11	12	12	16	12	12	16	12
Total Lost time (s)		5.0			5.0		5.0	5.0		5.0	5.0	
Lane Util. Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		1.00			0.97		1.00	0.97		1.00	0.94	
Flt Protected		0.98			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1763			1743		1770	2052		1770	1983	
Flt Permitted		0.62			0.91		0.21	1.00		0.21	1.00	
Satd. Flow (perm)		1116			1591		392	2052		392	1983	
Peak-hour factor, PHF	0.90	0.93	0.93	0.86	0.80	0.80	0.80	0.81	0.94	0.93	0.95	0.87
Adj. Flow (vph)	200	360	18	58	419	120	20	442	102	130	323	220
RTOR Reduction (vph)	0	2	0	0	15	0	0	14	0	0	41	0
Lane Group Flow (vph)	0	576	0	0	582	0	20	530	0	130	502	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		31.0			31.0		19.0	19.0		19.0	19.0	
Effective Green, g (s)		31.0			31.0		19.0	19.0		19.0	19.0	
Actuated g/C Ratio		0.52			0.52		0.32	0.32		0.32	0.32	
Clearance Time (s)		5.0			5.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)		576			822		124	649		124	627	
v/s Ratio Prot								0.26			0.25	
v/s Ratio Perm		c0.52			0.37		0.05			c0.33		
v/c Ratio		1.00			0.71		0.16	0.82		1.05	0.80	
Uniform Delay, d1		14.5			11.1		14.8	18.9		20.5	18.8	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		37.5			5.1		2.8	10.9		94.4	10.3	
Delay (s)		52.0			16.2		17.5	29.8		114.9	29.1	
Level of Service		D			B		B	C		F	C	
Approach Delay (s)		52.0			16.2			29.4			45.7	
Approach LOS		D			B			C			D	

Intersection Summary			
HCM 2000 Control Delay	36.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.02		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	115.2%	ICU Level of Service	H
Analysis Period (min)	15		

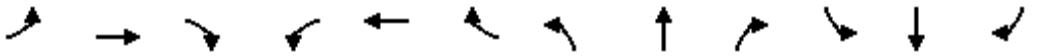
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	123	275	41	54	197	250	41	482	62	342	511	116
Future Volume (vph)	123	275	41	54	197	250	41	482	62	342	511	116
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0	6.0	6.0	6.0		3.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	1.00	0.85	1.00	0.98		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1826		1770	1863	1583	1770	1829		1770	1806	
Flt Permitted	0.43	1.00		0.17	1.00	1.00	0.35	1.00		0.26	1.00	
Satd. Flow (perm)	806	1826		315	1863	1583	647	1829		485	1806	
Peak-hour factor, PHF	0.80	0.82	0.80	0.94	0.82	0.80	0.80	0.84	0.80	0.87	0.90	0.80
Adj. Flow (vph)	154	335	51	57	240	312	51	574	78	393	568	145
RTOR Reduction (vph)	0	5	0	0	0	157	0	4	0	0	8	0
Lane Group Flow (vph)	154	381	0	57	240	156	51	648	0	393	705	0
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA		pm+pt	NA	
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	27.6	27.6		27.6	27.6	27.6	67.0	67.0		79.0	79.0	
Effective Green, g (s)	27.6	27.6		27.6	27.6	27.6	67.0	67.0		79.0	79.0	
Actuated g/C Ratio	0.23	0.23		0.23	0.23	0.23	0.56	0.56		0.67	0.67	
Clearance Time (s)	6.0	6.0		6.0	6.0	6.0	6.0	6.0		3.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	187	424		73	433	368	365	1033		420	1202	
v/s Ratio Prot		c0.21			0.13			0.35		c0.07	0.39	
v/s Ratio Perm	0.19			0.18		0.10	0.08			c0.55		
v/c Ratio	0.82	0.90		0.78	0.55	0.43	0.14	0.63		0.94	0.59	
Uniform Delay, d1	43.2	44.2		42.7	40.1	38.7	12.2	17.4		18.2	10.9	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	24.5	21.3		40.6	1.5	0.8	0.2	1.2		28.1	0.7	
Delay (s)	67.6	65.4		83.2	41.6	39.5	12.4	18.6		46.3	11.6	
Level of Service	E	E		F	D	D	B	B		D	B	
Approach Delay (s)		66.1			44.4			18.1			23.9	
Approach LOS		E			D			B			C	

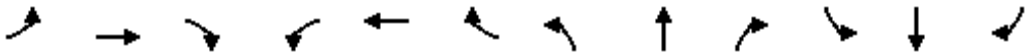
Intersection Summary			
HCM 2000 Control Delay	34.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	118.6	Sum of lost time (s)	15.0
Intersection Capacity Utilization	175.0%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	467	440	7	7	440	203	52	132	9	178	91	585
Future Volume (vph)	467	440	7	7	440	203	52	132	9	178	91	585
Ideal Flow (vphpl)	1200	1200	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	10	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	3.0	5.0			5.0			5.0			5.0	5.0
Lane Util. Factor	1.00	1.00			1.00			1.00			1.00	1.00
Frt	1.00	1.00			0.96			0.99			1.00	0.85
Flt Protected	0.95	1.00			1.00			0.99			0.97	1.00
Satd. Flow (prot)	1043	1095			1783			1826			1803	1583
Flt Permitted	0.21	1.00			0.99			0.55			0.60	1.00
Satd. Flow (perm)	226	1095			1773			1025			1119	1583
Peak-hour factor, PHF	0.93	0.82	0.80	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.90
Adj. Flow (vph)	502	537	9	8	473	218	56	142	10	191	98	650
RTOR Reduction (vph)	0	1	0	0	20	0	0	2	0	0	0	435
Lane Group Flow (vph)	502	545	0	0	679	0	0	206	0	0	289	215
Turn Type	pm+pt	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases	7	4			8			2			6	
Permitted Phases	4			8			2			6		6
Actuated Green, G (s)	53.0	53.0			31.0			17.0			17.0	17.0
Effective Green, g (s)	53.0	53.0			31.0			17.0			17.0	17.0
Actuated g/C Ratio	0.66	0.66			0.39			0.21			0.21	0.21
Clearance Time (s)	3.0	5.0			5.0			5.0			5.0	5.0
Vehicle Extension (s)	3.0	3.0			3.0			3.0			3.0	3.0
Lane Grp Cap (vph)	343	725			687			217			237	336
v/s Ratio Prot	c0.35	0.50										
v/s Ratio Perm	c0.62				0.38			0.20			c0.26	0.14
v/c Ratio	1.46	0.75			0.99			0.95			1.22	0.64
Uniform Delay, d1	18.5	9.1			24.3			31.1			31.5	28.7
Progression Factor	1.00	1.00			1.00			1.00			1.00	1.00
Incremental Delay, d2	224.0	4.4			31.0			46.0			130.6	4.1
Delay (s)	242.6	13.5			55.3			77.0			162.1	32.9
Level of Service	F	B			E			E			F	C
Approach Delay (s)		123.2			55.3			77.0			72.6	
Approach LOS		F			E			E			E	

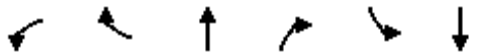
Intersection Summary			
HCM 2000 Control Delay	87.1	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.46		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	118.6%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	75	113	58	145	105	101	80	537	110	66	481	91
Future Volume (vph)	75	113	58	145	105	101	80	537	110	66	481	91
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.95		1.00	0.93		1.00	0.97		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1767		1770	1726		1770	1811		1770	1818	
Flt Permitted	0.59	1.00		0.62	1.00		0.21	1.00		0.16	1.00	
Satd. Flow (perm)	1093	1767		1163	1726		396	1811		299	1818	
Peak-hour factor, PHF	0.80	0.80	0.80	0.95	0.80	0.80	0.84	0.92	0.83	0.80	0.87	0.86
Adj. Flow (vph)	94	141	72	153	131	126	95	584	133	82	553	106
RTOR Reduction (vph)	0	31	0	0	58	0	0	14	0	0	12	0
Lane Group Flow (vph)	94	183	0	153	199	0	95	703	0	83	647	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			4			2			2	
Permitted Phases	4			4			2			2		
Actuated Green, G (s)	21.0	21.0		21.0	21.0		26.8	26.8		26.8	26.8	
Effective Green, g (s)	21.0	21.0		21.0	21.0		26.8	26.8		26.8	26.8	
Actuated g/C Ratio	0.35	0.35		0.35	0.35		0.45	0.45		0.45	0.45	
Clearance Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Vehicle Extension (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)	383	620		408	606		177	811		134	814	
v/s Ratio Prot		0.10			0.12			c0.39			0.36	
v/s Ratio Perm	0.09			c0.13			0.24			0.28		
v/c Ratio	0.25	0.29		0.38	0.33		0.54	0.87		0.62	0.80	
Uniform Delay, d1	13.8	14.0		14.5	14.2		12.0	14.9		12.6	14.1	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.5	0.4		0.8	0.4		4.0	10.0		9.4	5.7	
Delay (s)	14.2	14.4		15.3	14.7		15.9	24.9		22.0	19.9	
Level of Service	B	B		B	B		B	C		C	B	
Approach Delay (s)		14.4			14.9			23.8			20.1	
Approach LOS		B			B			C			C	

Intersection Summary			
HCM 2000 Control Delay	19.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	59.8	Sum of lost time (s)	12.0
Intersection Capacity Utilization	95.8%	ICU Level of Service	F
Analysis Period (min)	15		

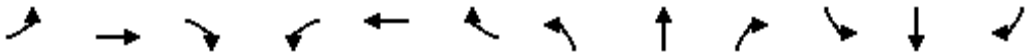
c Critical Lane Group



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	113	58	212	20	39	248
Future Volume (vph)	113	58	212	20	39	248
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0		6.0			6.0
Lane Util. Factor	1.00		1.00			1.00
Frt	0.96		0.99			1.00
Flt Protected	0.97		1.00			0.99
Satd. Flow (prot)	1725		1841			1850
Flt Permitted	0.97		1.00			0.93
Satd. Flow (perm)	1725		1841			1727
Peak-hour factor, PHF	0.81	0.91	0.80	0.80	0.80	0.80
Adj. Flow (vph)	140	64	265	25	49	310
RTOR Reduction (vph)	35	0	6	0	0	0
Lane Group Flow (vph)	169	0	284	0	0	359
Turn Type	Prot		NA		Perm	NA
Protected Phases	4		2			2
Permitted Phases					2	
Actuated Green, G (s)	7.5		28.6			28.6
Effective Green, g (s)	7.5		28.6			28.6
Actuated g/C Ratio	0.16		0.59			0.59
Clearance Time (s)	6.0		6.0			6.0
Vehicle Extension (s)	2.0		2.0			2.0
Lane Grp Cap (vph)	268		1094			1026
v/s Ratio Prot	c0.10		0.15			
v/s Ratio Perm						c0.21
v/c Ratio	0.63		0.26			0.35
Uniform Delay, d1	19.0		4.7			5.0
Progression Factor	1.00		1.00			1.00
Incremental Delay, d2	3.5		0.0			0.1
Delay (s)	22.6		4.7			5.1
Level of Service	C		A			A
Approach Delay (s)	22.6		4.7			5.1
Approach LOS	C		A			A

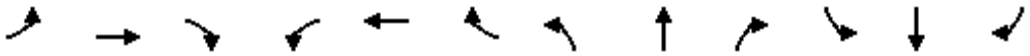
Intersection Summary			
HCM 2000 Control Delay	9.1	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	48.1	Sum of lost time (s)	12.0
Intersection Capacity Utilization	65.9%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



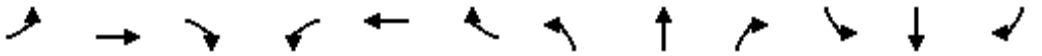
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	24	182	76	44	136	69	27	175	26	72	224	39
Future Volume (vph)	24	182	76	44	136	69	27	175	26	72	224	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0			6.0			6.0			6.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frt		0.96			0.96			0.98			0.98	
Flt Protected		1.00			0.99			0.99			0.99	
Satd. Flow (prot)		1789			1780			1820			1810	
Flt Permitted		0.96			0.89			0.92			0.86	
Satd. Flow (perm)		1717			1590			1681			1583	
Peak-hour factor, PHF	0.88	0.86	0.88	0.80	0.81	0.85	0.80	0.88	0.80	0.80	0.90	0.80
Adj. Flow (vph)	27	212	86	55	168	81	34	199	32	90	249	49
RTOR Reduction (vph)	0	17	0	0	17	0	0	7	0	0	7	0
Lane Group Flow (vph)	0	308	0	0	287	0	0	259	0	0	381	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		6			6			2			2	
Permitted Phases	6			6			2			2		
Actuated Green, G (s)		32.0			32.0			31.0			31.0	
Effective Green, g (s)		32.0			32.0			31.0			31.0	
Actuated g/C Ratio		0.43			0.43			0.41			0.41	
Clearance Time (s)		6.0			6.0			6.0			6.0	
Lane Grp Cap (vph)		732			678			694			654	
v/s Ratio Prot												
v/s Ratio Perm		0.18			c0.18			0.15			c0.24	
v/c Ratio		0.42			0.42			0.37			0.58	
Uniform Delay, d1		15.0			15.0			15.3			17.0	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		1.8			1.9			1.5			3.8	
Delay (s)		16.8			17.0			16.8			20.8	
Level of Service		B			B			B			C	
Approach Delay (s)		16.8			17.0			16.8			20.8	
Approach LOS		B			B			B			C	

Intersection Summary			
HCM 2000 Control Delay	18.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	67.1%	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 (vph)	44	187	16	104	271	25	34	109	52	41	177	48
Future Volume (vph)	44	187	16	104	271	25	34	109	52	41	177	48
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.99		1.00	0.95		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1840		1770	1838		1770	1772		1770	1801	
Flt Permitted	0.52	1.00		0.60	1.00		0.50	1.00		0.63	1.00	
Satd. Flow (perm)	960	1840		1124	1838		928	1772		1170	1801	
Peak-hour factor, PHF	0.80	0.82	0.80	0.88	0.86	0.80	0.83	0.88	0.87	0.82	0.84	0.80
Adj. Flow (vph)	55	228	20	118	315	31	41	124	60	50	211	60
RTOR Reduction (vph)	0	5	0	0	5	0	0	25	0	0	14	0
Lane Group Flow (vph)	55	243	0	118	341	0	41	159	0	50	257	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	38.0	38.0		38.0	38.0		22.0	22.0		22.0	22.0	
Effective Green, g (s)	38.0	38.0		38.0	38.0		22.0	22.0		22.0	22.0	
Actuated g/C Ratio	0.54	0.54		0.54	0.54		0.31	0.31		0.31	0.31	
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)	521	998		610	997		291	556		367	566	
v/s Ratio Prot		0.13			c0.19			0.09			c0.14	
v/s Ratio Perm	0.06			0.10			0.04			0.04		
v/c Ratio	0.11	0.24		0.19	0.34		0.14	0.29		0.14	0.45	
Uniform Delay, d1	7.8	8.4		8.2	9.0		17.2	18.1		17.2	19.2	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.4	0.6		0.7	0.9		1.0	1.3		0.8	2.6	
Delay (s)	8.2	9.0		8.9	9.9		18.2	19.4		18.0	21.8	
Level of Service	A	A		A	A		B	B		B	C	
Approach Delay (s)		8.9			9.7			19.2			21.2	
Approach LOS		A			A			B			C	

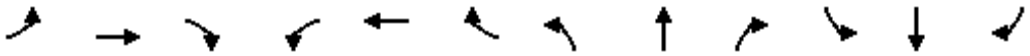
Intersection Summary			
HCM 2000 Control Delay	13.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	109.9%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	203	192	57	22	172	11	50	604	31	104	945	312
Future Volume (vph)	203	192	57	22	172	11	50	604	31	104	945	312
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	7.0		3.0	7.0	7.0	3.0	7.0		3.0	7.0	7.0
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.95		1.00	0.95	1.00
Frt	1.00	0.97		1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	1799		1770	1863	1583	1770	3513		1770	3539	1583
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1770	1799		1770	1863	1583	1770	3513		1770	3539	1583
Peak-hour factor, PHF	0.80	0.80	0.80	0.80	0.93	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Adj. Flow (vph)	254	240	71	28	185	14	62	755	39	130	1181	390
RTOR Reduction (vph)	0	12	0	0	0	12	0	4	0	0	0	226
Lane Group Flow (vph)	254	299	0	28	185	2	63	790	0	130	1181	164
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8						6
Actuated Green, G (s)	12.9	21.8		2.8	11.7	11.7	5.6	30.6		7.0	32.0	32.0
Effective Green, g (s)	12.9	21.8		2.8	11.7	11.7	5.6	30.6		7.0	32.0	32.0
Actuated g/C Ratio	0.16	0.27		0.03	0.14	0.14	0.07	0.37		0.09	0.39	0.39
Clearance Time (s)	3.0	7.0		3.0	7.0	7.0	3.0	7.0		3.0	7.0	7.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	277	477		60	265	225	120	1307		150	1377	616
v/s Ratio Prot	c0.14	c0.17		0.02	0.10		0.04	0.22		c0.07	c0.33	
v/s Ratio Perm						0.00						0.10
v/c Ratio	0.92	0.63		0.47	0.70	0.01	0.53	0.60		0.87	0.86	0.27
Uniform Delay, d1	34.1	26.6		39.0	33.6	30.3	37.0	20.9		37.1	23.0	17.1
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	32.7	2.6		5.6	7.8	0.0	4.1	2.1		37.3	7.1	1.1
Delay (s)	66.9	29.2		44.6	41.4	30.3	41.1	23.0		74.5	30.1	18.2
Level of Service	E	C		D	D	C	D	C		E	C	B
Approach Delay (s)		46.1			41.1			24.3			30.8	
Approach LOS		D			D			C			C	

Intersection Summary			
HCM 2000 Control Delay	32.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	82.2	Sum of lost time (s)	20.0
Intersection Capacity Utilization	68.1%	ICU Level of Service	C
Analysis Period (min)	15		

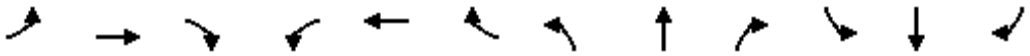
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	52	190	81	11	162	173	98	721	11	143	1091	65
Future Volume (vph)	52	190	81	11	162	173	98	721	11	143	1091	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	7.0		3.0	7.0		3.0	7.0		3.0	7.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frt	1.00	0.95		1.00	0.93		1.00	1.00		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1777		1770	1723		1770	3530		1770	3504	
Flt Permitted	0.23	1.00		0.51	1.00		0.14	1.00		0.23	1.00	
Satd. Flow (perm)	430	1777		946	1723		258	3530		427	3504	
Peak-hour factor, PHF	0.84	0.83	0.80	0.80	0.86	0.92	0.81	0.91	0.80	0.80	0.97	0.80
Adj. Flow (vph)	62	229	101	14	188	188	121	792	14	179	1125	81
RTOR Reduction (vph)	0	19	0	0	45	0	0	1	0	0	6	0
Lane Group Flow (vph)	62	311	0	14	331	0	121	805	0	179	1200	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	26.8	22.5		19.7	18.4		34.3	28.9		37.7	30.6	
Effective Green, g (s)	26.8	22.5		19.7	18.4		34.3	28.9		37.7	30.6	
Actuated g/C Ratio	0.34	0.28		0.25	0.23		0.43	0.36		0.47	0.38	
Clearance Time (s)	3.0	7.0		3.0	7.0		3.0	7.0		3.0	7.0	
Vehicle Extension (s)	3.0	2.0		3.0	2.0		3.0	2.0		3.0	2.0	
Lane Grp Cap (vph)	235	501		246	397		213	1278		321	1343	
v/s Ratio Prot	c0.02	c0.18		0.00	c0.19		0.04	0.23		c0.05	c0.34	
v/s Ratio Perm	0.07			0.01			0.21			0.21		
v/c Ratio	0.26	0.62		0.06	0.83		0.57	0.63		0.56	0.89	
Uniform Delay, d1	19.2	24.9		22.8	29.3		16.4	21.0		13.3	23.1	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.6	1.7		0.1	13.5		3.5	0.7		2.1	7.8	
Delay (s)	19.8	26.7		22.9	42.7		19.9	21.7		15.4	30.8	
Level of Service	B	C		C	D		B	C		B	C	
Approach Delay (s)		25.6			42.0			21.5			28.8	
Approach LOS		C			D			C			C	

Intersection Summary			
HCM 2000 Control Delay	27.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	79.8	Sum of lost time (s)	20.0
Intersection Capacity Utilization	81.3%	ICU Level of Service	D
Analysis Period (min)	15		

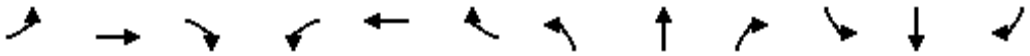
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	38	333	168	26	461	121	225	196	24	168	240	51
Future Volume (vph)	38	333	168	26	461	121	225	196	24	168	240	51
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.95		1.00	0.97		1.00	0.98		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1767		1770	1801		1770	1830		1770	1814	
Flt Permitted	0.21	1.00		0.25	1.00		0.49	1.00		0.60	1.00	
Satd. Flow (perm)	386	1767		459	1801		909	1830		1117	1814	
Peak-hour factor, PHF	0.80	0.84	0.82	0.80	0.87	0.80	0.80	0.86	0.80	0.80	0.81	0.81
Adj. Flow (vph)	48	396	205	32	530	151	281	228	30	210	296	63
RTOR Reduction (vph)	0	37	0	0	20	0	0	10	0	0	16	0
Lane Group Flow (vph)	48	564	0	33	661	0	281	248	0	210	343	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		1			1			2			2	
Permitted Phases	1			1			2			2		
Actuated Green, G (s)	19.3	19.3		19.3	19.3		16.8	16.8		16.8	16.8	
Effective Green, g (s)	19.3	19.3		19.3	19.3		16.8	16.8		16.8	16.8	
Actuated g/C Ratio	0.40	0.40		0.40	0.40		0.35	0.35		0.35	0.35	
Clearance Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	154	709		184	722		317	639		390	633	
v/s Ratio Prot		0.32			c0.37			0.14			0.19	
v/s Ratio Perm	0.12			0.07			c0.31			0.19		
v/c Ratio	0.31	0.80		0.18	0.92		0.89	0.39		0.54	0.54	
Uniform Delay, d1	9.9	12.7		9.3	13.6		14.8	11.8		12.5	12.6	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.4	5.8		0.2	15.9		23.7	0.1		0.7	0.5	
Delay (s)	10.3	18.4		9.5	29.5		38.5	11.9		13.3	13.1	
Level of Service	B	B		A	C		D	B		B	B	
Approach Delay (s)		17.8			28.6			25.8			13.1	
Approach LOS		B			C			C			B	

Intersection Summary			
HCM 2000 Control Delay	21.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	48.1	Sum of lost time (s)	12.0
Intersection Capacity Utilization	74.8%	ICU Level of Service	D
Analysis Period (min)	15		

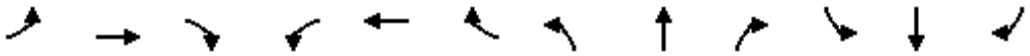
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	34	136	30	169	94	55	30	674	58	30	779	21
Future Volume (vph)	34	136	30	169	94	55	30	674	58	30	779	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0			6.0		3.0	6.0		3.0	6.0	
Lane Util. Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.98			0.98		1.00	0.99		1.00	1.00	
Flt Protected		0.99			0.97		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1809			1771		1770	1838		1770	1854	
Flt Permitted		0.90			0.63		0.11	1.00		0.12	1.00	
Satd. Flow (perm)		1633			1152		207	1838		218	1854	
Peak-hour factor, PHF	0.83	0.80	0.80	0.90	0.93	0.90	0.80	0.90	0.81	0.80	0.97	0.80
Adj. Flow (vph)	41	170	38	188	101	61	38	749	72	38	803	26
RTOR Reduction (vph)	0	7	0	0	9	0	0	4	0	0	1	0
Lane Group Flow (vph)	0	242	0	0	341	0	38	817	0	38	828	0
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		26.0			26.0		49.0	46.0		49.0	46.0	
Effective Green, g (s)		26.0			26.0		49.0	46.0		49.0	46.0	
Actuated g/C Ratio		0.29			0.29		0.54	0.51		0.54	0.51	
Clearance Time (s)		6.0			6.0		3.0	6.0		3.0	6.0	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		471			332		164	939		170	947	
v/s Ratio Prot							c0.01	0.44		0.01	c0.45	
v/s Ratio Perm		0.15			c0.30		0.12			0.11		
v/c Ratio		0.51			1.03		0.23	0.87		0.22	0.87	
Uniform Delay, d1		26.7			32.0		15.4	19.4		15.2	19.4	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.9			56.9		0.7	10.8		0.7	11.0	
Delay (s)		27.7			88.9		16.1	30.2		15.8	30.5	
Level of Service		C			F		B	C		B	C	
Approach Delay (s)		27.7			88.9			29.6			29.8	
Approach LOS		C			F			C			C	

Intersection Summary			
HCM 2000 Control Delay	38.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	96.2%	ICU Level of Service	F
Analysis Period (min)	15		

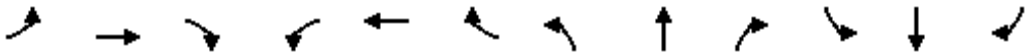
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	105	288	43	161	327	47	60	483	89	60	595	110
Future Volume (vph)	105	288	43	161	327	47	60	483	89	60	595	110
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	5.0		3.0	5.0		3.0	5.0		3.0	5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.98		1.00	0.97		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1822		1770	1828		1770	1816		1770	1816	
Flt Permitted	0.20	1.00		0.17	1.00		0.10	1.00		0.22	1.00	
Satd. Flow (perm)	373	1822		324	1828		186	1816		411	1816	
Peak-hour factor, PHF	0.82	0.91	0.80	0.80	0.80	0.80	0.80	0.95	0.86	0.80	0.91	0.83
Adj. Flow (vph)	128	316	54	201	409	59	75	508	103	75	654	133
RTOR Reduction (vph)	0	7	0	0	6	0	0	8	0	0	8	0
Lane Group Flow (vph)	128	363	0	201	462	0	75	603	0	75	779	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	24.0	20.0		30.0	23.0		45.1	40.1		45.1	40.1	
Effective Green, g (s)	24.0	20.0		30.0	23.0		45.1	40.1		45.1	40.1	
Actuated g/C Ratio	0.27	0.23		0.34	0.26		0.51	0.46		0.51	0.46	
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	5.0		3.0	5.0	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	165	413		225	477		185	826		287	826	
v/s Ratio Prot	0.04	0.20		c0.07	c0.25		c0.02	0.33		0.01	c0.43	
v/s Ratio Perm	0.18			0.23			0.18			0.12		
v/c Ratio	0.78	0.88		0.89	0.97		0.41	0.73		0.26	0.94	
Uniform Delay, d1	28.9	32.9		24.1	32.2		17.4	19.6		13.4	22.9	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	18.5	18.2		32.2	32.7		0.5	2.8		0.2	18.6	
Delay (s)	47.4	51.1		56.3	64.9		17.9	22.3		13.6	41.5	
Level of Service	D	D		E	E		B	C		B	D	
Approach Delay (s)		50.1			62.3			21.9			39.1	
Approach LOS		D			E			C			D	

Intersection Summary			
HCM 2000 Control Delay	42.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	88.1	Sum of lost time (s)	16.0
Intersection Capacity Utilization	83.8%	ICU Level of Service	E
Analysis Period (min)	15		

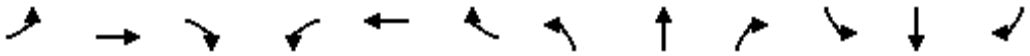
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	44	639	44	220	474	39	22	365	210	60	559	23
Future Volume (vph)	44	639	44	220	474	39	22	365	210	60	559	23
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		3.0	6.0		6.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.99		1.00	0.94		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1845		1770	1840		1770	1750		1770	1852	
Flt Permitted	0.35	1.00		0.11	1.00		0.12	1.00		0.12	1.00	
Satd. Flow (perm)	659	1845		201	1840		226	1750		226	1852	
Peak-hour factor, PHF	0.80	0.91	0.93	0.93	0.84	0.80	0.80	0.94	0.80	0.93	0.93	0.93
Adj. Flow (vph)	55	702	47	237	564	49	28	388	262	65	601	25
RTOR Reduction (vph)	0	2	0	0	3	0	0	27	0	0	2	0
Lane Group Flow (vph)	55	747	0	237	610	0	28	624	0	65	624	0
Turn Type	Perm	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases		4		3	8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	34.0	34.0		45.0	45.0		32.9	32.9		32.9	32.9	
Effective Green, g (s)	34.0	34.0		45.0	45.0		32.9	32.9		32.9	32.9	
Actuated g/C Ratio	0.38	0.38		0.50	0.50		0.37	0.37		0.37	0.37	
Clearance Time (s)	6.0	6.0		3.0	6.0		6.0	6.0		6.0	6.0	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	249	697		240	921		82	640		82	677	
v/s Ratio Prot		c0.40		c0.09	0.33			c0.36			0.34	
v/s Ratio Perm	0.08			0.41			0.12			0.29		
v/c Ratio	0.22	1.07		0.99	0.66		0.34	0.97		0.79	0.92	
Uniform Delay, d1	19.0	28.0		23.1	16.8		20.7	28.1		25.5	27.3	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.2	54.7		53.9	1.4		0.9	28.9		37.2	17.8	
Delay (s)	19.1	82.7		77.0	18.2		21.6	57.0		62.7	45.1	
Level of Service	B	F		E	B		C	E		E	D	
Approach Delay (s)		78.3			34.6			55.5			46.7	
Approach LOS		E			C			E			D	

Intersection Summary			
HCM 2000 Control Delay	53.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.02		
Actuated Cycle Length (s)	89.9	Sum of lost time (s)	15.0
Intersection Capacity Utilization	111.7%	ICU Level of Service	H
Analysis Period (min)	15		

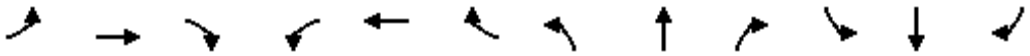
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	90	335	86	101	279	90	120	468	125	210	500	37
Future Volume (vph)	90	335	86	101	279	90	120	468	125	210	500	37
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	6.0		3.0	6.0		3.0	6.0	6.0	3.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	0.95	
Frt	1.00	0.97		1.00	0.96		1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	1804		1770	1788		1770	1863	1583	1770	3503	
Flt Permitted	0.26	1.00		0.19	1.00		0.29	1.00	1.00	0.20	1.00	
Satd. Flow (perm)	485	1804		345	1788		542	1863	1583	371	3503	
Peak-hour factor, PHF	0.80	0.89	0.86	0.90	0.90	0.80	0.80	0.94	0.80	0.84	0.80	0.80
Adj. Flow (vph)	112	376	100	112	310	112	150	498	156	250	625	46
RTOR Reduction (vph)	0	11	0	0	16	0	0	0	106	0	6	0
Lane Group Flow (vph)	113	465	0	112	407	0	150	498	50	250	665	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		
Actuated Green, G (s)	28.7	23.4		28.7	23.4		33.5	25.8	25.8	34.3	26.2	
Effective Green, g (s)	28.7	23.4		28.7	23.4		33.5	25.8	25.8	34.3	26.2	
Actuated g/C Ratio	0.36	0.29		0.36	0.29		0.42	0.32	0.32	0.43	0.33	
Clearance Time (s)	3.0	6.0		3.0	6.0		3.0	6.0	6.0	3.0	6.0	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Lane Grp Cap (vph)	257	523		216	519		342	596	506	298	1138	
v/s Ratio Prot	0.03	c0.26		c0.03	0.23		0.04	0.27		c0.08	0.19	
v/s Ratio Perm	0.13			0.15			0.14		0.03	c0.27		
v/c Ratio	0.44	0.89		0.52	0.78		0.44	0.84	0.10	0.84	0.58	
Uniform Delay, d1	18.8	27.4		19.3	26.3		15.4	25.4	19.2	17.5	22.7	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.4	16.2		0.9	7.1		0.3	9.4	0.0	17.6	0.5	
Delay (s)	19.2	43.6		20.2	33.4		15.7	34.9	19.3	35.1	23.2	
Level of Service	B	D		C	C		B	C	B	D	C	
Approach Delay (s)		38.9			30.6			28.3			26.4	
Approach LOS		D			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	30.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	80.6	Sum of lost time (s)	18.0
Intersection Capacity Utilization	81.6%	ICU Level of Service	D
Analysis Period (min)	15		

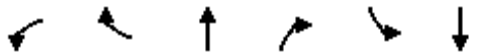
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	63	479	262	88	369	34	145	322	111	74	485	36
Future Volume (vph)	63	479	262	88	369	34	145	322	111	74	485	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.95		1.00	0.99		1.00	0.96		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1763		1770	1836		1770	1787		1770	1843	
Flt Permitted	0.38	1.00		0.12	1.00		0.18	1.00		0.32	1.00	
Satd. Flow (perm)	702	1763		226	1836		342	1787		588	1843	
Peak-hour factor, PHF	0.80	0.94	0.92	0.93	0.92	0.80	0.93	0.88	0.81	0.80	0.82	0.80
Adj. Flow (vph)	79	510	285	95	401	42	156	366	137	92	591	45
RTOR Reduction (vph)	0	25	0	0	5	0	0	17	0	0	4	0
Lane Group Flow (vph)	79	770	0	95	439	0	156	486	0	93	632	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			2			1			1	
Permitted Phases	2			2			1			1		
Actuated Green, G (s)	33.0	33.0		33.0	33.0		33.0	33.0		33.0	33.0	
Effective Green, g (s)	33.0	33.0		33.0	33.0		33.0	33.0		33.0	33.0	
Actuated g/C Ratio	0.41	0.41		0.41	0.41		0.41	0.41		0.41	0.41	
Clearance Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	289	727		93	757		141	737		242	760	
v/s Ratio Prot		c0.44			0.24			0.27			0.34	
v/s Ratio Perm	0.11			0.42			c0.46			0.16		
v/c Ratio	0.27	1.06		1.02	0.58		1.11	0.66		0.38	0.83	
Uniform Delay, d1	15.6	23.5		23.5	18.2		23.5	19.0		16.4	21.0	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.2	50.0		99.3	0.7		107.2	4.6		4.6	10.3	
Delay (s)	15.7	73.5		122.8	18.9		130.7	23.6		21.0	31.4	
Level of Service	B	E		F	B		F	C		C	C	
Approach Delay (s)		68.3			37.2			48.9			30.0	
Approach LOS		E			D			D			C	

Intersection Summary			
HCM 2000 Control Delay	47.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.08		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	125.6%	ICU Level of Service	H
Analysis Period (min)	15		

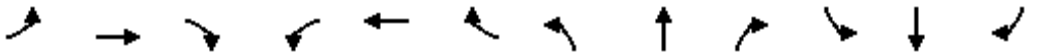
c Critical Lane Group



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	52	24	597	31	22	631
Future Volume (vph)	52	24	597	31	22	631
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0		7.0			7.0
Lane Util. Factor	1.00		1.00			1.00
Frt	0.96		0.99			1.00
Flt Protected	0.97		1.00			1.00
Satd. Flow (prot)	1724		1848			1859
Flt Permitted	0.97		1.00			0.96
Satd. Flow (perm)	1724		1848			1791
Peak-hour factor, PHF	0.80	0.80	0.94	0.80	0.80	0.94
Adj. Flow (vph)	65	30	635	39	28	671
RTOR Reduction (vph)	19	0	2	0	0	0
Lane Group Flow (vph)	76	0	672	0	0	699
Turn Type	Prot		NA		Perm	NA
Protected Phases	8		2			6
Permitted Phases					6	
Actuated Green, G (s)	6.6		70.0			70.0
Effective Green, g (s)	6.6		70.0			70.0
Actuated g/C Ratio	0.07		0.78			0.78
Clearance Time (s)	6.0		7.0			7.0
Vehicle Extension (s)	2.0		2.0			2.0
Lane Grp Cap (vph)	126		1443			1399
v/s Ratio Prot	c0.04		0.36			
v/s Ratio Perm						c0.39
v/c Ratio	0.60		0.47			0.50
Uniform Delay, d1	40.2		3.4			3.5
Progression Factor	1.00		1.00			1.00
Incremental Delay, d2	5.0		0.1			0.1
Delay (s)	45.3		3.5			3.6
Level of Service	D		A			A
Approach Delay (s)	45.3		3.5			3.6
Approach LOS	D		A			A

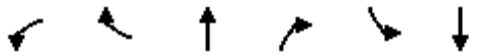
Intersection Summary			
HCM 2000 Control Delay	6.2	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	89.6	Sum of lost time (s)	13.0
Intersection Capacity Utilization	72.5%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	61	173	45	20	120	16	30	158	28	35	287	26
Future Volume (vph)	61	173	45	20	120	16	30	158	28	35	287	26
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0			6.0			6.0	6.0
Lane Util. Factor		1.00			1.00			1.00			1.00	1.00
Frt		0.98			0.99			0.98			1.00	0.85
Flt Protected		0.99			0.99			0.99			0.99	1.00
Satd. Flow (prot)		1802			1823			1818			1852	1583
Flt Permitted		0.89			0.93			0.92			0.94	1.00
Satd. Flow (perm)		1624			1702			1677			1745	1583
Peak-hour factor, PHF	0.80	0.82	0.80	0.80	0.85	0.80	0.80	0.80	0.80	0.82	0.90	0.80
Adj. Flow (vph)	76	211	56	25	141	20	38	198	35	43	319	32
RTOR Reduction (vph)	0	11	0	0	7	0	0	8	0	0	0	17
Lane Group Flow (vph)	0	332	0	0	179	0	0	263	0	0	362	16
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		6
Actuated Green, G (s)		22.0			22.0			32.0			32.0	32.0
Effective Green, g (s)		22.0			22.0			32.0			32.0	32.0
Actuated g/C Ratio		0.34			0.34			0.49			0.49	0.49
Clearance Time (s)		5.0			5.0			6.0			6.0	6.0
Lane Grp Cap (vph)		549			576			825			859	779
v/s Ratio Prot												
v/s Ratio Perm		c0.20			0.11			0.16			c0.21	0.01
v/c Ratio		0.61			0.31			0.32			0.42	0.02
Uniform Delay, d1		17.9			15.9			9.9			10.6	8.5
Progression Factor		1.00			1.00			1.00			1.00	1.00
Incremental Delay, d2		4.9			1.4			1.0			1.5	0.0
Delay (s)		22.8			17.3			11.0			12.1	8.5
Level of Service		C			B			B			B	A
Approach Delay (s)		22.8			17.3			11.0			11.8	
Approach LOS		C			B			B			B	

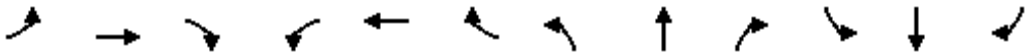
Intersection Summary			
HCM 2000 Control Delay	15.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	80.0%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	394	274	12	772	339
Future Volume (vph)	0	394	274	12	772	339
Ideal Flow (vphpl)	1900	1200	1900	1900	1900	1900
Total Lost time (s)		6.0	5.0	5.0	6.0	6.0
Lane Util. Factor		1.00	1.00	1.00	1.00	1.00
Frt		0.86	1.00	0.85	1.00	1.00
Flt Protected		1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)		1018	1863	1583	1770	1863
Flt Permitted		1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)		1018	1863	1583	1770	1863
Peak-hour factor, PHF	0.80	0.85	0.97	0.80	0.93	0.89
Adj. Flow (vph)	0	464	282	15	830	381
RTOR Reduction (vph)	0	82	0	9	0	0
Lane Group Flow (vph)	0	382	282	6	830	381
Turn Type		Perm	NA	Perm	Prot	NA
Protected Phases			4		6	
Permitted Phases		2		4		6
Actuated Green, G (s)		32.7	12.1	12.1	32.7	32.7
Effective Green, g (s)		32.7	12.1	12.1	32.7	32.7
Actuated g/C Ratio		0.59	0.22	0.22	0.59	0.59
Clearance Time (s)		6.0	5.0	5.0	6.0	6.0
Vehicle Extension (s)		3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		596	403	343	1037	1091
v/s Ratio Prot			c0.15		c0.47	
v/s Ratio Perm		0.38		0.00		0.20
v/c Ratio		0.64	0.70	0.02	0.80	0.35
Uniform Delay, d1		7.7	20.2	17.2	9.0	6.0
Progression Factor		1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2		2.4	5.3	0.0	4.5	0.2
Delay (s)		10.0	25.4	17.2	13.5	6.2
Level of Service		B	C	B	B	A
Approach Delay (s)	10.0		25.0			11.2
Approach LOS	B		C			B

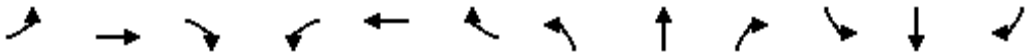
Intersection Summary			
HCM 2000 Control Delay	13.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	55.8	Sum of lost time (s)	11.0
Intersection Capacity Utilization	66.4%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



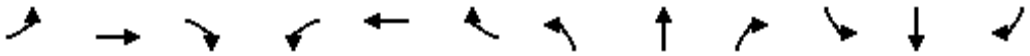
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	14	21	0	24	0	19	0	139	31	25	229	0
Future Volume (vph)	14	21	0	24	0	19	0	139	31	25	229	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0			7.0			7.0			7.0	
Lane Util. Factor	1.00	1.00			1.00			1.00			1.00	
Frt	1.00	1.00			0.94			0.98			1.00	
Flt Protected	0.95	1.00			0.97			1.00			1.00	
Satd. Flow (prot)	1770	1863			1704			1817			1854	
Flt Permitted	0.72	1.00			0.86			1.00			0.96	
Satd. Flow (perm)	1345	1863			1505			1817			1781	
Peak-hour factor, PHF	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.84	0.82	0.80
Adj. Flow (vph)	18	26	0	30	0	24	0	174	39	30	279	0
RTOR Reduction (vph)	0	0	0	0	36	0	0	11	0	0	0	0
Lane Group Flow (vph)	18	26	0	0	18	0	0	202	0	0	309	0
Turn Type	Perm	NA		Perm	NA			NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8						6		
Actuated Green, G (s)	25.0	25.0			25.0			36.0			36.0	
Effective Green, g (s)	25.0	25.0			25.0			36.0			36.0	
Actuated g/C Ratio	0.33	0.33			0.33			0.48			0.48	
Clearance Time (s)	7.0	7.0			7.0			7.0			7.0	
Lane Grp Cap (vph)	448	621			501			872			854	
v/s Ratio Prot		c0.01						0.11				
v/s Ratio Perm	0.01				0.01						c0.17	
v/c Ratio	0.04	0.04			0.04			0.23			0.36	
Uniform Delay, d1	16.9	16.9			16.9			11.4			12.3	
Progression Factor	1.00	1.00			1.00			1.00			0.90	
Incremental Delay, d2	0.2	0.1			0.1			0.6			0.9	
Delay (s)	17.1	17.0			17.0			12.0			12.0	
Level of Service	B	B			B			B			B	
Approach Delay (s)		17.0			17.0			12.0			12.0	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	12.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.23		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	65.4%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	17	124	23	77	94	62	11	152	51	104	235	21
Future Volume (vph)	17	124	23	77	94	62	11	152	51	104	235	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		9.0			9.0			9.0			9.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frt		0.98			0.97			0.97			0.99	
Flt Protected		0.99			0.98			1.00			0.99	
Satd. Flow (prot)		1818			1768			1794			1821	
Flt Permitted		0.94			0.81			0.96			0.83	
Satd. Flow (perm)		1720			1461			1731			1531	
Peak-hour factor, PHF	0.80	0.80	0.80	0.80	0.83	0.85	0.80	0.92	0.83	0.89	0.89	0.80
Adj. Flow (vph)	21	155	29	96	113	73	14	165	61	117	264	26
RTOR Reduction (vph)	0	0	0	0	0	0	0	16	0	0	3	0
Lane Group Flow (vph)	0	205	0	0	282	0	0	224	0	0	404	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		27.0			27.0			30.0			30.0	
Effective Green, g (s)		27.0			27.0			30.0			30.0	
Actuated g/C Ratio		0.36			0.36			0.40			0.40	
Clearance Time (s)		9.0			9.0			9.0			9.0	
Lane Grp Cap (vph)		619			525			692			612	
v/s Ratio Prot												
v/s Ratio Perm		0.12			c0.19			0.13			c0.26	
v/c Ratio		0.33			0.54			0.32			0.66	
Uniform Delay, d1		17.4			19.0			15.5			18.3	
Progression Factor		1.00			1.00			0.90			1.81	
Incremental Delay, d2		1.4			3.9			1.2			5.0	
Delay (s)		18.9			22.9			15.1			38.3	
Level of Service		B			C			B			D	
Approach Delay (s)		18.9			22.9			15.1			38.3	
Approach LOS		B			C			B			D	

Intersection Summary			
HCM 2000 Control Delay	26.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	100.6%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

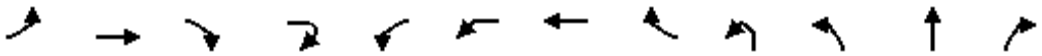


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	26	53	36	4	2	2	4	149	17	19	312	9
Future Volume (vph)	26	53	36	4	2	2	4	149	17	19	312	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		7.0			7.0			7.0			6.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frt		0.96			0.96			0.99			1.00	
Flt Protected		0.99			0.98			1.00			1.00	
Satd. Flow (prot)		1764			1754			1834			1851	
Flt Permitted		0.94			0.90			0.99			0.98	
Satd. Flow (perm)		1672			1618			1816			1814	
Peak-hour factor, PHF	0.80	0.80	0.80	0.83	0.80	0.80	0.80	0.87	0.80	0.80	0.82	0.80
Adj. Flow (vph)	32	66	45	5	2	2	5	171	21	24	380	11
RTOR Reduction (vph)	0	22	0	0	2	0	0	6	0	0	2	0
Lane Group Flow (vph)	0	122	0	0	9	0	0	191	0	0	413	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		26.0			26.0			35.0			36.0	
Effective Green, g (s)		26.0			26.0			35.0			36.0	
Actuated g/C Ratio		0.35			0.35			0.47			0.48	
Clearance Time (s)		7.0			7.0			7.0			6.0	
Lane Grp Cap (vph)		579			560			847			870	
v/s Ratio Prot												
v/s Ratio Perm		c0.07			0.01			0.11			c0.23	
v/c Ratio		0.21			0.02			0.23			0.48	
Uniform Delay, d1		17.3			16.1			11.9			13.1	
Progression Factor		1.00			1.00			1.79			1.00	
Incremental Delay, d2		0.8			0.1			0.6			1.9	
Delay (s)		18.1			16.1			21.9			15.0	
Level of Service		B			B			C			B	
Approach Delay (s)		18.1			16.1			21.9			15.0	
Approach LOS		B			B			C			B	

Intersection Summary			
HCM 2000 Control Delay	17.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	62.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBL	WBR	WBR2	NBL	NBT	SBT	SBR	NWT
Lane Configurations								
Traffic Volume (vph)	8	44	44	17	79	133	6	7
Future Volume (vph)	8	44	44	17	79	133	6	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0		6.0		6.0	6.0		6.0
Lane Util. Factor	1.00		0.95		1.00	1.00		1.00
Frt	0.87		0.85		1.00	0.99		1.00
Flt Protected	0.99		1.00		0.99	1.00		1.00
Satd. Flow (prot)	1611		1504		1849	1851		1863
Flt Permitted	0.99		1.00		0.95	1.00		1.00
Satd. Flow (perm)	1611		1504		1771	1851		1863
Peak-hour factor, PHF	0.80	0.80	0.80	0.99	0.80	0.80	0.80	0.80
Adj. Flow (vph)	10	55	55	17	99	166	8	9
RTOR Reduction (vph)	64	0	44	0	0	2	0	0
Lane Group Flow (vph)	7	0	5	0	116	172	0	9
Turn Type	Prot		Perm	Perm	NA	NA		NA
Protected Phases	8				1	1		2
Permitted Phases			8	1				
Actuated Green, G (s)	7.0		7.0		30.0	30.0		20.0
Effective Green, g (s)	7.0		7.0		30.0	30.0		20.0
Actuated g/C Ratio	0.09		0.09		0.40	0.40		0.27
Clearance Time (s)	6.0		6.0		6.0	6.0		6.0
Lane Grp Cap (vph)	150		140		708	740		496
v/s Ratio Prot	c0.00					c0.09		c0.00
v/s Ratio Perm			0.00		0.07			
v/c Ratio	0.04		0.03		0.16	0.23		0.02
Uniform Delay, d1	31.0		30.9		14.4	14.9		20.3
Progression Factor	1.00		1.00		1.00	1.00		1.00
Incremental Delay, d2	0.6		0.4		0.5	0.7		0.1
Delay (s)	31.5		31.4		14.9	15.6		20.3
Level of Service	C		C		B	B		C
Approach Delay (s)	31.4				14.9	15.6		20.3
Approach LOS	C				B	B		C

Intersection Summary			
HCM 2000 Control Delay	20.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.13		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	62.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

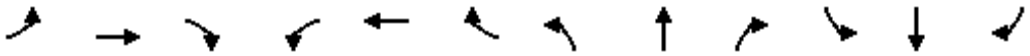


Movement	EBL	EBT	EBR	EBR2	WBL2	WBL	WBT	WBR	NBL2	NBL	NBT	NBR
Lane Configurations												
Traffic Volume (vph)	16	101	131	33	3	22	40	53	18	14	79	35
Future Volume (vph)	16	101	131	33	3	22	40	53	18	14	79	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0					6.0				6.0	
Lane Util. Factor		1.00					1.00				1.00	
Frt		0.92					0.94				0.97	
Flt Protected		1.00					0.99				0.99	
Satd. Flow (prot)		1711					1732				1783	
Flt Permitted		0.98					0.88				0.90	
Satd. Flow (perm)		1676					1548				1618	
Peak-hour factor, PHF	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Adj. Flow (vph)	20	126	164	41	4	28	50	66	22	18	99	44
RTOR Reduction (vph)	0	9	0	0	0	0	46	0	0	0	21	0
Lane Group Flow (vph)	0	342	0	0	0	0	102	0	0	0	163	0
Turn Type	Perm	NA			Perm	Perm	NA		pm+pt	pm+pt	NA	
Protected Phases		4					8		5	5	2	
Permitted Phases	4				8	8			2	2		
Actuated Green, G (s)		17.0					17.0				26.0	
Effective Green, g (s)		17.0					17.0				26.0	
Actuated g/C Ratio		0.31					0.31				0.47	
Clearance Time (s)		6.0					6.0				6.0	
Lane Grp Cap (vph)		518					478				779	
v/s Ratio Prot											c0.02	
v/s Ratio Perm		c0.20					0.07				0.08	
v/c Ratio		0.66					0.21				0.21	
Uniform Delay, d1		16.5					14.1				8.5	
Progression Factor		1.00					1.00				1.00	
Incremental Delay, d2		6.5					1.0				0.6	
Delay (s)		23.0					15.1				9.1	
Level of Service		C					B				A	
Approach Delay (s)		23.0					15.1				9.1	
Approach LOS		C					B				A	

Intersection Summary			
HCM 2000 Control Delay	18.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	55.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	45.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBL	SBT	SBR	SBR2
Lane Configurations				
Traffic Volume (vph)	58	149	14	11
Future Volume (vph)	58	149	14	11
Ideal Flow (vphpl)	1900	1900	1900	1900
Total Lost time (s)		6.0		
Lane Util. Factor		1.00		
Frt		0.99		
Flt Protected		0.99		
Satd. Flow (prot)		1812		
Flt Permitted		0.87		
Satd. Flow (perm)		1588		
Peak-hour factor, PHF	0.80	0.80	0.80	0.80
Adj. Flow (vph)	72	186	18	14
RTOR Reduction (vph)	0	3	0	0
Lane Group Flow (vph)	0	288	0	0
Turn Type	Perm	NA		
Protected Phases		6		
Permitted Phases	6			
Actuated Green, G (s)		18.0		
Effective Green, g (s)		18.0		
Actuated g/C Ratio		0.33		
Clearance Time (s)		6.0		
Lane Grp Cap (vph)		519		
v/s Ratio Prot				
v/s Ratio Perm		c0.18		
v/c Ratio		0.55		
Uniform Delay, d1		15.2		
Progression Factor		1.00		
Incremental Delay, d2		4.2		
Delay (s)		19.4		
Level of Service		B		
Approach Delay (s)		19.4		
Approach LOS		B		

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	917	6	40	265	44	0	0	188	0	0	0
Future Volume (vph)	0	917	6	40	265	44	0	0	188	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0		5.0	5.0				5.0			
Lane Util. Factor		0.91		1.00	0.95				1.00			
Frt		1.00		1.00	0.98				0.86			
Flt Protected		1.00		0.95	1.00				1.00			
Satd. Flow (prot)		5080		1770	3464				1611			
Flt Permitted		1.00		0.23	1.00				1.00			
Satd. Flow (perm)		5080		421	3464				1611			
Peak-hour factor, PHF	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Adj. Flow (vph)	0	1146	8	50	331	55	0	0	235	0	0	0
RTOR Reduction (vph)	0	1	0	0	23	0	0	0	38	0	0	0
Lane Group Flow (vph)	0	1153	0	50	363	0	0	0	197	0	0	0
Turn Type		NA		Perm	NA				Perm			
Protected Phases		4			8							
Permitted Phases				8					2			
Actuated Green, G (s)		22.1		22.1	22.1				8.7			
Effective Green, g (s)		22.1		22.1	22.1				8.7			
Actuated g/C Ratio		0.54		0.54	0.54				0.21			
Clearance Time (s)		5.0		5.0	5.0				5.0			
Vehicle Extension (s)		3.0		3.0	3.0				3.0			
Lane Grp Cap (vph)		2751		228	1876				343			
v/s Ratio Prot		c0.23			0.10							
v/s Ratio Perm				0.12					c0.12			
v/c Ratio		0.42		0.22	0.19				0.58			
Uniform Delay, d1		5.5		4.9	4.8				14.4			
Progression Factor		1.00		1.00	1.00				1.00			
Incremental Delay, d2		0.5		2.2	0.2				2.3			
Delay (s)		6.0		7.1	5.0				16.7			
Level of Service		A		A	A				B			
Approach Delay (s)		6.0			5.3			16.7			0.0	
Approach LOS		A			A			B			A	

Intersection Summary			
HCM 2000 Control Delay	7.2	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	40.8	Sum of lost time (s)	10.0
Intersection Capacity Utilization	37.8%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	17	343	107	84	274	12	210	6	100	60	8	222
Future Volume (vph)	17	343	107	84	274	12	210	6	100	60	8	222
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	2.0	6.0	6.0	2.0	6.0			6.0			6.0	6.0
Lane Util. Factor	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	0.99			0.96			1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00			0.97			0.96	1.00
Satd. Flow (prot)	1770	1863	1583	1770	1851			1726			1784	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00			0.75			0.61	1.00
Satd. Flow (perm)	1770	1863	1583	1770	1851			1335			1135	1583
Peak-hour factor, PHF	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Adj. Flow (vph)	21	429	134	105	342	15	262	8	125	75	10	278
RTOR Reduction (vph)	0	0	86	0	2	0	0	29	0	0	0	190
Lane Group Flow (vph)	21	429	48	105	356	0	0	367	0	0	85	88
Turn Type	Prot	NA	Perm	Prot	NA		Perm	NA		Perm	NA	Perm
Protected Phases	1	6		5	2			4			8	
Permitted Phases			6				4			8		8
Actuated Green, G (s)	0.8	20.9	20.9	4.6	24.7			18.4			18.4	18.4
Effective Green, g (s)	0.8	20.9	20.9	4.6	24.7			18.4			18.4	18.4
Actuated g/C Ratio	0.01	0.36	0.36	0.08	0.43			0.32			0.32	0.32
Clearance Time (s)	2.0	6.0	6.0	2.0	6.0			6.0			6.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			3.0			3.0	3.0
Lane Grp Cap (vph)	24	672	571	140	789			424			360	503
v/s Ratio Prot	c0.01	c0.23		c0.06	0.19							
v/s Ratio Perm			0.03					c0.27			0.07	0.06
v/c Ratio	0.88	0.64	0.08	0.75	0.45			0.86			0.24	0.18
Uniform Delay, d1	28.5	15.4	12.2	26.1	11.8			18.6			14.6	14.3
Progression Factor	1.00	1.00	1.00	1.00	1.00			1.00			1.00	1.00
Incremental Delay, d2	127.4	4.6	0.3	20.0	1.9			16.6			0.3	0.2
Delay (s)	155.9	20.0	12.5	46.1	13.6			35.1			14.9	14.4
Level of Service	F	B	B	D	B			D			B	B
Approach Delay (s)		23.1			21.0			35.1			14.5	
Approach LOS		C			C			D			B	

Intersection Summary			
HCM 2000 Control Delay	23.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	57.9	Sum of lost time (s)	14.0
Intersection Capacity Utilization	62.0%	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 (vph)	73	305	56	150	161	68	30	525	148	156	677	37
Future Volume (vph)	73	305	56	150	161	68	30	525	148	156	677	37
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1500	1500	1900	1500	1500	1900
Total Lost time (s)	3.0	5.0		3.0	5.0		3.0	5.0		3.0	5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.95		1.00	0.97		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1638		1770	1773		1397	1421		1397	1458	
Flt Permitted	0.34	1.00		0.14	1.00		0.18	1.00		0.15	1.00	
Satd. Flow (perm)	631	1638		257	1773		259	1421		228	1458	
Peak-hour factor, PHF	0.80	0.93	0.93	0.93	0.89	0.80	0.80	0.93	0.90	0.84	0.94	0.88
Adj. Flow (vph)	91	328	60	161	181	85	38	565	164	186	720	42
RTOR Reduction (vph)	0	5	0	0	13	0	0	8	0	0	2	0
Lane Group Flow (vph)	91	383	0	161	253	0	38	721	0	186	760	0
Parking (#/hr)		0										
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	38.0	29.0		38.0	29.0		72.0	66.0		78.9	69.9	
Effective Green, g (s)	38.0	29.0		38.0	29.0		72.0	66.0		78.9	69.9	
Actuated g/C Ratio	0.29	0.22		0.29	0.22		0.55	0.51		0.61	0.54	
Clearance Time (s)	3.0	5.0		3.0	5.0		3.0	5.0		3.0	5.0	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	263	365		180	395		196	721		227	784	
v/s Ratio Prot	0.02	c0.23		c0.06	0.14		0.01	0.51		c0.06	c0.52	
v/s Ratio Perm	0.08			0.20			0.10			0.43		
v/c Ratio	0.35	1.05		0.89	0.64		0.19	1.00		0.82	0.97	
Uniform Delay, d1	34.9	50.5		38.5	45.7		18.4	32.0		21.4	29.0	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.3	60.3		37.8	2.5		0.2	33.6		19.2	24.4	
Delay (s)	35.2	110.7		76.3	48.2		18.5	65.5		40.5	53.4	
Level of Service	D	F		E	D		B	E		D	D	
Approach Delay (s)		96.4			58.8			63.2			50.9	
Approach LOS		F			E			E			D	

Intersection Summary			
HCM 2000 Control Delay	64.1	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.99		
Actuated Cycle Length (s)	129.9	Sum of lost time (s)	16.0
Intersection Capacity Utilization	100.1%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Appendix 5E-20: 2040 Build PM

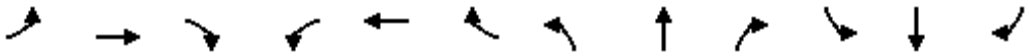
Unsignalized

Synchro Results

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	343	75	31	266	75	22
Future Volume (Veh/h)	343	75	31	266	75	22
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.81	0.80	0.81	0.95	0.80	0.80
Hourly flow rate (vph)	423	94	38	280	94	28
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			517		826	470
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			517		826	470
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			96		71	95
cM capacity (veh/h)			1049		329	594

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	517	318	122
Volume Left	0	38	94
Volume Right	94	0	28
cSH	1700	1049	367
Volume to Capacity	0.30	0.04	0.33
Queue Length 95th (ft)	0	3	36
Control Delay (s)	0.0	1.4	19.6
Lane LOS		A	C
Approach Delay (s)	0.0	1.4	19.6
Approach LOS			C

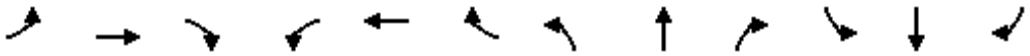
Intersection Summary			
Average Delay	2.9		
Intersection Capacity Utilization	52.1%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Yield			Stop			Yield	
Traffic Volume (vph)	27	33	8	1	36	257	7	87	10	297	95	17
Future Volume (vph)	27	33	8	1	36	257	7	87	10	297	95	17
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.87	0.80	0.80
Hourly flow rate (vph)	34	41	10	1	45	321	9	109	13	341	119	21

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	85	367	131	481
Volume Left (vph)	34	1	9	341
Volume Right (vph)	10	321	13	21
Hadj (s)	0.04	-0.49	-0.01	0.15
Departure Headway (s)	6.5	5.4	6.1	5.6
Degree Utilization, x	0.15	0.55	0.22	0.75
Capacity (veh/h)	479	625	518	621
Control Delay (s)	10.6	14.7	10.8	23.3
Approach Delay (s)	10.6	14.7	10.8	23.3
Approach LOS	B	B	B	C

Intersection Summary				
Delay	17.8			
Level of Service	C			
Intersection Capacity Utilization	60.7%	ICU Level of Service	B	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	31	203	13	12	186	34	11	50	31	27	43	47
Future Volume (Veh/h)	31	203	13	12	186	34	11	50	31	27	43	47
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	39	254	16	15	233	43	14	63	39	34	54	59
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		643			1031							
pX, platoon unblocked												
vC, conflicting volume	276			270			710	646	262	695	632	254
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	276			270			710	646	262	695	632	254
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	97			99			95	83	95	88	86	92
cM capacity (veh/h)	1287			1293			278	374	777	286	381	784

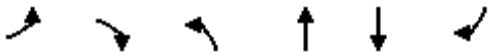
Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	309	291	116	147
Volume Left	39	15	14	34
Volume Right	16	43	39	59
cSH	1287	1293	431	437
Volume to Capacity	0.03	0.01	0.27	0.34
Queue Length 95th (ft)	2	1	27	36
Control Delay (s)	1.2	0.5	16.4	17.3
Lane LOS	A	A	C	C
Approach Delay (s)	1.2	0.5	16.4	17.3
Approach LOS			C	C

Intersection Summary				
Average Delay	5.8			
Intersection Capacity Utilization	40.7%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (veh/h)	0	74	649	88	0	836
Future Volume (Veh/h)	0	74	649	88	0	836
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	0	93	811	110	0	1045
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						1081
pX, platoon unblocked	0.76					
vC, conflicting volume	1911	866			811	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2040	866			811	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	74			100	
cM capacity (veh/h)	47	353			815	

Direction, Lane #	NW 1	NE 1	SW 1
Volume Total	93	921	1045
Volume Left	0	0	0
Volume Right	93	110	0
cSH	353	1700	1700
Volume to Capacity	0.26	0.54	0.61
Queue Length 95th (ft)	26	0	0
Control Delay (s)	18.8	0.0	0.0
Lane LOS	C		
Approach Delay (s)	18.8	0.0	0.0
Approach LOS	C		

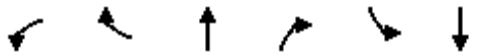
Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	50.7%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	69	42	78	254	262	100
Future Volume (Veh/h)	69	42	78	254	262	100
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.80	0.80	0.96	0.88	0.86	0.88
Hourly flow rate (vph)	86	53	81	289	305	114
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)					693	
pX, platoon unblocked						
vC, conflicting volume	813	362	419			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	813	362	419			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	73	92	93			
cM capacity (veh/h)	323	683	1140			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	139	370	419
Volume Left	86	81	0
Volume Right	53	0	114
cSH	404	1140	1700
Volume to Capacity	0.34	0.07	0.25
Queue Length 95th (ft)	38	6	0
Control Delay (s)	18.5	2.4	0.0
Lane LOS	C	A	
Approach Delay (s)	18.5	2.4	0.0
Approach LOS	C		

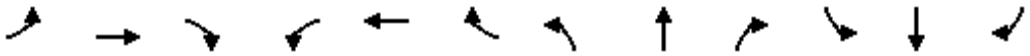
Intersection Summary			
Average Delay	3.7		
Intersection Capacity Utilization	53.9%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	9	219	172	3	222	295
Future Volume (Veh/h)	9	219	172	3	222	295
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.80	0.88	0.87	0.80	0.93	0.80
Hourly flow rate (vph)	11	249	198	4	239	369
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1047	200			202	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1047	200			202	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	95	70			83	
cM capacity (veh/h)	209	841			1370	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	260	202	608
Volume Left	11	0	239
Volume Right	249	4	0
cSH	745	1700	1370
Volume to Capacity	0.35	0.12	0.17
Queue Length 95th (ft)	39	0	16
Control Delay (s)	12.4	0.0	4.3
Lane LOS	B		A
Approach Delay (s)	12.4	0.0	4.3
Approach LOS	B		

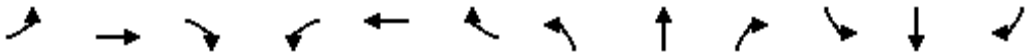
Intersection Summary			
Average Delay	5.5		
Intersection Capacity Utilization	61.1%	ICU Level of Service	B
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	15	436	16	8	564	16	13	4	11	12	2	13
Future Volume (Veh/h)	15	436	16	8	564	16	13	4	11	12	2	13
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.81	0.92	0.80	0.80	0.83	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	19	474	20	10	680	20	16	5	14	15	3	16
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)					1030							
pX, platoon unblocked	0.89						0.89	0.89		0.89	0.89	0.89
vC, conflicting volume	700			494			1250	1242	484	1248	1242	690
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	605			494			1220	1211	484	1219	1211	594
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	98			99			88	97	98	89	98	96
cM capacity (veh/h)	870			1070			130	158	583	131	158	451

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	513	710	35	34
Volume Left	19	10	16	15
Volume Right	20	20	14	16
cSH	870	1070	196	201
Volume to Capacity	0.02	0.01	0.18	0.17
Queue Length 95th (ft)	2	1	16	15
Control Delay (s)	0.6	0.2	27.3	26.5
Lane LOS	A	A	D	D
Approach Delay (s)	0.6	0.2	27.3	26.5
Approach LOS			D	D

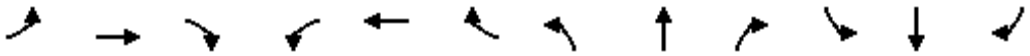
Intersection Summary				
Average Delay	1.8			
Intersection Capacity Utilization	44.0%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	7	350	8	1	466	14	8	3	6	8	0	20
Future Volume (Veh/h)	7	350	8	1	466	14	8	3	6	8	0	20
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.80	0.84	0.80	0.80	0.90	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	9	417	10	1	518	18	10	4	8	10	0	25
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	536			427			994	978	422	979	974	527
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	536			427			994	978	422	979	974	527
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			100			95	98	99	95	100	95
cM capacity (veh/h)	1032			1132			212	248	632	222	249	551

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	436	537	22	35
Volume Left	9	1	10	10
Volume Right	10	18	8	25
cSH	1032	1132	290	387
Volume to Capacity	0.01	0.00	0.08	0.09
Queue Length 95th (ft)	1	0	6	7
Control Delay (s)	0.3	0.0	18.4	15.2
Lane LOS	A	A	C	C
Approach Delay (s)	0.3	0.0	18.4	15.2
Approach LOS			C	C

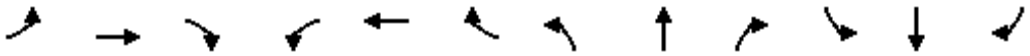
Intersection Summary			
Average Delay	1.0		
Intersection Capacity Utilization	35.9%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	252	10	171	262	38	12	16	102	53	68	33
Future Volume (Veh/h)	5	252	10	171	262	38	12	16	102	53	68	33
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.80	0.87	0.80	0.80	0.86	0.83	0.80	0.80	0.80	0.93	0.93	0.93
Hourly flow rate (vph)	6	290	13	214	305	46	15	20	128	57	73	35
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	351			303			1136	1088	296	1202	1071	328
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	351			303			1136	1088	296	1202	1071	328
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			83			85	89	83	46	60	95
cM capacity (veh/h)	1208			1258			103	178	743	106	182	713

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	309	565	163	165
Volume Left	6	214	15	57
Volume Right	13	46	128	35
cSH	1208	1258	378	167
Volume to Capacity	0.00	0.17	0.43	0.99
Queue Length 95th (ft)	0	15	53	193
Control Delay (s)	0.2	4.3	21.5	121.6
Lane LOS	A	A	C	F
Approach Delay (s)	0.2	4.3	21.5	121.6
Approach LOS			C	F

Intersection Summary				
Average Delay	21.7			
Intersection Capacity Utilization	64.9%	ICU Level of Service	C	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	198	4	34	217	28	9	84	148	34	127	67
Future Volume (Veh/h)	6	198	4	34	217	28	9	84	148	34	127	67
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.88	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	7	248	5	43	271	35	11	105	185	43	159	84
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	306			253			802	656	250	876	642	288
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	306			253			802	656	250	876	642	288
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			97			94	72	77	72	58	89
cM capacity (veh/h)	1255			1312			175	370	788	156	378	751

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	260	349	301	286
Volume Left	7	43	11	43
Volume Right	5	35	185	84
cSH	1255	1312	518	354
Volume to Capacity	0.01	0.03	0.58	0.81
Queue Length 95th (ft)	0	3	92	174
Control Delay (s)	0.3	1.2	21.1	46.6
Lane LOS	A	A	C	E
Approach Delay (s)	0.3	1.2	21.1	46.6
Approach LOS			C	E

Intersection Summary			
Average Delay	16.9		
Intersection Capacity Utilization	62.0%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	647	135	116	457	16	95
Future Volume (Veh/h)	647	135	116	457	16	95
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.88	0.80	0.93	0.86	0.80	0.80
Hourly flow rate (vph)	735	169	125	531	20	119
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	1023					
pX, platoon unblocked			0.86		0.86	0.86
vC, conflicting volume			904		1600	820
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			811		1616	713
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			82		75	68
cM capacity (veh/h)			705		81	373

Direction, Lane #	EB 1	WB 1	WB 2	NB 1
Volume Total	904	125	531	139
Volume Left	0	125	0	20
Volume Right	169	0	0	119
cSH	1700	705	1700	246
Volume to Capacity	0.53	0.18	0.31	0.57
Queue Length 95th (ft)	0	16	0	79
Control Delay (s)	0.0	11.2	0.0	37.1
Lane LOS		B		E
Approach Delay (s)	0.0	2.1		37.1
Approach LOS				E

Intersection Summary			
Average Delay	3.9		
Intersection Capacity Utilization	65.4%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	1	208	578	68	278	609
Future Volume (Veh/h)	1	208	578	68	278	609
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.80	0.80	0.88	0.80	0.87	0.89
Hourly flow rate (vph)	1	260	657	85	320	684
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			776			
pX, platoon unblocked	0.90	0.90			0.90	
vC, conflicting volume	1981	657			742	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2032	567			661	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	97	45			62	
cM capacity (veh/h)	35	473			838	

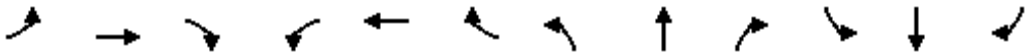
Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	261	657	85	320	684
Volume Left	1	0	0	320	0
Volume Right	260	0	85	0	0
cSH	451	1700	1700	838	1700
Volume to Capacity	0.58	0.39	0.05	0.38	0.40
Queue Length 95th (ft)	90	0	0	45	0
Control Delay (s)	23.4	0.0	0.0	11.9	0.0
Lane LOS	C			B	
Approach Delay (s)	23.4	0.0		3.8	
Approach LOS	C				

Intersection Summary			
Average Delay	4.9		
Intersection Capacity Utilization	68.8%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	8	20	224	6	22	363
Future Volume (Veh/h)	8	20	224	6	22	363
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.99	0.80	0.92	0.80	0.80	0.92
Hourly flow rate (vph)	8	25	243	8	28	395
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	698	247			251	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	698	247			251	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	98	97			98	
cM capacity (veh/h)	398	792			1314	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	33	251	423
Volume Left	8	0	28
Volume Right	25	8	0
cSH	639	1700	1314
Volume to Capacity	0.05	0.15	0.02
Queue Length 95th (ft)	4	0	2
Control Delay (s)	10.9	0.0	0.7
Lane LOS	B		A
Approach Delay (s)	10.9	0.0	0.7
Approach LOS	B		

Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	45.8%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	9	141	68	35	113	15	59	60	29	1	45	8
Future Volume (Veh/h)	9	141	68	35	113	15	59	60	29	1	45	8
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	10	153	74	38	123	16	64	65	32	1	49	9
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		1178										
pX, platoon unblocked												
vC, conflicting volume	139			227			450	425	190	482	454	131
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	139			227			450	425	190	482	454	131
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			97			86	87	96	100	90	99
cM capacity (veh/h)	1445			1341			462	503	852	418	484	919

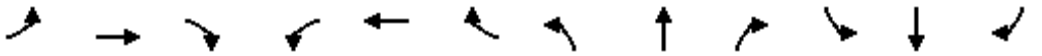
Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	237	177	161	59
Volume Left	10	38	64	1
Volume Right	74	16	32	9
cSH	1445	1341	527	520
Volume to Capacity	0.01	0.03	0.31	0.11
Queue Length 95th (ft)	1	2	32	10
Control Delay (s)	0.4	1.9	14.8	12.8
Lane LOS	A	A	B	B
Approach Delay (s)	0.4	1.9	14.8	12.8
Approach LOS			B	B

Intersection Summary				
Average Delay	5.6			
Intersection Capacity Utilization	43.6%	ICU Level of Service	A	
Analysis Period (min)	15			

Appendix 5E-21: 2040 Build AM & PM Mitigation

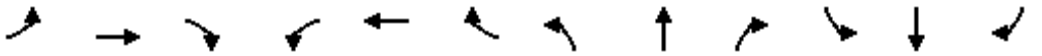
322 & Bowe

Synchro Results



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	592	401	2	0	321	165	46	140	0	101	119	243
Future Volume (vph)	592	401	2	0	321	165	46	140	0	101	119	243
Ideal Flow (vphpl)	1200	1200	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	10	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	3.0	5.0			5.0			5.0			5.0	5.0
Lane Util. Factor	1.00	1.00			0.95			1.00			1.00	1.00
Frt	1.00	1.00			0.95			1.00			1.00	0.85
Flt Protected	0.95	1.00			1.00			0.99			0.98	1.00
Satd. Flow (prot)	1043	1097			3363			1840			1821	1583
Flt Permitted	0.18	1.00			1.00			0.66			0.65	1.00
Satd. Flow (perm)	202	1097			3363			1231			1204	1583
Peak-hour factor, PHF	0.93	0.80	0.93	0.93	0.90	0.93	0.93	0.93	0.93	0.93	0.93	0.90
Adj. Flow (vph)	637	501	2	0	357	177	49	151	0	109	128	270
RTOR Reduction (vph)	0	0	0	0	56	0	0	0	0	0	0	213
Lane Group Flow (vph)	637	503	0	0	478	0	0	200	0	0	237	57
Turn Type	pm+pt	NA			NA		Perm	NA		Perm	NA	Perm
Protected Phases	7	4			8			2			6	
Permitted Phases	4			8			2			6		6
Actuated Green, G (s)	76.2	76.2			21.1			23.0			23.0	23.0
Effective Green, g (s)	76.2	76.2			21.1			23.0			23.0	23.0
Actuated g/C Ratio	0.70	0.70			0.19			0.21			0.21	0.21
Clearance Time (s)	3.0	5.0			5.0			5.0			5.0	5.0
Vehicle Extension (s)	3.0	3.0			3.0			3.0			3.0	3.0
Lane Grp Cap (vph)	542	765			649			259			253	333
v/s Ratio Prot	c0.56	0.46			0.14							
v/s Ratio Perm	c0.26							0.16			c0.20	0.04
v/c Ratio	1.18	0.66			0.74			0.77			0.94	0.17
Uniform Delay, d1	23.3	9.2			41.4			40.6			42.4	35.3
Progression Factor	1.00	1.00			1.00			1.00			1.00	1.00
Incremental Delay, d2	97.0	2.1			4.3			13.3			39.3	0.2
Delay (s)	120.2	11.3			45.8			53.9			81.7	35.5
Level of Service	F	B			D			D			F	D
Approach Delay (s)		72.2			45.8			53.9			57.1	
Approach LOS		E			D			D			E	

Intersection Summary			
HCM 2000 Control Delay	61.5	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.15		
Actuated Cycle Length (s)	109.2	Sum of lost time (s)	13.0
Intersection Capacity Utilization	99.8%	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 (vph)	467	440	7	7	440	203	52	132	9	178	91	585
Future Volume (vph)	467	440	7	7	440	203	52	132	9	178	91	585
Ideal Flow (vphpl)	1200	1200	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	10	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	3.0	5.0			5.0			5.0			5.0	5.0
Lane Util. Factor	1.00	1.00			0.95			1.00			1.00	1.00
Frt	1.00	1.00			0.95			0.99			1.00	0.85
Flt Protected	0.95	1.00			1.00			0.99			0.97	1.00
Satd. Flow (prot)	1043	1095			3372			1826			1803	1583
Flt Permitted	0.26	1.00			0.95			0.57			0.61	1.00
Satd. Flow (perm)	285	1095			3200			1061			1131	1583
Peak-hour factor, PHF	0.93	0.82	0.80	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.90
Adj. Flow (vph)	502	537	9	8	473	218	56	142	10	191	98	650
RTOR Reduction (vph)	0	1	0	0	67	0	0	2	0	0	0	432
Lane Group Flow (vph)	502	545	0	0	632	0	0	206	0	0	289	218
Turn Type	pm+pt	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases	7	4			8			2			6	
Permitted Phases	4			8			2			6		6
Actuated Green, G (s)	51.4	51.4			29.4			17.0			17.0	17.0
Effective Green, g (s)	51.4	51.4			29.4			17.0			17.0	17.0
Actuated g/C Ratio	0.66	0.66			0.37			0.22			0.22	0.22
Clearance Time (s)	3.0	5.0			5.0			5.0			5.0	5.0
Vehicle Extension (s)	3.0	3.0			3.0			3.0			3.0	3.0
Lane Grp Cap (vph)	370	717			1200			230			245	343
v/s Ratio Prot	c0.33	0.50										
v/s Ratio Perm	c0.56				0.20			0.19			c0.26	0.14
v/c Ratio	1.36	0.76			0.53			0.89			1.18	0.63
Uniform Delay, d1	14.6	9.3			19.1			29.8			30.7	27.9
Progression Factor	1.00	1.00			1.00			1.00			1.00	1.00
Incremental Delay, d2	177.3	4.8			0.4			32.4			114.8	3.8
Delay (s)	191.9	14.0			19.5			62.2			145.5	31.7
Level of Service	F	B			B			E			F	C
Approach Delay (s)		99.2			19.5			62.2			66.7	
Approach LOS		F			B			E			E	

Intersection Summary			
HCM 2000 Control Delay	66.8	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.36		
Actuated Cycle Length (s)	78.4	Sum of lost time (s)	13.0
Intersection Capacity Utilization	106.8%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			