CITYGATE CENTRE NORTH DEVELOPMENT

Traffic Impact Study

Naperville, Illinois

May 2018

Prepared for:
CityGate Centre North LLC

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EXECUTIVE SUMMARY

Kimley-Horn and Associates, Inc., (Kimley-Horn) was retained by CityGate Centre North, LLC to prepare a traffic impact study for a proposed sports arena and event center on the north side of Ferry Road between Monarch Drive and Corporate Lane in Naperville, Illinois. The proposed development totals approximately 221,300 square feet and includes two ice rinks and an approximately 6,600 square-foot restaurant. The ice rinks are expected to support youth hockey activities, including practices, games, and tournaments. In addition, the ice rinks will be designed to accommodate a junior hockey team. The estimated capacity when both ice rinks are in use is 4,600 seats. While the primary intent of the development is to support youth ice hockey and junior hockey team practices and games, the development provides flexibility for unique entertainment events. Proposed access to the site includes two full-access driveways to Corporate Lane (identified in this report as Access A and Private Drive).

As part of this traffic impact study, existing and future traffic conditions were evaluated for the study intersections along Ferry Road and Corporate Lane, as well as the proposed site access driveways. Based on a review of traffic conditions, it is anticipated that site-generated traffic and future background traffic growth would be accommodated at the intersection of Ferry Road/East Corporate Lane/Raymond Drive. Based on the results of the capacity analysis and field observations, the existing 95th percentile queues for the northbound left-turn, eastbound right-turn, and westbound left-turn movements currently exceed the storage lanes; this condition is expected to continue through the future year. Based on the right-of-way limits and proximity to the Interstate 88 overpass, extension of the storage lane or installation of dual left-turn lanes for the northbound approach should be considered independent of the proposed development. Similarly, extension of the storage bays provided for the eastbound right-turn and westbound left-turn lanes should be considered as part of any future improvements to the intersection of Ferry Road/East Corporate Lane/Raymond Drive.

To accommodate site-generated traffic and background traffic growth, a traffic signal and dedicated westbound right-turn lane is recommended at the intersection of Ferry Road/West Corporate Drive. Based on the spacing distance between West Corporate Lane and an existing driveway on the north side of Ferry Lane, the turn lane should provide 200 feet of storage with a 50-foot taper. The proposed site access driveways on Corporate Lane are anticipated to operate acceptably. At Access A, a single outbound lane and one receiving lane is recommended. At Private Drive, a single inbound lane and separate outbound through and right-turn lanes are recommended. Minor-leg stop control is recommended for Access A (minor-leg stop control is currently provided on Private Drive). The recommended site access improvements are based on the analysis of traffic conditions for typical events, including but not limited to youth hockey activities and junior hockey team practices and games. In order to prepare for unique entertainment events where attendance may total up to 6,600 people, development of a traffic management plan is recommended. Further details regarding this recommendation are provided in the *Recommendations & Conclusion* section of this report.

1. INTRODUCTION

Kimley-Horn and Associates, Inc., (Kimley-Horn) was retained by CityGate Centre North, LLC to prepare a traffic impact study for a proposed sports arena and event center on the north side of Ferry Road between Monarch Drive and Corporate Lane in Naperville, Illinois. The proposed development totals approximately 221,300 square feet and includes two ice rinks and an approximately 6,600 square-foot restaurant. The ice rinks are expected to support youth hockey activities, including practices, games, and tournaments. In addition, the ice rinks will be designed to accommodate a junior hockey team. The estimated capacity when both ice rinks are in use is 4,600 seats. While the primary intent of the development is to support youth ice hockey and junior hockey team practices and games, the development provides flexibility for unique entertainment events with an estimated maximum capacity up to 6,600 people.

Proposed access to the development would be provided via two full-access driveways to Corporate Lane (Access A and Private Drive). An aerial view of the study location and the surrounding roadway network is presented in **Exhibit 1**.

As a part of this study, the existing network was analyzed to determine current operation at the study intersections. Trip generation characteristics were then established for the proposed development. For purposes of this analysis, a seating capacity of 4,600 was assumed. The maximum capacity of up to 6,600 people is for unique events and is not characteristic of typical operations; and therefore, will be addressed through a separate traffic management plan as defined in the *Recommendations & Conclusion* section of this report. In order to evaluate more typical operations, site-generated trips were added to existing and future background volumes to evaluate the impact of the proposed development on area study intersections under the design horizon. This report presents and documents Kimley-Horn's data collection, summarizes the evaluation of traffic conditions on the surrounding roadways, and identifies recommendations to address the potential impact of site-generated traffic on the adjacent roadway network.

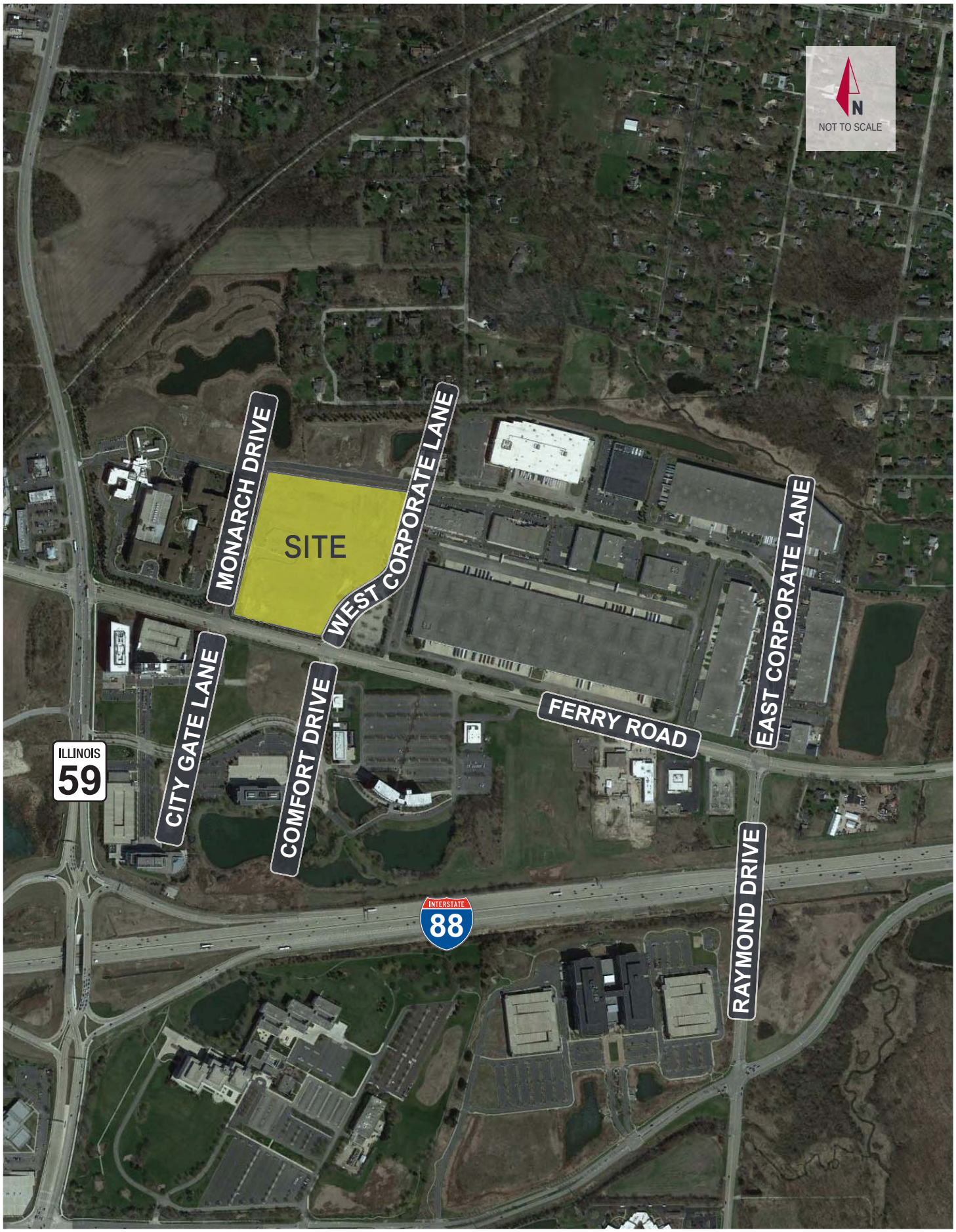

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EXHIBIT 1

SITE LOCATION MAP

2. EXISTING CONDITIONS

Kimley-Horn conducted a field visit to collect relevant information pertaining to existing land uses in the surrounding area, the adjacent street system, current traffic volumes and operating conditions, lane configurations and traffic controls at nearby intersections, and other key roadway characteristics. The findings of this field investigation are detailed as follows.

2.1. Area Connectivity & Land Uses

The proposed site is largely undeveloped with the exception of a parking lot for Monarch Landing, a senior living facility located to the west. The area surrounding the subject site is occupied by a variety of uses. To the east, the site is bordered by existing industrial developments. Single-family residential properties are located to the north. Existing office and commercial uses are located along the south side of Ferry Road in the study area.

Regional access to the subject site is provided by a full-access interchange at the Reagan Memorial Tollway (Interstate 88) and Illinois Route 59, which is located more than one-half mile southwest of the subject site. Illinois Route 59 supports regional north-south access to the study area. From the south, access to the site is provided via Raymond Drive. East-west access is provided by Ferry Road, which is located along the southern boundary of the site.

2.2. Existing Roadway Characteristics

A field investigation was conducted within the study area along Ferry Road, Raymond Drive, Corporate Lane, Monarch Drive, and CityGate Lane. As a result of this visit, the following information was obtained about the existing roadway network.

Ferry Road is classified as a Minor Arterial by the Illinois Department of Transportation (IDOT). Within the study area, Ferry Road generally provides two through lanes in each direction with dedicated left-turn lanes at all full-access intersections. In some locations, a landscaped center median is provided. At its signalized intersection with East Corporate Lane/Raymond Drive, Ferry Road provides a dedicated left-turn lane, one dedicated through lane, and one shared through/right-turn lane on the east leg; a dedicated left-turn lane, two through lanes, and a dedicated right-turn lane are provided on the west leg. At its unsignalized intersections with West Corporate Lane/Comfort Drive and Monarch Drive/CityGate Lane, Ferry Road provides a dedicated left-turn lane, one dedicated through lane, and a shared through/right-turn lane in each direction. Through the study area, the posted speed limit on Ferry Road is 45 miles per hour (MPH). Ferry Road is under the jurisdiction of DuPage County Division of Transportation (DuDOT).

Raymond Drive is a north-south roadway that is categorized by IDOT as a Minor Arterial. Raymond Drive extends south from Ferry Road to its terminus at Illinois Route 34 (Ogden Avenue). At its signalized intersection with Ferry Road, Raymond Drive provides a dedicated left-turn lane, one through lane, and a channelized right-turn lane on the south leg. Raymond Drive has a posted speed limit of 45 MPH and is under the jurisdiction of DuDOT.

Corporate Lane is a two-lane loop roadway that provides access to industrial warehouse/distribution developments fronting the roadway. At its signalized east intersection with Ferry Road, Corporate Lane (identified in this report as East Corporate Lane) aligns opposite Raymond Drive and provides a dedicated left-turn lane and a shared through/right-turn lane on the north leg. At its unsignalized west intersection with Ferry Road, Corporate Lane (identified in this report as West Corporate Lane) provides a dedicated left-turn and a shared through/right-turn lane on the north leg. Minor-leg stop-control is provided on West Corporate Lane at its intersection with Ferry Road. Near the northeast corner of the site, Corporate Lane intersects with Private Drive, an east-west access which extends west to Monarch Drive. No speed limit is posted along Corporate Lane, so for purposes of this analysis, a 25 MPH speed limit was assumed. Corporate Lane is a local roadway under the jurisdiction of the City of Naperville.

Private Drive is an east-west, two-lane asphalt roadway that runs along the northern half of the subject parcel and terminates at the east and west site boundaries. At its east end, Private Drive terminates at Corporate Lane. To the west, Private Drive provides secondary emergency access to Monarch Landing. Access to the proposed development would be provided via the existing intersection of Private Drive/Corporate Lane. Stop-control is currently provided on eastbound Private Drive at its intersection with Corporate Lane. For purposes of this analysis, a 25 MPH speed limit was assumed.

Monarch Drive is a two-lane private access driveway to Monarch Landing. At its intersection with Ferry Road, Monarch Drive provides a shared left-turn/through lane and a dedicated right-turn lane on the north leg. Stop-control is currently posted on southbound Monarch Drive at its intersection with Ferry Road. No speed limit is posted; for purposes of this analysis, a 25 MPH speed limit was assumed.

CityGate Lane is a north-south, two-lane private access driveway located opposite Monarch Drive. This private roadway provides access to CityGate, a commercial development located on the southeast quadrant of Ferry Road/Illinois Route 59. At its unsignalized intersection with Ferry Road, CityGate Lane provides a dedicated left-turn lane and a shared through/right-turn lane on the south leg. Stop-control is currently posted on northbound CityGate Lane at its intersection with Ferry Road. No speed limit is posted, so for purposes of this analysis, a 25 MPH speed limit was assumed.

Comfort Drive is located opposite West Corporate Lane and provides access to the commercial uses on the south side of Ferry Road. Comfort Lane provides a single travel lane in each direction and a landscaped center median. At its unsignalized intersection with Ferry Road, Comfort Drive provides a dedicated left-turn lane, one through lane, and a dedicated right-turn lane on the south leg. Stop-control is posted on northbound Comfort Drive at its intersection with Ferry Road. No speed limit is posted, so for purposes of this analysis, a 25 MPH speed limit was assumed. Comfort Drive is a local roadway under the jurisdiction of the City of Naperville.

2.3. Traffic Count Data

Weekday turning movement count data was collected in June 2017 at the following study intersections. To supplement the weekday data collection effort, Saturday turning movement count data was collected in February 2018.

- Ferry Road / East Corporate Lane / Raymond Drive
- Ferry Road / West Corporate Lane / Comfort Drive
- Ferry Road / Monarch Drive / CityGate Lane
- Corporate Lane / Private Drive

Counts were performed during the weekday morning and evening peak periods (7:00-9:00AM and 4:00-6:00PM, respectively), and during the Saturday midday peak period (11:00AM-1:00PM). The traffic counts reveal that peak traffic conditions take place within the study area from 7:30-8:30AM and 4:30-5:30PM during the weekday, and from 12:00-1:00PM on Saturday. For purposes of the analysis, the traffic count data was rounded to the nearest multiple of five and balanced through the study roadway network. Due to the presence of multiple existing driveways between Ferry Road/West Corporate Lane/Comfort Drive and Ferry Road/East Corporate Lane/Raymond Drive, the existing traffic count data was not balanced between these two study intersections. Similarly, the existing traffic count data was not balanced between the intersection of Corporate Lane/Private Drive and Ferry Road/East Corporate Lane/Raymond Drive in order to account for traffic at the existing driveways along Corporate Lane. Peak hour traffic volumes are summarized on **Exhibit 2**. Additionally, in order to conduct a traffic signal warrant analysis per the Manual on Uniform Traffic Control Devices (MUTCD), 12-hour turning movement counts were collected in May 2018 at the intersection of Ferry Road/West Corporate Lane/Comfort Drive from 7:00 AM to 7:00 PM on a typical weekday. A summary of the count data can be found in the study appendix.

Existing traffic volumes reveal that traffic volumes along Ferry Road are predominantly traveling in the eastbound direction during the morning peak hour and in the westbound direction during the evening peak hour. During the Saturday midday peak hour, traffic volumes on Ferry Road are generally evenly balanced in each direction. Traffic volumes on Corporate Lane are relatively balanced in each direction during the morning and evening peak hours.

2.4. Existing Capacity Analysis

Existing intersection capacity was evaluated with the use of Synchro capacity analysis software. The capacity of an intersection quantifies its ability to accommodate traffic volumes and is expressed in terms of level of service (LOS), measured in average delay per vehicle. LOS grades range from A to F, with LOS A as the highest (best traffic flow and least delay), LOS E as saturated or at-capacity conditions, and LOS F as the lowest (oversaturated conditions). The lowest LOS grade typically accepted by jurisdictional transportation agencies in Northeastern Illinois is LOS D.

The LOS grades shown below, which are provided in the Transportation Research Board's Highway Capacity Manual (HCM), quantify and categorize the driver's discomfort, frustration, fuel consumption, and travel times experienced as a result of intersection control and the resulting traffic queuing. A detailed description of each LOS rating can be found in **Table 2.1**.

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EXHIBIT 2

EXISTING (2017/2018) TRAFFIC VOLUMES

Table 2.1. Level of Service Grading Descriptions[1]

Level of Service	Description
A	Minimal control delay; traffic operates at primarily free-flow conditions; unimpeded movement within traffic stream.
B	Minor control delay at signalized intersections; traffic operates at a fairly unimpeded level with slightly restricted movement within traffic stream.
C	Moderate control delay; movement within traffic stream more restricted than at LOS B; formation of queues contributes to lower average travel speeds.
D	Considerable control delay that may be substantially increased by small increases in flow; average travel speeds continue to decrease.
E	High control delay; average travel speed no more than 33 percent of free flow speed.
F	Extremely high control delay; extensive queuing and high volumes create exceedingly restricted traffic flow.

1 – Highway Capacity Manual 2010

The range of control delay for each rating (as detailed in the HCM) is shown in **Table 2.2**.

Table 2.2. Level of Service Grading Criteria[1]

Level of Service	Average Control Delay (s/veh) at:	
	Unsignalized Intersections	Signalized Intersections
A	0 – 10	0 – 10
B	> 10 – 15	> 10 – 20
C	> 15 – 25	> 20 – 35
D	> 25 – 35	> 35 – 55
E	> 35 – 50	> 55 – 80
F[2]	> 50	> 80

1 – Highway Capacity Manual 2010

2 – All movements with a Volume to Capacity (v/C) ratio greater than 1 receive a rating of LOS F.

Based on these standards, capacity results were identified for the study intersections under existing conditions. In order to evaluate existing traffic operation, the signal timings for the Ferry Road/East Corporate Lane/Raymond Drive intersection were obtained from field timings conducted during the traffic count data collection previously described in *Section 2.3. Traffic Count Data*. Right-turn-on-red (RTOR) movements were included in the analysis. The results estimated for the unsignalized study intersections along Ferry Road are based on a conservative analysis as the effects of platooned vehicle progression that results from the signalized intersection of Ferry Road/Illinois Route 59 are not included in this study. Vehicle platooning often increases the number of gaps available to minor-street vehicles, thereby reducing actual vehicle delay relative to the results projected by the model; therefore, the results contained within this study can be considered conservative.

A summary of the existing capacity results is provided in **Table 2.3** on the following page. In this table, operation on each approach is quantified according to the average delay per vehicle and the corresponding level of service. Overall intersection operation is reported for the signalized intersection of Ferry Road/East Corporate Lane/Raymond Drive.

Table 2.3. Existing (Year 2017/2018) Levels of Service

Intersection	AM Peak Hour		PM Peak Hour		Saturday	
	Delay (s/veh)	LOS	Delay (s/veh)	LOS	Delay (s/veh)	LOS
Ferry Road / East Corporate Lane / Raymond Drive ★						
Northbound	41	D	56	E	30	C
Southbound	44	D	56	E	39	D
Eastbound	21	C	28	C	10+	B
Westbound	22	C	24	C	9	A
Intersection	*28*	*C*	*34*	*C*	*18*	*B*
Ferry Road / West Corporate Lane / Comfort Drive △						
Northbound	36	E[1]	45	E[1]	14	B
Southbound	38	E[1]	18	C[1]	10+	B
Eastbound (Left)	9	A	13	B	8	A
Westbound (Left)	13	B	9	A	9	A
Ferry Road / CityGate Lane / Monarch Drive △						
Northbound	> 120	F	103	F	13	B
Southbound	31	D[1]	29	D[1]	16	C
Eastbound (Left)	9	A	13	B	8	A
Westbound (Left)	15	B	8	A	8	A
Corporate Lane / Private Drive △						
Northbound (Left)	7	A	7	A	7	A
Eastbound	8	A	8	A	8	A
Westbound (Left)	8	A	7	A	7	A

★ – Signalized Intersection
△ – Minor-Leg Stop-Controlled Intersection
1 – Left-turn movement operates at LOS F.

The signalized intersection of Ferry Road/East Corporate Lane/Raymond Drive currently operates at LOS C or better during each peak hour. During the evening peak hour, the northbound and southbound approaches operate at LOS E. The delay is largely a function of the relatively high signal cycle length (150 seconds) and priority given to east-west traffic flow along Ferry Road. As a result, long periods of green time are allocated to the east-west through movements (greater than the 55 second threshold for LOS E) and the minor street approaches receive relatively short green times. Therefore, the northbound and southbound approaches exhibit high average delay and operate at LOS E. The estimated 95th percentile queue for the northbound left-turn movement is approximately 350 feet during the evening peak hour, which exceeds the available 230-foot storage bay. Field observations confirmed queue spillback from the existing northbound left-turn lane during the evening peak hour. The 95th percentile queue for the westbound left-turn movement exceeds the available 250-foot storage bay during both the morning and evening peak hours. Similarly, the 95th percentile queue for the eastbound right-turn movement exceeds the existing 135-foot storage bay during the weekday peak hours. Queue spillback from the existing storage lanes provided for the westbound left-turn and eastbound right-turn movements were also confirmed during peak hour field observations.

At its unsignalized intersection with Ferry Road, West Corporate Lane operates at LOS E during the morning peak hour and LOS C during the evening peak hour. On the south side of the street, Comfort Drive operates at LOS E during both weekday peak hours. During the Saturday midday peak hour, the northbound and southbound approaches operate at LOS B. For the weekday peak hours, the high average delay estimated for the northbound and southbound approaches is not unusual for a minor-street stop-controlled intersection with a heavily traveled arterial such as Ferry Road. During the weekday morning and Saturday midday peak hours, the 95th percentile queue estimated for each lane group is one vehicle or less. During the weekday evening peak hour, the 95th percentile queue for the northbound left-turn is approximately four vehicles; all other lane groups have an estimated 95th percentile queue of one vehicle or less.

At the unsignalized intersection of Ferry Road/CityGate Lane/Monarch Drive, the northbound approach operates at LOS F during the weekday peak hours. The southbound left-turn movement also operates at LOS F during the weekday peak hours. As noted previously, this delay is not unusual for a minor-street stop-controlled intersection with a heavily traveled roadway such as Ferry Road. The 95th percentile queue for the northbound left-turn movement is approximately four vehicles during the morning peak hour and nine vehicles during the evening peak hour. During evening peak hour field observations, the peak queue observed for the northbound left-turn movement was four vehicles; therefore, the 95th percentile queue reported by Synchro is considered conservative. All other lane groups at this intersection have estimated 95th percentile queue of one vehicle or less during the peak hours analyzed.

The unsignalized intersection of Corporate Lane/Private Drive operates at LOS A with a 95th percentile queue less than one vehicle during each peak hour.

3. FUTURE CONDITIONS

This section of the report outlines the proposed site plan, summarizes site-specific traffic characteristics, and develops future traffic projections for analysis.

3.1. Development Characteristics & Site Access

The proposed development totals approximately 221,300 square feet and includes two ice rinks and an approximately 6,600 square-foot restaurant. The ice rinks are expected to support youth hockey activities, including practices, games, and tournaments. In addition, the ice rinks will be designed to accommodate a junior hockey team. The estimated capacity when both ice rinks are in use is 4,600 seats. While the primary intent of the development is to support youth ice hockey and junior hockey team practices and games, the development provides flexibility for unique entertainment events with an estimated maximum capacity up to 6,600 people. The maximum capacity of 6,600 people is for unique events and is not characteristic of typical operations; and therefore, will be addressed through a separate traffic management plan as defined in the *Recommendations & Conclusion* section of this report.

For purposes of this analysis, a seating capacity of 4,600 was assumed. This is considered a conservative approach as typical youth hockey games, practices, and tournaments are not expected to reach this seating capacity. Typical youth hockey practices average approximately 10 to 15 spectators and typical (i.e., non-tournament) youth hockey games average between 50 to 100 spectators. Furthermore, the average attendance for a junior hockey game in the Chicagoland area is currently approximately 1,000 spectators.

Proposed access to the development would be provided via two full-access driveways to Corporate Lane (Access A and Private Drive). Loading activity would occur via an internal corridor planned between the north and south ice rinks. Access to the loading area would be provided via both Access A and Private Drive.

While the subject property is largely undeveloped, a parking facility for the adjacent Monarch Landing development currently occupies a portion of the site. The existing parking facility would be removed to accommodate the proposed development.

3.2. Site Trip Generation

Trip generation was calculated for this development based on data in the Institute of Transportation Engineer (ITE) manual titled Trip Generation, Tenth Edition. Trip generation data for the proposed land uses is shown in **Table 3.1**. For purposes of estimating trips for the proposed ice hockey facility, ITE Land Use Code (LUC) 465, Ice Skating Rink, was selected. ITE data provided for the variable "seats" was used as it provides a more conservative estimate of site-generated trips as compared to data provided for the other variables (i.e., 1,000 square feet or number of rinks). For purposes of a conservative analysis, site-generated trips were also calculated for the proposed restaurant use. Although the restaurant is expected to be ancillary to the ice rinks, the restaurant will be open to the

public during events. Data provided for LUC 931, Quality Restaurant, was selected to calculate the trip generation for this use. Copies of the ITE data are provided in the appendix.

Table 3.1. ITE Trip Generation Data

ITE Land Use	Unit	Weekday			Saturday
		Daily	AM Peak Hour	PM Peak Hour	Midday Peak Hour
Ice Skating Rink (465)	Per Seat	1.26 50% in/50% out	0.01 37% in/63% out	0.07 60% in/40% out	0.15 53%in/47% out
Quality Restaurant (931)	Per 1,000 sq. ft.	83.84 50% in/50% out	0.73 100% in/0% out[1]	7.80 67% in/33% out	10.68 59%in/41% out

1 – ITE data not provided. Assumed 100 percent inbound trips during the morning peak hour.

Based on the data shown above, site-generated traffic projections were calculated for the proposed development. The site-generated peak hour trips were rounded to the nearest multiple of five for the purposes of this analysis, and daily volumes were rounded to the nearest multiple of 10. A summary of the projected site trips is provided in **Table 3.2**.

Table 3.2. Site-Generated Traffic Projections

Land Use	Size	Weekday							Saturday		
		Daily	AM Peak			PM Peak			Midday Peak		
			In	Out	Total	In	Out	Total	In	Out	Total
Ice Skating Rink (LUC 465)	4,600 seats	5,800	15	30	45	195	130	325	365	325	690
Restaurant (LUC 931)	6,600 sq. ft.	550	5	-	5	35	15	50	40	30	70
Total		6,350	20	30	50	230	145	375	405	355	760

3.3. Directional Distribution

The estimated distribution of site-generated traffic on the surrounding roadway network as it approaches and departs the site is a function of several variables, such as the nature of surrounding land uses, prevailing traffic volumes/patterns, characteristics of the street system, and the ease with which motorists can travel over various sections of that system. In the case of the proposed development, anticipated tenant(s) and planned operational characteristics were considered to determine the anticipated directional distribution. Based on information available at the time of this study, it is anticipated that a majority of site-generated traffic would travel along Ferry Road to/from the west. The anticipated directional distribution is outlined in **Table 3.3**.

Table 3.3. Estimated Trip Distribution

Traveling to/from:	Percentage of Site Trips
West on Ferry Road	70%
East on Ferry Road	15%
South on Raymond Drive	15%
Total	100%

Using the traffic volume projections and estimated trip distributions presented in Table 3.2 and Table 3.3, the site trip assignment was prepared. The peak hour site traffic assignment is presented in **Exhibit 3**.

3.4. Future Capacity Analysis

The proposed redevelopment is expected to be constructed by Year 2019; Kimley-Horn therefore evaluated future traffic conditions for a Year 2024 design horizon (build-plus-five conditions).

Background Traffic Growth

Based on information received from the Chicago Metropolitan Agency for Planning (CMAP), traffic growth on Ferry Road is projected at a compounded rate of roughly 2.24 percent annually. Growth on Raymond Drive is projected at 1.73 percent annually. Since the existing industrial properties along Corporate Lane are largely built-out, a growth rate was not applied to the existing traffic volumes on this roadway. Similarly, a growth rate was not applied to the existing driveways in the study area. The resulting traffic projections background traffic volumes are presented in **Exhibit 4**. An official letter from CMAP documenting the projected Year 2040 traffic volume on the study roadways is included in the appendix.

Based on the anticipated traffic volumes, the results of capacity analysis for Year 2024 no-build conditions are summarized in **Table 3.4**. Future conditions were evaluated based on existing lane geometry and traffic signal timings obtained from field observations as described in *Section 2.4 Existing Capacity Analysis*.

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EXHIBIT 3

SITE TRIP ASSIGNMENT

Kimley»Horn

EXHIBIT 4

FUTURE (2024) NO-BUILD TRAFFIC PROJECTIONS

Table 3.4. Future (Year 2024) No-Build Levels of Service

Intersection	AM Peak Hour		PM Peak Hour		Saturday	
	Delay (s/veh)	LOS	Delay (s/veh)	LOS	Delay (s/veh)	LOS
Ferry Road / East Corporate Lane / Raymond Drive ★						
Northbound	40	D	72	E[1]	29	C
Southbound	44	D	56	E	39	D
Eastbound	30	C	40	D	11	B
Westbound	31	C	32	C	10-	A
Intersection	*33*	*C*	*45*	*D*	*18*	*B*
Ferry Road / West Corporate Lane / Comfort Drive △						
Northbound	61	F	109	F	15	B
Southbound	32	D[1]	22	C[1]	11	B
Eastbound (Left)	9	A	16	C	8	A
Westbound (Left)	15	B	9	A	9	A
Ferry Road / CityGate Lane / Monarch Drive △						
Northbound	> 120	F	>120	F	14	B
Southbound	47	E[1]	47	E[1]	17	C
Eastbound (Left)	9	A	15	B	8	A
Westbound (Left)	18	C	9	A	8	A
Corporate Lane / Private Drive △						
Northbound (Left)	7	A	7	A	7	A
Eastbound	8	A	8	A	8	A
Westbound (Left)	8	A	7	A	7	A

★ – Signalized Intersection
△ – Minor-Leg Stop-Controlled Intersection
1 – Left-turn movement operates at LOS F.

With increased background traffic volume within the study area, increased delay is projected for some approaches and left-turn movements at the study intersections. The results projected for the unsignalized study intersections along Ferry Road are based on a conservative analysis as the effects of platooned vehicle progression that results from the signalized intersection of Ferry Road/Illinois Route 59 are not included in this study.

In the future no-build scenario, the intersection of Ferry Road/East Corporate Lane/Raymond Drive is expected to operate at LOS D or better during each peak hour analyzed. Similar to existing conditions, during the evening peak hour the northbound and southbound approaches are expected to operate at LOS E. Again, this is largely a function of the relatively high signal cycle length (150 seconds) and priority given to east-west traffic flow along Ferry Road. The projected 95th percentile queue for the northbound left-turn movement is expected to continue to exceed the available storage during the evening peak hour. Projected 95th percentile queues for the westbound left-turn and eastbound right-turn movements are also expected to continue to exceed the available storage during the weekday peak hours.

With the addition of background traffic volume, the intersections of Ferry Road/West Corporate Lane/Comfort Drive and Ferry Road/CityGate Lane/Monarch Drive are expected to experience increased delay and longer 95th percentile queues on the northbound and southbound approaches. At the intersection of Ferry Road/West Corporate Lane/Comfort Drive, the 95th percentile queues projected for the northbound left-turn movement is approximately nine vehicles during the evening peak hour; the 95th percentile queues projected for the southbound left- and right-turn movements are less than four vehicles during this same peak hour. At the intersection of Ferry Road/CityGate Lane/Monarch Drive, the 95th percentile queue projected for the northbound left-turn movement is approximately 5 vehicles during the morning peak hour and 15 vehicles during the evening peak hour. The 95th percentile queues for the other lane groups at this intersection are projected to be approximately one vehicle or less. During the Saturday midday peak hour, these intersections are expected to operate with delay similar to existing conditions. As background traffic growth was not applied to the intersection of Corporate Lane/Private Drive, operations at this intersection are consistent with existing conditions.

Future Build Traffic Projections

Total traffic projections for Year 2024 were calculated by adding site trips (Exhibit 3) to the background traffic volumes (Exhibit 4). Traffic projections for the Year 2024 future build scenario are illustrated in **Exhibit 5**.

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EXHIBIT 5

FUTURE (2024) BUILD TRAFFIC PROJECTIONS

For the analysis of future traffic conditions, turn lane warrants were evaluated at the proposed site driveways using guidelines in the IDOT *Bureau of Design and Environment (BDE) Manual*. Although Ferry Road is under DuDOT jurisdiction and Corporate Lane is under City of Naperville jurisdiction, these agencies do not have their own standards for the implementation of new turn lanes at intersections; therefore, IDOT standards were used for guidance in the evaluation of turn lanes at the site access driveways.

Based on the volume guidance outlined in the *BDE Manual*, a westbound right-turn lane is warranted on Ferry Road at East Corporate Lane during the morning peak hour in the existing condition. Although the addition of background traffic growth and site-generated traffic are expected to contribute additional traffic to this intersection, there are no known improvement plans; and therefore, a westbound right-turn lane was excluded from the analysis of future conditions. A westbound right-turn lane was also evaluated for Ferry Road at West Corporate Lane. Based on the criteria provided for a four-lane highway with a design speed of 50 MPH, a westbound right-turn lane should be considered based on the volume of traffic projected during the evening peak hour. According to the *BDE Manual*, the recommended storage length is 215 feet with a 220-foot taper; however, in order to avoid conflict with an existing driveway to Ferry Road, a 200-foot storage lane with a 50-foot taper is recommended.

A northbound left-turn lane was evaluated for Corporate Lane at Access A and Private Drive. While the *BDE Manual* does not provide specific guidance for left-turn lanes on two-lane roadways with a 30 MPH design speed, a review of the volume guidelines for left-turn lanes on roadways with a 40 MPH design speed was completed. Based on the existing traffic volumes on Corporate Lane (Exhibit 2) and the estimated site trip assignment (Exhibit 3), a northbound left-turn lane should be considered at Access A during the Saturday midday peak hour. However, as this analysis represents a conservative estimate of site-generated traffic and the warrant criteria is met during the Saturday midday peak hour when use of the existing development along Corporate Lane is limited, a northbound left-turn lane was excluded from the analysis of Corporate Lane at Access A.

In addition, a southbound right-turn lane was evaluated for Corporate Lane at Access A. Based on the *BDE Manual* criteria for a two-lane roadway with a design speed below 50 MPH, a minimum right-turn volume of more than 40 vehicles is necessary to warrant a right-turn lane. Based on the estimated site trip assignment, a southbound right-turn lane is not warranted and therefore was not included in the analysis of future conditions.

At Access A, a single inbound and single outbound lane is recommended. At Private Drive, a single inbound and separate outbound through and right-turn lanes are recommended in order to facilitate outbound traffic. Minor-leg stop control is recommended for Access A (stop-control is currently posted on eastbound Private Drive at Corporate Lane).

Signal Warrant Analysis

In addition to the turn lane warrants, signal warrant analyses were performed according to criteria set by the Manual on Uniform Traffic Control Devices (MUTCD) for existing traffic data and future traffic projections at the intersection of Ferry Road/West Corporate Lane. For the purposes of this evaluation, all warrants referenced in the MUTCD were considered and are listed below.

- Warrant 1: Eight-Hour Vehicular Volume
- Warrant 2: Four-Hour Vehicular Volume
- Warrant 3: Peak Hour
- Warrant 4: Pedestrian Volume
- Warrant 5: School Crossing
- Warrant 6: Coordinated Signal System
- Warrant 7: Crash Experience
- Warrant 8: Roadway Network
- Warrant 9: Intersection Near a Grade Crossing

To perform these signal warrant analyses for existing conditions, the 12-hour turning movement counts described under *Section 2.3 Data Collection* were used. For the future traffic conditions, growth rates were applied to the existing 12-hour count data as outlined in *Section 3.4 Future Capacity Analysis* and combined with site-generated traffic volumes. In order to estimate site-generated traffic beyond the peak hour projections depicted in Table 3.2 and Exhibit 3, typical IDOT practice allows a signal warrant to be evaluated by reducing evening peak hour trip generation volumes to 55 percent of their projected total to represent the minimum volume during a given eight-hour period. Minor-street right-turning volumes were also reduced at the study intersections in accordance with Pagone's Theorem, per IDOT requirements. These reduced volumes were compared to MUTCD criteria for signal warrant analysis.

Warrant 1: Eight-Hour Vehicular Volume

In order to meet MUTCD standards for the installation of a traffic signal under Warrant 1, traffic volumes must meet the criteria for Condition A (Minimum Vehicular Volume) or Condition B (Interruption of Continuous Traffic). Per MUTCD, Condition A is intended for locations where a large volume of intersecting traffic is present; Condition B is intended for locations where Condition A is not met, and where the traffic volume on the major street is so heavy that traffic on the minor street experiences excessive delay or conflict when entering the intersection.

According to the criteria outlined in Table 4C-1 of the MUTCD, and based on the existing characteristics of the study intersection, traffic volumes must meet the following criteria for Warrant 1 for at least eight hours on an average day.

- Condition A: 420 vehicles per hour (VPH) on Ferry Road (major street); 105 VPH on highest volume approach of Corporate Lane (minor street); or
- Condition B: 630 vehicles per hour (VPH) on Ferry Road (major street); 53 VPH on highest volume approach of Corporate Lane (minor street)

The traffic volumes collected on May 2nd were compared to these criteria. As shown in **Table 3.5**, the existing traffic volumes do not meet the criteria for Condition A for any hour, but meet the criteria for Condition B for two hours on an average day. The qualifying hours do not meet the eight-hour minimum requirement; therefore, a traffic signal is not warranted under Condition A or Condition B for existing conditions.

Table 3.5. Signal Warrant 1 – Condition A and Condition B (Existing Conditions)

Hour	Major Street Volume (sum of both approaches)			Minor Street Volume (high volume approach)			Warrant 1A Criteria		Warrant 1B Criteria		Results	
	East	West	Total	North	South	High Volume*	Major > 420	Minor > 105	Major > 630	Minor > 53	Warrant 1A	Warrant 1B
7:00 AM	1103	596	1699	8	18	7	Yes	No	Yes	No	No	No
8:00 AM	929	500	1429	14	6	7	Yes	No	Yes	No	No	No
9:00 AM	521	344	865	11	14	7	Yes	No	Yes	No	No	No
10:00 AM	296	285	581	26	15	14	Yes	No	Yes	No	No	No
11:00 AM	330	337	667	41	36	25	Yes	No	Yes	No	No	No
12:00 PM	400	392	792	37	45	21	Yes	No	Yes	No	No	No
1:00 PM	355	416	771	30	26	17	Yes	No	Yes	No	No	No
2:00 PM	358	468	826	37	21	23	Yes	No	Yes	No	No	No
3:00 PM	407	690	1097	66	57	42	Yes	No	Yes	No	No	No
4:00 PM	591	1137	1728	126	72	68	Yes	No	Yes	Yes	No	Yes
5:00 PM	546	1054	1600	122	73	58	Yes	No	Yes	Yes	No	Yes
6:00 PM	363	653	1016	42	25	24	Yes	No	Yes	No	No	No
										Total Hours Signal Warrant Met	0	2

**Volume after right-turn reduction*

Future (Year 2024) traffic volumes were also compared to the above criteria. As shown in **Table 3.6**, the future traffic volumes meet the criteria for Condition A for one hour on an average day and meet the criteria for Condition B for eight hours. The qualifying hours meet the eight-hour minimum requirement for Condition B; therefore, a traffic signal is warranted under Condition 1B for future conditions.

Table 3.6. Signal Warrant 1 – Condition A and Condition B (Future Conditions)

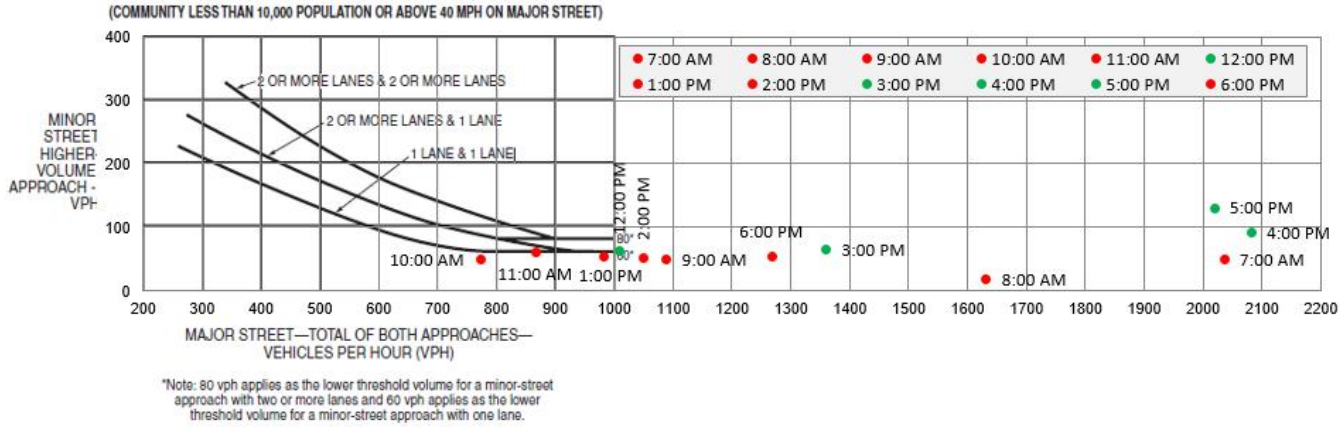
Hour	Major Street Volume (sum of both approaches)			Minor Street Volume (high volume approach)			Warrant 1A Criteria		Warrant 1B Criteria		Results	
	East	West	Total	North	South	High Volume*	Major > 420	Minor > 105	Major > 630	Minor > 53	Warrant 1A	Warrant 1B
7:00 AM	1341	694	2035	8	98	51	Yes	No	Yes	No	No	No
8:00 AM	1065	566	1631	14	36	20	Yes	No	Yes	No	No	No
9:00 AM	679	409	1088	11	94	50	Yes	No	Yes	No	No	No
10:00 AM	426	347	773	26	95	51	Yes	No	Yes	No	No	No
11:00 AM	463	403	866	41	116	61	Yes	No	Yes	Yes	No	Yes
12:00 PM	540	467	1007	37	125	64	Yes	No	Yes	Yes	No	Yes
1:00 PM	489	492	981	30	106	56	Yes	No	Yes	Yes	No	Yes
2:00 PM	496	552	1048	37	101	54	Yes	No	Yes	Yes	No	Yes
3:00 PM	553	806	1359	66	137	67	Yes	No	Yes	Yes	No	Yes
4:00 PM	763	1318	2081	126	152	93	Yes	No	Yes	Yes	No	Yes
5:00 PM	782	1236	2018	122	218	132	Yes	Yes	Yes	Yes	Yes	Yes
6:00 PM	503	764	1267	42	105	56	Yes	No	Yes	Yes	No	Yes
										Total Hours Signal Warrant Met	1	8

**Volume after right-turn reduction*

Warrant 2: Four-Hour Vehicular Volume

Per MUTCD, the Four-Hour Vehicular Volume signal warrant is intended for locations where the volume of intersecting traffic is the primary reason to evaluate a traffic signal. In order to meet the Warrant 2 standards for the installation of a traffic signal, traffic volumes must meet the criteria for Warrant 2 for at least four hours on an average day. The traffic volumes presented in Table 3.5 and Table 3.6 for the Warrant 1 analysis were compared to the Warrant 2 criteria outlined in Figure 4C-2 of the MUTCD. Based on this comparison, existing traffic volumes at Ferry Road/Corporate Lane are shown to not meet the criteria for any hour on an average weekday; therefore, a traffic signal is not warranted under Warrant 2 for existing conditions. Future (Year 2024) traffic volumes at Ferry Road/Corporate Lane are shown to meet the criteria for four hours; therefore, a traffic signal is warranted under Warrant 2 for future conditions. The twelve analyzed hours for future conditions are illustrated in **Figure 1**.

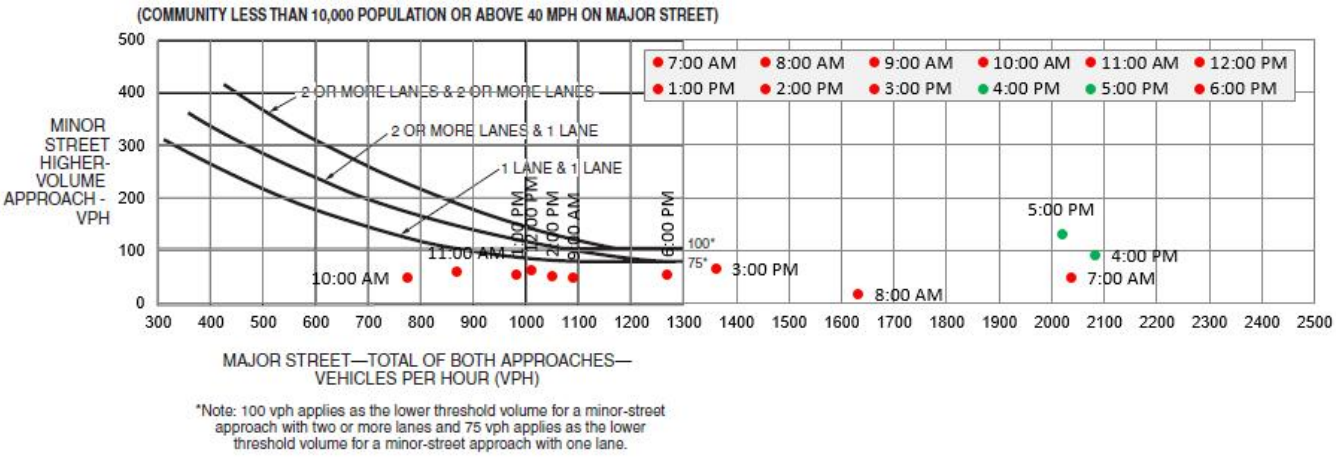
Figure 1. Warrant 2, Four-Hour Vehicular Volume



Warrant 3: Peak Hour

The Peak Hour signal warrant is intended for locations where for a minimum of one hour of an average day, the minor-street traffic suffers undue delay when entering or crossing the major street. This warrant is for office complexes, manufacturing plants, industrial complexes, or high-occupancy vehicle facilities that attract or discharge large numbers of vehicles over a short time. Because of the nature of the events that could be held at the proposed development, and the adjacent office complexes and industrial complexes, this warrant was appropriate to analyze. Since the trip generation used for this facility assumed the arena with a 4,600-seat capacity when both rinks are in use, the volumes generated would reflect that of a large event. The traffic volumes presented in in Table 3.5 and Table 3.6 for the Warrant 1 analysis were compared to the Warrant 3 criteria outlined in Figure 4C-4 of the MUTCD. Based on this comparison, existing traffic volumes at Ferry Road/Corporate Lane are shown to not meet the criteria for any hour on an average weekday; therefore, a traffic signal is not warranted under Warrant 3 for existing conditions. However, future (Year 2024) traffic volumes at Ferry Road/Corporate Lane are shown to meet the criteria for two hours; therefore, a traffic signal is warranted under future conditions. The twelve analyzed hours for future conditions are illustrated in **Figure 2**.

Figure 2. Warrant 3, Peak Hour



Warrant 4: Pedestrian Volume

The Pedestrian Volume signal warrant is intended for locations where the traffic volume on a major street creates excessive delay for pedestrians crossing the major street. In order to meet the Warrant 4 standards for the installation of a traffic signal, the following criteria must be satisfied:

- Vehicles per hour on the major street (total of both approaches) and the corresponding pedestrians per hour crossing the major street (total of all crossings) must fall above the curve depicted in Figure 4C-6 of the MUTCD for any four hours of an average day; or
- For one hour of an average day, vehicles per hour on the major street (total of both approaches) and the corresponding pedestrians per hour crossing the major street (total of all crossings) must fall above the curve depicted in Figure 4C-8 of the MUTCD.

As shown in **Figure 3** and **Figure 4**, the plotted points representing vehicles per hour and pedestrian crossings on Ferry Road from the existing counts do not meet the signal warrant criteria for any four hours (Figure 4C-6) or for one hour (Figure 4C-8) of an average day; therefore, a signal is not warranted under Warrant 4 for existing conditions.

For future conditions, it is anticipated that events with the facilities maximum capacity could require off-site parking to the south of Ferry Road in two nearby parking garages which would generate a significant increase in pedestrians traversing Ferry Road. However, in those cases, manual direction of visitors from their vehicles to the event center would likely be required for those pedestrians to utilize the Ferry Road/Corporate Lane intersection. The manual direction of pedestrians would also potentially necessitate manual traffic control at the intersection. Therefore, these large-scale events with off-site parking were not considered for the analysis of Warrant 4. As previously noted, for unique entertainment events where attendance may total up to 6,600 people, development of a traffic management plan is recommended since this would be not characteristic of typical operations. In order to meet Warrant 4 aside from unique entertainment events, pedestrian activity would need to increase from a maximum of 2 pedestrians per hour (pph) across the major street to 93 pph for the peak hour, or to 75 pph over the course of any 4 hours during the day. Even with a very conservative growth of the current pedestrian activity, Warrant 4 would not be satisfied for future conditions.

Figure 3. Warrant 4, Pedestrian Four-Hour Volume

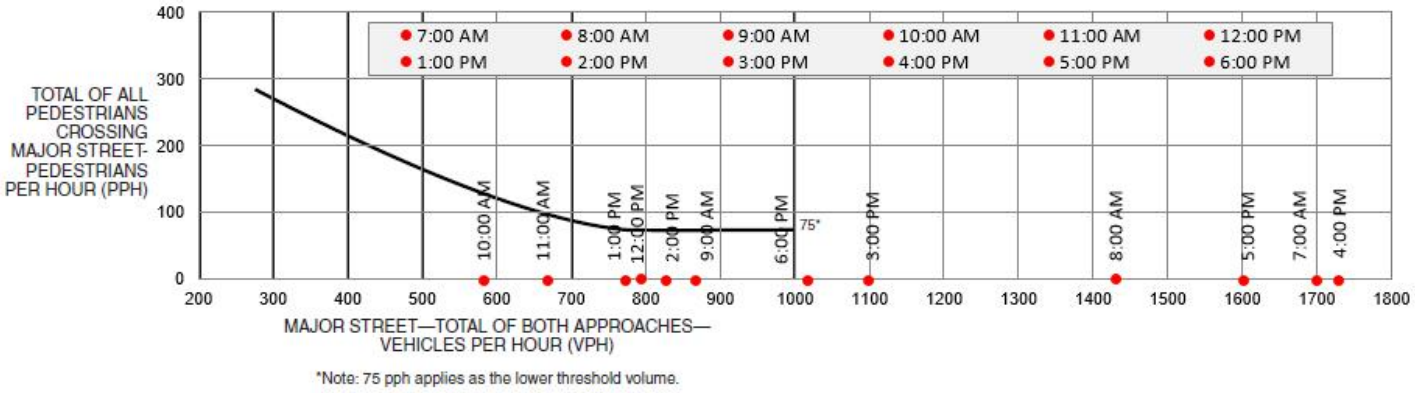
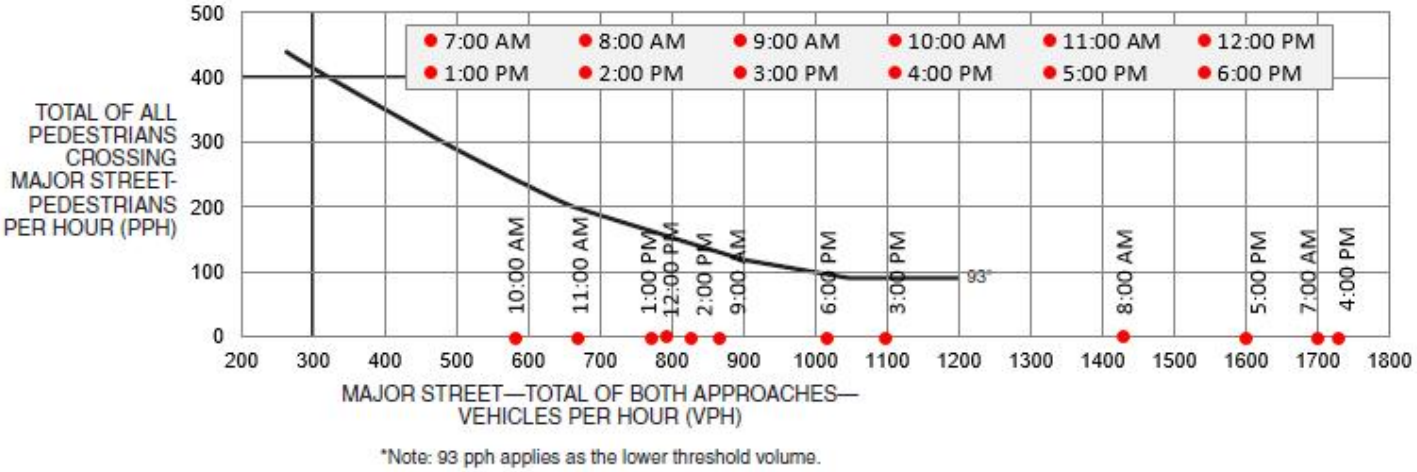


Figure 4. Warrant 4, Pedestrian Peak-Hour



Warrant 5: School Crossing

The School Crossing signal warrant measures the frequency and adequacy of gaps in vehicle traffic as related to the number and size of groups of students crossing the major street. Because no school crossing is located at or near the intersection, this warrant does not apply.

Warrant 6: Coordinated Signal System

In order to maintain proper platooning of vehicles in a coordinated signal system, the coordinated signal system warrant is used when intersections otherwise would not warrant a signal. The criteria to meet for this warrant is as follows.

- On a one-way street or a street that has traffic predominantly in one direction, the adjacent traffic control signals are so far apart that they do not provide the necessary degree of vehicular platooning.
- On a two-way street, adjacent traffic control signals do not provide the necessary degree of platooning and the proposed and adjacent traffic control signals will collectively provide a progressive operation.

Ferry Road is not a one-way street nor does it have traffic in predominantly one direction. Although the introduction of a signal at this intersection may aid in progression along Ferry Road, the primary intent for this signal would be for vehicles turning to and from the minor street, Corporate Lane. Therefore, the objective of providing the necessary degree of platooning along Ferry Road is not intended for this warrant analysis and so this warrant does not apply.

Warrant 7: Crash Experience

The Crash Experience signal warrant is intended for applications where the severity and frequency of crashes are the principal reasons to consider installing a traffic signal. The criteria required to be met for this warrant to be considered are as follows:

- Adequate trial of alternatives with satisfactory observance and enforcement has failed to reduce the crash frequency; and

- Five or more reported crashes, of types susceptible to correction by a traffic control signal, have occurred within a 12-month period, each crash involving personal injury or property damage apparently exceeding the applicable requirements for a reportable crash; and
- For each of any 8 hours of an average day, the vehicles per hour (vph) for both approaches of the major-street is 480 vph and the higher-volume minor-street approach is 120 vph, or the vph for both approaches of the major-street is 720 vph and the higher-volume minor-street approach is 60 vph, or the volume of pedestrian traffic is not less than 80 percent of the requirements specified in the Pedestrian Volume warrant. These major-street and minor-street volumes shall be for the same 8 hours. On the minor street, the higher volume shall not be required to be on the same approach during each of the 8 hours.

Crash frequency at this intersection is well below the five or more in a 12-month period based on crash data provided by City of Naperville staff. From this data, there have only been six reported crashes at this intersection in the past five years. Additionally, the pedestrian volume observed at this intersection is less than 80 percent of the required volumes for Warrant 4. As a result, this intersection does not meet all the criteria listed above, and therefore this warrant is not met.

Warrant 8: Roadway Network

The roadway network warrant is intended to be used for the intersection of two or more major routes. As described by the MUTCD, a major route shall have at least one of the following characteristics:

- It is part of the street or highway system that serves as the principal roadway network for through traffic flow.
- It includes rural or suburban highways outside, entering, or traversing a city.
- It appears as a major route on an official plan, such as a major street plan in an urban area traffic and transportation study.

Because Ferry Road and Corporate Lane both do not meet these characteristics, this warrant does not apply.

Warrant 9: Intersection Near a Grade Crossing

When an intersection approach controlled by a STOP or YIELD sign is in proximity to an at grade rail crossing, a signal can be considered. Because no at grade crossings are within the vicinity of this intersection, this warrant was does not apply.

Based on these analyses, a signal is warranted in future conditions at the intersection of Ferry Road/Corporate Lane. The above assumptions about traffic control and turn-lane recommendations were included in the build condition capacity analysis. Future capacity results for the build condition are provided in **Table 3.7**.

Table 3.7. Future (Year 2024) Build Levels of Service

Intersection	AM Peak Hour		PM Peak Hour		Saturday	
	Delay (s/veh)	LOS	Delay (s/veh)	LOS	Delay (s/veh)	LOS
Ferry Road / East Corporate Lane / Raymond Drive ✱						
Northbound	40	D	89	F	27	C
Southbound	44	D	56	E	39	D
Eastbound	34	C	54	D	19	B
Westbound	32	C	33	C	11	B
Intersection	*35*	*D*	*53*	*D*	*20+*	*C*
Ferry Road / West Corporate Lane / Comfort Drive ✱						
Northbound	45	D	50	D	29	C
Southbound	46	D	63	E	30	C
Eastbound	12	B	18	B	15	B
Westbound	1	A	15	B	31	C
Intersection	*10-*	*A*	*23*	*C*	*24-*	*C*
Ferry Road / CityGate Lane / Monarch Drive △						
Northbound	> 120	F	>120	F	21	C
Southbound	51	F	67	F	31	D
Eastbound (Left)	9	A	16	C	9	A
Westbound (Left)	18	C	9	A	9	A
Corporate Lane / Private Drive △						
Northbound (Left)	7	A	7	A	7	A
Eastbound	8	A	9	A	9	A
Westbound (Left)	8	A	7	A	7	A
Corporate Lane / Access A △						
Northbound (Left)	7	A	8	A	8	A
Eastbound	9	A	10-	A	11	B

✱ – Signalized Intersection
△ – Minor-Leg Stop-Controlled Intersection

The addition of site-generated traffic is not expected to materially impact the signalized intersection of Ferry Road/East Corporate Lane/Raymond Drive. Compared to the no-build condition, the overall LOS is projected to remain the same during the evening peak hour, but increase from LOS C to LOS D in the morning peak hour and from LOS B to LOS C in the Saturday peak hour. The deterioration in LOS is the result of approximately 2 seconds of increased delay in both scenarios. During the evening peak hour, the northbound and southbound approaches are expected to operate at LOS F and LOS E, respectively. Again, this is largely a function of the relatively high signal cycle length (150 seconds) and priority given to east-west traffic flow along Ferry Road. The projected 95th percentile queue for the northbound left-turn movement would be accommodated within the existing storage lane during the morning peak hour; however, it is expected to continue to exceed the available storage during the evening peak hour. Projected 95th percentile queues for the westbound left-turn and

eastbound right-turn movements are also expected to continue to exceed the available storage during the weekday peak hours.

With the addition of the proposed traffic signal at Ferry Road/West Corporate Lane/Comfort Drive, the overall intersection is expected to operate at LOS C or better during each peak hour. The cycle lengths for each peak hour analyzed were based on the cycle length at the adjacent Ferry Road/East Corporate Lane/Raymond Drive intersection. Delay on the northbound and southbound approach is projected to operate at LOS D during each peak hour, except for the southbound approach, which is anticipated to operate at LOS E during the weekday evening peak hour. Without the installation of a traffic signal, this approach is projected to operate at LOS F under no-build conditions. Due to the introduction of the signal, the 95th percentile queues are expected to increase for most lane groups. However, queues are not anticipated to exceed storage or extend to any upstream intersections for all movements except the northbound right-turn lane in the evening weekday peak hour which exceeds storage by approximately three vehicles. Per IDOT guidelines, right-turn on red (RTOR) is not permitted in capacity analysis so these queues are likely conservative compared to how an exclusive right-turn lane would operate at a signalized intersection.

Delay projected for the intersection of Ferry Road/CityGate Lane/Monarch Drive is expected to be similar to the no-build condition. The eastbound and westbound left-turn movements are expected to continue to operate at LOS C or better. During the evening peak hour, delay on the southbound approach is expected to increase resulting in LOS F (LOS E in the no-build condition). The projected 95th percentile queues for the eastbound and westbound left-turn movements are approximately one vehicle or less during each peak hour. The 95th percentile queues projected for the northbound and southbound turn movements are similar to those projected for the no-build condition.

As previously noted, the effects of platooned vehicle progression resulting from the signalized intersections along Ferry Road are not reflected in this analysis; therefore, the delay projected for the unsignalized intersection of Ferry Road/CityGate Lane/Monarch Drive is assumed to be conservative.

Under the future build scenario, Private Drive is projected to operate at LOS A during each peak hour; the proposed Access A is anticipated to operate at LOS B or better during each peak hour. At Access A, the projected 95th percentile queues for the northbound left-turn movement are approximately one vehicle or less during each peak hour; the 95th percentile queues on the eastbound approach are less than two vehicles during each peak hour. At Private Drive, 95th percentile queues for both the northbound left-turn movement and eastbound approach are projected to be approximately one vehicle or less.

RECOMMENDATIONS & CONCLUSIONS

Based on Kimley-Horn's review of the proposed site plan and evaluation of existing and future traffic conditions, the study intersections are expected to adequately accommodate background traffic growth, and site-generated traffic with the addition of the following mitigation measures.

- Install a new traffic signal at Ferry Road and West Corporate Lane per MUTCD and City standards
- Construct a dedicated westbound right-turn lane on Ferry Road at West Corporate Lane. Based on the spacing distance between West Corporate Lane and an existing driveway on the north side of Ferry Road, the turn lane should provide 200 feet of storage with a 50-foot taper.
- A single inbound lane and a single outbound lane should be provided for Access A.
- A single inbound lane and separate outbound through and right-turn lanes should be provided for Private Drive.
- Minor-leg stop control should be posted for outbound traffic at Access A (existing minor-leg stop control provided for eastbound Private Drive at Corporate Lane).

These mitigation measures are based on the analysis of traffic conditions for typical events, including but not limited to youth hockey activities and junior hockey team practices and games. In order to prepare for unique entertainment events where attendance may total up to 6,600 people, development of a traffic management plan is recommended. The traffic management plan would be on file with the City of Naperville and DuDOT and would likely address the following:

- Locations for manual traffic control in order to move traffic and pedestrians safely and efficiently through key intersections to/from the subject site;
- Parking plan, including attendants and indications (e.g., flags, cones, etc.) to assist motorists to the parking areas;
- Shuttle transportation from remote parking locations; and
- Temporary signage to provide wayfinding to onsite and remote parking facilities.

In addition to these recommendations, extension of turn lane storage lengths at the intersection of Ferry Road/East Corporate Lane/Raymond Drive should be considered independent of the proposed development. Based on the analysis of existing conditions, the 95th percentile queue estimated for the northbound left-turn lane on Raymond Drive at Ferry Road exceeds the available storage during the weekday evening peak hour. The 95th percentile queues estimated for the westbound left-turn lane and eastbound right-turn lane also exceed the available storage during the weekday morning and evening peak hours. This condition is expected to continue through Year 2024. Based on the right-of-way limits and proximity to the Interstate 88 overpass, extension of the storage lane or installation of dual left-turn lanes for the northbound approach should be considered independent of the proposed development. Similarly, extension of the storage bays provided for the eastbound right-turn and westbound left-turn lanes should be considered as part of any future improvements to the intersection of Ferry Road/East Corporate Lane/Raymond Drive.

Regardless of the final configuration of the intersection geometrics, several additional items should be taken into consideration when preparing roadway improvement plans for the subject development. While vertical sight distance appears to be adequate within the study area, care should be taken with landscaping, signage, and monumentation at the site access locations to ensure that adequate horizontal sight distance is provided from the new stop bars. If alterations to the site plan or land use should occur, changes to the analysis provided within this traffic impact study may be needed.

APPENDIX

Conceptual Site Plan

Existing (Year 2017/2018) Capacity Reports

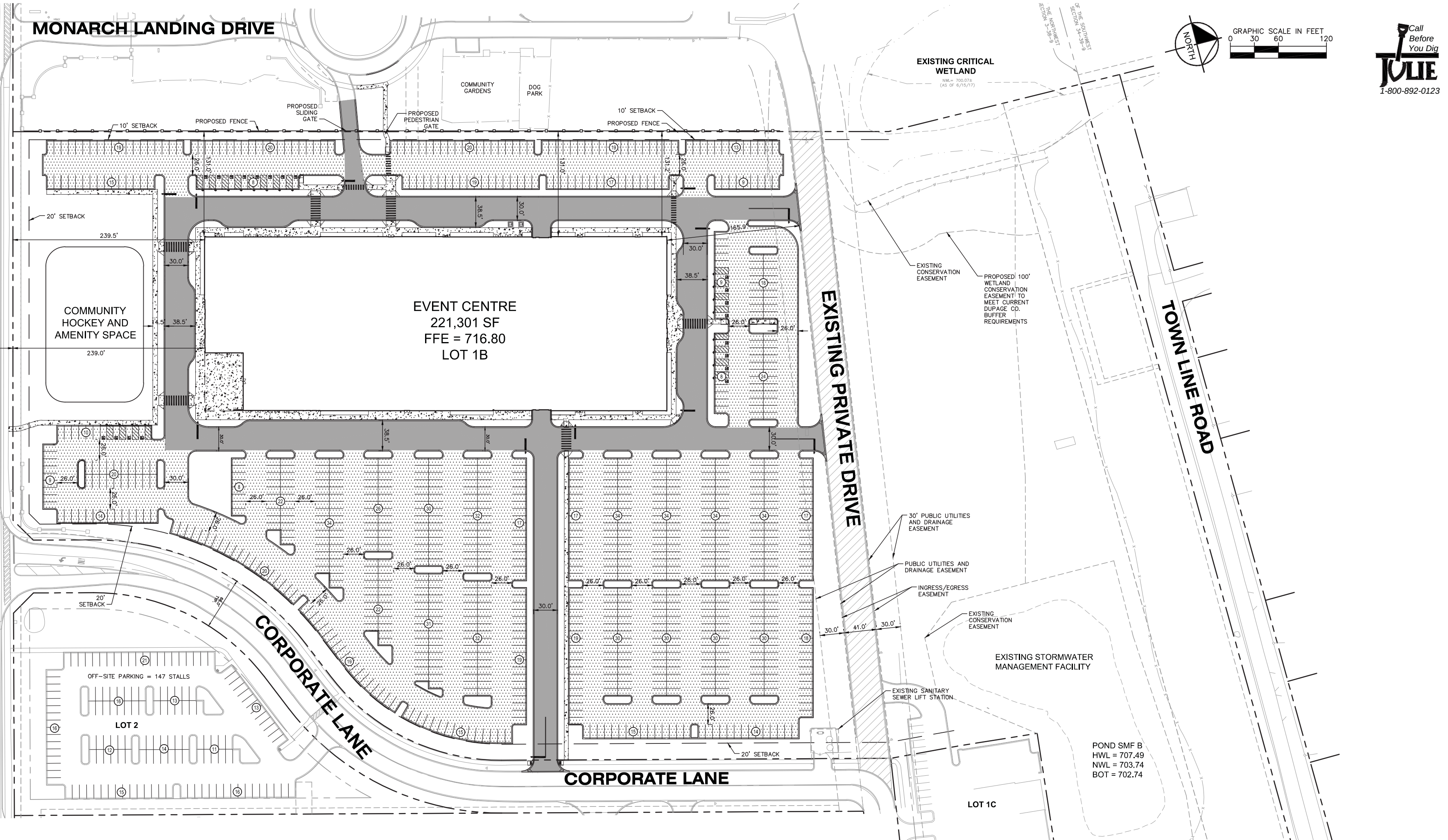
Future No-Build (Year 2024) Capacity Reports

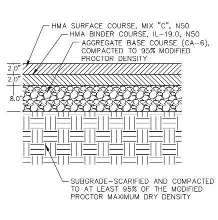
Future Build (Year 2024) Capacity Reports

Data from the ITE manual Trip Generation, Tenth Edition

Traffic Count Data

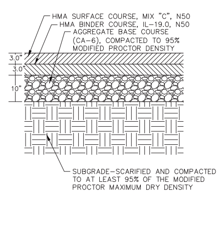
CONCEPTUAL SITE PLAN





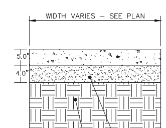
STANDARD DUTY ASPHALTIC PAVEMENT SECTION

N.T.S.



HEAVY DUTY ASPHALTIC PAVEMENT SECTION

N.T.S.



NOTES:

1. ALL SIDEWALK SHALL BE CONSTRUCTED WITH CONCRETE WITH A MINIMUM COMPRESSIVE STRENGTH OF 4,500 PSI AT 14 DAYS.
2. PROVIDE 1/2" EXPANSION JOINTS AT 20', MAXIMUM, SPACING AND FILLED WITH PREMOLDED BITUMINOUS EXPANSION JOINT FILLER MATERIAL OR REDWOOD. EXPANSION JOINTS SHALL HAVE #4 DOWELS, LUBRICATED, 18" LONG, AT 12" CENTERS, 6" FROM EDGE.
3. PROVIDE 3/8" GROOVED CONTROL JOINTS AT 5' CENTERS.
4. WELDED WIRE FABRIC (6X6–6X6) SHALL BE INSTALLED THROUGH DRIVEWAYS AT 2" ABOVE SLAB BOTTOM.
5. PROVIDE 1/2" BITUMINOUS EXPANSION JOINT FILLER MATERIAL WHERE WALK ABUTS EXISTING IMPROVEMENTS AND AT ALL CHANGES IN GRADE
6. USE 2–#4 REINFORCING BARS, 10' LONG OVER ALL UTILITY TRENCHES FOR NEW SIDEWALK AND CONNECTIONS TO EXISTING SIDEWALK.
7. AT DRIVE APPROACHES, SIDEWALK PCC AND BASE THICKNESS SHALL MATCH THAT OF THE DRIVE.

CONCRETE SIDEWALK

N.T.S.

GENERAL NOTES

1. ALL DIMENSIONS REFER TO THE FACE OF CURB UNLESS OTHERWISE NOTED.
2. BUILDING DIMENSIONS ARE TO THE OUTSIDE FACE OF BUILDING UNLESS OTHERWISE NOTED.
3. REFER TO ARCHITECTURAL AND STRUCTURAL PLANS TO VERIFY ALL BUILDING DIMENSIONS.
4. RADII ADJACENT TO PARKING STALL AND NOT DIMENSIONED ON THIS PLAN SHALL BE 3–FEET, TYPICAL.
5. REFER TO ARCHITECTURAL PLANS FOR MONUMENT SIGN DETAILS.
6. SEE MEP PLANS FOR SITE ELECTRICAL DRAWINGS.
7. ALL PROPOSED ON–SITE STRIPING SHALL BE PAINTED UNLESS OTHERWISE NOTED.

PARKING SUMMARY

PARKING SPACES REQUIRED (10/1000 SF GFA)	=	2,213 SPACES
PARKING SPACES PROVIDED ON–SITE	=	955 SPACES
ACCESSIBLE PARKING SPACES REQUIRED	=	20 SPACES
ACCESSIBLE PARKING SPACES PROVIDED	=	20 SPACES
PARKING SPACES PROVIDED OFF–SITE ON LOT 2	=	147 SPACES
TOTAL PARKING SPACES PROVIDED	=	1,102 SPACES

STANDARD PARKING STALLS – 9' X 17.5'

PAVING AND CURB LEGEND

- STANDARD DUTY ASPHALT PAVEMENT — SEE CONSTRUCTION DETAILS FOR PAVEMENT SECTION
- 1.5" ASPHALT PAVEMENT MILL W/ 1.5" BINDER AND 1.5" SURFACE COURSE
- HEAVY DUTY ASPHALT PAVEMENT — SEE CONSTRUCTION DETAILS FOR PAVEMENT SECTION
- CONCRETE SIDEWALK — SEE CONSTRUCTION DETAILS FOR PAVEMENT SECTION
- STANDARD PITCH CONCRETE CURB AND GUTTER
- REVERSE PITCH CONCRETE CURB AND GUTTER
- DEPRESSED CURB AND GUTTER

No. | REVISIONS | DATE | BY

Kimley»Horn

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1001 WARRENVILLE ROAD, SUITE 350, LISLE, IL 60532
PHONE: 630-487-5550
WWW.KIMLEY-HORN.COM

SCALE: AS NOTED
DESIGNED BY: TRE
DRAWN BY: IC
CHECKED BY: WAW

CALAMOS INVESTMENTS
HARBOUR CONTRACTORS, INC.

OVERALL SITE & PAVEMENT PLAN

CITY GATE EVENT CENTRE
CORPORATE LANE
NAPERVILLE, IL 60563

ORIGINAL ISSUE: 3/23/2018
KHA PROJECT NO. 168646000
SHEET NUMBER
C2.0

EXISTING (YEAR 2017/2018) CAPACITY REPORTS

Weekday Morning Peak Hour

Weekday Evening Peak Hour

Saturday Midday Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	25	760	315	425	305	75	335	45	500	25	10	5
Future Volume (veh/h)	25	760	315	425	305	75	335	45	500	25	10	5
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1570	1961	1827	1863	1834	1900	1863	1961	1863	1462	1549	1900
Adj Flow Rate, veh/h	26	800	332	447	321	79	353	47	526	26	11	5
Adj No. of Lanes	1	2	1	1	2	0	1	1	1	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	21	2	4	2	4	4	2	2	2	30	18	18
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	427	1497	896	489	1543	374	458	432	616	141	65	30
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.02	0.40	0.40	0.17	0.55	0.55	0.17	0.22	0.22	0.02	0.06	0.06
Ln Grp Delay, s/veh	17.3	24.2	12.6	31.1	11.7	11.7	42.3	31.4	40.1	43.4	0.0	46.0
Ln Grp LOS	B	C	B	C	B	B	D	C	D	D		D
Approach Vol, veh/h		1158			847			926			42	
Approach Delay, s/veh		20.7			22.0			40.5			44.4	
Approach LOS		C			C			D			D	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Case No	1.1	4.0	1.1	3.0	1.1	3.0	1.1	4.0
Phs Duration (G+Y+Rc), s	21.0	12.5	20.4	46.2	5.4	28.0	5.1	61.5
Change Period (Y+Rc), s	3.5	6.0	3.5	6.0	3.5	6.0	3.5	6.0
Max Green (Gmax), s	17.5	8.0	26.5	29.0	3.5	22.0	3.5	52.0
Max Allow Headway (MAH), s	3.7	6.0	3.7	8.7	4.0	6.0	3.8	8.7
Max Q Clear (g_c+l1), s	19.5	3.0	15.8	18.4	3.7	24.0	3.0	7.9
Green Ext Time (g_e), s	0.0	0.5	1.1	9.7	0.0	0.0	0.0	34.1
Prob of Phs Call (p_c)	1.00	1.00	1.00	1.00	0.51	1.00	0.51	1.00
Prob of Max Out (p_x)	1.00	1.00	0.03	0.98	1.00	1.00	1.00	0.71

Left-Turn Movement Data								
Assigned Mvmt	1		3		5		7	
Mvmt Sat Flow, veh/h	1774		1774		1392		1495	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1009		3725		1961		2782

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		459		1553		1583		675

Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	7	0
Lane Assignment	(Pr/Pm)		(Pr/Pm)		(Pr/Pm)		(Pr/Pm)	

Lanes in Grp	1	0	1	0	1	0	1	0
Grp Vol (v), veh/h	353	0	447	0	26	0	26	0
Grp Sat Flow (s), veh/h/ln	1774	0	1774	0	1392	0	1495	0
Q Serve Time (g_s), s	17.5	0.0	13.8	0.0	1.7	0.0	1.0	0.0
Cycle Q Clear Time (g_c), s	17.5	0.0	13.8	0.0	1.7	0.0	1.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	1392	0	495	0	656	0	827	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	8.5	0.0	42.2	0.0	6.5	0.0	40.2	0.0
Perm LT Serve Time (g_u), s	5.4	0.0	23.8	0.0	6.5	0.0	40.2	0.0
Perm LT Q Serve Time (g_ps), s	2.2	0.0	23.8	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	458	0	489	0	141	0	427	0
V/C Ratio (X)	0.77	0.00	0.91	0.00	0.18	0.00	0.06	0.00
Avail Cap (c_a), veh/h	458	0	660	0	163	0	457	0
Upstream Filter (I)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Uniform Delay (d1), s/veh	34.4	0.0	17.0	0.0	42.8	0.0	17.3	0.0
Incr Delay (d2), s/veh	7.9	0.0	14.2	0.0	0.6	0.0	0.1	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	42.3	0.0	31.1	0.0	43.4	0.0	17.3	0.0
1st-Term Q (Q1), veh/ln	0.8	0.0	6.6	0.0	0.7	0.0	0.4	0.0
2nd-Term Q (Q2), veh/ln	1.0	0.0	1.9	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.80	0.00	1.56	0.00	1.80	0.00	1.80	0.00
%ile Back of Q (95%), veh/ln	3.3	0.0	13.3	0.0	1.2	0.0	0.8	0.0
%ile Storage Ratio (RQ%)	0.37	0.00	1.35	0.00	0.96	0.00	0.17	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment				T		T		T
Lanes in Grp	0	0	0	2	0	1	0	1
Grp Vol (v), veh/h	0	0	0	800	0	47	0	199
Grp Sat Flow (s), veh/h/ln	0	0	0	1863	0	1961	0	1742
Q Serve Time (g_s), s	0.0	0.0	0.0	16.4	0.0	1.9	0.0	5.8
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	16.4	0.0	1.9	0.0	5.8
Lane Grp Cap (c), veh/h	0	0	0	1497	0	432	0	967
V/C Ratio (X)	0.00	0.00	0.00	0.53	0.00	0.11	0.00	0.21
Avail Cap (c_a), veh/h	0	0	0	1497	0	432	0	967
Upstream Filter (I)	0.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	22.8	0.0	31.1	0.0	11.2
Incr Delay (d2), s/veh	0.0	0.0	0.0	1.4	0.0	0.2	0.0	0.5
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	24.2	0.0	31.4	0.0	11.7
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	8.4	0.0	1.0	0.0	2.8

2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.56	0.00	1.80	0.00	1.80
%ile Back of Q (95%), veh/ln	0.0	0.0	0.0	13.6	0.0	1.9	0.0	5.2
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.13	0.00	0.06	0.00	0.54
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		R		R		T+R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	16	0	332	0	526	0	201
Grp Sat Flow (s), veh/h/ln	0	1468	0	1553	0	1583	0	1715
Q Serve Time (g_s), s	0.0	1.0	0.0	11.5	0.0	22.0	0.0	5.9
Cycle Q Clear Time (g_c), s	0.0	1.0	0.0	11.5	0.0	22.0	0.0	5.9
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	1552.9	0.0	1583.3	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	17.5	0.0	16.9	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.31	0.00	1.00	0.00	1.00	0.00	0.39
Lane Grp Cap (c), veh/h	0	95	0	896	0	616	0	951
V/C Ratio (X)	0.00	0.17	0.00	0.37	0.00	0.85	0.00	0.21
Avail Cap (c_a), veh/h	0	117	0	896	0	616	0	951
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	44.2	0.0	11.4	0.0	28.0	0.0	11.2
Incr Delay (d2), s/veh	0.0	1.8	0.0	1.2	0.0	12.2	0.0	0.5
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	46.0	0.0	12.6	0.0	40.1	0.0	11.7
1st-Term Q (Q1), veh/ln	0.0	0.4	0.0	4.9	0.0	13.2	0.0	2.8
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.3	0.0	2.1	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.80	0.00	1.72	0.00	1.42	0.00	1.80
%ile Back of Q (95%), veh/ln	0.0	0.8	0.0	9.0	0.0	21.7	0.0	5.3
%ile Storage Ratio (RQ%)	0.00	0.10	0.00	1.71	0.00	0.73	0.00	0.54
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	27.6
HCM 2010 LOS	C

Notes
User approved pedestrian interval to be less than phase max green.
User approved changes to right turn type.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	25	760	315	425	305	75	335	45	500	25	10	5
Future Volume (veh/h)	25	760	315	425	305	75	335	45	500	25	10	5
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1570	1961	1827	1863	1834	1900	1863	1961	1863	1462	1549	1900
Adj Flow Rate, veh/h	26	800	332	447	321	79	353	47	526	26	11	5
Adj No. of Lanes	1	2	1	1	2	0	1	1	1	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	21	2	4	2	4	4	2	2	2	30	18	18
Cap, veh/h	427	1497	896	489	1543	374	458	432	616	141	65	30
Arrive On Green	0.02	0.40	0.40	0.17	0.55	0.55	0.17	0.22	0.22	0.02	0.06	0.06
Sat Flow, veh/h	1495	3725	1553	1774	2782	675	1774	1961	1583	1392	1009	459
Grp Volume(v), veh/h	26	800	332	447	199	201	353	47	526	26	0	16
Grp Sat Flow(s),veh/h/ln	1495	1863	1553	1774	1742	1715	1774	1961	1583	1392	0	1468
Q Serve(g_s), s	1.0	16.4	11.5	13.8	5.8	5.9	17.5	1.9	22.0	1.7	0.0	1.0
Cycle Q Clear(g_c), s	1.0	16.4	11.5	13.8	5.8	5.9	17.5	1.9	22.0	1.7	0.0	1.0
Prop In Lane	1.00		1.00	1.00		0.39	1.00		1.00	1.00		0.31
Lane Grp Cap(c), veh/h	427	1497	896	489	967	951	458	432	616	141	0	95
V/C Ratio(X)	0.06	0.53	0.37	0.91	0.21	0.21	0.77	0.11	0.85	0.18	0.00	0.17
Avail Cap(c_a), veh/h	457	1497	896	660	967	951	458	432	616	163	0	117
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	17.3	22.8	11.4	17.0	11.2	11.2	34.4	31.1	28.0	42.8	0.0	44.2
Incr Delay (d2), s/veh	0.1	1.4	1.2	14.2	0.5	0.5	7.9	0.2	12.2	0.6	0.0	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.8	13.6	9.0	13.3	5.2	5.3	3.3	1.9	21.7	1.2	0.0	0.8
LnGrp Delay(d),s/veh	17.3	24.2	12.6	31.1	11.7	11.7	42.3	31.4	40.1	43.4	0.0	46.0
LnGrp LOS	B	C	B	C	B	B	D	C	D	D		D
Approach Vol, veh/h		1158			847			926			42	
Approach Delay, s/veh		20.7			22.0			40.5			44.4	
Approach LOS		C			C			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	21.0	12.5	20.4	46.2	5.4	28.0	5.1	61.5
Change Period (Y+Rc), s	3.5	6.0	3.5	6.0	3.5	6.0	3.5	6.0
Max Green Setting (Gmax), s	17.5	8.0	26.5	29.0	3.5	22.0	3.5	52.0
Max Q Clear Time (g_c+I1), s	19.5	3.0	15.8	18.4	3.7	24.0	3.0	7.9
Green Ext Time (p_c), s	0.0	0.5	1.1	9.7	0.0	0.0	0.0	34.1

Intersection Summary	
HCM 2010 Ctrl Delay	27.6
HCM 2010 LOS	C

Notes

User approved pedestrian interval to be less than phase max green.
User approved changes to right turn type.

Intersection	
Int Delay, s/veh	1.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	60	1170	35	65	485	5	10	1	40	1	2	10
Future Vol, veh/h	60	1170	35	65	485	5	10	1	40	1	2	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	150	-	-	230	-	-	140	-	140	110	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	10	3	3	2	3	33	2	2	2	2	50	25
Mvmt Flow	63	1232	37	68	511	5	11	1	42	1	2	11

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	516	0	0	1268	0	0	1769	2029	634	1393	2045	258
Stage 1	-	-	-	-	-	-	1376	1376	-	650	650	-
Stage 2	-	-	-	-	-	-	393	653	-	743	1395	-
Critical Hdwy	4.3	-	-	4.14	-	-	7.54	6.54	6.94	7.54	7.5	7.4
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	6.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	6.5	-
Follow-up Hdwy	2.3	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.5	3.55
Pot Cap-1 Maneuver	992	-	-	544	-	-	53	57	422	101	31	676
Stage 1	-	-	-	-	-	-	153	211	-	424	361	-
Stage 2	-	-	-	-	-	-	603	462	-	373	136	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	992	-	-	544	-	-	42	47	422	77	25	676
Mov Cap-2 Maneuver	-	-	-	-	-	-	42	47	-	77	25	-
Stage 1	-	-	-	-	-	-	143	198	-	397	316	-
Stage 2	-	-	-	-	-	-	516	404	-	313	127	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.4	1.5	36	37.7
HCM LOS			E	E

Minor Lane/Major Mvmt	NBLn1	NBLn2	NBLn3	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	42	47	422	992	-	-	544	-	-	77	127
HCM Lane V/C Ratio	0.251	0.022	0.1	0.064	-	-	0.126	-	-	0.014	0.099
HCM Control Delay (s)	117.3	83.3	14.5	8.9	-	-	12.6	-	-	52.4	36.5
HCM Lane LOS	F	F	B	A	-	-	B	-	-	F	E
HCM 95th %tile Q(veh)	0.8	0.1	0.3	0.2	-	-	0.4	-	-	0	0.3

Intersection	
Int Delay, s/veh	7.6

Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations													
Traffic Vol, veh/h	20	40	1240	125	90	395	20	35	1	20	5	1	10
Future Vol, veh/h	20	40	1240	125	90	395	20	35	1	20	5	1	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	215	-	-	195	-	-	65	-	-	-	-	95
Veh in Median Storage, #	-	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	3	2	2	5	2	2	2	6	2	2	8
Mvmt Flow	21	42	1305	132	95	416	21	37	1	21	5	1	11

Major/Minor	Major1				Major2			Minor1			Minor2		
Conflicting Flow All	318	437	0	0	1437	0	0	1895	2123	718	1395	2179	218
Stage 1	-	-	-	-	-	-	-	1497	1497	-	616	616	-
Stage 2	-	-	-	-	-	-	-	398	626	-	779	1563	-
Critical Hdwy	6.44	4.14	-	-	4.14	-	-	7.54	6.54	7.02	7.54	6.54	7.06
Critical Hdwy Stg 1	-	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.52	2.22	-	-	2.22	-	-	3.52	4.02	3.36	3.52	4.02	3.38
Pot Cap-1 Maneuver	902	1119	-	-	468	-	-	42	49	363	101	46	768
Stage 1	-	-	-	-	-	-	-	128	184	-	445	480	-
Stage 2	-	-	-	-	-	-	-	599	475	-	355	171	-
Platoon blocked, %			-	-		-	-						
Mov Cap-1 Maneuver	1031	1031	-	-	468	-	-	~ 34	39	363	79	37	768
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	~ 34	39	-	79	37	-
Stage 1	-	-	-	-	-	-	-	128	184	-	445	383	-
Stage 2	-	-	-	-	-	-	-	470	379	-	332	171	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.4	2.6	231.1	30.6
HCM LOS			F	D

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	34	260	1031	-	-	468	-	-	66	768
HCM Lane V/C Ratio	1.084	0.085	0.061	-	-	0.202	-	-	0.096	0.014
HCM Control Delay (s)	$ 357.7	20.1	8.7	-	-	14.6	-	-	65.2	9.8
HCM Lane LOS	F	C	A	-	-	B	-	-	F	A
HCM 95th %tile Q(veh)	3.9	0.3	0.2	-	-	0.7	-	-	0.3	0

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

Intersection	
Int Delay, s/veh	1.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	5	1	15	1	1	65
Future Vol, veh/h	5	1	15	1	1	65
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	25	2	2	11
Mvmt Flow	5	1	16	1	1	68

Major/Minor	Minor2		Major2		Major1	
Conflicting Flow All	104	1	68	0	1	0
Stage 1	33	-	-	-	-	-
Stage 2	71	-	-	-	-	-
Critical Hdwy	6.52	6.22	4.35	-	4.12	-
Critical Hdwy Stg 1	5.52	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	4.018	3.318	2.425	-	2.218	-
Pot Cap-1 Maneuver	786	1084	1399	-	1622	-
Stage 1	868	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %				-		-
Mov Cap-1 Maneuver	0	1084	1399	-	1622	-
Mov Cap-2 Maneuver	0	-	-	-	-	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	8.3	7.1	0.1
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBR	EBLn1	WBL	WBT
Capacity (veh/h)	1622	-	1084	1399	-
HCM Lane V/C Ratio	0.001	-	0.006	0.011	-
HCM Control Delay (s)	7.2	-	8.3	7.6	0
HCM Lane LOS	A	-	A	A	A
HCM 95th %tile Q(veh)	0	-	0	0	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	410	420	545	770	25	340	20	365	105	40	30
Future Volume (veh/h)	5	410	420	545	770	25	340	20	365	105	40	30
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1520	1961	1863	1863	1862	1900	1827	1818	1863	1845	1758	1900
Adj Flow Rate, veh/h	5	432	442	574	811	26	358	21	384	111	42	32
Adj No. of Lanes	1	2	1	1	2	0	1	1	1	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	25	2	2	2	2	2	4	10	2	3	12	12
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	270	1513	838	618	2123	68	390	386	661	270	129	98
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.00	0.41	0.41	0.20	0.61	0.61	0.12	0.21	0.21	0.05	0.14	0.14
Ln Grp Delay, s/veh	26.2	30.4	25.4	34.3	16.1	16.1	79.4	47.2	35.5	53.6	0.0	60.0
Ln Grp LOS	C	C	C	C	B	B	E	D	D	D		E
Approach Vol, veh/h		879			1411			763			185	
Approach Delay, s/veh		27.9			23.5			56.4			56.2	
Approach LOS		C			C			E			E	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Case No	1.1	4.0	1.1	3.0	1.1	3.0	1.1	4.0
Phs Duration (G+Y+Rc), s	22.0	26.9	34.2	66.9	11.0	37.9	4.1	97.1
Change Period (Y+Rc), s	3.5	6.0	3.5	6.0	3.5	6.0	3.5	6.0
Max Green (Gmax), s	18.5	25.0	46.5	41.0	7.5	36.0	3.5	84.0
Max Allow Headway (MAH), s	3.7	6.2	3.7	8.7	3.9	6.2	3.8	8.7
Max Q Clear (g_c+I1), s	20.5	8.1	29.0	29.3	9.5	30.0	2.3	19.8
Green Ext Time (g_e), s	0.0	3.7	1.7	10.9	0.0	1.9	0.0	49.5
Prob of Phs Call (p_c)	1.00	1.00	1.00	1.00	0.99	1.00	0.19	1.00
Prob of Max Out (p_x)	1.00	0.13	0.00	0.98	1.00	1.00	1.00	0.70

Left-Turn Movement Data								
Assigned Mvmt	1		3		5		7	
Mvmt Sat Flow, veh/h	1740		1774		1757		1448	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		927		3725		1818		3498

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		706		1583		1583		112

Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	7	0
Lane Assignment	(Pr/Pm)		(Pr/Pm)		(Pr/Pm)		(Pr/Pm)	

Lanes in Grp	1	0	1	0	1	0	1	0
Grp Vol (v), veh/h	358	0	574	0	111	0	5	0
Grp Sat Flow (s), veh/h/ln	1740	0	1774	0	1757	0	1448	0
Q Serve Time (g_s), s	18.5	0.0	27.0	0.0	7.5	0.0	0.3	0.0
Cycle Q Clear Time (g_c), s	18.5	0.0	27.0	0.0	7.5	0.0	0.3	0.0
Perm LT Sat Flow (s_l), veh/h/ln	1295	0	632	0	967	0	534	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	22.9	0.0	62.9	0.0	20.9	0.0	60.9	0.0
Perm LT Serve Time (g_u), s	14.8	0.0	49.2	0.0	20.9	0.0	60.9	0.0
Perm LT Q Serve Time (g_ps), s	14.8	0.0	49.2	0.0	1.4	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	390	0	618	0	270	0	270	0
V/C Ratio (X)	0.92	0.00	0.93	0.00	0.41	0.00	0.02	0.00
Avail Cap (c_a), veh/h	390	0	805	0	270	0	298	0
Upstream Filter (I)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Uniform Delay (d1), s/veh	53.1	0.0	20.0	0.0	52.6	0.0	26.2	0.0
Incr Delay (d2), s/veh	26.3	0.0	14.3	0.0	1.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	79.4	0.0	34.3	0.0	53.6	0.0	26.2	0.0
1st-Term Q (Q1), veh/ln	5.9	0.0	12.9	0.0	0.4	0.0	0.1	0.0
2nd-Term Q (Q2), veh/ln	2.8	0.0	2.5	0.0	0.1	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.55	0.00	1.42	0.00	1.80	0.00	1.80	0.00
%ile Back of Q (95%), veh/ln	13.6	0.0	21.8	0.0	0.8	0.0	0.2	0.0
%ile Storage Ratio (RQ%)	1.52	0.00	2.22	0.00	0.49	0.00	0.05	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment				T		T		T
Lanes in Grp	0	0	0	2	0	1	0	1
Grp Vol (v), veh/h	0	0	0	432	0	21	0	410
Grp Sat Flow (s), veh/h/ln	0	0	0	1863	0	1818	0	1769
Q Serve Time (g_s), s	0.0	0.0	0.0	11.7	0.0	1.4	0.0	17.8
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	11.7	0.0	1.4	0.0	17.8
Lane Grp Cap (c), veh/h	0	0	0	1513	0	386	0	1074
V/C Ratio (X)	0.00	0.00	0.00	0.29	0.00	0.05	0.00	0.38
Avail Cap (c_a), veh/h	0	0	0	1513	0	436	0	1074
Upstream Filter (I)	0.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	29.9	0.0	47.0	0.0	15.1
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.5	0.0	0.1	0.0	1.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	30.4	0.0	47.2	0.0	16.1
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	6.0	0.0	0.7	0.0	8.7

2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.3
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.66	0.00	1.80	0.00	1.55
%ile Back of Q (95%), veh/ln	0.0	0.0	0.0	10.2	0.0	1.3	0.0	13.9
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.10	0.00	0.05	0.00	1.40
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		R		R		T+R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	74	0	442	0	384	0	427
Grp Sat Flow (s), veh/h/ln	0	1633	0	1583	0	1583	0	1842
Q Serve Time (g_s), s	0.0	6.1	0.0	27.3	0.0	28.0	0.0	17.8
Cycle Q Clear Time (g_c), s	0.0	6.1	0.0	27.3	0.0	28.0	0.0	17.8
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	1583.3	0.0	1583.3	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	18.5	0.0	30.7	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.43	0.00	1.00	0.00	1.00	0.00	0.06
Lane Grp Cap (c), veh/h	0	227	0	838	0	661	0	1118
V/C Ratio (X)	0.00	0.33	0.00	0.53	0.00	0.58	0.00	0.38
Avail Cap (c_a), veh/h	0	272	0	838	0	704	0	1118
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	58.2	0.0	23.0	0.0	33.6	0.0	15.1
Incr Delay (d2), s/veh	0.0	1.8	0.0	2.4	0.0	1.9	0.0	1.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	60.0	0.0	25.4	0.0	35.5	0.0	16.1
1st-Term Q (Q1), veh/ln	0.0	2.8	0.0	11.9	0.0	12.2	0.0	9.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.6	0.0	0.4	0.0	0.3
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.80	0.00	1.47	0.00	1.46	0.00	1.54
%ile Back of Q (95%), veh/ln	0.0	5.2	0.0	18.2	0.0	18.4	0.0	14.3
%ile Storage Ratio (RQ%)	0.00	0.59	0.00	3.42	0.00	0.62	0.00	1.45
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	34.3
HCM 2010 LOS	C

Notes

User approved changes to right turn type.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	410	420	545	770	25	340	20	365	105	40	30
Future Volume (veh/h)	5	410	420	545	770	25	340	20	365	105	40	30
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1520	1961	1863	1863	1862	1900	1827	1818	1863	1845	1758	1900
Adj Flow Rate, veh/h	5	432	442	574	811	26	358	21	384	111	42	32
Adj No. of Lanes	1	2	1	1	2	0	1	1	1	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	25	2	2	2	2	2	4	10	2	3	12	12
Cap, veh/h	270	1513	838	618	2123	68	390	386	661	270	129	98
Arrive On Green	0.00	0.41	0.41	0.20	0.61	0.61	0.12	0.21	0.21	0.05	0.14	0.14
Sat Flow, veh/h	1448	3725	1583	1774	3498	112	1740	1818	1583	1757	927	706
Grp Volume(v), veh/h	5	432	442	574	410	427	358	21	384	111	0	74
Grp Sat Flow(s),veh/h/ln	1448	1863	1583	1774	1769	1842	1740	1818	1583	1757	0	1633
Q Serve(g_s), s	0.3	11.7	27.3	27.0	17.8	17.8	18.5	1.4	28.0	7.5	0.0	6.1
Cycle Q Clear(g_c), s	0.3	11.7	27.3	27.0	17.8	17.8	18.5	1.4	28.0	7.5	0.0	6.1
Prop In Lane	1.00		1.00	1.00		0.06	1.00		1.00	1.00		0.43
Lane Grp Cap(c), veh/h	270	1513	838	618	1074	1118	390	386	661	270	0	227
V/C Ratio(X)	0.02	0.29	0.53	0.93	0.38	0.38	0.92	0.05	0.58	0.41	0.00	0.33
Avail Cap(c_a), veh/h	298	1513	838	805	1074	1118	390	436	704	270	0	272
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	26.2	29.9	23.0	20.0	15.1	15.1	53.1	47.0	33.6	52.6	0.0	58.2
Incr Delay (d2), s/veh	0.0	0.5	2.4	14.3	1.0	1.0	26.3	0.1	1.9	1.0	0.0	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.2	10.2	18.2	21.8	13.9	14.3	13.6	1.3	18.4	0.8	0.0	5.2
LnGrp Delay(d),s/veh	26.2	30.4	25.4	34.3	16.1	16.1	79.4	47.2	35.5	53.6	0.0	60.0
LnGrp LOS	C	C	C	C	B	B	E	D	D	D		E
Approach Vol, veh/h		879			1411			763			185	
Approach Delay, s/veh		27.9			23.5			56.4			56.2	
Approach LOS		C			C			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	22.0	26.9	34.2	66.9	11.0	37.9	4.1	97.1
Change Period (Y+Rc), s	3.5	6.0	3.5	6.0	3.5	6.0	3.5	6.0
Max Green Setting (Gmax), s	18.5	25.0	46.5	41.0	7.5	36.0	3.5	84.0
Max Q Clear Time (g_c+I1), s	20.5	8.1	29.0	29.3	9.5	30.0	2.3	19.8
Green Ext Time (p_c), s	0.0	3.7	1.7	10.9	0.0	1.9	0.0	49.5

Intersection Summary	
HCM 2010 Ctrl Delay	34.3
HCM 2010 LOS	C

Notes

User approved changes to right turn type.

Intersection	
Int Delay, s/veh	5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	15	570	5	10	1205	5	65	1	130	1	1	75
Future Vol, veh/h	15	570	5	10	1205	5	65	1	130	1	1	75
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	150	-	-	230	-	-	140	-	140	110	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	20	2	2	2	2	67	2	2	2	2	2	8
Mvmt Flow	16	600	5	11	1268	5	68	1	137	1	1	79

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1274	0	0	605	0	0	1290	1929	303	1624	1929	637
Stage 1	-	-	-	-	-	-	634	634	-	1292	1292	-
Stage 2	-	-	-	-	-	-	656	1295	-	332	637	-
Critical Hdwy	4.5	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	7.06
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.4	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.38
Pot Cap-1 Maneuver	453	-	-	969	-	-	121	66	693	68	66	406
Stage 1	-	-	-	-	-	-	434	471	-	172	232	-
Stage 2	-	-	-	-	-	-	421	231	-	655	470	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	453	-	-	969	-	-	93	63	693	52	63	406
Mov Cap-2 Maneuver	-	-	-	-	-	-	93	63	-	52	63	-
Stage 1	-	-	-	-	-	-	419	454	-	166	229	-
Stage 2	-	-	-	-	-	-	334	228	-	506	453	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	0.1	45.1	17.8
HCM LOS			E	C

Minor Lane/Major Mvmt	NBLn1	NBLn2	NBLn3	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	93	63	693	453	-	-	969	-	-	52	379
HCM Lane V/C Ratio	0.736	0.017	0.197	0.035	-	-	0.011	-	-	0.02	0.211
HCM Control Delay (s)	112.1	63.1	11.5	13.2	-	-	8.8	-	-	75.7	17
HCM Lane LOS	F	F	B	B	-	-	A	-	-	F	C
HCM 95th %tile Q(veh)	3.8	0.1	0.7	0.1	-	-	0	-	-	0.1	0.8

Intersection	
Int Delay, s/veh	14.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	430	25	10	1320	15	140	1	155	5	1	25
Future Vol, veh/h	10	430	25	10	1320	15	140	1	155	5	1	25
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	215	-	-	195	-	-	65	-	-	-	-	95
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	4	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	453	26	11	1389	16	147	1	163	5	1	26

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1405	0	0	479	0	0	1203	1913	239	1666	1918	703
Stage 1	-	-	-	-	-	-	487	487	-	1418	1418	-
Stage 2	-	-	-	-	-	-	716	1426	-	248	500	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	482	-	-	1080	-	-	~ 140	67	762	63	67	380
Stage 1	-	-	-	-	-	-	531	549	-	144	201	-
Stage 2	-	-	-	-	-	-	387	199	-	734	541	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	482	-	-	1080	-	-	~ 125	65	762	48	65	380
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 125	65	-	48	65	-
Stage 1	-	-	-	-	-	-	519	536	-	141	199	-
Stage 2	-	-	-	-	-	-	355	197	-	563	529	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	0.1	102.6	29.1
HCM LOS			F	D

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	125	713	482	-	-	1080	-	-	50	380
HCM Lane V/C Ratio	1.179	0.23	0.022	-	-	0.01	-	-	0.126	0.069
HCM Control Delay (s)	204.1	11.6	12.6	-	-	8.4	-	-	87.1	15.2
HCM Lane LOS	F	B	B	-	-	A	-	-	F	C
HCM 95th %tile Q(veh)	9	0.9	0.1	-	-	0	-	-	0.4	0.2

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

Intersection	
Int Delay, s/veh	6.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	10	1	75	1	1	20
Future Vol, veh/h	10	1	75	1	1	20
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	9	2	2	44
Mvmt Flow	11	1	79	1	1	21

Major/Minor	Minor2		Major2		Major1	
Conflicting Flow All	182	1	21	0	1	0
Stage 1	159	-	-	-	-	-
Stage 2	23	-	-	-	-	-
Critical Hdwy	6.52	6.22	4.19	-	4.12	-
Critical Hdwy Stg 1	5.52	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	4.018	3.318	2.281	-	2.218	-
Pot Cap-1 Maneuver	712	1084	1550	-	1622	-
Stage 1	766	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %				-		-
Mov Cap-1 Maneuver	0	1084	1550	-	1622	-
Mov Cap-2 Maneuver	0	-	-	-	-	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	8.4	7.3	0.3
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBR	EBLn1	WBL	WBT
Capacity (veh/h)	1622	-	1084	1550	-
HCM Lane V/C Ratio	0.001	-	0.011	0.051	-
HCM Control Delay (s)	7.2	-	8.4	7.4	0
HCM Lane LOS	A	-	A	A	A
HCM 95th %tile Q(veh)	0	-	0	0.2	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	125	195	225	130	25	200	20	220	25	25	10
Future Volume (veh/h)	10	125	195	225	130	25	200	20	220	25	25	10
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1743	1961	1863	1863	1863	1900	1863	1961	1863	1863	1791	1900
Adj Flow Rate, veh/h	11	132	205	237	137	26	211	21	232	26	26	11
Adj No. of Lanes	1	2	1	1	2	0	1	1	1	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	9	2	2	2	2	2	2	2	2	2	4	4
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	642	1794	966	720	1680	312	401	393	460	210	106	45
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.01	0.48	0.48	0.09	0.56	0.56	0.13	0.20	0.20	0.02	0.09	0.09
Ln Grp Delay, s/veh	11.8	12.6	8.4	8.9	9.1	9.2	30.7	29.2	28.4	36.8	0.0	40.0
Ln Grp LOS	B	B	A	A	A	A	C	C	C	D		D
Approach Vol, veh/h		348			400			464			63	
Approach Delay, s/veh		10.1			9.0			29.5			38.6	
Approach LOS		B			A			C			D	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Case No	1.1	4.0	1.1	3.0	1.1	3.0	1.1	4.0
Phs Duration (G+Y+Rc), s	15.1	14.0	11.6	49.3	5.0	24.0	4.2	56.7
Change Period (Y+Rc), s	3.5	6.0	3.5	6.0	3.5	6.0	3.5	6.0
Max Green (Gmax), s	20.5	11.0	19.5	20.0	5.5	26.0	5.5	34.0
Max Allow Headway (MAH), s	3.7	6.2	3.7	8.5	3.9	6.2	3.7	8.5
Max Q Clear (g_c+I1), s	11.2	3.8	7.6	7.2	3.2	13.0	2.3	3.9
Green Ext Time (g_e), s	0.4	1.2	0.5	5.1	0.0	1.8	0.0	8.3
Prob of Phs Call (p_c)	0.99	1.00	1.00	1.00	0.48	1.00	0.24	1.00
Prob of Max Out (p_x)	0.01	0.74	0.00	0.65	1.00	0.13	1.00	0.11

Left-Turn Movement Data								
Assigned Mvmt	1		3		5		7	
Mvmt Sat Flow, veh/h	1774		1774		1774		1660	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1196		3725		1961		2981

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		506		1583		1583		554

Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	7	0
Lane Assignment	(Pr/Pm)		(Pr/Pm)		(Pr/Pm)		(Pr/Pm)	

Lanes in Grp	1	0	1	0	1	0	1	0
Grp Vol (v), veh/h	211	0	237	0	26	0	11	0
Grp Sat Flow (s), veh/h/ln	1774	0	1774	0	1774	0	1660	0
Q Serve Time (g_s), s	9.2	0.0	5.6	0.0	1.2	0.0	0.3	0.0
Cycle Q Clear Time (g_c), s	9.2	0.0	5.6	0.0	1.2	0.0	0.3	0.0
Perm LT Sat Flow (s_l), veh/h/ln	1365	0	1039	0	1122	0	1140	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	10.0	0.0	45.3	0.0	8.0	0.0	43.3	0.0
Perm LT Serve Time (g_u), s	6.2	0.0	41.6	0.0	8.0	0.0	43.3	0.0
Perm LT Q Serve Time (g_ps), s	0.7	0.0	1.1	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	401	0	720	0	210	0	642	0
V/C Ratio (X)	0.53	0.00	0.33	0.00	0.12	0.00	0.02	0.00
Avail Cap (c_a), veh/h	578	0	945	0	288	0	730	0
Upstream Filter (I)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Uniform Delay (d1), s/veh	29.6	0.0	8.7	0.0	36.5	0.0	11.8	0.0
Incr Delay (d2), s/veh	1.1	0.0	0.3	0.0	0.3	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	30.7	0.0	8.9	0.0	36.8	0.0	11.8	0.0
1st-Term Q (Q1), veh/ln	4.5	0.0	2.7	0.0	0.6	0.0	0.1	0.0
2nd-Term Q (Q2), veh/ln	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.77	0.00	1.80	0.00	1.80	0.00	1.80	0.00
%ile Back of Q (95%), veh/ln	8.1	0.0	5.0	0.0	1.1	0.0	0.3	0.0
%ile Storage Ratio (RQ%)	0.89	0.00	0.50	0.00	0.68	0.00	0.05	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment				T		T		T
Lanes in Grp	0	0	0	2	0	1	0	1
Grp Vol (v), veh/h	0	0	0	132	0	21	0	80
Grp Sat Flow (s), veh/h/ln	0	0	0	1863	0	1961	0	1770
Q Serve Time (g_s), s	0.0	0.0	0.0	1.7	0.0	0.8	0.0	1.9
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	1.7	0.0	0.8	0.0	1.9
Lane Grp Cap (c), veh/h	0	0	0	1794	0	393	0	997
V/C Ratio (X)	0.00	0.00	0.00	0.07	0.00	0.05	0.00	0.08
Avail Cap (c_a), veh/h	0	0	0	1794	0	566	0	997
Upstream Filter (I)	0.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	12.5	0.0	29.1	0.0	9.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.2
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	12.6	0.0	29.2	0.0	9.1
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.9	0.0	0.4	0.0	0.9

2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.80	0.00	1.80	0.00	1.80
%ile Back of Q (95%), veh/ln	0.0	0.0	0.0	1.6	0.0	0.8	0.0	1.7
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.02	0.00	0.03	0.00	0.17
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		R		R		T+R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	37	0	205	0	232	0	83
Grp Sat Flow (s), veh/h/ln	0	1702	0	1583	0	1583	0	1765
Q Serve Time (g_s), s	0.0	1.8	0.0	5.2	0.0	11.0	0.0	1.9
Cycle Q Clear Time (g_c), s	0.0	1.8	0.0	5.2	0.0	11.0	0.0	1.9
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	1583.3	0.0	1583.3	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	11.6	0.0	8.1	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.30	0.00	1.00	0.00	1.00	0.00	0.31
Lane Grp Cap (c), veh/h	0	151	0	966	0	460	0	995
V/C Ratio (X)	0.00	0.24	0.00	0.21	0.00	0.50	0.00	0.08
Avail Cap (c_a), veh/h	0	208	0	966	0	600	0	995
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	38.2	0.0	7.9	0.0	26.6	0.0	9.0
Incr Delay (d2), s/veh	0.0	1.8	0.0	0.5	0.0	1.8	0.0	0.2
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	40.0	0.0	8.4	0.0	28.4	0.0	9.2
1st-Term Q (Q1), veh/ln	0.0	0.9	0.0	2.3	0.0	4.8	0.0	0.9
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.1	0.0	0.2	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.80	0.00	1.80	0.00	1.73	0.00	1.80
%ile Back of Q (95%), veh/ln	0.0	1.7	0.0	4.4	0.0	8.7	0.0	1.8
%ile Storage Ratio (RQ%)	0.00	0.18	0.00	0.82	0.00	0.29	0.00	0.18
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	18.2
HCM 2010 LOS	B

Notes
User approved pedestrian interval to be less than phase max green.
User approved changes to right turn type.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	125	195	225	130	25	200	20	220	25	25	10
Future Volume (veh/h)	10	125	195	225	130	25	200	20	220	25	25	10
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1743	1961	1863	1863	1863	1900	1863	1961	1863	1863	1791	1900
Adj Flow Rate, veh/h	11	132	205	237	137	26	211	21	232	26	26	11
Adj No. of Lanes	1	2	1	1	2	0	1	1	1	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	9	2	2	2	2	2	2	2	2	2	4	4
Cap, veh/h	642	1794	966	720	1680	312	401	393	460	210	106	45
Arrive On Green	0.01	0.48	0.48	0.09	0.56	0.56	0.13	0.20	0.20	0.02	0.09	0.09
Sat Flow, veh/h	1660	3725	1583	1774	2981	554	1774	1961	1583	1774	1196	506
Grp Volume(v), veh/h	11	132	205	237	80	83	211	21	232	26	0	37
Grp Sat Flow(s),veh/h/ln	1660	1863	1583	1774	1770	1765	1774	1961	1583	1774	0	1702
Q Serve(g_s), s	0.3	1.7	5.2	5.6	1.9	1.9	9.2	0.8	11.0	1.2	0.0	1.8
Cycle Q Clear(g_c), s	0.3	1.7	5.2	5.6	1.9	1.9	9.2	0.8	11.0	1.2	0.0	1.8
Prop In Lane	1.00		1.00	1.00		0.31	1.00		1.00	1.00		0.30
Lane Grp Cap(c), veh/h	642	1794	966	720	997	995	401	393	460	210	0	151
V/C Ratio(X)	0.02	0.07	0.21	0.33	0.08	0.08	0.53	0.05	0.50	0.12	0.00	0.24
Avail Cap(c_a), veh/h	730	1794	966	945	997	995	578	566	600	288	0	208
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	11.8	12.5	7.9	8.7	9.0	9.0	29.6	29.1	26.6	36.5	0.0	38.2
Incr Delay (d2), s/veh	0.0	0.1	0.5	0.3	0.2	0.2	1.1	0.1	1.8	0.3	0.0	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.3	1.6	4.4	5.0	1.7	1.8	8.1	0.8	8.7	1.1	0.0	1.7
LnGrp Delay(d),s/veh	11.8	12.6	8.4	8.9	9.1	9.2	30.7	29.2	28.4	36.8	0.0	40.0
LnGrp LOS	B	B	A	A	A	A	C	C	C	D		D
Approach Vol, veh/h		348			400			464			63	
Approach Delay, s/veh		10.1			9.0			29.5			38.6	
Approach LOS		B			A			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.1	14.0	11.6	49.3	5.0	24.0	4.2	56.7
Change Period (Y+Rc), s	3.5	6.0	3.5	6.0	3.5	6.0	3.5	6.0
Max Green Setting (Gmax), s	20.5	11.0	19.5	20.0	5.5	26.0	5.5	34.0
Max Q Clear Time (g_c+I1), s	11.2	3.8	7.6	7.2	3.2	13.0	2.3	3.9
Green Ext Time (p_c), s	0.4	1.2	0.5	5.1	0.0	1.8	0.0	8.3

Intersection Summary	
HCM 2010 Ctrl Delay	18.2
HCM 2010 LOS	B

Notes

User approved pedestrian interval to be less than phase max green.
User approved changes to right turn type.

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	30	325	1	5	335	2	10	1	5	1	1	20
Future Vol, veh/h	30	325	1	5	335	2	10	1	5	1	1	20
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	150	-	-	230	-	-	140	-	140	110	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	10	2	2	33	2	2	2	2	40	100	2	2
Mvmt Flow	32	342	1	5	353	2	11	1	5	1	1	21

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	355	0	0	343	0	0	593	771	172	599	770	177
Stage 1	-	-	-	-	-	-	406	406	-	364	364	-
Stage 2	-	-	-	-	-	-	187	365	-	235	406	-
Critical Hdwy	4.3	-	-	4.76	-	-	7.54	6.54	7.7	9.5	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	8.5	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	8.5	5.54	-
Follow-up Hdwy	2.3	-	-	2.53	-	-	3.52	4.02	3.7	4.5	4.02	3.32
Pot Cap-1 Maneuver	1145	-	-	1017	-	-	389	329	735	234	330	835
Stage 1	-	-	-	-	-	-	593	596	-	422	622	-
Stage 2	-	-	-	-	-	-	797	622	-	530	596	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1145	-	-	1017	-	-	369	318	735	226	319	835
Mov Cap-2 Maneuver	-	-	-	-	-	-	369	318	-	226	319	-
Stage 1	-	-	-	-	-	-	576	579	-	410	619	-
Stage 2	-	-	-	-	-	-	772	619	-	511	579	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.7	0.1	13.5	10.3
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	NBLn2	NBLn3	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	369	318	735	1145	-	-	1017	-	-	226	775
HCM Lane V/C Ratio	0.029	0.003	0.007	0.028	-	-	0.005	-	-	0.005	0.029
HCM Control Delay (s)	15	16.4	9.9	8.2	-	-	8.6	-	-	21	9.8
HCM Lane LOS	C	C	A	A	-	-	A	-	-	C	A
HCM 95th %tile Q(veh)	0.1	0	0	0.1	-	-	0	-	-	0	0.1

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	25	335	20	15	335	15	10	1	10	10	1	1
Future Vol, veh/h	25	335	20	15	335	15	10	1	10	10	1	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	215	-	-	195	-	-	65	-	-	-	-	95
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	13	2	2
Mvmt Flow	26	353	21	16	353	16	11	1	11	11	1	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	368	0	0	374	0	0	624	816	187	621	818	184
Stage 1	-	-	-	-	-	-	416	416	-	392	392	-
Stage 2	-	-	-	-	-	-	208	400	-	229	426	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.76	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.76	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.76	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.63	4.02	3.32
Pot Cap-1 Maneuver	1187	-	-	1181	-	-	370	310	823	350	309	827
Stage 1	-	-	-	-	-	-	585	590	-	575	605	-
Stage 2	-	-	-	-	-	-	775	600	-	722	584	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1187	-	-	1181	-	-	359	299	823	335	298	827
Mov Cap-2 Maneuver	-	-	-	-	-	-	359	299	-	335	298	-
Stage 1	-	-	-	-	-	-	572	577	-	562	597	-
Stage 2	-	-	-	-	-	-	762	592	-	696	571	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.5	0.3	12.6	15.7
HCM LOS			B	C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	359	710	1187	-	-	1181	-	-	331	827
HCM Lane V/C Ratio	0.029	0.016	0.022	-	-	0.013	-	-	0.035	0.001
HCM Control Delay (s)	15.3	10.2	8.1	-	-	8.1	-	-	16.3	9.4
HCM Lane LOS	C	B	A	-	-	A	-	-	C	A
HCM 95th %tile Q(veh)	0.1	0.1	0.1	-	-	0	-	-	0.1	0

Intersection	
Int Delay, s/veh	3.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1	1	20	1	1	30
Future Vol, veh/h	1	1	20	1	1	30
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	6	2	2	14
Mvmt Flow	1	1	21	1	1	32

Major/Minor	Minor2		Major2		Major1	
Conflicting Flow All	77	1	32	0	1	0
Stage 1	43	-	-	-	-	-
Stage 2	34	-	-	-	-	-
Critical Hdwy	6.52	6.22	4.16	-	4.12	-
Critical Hdwy Stg 1	5.52	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	4.018	3.318	2.254	-	2.218	-
Pot Cap-1 Maneuver	813	1084	1555	-	1622	-
Stage 1	859	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %				-		-
Mov Cap-1 Maneuver	0	1084	1555	-	1622	-
Mov Cap-2 Maneuver	0	-	-	-	-	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	8.3	7	0.2
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBR	EBLn1	WBL	WBT
Capacity (veh/h)	1622	-	1084	1555	-
HCM Lane V/C Ratio	0.001	-	0.002	0.014	-
HCM Control Delay (s)	7.2	-	8.3	7.3	0
HCM Lane LOS	A	-	A	A	A
HCM 95th %tile Q(veh)	0	-	0	0	-

FUTURE NO-BUILD (YEAR 2024) CAPACITY REPORTS

Weekday Morning Peak Hour

Weekday Evening Peak Hour

Saturday Midday Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	25	910	365	480	355	75	380	45	565	25	10	5
Future Volume (veh/h)	25	910	365	480	355	75	380	45	565	25	10	5
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1570	1961	1827	1863	1833	1900	1863	1961	1863	1462	1549	1900
Adj Flow Rate, veh/h	26	958	384	505	374	79	400	47	595	26	11	5
Adj No. of Lanes	1	2	1	1	2	0	1	1	1	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	21	2	4	2	4	4	2	2	2	30	18	18
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	357	1232	785	537	1590	332	458	432	728	139	65	30
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.02	0.33	0.33	0.24	0.55	0.55	0.17	0.22	0.22	0.02	0.06	0.06
Ln Grp Delay, s/veh	21.8	35.0	18.4	47.7	12.0	12.0	52.9	31.4	31.4	43.4	0.0	46.0
Ln Grp LOS	C	D	B	D	B	B	D	C	C	D		D
Approach Vol, veh/h		1368			958			1042			42	
Approach Delay, s/veh		30.1			30.8			39.7			44.4	
Approach LOS		C			C			D			D	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Case No	1.1	4.0	1.1	3.0	1.1	3.0	1.1	4.0
Phs Duration (G+Y+Rc), s	21.0	12.5	27.5	39.1	5.4	28.0	5.1	61.4
Change Period (Y+Rc), s	3.5	6.0	3.5	6.0	3.5	6.0	3.5	6.0
Max Green (Gmax), s	17.5	8.0	26.5	29.0	3.5	22.0	3.5	52.0
Max Allow Headway (MAH), s	3.7	6.0	3.7	8.7	4.0	6.0	3.8	8.7
Max Q Clear (g_c+l1), s	19.5	3.0	23.4	25.2	3.7	24.0	3.2	8.8
Green Ext Time (g_e), s	0.0	0.7	0.6	3.7	0.0	0.0	0.0	37.3
Prob of Phs Call (p_c)	1.00	1.00	1.00	1.00	0.51	1.00	0.51	1.00
Prob of Max Out (p_x)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.83

Left-Turn Movement Data								
Assigned Mvmt	1		3		5		7	
Mvmt Sat Flow, veh/h	1774		1774		1392		1495	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1009		3725		1961		2869

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		459		1553		1583		600

Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	7	0
Lane Assignment	(Pr/Pm)		(Pr/Pm)		(Pr/Pm)		(Pr/Pm)	

Lanes in Grp	1	0	1	0	1	0	1	0
Grp Vol (v), veh/h	400	0	505	0	26	0	26	0
Grp Sat Flow (s), veh/h/ln	1774	0	1774	0	1392	0	1495	0
Q Serve Time (g_s), s	17.5	0.0	21.4	0.0	1.7	0.0	1.2	0.0
Cycle Q Clear Time (g_c), s	17.5	0.0	21.4	0.0	1.7	0.0	1.2	0.0
Perm LT Sat Flow (s_l), veh/h/ln	1392	0	406	0	615	0	787	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	8.5	0.0	35.1	0.0	6.5	0.0	33.1	0.0
Perm LT Serve Time (g_u), s	5.4	0.0	9.9	0.0	6.5	0.0	33.1	0.0
Perm LT Q Serve Time (g_ps), s	5.4	0.0	9.9	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	458	0	537	0	139	0	357	0
V/C Ratio (X)	0.87	0.00	0.94	0.00	0.19	0.00	0.07	0.00
Avail Cap (c_a), veh/h	458	0	582	0	160	0	385	0
Upstream Filter (I)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Uniform Delay (d1), s/veh	36.1	0.0	25.2	0.0	42.8	0.0	21.7	0.0
Incr Delay (d2), s/veh	16.8	0.0	22.6	0.0	0.6	0.0	0.1	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	52.9	0.0	47.7	0.0	43.4	0.0	21.8	0.0
1st-Term Q (Q1), veh/ln	2.4	0.0	13.6	0.0	0.7	0.0	0.5	0.0
2nd-Term Q (Q2), veh/ln	2.1	0.0	3.4	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.77	0.00	1.40	0.00	1.80	0.00	1.80	0.00
%ile Back of Q (95%), veh/ln	8.1	0.0	23.7	0.0	1.2	0.0	0.9	0.0
%ile Storage Ratio (RQ%)	0.89	0.00	2.41	0.00	0.96	0.00	0.19	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment				T		T		T
Lanes in Grp	0	0	0	2	0	1	0	1
Grp Vol (v), veh/h	0	0	0	958	0	47	0	226
Grp Sat Flow (s), veh/h/ln	0	0	0	1863	0	1961	0	1741
Q Serve Time (g_s), s	0.0	0.0	0.0	23.2	0.0	1.9	0.0	6.6
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	23.2	0.0	1.9	0.0	6.6
Lane Grp Cap (c), veh/h	0	0	0	1232	0	432	0	965
V/C Ratio (X)	0.00	0.00	0.00	0.78	0.00	0.11	0.00	0.23
Avail Cap (c_a), veh/h	0	0	0	1232	0	432	0	965
Upstream Filter (I)	0.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	30.2	0.0	31.1	0.0	11.4
Incr Delay (d2), s/veh	0.0	0.0	0.0	4.9	0.0	0.2	0.0	0.6
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	35.0	0.0	31.4	0.0	12.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	11.8	0.0	1.0	0.0	3.2

2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.8	0.0	0.0	0.0	0.2
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.46	0.00	1.80	0.00	1.80
%ile Back of Q (95%), veh/ln	0.0	0.0	0.0	18.5	0.0	1.9	0.0	6.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.18	0.00	0.06	0.00	0.62
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		R		R		T+R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	16	0	384	0	595	0	227
Grp Sat Flow (s), veh/h/ln	0	1468	0	1553	0	1583	0	1727
Q Serve Time (g_s), s	0.0	1.0	0.0	16.2	0.0	22.0	0.0	6.8
Cycle Q Clear Time (g_c), s	0.0	1.0	0.0	16.2	0.0	22.0	0.0	6.8
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	1552.9	0.0	1583.3	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	17.5	0.0	24.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.31	0.00	1.00	0.00	1.00	0.00	0.35
Lane Grp Cap (c), veh/h	0	95	0	785	0	728	0	957
V/C Ratio (X)	0.00	0.17	0.00	0.49	0.00	0.82	0.00	0.24
Avail Cap (c_a), veh/h	0	117	0	785	0	728	0	957
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	44.2	0.0	16.2	0.0	23.4	0.0	11.4
Incr Delay (d2), s/veh	0.0	1.8	0.0	2.2	0.0	8.1	0.0	0.6
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	46.0	0.0	18.4	0.0	31.4	0.0	12.0
1st-Term Q (Q1), veh/ln	0.0	0.4	0.0	6.9	0.0	14.0	0.0	3.2
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.5	0.0	1.6	0.0	0.2
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.80	0.00	1.61	0.00	1.41	0.00	1.80
%ile Back of Q (95%), veh/ln	0.0	0.8	0.0	11.8	0.0	22.2	0.0	6.1
%ile Storage Ratio (RQ%)	0.00	0.10	0.00	2.25	0.00	0.75	0.00	0.62
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	33.4
HCM 2010 LOS	C

Notes
User approved pedestrian interval to be less than phase max green.
User approved changes to right turn type.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	25	910	365	480	355	75	380	45	565	25	10	5
Future Volume (veh/h)	25	910	365	480	355	75	380	45	565	25	10	5
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1570	1961	1827	1863	1833	1900	1863	1961	1863	1462	1549	1900
Adj Flow Rate, veh/h	26	958	384	505	374	79	400	47	595	26	11	5
Adj No. of Lanes	1	2	1	1	2	0	1	1	1	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	21	2	4	2	4	4	2	2	2	30	18	18
Cap, veh/h	357	1232	785	537	1590	332	458	432	728	139	65	30
Arrive On Green	0.02	0.33	0.33	0.24	0.55	0.55	0.17	0.22	0.22	0.02	0.06	0.06
Sat Flow, veh/h	1495	3725	1553	1774	2869	600	1774	1961	1583	1392	1009	459
Grp Volume(v), veh/h	26	958	384	505	226	227	400	47	595	26	0	16
Grp Sat Flow(s),veh/h/ln	1495	1863	1553	1774	1741	1727	1774	1961	1583	1392	0	1468
Q Serve(g_s), s	1.2	23.2	16.2	21.4	6.6	6.8	17.5	1.9	22.0	1.7	0.0	1.0
Cycle Q Clear(g_c), s	1.2	23.2	16.2	21.4	6.6	6.8	17.5	1.9	22.0	1.7	0.0	1.0
Prop In Lane	1.00		1.00	1.00		0.35	1.00		1.00	1.00		0.31
Lane Grp Cap(c), veh/h	357	1232	785	537	965	957	458	432	728	139	0	95
V/C Ratio(X)	0.07	0.78	0.49	0.94	0.23	0.24	0.87	0.11	0.82	0.19	0.00	0.17
Avail Cap(c_a), veh/h	385	1232	785	582	965	957	458	432	728	160	0	117
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	21.7	30.2	16.2	25.2	11.4	11.4	36.1	31.1	23.4	42.8	0.0	44.2
Incr Delay (d2), s/veh	0.1	4.9	2.2	22.6	0.6	0.6	16.8	0.2	8.1	0.6	0.0	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.9	18.5	11.8	23.7	6.0	6.1	8.1	1.9	22.2	1.2	0.0	0.8
LnGrp Delay(d),s/veh	21.8	35.0	18.4	47.7	12.0	12.0	52.9	31.4	31.4	43.4	0.0	46.0
LnGrp LOS	C	D	B	D	B	B	D	C	C	D		D
Approach Vol, veh/h		1368			958			1042			42	
Approach Delay, s/veh		30.1			30.8			39.7			44.4	
Approach LOS		C			C			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	21.0	12.5	27.5	39.1	5.4	28.0	5.1	61.4
Change Period (Y+Rc), s	3.5	6.0	3.5	6.0	3.5	6.0	3.5	6.0
Max Green Setting (Gmax), s	17.5	8.0	26.5	29.0	3.5	22.0	3.5	52.0
Max Q Clear Time (g_c+I1), s	19.5	3.0	23.4	25.2	3.7	24.0	3.2	8.8
Green Ext Time (p_c), s	0.0	0.7	0.6	3.7	0.0	0.0	0.0	37.3

Intersection Summary	
HCM 2010 Ctrl Delay	33.4
HCM 2010 LOS	C

Notes

User approved pedestrian interval to be less than phase max green.
User approved changes to right turn type.

Intersection	
Int Delay, s/veh	2.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	60	1385	35	65	580	5	10	1	40	1	1	15
Future Vol, veh/h	60	1385	35	65	580	5	10	1	40	1	1	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	150	-	-	230	-	-	140	-	140	110	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	10	3	3	2	3	33	2	2	2	2	50	25
Mvmt Flow	63	1458	37	68	611	5	11	1	42	1	1	16

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	616	0	0	1495	0	0	2046	2356	747	1606	2371	308
Stage 1	-	-	-	-	-	-	1603	1603	-	750	750	-
Stage 2	-	-	-	-	-	-	443	753	-	856	1621	-
Critical Hdwy	4.3	-	-	4.14	-	-	7.54	6.54	6.94	7.54	7.5	7.4
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	6.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	6.5	-
Follow-up Hdwy	2.3	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.5	3.55
Pot Cap-1 Maneuver	907	-	-	445	-	-	33	35	355	70	18	624
Stage 1	-	-	-	-	-	-	110	163	-	369	318	-
Stage 2	-	-	-	-	-	-	564	416	-	319	100	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	907	-	-	445	-	-	25	28	355	50	14	624
Mov Cap-2 Maneuver	-	-	-	-	-	-	25	28	-	50	14	-
Stage 1	-	-	-	-	-	-	102	152	-	343	269	-
Stage 2	-	-	-	-	-	-	464	352	-	260	93	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.4	1.5	60.6	31.7
HCM LOS			F	D

Minor Lane/Major Mvmt	NBLn1	NBLn2	NBLn3	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	25	28	355	907	-	-	445	-	-	50	168
HCM Lane V/C Ratio	0.421	0.038	0.119	0.07	-	-	0.154	-	-	0.021	0.1
HCM Control Delay (s)	229.1	138.5	16.5	9.3	-	-	14.6	-	-	78.5	28.8
HCM Lane LOS	F	F	C	A	-	-	B	-	-	F	D
HCM 95th %tile Q(veh)	1.3	0.1	0.4	0.2	-	-	0.5	-	-	0.1	0.3

Intersection	
Int Delay, s/veh	13.6

Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations													
Traffic Vol, veh/h	20	40	1455	125	90	495	20	35	1	20	5	1	10
Future Vol, veh/h	20	40	1455	125	90	495	20	35	1	20	5	1	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	215	-	-	195	-	-	65	-	-	-	-	95
Veh in Median Storage, #	-	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	3	2	2	5	2	2	2	6	2	2	8
Mvmt Flow	21	42	1532	132	95	521	21	37	1	21	5	1	11

Major/Minor	Major1				Major2			Minor1			Minor2		
Conflicting Flow All	396	542	0	0	1663	0	0	2175	2456	832	1614	2510	271
Stage 1	-	-	-	-	-	-	-	1724	1724	-	721	721	-
Stage 2	-	-	-	-	-	-	-	451	732	-	893	1789	-
Critical Hdwy	6.44	4.14	-	-	4.14	-	-	7.54	6.54	7.02	7.54	6.54	7.06
Critical Hdwy Stg 1	-	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.52	2.22	-	-	2.22	-	-	3.52	4.02	3.36	3.52	4.02	3.38
Pot Cap-1 Maneuver	805	1023	-	-	383	-	-	~ 26	30	304	69	28	709
Stage 1	-	-	-	-	-	-	-	92	142	-	385	430	-
Stage 2	-	-	-	-	-	-	-	557	425	-	303	132	-
Platoon blocked, %			-	-		-	-						
Mov Cap-1 Maneuver	933	933	-	-	383	-	-	~ 20	23	304	50	21	709
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	~ 20	23	-	50	21	-
Stage 1	-	-	-	-	-	-	-	92	142	-	385	323	-
Stage 2	-	-	-	-	-	-	-	411	320	-	280	132	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	2.6	$ 512.8	47
HCM LOS			F	E

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	20	192	933	-	-	383	-	-	41	709
HCM Lane V/C Ratio	1.842	0.115	0.068	-	-	0.247	-	-	0.154	0.015
HCM Control Delay (s)	$ 804.7	26.2	9.1	-	-	17.5	-	-	108.2	10.2
HCM Lane LOS	F	D	A	-	-	C	-	-	F	B
HCM 95th %tile Q(veh)	4.9	0.4	0.2	-	-	1	-	-	0.5	0

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

Intersection	
Int Delay, s/veh	1.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	5	1	15	1	1	65
Future Vol, veh/h	5	1	15	1	1	65
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	25	2	2	11
Mvmt Flow	5	1	16	1	1	68

Major/Minor	Minor2		Major2		Major1	
Conflicting Flow All	104	1	68	0	1	0
Stage 1	33	-	-	-	-	-
Stage 2	71	-	-	-	-	-
Critical Hdwy	6.52	6.22	4.35	-	4.12	-
Critical Hdwy Stg 1	5.52	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	4.018	3.318	2.425	-	2.218	-
Pot Cap-1 Maneuver	786	1084	1399	-	1622	-
Stage 1	868	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %				-		-
Mov Cap-1 Maneuver	0	1084	1399	-	1622	-
Mov Cap-2 Maneuver	0	-	-	-	-	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	8.3	7.1	0.1
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBR	EBLn1	WBL	WBT
Capacity (veh/h)	1622	-	1084	1399	-
HCM Lane V/C Ratio	0.001	-	0.006	0.011	-
HCM Control Delay (s)	7.2	-	8.3	7.6	0
HCM Lane LOS	A	-	A	A	A
HCM 95th %tile Q(veh)	0	-	0	0	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	480	475	615	940	25	400	20	410	105	40	30
Future Volume (veh/h)	5	480	475	615	940	25	400	20	410	105	40	30
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1520	1961	1863	1863	1862	1900	1827	1818	1863	1845	1758	1900
Adj Flow Rate, veh/h	5	505	500	647	989	26	421	21	432	111	42	32
Adj No. of Lanes	1	2	1	1	2	0	1	1	1	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	25	2	2	2	2	2	4	10	2	3	12	12
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	201	1215	712	671	2127	56	394	392	787	267	132	100
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.00	0.33	0.33	0.28	0.60	0.60	0.12	0.22	0.22	0.05	0.14	0.14
Ln Grp Delay, s/veh	33.8	40.4	38.9	53.6	17.8	17.7	119.6	46.8	27.4	53.3	0.0	59.5
Ln Grp LOS	C	D	D	D	B	B	F	D	C	D		E
Approach Vol, veh/h		1010			1662			874			185	
Approach Delay, s/veh		39.7			31.7			72.3			55.8	
Approach LOS		D			C			E			E	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Case No	1.1	4.0	1.1	3.0	1.1	3.0	1.1	4.0
Phs Duration (G+Y+Rc), s	22.0	27.3	45.7	54.9	11.0	38.3	4.1	96.6
Change Period (Y+Rc), s	3.5	6.0	3.5	6.0	3.5	6.0	3.5	6.0
Max Green (Gmax), s	18.5	25.0	46.5	41.0	7.5	36.0	3.5	84.0
Max Allow Headway (MAH), s	3.7	6.2	3.7	8.7	3.9	6.2	3.8	8.7
Max Q Clear (g_c+I1), s	20.5	8.1	41.1	40.1	9.5	30.3	2.3	25.2
Green Ext Time (g_e), s	0.0	4.1	1.2	0.9	0.0	2.0	0.0	52.0
Prob of Phs Call (p_c)	1.00	1.00	1.00	1.00	0.99	1.00	0.19	1.00
Prob of Max Out (p_x)	1.00	0.16	0.55	1.00	1.00	1.00	1.00	0.86

Left-Turn Movement Data								
Assigned Mvmt	1		3		5		7	
Mvmt Sat Flow, veh/h	1740		1774		1757		1448	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		927		3725		1818		3522

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		706		1583		1583		93

Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	7	0
Lane Assignment	(Pr/Pm)		(Pr/Pm)		(Pr/Pm)		(Pr/Pm)	

Lanes in Grp	1	0	1	0	1	0	1	0
Grp Vol (v), veh/h	421	0	647	0	111	0	5	0
Grp Sat Flow (s), veh/h/ln	1740	0	1774	0	1757	0	1448	0
Q Serve Time (g_s), s	18.5	0.0	39.1	0.0	7.5	0.0	0.3	0.0
Cycle Q Clear Time (g_c), s	18.5	0.0	39.1	0.0	7.5	0.0	0.3	0.0
Perm LT Sat Flow (s_l), veh/h/ln	1295	0	558	0	925	0	451	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	23.3	0.0	50.9	0.0	21.3	0.0	48.9	0.0
Perm LT Serve Time (g_u), s	15.2	0.0	33.1	0.0	21.3	0.0	48.9	0.0
Perm LT Q Serve Time (g_ps), s	15.2	0.0	33.1	0.0	1.4	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	394	0	671	0	267	0	201	0
V/C Ratio (X)	1.07	0.00	0.96	0.00	0.42	0.00	0.02	0.00
Avail Cap (c_a), veh/h	394	0	721	0	267	0	229	0
Upstream Filter (I)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Uniform Delay (d1), s/veh	54.7	0.0	29.4	0.0	52.3	0.0	33.8	0.0
Incr Delay (d2), s/veh	64.9	0.0	24.3	0.0	1.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	119.6	0.0	53.6	0.0	53.3	0.0	33.8	0.0
1st-Term Q (Q1), veh/ln	7.4	0.0	26.2	0.0	0.3	0.0	0.1	0.0
2nd-Term Q (Q2), veh/ln	7.1	0.0	4.5	0.0	0.1	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.80	0.00	1.30	0.00	1.80	0.00	1.80	0.00
%ile Back of Q (95%), veh/ln	26.2	0.0	39.9	0.0	0.7	0.0	0.3	0.0
%ile Storage Ratio (RQ%)	2.93	0.00	4.05	0.00	0.48	0.00	0.06	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	6.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment				T		T		T
Lanes in Grp	0	0	0	2	0	1	0	1
Grp Vol (v), veh/h	0	0	0	505	0	21	0	497
Grp Sat Flow (s), veh/h/ln	0	0	0	1863	0	1818	0	1769
Q Serve Time (g_s), s	0.0	0.0	0.0	15.8	0.0	1.4	0.0	23.2
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	15.8	0.0	1.4	0.0	23.2
Lane Grp Cap (c), veh/h	0	0	0	1215	0	392	0	1069
V/C Ratio (X)	0.00	0.00	0.00	0.42	0.00	0.05	0.00	0.46
Avail Cap (c_a), veh/h	0	0	0	1215	0	436	0	1069
Upstream Filter (I)	0.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	39.4	0.0	46.7	0.0	16.3
Incr Delay (d2), s/veh	0.0	0.0	0.0	1.0	0.0	0.1	0.0	1.5
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	40.4	0.0	46.8	0.0	17.8
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	8.1	0.0	0.7	0.0	11.3

2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.4
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.57	0.00	1.80	0.00	1.48
%ile Back of Q (95%), veh/ln	0.0	0.0	0.0	13.0	0.0	1.3	0.0	17.4
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.13	0.00	0.05	0.00	1.76
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		R		R		T+R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	74	0	500	0	432	0	518
Grp Sat Flow (s), veh/h/ln	0	1633	0	1583	0	1583	0	1845
Q Serve Time (g_s), s	0.0	6.1	0.0	38.1	0.0	28.3	0.0	23.2
Cycle Q Clear Time (g_c), s	0.0	6.1	0.0	38.1	0.0	28.3	0.0	23.2
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	1583.3	0.0	1583.3	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	18.5	0.0	42.2	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.43	0.00	1.00	0.00	1.00	0.00	0.05
Lane Grp Cap (c), veh/h	0	232	0	712	0	787	0	1115
V/C Ratio (X)	0.00	0.32	0.00	0.70	0.00	0.55	0.00	0.46
Avail Cap (c_a), veh/h	0	272	0	712	0	826	0	1115
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	57.8	0.0	33.2	0.0	26.1	0.0	16.3
Incr Delay (d2), s/veh	0.0	1.7	0.0	5.7	0.0	1.3	0.0	1.4
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	59.5	0.0	38.9	0.0	27.4	0.0	17.7
1st-Term Q (Q1), veh/ln	0.0	2.8	0.0	16.6	0.0	12.3	0.0	11.8
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	1.1	0.0	0.3	0.0	0.4
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.80	0.00	1.39	0.00	1.46	0.00	1.47
%ile Back of Q (95%), veh/ln	0.0	5.2	0.0	24.6	0.0	18.4	0.0	18.0
%ile Storage Ratio (RQ%)	0.00	0.59	0.00	4.64	0.00	0.62	0.00	1.82
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	44.6
HCM 2010 LOS	D

Notes

User approved changes to right turn type.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	480	475	615	940	25	400	20	410	105	40	30
Future Volume (veh/h)	5	480	475	615	940	25	400	20	410	105	40	30
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1520	1961	1863	1863	1862	1900	1827	1818	1863	1845	1758	1900
Adj Flow Rate, veh/h	5	505	500	647	989	26	421	21	432	111	42	32
Adj No. of Lanes	1	2	1	1	2	0	1	1	1	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	25	2	2	2	2	2	4	10	2	3	12	12
Cap, veh/h	201	1215	712	671	2127	56	394	392	787	267	132	100
Arrive On Green	0.00	0.33	0.33	0.28	0.60	0.60	0.12	0.22	0.22	0.05	0.14	0.14
Sat Flow, veh/h	1448	3725	1583	1774	3522	93	1740	1818	1583	1757	927	706
Grp Volume(v), veh/h	5	505	500	647	497	518	421	21	432	111	0	74
Grp Sat Flow(s),veh/h/ln	1448	1863	1583	1774	1769	1845	1740	1818	1583	1757	0	1633
Q Serve(g_s), s	0.3	15.8	38.1	39.1	23.2	23.2	18.5	1.4	28.3	7.5	0.0	6.1
Cycle Q Clear(g_c), s	0.3	15.8	38.1	39.1	23.2	23.2	18.5	1.4	28.3	7.5	0.0	6.1
Prop In Lane	1.00		1.00	1.00		0.05	1.00		1.00	1.00		0.43
Lane Grp Cap(c), veh/h	201	1215	712	671	1069	1115	394	392	787	267	0	232
V/C Ratio(X)	0.02	0.42	0.70	0.96	0.46	0.46	1.07	0.05	0.55	0.42	0.00	0.32
Avail Cap(c_a), veh/h	229	1215	712	721	1069	1115	394	436	826	267	0	272
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	33.8	39.4	33.2	29.4	16.3	16.3	54.7	46.7	26.1	52.3	0.0	57.8
Incr Delay (d2), s/veh	0.0	1.0	5.7	24.3	1.5	1.4	64.9	0.1	1.3	1.0	0.0	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.3	13.0	24.6	39.9	17.4	18.0	26.2	1.3	18.4	0.7	0.0	5.2
LnGrp Delay(d),s/veh	33.8	40.4	38.9	53.6	17.8	17.7	119.6	46.8	27.4	53.3	0.0	59.5
LnGrp LOS	C	D	D	D	B	B	F	D	C	D		E
Approach Vol, veh/h		1010			1662			874			185	
Approach Delay, s/veh		39.7			31.7			72.3			55.8	
Approach LOS		D			C			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	22.0	27.3	45.7	54.9	11.0	38.3	4.1	96.6
Change Period (Y+Rc), s	3.5	6.0	3.5	6.0	3.5	6.0	3.5	6.0
Max Green Setting (Gmax), s	18.5	25.0	46.5	41.0	7.5	36.0	3.5	84.0
Max Q Clear Time (g_c+I1), s	20.5	8.1	41.1	40.1	9.5	30.3	2.3	25.2
Green Ext Time (p_c), s	0.0	4.1	1.2	0.9	0.0	2.0	0.0	52.0

Intersection Summary	
HCM 2010 Ctrl Delay	44.6
HCM 2010 LOS	D

Notes

User approved changes to right turn type.

Intersection	
Int Delay, s/veh	9.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	15	685	5	10	1435	5	65	1	130	1	1	75
Future Vol, veh/h	15	685	5	10	1435	5	65	1	130	1	1	75
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	150	-	-	230	-	-	140	-	140	110	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	20	2	2	2	2	67	2	2	2	2	2	8
Mvmt Flow	16	721	5	11	1511	5	68	1	137	1	1	79

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1516	0	0	726	0	0	1532	2292	363	1927	2292	758
Stage 1	-	-	-	-	-	-	755	755	-	1534	1534	-
Stage 2	-	-	-	-	-	-	777	1537	-	393	758	-
Critical Hdwy	4.5	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	7.06
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.4	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.38
Pot Cap-1 Maneuver	358	-	-	873	-	-	80	39	634	40	39	337
Stage 1	-	-	-	-	-	-	367	415	-	122	177	-
Stage 2	-	-	-	-	-	-	356	176	-	603	413	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	358	-	-	873	-	-	~ 57	37	634	29	37	337
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 57	37	-	29	37	-
Stage 1	-	-	-	-	-	-	351	396	-	117	175	-
Stage 2	-	-	-	-	-	-	268	174	-	451	395	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	0.1	109.2	22.4
HCM LOS			F	C

Minor Lane/Major Mvmt	NBLn1	NBLn2	NBLn3	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	57	37	634	358	-	-	873	-	-	29	305
HCM Lane V/C Ratio	1.2	0.028	0.216	0.044	-	-	0.012	-	-	0.036	0.262
HCM Control Delay (s)	$ 303.4	105.1	12.2	15.5	-	-	9.2	-	-	133.8	20.9
HCM Lane LOS	F	F	B	C	-	-	A	-	-	F	C
HCM 95th %tile Q(veh)	5.8	0.1	0.8	0.1	-	-	0	-	-	0.1	1

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

Intersection	
Int Delay, s/veh	29.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	545	25	10	1550	15	140	1	155	5	1	25
Future Vol, veh/h	10	545	25	10	1550	15	140	1	155	5	1	25
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	215	-	-	195	-	-	65	-	-	-	-	95
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	4	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	574	26	11	1632	16	147	1	163	5	1	26

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1647	0	0	600	0	0	1445	2276	300	1969	2282	824
Stage 1	-	-	-	-	-	-	608	608	-	1661	1661	-
Stage 2	-	-	-	-	-	-	837	1668	-	308	621	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	389	-	-	973	-	-	~ 93	40	696	37	39	316
Stage 1	-	-	-	-	-	-	450	484	-	101	153	-
Stage 2	-	-	-	-	-	-	327	152	-	677	477	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	389	-	-	973	-	-	~ 81	38	696	27	37	316
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 81	38	-	27	37	-
Stage 1	-	-	-	-	-	-	437	470	-	98	151	-
Stage 2	-	-	-	-	-	-	294	150	-	503	464	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	0.1	242.8	46.5
HCM LOS			F	E

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	81	626	389	-	-	973	-	-	28	316
HCM Lane V/C Ratio	1.819	0.262	0.027	-	-	0.011	-	-	0.226	0.083
HCM Control Delay (s)	$ 499.1	12.8	14.5	-	-	8.7	-	-	167.7	17.4
HCM Lane LOS	F	B	B	-	-	A	-	-	F	C
HCM 95th %tile Q(veh)	12.7	1	0.1	-	-	0	-	-	0.7	0.3

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

Intersection	
Int Delay, s/veh	6.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	10	1	75	1	1	20
Future Vol, veh/h	10	1	75	1	1	20
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	9	2	2	44
Mvmt Flow	11	1	79	1	1	21

Major/Minor	Minor2		Major2		Major1	
Conflicting Flow All	182	1	21	0	1	0
Stage 1	159	-	-	-	-	-
Stage 2	23	-	-	-	-	-
Critical Hdwy	6.52	6.22	4.19	-	4.12	-
Critical Hdwy Stg 1	5.52	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	4.018	3.318	2.281	-	2.218	-
Pot Cap-1 Maneuver	712	1084	1550	-	1622	-
Stage 1	766	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %				-		-
Mov Cap-1 Maneuver	0	1084	1550	-	1622	-
Mov Cap-2 Maneuver	0	-	-	-	-	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	8.4	7.3	0.3
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBR	EBLn1	WBL	WBT
Capacity (veh/h)	1622	-	1084	1550	-
HCM Lane V/C Ratio	0.001	-	0.011	0.051	-
HCM Control Delay (s)	7.2	-	8.4	7.4	0
HCM Lane LOS	A	-	A	A	A
HCM 95th %tile Q(veh)	0	-	0	0.2	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	150	220	250	155	25	225	20	245	25	25	10
Future Volume (veh/h)	10	150	220	250	155	25	225	20	245	25	25	10
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1743	1961	1863	1863	1863	1900	1863	1961	1863	1863	1791	1900
Adj Flow Rate, veh/h	11	158	232	263	163	26	237	21	258	26	26	11
Adj No. of Lanes	1	2	1	1	2	0	1	1	1	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	9	2	2	2	2	2	2	2	2	2	4	4
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	602	1704	948	688	1688	265	425	418	498	208	106	45
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.01	0.46	0.46	0.10	0.55	0.55	0.14	0.21	0.21	0.02	0.09	0.09
Ln Grp Delay, s/veh	13.0	13.9	9.1	9.8	9.8	9.8	30.3	28.3	27.0	36.8	0.0	40.0
Ln Grp LOS	B	B	A	A	A	A	C	C	C	D		D
Approach Vol, veh/h		401			452			516			63	
Approach Delay, s/veh		11.1			9.8			28.6			38.6	
Approach LOS		B			A			C			D	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Case No	1.1	4.0	1.1	3.0	1.1	3.0	1.1	4.0
Phs Duration (G+Y+Rc), s	16.2	14.0	12.6	47.2	5.0	25.2	4.2	55.5
Change Period (Y+Rc), s	3.5	6.0	3.5	6.0	3.5	6.0	3.5	6.0
Max Green (Gmax), s	20.5	11.0	19.5	20.0	5.5	26.0	5.5	34.0
Max Allow Headway (MAH), s	3.7	6.2	3.7	8.5	3.9	6.2	3.7	8.5
Max Q Clear (g_c+I1), s	12.4	3.8	8.6	8.2	3.2	14.0	2.3	4.3
Green Ext Time (g_e), s	0.4	1.3	0.5	5.6	0.0	1.9	0.0	9.7
Prob of Phs Call (p_c)	1.00	1.00	1.00	1.00	0.48	1.00	0.24	1.00
Prob of Max Out (p_x)	0.04	0.75	0.01	0.76	1.00	0.19	1.00	0.17

Left-Turn Movement Data								
Assigned Mvmt	1		3		5		7	
Mvmt Sat Flow, veh/h	1774		1774		1774		1660	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1196		3725		1961		3067

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		506		1583		1583		481

Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	7	0
Lane Assignment	(Pr/Pm)		(Pr/Pm)		(Pr/Pm)		(Pr/Pm)	

Lanes in Grp	1	0	1	0	1	0	1	0
Grp Vol (v), veh/h	237	0	263	0	26	0	11	0
Grp Sat Flow (s), veh/h/ln	1774	0	1774	0	1774	0	1660	0
Q Serve Time (g_s), s	10.4	0.0	6.6	0.0	1.2	0.0	0.3	0.0
Cycle Q Clear Time (g_c), s	10.4	0.0	6.6	0.0	1.2	0.0	0.3	0.0
Perm LT Sat Flow (s_l), veh/h/ln	1365	0	990	0	1096	0	1113	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	10.0	0.0	43.2	0.0	8.0	0.0	41.2	0.0
Perm LT Serve Time (g_u), s	6.2	0.0	39.0	0.0	8.0	0.0	41.2	0.0
Perm LT Q Serve Time (g_ps), s	0.8	0.0	1.5	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	425	0	688	0	208	0	602	0
V/C Ratio (X)	0.56	0.00	0.38	0.00	0.13	0.00	0.02	0.00
Avail Cap (c_a), veh/h	578	0	893	0	286	0	691	0
Upstream Filter (I)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Uniform Delay (d1), s/veh	29.1	0.0	9.4	0.0	36.5	0.0	12.9	0.0
Incr Delay (d2), s/veh	1.1	0.0	0.3	0.0	0.3	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	30.3	0.0	9.8	0.0	36.8	0.0	13.0	0.0
1st-Term Q (Q1), veh/ln	5.0	0.0	3.1	0.0	0.6	0.0	0.1	0.0
2nd-Term Q (Q2), veh/ln	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.72	0.00	1.80	0.00	1.80	0.00	1.80	0.00
%ile Back of Q (95%), veh/ln	8.9	0.0	5.8	0.0	1.1	0.0	0.3	0.0
%ile Storage Ratio (RQ%)	0.98	0.00	0.59	0.00	0.68	0.00	0.05	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment				T		T		T
Lanes in Grp	0	0	0	2	0	1	0	1
Grp Vol (v), veh/h	0	0	0	158	0	21	0	93
Grp Sat Flow (s), veh/h/ln	0	0	0	1863	0	1961	0	1770
Q Serve Time (g_s), s	0.0	0.0	0.0	2.2	0.0	0.8	0.0	2.2
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	2.2	0.0	0.8	0.0	2.2
Lane Grp Cap (c), veh/h	0	0	0	1704	0	418	0	974
V/C Ratio (X)	0.00	0.00	0.00	0.09	0.00	0.05	0.00	0.10
Avail Cap (c_a), veh/h	0	0	0	1704	0	566	0	974
Upstream Filter (I)	0.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	13.8	0.0	28.1	0.0	9.6
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.2
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	13.9	0.0	28.3	0.0	9.8
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	1.1	0.0	0.4	0.0	1.1

2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.80	0.00	1.80	0.00	1.80
%ile Back of Q (95%), veh/ln	0.0	0.0	0.0	2.1	0.0	0.8	0.0	2.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.02	0.00	0.03	0.00	0.21
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		R		R		T+R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	37	0	232	0	258	0	96
Grp Sat Flow (s), veh/h/ln	0	1702	0	1583	0	1583	0	1778
Q Serve Time (g_s), s	0.0	1.8	0.0	6.2	0.0	12.0	0.0	2.3
Cycle Q Clear Time (g_c), s	0.0	1.8	0.0	6.2	0.0	12.0	0.0	2.3
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	1583.3	0.0	1583.3	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	12.7	0.0	9.1	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.30	0.00	1.00	0.00	1.00	0.00	0.27
Lane Grp Cap (c), veh/h	0	151	0	948	0	498	0	979
V/C Ratio (X)	0.00	0.24	0.00	0.24	0.00	0.52	0.00	0.10
Avail Cap (c_a), veh/h	0	208	0	948	0	617	0	979
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	38.2	0.0	8.5	0.0	25.3	0.0	9.6
Incr Delay (d2), s/veh	0.0	1.8	0.0	0.6	0.0	1.8	0.0	0.2
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	40.0	0.0	9.1	0.0	27.0	0.0	9.8
1st-Term Q (Q1), veh/ln	0.0	0.9	0.0	2.7	0.0	5.2	0.0	1.1
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.2	0.0	0.2	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.80	0.00	1.80	0.00	1.70	0.00	1.80
%ile Back of Q (95%), veh/ln	0.0	1.7	0.0	5.2	0.0	9.3	0.0	2.1
%ile Storage Ratio (RQ%)	0.00	0.18	0.00	0.97	0.00	0.31	0.00	0.21
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	18.2
HCM 2010 LOS	B

Notes

User approved pedestrian interval to be less than phase max green.
User approved changes to right turn type.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	150	220	250	155	25	225	20	245	25	25	10
Future Volume (veh/h)	10	150	220	250	155	25	225	20	245	25	25	10
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1743	1961	1863	1863	1863	1900	1863	1961	1863	1863	1791	1900
Adj Flow Rate, veh/h	11	158	232	263	163	26	237	21	258	26	26	11
Adj No. of Lanes	1	2	1	1	2	0	1	1	1	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	9	2	2	2	2	2	2	2	2	2	4	4
Cap, veh/h	602	1704	948	688	1688	265	425	418	498	208	106	45
Arrive On Green	0.01	0.46	0.46	0.10	0.55	0.55	0.14	0.21	0.21	0.02	0.09	0.09
Sat Flow, veh/h	1660	3725	1583	1774	3067	481	1774	1961	1583	1774	1196	506
Grp Volume(v), veh/h	11	158	232	263	93	96	237	21	258	26	0	37
Grp Sat Flow(s),veh/h/ln	1660	1863	1583	1774	1770	1778	1774	1961	1583	1774	0	1702
Q Serve(g_s), s	0.3	2.2	6.2	6.6	2.2	2.3	10.4	0.8	12.0	1.2	0.0	1.8
Cycle Q Clear(g_c), s	0.3	2.2	6.2	6.6	2.2	2.3	10.4	0.8	12.0	1.2	0.0	1.8
Prop In Lane	1.00		1.00	1.00		0.27	1.00		1.00	1.00		0.30
Lane Grp Cap(c), veh/h	602	1704	948	688	974	979	425	418	498	208	0	151
V/C Ratio(X)	0.02	0.09	0.24	0.38	0.10	0.10	0.56	0.05	0.52	0.13	0.00	0.24
Avail Cap(c_a), veh/h	691	1704	948	893	974	979	578	566	617	286	0	208
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	12.9	13.8	8.5	9.4	9.6	9.6	29.1	28.1	25.3	36.5	0.0	38.2
Incr Delay (d2), s/veh	0.0	0.1	0.6	0.3	0.2	0.2	1.1	0.1	1.8	0.3	0.0	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.3	2.1	5.2	5.8	2.0	2.1	8.9	0.8	9.3	1.1	0.0	1.7
LnGrp Delay(d),s/veh	13.0	13.9	9.1	9.8	9.8	9.8	30.3	28.3	27.0	36.8	0.0	40.0
LnGrp LOS	B	B	A	A	A	A	C	C	C	D		D
Approach Vol, veh/h		401			452			516			63	
Approach Delay, s/veh		11.1			9.8			28.6			38.6	
Approach LOS		B			A			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.2	14.0	12.6	47.2	5.0	25.2	4.2	55.5
Change Period (Y+Rc), s	3.5	6.0	3.5	6.0	3.5	6.0	3.5	6.0
Max Green Setting (Gmax), s	20.5	11.0	19.5	20.0	5.5	26.0	5.5	34.0
Max Q Clear Time (g_c+I1), s	12.4	3.8	8.6	8.2	3.2	14.0	2.3	4.3
Green Ext Time (p_c), s	0.4	1.3	0.5	5.6	0.0	1.9	0.0	9.7

Intersection Summary	
HCM 2010 Ctrl Delay	18.2
HCM 2010 LOS	B

Notes

User approved pedestrian interval to be less than phase max green.
User approved changes to right turn type.

Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	30	375	1	5	385	1	10	1	5	1	1	20
Future Vol, veh/h	30	375	1	5	385	1	10	1	5	1	1	20
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	150	-	-	230	-	-	140	-	140	110	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	10	2	2	33	2	2	2	2	40	100	2	2
Mvmt Flow	32	395	1	5	405	1	11	1	5	1	1	21

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	406	0	0	396	0	0	672	875	198	677	875	203
Stage 1	-	-	-	-	-	-	458	458	-	416	416	-
Stage 2	-	-	-	-	-	-	214	417	-	261	459	-
Critical Hdwy	4.3	-	-	4.76	-	-	7.54	6.54	7.7	9.5	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	8.5	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	8.5	5.54	-
Follow-up Hdwy	2.3	-	-	2.53	-	-	3.52	4.02	3.7	4.5	4.02	3.32
Pot Cap-1 Maneuver	1094	-	-	966	-	-	342	286	704	199	286	804
Stage 1	-	-	-	-	-	-	552	565	-	384	590	-
Stage 2	-	-	-	-	-	-	768	590	-	506	565	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1094	-	-	966	-	-	323	276	704	192	276	804
Mov Cap-2 Maneuver	-	-	-	-	-	-	323	276	-	192	276	-
Stage 1	-	-	-	-	-	-	536	548	-	373	587	-
Stage 2	-	-	-	-	-	-	743	587	-	487	548	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.6	0.1	14.6	10.6
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	NBLn2	NBLn3	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	323	276	704	1094	-	-	966	-	-	192	737
HCM Lane V/C Ratio	0.033	0.004	0.007	0.029	-	-	0.005	-	-	0.005	0.03
HCM Control Delay (s)	16.5	18.1	10.2	8.4	-	-	8.7	-	-	23.9	10
HCM Lane LOS	C	C	B	A	-	-	A	-	-	C	B
HCM 95th %tile Q(veh)	0.1	0	0	0.1	-	-	0	-	-	0	0.1

Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	25	385	20	15	385	15	10	1	10	10	1	1
Future Vol, veh/h	25	385	20	15	385	15	10	1	10	10	1	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	215	-	-	195	-	-	65	-	-	-	-	95
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	13	2	2
Mvmt Flow	26	405	21	16	405	16	11	1	11	11	1	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	421	0	0	426	0	0	703	921	213	701	924	211
Stage 1	-	-	-	-	-	-	468	468	-	445	445	-
Stage 2	-	-	-	-	-	-	235	453	-	256	479	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.76	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.76	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.76	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.63	4.02	3.32
Pot Cap-1 Maneuver	1135	-	-	1130	-	-	324	269	792	305	268	794
Stage 1	-	-	-	-	-	-	545	560	-	534	573	-
Stage 2	-	-	-	-	-	-	747	568	-	696	553	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1135	-	-	1130	-	-	314	259	792	292	258	794
Mov Cap-2 Maneuver	-	-	-	-	-	-	314	259	-	292	258	-
Stage 1	-	-	-	-	-	-	533	547	-	522	565	-
Stage 2	-	-	-	-	-	-	734	560	-	670	540	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.5	0.3	13.5	17.3
HCM LOS			B	C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	314	667	1135	-	-	1130	-	-	289	794
HCM Lane V/C Ratio	0.034	0.017	0.023	-	-	0.014	-	-	0.04	0.001
HCM Control Delay (s)	16.9	10.5	8.2	-	-	8.2	-	-	18	9.5
HCM Lane LOS	C	B	A	-	-	A	-	-	C	A
HCM 95th %tile Q(veh)	0.1	0.1	0.1	-	-	0	-	-	0.1	0

Intersection	
Int Delay, s/veh	3.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1	1	20	1	1	30
Future Vol, veh/h	1	1	20	1	1	30
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	6	2	2	14
Mvmt Flow	1	1	21	1	1	32

Major/Minor	Minor2		Major2		Major1	
Conflicting Flow All	77	1	32	0	1	0
Stage 1	43	-	-	-	-	-
Stage 2	34	-	-	-	-	-
Critical Hdwy	6.52	6.22	4.16	-	4.12	-
Critical Hdwy Stg 1	5.52	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	4.018	3.318	2.254	-	2.218	-
Pot Cap-1 Maneuver	813	1084	1555	-	1622	-
Stage 1	859	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %				-		-
Mov Cap-1 Maneuver	0	1084	1555	-	1622	-
Mov Cap-2 Maneuver	0	-	-	-	-	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	8.3	7	0.2
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBR	EBLn1	WBL	WBT
Capacity (veh/h)	1622	-	1084	1555	-
HCM Lane V/C Ratio	0.001	-	0.002	0.014	-
HCM Control Delay (s)	7.2	-	8.3	7.3	0
HCM Lane LOS	A	-	A	A	A
HCM 95th %tile Q(veh)	0	-	0	0	-

FUTURE BUILD (YEAR 2024) CAPACITY REPORTS

Weekday Morning Peak Hour

Weekday Evening Peak Hour

Saturday Midday Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	25	915	370	480	355	75	385	45	565	25	10	5
Future Volume (veh/h)	25	915	370	480	355	75	385	45	565	25	10	5
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1570	1961	1827	1863	1833	1900	1863	1961	1863	1462	1549	1900
Adj Flow Rate, veh/h	26	963	389	505	374	79	405	47	595	26	11	5
Adj No. of Lanes	1	2	1	1	2	0	1	1	1	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	21	2	4	2	4	4	2	2	2	30	18	18
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	354	1219	780	537	1590	332	458	432	734	139	65	30
HCM Platoon Ratio	0.67	0.67	0.67	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.01	0.22	0.22	0.24	0.55	0.55	0.17	0.22	0.22	0.02	0.06	0.06
Ln Grp Delay, s/veh	22.1	39.5	21.0	48.9	12.0	12.0	54.5	31.4	30.7	43.4	0.0	46.0
Ln Grp LOS	C	D	C	D	B	B	D	C	C	D		D
Approach Vol, veh/h		1378			958			1047			42	
Approach Delay, s/veh		33.9			31.5			40.0			44.4	
Approach LOS		C			C			D			D	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Case No	1.1	4.0	1.1	3.0	1.1	3.0	1.1	4.0
Phs Duration (G+Y+Rc), s	21.0	12.5	27.8	38.7	5.4	28.0	5.1	61.4
Change Period (Y+Rc), s	3.5	6.0	3.5	6.0	3.5	6.0	3.5	6.0
Max Green (Gmax), s	17.5	8.0	26.5	29.0	3.5	22.0	3.5	52.0
Max Allow Headway (MAH), s	3.7	6.0	3.7	8.7	4.0	6.0	3.8	8.7
Max Q Clear (g_c+I1), s	19.5	3.0	23.8	26.4	3.7	24.0	3.2	8.8
Green Ext Time (g_e), s	0.0	0.7	0.5	2.5	0.0	0.0	0.0	37.4
Prob of Phs Call (p_c)	1.00	1.00	1.00	1.00	0.51	1.00	0.51	1.00
Prob of Max Out (p_x)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.84

Left-Turn Movement Data								
Assigned Mvmt	1		3		5		7	
Mvmt Sat Flow, veh/h	1774		1774		1392		1495	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1009		3725		1961		2869

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		459		1553		1583		600

Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	7	0
Lane Assignment	(Pr/Pm)		(Pr/Pm)		(Pr/Pm)		(Pr/Pm)	

Lanes in Grp	1	0	1	0	1	0	1	0
Grp Vol (v), veh/h	405	0	505	0	26	0	26	0
Grp Sat Flow (s), veh/h/ln	1774	0	1774	0	1392	0	1495	0
Q Serve Time (g_s), s	17.5	0.0	21.8	0.0	1.7	0.0	1.2	0.0
Cycle Q Clear Time (g_c), s	17.5	0.0	21.8	0.0	1.7	0.0	1.2	0.0
Perm LT Sat Flow (s_l), veh/h/ln	1392	0	402	0	615	0	787	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	8.5	0.0	34.7	0.0	6.5	0.0	32.7	0.0
Perm LT Serve Time (g_u), s	5.4	0.0	8.3	0.0	6.5	0.0	32.7	0.0
Perm LT Q Serve Time (g_ps), s	5.4	0.0	8.3	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	458	0	537	0	139	0	354	0
V/C Ratio (X)	0.88	0.00	0.94	0.00	0.19	0.00	0.07	0.00
Avail Cap (c_a), veh/h	458	0	576	0	160	0	382	0
Upstream Filter (I)	1.00	0.00	1.00	0.00	1.00	0.00	0.69	0.00
Uniform Delay (d1), s/veh	36.3	0.0	25.8	0.0	42.8	0.0	22.0	0.0
Incr Delay (d2), s/veh	18.2	0.0	23.1	0.0	0.6	0.0	0.1	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	54.5	0.0	48.9	0.0	43.4	0.0	22.1	0.0
1st-Term Q (Q1), veh/ln	2.6	0.0	13.6	0.0	0.7	0.0	0.5	0.0
2nd-Term Q (Q2), veh/ln	2.3	0.0	3.4	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.74	0.00	1.40	0.00	1.80	0.00	1.80	0.00
%ile Back of Q (95%), veh/ln	8.5	0.0	23.8	0.0	1.2	0.0	0.9	0.0
%ile Storage Ratio (RQ%)	0.94	0.00	2.42	0.00	0.96	0.00	0.19	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment				T		T		T
Lanes in Grp	0	0	0	2	0	1	0	1
Grp Vol (v), veh/h	0	0	0	963	0	47	0	226
Grp Sat Flow (s), veh/h/ln	0	0	0	1863	0	1961	0	1741
Q Serve Time (g_s), s	0.0	0.0	0.0	24.4	0.0	1.9	0.0	6.6
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	24.4	0.0	1.9	0.0	6.6
Lane Grp Cap (c), veh/h	0	0	0	1219	0	432	0	965
V/C Ratio (X)	0.00	0.00	0.00	0.79	0.00	0.11	0.00	0.23
Avail Cap (c_a), veh/h	0	0	0	1219	0	432	0	965
Upstream Filter (I)	0.00	0.00	0.00	0.69	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	35.8	0.0	31.1	0.0	11.4
Incr Delay (d2), s/veh	0.0	0.0	0.0	3.7	0.0	0.2	0.0	0.6
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	39.5	0.0	31.4	0.0	12.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	12.6	0.0	1.0	0.0	3.2

2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.2
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.38	0.00	1.80	0.00	1.80
%ile Back of Q (95%), veh/ln	0.0	0.0	0.0	18.2	0.0	1.9	0.0	6.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.18	0.00	0.06	0.00	0.62
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		R		R		T+R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	16	0	389	0	595	0	227
Grp Sat Flow (s), veh/h/ln	0	1468	0	1553	0	1583	0	1727
Q Serve Time (g_s), s	0.0	1.0	0.0	17.4	0.0	22.0	0.0	6.8
Cycle Q Clear Time (g_c), s	0.0	1.0	0.0	17.4	0.0	22.0	0.0	6.8
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	1552.9	0.0	1583.3	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	17.5	0.0	24.3	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.31	0.00	1.00	0.00	1.00	0.00	0.35
Lane Grp Cap (c), veh/h	0	95	0	780	0	734	0	957
V/C Ratio (X)	0.00	0.17	0.00	0.50	0.00	0.81	0.00	0.24
Avail Cap (c_a), veh/h	0	117	0	780	0	734	0	957
Upstream Filter (I)	0.00	1.00	0.00	0.69	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	44.2	0.0	19.4	0.0	23.1	0.0	11.4
Incr Delay (d2), s/veh	0.0	1.8	0.0	1.6	0.0	7.7	0.0	0.6
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	46.0	0.0	21.0	0.0	30.7	0.0	12.0
1st-Term Q (Q1), veh/ln	0.0	0.4	0.0	7.5	0.0	14.0	0.0	3.2
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.3	0.0	1.6	0.0	0.2
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.80	0.00	1.49	0.00	1.42	0.00	1.80
%ile Back of Q (95%), veh/ln	0.0	0.8	0.0	11.6	0.0	22.0	0.0	6.1
%ile Storage Ratio (RQ%)	0.00	0.10	0.00	2.22	0.00	0.74	0.00	0.62
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	35.2
HCM 2010 LOS	D

Notes

User approved pedestrian interval to be less than phase max green.
User approved changes to right turn type.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	25	915	370	480	355	75	385	45	565	25	10	5
Future Volume (veh/h)	25	915	370	480	355	75	385	45	565	25	10	5
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1570	1961	1827	1863	1833	1900	1863	1961	1863	1462	1549	1900
Adj Flow Rate, veh/h	26	963	389	505	374	79	405	47	595	26	11	5
Adj No. of Lanes	1	2	1	1	2	0	1	1	1	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	21	2	4	2	4	4	2	2	2	30	18	18
Cap, veh/h	354	1219	780	537	1590	332	458	432	734	139	65	30
Arrive On Green	0.01	0.22	0.22	0.24	0.55	0.55	0.17	0.22	0.22	0.02	0.06	0.06
Sat Flow, veh/h	1495	3725	1553	1774	2869	600	1774	1961	1583	1392	1009	459
Grp Volume(v), veh/h	26	963	389	505	226	227	405	47	595	26	0	16
Grp Sat Flow(s),veh/h/ln	1495	1863	1553	1774	1741	1727	1774	1961	1583	1392	0	1468
Q Serve(g_s), s	1.2	24.4	17.4	21.8	6.6	6.8	17.5	1.9	22.0	1.7	0.0	1.0
Cycle Q Clear(g_c), s	1.2	24.4	17.4	21.8	6.6	6.8	17.5	1.9	22.0	1.7	0.0	1.0
Prop In Lane	1.00		1.00	1.00		0.35	1.00		1.00	1.00		0.31
Lane Grp Cap(c), veh/h	354	1219	780	537	965	957	458	432	734	139	0	95
V/C Ratio(X)	0.07	0.79	0.50	0.94	0.23	0.24	0.88	0.11	0.81	0.19	0.00	0.17
Avail Cap(c_a), veh/h	382	1219	780	576	965	957	458	432	734	160	0	117
HCM Platoon Ratio	0.67	0.67	0.67	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.69	0.69	0.69	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	22.0	35.8	19.4	25.8	11.4	11.4	36.3	31.1	23.1	42.8	0.0	44.2
Incr Delay (d2), s/veh	0.1	3.7	1.6	23.1	0.6	0.6	18.2	0.2	7.7	0.6	0.0	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.9	18.2	11.6	23.8	6.0	6.1	8.5	1.9	22.0	1.2	0.0	0.8
LnGrp Delay(d),s/veh	22.1	39.5	21.0	48.9	12.0	12.0	54.5	31.4	30.7	43.4	0.0	46.0
LnGrp LOS	C	D	C	D	B	B	D	C	C	D		D
Approach Vol, veh/h		1378			958			1047			42	
Approach Delay, s/veh		33.9			31.5			40.0			44.4	
Approach LOS		C			C			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	21.0	12.5	27.8	38.7	5.4	28.0	5.1	61.4
Change Period (Y+Rc), s	3.5	6.0	3.5	6.0	3.5	6.0	3.5	6.0
Max Green Setting (Gmax), s	17.5	8.0	26.5	29.0	3.5	22.0	3.5	52.0
Max Q Clear Time (g_c+I1), s	19.5	3.0	23.8	26.4	3.7	24.0	3.2	8.8
Green Ext Time (p_c), s	0.0	0.7	0.5	2.5	0.0	0.0	0.0	37.4

Intersection Summary	
HCM 2010 Ctrl Delay	35.2
HCM 2010 LOS	D

Notes

User approved pedestrian interval to be less than phase max green.
User approved changes to right turn type.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	75	1385	35	65	580	10	10	1	40	10	1	35
Future Volume (veh/h)	75	1385	35	65	580	10	10	1	40	10	1	35
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1727	1845	1900	1863	1942	1429	1863	1961	1863	1863	1512	1900
Adj Flow Rate, veh/h	79	1458	37	68	611	11	11	1	42	11	1	37
Adj No. of Lanes	1	2	0	1	2	1	1	1	1	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	10	3	3	2	3	33	2	2	2	2	50	50
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	618	2332	59	280	2467	812	196	157	127	233	3	101
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.03	0.67	0.67	0.06	1.00	1.00	0.03	0.08	0.08	0.03	0.08	0.08
Ln Grp Delay, s/veh	4.9	12.0	11.9	8.2	0.2	0.0	40.0	42.4	46.7	39.9	0.0	48.2
Ln Grp LOS	A	B	B	A	A	A	D	D	D	D		D
Approach Vol, veh/h		1574			690			54			49	
Approach Delay, s/veh		11.6			1.0			45.3			46.4	
Approach LOS		B			A			D			D	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Case No	1.1	4.0	1.1	4.0	1.1	3.0	1.1	3.0
Phs Duration (G+Y+Rc), s	6.7	72.8	6.5	14.0	6.6	72.9	6.5	14.0
Change Period (Y+Rc), s	3.5	6.0	3.5	6.0	3.5	6.0	3.5	6.0
Max Green (Gmax), s	6.5	63.0	3.5	8.0	3.5	66.0	3.5	8.0
Max Allow Headway (MAH), s	3.7	8.9	3.9	7.0	3.7	8.9	3.9	7.0
Max Q Clear (g_c+I1), s	3.2	25.9	2.6	4.8	3.5	2.0	2.6	4.5
Green Ext Time (g_e), s	0.0	35.5	0.0	0.1	0.0	59.6	0.0	0.1
Prob of Phs Call (p_c)	1.00	1.00	1.00	1.00	0.89	1.00	1.00	0.92
Prob of Max Out (p_x)	1.00	0.96	1.00	1.00	1.00	0.91	1.00	1.00

Left-Turn Movement Data								
Assigned Mvmt	1		3		5		7	
Mvmt Sat Flow, veh/h	1774		1774		1645		1774	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3493		34		3689		1961

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		89		1256		1214		1583

Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	7	0
Lane Assignment	(Pr/Pm)		(Pr/Pm)		(Pr/Pm)		(Pr/Pm)	

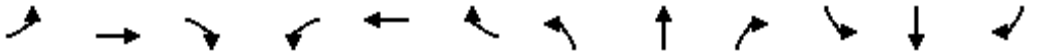
Lanes in Grp	1	0	1	0	1	0	1	0
Grp Vol (v), veh/h	68	0	11	0	79	0	11	0
Grp Sat Flow (s), veh/h/ln	1774	0	1774	0	1645	0	1774	0
Q Serve Time (g_s), s	1.2	0.0	0.6	0.0	1.5	0.0	0.6	0.0
Cycle Q Clear Time (g_c), s	1.2	0.0	0.6	0.0	1.5	0.0	0.6	0.0
Perm LT Sat Flow (s_l), veh/h/ln	350	0	1364	0	741	0	1358	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	66.8	0.0	8.0	0.0	66.8	0.0	8.0	0.0
Perm LT Serve Time (g_u), s	42.9	0.0	5.2	0.0	66.8	0.0	8.0	0.0
Perm LT Q Serve Time (g_ps), s	5.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	280	0	196	0	618	0	233	0
V/C Ratio (X)	0.24	0.00	0.06	0.00	0.13	0.00	0.05	0.00
Avail Cap (c_a), veh/h	338	0	205	0	624	0	242	0
Upstream Filter (I)	0.73	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Uniform Delay (d1), s/veh	7.9	0.0	39.9	0.0	4.8	0.0	39.9	0.0
Incr Delay (d2), s/veh	0.3	0.0	0.1	0.0	0.1	0.0	0.1	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	8.2	0.0	40.0	0.0	4.9	0.0	39.9	0.0
1st-Term Q (Q1), veh/ln	0.6	0.0	0.3	0.0	0.7	0.0	0.3	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.80	0.00	1.80	0.00	1.80	0.00	1.80	0.00
%ile Back of Q (95%), veh/ln	1.0	0.0	0.5	0.0	1.3	0.0	0.5	0.0
%ile Storage Ratio (RQ%)	0.11	0.00	0.09	0.00	0.23	0.00	0.11	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T				T		T
Lanes in Grp	0	1	0	0	0	2	0	1
Grp Vol (v), veh/h	0	731	0	0	0	611	0	1
Grp Sat Flow (s), veh/h/ln	0	1752	0	0	0	1845	0	1961
Q Serve Time (g_s), s	0.0	23.8	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	23.8	0.0	0.0	0.0	0.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	1170	0	0	0	2467	0	157
V/C Ratio (X)	0.00	0.62	0.00	0.00	0.00	0.25	0.00	0.01
Avail Cap (c_a), veh/h	0	1170	0	0	0	2467	0	157
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	0.73	0.00	1.00
Uniform Delay (d1), s/veh	0.0	9.5	0.0	0.0	0.0	0.0	0.0	42.3
Incr Delay (d2), s/veh	0.0	2.5	0.0	0.0	0.0	0.2	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	12.0	0.0	0.0	0.0	0.2	0.0	42.4
1st-Term Q (Q1), veh/ln	0.0	11.4	0.0	0.0	0.0	0.0	0.0	0.0

2nd-Term Q (Q2), veh/ln	0.0	0.8	0.0	0.0	0.0	0.1	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.47	0.00	1.00	0.00	1.80	0.00	1.80
%ile Back of Q (95%), veh/ln	0.0	17.9	0.0	0.0	0.0	0.1	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.78	0.00	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		T+R		R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	764	0	38	0	11	0	42
Grp Sat Flow (s), veh/h/ln	0	1829	0	1290	0	1214	0	1583
Q Serve Time (g_s), s	0.0	23.9	0.0	2.8	0.0	0.0	0.0	2.5
Cycle Q Clear Time (g_c), s	0.0	23.9	0.0	2.8	0.0	0.0	0.0	2.5
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.05	0.00	0.97	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	1221	0	103	0	812	0	127
V/C Ratio (X)	0.00	0.63	0.00	0.37	0.00	0.01	0.00	0.33
Avail Cap (c_a), veh/h	0	1221	0	103	0	812	0	127
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	0.73	0.00	1.00
Uniform Delay (d1), s/veh	0.0	9.5	0.0	43.6	0.0	0.0	0.0	43.5
Incr Delay (d2), s/veh	0.0	2.4	0.0	4.6	0.0	0.0	0.0	3.2
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	11.9	0.0	48.2	0.0	0.0	0.0	46.7
1st-Term Q (Q1), veh/ln	0.0	11.9	0.0	1.0	0.0	0.0	0.0	1.1
2nd-Term Q (Q2), veh/ln	0.0	0.8	0.0	0.1	0.0	0.0	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.46	0.00	1.80	0.00	1.80	0.00	1.80
%ile Back of Q (95%), veh/ln	0.0	18.6	0.0	2.0	0.0	0.0	0.0	2.2
%ile Storage Ratio (RQ%)	0.00	0.81	0.00	0.36	0.00	0.00	0.00	0.40
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	10.0
HCM 2010 LOS	A



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	75	1385	35	65	580	10	10	1	40	10	1	35
Future Volume (veh/h)	75	1385	35	65	580	10	10	1	40	10	1	35
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1727	1845	1900	1863	1942	1429	1863	1961	1863	1863	1512	1900
Adj Flow Rate, veh/h	79	1458	37	68	611	11	11	1	42	11	1	37
Adj No. of Lanes	1	2	0	1	2	1	1	1	1	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	10	3	3	2	3	33	2	2	2	2	50	50
Cap, veh/h	618	2332	59	280	2467	812	196	157	127	233	3	101
Arrive On Green	0.03	0.67	0.67	0.06	1.00	1.00	0.03	0.08	0.08	0.03	0.08	0.08
Sat Flow, veh/h	1645	3493	89	1774	3689	1214	1774	1961	1583	1774	34	1256
Grp Volume(v), veh/h	79	731	764	68	611	11	11	1	42	11	0	38
Grp Sat Flow(s),veh/h/ln	1645	1752	1829	1774	1845	1214	1774	1961	1583	1774	0	1290
Q Serve(g_s), s	1.5	23.8	23.9	1.2	0.0	0.0	0.6	0.0	2.5	0.6	0.0	2.8
Cycle Q Clear(g_c), s	1.5	23.8	23.9	1.2	0.0	0.0	0.6	0.0	2.5	0.6	0.0	2.8
Prop In Lane	1.00		0.05	1.00		1.00	1.00		1.00	1.00		0.97
Lane Grp Cap(c), veh/h	618	1170	1221	280	2467	812	196	157	127	233	0	103
V/C Ratio(X)	0.13	0.62	0.63	0.24	0.25	0.01	0.06	0.01	0.33	0.05	0.00	0.37
Avail Cap(c_a), veh/h	624	1170	1221	338	2467	812	205	157	127	242	0	103
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.73	0.73	0.73	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	4.8	9.5	9.5	7.9	0.0	0.0	39.9	42.3	43.5	39.9	0.0	43.6
Incr Delay (d2), s/veh	0.1	2.5	2.4	0.3	0.2	0.0	0.1	0.0	3.2	0.1	0.0	4.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.3	17.9	18.6	1.0	0.1	0.0	0.5	0.0	2.2	0.5	0.0	2.0
LnGrp Delay(d),s/veh	4.9	12.0	11.9	8.2	0.2	0.0	40.0	42.4	46.7	39.9	0.0	48.2
LnGrp LOS	A	B	B	A	A	A	D	D	D	D		D
Approach Vol, veh/h		1574			690			54			49	
Approach Delay, s/veh		11.6			1.0			45.3			46.4	
Approach LOS		B			A			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.7	72.8	6.5	14.0	6.6	72.9	6.5	14.0
Change Period (Y+Rc), s	3.5	6.0	3.5	6.0	3.5	6.0	3.5	6.0
Max Green Setting (Gmax), s	6.5	63.0	3.5	8.0	3.5	66.0	3.5	8.0
Max Q Clear Time (g_c+I1), s	3.2	25.9	2.6	4.8	3.5	2.0	2.6	4.5
Green Ext Time (p_c), s	0.0	35.5	0.0	0.1	0.0	59.6	0.0	0.1

Intersection Summary	
HCM 2010 Ctrl Delay	10.0
HCM 2010 LOS	A

Intersection	
Int Delay, s/veh	14.3

Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations													
Traffic Vol, veh/h	20	40	1470	125	90	515	20	35	1	20	5	1	10
Future Vol, veh/h	20	40	1470	125	90	515	20	35	1	20	5	1	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	215	-	-	195	-	-	65	-	-	-	-	95
Veh in Median Storage, #	-	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	3	2	2	5	2	2	2	6	2	2	8
Mvmt Flow	21	42	1547	132	95	542	21	37	1	21	5	1	11

Major/Minor	Major1				Major2			Minor1			Minor2		
Conflicting Flow All	411	563	0	0	1679	0	0	2200	2492	839	1643	2547	282
Stage 1	-	-	-	-	-	-	-	1739	1739	-	742	742	-
Stage 2	-	-	-	-	-	-	-	461	753	-	901	1805	-
Critical Hdwy	6.44	4.14	-	-	4.14	-	-	7.54	6.54	7.02	7.54	6.54	7.06
Critical Hdwy Stg 1	-	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.52	2.22	-	-	2.22	-	-	3.52	4.02	3.36	3.52	4.02	3.38
Pot Cap-1 Maneuver	788	1005	-	-	378	-	-	~ 25	29	301	66	26	697
Stage 1	-	-	-	-	-	-	-	90	140	-	374	420	-
Stage 2	-	-	-	-	-	-	-	550	416	-	299	129	-
Platoon blocked, %			-	-		-	-						
Mov Cap-1 Maneuver	915	915	-	-	378	-	-	~ 19	22	301	48	19	697
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	~ 19	22	-	48	19	-
Stage 1	-	-	-	-	-	-	-	90	140	-	374	314	-
Stage 2	-	-	-	-	-	-	-	404	311	-	276	129	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	2.5	$ 550	50.6
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	19	188	915	-	-	378	-	-	38	697
HCM Lane V/C Ratio	1.939	0.118	0.069	-	-	0.251	-	-	0.166	0.015
HCM Control Delay (s)	$ 864	26.7	9.2	-	-	17.7	-	-	117.8	10.2
HCM Lane LOS	F	D	A	-	-	C	-	-	F	B
HCM 95th %tile Q(veh)	5	0.4	0.2	-	-	1	-	-	0.5	0

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

Intersection	
Int Delay, s/veh	2.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	1	20	15	70	25	1
Future Vol, veh/h	1	20	15	70	25	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	12	8	2
Mvmt Flow	1	21	16	74	26	1

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	132	27	27	0	-	0
Stage 1	27	-	-	-	-	-
Stage 2	105	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	862	1048	1587	-	-	-
Stage 1	996	-	-	-	-	-
Stage 2	919	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	853	1048	1587	-	-	-
Mov Cap-2 Maneuver	853	-	-	-	-	-
Stage 1	996	-	-	-	-	-
Stage 2	909	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.5	1.3	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1587	-	1037	-	-
HCM Lane V/C Ratio	0.01	-	0.021	-	-
HCM Control Delay (s)	7.3	0	8.5	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection	
Int Delay, s/veh	1.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	5	10	15	1	5	65
Future Vol, veh/h	5	10	15	1	5	65
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	25	2	2	11
Mvmt Flow	5	11	16	1	5	68

Major/Minor	Minor2		Major2		Major1	
Conflicting Flow All	112	1	68	0	1	0
Stage 1	33	-	-	-	-	-
Stage 2	79	-	-	-	-	-
Critical Hdwy	6.52	6.22	4.35	-	4.12	-
Critical Hdwy Stg 1	5.52	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	4.018	3.318	2.425	-	2.218	-
Pot Cap-1 Maneuver	778	1084	1399	-	1622	-
Stage 1	868	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %				-		-
Mov Cap-1 Maneuver	0	1084	1399	-	1622	-
Mov Cap-2 Maneuver	0	-	-	-	-	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s		7.1	0.5
HCM LOS	-		

Minor Lane/Major Mvmt	NBL	NBR	EBLn1	EBLn2	WBL	WBT
Capacity (veh/h)	1622	-	-	1084	1399	-
HCM Lane V/C Ratio	0.003	-	-	0.01	0.011	-
HCM Control Delay (s)	7.2	-	-	8.4	7.6	0
HCM Lane LOS	A	-	-	A	A	A
HCM 95th %tile Q(veh)	0	-	-	0	0	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	500	495	615	945	55	430	25	410	105	40	30
Future Volume (veh/h)	5	500	495	615	945	55	430	25	410	105	40	30
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1520	1961	1863	1863	1861	1900	1827	1818	1863	1845	1758	1900
Adj Flow Rate, veh/h	5	526	521	647	995	58	453	26	432	111	42	32
Adj No. of Lanes	1	2	1	1	2	0	1	1	1	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	25	2	2	2	2	2	4	10	2	3	12	12
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	191	1179	696	668	2060	120	391	387	802	264	129	99
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.00	0.10	0.10	0.29	0.61	0.61	0.12	0.21	0.21	0.05	0.14	0.14
Ln Grp Delay, s/veh	34.9	56.0	52.6	58.4	18.0	17.9	151.7	47.3	26.3	53.7	0.0	59.9
Ln Grp LOS	C	E	D	E	B	B	F	D	C	D		E
Approach Vol, veh/h		1052			1700			911			185	
Approach Delay, s/veh		54.2			33.3			89.3			56.2	
Approach LOS		D			C			F			E	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Case No	1.1	4.0	1.1	3.0	1.1	3.0	1.1	4.0
Phs Duration (G+Y+Rc), s	22.0	26.9	47.6	53.5	11.0	37.9	4.1	97.0
Change Period (Y+Rc), s	3.5	6.0	3.5	6.0	3.5	6.0	3.5	6.0
Max Green (Gmax), s	18.5	25.0	46.5	41.0	7.5	36.0	3.5	84.0
Max Allow Headway (MAH), s	3.7	6.2	3.7	8.7	3.9	6.2	3.8	8.7
Max Q Clear (g_c+I1), s	20.5	8.1	43.3	42.6	9.5	29.8	2.4	26.5
Green Ext Time (g_e), s	0.0	4.1	0.8	0.0	0.0	2.2	0.0	52.0
Prob of Phs Call (p_c)	1.00	1.00	1.00	1.00	0.99	1.00	0.19	1.00
Prob of Max Out (p_x)	1.00	0.16	1.00	1.00	1.00	0.99	1.00	0.88

Left-Turn Movement Data								
Assigned Mvmt	1		3		5		7	
Mvmt Sat Flow, veh/h	1740		1774		1757		1448	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		927		3725		1818		3396

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		706		1583		1583		198

Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	7	0
Lane Assignment	(Pr/Pm)		(Pr/Pm)		(Pr/Pm)		(Pr/Pm)	

Lanes in Grp	1	0	1	0	1	0	1	0
Grp Vol (v), veh/h	453	0	647	0	111	0	5	0
Grp Sat Flow (s), veh/h/ln	1740	0	1774	0	1757	0	1448	0
Q Serve Time (g_s), s	18.5	0.0	41.3	0.0	7.5	0.0	0.4	0.0
Cycle Q Clear Time (g_c), s	18.5	0.0	41.3	0.0	7.5	0.0	0.4	0.0
Perm LT Sat Flow (s_l), veh/h/ln	1295	0	537	0	921	0	435	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	22.9	0.0	49.5	0.0	20.9	0.0	47.5	0.0
Perm LT Serve Time (g_u), s	14.8	0.0	27.6	0.0	20.9	0.0	47.5	0.0
Perm LT Q Serve Time (g_ps), s	14.8	0.0	27.6	0.0	1.4	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	391	0	668	0	264	0	191	0
V/C Ratio (X)	1.16	0.00	0.97	0.00	0.42	0.00	0.03	0.00
Avail Cap (c_a), veh/h	391	0	697	0	264	0	220	0
Upstream Filter (I)	1.00	0.00	1.00	0.00	1.00	0.00	0.95	0.00
Uniform Delay (d1), s/veh	54.9	0.0	32.4	0.0	52.6	0.0	34.9	0.0
Incr Delay (d2), s/veh	96.9	0.0	26.0	0.0	1.1	0.0	0.1	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	151.7	0.0	58.4	0.0	53.7	0.0	34.9	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	26.2	0.0	0.4	0.0	0.1	0.0
2nd-Term Q (Q2), veh/ln	10.5	0.0	4.8	0.0	0.1	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.80	0.00	1.29	0.00	1.80	0.00	1.80	0.00
%ile Back of Q (95%), veh/ln	18.9	0.0	40.2	0.0	0.8	0.0	0.3	0.0
%ile Storage Ratio (RQ%)	2.12	0.00	4.08	0.00	0.49	0.00	0.06	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	15.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment				T		T		T
Lanes in Grp	0	0	0	2	0	1	0	1
Grp Vol (v), veh/h	0	0	0	526	0	26	0	518
Grp Sat Flow (s), veh/h/ln	0	0	0	1863	0	1818	0	1768
Q Serve Time (g_s), s	0.0	0.0	0.0	19.9	0.0	1.7	0.0	24.5
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	19.9	0.0	1.7	0.0	24.5
Lane Grp Cap (c), veh/h	0	0	0	1179	0	387	0	1072
V/C Ratio (X)	0.00	0.00	0.00	0.45	0.00	0.07	0.00	0.48
Avail Cap (c_a), veh/h	0	0	0	1179	0	436	0	1072
Upstream Filter (I)	0.00	0.00	0.00	0.95	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	54.8	0.0	47.1	0.0	16.4
Incr Delay (d2), s/veh	0.0	0.0	0.0	1.2	0.0	0.2	0.0	1.6
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	56.0	0.0	47.3	0.0	18.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	10.3	0.0	0.9	0.0	11.9

2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.5
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.49	0.00	1.80	0.00	1.47
%ile Back of Q (95%), veh/ln	0.0	0.0	0.0	15.7	0.0	1.6	0.0	18.2
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.15	0.00	0.06	0.00	1.84
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		R		R		T+R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	74	0	521	0	432	0	535
Grp Sat Flow (s), veh/h/ln	0	1633	0	1583	0	1583	0	1826
Q Serve Time (g_s), s	0.0	6.1	0.0	40.6	0.0	27.8	0.0	24.5
Cycle Q Clear Time (g_c), s	0.0	6.1	0.0	40.6	0.0	27.8	0.0	24.5
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	1583.3	0.0	1583.3	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	18.5	0.0	44.1	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.43	0.00	1.00	0.00	1.00	0.00	0.11
Lane Grp Cap (c), veh/h	0	228	0	696	0	802	0	1108
V/C Ratio (X)	0.00	0.32	0.00	0.75	0.00	0.54	0.00	0.48
Avail Cap (c_a), veh/h	0	272	0	696	0	845	0	1108
Upstream Filter (I)	0.00	1.00	0.00	0.95	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	58.2	0.0	45.7	0.0	25.1	0.0	16.4
Incr Delay (d2), s/veh	0.0	1.7	0.0	6.9	0.0	1.2	0.0	1.5
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	59.9	0.0	52.6	0.0	26.3	0.0	17.9
1st-Term Q (Q1), veh/ln	0.0	2.8	0.0	17.8	0.0	12.1	0.0	12.3
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	1.3	0.0	0.3	0.0	0.5
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.80	0.00	1.37	0.00	1.47	0.00	1.46
%ile Back of Q (95%), veh/ln	0.0	5.2	0.0	26.2	0.0	18.2	0.0	18.7
%ile Storage Ratio (RQ%)	0.00	0.59	0.00	4.93	0.00	0.61	0.00	1.89
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	53.4
HCM 2010 LOS	D

Notes

User approved changes to right turn type.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	500	495	615	945	55	430	25	410	105	40	30
Future Volume (veh/h)	5	500	495	615	945	55	430	25	410	105	40	30
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1520	1961	1863	1863	1861	1900	1827	1818	1863	1845	1758	1900
Adj Flow Rate, veh/h	5	526	521	647	995	58	453	26	432	111	42	32
Adj No. of Lanes	1	2	1	1	2	0	1	1	1	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	25	2	2	2	2	2	4	10	2	3	12	12
Cap, veh/h	191	1179	696	668	2060	120	391	387	802	264	129	99
Arrive On Green	0.00	0.10	0.10	0.29	0.61	0.61	0.12	0.21	0.21	0.05	0.14	0.14
Sat Flow, veh/h	1448	3725	1583	1774	3396	198	1740	1818	1583	1757	927	706
Grp Volume(v), veh/h	5	526	521	647	518	535	453	26	432	111	0	74
Grp Sat Flow(s),veh/h/ln	1448	1863	1583	1774	1768	1826	1740	1818	1583	1757	0	1633
Q Serve(g_s), s	0.4	19.9	40.6	41.3	24.5	24.5	18.5	1.7	27.8	7.5	0.0	6.1
Cycle Q Clear(g_c), s	0.4	19.9	40.6	41.3	24.5	24.5	18.5	1.7	27.8	7.5	0.0	6.1
Prop In Lane	1.00		1.00	1.00		0.11	1.00		1.00	1.00		0.43
Lane Grp Cap(c), veh/h	191	1179	696	668	1072	1108	391	387	802	264	0	228
V/C Ratio(X)	0.03	0.45	0.75	0.97	0.48	0.48	1.16	0.07	0.54	0.42	0.00	0.32
Avail Cap(c_a), veh/h	220	1179	696	697	1072	1108	391	436	845	264	0	272
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	34.9	54.8	45.7	32.4	16.4	16.4	54.9	47.1	25.1	52.6	0.0	58.2
Incr Delay (d2), s/veh	0.1	1.2	6.9	26.0	1.6	1.5	96.9	0.2	1.2	1.1	0.0	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.3	15.7	26.2	40.2	18.2	18.7	18.9	1.6	18.2	0.8	0.0	5.2
LnGrp Delay(d),s/veh	34.9	56.0	52.6	58.4	18.0	17.9	151.7	47.3	26.3	53.7	0.0	59.9
LnGrp LOS	C	E	D	E	B	B	F	D	C	D		E
Approach Vol, veh/h		1052			1700			911			185	
Approach Delay, s/veh		54.2			33.3			89.3			56.2	
Approach LOS		D			C			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	22.0	26.9	47.6	53.5	11.0	37.9	4.1	97.0
Change Period (Y+Rc), s	3.5	6.0	3.5	6.0	3.5	6.0	3.5	6.0
Max Green Setting (Gmax), s	18.5	25.0	46.5	41.0	7.5	36.0	3.5	84.0
Max Q Clear Time (g_c+I1), s	20.5	8.1	43.3	42.6	9.5	29.8	2.4	26.5
Green Ext Time (p_c), s	0.0	4.1	0.8	0.0	0.0	2.2	0.0	52.0

Intersection Summary	
HCM 2010 Ctrl Delay	53.4
HCM 2010 LOS	D

Notes

User approved changes to right turn type.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	175	685	5	10	1435	40	65	1	130	40	1	180
Future Volume (veh/h)	175	685	5	10	1435	40	65	1	130	40	1	180
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1583	1863	1900	1863	1961	1138	1863	1961	1863	1863	1760	1900
Adj Flow Rate, veh/h	184	721	5	11	1511	42	68	1	137	42	1	189
Adj No. of Lanes	1	2	0	1	2	1	1	1	1	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	20	2	2	2	2	67	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	237	2195	15	432	2047	531	251	451	364	336	2	288
HCM Platoon Ratio	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.07	0.61	0.61	0.01	0.73	0.73	0.06	0.23	0.23	0.03	0.19	0.19
Ln Grp Delay, s/veh	29.9	15.1	15.1	14.9	15.6	9.6	45.6	44.5	51.6	46.9	0.0	67.0
Ln Grp LOS	C	B	B	B	B	A	D	D	D	D		E
Approach Vol, veh/h		910			1564			206			232	
Approach Delay, s/veh		18.1			15.4			49.6			63.4	
Approach LOS		B			B			D			E	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Case No	1.1	4.0	1.1	4.0	1.1	3.0	1.1	3.0
Phs Duration (G+Y+Rc), s	4.6	97.4	13.0	35.0	13.6	88.4	7.5	40.5
Change Period (Y+Rc), s	3.5	6.0	3.5	6.0	3.5	6.0	3.5	6.0
Max Green (Gmax), s	3.5	89.0	9.5	29.0	22.5	70.0	8.5	30.0
Max Allow Headway (MAH), s	3.7	8.9	3.9	7.0	3.8	8.9	3.9	7.0
Max Q Clear (g_c+I1), s	2.4	16.7	6.4	19.6	9.7	37.6	4.8	12.9
Green Ext Time (g_e), s	0.0	68.1	0.0	2.0	0.4	31.5	0.0	2.9
Prob of Phs Call (p_c)	0.37	1.00	1.00	1.00	1.00	1.00	0.83	1.00
Prob of Max Out (p_x)	1.00	0.92	0.00	0.00	0.00	0.97	1.00	0.00

Left-Turn Movement Data								
Assigned Mvmt	1		3		5		7	
Mvmt Sat Flow, veh/h	1774		1774		1508		1774	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3603		8		3725		1961

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		25		1489		967		1583

Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	7	0
Lane Assignment	(Pr/Pm)		(Pr/Pm)		(Pr/Pm)		(Pr/Pm)	

Lanes in Grp	1	0	1	0	1	0	1	0
Grp Vol (v), veh/h	11	0	68	0	184	0	42	0
Grp Sat Flow (s), veh/h/ln	1774	0	1774	0	1508	0	1774	0
Q Serve Time (g_s), s	0.4	0.0	4.4	0.0	7.7	0.0	2.8	0.0
Cycle Q Clear Time (g_c), s	0.4	0.0	4.4	0.0	7.7	0.0	2.8	0.0
Perm LT Sat Flow (s_l), veh/h/ln	725	0	1188	0	281	0	1246	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	82.4	0.0	31.0	0.0	84.4	0.0	29.0	0.0
Perm LT Serve Time (g_u), s	76.7	0.0	11.4	0.0	46.8	0.0	29.0	0.0
Perm LT Q Serve Time (g_ps), s	0.1	0.0	1.2	0.0	46.8	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	432	0	251	0	237	0	336	0
V/C Ratio (X)	0.03	0.00	0.27	0.00	0.78	0.00	0.12	0.00
Avail Cap (c_a), veh/h	460	0	251	0	362	0	389	0
Upstream Filter (I)	0.69	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Uniform Delay (d1), s/veh	14.9	0.0	42.9	0.0	24.3	0.0	46.7	0.0
Incr Delay (d2), s/veh	0.0	0.0	2.6	0.0	5.7	0.0	0.2	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	14.9	0.0	45.6	0.0	29.9	0.0	46.9	0.0
1st-Term Q (Q1), veh/ln	0.2	0.0	2.1	0.0	4.3	0.0	1.4	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.2	0.0	0.4	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.80	0.00	1.80	0.00	1.76	0.00	1.80	0.00
%ile Back of Q (95%), veh/ln	0.4	0.0	4.1	0.0	8.2	0.0	2.5	0.0
%ile Storage Ratio (RQ%)	0.04	0.00	0.75	0.00	1.59	0.00	0.58	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T				T		T
Lanes in Grp	0	1	0	0	0	2	0	1
Grp Vol (v), veh/h	0	354	0	0	0	1511	0	1
Grp Sat Flow (s), veh/h/ln	0	1770	0	0	0	1863	0	1961
Q Serve Time (g_s), s	0.0	14.7	0.0	0.0	0.0	35.6	0.0	0.1
Cycle Q Clear Time (g_c), s	0.0	14.7	0.0	0.0	0.0	35.6	0.0	0.1
Lane Grp Cap (c), veh/h	0	1078	0	0	0	2047	0	451
V/C Ratio (X)	0.00	0.33	0.00	0.00	0.00	0.74	0.00	0.00
Avail Cap (c_a), veh/h	0	1078	0	0	0	2047	0	451
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	0.69	0.00	1.00
Uniform Delay (d1), s/veh	0.0	14.3	0.0	0.0	0.0	13.9	0.0	44.5
Incr Delay (d2), s/veh	0.0	0.8	0.0	0.0	0.0	1.7	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	15.1	0.0	0.0	0.0	15.6	0.0	44.5
1st-Term Q (Q1), veh/ln	0.0	7.2	0.0	0.0	0.0	18.1	0.0	0.0

2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.0	0.0	0.5	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.60	0.00	1.00	0.00	1.32	0.00	1.80
%ile Back of Q (95%), veh/ln	0.0	11.9	0.0	0.0	0.0	24.4	0.0	0.1
%ile Storage Ratio (RQ%)	0.00	0.51	0.00	0.00	0.00	0.24	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		T+R		R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	372	0	190	0	42	0	137
Grp Sat Flow (s), veh/h/ln	0	1858	0	1497	0	967	0	1583
Q Serve Time (g_s), s	0.0	14.7	0.0	17.6	0.0	1.9	0.0	10.9
Cycle Q Clear Time (g_c), s	0.0	14.7	0.0	17.6	0.0	1.9	0.0	10.9
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.01	0.00	0.99	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	1132	0	289	0	531	0	364
V/C Ratio (X)	0.00	0.33	0.00	0.66	0.00	0.08	0.00	0.38
Avail Cap (c_a), veh/h	0	1132	0	289	0	531	0	364
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	0.69	0.00	1.00
Uniform Delay (d1), s/veh	0.0	14.3	0.0	55.9	0.0	9.4	0.0	48.7
Incr Delay (d2), s/veh	0.0	0.8	0.0	11.1	0.0	0.2	0.0	3.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	15.1	0.0	67.0	0.0	9.6	0.0	51.6
1st-Term Q (Q1), veh/ln	0.0	7.5	0.0	7.3	0.0	0.5	0.0	4.8
2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.9	0.0	0.0	0.0	0.3
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.59	0.00	1.57	0.00	1.80	0.00	1.73
%ile Back of Q (95%), veh/ln	0.0	12.4	0.0	12.9	0.0	0.9	0.0	8.8
%ile Storage Ratio (RQ%)	0.00	0.53	0.00	1.67	0.00	0.29	0.00	1.59
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	22.5
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	175	685	5	10	1435	40	65	1	130	40	1	180
Future Volume (veh/h)	175	685	5	10	1435	40	65	1	130	40	1	180
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1583	1863	1900	1863	1961	1138	1863	1961	1863	1863	1760	1900
Adj Flow Rate, veh/h	184	721	5	11	1511	42	68	1	137	42	1	189
Adj No. of Lanes	1	2	0	1	2	1	1	1	1	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	20	2	2	2	2	67	2	2	2	2	2	2
Cap, veh/h	237	2195	15	432	2047	531	251	451	364	336	2	288
Arrive On Green	0.07	0.61	0.61	0.01	0.73	0.73	0.06	0.23	0.23	0.03	0.19	0.19
Sat Flow, veh/h	1508	3603	25	1774	3725	967	1774	1961	1583	1774	8	1489
Grp Volume(v), veh/h	184	354	372	11	1511	42	68	1	137	42	0	190
Grp Sat Flow(s),veh/h/ln	1508	1770	1858	1774	1863	967	1774	1961	1583	1774	0	1497
Q Serve(g_s), s	7.7	14.7	14.7	0.4	35.6	1.9	4.4	0.1	10.9	2.8	0.0	17.6
Cycle Q Clear(g_c), s	7.7	14.7	14.7	0.4	35.6	1.9	4.4	0.1	10.9	2.8	0.0	17.6
Prop In Lane	1.00		0.01	1.00		1.00	1.00		1.00	1.00		0.99
Lane Grp Cap(c), veh/h	237	1078	1132	432	2047	531	251	451	364	336	0	289
V/C Ratio(X)	0.78	0.33	0.33	0.03	0.74	0.08	0.27	0.00	0.38	0.12	0.00	0.66
Avail Cap(c_a), veh/h	362	1078	1132	460	2047	531	251	451	364	389	0	289
HCM Platoon Ratio	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.69	0.69	0.69	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	24.3	14.3	14.3	14.9	13.9	9.4	42.9	44.5	48.7	46.7	0.0	55.9
Incr Delay (d2), s/veh	5.7	0.8	0.8	0.0	1.7	0.2	2.6	0.0	3.0	0.2	0.0	11.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	8.2	11.9	12.4	0.4	24.4	0.9	4.1	0.1	8.8	2.5	0.0	12.9
LnGrp Delay(d),s/veh	29.9	15.1	15.1	14.9	15.6	9.6	45.6	44.5	51.6	46.9	0.0	67.0
LnGrp LOS	C	B	B	B	B	A	D	D	D	D		E
Approach Vol, veh/h		910			1564			206			232	
Approach Delay, s/veh		18.1			15.4			49.6			63.4	
Approach LOS		B			B			D			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.6	97.4	13.0	35.0	13.6	88.4	7.5	40.5
Change Period (Y+Rc), s	3.5	6.0	3.5	6.0	3.5	6.0	3.5	6.0
Max Green Setting (Gmax), s	3.5	89.0	9.5	29.0	22.5	70.0	8.5	30.0
Max Q Clear Time (g_c+I1), s	2.4	16.7	6.4	19.6	9.7	37.6	4.8	12.9
Green Ext Time (p_c), s	0.0	68.1	0.0	2.0	0.4	31.5	0.0	2.9

Intersection Summary	
HCM 2010 Ctrl Delay	22.5
HCM 2010 LOS	C

Intersection	
Int Delay, s/veh	49.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	705	25	10	1655	15	140	1	155	5	1	25
Future Vol, veh/h	10	705	25	10	1655	15	140	1	155	5	1	25
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	215	-	-	195	-	-	65	-	-	-	-	95
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	4	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	742	26	11	1742	16	147	1	163	5	1	26

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1758	0	0	768	0	0	1669	2555	384	2164	2560	879
Stage 1	-	-	-	-	-	-	776	776	-	1771	1771	-
Stage 2	-	-	-	-	-	-	893	1779	-	393	789	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	352	-	-	842	-	-	~ 63	26	614	26	26	291
Stage 1	-	-	-	-	-	-	356	406	-	86	135	-
Stage 2	-	-	-	-	-	-	303	133	-	603	400	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	352	-	-	842	-	-	~ 54	25	614	18	25	291
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 54	25	-	18	25	-
Stage 1	-	-	-	-	-	-	345	393	-	83	133	-
Stage 2	-	-	-	-	-	-	270	131	-	428	388	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0.1	$ 454	67.2
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	54	533	352	-	-	842	-	-	19	291
HCM Lane V/C Ratio	2.729	0.308	0.03	-	-	0.013	-	-	0.332	0.09
HCM Control Delay (s)	$ 943.6	14.7	15.5	-	-	9.3	-	-	269.9	18.6
HCM Lane LOS	F	B	C	-	-	A	-	-	F	C
HCM 95th %tile Q(veh)	15.3	1.3	0.1	-	-	0	-	-	0.9	0.3

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

Intersection	
Int Delay, s/veh	5.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	1	105	165	50	115	1
Future Vol, veh/h	1	105	165	50	115	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	32	8	2
Mvmt Flow	1	111	174	53	121	1

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	522	122	122	0	-	0
Stage 1	122	-	-	-	-	-
Stage 2	400	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	515	929	1465	-	-	-
Stage 1	903	-	-	-	-	-
Stage 2	677	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	452	929	1465	-	-	-
Mov Cap-2 Maneuver	452	-	-	-	-	-
Stage 1	903	-	-	-	-	-
Stage 2	594	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.5	6	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1465	-	920	-	-
HCM Lane V/C Ratio	0.119	-	0.121	-	-
HCM Control Delay (s)	7.8	0	9.5	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.4	-	0.4	-	-

Intersection	
Int Delay, s/veh	3.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	10	40	75	35	30	20
Future Vol, veh/h	10	40	75	35	30	20
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	9	2	2	44
Mvmt Flow	11	42	79	37	32	21

Major/Minor	Minor2		Major2		Major1	
Conflicting Flow All	279	37	21	0	37	0
Stage 1	195	-	-	-	-	-
Stage 2	84	-	-	-	-	-
Critical Hdwy	6.52	6.22	4.19	-	4.12	-
Critical Hdwy Stg 1	5.52	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	4.018	3.318	2.281	-	2.218	-
Pot Cap-1 Maneuver	629	1035	1550	-	1574	-
Stage 1	739	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %				-		-
Mov Cap-1 Maneuver	0	1035	1550	-	1574	-
Mov Cap-2 Maneuver	0	-	-	-	-	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s		5.1	4.4
HCM LOS	-		

Minor Lane/Major Mvmt	NBL	NBR	EBLn1	EBLn2	WBL	WBT
Capacity (veh/h)	1574	-	-	1035	1550	-
HCM Lane V/C Ratio	0.02	-	-	0.041	0.051	-
HCM Control Delay (s)	7.3	-	-	8.6	7.4	0
HCM Lane LOS	A	-	-	A	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0.1	0.2	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	205	275	250	165	75	275	30	245	25	25	10
Future Volume (veh/h)	10	205	275	250	165	75	275	30	245	25	25	10
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1743	1961	1863	1863	1863	1900	1863	1961	1863	1863	1791	1900
Adj Flow Rate, veh/h	11	216	289	263	174	79	289	32	258	26	26	11
Adj No. of Lanes	1	2	1	1	2	0	1	1	1	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	9	2	2	2	2	2	2	2	2	2	4	4
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	542	1592	941	602	1260	549	470	469	545	207	106	45
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.00	0.14	0.14	0.11	0.52	0.52	0.17	0.24	0.24	0.02	0.09	0.09
Ln Grp Delay, s/veh	14.5	24.3	15.1	11.3	11.2	11.3	29.4	26.6	24.5	36.8	0.0	40.0
Ln Grp LOS	B	C	B	B	B	B	C	C	C	D		D
Approach Vol, veh/h		516			516			579			63	
Approach Delay, s/veh		19.0			11.3			27.0			38.6	
Approach LOS		B			B			C			D	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Case No	1.1	4.0	1.1	3.0	1.1	3.0	1.1	4.0
Phs Duration (G+Y+Rc), s	18.6	14.0	13.0	44.5	5.0	27.5	4.2	53.2
Change Period (Y+Rc), s	3.5	6.0	3.5	6.0	3.5	6.0	3.5	6.0
Max Green (Gmax), s	20.5	11.0	19.5	20.0	5.5	26.0	5.5	34.0
Max Allow Headway (MAH), s	3.7	6.2	3.7	8.6	3.9	6.2	3.7	8.6
Max Q Clear (g_c+I1), s	14.6	3.8	9.0	12.6	3.2	13.5	2.3	5.5
Green Ext Time (g_e), s	0.4	1.4	0.5	4.8	0.0	2.0	0.0	12.7
Prob of Phs Call (p_c)	1.00	1.00	1.00	1.00	0.48	1.00	0.24	1.00
Prob of Max Out (p_x)	0.24	0.77	0.01	1.00	1.00	0.18	1.00	0.34

Left-Turn Movement Data								
Assigned Mvmt	1		3		5		7	
Mvmt Sat Flow, veh/h	1774		1774		1774		1660	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1196		3725		1961		2401

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		506		1583		1583		1047

Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	7	0
Lane Assignment	(Pr/Pm)		(Pr/Pm)		(Pr/Pm)		(Pr/Pm)	

Lanes in Grp	1	0	1	0	1	0	1	0
Grp Vol (v), veh/h	289	0	263	0	26	0	11	0
Grp Sat Flow (s), veh/h/ln	1774	0	1774	0	1774	0	1660	0
Q Serve Time (g_s), s	12.6	0.0	7.0	0.0	1.2	0.0	0.3	0.0
Cycle Q Clear Time (g_c), s	12.6	0.0	7.0	0.0	1.2	0.0	0.3	0.0
Perm LT Sat Flow (s_l), veh/h/ln	1365	0	890	0	1085	0	1050	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	10.0	0.0	40.5	0.0	8.0	0.0	38.5	0.0
Perm LT Serve Time (g_u), s	6.2	0.0	33.9	0.0	8.0	0.0	38.5	0.0
Perm LT Q Serve Time (g_ps), s	1.0	0.0	2.8	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	470	0	602	0	207	0	542	0
V/C Ratio (X)	0.61	0.00	0.44	0.00	0.13	0.00	0.02	0.00
Avail Cap (c_a), veh/h	578	0	800	0	285	0	630	0
Upstream Filter (I)	1.00	0.00	1.00	0.00	1.00	0.00	0.97	0.00
Uniform Delay (d1), s/veh	28.1	0.0	10.8	0.0	36.5	0.0	14.5	0.0
Incr Delay (d2), s/veh	1.3	0.0	0.5	0.0	0.3	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	29.4	0.0	11.3	0.0	36.8	0.0	14.5	0.0
1st-Term Q (Q1), veh/ln	6.1	0.0	3.4	0.0	0.6	0.0	0.2	0.0
2nd-Term Q (Q2), veh/ln	0.2	0.0	0.1	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.65	0.00	1.80	0.00	1.80	0.00	1.80	0.00
%ile Back of Q (95%), veh/ln	10.4	0.0	6.2	0.0	1.1	0.0	0.3	0.0
%ile Storage Ratio (RQ%)	1.15	0.00	0.63	0.00	0.68	0.00	0.06	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment				T		T		T
Lanes in Grp	0	0	0	2	0	1	0	1
Grp Vol (v), veh/h	0	0	0	216	0	32	0	126
Grp Sat Flow (s), veh/h/ln	0	0	0	1863	0	1961	0	1770
Q Serve Time (g_s), s	0.0	0.0	0.0	4.6	0.0	1.1	0.0	3.3
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	4.6	0.0	1.1	0.0	3.3
Lane Grp Cap (c), veh/h	0	0	0	1592	0	469	0	929
V/C Ratio (X)	0.00	0.00	0.00	0.14	0.00	0.07	0.00	0.14
Avail Cap (c_a), veh/h	0	0	0	1592	0	566	0	929
Upstream Filter (I)	0.00	0.00	0.00	0.97	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	24.1	0.0	26.5	0.0	10.9
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.2	0.0	0.1	0.0	0.3
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	24.3	0.0	26.6	0.0	11.2
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	2.4	0.0	0.6	0.0	1.6

2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.80	0.00	1.80	0.00	1.80
%ile Back of Q (95%), veh/ln	0.0	0.0	0.0	4.3	0.0	1.1	0.0	3.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.04	0.00	0.04	0.00	0.31
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		R		R		T+R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	37	0	289	0	258	0	127
Grp Sat Flow (s), veh/h/ln	0	1702	0	1583	0	1583	0	1678
Q Serve Time (g_s), s	0.0	1.8	0.0	10.6	0.0	11.5	0.0	3.5
Cycle Q Clear Time (g_c), s	0.0	1.8	0.0	10.6	0.0	11.5	0.0	3.5
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	1583.3	0.0	1583.3	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	15.1	0.0	9.5	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.30	0.00	1.00	0.00	1.00	0.00	0.62
Lane Grp Cap (c), veh/h	0	151	0	941	0	545	0	881
V/C Ratio (X)	0.00	0.24	0.00	0.31	0.00	0.47	0.00	0.14
Avail Cap (c_a), veh/h	0	208	0	941	0	624	0	881
Upstream Filter (I)	0.00	1.00	0.00	0.97	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	38.2	0.0	14.3	0.0	23.1	0.0	11.0
Incr Delay (d2), s/veh	0.0	1.8	0.0	0.8	0.0	1.4	0.0	0.3
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	40.0	0.0	15.1	0.0	24.5	0.0	11.3
1st-Term Q (Q1), veh/ln	0.0	0.9	0.0	4.7	0.0	5.0	0.0	1.6
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.2	0.0	0.2	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.80	0.00	1.73	0.00	1.72	0.00	1.80
%ile Back of Q (95%), veh/ln	0.0	1.7	0.0	8.4	0.0	9.0	0.0	3.1
%ile Storage Ratio (RQ%)	0.00	0.18	0.00	1.59	0.00	0.30	0.00	0.31
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	20.1
HCM 2010 LOS	C

Notes

User approved pedestrian interval to be less than phase max green.
User approved changes to right turn type.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	205	275	250	165	75	275	30	245	25	25	10
Future Volume (veh/h)	10	205	275	250	165	75	275	30	245	25	25	10
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1743	1961	1863	1863	1863	1900	1863	1961	1863	1863	1791	1900
Adj Flow Rate, veh/h	11	216	289	263	174	79	289	32	258	26	26	11
Adj No. of Lanes	1	2	1	1	2	0	1	1	1	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	9	2	2	2	2	2	2	2	2	2	4	4
Cap, veh/h	542	1592	941	602	1260	549	470	469	545	207	106	45
Arrive On Green	0.00	0.14	0.14	0.11	0.52	0.52	0.17	0.24	0.24	0.02	0.09	0.09
Sat Flow, veh/h	1660	3725	1583	1774	2401	1047	1774	1961	1583	1774	1196	506
Grp Volume(v), veh/h	11	216	289	263	126	127	289	32	258	26	0	37
Grp Sat Flow(s),veh/h/ln	1660	1863	1583	1774	1770	1678	1774	1961	1583	1774	0	1702
Q Serve(g_s), s	0.3	4.6	10.6	7.0	3.3	3.5	12.6	1.1	11.5	1.2	0.0	1.8
Cycle Q Clear(g_c), s	0.3	4.6	10.6	7.0	3.3	3.5	12.6	1.1	11.5	1.2	0.0	1.8
Prop In Lane	1.00		1.00	1.00		0.62	1.00		1.00	1.00		0.30
Lane Grp Cap(c), veh/h	542	1592	941	602	929	881	470	469	545	207	0	151
V/C Ratio(X)	0.02	0.14	0.31	0.44	0.14	0.14	0.61	0.07	0.47	0.13	0.00	0.24
Avail Cap(c_a), veh/h	630	1592	941	800	929	881	578	566	624	285	0	208
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.97	0.97	0.97	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	14.5	24.1	14.3	10.8	10.9	11.0	28.1	26.5	23.1	36.5	0.0	38.2
Incr Delay (d2), s/veh	0.0	0.2	0.8	0.5	0.3	0.3	1.3	0.1	1.4	0.3	0.0	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.3	4.3	8.4	6.2	3.0	3.1	10.4	1.1	9.0	1.1	0.0	1.7
LnGrp Delay(d),s/veh	14.5	24.3	15.1	11.3	11.2	11.3	29.4	26.6	24.5	36.8	0.0	40.0
LnGrp LOS	B	C	B	B	B	B	C	C	C	D		D
Approach Vol, veh/h		516			516			579			63	
Approach Delay, s/veh		19.0			11.3			27.0			38.6	
Approach LOS		B			B			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.6	14.0	13.0	44.5	5.0	27.5	4.2	53.2
Change Period (Y+Rc), s	3.5	6.0	3.5	6.0	3.5	6.0	3.5	6.0
Max Green Setting (Gmax), s	20.5	11.0	19.5	20.0	5.5	26.0	5.5	34.0
Max Q Clear Time (g_c+I1), s	14.6	3.8	9.0	12.6	3.2	13.5	2.3	5.5
Green Ext Time (p_c), s	0.4	1.4	0.5	4.8	0.0	2.0	0.0	12.7

Intersection Summary	
HCM 2010 Ctrl Delay	20.1
HCM 2010 LOS	C

Notes

User approved pedestrian interval to be less than phase max green.
User approved changes to right turn type.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	315	375	1	5	385	60	10	1	5	110	1	265
Future Volume (veh/h)	315	375	1	5	385	60	10	1	5	110	1	265
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1727	1863	1900	1429	1961	1863	1863	1961	1357	950	1863	1900
Adj Flow Rate, veh/h	332	395	1	5	405	63	11	1	5	116	1	279
Adj No. of Lanes	1	2	0	1	2	1	1	1	1	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	10	2	2	33	2	2	2	2	40	100	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	527	1727	4	331	1214	516	258	379	223	322	2	474
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.15	0.48	0.48	0.00	0.11	0.11	0.01	0.19	0.19	0.11	0.30	0.30
Ln Grp Delay, s/veh	16.3	14.4	14.4	20.4	31.8	29.0	29.0	29.3	29.6	23.9	0.0	32.1
Ln Grp LOS	B	B	B	C	C	C	C	C	C	C		C
Approach Vol, veh/h		728			473			17			396	
Approach Delay, s/veh		15.3			31.3			29.2			29.7	
Approach LOS		B			C			C			C	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Case No	1.1	4.0	1.1	4.0	1.1	3.0	1.1	3.0
Phs Duration (G+Y+Rc), s	3.9	48.9	4.2	33.0	17.4	35.3	13.8	23.4
Change Period (Y+Rc), s	3.5	6.0	3.5	6.0	3.5	6.0	3.5	6.0
Max Green (Gmax), s	3.5	37.0	3.5	27.0	21.5	19.0	13.5	17.0
Max Allow Headway (MAH), s	3.8	8.8	3.9	7.7	3.7	8.8	4.3	7.7
Max Q Clear (g_c+I1), s	2.2	7.8	2.4	15.5	13.3	11.1	10.9	2.3
Green Ext Time (g_e), s	0.0	15.5	0.0	2.4	0.6	5.7	0.1	2.8
Prob of Phs Call (p_c)	0.12	1.00	0.24	1.00	1.00	1.00	0.94	1.00
Prob of Max Out (p_x)	1.00	0.44	1.00	0.00	0.07	1.00	1.00	0.00

Left-Turn Movement Data								
Assigned Mvmt	1		3		5		7	
Mvmt Sat Flow, veh/h	1361		1774		1645		905	

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3622		6		3725		1961

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		9		1579		1583		1154

Left Lane Group Data								
Assigned Mvmt	1	0	3	0	5	0	7	0
Lane Assignment	(Pr/Pm)		(Pr/Pm)		(Pr/Pm)		(Pr/Pm)	

Lanes in Grp	1	0	1	0	1	0	1	0
Grp Vol (v), veh/h	5	0	11	0	332	0	116	0
Grp Sat Flow (s), veh/h/ln	1361	0	1774	0	1645	0	905	0
Q Serve Time (g_s), s	0.2	0.0	0.4	0.0	11.3	0.0	8.9	0.0
Cycle Q Clear Time (g_c), s	0.2	0.0	0.4	0.0	11.3	0.0	8.9	0.0
Perm LT Sat Flow (s_l), veh/h/ln	755	0	1095	0	854	0	716	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	29.3	0.0	17.4	0.0	31.3	0.0	19.4	0.0
Perm LT Serve Time (g_u), s	29.3	0.0	13.5	0.0	20.3	0.0	17.3	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	7.0	0.0	0.4	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	331	0	258	0	527	0	322	0
V/C Ratio (X)	0.02	0.00	0.04	0.00	0.63	0.00	0.36	0.00
Avail Cap (c_a), veh/h	379	0	313	0	665	0	354	0
Upstream Filter (I)	0.91	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Uniform Delay (d1), s/veh	20.3	0.0	29.0	0.0	15.0	0.0	23.2	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.1	0.0	1.2	0.0	0.7	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	20.4	0.0	29.0	0.0	16.3	0.0	23.9	0.0
1st-Term Q (Q1), veh/ln	0.1	0.0	0.2	0.0	5.1	0.0	2.2	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.2	0.0	0.1	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.80	0.00	1.80	0.00	1.72	0.00	1.80	0.00
%ile Back of Q (95%), veh/ln	0.2	0.0	0.4	0.0	9.0	0.0	4.1	0.0
%ile Storage Ratio (RQ%)	0.02	0.00	0.07	0.00	1.62	0.00	1.66	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T				T		T
Lanes in Grp	0	1	0	0	0	2	0	1
Grp Vol (v), veh/h	0	193	0	0	0	405	0	1
Grp Sat Flow (s), veh/h/ln	0	1770	0	0	0	1863	0	1961
Q Serve Time (g_s), s	0.0	5.8	0.0	0.0	0.0	9.1	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	5.8	0.0	0.0	0.0	9.1	0.0	0.0
Lane Grp Cap (c), veh/h	0	844	0	0	0	1214	0	379
V/C Ratio (X)	0.00	0.23	0.00	0.00	0.00	0.33	0.00	0.00
Avail Cap (c_a), veh/h	0	844	0	0	0	1214	0	379
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	0.91	0.00	1.00
Uniform Delay (d1), s/veh	0.0	13.8	0.0	0.0	0.0	31.1	0.0	29.3
Incr Delay (d2), s/veh	0.0	0.6	0.0	0.0	0.0	0.7	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	14.4	0.0	0.0	0.0	31.8	0.0	29.3
1st-Term Q (Q1), veh/ln	0.0	2.8	0.0	0.0	0.0	4.7	0.0	0.0

2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.80	0.00	1.00	0.00	1.72	0.00	1.80
%ile Back of Q (95%), veh/ln	0.0	5.3	0.0	0.0	0.0	8.2	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.23	0.00	0.00	0.00	0.08	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		T+R		R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	203	0	280	0	63	0	5
Grp Sat Flow (s), veh/h/ln	0	1861	0	1584	0	1583	0	1154
Q Serve Time (g_s), s	0.0	5.8	0.0	13.5	0.0	3.2	0.0	0.3
Cycle Q Clear Time (g_c), s	0.0	5.8	0.0	13.5	0.0	3.2	0.0	0.3
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	888	0	475	0	516	0	223
V/C Ratio (X)	0.00	0.23	0.00	0.59	0.00	0.12	0.00	0.02
Avail Cap (c_a), veh/h	0	888	0	475	0	516	0	223
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	0.91	0.00	1.00
Uniform Delay (d1), s/veh	0.0	13.8	0.0	26.8	0.0	28.5	0.0	29.4
Incr Delay (d2), s/veh	0.0	0.6	0.0	5.3	0.0	0.4	0.0	0.2
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	14.4	0.0	32.1	0.0	29.0	0.0	29.6
1st-Term Q (Q1), veh/ln	0.0	2.9	0.0	5.9	0.0	1.4	0.0	0.1
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.7	0.0	0.1	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.80	0.00	1.64	0.00	1.80	0.00	1.80
%ile Back of Q (95%), veh/ln	0.0	5.5	0.0	10.8	0.0	2.7	0.0	0.2
%ile Storage Ratio (RQ%)	0.00	0.24	0.00	1.40	0.00	0.54	0.00	0.05
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	23.6
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	315	375	1	5	385	60	10	1	5	110	1	265
Future Volume (veh/h)	315	375	1	5	385	60	10	1	5	110	1	265
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1727	1863	1900	1429	1961	1863	1863	1961	1357	950	1863	1900
Adj Flow Rate, veh/h	332	395	1	5	405	63	11	1	5	116	1	279
Adj No. of Lanes	1	2	0	1	2	1	1	1	1	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	10	2	2	33	2	2	2	2	40	100	2	2
Cap, veh/h	527	1727	4	331	1214	516	258	379	223	322	2	474
Arrive On Green	0.15	0.48	0.48	0.00	0.11	0.11	0.01	0.19	0.19	0.11	0.30	0.30
Sat Flow, veh/h	1645	3622	9	1361	3725	1583	1774	1961	1154	905	6	1579
Grp Volume(v), veh/h	332	193	203	5	405	63	11	1	5	116	0	280
Grp Sat Flow(s),veh/h/ln	1645	1770	1861	1361	1863	1583	1774	1961	1154	905	0	1584
Q Serve(g_s), s	11.3	5.8	5.8	0.2	9.1	3.2	0.4	0.0	0.3	8.9	0.0	13.5
Cycle Q Clear(g_c), s	11.3	5.8	5.8	0.2	9.1	3.2	0.4	0.0	0.3	8.9	0.0	13.5
Prop In Lane	1.00		0.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	527	844	888	331	1214	516	258	379	223	322	0	475
V/C Ratio(X)	0.63	0.23	0.23	0.02	0.33	0.12	0.04	0.00	0.02	0.36	0.00	0.59
Avail Cap(c_a), veh/h	665	844	888	379	1214	516	313	379	223	354	0	475
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.91	0.91	0.91	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	15.0	13.8	13.8	20.3	31.1	28.5	29.0	29.3	29.4	23.2	0.0	26.8
Incr Delay (d2), s/veh	1.2	0.6	0.6	0.0	0.7	0.4	0.1	0.0	0.2	0.7	0.0	5.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	9.0	5.3	5.5	0.2	8.2	2.7	0.4	0.0	0.2	4.1	0.0	10.8
LnGrp Delay(d),s/veh	16.3	14.4	14.4	20.4	31.8	29.0	29.0	29.3	29.6	23.9	0.0	32.1
LnGrp LOS	B	B	B	C	C	C	C	C	C	C		C
Approach Vol, veh/h		728			473			17			396	
Approach Delay, s/veh		15.3			31.3			29.2			29.7	
Approach LOS		B			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	3.9	48.9	4.2	33.0	17.4	35.3	13.8	23.4
Change Period (Y+Rc), s	3.5	6.0	3.5	6.0	3.5	6.0	3.5	6.0
Max Green Setting (Gmax), s	3.5	37.0	3.5	27.0	21.5	19.0	13.5	17.0
Max Q Clear Time (g_c+I1), s	2.2	7.8	2.4	15.5	13.3	11.1	10.9	2.3
Green Ext Time (p_c), s	0.0	15.5	0.0	2.4	0.6	5.7	0.1	2.8

Intersection Summary	
HCM 2010 Ctrl Delay	23.6
HCM 2010 LOS	C

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	25	670	20	15	630	15	10	1	10	10	1	1
Future Vol, veh/h	25	670	20	15	630	15	10	1	10	10	1	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	215	-	-	195	-	-	65	-	-	-	-	95
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	13	2	2
Mvmt Flow	26	705	21	16	663	16	11	1	11	11	1	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	679	0	0	726	0	0	1132	1479	363	1109	1482	339
Stage 1	-	-	-	-	-	-	768	768	-	703	703	-
Stage 2	-	-	-	-	-	-	364	711	-	406	779	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.76	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.76	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.76	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.63	4.02	3.32
Pot Cap-1 Maneuver	909	-	-	873	-	-	158	125	634	151	124	657
Stage 1	-	-	-	-	-	-	360	409	-	370	438	-
Stage 2	-	-	-	-	-	-	627	434	-	564	404	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	909	-	-	873	-	-	151	119	634	142	118	657
Mov Cap-2 Maneuver	-	-	-	-	-	-	151	119	-	142	118	-
Stage 1	-	-	-	-	-	-	350	397	-	359	430	-
Stage 2	-	-	-	-	-	-	613	426	-	537	392	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	0.2	21.4	31.3
HCM LOS			C	D

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	151	455	909	-	-	873	-	-	139	657
HCM Lane V/C Ratio	0.07	0.025	0.029	-	-	0.018	-	-	0.083	0.002
HCM Control Delay (s)	30.6	13.1	9.1	-	-	9.2	-	-	33.2	10.5
HCM Lane LOS	D	B	A	-	-	A	-	-	D	B
HCM 95th %tile Q(veh)	0.2	0.1	0.1	-	-	0.1	-	-	0.3	0

Intersection	
Int Delay, s/veh	6.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	1	250	290	85	125	1
Future Vol, veh/h	1	250	290	85	125	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	10	5	2
Mvmt Flow	1	263	305	89	132	1

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	832	132	133	0	-	0
Stage 1	132	-	-	-	-	-
Stage 2	700	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	339	917	1452	-	-	-
Stage 1	894	-	-	-	-	-
Stage 2	493	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	264	917	1452	-	-	-
Mov Cap-2 Maneuver	264	-	-	-	-	-
Stage 1	894	-	-	-	-	-
Stage 2	384	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.6	6.3	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1452	-	908	-	-
HCM Lane V/C Ratio	0.21	-	0.291	-	-
HCM Control Delay (s)	8.1	0	10.6	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.8	-	1.2	-	-

Intersection	
Int Delay, s/veh	2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1	105	20	60	55	30
Future Vol, veh/h	1	105	20	60	55	30
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	6	2	2	14
Mvmt Flow	1	111	21	63	58	32

Major/Minor	Minor2		Major2		Major1	
Conflicting Flow All	252	63	32	0	63	0
Stage 1	105	-	-	-	-	-
Stage 2	147	-	-	-	-	-
Critical Hdwy	6.52	6.22	4.16	-	4.12	-
Critical Hdwy Stg 1	5.52	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	4.018	3.318	2.254	-	2.218	-
Pot Cap-1 Maneuver	651	1002	1555	-	1540	-
Stage 1	808	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %				-		-
Mov Cap-1 Maneuver	0	1002	1555	-	1540	-
Mov Cap-2 Maneuver	0	-	-	-	-	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s		1.8	4.8
HCM LOS	-		

Minor Lane/Major Mvmt	NBL	NBR	EBLn1	EBLn2	WBL	WBT
Capacity (veh/h)	1540	-	-	1002	1555	-
HCM Lane V/C Ratio	0.038	-	-	0.11	0.014	-
HCM Control Delay (s)	7.4	-	-	9	7.3	0
HCM Lane LOS	A	-	-	A	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0.4	0	-

DATA FROM THE ITE MANUAL TRIP GENERATION, TENTH EDITION

Land Use: 465
Ice Skating Rink

Description

An ice skating rink is a stand-alone facility used for ice-skating-oriented sports and entertainment activities. It may contain limited spectator seating, refreshment areas, a locker room, and arcade.

Additional Data

Time-of-day distribution data for this land use are presented in Appendix A. For the one site with data, the peak hours for site trips on a weekday, Friday, and Saturday were between 1:30 and 2:30 p.m., 5:15 and 6:15 p.m., and 4:15 and 5:15 p.m., respectively.

The sites were surveyed in the 1990s, the 2000s, and the 2010s in California, New Jersey, and Utah.

Source Numbers

441, 850, 954

Ice Skating Rink
(465)

Vehicle Trip Ends vs: **Seats**
On a: **Weekday**

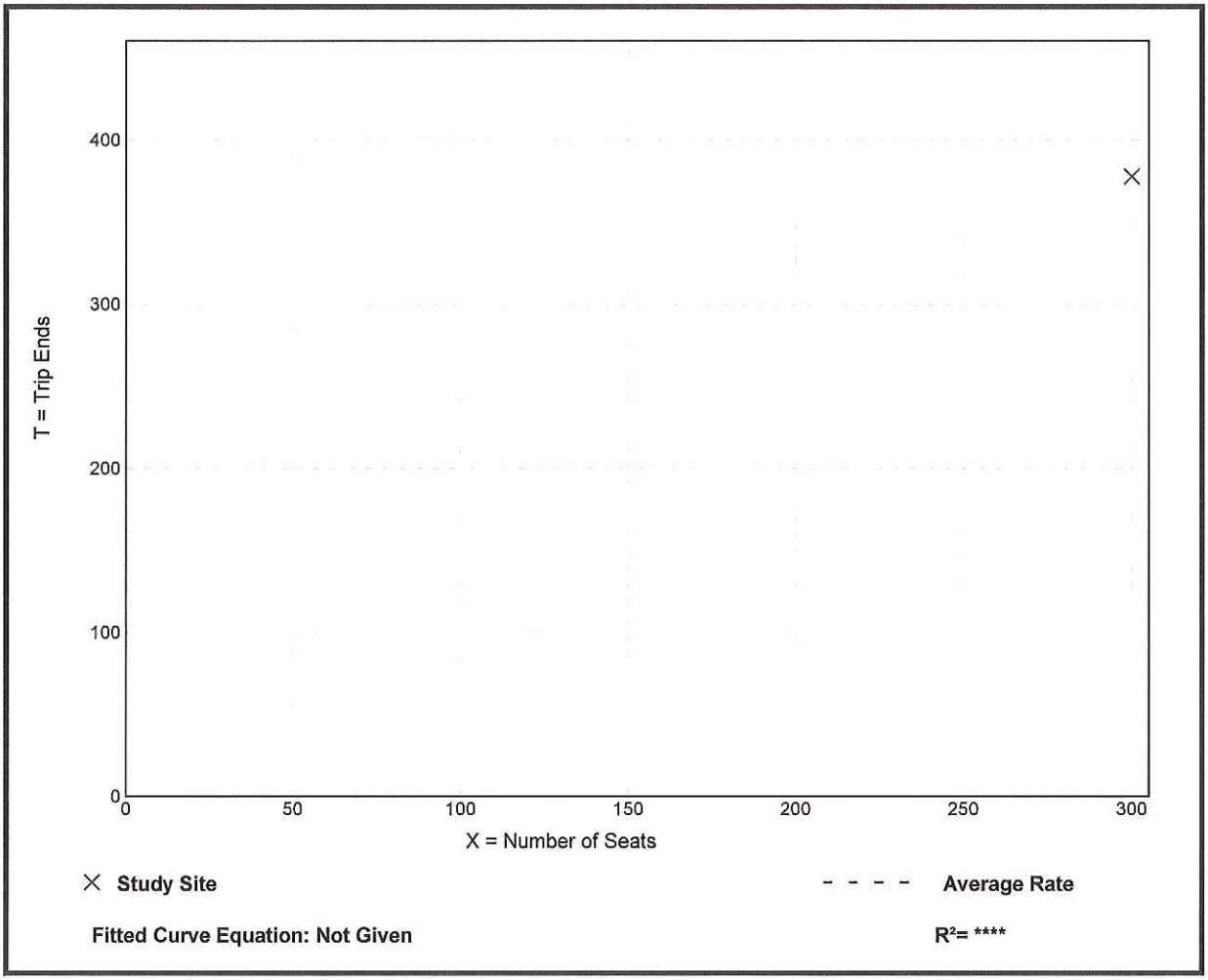
Setting/Location: **General Urban/Suburban**
Number of Studies: 1
Avg. Num. of Seats: 300
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Seat

Average Rate	Range of Rates	Standard Deviation
1.26	1.26 - 1.26	*

Data Plot and Equation

Caution – Small Sample Size



Fitted Curve Equation: Not Given

R^2= ****

Ice Skating Rink
(465)

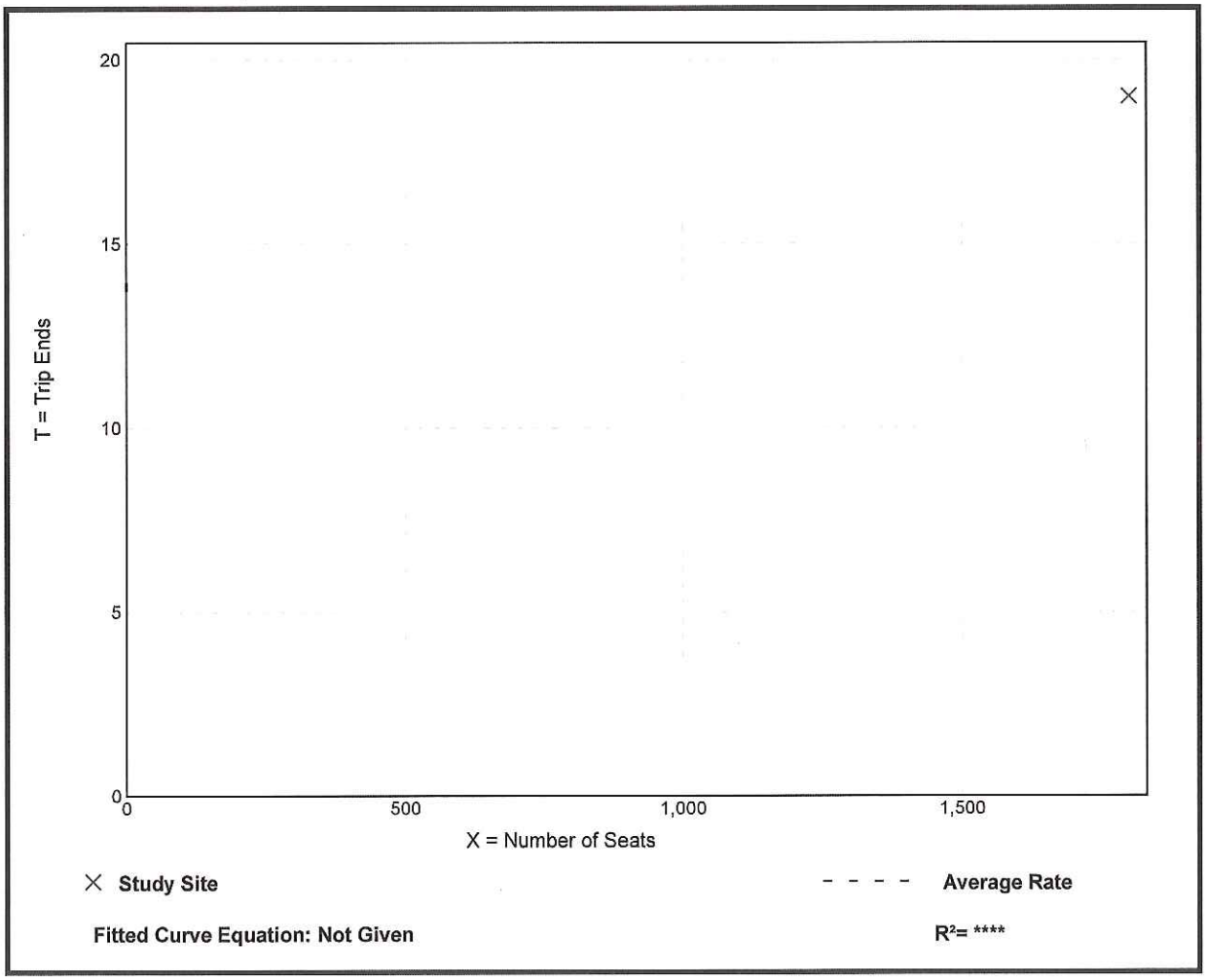
Vehicle Trip Ends vs: **Seats**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 1
Avg. Num. of Seats: 1800
Directional Distribution: 37% entering, 63% exiting

Vehicle Trip Generation per Seat

Average Rate	Range of Rates	Standard Deviation
0.01	0.01 - 0.01	*

Data Plot and Equation

Caution – Small Sample Size



Fitted Curve Equation: Not Given

R^2= ****

Ice Skating Rink
(465)

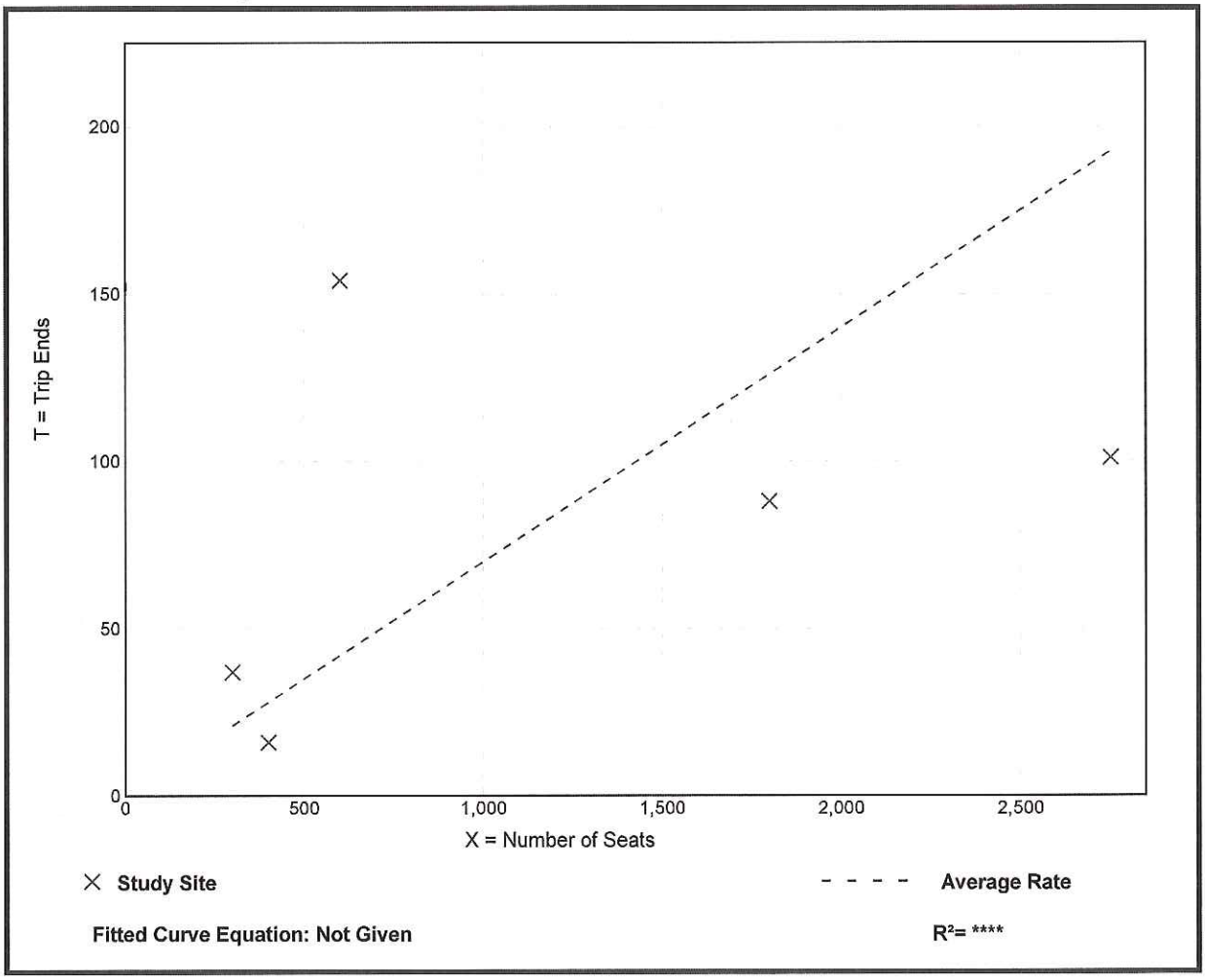
Vehicle Trip Ends vs: **Seats**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 5
Avg. Num. of Seats: 1170
Directional Distribution: 60% entering, 40% exiting

Vehicle Trip Generation per Seat

Average Rate	Range of Rates	Standard Deviation
0.07	0.04 - 0.26	0.07

Data Plot and Equation

Caution – Small Sample Size



Fitted Curve Equation: Not Given

R^2= ****

Ice Skating Rink
(465)

Vehicle Trip Ends vs: **Seats**
On a: **Saturday, Peak Hour of Generator**

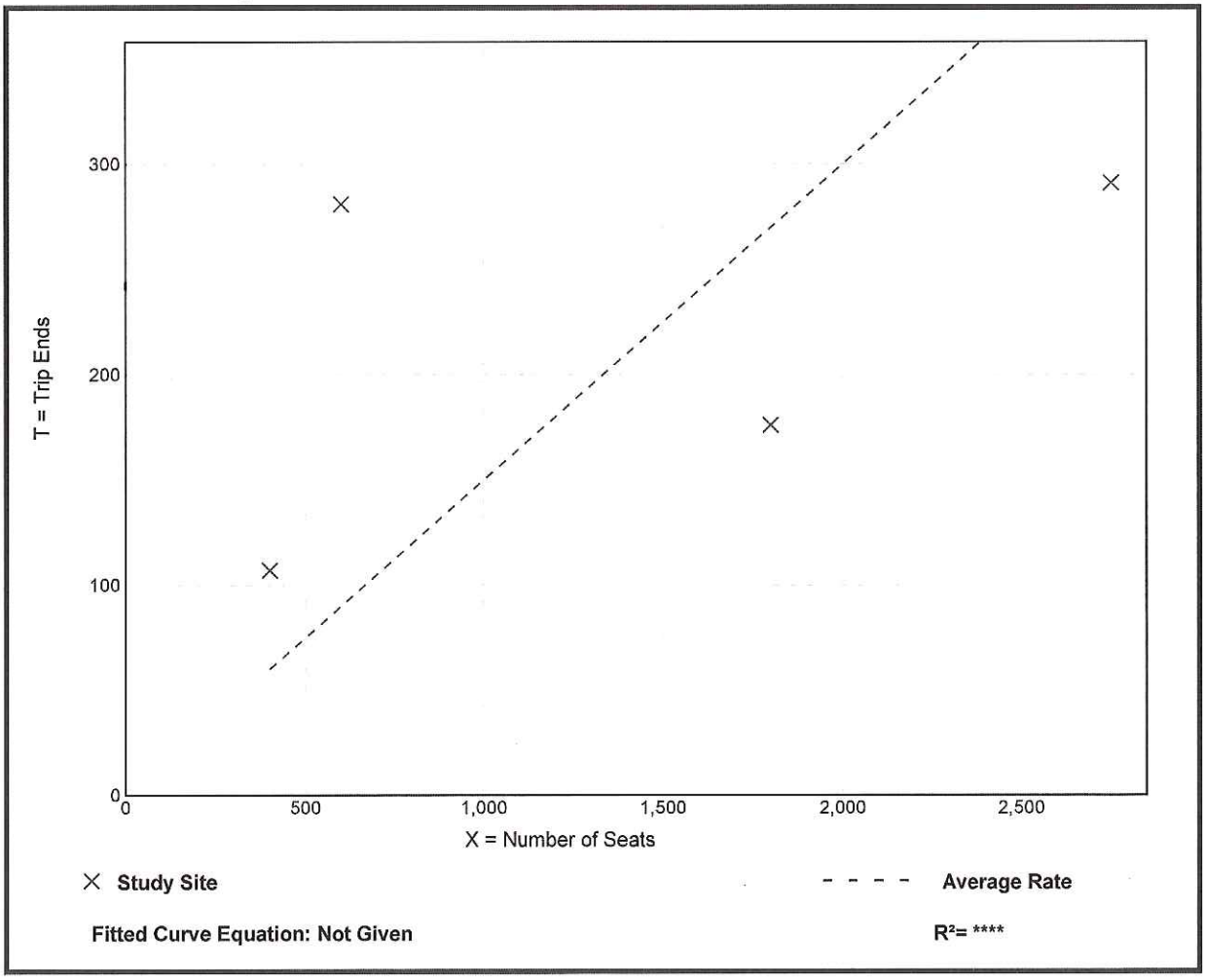
Setting/Location: **General Urban/Suburban**
Number of Studies: 4
Avg. Num. of Seats: 1388
Directional Distribution: 53% entering, 47% exiting

Vehicle Trip Generation per Seat

Average Rate	Range of Rates	Standard Deviation
0.15	0.10 - 0.47	0.14

Data Plot and Equation

Caution – Small Sample Size



Fitted Curve Equation: Not Given

R^2= ****

Land Use: 931
Quality Restaurant

Description

This land use consists of high quality, full-service eating establishments with a typical duration of stay of at least one hour. Quality restaurants generally do not serve breakfast; some do not serve lunch; all serve dinner. This type of restaurant often requests and sometimes requires reservations and is generally not part of a chain. Patrons commonly wait to be seated, are served by a waiter/waitress, order from menus and pay for meals after they eat. While some of the study sites have lounge or bar facilities (serving alcoholic beverages), they are ancillary to the restaurant. Fast casual restaurant (Land Use 930) and high-turnover (sit-down) restaurant (Land Use 932) are related uses.

Additional Data

The outdoor seating area is not included in the overall gross floor area. Therefore, the number of seats may be a more reliable independent variable on which to establish trip generation rates for facilities having significant outdoor seating.

The sites were surveyed in the 1980s and the 1990s in Alberta (CAN), California, Colorado, Florida, Indiana, Kentucky, New Jersey, and Utah.

Source Numbers

126, 260, 291, 301, 338, 339, 368, 437, 440, 976

Quality Restaurant
(931)

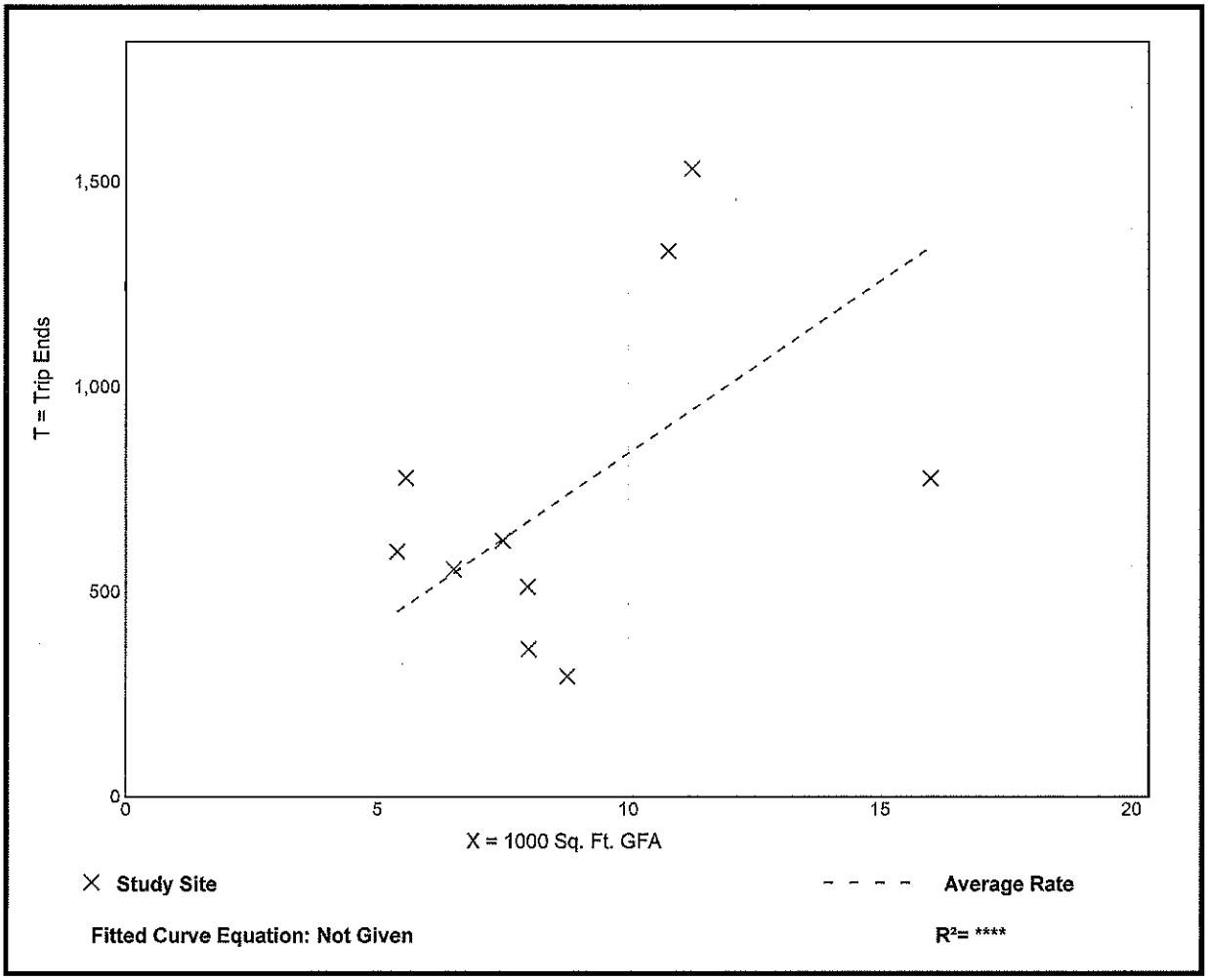
Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday**

Setting/Location: **General Urban/Suburban**
Number of Studies: 10
1000 Sq. Ft. GFA: 9
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
83.84	33.45 - 139.93	40.01

Data Plot and Equation



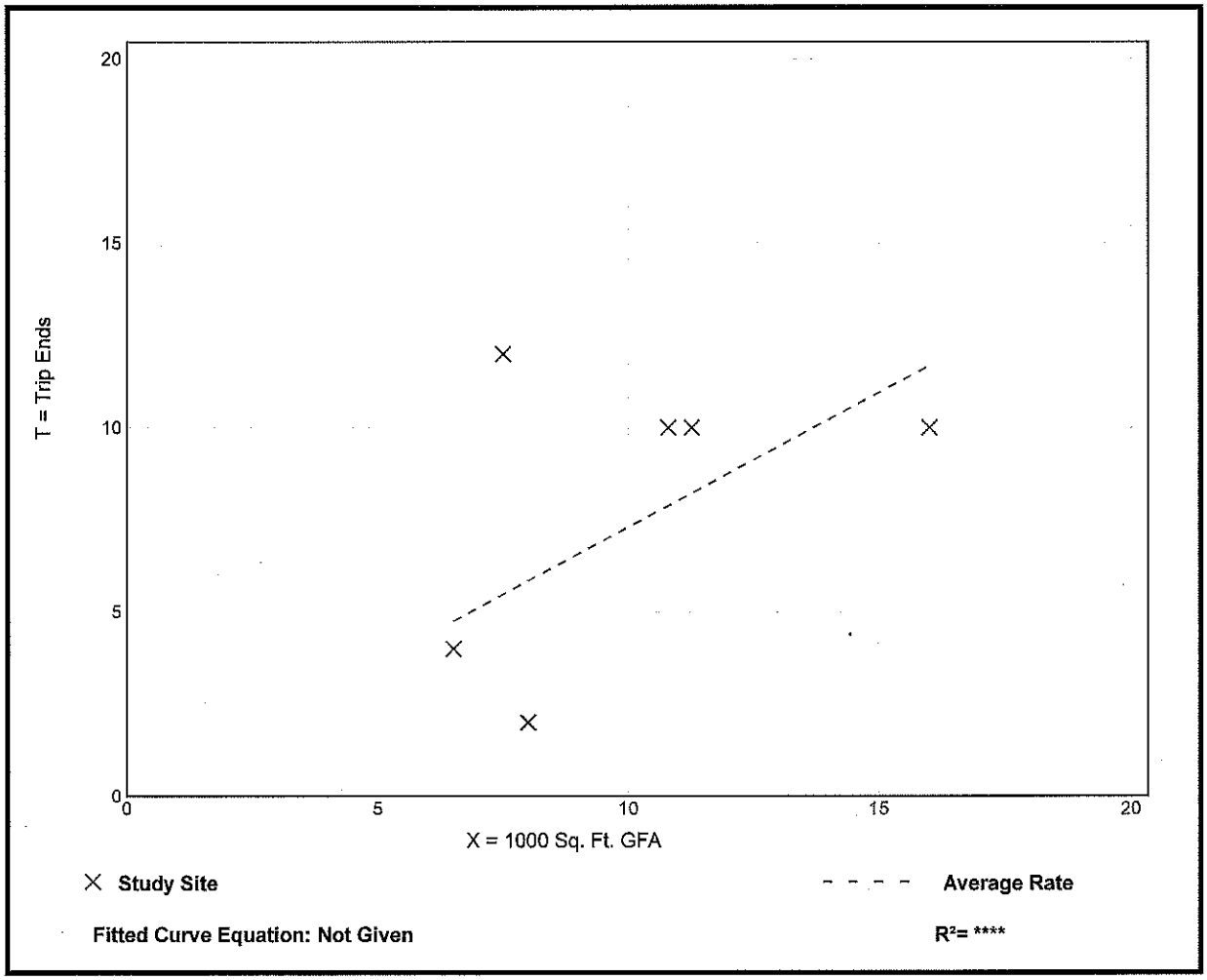
Quality Restaurant
(931)

Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 7
1000 Sq. Ft. GFA: 10
Directional Distribution: Not Available

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
0.73	0.25 - 1.60	0.42

Data Plot and Equation



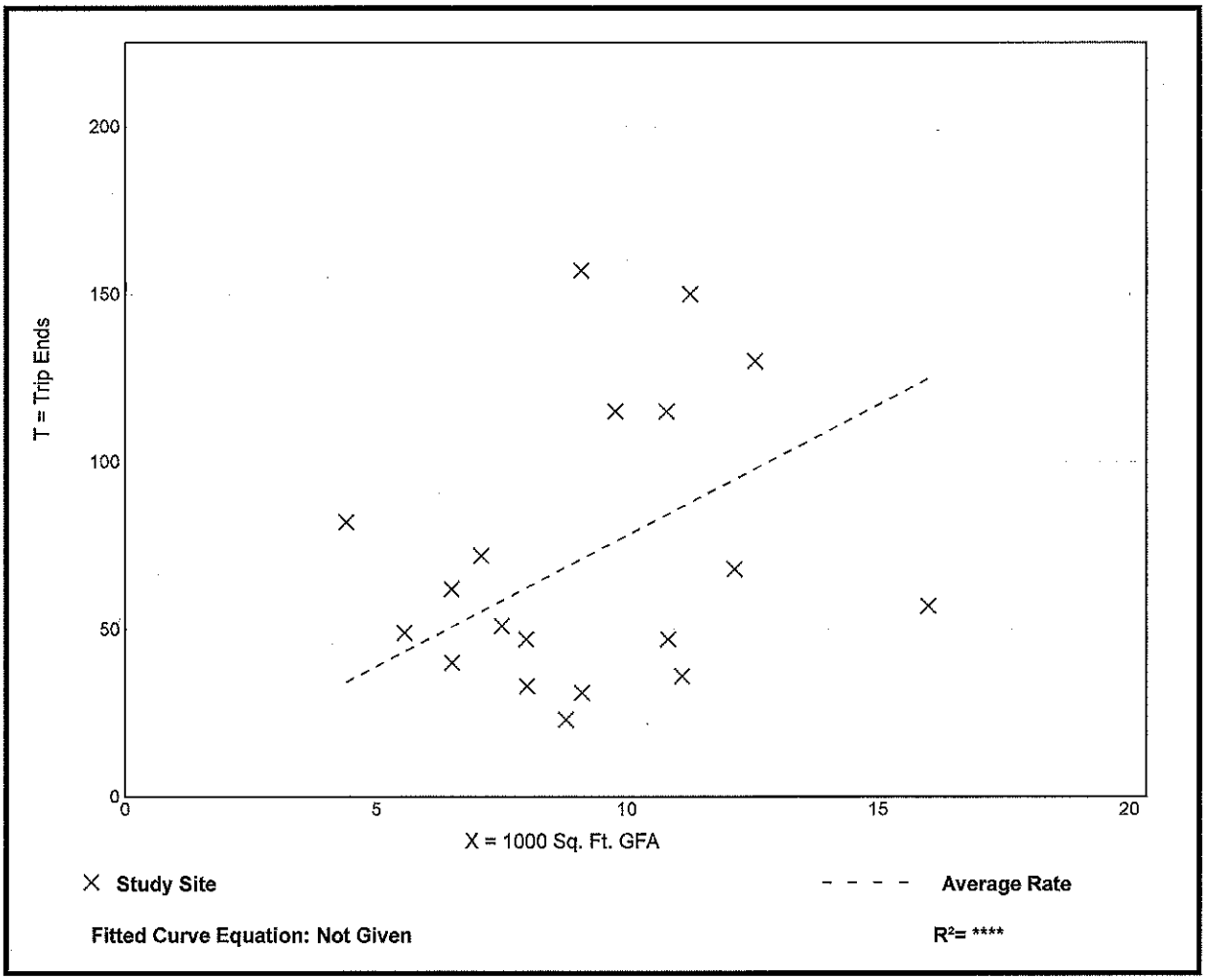
Quality Restaurant
(931)

Vehicle Trip Ends vs:	**1000 Sq. Ft. GFA**
On a:	**Weekday,**
	Peak Hour of Adjacent Street Traffic,
	One Hour Between 4 and 6 p.m.
Setting/Location:	**General Urban/Suburban**
Number of Studies:	19
1000 Sq. Ft. GFA:	9
Directional Distribution:	67% entering, 33% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
7.80	2.62 - 18.68	4.49

Data Plot and Equation



Fitted Curve Equation: Not Given

R^2= ****

Quality Restaurant
(931)

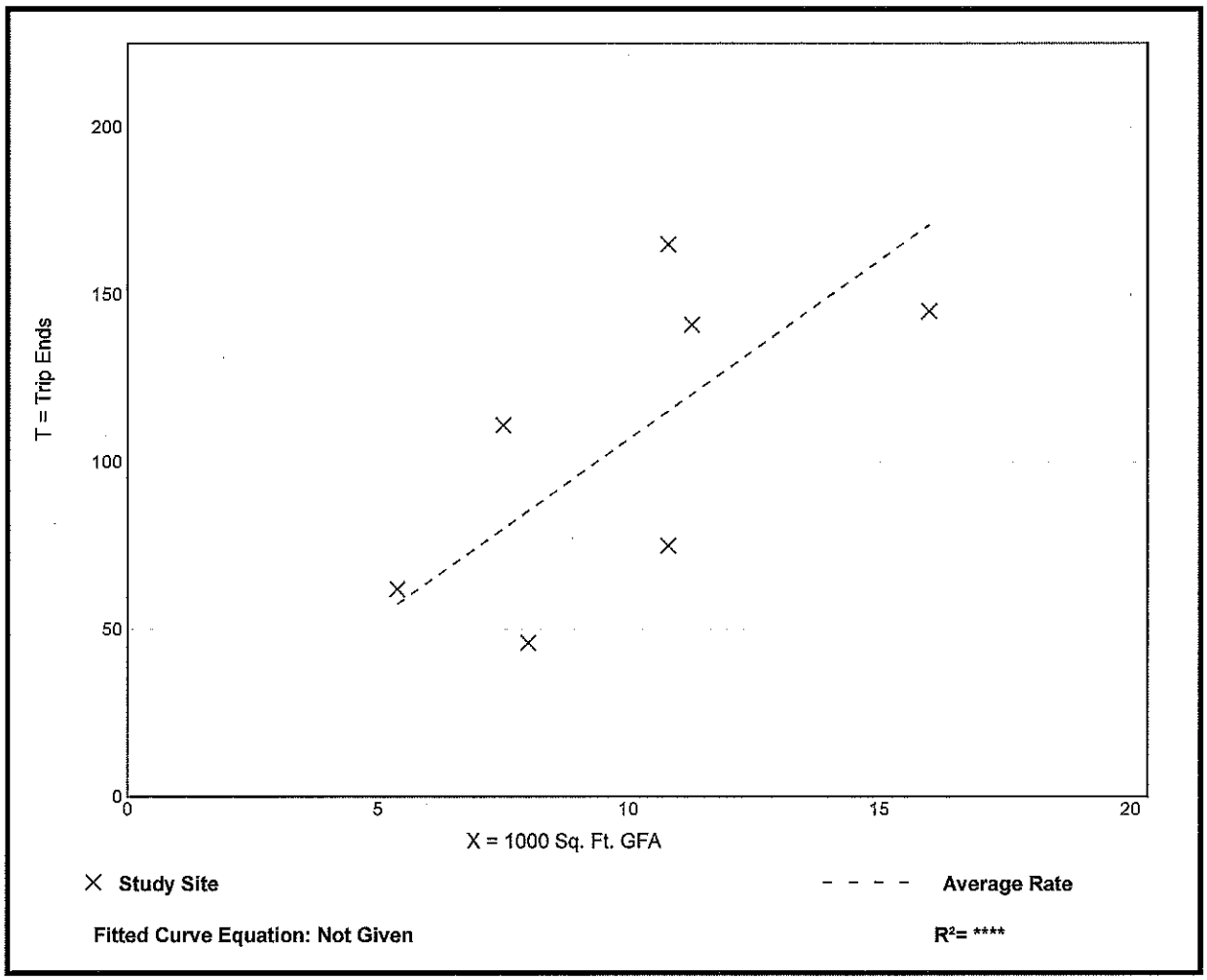
Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Saturday, Peak Hour of Generator**

Setting/Location: **General Urban/Suburban**
Number of Studies: 7
1000 Sq. Ft. GFA: 10
Directional Distribution: 59% entering, 41% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
10.68	5.75 - 15.29	3.62

Data Plot and Equation



Fitted Curve Equation: Not Given

R^2= ****

TRAFFIC COUNT DATA

Study Name Ferry Road / Corporate Lane / Comfort Drive
Date Tuesday, June 27, 2017

Report Summary

		Eastbound						Westbound						Northbound						Southbound								Crosswalk		
Time Period	Class.	U	L	T	R	I	O	U	L	T	R	I	O	U	L	T	R	I	O	U	L	T	R	I	O	Total		s on Cr	edestria	Total
Peak 1	Lights	0	56	1132	36	1224	488	0	63	470	2	535	1171	0	12	0	38	50	100	0	1	1	6	8	58	1817	W	0	0	0
Specified Period	%	0%	90%	97%	97%	97%	96%	0%	98%	97%	67%	97%	97%	0%	100%	0%	100%	100%	97%	0%	100%	50%	75%	73%	89%	97%		0%	0%	
7:00 AM - 9:00 AM	Mediums	0	5	24	1	30	13	0	0	12	1	13	24	0	0	0	0	0	2	0	0	1	1	2	6	45	E	0	0	0
One Hour Peak	%	0%	8%	2%	3%	2%	3%	0%	0%	2%	33%	2%	2%	0%	0%	0%	0%	0%	2%	0%	0%	50%	13%	18%	9%	2%		0%	0%	
7:30 AM - 8:30 AM	Articulated Trucks	0	1	7	0	8	6	0	1	5	0	6	7	0	0	0	0	0	1	0	0	0	1	1	1	15	S	0	2	2
	%	0%	2%	1%	0%	1%	1%	0%	2%	1%	0%	1%	1%	0%	0%	0%	0%	0%	1%	0%	0%	0%	13%	9%	2%	1%		0%	100%	
	Total	**0**	**62**	**1163**	**37**	**1262**	**507**	**0**	**64**	**487**	**3**	**554**	**1202**	**0**	**12**	**0**	**38**	**50**	**103**	**0**	**1**	**2**	**8**	**11**	**65**	**1877**	N	0	0	0
	PHF																									0.93		0%	0%	
	%HV	0%	10%	3%	3%	3%	4%	0%	2%	3%	33%	3%	3%	0%	0%	0%	0%	0%	3%	0%	0%	50%	25%	27%	11%	3%		**0**	**2**	**2**
	Bicycles on Road	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				
Peak 2	Lights	0	12	559	3	574	1329	0	8	1193	2	1203	692	0	67	0	132	199	12	0	1	1	69	71	14	2047	W	0	0	0
Specified Period	%	0%	80%	99%	100%	99%	99%	0%	100%	99%	33%	99%	99%	0%	100%	0%	100%	100%	100%	0%	100%	100%	92%	92%	67%	99%		0%	0%	
4:00 PM - 6:00 PM	Mediums	0	2	2	0	4	13	0	0	12	1	13	2	0	0	0	0	0	0	0	0	0	1	1	3	18	E	0	1	1
One Hour Peak	%	0%	13%	0%	0%	1%	1%	0%	0%	1%	17%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	1%	14%	1%		0%	100%	
4:30 PM - 5:30 PM	Articulated Trucks	0	1	2	0	3	6	0	0	1	3	4	2	0	0	0	0	0	0	0	0	0	5	5	4	12	S	1	0	1
	%	0%	7%	0%	0%	1%	0%	0%	0%	0%	50%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	7%	6%	19%	1%		100%	0%	
	Total	**0**	**15**	**563**	**3**	**581**	**1348**	**0**	**8**	**1206**	**6**	**1220**	**696**	**0**	**67**	**0**	**132**	**199**	**12**	**0**	**1**	**1**	**75**	**77**	**21**	**2077**	N	0	0	0
	PHF																									0.87		0%	0%	
	%HV	0%	20%	1%	0%	1%	1%	0%	0%	1%	67%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	8%	8%	33%	1%		**1**	**1**	**2**
	Bicycles on Road	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				

Study Name Ferry Road / Monarch Drive / CityGate Lane
Date Tuesday, June 27, 2017

Report Summary

		Eastbound						Westbound						Northbound						Southbound								Crosswalk		
Time Period	Class.	U	L	T	R	I	O	U	L	T	R	I	O	U	L	T	R	I	O	U	L	T	R	I	O	Total		s on Cr	odestria	Total
Peak 1	Lights	21	41	1205	125	1392	441	0	89	374	20	483	1226	0	35	1	17	53	214	0	4	0	11	15	62	1943	W	0	0	0
Specified Period	%	100%	98%	97%	100%	97%	96%	0%	99%	95%	100%	96%	97%	0%	100%	100%	94%	98%	100%	0%	100%	0%	92%	94%	98%	97%		0%	0%	
7:00 AM - 9:00 AM	Mediums	0	1	29	0	30	14	0	1	13	0	14	30	0	0	0	1	1	1	0	0	0	1	1	1	46	E	0	0	0
One Hour Peak	%	0%	2%	2%	0%	2%	3%	0%	1%	3%	0%	3%	2%	0%	0%	0%	6%	2%	0%	0%	0%	0%	8%	6%	2%	2%		0%	0%	
7:30 AM - 8:30 AM	Articulated Trucks	0	0	8	0	8	6	0	0	6	0	6	8	0	0	0	0	0	0	0	0	0	0	0	0	14	S	0	3	3
	%	0%	0%	1%	0%	1%	1%	0%	0%	2%	0%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%		0%	100%	
	Total	**21**	**42**	**1242**	**125**	**1430**	**461**	**0**	**90**	**393**	**20**	**503**	**1264**	**0**	**35**	**1**	**18**	**54**	**215**	**0**	**4**	**0**	**12**	**16**	**63**	**2003**	N	1	4	5
	PHF																									0.91		20%	80%	
	%HV	0%	2%	3%	0%	3%	4%	0%	1%	5%	0%	4%	3%	0%	0%	0%	6%	2%	0%	0%	0%	0%	8%	6%	2%	3%		**1**	**7**	**8**
	Bicycles on Road	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				
Peak 2	Lights	1	11	423	23	458	1458	0	12	1294	16	1322	582	0	140	0	155	295	36	0	4	1	23	28	27	2103	W	1	0	1
Specified Period	%	100%	100%	98%	96%	98%	99%	0%	100%	98%	100%	99%	99%	0%	100%	0%	100%	100%	97%	0%	100%	100%	100%	100%	100%	99%		100%	0%	
4:00 PM - 6:00 PM	Mediums	0	0	6	1	7	15	0	0	15	0	15	6	0	0	0	0	0	1	0	0	0	0	0	0	22	E	0	0	0
One Hour Peak	%	0%	0%	1%	4%	1%	1%	0%	0%	1%	0%	1%	1%	0%	0%	0%	0%	0%	3%	0%	0%	0%	0%	0%	0%	1%		0%	0%	
4:30 PM - 5:30 PM	Articulated Trucks	0	0	2	0	2	5	0	0	5	0	5	2	0	0	0	0	0	0	0	0	0	0	0	0	7	S	0	0	0
	%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%		0%	0%	
	Total	**1**	**11**	**431**	**24**	**467**	**1478**	**0**	**12**	**1314**	**16**	**1342**	**590**	**0**	**140**	**0**	**155**	**295**	**37**	**0**	**4**	**1**	**23**	**28**	**27**	**2132**	N	1	0	1
	PHF																									0.86		100%	0%	
	%HV	0%	0%	2%	4%	2%	1%	0%	0%	2%	0%	1%	1%	0%	0%	0%	0%	0%	3%	0%	0%	0%	0%	0%	0%	1%		**2**	**0**	**2**
	Bicycles on Road	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				

Study Name Ferry Road / Raymond Drive / Corporate Lane
Date Tuesday, June 27, 2017

Report Summary

		Eastbound						Westbound						Northbound						Southbound								Crosswalk		
Time Period	**Class.**	**U**	**L**	**T**	**R**	**I**	**O**	**U**	**L**	**T**	**R**	**I**	**O**	**U**	**L**	**T**	**R**	**I**	**O**	**U**	**L**	**T**	**R**	**I**	**O**	**Total**		**s on Cr**	**edestria**	**Total**
Peak 1	Lights	0	19	741	303	1063	627	0	419	295	76	790	1250	0	330	44	493	867	731	0	16	9	2	27	139	2747	W	0	0	0
Specified Period	%	0%	79%	98%	96%	97%	97%	0%	98%	96%	99%	97%	98%	0%	98%	100%	98%	98%	97%	0%	70%	82%	67%	73%	96%	97%		0%	0%	
7:00 AM - 9:00 AM	Mediums	0	2	14	11	27	11	0	8	6	1	15	28	0	4	0	8	12	21	0	6	2	1	9	3	63	E	0	0	0
One Hour Peak	%	0%	8%	2%	4%	2%	2%	0%	2%	2%	1%	2%	2%	0%	1%	0%	2%	1%	3%	0%	26%	18%	33%	24%	2%	2%		0%	0%	
7:30 AM - 8:30 AM	Articulated Trucks	0	3	3	0	6	8	0	0	6	0	6	4	0	2	0	0	2	0	0	1	0	0	1	3	15	S	0	0	0
	%	0%	13%	0%	0%	1%	1%	0%	0%	2%	0%	1%	0%	0%	1%	0%	0%	0%	0%	0%	4%	0%	0%	3%	2%	1%		0%	0%	
	Total	**0**	**24**	**758**	**314**	**1096**	**646**	**0**	**427**	**307**	**77**	**811**	**1282**	**0**	**336**	**44**	**501**	**881**	**752**	**0**	**23**	**11**	**3**	**37**	**145**	**2825**	N	0	0	0
	PHF																									0.93		0%	0%	
	%HV	0%	21%	2%	4%	3%	3%	0%	2%	4%	1%	3%	2%	0%	2%	0%	2%	2%	3%	0%	30%	18%	33%	27%	4%	3%		**0**	**0**	**0**
	Bicycles on Road	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	1				
Peak 2	Lights	0	3	407	416	826	1122	0	542	762	23	1327	869	0	329	19	360	708	995	0	102	37	31	170	45	3031	W	0	0	0
Specified Period	%	0%	75%	100%	99%	99%	98%	0%	100%	99%	96%	99%	99%	0%	96%	90%	99%	98%	99%	0%	97%	88%	97%	95%	92%	99%		0%	0%	
4:00 PM - 6:00 PM	Mediums	0	0	0	3	3	15	0	1	4	0	5	5	0	11	2	3	16	8	0	2	4	0	6	2	30	E	0	0	0
One Hour Peak	%	0%	0%	0%	1%	0%	1%	0%	0%	1%	0%	0%	1%	0%	3%	10%	1%	2%	1%	0%	2%	10%	0%	3%	4%	1%		0%	0%	
4:30 PM - 5:30 PM	Articulated Trucks	0	1	2	0	3	5	0	0	2	1	3	3	0	2	0	0	2	1	0	1	1	1	3	2	11	S	0	0	0
	%	0%	25%	0%	0%	0%	0%	0%	0%	0%	4%	0%	0%	0%	1%	0%	0%	0%	0%	0%	1%	2%	3%	2%	4%	0%		0%	0%	
	Total	**0**	**4**	**409**	**419**	**832**	**1142**	**0**	**543**	**768**	**24**	**1335**	**877**	**0**	**342**	**21**	**363**	**726**	**1004**	**0**	**105**	**42**	**32**	**179**	**49**	**3072**	N	1	0	1
	PHF																									0.94		100%	0%	
	%HV	0%	25%	0%	1%	1%	2%	0%	0%	1%	4%	1%	1%	0%	4%	10%	1%	2%	1%	0%	3%	12%	3%	5%	8%	1%		**1**	**0**	**1**
	Bicycles on Road	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				

Study Name Private Drive / Monarch Drive
Date Tuesday, June 27, 2017

Report Summary

		Eastbound					Westbound					Northbound							Crosswalk		
Time Period	Class.	U	T	R	I	O	U	L	T	I	O	U	L	R	I	O	Total		s on Cr	destria	Total
Peak 1	Lights	0	6	0	6	1	1	9	0	10	58	0	1	51	52	9	68	W	0	2	2
Specified Period	%	0%	100%	0%	100%	100%	100%	75%	0%	77%	91%	0%	100%	89%	90%	75%	88%		0%	100%	
7:30 AM - 8:30 AM	Mediums	0	0	0	0	0	0	2	0	2	5	0	0	5	5	2	7	E	0	0	0
One Hour Peak	%	0%	0%	0%	0%	0%	0%	17%	0%	15%	8%	0%	0%	9%	9%	17%	9%		0%	0%	
7:30 AM - 8:30 AM	Articulated Trucks	0	0	0	0	0	0	1	0	1	1	0	0	1	1	1	2	S	0	0	0
	%	0%	0%	0%	0%	0%	0%	8%	0%	8%	2%	0%	0%	2%	2%	8%	3%		0%	0%	
	Total	**0**	**6**	**0**	**6**	**1**	**1**	**12**	**0**	**13**	**64**	**0**	**1**	**57**	**58**	**12**	**77**		**0**	**2**	**2**
	PHF																0.77				
	% HV	0%	0%	0%	0%	0%	0%	25%	0%	23%	9%	0%	0%	11%	10%	25%	12%				
	Bicycles on Road	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
Peak 2	Lights	0	9	1	10	0	0	51	0	51	19	0	0	10	10	52	71	W	0	0	0
Specified Period	%	0%	100%	100%	100%	0%	0%	91%	0%	91%	70%	0%	0%	56%	56%	91%	85%		0%	0%	
4:30 PM - 5:30 PM	Mediums	0	0	0	0	0	0	1	0	1	6	0	0	6	6	1	7	E	0	0	0
One Hour Peak	%	0%	0%	0%	0%	0%	0%	2%	0%	2%	22%	0%	0%	33%	33%	2%	8%		0%	0%	
4:30 PM - 5:30 PM	Articulated Trucks	0	0	0	0	0	0	4	0	4	2	0	0	2	2	4	6	S	0	0	0
	%	0%	0%	0%	0%	0%	0%	7%	0%	7%	7%	0%	0%	11%	11%	7%	7%		0%	0%	
	Total	**0**	**9**	**1**	**10**	**0**	**0**	**56**	**0**	**56**	**27**	**0**	**0**	**18**	**18**	**57**	**84**		**0**	**0**	**0**
	PHF																0.84				
	% HV	0%	0%	0%	0%	0%	0%	9%	0%	9%	30%	0%	0%	44%	44%	9%	15%				
	Bicycles on Road	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				

Study Name Ferry & Corporate & Comfort
Date Saturday, February 24, 2018

Report Summary

		Eastbound						Westbound						Northbound						Southbound								Crosswalk		
Time Period	**Class.**	**U**	**L**	**T**	**R**	**I**	**O**	**U**	**L**	**T**	**R**	**I**	**O**	**U**	**L**	**T**	**R**	**I**	**O**	**U**	**L**	**T**	**R**	**I**	**O**	**Total**		**Bicycles c**	**Pedestrians**	**Total**
Peak	Lights	1	26	310	0	337	353	0	2	324	2	328	313	0	9	0	3	12	2	0	0	0	19	19	28	696	W	0	0	0
Specified Period	%	100%	90%	99%	0%	99%	99%	0%	67%	99%	100%	98%	98%	0%	100%	0%	60%	86%	67%	0%	0%	0%	100%	95%	90%	98%		0%	0%	
11:00 AM - 1:00 PM	Mediums	0	3	2	0	5	2	0	1	2	0	3	5	0	0	0	2	2	1	0	1	0	0	1	3	11	E	0	0	0
One Hour Peak	%	0%	10%	1%	0%	1%	1%	0%	33%	1%	0%	1%	2%	0%	0%	0%	40%	14%	33%	0%	100%	0%	0%	5%	10%	2%		0%	0%	
12:00 PM - 1:00 PM	Articulated Trucks	0	0	0	0	0	2	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2	S	0	1	1
	%	0%	0%	0%	0%	0%	1%	0%	0%	1%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%		0%	100%	
	Total	**1**	**29**	**312**	**0**	**342**	**357**	**0**	**3**	**328**	**2**	**333**	**318**	**0**	**9**	**0**	**5**	**14**	**3**	**0**	**1**	**0**	**19**	**20**	**31**	**709**	N	0	0	0
	PHF																									0.95		0%	0%	
	HV%	0%	10%	1%	0%	1%	1%	0%	33%	1%	0%	2%	2%	0%	0%	0%	40%	14%	33%	0%	100%	0%	0%	5%	10%	2%		**0**	**1**	**1**
	Bicycles on Road	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				

Study Name Ferry & Monarch & City Gate
Date Saturday, February 24, 2018

Report Summary

		Eastbound						Westbound						Northbound						Southbound								Crosswalk		
Time Period	**Class.**	**U**	**L**	**T**	**R**	**I**	**O**	**U**	**L**	**T**	**R**	**I**	**O**	**U**	**L**	**T**	**R**	**I**	**O**	**U**	**L**	**T**	**R**	**I**	**O**	**Total**		**Bicycles o**	**Pedestrians**	**Total**
Peak	Lights	1	24	333	18	376	339	0	13	325	15	353	352	0	12	0	12	24	31	0	7	0	1	8	39	761	W	0	0	0
Specified Period	%	100%	100%	99%	100%	99%	99%	0%	100%	99%	100%	99%	99%	0%	100%	0%	100%	100%	100%	0%	88%	0%	100%	89%	100%	99%		0%	0%	
11:00 AM - 1:00 PM	Mediums	0	0	4	0	4	2	0	0	2	0	2	5	0	0	0	0	0	0	0	1	0	0	1	0	7	E	0	0	0
One Hour Peak	%	0%	0%	1%	0%	1%	1%	0%	0%	1%	0%	1%	1%	0%	0%	0%	0%	0%	0%	0%	13%	0%	0%	11%	0%	1%		0%	0%	
12:00 PM - 1:00 PM	Articulated Trucks	0	0	0	0	0	2	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2	S	0	1	1
	%	0%	0%	0%	0%	0%	1%	0%	0%	1%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%		0%	100%	
	Total	**1**	**24**	**337**	**18**	**380**	**343**	**0**	**13**	**329**	**15**	**357**	**357**	**0**	**12**	**0**	**12**	**24**	**31**	**0**	**8**	**0**	**1**	**9**	**39**	**770**	N	0	0	0
	PHF																									0.94		0%	0%	
	HV%	0%	0%	1%	0%	1%	1%	0%	0%	1%	0%	1%	1%	0%	0%	0%	0%	0%	0%	0%	13%	0%	0%	11%	0%	1%		**0**	**1**	**1**
	Bicycles on Road	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				

Study Name Ferry & Corporate & Raymond
Date Saturday, February 24, 2018 1:15 PM

Report Summary

		Eastbound						Westbound						Northbound						Southbound								Crosswalk		
Time Period	**Class.**	**U**	**L**	**T**	**R**	**I**	**O**	**U**	**L**	**T**	**R**	**I**	**O**	**U**	**L**	**T**	**R**	**I**	**O**	**U**	**L**	**T**	**R**	**I**	**O**	**Total**		**Bicycles c**	**Pedestrians**	**Total**
Peak	Lights	0	10	123	194	327	335	0	223	129	25	377	368	0	198	20	220	438	442	0	25	25	8	58	55	1200	W	0	0	0
Specified Period	%	0%	91%	98%	100%	99%	99%	0%	100%	99%	100%	99%	99%	0%	100%	100%	100%	100%	100%	0%	100%	96%	89%	97%	98%	99%		0%	0%	
11:00 AM - 1:00 PM	Mediums	0	1	3	0	4	1	0	1	1	0	2	3	0	0	0	0	0	2	0	0	1	0	1	1	7	E	0	0	0
One Hour Peak	%	0%	9%	2%	0%	1%	0%	0%	0%	1%	0%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	4%	0%	2%	2%	1%		0%	0%	
12:00 PM - 1:00 PM	Articulated Trucks	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1	S	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%	2%	0%	0%		0%	0%	
	Total	**0**	**11**	**126**	**194**	**331**	**337**	**0**	**224**	**130**	**25**	**379**	**371**	**0**	**198**	**20**	**220**	**438**	**444**	**0**	**25**	**26**	**9**	**60**	**56**	**1208**	N	0	0	0
	PHF																									0.96		0%	0%	
	HV%	0%	9%	2%	0%	1%	1%	0%	0%	1%	0%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	4%	11%	3%	2%	1%		**0**	**0**	**0**
	Bicycles on Road	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				

Study Name Corporate & Monarch
Date Saturday, February 24, 2018

Report Summary

		Eastbound					Westbound					Northbound							Crosswalk		
Time Period	Class.	U	T	R	I	O	U	L	T	I	O	U	L	R	I	O	Total		Bicycles c	Pedestrians	Total
Peak	Lights	0	1	0	1	0	0	16	0	16	20	0	0	19	19	16	36	W	0	1	1
Specified Period	%	0%	100%	0%	100%	0%	0%	94%	0%	94%	87%	0%	0%	86%	86%	94%	90%		0%	100%	
11:00 AM - 1:00 PM	Mediums	0	0	0	0	0	0	1	0	1	3	0	0	3	3	1	4	E	0	0	0
One Hour Peak	%	0%	0%	0%	0%	0%	0%	6%	0%	6%	13%	0%	0%	14%	14%	6%	10%		0%	0%	
12:00 PM - 1:00 PM	Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0
	%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%		0%	0%	
	Total	**0**	**1**	**0**	**1**	**0**	**0**	**17**	**0**	**17**	**23**	**0**	**0**	**22**	**22**	**17**	**40**		**0**	**1**	**1**
	PHF																0.67				
	HV%	0%	0%	0%	0%	0%	0%	6%	0%	6%	13%	0%	0%	14%	14%	6%	10%				
	Bicycles on Road	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				

Study Name	Ferry & Comfort/Corporate
Start Date	Wednesday, May 02, 2018 7:00 AM
End Date	Wednesday, May 02, 2018 7:00 PM
Site Code	

Road Volumes

TMV	Movement	Eastbound				Eastbound To	Westbound				Westbound To	Northbound				Northbound To	Southbound				Southbound To	Grand Total
Interval		L	T	R	U		L	T	R	U		L	T	R	U		L	T	R	U		
5/2/2018 7:00		61	1042	0	0	1103	51	542	3	0	596	7	0	1	0	8	0	0	18	0	18	1725
Lights		52	1025	0	0	1077	51	529	3	0	583	6	0	1	0	7	0	0	10	0	10	1677
Mediums		6	8	0	0	14	0	9	0	0	9	1	0	0	0	1	0	0	3	0	3	27
Articulated Trucks		3	9	0	0	12	0	4	0	0	4	0	0	0	0	0	0	0	5	0	5	21
Bicycles on Road		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5/2/2018 8:00		65	864	0	0	929	62	434	4	0	500	4	0	10	0	14	0	0	6	0	6	1449
Lights		58	830	0	0	888	61	413	4	0	478	2	0	9	0	11	0	0	3	0	3	1380
Mediums		5	22	0	0	27	1	14	0	0	15	2	0	1	0	3	0	0	0	0	0	45
Articulated Trucks		2	12	0	0	14	0	7	0	0	7	0	0	0	0	0	0	0	3	0	3	24
Bicycles on Road		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5/2/2018 9:00		39	482	0	0	521	17	325	2	0	344	6	0	5	0	11	0	0	14	0	14	890
Lights		31	460	0	0	491	17	306	1	0	324	6	0	5	0	11	0	0	7	0	7	833
Mediums		5	15	0	0	20	0	14	1	0	15	0	0	0	0	0	0	0	3	0	3	38
Articulated Trucks		3	7	0	0	10	0	5	0	0	5	0	0	0	0	0	0	0	4	0	4	19
Bicycles on Road		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5/2/2018 10:00		25	270	1	0	296	7	278	0	1	286	10	0	16	0	26	0	1	14	0	15	623
Lights		18	245	0	0	263	6	254	0	1	261	8	0	14	0	22	0	1	9	0	10	556
Mediums		3	10	0	0	13	1	15	0	0	16	2	0	2	0	4	0	0	2	0	2	35
Articulated Trucks		4	15	1	0	20	0	9	0	0	9	0	0	0	0	0	0	0	3	0	3	32
Bicycles on Road		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5/2/2018 11:00		23	307	0	0	330	10	324	3	0	337	18	2	21	0	41	5	0	31	0	36	744
Lights		14	287	0	0	301	9	294	3	0	306	17	1	21	0	39	3	0	26	0	29	675
Mediums		4	12	0	0	16	0	15	0	0	15	0	1	0	0	1	2	0	1	0	3	35
Articulated Trucks		5	7	0	0	12	0	14	0	0	14	1	0	0	0	1	0	0	4	0	4	31
Bicycles on Road		0	1	0	0	1	1	1	0	0	2	0	0	0	0	0	0	0	0	0	0	3
5/2/2018 12:00		34	365	1	0	400	20	370	2	0	392	15	0	22	1	38	4	0	41	0	45	875
Lights		24	346	1	0	371	20	348	2	0	370	15	0	22	1	38	3	0	31	0	34	813
Mediums		6	10	0	0	16	0	14	0	0	14	0	0	0	0	0	1	0	4	0	5	35
Articulated Trucks		4	9	0	0	13	0	8	0	0	8	0	0	0	0	0	0	0	6	0	6	27
Bicycles on Road		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5/2/2018 13:00		34	321	0	0	355	16	399	1	0	416	12	1	17	0	30	2	0	24	0	26	827
Lights		18	303	0	0	321	16	376	1	0	393	11	1	17	0	29	1	0	15	0	16	759
Mediums		4	6	0	0	10	0	14	0	0	14	1	0	0	0	1	1	0	3	0	4	29
Articulated Trucks		12	12	0	0	24	0	9	0	0	9	0	0	0	0	0	0	0	6	0	6	39
Bicycles on Road		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5/2/2018 14:00		26	332	0	0	358	5	461	2	1	469	18	0	19	0	37	1	1	19	0	21	885
Lights		17	317	0	0	334	5	439	2	1	447	16	0	19	0	35	1	1	17	0	19	835
Mediums		5	6	0	0	11	0	16	0	0	16	2	0	0	0	2	0	0	0	0	0	29
Articulated Trucks		4	9	0	0	13	0	6	0	0	6	0	0	0	0	0	0	0	2	0	2	21
Bicycles on Road		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5/2/2018 15:00		23	384	0	1	408	5	684	1	0	690	34	0	32	1	67	1	0	56	0	57	1222
Lights		18	367	0	1	386	5	657	0	0	662	34	0	32	1	67	1	0	50	0	51	1166
Mediums		3	8	0	0	11	0	10	0	0	10	0	0	0	0	0	0	0	1	0	1	22
Articulated Trucks		2	8	0	0	10	0	17	1	0	18	0	0	0	0	0	0	0	5	0	5	33
Bicycles on Road		0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5/2/2018 16:00		18	573	0	1	592	3	1134	0	0	1137	47	1	78	0	126	0	1	71	0	72	1927
Lights		12	559	0	1	572	3	1115	0	0	1118	47	1	78	0	126	0	1	66	0	67	1883
Mediums		2	6	0	0	8	0	9	0	0	9	0	0	0	0	0	0	0	1	0	1	18
Articulated Trucks		4	8	0	0	12	0	10	0	0	10	0	0	0	0	0	0	0	4	0	4	26
Bicycles on Road		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5/2/2018 17:00		7	539	0	0	546	8	1043	3	0	1054	36	0	86	0	122	5	0	68	0	73	1795
Lights		2	535	0	0	537	8	1028	2	0	1038	36	0	86	0	122	2	0	60	0	62	1759
Mediums		3	4	0	0	7	0	5	0	0	5	0	0	0	0	0	0	0	4	0	4	16
Articulated Trucks		2	0	0	0	2	0	10	1	0	11	0	0	0	0	0	3	0	4	0	7	20
Bicycles on Road		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5/2/2018 18:00		13	350	0	1	364	2	649	2	2	655	18	0	24	0	42	2	2	21	0	25	1086
Lights		9	342	0	1	352	2	637	2	2	643	18	0	23	0	41	2	2	21	0	25	1061
Mediums		3	3	0	0	6	0	7	0	0	7	0	0	1	0	1	0	0	0	0	0	14
Articulated Trucks		1	5	0	0	6	0	5	0	0	5	0	0	0	0	0	0	0	0	0	0	11
Bicycles on Road		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total		368	5829	2	3	6202	206	6643	23	4	6876	225	4	331	2	562	20	5	383	0	408	14048

Crosswalk Volumes

Movement	Eastbound		Eastbound To	Westbound		Westbound To	Northbound		Northbound To	Southbound		Southbound To	Grand Total
Interval	PCCW	PCW		PCCW	PCW		PCCW	PCW		PCCW	PCW		
7:00 AM	0	0	0	0	0	0	1	1	2	0	0	0	2
Bicycles on Crosswa	0	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrians	0	0	0	0	0	0	1	1	2	0	0	0	2
8:00 AM	0	0	0	0	1	1	0	0	0	0	0	0	1
Bicycles on Crosswa	0	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrians	0	0	0	0	1	1	0	0	0	0	0	0	1
9:00 AM	0	0	0	0	0	0	0	0	0	2	0	2	2
Bicycles on Crosswa	0	0	0	0	0	0	0	0	0	1	0	1	1
Pedestrians	0	0	0	0	0	0	0	0	0	1	0	1	1
10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
Bicycles on Crosswa	0	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrians	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00 AM	0	0	0	0	0	0	0	2	2	0	1	1	3
Bicycles on Crosswa	0	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrians	0	0	0	0	0	0	0	2	2	0	1	1	3
12:00 PM	2	0	2	0	0	0	6	2	8	3	5	8	18
Bicycles on Crosswa	0	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrians	2	0	2	0	0	0	6	2	8	3	5	8	18
1:00 PM	0	0	0	0	0	0	0	0	0	1	0	1	1
Bicycles on Crosswa	0	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrians	0	0	0	0	0	0	0	0	0	1	0	1	1
2:00 PM	0	0	0	0	0	0	0	0	0	0	2	2	2
Bicycles on Crosswa	0	0	0	0	0	0	0	0	0	0	2	2	2
Pedestrians	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 PM	0	0	0	0	0	0	0	1	1	1	0	1	2
Bicycles on Crosswa	0	0	0	0	0	0	0	0	0	1	0	1	1
Pedestrians	0	0	0	0	0	0	0	1	1	0	0	0	1
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Bicycles on Crosswa	0	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrians	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Bicycles on Crosswa	0	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrians	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 PM	0	0	0	0	0	0	0	0	0	1	0	1	1
Bicycles on Crosswa	0	0	0	0	0	0	0	0	0	1	0	1	1
Pedestrians	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	2	0	2	0	1	1	7	6	13	8	8	16	32

Kimley»Horn

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