KITTELSON & ASSOCIATES

CLACKAMAS COUNTY FAIRGROUNDS & EVENT CENTER MULTIPURPOSE BUILDING TRAFFIC IMPACT ANALYSIS

CANBY, OR

September 2023

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Clackamas County Fairgrounds & Event Center Multipurpose Building Traffic Impact Analysis

Canby, OR

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Section 1

Executive Summary

EXECUTIVE SUMMARY

The Clackamas County Fairgrounds & Event Center (Fairgrounds) is an events complex located in Canby, Oregon that first opened in 1909. In 2014, the Fairgrounds was forced to demolish a 1924 building due to structural issues. Nonetheless, operations have continued without the permanent structure by hosting events outdoors in the same area or by erecting temporary tent structures that provided similar or greater covered area than the original building.

The Fairgrounds has secured funding to replace the building and is seeking approval from the City of Canby (City) to construct the replacement building. Referred to as a multipurpose building, the replacement structure will be approximately 44,069 square feet, including a 1,339 SF mezzanine. It will serve as a livestock barn, assembly space, vendor display area, show arena, and a potential gathering space for community members to assemble during future catastrophic events. It is currently estimated that this building would have a maximum capacity of approximately 2,695 persons, if all spaces were simultaneously occupied. The largest single event space is approximately 31,104 square feet and would accommodate a maximum event of approximately 2,074 attendees.

The City has directed the need for a traffic impact analysis to be prepared in support of the Fairgrounds application for construction of this replacement building. Four intersections were identified by the City for analysis: Ivy Street at 3rd Avenue and at OR 99E and Pine Street at 4th Avenue and at OR 99E.

Per the City's study requirements, the analysis considers the maximum event being hosted in this replacement building and its impact on the adjacent transportation system. The maximum event is defined as an event held on a Friday or Saturday evening, beginning between 7:00 and 7:30 PM and ending between 10:00 and 11:00 PM, with 2,695 people in attendance. Such an event is not likely to occur, but represents a worst-case scenario for this special event analysis.

FINDINGS

EXISTING CONDITIONS

- Operational performance at all of the study intersections meets current standards during the existing weekday and weekend pre- and post-event peak hours without and with a peak event.
- Existing queue storage is sufficient to accommodate the estimated 95th-percentile queues for all movements during the existing non-event Friday and concert event Saturday PM and Night peak hours.
- A review of historical crash data did not reveal any patterns or trends in the site vicinity that would require mitigation associated with the traffic-related impacts of this project.

2026 BACKGROUND CONDITIONS

- Year 2026 background volumes were estimated by growing measured 2023 summer volumes at a rate one-half percent per year (as directed by the City consultant traffic engineer).
- Operational performance at all of the study intersections meets current standards during the year 2026 weekday and weekend pre- and post-event peak hours without a peak event.
- Existing striped storage is sufficient to meet the 95th-percentile queue during the year 2026 weekday and weekend PM and Night peak hours without a peak event.

PROPOSED DEVELOPMENT PLAN

The proposed multipurpose building will be located in the same area on the site as a former Livestock Barn. The proposed building will be approximately 44,069 square feet in total, of which approximately 31,104 square feet will be multipurpose space.

- No changes are expected regarding access to the site or to staffing levels at the Fairgrounds and no increase in overall attendee capacity is anticipated.
- For the purposes of this special event study, operating the building at its maximum capacity of 2,695 attendees is defined as the maximum event occurring on a weekday or weekend evening.
- While the Fairgrounds would not operate the building at full capacity, it does anticipate hosting approximately five events each year that might result in sellout attendance of approximately 2,074 attendees.

YEAR 2026 MAXIMUM EVENT TRAFFIC CONDITIONS

- Operational performance at all of the study intersections meets current standards during the year 2026 weekday and weekend pre- and post-event peak hours with a maximum event.
- Existing striped storage is sufficient to meet the 95th-percentile queue during the 2026 maximum event weekday and weekend PM and Night peak hours.

RECOMMENDATIONS

No operational deficiencies have been identified that require mitigation.

Additional details of the study methodology, findings, and recommendations are provided within this report.

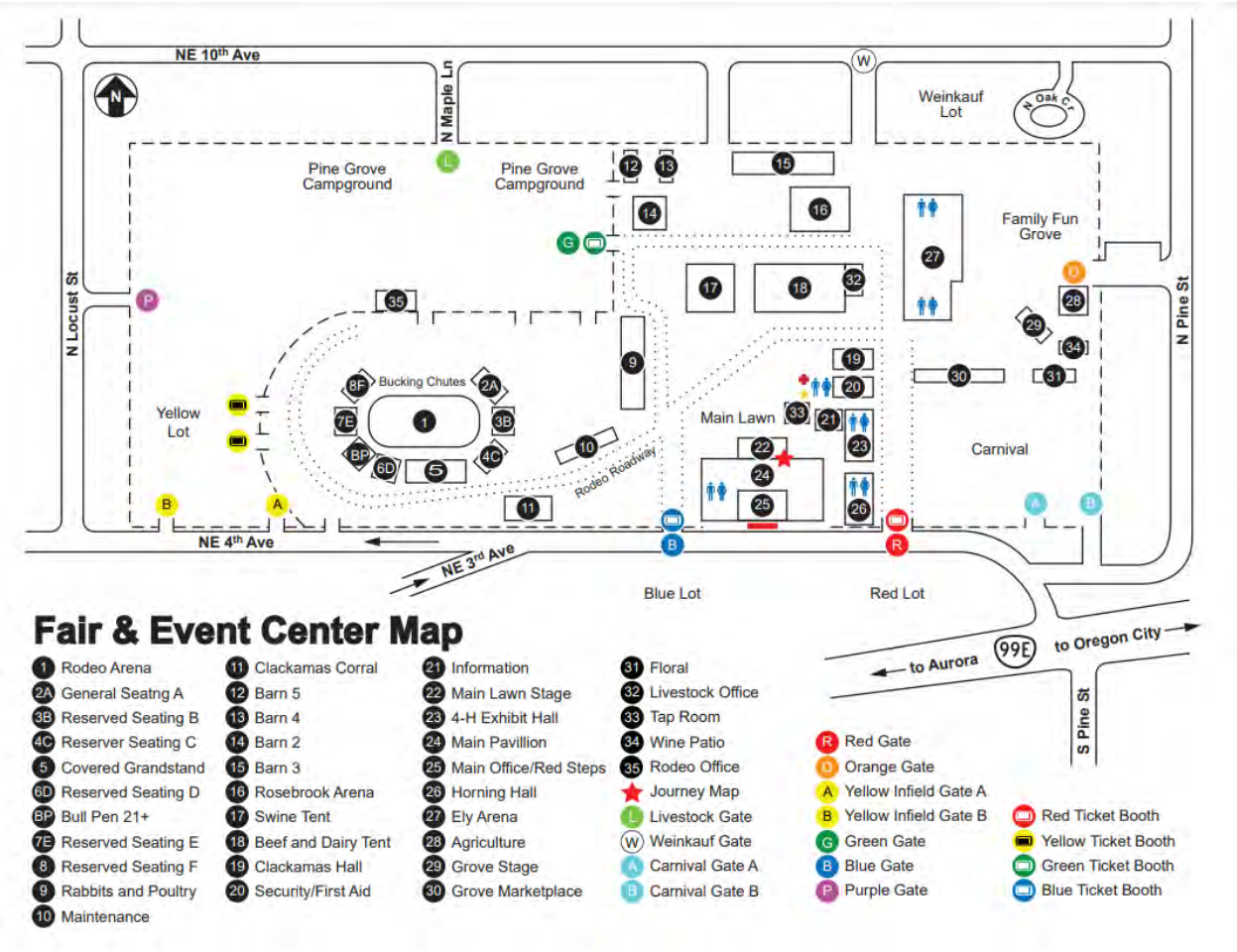
Section 2

Introduction

INTRODUCTION

The Clackamas County Fairgrounds and Event Center has been in operation since the site was first purchased in 1909. Several buildings were constructed on the grounds in 1924, including one known as the Livestock Barn. Ninety years later, In February of 2014, a major snow event crippled the building. The Livestock Barn was declared unsafe and was deconstructed that summer. Exhibit 1 is a current schematic map of the fairgrounds and event center. Structures 17, 18, and 32 represent the general area once enclosed by the Livestock Barn. Since then, tent structures have been rented and used in place of the barn during the County Fair each August and for a small number of major events each year. The Fairgrounds now proposes to construct a replacement building in the same location, but of a smaller size than the original building.

Exhibit 1. Clackamas County Fairgrounds and Event Center Facilities Map



HISTORICAL BACKGROUND

The Livestock Barn was built in 1924 and deconstructed in 2014, due to structural issues resulting from a severe snowstorm. Exhibit 2 is a Google Earth photo of the Fairgrounds in August of 2012 that reveals the location of the Livestock Barn (circled in red). It is worth noting that this photo was taken during the annual Clackamas County Fair, as evidenced by the carnival equipment and the volume of vehicles in the Red and Blue parking lots and north of the rodeo arena.

Exhibit 2. Fairgrounds with Former Livestock Barn (August 2012)

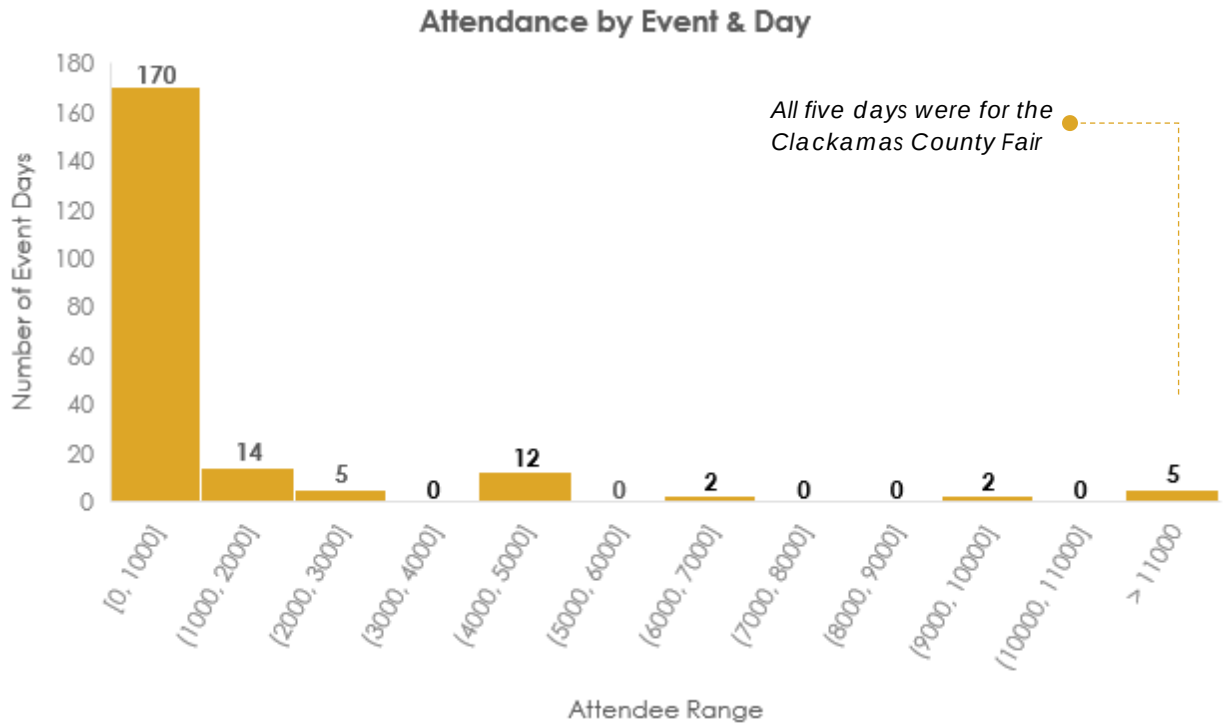
Loss of this building did not alter the operations or capacity of the Fairgrounds to host events. Since 2014, events that previously occurred at the Livestock Barn are now hosted in other buildings, in temporarily constructed tents (see Exhibit 3), or as an open-air event on the same site within the complex.

Exhibit 3. Fairgrounds with Temporary Tents (August 2019)

EVENTS & ANNUAL ATTENDANCE

The purpose of the Clackamas County Fairgrounds and Event Center (Fairgrounds) is to provide rental space for various private and public events that serve the local and regional community. The Fairgrounds allows space to be rented on a temporary basis for a wide variety of events. Figure 1 shows that the vast majority of events held throughout the past year had fewer than 1,000 attendees; in fact, nearly 75% had fewer than 100 attendees. Many events span several days, such as the annual fair, recreational vehicle shows, holiday bazaars, seasonal auto shows, music festivals, and flea markets. These events are usually open to attendees for between eight and twelve hours each day, so their demands on the adjacent transportation system are dispersed throughout the day.

Figure 1. Clackamas County Fairgrounds Patron Distribution, June 2022-June 2023



With nearly 75% of all events attracting 100 or fewer guests, it is reasonable to assume such an event represents typical operating conditions. A significant majority of these events happen outside of the typical weekday transportation system peak hours (7:00 – 9:00 AM and 4:00 – 6:00 PM). As such, typical Fairgrounds operating conditions have nominal effect on performance of the adjacent transportation system.

MAXIMUM EVENT ANALYSIS

Concerts represent a small number of the total events hosted each year, with some (five or less) being of a size that would benefit from occurring in the proposed replacement building. The nature of a concert is such that demands on the adjacent transportation system are more concentrated than those events described above, with attendees coming in a more concentrated time before the event begins and departing in a similarly concentrated time after the event is over. While this new building does not represent a new capacity to host such events nor the ability to host major events simultaneously, the City expressed concern for the potential impacts such a major (or maximum) event may have on the adjacent transportation system. The hypothetical maximum event is therefore defined as full occupancy of the entire building occurring on a weekday or weekend evening with a start time of 7:00 to 7:30 PM and an end time of 10:00 to 11:00 PM.

PROPOSED DEVELOPMENT

The Fairgrounds has proposed the construction of a new 44,069 square foot multipurpose building in 2026, at the same location as the former Livestock Barn and existing tents in order to provide a more permanent event structure.

The proposed multipurpose building is to serve as a livestock barn, assembly space, vendor display area, show arena, and a potential gathering space for community members to assemble during catastrophic events (such as the recent wildfire evacuations). The proposed building will be approximately 44,069 square feet in total, of which approximately 31,104 square feet will be multipurpose space. The remaining space will include a lobby area, gallery hallway area, storage, restrooms, daily business operations, one office, and mechanical and equipment rooms.

The maximum total occupant load of the proposed building is estimated at 2,695 persons. The former Livestock Barn, at around 48,400 square feet, had a maximum occupant load of around 3,065 persons. The temporary tents that have been used post-2014 have had a typical square footage of between 40,000 and 45,000 square feet. Therefore, the proposed multipurpose building will have a lower occupant load than the original Livestock Barn, and approximately the same capacity as the temporary tent structures. High-volume events have occurred on the site thus far, and the proposed building would decrease the maximum capacity compared to the existing facilities of either temporary tents or open space.

The proposed multipurpose building will be located in the middle of the site, which is zoned as Low Density Residential (R-1). The surrounding neighborhood comprises mostly low-density residential detached housing. The Clackamas County Fairgrounds has frontage on NE 4th Avenue, where the main entrance to the Fairgrounds is located. NE 4th Avenue is classified as a Collector. Several properties to the south and to the east are commercial use buildings and zoned as light industrial. Parking lots for the Fairgrounds are located to the south, and temporary overflow event parking is located on the lawn field to the west of the proposed location of the building.

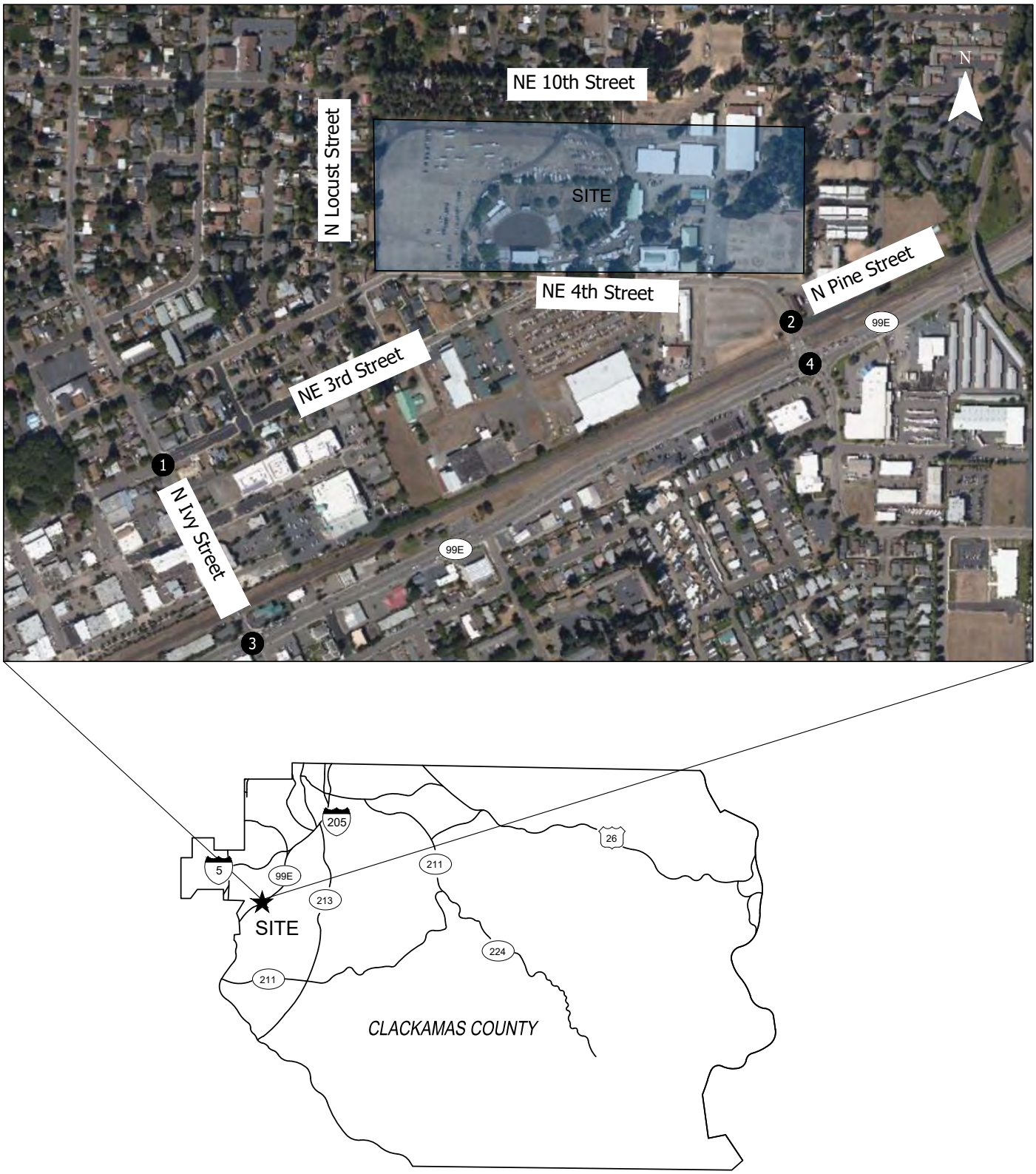
SCOPE OF THE REPORT

This analysis determines the transportation-related impacts associated with a maximum capacity event occurring in the proposed multipurpose building and was prepared in accordance with the City of Canby (City) requirements for transportation impact analysis (TIA). The study intersections and scope of this project were determined by the City, in consultation with the Oregon Department of Transportation. Operational analyses were performed at the following intersections, shown in Figure 2:

1. N Ivy Street/NE 3rd Avenue
2. N Pine Street/NE 4th Avenue
3. OR 99E/S Ivy Street
4. OR 99E/S Pine Street

The probable days when a maximum capacity event is expected to occur in the proposed multipurpose building would be on a Friday or a Saturday evening. The critical time periods would be prior to a concert starting at 7:00 or 7:30 PM and following the conclusion of the concert between 10:00 and 11:00 PM. This report evaluates these days and study periods under the following conditions:

- Year 2023 existing transportation system conditions without a maximum capacity event occurring;
- Year 2023 existing transportation system conditions with a maximum capacity event occurring;
- Year 2026 transportation system conditions without a maximum capacity event occurring; and
- Year 2026 transportation system conditions with a maximum capacity event occurring.



Site Vicinity Map
Canby, OR

Figure
2

Section 3

Existing Conditions

EXISTING CONDITIONS

The existing conditions analysis identifies the site conditions and current operational and geometric characteristics of the roadways within the study area. These conditions will be compared with future conditions later in this report.

SITE CONDITIONS AND ADJACENT LAND USES

The Fairgrounds is located on NE 4th Ave., just off highway OR 99E. The proposed multipurpose building is to be constructed on a 45,000 square foot site, centrally located on the Fairgrounds. The Fairgrounds is bounded to the south by NE 4th Ave., and much of the site's dedicated vehicle parking is located directly across this street from the Fairgrounds. Low-density residential areas bound the site to the west and north. High-density residential and light industrial zones border the Fairgrounds to the east and south. The main entrance to the Fairgrounds is on NE 4th Ave., with secondary and tertiary access possible from the west, north, and east.

TRANSPORTATION FACILITIES

Each of the study area roadways is summarized in Table 1.

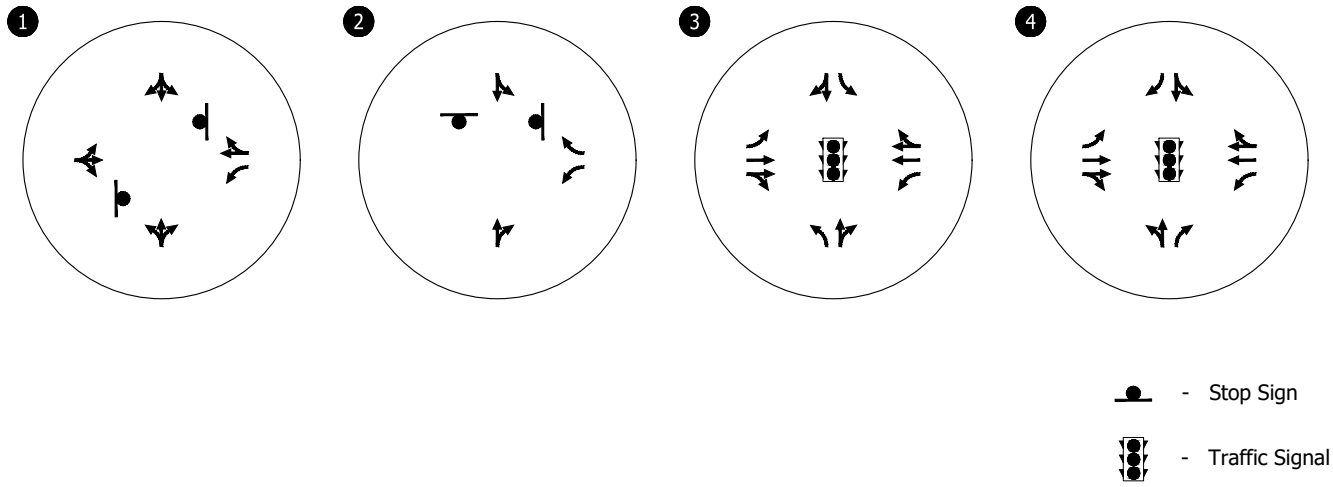
Table 1. Existing Transportation Facilities and Roadways in the Study Area

Roadway	Functional Classification (City)	National Highway System (NHS) Designation	Number of Lanes	Posted Speed (mph)	Sidewalks	Bicycle Lanes	On-Street Parking
Ivy St.	Arterial	Rural Minor Arterial	2	25	Yes	Yes	No
NE 4th Ave.	Collector	Rural Major Collector	2	25	Yes	Yes	No[1]
Pine St. (east of 4th Ave.)	Collector	Rural Major Collector	2	25	No	No	No
Pine St. (across railroad)	Collector	Rural Major Collector	2	25	West side only	No	No
OR 99E	Highway	Rural Principal Arterial	4	35	Yes	No	No
NE 3rd Ave.	Collector	Rural Major Collector	2	25	Yes	Yes	Yes

[1] No on-street parking on NE 4th Ave along Fairgrounds frontage; on-street parking available west of Locust Street.

ROADWAY FACILITIES

Figure 3 illustrates the existing lane configurations and traffic control devices at the study intersections. The primary roadway within the study area is OR 99E, a principal arterial that connects Canby to other parts of Clackamas County, including Oregon City to the northeast and Woodburn to the southwest. The frontage to the Fairgrounds, NE 4th Ave., is designated as a collector.



Existing Lane Configurations
& Traffic Control Devices
Canby, OR

Figure
3

PEDESTRIAN AND BICYCLE FACILITIES

The Fairgrounds has frontage on NE 4th Avenue. The street has sidewalks on both sides — as does NE 3rd Ave., which merges with it near the front entrance of the Fairgrounds. There are three marked crosswalks at this Y intersection. Another marked crosswalk crosses NE 4th Ave. approximately 120 feet to the east of this intersection, connecting the main Fairgrounds entrance to the west parking lot. Another marked crosswalk connects the east parking lot to the Fairgrounds approximately 100 feet to the east of the main Fairgrounds entrance. The aforementioned crosswalks do not have call buttons or flashing beacons. On the two-way section of NE 4th Ave. that fronts the Fairgrounds, there are bicycle lanes on both sides of the street. The westbound bicycle lane continues where the street is a one-way westbound street. The bicycle lane on eastbound NE 3rd Ave. continues onto eastbound NE 4th Ave. once the streets merge.

The study intersection of OR 99E/S Pine St. has transverse crosswalks on the north, west and south legs, as well as bicycle lanes on the south leg. The study intersection at OR 99E/S Ivy St. has transverse crosswalks on all four legs, as well as bicycle lanes on S Ivy St. At the study intersection at NE 3rd Ave./N Ivy St., all four legs are marked with continental crosswalks, and the north, east and south legs have bicycle lanes on both sides.

TRANSIT FACILITIES

Local and regional transit service is provided by Canby Area Transit (CAT), SMART, and TriMet, with each serving the Canby Transit Center located at NE 1st Avenue and N Ivy Street, one-half mile from the Fairgrounds main entrance. Another CAT stop is located at NE 10th Avenue and N Locust Street, also approximately ½-mile from the Fairgrounds main entrance. No change to these transit facilities or their level of use is anticipated with construction of the multipurpose building.

TRAFFIC VOLUMES AND PEAK HOUR OPERATIONS

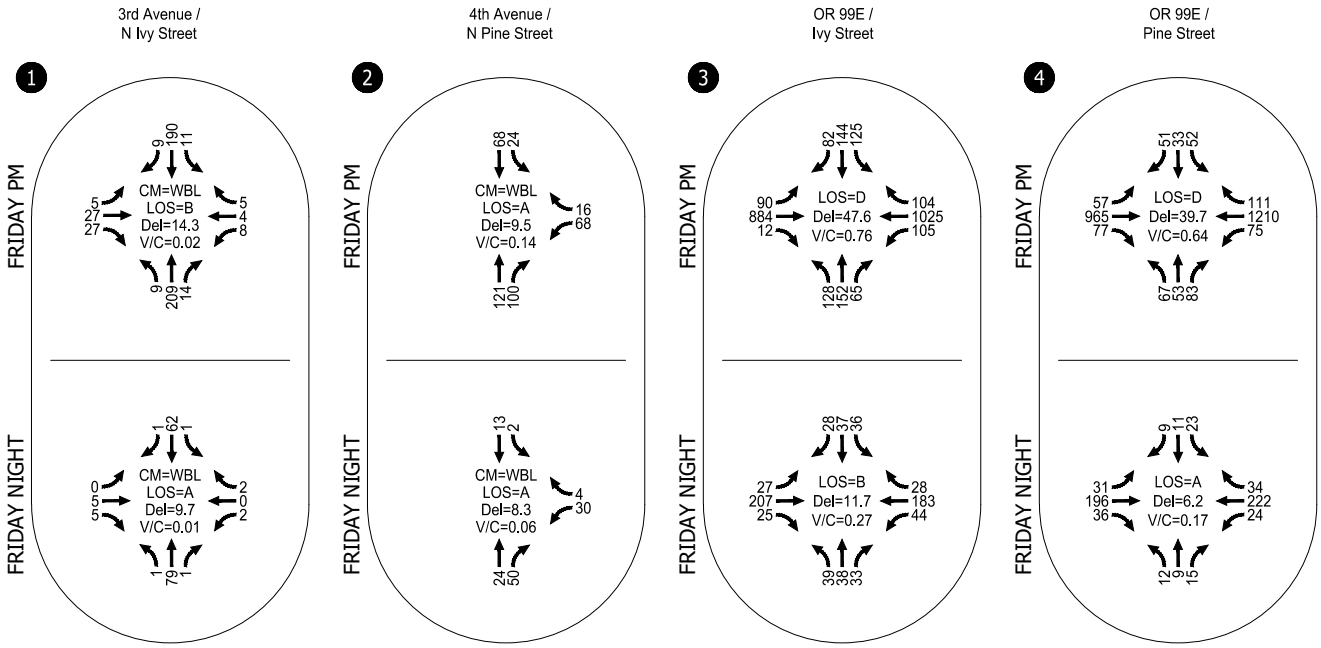
This study considers the transportation impact of a maximum event at the Fairgrounds on a weekday and on a weekend. A maximum event is represented by a concert, which the Fairgrounds only hosts approximately five times a year and only on Friday and Saturday evenings. Concerts typically begin between 6:30 and 7:30 PM and end between 10:00 and 11:00 PM. As such, counts were obtained from 4:30 PM to 7:30 PM and from 9:30 PM to 11:30 PM on Friday, June 30th (non-event day) and on Saturday, July 1st (concert event). A total of 2,293 patrons attended the concert on Saturday, July 1st. Appendix A contains the traffic count worksheets.

Turn movement counts were also obtained for the two main parking lots on 4th Avenue on Friday (a non-event day) and Saturday (a concert event day). These driveway counts were used to identify peak hours for the Fairgrounds, based on a concert event. The peak hours were found to be the following:

- Friday evening: 4:40-5:40 PM (“Friday PM” peak hour)
- Friday night: 9:45-10:45 PM (“Friday Night” peak hour)
- Saturday evening: 4:40-5:40 PM (“Saturday PM” peak hour) (pre-event peak hour)
- Saturday night: 9:45-10:45 PM (“Saturday Night” peak hour) (post-event peak hour)

EXISTING TRAFFIC OPERATIONS ANALYSIS

All traffic operations analyses described in this report were performed using *Synchro 11* in accordance with the procedures stated in the current edition of the Highway Capacity Manual. Figure 4 and Figure 5 show the existing traffic operations at the study intersections on Friday (non-event day) and Saturday (concert with 2,293 attendees), for both peak periods. Intersections 1 and 2 are controlled by the City, and their performance threshold is a Level of Service of E. Intersections 3 and 4 are controlled by ODOT, and their performance threshold is a volume-to-capacity (v/c) ratio of 0.85. *All intersections operated within their respective performance thresholds during the existing peak hours under non-event and concert event conditions.* Appendix B contains the existing traffic operations analysis Synchro worksheets.



The v/c ratios for all signalized intersections are reported using HCM 2000.

Existing Weekday Non-Event Traffic Operations
Friday PM and Night Peak Hours
Canby, OR

Figure 4

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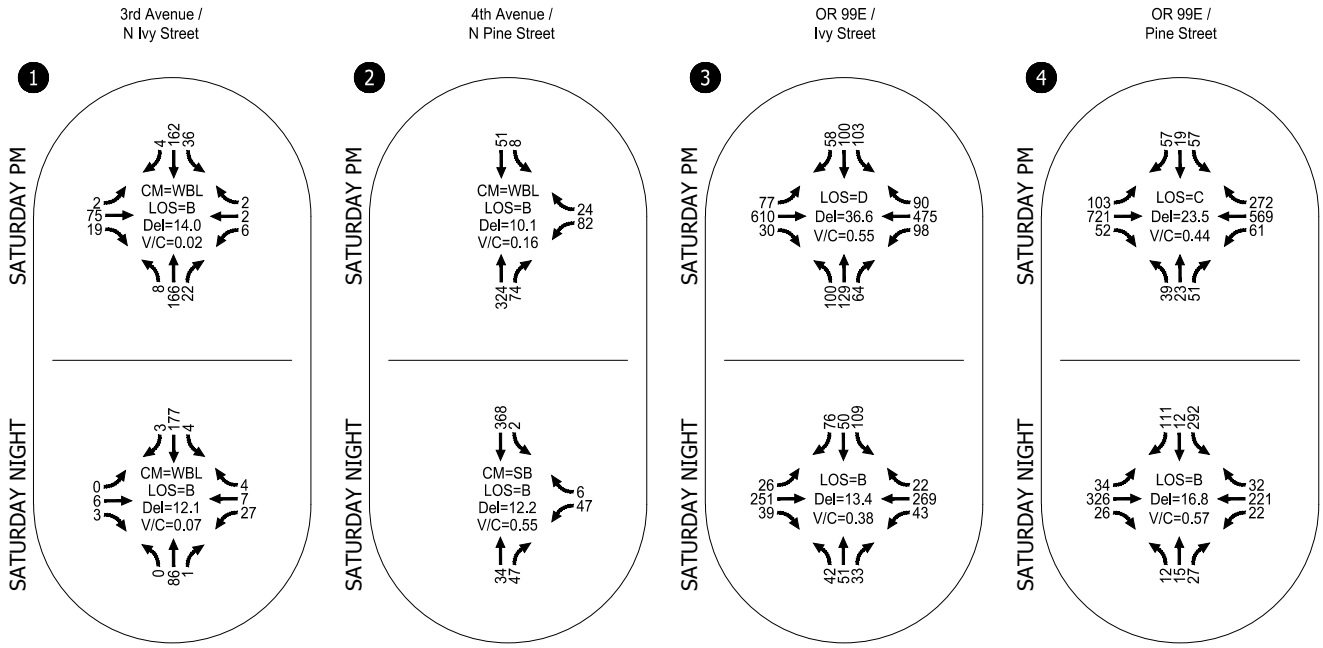

The v/c ratios for all signalized intersections are reported using HCM 2000.

Existing Weekend Concert Event Traffic Operations
Saturday PM and Night Peak Hours
Canby, OR

Figure 5

EXISTING QUEUEING ANALYSIS

Table 2 summarizes the 95th percentile queues for Friday (non-event weekday) peak hours, and Table 3 summarizes them for Saturday (maximum-event weekend) peak hours. *All intersection movements have adequate striped storage to accommodate the weekday (non-event) PM and Night peak hour 95th-percentile queues.*

Appendix B contains the existing queueing analysis results within the Synchro worksheets.

Table 2. Existing Friday (Non-Event) 95TH Percentile Queues (Synchro Output)

Intersection		Movement[1]	Storage (ft)	95th Percentile Queue (ft)[2]		Queue Storage Adequate?	
				PM	Night	PM	Night
1	3rd Avenue / Ivy Street	EBLTR	290	25	0	Yes	Yes
		WBL	75	25	0	Yes	Yes
2	4th Avenue / Pine Street	WBL	80	25	25	Yes	Yes
		SBLT	150	25	25	Yes	Yes
3	OR 99E / Ivy Street	EBL	100	75	25	Yes	Yes
		WBL	85	75	50	Yes	Yes
		NBL	200	200	50	Yes	Yes
		SBL	230	200	50	Yes	Yes
4	OR 99E / Pine Street	EBL	195	50	25	Yes	Yes
		WBL	85	50	25	Yes	Yes
		NBR	85	75	0	Yes	Yes
		SBR	50	50	0	Yes	Yes

[1] NB = northbound; SB = southbound; EB = eastbound; WB = westbound; L = left; T = through; R = right
[2] Vehicle queues rounded up to the nearest 25 feet

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Table 3. Existing Saturday (Concert Event) 95TH Percentile Queues (Synchro Output)

Intersection		Movement[1]	Storage (ft)	95th Percentile Queue (ft)[2]		Queue Storage Adequate?	
				PM	Night	PM	Night
1	3rd Avenue / Ivy Street	EBLTR	290	25	25	Yes	Yes
		WBL	75	0	25	Yes	Yes
2	4th Avenue / Pine Street	WBL	80	25	25	Yes	Yes
		SBLT	150	25	100	Yes	Yes
3	OR 99E / Ivy Street	EBL	100	75	50	Yes	Yes
		WBL	85	75	50	Yes	Yes
		NBL	200	125	50	Yes	Yes
		SBL	230	125	125	Yes	Yes
4	OR 99E / Pine Street	EBL	195	50	25	Yes	Yes
		WBL	85	50	25	Yes	Yes
		NBR	85	0	25	Yes	Yes
		SBR	50	0	50	Yes	Yes

[1] NB = northbound; SB = southbound; EB = eastbound; WB = westbound; L = left; T = through; R = right
[2] Vehicle queues rounded up to the nearest 25 feet

2023 MAXIMUM EVENT ANALYSIS

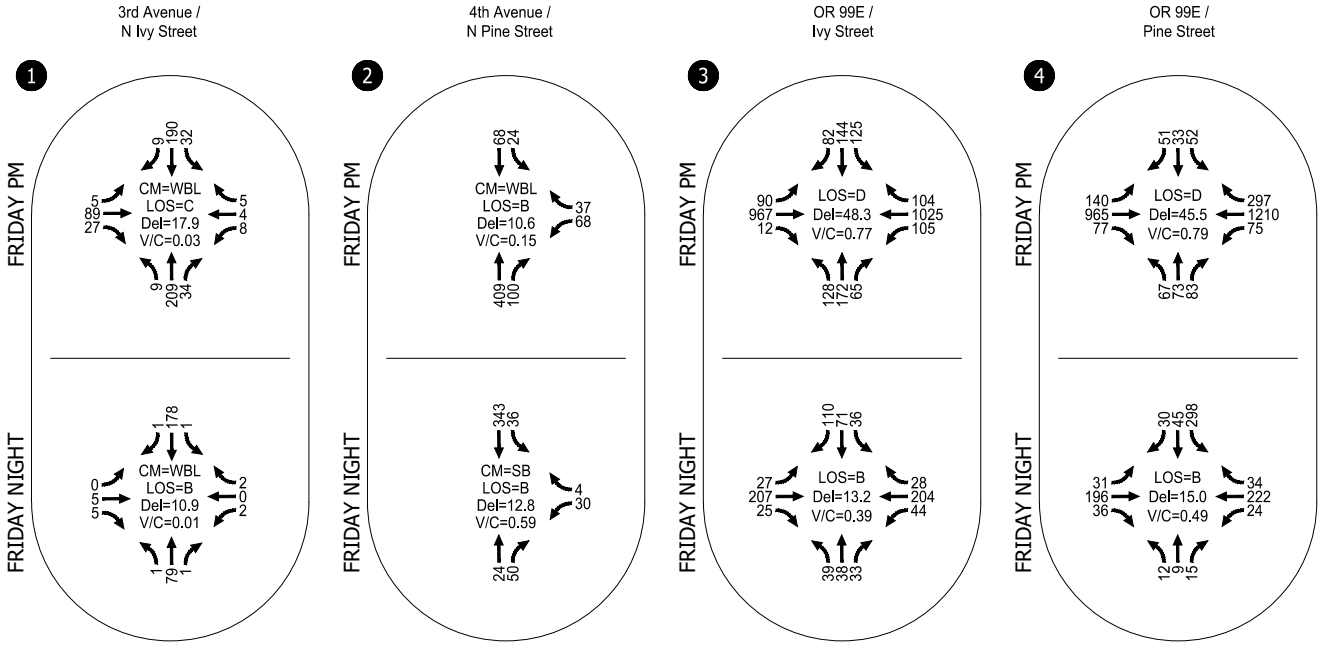
Some 2,293 patrons attended the maximum event concert on Saturday, July 1st when existing traffic operations were analyzed. Construction of the proposed multipurpose building would establish a maximum occupant load of approximately 2,695 patrons. A sensitivity analysis has been conducted that assumes the maximum patron attendance of 2,695 patrons occurred on Friday June 30th and on Saturday July 1st.

Measured driveway trips were factored up by 17.5% ((2,695-2,293)/2,695) for the PM peak hour and the Night peak hour during the maximum event that occurred on July 1st to represent a 2,695-patron maximum event, indicative of the proposed multipurpose building capacity. These additional trips were routed to the appropriate study intersections and added to the appropriate approach movements, based on a comparison of non-event and event peak hour travel patterns measured at the study intersections during both study days and study periods.

2023 MAXIMUM EVENT TRAFFIC OPERATIONS ANALYSIS

Figure 6 and Figure 7 show the intersection operations during Friday and Saturday peak hours if 2,695 patrons had attended an event at the Fairgrounds. *All intersections operated within their respective performance thresholds during each study period, assuming a 2,695-patron maximum event happened on either a summer Friday or Saturday night in year 2023.*

Appendix C contains the 2023 maximum event traffic operations analysis Synchro worksheets.



The v/c ratios for all signalized intersections are reported using HCM 2000.

Summer 2023 Weekday Maximum Traffic Operations
Friday PM and Night Peak Hours
Canby, OR

Figure 6

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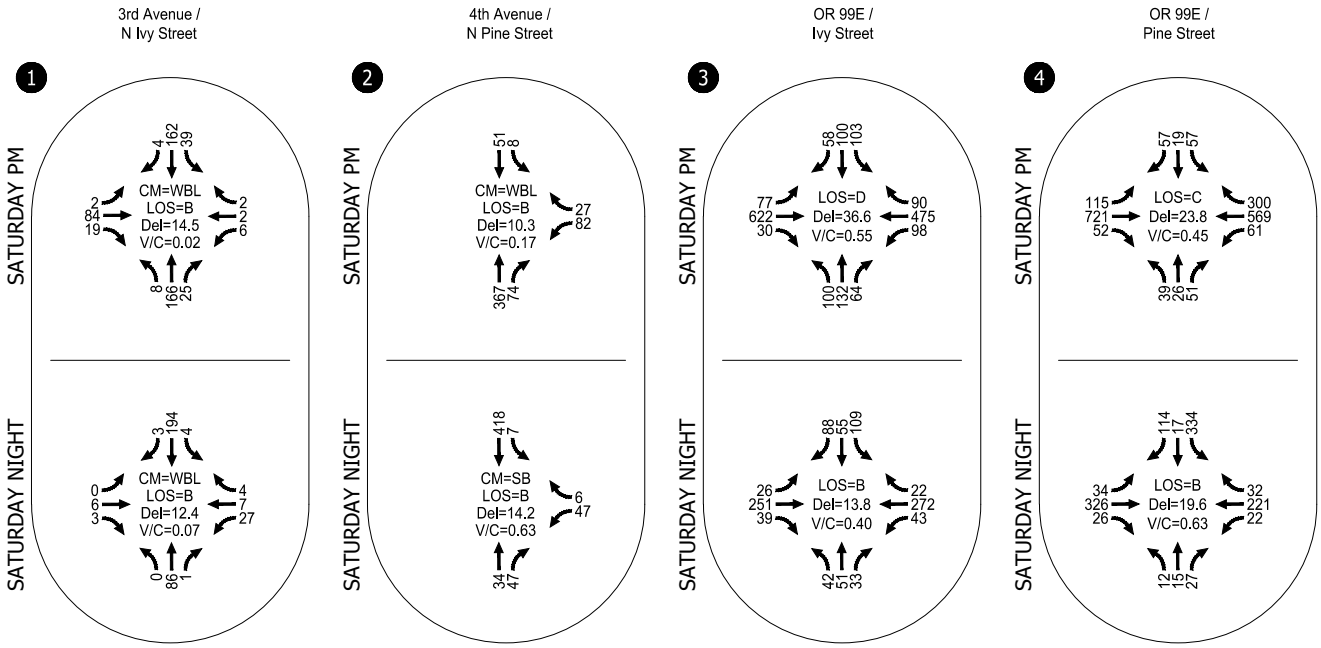

The v/c ratios for all signalized intersections are reported using HCM 2000.

Summer 2023 Weekend Maximum Traffic Operations
Saturday PM and Night Peak Hours
Canby, OR

Figure 7

2023 MAXIMUM EVENT QUEUEING ANALYSIS

Table 4 summarizes the 95th percentile queues for Friday peak hours with a maximum event (2,695 patrons attending a concert), and Table 5 summarizes them for Saturday peak hours with a similar maximum event. *Existing queue storage is sufficient to accommodate the estimated 95th-percentile queues for all movements in the 2023 maximum event Friday and Saturday PM and Night peak hours.*

Appendix C contains the 2023 maximum event queueing analysis results within the Synchro worksheets.

Table 4. Existing Friday Maximum Event 95TH Percentile Queues (Synchro Output)

Intersection		Movement[1]	Storage (ft)	95th Percentile Queue (ft)[2]		Queue Storage Adequate?	
				PM	Night	PM	Night
1	3rd Avenue / Ivy Street	EBLTR	290	50	25	Yes	Yes
		WBL	75	25	0	Yes	Yes
2	4th Avenue / Pine Street	WBL	80	25	25	Yes	Yes
		SBLT	150	25	100	Yes	Yes
3	OR 99E / Ivy Street	EBL	100	75	25	Yes	Yes
		WBL	85	75	50	Yes	Yes
		NBL	200	200	50	Yes	Yes
		SBL	230	200	50	Yes	Yes
4	OR 99E / Pine Street	EBL	195	175	50	Yes	Yes
		WBL	85	50	25	Yes	Yes
		NBR	85	75	0	Yes	Yes
		SBR	50	50	25	Yes	Yes

[1] NB = northbound; SB = southbound; EB = eastbound; WB = westbound; L = left; T = through; R = right
[2] Vehicle queues rounded up to the nearest 25 feet

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Table 5. Existing Saturday Maximum Event 95TH Percentile Queues (Synchro Output)

Intersection		Movement[1]	Storage (ft)	95th Percentile Queue (ft)[2]		Queue Storage Adequate?	
				PM	Night	PM	Night
1	3rd Avenue / Ivy Street	EBLTR	290	25	25	Yes	Yes
		WBL	75	0	25	Yes	Yes
2	4th Avenue / Pine Street	WBL	80	25	25	Yes	Yes
		SBLT	150	25	125	Yes	Yes
3	OR 99E / Ivy Street	EBL	100	75	50	Yes	Yes
		WBL	85	75	50	Yes	Yes
		NBL	200	125	50	Yes	Yes
		SBL	230	125	125	Yes	Yes
4	OR 99E / Pine Street	EBL	195	75	25	Yes	Yes
		WBL	85	50	25	Yes	Yes
		NBR	85	0	25	Yes	Yes
		SBR	50	0	50	Yes	Yes

[1] NB = northbound; SB = southbound; EB = eastbound; WB = westbound; L = left; T = through; R = right
[2] Vehicle queues rounded up to the nearest 25 feet

TRAFFIC SAFETY

Oregon Department of Transportation (ODOT) provided the most recent five years of reported crash data at the study intersections, the period from January 1, 2017 to December 31, 2021. Table 6 summarizes the reported crash data at the study intersections, including the crash severity and crash type of each crash.

One study intersection, NE 3rd Ave./N Ivy St., exceeded the 90th percentile crash rate over the most recent available five-year period. Four of the five reported crashes at this intersection were angle crashes, all of which occurred at dusk or at dark — three in the summer after 8pm and one after 5pm in January. No speeding, drugs, or alcohol were reportedly involved. In three of these, the driver who failed to yield did first stop at the stop control on 3rd Ave. This suggests that the lighting at the intersection may not be sufficient at darker hours, as even unimpaired drivers who stop at the stop control may not see approaching vehicles. Old street lamps line the approaches on N Ivy St. so newer lights such as cobra heads and/or flashing beacons may improve visibility at the intersection.

Appendix D contains the crash data worksheets.

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Table 6. ODOT Reported Crash Data (January 1, 2017 to December 31, 2021)

	Collision Type						Severity	
	Rear-end	Turning	Angle	Fixed	SS (O)[1]	Ped	PDO	Injury
3rd/Ivy	1		4				1	4
4th/Pine	1	1					1	1
OR99E/Ivy	7	16	3	4	1		9	22
OR99E/4th	5	5	3	1		1	6	9
Total	*14*	*22*	*10*	*5*	*1*	*1*	*17*	*36*

Intersection Risk Summary				
	Total Crashes	90th Percentile Crash Rate	Observed Crash Rate	Does Observed Exceed 90th Rate?
3rd/Ivy	*5*	0.41	0.53	Yes
4th/Pine	*2*	0.29	0.26	No
OR99E/Ivy	*31*	0.86	0.56	No
OR99E/4th	*15*	0.86	0.28	No
Total	53			

[1] Sideswipe (Overtaking)

Section 4

Transportation Impact Analysis

TRANSPORTATION IMPACT ANALYSIS

The transportation impact analysis identifies how the study area's transportation system will operate in 2026, which is the anticipated year of opening. This analysis reflects the fact that the Fairgrounds is an existing and approved use and that it occasionally hosts (approximately five times a year) special events (such as concerts) that represent a maximum event. Because any current in-process development should have accounted for these conditions in their analysis and subsequent approvals, only regional growth to the opening year is appropriate to assume in this analysis.

To address the City's concern is for how the system would handle a future event that filled the multipurpose building (something likely to happen approximately five times a year), the impact on traffic was examined as follows:

- Year 2026 background volumes were developed by applying a one-half percent annual growth rate, as directed by the City's traffic engineer.
- Site trip distribution patterns were derived based on existing travel patterns measured during a concert event at the venue site.
- Year 2026 total volumes were developed by assigning the site-generated trips estimated for a maximum event to the study intersections and adding them to the year 2026 background traffic volumes.
- Year 2026 total traffic conditions during peak hours were analyzed at each of the study intersections.

YEAR 2026 BACKGROUND TRAFFIC CONDITIONS

The year 2026 background traffic analysis identifies how the study area's transportation system will operate without a maximum event occurring at the Fairgrounds. This analysis includes general growth in the region but does not include traffic from the proposed development. A linear growth rate of one-half percent annually was applied to determine background traffic growth.

2026 BACKGROUND (NON-EVENT) TRAFFIC OPERATIONS ANALYSIS

Figure 8 and Figure 9 show the intersection operations in the year 2026, during Friday and Saturday peak hours if no event is occurring at the Fairgrounds. *All intersections operated within their respective performance thresholds during each study period on either a summer Friday or Saturday night in year 2026 when no event is occurring at the Fairgrounds.*

Appendix E contains the 2026 background (non-event) traffic conditions operations analysis Synchro worksheets.

2026 BACKGROUND (NON-EVENT) TRAFFIC QUEUEING ANALYSIS

Table 7 summarizes the 95th percentile queues for year 2026 summer Friday peak hours with no event at the Fairgrounds, and Table 8 summarizes them for Saturday peak hours without an event. *Existing queue storage is sufficient to accommodate the estimated 95th-percentile queues for all movements during the 2026 background traffic conditions during the Friday and Saturday PM and Night peak hours.*

Appendix E contains the 2026 background (non-event) traffic queueing analysis results within the Synchro worksheets.

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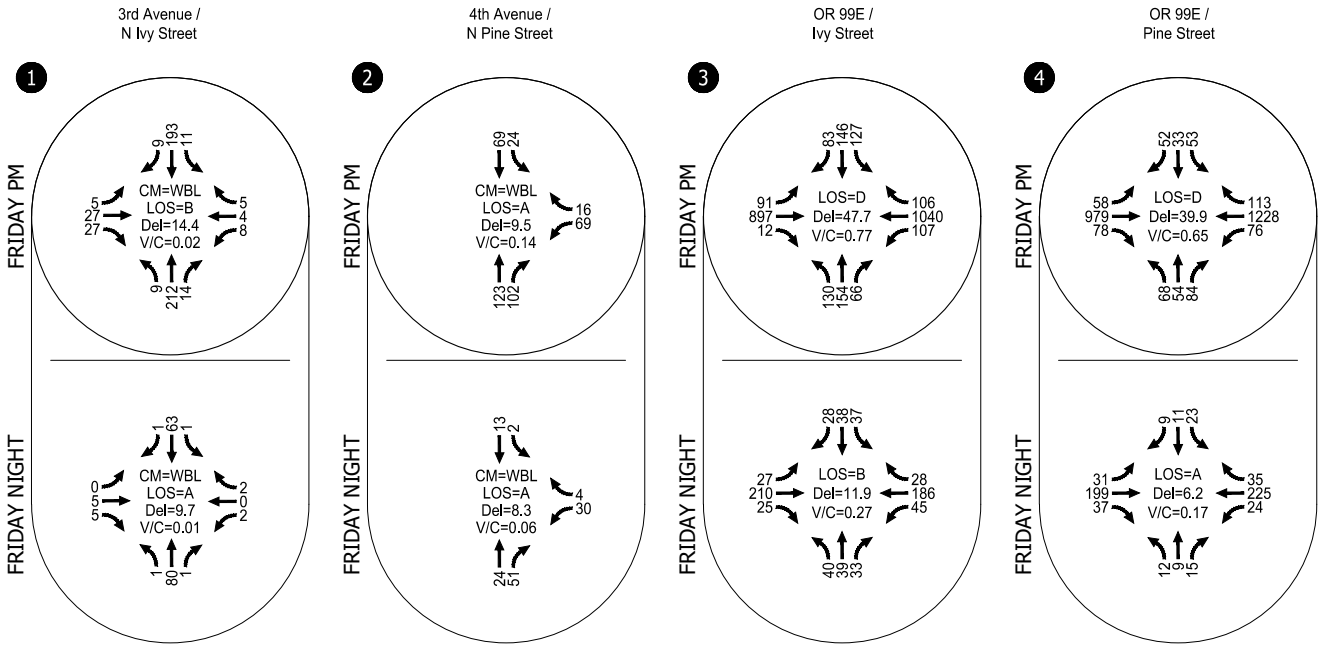
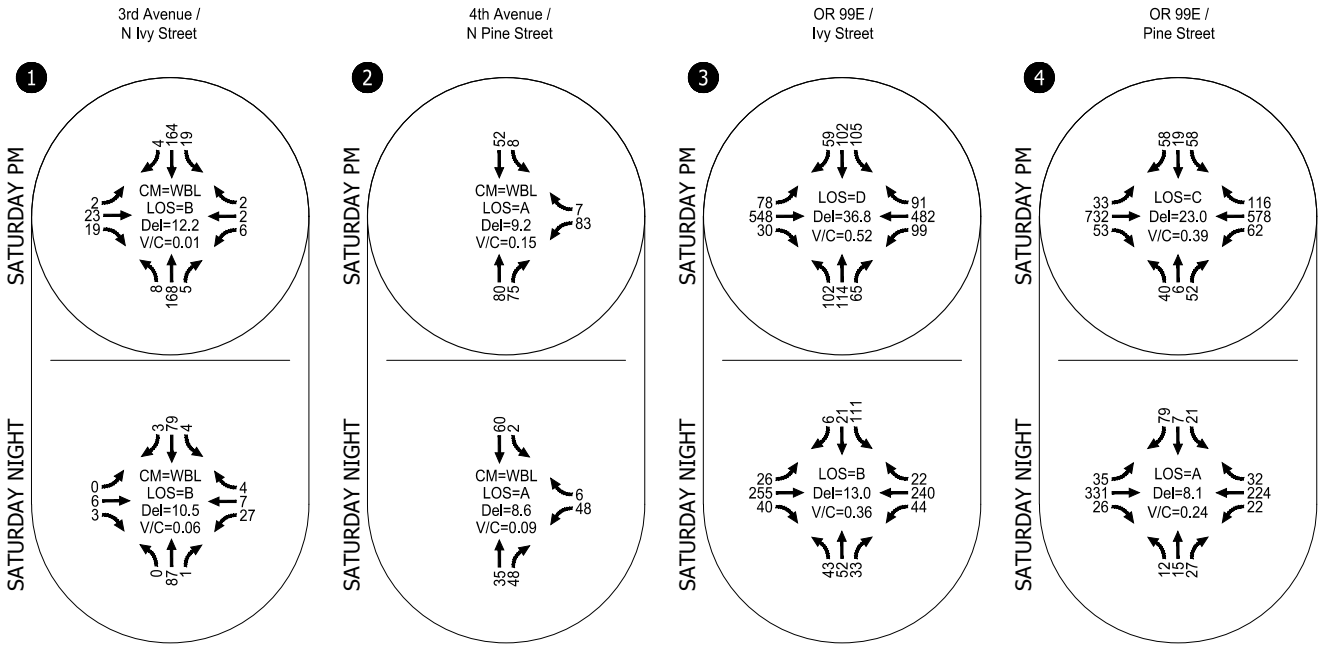


The v/c ratios for all signalized intersections are reported using HCM 2000.

Summer 2026 Weekday Non-Event Traffic Operations
Friday PM and Night Peak Hours
Canby, OR

Figure 8

KITTELSON & ASSOCIATES



Summer 2026 Weekend Non-Event Traffic Operations
Saturday PM and Night Peak Hours
Canby, OR

Figure
9

Table 7. Summer 2026 Friday Non-Event 95TH Percentile Queues (Synchro Output)

Intersection		Movement[1]	Storage (ft)	95th Percentile Queue (ft)[2]		Queue Storage Adequate?	
				PM	Night	PM	Night
1	3rd Avenue / Ivy Street	EBLTR	290	25	0	Yes	Yes
		WBL	75	25	0	Yes	Yes
2	4th Avenue / Pine Street	WBL	80	25	25	Yes	Yes
		SBLT	150	25	25	Yes	Yes
3	OR 99E / Ivy Street	EBL	100	75	25	Yes	Yes
		WBL	85	75	50	Yes	Yes
		NBL	200	200	50	Yes	Yes
		SBL	230	200	50	Yes	Yes
4	OR 99E / Pine Street	EBL	195	50	25	Yes	Yes
		WBL	85	50	25	Yes	Yes
		NBR	85	75	0	Yes	Yes
		SBR	50	50	0	Yes	Yes

[1] NB = northbound; SB = southbound; EB = eastbound; WB = westbound; L = left; T = through; R = right
[2] Vehicle queues rounded up to the nearest 25 feet

Table 8. Summer 2026 Saturday Non-Event 95TH Percentile Queues (Synchro Output)

Intersection		Movement[1]	Storage (ft)	95th Percentile Queue (ft)[2]		Queue Storage Adequate?	
				PM	Night	PM	Night
1	3rd Avenue / Ivy Street	EBLTR	290	25	25	Yes	Yes
		WBL	75	0	25	Yes	Yes
2	4th Avenue / Pine Street	WBL	80	25	25	Yes	Yes
		SBLT	150	25	25	Yes	Yes
3	OR 99E / Ivy Street	EBL	100	75	50	Yes	Yes
		WBL	85	75	50	Yes	Yes
		NBL	200	125	50	Yes	Yes
		SBL	230	125	125	Yes	Yes
4	OR 99E / Pine Street	EBL	196	25	25	Yes	Yes
		WBL	85	50	25	Yes	Yes
		NBR	85	0	25	Yes	Yes
		SBR	50	0	25	Yes	Yes

[1] NB = northbound; SB = southbound; EB = eastbound; WB = westbound; L = left; T = through; R = right
[2] Vehicle queues rounded up to the nearest 25 feet

PROPOSED DEVELOPMENT PLAN

The proposed multipurpose building is anticipated to be approximately 44,069 gross square feet. It is anticipated to sit in the same location as the former Livestock Barn and event tents. There is expected to be no change in the way patrons access the site, and no other developments to the Fairgrounds are needed to accommodate patrons to the multipurpose building. Therefore, patrons to the building will access the site via existing facilities. Access will be provided from the same locations as the previous buildings; specifically, the existing two driveways on the north side of NE 4th Avenue. No changes to the number of permanent or part-time employees are anticipated due to construction; maintenance and operation of the building will be provided by current staff and contract laborers.

TRIP GENERATION

The Institute of Transportation Engineers publish a national reference document, Trip Generation Manual, which is currently in its 11th edition. This document is frequently cited when preparing an estimate of trip generation for a proposed land use. Unfortunately, this document does not provide data for fairgrounds, event centers, or even concert halls.

Traffic count data was collected at the Fairgrounds parking lot driveways during a maximum event on Saturday, July 1, 2023. This data provides clear evidence of the volume, distribution, and arrival and departure patterns associated with vehicle trips generated by a maximum event at the Fairgrounds. The number of vehicle trips generated by the maximum event during the site pre-event and post-event peak hours were determined based on this data collection and then correlated with the number of persons in attendance (2,293) at the maximum event (a music concert).

A total of 351 vehicles entering and 15 vehicles exiting the parking lots were measured during the pre-event peak hour of the site. This correlates to a trip generation rate of 0.16 vehicle trips per maximum event attendee during the pre-event site peak hour. A total of 583 vehicles exiting and 1 vehicle entering the parking lots were measured during the post-event peak hour of the site. This correlates to a trip generation rate of 0.25 vehicle trips per maximum event attendee during the post-event site peak hour.

The proposed multipurpose building is estimated to have a maximum capacity of 2,695 attendees, which is a 17.5% increase over the attendance measured at the July 1, 2023, maximum event. Measured site trips during the July 1, 2023, pre- and post-event site peak hours were factored up by 17.5% to produce a motor vehicle trip generation estimate representative of a maximum event at the proposed multipurpose building. *[NOTE: The reader is reminded that the building will not be operated such that all spaces in the building will be simultaneously occupied. The largest practical event to be held in the proposed multipurpose building would accommodate approximately 2,074 attendees, which is approximately 219 fewer patrons or 9.5% lower than the total attending the concert on July 1, 2023.]*

YEAR 2026 TOTAL TRAFFIC CONDITIONS

The total traffic conditions analysis forecasts how the study area's transportation system will operate under year 2026 with background growth plus trips associated with a maximum event at the proposed multipurpose building.

Figure 10 and Figure 11 show the volumes and performance under year 2026 summer total traffic conditions at the four intersections. *All intersections operated within their respective performance thresholds during each study period on either a summer Friday or Saturday night in year 2026 with a maximum event occurring at the Fairgrounds.*

Appendix F contains the 2026 total traffic conditions operations analysis Synchro worksheets.

2026 MAXIMUM EVENT TRAFFIC QUEUEING ANALYSIS

Table 9 summarizes the 95th percentile queues for year 2026 summer Friday peak hours with a maximum event (2,695 attendees) at the Fairgrounds, and Table 10 summarizes them for Saturday peak hours with a maximum event. *Existing queue storage is sufficient to accommodate the estimated 95th-percentile queues for all movements during the 2026 maximum event traffic conditions during the Friday and Saturday PM and Night peak hours.*

Appendix F contains the 2026 total traffic queueing analysis results within the Synchro worksheets.

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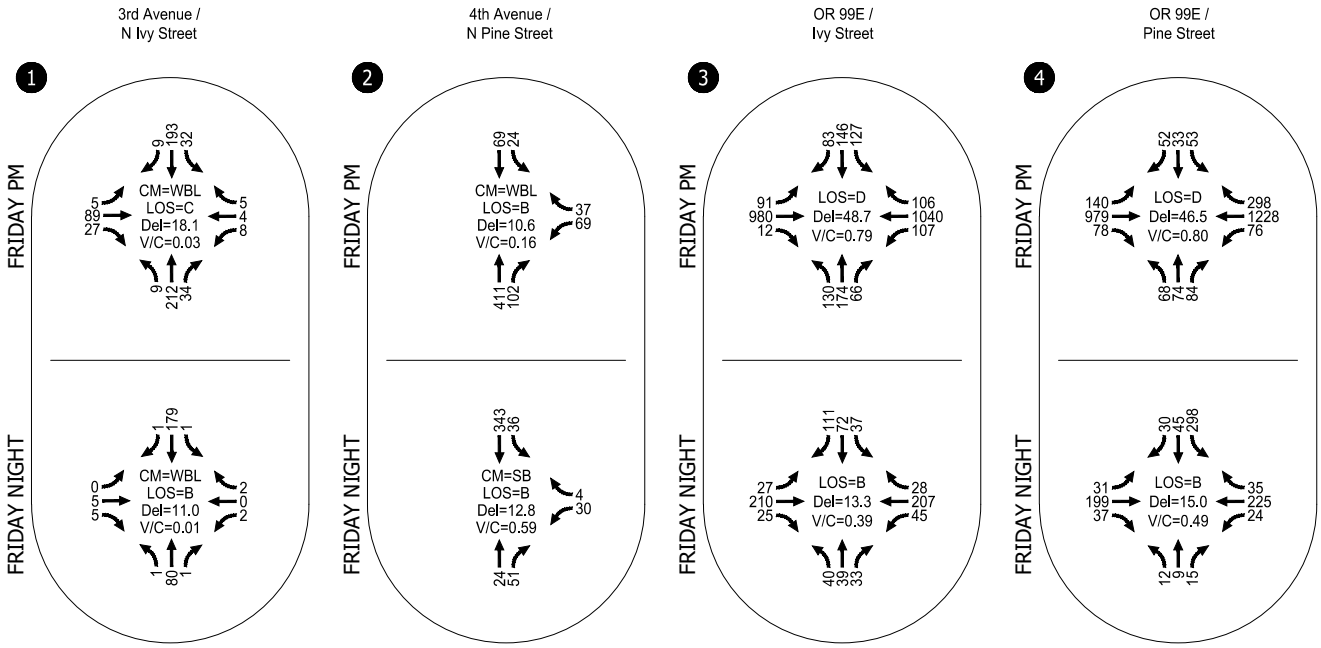
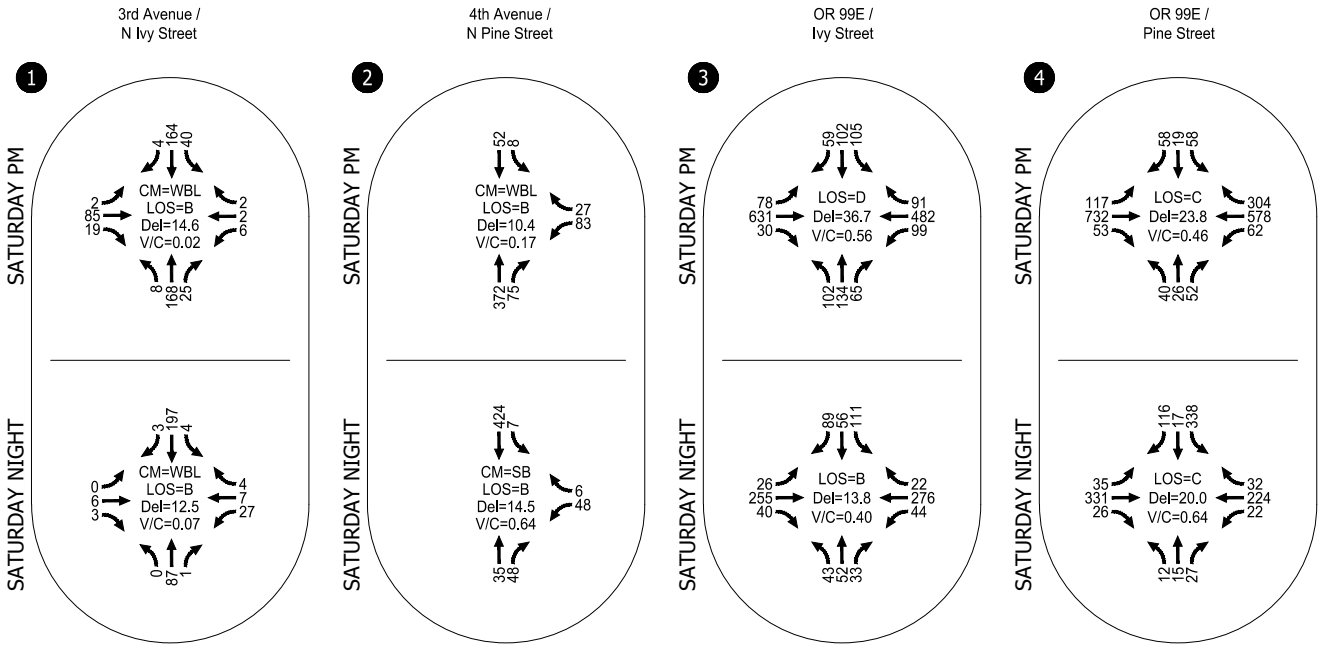


The v/c ratios for all signalized intersections are reported using HCM 2000.

Summer 2026 Weekday Maximum Event Traffic Operations
Friday PM and Night Peak Hours
Canby, OR

Figure
10

KITTELSON & ASSOCIATES



Summer 2026 Weekend Maximum Event Traffic Operations
Saturday PM and Night Peak Hours
Canby, OR

Figure
11

Table 9. Summer 2026 Friday Maximum Event 95TH Percentile Queues (Synchro Output)

Intersection		Movement[1]	Storage (ft)	95th Percentile Queue (ft)[2]		Queue Storage Adequate?	
				PM	Night	PM	Night
1	3rd Avenue / Ivy Street	EBLTR	290	50	25	Yes	Yes
		WBL	75	25	0	Yes	Yes
2	4th Avenue / Pine Street	WBL	80	25	25	Yes	Yes
		SBLT	150	25	100	Yes	Yes
3	OR 99E / Ivy Street	EBL	100	75	25	Yes	Yes
		WBL	85	75	50	Yes	Yes
		NBL	200	200	50	Yes	Yes
		SBL	230	200	50	Yes	Yes
4	OR 99E / Pine Street	EBL	195	175	50	Yes	Yes
		WBL	85	50	25	Yes	Yes
		NBR	85	75	0	Yes	Yes
		SBR	50	50	25	Yes	Yes

[1] NB = northbound; SB = southbound; EB = eastbound; WB = westbound; L = left; T = through; R = right
[2] Vehicle queues rounded up to the nearest 25 feet

Table 10. Summer 2026 Saturday Maximum Event 95TH Percentile Queues (Synchro Output)

Intersection		Movement[1]	Storage (ft)	95th Percentile Queue (ft)[2]		Queue Storage Adequate?	
				PM	Night	PM	Night
1	3rd Avenue / Ivy Street	EBLTR	290	25	25	Yes	Yes
		WBL	75	0	25	Yes	Yes
2	4th Avenue / Pine Street	WBL	80	25	25	Yes	Yes
		SBLT	150	25	125	Yes	Yes
3	OR 99E / Ivy Street	EBL	100	75	50	Yes	Yes
		WBL	85	75	50	Yes	Yes
		NBL	200	125	50	Yes	Yes
		SBL	230	125	125	Yes	Yes
4	OR 99E / Pine Street	EBL	195	75	25	Yes	Yes
		WBL	85	50	25	Yes	Yes
		NBR	85	0	25	Yes	Yes
		SBR	50	0	50	Yes	Yes

[1] NB = northbound; SB = southbound; EB = eastbound; WB = westbound; L = left; T = through; R = right
[2] Vehicle queues rounded up to the nearest 25 feet

ROADWAY STANDARDS

Frontage to the Fairgrounds is 4th Avenue, which is classified as a collector by the City. Currently, the cross-section does not fully meet City standards for a collector, according to the City TSP, due to the width of its sidewalks. Table 11, sourced from the City TSP, describes the standard dimensions for a collector cross-section; a third column is added containing the relevant 4th Avenue dimensions where it fronts the Fairgrounds.

Table 11. Canby Collector Street Characteristics & 4th Avenue Conditions

Characteristic	Collectors	4th Avenue	Meets standard?
Vehicle Lane Widths	10-11 ft.	10ft.	Yes
On-Street Parking	8 ft. – Optional	None	Yes
Bicycle Lanes (minimum)	5-6 ft.	6 ft.	Yes
Sidewalks (minimum)	6-8 ft.	5 ft.	No
Buffer/Planter Strip	0-8 ft.	0 ft.	Yes
Turn Lane/Median	12 ft. – Optional	None	Yes
Neighborhood Traffic Management (NTM)	Under Special Conditions		
Transit	As appropriate		
Turn Lanes	When warranted		

Section 5

Conclusions and Recommendations

CONCLUSIONS AND RECOMMENDATIONS

The results of the transportation impact analysis indicate that the proposed multipurpose building can be constructed and operated at a maximum event capacity while maintaining acceptable performance on the surrounding transportation system. The findings of this analysis and our recommendations are below.

FINDINGS

EXISTING CONDITIONS

- Operational performance at all of the study intersections meets current standards during the existing weekday and weekend pre- and post-event peak hours without and with a peak event.
- Existing queue storage is sufficient to accommodate the estimated 95th-percentile queues for all movements during the existing non-event Friday and concert event Saturday PM and Night peak hours.
- A review of historical crash data did not reveal any patterns or trends in the site vicinity that would require mitigation associated with the traffic-related impacts of this project.

2026 BACKGROUND CONDITIONS

- Year 2026 background volumes were estimated by growing measured 2023 summer volumes at a rate one-half percent per year (as directed by the City consultant traffic engineer).
- Operational performance at all of the study intersections meets current standards during the year 2026 weekday and weekend pre- and post-event peak hours without a peak event.
- Existing striped storage is sufficient to meet the 95th-percentile queues during the year 2026 weekday and weekend PM and Night peak hours without a peak event.

PROPOSED DEVELOPMENT PLAN

The proposed multipurpose building will be located in the same area on the site as a former Livestock Barn. The proposed building will be approximately 44,069 square feet in total, of which approximately 31,104 square feet will be multipurpose space.

- No changes are expected regarding access to the site or to staffing levels at the Fairgrounds and no increase to overall attendee capacity is anticipated.
- For the purposes of this special event study, operating the building at its maximum capacity of 2,695 attendees is defined as the maximum event occurring on a weekday or weekend evening.
- While the Fairgrounds would not operate the building at full capacity, it does anticipate hosting approximately five events each year that might result in sellout attendance of approximately 2,074 attendees.

YEAR 2026 MAXIMUM EVENT TRAFFIC CONDITIONS

- Operational performance at all of the study intersections meets current standards during the year 2026 weekday and weekend pre- and post-event peak hours with a maximum event.
- Existing striped storage is sufficient to meet the 95th-percentile queue during the 2026 maximum event weekday and weekend PM and Night peak hours.

RECOMMENDATIONS

No operational deficiencies have been identified that require mitigation.

Appendix A

Traffic Count Worksheets

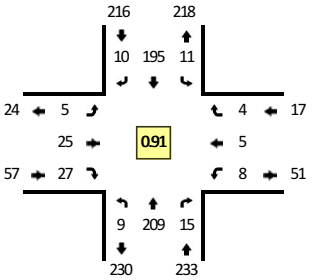
Type of peak hour being reported: Intersection Peak

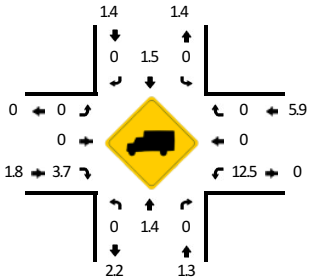
Method for determining peak hour: Total Entering Volume

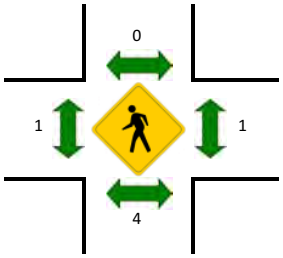
LOCATION: N Ivy St -- 3rd Ave
CITY/STATE: Canby, OR

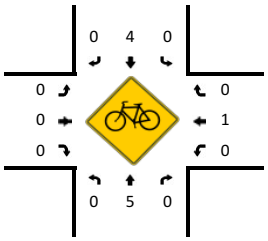
QC JOB #: 16258913
DATE: Fri, Jun 30 2023

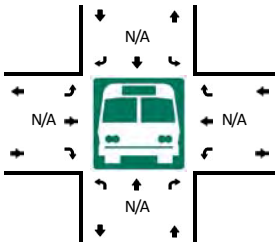
Peak-Hour: 4:35 PM -- 5:35 PM
Peak 15-Min: 4:45 PM -- 5:00 PM

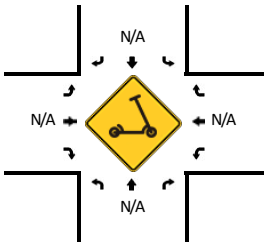












5-Min Count Period Beginning At	N Ivy St (Northbound)				N Ivy St (Southbound)				3rd Ave (Eastbound)				3rd Ave (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:30 PM	0	15	2	0	0	16	1	0	0	3	3	0	2	0	0	0	42	
4:35 PM	0	21	1	0	0	17	1	0	0	0	2	0	0	1	0	0	43	
4:40 PM	1	17	2	0	1	14	1	0	0	1	1	0	0	0	0	0	38	
4:45 PM	0	20	1	0	1	25	0	0	0	0	3	0	0	0	1	0	51	
4:50 PM	1	19	2	0	2	17	0	0	0	4	2	0	2	0	0	0	49	
4:55 PM	1	15	1	0	0	17	1	0	0	6	2	0	0	0	0	0	43	
5:00 PM	1	18	1	0	1	14	1	0	2	4	4	0	1	1	0	0	48	
5:05 PM	1	15	1	0	0	15	1	0	1	0	3	0	3	1	1	0	42	
5:10 PM	1	13	0	0	0	16	2	0	1	1	2	0	0	1	2	0	39	
5:15 PM	1	13	1	0	1	14	1	0	0	2	4	0	1	0	0	0	38	
5:20 PM	1	15	1	0	1	15	1	0	1	3	1	0	0	0	0	0	39	
5:25 PM	0	18	3	0	4	18	1	0	0	2	2	0	0	0	0	0	48	520
5:30 PM	1	25	1	0	0	13	0	0	0	2	1	0	1	1	0	0	45	523
5:35 PM	0	21	0	0	0	12	0	0	0	2	2	0	0	0	1	1	39	519
5:40 PM	1	14	0	0	1	15	0	0	0	0	3	0	1	0	0	0	35	516
5:45 PM	1	18	0	0	2	16	1	0	0	4	1	0	1	0	1	0	45	510
5:50 PM	0	20	0	0	0	15	1	0	0	1	0	0	2	0	0	0	39	500
5:55 PM	1	13	3	0	0	16	0	0	0	0	1	0	0	0	2	0	36	493
6:00 PM	0	20	1	0	0	12	1	0	0	2	1	0	0	0	0	0	37	482
6:05 PM	0	14	1	0	2	13	0	0	1	1	0	0	0	0	0	0	32	472
6:10 PM	0	17	1	0	0	17	0	0	1	1	4	0	0	0	2	0	43	476
6:15 PM	1	13	1	0	1	15	0	0	1	1	2	0	1	0	0	0	36	474
6:20 PM	0	11	0	0	0	14	0	0	1	0	3	0	0	0	0	0	29	464
6:25 PM	0	17	0	0	2	6	2	0	0	1	3	0	1	0	0	0	32	448
6:30 PM	1	13	1	0	0	11	1	0	0	1	0	0	0	1	1	0	30	433
6:35 PM	0	16	1	0	1	12	0	0	2	0	3	0	1	0	0	0	36	430
6:40 PM	0	21	2	0	0	14	1	0	1	2	0	0	0	0	1	0	42	437
6:45 PM	0	8	2	0	0	16	0	0	0	0	2	0	1	0	0	0	29	421
6:50 PM	1	13	3	0	1	11	0	0	0	1	0	0	0	0	0	0	30	412
6:55 PM	0	14	1	0	1	14	2	0	1	2	1	0	2	1	0	0	39	415
7:00 PM	0	18	4	0	0	11	0	0	1	1	3	0	1	0	0	0	39	417
7:05 PM	0	9	1	0	1	7	0	0	0	0	1	0	1	1	1	0	22	407
7:10 PM	0	27	3	0	0	12	0	0	0	1	1	0	1	0	0	0	45	409
7:15 PM	0	5	1	0	0	13	0	0	0	0	2	0	0	0	0	0	21	394
7:20 PM	0	9	1	0	1	10	0	0	0	1	0	0	0	0	0	0	22	387
7:25 PM	1	11	0	0	0	10	0	0	0	2	0	0	0	0	0	0	24	379

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	8	216	16	0	12	236	4	0	0	40	28	0	8	0	4	0	572
Heavy Trucks	0	4	0		0	8	0		0	0	4		4	0	0		20
Buses																	
Pedestrians		0				0				4				0			4
Bicycles	0	8	0		0	4	0		0	0	0		0	0	0		12
Scooters																	

Comments:

Report generated on 7/10/2023 8:47 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

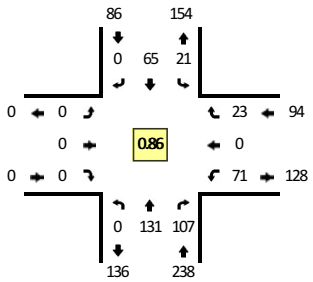
Type of peak hour being reported: Intersection Peak

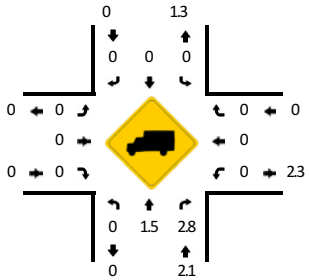
Method for determining peak hour: Total Entering Volume

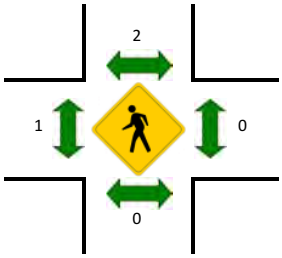
LOCATION: NE 4th Ave -- N Pine St
CITY/STATE: Canby, OR

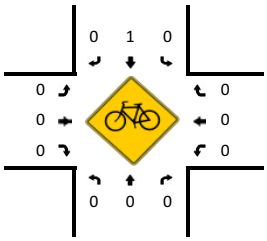
QC JOB #: 16258909
DATE: Fri, Jun 30 2023

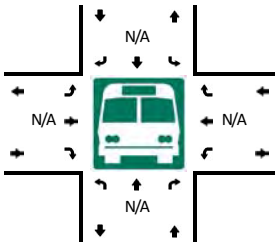
Peak-Hour: 4:30 PM -- 5:30 PM
Peak 15-Min: 4:30 PM -- 4:45 PM

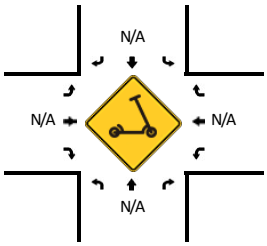












5-Min Count Period Beginning At	NE 4th Ave (Northbound)				NE 4th Ave (Southbound)				N Pine St (Eastbound)				N Pine St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:30 PM	0	17	7	0	2	5	0	0	0	0	0	0	6	0	6	0	43	
4:35 PM	0	16	10	0	1	4	0	0	0	0	0	0	7	0	1	0	39	
4:40 PM	0	13	9	0	2	3	0	0	0	0	0	0	10	0	2	0	39	
4:45 PM	0	11	12	0	3	5	0	0	0	0	0	0	5	0	3	0	39	
4:50 PM	0	9	15	0	1	12	0	0	0	0	0	0	5	0	1	0	43	
4:55 PM	0	3	8	0	2	6	0	0	0	0	0	0	6	0	1	0	26	
5:00 PM	0	11	8	0	2	6	0	0	0	0	0	0	4	0	1	0	32	
5:05 PM	0	9	5	0	2	5	0	0	0	0	0	0	4	0	3	0	28	
5:10 PM	0	10	5	0	1	4	0	0	0	0	0	0	3	0	0	0	23	
5:15 PM	0	11	12	0	3	4	0	0	0	0	0	0	2	0	0	0	32	
5:20 PM	0	7	4	0	2	3	0	0	0	0	0	0	11	0	1	0	28	
5:25 PM	0	14	12	0	0	8	0	0	0	0	0	0	8	0	4	0	46	418
5:30 PM	0	16	3	0	4	8	0	0	0	0	0	0	6	0	0	0	37	412
5:35 PM	0	7	7	0	2	4	0	0	0	0	0	0	4	0	0	0	24	397
5:40 PM	0	13	10	0	1	2	0	0	0	0	0	0	12	0	0	0	38	396
5:45 PM	0	9	8	0	0	4	0	0	0	0	0	0	8	0	0	0	29	386
5:50 PM	0	11	6	0	0	9	0	0	0	0	0	0	7	0	1	0	34	377
5:55 PM	0	7	4	0	0	2	0	0	0	0	0	0	5	0	1	0	19	370
6:00 PM	0	9	9	0	0	4	0	0	0	0	0	0	6	0	0	0	28	366
6:05 PM	0	5	11	0	1	6	0	0	0	0	0	0	4	0	1	0	28	366
6:10 PM	0	14	9	0	0	4	0	0	0	0	0	0	2	0	1	0	30	373
6:15 PM	0	8	5	0	2	3	0	0	0	0	0	0	4	0	1	0	23	364
6:20 PM	0	8	3	0	1	6	0	0	0	0	0	0	7	0	2	0	27	363
6:25 PM	0	12	12	0	1	5	0	0	0	0	0	0	7	0	2	0	39	356
6:30 PM	0	9	9	0	0	4	0	0	0	0	0	0	5	0	1	0	28	347
6:35 PM	0	4	7	0	0	9	0	0	0	0	0	0	9	0	1	0	30	353
6:40 PM	0	7	6	0	1	4	0	0	0	0	0	0	9	0	1	0	28	343
6:45 PM	0	8	3	0	2	1	0	0	0	0	0	0	3	0	3	0	20	334
6:50 PM	0	3	8	0	0	2	0	0	0	0	0	0	9	0	1	0	23	323
6:55 PM	0	8	3	0	0	5	0	0	0	0	0	0	13	0	0	0	29	333
7:00 PM	0	4	3	0	2	3	0	0	0	0	0	0	8	0	0	0	20	325
7:05 PM	0	8	10	0	0	4	0	0	0	0	0	0	3	0	1	0	26	323
7:10 PM	0	5	6	0	1	6	0	0	0	0	0	0	2	0	1	0	21	314
7:15 PM	0	3	2	0	0	4	0	0	0	0	0	0	2	0	1	0	12	303
7:20 PM	0	5	6	0	0	3	0	0	0	0	0	0	4	0	1	0	19	295
7:25 PM	0	7	5	0	0	4	0	0	0	0	0	0	3	0	1	0	20	276

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	184	104	0	20	48	0	0	0	0	0	0	92	0	36	0	484
Heavy Trucks	0	4	8		0	0	0		0	0	0		0	0	0		12
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	4	0		0	0	0		0	0	0		4
Scooters																	

Comments:

Report generated on 7/10/2023 8:47 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

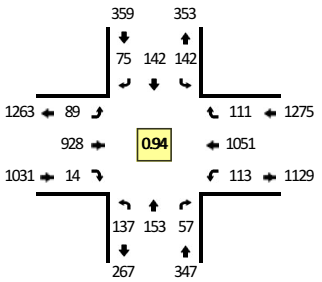
Type of peak hour being reported: Intersection Peak

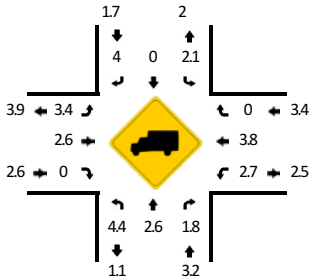
Method for determining peak hour: Total Entering Volume

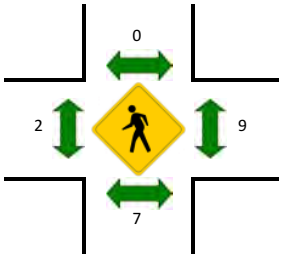
LOCATION: S Ivy St -- OR 99E
CITY/STATE: Canby, OR

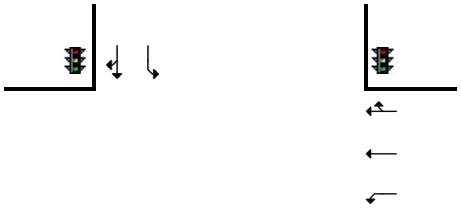
QC JOB #: 16258905
DATE: Fri, Jun 30 2023

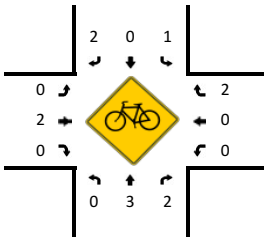
Peak-Hour: 4:30 PM -- 5:30 PM
Peak 15-Min: 4:35 PM -- 4:50 PM

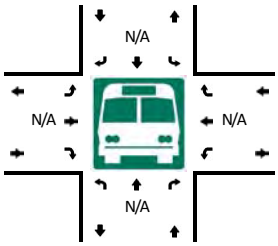


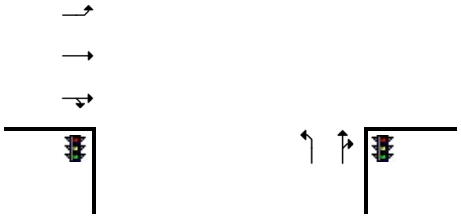


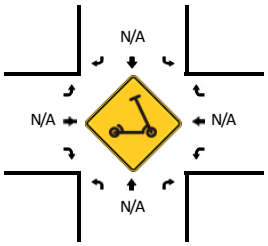












5-Min Count Period Beginning At	S Ivy St (Northbound)				S Ivy St (Southbound)				OR 99E (Eastbound)				OR 99E (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:30 PM	17	13	2	0	21	18	2	0	7	70	0	0	12	73	12	0	247	
4:35 PM	11	11	1	0	13	8	6	0	6	102	2	0	12	112	9	0	293	
4:40 PM	11	15	3	0	7	10	3	0	9	85	4	0	8	90	8	1	254	
4:45 PM	15	19	3	0	8	13	7	0	7	81	1	0	6	83	8	0	251	
4:50 PM	10	10	7	0	12	12	9	0	4	86	0	0	6	109	12	0	277	
4:55 PM	12	10	3	0	7	11	11	0	8	82	2	0	13	93	11	0	263	
5:00 PM	13	14	9	0	14	20	8	0	10	56	1	0	8	60	6	0	219	
5:05 PM	11	12	4	0	17	6	3	0	8	72	1	0	8	92	8	0	242	
5:10 PM	7	11	7	0	13	13	10	0	10	94	1	0	8	99	7	0	280	
5:15 PM	11	18	8	0	8	14	4	0	7	58	0	0	17	67	10	1	223	
5:20 PM	13	9	3	0	13	13	5	0	5	72	0	0	7	88	6	0	234	
5:25 PM	6	11	7	0	9	4	7	0	8	70	2	0	6	85	14	0	229	3012
5:30 PM	8	15	4	0	8	18	7	0	8	62	0	0	7	80	5	0	222	2987
5:35 PM	11	8	7	0	9	10	8	0	6	66	0	0	8	79	9	1	222	2916
5:40 PM	17	6	2	0	10	8	6	0	6	79	2	0	10	76	7	0	229	2891
5:45 PM	10	11	10	0	7	10	3	0	2	76	0	0	5	50	9	0	193	2833
5:50 PM	6	11	6	0	8	9	9	0	12	64	3	0	8	54	14	0	204	2760
5:55 PM	3	12	4	0	9	12	7	0	7	60	0	0	6	47	10	0	177	2674
6:00 PM	7	17	4	0	10	5	6	0	9	53	1	0	12	78	8	0	210	2665
6:05 PM	12	6	4	0	7	10	8	0	11	53	0	0	8	62	6	0	187	2610
6:10 PM	7	10	1	0	2	11	7	0	11	55	3	0	2	70	10	0	189	2519
6:15 PM	13	9	4	0	13	8	10	0	9	53	1	0	14	67	6	1	208	2504
6:20 PM	11	6	1	0	10	10	8	0	8	54	0	0	8	89	9	0	214	2484
6:25 PM	9	11	4	0	7	6	2	0	9	44	3	0	9	82	12	0	198	2453
6:30 PM	6	10	4	0	8	7	8	0	12	58	3	0	3	34	8	0	161	2392
6:35 PM	13	9	4	0	12	3	9	0	8	37	1	0	11	42	11	0	160	2330
6:40 PM	12	10	5	0	8	7	6	0	10	28	0	0	11	56	8	0	161	2262
6:45 PM	12	10	7	0	6	13	8	0	5	47	1	0	8	41	9	0	167	2236
6:50 PM	8	15	6	0	11	5	4	0	9	39	1	0	11	48	7	0	164	2196
6:55 PM	7	8	3	0	8	9	4	0	9	41	1	0	6	42	8	0	146	2165
7:00 PM	9	11	4	0	9	8	5	0	11	47	0	0	4	51	6	0	165	2120
7:05 PM	5	4	2	0	6	8	7	0	6	48	0	0	4	41	8	0	139	2072
7:10 PM	9	16	2	0	8	10	5	0	8	35	2	0	6	33	9	0	143	2026
7:15 PM	4	7	6	0	10	11	6	0	5	37	3	0	4	40	6	0	139	1957
7:20 PM	2	11	4	0	8	5	2	0	2	34	2	0	2	37	4	0	113	1856
7:25 PM	6	4	2	0	10	4	6	0	5	39	1	0	3	29	0	0	109	1767

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	148	180	28	0	112	124	64	0	88	1072	28	0	104	1140	100	4	3192
Heavy Trucks	8	8	0		4	0	0		4	24	0		8	52	0		108
Buses																	
Pedestrians		8				0				0				8			16
Bicycles	0	4	0		0	0	8		0	4	0		0	0	0		16
Scooters																	

Comments:

Report generated on 7/10/2023 8:47 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

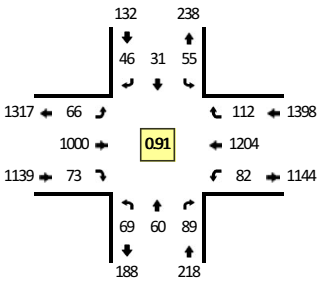
Type of peak hour being reported: Intersection Peak

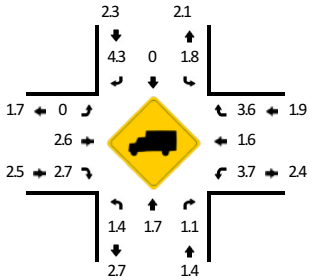
Method for determining peak hour: Total Entering Volume

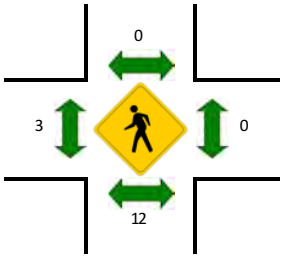
LOCATION: NE 4th Ave/S Pine St -- OR 99E
CITY/STATE: Canby, OR

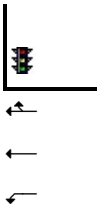
QC JOB #: 16258901
DATE: Fri, Jun 30 2023

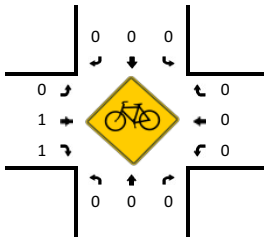
Peak-Hour: 4:30 PM -- 5:30 PM
Peak 15-Min: 4:35 PM -- 4:50 PM

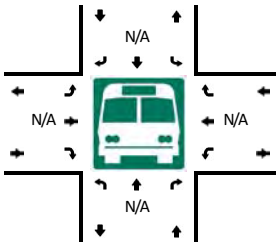


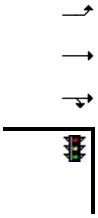


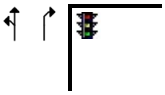


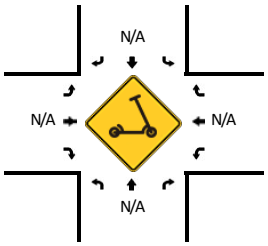












5-Min Count Period Beginning At	NE 4th Ave/S Pine St (Northbound)				NE 4th Ave/S Pine St (Southbound)				OR 99E (Eastbound)				OR 99E (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:30 PM	7	6	9	0	5	1	5	0	8	95	4	0	7	97	10	0	254	
4:35 PM	8	8	6	0	7	1	3	0	10	94	5	0	6	86	9	0	243	
4:40 PM	5	5	6	0	3	4	6	0	1	98	4	0	7	122	14	0	275	
4:45 PM	7	5	4	0	7	2	1	0	7	94	6	0	8	120	12	0	273	
4:50 PM	8	4	9	0	6	3	9	0	11	75	10	0	3	87	10	0	235	
4:55 PM	6	4	5	0	6	2	4	0	5	82	5	0	8	117	1	0	245	
5:00 PM	4	6	8	0	8	2	0	0	5	81	4	0	5	92	8	0	223	
5:05 PM	6	0	11	1	0	5	5	0	3	86	11	0	4	93	11	0	236	
5:10 PM	2	4	8	0	2	1	4	0	3	84	6	0	12	105	8	0	239	
5:15 PM	6	6	9	0	5	2	0	0	3	80	10	0	8	105	14	0	248	
5:20 PM	5	4	4	0	3	2	2	0	5	74	4	0	9	113	2	0	227	
5:25 PM	3	8	10	1	3	6	7	0	5	57	4	0	5	67	13	0	189	2887
5:30 PM	10	2	6	0	5	3	5	0	4	79	5	0	3	100	13	0	235	2868
5:35 PM	5	5	3	0	2	0	6	0	5	75	8	0	3	89	4	0	205	2830
5:40 PM	5	5	8	0	3	1	10	0	3	73	6	0	7	72	15	0	208	2763
5:45 PM	4	3	7	0	5	2	5	0	3	87	4	0	5	52	11	0	188	2678
5:50 PM	2	4	3	0	5	1	10	0	7	64	2	0	4	64	6	0	172	2615
5:55 PM	6	4	9	0	4	1	2	0	2	61	6	0	8	64	5	0	172	2542
6:00 PM	3	6	2	0	3	3	4	0	4	63	3	0	7	86	8	1	193	2512
6:05 PM	3	2	9	0	2	6	4	0	3	59	7	0	14	68	11	0	188	2464
6:10 PM	2	5	11	0	1	1	4	0	7	55	4	0	8	87	11	0	196	2421
6:15 PM	7	1	2	0	3	2	2	0	4	56	3	0	5	95	8	0	188	2361
6:20 PM	3	2	3	0	1	4	8	0	2	69	3	0	5	111	7	1	219	2353
6:25 PM	2	3	4	0	3	1	8	0	7	54	5	0	5	77	14	0	183	2347
6:30 PM	5	3	4	0	3	2	6	0	7	56	6	0	5	39	8	0	144	2256
6:35 PM	3	3	5	0	6	4	6	0	4	59	6	0	4	70	4	0	174	2225
6:40 PM	2	3	6	0	5	0	7	0	3	37	1	0	2	65	7	0	138	2155
6:45 PM	0	2	7	0	1	1	4	0	1	50	2	0	5	56	7	0	136	2103
6:50 PM	3	1	5	0	3	0	8	0	6	44	8	0	3	45	4	0	130	2061
6:55 PM	2	2	4	0	4	0	9	0	4	45	3	0	3	50	5	0	131	2020
7:00 PM	4	2	2	0	6	2	1	0	3	56	6	0	3	62	2	0	149	1976
7:05 PM	1	3	5	0	5	1	1	0	4	47	6	0	2	49	11	0	135	1923
7:10 PM	2	2	5	0	3	1	4	0	2	39	6	0	2	46	7	0	119	1846
7:15 PM	3	1	4	0	3	0	3	0	2	49	0	0	3	46	2	1	117	1775
7:20 PM	3	5	5	0	5	0	3	0	4	37	4	0	2	33	2	0	103	1659
7:25 PM	1	0	7	1	4	3	1	0	5	34	7	0	4	46	7	0	120	1596

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	80	72	64	0	68	28	40	0	72	1144	60	0	84	1312	140	0	3164
Heavy Trucks	0	4	0		0	0	0		0	20	0		8	24	8		64
Buses																	
Pedestrians		16				0				4				0			20
Bicycles	0	0	0		0	0	0		0	4	0		0	0	0		4
Scooters																	

Comments:

Report generated on 7/10/2023 8:47 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

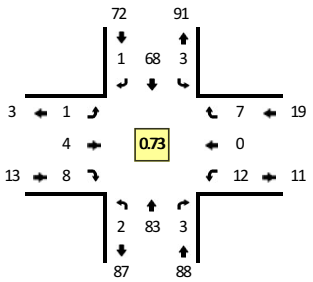
Type of peak hour being reported: Intersection Peak

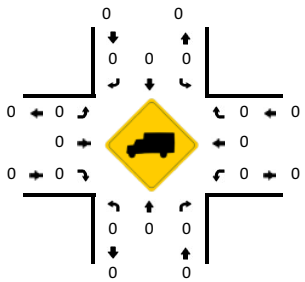
Method for determining peak hour: Total Entering Volume

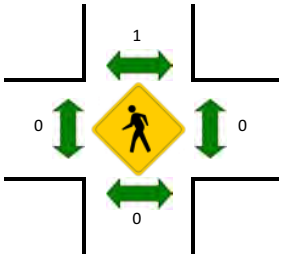
LOCATION: N Ivy St -- 3rd Ave
CITY/STATE: Canby, OR

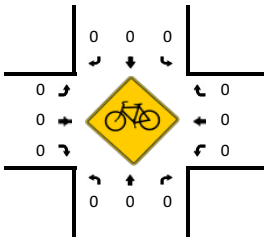
QC JOB #: 16258914
DATE: Fri, Jun 30 2023

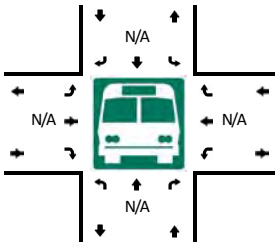
Peak-Hour: 9:30 PM -- 10:30 PM
Peak 15-Min: 9:30 PM -- 9:45 PM

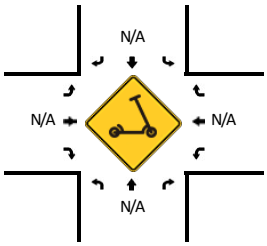












5-Min Count Period Beginning At	N Ivy St (Northbound)				N Ivy St (Southbound)				3rd Ave (Eastbound)				3rd Ave (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
9:30 PM	0	9	0	0	0	7	0	0	1	0	2	0	4	0	2	0	25	
9:35 PM	1	7	2	0	1	7	0	0	0	0	2	0	5	0	2	1	28	
9:40 PM	0	6	0	0	1	4	0	0	0	0	0	0	1	0	1	0	13	
9:45 PM	0	8	0	0	0	5	0	0	0	0	1	0	0	0	0	0	14	
9:50 PM	0	8	0	0	0	10	0	0	0	0	0	0	0	0	0	0	18	
9:55 PM	0	9	0	0	0	6	0	0	0	1	0	0	0	0	0	0	16	
10:00 PM	0	7	0	0	0	1	0	0	0	1	1	0	0	0	0	0	10	
10:05 PM	0	5	0	0	0	8	0	0	0	1	0	0	0	0	0	0	14	
10:10 PM	0	6	0	0	1	2	0	0	0	0	0	0	0	0	1	0	10	
10:15 PM	0	4	0	0	0	4	0	0	0	0	0	0	0	0	0	0	8	
10:20 PM	0	8	1	0	0	9	0	0	0	1	0	0	0	0	1	0	20	
10:25 PM	1	6	0	0	0	5	1	0	0	0	2	0	1	0	0	0	16	192
10:30 PM	0	6	0	0	0	4	0	0	0	0	0	0	0	0	0	0	10	177
10:35 PM	0	8	0	0	0	2	0	0	0	0	0	0	1	0	0	0	11	160
10:40 PM	0	4	0	0	0	6	0	0	0	1	1	0	0	0	0	0	12	159
10:45 PM	0	7	1	0	0	0	0	0	0	0	0	0	0	0	0	0	8	153
10:50 PM	0	3	0	0	0	4	0	0	0	0	1	0	1	1	0	0	10	145
10:55 PM	0	11	1	0	0	5	0	0	0	0	0	0	1	0	0	0	18	147
11:00 PM	0	3	0	0	0	1	0	0	0	0	0	0	0	0	0	0	4	141
11:05 PM	0	3	1	0	0	3	0	0	0	0	0	0	0	0	0	0	7	134
11:10 PM	1	8	0	0	0	2	0	0	1	0	0	0	0	0	0	0	12	136
11:15 PM	0	1	0	0	0	2	0	0	0	0	0	0	1	0	0	0	4	132
11:20 PM	0	5	1	0	0	3	0	0	0	0	0	0	0	0	0	0	9	121
11:25 PM	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	4	109

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	4	88	8	0	8	72	0	0	4	0	16	0	40	0	20	4	264
Heavy Trucks	0	0	0		0	0	0		0	0	0		0	0	0		0
Buses																	
Pedestrians		0				4				0				0			4
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 7/10/2023 8:47 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

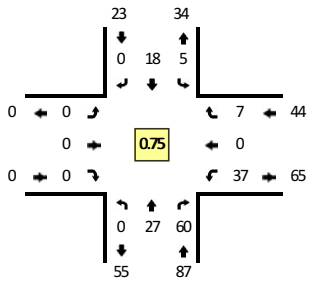
Type of peak hour being reported: Intersection Peak

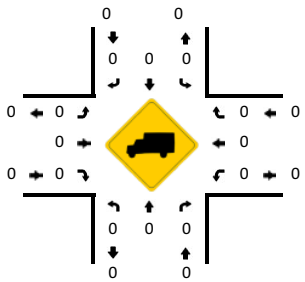
Method for determining peak hour: Total Entering Volume

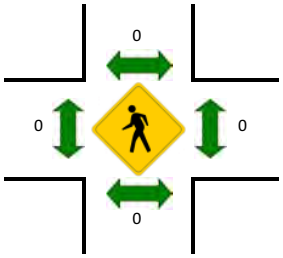
LOCATION: NE 4th Ave -- N Pine St
CITY/STATE: Canby, OR

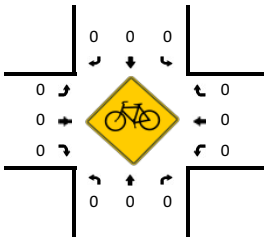
QC JOB #: 16258910
DATE: Fri, Jun 30 2023

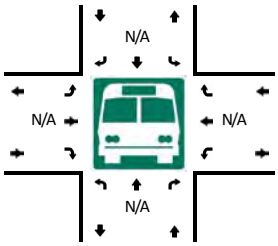
Peak-Hour: 9:30 PM -- 10:30 PM
Peak 15-Min: 9:30 PM -- 9:45 PM

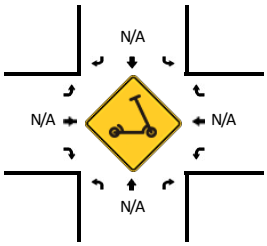












5-Min Count Period Beginning At	NE 4th Ave (Northbound)				NE 4th Ave (Southbound)				N Pine St (Eastbound)				N Pine St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
9:30 PM	0	1	7	0	0	2	0	0	0	0	0	0	5	0	1	0	16	
9:35 PM	0	2	8	0	1	5	0	0	0	0	0	0	3	0	1	0	20	
9:40 PM	0	4	3	0	2	0	0	0	0	0	0	0	5	0	1	0	15	
9:45 PM	0	1	6	0	1	0	0	0	0	0	0	0	1	0	0	0	9	
9:50 PM	0	1	7	0	0	0	0	0	0	0	0	0	3	0	1	0	12	
9:55 PM	0	0	8	0	0	2	0	0	0	0	0	0	3	0	0	0	13	
10:00 PM	0	8	1	0	1	3	0	0	0	0	0	0	2	0	1	0	16	
10:05 PM	0	2	2	0	0	0	0	0	0	0	0	0	4	0	0	0	8	
10:10 PM	0	1	3	0	0	3	0	0	0	0	0	0	3	0	0	0	10	
10:15 PM	0	2	5	0	0	0	0	0	0	0	0	0	1	0	0	0	8	
10:20 PM	0	2	6	0	0	1	0	0	0	0	0	0	4	0	2	0	15	
10:25 PM	0	3	4	0	0	2	0	0	0	0	0	0	3	0	0	0	12	154
10:30 PM	0	0	4	0	0	0	0	0	0	0	0	0	2	0	0	0	6	144
10:35 PM	0	1	1	0	0	2	0	0	0	0	0	0	1	0	0	0	5	129
10:40 PM	0	3	3	0	0	0	0	0	0	0	0	0	2	0	0	0	8	122
10:45 PM	0	2	2	0	0	0	0	0	0	0	0	0	1	0	0	0	5	118
10:50 PM	0	2	3	0	0	0	0	0	0	0	0	0	2	0	0	0	7	113
10:55 PM	0	1	3	0	1	0	0	0	0	0	0	0	1	0	0	0	6	106
11:00 PM	0	0	2	0	0	1	0	0	0	0	0	0	2	0	0	0	5	95
11:05 PM	0	1	2	0	1	0	0	0	0	0	0	0	2	0	0	0	6	93
11:10 PM	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	3	86
11:15 PM	0	0	1	0	1	0	0	0	0	0	0	0	1	0	1	0	4	82
11:20 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	68
11:25 PM	0	3	2	0	0	0	0	0	0	0	0	0	2	0	0	0	7	63

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	28	72	0	12	28	0	0	0	0	0	0	52	0	12	0	204
Heavy Trucks	0	0	0		0	0	0		0	0	0		0	0	0		0
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 7/10/2023 8:47 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

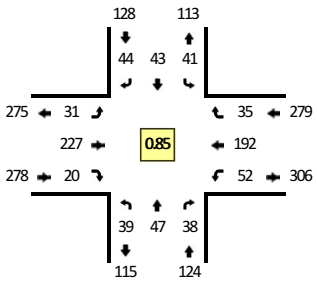
Type of peak hour being reported: Intersection Peak

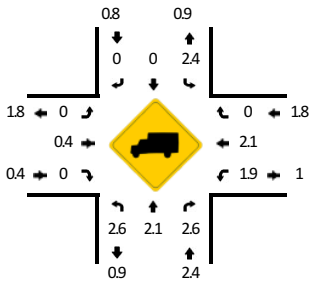
Method for determining peak hour: Total Entering Volume

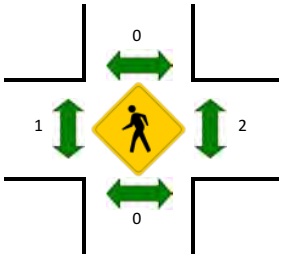
LOCATION: S Ivy St -- OR 99E
CITY/STATE: Canby, OR

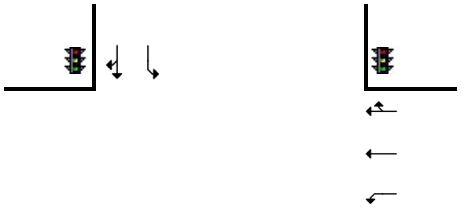
QC JOB #: 16258906
DATE: Fri, Jun 30 2023

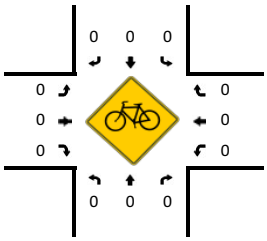
Peak-Hour: 9:30 PM -- 10:30 PM
Peak 15-Min: 9:30 PM -- 9:45 PM

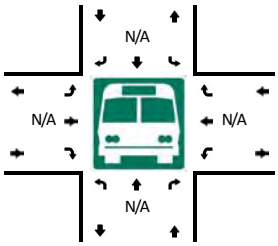


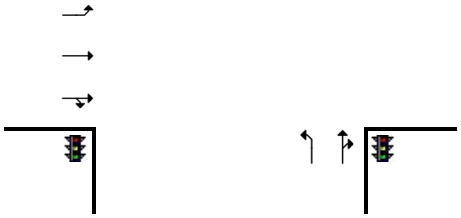


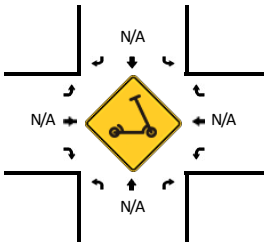












5-Min Count Period Beginning At	S Ivy St (Northbound)				S Ivy St (Southbound)				OR 99E (Eastbound)				OR 99E (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
9:30 PM	2	5	4	0	2	5	4	0	4	21	0	0	6	24	6	0	83	
9:35 PM	3	5	4	0	5	5	9	0	4	14	0	0	5	17	6	0	77	
9:40 PM	5	7	1	0	2	5	8	0	2	24	3	0	4	17	1	0	79	
9:45 PM	3	3	2	0	3	4	2	0	2	25	1	0	4	12	4	0	65	
9:50 PM	2	8	5	0	2	9	5	0	2	21	1	0	6	21	6	0	88	
9:55 PM	1	3	4	0	4	3	4	0	0	19	2	0	2	15	2	0	59	
10:00 PM	4	3	1	0	3	0	1	0	5	14	2	0	2	17	0	0	52	
10:05 PM	3	3	4	0	5	3	3	0	4	14	2	0	3	15	0	0	59	
10:10 PM	5	1	5	0	4	1	2	0	3	18	1	0	3	12	3	0	58	
10:15 PM	6	1	4	0	6	1	0	0	1	15	1	0	8	17	2	0	62	
10:20 PM	1	2	2	0	3	3	2	0	3	23	6	0	6	11	2	0	64	
10:25 PM	4	6	2	0	2	4	4	0	1	19	1	0	3	14	3	0	63	809
10:30 PM	4	2	2	0	3	2	2	0	1	11	1	0	1	16	1	0	46	772
10:35 PM	2	4	0	0	1	2	1	0	3	14	4	0	4	14	3	0	52	747
10:40 PM	4	2	2	0	0	5	2	0	2	14	3	0	2	19	2	0	57	725
10:45 PM	2	1	0	0	0	2	1	0	4	18	1	0	1	11	1	0	42	702
10:50 PM	1	2	3	0	1	3	1	0	6	11	1	0	5	12	0	0	46	660
10:55 PM	1	3	2	0	3	4	2	0	4	15	2	0	3	11	1	0	51	652
11:00 PM	2	1	0	0	0	0	0	0	1	12	1	0	0	14	2	0	33	633
11:05 PM	0	1	0	0	1	4	0	0	0	10	5	0	4	10	1	0	36	610
11:10 PM	3	5	1	0	1	3	7	0	2	16	0	0	6	7	2	0	53	605
11:15 PM	4	0	5	0	0	1	2	0	1	16	1	0	1	9	1	0	41	584
11:20 PM	1	2	1	0	0	4	3	0	2	8	2	0	2	8	2	0	35	555
11:25 PM	4	2	1	0	1	2	0	0	0	17	4	0	0	5	0	0	36	528

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	40	68	36	0	36	60	84	0	40	236	12	0	60	232	52	0	956
Heavy Trucks	0	4	0		0	0	0		0	0	0		0	0	0		4
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 7/10/2023 8:47 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

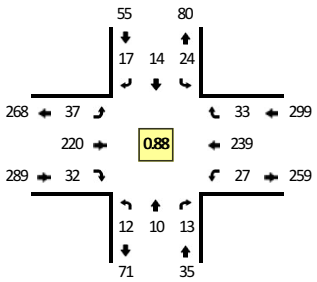
Type of peak hour being reported: Intersection Peak

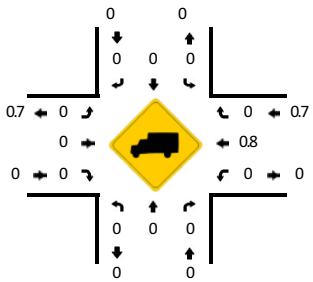
Method for determining peak hour: Total Entering Volume

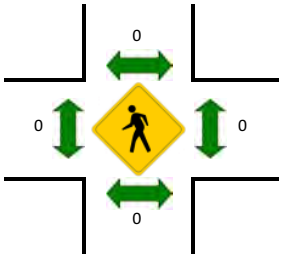
LOCATION: NE 4th Ave/S Pine St -- OR 99E
CITY/STATE: Canby, OR

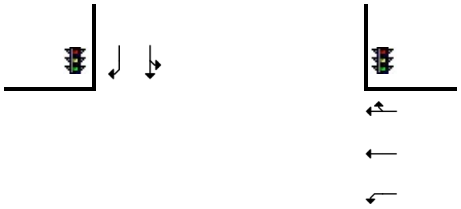
QC JOB #: 16258902
DATE: Fri, Jun 30 2023

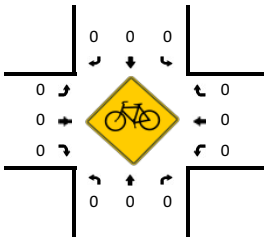
Peak-Hour: 9:30 PM -- 10:30 PM
Peak 15-Min: 9:30 PM -- 9:45 PM

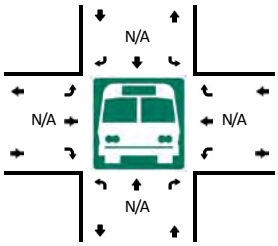


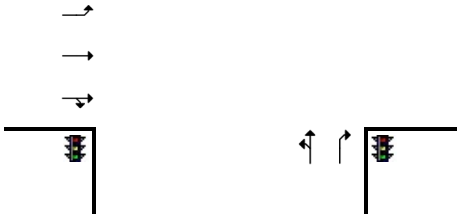


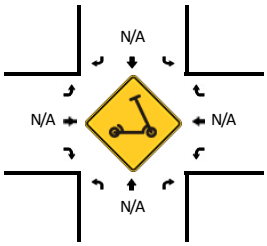












5-Min Count Period Beginning At	NE 4th Ave/S Pine St (Northbound)				NE 4th Ave/S Pine St (Southbound)				OR 99E (Eastbound)				OR 99E (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
9:30 PM	2	1	0	0	1	2	4	0	5	20	2	0	2	30	2	1	72	
9:35 PM	1	0	1	0	3	2	3	0	3	20	1	0	2	20	3	0	59	
9:40 PM	1	0	0	0	2	0	3	0	4	25	0	0	3	21	3	0	62	
9:45 PM	0	2	2	0	0	1	0	0	4	23	4	0	4	19	1	1	61	
9:50 PM	2	0	1	0	0	1	2	0	4	21	1	0	1	20	4	0	57	
9:55 PM	1	1	3	0	1	3	1	0	4	16	0	0	1	21	3	0	55	
10:00 PM	0	0	1	0	3	2	0	0	1	14	3	0	2	19	5	0	50	
10:05 PM	0	1	0	0	3	0	1	0	1	13	5	0	1	19	2	0	46	
10:10 PM	1	1	1	0	4	1	1	0	2	19	2	0	2	17	1	0	52	
10:15 PM	1	0	1	0	1	0	0	0	4	14	3	0	4	16	3	0	47	
10:20 PM	3	2	2	0	2	1	2	0	3	21	2	0	2	24	3	0	67	
10:25 PM	0	2	1	0	4	1	0	0	2	14	9	0	1	13	3	0	50	678
10:30 PM	1	0	1	0	2	0	0	0	2	17	0	0	2	19	2	0	46	652
10:35 PM	1	0	2	0	3	0	0	0	1	12	4	0	1	16	1	0	41	634
10:40 PM	2	0	0	0	0	1	2	0	2	12	3	0	3	19	4	0	48	620
10:45 PM	0	0	1	0	0	1	0	0	0	16	1	0	1	15	4	0	39	598
10:50 PM	0	1	0	0	2	0	0	0	3	9	0	0	2	17	1	0	35	576
10:55 PM	0	0	0	0	1	0	0	0	1	19	3	0	2	14	3	0	43	564
11:00 PM	0	0	0	0	2	0	1	0	0	13	3	0	0	15	2	0	36	550
11:05 PM	0	1	0	0	1	0	1	0	0	8	0	0	1	13	2	0	27	531
11:10 PM	0	0	0	0	0	0	0	0	2	13	1	0	0	16	1	0	33	512
11:15 PM	0	0	0	0	1	0	0	0	0	17	1	0	1	14	1	0	35	500
11:20 PM	1	0	0	0	0	1	0	0	0	7	0	0	0	4	0	0	13	446
11:25 PM	0	1	0	0	1	1	0	0	1	14	8	0	1	3	3	0	33	429

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	16	4	4	0	24	16	40	0	48	260	12	0	28	284	32	4	772
Heavy Trucks	0	0	0		0	0	0		0	0	0		0	8	0		8
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 7/10/2023 8:47 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

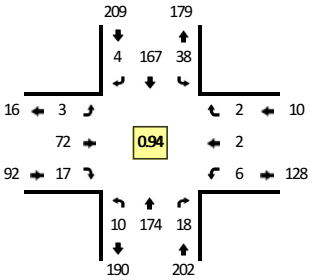
Type of peak hour being reported: Intersection Peak

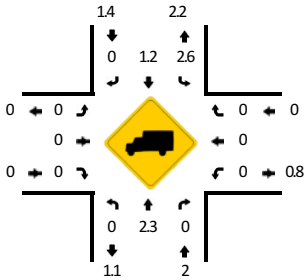
Method for determining peak hour: Total Entering Volume

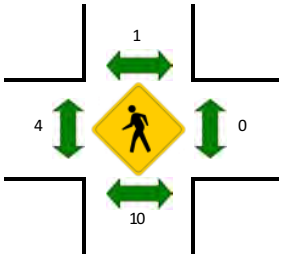
LOCATION: N Ivy St -- 3rd Ave
CITY/STATE: Canby, OR

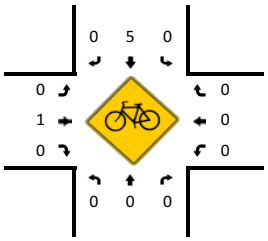
QC JOB #: 16258916
DATE: Sat, Jul 1 2023

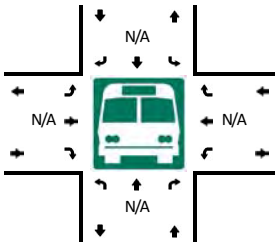
Peak-Hour: 4:35 PM -- 5:35 PM
Peak 15-Min: 4:35 PM -- 4:50 PM

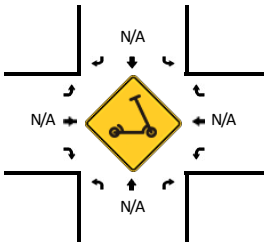












5-Min Count Period Beginning At	N Ivy St (Northbound)				N Ivy St (Southbound)				3rd Ave (Eastbound)				3rd Ave (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:30 PM	0	8	1	0	0	14	1	0	0	4	4	0	1	0	0	0	33	
4:35 PM	2	16	0	0	4	19	0	0	1	4	0	0	0	0	0	0	46	
4:40 PM	0	16	3	0	9	13	0	0	1	5	2	0	1	0	0	0	50	
4:45 PM	1	6	1	0	0	23	0	0	0	4	4	0	1	0	0	0	40	
4:50 PM	1	16	1	0	4	9	0	0	0	6	1	0	1	0	0	0	39	
4:55 PM	1	19	0	0	2	7	2	0	0	13	0	0	1	0	0	0	45	
5:00 PM	0	16	1	0	4	10	0	0	1	8	2	0	1	1	1	0	45	
5:05 PM	0	15	3	0	2	11	0	0	0	3	3	0	0	1	0	0	38	
5:10 PM	2	11	1	0	4	14	0	0	0	8	2	0	0	0	0	0	42	
5:15 PM	1	17	0	0	0	18	0	0	0	4	0	0	0	0	1	0	41	
5:20 PM	0	13	1	0	4	19	0	0	0	6	2	0	0	0	0	0	45	
5:25 PM	1	13	5	0	3	10	1	0	0	3	0	0	0	0	0	0	36	500
5:30 PM	1	16	2	0	2	14	1	0	0	8	1	0	1	0	0	0	46	513
5:35 PM	0	8	4	0	2	14	0	0	0	7	2	0	0	0	0	0	37	504
5:40 PM	0	15	5	0	3	6	0	0	0	11	2	0	0	0	0	0	42	496
5:45 PM	0	14	7	0	5	15	0	0	0	5	1	0	1	0	2	0	50	506
5:50 PM	0	14	2	0	14	8	0	0	0	1	4	0	1	0	2	0	46	513
5:55 PM	1	9	6	0	5	11	0	0	0	4	0	0	0	1	0	0	37	505
6:00 PM	2	10	2	0	4	14	0	0	0	2	1	0	2	0	0	0	37	497
6:05 PM	1	12	3	0	4	19	0	0	0	7	2	0	0	0	1	0	49	508
6:10 PM	1	11	3	0	5	11	0	0	0	5	0	0	1	0	0	0	37	503
6:15 PM	0	19	5	0	4	12	0	0	0	3	1	0	0	0	0	0	44	506
6:20 PM	1	17	4	0	3	12	0	0	0	3	0	0	0	0	0	0	40	501
6:25 PM	0	4	1	0	3	10	0	0	0	1	1	0	1	0	1	0	22	487
6:30 PM	1	18	1	0	5	10	0	0	0	8	0	0	0	0	0	0	43	484
6:35 PM	0	15	5	0	0	4	0	0	0	2	2	0	0	0	0	0	28	475
6:40 PM	0	10	2	0	2	19	1	0	0	2	1	0	0	0	0	0	37	470
6:45 PM	0	11	1	0	4	15	0	0	0	4	2	0	2	0	0	0	39	459
6:50 PM	0	12	2	0	0	9	0	0	0	2	1	0	0	0	1	0	27	440
6:55 PM	0	11	2	0	1	6	0	0	0	2	0	0	0	0	0	0	22	425

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	12	152	16	0	52	220	0	0	8	52	24	0	8	0	0	0	544
Heavy Trucks	0	4	0		4	0	0		0	0	0		0	0	0		8
Buses																	
Pedestrians		0				0				4				0			4
Bicycles	0	0	0		0	12	0		0	0	0		0	0	0		12

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
Scooters																	

Comments:

Report generated on 8/4/2023 11:36 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

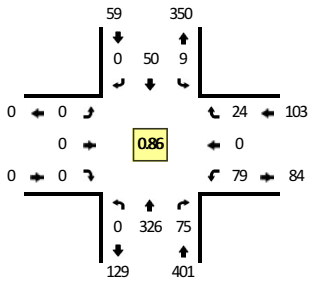
Type of peak hour being reported: Intersection Peak

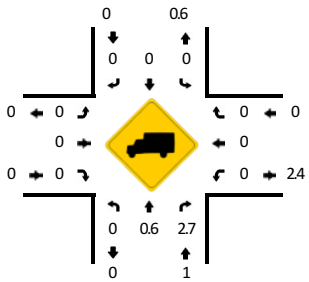
Method for determining peak hour: Total Entering Volume

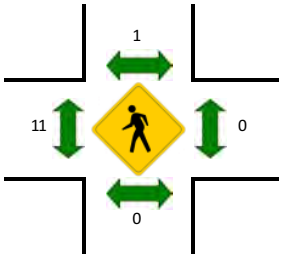
LOCATION: NE 4th Ave -- N Pine St
CITY/STATE: Canby, OR

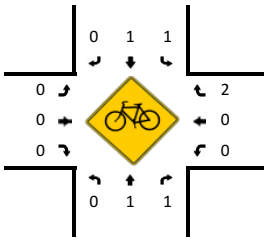
QC JOB #: 16258912
DATE: Sat, Jul 1 2023

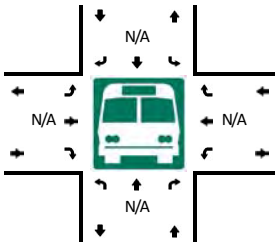
Peak-Hour: 4:35 PM -- 5:35 PM
Peak 15-Min: 5:00 PM -- 5:15 PM

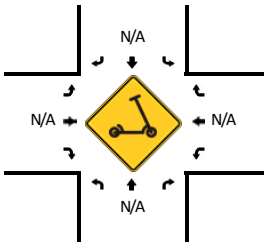












5-Min Count Period Beginning At	NE 4th Ave (Northbound)				NE 4th Ave (Southbound)				N Pine St (Eastbound)				N Pine St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:30 PM	0	16	8	0	1	1	0	0	0	0	0	0	5	0	0	0	31	
4:35 PM	0	21	4	0	1	1	0	0	0	0	0	0	6	0	2	0	35	
4:40 PM	0	18	9	0	0	4	0	0	0	0	0	0	8	0	2	0	41	
4:45 PM	0	20	4	0	2	3	0	0	0	0	0	0	7	0	4	0	40	
4:50 PM	0	32	5	0	1	6	0	0	0	0	0	0	5	0	3	0	52	
4:55 PM	0	34	6	0	0	5	0	0	0	0	0	0	5	0	0	0	50	
5:00 PM	0	27	7	0	1	7	0	0	0	0	0	0	9	0	4	0	55	
5:05 PM	0	33	7	0	1	7	0	0	0	0	0	0	5	0	3	0	56	
5:10 PM	0	34	5	0	1	4	0	0	0	0	0	0	9	0	0	0	53	
5:15 PM	0	25	7	0	1	4	0	0	0	0	0	0	10	0	2	0	49	
5:20 PM	0	31	9	0	0	4	0	0	0	0	0	0	4	0	1	0	49	
5:25 PM	0	30	7	0	0	1	0	0	0	0	0	0	7	0	1	0	46	557
5:30 PM	0	21	5	0	1	4	0	0	0	0	0	0	4	0	2	0	37	563
5:35 PM	0	19	3	0	0	2	0	0	0	0	0	0	8	0	2	0	34	562
5:40 PM	0	21	1	0	2	2	0	0	0	0	0	0	4	0	0	0	30	551
5:45 PM	0	16	4	0	0	7	0	0	0	0	0	0	3	0	0	0	30	541
5:50 PM	0	11	1	0	1	2	0	0	0	0	0	0	4	0	0	0	19	508
5:55 PM	0	10	3	0	0	1	0	0	0	0	0	0	3	0	1	0	18	476
6:00 PM	0	10	1	0	0	1	0	0	0	0	0	0	4	0	1	0	17	438
6:05 PM	0	14	1	0	1	10	0	0	0	0	0	0	5	0	2	0	33	415
6:10 PM	0	13	0	0	1	5	0	0	0	0	0	0	3	0	3	0	25	387
6:15 PM	0	12	0	0	1	4	0	0	0	0	0	0	9	0	8	0	34	372
6:20 PM	0	19	1	0	0	4	0	0	0	0	0	0	7	0	2	0	33	356
6:25 PM	0	24	0	0	0	0	0	0	0	0	0	0	5	0	2	0	31	341
6:30 PM	0	13	2	0	0	6	0	0	0	0	0	0	4	0	0	0	25	329
6:35 PM	0	16	6	0	0	6	0	0	0	0	0	0	5	0	3	0	36	331
6:40 PM	0	9	3	0	5	1	0	0	0	0	0	0	6	0	1	0	25	326
6:45 PM	0	5	6	0	1	3	0	0	0	0	0	0	6	0	1	0	22	318
6:50 PM	0	9	6	0	0	1	0	0	0	0	0	0	0	0	1	0	17	316
6:55 PM	0	9	3	0	1	4	0	0	0	0	0	0	9	0	0	0	26	324

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	376	76	0	12	72	0	0	0	0	0	0	92	0	28	0	656
Heavy Trucks	0	0	0		0	0	0		0	0	0		0	0	0		0
Buses																	
Pedestrians		0				0				16				0			16
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
Scooters																	

Comments:

Report generated on 8/4/2023 11:36 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

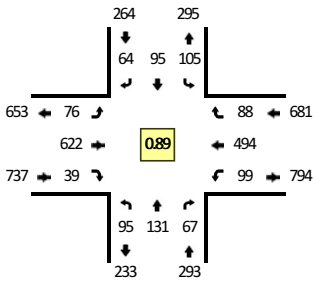
Type of peak hour being reported: Intersection Peak

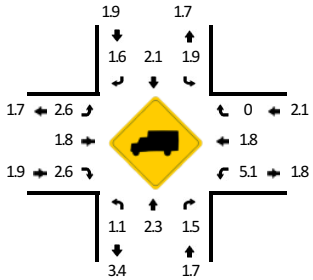
Method for determining peak hour: Total Entering Volume

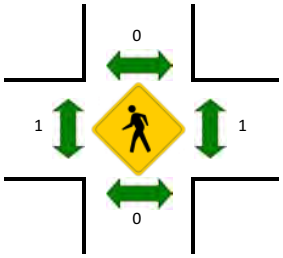
LOCATION: S Ivy St -- OR 99E
CITY/STATE: Canby, OR

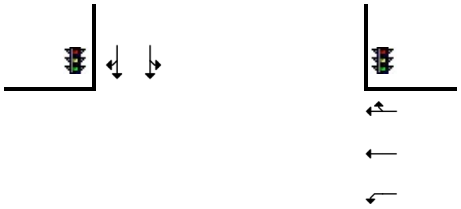
QC JOB #: 16258908
DATE: Sat, Jul 1 2023

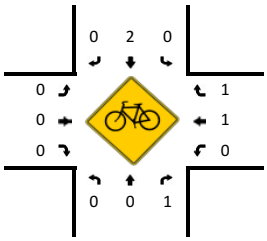
Peak-Hour: 4:30 PM -- 5:30 PM
Peak 15-Min: 4:55 PM -- 5:10 PM

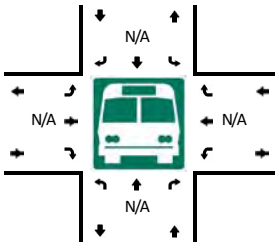


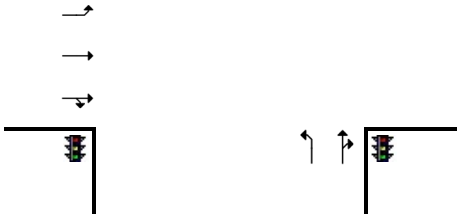


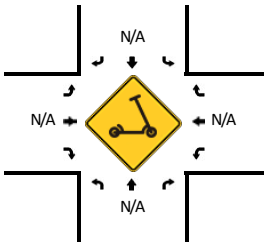












5-Min Count Period Beginning At	S Ivy St (Northbound)				S Ivy St (Southbound)				OR 99E (Eastbound)				OR 99E (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:30 PM	8	9	6	0	3	9	11	0	8	53	7	0	7	40	8	0	169	
4:35 PM	4	8	4	0	7	7	8	0	7	47	4	0	9	47	8	0	160	
4:40 PM	5	13	5	0	7	3	4	0	3	40	1	0	7	36	7	0	131	
4:45 PM	4	11	5	0	6	3	4	0	2	37	1	0	11	40	7	0	131	
4:50 PM	11	11	6	0	13	9	5	0	11	45	8	0	6	42	3	0	170	
4:55 PM	3	16	4	0	4	8	1	0	5	58	8	0	12	55	9	0	183	
5:00 PM	14	11	7	0	14	9	6	0	5	63	1	0	11	47	10	0	198	
5:05 PM	9	11	4	0	11	7	1	0	11	66	1	0	10	35	5	0	171	
5:10 PM	10	9	6	0	11	11	6	0	6	42	2	0	6	39	5	0	153	
5:15 PM	7	9	9	0	7	8	9	0	6	57	1	0	5	36	13	0	167	
5:20 PM	7	10	6	0	10	14	3	0	5	53	2	0	2	38	9	0	159	
5:25 PM	13	13	5	0	12	7	6	0	7	61	3	0	13	39	4	0	183	1975
5:30 PM	9	8	4	0	2	13	4	0	6	43	2	0	9	32	14	0	146	1952
5:35 PM	8	7	3	0	6	8	9	0	10	45	0	0	6	36	4	0	142	1934
5:40 PM	12	11	4	0	7	7	3	0	10	54	0	0	3	25	10	0	146	1949
5:45 PM	12	7	4	0	5	5	6	0	11	44	2	0	7	33	12	0	148	1966
5:50 PM	14	11	5	0	14	6	5	0	10	45	1	0	2	28	8	1	150	1946
5:55 PM	6	4	8	0	6	3	3	0	4	45	1	0	3	29	12	0	124	1887
6:00 PM	9	8	6	0	14	10	6	0	5	35	1	0	3	39	11	0	147	1836
6:05 PM	7	8	5	0	15	11	3	0	5	51	0	0	5	35	11	0	156	1821
6:10 PM	10	8	5	0	6	13	4	0	3	41	0	0	4	31	18	0	143	1811
6:15 PM	7	11	6	0	8	6	10	0	5	34	0	0	2	33	7	0	129	1773
6:20 PM	9	8	9	0	4	3	8	0	5	29	1	0	5	32	10	0	123	1737
6:25 PM	3	4	5	0	6	6	1	0	8	29	0	0	5	28	8	0	103	1657
6:30 PM	9	13	8	0	7	7	6	0	2	37	1	0	1	43	13	1	148	1659
6:35 PM	4	2	9	0	4	5	4	0	7	40	0	0	5	34	7	0	121	1638
6:40 PM	6	5	5	0	6	12	5	0	5	35	3	0	6	28	8	0	124	1616
6:45 PM	3	6	2	0	3	10	6	0	5	49	0	0	11	32	6	0	133	1601
6:50 PM	9	10	6	0	6	7	6	0	4	37	3	0	6	22	5	0	121	1572
6:55 PM	9	10	2	0	0	3	4	0	6	30	0	0	6	30	6	0	106	1554

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	104	152	60	0	116	96	32	0	84	748	40	0	132	548	96	0	2208
Heavy Trucks	0	0	0		4	0	4		0	4	4		8	0	0		24
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
Scooters																	

Comments:

Report generated on 8/4/2023 11:36 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

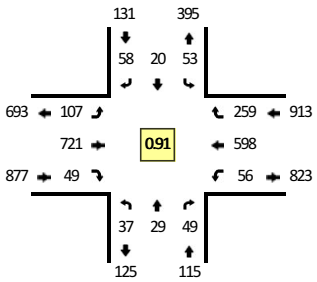
Type of peak hour being reported: Intersection Peak

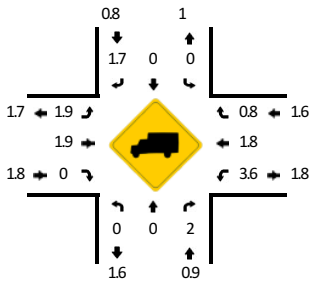
Method for determining peak hour: Total Entering Volume

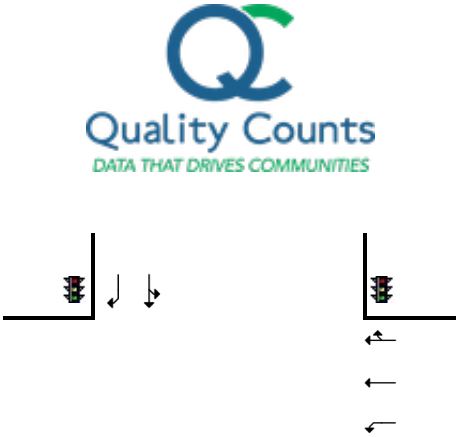
LOCATION: NE 4th Ave/S Pine St -- OR 99E
CITY/STATE: Canby, OR

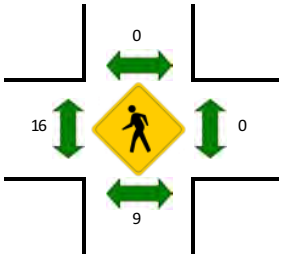
QC JOB #: 16258904
DATE: Sat, Jul 1 2023

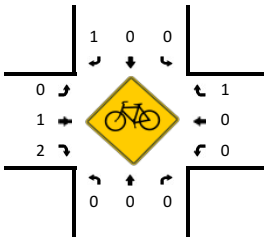
Peak-Hour: 4:30 PM -- 5:30 PM
Peak 15-Min: 4:55 PM -- 5:10 PM

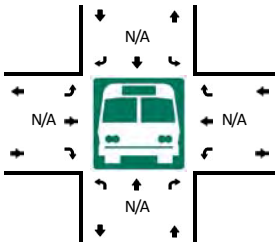


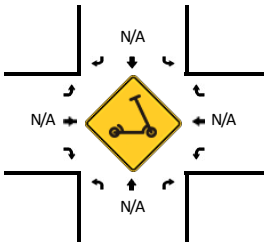












5-Min Count Period Beginning At	NE 4th Ave/S Pine St (Northbound)				NE 4th Ave/S Pine St (Southbound)				OR 99E (Eastbound)				OR 99E (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:30 PM	2	4	5	0	2	1	6	0	8	50	4	0	3	56	13	0	154	
4:35 PM	4	5	3	0	2	1	4	0	5	42	2	0	4	57	14	0	143	
4:40 PM	0	1	4	0	5	1	6	0	10	73	5	0	6	43	12	0	166	
4:45 PM	3	1	2	0	7	1	2	0	8	73	3	0	4	54	15	0	173	
4:50 PM	4	3	4	0	4	2	5	0	10	57	1	0	4	44	23	0	161	
4:55 PM	5	3	3	0	4	2	4	0	12	61	5	0	3	64	26	0	192	
5:00 PM	3	2	3	0	4	4	8	0	5	77	2	0	4	59	27	0	198	
5:05 PM	4	1	6	0	8	0	4	0	11	60	6	0	6	34	28	0	168	
5:10 PM	3	1	4	0	5	1	7	0	10	61	5	0	6	46	28	0	177	
5:15 PM	3	5	3	0	6	5	3	0	4	47	4	0	5	41	23	0	149	
5:20 PM	5	2	8	0	6	1	2	0	12	65	5	0	5	45	26	0	182	
5:25 PM	1	1	4	0	0	1	7	0	12	55	7	0	6	55	24	0	173	2036
5:30 PM	4	1	5	0	1	0	7	0	5	44	5	0	7	41	20	0	140	2022
5:35 PM	4	2	5	0	7	1	2	0	3	48	4	0	5	43	17	0	141	2020
5:40 PM	9	0	8	0	3	1	2	0	4	59	6	0	2	35	18	0	147	2001
5:45 PM	2	3	8	0	4	2	4	0	2	58	4	1	3	47	15	0	153	1981
5:50 PM	4	0	8	0	3	0	3	0	1	45	4	0	3	35	11	0	117	1937
5:55 PM	3	2	3	0	1	2	1	0	7	51	4	1	3	48	4	1	131	1876
6:00 PM	3	0	5	0	2	2	1	0	1	48	2	0	4	42	10	0	120	1798
6:05 PM	4	1	3	0	10	1	4	0	3	50	4	0	4	43	11	1	139	1769
6:10 PM	0	0	9	0	3	1	4	0	2	60	2	0	3	54	11	0	149	1741
6:15 PM	4	2	3	0	4	2	7	0	4	33	5	0	8	43	6	0	121	1713
6:20 PM	3	0	7	0	5	2	4	0	0	50	6	0	3	41	20	0	141	1672
6:25 PM	6	0	4	0	1	1	3	0	0	31	6	0	6	48	23	0	129	1628
6:30 PM	3	0	3	0	6	1	3	0	2	40	1	0	2	54	14	0	129	1617
6:35 PM	4	1	1	0	3	2	6	0	3	54	5	0	5	36	18	0	138	1614
6:40 PM	4	4	4	0	2	0	5	0	1	27	4	0	0	36	7	0	94	1561
6:45 PM	1	2	1	0	4	1	4	0	5	55	2	0	2	36	4	0	117	1525
6:50 PM	1	4	4	0	0	2	0	0	6	40	2	0	1	33	5	0	98	1506
6:55 PM	5	1	3	0	5	1	7	0	3	39	1	0	5	38	8	0	116	1491

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	48	24	48	0	64	24	64	0	112	792	52	0	52	628	324	0	2232
Heavy Trucks	0	0	0		0	0	0		4	12	0		0	0	0		16
Buses																	
Pedestrians		20				0				24				0			44
Bicycles	0	0	0		0	0	0		0	4	8		0	0	0		12

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
Scooters																	

Comments:

Report generated on 8/4/2023 11:36 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

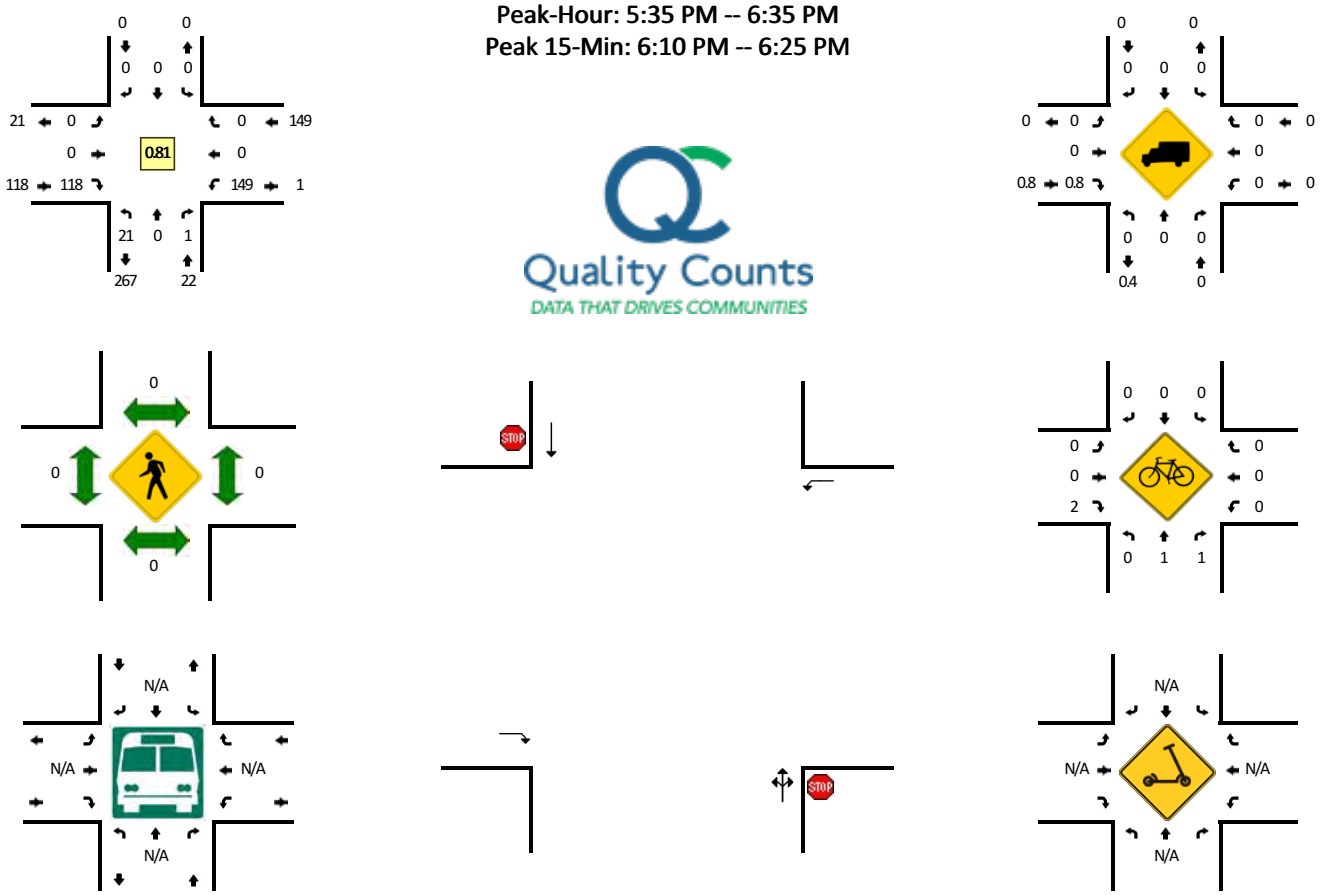
Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

LOCATION: West Fairgrounds Entrance -- NE 4th Ave
CITY/STATE: Canby, OR

QC JOB #: 16258931
DATE: Sat, Jul 1 2023

Peak-Hour: 5:35 PM -- 6:35 PM
Peak 15-Min: 6:10 PM -- 6:25 PM



5-Min Count Period Beginning At	West Fairgrounds Entrance (Northbound)				West Fairgrounds Entrance (Southbound)				NE 4th Ave (Eastbound)				NE 4th Ave (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:30 PM	0	0	0	0	0	0	0	0	0	0	3	0	1	0	0	0	4	
4:35 PM	1	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	7	
4:40 PM	1	0	0	0	0	0	0	0	0	0	8	0	0	0	0	0	9	
4:45 PM	1	0	0	0	0	0	0	0	0	0	7	0	0	0	0	0	8	
4:50 PM	0	0	0	0	0	0	0	0	0	0	9	0	0	0	0	0	9	
4:55 PM	2	0	0	0	0	0	0	0	0	0	9	0	2	0	0	0	13	
5:00 PM	0	0	0	0	0	0	0	0	0	0	10	0	1	0	0	0	11	
5:05 PM	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	3	
5:10 PM	0	0	1	0	0	0	0	0	0	0	7	0	0	0	0	0	8	
5:15 PM	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	4	
5:20 PM	0	0	0	0	0	0	0	0	0	0	7	0	0	0	0	0	7	
5:25 PM	0	1	0	0	0	0	0	0	0	0	5	0	4	0	0	0	10	93
5:30 PM	0	0	0	0	0	0	0	0	0	0	12	0	3	0	0	0	15	104
5:35 PM	1	0	0	0	0	0	0	0	0	0	7	0	17	0	0	0	25	122
5:40 PM	0	0	0	0	0	0	0	0	0	0	8	0	5	0	0	0	13	126
5:45 PM	2	0	0	0	0	0	0	0	0	0	11	0	15	0	0	0	28	146
5:50 PM	1	0	1	0	0	0	0	0	0	0	12	0	9	0	0	0	23	160
5:55 PM	5	0	0	0	0	0	0	0	0	0	9	0	9	0	0	0	23	170
6:00 PM	2	0	0	0	0	0	0	0	0	0	13	0	14	0	0	0	29	188
6:05 PM	3	0	0	0	0	0	0	0	0	0	10	0	10	0	0	0	23	208
6:10 PM	1	0	0	0	0	0	0	0	0	0	12	0	13	0	0	0	26	226
6:15 PM	4	0	0	0	0	0	0	0	0	0	12	0	17	0	0	0	33	255
6:20 PM	1	0	0	0	0	0	0	0	0	0	8	0	21	0	0	0	30	278
6:25 PM	0	0	0	0	0	0	0	0	0	0	8	0	11	0	0	0	19	287
6:30 PM	1	0	0	0	0	0	0	0	0	0	8	0	8	0	0	0	17	289
6:35 PM	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	6	270
6:40 PM	0	0	0	0	0	0	0	0	0	0	7	0	4	0	0	0	11	268
6:45 PM	0	0	1	0	0	0	0	0	0	0	6	0	2	0	0	0	9	249
6:50 PM	2	0	0	0	0	0	0	0	0	0	3	0	2	0	0	0	7	233
6:55 PM	0	0	0	0	0	0	0	0	0	0	1	0	4	0	0	0	5	215
7:00 PM	0	0	0	0	0	0	0	0	0	0	3	0	4	0	0	0	7	193
7:05 PM	0	0	0	0	0	0	0	0	0	0	2	0	1	0	0	0	3	173
7:10 PM	0	0	0	0	0	0	0	0	0	0	2	0	1	0	0	0	3	150
7:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	118
7:20 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	89
7:25 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	70

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	24	0	0	0	0	0	0	0	0	0	128	0	204	0	0	0	356
Heavy Trucks	0	0	0		0	0	0		0	0	0		0	0	0		0
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	4		0	0	0		4
Scooters																	

Comments:

Report generated on 7/25/2023 8:34 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

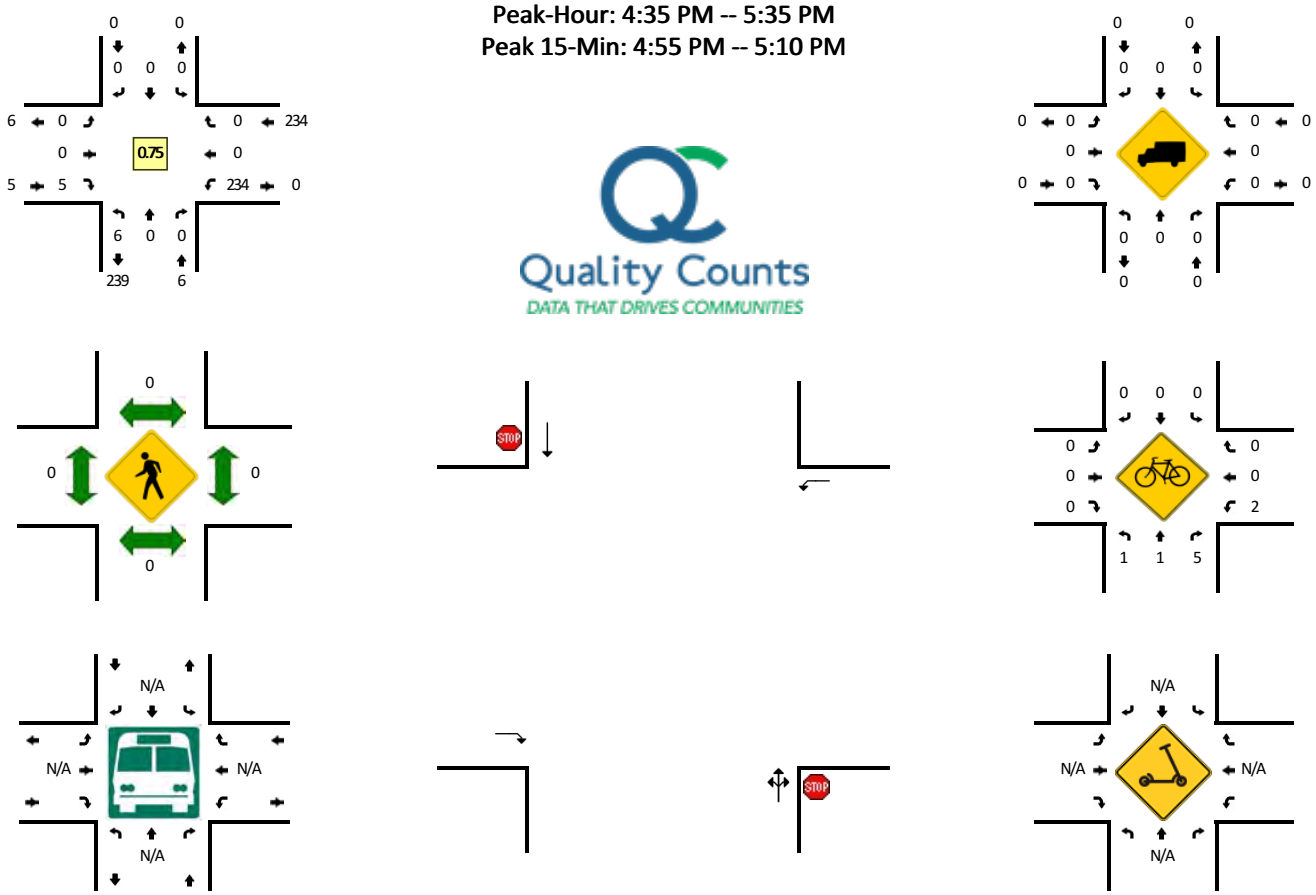
Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

LOCATION: East Fairgrounds Entrance -- NE 4th Ave
CITY/STATE: Canby, OR

QC JOB #: 16258933
DATE: Sat, Jul 1 2023

Peak-Hour: 4:35 PM -- 5:35 PM
Peak 15-Min: 4:55 PM -- 5:10 PM



5-Min Count Period Beginning At	East Fairgrounds Entrance (Northbound)				East Fairgrounds Entrance (Southbound)				NE 4th Ave (Eastbound)				NE 4th Ave (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	0	7	
4:35 PM	0	0	0	0	0	0	0	0	0	0	1	0	11	0	0	0	12	
4:40 PM	0	0	0	0	0	0	0	0	0	0	0	0	14	0	0	0	14	
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	18	0	0	0	18	
4:50 PM	0	0	0	0	0	0	0	0	0	0	0	0	20	0	0	0	20	
4:55 PM	1	0	0	0	0	0	0	0	0	0	0	0	27	0	0	0	28	
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	25	0	0	0	25	
5:05 PM	1	0	0	0	0	0	0	0	0	0	1	0	27	0	0	0	29	
5:10 PM	0	0	0	0	0	0	0	0	0	0	2	0	22	0	0	0	24	
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	23	0	0	0	23	
5:20 PM	0	0	0	0	0	0	0	0	0	0	0	0	18	0	0	0	18	
5:25 PM	0	0	0	0	0	0	0	0	0	0	1	0	15	0	0	0	16	234
5:30 PM	4	0	0	0	0	0	0	0	0	0	0	0	14	0	0	0	18	245
5:35 PM	2	0	0	0	0	0	0	0	0	0	1	0	8	0	0	0	11	244
5:40 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	231
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	213
5:50 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	194
5:55 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	167
6:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	143
6:05 PM	0	0	1	0	0	0	0	0	0	0	1	0	1	0	0	0	3	117
6:10 PM	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	95
6:15 PM	1	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	4	76
6:20 PM	1	0	0	0	0	0	0	0	0	0	1	0	2	0	0	0	4	62
6:25 PM	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	49
6:30 PM	1	0	1	0	0	0	0	0	0	0	1	0	2	0	0	0	5	36
6:35 PM	2	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	5	30
6:40 PM	1	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	3	32
6:45 PM	2	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	4	36
6:50 PM	1	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	3	38
6:55 PM	1	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	3	40
7:00 PM	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	2	41
7:05 PM	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	2	40
7:10 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	38
7:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	34
7:20 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	30
7:25 PM	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	2	29

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	8	0	0	0	0	0	0	0	0	0	4	0	316	0	0	0	328
Heavy Trucks	0	0	0		0	0	0		0	0	0		0	0	0		0
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	4	4		0	0	0		0	0	0		4	0	0		12
Scooters																	

Comments:

Report generated on 7/25/2023 8:34 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

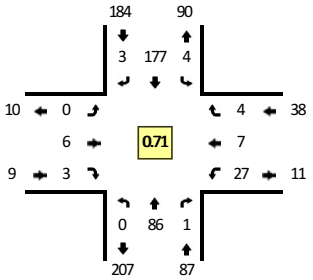
Type of peak hour being reported: Intersection Peak

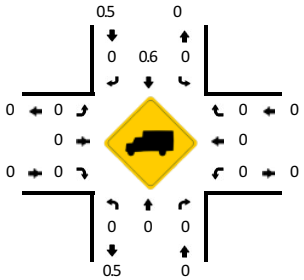
Method for determining peak hour: Total Entering Volume

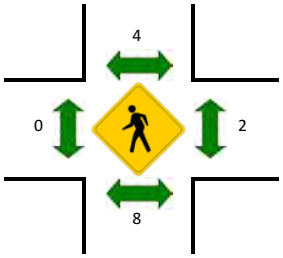
LOCATION: N Ivy St -- 3rd Ave
CITY/STATE: Canby, OR

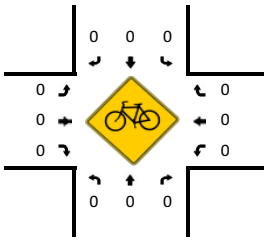
QC JOB #: 16258938
DATE: Sat, Jul 1 2023

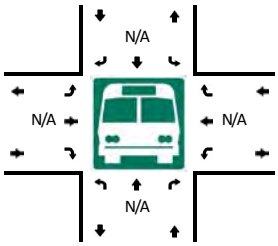
Peak-Hour: 9:45 PM -- 10:45 PM
Peak 15-Min: 10:10 PM -- 10:25 PM

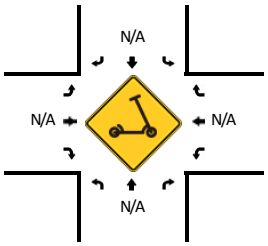












5-Min Count Period Beginning At	N Ivy St (Northbound)				N Ivy St (Southbound)				3rd Ave (Eastbound)				3rd Ave (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
9:30 PM	1	6	0	0	0	12	0	0	0	0	1	0	0	0	1	0	21	
9:35 PM	0	6	0	0	0	7	1	0	0	0	1	0	2	0	0	0	17	
9:40 PM	0	5	0	0	0	7	0	0	0	2	0	0	1	1	0	0	16	
9:45 PM	0	4	0	0	1	9	1	0	0	0	0	0	1	0	0	0	16	
9:50 PM	0	4	0	0	0	9	0	0	0	0	0	0	0	0	0	0	13	
9:55 PM	0	12	0	0	0	7	0	0	0	1	0	0	2	0	0	0	22	
10:00 PM	0	5	1	0	1	10	0	0	0	0	1	0	2	0	1	0	21	
10:05 PM	0	6	0	0	0	11	1	0	0	1	0	0	0	0	1	0	20	
10:10 PM	0	6	0	0	1	20	0	0	0	1	0	0	4	2	2	0	36	
10:15 PM	0	10	0	0	0	22	1	0	0	0	0	0	7	3	0	0	43	
10:20 PM	0	5	0	0	1	19	0	0	0	0	1	0	7	0	0	0	33	
10:25 PM	0	6	0	0	0	23	0	0	0	0	0	0	1	0	0	0	30	288
10:30 PM	0	8	0	0	0	16	0	0	0	1	1	0	3	1	0	0	30	297
10:35 PM	0	8	0	0	0	16	0	0	0	2	0	0	0	1	0	0	27	307
10:40 PM	0	12	0	0	0	15	0	0	0	0	0	0	0	0	0	0	27	318
10:45 PM	0	4	1	0	1	6	0	0	1	1	0	0	0	0	1	0	15	317
10:50 PM	0	6	0	0	0	4	0	0	0	0	1	0	0	0	0	0	11	315
10:55 PM	0	2	0	0	0	1	0	0	0	0	0	0	0	0	0	0	3	296
11:00 PM	0	2	1	0	0	2	0	0	0	0	0	0	0	0	0	0	5	280
11:05 PM	0	5	0	0	0	3	0	0	0	0	1	0	0	0	0	0	9	269
11:10 PM	1	2	0	0	0	1	0	0	0	0	0	0	1	1	0	0	6	239
11:15 PM	0	2	0	0	0	2	0	0	0	0	0	0	1	0	0	0	5	201
11:20 PM	0	6	0	0	0	4	0	0	0	0	0	0	0	0	0	0	10	178
11:25 PM	0	4	0	0	0	1	0	0	0	0	0	0	0	0	0	0	5	153

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	84	0	0	8	244	4	0	0	4	4	0	72	20	8	0	448
Heavy Trucks	0	0	0		0	0	0		0	0	0		0	0	0		0
Buses																	
Pedestrians		16				16				0				0			32
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 8/3/2023 2:41 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

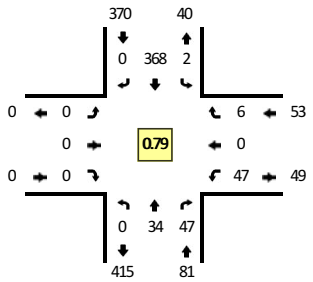
Type of peak hour being reported: Intersection Peak

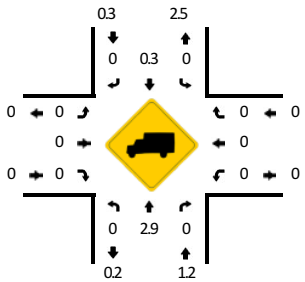
Method for determining peak hour: Total Entering Volume

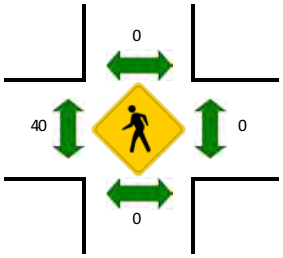
LOCATION: NE 4th Ave -- N Pine St
CITY/STATE: Canby, OR

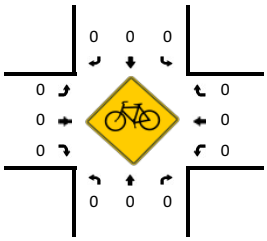
QC JOB #: 16258937
DATE: Sat, Jul 1 2023

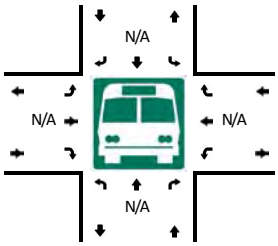
Peak-Hour: 9:45 PM -- 10:45 PM
Peak 15-Min: 10:10 PM -- 10:25 PM

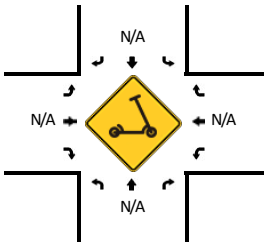












5-Min Count Period Beginning At	NE 4th Ave (Northbound)				NE 4th Ave (Southbound)				N Pine St (Eastbound)				N Pine St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
9:30 PM	0	1	7	0	0	17	0	0	0	0	0	0	2	0	1	0	28	
9:35 PM	0	6	0	0	0	11	0	0	0	0	0	0	6	0	0	0	23	
9:40 PM	0	7	8	0	0	10	0	0	0	0	0	0	9	0	2	0	36	
9:45 PM	0	5	6	0	0	17	0	0	0	0	0	0	6	0	0	0	34	
9:50 PM	0	4	5	0	0	22	0	0	0	0	0	0	3	0	0	0	34	
9:55 PM	0	5	3	0	2	21	0	0	0	0	0	0	4	0	1	0	36	
10:00 PM	0	3	8	0	0	22	0	0	0	0	0	0	4	0	2	0	39	
10:05 PM	0	6	3	0	0	21	0	0	0	0	0	0	3	0	0	0	33	
10:10 PM	0	2	6	0	0	46	0	0	0	0	0	0	6	0	0	0	60	
10:15 PM	0	3	3	0	0	51	0	0	0	0	0	0	2	0	0	0	59	
10:20 PM	0	0	3	0	0	35	0	0	0	0	0	0	3	0	0	0	41	
10:25 PM	0	3	3	0	0	31	0	0	0	0	0	0	4	0	2	0	43	466
10:30 PM	0	0	2	0	0	27	0	0	0	0	0	0	1	0	0	0	30	468
10:35 PM	0	2	3	0	0	37	0	0	0	0	0	0	9	0	1	0	52	497
10:40 PM	0	1	2	0	0	38	0	0	0	0	0	0	2	0	0	0	43	504
10:45 PM	0	0	2	0	0	25	0	0	0	0	0	0	7	0	0	0	34	504
10:50 PM	0	2	1	0	0	8	0	0	0	0	0	0	3	0	0	0	14	484
10:55 PM	0	1	2	0	0	3	0	0	0	0	0	0	2	0	0	0	8	456
11:00 PM	0	2	2	0	0	0	0	0	0	0	0	0	3	0	0	0	7	424
11:05 PM	0	1	1	0	1	2	0	0	0	0	0	0	3	0	0	0	8	399
11:10 PM	0	1	4	0	0	6	0	0	0	0	0	0	1	0	0	0	12	351
11:15 PM	0	0	3	0	0	2	0	0	0	0	0	0	1	0	0	0	6	298
11:20 PM	0	1	3	0	2	2	0	0	0	0	0	0	3	0	0	0	11	268
11:25 PM	0	4	3	0	0	2	0	0	0	0	0	0	4	0	0	0	13	238

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	20	48	0	0	528	0	0	0	0	0	0	44	0	0	0	640
Heavy Trucks	0	0	0		0	0	0		0	0	0		0	0	0		0
Buses																	
Pedestrians		0				0				36				0			36
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 8/3/2023 2:41 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

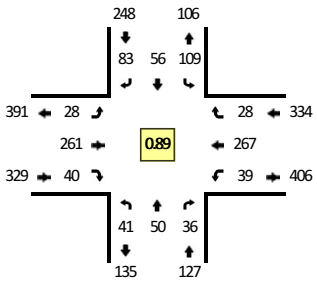
Type of peak hour being reported: Intersection Peak

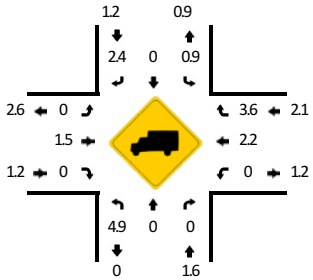
Method for determining peak hour: Total Entering Volume

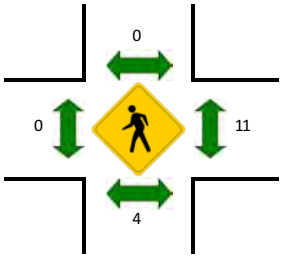
LOCATION: S Ivy St -- OR 99E
CITY/STATE: Canby, OR

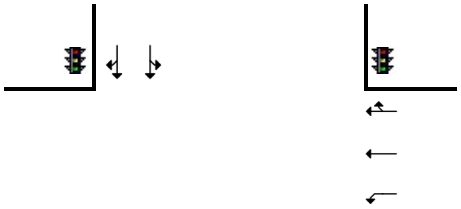
QC JOB #: 16258936
DATE: Sat, Jul 1 2023

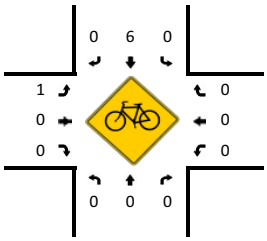
Peak-Hour: 9:35 PM -- 10:35 PM
Peak 15-Min: 10:10 PM -- 10:25 PM

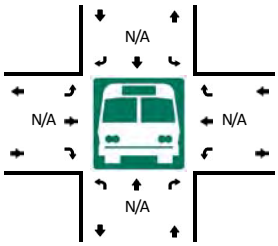


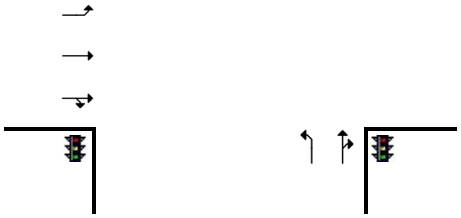


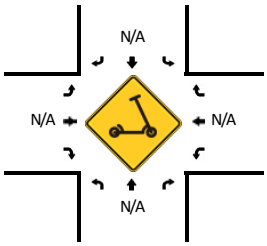












5-Min Count Period Beginning At	S Ivy St (Northbound)				S Ivy St (Southbound)				OR 99E (Eastbound)				OR 99E (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
9:30 PM	3	1	1	0	7	7	6	0	3	30	5	0	4	16	3	0	86	
9:35 PM	1	4	5	0	7	8	8	0	6	15	2	0	5	19	2	0	82	
9:40 PM	5	5	2	0	7	4	6	0	2	27	3	0	1	26	6	0	94	
9:45 PM	6	1	2	0	3	6	2	0	1	27	5	0	2	17	4	0	76	
9:50 PM	4	4	0	0	4	4	9	0	5	15	2	0	0	28	0	0	75	
9:55 PM	6	6	1	0	3	3	6	0	3	15	6	0	4	27	1	0	81	
10:00 PM	6	5	6	0	6	5	7	0	1	29	2	0	2	20	1	0	90	
10:05 PM	2	6	4	0	4	3	3	0	2	14	5	0	2	26	1	0	72	
10:10 PM	1	3	4	0	11	1	8	0	3	26	5	0	9	24	5	0	100	
10:15 PM	2	3	2	0	14	5	15	0	1	22	1	0	7	25	2	0	99	
10:20 PM	1	4	4	0	20	11	6	0	1	24	4	0	1	17	0	0	93	
10:25 PM	3	4	2	0	14	2	8	0	2	23	3	0	4	17	3	0	85	1033
10:30 PM	4	5	4	0	16	4	5	0	1	24	2	0	2	21	3	0	91	1038
10:35 PM	1	4	1	0	10	4	3	0	5	17	1	0	2	19	1	0	68	1024
10:40 PM	6	6	3	0	4	2	4	0	1	15	3	0	8	28	1	0	81	1011
10:45 PM	5	2	0	0	7	3	2	0	3	14	2	0	3	21	1	0	63	998
10:50 PM	4	3	3	0	1	1	2	0	0	18	3	0	2	18	1	0	56	979
10:55 PM	1	1	1	0	2	2	4	0	2	23	2	0	5	12	2	0	57	955
11:00 PM	4	2	2	0	1	4	0	0	0	12	1	0	3	5	2	0	36	901
11:05 PM	4	4	1	0	1	2	2	0	2	10	2	0	5	9	1	0	43	872
11:10 PM	2	0	2	0	5	3	3	0	1	24	2	0	1	8	2	0	53	825
11:15 PM	0	0	2	0	0	2	1	0	1	12	3	0	1	11	0	0	33	759
11:20 PM	1	4	0	0	1	2	1	0	3	12	3	0	1	8	0	0	36	702
11:25 PM	1	5	3	0	2	1	1	0	1	11	1	0	0	12	1	0	39	656

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	16	40	40	0	180	68	116	0	20	288	40	0	68	264	28	0	1168
Heavy Trucks	0	0	0		4	0	0		0	4	0		0	4	0		12
Buses																	
Pedestrians		0				0				0				24			24
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 8/3/2023 2:41 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

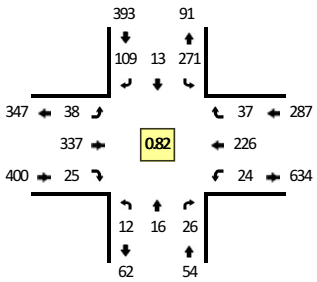
Type of peak hour being reported: Intersection Peak

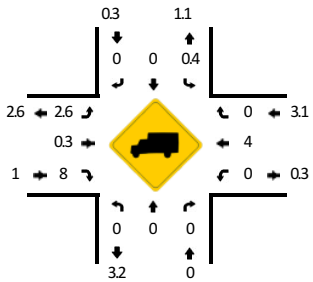
Method for determining peak hour: Total Entering Volume

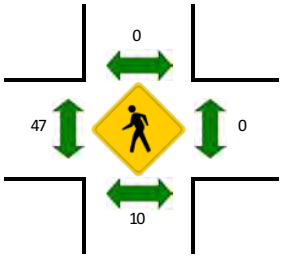
LOCATION: NE 4th Ave/S Pine St -- OR 99E
CITY/STATE: Canby, OR

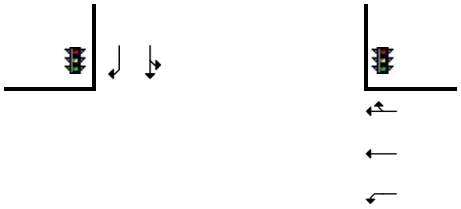
QC JOB #: 16258935
DATE: Sat, Jul 1 2023

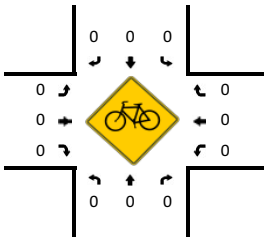
Peak-Hour: 9:40 PM -- 10:40 PM
Peak 15-Min: 10:10 PM -- 10:25 PM

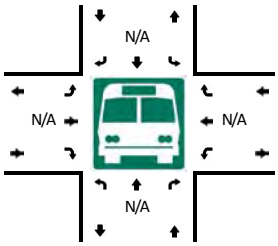


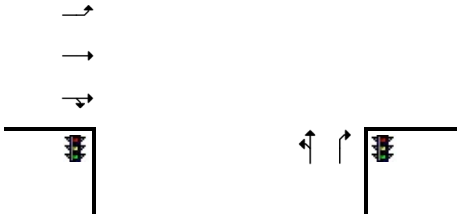


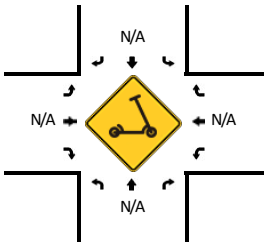












5-Min Count Period Beginning At	NE 4th Ave/S Pine St (Northbound)				NE 4th Ave/S Pine St (Southbound)				OR 99E (Eastbound)				OR 99E (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
9:30 PM	3	1	1	0	17	0	2	0	3	32	0	0	1	15	4	0	79	
9:35 PM	2	3	0	0	8	0	8	0	1	25	1	0	2	20	3	0	73	
9:40 PM	0	2	1	0	10	2	7	0	6	30	1	0	4	30	6	0	99	
9:45 PM	2	2	1	0	16	3	3	0	3	23	3	0	3	13	6	0	78	
9:50 PM	0	1	1	0	17	0	8	0	5	14	3	0	3	26	3	0	81	
9:55 PM	1	2	3	0	14	2	10	0	2	15	1	0	1	15	4	0	70	
10:00 PM	1	1	1	0	19	2	6	0	5	34	1	0	1	18	4	0	93	
10:05 PM	3	3	4	0	17	0	6	0	1	16	2	0	1	25	5	0	83	
10:10 PM	2	4	7	0	35	0	14	0	5	31	2	0	3	28	1	0	132	
10:15 PM	2	0	4	0	42	2	12	0	2	38	0	0	2	11	2	0	117	
10:20 PM	0	0	0	0	27	0	11	0	1	37	4	0	0	15	2	0	97	
10:25 PM	1	0	0	0	22	0	13	0	3	34	2	0	1	12	3	0	91	1093
10:30 PM	0	0	1	0	17	1	9	0	2	39	4	0	3	17	0	0	93	1107
10:35 PM	0	1	3	0	35	1	10	0	3	26	2	0	2	16	1	0	100	1134
10:40 PM	0	1	2	0	30	1	9	0	1	19	2	0	2	25	1	0	93	1128
10:45 PM	0	1	0	0	24	1	10	0	0	21	3	0	1	10	1	0	72	1122
10:50 PM	0	1	0	0	5	1	4	0	1	18	0	0	1	24	1	0	56	1097
10:55 PM	0	0	0	0	2	0	4	0	1	23	2	0	1	14	2	0	49	1076
11:00 PM	2	0	2	0	1	1	1	0	1	12	1	0	0	13	3	0	37	1020
11:05 PM	1	0	0	0	2	0	2	0	1	11	2	0	1	9	1	0	30	967
11:10 PM	0	0	1	0	5	1	2	0	5	22	1	0	3	13	0	0	53	888
11:15 PM	0	1	2	0	1	1	1	0	2	10	0	0	0	6	0	0	24	795
11:20 PM	0	0	1	0	0	0	4	0	3	11	0	0	0	10	1	0	30	728
11:25 PM	0	2	4	0	3	0	4	0	3	12	1	0	1	10	2	0	42	679

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	16	16	44	0	416	8	148	0	32	424	24	0	20	216	20	0	1384
Heavy Trucks	0	0	0		0	0	0		0	0	4		0	8	0		12
Buses																	
Pedestrians		16				0				44				0			60
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 8/3/2023 2:41 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

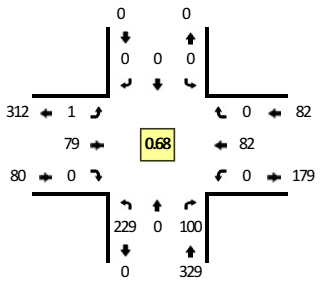
Type of peak hour being reported: Intersection Peak

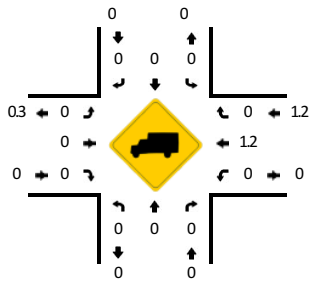
Method for determining peak hour: Total Entering Volume

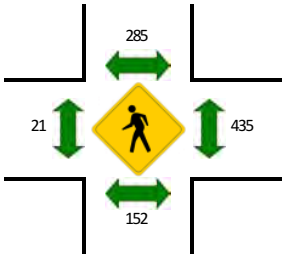
LOCATION: West Fairgrounds Entrance -- NE 4th Ave
CITY/STATE: Canby, OR

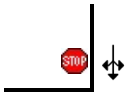
QC JOB #: 16258939
DATE: Sat, Jul 1 2023

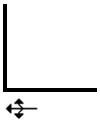
Peak-Hour: 9:40 PM -- 10:40 PM
Peak 15-Min: 10:10 PM -- 10:25 PM

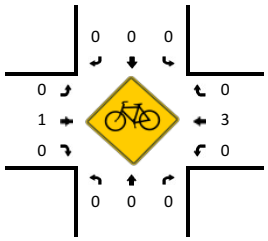


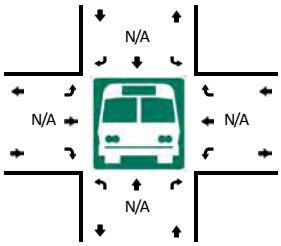


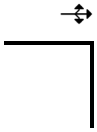


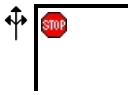


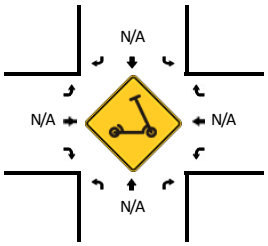












5-Min Count Period Beginning At	West Fairgrounds Entrance (Northbound)				West Fairgrounds Entrance (Southbound)				NE 4th Ave (Eastbound)				NE 4th Ave (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
9:30 PM	2	0	4	0	0	0	0	0	0	6	0	0	0	2	0	0	14	
9:35 PM	0	0	7	0	0	0	0	0	0	0	0	0	0	6	0	0	13	
9:40 PM	9	0	4	0	0	0	0	0	0	5	0	0	0	9	0	0	27	
9:45 PM	6	0	5	0	0	0	0	0	0	6	0	0	0	5	0	0	22	
9:50 PM	13	0	9	0	0	0	0	0	0	8	0	0	0	5	0	0	35	
9:55 PM	6	0	12	0	0	0	0	0	0	3	0	0	0	7	0	0	28	
10:00 PM	6	0	5	0	0	0	0	0	0	3	0	0	0	5	0	0	19	
10:05 PM	24	0	10	0	0	0	0	0	0	3	0	0	0	5	0	0	42	
10:10 PM	30	0	11	0	0	0	0	0	0	12	0	0	0	15	0	0	68	
10:15 PM	28	0	16	0	0	0	0	0	0	14	0	0	0	7	0	0	65	
10:20 PM	20	0	8	0	0	0	0	0	0	13	0	0	0	7	0	0	48	
10:25 PM	33	0	6	0	0	0	0	0	0	4	0	0	0	6	0	0	49	430
10:30 PM	40	0	4	0	0	0	0	0	0	6	0	1	0	5	0	0	56	472
10:35 PM	14	0	10	0	0	0	0	0	0	2	0	0	0	6	0	0	32	491
10:40 PM	2	0	2	0	0	0	0	0	0	0	0	0	0	22	0	0	26	490
10:45 PM	1	0	2	0	0	0	0	0	0	3	0	0	0	4	0	0	10	478
10:50 PM	0	0	0	0	0	0	0	0	0	3	0	0	0	1	0	0	4	447
10:55 PM	1	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	7	426
11:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	409
11:05 PM	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2	369
11:10 PM	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	0	4	305
11:15 PM	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	2	242
11:20 PM	0	0	0	0	0	0	0	0	0	2	0	0	0	3	0	0	5	199
11:25 PM	1	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	5	155

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	312	0	140	0	0	0	0	0	0	156	0	0	0	116	0	0	724
Heavy Trucks	0	0	0		0	0	0		0	0	0		0	4	0		4
Buses																	
Pedestrians		68				276				56				448			848
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 8/3/2023 2:41 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

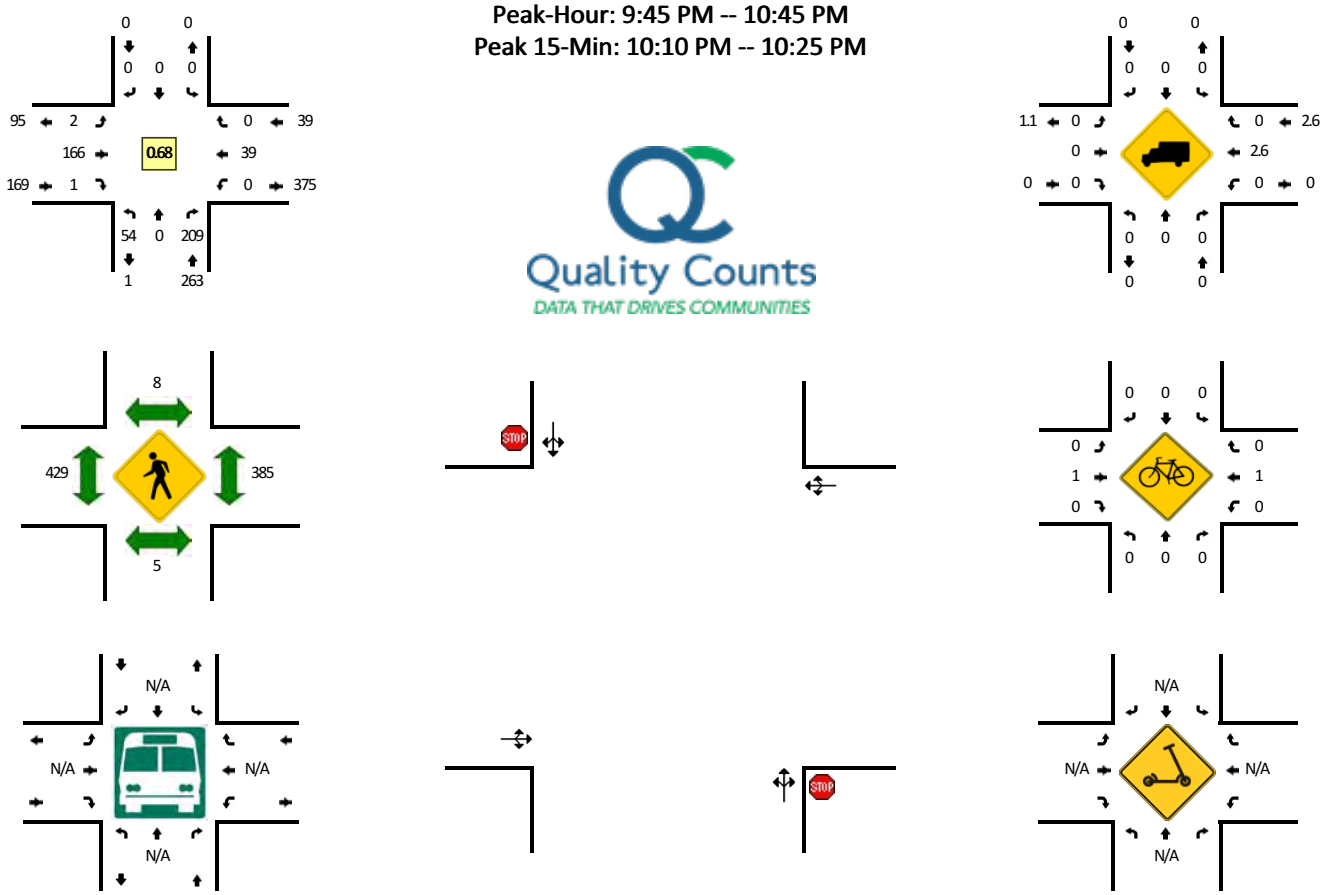
Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

LOCATION: East Fairgrounds Entrance -- NE 4th Ave
CITY/STATE: Canby, OR

QC JOB #: 16258940
DATE: Sat, Jul 1 2023

Peak-Hour: 9:45 PM -- 10:45 PM
Peak 15-Min: 10:10 PM -- 10:25 PM



5-Min Count Period Beginning At	East Fairgrounds Entrance (Northbound)				East Fairgrounds Entrance (Southbound)				NE 4th Ave (Eastbound)				NE 4th Ave (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
9:30 PM	0	0	2	0	0	0	0	0	0	10	0	0	0	2	0	0	14	
9:35 PM	0	0	5	0	0	0	0	0	0	6	0	0	0	6	0	0	17	
9:40 PM	0	0	6	0	0	0	0	0	0	10	0	0	0	9	0	0	25	
9:45 PM	0	0	2	0	0	0	0	0	0	9	0	0	0	5	0	0	16	
9:50 PM	1	0	8	0	0	0	0	0	0	18	0	0	0	4	0	0	31	
9:55 PM	1	0	8	0	0	0	0	0	0	13	1	0	0	6	0	0	29	
10:00 PM	1	0	15	0	0	0	0	0	0	8	0	0	0	4	0	0	28	
10:05 PM	1	0	14	0	0	0	0	0	0	7	0	0	0	5	0	0	27	
10:10 PM	13	0	29	0	0	0	0	0	0	23	0	0	0	2	0	0	67	
10:15 PM	3	0	27	0	0	0	0	0	0	25	0	0	0	3	0	0	58	
10:20 PM	6	0	22	0	0	0	0	0	0	20	0	0	0	0	0	0	48	
10:25 PM	3	0	18	0	0	0	0	0	0	11	0	0	0	5	0	0	37	397
10:30 PM	2	0	14	0	0	0	0	0	0	11	0	0	0	1	0	0	28	411
10:35 PM	3	0	18	0	0	0	0	0	0	16	0	1	0	3	0	0	41	435
10:40 PM	20	0	34	0	0	0	0	0	0	5	0	1	0	1	0	0	61	471
10:45 PM	2	0	6	0	0	0	1	0	0	5	0	0	0	0	0	0	14	469
10:50 PM	0	0	4	0	2	0	0	0	0	3	0	0	0	2	0	0	11	449
10:55 PM	1	0	0	0	2	0	2	0	0	0	0	0	0	2	0	0	7	427
11:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	401
11:05 PM	0	0	0	0	1	0	0	0	0	2	0	0	0	1	0	0	4	378
11:10 PM	0	0	1	0	2	0	0	0	0	2	0	0	0	1	0	0	6	317
11:15 PM	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2	261
11:20 PM	0	0	0	0	2	0	2	0	0	2	0	0	0	1	0	0	7	220
11:25 PM	0	0	0	0	2	0	1	0	0	0	0	0	0	3	1	0	7	190

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	88	0	312	0	0	0	0	0	0	272	0	0	0	20	0	0	692
Heavy Trucks	0	0	0		0	0	0		0	0	0		0	4	0		4
Buses																	
Pedestrians		8				0				64				380			452
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 8/3/2023 2:41 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Appendix B

Existing Traffic Operations

Intersection	
Int Delay, s/veh	2.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	27	27	8	4	5	9	209	14	11	190	9
Future Vol, veh/h	5	27	27	8	4	5	9	209	14	11	190	9
Conflicting Peds, #/hr	0	0	6	6	0	0	1	0	0	0	0	1
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	75	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	0	0	4	13	0	0	0	2	0	0	2	0
Mvmt Flow	5	30	30	9	4	5	10	230	15	12	209	10

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	501	504	221	532	502	238	220	0	0	245	0	0
Stage 1	239	239	-	258	258	-	-	-	-	-	-	-
Stage 2	262	265	-	274	244	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.24	7.23	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.23	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.23	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.336	3.617	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	484	473	814	441	474	806	1361	-	-	1333	-	-
Stage 1	769	711	-	723	698	-	-	-	-	-	-	-
Stage 2	747	693	-	709	708	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	470	464	808	396	465	806	1359	-	-	1333	-	-
Mov Cap-2 Maneuver	470	464	-	396	465	-	-	-	-	-	-	-
Stage 1	761	703	-	716	692	-	-	-	-	-	-	-
Stage 2	731	687	-	644	700	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	11.8	12.6	0.3	0.4
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1359	-	-	589	396	608	1333	-	-
HCM Lane V/C Ratio	0.007	-	-	0.101	0.022	0.016	0.009	-	-
HCM Control Delay (s)	7.7	-	-	11.8	14.3	11	7.7	-	-
HCM Lane LOS	A	-	-	B	B	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.3	0.1	0.1	0	-	-

Intersection	
Intersection Delay, s/veh	8.7
Intersection LOS	A

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	68	16	121	100	24	68
Future Vol, veh/h	68	16	121	100	24	68
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles, %	0	0	1	3	0	1
Mvmt Flow	83	20	148	122	29	83
Number of Lanes	1	1	1	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	2
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	2	0
HCM Control Delay	9.1	8.8	8.3
HCM LOS	A	A	A

Lane	NBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	0%	100%	0%	26%
Vol Thru, %	55%	0%	0%	74%
Vol Right, %	45%	0%	100%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	221	68	16	92
LT Vol	0	68	0	24
Through Vol	121	0	0	68
RT Vol	100	0	16	0
Lane Flow Rate	270	83	20	112
Geometry Grp	2	7	7	2
Degree of Util (X)	0.304	0.134	0.025	0.141
Departure Headway (Hd)	4.06	5.814	4.606	4.509
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	887	617	776	797
Service Time	2.075	3.548	2.339	2.53
HCM Lane V/C Ratio	0.304	0.135	0.026	0.141
HCM Control Delay	8.8	9.5	7.5	8.3
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	1.3	0.5	0.1	0.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	90	884	12	105	1025	104	128	152	65	125	144	82
Future Volume (veh/h)	90	884	12	105	1025	104	128	152	65	125	144	82
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.96	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1709	1709	1750	1736	1709	1750	1709	1709	1723	1723	1750	1695
Adj Flow Rate, veh/h	98	961	13	114	1114	113	139	165	71	136	157	89
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	0	1	3	0	3	3	2	2	0	4
Cap, veh/h	394	1834	25	330	1199	121	161	189	81	166	178	101
Arrive On Green	0.20	0.56	0.56	0.04	0.40	0.40	0.10	0.17	0.17	0.10	0.17	0.17
Sat Flow, veh/h	1628	3280	44	1654	2975	301	1628	1120	482	1641	1046	593
Grp Volume(v), veh/h	98	476	498	114	607	620	139	0	236	136	0	246
Grp Sat Flow(s),veh/h/ln	1628	1624	1701	1654	1624	1653	1628	0	1602	1641	0	1638
Q Serve(g_s), s	0.4	23.7	23.7	3.8	46.4	46.5	10.9	0.0	18.7	10.6	0.0	19.1
Cycle Q Clear(g_c), s	0.4	23.7	23.7	3.8	46.4	46.5	10.9	0.0	18.7	10.6	0.0	19.1
Prop In Lane	1.00		0.03	1.00		0.18	1.00		0.30	1.00		0.36
Lane Grp Cap(c), veh/h	394	908	951	330	654	666	161	0	270	166	0	279
V/C Ratio(X)	0.25	0.52	0.52	0.35	0.93	0.93	0.86	0.00	0.88	0.82	0.00	0.88
Avail Cap(c_a), veh/h	394	908	951	410	718	731	238	0	308	240	0	315
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	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	41.4	17.9	17.9	13.7	37.0	37.0	57.7	0.0	52.7	57.2	0.0	52.6
Incr Delay (d2), s/veh	0.1	2.2	2.1	0.2	21.4	21.4	13.5	0.0	19.7	8.9	0.0	20.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	9.2	9.6	1.4	21.8	22.2	5.1	0.0	9.0	4.8	0.0	9.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	41.5	20.0	19.9	14.0	58.4	58.4	71.2	0.0	72.5	66.2	0.0	73.1
LnGrp LOS	D	C	B	B	E	E	E	A	E	E	A	E
Approach Vol, veh/h		1072			1341			375			382	
Approach Delay, s/veh		21.9			54.6			72.0			70.6	
Approach LOS		C			D			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	30.0	56.9	17.2	25.9	9.7	77.2	16.9	26.2
Change Period (Y+Rc), s	4.5	* 4.5	4.0	4.0	4.0	4.5	4.0	4.0
Max Green Setting (Gmax), s	12.0	* 58	19.0	25.0	12.0	57.5	19.0	25.0
Max Q Clear Time (g_c+I1), s	2.4	48.5	12.6	20.7	5.8	25.7	12.9	21.1
Green Ext Time (p_c), s	0.0	3.9	0.0	0.2	0.0	4.5	0.0	0.2

Intersection Summary	
HCM 6th Ctrl Delay	47.6
HCM 6th LOS	D

Notes

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

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	98	974	114	1227	139	236	136	246
v/c Ratio	0.46	0.56	0.39	0.71	0.80	0.88	0.76	0.88
Control Delay	30.9	23.5	15.5	27.6	87.0	80.0	80.2	78.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	30.9	23.5	15.5	27.6	87.0	80.0	80.2	78.8
Queue Length 50th (ft)	32	285	38	402	115	183	112	188
Queue Length 95th (ft)	65	411	73	583	184	#293	180	#307
Internal Link Dist (ft)		157		159		136		119
Turn Bay Length (ft)	100		85		200			
Base Capacity (vph)	271	1730	346	1718	228	315	230	321
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.36	0.56	0.33	0.71	0.61	0.75	0.59	0.77

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	57	965	77	75	1210	111	67	53	83	52	33	51
Future Volume (veh/h)	57	965	77	75	1210	111	67	53	83	52	33	51
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.99	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1750	1777	1709	1695	1723	1709	1709	1820	1792	1723	1750	1695
Adj Flow Rate, veh/h	63	1072	86	83	1344	123	74	59	0	58	37	57
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	3	3	4	2	3	3	0	2	2	0	4
Cap, veh/h	462	1383	111	599	1564	142	121	84		159	90	233
Arrive On Green	0.22	0.44	0.44	0.30	0.52	0.52	0.16	0.16	0.00	0.16	0.16	0.16
Sat Flow, veh/h	1667	3158	253	1615	3031	276	477	514	1518	702	553	1429
Grp Volume(v), veh/h	63	573	585	83	723	744	133	0	0	95	0	57
Grp Sat Flow(s),veh/h/ln	1667	1689	1722	1615	1637	1670	990	0	1518	1255	0	1429
Q Serve(g_s), s	0.0	37.5	37.6	0.0	49.8	50.5	9.6	0.0	0.0	0.0	0.0	4.5
Cycle Q Clear(g_c), s	0.0	37.5	37.6	0.0	49.8	50.5	18.4	0.0	0.0	8.8	0.0	4.5
Prop In Lane	1.00		0.15	1.00		0.17	0.56		1.00	0.61		1.00
Lane Grp Cap(c), veh/h	462	740	754	599	844	862	205	0		249	0	233
V/C Ratio(X)	0.14	0.77	0.78	0.14	0.86	0.86	0.65	0.00		0.38	0.00	0.24
Avail Cap(c_a), veh/h	462	917	935	599	889	907	348	0		388	0	374
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	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	34.1	31.1	31.1	24.7	27.3	27.5	55.4	0.0	0.0	49.0	0.0	47.4
Incr Delay (d2), s/veh	0.1	7.8	7.7	0.1	10.9	11.2	7.2	0.0	0.0	2.0	0.0	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	16.5	16.8	1.7	21.2	21.9	4.7	0.0	0.0	3.0	0.0	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.2	38.9	38.8	24.8	38.2	38.6	62.7	0.0	0.0	51.0	0.0	48.6
LnGrp LOS	C	D	D	C	D	D	E	A		D	A	D
Approach Vol, veh/h		1221			1550			133			152	
Approach Delay, s/veh		38.6			37.7			62.7			50.1	
Approach LOS		D			D			E			D	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	32.3	72.5		25.2	42.5	62.3		25.2
Change Period (Y+Rc), s	* 4	5.4		4.0	* 4	5.4		4.0
Max Green Setting (Gmax), s	* 12	70.6		34.0	* 12	70.6		34.0
Max Q Clear Time (g_c+I1), s	2.0	52.5		20.4	2.0	39.6		10.8
Green Ext Time (p_c), s	0.0	14.5		1.0	0.1	17.3		1.3

Intersection Summary	
HCM 6th Ctrl Delay	39.7
HCM 6th LOS	D

Notes

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

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

Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	63	1158	83	1467	133	92	95	57
v/c Ratio	0.27	0.52	0.23	0.64	0.70	0.28	0.59	0.22
Control Delay	9.9	14.4	7.7	13.4	69.8	10.3	65.0	12.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.9	14.4	7.7	13.4	69.8	10.3	65.0	12.5
Queue Length 50th (ft)	10	234	13	316	108	0	76	0
Queue Length 95th (ft)	29	424	36	537	165	45	125	36
Internal Link Dist (ft)		431		278	337		94	
Turn Bay Length (ft)	196		85			85		50
Base Capacity (vph)	309	2236	385	2285	323	500	270	398
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.20	0.52	0.22	0.64	0.41	0.18	0.35	0.14

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	90	884	12	105	1025	104	128	152	65	125	144	82
Future Volume (vph)	90	884	12	105	1025	104	128	152	65	125	144	82
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Lane Width	12	12	12	12	12	12	11	11	12	11	11	12
Total Lost time (s)	4.0	4.5		4.0	4.5		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00		1.00	0.99		1.00	0.95		1.00	0.95	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1614	3221		1646	3192		1560	1557		1576	1567	
Flt Permitted	0.13	1.00		0.21	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	225	3221		367	3192		1560	1557		1576	1567	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	98	961	13	114	1114	113	139	165	71	136	157	89
RTOR Reduction (vph)	0	0	0	0	5	0	0	13	0	0	16	0
Lane Group Flow (vph)	98	974	0	114	1222	0	139	223	0	136	230	0
Confl. Peds. (#/hr)			4	4					11			4
Confl. Bikes (#/hr)									3			
Heavy Vehicles (%)	3%	3%	0%	1%	3%	0%	3%	3%	2%	2%	0%	4%
Turn Type	D.P+P	NA		D.P+P	NA		Prot	NA		Prot	NA	
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	2			6								
Actuated Green, G (s)	77.1	69.7		77.1	69.7		14.5	21.4		15.0	21.9	
Effective Green, g (s)	77.1	69.7		77.1	69.7		14.5	21.4		15.0	21.9	
Actuated g/C Ratio	0.59	0.54		0.59	0.54		0.11	0.16		0.12	0.17	
Clearance Time (s)	4.0	4.5		4.0	4.5		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	1.0	2.1		1.0	2.1		1.0	1.0		1.0	1.0	
Lane Grp Cap (vph)	212	1726		290	1711		174	256		181	263	
v/s Ratio Prot	0.03	c0.30		0.02	c0.38		c0.09	0.14		0.09	c0.15	
v/s Ratio Perm	0.25			0.21								
v/c Ratio	0.46	0.56		0.39	0.71		0.80	0.87		0.75	0.88	
Uniform Delay, d1	34.7	20.0		13.5	22.7		56.3	53.0		55.7	52.7	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.6	1.3		0.3	2.6		20.7	25.6		14.4	25.3	
Delay (s)	35.3	21.4		13.8	25.2		77.1	78.5		70.1	78.1	
Level of Service	D	C		B	C		E	E		E	E	
Approach Delay (s)		22.7			24.3			78.0			75.2	
Approach LOS		C			C			E			E	

Intersection Summary			
HCM 2000 Control Delay	36.2	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	16.5
Intersection Capacity Utilization	76.7%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	57	965	77	75	1210	111	67	53	83	52	33	51
Future Volume (vph)	57	965	77	75	1210	111	67	53	83	52	33	51
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Lane Width	11	14	12	12	12	12	12	13	16	12	11	11
Total Lost time (s)	4.0	5.4		4.0	5.4			4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00			1.00	1.00		1.00	0.98
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00	1.00		1.00	1.00
Frt	1.00	0.99		1.00	0.99			1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.97	1.00		0.97	1.00
Satd. Flow (prot)	1607	3393		1598	3216			1727	1653		1622	1361
Flt Permitted	0.13	1.00		0.19	1.00			0.70	1.00		0.62	1.00
Satd. Flow (perm)	225	3393		324	3216			1237	1653		1032	1361
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	63	1072	86	83	1344	123	74	59	92	58	37	57
RTOR Reduction (vph)	0	4	0	0	3	0	0	0	66	0	0	48
Lane Group Flow (vph)	63	1154	0	83	1464	0	0	133	26	0	95	9
Confl. Peds. (#/hr)			9	9			3					3
Confl. Bikes (#/hr)			1									
Heavy Vehicles (%)	0%	3%	3%	4%	2%	3%	3%	0%	2%	2%	0%	4%
Turn Type	D.P+P	NA		D.P+P	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases	1	6		5	2			4			8	
Permitted Phases	2			6			4		4	8		8
Actuated Green, G (s)	96.5	84.4		96.5	91.5			20.1	20.1		20.1	20.1
Effective Green, g (s)	96.5	84.4		96.5	91.5			20.1	20.1		20.1	20.1
Actuated g/C Ratio	0.74	0.65		0.74	0.70			0.15	0.15		0.15	0.15
Clearance Time (s)	4.0	5.4		4.0	5.4			4.0	4.0		4.0	4.0
Vehicle Extension (s)	2.3	5.1		2.3	5.1			5.0	5.0		5.0	5.0
Lane Grp Cap (vph)	220	2202		359	2263			191	255		159	210
v/s Ratio Prot	0.01	0.34		c0.02	c0.46							
v/s Ratio Perm	0.20			0.15				c0.11	0.02		0.09	0.01
v/c Ratio	0.29	0.52		0.23	0.65			0.70	0.10		0.60	0.04
Uniform Delay, d1	15.8	12.1		12.7	10.5			52.1	47.2		51.2	46.8
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	1.00
Incremental Delay, d2	0.4	0.9		0.2	1.4			13.2	0.4		8.8	0.2
Delay (s)	16.2	13.0		12.9	11.9			65.2	47.6		60.0	46.9
Level of Service	B	B		B	B			E	D		E	D
Approach Delay (s)		13.2			12.0			58.0			55.1	
Approach LOS		B			B			E			E	

Intersection Summary			
HCM 2000 Control Delay	17.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	13.4
Intersection Capacity Utilization	68.5%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

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	0	5	5	2	0	2	1	79	1	1	62	1
Future Vol, veh/h	0	5	5	2	0	2	1	79	1	1	62	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	75	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	83	83	83	83	83	83	83	83	83
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	6	6	2	0	2	1	95	1	1	75	1

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	-	176	76	182	176	96	76	0	0	96	0	0
Stage 1	-	78	-	98	98	-	-	-	-	-	-	-
Stage 2	-	98	-	84	78	-	-	-	-	-	-	-
Critical Hdwy	-	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	-	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	-	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	0	721	991	784	721	966	1536	-	-	1510	-	-
Stage 1	0	834	-	913	818	-	-	-	-	-	-	-
Stage 2	0	818	-	929	834	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	720	991	773	720	966	1536	-	-	1510	-	-
Mov Cap-2 Maneuver	-	720	-	773	720	-	-	-	-	-	-	-
Stage 1	-	833	-	912	817	-	-	-	-	-	-	-
Stage 2	-	817	-	916	833	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.4	9.2	0.1	0.1
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1536	-	-	834	773	966	1510	-	-
HCM Lane V/C Ratio	0.001	-	-	0.014	0.003	0.002	0.001	-	-
HCM Control Delay (s)	7.3	-	-	9.4	9.7	8.7	7.4	-	-
HCM Lane LOS	A	-	-	A	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0	0	0	0	-	-

Intersection	
Intersection Delay, s/veh	7.3
Intersection LOS	A

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	30	4	24	50	2	13
Future Vol, veh/h	30	4	24	50	2	13
Peak Hour Factor	0.74	0.74	0.74	0.74	0.74	0.74
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	41	5	32	68	3	18
Number of Lanes	1	1	1	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	2
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	2	0
HCM Control Delay	8.1	7	7.2
HCM LOS	A	A	A

Lane	NBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	0%	100%	0%	13%
Vol Thru, %	32%	0%	0%	87%
Vol Right, %	68%	0%	100%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	74	30	4	15
LT Vol	0	30	0	2
Through Vol	24	0	0	13
RT Vol	50	0	4	0
Lane Flow Rate	100	41	5	20
Geometry Grp	2	7	7	2
Degree of Util (X)	0.1	0.059	0.006	0.023
Departure Headway (Hd)	3.589	5.21	4.008	4.082
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	991	688	892	870
Service Time	1.64	2.941	1.738	2.139
HCM Lane V/C Ratio	0.101	0.06	0.006	0.023
HCM Control Delay	7	8.3	6.8	7.2
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.3	0.2	0	0.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	27	207	25	44	183	28	39	38	33	36	37	28
Future Volume (veh/h)	27	207	25	44	183	28	39	38	33	36	37	28
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1750	1736	1750	1723	1723	1750	1682	1709	1709	1709	1750	1750
Adj Flow Rate, veh/h	32	244	29	52	215	33	46	45	39	42	44	33
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	0	1	0	2	2	0	5	3	3	3	0	0
Cap, veh/h	493	842	99	501	807	122	66	138	120	66	151	114
Arrive On Green	0.03	0.28	0.28	0.05	0.28	0.28	0.04	0.16	0.16	0.04	0.16	0.16
Sat Flow, veh/h	1667	2973	350	1641	2850	431	1602	841	729	1628	928	696
Grp Volume(v), veh/h	32	134	139	52	122	126	46	0	84	42	0	77
Grp Sat Flow(s),veh/h/ln	1667	1650	1673	1641	1637	1645	1602	0	1570	1628	0	1623
Q Serve(g_s), s	0.0	2.2	2.3	0.8	2.0	2.1	1.0	0.0	1.7	0.9	0.0	1.5
Cycle Q Clear(g_c), s	0.0	2.2	2.3	0.8	2.0	2.1	1.0	0.0	1.7	0.9	0.0	1.5
Prop In Lane	1.00		0.21	1.00		0.26	1.00		0.46	1.00		0.43
Lane Grp Cap(c), veh/h	493	467	474	501	463	466	66	0	258	66	0	265
V/C Ratio(X)	0.06	0.29	0.29	0.10	0.26	0.27	0.70	0.00	0.33	0.64	0.00	0.29
Avail Cap(c_a), veh/h	1196	2896	2938	1170	2873	2888	1043	0	1289	1060	0	1333
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	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	10.1	9.9	9.9	8.3	9.8	9.8	16.7	0.0	13.0	16.7	0.0	13.0
Incr Delay (d2), s/veh	0.0	0.2	0.2	0.0	0.1	0.1	4.9	0.0	0.3	3.8	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	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.6	0.6	0.2	0.5	0.6	0.4	0.0	0.5	0.4	0.0	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	10.1	10.0	10.1	8.3	9.9	10.0	21.6	0.0	13.3	20.5	0.0	13.2
LnGrp LOS	B	B	B	A	A	A	C	A	B	C	A	B
Approach Vol, veh/h		305			300			130			119	
Approach Delay, s/veh		10.1			9.7			16.2			15.8	
Approach LOS		B			A			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.6	14.5	5.4	9.8	5.6	14.5	5.5	9.8
Change Period (Y+Rc), s	4.5	* 4.5	4.0	4.0	4.0	4.5	4.0	4.0
Max Green Setting (Gmax), s	16.0	* 62	23.0	29.0	16.0	62.0	23.0	29.0
Max Q Clear Time (g_c+I1), s	2.0	4.1	2.9	3.7	2.8	4.3	3.0	3.5
Green Ext Time (p_c), s	0.0	1.0	0.0	0.2	0.0	1.1	0.0	0.1

Intersection Summary	
HCM 6th Ctrl Delay	11.7
HCM 6th LOS	B

Notes

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

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	32	273	52	248	46	84	42	77
v/c Ratio	0.05	0.15	0.08	0.13	0.17	0.19	0.16	0.17
Control Delay	10.1	13.0	10.2	11.4	21.5	11.2	21.4	11.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	10.1	13.0	10.2	11.4	21.5	11.2	21.4	11.4
Queue Length 50th (ft)	1	8	3	7	5	5	4	5
Queue Length 95th (ft)	24	80	34	73	44	39	41	37
Internal Link Dist (ft)		157		159		136		119
Turn Bay Length (ft)	100		85		200			
Base Capacity (vph)	1146	3184	1016	3145	1099	1240	1120	1289
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.09	0.05	0.08	0.04	0.07	0.04	0.06

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	31	196	36	24	222	34	12	9	15	23	11	9
Future Volume (veh/h)	31	196	36	24	222	34	12	9	15	23	11	9
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1750	1806	1750	1750	1750	1750	1750	1820	1820	1750	1750	1750
Adj Flow Rate, veh/h	34	218	40	27	247	38	13	10	0	26	12	10
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	1	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	666	1133	204	679	1112	169	256	31		305	33	100
Arrive On Green	0.03	0.39	0.39	0.03	0.38	0.38	0.07	0.07	0.00	0.07	0.07	0.07
Sat Flow, veh/h	1667	2903	524	1667	2894	439	588	452	1542	1073	495	1483
Grp Volume(v), veh/h	34	127	131	27	141	144	23	0	0	38	0	10
Grp Sat Flow(s),veh/h/ln	1667	1716	1712	1667	1663	1671	1040	0	1542	1568	0	1483
Q Serve(g_s), s	0.3	1.3	1.3	0.2	1.5	1.5	0.4	0.0	0.0	0.0	0.0	0.2
Cycle Q Clear(g_c), s	0.3	1.3	1.3	0.2	1.5	1.5	0.9	0.0	0.0	0.6	0.0	0.2
Prop In Lane	1.00		0.31	1.00		0.26	0.57		1.00	0.68		1.00
Lane Grp Cap(c), veh/h	666	670	668	679	639	642	287	0		339	0	100
V/C Ratio(X)	0.05	0.19	0.20	0.04	0.22	0.23	0.08	0.00		0.11	0.00	0.10
Avail Cap(c_a), veh/h	1507	5009	4997	1850	4854	4878	2640	0		2544	0	2393
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	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	4.6	5.2	5.2	4.5	5.4	5.4	12.0	0.0	0.0	11.6	0.0	11.4
Incr Delay (d2), s/veh	0.0	0.3	0.3	0.0	0.4	0.4	0.3	0.0	0.0	0.3	0.0	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.2	0.2	0.0	0.3	0.3	0.1	0.0	0.0	0.2	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	4.6	5.5	5.6	4.5	5.8	5.8	12.3	0.0	0.0	11.9	0.0	12.3
LnGrp LOS	A	A	A	A	A	A	B	A		B	A	B
Approach Vol, veh/h		292			312			23			48	
Approach Delay, s/veh		5.4			5.7			12.3			12.0	
Approach LOS		A			A			B			B	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	4.9	15.4		5.8	4.7	15.6		5.8
Change Period (Y+Rc), s	4.0	* 5.4		4.0	4.0	* 5.4		4.0
Max Green Setting (Gmax), s	14.0	* 76		42.0	19.0	* 76		42.0
Max Q Clear Time (g_c+I1), s	2.3	3.5		2.9	2.2	3.3		2.6
Green Ext Time (p_c), s	0.0	3.7		0.2	0.0	3.4		0.4

Intersection Summary	
HCM 6th Ctrl Delay	6.2
HCM 6th LOS	A

Notes

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

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

Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	34	258	27	285	23	17	38	10
v/c Ratio	0.04	0.10	0.03	0.12	0.05	0.03	0.08	0.02
Control Delay	3.8	5.4	3.9	5.5	10.2	0.1	10.1	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	3.8	5.4	3.9	5.5	10.2	0.1	10.1	0.1
Queue Length 50th (ft)	1	0	1	0	1	0	2	0
Queue Length 95th (ft)	10	41	8	46	17	0	24	0
Internal Link Dist (ft)		431		278	337		94	
Turn Bay Length (ft)	196		85			85		50
Base Capacity (vph)	1005	3436	1206	3258	1713	1684	1690	1436
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.08	0.02	0.09	0.01	0.01	0.02	0.01

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	27	207	25	44	183	28	39	38	33	36	37	28
Future Volume (vph)	27	207	25	44	183	28	39	38	33	36	37	28
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Lane Width	12	12	12	12	12	12	11	11	12	11	11	12
Total Lost time (s)	4.0	4.5		4.0	4.5		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.98		1.00	0.93		1.00	0.94	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1662	3243		1630	3203		1531	1518		1560	1574	
Flt Permitted	0.60	1.00		0.58	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1046	3243		1002	3203		1531	1518		1560	1574	
Peak-hour factor, PHF	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Adj. Flow (vph)	32	244	29	52	215	33	46	45	39	42	44	33
RTOR Reduction (vph)	0	6	0	0	8	0	0	24	0	0	20	0
Lane Group Flow (vph)	32	267	0	52	240	0	46	60	0	42	57	0
Confl. Peds. (#/hr)									5			1
Heavy Vehicles (%)	0%	1%	0%	2%	2%	0%	5%	3%	3%	3%	0%	0%
Turn Type	D.P+P	NA		D.P+P	NA		Prot	NA		Prot	NA	
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	2			6								
Actuated Green, G (s)	19.1	17.6		19.1	18.4		1.7	5.4		1.7	5.4	
Effective Green, g (s)	19.1	17.6		19.1	18.4		1.7	5.4		1.7	5.4	
Actuated g/C Ratio	0.45	0.41		0.45	0.43		0.04	0.13		0.04	0.13	
Clearance Time (s)	4.0	4.5		4.0	4.5		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	1.0	2.1		1.0	2.1		1.0	1.0		1.0	1.0	
Lane Grp Cap (vph)	477	1336		470	1380		60	191		62	199	
v/s Ratio Prot	0.00	c0.08		0.00	c0.07		c0.03	c0.04		0.03	0.04	
v/s Ratio Perm	0.03			0.05								
v/c Ratio	0.07	0.20		0.11	0.17		0.77	0.32		0.68	0.29	
Uniform Delay, d1	6.7	8.0		6.7	7.5		20.3	17.0		20.2	16.9	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.0	0.0		0.0	0.0		40.0	0.3		20.6	0.3	
Delay (s)	6.7	8.1		6.8	7.5		60.3	17.3		40.8	17.2	
Level of Service	A	A		A	A		E	B		D	B	
Approach Delay (s)		7.9			7.4			32.5			25.5	
Approach LOS		A			A			C			C	

Intersection Summary			
HCM 2000 Control Delay	13.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.27		
Actuated Cycle Length (s)	42.7	Sum of lost time (s)	16.5
Intersection Capacity Utilization	32.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	31	196	36	24	222	34	12	9	15	23	11	9
Future Volume (vph)	31	196	36	24	222	34	12	9	15	23	11	9
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Lane Width	11	14	12	12	12	12	12	13	16	12	11	11
Total Lost time (s)	4.0	5.4		4.0	5.4			4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	1.00
Frt	1.00	0.98		1.00	0.98			1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.97	1.00		0.97	1.00
Satd. Flow (prot)	1607	3435		1662	3258			1759	1686		1636	1438
Flt Permitted	0.58	1.00		0.59	1.00			0.95	1.00		1.00	1.00
Satd. Flow (perm)	976	3435		1036	3258			1715	1686		1692	1438
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	34	218	40	27	247	38	13	10	17	26	12	10
RTOR Reduction (vph)	0	10	0	0	9	0	0	0	15	0	0	9
Lane Group Flow (vph)	34	248	0	27	276	0	0	23	2	0	38	1
Heavy Vehicles (%)	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Turn Type	D.P+P	NA		D.P+P	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases	1	6		5	2			4			8	
Permitted Phases	2			6			4		4	8		8
Actuated Green, G (s)	19.8	19.0		19.8	19.0			3.3	3.3		3.3	3.3
Effective Green, g (s)	19.8	19.0		19.8	19.0			3.3	3.3		3.3	3.3
Actuated g/C Ratio	0.54	0.52		0.54	0.52			0.09	0.09		0.09	0.09
Clearance Time (s)	4.0	5.4		4.0	5.4			4.0	4.0		4.0	4.0
Vehicle Extension (s)	2.3	5.1		2.3	5.1			5.0	5.0		5.0	5.0
Lane Grp Cap (vph)	543	1788		575	1695			155	152		152	130
v/s Ratio Prot	c0.00	0.07		0.00	c0.08							
v/s Ratio Perm	0.03			0.02				0.01	0.00		c0.02	0.00
v/c Ratio	0.06	0.14		0.05	0.16			0.15	0.01		0.25	0.01
Uniform Delay, d1	3.9	4.5		3.9	4.6			15.3	15.1		15.4	15.1
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	1.00
Incremental Delay, d2	0.0	0.1		0.0	0.1			0.9	0.1		1.8	0.0
Delay (s)	3.9	4.6		3.9	4.7			16.2	15.2		17.3	15.2
Level of Service	A	A		A	A			B	B		B	B
Approach Delay (s)		4.5			4.6			15.8			16.8	
Approach LOS		A			A			B			B	

Intersection Summary			
HCM 2000 Control Delay	6.1	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.17		
Actuated Cycle Length (s)	36.5	Sum of lost time (s)	13.4
Intersection Capacity Utilization	31.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Int Delay, s/veh	3.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	75	19	6	2	2	8	166	22	36	162	4
Future Vol, veh/h	2	75	19	6	2	2	8	166	22	36	162	4
Conflicting Peds, #/hr	1	0	10	10	0	1	4	0	0	0	0	4
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	75	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	98	98	98	98	98	98	98	98	98	98	98	98
Heavy Vehicles, %	0	0	0	0	0	0	0	2	0	3	2	0
Mvmt Flow	2	77	19	6	2	2	8	169	22	37	165	4

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	444	452	181	495	443	181	173	0	0	191	0	0
Stage 1	245	245	-	196	196	-	-	-	-	-	-	-
Stage 2	199	207	-	299	247	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.13	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.227	-	-
Pot Cap-1 Maneuver	528	506	867	488	512	867	1416	-	-	1377	-	-
Stage 1	763	707	-	810	742	-	-	-	-	-	-	-
Stage 2	807	734	-	714	706	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	508	486	855	404	492	866	1410	-	-	1377	-	-
Mov Cap-2 Maneuver	508	486	-	404	492	-	-	-	-	-	-	-
Stage 1	755	683	-	805	738	-	-	-	-	-	-	-
Stage 2	797	730	-	595	682	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	13.2	12.7	0.3	1.4
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1410	-	-	532	404	627	1377	-	-
HCM Lane V/C Ratio	0.006	-	-	0.18	0.015	0.007	0.027	-	-
HCM Control Delay (s)	7.6	-	-	13.2	14	10.8	7.7	-	-
HCM Lane LOS	A	-	-	B	B	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.7	0	0	0.1	-	-

Intersection	
Intersection Delay, s/veh	11.4
Intersection LOS	B

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	82	24	324	74	8	51
Future Vol, veh/h	82	24	324	74	8	51
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles, %	0	0	1	3	0	0
Mvmt Flow	95	28	377	86	9	59
Number of Lanes	1	1	1	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	2
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	2	0
HCM Control Delay	9.6	12.3	8.3
HCM LOS	A	B	A

Lane	NBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	0%	100%	0%	14%
Vol Thru, %	81%	0%	0%	86%
Vol Right, %	19%	0%	100%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	398	82	24	59
LT Vol	0	82	0	8
Through Vol	324	0	0	51
RT Vol	74	0	24	0
Lane Flow Rate	463	95	28	69
Geometry Grp	2	7	7	2
Degree of Util (X)	0.546	0.163	0.038	0.091
Departure Headway (Hd)	4.249	6.169	4.958	4.772
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	852	580	719	749
Service Time	2.268	3.921	2.709	2.81
HCM Lane V/C Ratio	0.543	0.164	0.039	0.092
HCM Control Delay	12.3	10.1	7.9	8.3
HCM Lane LOS	B	B	A	A
HCM 95th-tile Q	3.4	0.6	0.1	0.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	77	610	30	98	475	90	100	129	64	103	100	58
Future Volume (veh/h)	77	610	30	98	475	90	100	129	64	103	100	58
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1736	1723	1709	1695	1723	1750	1736	1723	1723	1736	1723	1723
Adj Flow Rate, veh/h	88	693	34	111	540	102	114	147	73	117	114	66
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	1	2	3	4	2	0	1	2	2	1	2	2
Cap, veh/h	692	1727	85	424	628	118	181	170	85	143	136	79
Arrive On Green	0.36	0.54	0.54	0.05	0.23	0.23	0.11	0.16	0.16	0.09	0.13	0.13
Sat Flow, veh/h	1654	3175	156	1615	2737	515	1654	1086	539	1654	1016	588
Grp Volume(v), veh/h	88	357	370	111	322	320	114	0	220	117	0	180
Grp Sat Flow(s),veh/h/ln	1654	1637	1695	1615	1637	1615	1654	0	1626	1654	0	1604
Q Serve(g_s), s	0.0	12.7	12.7	3.0	18.9	19.0	6.6	0.0	13.2	7.0	0.0	10.9
Cycle Q Clear(g_c), s	0.0	12.7	12.7	3.0	18.9	19.0	6.6	0.0	13.2	7.0	0.0	10.9
Prop In Lane	1.00		0.09	1.00		0.32	1.00		0.33	1.00		0.37
Lane Grp Cap(c), veh/h	692	890	922	424	376	371	181	0	255	143	0	215
V/C Ratio(X)	0.13	0.40	0.40	0.26	0.86	0.86	0.63	0.00	0.86	0.82	0.00	0.84
Avail Cap(c_a), veh/h	692	890	922	524	499	493	298	0	423	265	0	385
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	20.0	13.3	13.3	9.9	37.0	37.0	42.6	0.0	41.1	44.9	0.0	42.2
Incr Delay (d2), s/veh	0.0	1.3	1.3	0.1	21.5	22.5	1.4	0.0	4.9	4.3	0.0	3.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	4.7	4.9	1.0	9.6	9.6	2.7	0.0	5.6	3.0	0.0	4.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	20.0	14.7	14.6	10.0	58.5	59.5	44.0	0.0	46.0	49.3	0.0	45.6
LnGrp LOS	C	B	B	B	E	E	D	A	D	D	A	D
Approach Vol, veh/h		815			753			334			297	
Approach Delay, s/veh		15.2			51.8			45.3			47.0	
Approach LOS		B			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	40.2	27.5	12.6	19.7	8.8	58.9	14.9	17.4
Change Period (Y+Rc), s	4.5	* 4.5	4.0	4.0	4.0	4.5	4.0	4.0
Max Green Setting (Gmax), s	11.0	* 31	16.0	26.0	11.0	30.5	18.0	24.0
Max Q Clear Time (g_c+I1), s	2.0	21.0	9.0	15.2	5.0	14.7	8.6	12.9
Green Ext Time (p_c), s	0.0	1.9	0.0	0.3	0.0	2.7	0.0	0.3

Intersection Summary	
HCM 6th Ctrl Delay	36.6
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

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

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	88	727	111	642	114	220	117	180
v/c Ratio	0.20	0.45	0.30	0.42	0.56	0.80	0.68	0.74
Control Delay	13.7	19.8	12.9	20.5	51.3	56.6	61.6	51.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	13.7	19.8	12.9	20.5	51.3	56.6	61.6	51.4
Queue Length 50th (ft)	21	149	27	137	69	122	73	95
Queue Length 95th (ft)	56	264	68	228	119	183	121	145
Internal Link Dist (ft)		157		159		136		119
Turn Bay Length (ft)	100		85		200			
Base Capacity (vph)	463	1612	430	1540	286	427	255	394
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.19	0.45	0.26	0.42	0.40	0.52	0.46	0.46

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	103	721	52	61	569	272	39	23	51	57	19	57
Future Volume (veh/h)	103	721	52	61	569	272	39	23	51	57	19	57
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.99	0.98		1.00	0.98		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1723	1792	1723	1723	1723	1736	1709	1820	1763	1750	1750	1723
Adj Flow Rate, veh/h	113	792	57	67	625	299	43	25	0	63	21	63
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	1	3	0	4	0	0	2
Cap, veh/h	713	2274	164	493	809	387	118	56		180	51	176
Arrive On Green	0.35	0.71	0.71	0.03	0.38	0.38	0.12	0.12	0.00	0.12	0.12	0.12
Sat Flow, veh/h	1641	3213	231	1641	2139	1023	480	449	1494	941	407	1414
Grp Volume(v), veh/h	113	419	430	67	478	446	68	0	0	84	0	63
Grp Sat Flow(s),veh/h/ln	1641	1702	1743	1641	1637	1526	928	0	1494	1348	0	1414
Q Serve(g_s), s	0.0	9.6	9.6	1.1	25.7	25.7	3.1	0.0	0.0	0.0	0.0	4.1
Cycle Q Clear(g_c), s	0.0	9.6	9.6	1.1	25.7	25.7	8.9	0.0	0.0	5.8	0.0	4.1
Prop In Lane	1.00		0.13	1.00		0.67	0.63		1.00	0.75		1.00
Lane Grp Cap(c), veh/h	713	1205	1233	493	619	577	174	0		231	0	176
V/C Ratio(X)	0.16	0.35	0.35	0.14	0.77	0.77	0.39	0.00		0.36	0.00	0.36
Avail Cap(c_a), veh/h	713	1205	1233	569	763	711	451	0		498	0	453
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	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	17.5	5.7	5.7	4.0	27.3	27.3	42.9	0.0	0.0	40.8	0.0	40.1
Incr Delay (d2), s/veh	0.1	0.8	0.8	0.1	9.1	9.7	3.0	0.0	0.0	2.0	0.0	2.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	3.1	3.1	0.3	11.1	10.5	1.8	0.0	0.0	2.1	0.0	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	17.6	6.5	6.4	4.1	36.4	37.0	45.9	0.0	0.0	42.8	0.0	42.7
LnGrp LOS	B	A	A	A	D	D	D	A		D	A	D
Approach Vol, veh/h		962			991			68			147	
Approach Delay, s/veh		7.8			34.5			45.9			42.8	
Approach LOS		A			C			D			D	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	40.3	43.2		16.4	7.4	76.2		16.4
Change Period (Y+Rc), s	* 5.4	* 5.4		4.0	4.0	* 5.4		4.0
Max Green Setting (Gmax), s	* 8	* 47		32.0	8.0	* 47		32.0
Max Q Clear Time (g_c+I1), s	2.0	27.7		10.9	3.1	11.6		7.8
Green Ext Time (p_c), s	0.1	10.2		0.5	0.0	12.5		1.3

Intersection Summary	
HCM 6th Ctrl Delay	23.5
HCM 6th LOS	C

Notes

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

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

Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	113	849	67	924	68	56	84	63
v/c Ratio	0.29	0.37	0.15	0.46	0.26	0.14	0.35	0.17
Control Delay	10.1	11.5	6.7	11.5	33.6	0.7	36.3	1.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	10.1	11.5	6.7	11.5	33.6	0.7	36.3	1.1
Queue Length 50th (ft)	13	108	8	112	40	0	50	0
Queue Length 95th (ft)	50	239	32	250	66	0	80	0
Internal Link Dist (ft)		431		278	337		94	
Turn Bay Length (ft)	196		85			85		50
Base Capacity (vph)	415	2306	467	2027	447	606	406	527
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.27	0.37	0.14	0.46	0.15	0.09	0.21	0.12

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	77	610	30	98	475	90	100	129	64	103	100	58
Future Volume (vph)	77	610	30	98	475	90	100	129	64	103	100	58
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Lane Width	12	12	12	12	12	12	11	11	12	11	11	12
Total Lost time (s)	4.0	4.5		4.0	4.5		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.98		1.00	0.95		1.00	0.94	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1646	3235		1599	3180		1591	1576		1591	1558	
Flt Permitted	0.34	1.00		0.31	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	592	3235		517	3180		1591	1576		1591	1558	
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	88	693	34	111	540	102	114	147	73	117	114	66
RTOR Reduction (vph)	0	3	0	0	12	0	0	20	0	0	23	0
Lane Group Flow (vph)	88	724	0	111	630	0	114	200	0	117	157	0
Confl. Peds. (#/hr)	1					1						1
Confl. Bikes (#/hr)						1						2
Heavy Vehicles (%)	1%	2%	3%	4%	2%	0%	1%	2%	2%	1%	2%	2%
Turn Type	D.P+P	NA		D.P+P	NA		Prot	NA		Prot	NA	
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	2			6								
Actuated Green, G (s)	56.6	49.8		56.6	47.3		12.7	16.1		10.8	14.2	
Effective Green, g (s)	56.6	49.8		56.6	47.3		12.7	16.1		10.8	14.2	
Actuated g/C Ratio	0.57	0.50		0.57	0.47		0.13	0.16		0.11	0.14	
Clearance Time (s)	4.0	4.5		4.0	4.5		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	1.0	2.1		1.0	2.1		1.0	1.0		1.0	1.0	
Lane Grp Cap (vph)	433	1611		366	1504		202	253		171	221	
v/s Ratio Prot	0.02	c0.22		0.02	c0.20		0.07	c0.13		c0.07	0.10	
v/s Ratio Perm	0.10			0.15								
v/c Ratio	0.20	0.45		0.30	0.42		0.56	0.79		0.68	0.71	
Uniform Delay, d1	14.9	16.2		10.6	17.3		41.0	40.3		43.0	40.9	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.1	0.9		0.2	0.9		2.1	14.0		8.7	8.2	
Delay (s)	15.0	17.1		10.8	18.2		43.2	54.3		51.6	49.2	
Level of Service	B	B		B	B		D	D		D	D	
Approach Delay (s)		16.9			17.1			50.5			50.1	
Approach LOS		B			B			D			D	

Intersection Summary			
HCM 2000 Control Delay	26.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.5
Intersection Capacity Utilization	56.8%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	103	721	52	61	569	272	39	23	51	57	19	57
Future Volume (vph)	103	721	52	61	569	272	39	23	51	57	19	57
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Lane Width	11	14	12	12	12	12	12	13	16	12	11	11
Total Lost time (s)	4.0	5.4		4.0	5.4			4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00			1.00	1.00		1.00	0.98
Flpb, ped/bikes	1.00	1.00		1.00	1.00			0.99	1.00		1.00	1.00
Frt	1.00	0.99		1.00	0.95			1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.97	1.00		0.96	1.00
Satd. Flow (prot)	1576	3433		1628	3111			1708	1621		1631	1375
Flt Permitted	0.27	1.00		0.30	1.00			0.79	1.00		0.75	1.00
Satd. Flow (perm)	442	3433		514	3111			1398	1621		1271	1375
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	113	792	57	67	625	299	43	25	56	63	21	63
RTOR Reduction (vph)	0	4	0	0	41	0	0	0	46	0	0	52
Lane Group Flow (vph)	113	845	0	67	883	0	0	68	10	0	84	11
Confl. Peds. (#/hr)			8	8			13					13
Confl. Bikes (#/hr)			1									
Heavy Vehicles (%)	2%	2%	2%	2%	2%	1%	3%	0%	4%	0%	0%	2%
Turn Type	D.P+P	NA		D.P+P	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases	1	6		5	2			4			8	
Permitted Phases	2			6			4		4	8		8
Actuated Green, G (s)	69.6	64.4		69.6	62.3			17.0	17.0		17.0	17.0
Effective Green, g (s)	69.6	64.4		69.6	62.3			17.0	17.0		17.0	17.0
Actuated g/C Ratio	0.70	0.64		0.70	0.62			0.17	0.17		0.17	0.17
Clearance Time (s)	4.0	5.4		4.0	5.4			4.0	4.0		4.0	4.0
Vehicle Extension (s)	2.3	5.1		2.3	5.1			5.0	5.0		5.0	5.0
Lane Grp Cap (vph)	390	2210		415	1938			237	275		216	233
v/s Ratio Prot	0.02	c0.25		0.01	c0.28							
v/s Ratio Perm	0.18			0.10				0.05	0.01		c0.07	0.01
v/c Ratio	0.29	0.38		0.16	0.46			0.29	0.03		0.39	0.05
Uniform Delay, d1	9.7	8.4		5.0	9.9			36.2	34.6		36.9	34.7
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	1.00
Incremental Delay, d2	0.2	0.5		0.1	0.8			1.4	0.1		2.4	0.2
Delay (s)	10.0	8.9		5.2	10.7			37.6	34.8		39.3	34.9
Level of Service	A	A		A	B			D	C		D	C
Approach Delay (s)		9.0			10.3			36.3			37.4	
Approach LOS		A			B			D			D	

Intersection Summary			
HCM 2000 Control Delay	13.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	13.4
Intersection Capacity Utilization	59.9%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Int Delay, s/veh	1.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	6	3	27	7	4	0	86	1	4	177	3
Future Vol, veh/h	0	6	3	27	7	4	0	86	1	4	177	3
Conflicting Peds, #/hr	4	0	8	8	0	4	0	0	2	2	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	75	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	71	71	71	71	71	71	71	71	71	71	71	71
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	1	0
Mvmt Flow	0	8	4	38	10	6	0	121	1	6	249	4

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	-	387	259	401	389	128	-	0	0	124	0	0
Stage 1	-	263	-	124	124	-	-	-	-	-	-	-
Stage 2	-	124	-	277	265	-	-	-	-	-	-	-
Critical Hdwy	-	6.5	6.2	7.1	6.5	6.2	-	-	-	4.1	-	-
Critical Hdwy Stg 1	-	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	-	4	3.3	3.5	4	3.3	-	-	-	2.2	-	-
Pot Cap-1 Maneuver	0	551	785	563	549	927	0	-	-	1475	-	-
Stage 1	0	694	-	885	797	-	0	-	-	-	-	-
Stage 2	0	797	-	734	693	-	0	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	547	779	546	545	921	-	-	-	1472	-	-
Mov Cap-2 Maneuver	-	547	-	546	545	-	-	-	-	-	-	-
Stage 1	-	691	-	885	795	-	-	-	-	-	-	-
Stage 2	-	795	-	712	690	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	11.1	11.7	0	0.2
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	-	-	607	546	640	1472	-	-
HCM Lane V/C Ratio	-	-	0.021	0.07	0.024	0.004	-	-
HCM Control Delay (s)	-	-	11.1	12.1	10.8	7.5	-	-
HCM Lane LOS	-	-	B	B	B	A	-	-
HCM 95th %tile Q(veh)	-	-	0.1	0.2	0.1	0	-	-

Intersection	
Intersection Delay, s/veh	11.2
Intersection LOS	B

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	47	6	34	47	2	368
Future Vol, veh/h	47	6	34	47	2	368
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79
Heavy Vehicles, %	0	0	3	0	0	0
Mvmt Flow	59	8	43	59	3	466
Number of Lanes	1	1	1	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	2
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	2	0
HCM Control Delay	9.5	7.9	12.2
HCM LOS	A	A	B

Lane	NBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	0%	100%	0%	1%
Vol Thru, %	42%	0%	0%	99%
Vol Right, %	58%	0%	100%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	81	47	6	370
LT Vol	0	47	0	2
Through Vol	34	0	0	368
RT Vol	47	0	6	0
Lane Flow Rate	103	59	8	468
Geometry Grp	2	7	7	2
Degree of Util (X)	0.122	0.103	0.011	0.548
Departure Headway (Hd)	4.281	6.236	5.024	4.214
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	838	575	711	857
Service Time	2.305	3.974	2.762	2.229
HCM Lane V/C Ratio	0.123	0.103	0.011	0.546
HCM Control Delay	7.9	9.7	7.8	12.2
HCM Lane LOS	A	A	A	B
HCM 95th-tile Q	0.4	0.3	0	3.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	26	251	39	43	269	22	42	51	33	109	50	76
Future Volume (veh/h)	26	251	39	43	269	22	42	51	33	109	50	76
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.99	0.99		0.99	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1750	1736	1750	1750	1723	1750	1682	1750	1750	1736	1750	1709
Adj Flow Rate, veh/h	30	289	45	49	309	25	48	59	38	125	57	87
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	0	1	0	0	2	0	5	0	0	1	0	3
Cap, veh/h	420	775	119	441	833	67	144	160	103	155	103	157
Arrive On Green	0.03	0.27	0.27	0.04	0.27	0.27	0.09	0.16	0.16	0.09	0.17	0.17
Sat Flow, veh/h	1667	2860	440	1667	3065	246	1602	986	635	1654	618	943
Grp Volume(v), veh/h	30	165	169	49	164	170	48	0	97	125	0	144
Grp Sat Flow(s),veh/h/ln	1667	1650	1650	1667	1637	1675	1602	0	1622	1654	0	1561
Q Serve(g_s), s	0.0	3.1	3.2	0.8	3.1	3.2	1.1	0.0	2.0	2.8	0.0	3.2
Cycle Q Clear(g_c), s	0.0	3.1	3.2	0.8	3.1	3.2	1.1	0.0	2.0	2.8	0.0	3.2
Prop In Lane	1.00		0.27	1.00		0.15	1.00		0.39	1.00		0.60
Lane Grp Cap(c), veh/h	420	447	447	441	445	455	144	0	263	155	0	259
V/C Ratio(X)	0.07	0.37	0.38	0.11	0.37	0.37	0.33	0.00	0.37	0.81	0.00	0.56
Avail Cap(c_a), veh/h	1025	1723	1724	1023	1709	1749	627	0	635	648	0	611
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	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	12.1	11.3	11.3	9.4	11.3	11.3	16.4	0.0	14.3	17.0	0.0	14.7
Incr Delay (d2), s/veh	0.0	0.2	0.2	0.0	0.2	0.2	0.5	0.0	0.3	3.7	0.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.9	0.9	0.2	0.9	0.9	0.4	0.0	0.6	1.1	0.0	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	12.1	11.5	11.6	9.5	11.5	11.5	16.9	0.0	14.6	20.8	0.0	15.4
LnGrp LOS	B	B	B	A	B	B	B	A	B	C	A	B
Approach Vol, veh/h		364			383			145			269	
Approach Delay, s/veh		11.6			11.3			15.4			17.9	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.6	14.9	7.6	10.2	5.6	14.9	7.4	10.4
Change Period (Y+Rc), s	4.5	* 4.5	4.0	4.0	4.0	4.5	4.0	4.0
Max Green Setting (Gmax), s	15.0	* 40	15.0	15.0	15.0	40.0	15.0	15.0
Max Q Clear Time (g_c+I1), s	2.0	5.2	4.8	4.0	2.8	5.2	3.1	5.2
Green Ext Time (p_c), s	0.0	1.3	0.0	0.1	0.0	1.3	0.0	0.2

Intersection Summary	
HCM 6th Ctrl Delay	13.4
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

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

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	30	334	49	334	48	97	125	144
v/c Ratio	0.05	0.24	0.10	0.24	0.16	0.26	0.41	0.33
Control Delay	12.1	15.5	12.6	16.4	18.5	15.5	24.8	15.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	12.1	15.5	12.6	16.4	18.5	15.5	24.8	15.4
Queue Length 50th (ft)	2	24	7	25	9	12	21	7
Queue Length 95th (ft)	26	106	37	112	39	58	105	86
Internal Link Dist (ft)		157		159		136		119
Turn Bay Length (ft)	100		85		200			
Base Capacity (vph)	941	2786	811	2799	699	731	683	695
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.12	0.06	0.12	0.07	0.13	0.18	0.21

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	34	326	26	22	221	32	12	15	27	292	12	111
Future Volume (veh/h)	34	326	26	22	221	32	12	15	27	292	12	111
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.98	0.99		0.98	0.99		1.00	0.98		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1709	1820	1695	1750	1695	1750	1750	1820	1820	1750	1750	1750
Adj Flow Rate, veh/h	41	398	32	27	270	39	15	18	0	356	15	135
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Percent Heavy Veh, %	3	0	4	0	4	0	0	0	0	0	0	0
Cap, veh/h	368	847	68	327	710	101	106	88		491	15	637
Arrive On Green	0.03	0.26	0.26	0.03	0.25	0.25	0.44	0.44	0.00	0.44	0.44	0.44
Sat Flow, veh/h	1628	3238	259	1667	2822	403	0	198	1542	788	33	1436
Grp Volume(v), veh/h	41	212	218	27	153	156	33	0	0	371	0	135
Grp Sat Flow(s),veh/h/ln	1628	1729	1768	1667	1611	1614	198	0	1542	821	0	1436
Q Serve(g_s), s	0.9	5.1	5.2	0.6	3.9	4.0	0.0	0.0	0.0	0.0	0.0	2.9
Cycle Q Clear(g_c), s	0.9	5.1	5.2	0.6	3.9	4.0	22.0	0.0	0.0	22.0	0.0	2.9
Prop In Lane	1.00		0.15	1.00		0.25	0.45		1.00	0.96		1.00
Lane Grp Cap(c), veh/h	368	452	462	327	405	406	193	0		506	0	637
V/C Ratio(X)	0.11	0.47	0.47	0.08	0.38	0.38	0.17	0.00		0.73	0.00	0.21
Avail Cap(c_a), veh/h	738	1394	1425	789	1299	1301	193	0		506	0	637
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	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	13.1	15.4	15.4	13.1	15.3	15.4	11.7	0.0	0.0	14.0	0.0	8.5
Incr Delay (d2), s/veh	0.1	1.7	1.7	0.1	1.3	1.3	0.9	0.0	0.0	6.6	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	1.9	2.0	0.2	1.4	1.4	0.2	0.0	0.0	4.3	0.0	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.2	17.1	17.1	13.2	16.6	16.7	12.6	0.0	0.0	20.6	0.0	8.8
LnGrp LOS	B	B	B	B	B	B	B	A		C	A	A
Approach Vol, veh/h		471			336			33			506	
Approach Delay, s/veh		16.8			16.4			12.6			17.5	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.7	17.9		26.0	5.2	18.4		26.0
Change Period (Y+Rc), s	4.0	* 5.4		4.0	4.0	* 5.4		4.0
Max Green Setting (Gmax), s	13.0	* 40		20.0	15.0	* 40		22.0
Max Q Clear Time (g_c+I1), s	2.9	6.0		24.0	2.6	7.2		24.0
Green Ext Time (p_c), s	0.0	3.7		0.0	0.0	5.3		0.0

Intersection Summary	
HCM 6th Ctrl Delay	16.8
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

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

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

Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	41	430	27	309	33	33	371	135
v/c Ratio	0.11	0.44	0.07	0.35	0.08	0.06	0.64	0.20
Control Delay	11.6	18.3	11.3	17.2	12.5	0.8	19.6	6.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	11.6	18.3	11.3	17.2	12.5	0.8	19.6	6.3
Queue Length 50th (ft)	7	44	5	29	7	0	66	8
Queue Length 95th (ft)	23	103	17	75	21	1	195	39
Internal Link Dist (ft)		431		278	337		94	
Turn Bay Length (ft)	196		85			85		50
Base Capacity (vph)	504	2743	566	2599	737	848	576	692
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.08	0.16	0.05	0.12	0.04	0.04	0.64	0.20

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	26	251	39	43	269	22	42	51	33	109	50	76
Future Volume (vph)	26	251	39	43	269	22	42	51	33	109	50	76
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Lane Width	12	12	12	12	12	12	11	11	12	11	11	12
Total Lost time (s)	4.0	4.5		4.0	4.5		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.99		1.00	0.94		1.00	0.91	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1662	3217		1657	3228		1531	1581		1591	1496	
Flt Permitted	0.55	1.00		0.55	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	963	3217		960	3228		1531	1581		1591	1496	
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Adj. Flow (vph)	30	289	45	49	309	25	48	59	38	125	57	87
RTOR Reduction (vph)	0	13	0	0	7	0	0	24	0	0	52	0
Lane Group Flow (vph)	30	321	0	49	327	0	48	73	0	125	92	0
Confl. Peds. (#/hr)			7	7					10			
Confl. Bikes (#/hr)												4
Heavy Vehicles (%)	0%	1%	0%	0%	2%	0%	5%	0%	0%	1%	0%	3%
Turn Type	D.P+P	NA		D.P+P	NA		Prot	NA		Prot	NA	
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	2			6								
Actuated Green, G (s)	18.2	16.6		18.2	16.4		4.2	5.3		7.8	8.9	
Effective Green, g (s)	18.2	16.6		18.2	16.4		4.2	5.3		7.8	8.9	
Actuated g/C Ratio	0.38	0.35		0.38	0.34		0.09	0.11		0.16	0.19	
Clearance Time (s)	4.0	4.5		4.0	4.5		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	1.0	2.1		1.0	2.1		1.0	1.0		1.0	1.0	
Lane Grp Cap (vph)	392	1117		388	1107		134	175		259	278	
v/s Ratio Prot	0.00	c0.10		0.00	c0.10		0.03	0.05		c0.08	c0.06	
v/s Ratio Perm	0.03			0.04								
v/c Ratio	0.08	0.29		0.13	0.30		0.36	0.42		0.48	0.33	
Uniform Delay, d1	9.5	11.3		9.4	11.5		20.5	19.8		18.2	16.9	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.0	0.1		0.1	0.1		0.6	0.6		0.5	0.3	
Delay (s)	9.5	11.4		9.5	11.5		21.1	20.4		18.7	17.1	
Level of Service	A	B		A	B		C	C		B	B	
Approach Delay (s)		11.2			11.3			20.6			17.8	
Approach LOS		B			B			C			B	

Intersection Summary			
HCM 2000 Control Delay	14.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	47.8	Sum of lost time (s)	16.5
Intersection Capacity Utilization	43.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	34	326	26	22	221	32	12	15	27	292	12	111
Future Volume (vph)	34	326	26	22	221	32	12	15	27	292	12	111
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Lane Width	11	14	12	12	12	12	12	13	16	12	11	11
Total Lost time (s)	4.0	5.4		4.0	5.4			4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00			1.00	1.00		1.00	0.96
Flpb, ped/bikes	1.00	1.00		1.00	1.00			0.99	1.00		1.00	1.00
Frt	1.00	0.99		1.00	0.98			1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.98	1.00		0.95	1.00
Satd. Flow (prot)	1560	3488		1657	3152			1756	1686		1614	1384
Flt Permitted	0.56	1.00		0.49	1.00			0.86	1.00		0.71	1.00
Satd. Flow (perm)	926	3488		847	3152			1542	1686		1202	1384
Peak-hour factor, PHF	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Adj. Flow (vph)	41	398	32	27	270	39	15	18	33	356	15	135
RTOR Reduction (vph)	0	9	0	0	17	0	0	0	18	0	0	42
Lane Group Flow (vph)	41	421	0	27	292	0	0	33	15	0	371	93
Confl. Peds. (#/hr)			9	9			47					47
Heavy Vehicles (%)	3%	0%	4%	0%	4%	0%	0%	0%	0%	0%	0%	0%
Turn Type	D.P+P	NA		D.P+P	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases	1	6		5	2			4			8	
Permitted Phases	2			6			4		4	8		8
Actuated Green, G (s)	16.7	14.8		16.7	14.6			25.6	25.6		25.6	25.6
Effective Green, g (s)	16.7	14.8		16.7	14.6			25.6	25.6		25.6	25.6
Actuated g/C Ratio	0.30	0.27		0.30	0.26			0.46	0.46		0.46	0.46
Clearance Time (s)	4.0	5.4		4.0	5.4			4.0	4.0		4.0	4.0
Vehicle Extension (s)	2.3	5.1		2.3	5.1			5.0	5.0		5.0	5.0
Lane Grp Cap (vph)	301	926		281	826			708	774		552	636
v/s Ratio Prot	c0.01	c0.12		0.00	0.09							
v/s Ratio Perm	0.04			0.03				0.02	0.01		c0.31	0.07
v/c Ratio	0.14	0.45		0.10	0.35			0.05	0.02		0.67	0.15
Uniform Delay, d1	14.0	17.1		13.9	16.7			8.3	8.2		11.8	8.7
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	1.00
Incremental Delay, d2	0.1	0.8		0.1	0.6			0.1	0.0		4.2	0.2
Delay (s)	14.1	17.9		14.0	17.3			8.4	8.2		16.0	8.9
Level of Service	B	B		B	B			A	A		B	A
Approach Delay (s)		17.5			17.0			8.3			14.1	
Approach LOS		B			B			A			B	

Intersection Summary			
HCM 2000 Control Delay	15.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	55.7	Sum of lost time (s)	13.4
Intersection Capacity Utilization	52.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Appendix C

Existing Max Event Operations

Intersection	
Int Delay, s/veh	4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	89	27	8	4	5	9	209	34	32	190	9
Future Vol, veh/h	5	89	27	8	4	5	9	209	34	32	190	9
Conflicting Peds, #/hr	1	0	12	12	0	1	5	0	0	0	0	5
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	75	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	0	0	4	13	0	0	0	2	0	0	2	0
Mvmt Flow	5	98	30	9	4	5	10	230	37	35	209	10

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	563	576	231	629	563	250	224	0	0	267	0	0
Stage 1	289	289	-	269	269	-	-	-	-	-	-	-
Stage 2	274	287	-	360	294	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.24	7.23	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.23	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.23	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.336	3.617	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	440	431	803	380	438	794	1357	-	-	1308	-	-
Stage 1	723	677	-	713	690	-	-	-	-	-	-	-
Stage 2	736	678	-	636	673	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	418	412	789	287	419	793	1349	-	-	1308	-	-
Mov Cap-2 Maneuver	418	412	-	287	419	-	-	-	-	-	-	-
Stage 1	712	653	-	707	684	-	-	-	-	-	-	-
Stage 2	719	672	-	499	649	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	15.7	14.5	0.3	1.1
HCM LOS	C	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1349	-	-	464	287	568	1308	-	-
HCM Lane V/C Ratio	0.007	-	-	0.275	0.031	0.017	0.027	-	-
HCM Control Delay (s)	7.7	-	-	15.7	17.9	11.5	7.8	-	-
HCM Lane LOS	A	-	-	C	C	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	1.1	0.1	0.1	0.1	-	-

Intersection	
Intersection Delay, s/veh	16.3
Intersection LOS	C

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	68	37	409	100	24	68
Future Vol, veh/h	68	37	409	100	24	68
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles, %	0	0	1	3	0	1
Mvmt Flow	83	45	499	122	29	83
Number of Lanes	1	1	1	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	2
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	2	0
HCM Control Delay	9.9	18.9	9
HCM LOS	A	C	A

Lane	NBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	0%	100%	0%	26%
Vol Thru, %	80%	0%	0%	74%
Vol Right, %	20%	0%	100%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	509	68	37	92
LT Vol	0	68	0	24
Through Vol	409	0	0	68
RT Vol	100	0	37	0
Lane Flow Rate	621	83	45	112
Geometry Grp	2	7	7	2
Degree of Util (X)	0.745	0.152	0.068	0.156
Departure Headway (Hd)	4.318	6.609	5.393	4.99
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	838	539	658	715
Service Time	2.352	4.396	3.179	3.052
HCM Lane V/C Ratio	0.741	0.154	0.068	0.157
HCM Control Delay	18.9	10.6	8.6	9
HCM Lane LOS	C	B	A	A
HCM 95th-tile Q	6.9	0.5	0.2	0.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	90	967	12	105	1025	104	128	172	65	125	144	82
Future Volume (veh/h)	90	967	12	105	1025	104	128	172	65	125	144	82
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1709	1709	1750	1736	1709	1750	1709	1709	1723	1723	1750	1695
Adj Flow Rate, veh/h	98	1051	13	114	1114	113	139	187	71	136	157	89
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	0	1	3	0	3	3	2	2	0	4
Cap, veh/h	393	1837	23	302	1199	121	169	204	78	158	173	98
Arrive On Green	0.20	0.56	0.56	0.04	0.40	0.40	0.10	0.17	0.17	0.10	0.17	0.17
Sat Flow, veh/h	1628	3285	41	1654	2970	301	1628	1180	448	1641	1042	590
Grp Volume(v), veh/h	98	519	545	114	608	619	139	0	258	136	0	246
Grp Sat Flow(s),veh/h/ln	1628	1624	1702	1654	1624	1647	1628	0	1628	1641	0	1632
Q Serve(g_s), s	0.4	27.0	27.0	3.8	46.5	46.6	10.9	0.0	20.3	10.6	0.0	19.2
Cycle Q Clear(g_c), s	0.4	27.0	27.0	3.8	46.5	46.6	10.9	0.0	20.3	10.6	0.0	19.2
Prop In Lane	1.00		0.02	1.00		0.18	1.00		0.28	1.00		0.36
Lane Grp Cap(c), veh/h	393	908	952	302	655	665	169	0	282	158	0	271
V/C Ratio(X)	0.25	0.57	0.57	0.38	0.93	0.93	0.82	0.00	0.92	0.86	0.00	0.91
Avail Cap(c_a), veh/h	393	908	952	381	718	728	238	0	313	240	0	314
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	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	41.5	18.6	18.6	14.6	37.0	37.0	57.1	0.0	52.8	57.8	0.0	53.2
Incr Delay (d2), s/veh	0.1	2.6	2.5	0.3	21.4	21.5	10.4	0.0	27.3	11.8	0.0	24.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	10.5	10.9	1.4	21.8	22.2	5.0	0.0	10.4	5.0	0.0	9.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	41.6	21.2	21.1	14.9	58.3	58.5	67.5	0.0	80.1	69.7	0.0	77.9
LnGrp LOS	D	C	C	B	E	E	E	A	F	E	A	E
Approach Vol, veh/h		1162			1341			397			382	
Approach Delay, s/veh		22.9			54.7			75.7			75.0	
Approach LOS		C			D			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	30.0	57.0	16.6	26.5	9.7	77.2	17.5	25.6
Change Period (Y+Rc), s	4.5	* 4.5	4.0	4.0	4.0	4.5	4.0	4.0
Max Green Setting (Gmax), s	12.0	* 58	19.0	25.0	12.0	57.5	19.0	25.0
Max Q Clear Time (g_c+I1), s	2.4	48.6	12.6	22.3	5.8	29.0	12.9	21.2
Green Ext Time (p_c), s	0.0	3.8	0.0	0.2	0.0	5.0	0.0	0.2

Intersection Summary	
HCM 6th Ctrl Delay	48.3
HCM 6th LOS	D

Notes

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

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	98	1064	114	1227	139	258	136	246
v/c Ratio	0.46	0.62	0.44	0.73	0.75	0.89	0.80	0.88
Control Delay	32.1	25.4	17.3	28.6	79.1	79.7	86.2	79.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.1	25.4	17.3	28.6	79.1	79.7	86.2	79.1
Queue Length 50th (ft)	33	332	39	411	114	201	113	188
Queue Length 95th (ft)	65	463	73	584	184	#338	180	#309
Internal Link Dist (ft)		157		159		136		119
Turn Bay Length (ft)	100		85		200			
Base Capacity (vph)	265	1706	313	1683	228	322	230	321
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.37	0.62	0.36	0.73	0.61	0.80	0.59	0.77

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	140	965	77	75	1210	297	67	73	83	52	33	51
Future Volume (veh/h)	140	965	77	75	1210	297	67	73	83	52	33	51
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.99	0.98		1.00	0.99		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1750	1777	1709	1695	1723	1709	1709	1820	1792	1723	1750	1695
Adj Flow Rate, veh/h	156	1072	86	83	1344	330	74	81	0	58	37	57
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	3	3	4	2	3	3	0	2	2	0	4
Cap, veh/h	356	1383	111	572	1417	340	117	110		160	90	252
Arrive On Green	0.17	0.44	0.44	0.28	0.54	0.54	0.18	0.18	0.00	0.18	0.18	0.18
Sat Flow, veh/h	1667	3158	253	1615	2613	627	421	611	1518	639	503	1401
Grp Volume(v), veh/h	156	573	585	83	830	844	155	0	0	95	0	57
Grp Sat Flow(s),veh/h/ln	1667	1689	1722	1615	1637	1604	1032	0	1518	1142	0	1401
Q Serve(g_s), s	5.5	37.5	37.6	0.0	61.3	66.1	10.9	0.0	0.0	0.0	0.0	4.5
Cycle Q Clear(g_c), s	5.5	37.5	37.6	0.0	61.3	66.1	20.4	0.0	0.0	9.5	0.0	4.5
Prop In Lane	1.00		0.15	1.00		0.39	0.48		1.00	0.61		1.00
Lane Grp Cap(c), veh/h	356	740	754	572	887	869	226	0		250	0	252
V/C Ratio(X)	0.44	0.77	0.78	0.15	0.94	0.97	0.68	0.00		0.38	0.00	0.23
Avail Cap(c_a), veh/h	356	917	935	572	889	871	348	0		363	0	366
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	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	45.2	31.1	31.1	26.2	27.7	28.8	54.3	0.0	0.0	47.4	0.0	45.6
Incr Delay (d2), s/veh	0.5	7.8	7.7	0.1	18.1	24.2	7.6	0.0	0.0	2.0	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	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.4	16.5	16.8	1.8	27.1	29.8	5.5	0.0	0.0	2.9	0.0	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.8	38.9	38.8	26.3	45.8	52.9	61.9	0.0	0.0	49.4	0.0	46.5
LnGrp LOS	D	D	D	C	D	D	E	A		D	A	D
Approach Vol, veh/h		1314			1757			155			152	
Approach Delay, s/veh		39.6			48.3			61.9			48.3	
Approach LOS		D			D			E			D	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	26.7	75.9		27.4	40.3	62.3		27.4
Change Period (Y+Rc), s	* 4	5.4		4.0	* 4	5.4		4.0
Max Green Setting (Gmax), s	* 12	70.6		34.0	* 12	70.6		34.0
Max Q Clear Time (g_c+I1), s	7.5	68.1		22.4	2.0	39.6		11.5
Green Ext Time (p_c), s	0.1	2.4		1.1	0.1	17.3		1.3

Intersection Summary	
HCM 6th Ctrl Delay	45.5
HCM 6th LOS	D

Notes

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

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

Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	156	1158	83	1674	155	92	95	57
v/c Ratio	0.72	0.60	0.19	0.83	0.67	0.25	0.55	0.20
Control Delay	51.5	23.0	8.9	23.7	63.5	9.6	59.3	11.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	51.5	23.0	8.9	23.7	63.5	9.6	59.3	11.7
Queue Length 50th (ft)	53	386	14	513	125	0	75	0
Queue Length 95th (ft)	#157	433	36	764	188	45	125	36
Internal Link Dist (ft)		431		278	337		94	
Turn Bay Length (ft)	196		85			85		50
Base Capacity (vph)	229	2036	448	2029	349	500	263	392
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.68	0.57	0.19	0.83	0.44	0.18	0.36	0.15

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	90	967	12	105	1025	104	128	172	65	125	144	82
Future Volume (vph)	90	967	12	105	1025	104	128	172	65	125	144	82
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Lane Width	12	12	12	12	12	12	11	11	12	11	11	12
Total Lost time (s)	4.0	4.5		4.0	4.5		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00		1.00	0.99		1.00	0.96		1.00	0.95	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1614	3223		1646	3185		1560	1579		1576	1568	
Flt Permitted	0.13	1.00		0.18	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	219	3223		309	3185		1560	1579		1576	1568	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	98	1051	13	114	1114	113	139	187	71	136	157	89
RTOR Reduction (vph)	0	0	0	0	5	0	0	11	0	0	16	0
Lane Group Flow (vph)	98	1064	0	114	1222	0	139	247	0	136	230	0
Confl. Peds. (#/hr)	1					1	1					1
Confl. Bikes (#/hr)						1						2
Heavy Vehicles (%)	3%	3%	0%	1%	3%	0%	3%	3%	2%	2%	0%	4%
Turn Type	D.P+P	NA		D.P+P	NA		Prot	NA		Prot	NA	
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	2			6								
Actuated Green, G (s)	76.2	68.8		76.2	68.5		15.5	23.1		14.2	21.8	
Effective Green, g (s)	76.2	68.8		76.2	68.5		15.5	23.1		14.2	21.8	
Actuated g/C Ratio	0.59	0.53		0.59	0.53		0.12	0.18		0.11	0.17	
Clearance Time (s)	4.0	4.5		4.0	4.5		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	1.0	2.1		1.0	2.1		1.0	1.0		1.0	1.0	
Lane Grp Cap (vph)	210	1705		257	1678		186	280		172	262	
v/s Ratio Prot	0.03	c0.33		0.03	c0.38		c0.09	c0.16		0.09	0.15	
v/s Ratio Perm	0.25			0.23								
v/c Ratio	0.47	0.62		0.44	0.73		0.75	0.88		0.79	0.88	
Uniform Delay, d1	36.1	21.5		14.7	23.6		55.4	52.1		56.5	52.8	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.6	1.7		0.4	2.8		13.3	25.6		20.2	25.8	
Delay (s)	36.7	23.2		15.1	26.4		68.7	77.8		76.6	78.7	
Level of Service	D	C		B	C		E	E		E	E	
Approach Delay (s)		24.4			25.5			74.6			77.9	
Approach LOS		C			C			E			E	

Intersection Summary			
HCM 2000 Control Delay	37.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	16.5
Intersection Capacity Utilization	75.2%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	140	965	77	75	1210	297	67	73	83	52	33	51
Future Volume (vph)	140	965	77	75	1210	297	67	73	83	52	33	51
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Lane Width	11	14	12	12	12	12	12	13	16	12	11	11
Total Lost time (s)	4.0	5.4		4.0	5.4			4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00			1.00	1.00		1.00	0.97
Flpb, ped/bikes	1.00	1.00		1.00	1.00			0.99	1.00		1.00	1.00
Frt	1.00	0.99		1.00	0.97			1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.98	1.00		0.97	1.00
Satd. Flow (prot)	1607	3393		1599	3157			1727	1653		1622	1340
Flt Permitted	0.07	1.00		0.16	1.00			0.75	1.00		0.60	1.00
Satd. Flow (perm)	125	3393		275	3157			1335	1653		1010	1340
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	156	1072	86	83	1344	330	74	81	92	58	37	57
RTOR Reduction (vph)	0	4	0	0	13	0	0	0	55	0	0	47
Lane Group Flow (vph)	156	1154	0	83	1661	0	0	155	37	0	95	10
Confl. Peds. (#/hr)			9	9			15					15
Confl. Bikes (#/hr)			1									
Heavy Vehicles (%)	0%	3%	3%	4%	2%	3%	3%	0%	2%	2%	0%	4%
Turn Type	D.P+P	NA		D.P+P	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases	1	6		5	2			4			8	
Permitted Phases	2			6			4		4	8		8
Actuated Green, G (s)	94.1	72.5		94.1	82.3			22.5	22.5		22.5	22.5
Effective Green, g (s)	94.1	72.5		94.1	82.3			22.5	22.5		22.5	22.5
Actuated g/C Ratio	0.72	0.56		0.72	0.63			0.17	0.17		0.17	0.17
Clearance Time (s)	4.0	5.4		4.0	5.4			4.0	4.0		4.0	4.0
Vehicle Extension (s)	2.3	5.1		2.3	5.1			5.0	5.0		5.0	5.0
Lane Grp Cap (vph)	225	1892		419	1998			231	286		174	231
v/s Ratio Prot	c0.06	0.34		0.03	c0.53							
v/s Ratio Perm	0.44			0.11				c0.12	0.02		0.09	0.01
v/c Ratio	0.69	0.61		0.20	0.83			0.67	0.13		0.55	0.04
Uniform Delay, d1	35.9	19.3		17.3	18.5			50.3	45.5		49.1	44.8
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	1.00
Incremental Delay, d2	7.8	1.5		0.1	4.2			9.6	0.4		6.0	0.2
Delay (s)	43.8	20.7		17.4	22.7			59.9	45.9		55.1	44.9
Level of Service	D	C		B	C			E	D		E	D
Approach Delay (s)		23.5			22.4			54.7			51.3	
Approach LOS		C			C			D			D	

Intersection Summary			
HCM 2000 Control Delay	26.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	13.4
Intersection Capacity Utilization	83.1%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	5	5	2	0	2	1	79	1	1	178	1
Future Vol, veh/h	0	5	5	2	0	2	1	79	1	1	178	1
Conflicting Peds, #/hr	5	0	9	9	0	5	0	0	2	2	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	75	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	83	83	83	83	83	83	83	83	83
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	6	6	2	0	2	1	95	1	1	214	1

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	-	317	224	332	317	103	215	0	0	98	0	0
Stage 1	-	217	-	100	100	-	-	-	-	-	-	-
Stage 2	-	100	-	232	217	-	-	-	-	-	-	-
Critical Hdwy	-	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	-	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	-	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	0	602	820	625	602	957	1367	-	-	1508	-	-
Stage 1	0	727	-	911	816	-	-	-	-	-	-	-
Stage 2	0	816	-	775	727	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	600	813	608	600	950	1367	-	-	1505	-	-
Mov Cap-2 Maneuver	-	600	-	608	600	-	-	-	-	-	-	-
Stage 1	-	726	-	908	814	-	-	-	-	-	-	-
Stage 2	-	814	-	756	726	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.3	9.9	0.1	0
HCM LOS	B	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1367	-	-	690	608	950	1505	-	-
HCM Lane V/C Ratio	0.001	-	-	0.017	0.004	0.003	0.001	-	-
HCM Control Delay (s)	7.6	-	-	10.3	10.9	8.8	7.4	-	-
HCM Lane LOS	A	-	-	B	B	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0	0	0	-	-

Intersection	
Intersection Delay, s/veh	11.8
Intersection LOS	B

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	30	4	24	50	36	343
Future Vol, veh/h	30	4	24	50	36	343
Peak Hour Factor	0.74	0.74	0.74	0.74	0.74	0.74
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	41	5	32	68	49	464
Number of Lanes	1	1	1	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	2
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	2	0
HCM Control Delay	9.3	7.7	12.8
HCM LOS	A	A	B

Lane	NBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	0%	100%	0%	9%
Vol Thru, %	32%	0%	0%	91%
Vol Right, %	68%	0%	100%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	74	30	4	379
LT Vol	0	30	0	36
Through Vol	24	0	0	343
RT Vol	50	0	4	0
Lane Flow Rate	100	41	5	512
Geometry Grp	2	7	7	2
Degree of Util (X)	0.115	0.071	0.008	0.58
Departure Headway (Hd)	4.139	6.316	5.103	4.074
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	869	570	704	871
Service Time	2.148	4.024	2.811	2.172
HCM Lane V/C Ratio	0.115	0.072	0.007	0.588
HCM Control Delay	7.7	9.5	7.9	12.8
HCM Lane LOS	A	A	A	B
HCM 95th-tile Q	0.4	0.2	0	3.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	27	207	25	44	204	28	39	38	33	36	71	110
Future Volume (veh/h)	27	207	25	44	204	28	39	38	33	36	71	110
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.98	0.99		0.98	1.00		0.98	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1750	1736	1750	1723	1723	1750	1682	1709	1709	1709	1750	1750
Adj Flow Rate, veh/h	32	244	29	52	240	33	46	45	39	42	84	129
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	0	1	0	2	2	0	5	3	3	3	0	0
Cap, veh/h	433	780	92	451	763	104	64	175	151	112	145	222
Arrive On Green	0.03	0.26	0.26	0.04	0.26	0.26	0.04	0.21	0.21	0.07	0.24	0.24
Sat Flow, veh/h	1667	2968	349	1641	2890	392	1602	838	726	1628	610	937
Grp Volume(v), veh/h	32	134	139	52	135	138	46	0	84	42	0	213
Grp Sat Flow(s),veh/h/ln	1667	1650	1667	1641	1637	1645	1602	0	1563	1628	0	1547
Q Serve(g_s), s	0.0	2.6	2.7	0.9	2.6	2.7	1.1	0.0	1.8	1.0	0.0	4.8
Cycle Q Clear(g_c), s	0.0	2.6	2.7	0.9	2.6	2.7	1.1	0.0	1.8	1.0	0.0	4.8
Prop In Lane	1.00		0.21	1.00		0.24	1.00		0.46	1.00		0.61
Lane Grp Cap(c), veh/h	433	433	438	451	432	435	64	0	326	112	0	367
V/C Ratio(X)	0.07	0.31	0.32	0.12	0.31	0.32	0.72	0.00	0.26	0.37	0.00	0.58
Avail Cap(c_a), veh/h	1055	2577	2604	1041	2556	2570	928	0	1142	943	0	1130
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	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	12.3	11.7	11.8	9.9	11.7	11.7	18.8	0.0	13.1	17.7	0.0	13.4
Incr Delay (d2), s/veh	0.0	0.2	0.2	0.0	0.2	0.2	5.4	0.0	0.2	0.8	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.8	0.8	0.2	0.8	0.8	0.5	0.0	0.5	0.4	0.0	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	12.3	11.9	12.0	10.0	11.9	11.9	24.3	0.0	13.3	18.4	0.0	13.9
LnGrp LOS	B	B	B	A	B	B	C	A	B	B	A	B
Approach Vol, veh/h		305			325			130			255	
Approach Delay, s/veh		12.0			11.6			17.2			14.7	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.7	15.0	6.7	12.3	5.7	14.9	5.6	13.4
Change Period (Y+Rc), s	4.5	* 4.5	4.0	4.0	4.0	4.5	4.0	4.0
Max Green Setting (Gmax), s	16.0	* 62	23.0	29.0	16.0	62.0	23.0	29.0
Max Q Clear Time (g_c+I1), s	2.0	4.7	3.0	3.8	2.9	4.7	3.1	6.8
Green Ext Time (p_c), s	0.0	1.1	0.0	0.2	0.0	1.1	0.0	0.5

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

Notes

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

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	32	273	52	273	46	84	42	213
v/c Ratio	0.06	0.27	0.11	0.25	0.18	0.21	0.17	0.53
Control Delay	10.9	15.7	10.8	15.6	21.4	13.7	23.9	20.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	10.9	15.7	10.8	15.6	21.4	13.7	23.9	20.0
Queue Length 50th (ft)	3	21	4	12	8	9	8	27
Queue Length 95th (ft)	23	78	33	85	40	44	44	126
Internal Link Dist (ft)		157		159		136		119
Turn Bay Length (ft)	100		85		200			
Base Capacity (vph)	997	3123	804	3107	990	1140	1008	1159
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.09	0.06	0.09	0.05	0.07	0.04	0.18

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	31	196	36	24	222	34	12	9	15	298	45	30
Future Volume (veh/h)	31	196	36	24	222	34	12	9	15	298	45	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.98	0.99		0.97	0.98		1.00	0.98		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1750	1806	1750	1750	1750	1750	1750	1820	1820	1750	1750	1750
Adj Flow Rate, veh/h	34	218	40	27	247	38	13	10	0	331	50	33
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	1	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	340	650	117	350	633	96	271	178		623	74	693
Arrive On Green	0.03	0.22	0.22	0.02	0.22	0.22	0.48	0.48	0.00	0.48	0.48	0.48
Sat Flow, veh/h	1667	2892	520	1667	2884	437	328	367	1542	1012	153	1433
Grp Volume(v), veh/h	34	128	130	27	141	144	23	0	0	381	0	33
Grp Sat Flow(s),veh/h/ln	1667	1716	1697	1667	1663	1658	695	0	1542	1165	0	1433
Q Serve(g_s), s	0.8	3.1	3.2	0.6	3.6	3.7	0.2	0.0	0.0	0.0	0.0	0.6
Cycle Q Clear(g_c), s	0.8	3.1	3.2	0.6	3.6	3.7	14.8	0.0	0.0	14.6	0.0	0.6
Prop In Lane	1.00		0.31	1.00		0.26	0.57		1.00	0.87		1.00
Lane Grp Cap(c), veh/h	340	386	381	350	365	364	448	0		697	0	693
V/C Ratio(X)	0.10	0.33	0.34	0.08	0.39	0.40	0.05	0.00		0.55	0.00	0.05
Avail Cap(c_a), veh/h	753	2590	2562	938	2510	2503	956	0		1163	0	1195
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	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	14.6	16.3	16.4	14.5	16.7	16.8	8.5	0.0	0.0	10.5	0.0	6.9
Incr Delay (d2), s/veh	0.1	1.1	1.2	0.1	1.5	1.6	0.1	0.0	0.0	1.4	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	1.2	1.2	0.2	1.4	1.4	0.1	0.0	0.0	3.0	0.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	14.7	17.5	17.6	14.6	18.2	18.4	8.6	0.0	0.0	11.9	0.0	6.9
LnGrp LOS	B	B	B	B	B	B	A	A		B	A	A
Approach Vol, veh/h		292			312			23			414	
Approach Delay, s/veh		17.2			18.0			8.6			11.5	
Approach LOS		B			B			A			B	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.5	16.5		28.4	5.3	16.7		28.4
Change Period (Y+Rc), s	4.0	* 5.4		4.0	4.0	* 5.4		4.0
Max Green Setting (Gmax), s	14.0	* 76		42.0	19.0	* 76		42.0
Max Q Clear Time (g_c+I1), s	2.8	5.7		16.8	2.6	5.2		16.6
Green Ext Time (p_c), s	0.0	3.7		0.1	0.0	3.4		5.1

Intersection Summary	
HCM 6th Ctrl Delay	15.0
HCM 6th LOS	B

Notes

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

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

Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	34	258	27	285	23	17	381	33
v/c Ratio	0.11	0.35	0.08	0.41	0.08	0.04	0.52	0.04
Control Delay	15.7	22.1	15.3	23.3	19.0	0.2	13.6	0.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	15.7	22.1	15.3	23.3	19.0	0.2	13.6	0.6
Queue Length 50th (ft)	9	37	7	43	7	0	64	0
Queue Length 95th (ft)	26	78	22	88	17	0	225	3
Internal Link Dist (ft)		431		278	337		94	
Turn Bay Length (ft)	196		85			85		50
Base Capacity (vph)	423	3394	533	3258	964	1102	796	859
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.08	0.08	0.05	0.09	0.02	0.02	0.48	0.04

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	27	207	25	44	204	28	39	38	33	36	71	110
Future Volume (vph)	27	207	25	44	204	28	39	38	33	36	71	110
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Lane Width	12	12	12	12	12	12	11	11	12	11	11	12
Total Lost time (s)	4.0	4.5		4.0	4.5		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.98		1.00	0.93		1.00	0.91	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1662	3233		1623	3208		1531	1515		1560	1523	
Flt Permitted	0.58	1.00		0.58	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1022	3233		998	3208		1531	1515		1560	1523	
Peak-hour factor, PHF	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Adj. Flow (vph)	32	244	29	52	240	33	46	45	39	42	84	129
RTOR Reduction (vph)	0	8	0	0	9	0	0	21	0	0	37	0
Lane Group Flow (vph)	32	265	0	52	264	0	46	63	0	42	176	0
Confl. Peds. (#/hr)			8	8					12	12		
Confl. Bikes (#/hr)												4
Heavy Vehicles (%)	0%	1%	0%	2%	2%	0%	5%	3%	3%	3%	0%	0%
Turn Type	D.P+P	NA		D.P+P	NA		Prot	NA		Prot	NA	
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	2			6								
Actuated Green, G (s)	16.6	13.8		16.6	14.4		3.0	10.5		2.7	10.2	
Effective Green, g (s)	16.6	13.8		16.6	14.4		3.0	10.5		2.7	10.2	
Actuated g/C Ratio	0.36	0.30		0.36	0.31		0.06	0.23		0.06	0.22	
Clearance Time (s)	4.0	4.5		4.0	4.5		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	1.0	2.1		1.0	2.1		1.0	1.0		1.0	1.0	
Lane Grp Cap (vph)	396	963		395	997		99	343		90	335	
v/s Ratio Prot	0.00	c0.08		0.01	c0.08		c0.03	0.04		0.03	c0.12	
v/s Ratio Perm	0.03			0.04								
v/c Ratio	0.08	0.28		0.13	0.26		0.46	0.18		0.47	0.53	
Uniform Delay, d1	9.8	12.4		9.8	12.0		20.9	14.4		21.1	15.9	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.0	0.1		0.1	0.1		1.3	0.1		1.4	0.7	
Delay (s)	9.9	12.5		9.9	12.0		22.1	14.5		22.5	16.6	
Level of Service	A	B		A	B		C	B		C	B	
Approach Delay (s)		12.2			11.7			17.2			17.6	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	14.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	46.3	Sum of lost time (s)	16.5
Intersection Capacity Utilization	41.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	31	196	36	24	222	34	12	9	15	298	45	30
Future Volume (vph)	31	196	36	24	222	34	12	9	15	298	45	30
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Lane Width	11	14	12	12	12	12	12	13	16	12	11	11
Total Lost time (s)	4.0	5.4		4.0	5.4			4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00			1.00	1.00		1.00	0.95
Flpb, ped/bikes	1.00	1.00		0.99	1.00			0.99	1.00		1.00	1.00
Frt	1.00	0.98		1.00	0.98			1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.97	1.00		0.96	1.00
Satd. Flow (prot)	1607	3415		1650	3258			1738	1686		1621	1367
Flt Permitted	0.58	1.00		0.59	1.00			0.85	1.00		0.74	1.00
Satd. Flow (perm)	976	3415		1029	3258			1520	1686		1248	1367
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	34	218	40	27	247	38	13	10	17	331	50	33
RTOR Reduction (vph)	0	16	0	0	14	0	0	0	7	0	0	14
Lane Group Flow (vph)	34	242	0	27	271	0	0	23	10	0	381	19
Confl. Peds. (#/hr)			11	11			55					55
Heavy Vehicles (%)	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Turn Type	D.P+P	NA		D.P+P	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases	1	6		5	2			4			8	
Permitted Phases	2			6			4		4	8		8
Actuated Green, G (s)	16.3	14.0		16.3	13.9			39.2	39.2		39.2	39.2
Effective Green, g (s)	16.3	14.0		16.3	13.9			39.2	39.2		39.2	39.2
Actuated g/C Ratio	0.24	0.20		0.24	0.20			0.57	0.57		0.57	0.57
Clearance Time (s)	4.0	5.4		4.0	5.4			4.0	4.0		4.0	4.0
Vehicle Extension (s)	2.3	5.1		2.3	5.1			5.0	5.0		5.0	5.0
Lane Grp Cap (vph)	252	693		264	657			864	959		710	777
v/s Ratio Prot	c0.00	0.07		0.00	c0.08							
v/s Ratio Perm	0.03			0.02				0.02	0.01		c0.31	0.01
v/c Ratio	0.13	0.35		0.10	0.41			0.03	0.01		0.54	0.02
Uniform Delay, d1	20.5	23.5		20.4	23.9			6.5	6.4		9.2	6.5
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	1.00
Incremental Delay, d2	0.1	0.7		0.1	0.9			0.0	0.0		1.4	0.0
Delay (s)	20.7	24.2		20.5	24.9			6.5	6.4		10.6	6.5
Level of Service	C	C		C	C			A	A		B	A
Approach Delay (s)		23.8			24.5			6.5			10.3	
Approach LOS		C			C			A			B	

Intersection Summary			
HCM 2000 Control Delay	18.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	68.9	Sum of lost time (s)	13.4
Intersection Capacity Utilization	52.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	3.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	84	19	6	2	2	8	166	25	39	162	4
Future Vol, veh/h	2	84	19	6	2	2	8	166	25	39	162	4
Conflicting Peds, #/hr	1	0	12	12	0	1	5	0	0	0	0	5
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	75	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	98	98	98	98	98	98	98	98	98	98	98	98
Heavy Vehicles, %	0	0	0	0	0	0	0	2	0	3	2	0
Mvmt Flow	2	86	19	6	2	2	8	169	26	40	165	4

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	453	463	184	510	452	183	174	0	0	195	0	0
Stage 1	252	252	-	198	198	-	-	-	-	-	-	-
Stage 2	201	211	-	312	254	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.13	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.227	-	-
Pot Cap-1 Maneuver	520	499	864	477	506	865	1415	-	-	1372	-	-
Stage 1	757	702	-	808	741	-	-	-	-	-	-	-
Stage 2	805	731	-	703	701	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	499	477	849	386	484	864	1407	-	-	1372	-	-
Mov Cap-2 Maneuver	499	477	-	386	484	-	-	-	-	-	-	-
Stage 1	748	675	-	803	737	-	-	-	-	-	-	-
Stage 2	795	727	-	574	674	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	13.7	13	0.3	1.5
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1407	-	-	519	386	620	1372	-	-
HCM Lane V/C Ratio	0.006	-	-	0.203	0.016	0.007	0.029	-	-
HCM Control Delay (s)	7.6	-	-	13.7	14.5	10.8	7.7	-	-
HCM Lane LOS	A	-	-	B	B	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.8	0	0	0.1	-	-

Intersection	
Intersection Delay, s/veh	12.6
Intersection LOS	B

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	82	27	367	74	8	51
Future Vol, veh/h	82	27	367	74	8	51
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles, %	0	0	1	3	0	0
Mvmt Flow	95	31	427	86	9	59
Number of Lanes	1	1	1	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	2
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	2	0
HCM Control Delay	9.8	13.8	8.4
HCM LOS	A	B	A

Lane	NBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	0%	100%	0%	14%
Vol Thru, %	83%	0%	0%	86%
Vol Right, %	17%	0%	100%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	441	82	27	59
LT Vol	0	82	0	8
Through Vol	367	0	0	51
RT Vol	74	0	27	0
Lane Flow Rate	513	95	31	69
Geometry Grp	2	7	7	2
Degree of Util (X)	0.609	0.166	0.044	0.092
Departure Headway (Hd)	4.275	6.284	5.071	4.842
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	846	569	702	738
Service Time	2.296	4.043	2.83	2.885
HCM Lane V/C Ratio	0.606	0.167	0.044	0.093
HCM Control Delay	13.8	10.3	8.1	8.4
HCM Lane LOS	B	B	A	A
HCM 95th-tile Q	4.2	0.6	0.1	0.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	77	622	30	98	475	90	100	132	64	103	100	58
Future Volume (veh/h)	77	622	30	98	475	90	100	132	64	103	100	58
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1736	1723	1709	1695	1723	1750	1736	1723	1723	1736	1723	1723
Adj Flow Rate, veh/h	88	707	34	111	540	102	114	150	73	117	114	66
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	1	2	3	4	2	0	1	2	2	1	2	2
Cap, veh/h	687	1719	83	416	628	118	183	175	85	143	137	80
Arrive On Green	0.35	0.54	0.54	0.05	0.23	0.23	0.11	0.16	0.16	0.09	0.14	0.14
Sat Flow, veh/h	1654	3179	153	1615	2737	515	1654	1094	532	1654	1016	588
Grp Volume(v), veh/h	88	364	377	111	322	320	114	0	223	117	0	180
Grp Sat Flow(s),veh/h/ln	1654	1637	1695	1615	1637	1615	1654	0	1626	1654	0	1604
Q Serve(g_s), s	0.0	13.1	13.1	3.0	18.9	19.0	6.6	0.0	13.4	7.0	0.0	10.9
Cycle Q Clear(g_c), s	0.0	13.1	13.1	3.0	18.9	19.0	6.6	0.0	13.4	7.0	0.0	10.9
Prop In Lane	1.00		0.09	1.00		0.32	1.00		0.33	1.00		0.37
Lane Grp Cap(c), veh/h	687	885	917	416	376	371	183	0	260	143	0	217
V/C Ratio(X)	0.13	0.41	0.41	0.27	0.86	0.86	0.62	0.00	0.86	0.82	0.00	0.83
Avail Cap(c_a), veh/h	687	885	917	516	499	493	298	0	423	265	0	385
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	20.2	13.6	13.6	10.1	37.0	37.0	42.5	0.0	40.9	44.9	0.0	42.1
Incr Delay (d2), s/veh	0.0	1.4	1.4	0.1	21.5	22.5	1.3	0.0	5.1	4.3	0.0	3.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	4.9	5.0	1.0	9.6	9.6	2.7	0.0	5.7	3.0	0.0	4.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	20.2	15.0	14.9	10.2	58.5	59.5	43.7	0.0	46.0	49.3	0.0	45.2
LnGrp LOS	C	B	B	B	E	E	D	A	D	D	A	D
Approach Vol, veh/h		829			753			337			297	
Approach Delay, s/veh		15.5			51.8			45.3			46.8	
Approach LOS		B			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	39.9	27.5	12.6	20.0	8.8	58.6	15.1	17.5
Change Period (Y+Rc), s	4.5	* 4.5	4.0	4.0	4.0	4.5	4.0	4.0
Max Green Setting (Gmax), s	11.0	* 31	16.0	26.0	11.0	30.5	18.0	24.0
Max Q Clear Time (g_c+I1), s	2.0	21.0	9.0	15.4	5.0	15.1	8.6	12.9
Green Ext Time (p_c), s	0.0	1.9	0.0	0.3	0.0	2.7	0.0	0.3

Intersection Summary	
HCM 6th Ctrl Delay	36.6
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

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

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	88	741	111	642	114	223	117	180
v/c Ratio	0.20	0.46	0.31	0.42	0.56	0.81	0.68	0.74
Control Delay	13.8	20.1	13.1	20.7	50.8	56.5	61.9	51.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	13.8	20.1	13.1	20.7	50.8	56.5	61.9	51.4
Queue Length 50th (ft)	22	153	28	138	68	124	73	95
Queue Length 95th (ft)	56	270	68	228	119	185	122	145
Internal Link Dist (ft)		157		159		136		119
Turn Bay Length (ft)	100		85		200			
Base Capacity (vph)	462	1607	423	1530	286	427	254	394
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.19	0.46	0.26	0.42	0.40	0.52	0.46	0.46

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	115	721	52	61	569	300	39	26	51	57	19	57
Future Volume (veh/h)	115	721	52	61	569	300	39	26	51	57	19	57
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.99	0.98		1.00	0.98		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1723	1792	1723	1723	1723	1736	1709	1820	1763	1750	1750	1723
Adj Flow Rate, veh/h	126	792	57	67	625	330	43	29	0	63	21	63
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	1	3	0	4	0	0	2
Cap, veh/h	685	2255	162	488	799	422	118	66		183	52	184
Arrive On Green	0.33	0.70	0.70	0.03	0.39	0.39	0.13	0.13	0.00	0.13	0.13	0.13
Sat Flow, veh/h	1641	3213	231	1641	2060	1088	468	503	1494	924	398	1410
Grp Volume(v), veh/h	126	419	430	67	496	459	72	0	0	84	0	63
Grp Sat Flow(s),veh/h/ln	1641	1702	1742	1641	1637	1512	971	0	1494	1322	0	1410
Q Serve(g_s), s	0.0	9.7	9.8	1.1	26.6	26.7	3.1	0.0	0.0	0.0	0.0	4.1
Cycle Q Clear(g_c), s	0.0	9.7	9.8	1.1	26.6	26.7	9.0	0.0	0.0	5.9	0.0	4.1
Prop In Lane	1.00		0.13	1.00		0.72	0.60		1.00	0.75		1.00
Lane Grp Cap(c), veh/h	685	1195	1223	488	635	586	184	0		235	0	184
V/C Ratio(X)	0.18	0.35	0.35	0.14	0.78	0.78	0.39	0.00		0.36	0.00	0.34
Avail Cap(c_a), veh/h	685	1195	1223	564	763	705	455	0		493	0	451
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	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	19.0	5.9	5.9	4.2	26.9	26.9	42.3	0.0	0.0	40.3	0.0	39.6
Incr Delay (d2), s/veh	0.1	0.8	0.8	0.1	9.3	10.0	2.9	0.0	0.0	2.0	0.0	2.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	3.2	3.2	0.3	11.6	10.8	1.9	0.0	0.0	2.1	0.0	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.1	6.7	6.7	4.3	36.2	36.9	45.1	0.0	0.0	42.2	0.0	41.9
LnGrp LOS	B	A	A	A	D	D	D	A		D	A	D
Approach Vol, veh/h		975			1022			72			147	
Approach Delay, s/veh		8.3			34.4			45.1			42.1	
Approach LOS		A			C			D			D	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	38.8	44.2		17.0	7.4	75.6		17.0
Change Period (Y+Rc), s	* 5.4	* 5.4		4.0	4.0	* 5.4		4.0
Max Green Setting (Gmax), s	* 8	* 47		32.0	8.0	* 47		32.0
Max Q Clear Time (g_c+I1), s	2.0	28.7		11.0	3.1	11.8		7.9
Green Ext Time (p_c), s	0.1	10.1		0.6	0.0	12.4		1.3

Intersection Summary	
HCM 6th Ctrl Delay	23.8
HCM 6th LOS	C

Notes

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

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

Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	126	849	67	955	72	56	84	63
v/c Ratio	0.33	0.37	0.15	0.48	0.27	0.14	0.35	0.17
Control Delay	11.3	11.5	6.7	11.8	33.9	0.7	36.3	1.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	11.3	11.5	6.7	11.8	33.9	0.7	36.3	1.1
Queue Length 50th (ft)	15	108	8	120	42	0	50	0
Queue Length 95th (ft)	55	239	32	261	69	0	80	0
Internal Link Dist (ft)		431		278	337		94	
Turn Bay Length (ft)	196		85			85		50
Base Capacity (vph)	403	2305	467	2009	452	606	405	526
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.31	0.37	0.14	0.48	0.16	0.09	0.21	0.12

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	77	622	30	98	475	90	100	132	64	103	100	58
Future Volume (vph)	77	622	30	98	475	90	100	132	64	103	100	58
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Lane Width	12	12	12	12	12	12	11	11	12	11	11	12
Total Lost time (s)	4.0	4.5		4.0	4.5		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.98		1.00	0.95		1.00	0.94	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1646	3236		1599	3180		1591	1577		1591	1558	
Flt Permitted	0.34	1.00		0.30	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	590	3236		504	3180		1591	1577		1591	1558	
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	88	707	34	111	540	102	114	150	73	117	114	66
RTOR Reduction (vph)	0	3	0	0	12	0	0	20	0	0	23	0
Lane Group Flow (vph)	88	738	0	111	630	0	114	203	0	117	157	0
Confl. Peds. (#/hr)	1					1	1					1
Confl. Bikes (#/hr)						1						2
Heavy Vehicles (%)	1%	2%	3%	4%	2%	0%	1%	2%	2%	1%	2%	2%
Turn Type	D.P+P	NA		D.P+P	NA		Prot	NA		Prot	NA	
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	2			6								
Actuated Green, G (s)	56.4	49.6		56.4	47.0		12.9	16.3		10.8	14.2	
Effective Green, g (s)	56.4	49.6		56.4	47.0		12.9	16.3		10.8	14.2	
Actuated g/C Ratio	0.56	0.50		0.56	0.47		0.13	0.16		0.11	0.14	
Clearance Time (s)	4.0	4.5		4.0	4.5		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	1.0	2.1		1.0	2.1		1.0	1.0		1.0	1.0	
Lane Grp Cap (vph)	432	1605		358	1494		205	257		171	221	
v/s Ratio Prot	0.02	c0.23		0.02	c0.20		0.07	c0.13		c0.07	0.10	
v/s Ratio Perm	0.10			0.15								
v/c Ratio	0.20	0.46		0.31	0.42		0.56	0.79		0.68	0.71	
Uniform Delay, d1	15.1	16.5		10.8	17.5		40.9	40.2		43.0	40.9	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.1	1.0		0.2	0.9		1.9	13.8		8.7	8.2	
Delay (s)	15.1	17.4		10.9	18.4		42.7	54.0		51.6	49.2	
Level of Service	B	B		B	B		D	D		D	D	
Approach Delay (s)		17.2			17.3			50.2			50.1	
Approach LOS		B			B			D			D	

Intersection Summary			
HCM 2000 Control Delay	26.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.5
Intersection Capacity Utilization	57.3%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	115	721	52	61	569	300	39	26	51	57	19	57
Future Volume (vph)	115	721	52	61	569	300	39	26	51	57	19	57
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Lane Width	11	14	12	12	12	12	12	13	16	12	11	11
Total Lost time (s)	4.0	5.4		4.0	5.4			4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00			1.00	1.00		1.00	0.97
Flpb, ped/bikes	1.00	1.00		1.00	1.00			0.99	1.00		1.00	1.00
Frt	1.00	0.99		1.00	0.95			1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.97	1.00		0.96	1.00
Satd. Flow (prot)	1576	3432		1627	3101			1711	1621		1631	1372
Flt Permitted	0.25	1.00		0.30	1.00			0.80	1.00		0.75	1.00
Satd. Flow (perm)	421	3432		514	3101			1414	1621		1267	1372
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	126	792	57	67	625	330	43	29	56	63	21	63
RTOR Reduction (vph)	0	4	0	0	49	0	0	0	46	0	0	52
Lane Group Flow (vph)	126	845	0	67	906	0	0	72	10	0	84	11
Confl. Peds. (#/hr)			9	9			15					15
Confl. Bikes (#/hr)			1									
Heavy Vehicles (%)	2%	2%	2%	2%	2%	1%	3%	0%	4%	0%	0%	2%
Turn Type	D.P+P	NA		D.P+P	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases	1	6		5	2			4			8	
Permitted Phases	2			6			4		4	8		8
Actuated Green, G (s)	69.6	64.4		69.6	61.7			17.0	17.0		17.0	17.0
Effective Green, g (s)	69.6	64.4		69.6	61.7			17.0	17.0		17.0	17.0
Actuated g/C Ratio	0.70	0.64		0.70	0.62			0.17	0.17		0.17	0.17
Clearance Time (s)	4.0	5.4		4.0	5.4			4.0	4.0		4.0	4.0
Vehicle Extension (s)	2.3	5.1		2.3	5.1			5.0	5.0		5.0	5.0
Lane Grp Cap (vph)	384	2210		415	1913			240	275		215	233
v/s Ratio Prot	0.03	c0.25		0.01	c0.29							
v/s Ratio Perm	0.20			0.10				0.05	0.01		c0.07	0.01
v/c Ratio	0.33	0.38		0.16	0.47			0.30	0.03		0.39	0.05
Uniform Delay, d1	10.6	8.4		5.0	10.4			36.3	34.6		36.9	34.7
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	1.00
Incremental Delay, d2	0.3	0.5		0.1	0.8			1.5	0.1		2.4	0.2
Delay (s)	10.9	8.9		5.2	11.2			37.8	34.8		39.3	34.9
Level of Service	B	A		A	B			D	C		D	C
Approach Delay (s)		9.2			10.8			36.5			37.4	
Approach LOS		A			B			D			D	

Intersection Summary			
HCM 2000 Control Delay	13.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	13.4
Intersection Capacity Utilization	62.2%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	6	3	27	7	4	0	86	1	4	194	3
Future Vol, veh/h	0	6	3	27	7	4	0	86	1	4	194	3
Conflicting Peds, #/hr	5	0	9	9	0	5	0	0	2	2	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	75	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	71	71	71	71	71	71	71	71	71	71	71	71
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	1	0
Mvmt Flow	0	8	4	38	10	6	0	121	1	6	273	4

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	-	411	284	426	413	129	-	0	0	124	0	0
Stage 1	-	287	-	124	124	-	-	-	-	-	-	-
Stage 2	-	124	-	302	289	-	-	-	-	-	-	-
Critical Hdwy	-	6.5	6.2	7.1	6.5	6.2	-	-	-	4.1	-	-
Critical Hdwy Stg 1	-	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	-	4	3.3	3.5	4	3.3	-	-	-	2.2	-	-
Pot Cap-1 Maneuver	0	534	760	542	532	926	0	-	-	1475	-	-
Stage 1	0	678	-	885	797	-	0	-	-	-	-	-
Stage 2	0	797	-	712	677	-	0	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	530	753	525	528	919	-	-	-	1472	-	-
Mov Cap-2 Maneuver	-	530	-	525	528	-	-	-	-	-	-	-
Stage 1	-	675	-	885	795	-	-	-	-	-	-	-
Stage 2	-	795	-	690	674	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	11.3	12	0	0.1
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	-	-	588	525	625	1472	-	-
HCM Lane V/C Ratio	-	-	0.022	0.072	0.025	0.004	-	-
HCM Control Delay (s)	-	-	11.3	12.4	10.9	7.5	-	-
HCM Lane LOS	-	-	B	B	B	A	-	-
HCM 95th %tile Q(veh)	-	-	0.1	0.2	0.1	0	-	-

Intersection	
Intersection Delay, s/veh	12.9
Intersection LOS	B

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	47	6	34	47	7	418
Future Vol, veh/h	47	6	34	47	7	418
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79
Heavy Vehicles, %	0	0	3	0	0	0
Mvmt Flow	59	8	43	59	9	529
Number of Lanes	1	1	1	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	2
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	2	0
HCM Control Delay	9.7	8	14.2
HCM LOS	A	A	B

Lane	NBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	0%	100%	0%	2%
Vol Thru, %	42%	0%	0%	98%
Vol Right, %	58%	0%	100%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	81	47	6	425
LT Vol	0	47	0	7
Through Vol	34	0	0	418
RT Vol	47	0	6	0
Lane Flow Rate	103	59	8	538
Geometry Grp	2	7	7	2
Degree of Util (X)	0.124	0.106	0.011	0.631
Departure Headway (Hd)	4.355	6.389	5.175	4.222
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	822	560	690	855
Service Time	2.384	4.134	2.92	2.239
HCM Lane V/C Ratio	0.125	0.105	0.012	0.629
HCM Control Delay	8	9.9	8	14.2
HCM Lane LOS	A	A	A	B
HCM 95th-tile Q	0.4	0.4	0	4.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	26	251	39	43	272	22	42	51	33	109	55	88
Future Volume (veh/h)	26	251	39	43	272	22	42	51	33	109	55	88
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.98	0.99		0.99	1.00		0.98	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1750	1736	1750	1750	1723	1750	1682	1750	1750	1736	1750	1709
Adj Flow Rate, veh/h	30	289	45	49	313	25	48	59	38	125	63	101
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	0	1	0	0	2	0	5	0	0	1	0	3
Cap, veh/h	408	761	117	431	820	65	143	174	112	155	107	172
Arrive On Green	0.03	0.27	0.27	0.04	0.27	0.27	0.09	0.18	0.18	0.09	0.18	0.18
Sat Flow, veh/h	1667	2859	440	1667	3068	243	1602	985	635	1654	591	947
Grp Volume(v), veh/h	30	165	169	49	166	172	48	0	97	125	0	164
Grp Sat Flow(s),veh/h/ln	1667	1650	1649	1667	1637	1675	1602	0	1620	1654	0	1538
Q Serve(g_s), s	0.0	3.2	3.3	0.8	3.2	3.3	1.1	0.0	2.1	2.9	0.0	3.8
Cycle Q Clear(g_c), s	0.0	3.2	3.3	0.8	3.2	3.3	1.1	0.0	2.1	2.9	0.0	3.8
Prop In Lane	1.00		0.27	1.00		0.15	1.00		0.39	1.00		0.62
Lane Grp Cap(c), veh/h	408	439	439	431	437	447	143	0	287	155	0	279
V/C Ratio(X)	0.07	0.38	0.38	0.11	0.38	0.38	0.34	0.00	0.34	0.81	0.00	0.59
Avail Cap(c_a), veh/h	999	1683	1682	998	1670	1708	613	0	620	633	0	588
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	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	12.6	11.7	11.8	9.8	11.7	11.7	16.8	0.0	14.1	17.4	0.0	14.7
Incr Delay (d2), s/veh	0.0	0.2	0.3	0.0	0.2	0.2	0.5	0.0	0.3	3.7	0.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.9	0.9	0.2	0.9	1.0	0.4	0.0	0.6	1.1	0.0	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	12.6	12.0	12.0	9.8	12.0	12.0	17.3	0.0	14.4	21.1	0.0	15.4
LnGrp LOS	B	B	B	A	B	B	B	A	B	C	A	B
Approach Vol, veh/h		364			387			145			289	
Approach Delay, s/veh		12.0			11.7			15.3			17.9	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.6	15.0	7.7	10.9	5.7	14.9	7.5	11.1
Change Period (Y+Rc), s	4.5	* 4.5	4.0	4.0	4.0	4.5	4.0	4.0
Max Green Setting (Gmax), s	15.0	* 40	15.0	15.0	15.0	40.0	15.0	15.0
Max Q Clear Time (g_c+I1), s	2.0	5.3	4.9	4.1	2.8	5.3	3.1	5.8
Green Ext Time (p_c), s	0.0	1.3	0.0	0.1	0.0	1.3	0.0	0.3

Intersection Summary	
HCM 6th Ctrl Delay	13.8
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

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

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	30	334	49	338	48	97	125	164
v/c Ratio	0.05	0.24	0.10	0.25	0.17	0.25	0.40	0.36
Control Delay	12.1	15.5	12.6	16.4	19.2	15.4	24.6	15.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	12.1	15.5	12.6	16.4	19.2	15.4	24.6	15.4
Queue Length 50th (ft)	2	24	7	26	9	12	21	9
Queue Length 95th (ft)	26	106	37	114	40	58	105	97
Internal Link Dist (ft)		157		159		136		119
Turn Bay Length (ft)	100		85		200			
Base Capacity (vph)	948	2786	817	2799	715	752	705	715
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.12	0.06	0.12	0.07	0.13	0.18	0.23

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	34	326	26	22	221	32	12	15	27	334	17	114
Future Volume (veh/h)	34	326	26	22	221	32	12	15	27	334	17	114
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.98	0.99		0.98	0.99		1.00	0.98		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1709	1820	1695	1750	1695	1750	1750	1820	1820	1750	1750	1750
Adj Flow Rate, veh/h	41	398	32	27	270	39	15	18	0	407	21	139
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Percent Heavy Veh, %	3	0	4	0	4	0	0	0	0	0	0	0
Cap, veh/h	369	851	68	328	714	102	105	88		487	18	632
Arrive On Green	0.03	0.26	0.26	0.03	0.25	0.25	0.44	0.44	0.00	0.44	0.44	0.44
Sat Flow, veh/h	1628	3237	259	1667	2821	402	0	198	1542	782	40	1428
Grp Volume(v), veh/h	41	212	218	27	153	156	33	0	0	428	0	139
Grp Sat Flow(s),veh/h/ln	1628	1729	1767	1667	1611	1612	198	0	1542	823	0	1428
Q Serve(g_s), s	0.9	5.1	5.2	0.6	3.9	4.0	0.0	0.0	0.0	0.0	0.0	3.0
Cycle Q Clear(g_c), s	0.9	5.1	5.2	0.6	3.9	4.0	22.0	0.0	0.0	22.0	0.0	3.0
Prop In Lane	1.00		0.15	1.00		0.25	0.45		1.00	0.95		1.00
Lane Grp Cap(c), veh/h	369	455	465	328	408	408	193	0		505	0	632
V/C Ratio(X)	0.11	0.47	0.47	0.08	0.37	0.38	0.17	0.00		0.85	0.00	0.22
Avail Cap(c_a), veh/h	738	1391	1421	789	1296	1297	193	0		505	0	632
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	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	13.1	15.4	15.4	13.1	15.3	15.4	11.7	0.0	0.0	15.5	0.0	8.6
Incr Delay (d2), s/veh	0.1	1.7	1.7	0.1	1.3	1.3	0.9	0.0	0.0	13.7	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	1.9	2.0	0.2	1.4	1.4	0.2	0.0	0.0	6.4	0.0	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.2	17.1	17.1	13.2	16.6	16.7	12.6	0.0	0.0	29.3	0.0	8.9
LnGrp LOS	B	B	B	B	B	B	B	A		C	A	A
Approach Vol, veh/h		471			336			33			567	
Approach Delay, s/veh		16.7			16.4			12.6			24.3	
Approach LOS		B			B			B			C	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.7	18.0		26.0	5.2	18.5		26.0
Change Period (Y+Rc), s	4.0	* 5.4		4.0	4.0	* 5.4		4.0
Max Green Setting (Gmax), s	13.0	* 40		20.0	15.0	* 40		22.0
Max Q Clear Time (g_c+I1), s	2.9	6.0		24.0	2.6	7.2		24.0
Green Ext Time (p_c), s	0.0	3.7		0.0	0.0	5.4		0.0

Intersection Summary	
HCM 6th Ctrl Delay	19.6
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

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

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

Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	41	430	27	309	33	33	428	139
v/c Ratio	0.11	0.45	0.08	0.36	0.08	0.06	0.72	0.20
Control Delay	12.3	19.2	12.0	18.0	13.3	0.8	23.0	6.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	12.3	19.2	12.0	18.0	13.3	0.8	23.0	6.4
Queue Length 50th (ft)	9	57	6	38	9	0	82	8
Queue Length 95th (ft)	23	103	17	75	21	1	#267	40
Internal Link Dist (ft)		431		278	337		94	
Turn Bay Length (ft)	196		85			85		50
Base Capacity (vph)	491	2639	545	2501	704	822	593	704
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.08	0.16	0.05	0.12	0.05	0.04	0.72	0.20

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	26	251	39	43	272	22	42	51	33	109	55	88
Future Volume (vph)	26	251	39	43	272	22	42	51	33	109	55	88
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Lane Width	12	12	12	12	12	12	11	11	12	11	11	12
Total Lost time (s)	4.0	4.5		4.0	4.5		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.99		1.00	0.94		1.00	0.91	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1662	3217		1657	3228		1531	1581		1591	1492	
Flt Permitted	0.55	1.00		0.55	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	960	3217		960	3228		1531	1581		1591	1492	
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Adj. Flow (vph)	30	289	45	49	313	25	48	59	38	125	63	101
RTOR Reduction (vph)	0	13	0	0	7	0	0	24	0	0	54	0
Lane Group Flow (vph)	30	321	0	49	331	0	48	73	0	125	110	0
Confl. Peds. (#/hr)			8	8					12	12		
Confl. Bikes (#/hr)												4
Heavy Vehicles (%)	0%	1%	0%	0%	2%	0%	5%	0%	0%	1%	0%	3%
Turn Type	D.P+P	NA		D.P+P	NA		Prot	NA		Prot	NA	
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	2			6								
Actuated Green, G (s)	17.9	16.3		17.9	16.1		3.8	5.3		7.6	9.1	
Effective Green, g (s)	17.9	16.3		17.9	16.1		3.8	5.3		7.6	9.1	
Actuated g/C Ratio	0.38	0.34		0.38	0.34		0.08	0.11		0.16	0.19	
Clearance Time (s)	4.0	4.5		4.0	4.5		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	1.0	2.1		1.0	2.1		1.0	1.0		1.0	1.0	
Lane Grp Cap (vph)	390	1108		386	1098		122	177		255	287	
v/s Ratio Prot	0.00	c0.10		0.00	c0.10		0.03	0.05		c0.08	c0.07	
v/s Ratio Perm	0.03			0.04								
v/c Ratio	0.08	0.29		0.13	0.30		0.39	0.41		0.49	0.38	
Uniform Delay, d1	9.4	11.3		9.4	11.5		20.7	19.6		18.1	16.7	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.0	0.1		0.1	0.1		0.8	0.6		0.5	0.3	
Delay (s)	9.5	11.3		9.5	11.5		21.4	20.1		18.6	17.0	
Level of Service	A	B		A	B		C	C		B	B	
Approach Delay (s)		11.2			11.3			20.6			17.7	
Approach LOS		B			B			C			B	

Intersection Summary			
HCM 2000 Control Delay	13.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	47.3	Sum of lost time (s)	16.5
Intersection Capacity Utilization	44.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	34	326	26	22	221	32	12	15	27	334	17	114
Future Volume (vph)	34	326	26	22	221	32	12	15	27	334	17	114
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Lane Width	11	14	12	12	12	12	12	13	16	12	11	11
Total Lost time (s)	4.0	5.4		4.0	5.4			4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00			1.00	1.00		1.00	0.96
Flpb, ped/bikes	1.00	1.00		1.00	1.00			0.99	1.00		1.00	1.00
Frt	1.00	0.99		1.00	0.98			1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.98	1.00		0.95	1.00
Satd. Flow (prot)	1560	3487		1656	3152			1755	1686		1615	1376
Flt Permitted	0.56	1.00		0.48	1.00			0.85	1.00		0.71	1.00
Satd. Flow (perm)	926	3487		832	3152			1524	1686		1205	1376
Peak-hour factor, PHF	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Adj. Flow (vph)	41	398	32	27	270	39	15	18	33	407	21	139
RTOR Reduction (vph)	0	9	0	0	17	0	0	0	17	0	0	41
Lane Group Flow (vph)	41	421	0	27	292	0	0	33	16	0	428	98
Confl. Peds. (#/hr)			11	11			55					55
Heavy Vehicles (%)	3%	0%	4%	0%	4%	0%	0%	0%	0%	0%	0%	0%
Turn Type	D.P+P	NA		D.P+P	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases	1	6		5	2			4			8	
Permitted Phases	2			6			4		4	8		8
Actuated Green, G (s)	16.9	14.9		16.9	14.7			27.2	27.2		27.2	27.2
Effective Green, g (s)	16.9	14.9		16.9	14.7			27.2	27.2		27.2	27.2
Actuated g/C Ratio	0.29	0.26		0.29	0.26			0.47	0.47		0.47	0.47
Clearance Time (s)	4.0	5.4		4.0	5.4			4.0	4.0		4.0	4.0
Vehicle Extension (s)	2.3	5.1		2.3	5.1			5.0	5.0		5.0	5.0
Lane Grp Cap (vph)	296	903		273	805			720	797		570	650
v/s Ratio Prot	c0.01	c0.12		0.00	0.09							
v/s Ratio Perm	0.04			0.03				0.02	0.01		c0.36	0.07
v/c Ratio	0.14	0.47		0.10	0.36			0.05	0.02		0.75	0.15
Uniform Delay, d1	14.7	17.9		14.6	17.6			8.2	8.1		12.4	8.6
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	1.00
Incremental Delay, d2	0.1	0.8		0.1	0.6			0.1	0.0		6.6	0.2
Delay (s)	14.8	18.8		14.7	18.2			8.2	8.1		18.9	8.8
Level of Service	B	B		B	B			A	A		B	A
Approach Delay (s)		18.4			17.9			8.1			16.5	
Approach LOS		B			B			A			B	

Intersection Summary			
HCM 2000 Control Delay	17.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	57.5	Sum of lost time (s)	13.4
Intersection Capacity Utilization	54.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Appendix D

Crash Data

OREGON DEPARTMENT OF TRANSPORTATION - POLICY, DATA AND ANALYSIS DIVISION
TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT
CRASH SUMMARIES BY YEAR BY COLLISION TYPE

Intersectional Crashes at NE 3rd Ave & N Ivy St in Canby, OR.
January 1, 2017 through December 31, 2021

COLLISION TYPE	FATAL CRASHES	NON-FATAL CRASHES	PROPERTY DAMAGE ONLY	TOTAL CRASHES	PEOPLE KILLED	PEOPLE INJURED	TRUCKS	DRY SURF	WET SURF	DAY	DARK	INTER-SECTION	INTER-SECTION RELATED	OFF-ROAD
YEAR: 2019														
ANGLE	0	1	1	2	0	1	0	2	0	0	2	2	0	0
REAR-END	0	1	0	1	0	1	0	1	0	1	0	1	0	0
2019 TOTAL	0	2	1	3	0	2	0	3	0	1	2	3	0	0
YEAR: 2018														
ANGLE	0	1	0	1	0	1	0	1	0	0	1	1	0	0
2018 TOTAL	0	1	0	1	0	1	0	1	0	0	1	1	0	0
YEAR: 2017														
ANGLE	0	1	0	1	0	2	0	1	0	0	1	1	0	0
2017 TOTAL	0	1	0	1	0	2	0	1	0	0	1	1	0	0
FINAL TOTAL	0	4	1	5	0	5	0	5	0	1	4	5	0	0

Disclaimers: *Effective 2016,* ***collection of "Property Damage Only" (PDO) crash data elements was reduced for vehicles and participants.*** *Age, Gender, License, Error and other elements are no longer available for PDO crash reporting. Please keep this in mind when comparing 2016 PDO crash data to prior years.*

A higher number of crashes may be reported as of 2011 compared to prior years. This does not necessarily reflect an increase in annual crashes. The higher numbers may result from a change to an internal departmental process that allows the Crash Analysis and Reporting Unit to add previously unavailable, non-fatal crash reports to the annual data file. Please be aware of this change when comparing pre-2011 crash statistics. For all disclaimers, see https://www.oregon.gov/ODOT/Data/documents/Crash_Data_Disclaimers.pdf.

TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT
URBAN NON-SYSTEM CRASH LISTING

CITY OF CANBY, CLACKAMAS COUNTY

Intersectional Crashes at NE 3rd Ave & N Ivy St in Canby, OR.
January 1, 2017 through December 31, 2021

SER# INVEST UNLOC?	SPED	ALC	DRUG/MJ	SCHL	WORK	DATE DAY/TIME LAT/LONG	FC DISTNC	CITY STREET FIRST STREET SECOND STREET INTERSECTION SEQ #	RD CHAR DIRECT LOCTN	INT-TYP (MEDIAN) LEGS (#LANES)	INT-REL TRAF-CONTL	OFF-RD RNDBT DRVWY	WTHR SURF LIGHT	CRASH TYP COLL TYP SVRTY	V#	SPCL USE TRLR QTY OWNER	MOVE FROM TO	P#	PRTC TYPE	INJ SVRTY	AGE	SEX	LICNS RES	PED LOC	ERROR	ACTN	EVENT	CAUSE
01506	N	N	N	N	N	05/09/2019	17	N IVY ST	INTER	CROSS	N	N	CLR	S-1STOP	01	NONE 0	STRGHT										084	07,27,29
CITY			N			Thu 3P	0	NW 3RD AVE	SW		STOP SIGN	N	DRY	REAR		PUBLC	NE SW									000		00
No			*45 15 51.86*			*-122 41 37.44*		1	06	0		N	DAY	INJ		OTHER		01	DRVR	NONE	27	M	OR-Y		043,026	038		07,27,29
																							OR<25					
															02	NONE 0	STOP											
																PRVTE	NE SW									011		00
																PSNGR CAR		01	DRVR	NONE	16	M	OR-Y		000	000		00
																							OR<25					
																		02	PSNG	INJC	74	F			000	000		00
03402	N	N	N	N	N	08/18/2017	17	N IVY ST	INTER	CROSS	N	N	CLR	ANGL-OTH	01	NONE 0	STRGHT											29
CITY			N			Fri 11P	0	NW 3RD AVE	CN		STOP SIGN	N	DRY	ANGL		PRVTE	NW SE									000		00
No			*45 15 51.86*			*-122 41 37.43*		1	01	0		N	DLIT	INJ		PSNGR CAR		01	DRVR	INJC	34	F	OR-Y		000	000		00
																							OR<25					
															02	NONE 0	STRGHT											
																PRVTE	NE SW									015		00
																PSNGR CAR		01	DRVR	NONE	52	F	OR-Y		028	000		02
																							OR<25					
																		02	PSNG	INJB	59	F			000	000		00
00269	N	N	N	N	N	01/23/2019	17	N IVY ST	INTER	CROSS	N	N	CLR	ANGL-OTH	01	NONE 0	STRGHT										084	02
CITY			N			Wed 5P	0	NW 3RD AVE	CN		STOP SIGN	N	DRY	ANGL		PRVTE	NE SW									015		00
No			*45 15 51.86*			*-122 41 37.44*		1	02	0		N	DUSK	INJ		PSNGR CAR		01	DRVR	NONE	22	F	OR-Y		028	000	084	02
																							OR<25					
															02	NONE 0	STRGHT											
																PRVTE	SE NW									000		00
																PSNGR CAR		01	DRVR	INJC	51	F	OR-Y		000	000		00
																							OR<25					
02884	N	N	N			08/18/2018	17	N IVY ST	INTER	CROSS	N	N	CLR	ANGL-OTH	01	NONE 0	STRGHT											02
NONE			N			Sat 8P	0	NW 3RD AVE	CN		STOP SIGN	N	DRY	ANGL		PRVTE	SW NE									015		00
No			*45 15 51.86*			*-122 41 37.44*		1	04	0		N	DUSK	INJ		PSNGR CAR		01	DRVR	NONE	56	M	OR-Y		028	000		02
																							OR<25					
															02	NONE 0	STRGHT											
																PRVTE	SE NW									000		00
																PSNGR CAR		01	DRVR	INJC	25	F	OR-Y		000	000		00
																							OR<25					
02497	N	N	N	N	N	07/22/2019	17	N IVY ST	INTER	CROSS	N	N	CLR	ANGL-OTH	01	NONE 9	STRGHT											03
CITY			N			Mon 9P	0	NW 3RD AVE	CN		STOP SIGN	N	DRY	ANGL		N/A	SW NE									000		00
No			*45 15 51.87*			*-122 41 37.43*		1	04	0		N	DLIT	PDO		PSNGR CAR		01	DRVR	NONE	00	U	UNK		000	000		00
																							UNK					
															02	NONE 9	STRGHT											
																N/A	SE NW									000		00
																PSNGR CAR		01	DRVR	NONE	00	U	UNK		000	000		00
																							UNK					

ACTION CODE TRANSLATION LIST

ACTION CODE	SHORT DESCRIPTION	LONG DESCRIPTION
000	NONE	NO ACTION OR NON-WARRANTED
001	SKIDDED	SKIDDED
002	ON/OFF V	GETTING ON OR OFF STOPPED OR PARKED VEHICLE
003	LOAD OVR	OVERHANGING LOAD STRUCK ANOTHER VEHICLE, ETC.
006	SLOW DN	SLOWED DOWN
007	AVOIDING	AVOIDING MANEUVER
008	PAR PARK	PARALLEL PARKING
009	ANG PARK	ANGLE PARKING
010	INTERFERE	PASSENGER INTERFERING WITH DRIVER
011	STOPPED	STOPPED IN TRAFFIC NOT WAITING TO MAKE A LEFT TURN
012	STP/L TRN	STOPPED BECAUSE OF LEFT TURN SIGNAL OR WAITING, ETC.
013	STP TURN	STOPPED WHILE EXECUTING A TURN
014	EMR V PKD	EMERGENCY VEHICLE LEGALLY PARKED IN THE ROADWAY
015	GO A/STOP	PROCEED AFTER STOPPING FOR A STOP SIGN/FLASHING RED.
016	TRN A/RED	TURNED ON RED AFTER STOPPING
017	LOSTCTRL	LOST CONTROL OF VEHICLE
018	EXIT DWY	ENTERING STREET OR HIGHWAY FROM ALLEY OR DRIVEWAY
019	ENTR DWY	ENTERING ALLEY OR DRIVEWAY FROM STREET OR HIGHWAY
020	STR ENTR	BEFORE ENTERING ROADWAY, STRUCK PEDESTRIAN, ETC. ON SIDEWALK OR SHOULDER
021	NO DRVR	CAR RAN AWAY - NO DRIVER
022	PREV COL	STRUCK, OR WAS STRUCK BY, VEHICLE OR PEDESTRIAN IN PRIOR COLLISION BEFORE ACC. STABILIZED
023	STALLED	VEHICLE STALLED OR DISABLED
024	DRVR DEAD	DEAD BY UNASSOCIATED CAUSE
025	FATIGUE	FATIGUED, SLEEPY, ASLEEP
026	SUN	DRIVER BLINDED BY SUN
027	HDLGHTS	DRIVER BLINDED BY HEADLIGHTS
028	ILLNESS	PHYSICALLY ILL
029	THRU MED	VEHICLE CROSSED, PLUNGED OVER, OR THROUGH MEDIAN BARRIER
030	PURSUIT	PURSUING OR ATTEMPTING TO STOP A VEHICLE
031	PASSING	PASSING SITUATION
032	PRKOFFRD	VEHICLE PARKED BEYOND CURB OR SHOULDER
033	CROS MED	VEHICLE CROSSED EARTH OR GRASS MEDIAN
034	X N/SGNL	CROSSING AT INTERSECTION - NO TRAFFIC SIGNAL PRESENT
035	X W/ SGNL	CROSSING AT INTERSECTION - TRAFFIC SIGNAL PRESENT
036	DIAGONAL	CROSSING AT INTERSECTION - DIAGONALLY
037	BTWN INT	CROSSING BETWEEN INTERSECTIONS
038	DISTRACT	DRIVER'S ATTENTION DISTRACTED
039	W/TRAF-S	WALKING, RUNNING, RIDING, ETC., ON SHOULDER WITH TRAFFIC
040	A/TRAF-S	WALKING, RUNNING, RIDING, ETC., ON SHOULDER FACING TRAFFIC
041	W/TRAF-P	WALKING, RUNNING, RIDING, ETC., ON PAVEMENT WITH TRAFFIC
042	A/TRAF-P	WALKING, RUNNING, RIDING, ETC., ON PAVEMENT FACING TRAFFIC
043	PLAYINRD	PLAYING IN STREET OR ROAD
044	PUSH MV	PUSHING OR WORKING ON VEHICLE IN ROAD OR ON SHOULDER
045	WORK ON	WORKING IN ROADWAY OR ALONG SHOULDER
046	W/ TRAFIC	NON-MOTORIST WALKING, RUNNING, RIDING, ETC. WITH TRAFFIC
047	A/ TRAFIC	NON-MOTORIST WALKING, RUNNING, RIDING, ETC. FACING TRAFFIC
048	CHNG LANE	CHANGED LANES JUST PRIOR TO UNSTABILIZED SITUATION
050	LAY ON RD	STANDING OR LYING IN ROADWAY
051	ENT OFFRD	ENTERING / STARTING IN TRAFFIC LANE FROM OFF ROAD

ACTION CODE TRANSLATION LIST

ACTION CODE	SHORT DESCRIPTION	LONG DESCRIPTION
052	MERGING	MERGING
053	LN SPLITG	LANE SPLITTING
055	SPRAY	BLINDED BY WATER SPRAY
088	OTHER	OTHER ACTION
099	UNK	UNKNOWN ACTION

CAUSE CODE TRANSLATION LIST

CAUSE CODE	SHORT DESCRIPTION	LONG DESCRIPTION
00	NO CODE	NO CAUSE ASSOCIATED AT THIS LEVEL
01	TOO-FAST	TOO FAST FOR CONDITIONS (NOT EXCEED POSTED SPEED
02	NO-YIELD	DID NOT YIELD RIGHT-OF-WAY
03	PAS-STOP	PASSED STOP SIGN OR RED FLASHER
04	DIS SIG	DISREGARDED TRAFFIC SIGNAL
05	LEFT-CTR	DROVE LEFT OF CENTER ON TWO-WAY ROAD; STRADDLING
06	IMP-OVER	IMPROPER OVERTAKING
07	TOO-CLOS	FOLLOWED TOO CLOSELY
08	IMP-TURN	MADE IMPROPER TURN
09	DRINKING	ALCOHOL OR DRUG INVOLVED
10	OTHR-IMP	OTHER IMPROPER DRIVING
11	MECH-DEF	MECHANICAL DEFECT
12	OTHER	OTHER (NOT IMPROPER DRIVING)
13	IMP LN C	IMPROPER CHANGE OF TRAFFIC LANES
14	DIS TCD	DISREGARDED OTHER TRAFFIC CONTROL DEVICE
15	WRNG WAY	WRONG WAY ON ONE-WAY ROAD; WRONG SIDE DIVIDED RO
16	FATIGUE	DRIVER DROWSY/FATIGUED/SLEEPY
17	ILLNESS	PHYSICAL ILLNESS
18	IN RDWY	NON-MOTORIST ILLEGALLY IN ROADWAY
19	NT VISBL	NON-MOTORIST NOT VISIBLE; NON-REFLECTIVE CLOTHIN
20	IMP PKNG	VEHICLE IMPROPERLY PARKED
21	DEF STER	DEFECTIVE STEERING MECHANISM
22	DEF BRKE	INADEQUATE OR NO BRAKES
24	LOADSHFT	VEHICLE LOST LOAD OR LOAD SHIFTED
25	TIREFAIL	TIRE FAILURE
26	PHANTOM	PHANTOM / NON-CONTACT VEHICLE
27	INATTENT	INATTENTION
28	NM INATT	NON-MOTORIST INATTENTION
29	F AVOID	FAILED TO AVOID VEHICLE AHEAD
30	SPEED	DRIVING IN EXCESS OF POSTED SPEED
31	RACING	SPEED RACING (PER PAR)
32	CARELESS	CARELESS DRIVING (PER PAR)
33	RECKLESS	RECKLESS DRIVING (PER PAR)
34	AGGRESV	AGGRESSIVE DRIVING (PER PAR)
35	RD RAGE	ROAD RAGE (PER PAR)
40	VIEW OBS	VIEW OBSCURED
50	USED MDN	IMPROPER USE OF MEDIAN OR SHOULDER
51	FAIL LN	FAILED TO MAINTAIN LANE
52	OFF RD	RAN OFF ROAD

COLLISION TYPE CODE TRANSLATION LIST

COLL CODE	SHORT DESCRIPTION	LONG DESCRIPTION
&	OTH	MISCELLANEOUS
-	BACK	BACKING
0	PED	PEDESTRIAN
1	ANGL	ANGLE
2	HEAD	HEAD-ON
3	REAR	REAR-END
4	SS-M	SIDESWIPE - MEETING
5	SS-O	SIDESWIPE - OVERTAKING
6	TURN	TURNING MOVEMENT
7	PARK	PARKING MANEUVER
8	NCOL	NON-COLLISION
9	FIX	FIXED OBJECT OR OTHER OBJECT

CRASH TYPE CODE TRANSLATION LIST

CRASH TYPE	SHORT DESCRIPTION	LONG DESCRIPTION
&	OVERTURN	OVERTURNED
0	NON-COLL	OTHER NON-COLLISION
1	OTH RDWY	MOTOR VEHICLE ON OTHER ROADWAY
2	PRKD MV	PARKED MOTOR VEHICLE
3	PED	PEDESTRIAN
4	TRAIN	RAILWAY TRAIN
6	BIKE	PEDALCYCLIST
7	ANIMAL	ANIMAL
8	FIX OBJ	FIXED OBJECT
9	OTH OBJ	OTHER OBJECT
A	ANGL-STP	ENTERING AT ANGLE - ONE VEHICLE STOPPED
B	ANGL-OTH	ENTERING AT ANGLE - ALL OTHERS
C	S-STRGHT	FROM SAME DIRECTION - BOTH GOING STRAIGHT
D	S-1TURN	FROM SAME DIRECTION - ONE TURN, ONE STRAIGHT
E	S-1STOP	FROM SAME DIRECTION - ONE STOPPED
F	S-OTHER	FROM SAME DIRECTION-ALL OTHERS, INCLUDING PARKING
G	O-STRGHT	FROM OPPOSITE DIRECTION - BOTH GOING STRAIGHT
H	O-1 L-TURN	FROM OPPOSITE DIRECTION-ONE LEFT TURN,ONE STRAIGHT
I	O-1STOP	FROM OPPOSITE DIRECTION - ONE STOPPED
J	O-OTHER	FROM OPPOSITE DIRECTION-ALL OTHERS INCL. PARKING

DRIVER LICENSE CODE TRANSLATION LIST

LIC CODE	SHORT DESC	LONG DESCRIPTION
0	NONE	NOT LICENSED (HAD NEVER BEEN LICENSED)
1	OR-Y	VALID OREGON LICENSE
2	OTH-Y	VALID LICENSE, OTHER STATE OR COUNTRY
3	SUSP	SUSPENDED/REVOKED
4	EXP	EXPIRED
8	N-VAL	OTHER NON-VALID LICENSE
9	UNK	UNKNOWN IF DRIVER WAS LICENSED AT TIME OF CRASH

DRIVER RESIDENCE CODE TRANSLATION LIST

RES CODE	SHORT DESC	LONG DESCRIPTION
1	OR<25	OREGON RESIDENT WITHIN 25 MILE OF HOME
2	OR>25	OREGON RESIDENT 25 OR MORE MILES FROM HOME
3	OR-?	OREGON RESIDENT - UNKNOWN DISTANCE FROM HOME
4	N-RES	NON-RESIDENT
9	UNK	UNKNOWN IF OREGON RESIDENT

ERROR CODE TRANSLATION LIST

ERROR CODE	SHORT DESCRIPTION	FULL DESCRIPTION
000	NONE	NO ERROR
001	WIDE TRN	WIDE TURN
002	CUT CORN	CUT CORNER ON TURN
003	FAIL TRN	FAILED TO OBEY MANDATORY TRAFFIC TURN SIGNAL, SIGN OR LANE MARKINGS
004	L IN TRF	LEFT TURN IN FRONT OF ONCOMING TRAFFIC
005	L PROHIB	LEFT TURN WHERE PROHIBITED
006	FRM WRNG	TURNED FROM WRONG LANE
007	TO WRONG	TURNED INTO WRONG LANE
008	ILLEG U	U-TURNED ILLEGALLY
009	IMP STOP	IMPROPERLY STOPPED IN TRAFFIC LANE
010	IMP SIG	IMPROPER SIGNAL OR FAILURE TO SIGNAL
011	IMP BACK	BACKING IMPROPERLY (NOT PARKING)
012	IMP PARK	IMPROPERLY PARKED
013	UNPARK	IMPROPER START LEAVING PARKED POSITION
014	IMP STRT	IMPROPER START FROM STOPPED POSITION
015	IMP LGHT	IMPROPER OR NO LIGHTS (VEHICLE IN TRAFFIC)
016	INATTENT	INATTENTION (FAILURE TO DIM LIGHTS PRIOR TO 4/1/97)
017	UNSF VEH	DRIVING UNSAFE VEHICLE (NO OTHER ERROR APPARENT)
018	OTH PARK	ENTERING/EXITING PARKED POSITION W/ INSUFFICIENT CLEARANCE; OTHER IMPROPER PARKING MANEUVER
019	DIS DRIV	DISREGARDED OTHER DRIVER'S SIGNAL
020	DIS SGNL	DISREGARDED TRAFFIC SIGNAL
021	RAN STOP	DISREGARDED STOP SIGN OR FLASHING RED
022	DIS SIGN	DISREGARDED WARNING SIGN, FLARES OR FLASHING AMBER
023	DIS OFCR	DISREGARDED POLICE OFFICER OR FLAGMAN
024	DIS EMER	DISREGARDED SIREN OR WARNING OF EMERGENCY VEHICLE
025	DIS RR	DISREGARDED RR SIGNAL, RR SIGN, OR RR FLAGMAN
026	REAR-END	FAILED TO AVOID STOPPED OR PARKED VEHICLE AHEAD OTHER THAN SCHOOL BUS
027	BIKE ROW	DID NOT HAVE RIGHT-OF-WAY OVER PEDALCYCLIST
028	NO ROW	DID NOT HAVE RIGHT-OF-WAY
029	PED ROW	FAILED TO YIELD RIGHT-OF-WAY TO PEDESTRIAN
030	PAS CURV	PASSING ON A CURVE
031	PAS WRNG	PASSING ON THE WRONG SIDE
032	PAS TANG	PASSING ON STRAIGHT ROAD UNDER UNSAFE CONDITIONS
033	PAS X-WK	PASSED VEHICLE STOPPED AT CROSSWALK FOR PEDESTRIAN
034	PAS INTR	PASSING AT INTERSECTION
035	PAS HILL	PASSING ON CREST OF HILL
036	N/PAS ZN	PASSING IN "NO PASSING" ZONE
037	PAS TRAF	PASSING IN FRONT OF ONCOMING TRAFFIC
038	CUT-IN	CUTTING IN (TWO LANES - TWO WAY ONLY)
039	WRNGSIDE	DRIVING ON WRONG SIDE OF THE ROAD (2-WAY UNDIVIDED ROADWAYS)

ERROR CODE TRANSLATION LIST

ERROR CODE	SHORT DESCRIPTION	FULL DESCRIPTION
040	THRU MED	DRIVING THROUGH SAFETY ZONE OR OVER ISLAND
041	F/ST BUS	FAILED TO STOP FOR SCHOOL BUS
042	F/SLO MV	FAILED TO DECREASE SPEED FOR SLOWER MOVING VEHICLE
043	TOO CLOSE	FOLLOWING TOO CLOSELY (MUST BE ON OFFICER'S REPORT)
044	STRDL LN	STRADDLING OR DRIVING ON WRONG LANES
045	IMP CHG	IMPROPER CHANGE OF TRAFFIC LANES
046	WRNG WAY	WRONG WAY ON ONE-WAY ROADWAY; WRONG SIDE DIVIDED ROAD
047	BASCRULE	DRIVING TOO FAST FOR CONDITIONS (NOT EXCEEDING POSTED SPEED)
048	OPN DOOR	OPENED DOOR INTO ADJACENT TRAFFIC LANE
049	IMPEDING	IMPEDING TRAFFIC
050	SPEED	DRIVING IN EXCESS OF POSTED SPEED
051	RECKLESS	RECKLESS DRIVING (PER PAR)
052	CARELESS	CARELESS DRIVING (PER PAR)
053	RACING	SPEED RACING (PER PAR)
054	X N/SGNL	CROSSING AT INTERSECTION, NO TRAFFIC SIGNAL PRESENT
055	X W/SGNL	CROSSING AT INTERSECTION, TRAFFIC SIGNAL PRESENT
056	DIAGONAL	CROSSING AT INTERSECTION - DIAGONALLY
057	BTWN INT	CROSSING BETWEEN INTERSECTIONS
059	W/TRAF-S	WALKING, RUNNING, RIDING, ETC., ON SHOULDER WITH TRAFFIC
060	A/TRAF-S	WALKING, RUNNING, RIDING, ETC., ON SHOULDER FACING TRAFFIC
061	W/TRAF-P	WALKING, RUNNING, RIDING, ETC., ON PAVEMENT WITH TRAFFIC
062	A/TRAF-P	WALKING, RUNNING, RIDING, ETC., ON PAVEMENT FACING TRAFFIC
063	PLAYINRD	PLAYING IN STREET OR ROAD
064	PUSH MV	PUSHING OR WORKING ON VEHICLE IN ROAD OR ON SHOULDER
065	WORK IN RD	WORKING IN ROADWAY OR ALONG SHOULDER
070	LAY ON RD	STANDING OR LYING IN ROADWAY
071	NM IMP USE	IMPROPER USE OF TRAFFIC LANE BY NON-MOTORIST
073	ELUDING	ELUDING / ATTEMPT TO ELUDE
079	F NEG CURV	FAILED TO NEGOTIATE A CURVE
080	FAIL LN	FAILED TO MAINTAIN LANE
081	OFF RD	RAN OFF ROAD
082	NO CLEAR	DRIVER MISJUDGED CLEARANCE
083	OVRSTEER	OVER-CORRECTING
084	NOT USED	CODE NOT IN USE
085	OVRLOAD	OVERLOADING OR IMPROPER LOADING OF VEHICLE WITH CARGO OR PASSENGERS
097	UNA DIS TC	UNABLE TO DETERMINE WHICH DRIVER DISREGARDED TRAFFIC CONTROL DEVICE

EVENT CODE TRANSLATION LIST

EVENT CODE	SHORT DESCRIPTION	LONG DESCRIPTION
001	FEL/JUMP	OCCUPANT FELL, JUMPED OR WAS EJECTED FROM MOVING VEHICLE
002	INTERFER	PASSENGER INTERFERED WITH DRIVER
003	BUG INTF	ANIMAL OR INSECT IN VEHICLE INTERFERED WITH DRIVER
004	INDRCT PED	PEDESTRIAN INDIRECTLY INVOLVED (NOT STRUCK)
005	SUB-PED	"SUB-PED": PEDESTRIAN INJURED SUBSEQUENT TO COLLISION, ETC.
006	INDRCT BIK	PEDALCYCLIST INDIRECTLY INVOLVED (NOT STRUCK)
007	HITCHIKR	HITCHHIKER (SOLICITING A RIDE)
008	PSNGR TOW	PASSENGER OR NON-MOTORIST BEING TOWED OR PUSHED ON CONVEYANCE
009	ON/OFF V	GETTING ON/OFF STOPPED/PARKED VEHICLE (OCCUPANTS ONLY; MUST HAVE PHYSICAL CONTACT W/ VEHIC
010	SUB OTRN	OVERTURNED AFTER FIRST HARMFUL EVENT
011	MV PUSHD	VEHICLE BEING PUSHED
012	MV TOWED	VEHICLE TOWED OR HAD BEEN TOWING ANOTHER VEHICLE
013	FORCED	VEHICLE FORCED BY IMPACT INTO ANOTHER VEHICLE, PEDALCYCLIST OR PEDESTRIAN
014	SET MOTN	VEHICLE SET IN MOTION BY NON-DRIVER (CHILD RELEASED BRAKES, ETC.)
015	RR ROW	AT OR ON RAILROAD RIGHT-OF-WAY (NOT LIGHT RAIL)
016	LT RL ROW	AT OR ON LIGHT-RAIL RIGHT-OF-WAY
017	RR HIT V	TRAIN STRUCK VEHICLE
018	V HIT RR	VEHICLE STRUCK TRAIN
019	HIT RR CAR	VEHICLE STRUCK RAILROAD CAR ON ROADWAY
020	JACKNIFE	JACKKNIFE; TRAILER OR TOWED VEHICLE STRUCK TOWING VEHICLE
021	TRL OTRN	TRAILER OR TOWED VEHICLE OVERTURNED
022	CN BROKE	TRAILER CONNECTION BROKE
023	DETACH TRL	DETACHED TRAILING OBJECT STRUCK OTHER VEHICLE, NON-MOTORIST, OR OBJECT
024	V DOOR OPN	VEHICLE DOOR OPENED INTO ADJACENT TRAFFIC LANE
025	WHEELOFF	WHEEL CAME OFF
026	HOOD UP	HOOD FLEW UP
028	LOAD SHIFT	LOST LOAD, LOAD MOVED OR SHIFTED
029	TIREFAIL	TIRE FAILURE
030	PET	PET: CAT, DOG AND SIMILAR
031	LVSTOCK	STOCK: COW, CALF, BULL, STEER, SHEEP, ETC.
032	HORSE	HORSE, MULE, OR DONKEY
033	HRSE&RID	HORSE AND RIDER
034	GAME	WILD ANIMAL, GAME (INCLUDES BIRDS; NOT DEER OR ELK)
035	DEER ELK	DEER OR ELK, WAPITI
036	ANML VEH	ANIMAL-DRAWN VEHICLE
037	CULVERT	CULVERT, OPEN LOW OR HIGH MANHOLE
038	ATENUATN	IMPACT ATTENUATOR
039	PK METER	PARKING METER
040	CURB	CURB (ALSO NARROW SIDEWALKS ON BRIDGES)
041	JIGGLE	JIGGLE BAR OR TRAFFIC SNAKE FOR CHANNELIZATION
042	GDRL END	LEADING EDGE OF GUARDRAIL
043	GARDRAIL	GUARD RAIL (NOT METAL MEDIAN BARRIER)
044	BARRIER	MEDIAN BARRIER (RAISED OR METAL)
045	WALL	RETAINING WALL OR TUNNEL WALL
046	BR RAIL	BRIDGE RAILING OR PARAPET (ON BRIDGE OR APPROACH)
047	BR ABUTMNT	BRIDGE ABUTMENT (INCLUDED "APPROACH END" THRU 2013)
048	BR COLMN	BRIDGE PILLAR OR COLUMN
049	BR GIRDR	BRIDGE GIRDER (HORIZONTAL BRIDGE STRUCTURE OVERHEAD)
050	ISLAND	TRAFFIC RAISED ISLAND
051	GORE	GORE
052	POLE UNK	POLE - TYPE UNKNOWN
053	POLE UTL	POLE - POWER OR TELEPHONE
054	ST LIGHT	POLE - STREET LIGHT ONLY
055	TRF SGNL	POLE - TRAFFIC SIGNAL AND PED SIGNAL ONLY
056	SGN BRDG	POLE - SIGN BRIDGE
057	STOPSIGN	STOP OR YIELD SIGN

EVENT CODE TRANSLATION LIST

EVENT CODE	SHORT DESCRIPTION	LONG DESCRIPTION
058	OTH SIGN	OTHER SIGN, INCLUDING STREET SIGNS
059	HYDRANT	HYDRANT
060	MARKER	DELINEATOR OR MARKER (REFLECTOR POSTS)
061	MAILBOX	MAILBOX
062	TREE	TREE, STUMP OR SHRUBS
063	VEG OHED	TREE BRANCH OR OTHER VEGETATION OVERHEAD, ETC.
064	WIRE/CBL	WIRE OR CABLE ACROSS OR OVER THE ROAD
065	TEMP SGN	TEMPORARY SIGN OR BARRICADE IN ROAD, ETC.
066	PERM SGN	PERMANENT SIGN OR BARRICADE IN/OFF ROAD
067	SLIDE	SLIDES, FALLEN OR FALLING ROCKS
068	FRGN OBJ	FOREIGN OBSTRUCTION/DEBRIS IN ROAD (NOT GRAVEL)
069	EQP WORK	EQUIPMENT WORKING IN/OFF ROAD
070	OTH EQP	OTHER EQUIPMENT IN OR OFF ROAD (INCLUDES PARKED TRAILER, BOAT)
071	MAIN EQP	WRECKER, STREET SWEEPER, SNOW PLOW OR SANDING EQUIPMENT
072	OTHER WALL	ROCK, BRICK OR OTHER SOLID WALL
073	IRRGL PVMT	OTHER BUMP (NOT SPEED BUMP), POTHOLE OR PAVEMENT IRREGULARITY (PER PAR)
074	OVERHD OBJ	OTHER OVERHEAD OBJECT (HIGHWAY SIGN, SIGNAL HEAD, ETC.); NOT BRIDGE
075	CAVE IN	BRIDGE OR ROAD CAVE IN
076	HI WATER	HIGH WATER
077	SNO BANK	SNOW BANK
078	LO-HI EDGE	LOW OR HIGH SHOULDER AT PAVEMENT EDGE
079	DITCH	CUT SLOPE OR DITCH EMBANKMENT
080	OBJ FRM MV	STRUCK BY ROCK OR OTHER OBJECT SET IN MOTION BY OTHER VEHICLE (INCL. LOST LOADS)
081	FLY-OBJ	STRUCK BY ROCK OR OTHER MOVING OR FLYING OBJECT (NOT SET IN MOTION BY VEHICLE)
082	VEH HID	VEHICLE OBSCURED VIEW
083	VEG HID	VEGETATION OBSCURED VIEW
084	BLDG HID	VIEW OBSCURED BY FENCE, SIGN, PHONE BOOTH, ETC.
085	WIND GUST	WIND GUST
086	IMMERSED	VEHICLE IMMERSED IN BODY OF WATER
087	FIRE/EXP	FIRE OR EXPLOSION
088	FENC/BLD	FENCE OR BUILDING, ETC.
089	OTHR CRASH	CRASH RELATED TO ANOTHER SEPARATE CRASH
090	TO 1 SIDE	TWO-WAY TRAFFIC ON DIVIDED ROADWAY ALL ROUTED TO ONE SIDE
091	BUILDING	BUILDING OR OTHER STRUCTURE
092	PHANTOM	OTHER (PHANTOM) NON-CONTACT VEHICLE
093	CELL PHONE	CELL PHONE (ON PAR OR DRIVER IN USE)
094	VIOL GDL	TEENAGE DRIVER IN VIOLATION OF GRADUATED LICENSE PGM
095	GUY WIRE	GUY WIRE
096	BERM	BERM (EARTHEN OR GRAVEL MOUND)
097	GRAVEL	GRAVEL IN ROADWAY
098	ABR EDGE	ABRUPT EDGE
099	CELL WTNSD	CELL PHONE USE WITNESSED BY OTHER PARTICIPANT
100	UNK FIXD	FIXED OBJECT, UNKNOWN TYPE.
101	OTHER OBJ	NON-FIXED OBJECT, OTHER OR UNKNOWN TYPE
102	TEXTING	TEXTING
103	WZ WORKER	WORK ZONE WORKER
104	ON VEHICLE	PASSENGER RIDING ON VEHICLE EXTERIOR
105	PEDAL PSGR	PASSENGER RIDING ON PEDALCYCLE
106	MAN WHLCHR	PEDESTRIAN IN NON-MOTORIZED WHEELCHAIR
107	MTR WHLCHR	PEDESTRIAN IN MOTORIZED WHEELCHAIR
108	OFFICER	LAW ENFORCEMENT / POLICE OFFICER
109	SUB-BIKE	"SUB-BIKE": PEDALCYCLIST INJURED SUBSEQUENT TO COLLISION, ETC.
110	N-MTR	NON-MOTORIST STRUCK VEHICLE
111	S CAR VS V	STREET CAR/TROLLEY (ON RAILS OR OVERHEAD WIRE SYSTEM) STRUCK VEHICLE
112	V VS S CAR	VEHICLE STRUCK STREET CAR/TROLLEY (ON RAILS OR OVERHEAD WIRE SYSTEM)
113	S CAR ROW	AT OR ON STREET CAR OR TROLLEY RIGHT-OF-WAY

EVENT CODE TRANSLATION LIST

EVENT CODE	SHORT DESCRIPTION	LONG DESCRIPTION
114	RR EQUIP	VEHICLE STRUCK RAILROAD EQUIPMENT (NOT TRAIN) ON TRACKS
115	DSTRCT GPS	DISTRACTED BY NAVIGATION SYSTEM OR GPS DEVICE
116	DSTRCT OTH	DISTRACTED BY OTHER ELECTRONIC DEVICE
117	RR GATE	RAIL CROSSING DROP-ARM GATE
118	EXPNSN JNT	EXPANSION JOINT
119	JERSEY BAR	JERSEY BARRIER
120	WIRE BAR	WIRE OR CABLE MEDIAN BARRIER
121	FENCE	FENCE
123	OBJ IN VEH	LOOSE OBJECT IN VEHICLE STRUCK OCCUPANT
124	SLIPPERY	SLIDING OR SWERVING DUE TO WET, ICY, SLIPPERY OR LOOSE SURFACE (NOT GRAVEL)
125	SHLDR	SHOULDER GAVE WAY
126	BOULDER	ROCK(S), BOULDER (NOT GRAVEL; NOT ROCK SLIDE)
127	LAND SLIDE	ROCK SLIDE OR LAND SLIDE
128	CURVE INV	CURVE PRESENT AT CRASH LOCATION
129	HILL INV	VERTICAL GRADE / HILL PRESENT AT CRASH LOCATION
130	CURVE HID	VIEW OBSCURED BY CURVE
131	HILL HID	VIEW OBSCURED BY VERTICAL GRADE / HILL
132	WINDOW HID	VIEW OBSCURED BY VEHICLE WINDOW CONDITIONS
133	SPRAY HID	VIEW OBSCURED BY WATER SPRAY
134	TORRENTIAL	TORRENTIAL RAIN (EXCEPTIONALLY HEAVY RAIN)
135	RAIL OCC	INJURED OCCUPANT OF RAILWAY TRAIN, LIGHT RAIL, STREET CAR OR CABLE CAR

FUNCTIONAL CLASSIFICATION TRANSLATION LIST

FUNC CLASS	DESCRIPTION
01	RURAL PRINCIPAL ARTERIAL - INTERSTATE
02	RURAL PRINCIPAL ARTERIAL - OTHER
06	RURAL MINOR ARTERIAL
07	RURAL MAJOR COLLECTOR
08	RURAL MINOR COLLECTOR
09	RURAL LOCAL
11	URBAN PRINCIPAL ARTERIAL - INTERSTATE
12	URBAN PRINCIPAL ARTERIAL - OTHER FREEWAYS AND EXP
14	URBAN PRINCIPAL ARTERIAL - OTHER
16	URBAN MINOR ARTERIAL
17	URBAN MAJOR COLLECTOR
18	URBAN MINOR COLLECTOR
19	URBAN LOCAL
78	UNKNOWN RURAL SYSTEM
79	UNKNOWN RURAL NON-SYSTEM
98	UNKNOWN URBAN SYSTEM
99	UNKNOWN URBAN NON-SYSTEM

HIGHWAY COMPONENT TRANSLATION LIST

CODE	DESCRIPTION
0	MAINLINE STATE HIGHWAY
1	COUPLET
3	FRONTAGE ROAD
6	CONNECTION
8	HIGHWAY - OTHER

INJURY SEVERITY CODE TRANSLATION LIST

CODE	SHORT DESC	LONG DESCRIPTION
1	KILL	FATAL INJURY (K)
2	INJA	SUSPECTED SERIOUS INJURY (A)
3	INJB	SUSPECTED MINOR INJURY (B)
4	INJC	POSSIBLE INJURY (C)
5	PRI	DIED PRIOR TO CRASH
7	NO<5	NO INJURY - 0 TO 4 YEARS OF AGE
9	NONE	NO APPARENT INJURY (O)

LIGHT CONDITION CODE TRANSLATION LIST

CODE	SHORT DESC	LONG DESCRIPTION
0	UNK	UNKNOWN
1	DAY	DAYLIGHT
2	DLIT	DARKNESS - WITH STREET LIGHTS
3	DARK	DARKNESS - NO STREET LIGHTS
4	DAWN	DAWN (TWILIGHT)
5	DUSK	DUSK (TWILIGHT)

MEDIAN TYPE CODE TRANSLATION LIST

CODE	SHORT DESC	LONG DESCRIPTION
0	NONE	NO MEDIAN
1	RSDMD	SOLID MEDIAN BARRIER
2	DIVMD	EARTH, GRASS OR PAVED MEDIAN

MILEAGE TYPE CODE TRANSLATION LIST

CODE	LONG DESCRIPTION
0	REGULAR MILEAGE
T	TEMPORARY
Y	SPUR
Z	OVERLAPPING

MOVEMENT TYPE CODE TRANSLATION LIST

CODE	SHORT DESC	LONG DESCRIPTION
0	UNK	UNKNOWN
1	STRGHT	STRAIGHT AHEAD
2	TURN-R	TURNING RIGHT
3	TURN-L	TURNING LEFT
4	U-TURN	MAKING A U-TURN
5	BACK	BACKING
6	STOP	STOPPED IN TRAFFIC
7	PRKD-P	PARKED - PROPERLY
8	PRKD-I	PARKED - IMPROPERLY
9	PARKNG	PARKING MANEUVER

NON-MOTORIST LOCATION CODE TRANSLATION LIST

CODE	LONG DESCRIPTION
00	AT INTERSECTION - NOT IN ROADWAY
01	AT INTERSECTION - INSIDE CROSSWALK
02	AT INTERSECTION - IN ROADWAY, OUTSIDE CROSSWALK
03	AT INTERSECTION - IN ROADWAY, XWALK AVAIL UNKNWN
04	NOT AT INTERSECTION - IN ROADWAY
05	NOT AT INTERSECTION - ON SHOULDER
06	NOT AT INTERSECTION - ON MEDIAN
07	NOT AT INTERSECTION - WITHIN TRAFFIC RIGHT-OF-WAY
08	NOT AT INTERSECTION - IN BIKE PATH OR PARKING LANE
09	NOT-AT INTERSECTION - ON SIDEWALK
10	OUTSIDE TRAFFICWAY BOUNDARIES
13	AT INTERSECTION - IN BIKE LANE
14	NOT AT INTERSECTION - IN BIKE LANE
15	NOT AT INTERSECTION - INSIDE MID-BLOCK CROSSWALK
16	NOT AT INTERSECTION - IN PARKING LANE
18	OTHER, NOT IN ROADWAY
99	UNKNOWN LOCATION

ROAD CHARACTER CODE TRANSLATION LIST

CODE	SHORT DESC	LONG DESCRIPTION
0	UNK	UNKNOWN
1	INTER	INTERSECTION
2	ALLEY	DRIVEWAY OR ALLEY
3	STRGHT	STRAIGHT ROADWAY
4	TRANS	TRANSITION
5	CURVE	CURVE (HORIZONTAL CURVE)
6	OPENAC	OPEN ACCESS OR TURNOUT
7	GRADE	GRADE (VERTICAL CURVE)
8	BRIDGE	BRIDGE STRUCTURE
9	TUNNEL	TUNNEL

PARTICIPANT TYPE CODE TRANSLATION LIST

CODE	SHORT DESC	LONG DESCRIPTION
0	OCC	UNKNOWN OCCUPANT TYPE
1	DRVR	DRIVER
2	PSNG	PASSENGER
3	PED	PEDESTRIAN
4	CONV	PEDESTRIAN USING A PEDESTRIAN CONVEYA
5	PTOW	PEDESTRIAN TOWING OR TRAILERING AN OB
6	BIKE	PEDALCYCLIST
7	BTOW	PEDALCYCLIST TOWING OR TRAILERING AN
8	PRKD	OCCUPANT OF A PARKED MOTOR VEHICLE
9	OTHR	OTHER TYPE OF NON-MOTORIST

TRAFFIC CONTROL DEVICE CODE TRANSLATION LIST

CODE	SHORT DESC	LONG DESCRIPTION
000	NONE	NO CONTROL
001	TRF SIGNAL	TRAFFIC SIGNALS
002	FLASHBCN-R	FLASHING BEACON - RED (STOP)
003	FLASHBCN-A	FLASHING BEACON - AMBER (SLOW)
004	STOP SIGN	STOP SIGN
005	SLOW SIGN	SLOW SIGN
006	REG-SIGN	REGULATORY SIGN
007	YIELD	YIELD SIGN
008	WARNING	WARNING SIGN
009	CURVE	CURVE SIGN
010	SCHL X-ING	SCHOOL CROSSING SIGN OR SPECIAL SIGNAL
011	OFCR/FLAG	POLICE OFFICER, FLAGMAN - SCHOOL PATROL
012	BRDG-GATE	BRIDGE GATE - BARRIER
013	TEMP-BARR	TEMPORARY BARRIER
014	NO-PASS-ZN	NO PASSING ZONE
015	ONE-WAY	ONE-WAY STREET
016	CHANNEL	CHANNELIZATION
017	MEDIAN BAR	MEDIAN BARRIER
018	PILOT CAR	PILOT CAR
019	SP PED SIG	SPECIAL PEDESTRIAN SIGNAL
020	X-BUCK	CROSSBUCK
021	THR-GN-SIG	THROUGH GREEN ARROW OR SIGNAL
022	L-GRN-SIG	LEFT TURN GREEN ARROW, LANE MARKINGS, OR SIGNAL
023	R-GRN-SIG	RIGHT TURN GREEN ARROW, LANE MARKINGS, OR SIGNAL
024	WIGWAG	WIGWAG OR FLASHING LIGHTS W/O DROP-ARM GATE
025	X-BUCK WRN	CROSSBUCK AND ADVANCE WARNING
026	WW W/ GATE	FLASHING LIGHTS WITH DROP-ARM GATES
027	OVRHD SGNL	SUPPLEMENTAL OVERHEAD SIGNAL (RR XING ONLY)
028	SP RR STOP	SPECIAL RR STOP SIGN
029	ILUM GRD X	ILLUMINATED GRADE CROSSING
037	RAMP METER	METERED RAMPS
038	RUMBLE STR	RUMBLE STRIP
040	AUTO. FLAG	AUTOMATED FLAGGER ASSISTANCE DEVICE
090	L-TURN REF	LEFT TURN REFUGE (WHEN REFUGE IS INVOLVED)
091	R-TURN ALL	RIGHT TURN AT ALL TIMES SIGN, ETC.
092	EMR SGN/FL	EMERGENCY SIGNS OR FLARES
093	ACCEL LANE	ACCELERATION OR DECELERATION LANES
094	R-TURN PRO	RIGHT TURN PROHIBITED ON RED AFTER STOPPING
095	BUS STPSGN	BUS STOP SIGN AND RED LIGHTS

VEHICLE TYPE CODE TRANSLATION LIST

CODE	SHORT DESC	LONG DESCRIPTION
00	PDO	NOT COLLECTED FOR PDO CRASHES
01	PSNGR CAR	PASSENGER CAR, PICKUP, LIGHT DELIVERY, ETC.
02	BOBTAIL	TRUCK TRACTOR WITH NO TRAILERS (BOBTAIL)
03	FARM TRCTR	FARM TRACTOR OR SELF-PROPELLED FARM EQUIPMENT
04	SEMI TOW	TRUCK TRACTOR WITH TRAILER/MOBILE HOME IN TOW
05	TRUCK	TRUCK WITH NON-DETACHABLE BED, PANEL, ETC.
06	MOPED	MOPED, MINIBIKE, SEATED MOTOR SCOOTER (REV. 2022)
07	SCHL BUS	SCHOOL BUS (INCLUDES VAN)
08	OTH BUS	OTHER BUS
09	MTRCYCLE	MOTORCYCLE, DIRT BIKE
10	OTHER	OTHER: FORKLIFT, BACKHOE, ETC.
11	MOTRHOME	MOTORHOME
12	TROLLEY	MOTORIZED STREET CAR/TROLLEY (NO RAILS/WIRES)
13	ATV	ATV
14	MTRSCTR	MOTORIZED SCOOTER (STANDING)
15	SNOWMOBILE	SNOWMOBILE
16	MTRZ/EBIKE	MOTORIZED OR ELECTRIC BICYCLE (E-BIKE) (EFF.2022)
17	UTV	UTV SIDE BY SIDE
99	UNKNOWN	UNKNOWN VEHICLE TYPE

WEATHER CONDITION CODE TRANSLATION LIST

CODE	SHORT DESC	LONG DESCRIPTION
0	UNK	UNKNOWN
1	CLR	CLEAR
2	CLD	CLOUDY
3	RAIN	RAIN
4	SLT	SLEET
5	FOG	FOG
6	SNOW	SNOW
7	DUST	DUST
8	SMOK	SMOKE
9	ASH	ASH
099	UNKNOWN	UNKNOWN OR NOT DEFINITE

OREGON DEPARTMENT OF TRANSPORTATION - POLICY, DATA AND ANALYSIS DIVISION
TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT
CRASH SUMMARIES BY YEAR BY COLLISION TYPE

Intersectional Crashes at NE 4th Ave & N Pine St in Canby, OR.
January 1, 2017 through December 31, 2021

COLLISION TYPE	FATAL CRASHES	NON-FATAL CRASHES	PROPERTY DAMAGE ONLY	TOTAL CRASHES	PEOPLE KILLED	PEOPLE INJURED	TRUCKS	DRY SURF	WET SURF	DAY	DARK	INTER-SECTION	INTER-SECTION RELATED	OFF-ROAD
YEAR: 2018														
REAR-END	0	0	1	1	0	0	0	0	1	0	1	1	0	0
TURNING MOVEMENTS	0	1	0	1	0	1	0	1	0	0	1	1	0	0
2018 TOTAL	0	1	1	2	0	1	0	1	1	0	2	2	0	0
FINAL TOTAL	0	1	1	2	0	1	0	1	1	0	2	2	0	0

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A higher number of crashes may be reported as of 2011 compared to prior years. This does not necessarily reflect an increase in annual crashes. The higher numbers may result from a change to an internal departmental process that allows the Crash Analysis and Reporting Unit to add previously unavailable, non-fatal crash reports to the annual data file. Please be aware of this change when comparing pre-2011 crash statistics. For all disclaimers, see https://www.oregon.gov/ODOT/Data/documents/Crash_Data_Disclaimers.pdf.

TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT

URBAN NON-SYSTEM CRASH LISTING

CITY OF CANBY, CLACKAMAS COUNTY

Intersectional Crashes at NE 4th Ave & N Pine St in Canby, OR.

January 1, 2017 through December 31, 2021

SER# / INVEST / UNLOC?	SPED	ALC	DRUG/MJ	SCHL	WORK	DATE / DAY/TIME / *LAT/LONG*	FC / DISTNC	CITY STREET / FIRST STREET / SECOND STREET / INTERSECTION SEQ #	RD CHAR / DIRECT / LOCTN	INT-TYP (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF-CONTL	OFF-RD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH TYP / COLL TYP / SVRTY	V#	SPCL USE / TRLR QTY / OWNER	MOVE / FROM / TO	P#	PRTC / TYPE	INJ / SVRTY	AGE	SEX	LICNS / RES	PED LOC	ERROR	ACTN	EVENT	CAUSE
00301	N	N	N			01/24/2018	17	N PINE ST	INTER	3-LEG	N	N	RAIN	S-1STOP	01	NONE 9	STRGHT											29
NONE			N			Wed 5A	0	NE 4TH AVE	NW		STOP SIGN	N	WET	REAR		N/A	NW SE									000		00
No	*45*	*15*	*58.37*			*-122 40 59.02*		1	06	0		N	DLIT	PDO		PSNGR CAR		01	DRVR	NONE	00	U	UNK UNK		000	000		00
															02	NONE 9	STOP											
																N/A	NW SE									011		00
																PSNGR CAR		01	DRVR	NONE	00	U	UNK UNK		000	000		00
03571	N	N	N	N	N	10/05/2018	17	N PINE ST	INTER	3-LEG	N	N	UNK	ANGL-OTH	01	NONE 0	STRGHT											02
CITY			N			Fri 6A	0	NE 4TH AVE	CN		STOP SIGN	N	DRY	TURN		PRVTE	SE NW									000		00
No	*45*	*15*	*58.37*			*-122 40 59.02*		1	02	0		N	DAWN	INJ		PSNGR CAR		01	DRVR	INJC	53	M	OR-Y OR<25		000	000		00
															02	NONE 0	TURN-L											
																PRVTE	NE SE									015		00
																PSNGR CAR		01	DRVR	NONE	50	M	OR-Y OR<25		028	000		02

OREGON DEPARTMENT OF TRANSPORTATION - POLICY, DATA AND ANALYSIS DIVISION
TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT
CRASH SUMMARIES BY YEAR BY COLLISION TYPE

Intersectional Crashes at OR-99E, Pacific Hwy (ODOT Hwy #081) & Ivy St in Canby, OR.
January 1, 2017 through December 31, 2021

COLLISION TYPE	FATAL CRASHES	NON-FATAL CRASHES	PROPERTY DAMAGE ONLY	TOTAL CRASHES	PEOPLE KILLED	PEOPLE INJURED	TRUCKS	DRY SURF	WET SURF	DAY	DARK	INTER-SECTION	INTER-SECTION RELATED	OFF-ROAD
YEAR: 2021														
FIXED / OTHER OBJECT	0	1	2	3	0	1	2	2	1	2	1	3	0	3
REAR-END	0	1	0	1	0	1	0	1	0	1	0	1	0	0
TURNING MOVEMENTS	0	4	1	5	0	8	0	3	2	2	3	5	0	0
2021 TOTAL	0	6	3	9	0	10	2	6	3	5	4	9	0	3
YEAR: 2020														
ANGLE	0	1	0	1	0	1	0	1	0	1	0	1	0	0
REAR-END	0	2	0	2	0	2	0	0	1	1	1	2	0	0
SIDESWIPE - OVERTAKING	0	0	1	1	0	0	1	0	1	0	1	1	0	0
TURNING MOVEMENTS	0	1	1	2	0	1	0	1	1	2	0	2	0	0
2020 TOTAL	0	4	2	6	0	4	1	2	3	4	2	6	0	0
YEAR: 2019														
ANGLE	0	1	0	1	0	1	0	0	0	0	1	1	0	0
REAR-END	0	0	2	2	0	0	0	2	0	2	0	2	0	0
TURNING MOVEMENTS	0	1	0	1	0	1	0	0	1	1	0	1	0	0
2019 TOTAL	0	2	2	4	0	2	0	2	1	3	1	4	0	0
YEAR: 2018														
TURNING MOVEMENTS	0	1	0	1	0	2	0	0	1	1	0	1	0	0
2018 TOTAL	0	1	0	1	0	2	0	0	1	1	0	1	0	0
YEAR: 2017														
ANGLE	0	1	0	1	0	1	0	0	1	1	0	1	0	0
FIXED / OTHER OBJECT	0	1	0	1	0	1	1	1	0	1	0	1	0	1
REAR-END	0	1	1	2	0	1	0	2	0	2	0	2	0	0
TURNING MOVEMENTS	0	6	1	7	0	12	1	4	3	6	1	7	0	0
2017 TOTAL	0	9	2	11	0	15	2	7	4	10	1	11	0	1
FINAL TOTAL	0	22	9	31	0	33	5	17	12	23	8	31	0	4

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TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT
CONTINUOUS SYSTEM CRASH LISTING

081 PACIFIC HIGHWAY EAST

Intersectional Crashes at OR-99E, Pacific Hwy (ODOT Hwy #081) & Ivy St in Canby, OR.
January 1, 2017 through December 31, 2021

SER# INVEST UNLOC?	SPEED / ALCOHOL / DRUG / CMJ / SCHOOL / WORK	DATE DAY/TIME *LAT/LONG*	COUNTY CITY URBAN AREA	RD# CMPT/MLG MILEPNT LRS	FC CONN # FIRST STREET SECOND STREET INTERSECTION SEQ#	RD CHAR DIRECT LOCTN	INT-TYP (MEDIAN) LEGS (#LANES)	INT-REL TRAF-CNTL	OFFRD RNDBT DRVWY	WTHR SURF LIGHT	CRASH TYP COLL TYP SVRTY	V#	SPCL USE TRLR QTY OWNER VEH TYPE	MOVE FROM TO	P#	PRTC TYPE	INJ SVRTY	AGE	SEX	LICNS RES	PED LOC	ERROR	ACTN	EVENT	CAUSE
01311	N N N	04/24/2019	CLACKAMAS	1 14		INTER	CROSS	N	N	CLR	S-1STOP	01	NONE 9	STRGHT											29
NONE	N	Wed 6P	CANBY	MN 0	S IVY ST	NE		TRF SIGNAL	N	DRY	REAR		N/A	NE SW									000		00
			CANBY UA	21.14	PACIFIC HY 99E	06	0		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	U	UNK		000	000		00
No	*45 15 44.14 -122 41 31.63*			008100100S00	1															UNK					
												02	NONE 9	STOP											
													N/A	NE SW									011		00
													PSNGR CAR		01	DRVR	NONE	00	U	UNK		000	000		00
																				UNK					
00212	N N N N N	01/15/2020	CLACKAMAS	1 14		INTER	CROSS	N	N	RAIN	S-1STOP	01	NONE 0	STRGHT											27,29
CITY	N	Wed 4P	CANBY	MN 0	S IVY ST	NE		TRF SIGNAL	N	WET	REAR		PRVTE	NE SW									000		00
			CANBY UA	21.14	PACIFIC HY 99E	06	0		N	DLIT	INJ		PSNGR CAR		01	DRVR	NONE	27	F	OR-Y		026	038		27,29
No	*45 15 44.15 -122 41 31.65*			008100100S00	1															OR<25					
												02	NONE 0	STOP											
													PRVTE	NE SW									011		00
													PSNGR CAR		01	DRVR	INJC	26	F	OR-Y		000	000		00
																				OR<25					
01735	N N N N N	06/23/2021	CLACKAMAS	1 14		INTER	CROSS	N	Y	CLR	FIX OBJ	01	NONE 9	TURN-R										058	27,08
CITY	N	Wed 7A	CANBY	MN 0	S IVY ST	SE		TRF SIGNAL	N	DRY	FIX		N/A	SW SE									000		00
			CANBY UA	21.14	PACIFIC HY 99E	05	0		N	DAY	PDO		SEMI TOW		01	DRVR	NONE	00	U	UNK		000	000		00
No	*45 15 44.16 -122 41 31.64*			008100100S00	1															UNK					
03501	N N N	11/16/2021	CLACKAMAS	1 14		INTER	CROSS	N	Y	CLD	FIX OBJ	01	NONE 9	TURN-R										055	08
CITY	N	Tue 6P	CANBY	MN 0	S IVY ST	SE		TRF SIGNAL	N	DRY	FIX		N/A	SE NE									000		00
			CANBY UA	21.14	PACIFIC HY 99E	06	0		N	DLIT	PDO		SEMI TOW		01	DRVR	NONE	00	U	UNK		000	000		00
No	*45 15 44.14 -122 41 31.63*			008100100S00	1															UNK					
02021	N N N N N	05/24/2017	CLACKAMAS	1 14		INTER	CROSS	N	Y	CLR	FIX OBJ	01	NONE 0	TURN-L										055	08
CITY	N	Wed 1P	CANBY	MN 0	S IVY ST	SW		TRF SIGNAL	N	DRY	FIX		PRVTE	NE SE									000	055	00
			CANBY UA	21.14	PACIFIC HY 99E	06	0		N	DAY	INJ		SEMI TOW		01	DRVR	INJC	56	M	OR-Y		001	000		08
No	*45 15 44.14 -122 41 31.62*			008100100S00	1															OR<25					
03271	N N N	08/10/2017	CLACKAMAS	1 14		INTER	CROSS	N	N	CLR	S-1STOP	01	NONE 9	STRGHT											29
NONE	N	Thu 5P	CANBY	MN 0	S IVY ST	SW		TRF SIGNAL	N	DRY	REAR		N/A	NE SW									000		00
			CANBY UA	21.14	PACIFIC HY 99E	06	0		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	U	UNK		000	000		00
No	*45 15 44.14 -122 41 31.62*			008100100S00	1															UNK					
												02	NONE 9	STOP											
													N/A	NE SW									011		00
													PSNGR CAR		01	DRVR	NONE	00	U	UNK		000	000		00
																				UNK					

081 PACIFIC HIGHWAY EAST

Intersectional Crashes at OR-99E, Pacific Hwy (ODOT Hwy #081) & Ivy St in Canby, OR.
January 1, 2017 through December 31, 2021

SER# / INVEST / UNLOC?	SPEED / ALCHL / DRUG / SCHL / WRK / OTHR	DATE / DAY / TIME / LAT/LONG	COUNTY / CITY / URBAN AREA	RD# / CMPT/MLG / MILEPNT / LRS	FC / CONN # / FIRST STREET / SECOND STREET / INTERSECTION SEQ#	RD CHAR / DIRECT / LOCTN	INT-TYP / (MEDIAN) LEGS / (#LANES)	INT-REL / TRAF-CNTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH TYP / COLL TYP / SVRTY	V#	SPCL USE / TRLR QTY / OWNER / VEH TYPE	MOVE / FROM / TO	P#	PRTC / TYPE	INJ / SVRTY	AGE	SEX	LICNS / RES	PED LOC	ERROR	ACTN	EVENT	CAUSE
02034	N N N N N	06/18/2019	CLACKAMAS	1 14		INTER	CROSS	N		N CLR	S-1STOP	01	NONE 9	STRGHT											29
CITY	N	Tue 3P	CANBY	MN 0	S IVY ST	SW		TRF SIGNAL		N DRY	REAR		N/A	SW NE									000		00
			CANBY UA	21.14	PACIFIC HY 99E	06	0			N DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	U	UNK		000	000		00
No	*45 15*	*44.14 -122 41 31.62*		008100100S00	1															UNK					
												02	NONE 9	STOP											
													N/A	SW NE									011		00
													PSNGR CAR		01	DRVR	NONE	00	U	UNK		000	000		00
																				UNK					
00187	N N N	01/16/2020	CLACKAMAS	1 14		INTER	CROSS	N		N RAIN	S-1STOP	01	NONE 9	TURN-R											08
NONE	N	Thu 6A	CANBY	MN 0	S IVY ST	SW		TRF SIGNAL		N WET	SS-O		N/A	SW SE									000		00
			CANBY UA	21.14	PACIFIC HY 99E	06	0			N DLIT	PDO		SEMI TOW		01	DRVR	NONE	00	U	UNK		000	000		00
No	*45 15*	*44.11 -122 41 31.62*		008100100S00	1															UNK					
												02	NONE 9	STOP											
													N/A	SW NE									012		00
													PSNGR CAR		01	DRVR	NONE	00	U	UNK		000	000		00
																				UNK					
01080	N N N	04/26/2021	CLACKAMAS	1 14		INTER	CROSS	N		N CLR	S-1STOP	01	NONE 0	STRGHT											29
CITY	N	Mon 1P	CANBY	MN 0	S IVY ST	SW		TRF SIGNAL		N DRY	REAR		UNKN	SW NE									000		00
			CANBY UA	21.14	PACIFIC HY 99E	06	0			N DAY	INJ		PSNGR CAR		01	DRVR	NONE	00	U	UNK		026	000		29
No	*45 15*	*44.11 -122 41 31.60*		008100100S00	1															UNK					
												02	NONE 0	STOP											
													PRVTE	SW NE									011		00
													PSNGR CAR		01	DRVR	INJC	49	M	OR-Y		000	000		00
																				OR<25					
03145	N N N	10/20/2021	CLACKAMAS	1 14		INTER	CROSS	N		Y RAIN	FIX OBJ	01	NONE 0	STRGHT										091	17
STATE	N	Wed 7A	CANBY	MN 0	S IVY ST	SW		TRF SIGNAL		N WET	FIX		PRVTE	UN UN									000	091	00
			CANBY UA	21.14	PACIFIC HY 99E	06	0			N DAY	INJ		PSNGR CAR		01	DRVR	INJA	44	M	OR-Y		081	028		17
No	*45 15*	*44.14 -122 41 31.63*		008100100S00	1															OR<25					
03977	N N N N N	09/25/2017	CLACKAMAS	1 14		INTER	CROSS	N		N CLR	O-1 L-TURN	01	NONE 0	STRGHT											02
CITY	N	Mon 4P	CANBY	MN 0	S IVY ST	CN		TRF SIGNAL		N DRY	TURN		PRVTE	NE SW									000		00
			CANBY UA	21.14	PACIFIC HY 99E	01	0			N DAY	INJ		PSNGR CAR		01	DRVR	INJB	40	F	OR-Y		000	000		00
No	*45 15*	*44.14 -122 41 31.62*		008100100S00	1															OR<25					
															02	PSNG	INJB	02	F			000	000		00
												02	NONE 0	TURN-L											
													PRVTE	SW NW									000		00
													PSNGR CAR		01	DRVR	INJC	16	F	OR-Y		028,004	000		02
																				OR<25					

081 PACIFIC HIGHWAY EAST

Intersectional Crashes at OR-99E, Pacific Hwy (ODOT Hwy #081) & Ivy St in Canby, OR.
January 1, 2017 through December 31, 2021

SER# / INVEST / UNLOC?	SPEED / ALCHL / DRUG / SCHL / WRK / OTHR	DATE / DAY/TIME / LAT/LONG	COUNTY / CITY / URBAN AREA	RD# / CMPT/MLG / MILEPNT / LRS	FC / CONN # / FIRST STREET / SECOND STREET / INTERSECTION SEQ#	RD CHAR / DIRECT / LOCTN	INT-TYP / (MEDIAN) / LEGS / (#LANES)	INT-REL / TRAF- / CNTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH TYP / COLL TYP / SVRTY	V#	SPCL USE / TRLR QTY / OWNER / VEH TYPE	MOVE / FROM / TO	P#	PRTC / TYPE	INJ / SVRTY	AGE	SEX	LICNS / RES	PED LOC	ERROR	ACTN	EVENT	CAUSE
02143	N N N N N	08/10/2020	CLACKAMAS	1 14		INTER	CROSS	N	N	CLR	ANGL-OTH	01	NONE 0	STRGHT											27,04
CITY	N	Mon 9A	CANBY	MN 0	S IVY ST	CN		TRF SIGNAL	N	DRY	ANGL		PRVTE	NW SE									000		00
			CANBY UA	21.14	PACIFIC HY 99E	01	0		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	75	M	OR-Y		020	038		27,04
No	*45 15 44.17 -122 41 31.64*			008100100S00	1															OR<25					
												02	NONE 0	STRGHT											
													PRVTE	NE SW									000		00
													PSNGR CAR		01	DRVR	INJC	68	M	OR-Y		000	000		00
																				OR<25					
02873	N N N N N	10/24/2020	CLACKAMAS	1 14		INTER	CROSS	N	N	CLR	ANGL-OTH	01	NONE 0	TURN-L											04
CITY	N	Sat 11A	CANBY	MN 0	S IVY ST	CN		TRF SIGNAL	N	DRY	TURN		PRVTE	SE SW									000		00
			CANBY UA	21.14	PACIFIC HY 99E	01	0		N	DAY	INJ		PSNGR CAR		01	DRVR	INJC	30	F	OR-Y		000	000		00
No	*45 15 44.14 -122 41 31.64*			008100100S00	1															OR<25					
												02	NONE 0	STRGHT											
													PRVTE	SW NE									000		00
													PSNGR CAR		01	DRVR	NONE	36	M	OR-Y		020	000		04
																				OR<25					
00104	N N N N N	01/07/2017	CLACKAMAS	1 14		INTER	CROSS	N	N	SNOW	O-1 L-TURN	01	NONE 0	STRGHT										124	02,08
CITY	N	Sat 6P	CANBY	MN 0	S IVY ST	CN		TRF SIGNAL	N	SNO	TURN		PRVTE	NE SW									000		00
			CANBY UA	21.14	PACIFIC HY 99E	02	0		N	DLIT	INJ		PSNGR CAR		01	DRVR	INJC	63	M	OR-Y		000	000		00
No	*45 15 44.14 -122 41 31.62*			008100100S00	1															OR<25					
												02	NONE 0	TURN-L											
													PRVTE	SW NW									000		00
													PSNGR CAR		01	DRVR	NONE	57	M	OR-Y		028,004	000		02,08
																				OR<25					
01964	N N N N N	06/08/2018	CLACKAMAS	1 14		INTER	CROSS	N	N	RAIN	O-1 L-TURN	01	NONE 0	STRGHT											02,08
CITY	N	Fri 6P	CANBY	MN 0	S IVY ST	CN		TRF SIGNAL	N	WET	TURN		PRVTE	NE SW									000		00
			CANBY UA	21.14	PACIFIC HY 99E	02	0		N	DAY	INJ		PSNGR CAR		01	DRVR	INJC	43	F	OR-Y		000	000		00
No	*45 15 44.16 -122 41 31.63*			008100100S00	1															OR<25					
															02	PSNG	INJC	08	F			000	000		00
												02	NONE 0	TURN-L											
													PRVTE	SW NW									000		00
													PSNGR CAR		01	DRVR	NONE	37	M	OR-Y		028,004	000		02,08
																				OR<25					
03666	N N N	10/20/2019	CLACKAMAS	1 14		INTER	CROSS	N	N	UNK	ANGL-OTH	01	NONE	STRGHT											02
NONE	N	Sun 5P	CANBY	MN 0	S IVY ST	CN		TRF SIGNAL	N	UNK	ANGL		PRVTE	SW NE									000		00
			CANBY UA	21.14	PACIFIC HY 99E	02	0		N	DUSK	INJ		PSNGR CAR		01	DRVR	INJC	24	M	OR-Y		000	000		00
No	*45 15 44.16 -122 41 31.63*			008100100S00	1															OR<25					

081 PACIFIC HIGHWAY EAST

Intersectional Crashes at OR-99E, Pacific Hwy (ODOT Hwy #081) & Ivy St in Canby, OR.
January 1, 2017 through December 31, 2021

SER# INVEST UNLOC?	SPEED / ALCOHOL / DRUG / CMLT / SCHL / WORK	DATE DAY/TIME *LAT/LONG*	COUNTY CITY URBAN AREA	RD# CMPT/MLG MILEPNT LRS	FC CONN # FIRST STREET SECOND STREET INTERSECTION SEQ#	RD CHAR DIRECT LOCTN	INT-TYP (MEDIAN) LEGS (#LANES)	INT-REL TRAF-CNTL	OFFRD RNDBT DRVWY	WTHR SURF LIGHT	CRASH TYP COLL TYP SVRTY	V#	SPCL USE TRLR QTY OWNER VEH TYPE	MOVE FROM TO	P#	PRTC TYPE	INJ SVRTY	AGE	SEX	LICNS RES	PED LOC	ERROR	ACTN	EVENT	CAUSE
												02	NONE PRVTE	TURN-R S NE									000		00
													PSNGR CAR		01	DRVR	NONE	00	M	UNK OR<25		000	000		02
03785 CITY	N N N N	12/09/2021 Thu 6P	CLACKAMAS CANBY	1 14 MN 0	S IVY ST	INTER CN	CROSS	N TRF SIGNAL	N	CLR N WET	O-1 L-TURN TURN	01	NONE 0 PRVTE	TURN-L NW NE									000		04 00
			CANBY UA	21.14	PACIFIC HY 99E	02	0		N	DLIT	INJ		PSNGR CAR		01	DRVR	INJB	29	F	OR-Y OR<25		097	000		00
No	*45 15*	*44.12 -122 41 31.61*		008100100S00	1										02	PSNG	INJB	13	F			000	000		00
												02	NONE 0 PRVTE	STRGHT SE NW									000		00
													PSNGR CAR		01	DRVR	INJC	33	M	OR-Y OR<25		097	000		00
01262 CITY	N N N N N	04/04/2017 Tue 11A	CLACKAMAS CANBY	1 14 MN 0	S IVY ST	INTER CN	CROSS	N TRF SIGNAL	N	CLD N DRY	O-1 L-TURN TURN	01	NONE 1 PRVTE	TURN-L NE SE									000		32 00
			CANBY UA	21.14	PACIFIC HY 99E	03	0		N	DAY	INJ		SEMI TOW		01	DRVR	NONE	62	M	OR-Y OR>25		000	000		00
No	*45 15*	*44.14 -122 41 31.62*		008100100S00	1																				
												02	NONE 0 PRVTE	STRGHT SW NE									000		00
													PSNGR CAR		01	DRVR	INJC	33	F	OR-Y OR<25		052	000		32
															02	PSNG	NO<5	04	F			000	000		00
05301 CITY	N N N N N	12/13/2017 Wed 3P	CLACKAMAS CANBY	1 14 MN 0	S IVY ST	INTER CN	CROSS	N TRF SIGNAL	N	CLR N DRY	O-1 L-TURN TURN	01	NONE 0 PRVTE	STRGHT SW NE									000	013	02 00
			CANBY UA	21.14	PACIFIC HY 99E	03	0		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	35	M	OR-Y OR<25		000	000		00
No	*45 15*	*44.14 -122 41 31.62*		008100100S00	1																				
												02	NONE 0 PRVTE	TURN-L NE SE									000		00
													PSNGR CAR		01	DRVR	NONE	55	M	OR-Y OR<25		028,004	000		02
												03	NONE 0 PRVTE	STRGHT SW NE									000	013	00
													PSNGR CAR		01	DRVR	INJB	36	F	OR-Y OR<25		000	000		00
															02	PSNG	INJB	05	M			000	000		00
												04	NONE 0 PRVTE	STOP SE NW									022		00
													PSNGR CAR		01	DRVR	NONE	46	F	OR-Y OR<25		000	000		00

081 PACIFIC HIGHWAY EAST

Intersectional Crashes at OR-99E, Pacific Hwy (ODOT Hwy #081) & Ivy St in Canby, OR.
January 1, 2017 through December 31, 2021

SER# / INVEST / UNLOC?	SPEED / ALCOHOL / DRUG / SCHOOL / WORK	DATE / DAY/TIME / *LAT/LONG*	COUNTY / CITY / URBAN AREA	RD# / CMPT/MLG / MILEPNT / LRS	FC / CONN # / FIRST STREET / SECOND STREET / INTERSECTION SEQ#	RD CHAR / DIRECT / LOCTN	INT-TYP / (MEDIAN) / LEGS / (#LANES)	INT-REL / TRAF-CNTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH TYP / COLL TYP / SVRTY	V#	SPCL USE / TRLR QTY / OWNER / VEH TYPE	MOVE / FROM / TO	P#	PRTC / TYPE	INJ / SVRTY	AGE	SEX	LICNS / RES	PED LOC	ERROR	ACTN	EVENT	CAUSE
05544	N N N N N	12/23/2017	CLACKAMAS	1 14		INTER	CROSS	N	N	CLD	O-1 L-TURN	01	NONE 0	STRGHT										013	04,08
CITY	N	Sat 11A	CANBY	MN 0	S IVY ST	CN		TRF SIGNAL	N	DRY	TURN		PRVTE	SW NE									000		00
			CANBY UA	21.14	PACIFIC HY 99E	03	0		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	55	M	OR-Y		000	000		00
No	*45 15 44.14 -122 41 31.62*			008100100S00	1															OR<25					
												02	NONE 0	TURN-L											
													PRVTE	NE SE									000	013	00
													PSNGR CAR		01	DRVR	INJC	66	M	OR-Y		020,004	000		04,08
																				OR<25					
															02	PSNG	INJC	55	F			000	000		00
												03	NONE 0	STOP											
													PRVTE	SE NW									022		00
													PSNGR CAR		01	DRVR	INJC	65	F	OR-Y		000	000		00
																				OR<25					
03331	N N N N N	09/27/2019	CLACKAMAS	1 14		INTER	CROSS	N	N	RAIN	O-1 L-TURN	01	NONE 0	TURN-L											02,08
CITY	N	Fri 2P	CANBY	MN 0	S IVY ST	CN		TRF SIGNAL	N	WET	TURN		PRVTE	E S									000		00
			CANBY UA	21.14	PACIFIC HY 99E	03	0		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	30	F	OTH-Y		028,004	000		02,08
No	*45 15 44.15 -122 41 31.63*			008100100S00	1															N-RES					
												02	NONE 0	STRGHT											
													PRVTE	W E									000		00
													PSNGR CAR		01	DRVR	INJC	45	F	OR-Y		000	000		00
																				OR>25					
02988	N N N	11/05/2020	CLACKAMAS	1 14		INTER	CROSS	N	N	RAIN	O-1 L-TURN	01	NONE 9	STRGHT											02,08
NONE	N	Thu 3P	CANBY	MN 0	S IVY ST	CN		TRF SIGNAL	N	WET	TURN		N/A	SW NE									000		00
			CANBY UA	21.14	PACIFIC HY 99E	03	0		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	U	UNK		000	000		00
No	*45 15 44.14 -122 41 31.63*			008100100S00	1															UNK					
												02	NONE 9	TURN-L											
													N/A	NE SE									000		00
													PSNGR CAR		01	DRVR	NONE	00	U	UNK		000	000		00
																				UNK					
00580	N N N N N	03/05/2021	CLACKAMAS	1 14		INTER	CROSS	N	N	CLR	O-1 L-TURN	01	NONE 0	TURN-L											02,08
STATE	N	Fri 11P	CANBY	MN 0	S IVY ST	CN		TRF SIGNAL	N	DRY	TURN		PRVTE	NE SE									000		00
			CANBY UA	21.14	PACIFIC HY 99E	03	0		N	DLIT	INJ		PSNGR CAR		01	DRVR	NONE	27	M	OR-Y		028,004	000		02,08
No	*45 15 44.15 -122 41 31.63*			008100100S00	1															OR<25					
												02	NONE 0	STRGHT											
													PRVTE	SW NE									000		00
													PSNGR CAR		01	DRVR	INJC	53	F	OR-Y		000	000		00
																				OR<25					

081 PACIFIC HIGHWAY EAST

Intersectional Crashes at OR-99E, Pacific Hwy (ODOT Hwy #081) & Ivy St in Canby, OR.
January 1, 2017 through December 31, 2021

SER# / INVEST / UNLOC?	SPEED / ALCHL / DRUG / SCHL / WRK / DARK	DATE / DAY / TIME / *LAT/LONG*	COUNTY / CITY / URBAN AREA	RD# / CMPT/MLG / MILEPNT / LRS	FC / CONN # / FIRST STREET / SECOND STREET / INTERSECTION SEQ#	RD CHAR / DIRECT / LOCTN	INT-TYP / (MEDIAN) LEGS / (#LANES)	INT-REL / TRAF-CNTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH TYP / COLL TYP / SVRTY	V#	SPCL USE / TRLR QTY / OWNER / VEH TYPE	MOVE / FROM / TO	P#	PRTC / TYPE	INJ / SVRTY	AGE	SEX	LICNS / RES	PED LOC	ERROR	ACTN EVENT	CAUSE
00842	N N N N N	04/05/2021	CLACKAMAS	1 14		INTER	CROSS	N	N	CLR	O-1 L-TURN	01	NONE 0	TURN-L										02,08
CITY	N	Mon 12P	CANBY	MN 0	S IVY ST	CN		TRF SIGNAL	N	DRY	TURN		PRVTE	NE SE									000	00
			CANBY UA	21.14	PACIFIC HY 99E	03	0		N	DAY	INJ		PSNGR CAR		01	DRVR	INJC	42	F	OR-Y		028,004	000	02,08
No	*45 15 44.14 -122 41 31.62*			008100100S00	1															OR<25				
												02	NONE 1	STRGHT										
													PRVTE	SW NE									000	00
													PSNGR CAR		01	DRVR	INJB	40	M	OR-Y		000	000	00
																				OR<25				
03387	N N N	11/07/2021	CLACKAMAS	1 14		INTER	CROSS	N	N	RAIN	O-1 L-TURN	01	NONE 9	TURN-L										02,08
CITY	N	Sun 7P	CANBY	MN 0	S IVY ST	CN		TRF SIGNAL	N	WET	TURN		N/A	SE SW									000	00
			CANBY UA	21.14	PACIFIC HY 99E	03	0		N	DLIT	PDO		PSNGR CAR		01	DRVR	NONE	00	U	UNK		000	000	00
No	*45 15 44.14 -122 41 31.62*			008100100S00	1															UNK				
												02	NONE 9	STRGHT										
													N/A	NW SE									000	00
													PSNGR CAR		01	DRVR	NONE	00	U	UNK		000	000	00
																				UNK				
00478	N N N	02/04/2017	CLACKAMAS	1 14		INTER	CROSS	N	N	RAIN	O-1 L-TURN	01	NONE 9	STRGHT										02,08
NONE	N	Sat 2P	CANBY	MN 0	S IVY ST	CN		TRF SIGNAL	N	WET	TURN		N/A	SE NW									000	00
			CANBY UA	21.14	PACIFIC HY 99E	04	0		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	U	UNK		000	000	00
No	*45 15 44.14 -122 41 31.62*			008100100S00	1															UNK				
												02	NONE 9	TURN-L										
													N/A	NW NE									000	00
													PSNGR CAR		01	DRVR	NONE	00	U	UNK		000	000	00
																				UNK				
01187	N N N	03/29/2017	CLACKAMAS	1 14		INTER	CROSS	N	N	UNK	O-1 L-TURN	01	NONE 0	TURN-L										02
NONE	N	Wed 2P	CANBY	MN 0	S IVY ST	CN		TRF SIGNAL	N	WET	TURN		PRVTE	NE SE									000	00
			CANBY UA	21.14	PACIFIC HY 99E	04	0		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	28	M	OR-Y		028	000	02
No	*45 15 44.14 -122 41 31.62*			008100100S00	1															OR<25				
												02	NONE 0	STRGHT										
													PRVTE	SW NE									000	00
													PSNGR CAR		01	DRVR	NONE	67	M	OR-Y		000	000	00
																				OR<25				
															02	PSNG	INJC	12	F			000	000	00
															03	PSNG	INJC	58	F			000	000	00
05003	N N N	11/26/2017	CLACKAMAS	1 14		INTER	CROSS	N	N	CLD	ANGL-OTH	01	NONE 0	STRGHT										04
NONE	N	Sun 10A	CANBY	MN 0	S IVY ST	CN		TRF SIGNAL	N	WET	ANGL		UNKN	SW NE									000	00
			CANBY UA	21.14	PACIFIC HY 99E	04	0		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	26	M	OR-Y		020	000	04
No	*45 15 44.14 -122 41 31.62*			008100100S00	1															OR<25				

081 PACIFIC HIGHWAY EAST

Intersectional Crashes at OR-99E, Pacific Hwy (ODOT Hwy #081) & Ivy St in Canby, OR.
January 1, 2017 through December 31, 2021

SER# / INVEST / UNLOC?	SPEED / ALCOHOL / DRUG / SCHOOL / HOLIDAY / WORK	DATE / DAY/TIME / *LAT/LONG*	COUNTY / CITY / URBAN AREA	RD# / CMPT/MLG / MILEPNT / LRS	FC	CONN # / FIRST STREET / SECOND STREET / INTERSECTION SEQ#	RD CHAR / DIRECT / LOCTN	INT-TYP / (MEDIAN) / LEGS / (#LANES)	INT-REL / TRAF- / CNTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH TYP / COLL TYP / SVRTY	V#	SPCL USE / TRLR QTY / OWNER / VEH TYPE	MOVE / FROM / TO	P#	PRTC / TYPE	INJ / SVRTY	AGE	SEX	LICNS / RES	PED LOC	ERROR	ACTN	EVENT	CAUSE
													02	NONE / PRVTE	0 / STRGHT / NW SE									000		00
														PSNGR CAR		01	DRVR	INJC	67	F	OR-Y / OR>25		000	000		00
02488	N N N N N	08/26/2021	CLACKAMAS	1	14		INTER	CROSS	N		N CLR	O-1 L-TURN	01	NONE / PRVTE	0 / STRGHT / SW NE									000	013	04,02 / 00
CITY	N	Thu 2P	CANBY	MN	0	S IVY ST	CN		L-GRN-SIG		N DRY	TURN		PSNGR CAR		01	DRVR	INJB	36	M	OR-Y / OR<25		000	000		00
			CANBY UA	21.14		PACIFIC HY 99E	04	0			N DAY	INJ														
No	*45 15 44.14 -122 41 31.62*			008100100S00		1																				
													02	NONE / PRVTE	0 / TURN-L / NE SE									000	013	00
														PSNGR CAR		01	DRVR	NONE	73	M	OR-Y / OR<25		020,028,004	000		04,02
													03	NONE / PRVTE	0 / STOP / SE NW									022	013	00
														PSNGR CAR		01	DRVR	NONE	61	F	OR-Y / OR<25		000	000		00
													04	NONE / PRVTE	0 / STOP / SE NW									022		00
														PSNGR CAR		01	DRVR	INJC	36	M	SUSP / OR>25		000	000		00

TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT

URBAN NON-SYSTEM CRASH LISTING

CITY OF CANBY, CLACKAMAS COUNTY

Intersectional Crashes at OR-99E, Pacific Hwy (ODOT Hwy #081) & Ivy St in Canby, OR.

January 1, 2017 through December 31, 2021

SER# / INVEST / UNLOC?	SPED	ALC	DRUG/MJ	SCHL	WORK	DATE / DAY/TIME / *LAT/LONG*	FC / DISTNC	CITY STREET / FIRST STREET / SECOND STREET / INTERSECTION SEQ #	RD CHAR / DIRECT / LOCTN	INT-TYP (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF-CONTL	OFF-RD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH TYP / COLL TYP / SVRTY	V#	SPCL USE / TRLR QTY / OWNER	MOVE / FROM / TO	P#	PRTC / TYPE	INJ / SVRTY	AGE	SEX	LICNS / RES	PED LOC	ERROR	ACTN	EVENT	CAUSE
01020	N	N	N			03/24/2020	16	S IVY ST	INTER	CROSS	N	N	UNK	S-1STOP	01	NONE 0	STRGHT											29
NONE			N			Tue 5P	0	PACIFIC HY 99E	UN		TRF SIGNAL	N	UNK	REAR		PRVTE	UN UN									000		00
No	*45*	*15*	*44.15*			*-122 41 31.64*		1	06	0		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	27	M	OR-Y OR<25		026	000		29
															02	NONE 0	STOP											
																PRVTE	UN UN									011		00
																PSNGR CAR		01	DRVR	INJC	57	F	OR-Y OR<25		000	000		00
02462	N	N	N			06/22/2017	14	S IVY ST	INTER	CROSS	N	N	CLR	S-1STOP	01	NONE 0	STRGHT										115	27,29
NONE			N			Thu 3P	0	PACIFIC HY 99E	SE		TRF SIGNAL	N	DRY	REAR		PRVTE	SE NW									000		00
No	*45*	*15*	*44.14*			*-122 41 31.62*		1	06	0		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	00	M	OTH-Y N-RES		026	038		27,29
															02	NONE 0	STOP											
																PRVTE	SE NW									011		00
																PSNGR CAR		01	DRVR	INJC	47	M	OR-Y OR<25		000	000		00

OREGON DEPARTMENT OF TRANSPORTATION - POLICY, DATA AND ANALYSIS DIVISION
TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT
CRASH SUMMARIES BY YEAR BY COLLISION TYPE

Intersectional Crashes at OR-99E, Pacific Hwy (ODOT Hwy #081) & NE 4th Ave / S Pine St in Canby, OR.
January 1, 2017 through December 31, 2021

COLLISION TYPE	FATAL CRASHES	NON-FATAL CRASHES	PROPERTY DAMAGE ONLY	TOTAL CRASHES	PEOPLE KILLED	PEOPLE INJURED	TRUCKS	DRY SURF	WET SURF	DAY	DARK	INTER-SECTION	INTER-SECTION RELATED	OFF-ROAD
YEAR: 2021														
ANGLE	0	0	1	1	0	0	0	1	0	1	0	1	0	0
FIXED / OTHER OBJECT	0	1	0	1	0	2	0	0	1	0	1	1	0	1
REAR-END	0	1	0	1	0	1	0	1	0	1	0	1	0	0
TURNING MOVEMENTS	0	0	1	1	0	0	0	0	1	0	1	1	0	0
2021 TOTAL	0	2	2	4	0	3	0	2	2	2	2	4	0	1
YEAR: 2020														
ANGLE	0	0	1	1	0	0	0	1	0	0	1	1	0	0
PEDESTRIAN	0	1	0	1	0	2	0	0	1	0	1	1	0	0
2020 TOTAL	0	1	1	2	0	2	0	1	1	0	2	2	0	0
YEAR: 2019														
REAR-END	0	1	0	1	0	2	0	1	0	1	0	1	0	0
TURNING MOVEMENTS	0	0	1	1	0	0	0	0	1	1	0	1	0	0
2019 TOTAL	0	1	1	2	0	2	0	1	1	2	0	2	0	0
YEAR: 2018														
REAR-END	0	0	1	1	0	0	0	0	1	1	0	1	0	0
TURNING MOVEMENTS	0	2	0	2	0	3	0	2	0	2	0	2	0	0
2018 TOTAL	0	2	1	3	0	3	0	2	1	3	0	3	0	0
YEAR: 2017														
ANGLE	0	1	0	1	0	1	0	0	1	1	0	1	0	0
REAR-END	0	2	0	2	0	5	0	2	0	2	0	2	0	0
TURNING MOVEMENTS	0	0	1	1	0	0	0	1	0	1	0	1	0	0
2017 TOTAL	0	3	1	4	0	6	0	3	1	4	0	4	0	0
FINAL TOTAL	0	9	6	15	0	16	0	9	6	11	4	15	0	1

Disclaimers: *Effective 2016,* ***collection of "Property Damage Only" (PDO) crash data elements was reduced for vehicles and participants.*** *Age, Gender, License, Error and other elements are no longer available for PDO crash reporting. Please keep this in mind when comparing 2016 PDO crash data to prior years.*

A higher number of crashes may be reported as of 2011 compared to prior years. This does not necessarily reflect an increase in annual crashes. The higher numbers may result from a change to an internal departmental process that allows the Crash Analysis and Reporting Unit to add previously unavailable, non-fatal crash reports to the annual data file. Please be aware of this change when comparing pre-2011 crash statistics. For all disclaimers, see https://www.oregon.gov/ODOT/Data/documents/Crash_Data_Disclaimers.pdf.

TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT
CONTINUOUS SYSTEM CRASH LISTING

081 PACIFIC HIGHWAY EAST

Intersectional Crashes at OR-99E, Pacific Hwy (ODOT Hwy #081) & NE 4th Ave / S Pine St in Canby, OR.
January 1, 2017 through December 31, 2021

SER# INVEST UNLOC?	S P E D	E A L C	D R U G / M J	S C H L	W O R K	DATE DAY/TIME *LAT/LONG*	COUNTY CITY URBAN AREA	RD# CMPT/MLG MILEPNT LRS	FC	CONN # FIRST STREET SECOND STREET INTERSECTION	SEQ#	RD CHAR DIRECT LOCTN	INT-TYP (MEDIAN) LEGS (#LANES)	INT-REL TRAF-CNTL	OFFRD RNDBT DRVWY	WTHR SURF LIGHT	CRASH TYP COLL TYP SVRTY	V#	SPCL TRLR OWNER VEH	USE QTY TYPE	MOVE FROM TO	P#	PRTC TYPE	INJ SVRTY	A G E	S E X	LICNS RES	PED LOC	ERROR	ACTN	EVENT	CAUSE
01580	Y	Y	N	N	N	06/12/2021	CLACKAMAS	1	14			INTER	CROSS	N	Y	RAIN	FIX OBJ	01	NONE	0	TURN-R										055	01,08,27
CITY			N			Sat 2A	CANBY	MN	0	PACIFIC HY 99E		N		TRF SIGNAL	N	WET	FIX		PRVTE		NE N								000	055	00
							CANBY UA	20.62		PINE ST		05	0		N	DLIT	INJ		PSNGR	CAR		01	DRVR	INJB	25	M	SUSP		047,002	038		01,08,27
No	*45*	*15*	*56.99*	*-122*	*40*	*57.93*	008100100S00				1																OR<25					
																						02	PSNG	INJB	21	M			000	000		00
03939	N	N	N	N	N	10/29/2018	CLACKAMAS	1	14			INTER	CROSS	N	N	CLD	S-1STOP	01	NONE	9	STRGHT											04,29
CITY			N			Mon 4P	CANBY	MN	0	PACIFIC HY 99E		NE		TRF SIGNAL	N	WET	REAR		N/A		NE SW								000		00
							CANBY UA	20.62		PINE ST		06	0		N	DAY	PDO		PSNGR	CAR		01	DRVR	NONE	00	U	UNK		000	000		00
No	*45*	*15*	*57.00*	*-122*	*40*	*57.90*	008100100S00				1																UNK					
																		02	NONE	9	STOP											
																			N/A		NE SW									011		00
																			PSNGR	CAR		01	DRVR	NONE	00	U	UNK		000	000		00
																											UNK					
01863	N	N	N			06/06/2019	CLACKAMAS	1	14			INTER	CROSS	N	N	CLR	S-1STOP	01	NONE	0	STRGHT										109	29
CITY			N			Thu 4P	CANBY	MN	0	PACIFIC HY 99E		SE		TRF SIGNAL	N	DRY	REAR		PRVTE		SE NW								000		00
							CANBY UA	20.62		PINE ST		06	0		N	DAY	INJ		PSNGR	CAR		01	DRVR	NONE	50	M	OR-Y		026	000		29
No	*45*	*15*	*56.99*	*-122*	*40*	*57.92*	008100100S00				1																OR<25					
																					STRGHT	01	BIKE	INJB	25	M		01	000	035	109	00
																					NW SE											
																		02	NONE	0	STOP											
																			PRVTE		SE NW									011	013	00
																			PSNGR	CAR		01	DRVR	INJC	37	M	OR-Y		000	000		00
																											OR<25					
03152	N	N	N			08/03/2017	CLACKAMAS	1	14			INTER	CROSS	N	N	ASH	S-1STOP	01	NONE	0	STRGHT											29
CITY			N			Thu 2P	CANBY	MN	0	PACIFIC HY 99E		S		TRF SIGNAL	N	DRY	REAR		PRVTE		S N								000		00
							CANBY UA	20.62		PINE ST		06	1		N	DAY	INJ		PSNGR	CAR		01	DRVR	NONE	37	M	OR-Y		026	000		29
No	*45*	*15*	*56.99*	*-122*	*40*	*57.92*	008100100S00				1																OR<25					
																		02	NONE	0	STOP											
																			PRVTE		S N									011		00
																			PSNGR	CAR		01	DRVR	INJC	78	M	OTH-Y		000	000		00
																											N-RES					
																						02	PSNG	INJC	17	F			000	000		00
03458	N	N	N	N	N	12/21/2020	CLACKAMAS	1	14			INTER	CROSS	N	N	RAIN	PED	01	NONE	0	TURN-L											02
CITY			N			Mon 8P	CANBY	MN	0	PACIFIC HY 99E		SW		TRF SIGNAL	N	WET	PED		PRVTE		S SW								000		00
							CANBY UA	20.62		PINE ST		05	0		N	DLIT	INJ		PSNGR	CAR		01	DRVR	NONE	54	M	OR-Y		029	000		02
No	*45*	*15*	*56.99*	*-122*	*40*	*57.91*	008100100S00				1																OR<25					
																					STRGHT	01	PED	INJC	13	F		01	000	000		00
																					UN UN											
																					STRGHT	02	PED	INJC	41	M		01	000	000		00
																					UN UN											

081 PACIFIC HIGHWAY EAST

Intersectional Crashes at OR-99E, Pacific Hwy (ODOT Hwy #081) & NE 4th Ave / S Pine St in Canby, OR.
January 1, 2017 through December 31, 2021

SER# INVEST UNLOC?	S P E D	N N E A L C	N D R U G / M J	S C H L	W O R K	DATE DAY/TIME *LAT/LONG*	COUNTY CITY URBAN AREA	RD# CMPT/MLG MILEPNT LRS	FC	CONN # FIRST STREET SECOND STREET INTERSECTION SEQ#	RD CHAR DIRECT LOCTN	INT-TYP (MEDIAN) LEGS (#LANES)	INT-REL TRAF-CNTL	OFFRD RNDBT DRVWY	WTHR SURF LIGHT	CRASH TYP COLL TYP SVRTY	V#	SPCL USE TRLR QTY OWNER VEH TYPE	MOVE FROM TO	P#	PRTC TYPE	INJ SVRTY	A G E	S E X	LICNS RES	PED LOC	ERROR	ACTN	EVENT	CAUSE
03950	N	N	N			09/23/2017	CLACKAMAS	1	14		INTER	CROSS	N		N	CLR	ANGL-OTH	01	NONE 9	TURN-L										02
NONE			N			Sat 9A	CANBY	MN	0	PACIFIC HY 99E	CN		TRF SIGNAL		N	DRY	TURN		N/A	S SW								015		00
							CANBY UA	20.62		PINE ST	01	0			N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	U	UNK	000	000		00
No	*45 15 56.99 -122 40 57.92*							008100100S00		1																UNK				
																	02	NONE 9	STRGHT									000		00
																		N/A	NE SW											
																		PSNGR CAR		01	DRVR	NONE	00	U	UNK	000	000		00
																									UNK					
02217	N	N	N			06/26/2018	CLACKAMAS	1	14		INTER	CROSS	N		N	CLR	O-1 L-TURN	01	NONE 0	TURN-L										02
NONE			N			Tue 3P	CANBY	MN	0	PACIFIC HY 99E	CN		TRF SIGNAL		N	DRY	TURN		PRVTE	SW NW								000		00
							CANBY UA	20.62		PINE ST	01	0			N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	69	F	OR-Y	028	000		02
No	*45 15 57.01 -122 40 57.89*							008100100S00		1																OR<25				
																	02	NONE 0	STRGHT									000		00
																		PRVTE	NE SW											
																		PSNGR CAR		01	DRVR	INJB	66	F	OR-Y	000	000		00
																									OR<25					
02303	N	N	N	N	N	07/01/2018	CLACKAMAS	1	14		INTER	CROSS	N		N	CLR	O-1 L-TURN	01	NONE 0	STRGHT										02,08
CITY			N			Sun 2P	CANBY	MN	0	PACIFIC HY 99E	CN		TRF SIGNAL		N	DRY	TURN		PRVTE	N S								000		00
							CANBY UA	20.62		PINE ST	01	0			N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	73	M	OR-Y	000	000		00
No	*45 15 57.02 -122 40 57.91*							008100100S00		1																OR<25				
																					02	PSNG	INJC	67	F		000	000		00
																	02	NONE 0	TURN-L									000		00
																		PRVTE	S SW											
																		PSNGR CAR		01	DRVR	INJB	38	F	OR-Y	028,004	000		02,08
																									OR<25					
00808	N	N	N	N	N	03/06/2019	CLACKAMAS	1	14		INTER	CROSS	N		N	SLT	ANGL-OTH	01	NONE 9	STRGHT										04
CITY			N			Wed 1P	CANBY	MN	0	PACIFIC HY 99E	CN		TRF SIGNAL		N	WET	TURN		N/A	NE SW								000		00
							CANBY UA	20.62		PINE ST	01	0			N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	U	UNK	000	000		00
No	*45 15 57.01 -122 40 57.90*							008100100S00		1																UNK				
																	02	NONE 9	TURN-L									000		00
																		N/A	N NE											
																		PSNGR CAR		01	DRVR	NONE	00	U	UNK	000	000		00
																									UNK					
03103	N	N	N			10/16/2021	CLACKAMAS	1	14		INTER	CROSS	N		N	CLR	ANGL-OTH	01	NONE 9	STRGHT										04
NONE			N			Sat 11A	CANBY	MN	0	PACIFIC HY 99E	CN		TRF SIGNAL		N	DRY	ANGL		N/A	SE NW								000		00
							CANBY UA	20.62		PINE ST	02	0			N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	U	UNK	000	000		00
No	*45 15 56.99 -122 40 57.92*							008100100S00		1																UNK				

081 PACIFIC HIGHWAY EAST

Intersectional Crashes at OR-99E, Pacific Hwy (ODOT Hwy #081) & NE 4th Ave / S Pine St in Canby, OR.
January 1, 2017 through December 31, 2021

SER# INVEST UNLOC?	SPEED	ALCOHOL	DRUG	SCHL	WORK	DATE DAY/TIME *LAT/LONG*	COUNTY CITY URBAN AREA	RD# CMPT/MLG MILEPNT LRS	FC	CONN # FIRST STREET SECOND STREET INTERSECTION SEQ#	RD CHAR DIRECT LOCTN	INT-TYP (MEDIAN) LEGS (#LANES)	INT-REL TRAF-CNTL	OFFRD RNDBT DRVWY	WTHR SURF LIGHT	CRASH TYP COLL TYP SVRTY	V#	SPCL USE TRLR QTY OWNER VEH TYPE	MOVE FROM TO	P#	PRTC TYPE	INJ SVRTY	AGE	SEX	LICNS RES	PED LOC	ERROR	ACTN	EVENT	CAUSE
																	02	NONE 9 N/A	STRGHT SW NE									000		00
																		PSNGR CAR		01	DRVR	NONE	00	U	UNK UNK	000		000		00
02290 CITY	N	N	N	N	N	06/10/2017 Sat 11A	CLACKAMAS CANBY	1 MN	14 0	PACIFIC HY 99E	INTER CN	CROSS	N TRF SIGNAL	N	RAIN WET	ANGL-OTH ANGL	01	NONE 0 PRVTE	STRGHT N S									000		12 00
							CANBY UA	20.62		PINE ST	03	0		N	DAY	INJ		PSNGR CAR		01	DRVR	INJC	35	M	OR-Y OR<25	000		000		12
No	*45 15*		*56.99*	*-122*	*40*	*57.92*	008100100S00			1																				
																	02	NONE 0 PRVTE	STRGHT SW NE									000		00
																		PSNGR CAR		01	DRVR	NONE	56	F	OR-Y OR<25	000		000		12
03423 CITY	N	Y	N	N	N	11/10/2021 Wed 6P	CLACKAMAS CANBY	1 MN	14 0	PACIFIC HY 99E	INTER CN	CROSS	N TRF SIGNAL	N	RAIN WET	O-1 L-TURN TURN	01	NONE 9 N/A	STRGHT NW SE									031		02,08,33 00
							CANBY UA	20.62		PINE ST	03	0		N	DLIT	PDO		PSNGR CAR		01	DRVR	NONE	00	U	UNK UNK	000		000		00
No	*45 15*		*56.99*	*-122*	*40*	*57.92*	008100100S00			1																				
																	02	NONE 9 N/A	TURN-L SE SW									000		00
																		PSNGR CAR		01	DRVR	NONE	00	U	UNK UNK	000		000		00
02623 NONE	N	N	N			09/28/2020 Mon 7P	CLACKAMAS CANBY	1 MN	14 0	PACIFIC HY 99E	INTER CN	CROSS	N TRF SIGNAL	N	CLR DRY	ANGL-OTH ANGL	01	NONE 9 N/A	STRGHT S N									000		04 00
							CANBY UA	20.62		PINE ST	04	0		N	DUSK	PDO		PSNGR CAR		01	DRVR	NONE	00	U	UNK UNK	000		000		00
No	*45 15*		*57.00*	*-122*	*40*	*57.93*	008100100S00			1																				
																	02	NONE 9 N/A	STRGHT SW NE									000		00
																		PSNGR CAR		01	DRVR	NONE	00	U	UNK UNK	000		000		00
03718 NONE	N	N	N			12/03/2021 Fri 2P	CLACKAMAS CANBY	1 MN	14 0	PACIFIC HY 99E	INTER CN	CROSS	N L-GRN-SIG	N	CLR DRY	S-1STOP REAR	01	NONE 0 PRVTE	STRGHT NE SW									000		29 00
							CANBY UA	20.62		NE 4TH AVE	06	1		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	47	M	OR-Y OR>25	026		000		29
No	*45 15*		*56.99*	*-122*	*40*	*57.92*	008100100S00			1																				
																	02	NONE 0 PRVTE	STOP NE SW									012		00
																		PSNGR CAR		01	DRVR	INJC	25	F	OR-Y OR<25	000		000		00

TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT

URBAN NON-SYSTEM CRASH LISTING

CITY OF CANBY, CLACKAMAS COUNTY

Intersectional Crashes at OR-99E, Pacific Hwy (ODOT Hwy #081) & NE 4th Ave / S Pine St in Canby, OR.

January 1, 2017 through December 31, 2021

SER# / INVEST / UNLOC?	SPED	ALC	DRUG/MJ	SCHL	WORK	DATE / DAY/TIME / *LAT/LONG*	FC / DISTNC	CITY STREET / FIRST STREET / SECOND STREET / INTERSECTION SEQ #	RD CHAR / DIRECT / LOCTN	INT-TYP (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF-CONTL	OFF-RD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH TYP / COLL TYP / SVRTY	V#	SPCL USE / TRLR QTY / OWNER	MOVE / FROM / TO	P#	PRTC / TYPE	INJ / SVRTY	AGE	SEX	LICNS / RES	PED LOC	ERROR	ACTN	EVENT	CAUSE
03335	N	N	N			08/15/2017	17	PACIFIC HY 99E	INTER	CROSS	N	N	CLR	S-1STOP	01	NONE 0	STRGHT											29
NONE			N			Tue 11A	0	PINE ST	S		TRF SIGNAL	N	DRY	REAR		PRVTE	S N									000		00
No	*45 15 56.99*					*-122 40 57.92*		1	06	0		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	36	M	OR-Y OR<25		026	000		29
															02	NONE 0	STOP											
																PRVTE	S N									011		00
																PSNGR CAR		01	DRVR	INJC	28	F	OR-Y OR<25		000	000		00
																		02	PSNG	INJC	30	M			000	000		00
																		03	PSNG	NO<5	04	M			000	000		00
																		04	PSNG	INJC	02	F			000	000		00

Appendix E

Future Non-Event Operations

Intersection	
Int Delay, s/veh	2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	27	27	8	4	5	9	212	14	11	193	9
Future Vol, veh/h	5	27	27	8	4	5	9	212	14	11	193	9
Conflicting Peds, #/hr	0	0	6	6	0	0	1	0	0	0	0	1
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	75	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	0	0	4	13	0	0	0	2	0	0	2	0
Mvmt Flow	5	30	30	9	4	5	10	233	15	12	212	10

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	507	510	224	538	508	241	223	0	0	248	0	0
Stage 1	242	242	-	261	261	-	-	-	-	-	-	-
Stage 2	265	268	-	277	247	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.24	7.23	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.23	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.23	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.336	3.617	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	479	469	810	437	471	803	1358	-	-	1330	-	-
Stage 1	766	709	-	720	696	-	-	-	-	-	-	-
Stage 2	745	691	-	706	706	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	465	460	804	392	462	803	1356	-	-	1330	-	-
Mov Cap-2 Maneuver	465	460	-	392	462	-	-	-	-	-	-	-
Stage 1	758	701	-	714	690	-	-	-	-	-	-	-
Stage 2	729	685	-	641	698	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	11.8	12.6	0.3	0.4
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1356	-	-	585	392	605	1330	-	-
HCM Lane V/C Ratio	0.007	-	-	0.101	0.022	0.016	0.009	-	-
HCM Control Delay (s)	7.7	-	-	11.8	14.4	11	7.7	-	-
HCM Lane LOS	A	-	-	B	B	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.3	0.1	0.1	0	-	-

Intersection	
Intersection Delay, s/veh	8.8
Intersection LOS	A

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	69	16	123	102	24	69
Future Vol, veh/h	69	16	123	102	24	69
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles, %	0	0	1	3	0	1
Mvmt Flow	84	20	150	124	29	84
Number of Lanes	1	1	1	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	2
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	2	0
HCM Control Delay	9.1	8.9	8.3
HCM LOS	A	A	A

Lane	NBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	0%	100%	0%	26%
Vol Thru, %	55%	0%	0%	74%
Vol Right, %	45%	0%	100%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	225	69	16	93
LT Vol	0	69	0	24
Through Vol	123	0	0	69
RT Vol	102	0	16	0
Lane Flow Rate	274	84	20	113
Geometry Grp	2	7	7	2
Degree of Util (X)	0.31	0.136	0.025	0.142
Departure Headway (Hd)	4.065	5.829	4.621	4.518
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	886	615	774	795
Service Time	2.079	3.561	2.352	2.539
HCM Lane V/C Ratio	0.309	0.137	0.026	0.142
HCM Control Delay	8.9	9.5	7.5	8.3
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	1.3	0.5	0.1	0.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	91	897	12	107	1040	106	130	154	66	127	146	83
Future Volume (veh/h)	91	897	12	107	1040	106	130	154	66	127	146	83
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.97	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1709	1709	1750	1736	1709	1750	1709	1709	1723	1723	1750	1695
Adj Flow Rate, veh/h	99	975	13	116	1130	115	141	167	72	138	159	90
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	0	1	3	0	3	3	2	2	0	4
Cap, veh/h	377	1814	24	323	1213	123	163	193	83	169	182	103
Arrive On Green	0.19	0.55	0.55	0.05	0.41	0.41	0.10	0.17	0.17	0.10	0.17	0.17
Sat Flow, veh/h	1628	3281	44	1654	2974	302	1628	1119	483	1641	1041	589
Grp Volume(v), veh/h	99	483	505	116	616	629	141	0	239	138	0	249
Grp Sat Flow(s),veh/h/ln	1628	1624	1701	1654	1624	1653	1628	0	1602	1641	0	1631
Q Serve(g_s), s	0.6	24.6	24.6	3.9	47.1	47.3	11.1	0.0	18.9	10.7	0.0	19.3
Cycle Q Clear(g_c), s	0.6	24.6	24.6	3.9	47.1	47.3	11.1	0.0	18.9	10.7	0.0	19.3
Prop In Lane	1.00		0.03	1.00		0.18	1.00		0.30	1.00		0.36
Lane Grp Cap(c), veh/h	377	898	941	323	662	674	163	0	276	169	0	285
V/C Ratio(X)	0.26	0.54	0.54	0.36	0.93	0.93	0.86	0.00	0.87	0.82	0.00	0.87
Avail Cap(c_a), veh/h	377	898	941	401	718	731	238	0	308	240	0	314
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	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	42.5	18.5	18.5	14.3	36.7	36.8	57.6	0.0	52.4	57.1	0.0	52.3
Incr Delay (d2), s/veh	0.1	2.3	2.2	0.3	21.6	21.7	14.2	0.0	18.9	9.4	0.0	20.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	9.5	10.0	1.4	22.1	22.6	5.2	0.0	9.0	4.9	0.0	9.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	42.6	20.8	20.7	14.5	58.3	58.5	71.8	0.0	71.3	66.6	0.0	72.4
LnGrp LOS	D	C	C	B	E	E	E	A	E	E	A	E
Approach Vol, veh/h		1087			1361			380			387	
Approach Delay, s/veh		22.7			54.7			71.5			70.3	
Approach LOS		C			D			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	28.8	57.5	17.4	26.4	9.9	76.4	17.0	26.7
Change Period (Y+Rc), s	4.5	* 4.5	4.0	4.0	4.0	4.5	4.0	4.0
Max Green Setting (Gmax), s	12.0	* 58	19.0	25.0	12.0	57.5	19.0	25.0
Max Q Clear Time (g_c+I1), s	2.6	49.3	12.7	20.9	5.9	26.6	13.1	21.3
Green Ext Time (p_c), s	0.0	3.7	0.0	0.2	0.0	4.5	0.0	0.2

Intersection Summary	
HCM 6th Ctrl Delay	47.7
HCM 6th LOS	D

Notes

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

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	99	988	116	1245	141	239	138	249
v/c Ratio	0.48	0.57	0.41	0.73	0.81	0.88	0.76	0.89
Control Delay	32.8	24.0	15.9	28.4	87.3	80.2	80.3	79.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.8	24.0	15.9	28.4	87.3	80.2	80.3	79.1
Queue Length 50th (ft)	33	294	39	416	117	185	114	190
Queue Length 95th (ft)	65	418	74	597	187	#303	182	#315
Internal Link Dist (ft)		157		159		136		119
Turn Bay Length (ft)	100		85		200			
Base Capacity (vph)	263	1719	340	1706	228	315	230	321
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.38	0.57	0.34	0.73	0.62	0.76	0.60	0.78

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	58	979	78	76	1228	113	68	54	84	53	33	52
Future Volume (veh/h)	58	979	78	76	1228	113	68	54	84	53	33	52
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.99	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1750	1777	1709	1695	1723	1709	1709	1820	1792	1723	1750	1695
Adj Flow Rate, veh/h	64	1088	87	84	1364	126	76	60	0	59	37	58
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	3	3	4	2	3	3	0	2	2	0	4
Cap, veh/h	447	1399	112	585	1573	145	123	84		162	91	238
Arrive On Green	0.21	0.44	0.44	0.29	0.52	0.52	0.17	0.17	0.00	0.17	0.17	0.17
Sat Flow, veh/h	1667	3159	252	1615	3028	278	482	507	1518	707	545	1429
Grp Volume(v), veh/h	64	581	594	84	734	756	136	0	0	96	0	58
Grp Sat Flow(s),veh/h/ln	1667	1689	1723	1615	1637	1670	989	0	1518	1252	0	1429
Q Serve(g_s), s	0.0	38.0	38.1	0.0	50.8	51.6	10.0	0.0	0.0	0.0	0.0	4.6
Cycle Q Clear(g_c), s	0.0	38.0	38.1	0.0	50.8	51.6	18.8	0.0	0.0	8.9	0.0	4.6
Prop In Lane	1.00		0.15	1.00		0.17	0.56		1.00	0.61		1.00
Lane Grp Cap(c), veh/h	447	748	763	585	850	868	208	0		253	0	238
V/C Ratio(X)	0.14	0.78	0.78	0.14	0.86	0.87	0.65	0.00		0.38	0.00	0.24
Avail Cap(c_a), veh/h	447	917	935	585	889	907	346	0		387	0	374
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	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	35.4	30.8	30.8	25.5	27.2	27.4	55.3	0.0	0.0	48.6	0.0	47.1
Incr Delay (d2), s/veh	0.1	7.8	7.7	0.1	11.3	11.7	7.3	0.0	0.0	2.0	0.0	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	16.7	17.1	1.8	21.6	22.5	4.8	0.0	0.0	3.0	0.0	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.5	38.6	38.5	25.6	38.5	39.1	62.6	0.0	0.0	50.6	0.0	48.2
LnGrp LOS	D	D	D	C	D	D	E	A		D	A	D
Approach Vol, veh/h		1239			1574			136			154	
Approach Delay, s/veh		38.4			38.1			62.6			49.7	
Approach LOS		D			D			E			D	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	31.4	73.0		25.6	41.4	63.0		25.6
Change Period (Y+Rc), s	* 4	5.4		4.0	* 4	5.4		4.0
Max Green Setting (Gmax), s	* 12	70.6		34.0	* 12	70.6		34.0
Max Q Clear Time (g_c+I1), s	2.0	53.6		20.8	2.0	40.1		10.9
Green Ext Time (p_c), s	0.0	13.9		1.0	0.1	17.5		1.3

Intersection Summary	
HCM 6th Ctrl Delay	39.9
HCM 6th LOS	D

Notes

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

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

Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	64	1175	84	1490	136	93	96	58
v/c Ratio	0.28	0.53	0.24	0.65	0.71	0.28	0.61	0.22
Control Delay	10.4	14.7	8.0	13.9	70.9	10.2	65.7	12.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	10.4	14.7	8.0	13.9	70.9	10.2	65.7	12.2
Queue Length 50th (ft)	10	239	13	329	111	0	77	0
Queue Length 95th (ft)	29	429	36	558	168	44	127	37
Internal Link Dist (ft)		431		278	337		94	
Turn Bay Length (ft)	196		85			85		50
Base Capacity (vph)	303	2225	380	2276	320	501	265	398
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.21	0.53	0.22	0.65	0.42	0.19	0.36	0.15

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	91	897	12	107	1040	106	130	154	66	127	146	83
Future Volume (vph)	91	897	12	107	1040	106	130	154	66	127	146	83
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Lane Width	12	12	12	12	12	12	11	11	12	11	11	12
Total Lost time (s)	4.0	4.5		4.0	4.5		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00		1.00	0.99		1.00	0.95		1.00	0.95	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1614	3222		1646	3192		1560	1557		1576	1567	
Flt Permitted	0.13	1.00		0.21	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	214	3222		356	3192		1560	1557		1576	1567	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	99	975	13	116	1130	115	141	167	72	138	159	90
RTOR Reduction (vph)	0	0	0	0	5	0	0	13	0	0	16	0
Lane Group Flow (vph)	99	988	0	116	1240	0	141	226	0	138	233	0
Confl. Peds. (#/hr)			4	4			4		11	11		4
Confl. Bikes (#/hr)									3			
Heavy Vehicles (%)	3%	3%	0%	1%	3%	0%	3%	3%	2%	2%	0%	4%
Turn Type	D.P+P	NA		D.P+P	NA		Prot	NA		Prot	NA	
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	2			6								
Actuated Green, G (s)	76.8	69.3		76.8	69.2		14.6	21.6		15.1	22.1	
Effective Green, g (s)	76.8	69.3		76.8	69.2		14.6	21.6		15.1	22.1	
Actuated g/C Ratio	0.59	0.53		0.59	0.53		0.11	0.17		0.12	0.17	
Clearance Time (s)	4.0	4.5		4.0	4.5		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	1.0	2.1		1.0	2.1		1.0	1.0		1.0	1.0	
Lane Grp Cap (vph)	208	1717		284	1699		175	258		183	266	
v/s Ratio Prot	0.03	c0.31		0.02	c0.39		c0.09	0.15		0.09	c0.15	
v/s Ratio Perm	0.25			0.22								
v/c Ratio	0.48	0.58		0.41	0.73		0.81	0.88		0.75	0.88	
Uniform Delay, d1	36.2	20.4		13.7	23.2		56.3	52.9		55.7	52.6	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.6	1.4		0.3	2.8		21.8	26.1		14.4	25.3	
Delay (s)	36.9	21.8		14.1	26.0		78.2	79.0		70.1	77.9	
Level of Service	D	C		B	C		E	E		E	E	
Approach Delay (s)		23.2			25.0			78.7			75.1	
Approach LOS		C			C			E			E	

Intersection Summary			
HCM 2000 Control Delay	36.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	16.5
Intersection Capacity Utilization	77.5%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	58	979	78	76	1228	113	68	54	84	53	33	52
Future Volume (vph)	58	979	78	76	1228	113	68	54	84	53	33	52
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Lane Width	11	14	12	12	12	12	12	13	16	12	11	11
Total Lost time (s)	4.0	5.4		4.0	5.4			4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00			1.00	1.00		1.00	0.98
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00	1.00		1.00	1.00
Frt	1.00	0.99		1.00	0.99			1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.97	1.00		0.97	1.00
Satd. Flow (prot)	1607	3393		1598	3216			1727	1653		1621	1361
Flt Permitted	0.13	1.00		0.19	1.00			0.69	1.00		0.61	1.00
Satd. Flow (perm)	216	3393		315	3216			1227	1653		1016	1361
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	64	1088	87	84	1364	126	76	60	93	59	37	58
RTOR Reduction (vph)	0	4	0	0	4	0	0	0	65	0	0	49
Lane Group Flow (vph)	64	1171	0	84	1486	0	0	136	28	0	96	9
Confl. Peds. (#/hr)			9	9			3					3
Confl. Bikes (#/hr)			1									
Heavy Vehicles (%)	0%	3%	3%	4%	2%	3%	3%	0%	2%	2%	0%	4%
Turn Type	D.P+P	NA		D.P+P	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases	1	6		5	2			4			8	
Permitted Phases	2			6			4		4	8		8
Actuated Green, G (s)	96.3	84.1		96.3	91.1			20.3	20.3		20.3	20.3
Effective Green, g (s)	96.3	84.1		96.3	91.1			20.3	20.3		20.3	20.3
Actuated g/C Ratio	0.74	0.65		0.74	0.70			0.16	0.16		0.16	0.16
Clearance Time (s)	4.0	5.4		4.0	5.4			4.0	4.0		4.0	4.0
Vehicle Extension (s)	2.3	5.1		2.3	5.1			5.0	5.0		5.0	5.0
Lane Grp Cap (vph)	215	2195		353	2253			191	258		158	212
v/s Ratio Prot	0.01	0.35		c0.02	c0.46							
v/s Ratio Perm	0.21			0.15				c0.11	0.02		0.09	0.01
v/c Ratio	0.30	0.53		0.24	0.66			0.71	0.11		0.61	0.04
Uniform Delay, d1	16.7	12.4		13.3	10.8			52.1	47.1		51.1	46.6
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	1.00
Incremental Delay, d2	0.5	0.9		0.2	1.5			14.5	0.4		9.4	0.2
Delay (s)	17.1	13.3		13.5	12.4			66.5	47.5		60.5	46.8
Level of Service	B	B		B	B			E	D		E	D
Approach Delay (s)		13.5			12.4			58.8			55.3	
Approach LOS		B			B			E			E	

Intersection Summary			
HCM 2000 Control Delay	18.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	13.4
Intersection Capacity Utilization	69.3%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

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	0	5	5	2	0	2	1	80	1	1	63	1
Future Vol, veh/h	0	5	5	2	0	2	1	80	1	1	63	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	75	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	83	83	83	83	83	83	83	83	83
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	6	6	2	0	2	1	96	1	1	76	1

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	-	178	77	184	178	97	77	0	0	97	0	0
Stage 1	-	79	-	99	99	-	-	-	-	-	-	-
Stage 2	-	99	-	85	79	-	-	-	-	-	-	-
Critical Hdwy	-	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	-	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	-	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	0	719	990	781	719	965	1535	-	-	1509	-	-
Stage 1	0	833	-	912	817	-	-	-	-	-	-	-
Stage 2	0	817	-	928	833	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	718	990	770	718	965	1535	-	-	1509	-	-
Mov Cap-2 Maneuver	-	718	-	770	718	-	-	-	-	-	-	-
Stage 1	-	832	-	911	816	-	-	-	-	-	-	-
Stage 2	-	816	-	915	832	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.4	9.2	0.1	0.1
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1535	-	-	832	770	965	1509	-	-
HCM Lane V/C Ratio	0.001	-	-	0.014	0.003	0.002	0.001	-	-
HCM Control Delay (s)	7.3	-	-	9.4	9.7	8.7	7.4	-	-
HCM Lane LOS	A	-	-	A	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0	0	0	0	-	-

Intersection	
Intersection Delay, s/veh	7.3
Intersection LOS	A

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	30	4	24	51	2	13
Future Vol, veh/h	30	4	24	51	2	13
Peak Hour Factor	0.74	0.74	0.74	0.74	0.74	0.74
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	41	5	32	69	3	18
Number of Lanes	1	1	1	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	2
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	2	0
HCM Control Delay	8.1	7	7.2
HCM LOS	A	A	A

Lane	NBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	0%	100%	0%	13%
Vol Thru, %	32%	0%	0%	87%
Vol Right, %	68%	0%	100%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	75	30	4	15
LT Vol	0	30	0	2
Through Vol	24	0	0	13
RT Vol	51	0	4	0
Lane Flow Rate	101	41	5	20
Geometry Grp	2	7	7	2
Degree of Util (X)	0.101	0.059	0.006	0.023
Departure Headway (Hd)	3.586	5.212	4.01	4.083
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	991	687	891	870
Service Time	1.637	2.943	1.74	2.14
HCM Lane V/C Ratio	0.102	0.06	0.006	0.023
HCM Control Delay	7	8.3	6.8	7.2
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.3	0.2	0	0.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	27	210	25	45	186	28	40	39	33	37	38	28
Future Volume (veh/h)	27	210	25	45	186	28	40	39	33	37	38	28
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1750	1736	1750	1723	1723	1750	1682	1709	1709	1709	1750	1750
Adj Flow Rate, veh/h	32	247	29	53	219	33	47	46	39	44	45	33
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	0	1	0	2	2	0	5	3	3	3	0	0
Cap, veh/h	484	831	97	492	797	118	67	148	125	67	162	119
Arrive On Green	0.03	0.28	0.28	0.05	0.28	0.28	0.04	0.17	0.17	0.04	0.17	0.17
Sat Flow, veh/h	1667	2978	346	1641	2858	425	1602	851	721	1628	934	685
Grp Volume(v), veh/h	32	136	140	53	124	128	47	0	85	44	0	78
Grp Sat Flow(s),veh/h/ln	1667	1650	1674	1641	1637	1646	1602	0	1572	1628	0	1620
Q Serve(g_s), s	0.0	2.3	2.4	0.8	2.1	2.2	1.0	0.0	1.7	1.0	0.0	1.5
Cycle Q Clear(g_c), s	0.0	2.3	2.4	0.8	2.1	2.2	1.0	0.0	1.7	1.0	0.0	1.5
Prop In Lane	1.00		0.21	1.00		0.26	1.00		0.46	1.00		0.42
Lane Grp Cap(c), veh/h	484	460	467	492	456	459	67	0	273	67	0	281
V/C Ratio(X)	0.07	0.29	0.30	0.11	0.27	0.28	0.70	0.00	0.31	0.66	0.00	0.28
Avail Cap(c_a), veh/h	1175	2853	2895	1149	2830	2847	1028	0	1271	1044	0	1310
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	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	10.4	10.2	10.2	8.5	10.1	10.1	17.0	0.0	12.9	16.9	0.0	12.9
Incr Delay (d2), s/veh	0.0	0.2	0.2	0.0	0.1	0.1	4.9	0.0	0.2	4.0	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	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.6	0.6	0.2	0.6	0.6	0.4	0.0	0.5	0.4	0.0	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	10.4	10.3	10.3	8.6	10.2	10.3	21.9	0.0	13.2	21.0	0.0	13.1
LnGrp LOS	B	B	B	A	B	B	C	A	B	C	A	B
Approach Vol, veh/h		308			305			132			122	
Approach Delay, s/veh		10.3			10.0			16.3			15.9	
Approach LOS		B			A			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.6	14.5	5.5	10.2	5.6	14.5	5.5	10.2
Change Period (Y+Rc), s	4.5	* 4.5	4.0	4.0	4.0	4.5	4.0	4.0
Max Green Setting (Gmax), s	16.0	* 62	23.0	29.0	16.0	62.0	23.0	29.0
Max Q Clear Time (g_c+I1), s	2.0	4.2	3.0	3.7	2.8	4.4	3.0	3.5
Green Ext Time (p_c), s	0.0	1.0	0.0	0.2	0.0	1.1	0.0	0.1

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

Notes

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

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	32	276	53	252	47	85	44	78
v/c Ratio	0.05	0.15	0.08	0.13	0.18	0.20	0.16	0.17
Control Delay	10.1	13.0	10.2	11.4	21.4	11.4	21.5	11.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	10.1	13.0	10.2	11.4	21.4	11.4	21.5	11.6
Queue Length 50th (ft)	1	8	3	7	5	5	4	5
Queue Length 95th (ft)	24	81	35	74	45	40	43	38
Internal Link Dist (ft)		157		159		136		119
Turn Bay Length (ft)	100		85		200			
Base Capacity (vph)	1144	3182	1015	3142	1098	1240	1119	1289
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.09	0.05	0.08	0.04	0.07	0.04	0.06

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	31	199	37	24	225	35	12	9	15	23	11	9
Future Volume (veh/h)	31	199	37	24	225	35	12	9	15	23	11	9
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1750	1806	1750	1750	1750	1750	1750	1820	1820	1750	1750	1750
Adj Flow Rate, veh/h	34	221	41	27	250	39	13	10	0	26	12	10
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	1	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	664	1131	206	677	1109	171	256	31		305	33	100
Arrive On Green	0.03	0.39	0.39	0.03	0.38	0.38	0.07	0.07	0.00	0.07	0.07	0.07
Sat Flow, veh/h	1667	2898	529	1667	2888	445	588	452	1542	1073	495	1483
Grp Volume(v), veh/h	34	129	133	27	143	146	23	0	0	38	0	10
Grp Sat Flow(s),veh/h/ln	1667	1716	1711	1667	1663	1670	1040	0	1542	1568	0	1483
Q Serve(g_s), s	0.3	1.3	1.3	0.2	1.5	1.5	0.4	0.0	0.0	0.0	0.0	0.2
Cycle Q Clear(g_c), s	0.3	1.3	1.3	0.2	1.5	1.5	0.9	0.0	0.0	0.6	0.0	0.2
Prop In Lane	1.00		0.31	1.00		0.27	0.57		1.00	0.68		1.00
Lane Grp Cap(c), veh/h	664	670	668	677	639	642	287	0		339	0	100
V/C Ratio(X)	0.05	0.19	0.20	0.04	0.22	0.23	0.08	0.00		0.11	0.00	0.10
Avail Cap(c_a), veh/h	1504	5009	4994	1848	4854	4876	2640	0		2544	0	2393
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	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	4.6	5.2	5.2	4.5	5.4	5.4	12.0	0.0	0.0	11.6	0.0	11.4
Incr Delay (d2), s/veh	0.0	0.3	0.3	0.0	0.4	0.4	0.3	0.0	0.0	0.3	0.0	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.2	0.2	0.0	0.3	0.3	0.1	0.0	0.0	0.2	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	4.6	5.5	5.6	4.5	5.8	5.8	12.3	0.0	0.0	11.9	0.0	12.3
LnGrp LOS	A	A	A	A	A	A	B	A		B	A	B
Approach Vol, veh/h		296			316			23			48	
Approach Delay, s/veh		5.4			5.7			12.3			12.0	
Approach LOS		A			A			B			B	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	4.9	15.4		5.8	4.7	15.6		5.8
Change Period (Y+Rc), s	4.0	* 5.4		4.0	4.0	* 5.4		4.0
Max Green Setting (Gmax), s	14.0	* 76		42.0	19.0	* 76		42.0
Max Q Clear Time (g_c+I1), s	2.3	3.5		2.9	2.2	3.3		2.6
Green Ext Time (p_c), s	0.0	3.8		0.2	0.0	3.4		0.4

Intersection Summary	
HCM 6th Ctrl Delay	6.2
HCM 6th LOS	A

Notes

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

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

Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	34	262	27	289	23	17	38	10
v/c Ratio	0.04	0.10	0.03	0.12	0.05	0.03	0.08	0.02
Control Delay	3.8	5.3	3.8	5.5	10.2	0.1	10.1	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	3.8	5.3	3.8	5.5	10.2	0.1	10.1	0.1
Queue Length 50th (ft)	1	0	1	0	1	0	2	0
Queue Length 95th (ft)	10	41	8	46	17	0	24	0
Internal Link Dist (ft)		431		278	337		94	
Turn Bay Length (ft)	196		85			85		50
Base Capacity (vph)	1003	3436	1204	3258	1713	1683	1689	1435
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.08	0.02	0.09	0.01	0.01	0.02	0.01

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	27	210	25	45	186	28	40	39	33	37	38	28
Future Volume (vph)	27	210	25	45	186	28	40	39	33	37	38	28
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Lane Width	12	12	12	12	12	12	11	11	12	11	11	12
Total Lost time (s)	4.0	4.5		4.0	4.5		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.98		1.00	0.93		1.00	0.94	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1662	3244		1630	3204		1531	1519		1560	1576	
Flt Permitted	0.60	1.00		0.58	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1042	3244		999	3204		1531	1519		1560	1576	
Peak-hour factor, PHF	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Adj. Flow (vph)	32	247	29	53	219	33	47	46	39	44	45	33
RTOR Reduction (vph)	0	6	0	0	8	0	0	23	0	0	19	0
Lane Group Flow (vph)	32	270	0	53	244	0	47	62	0	44	59	0
Confl. Peds. (#/hr)							1		5	5		1
Heavy Vehicles (%)	0%	1%	0%	2%	2%	0%	5%	3%	3%	3%	0%	0%
Turn Type	D.P+P	NA		D.P+P	NA		Prot	NA		Prot	NA	
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	2			6								
Actuated Green, G (s)	19.2	17.7		19.2	18.5		1.8	5.4		1.8	5.4	
Effective Green, g (s)	19.2	17.7		19.2	18.5		1.8	5.4		1.8	5.4	
Actuated g/C Ratio	0.45	0.41		0.45	0.43		0.04	0.13		0.04	0.13	
Clearance Time (s)	4.0	4.5		4.0	4.5		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	1.0	2.1		1.0	2.1		1.0	1.0		1.0	1.0	
Lane Grp Cap (vph)	476	1338		469	1381		64	191		65	198	
v/s Ratio Prot	0.00	c0.08		0.00	c0.08		c0.03	c0.04		0.03	0.04	
v/s Ratio Perm	0.03			0.05								
v/c Ratio	0.07	0.20		0.11	0.18		0.73	0.33		0.68	0.30	
Uniform Delay, d1	6.8	8.1		6.8	7.5		20.3	17.1		20.3	17.0	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.0	0.0		0.0	0.0		30.9	0.4		19.7	0.3	
Delay (s)	6.8	8.1		6.8	7.5		51.2	17.5		40.0	17.3	
Level of Service	A	A		A	A		D	B		D	B	
Approach Delay (s)		8.0			7.4			29.5			25.5	
Approach LOS		A			A			C			C	

Intersection Summary			
HCM 2000 Control Delay	13.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.27		
Actuated Cycle Length (s)	42.9	Sum of lost time (s)	16.5
Intersection Capacity Utilization	33.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	31	199	37	24	225	35	12	9	15	23	11	9
Future Volume (vph)	31	199	37	24	225	35	12	9	15	23	11	9
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Lane Width	11	14	12	12	12	12	12	13	16	12	11	11
Total Lost time (s)	4.0	5.4		4.0	5.4			4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	1.00
Frt	1.00	0.98		1.00	0.98			1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.97	1.00		0.97	1.00
Satd. Flow (prot)	1607	3434		1662	3258			1759	1686		1636	1438
Flt Permitted	0.57	1.00		0.59	1.00			0.95	1.00		1.00	1.00
Satd. Flow (perm)	972	3434		1032	3258			1715	1686		1692	1438
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	34	221	41	27	250	39	13	10	17	26	12	10
RTOR Reduction (vph)	0	10	0	0	9	0	0	0	15	0	0	9
Lane Group Flow (vph)	34	252	0	27	280	0	0	23	2	0	38	1
Heavy Vehicles (%)	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Turn Type	D.P+P	NA		D.P+P	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases	1	6		5	2			4			8	
Permitted Phases	2			6			4		4	8		8
Actuated Green, G (s)	19.8	19.0		19.8	19.0			3.3	3.3		3.3	3.3
Effective Green, g (s)	19.8	19.0		19.8	19.0			3.3	3.3		3.3	3.3
Actuated g/C Ratio	0.54	0.52		0.54	0.52			0.09	0.09		0.09	0.09
Clearance Time (s)	4.0	5.4		4.0	5.4			4.0	4.0		4.0	4.0
Vehicle Extension (s)	2.3	5.1		2.3	5.1			5.0	5.0		5.0	5.0
Lane Grp Cap (vph)	541	1787		573	1695			155	152		152	130
v/s Ratio Prot	c0.00	0.07		0.00	c0.09							
v/s Ratio Perm	0.03			0.02				0.01	0.00		c0.02	0.00
v/c Ratio	0.06	0.14		0.05	0.17			0.15	0.01		0.25	0.01
Uniform Delay, d1	3.9	4.5		3.9	4.6			15.3	15.1		15.4	15.1
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	1.00
Incremental Delay, d2	0.0	0.1		0.0	0.1			0.9	0.1		1.8	0.0
Delay (s)	3.9	4.6		3.9	4.7			16.2	15.2		17.3	15.2
Level of Service	A	A		A	A			B	B		B	B
Approach Delay (s)		4.5			4.6			15.8			16.8	
Approach LOS		A			A			B			B	

Intersection Summary			
HCM 2000 Control Delay	6.1	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.17		
Actuated Cycle Length (s)	36.5	Sum of lost time (s)	13.4
Intersection Capacity Utilization	31.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

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	2	23	19	6	2	2	8	168	5	19	164	4
Future Vol, veh/h	2	23	19	6	2	2	8	168	5	19	164	4
Conflicting Peds, #/hr	0	0	6	6	0	0	1	0	0	0	0	1
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	75	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	98	98	98	98	98	98	98	98	98	98	98	98
Heavy Vehicles, %	0	0	0	0	0	0	0	2	0	3	2	0
Mvmt Flow	2	23	19	6	2	2	8	171	5	19	167	4

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	400	400	176	424	400	174	172	0	0	176	0	0
Stage 1	208	208	-	190	190	-	-	-	-	-	-	-
Stage 2	192	192	-	234	210	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.13	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.227	-	-
Pot Cap-1 Maneuver	564	541	872	544	541	875	1417	-	-	1394	-	-
Stage 1	799	734	-	816	747	-	-	-	-	-	-	-
Stage 2	814	745	-	774	732	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	552	529	866	503	529	875	1415	-	-	1394	-	-
Mov Cap-2 Maneuver	552	529	-	503	529	-	-	-	-	-	-	-
Stage 1	793	722	-	811	743	-	-	-	-	-	-	-
Stage 2	805	741	-	717	720	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	11	11.5	0.3	0.8
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1415	-	-	642	503	659	1394	-	-
HCM Lane V/C Ratio	0.006	-	-	0.067	0.012	0.006	0.014	-	-
HCM Control Delay (s)	7.6	-	-	11	12.2	10.5	7.6	-	-
HCM Lane LOS	A	-	-	B	B	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.2	0	0	0	-	-

Intersection	
Intersection Delay, s/veh	8.3
Intersection LOS	A

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	83	7	80	75	8	52
Future Vol, veh/h	83	7	80	75	8	52
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles, %	0	0	1	3	0	0
Mvmt Flow	97	8	93	87	9	60
Number of Lanes	1	1	1	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	2
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	2	0
HCM Control Delay	9	8	7.8
HCM LOS	A	A	A

Lane	NBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	0%	100%	0%	13%
Vol Thru, %	52%	0%	0%	87%
Vol Right, %	48%	0%	100%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	155	83	7	60
LT Vol	0	83	0	8
Through Vol	80	0	0	52
RT Vol	75	0	7	0
Lane Flow Rate	180	97	8	70
Geometry Grp	2	7	7	2
Degree of Util (X)	0.2	0.149	0.01	0.085
Departure Headway (Hd)	4.001	5.55	4.345	4.402
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	901	650	829	817
Service Time	2.009	3.25	2.045	2.414
HCM Lane V/C Ratio	0.2	0.149	0.01	0.086
HCM Control Delay	8	9.2	7.1	7.8
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.7	0.5	0	0.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	78	548	30	99	482	91	102	114	65	105	102	59
Future Volume (veh/h)	78	548	30	99	482	91	102	114	65	105	102	59
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.97	1.00		0.98	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1736	1723	1709	1695	1723	1750	1736	1723	1723	1736	1723	1723
Adj Flow Rate, veh/h	89	623	34	112	548	103	116	130	74	119	116	67
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	1	2	3	4	2	0	1	2	2	1	2	2
Cap, veh/h	659	1658	90	439	636	119	164	176	100	145	162	94
Arrive On Green	0.34	0.53	0.53	0.05	0.23	0.23	0.10	0.17	0.17	0.09	0.16	0.16
Sat Flow, veh/h	1654	3155	172	1615	2736	512	1654	1022	582	1654	1010	583
Grp Volume(v), veh/h	89	323	334	112	327	324	116	0	204	119	0	183
Grp Sat Flow(s),veh/h/ln	1654	1637	1691	1615	1637	1612	1654	0	1605	1654	0	1593
Q Serve(g_s), s	0.0	11.7	11.7	3.2	19.2	19.3	6.8	0.0	12.1	7.1	0.0	10.9
Cycle Q Clear(g_c), s	0.0	11.7	11.7	3.2	19.2	19.3	6.8	0.0	12.1	7.1	0.0	10.9
Prop In Lane	1.00		0.10	1.00		0.32	1.00		0.36	1.00		0.37
Lane Grp Cap(c), veh/h	659	860	889	439	380	375	164	0	276	145	0	256
V/C Ratio(X)	0.14	0.38	0.38	0.25	0.86	0.87	0.71	0.00	0.74	0.82	0.00	0.71
Avail Cap(c_a), veh/h	659	860	889	537	499	492	298	0	417	265	0	382
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	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	21.3	14.0	14.0	10.5	36.8	36.9	43.6	0.0	39.2	44.8	0.0	39.8
Incr Delay (d2), s/veh	0.0	1.3	1.2	0.1	21.6	22.5	2.1	0.0	1.4	4.3	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	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	4.4	4.5	1.1	9.7	9.7	2.9	0.0	4.8	3.1	0.0	4.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	21.3	15.3	15.2	10.6	58.4	59.4	45.7	0.0	40.7	49.2	0.0	41.2
LnGrp LOS	C	B	B	B	E	E	D	A	D	D	A	D
Approach Vol, veh/h		746			763			320			302	
Approach Delay, s/veh		16.0			51.8			42.5			44.3	
Approach LOS		B			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	38.3	27.7	12.8	21.2	9.0	57.0	13.9	20.1
Change Period (Y+Rc), s	4.5	* 4.5	4.0	4.0	4.0	4.5	4.0	4.0
Max Green Setting (Gmax), s	11.0	* 31	16.0	26.0	11.0	30.5	18.0	24.0
Max Q Clear Time (g_c+I1), s	2.0	21.3	9.1	14.1	5.2	13.7	8.8	12.9
Green Ext Time (p_c), s	0.0	1.9	0.0	0.3	0.0	2.4	0.0	0.3

Intersection Summary	
HCM 6th Ctrl Delay	36.8
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

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

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	89	657	113	651	116	204	119	183
v/c Ratio	0.20	0.41	0.28	0.41	0.60	0.77	0.69	0.74
Control Delay	13.9	19.1	12.6	19.6	54.0	52.5	62.2	51.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	13.9	19.1	12.6	19.6	54.0	52.5	62.2	51.7
Queue Length 50th (ft)	21	127	27	133	71	110	74	97
Queue Length 95th (ft)	58	241	71	235	119	163	124	148
Internal Link Dist (ft)		157		159		136		119
Turn Bay Length (ft)	100		85		200			
Base Capacity (vph)	465	1622	461	1591	286	425	254	394
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.19	0.41	0.25	0.41	0.41	0.48	0.47	0.46

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	33	732	53	62	578	116	40	6	52	58	19	58
Future Volume (veh/h)	33	732	53	62	578	116	40	6	52	58	19	58
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.99	0.99		1.00	0.99		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1723	1792	1723	1723	1723	1736	1709	1820	1763	1750	1750	1723
Adj Flow Rate, veh/h	36	804	58	68	635	127	44	7	0	64	21	64
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	1	3	0	4	0	0	2
Cap, veh/h	865	2377	171	513	871	174	113	13		166	41	133
Arrive On Green	0.44	0.74	0.74	0.03	0.32	0.32	0.09	0.09	0.00	0.09	0.09	0.09
Sat Flow, veh/h	1641	3213	232	1641	2711	541	504	143	1494	1118	448	1446
Grp Volume(v), veh/h	36	426	436	68	383	379	51	0	0	85	0	64
Grp Sat Flow(s),veh/h/ln	1641	1702	1742	1641	1637	1616	647	0	1494	1566	0	1446
Q Serve(g_s), s	0.0	8.7	8.7	1.0	20.7	20.8	3.4	0.0	0.0	0.0	0.0	4.2
Cycle Q Clear(g_c), s	0.0	8.7	8.7	1.0	20.7	20.8	8.5	0.0	0.0	5.1	0.0	4.2
Prop In Lane	1.00		0.13	1.00		0.33	0.86		1.00	0.75		1.00
Lane Grp Cap(c), veh/h	865	1259	1289	513	526	519	127	0		207	0	133
V/C Ratio(X)	0.04	0.34	0.34	0.13	0.73	0.73	0.40	0.00		0.41	0.00	0.48
Avail Cap(c_a), veh/h	865	1259	1289	589	763	753	429	0		526	0	463
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	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	10.6	4.5	4.5	3.1	30.1	30.1	46.9	0.0	0.0	43.5	0.0	43.1
Incr Delay (d2), s/veh	0.0	0.7	0.7	0.1	8.6	8.8	4.4	0.0	0.0	2.8	0.0	5.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	2.6	2.7	0.2	9.1	9.1	1.4	0.0	0.0	2.2	0.0	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	10.6	5.2	5.2	3.2	38.7	38.9	51.2	0.0	0.0	46.3	0.0	48.8
LnGrp LOS	B	A	A	A	D	D	D	A		D	A	D
Approach Vol, veh/h		898			830			51			149	
Approach Delay, s/veh		5.4			35.8			51.2			47.4	
Approach LOS		A			D			D			D	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	49.3	37.5		13.2	7.4	79.4		13.2
Change Period (Y+Rc), s	* 5.4	* 5.4		4.0	4.0	* 5.4		4.0
Max Green Setting (Gmax), s	* 8	* 47		32.0	8.0	* 47		32.0
Max Q Clear Time (g_c+I1), s	2.0	22.8		10.5	3.0	10.7		7.1
Green Ext Time (p_c), s	0.0	9.3		0.4	0.0	12.8		1.3

Intersection Summary	
HCM 6th Ctrl Delay	23.0
HCM 6th LOS	C

Notes

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

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

Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	36	862	68	762	51	57	85	64
v/c Ratio	0.07	0.36	0.15	0.34	0.26	0.16	0.42	0.20
Control Delay	5.5	9.6	5.4	9.3	36.8	0.9	42.0	1.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	5.5	9.6	5.4	9.3	36.8	0.9	42.0	1.3
Queue Length 50th (ft)	4	111	8	101	30	0	51	0
Queue Length 95th (ft)	20	244	33	216	53	0	80	0
Internal Link Dist (ft)		431		278	337		94	
Turn Bay Length (ft)	196		85			85		50
Base Capacity (vph)	520	2407	484	2263	408	606	404	532
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.07	0.36	0.14	0.34	0.13	0.09	0.21	0.12

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	78	548	30	99	482	91	102	114	65	105	102	59
Future Volume (vph)	78	548	30	99	482	91	102	114	65	105	102	59
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Lane Width	12	12	12	12	12	12	11	11	12	11	11	12
Total Lost time (s)	4.0	4.5		4.0	4.5		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.98		1.00	0.95		1.00	0.95	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1646	3228		1597	3182		1591	1554		1591	1556	
Flt Permitted	0.34	1.00		0.34	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	593	3228		577	3182		1591	1554		1591	1556	
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	89	623	34	112	548	103	116	130	74	119	116	67
RTOR Reduction (vph)	0	3	0	0	11	0	0	24	0	0	23	0
Lane Group Flow (vph)	89	654	0	113	640	0	116	180	0	119	160	0
Confl. Peds. (#/hr)			4	4			4		11	11		4
Confl. Bikes (#/hr)						1						2
Heavy Vehicles (%)	1%	2%	3%	4%	2%	0%	1%	2%	2%	1%	2%	2%
Turn Type	D.P+P	NA		D.P+P	NA		Prot	NA		Prot	NA	
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	2			6								
Actuated Green, G (s)	57.0	50.2		57.0	48.9		12.1	15.6		10.9	14.4	
Effective Green, g (s)	57.0	50.2		57.0	48.9		12.1	15.6		10.9	14.4	
Actuated g/C Ratio	0.57	0.50		0.57	0.49		0.12	0.16		0.11	0.14	
Clearance Time (s)	4.0	4.5		4.0	4.5		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	1.0	2.1		1.0	2.1		1.0	1.0		1.0	1.0	
Lane Grp Cap (vph)	423	1620		398	1555		192	242		173	224	
v/s Ratio Prot	0.02	c0.20		0.02	c0.20		0.07	c0.12		c0.07	0.10	
v/s Ratio Perm	0.10			0.14								
v/c Ratio	0.21	0.40		0.28	0.41		0.60	0.75		0.69	0.71	
Uniform Delay, d1	14.6	15.6		10.3	16.3		41.7	40.3		42.9	40.8	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.1	0.8		0.1	0.8		3.6	10.4		8.7	8.6	
Delay (s)	14.7	16.3		10.4	17.2		45.3	50.7		51.6	49.5	
Level of Service	B	B		B	B		D	D		D	D	
Approach Delay (s)		16.1			16.2			48.7			50.3	
Approach LOS		B			B			D			D	

Intersection Summary			
HCM 2000 Control Delay	25.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.5
Intersection Capacity Utilization	57.7%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	33	732	53	62	578	116	40	6	52	58	19	58
Future Volume (vph)	33	732	53	62	578	116	40	6	52	58	19	58
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Lane Width	11	14	12	12	12	12	12	13	16	12	11	11
Total Lost time (s)	4.0	5.4		4.0	5.4			4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00			1.00	1.00		1.00	0.99
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00	1.00		1.00	1.00
Frt	1.00	0.99		1.00	0.97			1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.96	1.00		0.96	1.00
Satd. Flow (prot)	1576	3432		1627	3184			1686	1621		1630	1389
Flt Permitted	0.34	1.00		0.30	1.00			0.73	1.00		0.75	1.00
Satd. Flow (perm)	566	3432		516	3184			1275	1621		1266	1389
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	36	804	58	68	635	127	44	7	57	64	21	64
RTOR Reduction (vph)	0	3	0	0	10	0	0	0	49	0	0	55
Lane Group Flow (vph)	36	859	0	68	752	0	0	51	8	0	85	9
Confl. Peds. (#/hr)			9	9			3					3
Confl. Bikes (#/hr)			1									
Heavy Vehicles (%)	2%	2%	2%	2%	2%	1%	3%	0%	4%	0%	0%	2%
Turn Type	D.P+P	NA		D.P+P	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases	1	6		5	2			4			8	
Permitted Phases	2			6			4		4	8		8
Actuated Green, G (s)	72.4	67.3		72.4	67.3			14.2	14.2		14.2	14.2
Effective Green, g (s)	72.4	67.3		72.4	67.3			14.2	14.2		14.2	14.2
Actuated g/C Ratio	0.72	0.67		0.72	0.67			0.14	0.14		0.14	0.14
Clearance Time (s)	4.0	5.4		4.0	5.4			4.0	4.0		4.0	4.0
Vehicle Extension (s)	2.3	5.1		2.3	5.1			5.0	5.0		5.0	5.0
Lane Grp Cap (vph)	461	2309		430	2142			181	230		179	197
v/s Ratio Prot	0.00	c0.25		0.01	c0.24							
v/s Ratio Perm	0.05			0.11				0.04	0.00		c0.07	0.01
v/c Ratio	0.08	0.37		0.16	0.35			0.28	0.04		0.47	0.05
Uniform Delay, d1	5.3	7.1		4.2	7.0			38.3	37.0		39.5	37.1
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	1.00
Incremental Delay, d2	0.0	0.5		0.1	0.5			1.8	0.1		4.1	0.2
Delay (s)	5.3	7.6		4.3	7.5			40.1	37.1		43.6	37.3
Level of Service	A	A		A	A			D	D		D	D
Approach Delay (s)		7.5			7.2			38.5			40.9	
Approach LOS		A			A			D			D	

Intersection Summary			
HCM 2000 Control Delay	11.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	13.4
Intersection Capacity Utilization	51.3%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Int Delay, s/veh	2.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	6	3	27	7	4	0	87	1	4	79	3
Future Vol, veh/h	0	6	3	27	7	4	0	87	1	4	79	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	75	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	71	71	71	71	71	71	71	71	71	71	71	71
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	1	0
Mvmt Flow	0	8	4	38	10	6	0	123	1	6	111	4

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	-	249	113	255	251	124	-	0	0	124	0	0
Stage 1	-	125	-	124	124	-	-	-	-	-	-	-
Stage 2	-	124	-	131	127	-	-	-	-	-	-	-
Critical Hdwy	-	6.5	6.2	7.1	6.5	6.2	-	-	-	4.1	-	-
Critical Hdwy Stg 1	-	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	-	4	3.3	3.5	4	3.3	-	-	-	2.2	-	-
Pot Cap-1 Maneuver	0	657	945	702	656	932	0	-	-	1475	-	-
Stage 1	0	796	-	885	797	-	0	-	-	-	-	-
Stage 2	0	797	-	877	795	-	0	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	654	945	690	653	932	-	-	-	1475	-	-
Mov Cap-2 Maneuver	-	654	-	690	653	-	-	-	-	-	-	-
Stage 1	-	793	-	885	797	-	-	-	-	-	-	-
Stage 2	-	797	-	860	792	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10	10.4	0	0.3
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	-	-	729	690	733	1475	-	-
HCM Lane V/C Ratio	-	-	0.017	0.055	0.021	0.004	-	-
HCM Control Delay (s)	-	-	10	10.5	10	7.5	-	-
HCM Lane LOS	-	-	B	B	B	A	-	-
HCM 95th %tile Q(veh)	-	-	0.1	0.2	0.1	0	-	-

Intersection	
Intersection Delay, s/veh	7.7
Intersection LOS	A

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	48	6	35	48	2	60
Future Vol, veh/h	48	6	35	48	2	60
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79
Heavy Vehicles, %	0	0	3	0	0	0
Mvmt Flow	61	8	44	61	3	76
Number of Lanes	1	1	1	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	2
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	2	0
HCM Control Delay	8.4	7.4	7.6
HCM LOS	A	A	A

Lane	NBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	0%	100%	0%	3%
Vol Thru, %	42%	0%	0%	97%
Vol Right, %	58%	0%	100%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	83	48	6	62
LT Vol	0	48	0	2
Through Vol	35	0	0	60
RT Vol	48	0	6	0
Lane Flow Rate	105	61	8	78
Geometry Grp	2	7	7	2
Degree of Util (X)	0.11	0.09	0.009	0.089
Departure Headway (Hd)	3.782	5.317	4.114	4.104
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	931	670	861	859
Service Time	1.873	3.085	1.882	2.194
HCM Lane V/C Ratio	0.113	0.091	0.009	0.091
HCM Control Delay	7.4	8.6	6.9	7.6
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.4	0.3	0	0.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	26	255	40	44	240	22	43	52	33	111	21	6
Future Volume (veh/h)	26	255	40	44	240	22	43	52	33	111	21	6
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1750	1736	1750	1750	1723	1750	1682	1750	1750	1736	1750	1709
Adj Flow Rate, veh/h	30	293	46	51	276	25	49	60	38	128	24	7
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	0	1	0	0	2	0	5	0	0	1	0	3
Cap, veh/h	440	768	119	446	815	73	132	149	94	159	210	61
Arrive On Green	0.03	0.27	0.27	0.04	0.27	0.27	0.08	0.15	0.15	0.10	0.16	0.16
Sat Flow, veh/h	1667	2862	444	1667	3037	273	1602	998	632	1654	1293	377
Grp Volume(v), veh/h	30	167	172	51	148	153	49	0	98	128	0	31
Grp Sat Flow(s),veh/h/ln	1667	1650	1656	1667	1637	1674	1602	0	1629	1654	0	1670
Q Serve(g_s), s	0.0	3.1	3.2	0.8	2.7	2.7	1.1	0.0	2.0	2.8	0.0	0.6
Cycle Q Clear(g_c), s	0.0	3.1	3.2	0.8	2.7	2.7	1.1	0.0	2.0	2.8	0.0	0.6
Prop In Lane	1.00		0.27	1.00		0.16	1.00		0.39	1.00		0.23
Lane Grp Cap(c), veh/h	440	443	444	446	439	449	132	0	243	159	0	272
V/C Ratio(X)	0.07	0.38	0.39	0.11	0.34	0.34	0.37	0.00	0.40	0.81	0.00	0.11
Avail Cap(c_a), veh/h	1060	1770	1777	1043	1756	1796	645	0	656	665	0	672
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	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	11.5	11.1	11.1	9.2	11.0	11.0	16.2	0.0	14.4	16.5	0.0	13.3
Incr Delay (d2), s/veh	0.0	0.2	0.3	0.0	0.2	0.2	0.6	0.0	0.4	3.7	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.9	0.9	0.2	0.7	0.8	0.4	0.0	0.6	1.1	0.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	11.6	11.4	11.4	9.3	11.2	11.2	16.8	0.0	14.8	20.2	0.0	13.4
LnGrp LOS	B	B	B	A	B	B	B	A	B	C	A	B
Approach Vol, veh/h		369			352			147			159	
Approach Delay, s/veh		11.4			10.9			15.4			18.8	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.6	14.5	7.6	9.6	5.6	14.5	7.1	10.1
Change Period (Y+Rc), s	4.5	* 4.5	4.0	4.0	4.0	4.5	4.0	4.0
Max Green Setting (Gmax), s	15.0	* 40	15.0	15.0	15.0	40.0	15.0	15.0
Max Q Clear Time (g_c+I1), s	2.0	4.7	4.8	4.0	2.8	5.2	3.1	2.6
Green Ext Time (p_c), s	0.0	1.1	0.0	0.1	0.0	1.3	0.0	0.0

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

Notes

User approved pedestrian interval to be less than phase max green.

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

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	30	339	51	301	49	98	128	31
v/c Ratio	0.05	0.26	0.11	0.21	0.21	0.29	0.46	0.06
Control Delay	12.3	16.5	13.1	15.2	22.8	16.0	26.3	14.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	12.3	16.5	13.1	15.2	22.8	16.0	26.3	14.4
Queue Length 50th (ft)	2	25	7	23	9	12	22	2
Queue Length 95th (ft)	26	108	38	100	48	56	104	25
Internal Link Dist (ft)		157		159		136		119
Turn Bay Length (ft)	100		85		200			
Base Capacity (vph)	910	2808	740	2803	571	647	594	677
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.12	0.07	0.11	0.09	0.15	0.22	0.05

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	35	331	26	22	224	32	12	15	27	21	7	79
Future Volume (veh/h)	35	331	26	22	224	32	12	15	27	21	7	79
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1709	1820	1695	1750	1695	1750	1750	1820	1820	1750	1750	1750
Adj Flow Rate, veh/h	43	404	32	27	273	39	15	18	0	26	9	96
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Percent Heavy Veh, %	3	0	4	0	4	0	0	0	0	0	0	0
Cap, veh/h	594	1186	94	543	997	141	249	154		338	80	202
Arrive On Green	0.04	0.37	0.37	0.03	0.35	0.35	0.14	0.14	0.00	0.14	0.14	0.14
Sat Flow, veh/h	1628	3247	256	1667	2834	400	474	1132	1542	865	590	1483
Grp Volume(v), veh/h	43	214	222	27	154	158	33	0	0	35	0	96
Grp Sat Flow(s),veh/h/ln	1628	1729	1774	1667	1611	1623	1606	0	1542	1455	0	1483
Q Serve(g_s), s	0.5	2.6	2.6	0.3	1.9	2.0	0.0	0.0	0.0	0.0	0.0	1.7
Cycle Q Clear(g_c), s	0.5	2.6	2.6	0.3	1.9	2.0	0.5	0.0	0.0	0.5	0.0	1.7
Prop In Lane	1.00		0.14	1.00		0.25	0.45		1.00	0.74		1.00
Lane Grp Cap(c), veh/h	594	632	648	543	567	571	403	0		419	0	202
V/C Ratio(X)	0.07	0.34	0.34	0.05	0.27	0.28	0.08	0.00		0.08	0.00	0.48
Avail Cap(c_a), veh/h	1273	2434	2497	1378	2267	2285	1260	0		1310	0	1148
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	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	5.5	6.5	6.5	5.5	6.6	6.6	10.8	0.0	0.0	10.8	0.0	11.3
Incr Delay (d2), s/veh	0.0	0.7	0.7	0.0	0.6	0.6	0.2	0.0	0.0	0.2	0.0	3.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.6	0.6	0.0	0.4	0.4	0.2	0.0	0.0	0.2	0.0	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	5.5	7.2	7.2	5.5	7.2	7.2	11.0	0.0	0.0	11.0	0.0	15.0
LnGrp LOS	A	A	A	A	A	A	B	A		B	A	B
Approach Vol, veh/h		479			339			33			131	
Approach Delay, s/veh		7.1			7.0			11.0			14.0	
Approach LOS		A			A			B			B	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.2	15.4		7.9	4.8	15.8		7.9
Change Period (Y+Rc), s	4.0	* 5.4		4.0	4.0	* 5.4		4.0
Max Green Setting (Gmax), s	13.0	* 40		20.0	15.0	* 40		22.0
Max Q Clear Time (g_c+I1), s	2.5	4.0		2.5	2.3	4.6		3.7
Green Ext Time (p_c), s	0.0	3.8		0.2	0.0	5.5		0.8

Intersection Summary	
HCM 6th Ctrl Delay	8.1
HCM 6th LOS	A

Notes

User approved pedestrian interval to be less than phase max green.

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

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

Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	43	436	27	312	33	33	35	96
v/c Ratio	0.06	0.19	0.04	0.16	0.08	0.07	0.10	0.22
Control Delay	4.1	6.0	4.0	7.4	13.4	1.8	13.7	5.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	4.1	6.0	4.0	7.4	13.4	1.8	13.7	5.8
Queue Length 50th (ft)	3	20	2	13	4	0	4	0
Queue Length 95th (ft)	10	60	7	44	21	4	23	23
Internal Link Dist (ft)		431		278	337		94	
Turn Bay Length (ft)	196		85			85		50
Base Capacity (vph)	874	3391	964	3091	1042	1184	885	1019
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.05	0.13	0.03	0.10	0.03	0.03	0.04	0.09

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	26	255	40	44	240	22	43	52	33	111	21	6
Future Volume (vph)	26	255	40	44	240	22	43	52	33	111	21	6
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Lane Width	12	12	12	12	12	12	11	11	12	11	11	12
Total Lost time (s)	4.0	4.5		4.0	4.5		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	0.99		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.99		1.00	0.94		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1662	3229		1662	3224		1531	1584		1591	1617	
Flt Permitted	0.57	1.00		0.55	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	994	3229		959	3224		1531	1584		1591	1617	
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Adj. Flow (vph)	30	293	46	51	276	25	49	60	38	128	24	7
RTOR Reduction (vph)	0	13	0	0	7	0	0	22	0	0	5	0
Lane Group Flow (vph)	30	326	0	51	294	0	49	76	0	128	26	0
Confl. Peds. (#/hr)							1		5	5		1
Confl. Bikes (#/hr)												4
Heavy Vehicles (%)	0%	1%	0%	0%	2%	0%	5%	0%	0%	1%	0%	3%
Turn Type	D.P+P	NA		D.P+P	NA		Prot	NA		Prot	NA	
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	2			6								
Actuated Green, G (s)	19.1	17.3		19.1	18.2		3.4	7.3		8.6	12.5	
Effective Green, g (s)	19.1	17.3		19.1	18.2		3.4	7.3		8.6	12.5	
Actuated g/C Ratio	0.37	0.34		0.37	0.35		0.07	0.14		0.17	0.24	
Clearance Time (s)	4.0	4.5		4.0	4.5		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	1.0	2.1		1.0	2.1		1.0	1.0		1.0	1.0	
Lane Grp Cap (vph)	380	1084		380	1139		101	224		265	392	
v/s Ratio Prot	0.00	c0.10		0.00	c0.09		0.03	c0.05		c0.08	0.02	
v/s Ratio Perm	0.03			0.05								
v/c Ratio	0.08	0.30		0.13	0.26		0.49	0.34		0.48	0.07	
Uniform Delay, d1	10.5	12.6		10.5	11.8		23.2	19.9		19.4	15.0	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.0	0.1		0.1	0.1		1.3	0.3		0.5	0.0	
Delay (s)	10.5	12.7		10.6	11.9		24.5	20.2		19.9	15.0	
Level of Service	B	B		B	B		C	C		B	B	
Approach Delay (s)		12.5			11.7			21.7			19.0	
Approach LOS		B			B			C			B	

Intersection Summary			
HCM 2000 Control Delay	14.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	51.5	Sum of lost time (s)	16.5
Intersection Capacity Utilization	36.4%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	35	331	26	22	224	32	12	15	27	21	7	79
Future Volume (vph)	35	331	26	22	224	32	12	15	27	21	7	79
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Lane Width	11	14	12	12	12	12	12	13	16	12	11	11
Total Lost time (s)	4.0	5.4		4.0	5.4			4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	1.00
Frt	1.00	0.99		1.00	0.98			1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.98	1.00		0.96	1.00
Satd. Flow (prot)	1560	3497		1662	3152			1768	1686		1631	1438
Flt Permitted	0.56	1.00		0.50	1.00			0.84	1.00		0.76	1.00
Satd. Flow (perm)	923	3497		873	3152			1514	1686		1286	1438
Peak-hour factor, PHF	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Adj. Flow (vph)	43	404	32	27	273	39	15	18	33	26	9	96
RTOR Reduction (vph)	0	6	0	0	12	0	0	0	29	0	0	84
Lane Group Flow (vph)	43	430	0	27	300	0	0	33	4	0	35	12
Heavy Vehicles (%)	3%	0%	4%	0%	4%	0%	0%	0%	0%	0%	0%	0%
Turn Type	D.P+P	NA		D.P+P	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases	1	6		5	2			4			8	
Permitted Phases	2			6			4		4	8		8
Actuated Green, G (s)	20.5	19.7		20.5	18.7			4.9	4.9		4.9	4.9
Effective Green, g (s)	20.5	19.7		20.5	18.7			4.9	4.9		4.9	4.9
Actuated g/C Ratio	0.53	0.51		0.53	0.48			0.13	0.13		0.13	0.13
Clearance Time (s)	4.0	5.4		4.0	5.4			4.0	4.0		4.0	4.0
Vehicle Extension (s)	2.3	5.1		2.3	5.1			5.0	5.0		5.0	5.0
Lane Grp Cap (vph)	517	1775		477	1519			191	212		162	181
v/s Ratio Prot	c0.00	c0.12		0.00	0.10							
v/s Ratio Perm	0.04			0.03				0.02	0.00		c0.03	0.01
v/c Ratio	0.08	0.24		0.06	0.20			0.17	0.02		0.22	0.07
Uniform Delay, d1	4.4	5.4		4.4	5.8			15.1	14.8		15.2	14.9
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	1.00
Incremental Delay, d2	0.0	0.2		0.0	0.1			0.9	0.1		1.4	0.3
Delay (s)	4.5	5.5		4.4	5.9			16.0	14.9		16.6	15.3
Level of Service	A	A		A	A			B	B		B	B
Approach Delay (s)		5.4			5.8			15.5			15.6	
Approach LOS		A			A			B			B	

Intersection Summary			
HCM 2000 Control Delay	7.5	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.24		
Actuated Cycle Length (s)	38.8	Sum of lost time (s)	13.4
Intersection Capacity Utilization	33.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Appendix F

Future Max Event Operations

Intersection	
Int Delay, s/veh	4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	89	27	8	4	5	9	212	34	32	193	9
Future Vol, veh/h	5	89	27	8	4	5	9	212	34	32	193	9
Conflicting Peds, #/hr	1	0	12	12	0	1	5	0	0	0	0	5
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	75	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	0	0	4	13	0	0	0	2	0	0	2	0
Mvmt Flow	5	98	30	9	4	5	10	233	37	35	212	10

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	569	582	234	635	569	253	227	0	0	270	0	0
Stage 1	292	292	-	272	272	-	-	-	-	-	-	-
Stage 2	277	290	-	363	297	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.24	7.23	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.23	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.23	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.336	3.617	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	436	427	800	376	435	791	1353	-	-	1305	-	-
Stage 1	720	675	-	710	688	-	-	-	-	-	-	-
Stage 2	734	676	-	634	671	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	414	408	786	283	415	790	1345	-	-	1305	-	-
Mov Cap-2 Maneuver	414	408	-	283	415	-	-	-	-	-	-	-
Stage 1	709	650	-	704	682	-	-	-	-	-	-	-
Stage 2	717	670	-	496	646	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	15.8	14.6	0.3	1.1
HCM LOS	C	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1345	-	-	459	283	564	1305	-	-
HCM Lane V/C Ratio	0.007	-	-	0.278	0.031	0.018	0.027	-	-
HCM Control Delay (s)	7.7	-	-	15.8	18.1	11.5	7.8	-	-
HCM Lane LOS	A	-	-	C	C	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	1.1	0.1	0.1	0.1	-	-

Intersection	
Intersection Delay, s/veh	16.5
Intersection LOS	C

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	69	37	411	102	24	69
Future Vol, veh/h	69	37	411	102	24	69
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles, %	0	0	1	3	0	1
Mvmt Flow	84	45	501	124	29	84
Number of Lanes	1	1	1	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	2
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	2	0
HCM Control Delay	9.9	19.2	9
HCM LOS	A	C	A

Lane	NBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	0%	100%	0%	26%
Vol Thru, %	80%	0%	0%	74%
Vol Right, %	20%	0%	100%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	513	69	37	93
LT Vol	0	69	0	24
Through Vol	411	0	0	69
RT Vol	102	0	37	0
Lane Flow Rate	626	84	45	113
Geometry Grp	2	7	7	2
Degree of Util (X)	0.751	0.155	0.068	0.157
Departure Headway (Hd)	4.322	6.623	5.407	4.999
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	838	538	656	712
Service Time	2.357	4.408	3.191	3.064
HCM Lane V/C Ratio	0.747	0.156	0.069	0.159
HCM Control Delay	19.2	10.6	8.6	9
HCM Lane LOS	C	B	A	A
HCM 95th-tile Q	7.1	0.5	0.2	0.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	91	980	12	107	1040	106	130	174	66	127	146	83
Future Volume (veh/h)	91	980	12	107	1040	106	130	174	66	127	146	83
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1709	1709	1750	1736	1709	1750	1709	1709	1723	1723	1750	1695
Adj Flow Rate, veh/h	99	1065	13	116	1130	115	141	189	72	138	159	90
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	0	1	3	0	3	3	2	2	0	4
Cap, veh/h	380	1825	22	296	1212	123	171	206	78	160	175	99
Arrive On Green	0.19	0.56	0.56	0.04	0.41	0.41	0.10	0.17	0.17	0.10	0.17	0.17
Sat Flow, veh/h	1628	3285	40	1654	2969	302	1628	1178	449	1641	1042	590
Grp Volume(v), veh/h	99	526	552	116	617	628	141	0	261	138	0	249
Grp Sat Flow(s),veh/h/ln	1628	1624	1702	1654	1624	1647	1628	0	1627	1641	0	1632
Q Serve(g_s), s	0.6	27.7	27.7	3.9	47.2	47.4	11.0	0.0	20.5	10.8	0.0	19.5
Cycle Q Clear(g_c), s	0.6	27.7	27.7	3.9	47.2	47.4	11.0	0.0	20.5	10.8	0.0	19.5
Prop In Lane	1.00		0.02	1.00		0.18	1.00		0.28	1.00		0.36
Lane Grp Cap(c), veh/h	380	902	945	296	663	672	171	0	285	160	0	274
V/C Ratio(X)	0.26	0.58	0.58	0.39	0.93	0.93	0.83	0.00	0.92	0.86	0.00	0.91
Avail Cap(c_a), veh/h	380	902	945	374	718	728	238	0	313	240	0	314
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	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	42.3	19.0	19.0	15.0	36.7	36.8	57.0	0.0	52.7	57.8	0.0	53.1
Incr Delay (d2), s/veh	0.1	2.8	2.6	0.3	21.6	21.8	11.0	0.0	27.9	12.6	0.0	25.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	10.8	11.2	1.4	22.2	22.6	5.1	0.0	10.6	5.1	0.0	10.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	42.5	21.8	21.6	15.4	58.3	58.6	68.0	0.0	80.6	70.3	0.0	78.4
LnGrp LOS	D	C	C	B	E	E	E	A	F	E	A	E
Approach Vol, veh/h		1177			1361			402			387	
Approach Delay, s/veh		23.4			54.8			76.2			75.5	
Approach LOS		C			D			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	29.0	57.6	16.7	26.7	9.8	76.7	17.6	25.8
Change Period (Y+Rc), s	4.5	* 4.5	4.0	4.0	4.0	4.5	4.0	4.0
Max Green Setting (Gmax), s	12.0	* 58	19.0	25.0	12.0	57.5	19.0	25.0
Max Q Clear Time (g_c+I1), s	2.6	49.4	12.8	22.5	5.9	29.7	13.0	21.5
Green Ext Time (p_c), s	0.0	3.7	0.0	0.2	0.0	5.0	0.0	0.2

Intersection Summary	
HCM 6th Ctrl Delay	48.7
HCM 6th LOS	D

Notes

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

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	99	1078	116	1245	141	261	138	249
v/c Ratio	0.48	0.64	0.46	0.75	0.75	0.89	0.80	0.89
Control Delay	34.0	26.0	17.8	29.6	79.3	79.9	86.3	79.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	34.0	26.0	17.8	29.6	79.3	79.9	86.3	79.2
Queue Length 50th (ft)	34	342	40	426	116	203	115	190
Queue Length 95th (ft)	65	471	74	598	187	#349	182	#317
Internal Link Dist (ft)		157		159		136		119
Turn Bay Length (ft)	100		85		200			
Base Capacity (vph)	257	1695	307	1667	228	322	230	321
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.39	0.64	0.38	0.75	0.62	0.81	0.60	0.78

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	140	979	78	76	1228	298	68	74	84	53	33	52
Future Volume (veh/h)	140	979	78	76	1228	298	68	74	84	53	33	52
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.99	0.98		1.00	0.99		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1750	1777	1709	1695	1723	1709	1709	1820	1792	1723	1750	1695
Adj Flow Rate, veh/h	156	1088	87	84	1364	331	76	82	0	59	37	58
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	3	3	4	2	3	3	0	2	2	0	4
Cap, veh/h	346	1399	112	558	1423	337	119	110		163	91	257
Arrive On Green	0.17	0.44	0.44	0.27	0.54	0.54	0.18	0.18	0.00	0.18	0.18	0.18
Sat Flow, veh/h	1667	3159	252	1615	2620	621	426	602	1518	644	496	1401
Grp Volume(v), veh/h	156	581	594	84	840	855	158	0	0	96	0	58
Grp Sat Flow(s),veh/h/ln	1667	1689	1723	1615	1637	1605	1029	0	1518	1141	0	1401
Q Serve(g_s), s	5.9	38.0	38.1	0.0	62.6	67.8	11.2	0.0	0.0	0.0	0.0	4.6
Cycle Q Clear(g_c), s	5.9	38.0	38.1	0.0	62.6	67.8	20.8	0.0	0.0	9.6	0.0	4.6
Prop In Lane	1.00		0.15	1.00		0.39	0.48		1.00	0.61		1.00
Lane Grp Cap(c), veh/h	346	748	763	558	888	871	229	0		254	0	257
V/C Ratio(X)	0.45	0.78	0.78	0.15	0.94	0.98	0.69	0.00		0.38	0.00	0.23
Avail Cap(c_a), veh/h	346	917	935	558	889	872	346	0		362	0	367
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	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	45.9	30.8	30.8	27.1	27.9	29.1	54.2	0.0	0.0	47.0	0.0	45.2
Incr Delay (d2), s/veh	0.6	7.8	7.7	0.1	19.5	26.4	7.6	0.0	0.0	2.0	0.0	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.4	16.7	17.1	1.9	27.9	31.0	5.6	0.0	0.0	2.9	0.0	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.5	38.6	38.5	27.1	47.4	55.5	61.8	0.0	0.0	49.0	0.0	46.2
LnGrp LOS	D	D	D	C	D	E	E	A		D	A	D
Approach Vol, veh/h		1331			1779			158			154	
Approach Delay, s/veh		39.5			50.3			61.8			47.9	
Approach LOS		D			D			E			D	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	26.2	76.0		27.8	39.2	63.0		27.8
Change Period (Y+Rc), s	* 4	5.4		4.0	* 4	5.4		4.0
Max Green Setting (Gmax), s	* 12	70.6		34.0	* 12	70.6		34.0
Max Q Clear Time (g_c+I1), s	7.9	69.8		22.8	2.0	40.1		11.6
Green Ext Time (p_c), s	0.1	0.7		1.1	0.1	17.5		1.3

Intersection Summary	
HCM 6th Ctrl Delay	46.5
HCM 6th LOS	D

Notes

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

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

Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	156	1175	84	1695	158	93	96	58
v/c Ratio	0.74	0.61	0.20	0.84	0.68	0.25	0.55	0.21
Control Delay	54.6	23.1	9.3	24.3	64.4	9.6	59.8	11.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	54.6	23.1	9.3	24.3	64.4	9.6	59.8	11.5
Queue Length 50th (ft)	58	390	14	532	128	0	76	0
Queue Length 95th (ft)	#165	435	36	#805	191	44	127	37
Internal Link Dist (ft)		431		278	337		94	
Turn Bay Length (ft)	196		85			85		50
Base Capacity (vph)	224	2035	440	2028	346	501	259	393
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.70	0.58	0.19	0.84	0.46	0.19	0.37	0.15

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	91	980	12	107	1040	106	130	174	66	127	146	83
Future Volume (vph)	91	980	12	107	1040	106	130	174	66	127	146	83
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Lane Width	12	12	12	12	12	12	11	11	12	11	11	12
Total Lost time (s)	4.0	4.5		4.0	4.5		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00		1.00	0.99		1.00	0.96		1.00	0.95	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1614	3223		1646	3185		1560	1579		1576	1568	
Flt Permitted	0.12	1.00		0.17	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	206	3223		299	3185		1560	1579		1576	1568	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	99	1065	13	116	1130	115	141	189	72	138	159	90
RTOR Reduction (vph)	0	0	0	0	5	0	0	11	0	0	16	0
Lane Group Flow (vph)	99	1078	0	116	1240	0	141	250	0	138	233	0
Confl. Peds. (#/hr)	1					1	1					1
Confl. Bikes (#/hr)						1						2
Heavy Vehicles (%)	3%	3%	0%	1%	3%	0%	3%	3%	2%	2%	0%	4%
Turn Type	D.P+P	NA		D.P+P	NA		Prot	NA		Prot	NA	
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	2			6								
Actuated Green, G (s)	75.9	68.4		75.9	67.8		15.6	23.3		14.3	22.0	
Effective Green, g (s)	75.9	68.4		75.9	67.8		15.6	23.3		14.3	22.0	
Actuated g/C Ratio	0.58	0.53		0.58	0.52		0.12	0.18		0.11	0.17	
Clearance Time (s)	4.0	4.5		4.0	4.5		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	1.0	2.1		1.0	2.1		1.0	1.0		1.0	1.0	
Lane Grp Cap (vph)	208	1695		252	1661		187	283		173	265	
v/s Ratio Prot	0.03	c0.33		0.03	c0.39		c0.09	c0.16		0.09	0.15	
v/s Ratio Perm	0.25			0.24								
v/c Ratio	0.48	0.64		0.46	0.75		0.75	0.88		0.80	0.88	
Uniform Delay, d1	37.7	21.9		15.0	24.4		55.3	52.0		56.4	52.7	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.6	1.8		0.5	3.1		14.1	25.6		20.7	26.3	
Delay (s)	38.3	23.8		15.5	27.5		69.5	77.6		77.2	79.0	
Level of Service	D	C		B	C		E	E		E	E	
Approach Delay (s)		25.0			26.5			74.8			78.3	
Approach LOS		C			C			E			E	

Intersection Summary			
HCM 2000 Control Delay	37.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	16.5
Intersection Capacity Utilization	76.1%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	140	979	78	76	1228	298	68	74	84	53	33	52
Future Volume (vph)	140	979	78	76	1228	298	68	74	84	53	33	52
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Lane Width	11	14	12	12	12	12	12	13	16	12	11	11
Total Lost time (s)	4.0	5.4		4.0	5.4			4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00			1.00	1.00		1.00	0.97
Flpb, ped/bikes	1.00	1.00		1.00	1.00			0.99	1.00		1.00	1.00
Frt	1.00	0.99		1.00	0.97			1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.98	1.00		0.97	1.00
Satd. Flow (prot)	1607	3393		1599	3158			1727	1653		1621	1340
Flt Permitted	0.07	1.00		0.16	1.00			0.75	1.00		0.60	1.00
Satd. Flow (perm)	118	3393		268	3158			1323	1653		995	1340
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	156	1088	87	84	1364	331	76	82	93	59	37	58
RTOR Reduction (vph)	0	4	0	0	13	0	0	0	54	0	0	48
Lane Group Flow (vph)	156	1171	0	84	1682	0	0	158	39	0	96	10
Confl. Peds. (#/hr)			9	9			15					15
Confl. Bikes (#/hr)			1									
Heavy Vehicles (%)	0%	3%	3%	4%	2%	3%	3%	0%	2%	2%	0%	4%
Turn Type	D.P+P	NA		D.P+P	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases	1	6		5	2			4			8	
Permitted Phases	2			6			4		4	8		8
Actuated Green, G (s)	93.9	72.6		93.9	82.1			22.7	22.7		22.7	22.7
Effective Green, g (s)	93.9	72.6		93.9	82.1			22.7	22.7		22.7	22.7
Actuated g/C Ratio	0.72	0.56		0.72	0.63			0.17	0.17		0.17	0.17
Clearance Time (s)	4.0	5.4		4.0	5.4			4.0	4.0		4.0	4.0
Vehicle Extension (s)	2.3	5.1		2.3	5.1			5.0	5.0		5.0	5.0
Lane Grp Cap (vph)	220	1894		411	1994			231	288		173	233
v/s Ratio Prot	c0.06	0.35		0.03	c0.53							
v/s Ratio Perm	0.45			0.11				c0.12	0.02		0.10	0.01
v/c Ratio	0.71	0.62		0.20	0.84			0.68	0.13		0.55	0.04
Uniform Delay, d1	36.8	19.4		17.9	18.9			50.3	45.3		49.0	44.6
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	1.00
Incremental Delay, d2	8.9	1.5		0.1	4.6			10.3	0.4		6.4	0.2
Delay (s)	45.7	20.9		18.0	23.4			60.6	45.8		55.4	44.8
Level of Service	D	C		B	C			E	D		E	D
Approach Delay (s)		23.8			23.2			55.1			51.4	
Approach LOS		C			C			E			D	

Intersection Summary			
HCM 2000 Control Delay	26.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	13.4
Intersection Capacity Utilization	83.7%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	5	5	2	0	2	1	80	1	1	179	1
Future Vol, veh/h	0	5	5	2	0	2	1	80	1	1	179	1
Conflicting Peds, #/hr	5	0	9	9	0	5	0	0	2	2	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	75	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	83	83	83	83	83	83	83	83	83
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	6	6	2	0	2	1	96	1	1	216	1

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	-	320	226	335	320	104	217	0	0	99	0	0
Stage 1	-	219	-	101	101	-	-	-	-	-	-	-
Stage 2	-	101	-	234	219	-	-	-	-	-	-	-
Critical Hdwy	-	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	-	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	-	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	0	600	818	622	600	956	1365	-	-	1507	-	-
Stage 1	0	726	-	910	815	-	-	-	-	-	-	-
Stage 2	0	815	-	774	726	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	598	811	605	598	949	1365	-	-	1504	-	-
Mov Cap-2 Maneuver	-	598	-	605	598	-	-	-	-	-	-	-
Stage 1	-	725	-	907	813	-	-	-	-	-	-	-
Stage 2	-	813	-	755	725	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.3	9.9	0.1	0
HCM LOS	B	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1365	-	-	688	605	949	1504	-	-
HCM Lane V/C Ratio	0.001	-	-	0.018	0.004	0.003	0.001	-	-
HCM Control Delay (s)	7.6	-	-	10.3	11	8.8	7.4	-	-
HCM Lane LOS	A	-	-	B	B	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0	0	0	-	-

Intersection	
Intersection Delay, s/veh	11.8
Intersection LOS	B

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	30	4	24	51	36	343
Future Vol, veh/h	30	4	24	51	36	343
Peak Hour Factor	0.74	0.74	0.74	0.74	0.74	0.74
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	41	5	32	69	49	464
Number of Lanes	1	1	1	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	2
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	2	0
HCM Control Delay	9.3	7.7	12.8
HCM LOS	A	A	B

Lane	NBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	0%	100%	0%	9%
Vol Thru, %	32%	0%	0%	91%
Vol Right, %	68%	0%	100%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	75	30	4	379
LT Vol	0	30	0	36
Through Vol	24	0	0	343
RT Vol	51	0	4	0
Lane Flow Rate	101	41	5	512
Geometry Grp	2	7	7	2
Degree of Util (X)	0.116	0.071	0.008	0.58
Departure Headway (Hd)	4.137	6.318	5.105	4.075
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	870	570	704	871
Service Time	2.145	4.025	2.812	2.172
HCM Lane V/C Ratio	0.116	0.072	0.007	0.588
HCM Control Delay	7.7	9.5	7.9	12.8
HCM Lane LOS	A	A	A	B
HCM 95th-tile Q	0.4	0.2	0	3.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	27	210	25	45	207	28	40	39	33	37	72	111
Future Volume (veh/h)	27	210	25	45	207	28	40	39	33	37	72	111
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.98	0.99		0.98	1.00		0.98	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1750	1736	1750	1723	1723	1750	1682	1709	1709	1709	1750	1750
Adj Flow Rate, veh/h	32	247	29	53	244	33	47	46	39	44	85	131
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	0	1	0	2	2	0	5	3	3	3	0	0
Cap, veh/h	430	776	90	449	762	102	65	176	150	117	146	224
Arrive On Green	0.03	0.26	0.26	0.04	0.26	0.26	0.04	0.21	0.21	0.07	0.24	0.24
Sat Flow, veh/h	1667	2972	345	1641	2896	387	1602	847	718	1628	609	938
Grp Volume(v), veh/h	32	136	140	53	137	140	47	0	85	44	0	216
Grp Sat Flow(s),veh/h/ln	1667	1650	1668	1641	1637	1646	1602	0	1565	1628	0	1547
Q Serve(g_s), s	0.0	2.6	2.7	0.9	2.7	2.7	1.2	0.0	1.8	1.0	0.0	4.9
Cycle Q Clear(g_c), s	0.0	2.6	2.7	0.9	2.7	2.7	1.2	0.0	1.8	1.0	0.0	4.9
Prop In Lane	1.00		0.21	1.00		0.23	1.00		0.46	1.00		0.61
Lane Grp Cap(c), veh/h	430	431	436	449	431	433	65	0	326	117	0	370
V/C Ratio(X)	0.07	0.32	0.32	0.12	0.32	0.32	0.72	0.00	0.26	0.38	0.00	0.58
Avail Cap(c_a), veh/h	1049	2568	2597	1035	2548	2563	925	0	1140	940	0	1126
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	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	12.4	11.8	11.9	10.0	11.8	11.8	18.9	0.0	13.2	17.6	0.0	13.4
Incr Delay (d2), s/veh	0.0	0.2	0.2	0.0	0.2	0.2	5.5	0.0	0.2	0.7	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.8	0.8	0.3	0.8	0.8	0.5	0.0	0.5	0.4	0.0	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	12.4	12.0	12.1	10.1	12.0	12.0	24.3	0.0	13.4	18.4	0.0	13.9
LnGrp LOS	B	B	B	B	B	B	C	A	B	B	A	B
Approach Vol, veh/h		308			330			132			260	
Approach Delay, s/veh		12.1			11.7			17.3			14.7	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.7	15.0	6.9	12.3	5.8	14.9	5.6	13.5
Change Period (Y+Rc), s	4.5	* 4.5	4.0	4.0	4.0	4.5	4.0	4.0
Max Green Setting (Gmax), s	16.0	* 62	23.0	29.0	16.0	62.0	23.0	29.0
Max Q Clear Time (g_c+I1), s	2.0	4.7	3.0	3.8	2.9	4.7	3.2	6.9
Green Ext Time (p_c), s	0.0	1.1	0.0	0.2	0.0	1.1	0.0	0.5

Intersection Summary	
HCM 6th Ctrl Delay	13.3
HCM 6th LOS	B

Notes

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

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	32	276	53	277	47	85	44	216
v/c Ratio	0.06	0.29	0.12	0.27	0.19	0.19	0.19	0.55
Control Delay	11.7	16.8	11.6	16.6	22.6	13.4	25.0	21.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	11.7	16.8	11.6	16.6	22.6	13.4	25.0	21.4
Queue Length 50th (ft)	5	31	8	22	12	9	11	40
Queue Length 95th (ft)	23	80	33	86	41	44	46	127
Internal Link Dist (ft)		157		159		136		119
Turn Bay Length (ft)	100		85		200			
Base Capacity (vph)	948	3122	769	3107	948	1092	966	1109
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.09	0.07	0.09	0.05	0.08	0.05	0.19

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	31	199	37	24	225	35	12	9	15	298	45	30
Future Volume (veh/h)	31	199	37	24	225	35	12	9	15	298	45	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.98	0.99		0.97	0.98		1.00	0.98		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1750	1806	1750	1750	1750	1750	1750	1820	1820	1750	1750	1750
Adj Flow Rate, veh/h	34	221	41	27	250	39	13	10	0	331	50	33
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	1	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	338	649	118	349	632	97	271	178		623	74	693
Arrive On Green	0.03	0.22	0.22	0.02	0.22	0.22	0.48	0.48	0.00	0.48	0.48	0.48
Sat Flow, veh/h	1667	2886	525	1667	2877	442	328	367	1542	1012	153	1433
Grp Volume(v), veh/h	34	130	132	27	143	146	23	0	0	381	0	33
Grp Sat Flow(s),veh/h/ln	1667	1716	1696	1667	1663	1657	695	0	1542	1165	0	1433
Q Serve(g_s), s	0.8	3.2	3.3	0.6	3.7	3.8	0.2	0.0	0.0	0.0	0.0	0.6
Cycle Q Clear(g_c), s	0.8	3.2	3.3	0.6	3.7	3.8	14.8	0.0	0.0	14.6	0.0	0.6
Prop In Lane	1.00		0.31	1.00		0.27	0.57		1.00	0.87		1.00
Lane Grp Cap(c), veh/h	338	386	381	349	365	364	448	0		697	0	693
V/C Ratio(X)	0.10	0.34	0.35	0.08	0.39	0.40	0.05	0.00		0.55	0.00	0.05
Avail Cap(c_a), veh/h	752	2590	2560	936	2510	2502	956	0		1163	0	1195
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	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	14.6	16.4	16.4	14.5	16.8	16.8	8.5	0.0	0.0	10.5	0.0	6.9
Incr Delay (d2), s/veh	0.1	1.1	1.2	0.1	1.5	1.6	0.1	0.0	0.0	1.4	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	1.2	1.2	0.2	1.4	1.4	0.1	0.0	0.0	3.0	0.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	14.7	17.5	17.6	14.6	18.3	18.4	8.6	0.0	0.0	11.9	0.0	6.9
LnGrp LOS	B	B	B	B	B	B	A	A		B	A	A
Approach Vol, veh/h		296			316			23			414	
Approach Delay, s/veh		17.2			18.0			8.6			11.5	
Approach LOS		B			B			A			B	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.5	16.5		28.4	5.3	16.7		28.4
Change Period (Y+Rc), s	4.0	* 5.4		4.0	4.0	* 5.4		4.0
Max Green Setting (Gmax), s	14.0	* 76		42.0	19.0	* 76		42.0
Max Q Clear Time (g_c+I1), s	2.8	5.8		16.8	2.6	5.3		16.6
Green Ext Time (p_c), s	0.0	3.8		0.1	0.0	3.4		5.1

Intersection Summary	
HCM 6th Ctrl Delay	15.0
HCM 6th LOS	B

Notes

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

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

Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	34	262	27	289	23	17	381	33
v/c Ratio	0.11	0.36	0.08	0.42	0.08	0.04	0.52	0.04
Control Delay	15.7	22.1	15.3	23.4	19.0	0.2	13.7	0.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	15.7	22.1	15.3	23.4	19.0	0.2	13.7	0.6
Queue Length 50th (ft)	9	38	7	43	8	0	64	0
Queue Length 95th (ft)	26	80	22	89	17	0	225	3
Internal Link Dist (ft)		431		278	337		94	
Turn Bay Length (ft)	196		85			85		50
Base Capacity (vph)	423	3394	533	3258	963	1101	794	858
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.08	0.08	0.05	0.09	0.02	0.02	0.48	0.04

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	27	210	25	45	207	28	40	39	33	37	72	111
Future Volume (vph)	27	210	25	45	207	28	40	39	33	37	72	111
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Lane Width	12	12	12	12	12	12	11	11	12	11	11	12
Total Lost time (s)	4.0	4.5		4.0	4.5		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.98		1.00	0.93		1.00	0.91	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1662	3233		1623	3209		1531	1516		1560	1523	
Flt Permitted	0.58	1.00		0.58	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1018	3233		995	3209		1531	1516		1560	1523	
Peak-hour factor, PHF	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Adj. Flow (vph)	32	247	29	53	244	33	47	46	39	44	85	131
RTOR Reduction (vph)	0	8	0	0	8	0	0	19	0	0	37	0
Lane Group Flow (vph)	32	268	0	53	269	0	47	66	0	44	179	0
Confl. Peds. (#/hr)			8	8					12	12		
Confl. Bikes (#/hr)												4
Heavy Vehicles (%)	0%	1%	0%	2%	2%	0%	5%	3%	3%	3%	0%	0%
Turn Type	D.P+P	NA		D.P+P	NA		Prot	NA		Prot	NA	
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	2			6								
Actuated Green, G (s)	16.4	13.7		16.4	14.1		4.9	12.3		2.9	10.3	
Effective Green, g (s)	16.4	13.7		16.4	14.1		4.9	12.3		2.9	10.3	
Actuated g/C Ratio	0.34	0.28		0.34	0.29		0.10	0.26		0.06	0.21	
Clearance Time (s)	4.0	4.5		4.0	4.5		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	1.0	2.1		1.0	2.1		1.0	1.0		1.0	1.0	
Lane Grp Cap (vph)	377	920		374	940		155	387		94	326	
v/s Ratio Prot	0.00	c0.08		0.01	c0.08		c0.03	0.04		0.03	c0.12	
v/s Ratio Perm	0.02			0.04								
v/c Ratio	0.08	0.29		0.14	0.29		0.30	0.17		0.47	0.55	
Uniform Delay, d1	10.8	13.4		10.8	13.1		20.0	13.9		21.9	16.8	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.0	0.1		0.1	0.1		0.4	0.1		1.3	1.0	
Delay (s)	10.8	13.5		10.9	13.2		20.4	14.0		23.2	17.9	
Level of Service	B	B		B	B		C	B		C	B	
Approach Delay (s)		13.2			12.8			16.3			18.8	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	14.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	48.1	Sum of lost time (s)	16.5
Intersection Capacity Utilization	41.8%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	31	199	37	24	225	35	12	9	15	298	45	30
Future Volume (vph)	31	199	37	24	225	35	12	9	15	298	45	30
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Lane Width	11	14	12	12	12	12	12	13	16	12	11	11
Total Lost time (s)	4.0	5.4		4.0	5.4			4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00			1.00	1.00		1.00	0.95
Flpb, ped/bikes	1.00	1.00		0.99	1.00			0.99	1.00		1.00	1.00
Frt	1.00	0.98		1.00	0.98			1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.97	1.00		0.96	1.00
Satd. Flow (prot)	1607	3414		1650	3258			1738	1686		1621	1367
Flt Permitted	0.57	1.00		0.59	1.00			0.85	1.00		0.74	1.00
Satd. Flow (perm)	972	3414		1025	3258			1520	1686		1248	1367
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	34	221	41	27	250	39	13	10	17	331	50	33
RTOR Reduction (vph)	0	16	0	0	14	0	0	0	7	0	0	14
Lane Group Flow (vph)	34	246	0	27	275	0	0	23	10	0	381	19
Confl. Peds. (#/hr)			11	11			55					55
Heavy Vehicles (%)	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Turn Type	D.P+P	NA		D.P+P	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases	1	6		5	2			4			8	
Permitted Phases	2			6			4		4	8		8
Actuated Green, G (s)	16.3	14.0		16.3	13.9			39.2	39.2		39.2	39.2
Effective Green, g (s)	16.3	14.0		16.3	13.9			39.2	39.2		39.2	39.2
Actuated g/C Ratio	0.24	0.20		0.24	0.20			0.57	0.57		0.57	0.57
Clearance Time (s)	4.0	5.4		4.0	5.4			4.0	4.0		4.0	4.0
Vehicle Extension (s)	2.3	5.1		2.3	5.1			5.0	5.0		5.0	5.0
Lane Grp Cap (vph)	252	693		263	657			864	959		710	777
v/s Ratio Prot	c0.00	0.07		0.00	c0.08							
v/s Ratio Perm	0.03			0.02				0.02	0.01		c0.31	0.01
v/c Ratio	0.13	0.36		0.10	0.42			0.03	0.01		0.54	0.02
Uniform Delay, d1	20.5	23.6		20.4	24.0			6.5	6.4		9.2	6.5
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	1.00
Incremental Delay, d2	0.1	0.7		0.1	0.9			0.0	0.0		1.4	0.0
Delay (s)	20.7	24.3		20.5	24.9			6.5	6.4		10.6	6.5
Level of Service	C	C		C	C			A	A		B	A
Approach Delay (s)		23.8			24.5			6.5			10.3	
Approach LOS		C			C			A			B	

Intersection Summary			
HCM 2000 Control Delay	18.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	68.9	Sum of lost time (s)	13.4
Intersection Capacity Utilization	52.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	3.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	85	19	6	2	2	8	168	25	40	164	4
Future Vol, veh/h	2	85	19	6	2	2	8	168	25	40	164	4
Conflicting Peds, #/hr	1	0	12	12	0	1	5	0	0	0	0	5
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	75	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	98	98	98	98	98	98	98	98	98	98	98	98
Heavy Vehicles, %	0	0	0	0	0	0	0	2	0	3	2	0
Mvmt Flow	2	87	19	6	2	2	8	171	26	41	167	4

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	459	469	186	516	458	185	176	0	0	197	0	0
Stage 1	256	256	-	200	200	-	-	-	-	-	-	-
Stage 2	203	213	-	316	258	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.13	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.227	-	-
Pot Cap-1 Maneuver	516	495	861	473	502	862	1412	-	-	1370	-	-
Stage 1	753	699	-	806	739	-	-	-	-	-	-	-
Stage 2	804	730	-	699	698	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	495	473	846	381	479	861	1404	-	-	1370	-	-
Mov Cap-2 Maneuver	495	473	-	381	479	-	-	-	-	-	-	-
Stage 1	744	672	-	801	735	-	-	-	-	-	-	-
Stage 2	794	726	-	569	671	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	13.8	13.1	0.3	1.5
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1404	-	-	514	381	616	1370	-	-
HCM Lane V/C Ratio	0.006	-	-	0.206	0.016	0.007	0.03	-	-
HCM Control Delay (s)	7.6	-	-	13.8	14.6	10.9	7.7	-	-
HCM Lane LOS	A	-	-	B	B	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.8	0	0	0.1	-	-

Intersection	
Intersection Delay, s/veh	12.7
Intersection LOS	B

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	83	27	372	75	8	52
Future Vol, veh/h	83	27	372	75	8	52
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles, %	0	0	1	3	0	0
Mvmt Flow	97	31	433	87	9	60
Number of Lanes	1	1	1	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	2
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	2	0
HCM Control Delay	9.8	14	8.4
HCM LOS	A	B	A

Lane	NBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	0%	100%	0%	13%
Vol Thru, %	83%	0%	0%	87%
Vol Right, %	17%	0%	100%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	447	83	27	60
LT Vol	0	83	0	8
Through Vol	372	0	0	52
RT Vol	75	0	27	0
Lane Flow Rate	520	97	31	70
Geometry Grp	2	7	7	2
Degree of Util (X)	0.618	0.169	0.044	0.094
Departure Headway (Hd)	4.279	6.3	5.088	4.853
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	842	567	699	736
Service Time	2.303	4.063	2.85	2.899
HCM Lane V/C Ratio	0.618	0.171	0.044	0.095
HCM Control Delay	14	10.4	8.1	8.4
HCM Lane LOS	B	B	A	A
HCM 95th-tile Q	4.4	0.6	0.1	0.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	78	631	30	99	482	91	102	134	65	105	102	59
Future Volume (veh/h)	78	631	30	99	482	91	102	134	65	105	102	59
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1736	1723	1709	1695	1723	1750	1736	1723	1723	1736	1723	1723
Adj Flow Rate, veh/h	89	717	34	112	548	103	116	152	74	119	116	67
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	1	2	3	4	2	0	1	2	2	1	2	2
Cap, veh/h	677	1709	81	410	636	119	185	177	86	145	139	81
Arrive On Green	0.35	0.54	0.54	0.05	0.23	0.23	0.11	0.16	0.16	0.09	0.14	0.14
Sat Flow, veh/h	1654	3181	151	1615	2739	513	1654	1093	532	1654	1017	588
Grp Volume(v), veh/h	89	369	382	112	326	325	116	0	226	119	0	183
Grp Sat Flow(s),veh/h/ln	1654	1637	1695	1615	1637	1616	1654	0	1626	1654	0	1605
Q Serve(g_s), s	0.0	13.5	13.5	3.1	19.1	19.3	6.7	0.0	13.5	7.1	0.0	11.1
Cycle Q Clear(g_c), s	0.0	13.5	13.5	3.1	19.1	19.3	6.7	0.0	13.5	7.1	0.0	11.1
Prop In Lane	1.00		0.09	1.00		0.32	1.00		0.33	1.00		0.37
Lane Grp Cap(c), veh/h	677	879	911	410	380	375	185	0	262	145	0	220
V/C Ratio(X)	0.13	0.42	0.42	0.27	0.86	0.87	0.63	0.00	0.86	0.82	0.00	0.83
Avail Cap(c_a), veh/h	677	879	911	509	499	493	298	0	423	265	0	385
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	20.6	13.8	13.8	10.3	36.8	36.9	42.4	0.0	40.8	44.8	0.0	42.0
Incr Delay (d2), s/veh	0.0	1.5	1.4	0.1	21.6	22.5	1.3	0.0	5.6	4.3	0.0	3.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	5.0	5.2	1.0	9.7	9.7	2.8	0.0	5.8	3.1	0.0	4.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	20.6	15.3	15.3	10.4	58.4	59.4	43.7	0.0	46.4	49.2	0.0	45.1
LnGrp LOS	C	B	B	B	E	E	D	A	D	D	A	D
Approach Vol, veh/h		840			763			342			302	
Approach Delay, s/veh		15.8			51.8			45.5			46.7	
Approach LOS		B			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	39.4	27.7	12.8	20.1	8.9	58.2	15.2	17.7
Change Period (Y+Rc), s	4.5	* 4.5	4.0	4.0	4.0	4.5	4.0	4.0
Max Green Setting (Gmax), s	11.0	* 31	16.0	26.0	11.0	30.5	18.0	24.0
Max Q Clear Time (g_c+I1), s	2.0	21.3	9.1	15.5	5.1	15.5	8.7	13.1
Green Ext Time (p_c), s	0.0	1.9	0.0	0.4	0.0	2.8	0.0	0.3

Intersection Summary	
HCM 6th Ctrl Delay	36.7
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

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

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	89	751	113	651	116	226	119	183
v/c Ratio	0.20	0.47	0.32	0.43	0.56	0.81	0.69	0.74
Control Delay	14.1	20.5	13.3	20.9	50.9	56.5	62.4	51.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	14.1	20.5	13.3	20.9	50.9	56.5	62.4	51.7
Queue Length 50th (ft)	22	156	28	142	70	126	74	97
Queue Length 95th (ft)	57	275	70	232	121	186	124	148
Internal Link Dist (ft)		157		159		136		119
Turn Bay Length (ft)	100		85		200			
Base Capacity (vph)	456	1597	417	1524	286	427	254	394
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.20	0.47	0.27	0.43	0.41	0.53	0.47	0.46

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	117	732	53	62	578	304	40	26	52	58	19	58
Future Volume (veh/h)	117	732	53	62	578	304	40	26	52	58	19	58
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.99	0.98		1.00	0.98		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1723	1792	1723	1723	1723	1736	1709	1820	1763	1750	1750	1723
Adj Flow Rate, veh/h	129	804	58	68	635	334	44	29	0	64	21	64
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	1	3	0	4	0	0	2
Cap, veh/h	677	2251	162	482	808	425	119	64		185	51	185
Arrive On Green	0.33	0.70	0.70	0.03	0.39	0.39	0.13	0.13	0.00	0.13	0.13	0.13
Sat Flow, veh/h	1641	3213	232	1641	2064	1085	468	491	1494	926	391	1410
Grp Volume(v), veh/h	129	426	436	68	504	465	73	0	0	85	0	64
Grp Sat Flow(s),veh/h/ln	1641	1702	1742	1641	1637	1512	958	0	1494	1318	0	1410
Q Serve(g_s), s	0.0	10.0	10.0	1.1	27.0	27.0	3.2	0.0	0.0	0.0	0.0	4.1
Cycle Q Clear(g_c), s	0.0	10.0	10.0	1.1	27.0	27.0	9.2	0.0	0.0	6.0	0.0	4.1
Prop In Lane	1.00		0.13	1.00		0.72	0.60		1.00	0.75		1.00
Lane Grp Cap(c), veh/h	677	1193	1221	482	641	592	184	0		236	0	185
V/C Ratio(X)	0.19	0.36	0.36	0.14	0.79	0.79	0.40	0.00		0.36	0.00	0.35
Avail Cap(c_a), veh/h	677	1193	1221	558	763	705	453	0		492	0	451
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	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	19.5	6.0	6.0	4.2	26.7	26.7	42.3	0.0	0.0	40.2	0.0	39.5
Incr Delay (d2), s/veh	0.1	0.8	0.8	0.1	9.4	10.1	3.0	0.0	0.0	2.0	0.0	2.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	3.2	3.3	0.3	11.7	10.9	1.9	0.0	0.0	2.1	0.0	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.5	6.8	6.8	4.3	36.1	36.8	45.3	0.0	0.0	42.2	0.0	41.9
LnGrp LOS	B	A	A	A	D	D	D	A		D	A	D
Approach Vol, veh/h		991			1037			73			149	
Approach Delay, s/veh		8.5			34.3			45.3			42.1	
Approach LOS		A			C			D			D	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	38.3	44.6		17.1	7.4	75.5		17.1
Change Period (Y+Rc), s	* 5.4	* 5.4		4.0	4.0	* 5.4		4.0
Max Green Setting (Gmax), s	* 8	* 47		32.0	8.0	* 47		32.0
Max Q Clear Time (g_c+I1), s	2.0	29.0		11.2	3.1	12.0		8.0
Green Ext Time (p_c), s	0.1	10.1		0.6	0.0	12.7		1.3

Intersection Summary	
HCM 6th Ctrl Delay	23.8
HCM 6th LOS	C

Notes

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

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

Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	129	862	68	969	73	57	85	64
v/c Ratio	0.34	0.37	0.16	0.48	0.28	0.14	0.36	0.18
Control Delay	11.7	11.6	6.7	12.1	34.0	0.7	36.5	1.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	11.7	11.6	6.7	12.1	34.0	0.7	36.5	1.1
Queue Length 50th (ft)	15	111	8	124	43	0	51	0
Queue Length 95th (ft)	56	244	33	268	70	0	80	0
Internal Link Dist (ft)		431		278	337		94	
Turn Bay Length (ft)	196		85			85		50
Base Capacity (vph)	397	2302	461	2004	450	606	404	526
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.32	0.37	0.15	0.48	0.16	0.09	0.21	0.12

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	78	631	30	99	482	91	102	134	65	105	102	59
Future Volume (vph)	78	631	30	99	482	91	102	134	65	105	102	59
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Lane Width	12	12	12	12	12	12	11	11	12	11	11	12
Total Lost time (s)	4.0	4.5		4.0	4.5		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.98		1.00	0.95		1.00	0.95	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1646	3236		1599	3181		1591	1577		1591	1558	
Flt Permitted	0.33	1.00		0.29	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	580	3236		494	3181		1591	1577		1591	1558	
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	89	717	34	112	548	103	116	152	74	119	116	67
RTOR Reduction (vph)	0	3	0	0	12	0	0	20	0	0	23	0
Lane Group Flow (vph)	89	748	0	113	639	0	116	206	0	119	160	0
Confl. Peds. (#/hr)	1					1	1					1
Confl. Bikes (#/hr)						1						2
Heavy Vehicles (%)	1%	2%	3%	4%	2%	0%	1%	2%	2%	1%	2%	2%
Turn Type	D.P+P	NA		D.P+P	NA		Prot	NA		Prot	NA	
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	2			6								
Actuated Green, G (s)	56.1	49.2		56.1	46.7		13.0	16.5		10.9	14.4	
Effective Green, g (s)	56.1	49.2		56.1	46.7		13.0	16.5		10.9	14.4	
Actuated g/C Ratio	0.56	0.49		0.56	0.47		0.13	0.16		0.11	0.14	
Clearance Time (s)	4.0	4.5		4.0	4.5		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	1.0	2.1		1.0	2.1		1.0	1.0		1.0	1.0	
Lane Grp Cap (vph)	425	1592		353	1485		206	260		173	224	
v/s Ratio Prot	0.02	c0.23		0.02	c0.20		0.07	c0.13		c0.07	0.10	
v/s Ratio Perm	0.10			0.16								
v/c Ratio	0.21	0.47		0.32	0.43		0.56	0.79		0.69	0.71	
Uniform Delay, d1	15.4	16.8		11.0	17.8		40.8	40.1		42.9	40.8	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.1	1.0		0.2	0.9		2.1	14.2		8.7	8.6	
Delay (s)	15.5	17.8		11.1	18.7		42.9	54.3		51.6	49.5	
Level of Service	B	B		B	B		D	D		D	D	
Approach Delay (s)		17.5			17.6			50.4			50.3	
Approach LOS		B			B			D			D	

Intersection Summary			
HCM 2000 Control Delay	27.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.5
Intersection Capacity Utilization	58.0%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	117	732	53	62	578	304	40	26	52	58	19	58
Future Volume (vph)	117	732	53	62	578	304	40	26	52	58	19	58
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Lane Width	11	14	12	12	12	12	12	13	16	12	11	11
Total Lost time (s)	4.0	5.4		4.0	5.4			4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00			1.00	1.00		1.00	0.97
Flpb, ped/bikes	1.00	1.00		1.00	1.00			0.99	1.00		1.00	1.00
Frt	1.00	0.99		1.00	0.95			1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.97	1.00		0.96	1.00
Satd. Flow (prot)	1576	3432		1628	3102			1710	1621		1630	1372
Flt Permitted	0.25	1.00		0.29	1.00			0.80	1.00		0.75	1.00
Satd. Flow (perm)	412	3432		505	3102			1409	1621		1263	1372
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	129	804	58	68	635	334	44	29	57	64	21	64
RTOR Reduction (vph)	0	4	0	0	49	0	0	0	47	0	0	53
Lane Group Flow (vph)	129	858	0	68	920	0	0	73	10	0	85	11
Confl. Peds. (#/hr)			9	9			15					15
Confl. Bikes (#/hr)			1									
Heavy Vehicles (%)	2%	2%	2%	2%	2%	1%	3%	0%	4%	0%	0%	2%
Turn Type	D.P+P	NA		D.P+P	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases	1	6		5	2			4			8	
Permitted Phases	2			6			4		4	8		8
Actuated Green, G (s)	69.6	64.4		69.6	61.6			17.0	17.0		17.0	17.0
Effective Green, g (s)	69.6	64.4		69.6	61.6			17.0	17.0		17.0	17.0
Actuated g/C Ratio	0.70	0.64		0.70	0.62			0.17	0.17		0.17	0.17
Clearance Time (s)	4.0	5.4		4.0	5.4			4.0	4.0		4.0	4.0
Vehicle Extension (s)	2.3	5.1		2.3	5.1			5.0	5.0		5.0	5.0
Lane Grp Cap (vph)	379	2210		409	1910			239	275		214	233
v/s Ratio Prot	0.03	c0.25		0.01	c0.30							
v/s Ratio Perm	0.21			0.11				0.05	0.01		c0.07	0.01
v/c Ratio	0.34	0.39		0.17	0.48			0.31	0.04		0.40	0.05
Uniform Delay, d1	11.0	8.5		5.1	10.5			36.3	34.7		36.9	34.7
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	1.00
Incremental Delay, d2	0.3	0.5		0.1	0.9			1.5	0.1		2.5	0.2
Delay (s)	11.3	9.0		5.2	11.4			37.8	34.8		39.5	34.9
Level of Service	B	A		A	B			D	C		D	C
Approach Delay (s)		9.3			11.0			36.5			37.5	
Approach LOS		A			B			D			D	

Intersection Summary			
HCM 2000 Control Delay	13.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	13.4
Intersection Capacity Utilization	62.8%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	6	3	27	7	4	0	87	1	4	197	3
Future Vol, veh/h	0	6	3	27	7	4	0	87	1	4	197	3
Conflicting Peds, #/hr	5	0	9	9	0	5	0	0	2	2	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	75	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	71	71	71	71	71	71	71	71	71	71	71	71
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	1	0
Mvmt Flow	0	8	4	38	10	6	0	123	1	6	277	4

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	-	417	288	432	419	131	-	0	0	126	0	0
Stage 1	-	291	-	126	126	-	-	-	-	-	-	-
Stage 2	-	126	-	306	293	-	-	-	-	-	-	-
Critical Hdwy	-	6.5	6.2	7.1	6.5	6.2	-	-	-	4.1	-	-
Critical Hdwy Stg 1	-	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	-	4	3.3	3.5	4	3.3	-	-	-	2.2	-	-
Pot Cap-1 Maneuver	0	530	756	537	528	924	0	-	-	1473	-	-
Stage 1	0	675	-	883	796	-	0	-	-	-	-	-
Stage 2	0	796	-	708	674	-	0	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	526	750	520	524	917	-	-	-	1470	-	-
Mov Cap-2 Maneuver	-	526	-	520	524	-	-	-	-	-	-	-
Stage 1	-	672	-	883	794	-	-	-	-	-	-	-
Stage 2	-	794	-	686	671	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	11.3	12	0	0.1
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	-	-	584	520	621	1470	-	-
HCM Lane V/C Ratio	-	-	0.022	0.073	0.025	0.004	-	-
HCM Control Delay (s)	-	-	11.3	12.5	10.9	7.5	-	-
HCM Lane LOS	-	-	B	B	B	A	-	-
HCM 95th %tile Q(veh)	-	-	0.1	0.2	0.1	0	-	-

Intersection	
Intersection Delay, s/veh	13.1
Intersection LOS	B

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	48	6	35	48	7	424
Future Vol, veh/h	48	6	35	48	7	424
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79
Heavy Vehicles, %	0	0	3	0	0	0
Mvmt Flow	61	8	44	61	9	537
Number of Lanes	1	1	1	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	2
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	2	0
HCM Control Delay	9.7	8	14.5
HCM LOS	A	A	B

Lane	NBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	0%	100%	0%	2%
Vol Thru, %	42%	0%	0%	98%
Vol Right, %	58%	0%	100%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	83	48	6	431
LT Vol	0	48	0	7
Through Vol	35	0	0	424
RT Vol	48	0	6	0
Lane Flow Rate	105	61	8	546
Geometry Grp	2	7	7	2
Degree of Util (X)	0.127	0.108	0.011	0.641
Departure Headway (Hd)	4.368	6.411	5.197	4.228
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	819	558	687	857
Service Time	2.399	4.158	2.943	2.245
HCM Lane V/C Ratio	0.128	0.109	0.012	0.637
HCM Control Delay	8	9.9	8	14.5
HCM Lane LOS	A	A	A	B
HCM 95th-tile Q	0.4	0.4	0	4.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	26	255	40	44	276	22	43	52	33	111	56	89
Future Volume (veh/h)	26	255	40	44	276	22	43	52	33	111	56	89
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.98	0.99		0.98	1.00		0.98	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1750	1736	1750	1750	1723	1750	1682	1750	1750	1736	1750	1709
Adj Flow Rate, veh/h	30	293	46	51	317	25	49	60	38	128	64	102
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	0	1	0	0	2	0	5	0	0	1	0	3
Cap, veh/h	405	754	117	428	818	64	145	176	111	159	108	172
Arrive On Green	0.03	0.26	0.26	0.04	0.27	0.27	0.09	0.18	0.18	0.10	0.18	0.18
Sat Flow, veh/h	1667	2855	443	1667	3071	241	1602	993	629	1654	593	945
Grp Volume(v), veh/h	30	168	171	51	168	174	49	0	98	128	0	166
Grp Sat Flow(s),veh/h/ln	1667	1650	1649	1667	1637	1675	1602	0	1621	1654	0	1538
Q Serve(g_s), s	0.0	3.3	3.4	0.9	3.3	3.3	1.1	0.0	2.1	3.0	0.0	3.9
Cycle Q Clear(g_c), s	0.0	3.3	3.4	0.9	3.3	3.3	1.1	0.0	2.1	3.0	0.0	3.9
Prop In Lane	1.00		0.27	1.00		0.14	1.00		0.39	1.00		0.61
Lane Grp Cap(c), veh/h	405	436	435	428	436	446	145	0	287	159	0	281
V/C Ratio(X)	0.07	0.38	0.39	0.12	0.39	0.39	0.34	0.00	0.34	0.81	0.00	0.59
Avail Cap(c_a), veh/h	994	1678	1677	991	1664	1703	611	0	618	631	0	587
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	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	12.7	11.9	11.9	9.9	11.8	11.8	16.8	0.0	14.2	17.4	0.0	14.7
Incr Delay (d2), s/veh	0.0	0.3	0.3	0.0	0.3	0.3	0.5	0.0	0.3	3.6	0.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	1.0	1.0	0.2	1.0	1.0	0.4	0.0	0.7	1.2	0.0	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	12.7	12.1	12.1	9.9	12.0	12.1	17.3	0.0	14.4	21.0	0.0	15.5
LnGrp LOS	B	B	B	A	B	B	B	A	B	C	A	B
Approach Vol, veh/h		369			393			147			294	
Approach Delay, s/veh		12.2			11.8			15.4			17.9	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.6	15.0	7.8	11.0	5.7	14.9	7.6	11.2
Change Period (Y+Rc), s	4.5	* 4.5	4.0	4.0	4.0	4.5	4.0	4.0
Max Green Setting (Gmax), s	15.0	* 40	15.0	15.0	15.0	40.0	15.0	15.0
Max Q Clear Time (g_c+I1), s	2.0	5.3	5.0	4.1	2.9	5.4	3.1	5.9
Green Ext Time (p_c), s	0.0	1.3	0.0	0.1	0.0	1.3	0.0	0.3

Intersection Summary	
HCM 6th Ctrl Delay	13.8
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

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

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	30	339	51	342	49	98	128	166
v/c Ratio	0.06	0.26	0.11	0.26	0.18	0.27	0.44	0.32
Control Delay	12.3	16.3	12.9	17.3	19.7	16.2	26.1	14.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	12.3	16.3	12.9	17.3	19.7	16.2	26.1	14.8
Queue Length 50th (ft)	2	25	7	26	9	12	22	9
Queue Length 95th (ft)	26	108	38	116	41	59	107	100
Internal Link Dist (ft)		157		159		136		119
Turn Bay Length (ft)	100		85		200			
Base Capacity (vph)	903	2778	759	2792	666	702	654	677
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.12	0.07	0.12	0.07	0.14	0.20	0.25

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	35	331	26	22	224	32	12	15	27	338	17	116
Future Volume (veh/h)	35	331	26	22	224	32	12	15	27	338	17	116
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.98	0.99		0.98	0.99		1.00	0.98		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1709	1820	1695	1750	1695	1750	1750	1820	1820	1750	1750	1750
Adj Flow Rate, veh/h	43	404	32	27	273	39	15	18	0	412	21	141
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Percent Heavy Veh, %	3	0	4	0	4	0	0	0	0	0	0	0
Cap, veh/h	370	860	68	327	718	101	105	87		486	18	630
Arrive On Green	0.04	0.27	0.27	0.03	0.25	0.25	0.44	0.44	0.00	0.44	0.44	0.44
Sat Flow, veh/h	1628	3241	256	1667	2825	398	0	198	1542	782	40	1428
Grp Volume(v), veh/h	43	215	221	27	154	158	33	0	0	433	0	141
Grp Sat Flow(s),veh/h/ln	1628	1729	1768	1667	1611	1613	198	0	1542	822	0	1428
Q Serve(g_s), s	1.0	5.2	5.2	0.6	3.9	4.0	0.0	0.0	0.0	0.0	0.0	3.1
Cycle Q Clear(g_c), s	1.0	5.2	5.2	0.6	3.9	4.0	22.0	0.0	0.0	22.0	0.0	3.1
Prop In Lane	1.00		0.14	1.00		0.25	0.45		1.00	0.95		1.00
Lane Grp Cap(c), veh/h	370	459	469	327	409	410	192	0		504	0	630
V/C Ratio(X)	0.12	0.47	0.47	0.08	0.38	0.38	0.17	0.00		0.86	0.00	0.22
Avail Cap(c_a), veh/h	736	1387	1418	787	1292	1294	192	0		504	0	630
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	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	13.1	15.4	15.4	13.1	15.3	15.4	11.8	0.0	0.0	15.7	0.0	8.6
Incr Delay (d2), s/veh	0.1	1.7	1.7	0.1	1.3	1.3	0.9	0.0	0.0	15.0	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	1.9	2.0	0.2	1.4	1.4	0.2	0.0	0.0	6.7	0.0	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.2	17.0	17.0	13.1	16.6	16.7	12.7	0.0	0.0	30.8	0.0	9.0
LnGrp LOS	B	B	B	B	B	B	B	A		C	A	A
Approach Vol, veh/h		479			339			33			574	
Approach Delay, s/veh		16.7			16.4			12.7			25.4	
Approach LOS		B			B			B			C	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.8	18.1		26.0	5.2	18.6		26.0
Change Period (Y+Rc), s	4.0	* 5.4		4.0	4.0	* 5.4		4.0
Max Green Setting (Gmax), s	13.0	* 40		20.0	15.0	* 40		22.0
Max Q Clear Time (g_c+I1), s	3.0	6.0		24.0	2.6	7.2		24.0
Green Ext Time (p_c), s	0.0	3.8		0.0	0.0	5.4		0.0

Intersection Summary	
HCM 6th Ctrl Delay	20.0
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

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

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

Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	43	436	27	312	33	33	433	141
v/c Ratio	0.11	0.46	0.08	0.36	0.08	0.06	0.73	0.20
Control Delay	12.3	19.2	12.0	18.0	13.3	0.8	23.5	6.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	12.3	19.2	12.0	18.0	13.3	0.8	23.5	6.5
Queue Length 50th (ft)	10	58	6	38	9	0	84	8
Queue Length 95th (ft)	23	104	17	75	21	1	#273	41
Internal Link Dist (ft)		431		278	337		94	
Turn Bay Length (ft)	196		85			85		50
Base Capacity (vph)	491	2635	545	2498	702	820	592	704
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.09	0.17	0.05	0.12	0.05	0.04	0.73	0.20

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	26	255	40	44	276	22	43	52	33	111	56	89
Future Volume (vph)	26	255	40	44	276	22	43	52	33	111	56	89
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Lane Width	12	12	12	12	12	12	11	11	12	11	11	12
Total Lost time (s)	4.0	4.5		4.0	4.5		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.99		1.00	0.94		1.00	0.91	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1662	3216		1656	3229		1531	1582		1591	1493	
Flt Permitted	0.55	1.00		0.55	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	956	3216		955	3229		1531	1582		1591	1493	
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Adj. Flow (vph)	30	293	46	51	317	25	49	60	38	128	64	102
RTOR Reduction (vph)	0	14	0	0	6	0	0	22	0	0	51	0
Lane Group Flow (vph)	30	325	0	51	336	0	49	76	0	128	115	0
Confl. Peds. (#/hr)			8	8					12	12		
Confl. Bikes (#/hr)												4
Heavy Vehicles (%)	0%	1%	0%	0%	2%	0%	5%	0%	0%	1%	0%	3%
Turn Type	D.P+P	NA		D.P+P	NA		Prot	NA		Prot	NA	
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	2			6								
Actuated Green, G (s)	17.7	16.0		17.7	15.8		4.0	7.0		8.5	11.5	
Effective Green, g (s)	17.7	16.0		17.7	15.8		4.0	7.0		8.5	11.5	
Actuated g/C Ratio	0.36	0.32		0.36	0.32		0.08	0.14		0.17	0.23	
Clearance Time (s)	4.0	4.5		4.0	4.5		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	1.0	2.1		1.0	2.1		1.0	1.0		1.0	1.0	
Lane Grp Cap (vph)	367	1035		364	1026		123	222		272	345	
v/s Ratio Prot	0.00	c0.10		0.00	c0.10		0.03	0.05		c0.08	c0.08	
v/s Ratio Perm	0.03			0.05								
v/c Ratio	0.08	0.31		0.14	0.33		0.40	0.34		0.47	0.33	
Uniform Delay, d1	10.6	12.7		10.6	12.9		21.7	19.3		18.6	15.9	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.0	0.1		0.1	0.1		0.8	0.3		0.5	0.2	
Delay (s)	10.7	12.8		10.7	13.0		22.5	19.6		19.0	16.1	
Level of Service	B	B		B	B		C	B		B	B	
Approach Delay (s)		12.6			12.7			20.6			17.4	
Approach LOS		B			B			C			B	

Intersection Summary			
HCM 2000 Control Delay	14.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	49.7	Sum of lost time (s)	16.5
Intersection Capacity Utilization	44.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	35	331	26	22	224	32	12	15	27	338	17	116
Future Volume (vph)	35	331	26	22	224	32	12	15	27	338	17	116
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Lane Width	11	14	12	12	12	12	12	13	16	12	11	11
Total Lost time (s)	4.0	5.4		4.0	5.4			4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00			1.00	1.00		1.00	0.96
Flpb, ped/bikes	1.00	1.00		1.00	1.00			0.99	1.00		1.00	1.00
Frt	1.00	0.99		1.00	0.98			1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.98	1.00		0.95	1.00
Satd. Flow (prot)	1560	3488		1656	3152			1756	1686		1615	1376
Flt Permitted	0.56	1.00		0.47	1.00			0.85	1.00		0.71	1.00
Satd. Flow (perm)	923	3488		822	3152			1522	1686		1205	1376
Peak-hour factor, PHF	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Adj. Flow (vph)	43	404	32	27	273	39	15	18	33	412	21	141
RTOR Reduction (vph)	0	9	0	0	17	0	0	0	17	0	0	41
Lane Group Flow (vph)	43	427	0	27	295	0	0	33	16	0	433	100
Confl. Peds. (#/hr)			11	11			55					55
Heavy Vehicles (%)	3%	0%	4%	0%	4%	0%	0%	0%	0%	0%	0%	0%
Turn Type	D.P+P	NA		D.P+P	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases	1	6		5	2			4			8	
Permitted Phases	2			6			4		4	8		8
Actuated Green, G (s)	17.0	15.0		17.0	14.8			27.2	27.2		27.2	27.2
Effective Green, g (s)	17.0	15.0		17.0	14.8			27.2	27.2		27.2	27.2
Actuated g/C Ratio	0.30	0.26		0.30	0.26			0.47	0.47		0.47	0.47
Clearance Time (s)	4.0	5.4		4.0	5.4			4.0	4.0		4.0	4.0
Vehicle Extension (s)	2.3	5.1		2.3	5.1			5.0	5.0		5.0	5.0
Lane Grp Cap (vph)	296	908		271	809			718	796		569	649
v/s Ratio Prot	c0.01	c0.12		0.00	0.09							
v/s Ratio Perm	0.04			0.03				0.02	0.01		c0.36	0.07
v/c Ratio	0.15	0.47		0.10	0.36			0.05	0.02		0.76	0.15
Uniform Delay, d1	14.7	18.0		14.6	17.5			8.2	8.1		12.5	8.7
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	1.00
Incremental Delay, d2	0.1	0.8		0.1	0.6			0.1	0.0		7.0	0.2
Delay (s)	14.8	18.8		14.6	18.2			8.3	8.1		19.5	8.9
Level of Service	B	B		B	B			A	A		B	A
Approach Delay (s)		18.4			17.9			8.2			16.9	
Approach LOS		B			B			A			B	

Intersection Summary			
HCM 2000 Control Delay	17.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	57.6	Sum of lost time (s)	13.4
Intersection Capacity Utilization	55.1%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			