Office of Transportation and Infrastructure Systems

Memorandum

December 19, 2024

To: Kelley Yemen, AICP
From: James Lentz, EIT
CC: Jeannette Brugger, AICP, Adam Smith, PE, PTOE
Subject: **47th Street Traffic Analysis**

Executive Summary

The Office of Multimodal Planning (OMP) conducted a planning and analysis effort for a redesign of 47th Street, a High Injury Network corridor. The proposed redesign aims to enhance safety and multimodal functionality by converting a segment of 47th Street (Chestnut Street to Kingsessing) to one-way northbound vehicular traffic and introducing a southbound, contraflow, parking-separated bike lane. The project is slated for implementation in 2025 as part of scheduled repaving.

Analysis Results

Traffic analysis, leveraging industry-standard Synchro modeling software, assessed the impacts of diverted traffic on the surrounding road network during AM and PM peak periods. Traffic volumes were collected through video and in-person turning movement counts, adhering to traffic engineering practices. Existing signal timings were used in both existing and proposed models.

Road Network has Excess Capacity to Absorb Diverted Traffic

Both AM and PM peak-hour scenarios showed that nearby intersections have adequate capacity to absorb diverted traffic. Redistributing southbound 47th Street traffic even reduces pressure on some bottlenecks near Grays Ferry Bridge, reducing delay for some movements

Level of Service Within Acceptable Range

Level of Service (LOS) results in the proposed model remain within the acceptable range, indicating manageable delay experienced by drivers. Analysis revealed LOS A to D across all intersections.

Traffic Simulation Results

While SimTraffic simulations identified potential delays for southbound traffic on 49th Street during the PM peak, real-world impacts may be less significant than modeled, given model calibration challenges.

Introduction

47th Street will be repaved in 2025. The corridor, from Grays Ferry Bridge to Chestnut Street, is part of the High Injury Network. As part of this repaving process, The Office of Multimodal Planning (OMP) conducted a planning and analysis effort to determine ways to alter the design of 47th Street for improved safety.

The proposed design alters 47th Street from Chestnut Street to Kingsessing Avenue to have one-way northbound vehicular traffic. Southbound vehicular traffic would reroute to parallel streets. The excess space would be utilized to provide a contraflow parking-separated bike lane southbound. The existing and proposed cross-sections can be found below in Figures 1-4. The curb-to-curb width of 47th Street is 34 feet north of Baltimore Avenue and 40 feet south of Baltimore Avenue.

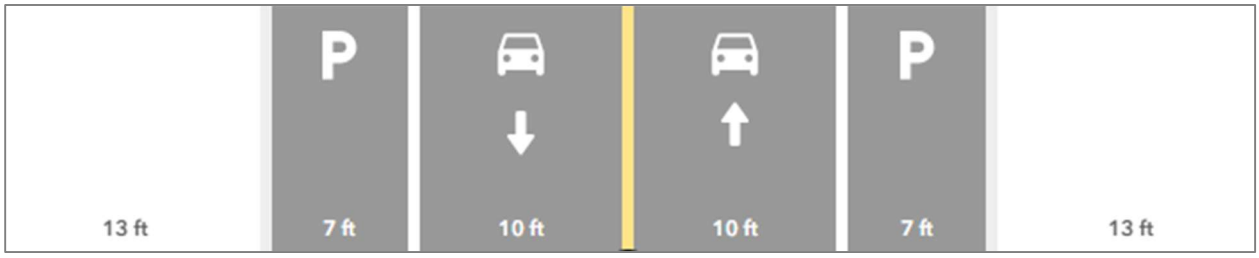


Figure 1: Existing 47th Street cross-section (Chestnut Street – Baltimore Avenue)

Figure 2: Proposed 47th Street cross-section (Chestnut Street – Baltimore Avenue)

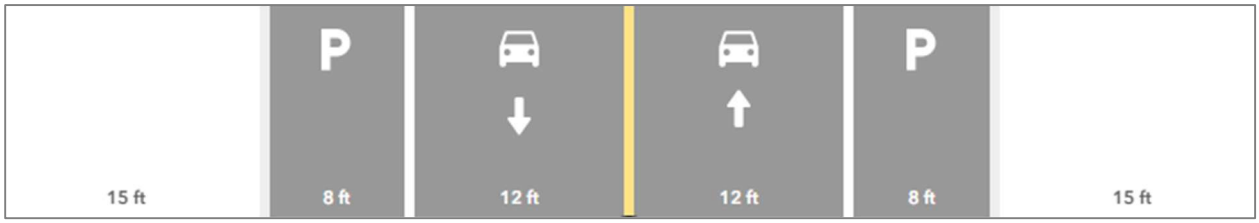


Figure 3: Existing 47th Street cross-section (Baltimore Avenue – Kingsessing Avenue)

Figure 4: Proposed 47th Street cross-section (Baltimore Avenue - Kingsessing Avenue)

Traffic Analysis

Traffic analysis was conducted by City staff using industry-standard Synchro 11.1 for macro-level modeling and SimTraffic 11.1 for microsimulation. Two models were produced: an existing conditions model, with current conditions of the road network, and a proposed conditions model, reflecting the conversion of 47th Street to one-way northbound with diverted traffic volumes redistributed. Each model includes an AM peak hour analysis and a PM peak hour analysis.

Traffic Model Inputs

The critical inputs for a traffic model are the road network itself, the traffic volumes for each movement at intersections within the area of concern, and the signal timings for those intersections.

Road Network

The Synchro model of existing conditions was created based on aerial imagery, checked against City records, and confirmed by area residents. The model of the proposed conditions was then built upon that model using the conceptual designs presented to the public.

The project area was divided into three regions within the single model to balance staffing limitations with the need to analyze a large network:

- Chestnut Street (49th Street to 47th Street) and Walnut Street (48th Street to 46th Street)
- Baltimore Avenue (49th Street to 46th Street/Cedar Avenue)
- Kingsessing Avenue (49th Street to 46th Street), Greenway Avenue (49th Street), Woodland Avenue (49th Street to 46th Street), and Paschall Avenue (49th Street to 47th Street)

These three regions encompass the major intersections where diverted volumes are expected to have the greatest impact. The additional delay for turning movements—particularly left turns—at these intersections are the critical impact requiring analysis.

To reflect real-world driver behavior, large intersections where drivers regularly bypass traffic waiting to turn were given pocket turn lanes in the model. To illustrate, at the intersection of 47th Street and Baltimore Avenue, as many as four left-turning cars may queue beyond the stop bar while through vehicles pass on the right (see below). Without these pocket turn lanes, the existing conditions model would show unrealistic queuing and resulting delay, and the proposed conditions model would not

accurately reflect the impacts of diverting northbound 47th Street traffic. The length of pocket turn lanes were determined by

Figure 5. Diagram of through vehicles passing a queue of left-turning vehicles at 47th & Baltimore. This observable, real-world behavior is reflected in the model through artificial pocket turn lanes.

Volumes

Traffic volumes are simply the quantity of vehicles making a given movement (e.g., a left turn). The following table details the analyzed intersections and the source, date, and time City staff and our partners collected volumes at that intersection. Following traffic engineering best practices, volumes were collected in 15-minute increments on Tuesday, Wednesday, or Thursday on days likely unaffected by holiday shifts in traffic patterns. Counts included pedestrian and bicyclist movements. Volumes were collected in one of two ways, for various purposes:

In-person turning movement counts are conducted by City staff on location, using traffic counting software. These counts are focused on intersections and collect the direction of travel and movement (left/through/right) for each driver entering the intersection within the count period. These counts also collect whether the vehicle is a passenger vehicle or heavy vehicle (large trucks and buses) as well as counting the movements of pedestrians and cyclists. As these counts are human-collected, they are normally taken for shorter periods of 1-2 hours.

Camera turning movement counts are similar to in-person counts, but they are accomplished by reviewing a recording from a camera positioned such that it captures all intersection approaches. The City has a contract with the Delaware Valley Regional Planning Commission (DVRPC) to provide video turning movement counts.

Counts were taken in either 2023 or 2024 as volume data acquired for other projects was re-used, with remaining intersections either counted by the contractor or City staff. Volumes at 49th Street and

Baltimore Avenue were initially collected via video counts on September 10, 2024. Due to an unanticipated street closure on 49th Street north of Baltimore Avenue, City staff recounted volumes during the AM peak in-person on October 17, 2024.

Volumes at the stop-controlled/free intersection of 48th Street and Grays Ferry Avenue were balanced with the counts at adjacent intersections.

Table 1: Volume Collection Details

	Street 1	Street 2	Control Type	Source	AM Date	AM Time[a]	PM Date	PM Time[a]
1	49th	Chestnut	Signal	Video	09/26/24	7-9am	09/26/24	3-6pm
2	49th	Baltimore[b]	Signal	In-person Video	10/17/24 -	7-9am -	- 09/10/24	- 4-6pm
3	49th	Kingsessing	Signal	In-person	11/28/23	7-9am	11/29/23	4-6pm
4	49th	Greenway	Signal	In-person	11/28/23	7-9am	11/29/23	4-6pm
5	49th	Woodland	Signal	In-person	11/28/23	7-9am	11/29/23	4-6pm
6	49th	Paschall	Signal	In-person	11/28/23	7-9am	11/29/23	4-6pm
7	48th	Chestnut	Signal	In-person	09/17/24	7-9am	09/17/24	4-6pm
8	48th	Walnut	Signal	In-person	08/31/23	8:30-9:30am	08/31/23	5-6pm
9	48th	Baltimore	Signal	In-person	10/11/23	7:30-8:30am	10/11/23	4:15-5pm
10	48th	Kingsessing	Stop	Video	10/08/24	7-9am	10/08/23	3-6pm
11	48th	Woodland	Signal	In-person	11/28/23	7-9am	11/28/23	4-6pm
12	47th	Chestnut	Signal	Video	09/26/24	7-9am	09/26/24	3-6pm
13	47th	Walnut	Signal	In-person	09/17/24	7-9am	09/17/24	4-6pm
14	47th	Baltimore	Signal	In-person	09/17/24	7-9am	09/17/23	4-6pm
15	47th	Kingsessing	Signal	In-person	09/17/24	7-9am	09/17/24	4-6pm
16	47th	Woodland	Signal	In-person	11/28/23	7-9am	11/29/23	4-6pm
17	47th	Paschall	Stop	In-person	11/28/23	7-9am	11/29/23	4-6pm
18	46th	Walnut	Signal	In-person	09/17/24	7-9am	09/17/24	4-6pm
19	46th	Cedar	Signal	Video	10/11/23	6am-12pm	10/11/23	12pm-7pm
20	46th	Baltimore	Signal	Video	10/11/23	6am-12pm	10/11/23	12pm-7pm
21	46th	Kingsessing	Signal	In-person	09/17/24	7-9am	09/17/24	4-6pm
22	46th	Woodland	Signal	In-person	09/17/24	7-9am	09/17/24	4-6pm
23	Walnut	Farragut	Signal	In-person	11/13/24	7:30-8:30am	11/13/24	4:15-5:15pm
24	Grays Ferry	Woodland	Free	In-person	11/28/23	7-9am	11/29/23	4-6pm
25	Grays Ferry	Paschall	Signal	In-person	11/28/23	7-9am	11/29/23	4-6pm

[a] Times shown are the full duration of counts. Peak hours were selected by analyzing network-wide volumes.
[b] AM counts were in-person and PM volumes were collected by video due to a street closure necessitating a recount.

Traffic Signal Timings

OTIS staff obtained signal timings from the City's signal database. The Streets Traffic Unit confirmed the signal timings were current.

Process

City staff analyzed volumes from traffic counts to identify network-wide AM and PM peak hours. The City used R (a scripting language) and Excel to convert the raw data into a form appropriate for entry into Synchro. Once converted, staff then entered the peak-hour volumes into the existing-conditions Synchro model.

To analyze diverted volumes, an Excel spreadsheet mapping modeled intersections with existing volumes was created. Staff identified potential alternative routes and redistributed diverted traffic among three primary southbound routes: 49th Street, 48th Street, and 46th Street. The Excel spreadsheet documents assumptions. Generally, the analysis assumes:

- Eastbound travelers would be heading to Grays Ferry Bridge—this is the conservative approach, as limited access to the bridge creates bottlenecks and realistically many drivers are not traveling the entire length of the studied corridors.
- Drivers would thus favor 49th Street, as it is the most complete route to the Grays Ferry Bridge.
- Drivers would typically favor turning earlier rather than later and would seek the shortest route, disregarding traffic volumes. Again, this is conservative, as real-world drivers would adjust behavior based on observed queuing and experienced delay.

Specifics of how traffic on 47th Street was redistributed are shown in the table below.

Table 2.Distribution of traffic volumes diverted from 47th Street among alternative southbound routes

			Proportion of traffic volumes diverted, by southbound route		
Intersecting Street	Direction	Movement	46th Street	48th Street	49th Street
Chestnut St	Eastbound	Right Turn	-	1/3	2/3
Walnut St	Westbound	Left Turn	2/3	1/3	-
Walnut St	Southbound	Right Turn	-	All	-
Walnut St	Southbound	Through	-[a]	-[a]	-[a]
Baltimore Ave	Southbound	Right Turn	-	All	-
Baltimore Ave	Southbound	Through	3/8	1/3 x 5/8	2/3 x 5/8
Baltimore Ave	Southbound	Left Turn	All	-	-
Baltimore Ave	Eastbound	Right Turn	-	1/3	2/3
Baltimore Ave	Westbound	Left Turn	All	-	-
Kingsessing Ave	Southbound	Left Turn	All	-	-
Kingsessing Ave	Southbound	Through	3/8	-	5/8[b]
Kingsessing Ave	Southbound	Right Turn	All	-	-

[a] Assuming southbound volumes at Walnut St are accounted for by volumes diverted from the eastbound right turn at Chestnut St.
[a] Volumes diverted to 49th St distributed among subsequent routes to Grays Ferry Bridge based on proportional existing volumes.

New volumes were calculated in the spreadsheet based on the above diversions. Southbound diverted volumes were carried through each intersection until reaching the Grays Ferry Bridge. Adjusted volumes were then entered into the proposed Synchro model.

Signal timings were not adjusted for new volumes. This is conservative, as more green time could be dedicated to overloaded movements and signals could be coordinated across corridors, so drivers encounter fewer red signals.

Analysis & Results

15-minute volumes at each intersection were summed and AM and PM peaks were identified as the 60-minute interval with the highest total volume. This method identified the AM peak as 7:30 to 8:30 and the PM peak as 4:15 to 5:15. Where peak-hour volumes were unavailable, volumes for the intersection peak were used.

Synchro calculated Level of Service (LOS) results for each intersection and movement using HCM6 methodology where available. At intersections with non-NEMA phasing, Synchro's native results were used. The reports are available in . LOS is an industry-standard engineering metric that assigns a letter (A through F) based on the delay experienced by motor vehicle users, with A indicating the least delay and F indicating the most. Despite the implications, LOS is not a letter grade—LOS A is undesirable as it indicates excess capacity, which has negative safety implications. Traffic engineers generally consider

LOS D or lower appropriate. City standards identify LOS D or lower as desirable for intersections and LOS E or lower desirable for individual movements.

LOS results for the intersections within the study are shown in the table below. LOS between A and C (with one LOS D) in the existing condition indicate excess capacity capable of absorbing diverted traffic. Proposed condition LOS results show no significant increase in delay. Some intersections and movements even see improvements with the diversion of southbound 47th Street traffic, as redistributing those volumes among alternative routes relieves some pressure on bottlenecks fed by 47th Street near the Grays Ferry Bridge. The effect is most significant for the southwest-bound movement on Paschall Avenue at Grays Ferry Avenue, where the existing condition is LOS F and the proposed condition is LOS C/D. The full Measures of Effectiveness (MOE) tables, detailing LOS by intersection and movement, are in Appendix B.

Table 3.Intersection Level of Service Results

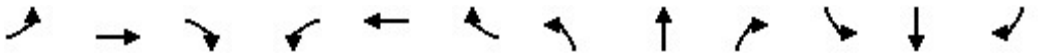
	Existing Conditions				Proposed Conditions			
	AM Peak		PM Peak		AM Peak		PM Peak	
Intersection	LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)
49th & Chestnut	B	14.1	B	13.0	B	14.2	B	13.0
48th & Chestnut	B	16.2	B	15.6	B	15.9	B	15.4
47th & Chestnut	A	6.8	A	5.3	A	6.3	A	4.6
48th & Walnut	B	20.0	C	25.8	C	21.1	C	28.6
47th & Walnut	B	10.9	B	10.8	B	17.1	B	10.4
Farragut & Walnut	B	11.8	B	15.1	A	5.2	B	14.4
46th & Walnut	B	10.6	B	11.3	B	10.7	B	11.3
49th & Baltimore	B	14.7	B	15.3	B	16.8	B	17.9
48th & Baltimore	B	15.4	B	16.1	B	17.0	B	19.3
47th & Baltimore	B	10.8	B	11.1	A	5.8	A	6.5
46th & Baltimore	B	14.1	B	13.1	B	14.5	B	14.1
46th & Cedar Ave	A	7.9	B	15.2	B	12.9	C	26.4
49th & Kingsessing	A	8.8	A	9.5	A	9.8	B	11.2
48th & Kingsessing	A	9.5	A	8.7	A	9.5	A	8.8
47th & Kingsessing	B	14.6	B	16.8	B	13.5	B	16.3
46th & Kingsessing	B	14.4	B	11.3	B	12.4	B	12.7
49th & Greenway	B	14.0	B	15.5	B	15.5	B	17.2
49th & Woodland	B	17.1	B	16.0	B	18.6	C	20.9
48th & Woodland	B	19.3	C	21.7	C	20.3	C	22.0
47th & Woodland	C	21.9	C	21.3	C	22.4	C	21.3
46th & Woodland	B	10.2	A	9.7	B	10.2	A	9.7
49th & Paschall	B	17.4	B	18.3	B	17.4	B	18.2
Grays Ferry & Paschall	C	27.4	D	47.8	C	21.9	C	24.3
47th & Paschall	C	17.1	C	19.9	B	16.3	B	18.7

Following best practices, five SimTraffic simulations were run, with results averaged. Each simulation seeded for 15 minutes then recorded for 60 minutes. Analysts attempted to calibrate the existing conditions model to current observable traffic conditions but were unable to get within an acceptable range of the real-world results due to unrealistic queuing at key intersections. Consequently, the SimTraffic results should be viewed skeptically. The full reports are in . Based on these SimTraffic results, southbound drivers on 49th Street may experience some delay in the PM peak hour (4:15-5:15).

Conclusion

Traffic analysis suggests that the impacts of the one-way conversion can be absorbed by adjacent streets in the road network.

Appendix A: Synchro Reports



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	58	151	11	3	21	3	7	85	9	4	65	24
Future Volume (veh/h)	58	151	11	3	21	3	7	85	9	4	65	24
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.98		0.96	0.99		0.96	0.98		0.98	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	2018	2067	2067	2067	2018	2067	2067	2067	1920	2067	2067	2067
Adj Flow Rate, veh/h	65	170	12	3	24	3	8	96	10	4	73	27
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	5	2	2	2	5	2	2	2	11	2	2	2
Cap, veh/h	281	716	47	118	847	100	81	576	57	70	458	163
Arrive On Green	0.17	0.17	0.17	0.52	0.52	0.52	0.32	0.32	0.32	0.32	0.32	0.32
Sat Flow, veh/h	390	1364	90	99	1613	190	52	1772	175	23	1410	502
Grp Volume(v), veh/h	247	0	0	30	0	0	114	0	0	104	0	0
Grp Sat Flow(s),veh/h/ln	1844	0	0	1902	0	0	1999	0	0	1935	0	0
Q Serve(g_s), s	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	6.3	0.0	0.0	0.4	0.0	0.0	2.4	0.0	0.0	2.3	0.0	0.0
Prop In Lane	0.26		0.05	0.10		0.10	0.07		0.09	0.04		0.26
Lane Grp Cap(c), veh/h	1044	0	0	1065	0	0	714	0	0	691	0	0
V/C Ratio(X)	0.24	0.00	0.00	0.03	0.00	0.00	0.16	0.00	0.00	0.15	0.00	0.00
Avail Cap(c_a), veh/h	1044	0	0	1065	0	0	714	0	0	691	0	0
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	14.4	0.0	0.0	6.9	0.0	0.0	14.5	0.0	0.0	14.4	0.0	0.0
Incr Delay (d2), s/veh	0.5	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.5	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	5.4	0.0	0.0	0.3	0.0	0.0	2.0	0.0	0.0	1.9	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	14.9	0.0	0.0	6.9	0.0	0.0	15.0	0.0	0.0	14.9	0.0	0.0
LnGrp LOS	B	A	A	A	A	A	B	A	A	B	A	A
Approach Vol, veh/h		247			30			114			104	
Approach Delay, s/veh		14.9			6.9			15.0			14.9	
Approach LOS		B			A			B			B	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		24.0		36.0		24.0		36.0				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		18.0		30.0		18.0		30.0				
Max Q Clear Time (g_c+I1), s		0.0		0.0		0.0		0.0				
Green Ext Time (p_c), s		0.0		0.0		0.0		0.0				

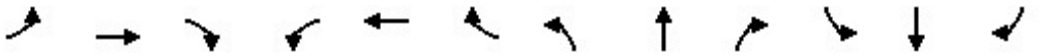
Intersection Summary												
HCM 6th Ctrl Delay			14.4									
HCM 6th LOS			B									

HCM 6th Edition methodology does not support more than 4 approaches.

HCM 6th Edition methodology does not support Non-NEMA phasing.

HCM 6th Edition methodology does not support more than 4 approaches.

HCM 6th Edition methodology does not support clustered intersections.



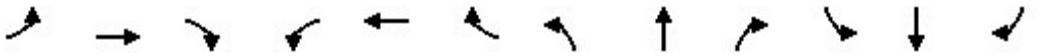
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	33	647	51	28	285	0	0	214	91
Future Volume (veh/h)	0	0	0	33	647	51	28	285	0	0	214	91
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		0.97	0.99		1.00	1.00		0.99
Parking Bus, Adj				0.90	1.00	0.90	1.00	1.00	1.00	1.00	1.00	0.90
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1697	1960	1976	1979	1995	0	0	1992	1927
Adj Flow Rate, veh/h				38	752	59	33	331	0	0	249	106
Peak Hour Factor				0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %				21	5	4	7	6	0	0	3	7
Cap, veh/h				75	1558	129	93	561	0	0	406	173
Arrive On Green				0.17	0.17	0.17	0.34	0.34	0.00	0.00	0.34	0.34
Sat Flow, veh/h				148	3064	253	81	1642	0	0	1188	506
Grp Volume(v), veh/h				450	0	399	364	0	0	0	0	355
Grp Sat Flow(s),veh/h/ln				1756	0	1709	1723	0	0	0	0	1694
Q Serve(g_s), s				14.0	0.0	12.6	0.8	0.0	0.0	0.0	0.0	10.5
Cycle Q Clear(g_c), s				14.0	0.0	12.6	11.3	0.0	0.0	0.0	0.0	10.5
Prop In Lane				0.08		0.15	0.09		0.00	0.00		0.30
Lane Grp Cap(c), veh/h				893	0	869	654	0	0	0	0	579
V/C Ratio(X)				0.50	0.00	0.46	0.56	0.00	0.00	0.00	0.00	0.61
Avail Cap(c_a), veh/h				893	0	869	654	0	0	0	0	579
HCM Platoon Ratio				0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh				18.1	0.0	17.5	16.0	0.0	0.0	0.0	0.0	16.4
Incr Delay (d2), s/veh				2.0	0.0	1.7	3.4	0.0	0.0	0.0	0.0	4.8
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln				11.1	0.0	10.0	7.7	0.0	0.0	0.0	0.0	8.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				20.1	0.0	19.3	19.4	0.0	0.0	0.0	0.0	21.2
LnGrp LOS				C	A	B	B	A	A	A	A	C
Approach Vol, veh/h					849			364			355	
Approach Delay, s/veh					19.7			19.4			21.2	
Approach LOS					B			B			C	

Timer - Assigned Phs	2	4	6
Phs Duration (G+Y+Rc), s	25.0	35.0	25.0
Change Period (Y+Rc), s	6.0	* 6	6.0
Max Green Setting (Gmax), s	19.0	* 29	19.0
Max Q Clear Time (g_c+I1), s	0.0	0.0	0.0
Green Ext Time (p_c), s	0.0	0.0	0.0

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

Notes

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	34	747	27	52	105	0	0	114	25
Future Volume (veh/h)	0	0	0	34	747	27	52	105	0	0	114	25
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		0.98	0.96		1.00	1.00		0.94
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				2002	2034	2067	2034	2034	0	0	2067	2067
Adj Flow Rate, veh/h				38	830	30	58	117	0	0	127	28
Peak Hour Factor				0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %				6	4	2	4	4	0	0	2	2
Cap, veh/h				96	2206	84	185	342	0	0	419	92
Arrive On Green				0.59	0.59	0.59	0.26	0.26	0.00	0.00	0.26	0.26
Sat Flow, veh/h				163	3728	141	406	1325	0	0	1621	357
Grp Volume(v), veh/h				472	0	426	175	0	0	0	0	155
Grp Sat Flow(s),veh/h/ln				2026	0	2006	1731	0	0	0	0	1978
Q Serve(g_s), s				7.4	0.0	6.6	0.4	0.0	0.0	0.0	0.0	3.8
Cycle Q Clear(g_c), s				7.4	0.0	6.6	4.3	0.0	0.0	0.0	0.0	3.8
Prop In Lane				0.08		0.07	0.33		0.00	0.00		0.18
Lane Grp Cap(c), veh/h				1199	0	1187	527	0	0	0	0	511
V/C Ratio(X)				0.39	0.00	0.36	0.33	0.00	0.00	0.00	0.00	0.30
Avail Cap(c_a), veh/h				1199	0	1187	527	0	0	0	0	511
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh				6.5	0.0	6.3	18.1	0.0	0.0	0.0	0.0	17.9
Incr Delay (d2), s/veh				1.0	0.0	0.8	1.7	0.0	0.0	0.0	0.0	1.5
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln				4.9	0.0	4.3	3.8	0.0	0.0	0.0	0.0	3.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				7.5	0.0	7.2	19.7	0.0	0.0	0.0	0.0	19.4
LnGrp LOS				A	A	A	B	A	A	A	A	B
Approach Vol, veh/h					898			175			155	
Approach Delay, s/veh					7.4			19.7			19.4	
Approach LOS					A			B			B	

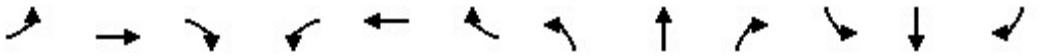
Timer - Assigned Phs	2	4	6
Phs Duration (G+Y+Rc), s	20.0	40.0	20.0
Change Period (Y+Rc), s	6.0	* 6	6.0
Max Green Setting (Gmax), s	14.0	* 34	14.0
Max Q Clear Time (g_c+I1), s	0.0	0.0	0.0
Green Ext Time (p_c), s	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	10.6
HCM 6th LOS	B

Notes

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

HCM 6th Edition methodology does not support clustered intersections.



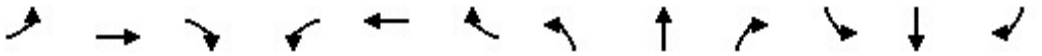
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	164	1233	36	0	0	0	0	299	55	51	279	0
Future Volume (veh/h)	164	1233	36	0	0	0	0	299	55	51	279	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.93				1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	2067	2067	2067				0	2150	1854	2067	2150	0
Adj Flow Rate, veh/h	180	1355	40				0	329	60	56	307	0
Peak Hour Factor	0.91	0.91	0.91				0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2				0	2	15	2	2	0
Cap, veh/h	968	1911	56				0	633	115	129	572	0
Arrive On Green	0.49	0.49	0.49				0.00	0.36	0.36	0.36	0.36	0.00
Sat Flow, veh/h	1969	3886	115				0	1767	322	168	1597	0
Grp Volume(v), veh/h	180	684	711				0	0	389	363	0	0
Grp Sat Flow(s),veh/h/ln	1969	1964	2037				0	0	2089	1765	0	0
Q Serve(g_s), s	3.1	16.3	16.4				0.0	0.0	8.8	1.8	0.0	0.0
Cycle Q Clear(g_c), s	3.1	16.3	16.4				0.0	0.0	8.8	10.6	0.0	0.0
Prop In Lane	1.00		0.06				0.00		0.15	0.15		0.00
Lane Grp Cap(c), veh/h	968	966	1002				0	0	749	702	0	0
V/C Ratio(X)	0.19	0.71	0.71				0.00	0.00	0.52	0.52	0.00	0.00
Avail Cap(c_a), veh/h	968	966	1002				0	0	749	702	0	0
HCM Platoon Ratio	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				0.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	8.5	11.9	11.9				0.0	0.0	15.2	15.1	0.0	0.0
Incr Delay (d2), s/veh	0.4	4.4	4.3				0.0	0.0	2.6	2.7	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.2	11.4	11.7				0.0	0.0	7.8	7.3	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	9.0	16.3	16.2				0.0	0.0	17.7	17.8	0.0	0.0
LnGrp LOS	A	B	B				A	A	B	B	A	A
Approach Vol, veh/h		1575						389			363	
Approach Delay, s/veh		15.4						17.7			17.8	
Approach LOS		B						B			B	

Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		26.0		34.0		26.0						
Change Period (Y+Rc), s		6.0		* 6		6.0						
Max Green Setting (Gmax), s		20.0		* 28		20.0						
Max Q Clear Time (g_c+I1), s		0.0		0.0		0.0						
Green Ext Time (p_c), s		0.0		0.0		0.0						

Intersection Summary	
HCM 6th Ctrl Delay	16.2
HCM 6th LOS	B

Notes

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



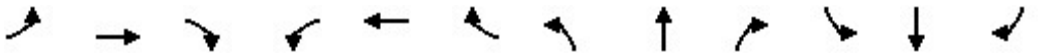
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	26	1281	64	0	0	0	0	75	91	77	134	0
Future Volume (veh/h)	26	1281	64	0	0	0	0	75	91	77	134	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96				1.00		0.98	0.99		1.00
Parking Bus, Adj	1.00	1.00	0.98				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	2067	2067	2067				0	2051	2067	2067	2051	0
Adj Flow Rate, veh/h	27	1348	67				0	79	96	81	141	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2				0	3	2	2	3	0
Cap, veh/h	40	2098	109				0	254	308	214	349	0
Arrive On Green	0.55	0.55	0.55				0.00	0.30	0.30	0.30	0.30	0.00
Sat Flow, veh/h	73	3783	197				0	832	1012	451	1147	0
Grp Volume(v), veh/h	767	0	675				0	0	175	222	0	0
Grp Sat Flow(s),veh/h/ln	2064	0	1989				0	0	1844	1598	0	0
Q Serve(g_s), s	16.8	0.0	14.7				0.0	0.0	4.7	2.8	0.0	0.0
Cycle Q Clear(g_c), s	16.8	0.0	14.7				0.0	0.0	4.7	7.4	0.0	0.0
Prop In Lane	0.04		0.10				0.00		0.55	0.36		0.00
Lane Grp Cap(c), veh/h	1145	0	1103				0	0	562	564	0	0
V/C Ratio(X)	0.67	0.00	0.61				0.00	0.00	0.31	0.39	0.00	0.00
Avail Cap(c_a), veh/h	1145	0	1103				0	0	562	564	0	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	10.1	0.0	9.6				0.0	0.0	17.1	17.8	0.0	0.0
Incr Delay (d2), s/veh	3.1	0.0	2.5				0.0	0.0	1.4	2.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	11.5	0.0	9.9				0.0	0.0	3.8	5.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.2	0.0	12.1				0.0	0.0	18.5	19.9	0.0	0.0
LnGrp LOS	B	A	B				A	A	B	B	A	A
Approach Vol, veh/h		1442						175			222	
Approach Delay, s/veh		12.7						18.5			19.9	
Approach LOS		B						B			B	

Timer - Assigned Phs	2	4	6
Phs Duration (G+Y+Rc), s	24.0	40.0	24.0
Change Period (Y+Rc), s	6.0	* 6	6.0
Max Green Setting (Gmax), s	18.0	* 34	18.0
Max Q Clear Time (g_c+I1), s	0.0	0.0	0.0
Green Ext Time (p_c), s	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	14.1
HCM 6th LOS	B

Notes

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



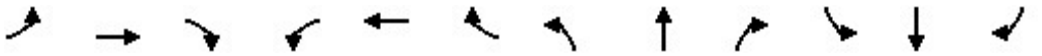
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	16	167	31	52	48	3	17	283	82	7	298	9
Future Volume (veh/h)	16	167	31	52	48	3	17	283	82	7	298	9
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.96	0.99		0.96	0.99		0.96	0.99		0.96
Parking Bus, Adj	1.00	1.00	0.90	1.00	1.00	0.90	1.00	1.00	0.90	1.00	1.00	0.90
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	2002	2067	2051	2034	2034	2067	2002	1953	2018	2067	2034	2067
Adj Flow Rate, veh/h	17	180	33	56	52	3	18	304	88	8	320	10
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	6	2	3	4	4	2	6	9	5	2	4	2
Cap, veh/h	86	532	93	323	274	14	78	613	172	611	855	27
Arrive On Green	0.36	0.36	0.36	0.36	0.36	0.36	0.97	0.97	0.97	0.48	0.48	0.48
Sat Flow, veh/h	59	1458	254	638	751	39	31	1263	354	983	1763	55
Grp Volume(v), veh/h	230	0	0	111	0	0	410	0	0	8	0	330
Grp Sat Flow(s),veh/h/ln	1771	0	0	1428	0	0	1648	0	0	983	0	1819
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.9
Cycle Q Clear(g_c), s	5.6	0.0	0.0	2.5	0.0	0.0	0.9	0.0	0.0	0.1	0.0	6.9
Prop In Lane	0.07		0.14	0.50		0.03	0.04		0.21	1.00		0.03
Lane Grp Cap(c), veh/h	711	0	0	612	0	0	862	0	0	611	0	882
V/C Ratio(X)	0.32	0.00	0.00	0.18	0.00	0.00	0.48	0.00	0.00	0.01	0.00	0.37
Avail Cap(c_a), veh/h	711	0	0	612	0	0	862	0	0	611	0	882
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	13.9	0.0	0.0	12.9	0.0	0.0	0.5	0.0	0.0	8.0	0.0	9.7
Incr Delay (d2), s/veh	1.2	0.0	0.0	0.7	0.0	0.0	1.9	0.0	0.0	0.0	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(95%),veh/ln	4.2	0.0	0.0	1.9	0.0	0.0	1.1	0.0	0.0	0.1	0.0	4.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	15.1	0.0	0.0	13.5	0.0	0.0	2.4	0.0	0.0	8.0	0.0	10.9
LnGrp LOS	B	A	A	B	A	A	A	A	A	A	A	B
Approach Vol, veh/h		230			111			410			338	
Approach Delay, s/veh		15.1			13.5			2.4			10.9	
Approach LOS		B			B			A			B	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		33.6		26.4		33.6		26.4				
Change Period (Y+Rc), s		* 6		6.0		* 6		6.0				
Max Green Setting (Gmax), s		* 28		20.4		* 28		20.4				
Max Q Clear Time (g_c+I1), s		0.0		0.0		2.1		0.0				
Green Ext Time (p_c), s		0.0		0.0		0.1		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			8.8									
HCM 6th LOS			A									

Notes

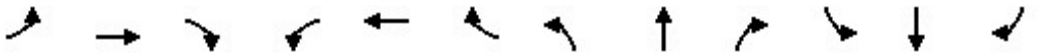
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (veh/h)	8	258	6	46	123	6	17	141	190	74	106	9
Future Volume (veh/h)	8	258	6	46	123	6	17	141	190	74	106	9
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.97		0.94	0.98		0.94	0.95		0.90	0.97		0.90
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	0.98	1.00	1.00	0.90	1.00	1.00	0.89
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	2067	2002	2067	1707	1953	2067	1625	1887	1953	2018	1985	1559
Adj Flow Rate, veh/h	9	277	6	49	132	6	18	152	204	80	114	10
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	6	2	24	9	2	29	13	9	5	7	33
Cap, veh/h	63	972	21	236	606	26	66	226	285	204	261	20
Arrive On Green	0.51	0.51	0.51	0.51	0.51	0.51	0.36	0.36	0.36	0.36	0.36	0.36
Sat Flow, veh/h	20	1916	41	336	1195	51	32	621	784	363	717	56
Grp Volume(v), veh/h	292	0	0	187	0	0	374	0	0	204	0	0
Grp Sat Flow(s),veh/h/ln	1977	0	0	1583	0	0	1436	0	0	1136	0	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	2.1	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	5.9	0.0	0.0	3.8	0.0	0.0	15.5	0.0	0.0	9.2	0.0	0.0
Prop In Lane	0.03		0.02	0.26		0.03	0.05		0.55	0.39		0.05
Lane Grp Cap(c), veh/h	1056	0	0	868	0	0	577	0	0	485	0	0
V/C Ratio(X)	0.28	0.00	0.00	0.22	0.00	0.00	0.65	0.00	0.00	0.42	0.00	0.00
Avail Cap(c_a), veh/h	1056	0	0	868	0	0	577	0	0	485	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	10.0	0.0	0.0	9.4	0.0	0.0	19.0	0.0	0.0	16.5	0.0	0.0
Incr Delay (d2), s/veh	0.7	0.0	0.0	0.6	0.0	0.0	5.5	0.0	0.0	2.7	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	4.6	0.0	0.0	2.8	0.0	0.0	9.5	0.0	0.0	4.9	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	10.6	0.0	0.0	10.0	0.0	0.0	24.6	0.0	0.0	19.2	0.0	0.0
LnGrp LOS	B	A	A	B	A	A	C	A	A	B	A	A
Approach Vol, veh/h		292			187			374			204	
Approach Delay, s/veh		10.6			10.0			24.6			19.2	
Approach LOS		B			B			C			B	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		30.0		40.0		30.0		40.0				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		24.0		34.0		24.0		34.0				
Max Q Clear Time (g_c+I1), s		0.0		0.0		0.0		0.0				
Green Ext Time (p_c), s		0.0		0.0		0.0		0.0				

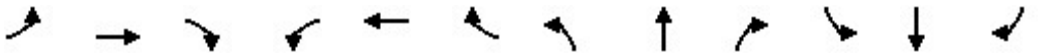
Intersection Summary												
HCM 6th Ctrl Delay			17.1									
HCM 6th LOS			B									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	173	48	18	34	2	46	205	45	5	189	13
Future Volume (veh/h)	20	173	48	18	34	2	46	205	45	5	189	13
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		0.96	0.96		0.92	0.97		0.92
Parking Bus, Adj	1.00	1.00	0.90	1.00	1.00	0.90	1.00	1.00	0.90	1.00	1.00	0.90
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	2018	2067	2067	2067	2051	2067	2116	2099	2065	2150	2150	2150
Adj Flow Rate, veh/h	21	180	50	19	35	2	48	214	47	5	197	14
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	5	2	2	2	3	2	4	5	7	2	2	2
Cap, veh/h	101	701	184	306	531	28	123	408	83	66	569	40
Arrive On Green	0.52	0.52	0.52	0.52	0.52	0.52	0.32	0.32	0.32	0.32	0.32	0.32
Sat Flow, veh/h	69	1336	350	430	1011	53	166	1255	255	14	1750	122
Grp Volume(v), veh/h	251	0	0	56	0	0	309	0	0	216	0	0
Grp Sat Flow(s),veh/h/ln	1755	0	0	1494	0	0	1676	0	0	1887	0	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	2.1	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	4.6	0.0	0.0	0.9	0.0	0.0	8.6	0.0	0.0	5.2	0.0	0.0
Prop In Lane	0.08		0.20	0.34		0.04	0.16		0.15	0.02		0.06
Lane Grp Cap(c), veh/h	986	0	0	865	0	0	614	0	0	675	0	0
V/C Ratio(X)	0.25	0.00	0.00	0.06	0.00	0.00	0.50	0.00	0.00	0.32	0.00	0.00
Avail Cap(c_a), veh/h	986	0	0	865	0	0	614	0	0	675	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	7.9	0.0	0.0	7.0	0.0	0.0	16.5	0.0	0.0	15.4	0.0	0.0
Incr Delay (d2), s/veh	0.6	0.0	0.0	0.1	0.0	0.0	2.9	0.0	0.0	1.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.1	0.0	0.0	0.6	0.0	0.0	6.6	0.0	0.0	4.2	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	8.5	0.0	0.0	7.1	0.0	0.0	19.4	0.0	0.0	16.7	0.0	0.0
LnGrp LOS	A	A	A	A	A	A	B	A	A	B	A	A
Approach Vol, veh/h		251			56			309			216	
Approach Delay, s/veh		8.5			7.1			19.4			16.7	
Approach LOS		A			A			B			B	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		24.0		36.0		24.0		36.0				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		18.0		30.0		18.0		30.0				
Max Q Clear Time (g_c+I1), s		0.0		0.0		0.0		0.0				
Green Ext Time (p_c), s		0.0		0.0		0.0		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			14.6									
HCM 6th LOS			B									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	306	196	19	110	2	172	125	27	2	98	6
Future Volume (veh/h)	30	306	196	19	110	2	172	125	27	2	98	6
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.96	1.00		0.96	0.99		0.96	0.99		0.98
Parking Bus, Adj	1.00	1.00	0.90	1.00	1.00	0.90	1.00	1.00	0.90	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1963	2048	2065	1741	2065	2150	1985	2067	1609	2067	1985	1822
Adj Flow Rate, veh/h	32	326	209	20	117	2	183	133	29	2	104	6
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	13	8	7	26	7	2	7	2	30	2	7	17
Cap, veh/h	85	427	262	127	651	10	374	254	49	64	766	44
Arrive On Green	0.43	0.43	0.43	0.43	0.43	0.43	0.41	0.41	0.41	0.41	0.41	0.41
Sat Flow, veh/h	51	1005	616	136	1532	24	679	612	119	8	1846	105
Grp Volume(v), veh/h	567	0	0	139	0	0	345	0	0	112	0	0
Grp Sat Flow(s),veh/h/ln	1672	0	0	1693	0	0	1410	0	0	1959	0	0
Q Serve(g_s), s	6.1	0.0	0.0	0.0	0.0	0.0	8.7	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	17.5	0.0	0.0	2.8	0.0	0.0	10.9	0.0	0.0	2.1	0.0	0.0
Prop In Lane	0.06		0.37	0.14		0.01	0.53		0.08	0.02		0.05
Lane Grp Cap(c), veh/h	774	0	0	788	0	0	677	0	0	874	0	0
V/C Ratio(X)	0.73	0.00	0.00	0.18	0.00	0.00	0.51	0.00	0.00	0.13	0.00	0.00
Avail Cap(c_a), veh/h	774	0	0	788	0	0	677	0	0	874	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	14.9	0.0	0.0	10.7	0.0	0.0	13.2	0.0	0.0	10.9	0.0	0.0
Incr Delay (d2), s/veh	6.1	0.0	0.0	0.5	0.0	0.0	2.7	0.0	0.0	0.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	11.6	0.0	0.0	2.1	0.0	0.0	6.5	0.0	0.0	1.6	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	21.0	0.0	0.0	11.2	0.0	0.0	16.0	0.0	0.0	11.2	0.0	0.0
LnGrp LOS	C	A	A	B	A	A	B	A	A	B	A	A
Approach Vol, veh/h		567			139			345			112	
Approach Delay, s/veh		21.0			11.2			16.0			11.2	
Approach LOS		C			B			B			B	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		30.0		30.0		30.0		30.0				
Change Period (Y+Rc), s		6.6		6.0		6.6		6.0				
Max Green Setting (Gmax), s		23.4		24.0		23.4		24.0				
Max Q Clear Time (g_c+I1), s		0.0		0.0		0.0		0.0				
Green Ext Time (p_c), s		0.0		0.0		0.0		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			17.4									
HCM 6th LOS			B									

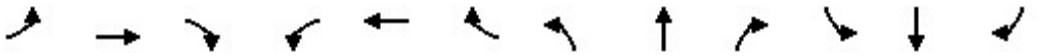
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	1	646	2	273	394	1	2	85	271	164	22	17
Future Volume (veh/h)	1	646	2	273	394	1	2	85	271	164	22	17
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		1.00	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.90	1.00	1.00	0.90
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	2067	2067	2067	1969	2051	2067	2067	2067	1953	2067	2067	2067
Adj Flow Rate, veh/h	1	702	2	297	428	1	2	92	295	178	24	18
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, %	2	2	2	8	3	2	2	2	9	2	2	2
Cap, veh/h	480	1674	5	485	1193	3	41	115	364	193	25	13
Arrive On Green	0.42	0.42	0.42	0.11	0.58	0.58	0.28	0.28	0.28	0.28	0.28	0.28
Sat Flow, veh/h	959	4017	11	1875	2045	5	2	406	1283	428	89	46
Grp Volume(v), veh/h	1	343	361	297	0	429	389	0	0	220	0	0
Grp Sat Flow(s),veh/h/ln	959	1964	2065	1875	0	2050	1692	0	0	562	0	0
Q Serve(g_s), s	0.1	11.1	11.1	7.7	0.0	9.9	0.0	0.0	0.0	5.5	0.0	0.0
Cycle Q Clear(g_c), s	0.1	11.1	11.1	7.7	0.0	9.9	20.0	0.0	0.0	25.5	0.0	0.0
Prop In Lane	1.00		0.01	1.00		0.00	0.01		0.76	0.81		0.08
Lane Grp Cap(c), veh/h	480	818	860	485	0	1196	520	0	0	232	0	0
V/C Ratio(X)	0.00	0.42	0.42	0.61	0.00	0.36	0.75	0.00	0.00	0.95	0.00	0.00
Avail Cap(c_a), veh/h	480	818	860	485	0	1196	520	0	0	232	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	0.61	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	15.3	18.6	18.6	12.7	0.0	9.9	30.3	0.0	0.0	36.9	0.0	0.0
Incr Delay (d2), s/veh	0.0	1.6	1.5	2.3	0.0	0.8	6.0	0.0	0.0	47.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	9.1	9.4	6.0	0.0	7.9	12.4	0.0	0.0	12.6	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	15.3	20.1	20.1	15.0	0.0	10.7	36.3	0.0	0.0	84.3	0.0	0.0
LnGrp LOS	B	C	C	B	A	B	D	A	A	F	A	A
Approach Vol, veh/h		705			726			389			220	
Approach Delay, s/veh		20.1			12.5			36.3			84.3	
Approach LOS		C			B			D			F	

Timer - Assigned Phs	2	3	4	6	8
Phs Duration (G+Y+Rc), s	32.0	15.0	43.0	32.0	58.0
Change Period (Y+Rc), s	* 8	7.0	* 7	* 8	* 7
Max Green Setting (Gmax), s	* 24	8.0	* 36	* 24	* 51
Max Q Clear Time (g_c+I1), s	22.0	9.7	13.1	27.5	11.9
Green Ext Time (p_c), s	0.3	0.0	1.8	0.0	1.1

Intersection Summary	
HCM 6th Ctrl Delay	27.4
HCM 6th LOS	C

Notes

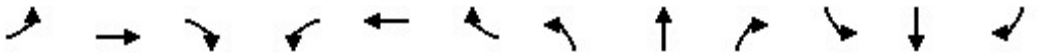
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	25	315	6	61	185	6	3	278	284	13	126	32
Future Volume (veh/h)	25	315	6	61	185	6	3	278	284	13	126	32
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		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	2067	2002	2067	2067	1985	2067	1622	2150	2150	2150	2150	2150
Adj Flow Rate, veh/h	27	335	6	65	197	6	3	296	302	14	134	34
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	6	2	2	7	2	33	2	2	2	2	2
Cap, veh/h	92	932	16	230	676	19	397	351	358	173	600	152
Arrive On Green	0.34	0.34	0.34	0.51	0.51	0.51	0.36	0.36	0.36	0.36	0.36	0.36
Sat Flow, veh/h	72	1838	32	328	1332	38	955	963	982	853	1646	418
Grp Volume(v), veh/h	368	0	0	268	0	0	3	0	598	14	0	168
Grp Sat Flow(s),veh/h/ln	1941	0	0	1698	0	0	955	0	1945	853	0	2064
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	19.8	1.1	0.0	3.9
Cycle Q Clear(g_c), s	9.7	0.0	0.0	5.4	0.0	0.0	4.1	0.0	19.8	20.8	0.0	3.9
Prop In Lane	0.07		0.02	0.24		0.02	1.00		0.51	1.00		0.20
Lane Grp Cap(c), veh/h	1040	0	0	925	0	0	397	0	708	173	0	752
V/C Ratio(X)	0.35	0.00	0.00	0.29	0.00	0.00	0.01	0.00	0.84	0.08	0.00	0.22
Avail Cap(c_a), veh/h	1040	0	0	925	0	0	397	0	708	173	0	752
HCM Platoon Ratio	0.67	0.67	0.67	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	14.6	0.0	0.0	9.8	0.0	0.0	16.8	0.0	20.4	30.0	0.0	15.4
Incr Delay (d2), s/veh	0.9	0.0	0.0	0.8	0.0	0.0	0.0	0.0	11.8	0.9	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(95%),veh/ln	8.4	0.0	0.0	4.2	0.0	0.0	0.1	0.0	16.0	0.5	0.0	3.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	15.5	0.0	0.0	10.6	0.0	0.0	16.9	0.0	32.2	30.9	0.0	16.1
LnGrp LOS	B	A	A	B	A	A	B	A	C	C	A	B
Approach Vol, veh/h		368			268			601			182	
Approach Delay, s/veh		15.5			10.6			32.1			17.2	
Approach LOS		B			B			C			B	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		40.0		30.0		40.0		30.0				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		34.0		24.0		34.0		24.0				
Max Q Clear Time (g_c+I1), s		0.0		22.8		0.0		6.1				
Green Ext Time (p_c), s		0.0		0.0		0.0		0.1				

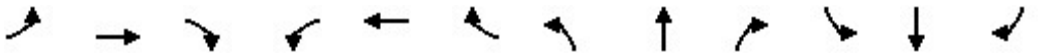
Intersection Summary												
HCM 6th Ctrl Delay			21.9									
HCM 6th LOS			C									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	58	537	3	4	194	10	15	19	15	15	7	59
Future Volume (veh/h)	58	537	3	4	194	10	15	19	15	15	7	59
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.98		0.97	0.99		0.95	0.98		0.97	0.98		0.95
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	2051	1969	2067	2067	1903	2067	2067	2067	2067	2067	2067	2067
Adj Flow Rate, veh/h	62	577	3	4	209	11	16	20	16	16	8	63
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	3	8	2	2	12	2	2	2	2	2	2	2
Cap, veh/h	133	1004	5	66	1018	53	182	226	147	117	82	336
Arrive On Green	0.57	0.57	0.57	0.57	0.57	0.57	0.28	0.28	0.28	0.28	0.28	0.28
Sat Flow, veh/h	116	1747	9	8	1770	92	378	821	533	168	297	1221
Grp Volume(v), veh/h	642	0	0	224	0	0	52	0	0	87	0	0
Grp Sat Flow(s),veh/h/ln	1872	0	0	1869	0	0	1732	0	0	1686	0	0
Q Serve(g_s), s	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	12.4	0.0	0.0	3.4	0.0	0.0	1.2	0.0	0.0	2.3	0.0	0.0
Prop In Lane	0.10		0.00	0.02		0.05	0.31		0.31	0.18		0.72
Lane Grp Cap(c), veh/h	1142	0	0	1136	0	0	555	0	0	535	0	0
V/C Ratio(X)	0.56	0.00	0.00	0.20	0.00	0.00	0.09	0.00	0.00	0.16	0.00	0.00
Avail Cap(c_a), veh/h	1142	0	0	1136	0	0	555	0	0	535	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	8.0	0.0	0.0	6.2	0.0	0.0	16.2	0.0	0.0	16.6	0.0	0.0
Incr Delay (d2), s/veh	2.0	0.0	0.0	0.4	0.0	0.0	0.3	0.0	0.0	0.7	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	8.5	0.0	0.0	2.2	0.0	0.0	1.0	0.0	0.0	1.7	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	10.0	0.0	0.0	6.5	0.0	0.0	16.5	0.0	0.0	17.2	0.0	0.0
LnGrp LOS	B	A	A	A	A	A	B	A	A	B	A	A
Approach Vol, veh/h		642			224			52			87	
Approach Delay, s/veh		10.0			6.5			16.5			17.2	
Approach LOS		B			A			B			B	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		21.0		39.0		21.0		39.0				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		15.0		33.0		15.0		33.0				
Max Q Clear Time (g_c+I1), s		0.0		0.0		0.0		0.0				
Green Ext Time (p_c), s		0.0		0.0		0.0		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			10.2									
HCM 6th LOS			B									



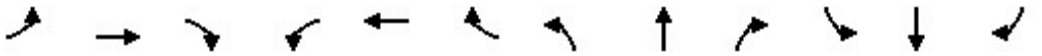
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	295	6	84	139	10	63	327	23	25	329	5
Future Volume (veh/h)	0	295	6	84	139	10	63	327	23	25	329	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	0.99		1.00	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.90	1.00	1.00	0.90
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1861	1713	1861	1861	1698	1595	1874	1935	1904	1935	1935	1935
Adj Flow Rate, veh/h	0	307	6	88	145	0	66	341	24	26	343	5
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	12	2	2	13	20	6	2	4	2	2	2
Cap, veh/h	0	849	17	258	388		379	584	41	77	573	8
Arrive On Green	0.00	0.51	0.51	0.17	0.17	0.00	0.36	0.36	0.36	0.36	0.36	0.36
Sat Flow, veh/h	0	1673	33	369	766	0	933	1604	113	60	1572	22
Grp Volume(v), veh/h	0	0	313	233	0	0	66	0	365	374	0	0
Grp Sat Flow(s),veh/h/ln	0	0	1706	1135	0	0	933	0	1717	1654	0	0
Q Serve(g_s), s	0.0	0.0	7.8	7.3	0.0	0.0	0.0	0.0	12.0	0.6	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	7.8	15.1	0.0	0.0	5.7	0.0	12.0	12.7	0.0	0.0
Prop In Lane	0.00		0.02	0.38		0.00	1.00		0.07	0.07		0.01
Lane Grp Cap(c), veh/h	0	0	865	646	0		379	0	626	658	0	0
V/C Ratio(X)	0.00	0.00	0.36	0.36	0.00		0.17	0.00	0.58	0.57	0.00	0.00
Avail Cap(c_a), veh/h	0	0	865	646	0		379	0	626	658	0	0
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	10.4	20.8	0.0	0.0	16.0	0.0	18.0	18.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	1.2	1.6	0.0	0.0	1.0	0.0	3.9	3.5	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	0.0	5.3	7.5	0.0	0.0	1.5	0.0	8.9	9.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	11.6	22.4	0.0	0.0	17.0	0.0	21.9	21.6	0.0	0.0
LnGrp LOS	A	A	B	C	A		B	A	C	C	A	A
Approach Vol, veh/h		313			233			431			374	
Approach Delay, s/veh		11.6			22.4			21.2			21.6	
Approach LOS		B			C			C			C	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	40.0	30.0	40.0	30.0
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	34.0	24.0	34.0	24.0
Max Q Clear Time (g_c+I1), s	0.0	0.0	0.0	7.7
Green Ext Time (p_c), s	0.0	0.0	0.0	0.1

Intersection Summary	
HCM 6th Ctrl Delay	19.3
HCM 6th LOS	B

Notes

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



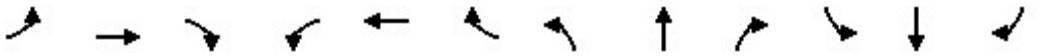
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	26	142	10	4	125	206	5	152	4	203	171	6
Future Volume (veh/h)	26	142	10	4	125	206	5	152	4	203	171	6
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.98	0.99		0.96	0.98		0.97	0.98		0.95
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	1969	2067	1609	2067	2051	2067	2067	1887	2067	2067	2002	1822
Adj Flow Rate, veh/h	28	154	11	4	136	224	5	165	4	221	186	7
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, %	8	2	30	2	3	2	2	13	2	2	6	17
Cap, veh/h	123	603	40	63	252	407	69	859	20	439	349	12
Arrive On Green	0.38	0.37	0.38	0.38	0.37	0.38	0.47	0.47	0.47	0.47	0.47	0.47
Sat Flow, veh/h	148	1636	108	6	685	1105	15	1809	43	731	736	25
Grp Volume(v), veh/h	193	0	0	364	0	0	174	0	0	414	0	0
Grp Sat Flow(s),veh/h/ln	1892	0	0	1796	0	0	1867	0	0	1492	0	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.9	0.0	0.0
Cycle Q Clear(g_c), s	3.9	0.0	0.0	9.4	0.0	0.0	3.2	0.0	0.0	11.1	0.0	0.0
Prop In Lane	0.15		0.06	0.01		0.62	0.03		0.02	0.53		0.02
Lane Grp Cap(c), veh/h	797	0	0	752	0	0	948	0	0	801	0	0
V/C Ratio(X)	0.24	0.00	0.00	0.48	0.00	0.00	0.18	0.00	0.00	0.52	0.00	0.00
Avail Cap(c_a), veh/h	797	0	0	752	0	0	948	0	0	801	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	13.1	0.0	0.0	14.7	0.0	0.0	9.1	0.0	0.0	10.9	0.0	0.0
Incr Delay (d2), s/veh	0.7	0.0	0.0	2.2	0.0	0.0	0.4	0.0	0.0	2.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.2	0.0	0.0	6.9	0.0	0.0	2.3	0.0	0.0	7.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.9	0.0	0.0	16.9	0.0	0.0	9.5	0.0	0.0	13.3	0.0	0.0
LnGrp LOS	B	A	A	B	A	A	A	A	A	B	A	A
Approach Vol, veh/h		193			364			174			414	
Approach Delay, s/veh		13.9			16.9			9.5			13.3	
Approach LOS		B			B			A			B	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		33.0		27.0		33.0		27.0				
Change Period (Y+Rc), s		* 6		5.4		* 6		5.4				
Max Green Setting (Gmax), s		* 27		21.6		* 27		21.6				
Max Q Clear Time (g_c+I1), s		0.0		0.0		0.0		0.0				
Green Ext Time (p_c), s		0.0		0.0		0.0		0.0				

Intersection Summary	
HCM 6th Ctrl Delay	14.0
HCM 6th LOS	B

Notes

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



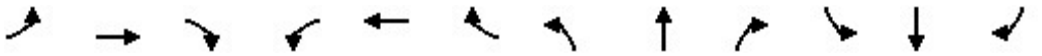
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	92	818	9	63	136	0	0	49	20
Future Volume (veh/h)	0	0	0	92	818	9	63	136	0	0	49	20
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		0.95	0.96		1.00	1.00		0.93
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				2009	1976	2009	2002	2067	0	0	2034	2067
Adj Flow Rate, veh/h				106	940	10	72	156	0	0	56	23
Peak Hour Factor				0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %				2	4	2	6	2	0	0	4	2
Cap, veh/h				223	2076	23	189	354	0	0	346	142
Arrive On Green				0.59	0.59	0.59	0.26	0.26	0.00	0.00	0.26	0.26
Sat Flow, veh/h				376	3508	39	427	1371	0	0	1339	550
Grp Volume(v), veh/h				552	0	504	228	0	0	0	0	79
Grp Sat Flow(s),veh/h/ln				1957	0	1966	1798	0	0	0	0	1889
Q Serve(g_s), s				9.6	0.0	8.5	2.7	0.0	0.0	0.0	0.0	1.9
Cycle Q Clear(g_c), s				9.6	0.0	8.5	6.0	0.0	0.0	0.0	0.0	1.9
Prop In Lane				0.19		0.02	0.32		0.00	0.00		0.29
Lane Grp Cap(c), veh/h				1158	0	1163	543	0	0	0	0	488
V/C Ratio(X)				0.48	0.00	0.43	0.42	0.00	0.00	0.00	0.00	0.16
Avail Cap(c_a), veh/h				1158	0	1163	543	0	0	0	0	488
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh				7.0	0.0	6.7	18.6	0.0	0.0	0.0	0.0	17.2
Incr Delay (d2), s/veh				1.4	0.0	1.2	2.4	0.0	0.0	0.0	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
%ile BackOfQ(95%),veh/ln				6.2	0.0	5.5	5.1	0.0	0.0	0.0	0.0	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				8.4	0.0	7.9	21.0	0.0	0.0	0.0	0.0	17.9
LnGrp LOS				A	A	A	C	A	A	A	A	B
Approach Vol, veh/h					1056			228			79	
Approach Delay, s/veh					8.1			21.0			17.9	
Approach LOS					A			C			B	

Timer - Assigned Phs	2	4	6
Phs Duration (G+Y+Rc), s	20.0	40.0	20.0
Change Period (Y+Rc), s	6.0	* 6	6.0
Max Green Setting (Gmax), s	14.0	* 34	14.0
Max Q Clear Time (g_c+I1), s	0.0	0.0	0.0
Green Ext Time (p_c), s	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	10.9
HCM 6th LOS	B

Notes

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



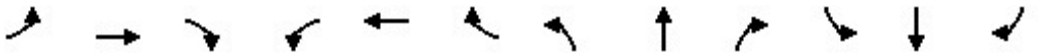
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1311	35	0	0	0	0	0	109	0	0	0
Future Volume (veh/h)	0	1311	35	0	0	0	0	0	109	0	0	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95				1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	2067	2067	2067				0	2067	2067	2067	2067	0
Adj Flow Rate, veh/h	0	1410	38				0	0	117	0	0	0
Peak Hour Factor	0.93	0.93	0.93				0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	0	2308	62				0	0	443	0	534	0
Arrive On Green	0.00	0.20	0.20				0.00	0.00	0.26	0.00	0.00	0.00
Sat Flow, veh/h	0	4004	105				0	0	1713	0	2067	0
Grp Volume(v), veh/h	0	709	739				0	0	117	0	0	0
Grp Sat Flow(s),veh/h/ln	0	1964	2042				0	0	1713	0	2067	0
Q Serve(g_s), s	0.0	19.8	19.8				0.0	0.0	3.3	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	19.8	19.8				0.0	0.0	3.3	0.0	0.0	0.0
Prop In Lane	0.00		0.05				0.00		1.00	0.00		0.00
Lane Grp Cap(c), veh/h	0	1162	1208				0	0	443	0	534	0
V/C Ratio(X)	0.00	0.61	0.61				0.00	0.00	0.26	0.00	0.00	0.00
Avail Cap(c_a), veh/h	0	1162	1208				0	0	443	0	534	0
HCM Platoon Ratio	0.33	0.33	0.33				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00				0.00	0.00	1.00	0.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	17.8	17.8				0.0	0.0	17.7	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	2.4	2.3				0.0	0.0	1.5	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	16.2	16.7				0.0	0.0	2.5	0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	20.2	20.2				0.0	0.0	19.2	0.0	0.0	0.0
LnGrp LOS	A	C	C				A	A	B	A	A	A
Approach Vol, veh/h		1448						117			0	
Approach Delay, s/veh		20.2						19.2			0.0	
Approach LOS		C						B				

Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		20.0		40.0		20.0						
Change Period (Y+Rc), s		6.0		* 6		6.0						
Max Green Setting (Gmax), s		14.0		* 34		14.0						
Max Q Clear Time (g_c+I1), s		0.0		0.0		0.0						
Green Ext Time (p_c), s		0.0		0.0		0.0						

Intersection Summary		
HCM 6th Ctrl Delay		20.1
HCM 6th LOS		C

Notes

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	173	228	17	6	117	13	26	162	43	17	285	27
Future Volume (veh/h)	173	228	17	6	117	13	26	162	43	17	285	27
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.98		0.95	0.99		0.96	0.97		1.00	0.95		0.91
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	2034	2067	2002	1822	2051	2067	2067	2018	2067	2067	2067	1854
Adj Flow Rate, veh/h	188	248	18	7	127	14	28	176	0	18	310	29
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, %	4	2	6	17	3	2	2	5	2	2	2	15
Cap, veh/h	414	528	35	79	962	102	109	500		77	504	46
Arrive On Green	1.00	1.00	1.00	1.00	1.00	1.00	0.29	0.29	0.00	0.29	0.29	0.29
Sat Flow, veh/h	605	968	65	30	1764	187	145	1754	0	50	1769	161
Grp Volume(v), veh/h	454	0	0	148	0	0	204	0	0	357	0	0
Grp Sat Flow(s),veh/h/ln	1638	0	0	1982	0	0	1899	0	0	1980	0	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	4.8	0.0	0.0	9.3	0.0	0.0
Prop In Lane	0.41		0.04	0.05		0.09	0.14		0.00	0.05		0.08
Lane Grp Cap(c), veh/h	977	0	0	1143	0	0	609	0		627	0	0
V/C Ratio(X)	0.46	0.00	0.00	0.13	0.00	0.00	0.33	0.00		0.57	0.00	0.00
Avail Cap(c_a), veh/h	977	0	0	1143	0	0	609	0		627	0	0
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	17.1	0.0	0.0	18.6	0.0	0.0
Incr Delay (d2), s/veh	1.6	0.0	0.0	0.2	0.0	0.0	1.5	0.0	0.0	3.7	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.8	0.0	0.0	0.1	0.0	0.0	4.2	0.0	0.0	8.2	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	1.6	0.0	0.0	0.2	0.0	0.0	18.5	0.0	0.0	22.4	0.0	0.0
LnGrp LOS	A	A	A	A	A	A	B	A		C	A	A
Approach Vol, veh/h		454			148			204			357	
Approach Delay, s/veh		1.6			0.2			18.5			22.4	
Approach LOS		A			A			B			C	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		22.2		37.8		22.2		37.8				
Change Period (Y+Rc), s		6.6		6.6		6.6		6.6				
Max Green Setting (Gmax), s		15.6		31.2		15.6		31.2				
Max Q Clear Time (g_c+I1), s		0.0		0.0		0.0		0.0				
Green Ext Time (p_c), s		0.0		0.0		0.0		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			10.8									
HCM 6th LOS			B									

Notes

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

Intersection	
Intersection Delay, s/veh	9.5
Intersection LOS	A

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	64	205	50	42	50	57
Future Vol, veh/h	64	205	50	42	50	57
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles, %	3	2	4	7	2	4
Mvmt Flow	76	244	60	50	60	68
Number of Lanes	0	1	1	0	1	0

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	1	1
HCM Control Delay	10.3	8	8.6
HCM LOS	B	A	A

Lane	EBLn1	WBLn1	SBLn1
Vol Left, %	24%	0%	47%
Vol Thru, %	76%	54%	0%
Vol Right, %	0%	46%	53%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	269	92	107
LT Vol	64	0	50
Through Vol	205	50	0
RT Vol	0	42	57
Lane Flow Rate	320	110	127
Geometry Grp	1	1	1
Degree of Util (X)	0.393	0.132	0.165
Departure Headway (Hd)	4.423	4.347	4.669
Convergence, Y/N	Yes	Yes	Yes
Cap	813	825	768
Service Time	2.444	2.373	2.696
HCM Lane V/C Ratio	0.394	0.133	0.165
HCM Control Delay	10.3	8	8.6
HCM Lane LOS	B	A	A
HCM 95th-tile Q	1.9	0.5	0.6

Intersection	
Intersection Delay, s/veh	17.1
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	86	0	0	0	5	7	10	576	1	2	0	204
Future Vol, veh/h	86	0	0	0	5	7	10	576	1	2	0	204
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles, %	2	2	2	2	2	14	2	2	2	50	2	2
Mvmt Flow	90	0	0	0	5	7	10	600	1	2	0	213
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	10.2	8.9	20.6	10.4
HCM LOS	B	A	C	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	2%	100%	0%	1%
Vol Thru, %	98%	0%	42%	0%
Vol Right, %	0%	0%	58%	99%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	587	86	12	206
LT Vol	10	86	0	2
Through Vol	576	0	5	0
RT Vol	1	0	7	204
Lane Flow Rate	611	90	12	215
Geometry Grp	1	1	1	1
Degree of Util (X)	0.764	0.15	0.02	0.305
Departure Headway (Hd)	4.498	6.008	5.74	5.118
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	801	591	627	697
Service Time	2.545	4.103	3.74	3.186
HCM Lane V/C Ratio	0.763	0.152	0.019	0.308
HCM Control Delay	20.6	10.2	8.9	10.4
HCM Lane LOS	C	B	A	B
HCM 95th-tile Q	7.4	0.5	0.1	1.3

Intersection	
Intersection Delay, s/veh	8.7
Intersection LOS	A

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	51	106	111	55	41	77
Future Vol, veh/h	51	106	111	55	41	77
Peak Hour Factor	0.82	0.82	0.92	0.82	0.82	0.82
Heavy Vehicles, %	4	2	2	2	2	5
Mvmt Flow	62	129	121	67	50	94
Number of Lanes	0	1	1	0	1	0

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	1	1
HCM Control Delay	9.1	8.5	8.5
HCM LOS	A	A	A

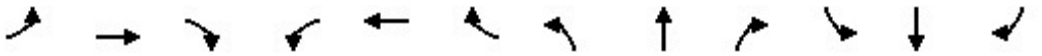
Lane	EBLn1	WBLn1	SBLn1
Vol Left, %	32%	0%	35%
Vol Thru, %	68%	67%	0%
Vol Right, %	0%	33%	65%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	157	166	118
LT Vol	51	0	41
Through Vol	106	111	0
RT Vol	0	55	77
Lane Flow Rate	191	188	144
Geometry Grp	1	1	1
Degree of Util (X)	0.243	0.223	0.178
Departure Headway (Hd)	4.564	4.283	4.458
Convergence, Y/N	Yes	Yes	Yes
Cap	787	839	806
Service Time	2.587	2.306	2.483
HCM Lane V/C Ratio	0.243	0.224	0.179
HCM Control Delay	9.1	8.5	8.5
HCM Lane LOS	A	A	A
HCM 95th-tile Q	1	0.9	0.6

Intersection	
Intersection Delay, s/veh	19.9
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	45	3	0	0	8	4	23	586	4	6	0	301
Future Vol, veh/h	45	3	0	0	8	4	23	586	4	6	0	301
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
Heavy Vehicles, %	4	2	2	2	2	2	2	2	2	17	2	2
Mvmt Flow	49	3	0	0	9	4	25	637	4	7	0	327
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	10	9.2	25.4	10.8
HCM LOS	A	A	D	B

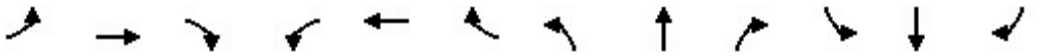
Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	4%	94%	0%	2%
Vol Thru, %	96%	6%	67%	0%
Vol Right, %	1%	0%	33%	98%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	613	48	12	307
LT Vol	23	45	0	6
Through Vol	586	3	8	0
RT Vol	4	0	4	301
Lane Flow Rate	666	52	13	334
Geometry Grp	1	1	1	1
Degree of Util (X)	0.83	0.091	0.022	0.418
Departure Headway (Hd)	4.485	6.309	6.093	4.505
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	806	563	591	794
Service Time	2.527	4.405	4.093	2.555
HCM Lane V/C Ratio	0.826	0.092	0.022	0.421
HCM Control Delay	25.4	10	9.2	10.8
HCM Lane LOS	D	A	A	B
HCM 95th-tile Q	9.4	0.3	0.1	2.1



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (veh/h)	35	73	6	4	90	2	11	98	3	6	61	36
Future Volume (veh/h)	35	73	6	4	90	2	11	98	3	6	61	36
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.98		0.96	0.98		0.96	0.98		0.96	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	2067	2067	2067	2067	2067	2067	2067	2067	2067	1822	2067	2067
Adj Flow Rate, veh/h	38	79	7	4	98	2	12	107	3	7	66	39
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, %	2	2	2	2	2	2	2	2	2	17	2	2
Cap, veh/h	315	637	52	73	1042	21	92	609	16	77	386	214
Arrive On Green	0.52	0.52	0.52	0.52	0.52	0.52	0.32	0.32	0.32	0.32	0.32	0.32
Sat Flow, veh/h	451	1213	100	21	1986	39	81	1874	49	42	1188	657
Grp Volume(v), veh/h	124	0	0	104	0	0	122	0	0	112	0	0
Grp Sat Flow(s),veh/h/ln	1764	0	0	2046	0	0	2005	0	0	1887	0	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	1.8	0.0	0.0	1.5	0.0	0.0	2.6	0.0	0.0	2.5	0.0	0.0
Prop In Lane	0.31		0.06	0.04		0.02	0.10		0.02	0.06		0.35
Lane Grp Cap(c), veh/h	1004	0	0	1136	0	0	717	0	0	677	0	0
V/C Ratio(X)	0.12	0.00	0.00	0.09	0.00	0.00	0.17	0.00	0.00	0.17	0.00	0.00
Avail Cap(c_a), veh/h	1004	0	0	1136	0	0	717	0	0	677	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	7.2	0.0	0.0	7.1	0.0	0.0	14.5	0.0	0.0	14.5	0.0	0.0
Incr Delay (d2), s/veh	0.3	0.0	0.0	0.2	0.0	0.0	0.5	0.0	0.0	0.5	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.4	0.0	0.0	1.1	0.0	0.0	2.2	0.0	0.0	2.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	7.5	0.0	0.0	7.3	0.0	0.0	15.0	0.0	0.0	15.0	0.0	0.0
LnGrp LOS	A	A	A	A	A	A	B	A	A	B	A	A
Approach Vol, veh/h		124			104			122			112	
Approach Delay, s/veh		7.5			7.3			15.0			15.0	
Approach LOS		A			A			B			B	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		24.0		36.0		24.0		36.0				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		18.0		30.0		18.0		30.0				
Max Q Clear Time (g_c+I1), s		0.0		0.0		0.0		0.0				
Green Ext Time (p_c), s		0.0		0.0		0.0		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			11.3									
HCM 6th LOS			B									



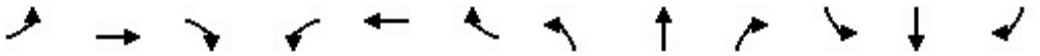
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	51	928	59	30	262	0	0	290	92
Future Volume (veh/h)	0	0	0	51	928	59	30	262	0	0	290	92
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		0.96	1.00		1.00	1.00		0.97
Parking Bus, Adj				0.90	1.00	0.90	1.00	1.00	1.00	1.00	1.00	0.90
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1910	2009	1992	2044	1995	0	0	2009	2009
Adj Flow Rate, veh/h				62	1132	72	37	320	0	0	354	112
Peak Hour Factor				0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Percent Heavy Veh, %				8	2	3	3	6	0	0	2	2
Cap, veh/h				85	1616	108	84	423	0	0	447	141
Arrive On Green				0.17	0.17	0.17	0.34	0.34	0.00	0.00	0.34	0.34
Sat Flow, veh/h				167	3179	212	52	1237	0	0	1307	414
Grp Volume(v), veh/h				669	0	597	357	0	0	0	0	466
Grp Sat Flow(s),veh/h/ln				1799	0	1759	1289	0	0	0	0	1721
Q Serve(g_s), s				21.2	0.0	19.1	2.3	0.0	0.0	0.0	0.0	14.7
Cycle Q Clear(g_c), s				21.2	0.0	19.1	17.0	0.0	0.0	0.0	0.0	14.7
Prop In Lane				0.09		0.12	0.10		0.00	0.00		0.24
Lane Grp Cap(c), veh/h				915	0	894	507	0	0	0	0	588
V/C Ratio(X)				0.73	0.00	0.67	0.70	0.00	0.00	0.00	0.00	0.79
Avail Cap(c_a), veh/h				915	0	894	507	0	0	0	0	588
HCM Platoon Ratio				0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh				21.1	0.0	20.2	16.6	0.0	0.0	0.0	0.0	17.8
Incr Delay (d2), s/veh				5.2	0.0	3.9	8.0	0.0	0.0	0.0	0.0	10.5
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln				16.6	0.0	14.7	8.3	0.0	0.0	0.0	0.0	11.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				26.2	0.0	24.1	24.6	0.0	0.0	0.0	0.0	28.4
LnGrp LOS				C	A	C	C	A	A	A	A	C
Approach Vol, veh/h					1266			357			466	
Approach Delay, s/veh					25.3			24.6			28.4	
Approach LOS					C			C			C	

Timer - Assigned Phs	2	4	6
Phs Duration (G+Y+Rc), s	25.0	35.0	25.0
Change Period (Y+Rc), s	6.0	* 6	6.0
Max Green Setting (Gmax), s	19.0	* 29	19.0
Max Q Clear Time (g_c+I1), s	0.0	0.0	0.0
Green Ext Time (p_c), s	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	25.8
HCM 6th LOS	C

Notes

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



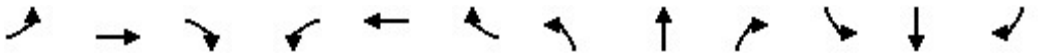
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	35	795	23	56	98	0	0	119	31
Future Volume (veh/h)	0	0	0	35	795	23	56	98	0	0	119	31
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		0.98	0.96		1.00	1.00		0.93
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				2002	2051	2067	2034	2018	0	0	2067	2067
Adj Flow Rate, veh/h				43	981	28	69	121	0	0	147	38
Peak Hour Factor				0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Percent Heavy Veh, %				6	3	2	4	5	0	0	2	2
Cap, veh/h				94	2247	67	185	295	0	0	402	104
Arrive On Green				0.59	0.59	0.59	0.26	0.26	0.00	0.00	0.26	0.26
Sat Flow, veh/h				159	3798	114	399	1142	0	0	1555	402
Grp Volume(v), veh/h				553	0	499	190	0	0	0	0	185
Grp Sat Flow(s),veh/h/ln				2043	0	2027	1541	0	0	0	0	1957
Q Serve(g_s), s				9.1	0.0	8.0	1.8	0.0	0.0	0.0	0.0	4.6
Cycle Q Clear(g_c), s				9.1	0.0	8.0	6.4	0.0	0.0	0.0	0.0	4.6
Prop In Lane				0.08		0.06	0.36		0.00	0.00		0.21
Lane Grp Cap(c), veh/h				1209	0	1200	480	0	0	0	0	505
V/C Ratio(X)				0.46	0.00	0.42	0.40	0.00	0.00	0.00	0.00	0.37
Avail Cap(c_a), veh/h				1209	0	1200	480	0	0	0	0	505
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh				6.9	0.0	6.6	18.5	0.0	0.0	0.0	0.0	18.2
Incr Delay (d2), s/veh				1.2	0.0	1.1	2.4	0.0	0.0	0.0	0.0	2.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln				6.1	0.0	5.3	4.4	0.0	0.0	0.0	0.0	4.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				8.1	0.0	7.7	21.0	0.0	0.0	0.0	0.0	20.3
LnGrp LOS				A	A	A	C	A	A	A	A	C
Approach Vol, veh/h					1052			190			185	
Approach Delay, s/veh					7.9			21.0			20.3	
Approach LOS					A			C			C	

Timer - Assigned Phs	2	4	6
Phs Duration (G+Y+Rc), s	20.0	40.0	20.0
Change Period (Y+Rc), s	6.0	* 6	6.0
Max Green Setting (Gmax), s	14.0	* 34	14.0
Max Q Clear Time (g_c+I1), s	0.0	0.0	0.0
Green Ext Time (p_c), s	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	11.3
HCM 6th LOS	B

Notes

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



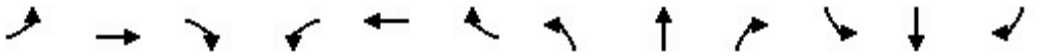
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	143	1156	39	0	0	0	0	285	55	43	293	0
Future Volume (veh/h)	143	1156	39	0	0	0	0	285	55	43	293	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96				1.00		0.97	0.99		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	2067	2067	2051				0	2150	1838	2067	2150	0
Adj Flow Rate, veh/h	159	1284	43				0	317	61	48	326	0
Peak Hour Factor	0.90	0.90	0.90				0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	3				0	2	16	2	2	0
Cap, veh/h	968	1904	64				0	625	120	120	623	0
Arrive On Green	0.49	0.49	0.49				0.00	0.36	0.36	0.36	0.36	0.00
Sat Flow, veh/h	1969	3872	130				0	1744	336	146	1739	0
Grp Volume(v), veh/h	159	651	676				0	0	378	374	0	0
Grp Sat Flow(s),veh/h/ln	1969	1964	2038				0	0	2079	1885	0	0
Q Serve(g_s), s	2.7	15.1	15.2				0.0	0.0	8.6	1.0	0.0	0.0
Cycle Q Clear(g_c), s	2.7	15.1	15.2				0.0	0.0	8.6	9.6	0.0	0.0
Prop In Lane	1.00		0.06				0.00		0.16	0.13		0.00
Lane Grp Cap(c), veh/h	968	966	1002				0	0	745	743	0	0
V/C Ratio(X)	0.16	0.67	0.68				0.00	0.00	0.51	0.50	0.00	0.00
Avail Cap(c_a), veh/h	968	966	1002				0	0	745	743	0	0
HCM Platoon Ratio	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				0.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	8.4	11.6	11.6				0.0	0.0	15.1	15.0	0.0	0.0
Incr Delay (d2), s/veh	0.4	3.8	3.6				0.0	0.0	2.5	2.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.9	10.6	10.9				0.0	0.0	7.6	7.4	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	8.8	15.3	15.2				0.0	0.0	17.6	17.5	0.0	0.0
LnGrp LOS	A	B	B				A	A	B	B	A	A
Approach Vol, veh/h		1486						378			374	
Approach Delay, s/veh		14.6						17.6			17.5	
Approach LOS		B						B			B	

Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		26.0		34.0		26.0						
Change Period (Y+Rc), s		6.0		* 6		6.0						
Max Green Setting (Gmax), s		20.0		* 28		20.0						
Max Q Clear Time (g_c+I1), s		0.0		0.0		0.0						
Green Ext Time (p_c), s		0.0		0.0		0.0						

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

Notes

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



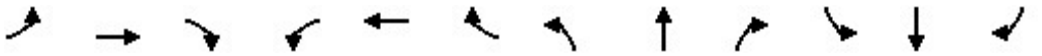
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	31	1002	68	0	0	0	0	88	85	65	165	0
Future Volume (veh/h)	31	1002	68	0	0	0	0	88	85	65	165	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96				1.00		0.97	0.99		1.00
Parking Bus, Adj	1.00	1.00	0.98				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	2051	2067	2067				0	2067	2067	2067	2067	0
Adj Flow Rate, veh/h	33	1066	72				0	94	90	69	176	0
Peak Hour Factor	0.94	0.94	0.94				0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	3	2	2				0	2	2	2	2	0
Cap, veh/h	60	2034	145				0	291	278	182	435	0
Arrive On Green	0.55	0.55	0.55				0.00	0.30	0.30	0.30	0.30	0.00
Sat Flow, veh/h	109	3667	261				0	954	913	361	1427	0
Grp Volume(v), veh/h	625	0	546				0	0	184	245	0	0
Grp Sat Flow(s),veh/h/ln	2062	0	1975				0	0	1867	1788	0	0
Q Serve(g_s), s	12.4	0.0	10.9				0.0	0.0	4.9	1.5	0.0	0.0
Cycle Q Clear(g_c), s	12.4	0.0	10.9				0.0	0.0	4.9	6.4	0.0	0.0
Prop In Lane	0.05		0.13				0.00		0.49	0.28		0.00
Lane Grp Cap(c), veh/h	1144	0	1095				0	0	569	617	0	0
V/C Ratio(X)	0.55	0.00	0.50				0.00	0.00	0.32	0.40	0.00	0.00
Avail Cap(c_a), veh/h	1144	0	1095				0	0	569	617	0	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	9.1	0.0	8.8				0.0	0.0	17.2	17.6	0.0	0.0
Incr Delay (d2), s/veh	1.9	0.0	1.6				0.0	0.0	1.5	1.9	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	8.8	0.0	7.7				0.0	0.0	4.0	5.4	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	11.0	0.0	10.4				0.0	0.0	18.7	19.5	0.0	0.0
LnGrp LOS	B	A	B				A	A	B	B	A	A
Approach Vol, veh/h		1171						184			245	
Approach Delay, s/veh		10.7						18.7			19.5	
Approach LOS		B						B			B	

Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		24.0		40.0		24.0						
Change Period (Y+Rc), s		6.0		* 6		6.0						
Max Green Setting (Gmax), s		18.0		* 34		18.0						
Max Q Clear Time (g_c+I1), s		0.0		0.0		0.0						
Green Ext Time (p_c), s		0.0		0.0		0.0						

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

Notes

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



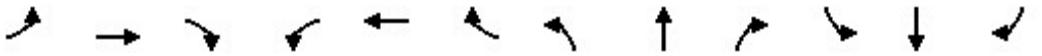
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	11	80	31	84	109	1	31	320	63	12	390	12
Future Volume (veh/h)	11	80	31	84	109	1	31	320	63	12	390	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.96	0.99		0.96	0.99		0.96	0.99		0.97
Parking Bus, Adj	1.00	1.00	0.90	1.00	1.00	0.90	1.00	1.00	0.90	1.00	1.00	0.90
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	2067	2067	2067	2034	2067	2067	2067	2034	2067	2067	2051	1969
Adj Flow Rate, veh/h	12	89	34	93	121	1	34	356	70	13	433	13
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, %	2	2	2	4	2	2	2	4	2	2	3	8
Cap, veh/h	88	448	158	289	345	3	97	664	125	599	864	26
Arrive On Green	0.36	0.36	0.36	0.36	0.36	0.36	0.97	0.97	0.97	0.48	0.48	0.48
Sat Flow, veh/h	61	1227	434	556	944	7	66	1370	258	955	1781	53
Grp Volume(v), veh/h	135	0	0	215	0	0	460	0	0	13	0	446
Grp Sat Flow(s),veh/h/ln	1722	0	0	1507	0	0	1694	0	0	955	0	1834
Q Serve(g_s), s	0.0	0.0	0.0	2.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.9
Cycle Q Clear(g_c), s	3.2	0.0	0.0	5.6	0.0	0.0	1.0	0.0	0.0	0.2	0.0	9.9
Prop In Lane	0.09		0.25	0.43		0.00	0.07		0.15	1.00		0.03
Lane Grp Cap(c), veh/h	694	0	0	636	0	0	886	0	0	599	0	889
V/C Ratio(X)	0.19	0.00	0.00	0.34	0.00	0.00	0.52	0.00	0.00	0.02	0.00	0.50
Avail Cap(c_a), veh/h	694	0	0	636	0	0	886	0	0	599	0	889
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	13.1	0.0	0.0	13.8	0.0	0.0	0.5	0.0	0.0	8.0	0.0	10.5
Incr Delay (d2), s/veh	0.6	0.0	0.0	1.4	0.0	0.0	2.2	0.0	0.0	0.1	0.0	2.0
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(95%),veh/ln	2.3	0.0	0.0	3.9	0.0	0.0	1.3	0.0	0.0	0.2	0.0	7.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.7	0.0	0.0	15.2	0.0	0.0	2.7	0.0	0.0	8.1	0.0	12.5
LnGrp LOS	B	A	A	B	A	A	A	A	A	A	A	B
Approach Vol, veh/h		135			215			460			459	
Approach Delay, s/veh		13.7			15.2			2.7			12.4	
Approach LOS		B			B			A			B	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		33.6		26.4		33.6		26.4				
Change Period (Y+Rc), s		* 6		6.0		* 6		6.0				
Max Green Setting (Gmax), s		* 28		20.4		* 28		20.4				
Max Q Clear Time (g_c+I1), s		0.0		0.0		2.2		0.0				
Green Ext Time (p_c), s		0.0		0.0		0.1		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			9.5									
HCM 6th LOS			A									

Notes

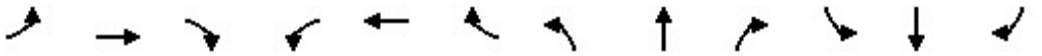
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (veh/h)	16	279	5	110	147	15	24	133	112	116	155	17
Future Volume (veh/h)	16	279	5	110	147	15	24	133	112	116	155	17
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.93		0.89	0.95		0.89	0.97		0.93	0.97		0.93
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.90	1.00	1.00	0.90
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	2002	2018	2067	1887	1985	2067	1690	2018	1871	2067	2018	1805
Adj Flow Rate, veh/h	18	310	6	122	163	17	27	148	124	129	172	19
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, %	6	5	2	13	7	2	25	5	14	2	5	18
Cap, veh/h	77	957	18	342	437	42	84	311	240	243	298	30
Arrive On Green	0.51	0.51	0.51	0.51	0.51	0.51	0.36	0.36	0.36	0.36	0.36	0.36
Sat Flow, veh/h	46	1887	35	531	862	83	77	854	660	468	819	81
Grp Volume(v), veh/h	334	0	0	302	0	0	299	0	0	320	0	0
Grp Sat Flow(s),veh/h/ln	1968	0	0	1477	0	0	1592	0	0	1368	0	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.9	0.0	0.0
Cycle Q Clear(g_c), s	6.9	0.0	0.0	6.5	0.0	0.0	10.0	0.0	0.0	12.9	0.0	0.0
Prop In Lane	0.05		0.02	0.40		0.06	0.09		0.41	0.40		0.06
Lane Grp Cap(c), veh/h	1052	0	0	821	0	0	636	0	0	570	0	0
V/C Ratio(X)	0.32	0.00	0.00	0.37	0.00	0.00	0.47	0.00	0.00	0.56	0.00	0.00
Avail Cap(c_a), veh/h	1052	0	0	821	0	0	636	0	0	570	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	10.2	0.0	0.0	10.1	0.0	0.0	17.3	0.0	0.0	17.9	0.0	0.0
Incr Delay (d2), s/veh	0.8	0.0	0.0	1.3	0.0	0.0	2.5	0.0	0.0	4.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	5.4	0.0	0.0	5.0	0.0	0.0	7.0	0.0	0.0	8.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	11.0	0.0	0.0	11.4	0.0	0.0	19.8	0.0	0.0	21.9	0.0	0.0
LnGrp LOS	B	A	A	B	A	A	B	A	A	C	A	A
Approach Vol, veh/h		334			302			299			320	
Approach Delay, s/veh		11.0			11.4			19.8			21.9	
Approach LOS		B			B			B			C	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		30.0		40.0		30.0		40.0				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		24.0		34.0		24.0		34.0				
Max Q Clear Time (g_c+I1), s		0.0		0.0		0.0		0.0				
Green Ext Time (p_c), s		0.0		0.0		0.0		0.0				

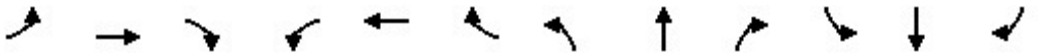
Intersection Summary												
HCM 6th Ctrl Delay			16.0									
HCM 6th LOS			B									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	75	47	19	120	2	64	267	37	3	201	14
Future Volume (veh/h)	3	75	47	19	120	2	64	267	37	3	201	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.98		0.96	0.98		0.96	0.97		0.92	0.98		0.92
Parking Bus, Adj	1.00	1.00	0.90	1.00	1.00	0.90	1.00	1.00	0.90	1.00	1.00	0.90
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	2067	2067	2034	2067	2067	2067	2150	2150	2150	2150	2150	2150
Adj Flow Rate, veh/h	3	84	53	21	135	2	72	300	42	3	226	16
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	4	2	2	2	2	2	2	2	2	2
Cap, veh/h	66	552	339	143	837	12	141	430	56	63	573	40
Arrive On Green	0.52	0.52	0.52	0.52	0.52	0.52	0.32	0.32	0.32	0.32	0.32	0.32
Sat Flow, veh/h	8	1051	645	142	1594	22	216	1323	174	7	1763	124
Grp Volume(v), veh/h	140	0	0	158	0	0	414	0	0	245	0	0
Grp Sat Flow(s),veh/h/ln	1705	0	0	1759	0	0	1713	0	0	1894	0	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	6.5	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	2.5	0.0	0.0	2.7	0.0	0.0	12.5	0.0	0.0	6.0	0.0	0.0
Prop In Lane	0.02		0.38	0.13		0.01	0.17		0.10	0.01		0.07
Lane Grp Cap(c), veh/h	956	0	0	991	0	0	627	0	0	676	0	0
V/C Ratio(X)	0.15	0.00	0.00	0.16	0.00	0.00	0.66	0.00	0.00	0.36	0.00	0.00
Avail Cap(c_a), veh/h	956	0	0	991	0	0	627	0	0	676	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	7.4	0.0	0.0	7.4	0.0	0.0	17.7	0.0	0.0	15.7	0.0	0.0
Incr Delay (d2), s/veh	0.3	0.0	0.0	0.3	0.0	0.0	5.4	0.0	0.0	1.5	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.6	0.0	0.0	1.8	0.0	0.0	9.4	0.0	0.0	4.8	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	7.7	0.0	0.0	7.7	0.0	0.0	23.1	0.0	0.0	17.2	0.0	0.0
LnGrp LOS	A	A	A	A	A	A	C	A	A	B	A	A
Approach Vol, veh/h		140			158			414			245	
Approach Delay, s/veh		7.7			7.7			23.1			17.2	
Approach LOS		A			A			C			B	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		24.0		36.0		24.0		36.0				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		18.0		30.0		18.0		30.0				
Max Q Clear Time (g_c+I1), s		0.0		0.0		0.0		0.0				
Green Ext Time (p_c), s		0.0		0.0		0.0		0.0				

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	7	223	200	48	224	2	313	109	41	5	100	33
Future Volume (veh/h)	7	223	200	48	224	2	313	109	41	5	100	33
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		0.97	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	0.90	1.00	1.00	0.90	1.00	1.00	0.90	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1946	2082	2133	2082	2065	2150	2018	2067	1854	2067	2002	2051
Adj Flow Rate, veh/h	8	242	217	52	243	2	340	118	45	5	109	36
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, %	14	6	3	6	7	2	5	2	15	2	6	3
Cap, veh/h	65	382	335	149	632	5	474	130	49	70	595	191
Arrive On Green	0.43	0.43	0.43	0.43	0.43	0.43	0.41	0.41	0.41	0.41	0.41	0.41
Sat Flow, veh/h	10	898	788	185	1488	11	899	312	119	19	1435	459
Grp Volume(v), veh/h	467	0	0	297	0	0	503	0	0	150	0	0
Grp Sat Flow(s),veh/h/ln	1696	0	0	1684	0	0	1331	0	0	1913	0	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	18.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	13.0	0.0	0.0	6.6	0.0	0.0	21.0	0.0	0.0	3.0	0.0	0.0
Prop In Lane	0.02		0.46	0.18		0.01	0.68		0.09	0.03		0.24
Lane Grp Cap(c), veh/h	782	0	0	786	0	0	653	0	0	856	0	0
V/C Ratio(X)	0.60	0.00	0.00	0.38	0.00	0.00	0.77	0.00	0.00	0.18	0.00	0.00
Avail Cap(c_a), veh/h	782	0	0	786	0	0	653	0	0	856	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	13.7	0.0	0.0	11.8	0.0	0.0	15.9	0.0	0.0	11.1	0.0	0.0
Incr Delay (d2), s/veh	3.4	0.0	0.0	1.4	0.0	0.0	8.6	0.0	0.0	0.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	8.9	0.0	0.0	4.9	0.0	0.0	11.3	0.0	0.0	2.2	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	17.0	0.0	0.0	13.2	0.0	0.0	24.5	0.0	0.0	11.6	0.0	0.0
LnGrp LOS	B	A	A	B	A	A	C	A	A	B	A	A
Approach Vol, veh/h		467			297			503			150	
Approach Delay, s/veh		17.0			13.2			24.5			11.6	
Approach LOS		B			B			C			B	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		30.0		30.0		30.0		30.0				
Change Period (Y+Rc), s		6.6		6.0		6.6		6.0				
Max Green Setting (Gmax), s		23.4		24.0		23.4		24.0				
Max Q Clear Time (g_c+I1), s		0.0		0.0		0.0		0.0				
Green Ext Time (p_c), s		0.0		0.0		0.0		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			18.3									
HCM 6th LOS			B									

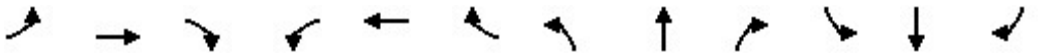
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	9	668	15	334	484	3	6	44	293	242	59	7
Future Volume (veh/h)	9	668	15	334	484	3	6	44	293	242	59	7
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.90	1.00	1.00	0.90
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1920	2067	2067	1920	2067	2067	1822	2018	2051	2067	2067	2067
Adj Flow Rate, veh/h	9	696	16	348	504	3	6	46	305	252	61	7
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	11	2	2	11	2	2	17	5	3	2	2	2
Cap, veh/h	425	1634	38	472	1197	7	44	65	397	205	32	4
Arrive On Green	0.42	0.42	0.42	0.11	0.58	0.58	0.28	0.28	0.28	0.28	0.28	0.28
Sat Flow, veh/h	828	3922	90	1828	2052	12	11	228	1402	471	114	13
Grp Volume(v), veh/h	9	348	364	348	0	507	357	0	0	320	0	0
Grp Sat Flow(s),veh/h/ln	828	1964	2048	1828	0	2065	1641	0	0	599	0	0
Q Serve(g_s), s	0.6	11.3	11.3	9.5	0.0	12.2	0.0	0.0	0.0	6.7	0.0	0.0
Cycle Q Clear(g_c), s	0.6	11.3	11.3	9.5	0.0	12.2	18.8	0.0	0.0	25.5	0.0	0.0
Prop In Lane	1.00		0.04	1.00		0.01	0.02		0.85	0.79		0.02
Lane Grp Cap(c), veh/h	425	818	853	472	0	1204	506	0	0	241	0	0
V/C Ratio(X)	0.02	0.43	0.43	0.74	0.00	0.42	0.71	0.00	0.00	1.33	0.00	0.00
Avail Cap(c_a), veh/h	425	818	853	472	0	1204	506	0	0	241	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	0.80	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	15.5	18.6	18.6	13.7	0.0	10.4	30.0	0.0	0.0	37.7	0.0	0.0
Incr Delay (d2), s/veh	0.1	1.6	1.6	6.0	0.0	1.1	6.5	0.0	0.0	173.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.2	9.2	9.5	8.0	0.0	9.4	12.1	0.0	0.0	27.4	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	15.6	20.2	20.2	19.7	0.0	11.4	36.5	0.0	0.0	210.8	0.0	0.0
LnGrp LOS	B	C	C	B	A	B	D	A	A	F	A	A
Approach Vol, veh/h		721			855			357			320	
Approach Delay, s/veh		20.1			14.8			36.5			210.8	
Approach LOS		C			B			D			F	

Timer - Assigned Phs	2	3	4	6	8
Phs Duration (G+Y+Rc), s	32.0	15.0	43.0	32.0	58.0
Change Period (Y+Rc), s	* 8	7.0	* 7	* 8	* 7
Max Green Setting (Gmax), s	* 24	8.0	* 36	* 24	* 51
Max Q Clear Time (g_c+I1), s	20.8	11.5	13.3	27.5	14.2
Green Ext Time (p_c), s	0.4	0.0	1.9	0.0	1.4

Intersection Summary	
HCM 6th Ctrl Delay	47.8
HCM 6th LOS	D

Notes

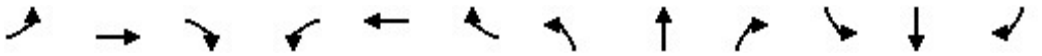
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	12	212	8	115	333	13	16	343	198	11	186	79
Future Volume (veh/h)	12	212	8	115	333	13	16	343	198	11	186	79
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.96	0.99		0.96	0.99		0.95	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	2067	2034	2067	2051	2067	2067	2082	2150	2116	2150	2150	2150
Adj Flow Rate, veh/h	13	233	9	126	366	14	18	377	218	12	204	87
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	4	2	3	2	2	6	2	4	2	2	2
Cap, veh/h	73	948	35	249	692	25	381	457	264	180	514	219
Arrive On Green	0.17	0.17	0.17	0.51	0.51	0.51	0.36	0.36	0.36	0.36	0.36	0.36
Sat Flow, veh/h	38	1870	70	363	1365	49	1085	1253	725	851	1410	601
Grp Volume(v), veh/h	255	0	0	506	0	0	18	0	595	12	0	291
Grp Sat Flow(s),veh/h/ln	1978	0	0	1778	0	0	1085	0	1978	851	0	2012
Q Serve(g_s), s	0.0	0.0	0.0	4.7	0.0	0.0	0.9	0.0	19.1	0.9	0.0	7.5
Cycle Q Clear(g_c), s	7.7	0.0	0.0	12.4	0.0	0.0	8.4	0.0	19.1	20.1	0.0	7.5
Prop In Lane	0.05		0.04	0.25		0.03	1.00		0.37	1.00		0.30
Lane Grp Cap(c), veh/h	1057	0	0	966	0	0	381	0	720	180	0	733
V/C Ratio(X)	0.24	0.00	0.00	0.52	0.00	0.00	0.05	0.00	0.83	0.07	0.00	0.40
Avail Cap(c_a), veh/h	1057	0	0	966	0	0	381	0	720	180	0	733
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	17.6	0.0	0.0	11.4	0.0	0.0	19.7	0.0	20.2	29.3	0.0	16.5
Incr Delay (d2), s/veh	0.5	0.0	0.0	2.0	0.0	0.0	0.2	0.0	10.5	0.7	0.0	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	7.1	0.0	0.0	8.9	0.0	0.0	0.4	0.0	15.6	0.4	0.0	6.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.1	0.0	0.0	13.4	0.0	0.0	19.9	0.0	30.7	30.1	0.0	18.1
LnGrp LOS	B	A	A	B	A	A	B	A	C	C	A	B
Approach Vol, veh/h		255			506			613			303	
Approach Delay, s/veh		18.1			13.4			30.4			18.6	
Approach LOS		B			B			C			B	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		40.0		30.0		40.0		30.0				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		34.0		24.0		34.0		24.0				
Max Q Clear Time (g_c+I1), s		0.0		22.1		0.0		10.4				
Green Ext Time (p_c), s		0.0		0.0		0.0		0.1				

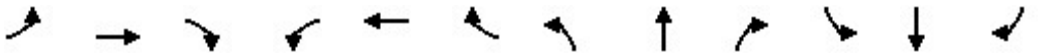
Intersection Summary												
HCM 6th Ctrl Delay			21.3									
HCM 6th LOS			C									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (veh/h)	63	455	3	3	261	12	20	14	15	15	9	59
Future Volume (veh/h)	63	455	3	3	261	12	20	14	15	15	9	59
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.98		0.97	0.99		0.95	0.98		0.97	0.98		0.95
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	2051	1953	2067	2067	1969	2067	2018	2067	2067	2067	2067	2067
Adj Flow Rate, veh/h	68	489	3	3	281	13	22	15	16	16	10	63
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	3	9	2	2	8	2	5	2	2	2	2	2
Cap, veh/h	150	954	6	63	1066	49	235	165	136	116	91	330
Arrive On Green	0.57	0.57	0.57	0.57	0.57	0.57	0.28	0.28	0.28	0.28	0.28	0.28
Sat Flow, veh/h	145	1660	10	4	1853	85	545	600	495	163	332	1200
Grp Volume(v), veh/h	560	0	0	297	0	0	53	0	0	89	0	0
Grp Sat Flow(s),veh/h/ln	1814	0	0	1943	0	0	1640	0	0	1695	0	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	10.3	0.0	0.0	4.6	0.0	0.0	1.2	0.0	0.0	2.3	0.0	0.0
Prop In Lane	0.12		0.01	0.01		0.04	0.42		0.30	0.18		0.71
Lane Grp Cap(c), veh/h	1110	0	0	1178	0	0	536	0	0	537	0	0
V/C Ratio(X)	0.50	0.00	0.00	0.25	0.00	0.00	0.10	0.00	0.00	0.17	0.00	0.00
Avail Cap(c_a), veh/h	1110	0	0	1178	0	0	536	0	0	537	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	7.6	0.0	0.0	6.4	0.0	0.0	16.2	0.0	0.0	16.6	0.0	0.0
Incr Delay (d2), s/veh	1.6	0.0	0.0	0.5	0.0	0.0	0.4	0.0	0.0	0.7	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	7.2	0.0	0.0	3.1	0.0	0.0	1.0	0.0	0.0	1.8	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	9.2	0.0	0.0	6.9	0.0	0.0	16.6	0.0	0.0	17.3	0.0	0.0
LnGrp LOS	A	A	A	A	A	A	B	A	A	B	A	A
Approach Vol, veh/h		560			297			53			89	
Approach Delay, s/veh		9.2			6.9			16.6			17.3	
Approach LOS		A			A			B			B	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		21.0		39.0		21.0		39.0				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		15.0		33.0		15.0		33.0				
Max Q Clear Time (g_c+I1), s		0.0		0.0		0.0		0.0				
Green Ext Time (p_c), s		0.0		0.0		0.0		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			9.7									
HCM 6th LOS			A									



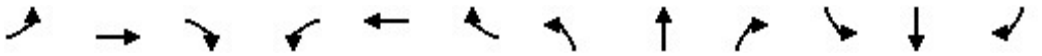
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	199	16	183	226	28	78	399	14	16	262	12
Future Volume (veh/h)	6	199	16	183	226	28	78	399	14	16	262	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.96	0.99		1.00	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.90	1.00	1.00	0.90
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1861	1669	1861	1846	1728	1787	1843	1920	1858	1935	1889	1843
Adj Flow Rate, veh/h	6	212	17	195	240	0	83	424	15	17	279	13
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	15	2	3	11	7	8	3	7	2	5	8
Cap, veh/h	59	762	60	351	401		341	603	21	67	522	23
Arrive On Green	0.51	0.51	0.51	0.17	0.17	0.00	0.36	0.36	0.36	0.36	0.36	0.36
Sat Flow, veh/h	12	1502	118	545	791	0	965	1656	59	35	1434	64
Grp Volume(v), veh/h	235	0	0	435	0	0	83	0	439	309	0	0
Grp Sat Flow(s),veh/h/ln	1632	0	0	1336	0	0	965	0	1715	1533	0	0
Q Serve(g_s), s	0.0	0.0	0.0	14.6	0.0	0.0	0.0	0.0	15.3	0.4	0.0	0.0
Cycle Q Clear(g_c), s	5.8	0.0	0.0	20.4	0.0	0.0	9.8	0.0	15.3	15.7	0.0	0.0
Prop In Lane	0.03		0.07	0.45		0.00	1.00		0.03	0.06		0.04
Lane Grp Cap(c), veh/h	881	0	0	752	0		341	0	625	613	0	0
V/C Ratio(X)	0.27	0.00	0.00	0.58	0.00		0.24	0.00	0.70	0.50	0.00	0.00
Avail Cap(c_a), veh/h	881	0	0	752	0		341	0	625	613	0	0
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	9.9	0.0	0.0	22.2	0.0	0.0	17.2	0.0	19.0	17.3	0.0	0.0
Incr Delay (d2), s/veh	0.7	0.0	0.0	3.2	0.0	0.0	1.7	0.0	6.5	3.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.7	0.0	0.0	12.8	0.0	0.0	2.1	0.0	11.1	7.5	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	10.7	0.0	0.0	25.5	0.0	0.0	18.9	0.0	25.5	20.3	0.0	0.0
LnGrp LOS	B	A	A	C	A		B	A	C	C	A	A
Approach Vol, veh/h		235			435			522			309	
Approach Delay, s/veh		10.7			25.5			24.5			20.3	
Approach LOS		B			C			C			C	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	40.0	30.0	40.0	30.0
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	34.0	24.0	34.0	24.0
Max Q Clear Time (g_c+I1), s	0.0	0.0	0.0	11.8
Green Ext Time (p_c), s	0.0	0.0	0.0	0.1

Intersection Summary	
HCM 6th Ctrl Delay	21.7
HCM 6th LOS	C

Notes

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



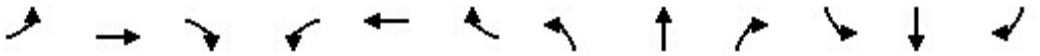
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (veh/h)	10	131	8	6	270	180	11	183	4	148	310	20
Future Volume (veh/h)	10	131	8	6	270	180	11	183	4	148	310	20
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.95	0.98		0.94	0.99		0.97	0.99		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	1936	1969	1478	1822	1985	1985	1953	2002	2067	1985	1985	2018
Adj Flow Rate, veh/h	10	136	8	6	281	188	11	191	4	154	323	21
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	10	8	38	17	7	7	9	6	2	7	7	5
Cap, veh/h	80	643	36	63	398	262	81	894	18	283	544	33
Arrive On Green	0.38	0.37	0.38	0.38	0.37	0.38	0.47	0.47	0.47	0.47	0.47	0.47
Sat Flow, veh/h	44	1747	98	7	1081	713	37	1881	38	430	1145	69
Grp Volume(v), veh/h	154	0	0	475	0	0	206	0	0	498	0	0
Grp Sat Flow(s),veh/h/ln	1889	0	0	1800	0	0	1956	0	0	1645	0	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.3	0.0	0.0
Cycle Q Clear(g_c), s	3.2	0.0	0.0	13.3	0.0	0.0	3.6	0.0	0.0	13.0	0.0	0.0
Prop In Lane	0.06		0.05	0.01		0.40	0.05		0.02	0.31		0.04
Lane Grp Cap(c), veh/h	791	0	0	754	0	0	992	0	0	860	0	0
V/C Ratio(X)	0.19	0.00	0.00	0.63	0.00	0.00	0.21	0.00	0.00	0.58	0.00	0.00
Avail Cap(c_a), veh/h	791	0	0	754	0	0	992	0	0	860	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	13.0	0.0	0.0	16.0	0.0	0.0	9.2	0.0	0.0	11.5	0.0	0.0
Incr Delay (d2), s/veh	0.5	0.0	0.0	4.0	0.0	0.0	0.5	0.0	0.0	2.8	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.5	0.0	0.0	9.5	0.0	0.0	2.7	0.0	0.0	8.5	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.5	0.0	0.0	20.0	0.0	0.0	9.7	0.0	0.0	14.3	0.0	0.0
LnGrp LOS	B	A	A	B	A	A	A	A	A	B	A	A
Approach Vol, veh/h		154			475			206			498	
Approach Delay, s/veh		13.5			20.0			9.7			14.3	
Approach LOS		B			B			A			B	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		33.0		27.0		33.0		27.0				
Change Period (Y+Rc), s		* 6		5.4		* 6		5.4				
Max Green Setting (Gmax), s		* 27		21.6		* 27		21.6				
Max Q Clear Time (g_c+I1), s		0.0		0.0		0.0		0.0				
Green Ext Time (p_c), s		0.0		0.0		0.0		0.0				

Intersection Summary	
HCM 6th Ctrl Delay	15.5
HCM 6th LOS	B

Notes

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



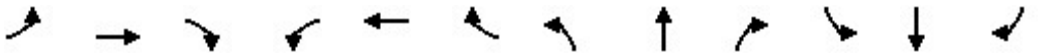
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	91	886	13	58	119	0	0	40	18
Future Volume (veh/h)	0	0	0	91	886	13	58	119	0	0	40	18
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		0.95	0.95		1.00	1.00		0.92
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1992	1992	2009	1985	2067	0	0	2051	2067
Adj Flow Rate, veh/h				108	1055	15	69	142	0	0	48	21
Peak Hour Factor				0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %				3	3	2	7	2	0	0	3	2
Cap, veh/h				205	2104	31	192	351	0	0	340	149
Arrive On Green				0.59	0.59	0.59	0.26	0.26	0.00	0.00	0.26	0.26
Sat Flow, veh/h				346	3556	53	435	1358	0	0	1316	576
Grp Volume(v), veh/h				616	0	562	211	0	0	0	0	69
Grp Sat Flow(s),veh/h/ln				1975	0	1980	1793	0	0	0	0	1891
Q Serve(g_s), s				11.1	0.0	9.7	2.0	0.0	0.0	0.0	0.0	1.7
Cycle Q Clear(g_c), s				11.1	0.0	9.7	5.4	0.0	0.0	0.0	0.0	1.7
Prop In Lane				0.18		0.03	0.33		0.00	0.00		0.30
Lane Grp Cap(c), veh/h				1169	0	1171	543	0	0	0	0	489
V/C Ratio(X)				0.53	0.00	0.48	0.39	0.00	0.00	0.00	0.00	0.14
Avail Cap(c_a), veh/h				1169	0	1171	543	0	0	0	0	489
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh				7.3	0.0	7.0	18.4	0.0	0.0	0.0	0.0	17.1
Incr Delay (d2), s/veh				1.7	0.0	1.4	2.1	0.0	0.0	0.0	0.0	0.6
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln				7.3	0.0	6.3	4.7	0.0	0.0	0.0	0.0	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				9.0	0.0	8.4	20.5	0.0	0.0	0.0	0.0	17.7
LnGrp LOS				A	A	A	C	A	A	A	A	B
Approach Vol, veh/h					1178			211			69	
Approach Delay, s/veh					8.7			20.5			17.7	
Approach LOS					A			C			B	

Timer - Assigned Phs	2	4	6
Phs Duration (G+Y+Rc), s	20.0	40.0	20.0
Change Period (Y+Rc), s	6.0	* 6	6.0
Max Green Setting (Gmax), s	14.0	* 34	14.0
Max Q Clear Time (g_c+I1), s	0.0	0.0	0.0
Green Ext Time (p_c), s	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	10.8
HCM 6th LOS	B

Notes

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



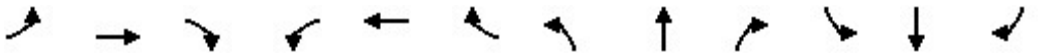
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1030	67	0	0	0	0	0	125	0	0	0
Future Volume (veh/h)	0	1030	67	0	0	0	0	0	125	0	0	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96				1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	2067	2067	2051				0	2067	1838	2067	2067	0
Adj Flow Rate, veh/h	0	1132	74				0	0	137	0	0	0
Peak Hour Factor	0.91	0.91	0.91				0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	3				0	2	16	2	2	0
Cap, veh/h	0	2207	144				0	0	444	0	534	0
Arrive On Green	0.00	0.20	0.20				0.00	0.00	0.26	0.00	0.00	0.00
Sat Flow, veh/h	0	3834	244				0	0	1717	0	2067	0
Grp Volume(v), veh/h	0	596	610				0	0	137	0	0	0
Grp Sat Flow(s),veh/h/ln	0	1964	2010				0	0	1717	0	2067	0
Q Serve(g_s), s	0.0	16.3	16.3				0.0	0.0	3.9	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	16.3	16.3				0.0	0.0	3.9	0.0	0.0	0.0
Prop In Lane	0.00		0.12				0.00		1.00	0.00		0.00
Lane Grp Cap(c), veh/h	0	1162	1189				0	0	444	0	534	0
V/C Ratio(X)	0.00	0.51	0.51				0.00	0.00	0.31	0.00	0.00	0.00
Avail Cap(c_a), veh/h	0	1162	1189				0	0	444	0	534	0
HCM Platoon Ratio	0.33	0.33	0.33				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00				0.00	0.00	1.00	0.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	16.4	16.4				0.0	0.0	17.9	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	1.6	1.6				0.0	0.0	1.8	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	13.6	13.9				0.0	0.0	3.0	0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	18.0	18.0				0.0	0.0	19.7	0.0	0.0	0.0
LnGrp LOS	A	B	B				A	A	B	A	A	A
Approach Vol, veh/h		1206						137			0	
Approach Delay, s/veh		18.0						19.7			0.0	
Approach LOS		B						B				

Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		20.0		40.0		20.0						
Change Period (Y+Rc), s		6.0		* 6		6.0						
Max Green Setting (Gmax), s		14.0		* 34		14.0						
Max Q Clear Time (g_c+I1), s		0.0		0.0		0.0						
Green Ext Time (p_c), s		0.0		0.0		0.0						

Intersection Summary		
HCM 6th Ctrl Delay		18.2
HCM 6th LOS		B

Notes

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	143	200	22	6	141	13	36	178	38	17	271	28
Future Volume (veh/h)	143	200	22	6	141	13	36	178	38	17	271	28
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.98		0.95	0.98		0.96	0.97		1.00	0.95		0.91
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	2034	2067	2067	1822	2051	1969	2067	2034	2051	2067	2051	1871
Adj Flow Rate, veh/h	159	222	24	7	157	14	40	198	0	19	301	31
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, %	4	2	2	17	3	8	2	4	3	2	3	14
Cap, veh/h	391	528	53	75	989	86	126	482		78	493	49
Arrive On Green	1.00	1.00	1.00	1.00	1.00	1.00	0.29	0.29	0.00	0.29	0.29	0.29
Sat Flow, veh/h	564	969	97	23	1815	157	197	1692	0	53	1729	173
Grp Volume(v), veh/h	405	0	0	178	0	0	238	0	0	351	0	0
Grp Sat Flow(s),veh/h/ln	1630	0	0	1995	0	0	1889	0	0	1955	0	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	5.7	0.0	0.0	9.2	0.0	0.0
Prop In Lane	0.39		0.06	0.04		0.08	0.17		0.00	0.05		0.09
Lane Grp Cap(c), veh/h	972	0	0	1150	0	0	608	0		620	0	0
V/C Ratio(X)	0.42	0.00	0.00	0.15	0.00	0.00	0.39	0.00		0.57	0.00	0.00
Avail Cap(c_a), veh/h	972	0	0	1150	0	0	608	0		620	0	0
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	17.4	0.0	0.0	18.6	0.0	0.0
Incr Delay (d2), s/veh	1.3	0.0	0.0	0.3	0.0	0.0	1.9	0.0	0.0	3.7	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.6	0.0	0.0	0.2	0.0	0.0	5.1	0.0	0.0	8.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	1.3	0.0	0.0	0.3	0.0	0.0	19.3	0.0	0.0	22.3	0.0	0.0
LnGrp LOS	A	A	A	A	A	A	B	A		C	A	A
Approach Vol, veh/h		405			178			238			351	
Approach Delay, s/veh		1.3			0.3			19.3			22.3	
Approach LOS		A			A			B			C	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		22.2		37.8		22.2		37.8				
Change Period (Y+Rc), s		6.6		6.6		6.6		6.6				
Max Green Setting (Gmax), s		15.6		31.2		15.6		31.2				
Max Q Clear Time (g_c+I1), s		0.0		0.0		0.0		0.0				
Green Ext Time (p_c), s		0.0		0.0		0.0		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			11.1									
HCM 6th LOS			B									

Notes

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

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	7:15	7:15	7:15	7:15	7:15	7:15
End Time	8:30	8:30	8:30	8:30	8:30	8:30
Total Time (min)	75	75	75	75	75	75
Time Recorded (min)	60	60	60	60	60	60
# of Intervals	2	2	2	2	2	2
# of Recorded Intervals	1	1	1	1	1	1
Vehs Entered	11145	10780	10949	11210	11087	11026
Vehs Exited	10976	10491	10919	11038	11031	10897
Starting Vehs	309	349	352	311	314	321
Ending Vehs	478	638	382	483	370	455
Travel Distance (mi)	4316	4078	4258	4318	4327	4259
Travel Time (hr)	360.0	527.7	390.5	385.5	343.3	401.4
Total Delay (hr)	190.5	368.2	223.4	215.8	173.4	234.3
Total Stops	17005	16712	17363	17413	17072	17107
Fuel Used (gal)	206.6	236.8	210.7	211.3	202.2	213.5

Interval #0 Information Seeding

Start Time	7:15
End Time	7:30
Total Time (min)	15

Volumes adjusted by Growth Factors.

No data recorded this interval.

Interval #1 Information Recording

Start Time	7:30
End Time	8:30
Total Time (min)	60

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	Avg
Vehs Entered	11145	10780	10949	11210	11087	11026
Vehs Exited	10976	10491	10919	11038	11031	10897
Starting Vehs	309	349	352	311	314	321
Ending Vehs	478	638	382	483	370	455
Travel Distance (mi)	4316	4078	4258	4318	4327	4259
Travel Time (hr)	360.0	527.7	390.5	385.5	343.3	401.4
Total Delay (hr)	190.5	368.2	223.4	215.8	173.4	234.3
Total Stops	17005	16712	17363	17413	17072	17107
Fuel Used (gal)	206.6	236.8	210.7	211.3	202.2	213.5

Arterial Level of Service: NB 46th St

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Woodland Ave	69	15.6	32.1	0.1	14
Kingsessing Ave	2	26.5	41.2	0.1	11
Total		42.1	73.3	0.3	12

Arterial Level of Service: SB 46th St

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Kingsessing Ave	2	14.7	25.2	0.1	12
Woodland Ave	69	35.9	54.0	0.1	9
Total		50.6	79.2	0.2	10

Arterial Level of Service: EB Kingsessing Ave

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
49th St	54	48.3	90.6	0.1	5
48th St	4	40.4	54.7	0.1	6
47th St	59	52.6	64.7	0.1	5
46th St	2	15.7	29.1	0.1	12
Total		157.1	239.1	0.4	6

Arterial Level of Service: WB Kingsessing Ave

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
46th St	2	6.4	18.0	0.1	17
47th St	59	61.2	72.6	0.1	5
48th St	4	6.9	19.7	0.1	17
49th St	54	14.3	26.7	0.1	12
Total		88.9	137.0	0.4	10

Arterial Level of Service: EB Baltimore Ave

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
49th St	18	14.1	28.5	0.1	14
Florence Ave	3	18.9	31.8	0.1	12
47th St	92	13.1	28.0	0.1	14
46th St	19	16.7	30.2	0.1	14
Cedar Ave	47	1.3	7.5	0.0	19
Total		64.1	126.0	0.5	14

Arterial Level of Service: WB Baltimore Ave

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Cedar Ave	47	0.3	10.6	0.1	26
46th St	19	16.0	20.8	0.0	7
47th St	92	13.9	29.5	0.1	14
48th St	3	11.2	25.1	0.1	16
49th St	18	8.4	21.3	0.1	18
Total		49.9	107.3	0.4	15

Arterial Level of Service: NB 48th St

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Woodland Ave	70	40.1	53.3	0.1	5
	71	4.6	9.8	0.0	14
Total		44.7	63.0	0.1	6

Arterial Level of Service: SE 48th St

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Woodland Ave	70	30.3	36.0	0.0	4
Grays Ferry	72	2.7	13.7	0.1	20
Total		32.9	49.7	0.1	8

Arterial Level of Service: NB 49th St

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Paschall Ave	62	23.8	34.9	0.1	8
Woodland Ave	57	32.6	69.3	0.1	9
Greenway Ave	74	43.1	59.3	0.1	6
Kingsessing Ave	54	23.7	44.5	0.1	10
Total		123.2	208.0	0.4	8

Arterial Level of Service: SB 49th St

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Kingsessing Ave	54	10.6	24.3	0.1	15
Greenway Ave	74	17.7	32.8	0.1	12
Woodland Ave	57	62.2	76.0	0.1	5
Paschall Ave	62	8.8	19.3	0.1	18
Total		99.3	152.3	0.4	10

Intersection: 2: 46th St & Kingsessing Ave

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	175	44	112	104
Average Queue (ft)	79	11	44	43
95th Queue (ft)	158	37	84	85
Link Distance (ft)	394	421	594	378
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 3: Florence Ave & 48th St & Baltimore Ave

Movement	EB	WB	NB	NB	SB
Directions Served	LTR>	<LTR	<L	TR	LTR>
Maximum Queue (ft)	246	112	104	204	209
Average Queue (ft)	127	38	47	94	83
95th Queue (ft)	216	81	97	166	157
Link Distance (ft)	390	471		1055	362
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)			80		
Storage Blk Time (%)			2	12	
Queuing Penalty (veh)			5	7	

Intersection: 4: Kingsessing Ave & 48th St

Movement	EB	WB	SB
Directions Served	LT	TR	LR
Maximum Queue (ft)	294	91	217
Average Queue (ft)	113	38	81
95th Queue (ft)	321	65	288
Link Distance (ft)	421	402	492
Upstream Blk Time (%)	9		6
Queuing Penalty (veh)	24		0
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 5: Farragut St & Walnut St

Movement	WB	WB	NB	SB
Directions Served	T	TR	LT	R
Maximum Queue (ft)	224	218	83	81
Average Queue (ft)	150	122	37	37
95th Queue (ft)	218	194	72	69
Link Distance (ft)	213	213	410	399
Upstream Blk Time (%)	1	0		
Queuing Penalty (veh)	2	1		
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 18: 49th St & Baltimore Ave & Catharine St

Movement	EB	WB	NB	NB	SB
Directions Served	<LTR	LTR>	<L	TR	LTR>
Maximum Queue (ft)	228	159	56	191	148
Average Queue (ft)	102	45	34	84	73
95th Queue (ft)	182	109	61	154	125
Link Distance (ft)	508	390		1409	506
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)			20		
Storage Blk Time (%)			31	36	
Queuing Penalty (veh)			55	36	

Intersection: 19: 46th St & Baltimore Ave

Movement	EB	WB	NB	SB	SB
Directions Served	LTR	LTR	LTR	L	TR
Maximum Queue (ft)	210	132	166	54	60
Average Queue (ft)	113	45	81	23	34
95th Queue (ft)	181	94	136	48	61
Link Distance (ft)	495	96	397	43	43
Upstream Blk Time (%)		2		1	7
Queuing Penalty (veh)		2		2	7
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 42: 48th St & Walnut St

Movement	WB	WB	NB	SB
Directions Served	LT	TR	LT	TR
Maximum Queue (ft)	104	93	259	238
Average Queue (ft)	36	39	126	122
95th Queue (ft)	79	84	219	206
Link Distance (ft)	491	491	386	472
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 43: 46th St & Walnut St

Movement	WB	WB	NB	SB
Directions Served	LT	TR	LT	TR
Maximum Queue (ft)	222	187	170	136
Average Queue (ft)	116	68	80	67
95th Queue (ft)	185	137	138	118
Link Distance (ft)	517	517	394	502
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 45: 46th St & Cedar Ave

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LT	TR
Maximum Queue (ft)	94	70	53	144
Average Queue (ft)	38	23	5	59
95th Queue (ft)	69	55	29	112
Link Distance (ft)	209	135	43	538
Upstream Blk Time (%)			0	
Queuing Penalty (veh)			1	
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 47: Baltimore Ave & Cedar Ave

Movement	WB
Directions Served	TR
Maximum Queue (ft)	7
Average Queue (ft)	0
95th Queue (ft)	5
Link Distance (ft)	364
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 48: 48th St & Chestnut St

Movement	EB	EB	EB	NB	SB
Directions Served	L	T	TR	TR	LT
Maximum Queue (ft)	140	334	328	240	319
Average Queue (ft)	78	176	179	156	144
95th Queue (ft)	158	321	308	229	241
Link Distance (ft)		471	471	472	512
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)	100				
Storage Blk Time (%)	1	19			
Queuing Penalty (veh)	7	31			

Intersection: 49: 49th St & Chestnut St

Movement	EB	EB	NB	SB
Directions Served	LT	TR	TR	LT
Maximum Queue (ft)	377	327	140	182
Average Queue (ft)	210	158	68	89
95th Queue (ft)	315	267	121	147
Link Distance (ft)	510	510	516	501
Upstream Blk Time (%)	0			
Queuing Penalty (veh)	0			
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 54: 49th St & Kingsessing Ave

Movement	EB	WB	NB	SB	SB
Directions Served	LTR	LTR	LTR	L	TR
Maximum Queue (ft)	262	139	327	36	178
Average Queue (ft)	114	43	148	6	99
95th Queue (ft)	302	110	374	27	159
Link Distance (ft)	441	421	506		490
Upstream Blk Time (%)	4		7		
Queuing Penalty (veh)	0		26		
Storage Bay Dist (ft)				20	
Storage Blk Time (%)				7	32
Queuing Penalty (veh)				22	2

Intersection: 57: 49th St & Woodland Ave

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	232	152	284	388
Average Queue (ft)	95	61	153	160
95th Queue (ft)	185	127	287	328
Link Distance (ft)	402	88	408	432
Upstream Blk Time (%)	0	3	2	1
Queuing Penalty (veh)	0	5	4	1
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 59: 47th St & Kingsessing Ave

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	308	181	292	400
Average Queue (ft)	138	49	137	170
95th Queue (ft)	347	166	238	428
Link Distance (ft)	402	394	659	471
Upstream Blk Time (%)	13	1		16
Queuing Penalty (veh)	33	0		0
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 60: 47th St & Paschall Ave

Movement	EB	WB	NB	B77	SB
Directions Served	LT	TR	LTR	T	LTR
Maximum Queue (ft)	68	48	134	132	684
Average Queue (ft)	31	12	98	73	344
95th Queue (ft)	62	38	134	149	703
Link Distance (ft)	58	392	25	6	723
Upstream Blk Time (%)	1		76	26	4
Queuing Penalty (veh)	1		446	155	7
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 62: 49th St & Paschall Ave

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	386	213	304	119
Average Queue (ft)	206	72	138	43
95th Queue (ft)	364	165	249	101
Link Distance (ft)	402	620	318	408
Upstream Blk Time (%)	4		3	
Queuing Penalty (veh)	0		0	
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 66: Paschall Ave & Grays Ferry Ave

Movement	EB	EB	WB	WB	NE	SW
Directions Served	T	TR	L	TR	LTR	LTR
Maximum Queue (ft)	219	220	245	252	542	77
Average Queue (ft)	117	126	134	128	250	71
95th Queue (ft)	194	195	237	239	494	85
Link Distance (ft)	256	256	168	168	620	58
Upstream Blk Time (%)	0	0	11	9	0	69
Queuing Penalty (veh)	0	0	35	29	0	152
Storage Bay Dist (ft)						
Storage Blk Time (%)	33					
Queuing Penalty (veh)	0					

Intersection: 67: Grays Ferry & Woodland Ave

Movement	EB	WB
Directions Served	TR	LT
Maximum Queue (ft)	14	93
Average Queue (ft)	1	12
95th Queue (ft)	8	51
Link Distance (ft)	88	243
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 68: 47th St & Woodland Ave

Movement	EB	WB	NB	NB	SB	SB
Directions Served	LTR	LTR	L	TR	L	TR
Maximum Queue (ft)	248	292	20	736	74	658
Average Queue (ft)	130	118	3	475	52	308
95th Queue (ft)	213	251	20	844	94	745
Link Distance (ft)	397	397		723		659
Upstream Blk Time (%)		1		6		22
Queuing Penalty (veh)		3		38		55
Storage Bay Dist (ft)			20		50	
Storage Blk Time (%)			5	62	69	13
Queuing Penalty (veh)			29	2	109	2

Intersection: 69: 46th St & Woodland Ave

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	298	148	66	116
Average Queue (ft)	166	62	25	49
95th Queue (ft)	271	124	57	92
Link Distance (ft)	397	447	611	594
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 70: 48th St & Woodland Ave

Movement	EB	WB	NB	NB	SB	B71	B76
Directions Served	LTR	LTR	L	TR	LTR	T	T
Maximum Queue (ft)	202	287	48	384	188	207	92
Average Queue (ft)	102	138	27	207	138	41	8
95th Queue (ft)	176	276	55	383	213	163	61
Link Distance (ft)	243	397		303	115	157	285
Upstream Blk Time (%)	0	3		11	27	6	
Queuing Penalty (veh)	0	6		45	94	23	
Storage Bay Dist (ft)			20				
Storage Blk Time (%)			29	43			
Queuing Penalty (veh)			103	27			

Intersection: 72: Grays Ferry/Grays Ferry Ave & 48th St

Movement	EB	WB	SE
Directions Served	LT	R	L
Maximum Queue (ft)	143	180	8
Average Queue (ft)	67	30	0
95th Queue (ft)	114	162	5
Link Distance (ft)	315	256	303
Upstream Blk Time (%)		5	
Queuing Penalty (veh)		20	
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 74: 49th St & Greenway Ave

Movement	EB	WB	B76	B71	NB	SB
Directions Served	LTR	LTR	T	T	LTR	LTR
Maximum Queue (ft)	241	303	48	32	207	257
Average Queue (ft)	100	138	18	9	94	113
95th Queue (ft)	261	288	117	65	262	206
Link Distance (ft)	402	285	157	115	432	506
Upstream Blk Time (%)	7	8	6	4	4	
Queuing Penalty (veh)	0	26	22	14	6	
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 79: Grays Ferry Ave

Movement	EB	WB	WB	WB
Directions Served	T	T	T	R
Maximum Queue (ft)	8	937	1108	276
Average Queue (ft)	0	363	418	130
95th Queue (ft)	5	1323	1404	333
Link Distance (ft)	168	1496	1496	
Upstream Blk Time (%)		7	12	
Queuing Penalty (veh)		0	0	
Storage Bay Dist (ft)				76
Storage Blk Time (%)			7	38
Queuing Penalty (veh)			41	127

Intersection: 88: 47th St & Walnut St

Movement	WB	WB	NB	SB
Directions Served	LT	TR	LT	TR
Maximum Queue (ft)	180	177	180	82
Average Queue (ft)	93	90	86	33
95th Queue (ft)	149	154	147	67
Link Distance (ft)	210	210	377	462
Upstream Blk Time (%)	0	0		
Queuing Penalty (veh)	0	0		
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 89: 47th St/Rite-Aid Drwy & Chestnut St

Movement	EB	EB	NB
Directions Served	LT	TR	TR
Maximum Queue (ft)	92	90	115
Average Queue (ft)	32	36	60
95th Queue (ft)	64	75	103
Link Distance (ft)	499	499	462
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 92: 47th St & Baltimore Ave

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	203	119	316	313
Average Queue (ft)	100	46	115	157
95th Queue (ft)	168	101	290	281
Link Distance (ft)	471	495	744	761
Upstream Blk Time (%)			0	
Queuing Penalty (veh)			0	
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Network Summary

Network wide Queuing Penalty: 1893

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	4:00	4:00	4:00	4:00	4:00	4:00
End Time	5:15	5:15	5:15	5:15	5:15	5:15
Total Time (min)	75	75	75	75	75	75
Time Recorded (min)	60	60	60	60	60	60
# of Intervals	2	2	2	2	2	2
# of Recorded Intervals	1	1	1	1	1	1
Vehs Entered	12608	12388	12474	12506	12606	12519
Vehs Exited	12497	12350	12423	12427	12488	12435
Starting Vehs	372	427	379	407	398	391
Ending Vehs	483	465	430	486	516	457
Travel Distance (mi)	4595	4614	4616	4642	4600	4613
Travel Time (hr)	467.0	563.5	483.0	517.4	521.5	510.5
Total Delay (hr)	285.2	380.8	300.3	333.7	339.2	327.8
Total Stops	19049	19256	19161	19532	18932	19181
Fuel Used (gal)	238.4	259.9	242.1	249.3	250.7	248.1

Interval #0 Information Seeding

Start Time	4:00
End Time	4:15
Total Time (min)	15

Volumes adjusted by Growth Factors.

No data recorded this interval.

Interval #1 Information Recording

Start Time	4:15
End Time	5:15
Total Time (min)	60

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	Avg
Vehs Entered	12608	12388	12474	12506	12606	12519
Vehs Exited	12497	12350	12423	12427	12488	12435
Starting Vehs	372	427	379	407	398	391
Ending Vehs	483	465	430	486	516	457
Travel Distance (mi)	4595	4614	4616	4642	4600	4613
Travel Time (hr)	467.0	563.5	483.0	517.4	521.5	510.5
Total Delay (hr)	285.2	380.8	300.3	333.7	339.2	327.8
Total Stops	19049	19256	19161	19532	18932	19181
Fuel Used (gal)	238.4	259.9	242.1	249.3	250.7	248.1

Arterial Level of Service: NB 46th St

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Woodland Ave	69	24.1	40.9	0.1	11
Kingsessing Ave	2	21.4	33.5	0.1	14
Total		45.5	74.3	0.3	12

Arterial Level of Service: SB 46th St

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Kingsessing Ave	2	15.8	26.4	0.1	11
Woodland Ave	69	63.4	81.1	0.1	6
Total		79.2	107.5	0.2	7

Arterial Level of Service: EB Kingsessing Ave

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
49th St	54	15.6	28.0	0.1	12
48th St	4	7.7	21.0	0.1	16
47th St	59	35.2	46.5	0.1	7
46th St	2	13.9	27.6	0.1	12
Total		72.5	123.0	0.4	11

Arterial Level of Service: WB Kingsessing Ave

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
46th St	2	7.1	18.7	0.1	17
47th St	59	30.2	42.8	0.1	8
48th St	4	6.7	19.2	0.1	17
49th St	54	21.8	34.6	0.1	10
Total		65.8	115.3	0.4	11

Arterial Level of Service: EB Baltimore Ave

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
49th St	18	82.8	118.8	0.1	4
Florence Ave	3	29.3	44.5	0.1	10
47th St	92	13.4	27.3	0.1	15
46th St	19	15.6	30.7	0.1	13
Cedar Ave	47	1.3	7.4	0.0	19
Total		142.4	228.7	0.5	9

Arterial Level of Service: WB Baltimore Ave

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Cedar Ave	47	0.7	11.0	0.1	25
46th St	19	15.1	19.7	0.0	7
47th St	92	8.8	22.0	0.1	19
48th St	3	24.6	36.7	0.1	11
49th St	18	24.3	39.4	0.1	10
Total		73.5	128.8	0.4	13

Arterial Level of Service: NB 48th St

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Woodland Ave	70	35.0	48.1	0.1	6
	71	1.5	6.7	0.0	20
Total		36.5	54.7	0.1	7

Arterial Level of Service: SE 48th St

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Woodland Ave	70	27.3	33.0	0.0	4
Grays Ferry	72	2.6	13.5	0.1	20
Total		29.9	46.5	0.1	9

Arterial Level of Service: NB 49th St

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Paschall Ave	62	33.4	43.2	0.1	6
Woodland Ave	57	22.8	31.0	0.1	11
Greenway Ave	74	13.6	26.3	0.1	14
Kingsessing Ave	54	13.3	27.6	0.1	14
Total		83.0	128.0	0.4	11

Arterial Level of Service: SB 49th St

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Kingsessing Ave	54	17.2	33.1	0.1	12
Greenway Ave	74	23.8	38.8	0.1	10
Woodland Ave	57	53.3	66.4	0.1	5
Paschall Ave	62	7.0	16.3	0.1	21
Total		101.2	154.5	0.4	10

Intersection: 2: 46th St & Kingsessing Ave

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	133	91	95	114
Average Queue (ft)	45	35	43	45
95th Queue (ft)	97	75	83	88
Link Distance (ft)	394	421	594	378
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 3: Florence Ave & 48th St & Baltimore Ave

Movement	EB	WB	NB	NB	SB
Directions Served	LTR>	<LTR	<L	TR	LTR>
Maximum Queue (ft)	302	316	105	402	301
Average Queue (ft)	157	117	81	173	120
95th Queue (ft)	282	252	127	422	227
Link Distance (ft)	390	471		1055	362
Upstream Blk Time (%)					0
Queuing Penalty (veh)					0
Storage Bay Dist (ft)			80		
Storage Blk Time (%)			35	15	
Queuing Penalty (veh)			66	15	

Intersection: 4: Kingsessing Ave & 48th St

Movement	EB	WB	SB
Directions Served	LT	TR	LR
Maximum Queue (ft)	106	129	100
Average Queue (ft)	46	47	42
95th Queue (ft)	85	86	75
Link Distance (ft)	421	402	492
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 5: Farragut St & Walnut St

Movement	WB	WB	NB	SB
Directions Served	T	TR	LT	R
Maximum Queue (ft)	223	212	141	112
Average Queue (ft)	141	124	52	58
95th Queue (ft)	230	210	106	99
Link Distance (ft)	213	213	410	399
Upstream Blk Time (%)	1	0		
Queuing Penalty (veh)	3	1		
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 18: 49th St & Baltimore Ave & Catharine St

Movement	EB	WB	NB	NB	SB
Directions Served	<LTR	LTR>	<L	TR	LTR>
Maximum Queue (ft)	523	376	55	388	223
Average Queue (ft)	284	146	41	145	100
95th Queue (ft)	559	320	57	319	179
Link Distance (ft)	508	390		1409	506
Upstream Blk Time (%)	14	1			
Queuing Penalty (veh)	0	2			
Storage Bay Dist (ft)			20		
Storage Blk Time (%)			56	34	
Queuing Penalty (veh)			83	40	

Intersection: 19: 46th St & Baltimore Ave

Movement	EB	WB	NB	SB	SB
Directions Served	LTR	LTR	LTR	L	TR
Maximum Queue (ft)	153	153	168	58	86
Average Queue (ft)	76	80	73	18	47
95th Queue (ft)	131	136	135	48	76
Link Distance (ft)	495	96	397	43	43
Upstream Blk Time (%)		3		2	17
Queuing Penalty (veh)		8		3	25
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 42: 48th St & Walnut St

Movement	WB	WB	NB	SB
Directions Served	LT	TR	LT	TR
Maximum Queue (ft)	127	139	349	345
Average Queue (ft)	58	56	142	182
95th Queue (ft)	101	116	277	310
Link Distance (ft)	491	491	386	472
Upstream Blk Time (%)			1	
Queuing Penalty (veh)			0	
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 43: 46th St & Walnut St

Movement	WB	WB	NB	SB
Directions Served	LT	TR	LT	TR
Maximum Queue (ft)	205	169	165	152
Average Queue (ft)	116	68	76	70
95th Queue (ft)	179	128	137	120
Link Distance (ft)	517	517	394	502
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 45: 46th St & Cedar Ave

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LT	TR
Maximum Queue (ft)	84	120	99	212
Average Queue (ft)	30	47	21	98
95th Queue (ft)	62	90	70	167
Link Distance (ft)	209	135	43	538
Upstream Blk Time (%)		0	1	
Queuing Penalty (veh)		0	2	
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 47: Baltimore Ave & Cedar Ave

Movement	WB
Directions Served	TR
Maximum Queue (ft)	36
Average Queue (ft)	2
95th Queue (ft)	19
Link Distance (ft)	364
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 48: 48th St & Chestnut St

Movement	EB	EB	EB	NB	SB
Directions Served	L	T	TR	TR	LT
Maximum Queue (ft)	140	307	304	270	411
Average Queue (ft)	71	159	156	162	178
95th Queue (ft)	151	283	273	245	330
Link Distance (ft)		471	471	472	512
Upstream Blk Time (%)					0
Queuing Penalty (veh)					0
Storage Bay Dist (ft)	100				
Storage Blk Time (%)	0	19			
Queuing Penalty (veh)	2	27			

Intersection: 49: 49th St & Chestnut St

Movement	EB	EB	NB	SB
Directions Served	LT	TR	TR	LT
Maximum Queue (ft)	256	234	164	182
Average Queue (ft)	159	112	66	96
95th Queue (ft)	231	195	121	161
Link Distance (ft)	510	510	516	501
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 54: 49th St & Kingsessing Ave

Movement	EB	WB	NB	SB	SB
Directions Served	LTR	LTR	LTR	L	TR
Maximum Queue (ft)	121	167	241	44	293
Average Queue (ft)	49	77	106	11	145
95th Queue (ft)	97	132	193	37	294
Link Distance (ft)	441	421	506		490
Upstream Blk Time (%)					3
Queuing Penalty (veh)					0
Storage Bay Dist (ft)				20	
Storage Blk Time (%)				4	37
Queuing Penalty (veh)				18	4

Intersection: 57: 49th St & Woodland Ave

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	215	165	224	417
Average Queue (ft)	96	90	109	228
95th Queue (ft)	161	157	199	421
Link Distance (ft)	402	88	408	432
Upstream Blk Time (%)		10		2
Queuing Penalty (veh)		24		7
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 59: 47th St & Kingsessing Ave

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	250	260	354	495
Average Queue (ft)	86	85	175	283
95th Queue (ft)	228	201	304	581
Link Distance (ft)	402	394	659	471
Upstream Blk Time (%)	2			38
Queuing Penalty (veh)	2			0
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 60: 47th St & Paschall Ave

Movement	EB	WB	NB	B77	SB
Directions Served	LT	TR	LTR	T	LTR
Maximum Queue (ft)	47	44	139	139	745
Average Queue (ft)	16	10	104	88	715
95th Queue (ft)	36	35	133	155	797
Link Distance (ft)	58	392	25	6	723
Upstream Blk Time (%)	0		86	39	44
Queuing Penalty (veh)	0		526	238	135
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 62: 49th St & Paschall Ave

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	253	356	352	123
Average Queue (ft)	122	132	224	53
95th Queue (ft)	210	291	364	102
Link Distance (ft)	402	620	318	408
Upstream Blk Time (%)			7	
Queuing Penalty (veh)			0	
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 66: Paschall Ave & Grays Ferry Ave

Movement	EB	EB	EB	WB	WB	NE	SW
Directions Served	L	T	TR	L	TR	LTR	LTR
Maximum Queue (ft)	55	219	237	273	240	278	77
Average Queue (ft)	3	128	140	215	132	123	74
95th Queue (ft)	27	200	210	304	233	232	78
Link Distance (ft)		256	256	168	168	620	58
Upstream Blk Time (%)			0	54	4		71
Queuing Penalty (veh)			0	223	17		237
Storage Bay Dist (ft)	50						
Storage Blk Time (%)	0	36					
Queuing Penalty (veh)	0	3					

Intersection: 67: Grays Ferry & Woodland Ave

Movement	EB	WB
Directions Served	TR	LT
Maximum Queue (ft)	22	132
Average Queue (ft)	1	30
95th Queue (ft)	9	91
Link Distance (ft)	88	243
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 68: 47th St & Woodland Ave

Movement	EB	WB	NB	NB	SB	SB
Directions Served	LTR	LTR	L	TR	L	TR
Maximum Queue (ft)	215	421	46	661	74	675
Average Queue (ft)	96	354	7	387	13	507
95th Queue (ft)	178	525	31	685	49	887
Link Distance (ft)	397	397		723		659
Upstream Blk Time (%)		35		1		37
Queuing Penalty (veh)		119		5		99
Storage Bay Dist (ft)			20		50	
Storage Blk Time (%)			8	61	1	82
Queuing Penalty (veh)			42	10	3	9

Intersection: 69: 46th St & Woodland Ave

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	329	471	97	166
Average Queue (ft)	165	259	28	70
95th Queue (ft)	286	545	72	160
Link Distance (ft)	397	447	611	594
Upstream Blk Time (%)	0	25		
Queuing Penalty (veh)	0	0		
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 70: 48th St & Woodland Ave

Movement	EB	WB	NB	NB	SB	B71	B76
Directions Served	LTR	LTR	L	TR	LTR	T	T
Maximum Queue (ft)	181	374	53	381	198	166	19
Average Queue (ft)	76	195	33	232	123	20	1
95th Queue (ft)	143	359	59	406	201	96	10
Link Distance (ft)	243	397		303	115	157	285
Upstream Blk Time (%)		1		10	17	1	
Queuing Penalty (veh)		4		51	48	3	
Storage Bay Dist (ft)			20				
Storage Blk Time (%)			38	49			
Queuing Penalty (veh)			156	38			

Intersection: 72: Grays Ferry/Grays Ferry Ave & 48th St

Movement	EB	WB	SE
Directions Served	LT	R	L
Maximum Queue (ft)	211	178	12
Average Queue (ft)	95	20	1
95th Queue (ft)	172	111	7
Link Distance (ft)	315	256	303
Upstream Blk Time (%)		0	
Queuing Penalty (veh)		2	
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 74: 49th St & Greenway Ave

Movement	EB	WB	B76	NB	SB
Directions Served	LTR	LTR	T	LTR	LTR
Maximum Queue (ft)	288	332	42	163	341
Average Queue (ft)	95	161	2	78	184
95th Queue (ft)	241	287	27	140	358
Link Distance (ft)	402	285	157	432	506
Upstream Blk Time (%)	2	1	0		1
Queuing Penalty (veh)	0	6	0		7
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 79: Grays Ferry Ave

Movement	WB	WB	WB
Directions Served	T	T	R
Maximum Queue (ft)	941	1044	276
Average Queue (ft)	245	357	177
95th Queue (ft)	755	961	372
Link Distance (ft)	1496	1496	
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			76
Storage Blk Time (%)		2	58
Queuing Penalty (veh)		10	239

Intersection: 88: 47th St & Walnut St

Movement	WB	WB	NB	SB
Directions Served	LT	TR	LT	TR
Maximum Queue (ft)	218	224	151	66
Average Queue (ft)	87	94	77	24
95th Queue (ft)	195	197	129	55
Link Distance (ft)	210	210	377	462
Upstream Blk Time (%)	0	0		
Queuing Penalty (veh)	1	2		
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 89: 47th St/Rite-Aid Drwy & Chestnut St

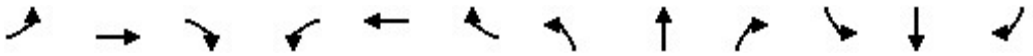
Movement	EB	EB	NB
Directions Served	LT	TR	TR
Maximum Queue (ft)	65	101	156
Average Queue (ft)	23	34	63
95th Queue (ft)	53	75	117
Link Distance (ft)	499	499	462
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 92: 47th St & Baltimore Ave

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	214	125	330	312
Average Queue (ft)	93	55	125	137
95th Queue (ft)	166	102	250	251
Link Distance (ft)	471	495	744	761
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Network Summary

Network wide Queuing Penalty: 2565



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	58	151	11	3	21	3	7	85	9	4	65	24
Future Volume (vph)	58	151	11	3	21	3	7	85	9	4	65	24
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100
Lane Width (ft)	12	10	12	12	10	12	12	12	12	12	12	12
Satd. Flow (prot)	0	1864	0	0	1835	0	0	2007	0	0	1960	0
Flt Permitted		0.925			0.978			0.982			0.991	
Satd. Flow (perm)	0	1741	0	0	1800	0	0	1974	0	0	1945	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		6			3			9			27	
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		493			457			681			425	
Travel Time (s)		13.4			12.5			18.6			11.6	
Confl. Peds. (#/hr)	9		18	18		9	14		6	6		14
Confl. Bikes (#/hr)			2			1						2
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	5%	2%	2%	2%	5%	2%	2%	2%	11%	2%	2%	2%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	247	0	0	30	0	0	114	0	0	104	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Total Split (s)	36.0	36.0		36.0	36.0		24.0	24.0		24.0	24.0	
Total Lost Time (s)		4.5			4.5			4.5			4.5	
Act Effct Green (s)		31.5			31.5			19.5			19.5	
Actuated g/C Ratio		0.52			0.52			0.32			0.32	
v/c Ratio		0.27			0.03			0.18			0.16	
Control Delay		12.6			6.6			14.6			12.0	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		12.6			6.6			14.6			12.0	
LOS		B			A			B			B	
Approach Delay		12.6			6.6			14.6			12.0	
Approach LOS		B			A			B			B	
Queue Length 50th (ft)		64			4			32			19	
Queue Length 95th (ft)		113			14			m49			48	
Internal Link Dist (ft)		413			377			601			345	
Turn Bay Length (ft)												
Base Capacity (vph)		916			946			647			650	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.27			0.03			0.18			0.16	

Intersection Summary	
Area Type:	Other
Cycle Length: 60	
Actuated Cycle Length: 60	
Offset: 58.8 (98%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green	
Control Type: Pretimed	

Maximum v/c Ratio: 0.27

Intersection Signal Delay: 12.6	Intersection LOS: B
Intersection Capacity Utilization 47.5%	ICU Level of Service A
Analysis Period (min) 15	

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: 46th St & Kingsessing Ave

Lane Group	EBL	EBT	EBR	EBR2	WBL2	WBL	WBT	WBR	NBL2	NBL	NBT	NBR
Lane Configurations												
Traffic Volume (vph)	72	306	42	3	11	2	165	14	7	52	211	4
Future Volume (vph)	72	306	42	3	11	2	165	14	7	52	211	4
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100
Lane Width (ft)	12	10	12	12	12	12	10	12	12	12	14	12
Storage Length (ft)	0		0			0		0		80		0
Storage Lanes	0		0			0		0		1		0
Taper Length (ft)	25					25				25		
Satd. Flow (prot)	0	1821	0	0	0	0	1855	0	0	1833	2105	0
Flt Permitted		0.908					0.961			0.588		
Satd. Flow (perm)	0	1664	0	0	0	0	1784	0	0	1028	2105	0
Right Turn on Red				Yes				Yes				Yes
Satd. Flow (RTOR)		1					9				1	
Link Speed (mph)		25					25				25	
Link Distance (ft)		570					589				1127	
Travel Time (s)		15.5					16.1				30.7	
Confl. Peds. (#/hr)	12		30	43	30	43		12	43	47		36
Confl. Bikes (#/hr)			12	12				5				4
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
Heavy Vehicles (%)	2%	2%	2%	67%	2%	2%	2%	7%	29%	6%	6%	2%
Bus Blockages (#/hr)	0	4	0	0	0	0	4	0	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	464	0	0	0	0	210	0	0	65	236	0
Turn Type	Perm	NA			Perm	Perm	NA		Perm	Perm	NA	
Protected Phases		4					8				2	
Permitted Phases	4				8	8			2	2		
Total Split (s)	36.0	36.0			36.0	36.0	36.0		24.0	24.0	24.0	
Total Lost Time (s)		5.7					5.7			5.7	5.7	
Act Effct Green (s)		30.3					30.3			18.3	18.3	
Actuated g/C Ratio		0.50					0.50			0.30	0.30	
v/c Ratio		0.55					0.23			0.21	0.37	
Control Delay		15.5					8.4			17.7	18.3	
Queue Delay		0.0					0.0			0.0	0.0	
Total Delay		15.5					8.4			17.7	18.3	
LOS		B					A			B	B	
Approach Delay		15.5					8.4				18.2	
Approach LOS		B					A				B	
Queue Length 50th (ft)		103					41			17	66	
Queue Length 95th (ft)		192					m66			44	118	
Internal Link Dist (ft)		490					509				1047	
Turn Bay Length (ft)										80		
Base Capacity (vph)		840					905			313	642	
Starvation Cap Reductn		0					0			0	0	
Spillback Cap Reductn		0					0			0	0	
Storage Cap Reductn		0					0			0	0	
Reduced v/c Ratio		0.55					0.23			0.21	0.37	

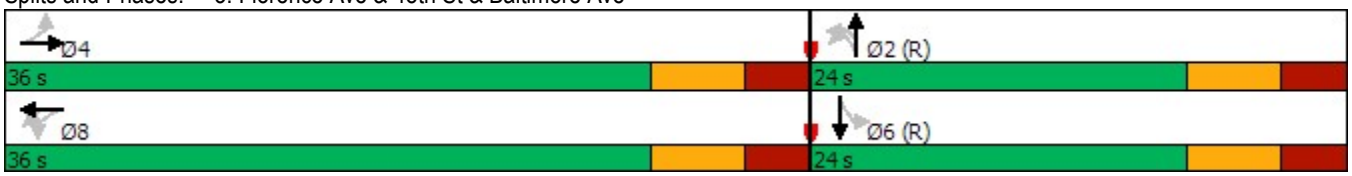
Intersection Summary	
Area Type:	Other

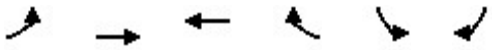
Lane Group	SBL	SBT	SBR	SBR2
Lane Configurations				
Traffic Volume (vph)	12	156	13	39
Future Volume (vph)	12	156	13	39
Ideal Flow (vphpl)	2100	2100	2100	2100
Lane Width (ft)	12	14	12	12
Storage Length (ft)	0		0	
Storage Lanes	0		0	
Taper Length (ft)	25			
Satd. Flow (prot)	0	1925	0	0
Flt Permitted		0.974		
Satd. Flow (perm)	0	1877	0	0
Right Turn on Red				Yes
Satd. Flow (RTOR)		19		
Link Speed (mph)		25		
Link Distance (ft)		425		
Travel Time (s)		11.6		
Confl. Peds. (#/hr)	36		43	47
Confl. Bikes (#/hr)			5	5
Peak Hour Factor	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	2%	6%	2%	8%
Bus Blockages (#/hr)	0	4	0	0
Shared Lane Traffic (%)				
Lane Group Flow (vph)	0	241	0	0
Turn Type	Perm	NA		
Protected Phases		6		
Permitted Phases	6			
Total Split (s)	24.0	24.0		
Total Lost Time (s)		5.7		
Act Effct Green (s)		18.3		
Actuated g/C Ratio		0.30		
v/c Ratio		0.41		
Control Delay		17.8		
Queue Delay		0.0		
Total Delay		17.8		
LOS		B		
Approach Delay		17.8		
Approach LOS		B		
Queue Length 50th (ft)		62		
Queue Length 95th (ft)		117		
Internal Link Dist (ft)		345		
Turn Bay Length (ft)				
Base Capacity (vph)		585		
Starvation Cap Reductn		0		
Spillback Cap Reductn		0		
Storage Cap Reductn		0		
Reduced v/c Ratio		0.41		

Intersection Summary

Cycle Length: 60
Actuated Cycle Length: 60
Offset: 18 (30%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Control Type: Pretimed
Maximum v/c Ratio: 0.55
Intersection Signal Delay: 15.4 Intersection LOS: B
Intersection Capacity Utilization 72.1% ICU Level of Service C
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

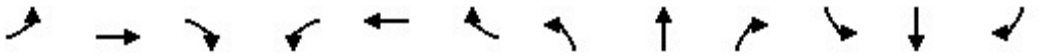
Splits and Phases: 3: Florence Ave & 48th St & Baltimore Ave





Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	64	205	50	42	50	57
Future Volume (vph)	64	205	50	42	50	57
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100
Lane Width (ft)	10	10	10	10	15	15
Satd. Flow (prot)	0	1705	1572	0	1829	0
Flt Permitted		0.988			0.977	
Satd. Flow (perm)	0	1705	1572	0	1829	0
Link Speed (mph)		25	25		25	
Link Distance (ft)		483	490		528	
Travel Time (s)		13.2	13.4		14.4	
Confl. Peds. (#/hr)	7			7	11	8
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles (%)	3%	2%	4%	7%	2%	4%
Parking (#/hr)	0	0	0	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	320	110	0	128	0
Sign Control		Stop	Stop		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 34.1%		ICU Level of Service A	
Analysis Period (min) 15			

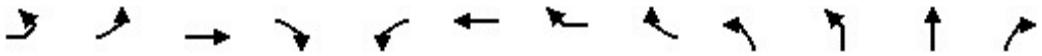


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	815	43	9	110	0	0	0	124
Future Volume (vph)	0	0	0	0	815	43	9	110	0	0	0	124
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100
Lane Width (ft)	12	12	12	10	10	10	11	11	11	10	10	10
Grade (%)		0%			3%			0%			0%	
Satd. Flow (prot)	0	0	0	0	3266	0	0	1784	0	0	0	1439
Flt Permitted								0.996				
Satd. Flow (perm)	0	0	0	0	3266	0	0	1781	0	0	0	1386
Right Turn on Red			Yes			Yes	Yes		Yes			Yes
Satd. Flow (RTOR)					15			36				63
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		272			269			426			435	
Travel Time (s)		6.2			6.1			9.7			9.9	
Confl. Peds. (#/hr)	18		58	58		18	31		23	23		31
Confl. Bikes (#/hr)						6			2			5
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
Heavy Vehicles (%)	2%	2%	2%	2%	4%	2%	2%	2%	2%	2%	2%	6%
Bus Blockages (#/hr)	0	0	0	0	8	0	0	0	0	0	0	0
Parking (#/hr)					0			0				0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	933	0	0	130	0	0	0	135
Turn Type					NA		Perm	NA				Perm
Protected Phases					8			2				
Permitted Phases							2					6
Total Split (s)					22.5		22.5	22.5				22.5
Total Lost Time (s)					3.0			3.0				3.0
Act Effct Green (s)					19.5			19.5				19.5
Actuated g/C Ratio					0.43			0.43				0.43
v/c Ratio					0.66			0.16				0.21
Control Delay					12.6			6.7				5.9
Queue Delay					0.7			0.0				0.0
Total Delay					13.3			6.7				5.9
LOS					B			A				A
Approach Delay					13.3			6.7			5.9	
Approach LOS					B			A			A	
Queue Length 50th (ft)					91			14				10
Queue Length 95th (ft)					140			36				34
Internal Link Dist (ft)		192			189			346			355	
Turn Bay Length (ft)												
Base Capacity (vph)					1423			792				636
Starvation Cap Reductn					202			0				0
Spillback Cap Reductn					0			0				0
Storage Cap Reductn					0			0				0
Reduced v/c Ratio					0.76			0.16				0.21

Intersection Summary	
Area Type:	Other
Cycle Length: 45	

Actuated Cycle Length: 45
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBR, Start of Green
Control Type: Pretimed
Maximum v/c Ratio: 0.66
Intersection Signal Delay: 11.8 Intersection LOS: B
Intersection Capacity Utilization 59.8% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 5: Farragut St & Walnut St



Lane Group	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL2	NBL	NBT	NBR
Lane Configurations												
Traffic Volume (vph)	2	24	285	32	10	138	9	22	61	39	154	24
Future Volume (vph)	2	24	285	32	10	138	9	22	61	39	154	24
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100
Lane Width (ft)	12	12	10	12	12	10	12	12	10	10	10	12
Storage Length (ft)		0		0	0		0			20		0
Storage Lanes		0		0	0		0			1		0
Taper Length (ft)		25			25					25		
Satd. Flow (prot)	0	0	1659	0	0	1545	0	0	0	1825	1684	0
Flt Permitted			0.964			0.970				0.623		
Satd. Flow (perm)	0	0	1604	0	0	1503	0	0	0	1135	1684	0
Right Turn on Red				Yes				Yes				Yes
Satd. Flow (RTOR)			12			16					14	
Link Speed (mph)			25			25					25	
Link Distance (ft)			579			570					1474	
Travel Time (s)			15.8			15.5					40.2	
Confl. Peds. (#/hr)		12		21	21		12		29	22		18
Confl. Bikes (#/hr)				12			5	5				1
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
Heavy Vehicles (%)	2%	2%	2%	6%	60%	6%	11%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	4	0	0	4	0	0	0	0	0	0
Parking (#/hr)			0			0					0	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	395	0	0	205	0	0	0	115	205	0
Turn Type	Perm	Perm	NA		Perm	NA			Perm	Perm	NA	
Protected Phases			4			8					2	
Permitted Phases	4	4			8				2	2		
Total Split (s)	34.8	34.8	34.8		34.8	34.8			25.2	25.2	25.2	
Total Lost Time (s)			6.9			6.9				5.1	5.1	
Act Effct Green (s)			27.9			27.9				20.1	20.1	
Actuated g/C Ratio			0.46			0.46				0.34	0.34	
v/c Ratio			0.53			0.29				0.30	0.36	
Control Delay			14.1			9.6				17.5	16.2	
Queue Delay			0.0			0.0				0.0	0.0	
Total Delay			14.1			9.6				17.5	16.2	
LOS			B			A				B	B	
Approach Delay			14.1			9.6					16.7	
Approach LOS			B			A					B	
Queue Length 50th (ft)			92			37				30	51	
Queue Length 95th (ft)			154			66				64	94	
Internal Link Dist (ft)			499			490					1394	
Turn Bay Length (ft)										20		
Base Capacity (vph)			752			707				380	573	
Starvation Cap Reductn			0			0				0	0	
Spillback Cap Reductn			0			0				0	0	
Storage Cap Reductn			0			0				0	0	
Reduced v/c Ratio			0.53			0.29				0.30	0.36	

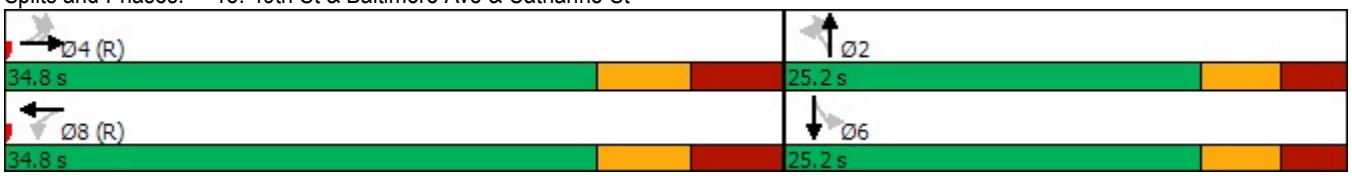
Intersection Summary

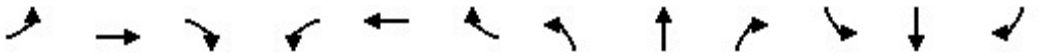
Lane Group	SBL	SBT	SBR	SBR2
Lane Configurations				
Traffic Volume (vph)	11	144	22	8
Future Volume (vph)	11	144	22	8
Ideal Flow (vphpl)	2100	2100	2100	2100
Lane Width (ft)	12	10	12	12
Storage Length (ft)	0		0	
Storage Lanes	0		0	
Taper Length (ft)	25			
Satd. Flow (prot)	0	1659	0	0
Flt Permitted		0.976		
Satd. Flow (perm)	0	1622	0	0
Right Turn on Red				Yes
Satd. Flow (RTOR)		4		
Link Speed (mph)		25		
Link Distance (ft)		572		
Travel Time (s)		15.6		
Confl. Peds. (#/hr)	18		22	29
Confl. Bikes (#/hr)			4	4
Peak Hour Factor	0.87	0.87	0.87	0.87
Heavy Vehicles (%)	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0
Parking (#/hr)		0		
Shared Lane Traffic (%)				
Lane Group Flow (vph)	0	213	0	0
Turn Type	Perm	NA		
Protected Phases		6		
Permitted Phases	6			
Total Split (s)	25.2	25.2		
Total Lost Time (s)		5.1		
Act Effct Green (s)		20.1		
Actuated g/C Ratio		0.34		
v/c Ratio		0.39		
Control Delay		17.6		
Queue Delay		0.0		
Total Delay		17.6		
LOS		B		
Approach Delay		17.6		
Approach LOS		B		
Queue Length 50th (ft)		57		
Queue Length 95th (ft)		103		
Internal Link Dist (ft)		492		
Turn Bay Length (ft)				
Base Capacity (vph)		546		
Starvation Cap Reductn		0		
Spillback Cap Reductn		0		
Storage Cap Reductn		0		
Reduced v/c Ratio		0.39		

Intersection Summary

Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 60			
Offset: 49.8 (83%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green			
Control Type: Pretimed			
Maximum v/c Ratio: 0.53			
Intersection Signal Delay: 14.7		Intersection LOS: B	
Intersection Capacity Utilization 68.5%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 18: 49th St & Baltimore Ave & Catharine St





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	19	305	44	6	104	0	13	184	2	59	152	38
Future Volume (vph)	19	305	44	6	104	0	13	184	2	59	152	38
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100
Lane Width (ft)	12	10	12	12	10	12	12	10	12	12	10	12
Satd. Flow (prot)	0	1828	0	0	1885	0	0	1913	0	1956	1846	0
Flt Permitted		0.983			0.968			0.965		0.253		
Satd. Flow (perm)	0	1799	0	0	1827	0	0	1848	0	517	1846	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		13						1			26	
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		603			205			463			100	
Travel Time (s)		16.4			5.6			12.6			2.7	
Confl. Peds. (#/hr)	33		50	50		33	19		13	13		19
Confl. Bikes (#/hr)			24									2
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
Heavy Vehicles (%)	6%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	4	0	0	4	0	0	0	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	401	0	0	120	0	0	216	0	64	206	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6 10	
Permitted Phases	4			8			2			6 10		
Total Split (s)	28.2	28.2		28.2	28.2		19.2	19.2				
Total Lost Time (s)		4.5			6.3			5.7				
Act Effct Green (s)		23.7			21.9			13.5		26.1	26.1	
Actuated g/C Ratio		0.40			0.36			0.22		0.44	0.44	
v/c Ratio		0.56			0.18			0.52		0.29	0.25	
Control Delay		13.2			13.9			25.5		9.6	5.4	
Queue Delay		0.0			0.0			0.0		0.0	0.0	
Total Delay		13.2			13.9			25.5		9.6	5.4	
LOS		B			B			C		A	A	
Approach Delay		13.2			13.9			25.5			6.4	
Approach LOS		B			B			C			A	
Queue Length 50th (ft)		63			29			68		8	18	
Queue Length 95th (ft)		m129			60			127		18	34	
Internal Link Dist (ft)		523			125			383			20	
Turn Bay Length (ft)												
Base Capacity (vph)		718			666			416		224	817	
Starvation Cap Reductn		0			0			0		0	0	
Spillback Cap Reductn		0			0			0		0	0	
Storage Cap Reductn		0			0			0		0	0	
Reduced v/c Ratio		0.56			0.18			0.52		0.29	0.25	

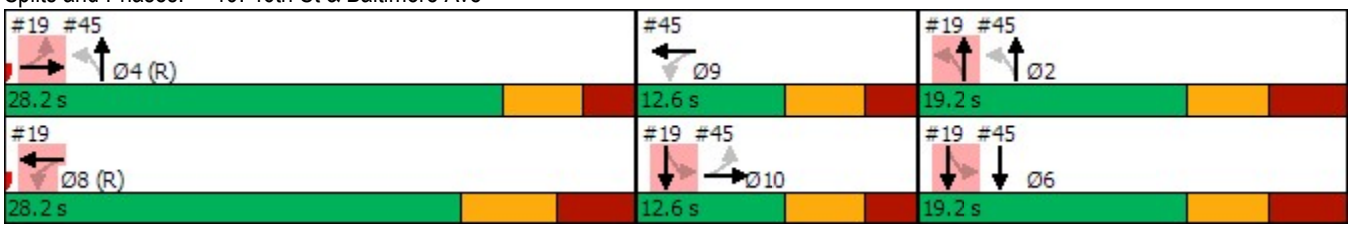
Intersection Summary	
Area Type:	Other
Cycle Length: 60	
Actuated Cycle Length: 60	
Offset: 58.8 (98%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green	

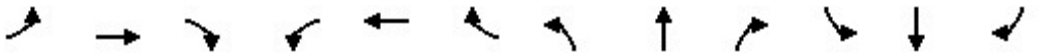
Lane Group	Ø6	Ø9	Ø10
Lane Configurations			
Traffic Volume (vph)			
Future Volume (vph)			
Ideal Flow (vphpl)			
Lane Width (ft)			
Satd. Flow (prot)			
Flt Permitted			
Satd. Flow (perm)			
Right Turn on Red			
Satd. Flow (RTOR)			
Link Speed (mph)			
Link Distance (ft)			
Travel Time (s)			
Confl. Peds. (#/hr)			
Confl. Bikes (#/hr)			
Peak Hour Factor			
Heavy Vehicles (%)			
Bus Blockages (#/hr)			
Shared Lane Traffic (%)			
Lane Group Flow (vph)			
Turn Type			
Protected Phases	6	9	10
Permitted Phases			
Total Split (s)	19.2	12.6	12.6
Total Lost Time (s)			
Act Effct Green (s)			
Actuated g/C Ratio			
v/c Ratio			
Control Delay			
Queue Delay			
Total Delay			
LOS			
Approach Delay			
Approach LOS			
Queue Length 50th (ft)			
Queue Length 95th (ft)			
Internal Link Dist (ft)			
Turn Bay Length (ft)			
Base Capacity (vph)			
Starvation Cap Reductn			
Spillback Cap Reductn			
Storage Cap Reductn			
Reduced v/c Ratio			

Intersection Summary

Control Type: Pretimed
Maximum v/c Ratio: 0.56
Intersection Signal Delay: 14.1 Intersection LOS: B
Intersection Capacity Utilization 53.9% ICU Level of Service A
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 19: 46th St & Baltimore Ave





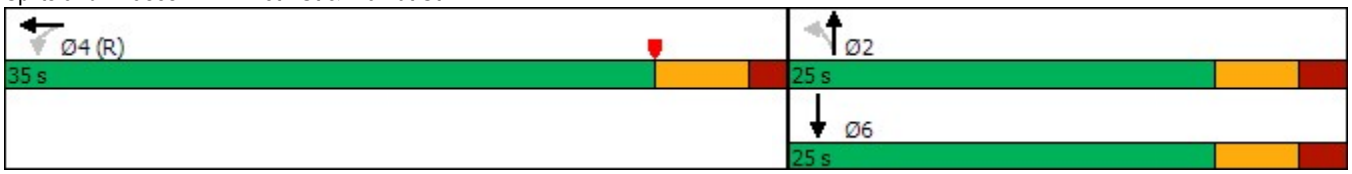
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	33	647	51	28	285	0	0	214	91
Future Volume (vph)	0	0	0	33	647	51	28	285	0	0	214	91
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100
Lane Width (ft)	10	10	10	10	10	10	10	10	10	10	10	10
Grade (%)		0%			3%			1%			3%	
Storage Length (ft)	0		0	0		40	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	0	0	0	3201	0	0	1620	0	0	1591	0
Flt Permitted					0.998			0.942				
Satd. Flow (perm)	0	0	0	0	3200	0	0	1533	0	0	1591	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		281			574			415			591	
Travel Time (s)		6.4			13.0			11.3			16.1	
Confl. Peds. (#/hr)	4		8	8		4	9		6	6		9
Confl. Bikes (#/hr)			1			2			12			
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles (%)	2%	2%	2%	21%	5%	4%	7%	6%	2%	2%	3%	7%
Bus Blockages (#/hr)	0	0	0	0	8	0	0	4	0	0	0	0
Parking (#/hr)				0	0	0	0	0			0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	849	0	0	364	0	0	355	0
Turn Type				Perm	NA		Perm	NA			NA	
Protected Phases					4			2			6	
Permitted Phases				4			2					
Total Split (s)				35.0	35.0		25.0	25.0			25.0	
Total Lost Time (s)					4.5			4.5			4.5	
Act Effct Green (s)					30.5			20.5			20.5	
Actuated g/C Ratio					0.51			0.34			0.34	
v/c Ratio					0.52			0.70			0.65	
Control Delay					5.7			25.9			18.5	
Queue Delay					0.0			0.0			0.0	
Total Delay					5.7			25.9			18.5	
LOS					A			C			B	
Approach Delay					5.7			25.9			18.5	
Approach LOS					A			C			B	
Queue Length 50th (ft)					25			111			136	
Queue Length 95th (ft)					31			184			m205	
Internal Link Dist (ft)		201			494			335			511	
Turn Bay Length (ft)												
Base Capacity (vph)					1626			523			543	
Starvation Cap Reductn					0			0			0	
Spillback Cap Reductn					0			0			0	
Storage Cap Reductn					0			0			0	
Reduced v/c Ratio					0.52			0.70			0.65	

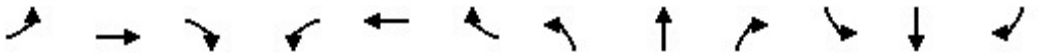
Intersection Summary

Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 60			
Offset: 20 (33%), Referenced to phase 4:WBTL, Start of Yellow			
Control Type: Pretimed			
Maximum v/c Ratio: 0.70			
Intersection Signal Delay: 13.3		Intersection LOS: B	
Intersection Capacity Utilization 66.3%		ICU Level of Service C	
Analysis Period (min) 15			

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 42: 48th St & Walnut St



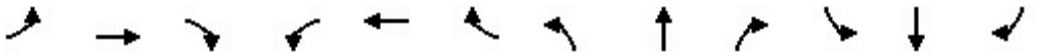


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	34	747	27	52	105	0	0	114	25
Future Volume (vph)	0	0	0	34	747	27	52	105	0	0	114	25
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100
Lane Width (ft)	12	10	12	12	10	12	12	10	12	12	10	12
Satd. Flow (prot)	0	0	0	0	3523	0	0	1854	0	0	1830	0
Flt Permitted					0.998			0.846				
Satd. Flow (perm)	0	0	0	0	3521	0	0	1580	0	0	1830	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					10						18	
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		269			567			427			550	
Travel Time (s)		6.1			12.9			11.6			15.0	
Confl. Peds. (#/hr)	10		18	18		10	29		29	29		29
Confl. Bikes (#/hr)			2									
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
Heavy Vehicles (%)	2%	2%	2%	6%	4%	2%	4%	4%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	4	0	0	0	0	0	4	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	898	0	0	175	0	0	155	0
Turn Type				Perm	NA		Perm	NA			NA	
Protected Phases					4			2			6	
Permitted Phases				4			2					
Total Split (s)				40.0	40.0		20.0	20.0			20.0	
Total Lost Time (s)					4.5			4.5			4.5	
Act Effct Green (s)					35.5			15.5			15.5	
Actuated g/C Ratio					0.59			0.26			0.26	
v/c Ratio					0.43			0.43			0.32	
Control Delay					7.4			22.5			18.0	
Queue Delay					0.0			0.0			0.0	
Total Delay					7.4			22.5			18.0	
LOS					A			C			B	
Approach Delay					7.4			22.5			18.0	
Approach LOS					A			C			B	
Queue Length 50th (ft)					80			53			40	
Queue Length 95th (ft)					114			103			83	
Internal Link Dist (ft)		189			487			347			470	
Turn Bay Length (ft)												
Base Capacity (vph)					2087			408			486	
Starvation Cap Reductn					0			0			0	
Spillback Cap Reductn					0			0			0	
Storage Cap Reductn					0			0			0	
Reduced v/c Ratio					0.43			0.43			0.32	

Intersection Summary	
Area Type:	Other
Cycle Length: 60	
Actuated Cycle Length: 60	
Offset: 55 (92%), Referenced to phase 4:WBTL, Start of Yellow	

Control Type: Pretimed
Maximum v/c Ratio: 0.43
Intersection Signal Delay: 10.9 Intersection LOS: B
Intersection Capacity Utilization 62.9% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 43: 46th St & Walnut St



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	0	99	0	28	10	15	188	0	0	123	4
Future Volume (vph)	10	0	99	0	28	10	15	188	0	0	123	4
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100
Satd. Flow (prot)	0	1762	0	0	1888	0	0	2051	0	0	2045	0
Flt Permitted		0.963						0.981				
Satd. Flow (perm)	0	1687	0	0	1888	0	0	2017	0	0	2045	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		218			11						2	
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		246			212			100			568	
Travel Time (s)		6.7			5.8			2.7			15.5	
Confl. Peds. (#/hr)	33					33	31					31
Confl. Bikes (#/hr)			1									2
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
Heavy Vehicles (%)	10%	2%	2%	2%	4%	1%	2%	2%	2%	2%	2%	2%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	119	0	0	41	0	0	220	0	0	138	0
Turn Type	Perm	NA			NA		Perm	NA			NA	
Protected Phases		10			9			2 4			6	
Permitted Phases	10			9			2 4					
Total Split (s)	12.6	12.6		12.6	12.6						19.2	
Total Lost Time (s)		4.5			4.5						5.7	
Act Effct Green (s)		8.1			8.1			41.7			13.5	
Actuated g/C Ratio		0.14			0.14			0.70			0.22	
v/c Ratio		0.29			0.16			0.16			0.30	
Control Delay		2.1			20.1			0.4			21.2	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		2.1			20.1			0.4			21.2	
LOS		A			C			A			C	
Approach Delay		2.1			20.1			0.4			21.2	
Approach LOS		A			C			A			C	
Queue Length 50th (ft)		0			10			1			41	
Queue Length 95th (ft)		4			34			2			83	
Internal Link Dist (ft)		166			132			20			488	
Turn Bay Length (ft)												
Base Capacity (vph)		416			264			1401			461	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		7			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.29			0.16			0.16			0.30	

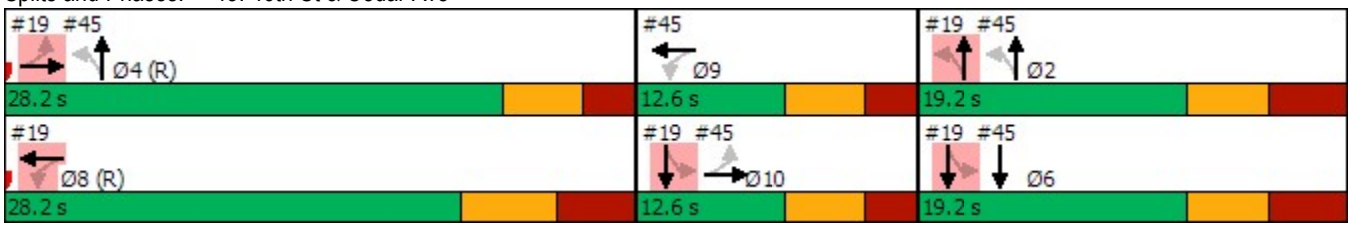
Intersection Summary	
Area Type:	Other
Cycle Length: 60	
Actuated Cycle Length: 60	
Offset: 58.8 (98%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green	
Control Type: Pretimed	
Maximum v/c Ratio: 0.56	

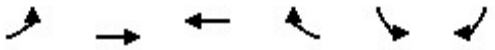
Lane Group	Ø2	Ø4	Ø8
Lane Configurations			
Traffic Volume (vph)			
Future Volume (vph)			
Ideal Flow (vphpl)			
Satd. Flow (prot)			
Flt Permitted			
Satd. Flow (perm)			
Right Turn on Red			
Satd. Flow (RTOR)			
Link Speed (mph)			
Link Distance (ft)			
Travel Time (s)			
Confl. Peds. (#/hr)			
Confl. Bikes (#/hr)			
Peak Hour Factor			
Heavy Vehicles (%)			
Shared Lane Traffic (%)			
Lane Group Flow (vph)			
Turn Type			
Protected Phases	2	4	8
Permitted Phases			
Total Split (s)	19.2	28.2	28.2
Total Lost Time (s)			
Act Effct Green (s)			
Actuated g/C Ratio			
v/c Ratio			
Control Delay			
Queue Delay			
Total Delay			
LOS			
Approach Delay			
Approach LOS			
Queue Length 50th (ft)			
Queue Length 95th (ft)			
Internal Link Dist (ft)			
Turn Bay Length (ft)			
Base Capacity (vph)			
Starvation Cap Reductn			
Spillback Cap Reductn			
Storage Cap Reductn			
Reduced v/c Ratio			

Intersection Summary

Intersection Signal Delay: 7.9	Intersection LOS: A
Intersection Capacity Utilization 41.4%	ICU Level of Service A
Analysis Period (min) 15	

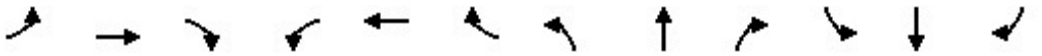
Splits and Phases: 45: 46th St & Cedar Ave





Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	366	110	65	0	0
Future Volume (vph)	0	366	110	65	0	0
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100
Satd. Flow (prot)	0	2059	1935	0	0	0
Flt Permitted						
Satd. Flow (perm)	0	2059	1935	0	0	0
Link Speed (mph)		25	25		25	
Link Distance (ft)		205	392		212	
Travel Time (s)		5.6	10.7		5.8	
Confl. Peds. (#/hr)				33		
Confl. Bikes (#/hr)				6		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	2%	2%	5%	2%	2%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	398	191	0	0	0
Sign Control		Free	Free		Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 20.8%		ICU Level of Service A	
Analysis Period (min) 15			

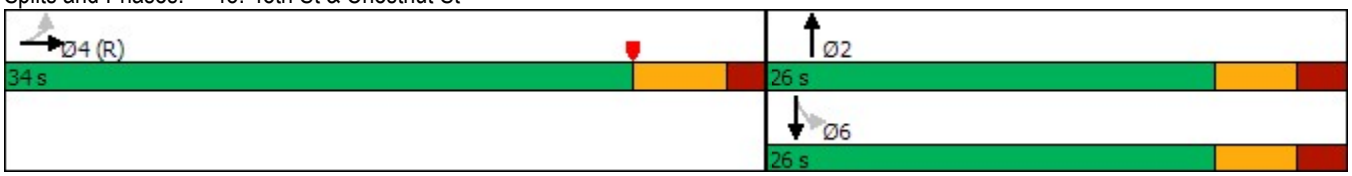


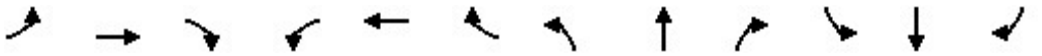
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	164	1233	36	0	0	0	0	299	55	51	279	0
Future Volume (vph)	164	1233	36	0	0	0	0	299	55	51	279	0
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100
Lane Width (ft)	12	10	12	12	10	12	12	14	12	12	14	12
Storage Length (ft)	100		0	0		0	0		0	0		0
Storage Lanes	1		0	0		0	0		0	0		0
Taper Length (ft)	40			25			25			25		
Satd. Flow (prot)	1956	3601	0	0	0	0	0	2102	0	0	2179	0
Flt Permitted	0.950										0.814	
Satd. Flow (perm)	1938	3601	0	0	0	0	0	2102	0	0	1787	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		7						17				
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		550			574			591			540	
Travel Time (s)		12.5			13.0			16.1			14.7	
Confl. Peds. (#/hr)	9		45	45		9	23		9	9		23
Confl. Bikes (#/hr)			1									
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
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	15%	2%	2%	2%
Bus Blockages (#/hr)	0	4	0	0	0	0	0	0	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	180	1395	0	0	0	0	0	389	0	0	363	0
Turn Type	Perm	NA						NA		Perm	NA	
Protected Phases		4						2			6	
Permitted Phases	4									6		
Total Split (s)	34.0	34.0						26.0		26.0	26.0	
Total Lost Time (s)	4.5	4.5						4.5			4.5	
Act Effct Green (s)	29.5	29.5						21.5			21.5	
Actuated g/C Ratio	0.49	0.49						0.36			0.36	
v/c Ratio	0.19	0.79						0.51			0.57	
Control Delay	9.2	16.6						14.1			19.7	
Queue Delay	0.0	0.0						0.0			0.0	
Total Delay	9.2	16.6						14.1			19.7	
LOS	A	B						B			B	
Approach Delay		15.7						14.1			19.7	
Approach LOS		B						B			B	
Queue Length 50th (ft)	34	202						137			103	
Queue Length 95th (ft)	64	282						m209			177	
Internal Link Dist (ft)		470			494			511			460	
Turn Bay Length (ft)	100											
Base Capacity (vph)	952	1774						764			640	
Starvation Cap Reductn	0	0						0			0	
Spillback Cap Reductn	0	0						0			0	
Storage Cap Reductn	0	0						0			0	
Reduced v/c Ratio	0.19	0.79						0.51			0.57	

Intersection Summary	
Area Type:	Other

Cycle Length: 60
Actuated Cycle Length: 60
Offset: 52 (87%), Referenced to phase 4:EBTL, Start of Yellow
Control Type: Pretimed
Maximum v/c Ratio: 0.79
Intersection Signal Delay: 16.1 Intersection LOS: B
Intersection Capacity Utilization 77.3% ICU Level of Service D
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 48: 48th St & Chestnut St





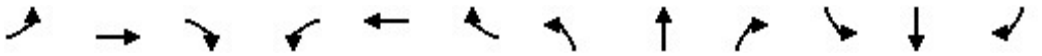
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	26	1281	64	0	0	0	0	75	91	77	134	0
Future Volume (vph)	26	1281	64	0	0	0	0	75	91	77	134	0
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100
Lane Width (ft)	12	10	12	12	10	12	12	10	12	12	10	12
Satd. Flow (prot)	0	3434	0	0	0	0	0	1577	0	0	1688	0
Flt Permitted		0.999									0.823	
Satd. Flow (perm)	0	3433	0	0	0	0	0	1577	0	0	1411	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		12						37				
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		548			550			570			529	
Travel Time (s)		12.5			12.5			15.5			14.4	
Confl. Peds. (#/hr)	16		20	20		16	38		8	8		38
Confl. Bikes (#/hr)			4						1			1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	3%	2%	2%	3%	2%
Bus Blockages (#/hr)	0	0	4	0	0	0	0	0	0	0	0	0
Parking (#/hr)		0						0			0	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1442	0	0	0	0	0	175	0	0	222	0
Turn Type	Perm	NA						NA		Perm	NA	
Protected Phases		4						2			6	
Permitted Phases	4									6		
Total Split (s)	40.0	40.0						24.0		24.0	24.0	
Total Lost Time (s)		4.5						4.5			4.5	
Act Effct Green (s)		35.5						19.5			19.5	
Actuated g/C Ratio		0.55						0.30			0.30	
v/c Ratio		0.76						0.35			0.52	
Control Delay		14.1						15.8			23.6	
Queue Delay		0.0						0.0			0.0	
Total Delay		14.1						15.8			23.6	
LOS		B						B			C	
Approach Delay		14.1						15.8			23.6	
Approach LOS		B						B			C	
Queue Length 50th (ft)		202						40			71	
Queue Length 95th (ft)		282						87			132	
Internal Link Dist (ft)		468			470			490			449	
Turn Bay Length (ft)												
Base Capacity (vph)		1909						506			429	
Starvation Cap Reductn		0						0			0	
Spillback Cap Reductn		0						0			0	
Storage Cap Reductn		0						0			0	
Reduced v/c Ratio		0.76						0.35			0.52	

Intersection Summary	
Area Type:	Other
Cycle Length: 64	
Actuated Cycle Length: 64	

Offset: 43 (67%), Referenced to phase 4:EBTL, Start of Yellow

Control Type: Pretimed	
Maximum v/c Ratio: 0.76	
Intersection Signal Delay: 15.4	Intersection LOS: B
Intersection Capacity Utilization 72.6%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 49: 49th St & Chestnut St

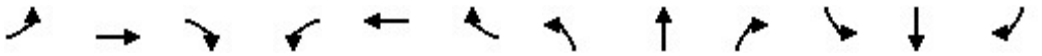


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	16	167	31	52	48	3	17	283	82	7	298	9
Future Volume (vph)	16	167	31	52	48	3	17	283	82	7	298	9
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100
Lane Width (ft)	10	10	10	10	10	10	12	12	12	12	12	12
Storage Length (ft)	0		0	0		0	0		0	20		0
Storage Lanes	0		0	0		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	1674	0	0	1646	0	0	1656	0	1760	1778	0
Flt Permitted		0.978			0.781			0.979		0.485		
Satd. Flow (perm)	0	1642	0	0	1312	0	0	1624	0	892	1778	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		16			3			32			4	
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		475			483			581			517	
Travel Time (s)		13.0			13.2			15.8			14.1	
Confl. Peds. (#/hr)	10		12	12		10	13		15	15		13
Confl. Bikes (#/hr)			1			2			1			4
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	6%	2%	3%	4%	4%	2%	6%	9%	5%	2%	4%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	4	0	0	4	0
Parking (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	230	0	0	111	0	0	410	0	8	330	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Total Split (s)	26.4	26.4		26.4	26.4		33.6	33.6		33.6	33.6	
Total Lost Time (s)		4.5			4.5			4.5		4.5	4.5	
Act Effct Green (s)		21.9			21.9			29.1		29.1	29.1	
Actuated g/C Ratio		0.36			0.36			0.48		0.48	0.48	
v/c Ratio		0.38			0.23			0.51		0.02	0.38	
Control Delay		15.3			14.5			10.6		8.3	11.3	
Queue Delay		0.0			0.0			0.0		0.0	0.0	
Total Delay		15.3			14.5			10.6		8.3	11.3	
LOS		B			B			B		A	B	
Approach Delay		15.3			14.5			10.6			11.2	
Approach LOS		B			B			B			B	
Queue Length 50th (ft)		55			26			87		1	69	
Queue Length 95th (ft)		105			58			150		7	121	
Internal Link Dist (ft)		395			403			501			437	
Turn Bay Length (ft)										20		
Base Capacity (vph)		609			480			804		432	864	
Starvation Cap Reductn		0			0			0		0	0	
Spillback Cap Reductn		0			0			0		0	0	
Storage Cap Reductn		0			0			0		0	0	
Reduced v/c Ratio		0.38			0.23			0.51		0.02	0.38	

Intersection Summary

Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 60			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Control Type: Pretimed			
Maximum v/c Ratio: 0.51			
Intersection Signal Delay: 12.2		Intersection LOS: B	
Intersection Capacity Utilization 58.1%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 54: 49th St & Kingsessing Ave



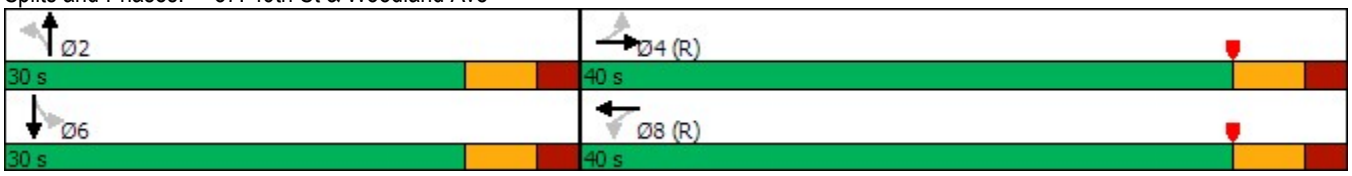
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	8	258	6	46	123	6	17	141	190	74	106	9
Future Volume (vph)	8	258	6	46	123	6	17	141	190	74	106	9
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100
Lane Width (ft)	12	12	12	10	10	10	12	12	12	12	12	12
Satd. Flow (prot)	0	1973	0	0	1665	0	0	1504	0	0	1678	0
Flt Permitted		0.992			0.868			0.981			0.714	
Satd. Flow (perm)	0	1959	0	0	1455	0	0	1475	0	0	1209	0
Right Turn on Red			Yes			No			Yes			No
Satd. Flow (RTOR)		2						97				
Link Speed (mph)		25			25			30			25	
Link Distance (ft)		447			176			504			520	
Travel Time (s)		12.2			4.8			11.5			14.2	
Confl. Peds. (#/hr)	37		40	40		37	54		36	36		54
Confl. Bikes (#/hr)			4			3			3			3
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	2%	6%	2%	24%	9%	2%	29%	13%	9%	5%	7%	33%
Bus Blockages (#/hr)	0	0	0	6	6	6	0	0	0	4	4	4
Parking (#/hr)							0	0	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	292	0	0	187	0	0	374	0	0	204	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Total Split (s)	40.0	40.0		40.0	40.0		30.0	30.0		30.0	30.0	
Total Lost Time (s)		4.5			4.5			4.5			4.5	
Act Effct Green (s)		35.5			35.5			25.5			25.5	
Actuated g/C Ratio		0.51			0.51			0.36			0.36	
v/c Ratio		0.29			0.25			0.63			0.46	
Control Delay		10.9			12.7			18.8			21.3	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		10.9			12.7			18.8			21.3	
LOS		B			B			B			C	
Approach Delay		10.9			12.7			18.8			21.3	
Approach LOS		B			B			B			C	
Queue Length 50th (ft)		68			0			94			66	
Queue Length 95th (ft)		113			0			182			124	
Internal Link Dist (ft)		367			96			424			440	
Turn Bay Length (ft)												
Base Capacity (vph)		994			737			598			440	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.29			0.25			0.63			0.46	

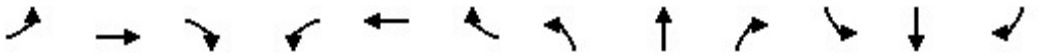
Intersection Summary	
Area Type:	Other
Cycle Length: 70	
Actuated Cycle Length: 70	

Offset: 51 (73%), Referenced to phase 4:EBTL and 8:WBTL, Start of Yellow

Control Type: Pretimed	
Maximum v/c Ratio: 0.63	
Intersection Signal Delay: 16.0	Intersection LOS: B
Intersection Capacity Utilization 70.2%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 57: 49th St & Woodland Ave



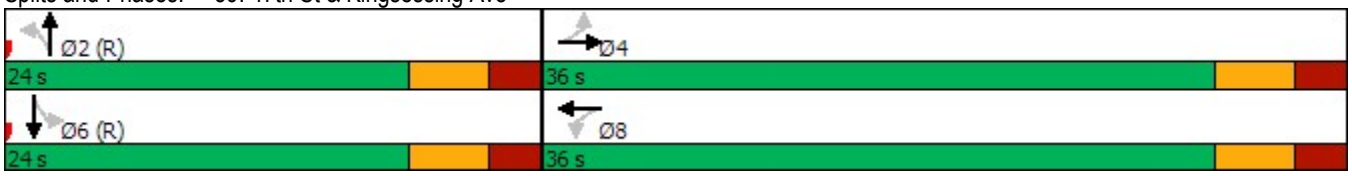


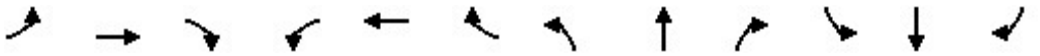
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	20	173	48	18	34	2	46	205	45	5	189	13
Future Volume (vph)	20	173	48	18	34	2	46	205	45	5	189	13
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100
Lane Width (ft)	10	10	10	10	10	10	13	13	13	13	13	13
Satd. Flow (prot)	0	1660	0	0	1679	0	0	1792	0	0	1885	0
Flt Permitted		0.980			0.891			0.921			0.991	
Satd. Flow (perm)	0	1633	0	0	1517	0	0	1653	0	0	1870	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		490			493			759			517	
Travel Time (s)		13.4			13.4			20.7			14.1	
Confl. Peds. (#/hr)	8		16	16		8	40		14	14		40
Confl. Bikes (#/hr)						2			2			3
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	5%	2%	2%	2%	3%	2%	4%	5%	7%	2%	2%	2%
Parking (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	251	0	0	56	0	0	309	0	0	216	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Total Split (s)	36.0	36.0		36.0	36.0		24.0	24.0		24.0	24.0	
Total Lost Time (s)		4.5			4.5			4.5			4.5	
Act Effct Green (s)		31.5			31.5			19.5			19.5	
Actuated g/C Ratio		0.52			0.52			0.32			0.32	
v/c Ratio		0.29			0.07			0.58			0.36	
Control Delay		9.2			5.8			22.0			17.6	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		9.2			5.8			22.0			17.6	
LOS		A			A			C			B	
Approach Delay		9.2			5.8			22.0			17.6	
Approach LOS		A			A			C			B	
Queue Length 50th (ft)		46			9			91			58	
Queue Length 95th (ft)		85			21			162			108	
Internal Link Dist (ft)		410			413			679			437	
Turn Bay Length (ft)												
Base Capacity (vph)		857			796			537			607	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.29			0.07			0.58			0.36	

Intersection Summary	
Area Type:	Other
Cycle Length: 60	
Actuated Cycle Length: 60	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	

Control Type: Pretimed
Maximum v/c Ratio: 0.58
Intersection Signal Delay: 15.9 Intersection LOS: B
Intersection Capacity Utilization 48.9% ICU Level of Service A
Analysis Period (min) 15

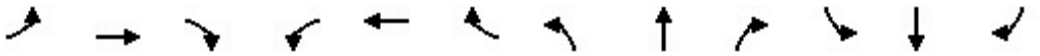
Splits and Phases: 59: 47th St & Kingsessing Ave





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	86	0	0	0	5	7	10	576	1	2	0	204
Future Volume (vph)	86	0	0	0	5	7	10	576	1	2	0	204
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100
Satd. Flow (prot)	0	1956	0	0	1774	0	0	2057	0	0	1775	0
Flt Permitted		0.950						0.999				
Satd. Flow (perm)	0	1956	0	0	1774	0	0	2057	0	0	1775	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		188			439			100			840	
Travel Time (s)		5.1			12.0			2.7			22.9	
Confl. Peds. (#/hr)	5					5			1	1		
Confl. Bikes (#/hr)			1						3			4
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	2%	2%	2%	2%	2%	14%	2%	2%	2%	50%	2%	2%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	90	0	0	12	0	0	611	0	0	215	0
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 50.8%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	306	196	19	110	2	172	125	27	2	98	6
Future Volume (vph)	30	306	196	19	110	2	172	125	27	2	98	6
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100
Lane Width (ft)	15	15	15	13	13	13	12	12	12	12	12	12
Satd. Flow (prot)	0	1786	0	0	1722	0	0	1643	0	0	1842	0
Flt Permitted		0.979			0.902			0.774			0.994	
Satd. Flow (perm)	0	1754	0	0	1563	0	0	1295	0	0	1833	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		61			2			9			6	
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		439			789			362			504	
Travel Time (s)		12.0			21.5			8.2			11.5	
Confl. Peds. (#/hr)	6		12	12		6	15		4	4		15
Confl. Bikes (#/hr)			2			2			3			
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	13%	8%	7%	26%	7%	2%	7%	2%	30%	2%	7%	17%
Bus Blockages (#/hr)	0	2	0	0	6	0	0	8	0	0	12	0
Parking (#/hr)	0	0	0	0	0	0	0	0	0			
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	567	0	0	139	0	0	345	0	0	112	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Total Split (s)	30.0	30.0		30.0	30.0		30.0	30.0		30.0	30.0	
Total Lost Time (s)		4.5			4.5			5.1			5.1	
Act Effct Green (s)		25.5			25.5			24.9			24.9	
Actuated g/C Ratio		0.42			0.42			0.42			0.42	
v/c Ratio		0.73			0.21			0.64			0.15	
Control Delay		19.5			11.8			20.1			11.0	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		19.5			11.8			20.1			11.0	
LOS		B			B			C			B	
Approach Delay		19.5			11.8			20.1			11.0	
Approach LOS		B			B			C			B	
Queue Length 50th (ft)		145			30			92			23	
Queue Length 95th (ft)		#256			61			174			50	
Internal Link Dist (ft)		359			709			282			424	
Turn Bay Length (ft)												
Base Capacity (vph)		780			665			542			764	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.73			0.21			0.64			0.15	

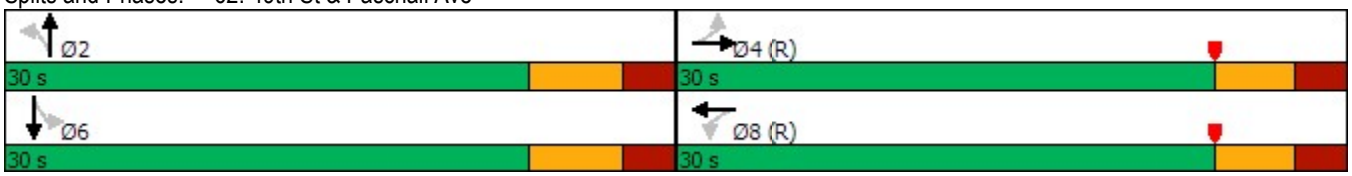
Intersection Summary	
Area Type:	Other
Cycle Length: 60	
Actuated Cycle Length: 60	

Offset: 51 (85%), Referenced to phase 4:EBTL and 8:WBTL, Start of Yellow

Control Type: Pretimed	
Maximum v/c Ratio: 0.73	
Intersection Signal Delay: 17.9	Intersection LOS: B
Intersection Capacity Utilization 61.2%	ICU Level of Service B
Analysis Period (min) 15	

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

Splits and Phases: 62: 49th St & Paschall Ave

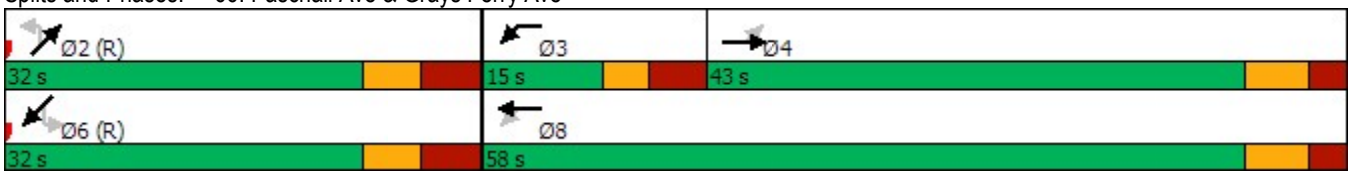


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	1	646	2	273	394	1	2	85	271	164	22	17
Future Volume (vph)	1	646	2	273	394	1	2	85	271	164	22	17
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100
Lane Width (ft)	10	11	12	10	10	10	10	10	10	10	10	10
Storage Length (ft)	50		0	0		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	73			25			25			25		
Satd. Flow (prot)	1825	3781	0	1724	1903	0	0	1462	0	0	1640	0
Flt Permitted	0.513			0.262				0.998			0.356	
Satd. Flow (perm)	986	3781	0	475	1903	0	0	1459	0	0	607	0
Right Turn on Red			Yes			No			Yes			No
Satd. Flow (RTOR)								175				
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		424			289			789			188	
Travel Time (s)		11.6			7.9			21.5			5.1	
Confl. Peds. (#/hr)							1		1	1		1
Confl. Bikes (#/hr)			5			4						3
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
Heavy Vehicles (%)	2%	2%	2%	8%	3%	2%	2%	2%	9%	2%	2%	2%
Parking (#/hr)							0	0	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	1	704	0	297	429	0	0	389	0	0	220	0
Turn Type	Perm	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases		4		3	8			2			6	
Permitted Phases	4			8			2			6		
Total Split (s)	43.0	43.0		15.0	58.0		32.0	32.0		32.0	32.0	
Total Lost Time (s)	5.5	5.5		5.5	5.5			6.5			6.5	
Act Effct Green (s)	37.5	37.5		52.5	52.5			25.5			25.5	
Actuated g/C Ratio	0.42	0.42		0.58	0.58			0.28			0.28	
v/c Ratio	0.00	0.45		0.73	0.39			0.72			1.29	
Control Delay	15.0	20.0		21.8	11.4			24.5			196.6	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay	15.0	20.0		21.8	11.4			24.5			196.6	
LOS	B	B		C	B			C			F	
Approach Delay		19.9			15.7			24.5			196.6	
Approach LOS		B			B			C			F	
Queue Length 50th (ft)	0	146		79	121			109			~160	
Queue Length 95th (ft)	3	195		#138	183			219			#300	
Internal Link Dist (ft)		344			209			709			108	
Turn Bay Length (ft)	50											
Base Capacity (vph)	410	1575		408	1110			538			171	
Starvation Cap Reductn	0	0		0	0			0			0	
Spillback Cap Reductn	0	0		0	0			0			0	
Storage Cap Reductn	0	0		0	0			0			0	
Reduced v/c Ratio	0.00	0.45		0.73	0.39			0.72			1.29	

Intersection Summary	
Area Type:	Other

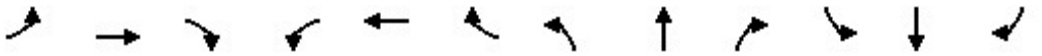
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:NETL and 6:SWTL, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.29
Intersection Signal Delay: 38.3 Intersection LOS: D
Intersection Capacity Utilization 80.8% ICU Level of Service D
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 66: Paschall Ave & Grays Ferry Ave



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	301	221	11	176	0	0
Future Volume (vph)	301	221	11	176	0	0
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100
Satd. Flow (prot)	1847	0	0	1927	0	0
Flt Permitted				0.997		
Satd. Flow (perm)	1847	0	0	1927	0	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	176			341	411	
Travel Time (s)	4.0			7.8	9.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	11%	2%	3%	9%	2%	2%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	567	0	0	203	0	0
Sign Control	Free			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	29.9%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	25	315	6	61	185	6	3	278	284	13	126	32
Future Volume (vph)	25	315	6	61	185	6	3	278	284	13	126	32
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100
Lane Width (ft)	10	10	10	10	10	10	15	15	15	15	15	15
Storage Length (ft)	0		0	0		0	20		0	20		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	1844	0	0	1826	0	1650	2067	0	2151	2187	0
Flt Permitted		0.967			0.847		0.649			0.157		
Satd. Flow (perm)	0	1790	0	0	1565	0	1127	2067	0	356	2187	0
Right Turn on Red			No			Yes			No			No
Satd. Flow (RTOR)					2							
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		524			499			840			759	
Travel Time (s)		14.3			13.6			22.9			20.7	
Confl. Bikes (#/hr)			3			3			4			2
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	2%	6%	2%	2%	7%	2%	33%	2%	2%	2%	2%	2%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	368	0	0	268	0	3	598	0	14	168	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Total Split (s)	40.0	40.0		40.0	40.0		30.0	30.0		30.0	30.0	
Total Lost Time (s)		4.5			4.5		4.5	4.5		4.5	4.5	
Act Effct Green (s)		35.5			35.5		25.5	25.5		25.5	25.5	
Actuated g/C Ratio		0.51			0.51		0.36	0.36		0.36	0.36	
v/c Ratio		0.41			0.34		0.01	0.80		0.11	0.21	
Control Delay		11.1			11.7		14.3	29.7		17.5	16.2	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		11.1			11.7		14.3	29.7		17.5	16.2	
LOS		B			B		B	C		B	B	
Approach Delay		11.1			11.7			29.6			16.3	
Approach LOS		B			B			C			B	
Queue Length 50th (ft)		113			63		1	225		4	49	
Queue Length 95th (ft)		202			111		6	#386		16	89	
Internal Link Dist (ft)		444			419			760			679	
Turn Bay Length (ft)							20			20		
Base Capacity (vph)		907			794		410	752		129	796	
Starvation Cap Reductn		0			0		0	0		0	0	
Spillback Cap Reductn		0			0		0	0		0	0	
Storage Cap Reductn		0			0		0	0		0	0	
Reduced v/c Ratio		0.41			0.34		0.01	0.80		0.11	0.21	

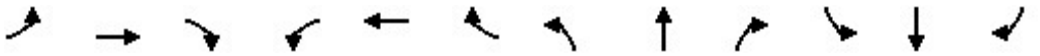
Intersection Summary	
Area Type:	Other
Cycle Length: 70	
Actuated Cycle Length: 70	

Offset: 21 (30%), Referenced to phase 4:SBTL and 8:NBTL, Start of Yellow

Control Type: Pretimed	
Maximum v/c Ratio: 0.80	
Intersection Signal Delay: 19.7	Intersection LOS: B
Intersection Capacity Utilization 63.2%	ICU Level of Service B
Analysis Period (min) 15	

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

Splits and Phases: 68: 47th St & Woodland Ave

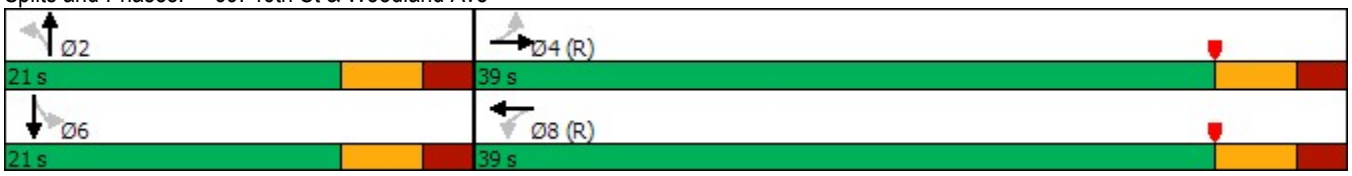


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	58	537	3	4	194	10	15	19	15	15	7	59
Future Volume (vph)	58	537	3	4	194	10	15	19	15	15	7	59
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100
Lane Width (ft)	12	10	12	12	10	12	12	12	12	12	12	12
Satd. Flow (prot)	0	1696	0	0	1631	0	0	1922	0	0	1779	0
Flt Permitted		0.951			0.991			0.912			0.950	
Satd. Flow (perm)	0	1618	0	0	1618	0	0	1768	0	0	1701	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		499			488			657			681	
Travel Time (s)		13.6			13.3			17.9			18.6	
Confl. Peds. (#/hr)	34		15	15		34	14		8	8		14
Confl. Bikes (#/hr)						1						1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	3%	8%	2%	2%	12%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	16	0	0	16	0	0	0	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	642	0	0	224	0	0	52	0	0	87	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Total Split (s)	39.0	39.0		39.0	39.0		21.0	21.0		21.0	21.0	
Total Lost Time (s)		4.5			4.5			4.5			4.5	
Act Effct Green (s)		34.5			34.5			16.5			16.5	
Actuated g/C Ratio		0.58			0.58			0.28			0.28	
v/c Ratio		0.69			0.24			0.11			0.19	
Control Delay		13.9			7.1			17.0			32.9	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		13.9			7.1			17.0			32.9	
LOS		B			A			B			C	
Approach Delay		13.9			7.1			17.0			32.9	
Approach LOS		B			A			B			C	
Queue Length 50th (ft)		144			35			14			32	
Queue Length 95th (ft)		254			66			37			72	
Internal Link Dist (ft)		419			408			577			601	
Turn Bay Length (ft)												
Base Capacity (vph)		930			930			486			467	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.69			0.24			0.11			0.19	

Intersection Summary	
Area Type:	Other
Cycle Length: 60	
Actuated Cycle Length: 60	
Offset: 30 (50%), Referenced to phase 4:EBTL and 8:WBTL, Start of Yellow	

Control Type: Pretimed
Maximum v/c Ratio: 0.69
Intersection Signal Delay: 14.2 Intersection LOS: B
Intersection Capacity Utilization 74.5% ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 69: 46th St & Woodland Ave

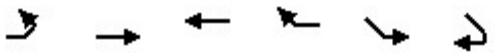


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	295	6	84	139	10	63	327	23	25	329	5
Future Volume (vph)	0	295	6	84	139	10	63	327	23	25	329	5
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100
Lane Width (ft)	10	10	10	10	10	10	15	15	15	15	15	15
Storage Length (ft)	0		0	0		0	20		0	0		0
Storage Lanes	0		0	0		0	1		0	0		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	1572	0	0	1573	0	1677	1810	0	0	1825	0
Flt Permitted					0.792		0.430				0.958	
Satd. Flow (perm)	0	1572	0	0	1267	0	758	1810	0	0	1753	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		2			4			6			1	
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		341			524			393			198	
Travel Time (s)		9.3			14.3			10.7			5.4	
Confl. Peds. (#/hr)	10		8	8		10	2		5	5		2
Confl. Bikes (#/hr)			3			2			2			1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	2%	12%	2%	2%	13%	20%	6%	2%	4%	2%	2%	2%
Parking (#/hr)							0	0	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	313	0	0	243	0	66	365	0	0	374	0
Turn Type		NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Total Split (s)	40.0	40.0		40.0	40.0		30.0	30.0		30.0	30.0	
Total Lost Time (s)		4.5			4.5		4.5	4.5			4.5	
Act Effct Green (s)		35.5			35.5		25.5	25.5			25.5	
Actuated g/C Ratio		0.51			0.51		0.36	0.36			0.36	
v/c Ratio		0.39			0.38		0.24	0.55			0.59	
Control Delay		9.7			21.7		18.4	21.2			22.5	
Queue Delay		0.0			0.0		0.0	0.0			0.0	
Total Delay		9.7			21.7		18.4	21.2			22.5	
LOS		A			C		B	C			C	
Approach Delay		9.7			21.7			20.8			22.5	
Approach LOS		A			C			C			C	
Queue Length 50th (ft)		44			95		19	120			127	
Queue Length 95th (ft)		95			159		48	198			210	
Internal Link Dist (ft)		261			444			313			118	
Turn Bay Length (ft)							20					
Base Capacity (vph)		798			644		276	663			639	
Starvation Cap Reductn		0			0		0	0			0	
Spillback Cap Reductn		0			0		0	0			0	
Storage Cap Reductn		0			0		0	0			0	
Reduced v/c Ratio		0.39			0.38		0.24	0.55			0.59	

Intersection Summary	
Area Type:	CBD

Cycle Length: 70	
Actuated Cycle Length: 70	
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green	
Control Type: Pretimed	
Maximum v/c Ratio: 0.59	
Intersection Signal Delay: 18.9	Intersection LOS: B
Intersection Capacity Utilization 78.4%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 70: 48th St & Woodland Ave



Lane Group	EBL	EBT	WBT	WBR	SEL	SER
Lane Configurations						
Traffic Volume (vph)	0	232	0	413	417	0
Future Volume (vph)	0	232	0	413	417	0
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100
Lane Width (ft)	12	16	12	12	12	12
Satd. Flow (prot)	0	2333	0	1781	1956	0
Flt Permitted					0.950	
Satd. Flow (perm)	0	2333	0	1781	1956	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		411	424		393	
Travel Time (s)		9.3	9.6		8.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	252	0	449	453	0
Sign Control		Stop	Free		Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 40.9%		ICU Level of Service A	
Analysis Period (min) 15			

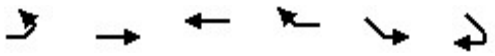
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	26	142	10	4	125	206	5	152	4	203	171	6
Future Volume (vph)	26	142	10	4	125	206	5	152	4	203	171	6
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100
Satd. Flow (prot)	0	1913	0	0	1848	0	0	1829	0	0	1929	0
Flt Permitted		0.917			0.997			0.989			0.764	
Satd. Flow (perm)	0	1766	0	0	1844	0	0	1810	0	0	1506	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		6			152			3			2	
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		441			364			520			581	
Travel Time (s)		12.0			9.9			14.2			15.8	
Confl. Peds. (#/hr)	4		13	13		4	27		11	11		27
Confl. Bikes (#/hr)						2						5
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
Heavy Vehicles (%)	8%	2%	30%	2%	3%	2%	2%	13%	2%	2%	6%	17%
Bus Blockages (#/hr)	0	8	0	0	0	0	0	4	0	0	4	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	193	0	0	364	0	0	174	0	0	414	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Total Split (s)	27.0	27.0		27.0	27.0		33.0	33.0		33.0	33.0	
Total Lost Time (s)		4.9			4.9			4.5			4.5	
Act Effct Green (s)		22.1			22.1			28.5			28.5	
Actuated g/C Ratio		0.37			0.37			0.48			0.48	
v/c Ratio		0.30			0.47			0.20			0.58	
Control Delay		14.5			10.5			9.8			11.9	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		14.5			10.5			9.8			11.9	
LOS		B			B			A			B	
Approach Delay		14.5			10.5			9.8			11.9	
Approach LOS		B			B			A			B	
Queue Length 50th (ft)		46			53			33			68	
Queue Length 95th (ft)		89			115			65			112	
Internal Link Dist (ft)		361			284			440			501	
Turn Bay Length (ft)												
Base Capacity (vph)		654			775			861			716	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.30			0.47			0.20			0.58	

Intersection Summary	
Area Type:	Other
Cycle Length: 60	
Actuated Cycle Length: 60	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Control Type: Pretimed	

Maximum v/c Ratio: 0.58

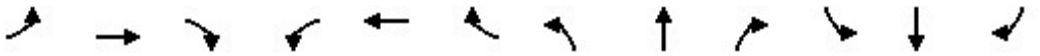
Intersection Signal Delay: 11.6	Intersection LOS: B
Intersection Capacity Utilization 79.3%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 74: 49th St & Greenway Ave



Lane Group	EBL	EBT	WBT	WBR	SEL	SER
Lane Configurations						
Traffic Volume (vph)	0	1081	668	587	0	0
Future Volume (vph)	0	1081	668	587	0	0
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100
Storage Length (ft)	0			76	0	0
Storage Lanes	0			1	0	0
Taper Length (ft)	25				25	
Satd. Flow (prot)	0	3912	3912	1750	0	0
Flt Permitted						
Satd. Flow (perm)	0	3912	3912	1750	0	0
Link Speed (mph)		30	35		30	
Link Distance (ft)		289	1512		114	
Travel Time (s)		6.6	29.5		2.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1175	726	638	0	0
Sign Control		Free	Free		Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 36.2%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	92	818	9	63	136	0	0	49	20
Future Volume (vph)	0	0	0	92	818	9	63	136	0	0	49	20
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100
Lane Width (ft)	12	10	12	12	10	12	12	10	12	12	10	12
Grade (%)		0%			3%			0%			0%	
Satd. Flow (prot)	0	0	0	0	3456	0	0	1868	0	0	1800	0
Flt Permitted					0.995			0.872				
Satd. Flow (perm)	0	0	0	0	3446	0	0	1642	0	0	1800	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					3						23	
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		574			272			413			576	
Travel Time (s)		13.0			6.2			11.3			15.7	
Confl. Peds. (#/hr)	15		35	35		15	24		22	22		24
Confl. Bikes (#/hr)						6			2			1
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
Heavy Vehicles (%)	2%	2%	2%	2%	4%	2%	6%	2%	2%	2%	4%	2%
Bus Blockages (#/hr)	0	0	0	0	8	0	0	0	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	1056	0	0	228	0	0	79	0
Turn Type				Perm	NA		Perm	NA			NA	
Protected Phases					4			2			6	
Permitted Phases				4			2					
Total Split (s)				40.0	40.0		20.0	20.0			20.0	
Total Lost Time (s)					4.5			4.5			4.5	
Act Effct Green (s)					35.5			15.5			15.5	
Actuated g/C Ratio					0.59			0.26			0.26	
v/c Ratio					0.52			0.54			0.16	
Control Delay					8.3			24.7			10.2	
Queue Delay					2.0			0.0			0.0	
Total Delay					10.4			24.7			10.2	
LOS					B			C			B	
Approach Delay					10.4			24.7			10.2	
Approach LOS					B			C			B	
Queue Length 50th (ft)					102			71			15	
Queue Length 95th (ft)					137			126			m30	
Internal Link Dist (ft)		494			192			333			496	
Turn Bay Length (ft)												
Base Capacity (vph)					2040			424			482	
Starvation Cap Reductn					794			0			0	
Spillback Cap Reductn					0			0			0	
Storage Cap Reductn					0			0			0	
Reduced v/c Ratio					0.85			0.54			0.16	

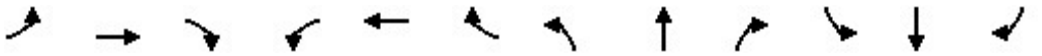
Intersection Summary	
Area Type:	Other
Cycle Length: 60	
Actuated Cycle Length: 60	

Offset: 10 (17%), Referenced to phase 4:WBTL, Start of Yellow

Control Type: Pretimed	
Maximum v/c Ratio: 0.54	
Intersection Signal Delay: 12.8	Intersection LOS: B
Intersection Capacity Utilization 52.1%	ICU Level of Service A
Analysis Period (min) 15	

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 88: 47th St & Walnut St

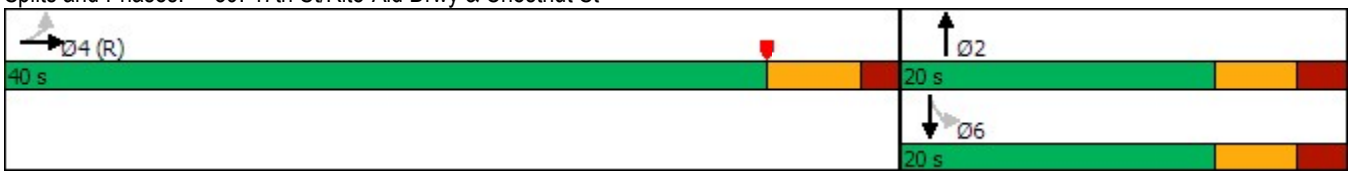


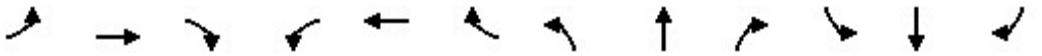
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1311	35	0	0	0	0	0	109	0	0	0
Future Volume (vph)	0	1311	35	0	0	0	0	0	109	0	0	0
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100
Lane Width (ft)	12	10	12	12	10	12	12	10	12	12	12	12
Satd. Flow (prot)	0	3395	0	0	0	0	0	1463	0	0	2059	0
Flt Permitted												
Satd. Flow (perm)	0	3395	0	0	0	0	0	1463	0	0	2059	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		8						55				
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		574			259			576			194	
Travel Time (s)		13.0			5.9			15.7			5.3	
Confl. Peds. (#/hr)	14		21	21		14	4		8	8		4
Confl. Bikes (#/hr)			17						1			
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Bus Blockages (#/hr)	0	8	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)		0						0				
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1448	0	0	0	0	0	117	0	0	0	0
Turn Type		NA						NA				
Protected Phases		4						2			6	
Permitted Phases	4									6		
Total Split (s)	40.0	40.0						20.0		20.0	20.0	
Total Lost Time (s)		4.5						4.5			4.5	
Act Effct Green (s)		35.5						15.5				
Actuated g/C Ratio		0.59						0.26				
v/c Ratio		0.72						0.28				
Control Delay		5.4						23.7				
Queue Delay		0.0						0.0				
Total Delay		5.4						23.7				
LOS		A						C				
Approach Delay		5.4						23.7				
Approach LOS		A						C				
Queue Length 50th (ft)		17						24				
Queue Length 95th (ft)		23						m64				
Internal Link Dist (ft)		494			179			496			114	
Turn Bay Length (ft)												
Base Capacity (vph)		2011						418				
Starvation Cap Reductn		0						0				
Spillback Cap Reductn		0						0				
Storage Cap Reductn		0						0				
Reduced v/c Ratio		0.72						0.28				

Intersection Summary	
Area Type:	Other
Cycle Length: 60	
Actuated Cycle Length: 60	
Offset: 13 (22%), Referenced to phase 4:EBTL, Start of Yellow	

Control Type: Pretimed
Maximum v/c Ratio: 0.72
Intersection Signal Delay: 6.8 Intersection LOS: A
Intersection Capacity Utilization 53.0% ICU Level of Service A
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 89: 47th St/Rite-Aid Drwy & Chestnut St





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	173	228	17	6	117	13	26	162	43	17	285	27
Future Volume (vph)	173	228	17	6	117	13	26	162	43	17	285	27
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100
Lane Width (ft)	12	10	12	12	10	12	12	12	12	12	10	12
Satd. Flow (prot)	0	1852	0	0	1857	0	0	1922	0	0	1862	0
Flt Permitted		0.800			0.979			0.922			0.974	
Satd. Flow (perm)	0	1502	0	0	1821	0	0	1776	0	0	1815	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		589			603			803			807	
Travel Time (s)		16.1			16.4			21.9			22.0	
Confl. Peds. (#/hr)	22		20	20		22	40		38	38		40
Confl. Bikes (#/hr)			11			1			5			1
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
Heavy Vehicles (%)	4%	2%	6%	17%	3%	2%	2%	5%	2%	2%	2%	15%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	454	0	0	148	0	0	251	0	0	357	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Total Split (s)	37.8	37.8		37.8	37.8		22.2	22.2		22.2	22.2	
Total Lost Time (s)		5.1			5.1			5.1			5.1	
Act Effct Green (s)		32.7			32.7			17.1			17.1	
Actuated g/C Ratio		0.54			0.54			0.28			0.28	
v/c Ratio		0.56			0.15			0.50			0.69	
Control Delay		11.5			5.0			21.9			27.7	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		11.5			5.0			21.9			27.7	
LOS		B			A			C			C	
Approach Delay		11.5			5.0			21.9			27.7	
Approach LOS		B			A			C			C	
Queue Length 50th (ft)		77			13			75			114	
Queue Length 95th (ft)		90			28			136			#218	
Internal Link Dist (ft)		509			523			723			727	
Turn Bay Length (ft)												
Base Capacity (vph)		818			992			506			517	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.56			0.15			0.50			0.69	

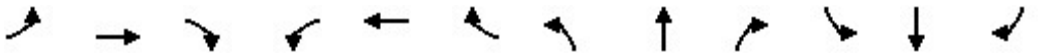
Intersection Summary	
Area Type:	Other
Cycle Length: 60	
Actuated Cycle Length: 60	
Offset: 47.4 (79%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green	
Control Type: Pretimed	

Maximum v/c Ratio: 0.69

Intersection Signal Delay: 17.6	Intersection LOS: B
Intersection Capacity Utilization 83.9%	ICU Level of Service E
Analysis Period (min) 15	

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

Splits and Phases: 92: 47th St & Baltimore Ave



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	35	73	6	4	90	2	11	98	3	6	61	36
Future Volume (vph)	35	73	6	4	90	2	11	98	3	6	61	36
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100
Lane Width (ft)	12	10	12	12	10	12	12	12	12	12	12	12
Satd. Flow (prot)	0	1872	0	0	1910	0	0	2040	0	0	1908	0
Flt Permitted		0.909			0.993			0.972			0.983	
Satd. Flow (perm)	0	1713	0	0	1899	0	0	1990	0	0	1880	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		7			2			2			39	
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		493			457			681			425	
Travel Time (s)		13.4			12.5			18.6			11.6	
Confl. Peds. (#/hr)	20		15	15		20	13		11	11		13
Confl. Bikes (#/hr)			6			4			1			3
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
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	17%	2%	2%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	124	0	0	104	0	0	122	0	0	112	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Total Split (s)	36.0	36.0		36.0	36.0		24.0	24.0		24.0	24.0	
Total Lost Time (s)		4.5			4.5			4.5			4.5	
Act Effct Green (s)		31.5			31.5			19.5			19.5	
Actuated g/C Ratio		0.52			0.52			0.32			0.32	
v/c Ratio		0.14			0.10			0.19			0.18	
Control Delay		10.2			7.4			14.7			11.0	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		10.2			7.4			14.7			11.0	
LOS		B			A			B			B	
Approach Delay		10.2			7.4			14.7			11.0	
Approach LOS		B			A			B			B	
Queue Length 50th (ft)		25			17			36			18	
Queue Length 95th (ft)		m50			37			m63			49	
Internal Link Dist (ft)		413			377			601			345	
Turn Bay Length (ft)												
Base Capacity (vph)		902			997			648			637	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.14			0.10			0.19			0.18	

Intersection Summary	
Area Type:	Other
Cycle Length: 60	
Actuated Cycle Length: 60	
Offset: 58.8 (98%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green	
Control Type: Pretimed	

Maximum v/c Ratio: 0.19

Intersection Signal Delay: 11.0	Intersection LOS: B
Intersection Capacity Utilization 47.5%	ICU Level of Service A
Analysis Period (min) 15	

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: 46th St & Kingsessing Ave

Lane Group	EBL	EBT	EBR	EBR2	WBL2	WBL	WBT	WBR	NBL2	NBL	NBT	NBR
Lane Configurations												
Traffic Volume (vph)	67	228	93	4	7	17	301	17	24	74	184	6
Future Volume (vph)	67	228	93	4	7	17	301	17	24	74	184	6
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100
Lane Width (ft)	12	10	12	12	12	12	10	12	12	12	14	12
Storage Length (ft)	0		0			0		0		80		0
Storage Lanes	0		0			0		0		1		0
Taper Length (ft)	25					25				25		
Satd. Flow (prot)	0	1739	0	0	0	0	1862	0	0	1941	2158	0
Flt Permitted		0.875					0.953			0.472		
Satd. Flow (perm)	0	1534	0	0	0	0	1774	0	0	818	2158	0
Right Turn on Red				Yes				Yes				Yes
Satd. Flow (RTOR)		1					6				3	
Link Speed (mph)		25					25				25	
Link Distance (ft)		570					589				1127	
Travel Time (s)		15.5					16.1				30.7	
Confl. Peds. (#/hr)	8		62	68	62	68		8	68	111		39
Confl. Bikes (#/hr)			14	14				21				3
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
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	6%	2%	3%	3%	2%
Bus Blockages (#/hr)	0	4	0	0	0	0	4	0	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	431	0	0	0	0	377	0	0	107	209	0
Turn Type	Perm	NA			Perm	Perm	NA		Perm	Perm	NA	
Protected Phases		4					8				2	
Permitted Phases	4				8	8			2	2		
Total Split (s)	36.0	36.0			36.0	36.0	36.0		24.0	24.0	24.0	
Total Lost Time (s)		5.7					5.7			5.7	5.7	
Act Effct Green (s)		30.3					30.3			18.3	18.3	
Actuated g/C Ratio		0.50					0.50			0.30	0.30	
v/c Ratio		0.56					0.42			0.43	0.32	
Control Delay		14.8					10.0			23.3	17.5	
Queue Delay		0.0					0.0			0.0	0.0	
Total Delay		14.8					10.0			23.3	17.5	
LOS		B					B			C	B	
Approach Delay		14.8					10.0				19.4	
Approach LOS		B					B				B	
Queue Length 50th (ft)		94					75			31	57	
Queue Length 95th (ft)		179					m104			72	104	
Internal Link Dist (ft)		490					509				1047	
Turn Bay Length (ft)										80		
Base Capacity (vph)		775					898			249	660	
Starvation Cap Reductn		0					0			0	0	
Spillback Cap Reductn		0					0			0	0	
Storage Cap Reductn		0					0			0	0	
Reduced v/c Ratio		0.56					0.42			0.43	0.32	

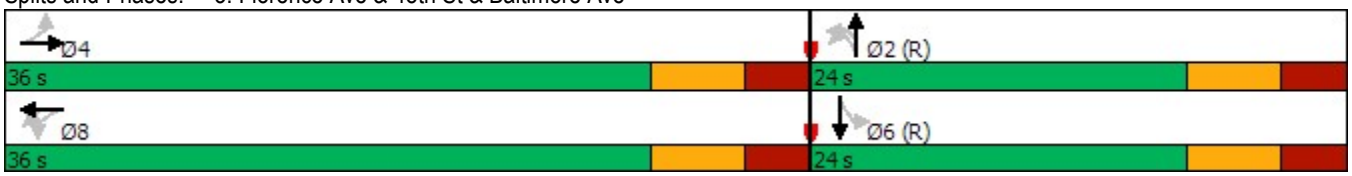
Intersection Summary	
Area Type:	Other

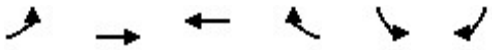
Lane Group	SBL	SBT	SBR	SBR2
Lane Configurations				
Traffic Volume (vph)	8	191	46	54
Future Volume (vph)	8	191	46	54
Ideal Flow (vphpl)	2100	2100	2100	2100
Lane Width (ft)	12	14	12	12
Storage Length (ft)	0		0	
Storage Lanes	0		0	
Taper Length (ft)	25			
Satd. Flow (prot)	0	1829	0	0
Flt Permitted		0.988		
Satd. Flow (perm)	0	1806	0	0
Right Turn on Red				Yes
Satd. Flow (RTOR)		19		
Link Speed (mph)		25		
Link Distance (ft)		425		
Travel Time (s)		11.6		
Confl. Peds. (#/hr)	39		68	111
Confl. Bikes (#/hr)			8	8
Peak Hour Factor	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	2%	3%	2%	2%
Bus Blockages (#/hr)	0	4	0	0
Shared Lane Traffic (%)				
Lane Group Flow (vph)	0	329	0	0
Turn Type	Perm	NA		
Protected Phases		6		
Permitted Phases	6			
Total Split (s)	24.0	24.0		
Total Lost Time (s)		5.7		
Act Effct Green (s)		18.3		
Actuated g/C Ratio		0.30		
v/c Ratio		0.58		
Control Delay		21.5		
Queue Delay		0.0		
Total Delay		21.5		
LOS		C		
Approach Delay		21.5		
Approach LOS		C		
Queue Length 50th (ft)		93		
Queue Length 95th (ft)		166		
Internal Link Dist (ft)		345		
Turn Bay Length (ft)				
Base Capacity (vph)		564		
Starvation Cap Reductn		0		
Spillback Cap Reductn		0		
Storage Cap Reductn		0		
Reduced v/c Ratio		0.58		

Intersection Summary

Cycle Length: 60
Actuated Cycle Length: 60
Offset: 18 (30%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Control Type: Pretimed
Maximum v/c Ratio: 0.58
Intersection Signal Delay: 16.1 Intersection LOS: B
Intersection Capacity Utilization 82.0% ICU Level of Service D
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

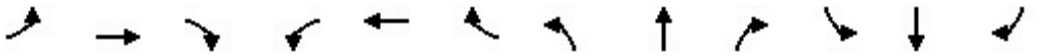
Splits and Phases: 3: Florence Ave & 48th St & Baltimore Ave





Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	51	106	111	55	41	77
Future Volume (vph)	51	106	111	55	41	77
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100
Lane Width (ft)	10	10	10	10	15	15
Satd. Flow (prot)	0	1691	1646	0	1793	0
Flt Permitted		0.984			0.983	
Satd. Flow (perm)	0	1691	1646	0	1793	0
Link Speed (mph)		25	25		25	
Link Distance (ft)		483	490		528	
Travel Time (s)		13.2	13.4		14.4	
Confl. Peds. (#/hr)	8			8	6	5
Confl. Bikes (#/hr)				7		8
Peak Hour Factor	0.82	0.82	0.92	0.82	0.82	0.82
Heavy Vehicles (%)	4%	2%	2%	2%	2%	5%
Parking (#/hr)	0	0	0	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	191	188	0	144	0
Sign Control		Stop	Stop		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 35.0%		ICU Level of Service A	
Analysis Period (min) 15			



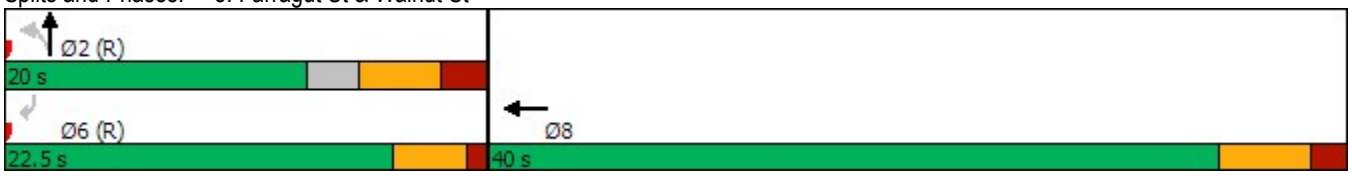
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	1032	66	11	102	0	0	0	173
Future Volume (vph)	0	0	0	0	1032	66	11	102	0	0	0	173
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100
Lane Width (ft)	12	12	12	10	10	10	11	11	11	10	10	10
Grade (%)		0%			3%			0%			0%	
Satd. Flow (prot)	0	0	0	0	3322	0	0	1782	0	0	0	1496
Flt Permitted								0.995				
Satd. Flow (perm)	0	0	0	0	3322	0	0	1775	0	0	0	1417
Right Turn on Red			Yes			Yes	Yes		Yes			Yes
Satd. Flow (RTOR)					17			52				79
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		272			269			426			435	
Travel Time (s)		6.2			6.1			11.6			11.9	
Confl. Peds. (#/hr)	16		29	29		16	38		50	50		38
Confl. Bikes (#/hr)						19						3
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Bus Blockages (#/hr)	0	0	0	0	8	0	0	0	0	0	0	0
Parking (#/hr)					0			0				0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	1155	0	0	119	0	0	0	182
Turn Type					NA		Perm	NA				Perm
Protected Phases					8			2				
Permitted Phases							2					6
Total Split (s)					40.0		20.0	20.0				22.5
Total Lost Time (s)					4.5			4.5				3.0
Act Effct Green (s)					35.5			18.0				19.5
Actuated g/C Ratio					0.57			0.29				0.31
v/c Ratio					0.61			0.22				0.37
Control Delay					10.5			11.6				12.2
Queue Delay					5.4			0.0				0.0
Total Delay					15.9			11.6				12.2
LOS					B			B				B
Approach Delay					15.9			11.6			12.2	
Approach LOS					B			B			B	
Queue Length 50th (ft)					133			19				29
Queue Length 95th (ft)					188			53				74
Internal Link Dist (ft)		192			189			346			355	
Turn Bay Length (ft)												
Base Capacity (vph)					1894			548				496
Starvation Cap Reductn					668			0				0
Spillback Cap Reductn					0			0				0
Storage Cap Reductn					0			0				0
Reduced v/c Ratio					0.94			0.22				0.37

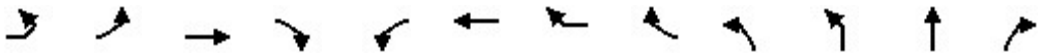
Intersection Summary	
Area Type:	Other
Cycle Length: 62.5	
Actuated Cycle Length: 62.5	

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBR, Start of Green

Control Type: Pretimed	
Maximum v/c Ratio: 0.61	
Intersection Signal Delay: 15.1	Intersection LOS: B
Intersection Capacity Utilization 64.7%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 5: Farragut St & Walnut St





Lane Group	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL2	NBL	NBT	NBR
Lane Configurations												
Traffic Volume (vph)	22	30	205	71	8	384	36	9	53	64	132	18
Future Volume (vph)	22	30	205	71	8	384	36	9	53	64	132	18
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100
Lane Width (ft)	12	12	10	12	12	10	12	12	10	10	10	12
Storage Length (ft)		0		0	0		0			20		0
Storage Lanes		0		0	0		0			1		0
Taper Length (ft)		25			25					25		
Satd. Flow (prot)	0	0	1606	0	0	1654	0	0	0	1825	1657	0
Flt Permitted			0.870			0.992				0.557		
Satd. Flow (perm)	0	0	1405	0	0	1641	0	0	0	973	1657	0
Right Turn on Red				Yes				Yes				Yes
Satd. Flow (RTOR)			31			2					12	
Link Speed (mph)			25			25					25	
Link Distance (ft)			579			570					1474	
Travel Time (s)			15.8			15.5					40.2	
Confl. Peds. (#/hr)		28		70	70		28		65	35		66
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	2%	2%	2%	2%	50%	2%	2%	2%	2%	2%	2%	11%
Bus Blockages (#/hr)	0	0	4	0	0	4	0	0	0	0	0	0
Parking (#/hr)			0			0					0	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	342	0	0	455	0	0	0	122	157	0
Turn Type	Perm	Perm	NA		Perm	NA			Perm	Perm	NA	
Protected Phases			4			8					2	
Permitted Phases	4	4			8				2	2		
Total Split (s)	34.8	34.8	34.8		34.8	34.8			25.2	25.2	25.2	
Total Lost Time (s)			6.9			6.9				5.1	5.1	
Act Effct Green (s)			27.9			27.9				20.1	20.1	
Actuated g/C Ratio			0.46			0.46				0.34	0.34	
v/c Ratio			0.51			0.60				0.38	0.28	
Control Delay			13.5			13.5				19.4	15.1	
Queue Delay			0.0			0.0				0.0	0.0	
Total Delay			13.5			13.5				19.4	15.1	
LOS			B			B				B	B	
Approach Delay			13.5			13.5					17.0	
Approach LOS			B			B					B	
Queue Length 50th (ft)			73			84				33	37	
Queue Length 95th (ft)			139			136				74	77	
Internal Link Dist (ft)			499			490					1394	
Turn Bay Length (ft)										20		
Base Capacity (vph)			669			764				325	563	
Starvation Cap Reductn			0			0				0	0	
Spillback Cap Reductn			0			0				0	0	
Storage Cap Reductn			0			0				0	0	
Reduced v/c Ratio			0.51			0.60				0.38	0.28	

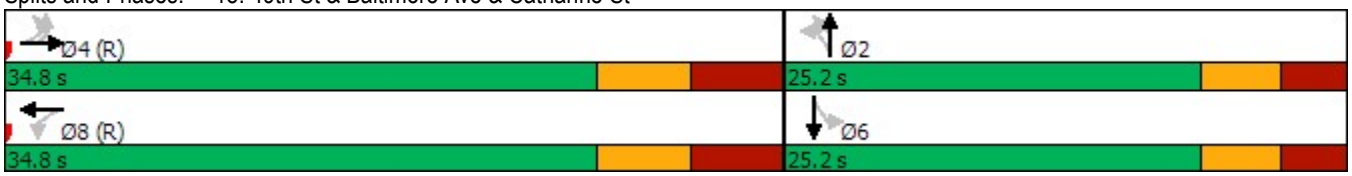
Intersection Summary	
Area Type:	Other

Lane Group	SBL	SBT	SBR	SBR2
Lane Configurations				
Traffic Volume (vph)	13	179	33	29
Future Volume (vph)	13	179	33	29
Ideal Flow (vphpl)	2100	2100	2100	2100
Lane Width (ft)	12	10	12	12
Storage Length (ft)	0		0	
Storage Lanes	0		0	
Taper Length (ft)	25			
Satd. Flow (prot)	0	1613	0	0
Flt Permitted		0.981		
Satd. Flow (perm)	0	1580	0	0
Right Turn on Red				Yes
Satd. Flow (RTOR)		12		
Link Speed (mph)		25		
Link Distance (ft)		572		
Travel Time (s)		15.6		
Confl. Peds. (#/hr)	66		65	
Peak Hour Factor	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	2%	2%	6%	2%
Bus Blockages (#/hr)	0	0	0	0
Parking (#/hr)		0		
Shared Lane Traffic (%)				
Lane Group Flow (vph)	0	264	0	0
Turn Type	Perm	NA		
Protected Phases		6		
Permitted Phases	6			
Total Split (s)	25.2	25.2		
Total Lost Time (s)		5.1		
Act Effct Green (s)		20.1		
Actuated g/C Ratio		0.34		
v/c Ratio		0.49		
Control Delay		18.9		
Queue Delay		0.0		
Total Delay		18.9		
LOS		B		
Approach Delay		18.9		
Approach LOS		B		
Queue Length 50th (ft)		71		
Queue Length 95th (ft)		132		
Internal Link Dist (ft)		492		
Turn Bay Length (ft)				
Base Capacity (vph)		537		
Starvation Cap Reductn		0		
Spillback Cap Reductn		0		
Storage Cap Reductn		0		
Reduced v/c Ratio		0.49		

Intersection Summary

Cycle Length: 60	
Actuated Cycle Length: 60	
Offset: 49.8 (83%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green	
Control Type: Pretimed	
Maximum v/c Ratio: 0.60	
Intersection Signal Delay: 15.3	Intersection LOS: B
Intersection Capacity Utilization 88.1%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 18: 49th St & Baltimore Ave & Catharine St



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	17	181	39	7	224	0	19	148	5	43	212	96
Future Volume (vph)	17	181	39	7	224	0	19	148	5	43	212	96
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100
Lane Width (ft)	12	10	12	12	10	12	12	10	12	12	10	12
Satd. Flow (prot)	0	1775	0	0	1887	0	0	1897	0	1956	1777	0
Flt Permitted		0.963			0.986			0.918		0.302		
Satd. Flow (perm)	0	1713	0	0	1859	0	0	1741	0	606	1777	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		19						2			48	
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		603			205			463			100	
Travel Time (s)		16.4			5.6			12.6			2.7	
Confl. Peds. (#/hr)	31		105	105			41		38	38		41
Confl. Bikes (#/hr)			16						1			
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
Heavy Vehicles (%)	2%	3%	2%	2%	2%	2%	2%	2%	2%	2%	2%	4%
Bus Blockages (#/hr)	0	4	0	0	4	0	0	0	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	261	0	0	254	0	0	189	0	47	338	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6 10	
Permitted Phases	4			8			2			6 10		
Total Split (s)	28.2	28.2		28.2	28.2		19.2	19.2				
Total Lost Time (s)		6.3			6.3			5.7				
Act Effct Green (s)		21.9			21.9			13.5		26.1	26.1	
Actuated g/C Ratio		0.36			0.36			0.22		0.44	0.44	
v/c Ratio		0.41			0.37			0.48		0.18	0.42	
Control Delay		12.6			16.0			24.8		6.7	5.6	
Queue Delay		0.0			0.0			0.0		0.0	0.0	
Total Delay		12.6			16.0			24.8		6.7	5.6	
LOS		B			B			C		A	A	
Approach Delay		12.6			16.0			24.8			5.8	
Approach LOS		B			B			C			A	
Queue Length 50th (ft)		43			66			59		4	19	
Queue Length 95th (ft)		m90			118			113		m10	50	
Internal Link Dist (ft)		523			125			383			20	
Turn Bay Length (ft)												
Base Capacity (vph)		637			678			393		263	800	
Starvation Cap Reductn		0			0			0		0	0	
Spillback Cap Reductn		0			0			0		0	0	
Storage Cap Reductn		0			0			0		0	0	
Reduced v/c Ratio		0.41			0.37			0.48		0.18	0.42	

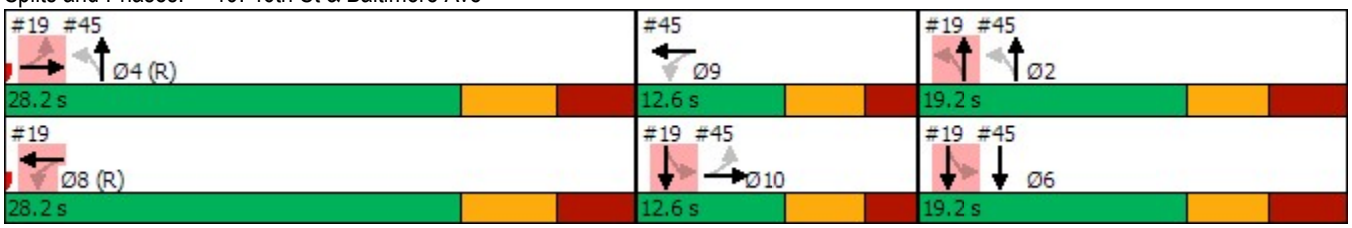
Intersection Summary	
Area Type:	Other
Cycle Length: 60	
Actuated Cycle Length: 60	
Offset: 58.8 (98%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green	

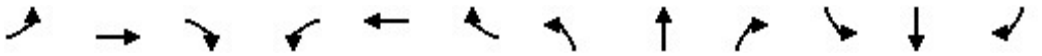
Lane Group	Ø6	Ø9	Ø10
Lane Configurations			
Traffic Volume (vph)			
Future Volume (vph)			
Ideal Flow (vphpl)			
Lane Width (ft)			
Satd. Flow (prot)			
Flt Permitted			
Satd. Flow (perm)			
Right Turn on Red			
Satd. Flow (RTOR)			
Link Speed (mph)			
Link Distance (ft)			
Travel Time (s)			
Confl. Peds. (#/hr)			
Confl. Bikes (#/hr)			
Peak Hour Factor			
Heavy Vehicles (%)			
Bus Blockages (#/hr)			
Shared Lane Traffic (%)			
Lane Group Flow (vph)			
Turn Type			
Protected Phases	6	9	10
Permitted Phases			
Total Split (s)	19.2	12.6	12.6
Total Lost Time (s)			
Act Effct Green (s)			
Actuated g/C Ratio			
v/c Ratio			
Control Delay			
Queue Delay			
Total Delay			
LOS			
Approach Delay			
Approach LOS			
Queue Length 50th (ft)			
Queue Length 95th (ft)			
Internal Link Dist (ft)			
Turn Bay Length (ft)			
Base Capacity (vph)			
Starvation Cap Reductn			
Spillback Cap Reductn			
Storage Cap Reductn			
Reduced v/c Ratio			

Intersection Summary

Control Type: Pretimed
Maximum v/c Ratio: 0.56
Intersection Signal Delay: 13.1 Intersection LOS: B
Intersection Capacity Utilization 50.7% ICU Level of Service A
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 19: 46th St & Baltimore Ave





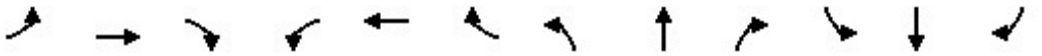
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	51	928	59	30	262	0	0	290	92
Future Volume (vph)	0	0	0	51	928	59	30	262	0	0	290	92
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100
Lane Width (ft)	10	10	10	10	10	10	10	10	10	10	10	10
Grade (%)		0%			3%			1%			3%	
Storage Length (ft)	0		0	0		40	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	0	0	0	3359	0	0	1626	0	0	1643	0
Flt Permitted					0.998			0.757				
Satd. Flow (perm)	0	0	0	0	3357	0	0	1237	0	0	1643	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		281			574			415			591	
Travel Time (s)		6.4			13.0			11.3			16.1	
Confl. Peds. (#/hr)	15		13	13		15	3		16	16		3
Confl. Bikes (#/hr)			2			10			6			1
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
Heavy Vehicles (%)	2%	2%	2%	8%	2%	3%	3%	6%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	4	0	0	0	0
Parking (#/hr)				0	0	0	0	0			0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	1266	0	0	357	0	0	466	0
Turn Type				Perm	NA		Perm	NA			NA	
Protected Phases					4			2			6	
Permitted Phases				4			2					
Total Split (s)				35.0	35.0		25.0	25.0			25.0	
Total Lost Time (s)					4.5			4.5			4.5	
Act Effct Green (s)					30.5			20.5			20.5	
Actuated g/C Ratio					0.51			0.34			0.34	
v/c Ratio					0.74			0.85			0.83	
Control Delay					9.3			40.1			30.1	
Queue Delay					0.0			0.0			0.0	
Total Delay					9.3			40.1			30.1	
LOS					A			D			C	
Approach Delay					9.3			40.1			30.1	
Approach LOS					A			D			C	
Queue Length 50th (ft)					43			117			182	
Queue Length 95th (ft)					50			#217			#267	
Internal Link Dist (ft)		201			494			335			511	
Turn Bay Length (ft)												
Base Capacity (vph)					1706			422			561	
Starvation Cap Reductn					0			0			0	
Spillback Cap Reductn					0			0			0	
Storage Cap Reductn					0			0			0	
Reduced v/c Ratio					0.74			0.85			0.83	

Intersection Summary

Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 60			
Offset: 20 (33%), Referenced to phase 4:WBTL, Start of Yellow			
Control Type: Pretimed			
Maximum v/c Ratio: 0.85			
Intersection Signal Delay: 19.2		Intersection LOS: B	
Intersection Capacity Utilization 72.3%		ICU Level of Service C	
Analysis Period (min) 15			

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

Splits and Phases: 42: 48th St & Walnut St

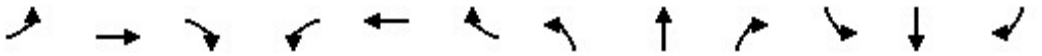


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	35	795	23	56	98	0	0	119	31
Future Volume (vph)	0	0	0	35	795	23	56	98	0	0	119	31
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100
Lane Width (ft)	12	10	12	12	10	12	12	10	12	12	10	12
Satd. Flow (prot)	0	0	0	0	3559	0	0	1839	0	0	1821	0
Flt Permitted					0.998			0.816				
Satd. Flow (perm)	0	0	0	0	3556	0	0	1515	0	0	1821	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					8						21	
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		269			567			427			550	
Travel Time (s)		6.1			12.9			11.6			15.0	
Confl. Peds. (#/hr)	7		25	25		7	28		30	30		28
Confl. Bikes (#/hr)			2									1
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles (%)	2%	2%	2%	6%	3%	2%	4%	5%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	4	0	0	0	0	0	4	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	1052	0	0	190	0	0	185	0
Turn Type				Perm	NA		Perm	NA			NA	
Protected Phases					4			2			6	
Permitted Phases				4			2					
Total Split (s)				40.0	40.0		20.0	20.0			20.0	
Total Lost Time (s)					4.5			4.5			4.5	
Act Effct Green (s)					35.5			15.5			15.5	
Actuated g/C Ratio					0.59			0.26			0.26	
v/c Ratio					0.50			0.49			0.38	
Control Delay					8.1			23.9			18.9	
Queue Delay					0.0			0.0			0.0	
Total Delay					8.1			23.9			18.9	
LOS					A			C			B	
Approach Delay					8.1			23.9			18.9	
Approach LOS					A			C			B	
Queue Length 50th (ft)					100			58			48	
Queue Length 95th (ft)					119			98			85	
Internal Link Dist (ft)		189			487			347			470	
Turn Bay Length (ft)												
Base Capacity (vph)					2107			391			486	
Starvation Cap Reductn					0			0			0	
Spillback Cap Reductn					0			0			0	
Storage Cap Reductn					0			0			0	
Reduced v/c Ratio					0.50			0.49			0.38	

Intersection Summary	
Area Type:	Other
Cycle Length: 60	
Actuated Cycle Length: 60	
Offset: 55 (92%), Referenced to phase 4:WBTL, Start of Yellow	

Control Type: Pretimed
Maximum v/c Ratio: 0.50
Intersection Signal Delay: 11.6 Intersection LOS: B
Intersection Capacity Utilization 62.9% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 43: 46th St & Walnut St



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	8	0	52	0	69	29	32	133	0	0	229	7
Future Volume (vph)	8	0	52	0	69	29	32	133	0	0	229	7
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100
Satd. Flow (prot)	0	1805	0	0	1883	0	0	2038	0	0	2043	0
Flt Permitted		0.936						0.917				
Satd. Flow (perm)	0	1679	0	0	1883	0	0	1879	0	0	2043	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		218			29						2	
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		246			212			100			568	
Travel Time (s)		6.7			5.8			2.7			15.5	
Confl. Peds. (#/hr)	31					31	47					47
Confl. Bikes (#/hr)						11						
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
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	66	0	0	108	0	0	181	0	0	260	0
Turn Type	Perm	NA			NA		Perm	NA			NA	
Protected Phases		10			9			2 4			6	
Permitted Phases	10			9			2 4					
Total Split (s)	12.6	12.6		12.6	12.6						19.2	
Total Lost Time (s)		4.5			4.5						5.7	
Act Effct Green (s)		8.1			8.1			41.7			13.5	
Actuated g/C Ratio		0.14			0.14			0.70			0.22	
v/c Ratio		0.16			0.39			0.14			0.56	
Control Delay		0.8			22.8			0.4			26.0	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		0.8			22.8			0.4			26.0	
LOS		A			C			A			C	
Approach Delay		0.8			22.8			0.4			26.0	
Approach LOS		A			C			A			C	
Queue Length 50th (ft)		0			26			1			83	
Queue Length 95th (ft)		0			66			1			148	
Internal Link Dist (ft)		166			132			20			488	
Turn Bay Length (ft)												
Base Capacity (vph)		415			279			1305			461	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		14			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.16			0.39			0.14			0.56	

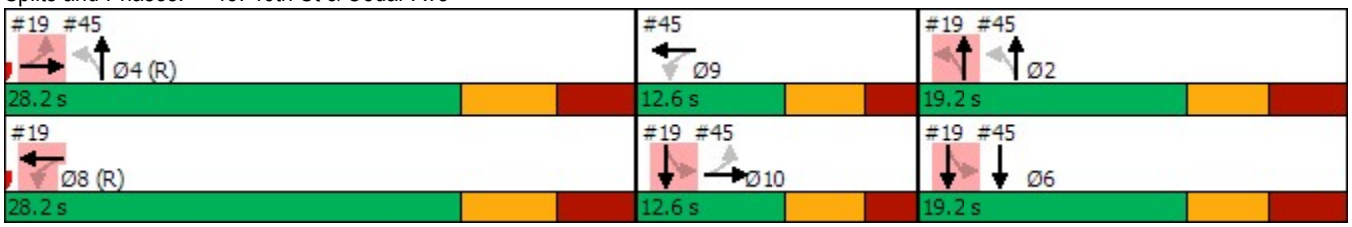
Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 60			
Offset: 58.8 (98%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green			
Control Type: Pretimed			
Maximum v/c Ratio: 0.56			
Intersection Signal Delay: 15.2		Intersection LOS: B	

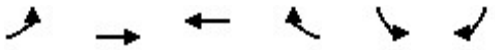
Lane Group	Ø2	Ø4	Ø8
Lane Configurations			
Traffic Volume (vph)			
Future Volume (vph)			
Ideal Flow (vphpl)			
Satd. Flow (prot)			
Flt Permitted			
Satd. Flow (perm)			
Right Turn on Red			
Satd. Flow (RTOR)			
Link Speed (mph)			
Link Distance (ft)			
Travel Time (s)			
Confl. Peds. (#/hr)			
Confl. Bikes (#/hr)			
Peak Hour Factor			
Shared Lane Traffic (%)			
Lane Group Flow (vph)			
Turn Type			
Protected Phases	2	4	8
Permitted Phases			
Total Split (s)	19.2	28.2	28.2
Total Lost Time (s)			
Act Effct Green (s)			
Actuated g/C Ratio			
v/c Ratio			
Control Delay			
Queue Delay			
Total Delay			
LOS			
Approach Delay			
Approach LOS			
Queue Length 50th (ft)			
Queue Length 95th (ft)			
Internal Link Dist (ft)			
Turn Bay Length (ft)			
Base Capacity (vph)			
Starvation Cap Reductn			
Spillback Cap Reductn			
Storage Cap Reductn			
Reduced v/c Ratio			

Intersection Summary

Intersection Capacity Utilization 44.5% ICU Level of Service A
Analysis Period (min) 15

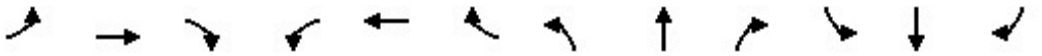
Splits and Phases: 45: 46th St & Cedar Ave





Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	229	231	168	0	0
Future Volume (vph)	0	229	231	168	0	0
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100
Satd. Flow (prot)	0	2039	1941	0	0	0
Flt Permitted						
Satd. Flow (perm)	0	2039	1941	0	0	0
Link Speed (mph)		25	25		25	
Link Distance (ft)		205	392		212	
Travel Time (s)		5.6	10.7		5.8	
Confl. Peds. (#/hr)				31		
Confl. Bikes (#/hr)				35		
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	2%	3%	2%	2%	2%	2%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	252	439	0	0	0
Sign Control		Free	Free		Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 24.8%		ICU Level of Service A	
Analysis Period (min) 15			

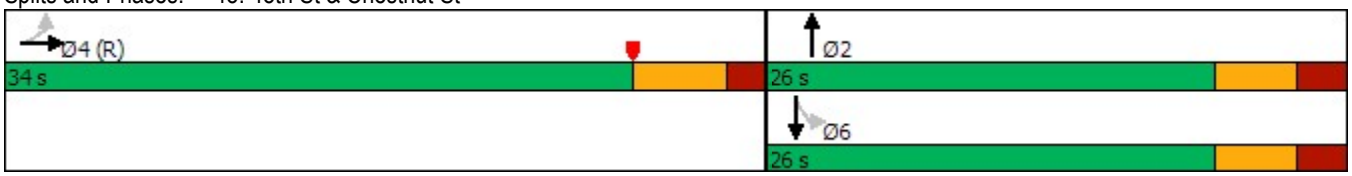


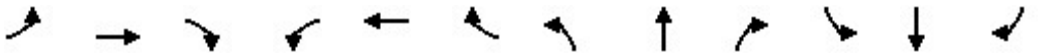
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	143	1156	39	0	0	0	0	285	55	43	293	0
Future Volume (vph)	143	1156	39	0	0	0	0	285	55	43	293	0
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100
Lane Width (ft)	12	10	12	12	10	12	12	14	12	12	14	12
Storage Length (ft)	100		0	0		0	0		0	0		0
Storage Lanes	1		0	0		0	0		0	0		0
Taper Length (ft)	40			25			25			25		
Satd. Flow (prot)	1956	3596	0	0	0	0	0	2059	0	0	2183	0
Flt Permitted	0.950										0.878	
Satd. Flow (perm)	1938	3596	0	0	0	0	0	2059	0	0	1926	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		8						18				
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		550			574			591			540	
Travel Time (s)		12.5			13.0			16.1			14.7	
Confl. Peds. (#/hr)	9		39	39		9	23		16	16		23
Confl. Bikes (#/hr)									1			
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
Heavy Vehicles (%)	2%	2%	3%	2%	2%	2%	2%	2%	16%	2%	2%	2%
Bus Blockages (#/hr)	0	4	0	0	0	0	0	4	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	159	1327	0	0	0	0	0	378	0	0	374	0
Turn Type	Perm	NA						NA		Perm	NA	
Protected Phases		4						2			6	
Permitted Phases	4									6		
Total Split (s)	34.0	34.0						26.0		26.0	26.0	
Total Lost Time (s)	4.5	4.5						4.5			4.5	
Act Effct Green (s)	29.5	29.5						21.5			21.5	
Actuated g/C Ratio	0.49	0.49						0.36			0.36	
v/c Ratio	0.17	0.75						0.50			0.54	
Control Delay	9.1	15.5						13.9			18.9	
Queue Delay	0.0	0.0						0.0			0.0	
Total Delay	9.1	15.5						13.9			18.9	
LOS	A	B						B			B	
Approach Delay		14.8						13.9			18.9	
Approach LOS		B						B			B	
Queue Length 50th (ft)	30	186						135			105	
Queue Length 95th (ft)	58	260						m172			178	
Internal Link Dist (ft)		470			494			511			460	
Turn Bay Length (ft)	100											
Base Capacity (vph)	952	1772						749			690	
Starvation Cap Reductn	0	0						0			0	
Spillback Cap Reductn	0	0						0			0	
Storage Cap Reductn	0	0						0			0	
Reduced v/c Ratio	0.17	0.75						0.50			0.54	

Intersection Summary	
Area Type:	Other

Cycle Length: 60
Actuated Cycle Length: 60
Offset: 52 (87%), Referenced to phase 4:EBTL, Start of Yellow
Control Type: Pretimed
Maximum v/c Ratio: 0.75
Intersection Signal Delay: 15.4 Intersection LOS: B
Intersection Capacity Utilization 74.9% ICU Level of Service D
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 48: 48th St & Chestnut St





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	31	1002	68	0	0	0	0	88	85	65	165	0
Future Volume (vph)	31	1002	68	0	0	0	0	88	85	65	165	0
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100
Lane Width (ft)	12	10	12	12	10	12	12	10	12	12	10	12
Satd. Flow (prot)	0	3424	0	0	0	0	0	1590	0	0	1705	0
Flt Permitted		0.999									0.860	
Satd. Flow (perm)	0	3423	0	0	0	0	0	1590	0	0	1481	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		17						77				
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		548			550			570			529	
Travel Time (s)		12.5			12.5			15.5			14.4	
Confl. Peds. (#/hr)	12		12	12		12	20		19	19		20
Confl. Bikes (#/hr)			14			2			2			1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	3%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	4	0	0	0	0	0	0	0	0	0
Parking (#/hr)		0						0			0	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1171	0	0	0	0	0	184	0	0	245	0
Turn Type	Perm	NA						NA		Perm	NA	
Protected Phases		4						2			6	
Permitted Phases	4									6		
Total Split (s)	40.0	40.0						24.0		24.0	24.0	
Total Lost Time (s)		4.5						4.5			4.5	
Act Effct Green (s)		35.5						19.5			19.5	
Actuated g/C Ratio		0.55						0.30			0.30	
v/c Ratio		0.61						0.34			0.54	
Control Delay		11.2						12.3			23.9	
Queue Delay		0.0						0.0			0.0	
Total Delay		11.2						12.3			23.9	
LOS		B						B			C	
Approach Delay		11.2						12.3			23.9	
Approach LOS		B						B			C	
Queue Length 50th (ft)		144						31			79	
Queue Length 95th (ft)		200						76			144	
Internal Link Dist (ft)		468			470			490			449	
Turn Bay Length (ft)												
Base Capacity (vph)		1906						537			451	
Starvation Cap Reductn		0						0			0	
Spillback Cap Reductn		0						0			0	
Storage Cap Reductn		0						0			0	
Reduced v/c Ratio		0.61						0.34			0.54	

Intersection Summary	
Area Type:	Other
Cycle Length: 64	
Actuated Cycle Length: 64	

Offset: 43 (67%), Referenced to phase 4:EBTL, Start of Yellow

Control Type: Pretimed	
Maximum v/c Ratio: 0.61	
Intersection Signal Delay: 13.3	Intersection LOS: B
Intersection Capacity Utilization 65.8%	ICU Level of Service C
Analysis Period (min) 15	

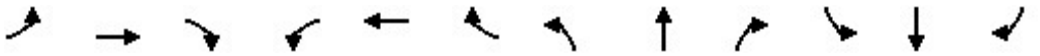
Splits and Phases: 49: 49th St & Chestnut St

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	11	80	31	84	109	1	31	320	63	12	390	12
Future Volume (vph)	11	80	31	84	109	1	31	320	63	12	390	12
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100
Lane Width (ft)	10	10	10	10	10	10	12	12	12	12	12	12
Storage Length (ft)	0		0	0		0	0		0	20		0
Storage Lanes	0		0	0		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	1647	0	0	1677	0	0	1744	0	1760	1794	0
Flt Permitted		0.968			0.817			0.949		0.453		
Satd. Flow (perm)	0	1601	0	0	1391	0	0	1661	0	839	1794	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		32						21			3	
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		475			483			581			517	
Travel Time (s)		13.0			13.2			15.8			14.1	
Confl. Peds. (#/hr)	4		13	13		4	12		2	2		12
Confl. Bikes (#/hr)			2			1			5			1
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
Heavy Vehicles (%)	2%	2%	2%	4%	2%	2%	2%	4%	2%	2%	3%	8%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	4	0	0	4	0
Parking (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	135	0	0	215	0	0	460	0	13	446	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Total Split (s)	26.4	26.4		26.4	26.4		33.6	33.6		33.6	33.6	
Total Lost Time (s)		4.5			4.5			4.5		4.5	4.5	
Act Effct Green (s)		21.9			21.9			29.1		29.1	29.1	
Actuated g/C Ratio		0.36			0.36			0.48		0.48	0.48	
v/c Ratio		0.22			0.42			0.56		0.03	0.51	
Control Delay		11.4			17.6			10.7		8.5	13.1	
Queue Delay		0.0			0.0			0.0		0.0	0.0	
Total Delay		11.4			17.6			10.7		8.5	13.1	
LOS		B			B			B		A	B	
Approach Delay		11.4			17.6			10.7			13.0	
Approach LOS		B			B			B			B	
Queue Length 50th (ft)		25			57			101		2	102	
Queue Length 95th (ft)		58			109			150		10	173	
Internal Link Dist (ft)		395			403			501			437	
Turn Bay Length (ft)										20		
Base Capacity (vph)		604			507			816		406	871	
Starvation Cap Reductn		0			0			0		0	0	
Spillback Cap Reductn		0			0			0		0	0	
Storage Cap Reductn		0			0			0		0	0	
Reduced v/c Ratio		0.22			0.42			0.56		0.03	0.51	

Intersection Summary

Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 60			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Control Type: Pretimed			
Maximum v/c Ratio: 0.56			
Intersection Signal Delay: 12.8		Intersection LOS: B	
Intersection Capacity Utilization 66.0%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 54: 49th St & Kingsessing Ave



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	16	279	5	110	147	15	24	133	112	116	155	17
Future Volume (vph)	16	279	5	110	147	15	24	133	112	116	155	17
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100
Lane Width (ft)	12	12	12	10	10	10	12	12	12	12	12	12
Satd. Flow (prot)	0	1988	0	0	1624	0	0	1546	0	0	1667	0
Flt Permitted		0.977			0.764			0.950			0.700	
Satd. Flow (perm)	0	1942	0	0	1251	0	0	1472	0	0	1176	0
Right Turn on Red			Yes			No			Yes			No
Satd. Flow (RTOR)		2						57				
Link Speed (mph)		25			25			30			25	
Link Distance (ft)		447			176			504			520	
Travel Time (s)		12.2			4.8			11.5			14.2	
Confl. Peds. (#/hr)	95		49	49		95	29		39	39		29
Confl. Bikes (#/hr)			2			3			1			1
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
Heavy Vehicles (%)	6%	5%	2%	13%	7%	2%	25%	5%	14%	2%	5%	18%
Bus Blockages (#/hr)	0	0	0	0	16	0	0	2	0	0	12	0
Parking (#/hr)							0	0	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	334	0	0	302	0	0	299	0	0	320	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Total Split (s)	40.0	40.0		40.0	40.0		30.0	30.0		30.0	30.0	
Total Lost Time (s)		4.5			4.5			4.5			4.5	
Act Effct Green (s)		35.5			35.5			25.5			25.5	
Actuated g/C Ratio		0.51			0.51			0.36			0.36	
v/c Ratio		0.34			0.48			0.52			0.75	
Control Delay		11.4			12.8			17.9			32.8	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		11.4			12.8			17.9			32.8	
LOS		B			B			B			C	
Approach Delay		11.4			12.8			17.9			32.8	
Approach LOS		B			B			B			C	
Queue Length 50th (ft)		79			68			78			118	
Queue Length 95th (ft)		131			m102			150			#242	
Internal Link Dist (ft)		367			96			424			440	
Turn Bay Length (ft)												
Base Capacity (vph)		985			634			572			428	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.34			0.48			0.52			0.75	

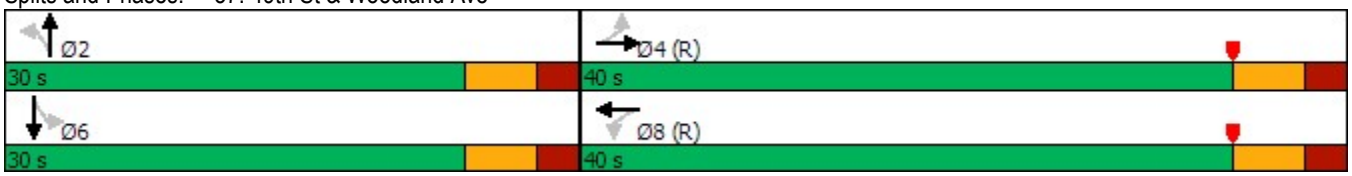
Intersection Summary	
Area Type:	Other
Cycle Length: 70	
Actuated Cycle Length: 70	

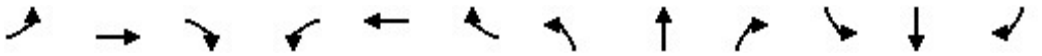
Offset: 51 (73%), Referenced to phase 4:EBTL and 8:WBTL, Start of Yellow

Control Type: Pretimed	
Maximum v/c Ratio: 0.75	
Intersection Signal Delay: 18.7	Intersection LOS: B
Intersection Capacity Utilization 72.5%	ICU Level of Service C
Analysis Period (min) 15	

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 57: 49th St & Woodland Ave



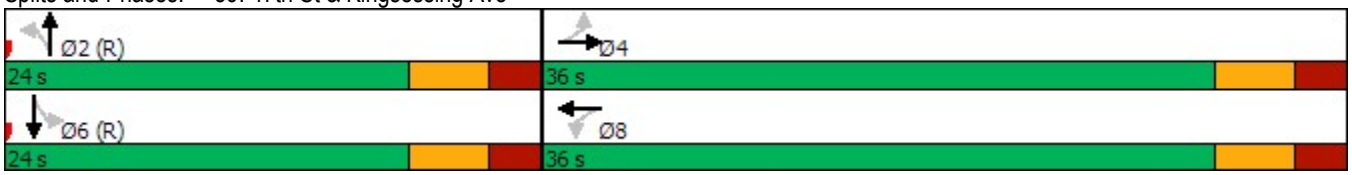


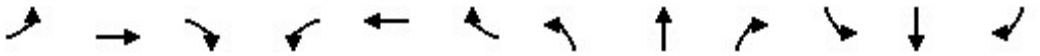
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	3	75	47	19	120	2	64	267	37	3	201	14
Future Volume (vph)	3	75	47	19	120	2	64	267	37	3	201	14
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100
Lane Width (ft)	10	10	10	10	10	10	13	13	13	13	13	13
Satd. Flow (prot)	0	1601	0	0	1713	0	0	1863	0	0	1886	0
Flt Permitted		0.996			0.961			0.904			0.994	
Satd. Flow (perm)	0	1596	0	0	1654	0	0	1689	0	0	1877	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		490			493			759			517	
Travel Time (s)		13.4			13.4			20.7			14.1	
Confl. Peds. (#/hr)	17		21	21		17	36		9	9		36
Confl. Bikes (#/hr)			5			2			7			2
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	2%	2%	4%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Parking (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	140	0	0	158	0	0	414	0	0	245	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Total Split (s)	36.0	36.0		36.0	36.0		24.0	24.0		24.0	24.0	
Total Lost Time (s)		4.5			4.5			4.5			4.5	
Act Effct Green (s)		31.5			31.5			19.5			19.5	
Actuated g/C Ratio		0.52			0.52			0.32			0.32	
v/c Ratio		0.17			0.18			0.76			0.40	
Control Delay		8.1			7.3			29.3			18.2	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		8.1			7.3			29.3			18.2	
LOS		A			A			C			B	
Approach Delay		8.1			7.3			29.3			18.2	
Approach LOS		A			A			C			B	
Queue Length 50th (ft)		24			32			132			68	
Queue Length 95th (ft)		48			60			#253			120	
Internal Link Dist (ft)		410			413			679			437	
Turn Bay Length (ft)												
Base Capacity (vph)		837			868			548			610	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.17			0.18			0.76			0.40	

Intersection Summary	
Area Type:	Other
Cycle Length: 60	
Actuated Cycle Length: 60	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	

Control Type: Pretimed
Maximum v/c Ratio: 0.76
Intersection Signal Delay: 19.7 Intersection LOS: B
Intersection Capacity Utilization 54.8% ICU Level of Service A
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

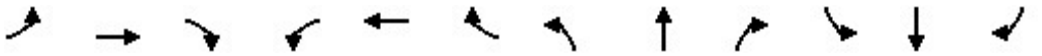
Splits and Phases: 59: 47th St & Kingsessing Ave





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	45	3	0	0	8	4	23	586	4	6	0	301
Future Volume (vph)	45	3	0	0	8	4	23	586	4	6	0	301
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100
Satd. Flow (prot)	0	1931	0	0	1972	0	0	2053	0	0	1780	0
Flt Permitted		0.955						0.998			0.999	
Satd. Flow (perm)	0	1931	0	0	1972	0	0	2053	0	0	1780	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		188			439			100			840	
Travel Time (s)		5.1			12.0			2.7			22.9	
Confl. Peds. (#/hr)	4					4			2	2		
Confl. Bikes (#/hr)			1						10			1
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
Heavy Vehicles (%)	4%	2%	2%	2%	2%	2%	2%	2%	2%	17%	2%	2%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	52	0	0	13	0	0	666	0	0	334	0
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 54.7%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	7	223	200	48	224	2	313	109	41	5	100	33
Future Volume (vph)	7	223	200	48	224	2	313	109	41	5	100	33
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100
Lane Width (ft)	15	15	15	13	13	13	12	12	12	12	12	12
Satd. Flow (prot)	0	1818	0	0	1767	0	0	1658	0	0	1827	0
Flt Permitted		0.994			0.882			0.734			0.982	
Satd. Flow (perm)	0	1809	0	0	1572	0	0	1258	0	0	1798	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		91			1			10			32	
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		439			789			362			504	
Travel Time (s)		12.0			21.5			8.2			11.5	
Confl. Peds. (#/hr)			4	4			1		2	2		1
Confl. Bikes (#/hr)			5			1			1			1
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
Heavy Vehicles (%)	14%	6%	3%	6%	7%	2%	5%	2%	15%	2%	6%	3%
Bus Blockages (#/hr)	0	2	0	0	6	0	0	8	0	0	12	0
Parking (#/hr)	0	0	0	0	0	0	0	0	0			
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	467	0	0	297	0	0	503	0	0	150	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Total Split (s)	30.0	30.0		30.0	30.0		30.0	30.0		30.0	30.0	
Total Lost Time (s)		4.5			4.5			5.1			5.1	
Act Effct Green (s)		25.5			25.5			24.9			24.9	
Actuated g/C Ratio		0.42			0.42			0.42			0.42	
v/c Ratio		0.57			0.44			0.95			0.20	
Control Delay		13.6			14.8			50.1			9.6	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		13.6			14.8			50.1			9.6	
LOS		B			B			D			A	
Approach Delay		13.6			14.8			50.1			9.6	
Approach LOS		B			B			D			A	
Queue Length 50th (ft)		95			72			165			26	
Queue Length 95th (ft)		176			130			#350			57	
Internal Link Dist (ft)		359			709			282			424	
Turn Bay Length (ft)												
Base Capacity (vph)		821			668			527			764	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.57			0.44			0.95			0.20	

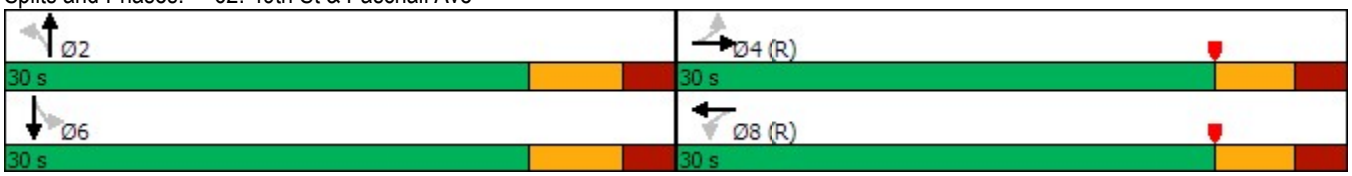
Intersection Summary	
Area Type:	Other
Cycle Length: 60	
Actuated Cycle Length: 60	

Offset: 51 (85%), Referenced to phase 4:EBTL and 8:WBTL, Start of Yellow

Control Type: Pretimed	
Maximum v/c Ratio: 0.95	
Intersection Signal Delay: 26.4	Intersection LOS: C
Intersection Capacity Utilization 85.0%	ICU Level of Service E
Analysis Period (min) 15	

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

Splits and Phases: 62: 49th St & Paschall Ave



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	9	668	15	334	484	3	6	44	293	242	59	7
Future Volume (vph)	9	668	15	334	484	3	6	44	293	242	59	7
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100
Lane Width (ft)	10	11	12	10	10	10	10	10	10	10	10	10
Storage Length (ft)	50		0	0		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	73			25			25			25		
Satd. Flow (prot)	1677	3768	0	1677	1919	0	0	1451	0	0	1658	0
Flt Permitted	0.477			0.259				0.992			0.398	
Satd. Flow (perm)	841	3768	0	457	1919	0	0	1441	0	0	686	0
Right Turn on Red			Yes			No			Yes			No
Satd. Flow (RTOR)		3						295				
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		424			289			789			188	
Travel Time (s)		11.6			7.9			21.5			5.1	
Confl. Peds. (#/hr)	2		2	2		2	4		1	1		4
Confl. Bikes (#/hr)			3			3			3			
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	11%	2%	2%	11%	2%	2%	17%	5%	3%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	6	0	0	0	0
Parking (#/hr)							0	0	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	9	712	0	348	507	0	0	357	0	0	320	0
Turn Type	Perm	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases		4		3	8			2			6	
Permitted Phases	4			8			2			6		
Total Split (s)	43.0	43.0		15.0	58.0		32.0	32.0		32.0	32.0	
Total Lost Time (s)	5.5	5.5		5.5	5.5			6.5			6.5	
Act Effct Green (s)	37.5	37.5		52.5	52.5			25.5			25.5	
Actuated g/C Ratio	0.42	0.42		0.58	0.58			0.28			0.28	
v/c Ratio	0.03	0.45		0.88	0.45			0.58			1.65	
Control Delay	15.9	19.9		37.4	12.3			10.0			340.5	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay	15.9	19.9		37.4	12.3			10.0			340.5	
LOS	B	B		D	B			A			F	
Approach Delay		19.9			22.5			10.0			340.5	
Approach LOS		B			C			A			F	
Queue Length 50th (ft)	3	148		96	151			26			~266	
Queue Length 95th (ft)	12	197		#220	224			108			#428	
Internal Link Dist (ft)		344			209			709			108	
Turn Bay Length (ft)	50											
Base Capacity (vph)	350	1571		395	1119			619			194	
Starvation Cap Reductn	0	0		0	0			0			0	
Spillback Cap Reductn	0	0		0	0			0			0	
Storage Cap Reductn	0	0		0	0			0			0	
Reduced v/c Ratio	0.03	0.45		0.88	0.45			0.58			1.65	

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:NETL and 6:SWTL, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.65
Intersection Signal Delay: 64.8 Intersection LOS: E
Intersection Capacity Utilization 89.9% ICU Level of Service E
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 66: Paschall Ave & Grays Ferry Ave

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	233	272	39	249	0	0
Future Volume (vph)	233	272	39	249	0	0
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100
Satd. Flow (prot)	1834	0	0	1927	0	0
Flt Permitted				0.993		
Satd. Flow (perm)	1834	0	0	1927	0	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	176			341	411	
Travel Time (s)	4.0			7.8	9.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	11%	2%	3%	9%	2%	2%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	549	0	0	313	0	0
Sign Control	Free			Free	Free	

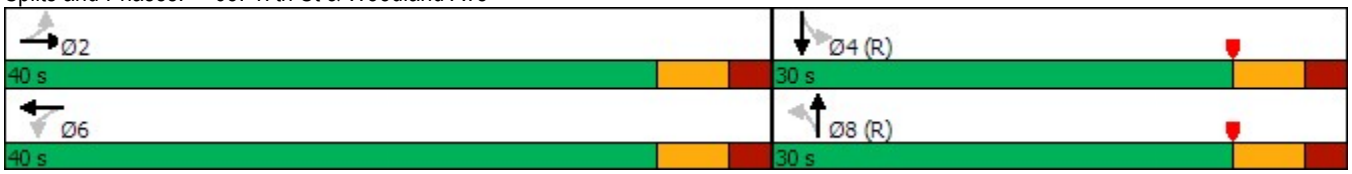
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	45.1%	ICU Level of Service	A
Analysis Period (min)	15		

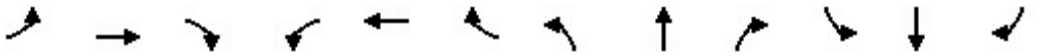
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	12	212	8	115	333	13	16	343	198	11	186	79
Future Volume (vph)	12	212	8	115	333	13	16	343	198	11	186	79
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100
Lane Width (ft)	10	10	10	10	10	10	15	15	15	15	15	15
Storage Length (ft)	0		0	0		0	20		0	20		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	1870	0	0	1885	0	2070	2101	0	2151	2137	0
Flt Permitted		0.971			0.853		0.489			0.157		
Satd. Flow (perm)	0	1821	0	0	1623	0	1054	2101	0	355	2137	0
Right Turn on Red			No			Yes			No			No
Satd. Flow (RTOR)					3							
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		524			499			840			759	
Travel Time (s)		14.3			13.6			22.9			20.7	
Confl. Peds. (#/hr)	9		15	15		9	13		1	1		13
Confl. Bikes (#/hr)			1			5			9			3
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
Heavy Vehicles (%)	2%	4%	2%	3%	2%	2%	6%	2%	4%	2%	2%	2%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	255	0	0	506	0	18	595	0	12	291	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Total Split (s)	40.0	40.0		40.0	40.0		30.0	30.0		30.0	30.0	
Total Lost Time (s)		4.5			4.5		4.5	4.5		4.5	4.5	
Act Effct Green (s)		35.5			35.5		25.5	25.5		25.5	25.5	
Actuated g/C Ratio		0.51			0.51		0.36	0.36		0.36	0.36	
v/c Ratio		0.28			0.61		0.05	0.78		0.09	0.37	
Control Delay		9.6			16.3		14.9	28.5		17.0	18.1	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		9.6			16.3		14.9	28.5		17.0	18.1	
LOS		A			B		B	C		B	B	
Approach Delay		9.6			16.3			28.1			18.1	
Approach LOS		A			B			C			B	
Queue Length 50th (ft)		74			145		5	222		3	90	
Queue Length 95th (ft)		m138			239		17	#378		15	150	
Internal Link Dist (ft)		444			419			760			679	
Turn Bay Length (ft)							20			20		
Base Capacity (vph)		923			824		383	765		129	778	
Starvation Cap Reductn		0			0		0	0		0	0	
Spillback Cap Reductn		0			0		0	0		0	0	
Storage Cap Reductn		0			0		0	0		0	0	
Reduced v/c Ratio		0.28			0.61		0.05	0.78		0.09	0.37	

Intersection Summary	
Area Type:	Other
Cycle Length: 70	

Actuated Cycle Length: 70
Offset: 21 (30%), Referenced to phase 4:SBTL and 8:NBTL, Start of Yellow
Control Type: Pretimed
Maximum v/c Ratio: 0.78
Intersection Signal Delay: 19.9 Intersection LOS: B
Intersection Capacity Utilization 72.1% ICU Level of Service C
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 68: 47th St & Woodland Ave





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	63	455	3	3	261	12	20	14	15	15	9	59
Future Volume (vph)	63	455	3	3	261	12	20	14	15	15	9	59
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100
Lane Width (ft)	12	10	12	12	10	12	12	12	12	12	12	12
Satd. Flow (prot)	0	1798	0	0	1804	0	0	1893	0	0	1784	0
Flt Permitted		0.928			0.996			0.878			0.951	
Satd. Flow (perm)	0	1675	0	0	1798	0	0	1680	0	0	1708	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		499			488			657			681	
Travel Time (s)		13.6			13.3			17.9			18.6	
Confl. Peds. (#/hr)	35		21	21		35	14		7	7		14
Confl. Bikes (#/hr)						1						1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	3%	9%	2%	2%	8%	2%	5%	2%	2%	2%	2%	2%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	560	0	0	297	0	0	53	0	0	89	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Total Split (s)	39.0	39.0		39.0	39.0		21.0	21.0		21.0	21.0	
Total Lost Time (s)		4.5			4.5			4.5			4.5	
Act Effct Green (s)		34.5			34.5			16.5			16.5	
Actuated g/C Ratio		0.58			0.58			0.28			0.28	
v/c Ratio		0.58			0.29			0.11			0.19	
Control Delay		11.2			7.4			17.2			30.1	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		11.2			7.4			17.2			30.1	
LOS		B			A			B			C	
Approach Delay		11.2			7.4			17.2			30.1	
Approach LOS		B			A			B			C	
Queue Length 50th (ft)		114			48			14			31	
Queue Length 95th (ft)		196			85			37			70	
Internal Link Dist (ft)		419			408			577			601	
Turn Bay Length (ft)												
Base Capacity (vph)		963			1033			462			469	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.58			0.29			0.11			0.19	

Intersection Summary	
Area Type:	Other
Cycle Length: 60	
Actuated Cycle Length: 60	
Offset: 30 (50%), Referenced to phase 4:EBTL and 8:WBTL, Start of Yellow	
Control Type: Pretimed	

Maximum v/c Ratio: 0.58

Intersection Signal Delay: 12.1	Intersection LOS: B
Intersection Capacity Utilization 78.8%	ICU Level of Service D
Analysis Period (min) 15	

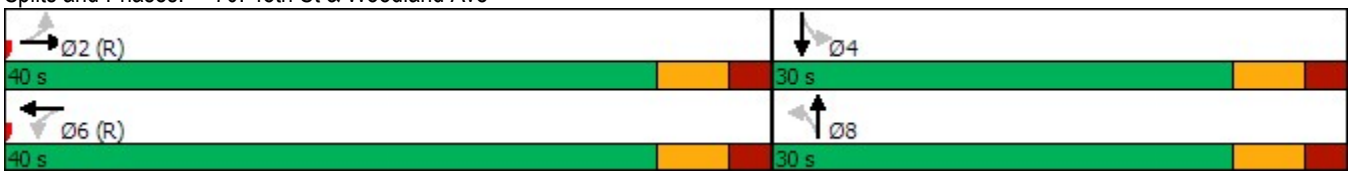
Splits and Phases: 69: 46th St & Woodland Ave

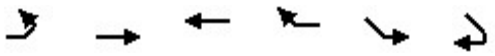
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	6	199	16	183	226	28	78	399	14	16	262	12
Future Volume (vph)	6	199	16	183	226	28	78	399	14	16	262	12
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100
Lane Width (ft)	10	10	10	10	10	10	15	15	15	15	15	15
Storage Length (ft)	0		0	0		0	20		0	0		0
Storage Lanes	0		0	0		0	1		0	0		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	1481	0	0	1539	0	1646	1803	0	0	1764	0
Flt Permitted		0.989			0.767		0.489				0.966	
Satd. Flow (perm)	0	1466	0	0	1200	0	843	1803	0	0	1709	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		8			7			3			4	
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		341			524			393			198	
Travel Time (s)		9.3			14.3			10.7			5.4	
Confl. Peds. (#/hr)	13		18	18		13	7		5	5		7
Confl. Bikes (#/hr)			1			5			2			2
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	2%	15%	2%	3%	11%	7%	8%	3%	7%	2%	5%	8%
Bus Blockages (#/hr)	0	8	0	0	8	0	0	0	0	0	0	0
Parking (#/hr)							0	0	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	235	0	0	465	0	83	439	0	0	309	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Total Split (s)	40.0	40.0		40.0	40.0		30.0	30.0		30.0	30.0	
Total Lost Time (s)		4.5			4.5		4.5	4.5			4.5	
Act Effct Green (s)		35.5			35.5		25.5	25.5			25.5	
Actuated g/C Ratio		0.51			0.51		0.36	0.36			0.36	
v/c Ratio		0.31			0.76		0.27	0.67			0.49	
Control Delay		9.8			30.4		18.7	24.6			20.4	
Queue Delay		0.0			0.0		0.0	0.0			0.0	
Total Delay		9.8			30.4		18.7	24.6			20.4	
LOS		A			C		B	C			C	
Approach Delay		9.8			30.4			23.6			20.4	
Approach LOS		A			C			C			C	
Queue Length 50th (ft)		36			213		25	154			99	
Queue Length 95th (ft)		m72			#328		57	250			169	
Internal Link Dist (ft)		261			444			313			118	
Turn Bay Length (ft)							20					
Base Capacity (vph)		747			612		307	658			625	
Starvation Cap Reductn		0			0		0	0			0	
Spillback Cap Reductn		0			0		0	0			0	
Storage Cap Reductn		0			0		0	0			0	
Reduced v/c Ratio		0.31			0.76		0.27	0.67			0.49	

Intersection Summary

Area Type: CBD
Cycle Length: 70
Actuated Cycle Length: 70
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Control Type: Pretimed
Maximum v/c Ratio: 0.76
Intersection Signal Delay: 22.9 Intersection LOS: C
Intersection Capacity Utilization 83.3% ICU Level of Service E
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 70: 48th St & Woodland Ave





Lane Group	EBL	EBT	WBT	WBR	SEL	SER
Lane Configurations						
Traffic Volume (vph)	0	311	0	497	461	0
Future Volume (vph)	0	311	0	497	461	0
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100
Lane Width (ft)	12	16	12	12	12	12
Satd. Flow (prot)	0	2333	0	1781	1956	0
Flt Permitted					0.950	
Satd. Flow (perm)	0	2333	0	1781	1956	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		411	424		393	
Travel Time (s)		9.3	9.6		8.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	338	0	540	501	0
Sign Control		Stop	Free		Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	49.3%	ICU Level of Service	A
Analysis Period (min)	15		

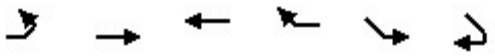
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	131	8	6	270	180	11	183	4	148	310	20
Future Volume (vph)	10	131	8	6	270	180	11	183	4	148	310	20
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100
Satd. Flow (prot)	0	1830	0	0	1817	0	0	1935	0	0	1889	0
Flt Permitted		0.964			0.997			0.971			0.838	
Satd. Flow (perm)	0	1768	0	0	1813	0	0	1884	0	0	1604	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5			62			2			5	
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		441			364			520			581	
Travel Time (s)		12.0			9.9			14.2			15.8	
Confl. Peds. (#/hr)	17		23	23		17	12		8	8		12
Confl. Bikes (#/hr)			1			9			1			10
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	10%	8%	38%	17%	7%	7%	9%	6%	2%	7%	7%	5%
Bus Blockages (#/hr)	0	8	0	0	0	0	0	4	0	0	4	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	154	0	0	475	0	0	206	0	0	498	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Total Split (s)	27.0	27.0		27.0	27.0		33.0	33.0		33.0	33.0	
Total Lost Time (s)		4.9			4.9			4.5			4.5	
Act Effct Green (s)		22.1			22.1			28.5			28.5	
Actuated g/C Ratio		0.37			0.37			0.48			0.48	
v/c Ratio		0.24			0.67			0.23			0.65	
Control Delay		13.9			19.4			10.1			13.1	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		13.9			19.4			10.1			13.1	
LOS		B			B			B			B	
Approach Delay		13.9			19.4			10.1			13.1	
Approach LOS		B			B			B			B	
Queue Length 50th (ft)		36			120			41			82	
Queue Length 95th (ft)		73			214			76			157	
Internal Link Dist (ft)		361			284			440			501	
Turn Bay Length (ft)												
Base Capacity (vph)		654			706			895			764	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.24			0.67			0.23			0.65	

Intersection Summary	
Area Type:	Other
Cycle Length: 60	
Actuated Cycle Length: 60	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Control Type: Pretimed	

Maximum v/c Ratio: 0.67

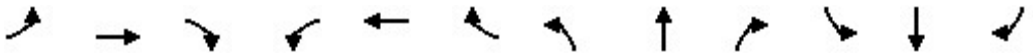
Intersection Signal Delay: 14.9	Intersection LOS: B
Intersection Capacity Utilization 82.4%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 74: 49th St & Greenway Ave



Lane Group	EBL	EBT	WBT	WBR	SEL	SER
Lane Configurations						
Traffic Volume (vph)	0	1203	821	613	0	0
Future Volume (vph)	0	1203	821	613	0	0
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100
Storage Length (ft)	0			76	0	0
Storage Lanes	0			1	0	0
Taper Length (ft)	25				25	
Satd. Flow (prot)	0	3912	3912	1750	0	0
Flt Permitted						
Satd. Flow (perm)	0	3912	3912	1750	0	0
Link Speed (mph)		30	35		30	
Link Distance (ft)		289	1512		114	
Travel Time (s)		6.6	29.5		2.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1308	892	666	0	0
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 37.7%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	91	886	13	58	119	0	0	40	18
Future Volume (vph)	0	0	0	91	886	13	58	119	0	0	40	18
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100
Lane Width (ft)	12	10	12	12	10	12	12	10	12	12	10	12
Grade (%)		0%			3%			0%			0%	
Satd. Flow (prot)	0	0	0	0	3479	0	0	1861	0	0	1805	0
Flt Permitted					0.995			0.873				
Satd. Flow (perm)	0	0	0	0	3471	0	0	1635	0	0	1805	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					4						21	
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		574			272			413			576	
Travel Time (s)		13.0			6.2			11.3			15.7	
Confl. Peds. (#/hr)	10		31	31		10	29		29	29		29
Confl. Bikes (#/hr)						2			2			1
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles (%)	2%	2%	2%	3%	3%	2%	7%	2%	2%	2%	3%	2%
Bus Blockages (#/hr)	0	0	0	0	8	0	0	0	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	1178	0	0	211	0	0	69	0
Turn Type				Perm	NA		Perm	NA			NA	
Protected Phases					4			2			6	
Permitted Phases				4			2					
Total Split (s)				40.0	40.0		20.0	20.0			20.0	
Total Lost Time (s)					4.5			4.5			4.5	
Act Effct Green (s)					35.5			15.5			15.5	
Actuated g/C Ratio					0.59			0.26			0.26	
v/c Ratio					0.57			0.50			0.14	
Control Delay					8.9			23.8			10.1	
Queue Delay					3.6			0.0			0.0	
Total Delay					12.5			23.8			10.1	
LOS					B			C			B	
Approach Delay					12.5			23.8			10.1	
Approach LOS					B			C			B	
Queue Length 50th (ft)					120			65			20	
Queue Length 95th (ft)					150			112			m28	
Internal Link Dist (ft)		494			192			333			496	
Turn Bay Length (ft)												
Base Capacity (vph)					2055			422			481	
Starvation Cap Reductn					763			0			0	
Spillback Cap Reductn					0			0			0	
Storage Cap Reductn					0			0			0	
Reduced v/c Ratio					0.91			0.50			0.14	

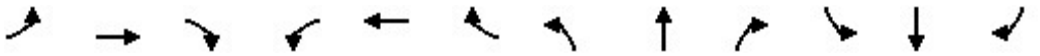
Intersection Summary	
Area Type:	Other
Cycle Length: 60	
Actuated Cycle Length: 60	

Offset: 10 (17%), Referenced to phase 4:WBTL, Start of Yellow

Control Type: Pretimed	
Maximum v/c Ratio: 0.57	
Intersection Signal Delay: 14.0	Intersection LOS: B
Intersection Capacity Utilization 51.1%	ICU Level of Service A
Analysis Period (min) 15	

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 88: 47th St & Walnut St

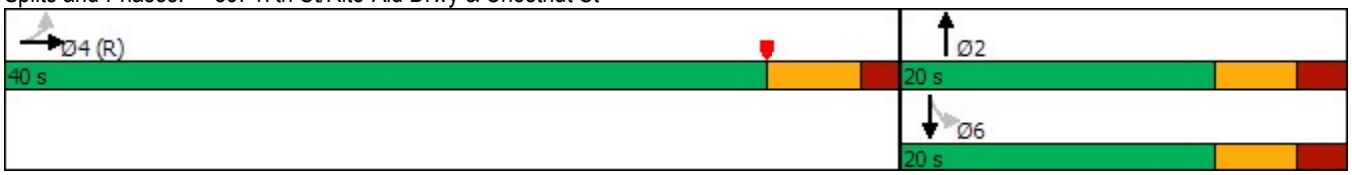


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1030	67	0	0	0	0	0	125	0	0	0
Future Volume (vph)	0	1030	67	0	0	0	0	0	125	0	0	0
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100
Lane Width (ft)	12	10	12	12	10	12	12	10	12	12	12	12
Satd. Flow (prot)	0	3372	0	0	0	0	0	1274	0	0	2059	0
Flt Permitted												
Satd. Flow (perm)	0	3372	0	0	0	0	0	1274	0	0	2059	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		19						80				
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		574			259			576			194	
Travel Time (s)		13.0			5.9			15.7			5.3	
Confl. Peds. (#/hr)	18		15	15		18	11		17	17		11
Confl. Bikes (#/hr)			15			1						
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
Heavy Vehicles (%)	2%	2%	3%	2%	2%	2%	2%	2%	16%	2%	2%	2%
Bus Blockages (#/hr)	0	8	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)		0						0				
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1206	0	0	0	0	0	137	0	0	0	0
Turn Type		NA						NA				
Protected Phases		4						2			6	
Permitted Phases	4									6		
Total Split (s)	40.0	40.0						20.0		20.0	20.0	
Total Lost Time (s)		4.5						4.5			4.5	
Act Effct Green (s)		35.5						15.5				
Actuated g/C Ratio		0.59						0.26				
v/c Ratio		0.60						0.35				
Control Delay		3.5						21.4				
Queue Delay		0.0						0.0				
Total Delay		3.5						21.4				
LOS		A						C				
Approach Delay		3.5						21.4				
Approach LOS		A						C				
Queue Length 50th (ft)		12						25				
Queue Length 95th (ft)		17						m68				
Internal Link Dist (ft)		494			179			496			114	
Turn Bay Length (ft)												
Base Capacity (vph)		2002						388				
Starvation Cap Reductn		0						0				
Spillback Cap Reductn		0						0				
Storage Cap Reductn		0						0				
Reduced v/c Ratio		0.60						0.35				

Intersection Summary	
Area Type:	Other
Cycle Length: 60	
Actuated Cycle Length: 60	

Offset: 13 (22%), Referenced to phase 4:EBTL, Start of Yellow
Control Type: Pretimed
Maximum v/c Ratio: 0.60
Intersection Signal Delay: 5.3 Intersection LOS: A
Intersection Capacity Utilization 47.5% ICU Level of Service A
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 89: 47th St/Rite-Aid Drwy & Chestnut St

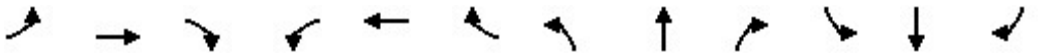


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	143	200	22	6	141	13	36	178	38	17	271	28
Future Volume (vph)	143	200	22	6	141	13	36	178	38	17	271	28
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100
Lane Width (ft)	12	10	12	12	10	12	12	12	12	12	10	12
Satd. Flow (prot)	0	1821	0	0	1825	0	0	1950	0	0	1843	0
Flt Permitted		0.802			0.984			0.881			0.973	
Satd. Flow (perm)	0	1479	0	0	1799	0	0	1722	0	0	1795	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		589			603			803			807	
Travel Time (s)		16.1			16.4			21.9			22.0	
Confl. Peds. (#/hr)	24		22	22		24	41		31	31		41
Confl. Bikes (#/hr)			11			1			5			2
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
Heavy Vehicles (%)	4%	2%	2%	17%	3%	8%	2%	4%	3%	2%	3%	14%
Bus Blockages (#/hr)	0	4	0	0	4	0	0	0	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	405	0	0	178	0	0	280	0	0	351	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Total Split (s)	37.8	37.8		37.8	37.8		22.2	22.2		22.2	22.2	
Total Lost Time (s)		5.1			5.1			5.1			5.1	
Act Effct Green (s)		32.7			32.7			17.1			17.1	
Actuated g/C Ratio		0.54			0.54			0.28			0.28	
v/c Ratio		0.50			0.18			0.57			0.69	
Control Delay		9.8			8.4			23.8			27.6	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		9.8			8.4			23.8			27.6	
LOS		A			A			C			C	
Approach Delay		9.8			8.4			23.8			27.6	
Approach LOS		A			A			C			C	
Queue Length 50th (ft)		64			21			86			112	
Queue Length 95th (ft)		84			62			153			#214	
Internal Link Dist (ft)		509			523			723			727	
Turn Bay Length (ft)												
Base Capacity (vph)		806			980			490			511	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.50			0.18			0.57			0.69	

Intersection Summary	
Area Type:	Other
Cycle Length: 60	
Actuated Cycle Length: 60	
Offset: 47.4 (79%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green	

Control Type: Pretimed
Maximum v/c Ratio: 0.69
Intersection Signal Delay: 18.0 Intersection LOS: B
Intersection Capacity Utilization 87.5% ICU Level of Service E
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

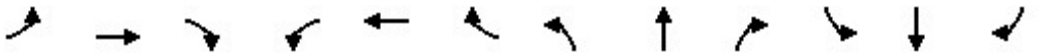
Splits and Phases: 92: 47th St & Baltimore Ave



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	58	146	11	3	21	3	7	85	9	9	65	108
Future Volume (veh/h)	58	146	11	3	21	3	7	85	9	9	65	108
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.98		0.96	0.99		0.96	0.99		0.98	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	2018	2067	2067	2067	2018	2067	2067	2067	1920	2067	2067	2067
Adj Flow Rate, veh/h	65	164	12	3	24	3	8	96	10	10	73	121
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	5	2	2	2	5	2	2	2	11	2	2	2
Cap, veh/h	287	706	48	118	847	100	81	574	57	74	226	346
Arrive On Green	0.52	0.52	0.52	0.52	0.52	0.52	0.32	0.32	0.32	0.32	0.32	0.32
Sat Flow, veh/h	402	1345	92	99	1614	190	51	1766	175	35	696	1065
Grp Volume(v), veh/h	241	0	0	30	0	0	114	0	0	204	0	0
Grp Sat Flow(s),veh/h/ln	1838	0	0	1903	0	0	1992	0	0	1796	0	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	3.8	0.0	0.0	0.4	0.0	0.0	2.4	0.0	0.0	5.1	0.0	0.0
Prop In Lane	0.27		0.05	0.10		0.10	0.07		0.09	0.05		0.59
Lane Grp Cap(c), veh/h	1041	0	0	1065	0	0	712	0	0	647	0	0
V/C Ratio(X)	0.23	0.00	0.00	0.03	0.00	0.00	0.16	0.00	0.00	0.32	0.00	0.00
Avail Cap(c_a), veh/h	1041	0	0	1065	0	0	712	0	0	647	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	7.7	0.0	0.0	6.9	0.0	0.0	14.5	0.0	0.0	15.4	0.0	0.0
Incr Delay (d2), s/veh	0.5	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	1.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.8	0.0	0.0	0.3	0.0	0.0	2.0	0.0	0.0	4.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	8.2	0.0	0.0	6.9	0.0	0.0	15.0	0.0	0.0	16.7	0.0	0.0
LnGrp LOS	A	A	A	A	A	A	B	A	A	B	A	A
Approach Vol, veh/h		241			30			114			204	
Approach Delay, s/veh		8.2			6.9			15.0			16.7	
Approach LOS		A			A			B			B	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		24.0		36.0		24.0		36.0				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		18.0		30.0		18.0		30.0				
Max Q Clear Time (g_c+I1), s		0.0		0.0		0.0		0.0				
Green Ext Time (p_c), s		0.0		0.0		0.0		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			12.4									
HCM 6th LOS			B									



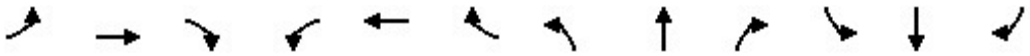
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	64	647	51	28	285	0	0	231	111
Future Volume (veh/h)	0	0	0	64	647	51	28	285	0	0	231	111
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		0.97	0.99		1.00	1.00		0.99
Parking Bus, Adj				0.90	1.00	0.90	1.00	1.00	1.00	1.00	1.00	0.90
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1697	1960	1976	1979	1995	0	0	1992	1927
Adj Flow Rate, veh/h				74	752	59	33	331	0	0	269	129
Peak Hour Factor				0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %				21	5	4	7	6	0	0	3	7
Cap, veh/h				141	1496	123	88	512	0	0	389	187
Arrive On Green				0.17	0.17	0.17	0.34	0.34	0.00	0.00	0.34	0.34
Sat Flow, veh/h				277	2942	242	67	1497	0	0	1140	546
Grp Volume(v), veh/h				468	0	417	364	0	0	0	0	398
Grp Sat Flow(s),veh/h/ln				1750	0	1711	1564	0	0	0	0	1686
Q Serve(g_s), s				14.7	0.0	13.2	1.2	0.0	0.0	0.0	0.0	12.2
Cycle Q Clear(g_c), s				14.7	0.0	13.2	13.5	0.0	0.0	0.0	0.0	12.2
Prop In Lane				0.16		0.14	0.09		0.00	0.00		0.32
Lane Grp Cap(c), veh/h				889	0	870	600	0	0	0	0	576
V/C Ratio(X)				0.53	0.00	0.48	0.61	0.00	0.00	0.00	0.00	0.69
Avail Cap(c_a), veh/h				889	0	870	600	0	0	0	0	576
HCM Platoon Ratio				0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh				18.4	0.0	17.8	16.1	0.0	0.0	0.0	0.0	17.0
Incr Delay (d2), s/veh				2.2	0.0	1.9	4.5	0.0	0.0	0.0	0.0	6.7
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln				11.6	0.0	10.4	7.9	0.0	0.0	0.0	0.0	9.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				20.6	0.0	19.7	20.7	0.0	0.0	0.0	0.0	23.7
LnGrp LOS				C	A	B	C	A	A	A	A	C
Approach Vol, veh/h					885			364			398	
Approach Delay, s/veh					20.2			20.7			23.7	
Approach LOS					C			C			C	

Timer - Assigned Phs	2	4	6
Phs Duration (G+Y+Rc), s	25.0	35.0	25.0
Change Period (Y+Rc), s	6.0	* 6	6.0
Max Green Setting (Gmax), s	19.0	* 29	19.0
Max Q Clear Time (g_c+I1), s	0.0	0.0	0.0
Green Ext Time (p_c), s	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	21.1
HCM 6th LOS	C

Notes

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



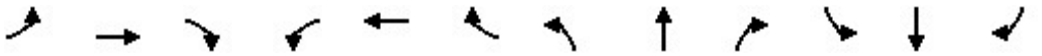
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	96	685	27	52	105	0	0	114	25
Future Volume (veh/h)	0	0	0	96	685	27	52	105	0	0	114	25
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		0.98	0.96		1.00	1.00		0.94
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				2002	2034	2067	2034	2034	0	0	2067	2067
Adj Flow Rate, veh/h				107	761	30	58	117	0	0	127	28
Peak Hour Factor				0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %				6	4	2	4	4	0	0	2	2
Cap, veh/h				271	2024	83	185	342	0	0	419	92
Arrive On Green				0.59	0.59	0.59	0.26	0.26	0.00	0.00	0.26	0.26
Sat Flow, veh/h				457	3420	141	406	1325	0	0	1621	357
Grp Volume(v), veh/h				471	0	427	175	0	0	0	0	155
Grp Sat Flow(s),veh/h/ln				2012	0	2007	1731	0	0	0	0	1978
Q Serve(g_s), s				7.5	0.0	6.6	0.4	0.0	0.0	0.0	0.0	3.8
Cycle Q Clear(g_c), s				7.5	0.0	6.6	4.3	0.0	0.0	0.0	0.0	3.8
Prop In Lane				0.23		0.07	0.33		0.00	0.00		0.18
Lane Grp Cap(c), veh/h				1190	0	1187	527	0	0	0	0	511
V/C Ratio(X)				0.40	0.00	0.36	0.33	0.00	0.00	0.00	0.00	0.30
Avail Cap(c_a), veh/h				1190	0	1187	527	0	0	0	0	511
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh				6.5	0.0	6.4	18.1	0.0	0.0	0.0	0.0	17.9
Incr Delay (d2), s/veh				1.0	0.0	0.8	1.7	0.0	0.0	0.0	0.0	1.5
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln				4.9	0.0	4.3	3.8	0.0	0.0	0.0	0.0	3.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				7.5	0.0	7.2	19.7	0.0	0.0	0.0	0.0	19.4
LnGrp LOS				A	A	A	B	A	A	A	A	B
Approach Vol, veh/h					898			175			155	
Approach Delay, s/veh					7.4			19.7			19.4	
Approach LOS					A			B			B	

Timer - Assigned Phs	2	4	6
Phs Duration (G+Y+Rc), s	20.0	40.0	20.0
Change Period (Y+Rc), s	6.0	* 6	6.0
Max Green Setting (Gmax), s	14.0	* 34	14.0
Max Q Clear Time (g_c+I1), s	0.0	0.0	0.0
Green Ext Time (p_c), s	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	10.7
HCM 6th LOS	B

Notes

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



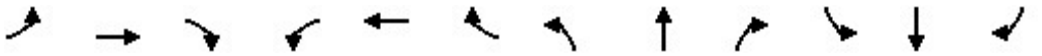
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	164	1183	53	0	0	0	0	299	55	51	279	0
Future Volume (veh/h)	164	1183	53	0	0	0	0	299	55	51	279	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.93				1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	2067	2067	2067				0	2150	1854	2067	2150	0
Adj Flow Rate, veh/h	180	1300	58				0	329	60	56	307	0
Peak Hour Factor	0.91	0.91	0.91				0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2				0	2	15	2	2	0
Cap, veh/h	968	1876	84				0	633	115	129	572	0
Arrive On Green	0.49	0.49	0.49				0.00	0.36	0.36	0.36	0.36	0.00
Sat Flow, veh/h	1969	3816	170				0	1767	322	168	1597	0
Grp Volume(v), veh/h	180	668	690				0	0	389	363	0	0
Grp Sat Flow(s),veh/h/ln	1969	1964	2023				0	0	2089	1765	0	0
Q Serve(g_s), s	3.1	15.7	15.8				0.0	0.0	8.8	1.8	0.0	0.0
Cycle Q Clear(g_c), s	3.1	15.7	15.8				0.0	0.0	8.8	10.6	0.0	0.0
Prop In Lane	1.00		0.08				0.00		0.15	0.15		0.00
Lane Grp Cap(c), veh/h	968	966	994				0	0	749	702	0	0
V/C Ratio(X)	0.19	0.69	0.69				0.00	0.00	0.52	0.52	0.00	0.00
Avail Cap(c_a), veh/h	968	966	994				0	0	749	702	0	0
HCM Platoon Ratio	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				0.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	8.5	11.7	11.8				0.0	0.0	15.2	15.1	0.0	0.0
Incr Delay (d2), s/veh	0.4	4.1	4.0				0.0	0.0	2.6	2.7	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.2	11.0	11.3				0.0	0.0	7.8	7.3	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	9.0	15.8	15.8				0.0	0.0	17.7	17.8	0.0	0.0
LnGrp LOS	A	B	B				A	A	B	B	A	A
Approach Vol, veh/h		1538						389			363	
Approach Delay, s/veh		15.0						17.7			17.8	
Approach LOS		B						B			B	

Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		26.0		34.0		26.0						
Change Period (Y+Rc), s		6.0		* 6		6.0						
Max Green Setting (Gmax), s		20.0		* 28		20.0						
Max Q Clear Time (g_c+I1), s		0.0		0.0		0.0						
Green Ext Time (p_c), s		0.0		0.0		0.0						

Intersection Summary												
HCM 6th Ctrl Delay			15.9									
HCM 6th LOS			B									

Notes

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



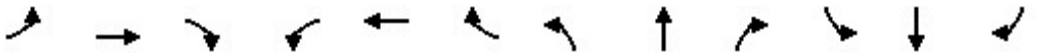
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	26	1248	97	0	0	0	0	75	91	77	134	0
Future Volume (veh/h)	26	1248	97	0	0	0	0	75	91	77	134	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96				1.00		0.98	0.99		1.00
Parking Bus, Adj	1.00	1.00	0.98				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	2067	2067	2067				0	2051	2067	2067	2051	0
Adj Flow Rate, veh/h	27	1314	102				0	79	96	81	141	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2				0	3	2	2	3	0
Cap, veh/h	40	2030	165				0	254	308	214	349	0
Arrive On Green	0.55	0.55	0.55				0.00	0.30	0.30	0.30	0.30	0.00
Sat Flow, veh/h	72	3659	298				0	832	1012	451	1147	0
Grp Volume(v), veh/h	770	0	673				0	0	175	222	0	0
Grp Sat Flow(s),veh/h/ln	2064	0	1966				0	0	1844	1598	0	0
Q Serve(g_s), s	17.0	0.0	14.8				0.0	0.0	4.7	2.8	0.0	0.0
Cycle Q Clear(g_c), s	17.0	0.0	14.8				0.0	0.0	4.7	7.4	0.0	0.0
Prop In Lane	0.04		0.15				0.00		0.55	0.36		0.00
Lane Grp Cap(c), veh/h	1145	0	1090				0	0	562	564	0	0
V/C Ratio(X)	0.67	0.00	0.62				0.00	0.00	0.31	0.39	0.00	0.00
Avail Cap(c_a), veh/h	1145	0	1090				0	0	562	564	0	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	10.1	0.0	9.6				0.0	0.0	17.1	17.8	0.0	0.0
Incr Delay (d2), s/veh	3.2	0.0	2.6				0.0	0.0	1.4	2.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	11.6	0.0	9.9				0.0	0.0	3.8	5.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.3	0.0	12.3				0.0	0.0	18.5	19.9	0.0	0.0
LnGrp LOS	B	A	B				A	A	B	B	A	A
Approach Vol, veh/h		1443						175			222	
Approach Delay, s/veh		12.8						18.5			19.9	
Approach LOS		B						B			B	

Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		24.0		40.0		24.0						
Change Period (Y+Rc), s		6.0		* 6		6.0						
Max Green Setting (Gmax), s		18.0		* 34		18.0						
Max Q Clear Time (g_c+I1), s		0.0		0.0		0.0						
Green Ext Time (p_c), s		0.0		0.0		0.0						

Intersection Summary												
HCM 6th Ctrl Delay			14.2									
HCM 6th LOS			B									

Notes

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



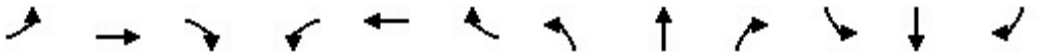
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	16	167	31	52	48	3	17	283	82	7	418	9
Future Volume (veh/h)	16	167	31	52	48	3	17	283	82	7	418	9
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.96	0.99		0.96	0.99		0.96	0.99		0.96
Parking Bus, Adj	1.00	1.00	0.90	1.00	1.00	0.90	1.00	1.00	0.90	1.00	1.00	0.90
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	2002	2067	2051	2034	2034	2067	2002	1953	2018	2067	2034	2067
Adj Flow Rate, veh/h	17	180	33	56	52	3	18	304	88	8	449	10
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	6	2	3	4	4	2	6	9	5	2	4	2
Cap, veh/h	86	532	93	323	274	14	77	610	171	611	864	19
Arrive On Green	0.36	0.36	0.36	0.36	0.36	0.36	0.97	0.97	0.97	0.48	0.48	0.48
Sat Flow, veh/h	59	1458	254	638	751	39	30	1258	352	983	1782	40
Grp Volume(v), veh/h	230	0	0	111	0	0	410	0	0	8	0	459
Grp Sat Flow(s),veh/h/ln	1771	0	0	1428	0	0	1641	0	0	983	0	1822
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.4
Cycle Q Clear(g_c), s	5.6	0.0	0.0	2.5	0.0	0.0	0.9	0.0	0.0	0.1	0.0	10.4
Prop In Lane	0.07		0.14	0.50		0.03	0.04		0.21	1.00		0.02
Lane Grp Cap(c), veh/h	711	0	0	612	0	0	858	0	0	611	0	884
V/C Ratio(X)	0.32	0.00	0.00	0.18	0.00	0.00	0.48	0.00	0.00	0.01	0.00	0.52
Avail Cap(c_a), veh/h	711	0	0	612	0	0	858	0	0	611	0	884
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	13.9	0.0	0.0	12.9	0.0	0.0	0.5	0.0	0.0	8.0	0.0	10.6
Incr Delay (d2), s/veh	1.2	0.0	0.0	0.7	0.0	0.0	1.9	0.0	0.0	0.0	0.0	2.2
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(95%),veh/ln	4.2	0.0	0.0	1.9	0.0	0.0	1.1	0.0	0.0	0.1	0.0	7.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	15.1	0.0	0.0	13.5	0.0	0.0	2.4	0.0	0.0	8.0	0.0	12.8
LnGrp LOS	B	A	A	B	A	A	A	A	A	A	A	B
Approach Vol, veh/h		230			111			410			467	
Approach Delay, s/veh		15.1			13.5			2.4			12.7	
Approach LOS		B			B			A			B	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	33.6	26.4	33.6	26.4
Change Period (Y+Rc), s	* 6	6.0	* 6	6.0
Max Green Setting (Gmax), s	* 28	20.4	* 28	20.4
Max Q Clear Time (g_c+I1), s	0.0	0.0	2.1	0.0
Green Ext Time (p_c), s	0.0	0.0	0.1	0.0

Intersection Summary	
HCM 6th Ctrl Delay	9.8
HCM 6th LOS	A

Notes

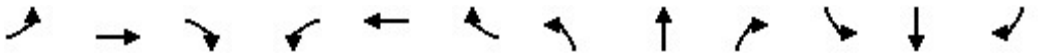
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



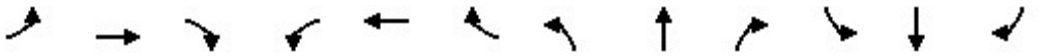
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	258	6	46	123	6	17	141	190	127	108	9
Future Volume (veh/h)	8	258	6	46	123	6	17	141	190	127	108	9
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.97		0.94	0.98		0.94	0.96		0.90	0.97		0.90
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	0.98	1.00	1.00	0.90	1.00	1.00	0.89
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	2067	2002	2067	1707	1953	2067	1625	1887	1953	2018	1985	1559
Adj Flow Rate, veh/h	9	277	6	49	132	6	18	152	204	137	116	10
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	6	2	24	9	2	29	13	9	5	7	33
Cap, veh/h	63	972	21	236	606	26	67	233	295	239	180	13
Arrive On Green	0.51	0.51	0.51	0.51	0.51	0.51	0.36	0.36	0.36	0.36	0.36	0.36
Sat Flow, veh/h	20	1916	41	336	1195	51	35	640	810	442	495	37
Grp Volume(v), veh/h	292	0	0	187	0	0	374	0	0	263	0	0
Grp Sat Flow(s),veh/h/ln	1977	0	0	1583	0	0	1485	0	0	974	0	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.9	0.0	0.0
Cycle Q Clear(g_c), s	5.9	0.0	0.0	3.8	0.0	0.0	15.0	0.0	0.0	18.0	0.0	0.0
Prop In Lane	0.03		0.02	0.26		0.03	0.05		0.55	0.52		0.04
Lane Grp Cap(c), veh/h	1056	0	0	868	0	0	595	0	0	433	0	0
V/C Ratio(X)	0.28	0.00	0.00	0.22	0.00	0.00	0.63	0.00	0.00	0.61	0.00	0.00
Avail Cap(c_a), veh/h	1056	0	0	868	0	0	595	0	0	433	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	10.0	0.0	0.0	9.4	0.0	0.0	19.0	0.0	0.0	19.5	0.0	0.0
Incr Delay (d2), s/veh	0.7	0.0	0.0	0.6	0.0	0.0	5.0	0.0	0.0	6.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	4.6	0.0	0.0	2.8	0.0	0.0	9.5	0.0	0.0	7.8	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	10.6	0.0	0.0	10.0	0.0	0.0	24.0	0.0	0.0	25.7	0.0	0.0
LnGrp LOS	B	A	A	B	A	A	C	A	A	C	A	A
Approach Vol, veh/h		292			187			374			263	
Approach Delay, s/veh		10.6			10.0			24.0			25.7	
Approach LOS		B			B			C			C	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		30.0		40.0		30.0		40.0				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		24.0		34.0		24.0		34.0				
Max Q Clear Time (g_c+I1), s		0.0		0.0		0.0		0.0				
Green Ext Time (p_c), s		0.0		0.0		0.0		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			18.6									
HCM 6th LOS			B									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	173	48	89	34	2	46	205	45	0	0	0
Future Volume (veh/h)	20	173	48	89	34	2	46	205	45	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	0.99		0.98	0.99		0.96	1.00		0.92			
Parking Bus, Adj	1.00	1.00	0.90	1.00	1.00	0.90	1.00	0.90	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	2018	2067	2067	2067	2051	2067	2116	2099	2065			
Adj Flow Rate, veh/h	21	180	50	93	35	2	48	214	47			
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96			
Percent Heavy Veh, %	5	2	2	2	3	2	4	5	7			
Cap, veh/h	101	702	184	556	194	10	91	404	89			
Arrive On Green	0.52	0.52	0.52	0.52	0.52	0.52	0.32	0.32	0.32			
Sat Flow, veh/h	69	1336	350	862	370	19	279	1244	273			
Grp Volume(v), veh/h	251	0	0	130	0	0	309	0	0			
Grp Sat Flow(s),veh/h/ln	1755	0	0	1252	0	0	1797	0	0			
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	8.4	0.0	0.0			
Cycle Q Clear(g_c), s	4.6	0.0	0.0	2.2	0.0	0.0	8.4	0.0	0.0			
Prop In Lane	0.08		0.20	0.72		0.02	0.16		0.15			
Lane Grp Cap(c), veh/h	986	0	0	760	0	0	584	0	0			
V/C Ratio(X)	0.25	0.00	0.00	0.17	0.00	0.00	0.53	0.00	0.00			
Avail Cap(c_a), veh/h	986	0	0	760	0	0	584	0	0			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	7.9	0.0	0.0	7.3	0.0	0.0	16.5	0.0	0.0			
Incr Delay (d2), s/veh	0.6	0.0	0.0	0.5	0.0	0.0	3.4	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(95%),veh/ln	3.1	0.0	0.0	1.5	0.0	0.0	6.8	0.0	0.0			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	8.5	0.0	0.0	7.8	0.0	0.0	19.9	0.0	0.0			
LnGrp LOS	A	A	A	A	A	A	B	A	A			
Approach Vol, veh/h		251			130			309				
Approach Delay, s/veh		8.5			7.8			19.9				
Approach LOS		A			A			B				
Timer - Assigned Phs		2		4				8				
Phs Duration (G+Y+Rc), s		24.0		36.0				36.0				
Change Period (Y+Rc), s		6.0		6.0				6.0				
Max Green Setting (Gmax), s		18.0		30.0				30.0				
Max Q Clear Time (g_c+I1), s		0.0		0.0				0.0				
Green Ext Time (p_c), s		0.0		0.0				0.0				
Intersection Summary												
HCM 6th Ctrl Delay			13.5									
HCM 6th LOS			B									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✣			✣			✣			✣	
Traffic Volume (veh/h)	30	306	196	19	110	2	172	125	27	4	98	6
Future Volume (veh/h)	30	306	196	19	110	2	172	125	27	4	98	6
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.96	1.00		0.96	0.99		0.96	0.99		0.98
Parking Bus, Adj	1.00	1.00	0.90	1.00	1.00	0.90	1.00	1.00	0.90	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1963	2048	2065	1741	2065	2150	1985	2067	1609	2067	1985	1822
Adj Flow Rate, veh/h	32	326	209	20	117	2	183	133	29	4	104	6
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	13	8	7	26	7	2	7	2	30	2	7	17
Cap, veh/h	85	427	262	127	651	10	374	254	49	70	759	43
Arrive On Green	0.43	0.43	0.43	0.43	0.43	0.43	0.41	0.41	0.41	0.41	0.41	0.41
Sat Flow, veh/h	51	1005	616	136	1532	24	679	613	119	19	1830	103
Grp Volume(v), veh/h	567	0	0	139	0	0	345	0	0	114	0	0
Grp Sat Flow(s),veh/h/ln	1672	0	0	1693	0	0	1411	0	0	1951	0	0
Q Serve(g_s), s	6.1	0.0	0.0	0.0	0.0	0.0	8.7	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	17.5	0.0	0.0	2.8	0.0	0.0	10.8	0.0	0.0	2.2	0.0	0.0
Prop In Lane	0.06		0.37	0.14		0.01	0.53		0.08	0.04		0.05
Lane Grp Cap(c), veh/h	774	0	0	788	0	0	677	0	0	872	0	0
V/C Ratio(X)	0.73	0.00	0.00	0.18	0.00	0.00	0.51	0.00	0.00	0.13	0.00	0.00
Avail Cap(c_a), veh/h	774	0	0	788	0	0	677	0	0	872	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	14.9	0.0	0.0	10.7	0.0	0.0	13.2	0.0	0.0	10.9	0.0	0.0
Incr Delay (d2), s/veh	6.1	0.0	0.0	0.5	0.0	0.0	2.7	0.0	0.0	0.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	11.6	0.0	0.0	2.1	0.0	0.0	6.5	0.0	0.0	1.6	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	21.0	0.0	0.0	11.2	0.0	0.0	16.0	0.0	0.0	11.2	0.0	0.0
LnGrp LOS	C	A	A	B	A	A	B	A	A	B	A	A
Approach Vol, veh/h		567			139			345			114	
Approach Delay, s/veh		21.0			11.2			16.0			11.2	
Approach LOS		C			B			B			B	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		30.0		30.0		30.0		30.0				
Change Period (Y+Rc), s		6.6		6.0		6.6		6.0				
Max Green Setting (Gmax), s		23.4		24.0		23.4		24.0				
Max Q Clear Time (g_c+I1), s		0.0		0.0		0.0		0.0				
Green Ext Time (p_c), s		0.0		0.0		0.0		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			17.4									
HCM 6th LOS			B									

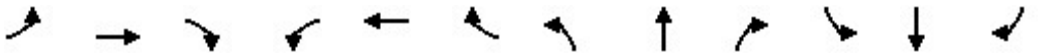
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	1	764	2	273	394	1	2	85	273	44	22	17
Future Volume (veh/h)	1	764	2	273	394	1	2	85	273	44	22	17
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		1.00	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.90	1.00	1.00	0.90
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	2067	2067	2067	1969	2051	2067	2067	2067	1953	2067	2067	2067
Adj Flow Rate, veh/h	1	830	2	297	428	1	2	92	297	48	24	18
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, %	2	2	2	8	3	2	2	2	9	2	2	2
Cap, veh/h	480	1675	4	444	1193	3	41	111	352	161	78	44
Arrive On Green	0.42	0.42	0.42	0.11	0.58	0.58	0.28	0.28	0.28	0.28	0.28	0.28
Sat Flow, veh/h	959	4019	10	1875	2045	5	2	391	1241	352	274	157
Grp Volume(v), veh/h	1	406	426	297	0	429	391	0	0	90	0	0
Grp Sat Flow(s),veh/h/ln	959	1964	2065	1875	0	2050	1634	0	0	783	0	0
Q Serve(g_s), s	0.1	13.7	13.7	7.7	0.0	9.9	1.2	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.1	13.7	13.7	7.7	0.0	9.9	20.3	0.0	0.0	7.5	0.0	0.0
Prop In Lane	1.00		0.00	1.00		0.00	0.01		0.76	0.53		0.20
Lane Grp Cap(c), veh/h	480	818	861	444	0	1196	503	0	0	283	0	0
V/C Ratio(X)	0.00	0.50	0.50	0.67	0.00	0.36	0.78	0.00	0.00	0.32	0.00	0.00
Avail Cap(c_a), veh/h	480	818	861	444	0	1196	503	0	0	283	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	0.61	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	15.3	19.3	19.3	13.7	0.0	9.9	30.4	0.0	0.0	25.1	0.0	0.0
Incr Delay (d2), s/veh	0.0	2.1	2.0	3.8	0.0	0.8	7.1	0.0	0.0	2.9	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	10.8	11.2	6.3	0.0	7.9	12.6	0.0	0.0	3.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	15.3	21.4	21.3	17.5	0.0	10.7	37.5	0.0	0.0	28.0	0.0	0.0
LnGrp LOS	B	C	C	B	A	B	D	A	A	C	A	A
Approach Vol, veh/h		833			726			391			90	
Approach Delay, s/veh		21.4			13.5			37.5			28.0	
Approach LOS		C			B			D			C	

Timer - Assigned Phs	2	3	4	6	8
Phs Duration (G+Y+Rc), s	32.0	15.0	43.0	32.0	58.0
Change Period (Y+Rc), s	* 8	7.0	* 7	* 8	* 7
Max Green Setting (Gmax), s	* 24	8.0	* 36	* 24	* 51
Max Q Clear Time (g_c+I1), s	22.3	9.7	15.7	9.5	11.9
Green Ext Time (p_c), s	0.2	0.0	2.2	0.2	1.1

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

Notes

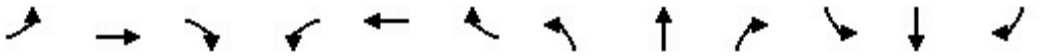
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	25	315	6	61	185	6	3	278	284	13	6	32
Future Volume (veh/h)	25	315	6	61	185	6	3	278	284	13	6	32
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		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	2067	2002	2067	2067	1985	2067	1622	2150	2150	2067	2067	2150
Adj Flow Rate, veh/h	27	335	6	65	197	6	3	296	302	14	6	34
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	6	2	2	7	2	33	2	2	2	2	2
Cap, veh/h	92	932	16	230	676	19	478	351	358	170	96	544
Arrive On Green	0.34	0.34	0.34	0.51	0.51	0.51	0.36	0.36	0.36	0.36	0.36	0.36
Sat Flow, veh/h	72	1838	32	328	1332	38	1073	963	982	820	264	1495
Grp Volume(v), veh/h	368	0	0	268	0	0	3	0	598	14	0	40
Grp Sat Flow(s),veh/h/ln	1941	0	0	1698	0	0	1073	0	1945	820	0	1758
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	19.8	1.1	0.0	1.0
Cycle Q Clear(g_c), s	9.7	0.0	0.0	5.4	0.0	0.0	1.2	0.0	19.8	20.9	0.0	1.0
Prop In Lane	0.07		0.02	0.24		0.02	1.00		0.51	1.00		0.85
Lane Grp Cap(c), veh/h	1040	0	0	925	0	0	478	0	708	170	0	641
V/C Ratio(X)	0.35	0.00	0.00	0.29	0.00	0.00	0.01	0.00	0.84	0.08	0.00	0.06
Avail Cap(c_a), veh/h	1040	0	0	925	0	0	478	0	708	170	0	641
HCM Platoon Ratio	0.67	0.67	0.67	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	14.6	0.0	0.0	9.8	0.0	0.0	14.9	0.0	20.4	30.0	0.0	14.5
Incr Delay (d2), s/veh	0.9	0.0	0.0	0.8	0.0	0.0	0.0	0.0	11.8	0.9	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(95%),veh/ln	8.4	0.0	0.0	4.2	0.0	0.0	0.1	0.0	16.0	0.5	0.0	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	15.5	0.0	0.0	10.6	0.0	0.0	14.9	0.0	32.2	31.0	0.0	14.7
LnGrp LOS	B	A	A	B	A	A	B	A	C	C	A	B
Approach Vol, veh/h		368			268			601			54	
Approach Delay, s/veh		15.5			10.6			32.1			18.9	
Approach LOS		B			B			C			B	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		40.0		30.0		40.0		30.0				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		34.0		24.0		34.0		24.0				
Max Q Clear Time (g_c+I1), s		0.0		22.9		0.0		3.2				
Green Ext Time (p_c), s		0.0		0.0		0.0		0.1				

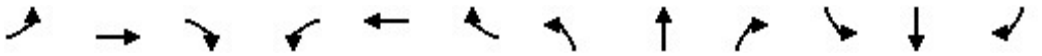
Intersection Summary												
HCM 6th Ctrl Delay			22.4									
HCM 6th LOS			C									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (veh/h)	58	537	3	4	194	10	15	19	15	15	7	59
Future Volume (veh/h)	58	537	3	4	194	10	15	19	15	15	7	59
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.98		0.97	0.99		0.95	0.98		0.97	0.98		0.95
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	2051	1969	2067	2067	1903	2067	2067	2067	2067	2067	2067	2067
Adj Flow Rate, veh/h	62	577	3	4	209	11	16	20	16	16	8	63
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	3	8	2	2	12	2	2	2	2	2	2	2
Cap, veh/h	133	1004	5	66	1018	53	182	226	147	117	82	336
Arrive On Green	0.57	0.57	0.57	0.57	0.57	0.57	0.28	0.28	0.28	0.28	0.28	0.28
Sat Flow, veh/h	116	1747	9	8	1770	92	378	821	533	168	297	1221
Grp Volume(v), veh/h	642	0	0	224	0	0	52	0	0	87	0	0
Grp Sat Flow(s),veh/h/ln	1872	0	0	1869	0	0	1732	0	0	1686	0	0
Q Serve(g_s), s	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	12.4	0.0	0.0	3.4	0.0	0.0	1.2	0.0	0.0	2.3	0.0	0.0
Prop In Lane	0.10		0.00	0.02		0.05	0.31		0.31	0.18		0.72
Lane Grp Cap(c), veh/h	1142	0	0	1136	0	0	555	0	0	535	0	0
V/C Ratio(X)	0.56	0.00	0.00	0.20	0.00	0.00	0.09	0.00	0.00	0.16	0.00	0.00
Avail Cap(c_a), veh/h	1142	0	0	1136	0	0	555	0	0	535	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	8.0	0.0	0.0	6.2	0.0	0.0	16.2	0.0	0.0	16.6	0.0	0.0
Incr Delay (d2), s/veh	2.0	0.0	0.0	0.4	0.0	0.0	0.3	0.0	0.0	0.7	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	8.5	0.0	0.0	2.2	0.0	0.0	1.0	0.0	0.0	1.7	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	10.0	0.0	0.0	6.5	0.0	0.0	16.5	0.0	0.0	17.2	0.0	0.0
LnGrp LOS	B	A	A	A	A	A	B	A	A	B	A	A
Approach Vol, veh/h		642			224			52			87	
Approach Delay, s/veh		10.0			6.5			16.5			17.2	
Approach LOS		B			A			B			B	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		21.0		39.0		21.0		39.0				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		15.0		33.0		15.0		33.0				
Max Q Clear Time (g_c+I1), s		0.0		0.0		0.0		0.0				
Green Ext Time (p_c), s		0.0		0.0		0.0		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			10.2									
HCM 6th LOS			B									



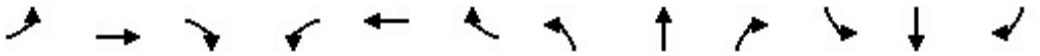
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	295	6	84	139	10	63	327	23	25	394	5
Future Volume (veh/h)	0	295	6	84	139	10	63	327	23	25	394	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	0.99		1.00	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.90	1.00	1.00	0.90
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1861	1713	1861	1861	1698	1595	1874	1935	1904	1935	1935	1935
Adj Flow Rate, veh/h	0	307	6	88	145	0	66	341	24	26	410	5
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	12	2	2	13	20	6	2	4	2	2	2
Cap, veh/h	0	849	17	258	388		330	584	41	73	581	7
Arrive On Green	0.00	0.51	0.51	0.17	0.17	0.00	0.36	0.36	0.36	0.36	0.36	0.36
Sat Flow, veh/h	0	1673	33	369	766	0	878	1604	113	51	1594	19
Grp Volume(v), veh/h	0	0	313	233	0	0	66	0	365	441	0	0
Grp Sat Flow(s),veh/h/ln	0	0	1706	1135	0	0	878	0	1717	1664	0	0
Q Serve(g_s), s	0.0	0.0	7.8	7.3	0.0	0.0	0.0	0.0	12.0	3.8	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	7.8	15.1	0.0	0.0	7.3	0.0	12.0	15.8	0.0	0.0
Prop In Lane	0.00		0.02	0.38		0.00	1.00		0.07	0.06		0.01
Lane Grp Cap(c), veh/h	0	0	865	646	0		330	0	626	661	0	0
V/C Ratio(X)	0.00	0.00	0.36	0.36	0.00		0.20	0.00	0.58	0.67	0.00	0.00
Avail Cap(c_a), veh/h	0	0	865	646	0		330	0	626	661	0	0
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	10.4	20.8	0.0	0.0	16.5	0.0	18.0	19.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	1.2	1.6	0.0	0.0	1.4	0.0	3.9	5.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	0.0	5.3	7.5	0.0	0.0	1.6	0.0	8.9	11.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	11.6	22.4	0.0	0.0	17.8	0.0	21.9	24.3	0.0	0.0
LnGrp LOS	A	A	B	C	A		B	A	C	C	A	A
Approach Vol, veh/h		313			233			431			441	
Approach Delay, s/veh		11.6			22.4			21.3			24.3	
Approach LOS		B			C			C			C	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		40.0		30.0		40.0		30.0				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		34.0		24.0		34.0		24.0				
Max Q Clear Time (g_c+I1), s		0.0		0.0		0.0		9.3				
Green Ext Time (p_c), s		0.0		0.0		0.0		0.1				

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

Notes

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



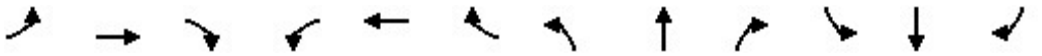
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (veh/h)	26	142	10	4	125	206	5	152	4	268	226	6
Future Volume (veh/h)	26	142	10	4	125	206	5	152	4	268	226	6
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.98	0.99		0.96	0.99		0.97	0.98		0.95
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	1969	2067	1609	2067	2051	2067	2067	1887	2067	2067	2002	1822
Adj Flow Rate, veh/h	28	154	11	4	136	224	5	165	4	291	246	7
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, %	8	2	30	2	3	2	2	13	2	2	6	17
Cap, veh/h	123	603	40	63	252	407	69	859	20	459	332	9
Arrive On Green	0.38	0.37	0.38	0.38	0.37	0.38	0.47	0.47	0.47	0.47	0.47	0.47
Sat Flow, veh/h	148	1636	108	6	685	1105	15	1808	43	773	698	19
Grp Volume(v), veh/h	193	0	0	364	0	0	174	0	0	544	0	0
Grp Sat Flow(s),veh/h/ln	1892	0	0	1796	0	0	1865	0	0	1490	0	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14.2	0.0	0.0
Cycle Q Clear(g_c), s	3.9	0.0	0.0	9.4	0.0	0.0	3.2	0.0	0.0	17.4	0.0	0.0
Prop In Lane	0.15		0.06	0.01		0.62	0.03		0.02	0.53		0.01
Lane Grp Cap(c), veh/h	797	0	0	752	0	0	948	0	0	800	0	0
V/C Ratio(X)	0.24	0.00	0.00	0.48	0.00	0.00	0.18	0.00	0.00	0.68	0.00	0.00
Avail Cap(c_a), veh/h	797	0	0	752	0	0	948	0	0	800	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	13.1	0.0	0.0	14.7	0.0	0.0	9.1	0.0	0.0	12.5	0.0	0.0
Incr Delay (d2), s/veh	0.7	0.0	0.0	2.2	0.0	0.0	0.4	0.0	0.0	4.6	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.2	0.0	0.0	6.9	0.0	0.0	2.3	0.0	0.0	10.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.9	0.0	0.0	16.9	0.0	0.0	9.5	0.0	0.0	17.1	0.0	0.0
LnGrp LOS	B	A	A	B	A	A	A	A	A	B	A	A
Approach Vol, veh/h		193			364			174			544	
Approach Delay, s/veh		13.9			16.9			9.5			17.1	
Approach LOS		B			B			A			B	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		33.0		27.0		33.0		27.0				
Change Period (Y+Rc), s		* 6		5.4		* 6		5.4				
Max Green Setting (Gmax), s		* 27		21.6		* 27		21.6				
Max Q Clear Time (g_c+I1), s		0.0		0.0		0.0		0.0				
Green Ext Time (p_c), s		0.0		0.0		0.0		0.0				

Intersection Summary	
HCM 6th Ctrl Delay	15.5
HCM 6th LOS	B

Notes

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



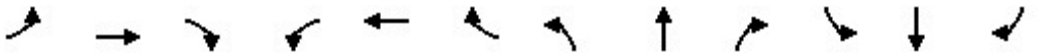
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	0	818	9	63	136	0	0	0	0
Future Volume (veh/h)	0	0	0	0	818	9	63	136	0	0	0	0
Initial Q (Qb), veh				0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)				1.00		0.96	1.00		1.00			
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach					No			No				
Adj Sat Flow, veh/h/ln				0	1976	2009	2002	2067	0			
Adj Flow Rate, veh/h				0	940	10	72	156	0			
Peak Hour Factor				0.87	0.87	0.87	0.87	0.87	0.87			
Percent Heavy Veh, %				0	4	2	6	2	0			
Cap, veh/h				0	2250	24	195	365	0			
Arrive On Green				0.00	0.20	0.20	0.26	0.26	0.00			
Sat Flow, veh/h				0	3902	40	448	1415	0			
Grp Volume(v), veh/h				0	464	486	228	0	0			
Grp Sat Flow(s),veh/h/ln				0	1877	1967	1862	0	0			
Q Serve(g_s), s				0.0	13.0	13.0	2.5	0.0	0.0			
Cycle Q Clear(g_c), s				0.0	13.0	13.0	5.9	0.0	0.0			
Prop In Lane				0.00		0.02	0.32		0.00			
Lane Grp Cap(c), veh/h				0	1111	1164	560	0	0			
V/C Ratio(X)				0.00	0.42	0.42	0.41	0.00	0.00			
Avail Cap(c_a), veh/h				0	1111	1164	560	0	0			
HCM Platoon Ratio				1.00	0.33	0.33	1.00	1.00	1.00			
Upstream Filter(I)				0.00	1.00	1.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh				0.0	15.1	15.1	18.6	0.0	0.0			
Incr Delay (d2), s/veh				0.0	1.2	1.1	2.2	0.0	0.0			
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(95%),veh/ln				0.0	10.9	11.3	5.1	0.0	0.0			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				0.0	16.2	16.2	20.8	0.0	0.0			
LnGrp LOS				A	B	B	C	A	A			
Approach Vol, veh/h					950			228				
Approach Delay, s/veh					16.2			20.8				
Approach LOS					B			C				

Timer - Assigned Phs	2	4
Phs Duration (G+Y+Rc), s	20.0	40.0
Change Period (Y+Rc), s	6.0	* 6
Max Green Setting (Gmax), s	14.0	* 34
Max Q Clear Time (g_c+I1), s	0.0	0.0
Green Ext Time (p_c), s	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	17.1
HCM 6th LOS	B

Notes

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	173	228	0	0	117	13	26	162	43	0	0	0
Future Volume (veh/h)	173	228	0	0	117	13	26	162	43	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	0.98		1.00	1.00		0.96	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	2034	2067	0	0	2051	2067	2067	2018	2067			
Adj Flow Rate, veh/h	188	248	0	0	127	14	28	176	0			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	4	2	0	0	3	2	2	5	2			
Cap, veh/h	431	546	0	0	984	109	78	493				
Arrive On Green	1.00	1.00	0.00	0.00	1.00	1.00	0.29	0.29	0.00			
Sat Flow, veh/h	633	1001	0	0	1806	199	275	1729	0			
Grp Volume(v), veh/h	436	0	0	0	0	141	204	0	0			
Grp Sat Flow(s),veh/h/ln	1634	0	0	0	0	2005	2004	0	0			
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	4.9	0.0	0.0			
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	4.9	0.0	0.0			
Prop In Lane	0.43		0.00	0.00		0.10	0.14		0.00			
Lane Grp Cap(c), veh/h	976	0	0	0	0	1093	571	0				
V/C Ratio(X)	0.45	0.00	0.00	0.00	0.00	0.13	0.36	0.00				
Avail Cap(c_a), veh/h	976	0	0	0	0	1093	571	0				
HCM Platoon Ratio	2.00	2.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	0.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	17.1	0.0	0.0			
Incr Delay (d2), s/veh	1.5	0.0	0.0	0.0	0.0	0.2	1.7	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(95%),veh/ln	0.7	0.0	0.0	0.0	0.0	0.1	4.3	0.0	0.0			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	1.5	0.0	0.0	0.0	0.0	0.2	18.8	0.0	0.0			
LnGrp LOS	A	A	A	A	A	A	B	A				
Approach Vol, veh/h		436			141			204				
Approach Delay, s/veh		1.5			0.2			18.8				
Approach LOS		A			A			B				
Timer - Assigned Phs		2		4				8				
Phs Duration (G+Y+Rc), s		22.2		37.8				37.8				
Change Period (Y+Rc), s		6.6		6.6				6.6				
Max Green Setting (Gmax), s		15.6		31.2				31.2				
Max Q Clear Time (g_c+I1), s		0.0		0.0				0.0				
Green Ext Time (p_c), s		0.0		0.0				0.0				
Intersection Summary												
HCM 6th Ctrl Delay			5.8									
HCM 6th LOS			A									

Notes

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

Intersection	
Intersection Delay, s/veh	9.5
Intersection LOS	A

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	64	205	37	42	50	70
Future Vol, veh/h	64	205	37	42	50	70
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles, %	3	2	4	7	2	4
Mvmt Flow	76	244	44	50	60	83
Number of Lanes	0	1	1	0	1	0

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	1	1
HCM Control Delay	10.3	7.9	8.7
HCM LOS	B	A	A

Lane	EBLn1	WBLn1	SBLn1
Vol Left, %	24%	0%	42%
Vol Thru, %	76%	47%	0%
Vol Right, %	0%	53%	58%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	269	79	120
LT Vol	64	0	50
Through Vol	205	37	0
RT Vol	0	42	70
Lane Flow Rate	320	94	143
Geometry Grp	1	1	1
Degree of Util (X)	0.395	0.113	0.183
Departure Headway (Hd)	4.438	4.337	4.6
Convergence, Y/N	Yes	Yes	Yes
Cap	810	826	780
Service Time	2.463	2.368	2.627
HCM Lane V/C Ratio	0.395	0.114	0.183
HCM Control Delay	10.3	7.9	8.7
HCM Lane LOS	B	A	A
HCM 95th-tile Q	1.9	0.4	0.7

Intersection	
Intersection Delay, s/veh	16.3
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	86	0	0	0	5	7	10	576	1	2	0	84
Future Vol, veh/h	86	0	0	0	5	7	10	576	1	2	0	84
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles, %	2	2	2	2	2	14	2	2	2	50	2	2
Mvmt Flow	90	0	0	0	5	7	10	600	1	2	0	88
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9.8	8.5	18.5	8.9
HCM LOS	A	A	C	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	2%	100%	0%	2%
Vol Thru, %	98%	0%	42%	0%
Vol Right, %	0%	0%	58%	98%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	587	86	12	86
LT Vol	10	86	0	2
Through Vol	576	0	5	0
RT Vol	1	0	7	84
Lane Flow Rate	611	90	12	90
Geometry Grp	1	1	1	1
Degree of Util (X)	0.737	0.143	0.018	0.127
Departure Headway (Hd)	4.337	5.729	5.319	5.104
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	832	624	668	701
Service Time	2.365	3.79	3.393	3.152
HCM Lane V/C Ratio	0.734	0.144	0.018	0.128
HCM Control Delay	18.5	9.8	8.5	8.9
HCM Lane LOS	C	A	A	A
HCM 95th-tile Q	6.7	0.5	0.1	0.4

Intersection	
Intersection Delay, s/veh	8.8
Intersection LOS	A

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	51	106	97	55	41	91
Future Vol, veh/h	51	106	97	55	41	91
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles, %	4	2	2	2	2	5
Mvmt Flow	62	129	118	67	50	111
Number of Lanes	0	1	1	0	1	0

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	1	1
HCM Control Delay	9.1	8.6	8.6
HCM LOS	A	A	A

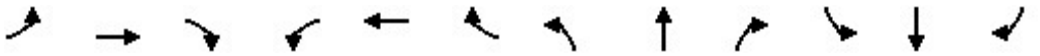
Lane	EBLn1	WBLn1	SBLn1
Vol Left, %	32%	0%	31%
Vol Thru, %	68%	64%	0%
Vol Right, %	0%	36%	69%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	157	152	132
LT Vol	51	0	41
Through Vol	106	97	0
RT Vol	0	55	91
Lane Flow Rate	191	185	161
Geometry Grp	1	1	1
Degree of Util (X)	0.245	0.222	0.198
Departure Headway (Hd)	4.602	4.305	4.426
Convergence, Y/N	Yes	Yes	Yes
Cap	781	834	810
Service Time	2.628	2.331	2.455
HCM Lane V/C Ratio	0.245	0.222	0.199
HCM Control Delay	9.1	8.6	8.6
HCM Lane LOS	A	A	A
HCM 95th-tile Q	1	0.8	0.7

Intersection	
Intersection Delay, s/veh	18.7
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	45	3	0	0	8	4	23	586	4	6	0	174
Future Vol, veh/h	45	3	0	0	8	4	23	586	4	6	0	174
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
Heavy Vehicles, %	4	2	2	2	2	2	2	2	2	17	2	2
Mvmt Flow	49	3	0	0	9	4	25	637	4	7	0	189
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9.7	8.9	22.5	9
HCM LOS	A	A	C	A

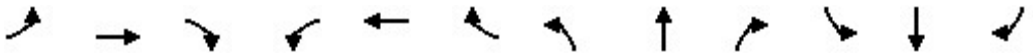
Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	4%	94%	0%	3%
Vol Thru, %	96%	6%	67%	0%
Vol Right, %	1%	0%	33%	97%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	613	48	12	180
LT Vol	23	45	0	6
Through Vol	586	3	8	0
RT Vol	4	0	4	174
Lane Flow Rate	666	52	13	196
Geometry Grp	1	1	1	1
Degree of Util (X)	0.802	0.088	0.021	0.244
Departure Headway (Hd)	4.334	6.038	5.698	4.49
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	833	591	623	796
Service Time	2.365	4.106	3.776	2.533
HCM Lane V/C Ratio	0.8	0.088	0.021	0.246
HCM Control Delay	22.5	9.7	8.9	9
HCM Lane LOS	C	A	A	A
HCM 95th-tile Q	8.6	0.3	0.1	1



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (veh/h)	35	70	6	4	90	2	11	98	3	9	61	126
Future Volume (veh/h)	35	70	6	4	90	2	11	98	3	9	61	126
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.98		0.96	0.98		0.96	0.99		0.96	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	2067	2067	2067	2067	2067	2067	2067	2067	2067	1822	2067	2067
Adj Flow Rate, veh/h	38	76	7	4	98	2	12	107	3	10	66	137
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, %	2	2	2	2	2	2	2	2	2	17	2	2
Cap, veh/h	322	626	53	73	1042	21	92	606	16	74	196	372
Arrive On Green	0.52	0.52	0.52	0.52	0.52	0.52	0.32	0.32	0.32	0.32	0.32	0.32
Sat Flow, veh/h	463	1192	102	21	1986	39	80	1864	49	33	602	1145
Grp Volume(v), veh/h	121	0	0	104	0	0	122	0	0	213	0	0
Grp Sat Flow(s),veh/h/ln	1756	0	0	2046	0	0	1994	0	0	1779	0	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	1.8	0.0	0.0	1.5	0.0	0.0	2.6	0.0	0.0	5.4	0.0	0.0
Prop In Lane	0.31		0.06	0.04		0.02	0.10		0.02	0.05		0.64
Lane Grp Cap(c), veh/h	1001	0	0	1136	0	0	714	0	0	641	0	0
V/C Ratio(X)	0.12	0.00	0.00	0.09	0.00	0.00	0.17	0.00	0.00	0.33	0.00	0.00
Avail Cap(c_a), veh/h	1001	0	0	1136	0	0	714	0	0	641	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	7.2	0.0	0.0	7.1	0.0	0.0	14.5	0.0	0.0	15.5	0.0	0.0
Incr Delay (d2), s/veh	0.2	0.0	0.0	0.2	0.0	0.0	0.5	0.0	0.0	1.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.3	0.0	0.0	1.1	0.0	0.0	2.2	0.0	0.0	4.2	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	7.4	0.0	0.0	7.3	0.0	0.0	15.1	0.0	0.0	16.9	0.0	0.0
LnGrp LOS	A	A	A	A	A	A	B	A	A	B	A	A
Approach Vol, veh/h		121			104			122			213	
Approach Delay, s/veh		7.4			7.3			15.1			16.9	
Approach LOS		A			A			B			B	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		24.0		36.0		24.0		36.0				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		18.0		30.0		18.0		30.0				
Max Q Clear Time (g_c+I1), s		0.0		0.0		0.0		0.0				
Green Ext Time (p_c), s		0.0		0.0		0.0		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			12.7									
HCM 6th LOS			B									



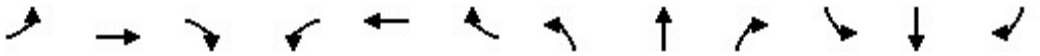
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	82	928	59	30	262	0	0	304	110
Future Volume (veh/h)	0	0	0	82	928	59	30	262	0	0	304	110
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		0.96	1.00		1.00	1.00		0.97
Parking Bus, Adj				0.90	1.00	0.90	1.00	1.00	1.00	1.00	1.00	0.90
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1910	2009	1992	2044	1995	0	0	2009	2009
Adj Flow Rate, veh/h				100	1132	72	37	320	0	0	371	134
Peak Hour Factor				0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Percent Heavy Veh, %				8	2	3	3	6	0	0	2	2
Cap, veh/h				133	1570	105	78	373	0	0	430	155
Arrive On Green				0.17	0.17	0.17	0.34	0.34	0.00	0.00	0.34	0.34
Sat Flow, veh/h				261	3088	206	35	1091	0	0	1258	454
Grp Volume(v), veh/h				688	0	616	357	0	0	0	0	505
Grp Sat Flow(s),veh/h/ln				1795	0	1760	1126	0	0	0	0	1712
Q Serve(g_s), s				21.9	0.0	19.7	2.8	0.0	0.0	0.0	0.0	16.5
Cycle Q Clear(g_c), s				21.9	0.0	19.7	19.3	0.0	0.0	0.0	0.0	16.5
Prop In Lane				0.15		0.12	0.10		0.00	0.00		0.27
Lane Grp Cap(c), veh/h				912	0	895	451	0	0	0	0	585
V/C Ratio(X)				0.75	0.00	0.69	0.79	0.00	0.00	0.00	0.00	0.86
Avail Cap(c_a), veh/h				912	0	895	451	0	0	0	0	585
HCM Platoon Ratio				0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh				21.4	0.0	20.5	17.0	0.0	0.0	0.0	0.0	18.4
Incr Delay (d2), s/veh				5.8	0.0	4.3	13.3	0.0	0.0	0.0	0.0	15.5
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln				17.2	0.0	15.3	9.0	0.0	0.0	0.0	0.0	13.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				27.2	0.0	24.8	30.3	0.0	0.0	0.0	0.0	34.0
LnGrp LOS				C	A	C	C	A	A	A	A	C
Approach Vol, veh/h					1304			357			505	
Approach Delay, s/veh					26.0			30.3			34.0	
Approach LOS					C			C			C	

Timer - Assigned Phs	2	4	6
Phs Duration (G+Y+Rc), s	25.0	35.0	25.0
Change Period (Y+Rc), s	6.0	* 6	6.0
Max Green Setting (Gmax), s	19.0	* 29	19.0
Max Q Clear Time (g_c+I1), s	0.0	0.0	0.0
Green Ext Time (p_c), s	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	28.6
HCM 6th LOS	C

Notes

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



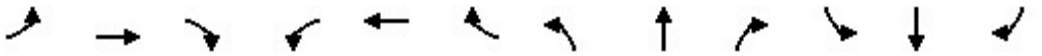
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	96	734	23	56	98	0	0	119	31
Future Volume (veh/h)	0	0	0	96	734	23	56	98	0	0	119	31
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		0.98	0.96		1.00	1.00		0.93
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				2002	2051	2067	2034	2018	0	0	2067	2067
Adj Flow Rate, veh/h				119	906	28	69	121	0	0	147	38
Peak Hour Factor				0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Percent Heavy Veh, %				6	3	2	4	5	0	0	2	2
Cap, veh/h				259	2074	67	185	295	0	0	402	104
Arrive On Green				0.59	0.59	0.59	0.26	0.26	0.00	0.00	0.26	0.26
Sat Flow, veh/h				438	3506	113	399	1142	0	0	1555	402
Grp Volume(v), veh/h				551	0	502	190	0	0	0	0	185
Grp Sat Flow(s),veh/h/ln				2029	0	2028	1541	0	0	0	0	1957
Q Serve(g_s), s				9.1	0.0	8.1	1.8	0.0	0.0	0.0	0.0	4.6
Cycle Q Clear(g_c), s				9.1	0.0	8.1	6.4	0.0	0.0	0.0	0.0	4.6
Prop In Lane				0.22		0.06	0.36		0.00	0.00		0.21
Lane Grp Cap(c), veh/h				1200	0	1200	480	0	0	0	0	505
V/C Ratio(X)				0.46	0.00	0.42	0.40	0.00	0.00	0.00	0.00	0.37
Avail Cap(c_a), veh/h				1200	0	1200	480	0	0	0	0	505
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh				6.9	0.0	6.6	18.5	0.0	0.0	0.0	0.0	18.2
Incr Delay (d2), s/veh				1.3	0.0	1.1	2.4	0.0	0.0	0.0	0.0	2.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln				6.1	0.0	5.3	4.4	0.0	0.0	0.0	0.0	4.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				8.1	0.0	7.7	21.0	0.0	0.0	0.0	0.0	20.3
LnGrp LOS				A	A	A	C	A	A	A	A	C
Approach Vol, veh/h					1053			190			185	
Approach Delay, s/veh					7.9			21.0			20.3	
Approach LOS					A			C			C	

Timer - Assigned Phs	2	4	6
Phs Duration (G+Y+Rc), s	20.0	40.0	20.0
Change Period (Y+Rc), s	6.0	* 6	6.0
Max Green Setting (Gmax), s	14.0	* 34	14.0
Max Q Clear Time (g_c+I1), s	0.0	0.0	0.0
Green Ext Time (p_c), s	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	11.3
HCM 6th LOS	B

Notes

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



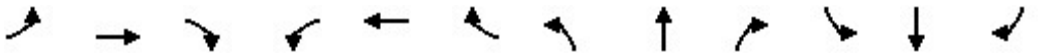
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	143	1115	53	0	0	0	0	285	55	43	293	0
Future Volume (veh/h)	143	1115	53	0	0	0	0	285	55	43	293	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96				1.00		0.97	0.99		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	2067	2067	2051				0	2150	1838	2067	2150	0
Adj Flow Rate, veh/h	159	1239	59				0	317	61	48	326	0
Peak Hour Factor	0.90	0.90	0.90				0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	3				0	2	16	2	2	0
Cap, veh/h	968	1873	89				0	625	120	120	623	0
Arrive On Green	0.49	0.49	0.49				0.00	0.36	0.36	0.36	0.36	0.00
Sat Flow, veh/h	1969	3809	181				0	1744	336	146	1739	0
Grp Volume(v), veh/h	159	638	660				0	0	378	374	0	0
Grp Sat Flow(s),veh/h/ln	1969	1964	2026				0	0	2079	1885	0	0
Q Serve(g_s), s	2.7	14.7	14.7				0.0	0.0	8.6	1.0	0.0	0.0
Cycle Q Clear(g_c), s	2.7	14.7	14.7				0.0	0.0	8.6	9.6	0.0	0.0
Prop In Lane	1.00		0.09				0.00		0.16	0.13		0.00
Lane Grp Cap(c), veh/h	968	966	996				0	0	745	743	0	0
V/C Ratio(X)	0.16	0.66	0.66				0.00	0.00	0.51	0.50	0.00	0.00
Avail Cap(c_a), veh/h	968	966	996				0	0	745	743	0	0
HCM Platoon Ratio	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				0.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	8.4	11.5	11.5				0.0	0.0	15.1	15.0	0.0	0.0
Incr Delay (d2), s/veh	0.4	3.6	3.5				0.0	0.0	2.5	2.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.9	10.3	10.6				0.0	0.0	7.6	7.4	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	8.8	15.0	15.0				0.0	0.0	17.6	17.5	0.0	0.0
LnGrp LOS	A	B	B				A	A	B	B	A	A
Approach Vol, veh/h		1457						378			374	
Approach Delay, s/veh		14.3						17.6			17.5	
Approach LOS		B						B			B	

Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		26.0		34.0		26.0						
Change Period (Y+Rc), s		6.0		* 6		6.0						
Max Green Setting (Gmax), s		20.0		* 28		20.0						
Max Q Clear Time (g_c+I1), s		0.0		0.0		0.0						
Green Ext Time (p_c), s		0.0		0.0		0.0						

Intersection Summary												
HCM 6th Ctrl Delay			15.4									
HCM 6th LOS			B									

Notes

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



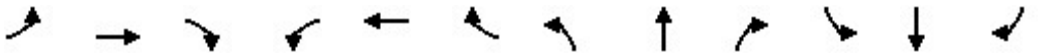
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	31	975	95	0	0	0	0	88	85	65	165	0
Future Volume (veh/h)	31	975	95	0	0	0	0	88	85	65	165	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96				1.00		0.97	0.99		1.00
Parking Bus, Adj	1.00	1.00	0.98				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	2051	2067	2067				0	2067	2067	2067	2067	0
Adj Flow Rate, veh/h	33	1037	101				0	94	90	69	176	0
Peak Hour Factor	0.94	0.94	0.94				0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	3	2	2				0	2	2	2	2	0
Cap, veh/h	60	1964	202				0	291	278	182	435	0
Arrive On Green	0.55	0.55	0.55				0.00	0.30	0.30	0.30	0.30	0.00
Sat Flow, veh/h	108	3541	363				0	954	913	361	1427	0
Grp Volume(v), veh/h	629	0	542				0	0	184	245	0	0
Grp Sat Flow(s),veh/h/ln	2062	0	1951				0	0	1867	1788	0	0
Q Serve(g_s), s	12.5	0.0	11.0				0.0	0.0	4.9	1.5	0.0	0.0
Cycle Q Clear(g_c), s	12.5	0.0	11.0				0.0	0.0	4.9	6.4	0.0	0.0
Prop In Lane	0.05		0.19				0.00		0.49	0.28		0.00
Lane Grp Cap(c), veh/h	1144	0	1082				0	0	569	617	0	0
V/C Ratio(X)	0.55	0.00	0.50				0.00	0.00	0.32	0.40	0.00	0.00
Avail Cap(c_a), veh/h	1144	0	1082				0	0	569	617	0	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	9.1	0.0	8.8				0.0	0.0	17.2	17.6	0.0	0.0
Incr Delay (d2), s/veh	1.9	0.0	1.7				0.0	0.0	1.5	1.9	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	8.9	0.0	7.7				0.0	0.0	4.0	5.4	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	11.0	0.0	10.4				0.0	0.0	18.7	19.5	0.0	0.0
LnGrp LOS	B	A	B				A	A	B	B	A	A
Approach Vol, veh/h		1171						184			245	
Approach Delay, s/veh		10.8						18.7			19.5	
Approach LOS		B						B			B	

Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		24.0		40.0		24.0						
Change Period (Y+Rc), s		6.0		* 6		6.0						
Max Green Setting (Gmax), s		18.0		* 34		18.0						
Max Q Clear Time (g_c+I1), s		0.0		0.0		0.0						
Green Ext Time (p_c), s		0.0		0.0		0.0						

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

Notes

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



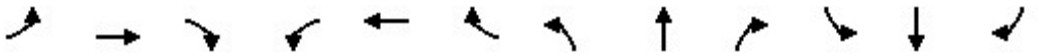
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	11	80	31	84	109	1	31	320	63	12	517	12
Future Volume (veh/h)	11	80	31	84	109	1	31	320	63	12	517	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.96	0.99		0.96	1.00		0.96	1.00		0.97
Parking Bus, Adj	1.00	1.00	0.90	1.00	1.00	0.90	1.00	1.00	0.90	1.00	1.00	0.90
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	2067	2067	2067	2034	2067	2067	2067	2034	2067	2067	2051	1969
Adj Flow Rate, veh/h	12	89	34	93	121	1	34	356	70	13	574	13
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, %	2	2	2	4	2	2	2	4	2	2	3	8
Cap, veh/h	88	448	158	289	345	3	93	629	118	463	871	20
Arrive On Green	0.36	0.36	0.36	0.36	0.36	0.36	0.97	0.97	0.97	0.48	0.48	0.48
Sat Flow, veh/h	61	1227	434	556	944	7	59	1297	243	957	1796	41
Grp Volume(v), veh/h	135	0	0	215	0	0	460	0	0	13	0	587
Grp Sat Flow(s),veh/h/ln	1722	0	0	1507	0	0	1600	0	0	957	0	1837
Q Serve(g_s), s	0.0	0.0	0.0	2.4	0.0	0.0	1.9	0.0	0.0	0.0	0.0	14.5
Cycle Q Clear(g_c), s	3.2	0.0	0.0	5.6	0.0	0.0	16.4	0.0	0.0	0.8	0.0	14.5
Prop In Lane	0.09		0.25	0.43		0.00	0.07		0.15	1.00		0.02
Lane Grp Cap(c), veh/h	694	0	0	636	0	0	840	0	0	463	0	891
V/C Ratio(X)	0.19	0.00	0.00	0.34	0.00	0.00	0.55	0.00	0.00	0.03	0.00	0.66
Avail Cap(c_a), veh/h	694	0	0	636	0	0	840	0	0	463	0	891
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	13.1	0.0	0.0	13.8	0.0	0.0	0.6	0.0	0.0	8.2	0.0	11.7
Incr Delay (d2), s/veh	0.6	0.0	0.0	1.4	0.0	0.0	2.6	0.0	0.0	0.1	0.0	3.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.3	0.0	0.0	3.9	0.0	0.0	1.4	0.0	0.0	0.2	0.0	10.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.7	0.0	0.0	15.2	0.0	0.0	3.1	0.0	0.0	8.3	0.0	15.5
LnGrp LOS	B	A	A	B	A	A	A	A	A	A	A	B
Approach Vol, veh/h		135			215			460			600	
Approach Delay, s/veh		13.7			15.2			3.1			15.3	
Approach LOS		B			B			A			B	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		33.6		26.4		33.6		26.4				
Change Period (Y+Rc), s		* 6		6.0		* 6		6.0				
Max Green Setting (Gmax), s		* 28		20.4		* 28		20.4				
Max Q Clear Time (g_c+I1), s		0.0		0.0		2.8		0.0				
Green Ext Time (p_c), s		0.0		0.0		0.1		0.0				

Intersection Summary		
HCM 6th Ctrl Delay		11.2
HCM 6th LOS		B

Notes

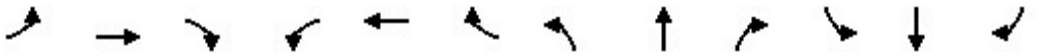
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



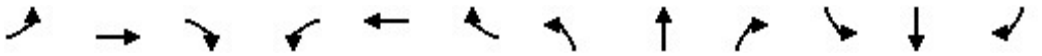
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	16	279	5	110	147	15	24	133	112	198	159	17
Future Volume (veh/h)	16	279	5	110	147	15	24	133	112	198	159	17
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.93		0.89	0.95		0.89	0.98		0.93	0.97		0.93
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.90	1.00	1.00	0.90
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	2002	2018	2067	1887	1985	2067	1690	2018	1871	2067	2018	1805
Adj Flow Rate, veh/h	18	310	6	122	163	17	27	148	124	220	177	19
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, %	6	5	2	13	7	2	25	5	14	2	5	18
Cap, veh/h	77	957	18	342	437	42	86	324	251	292	191	19
Arrive On Green	0.51	0.51	0.51	0.51	0.51	0.51	0.36	0.36	0.36	0.36	0.36	0.36
Sat Flow, veh/h	46	1887	35	531	862	83	83	888	689	585	525	53
Grp Volume(v), veh/h	334	0	0	302	0	0	299	0	0	416	0	0
Grp Sat Flow(s),veh/h/ln	1968	0	0	1477	0	0	1660	0	0	1163	0	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14.8	0.0	0.0
Cycle Q Clear(g_c), s	6.9	0.0	0.0	6.5	0.0	0.0	10.0	0.0	0.0	24.8	0.0	0.0
Prop In Lane	0.05		0.02	0.40		0.06	0.09		0.41	0.53		0.05
Lane Grp Cap(c), veh/h	1052	0	0	821	0	0	661	0	0	502	0	0
V/C Ratio(X)	0.32	0.00	0.00	0.37	0.00	0.00	0.45	0.00	0.00	0.83	0.00	0.00
Avail Cap(c_a), veh/h	1052	0	0	821	0	0	661	0	0	502	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	10.2	0.0	0.0	10.1	0.0	0.0	17.3	0.0	0.0	22.2	0.0	0.0
Incr Delay (d2), s/veh	0.8	0.0	0.0	1.3	0.0	0.0	2.2	0.0	0.0	14.5	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	5.4	0.0	0.0	5.0	0.0	0.0	7.0	0.0	0.0	13.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	11.0	0.0	0.0	11.4	0.0	0.0	19.5	0.0	0.0	36.8	0.0	0.0
LnGrp LOS	B	A	A	B	A	A	B	A	A	D	A	A
Approach Vol, veh/h		334			302			299			416	
Approach Delay, s/veh		11.0			11.4			19.5			36.8	
Approach LOS		B			B			B			D	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		30.0		40.0		30.0		40.0				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		24.0		34.0		24.0		34.0				
Max Q Clear Time (g_c+I1), s		0.0		0.0		0.0		0.0				
Green Ext Time (p_c), s		0.0		0.0		0.0		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			20.9									
HCM 6th LOS			C									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	75	47	95	120	2	64	267	37	0	0	0
Future Volume (veh/h)	3	75	47	95	120	2	64	267	37	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	0.98		0.96	0.98		0.96	1.00		0.92			
Parking Bus, Adj	1.00	1.00	0.90	1.00	1.00	0.90	1.00	0.90	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	2067	2067	2034	2067	2067	2067	2150	2150	2150			
Adj Flow Rate, veh/h	3	84	53	107	135	2	72	300	42			
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89			
Percent Heavy Veh, %	2	2	4	2	2	2	2	2	2			
Cap, veh/h	66	552	339	389	461	6	105	439	61			
Arrive On Green	0.52	0.52	0.52	0.52	0.52	0.52	0.32	0.32	0.32			
Sat Flow, veh/h	8	1051	645	577	878	12	324	1351	189			
Grp Volume(v), veh/h	140	0	0	244	0	0	414	0	0			
Grp Sat Flow(s),veh/h/ln	1705	0	0	1467	0	0	1865	0	0			
Q Serve(g_s), s	0.0	0.0	0.0	2.4	0.0	0.0	11.6	0.0	0.0			
Cycle Q Clear(g_c), s	2.5	0.0	0.0	4.9	0.0	0.0	11.6	0.0	0.0			
Prop In Lane	0.02		0.38	0.44		0.01	0.17		0.10			
Lane Grp Cap(c), veh/h	956	0	0	856	0	0	606	0	0			
V/C Ratio(X)	0.15	0.00	0.00	0.28	0.00	0.00	0.68	0.00	0.00			
Avail Cap(c_a), veh/h	956	0	0	856	0	0	606	0	0			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	7.4	0.0	0.0	7.9	0.0	0.0	17.6	0.0	0.0			
Incr Delay (d2), s/veh	0.3	0.0	0.0	0.8	0.0	0.0	6.1	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(95%),veh/ln	1.6	0.0	0.0	3.0	0.0	0.0	9.5	0.0	0.0			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	7.7	0.0	0.0	8.7	0.0	0.0	23.7	0.0	0.0			
LnGrp LOS	A	A	A	A	A	A	C	A	A			
Approach Vol, veh/h		140			244			414				
Approach Delay, s/veh		7.7			8.7			23.7				
Approach LOS		A			A			C				
Timer - Assigned Phs		2		4				8				
Phs Duration (G+Y+Rc), s		24.0		36.0				36.0				
Change Period (Y+Rc), s		6.0		6.0				6.0				
Max Green Setting (Gmax), s		18.0		30.0				30.0				
Max Q Clear Time (g_c+I1), s		0.0		0.0				0.0				
Green Ext Time (p_c), s		0.0		0.0				0.0				
Intersection Summary												
HCM 6th Ctrl Delay			16.3									
HCM 6th LOS			B									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✣			✣			✣			✣	
Traffic Volume (veh/h)	7	223	200	48	224	2	313	109	41	9	100	33
Future Volume (veh/h)	7	223	200	48	224	2	313	109	41	9	100	33
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		0.97	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	0.90	1.00	1.00	0.90	1.00	1.00	0.90	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1946	2082	2133	2082	2065	2150	2018	2067	1854	2067	2002	2051
Adj Flow Rate, veh/h	8	242	217	52	243	2	340	118	45	10	109	36
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, %	14	6	3	6	7	2	5	2	15	2	6	3
Cap, veh/h	65	382	335	149	632	5	474	130	49	83	590	184
Arrive On Green	0.43	0.43	0.43	0.43	0.43	0.43	0.41	0.41	0.41	0.41	0.41	0.41
Sat Flow, veh/h	10	898	788	185	1488	11	901	313	119	46	1422	444
Grp Volume(v), veh/h	467	0	0	297	0	0	503	0	0	155	0	0
Grp Sat Flow(s),veh/h/ln	1696	0	0	1684	0	0	1333	0	0	1911	0	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	17.9	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	13.0	0.0	0.0	6.6	0.0	0.0	21.0	0.0	0.0	3.1	0.0	0.0
Prop In Lane	0.02		0.46	0.18		0.01	0.68		0.09	0.06		0.23
Lane Grp Cap(c), veh/h	782	0	0	786	0	0	654	0	0	857	0	0
V/C Ratio(X)	0.60	0.00	0.00	0.38	0.00	0.00	0.77	0.00	0.00	0.18	0.00	0.00
Avail Cap(c_a), veh/h	782	0	0	786	0	0	654	0	0	857	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	13.7	0.0	0.0	11.8	0.0	0.0	15.9	0.0	0.0	11.2	0.0	0.0
Incr Delay (d2), s/veh	3.4	0.0	0.0	1.4	0.0	0.0	8.5	0.0	0.0	0.5	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	8.9	0.0	0.0	4.9	0.0	0.0	11.3	0.0	0.0	2.3	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	17.0	0.0	0.0	13.2	0.0	0.0	24.4	0.0	0.0	11.6	0.0	0.0
LnGrp LOS	B	A	A	B	A	A	C	A	A	B	A	A
Approach Vol, veh/h		467			297			503			155	
Approach Delay, s/veh		17.0			13.2			24.4			11.6	
Approach LOS		B			B			C			B	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		30.0		30.0		30.0		30.0				
Change Period (Y+Rc), s		6.6		6.0		6.6		6.0				
Max Green Setting (Gmax), s		23.4		24.0		23.4		24.0				
Max Q Clear Time (g_c+I1), s		0.0		0.0		0.0		0.0				
Green Ext Time (p_c), s		0.0		0.0		0.0		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			18.2									
HCM 6th LOS			B									

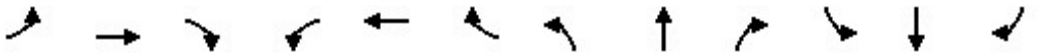
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	9	791	15	334	484	3	6	44	297	115	59	7
Future Volume (veh/h)	9	791	15	334	484	3	6	44	297	115	59	7
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.90	1.00	1.00	0.90
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1920	2067	2067	1920	2067	2067	1822	2018	2051	2067	2067	2067
Adj Flow Rate, veh/h	9	824	16	348	504	3	6	46	309	120	61	7
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	11	2	2	11	2	2	17	5	3	2	2	2
Cap, veh/h	425	1641	32	432	1197	7	44	63	392	186	83	8
Arrive On Green	0.42	0.42	0.42	0.11	0.58	0.58	0.28	0.28	0.28	0.28	0.28	0.28
Sat Flow, veh/h	828	3939	76	1828	2052	12	10	223	1383	424	294	28
Grp Volume(v), veh/h	9	411	429	348	0	507	361	0	0	188	0	0
Grp Sat Flow(s),veh/h/ln	828	1964	2051	1828	0	2065	1616	0	0	746	0	0
Q Serve(g_s), s	0.6	13.9	13.9	9.5	0.0	12.2	0.0	0.0	0.0	4.2	0.0	0.0
Cycle Q Clear(g_c), s	0.6	13.9	13.9	9.5	0.0	12.2	19.1	0.0	0.0	23.3	0.0	0.0
Prop In Lane	1.00		0.04	1.00		0.01	0.02		0.86	0.64		0.04
Lane Grp Cap(c), veh/h	425	818	855	432	0	1204	498	0	0	277	0	0
V/C Ratio(X)	0.02	0.50	0.50	0.80	0.00	0.42	0.72	0.00	0.00	0.68	0.00	0.00
Avail Cap(c_a), veh/h	425	818	855	432	0	1204	498	0	0	277	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	0.80	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	15.5	19.4	19.4	15.1	0.0	10.4	30.1	0.0	0.0	31.9	0.0	0.0
Incr Delay (d2), s/veh	0.1	2.2	2.1	10.6	0.0	1.1	7.2	0.0	0.0	12.6	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.2	10.9	11.3	8.7	0.0	9.4	12.4	0.0	0.0	8.6	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	15.6	21.6	21.5	25.7	0.0	11.4	37.3	0.0	0.0	44.5	0.0	0.0
LnGrp LOS	B	C	C	C	A	B	D	A	A	D	A	A
Approach Vol, veh/h		849			855			361			188	
Approach Delay, s/veh		21.5			17.2			37.3			44.5	
Approach LOS		C			B			D			D	

Timer - Assigned Phs	2	3	4	6	8
Phs Duration (G+Y+Rc), s	32.0	15.0	43.0	32.0	58.0
Change Period (Y+Rc), s	* 8	7.0	* 7	* 8	* 7
Max Green Setting (Gmax), s	* 24	8.0	* 36	* 24	* 51
Max Q Clear Time (g_c+I1), s	21.1	11.5	15.9	25.3	14.2
Green Ext Time (p_c), s	0.4	0.0	2.2	0.0	1.4

Intersection Summary	
HCM 6th Ctrl Delay	24.3
HCM 6th LOS	C

Notes

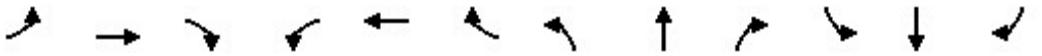
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	12	212	8	115	333	13	16	343	198	11	59	79
Future Volume (veh/h)	12	212	8	115	333	13	16	343	198	11	59	79
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.96	0.99		0.96	0.99		0.95	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	2067	2034	2067	2051	2067	2067	2082	2150	2116	2067	2067	2150
Adj Flow Rate, veh/h	13	233	9	126	366	14	18	377	218	12	65	87
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	4	2	3	2	2	6	2	4	2	2	2
Cap, veh/h	73	948	35	249	692	25	479	457	264	177	285	381
Arrive On Green	0.17	0.17	0.17	0.51	0.51	0.51	0.36	0.36	0.36	0.36	0.36	0.36
Sat Flow, veh/h	38	1870	70	363	1365	49	1227	1253	725	819	781	1046
Grp Volume(v), veh/h	255	0	0	506	0	0	18	0	595	12	0	152
Grp Sat Flow(s),veh/h/ln	1978	0	0	1778	0	0	1227	0	1978	819	0	1827
Q Serve(g_s), s	0.0	0.0	0.0	4.7	0.0	0.0	0.7	0.0	19.1	0.9	0.0	4.0
Cycle Q Clear(g_c), s	7.7	0.0	0.0	12.4	0.0	0.0	4.8	0.0	19.1	20.1	0.0	4.0
Prop In Lane	0.05		0.04	0.25		0.03	1.00		0.37	1.00		0.57
Lane Grp Cap(c), veh/h	1057	0	0	966	0	0	479	0	720	177	0	666
V/C Ratio(X)	0.24	0.00	0.00	0.52	0.00	0.00	0.04	0.00	0.83	0.07	0.00	0.23
Avail Cap(c_a), veh/h	1057	0	0	966	0	0	479	0	720	177	0	666
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	17.6	0.0	0.0	11.4	0.0	0.0	17.1	0.0	20.2	29.4	0.0	15.4
Incr Delay (d2), s/veh	0.5	0.0	0.0	2.0	0.0	0.0	0.1	0.0	10.5	0.7	0.0	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	7.1	0.0	0.0	8.9	0.0	0.0	0.4	0.0	15.6	0.4	0.0	3.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.1	0.0	0.0	13.4	0.0	0.0	17.2	0.0	30.7	30.1	0.0	16.2
LnGrp LOS	B	A	A	B	A	A	B	A	C	C	A	B
Approach Vol, veh/h		255			506			613			164	
Approach Delay, s/veh		18.1			13.4			30.3			17.2	
Approach LOS		B			B			C			B	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		40.0		30.0		40.0		30.0				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		34.0		24.0		34.0		24.0				
Max Q Clear Time (g_c+I1), s		0.0		22.1		0.0		6.8				
Green Ext Time (p_c), s		0.0		0.0		0.0		0.1				

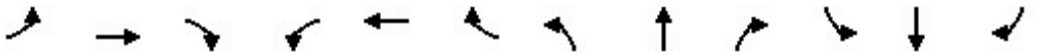
Intersection Summary												
HCM 6th Ctrl Delay			21.3									
HCM 6th LOS			C									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (veh/h)	63	455	3	3	261	12	20	14	15	15	9	59
Future Volume (veh/h)	63	455	3	3	261	12	20	14	15	15	9	59
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.98		0.97	0.99		0.95	0.98		0.97	0.98		0.95
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	2051	1953	2067	2067	1969	2067	2018	2067	2067	2067	2067	2067
Adj Flow Rate, veh/h	68	489	3	3	281	13	22	15	16	16	10	63
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	3	9	2	2	8	2	5	2	2	2	2	2
Cap, veh/h	150	954	6	63	1066	49	235	165	136	116	91	330
Arrive On Green	0.57	0.57	0.57	0.57	0.57	0.57	0.28	0.28	0.28	0.28	0.28	0.28
Sat Flow, veh/h	145	1660	10	4	1853	85	545	600	495	163	332	1200
Grp Volume(v), veh/h	560	0	0	297	0	0	53	0	0	89	0	0
Grp Sat Flow(s),veh/h/ln	1814	0	0	1943	0	0	1640	0	0	1695	0	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	10.3	0.0	0.0	4.6	0.0	0.0	1.2	0.0	0.0	2.3	0.0	0.0
Prop In Lane	0.12		0.01	0.01		0.04	0.42		0.30	0.18		0.71
Lane Grp Cap(c), veh/h	1110	0	0	1178	0	0	536	0	0	537	0	0
V/C Ratio(X)	0.50	0.00	0.00	0.25	0.00	0.00	0.10	0.00	0.00	0.17	0.00	0.00
Avail Cap(c_a), veh/h	1110	0	0	1178	0	0	536	0	0	537	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	7.6	0.0	0.0	6.4	0.0	0.0	16.2	0.0	0.0	16.6	0.0	0.0
Incr Delay (d2), s/veh	1.6	0.0	0.0	0.5	0.0	0.0	0.4	0.0	0.0	0.7	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	7.2	0.0	0.0	3.1	0.0	0.0	1.0	0.0	0.0	1.8	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	9.2	0.0	0.0	6.9	0.0	0.0	16.6	0.0	0.0	17.3	0.0	0.0
LnGrp LOS	A	A	A	A	A	A	B	A	A	B	A	A
Approach Vol, veh/h		560			297			53			89	
Approach Delay, s/veh		9.2			6.9			16.6			17.3	
Approach LOS		A			A			B			B	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		21.0		39.0		21.0		39.0				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		15.0		33.0		15.0		33.0				
Max Q Clear Time (g_c+I1), s		0.0		0.0		0.0		0.0				
Green Ext Time (p_c), s		0.0		0.0		0.0		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			9.7									
HCM 6th LOS			A									



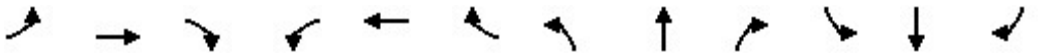
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	199	16	183	226	28	78	399	14	16	303	12
Future Volume (veh/h)	6	199	16	183	226	28	78	399	14	16	303	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.96	0.99		1.00	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.90	1.00	1.00	0.90
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1861	1669	1861	1846	1728	1787	1843	1920	1858	1935	1889	1843
Adj Flow Rate, veh/h	6	212	17	195	240	0	83	424	15	17	322	13
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	15	2	3	11	7	8	3	7	2	5	8
Cap, veh/h	59	762	60	351	401		334	603	21	65	529	21
Arrive On Green	0.51	0.51	0.51	0.17	0.17	0.00	0.36	0.36	0.36	0.36	0.36	0.36
Sat Flow, veh/h	12	1502	118	545	791	0	928	1656	59	31	1452	57
Grp Volume(v), veh/h	235	0	0	435	0	0	83	0	439	352	0	0
Grp Sat Flow(s),veh/h/ln	1632	0	0	1336	0	0	928	0	1715	1539	0	0
Q Serve(g_s), s	0.0	0.0	0.0	14.6	0.0	0.0	0.0	0.0	15.3	0.5	0.0	0.0
Cycle Q Clear(g_c), s	5.8	0.0	0.0	20.4	0.0	0.0	9.9	0.0	15.3	15.8	0.0	0.0
Prop In Lane	0.03		0.07	0.45		0.00	1.00		0.03	0.05		0.04
Lane Grp Cap(c), veh/h	881	0	0	752	0		334	0	625	615	0	0
V/C Ratio(X)	0.27	0.00	0.00	0.58	0.00		0.25	0.00	0.70	0.57	0.00	0.00
Avail Cap(c_a), veh/h	881	0	0	752	0		334	0	625	615	0	0
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	9.9	0.0	0.0	22.2	0.0	0.0	17.3	0.0	19.0	17.9	0.0	0.0
Incr Delay (d2), s/veh	0.7	0.0	0.0	3.2	0.0	0.0	1.8	0.0	6.5	3.8	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.7	0.0	0.0	12.8	0.0	0.0	2.1	0.0	11.1	8.6	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	10.7	0.0	0.0	25.5	0.0	0.0	19.1	0.0	25.5	21.7	0.0	0.0
LnGrp LOS	B	A	A	C	A		B	A	C	C	A	A
Approach Vol, veh/h		235			435			522			352	
Approach Delay, s/veh		10.7			25.5			24.5			21.7	
Approach LOS		B			C			C			C	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	40.0	30.0	40.0	30.0
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	34.0	24.0	34.0	24.0
Max Q Clear Time (g_c+I1), s	0.0	0.0	0.0	11.9
Green Ext Time (p_c), s	0.0	0.0	0.0	0.1

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

Notes

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



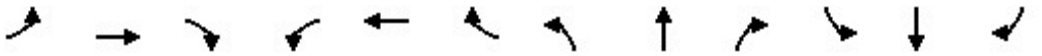
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✣			✣			✣			✣	
Traffic Volume (veh/h)	10	131	8	6	270	180	11	183	4	189	396	20
Future Volume (veh/h)	10	131	8	6	270	180	11	183	4	189	396	20
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.95	0.98		0.94	1.00		0.97	0.99		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	1936	1969	1478	1822	1985	1985	1953	2002	2067	1985	1985	2018
Adj Flow Rate, veh/h	10	136	8	6	281	188	11	191	4	197	412	21
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	10	8	38	17	7	7	9	6	2	7	7	5
Cap, veh/h	80	643	36	63	398	262	81	893	18	298	535	26
Arrive On Green	0.38	0.37	0.38	0.38	0.37	0.38	0.47	0.47	0.47	0.47	0.47	0.47
Sat Flow, veh/h	44	1747	98	7	1081	713	37	1880	38	462	1126	55
Grp Volume(v), veh/h	154	0	0	475	0	0	206	0	0	630	0	0
Grp Sat Flow(s),veh/h/ln	1889	0	0	1800	0	0	1955	0	0	1643	0	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15.5	0.0	0.0
Cycle Q Clear(g_c), s	3.2	0.0	0.0	13.3	0.0	0.0	3.6	0.0	0.0	19.2	0.0	0.0
Prop In Lane	0.06		0.05	0.01		0.40	0.05		0.02	0.31		0.03
Lane Grp Cap(c), veh/h	791	0	0	754	0	0	992	0	0	859	0	0
V/C Ratio(X)	0.19	0.00	0.00	0.63	0.00	0.00	0.21	0.00	0.00	0.73	0.00	0.00
Avail Cap(c_a), veh/h	791	0	0	754	0	0	992	0	0	859	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	13.0	0.0	0.0	16.0	0.0	0.0	9.2	0.0	0.0	13.0	0.0	0.0
Incr Delay (d2), s/veh	0.5	0.0	0.0	4.0	0.0	0.0	0.5	0.0	0.0	5.5	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.5	0.0	0.0	9.5	0.0	0.0	2.7	0.0	0.0	11.8	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.5	0.0	0.0	20.0	0.0	0.0	9.7	0.0	0.0	18.5	0.0	0.0
LnGrp LOS	B	A	A	B	A	A	A	A	A	B	A	A
Approach Vol, veh/h		154			475			206			630	
Approach Delay, s/veh		13.5			20.0			9.7			18.5	
Approach LOS		B			B			A			B	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		33.0		27.0		33.0		27.0				
Change Period (Y+Rc), s		* 6		5.4		* 6		5.4				
Max Green Setting (Gmax), s		* 27		21.6		* 27		21.6				
Max Q Clear Time (g_c+I1), s		0.0		0.0		0.0		0.0				
Green Ext Time (p_c), s		0.0		0.0		0.0		0.0				

Intersection Summary	
HCM 6th Ctrl Delay	17.2
HCM 6th LOS	B

Notes

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



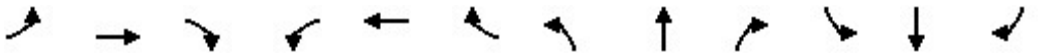
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	0	917	13	58	119	0	0	0	0
Future Volume (veh/h)	0	0	0	0	917	13	58	119	0	0	0	0
Initial Q (Qb), veh				0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)				1.00		0.97	1.00		1.00			
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach					No			No				
Adj Sat Flow, veh/h/ln				0	1992	2009	1985	2067	0			
Adj Flow Rate, veh/h				0	1092	15	69	142	0			
Peak Hour Factor				0.84	0.84	0.84	0.84	0.84	0.84			
Percent Heavy Veh, %				0	3	2	7	2	0			
Cap, veh/h				0	2261	31	197	362	0			
Arrive On Green				0.00	0.59	0.59	0.26	0.26	0.00			
Sat Flow, veh/h				0	3921	52	456	1402	0			
Grp Volume(v), veh/h				0	541	566	211	0	0			
Grp Sat Flow(s),veh/h/ln				0	1893	1981	1858	0	0			
Q Serve(g_s), s				0.0	9.8	9.8	1.9	0.0	0.0			
Cycle Q Clear(g_c), s				0.0	9.8	9.8	5.3	0.0	0.0			
Prop In Lane				0.00		0.03	0.33		0.00			
Lane Grp Cap(c), veh/h				0	1120	1172	560	0	0			
V/C Ratio(X)				0.00	0.48	0.48	0.38	0.00	0.00			
Avail Cap(c_a), veh/h				0	1120	1172	560	0	0			
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)				0.00	1.00	1.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh				0.0	7.0	7.0	18.4	0.0	0.0			
Incr Delay (d2), s/veh				0.0	1.5	1.4	1.9	0.0	0.0			
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(95%),veh/ln				0.0	6.2	6.4	4.6	0.0	0.0			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				0.0	8.5	8.4	20.3	0.0	0.0			
LnGrp LOS				A	A	A	C	A	A			
Approach Vol, veh/h					1107			211				
Approach Delay, s/veh					8.5			20.3				
Approach LOS					A			C				

Timer - Assigned Phs	2	4
Phs Duration (G+Y+Rc), s	20.0	40.0
Change Period (Y+Rc), s	6.0	* 6
Max Green Setting (Gmax), s	14.0	* 34
Max Q Clear Time (g_c+I1), s	0.0	0.0
Green Ext Time (p_c), s	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	10.4
HCM 6th LOS	B

Notes

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	143	200	0	0	141	13	36	178	38	0	0	0
Future Volume (veh/h)	143	200	0	0	141	13	36	178	38	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	0.98		1.00	1.00		0.96	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	2034	2067	0	0	2051	1969	2067	2034	2051			
Adj Flow Rate, veh/h	159	222	0	0	157	14	40	198	0			
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90			
Percent Heavy Veh, %	4	2	0	0	3	8	2	4	3			
Cap, veh/h	414	556	0	0	1007	90	97	478				
Arrive On Green	1.00	1.00	0.00	0.00	1.00	1.00	0.29	0.29	0.00			
Sat Flow, veh/h	604	1020	0	0	1848	165	339	1678	0			
Grp Volume(v), veh/h	381	0	0	0	0	171	238	0	0			
Grp Sat Flow(s),veh/h/ln	1624	0	0	0	0	2013	2018	0	0			
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	5.7	0.0	0.0			
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	5.7	0.0	0.0			
Prop In Lane	0.42		0.00	0.00		0.08	0.17		0.00			
Lane Grp Cap(c), veh/h	970	0	0	0	0	1097	575	0				
V/C Ratio(X)	0.39	0.00	0.00	0.00	0.00	0.16	0.41	0.00				
Avail Cap(c_a), veh/h	970	0	0	0	0	1097	575	0				
HCM Platoon Ratio	2.00	2.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	0.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	17.4	0.0	0.0			
Incr Delay (d2), s/veh	1.2	0.0	0.0	0.0	0.0	0.3	2.2	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(95%),veh/ln	0.6	0.0	0.0	0.0	0.0	0.2	5.1	0.0	0.0			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	1.2	0.0	0.0	0.0	0.0	0.3	19.6	0.0	0.0			
LnGrp LOS	A	A	A	A	A	A	B	A				
Approach Vol, veh/h		381			171			238				
Approach Delay, s/veh		1.2			0.3			19.6				
Approach LOS		A			A			B				
Timer - Assigned Phs		2		4				8				
Phs Duration (G+Y+Rc), s		22.2		37.8				37.8				
Change Period (Y+Rc), s		6.6		6.6				6.6				
Max Green Setting (Gmax), s		15.6		31.2				31.2				
Max Q Clear Time (g_c+I1), s		0.0		0.0				0.0				
Green Ext Time (p_c), s		0.0		0.0				0.0				

Intersection Summary	
HCM 6th Ctrl Delay	6.5
HCM 6th LOS	A

Notes

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

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	7:15	7:15	7:15	7:15	7:15	7:15
End Time	8:30	8:30	8:30	8:30	8:30	8:30
Total Time (min)	75	75	75	75	75	75
Time Recorded (min)	60	60	60	60	60	60
# of Intervals	2	2	2	2	2	2
# of Recorded Intervals	1	1	1	1	1	1
Vehs Entered	11061	11082	11040	11174	11088	11091
Vehs Exited	10942	10997	11040	11103	10986	11014
Starting Vehs	313	311	343	351	308	317
Ending Vehs	432	396	343	422	410	399
Travel Distance (mi)	4305	4324	4286	4340	4292	4309
Travel Time (hr)	334.9	428.6	385.0	357.1	342.0	369.5
Total Delay (hr)	165.7	258.5	216.2	186.5	172.9	200.0
Total Stops	16807	17541	16672	17177	16626	16959
Fuel Used (gal)	199.3	220.6	210.2	205.6	200.6	207.2

Interval #0 Information Seeding

Start Time	7:15
End Time	7:30
Total Time (min)	15

Volumes adjusted by Growth Factors.

No data recorded this interval.

Interval #1 Information Recording

Start Time	7:30
End Time	8:30
Total Time (min)	60

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	Avg
Vehs Entered	11061	11082	11040	11174	11088	11091
Vehs Exited	10942	10997	11040	11103	10986	11014
Starting Vehs	313	311	343	351	308	317
Ending Vehs	432	396	343	422	410	399
Travel Distance (mi)	4305	4324	4286	4340	4292	4309
Travel Time (hr)	334.9	428.6	385.0	357.1	342.0	369.5
Total Delay (hr)	165.7	258.5	216.2	186.5	172.9	200.0
Total Stops	16807	17541	16672	17177	16626	16959
Fuel Used (gal)	199.3	220.6	210.2	205.6	200.6	207.2

Arterial Level of Service: NB 46th St

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Woodland Ave	69	15.0	31.6	0.1	14
Kingsessing Ave	2	24.0	38.1	0.1	12
Total		39.0	69.7	0.3	13

Arterial Level of Service: SB 46th St

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Kingsessing Ave	2	16.1	26.6	0.1	11
Woodland Ave	69	29.3	46.0	0.1	10
Total		45.3	72.6	0.2	10

Arterial Level of Service: EB Kingsessing Ave

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
49th St	54	19.5	31.9	0.1	10
48th St	4	12.6	25.2	0.1	13
47th St	59	17.0	29.5	0.1	11
46th St	2	16.3	29.5	0.1	11
Total		65.5	116.0	0.4	11

Arterial Level of Service: WB Kingsessing Ave

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
46th St	2	9.2	20.8	0.1	15
47th St	59	14.5	26.0	0.1	13
48th St	4	6.2	19.4	0.1	17
49th St	54	21.2	34.1	0.1	10
Total		51.1	100.3	0.4	13

Arterial Level of Service: EB Baltimore Ave

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
49th St	18	14.6	29.1	0.1	14
Florence Ave	3	19.1	31.9	0.1	12
47th St	92	11.6	26.4	0.1	15
46th St	19	19.1	32.2	0.1	13
Cedar Ave	47	1.4	7.4	0.0	19
Total		65.8	127.1	0.5	14

Arterial Level of Service: WB Baltimore Ave

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Cedar Ave	47	0.3	10.4	0.1	26
46th St	19	15.6	20.2	0.0	7
47th St	92	11.6	26.9	0.1	15
48th St	3	11.4	25.3	0.1	16
49th St	18	8.0	21.1	0.1	18
Total		46.8	103.9	0.4	16

Arterial Level of Service: NB 48th St

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Woodland Ave	70	30.9	44.2	0.1	6
	71	1.6	6.8	0.0	20
Total		32.5	50.9	0.1	8

Arterial Level of Service: SE 48th St

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Woodland Ave	70	38.1	47.6	0.0	3
Grays Ferry	72	3.0	14.1	0.1	19
Total		41.0	61.7	0.1	7

Arterial Level of Service: NB 49th St

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Paschall Ave	62	18.6	26.4	0.1	9
Woodland Ave	57	23.2	30.9	0.1	11
Greenway Ave	74	13.3	27.3	0.1	13
Kingsessing Ave	54	11.3	26.9	0.1	15
Total		66.5	111.5	0.4	12

Arterial Level of Service: SB 49th St

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Kingsessing Ave	54	63.9	200.0	0.1	5
Greenway Ave	74	72.8	87.8	0.1	5
Woodland Ave	57	150.7	169.4	0.1	2
Paschall Ave	62	10.0	20.3	0.1	17
Total		297.3	477.6	0.4	4

Intersection: 2: 46th St & Kingsessing Ave

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	167	47	95	165
Average Queue (ft)	95	11	47	56
95th Queue (ft)	156	39	84	116
Link Distance (ft)	396	421	594	378
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 3: Florence Ave & 48th St & Baltimore Ave

Movement	EB	WB	NB	NB	SB
Directions Served	LTR>	<LTR	<L	TR	LTR>
Maximum Queue (ft)	227	100	104	257	312
Average Queue (ft)	120	39	58	96	135
95th Queue (ft)	202	84	106	196	252
Link Distance (ft)	390	479		1064	363
Upstream Blk Time (%)					0
Queuing Penalty (veh)					0
Storage Bay Dist (ft)			80		
Storage Blk Time (%)			9	10	
Queuing Penalty (veh)			19	6	

Intersection: 4: Kingsessing Ave & 48th St

Movement	EB	WB	SB
Directions Served	LT	TR	LR
Maximum Queue (ft)	246	76	108
Average Queue (ft)	70	36	41
95th Queue (ft)	168	62	78
Link Distance (ft)	421	404	492
Upstream Blk Time (%)	0		
Queuing Penalty (veh)	1		
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 5: Farragut St & Walnut St

Movement	WB	WB	NB	SB
Directions Served	T	TR	LT	R
Maximum Queue (ft)	100	96	125	94
Average Queue (ft)	54	44	60	43
95th Queue (ft)	91	83	105	75
Link Distance (ft)	212	212	408	399
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 18: 49th St & Baltimore Ave & Catharine St

Movement	EB	WB	NB	NB	SB
Directions Served	<LTR	LTR>	<L	TR	LTR>
Maximum Queue (ft)	235	138	48	326	213
Average Queue (ft)	99	46	38	110	114
95th Queue (ft)	185	102	57	242	189
Link Distance (ft)	508	390		1404	506
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)			20		
Storage Blk Time (%)			47	38	
Queuing Penalty (veh)			83	38	

Intersection: 19: 46th St & Baltimore Ave

Movement	EB	WB	NB	SB	SB
Directions Served	LTR	LTR	LTR	L	TR
Maximum Queue (ft)	248	110	181	69	80
Average Queue (ft)	117	40	86	29	45
95th Queue (ft)	200	81	145	58	70
Link Distance (ft)	495	96	397	43	43
Upstream Blk Time (%)		1		5	19
Queuing Penalty (veh)		1		9	33
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 42: 48th St & Walnut St

Movement	WB	WB	NB	SB
Directions Served	LT	TR	LT	TR
Maximum Queue (ft)	84	60	293	258
Average Queue (ft)	29	16	133	135
95th Queue (ft)	70	47	234	223
Link Distance (ft)	503	503	386	472
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 43: 46th St & Walnut St

Movement	WB	WB	NB	SB
Directions Served	LT	TR	LT	TR
Maximum Queue (ft)	184	148	160	133
Average Queue (ft)	112	63	78	66
95th Queue (ft)	170	119	128	114
Link Distance (ft)	517	517	394	502
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 45: 46th St & Cedar Ave

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LT	TR
Maximum Queue (ft)	126	65	90	222
Average Queue (ft)	47	21	15	110
95th Queue (ft)	90	51	54	188
Link Distance (ft)	209	136	43	558
Upstream Blk Time (%)			1	
Queuing Penalty (veh)			2	
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 47: Baltimore Ave & Cedar Ave

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 48: 48th St & Chestnut St

Movement	EB	EB	EB	NB	SB
Directions Served	L	T	TR	TR	LT
Maximum Queue (ft)	140	324	315	264	302
Average Queue (ft)	78	162	162	165	152
95th Queue (ft)	156	296	280	240	257
Link Distance (ft)		471	471	472	512
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)	100				
Storage Blk Time (%)	1	18			
Queuing Penalty (veh)	8	29			

Intersection: 49: 49th St & Chestnut St

Movement	EB	EB	NB	SB
Directions Served	LT	TR	TR	LT
Maximum Queue (ft)	322	280	148	198
Average Queue (ft)	205	154	65	97
95th Queue (ft)	298	247	118	170
Link Distance (ft)	510	510	516	501
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 54: 49th St & Kingsessing Ave

Movement	EB	WB	NB	SB	SB
Directions Served	LTR	LTR	LTR	L	TR
Maximum Queue (ft)	221	142	265	40	431
Average Queue (ft)	83	54	104	5	275
95th Queue (ft)	167	119	199	25	581
Link Distance (ft)	441	421	506		490
Upstream Blk Time (%)					32
Queuing Penalty (veh)					0
Storage Bay Dist (ft)				20	
Storage Blk Time (%)				2	54
Queuing Penalty (veh)				7	4

Intersection: 57: 49th St & Woodland Ave

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	171	160	257	444
Average Queue (ft)	85	66	142	329
95th Queue (ft)	145	129	231	531
Link Distance (ft)	402	88	408	432
Upstream Blk Time (%)		3		14
Queuing Penalty (veh)		5		33
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 59: 47th St & Kingsessing Ave

Movement	EB	WB	NB
Directions Served	LTR	LTR	LTR
Maximum Queue (ft)	197	177	228
Average Queue (ft)	90	58	122
95th Queue (ft)	210	153	196
Link Distance (ft)	404	396	660
Upstream Blk Time (%)	3	1	
Queuing Penalty (veh)	7	2	
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 60: 47th St & Paschall Ave

Movement	EB	WB	NB	B77	SB
Directions Served	LT	TR	LTR	T	LTR
Maximum Queue (ft)	60	59	132	131	79
Average Queue (ft)	31	11	95	55	35
95th Queue (ft)	57	40	130	135	63
Link Distance (ft)	58	392	25	8	723
Upstream Blk Time (%)	1		68	20	
Queuing Penalty (veh)	1		401	120	
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 62: 49th St & Paschall Ave

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	403	149	245	142
Average Queue (ft)	218	62	121	45
95th Queue (ft)	386	129	203	107
Link Distance (ft)	402	620	318	408
Upstream Blk Time (%)	4		0	
Queuing Penalty (veh)	0		0	
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 66: Paschall Ave & Grays Ferry Ave

Movement	EB	EB	WB	WB	NE	SW
Directions Served	T	TR	L	TR	LTR	LTR
Maximum Queue (ft)	236	250	254	230	561	76
Average Queue (ft)	149	158	148	116	293	39
95th Queue (ft)	225	230	255	195	589	82
Link Distance (ft)	256	256	168	168	620	58
Upstream Blk Time (%)	0	0	16	1	1	12
Queuing Penalty (veh)	0	0	52	5	3	12
Storage Bay Dist (ft)						
Storage Blk Time (%)	38					
Queuing Penalty (veh)	0					

Intersection: 67: Grays Ferry & Woodland Ave

Movement	WB
Directions Served	LT
Maximum Queue (ft)	65
Average Queue (ft)	9
95th Queue (ft)	39
Link Distance (ft)	243
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 68: 47th St & Woodland Ave

Movement	EB	WB	NB	NB	SB	SB
Directions Served	LTR	LTR	L	TR	L	TR
Maximum Queue (ft)	248	214	8	722	68	301
Average Queue (ft)	126	95	0	487	41	104
95th Queue (ft)	218	173	5	845	85	393
Link Distance (ft)	394	398		723		660
Upstream Blk Time (%)				5		4
Queuing Penalty (veh)				35		6
Storage Bay Dist (ft)			20		50	
Storage Blk Time (%)			0	64	52	1
Queuing Penalty (veh)			1	2	20	0

Intersection: 69: 46th St & Woodland Ave

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	308	145	70	96
Average Queue (ft)	171	60	25	43
95th Queue (ft)	272	114	61	82
Link Distance (ft)	398	447	611	594
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 70: 48th St & Woodland Ave

Movement	EB	WB	NB	NB	SB	B71	B76
Directions Served	LTR	LTR	L	TR	LTR	T	T
Maximum Queue (ft)	174	212	51	372	211	244	173
Average Queue (ft)	90	114	28	184	166	104	52
95th Queue (ft)	157	189	56	357	225	261	220
Link Distance (ft)	243	394		303	115	157	285
Upstream Blk Time (%)				6	47	21	4
Queuing Penalty (veh)				25	195	87	17
Storage Bay Dist (ft)			20				
Storage Blk Time (%)			40	41			
Queuing Penalty (veh)			139	26			

Intersection: 72: Grays Ferry/Grays Ferry Ave & 48th St

Movement	EB	WB
Directions Served	LT	R
Maximum Queue (ft)	166	89
Average Queue (ft)	81	7
95th Queue (ft)	140	49
Link Distance (ft)	315	256
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 74: 49th St & Greenway Ave

Movement	EB	WB	B76	B71	NB	SB
Directions Served	LTR	LTR	T	T	LTR	LTR
Maximum Queue (ft)	264	299	82	25	156	510
Average Queue (ft)	111	123	6	1	73	324
95th Queue (ft)	260	260	63	19	139	606
Link Distance (ft)	402	285	157	115	432	506
Upstream Blk Time (%)	1	3	1	0		12
Queuing Penalty (veh)	0	9	3	0		59
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 79: Grays Ferry Ave

Movement	WB	WB	WB
Directions Served	T	T	R
Maximum Queue (ft)	546	752	276
Average Queue (ft)	70	122	76
95th Queue (ft)	395	541	261
Link Distance (ft)	1522	1522	
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			76
Storage Blk Time (%)		1	24
Queuing Penalty (veh)		3	79

Intersection: 88: 47th St & Walnut St

Movement	WB	WB	NB
Directions Served	T	TR	LT
Maximum Queue (ft)	120	113	159
Average Queue (ft)	59	62	82
95th Queue (ft)	100	103	134
Link Distance (ft)	210	210	377
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 89: 47th St/Rite-Aid Drwy & Chestnut St

Movement	EB	EB	NB
Directions Served	LT	T	TR
Maximum Queue (ft)	82	93	111
Average Queue (ft)	34	33	57
95th Queue (ft)	64	72	102
Link Distance (ft)	504	504	460
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 92: 47th St & Baltimore Ave

Movement	EB	WB	NB
Directions Served	LT	TR	LTR
Maximum Queue (ft)	186	96	161
Average Queue (ft)	88	38	75
95th Queue (ft)	153	81	135
Link Distance (ft)	479	495	744
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Network Summary

Network wide Queuing Penalty: 1589

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	4:00	4:00	4:00	4:00	4:00	4:00
End Time	5:15	5:15	5:15	5:15	5:15	5:15
Total Time (min)	75	75	75	75	75	75
Time Recorded (min)	60	60	60	60	60	60
# of Intervals	2	2	2	2	2	2
# of Recorded Intervals	1	1	1	1	1	1
Vehs Entered	12627	12526	12745	12603	12464	12597
Vehs Exited	12425	12536	12556	12557	12434	12500
Starting Vehs	335	427	366	400	370	374
Ending Vehs	537	417	555	446	400	455
Travel Distance (mi)	4621	4625	4671	4665	4608	4638
Travel Time (hr)	485.0	442.3	439.1	452.5	461.9	456.2
Total Delay (hr)	302.7	259.8	255.1	268.2	280.1	273.2
Total Stops	20828	19705	19751	20078	19197	19906
Fuel Used (gal)	242.8	233.2	233.4	237.1	236.0	236.5

Interval #0 Information Seeding

Start Time	4:00
End Time	4:15
Total Time (min)	15

Volumes adjusted by Growth Factors.

No data recorded this interval.

Interval #1 Information Recording

Start Time	4:15
End Time	5:15
Total Time (min)	60

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	Avg
Vehs Entered	12627	12526	12745	12603	12464	12597
Vehs Exited	12425	12536	12556	12557	12434	12500
Starting Vehs	335	427	366	400	370	374
Ending Vehs	537	417	555	446	400	455
Travel Distance (mi)	4621	4625	4671	4665	4608	4638
Travel Time (hr)	485.0	442.3	439.1	452.5	461.9	456.2
Total Delay (hr)	302.7	259.8	255.1	268.2	280.1	273.2
Total Stops	20828	19705	19751	20078	19197	19906
Fuel Used (gal)	242.8	233.2	233.4	237.1	236.0	236.5

Arterial Level of Service: NB 46th St

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Woodland Ave	69	15.6	33.3	0.1	13
Kingsessing Ave	2	22.3	34.9	0.1	13
Total		38.0	68.3	0.3	13

Arterial Level of Service: SB 46th St

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Kingsessing Ave	2	16.7	27.4	0.1	11
Woodland Ave	69	32.8	50.2	0.1	9
Total		49.5	77.7	0.2	10

Arterial Level of Service: EB Kingsessing Ave

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
49th St	54	16.4	28.8	0.1	11
48th St	4	7.1	20.3	0.1	16
47th St	59	9.4	21.1	0.1	16
46th St	2	15.5	28.7	0.1	12
Total		48.5	98.9	0.4	13

Arterial Level of Service: WB Kingsessing Ave

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
46th St	2	7.8	19.6	0.1	16
47th St	59	10.9	23.3	0.1	14
48th St	4	6.1	18.5	0.1	18
49th St	54	29.5	43.1	0.1	8
Total		54.3	104.4	0.4	13

Arterial Level of Service: EB Baltimore Ave

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
49th St	18	71.3	90.3	0.1	5
Florence Ave	3	25.0	37.0	0.1	11
47th St	92	12.1	25.7	0.1	16
46th St	19	15.6	30.8	0.1	13
Cedar Ave	47	1.3	7.3	0.0	19
Total		125.3	191.1	0.5	9

Arterial Level of Service: WB Baltimore Ave

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Cedar Ave	47	0.7	11.0	0.1	25
46th St	19	15.1	19.7	0.0	7
47th St	92	7.9	20.6	0.1	20
48th St	3	24.5	37.2	0.1	11
49th St	18	22.3	37.5	0.1	10
Total		70.5	126.0	0.4	13

Arterial Level of Service: NB 48th St

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Woodland Ave	70	33.2	46.2	0.1	6
	71	1.5	6.6	0.0	20
Total		34.7	52.8	0.1	8

Arterial Level of Service: SE 48th St

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Woodland Ave	70	24.4	29.6	0.0	5
Grays Ferry	72	2.7	13.6	0.1	20
Total		27.1	43.2	0.1	9

Arterial Level of Service: NB 49th St

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Paschall Ave	62	32.0	40.8	0.1	6
Woodland Ave	57	24.4	32.8	0.1	11
Greenway Ave	74	14.1	27.0	0.1	13
Kingsessing Ave	54	14.5	28.7	0.1	14
Total		84.9	129.4	0.4	11

Arterial Level of Service: SB 49th St

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Kingsessing Ave	54	51.6	111.3	0.1	5
Greenway Ave	74	68.1	104.0	0.1	5
Woodland Ave	57	96.8	109.8	0.1	3
Paschall Ave	62	7.4	16.7	0.1	21
Total		223.9	341.9	0.4	5

Intersection: 2: 46th St & Kingsessing Ave

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	96	89	104	182
Average Queue (ft)	47	36	43	70
95th Queue (ft)	88	76	84	128
Link Distance (ft)	396	421	594	378
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 3: Florence Ave & 48th St & Baltimore Ave

Movement	EB	WB	NB	NB	SB
Directions Served	LTR>	<LTR	<L	TR	LTR>
Maximum Queue (ft)	265	322	105	1103	345
Average Queue (ft)	137	107	102	846	170
95th Queue (ft)	241	245	109	1311	311
Link Distance (ft)	390	479		1064	363
Upstream Blk Time (%)				29	4
Queuing Penalty (veh)				0	0
Storage Bay Dist (ft)			80		
Storage Blk Time (%)			85	24	
Queuing Penalty (veh)			161	24	

Intersection: 4: Kingsessing Ave & 48th St

Movement	EB	WB	SB
Directions Served	LT	TR	LR
Maximum Queue (ft)	78	89	128
Average Queue (ft)	43	46	45
95th Queue (ft)	67	72	99
Link Distance (ft)	421	404	492
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 5: Farragut St & Walnut St

Movement	WB	WB	NB	SB
Directions Served	T	TR	LT	R
Maximum Queue (ft)	225	208	78	78
Average Queue (ft)	157	134	35	40
95th Queue (ft)	224	205	70	70
Link Distance (ft)	212	212	408	399
Upstream Blk Time (%)	1	0		
Queuing Penalty (veh)	4	1		
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 18: 49th St & Baltimore Ave & Catharine St

Movement	EB	WB	NB	NB	SB
Directions Served	<LTR	LTR>	<L	TR	LTR>
Maximum Queue (ft)	528	354	54	655	332
Average Queue (ft)	249	128	42	276	155
95th Queue (ft)	503	289	55	677	274
Link Distance (ft)	508	390		1404	506
Upstream Blk Time (%)	8	0			
Queuing Penalty (veh)	0	1			
Storage Bay Dist (ft)			20		
Storage Blk Time (%)			72	36	
Queuing Penalty (veh)			108	42	

Intersection: 19: 46th St & Baltimore Ave

Movement	EB	WB	NB	SB	SB
Directions Served	LTR	LTR	LTR	L	TR
Maximum Queue (ft)	186	150	188	57	93
Average Queue (ft)	74	78	83	27	63
95th Queue (ft)	141	133	155	52	88
Link Distance (ft)	495	96	397	43	43
Upstream Blk Time (%)		3		4	38
Queuing Penalty (veh)		8		8	76
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 42: 48th St & Walnut St

Movement	WB	WB	NB	SB
Directions Served	LT	TR	LT	TR
Maximum Queue (ft)	115	116	299	325
Average Queue (ft)	56	48	142	177
95th Queue (ft)	101	101	251	290
Link Distance (ft)	503	503	386	472
Upstream Blk Time (%)			0	
Queuing Penalty (veh)			0	
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 43: 46th St & Walnut St

Movement	WB	WB	NB	SB
Directions Served	LT	TR	LT	TR
Maximum Queue (ft)	203	174	145	144
Average Queue (ft)	122	67	76	65
95th Queue (ft)	184	136	122	113
Link Distance (ft)	517	517	394	502
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 45: 46th St & Cedar Ave

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LT	TR
Maximum Queue (ft)	67	134	104	436
Average Queue (ft)	29	47	37	217
95th Queue (ft)	59	94	97	400
Link Distance (ft)	209	136	43	558
Upstream Blk Time (%)		0	4	0
Queuing Penalty (veh)		0	6	0
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 47: Baltimore Ave & Cedar Ave

Movement	WB
Directions Served	TR
Maximum Queue (ft)	39
Average Queue (ft)	2
95th Queue (ft)	23
Link Distance (ft)	364
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 48: 48th St & Chestnut St

Movement	EB	EB	EB	NB	SB
Directions Served	L	T	TR	TR	LT
Maximum Queue (ft)	140	288	292	251	297
Average Queue (ft)	69	153	152	170	152
95th Queue (ft)	147	273	266	247	252
Link Distance (ft)		471	471	472	512
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)	100				
Storage Blk Time (%)	1	18			
Queuing Penalty (veh)	4	25			

Intersection: 49: 49th St & Chestnut St

Movement	EB	EB	NB	SB
Directions Served	LT	TR	TR	LT
Maximum Queue (ft)	251	213	147	176
Average Queue (ft)	157	103	68	95
95th Queue (ft)	226	178	117	156
Link Distance (ft)	510	510	516	501
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 54: 49th St & Kingsessing Ave

Movement	EB	WB	NB	SB	SB
Directions Served	LTR	LTR	LTR	L	TR
Maximum Queue (ft)	144	261	238	41	526
Average Queue (ft)	53	99	111	6	291
95th Queue (ft)	105	219	205	27	547
Link Distance (ft)	441	421	506		490
Upstream Blk Time (%)		1			21
Queuing Penalty (veh)		2			0
Storage Bay Dist (ft)				20	
Storage Blk Time (%)				2	57
Queuing Penalty (veh)				12	7

Intersection: 57: 49th St & Woodland Ave

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	196	165	227	447
Average Queue (ft)	100	88	124	365
95th Queue (ft)	170	147	213	517
Link Distance (ft)	402	88	408	432
Upstream Blk Time (%)		9		12
Queuing Penalty (veh)		22		49
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 59: 47th St & Kingsessing Ave

Movement	EB	WB	NB
Directions Served	LTR	LTR	LTR
Maximum Queue (ft)	96	167	249
Average Queue (ft)	43	81	143
95th Queue (ft)	79	142	229
Link Distance (ft)	404	396	660
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 60: 47th St & Paschall Ave

Movement	EB	WB	NB	B77	SB
Directions Served	LT	TR	LTR	T	LTR
Maximum Queue (ft)	54	35	135	131	228
Average Queue (ft)	18	11	94	55	88
95th Queue (ft)	41	35	130	134	186
Link Distance (ft)	58	392	25	8	723
Upstream Blk Time (%)	0		65	19	
Queuing Penalty (veh)	0		397	118	
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 62: 49th St & Paschall Ave

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	279	369	328	108
Average Queue (ft)	131	136	205	50
95th Queue (ft)	227	327	330	95
Link Distance (ft)	402	620	318	408
Upstream Blk Time (%)		1	5	
Queuing Penalty (veh)		3	0	
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 66: Paschall Ave & Grays Ferry Ave

Movement	EB	EB	EB	WB	WB	NE	SW
Directions Served	L	T	TR	L	TR	LTR	LTR
Maximum Queue (ft)	98	245	238	284	238	366	77
Average Queue (ft)	5	153	164	248	137	159	67
95th Queue (ft)	41	221	230	287	246	314	90
Link Distance (ft)		256	256	168	168	620	58
Upstream Blk Time (%)		0	0	81	4		41
Queuing Penalty (veh)		0	0	331	18		84
Storage Bay Dist (ft)	50						
Storage Blk Time (%)		42					
Queuing Penalty (veh)		4					

Intersection: 67: Grays Ferry & Woodland Ave

Movement	EB	WB
Directions Served	TR	LT
Maximum Queue (ft)	6	120
Average Queue (ft)	0	32
95th Queue (ft)	4	89
Link Distance (ft)	88	243
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 68: 47th St & Woodland Ave

Movement	EB	WB	NB	NB	SB	SB
Directions Served	LTR	LTR	L	TR	L	TR
Maximum Queue (ft)	159	300	45	534	73	186
Average Queue (ft)	81	161	7	295	16	50
95th Queue (ft)	141	267	29	534	53	124
Link Distance (ft)	394	398		723		660
Upstream Blk Time (%)				1		
Queuing Penalty (veh)				4		
Storage Bay Dist (ft)			20		50	
Storage Blk Time (%)			5	59	8	9
Queuing Penalty (veh)			30	9	11	1

Intersection: 69: 46th St & Woodland Ave

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	275	174	69	100
Average Queue (ft)	150	74	25	48
95th Queue (ft)	253	137	56	91
Link Distance (ft)	398	447	611	594
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 70: 48th St & Woodland Ave

Movement	EB	WB	NB	NB	SB	B71	B76
Directions Served	LTR	LTR	L	TR	LTR	T	T
Maximum Queue (ft)	199	413	54	378	210	145	25
Average Queue (ft)	75	220	32	223	126	18	1
95th Queue (ft)	143	372	57	390	202	97	19
Link Distance (ft)	243	394		303	115	157	285
Upstream Blk Time (%)	0	1		8	15	2	
Queuing Penalty (veh)	0	5		39	49	5	
Storage Bay Dist (ft)			20				
Storage Blk Time (%)			31	47			
Queuing Penalty (veh)			129	36			

Intersection: 72: Grays Ferry/Grays Ferry Ave & 48th St

Movement	EB	WB	SE
Directions Served	LT	R	L
Maximum Queue (ft)	294	159	4
Average Queue (ft)	129	15	0
95th Queue (ft)	230	84	4
Link Distance (ft)	315	256	303
Upstream Blk Time (%)	0	0	
Queuing Penalty (veh)	2	0	
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 74: 49th St & Greenway Ave

Movement	EB	WB	B76	NB	SB
Directions Served	LTR	LTR	T	LTR	LTR
Maximum Queue (ft)	328	347	50	187	519
Average Queue (ft)	85	183	2	81	419
95th Queue (ft)	208	320	24	148	616
Link Distance (ft)	402	285	157	432	506
Upstream Blk Time (%)	1	3			10
Queuing Penalty (veh)	0	12			62
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 79: Grays Ferry Ave

Movement	EB	WB	WB	WB
Directions Served	T	T	T	R
Maximum Queue (ft)	11	886	920	276
Average Queue (ft)	0	310	294	98
95th Queue (ft)	8	1063	1100	298
Link Distance (ft)	168	1522	1522	
Upstream Blk Time (%)		3	6	
Queuing Penalty (veh)		0	0	
Storage Bay Dist (ft)				76
Storage Blk Time (%)			3	19
Queuing Penalty (veh)			21	76

Intersection: 88: 47th St & Walnut St

Movement	WB	WB	NB
Directions Served	T	TR	LT
Maximum Queue (ft)	190	209	152
Average Queue (ft)	93	102	70
95th Queue (ft)	162	174	121
Link Distance (ft)	210	210	377
Upstream Blk Time (%)	0	0	
Queuing Penalty (veh)	0	1	
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 89: 47th St/Rite-Aid Drwy & Chestnut St

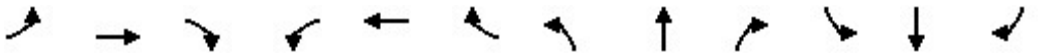
Movement	EB	EB	NB
Directions Served	LT	T	TR
Maximum Queue (ft)	60	78	157
Average Queue (ft)	22	27	62
95th Queue (ft)	51	62	123
Link Distance (ft)	504	504	460
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 92: 47th St & Baltimore Ave

Movement	EB	WB	NB
Directions Served	LT	TR	LTR
Maximum Queue (ft)	173	114	199
Average Queue (ft)	86	48	89
95th Queue (ft)	149	100	158
Link Distance (ft)	479	495	744
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Network Summary

Network wide Queuing Penalty: 2010



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	58	146	11	3	21	3	7	85	9	9	65	108
Future Volume (vph)	58	146	11	3	21	3	7	85	9	9	65	108
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100
Lane Width (ft)	12	10	12	12	10	12	12	12	12	12	12	12
Satd. Flow (prot)	0	1864	0	0	1835	0	0	2007	0	0	1840	0
Flt Permitted		0.923			0.978			0.976			0.986	
Satd. Flow (perm)	0	1736	0	0	1800	0	0	1963	0	0	1817	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		7			3			9			121	
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		493			457			681			425	
Travel Time (s)		13.4			12.5			18.6			11.6	
Confl. Peds. (#/hr)	9		18	18		9	14		6	6		14
Confl. Bikes (#/hr)			2			1						2
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	5%	2%	2%	2%	5%	2%	2%	2%	11%	2%	2%	2%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	241	0	0	30	0	0	114	0	0	204	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Total Split (s)	36.0	36.0		36.0	36.0		24.0	24.0		24.0	24.0	
Total Lost Time (s)		4.5			4.5			4.5			4.5	
Act Effct Green (s)		31.5			31.5			19.5			19.5	
Actuated g/C Ratio		0.52			0.52			0.32			0.32	
v/c Ratio		0.26			0.03			0.18			0.30	
Control Delay		12.8			6.6			14.6			8.2	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		12.8			6.6			14.6			8.2	
LOS		B			A			B			A	
Approach Delay		12.8			6.6			14.6			8.2	
Approach LOS		B			A			B			A	
Queue Length 50th (ft)		64			4			32			21	
Queue Length 95th (ft)		113			14			m49			61	
Internal Link Dist (ft)		413			377			601			345	
Turn Bay Length (ft)												
Base Capacity (vph)		914			946			644			672	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.26			0.03			0.18			0.30	

Intersection Summary	
Area Type:	Other
Cycle Length: 60	
Actuated Cycle Length: 60	
Offset: 58.8 (98%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green	
Control Type: Pretimed	

Maximum v/c Ratio: 0.30

Intersection Signal Delay: 11.2	Intersection LOS: B
Intersection Capacity Utilization 47.5%	ICU Level of Service A
Analysis Period (min) 15	

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: 46th St & Kingsessing Ave

Lane Group	EBL	EBT	EBR	EBR2	WBL2	WBL	WBT	WBR	NBL2	NBL	NBT	NBR
Lane Configurations												
Traffic Volume (vph)	72	288	48	3	11	2	138	14	7	52	211	4
Future Volume (vph)	72	288	48	3	11	2	138	14	7	52	211	4
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100
Lane Width (ft)	12	10	12	12	12	12	10	12	12	12	14	12
Storage Length (ft)	0		0			0		0		80		0
Storage Lanes	0		0			0		0		1		0
Taper Length (ft)	25					25				25		
Satd. Flow (prot)	0	1810	0	0	0	0	1850	0	0	1833	2105	0
Flt Permitted		0.912					0.957			0.443		
Satd. Flow (perm)	0	1663	0	0	0	0	1772	0	0	793	2105	0
Right Turn on Red				Yes				Yes				Yes
Satd. Flow (RTOR)		1					11				1	
Link Speed (mph)		25					25				25	
Link Distance (ft)		570					589				1136	
Travel Time (s)		15.5					16.1				31.0	
Confl. Peds. (#/hr)	12		30	43	30	43		12	43	47		36
Confl. Bikes (#/hr)			12	12				5				4
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
Heavy Vehicles (%)	2%	2%	2%	67%	2%	2%	2%	7%	29%	6%	6%	2%
Bus Blockages (#/hr)	0	4	0	0	0	0	4	0	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	451	0	0	0	0	181	0	0	65	236	0
Turn Type	Perm	NA			Perm	Perm	NA		Perm	Perm	NA	
Protected Phases		4					8				2	
Permitted Phases	4				8	8			2	2		
Total Split (s)	36.0	36.0			36.0	36.0	36.0		24.0	24.0	24.0	
Total Lost Time (s)		5.7					5.7			5.7	5.7	
Act Effct Green (s)		30.3					30.3			18.3	18.3	
Actuated g/C Ratio		0.50					0.50			0.30	0.30	
v/c Ratio		0.54					0.20			0.27	0.37	
Control Delay		15.1					9.7			19.5	18.3	
Queue Delay		0.0					0.0			0.0	0.0	
Total Delay		15.1					9.7			19.5	18.3	
LOS		B					A			B	B	
Approach Delay		15.1					9.7				18.6	
Approach LOS		B					A				B	
Queue Length 50th (ft)		98					42			18	66	
Queue Length 95th (ft)		185					71			46	118	
Internal Link Dist (ft)		490					509				1056	
Turn Bay Length (ft)										80		
Base Capacity (vph)		840					900			241	642	
Starvation Cap Reductn		0					0			0	0	
Spillback Cap Reductn		0					0			0	0	
Storage Cap Reductn		0					0			0	0	
Reduced v/c Ratio		0.54					0.20			0.27	0.37	

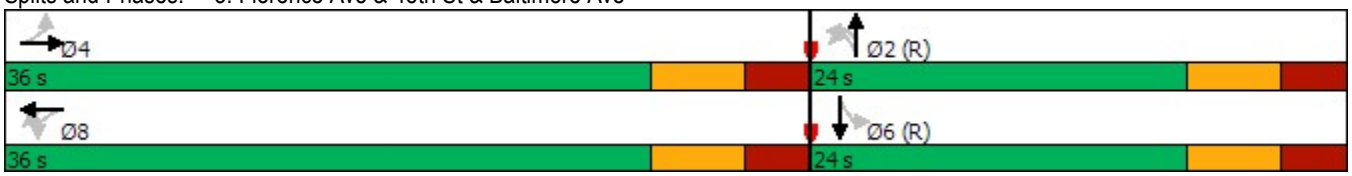
Intersection Summary	
Area Type:	Other

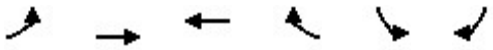
Lane Group	SBL	SBT	SBR	SBR2
Lane Configurations				
Traffic Volume (vph)	12	233	13	66
Future Volume (vph)	12	233	13	66
Ideal Flow (vphpl)	2100	2100	2100	2100
Lane Width (ft)	12	14	12	12
Storage Length (ft)	0		0	
Storage Lanes	0		0	
Taper Length (ft)	25			
Satd. Flow (prot)	0	1919	0	0
Flt Permitted		0.982		
Satd. Flow (perm)	0	1885	0	0
Right Turn on Red				Yes
Satd. Flow (RTOR)		22		
Link Speed (mph)		25		
Link Distance (ft)		425		
Travel Time (s)		11.6		
Confl. Peds. (#/hr)	36		43	47
Confl. Bikes (#/hr)			5	5
Peak Hour Factor	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	2%	6%	2%	8%
Bus Blockages (#/hr)	0	4	0	0
Shared Lane Traffic (%)				
Lane Group Flow (vph)	0	356	0	0
Turn Type	Perm	NA		
Protected Phases		6		
Permitted Phases	6			
Total Split (s)	24.0	24.0		
Total Lost Time (s)		5.7		
Act Effct Green (s)		18.3		
Actuated g/C Ratio		0.30		
v/c Ratio		0.60		
Control Delay		21.7		
Queue Delay		0.0		
Total Delay		21.7		
LOS		C		
Approach Delay		21.7		
Approach LOS		C		
Queue Length 50th (ft)		101		
Queue Length 95th (ft)		177		
Internal Link Dist (ft)		345		
Turn Bay Length (ft)				
Base Capacity (vph)		590		
Starvation Cap Reductn		0		
Spillback Cap Reductn		0		
Storage Cap Reductn		0		
Reduced v/c Ratio		0.60		

Intersection Summary

Cycle Length: 60	
Actuated Cycle Length: 60	
Offset: 18 (30%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Control Type: Pretimed	
Maximum v/c Ratio: 0.60	
Intersection Signal Delay: 17.0	Intersection LOS: B
Intersection Capacity Utilization 73.9%	ICU Level of Service D
Analysis Period (min) 15	

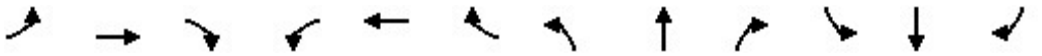
Splits and Phases: 3: Florence Ave & 48th St & Baltimore Ave





Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	64	205	37	42	50	70
Future Volume (vph)	64	205	37	42	50	70
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100
Lane Width (ft)	10	10	10	10	15	15
Satd. Flow (prot)	0	1705	1550	0	1819	0
Flt Permitted		0.988			0.979	
Satd. Flow (perm)	0	1705	1550	0	1819	0
Link Speed (mph)		25	25		25	
Link Distance (ft)		483	490		528	
Travel Time (s)		13.2	13.4		14.4	
Confl. Peds. (#/hr)	7			7	11	8
Confl. Bikes (#/hr)				2		4
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles (%)	3%	2%	4%	7%	2%	4%
Parking (#/hr)	0	0	0	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	320	94	0	143	0
Sign Control		Stop	Stop		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 34.7%		ICU Level of Service A	
Analysis Period (min) 15			

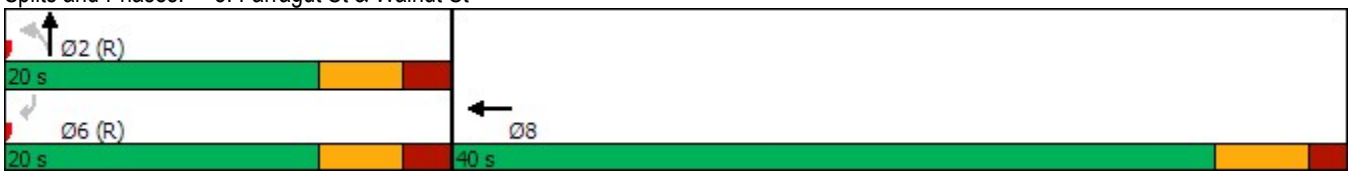


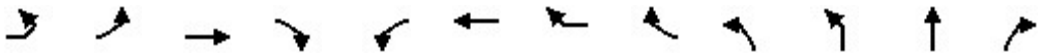
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	753	43	9	110	0	0	0	124
Future Volume (vph)	0	0	0	0	753	43	9	110	0	0	0	124
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100
Lane Width (ft)	12	12	12	10	10	10	11	11	11	10	10	10
Grade (%)		0%			3%			0%			0%	
Satd. Flow (prot)	0	0	0	0	3267	0	0	1784	0	0	0	1439
Flt Permitted								0.996				
Satd. Flow (perm)	0	0	0	0	3267	0	0	1779	0	0	0	1366
Right Turn on Red			Yes			Yes	Yes		Yes			Yes
Satd. Flow (RTOR)					17			55				163
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		272			269			425			435	
Travel Time (s)		6.2			6.1			11.6			11.9	
Confl. Peds. (#/hr)	18		58	58		18	31		23	23		31
Confl. Bikes (#/hr)						6			2			5
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
Heavy Vehicles (%)	2%	2%	2%	2%	4%	2%	2%	2%	2%	2%	2%	6%
Bus Blockages (#/hr)	0	0	0	0	8	0	0	0	0	0	0	0
Parking (#/hr)					0			0				0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	865	0	0	130	0	0	0	135
Turn Type					NA		Perm	NA				Perm
Protected Phases					8			2				
Permitted Phases							2					6
Total Split (s)					40.0		20.0	20.0				20.0
Total Lost Time (s)					4.5			4.5				4.5
Act Effct Green (s)					35.5			15.5				15.5
Actuated g/C Ratio					0.59			0.26				0.26
v/c Ratio					0.45			0.26				0.29
Control Delay					4.1			12.7				4.3
Queue Delay					0.1			0.0				0.0
Total Delay					4.2			12.7				4.3
LOS					A			B				A
Approach Delay					4.2			12.7			4.3	
Approach LOS					A			B			A	
Queue Length 50th (ft)					37			21				0
Queue Length 95th (ft)					48			58				26
Internal Link Dist (ft)		192			189			345			355	
Turn Bay Length (ft)												
Base Capacity (vph)					1939			500				473
Starvation Cap Reductn					225			0				0
Spillback Cap Reductn					101			1				5
Storage Cap Reductn					0			0				0
Reduced v/c Ratio					0.50			0.26				0.29

Intersection Summary	
Area Type:	Other
Cycle Length: 60	

Actuated Cycle Length: 60
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBR, Start of Green
Control Type: Pretimed
Maximum v/c Ratio: 0.45
Intersection Signal Delay: 5.2 Intersection LOS: A
Intersection Capacity Utilization 54.7% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 5: Farragut St & Walnut St





Lane Group	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL2	NBL	NBT	NBR
Lane Configurations												
Traffic Volume (vph)	2	24	273	44	10	138	9	22	61	39	154	24
Future Volume (vph)	2	24	273	44	10	138	9	22	61	39	154	24
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100
Lane Width (ft)	12	12	10	12	12	10	12	12	10	10	10	12
Storage Length (ft)		0		0	0		0			20		0
Storage Lanes		0		0	0		0			1		0
Taper Length (ft)		25			25					25		
Satd. Flow (prot)	0	0	1647	0	0	1545	0	0	0	1825	1684	0
Flt Permitted			0.964			0.970				0.459		
Satd. Flow (perm)	0	0	1593	0	0	1503	0	0	0	848	1684	0
Right Turn on Red				Yes				Yes				Yes
Satd. Flow (RTOR)			17			16					14	
Link Speed (mph)			25			25					25	
Link Distance (ft)			579			570					1469	
Travel Time (s)			15.8			15.5					40.1	
Confl. Peds. (#/hr)		12		21	21		12		29	22		18
Confl. Bikes (#/hr)				12			5	5				1
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
Heavy Vehicles (%)	2%	2%	2%	6%	60%	6%	11%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	4	0	0	4	0	0	0	0	0	0
Parking (#/hr)			0			0					0	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	395	0	0	205	0	0	0	115	205	0
Turn Type	Perm	Perm	NA		Perm	NA			Perm	Perm	NA	
Protected Phases			4			8					2	
Permitted Phases	4	4			8				2	2		
Total Split (s)	34.8	34.8	34.8		34.8	34.8			25.2	25.2	25.2	
Total Lost Time (s)			6.9			6.9				5.1	5.1	
Act Effct Green (s)			27.9			27.9				20.1	20.1	
Actuated g/C Ratio			0.46			0.46				0.34	0.34	
v/c Ratio			0.53			0.29				0.40	0.36	
Control Delay			14.0			10.5				20.7	16.2	
Queue Delay			0.0			0.0				0.0	0.0	
Total Delay			14.0			10.5				20.7	16.2	
LOS			B			B				C	B	
Approach Delay			14.0			10.5					17.8	
Approach LOS			B			B					B	
Queue Length 50th (ft)			90			45				31	51	
Queue Length 95th (ft)			152			81				69	94	
Internal Link Dist (ft)			499			490					1389	
Turn Bay Length (ft)										20		
Base Capacity (vph)			749			707				284	573	
Starvation Cap Reductn			0			0				0	0	
Spillback Cap Reductn			0			0				0	0	
Storage Cap Reductn			0			0				0	0	
Reduced v/c Ratio			0.53			0.29				0.40	0.36	

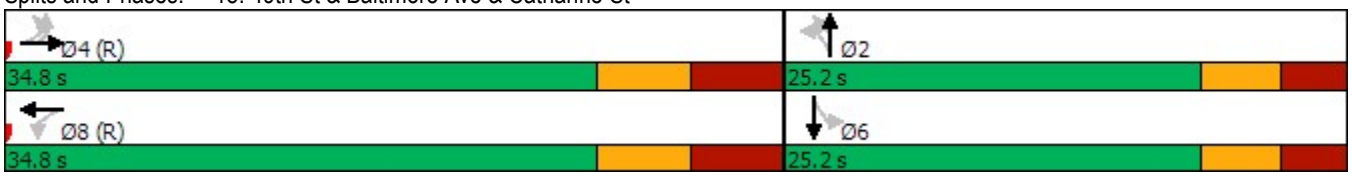
Intersection Summary

Lane Group	SBL	SBT	SBR	SBR2
Lane Configurations				
Traffic Volume (vph)	11	263	22	8
Future Volume (vph)	11	263	22	8
Ideal Flow (vphpl)	2100	2100	2100	2100
Lane Width (ft)	12	10	12	12
Storage Length (ft)	0		0	
Storage Lanes	0		0	
Taper Length (ft)	25			
Satd. Flow (prot)	0	1686	0	0
Flt Permitted		0.985		
Satd. Flow (perm)	0	1663	0	0
Right Turn on Red				Yes
Satd. Flow (RTOR)		2		
Link Speed (mph)		25		
Link Distance (ft)		572		
Travel Time (s)		15.6		
Confl. Peds. (#/hr)	18		22	29
Confl. Bikes (#/hr)			4	4
Peak Hour Factor	0.87	0.87	0.87	0.87
Heavy Vehicles (%)	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0
Parking (#/hr)		0		
Shared Lane Traffic (%)				
Lane Group Flow (vph)	0	349	0	0
Turn Type	Perm	NA		
Protected Phases		6		
Permitted Phases	6			
Total Split (s)	25.2	25.2		
Total Lost Time (s)		5.1		
Act Effct Green (s)		20.1		
Actuated g/C Ratio		0.34		
v/c Ratio		0.63		
Control Delay		22.6		
Queue Delay		0.0		
Total Delay		22.6		
LOS		C		
Approach Delay		22.6		
Approach LOS		C		
Queue Length 50th (ft)		103		
Queue Length 95th (ft)		173		
Internal Link Dist (ft)		492		
Turn Bay Length (ft)				
Base Capacity (vph)		558		
Starvation Cap Reductn		0		
Spillback Cap Reductn		0		
Storage Cap Reductn		0		
Reduced v/c Ratio		0.63		

Intersection Summary

Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 60			
Offset: 49.8 (83%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green			
Control Type: Pretimed			
Maximum v/c Ratio: 0.63			
Intersection Signal Delay: 16.8		Intersection LOS: B	
Intersection Capacity Utilization 68.7%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 18: 49th St & Baltimore Ave & Catharine St



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	19	305	44	12	98	0	13	184	2	76	259	38
Future Volume (vph)	19	305	44	12	98	0	13	184	2	76	259	38
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100
Lane Width (ft)	12	10	12	12	10	12	12	10	12	12	10	12
Satd. Flow (prot)	0	1827	0	0	1881	0	0	1913	0	1956	1874	0
Flt Permitted		0.980			0.935			0.955		0.253		
Satd. Flow (perm)	0	1792	0	0	1762	0	0	1829	0	517	1874	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		13						1			15	
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		603			205			463			100	
Travel Time (s)		16.4			5.6			12.6			2.7	
Confl. Peds. (#/hr)	33		50	50		33	19		13	13		19
Confl. Bikes (#/hr)			24									2
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
Heavy Vehicles (%)	6%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	4	0	0	4	0	0	0	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	401	0	0	120	0	0	216	0	83	323	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6 10	
Permitted Phases	4			8			2			6 10		
Total Split (s)	28.2	28.2		28.2	28.2		19.2	19.2				
Total Lost Time (s)		6.3			6.3			5.7				
Act Effct Green (s)		21.9			21.9			13.5		26.1	26.1	
Actuated g/C Ratio		0.36			0.36			0.22		0.44	0.44	
v/c Ratio		0.61			0.19			0.52		0.37	0.39	
Control Delay		16.1			14.0			25.7		11.5	6.1	
Queue Delay		0.0			0.0			0.0		0.0	0.0	
Total Delay		16.1			14.0			25.7		11.5	6.1	
LOS		B			B			C		B	A	
Approach Delay		16.1			14.0			25.7			7.2	
Approach LOS		B			B			C			A	
Queue Length 50th (ft)		70			29			68		7	24	
Queue Length 95th (ft)		136			60			127		m19	54	
Internal Link Dist (ft)		523			125			383			20	
Turn Bay Length (ft)												
Base Capacity (vph)		662			643			412		224	823	
Starvation Cap Reductn		0			0			0		0	0	
Spillback Cap Reductn		0			0			0		0	0	
Storage Cap Reductn		0			0			0		0	0	
Reduced v/c Ratio		0.61			0.19			0.52		0.37	0.39	

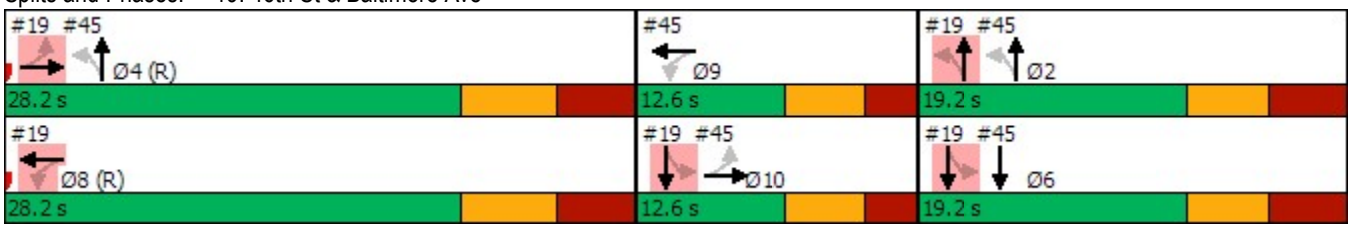
Intersection Summary	
Area Type:	Other
Cycle Length: 60	
Actuated Cycle Length: 60	
Offset: 58.8 (98%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green	

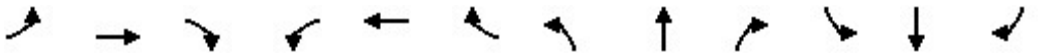
Lane Group	Ø6	Ø9	Ø10
Lane Configurations			
Traffic Volume (vph)			
Future Volume (vph)			
Ideal Flow (vphpl)			
Lane Width (ft)			
Satd. Flow (prot)			
Flt Permitted			
Satd. Flow (perm)			
Right Turn on Red			
Satd. Flow (RTOR)			
Link Speed (mph)			
Link Distance (ft)			
Travel Time (s)			
Confl. Peds. (#/hr)			
Confl. Bikes (#/hr)			
Peak Hour Factor			
Heavy Vehicles (%)			
Bus Blockages (#/hr)			
Shared Lane Traffic (%)			
Lane Group Flow (vph)			
Turn Type			
Protected Phases	6	9	10
Permitted Phases			
Total Split (s)	19.2	12.6	12.6
Total Lost Time (s)			
Act Effct Green (s)			
Actuated g/C Ratio			
v/c Ratio			
Control Delay			
Queue Delay			
Total Delay			
LOS			
Approach Delay			
Approach LOS			
Queue Length 50th (ft)			
Queue Length 95th (ft)			
Internal Link Dist (ft)			
Turn Bay Length (ft)			
Base Capacity (vph)			
Starvation Cap Reductn			
Spillback Cap Reductn			
Storage Cap Reductn			
Reduced v/c Ratio			

Intersection Summary

Control Type: Pretimed
Maximum v/c Ratio: 0.61
Intersection Signal Delay: 14.5 Intersection LOS: B
Intersection Capacity Utilization 59.8% ICU Level of Service B
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 19: 46th St & Baltimore Ave





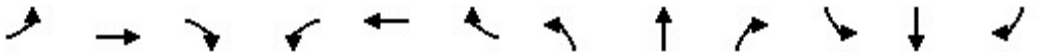
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	64	647	51	28	285	0	0	231	111
Future Volume (vph)	0	0	0	64	647	51	28	285	0	0	231	111
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100
Lane Width (ft)	10	10	10	10	10	10	10	10	10	10	10	10
Grade (%)		0%			3%			1%			3%	
Storage Length (ft)	0		0	0		40	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	0	0	0	3176	0	0	1620	0	0	1582	0
Flt Permitted					0.996			0.907				
Satd. Flow (perm)	0	0	0	0	3174	0	0	1476	0	0	1582	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		281			574			415			591	
Travel Time (s)		6.4			13.0			11.3			16.1	
Confl. Peds. (#/hr)	4		8	8		4	9		6	6		9
Confl. Bikes (#/hr)			1			2			12			
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles (%)	2%	2%	2%	21%	5%	4%	7%	6%	2%	2%	3%	7%
Bus Blockages (#/hr)	0	0	0	0	8	0	0	4	0	0	0	0
Parking (#/hr)				0	0	0	0	0			0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	885	0	0	364	0	0	398	0
Turn Type				Perm	NA		Perm	NA			NA	
Protected Phases					4			2			6	
Permitted Phases				4			2					
Total Split (s)				35.0	35.0		25.0	25.0			25.0	
Total Lost Time (s)					4.5			4.5			4.5	
Act Effct Green (s)					30.5			20.5			20.5	
Actuated g/C Ratio					0.51			0.34			0.34	
v/c Ratio					0.55			0.72			0.74	
Control Delay					4.9			27.7			23.5	
Queue Delay					0.0			0.0			0.0	
Total Delay					4.9			27.7			23.5	
LOS					A			C			C	
Approach Delay					4.9			27.7			23.5	
Approach LOS					A			C			C	
Queue Length 50th (ft)					13			113			153	
Queue Length 95th (ft)					21			#198			m#233	
Internal Link Dist (ft)		201			494			335			511	
Turn Bay Length (ft)												
Base Capacity (vph)					1613			504			540	
Starvation Cap Reductn					0			0			0	
Spillback Cap Reductn					0			0			0	
Storage Cap Reductn					0			0			0	
Reduced v/c Ratio					0.55			0.72			0.74	

Intersection Summary

Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 60			
Offset: 20 (33%), Referenced to phase 4:WBTL, Start of Yellow			
Control Type: Pretimed			
Maximum v/c Ratio: 0.74			
Intersection Signal Delay: 14.4		Intersection LOS: B	
Intersection Capacity Utilization 66.3%		ICU Level of Service C	
Analysis Period (min) 15			

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 42: 48th St & Walnut St

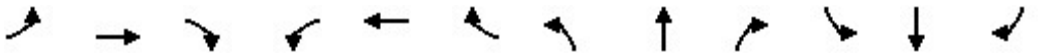


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	96	685	27	52	105	0	0	114	25
Future Volume (vph)	0	0	0	96	685	27	52	105	0	0	114	25
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100
Lane Width (ft)	12	10	12	12	10	12	12	10	12	12	10	12
Satd. Flow (prot)	0	0	0	0	3504	0	0	1854	0	0	1830	0
Flt Permitted					0.994			0.846				
Satd. Flow (perm)	0	0	0	0	3498	0	0	1580	0	0	1830	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					10						18	
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		269			567			427			550	
Travel Time (s)		6.1			12.9			11.6			15.0	
Confl. Peds. (#/hr)	10		18	18		10	29		29	29		29
Confl. Bikes (#/hr)			2									
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
Heavy Vehicles (%)	2%	2%	2%	6%	4%	2%	4%	4%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	4	0	0	0	0	0	4	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	898	0	0	175	0	0	155	0
Turn Type				Perm	NA		Perm	NA			NA	
Protected Phases					4			2			6	
Permitted Phases				4			2					
Total Split (s)				40.0	40.0		20.0	20.0			20.0	
Total Lost Time (s)					4.5			4.5			4.5	
Act Effct Green (s)					35.5			15.5			15.5	
Actuated g/C Ratio					0.59			0.26			0.26	
v/c Ratio					0.43			0.43			0.32	
Control Delay					7.4			22.5			18.0	
Queue Delay					0.0			0.0			0.0	
Total Delay					7.4			22.5			18.0	
LOS					A			C			B	
Approach Delay					7.4			22.5			18.0	
Approach LOS					A			C			B	
Queue Length 50th (ft)					80			53			40	
Queue Length 95th (ft)					115			103			83	
Internal Link Dist (ft)		189			487			347			470	
Turn Bay Length (ft)												
Base Capacity (vph)					2073			408			486	
Starvation Cap Reductn					0			0			0	
Spillback Cap Reductn					0			0			0	
Storage Cap Reductn					0			0			0	
Reduced v/c Ratio					0.43			0.43			0.32	

Intersection Summary	
Area Type:	Other
Cycle Length: 60	
Actuated Cycle Length: 60	
Offset: 55 (92%), Referenced to phase 4:WBTL, Start of Yellow	

Control Type: Pretimed
Maximum v/c Ratio: 0.43
Intersection Signal Delay: 10.9 Intersection LOS: B
Intersection Capacity Utilization 62.9% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 43: 46th St & Walnut St



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	0	99	0	28	10	15	188	0	0	247	4
Future Volume (vph)	10	0	99	0	28	10	15	188	0	0	247	4
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100
Satd. Flow (prot)	0	1762	0	0	1888	0	0	2051	0	0	2052	0
Flt Permitted		0.963						0.973				
Satd. Flow (perm)	0	1687	0	0	1888	0	0	2001	0	0	2052	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		218			11						1	
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		246			213			100			587	
Travel Time (s)		6.7			5.8			2.7			16.0	
Confl. Peds. (#/hr)	33					33	31					31
Confl. Bikes (#/hr)			1									2
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
Heavy Vehicles (%)	10%	2%	2%	2%	4%	1%	2%	2%	2%	2%	2%	2%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	119	0	0	41	0	0	220	0	0	272	0
Turn Type	Perm	NA			NA		Perm	NA			NA	
Protected Phases		10			9			2 4			6	
Permitted Phases	10			9			2 4					
Total Split (s)	12.6	12.6		12.6	12.6						19.2	
Total Lost Time (s)		4.5			4.5						5.7	
Act Effct Green (s)		8.1			8.1			41.7			13.5	
Actuated g/C Ratio		0.14			0.14			0.70			0.22	
v/c Ratio		0.29			0.16			0.16			0.59	
Control Delay		2.1			20.1			0.3			26.7	
Queue Delay		0.1			0.0			0.0			0.0	
Total Delay		2.1			20.1			0.3			26.7	
LOS		A			C			A			C	
Approach Delay		2.1			20.1			0.3			26.7	
Approach LOS		A			C			A			C	
Queue Length 50th (ft)		0			10			1			88	
Queue Length 95th (ft)		4			34			m1			154	
Internal Link Dist (ft)		166			133			20			507	
Turn Bay Length (ft)												
Base Capacity (vph)		416			264			1390			462	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		24			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.30			0.16			0.16			0.59	

Intersection Summary	
Area Type:	Other
Cycle Length: 60	
Actuated Cycle Length: 60	
Offset: 58.8 (98%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green	
Control Type: Pretimed	
Maximum v/c Ratio: 0.61	

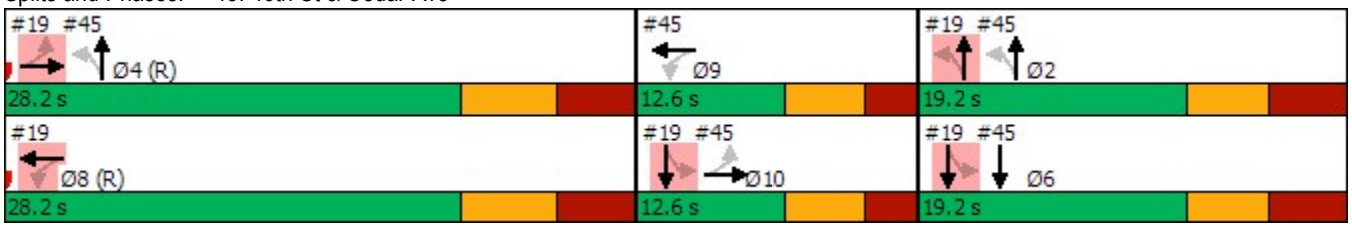
Lane Group	Ø2	Ø4	Ø8
Lane Configurations			
Traffic Volume (vph)			
Future Volume (vph)			
Ideal Flow (vphpl)			
Satd. Flow (prot)			
Flt Permitted			
Satd. Flow (perm)			
Right Turn on Red			
Satd. Flow (RTOR)			
Link Speed (mph)			
Link Distance (ft)			
Travel Time (s)			
Confl. Peds. (#/hr)			
Confl. Bikes (#/hr)			
Peak Hour Factor			
Heavy Vehicles (%)			
Shared Lane Traffic (%)			
Lane Group Flow (vph)			
Turn Type			
Protected Phases	2	4	8
Permitted Phases			
Total Split (s)	19.2	28.2	28.2
Total Lost Time (s)			
Act Effct Green (s)			
Actuated g/C Ratio			
v/c Ratio			
Control Delay			
Queue Delay			
Total Delay			
LOS			
Approach Delay			
Approach LOS			
Queue Length 50th (ft)			
Queue Length 95th (ft)			
Internal Link Dist (ft)			
Turn Bay Length (ft)			
Base Capacity (vph)			
Starvation Cap Reductn			
Spillback Cap Reductn			
Storage Cap Reductn			
Reduced v/c Ratio			

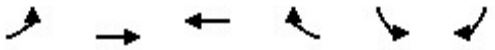
Intersection Summary

Intersection Signal Delay: 12.9	Intersection LOS: B
Intersection Capacity Utilization 41.4%	ICU Level of Service A
Analysis Period (min) 15	

m Volume for 95th percentile queue is metered by upstream signal.

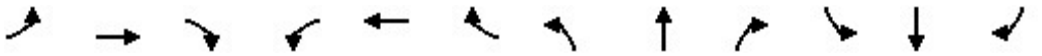
Splits and Phases: 45: 46th St & Cedar Ave





Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	366	110	65	0	0
Future Volume (vph)	0	366	110	65	0	0
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100
Satd. Flow (prot)	0	2059	1935	0	0	0
Flt Permitted						
Satd. Flow (perm)	0	2059	1935	0	0	0
Link Speed (mph)		25	25		25	
Link Distance (ft)		205	392		213	
Travel Time (s)		5.6	10.7		5.8	
Confl. Peds. (#/hr)				33		
Confl. Bikes (#/hr)				6		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	2%	2%	5%	2%	2%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	398	191	0	0	0
Sign Control		Free	Free		Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 20.8%		ICU Level of Service A	
Analysis Period (min) 15			

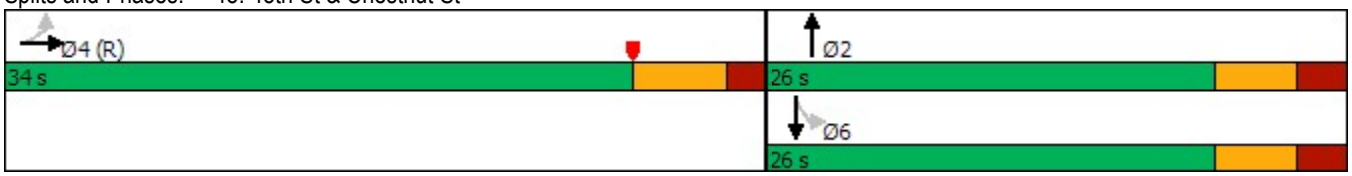


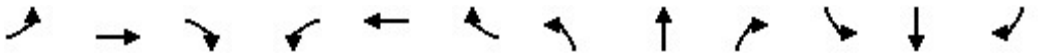
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	164	1183	53	0	0	0	0	299	55	51	279	0
Future Volume (vph)	164	1183	53	0	0	0	0	299	55	51	279	0
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100
Lane Width (ft)	12	10	12	12	10	12	12	14	12	12	14	12
Storage Length (ft)	100		0	0		0	0		0	0		0
Storage Lanes	1		0	0		0	0		0	0		0
Taper Length (ft)	40			25			25			25		
Satd. Flow (prot)	1956	3590	0	0	0	0	0	2102	0	0	2179	0
Flt Permitted	0.950										0.814	
Satd. Flow (perm)	1938	3590	0	0	0	0	0	2102	0	0	1787	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		10						17				
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		550			574			591			540	
Travel Time (s)		12.5			13.0			16.1			14.7	
Confl. Peds. (#/hr)	9		45	45		9	23		9	9		23
Confl. Bikes (#/hr)			1									
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
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	15%	2%	2%	2%
Bus Blockages (#/hr)	0	4	0	0	0	0	0	0	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	180	1358	0	0	0	0	0	389	0	0	363	0
Turn Type	Perm	NA						NA		Perm	NA	
Protected Phases		4						2			6	
Permitted Phases	4									6		
Total Split (s)	34.0	34.0						26.0		26.0	26.0	
Total Lost Time (s)	4.5	4.5						4.5			4.5	
Act Effct Green (s)	29.5	29.5						21.5			21.5	
Actuated g/C Ratio	0.49	0.49						0.36			0.36	
v/c Ratio	0.19	0.77						0.51			0.57	
Control Delay	9.2	16.0						14.0			19.7	
Queue Delay	0.0	0.0						0.0			0.0	
Total Delay	9.2	16.0						14.0			19.7	
LOS	A	B						B			B	
Approach Delay		15.2						14.0			19.7	
Approach LOS		B						B			B	
Queue Length 50th (ft)	34	194						137			103	
Queue Length 95th (ft)	64	270						m203			177	
Internal Link Dist (ft)		470			494			511			460	
Turn Bay Length (ft)	100											
Base Capacity (vph)	952	1770						764			640	
Starvation Cap Reductn	0	0						0			0	
Spillback Cap Reductn	0	0						0			0	
Storage Cap Reductn	0	0						0			0	
Reduced v/c Ratio	0.19	0.77						0.51			0.57	

Intersection Summary	
Area Type:	Other

Cycle Length: 60
Actuated Cycle Length: 60
Offset: 52 (87%), Referenced to phase 4:EBTL, Start of Yellow
Control Type: Pretimed
Maximum v/c Ratio: 0.77
Intersection Signal Delay: 15.7 Intersection LOS: B
Intersection Capacity Utilization 76.6% ICU Level of Service D
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 48: 48th St & Chestnut St





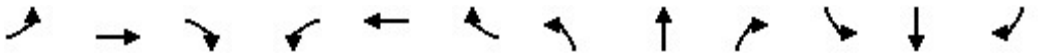
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	26	1248	97	0	0	0	0	75	91	77	134	0
Future Volume (vph)	26	1248	97	0	0	0	0	75	91	77	134	0
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100
Lane Width (ft)	12	10	12	12	10	12	12	10	12	12	10	12
Satd. Flow (prot)	0	3417	0	0	0	0	0	1577	0	0	1688	0
Flt Permitted		0.999									0.823	
Satd. Flow (perm)	0	3416	0	0	0	0	0	1577	0	0	1411	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		20						41				
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		548			550			570			529	
Travel Time (s)		12.5			12.5			15.5			14.4	
Confl. Peds. (#/hr)	16		20	20		16	38		8	8		38
Confl. Bikes (#/hr)			4						1			1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	3%	2%	2%	3%	2%
Bus Blockages (#/hr)	0	0	4	0	0	0	0	0	0	0	0	0
Parking (#/hr)		0						0			0	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1443	0	0	0	0	0	175	0	0	222	0
Turn Type	Perm	NA						NA		Perm	NA	
Protected Phases		4						2			6	
Permitted Phases	4									6		
Total Split (s)	40.0	40.0						24.0		24.0	24.0	
Total Lost Time (s)		4.5						4.5			4.5	
Act Effct Green (s)		35.5						19.5			19.5	
Actuated g/C Ratio		0.55						0.30			0.30	
v/c Ratio		0.76						0.34			0.52	
Control Delay		14.1						15.4			23.6	
Queue Delay		0.0						0.0			0.0	
Total Delay		14.1						15.4			23.6	
LOS		B						B			C	
Approach Delay		14.1						15.4			23.6	
Approach LOS		B						B			C	
Queue Length 50th (ft)		202						39			71	
Queue Length 95th (ft)		282						85			132	
Internal Link Dist (ft)		468			470			490			449	
Turn Bay Length (ft)												
Base Capacity (vph)		1903						509			429	
Starvation Cap Reductn		0						0			0	
Spillback Cap Reductn		0						0			0	
Storage Cap Reductn		0						0			0	
Reduced v/c Ratio		0.76						0.34			0.52	

Intersection Summary	
Area Type:	Other
Cycle Length: 64	
Actuated Cycle Length: 64	

Offset: 43 (67%), Referenced to phase 4:EBTL, Start of Yellow

Control Type: Pretimed	
Maximum v/c Ratio: 0.76	
Intersection Signal Delay: 15.3	Intersection LOS: B
Intersection Capacity Utilization 72.7%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 49: 49th St & Chestnut St

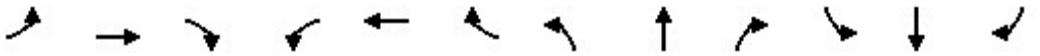


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	16	167	31	52	48	3	17	283	82	7	418	9
Future Volume (vph)	16	167	31	52	48	3	17	283	82	7	418	9
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100
Lane Width (ft)	10	10	10	10	10	10	12	12	12	12	12	12
Storage Length (ft)	0		0	0		0	0		0	20		0
Storage Lanes	0		0	0		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	1674	0	0	1646	0	0	1656	0	1760	1782	0
Flt Permitted		0.978			0.781			0.974		0.485		
Satd. Flow (perm)	0	1642	0	0	1312	0	0	1615	0	892	1782	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		16			3			32			3	
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		475			483			581			517	
Travel Time (s)		13.0			13.2			15.8			14.1	
Confl. Peds. (#/hr)	10		12	12		10	13		15	15		13
Confl. Bikes (#/hr)			1			2			1			4
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	6%	2%	3%	4%	4%	2%	6%	9%	5%	2%	4%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	4	0	0	4	0
Parking (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	230	0	0	111	0	0	410	0	8	459	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Total Split (s)	26.4	26.4		26.4	26.4		33.6	33.6		33.6	33.6	
Total Lost Time (s)		4.5			4.5			4.5		4.5	4.5	
Act Effct Green (s)		21.9			21.9			29.1		29.1	29.1	
Actuated g/C Ratio		0.36			0.36			0.48		0.48	0.48	
v/c Ratio		0.38			0.23			0.51		0.02	0.53	
Control Delay		15.3			14.5			10.6		8.3	13.5	
Queue Delay		0.0			0.0			0.0		0.0	0.0	
Total Delay		15.3			14.5			10.6		8.3	13.5	
LOS		B			B			B		A	B	
Approach Delay		15.3			14.5			10.6			13.4	
Approach LOS		B			B			B			B	
Queue Length 50th (ft)		55			26			87		1	106	
Queue Length 95th (ft)		105			58			150		7	180	
Internal Link Dist (ft)		395			403			501			437	
Turn Bay Length (ft)										20		
Base Capacity (vph)		609			480			799		432	865	
Starvation Cap Reductn		0			0			0		0	0	
Spillback Cap Reductn		0			0			0		0	0	
Storage Cap Reductn		0			0			0		0	0	
Reduced v/c Ratio		0.38			0.23			0.51		0.02	0.53	

Intersection Summary

Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 60			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Control Type: Pretimed			
Maximum v/c Ratio: 0.53			
Intersection Signal Delay: 12.9		Intersection LOS: B	
Intersection Capacity Utilization 58.1%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 54: 49th St & Kingsessing Ave



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	8	258	6	46	123	6	17	141	190	127	108	9
Future Volume (vph)	8	258	6	46	123	6	17	141	190	127	108	9
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100
Lane Width (ft)	12	12	12	10	10	10	12	12	12	12	12	12
Satd. Flow (prot)	0	1973	0	0	1665	0	0	1504	0	0	1681	0
Flt Permitted		0.992			0.868			0.978			0.561	
Satd. Flow (perm)	0	1959	0	0	1455	0	0	1471	0	0	955	0
Right Turn on Red			Yes			No			Yes			No
Satd. Flow (RTOR)		2						97				
Link Speed (mph)		25			25			30			25	
Link Distance (ft)		447			176			504			520	
Travel Time (s)		12.2			4.8			11.5			14.2	
Confl. Peds. (#/hr)	37		40	40		37	54		36	36		54
Confl. Bikes (#/hr)			4			3			3			3
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	2%	6%	2%	24%	9%	2%	29%	13%	9%	5%	7%	33%
Bus Blockages (#/hr)	0	0	0	6	6	6	0	0	0	4	4	4
Parking (#/hr)							0	0	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	292	0	0	187	0	0	374	0	0	263	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Total Split (s)	40.0	40.0		40.0	40.0		30.0	30.0		30.0	30.0	
Total Lost Time (s)		4.5			4.5			4.5			4.5	
Act Effct Green (s)		35.5			35.5			25.5			25.5	
Actuated g/C Ratio		0.51			0.51			0.36			0.36	
v/c Ratio		0.29			0.25			0.63			0.76	
Control Delay		10.9			12.5			18.8			36.5	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		10.9			12.5			18.8			36.5	
LOS		B			B			B			D	
Approach Delay		10.9			12.5			18.8			36.5	
Approach LOS		B			B			B			D	
Queue Length 50th (ft)		68			0			94			97	
Queue Length 95th (ft)		113			m0			182			#216	
Internal Link Dist (ft)		367			96			424			440	
Turn Bay Length (ft)												
Base Capacity (vph)		994			737			597			347	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.29			0.25			0.63			0.76	

Intersection Summary	
Area Type:	Other
Cycle Length: 70	
Actuated Cycle Length: 70	

Offset: 51 (73%), Referenced to phase 4:EBTL and 8:WBTL, Start of Yellow

Control Type: Pretimed

Maximum v/c Ratio: 0.76

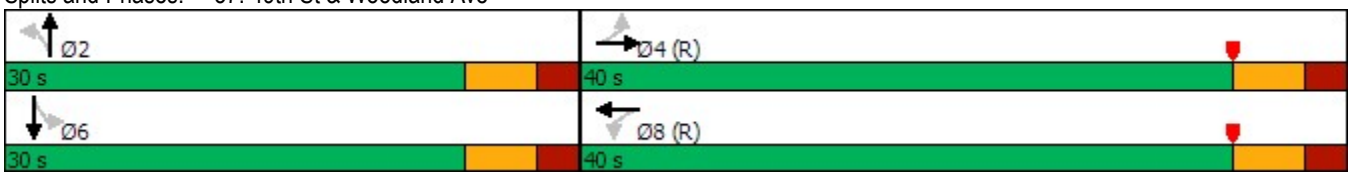
Intersection Signal Delay: 19.9	Intersection LOS: B
Intersection Capacity Utilization 71.2%	ICU Level of Service C

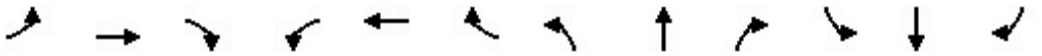
Analysis Period (min) 15

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

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 57: 49th St & Woodland Ave



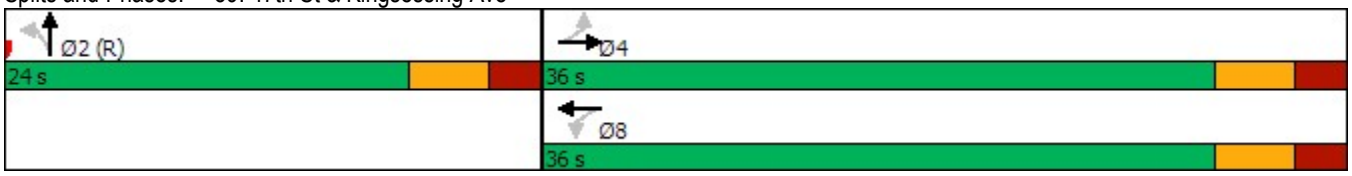


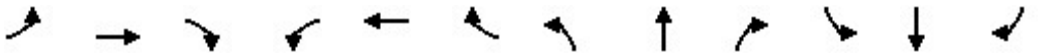
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	20	173	48	89	34	2	46	205	45	0	0	0
Future Volume (vph)	20	173	48	89	34	2	46	205	45	0	0	0
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100
Lane Width (ft)	10	10	10	10	10	10	13	13	13	13	13	13
Satd. Flow (prot)	0	1660	0	0	1660	0	0	1792	0	0	0	0
Flt Permitted		0.975			0.698			0.992				
Satd. Flow (perm)	0	1624	0	0	1192	0	0	1775	0	0	0	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		490			493			759			517	
Travel Time (s)		13.4			13.4			20.7			14.1	
Confl. Peds. (#/hr)	8		16	16		8	40		14	14		40
Confl. Bikes (#/hr)						2			2			3
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	5%	2%	2%	2%	3%	2%	4%	5%	7%	2%	2%	2%
Parking (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	251	0	0	130	0	0	309	0	0	0	0
Turn Type	Perm	NA		Perm	NA		Perm	NA				
Protected Phases		4			8			2				
Permitted Phases	4			8			2					
Total Split (s)	36.0	36.0		36.0	36.0		24.0	24.0				
Total Lost Time (s)		4.5			4.5			4.5				
Act Effct Green (s)		31.5			31.5			19.5				
Actuated g/C Ratio		0.52			0.52			0.32				
v/c Ratio		0.29			0.21			0.54				
Control Delay		9.2			7.1			20.7				
Queue Delay		0.0			0.0			0.0				
Total Delay		9.2			7.1			20.7				
LOS		A			A			C				
Approach Delay		9.2			7.1			20.7				
Approach LOS		A			A			C				
Queue Length 50th (ft)		47			20			90				
Queue Length 95th (ft)		85			35			158				
Internal Link Dist (ft)		410			413			679			437	
Turn Bay Length (ft)												
Base Capacity (vph)		852			625			576				
Starvation Cap Reductn		0			0			0				
Spillback Cap Reductn		0			0			0				
Storage Cap Reductn		0			0			0				
Reduced v/c Ratio		0.29			0.21			0.54				

Intersection Summary	
Area Type:	Other
Cycle Length: 60	
Actuated Cycle Length: 60	
Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Green	

Control Type: Pretimed
Maximum v/c Ratio: 0.54
Intersection Signal Delay: 14.0 Intersection LOS: B
Intersection Capacity Utilization 54.9% ICU Level of Service A
Analysis Period (min) 15

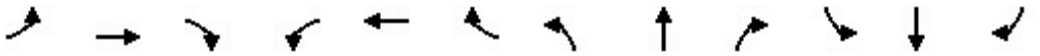
Splits and Phases: 59: 47th St & Kingsessing Ave





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	86	0	0	0	5	7	10	576	1	2	0	84
Future Volume (vph)	86	0	0	0	5	7	10	576	1	2	0	84
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100
Satd. Flow (prot)	0	1956	0	0	1774	0	0	2057	0	0	1767	0
Flt Permitted		0.950						0.999			0.999	
Satd. Flow (perm)	0	1956	0	0	1774	0	0	2057	0	0	1767	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		188			439			100			840	
Travel Time (s)		5.1			12.0			2.7			22.9	
Confl. Peds. (#/hr)	5					5			1	1		
Confl. Bikes (#/hr)			1						3			4
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	2%	2%	2%	2%	2%	14%	2%	2%	2%	50%	2%	2%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	90	0	0	12	0	0	611	0	0	90	0
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 49.4%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	306	196	19	110	2	172	125	27	4	98	6
Future Volume (vph)	30	306	196	19	110	2	172	125	27	4	98	6
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100
Lane Width (ft)	15	15	15	13	13	13	12	12	12	12	12	12
Satd. Flow (prot)	0	1786	0	0	1722	0	0	1643	0	0	1842	0
Flt Permitted		0.979			0.902			0.773			0.987	
Satd. Flow (perm)	0	1754	0	0	1563	0	0	1293	0	0	1821	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		61			2			9			6	
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		439			789			362			504	
Travel Time (s)		12.0			21.5			8.2			11.5	
Confl. Peds. (#/hr)	6		12	12		6	15		4	4		15
Confl. Bikes (#/hr)			2			2			3			
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	13%	8%	7%	26%	7%	2%	7%	2%	30%	2%	7%	17%
Bus Blockages (#/hr)	0	2	0	0	6	0	0	8	0	0	12	0
Parking (#/hr)	0	0	0	0	0	0	0	0	0			
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	567	0	0	139	0	0	345	0	0	114	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Total Split (s)	30.0	30.0		30.0	30.0		30.0	30.0		30.0	30.0	
Total Lost Time (s)		4.5			4.5			5.1			5.1	
Act Effct Green (s)		25.5			25.5			24.9			24.9	
Actuated g/C Ratio		0.42			0.42			0.42			0.42	
v/c Ratio		0.73			0.21			0.64			0.15	
Control Delay		19.5			11.8			20.1			11.1	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		19.5			11.8			20.1			11.1	
LOS		B			B			C			B	
Approach Delay		19.5			11.8			20.1			11.1	
Approach LOS		B			B			C			B	
Queue Length 50th (ft)		145			30			92			23	
Queue Length 95th (ft)		#256			61			175			50	
Internal Link Dist (ft)		359			709			282			424	
Turn Bay Length (ft)												
Base Capacity (vph)		780			665			541			759	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.73			0.21			0.64			0.15	

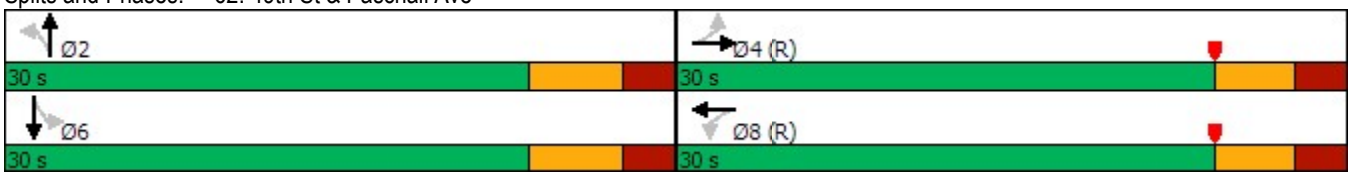
Intersection Summary	
Area Type:	Other
Cycle Length: 60	
Actuated Cycle Length: 60	

Offset: 51 (85%), Referenced to phase 4:EBTL and 8:WBTL, Start of Yellow

Control Type: Pretimed	
Maximum v/c Ratio: 0.73	
Intersection Signal Delay: 18.0	Intersection LOS: B
Intersection Capacity Utilization 61.2%	ICU Level of Service B
Analysis Period (min) 15	

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

Splits and Phases: 62: 49th St & Paschall Ave

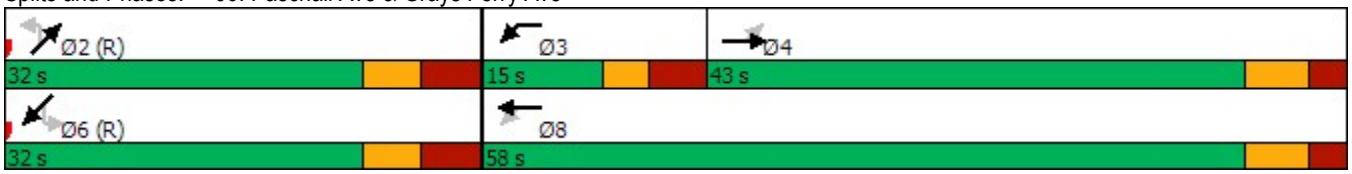


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	1	764	2	273	394	1	2	85	273	44	22	17
Future Volume (vph)	1	764	2	273	394	1	2	85	273	44	22	17
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100
Lane Width (ft)	10	11	12	10	10	10	10	10	10	10	10	10
Storage Length (ft)	50		0	0		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	73			25			25			25		
Satd. Flow (prot)	1825	3781	0	1724	1903	0	0	1460	0	0	1631	0
Flt Permitted	0.513			0.206				0.999			0.539	
Satd. Flow (perm)	986	3781	0	374	1903	0	0	1458	0	0	902	0
Right Turn on Red			Yes			No			Yes			No
Satd. Flow (RTOR)								176				
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		424			289			789			188	
Travel Time (s)		11.6			7.9			21.5			5.1	
Confl. Peds. (#/hr)							1		1	1		1
Confl. Bikes (#/hr)			5			4						3
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
Heavy Vehicles (%)	2%	2%	2%	8%	3%	2%	2%	2%	9%	2%	2%	2%
Parking (#/hr)							0	0	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	1	832	0	297	429	0	0	391	0	0	90	0
Turn Type	Perm	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases		4		3	8			2			6	
Permitted Phases	4			8			2			6		
Total Split (s)	43.0	43.0		15.0	58.0		32.0	32.0		32.0	32.0	
Total Lost Time (s)	5.5	5.5		5.5	5.5			6.5			6.5	
Act Effct Green (s)	37.5	37.5		52.5	52.5			25.5			25.5	
Actuated g/C Ratio	0.42	0.42		0.58	0.58			0.28			0.28	
v/c Ratio	0.00	0.53		0.82	0.39			0.73			0.35	
Control Delay	15.0	21.2		31.2	11.4			24.6			30.5	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay	15.0	21.2		31.2	11.4			24.6			30.5	
LOS	B	C		C	B			C			C	
Approach Delay		21.1			19.5			24.6			30.5	
Approach LOS		C			B			C			C	
Queue Length 50th (ft)	0	181		79	121			110			41	
Queue Length 95th (ft)	3	236		#172	183			220			85	
Internal Link Dist (ft)		344			209			709			108	
Turn Bay Length (ft)	50											
Base Capacity (vph)	410	1575		360	1110			539			255	
Starvation Cap Reductn	0	0		0	0			0			0	
Spillback Cap Reductn	0	0		0	0			0			0	
Storage Cap Reductn	0	0		0	0			0			0	
Reduced v/c Ratio	0.00	0.53		0.82	0.39			0.73			0.35	

Intersection Summary	
Area Type:	Other

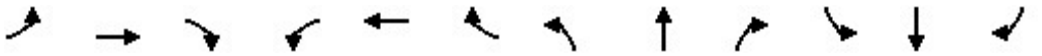
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:NETL and 6:SWTL, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.82
Intersection Signal Delay: 21.6 Intersection LOS: C
Intersection Capacity Utilization 78.1% ICU Level of Service D
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 66: Paschall Ave & Grays Ferry Ave



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	301	274	11	176	0	0
Future Volume (vph)	301	274	11	176	0	0
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100
Satd. Flow (prot)	1842	0	0	1927	0	0
Flt Permitted				0.997		
Satd. Flow (perm)	1842	0	0	1927	0	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	176			341	411	
Travel Time (s)	4.0			7.8	9.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	11%	2%	3%	9%	2%	2%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	625	0	0	203	0	0
Sign Control	Free			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	32.8%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	25	315	6	61	185	6	3	278	284	13	6	32
Future Volume (vph)	25	315	6	61	185	6	3	278	284	13	6	32
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100
Lane Width (ft)	10	10	10	10	10	10	15	15	15	10	10	15
Storage Length (ft)	0		0	0		0	20		0	20		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	1844	0	0	1826	0	1650	2067	0	1825	1644	0
Flt Permitted		0.967			0.847		0.731			0.157		
Satd. Flow (perm)	0	1790	0	0	1565	0	1270	2067	0	302	1644	0
Right Turn on Red			No			Yes			No			No
Satd. Flow (RTOR)					2							
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		524			499			840			759	
Travel Time (s)		14.3			13.6			22.9			20.7	
Confl. Bikes (#/hr)			3			3			4			2
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	2%	6%	2%	2%	7%	2%	33%	2%	2%	2%	2%	2%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	368	0	0	268	0	3	598	0	14	40	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Total Split (s)	40.0	40.0		40.0	40.0		30.0	30.0		30.0	30.0	
Total Lost Time (s)		4.5			4.5		4.5	4.5		4.5	4.5	
Act Effct Green (s)		35.5			35.5		25.5	25.5		25.5	25.5	
Actuated g/C Ratio		0.51			0.51		0.36	0.36		0.36	0.36	
v/c Ratio		0.41			0.34		0.01	0.80		0.13	0.07	
Control Delay		11.1			11.7		14.3	29.7		18.5	15.0	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		11.1			11.7		14.3	29.7		18.5	15.0	
LOS		B			B		B	C		B	B	
Approach Delay		11.1			11.7			29.6			15.9	
Approach LOS		B			B			C			B	
Queue Length 50th (ft)		115			63		1	225		4	11	
Queue Length 95th (ft)		203			111		6	#386		17	30	
Internal Link Dist (ft)		444			419			760			679	
Turn Bay Length (ft)							20			20		
Base Capacity (vph)		907			794		462	752		110	598	
Starvation Cap Reductn		0			0		0	0		0	0	
Spillback Cap Reductn		0			0		0	0		0	0	
Storage Cap Reductn		0			0		0	0		0	0	
Reduced v/c Ratio		0.41			0.34		0.01	0.80		0.13	0.07	

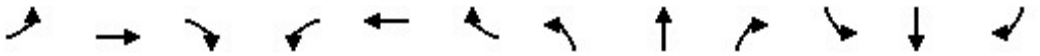
Intersection Summary	
Area Type:	Other
Cycle Length: 70	
Actuated Cycle Length: 70	

Offset: 21 (30%), Referenced to phase 4:SBTL and 8:NBTL, Start of Yellow

Control Type: Pretimed	
Maximum v/c Ratio: 0.80	
Intersection Signal Delay: 20.1	Intersection LOS: C
Intersection Capacity Utilization 63.2%	ICU Level of Service B
Analysis Period (min) 15	

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

Splits and Phases: 68: 47th St & Woodland Ave

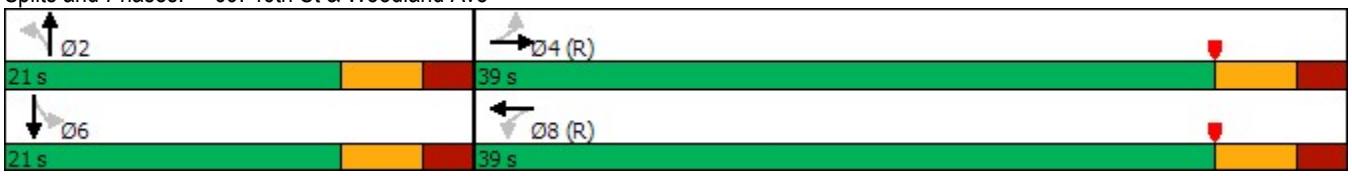


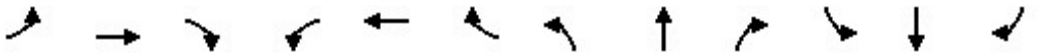
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	58	537	3	4	194	10	15	19	15	15	7	59
Future Volume (vph)	58	537	3	4	194	10	15	19	15	15	7	59
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100
Lane Width (ft)	12	10	12	12	10	12	12	12	12	12	12	12
Satd. Flow (prot)	0	1696	0	0	1631	0	0	1922	0	0	1779	0
Flt Permitted		0.951			0.991			0.912			0.950	
Satd. Flow (perm)	0	1618	0	0	1618	0	0	1768	0	0	1701	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		499			488			657			681	
Travel Time (s)		13.6			13.3			17.9			18.6	
Confl. Peds. (#/hr)	34		15	15		34	14		8	8		14
Confl. Bikes (#/hr)						1						1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	3%	8%	2%	2%	12%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	16	0	0	16	0	0	0	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	642	0	0	224	0	0	52	0	0	87	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Total Split (s)	39.0	39.0		39.0	39.0		21.0	21.0		21.0	21.0	
Total Lost Time (s)		4.5			4.5			4.5			4.5	
Act Effct Green (s)		34.5			34.5			16.5			16.5	
Actuated g/C Ratio		0.58			0.58			0.28			0.28	
v/c Ratio		0.69			0.24			0.11			0.19	
Control Delay		13.9			7.1			17.0			27.3	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		13.9			7.1			17.0			27.3	
LOS		B			A			B			C	
Approach Delay		13.9			7.1			17.0			27.3	
Approach LOS		B			A			B			C	
Queue Length 50th (ft)		144			35			14			29	
Queue Length 95th (ft)		254			66			37			68	
Internal Link Dist (ft)		419			408			577			601	
Turn Bay Length (ft)												
Base Capacity (vph)		930			930			486			467	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.69			0.24			0.11			0.19	

Intersection Summary	
Area Type:	Other
Cycle Length: 60	
Actuated Cycle Length: 60	
Offset: 30 (50%), Referenced to phase 4:EBTL and 8:WBTL, Start of Yellow	

Control Type: Pretimed
Maximum v/c Ratio: 0.69
Intersection Signal Delay: 13.7 Intersection LOS: B
Intersection Capacity Utilization 74.5% ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 69: 46th St & Woodland Ave



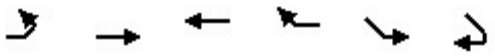


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	295	6	84	139	10	63	327	23	25	394	5
Future Volume (vph)	0	295	6	84	139	10	63	327	23	25	394	5
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100
Lane Width (ft)	10	10	10	10	10	10	15	15	15	15	15	15
Storage Length (ft)	0		0	0		0	20		0	0		0
Storage Lanes	0		0	0		0	1		0	0		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	1572	0	0	1573	0	1677	1810	0	0	1825	0
Flt Permitted					0.792		0.374				0.964	
Satd. Flow (perm)	0	1572	0	0	1267	0	659	1810	0	0	1764	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		2			4			6			1	
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		341			524			393			198	
Travel Time (s)		9.3			14.3			10.7			5.4	
Confl. Peds. (#/hr)	10		8	8		10	2		5	5		2
Confl. Bikes (#/hr)			3			2			2			1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	2%	12%	2%	2%	13%	20%	6%	2%	4%	2%	2%	2%
Parking (#/hr)							0	0	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	313	0	0	243	0	66	365	0	0	441	0
Turn Type		NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Total Split (s)	40.0	40.0		40.0	40.0		30.0	30.0		30.0	30.0	
Total Lost Time (s)		4.5			4.5		4.5	4.5			4.5	
Act Effct Green (s)		35.5			35.5		25.5	25.5			25.5	
Actuated g/C Ratio		0.51			0.51		0.36	0.36			0.36	
v/c Ratio		0.39			0.38		0.28	0.55			0.69	
Control Delay		8.7			21.9		19.6	21.2			25.4	
Queue Delay		0.0			0.0		0.0	0.0			0.0	
Total Delay		8.7			21.9		19.6	21.2			25.4	
LOS		A			C		B	C			C	
Approach Delay		8.7			21.9			21.0			25.4	
Approach LOS		A			C			C			C	
Queue Length 50th (ft)		40			95		20	120			157	
Queue Length 95th (ft)		m78			170		50	198			255	
Internal Link Dist (ft)		261			444			313			118	
Turn Bay Length (ft)							20					
Base Capacity (vph)		798			644		240	663			643	
Starvation Cap Reductn		0			0		0	0			0	
Spillback Cap Reductn		0			0		0	0			0	
Storage Cap Reductn		0			0		0	0			0	
Reduced v/c Ratio		0.39			0.38		0.28	0.55			0.69	

Intersection Summary	
Area Type:	CBD

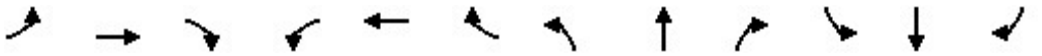
Cycle Length: 70
Actuated Cycle Length: 70
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Control Type: Pretimed
Maximum v/c Ratio: 0.69
Intersection Signal Delay: 19.8 Intersection LOS: B
Intersection Capacity Utilization 81.7% ICU Level of Service D
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 70: 48th St & Woodland Ave



Lane Group	EBL	EBT	WBT	WBR	SEL	SER
Lane Configurations						
Traffic Volume (vph)	0	285	0	413	482	0
Future Volume (vph)	0	285	0	413	482	0
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100
Lane Width (ft)	12	16	12	12	12	12
Satd. Flow (prot)	0	2333	0	1781	1956	0
Flt Permitted					0.950	
Satd. Flow (perm)	0	2333	0	1781	1956	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		411	424		393	
Travel Time (s)		9.3	9.6		8.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	310	0	449	524	0
Sign Control		Stop	Free		Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	44.4%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	26	142	10	4	125	206	5	152	4	268	226	6
Future Volume (vph)	26	142	10	4	125	206	5	152	4	268	226	6
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100
Satd. Flow (prot)	0	1913	0	0	1848	0	0	1829	0	0	1930	0
Flt Permitted		0.917			0.997			0.986			0.763	
Satd. Flow (perm)	0	1766	0	0	1844	0	0	1805	0	0	1505	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		6			152			3			1	
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		441			364			520			581	
Travel Time (s)		12.0			9.9			14.2			15.8	
Confl. Peds. (#/hr)	4		13	13		4	27		11	11		27
Confl. Bikes (#/hr)						2						5
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
Heavy Vehicles (%)	8%	2%	30%	2%	3%	2%	2%	13%	2%	2%	6%	17%
Bus Blockages (#/hr)	0	8	0	0	0	0	0	4	0	0	4	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	193	0	0	364	0	0	174	0	0	544	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Total Split (s)	27.0	27.0		27.0	27.0		33.0	33.0		33.0	33.0	
Total Lost Time (s)		4.9			4.9			4.5			4.5	
Act Effct Green (s)		22.1			22.1			28.5			28.5	
Actuated g/C Ratio		0.37			0.37			0.48			0.48	
v/c Ratio		0.30			0.47			0.20			0.76	
Control Delay		14.5			10.5			9.8			19.1	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		14.5			10.5			9.8			19.1	
LOS		B			B			A			B	
Approach Delay		14.5			10.5			9.8			19.1	
Approach LOS		B			B			A			B	
Queue Length 50th (ft)		46			53			34			88	
Queue Length 95th (ft)		89			115			65			#185	
Internal Link Dist (ft)		361			284			440			501	
Turn Bay Length (ft)												
Base Capacity (vph)		654			775			858			715	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.30			0.47			0.20			0.76	

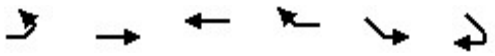
Intersection Summary	
Area Type:	Other
Cycle Length: 60	
Actuated Cycle Length: 60	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Control Type: Pretimed	

Maximum v/c Ratio: 0.76

Intersection Signal Delay: 14.7	Intersection LOS: B
Intersection Capacity Utilization 81.4%	ICU Level of Service D
Analysis Period (min) 15	

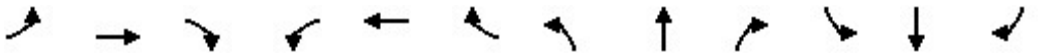
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 74: 49th St & Greenway Ave



Lane Group	EBL	EBT	WBT	WBR	SEL	SER
Lane Configurations		↑↑	↑↑	↱		
Traffic Volume (vph)	0	1081	668	587	0	0
Future Volume (vph)	0	1081	668	587	0	0
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100
Storage Length (ft)	0			76	0	0
Storage Lanes	0			1	0	0
Taper Length (ft)	25				25	
Satd. Flow (prot)	0	3912	3912	1750	0	0
Flt Permitted						
Satd. Flow (perm)	0	3912	3912	1750	0	0
Link Speed (mph)		30	35		30	
Link Distance (ft)		289	1538		114	
Travel Time (s)		6.6	30.0		2.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1175	726	638	0	0
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 36.2%		ICU Level of Service A	
Analysis Period (min) 15			



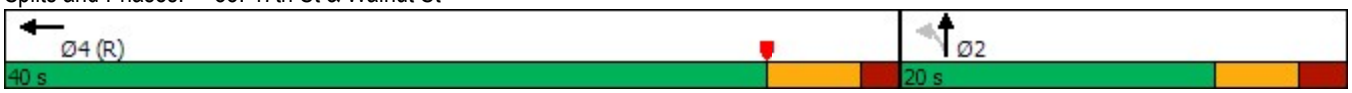
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	818	9	63	136	0	0	0	0
Future Volume (vph)	0	0	0	0	818	9	63	136	0	0	0	0
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100
Lane Width (ft)	12	10	12	12	10	12	12	10	12	12	10	12
Grade (%)		0%			3%			0%			0%	
Satd. Flow (prot)	0	0	0	0	3463	0	0	1868	0	0	0	0
Flt Permitted								0.984				
Satd. Flow (perm)	0	0	0	0	3463	0	0	1851	0	0	0	0
Right Turn on Red			Yes			Yes	Yes		Yes			Yes
Satd. Flow (RTOR)					3			55				
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		574			272			413			576	
Travel Time (s)		13.0			6.2			11.3			15.7	
Confl. Peds. (#/hr)	15		35	35		15	24		22	22		24
Confl. Bikes (#/hr)						6			2			1
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
Heavy Vehicles (%)	2%	2%	2%	2%	4%	2%	6%	2%	2%	2%	4%	2%
Bus Blockages (#/hr)	0	0	0	0	8	0	0	0	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	950	0	0	228	0	0	0	0
Turn Type					NA		Perm	NA				
Protected Phases					4			2				
Permitted Phases							2					
Total Split (s)					40.0		20.0	20.0				
Total Lost Time (s)					4.5			4.5				
Act Effct Green (s)					35.5			15.5				
Actuated g/C Ratio					0.59			0.26				
v/c Ratio					0.46			0.44				
Control Delay					6.2			17.1				
Queue Delay					0.5			0.0				
Total Delay					6.7			17.1				
LOS					A			B				
Approach Delay					6.7			17.1				
Approach LOS					A			B				
Queue Length 50th (ft)					86			51				
Queue Length 95th (ft)					114			101				
Internal Link Dist (ft)		494			192			333			496	
Turn Bay Length (ft)												
Base Capacity (vph)					2050			518				
Starvation Cap Reductn					613			0				
Spillback Cap Reductn					0			0				
Storage Cap Reductn					0			0				
Reduced v/c Ratio					0.66			0.44				

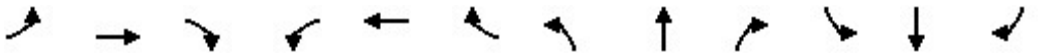
Intersection Summary	
Area Type:	Other
Cycle Length: 60	
Actuated Cycle Length: 60	

Offset: 10 (17%), Referenced to phase 4:WBT, Start of Yellow

Control Type: Pretimed	
Maximum v/c Ratio: 0.46	
Intersection Signal Delay: 8.7	Intersection LOS: A
Intersection Capacity Utilization 52.1%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 88: 47th St & Walnut St



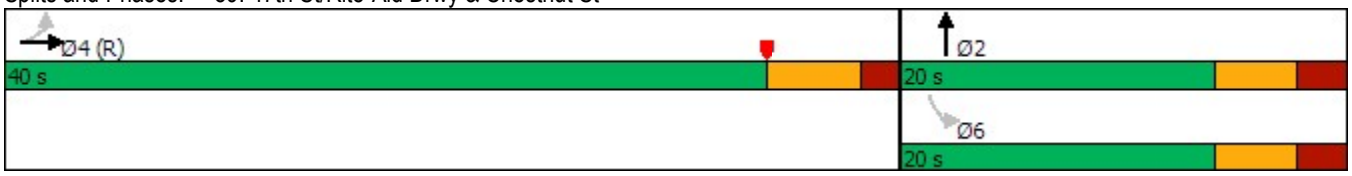


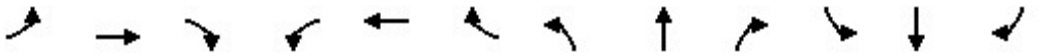
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1311	0	0	0	0	0	0	109	0	0	0
Future Volume (vph)	0	1311	0	0	0	0	0	0	109	0	0	0
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100
Lane Width (ft)	12	10	12	12	10	12	12	10	12	12	12	12
Satd. Flow (prot)	0	3413	0	0	0	0	0	1463	0	2059	0	0
Flt Permitted												
Satd. Flow (perm)	0	3413	0	0	0	0	0	1463	0	2059	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)								55				
Link Speed (mph)		30			30			25			20	
Link Distance (ft)		574			259			576			194	
Travel Time (s)		13.0			5.9			15.7			6.6	
Confl. Peds. (#/hr)	14		21	21		14	4		8	8		4
Confl. Bikes (#/hr)			17						1			
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Bus Blockages (#/hr)	0	8	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)		0						0				
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1410	0	0	0	0	0	117	0	0	0	0
Turn Type		NA						NA		Perm		
Protected Phases		4						2				
Permitted Phases	4									6		
Total Split (s)	40.0	40.0						20.0		20.0		
Total Lost Time (s)		4.5						4.5		4.5		
Act Effct Green (s)		35.5						15.5				
Actuated g/C Ratio		0.59						0.26				
v/c Ratio		0.70						0.28				
Control Delay		5.3						18.7				
Queue Delay		0.0						0.0				
Total Delay		5.3						18.7				
LOS		A						B				
Approach Delay		5.3						18.7				
Approach LOS		A						B				
Queue Length 50th (ft)		17						14				
Queue Length 95th (ft)		24						54				
Internal Link Dist (ft)		494			179			496			114	
Turn Bay Length (ft)												
Base Capacity (vph)		2019						418				
Starvation Cap Reductn		0						0				
Spillback Cap Reductn		0						0				
Storage Cap Reductn		0						0				
Reduced v/c Ratio		0.70						0.28				

Intersection Summary	
Area Type:	Other
Cycle Length: 60	
Actuated Cycle Length: 60	
Offset: 13 (22%), Referenced to phase 4:EBTL, Start of Yellow	

Control Type: Pretimed
Maximum v/c Ratio: 0.70
Intersection Signal Delay: 6.3 Intersection LOS: A
Intersection Capacity Utilization 53.2% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 89: 47th St/Rite-Aid Drwy & Chestnut St





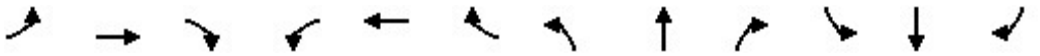
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	173	228	0	0	117	13	26	162	43	0	0	0
Future Volume (vph)	173	228	0	0	117	13	26	162	43	0	0	0
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100
Lane Width (ft)	12	10	12	12	10	12	12	12	12	12	10	12
Satd. Flow (prot)	0	1865	0	0	1872	0	0	1922	0	0	0	0
Flt Permitted		0.797						0.994				
Satd. Flow (perm)	0	1508	0	0	1872	0	0	1906	0	0	0	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		589			603			803			807	
Travel Time (s)		16.1			16.4			21.9			22.0	
Confl. Peds. (#/hr)	22		20	20		22	40		38	38		40
Confl. Bikes (#/hr)			11			1			5			1
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
Heavy Vehicles (%)	4%	2%	6%	17%	3%	2%	2%	5%	2%	2%	2%	15%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	436	0	0	141	0	0	251	0	0	0	0
Turn Type	Perm	NA			NA		Perm	NA				
Protected Phases		4			8			2				
Permitted Phases	4						2					
Total Split (s)	37.8	37.8			37.8		22.2	22.2				
Total Lost Time (s)		5.1			5.1			5.1				
Act Effct Green (s)		32.7			32.7			17.1				
Actuated g/C Ratio		0.54			0.54			0.28				
v/c Ratio		0.53			0.14			0.46				
Control Delay		11.1			4.9			21.0				
Queue Delay		0.0			0.0			0.0				
Total Delay		11.1			4.9			21.0				
LOS		B			A			C				
Approach Delay		11.1			4.9			21.0				
Approach LOS		B			A			C				
Queue Length 50th (ft)		74			12			74				
Queue Length 95th (ft)		87			27			133				
Internal Link Dist (ft)		509			523			723			727	
Turn Bay Length (ft)												
Base Capacity (vph)		821			1020			543				
Starvation Cap Reductn		0			0			0				
Spillback Cap Reductn		0			0			0				
Storage Cap Reductn		0			0			0				
Reduced v/c Ratio		0.53			0.14			0.46				

Intersection Summary	
Area Type:	Other
Cycle Length: 60	
Actuated Cycle Length: 60	
Offset: 47.4 (79%), Referenced to phase 4:EBTL and 8:WBT, Start of Green	
Control Type: Pretimed	

Maximum v/c Ratio: 0.53

Intersection Signal Delay: 13.0	Intersection LOS: B
Intersection Capacity Utilization 83.4%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 92: 47th St & Baltimore Ave



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	35	70	6	4	90	2	11	98	3	9	61	126
Future Volume (vph)	35	70	6	4	90	2	11	98	3	9	61	126
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100
Lane Width (ft)	12	10	12	12	10	12	12	12	12	12	12	12
Satd. Flow (prot)	0	1872	0	0	1910	0	0	2040	0	0	1810	0
Flt Permitted		0.907			0.993			0.963			0.986	
Satd. Flow (perm)	0	1708	0	0	1899	0	0	1972	0	0	1787	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		7			2			2			137	
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		493			457			681			425	
Travel Time (s)		13.4			12.5			18.6			11.6	
Confl. Peds. (#/hr)	20		15	15		20	13		11	11		13
Confl. Bikes (#/hr)			6			4			1			3
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
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	17%	2%	2%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	121	0	0	104	0	0	122	0	0	213	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Total Split (s)	36.0	36.0		36.0	36.0		24.0	24.0		24.0	24.0	
Total Lost Time (s)		4.5			4.5			4.5			4.5	
Act Effct Green (s)		31.5			31.5			19.5			19.5	
Actuated g/C Ratio		0.52			0.52			0.32			0.32	
v/c Ratio		0.13			0.10			0.19			0.32	
Control Delay		10.4			7.4			14.8			7.6	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		10.4			7.4			14.8			7.6	
LOS		B			A			B			A	
Approach Delay		10.4			7.4			14.8			7.6	
Approach LOS		B			A			B			A	
Queue Length 50th (ft)		25			17			36			19	
Queue Length 95th (ft)		m51			37			m63			61	
Internal Link Dist (ft)		413			377			601			345	
Turn Bay Length (ft)												
Base Capacity (vph)		900			997			642			673	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.13			0.10			0.19			0.32	

Intersection Summary	
Area Type:	Other
Cycle Length: 60	
Actuated Cycle Length: 60	
Offset: 58.8 (98%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green	
Control Type: Pretimed	

Maximum v/c Ratio: 0.32

Intersection Signal Delay: 9.7	Intersection LOS: A
Intersection Capacity Utilization 47.5%	ICU Level of Service A
Analysis Period (min) 15	

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: 46th St & Kingsessing Ave

Lane Group	EBL	EBT	EBR	EBR2	WBL2	WBL	WBT	WBR	NBL2	NBL	NBT	NBR
Lane Configurations												
Traffic Volume (vph)	67	205	101	4	7	17	273	17	24	74	184	6
Future Volume (vph)	67	205	101	4	7	17	273	17	24	74	184	6
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100
Lane Width (ft)	12	10	12	12	12	12	10	12	12	12	14	12
Storage Length (ft)	0		0			0		0		80		0
Storage Lanes	0		0			0		0		1		0
Taper Length (ft)	25					25				25		
Satd. Flow (prot)	0	1720	0	0	0	0	1862	0	0	1941	2158	0
Flt Permitted		0.877					0.950			0.356		
Satd. Flow (perm)	0	1521	0	0	0	0	1766	0	0	642	2158	0
Right Turn on Red				Yes				Yes				Yes
Satd. Flow (RTOR)		1					7				3	
Link Speed (mph)		25					25				25	
Link Distance (ft)		570					589				1136	
Travel Time (s)		15.5					16.1				31.0	
Confl. Peds. (#/hr)	8		62	68	62	68		8	68	111		39
Confl. Bikes (#/hr)			14	14				21				3
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
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	6%	2%	3%	3%	2%
Bus Blockages (#/hr)	0	4	0	0	0	0	4	0	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	414	0	0	0	0	346	0	0	107	209	0
Turn Type	Perm	NA			Perm	Perm	NA		Perm	Perm	NA	
Protected Phases		4					8				2	
Permitted Phases	4				8	8			2	2		
Total Split (s)	36.0	36.0			36.0	36.0	36.0		24.0	24.0	24.0	
Total Lost Time (s)		5.7					5.7			5.7	5.7	
Act Effct Green (s)		30.3					30.3			18.3	18.3	
Actuated g/C Ratio		0.50					0.50			0.30	0.30	
v/c Ratio		0.54					0.39			0.55	0.32	
Control Delay		14.4					10.1			30.7	17.5	
Queue Delay		0.0					0.0			0.0	0.0	
Total Delay		14.4					10.1			30.7	17.5	
LOS		B					B			C	B	
Approach Delay		14.4					10.1				21.9	
Approach LOS		B					B				C	
Queue Length 50th (ft)		88					75			32	57	
Queue Length 95th (ft)		m171					97			#91	104	
Internal Link Dist (ft)		490					509				1056	
Turn Bay Length (ft)										80		
Base Capacity (vph)		768					895			195	660	
Starvation Cap Reductn		0					0			0	0	
Spillback Cap Reductn		0					0			0	0	
Storage Cap Reductn		0					0			0	0	
Reduced v/c Ratio		0.54					0.39			0.55	0.32	

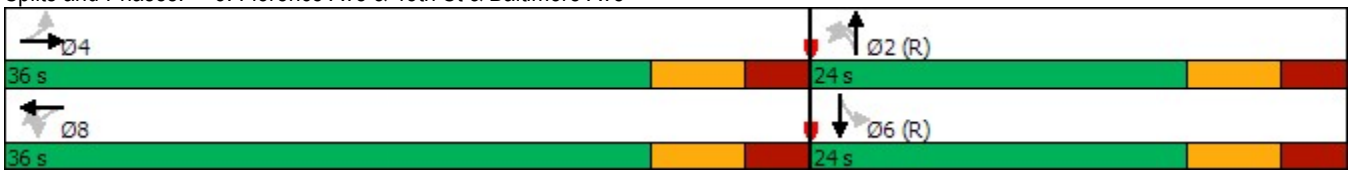
Intersection Summary	
Area Type:	Other

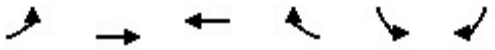
Lane Group	SBL	SBT	SBR	SBR2
Lane Configurations				
Traffic Volume (vph)	8	262	46	82
Future Volume (vph)	8	262	46	82
Ideal Flow (vphpl)	2100	2100	2100	2100
Lane Width (ft)	12	14	12	12
Storage Length (ft)	0		0	
Storage Lanes	0		0	
Taper Length (ft)	25			
Satd. Flow (prot)	0	1840	0	0
Flt Permitted		0.991		
Satd. Flow (perm)	0	1824	0	0
Right Turn on Red				Yes
Satd. Flow (RTOR)		22		
Link Speed (mph)		25		
Link Distance (ft)		425		
Travel Time (s)		11.6		
Confl. Peds. (#/hr)	39		68	111
Confl. Bikes (#/hr)			8	8
Peak Hour Factor	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	2%	3%	2%	2%
Bus Blockages (#/hr)	0	4	0	0
Shared Lane Traffic (%)				
Lane Group Flow (vph)	0	438	0	0
Turn Type	Perm	NA		
Protected Phases		6		
Permitted Phases	6			
Total Split (s)	24.0	24.0		
Total Lost Time (s)		5.7		
Act Effct Green (s)		18.3		
Actuated g/C Ratio		0.30		
v/c Ratio		0.77		
Control Delay		29.2		
Queue Delay		0.0		
Total Delay		29.2		
LOS		C		
Approach Delay		29.2		
Approach LOS		C		
Queue Length 50th (ft)		135		
Queue Length 95th (ft)		#267		
Internal Link Dist (ft)		345		
Turn Bay Length (ft)				
Base Capacity (vph)		571		
Starvation Cap Reductn		0		
Spillback Cap Reductn		0		
Storage Cap Reductn		0		
Reduced v/c Ratio		0.77		

Intersection Summary

Cycle Length: 60
Actuated Cycle Length: 60
Offset: 18 (30%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Control Type: Pretimed
Maximum v/c Ratio: 0.77
Intersection Signal Delay: 19.3 Intersection LOS: B
Intersection Capacity Utilization 85.5% ICU Level of Service E
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

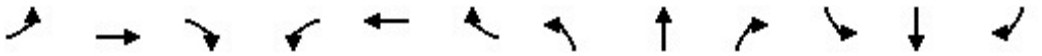
Splits and Phases: 3: Florence Ave & 48th St & Baltimore Ave





Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	51	106	97	55	41	91
Future Volume (vph)	51	106	97	55	41	91
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100
Lane Width (ft)	10	10	10	10	15	15
Satd. Flow (prot)	0	1691	1645	0	1785	0
Flt Permitted		0.984			0.985	
Satd. Flow (perm)	0	1691	1645	0	1785	0
Link Speed (mph)		25	25		25	
Link Distance (ft)		483	490		528	
Travel Time (s)		13.2	13.4		14.4	
Confl. Peds. (#/hr)	8			8	6	5
Confl. Bikes (#/hr)				7		8
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles (%)	4%	2%	2%	2%	2%	5%
Parking (#/hr)	0	0	0	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	191	185	0	161	0
Sign Control		Stop	Stop		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 35.2%		ICU Level of Service A	
Analysis Period (min) 15			



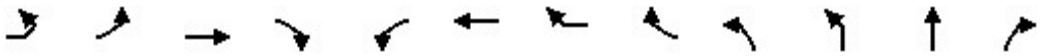
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	971	66	11	102	0	0	0	173
Future Volume (vph)	0	0	0	0	971	66	11	102	0	0	0	173
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100
Lane Width (ft)	12	12	12	10	10	10	11	11	11	10	10	10
Grade (%)		0%			3%			0%			0%	
Satd. Flow (prot)	0	0	0	0	3331	0	0	1782	0	0	0	1496
Flt Permitted								0.995				
Satd. Flow (perm)	0	0	0	0	3331	0	0	1782	0	0	0	1496
Right Turn on Red			Yes			Yes	Yes		Yes			Yes
Satd. Flow (RTOR)					19			36				46
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		272			269			425			435	
Travel Time (s)		6.2			6.1			9.7			9.9	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Bus Blockages (#/hr)	0	0	0	0	8	0	0	0	0	0	0	0
Parking (#/hr)					0			0				0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	1091	0	0	119	0	0	0	182
Turn Type					NA		Perm	NA				Perm
Protected Phases					8			2				
Permitted Phases							2					6
Total Split (s)					22.5		22.5	22.5				22.5
Total Lost Time (s)					3.0			3.0				3.0
Act Effct Green (s)					19.5			19.5				19.5
Actuated g/C Ratio					0.43			0.43				0.43
v/c Ratio					0.75			0.15				0.27
Control Delay					14.6			6.4				7.5
Queue Delay					1.8			0.0				0.0
Total Delay					16.4			6.4				7.5
LOS					B			A				A
Approach Delay					16.4			6.4			7.5	
Approach LOS					B			A			A	
Queue Length 50th (ft)					113			12				20
Queue Length 95th (ft)					173			33				50
Internal Link Dist (ft)		192			189			345			355	
Turn Bay Length (ft)												
Base Capacity (vph)					1454			792				674
Starvation Cap Reductn					206			0				0
Spillback Cap Reductn					0			0				0
Storage Cap Reductn					0			0				0
Reduced v/c Ratio					0.87			0.15				0.27

Intersection Summary	
Area Type:	Other
Cycle Length: 45	
Actuated Cycle Length: 45	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBR, Start of Green	
Control Type: Pretimed	

Maximum v/c Ratio: 0.75

Intersection Signal Delay: 14.4	Intersection LOS: B
Intersection Capacity Utilization 51.3%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 5: Farragut St & Walnut St



Lane Group	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL2	NBL	NBT	NBR
Lane Configurations												
Traffic Volume (vph)	22	30	190	86	8	384	36	9	53	64	132	18
Future Volume (vph)	22	30	190	86	8	384	36	9	53	64	132	18
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100
Lane Width (ft)	12	12	10	12	12	10	12	12	10	10	10	12
Storage Length (ft)		0		0	0		0			20		0
Storage Lanes		0		0	0		0			1		0
Taper Length (ft)		25			25					25		
Satd. Flow (prot)	0	0	1587	0	0	1654	0	0	0	1825	1657	0
Flt Permitted			0.870			0.992				0.426		
Satd. Flow (perm)	0	0	1389	0	0	1641	0	0	0	761	1657	0
Right Turn on Red				Yes				Yes				Yes
Satd. Flow (RTOR)			40			2					12	
Link Speed (mph)			25			25					25	
Link Distance (ft)			579			570					1469	
Travel Time (s)			15.8			15.5					40.1	
Confl. Peds. (#/hr)		28		70	70		28		65	35		66
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	2%	2%	2%	2%	50%	2%	2%	2%	2%	2%	2%	11%
Bus Blockages (#/hr)	0	0	4	0	0	4	0	0	0	0	0	0
Parking (#/hr)			0			0					0	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	342	0	0	455	0	0	0	122	157	0
Turn Type	Perm	Perm	NA		Perm	NA			Perm	Perm	NA	
Protected Phases			4			8					2	
Permitted Phases	4	4			8				2	2		
Total Split (s)	34.8	34.8	34.8		34.8	34.8			25.2	25.2	25.2	
Total Lost Time (s)			6.9			6.9				5.1	5.1	
Act Effct Green (s)			27.9			27.9				20.1	20.1	
Actuated g/C Ratio			0.46			0.46				0.34	0.34	
v/c Ratio			0.51			0.60				0.48	0.28	
Control Delay			13.2			14.6				23.6	15.1	
Queue Delay			0.0			0.0				0.0	0.0	
Total Delay			13.2			14.6				23.6	15.1	
LOS			B			B				C	B	
Approach Delay			13.2			14.6					18.8	
Approach LOS			B			B					B	
Queue Length 50th (ft)			71			96				34	37	
Queue Length 95th (ft)			136			m153				81	77	
Internal Link Dist (ft)			499			490					1389	
Turn Bay Length (ft)										20		
Base Capacity (vph)			667			764				254	563	
Starvation Cap Reductn			0			0				0	0	
Spillback Cap Reductn			0			0				0	0	
Storage Cap Reductn			0			0				0	0	
Reduced v/c Ratio			0.51			0.60				0.48	0.28	

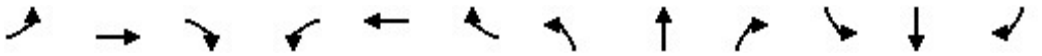
Intersection Summary	
Area Type:	Other

Lane Group	SBL	SBT	SBR	SBR2
Lane Configurations				
Traffic Volume (vph)	13	292	33	29
Future Volume (vph)	13	292	33	29
Ideal Flow (vphpl)	2100	2100	2100	2100
Lane Width (ft)	12	10	12	12
Storage Length (ft)	0		0	
Storage Lanes	0		0	
Taper Length (ft)	25			
Satd. Flow (prot)	0	1648	0	0
Flt Permitted		0.987		
Satd. Flow (perm)	0	1625	0	0
Right Turn on Red				Yes
Satd. Flow (RTOR)		8		
Link Speed (mph)		25		
Link Distance (ft)		572		
Travel Time (s)		15.6		
Confl. Peds. (#/hr)	66		65	
Peak Hour Factor	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	2%	2%	6%	2%
Bus Blockages (#/hr)	0	0	0	0
Parking (#/hr)		0		
Shared Lane Traffic (%)				
Lane Group Flow (vph)	0	382	0	0
Turn Type	Perm	NA		
Protected Phases		6		
Permitted Phases	6			
Total Split (s)	25.2	25.2		
Total Lost Time (s)		5.1		
Act Effct Green (s)		20.1		
Actuated g/C Ratio		0.34		
v/c Ratio		0.70		
Control Delay		25.3		
Queue Delay		0.0		
Total Delay		25.3		
LOS		C		
Approach Delay		25.3		
Approach LOS		C		
Queue Length 50th (ft)		115		
Queue Length 95th (ft)		#214		
Internal Link Dist (ft)		492		
Turn Bay Length (ft)				
Base Capacity (vph)		549		
Starvation Cap Reductn		0		
Spillback Cap Reductn		0		
Storage Cap Reductn		0		
Reduced v/c Ratio		0.70		

Intersection Summary

Cycle Length: 60
Actuated Cycle Length: 60
Offset: 49.8 (83%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green
Control Type: Pretimed
Maximum v/c Ratio: 0.70
Intersection Signal Delay: 17.9 Intersection LOS: B
Intersection Capacity Utilization 91.9% ICU Level of Service F
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 18: 49th St & Baltimore Ave & Catharine St



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	17	181	39	13	218	0	19	148	5	60	314	96
Future Volume (vph)	17	181	39	13	218	0	19	148	5	60	314	96
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100
Lane Width (ft)	12	10	12	12	10	12	12	10	12	12	10	12
Satd. Flow (prot)	0	1775	0	0	1885	0	0	1897	0	1956	1813	0
Flt Permitted		0.963			0.973			0.901		0.302		
Satd. Flow (perm)	0	1713	0	0	1830	0	0	1710	0	606	1813	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		19						2			32	
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		603			205			463			100	
Travel Time (s)		16.4			5.6			12.6			2.7	
Confl. Peds. (#/hr)	31		105	105			41		38	38		41
Confl. Bikes (#/hr)			16						1			
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
Heavy Vehicles (%)	2%	3%	2%	2%	2%	2%	2%	2%	2%	2%	2%	4%
Bus Blockages (#/hr)	0	4	0	0	4	0	0	0	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	261	0	0	254	0	0	189	0	66	450	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6 10	
Permitted Phases	4			8			2			6 10		
Total Split (s)	28.2	28.2		28.2	28.2		19.2	19.2				
Total Lost Time (s)		6.3			6.3			5.7				
Act Effct Green (s)		21.9			21.9			13.5		26.1	26.1	
Actuated g/C Ratio		0.36			0.36			0.22		0.44	0.44	
v/c Ratio		0.41			0.38			0.49		0.25	0.56	
Control Delay		12.4			16.2			25.1		8.4	10.1	
Queue Delay		0.0			0.0			0.0		0.0	0.0	
Total Delay		12.4			16.2			25.1		8.4	10.1	
LOS		B			B			C		A	B	
Approach Delay		12.4			16.2			25.1			9.9	
Approach LOS		B			B			C			A	
Queue Length 50th (ft)		38			66			59		4	30	
Queue Length 95th (ft)		84			118			113		m11	m76	
Internal Link Dist (ft)		523			125			383			20	
Turn Bay Length (ft)												
Base Capacity (vph)		637			667			386		263	806	
Starvation Cap Reductn		0			0			0		0	0	
Spillback Cap Reductn		0			0			0		0	0	
Storage Cap Reductn		0			0			0		0	0	
Reduced v/c Ratio		0.41			0.38			0.49		0.25	0.56	

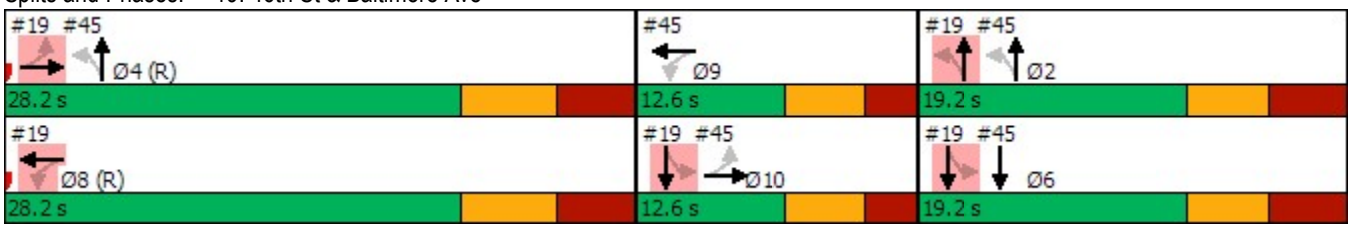
Intersection Summary	
Area Type:	Other
Cycle Length: 60	
Actuated Cycle Length: 60	
Offset: 58.8 (98%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green	

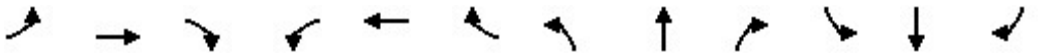
Lane Group	Ø6	Ø9	Ø10
Lane Configurations			
Traffic Volume (vph)			
Future Volume (vph)			
Ideal Flow (vphpl)			
Lane Width (ft)			
Satd. Flow (prot)			
Flt Permitted			
Satd. Flow (perm)			
Right Turn on Red			
Satd. Flow (RTOR)			
Link Speed (mph)			
Link Distance (ft)			
Travel Time (s)			
Confl. Peds. (#/hr)			
Confl. Bikes (#/hr)			
Peak Hour Factor			
Heavy Vehicles (%)			
Bus Blockages (#/hr)			
Shared Lane Traffic (%)			
Lane Group Flow (vph)			
Turn Type			
Protected Phases	6	9	10
Permitted Phases			
Total Split (s)	19.2	12.6	12.6
Total Lost Time (s)			
Act Effct Green (s)			
Actuated g/C Ratio			
v/c Ratio			
Control Delay			
Queue Delay			
Total Delay			
LOS			
Approach Delay			
Approach LOS			
Queue Length 50th (ft)			
Queue Length 95th (ft)			
Internal Link Dist (ft)			
Turn Bay Length (ft)			
Base Capacity (vph)			
Starvation Cap Reductn			
Spillback Cap Reductn			
Storage Cap Reductn			
Reduced v/c Ratio			

Intersection Summary

Control Type: Pretimed
Maximum v/c Ratio: 0.84
Intersection Signal Delay: 14.1 Intersection LOS: B
Intersection Capacity Utilization 48.9% ICU Level of Service A
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 19: 46th St & Baltimore Ave





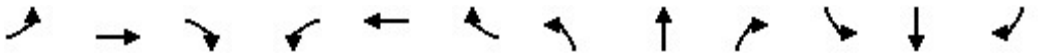
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	82	928	59	30	262	0	0	304	110
Future Volume (vph)	0	0	0	82	928	59	30	262	0	0	304	110
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100
Lane Width (ft)	10	10	10	10	10	10	10	10	10	10	10	10
Grade (%)		0%			3%			1%			3%	
Storage Length (ft)	0		0	0		40	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	0	0	0	3297	0	0	1626	0	0	1636	0
Flt Permitted					0.996			0.684				
Satd. Flow (perm)	0	0	0	0	3294	0	0	1118	0	0	1636	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		281			574			415			591	
Travel Time (s)		6.4			13.0			11.3			16.1	
Confl. Peds. (#/hr)	15		13	13		15	3		16	16		3
Confl. Bikes (#/hr)			2			10			6			1
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
Heavy Vehicles (%)	2%	2%	2%	8%	2%	3%	3%	6%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	8	0	0	4	0	0	0	0
Parking (#/hr)				0	0	0	0	0			0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	1304	0	0	357	0	0	505	0
Turn Type				Perm	NA		Perm	NA			NA	
Protected Phases					4			2			6	
Permitted Phases				4			2					
Total Split (s)				35.0	35.0		25.0	25.0			25.0	
Total Lost Time (s)					4.5			4.5			4.5	
Act Effct Green (s)					30.5			20.5			20.5	
Actuated g/C Ratio					0.51			0.34			0.34	
v/c Ratio					0.78			0.94			0.91	
Control Delay					10.1			56.4			39.2	
Queue Delay					0.0			0.0			0.0	
Total Delay					10.1			56.4			39.2	
LOS					B			E			D	
Approach Delay					10.1			56.4			39.2	
Approach LOS					B			E			D	
Queue Length 50th (ft)					192			122			196	
Queue Length 95th (ft)					44			#233			#299	
Internal Link Dist (ft)		201			494			335			511	
Turn Bay Length (ft)												
Base Capacity (vph)					1674			381			558	
Starvation Cap Reductn					0			0			0	
Spillback Cap Reductn					0			0			0	
Storage Cap Reductn					0			0			0	
Reduced v/c Ratio					0.78			0.94			0.91	

Intersection Summary

Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 60			
Offset: 20 (33%), Referenced to phase 4:WBTL, Start of Yellow			
Control Type: Pretimed			
Maximum v/c Ratio: 0.94			
Intersection Signal Delay: 24.5		Intersection LOS: C	
Intersection Capacity Utilization 73.1%		ICU Level of Service D	
Analysis Period (min) 15			

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

Splits and Phases: 42: 48th St & Walnut St

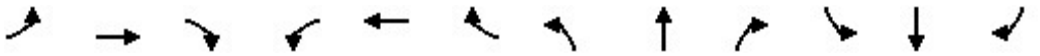


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	96	734	23	56	98	0	0	119	31
Future Volume (vph)	0	0	0	96	734	23	56	98	0	0	119	31
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100
Lane Width (ft)	12	10	12	12	10	12	12	10	12	12	10	12
Satd. Flow (prot)	0	0	0	0	3538	0	0	1839	0	0	1821	0
Flt Permitted					0.994			0.816				
Satd. Flow (perm)	0	0	0	0	3529	0	0	1515	0	0	1821	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					8						21	
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		269			567			427			550	
Travel Time (s)		6.1			12.9			11.6			15.0	
Confl. Peds. (#/hr)	7		25	25		7	28		30	30		28
Confl. Bikes (#/hr)			2									1
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles (%)	2%	2%	2%	6%	3%	2%	4%	5%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	4	0	0	0	0	0	4	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	1053	0	0	190	0	0	185	0
Turn Type				Perm	NA		Perm	NA			NA	
Protected Phases					4			2			6	
Permitted Phases				4			2					
Total Split (s)				40.0	40.0		20.0	20.0			20.0	
Total Lost Time (s)					4.5			4.5			4.5	
Act Effct Green (s)					35.5			15.5			15.5	
Actuated g/C Ratio					0.59			0.26			0.26	
v/c Ratio					0.50			0.49			0.38	
Control Delay					8.1			23.9			18.9	
Queue Delay					0.0			0.0			0.0	
Total Delay					8.1			23.9			18.9	
LOS					A			C			B	
Approach Delay					8.1			23.9			18.9	
Approach LOS					A			C			B	
Queue Length 50th (ft)					100			58			48	
Queue Length 95th (ft)					120			98			85	
Internal Link Dist (ft)		189			487			347			470	
Turn Bay Length (ft)												
Base Capacity (vph)					2091			391			486	
Starvation Cap Reductn					0			0			0	
Spillback Cap Reductn					0			0			0	
Storage Cap Reductn					0			0			0	
Reduced v/c Ratio					0.50			0.49			0.38	

Intersection Summary	
Area Type:	Other
Cycle Length: 60	
Actuated Cycle Length: 60	
Offset: 55 (92%), Referenced to phase 4:WBTL, Start of Yellow	

Control Type: Pretimed
Maximum v/c Ratio: 0.50
Intersection Signal Delay: 11.6 Intersection LOS: B
Intersection Capacity Utilization 62.9% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 43: 46th St & Walnut St



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	8	0	52	0	69	29	32	133	0	0	348	7
Future Volume (vph)	8	0	52	0	69	29	32	133	0	0	348	7
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100
Satd. Flow (prot)	0	1805	0	0	1883	0	0	2038	0	0	2047	0
Flt Permitted		0.936						0.895				
Satd. Flow (perm)	0	1679	0	0	1883	0	0	1836	0	0	2047	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		218			29						2	
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		246			213			100			587	
Travel Time (s)		6.7			5.8			2.7			16.0	
Confl. Peds. (#/hr)	31					31	47					47
Confl. Bikes (#/hr)						11						
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
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	66	0	0	108	0	0	181	0	0	390	0
Turn Type	Perm	NA			NA		Perm	NA			NA	
Protected Phases		10			9			2 4			6	
Permitted Phases	10			9			2 4					
Total Split (s)	12.6	12.6		12.6	12.6						19.2	
Total Lost Time (s)		4.5			4.5						5.7	
Act Effct Green (s)		8.1			8.1			41.7			13.5	
Actuated g/C Ratio		0.14			0.14			0.70			0.22	
v/c Ratio		0.16			0.39			0.14			0.84	
Control Delay		0.8			22.8			0.4			41.7	
Queue Delay		0.1			0.0			0.0			2.1	
Total Delay		0.9			22.8			0.4			43.8	
LOS		A			C			A			D	
Approach Delay		0.9			22.8			0.4			43.8	
Approach LOS		A			C			A			D	
Queue Length 50th (ft)		0			26			1			135	
Queue Length 95th (ft)		0			66			1			#273	
Internal Link Dist (ft)		166			133			20			507	
Turn Bay Length (ft)												
Base Capacity (vph)		415			279			1276			462	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		30			0			0			20	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.17			0.39			0.14			0.88	

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 60			
Offset: 58.8 (98%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green			
Control Type: Pretimed			
Maximum v/c Ratio: 0.84			
Intersection Signal Delay: 26.4		Intersection LOS: C	

Lane Group	Ø2	Ø4	Ø8
Lane Configurations			
Traffic Volume (vph)			
Future Volume (vph)			
Ideal Flow (vphpl)			
Satd. Flow (prot)			
Flt Permitted			
Satd. Flow (perm)			
Right Turn on Red			
Satd. Flow (RTOR)			
Link Speed (mph)			
Link Distance (ft)			
Travel Time (s)			
Confl. Peds. (#/hr)			
Confl. Bikes (#/hr)			
Peak Hour Factor			
Shared Lane Traffic (%)			
Lane Group Flow (vph)			
Turn Type			
Protected Phases	2	4	8
Permitted Phases			
Total Split (s)	19.2	28.2	28.2
Total Lost Time (s)			
Act Effct Green (s)			
Actuated g/C Ratio			
v/c Ratio			
Control Delay			
Queue Delay			
Total Delay			
LOS			
Approach Delay			
Approach LOS			
Queue Length 50th (ft)			
Queue Length 95th (ft)			
Internal Link Dist (ft)			
Turn Bay Length (ft)			
Base Capacity (vph)			
Starvation Cap Reductn			
Spillback Cap Reductn			
Storage Cap Reductn			
Reduced v/c Ratio			

Intersection Summary

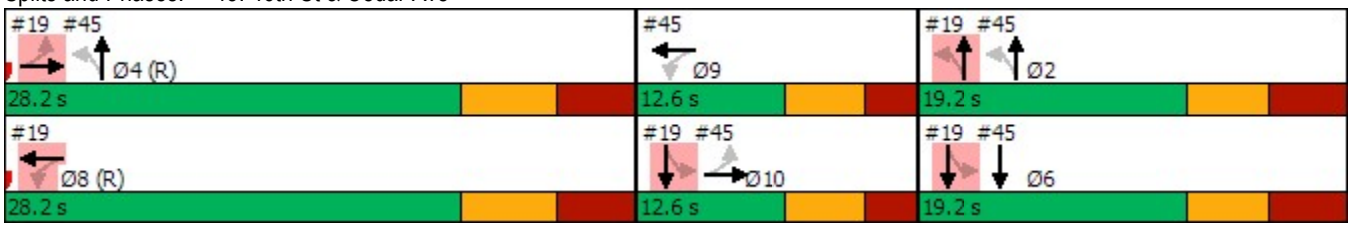
Intersection Capacity Utilization 49.7% ICU Level of Service A

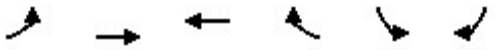
Analysis Period (min) 15

\# 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

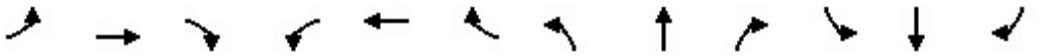
Splits and Phases: 45: 46th St & Cedar Ave





Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	229	231	168	0	0
Future Volume (vph)	0	229	231	168	0	0
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100
Satd. Flow (prot)	0	2039	1941	0	0	0
Flt Permitted						
Satd. Flow (perm)	0	2039	1941	0	0	0
Link Speed (mph)		25	25		25	
Link Distance (ft)		205	392		213	
Travel Time (s)		5.6	10.7		5.8	
Confl. Peds. (#/hr)				31		
Confl. Bikes (#/hr)				35		
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	2%	3%	2%	2%	2%	2%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	252	439	0	0	0
Sign Control		Free	Free		Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 24.8%		ICU Level of Service A	
Analysis Period (min) 15			

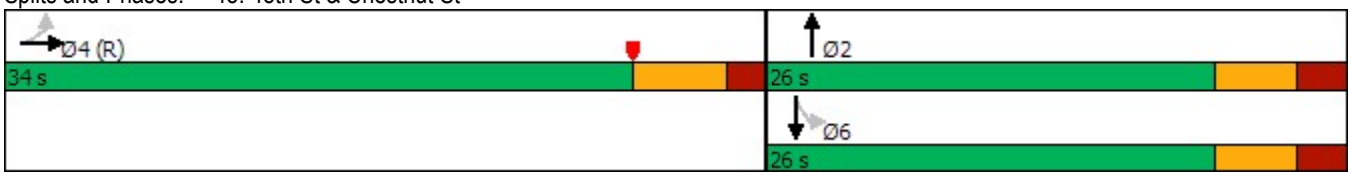


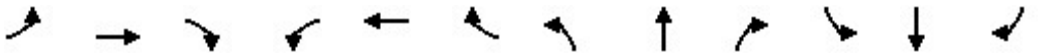
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	143	1115	53	0	0	0	0	285	55	43	293	0
Future Volume (vph)	143	1115	53	0	0	0	0	285	55	43	293	0
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100
Lane Width (ft)	12	10	12	12	10	12	12	14	12	12	14	12
Storage Length (ft)	100		0	0		0	0		0	0		0
Storage Lanes	1		0	0		0	0		0	0		0
Taper Length (ft)	40			25			25			25		
Satd. Flow (prot)	1956	3585	0	0	0	0	0	2059	0	0	2183	0
Flt Permitted	0.950										0.878	
Satd. Flow (perm)	1938	3585	0	0	0	0	0	2059	0	0	1926	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		11						18				
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		550			574			591			540	
Travel Time (s)		12.5			13.0			16.1			14.7	
Confl. Peds. (#/hr)	9		39	39		9	23		16	16		23
Confl. Bikes (#/hr)									1			
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
Heavy Vehicles (%)	2%	2%	3%	2%	2%	2%	2%	2%	16%	2%	2%	2%
Bus Blockages (#/hr)	0	4	0	0	0	0	0	4	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	159	1298	0	0	0	0	0	378	0	0	374	0
Turn Type	Perm	NA						NA		Perm	NA	
Protected Phases		4						2			6	
Permitted Phases	4									6		
Total Split (s)	34.0	34.0						26.0		26.0	26.0	
Total Lost Time (s)	4.5	4.5						4.5			4.5	
Act Effct Green (s)	29.5	29.5						21.5			21.5	
Actuated g/C Ratio	0.49	0.49						0.36			0.36	
v/c Ratio	0.17	0.73						0.50			0.54	
Control Delay	9.1	15.1						13.5			18.9	
Queue Delay	0.0	0.0						0.0			0.0	
Total Delay	9.1	15.1						13.5			18.9	
LOS	A	B						B			B	
Approach Delay		14.5						13.5			18.9	
Approach LOS		B						B			B	
Queue Length 50th (ft)	30	180						135			105	
Queue Length 95th (ft)	58	251						m157			178	
Internal Link Dist (ft)		470			494			511			460	
Turn Bay Length (ft)	100											
Base Capacity (vph)	952	1768						749			690	
Starvation Cap Reductn	0	0						0			0	
Spillback Cap Reductn	0	0						0			0	
Storage Cap Reductn	0	0						0			0	
Reduced v/c Ratio	0.17	0.73						0.50			0.54	

Intersection Summary	
Area Type:	Other

Cycle Length: 60
Actuated Cycle Length: 60
Offset: 52 (87%), Referenced to phase 4:EBTL, Start of Yellow
Control Type: Pretimed
Maximum v/c Ratio: 0.73
Intersection Signal Delay: 15.1 Intersection LOS: B
Intersection Capacity Utilization 74.3% ICU Level of Service D
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 48: 48th St & Chestnut St





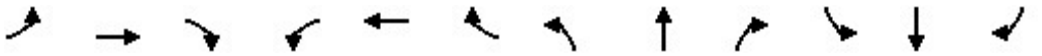
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	31	975	95	0	0	0	0	88	85	65	165	0
Future Volume (vph)	31	975	95	0	0	0	0	88	85	65	165	0
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100
Lane Width (ft)	12	10	12	12	10	12	12	10	12	12	10	12
Satd. Flow (prot)	0	3407	0	0	0	0	0	1590	0	0	1705	0
Flt Permitted		0.999									0.860	
Satd. Flow (perm)	0	3406	0	0	0	0	0	1590	0	0	1481	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		25						77				
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		548			550			570			529	
Travel Time (s)		12.5			12.5			15.5			14.4	
Confl. Peds. (#/hr)	12		12	12		12	20		19	19		20
Confl. Bikes (#/hr)			14			2			2			1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	3%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	4	0	0	0	0	0	0	0	0	0
Parking (#/hr)		0						0			0	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1171	0	0	0	0	0	184	0	0	245	0
Turn Type	Perm	NA						NA		Perm	NA	
Protected Phases		4						2			6	
Permitted Phases	4									6		
Total Split (s)	40.0	40.0						24.0		24.0	24.0	
Total Lost Time (s)		4.5						4.5			4.5	
Act Effct Green (s)		35.5						19.5			19.5	
Actuated g/C Ratio		0.55						0.30			0.30	
v/c Ratio		0.62						0.34			0.54	
Control Delay		11.2						12.3			23.9	
Queue Delay		0.0						0.0			0.0	
Total Delay		11.2						12.3			23.9	
LOS		B						B			C	
Approach Delay		11.2						12.3			23.9	
Approach LOS		B						B			C	
Queue Length 50th (ft)		143						31			79	
Queue Length 95th (ft)		199						76			144	
Internal Link Dist (ft)		468			470			490			449	
Turn Bay Length (ft)												
Base Capacity (vph)		1900						537			451	
Starvation Cap Reductn		0						0			0	
Spillback Cap Reductn		0						0			0	
Storage Cap Reductn		0						0			0	
Reduced v/c Ratio		0.62						0.34			0.54	

Intersection Summary	
Area Type:	Other
Cycle Length: 64	
Actuated Cycle Length: 64	

Offset: 43 (67%), Referenced to phase 4:EBTL, Start of Yellow

Control Type: Pretimed	
Maximum v/c Ratio: 0.62	
Intersection Signal Delay: 13.3	Intersection LOS: B
Intersection Capacity Utilization 66.0%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 49: 49th St & Chestnut St



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	11	80	31	84	109	1	31	320	63	12	517	12
Future Volume (vph)	11	80	31	84	109	1	31	320	63	12	517	12
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100
Lane Width (ft)	10	10	10	10	10	10	12	12	12	12	12	12
Storage Length (ft)	0		0	0		0	0		0	20		0
Storage Lanes	0		0	0		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	1647	0	0	1677	0	0	1744	0	1760	1797	0
Flt Permitted		0.968			0.817			0.936		0.453		
Satd. Flow (perm)	0	1601	0	0	1391	0	0	1639	0	839	1797	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		32						21			3	
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		475			483			581			517	
Travel Time (s)		13.0			13.2			15.8			14.1	
Confl. Peds. (#/hr)	4		13	13		4	12		2	2		12
Confl. Bikes (#/hr)			2			1			5			1
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
Heavy Vehicles (%)	2%	2%	2%	4%	2%	2%	2%	4%	2%	2%	3%	8%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	4	0	0	4	0
Parking (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	135	0	0	215	0	0	460	0	13	587	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Total Split (s)	26.4	26.4		26.4	26.4		33.6	33.6		33.6	33.6	
Total Lost Time (s)		4.5			4.5			4.5		4.5	4.5	
Act Effct Green (s)		21.9			21.9			29.1		29.1	29.1	
Actuated g/C Ratio		0.36			0.36			0.48		0.48	0.48	
v/c Ratio		0.22			0.42			0.57		0.03	0.67	
Control Delay		11.4			17.6			10.9		8.5	16.5	
Queue Delay		0.0			0.0			0.0		0.0	0.0	
Total Delay		11.4			17.6			10.9		8.5	16.5	
LOS		B			B			B		A	B	
Approach Delay		11.4			17.6			10.9			16.4	
Approach LOS		B			B			B			B	
Queue Length 50th (ft)		25			57			101		2	150	
Queue Length 95th (ft)		58			109			152		10	252	
Internal Link Dist (ft)		395			403			501			437	
Turn Bay Length (ft)										20		
Base Capacity (vph)		604			507			805		406	873	
Starvation Cap Reductn		0			0			0		0	0	
Spillback Cap Reductn		0			0			0		0	0	
Storage Cap Reductn		0			0			0		0	0	
Reduced v/c Ratio		0.22			0.42			0.57		0.03	0.67	

Intersection Summary

Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 60			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Control Type: Pretimed			
Maximum v/c Ratio: 0.67			
Intersection Signal Delay: 14.3		Intersection LOS: B	
Intersection Capacity Utilization 66.0%		ICU Level of Service C	
Analysis Period (min) 15			

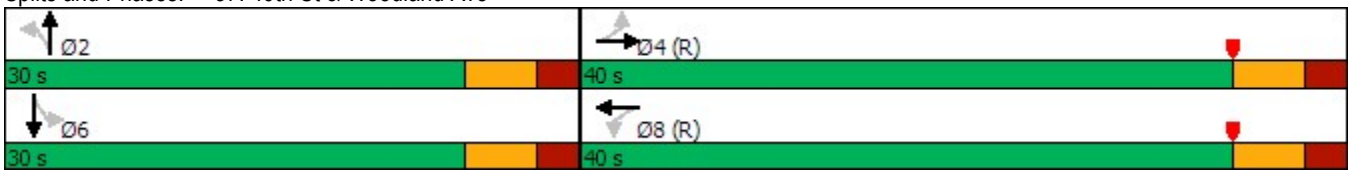
Splits and Phases: 54: 49th St & Kingsessing Ave

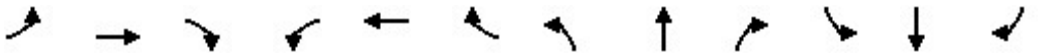
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	16	279	5	110	147	15	24	133	112	198	159	17
Future Volume (vph)	16	279	5	110	147	15	24	133	112	198	159	17
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100
Lane Width (ft)	12	12	12	10	10	10	12	12	12	12	12	12
Satd. Flow (prot)	0	1988	0	0	1624	0	0	1546	0	0	1670	0
Flt Permitted		0.977			0.764			0.947			0.621	
Satd. Flow (perm)	0	1942	0	0	1251	0	0	1468	0	0	1048	0
Right Turn on Red			Yes			No			Yes			No
Satd. Flow (RTOR)		2						57				
Link Speed (mph)		25			25			30			25	
Link Distance (ft)		447			176			504			520	
Travel Time (s)		12.2			4.8			11.5			14.2	
Confl. Peds. (#/hr)	95		49	49		95	29		39	39		29
Confl. Bikes (#/hr)			2			3			1			1
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
Heavy Vehicles (%)	6%	5%	2%	13%	7%	2%	25%	5%	14%	2%	5%	18%
Bus Blockages (#/hr)	0	0	0	0	16	0	0	2	0	0	12	0
Parking (#/hr)							0	0	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	334	0	0	302	0	0	299	0	0	416	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Total Split (s)	40.0	40.0		40.0	40.0		30.0	30.0		30.0	30.0	
Total Lost Time (s)		4.5			4.5			4.5			4.5	
Act Effct Green (s)		35.5			35.5			25.5			25.5	
Actuated g/C Ratio		0.51			0.51			0.36			0.36	
v/c Ratio		0.34			0.48			0.52			1.09	
Control Delay		11.4			12.7			17.9			99.0	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		11.4			12.7			17.9			99.0	
LOS		B			B			B			F	
Approach Delay		11.4			12.7			17.9			99.0	
Approach LOS		B			B			B			F	
Queue Length 50th (ft)		79			68			78			~207	
Queue Length 95th (ft)		131			m103			150			#367	
Internal Link Dist (ft)		367			96			424			440	
Turn Bay Length (ft)												
Base Capacity (vph)		985			634			571			381	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.34			0.48			0.52			1.09	

Intersection Summary	
Area Type:	Other
Cycle Length: 70	
Actuated Cycle Length: 70	

Offset: 51 (73%), Referenced to phase 4:EBTL and 8:WBTL, Start of Yellow
Control Type: Pretimed
Maximum v/c Ratio: 1.09
Intersection Signal Delay: 40.1 Intersection LOS: D
Intersection Capacity Utilization 76.7% ICU Level of Service D
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 57: 49th St & Woodland Ave



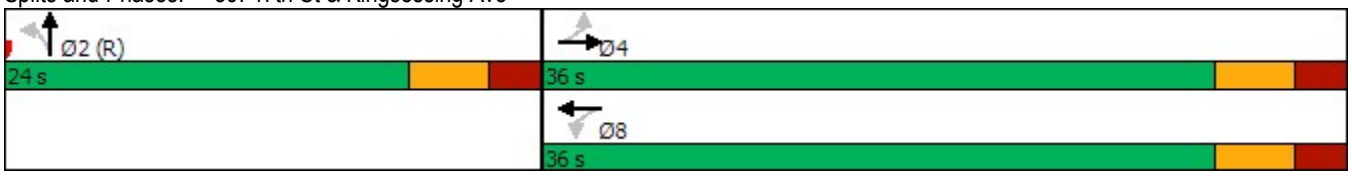


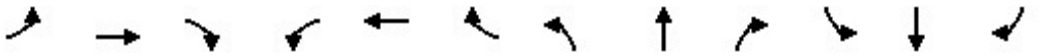
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	3	75	47	95	120	2	64	267	37	0	0	0
Future Volume (vph)	3	75	47	95	120	2	64	267	37	0	0	0
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100
Lane Width (ft)	10	10	10	10	10	10	13	13	13	13	13	13
Satd. Flow (prot)	0	1601	0	0	1691	0	0	1863	0	0	0	0
Flt Permitted		0.995			0.821			0.991				
Satd. Flow (perm)	0	1594	0	0	1408	0	0	1845	0	0	0	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		490			493			759			517	
Travel Time (s)		13.4			13.4			20.7			14.1	
Confl. Peds. (#/hr)	17		21	21		17	36		9	9		36
Confl. Bikes (#/hr)			5			2			7			2
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	2%	2%	4%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Parking (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	140	0	0	244	0	0	414	0	0	0	0
Turn Type	Perm	NA		Perm	NA		Perm	NA				
Protected Phases		4			8			2				
Permitted Phases	4			8			2					
Total Split (s)	36.0	36.0		36.0	36.0		24.0	24.0				
Total Lost Time (s)		4.5			4.5			4.5				
Act Effct Green (s)		31.5			31.5			19.5				
Actuated g/C Ratio		0.52			0.52			0.32				
v/c Ratio		0.17			0.33			0.69				
Control Delay		8.1			8.6			25.0				
Queue Delay		0.0			0.0			0.0				
Total Delay		8.1			8.6			25.0				
LOS		A			A			C				
Approach Delay		8.1			8.6			25.0				
Approach LOS		A			A			C				
Queue Length 50th (ft)		24			48			128				
Queue Length 95th (ft)		48			76			213				
Internal Link Dist (ft)		410			413			679			437	
Turn Bay Length (ft)												
Base Capacity (vph)		836			739			599				
Starvation Cap Reductn		0			0			0				
Spillback Cap Reductn		0			0			0				
Storage Cap Reductn		0			0			0				
Reduced v/c Ratio		0.17			0.33			0.69				

Intersection Summary	
Area Type:	Other
Cycle Length: 60	
Actuated Cycle Length: 60	
Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Green	

Control Type: Pretimed
Maximum v/c Ratio: 0.69
Intersection Signal Delay: 17.0 Intersection LOS: B
Intersection Capacity Utilization 56.6% ICU Level of Service B
Analysis Period (min) 15

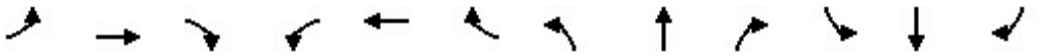
Splits and Phases: 59: 47th St & Kingsessing Ave





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	45	3	0	0	8	4	23	586	4	6	0	174
Future Volume (vph)	45	3	0	0	8	4	23	586	4	6	0	174
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100
Satd. Flow (prot)	0	1931	0	0	1972	0	0	2053	0	0	1778	0
Flt Permitted		0.955						0.998			0.998	
Satd. Flow (perm)	0	1931	0	0	1972	0	0	2053	0	0	1778	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		188			439			100			840	
Travel Time (s)		5.1			12.0			2.7			22.9	
Confl. Peds. (#/hr)	4					4			2	2		
Confl. Bikes (#/hr)			1						10			1
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
Heavy Vehicles (%)	4%	2%	2%	2%	2%	2%	2%	2%	2%	17%	2%	2%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	52	0	0	13	0	0	666	0	0	196	0
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 52.5%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	7	223	200	48	224	2	313	109	41	9	100	33
Future Volume (vph)	7	223	200	48	224	2	313	109	41	9	100	33
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100
Lane Width (ft)	15	15	15	13	13	13	12	12	12	12	12	12
Satd. Flow (prot)	0	1818	0	0	1767	0	0	1658	0	0	1829	0
Flt Permitted		0.994			0.882			0.734			0.962	
Satd. Flow (perm)	0	1809	0	0	1572	0	0	1258	0	0	1765	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		91			1			10			31	
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		439			789			362			504	
Travel Time (s)		12.0			21.5			8.2			11.5	
Confl. Peds. (#/hr)			4	4			1		2	2		1
Confl. Bikes (#/hr)			5			1			1			1
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
Heavy Vehicles (%)	14%	6%	3%	6%	7%	2%	5%	2%	15%	2%	6%	3%
Bus Blockages (#/hr)	0	2	0	0	6	0	0	8	0	0	12	0
Parking (#/hr)	0	0	0	0	0	0	0	0	0			
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	467	0	0	297	0	0	503	0	0	155	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Total Split (s)	30.0	30.0		30.0	30.0		30.0	30.0		30.0	30.0	
Total Lost Time (s)		4.5			4.5			5.1			5.1	
Act Effct Green (s)		25.5			25.5			24.9			24.9	
Actuated g/C Ratio		0.42			0.42			0.42			0.42	
v/c Ratio		0.57			0.44			0.95			0.21	
Control Delay		13.6			14.8			50.1			9.8	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		13.6			14.8			50.1			9.8	
LOS		B			B			D			A	
Approach Delay		13.6			14.8			50.1			9.8	
Approach LOS		B			B			D			A	
Queue Length 50th (ft)		95			72			165			27	
Queue Length 95th (ft)		176			130			#350			59	
Internal Link Dist (ft)		359			709			282			424	
Turn Bay Length (ft)												
Base Capacity (vph)		821			668			527			750	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.57			0.44			0.95			0.21	

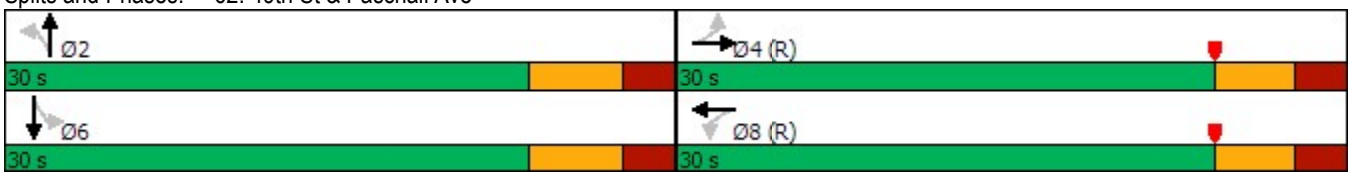
Intersection Summary	
Area Type:	Other
Cycle Length: 60	
Actuated Cycle Length: 60	

Offset: 51 (85%), Referenced to phase 4:EBTL and 8:WBTL, Start of Yellow

Control Type: Pretimed	
Maximum v/c Ratio: 0.95	
Intersection Signal Delay: 26.4	Intersection LOS: C
Intersection Capacity Utilization 85.0%	ICU Level of Service E
Analysis Period (min) 15	

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

Splits and Phases: 62: 49th St & Paschall Ave



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	9	791	15	334	484	3	6	44	297	115	59	7
Future Volume (vph)	9	791	15	334	484	3	6	44	297	115	59	7
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100
Lane Width (ft)	10	11	12	10	10	10	10	10	10	10	10	10
Storage Length (ft)	50		0	0		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	73			25			25			25		
Satd. Flow (prot)	1677	3768	0	1677	1919	0	0	1450	0	0	1666	0
Flt Permitted	0.477			0.202				0.994			0.438	
Satd. Flow (perm)	841	3768	0	357	1919	0	0	1442	0	0	753	0
Right Turn on Red			Yes			No			Yes			No
Satd. Flow (RTOR)		3						262				
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		424			289			789			188	
Travel Time (s)		11.6			7.9			21.5			5.1	
Confl. Peds. (#/hr)	2		2	2		2	4		1	1		4
Confl. Bikes (#/hr)			3			3			3			
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	11%	2%	2%	11%	2%	2%	17%	5%	3%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	6	0	0	0	0
Parking (#/hr)							0	0	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	9	840	0	348	507	0	0	361	0	0	188	0
Turn Type	Perm	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases		4		3	8			2			6	
Permitted Phases	4			8			2			6		
Total Split (s)	43.0	43.0		15.0	58.0		32.0	32.0		32.0	32.0	
Total Lost Time (s)	5.5	5.5		5.5	5.5			6.5			6.5	
Act Effct Green (s)	37.5	37.5		52.5	52.5			25.5			25.5	
Actuated g/C Ratio	0.42	0.42		0.58	0.58			0.28			0.28	
v/c Ratio	0.03	0.53		1.00	0.45			0.61			0.88	
Control Delay	15.9	21.2		65.0	12.3			12.9			71.3	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay	15.9	21.2		65.0	12.3			12.9			71.3	
LOS	B	C		E	B			B			E	
Approach Delay		21.1			33.7			12.9			71.3	
Approach LOS		C			C			B			E	
Queue Length 50th (ft)	3	183		~97	151			43			102	
Queue Length 95th (ft)	12	239		#255	224			134			#229	
Internal Link Dist (ft)		344			209			709			108	
Turn Bay Length (ft)	50											
Base Capacity (vph)	350	1571		347	1119			596			213	
Starvation Cap Reductn	0	0		0	0			0			0	
Spillback Cap Reductn	0	0		0	0			0			0	
Storage Cap Reductn	0	0		0	0			0			0	
Reduced v/c Ratio	0.03	0.53		1.00	0.45			0.61			0.88	

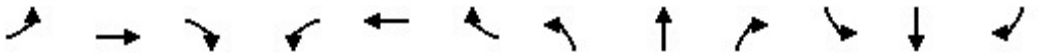
Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:NETL and 6:SWTL, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.00
Intersection Signal Delay: 28.8 Intersection LOS: C
Intersection Capacity Utilization 85.0% ICU Level of Service E
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 66: Paschall Ave & Grays Ferry Ave

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	233	354	39	249	0	0
Future Volume (vph)	233	354	39	249	0	0
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100
Satd. Flow (prot)	1828	0	0	1927	0	0
Flt Permitted				0.993		
Satd. Flow (perm)	1828	0	0	1927	0	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	176			341	411	
Travel Time (s)	4.0			7.8	9.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	11%	2%	3%	9%	2%	2%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	638	0	0	313	0	0
Sign Control	Free			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	45.1%	ICU Level of Service	A
Analysis Period (min)	15		

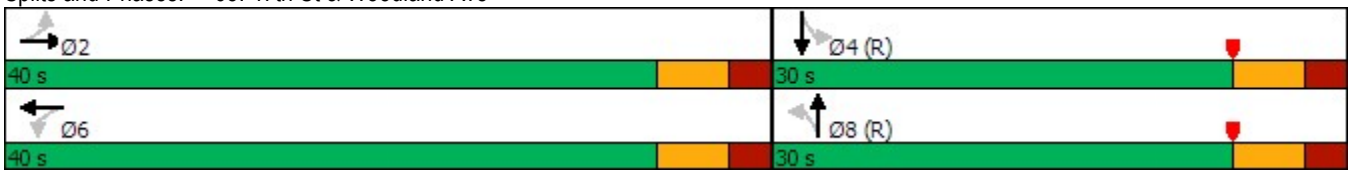


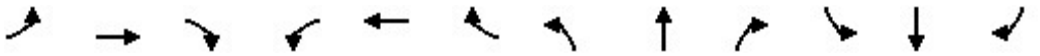
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	12	212	8	115	333	13	16	343	198	11	59	79
Future Volume (vph)	12	212	8	115	333	13	16	343	198	11	59	79
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100
Lane Width (ft)	10	10	10	10	10	10	15	15	15	10	10	15
Storage Length (ft)	0		0	0		0	20		0	20		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	1870	0	0	1885	0	2070	2101	0	1825	1716	0
Flt Permitted		0.971			0.853		0.660			0.157		
Satd. Flow (perm)	0	1821	0	0	1623	0	1418	2101	0	302	1716	0
Right Turn on Red			No			Yes			No			No
Satd. Flow (RTOR)					3							
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		524			499			840			759	
Travel Time (s)		14.3			13.6			22.9			20.7	
Confl. Peds. (#/hr)	9		15	15		9	13		1	1		13
Confl. Bikes (#/hr)			1			5			9			3
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
Heavy Vehicles (%)	2%	4%	2%	3%	2%	2%	6%	2%	4%	2%	2%	2%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	255	0	0	506	0	18	595	0	12	152	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Total Split (s)	40.0	40.0		40.0	40.0		30.0	30.0		30.0	30.0	
Total Lost Time (s)		4.5			4.5		4.5	4.5		4.5	4.5	
Act Effct Green (s)		35.5			35.5		25.5	25.5		25.5	25.5	
Actuated g/C Ratio		0.51			0.51		0.36	0.36		0.36	0.36	
v/c Ratio		0.28			0.61		0.03	0.78		0.11	0.24	
Control Delay		9.4			16.3		14.7	28.5		17.9	16.9	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		9.4			16.3		14.7	28.5		17.9	16.9	
LOS		A			B		B	C		B	B	
Approach Delay		9.4			16.3			28.1			16.9	
Approach LOS		A			B			C			B	
Queue Length 50th (ft)		68			145		5	222		3	45	
Queue Length 95th (ft)		m137			239		17	#378		15	84	
Internal Link Dist (ft)		444			419			760			679	
Turn Bay Length (ft)							20			20		
Base Capacity (vph)		923			824		516	765		110	625	
Starvation Cap Reductn		0			0		0	0		0	0	
Spillback Cap Reductn		0			0		0	0		0	0	
Storage Cap Reductn		0			0		0	0		0	0	
Reduced v/c Ratio		0.28			0.61		0.03	0.78		0.11	0.24	

Intersection Summary	
Area Type:	Other
Cycle Length: 70	

Actuated Cycle Length: 70
Offset: 21 (30%), Referenced to phase 4:SBTL and 8:NBTL, Start of Yellow
Control Type: Pretimed
Maximum v/c Ratio: 0.78
Intersection Signal Delay: 19.9 Intersection LOS: B
Intersection Capacity Utilization 72.1% ICU Level of Service C
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 68: 47th St & Woodland Ave





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	63	455	3	3	261	12	20	14	15	15	9	59
Future Volume (vph)	63	455	3	3	261	12	20	14	15	15	9	59
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100
Lane Width (ft)	12	10	12	12	10	12	12	12	12	12	12	12
Satd. Flow (prot)	0	1798	0	0	1804	0	0	1893	0	0	1784	0
Flt Permitted		0.928			0.996			0.878			0.951	
Satd. Flow (perm)	0	1675	0	0	1798	0	0	1680	0	0	1708	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		499			488			657			681	
Travel Time (s)		13.6			13.3			17.9			18.6	
Confl. Peds. (#/hr)	35		21	21		35	14		7	7		14
Confl. Bikes (#/hr)						1						1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	3%	9%	2%	2%	8%	2%	5%	2%	2%	2%	2%	2%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	560	0	0	297	0	0	53	0	0	89	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Total Split (s)	39.0	39.0		39.0	39.0		21.0	21.0		21.0	21.0	
Total Lost Time (s)		4.5			4.5			4.5			4.5	
Act Effct Green (s)		34.5			34.5			16.5			16.5	
Actuated g/C Ratio		0.58			0.58			0.28			0.28	
v/c Ratio		0.58			0.29			0.11			0.19	
Control Delay		11.2			7.4			17.2			25.7	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		11.2			7.4			17.2			25.7	
LOS		B			A			B			C	
Approach Delay		11.2			7.4			17.2			25.7	
Approach LOS		B			A			B			C	
Queue Length 50th (ft)		114			48			14			28	
Queue Length 95th (ft)		196			85			37			66	
Internal Link Dist (ft)		419			408			577			601	
Turn Bay Length (ft)												
Base Capacity (vph)		963			1033			462			469	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.58			0.29			0.11			0.19	

Intersection Summary	
Area Type:	Other
Cycle Length: 60	
Actuated Cycle Length: 60	
Offset: 30 (50%), Referenced to phase 4:EBTL and 8:WBTL, Start of Yellow	
Control Type: Pretimed	

Maximum v/c Ratio: 0.58

Intersection Signal Delay: 11.7	Intersection LOS: B
Intersection Capacity Utilization 78.8%	ICU Level of Service D
Analysis Period (min) 15	

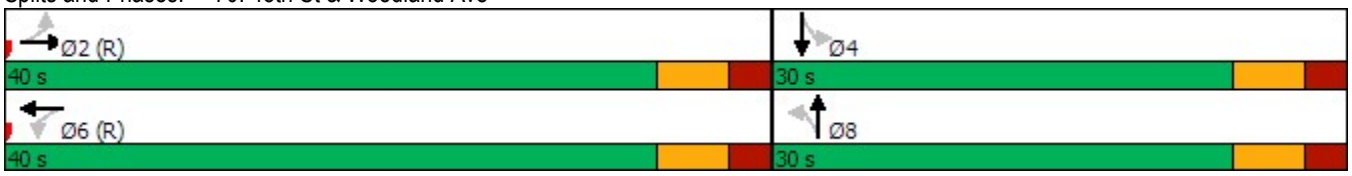
Splits and Phases: 69: 46th St & Woodland Ave

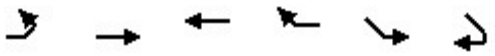
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	6	199	16	183	226	28	78	399	14	16	303	12
Future Volume (vph)	6	199	16	183	226	28	78	399	14	16	303	12
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100
Lane Width (ft)	10	10	10	10	10	10	15	15	15	15	15	15
Storage Length (ft)	0		0	0		0	20		0	0		0
Storage Lanes	0		0	0		0	1		0	0		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	1481	0	0	1539	0	1646	1803	0	0	1768	0
Flt Permitted		0.989			0.767		0.447				0.970	
Satd. Flow (perm)	0	1466	0	0	1200	0	771	1803	0	0	1718	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		8			7			3			3	
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		341			524			393			198	
Travel Time (s)		9.3			14.3			10.7			5.4	
Confl. Peds. (#/hr)	13		18	18		13	7		5	5		7
Confl. Bikes (#/hr)			1			5			2			2
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	2%	15%	2%	3%	11%	7%	8%	3%	7%	2%	5%	8%
Bus Blockages (#/hr)	0	8	0	0	8	0	0	0	0	0	0	0
Parking (#/hr)							0	0	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	235	0	0	465	0	83	439	0	0	352	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Total Split (s)	40.0	40.0		40.0	40.0		30.0	30.0		30.0	30.0	
Total Lost Time (s)		4.5			4.5		4.5	4.5			4.5	
Act Effct Green (s)		35.5			35.5		25.5	25.5			25.5	
Actuated g/C Ratio		0.51			0.51		0.36	0.36			0.36	
v/c Ratio		0.31			0.76		0.30	0.67			0.56	
Control Delay		8.3			30.8		19.6	24.6			21.9	
Queue Delay		0.0			0.0		0.0	0.0			0.0	
Total Delay		8.3			30.8		19.6	24.6			21.9	
LOS		A			C		B	C			C	
Approach Delay		8.3			30.8			23.8			21.9	
Approach LOS		A			C			C			C	
Queue Length 50th (ft)		31			213		25	154			117	
Queue Length 95th (ft)		m53			#328		59	250			196	
Internal Link Dist (ft)		261			444			313			118	
Turn Bay Length (ft)							20					
Base Capacity (vph)		747			612		280	658			627	
Starvation Cap Reductn		0			0		0	0			0	
Spillback Cap Reductn		0			0		0	0			0	
Storage Cap Reductn		0			0		0	0			0	
Reduced v/c Ratio		0.31			0.76		0.30	0.67			0.56	

Intersection Summary

Area Type: CBD
Cycle Length: 70
Actuated Cycle Length: 70
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Control Type: Pretimed
Maximum v/c Ratio: 0.76
Intersection Signal Delay: 23.1 Intersection LOS: C
Intersection Capacity Utilization 85.5% ICU Level of Service E
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

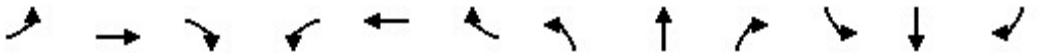
Splits and Phases: 70: 48th St & Woodland Ave





Lane Group	EBL	EBT	WBT	WBR	SEL	SER
Lane Configurations						
Traffic Volume (vph)	0	393	0	497	502	0
Future Volume (vph)	0	393	0	497	502	0
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100
Lane Width (ft)	12	16	12	12	12	12
Satd. Flow (prot)	0	2333	0	1781	1956	0
Flt Permitted					0.950	
Satd. Flow (perm)	0	2333	0	1781	1956	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		411	424		393	
Travel Time (s)		9.3	9.6		8.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	427	0	540	546	0
Sign Control		Stop	Free		Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	53.2%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	131	8	6	270	180	11	183	4	189	396	20
Future Volume (vph)	10	131	8	6	270	180	11	183	4	189	396	20
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100
Satd. Flow (prot)	0	1830	0	0	1817	0	0	1935	0	0	1893	0
Flt Permitted		0.964			0.997			0.964			0.832	
Satd. Flow (perm)	0	1768	0	0	1813	0	0	1871	0	0	1596	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5			62			2			4	
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		441			364			520			581	
Travel Time (s)		12.0			9.9			14.2			15.8	
Confl. Peds. (#/hr)	17		23	23		17	12		8	8		12
Confl. Bikes (#/hr)			1			9			1			10
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	10%	8%	38%	17%	7%	7%	9%	6%	2%	7%	7%	5%
Bus Blockages (#/hr)	0	8	0	0	0	0	0	4	0	0	4	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	154	0	0	475	0	0	206	0	0	631	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Total Split (s)	27.0	27.0		27.0	27.0		33.0	33.0		33.0	33.0	
Total Lost Time (s)		4.9			4.9			4.5			4.5	
Act Effct Green (s)		22.1			22.1			28.5			28.5	
Actuated g/C Ratio		0.37			0.37			0.48			0.48	
v/c Ratio		0.24			0.67			0.23			0.83	
Control Delay		13.9			19.4			10.1			22.1	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		13.9			19.4			10.1			22.1	
LOS		B			B			B			C	
Approach Delay		13.9			19.4			10.1			22.1	
Approach LOS		B			B			B			C	
Queue Length 50th (ft)		36			120			41			116	
Queue Length 95th (ft)		73			214			76			#355	
Internal Link Dist (ft)		361			284			440			501	
Turn Bay Length (ft)												
Base Capacity (vph)		654			706			889			760	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.24			0.67			0.23			0.83	

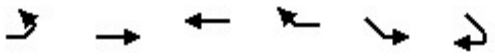
Intersection Summary	
Area Type:	Other
Cycle Length: 60	
Actuated Cycle Length: 60	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Control Type: Pretimed	

Maximum v/c Ratio: 0.83

Intersection Signal Delay: 18.7	Intersection LOS: B
Intersection Capacity Utilization 88.5%	ICU Level of Service E
Analysis Period (min) 15	

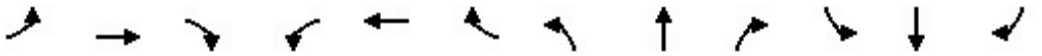
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 74: 49th St & Greenway Ave



Lane Group	EBL	EBT	WBT	WBR	SEL	SER
Lane Configurations						
Traffic Volume (vph)	0	1203	821	613	0	0
Future Volume (vph)	0	1203	821	613	0	0
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100
Storage Length (ft)	0			76	0	0
Storage Lanes	0			1	0	0
Taper Length (ft)	25				25	
Satd. Flow (prot)	0	3912	3912	1750	0	0
Flt Permitted						
Satd. Flow (perm)	0	3912	3912	1750	0	0
Link Speed (mph)		30	35		30	
Link Distance (ft)		289	1538		114	
Travel Time (s)		6.6	30.0		2.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1308	892	666	0	0
Sign Control		Free	Free		Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 37.7%		ICU Level of Service A	
Analysis Period (min) 15			

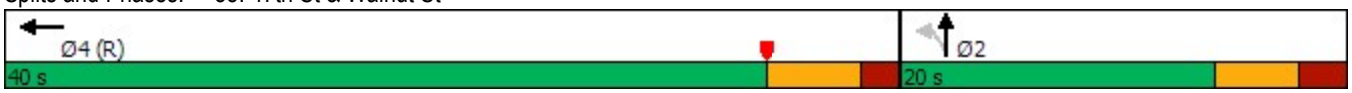


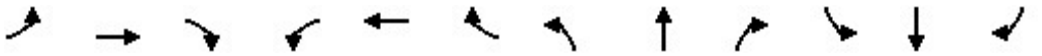
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	917	13	58	119	0	0	0	0
Future Volume (vph)	0	0	0	0	917	13	58	119	0	0	0	0
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100
Lane Width (ft)	12	10	12	12	10	12	12	10	12	12	10	12
Grade (%)		0%			3%			0%			0%	
Satd. Flow (prot)	0	0	0	0	3496	0	0	1861	0	0	0	0
Flt Permitted								0.984				
Satd. Flow (perm)	0	0	0	0	3496	0	0	1840	0	0	0	0
Right Turn on Red			Yes			Yes	Yes		Yes			Yes
Satd. Flow (RTOR)					4			55				
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		574			272			413			576	
Travel Time (s)		13.0			6.2			11.3			15.7	
Confl. Peds. (#/hr)	10		31	31		10	29		29	29		29
Confl. Bikes (#/hr)						2			2			1
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles (%)	2%	2%	2%	3%	3%	2%	7%	2%	2%	2%	3%	2%
Bus Blockages (#/hr)	0	0	0	0	8	0	0	0	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	1107	0	0	211	0	0	0	0
Turn Type					NA		Perm	NA				
Protected Phases					4			2				
Permitted Phases							2					
Total Split (s)					40.0		20.0	20.0				
Total Lost Time (s)					4.5			4.5				
Act Effct Green (s)					35.5			15.5				
Actuated g/C Ratio					0.59			0.26				
v/c Ratio					0.53			0.41				
Control Delay					8.5			16.3				
Queue Delay					2.5			0.0				
Total Delay					11.0			16.3				
LOS					B			B				
Approach Delay					11.0			16.3				
Approach LOS					B			B				
Queue Length 50th (ft)					109			46				
Queue Length 95th (ft)					137			88				
Internal Link Dist (ft)		494			192			333			496	
Turn Bay Length (ft)												
Base Capacity (vph)					2070			516				
Starvation Cap Reductn					802			0				
Spillback Cap Reductn					0			0				
Storage Cap Reductn					0			0				
Reduced v/c Ratio					0.87			0.41				

Intersection Summary	
Area Type:	Other
Cycle Length: 60	
Actuated Cycle Length: 60	

Offset: 10 (17%), Referenced to phase 4:WBT, Start of Yellow	
Control Type: Pretimed	
Maximum v/c Ratio: 0.53	
Intersection Signal Delay: 11.8	Intersection LOS: B
Intersection Capacity Utilization 51.1%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 88: 47th St & Walnut St





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1030	0	0	0	0	0	0	125	0	0	0
Future Volume (vph)	0	1030	0	0	0	0	0	0	125	0	0	0
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100
Lane Width (ft)	12	10	12	12	10	12	12	10	12	12	12	12
Satd. Flow (prot)	0	3413	0	0	0	0	0	1274	0	2059	0	0
Flt Permitted												
Satd. Flow (perm)	0	3413	0	0	0	0	0	1274	0	2059	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)								80				
Link Speed (mph)		30			30			25			20	
Link Distance (ft)		574			259			576			194	
Travel Time (s)		13.0			5.9			15.7			6.6	
Confl. Peds. (#/hr)	18		15	15		18	11		17	17		11
Confl. Bikes (#/hr)			15			1						
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
Heavy Vehicles (%)	2%	2%	3%	2%	2%	2%	2%	2%	16%	2%	2%	2%
Bus Blockages (#/hr)	0	8	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)		0						0				
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1132	0	0	0	0	0	137	0	0	0	0
Turn Type		NA						NA		Perm		
Protected Phases		4						2				
Permitted Phases	4									6		
Total Split (s)	40.0	40.0						20.0		20.0		
Total Lost Time (s)		4.5						4.5		4.5		
Act Effct Green (s)		35.5						15.5				
Actuated g/C Ratio		0.59						0.26				
v/c Ratio		0.56						0.35				
Control Delay		3.2						16.6				
Queue Delay		0.0						0.0				
Total Delay		3.2						16.6				
LOS		A						B				
Approach Delay		3.2						16.6				
Approach LOS		A						B				
Queue Length 50th (ft)		14						12				
Queue Length 95th (ft)		20						m56				
Internal Link Dist (ft)		494			179			496			114	
Turn Bay Length (ft)												
Base Capacity (vph)		2019						388				
Starvation Cap Reductn		0						0				
Spillback Cap Reductn		0						0				
Storage Cap Reductn		0						0				
Reduced v/c Ratio		0.56						0.35				

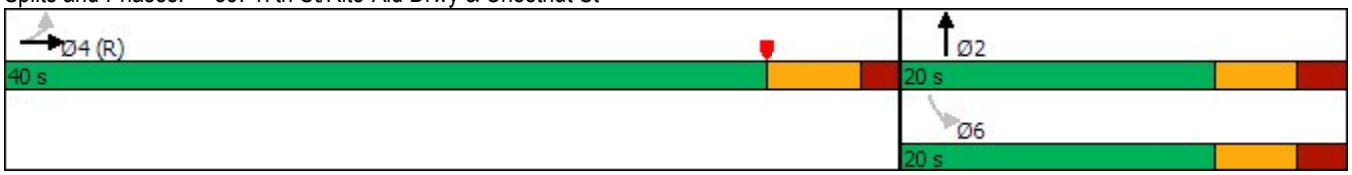
Intersection Summary	
Area Type:	Other
Cycle Length: 60	
Actuated Cycle Length: 60	

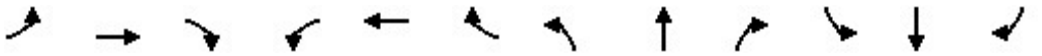
Offset: 13 (22%), Referenced to phase 4:EBTL, Start of Yellow

Control Type: Pretimed	
Maximum v/c Ratio: 0.56	
Intersection Signal Delay: 4.6	Intersection LOS: A
Intersection Capacity Utilization 48.8%	ICU Level of Service A
Analysis Period (min) 15	

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 89: 47th St/Rite-Aid Drwy & Chestnut St





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	143	200	0	0	141	13	36	178	38	0	0	0
Future Volume (vph)	143	200	0	0	141	13	36	178	38	0	0	0
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100
Lane Width (ft)	12	10	12	12	10	12	12	12	12	12	10	12
Satd. Flow (prot)	0	1838	0	0	1838	0	0	1950	0	0	0	0
Flt Permitted		0.795						0.993				
Satd. Flow (perm)	0	1480	0	0	1838	0	0	1930	0	0	0	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		589			603			803			807	
Travel Time (s)		16.1			16.4			21.9			22.0	
Confl. Peds. (#/hr)	24		22	22		24	41		31	31		41
Confl. Bikes (#/hr)			11			1			5			2
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
Heavy Vehicles (%)	4%	2%	2%	17%	3%	8%	2%	4%	3%	2%	3%	14%
Bus Blockages (#/hr)	0	4	0	0	4	0	0	0	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	381	0	0	171	0	0	280	0	0	0	0
Turn Type	Perm	NA			NA		Perm	NA				
Protected Phases		4			8			2				
Permitted Phases	4						2					
Total Split (s)	37.8	37.8			37.8		22.2	22.2				
Total Lost Time (s)		5.1			5.1			5.1				
Act Effct Green (s)		32.7			32.7			17.1				
Actuated g/C Ratio		0.54			0.54			0.28				
v/c Ratio		0.47			0.17			0.51				
Control Delay		9.3			8.3			21.8				
Queue Delay		0.0			0.0			0.0				
Total Delay		9.3			8.3			21.8				
LOS		A			A			C				
Approach Delay		9.3			8.3			21.8				
Approach LOS		A			A			C				
Queue Length 50th (ft)		60			20			84				
Queue Length 95th (ft)		m80			58			148				
Internal Link Dist (ft)		509			523			723			727	
Turn Bay Length (ft)												
Base Capacity (vph)		806			1001			550				
Starvation Cap Reductn		0			0			0				
Spillback Cap Reductn		0			0			0				
Storage Cap Reductn		0			0			0				
Reduced v/c Ratio		0.47			0.17			0.51				

Intersection Summary	
Area Type:	Other
Cycle Length: 60	
Actuated Cycle Length: 60	
Offset: 47.4 (79%), Referenced to phase 4:EBTL and 8:WBT, Start of Green	

Control Type: Pretimed
Maximum v/c Ratio: 0.51
Intersection Signal Delay: 13.3 Intersection LOS: B
Intersection Capacity Utilization 84.2% ICU Level of Service E
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 92: 47th St & Baltimore Ave

Appendix B: MOE Tables

47th Street Traffic Analysis Results

LOS, Delay, and Queue Lengths

	Intersection	Street	Movement	Storage Length (ft)	Existing Condition								Proposed Condition							
					AM Peak Hour				PM Peak Hour				AM Peak Hour				PM Peak Hour			
					HCM LOS^	HCM Delay^ (sec)	HCM Queue* (ft)	SimTraffic Queue* (ft)	HCM LOS^	HCM Delay^ (sec)	HCM Queue* (ft)	SimTraffic Queue* (ft)	HCM LOS^	HCM Delay^ (sec)	HCM Queue* (ft)	SimTraffic Queue* (ft)	HCM LOS^	HCM Delay^ (sec)	HCM Queue* (ft)	SimTraffic Queue* (ft)
49	49th & Chestnut	49th St	NBT	482	B	18.5	95	121	B	18.7	100	121	B	18.5	95	118	B	18.7	100	117
			NBR																	
			SBL	472	B	19.9	128	147	B	19.5	135	161	B	19.9	128	170	B	19.5	135	156
			SBT																	
		Chestnut St	EBL	488	B	13.2	288	315	B	11.0	220	231	B	13.3	290	298	B	11.0	223	226
			EBT																	
			EBR	488	B	12.1	248	267	B	10.4	193	195	B	12.3	248	247	B	10.4	193	178
		Overall			**B**	**14.1**	-	-	**B**	**13.0**	-	-	**B**	**14.2**	-	-	**B**	**13.0**	-	-
48	48th & Chestnut	48th St	NBT	476	B	17.7	195	229	B	17.6	190	245	B	17.7	195	240	B	17.6	190	247
			NBR																	
			SBL	465	B	17.8	183	241	B	17.5	185	330	B	17.8	183	257	B	17.5	185	252
			SBT																	
		Chestnut St	EBL	470	A	9.0	55	158	A	8.8	48	151	A	9.0	55	78	A	8.8	48	147
			EBT	470	B	16.3	285	321	B	15.3	265	283	B	15.8	275	296	B	15.0	258	273
			EBR	470	B	16.2	293	308	B	15.2	273	273	B	15.8	283	280	B	15.0	265	266
		Overall			**B**	**16.2**	-	-	**B**	**15.6**	-	-	**B**	**15.9**	-	-	**B**	**15.4**	-	-
89	47th & Chestnut[a]	47th St	NBT	476	C	23.7	m64	103	C	21.5	m68	117	B	18.7	54	102	B	16.6	m56	123
			NBR																	
			SBL	230	A	0.0	0	0	A	0.0	0	0	*southb*							
			SBT																	
		Chestnut St	EBL	488	A	5.4	23	64	A	3.5	17	53	A	5.3	24	64	A	3.2	20	51
			EBT	488				75				75				72				62
			EBR	488									*southbound 47 St closed*							
		Overall			**A**	**6.8**	-		**A**	**5.3**	-	-	**A**	**6.3**	-	-	**A**	**4.6**	-	-
42	48th & Walnut	48th St	NBL	350	B	19.4	193	219	C	24.6	208	277	C	20.7	198	234	C	30.3	225	251
			NBT																	
			SBT	482	C	21.2	200	206	C	28.4	285	310	C	23.7	230	223	C	34.0	330	290
			SBR																	
		Walnut St	WBL	206	C	20.1	278	79	C	26.2	415	101	C	20.6	290	70	C	27.2	430	101
			WBT	482			0				0		C	20.6	290		C	27.2	430	101
			WBR	482	B	19.3	250	84	C	24.1	368	116	B	19.7	260	47	C	24.8	383	101
		Overall			**B**	**20.0**	-	-	**C**	**25.8**	-	-	**C**	**21.1**	-	-	**C**	**28.6**	-	-
88	47th & Walnut	47th St	NBL	350	C	21.0	128	147	C	20.5	118	129	C	20.8	128	134	C	20.3	115	121
			NBT																	
			SBT	479	B	17.9	40	67	B	17.7	35	55	*southbound 47 St closed*							
			SBR																	
		Walnut St	WBL	482	A	8.4	155	149	A	9.0	183	195								
			WBT	482	A	8.4	155	154	A	9.0	183	197	B	16.2	273	100	A	8.5	155	174
			WBR	482	A	7.9	138	154	A	8.4	158	197		16.2	283	103	A	8.4	160	162
		Overall			**B**	**10.9**	-	-	**B**	**10.8**	-	-	**B**	**17.1**	-	-	**B**	**10.4**	-	-
5	Farragut & Walnut[a]	Farragut St	NBL	343	A	6.7	36	72	B	11.6	53	106	B	12.7	58	105	A	6.4	33	70
			NBT																	
			SBR	213	A	5.9	34	69	B	12.2	74	99	A	4.3	26	75	A	7.5	50	70
		Walnut St	WBT	207	B	14.3	141	218	B	16.9	189	230	A	5.2	49	91	B	16.4	173	224
			WBR	207				194				210				83				205
		Overall			**B**	**11.8**	-	-	**B**	**15.1**	-	-	**A**	**5.2**	-	-	**B**	**14.4**	-	-

43	**46th & Walnut**	46th St	NBL	352	B	19.7	95	138	C	21.0	110	137	B	19.7	95	128	C	21.0	110	122
			NBT																	
			SBT	219	B	19.4	83	118	C	20.3	103	120	B	19.4	83	114	C	20.3	103	113
			SBR																	
		Walnut St	WBL	488	A	7.5	123	185	A	8.1	153	179	A	7.5	123	170	A	8.1	153	184
			WBT	488	A	7.5	123	185	A	8.1	153		A	7.5	123	170	A	8.1	153	184
			WBR	488	A	7.2	108	137	A	7.7	133	128	A	7.2	108	119	A	7.7	133	136
			Overall		**B**	**10.6**	**-**	**-**	**B**	**11.3**	**-**	**-**	**B**	**10.7**	**-**	**-**	**B**	**11.3**	**-**	**-**
18	**49th & Baltimore**[a]	49th St	NBL2	266	B	17.5	64	61	B	19.4	74	57	C	20.7	69	57	C	23.6	81	55
			NBL																	
			NBT	266	B	16.2	94	154	B	15.1	77	319	B	16.2	94	242	B	15.1	77	**677**
			NBR																	
			SBL	468	B	17.6	103	125	B	18.9	132	179	C	22.6	173	189	C	25.3	#214	274
			SBT																	
			SBR																	
			SBR2																	
		Baltimore Ave	EBL2	486	B	14.1	154	182	B	13.5	139	559	B	14	152	185	B	13.2	136	503
			EBL																	
			EBT																	
			EBR																	
			WBL	456	A	9.6	66	109	B	13.5	136	320	B	10.5	81	102	B	14.6	m153	289
			WBT																	
			WBR																	
			WBR2																	
			Overall		**B**	**14.7**	**-**	**-**	**B**	**15.3**	**-**	**-**	**B**	**16.8**	**-**	**-**	**B**	**17.9**	**-**	**-**
3	**48th & Baltimore**[a]	48th St	NBL2	443	B	17.7	44	97	C	23.3	72	127	B	19.5	46	106	C	30.7	#91	109
			NBL																	
			NBT	443	B	18.3	118	166	B	17.5	104	422	B	18.3	118	196	B	17.5	104	**1311**
			NBR																	
			SBL	327	B	17.8	117	157	C	21.5	166	227	C	21.7	177	252	C	29.2	#267	311
			SBT																	
		Baltimore Ave	EBL	457	B	15.5	192	216	B	14.8	179	282	B	15.1	185	202	B	14.4	m171	241
			EBT																	
			EBR																	
			EBR2																	
			WBL2	503	A	8.4	m66	81	A	10	m104	252	A	9.7	71	84	B	10.1	97	245
			WBL																	
			WBT																	
			WBR																	
			Overall		**B**	**15.4**	**-**	**-**	**B**	**16.1**	**-**	**-**	**B**	**17.0**	**-**	**-**	**B**	**19.3**	**-**	**-**
92	**47th & Baltimore**	47th St	NBL	699	B	18.5	105	290	B	19.3	128	250	B	18.8	108	135	B	19.6	128	158
			NBT																	
			NBR																	
			SBL	159	C	22.4	205	281	C	22.3	203	251	*Southbound 47 St closed*							
			SBT																	
			SBR																	
		Baltimore Ave	EBL	502	A	1.6	20	168	A	1.3	15	166	A	1.5	18	153	A	1.2	15	149
			EBT																	
			EBR										*Southbound 47 St closed*							
			WBL	506	A	0.2	3	101	A	0.3	5	102	A	0.2	3	81	A	0.3	5	100
			WBT																	
			WBR																	
			Overall		**B**	**10.8**	**-**	**-**	**B**	**11.1**	**-**	**-**	**A**	**5.8**	**-**	**-**	**A**	**6.5**	**-**	**-**

19	**46th & Baltimore**[b]	46th St	NBL	368	C	25.5	127	136	C	24.8	113	135	C	25.7	127	145	C	25.1	113	155
			NBT																	
			NBR																	
			SBL	507	A	9.6	18	48	A	6.7	m10	48	B	11.5	m19	58	A	8.4	m11	52
			SBT	507	A	5.4	34	61	A	5.6	50	76	A	6.1	54	70	B	10.1	m76	88
			SBR																	
		Baltimore Ave	EBL	504	B	13.2	m129	181	B	12.6	m90	131	B	16.1	136	200	B	12.4	84	141
			EBT																	
			EBR																	
			WBL	485	B	13.9	60	94	B	16	118	136	B	14	60	81	B	16.2	118	133
			WBT																	
			WBR																	
		Overall			**B**	**14.1**	**-**	**-**	**B**	**13.1**	**-**	**-**	**B**	**14.5**	**-**	**-**	**B**	**14.1**	**-**	**-**
45	**46th & Cedar Ave**[b]	46th St	NBL	368	A	0.4	2	29	A	0.4	1	70	A	0.3	m1	54	A	0.4	1	97
			NBT																	
			SBT	507	C	21.2	83	112	C	26	148	167	C	26.7	154	188	D	43.8	#273	400
			SBR																	
		Cedar Ave	EBL	465	A	2.1	4	69	A	0.8	0	62	A	2.1	4	90	A	0.9	0	59
			EBR																	
			WBL	131	C	20.1	34	55	C	22.8	66	90	C	20.1	34	51	C	22.8	66	94
			WBT																	
			WBR																	
		Overall			**A**	**7.9**	**-**	**-**	**B**	**15.2**	**-**	**-**	**B**	**12.9**	**-**	**-**	**C**	**26.4**	**-**	**-**
54	**49th & Kingsessing**	49th St	NBL	507	A	2.4	28	374	A	2.7	33	193	A	2.4	28	199	A	3.1	35	205
			NBT																	
			NBR																	
			SBL	450	A	8.0	3	27	A	8.1	5	47	A	8.0	3	25	A	8.3	5	27
			SBT	450	B	10.9	120	159	B	12.5	180	294	B	12.8	188	**581**	B	15.5	253	**547**
			SBR																	
		Kingsessing Ave	EBL	405	B	15.1	105	302	B	13.7	58	97	B	15.1	105	167	B	13.7	58	105
			EBT																	
			EBR																	
			WBL	406	B	13.5	48	110	B	15.2	98	132	B	13.5	48	119	B	15.2	98	219
			WBT																	
			WBR																	
		Overall			**A**	**8.8**	**-**	**-**	**A**	**9.5**	**-**	**-**	**A**	**9.8**	**-**	**-**	**B**	**11.2**	**-**	**-**
4	**48th & Kingsessing**[c] ●	48th St	SBL	455	A	8.7	18	288	A	8.5	15	75	A	8.7	18	78	A	8.6	18	99
			SBR	455																
		Kingsessing Ave	EBL	411	B	10.3	48	321	A	9.1	25	85	B	10.3	48	168	A	9.1	25	67
			EBT	411																
			WBT	423	A	7.9	10	65	A	8.5	23	86	A	7.9	10	62	A	8.6	20	72
			WBR	423																
		Overall			**A**	**9.5**	**-**	**-**	**A**	**8.7**	**-**	**-**	**A**	**9.5**	**-**	**-**	**A**	**8.8**	**-**	**-**
59	**47th & Kingsessing**	47th St	NBL	673	B	19.4	165	238	C	23.1	235	304	B	19.9	170	196	C	23.7	238	229
			NBT	673																
			NBR	673																
			SBL	451	B	16.7	105	428	B	17.2	120	581	*Southbound 47 St closed*							
			SBT	451																
			SBR	451																
		Kingsessing Ave	EBL	418	A	8.5	78	347	A	7.7	40	228	A	8.5	78	210	A	7.7	40	79
			EBT	418																
			EBR	418																
			WBL	411	A	7.1	15	166	A	7.7	45	201	A	7.8	38	153	A	8.7	75	142
			WBT	411																
			WBR	411																
		Overall			**B**	**14.6**	**-**	**-**	**B**	**16.8**	**-**	**-**	**B**	**13.5**	**-**	**-**	**B**	**16.3**	**-**	**-**
2	**46th & Kingsessing**	46th St	NBL	605	B	15.0	50	84	B	15.0	55	83	B	15.0	50	84	B	15.1	55	84
			NBT	605																
			NBR	605																
			SBL	450	B	14.9	48	85	B	15.0	50	88	B	16.7	100	116	B	16.9	105	128
			SBT	450																
			SBR	450																
		Kingsessing Ave	EBL	411	B	14.9	135	158	A	7.5	35	97	A	8.2	70	156	A	7.4	33	88
			EBT	411																
			EBR	411																
			WBL	413	A	6.9	8	37	A	7.3	28	75	A	6.9	8	39	A	7.3	28	76
			WBT	413																
			WBR	413																
		Overall			**B**	**14.4**	**-**	**-**	**B**	**11.3**	**-**	**-**	**B**	**12.4**	**-**	**-**	**B**	**12.7**	**-**	**-**
74	**49th & Greenway**	49th St	NBL	291	A	9.5	58	262	A	9.7	68	140	A	9.5	58	139	A	9.7	68	148
			NBT	291																
			NBR	291																
			SBL	511	B	13.3	175	206	B	14.3	213	358	B	17.1	253	**606**	B	18.5	295	**616**
			SBT	511																
			SBR	511																
		Greenway Ave	EBL	403	B	13.9	80	261	B	13.5	63	241	B	13.9	80	260	B	13.5	63	208
			EBT	403																
			EBR	403																
			WBL	680	B	16.9	173	557	B	20.0	238	314	B	16.9	173	342	B	20.0	238	320
			WBT	680																
			WBR	680																
		Overall			**B**	**14.0**	**-**	**-**	**B**	**15.5**	**-**	**-**	**B**	**15.5**	**-**	**-**	**B**	**17.2**	**-**	**-**
57	**49th & Woodland**	49th St	NBL	409	C	24.6	238	287	B	19.8	175	199	C	24.0	238	231	B	19.5	175	213
			NBT	409																
			NBR	409																
			SBL	439	B	19.2	123	328	C	21.9	203	421	C	25.7	195	**531**	D	36.8	328	**517**
			SBT	439																
			SBR	439																
		Woodland	EBL	389	B	10.6	115	185	B	11.0	135	161	B	10.6	115	145	B	11.0	135	170
			EBT	389																
			EBR	389																

		Ave	WBL	402	B	10.0	70	127	B	11.4	125	157	B	10.0	70	129	B	11.4	125	147
			WBT	402																
			WBR	402																
			Overall		**B**	**17.1**	**-**	**-**	**B**	**16.0**	**-**	**-**	**B**	**18.6**	**-**	**-**	**C**	**20.9**	**-**	**-**
70	**48th & Woodland**	48th St	NBL	291	B	17.0	38	27	B	18.9	53	59	B	17.8	40	56	B	19.1	53	57
			NBT	291	C	21.9	223	383	C	25.5	278	406	C	21.9	223	357	C	25.5	278	390
			NBR	291																
			SBL	680	C	21.6	225	437	C	20.3	188	307	C	24.3	275	225	C	21.7	215	318
			SBT	680																
			SBR	680																
		Woodland Ave	EBL	414	B	11.6	133	176	B	10.7	93	143	B	11.6	133	157	B	10.7	93	143
			EBT	414																
			EBR	414																
			WBL	438	C	22.4	188	276	C	25.5	320	359	C	22.4	188	**670**	C	25.5	320	372
			WBT	438																
			WBR	438																
			Overall		**B**	**19.3**	**-**	**-**	**C**	**21.7**	**-**	**-**	**C**	**20.3**	**-**	**-**	**C**	**22.0**	**-**	**-**

68	**47th & Woodland**	47th St	NBL	742	B	16.1	85	20	B	19.9	10	31	B	14.9	3	5	B	17.2	10	29
			NBT	742	C	32.2	400	844	C	30.7	390	685	C	32.2	400	845	C	30.7	390	534
			NBR	742																
			SBL	672	C	30.9	13	94	C	30.1	10	49	C	31.0	13	85	C	30.1	10	53
			SBT	672	B	16.1	85	745	B	18.1	163	887	B	14.7	20	393	B	16.2	80	124
			SBR	672																
		Woodland Ave	EBL	425	B	15.5	210	213	B	18.1	178	178	B	15.5	210	218	B	18.1	178	141
			EBT	425																
			EBR	425																
			WBL	413	B	10.6	105	251	B	13.4	223	525	B	10.6	105	173	B	13.4	223	267
			WBT	413																
			WBR	413																
			Overall		**C**	**21.9**	**-**	**-**	**C**	**21.3**	**-**	**-**	**C**	**22.4**	**-**	**-**	**C**	**21.3**	**-**	**-**
69	**46th & Woodland**	46th St	NBL	605	B	16.5	25	57	B	16.6	25	72	B	16.5	25	61	B	16.6	25	56
			NBT	605																
			NBR	605																
			SBL	597	B	17.2	43	92	B	17.3	45	160	B	17.2	43	82	B	17.3	45	91
			SBT	597																
			SBR	597																
		Woodland Ave	EBL	422	A	10.0	213	271	A	9.2	180	286	B	10.0	213	272	A	9.2	180	253
			EBT	422																
			EBR	422																
			WBL	403	A	6.5	55	124	A	6.9	78	545	A	6.5	55	114	A	6.9	78	137
			WBT	403																
			WBR	403																
			Overall		**B**	**10.2**	**-**	**-**	**A**	**9.7**	**-**	**-**	**B**	**10.2**	**-**	**-**	**A**	**9.7**	**-**	**-**
62	**49th & Paschall**	49th St	NBL	2,971	B	16.0	163	249	C	24.5	283	364	B	16.0	163	203	C	24.4	283	330
			NBT	2,971																
			NBR	2,971																
			SBL	408	B	11.2	40	101	B	11.6	55	102	B	11.2	40	107	B	11.6	58	95
			SBT	408																
			SBR	408																
		Paschall Ave	EBL	392		21.0	290	402	B	17.0	223	210	C	21.0	290	386	B	17.0	223	227
			EBT	392																
			EBR	392																
			WBL	641	B	11.2	53	620	B	13.2	123	291	B	11.2	53	129	B	13.2	123	327
			WBT	641																
			WBR	641																
			Overall		**B**	**17.4**	**-**	**-**	**B**	**18.3**	**-**	**-**	**B**	**17.4**	**-**	**-**	**B**	**18.2**	**-**	**-**
66	**Grays Ferry & Paschall**	Paschall Ave	NEL	633	D	36.3	310	495	D	36.5	303	232	D	37.5	315	589	D	37.3	310	314
			NET	633																
			NER	633																
			SWL	103	F	84.3	315	85	F	210.8	685	78	C	28.0	78	82	D	44.5	215	90
			SWT	103																
			SWR	103																
		Grays Ferry Ave	EBL	50	B	15.3	0	0	B	15.6	5	27	B	15.3	0	0	B	15.6	5	41
			EBT	656	C	20.1	228	194	C	20.2	230	200	C	21.4	270	225	C	21.6	273	221
			EBR	656	C	20.1	235	195	C	20.2	238	210	C	21.3	280	230	C	21.5	283	230
			WBL	249	B	15.0	150	237	B	19.7	200	304	B	17.5	158	255	C	25.7	218	287
			WBT	2,156	B	10.7	198	239	B	11.4	235	233	B	10.7	198	195	B	11.4	235	246
			WBR	2,156																
			Overall		**C**	**27.4**	**-**	**-**	**D**	**47.8**	**-**	**-**	**C**	**21.9**	**-**	**-**	**C**	**24.3**	**-**	**-**

60	**47th & Paschall**[c]	47th St	NBL	209	C	20.6	185	283	D	25.4	235	288	C	18.5	168	265	C	22.5	215	264
			NBT	209																
			NBR	209																
			SBL	742	B	10.4	33	703	B	10.8	53	797	A	8.9	10	63	A	9.0	25	186
			SBT	742																
			SBR	742																
		Paschall Ave	EBL	107	B	10.2	13	62	A	10.0	8	36	A	9.8	13	57	A	9.7	8	41
			EBT	107																
			WBT	396	A	8.9	3	38	A	9.2	0	35	A	8.5	3	40	A	8.9	3	35
			WBR	396																
			Overall		**C**	**17.1**	**-**	**-**	**C**	**19.9**	**-**	**-**	**B**	**16.3**	**-**	**-**	**B**	**18.7**	**-**	**-**

^ HCM 6th Edition LOS and delay results.

** 95th percentile queue. For SimTraffic queues on multilane approaches, the largest queue for the lane group is given.*

 # 95th percentile volume exceeds capacity, queue may be longer.

m Volume for 95th percentile queue is metered by upstream signal.

a HCM 6th Edition methodology does not support non-NEMA phasing. Synchro results reported.

b HCM 6th Edition methodology does not support clustered intersections. Synchro results reported.

c Stop-controlled intersection. HCM6 AWSC results reported.