ATTACHMENTS A - I

ATTACHMENT A

Data Collection Element	Description	Applicable Sites	Responsible for Data Collection	Responsible for Data Entry	Responsible for Analysis
Site Access Volumes	24-hour volumes at the site ingress and egress points. Collected via video or tubes – focus on daily counts and peak hour volumes for a 2-week period.	Renton, Factoria, Shoreline, Houghton	Idax	Transpo Group/ Idax	Transpo Group
Site ingress/Egress Queuing	Record inbound/outbound queuing levels for 2-week period - video.	Renton, Factoria, Shoreline, Houghton	Idax	Transpo Group/ Idax	Transpo Group
Internal Queuing	Record queuing levels at internal material transfer points – Video or observations	Renton, Factoria, Shoreline, Houghton, Bow Lake	Transpo Group / Idax / URS	Transpo Group / Idax / URS	Transpo Group
Internal trip patterns	Document the number and percentage of shared trips between multiple material transfers (i.e. garbage only vs. garbage and recycling).	Renton, Factoria, Shoreline, Houghton, Bow Lake	Transpo Group / URS	Transpo Group / URS	Transpo Group
Vehicle Duration/ Travel Time Onsite	Recording of entry and exit times of vehicles onsite via observation	Renton, Factoria, Shoreline, Houghton	Transpo Group / URS	Transpo Group / URS	Transpo Group
Customer Trip Origin	Identify customer origins via intercept surveys – recorded on paper or electronic format at the point of intercept.	Renton, Factoria, Shoreline, Houghton	Transpo Group / URS	Transpo Group / URS	Transpo Group
Offsite Turning Movement Counts	Peak-hour traffic volumes collected at offsite study intersection locations.	Renton, Factoria, Shoreline, Houghton	Idax	Transpo Group/ Idax	Transpo Group
Customer Processing Rates	Identify processing rates at key points. Including entry, exit, tipping floor, and HHW or recycling areas.	Renton, Factoria, Shoreline, Houghton, Bow Lake	Transpo Group / URS	Transpo Group / URS	Transpo Group
Haul Weight per Vehicle	Average haul weights per vehicle for the different uses will be observed at noted.	Renton, Factoria, Shoreline, Houghton	King County	King County	Transpo Group
Waste Stream Forecasts	Waste stream forecasts to be provided reflecting with and without the Renton facility. This would include information for garbage, recycling, and household hazardous waste.	Renton, Factoria, Shoreline, Houghton	King County	King County	Transpo Group

ATTACHMENT B

Highway Capacity Manual 2010

Signalized intersection level of service (LOS) is defined in terms of a weighted average control delay for the entire intersection. Control delay quantifies the increase in travel time that a vehicle experiences due to the traffic signal control as well as provides a surrogate measure for driver discomfort and fuel consumption. Signalized intersection LOS is stated in terms of average control delay per vehicle (in seconds) during a specified time period (e.g., weekday PM peak hour). Control delay is a complex measure based on many variables, including signal phasing and coordination (i.e., progression of movements through the intersection and along the corridor), signal cycle length, and traffic volumes with respect to intersection capacity and resulting queues. Table 1 summarizes the LOS criteria for signalized intersections, as described in the *Highway Capacity Manual 2010* (Transportation Research Board, 2010).

Table 1. Level of Service Criteria for Signalized Intersections

Level of Service	Average Control Delay (seconds/vehicle)	General Description
A	≤10	Free Flow
B	>10 – 20	Stable Flow (slight delays)
C	>20 – 35	Stable flow (acceptable delays)
D	>35 – 55	Approaching unstable flow (tolerable delay, occasionally wait through more than one signal cycle before proceeding)
E	>55 – 80	Unstable flow (intolerable delay)
F[1]	>80	Forced flow (congested and queues fail to clear)

Source: *Highway Capacity Manual 2010*, Transportation Research Board, 2010.

1. If the volume-to-capacity (v/c) ratio for a lane group exceeds 1.0 LOS F is assigned to the individual lane group. LOS for overall approach or intersection is determined solely by the control delay.

Unsignalized intersection LOS criteria can be further reduced into two intersection types: all-way stop and two-way stop control. All-way stop control intersection LOS is expressed in terms of the weighted average control delay of the overall intersection or by approach. Two-way stop-controlled intersection LOS is defined in terms of the average control delay for each minor-street movement (or shared movement) as well as major-street left-turns. This approach is because major-street through vehicles are assumed to experience zero delay, a weighted average of all movements results in very low overall average delay, and this calculated low delay could mask deficiencies of minor movements. Table 2 shows LOS criteria for unsignalized intersections.

Table 2. Level of Service Criteria for Unsignalized Intersections

Level of Service	Average Control Delay (seconds/vehicle)
A	0 – 10
B	>10 – 15
C	>15 – 25
D	>25 – 35
E	>35 – 50
F[1]	>50

Source: *Highway Capacity Manual 2010*, Transportation Research Board, 2010.

1. If the volume-to-capacity (v/c) ratio exceeds 1.0, LOS F is assigned an individual lane group for all unsignalized intersections, or minor street approach at two-way stop-controlled intersections. Overall intersection LOS is determined solely by control delay.

Highway Capacity Manual, 2000

Signalized intersection level of service (LOS) is defined in terms of the average total vehicle delay of all movements through an intersection. Vehicle delay is a method of quantifying several intangible factors, including driver discomfort, frustration, and lost travel time. Specifically, LOS criteria are stated in terms of average delay per vehicle during a specified time period (for example, the PM peak hour). Vehicle delay is a complex measure based on many variables, including signal phasing (i.e., progression of movements through the intersection), signal cycle length, and traffic volumes with respect to intersection capacity. Table 1 shows LOS criteria for signalized intersections, as described in the *Highway Capacity Manual* (Transportation Research Board, Special Report 209, 2000).

Table 1. Level of Service Criteria for Signalized Intersections

Level of Service	Average Control Delay (sec/veh)	General Description (Signalized Intersections)
A	≤10	Free Flow
B	>10 - 20	Stable Flow (slight delays)
C	>20 - 35	Stable flow (acceptable delays)
D	>35 - 55	Approaching unstable flow (tolerable delay, occasionally wait through more than one signal cycle before proceeding)
E	>55 - 80	Unstable flow (intolerable delay)
F	>80	Forced flow (jammed)

Source: *Highway Capacity Manual*, Transportation Research Board, Special Report 209, 2000.

Unsignalized intersection LOS criteria can be further reduced into two intersection types: all-way stop-controlled and two-way stop-controlled. All-way, stop-controlled intersection LOS is expressed in terms of the average vehicle delay of all of the movements, much like that of a signalized intersection. Two-way, stop-controlled intersection LOS is defined in terms of the average vehicle delay of an individual movement(s). This is because the performance of a two-way, stop-controlled intersection is more closely reflected in terms of its individual movements, rather than its performance overall. For this reason, LOS for a two-way, stop-controlled intersection is defined in terms of its individual movements. With this in mind, total average vehicle delay (i.e., average delay of all movements) for a two-way, stop-controlled intersection should be viewed with discretion. Table 2 shows LOS criteria for unsignalized intersections (both all-way and two-way, stop-controlled).

Table 2. Level of Service Criteria for Unsignalized Intersections

Level of Service	Average Control Delay (sec/veh)
A	0 - 10
B	>10 - 15
C	>15 - 25
D	>25 - 35
E	>35 - 50
F	>50

Source: *Highway Capacity Manual*, Transportation Research Board, Special Report 209, 2000.

ATTACHMENT C

Shoreline Data Collection Plan - Camera / Tubes

EXHIBIT

1

Northeast Recycling and Transfer Station No Action

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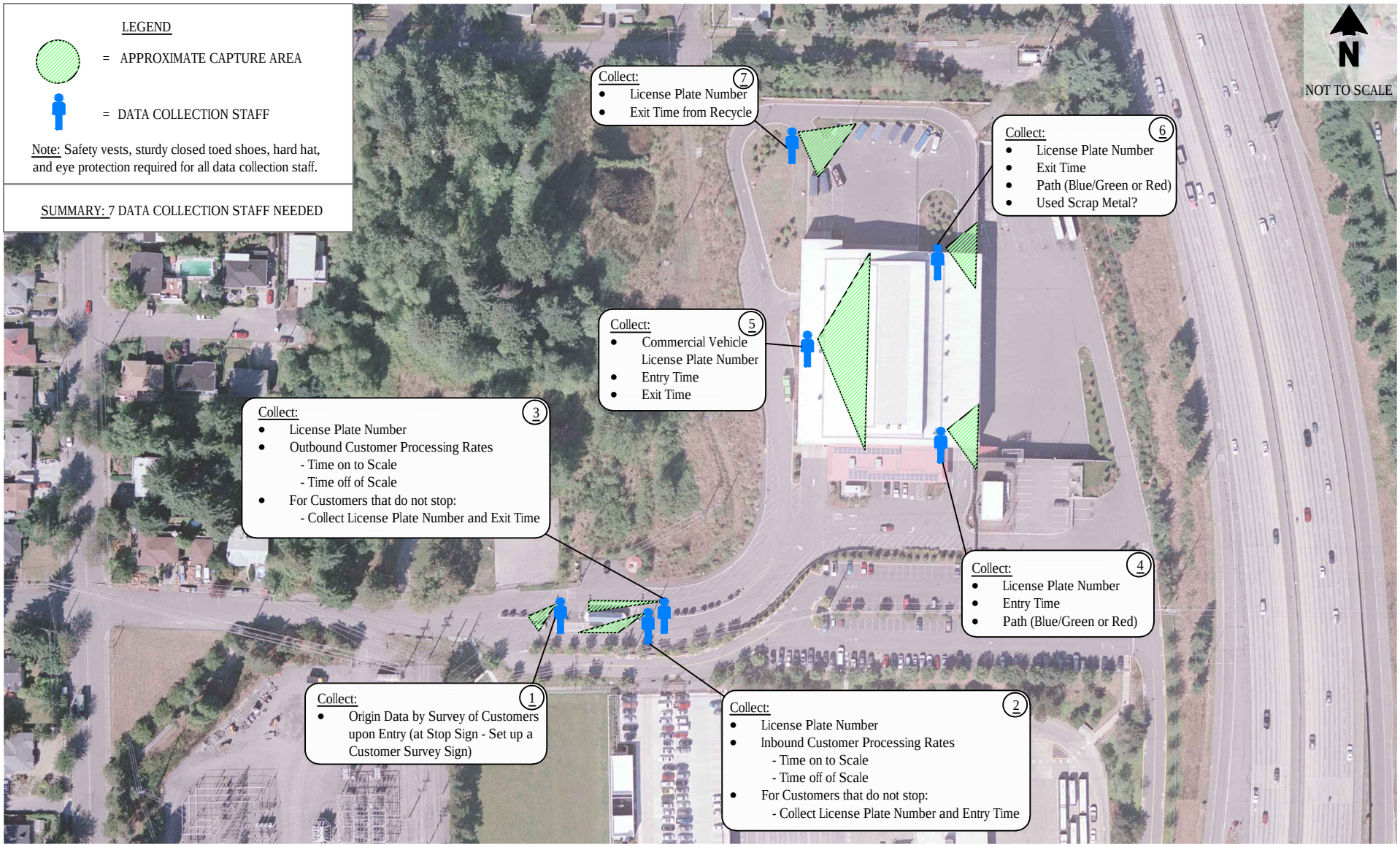

Shoreline Data Collection Plan - Manual

EXHIBIT

2

Northeast Recycling and Transfer Station No Action

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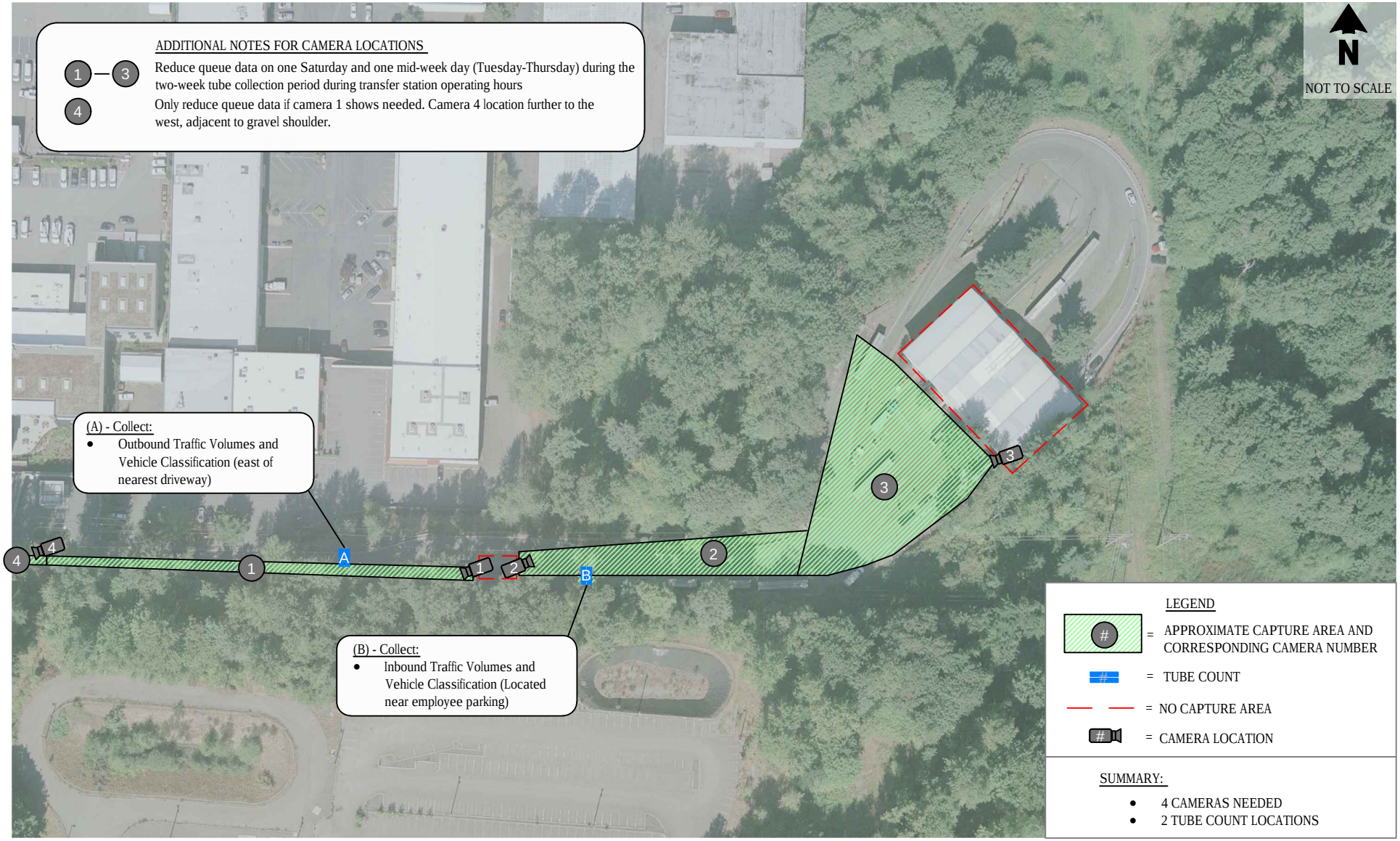

Factoria Transfer Station Data Collection Plan - Camera / Tubes

EXHIBIT

3

Northeast Recycling and Transfer Station No Action

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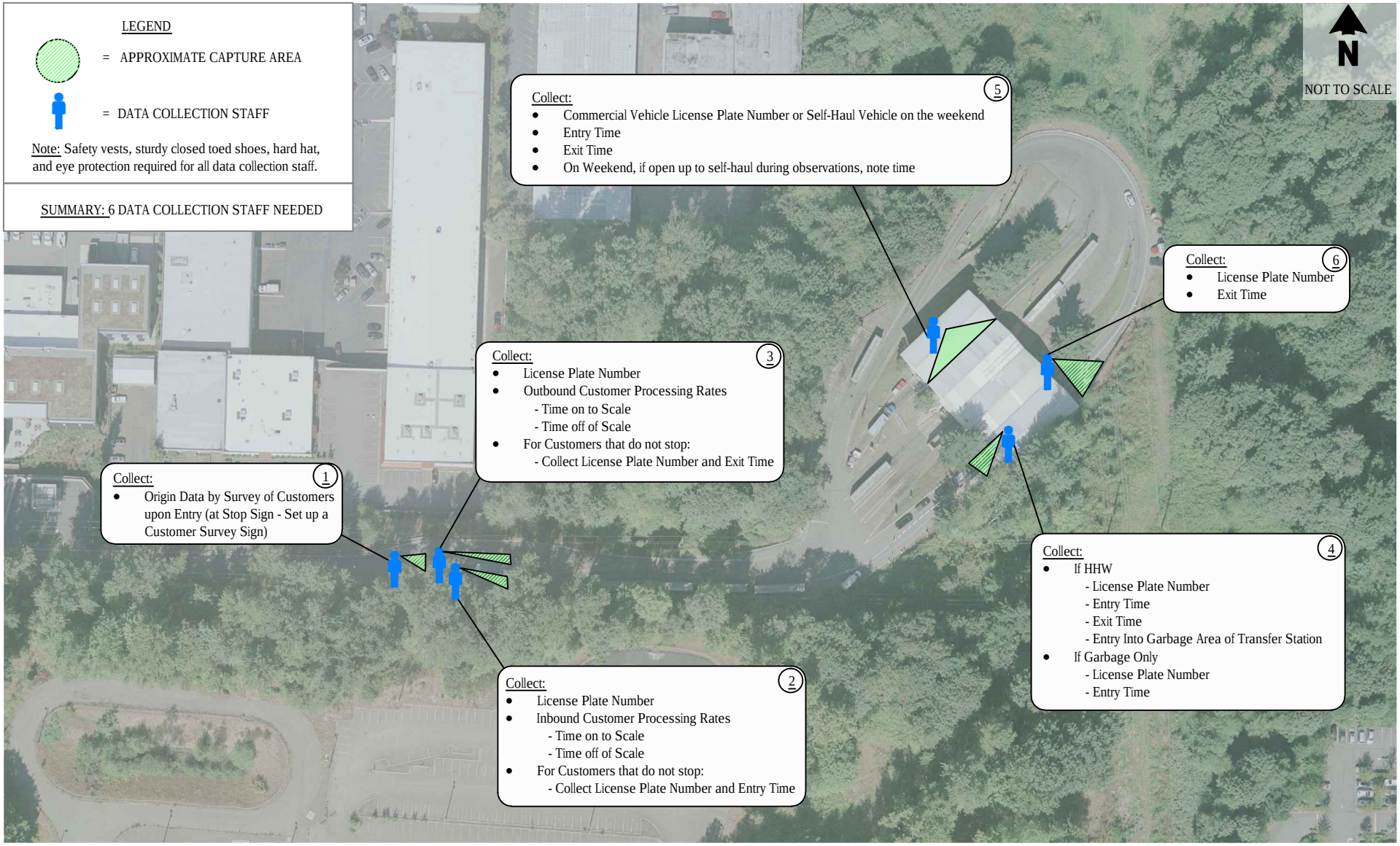

Factoria Transfer Station Data Collection Plan - Manual

EXHIBIT

4

Northeast Recycling and Transfer Station No Action

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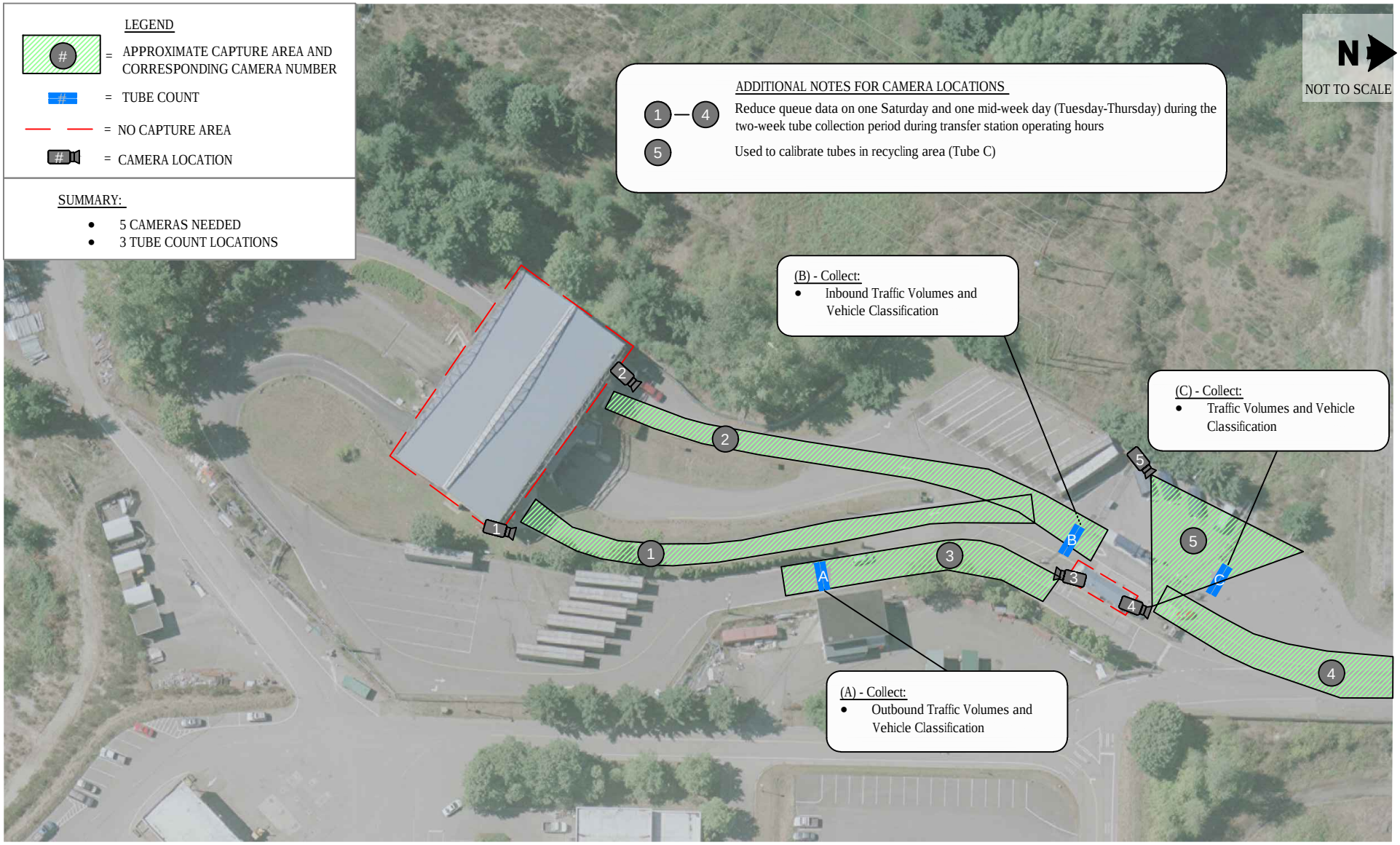

Renton Transfer Station Data Collection Plan - Camera / Tubes

EXHIBIT

5

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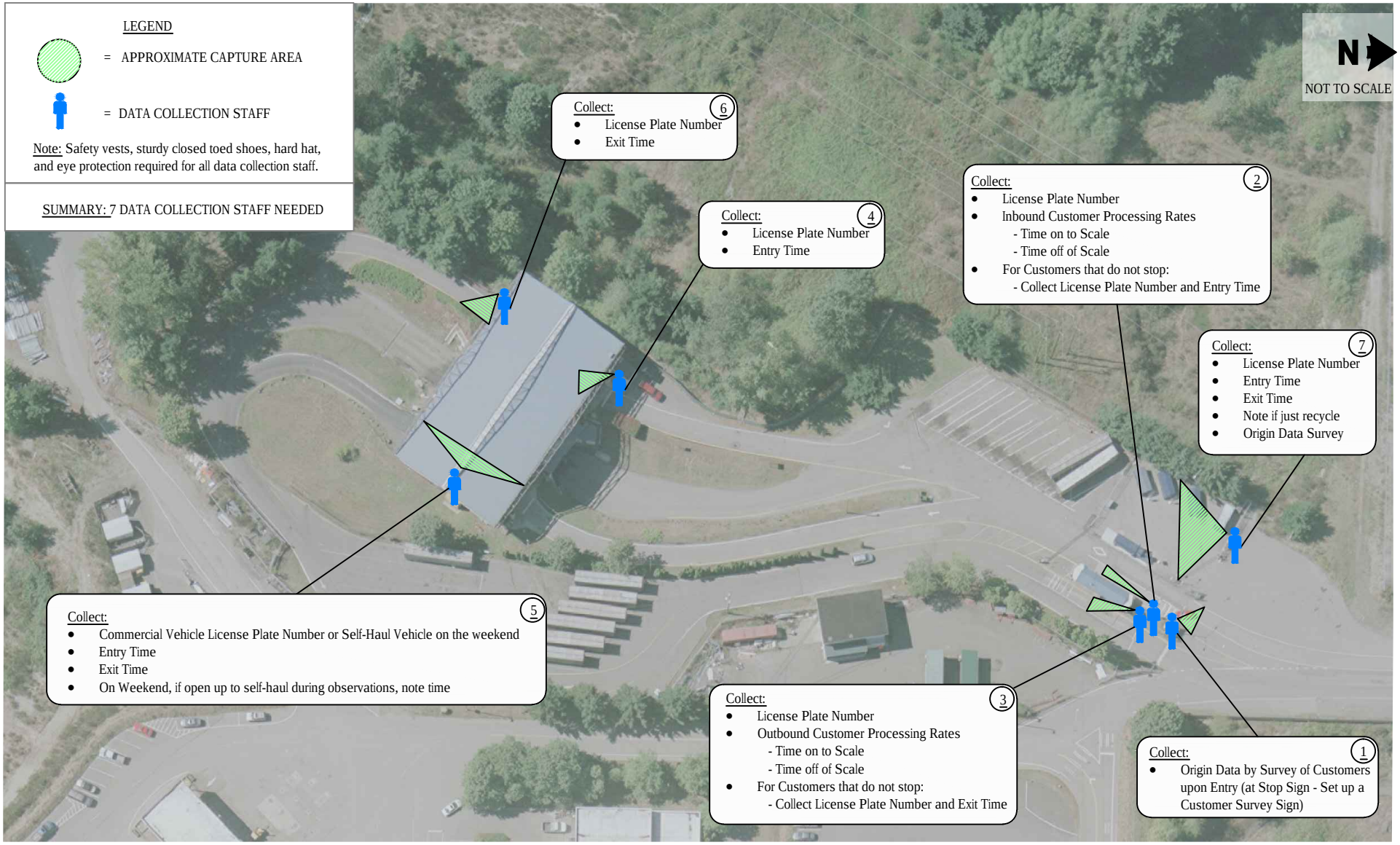

Renton Transfer Station Data Collection Plan - Manual

EXHIBIT

6

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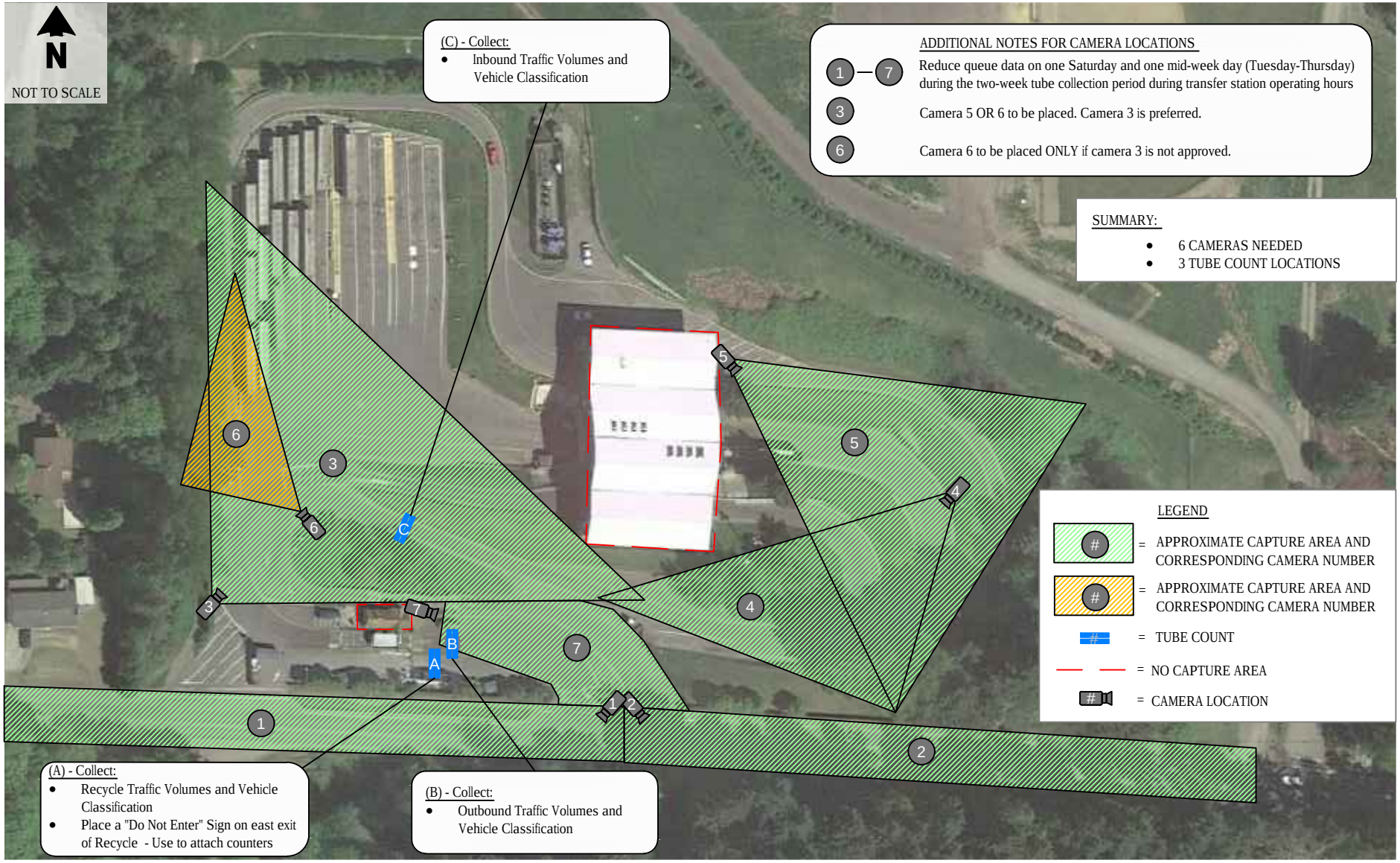

Houghton Transfer Station Data Collection Plan - Camera / Tubes

EXHIBIT **7**

Northeast Recycling and Transfer Station No Action

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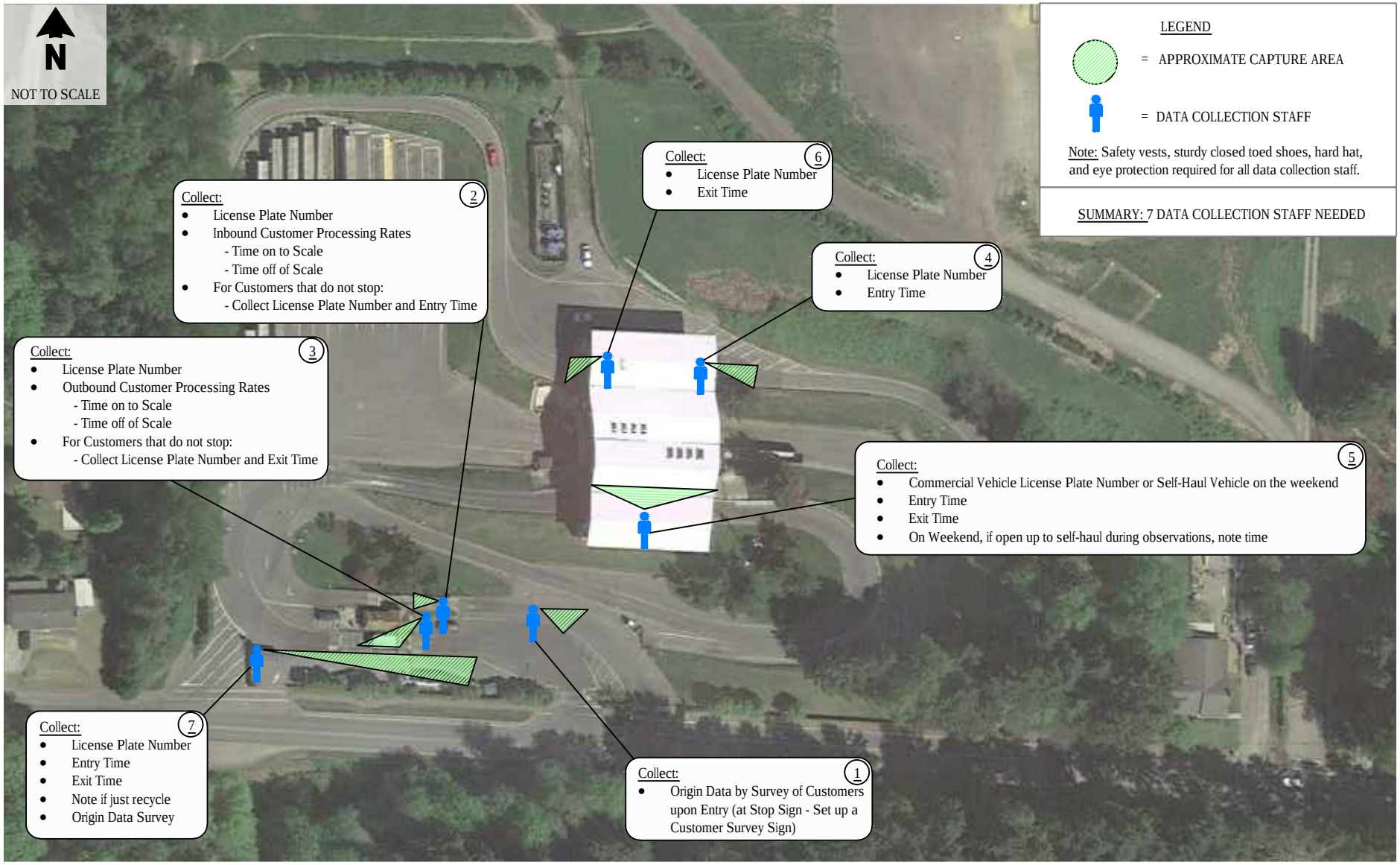

Houghton Transfer Station Data Collection Plan - Manual

EXHIBIT **8**

Northeast Recycling and Transfer Station No Action

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transpoGROUP

ADDITIONAL NOTES FOR CAMERA LOCATIONS

1 , 5 Only reduce queue data if camera 3 shows needed

2 — 4 Reduce queue data on one Saturday and one mid-week day (Tuesday-Thursday) during the tube collection period during transfer station operating hours

6 Reduce queue data on one Saturday and one mid-week day (Tuesday-Thursday) during the tube collection period during transfer station operating hours

Bow Lake Transfer Station Data Collection Plan - Camera / Tubes

EXHIBIT 9

Northeast Recycling and Transfer Station No Action

transpoGROUP

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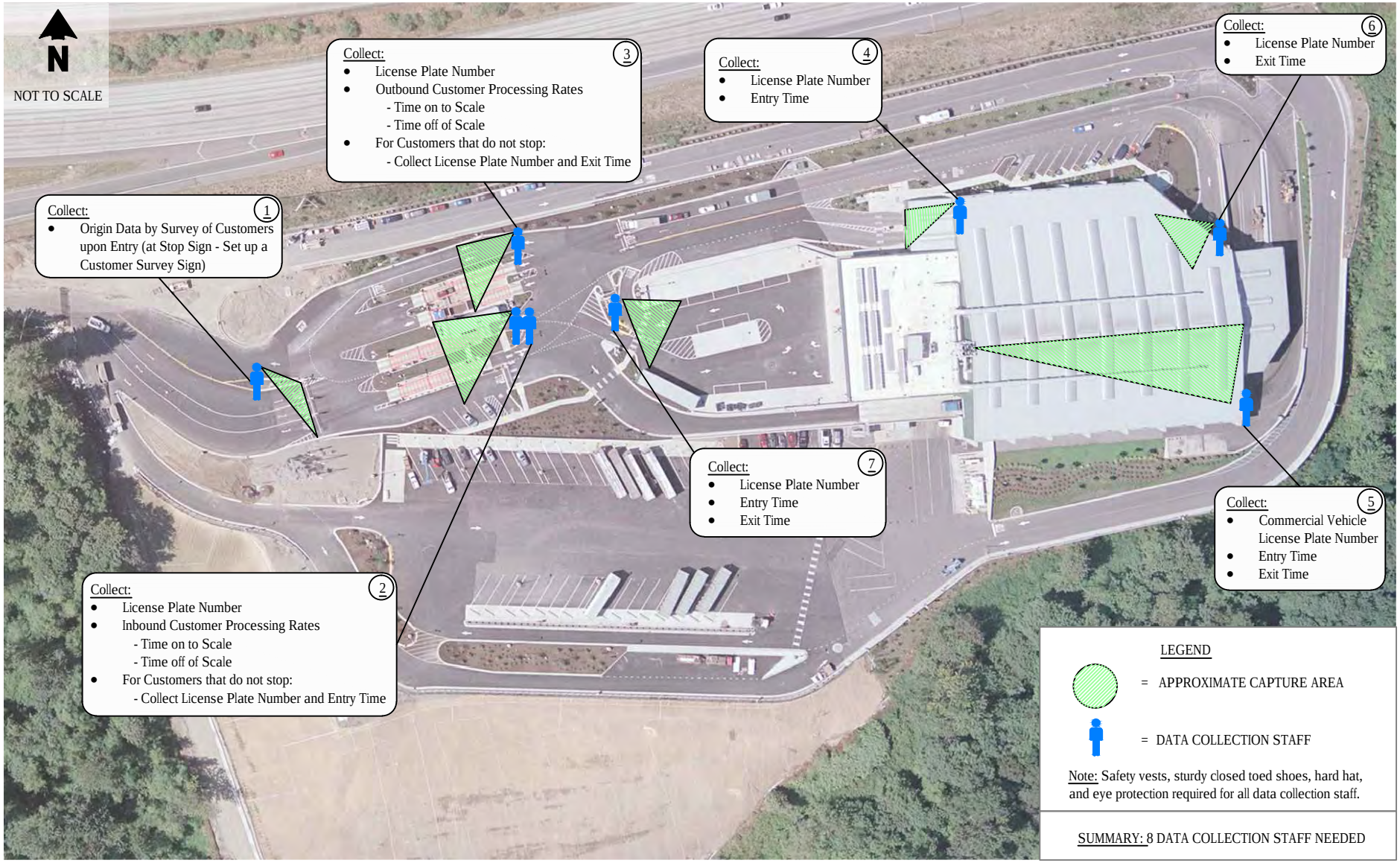

Bow Lake Transfer Station Data Collection Plan - Manual

EXHIBIT **10**

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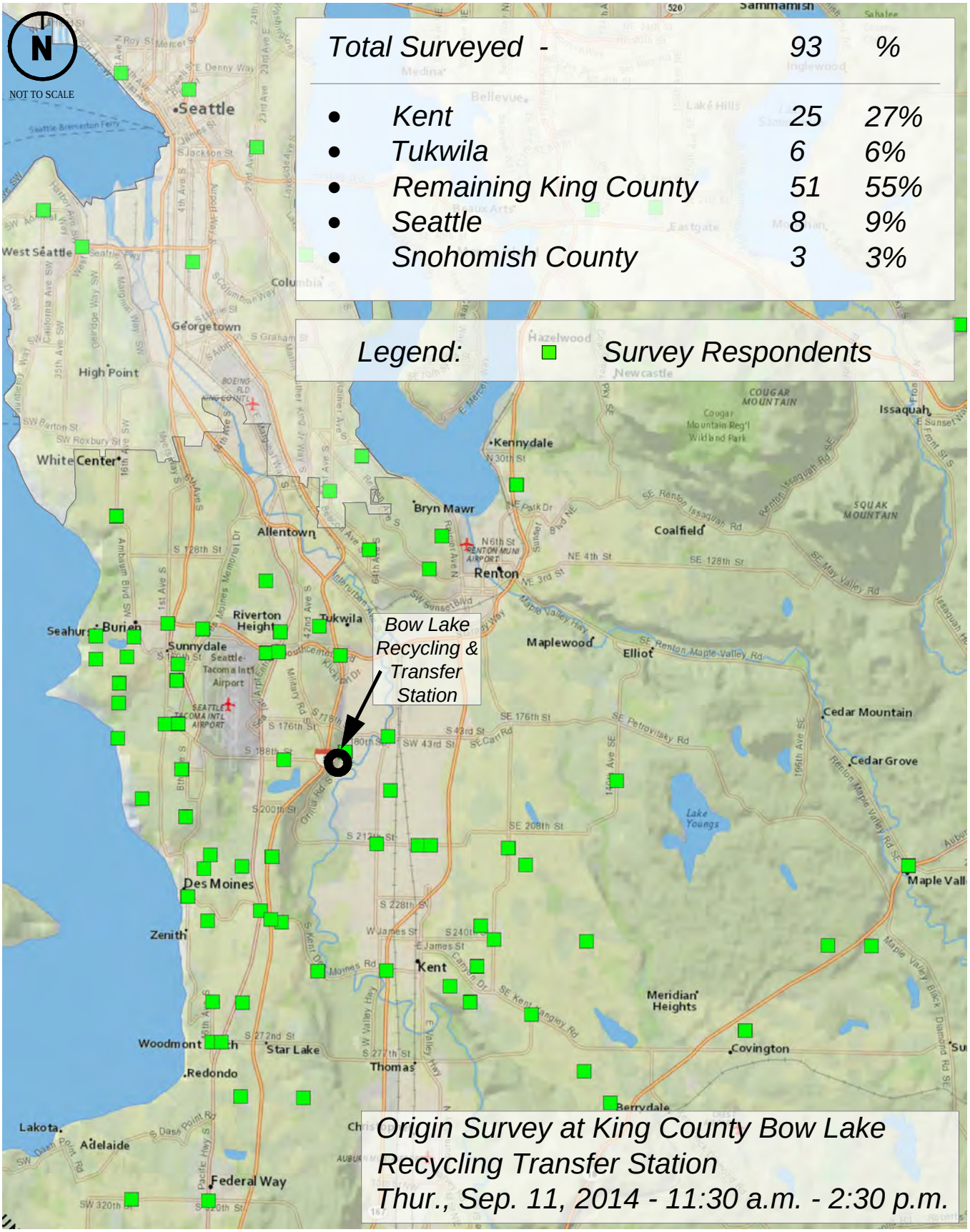
transpoGROUP

ATTACHMENT D



Weekday Bow Lake Survey Data

ATTACHMENT

D-1

Transfer Plan Review

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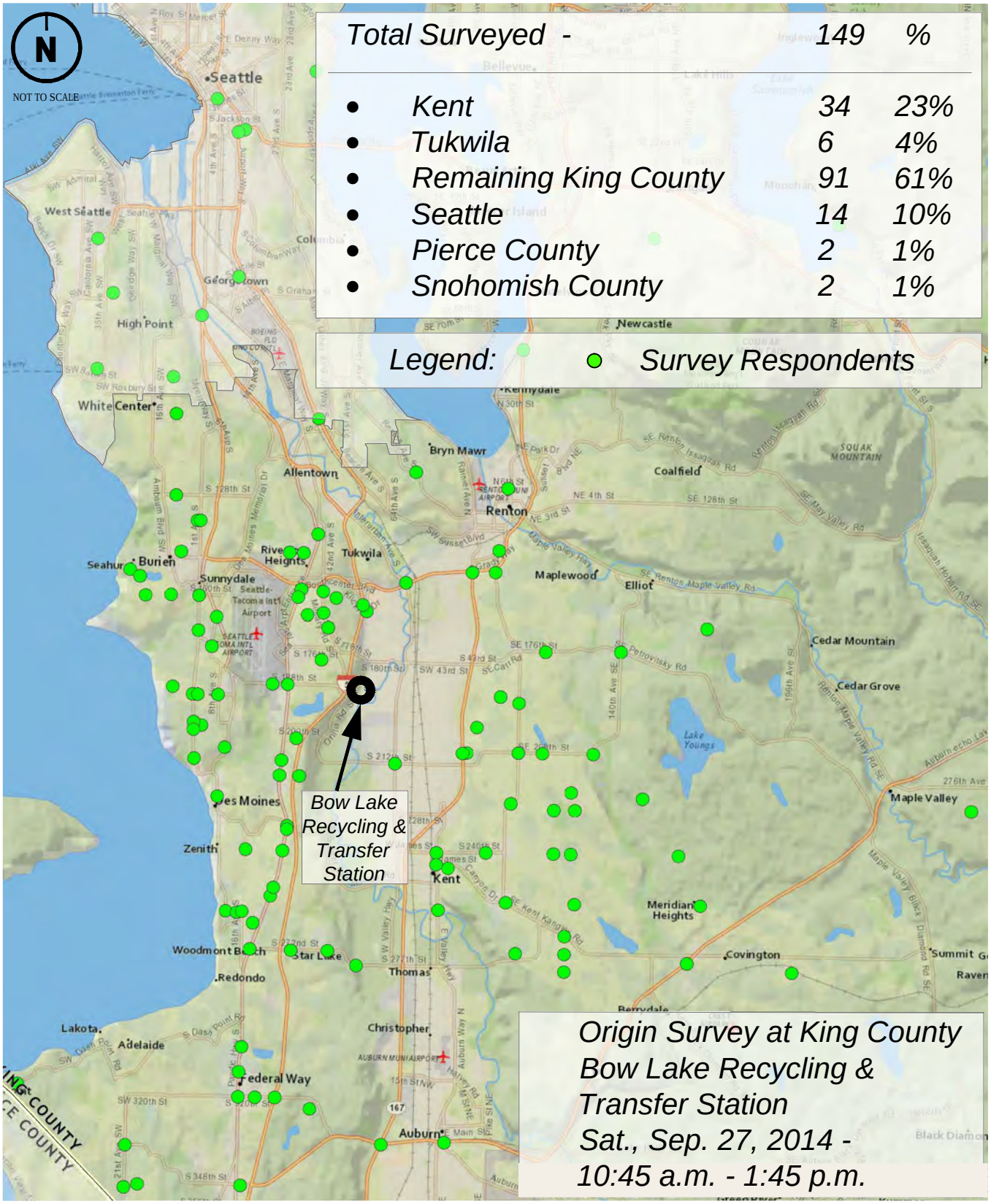

Saturday Bow Lake Survey Data

ATTACHMENT

D-2

Transfer Plan Review

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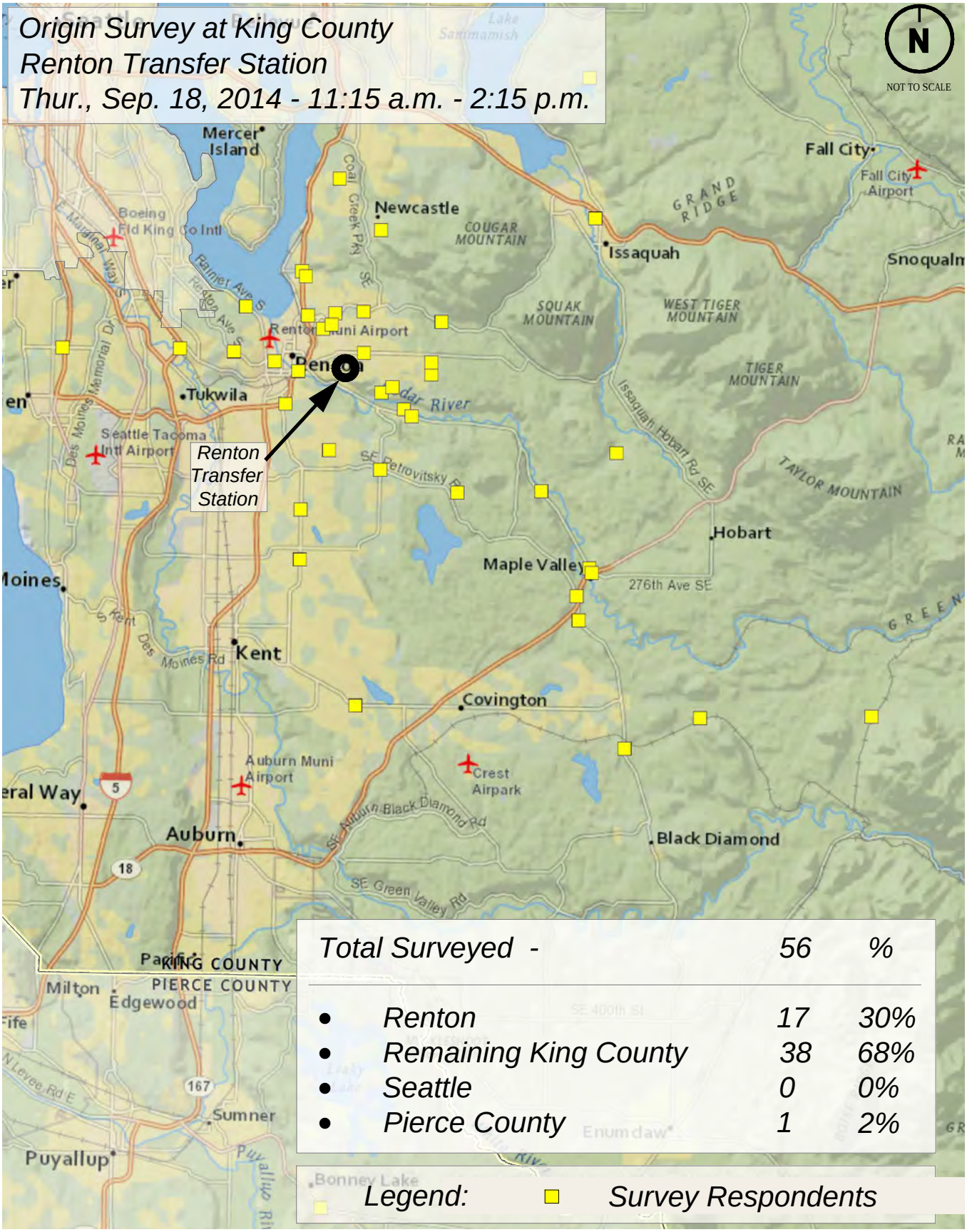
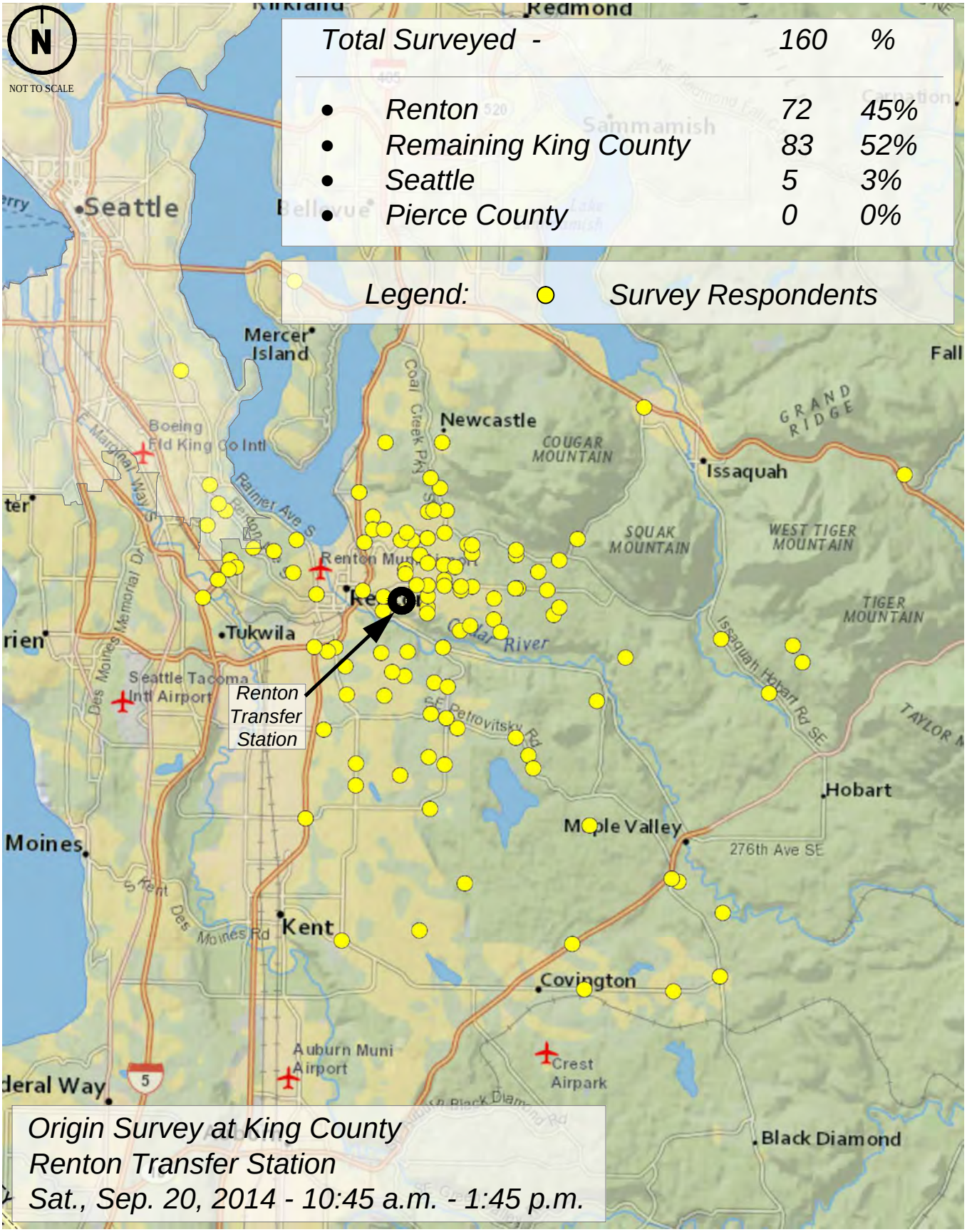


Weekday Renton Survey Data

Transfer Plan Review

ATTACHMENT

D-3



Saturday Renton Survey Data

ATTACHMENT

D-4

Transfer Plan Review

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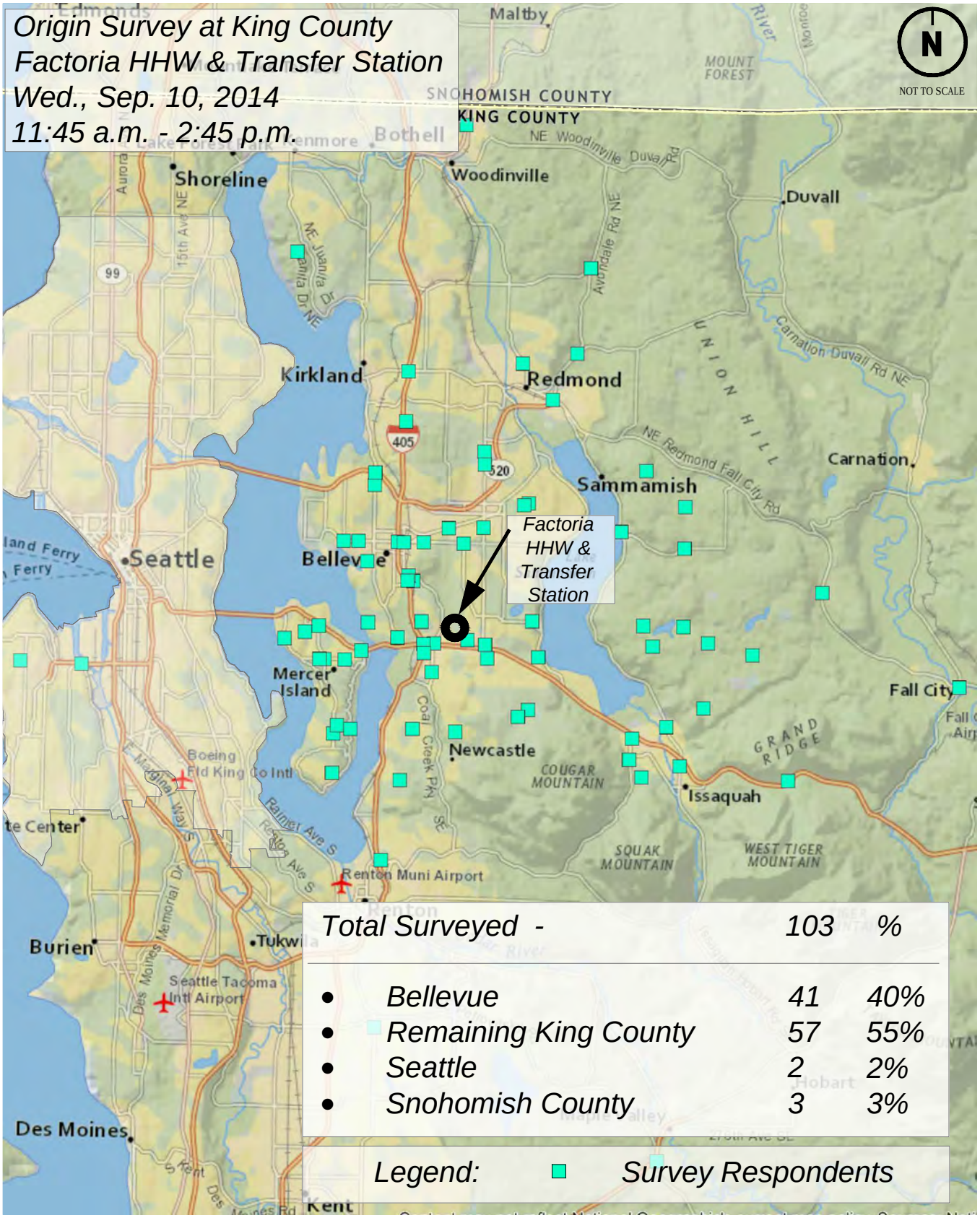

Weekday Factoria Survey Data

ATTACHMENT

D-5

Transfer Plan Review

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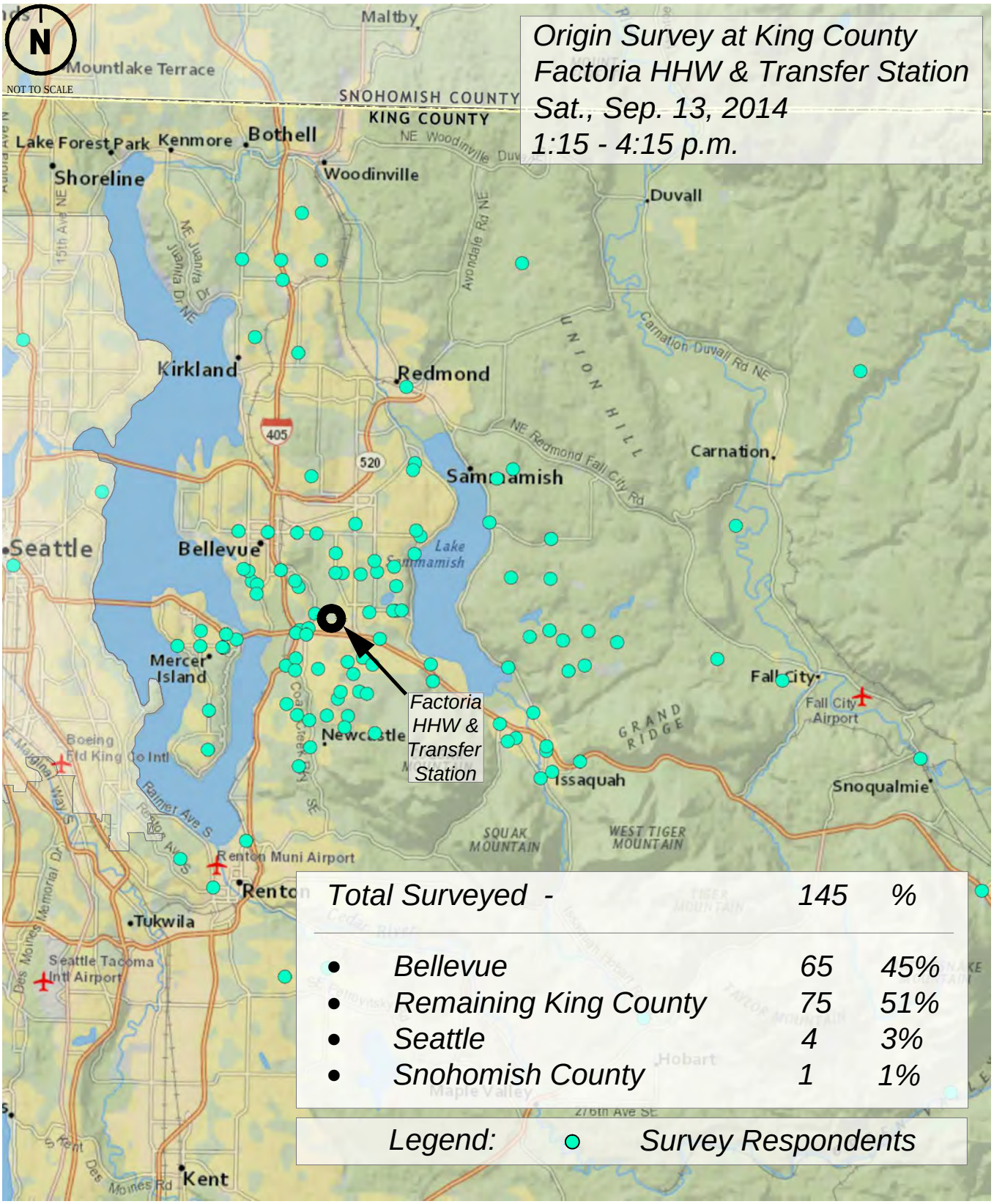
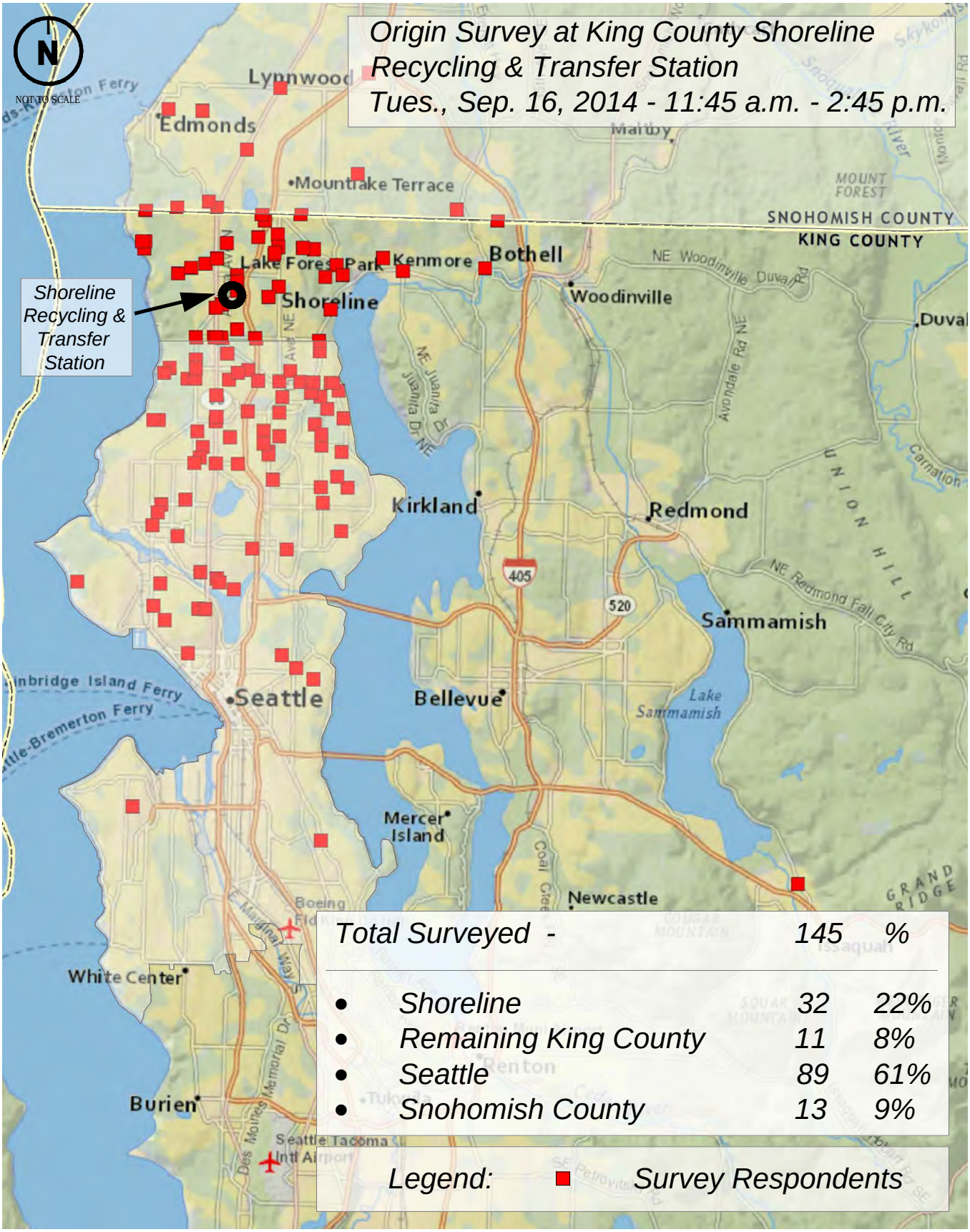


Saturday Factoria Survey Data

Transfer Plan Review

ATTACHMENT

D-6



Weekday Shoreline Survey Data

ATTACHMENT

D-7

Transfer Plan Review

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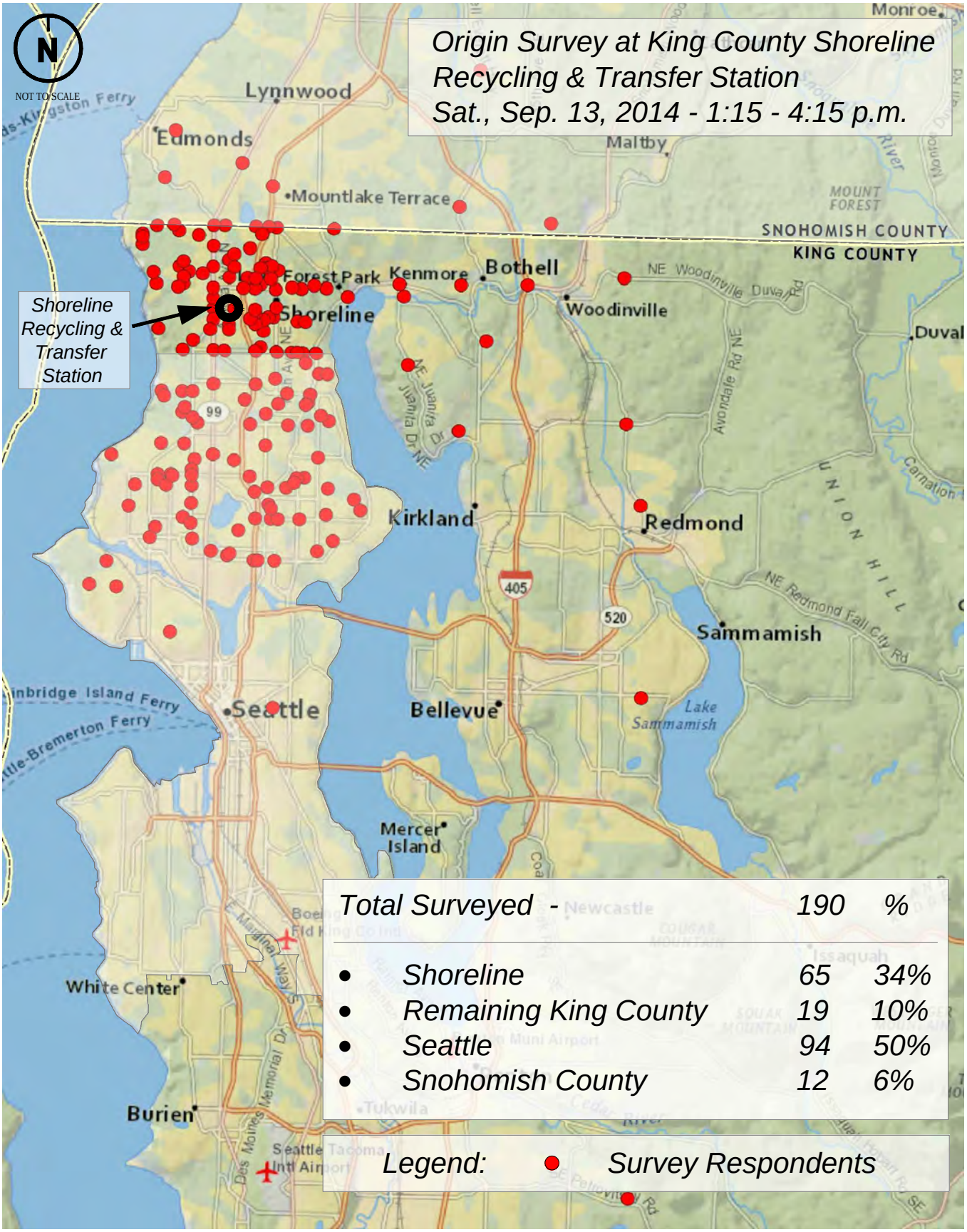
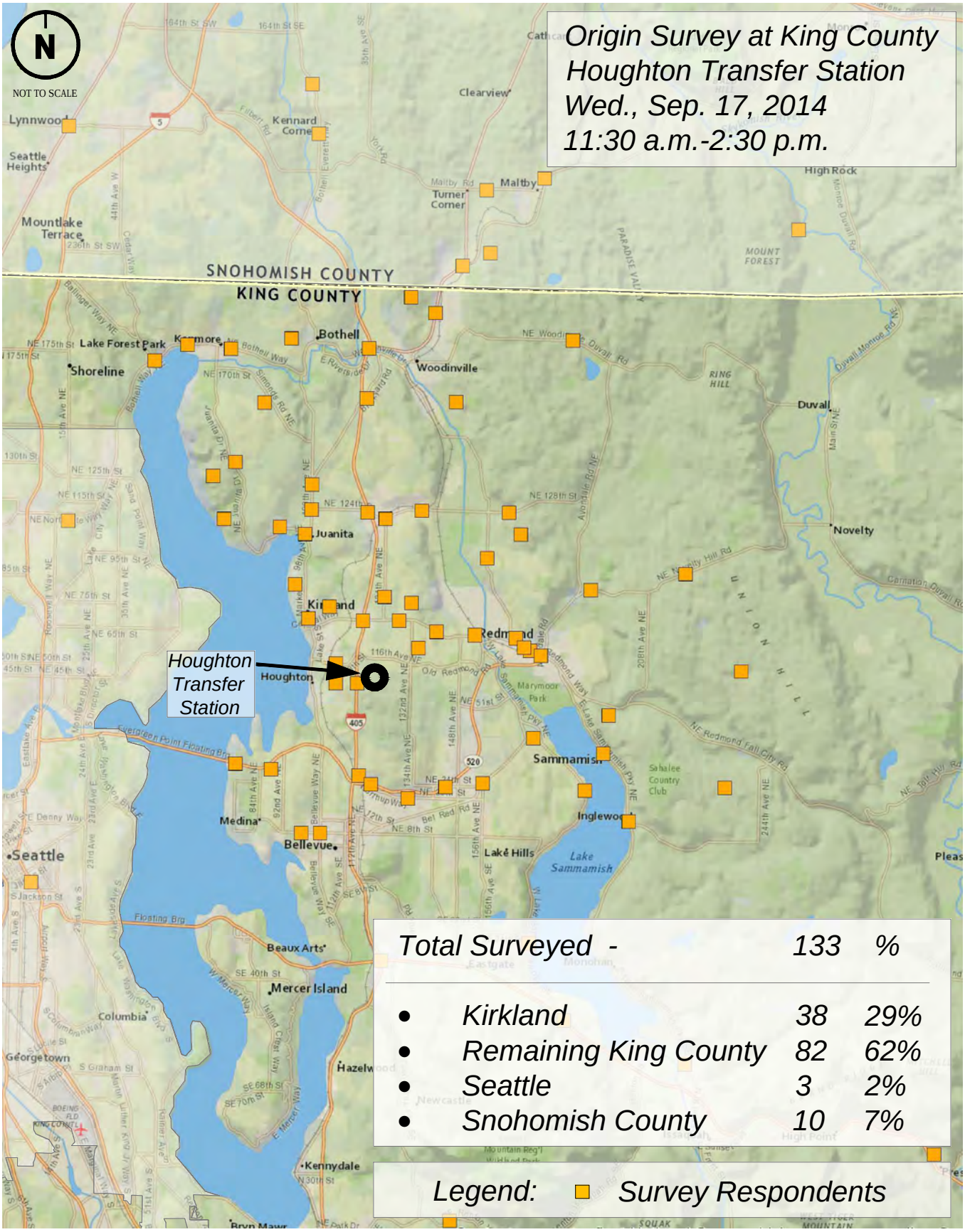


Saturday Shoreline Survey Data

Transfer Plan Review

ATTACHMENT

D-8

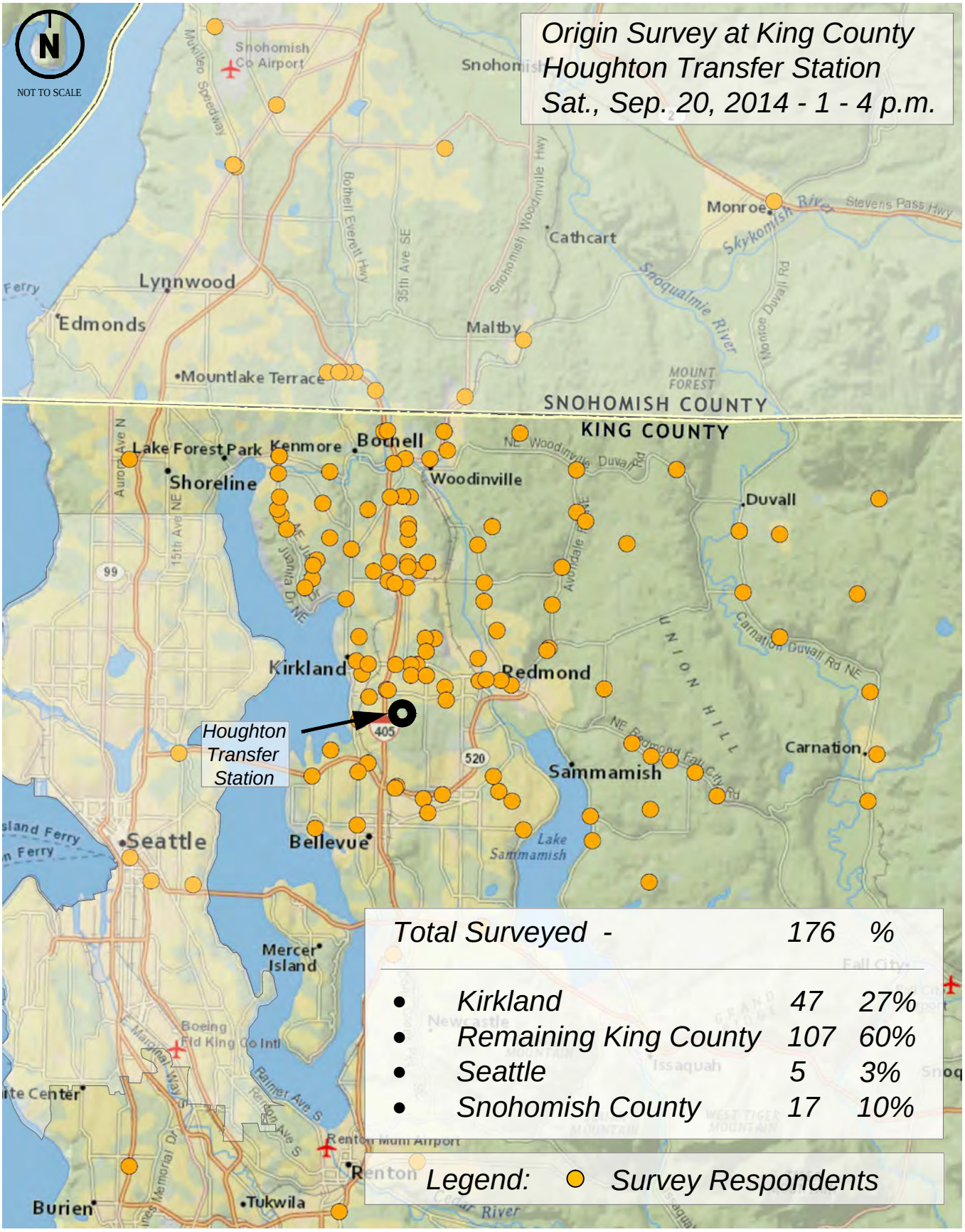


Weekday Houghton Survey Data

Transfer Plan Review

ATTACHMENT

D-9



Saturday Houghton Survey Data

Transfer Plan Review

ATTACHMENT

D-10

ATTACHMENT E

2023 - King County Transfer Station Trip Generation - Bow Lake Concept 0

Annual

2023 Annual Trip Generation Summary

Material	Tonnage: Commercial Haul	Tonnage: Self Haul	Average Tonnage/Vehicle: Commercial Haul	Average Tonnage/Vehicle: Self Haul	Total Annual Trips[6]: Commercial Haul	Total Annual Trips[6]: Self Haul	Total Annual Trips[6]: Hauling Trucks	Total Annual Trips[6]: Total
Recycling[1]	9,431	5,356	5.25	0.30	3,592	35,706		**39,298**
Hazardous Waste[2]								
Garbage[3]	**218,782**	**52,318**	5.25	0.35	83,346	298,960		**382,306**
Yard Waste[4]		3,748	5.25	0.25	0	29,984		**29,984**
Hauling Away[5]							25,646	**25,646**
Total								**477,234**

Material	Total Annual Weekday Trips[7]: Commercial Haul %	Commercial Haul Trips	Self Haul %	Self Haul Trips	Hauling Trucks %	Hauling Trucks Trips	Total Trips
Recycling[1]	94%		63%	22,495			**22,495**
Hazardous Waste[2]							
Garbage[3]	94%	78,345	63%	188,345			**266,690**
Yard Waste[4]	94%	0	63%	18,890			**18,890**
Hauling Away[5]					75%	19,235	**19,235**
Total							**327,310**

Material	Total Annual Weekend Trips: Commercial Haul %	Commercial Haul Trips	Self Haul %	Self Haul Trips	Hauling Trucks %	Hauling Trucks Trips	Total Trips
Recycling[1]	6%		37%	13,211			**13,211**
Hazardous Waste[2]							
Garbage[3]	6%	5,001	37%	110,615			**115,616**
Yard Waste[4]	6%	0	37%	11,094			**11,094**
Hauling Away[5]					25%	6,412	**6,412**
Total							**146,333**

1. Tonnage provided by King County assuming Houghton closes before 2023 and Bellevue leaves in 2029. Commercial average tonnage/vehicle estimated using garbage as guide (consistent with South County Recycling and Transfer Station site) and self haul is consistent with ton.veh used at South County Recycling and Transfer Station site.

2. No Hazardous Waste at the Bow Lake Site.

3. Garbage tonnage provided by King County. Average Tonnage/Vehicle provided by KC for commericial vs self haul, self haul assumed to be without an account.

4. Yard Waste/Wood Waste and compostable paper provided by KC. Average tonnage/vehicle estimated using garbage as guide (consistent with South County Recycling and Transfer Station site)

5. Hauling away total annual trucks provided by King County. Average Tonnage/Vehicle consistent with South County Recycling and Transfer Station site.

6. Total Annual Trips represents both inbound and outbound trips.

7.Annual weekday vs weekend trips based on 9/1/13-9/1/14 transaction data for Bow Lake site provided by King county including self haul vs commercial.

Daily

Daily Trip Generation Summary - PEAK

	Material	Annual Trips[1]	Weekday %	Weekday Trips	Weekend %	Weekend Trips	Transfer Station Open[2]: Weekdays/Year	Weekend Days/Year	Weekday Trips %	Weekday Trips Trips	Weekend Trips %	Weekend Trips Trips[3]
Commercial Haul	Recycle	3,592	94%	3,376	6%	216	259	103	94%	14	6%	4
	Hazardous Waste	0	0%	0	100%	0	259	103	0%	0	100%	0
	Garbage	83,346	94%	78,345	6%	5,001	259	103	94%	329	6%	101
	Yard Waste	0	94%	0	6%	0	259	103	94%	0	6%	0
	Total	86,938		81,721		5,217				343		105
Self Haul	Recycle	35,706	63%	22,495	37%	13,211	259	103	63%	115	37%	164
	Hazardous Waste	0	0%	0	100%	0	259	103	0%	0	100%	0
	Garbage	298,960	63%	188,345	37%	110,615	259	103	63%	967	37%	1,371
	Yard Waste	29,984	63%	18,890	37%	11,094	259	103	63%	97	37%	138
	Total	364,650		229,730		134,920				1,179		1,673
Hauling Trucks	Hauling Away	25,646	75%	19,235	25%	6,412	259	103	75%	92	25%	80
Total		*477,234*		*330,686*		*146,549*				**1,614**		**1,858**
									Existing Trips	**750**		**900**
									Increase	**864**		**958**

Commercial Haul					
Self Haul	waste	91.7%	5.043137		
Hauling Trucks	recycle	8.3%	0.913726		

1. Annual Trips based on peak month

2. Assumes one holiday on a weekday and two on a weekend.

3. Weekend average increased by 5% to account for more vehicles on Saturday than Sunday.

WEEKDAY	Bow Lake Commercial	SelfHaul	Total
Median	159	329	489
90th Percentile	173	437	603
Peak Increase	**108.8%**	**132.9%**	**123.3%**

Note: Median and 90th Percentile include all *weekdays* January 2013 - December 2013

WEEKEND	Bow Lake Commercial	SelfHaul	Total
Median	11	420	430
90th Percentile	20.7	536	551
Peak Increase	**197.1%**	**127.7%**	**128.3%**

Note: Median and 90th Percentile include all *weekends* January 2013 - December 2013

Time of Day Summary

Time of Day Summary of Trips

Weekday Summary

Hour	Commercial Haul %	Commercial Haul Trips	Recycle %	Recycle Trips	Hazardous Waste %	Hazardous Waste Trips	Garbage %	Garbage Trips	Yard Waste %	Yard Waste Trips	Self Haul TOTAL	Hauling Trucks %	Hauling Trucks Trips	Total Trips
6:00	0%	0	0%	0	0%	0	0%	0	0%	0	0	12%	11	11
7:00	8%	28	3%	4	3%	0	3%	32	3%	3	39	6%	6	73
8:00	9%	32	5%	6	5%	0	5%	53	5%	5	64	12%	11	107
9:00	9%	32	8%	9	8%	0	8%	74	8%	7	90	9%	8	130
10:00	11%	39	10%	11	10%	0	10%	92	10%	9	112	12%	11	162
11:00	12%	41	11%	12	11%	0	11%	106	11%	11	129	9%	8	178
12:00	12%	41	11%	13	11%	0	11%	110	11%	12	135	9%	8	184
13:00	11%	38	11%	13	11%	0	11%	110	11%	11	134	6%	6	178
14:00	9%	32	11%	13	11%	0	11%	110	11%	11	134	9%	8	174
15:00	8%	28	10%	12	10%	0	10%	99	10%	10	121	6%	6	155
16:00	5%	18	10%	11	10%	0	10%	92	10%	9	112	3%	3	133
17:00	4%	14	9%	11	9%	0	9%	89	9%	9	109	3%	3	126
18:00	0%	0	0%	0	0%	0	0%	0	0%	0	0	0%	0	0
Daily Trips	**100%**	**343**	**100%**	**115**	**100%**	**0**	**100%**	**967**	**100%**	**97**	**1179**	**97%**	**89**	**1611**

Weekend Summary

Hour	Commercial Haul %	Commercial Haul Trips	Recycle %	Recycle Trips	Hazardous Waste %	Hazardous Waste Trips	Garbage %	Garbage Trips	Yard Waste %	Yard Waste Trips	Self Haul TOTAL	Hauling Trucks %	Hauling Trucks Trips	Total Trips
6:00	0%	0	0%	0	0%	0	0%	0	0%	0	0	17%	14	14
7:00	0%	0	0%	0	0%	0	0%	0	0%	0	0	7%	6	6
8:00	14%	14	4%	7	4%	0	4%	61	4%	6	74	10%	8	96
9:00	14%	14	8%	13	8%	0	8%	105	8%	11	129	10%	8	151
10:00	9%	10	10%	17	10%	0	10%	138	10%	14	169	10%	8	187
11:00	14%	14	12%	20	12%	0	12%	165	12%	17	202	7%	6	222
12:00	9%	10	13%	21	13%	0	13%	172	13%	17	210	10%	8	228
13:00	9%	9	13%	20	13%	0	13%	176	13%	17	213	7%	5	227
14:00	9%	9	13%	21	13%	0	13%	176	13%	18	215	10%	8	232
15:00	9%	10	12%	20	12%	0	12%	169	12%	17	206	7%	6	222
16:00	9%	10	11%	18	11%	0	11%	152	11%	15	185	0%	0	195
17:00	5%	5	4%	7	4%	0	4%	57	4%	6	70	0%	0	75
18:00	0%	0	0%	0	0%	0	0%	0	0%	0	0	0%	0	0
Daily Trips	**100%**	**105**	**100%**	**164**	**100%**	**0**	**100%**	**1371**	**100%**	**138**	**1673**	**97%**	**77**	**1855**

Note: Time of day percentages for commercial and self-haul based on observed trends at the Bow Lake facility.

Total trips based on tonnage and does not include reduction to account for shared trips (i.e. a recycle and garbage trip by a single customer). Modeling assumed an approximate 2 percent reduction in self haul trips.

2023 - King County Transfer Station Trip Generation - Bow Lake Concept 1

Annual

2023 Annual Trip Generation Summary

Material	Tonnage: Commercial Haul	Tonnage: Self Haul	Average Tonnage/Vehicle: Commercial Haul	Average Tonnage/Vehicle: Self Haul	Total Annual Trips[6]: Commercial Haul	Total Annual Trips[6]: Self Haul	Total Annual Trips[6]: Hauling Trucks	Total Annual Trips[6]: Total
Recycling[1]	8,682	5,356	5.25	0.30	3,308	35,706		**39,014**
Hazardous Waste[2]								
Garbage[3]	**201,411**	**52,318**	5.25	0.35	76,728	298,960		**375,688**
Yard Waste[4]		3,748	5.25	0.25	0	29,984		**29,984**
Hauling Away[5]							24,284	**24,284**
Total								**468,970**

Material	Total Annual Weekday Trips[7]: Commercial Haul %	Commercial Haul Trips	Self Haul %	Self Haul Trips	Hauling Trucks %	Hauling Trucks Trips	Total Trips	Total Annual Weekend Trips: Commercial Haul %	Commercial Haul Trips	Self Haul %	Self Haul Trips	Hauling Trucks %	Hauling Trucks Trips	Total Trips
Recycling[1]	94%		63%	22,495			**22,495**	6%		37%	13,211			**13,211**
Hazardous Waste[2]														
Garbage[3]	94%	72,124	63%	188,345			**260,469**	6%	4,604	37%	110,615			**115,219**
Yard Waste[4]	94%	0	63%	18,890			**18,890**	6%	0	37%	11,094			**11,094**
Hauling Away[5]					75%	18,213	**18,213**					25%	6,071	**6,071**
Total							**320,067**							**145,595**

1. Tonnage provided by King County assuming Houghton closes before 2023 and Bellevue leaves in 2029. Commercial average tonnage/vehicle estimated using garbage as guide (consistent with South County Recycling and Transfer Station site) and self haul is consistent with ton.veh used at South County Recycling and Transfer Station site.

2. No Hazardous Waste at the Bow Lake Site.

3. Garbage tonnage provided by King County for concept. Average Tonnage/Vehicle provided by KC for commericial vs self haul, self haul assumed to be without an account.

4. Yard Waste/Wood Waste and compostable paper provided by KC. Average tonnage/vehicle estimated using garbage as guide (consistent with South County Recycling and Transfer Station site)

5. Hauling away total annual trucks provided by King County. Average Tonnage/Vehicle consistent with South County Recycling and Transfer Station site.

6. Total Annual Trips represents both inbound and outbound trips.

7.Annual weekday vs weekend trips based on 9/1/13-9/1/14 transaction data for Bow Lake site provided by King county including self haul vs commercial.

Daily

Daily Trip Generation Summary - PEAK

	Material	Annual Trips[1]	Weekday %	Weekday Trips	Weekend %	Weekend Trips	Transfer Station Open[2]: Weekdays/Year	Weekend Days/Year	Weekday Trips %	Weekday Trips Trips	Weekend Trips %	Weekend Trips Trips[3]
Commercial Haul	Recycle	3,308	94%	3,110	6%	198	259	103	94%	13	6%	4
	Hazardous Waste	0	0%	0	100%	0	259	103	0%	0	100%	0
	Garbage	76,728	94%	72,124	6%	4,604	259	103	94%	303	6%	93
	Yard Waste	0	94%	0	6%	0	259	103	94%	0	6%	0
	Total	80,036		75,234		4,802				316		97
Self Haul	Recycle	35,706	63%	22,495	37%	13,211	259	103	63%	115	37%	164
	Hazardous Waste	0	0%	0	100%	0	259	103	0%	0	100%	0
	Garbage	298,960	63%	188,345	37%	110,615	259	103	63%	967	37%	1,371
	Yard Waste	29,984	63%	18,890	37%	11,094	259	103	63%	97	37%	138
	Total	364,650		229,730		134,920				1,179		1,673
Hauling Trucks	Hauling Away	24,284	75%	18,213	25%	6,071	259	103	75%	87	25%	76
Total		*468,970*		*323,177*		*145,793*				**1,582**		**1,846**
									Existing Trips	**750**		**900**
									Increase	**832**		**946**

1. Annual Trips based on peak month

2. Assumes one holiday on a weekday and two on a weekend.

3. Weekend average increased by 5% to account for more vehicles on Saturday than Sunday.

Commercial Haul	waste	91.6%	0	
Self Haul	recycle	8.4%	0	
Hauling Trucks				

WEEKDAY	Bow Lake Commercia	SelfHaul	Total
Median	159	329	489
90th Percentile	173	437	603
Peak Increase	**108.8%**	**132.9%**	**123.3%**

Note: Median and 90th Percentile include all *weekdays* January 2013 - December 2013

WEEKEND	Bow Lake Commercia	SelfHaul	Total
Median	11	420	430
90th Percentile	20.7	536	551
Peak Increase	**197.1%**	**127.7%**	**128.3%**

Note: Median and 90th Percentile include all *weekends* January 2013 - December 2013

Time of Day Summary

Time of Day Summary of Trips

Weekday Summary

Hour	Commercial Haul %	Commercial Haul Trips	Recycle %	Recycle Trips	Hazardous Waste %	Hazardous Waste Trips	Garbage %	Garbage Trips	Yard Waste %	Yard Waste Trips	Self Haul TOTAL	Hauling Trucks %	Hauling Trucks Trips	Total Trips
6:00	0%	0	0%	0	0%	0	0%	0	0%	0	0	12%	11	11
7:00	8%	26	3%	4	3%	0	3%	32	3%	3	39	6%	5	70
8:00	9%	29	5%	6	5%	0	5%	53	5%	5	64	12%	11	104
9:00	9%	29	8%	9	8%	0	8%	74	8%	7	90	9%	8	127
10:00	11%	35	10%	11	10%	0	10%	92	10%	9	112	12%	11	158
11:00	12%	38	11%	12	11%	0	11%	106	11%	11	129	9%	8	175
12:00	12%	38	11%	13	11%	0	11%	110	11%	12	135	9%	8	181
13:00	11%	34	11%	13	11%	0	11%	110	11%	11	134	6%	5	173
14:00	9%	29	11%	13	11%	0	11%	110	11%	11	134	9%	8	171
15:00	8%	26	10%	12	10%	0	10%	99	10%	10	121	6%	5	152
16:00	5%	16	10%	11	10%	0	10%	92	10%	9	112	3%	3	131
17:00	4%	13	9%	11	9%	0	9%	89	9%	9	109	3%	3	125
18:00	0%	0	0%	0	0%	0	0%	0	0%	0	0	0%	0	0
Daily Trips	**100%**	**313**	**100%**	**115**	**100%**	**0**	**100%**	**967**	**100%**	**97**	**1179**	**97%**	**86**	**1578**

Weekend Summary

Hour	Commercial Haul %	Commercial Haul Trips	Recycle %	Recycle Trips	Hazardous Waste %	Hazardous Waste Trips	Garbage %	Garbage Trips	Yard Waste %	Yard Waste Trips	Self Haul TOTAL	Hauling Trucks %	Hauling Trucks Trips	Total Trips
6:00	0%	0	0%	0	0%	0	0%	0	0%	0	0	17%	13	13
7:00	0%	0	0%	0	0%	0	0%	0	0%	0	0	7%	5	5
8:00	14%	13	4%	7	4%	0	4%	61	4%	6	74	10%	8	95
9:00	14%	13	8%	13	8%	0	8%	105	8%	11	129	10%	8	150
10:00	9%	9	10%	17	10%	0	10%	138	10%	14	169	10%	8	186
11:00	14%	13	12%	20	12%	0	12%	165	12%	17	202	7%	5	220
12:00	9%	9	13%	21	13%	0	13%	172	13%	17	210	10%	8	227
13:00	9%	8	13%	20	13%	0	13%	176	13%	17	213	7%	4	225
14:00	9%	8	13%	21	13%	0	13%	176	13%	18	215	10%	8	231
15:00	9%	9	12%	20	12%	0	12%	169	12%	17	206	7%	5	220
16:00	9%	9	11%	18	11%	0	11%	152	11%	15	185	0%	0	194
17:00	5%	4	4%	7	4%	0	4%	57	4%	6	70	0%	0	74
18:00	0%	0	0%	0	0%	0	0%	0	0%	0	0	0%	0	0
Daily Trips	**100%**	**95**	**100%**	**164**	**100%**	**0**	**100%**	**1371**	**100%**	**138**	**1673**	**97%**	**72**	**1840**

Note: Time of day percentages for commercial and self-haul based on observed trends at the Bow Lake facility.

Total trips based on tonnage and does not include reduction to account for shared trips (i.e. a recycle and garbage trip by a single customer). Modeling assumed an approximate 2 percent reduction in self haul trips.

2023 - King County Transfer Station Trip Generation - Bow Lake Concept 2

Annual

2023 Annual Trip Generation Summary

Material	Tonnage		Average Tonnage/Vehicle		Total Annual Trips[6]				Total Annual Weekday Trips[7]							Total Annual Weekend Trips						
									Commercial Haul		Self Haul		Hauling Trucks			Commercial Haul		Self Haul		Hauling Trucks		
	Commercial Haul	Self Haul	Commercial Haul	Self Haul	Commercial Haul	Self Haul	Hauling Trucks	Total	%	Trips	%	Trips	%	Trips	Total Trips	%	Trips	%	Trips	%	Trips	Total Trips
Recycling[1]	9,431	5,356	5.25	0.30	3,592	35,706		**39,298**	94%		63%	22,495			**22,495**	6%		37%	13,211			**13,211**
Hazardous Waste[2]																						
Garbage[3]	**218,782**	**52,318**	5.25	0.35	83,346	298,960		**382,306**	94%	78,345	63%	188,345			**266,690**	6%	5,001	37%	110,615			**115,616**
Yard Waste[4]		3,748	5.25	0.25	0	29,984		**29,984**	94%	0	63%	18,890			**18,890**	6%	0	37%	11,094			**11,094**
Hauling Away[5]							25,646	**25,646**					75%	19,235	**19,235**					25%	6,412	**6,412**
Total								**477,234**							**327,310**							**146,333**

1. Tonnage provided by King County assuming Houghton closes before 2023 and Bellevue leaves in 2029. Commercial average tonnage/vehicle estimated using garbage as guide (consistent with South County Recycling and Transfer Station site) and self haul is consistent with ton.veh used at South County Recycling and Transfer Station site.

2. No Hazardous Waste at the Bow Lake Site.

3. Garbage tonnage provided by King County for concept. Average Tonnage/Vehicle provided by KC for commericial vs self haul, self haul assumed to be without an account.

4. Yard Waste/Wood Waste and compostable paper provided by KC. Average tonnage/vehicle estimated using garbage as guide (consistent with South County Recycling and Transfer Station site)

5. Hauling away total annual trucks provided by King County. Average Tonnage/Vehicle consistent with South County Recycling and Transfer Station site.

6. Total Annual Trips represents both inbound and outbound trips.

7.Annual weekday vs weekend trips based on 9/1/13-9/1/14 transaction data for Bow Lake site provided by King county including self haul vs commercial.

Daily

Daily Trip Generation Summary - PEAK

	Material	Annual Trips[1]	Weekday %	Weekday Trips	Weekend %	Weekend Trips	Transfer Station Open[2] Weekdays/Year	Weekend Days/Year	Weekday Trips %	Weekday Trips Trips	Weekend Trips %	Weekend Trips Trips[3]	
Commercial Haul	Recycle	3,592	94%	3,376	6%	216	259	103	94%	14	6%	4	Commercial Haul
	Hazardous Waste	0	0%	0	100%	0	259	103	0%	0	100%	0	
	Garbage	83,346	94%	78,345	6%	5,001	259	103	94%	329	6%	101	
	Yard Waste	0	94%	0	6%	0	259	103	94%	0	6%	0	
	Total	86,938		81,721		5,217				343		105	
Self Haul	Recycle	35,706	63%	22,495	37%	13,211	259	103	63%	115	37%	164	Self Haul
	Hazardous Waste	0	0%	0	100%	0	259	103	0%	0	100%	0	
	Garbage	298,960	63%	188,345	37%	110,615	259	103	63%	967	37%	1,371	
	Yard Waste	29,984	63%	18,890	37%	11,094	259	103	63%	97	37%	138	
	Total	364,650		229,730		134,920				1,179		1,673	
Hauling Trucks	Hauling Away	25,646	75%	19,235	25%	6,412	259	103	75%	92	25%	80	Hauling Trucks
Total		***477,234***		***330,686***		***146,549***				**1,614**		**1,858**	

1. Annual Trips based on peak month

2. Assumes one holiday on a weekday and two on a weekend.

3. Weekend average increased by 5% to account for more vehicles on Saturday than Sunday.

waste	91.7%	0	
recycle	8.3%	0	

	Weekday Trips	Weekend Trips
Existing Trips	**750**	**900**
Increase	**864**	**958**

WEEKDAY	Bow Lake Commercia	SelfHaul	Total
Median	159	329	489
90th Percentile	173	437	603
Peak Increase	**108.8%**	**132.9%**	**123.3%**

Note: Median and 90th Percentile include all *weekdays* January 2013 - December 2013

WEEKEND	Bow Lake Commercia	SelfHaul	Total
Median	11	420	430
90th Percentile	20.7	536	551
Peak Increase	**197.1%**	**127.7%**	**128.3%**

Note: Median and 90th Percentile include all *weekends* January 2013 - December 2013

Time of Day Summary

Time of Day Summary of Trips

Hour	Weekday Summary: Commercial Haul %	Commercial Haul Trips	Self Haul: Recycle %	Recycle Trips	Hazardous Waste %	Hazardous Waste Trips	Garbage %	Garbage Trips	Yard Waste %	Yard Waste Trips	TOTAL	Hauling Trucks %	Hauling Trucks Trips	Total Trips
6:00	0%	0	0%	0	0%	0	0%	0	0%	0	0	12%	11	11
7:00	8%	28	3%	4	3%	0	3%	32	3%	3	39	6%	6	73
8:00	9%	32	5%	6	5%	0	5%	53	5%	5	64	12%	11	107
9:00	9%	32	8%	9	8%	0	8%	74	8%	7	90	9%	8	130
10:00	11%	39	10%	11	10%	0	10%	92	10%	9	112	12%	11	162
11:00	12%	41	11%	12	11%	0	11%	106	11%	11	129	9%	8	178
12:00	12%	41	11%	13	11%	0	11%	110	11%	12	135	9%	8	184
13:00	11%	38	11%	13	11%	0	11%	110	11%	11	134	6%	6	178
14:00	9%	32	11%	13	11%	0	11%	110	11%	11	134	9%	8	174
15:00	8%	28	10%	12	10%	0	10%	99	10%	10	121	6%	6	155
16:00	5%	18	10%	11	10%	0	10%	92	10%	9	112	3%	3	133
17:00	4%	14	9%	11	9%	0	9%	89	9%	9	109	3%	3	126
18:00	0%	0	0%	0	0%	0	0%	0	0%	0	0	0%	0	0
Daily Trips	**100%**	**343**	**100%**	**115**	**100%**	**0**	**100%**	**967**	**100%**	**97**	**1179**	**97%**	**89**	**1611**

Hour	Weekend Summary: Commercial Haul %	Commercial Haul Trips	Self Haul: Recycle %	Recycle Trips	Hazardous Waste %	Hazardous Waste Trips	Garbage %	Garbage Trips	Yard Waste %	Yard Waste Trips	TOTAL	Hauling Trucks %	Hauling Trucks Trips	Total Trips
6:00	0%	0	0%	0	0%	0	0%	0	0%	0	0	17%	14	14
7:00	0%	0	0%	0	0%	0	0%	0	0%	0	0	7%	6	6
8:00	14%	14	4%	7	4%	0	4%	61	4%	6	74	10%	8	96
9:00	14%	14	8%	13	8%	0	8%	105	8%	11	129	10%	8	151
10:00	9%	10	10%	17	10%	0	10%	138	10%	14	169	10%	8	187
11:00	14%	14	12%	20	12%	0	12%	165	12%	17	202	7%	6	222
12:00	9%	10	13%	21	13%	0	13%	172	13%	17	210	10%	8	228
13:00	9%	9	13%	20	13%	0	13%	176	13%	17	213	7%	5	227
14:00	9%	9	13%	21	13%	0	13%	176	13%	18	215	10%	8	232
15:00	9%	10	12%	20	12%	0	12%	169	12%	17	206	7%	6	222
16:00	9%	10	11%	18	11%	0	11%	152	11%	15	185	0%	0	195
17:00	5%	5	4%	7	4%	0	4%	57	4%	6	70	0%	0	75
18:00	0%	0	0%	0	0%	0	0%	0	0%	0	0	0%	0	0
Daily Trips	**100%**	**105**	**100%**	**164**	**100%**	**0**	**100%**	**1371**	**100%**	**138**	**1673**	**97%**	**77**	**1855**

Note: Time of day percentages for commercial and self-haul based on observed trends at the Bow Lake facility.

Total trips based on tonnage and does not include reduction to account for shared trips (i.e. a recycle and garbage trip by a single customer). Modeling assumed an approximate 2 percent reduction in self haul trips.

2023 - King County Transfer Station Trip Generation - Bow Lake Concept 3

Annual

2023 Annual Trip Generation Summary

Material	Tonnage: Commercial Haul	Tonnage: Self Haul	Average Tonnage/Vehicle: Commercial Haul	Average Tonnage/Vehicle: Self Haul	Total Annual Trips[6]: Commercial Haul	Total Annual Trips[6]: Self Haul	Total Annual Trips[6]: Hauling Trucks	Total Annual Trips[6]: Total
Recycling[1]	9,431	5,356	5.25	0.30	3,592	35,706		**39,298**
Hazardous Waste[2]								
Garbage[3]	**218,395**	**52,937**	5.25	0.35	83,198	302,498		**385,696**
Yard Waste[4]		3,748	5.25	0.25	0	29,984		**29,984**
Hauling Away[5]							25,664	**25,664**
Total								**480,642**

Material	Total Annual Weekday Trips[7]: Commercial Haul %	Trips	Self Haul %	Trips	Hauling Trucks %	Trips	Total Trips	Total Annual Weekend Trips: Commercial Haul %	Trips	Self Haul %	Trips	Hauling Trucks %	Trips	Total Trips
Recycling[1]	94%		63%	22,495			**22,495**	6%		37%	13,211			**13,211**
Hazardous Waste[2]														
Garbage[3]	94%	78,206	63%	190,574			**268,780**	6%	4,992	37%	111,924			**116,916**
Yard Waste[4]	94%	0	63%	18,890			**18,890**	6%	0	37%	11,094			**11,094**
Hauling Away[5]					75%	19,248	**19,248**					25%	6,416	**6,416**
Total							**329,413**							**147,637**

1. Tonnage provided by King County assuming Houghton closes before 2023 and Bellevue leaves in 2029. Commercial average tonnage/vehicle estimated using garbage as guide (consistent with South County Recycling and Transfer Station site) and self haul is consistent with ton.veh used at South County Recycling and Transfer Station site.

2. No Hazardous Waste at the Bow Lake Site.

3. Garbage tonnage provided by King County for concept. Average Tonnage/Vehicle provided by KC for commericial vs self haul, self haul assumed to be without an account.

4. Yard Waste/Wood Waste and compostable paper provided by KC. Average tonnage/vehicle estimated using garbage as guide (consistent with South County Recycling and Transfer Station site)

5. Hauling away total annual trucks provided by King County. Average Tonnage/Vehicle consistent with South County Recycling and Transfer Station site.

6. Total Annual Trips represents both inbound and outbound trips.

7.Annual weekday vs weekend trips based on 9/1/13-9/1/14 transaction data for Bow Lake site provided by King county including self haul vs commercial.

Daily

Daily Trip Generation Summary - PEAK

	Material	Annual Trips[1]	Weekday %	Weekday Trips	Weekend %	Weekend Trips	Transfer Station Open[2]: Weekdays/Year	Weekend Days/Year	Weekday Trips %	Trips	Weekend Trips %	Trips[3]
Commercial Haul	Recycle	3,592	94%	3,376	6%	216	259	103	94%	14	6%	4
	Hazardous Waste	0	0%	0	100%	0	259	103	0%	0	100%	0
	Garbage	83,198	94%	78,206	6%	4,992	259	103	94%	329	6%	100
	Yard Waste	0	94%	0	6%	0	259	103	94%	0	6%	0
	Total	86,790		81,582		5,208				343		104
Self Haul	Recycle	35,706	63%	22,495	37%	13,211	259	103	63%	115	37%	164
	Hazardous Waste	0	0%	0	100%	0	259	103	0%	0	100%	0
	Garbage	302,498	63%	190,574	37%	111,924	259	103	63%	978	37%	1,388
	Yard Waste	29,984	63%	18,890	37%	11,094	259	103	63%	97	37%	138
	Total	368,188		231,959		136,229				1,190		1,690
Hauling Trucks	Hauling Away	25,664	75%	19,248	25%	6,416	259	103	75%	92	25%	80
Total		*480,642*		*332,789*		*147,853*				**1,625**		**1,874**

Commercial Haul				
	waste	91.7%	0	
Self Haul	recycle	8.3%	0	
Hauling Trucks				

1. Annual Trips based on peak month

2. Assumes one holiday on a weekday and two on a weekend.

3. Weekend average increased by 5% to account for more vehicles on Saturday than Sunday.

	Existing Trips	Increase
Weekday	750	875
Weekend	900	974

WEEKDAY	Bow Lake Commercia	SelfHaul	Total
Median	159	329	489
90th Percentile	173	437	603
Peak Increase	**108.8%**	**132.9%**	**123.3%**

Note: Median and 90th Percentile include all *weekdays* January 2013 - December 2013

WEEKEND	Bow Lake Commercia	SelfHaul	Total
Median	11	420	430
90th Percentile	20.7	536	551
Peak Increase	**197.1%**	**127.7%**	**128.3%**

Note: Median and 90th Percentile include all *weekends* January 2013 - December 2013

Time of Day Summary

Time of Day Summary of Trips

Weekday Summary

Hour	Commercial Haul %	Commercial Haul Trips	Self Haul: Recycle %	Recycle Trips	Hazardous Waste %	Hazardous Waste Trips	Garbage %	Garbage Trips	Yard Waste %	Yard Waste Trips	TOTAL	Hauling Trucks %	Hauling Trucks Trips	Total Trips
6:00	0%	0	0%	0	0%	0	0%	0	0%	0	0	12%	11	11
7:00	8%	28	3%	4	3%	0	3%	32	3%	3	39	6%	6	73
8:00	9%	32	5%	6	5%	0	5%	54	5%	5	65	12%	11	108
9:00	9%	32	8%	9	8%	0	8%	75	8%	7	91	9%	8	131
10:00	11%	39	10%	11	10%	0	10%	93	10%	9	113	12%	11	163
11:00	12%	41	11%	12	11%	0	11%	107	11%	11	130	9%	8	179
12:00	12%	41	11%	13	11%	0	11%	111	11%	12	136	9%	8	185
13:00	11%	38	11%	13	11%	0	11%	111	11%	11	135	6%	6	179
14:00	9%	32	11%	13	11%	0	11%	111	11%	11	135	9%	8	175
15:00	8%	28	10%	12	10%	0	10%	100	10%	10	122	6%	6	156
16:00	5%	18	10%	11	10%	0	10%	93	10%	9	113	3%	3	134
17:00	4%	14	9%	11	9%	0	9%	90	9%	9	110	3%	3	127
18:00	0%	0	0%	0	0%	0	0%	0	0%	0	0	0%	0	0
Daily Trips	**100%**	**343**	**100%**	**115**	**100%**	**0**	**100%**	**977**	**100%**	**97**	**1189**	**97%**	**89**	**1621**

Weekend Summary

Hour	Commercial Haul %	Commercial Haul Trips	Self Haul: Recycle %	Recycle Trips	Hazardous Waste %	Hazardous Waste Trips	Garbage %	Garbage Trips	Yard Waste %	Yard Waste Trips	TOTAL	Hauling Trucks %	Hauling Trucks Trips	Total Trips
6:00	0%	0	0%	0	0%	0	0%	0	0%	0	0	17%	14	14
7:00	0%	0	0%	0	0%	0	0%	0	0%	0	0	7%	6	6
8:00	14%	14	4%	7	4%	0	4%	62	4%	6	75	10%	8	97
9:00	14%	14	8%	13	8%	0	8%	106	8%	11	130	10%	8	152
10:00	9%	9	10%	17	10%	0	10%	140	10%	14	171	10%	8	188
11:00	14%	14	12%	20	12%	0	12%	168	12%	17	205	7%	6	225
12:00	9%	9	13%	21	13%	0	13%	174	13%	17	212	10%	8	229
13:00	9%	8	13%	20	13%	0	13%	178	13%	17	215	7%	5	228
14:00	9%	8	13%	21	13%	0	13%	178	13%	18	217	10%	8	233
15:00	9%	9	12%	20	12%	0	12%	171	12%	17	208	7%	6	223
16:00	9%	9	11%	18	11%	0	11%	154	11%	15	187	0%	0	196
17:00	5%	5	4%	7	4%	0	4%	58	4%	6	71	0%	0	76
18:00	0%	0	0%	0	0%	0	0%	0	0%	0	0	0%	0	0
Daily Trips	**100%**	**99**	**100%**	**164**	**100%**	**0**	**100%**	**1389**	**100%**	**138**	**1691**	**97%**	**77**	**1867**

Note: Time of day percentages for commercial and self-haul based on observed trends at the Bow Lake facility.

Total trips based on tonnage and does not include reduction to account for shared trips (i.e. a recycle and garbage trip by a single customer). Modeling assumed an approximate 2 percent reduction in self haul trips.

2023 - King County Transfer Station Trip Generation - Bow Lake without Renton Concept 0

Annual

2023 Annual Trip Generation Summary

Material	Tonnage: Commercial Haul	Tonnage: Self Haul	Average Tonnage/Vehicle[6]: Commercial Haul	Average Tonnage/Vehicle[6]: Self Haul	Total Annual Trips[7]: Commercial Haul	Total Annual Trips[7]: Self Haul	Total Annual Trips[7]: Hauling Trucks	Total Annual Trips[7]: Total
Recycling[1]	10,892	6,835	5.28	0.30	4,124	45,566		**49,690**
Hazardous Waste[2]								
Garbage[3]	**252,689**	**64,811**	5.28	0.33	95,676	391,934		**487,610**
Yard Waste[4]		3,748	5.28	0.25	0	29,984		**29,984**
Hauling Away[5]							30,382	**30,382**
Total								**597,666**

Material	Total Annual Weekday Trips[8]: Commercial Haul %	Trips	Self Haul %	Trips	Hauling Trucks %	Trips	Total Trips	Total Annual Weekend Trips: Commercial Haul %	Trips	Self Haul %	Trips	Hauling Trucks %	Trips	Total Trips
Recycling[1]	94%		63%	28,707			**28,707**	6%		37%	16,859			**16,859**
Hazardous Waste[2]														
Garbage[3]	94%	89,935	63%	246,918			**336,853**	6%	5,741	37%	145,016			**150,757**
Yard Waste[4]	94%	0	63%	18,890			**18,890**	6%	0	37%	11,094			**11,094**
Hauling Away[5]					75%	22,787	**22,787**					25%	7,596	**7,596**
Total							**407,237**							**186,306**

1. Tonnage provided by King County assuming Houghton closes before 2023 and Bellevue leaves in 2029. Commercial average tonnage/vehicle estimated using garbage as guide (consistent with South County Recycling and Transfer Station site) and self haul is consistent with ton.veh used at South County Recycling and Transfer Station site.

2. No Hazardous Waste at the Bow Lake Site.

3. Garbage tonnage provided by King County. Average Tonnage/Vehicle provided by KC for commericial vs self haul, self haul assumed to be without an account.

4. Yard Waste/Wood Waste and compostable paper provided by KC. Average tonnage/vehicle estimated using garbage as guide (consistent with South County Recycling and Transfer Station site)

5. Hauling away total annual trucks provided by King County. Average Tonnage/Vehicle consistent with South County Recycling and Transfer Station site.

6. Average Tonnage/Vehicle reflects a weighted average taking into account the shift in tonnage from Renton

7. Total Annual Trips represents both inbound and outbound trips.

8.Annual weekday vs weekend trips based on 9/1/13-9/1/14 transaction data for Bow Lake site provided by King county including self haul vs commercial.

Daily

Daily Trip Generation Summary - PEAK

	Material	Annual Trips[1]	Weekday %	Weekday Trips	Weekend %	Weekend Trips	Transfer Station Open[2]: Weekdays/Year	Weekend Days/Year	Weekday Trips %	Weekday Trips Trips	Weekend Trips %	Weekend Trips Trips[3]
Commercial Haul	Recycle	4,124	94%	3,877	6%	247	259	103	94%	16	6%	5
	Hazardous Waste	0	0%	0	100%	0	259	103	0%	0	100%	0
	Garbage	95,676	94%	89,935	6%	5,741	259	103	94%	378	6%	115
	Yard Waste	0	94%	0	6%	0	259	103	94%	0	6%	0
	Total	99,800		93,812		5,988				394		120
Self Haul	Recycle	45,566	63%	28,707	37%	16,859	259	103	63%	147	37%	209
	Hazardous Waste	0	0%	0	100%	0	259	103	0%	0	100%	0
	Garbage	391,934	63%	246,918	37%	145,016	259	103	63%	1,267	37%	1,798
	Yard Waste	29,984	63%	18,890	37%	11,094	259	103	63%	97	37%	138
	Total	467,484		294,515		172,969				1,511		2,145
Hauling Trucks	Hauling Away	30,382	75%	22,787	25%	7,596	259	103	75%	108	25%	95
Total		*597,666*		*411,114*		*186,553*				**2,013**		**2,360**
									Existing Trips	**750**		**900**
									Increase	**1,263**		**1,460**

1. Annual Trips based on peak month

2. Assumes one holiday on a weekday and two on a weekend.

3. Weekend average increased by 5% to account for more vehicles on Saturday than Sunday.

Commercial Haul					
	waste	91.6%	5.954594		
Self Haul	recycle	8.4%	1.090813		
Hauling Trucks					

WEEKDAY	Bow Lake Commercia	SelfHaul	Total
Median	159	329	489
90th Percentile	173	437	603
Peak Increase	**108.8%**	**132.9%**	**123.3%**

Note: Median and 90th Percentile include all *weekdays* January 2013 - December 2013

WEEKEND	Bow Lake Commercia	SelfHaul	Total
Median	11	420	430
90th Percentile	20.7	536	551
Peak Increase	**197.1%**	**127.7%**	**128.3%**

Note: Median and 90th Percentile include all *weekends* January 2013 - December 2013

Time of Day Summary

Time of Day Summary of Trips

Weekday Summary

Hour	Commercial Haul %	Commercial Haul Trips	Self Haul: Recycle %	Recycle Trips	Hazardous Waste %	Hazardous Waste Trips	Garbage %	Garbage Trips	Yard Waste %	Yard Waste Trips	TOTAL	Hauling Trucks %	Hauling Trucks Trips	Total Trips
6:00	0%	0	0%	0	0%	0	0%	0	0%	0	0	12%	13	13
7:00	8%	32	3%	5	3%	0	3%	42	3%	3	50	6%	7	89
8:00	9%	36	5%	8	5%	0	5%	70	5%	5	83	12%	13	132
9:00	9%	36	8%	11	8%	0	8%	97	8%	7	115	9%	10	161
10:00	11%	45	10%	14	10%	0	10%	121	10%	9	144	12%	13	202
11:00	12%	49	11%	16	11%	0	11%	139	11%	11	166	9%	10	225
12:00	12%	49	11%	17	11%	0	11%	144	11%	12	173	9%	10	232
13:00	11%	45	11%	17	11%	0	11%	144	11%	11	172	6%	6	223
14:00	9%	36	11%	17	11%	0	11%	144	11%	11	172	9%	10	218
15:00	8%	32	10%	15	10%	0	10%	130	10%	10	155	6%	7	194
16:00	5%	20	10%	14	10%	0	10%	121	10%	9	144	3%	3	167
17:00	4%	16	9%	13	9%	0	9%	116	9%	9	138	3%	3	157
18:00	0%	0	0%	0	0%	0	0%	0	0%	0	0	0%	0	0
Daily Trips	**100%**	**396**	**100%**	**147**	**100%**	**0**	**100%**	**1268**	**100%**	**97**	**1512**	**97%**	**105**	**2013**

Weekend Summary

Hour	Commercial Haul %	Commercial Haul Trips	Self Haul: Recycle %	Recycle Trips	Hazardous Waste %	Hazardous Waste Trips	Garbage %	Garbage Trips	Yard Waste %	Yard Waste Trips	TOTAL	Hauling Trucks %	Hauling Trucks Trips	Total Trips
6:00	0%	0	0%	0	0%	0	0%	0	0%	0	0	17%	16	16
7:00	0%	0	0%	0	0%	0	0%	0	0%	0	0	7%	7	7
8:00	14%	16	4%	9	4%	0	4%	80	4%	6	95	10%	10	121
9:00	14%	16	8%	16	8%	0	8%	137	8%	11	164	10%	10	190
10:00	9%	11	10%	21	10%	0	10%	182	10%	14	217	10%	10	238
11:00	14%	16	12%	25	12%	0	12%	217	12%	17	259	7%	7	282
12:00	9%	11	13%	26	13%	0	13%	226	13%	17	269	10%	10	290
13:00	9%	10	13%	27	13%	0	13%	230	13%	17	274	7%	6	290
14:00	9%	10	13%	27	13%	0	13%	230	13%	18	275	10%	9	294
15:00	9%	11	12%	26	12%	0	12%	221	12%	17	264	7%	7	282
16:00	9%	11	11%	23	11%	0	11%	199	11%	15	237	0%	0	248
17:00	5%	5	4%	9	4%	0	4%	75	4%	6	90	0%	0	95
18:00	0%	0	0%	0	0%	0	0%	0	0%	0	0	0%	0	0
Daily Trips	**100%**	**117**	**100%**	**209**	**100%**	**0**	**100%**	**1797**	**100%**	**138**	**2144**	**97%**	**92**	**2353**

Note: Time of day percentages for commercial and self-haul based on observed trends at the Bow Lake facility.

Total trips based on tonnage and does not include reduction to account for shared trips (i.e. a recycle and garbage trip by a single customer). Modeling assumed an approximate 2 percent reduction in self haul trips.

2023 - King County Transfer Station Trip Generation - Bow Lake without Renton Concept 1

Annual

2023 Annual Trip Generation Summary

Material	Tonnage		Average Tonnage/Vehicle		Total Annual Trips[6]				Total Annual Weekday Trips[7]							Total Annual Weekend Trips						
									Commercial Haul		Self Haul		Hauling Trucks			Commercial Haul		Self Haul		Hauling Trucks		
	Commercial Haul	Self Haul	Commercial Haul	Self Haul	Commercial Haul	Self Haul	Hauling Trucks	Total	%	Trips	%	Trips	%	Trips	Total Trips	%	Trips	%	Trips	%	Trips	Total Trips
Recycling[1]	10,988	6,835	5.28	0.30	4,158	45,566		**49,724**	94%		63%	28,707			**28,707**	6%		37%	16,859			**16,859**
Hazardous Waste[2]																						
Garbage[3]	**254,918**	**64,811**	5.28	0.33	96,486	391,934		**488,420**	94%	90,697	63%	246,918			**337,615**	6%	5,789	37%	145,016			**150,805**
Yard Waste[4]		3,748	5.28	0.25	0	29,984		**29,984**	94%	0	63%	18,890			**18,890**	6%	0	37%	11,094			**11,094**
Hauling Away[5]							30,556	**30,556**					75%	22,917	**22,917**					25%	7,639	**7,639**
Total								**598,684**							**408,129**							**186,397**

1. Tonnage provided by King County assuming Houghton closes before 2023 and Bellevue leaves in 2029. Commercial average tonnage/vehicle estimated using garbage as guide (consistent with South County Recycling and Transfer Station site) and self haul is consistent with ton.veh used at South County Recycling and Transfer Station site.

2. No Hazardous Waste at the Bow Lake Site.

3. Garbage tonnage provided by King County for concept. Average Tonnage/Vehicle provided by KC for commericial vs self haul, self haul assumed to be without an account.

4. Yard Waste/Wood Waste and compostable paper provided by KC. Average tonnage/vehicle estimated using garbage as guide (consistent with South County Recycling and Transfer Station site)

5. Hauling away total annual trucks provided by King County. Average Tonnage/Vehicle consistent with South County Recycling and Transfer Station site.

6. Total Annual Trips represents both inbound and outbound trips.

7.Annual weekday vs weekend trips based on 9/1/13-9/1/14 transaction data for Bow Lake site provided by King county including self haul vs commercial.

Daily

Daily Trip Generation Summary - PEAK

	Material	Annual Trips[1]	Weekday %	Weekday Trips	Weekend %	Weekend Trips	Transfer Station Open[2] Weekdays/Year	Weekend Days/Year	Weekday Trips %	Weekday Trips Trips	Weekend Trips %	Weekend Trips Trips[3]
Commercial Haul	Recycle	4,158	94%	3,909	6%	249	259	103	94%	16	6%	5
	Hazardous Waste	0	0%	0	100%	0	259	103	0%	0	100%	0
	Garbage	96,486	94%	90,697	6%	5,789	259	103	94%	381	6%	116
	Yard Waste	0	94%	0	6%	0	259	103	94%	0	6%	0
	Total	100,644		94,606		6,038				397		121
Self Haul	Recycle	45,566	63%	28,707	37%	16,859	259	103	63%	147	37%	209
	Hazardous Waste	0	0%	0	100%	0	259	103	0%	0	100%	0
	Garbage	391,934	63%	246,918	37%	145,016	259	103	63%	1,267	37%	1,798
	Yard Waste	29,984	63%	18,890	37%	11,094	259	103	63%	97	37%	138
	Total	467,484		294,515		172,969				1,511		2,145
Hauling Trucks	Hauling Away	30,556	75%	22,917	25%	7,639	259	103	75%	109	25%	95
Total		*598,684*		*412,038*		*186,646*				**2,017**		**2,361**

1. Annual Trips based on peak month

2. Assumes one holiday on a weekday and two on a weekend.

3. Weekend average increased by 5% to account for more vehicles on Saturday than Sunday.

Existing Trips	**750**	**900**
Increase	**1,267**	**1,461**

Commercial Haul	waste	91.6%	0
Self Haul	recycle	8.4%	0

WEEKDAY	Bow Lake Commercia	SelfHaul	Total
Median	159	329	489
90th Percentile	173	437	603
Peak Increase	**108.8%**	**132.9%**	**123.3%**

Note: Median and 90th Percentile include all *weekdays* January 2013 - December 2013

WEEKEND	Bow Lake Commercia	SelfHaul	Total
Median	11	420	430
90th Percentile	20.7	536	551
Peak Increase	**197.1%**	**127.7%**	**128.3%**

Note: Median and 90th Percentile include all *weekends* January 2013 - December 2013

Time of Day Summary

Time of Day Summary of Trips

Hour	Weekday Summary: Commercial Haul %	Commercial Haul Trips	Self Haul: Recycle %	Recycle Trips	Hazardous Waste %	Hazardous Waste Trips	Garbage %	Garbage Trips	Yard Waste %	Yard Waste Trips	TOTAL	Hauling Trucks %	Hauling Trucks Trips	Total Trips
6:00	0%	0	0%	0	0%	0	0%	0	0%	0	0	12%	13	13
7:00	8%	32	3%	5	3%	0	3%	42	3%	3	50	6%	7	89
8:00	9%	36	5%	8	5%	0	5%	70	5%	5	83	12%	13	132
9:00	9%	36	8%	11	8%	0	8%	97	8%	7	115	9%	10	161
10:00	11%	46	10%	14	10%	0	10%	121	10%	9	144	12%	13	203
11:00	12%	50	11%	16	11%	0	11%	139	11%	11	166	9%	10	226
12:00	12%	50	11%	17	11%	0	11%	144	11%	12	173	9%	10	233
13:00	11%	46	11%	17	11%	0	11%	144	11%	11	172	6%	6	224
14:00	9%	36	11%	17	11%	0	11%	144	11%	11	172	9%	10	218
15:00	8%	32	10%	15	10%	0	10%	130	10%	10	155	6%	7	194
16:00	5%	20	10%	14	10%	0	10%	121	10%	9	144	3%	3	167
17:00	4%	16	9%	13	9%	0	9%	116	9%	9	138	3%	3	157
18:00	0%	0	0%	0	0%	0	0%	0	0%	0	0	0%	0	0
Daily Trips	**100%**	**400**	**100%**	**147**	**100%**	**0**	**100%**	**1268**	**100%**	**97**	**1512**	**97%**	**105**	**2017**

Hour	Weekend Summary: Commercial Haul %	Commercial Haul Trips	Self Haul: Recycle %	Recycle Trips	Hazardous Waste %	Hazardous Waste Trips	Garbage %	Garbage Trips	Yard Waste %	Yard Waste Trips	TOTAL	Hauling Trucks %	Hauling Trucks Trips	Total Trips
6:00	0%	0	0%	0	0%	0	0%	0	0%	0	0	17%	16	16
7:00	0%	0	0%	0	0%	0	0%	0	0%	0	0	7%	7	7
8:00	14%	17	4%	9	4%	0	4%	80	4%	6	95	10%	10	122
9:00	14%	17	8%	16	8%	0	8%	137	8%	11	164	10%	10	191
10:00	9%	11	10%	21	10%	0	10%	182	10%	14	217	10%	10	238
11:00	14%	17	12%	25	12%	0	12%	217	12%	17	259	7%	7	283
12:00	9%	11	13%	26	13%	0	13%	226	13%	17	269	10%	10	290
13:00	9%	10	13%	27	13%	0	13%	230	13%	17	274	7%	6	290
14:00	9%	10	13%	27	13%	0	13%	230	13%	18	275	10%	9	294
15:00	9%	11	12%	26	12%	0	12%	221	12%	17	264	7%	7	282
16:00	9%	11	11%	23	11%	0	11%	199	11%	15	237	0%	0	248
17:00	5%	6	4%	9	4%	0	4%	75	4%	6	90	0%	0	96
18:00	0%	0	0%	0	0%	0	0%	0	0%	0	0	0%	0	0
Daily Trips	**100%**	**121**	**100%**	**209**	**100%**	**0**	**100%**	**1797**	**100%**	**138**	**2144**	**97%**	**92**	**2357**

Note: Time of day percentages for commercial and self-haul based on observed trends at the Bow Lake facility.

Total trips based on tonnage and does not include reduction to account for shared trips (i.e. a recycle and garbage trip by a single customer). Modeling assumed an approximate 2 percent reduction in self haul trips.

2023 - King County Transfer Station Trip Generation - Bow Lake without Renton Concept 2

Annual

2023 Annual Trip Generation Summary

Material	Tonnage		Average Tonnage/Vehicle		Total Annual Trips[6]				Total Annual Weekday Trips[7]							Total Annual Weekend Trips						
									Commercial Haul		Self Haul		Hauling Trucks			Commercial Haul		Self Haul		Hauling Trucks		
	Commercial Haul	Self Haul	Commercial Haul	Self Haul	Commercial Haul	Self Haul	Hauling Trucks	Total	%	Trips	%	Trips	%	Trips	Total Trips	%	Trips	%	Trips	%	Trips	Total Trips
Recycling[1]	10,892	6,945	5.28	0.30	4,124	46,300		**50,424**	94%		63%	29,169			**29,169**	6%		37%	17,131			**17,131**
Hazardous Waste[2]																						
Garbage[3]	**252,689**	**69,960**	5.28	0.33	95,676	429,216		**524,892**	94%	89,935	63%	270,406			**360,341**	6%	5,741	37%	158,810			**164,551**
Yard Waste[4]		4,045	5.28	0.25	0	32,360		**32,360**	94%	0	63%	20,387			**20,387**	6%	0	37%	11,973			**11,973**
Hauling Away[5]							30,900	**30,900**					75%	23,175	**23,175**					25%	7,725	**7,725**
Total								**638,576**							**433,072**							**201,380**

1. Tonnage provided by King County assuming Houghton closes before 2023 and Bellevue leaves in 2029. Commercial average tonnage/vehicle estimated using garbage as guide (consistent with South County Recycling and Transfer Station site) and self haul is consistent with ton.veh used at South County Recycling and Transfer Station site.

2. No Hazardous Waste at the Bow Lake Site.

3. Garbage tonnage provided by King County for concept. Average Tonnage/Vehicle provided by KC for commericial vs self haul, self haul assumed to be without an account.

4. Yard Waste/Wood Waste and compostable paper provided by KC. Average tonnage/vehicle estimated using garbage as guide (consistent with South County Recycling and Transfer Station site)

5. Hauling away total annual trucks provided by King County. Average Tonnage/Vehicle consistent with South County Recycling and Transfer Station site.

6. Total Annual Trips represents both inbound and outbound trips.

7.Annual weekday vs weekend trips based on 9/1/13-9/1/14 transaction data for Bow Lake site provided by King county including self haul vs commercial.

Daily

Daily Trip Generation Summary - PEAK

	Material	Annual Trips[1]	Weekday %	Weekday Trips	Weekend %	Weekend Trips	Transfer Station Open[2] Weekdays/Year	Weekend Days/Year	Weekday Trips %	Weekday Trips Trips	Weekend Trips %	Weekend Trips Trips[3]
Commercial Haul	Recycle	4,124	94%	3,877	6%	247	259	103	94%	16	6%	5
	Hazardous Waste	0	0%	0	100%	0	259	103	0%	0	100%	0
	Garbage	95,676	94%	89,935	6%	5,741	259	103	94%	378	6%	115
	Yard Waste	0	94%	0	6%	0	259	103	94%	0	6%	0
	Total	99,800		93,812		5,988				394		120
Self Haul	Recycle	46,300	63%	29,169	37%	17,131	259	103	63%	150	37%	212
	Hazardous Waste	0	0%	0	100%	0	259	103	0%	0	100%	0
	Garbage	429,216	63%	270,406	37%	158,810	259	103	63%	1,388	37%	1,969
	Yard Waste	32,360	63%	20,387	37%	11,973	259	103	63%	105	37%	148
	Total	507,876		319,962		187,914				1,643		2,329
Hauling Trucks	Hauling Away	30,900	75%	23,175	25%	7,725	259	103	75%	110	25%	96
Total		*638,576*		*436,949*		*201,627*				**2,147**		**2,545**
									Existing Trips	**750**		**900**
									Increase	**1,397**		**1,645**

1. Annual Trips based on peak month

2. Assumes one holiday on a weekday and two on a weekend.

3. Weekend average increased by 5% to account for more vehicles on Saturday than Sunday.

Commercial Haul				
	waste	92.0%	0	
Self Haul	recycle	8.0%	0	
Hauling Trucks				

WEEKDAY	Bow Lake Commercia	SelfHaul	Total
Median	159	329	489
90th Percentile	173	437	603
Peak Increase	**108.8%**	**132.9%**	**123.3%**

Note: Median and 90th Percentile include all *weekdays* January 2013 - December 2013

WEEKEND	Bow Lake Commercia	SelfHaul	Total
Median	11	420	430
90th Percentile	20.7	536	551
Peak Increase	**197.1%**	**127.7%**	**128.3%**

Note: Median and 90th Percentile include all *weekends* January 2013 - December 2013

Time of Day Summary

Time of Day Summary of Trips

Weekday Summary

Hour	Commercial Haul %	Commercial Haul Trips	Self Haul: Recycle %	Recycle Trips	Hazardous Waste %	Hazardous Waste Trips	Garbage %	Garbage Trips	Yard Waste %	Yard Waste Trips	TOTAL	Hauling Trucks %	Hauling Trucks Trips	Total Trips
6:00	0%	0	0%	0	0%	0	0%	0	0%	0	0	12%	13	13
7:00	8%	32	3%	5	3%	0	3%	46	3%	3	54	6%	7	93
8:00	9%	36	5%	8	5%	0	5%	76	5%	6	90	12%	13	139
9:00	9%	36	8%	12	8%	0	8%	107	8%	8	127	9%	10	173
10:00	11%	45	10%	14	10%	0	10%	132	10%	10	156	12%	13	214
11:00	12%	49	11%	16	11%	0	11%	153	11%	12	181	9%	10	240
12:00	12%	49	11%	17	11%	0	11%	158	11%	13	188	9%	10	247
13:00	11%	45	11%	17	11%	0	11%	158	11%	12	187	6%	6	238
14:00	9%	36	11%	17	11%	0	11%	158	11%	12	187	9%	10	233
15:00	8%	32	10%	15	10%	0	10%	142	10%	11	168	6%	7	207
16:00	5%	20	10%	14	10%	0	10%	132	10%	10	156	3%	3	179
17:00	4%	16	9%	14	9%	0	9%	127	9%	10	151	3%	3	170
18:00	0%	0	0%	0	0%	0	0%	0	0%	0	0	0%	0	0
Daily Trips	**100%**	**396**	**100%**	**149**	**100%**	**0**	**100%**	**1389**	**100%**	**107**	**1645**	**97%**	**105**	**2146**

Weekend Summary

Hour	Commercial Haul %	Commercial Haul Trips	Self Haul: Recycle %	Recycle Trips	Hazardous Waste %	Hazardous Waste Trips	Garbage %	Garbage Trips	Yard Waste %	Yard Waste Trips	TOTAL	Hauling Trucks %	Hauling Trucks Trips	Total Trips
6:00	0%	0	0%	0	0%	0	0%	0	0%	0	0	17%	17	17
7:00	0%	0	0%	0	0%	0	0%	0	0%	0	0	7%	7	7
8:00	14%	16	4%	9	4%	0	4%	87	4%	7	103	10%	10	129
9:00	14%	16	8%	16	8%	0	8%	150	8%	11	177	10%	10	203
10:00	9%	11	10%	21	10%	0	10%	199	10%	15	235	10%	10	256
11:00	14%	16	12%	26	12%	0	12%	238	12%	18	282	7%	7	305
12:00	9%	11	13%	27	13%	0	13%	247	13%	19	293	10%	10	314
13:00	9%	10	13%	27	13%	0	13%	252	13%	18	297	7%	6	313
14:00	9%	10	13%	27	13%	0	13%	252	13%	19	298	10%	9	317
15:00	9%	11	12%	26	12%	0	12%	242	12%	18	286	7%	7	304
16:00	9%	11	11%	23	11%	0	11%	218	11%	16	257	0%	0	268
17:00	5%	5	4%	9	4%	0	4%	82	4%	6	97	0%	0	102
18:00	0%	0	0%	0	0%	0	0%	0	0%	0	0	0%	0	0
Daily Trips	**100%**	**117**	**100%**	**211**	**100%**	**0**	**100%**	**1967**	**100%**	**147**	**2325**	**97%**	**93**	**2535**

Note: Time of day percentages for commercial and self-haul based on observed trends at the Bow Lake facility.

Total trips based on tonnage and does not include reduction to account for shared trips (i.e. a recycle and garbage trip by a single customer). Modeling assumed an approximate 2 percent reduction in self haul trips.

2023 - King County Transfer Station Trip Generation - Bow Lake without Renton Concept 3

Annual

2023 Annual Trip Generation Summary

Material	Tonnage		Average Tonnage/Vehicle		Total Annual Trips[6]				Total Annual Weekday Trips[7]							Total Annual Weekend Trips						
									Commercial Haul		Self Haul		Hauling Trucks			Commercial Haul		Self Haul		Hauling Trucks		
	Commercial Haul	Self Haul	Commercial Haul	Self Haul	Commercial Haul	Self Haul	Hauling Trucks	Total	%	Trips	%	Trips	%	Trips	Total Trips	%	Trips	%	Trips	%	Trips	Total Trips
Recycling[1]	10,892	6,835	5.28	0.30	4,124	45,566		**49,690**	94%		63%	28,707			**28,707**	6%		37%	16,859			**16,859**
Hazardous Waste[2]																						
Garbage[3]	**252,302**	**65,430**	5.28	0.33	95,528	395,460		**490,988**	94%	89,796	63%	249,140			**338,936**	6%	5,732	37%	146,320			**152,052**
Yard Waste[4]		3,748	5.28	0.25	0	29,984		**29,984**	94%	0	63%	18,890			**18,890**	6%	0	37%	11,094			**11,094**
Hauling Away[5]							30,400	**30,400**					75%	22,800	**22,800**					25%	7,600	**7,600**
Total								**601,062**							**409,333**							**187,605**

1. Tonnage provided by King County assuming Houghton closes before 2023 and Bellevue leaves in 2029. Commercial average tonnage/vehicle estimated using garbage as guide (consistent with South County Recycling and Transfer Station site) and self haul is consistent with ton.veh used at South County Recycling and Transfer Station site.

2. No Hazardous Waste at the Bow Lake Site.

3. Garbage tonnage provided by King County for concept. Average Tonnage/Vehicle provided by KC for commericial vs self haul, self haul assumed to be without an account.

4. Yard Waste/Wood Waste and compostable paper provided by KC. Average tonnage/vehicle estimated using garbage as guide (consistent with South County Recycling and Transfer Station site)

5. Hauling away total annual trucks provided by King County. Average Tonnage/Vehicle consistent with South County Recycling and Transfer Station site.

6. Total Annual Trips represents both inbound and outbound trips.

7.Annual weekday vs weekend trips based on 9/1/13-9/1/14 transaction data for Bow Lake site provided by King county including self haul vs commercial.

Daily

Daily Trip Generation Summary - PEAK

	Material	Annual Trips[1]	Weekday %	Weekday Trips	Weekend %	Weekend Trips	Transfer Station Open[2] Weekdays/Year	Weekend Days/Year	Weekday Trips %	Weekday Trips Trips	Weekend Trips %	Weekend Trips Trips[3]
Commercial Haul	Recycle	4,124	94%	3,877	6%	247	259	103	94%	16	6%	5
	Hazardous Waste	0	0%	0	100%	0	259	103	0%	0	100%	0
	Garbage	95,528	94%	89,796	6%	5,732	259	103	94%	377	6%	115
	Yard Waste	0	94%	0	6%	0	259	103	94%	0	6%	0
	Total	99,652		93,673		5,979				393		120
Self Haul	Recycle	45,566	63%	28,707	37%	16,859	259	103	63%	147	37%	209
	Hazardous Waste	0	0%	0	100%	0	259	103	0%	0	100%	0
	Garbage	395,460	63%	249,140	37%	146,320	259	103	63%	1,279	37%	1,814
	Yard Waste	29,984	63%	18,890	37%	11,094	259	103	63%	97	37%	138
	Total	471,010		296,737		174,273				1,523		2,161
Hauling Trucks	Hauling Away	30,400	75%	22,800	25%	7,600	259	103	75%	109	25%	95
Total		*601,062*		*413,210*		*187,852*				**2,025**		**2,376**

1. Annual Trips based on peak month

2. Assumes one holiday on a weekday and two on a weekend.

3. Weekend average increased by 5% to account for more vehicles on Saturday than Sunday.

Existing Trips	**750**	**900**
Increase	**1,275**	**1,476**

Commercial Haul			
	waste	91.7%	0
Self Haul	recycle	8.3%	0
Hauling Trucks			

WEEKDAY	Bow Lake Commercia	SelfHaul	Total
Median	159	329	489
90th Percentile	173	437	603
Peak Increase	**108.8%**	**132.9%**	**123.3%**

Note: Median and 90th Percentile include all *weekdays* January 2013 - December 2013

WEEKEND	Bow Lake Commercia	SelfHaul	Total
Median	11	420	430
90th Percentile	20.7	536	551
Peak Increase	**197.1%**	**127.7%**	**128.3%**

Note: Median and 90th Percentile include all *weekends* January 2013 - December 2013

Time of Day Summary

Time of Day Summary of Trips

Weekday Summary

Hour	Commercial Haul %	Commercial Haul Trips	Self Haul: Recycle %	Recycle Trips	Hazardous Waste %	Hazardous Waste Trips	Garbage %	Garbage Trips	Yard Waste %	Yard Waste Trips	TOTAL	Hauling Trucks %	Hauling Trucks Trips	Total Trips
6:00	0%	0	0%	0	0%	0	0%	0	0%	0	0	12%	13	13
7:00	8%	32	3%	5	3%	0	3%	42	3%	3	50	6%	7	89
8:00	9%	36	5%	8	5%	0	5%	70	5%	5	83	12%	13	132
9:00	9%	36	8%	11	8%	0	8%	98	8%	7	116	9%	10	162
10:00	11%	45	10%	14	10%	0	10%	122	10%	9	145	12%	13	203
11:00	12%	49	11%	16	11%	0	11%	141	11%	11	168	9%	10	227
12:00	12%	49	11%	17	11%	0	11%	145	11%	12	174	9%	10	233
13:00	11%	45	11%	17	11%	0	11%	145	11%	11	173	6%	6	224
14:00	9%	36	11%	17	11%	0	11%	145	11%	11	173	9%	10	219
15:00	8%	32	10%	15	10%	0	10%	131	10%	10	156	6%	7	195
16:00	5%	20	10%	14	10%	0	10%	122	10%	9	145	3%	3	168
17:00	4%	16	9%	13	9%	0	9%	117	9%	9	139	3%	3	158
18:00	0%	0	0%	0	0%	0	0%	0	0%	0	0	0%	0	0
Daily Trips	**100%**	**396**	**100%**	**147**	**100%**	**0**	**100%**	**1278**	**100%**	**97**	**1522**	**97%**	**105**	**2023**

Weekend Summary

Hour	Commercial Haul %	Commercial Haul Trips	Self Haul: Recycle %	Recycle Trips	Hazardous Waste %	Hazardous Waste Trips	Garbage %	Garbage Trips	Yard Waste %	Yard Waste Trips	TOTAL	Hauling Trucks %	Hauling Trucks Trips	Total Trips
6:00	0%	0	0%	0	0%	0	0%	0	0%	0	0	17%	16	16
7:00	0%	0	0%	0	0%	0	0%	0	0%	0	0	7%	7	7
8:00	14%	16	4%	9	4%	0	4%	80	4%	6	95	10%	10	121
9:00	14%	16	8%	16	8%	0	8%	139	8%	11	166	10%	10	192
10:00	9%	11	10%	21	10%	0	10%	183	10%	14	218	10%	10	239
11:00	14%	16	12%	25	12%	0	12%	219	12%	17	261	7%	7	284
12:00	9%	11	13%	26	13%	0	13%	228	13%	17	271	10%	10	292
13:00	9%	10	13%	27	13%	0	13%	232	13%	17	276	7%	6	292
14:00	9%	10	13%	27	13%	0	13%	232	13%	18	277	10%	9	296
15:00	9%	11	12%	26	12%	0	12%	223	12%	17	266	7%	7	284
16:00	9%	11	11%	23	11%	0	11%	201	11%	15	239	0%	0	250
17:00	5%	5	4%	9	4%	0	4%	76	4%	6	91	0%	0	96
18:00	0%	0	0%	0	0%	0	0%	0	0%	0	0	0%	0	0
Daily Trips	**100%**	**117**	**100%**	**209**	**100%**	**0**	**100%**	**1813**	**100%**	**138**	**2160**	**97%**	**92**	**2369**

Note: Time of day percentages for commercial and self-haul based on observed trends at the Bow Lake facility.

Total trips based on tonnage and does not include reduction to account for shared trips (i.e. a recycle and garbage trip by a single customer). Modeling assumed an approximate 2 percent reduction in self haul trips.

2023 - King County Transfer Station Trip Generation - Renton Concept 0

Annual

2023 Annual Trip Generation Summary

Material	Tonnage: Commercial Haul	Tonnage: Self Haul	Average Tonnage/Vehicle: Commercial Haul	Average Tonnage/Vehicle: Self Haul	Total Annual Trips[6]: Commercial Haul	Total Annual Trips[6]: Self Haul	Total Annual Trips[6]: Hauling Trucks	Total Annual Trips[6]: Total
Recycling[1]		599	5.49	0.30	0	3,994		**3,994**
Hazardous Waste[2]								
Garbage[3]	**50,861**	**18,739**	5.49	0.25	18,528	149,912		**168,440**
Yard Waste[4]			5.49	0.25	0	0		**0**
Hauling Away[5]							5,902	**5,902**
Total								**178,336**

Material	Total Annual Weekday Trips[7]: Commercial Haul %	Trips	Self Haul %	Trips	Hauling Trucks %	Trips	Total Trips	Total Annual Weekend Trips: Commercial Haul %	Trips	Self Haul %	Trips	Hauling Trucks %	Trips	Total Trips
Recycling[1]	92%		58%	2,317			**2,317**	8%		42%	1,677			**1,677**
Hazardous Waste[2]														
Garbage[3]	92%	17,046	58%	86,949			**103,995**	8%	1,482	42%	62,963			**64,445**
Yard Waste[4]	92%	0	58%	0			**0**	8%	0	42%	0			**0**
Hauling Away[5]					77%	4,545	**4,545**					23%	1,357	**1,357**
Total							**110,857**							**67,479**

1. Tonnage provided by King County assuming Houghton closes before 2023 and Bellevue leaves in 2029. Commercial average tonnage/vehicle estimated using garbage as guide (consistent with South County Recycling and Transfer Station site) and self haul is consistent with ton.veh used at South County Recycling and Transfer Station site.

2. No Hazardous Waste at the Renton Site.

3. Garbage tonnage provided by King County. Average Tonnage/Vehicle provided by KC for commericial vs self haul, self haul assumed to be without an account.

4. Yard Waste/Wood Waste and compostable paper provided by KC. Average tonnage/vehicle estimated using garbage as guide (consistent with South County Recycling and Transfer Station site)

5. Hauling away total annual trucks provided by King County. Average Tonnage/Vehicle consistent with South County Recycling and Transfer Station site.

6. Total Annual Trips represents both inbound and outbound trips.

7.Annual weekday vs weekend trips based on 9/1/13-9/1/14 transaction data for Renton site provided by King county including self haul vs commercial.

Daily

Daily Trip Generation Summary - PEAK

	Material	Annual Trips[1]	Weekday %	Weekday Trips	Weekend %	Weekend Trips	Transfer Station Open[2]: Weekdays/Year	Weekend Days/Year	Weekday Trips %	Trips	Weekend Trips %	Trips[3]
Commercial Haul	Recycle	0	92%	0	8%	0	259	103	92%	0	8%	0
	Hazardous Waste	0	0%	0	100%	0	259	103	0%	0	100%	0
	Garbage	18,528	92%	17,046	8%	1,482	259	103	92%	77	8%	60
	Yard Waste	0	92%	0	8%	0	259	103	92%	0	8%	0
	Total	18,528		17,046		1,482				77		60
Self Haul	Recycle	3,994	58%	2,317	42%	1,677	259	103	58%	12	42%	21
	Hazardous Waste	0	0%	0	100%	0	259	103	0%	0	100%	0
	Garbage	149,912	58%	86,949	42%	62,963	259	103	58%	444	42%	800
	Yard Waste	0	58%	0	42%	0	259	103	58%	0	42%	0
	Total	153,906		89,266		64,640				456		821
Hauling Trucks	Hauling Away	5,902	77%	4,545	23%	1,357	259	103	77%	22	23%	17
Total		*178,336*		*110,857*		*67,479*				**555**		**898**

Commercial Haul			
Self Haul	waste	97.8%	0.489103
	recycle	2.2%	0.021794
Hauling Trucks			

1. Annual Trips based on peak month

2. Assumes one holiday on a weekday and two on a weekend.

3. Weekend average increased by 5% to account for more vehicles on Saturday than Sunday.

WEEKDAY	Renton Commercia	SelfHaul	Total
Median	35	134	169
90th Percentile	41	177	213
Peak Increase	**117.1%**	**132.3%**	**126.2%**

Note: Median and 90th Percentile include all *weekdays* January 2013 - December 2013

WEEKEND	Renton Commercia	SelfHaul	Total
Median	1	254	257
90th Percentile	4	332	333
Peak Increase	**400.0%**	**130.9%**	**129.9%**

Note: Median and 90th Percentile include all *weekends* January 2013 - December 2013

Time of Day Summary

Time of Day Summary of Trips

Weekday Summary

Hour	Commercial Haul %	Trips	Self Haul: Recycle %	Trips	Hazardous Waste %	Trips	Garbage %	Trips	Yard Waste %	Trips	TOTAL	Hauling Trucks %	Trips	Total Trips
6:00	0%	0	0%	0	0%	0	0%	0	0%	0	0	13%	3	3
7:00	5%	4	3%	0	3%	0	3%	13	3%	0	13	6%	1	18
8:00	8%	6	6%	1	6%	0	6%	25	6%	0	26	6%	1	33
9:00	13%	10	9%	1	9%	0	9%	38	9%	0	39	6%	1	50
10:00	13%	10	11%	1	11%	0	11%	48	11%	0	49	6%	2	61
11:00	13%	10	12%	1	12%	0	12%	54	12%	0	55	6%	2	67
12:00	13%	10	12%	2	12%	0	12%	54	12%	0	56	6%	2	68
13:00	16%	13	12%	2	12%	0	12%	54	12%	0	56	6%	2	71
14:00	11%	8	12%	2	12%	0	12%	53	12%	0	55	13%	3	66
15:00	5%	4	11%	1	11%	0	11%	51	11%	0	52	6%	1	57
16:00	3%	2	11%	1	11%	0	11%	51	11%	0	52	6%	1	55
17:00	0%	0	1%	0	1%	0	1%	3	1%	0	3	6%	1	4
18:00	0%	0	0%	0	0%	0	0%	0	0%	0	0	6%	1	1
Daily Trips	**100%**	**77**	**100%**	**12**	**100%**	**0**	**100%**	**444**	**100%**	**0**	**456**	**94%**	**21**	**554**

Weekend Summary

Hour	Commercial Haul %	Trips	Self Haul: Recycle %	Trips	Hazardous Waste %	Trips	Garbage %	Trips	Yard Waste %	Trips	TOTAL	Hauling Trucks %	Trips	Total Trips
6:00	0%	0	0%	0	0%	0	0%	0	0%	0	0	8%	1	1
7:00	0%	0	0%	0	0%	0	0%	0	0%	0	0	8%	1	1
8:00	18%	11	5%	1	5%	0	5%	37	5%	0	38	8%	1	50
9:00	9%	5	8%	2	8%	0	8%	65	8%	0	67	8%	2	74
10:00	9%	6	11%	2	11%	0	11%	87	11%	0	89	8%	2	97
11:00	9%	6	13%	3	13%	0	13%	102	13%	0	105	8%	2	113
12:00	9%	6	14%	3	14%	0	14%	109	14%	0	112	8%	2	120
13:00	9%	6	14%	3	14%	0	14%	109	14%	0	112	8%	1	119
14:00	9%	5	13%	3	13%	0	13%	105	13%	0	108	8%	1	114
15:00	9%	5	12%	2	12%	0	12%	93	12%	0	95	8%	1	101
16:00	9%	5	9%	2	9%	0	9%	74	9%	0	76	8%	1	82
17:00	9%	5	2%	0	2%	0	2%	19	2%	0	19	8%	1	25
18:00	0%	0	0%	0	0%	0	0%	0	0%	0	0	0%	0	0
Daily Trips	**100%**	**60**	**100%**	**21**	**100%**	**0**	**100%**	**800**	**100%**	**0**	**821**	**92%**	**16**	**897**

Note: Time of day percentages for commercial and self-haul based on observed trends at the Renton facility.

2023 - King County Transfer Station Trip Generation - Renton Concept 1

Annual

2023 Annual Trip Generation Summary

Material	Tonnage: Commercial Haul	Tonnage: Self Haul	Average Tonnage/Vehicle: Commercial Haul	Average Tonnage/Vehicle: Self Haul	Total Annual Trips[6]: Commercial Haul	Total Annual Trips[6]: Self Haul	Total Annual Trips[6]: Hauling Trucks	Total Annual Trips[6]: Total
Recycling[1]		599	5.42	0.30	0	3,994		**3,994**
Hazardous Waste[2]								
Garbage[3]	**75,810**	**18,739**	5.42	0.25	28,000	149,912		**177,912**
Yard Waste[4]			5.42	0.25	0	0		**0**
Hauling Away[5]							7,860	**7,860**
Total								**189,766**

Material	Total Annual Weekday Trips[7]: Commercial Haul %	Commercial Haul Trips	Self Haul %	Self Haul Trips	Hauling Trucks %	Hauling Trucks Trips	Total Trips	Total Annual Weekend Trips: Commercial Haul %	Commercial Haul Trips	Self Haul %	Self Haul Trips	Hauling Trucks %	Hauling Trucks Trips	Total Trips
Recycling[1]	92%		58%	2,317			**2,317**	8%		42%	1,677			**1,677**
Hazardous Waste[2]														
Garbage[3]	92%	25,760	58%	86,949			**112,709**	8%	2,240	42%	62,963			**65,203**
Yard Waste[4]	92%	0	58%	0			**0**	8%	0	42%	0			**0**
Hauling Away[5]					77%	6,052	**6,052**					23%	1,808	**1,808**
Total							**121,078**							**68,688**

1. Tonnage provided by King County assuming Houghton closes before 2023 and Bellevue leaves in 2029. Commercial average tonnage/vehicle estimated using garbage as guide (consistent with South County Recycling and Transfer Station site) and self haul is consistent with ton.veh used at South County Recycling and Transfer Station site.

2. No Hazardous Waste at the Renton Site.

3. Garbage tonnage provided by King County for concept. Average Tonnage/Vehicle provided by KC for commericial vs self haul, self haul assumed to be without an account.

4. Yard Waste/Wood Waste and compostable paper provided by KC. Average tonnage/vehicle estimated using garbage as guide (consistent with South County Recycling and Transfer Station site)

5. Hauling away total annual trucks provided by King County. Average Tonnage/Vehicle consistent with South County Recycling and Transfer Station site.

6. Total Annual Trips represents both inbound and outbound trips.

7.Annual weekday vs weekend trips based on 9/1/13-9/1/14 transaction data for Renton site provided by King county including self haul vs commercial.

Daily

Daily Trip Generation Summary - PEAK

	Material	Annual Trips[1]	Weekday %	Weekday Trips	Weekend %	Weekend Trips	Transfer Station Open[2]: Weekdays/Year	Weekend Days/Year	Weekday Trips %	Weekday Trips Trips	Weekend Trips %	Weekend Trips Trips[3]
Commercial Haul	Recycle	0	92%	0	8%	0	259	103	92%	0	8%	0
	Hazardous Waste	0	0%	0	100%	0	259	103	0%	0	100%	0
	Garbage	28,000	92%	25,760	8%	2,240	259	103	92%	117	8%	91
	Yard Waste	0	92%	0	8%	0	259	103	92%	0	8%	0
	Total	28,000		25,760		2,240				117		91
Self Haul	Recycle	3,994	58%	2,317	42%	1,677	259	103	58%	12	42%	21
	Hazardous Waste	0	0%	0	100%	0	259	103	0%	0	100%	0
	Garbage	149,912	58%	86,949	42%	62,963	259	103	58%	444	42%	800
	Yard Waste	0	58%	0	42%	0	259	103	58%	0	42%	0
	Total	153,906		89,266		64,640				456		821
Hauling Trucks	Hauling Away	7,860	77%	6,052	23%	1,808	259	103	77%	29	23%	23
Total		*189,766*		*121,078*		*68,688*				**602**		**935**

1. Annual Trips based on peak month

2. Assumes one holiday on a weekday and two on a weekend.

3. Weekend average increased by 5% to account for more vehicles on Saturday than Sunday.

Commer					
	waste	98.0%	0		
Self Haul	recycle	2.0%	0		
Hauling Trucks					

WEEKDAY	Renton Commercia	SelfHaul	Total
Median	35	134	169
90th Percentile	41	177	213
Peak Increase	**117.1%**	**132.3%**	**126.2%**

Note: Median and 90th Percentile include all *weekdays* January 2013 - December 2013

WEEKEND	Renton Commercia	SelfHaul	Total
Median	1	254	257
90th Percentile	4	332	333
Peak Increase	**400.0%**	**130.9%**	**129.9%**

Note: Median and 90th Percentile include all *weekends* January 2013 - December 2013

Time of Day Summary

Time of Day Summary of Trips

Hour	Weekday Summary: Commercial Haul %	Commercial Haul Trips	Self Haul: Recycle %	Recycle Trips	Hazardous Waste %	Hazardous Waste Trips	Garbage %	Garbage Trips	Yard Waste %	Yard Waste Trips	TOTAL	Hauling Trucks %	Hauling Trucks Trips	Total Trips
6:00	0%	0	0%	0	0%	0	0%	0	0%	0	0	13%	4	4
7:00	5%	6	3%	0	3%	0	3%	13	3%	0	13	6%	2	21
8:00	8%	9	6%	1	6%	0	6%	25	6%	0	26	6%	2	37
9:00	13%	15	9%	1	9%	0	9%	38	9%	0	39	6%	2	56
10:00	13%	15	11%	1	11%	0	11%	48	11%	0	49	6%	3	67
11:00	13%	15	12%	1	12%	0	12%	54	12%	0	55	6%	3	73
12:00	13%	15	12%	2	12%	0	12%	54	12%	0	56	6%	3	74
13:00	16%	19	12%	2	12%	0	12%	54	12%	0	56	6%	3	78
14:00	11%	12	12%	2	12%	0	12%	53	12%	0	55	13%	4	71
15:00	5%	6	11%	1	11%	0	11%	51	11%	0	52	6%	2	60
16:00	3%	3	11%	1	11%	0	11%	51	11%	0	52	6%	2	57
17:00	0%	0	1%	0	1%	0	1%	3	1%	0	3	6%	2	5
18:00	0%	0	0%	0	0%	0	0%	0	0%	0	0	6%	2	2
Daily Trips	**100%**	**115**	**100%**	**12**	**100%**	**0**	**100%**	**444**	**100%**	**0**	**456**	**94%**	**34**	**605**

Hour	Weekend Summary: Commercial Haul %	Commercial Haul Trips	Self Haul: Recycle %	Recycle Trips	Hazardous Waste %	Hazardous Waste Trips	Garbage %	Garbage Trips	Yard Waste %	Yard Waste Trips	TOTAL	Hauling Trucks %	Hauling Trucks Trips	Total Trips
6:00	0%	0	0%	0	0%	0	0%	0	0%	0	0	8%	2	2
7:00	0%	0	0%	0	0%	0	0%	0	0%	0	0	8%	2	2
8:00	18%	17	5%	1	5%	0	5%	37	5%	0	38	8%	2	57
9:00	9%	8	8%	2	8%	0	8%	65	8%	0	67	8%	3	78
10:00	9%	9	11%	2	11%	0	11%	87	11%	0	89	8%	3	101
11:00	9%	9	13%	3	13%	0	13%	102	13%	0	105	8%	3	117
12:00	9%	9	14%	3	14%	0	14%	109	14%	0	112	8%	3	124
13:00	9%	9	14%	3	14%	0	14%	109	14%	0	112	8%	2	123
14:00	9%	8	13%	3	13%	0	13%	105	13%	0	108	8%	2	118
15:00	9%	8	12%	2	12%	0	12%	93	12%	0	95	8%	2	105
16:00	9%	8	9%	2	9%	0	9%	74	9%	0	76	8%	2	86
17:00	9%	8	2%	0	2%	0	2%	19	2%	0	19	8%	2	29
18:00	0%	0	0%	0	0%	0	0%	0	0%	0	0	0%	0	0
Daily Trips	**100%**	**93**	**100%**	**21**	**100%**	**0**	**100%**	**800**	**100%**	**0**	**821**	**92%**	**28**	**942**

Note: Time of day percentages for commercial and self-haul based on observed trends at the Renton facility.

2023 - King County Transfer Station Trip Generation - Renton Concept 2

Annual

2023 Annual Trip Generation Summary

Material	Tonnage: Commercial Haul	Tonnage: Self Haul	Average Tonnage/Vehicle: Commercial Haul	Average Tonnage/Vehicle: Self Haul	Total Annual Trips[6]: Commercial Haul	Total Annual Trips[6]: Self Haul	Total Annual Trips[6]: Hauling Trucks	Total Annual Trips[6]: Total
Recycling[1]		845	5.49	0.30	0	5,634		**5,634**
Hazardous Waste[2]								
Garbage[3]	**50,861**	**26,463**	5.49	0.27	18,528	198,668		**217,196**
Yard Waste[4]			5.49	0.25	0	0		**0**
Hauling Away[5]							6,690	**6,690**
Total								**229,520**

Material	Total Annual Weekday Trips[7]: Commercial Haul %	Commercial Haul Trips	Self Haul %	Self Haul Trips	Hauling Trucks %	Hauling Trucks Trips	Total Trips	Total Annual Weekend Trips: Commercial Haul %	Commercial Haul Trips	Self Haul %	Self Haul Trips	Hauling Trucks %	Hauling Trucks Trips	Total Trips
Recycling[1]	92%		58%	3,268			**3,268**	8%		42%	2,366			**2,366**
Hazardous Waste[2]														
Garbage[3]	92%	17,046	58%	115,227			**132,273**	8%	1,482	42%	83,441			**84,923**
Yard Waste[4]	92%	0	58%	0			**0**	8%	0	42%	0			**0**
Hauling Away[5]					77%	5,151	**5,151**					23%	1,539	**1,539**
Total							**140,692**							**88,828**

1. Tonnage provided by King County assuming Houghton closes before 2023 and Bellevue leaves in 2029. Commercial average tonnage/vehicle estimated using garbage as guide (consistent with South County Recycling and Transfer Station site) and self haul is consistent with ton.veh used at South County Recycling and Transfer Station site.

2. No Hazardous Waste at the Renton Site.

3. Garbage tonnage provided by King County for concept. Average Tonnage/Vehicle provided by KC for commericial vs self haul, self haul assumed to be without an account.

4. Yard Waste/Wood Waste and compostable paper provided by KC. Average tonnage/vehicle estimated using garbage as guide (consistent with South County Recycling and Transfer Station site)

5. Hauling away total annual trucks provided by King County. Average Tonnage/Vehicle consistent with South County Recycling and Transfer Station site.

6. Total Annual Trips represents both inbound and outbound trips.

7.Annual weekday vs weekend trips based on 9/1/13-9/1/14 transaction data for Renton site provided by King county including self haul vs commercial.

Daily

Daily Trip Generation Summary - PEAK

	Material	Annual Trips[1]	Weekday %	Weekday Trips	Weekend %	Weekend Trips	Transfer Station Open[2]: Weekdays/Year	Weekend Days/Year	Weekday Trips %	Weekday Trips Trips	Weekend Trips %	Weekend Trips Trips[3]
Commercial Haul	Recycle	0	92%	0	8%	0	259	103	92%	0	8%	0
	Hazardous Waste	0	0%	0	100%	0	259	103	0%	0	100%	0
	Garbage	18,528	92%	17,046	8%	1,482	259	103	92%	77	8%	60
	Yard Waste	0	92%	0	8%	0	259	103	92%	0	8%	0
	Total	18,528		17,046		1,482				77		60
Self Haul	Recycle	5,634	58%	3,957	42%	1,677	259	103	58%	20	42%	21
	Hazardous Waste	0	0%	0	100%	0	259	103	0%	0	100%	0
	Garbage	198,668	58%	135,705	42%	62,963	259	103	58%	693	42%	800
	Yard Waste	0	58%	0	42%	0	259	103	58%	0	42%	0
	Total	204,302		139,662		64,640				713		821
Hauling Trucks	Hauling Away	6,690	77%	5,333	23%	1,357	259	103	77%	26	23%	17
Total		*229,520*		*162,041*		*67,479*				**816**		**898**

1. Annual Trips based on peak month

2. Assumes one holiday on a weekday and two on a weekend.

3. Weekend average increased by 5% to account for more vehicles on Saturday than Sunday.

Commercial Haul	Recycle	waste	97.5%	0	
Self Haul	Recycle	recycle	2.5%	0	
Hauling Trucks	Hauling Trucks				

WEEKDAY	Renton Commercia	Renton SelfHaul	Renton Total
Median	35	134	169
90th Percentile	41	177	213
Peak Increase	**117.1%**	**132.3%**	**126.2%**

Note: Median and 90th Percentile include all *weekdays* January 2013 - December 2013

WEEKEND	Renton Commercia	Renton SelfHaul	Renton Total
Median	1	254	257
90th Percentile	4	332	333
Peak Increase	**400.0%**	**130.9%**	**129.9%**

Note: Median and 90th Percentile include all *weekends* January 2013 - December 2013

Time of Day Summary

Time of Day Summary of Trips

Hour	Weekday Summary: Commercial Haul %	Commercial Haul Trips	Self Haul: Recycle %	Recycle Trips	Hazardous Waste %	Hazardous Waste Trips	Garbage %	Garbage Trips	Yard Waste %	Yard Waste Trips	TOTAL	Hauling Trucks %	Hauling Trucks Trips	Total Trips
6:00	0%	0	0%	0	0%	0	0%	0	0%	0	0	13%	3	3
7:00	5%	4	3%	1	3%	0	3%	20	3%	0	21	6%	2	27
8:00	8%	6	6%	1	6%	0	6%	40	6%	0	41	6%	2	49
9:00	13%	10	9%	2	9%	0	9%	59	9%	0	61	6%	2	73
10:00	13%	10	11%	2	11%	0	11%	74	11%	0	76	6%	3	89
11:00	13%	10	12%	2	12%	0	12%	84	12%	0	86	6%	3	99
12:00	13%	10	12%	3	12%	0	12%	84	12%	0	87	6%	3	100
13:00	16%	13	12%	3	12%	0	12%	84	12%	0	87	6%	3	103
14:00	11%	8	12%	3	12%	0	12%	83	12%	0	86	13%	3	97
15:00	5%	4	11%	2	11%	0	11%	79	11%	0	81	6%	2	87
16:00	3%	2	11%	2	11%	0	11%	79	11%	0	81	6%	2	85
17:00	0%	0	1%	0	1%	0	1%	5	1%	0	5	6%	2	7
18:00	0%	0	0%	0	0%	0	0%	0	0%	0	0	6%	2	2
Daily Trips	**100%**	**77**	**100%**	**21**	**100%**	**0**	**100%**	**691**	**100%**	**0**	**712**	**94%**	**32**	**821**

Hour	Weekend Summary: Commercial Haul %	Commercial Haul Trips	Self Haul: Recycle %	Recycle Trips	Hazardous Waste %	Hazardous Waste Trips	Garbage %	Garbage Trips	Yard Waste %	Yard Waste Trips	TOTAL	Hauling Trucks %	Hauling Trucks Trips	Total Trips
6:00	0%	0	0%	0	0%	0	0%	0	0%	0	0	8%	1	1
7:00	0%	0	0%	0	0%	0	0%	0	0%	0	0	8%	1	1
8:00	18%	11	5%	1	5%	0	5%	37	5%	0	38	8%	1	50
9:00	9%	5	8%	2	8%	0	8%	65	8%	0	67	8%	2	74
10:00	9%	6	11%	2	11%	0	11%	87	11%	0	89	8%	2	97
11:00	9%	6	13%	3	13%	0	13%	102	13%	0	105	8%	2	113
12:00	9%	6	14%	3	14%	0	14%	109	14%	0	112	8%	2	120
13:00	9%	6	14%	3	14%	0	14%	109	14%	0	112	8%	1	119
14:00	9%	5	13%	3	13%	0	13%	105	13%	0	108	8%	1	114
15:00	9%	5	12%	2	12%	0	12%	93	12%	0	95	8%	1	101
16:00	9%	5	9%	2	9%	0	9%	74	9%	0	76	8%	1	82
17:00	9%	5	2%	0	2%	0	2%	19	2%	0	19	8%	1	25
18:00	0%	0	0%	0	0%	0	0%	0	0%	0	0	0%	0	0
Daily Trips	**100%**	**60**	**100%**	**21**	**100%**	**0**	**100%**	**800**	**100%**	**0**	**821**	**92%**	**16**	**897**

Note: Time of day percentages for commercial and self-haul based on observed trends at the Renton facility.

2023 - King County Transfer Station Trip Generation - Renton Concept 3

Annual

2023 Annual Trip Generation Summary

Material	Tonnage: Commercial Haul	Tonnage: Self Haul	Average Tonnage/Vehicle: Commercial Haul	Average Tonnage/Vehicle: Self Haul	Total Annual Trips[6]: Commercial Haul	Total Annual Trips[6]: Self Haul	Total Annual Trips[6]: Hauling Trucks	Total Annual Trips[6]: Total
Recycling[1]		599	5.49	0.30	0	3,994		**3,994**
Hazardous Waste[2]								
Garbage[3]	**50,861**	**18,739**	5.49	0.25	18,528	149,912		**168,440**
Yard Waste[4]			5.49	0.25	0	0		**0**
Hauling Away[5]							5,902	**5,902**
Total								**178,336**

Material	Total Annual Weekday Trips[7]: Commercial Haul %	Commercial Haul Trips	Self Haul %	Self Haul Trips	Hauling Trucks %	Hauling Trucks Trips	Total Trips	Total Annual Weekend Trips: Commercial Haul %	Commercial Haul Trips	Self Haul %	Self Haul Trips	Hauling Trucks %	Hauling Trucks Trips	Total Trips
Recycling[1]	92%		58%	2,317			**2,317**	8%		42%	1,677			**1,677**
Hazardous Waste[2]														
Garbage[3]	92%	17,046	58%	86,949			**103,995**	8%	1,482	42%	62,963			**64,445**
Yard Waste[4]	92%	0	58%	0			**0**	8%	0	42%	0			**0**
Hauling Away[5]					77%	4,545	**4,545**					23%	1,357	**1,357**
Total							**110,857**							**67,479**

1. Tonnage provided by King County assuming Houghton closes before 2023 and Bellevue leaves in 2029. Commercial average tonnage/vehicle estimated using garbage as guide (consistent with South County Recycling and Transfer Station site) and self haul is consistent with ton.veh used at South County Recycling and Transfer Station site.

2. No Hazardous Waste at the Renton Site.

3. Garbage tonnage provided by King County for concept. Average Tonnage/Vehicle provided by KC for commericial vs self haul, self haul assumed to be without an account.

4. Yard Waste/Wood Waste and compostable paper provided by KC. Average tonnage/vehicle estimated using garbage as guide (consistent with South County Recycling and Transfer Station site)

5. Hauling away total annual trucks provided by King County. Average Tonnage/Vehicle consistent with South County Recycling and Transfer Station site.

6. Total Annual Trips represents both inbound and outbound trips.

7.Annual weekday vs weekend trips based on 9/1/13-9/1/14 transaction data for Renton site provided by King county including self haul vs commercial.

Daily

Daily Trip Generation Summary - PEAK

	Material	Annual Trips[1]	Weekday %	Weekday Trips	Weekend %	Weekend Trips	Transfer Station Open[2]: Weekdays/Year	Weekend Days/Year	Weekday Trips %	Weekday Trips Trips	Weekend Trips %	Weekend Trips Trips[3]
Commercial Haul	Recycle	0	92%	0	8%	0	259	103	92%	0	8%	0
	Hazardous Waste	0	0%	0	100%	0	259	103	0%	0	100%	0
	Garbage	18,528	92%	17,046	8%	1,482	259	103	92%	77	8%	60
	Yard Waste	0	92%	0	8%	0	259	103	92%	0	8%	0
	Total	18,528		17,046		1,482				77		60
Self Haul	Recycle	3,994	58%	2,317	42%	1,677	259	103	58%	12	42%	21
	Hazardous Waste	0	0%	0	100%	0	259	103	0%	0	100%	0
	Garbage	149,912	58%	86,949	42%	62,963	259	103	58%	444	42%	800
	Yard Waste	0	58%	0	42%	0	259	103	58%	0	42%	0
	Total	153,906		89,266		64,640				456		821
Hauling Trucks	Hauling Away	5,902	77%	4,545	23%	1,357	259	103	77%	22	23%	17
Total		*178,336*		*110,857*		*67,479*				**555**		**898**

1. Annual Trips based on peak month

2. Assumes one holiday on a weekday and two on a weekend.

3. Weekend average increased by 5% to account for more vehicles on Saturday than Sunday.

Commer	waste	97.8%	0		
Self Haul	recycle	2.2%	0		
Hauling Trucks					

WEEKDAY	Renton Commercia	SelfHaul	Total
Median	35	134	169
90th Percentile	41	177	213
Peak Increase	**117.1%**	**132.3%**	**126.2%**

Note: Median and 90th Percentile include all *weekdays* January 2013 - December 2013

WEEKEND	Renton Commercia	SelfHaul	Total
Median	1	254	257
90th Percentile	4	332	333
Peak Increase	**400.0%**	**130.9%**	**129.9%**

Note: Median and 90th Percentile include all *weekends* January 2013 - December 2013

Time of Day Summary

Time of Day Summary of Trips

Weekday Summary

Hour	Commercial Haul %	Commercial Haul Trips	Recycle %	Recycle Trips	Hazardous Waste %	Hazardous Waste Trips	Garbage %	Garbage Trips	Yard Waste %	Yard Waste Trips	Self Haul TOTAL	Hauling Trucks %	Hauling Trucks Trips	Total Trips
6:00	0%	0	0%	0	0%	0	0%	0	0%	0	0	13%	3	3
7:00	5%	4	3%	0	3%	0	3%	13	3%	0	13	6%	1	18
8:00	8%	6	6%	1	6%	0	6%	25	6%	0	26	6%	1	33
9:00	13%	10	9%	1	9%	0	9%	38	9%	0	39	6%	1	50
10:00	13%	10	11%	1	11%	0	11%	48	11%	0	49	6%	2	61
11:00	13%	10	12%	1	12%	0	12%	54	12%	0	55	6%	2	67
12:00	13%	10	12%	2	12%	0	12%	54	12%	0	56	6%	2	68
13:00	16%	13	12%	2	12%	0	12%	54	12%	0	56	6%	2	71
14:00	11%	8	12%	2	12%	0	12%	53	12%	0	55	13%	3	66
15:00	5%	4	11%	1	11%	0	11%	51	11%	0	52	6%	1	57
16:00	3%	2	11%	1	11%	0	11%	51	11%	0	52	6%	1	55
17:00	0%	0	1%	0	1%	0	1%	3	1%	0	3	6%	1	4
18:00	0%	0	0%	0	0%	0	0%	0	0%	0	0	6%	1	1
Daily Trips	**100%**	**77**	**100%**	**12**	**100%**	**0**	**100%**	**444**	**100%**	**0**	**456**	**94%**	**21**	**554**

Weekend Summary

Hour	Commercial Haul %	Commercial Haul Trips	Recycle %	Recycle Trips	Hazardous Waste %	Hazardous Waste Trips	Garbage %	Garbage Trips	Yard Waste %	Yard Waste Trips	Self Haul TOTAL	Hauling Trucks %	Hauling Trucks Trips	Total Trips
6:00	0%	0	0%	0	0%	0	0%	0	0%	0	0	8%	1	1
7:00	0%	0	0%	0	0%	0	0%	0	0%	0	0	8%	1	1
8:00	18%	11	5%	1	5%	0	5%	37	5%	0	38	8%	1	50
9:00	9%	5	8%	2	8%	0	8%	65	8%	0	67	8%	2	74
10:00	9%	6	11%	2	11%	0	11%	87	11%	0	89	8%	2	97
11:00	9%	6	13%	3	13%	0	13%	102	13%	0	105	8%	2	113
12:00	9%	6	14%	3	14%	0	14%	109	14%	0	112	8%	2	120
13:00	9%	6	14%	3	14%	0	14%	109	14%	0	112	8%	1	119
14:00	9%	5	13%	3	13%	0	13%	105	13%	0	108	8%	1	114
15:00	9%	5	12%	2	12%	0	12%	93	12%	0	95	8%	1	101
16:00	9%	5	9%	2	9%	0	9%	74	9%	0	76	8%	1	82
17:00	9%	5	2%	0	2%	0	2%	19	2%	0	19	8%	1	25
18:00	0%	0	0%	0	0%	0	0%	0	0%	0	0	0%	0	0
Daily Trips	**100%**	**60**	**100%**	**21**	**100%**	**0**	**100%**	**800**	**100%**	**0**	**821**	**92%**	**16**	**897**

Note: Time of day percentages for commercial and self-haul based on observed trends at the Renton facility.

2023 - King County Transfer Station Trip Generation - Factoria Concept 0

Annual

2023 Annual Trip Generation Summary

Material	Tonnage: Commercial Haul	Tonnage: Self Haul	Average Tonnage/Vehicle[6]: Commercial Haul	Average Tonnage/Vehicle[6]: Self Haul	Total Annual Trips[7]: Commercial Haul	Total Annual Trips[7]: Self Haul	Total Annual Trips[7]: Hauling Trucks	Total Annual Trips[7]: Total
Recycling[1]	6,803	6,137	5.80	0.30	2,346	40,914		**43,260**
Hazardous Waste[2]		385		0.03		29,352		**29,352**
Garbage[3]	**227,280**	**55,170**	5.80	0.31	78,364	360,346		**438,710**
Yard Waste[4]		2,997	5.80	0.25	0	23,976		**23,976**
Hauling Away[5]							27,188	**27,188**
Total								**562,486**

Material	Total Annual Weekday Trips[8]: Commercial Haul %	Commercial Haul Trips	Self Haul %	Self Haul Trips	Hauling Trucks %	Hauling Trucks Trips	Total Trips	Total Annual Weekend Trips: Commercial Haul %	Commercial Haul Trips	Self Haul %	Self Haul Trips	Hauling Trucks %	Hauling Trucks Trips	Total Trips
Recycling[1]	94%		63%	25,776			**25,776**	6%		37%	15,138			**15,138**
Hazardous Waste[2]			63%	18,492			**18,492**			37%	10,860			**10,860**
Garbage[3]	94%	73,662	63%	227,018			**300,680**	6%	4,702	37%	133,328			**138,030**
Yard Waste[4]	94%	0	63%	15,105			**15,105**	6%	0	37%	8,871			**8,871**
Hauling Away[5]					81%	22,022	**22,022**					19%	5,166	**5,166**
Total							**382,075**							**178,065**

1. Tonnage provided by King County assuming Houghton closes before 2023 and Bellevue leaves in 2029. Commercial average tonnage/vehicle estimated using garbage as guide (consistent with South County Recycling and Transfer Station site) and self haul is consistent with ton.veh used at South County Recycling and Transfer Station site.

2. HHW tonnage provided by KC. Only Self-Haul assumed to carry HHW. Average pounds per vehicle assumed to be 52.4, provided by KC.

3. Garbage tonnage provided by King County. Average Tonnage/Vehicle provided by KC for commericial vs self haul, self haul assumed to be without an account.

4. Yard Waste/Wood Waste and compostable paper provided by KC. Average tonnage/vehicle estimated using garbage as guide (consistent with South County Recycling and Transfer Station site)

5. Hauling away total annual trucks provided by King County. Average Tonnage/Vehicle consistent with South County Recycling and Transfer Station site.

6. Average Tonnage/Vehicle reflects a weighted average taking into account the shift in tonnage from Houghton.

7. Total Annual Trips represents both inbound and outbound trips.

8.Annual weekday vs weekend trips based on 9/1/13-9/1/14 transaction data for Factoria site provided by King county including self haul vs commercial.

Daily

Daily Trip Generation Summary - PEAK

	Material	Annual Trips[1]	Weekday %	Weekday Trips	Weekend %	Weekend Trips	Transfer Station Open[2]: Weekdays/Year	Weekend Days/Year	Weekday Trips %	Weekday Trips Trips	Weekend Trips %	Weekend Trips Trips[3]
Commercial Haul	Recycle	2,346	94%	2,205	6%	141	259	103	94%	10	6%	4
	Hazardous Waste	0	0%	0	100%	0	259	103	0%	0	100%	0
	Garbage	78,364	94%	73,662	6%	4,702	259	103	94%	322	6%	144
	Yard Waste	0	94%	0	6%	0	259	103	94%	0	6%	0
	Total	80,710		75,867		4,843				332		148
Self Haul	Recycle	40,914	63%	25,776	37%	15,138	259	103	63%	132	37%	199
	Hazardous Waste	29,352	63%	18,492	37%	10,860	259	103	63%	95	37%	143
	Garbage	360,346	63%	227,018	37%	133,328	259	103	63%	1,167	37%	1,754
	Yard Waste	23,976	63%	15,105	37%	8,871	259	103	63%	78	37%	117
	Total	454,588		286,391		168,197				1,472		2,213
Hauling Trucks	Hauling Away	27,188	81%	22,022	19%	5,166	259	103	81%	106	19%	68
Total		*562,486*		*384,280*		*178,206*				**1,910**		**2,429**

Commercial Haul	waste	92.3%	5.075177084
Self Haul	recycle	7.7%	0.849645833
Hauling Trucks			

1. Annual Trips based on peak month

2. Assumes one holiday on a weekday and two on a weekend.

3. Weekend average increased by 5% to account for more vehicles on Saturday than Sunday.

WEEKDAY	Factoria Commercial	SelfHaul	Total
Median	69	175	244
90th Percentile	78	232	305
Peak Increase	**113.0%**	**133.1%**	**125.0%**

Note: Median and 90th Percentile include all*weekdays* January 2013 - December 2013

WEEKEND	Factoria Commercial	SelfHaul	Total
Median	1	278	280
90th Percentile	3	376	377
Peak Increase	**300.0%**	**135.5%**	**134.8%**

Note: Median and 90th Percentile include all*weekends* January 2013 - December 2013

Time of Day Summary

Time of Day Summary of Trips

Weekday Summary

Hour	Commercial Haul %	Commercial Haul Trips	Self Haul: Recycle %	Recycle Trips	Hazardous Waste %	Hazardous Waste Trips	Garbage %	Garbage Trips	Yard Waste %	Yard Waste Trips	TOTAL	Hauling Trucks %	Hauling Trucks Trips	Total Trips
6:00	0%	0	0%	0	0%	0	0%	0	0%	0	0	7%	8	8
7:00	13%	44	4%	6	4%	4	4%	52	4%	4	66	11%	11	121
8:00	15%	49	6%	8	6%	6	6%	72	6%	5	91	11%	11	151
9:00	10%	33	10%	13	10%	9	10%	111	10%	7	140	11%	11	184
10:00	11%	38	12%	16	12%	11	12%	138	12%	9	174	7%	7	219
11:00	10%	33	13%	17	13%	12	13%	151	13%	10	190	7%	7	230
12:00	10%	33	13%	18	13%	13	13%	157	13%	11	199	7%	7	239
13:00	11%	38	14%	18	14%	13	14%	164	14%	10	205	7%	7	250
14:00	11%	38	13%	18	13%	13	13%	157	13%	11	199	7%	8	245
15:00	7%	22	13%	18	13%	13	13%	157	13%	11	199	7%	8	229
16:00	2%	5	1%	1	1%	1	1%	7	1%	0	9	7%	8	22
17:00	0%	0	0%	0	0%	0	0%	0	0%	0	0	7%	8	8
18:00	0%	0	0%	0	0%	0	0%	0	0%	0	0	4%	4	4
Daily Trips	**100%**	**333**	**100%**	**133**	**100%**	**95**	**100%**	**1166**	**100%**	**78**	**1472**	**100%**	**105**	**1910**

Weekend Summary

Hour	Commercial Haul %	Commercial Haul Trips	Self Haul: Recycle %	Recycle Trips	Hazardous Waste %	Hazardous Waste Trips	Garbage %	Garbage Trips	Yard Waste %	Yard Waste Trips	TOTAL	Hauling Trucks %	Hauling Trucks Trips	Total Trips
6:00	0%	0	0%	0	0%	0	0%	0	0%	0	0	11%	7	7
7:00	0%	0	0%	0	0%	0	0%	0	0%	0	0	5%	4	4
8:00	13%	20	5%	9	5%	7	5%	84	5%	6	106	11%	7	133
9:00	7%	10	7%	14	7%	10	7%	122	7%	8	154	5%	4	168
10:00	7%	10	10%	20	10%	15	10%	180	10%	12	227	11%	7	244
11:00	13%	20	12%	24	12%	17	12%	212	12%	14	267	5%	3	290
12:00	13%	20	13%	27	13%	18	13%	225	13%	15	285	5%	3	308
13:00	13%	21	13%	27	13%	18	13%	225	13%	15	285	5%	3	309
14:00	13%	21	14%	28	14%	20	14%	245	14%	17	310	11%	6	337
15:00	13%	21	13%	26	13%	19	13%	231	13%	15	291	5%	4	316
16:00	7%	10	10%	20	10%	15	10%	180	10%	12	227	5%	4	241
17:00	0%	0	3%	6	3%	4	3%	51	3%	3	64	5%	4	68
18:00	0%	0	0%	0	0%	0	0%	0	0%	0	0	0%	0	0
Daily Trips	**100%**	**153**	**100%**	**201**	**100%**	**143**	**100%**	**1755**	**100%**	**117**	**2216**	**84%**	**56**	**2425**

Note: Time of day percentages for commercial and self-haul based on observed trends at the Factoria facility.

Total trips based on tonnage and does not include reduction to account for shared trips (i.e. a recycle and garbage trip by a single customer). Modeling assumed an approximate 8 percent reduction in self haul trips.

2023 - King County Transfer Station Trip Generation - Factoria Concept 1

Annual

2023 Annual Trip Generation Summary

Material	Tonnage		Average Tonnage/Vehicle		Total Annual Trips[6]				Total Annual Weekday Trips[7]							Total Annual Weekend Trips						
									Commercial Haul		Self Haul		Hauling Trucks			Commercial Haul		Self Haul		Hauling Trucks		
	Commercial Haul	Self Haul	Commercial Haul	Self Haul	Commercial Haul	Self Haul	Hauling Trucks	Total	%	Trips	%	Trips	%	Trips	Total Trips	%	Trips	%	Trips	%	Trips	Total Trips
Recycling[1]	10,140	6,137	5.80	0.30	3,496	40,914		**44,410**	94%		63%	25,776			**25,776**	6%		37%	15,138			**15,138**
Hazardous Waste[2]		385		0.03		29,352		**29,352**			63%	18,492			**18,492**			37%	10,860			**10,860**
Garbage[3]	**212,639**	**55,170**	5.80	0.31	73,316	360,346		**433,662**	94%	68,917	63%	227,018			**295,935**	6%	4,399	37%	133,328			**137,727**
Yard Waste[4]		2,997	5.80	0.25	0	23,976		**23,976**	94%	0	63%	15,105			**15,105**	6%	0	37%	8,871			**8,871**
Hauling Away[5]							26,040	**26,040**					81%	21,092	**21,092**					19%	4,948	**4,948**
Total								**557,440**							**376,400**							**177,544**

1. Tonnage provided by King County assuming Houghton closes before 2023 and Bellevue leaves in 2029. Commercial average tonnage/vehicle estimated using garbage as guide (consistent with South County Recycling and Transfer Station site) and self haul is consistent with ton.veh used at South County Recycling and Transfer Station site.

2. HHW tonnage provided by KC. Only Self-Haul assumed to carry HHW. Average pounds per vehicle assumed to be 52.4, provided by KC.

3. Garbage tonnage provided by King County for concept. Average Tonnage/Vehicle provided by KC for commericial vs self haul, self haul assumed to be without an account.

4. Yard Waste/Wood Waste and compostable paper provided by KC. Average tonnage/vehicle estimated using garbage as guide (consistent with South County Recycling and Transfer Station site)

5. Hauling away total annual trucks provided by King County. Average Tonnage/Vehicle consistent with South County Recycling and Transfer Station site.

6. Total Annual Trips represents both inbound and outbound trips.

7.Annual weekday vs weekend trips based on 9/1/13-9/1/14 transaction data for Factoria site provided by King county including self haul vs commercial.

Daily

Daily Trip Generation Summary - PEAK

	Material	Annual Trips[1]	Weekday %	Weekday Trips	Weekend %	Weekend Trips	Transfer Station Open[2] Weekdays/Year	Transfer Station Open[2] Weekend Days/Year	Weekday Trips %	Weekday Trips Trips	Weekend Trips %	Weekend Trips Trips[3]
Commercial Haul	Recycle	3,496	94%	3,286	6%	210	259	103	94%	14	6%	6
	Hazardous Waste	0	0%	0	100%	0	259	103	0%	0	100%	0
	Garbage	73,316	94%	68,917	6%	4,399	259	103	94%	301	6%	135
	Yard Waste	0	94%	0	6%	0	259	103	94%	0	6%	0
	Total	76,812		72,203		4,609				315		141
Self Haul	Recycle	40,914	63%	25,776	37%	15,138	259	103	63%	132	37%	199
	Hazardous Waste	29,352	63%	18,492	37%	10,860	259	103	63%	95	37%	143
	Garbage	360,346	63%	227,018	37%	133,328	259	103	63%	1,167	37%	1,754
	Yard Waste	23,976	63%	15,105	37%	8,871	259	103	63%	78	37%	117
	Total	454,588		286,391		168,197				1,472		2,213
Hauling Trucks	Hauling Away	26,040	81%	21,092	19%	4,948	259	103	81%	102	19%	65
Total		*557,440*		*379,686*		*177,754*				**1,889**		**2,419**

1. Annual Trips based on peak month

2. Assumes one holiday on a weekday and two on a weekend.

3. Weekend average increased by 5% to account for more vehicles on Saturday than Sunday.

Commercial Haul	waste	91.9%	1.837911	
Self Haul	recycle	8.1%	0.324177	
Hauling Trucks				

WEEKDAY	Factoria Commercia	Factoria SelfHaul	Factoria Total
Median	69	175	244
90th Percentile	78	232	305
Peak Increase	**113.0%**	**133.1%**	**125.0%**

Note: Median and 90th Percentile include all *weekdays* January 2013 - December 2013

WEEKEND	Factoria Commercia	Factoria SelfHaul	Factoria Total
Median	1	278	280
90th Percentile	3	376	377
Peak Increase	**300.0%**	**135.5%**	**134.8%**

Note: Median and 90th Percentile include all *weekends* January 2013 - December 2013

Time of Day Summary

Time of Day Summary of Trips

Weekday Summary

Hour	Commercial Haul %	Commercial Haul Trips	Self Haul: Recycle %	Recycle Trips	Hazardous Waste %	Hazardous Waste Trips	Garbage %	Garbage Trips	Yard Waste %	Yard Waste Trips	TOTAL	Hauling Trucks %	Hauling Trucks Trips	Total Trips
6:00	0%	0	0%	0	0%	0	0%	0	0%	0	0	7%	7	7
7:00	13%	41	4%	6	4%	4	4%	52	4%	4	66	11%	11	118
8:00	15%	46	6%	8	6%	6	6%	72	6%	5	91	11%	11	148
9:00	10%	31	10%	13	10%	9	10%	111	10%	7	140	11%	11	182
10:00	11%	36	12%	16	12%	11	12%	138	12%	9	174	7%	6	216
11:00	10%	31	13%	17	13%	12	13%	151	13%	10	190	7%	6	227
12:00	10%	31	13%	18	13%	13	13%	157	13%	11	199	7%	6	236
13:00	11%	36	14%	18	14%	13	14%	164	14%	10	205	7%	6	247
14:00	11%	36	13%	18	13%	13	13%	157	13%	11	199	7%	7	242
15:00	7%	21	13%	18	13%	13	13%	157	13%	11	199	7%	7	227
16:00	2%	5	1%	1	1%	1	1%	7	1%	0	9	7%	7	21
17:00	0%	0	0%	0	0%	0	0%	0	0%	0	0	7%	7	7
18:00	0%	0	0%	0	0%	0	0%	0	0%	0	0	4%	4	4
Daily Trips	**100%**	**314**	**100%**	**133**	**100%**	**95**	**100%**	**1166**	**100%**	**78**	**1472**	**100%**	**96**	**1882**

Weekend Summary

Hour	Commercial Haul %	Commercial Haul Trips	Self Haul: Recycle %	Recycle Trips	Hazardous Waste %	Hazardous Waste Trips	Garbage %	Garbage Trips	Yard Waste %	Yard Waste Trips	TOTAL	Hauling Trucks %	Hauling Trucks Trips	Total Trips
6:00	0%	0	0%	0	0%	0	0%	0	0%	0	0	11%	7	7
7:00	0%	0	0%	0	0%	0	0%	0	0%	0	0	5%	3	3
8:00	13%	19	5%	9	5%	7	5%	84	5%	6	106	11%	7	132
9:00	7%	9	7%	14	7%	10	7%	122	7%	8	154	5%	3	166
10:00	7%	9	10%	20	10%	15	10%	180	10%	12	227	11%	7	243
11:00	13%	19	12%	24	12%	17	12%	212	12%	14	267	5%	2	288
12:00	13%	19	13%	27	13%	18	13%	225	13%	15	285	5%	2	306
13:00	13%	20	13%	27	13%	18	13%	225	13%	15	285	5%	2	307
14:00	13%	20	14%	28	14%	20	14%	245	14%	17	310	11%	6	336
15:00	13%	20	13%	26	13%	19	13%	231	13%	15	291	5%	3	314
16:00	7%	9	10%	20	10%	15	10%	180	10%	12	227	5%	3	239
17:00	0%	0	3%	6	3%	4	3%	51	3%	3	64	5%	3	67
18:00	0%	0	0%	0	0%	0	0%	0	0%	0	0	0%	0	0
Daily Trips	**100%**	**144**	**100%**	**201**	**100%**	**143**	**100%**	**1755**	**100%**	**117**	**2216**	**84%**	**48**	**2408**

Note: Time of day percentages for commercial and self-haul based on observed trends at the Factoria facility.

Total trips based on tonnage and does not include reduction to account for shared trips (i.e. a recycle and garbage trip by a single customer). Modeling assumed an approximate 8 percent reduction in self haul trips.

2023 - King County Transfer Station Trip Generation - Factoria Concept 2

Annual

2023 Annual Trip Generation Summary

Material	Tonnage		Average Tonnage/Vehicle		Total Annual Trips[6]				Total Annual Weekday Trips[7]							Total Annual Weekend Trips						
									Commercial Haul		Self Haul		Hauling Trucks			Commercial Haul		Self Haul		Hauling Trucks		
	Commercial Haul	Self Haul	Commercial Haul	Self Haul	Commercial Haul	Self Haul	Hauling Trucks	Total	%	Trips	%	Trips	%	Trips	Total Trips	%	Trips	%	Trips	%	Trips	Total Trips
Recycling[1]	6,803	4,419	5.80	0.30	2,346	29,460		**31,806**	94%		63%	18,560			**18,560**	6%		37%	10,900			**10,900**
Hazardous Waste[2]		385		0.03		29,352		**29,352**			48%	14,089			**14,089**			52%	15,263			**15,263**
Garbage[3]	**227,280**	**39,722**	5.80	0.31	78,364	259,448		**337,812**	94%	73,662	63%	163,452			**237,114**	6%	4,702	37%	95,996			**100,698**
Yard Waste[4]		2,158	5.80	0.25	0	17,264		**17,264**	94%	0	63%	10,876			**10,876**	6%	0	37%	6,388			**6,388**
Hauling Away[5]							24,612	**24,612**					81%	19,936	**19,936**					19%	4,676	**4,676**
Total								**440,846**							**300,575**							**137,925**

1. Tonnage provided by King County assuming Houghton closes before 2023 and Bellevue leaves in 2029. Commercial average tonnage/vehicle estimated using garbage as guide (consistent with South County Recycling and Transfer Station site) and self haul is consistent with ton.veh used at South County Recycling and Transfer Station site.

2. HHW tonnage provided by KC. Only Self-Haul assumed to carry HHW. Average pounds per vehicle assumed to be 52.4, provided by KC. 15% shift from weekday to weekend for concept 2 provided by KC.

3. Garbage tonnage provided by King County for concept. Average Tonnage/Vehicle provided by KC for commericial vs self haul, self haul assumed to be without an account.

4. Yard Waste/Wood Waste and compostable paper provided by KC. Average tonnage/vehicle estimated using garbage as guide (consistent with South County Recycling and Transfer Station site)

5. Hauling away total annual trucks provided by King County. Average Tonnage/Vehicle consistent with South County Recycling and Transfer Station site.

6. Total Annual Trips represents both inbound and outbound trips.

7.Annual weekday vs weekend trips based on 9/1/13-9/1/14 transaction data for Factoria site provided by King county including self haul vs commercial.

Daily

Daily Trip Generation Summary - PEAK

	Material	Annual Trips[1]	Weekday %	Weekday Trips	Weekend %	Weekend Trips	Transfer Station Open[2] Weekdays/Year	Transfer Station Open[2] Weekend Days/Year	Weekday Trips %	Weekday Trips Trips	Weekend Trips %	Weekend Trips Trips[3]
Commercial Haul	Recycle	2,346	94%	2,205	6%	141	259	103	94%	10	6%	4
	Hazardous Waste	0	0%	0	100%	0	259	103	0%	0	100%	0
	Garbage	78,364	94%	73,662	6%	4,702	259	103	94%	322	6%	144
	Yard Waste	0	94%	0	6%	0	259	103	94%	0	6%	0
	Total	80,710		75,867		4,843				332		148
Self Haul	Recycle	29,460	63%	14,322	37%	15,138	259	103	63%	74	37%	199
	Hazardous Waste	29,352	48%	18,492	52%	10,860	259	103	48%	95	52%	143
	Garbage	259,448	63%	126,120	37%	133,328	259	103	63%	648	37%	1,754
	Yard Waste	17,264	63%	8,393	37%	8,871	259	103	63%	43	37%	117
	Total	335,524		167,327		168,197				860		2,213
Hauling Trucks	Hauling Away	24,612	81%	19,446	19%	5,166	259	103	81%	94	19%	68
Total		*440,846*		*262,640*		*178,206*				**1,286**		**2,429**

1. Annual Trips based on peak month

2. Assumes one holiday on a weekday and two on a weekend.

3. Weekend average increased by 5% to account for more vehicles on Saturday than Sunday.

Commercial Haul	waste	93.2%	0	
Self Haul	recycle	6.8%	0	
Hauling Trucks				

WEEKDAY	Factoria Commercia	Factoria SelfHaul	Factoria Total
Median	69	175	244
90th Percentile	78	232	305
Peak Increase	**113.0%**	**133.1%**	**125.0%**

Note: Median and 90th Percentile include all *weekdays* January 2013 - December 2013

WEEKEND	Factoria Commercia	Factoria SelfHaul	Factoria Total
Median	1	278	280
90th Percentile	3	376	377
Peak Increase	**300.0%**	**135.5%**	**134.8%**

Note: Median and 90th Percentile include all *weekends* January 2013 - December 2013

Time of Day Summary

Time of Day Summary of Trips

Weekday Summary

Hour	Commercial Haul %	Commercial Haul Trips	Self Haul: Recycle %	Recycle Trips	Hazardous Waste %	Hazardous Waste Trips	Garbage %	Garbage Trips	Yard Waste %	Yard Waste Trips	TOTAL	Hauling Trucks %	Hauling Trucks Trips	Total Trips
6:00	5%	17	0%	0	0%	0	0%	0	0%	0	0	7%	7	24
7:00	10%	33	0%	0	0%	0	0%	0	0%	0	0	11%	10	43
8:00	12%	40	0%	0	0%	0	0%	0	0%	0	0	11%	10	50
9:00	11%	37	0%	0	0%	0	0%	0	0%	0	0	11%	10	47
10:00	11%	37	0%	0	0%	0	0%	0	0%	0	0	7%	6	43
11:00	10%	33	2%	1	2%	2	2%	13	2%	1	17	7%	6	56
12:00	10%	33	2%	1	2%	2	2%	13	2%	1	17	7%	6	56
13:00	11%	37	1%	1	1%	1	1%	6	1%	0	8	7%	6	51
14:00	11%	37	0%	0	0%	0	0%	0	0%	0	0	7%	7	44
15:00	7%	23	25%	19	25%	24	25%	162	25%	11	216	7%	7	246
16:00	2%	7	20%	15	20%	19	20%	130	20%	9	173	7%	7	187
17:00	0%	0	15%	11	15%	14	15%	97	15%	6	128	7%	7	135
18:00	0%	0	10%	7	10%	10	10%	65	10%	4	86	4%	3	89
19:00	0%	0	10%	7	10%	10	10%	65	10%	4	86	0%	0	86
20:00	0%	0	10%	7	10%	10	10%	65	10%	4	86	0%	0	86
21:00	0%	0	5%	4	5%	5	5%	32	5%	2	43	0%	0	43
Daily Trips	**100%**	**334**	**100%**	**73**	**100%**	**97**	**100%**	**648**	**100%**	**42**	**645**	**1**	**92**	**1286**

Weekend Summary

Hour	Commercial Haul %	Commercial Haul Trips	Self Haul: Recycle %	Recycle Trips	Hazardous Waste %	Hazardous Waste Trips	Garbage %	Garbage Trips	Yard Waste %	Yard Waste Trips	TOTAL	Hauling Trucks %	Hauling Trucks Trips	Total Trips
6:00	0%	0	0%	0		0		0		0	0	11%	7	7
7:00	0%	0	0%	0		0		0		0	0	5%	4	4
8:00	13%	20	5%	10	5%	7	5%	88	5%	6	111	11%	7	138
9:00	7%	10	7%	14	7%	10	7%	123	7%	8	155	5%	4	169
10:00	7%	10	9%	18	9%	13	9%	158	9%	11	200	11%	7	217
11:00	13%	20	10%	20	10%	14	10%	175	10%	12	221	5%	3	244
12:00	13%	20	10%	21	10%	14	10%	175	10%	12	222	5%	3	245
13:00	13%	21	10%	21	10%	14	10%	175	10%	12	222	5%	3	246
14:00	13%	21	10%	20	10%	14	10%	176	10%	13	223	11%	6	250
15:00	13%	21	9%	18	9%	13	9%	158	9%	11	200	5%	4	225
16:00	7%	10	9%	18	9%	13	9%	158	9%	11	200	5%	4	214
17:00	0%	0	8%	16	8%	11	8%	140	8%	9	176	5%	4	180
18:00	0%	0	7%	14	7%	10	7%	123	7%	8	155	0%	0	155
19:00	0%	0	6%	12	6%	9	6%	105	6%	7	133	0%	0	133
20:00														
21:00														
Daily Trips	**100%**	**153**	**100%**	**202**	**100%**	**142**	**100%**	**1754**	**100%**	**120**	**2218**	**84%**	**56**	**2427**

Note: Time of day percentages for commercial and self-haul based on observed trends at the Bow Lake facility.

Total trips based on tonnage and does not include reduction to account for shared trips (i.e. a recycle and garbage trip by a single customer). Modeling assumed an approximate 8 percent reduction in self haul trips.

2023 - King County Transfer Station Trip Generation - Factoria Concept 3

Annual

2023 Annual Trip Generation Summary

Material	Tonnage: Commercial Haul	Tonnage: Self Haul	Average Tonnage/Vehicle: Commercial Haul	Average Tonnage/Vehicle: Self Haul	Total Annual Trips[6]: Commercial Haul	Total Annual Trips[6]: Self Haul	Total Annual Trips[6]: Hauling Trucks	Total Annual Trips[6]: Total
Recycling[1]	4,607	3,154	5.59	0.30	1,648	21,026		**22,674**
Hazardous Waste[2]		385		0.03		29,352		**29,352**
Garbage[3]	**94,805**	**24,795**	5.59	0.29	33,920	171,000		**204,920**
Yard Waste[4]		1,703	5.59	0.25	0	13,624		**13,624**
Hauling Away[5]							12,062	**12,062**
Total								**282,632**

Material	Total Annual Weekday Trips[7]: Commercial Haul %	Commercial Haul Trips	Self Haul %	Self Haul Trips	Hauling Trucks %	Hauling Trucks Trips	Total Trips	Total Annual Weekend Trips: Commercial Haul %	Commercial Haul Trips	Self Haul %	Self Haul Trips	Hauling Trucks %	Hauling Trucks Trips	Total Trips
Recycling[1]	94%		63%	13,246			**13,246**	6%		37%	7,780			**7,780**
Hazardous Waste[2]			63%	18,492			**18,492**			37%	10,860			**10,860**
Garbage[3]	94%	31,885	63%	107,730			**139,615**	6%	2,035	37%	63,270			**65,305**
Yard Waste[4]	94%	0	63%	8,583			**8,583**	6%	0	37%	5,041			**5,041**
Hauling Away[5]					81%	9,770	**9,770**					19%	2,292	**2,292**
Total							**189,706**							**91,278**

1. Tonnage provided by King County assuming Houghton closes before 2023 and Bellevue leaves in 2029. Commercial average tonnage/vehicle estimated using garbage as guide (consistent with South County Recycling and Transfer Station site) and self haul is consistent with ton.veh used at South County Recycling and Transfer Station site.

2. HHW tonnage provided by KC. Only Self-Haul assumed to carry HHW. Average pounds per vehicle assumed to be 52.4, provided by KC.

3. Garbage tonnage provided by King County for concept. Average Tonnage/Vehicle provided by KC for commericial vs self haul, self haul assumed to be without an account.

4. Yard Waste/Wood Waste and compostable paper provided by KC. Average tonnage/vehicle estimated using garbage as guide (consistent with South County Recycling and Transfer Station site)

5. Hauling away total annual trucks provided by King County. Average Tonnage/Vehicle consistent with South County Recycling and Transfer Station site.

6. Total Annual Trips represents both inbound and outbound trips.

7.Annual weekday vs weekend trips based on 9/1/13-9/1/14 transaction data for Factoria site provided by King county including self haul vs commercial.

Daily

Daily Trip Generation Summary - PEAK

	Material	Annual Trips[1]	Weekday %	Weekday Trips	Weekend %	Weekend Trips	Transfer Station Open[2]: Weekdays/Year	Weekend Days/Year	Weekday Trips %	Weekday Trips	Weekend Trips %	Weekend Trips[3]
Commercial Haul	Recycle	1,648	94%	1,549	6%	99	259	103	94%	7	6%	3
	Hazardous Waste	0	0%	0	100%	0	259	103	0%	0	100%	0
	Garbage	33,920	94%	31,885	6%	2,035	259	103	94%	139	6%	62
	Yard Waste	0	94%	0	6%	0	259	103	94%	0	6%	0
	Total	35,568		33,434		2,134				146		65
Self Haul	Recycle	21,026	63%	13,246	37%	7,780	259	103	63%	68	37%	102
	Hazardous Waste	29,352	63%	18,492	37%	10,860	259	103	63%	95	37%	143
	Garbage	171,000	63%	107,730	37%	63,270	259	103	63%	554	37%	832
	Yard Waste	13,624	63%	8,583	37%	5,041	259	103	63%	44	37%	66
	Total	235,002		148,051		86,951				761		1,143
Hauling Trucks	Hauling Away	12,062	81%	9,770	19%	2,292	259	103	81%	47	19%	30
Total		*282,632*		*191,255*		*91,377*				**954**		**1,238**

1. Annual Trips based on peak month

2. Assumes one holiday on a weekday and two on a weekend.

3. Weekend average increased by 5% to account for more vehicles on Saturday than Sunday.

Commercial Haul	waste	91.8%	1.836956	
Self Haul	recycle	8.2%	0.326088	
Hauling Trucks				

WEEKDAY	Factoria Commercia	SelfHaul	Total
Median	69	175	244
90th Percentile	78	232	305
Peak Increase	**113.0%**	**133.1%**	**125.0%**

Note: Median and 90th Percentile include all *weekdays* January 2013 - December 2013

WEEKEND	Factoria Commercia	SelfHaul	Total
Median	1	278	280
90th Percentile	3	376	377
Peak Increase	**300.0%**	**135.5%**	**134.8%**

Note: Median and 90th Percentile include all *weekends* January 2013 - December 2013

Time of Day Summary

Time of Day Summary of Trips

Hour	Weekday Summary: Commercial Haul %	Commercial Haul Trips	Self Haul: Recycle %	Recycle Trips	Hazardous Waste %	Hazardous Waste Trips	Garbage %	Garbage Trips	Yard Waste %	Yard Waste Trips	TOTAL	Hauling Trucks %	Hauling Trucks Trips	Total Trips
6:00	0%	0	0%	0	0%	0	0%	0	0%	0	0	7%	3	3
7:00	13%	19	4%	3	4%	4	4%	25	4%	2	34	11%	5	58
8:00	15%	22	6%	4	6%	6	6%	34	6%	3	47	11%	5	74
9:00	10%	14	10%	6	10%	9	10%	53	10%	4	72	11%	5	91
10:00	11%	17	12%	8	12%	11	12%	65	12%	5	89	7%	2	108
11:00	10%	14	13%	9	13%	12	13%	72	13%	6	99	7%	2	115
12:00	10%	14	13%	9	13%	13	13%	75	13%	6	103	7%	2	119
13:00	11%	17	14%	9	14%	13	14%	78	14%	5	105	7%	2	124
14:00	11%	17	13%	9	13%	13	13%	75	13%	6	103	7%	3	123
15:00	7%	10	13%	9	13%	13	13%	75	13%	6	103	7%	3	116
16:00	2%	2	1%	0	1%	1	1%	3	1%	0	4	7%	3	9
17:00	0%	0	0%	0	0%	0	0%	0	0%	0	0	7%	3	3
18:00	0%	0	0%	0	0%	0	0%	0	0%	0	0	4%	2	2
Daily Trips	**100%**	**146**	**100%**	**66**	**100%**	**95**	**100%**	**555**	**100%**	**43**	**759**	**100%**	**40**	**945**

Hour	Weekend Summary: Commercial Haul %	Commercial Haul Trips	Self Haul: Recycle %	Recycle Trips	Hazardous Waste %	Hazardous Waste Trips	Garbage %	Garbage Trips	Yard Waste %	Yard Waste Trips	TOTAL	Hauling Trucks %	Hauling Trucks Trips	Total Trips
6:00	0%	0	0%	0	0%	0	0%	0	0%	0	0	11%	3	3
7:00	0%	0	0%	0	0%	0	0%	0	0%	0	0	5%	2	2
8:00	13%	9	5%	5	5%	7	5%	40	5%	3	55	11%	3	67
9:00	7%	4	7%	7	7%	10	7%	58	7%	5	80	5%	2	86
10:00	7%	4	10%	10	10%	15	10%	85	10%	7	117	11%	3	124
11:00	13%	9	12%	12	12%	17	12%	101	12%	8	138	5%	1	148
12:00	13%	9	13%	14	13%	18	13%	107	13%	8	147	5%	1	157
13:00	13%	10	13%	14	13%	18	13%	107	13%	8	147	5%	1	158
14:00	13%	10	14%	14	14%	20	14%	117	14%	10	161	11%	2	173
15:00	13%	10	13%	13	13%	19	13%	110	13%	9	151	5%	2	163
16:00	7%	4	10%	10	10%	15	10%	85	10%	7	117	5%	2	123
17:00	0%	0	3%	3	3%	4	3%	24	3%	2	33	5%	2	35
18:00	0%	0	0%	0	0%	0	0%	0	0%	0	0	0%	0	0
Daily Trips	**100%**	**69**	**100%**	**102**	**100%**	**143**	**100%**	**834**	**100%**	**67**	**1146**	**84%**	**24**	**1239**

Note: Time of day percentages for commercial and self-haul based on observed trends at the Factoria facility.

Total trips based on tonnage and does not include reduction to account for shared trips (i.e. a recycle and garbage trip by a single customer). Modeling assumed an approximate 8 percent reduction in self haul trips.

2023 - King County Transfer Station Trip Generation - Factoria without Renton Concept 0

Annual

2023 Annual Trip Generation Summary

Material	Tonnage: Commercial Haul	Tonnage: Self Haul	Average Tonnage/Vehicle[6]: Commercial Haul	Average Tonnage/Vehicle[6]: Self Haul	Total Annual Trips[7]: Commercial Haul	Total Annual Trips[7]: Self Haul	Total Annual Trips[7]: Hauling Trucks	Total Annual Trips[7]: Total
Recycling[1]	7,147	6,584	5.78	0.30	2,474	43,894		**46,368**
Hazardous Waste[2]		385		0.03		29,352		**29,352**
Garbage[3]	**244,234**	**61,416**	5.78	0.30	84,524	408,774		**493,298**
Yard Waste[4]		2,997	5.78	0.25	0	23,976		**23,976**
Hauling Away[5]							29,340	**29,340**
Total								**622,334**

Material	Total Annual Weekday Trips[8]: Commercial Haul %	Commercial Haul Trips	Self Haul %	Self Haul Trips	Hauling Trucks %	Hauling Trucks Trips	Total Trips	Total Annual Weekend Trips: Commercial Haul %	Commercial Haul Trips	Self Haul %	Self Haul Trips	Hauling Trucks %	Hauling Trucks Trips	Total Trips
Recycling[1]	94%		63%	27,653			**27,653**	6%		37%	16,241			**16,241**
Hazardous Waste[2]			63%	18,492			**18,492**			37%	10,860			**10,860**
Garbage[3]	94%	79,453	63%	257,528			**336,981**	6%	5,071	37%	151,246			**156,317**
Yard Waste[4]	94%	0	63%	15,105			**15,105**	6%	0	37%	8,871			**8,871**
Hauling Away[5]					81%	23,765	**23,765**					19%	5,575	**5,575**
Total							**421,996**							**197,864**

1. Tonnage provided by King County assuming Houghton closes before 2023 and Bellevue leaves in 2029. Commercial average tonnage/vehicle estimated using garbage as guide (consistent with South County Recycling and Transfer Station site) and self haul is consistent with ton.veh used at South County Recycling and Transfer Station site.

2. HHW tonnage provided by KC. Only Self-Haul assumed to carry HHW. Average pounds per vehicle assumed to be 52.4, provided by KC.

3. Garbage tonnage provided by King County. Average Tonnage/Vehicle provided by KC for commericial vs self haul, self haul assumed to be without an account.

4. Yard Waste/Wood Waste and compostable paper provided by KC. Average tonnage/vehicle estimated using garbage as guide (consistent with South County Recycling and Transfer Station site)

5. Hauling away total annual trucks provided by King County. Average Tonnage/Vehicle consistent with South County Recycling and Transfer Station site.

6. Average Tonnage/Vehicle reflects a weighted average taking into account the shift in tonnage from Houghton and Renton.

7. Total Annual Trips represents both inbound and outbound trips.

8.Annual weekday vs weekend trips based on 9/1/13-9/1/14 transaction data for Factoria site provided by King county including self haul vs commercial.

Daily

Daily Trip Generation Summary - PEAK

	Material	Annual Trips[1]	Weekday %	Weekday Trips	Weekend %	Weekend Trips	Transfer Station Open[2]: Weekdays/Year	Weekend Days/Year	Weekday Trips %	Weekday Trips Trips	Weekend Trips %	Weekend Trips Trips[3]
Commercial Haul	Recycle	2,474	94%	2,326	6%	148	259	103	94%	10	6%	5
	Hazardous Waste	0	0%	0	100%	0	259	103	0%	0	100%	0
	Garbage	84,524	94%	79,453	6%	5,071	259	103	94%	347	6%	155
	Yard Waste	0	94%	0	6%	0	259	103	94%	0	6%	0
	Total	86,998		81,779		5,219				357		160
Self Haul	Recycle	43,894	63%	27,653	37%	16,241	259	103	63%	142	37%	214
	Hazardous Waste	29,352	63%	18,492	37%	10,860	259	103	63%	95	37%	143
	Garbage	408,774	63%	257,528	37%	151,246	259	103	63%	1,324	37%	1,990
	Yard Waste	23,976	63%	15,105	37%	8,871	259	103	63%	78	37%	117
	Total	505,996		318,778		187,218				1,639		2,464
Hauling Trucks	Hauling Away	29,340	81%	23,765	19%	5,575	259	103	81%	115	19%	73
Total		***622,334***		***424,322***		***198,012***				**2,111**		**2,697**

1. Annual Trips based on peak month

2. Assumes one holiday on a weekday and two on a weekend.

3. Weekend average increased by 5% to account for more vehicles on Saturday than Sunday.

Commer						
	waste	92.5%	6.476097			
Self Haul	recycle	7.5%	1.047806			
Hauling Trucks						

WEEKDAY	Factoria Commercia	SelfHaul	Total
Median	69	175	244
90th Percentile	78	232	305
Peak Increase	**113.0%**	**133.1%**	**125.0%**

Note: Median and 90th Percentile include all *weekdays* January 2013 - December 2013

WEEKEND	Factoria Commercia	SelfHaul	Total
Median	1	278	280
90th Percentile	3	376	377
Peak Increase	**300.0%**	**135.5%**	**134.8%**

Note: Median and 90th Percentile include all *weekends* January 2013 - December 2013

Time of Day Summary

Time of Day Summary of Trips

Hour	Weekday Summary: Commercial Haul %	Commercial Haul Trips	Self Haul: Recycle %	Recycle Trips	Hazardous Waste %	Hazardous Waste Trips	Garbage %	Garbage Trips	Yard Waste %	Yard Waste Trips	TOTAL	Hauling Trucks %	Hauling Trucks Trips	Total Trips
6:00	0%	0	0%	0	0%	0	0%	0	0%	0	0	12%	14	14
7:00	13%	47	4%	6	4%	4	4%	60	4%	4	74	6%	7	128
8:00	15%	53	6%	9	6%	6	6%	82	6%	5	102	12%	14	169
9:00	10%	35	10%	14	10%	9	10%	126	10%	7	156	9%	10	201
10:00	11%	41	12%	17	12%	11	12%	156	12%	9	193	12%	14	248
11:00	10%	35	13%	18	13%	12	13%	171	13%	10	211	9%	10	256
12:00	10%	36	13%	19	13%	13	13%	179	13%	10	221	9%	10	267
13:00	11%	42	14%	21	14%	13	14%	185	14%	11	230	6%	8	280
14:00	11%	42	13%	19	13%	13	13%	179	13%	11	222	9%	10	274
15:00	7%	23	13%	19	13%	13	13%	179	13%	11	222	6%	8	253
16:00	2%	6	1%	1	1%	1	1%	7	1%	0	9	3%	3	18
17:00	0%	0	0%	0	0%	0	0%	0	0%	0	0	3%	3	3
18:00	0%	0	0%	0	0%	0	0%	0	0%	0	0	0%	0	0
Daily Trips	**100%**	**360**	**100%**	**143**	**100%**	**95**	**100%**	**1324**	**100%**	**78**	**1640**	**97%**	**111**	**2111**

Hour	Weekend Summary: Commercial Haul %	Commercial Haul Trips	Self Haul: Recycle %	Recycle Trips	Hazardous Waste %	Hazardous Waste Trips	Garbage %	Garbage Trips	Yard Waste %	Yard Waste Trips	TOTAL	Hauling Trucks %	Hauling Trucks Trips	Total Trips
6:00	0%	0	0%	0	0%	0	0%	0	0%	0	0	11%	8	8
7:00	0%	0	0%	0	0%	0	0%	0	0%	0	0	5%	4	4
8:00	13%	21	5%	10	5%	7	5%	95	5%	6	118	11%	8	147
9:00	7%	11	7%	15	7%	10	7%	138	7%	8	171	5%	4	186
10:00	7%	11	10%	22	10%	15	10%	204	10%	12	253	11%	8	272
11:00	13%	21	12%	26	12%	17	12%	241	12%	14	298	5%	4	323
12:00	13%	21	13%	27	13%	18	13%	255	13%	15	315	5%	3	339
13:00	13%	21	13%	26	13%	18	13%	255	13%	15	314	5%	3	338
14:00	13%	21	14%	30	14%	20	14%	278	14%	17	345	11%	7	373
15:00	13%	21	13%	28	13%	19	13%	263	13%	15	325	5%	4	350
16:00	7%	11	10%	22	10%	15	10%	204	10%	12	253	5%	4	268
17:00	0%	0	3%	6	3%	4	3%	58	3%	3	71	5%	4	75
18:00	0%	0	0%	0	0%	0	0%	0	0%	0	0	0%	0	0
Daily Trips	**100%**	**159**	**100%**	**212**	**100%**	**143**	**100%**	**1991**	**100%**	**117**	**2463**	**84%**	**61**	**2683**

Note: Time of day percentages for commercial and self-haul based on observed trends at the Factoria facility.

Total trips based on tonnage and does not include reduction to account for shared trips (i.e. a recycle and garbage trip by a single customer). Modeling assumed an approximate 8 percent reduction in self haul trips.

2023 - King County Transfer Station Trip Generation - Factoria without Renton Concept 1

Annual

2023 Annual Trip Generation Summary

Material	Tonnage: Commercial Haul	Tonnage: Self Haul	Average Tonnage/Vehicle: Commercial Haul	Average Tonnage/Vehicle: Self Haul	Total Annual Trips[6]: Commercial Haul	Total Annual Trips[6]: Self Haul	Total Annual Trips[6]: Hauling Trucks	Total Annual Trips[6]: Total
Recycling[1]	4,844	6,584	5.78	0.30	1,674	43,894		**45,568**
Hazardous Waste[2]		385		0.03		29,352		**29,352**
Garbage[3]	**165,524**	**61,416**	5.78	0.30	57,232	408,774		**466,006**
Yard Waste[4]		2,997	5.78	0.25	0	23,976		**23,976**
Hauling Away[5]							23,166	**23,166**
Total								**588,068**

Material	Total Annual Weekday Trips[7]: Commercial Haul %	Commercial Haul Trips	Self Haul %	Self Haul Trips	Hauling Trucks %	Hauling Trucks Trips	Total Trips	Total Annual Weekend Trips: Commercial Haul %	Commercial Haul Trips	Self Haul %	Self Haul Trips	Hauling Trucks %	Hauling Trucks Trips	Total Trips
Recycling[1]	94%		63%	27,653			**27,653**	6%		37%	16,241			**16,241**
Hazardous Waste[2]			63%	18,492			**18,492**			37%	10,860			**10,860**
Garbage[3]	94%	53,798	63%	257,528			**311,326**	6%	3,434	37%	151,246			**154,680**
Yard Waste[4]	94%	0	63%	15,105			**15,105**	6%	0	37%	8,871			**8,871**
Hauling Away[5]					81%	18,764	**18,764**					19%	4,402	**4,402**
Total							**391,340**							**195,054**

1. Tonnage provided by King County assuming Houghton closes before 2023 and Bellevue leaves in 2029. Commercial average tonnage/vehicle estimated using garbage as guide (consistent with South County Recycling and Transfer Station site) and self haul is consistent with ton.veh used at South County Recycling and Transfer Station site.

2. HHW tonnage provided by KC. Only Self-Haul assumed to carry HHW. Average pounds per vehicle assumed to be 52.4, provided by KC.

3. Garbage tonnage provided by King County for concept. Average Tonnage/Vehicle provided by KC for commericial vs self haul, self haul assumed to be without an account.

4. Yard Waste/Wood Waste and compostable paper provided by KC. Average tonnage/vehicle estimated using garbage as guide (consistent with South County Recycling and Transfer Station site)

5. Hauling away total annual trucks provided by King County. Average Tonnage/Vehicle consistent with South County Recycling and Transfer Station site.

6. Total Annual Trips represents both inbound and outbound trips.

7.Annual weekday vs weekend trips based on 9/1/13-9/1/14 transaction data for Factoria site provided by King county including self haul vs commercial.

Daily

Daily Trip Generation Summary - PEAK

	Material	Annual Trips[1]	Weekday %	Weekday Trips	Weekend %	Weekend Trips	Transfer Station Open[2]: Weekdays/Year	Weekend Days/Year	Weekday Trips %	Weekday Trips Trips	Weekend Trips %	Weekend Trips Trips[3]
Commercial Haul	Recycle	1,674	94%	1,574	6%	100	259	103	94%	7	6%	3
	Hazardous Waste	0	0%	0	100%	0	259	103	0%	0	100%	0
	Garbage	57,232	94%	53,798	6%	3,434	259	103	94%	235	6%	105
	Yard Waste	0	94%	0	6%	0	259	103	94%	0	6%	0
	Total	58,906		55,372		3,534				242		108
Self Haul	Recycle	43,894	63%	27,653	37%	16,241	259	103	63%	142	37%	214
	Hazardous Waste	29,352	63%	18,492	37%	10,860	259	103	63%	95	37%	143
	Garbage	408,774	63%	257,528	37%	151,246	259	103	63%	1,324	37%	1,990
	Yard Waste	23,976	63%	15,105	37%	8,871	259	103	63%	78	37%	117
	Total	505,996		318,778		187,218				1,639		2,464
Hauling Trucks	Hauling Away	23,166	81%	18,764	19%	4,402	259	103	81%	91	19%	58
Total		*588,068*		*392,914*		*195,154*				**1,972**		**2,630**

1. Annual Trips based on peak month

2. Assumes one holiday on a weekday and two on a weekend.

3. Weekend average increased by 5% to account for more vehicles on Saturday than Sunday.

Commer	waste	92.2%	1.843769	
Self Haul	recycle	7.8%	0.312463	
Hauling Trucks				

WEEKDAY	Factoria Commercia	SelfHaul	Total
Median	69	175	244
90th Percentile	78	232	305
Peak Increase	**113.0%**	**133.1%**	**125.0%**

Note: Median and 90th Percentile include all *weekdays* January 2013 - December 2013

WEEKEND	Factoria Commercia	SelfHaul	Total
Median	1	278	280
90th Percentile	3	376	377
Peak Increase	**300.0%**	**135.5%**	**134.8%**

Note: Median and 90th Percentile include all *weekends* January 2013 - December 2013

Time of Day Summary

Time of Day Summary of Trips

Hour	Weekday Summary: Commercial Haul %	Commercial Haul Trips	Self Haul: Recycle %	Recycle Trips	Hazardous Waste %	Hazardous Waste Trips	Garbage %	Garbage Trips	Yard Waste %	Yard Waste Trips	TOTAL	Hauling Trucks %	Hauling Trucks Trips	Total Trips
6:00	0%	0	0%	0	0%	0	0%	0	0%	0	0	12%	11	11
7:00	13%	32	4%	6	4%	4	4%	60	4%	4	74	6%	6	112
8:00	15%	36	6%	9	6%	6	6%	82	6%	5	102	12%	11	149
9:00	10%	24	10%	14	10%	9	10%	126	10%	7	156	9%	8	188
10:00	11%	28	12%	17	12%	11	12%	156	12%	9	193	12%	11	232
11:00	10%	24	13%	18	13%	12	13%	171	13%	10	211	9%	8	243
12:00	10%	25	13%	19	13%	13	13%	179	13%	10	221	9%	8	254
13:00	11%	29	14%	21	14%	13	14%	185	14%	11	230	6%	7	266
14:00	11%	29	13%	19	13%	13	13%	179	13%	11	222	9%	8	259
15:00	7%	16	13%	19	13%	13	13%	179	13%	11	222	6%	7	245
16:00	2%	4	1%	1	1%	1	1%	7	1%	0	9	3%	3	16
17:00	0%	0	0%	0	0%	0	0%	0	0%	0	0	3%	3	3
18:00	0%	0	0%	0	0%	0	0%	0	0%	0	0	0%	0	0
Daily Trips	**100%**	**247**	**100%**	**143**	**100%**	**95**	**100%**	**1324**	**100%**	**78**	**1640**	**97%**	**91**	**1978**

Hour	Weekend Summary: Commercial Haul %	Commercial Haul Trips	Self Haul: Recycle %	Recycle Trips	Hazardous Waste %	Hazardous Waste Trips	Garbage %	Garbage Trips	Yard Waste %	Yard Waste Trips	TOTAL	Hauling Trucks %	Hauling Trucks Trips	Total Trips
6:00	0%	0	0%	0	0%	0	0%	0	0%	0	0	11%	6	6
7:00	0%	0	0%	0	0%	0	0%	0	0%	0	0	5%	3	3
8:00	13%	14	5%	10	5%	7	5%	95	5%	6	118	11%	6	138
9:00	7%	7	7%	15	7%	10	7%	138	7%	8	171	5%	3	181
10:00	7%	7	10%	22	10%	15	10%	204	10%	12	253	11%	6	266
11:00	13%	14	12%	26	12%	17	12%	241	12%	14	298	5%	3	315
12:00	13%	14	13%	27	13%	18	13%	255	13%	15	315	5%	2	331
13:00	13%	14	13%	26	13%	18	13%	255	13%	15	314	5%	2	330
14:00	13%	14	14%	30	14%	20	14%	278	14%	17	345	11%	5	364
15:00	13%	14	13%	28	13%	19	13%	263	13%	15	325	5%	3	342
16:00	7%	7	10%	22	10%	15	10%	204	10%	12	253	5%	3	263
17:00	0%	0	3%	6	3%	4	3%	58	3%	3	71	5%	3	74
18:00	0%	0	0%	0	0%	0	0%	0	0%	0	0	0%	0	0
Daily Trips	**100%**	**105**	**100%**	**212**	**100%**	**143**	**100%**	**1991**	**100%**	**117**	**2463**	**84%**	**45**	**2613**

Note: Time of day percentages for commercial and self-haul based on observed trends at the Factoria facility.

Total trips based on tonnage and does not include reduction to account for shared trips (i.e. a recycle and garbage trip by a single customer). Modeling assumed an approximate 8 percent reduction in self haul trips.

2023 - King County Transfer Station Trip Generation - Factoria without Renton Concept 2

Annual

2023 Annual Trip Generation Summary

Material	Tonnage: Commercial Haul	Tonnage: Self Haul	Average Tonnage/Vehicle: Commercial Haul	Average Tonnage/Vehicle: Self Haul	Total Annual Trips[6]: Commercial Haul	Total Annual Trips[6]: Self Haul	Total Annual Trips[6]: Hauling Trucks	Total Annual Trips[6]: Total
Recycling[1]	7,147	4,079	5.78	0.30	2,474	27,194		**29,668**
Hazardous Waste[2]		385		0.03		29,352		**29,352**
Garbage[3]	**244,234**	**40,820**	5.78	0.30	84,524	274,330		**358,854**
Yard Waste[4]		1,992	5.78	0.25	0	15,936		**15,936**
Hauling Away[5]							25,756	**25,756**
Total								**459,566**

Material	Total Annual Weekday Trips[7]: Commercial Haul %	Commercial Haul Trips	Self Haul %	Self Haul Trips	Hauling Trucks %	Hauling Trucks Trips	Total Trips	Total Annual Weekend Trips: Commercial Haul %	Commercial Haul Trips	Self Haul %	Self Haul Trips	Hauling Trucks %	Hauling Trucks Trips	Total Trips
Recycling[1]	94%		63%	17,132			**17,132**	6%		37%	10,062			**10,062**
Hazardous Waste[2]			48%	14,089			**14,089**			52%	15,263			**15,263**
Garbage[3]	94%	79,453	63%	172,828			**252,281**	6%	5,071	37%	101,502			**106,573**
Yard Waste[4]	94%	0	63%	10,040			**10,040**	6%	0	37%	5,896			**5,896**
Hauling Away[5]					81%	20,862	**20,862**					19%	4,894	**4,894**
Total							**314,404**							**142,688**

1. Tonnage provided by King County assuming Houghton closes before 2023 and Bellevue leaves in 2029. Commercial average tonnage/vehicle estimated using garbage as guide (consistent with South County Recycling and Transfer Station site) and self haul is consistent with ton.veh used at South County Recycling and Transfer Station site.

2. HHW tonnage provided by KC. Only Self-Haul assumed to carry HHW. Average pounds per vehicle assumed to be 52.4, provided by KC. 15% shift from weekday to weekend for concept 2 provided by KC.

3. Garbage tonnage provided by King County for concept. Average Tonnage/Vehicle provided by KC for commericial vs self haul, self haul assumed to be without an account.

4. Yard Waste/Wood Waste and compostable paper provided by KC. Average tonnage/vehicle estimated using garbage as guide (consistent with South County Recycling and Transfer Station site)

5. Hauling away total annual trucks provided by King County. Average Tonnage/Vehicle consistent with South County Recycling and Transfer Station site.

6. Total Annual Trips represents both inbound and outbound trips.

7.Annual weekday vs weekend trips based on 9/1/13-9/1/14 transaction data for Factoria site provided by King county including self haul vs commercial.

Daily

Daily Trip Generation Summary - PEAK

	Material	Annual Trips[1]	Weekday %	Weekday Trips	Weekend %	Weekend Trips	Transfer Station Open[2]: Weekdays/Year	Weekend Days/Year	Weekday Trips %	Weekday Trips Trips	Weekend Trips %	Weekend Trips Trips[3]
Commercial Haul	Recycle	2,474	94%	2,326	6%	148	259	103	94%	10	6%	5
	Hazardous Waste	0	0%	0	100%	0	259	103	0%	0	100%	0
	Garbage	84,524	94%	79,453	6%	5,071	259	103	94%	347	6%	155
	Yard Waste	0	94%	0	6%	0	259	103	94%	0	6%	0
	Total	86,998		81,779		5,219				357		160
Self Haul	Recycle	27,194	63%	10,953	37%	16,241	259	103	63%	56	37%	214
	Hazardous Waste	29,352	48%	18,492	52%	10,860	259	103	48%	95	52%	143
	Garbage	274,330	63%	123,084	37%	151,246	259	103	63%	633	37%	1,990
	Yard Waste	15,936	63%	7,065	37%	8,871	259	103	63%	36	37%	117
	Total	346,812		159,594		187,218				820		2,464
Hauling Trucks	Hauling Away	25,756	81%	20,181	19%	5,575	259	103	81%	97	19%	73
Total		*459,566*		*261,554*		*198,012*				**1,274**		**2,697**

1. Annual Trips based on peak month

2. Assumes one holiday on a weekday and two on a weekend.

3. Weekend average increased by 5% to account for more vehicles on Saturday than Sunday.

Commercial Haul	waste	94.5%	0	
Self Haul	recycle	5.5%	0	
Hauling Trucks				

WEEKDAY	Factoria Commercia	SelfHaul	Total
Median	69	175	244
90th Percentile	78	232	305
Peak Increase	**113.0%**	**133.1%**	**125.0%**

Note: Median and 90th Percentile include all *weekdays* January 2013 - December 2013

WEEKEND	Factoria Commercia	SelfHaul	Total
Median	1	278	280
90th Percentile	3	376	377
Peak Increase	**300.0%**	**135.5%**	**134.8%**

Note: Median and 90th Percentile include all *weekends* January 2013 - December 2013

Time of Day Summary

Time of Day Summary of Trips

Weekday Summary

Hour	Commercial Haul %	Commercial Haul Trips	Self Haul: Recycle %	Recycle Trips	Hazardous Waste %	Hazardous Waste Trips	Garbage %	Garbage Trips	Yard Waste %	Yard Waste Trips	TOTAL	Hauling Trucks %	Hauling Trucks Trips	Total Trips
6:00	5%	18	0%	0	0%	0	0%	0	0%	0	0	12%	12	30
7:00	10%	36	0%	0	0%	0	0%	0	0%	0	0	6%	6	42
8:00	12%	43	0%	0	0%	0	0%	0	0%	0	0	12%	12	55
9:00	11%	39	0%	0	0%	0	0%	0	0%	0	0	9%	9	48
10:00	11%	39	0%	0	0%	0	0%	0	0%	0	0	12%	12	51
11:00	10%	36	2%	1	2%	2	2%	13	2%	1	17	9%	9	62
12:00	10%	37	2%	1	2%	2	2%	13	2%	1	17	9%	9	63
13:00	11%	40	1%	1	1%	1	1%	5	1%	0	7	6%	7	54
14:00	11%	40	0%	0	0%	0	0%	0	0%	0	0	9%	9	49
15:00	7%	25	25%	14	25%	24	25%	158	25%	9	205	6%	7	237
16:00	2%	7	20%	11	20%	19	20%	127	20%	7	164	3%	3	174
17:00	0%	0	15%	8	15%	14	15%	95	15%	5	122	3%	3	125
18:00	0%	0	10%	6	10%	10	10%	63	10%	4	83	0%	0	83
19:00	0%	0	10%	6	10%	10	10%	63	10%	4	83	0%	0	83
20:00	0%	0	10%	6	10%	10	10%	63	10%	4	83	0%	0	83
21:00	0%	0	5%	3	5%	5	5%	32	5%	2	42	0%	0	42
Daily Trips	**100%**	**360**	**100%**	**57**	**100%**	**97**	**100%**	**632**	**100%**	**37**	**823**	**97%**	**98**	**1281**

Weekend Summary

Hour	Commercial Haul %	Commercial Haul Trips	Self Haul: Recycle %	Recycle Trips	Hazardous Waste %	Hazardous Waste Trips	Garbage %	Garbage Trips	Yard Waste %	Yard Waste Trips	TOTAL	Hauling Trucks %	Hauling Trucks Trips	Total Trips
6:00	0%	0		0		0		0		0	0	11%	8	8
7:00	0%	0		0		0		0		0	0	5%	4	4
8:00	13%	21	5%	11	5%	7	5%	100	5%	6	124	11%	8	153
9:00	7%	11	7%	15	7%	10	7%	139	7%	8	172	5%	4	187
10:00	7%	11	9%	19	9%	13	9%	179	9%	11	222	11%	8	241
11:00	13%	21	10%	21	10%	14	10%	199	10%	12	246	5%	4	271
12:00	13%	21	10%	21	10%	14	10%	199	10%	12	246	5%	3	270
13:00	13%	21	10%	20	10%	14	10%	199	10%	12	245	5%	3	269
14:00	13%	21	10%	21	10%	14	10%	200	10%	13	248	11%	7	276
15:00	13%	21	9%	19	9%	13	9%	180	9%	11	223	5%	4	248
16:00	7%	11	9%	19	9%	13	9%	179	9%	11	222	5%	4	237
17:00	0%	0	8%	17	8%	11	8%	159	8%	9	196	5%	4	200
18:00	0%	0	7%	15	7%	10	7%	139	7%	8	172	0%	0	172
19:00			6%	13	6%	9	6%	119	6%	7	148		0	148
20:00														
21:00														
Daily Trips	**100%**	**159**	**100%**	**211**	**100%**	**142**	**100%**	**1991**	**100%**	**120**	**2464**	**84%**	**61**	**2684**

Note: Time of day percentages for commercial and self-haul based on observed trends at the Bow Lake facility.

Total trips based on tonnage and does not include reduction to account for shared trips (i.e. a recycle and garbage trip by a single customer). Modeling assumed an approximate 8 percent reduction in self haul trips.

2023 - King County Transfer Station Trip Generation - Factoria without Renton Concept 3

Annual

2023 Annual Trip Generation Summary

Material	Tonnage: Commercial Haul	Tonnage: Self Haul	Average Tonnage/Vehicle: Commercial Haul	Average Tonnage/Vehicle: Self Haul	Total Annual Trips[6]: Commercial Haul	Total Annual Trips[6]: Self Haul	Total Annual Trips[6]: Hauling Trucks	Total Annual Trips[6]: Total
Recycling[1]	4,950	3,601	5.57	0.30	1,776	24,006		**25,782**
Hazardous Waste[2]		385		0.03		29,352		**29,352**
Garbage[3]	**111,758**	**31,042**	5.57	0.28	40,094	220,194		**260,288**
Yard Waste[4]		1,703	5.57	0.25	0	13,624		**13,624**
Hauling Away[5]							14,214	**14,214**
Total								**343,260**

Material	Total Annual Weekday Trips[7]: Commercial Haul %	Commercial Haul Trips	Self Haul %	Self Haul Trips	Hauling Trucks %	Hauling Trucks Trips	Total Trips	Total Annual Weekend Trips: Commercial Haul %	Commercial Haul Trips	Self Haul %	Self Haul Trips	Hauling Trucks %	Hauling Trucks Trips	Total Trips
Recycling[1]	94%		63%	15,124			**15,124**	6%		37%	8,882			**8,882**
Hazardous Waste[2]			63%	18,492			**18,492**			37%	10,860			**10,860**
Garbage[3]	94%	37,688	63%	138,722			**176,410**	6%	2,406	37%	81,472			**83,878**
Yard Waste[4]	94%	0	63%	8,583			**8,583**	6%	0	37%	5,041			**5,041**
Hauling Away[5]					81%	11,513	**11,513**					19%	2,701	**2,701**
Total							**230,122**							**111,362**

1. Tonnage provided by King County assuming Houghton closes before 2023 and Bellevue leaves in 2029. Commercial average tonnage/vehicle estimated using garbage as guide (consistent with South County Recycling and Transfer Station site) and self haul is consistent with ton.veh used at South County Recycling and Transfer Station site.

2. HHW tonnage provided by KC. Only Self-Haul assumed to carry HHW. Average pounds per vehicle assumed to be 52.4, provided by KC.

3. Garbage tonnage provided by King County for concept. Average Tonnage/Vehicle provided by KC for commericial vs self haul, self haul assumed to be without an account.

4. Yard Waste/Wood Waste and compostable paper provided by KC. Average tonnage/vehicle estimated using garbage as guide (consistent with South County Recycling and Transfer Station site)

5. Hauling away total annual trucks provided by King County. Average Tonnage/Vehicle consistent with South County Recycling and Transfer Station site.

6. Total Annual Trips represents both inbound and outbound trips.

7.Annual weekday vs weekend trips based on 9/1/13-9/1/14 transaction data for Factoria site provided by King county including self haul vs commercial.

Daily

Daily Trip Generation Summary - PEAK

	Material	Annual Trips[1]	Weekday %	Weekday Trips	Weekend %	Weekend Trips	Transfer Station Open[2]: Weekdays/Year	Weekend Days/Year	Weekday Trips %	Weekday Trips	Weekend Trips %	Weekend Trips[3]
Commercial Haul	Recycle	1,776	94%	1,669	6%	107	259	103	94%	7	6%	3
	Hazardous Waste	0	0%	0	100%	0	259	103	0%	0	100%	0
	Garbage	40,094	94%	37,688	6%	2,406	259	103	94%	164	6%	74
	Yard Waste	0	94%	0	6%	0	259	103	94%	0	6%	0
	Total	41,870		39,357		2,513				171		77
Self Haul	Recycle	24,006	63%	15,124	37%	8,882	259	103	63%	78	37%	117
	Hazardous Waste	29,352	63%	18,492	37%	10,860	259	103	63%	95	37%	143
	Garbage	220,194	63%	138,722	37%	81,472	259	103	63%	713	37%	1,072
	Yard Waste	13,624	63%	8,583	37%	5,041	259	103	63%	44	37%	66
	Total	287,176		180,921		106,255				930		1,398
Hauling Trucks	Hauling Away	14,214	81%	11,513	19%	2,701	259	103	81%	56	19%	35
Total		*343,260*		*231,791*		*111,469*				**1,157**		**1,510**

1. Annual Trips based on peak month

2. Assumes one holiday on a weekday and two on a weekend.

3. Weekend average increased by 5% to account for more vehicles on Saturday than Sunday.

Commercial Haul	waste	92.4%	1.847529	
Self Haul	recycle	7.6%	0.304942	
Hauling Trucks				

WEEKDAY	Factoria Commercia	SelfHaul	Total
Median	69	175	244
90th Percentile	78	232	305
Peak Increase	**113.0%**	**133.1%**	**125.0%**

Note: Median and 90th Percentile include all *weekdays* January 2013 - December 2013

WEEKEND	Factoria Commercia	SelfHaul	Total
Median	1	278	280
90th Percentile	3	376	377
Peak Increase	**300.0%**	**135.5%**	**134.8%**

Note: Median and 90th Percentile include all *weekends* January 2013 - December 2013

Time of Day Summary

Time of Day Summary of Trips

Weekday Summary

Hour	Commercial Haul %	Commercial Haul Trips	Self Haul: Recycle %	Recycle Trips	Hazardous Waste %	Hazardous Waste Trips	Garbage %	Garbage Trips	Yard Waste %	Yard Waste Trips	TOTAL	Hauling Trucks %	Hauling Trucks Trips	Total Trips
6:00	0%	0	0%	0	0%	0	0%	0	0%	0	0	12%	7	7
7:00	13%	22	4%	4	4%	4	4%	32	4%	2	42	6%	3	67
8:00	15%	25	6%	5	6%	6	6%	44	6%	3	58	12%	7	90
9:00	10%	17	10%	7	10%	9	10%	68	10%	4	88	9%	5	110
10:00	11%	20	12%	9	12%	11	12%	84	12%	5	109	12%	7	136
11:00	10%	17	13%	10	13%	12	13%	92	13%	6	120	9%	5	142
12:00	10%	18	13%	11	13%	13	13%	96	13%	5	125	9%	5	148
13:00	11%	21	14%	12	14%	13	14%	99	14%	6	130	6%	4	155
14:00	11%	21	13%	11	13%	13	13%	96	13%	6	126	9%	5	152
15:00	7%	11	13%	11	13%	13	13%	96	13%	6	126	6%	4	141
16:00	2%	3	1%	0	1%	1	1%	4	1%	0	5	3%	2	10
17:00	0%	0	0%	0	0%	0	0%	0	0%	0	0	3%	2	2
18:00	0%	0	0%	0	0%	0	0%	0	0%	0	0	0%	0	0
Daily Trips	**100%**	**175**	**100%**	**80**	**100%**	**95**	**100%**	**711**	**100%**	**43**	**929**	**97%**	**56**	**1160**

Weekend Summary

Hour	Commercial Haul %	Commercial Haul Trips	Self Haul: Recycle %	Recycle Trips	Hazardous Waste %	Hazardous Waste Trips	Garbage %	Garbage Trips	Yard Waste %	Yard Waste Trips	TOTAL	Hauling Trucks %	Hauling Trucks Trips	Total Trips
6:00	0%	0	0%	0	0%	0	0%	0	0%	0	0	11%	4	4
7:00	0%	0	0%	0	0%	0	0%	0	0%	0	0	5%	2	2
8:00	13%	10	5%	6	5%	7	5%	51	5%	3	67	11%	4	81
9:00	7%	5	7%	8	7%	10	7%	75	7%	5	98	5%	2	105
10:00	7%	5	10%	12	10%	15	10%	110	10%	7	144	11%	4	153
11:00	13%	10	12%	14	12%	17	12%	130	12%	8	169	5%	2	181
12:00	13%	10	13%	15	13%	18	13%	137	13%	8	178	5%	1	189
13:00	13%	10	13%	14	13%	18	13%	137	13%	8	177	5%	1	188
14:00	13%	10	14%	16	14%	20	14%	150	14%	10	196	11%	3	209
15:00	13%	10	13%	15	13%	19	13%	142	13%	9	185	5%	2	197
16:00	7%	5	10%	12	10%	15	10%	110	10%	7	144	5%	2	151
17:00	0%	0	3%	3	3%	4	3%	31	3%	2	40	5%	2	42
18:00	0%	0	0%	0	0%	0	0%	0	0%	0	0	0%	0	0
Daily Trips	**100%**	**75**	**100%**	**115**	**100%**	**143**	**100%**	**1073**	**100%**	**67**	**1398**	**84%**	**29**	**1502**

Note: Time of day percentages for commercial and self-haul based on observed trends at the Factoria facility.

Total trips based on tonnage and does not include reduction to account for shared trips (i.e. a recycle and garbage trip by a single customer). Modeling assumed an approximate 8 percent reduction in self haul trips.

2023 - King County Transfer Station Trip Generation - Shoreline Concept 0

Annual

2023 Annual Trip Generation Summary

Material	Tonnage		Average Tonnage/Vehicle[6]		Total Annual Trips[7]				Total Annual Weekday Trips[8]							Total Annual Weekend Trips						
									Commercial Haul		Self Haul		Hauling Trucks			Commercial Haul		Self Haul		Hauling Trucks		
	Commercial Haul	Self Haul	Commercial Haul	Self Haul	Commercial Haul	Self Haul	Hauling Trucks	Total	%	Trips	%	Trips	%	Trips	Total Trips	%	Trips	%	Trips	%	Trips	Total Trips
Recycling[1]	1,045	4,199	5.68	0.30	368	27,994		**28,362**	87%		65%	18,196			**18,196**	13%		35%	9,798			**9,798**
Hazardous Waste[2]																						
Garbage[3]	**34,551**	**31,669**	5.68	0.31	12,162	202,528		**214,690**	87%	10,581	65%	131,643			**142,224**	13%	1,581	35%	70,885			**72,466**
Yard Waste[4]		5,726	5.68	0.25	0	45,808		**45,808**	87%	0	65%	29,775			**29,775**	13%	0	35%	16,033			**16,033**
Hauling Away[5]							8,940	**8,940**					69%	6,169	**6,169**					31%	2,771	**2,771**
Total								**297,800**							**196,364**							**101,068**

1. Tonnage provided by King County assuming Houghton closes before 2023 and Bellevue leaves in 2029. Commercial average tonnage/vehicle estimated using garbage as guide (consistent with South County Recycling and Transfer Station site) and self haul is consistent with ton.veh used at South County Recycling and Transfer Station site.

2. No Hazardous Waste at the Shoreline Site.

3. Garbage tonnage provided by King County. Average Tonnage/Vehicle provided by KC for commericial vs self haul, self haul assumed to be without an account.

4. Yard Waste/Wood Waste and compostable paper provided by KC. Average tonnage/vehicle estimated using garbage as guide (consistent with South County Recycling and Transfer Station site)

5. Hauling away total annual trucks provided by King County. Average Tonnage/Vehicle consistent with South County Recycling and Transfer Station site.

17628.05

7. Total Annual Trips represents both inbound and outbound trips.

8.Annual weekday vs weekend trips based on 9/1/13-9/1/14 transaction data for Shoreline site provided by King county including self haul vs commercial.

Daily

Daily Trip Generation Summary - PEAK

	Material	Annual Trips[1]	Weekday %	Weekday Trips	Weekend %	Weekend Trips	Transfer Station Open[2] Weekdays/Year	Weekend Days/Year	Weekday Trips %	Weekday Trips Trips	Weekend Trips %	Weekend Trips Trips[3]	
Commercial Haul	Recycle	368	87%	320	13%	48	259	103	87%	2	13%	2	Commer
	Hazardous Waste	0	0%	0	100%	0	259	103	0%	0	100%	0	
	Garbage	12,162	87%	10,581	13%	1,581	259	103	87%	52	13%	64	
	Yard Waste	0	87%	0	13%	0	259	103	87%	0	13%	0	
	Total	12,530		10,901		1,629				54		66	
Self Haul	Recycle	27,994	65%	18,196	35%	9,798	259	103	65%	94	35%	127	Self Haul
	Hazardous Waste	0	0%	0	100%	0	259	103	0%	0	100%	0	
	Garbage	202,528	65%	131,643	35%	70,885	259	103	65%	677	35%	918	
	Yard Waste	45,808	65%	29,775	35%	16,033	259	103	65%	153	35%	208	
	Total	276,330		179,614		96,716				924		1,253	
Hauling Trucks	Hauling Away	8,940	69%	6,169	31%	2,771	259	103	69%	31	31%	36	Hauling Trucks
Total		***297,800***		***196,684***		***101,116***				**1,009**		**1,355**	

1. Annual Trips based on peak month

2. Assumes one holiday on a weekday and two on a weekend.

3. Weekend average increased by 5% to account for more vehicles on Saturday than Sunday.

waste	90.3%	0.902811	
recycle	9.7%	0.194378	

WEEKDAY	Shoreline Commerci	SelfHaul	Total
Median	22	185	207
90th Percentile	28	246	269
Peak Increase	**127.3%**	**133.1%**	**130.1%**

Note: Median and 90th Percentile include all *weekdays* January 2013 - December 2013

WEEKEND	Shoreline Commerci	SelfHaul	Total
Median	1	271	272
90th Percentile	4	361	363
Peak Increase	**400.0%**	**133.3%**	**133.3%**

Note: Median and 90th Percentile include all *weekends* January 2013 - December 2013

Time of Day Summary

Time of Day Summary of Trips

Hour	Weekday Summary: Commercial Haul %	Commercial Haul Trips	Self Haul: Recycle %	Recycle Trips	Hazardous Waste %	Hazardous Waste Trips	Garbage %	Garbage Trips	Yard Waste %	Yard Waste Trips	TOTAL	Hauling Trucks %	Hauling Trucks Trips	Total Trips
6:00	0%	0	0%	0	0%	0	0%	0	0%	0	0	8%	2	2
7:00	8%	4	3%	3	3%	0	3%	19	3%	4	26	8%	2	32
8:00	12%	6	5%	5	5%	0	5%	37	5%	8	50	8%	2	58
9:00	8%	4	8%	7	8%	0	8%	53	8%	12	72	8%	2	78
10:00	15%	8	10%	10	10%	0	10%	69	10%	16	95	8%	3	106
11:00	15%	8	12%	11	12%	0	12%	79	12%	17	107	8%	3	118
12:00	12%	7	13%	12	13%	0	13%	86	13%	19	117	8%	3	127
13:00	12%	7	12%	11	12%	0	12%	82	12%	19	112	8%	3	122
14:00	8%	5	13%	12	13%	0	13%	85	13%	19	116	8%	3	124
15:00	8%	4	13%	12	13%	0	13%	85	13%	19	116	8%	2	122
16:00	4%	2	12%	11	12%	0	12%	82	12%	19	112	8%	2	116
17:00	0%	0	0%	0	0%	0	0%	3	0%	1	4	8%	2	6
18:00	0%	0	0%	0	0%	0	0%	0	0%	0	0	8%	2	2
Daily Trips	**100%**	**55**	**100%**	**94**	**100%**	**0**	**100%**	**680**	**100%**	**153**	**927**	**100%**	**31**	**1013**

Hour	Weekend Summary: Commercial Haul %	Commercial Haul Trips	Self Haul: Recycle %	Recycle Trips	Hazardous Waste %	Hazardous Waste Trips	Garbage %	Garbage Trips	Yard Waste %	Yard Waste Trips	TOTAL	Hauling Trucks %	Hauling Trucks Trips	Total Trips
6:00	0%	0	0%	0	0%	0	0%	0	0%	0	0	5%	2	2
7:00	0%	0	0%	0	0%	0	0%	0	0%	0	0	11%	4	4
8:00	9%	6	4%	5	4%	0	4%	37	4%	8	50	11%	4	60
9:00	9%	6	7%	8	7%	0	7%	60	7%	14	82	5%	2	90
10:00	18%	12	9%	12	9%	0	9%	86	9%	20	118	11%	4	134
11:00	9%	7	12%	15	12%	0	12%	110	12%	25	150	11%	4	161
12:00	9%	7	13%	17	13%	0	13%	120	13%	27	164	5%	2	173
13:00	9%	6	13%	17	13%	0	13%	123	13%	27	167	5%	2	175
14:00	9%	6	14%	18	14%	0	14%	128	14%	29	175	11%	3	184
15:00	9%	6	13%	16	13%	0	13%	118	13%	27	161	11%	3	170
16:00	9%	6	12%	15	12%	0	12%	107	12%	24	146	5%	2	154
17:00	9%	6	3%	4	3%	0	3%	29	3%	7	40	0%	0	46
18:00	0%	0	0%	0	0%	0	0%	0	0%	0	0	0%	0	0
Daily Trips	**100%**	**68**	**100%**	**127**	**100%**	**0**	**100%**	**918**	**100%**	**208**	**1253**	**89%**	**32**	**1353**

Note: Time of day percentages for commercial and self-haul based on observed trends at the Shoreline facility.

Total trips based on tonnage and does not include reduction to account for shared trips (i.e. a recycle and garbage trip by a single customer). Modeling assumed an approximate 7 percent reduction in self haul trips.

2023 - King County Transfer Station Trip Generation - Shoreline Concept 1

Annual

2023 Annual Trip Generation Summary

Material	Tonnage		Average Tonnage/Vehicle		Total Annual Trips[6]				Total Annual Weekday Trips[7]							Total Annual Weekend Trips						
									Commercial Haul		Self Haul		Hauling Trucks			Commercial Haul		Self Haul		Hauling Trucks		
	Commercial Haul	Self Haul	Commercial Haul	Self Haul	Commercial Haul	Self Haul	Hauling Trucks	Total	%	Trips	%	Trips	%	Trips	Total Trips	%	Trips	%	Trips	%	Trips	Total Trips
Recycling[1]	1,259	4,199	5.70	0.30	442	27,994		**28,436**	87%		65%	18,196			**18,196**	13%		35%	9,798			**9,798**
Hazardous Waste[2]																						
Garbage[3]	**41,608**	**31,669**	5.70	0.31	14,594	202,528		**217,122**	87%	12,697	65%	131,643			**144,340**	13%	1,897	35%	70,885			**72,782**
Yard Waste[4]		5,726	5.70	0.25	0	45,808		**45,808**	87%	0	65%	29,775			**29,775**	13%	0	35%	16,033			**16,033**
Hauling Away[5]							9,494	**9,494**					69%	6,551	**6,551**					31%	2,943	**2,943**
Total								**300,860**							**198,862**							**101,556**

1. Tonnage provided by King County assuming Houghton closes before 2023 and Bellevue leaves in 2029. Commercial average tonnage/vehicle estimated using garbage as guide (consistent with South County Recycling and Transfer Station site) and self haul is consistent with ton.veh used at South County Recycling and Transfer Station site.

2. No Hazardous Waste at the Shoreline Site.

3. Garbage tonnage provided by King County for concept. Average Tonnage/Vehicle provided by KC for commericial vs self haul, self haul assumed to be without an account.

4. Yard Waste/Wood Waste and compostable paper provided by KC. Average tonnage/vehicle estimated using garbage as guide (consistent with South County Recycling and Transfer Station site)

5. Hauling away total annual trucks provided by King County. Average Tonnage/Vehicle consistent with South County Recycling and Transfer Station site.

6. Total Annual Trips represents both inbound and outbound trips.

7.Annual weekday vs weekend trips based on 9/1/13-9/1/14 transaction data for Shoreline site provided by King county including self haul vs commercial.

Daily

Daily Trip Generation Summary - PEAK

	Material	Annual Trips[1]	Weekday %	Weekday Trips	Weekend %	Weekend Trips	Transfer Station Open[2] Weekdays/Year	Transfer Station Open[2] Weekend Days/Year	Weekday Trips %	Weekday Trips Trips	Weekend Trips %	Weekend Trips Trips[3]
Commercial Haul	Recycle	442	87%	385	13%	57	259	103	87%	2	13%	2
	Hazardous Waste	0	0%	0	100%	0	259	103	0%	0	100%	0
	Garbage	14,594	87%	12,697	13%	1,897	259	103	87%	62	13%	77
	Yard Waste	0	87%	0	13%	0	259	103	87%	0	13%	0
	Total	15,036		13,082		1,954				64		79
Self Haul	Recycle	27,994	65%	18,196	35%	9,798	259	103	65%	94	35%	127
	Hazardous Waste	0	0%	0	100%	0	259	103	0%	0	100%	0
	Garbage	202,528	65%	131,643	35%	70,885	259	103	65%	677	35%	918
	Yard Waste	45,808	65%	29,775	35%	16,033	259	103	65%	153	35%	208
	Total	276,330		179,614		96,716				924		1,253
Hauling Trucks	Hauling Away	9,494	69%	6,551	31%	2,943	259	103	69%	33	31%	38
Total		*300,860*		*199,247*		*101,613*				**1,021**		**1,370**

1. Annual Trips based on peak month

2. Assumes one holiday on a weekday and two on a weekend.

3. Weekend average increased by 5% to account for more vehicles on Saturday than Sunday.

Commercial Haul	waste	90.4%	0	
Self Haul	recycle	9.6%	0	
Hauling Trucks				

WEEKDAY	Shoreline Commercia	SelfHaul	Total
Median	22	185	207
90th Percentile	28	246	269
Peak Increase	**127.3%**	**133.1%**	**130.1%**

Note: Median and 90th Percentile include all *weekdays* January 2013 - December 2013

WEEKEND	Shoreline Commercia	SelfHaul	Total
Median	1	271	272
90th Percentile	4	361	363
Peak Increase	**400.0%**	**133.3%**	**133.3%**

Note: Median and 90th Percentile include all *weekends* January 2013 - December 2013

Time of Day Summary

Time of Day Summary of Trips

Weekday Summary

Hour	Commercial Haul %	Commercial Haul Trips	Self Haul: Recycle %	Recycle Trips	Hazardous Waste %	Hazardous Waste Trips	Garbage %	Garbage Trips	Yard Waste %	Yard Waste Trips	TOTAL	Hauling Trucks %	Hauling Trucks Trips	Total Trips
6:00	0%	0	0%	0	0%	0	0%	0	0%	0	0	8%	3	3
7:00	8%	5	3%	3	3%	0	3%	19	3%	4	26	8%	3	34
8:00	12%	7	5%	5	5%	0	5%	37	5%	8	50	8%	3	60
9:00	8%	5	8%	7	8%	0	8%	53	8%	12	72	8%	3	80
10:00	15%	10	10%	10	10%	0	10%	69	10%	16	95	8%	3	108
11:00	15%	10	12%	11	12%	0	12%	79	12%	17	107	8%	3	120
12:00	12%	8	13%	12	13%	0	13%	86	13%	19	117	8%	3	128
13:00	12%	8	12%	11	12%	0	12%	82	12%	19	112	8%	3	123
14:00	8%	6	13%	12	13%	0	13%	85	13%	19	116	8%	3	125
15:00	8%	5	13%	12	13%	0	13%	85	13%	19	116	8%	3	124
16:00	4%	2	12%	11	12%	0	12%	82	12%	19	112	8%	3	117
17:00	0%	0	0%	0	0%	0	0%	3	0%	1	4	8%	3	7
18:00	0%	0	0%	0	0%	0	0%	0	0%	0	0	8%	3	3
Daily Trips	**100%**	**66**	**100%**	**94**	**100%**	**0**	**100%**	**680**	**100%**	**153**	**927**	**100%**	**39**	**1032**

Weekend Summary

Hour	Commercial Haul %	Commercial Haul Trips	Self Haul: Recycle %	Recycle Trips	Hazardous Waste %	Hazardous Waste Trips	Garbage %	Garbage Trips	Yard Waste %	Yard Waste Trips	TOTAL	Hauling Trucks %	Hauling Trucks Trips	Total Trips
6:00	0%	0	0%	0	0%	0	0%	0	0%	0	0	5%	2	2
7:00	0%	0	0%	0	0%	0	0%	0	0%	0	0	11%	4	4
8:00	9%	7	4%	5	4%	0	4%	37	4%	8	50	11%	4	61
9:00	9%	7	7%	8	7%	0	7%	60	7%	14	82	5%	2	91
10:00	18%	14	9%	12	9%	0	9%	86	9%	20	118	11%	4	136
11:00	9%	8	12%	15	12%	0	12%	110	12%	25	150	11%	4	162
12:00	9%	8	13%	17	13%	0	13%	120	13%	27	164	5%	2	174
13:00	9%	7	13%	17	13%	0	13%	123	13%	27	167	5%	2	176
14:00	9%	7	14%	18	14%	0	14%	128	14%	29	175	11%	3	185
15:00	9%	7	13%	16	13%	0	13%	118	13%	27	161	11%	3	171
16:00	9%	7	12%	15	12%	0	12%	107	12%	24	146	5%	2	155
17:00	9%	7	3%	4	3%	0	3%	29	3%	7	40	0%	0	47
18:00	0%	0	0%	0	0%	0	0%	0	0%	0	0	0%	0	0
Daily Trips	**100%**	**79**	**100%**	**127**	**100%**	**0**	**100%**	**918**	**100%**	**208**	**1253**	**89%**	**32**	**1364**

Note: Time of day percentages for commercial and self-haul based on observed trends at the Shoreline facility.

Total trips based on tonnage and does not include reduction to account for shared trips (i.e. a recycle and garbage trip by a single customer). Modeling assumed an approximate 7 percent reduction in self haul trips.

2023 - King County Transfer Station Trip Generation - Shoreline Concept 2

Annual

2023 Annual Trip Generation Summary

Material	Tonnage		Average Tonnage/Vehicle		Total Annual Trips[6]				Total Annual Weekday Trips[7]							Total Annual Weekend Trips						
									Commercial Haul		Self Haul		Hauling Trucks			Commercial Haul		Self Haul		Hauling Trucks		
	Commercial Haul	Self Haul	Commercial Haul	Self Haul	Commercial Haul	Self Haul	Hauling Trucks	Total	%	Trips	%	Trips	%	Trips	Total Trips	%	Trips	%	Trips	%	Trips	Total Trips
Recycling[1]	1,045	5,223	5.68	0.30	368	34,820		**35,188**	87%		65%	22,633			**22,633**	13%		35%	12,187			**12,187**
Hazardous Waste[2]																						
Garbage[3]	**34,551**	**39,393**	5.68	0.31	12,162	252,960		**265,122**	87%	10,581	65%	164,424			**175,005**	13%	1,581	35%	88,536			**90,117**
Yard Waste[4]		7,122	5.68	0.25	0	56,976		**56,976**	87%	0	65%	37,034			**37,034**	13%	0	35%	19,942			**19,942**
Hauling Away[5]							10,460	**10,460**					69%	7,217	**7,217**					31%	3,243	**3,243**
Total								**367,746**							**241,889**							**125,489**

1. Tonnage provided by King County assuming Houghton closes before 2023 and Bellevue leaves in 2029. Commercial average tonnage/vehicle estimated using garbage as guide (consistent with South County Recycling and Transfer Station site) and self haul is consistent with ton.veh used at South County Recycling and Transfer Station site.

2. No Hazardous Waste at the Shoreline Site.

3. Garbage tonnage provided by King County for concept. Average Tonnage/Vehicle provided by KC for commericial vs self haul, self haul assumed to be without an account.

4. Yard Waste/Wood Waste and compostable paper provided by KC. Average tonnage/vehicle estimated using garbage as guide (consistent with South County Recycling and Transfer Station site)

5. Hauling away total annual trucks provided by King County. Average Tonnage/Vehicle consistent with South County Recycling and Transfer Station site.

6. Total Annual Trips represents both inbound and outbound trips.

7.Annual weekday vs weekend trips based on 9/1/13-9/1/14 transaction data for Shoreline site provided by King county including self haul vs commercial.

Daily

Daily Trip Generation Summary - PEAK

	Material	Annual Trips[1]	Weekday %	Weekday Trips	Weekend %	Weekend Trips	Transfer Station Open[2] Weekdays/Year	Transfer Station Open[2] Weekend Days/Year	Weekday Trips %	Weekday Trips Trips	Weekend Trips %	Weekend Trips Trips[3]
Commercial Haul	Recycle	368	87%	320	13%	48	259	103	87%	2	13%	2
	Hazardous Waste	0	0%	0	100%	0	259	103	0%	0	100%	0
	Garbage	12,162	87%	10,581	13%	1,581	259	103	87%	52	13%	64
	Yard Waste	0	87%	0	13%	0	259	103	87%	0	13%	0
	Total	12,530		10,901		1,629				54		66
Self Haul	Recycle	34,820	65%	25,022	35%	9,798	259	103	65%	129	35%	127
	Hazardous Waste	0	0%	0	100%	0	259	103	0%	0	100%	0
	Garbage	252,960	65%	182,075	35%	70,885	259	103	65%	936	35%	918
	Yard Waste	56,976	65%	40,943	35%	16,033	259	103	65%	210	35%	208
	Total	344,756		248,040		96,716				1,275		1,253
Hauling Trucks	Hauling Away	10,460	69%	7,689	31%	2,771	259	103	69%	39	31%	36
Total		*367,746*		*266,630*		*101,116*				**1,368**		**1,355**

1. Annual Trips based on peak month

2. Assumes one holiday on a weekday and two on a weekend.

3. Weekend average increased by 5% to account for more vehicles on Saturday than Sunday.

Commercial Haul	waste	90.2%	0
Self Haul	recycle	9.8%	0
Hauling Trucks			

WEEKDAY	Shoreline Commercia	SelfHaul	Total
Median	22	185	207
90th Percentile	28	246	269
Peak Increase	**127.3%**	**133.1%**	**130.1%**

Note: Median and 90th Percentile include all *weekdays* January 2013 - December 2013

WEEKEND	Shoreline Commercia	SelfHaul	Total
Median	1	271	272
90th Percentile	4	361	363
Peak Increase	**400.0%**	**133.3%**	**133.3%**

Note: Median and 90th Percentile include all *weekends* January 2013 - December 2013

Time of Day Summary

Time of Day Summary of Trips

Weekday Summary

Hour	Commercial Haul %	Commercial Haul Trips	Self Haul: Recycle %	Recycle Trips	Hazardous Waste %	Hazardous Waste Trips	Garbage %	Garbage Trips	Yard Waste %	Yard Waste Trips	TOTAL	Hauling Trucks %	Hauling Trucks Trips	Total Trips
6:00	0%	0	0%	0	0%	0	0%	0	0%	0	0	8%	3	3
7:00	8%	4	3%	4	3%	0	3%	26	3%	6	36	8%	3	43
8:00	12%	6	5%	7	5%	0	5%	51	5%	11	69	8%	3	78
9:00	8%	4	8%	10	8%	0	8%	73	8%	16	99	8%	3	106
10:00	15%	8	10%	13	10%	0	10%	95	10%	21	129	8%	3	140
11:00	15%	8	12%	15	12%	0	12%	110	12%	24	149	8%	3	160
12:00	12%	7	13%	16	13%	0	13%	118	13%	26	160	8%	3	170
13:00	12%	7	12%	16	12%	0	12%	113	12%	25	154	8%	3	164
14:00	8%	5	13%	16	13%	0	13%	117	13%	26	159	8%	3	167
15:00	8%	4	13%	16	13%	0	13%	117	13%	26	159	8%	3	166
16:00	4%	2	12%	16	12%	0	12%	113	12%	25	154	8%	3	159
17:00	0%	0	0%	1	0%	0	0%	4	0%	1	6	8%	3	9
18:00	0%	0	0%	0	0%	0	0%	0	0%	0	0	8%	3	3
Daily Trips	**100%**	**55**	**100%**	**130**	**100%**	**0**	**100%**	**937**	**100%**	**207**	**1274**	**100%**	**39**	**1368**

Weekend Summary

Hour	Commercial Haul %	Commercial Haul Trips	Self Haul: Recycle %	Recycle Trips	Hazardous Waste %	Hazardous Waste Trips	Garbage %	Garbage Trips	Yard Waste %	Yard Waste Trips	TOTAL	Hauling Trucks %	Hauling Trucks Trips	Total Trips
6:00	0%	0	0%	0	0%	0	0%	0	0%	0	0	5%	2	2
7:00	0%	0	0%	0	0%	0	0%	0	0%	0	0	11%	4	4
8:00	9%	6	4%	5	4%	0	4%	37	4%	8	50	11%	4	60
9:00	9%	6	7%	8	7%	0	7%	60	7%	14	82	5%	2	90
10:00	18%	12	9%	12	9%	0	9%	86	9%	20	118	11%	4	134
11:00	9%	7	12%	15	12%	0	12%	110	12%	25	150	11%	4	161
12:00	9%	7	13%	17	13%	0	13%	120	13%	27	164	5%	2	173
13:00	9%	6	13%	17	13%	0	13%	123	13%	27	167	5%	2	175
14:00	9%	6	14%	18	14%	0	14%	128	14%	29	175	11%	3	184
15:00	9%	6	13%	16	13%	0	13%	118	13%	27	161	11%	3	170
16:00	9%	6	12%	15	12%	0	12%	107	12%	24	146	5%	2	154
17:00	9%	6	3%	4	3%	0	3%	29	3%	7	40	0%	0	46
18:00	0%	0	0%	0	0%	0	0%	0	0%	0	0	0%	0	0
Daily Trips	**100%**	**68**	**100%**	**127**	**100%**	**0**	**100%**	**918**	**100%**	**208**	**1253**	**89%**	**32**	**1353**

Note: Time of day percentages for commercial and self-haul based on observed trends at the Shoreline facility.

Total trips based on tonnage and does not include reduction to account for shared trips (i.e. a recycle and garbage trip by a single customer). Modeling assumed an approximate 7 percent reduction in self haul trips.

2023 - King County Transfer Station Trip Generation - Shoreline Concept 3

Annual

2023 Annual Trip Generation Summary

Material	Tonnage		Average Tonnage/Vehicle		Total Annual Trips[6]				Total Annual Weekday Trips[7]							Total Annual Weekend Trips						
									Commercial Haul		Self Haul		Hauling Trucks			Commercial Haul		Self Haul		Hauling Trucks		
	Commercial Haul	Self Haul	Commercial Haul	Self Haul	Commercial Haul	Self Haul	Hauling Trucks	Total	%	Trips	%	Trips	%	Trips	Total Trips	%	Trips	%	Trips	%	Trips	Total Trips
Recycling[1]	801	3,868	5.57	0.30	288	25,786		**26,074**	87%		65%	16,761			**16,761**	13%		35%	9,025			**9,025**
Hazardous Waste[2]																						
Garbage[3]	**24,767**	**23,333**	5.57	0.31	8,892	150,536		**159,428**	87%	7,736	65%	97,848			**105,584**	13%	1,156	35%	52,688			**53,844**
Yard Waste[4]		5,726	5.57	0.25	0	45,808		**45,808**	87%	0	65%	29,775			**29,775**	13%	0	35%	16,033			**16,033**
Hauling Away[5]							7,274	**7,274**					69%	5,019	**5,019**					31%	2,255	**2,255**
Total								**238,584**							**157,139**							**81,157**

1. Tonnage provided by King County assuming Houghton closes before 2023 and Bellevue leaves in 2029. Commercial average tonnage/vehicle estimated using garbage as guide (consistent with South County Recycling and Transfer Station site) and self haul is consistent with ton.veh used at South County Recycling and Transfer Station site.

2. No Hazardous Waste at the Shoreline Site.

3. Garbage tonnage provided by King County for concept. Average Tonnage/Vehicle provided by KC for commericial vs self haul, self haul assumed to be without an account.

4. Yard Waste/Wood Waste and compostable paper provided by KC. Average tonnage/vehicle estimated using garbage as guide (consistent with South County Recycling and Transfer Station site)

5. Hauling away total annual trucks provided by King County. Average Tonnage/Vehicle consistent with South County Recycling and Transfer Station site.

6. Total Annual Trips represents both inbound and outbound trips.

7.Annual weekday vs weekend trips based on 9/1/13-9/1/14 transaction data for Shoreline site provided by King county including self haul vs commercial.

Daily

Daily Trip Generation Summary - PEAK

	Material	Annual Trips[1]	Weekday %	Weekday Trips	Weekend %	Weekend Trips	Transfer Station Open[2] Weekdays/Year	Weekend Days/Year	Weekday Trips %	Weekday Trips Trips	Weekend Trips %	Weekend Trips Trips[3]
Commercial Haul	Recycle	288	87%	251	13%	37	259	103	87%	1	13%	2
	Hazardous Waste	0	0%	0	100%	0	259	103	0%	0	100%	0
	Garbage	8,892	87%	7,736	13%	1,156	259	103	87%	38	13%	47
	Yard Waste	0	87%	0	13%	0	259	103	87%	0	13%	0
	Total	9,180		7,987		1,193				39		49
Self Haul	Recycle	25,786	65%	16,761	35%	9,025	259	103	65%	86	35%	117
	Hazardous Waste	0	0%	0	100%	0	259	103	0%	0	100%	0
	Garbage	150,536	65%	97,848	35%	52,688	259	103	65%	503	35%	682
	Yard Waste	45,808	65%	29,775	35%	16,033	259	103	65%	153	35%	208
	Total	222,130		144,384		77,746				742		1,007
Hauling Trucks	Hauling Away	7,274	69%	5,019	31%	2,255	259	103	69%	25	31%	29
Total		*238,584*		*157,390*		*81,194*				**806**		**1,085**

1. Annual Trips based on peak month

2. Assumes one holiday on a weekday and two on a weekend.

3. Weekend average increased by 5% to account for more vehicles on Saturday than Sunday.

Commerci			
	waste	88.8%	0
Self Haul	recycle	11.2%	0
Hauling Trucks			

	Shoreline		
WEEKDAY	Commercia	SelfHaul	Total
Median	22	185	207
90th Percentile	28	246	269
Peak Increase	**127.3%**	**133.1%**	**130.1%**

Note: Median and 90th Percentile include all *weekdays* January 2013 - December 2013

	Shoreline		
WEEKEND	Commercia	SelfHaul	Total
Median	1	271	272
90th Percentile	4	361	363
Peak Increase	**400.0%**	**133.3%**	**133.3%**

Note: Median and 90th Percentile include all *weekends* January 2013 - December 2013

Time of Day Summary

Time of Day Summary of Trips

Hour	Weekday Summary: Commercial Haul %	Commercial Haul Trips	Self Haul: Recycle %	Recycle Trips	Hazardous Waste %	Hazardous Waste Trips	Garbage %	Garbage Trips	Yard Waste %	Yard Waste Trips	TOTAL	Hauling Trucks %	Hauling Trucks Trips	Total Trips
6:00	0%	0	0%	0	0%	0	0%	0	0%	0	0	8%	2	2
7:00	8%	3	3%	2	3%	0	3%	14	3%	4	20	8%	2	25
8:00	12%	5	5%	5	5%	0	5%	28	5%	8	41	8%	2	48
9:00	8%	3	8%	7	8%	0	8%	39	8%	12	58	8%	2	63
10:00	15%	6	10%	9	10%	0	10%	51	10%	16	76	8%	2	84
11:00	15%	6	12%	10	12%	0	12%	59	12%	17	86	8%	2	94
12:00	12%	6	13%	11	13%	0	13%	64	13%	19	94	8%	2	102
13:00	12%	6	12%	10	12%	0	12%	61	12%	19	90	8%	2	98
14:00	8%	4	13%	11	13%	0	13%	63	13%	19	93	8%	2	99
15:00	8%	3	13%	11	13%	0	13%	63	13%	19	93	8%	2	98
16:00	4%	2	12%	10	12%	0	12%	61	12%	19	90	8%	2	94
17:00	0%	0	0%	0	0%	0	0%	2	0%	1	3	8%	2	5
18:00	0%	0	0%	0	0%	0	0%	0	0%	0	0	8%	2	2
Daily Trips	**100%**	**44**	**100%**	**86**	**100%**	**0**	**100%**	**505**	**100%**	**153**	**744**	**100%**	**26**	**814**

Hour	Weekend Summary: Commercial Haul %	Commercial Haul Trips	Self Haul: Recycle %	Recycle Trips	Hazardous Waste %	Hazardous Waste Trips	Garbage %	Garbage Trips	Yard Waste %	Yard Waste Trips	TOTAL	Hauling Trucks %	Hauling Trucks Trips	Total Trips
6:00	0%	0	0%	0	0%	0	0%	0	0%	0	0	5%	2	2
7:00	0%	0	0%	0	0%	0	0%	0	0%	0	0	11%	3	3
8:00	9%	4	4%	5	4%	0	4%	27	4%	8	40	11%	3	47
9:00	9%	4	7%	8	7%	0	7%	45	7%	14	67	5%	2	73
10:00	18%	9	9%	11	9%	0	9%	64	9%	20	95	11%	3	107
11:00	9%	5	12%	14	12%	0	12%	82	12%	25	121	11%	3	129
12:00	9%	5	13%	15	13%	0	13%	89	13%	27	131	5%	2	138
13:00	9%	4	13%	16	13%	0	13%	91	13%	27	134	5%	2	140
14:00	9%	4	14%	16	14%	0	14%	95	14%	29	140	11%	2	146
15:00	9%	4	13%	15	13%	0	13%	87	13%	27	129	11%	2	135
16:00	9%	4	12%	14	12%	0	12%	80	12%	24	118	5%	2	124
17:00	9%	4	3%	4	3%	0	3%	21	3%	7	32	0%	0	36
18:00	0%	0	0%	0	0%	0	0%	0	0%	0	0	0%	0	0
Daily Trips	**100%**	**47**	**100%**	**118**	**100%**	**0**	**100%**	**681**	**100%**	**208**	**1007**	**89%**	**26**	**1080**

Note: Time of day percentages for commercial and self-haul based on observed trends at the Shoreline facility.

Total trips based on tonnage and does not include reduction to account for shared trips (i.e. a recycle and garbage trip by a single customer). Modeling assumed an approximate 7 percent reduction in self haul trips.

2023 - King County Transfer Station Trip Generation - Shoreline without Renton Concept 0

Annual

2023 Annual Trip Generation Summary

Material	Tonnage		Average Tonnage/Vehicle[6]		Total Annual Trips[7]				Total Annual Weekday Trips[8]							Total Annual Weekend Trips						
									Commercial Haul		Self Haul		Hauling Trucks			Commercial Haul		Self Haul		Hauling Trucks		
	Commercial Haul	Self Haul	Commercial Haul	Self Haul	Commercial Haul	Self Haul	Hauling Trucks	Total	%	Trips	%	Trips	%	Trips	Total Trips	%	Trips	%	Trips	%	Trips	Total Trips
Recycling[1]	1,045	4,199	5.68	0.30	368	27,994		**28,362**	87%		65%	18,196			**18,196**	13%		35%	9,798			**9,798**
Hazardous Waste[2]																						
Garbage[3]	**34,551**	**31,669**	5.68	0.31	12,162	202,528		**214,690**	87%	10,581	65%	131,643			**142,224**	13%	1,581	35%	70,885			**72,466**
Yard Waste[4]		5,726	5.68	0.25	0	45,808		**45,808**	87%	0	65%	29,775			**29,775**	13%	0	35%	16,033			**16,033**
Hauling Away[5]							8,940	**8,940**					69%	6,169	**6,169**					31%	2,771	**2,771**
Total								**297,800**							**196,364**							**101,068**

1. Tonnage provided by King County assuming Houghton closes before 2023 and Bellevue leaves in 2029. Commercial average tonnage/vehicle estimated using garbage as guide (consistent with South County Recycling and Transfer Station site) and self haul is consistent with ton.veh used at South County Recycling and Transfer Station site.

2. No Hazardous Waste at the Shoreline Site.

3. Garbage tonnage provided by King County. Average Tonnage/Vehicle provided by KC for commericial vs self haul, self haul assumed to be without an account.

4. Yard Waste/Wood Waste and compostable paper provided by KC. Average tonnage/vehicle estimated using garbage as guide (consistent with South County Recycling and Transfer Station site)

5. Hauling away total annual trucks provided by King County. Average Tonnage/Vehicle consistent with South County Recycling and Transfer Station site.

6. Average Tonnage/Vehicle reflects a weighted average taking into account the shift in tonnage from Houghton.

7. Total Annual Trips represents both inbound and outbound trips.

8.Annual weekday vs weekend trips based on 9/1/13-9/1/14 transaction data for Shoreline site provided by King county including self haul vs commercial.

Daily

Daily Trip Generation Summary - PEAK

	Material	Annual Trips[1]	Weekday %	Weekday Trips	Weekend %	Weekend Trips	Transfer Station Open[2] Weekdays/Year	Weekend Days/Year	Weekday Trips %	Weekday Trips Trips	Weekend Trips %	Weekend Trips Trips[3]
Commercial Haul	Recycle	368	87%	320	13%	48	259	103	87%	2	13%	2
	Hazardous Waste	0	0%	0	100%	0	259	103	0%	0	100%	0
	Garbage	12,162	87%	10,581	13%	1,581	259	103	87%	52	13%	64
	Yard Waste	0	87%	0	13%	0	259	103	87%	0	13%	0
	Total	12,530		10,901		1,629				54		66
Self Haul	Recycle	27,994	65%	18,196	35%	9,798	259	103	65%	94	35%	127
	Hazardous Waste	0	0%	0	100%	0	259	103	0%	0	100%	0
	Garbage	202,528	65%	131,643	35%	70,885	259	103	65%	677	35%	918
	Yard Waste	45,808	65%	29,775	35%	16,033	259	103	65%	153	35%	208
	Total	276,330		179,614		96,716				924		1,253
Hauling Trucks	Hauling Away	8,940	69%	6,169	31%	2,771	259	103	69%	31	31%	36
Total		*297,800*		*196,684*		*101,116*				**1,009**		**1,355**

1. Annual Trips based on peak month

2. Assumes one holiday on a weekday and two on a weekend.

3. Weekend average increased by 5% to account for more vehicles on Saturday than Sunday.

Commer

waste 90.3% 0.902811

Self Haul recycle 9.7% 0.194378

Hauling Trucks

WEEKDAY	Shoreline Commercia	SelfHaul	Total
Median	22	185	207
90th Percentile	28	246	269
Peak Increase	**127.3%**	**133.1%**	**130.1%**

Note: Median and 90th Percentile include all *weekdays* January 2013 - December 2013

WEEKEND	Shoreline Commercia	SelfHaul	Total
Median	1	271	272
90th Percentile	4	361	363
Peak Increase	**400.0%**	**133.3%**	**133.3%**

Note: Median and 90th Percentile include all *weekends* January 2013 - December 2013

Time of Day Summary

Time of Day Summary of Trips

Weekday Summary

Hour	Commercial Haul %	Commercial Haul Trips	Self Haul: Recycle %	Recycle Trips	Hazardous Waste %	Hazardous Waste Trips	Garbage %	Garbage Trips	Yard Waste %	Yard Waste Trips	TOTAL	Hauling Trucks %	Hauling Trucks Trips	Total Trips
6:00	0%	0	0%	0	0%	0	0%	0	0%	0	0	8%	2	2
7:00	8%	4	3%	3	3%	0	3%	19	3%	4	26	8%	2	32
8:00	12%	6	5%	5	5%	0	5%	37	5%	8	50	8%	2	58
9:00	8%	4	8%	7	8%	0	8%	53	8%	12	72	8%	2	78
10:00	15%	9	10%	10	10%	0	10%	69	10%	16	95	8%	3	107
11:00	15%	9	12%	11	12%	0	12%	79	12%	17	107	8%	3	119
12:00	12%	7	13%	12	13%	0	13%	86	13%	19	117	8%	3	127
13:00	12%	6	12%	11	12%	0	12%	82	12%	19	112	8%	3	121
14:00	8%	4	13%	12	13%	0	13%	85	13%	19	116	8%	3	123
15:00	8%	4	13%	12	13%	0	13%	85	13%	19	116	8%	2	122
16:00	4%	2	12%	11	12%	0	12%	82	12%	19	112	8%	2	116
17:00	0%	0	0%	0	0%	0	0%	3	0%	1	4	8%	2	6
18:00	0%	0	0%	0	0%	0	0%	0	0%	0	0	8%	2	2
Daily Trips	**100%**	**55**	**100%**	**94**	**100%**	**0**	**100%**	**680**	**100%**	**153**	**927**	**100%**	**31**	**1013**

Weekend Summary

Hour	Commercial Haul %	Commercial Haul Trips	Self Haul: Recycle %	Recycle Trips	Hazardous Waste %	Hazardous Waste Trips	Garbage %	Garbage Trips	Yard Waste %	Yard Waste Trips	TOTAL	Hauling Trucks %	Hauling Trucks Trips	Total Trips
6:00	0%	0	0%	0	0%	0	0%	0	0%	0	0	5%	2	2
7:00	0%	0	0%	0	0%	0	0%	0	0%	0	0	11%	4	4
8:00	9%	6	4%	5	4%	0	4%	37	4%	8	50	11%	4	60
9:00	9%	6	7%	8	7%	0	7%	60	7%	14	82	5%	2	90
10:00	18%	12	9%	12	9%	0	9%	86	9%	20	118	11%	4	134
11:00	9%	6	12%	15	12%	0	12%	110	12%	25	150	11%	4	160
12:00	9%	6	13%	17	13%	0	13%	120	13%	27	164	5%	2	172
13:00	9%	7	13%	17	13%	0	13%	123	13%	27	167	5%	2	176
14:00	9%	7	14%	18	14%	0	14%	128	14%	29	175	11%	3	185
15:00	9%	6	13%	16	13%	0	13%	118	13%	27	161	11%	3	170
16:00	9%	6	12%	15	12%	0	12%	107	12%	24	146	5%	2	154
17:00	9%	6	3%	4	3%	0	3%	29	3%	7	40	0%	0	46
18:00	0%	0	0%	0	0%	0	0%	0	0%	0	0	0%	0	0
Daily Trips	**100%**	**68**	**100%**	**127**	**100%**	**0**	**100%**	**918**	**100%**	**208**	**1253**	**89%**	**32**	**1353**

Note: Time of day percentages for commercial and self-haul based on observed trends at the Shoreline facility.

Total trips based on tonnage and does not include reduction to account for shared trips (i.e. a recycle and garbage trip by a single customer). Modeling assumed an approximate 7 percent reduction in self haul trips.

2023 - King County Transfer Station Trip Generation - Shoreline without Renton Concept 1

Annual

2023 Annual Trip Generation Summary

Material	Tonnage: Commercial Haul	Tonnage: Self Haul	Average Tonnage/Vehicle: Commercial Haul	Average Tonnage/Vehicle: Self Haul	Total Annual Trips[6]: Commercial Haul	Total Annual Trips[6]: Self Haul	Total Annual Trips[6]: Hauling Trucks	Total Annual Trips[6]: Total
Recycling[1]	3,348	4,199	5.75	0.30	1,164	27,994		**29,158**
Hazardous Waste[2]								
Garbage[3]	**110,642**	**31,669**	5.75	0.31	38,498	202,528		**241,026**
Yard Waste[4]		6,299	5.75	0.25	0	50,392		**50,392**
Hauling Away[5]							14,972	**14,972**
Total								**335,548**

Material	Total Annual Weekday Trips[7]: Commercial Haul %	Commercial Haul Trips	Self Haul %	Self Haul Trips	Hauling Trucks %	Hauling Trucks Trips	Total Trips	Total Annual Weekend Trips: Commercial Haul %	Commercial Haul Trips	Self Haul %	Self Haul Trips	Hauling Trucks %	Hauling Trucks Trips	Total Trips
Recycling[1]	87%		65%	18,196			**18,196**	13%		35%	9,798			**9,798**
Hazardous Waste[2]														
Garbage[3]	87%	33,493	65%	131,643			**165,136**	13%	5,005	35%	70,885			**75,890**
Yard Waste[4]	87%	0	65%	32,755			**32,755**	13%	0	35%	17,637			**17,637**
Hauling Away[5]					69%	10,331	**10,331**					31%	4,641	**4,641**
Total							**226,418**							**107,966**

1. Tonnage provided by King County assuming Houghton closes before 2023 and Bellevue leaves in 2029. Commercial average tonnage/vehicle estimated using garbage as guide (consistent with South County Recycling and Transfer Station site) and self haul is consistent with ton.veh used at South County Recycling and Transfer Station site.

2. No Hazardous Waste at the Shoreline Site.

3. Garbage tonnage provided by King County for concept. Average Tonnage/Vehicle provided by KC for commericial vs self haul, self haul assumed to be without an account.

4. Yard Waste/Wood Waste and compostable paper provided by KC. Average tonnage/vehicle estimated using garbage as guide (consistent with South County Recycling and Transfer Station site)

5. Hauling away total annual trucks provided by King County. Average Tonnage/Vehicle consistent with South County Recycling and Transfer Station site.

6. Total Annual Trips represents both inbound and outbound trips.

7.Annual weekday vs weekend trips based on 9/1/13-9/1/14 transaction data for Shoreline site provided by King county including self haul vs commercial.

Daily

Daily Trip Generation Summary - PEAK

	Material	Annual Trips[1]	Weekday %	Weekday Trips	Weekend %	Weekend Trips	Transfer Station Open[2]: Weekdays/Year	Weekend Days/Year	Weekday Trips %	Weekday Trips Trips	Weekend Trips %	Weekend Trips Trips[3]
Commercial Haul	Recycle	1,164	87%	1,013	13%	151	259	103	87%	5	13%	6
	Hazardous Waste	0	0%	0	100%	0	259	103	0%	0	100%	0
	Garbage	38,498	87%	33,493	13%	5,005	259	103	87%	165	13%	204
	Yard Waste	0	87%	0	13%	0	259	103	87%	0	13%	0
	Total	39,662		34,506		5,156				170		210
Self Haul	Recycle	27,994	65%	18,196	35%	9,798	259	103	65%	94	35%	127
	Hazardous Waste	0	0%	0	100%	0	259	103	0%	0	100%	0
	Garbage	202,528	65%	131,643	35%	70,885	259	103	65%	677	35%	918
	Yard Waste	50,392	65%	32,755	35%	17,637	259	103	65%	168	35%	228
	Total	280,914		182,594		98,320				939		1,273
Hauling Trucks	Hauling Away	14,972	69%	10,331	31%	4,641	259	103	69%	52	31%	60
Total		*335,548*		*227,431*		*108,117*				**1,161**		**1,543**

1. Annual Trips based on peak month

2. Assumes one holiday on a weekday and two on a weekend.

3. Weekend average increased by 5% to account for more vehicles on Saturday than Sunday.

Commer				
	waste	91.2%	0	
Self Haul	recycle	8.8%	0	
Hauling Trucks				

WEEKDAY	Shoreline Commercia	SelfHaul	Total
Median	22	185	207
90th Percentile	28	246	269
Peak Increase	**127.3%**	**133.1%**	**130.1%**

Note: Median and 90th Percentile include all *weekdays* January 2013 - December 2013

WEEKEND	Shoreline Commercia	SelfHaul	Total
Median	1	271	272
90th Percentile	4	361	363
Peak Increase	**400.0%**	**133.3%**	**133.3%**

Note: Median and 90th Percentile include all *weekends* January 2013 - December 2013

Time of Day Summary

Time of Day Summary of Trips

Weekday Summary

Hour	Commercial Haul %	Commercial Haul Trips	Recycle %	Recycle Trips	Hazardous Waste %	Hazardous Waste Trips	Garbage %	Garbage Trips	Yard Waste %	Yard Waste Trips	Self Haul TOTAL	Hauling Trucks %	Hauling Trucks Trips	Total Trips
6:00	0%	0	0%	0	0%	0	0%	0	0%	0	0	8%	4	4
7:00	8%	13	3%	3	3%	0	3%	19	3%	5	27	8%	4	44
8:00	12%	20	5%	5	5%	0	5%	37	5%	9	51	8%	4	75
9:00	8%	13	8%	7	8%	0	8%	53	8%	13	73	8%	4	90
10:00	15%	27	10%	10	10%	0	10%	69	10%	17	96	8%	5	128
11:00	15%	27	12%	11	12%	0	12%	79	12%	19	109	8%	5	141
12:00	12%	21	13%	12	13%	0	13%	86	13%	21	119	8%	5	145
13:00	12%	20	12%	11	12%	0	12%	82	12%	20	113	8%	5	138
14:00	8%	13	13%	12	13%	0	13%	85	13%	21	118	8%	5	136
15:00	8%	13	13%	12	13%	0	13%	85	13%	21	118	8%	4	135
16:00	4%	7	12%	11	12%	0	12%	82	12%	20	113	8%	4	124
17:00	0%	0	0%	0	0%	0	0%	3	0%	1	4	8%	4	8
18:00	0%	0	0%	0	0%	0	0%	0	0%	0	0	8%	4	4
Daily Trips	**100%**	**174**	**100%**	**94**	**100%**	**0**	**100%**	**680**	**100%**	**167**	**941**	**100%**	**57**	**1172**

Weekend Summary

Hour	Commercial Haul %	Commercial Haul Trips	Recycle %	Recycle Trips	Hazardous Waste %	Hazardous Waste Trips	Garbage %	Garbage Trips	Yard Waste %	Yard Waste Trips	Self Haul TOTAL	Hauling Trucks %	Hauling Trucks Trips	Total Trips
6:00	0%	0	0%	0	0%	0	0%	0	0%	0	0	5%	3	3
7:00	0%	0	0%	0	0%	0	0%	0	0%	0	0	11%	6	6
8:00	9%	19	4%	5	4%	0	4%	37	4%	9	51	11%	6	76
9:00	9%	19	7%	8	7%	0	7%	60	7%	15	83	5%	3	105
10:00	18%	38	9%	12	9%	0	9%	86	9%	21	119	11%	6	163
11:00	9%	19	12%	15	12%	0	12%	110	12%	27	152	11%	6	177
12:00	9%	19	13%	17	13%	0	13%	120	13%	30	167	5%	3	189
13:00	9%	20	13%	17	13%	0	13%	123	13%	30	170	5%	3	193
14:00	9%	20	14%	18	14%	0	14%	128	14%	32	178	11%	5	203
15:00	9%	19	13%	16	13%	0	13%	118	13%	29	163	11%	5	187
16:00	9%	19	12%	15	12%	0	12%	107	12%	27	149	5%	3	171
17:00	9%	19	3%	4	3%	0	3%	29	3%	7	40	0%	0	59
18:00	0%	0	0%	0	0%	0	0%	0	0%	0	0	0%	0	0
Daily Trips	**100%**	**211**	**100%**	**127**	**100%**	**0**	**100%**	**918**	**100%**	**227**	**1272**	**89%**	**49**	**1532**

Note: Time of day percentages for commercial and self-haul based on observed trends at the Shoreline facility.

Total trips based on tonnage and does not include reduction to account for shared trips (i.e. a recycle and garbage trip by a single customer). Modeling assumed an approximate 7 percent reduction in self haul trips.

2023 - King County Transfer Station Trip Generation - Shoreline without Renton Concept 2

Annual

2023 Annual Trip Generation Summary

Material	Tonnage: Commercial Haul	Tonnage: Self Haul	Average Tonnage/Vehicle: Commercial Haul	Average Tonnage/Vehicle: Self Haul	Total Annual Trips[6]: Commercial Haul	Total Annual Trips[6]: Self Haul	Total Annual Trips[6]: Hauling Trucks	Total Annual Trips[6]: Total
Recycling[1]	1,045	6,248	5.68	0.30	368	41,654		**42,022**
Hazardous Waste[2]								
Garbage[3]	**34,551**	**47,117**	5.68	0.31	12,162	303,398		**315,560**
Yard Waste[4]		8,519	5.68	0.25	0	68,152		**68,152**
Hauling Away[5]							11,980	**11,980**
Total								**437,714**

Material	Total Annual Weekday Trips[7]: Commercial Haul %	Commercial Haul Trips	Self Haul %	Self Haul Trips	Hauling Trucks %	Hauling Trucks Trips	Total Trips	Total Annual Weekend Trips: Commercial Haul %	Commercial Haul Trips	Self Haul %	Self Haul Trips	Hauling Trucks %	Hauling Trucks Trips	Total Trips
Recycling[1]	87%		65%	27,075			**27,075**	13%		35%	14,579			**14,579**
Hazardous Waste[2]														
Garbage[3]	87%	10,581	65%	197,209			**207,790**	13%	1,581	35%	106,189			**107,770**
Yard Waste[4]	87%	0	65%	44,299			**44,299**	13%	0	35%	23,853			**23,853**
Hauling Away[5]					69%	8,266	**8,266**					31%	3,714	**3,714**
Total							**287,430**							**149,916**

1. Tonnage provided by King County assuming Houghton closes before 2023 and Bellevue leaves in 2029. Commercial average tonnage/vehicle estimated using garbage as guide (consistent with South County Recycling and Transfer Station site) and self haul is consistent with ton.veh used at South County Recycling and Transfer Station site.

2. No Hazardous Waste at the Shoreline Site.

3. Garbage tonnage provided by King County for concept. Average Tonnage/Vehicle provided by KC for commericial vs self haul, self haul assumed to be without an account.

4. Yard Waste/Wood Waste and compostable paper provided by KC. Average tonnage/vehicle estimated using garbage as guide (consistent with South County Recycling and Transfer Station site)

5. Hauling away total annual trucks provided by King County. Average Tonnage/Vehicle consistent with South County Recycling and Transfer Station site.

6. Total Annual Trips represents both inbound and outbound trips.

7.Annual weekday vs weekend trips based on 9/1/13-9/1/14 transaction data for Shoreline site provided by King county including self haul vs commercial.

Daily

Daily Trip Generation Summary - PEAK

	Material	Annual Trips[1]	Weekday %	Weekday Trips	Weekend %	Weekend Trips	Transfer Station Open[2]: Weekdays/Year	Weekend Days/Year	Weekday Trips %	Weekday Trips Trips	Weekend Trips %	Weekend Trips Trips[3]
Commercial Haul	Recycle	368	87%	320	13%	48	259	103	87%	2	13%	2
	Hazardous Waste	0	0%	0	100%	0	259	103	0%	0	100%	0
	Garbage	12,162	87%	10,581	13%	1,581	259	103	87%	52	13%	64
	Yard Waste	0	87%	0	13%	0	259	103	87%	0	13%	0
	Total	12,530		10,901		1,629				54		66
Self Haul	Recycle	41,654	65%	31,856	35%	9,798	259	103	65%	164	35%	127
	Hazardous Waste	0	0%	0	100%	0	259	103	0%	0	100%	0
	Garbage	303,398	65%	232,513	35%	70,885	259	103	65%	1,195	35%	918
	Yard Waste	68,152	65%	52,119	35%	16,033	259	103	65%	268	35%	208
	Total	413,204		316,488		96,716				1,627		1,253
Hauling Trucks	Hauling Away	11,980	69%	9,209	31%	2,771	259	103	69%	46	31%	36
Total		*437,714*		*336,598*		*101,116*				**1,727**		**1,355**

1. Annual Trips based on peak month

2. Assumes one holiday on a weekday and two on a weekend.

3. Weekend average increased by 5% to account for more vehicles on Saturday than Sunday.

Commercial Haul	waste	90.2%	0	
Self Haul	recycle	9.8%	0	
Hauling Trucks				

WEEKDAY	Shoreline Commercia	SelfHaul	Total
Median	22	185	207
90th Percentile	28	246	269
Peak Increase	**127.3%**	**133.1%**	**130.1%**

Note: Median and 90th Percentile include all *weekdays* January 2013 - December 2013

WEEKEND	Shoreline Commercia	SelfHaul	Total
Median	1	271	272
90th Percentile	4	361	363
Peak Increase	**400.0%**	**133.3%**	**133.3%**

Note: Median and 90th Percentile include all *weekends* January 2013 - December 2013

Time of Day Summary

Time of Day Summary of Trips

Weekday Summary

Hour	Commercial Haul %	Commercial Haul Trips	Self Haul: Recycle %	Recycle Trips	Hazardous Waste %	Hazardous Waste Trips	Garbage %	Garbage Trips	Yard Waste %	Yard Waste Trips	TOTAL	Hauling Trucks %	Hauling Trucks Trips	Total Trips
6:00	0%	0	0%	0	0%	0	0%	0	0%	0	0	8%	4	4
7:00	8%	4	3%	4	3%	0	3%	33	3%	7	44	8%	4	52
8:00	12%	6	5%	9	5%	0	5%	65	5%	15	89	8%	4	99
9:00	8%	4	8%	13	8%	0	8%	93	8%	21	127	8%	4	135
10:00	15%	9	10%	17	10%	0	10%	121	10%	27	165	8%	5	179
11:00	15%	9	12%	19	12%	0	12%	140	12%	30	189	8%	5	203
12:00	12%	7	13%	21	13%	0	13%	150	13%	34	205	8%	5	217
13:00	12%	6	12%	20	12%	0	12%	145	12%	32	197	8%	5	208
14:00	8%	4	13%	21	13%	0	13%	149	13%	34	204	8%	5	213
15:00	8%	4	13%	21	13%	0	13%	149	13%	34	204	8%	4	212
16:00	4%	2	12%	20	12%	0	12%	145	12%	32	197	8%	4	203
17:00	0%	0	0%	1	0%	0	0%	5	0%	1	7	8%	4	11
18:00	0%	0	0%	0	0%	0	0%	0	0%	0	0	8%	4	4
Daily Trips	**100%**	**55**	**100%**	**166**	**100%**	**0**	**100%**	**1195**	**100%**	**267**	**1628**	**100%**	**57**	**1740**

Weekend Summary

Hour	Commercial Haul %	Commercial Haul Trips	Self Haul: Recycle %	Recycle Trips	Hazardous Waste %	Hazardous Waste Trips	Garbage %	Garbage Trips	Yard Waste %	Yard Waste Trips	TOTAL	Hauling Trucks %	Hauling Trucks Trips	Total Trips
6:00	0%	0	0%	0	0%	0	0%	0	0%	0	0	5%	2	2
7:00	0%	0	0%	0	0%	0	0%	0	0%	0	0	11%	4	4
8:00	9%	6	4%	5	4%	0	4%	37	4%	8	50	11%	4	60
9:00	9%	6	7%	8	7%	0	7%	60	7%	14	82	5%	2	90
10:00	18%	12	9%	12	9%	0	9%	86	9%	20	118	11%	4	134
11:00	9%	6	12%	15	12%	0	12%	110	12%	25	150	11%	4	160
12:00	9%	6	13%	17	13%	0	13%	120	13%	27	164	5%	2	172
13:00	9%	7	13%	17	13%	0	13%	123	13%	27	167	5%	2	176
14:00	9%	7	14%	18	14%	0	14%	128	14%	29	175	11%	3	185
15:00	9%	6	13%	16	13%	0	13%	118	13%	27	161	11%	3	170
16:00	9%	6	12%	15	12%	0	12%	107	12%	24	146	5%	2	154
17:00	9%	6	3%	4	3%	0	3%	29	3%	7	40	0%	0	46
18:00	0%	0	0%	0	0%	0	0%	0	0%	0	0	0%	0	0
Daily Trips	**100%**	**68**	**100%**	**127**	**100%**	**0**	**100%**	**918**	**100%**	**208**	**1253**	**89%**	**32**	**1353**

Note: Time of day percentages for commercial and self-haul based on observed trends at the Shoreline facility.

Total trips based on tonnage and does not include reduction to account for shared trips (i.e. a recycle and garbage trip by a single customer). Modeling assumed an approximate 7 percent reduction in self haul trips.

2023 - King County Transfer Station Trip Generation - Shoreline without Renton Concept 3

Annual

2023 Annual Trip Generation Summary

Material	Tonnage: Commercial Haul	Tonnage: Self Haul	Average Tonnage/Vehicle: Commercial Haul	Average Tonnage/Vehicle: Self Haul	Total Annual Trips[6]: Commercial Haul	Total Annual Trips[6]: Self Haul	Total Annual Trips[6]: Hauling Trucks	Total Annual Trips[6]: Total
Recycling[1]	801	3,868	5.57	0.30	288	25,786		**26,074**
Hazardous Waste[2]								
Garbage[3]	**24,767**	**23,333**	5.57	0.31	8,892	150,536		**159,428**
Yard Waste[4]		5,726	5.57	0.25	0	45,808		**45,808**
Hauling Away[5]							7,274	**7,274**
Total								**238,584**

Material	Total Annual Weekday Trips[7]: Commercial Haul %	Commercial Haul Trips	Self Haul %	Self Haul Trips	Hauling Trucks %	Hauling Trucks Trips	Total Trips	Total Annual Weekend Trips: Commercial Haul %	Commercial Haul Trips	Self Haul %	Self Haul Trips	Hauling Trucks %	Hauling Trucks Trips	Total Trips
Recycling[1]	87%		65%	16,761			**16,761**	13%		35%	9,025			**9,025**
Hazardous Waste[2]														
Garbage[3]	87%	7,736	65%	97,848			**105,584**	13%	1,156	35%	52,688			**53,844**
Yard Waste[4]	87%	0	65%	29,775			**29,775**	13%	0	35%	16,033			**16,033**
Hauling Away[5]					69%	5,019	**5,019**					31%	2,255	**2,255**
Total							**157,139**							**81,157**

1. Tonnage provided by King County assuming Houghton closes before 2023 and Bellevue leaves in 2029. Commercial average tonnage/vehicle estimated using garbage as guide (consistent with South County Recycling and Transfer Station site) and self haul is consistent with ton.veh used at South County Recycling and Transfer Station site.

2. No Hazardous Waste at the Shoreline Site.

3. Garbage tonnage provided by King County for concept. Average Tonnage/Vehicle provided by KC for commericial vs self haul, self haul assumed to be without an account.

4. Yard Waste/Wood Waste and compostable paper provided by KC. Average tonnage/vehicle estimated using garbage as guide (consistent with South County Recycling and Transfer Station site)

5. Hauling away total annual trucks provided by King County. Average Tonnage/Vehicle consistent with South County Recycling and Transfer Station site.

6. Total Annual Trips represents both inbound and outbound trips.

7.Annual weekday vs weekend trips based on 9/1/13-9/1/14 transaction data for Shoreline site provided by King county including self haul vs commercial.

Daily

Daily Trip Generation Summary - PEAK

	Material	Annual Trips[1]	Weekday %	Weekday Trips	Weekend %	Weekend Trips	Transfer Station Open[2]: Weekdays/Year	Transfer Station Open[2]: Weekend Days/Year	Weekday Trips %	Weekday Trips Trips	Weekend Trips %	Weekend Trips Trips[3]
Commercial Haul	Recycle	288	87%	251	13%	37	259	103	87%	1	13%	2
	Hazardous Waste	0	0%	0	100%	0	259	103	0%	0	100%	0
	Garbage	8,892	87%	7,736	13%	1,156	259	103	87%	38	13%	47
	Yard Waste	0	87%	0	13%	0	259	103	87%	0	13%	0
	Total	9,180		7,987		1,193				39		49
Self Haul	Recycle	25,786	65%	16,761	35%	9,025	259	103	65%	86	35%	117
	Hazardous Waste	0	0%	0	100%	0	259	103	0%	0	100%	0
	Garbage	150,536	65%	97,848	35%	52,688	259	103	65%	503	35%	682
	Yard Waste	45,808	65%	29,775	35%	16,033	259	103	65%	153	35%	208
	Total	222,130		144,384		77,746				742		1,007
Hauling Trucks	Hauling Away	7,274	69%	5,019	31%	2,255	259	103	69%	25	31%	29
Total		*238,584*		*157,390*		*81,194*				**806**		**1,085**

1. Annual Trips based on peak month

2. Assumes one holiday on a weekday and two on a weekend.

3. Weekend average increased by 5% to account for more vehicles on Saturday than Sunday.

Commer	waste	88.8%	0	
Self Haul	recycle	11.2%	0	
Hauling Trucks				

WEEKDAY	Shoreline Commercia	SelfHaul	Total
Median	22	185	207
90th Percentile	28	246	269
Peak Increase	**127.3%**	**133.1%**	**130.1%**

Note: Median and 90th Percentile include all *weekdays* January 2013 - December 2013

WEEKEND	Shoreline Commercia	SelfHaul	Total
Median	1	271	272
90th Percentile	4	361	363
Peak Increase	**400.0%**	**133.3%**	**133.3%**

Note: Median and 90th Percentile include all *weekends* January 2013 - December 2013

Time of Day Summary

Time of Day Summary of Trips

Weekday Summary

Hour	Commercial Haul %	Commercial Haul Trips	Self Haul: Recycle %	Recycle Trips	Hazardous Waste %	Hazardous Waste Trips	Garbage %	Garbage Trips	Yard Waste %	Yard Waste Trips	TOTAL	Hauling Trucks %	Hauling Trucks Trips	Total Trips
6:00	0%	0	0%	0	0%	0	0%	0	0%	0	0	8%	2	2
7:00	8%	3	3%	2	3%	0	3%	14	3%	4	20	8%	2	25
8:00	12%	5	5%	5	5%	0	5%	28	5%	8	41	8%	2	48
9:00	8%	3	8%	7	8%	0	8%	39	8%	12	58	8%	2	63
10:00	15%	7	10%	9	10%	0	10%	51	10%	16	76	8%	3	86
11:00	15%	7	12%	10	12%	0	12%	59	12%	17	86	8%	3	96
12:00	12%	6	13%	11	13%	0	13%	64	13%	19	94	8%	3	103
13:00	12%	5	12%	10	12%	0	12%	61	12%	19	90	8%	3	98
14:00	8%	3	13%	11	13%	0	13%	63	13%	19	93	8%	3	99
15:00	8%	3	13%	11	13%	0	13%	63	13%	19	93	8%	2	98
16:00	4%	2	12%	10	12%	0	12%	61	12%	19	90	8%	2	94
17:00	0%	0	0%	0	0%	0	0%	2	0%	1	3	8%	2	5
18:00	0%	0	0%	0	0%	0	0%	0	0%	0	0	8%	2	2
Daily Trips	**100%**	**44**	**100%**	**86**	**100%**	**0**	**100%**	**505**	**100%**	**153**	**744**	**100%**	**31**	**819**

Weekend Summary

Hour	Commercial Haul %	Commercial Haul Trips	Self Haul: Recycle %	Recycle Trips	Hazardous Waste %	Hazardous Waste Trips	Garbage %	Garbage Trips	Yard Waste %	Yard Waste Trips	TOTAL	Hauling Trucks %	Hauling Trucks Trips	Total Trips
6:00	0%	0	0%	0	0%	0	0%	0	0%	0	0	5%	2	2
7:00	0%	0	0%	0	0%	0	0%	0	0%	0	0	11%	3	3
8:00	9%	4	4%	5	4%	0	4%	27	4%	8	40	11%	3	47
9:00	9%	4	7%	8	7%	0	7%	45	7%	14	67	5%	2	73
10:00	18%	9	9%	11	9%	0	9%	64	9%	20	95	11%	3	107
11:00	9%	4	12%	14	12%	0	12%	82	12%	25	121	11%	3	128
12:00	9%	4	13%	15	13%	0	13%	89	13%	27	131	5%	2	137
13:00	9%	5	13%	16	13%	0	13%	91	13%	27	134	5%	2	141
14:00	9%	5	14%	16	14%	0	14%	95	14%	29	140	11%	2	147
15:00	9%	4	13%	15	13%	0	13%	87	13%	27	129	11%	2	135
16:00	9%	4	12%	14	12%	0	12%	80	12%	24	118	5%	2	124
17:00	9%	4	3%	4	3%	0	3%	21	3%	7	32	0%	0	36
18:00	0%	0	0%	0	0%	0	0%	0	0%	0	0	0%	0	0
Daily Trips	**100%**	**47**	**100%**	**118**	**100%**	**0**	**100%**	**681**	**100%**	**208**	**1007**	**89%**	**26**	**1080**

Note: Time of day percentages for commercial and self-haul based on observed trends at the Shoreline facility.

Total trips based on tonnage and does not include reduction to account for shared trips (i.e. a recycle and garbage trip by a single customer). Modeling assumed an approximate 7 percent reduction in self haul trips.

ATTACHMENT F

Attachment F- 1
Bow Lake Tier 1 Weekday With-Renton Summary

Improvements		Site Capacity (Trips)	Percent Reduction	Concept 0		Concept 1		Concept 2		Concept 3	
				C0 Trips	Adjusted Trips	C1 Trips	Adjusted Trips	C2 Trips	Adjusted Trips	C3 Trips	Adjusted Trips
Extend Operating Hours		61	0%	91	91	89	89	91	91	91	91
Provide wait time information		61	1%	91	90	89	88	91	90	91	90
Lower cost curbside bulky waste collection		61	3.3%	91	89	89	87	91	89	91	89
Mandatory curbside garbage collection		61	14.9%	91	81	89	79	91	81	91	81
Lower regional direct fee to encourage haulers to use their own transfer stations		61	5%	91	88	89	86	91	88	91	88
Banned Materials	Banning yard/wood waste from both disposal and recycling	61	34%	91	69	89	67	91	69	91	69
	Reduction in HHW only transactions	61	0%	91	91	89	89	91	91	91	91
Incentive/peak pricing		61	0%	91	91	89	89	91	91	91	91
Minimum Fee	Factoria Only - Doubling the minimum fee	61	0%	91	91	89	89	91	91	91	91
	System Wide	61	7.5%	91	86	89	84	91	86	91	86
Drop Box	Northeast	61	0%	91	91	89	89	91	91	91	91
	Southeast	61	0%	91	91	89	89	91	91	91	91
Ban non-system Self Haul (effective 2029)		61	1%	91	88						

Attachment F- 2
Bow Lake Tier 1 Saturday With-Renton Summary

Improvements	Site Capacity (Trips)	Percent Reduction	Concept 0		Concept 1		Concept 2		Concept 3	
			C0 Trips	Adjusted Trips	C1 Trips	Adjusted Trips	C2 Trips	Adjusted Trips	C3 Trips	Adjusted Trips
Extend Operating Hours	70	0%	115	115	114	114	115	115	115	115
Provide wait time information	70	1%	115	114	114	113	115	114	115	114
Lower cost curbside bulky waste collection	70	3.3%	115	112	114	111	115	112	115	112
Mandatory curbside garbage collection	70	14.9%	115	99	114	98	115	99	115	99

Improvements		Site Capacity (Trips)	Percent Reduction	Concept 0		Concept 1		Concept 2		Concept 3	
				C0 Trips	Adjusted Trips	C1 Trips	Adjusted Trips	C2 Trips	Adjusted Trips	C3 Trips	Adjusted Trips
Lower regional direct fee to encourage haulers to use their own transfer stations		70	5%	115	110	114	109	115	110	115	110
Banned Materials	Banning yard/wood waste from both disposal and recycling	70	34%	115	79	114	78	115	79	115	79
	Reduction in HHW only transactions	70	0%	115	115	114	114	115	115	115	115
Incentive/peak pricing		70	0%	115	115	114	114	115	115	115	115
Minimum Fee	Factoria Only - Doubling the minimum fee	70	0%	115	115	114	114	115	115	115	115
	System Wide	70	7.5%	115	107	114	106	115	107	115	107
Drop Box	Northeast	70	0%	115	115	114	114	115	115	115	115
	Southeast	70	0%	115	115	114	114	115	115	115	115
Ban non-system Self Haul (effective 2029)		70	1%	115	109						

Attachment F- 3
Bow Lake Tier 1 Weekday Without-Renton Summary

Improvements		Site Capacity (Trips)	Percent Reduction	Concept 0		Concept 1		Concept 2		Concept 3	
				C0 Trips	Adjusted Trips	C1 Trips	Adjusted Trips	C2 Trips	Adjusted Trips	C3 Trips	Adjusted Trips
Extend Operating Hours		61	0%	115	115	115	115	123	123	116	116
Provide wait time information		61	1%	115	114	115	114	123	122	116	115
Lower cost curbside bulky waste collection		61	3.3%	115	112	115	112	123	120	116	113
Mandatory curbside garbage collection		61	14.9%	115	102	115	102	123	109	116	103
Lower regional direct fee to encourage haulers to use their own transfer stations		61	5%	115	111	115	111	123	118	116	112
Banned Materials	Banning yard/wood waste from both disposal and recycling	61	34%	115	86	115	86	123	91	116	87
	Reduction in HHW only transactions	61	0%	115	115	115	115	123	123	116	116
Incentive/peak pricing		61	0%	115	115	115	115	123	123	116	116

Improvements		Site Capacity (Trips)	Percent Reduction		Concept 0			Concept 1			Concept 2			Concept 3	
					C0 Trips	Adjusted Trips		C1 Trips	Adjusted Trips		C2 Trips	Adjusted Trips		C3 Trips	Adjusted Trips
Minimum Fee	Factoria Only - Doubling the minimum fee	61	0%		115	115		115	115		123	123		116	116
	System Wide	61	7.5%		115	109		115	109		123	116		116	110
Drop Box	Northeast	61	0%		115	115		115	115		123	123		116	116
	Southeast	61	5%		115	111		115	111		123	118		116	112
Ban non-system Self Haul (effective 2029)		61	1%		115	110									

Attachment F- 4
Bow Lake Tier 1 Saturday Without-Renton Summary

Improvements		Site Capacity (Trips)	Percent Reduction		Concept 0			Concept 1			Concept 2			Concept 3	
					C0 Trips	Adjusted Trips		C1 Trips	Adjusted Trips		C2 Trips	Adjusted Trips		C3 Trips	Adjusted Trips
Extend Operating Hours		70	0%		145	145		145	145		157	157		146	146
Provide wait time information		70	1%		145	144		145	144		157	156		146	145
Lower cost curbside bulky waste collection		70	3.3%		145	141		145	141		157	152		146	142
Mandatory curbside garbage collection		70	14.9%		145	125		145	125		157	135		146	126
Lower regional direct fee to encourage haulers to use their own transfer stations		70	5%		145	138		145	138		157	150		146	139
Banned Materials	Banning yard/wood waste from both disposal and recycling	70	34%		145	99		145	99		157	107		146	100
	Reduction in HHW only transactions	70	0%		145	145		145	145		157	157		146	146
Incentive/peak pricing		70	0%		145	145		145	145		157	157		146	146
Minimum Fee	Factoria Only - Doubling the minimum fee	70	0%		145	145		145	145		157	157		146	146
	System Wide	70	7.5%		145	135		145	135		157	146		146	136
Drop Box	Northeast	70	0%		145	145		145	145		157	157		146	146
	Southeast	70	5%		145	138		145	138		157	150		146	139
Ban non-system Self Haul (effective 2029)		70	1%		145	141									

Attachment F- 5
Factoria Tier 1 Weekday With-Renton Summary

Improvements		Site Capacity (Trips)	Percent Reduction	Concept 0		Concept 1		Concept 2		Concept 3	
				C0 Trips	Adjusted Trips	C1 Trips	Adjusted Trips	C2 Trips	Adjusted Trips	C3 Trips	Adjusted Trips
Extend Operating Hours		64	4%	117	113	115	111	111	107	56	54
Provide wait time information		64	1%	117	116	115	114	111	110	56	56
Lower cost curbside bulky waste collection		64	3.40%	117	114	115	112	111	108	56	54
Mandatory curbside garbage collection		64	4%	117	113	115	111	111	107	56	54
Lower regional direct fee to encourage haulers to use their own transfer stations		64	0%	117	117	115	115	111	111	56	56
Banned Materials	Banning yard/wood waste from both disposal and recycling	64	34%	117	85	115	83	111	78	56	40
	Reduction in HHW only transactions	64	3%	117	114	115	112	111	108	56	55
Incentive/peak pricing		64	15%	117	103	115	101	111	97	56	49
Minimum Fee	Factoria Only - Doubling the minimum fee	64	20%	117	98	115	96	111	92	56	47
	System Wide	64	7.50%	117	110	115	108	111	104	56	53
Drop Box	Northeast	64	6%	117	111	115	109	111	105	56	53
	Southeast	64	0%	117	117	115	115	111	111	56	56
Ban non-system Self Haul (effective 2029)		64	43%	107	67						

Attachment F- 6
Factoria Tier 1 Saturday With-Renton Summary

Improvements	Site Capacity (Trips)	Percent Reduction	Concept 0		Concept 1		Concept 2		Concept 3	
			C0 Trips	Adjusted Trips	C1 Trips	Adjusted Trips	C2 Trips	Adjusted Trips	C3 Trips	Adjusted Trips
Extend Operating Hours	96	4%	154	148	154	148	115	111	75	72
Provide wait time information	96	1%	154	153	154	153	115	114	75	74
Lower cost curbside bulky waste collection	96	3.40%	154	149	154	149	115	112	75	73
Mandatory curbside garbage collection	96	4%	154	148	154	148	115	111	75	72

Improvements		Site Capacity (Trips)	Percent Reduction	Concept 0		Concept 1		Concept 2		Concept 3	
				C0 Trips	Adjusted Trips	C1 Trips	Adjusted Trips	C2 Trips	Adjusted Trips	C3 Trips	Adjusted Trips
Lower regional direct fee to encourage haulers to use their own transfer stations		96	0%	154	154	154	154	115	115	75	75
Banned Materials	Banning yard/wood waste from both disposal and recycling	96	34%	154	106	154	106	115	81	75	52
	Reduction in HHW only transactions	96	3%	154	150	154	150	115	112	75	73
Incentive/peak pricing		96	15%	154	133	154	133	115	100	75	65
Minimum Fee	Factoria Only - Doubling the minimum fee	96	20%	154	126	154	126	115	95	75	61
	System Wide	96	7.50%	154	143	154	143	115	107	75	70
Drop Box	Northeast	96	6%	154	146	154	146	115	109	75	71
	Southeast	96	0%	154	154	154	154	115	115	75	75
Ban non-system Self Haul (effective 2029)		96	43%	154	89						

Attachment F- 7
Factoria Tier 1 Weekday Without-Renton Summary

Improvements		Site Capacity (Trips)	Percent Reduction	Concept 0		Concept 1		Concept 2		Concept 3	
				C0 Trips	Adjusted Trips	C1 Trips	Adjusted Trips	C2 Trips	Adjusted Trips	C3 Trips	Adjusted Trips
Extend Operating Hours		64	4%	131	127	124	120	109	105	71	69
Provide wait time information		64	1%	131	130	124	123	109	108	71	70
Lower cost curbside bulky waste collection		64	3.40%	131	127	124	120	109	106	71	69
Mandatory curbside garbage collection		64	4%	131	127	124	120	109	105	71	69
Lower regional direct fee to encourage haulers to use their own transfer stations		64	0%	131	131	124	124	109	109	71	71
Banned Materials	Banning yard/wood waste from both disposal and recycling	64	34%	131	95	124	88	109	77	71	51
	Reduction in HHW only transactions	64	3%	131	128	124	121	109	106	71	69

Improvements		Site Capacity (Trips)	Percent Reduction	Concept 0		Concept 1		Concept 2		Concept 3	
				C0 Trips	Adjusted Trips	C1 Trips	Adjusted Trips	C2 Trips	Adjusted Trips	C3 Trips	Adjusted Trips
Incentive/peak pricing		64	15%	131	115	124	108	109	95	71	62
Minimum Fee	Factoria Only - Doubling the minimum fee	64	20%	131	110	124	103	109	90	71	59
	System Wide	64	7.50%	131	123	124	116	109	102	71	67
Drop Box	Northeast	64	6%	131	125	124	118	109	103	71	68
	Southeast	64	9%	131	121	124	114	109	101	71	66
Ban non-system Self Haul (effective 2029)		64	43%	131	80						

Attachment F- 8
Factoria Tier 1 Saturday Without-Renton Summary

Improvements		Site Capacity (Trips)	Percent Reduction	Concept 0		Concept 1		Concept 2		Concept 3	
				C0 Trips	Adjusted Trips	C1 Trips	Adjusted Trips	C2 Trips	Adjusted Trips	C3 Trips	Adjusted Trips
Extend Operating Hours		96	4%	171	165	167	161	127	122	93	90
Provide wait time information		96	1%	171	169	167	165	127	126	93	92
Lower cost curbside bulky waste collection		96	3.40 %	171	166	167	162	127	123	93	90
Mandatory curbside garbage collection		96	4%	171	165	167	161	127	122	93	90
Lower regional direct fee to encourage haulers to use their own transfer stations		96	0%	171	171	167	167	127	127	93	93
Banned Materials	Banning yard/wood waste from both disposal and recycling	96	34%	171	118	167	114	127	89	93	64
	Reduction in HHW only transactions	96	3%	171	166	167	162	127	124	93	90
Incentive/peak pricing		96	15%	171	147	167	143	127	110	93	80
Minimum Fee	Factoria Only - Doubling the minimum fee	96	20%	171	140	167	136	127	104	93	76
	System Wide	96	7.50 %	171	159	167	155	127	119	93	87
Drop Box	Northeast	96	6%	171	162	167	158	127	120	93	88
	Southeast	96	9%	171	157	167	153	127	117	93	85
Ban non-system Self Haul (effective 2029)		96	43%	171	102						

Attachment F- 9
Shoreline Tier 1 Weekday With-Renton Summary

Improvements		Site Capacity (Trips)	Percent Reduction	Concept 0		Concept 1		Concept 2		Concept 3	
				C0 Trips	Adjusted Trips	C1 Trips	Adjusted Trips	C2 Trips	Adjusted Trips	C3 Trips	Adjusted Trips
Extend Operating Hours		73	4%	58	56	58	56	78	75	45	43
Provide wait time information		73	1%	58	57	58	57	78	77	45	45
Lower cost curbside bulky waste collection		73	3.7%	58	56	58	56	78	75	45	43
Mandatory curbside garbage collection		73	13.7%	58	51	58	51	78	68	45	39
Lower regional direct fee to encourage haulers to use their own transfer stations		73	0%	58	58	58	58	78	78	45	45
Banned Materials	Banning yard/wood waste from both disposal and recycling	73	34%	58	40	58	40	78	54	45	31
	Reduction in HHW only transactions	73	0%	58	58	58	58	78	78	45	45
Incentive/peak pricing		73	0%	58	58	58	58	78	78	45	45
Minimum Fee	Factoria Only - Doubling the minimum fee	73	0%	58	58	58	58	78	78	45	45
	System Wide	73	7.5%	58	54	58	54	78	73	45	42
Drop Box	Northeast	73	2%	58	57	58	57	78	77	45	44
	Southeast	73	0%	58	58	58	58	78	78	45	45
Ban non-system Self Haul (effective 2029)		73	8%	57	53						

Attachment F- 10
Shoreline Tier 1 Saturday With-Renton Summary

Improvements	Site Capacity (Trips)	Percent Reduction	Concept 0		Concept 1		Concept 2		Concept 3	
			C0 Trips	Adjusted Trips	C1 Trips	Adjusted Trips	C2 Trips	Adjusted Trips	C3 Trips	Adjusted Trips
Extend Operating Hours	66	4%	88	85	88	85	88	85	68	65
Provide wait time information	66	1%	88	87	88	87	88	87	68	67
Lower cost curbside bulky waste collection	66	3.70%	88	85	88	85	88	85	68	66
Mandatory curbside garbage collection	66	13.7%	88	77	88	77	88	77	68	59

Improvements		Site Capacity (Trips)	Percent Reduction	Concept 0		Concept 1		Concept 2		Concept 3	
				C0 Trips	Adjusted Trips	C1 Trips	Adjusted Trips	C2 Trips	Adjusted Trips	C3 Trips	Adjusted Trips
Lower regional direct fee to encourage haulers to use their own transfer stations		66	0%	88	88	88	88	88	88	68	68
Banned Materials	Banning yard/wood waste from both disposal and recycling	66	34%	88	60	88	60	88	60	68	46
	Reduction in HHW only transactions	66	0%	88	88	88	88	88	88	68	68
Incentive/peak pricing		66	0%	88	88	88	88	88	88	68	68
Minimum Fee	Factoria Only - Doubling the minimum fee	66	0%	88	88	88	88	88	88	68	68
	System Wide	66	7.50%	88	82	88	82	88	82	68	63
Drop Box	Northeast	66	2%	88	86	88	86	88	86	68	67
	Southeast	66	0%	88	88	88	88	88	88	68	68
Ban non-system Self Haul (effective 2029)		66	8%	88	79						

Attachment F- 11
Shoreline Tier 1 Weekday Without-Renton Summary

Improvements		Site Capacity (Trips)	Percent Reduction	Concept 0		Concept 1		Concept 2		Concept 3	
				C0 Trips	Adjusted Trips	C1 Trips	Adjusted Trips	C2 Trips	Adjusted Trips	C3 Trips	Adjusted Trips
Extend Operating Hours		73	4%	58	56	67	65	99	95	46	44
Provide wait time information		73	1%	58	57	67	66	99	98	46	46
Lower cost curbside bulky waste collection		73	3.70%	58	56	67	65	99	96	46	44
Mandatory curbside garbage collection		73	13.7%	58	51	67	60	99	86	46	40
Lower regional direct fee to encourage haulers to use their own transfer stations		73	0%	58	58	67	67	99	99	46	46
Banned Materials	Banning yard/wood waste from both disposal and recycling	73	34%	58	40	67	49	99	68	46	32
	Reduction in HHW only transactions	73	0%	58	58	67	67	99	99	46	46
Incentive/peak pricing		73	0%	58	58	67	67	99	99	46	46

Improvements		Site Capacity (Trips)	Percent Reduction	Concept 0		Concept 1		Concept 2		Concept 3	
				C0 Trips	Adjusted Trips	C1 Trips	Adjusted Trips	C2 Trips	Adjusted Trips	C3 Trips	Adjusted Trips
Minimum Fee	Factoria Only - Doubling the minimum fee	73	0%	58	58	67	67	99	99	46	46
	System Wide	73	7.50%	58	54	67	63	99	92	46	43
Drop Box	Northeast	73	2%	58	57	67	66	99	97	46	45
	Southeast	73	0%	58	58	67	67	99	99	46	46
Ban non-system Self Haul (effective 2029)		73	8%	57	53						

Attachment F- 12
Shoreline Tier 1 Saturday Without-Renton Summary

Improvements		Site Capacity (Trips)	Percent Reduction	Concept 0		Concept 1		Concept 2		Concept 3	
				C0 Trips	Adjusted Trips	C1 Trips	Adjusted Trips	C2 Trips	Adjusted Trips	C3 Trips	Adjusted Trips
Extend Operating Hours		66	4%	88	85	96	93	88	85	69	66
Provide wait time information		66	1%	88	87	96	95	88	87	69	68
Lower cost curbside bulky waste collection		66	3.70%	88	85	96	93	88	85	69	67
Mandatory curbside garbage collection		66	13.7%	88	77	96	85	88	77	69	60
Lower regional direct fee to encourage haulers to use their own transfer stations		66	0%	88	88	96	96	88	88	69	69
Banned Materials	Banning yard/wood waste from both disposal and recycling	66	34%	88	60	96	68	88	60	69	47
	Reduction in HHW only transactions	66	0%	88	88	96	96	88	88	69	69
Incentive/peak pricing		66	0%	88	88	96	96	88	88	69	69
Minimum Fee	Factoria Only - Doubling the minimum fee	66	0%	88	88	96	96	88	88	69	69
	System Wide	66	7.50%	88	82	96	90	88	82	69	64
Drop Box	Northeast	66	2%	88	86	96	94	88	86	69	68
	Southeast	66	0%	88	88	96	96	88	88	69	69
Ban non-system Self Haul (effective 2029)		66	8%	88	79						

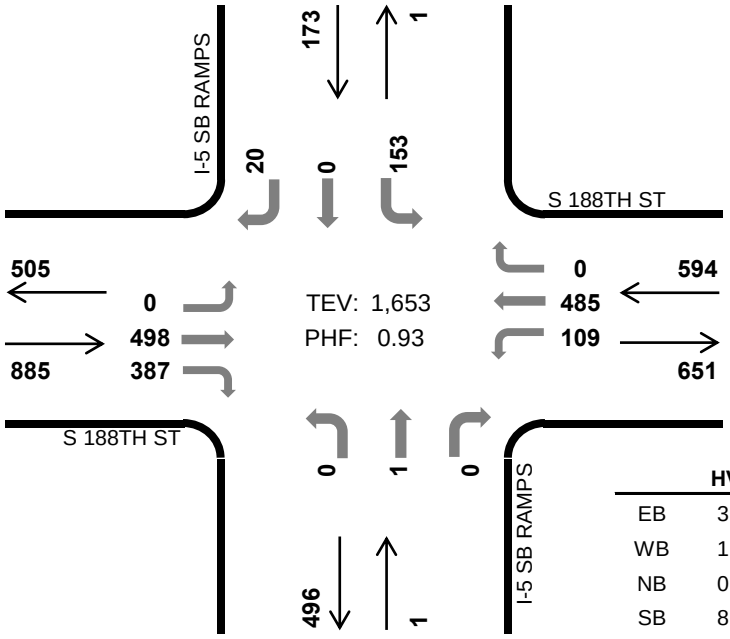
ATTACHMENT G

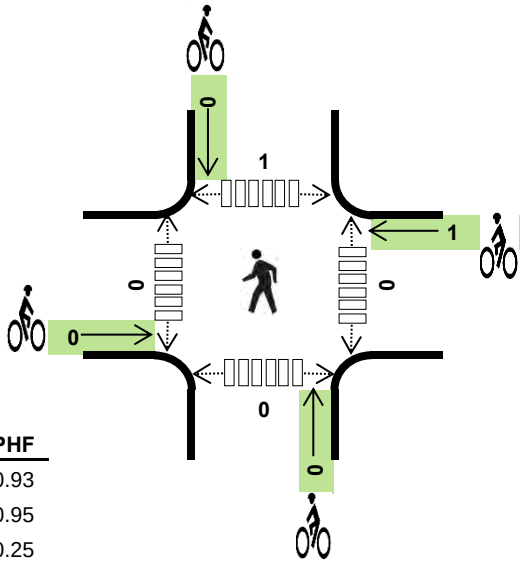
I-5 SB RAMPS
S 188TH ST

Date: Sat, Oct 04, 2014
Count Period: 11:15 AM to 1:15 PM
Peak Hour: 12:15 PM to 1:15 PM

N

Peak Hour





	HV %:	PHF
EB	3.3%	0.93
WB	1.5%	0.95
NB	0.0%	0.25
SB	8.7%	0.82
TOTAL	3.2%	0.93

Two-Hour Count Summaries

Interval Start	S 188TH ST Eastbound			S 188TH ST Westbound			I-5 SB RAMPS Northbound			I-5 SB RAMPS Southbound			15-min Total	Rolling One Hour
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
11:15 AM	0	136	79	26	117	0	0	0	0	38	0	6	402	
11:30 AM	0	111	73	28	128	0	0	0	0	31	0	7	378	
11:45 AM	0	123	69	15	108	0	0	0	0	50	0	10	375	
12:00 PM	0	124	61	29	115	0	0	0	0	42	0	13	384	1,539
12:15 PM	**0**	**108**	**80**	**31**	**119**	**0**	**0**	**1**	**0**	**39**	**0**	**3**	**381**	1,518
12:30 PM	**0**	**144**	**89**	**30**	**126**	**0**	**0**	**0**	**0**	**26**	**0**	**4**	**419**	1,559
12:45 PM	**0**	**112**	**113**	**25**	**112**	**0**	**0**	**0**	**0**	**38**	**0**	**10**	**410**	1,594
1:00 PM	**0**	**134**	**105**	**23**	**128**	**0**	**0**	**0**	**0**	**50**	**0**	**3**	**443**	**1,653**
Count Total	0	992	669	207	953	0	0	1	0	314	0	56	3,192	
Peak Hr	**0**	**498**	**387**	**109**	**485**	**0**	**0**	**1**	**0**	**153**	**0**	**20**	**1,653**	

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
11:15 AM	9	4	0	1	*14*	0	0	0	0	*0*	0	0	0	0	*0*
11:30 AM	10	6	0	2	*18*	0	0	0	0	*0*	0	0	0	0	*0*
11:45 AM	9	4	0	7	*20*	0	0	0	0	*0*	0	0	0	1	*1*
12:00 PM	6	6	0	3	*15*	0	0	0	0	*0*	0	0	0	0	*0*
12:15 PM	**5**	**3**	**0**	**5**	***13***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***
12:30 PM	**6**	**2**	**0**	**2**	***10***	**0**	**1**	**0**	**0**	***1***	**0**	**0**	**1**	**0**	***1***
12:45 PM	**10**	**2**	**0**	**3**	***15***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***
1:00 PM	**8**	**2**	**0**	**5**	***15***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***
Count Total	63	29	0	28	*120*	0	1	0	0	*1*	0	0	1	1	*2*
Peak Hr	**29**	**9**	**0**	**15**	***53***	**0**	**1**	**0**	**0**	***1***	**0**	**0**	**1**	**0**	***1***

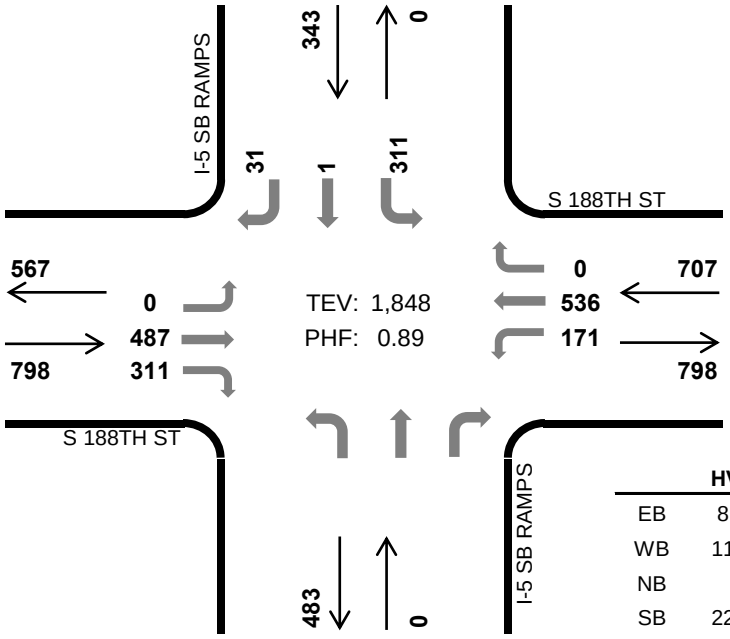
Mark Skaggs: 425 - 250 - 0777 mark.skaggs@idaxdata.com

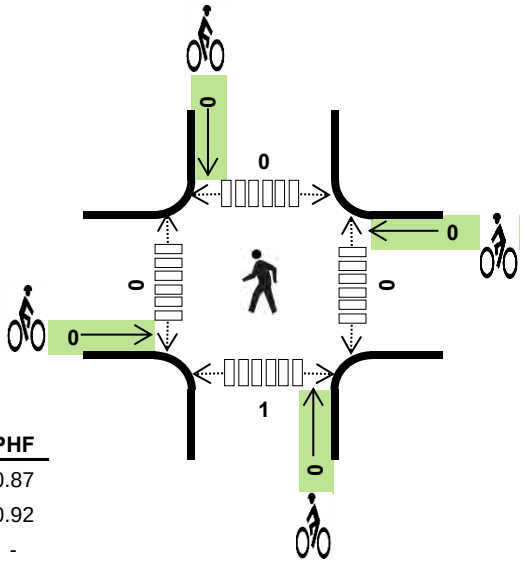
I-5 SB RAMPS
S 188TH ST

Date: Tue, Oct 07, 2014
Count Period: 11:30 AM to 1:30 PM
Peak Hour: 12:30 PM to 1:30 PM

N

Peak Hour





	HV %:	PHF
EB	8.5%	0.87
WB	11.0%	0.92
NB	-	-
SB	22.4%	0.86
TOTAL	12.1%	0.89

Two-Hour Count Summaries

Interval Start	S 188TH ST Eastbound			S 188TH ST Westbound			I-5 SB RAMPS Northbound			I-5 SB RAMPS Southbound			15-min Total	Rolling One Hour
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
11:30 AM	0	107	81	41	113	0	0	0	0	62	0	8	412	
11:45 AM	0	111	87	25	130	0	0	0	0	73	0	10	436	
12:00 PM	0	125	59	30	117	0	0	0	0	66	0	7	404	
12:15 PM	0	102	74	22	136	0	0	0	0	74	0	8	416	1,668
12:30 PM	**0**	**117**	**85**	**39**	**137**	**0**	**0**	**0**	**0**	**65**	**1**	**8**	**452**	1,708
12:45 PM	**0**	**119**	**71**	**32**	**130**	**0**	**0**	**0**	**0**	**79**	**0**	**7**	**438**	1,710
1:00 PM	**0**	**118**	**58**	**50**	**127**	**0**	**0**	**0**	**0**	**75**	**0**	**8**	**436**	1,742
1:15 PM	**0**	**133**	**97**	**50**	**142**	**0**	**0**	**0**	**0**	**92**	**0**	**8**	**522**	**1,848**
Count Total	0	932	612	289	1,032	0	0	0	0	586	1	64	3,516	
Peak Hr	**0**	**487**	**311**	**171**	**536**	**0**	**0**	**0**	**0**	**311**	**1**	**31**	**1,848**	

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
11:30 AM	11	23	0	18	*52*	0	0	0	0	*0*	0	0	0	0	*0*
11:45 AM	14	10	0	15	*39*	0	0	0	0	*0*	0	0	0	0	*0*
12:00 PM	21	13	0	19	*53*	0	0	0	0	*0*	0	0	0	0	*0*
12:15 PM	13	14	0	17	*44*	0	0	0	0	*0*	0	0	1	0	*1*
12:30 PM	**14**	**16**	**0**	**21**	***51***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***
12:45 PM	**18**	**20**	**0**	**10**	***48***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***
1:00 PM	**7**	**21**	**0**	**21**	***49***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**1**	***1***
1:15 PM	**29**	**21**	**0**	**25**	***75***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***
Count Total	127	138	0	146	*411*	0	0	0	0	*0*	0	0	1	1	*2*
Peak Hr	**68**	**78**	**0**	**77**	***223***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**1**	***1***

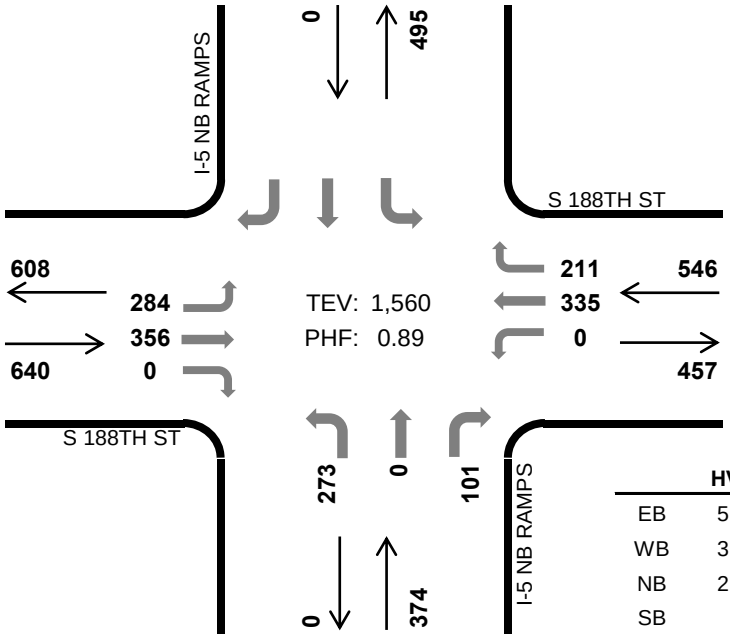
Mark Skaggs: 425 - 250 - 0777 mark.skaggs@idaxdata.com

I-5 NB RAMPS
S 188TH ST

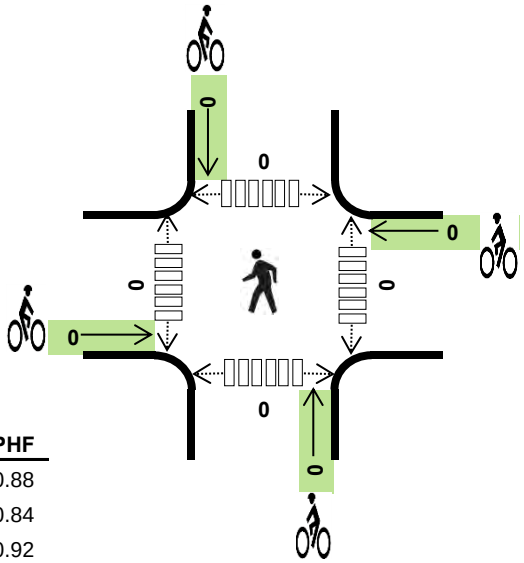
Date: Sat, Oct 04, 2014
Count Period: 11:15 AM to 1:15 PM
Peak Hour: 12:15 PM to 1:15 PM

N

Peak Hour



	HV %:	PHF
EB	5.6%	0.88
WB	3.1%	0.84
NB	2.7%	0.92
SB	-	-
TOTAL	4.0%	0.89



Two-Hour Count Summaries

Interval Start	S 188TH ST Eastbound			S 188TH ST Westbound			I-5 NB RAMPS Northbound			I-5 NB RAMPS Southbound			15-min Total	Rolling One Hour
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
11:15 AM	72	96	0	0	82	67	65	1	21	0	0	0	404	
11:30 AM	65	86	0	0	73	52	70	0	20	0	0	0	366	
11:45 AM	55	111	0	0	70	63	60	0	29	0	0	0	388	
12:00 PM	64	105	0	0	83	57	69	0	16	0	0	0	394	1,552
12:15 PM	**50**	**85**	**0**	**0**	**76**	**50**	**70**	**0**	**31**	**0**	**0**	**0**	**362**	1,510
12:30 PM	**92**	**89**	**0**	**0**	**78**	**50**	**69**	**0**	**17**	**0**	**0**	**0**	**395**	1,539
12:45 PM	**58**	**92**	**0**	**0**	**81**	**49**	**61**	**0**	**24**	**0**	**0**	**0**	**365**	1,516
1:00 PM	**84**	**90**	**0**	**0**	**100**	**62**	**73**	**0**	**29**	**0**	**0**	**0**	**438**	**1,560**
Count Total	540	754	0	0	643	450	537	1	187	0	0	0	3,112	
Peak Hr	**284**	**356**	**0**	**0**	**335**	**211**	**273**	**0**	**101**	**0**	**0**	**0**	**1,560**	

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
11:15 AM	8	7	3	0	*18*	0	0	0	0	*0*	0	0	0	1	*1*
11:30 AM	10	6	1	0	*17*	0	0	0	0	*0*	0	0	0	0	*0*
11:45 AM	15	12	1	0	*28*	0	0	0	0	*0*	1	0	0	0	*1*
12:00 PM	7	7	6	0	*20*	0	0	0	0	*0*	0	0	0	0	*0*
12:15 PM	**9**	**4**	**3**	**0**	***16***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***
12:30 PM	**7**	**4**	**2**	**0**	***13***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***
12:45 PM	**9**	**4**	**2**	**0**	***15***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***
1:00 PM	**11**	**5**	**3**	**0**	***19***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***
Count Total	76	49	21	0	*146*	0	0	0	0	*0*	1	0	0	1	*2*
Peak Hr	**36**	**17**	**10**	**0**	***63***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***

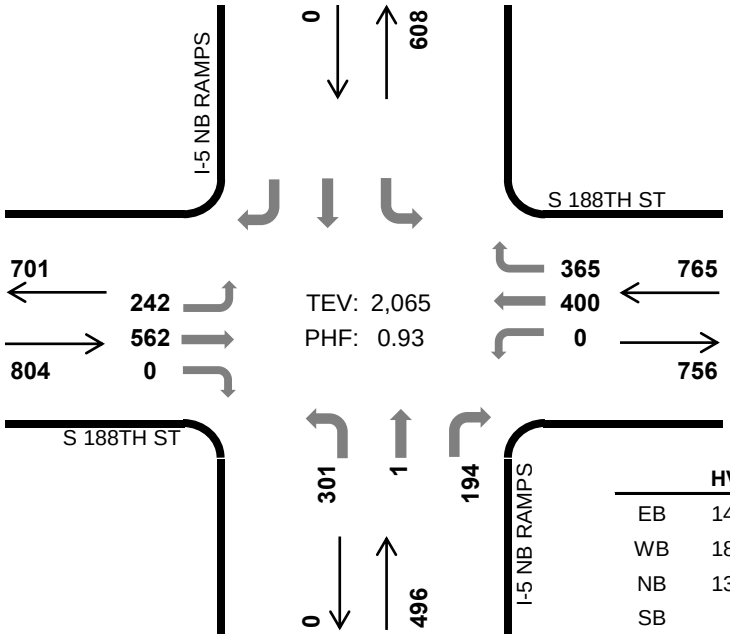
Mark Skaggs: 425 - 250 - 0777 mark.skaggs@idaxdata.com

I-5 NB RAMPS
S 188TH ST

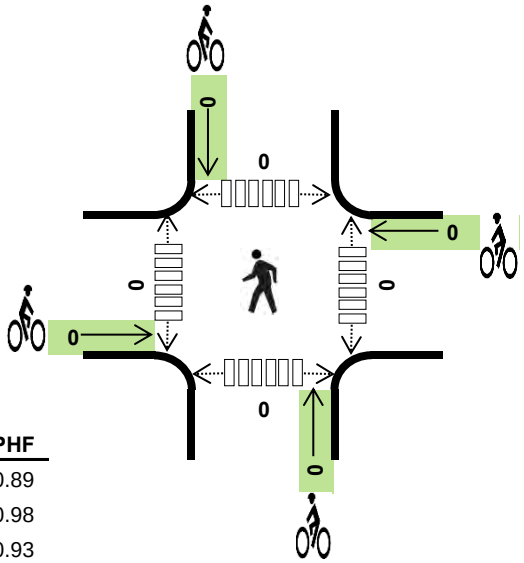
Date: Tue, Oct 07, 2014
Count Period: 11:30 AM to 1:30 PM
Peak Hour: 12:30 PM to 1:30 PM

N

Peak Hour



	HV %:	PHF
EB	14.9%	0.89
WB	18.7%	0.98
NB	13.7%	0.93
SB	-	-
TOTAL	16.0%	0.93



Two-Hour Count Summaries

Interval Start	S 188TH ST Eastbound			S 188TH ST Westbound			I-5 NB RAMPS Northbound			I-5 NB RAMPS Southbound			15-min Total	Rolling One Hour
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
11:30 AM	61	122	0	0	90	99	62	1	37	0	0	0	472	
11:45 AM	53	130	0	0	95	97	60	1	30	0	0	0	466	
12:00 PM	61	136	0	0	75	87	72	1	37	0	0	0	469	
12:15 PM	56	113	0	0	85	77	64	0	34	0	0	0	429	1,836
12:30 PM	**63**	**138**	**0**	**0**	**108**	**85**	**64**	**0**	**48**	**0**	**0**	**0**	**506**	1,870
12:45 PM	**57**	**137**	**0**	**0**	**92**	**91**	**73**	**0**	**48**	**0**	**0**	**0**	**498**	1,902
1:00 PM	**52**	**132**	**0**	**0**	**103**	**90**	**79**	**0**	**50**	**0**	**0**	**0**	**506**	1,939
1:15 PM	**70**	**155**	**0**	**0**	**97**	**99**	**85**	**1**	**48**	**0**	**0**	**0**	**555**	**2,065**
Count Total	473	1,063	0	0	745	725	559	4	332	0	0	0	3,901	
Peak Hr	**242**	**562**	**0**	**0**	**400**	**365**	**301**	**1**	**194**	**0**	**0**	**0**	**2,065**	

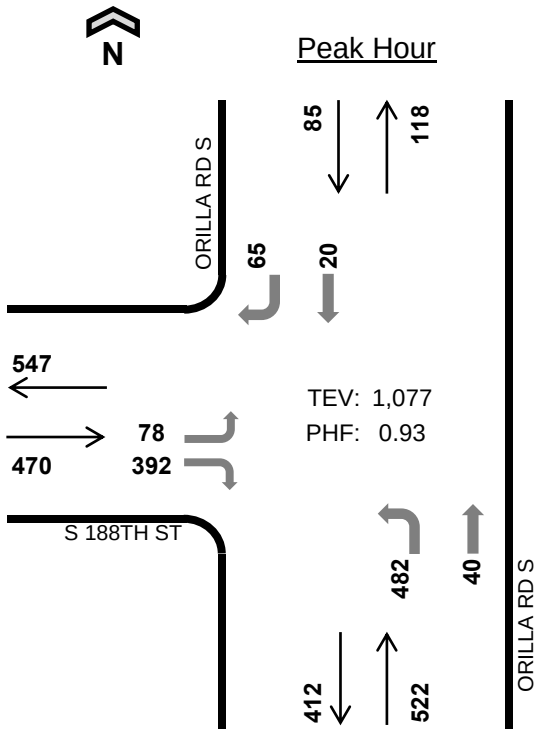
Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

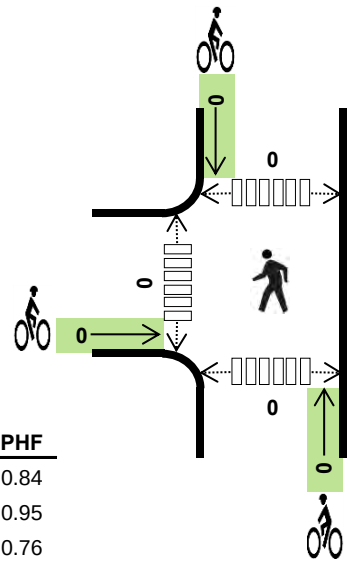
Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
11:30 AM	25	40	12	0	*77*	0	0	0	0	*0*	0	0	0	0	*0*
11:45 AM	29	25	16	0	*70*	0	0	0	0	*0*	0	0	0	0	*0*
12:00 PM	38	29	15	0	*82*	0	0	0	0	*0*	0	0	0	0	*0*
12:15 PM	19	31	14	0	*64*	0	0	0	0	*0*	0	0	0	0	*0*
12:30 PM	**29**	**29**	**22**	**0**	***80***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***
12:45 PM	**23**	**29**	**13**	**0**	***65***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***
1:00 PM	**27**	**45**	**19**	**0**	***91***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***
1:15 PM	**41**	**40**	**14**	**0**	***95***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***
Count Total	231	268	125	0	*624*	0	0	0	0	*0*	0	0	0	0	*0*
Peak Hr	**120**	**143**	**68**	**0**	***331***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***

Mark Skaggs: 425 - 250 - 0777 mark.skaggs@idaxdata.com

ORILLA RD S
S 188TH ST

Date: Sat, Oct 04, 2014
Count Period: 11:15 AM to 1:15 PM
Peak Hour: 11:15 AM to 12:15 PM





	HV %:	PHF
EB	6.4%	0.84
NB	3.4%	0.95
SB	16.5%	0.76
TOTAL	5.8%	0.93

Two-Hour Count Summaries

Interval Start	S 188TH ST Eastbound			S 188TH ST Westbound			ORILLA RD S Northbound			ORILLA RD S Southbound			15-min Total	Rolling One Hour
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
11:15 AM	**19**	**0**	**90**	**0**	**0**	**0**	**133**	**4**	**0**	**0**	**5**	**13**	**264**	
11:30 AM	**16**	**0**	**87**	**0**	**0**	**0**	**111**	**13**	**0**	**0**	**3**	**16**	**246**	
11:45 AM	**20**	**0**	**120**	**0**	**0**	**0**	**118**	**10**	**0**	**0**	**5**	**15**	**288**	
12:00 PM	**23**	**0**	**95**	**0**	**0**	**0**	**120**	**13**	**0**	**0**	**7**	**21**	**279**	**1,077**
12:15 PM	16	0	98	0	0	0	114	3	0	0	5	19	255	1,068
12:30 PM	13	0	93	0	0	0	107	13	0	0	2	21	249	1,071
12:45 PM	12	0	104	0	0	0	107	5	0	0	2	17	247	1,030
1:00 PM	19	0	99	0	0	0	143	12	0	0	6	25	304	1,055
Count Total	138	0	786	0	0	0	953	73	0	0	35	147	2,132	
Peak Hr	**78**	**0**	**392**	**0**	**0**	**0**	**482**	**40**	**0**	**0**	**20**	**65**	**1,077**	

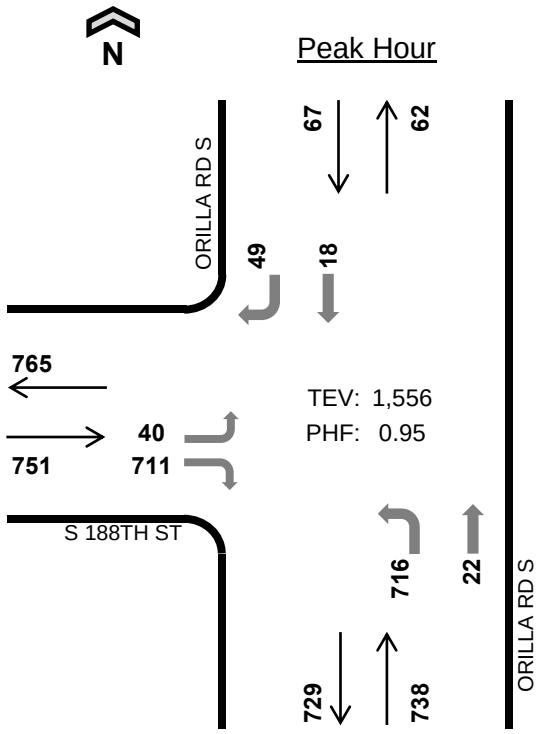
Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

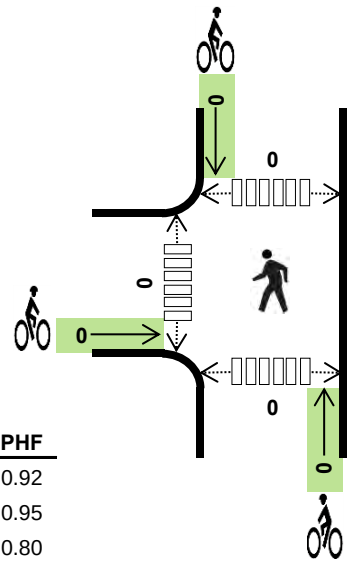
Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
11:15 AM	**7**	**0**	**4**	**2**	***13***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***
11:30 AM	**6**	**0**	**5**	**3**	***14***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***
11:45 AM	**14**	**0**	**8**	**3**	***25***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***
12:00 PM	**3**	**0**	**1**	**6**	***10***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***
12:15 PM	7	0	2	2	*11*	0	0	0	0	*0*	0	0	0	0	*0*
12:30 PM	5	0	4	2	*11*	0	0	0	0	*0*	0	0	0	0	*0*
12:45 PM	8	0	2	2	*12*	0	0	0	0	*0*	0	0	0	0	*0*
1:00 PM	9	0	5	1	*15*	0	0	0	0	*0*	0	0	0	0	*0*
Count Total	59	0	31	21	*111*	0	0	0	0	*0*	0	0	0	0	*0*
Peak Hr	**30**	**0**	**18**	**14**	***62***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***

Mark Skaggs: 425 - 250 - 0777 mark.skaggs@idaxdata.com

ORILLA RD S
S 188TH ST

Date: Tue, Oct 07, 2014
Count Period: 11:30 AM to 1:30 PM
Peak Hour: 12:30 PM to 1:30 PM





	HV %:	PHF
EB	19.7%	0.92
NB	18.0%	0.95
SB	34.3%	0.80
TOTAL	19.5%	0.95

Two-Hour Count Summaries

Interval Start	S 188TH ST Eastbound			S 188TH ST Westbound			ORILLA RD S Northbound			ORILLA RD S Southbound			15-min Total	Rolling One Hour
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
11:30 AM	7	0	147	0	0	0	176	11	0	0	4	13	358	
11:45 AM	6	0	148	0	0	0	179	4	0	0	1	14	352	
12:00 PM	12	0	157	0	0	0	153	2	0	0	5	5	334	
12:15 PM	9	0	133	0	0	0	148	10	0	0	3	9	312	1,356
12:30 PM	**8**	**0**	**171**	**0**	**0**	**0**	**182**	**3**	**0**	**0**	**4**	**12**	**380**	1,378
12:45 PM	**13**	**0**	**178**	**0**	**0**	**0**	**170**	**7**	**0**	**0**	**6**	**15**	**389**	1,415
1:00 PM	**6**	**0**	**172**	**0**	**0**	**0**	**178**	**4**	**0**	**0**	**4**	**13**	**377**	1,458
1:15 PM	**13**	**0**	**190**	**0**	**0**	**0**	**186**	**8**	**0**	**0**	**4**	**9**	**410**	**1,556**
Count Total	74	0	1,296	0	0	0	1,372	49	0	0	31	90	2,912	
Peak Hr	**40**	**0**	**711**	**0**	**0**	**0**	**716**	**22**	**0**	**0**	**18**	**49**	**1,556**	

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
11:30 AM	27	0	35	5	*67*	0	0	0	0	*0*	0	0	0	0	*0*
11:45 AM	33	0	22	6	*61*	0	0	0	0	*0*	0	0	0	0	*0*
12:00 PM	37	0	26	2	*65*	0	0	0	0	*0*	0	0	0	0	*0*
12:15 PM	27	0	31	4	*62*	0	0	0	0	*0*	0	0	0	0	*0*
12:30 PM	**39**	**0**	**26**	**7**	***72***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***
12:45 PM	**27**	**0**	**29**	**3**	***59***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***
1:00 PM	**39**	**0**	**38**	**6**	***83***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***
1:15 PM	**43**	**0**	**40**	**7**	***90***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***
Count Total	272	0	247	40	*559*	0	0	0	0	*0*	0	0	0	0	*0*
Peak Hr	**148**	**0**	**133**	**23**	***304***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***

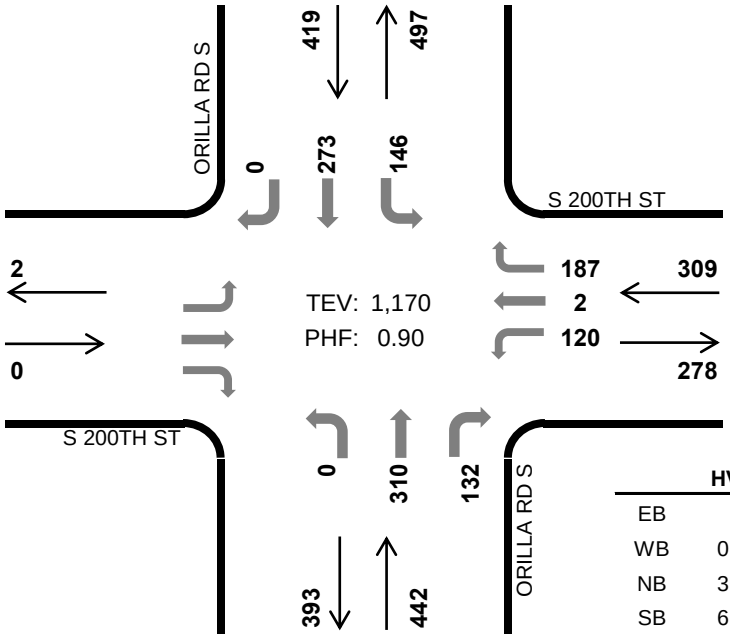
Mark Skaggs: 425 - 250 - 0777 mark.skaggs@idaxdata.com

ORILLA RD S
S 200TH ST

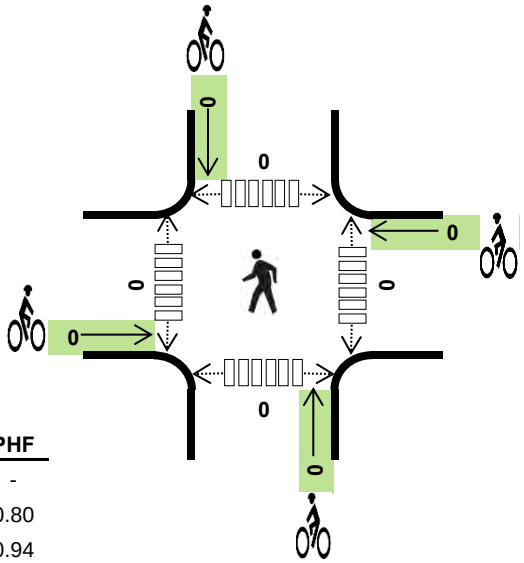
Date: Sat, Oct 04, 2014
Count Period: 11:15 AM to 1:15 PM
Peak Hour: 12:15 PM to 1:15 PM

N

Peak Hour



	HV %:	PHF
EB	-	-
WB	0.6%	0.80
NB	3.4%	0.94
SB	6.2%	0.94
TOTAL	3.7%	0.90



Two-Hour Count Summaries

Interval Start	S 200TH ST Eastbound			S 200TH ST Westbound			ORILLA RD S Northbound			ORILLA RD S Southbound			15-min Total	Rolling One Hour
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
11:15 AM	0	1	0	18	0	41	0	94	26	33	64	0	277	
11:30 AM	0	0	0	28	0	36	0	89	21	30	64	0	268	
11:45 AM	0	0	0	24	0	30	0	95	25	61	69	0	304	
12:00 PM	0	0	0	23	0	66	0	74	25	37	69	0	294	1,143
12:15 PM	**0**	**0**	**0**	**21**	**2**	**38**	**0**	**70**	**36**	**33**	**70**	**0**	**270**	1,136
12:30 PM	**0**	**0**	**0**	**34**	**0**	**49**	**0**	**71**	**43**	**34**	**62**	**0**	**293**	1,161
12:45 PM	**0**	**0**	**0**	**24**	**0**	**44**	**0**	**79**	**26**	**38**	**71**	**0**	**282**	1,139
1:00 PM	**0**	**0**	**0**	**41**	**0**	**56**	**0**	**90**	**27**	**41**	**70**	**0**	**325**	**1,170**
Count Total	0	1	0	213	2	360	0	662	229	307	539	0	2,313	
Peak Hr	**0**	**0**	**0**	**120**	**2**	**187**	**0**	**310**	**132**	**146**	**273**	**0**	**1,170**	

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
11:15 AM	0	3	1	2	*6*	0	0	0	0	*0*	0	0	0	0	*0*
11:30 AM	0	4	3	5	*12*	0	0	0	0	*0*	0	0	0	0	*0*
11:45 AM	0	3	6	9	*18*	0	0	0	0	*0*	0	0	0	0	*0*
12:00 PM	0	1	1	5	*7*	0	0	0	0	*0*	0	0	0	0	*0*
12:15 PM	**0**	**0**	**3**	**6**	***9***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***
12:30 PM	**0**	**2**	**5**	**5**	***12***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***
12:45 PM	**0**	**0**	**2**	**8**	***10***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***
1:00 PM	**0**	**0**	**5**	**7**	***12***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***
Count Total	0	13	26	47	*86*	0	0	0	0	*0*	0	0	0	0	*0*
Peak Hr	**0**	**2**	**15**	**26**	***43***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***

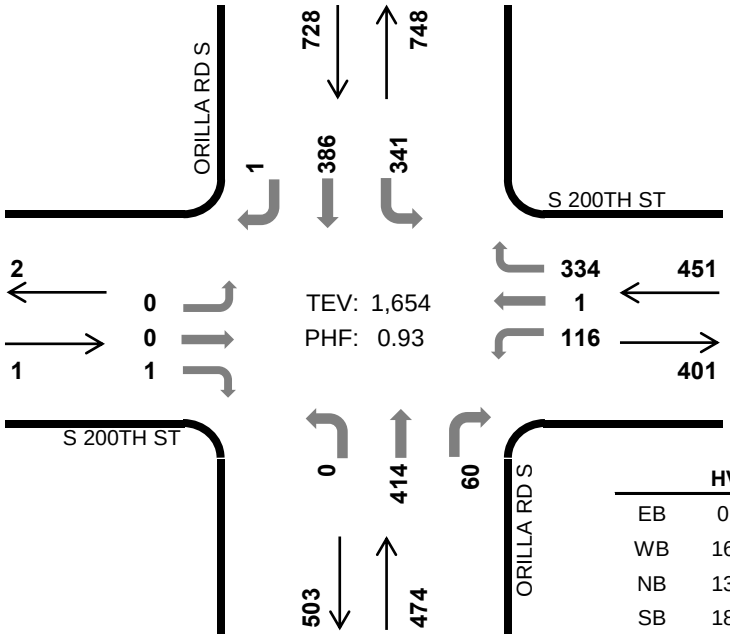
Mark Skaggs: 425 - 250 - 0777 mark.skaggs@idaxdata.com

ORILLA RD S
S 200TH ST

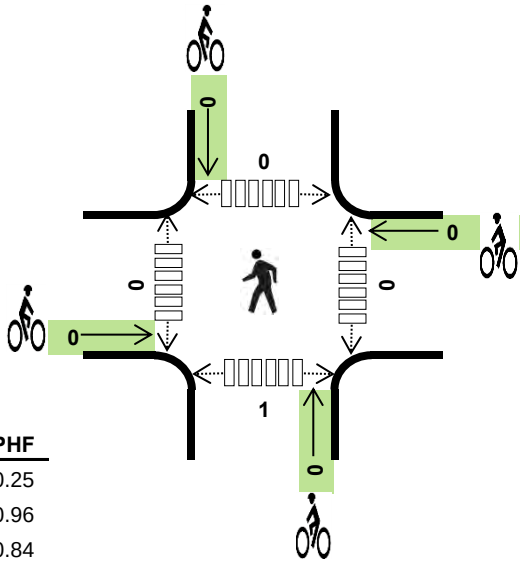
Date: Tue, Oct 07, 2014
Count Period: 11:30 AM to 1:30 PM
Peak Hour: 12:30 PM to 1:30 PM

N

Peak Hour



	HV %:	PHF
EB	0.0%	0.25
WB	16.0%	0.96
NB	13.9%	0.84
SB	18.7%	0.93
TOTAL	16.6%	0.93



Two-Hour Count Summaries

Interval Start	S 200TH ST Eastbound			S 200TH ST Westbound			ORILLA RD S Northbound			ORILLA RD S Southbound			15-min Total	Rolling One Hour
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
11:30 AM	0	0	0	14	0	78	0	104	16	68	85	0	365	
11:45 AM	0	1	0	25	0	72	0	103	22	63	91	0	377	
12:00 PM	1	1	0	27	0	69	1	89	27	71	87	0	373	
12:15 PM	0	0	1	24	0	54	0	110	16	78	75	0	358	1,473
12:30 PM	**0**	**0**	**0**	**30**	**1**	**86**	**0**	**94**	**13**	**79**	**87**	**0**	**390**	1,498
12:45 PM	**0**	**0**	**1**	**29**	**0**	**83**	**0**	**102**	**13**	**80**	**104**	**1**	**413**	1,534
1:00 PM	**0**	**0**	**0**	**27**	**0**	**84**	**0**	**97**	**14**	**86**	**96**	**0**	**404**	1,565
1:15 PM	**0**	**0**	**0**	**30**	**0**	**81**	**0**	**121**	**20**	**96**	**99**	**0**	**447**	**1,654**
Count Total	1	2	2	206	1	607	1	820	141	621	724	1	3,127	
Peak Hr	**0**	**0**	**1**	**116**	**1**	**334**	**0**	**414**	**60**	**341**	**386**	**1**	**1,654**	

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
11:30 AM	0	21	16	31	*68*	0	0	0	0	*0*	0	0	0	0	*0*
11:45 AM	0	11	12	29	*52*	0	0	0	0	*0*	0	0	0	0	*0*
12:00 PM	0	11	16	40	*67*	0	0	0	0	*0*	0	0	0	0	*0*
12:15 PM	0	11	23	31	*65*	0	0	1	0	*1*	0	0	0	0	*0*
12:30 PM	**0**	**16**	**9**	**35**	***60***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***
12:45 PM	**0**	**16**	**16**	**26**	***58***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***
1:00 PM	**0**	**20**	**14**	**34**	***68***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**1**	***1***
1:15 PM	**0**	**20**	**27**	**41**	***88***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***
Count Total	0	126	133	267	*526*	0	0	1	0	*1*	0	0	0	1	*1*
Peak Hr	**0**	**72**	**66**	**136**	***274***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**1**	***1***

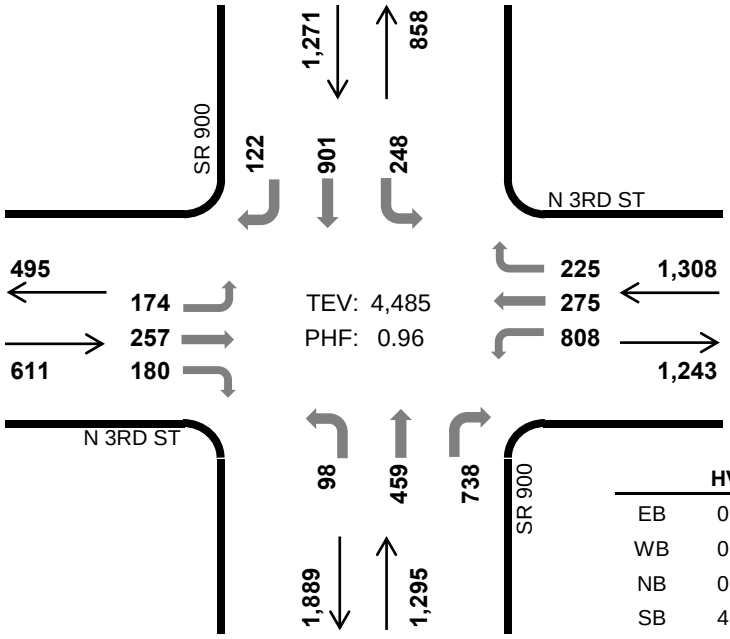
Mark Skaggs: 425 - 250 - 0777 mark.skaggs@idaxdata.com

SR 900
N 3RD ST

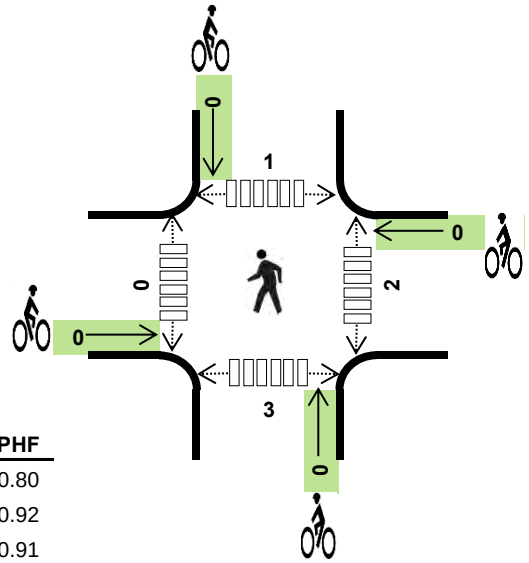
Date: Sat, Oct 04, 2014
Count Period: 11:45 AM to 1:45 PM
Peak Hour: 12:45 PM to 1:45 PM

N

Peak Hour



	HV %:	PHF
EB	0.2%	0.80
WB	0.4%	0.92
NB	0.8%	0.91
SB	4.5%	0.93
TOTAL	1.6%	0.96



Two-Hour Count Summaries

Interval Start	N 3RD ST Eastbound			N 3RD ST Westbound			SR 900 Northbound			SR 900 Southbound			15-min Total	Rolling One Hour
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
11:45 AM	45	59	18	200	77	75	26	90	183	58	205	30	1,066	
12:00 PM	42	55	40	193	64	72	15	109	208	56	218	32	1,104	
12:15 PM	50	43	42	206	74	69	22	112	200	78	195	27	1,118	
12:30 PM	45	56	36	212	56	81	31	109	205	58	231	25	1,145	4,433
12:45 PM	**26**	**67**	**33**	**209**	**69**	**25**	**21**	**98**	**189**	**71**	**215**	**33**	**1,056**	4,423
1:00 PM	**49**	**53**	**42**	**190**	**70**	**75**	**37**	**139**	**180**	**56**	**211**	**25**	**1,127**	4,446
1:15 PM	**51**	**65**	**35**	**218**	**76**	**62**	**18**	**107**	**182**	**59**	**226**	**32**	**1,131**	4,459
1:30 PM	**48**	**72**	**70**	**191**	**60**	**63**	**22**	**115**	**187**	**62**	**249**	**32**	**1,171**	**4,485**
Count Total	356	470	316	1,619	546	522	192	879	1,534	498	1,750	236	8,918	
Peak Hr	**174**	**257**	**180**	**808**	**275**	**225**	**98**	**459**	**738**	**248**	**901**	**122**	**4,485**	

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

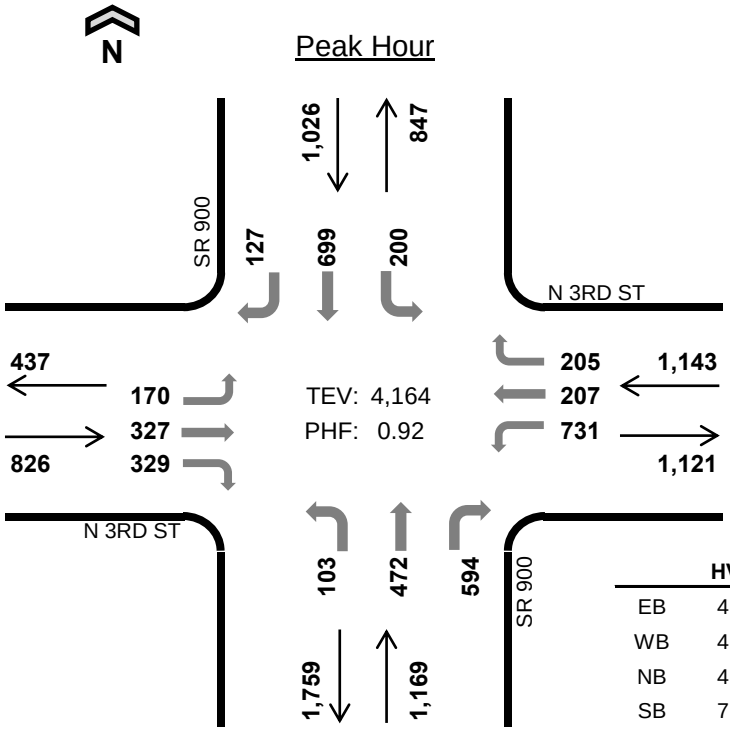
Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
11:45 AM	0	1	5	15	*21*	0	0	0	0	*0*	0	0	2	0	*2*
12:00 PM	0	6	5	16	*27*	0	0	0	0	*0*	5	2	1	5	*13*
12:15 PM	0	2	6	15	*23*	0	1	0	0	*1*	2	0	1	2	*5*
12:30 PM	0	0	4	13	*17*	0	0	0	0	*0*	2	2	4	0	*8*
12:45 PM	**0**	**0**	**1**	**11**	***12***	**0**	**0**	**0**	**0**	***0***	**1**	**0**	**0**	**0**	***1***
1:00 PM	**0**	**1**	**4**	**14**	***19***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**2**	***2***
1:15 PM	**0**	**2**	**3**	**17**	***22***	**0**	**0**	**0**	**0**	***0***	**1**	**0**	**0**	**1**	***2***
1:30 PM	**1**	**2**	**3**	**15**	***21***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**1**	**0**	***1***
Count Total	1	14	31	116	*162*	0	1	0	0	*1*	11	4	9	10	*34*
Peak Hr	**1**	**5**	**11**	**57**	***74***	**0**	**0**	**0**	**0**	***0***	**2**	**0**	**1**	**3**	***6***

Mark Skaggs: 425 - 250 - 0777 mark.skaggs@idaxdata.com

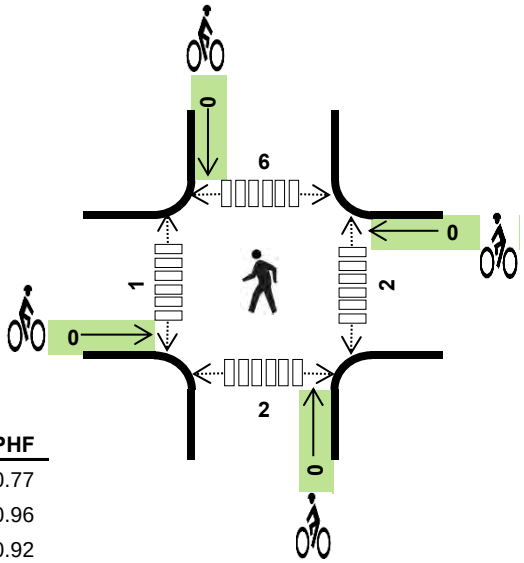
SR 900
N 3RD ST

Date: Thu, Oct 02, 2014
Count Period: 12:15 PM to 2:15 PM
Peak Hour: 1:15 PM to 2:15 PM

Peak Hour



	HV %:	PHF
EB	4.0%	0.77
WB	4.1%	0.96
NB	4.4%	0.92
SB	7.4%	0.86
TOTAL	5.0%	0.92



Two-Hour Count Summaries

Interval Start	N 3RD ST Eastbound			N 3RD ST Westbound			SR 900 Northbound			SR 900 Southbound			15-min Total	Rolling One Hour
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
12:15 PM	43	42	27	183	63	47	21	106	126	43	172	29	902	
12:30 PM	40	50	26	167	56	64	21	112	102	43	224	30	935	
12:45 PM	35	32	36	163	62	71	26	84	135	41	182	35	902	
1:00 PM	47	65	62	158	57	70	33	103	163	40	185	33	1,016	3,755
1:15 PM	**21**	**53**	**46**	**174**	**59**	**53**	**18**	**99**	**141**	**49**	**133**	**29**	**875**	3,728
1:30 PM	**55**	**97**	**116**	**189**	**48**	**61**	**34**	**141**	**141**	**51**	**160**	**33**	**1,126**	3,919
1:45 PM	**36**	**83**	**81**	**188**	**53**	**49**	**23**	**110**	**163**	**60**	**212**	**26**	**1,084**	4,101
2:00 PM	**58**	**94**	**86**	**180**	**47**	**42**	**28**	**122**	**149**	**40**	**194**	**39**	**1,079**	**4,164**
Count Total	335	516	480	1,402	445	457	204	877	1,120	367	1,462	254	7,919	
Peak Hr	**170**	**327**	**329**	**731**	**207**	**205**	**103**	**472**	**594**	**200**	**699**	**127**	**4,164**	

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
12:15 PM	3	5	9	23	*40*	0	0	0	0	*0*	1	4	1	2	*8*
12:30 PM	9	12	12	24	*57*	0	0	0	0	*0*	1	4	2	1	*8*
12:45 PM	1	13	12	25	*51*	0	0	0	0	*0*	0	0	2	1	*3*
1:00 PM	4	14	13	17	*48*	0	0	0	0	*0*	0	2	2	0	*4*
1:15 PM	**6**	**15**	**10**	**27**	***58***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**1**	**0**	***1***
1:30 PM	**6**	**11**	**7**	**21**	***45***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**2**	**0**	***2***
1:45 PM	**12**	**10**	**20**	**12**	***54***	**0**	**0**	**0**	**0**	***0***	**1**	**1**	**3**	**1**	***6***
2:00 PM	**9**	**11**	**15**	**16**	***51***	**0**	**0**	**0**	**0**	***0***	**1**	**0**	**0**	**1**	***2***
Count Total	50	91	98	165	*404*	0	0	0	0	*0*	4	11	13	6	*34*
Peak Hr	**33**	**47**	**52**	**76**	***208***	**0**	**0**	**0**	**0**	***0***	**2**	**1**	**6**	**2**	***11***

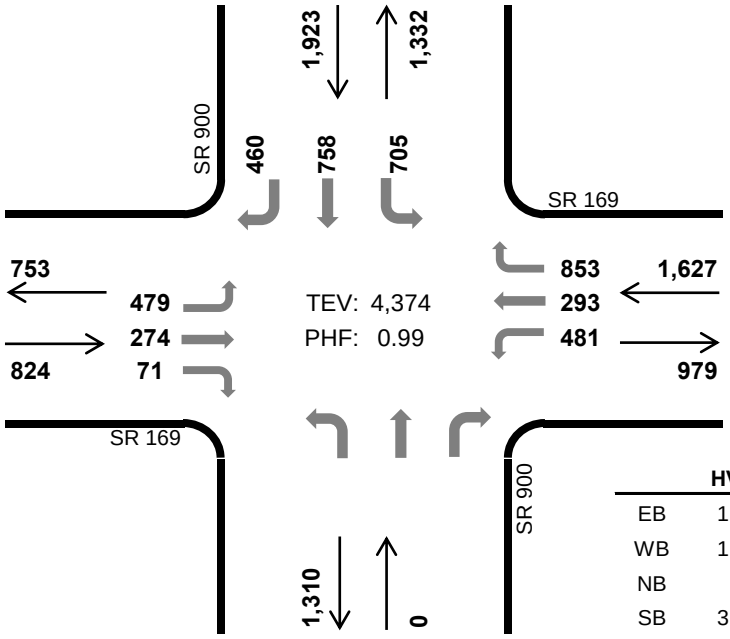
Mark Skaggs: 425 - 250 - 0777 mark.skaggs@idaxdata.com

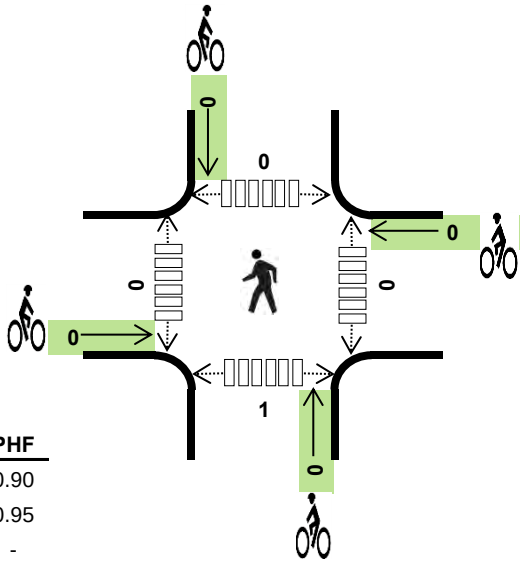
SR 900
SR 169

Date: Sat, Oct 04, 2014
Count Period: 11:45 AM to 1:45 PM
Peak Hour: 12:15 PM to 1:15 PM

N

Peak Hour





	HV %:	PHF
EB	1.1%	0.90
WB	1.8%	0.95
NB	-	-
SB	3.6%	0.92
TOTAL	2.4%	0.99

Two-Hour Count Summaries

Interval Start	SR 169 Eastbound			SR 169 Westbound			SR 900 Northbound			SR 900 Southbound			15-min Total	Rolling One Hour
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
11:45 AM	124	54	8	121	72	201	0	0	0	144	203	124	1,051	
12:00 PM	93	67	11	113	78	228	0	0	0	156	203	90	1,039	
12:15 PM	**132**	**84**	**14**	**119**	**83**	**225**	**0**	**0**	**0**	**152**	**190**	**107**	**1,106**	
12:30 PM	**107**	**51**	**22**	**121**	**69**	**214**	**0**	**0**	**0**	**187**	**212**	**123**	**1,106**	4,302
12:45 PM	**129**	**77**	**22**	**117**	**56**	**197**	**0**	**0**	**0**	**186**	**178**	**116**	**1,078**	4,329
1:00 PM	**111**	**62**	**13**	**124**	**85**	**217**	**0**	**0**	**0**	**180**	**178**	**114**	**1,084**	**4,374**
1:15 PM	116	68	19	128	64	205	0	0	0	173	198	100	1,071	4,339
1:30 PM	110	55	23	135	72	177	0	0	0	217	204	109	1,102	4,335
Count Total	922	518	132	978	579	1,664	0	0	0	1,395	1,566	883	8,637	
Peak Hr	**479**	**274**	**71**	**481**	**293**	**853**	**0**	**0**	**0**	**705**	**758**	**460**	**4,374**	

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
11:45 AM	0	10	0	18	*28*	0	0	0	0	*0*	0	0	0	0	*0*
12:00 PM	4	11	0	22	*37*	0	0	0	0	*0*	0	0	0	1	*1*
12:15 PM	**3**	**10**	**0**	**17**	***30***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***
12:30 PM	**2**	**6**	**0**	**16**	***24***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***
12:45 PM	**1**	**5**	**0**	**17**	***23***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***
1:00 PM	**3**	**8**	**0**	**19**	***30***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**1**	***1***
1:15 PM	2	6	0	17	*25*	0	0	0	0	*0*	0	0	0	2	*2*
1:30 PM	3	15	0	20	*38*	0	0	0	0	*0*	0	0	0	0	*0*
Count Total	18	71	0	146	*235*	0	0	0	0	*0*	0	0	0	4	*4*
Peak Hr	**9**	**29**	**0**	**69**	***107***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**1**	***1***

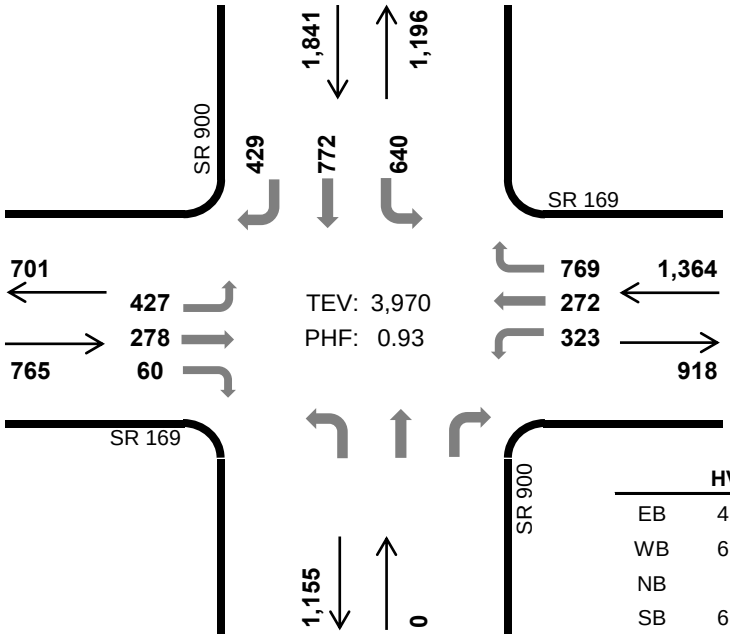
Mark Skaggs: 425 - 250 - 0777 mark.skaggs@idaxdata.com

SR 900
SR 169

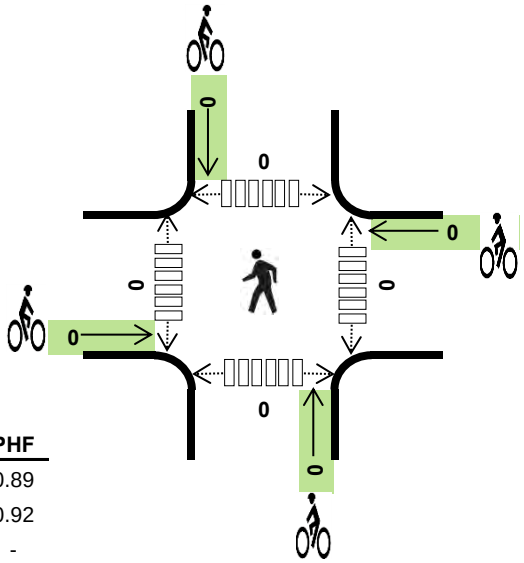
Date: Thu, Oct 02, 2014
Count Period: 12:15 PM to 2:15 PM
Peak Hour: 1:15 PM to 2:15 PM

N

Peak Hour



	HV %:	PHF
EB	4.2%	0.89
WB	6.9%	0.92
NB	-	-
SB	6.6%	0.91
TOTAL	6.2%	0.93



Two-Hour Count Summaries

Interval Start	SR 169 Eastbound			SR 169 Westbound			SR 900 Northbound			SR 900 Southbound			15-min Total	Rolling One Hour
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
12:15 PM	92	66	8	74	60	153	0	0	0	106	176	107	842	
12:30 PM	70	42	11	91	73	174	0	0	0	128	171	102	862	
12:45 PM	100	44	11	92	54	159	0	0	0	112	152	104	828	
1:00 PM	99	59	13	76	72	209	0	0	0	151	167	83	929	3,461
1:15 PM	**107**	**71**	**5**	**87**	**65**	**161**	**0**	**0**	**0**	**95**	**148**	**104**	**843**	3,462
1:30 PM	**92**	**55**	**17**	**92**	**69**	**209**	**0**	**0**	**0**	**175**	**211**	**108**	**1,028**	3,628
1:45 PM	**102**	**88**	**25**	**70**	**71**	**203**	**0**	**0**	**0**	**186**	**207**	**115**	**1,067**	3,867
2:00 PM	**126**	**64**	**13**	**74**	**67**	**196**	**0**	**0**	**0**	**184**	**206**	**102**	**1,032**	**3,970**
Count Total	788	489	103	656	531	1,464	0	0	0	1,137	1,438	825	7,431	
Peak Hr	**427**	**278**	**60**	**323**	**272**	**769**	**0**	**0**	**0**	**640**	**772**	**429**	**3,970**	

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
12:15 PM	11	14	0	28	*53*	0	0	0	0	*0*	0	0	0	0	*0*
12:30 PM	4	17	0	25	*46*	0	0	0	0	*0*	0	0	0	0	*0*
12:45 PM	2	24	0	29	*55*	0	0	0	0	*0*	0	0	0	1	*1*
1:00 PM	4	23	0	25	*52*	0	0	0	0	*0*	0	0	0	1	*1*
1:15 PM	**3**	**28**	**0**	**31**	***62***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***
1:30 PM	**4**	**24**	**0**	**27**	***55***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***
1:45 PM	**17**	**27**	**0**	**32**	***76***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***
2:00 PM	**8**	**15**	**0**	**31**	***54***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***
Count Total	53	172	0	228	*453*	0	0	0	0	*0*	0	0	0	2	*2*
Peak Hr	**32**	**94**	**0**	**121**	***247***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***

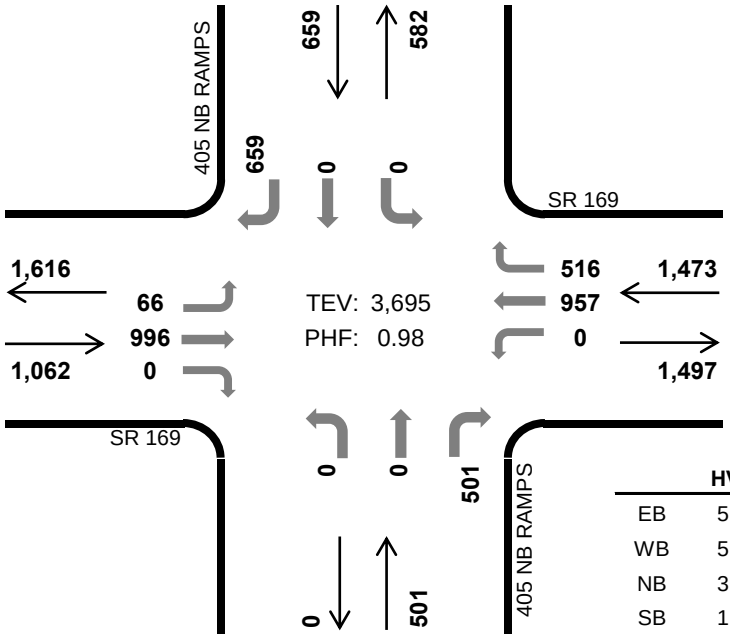
Mark Skaggs: 425 - 250 - 0777 mark.skaggs@idaxdata.com

405 NB RAMPS
SR 169

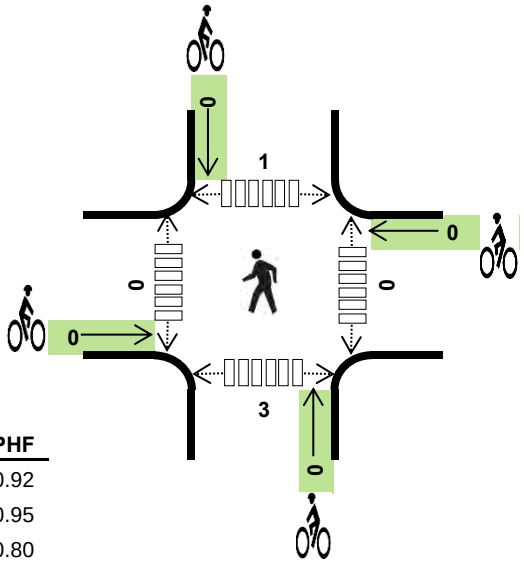
Date: Sat, Oct 04, 2014
Count Period: 11:45 AM to 1:45 PM
Peak Hour: 12:45 PM to 1:45 PM

N

Peak Hour



	HV %:	PHF
EB	5.0%	0.92
WB	5.1%	0.95
NB	3.6%	0.80
SB	1.5%	0.96
TOTAL	4.2%	0.98



Two-Hour Count Summaries

Interval Start	SR 169 Eastbound			SR 169 Westbound			405 NB RAMPS Northbound			405 NB RAMPS Southbound			15-min Total	Rolling One Hour
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
11:45 AM	3	198	0	0	249	132	0	0	112	0	1	150	845	
12:00 PM	24	207	0	0	230	153	0	0	125	0	0	195	934	
12:15 PM	18	213	0	0	274	133	0	0	103	0	0	170	911	
12:30 PM	25	226	0	0	236	142	0	0	111	0	1	177	918	3,608
12:45 PM	**23**	**246**	**0**	**0**	**232**	**139**	**0**	**0**	**133**	**0**	**0**	**152**	**925**	3,688
1:00 PM	**20**	**231**	**0**	**0**	**249**	**130**	**0**	**0**	**108**	**0**	**0**	**171**	**909**	3,663
1:15 PM	**9**	**245**	**0**	**0**	**256**	**130**	**0**	**0**	**104**	**0**	**0**	**170**	**914**	3,666
1:30 PM	**14**	**274**	**0**	**0**	**220**	**117**	**0**	**0**	**156**	**0**	**0**	**166**	**947**	**3,695**
Count Total	136	1,840	0	0	1,946	1,076	0	0	952	0	2	1,351	7,303	
Peak Hr	**66**	**996**	**0**	**0**	**957**	**516**	**0**	**0**	**501**	**0**	**0**	**659**	**3,695**	

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

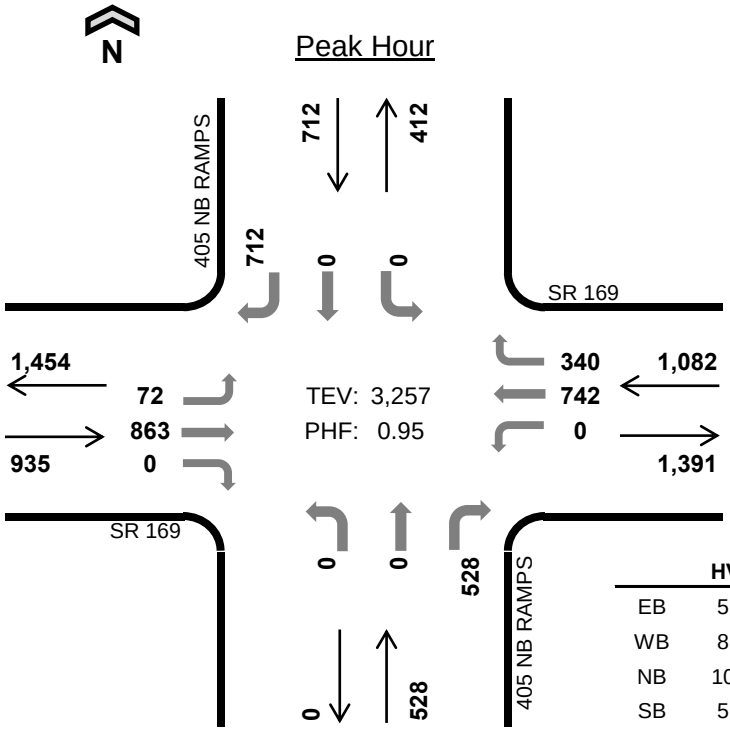
Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
11:45 AM	17	13	2	5	*37*	0	2	0	0	*2*	0	0	0	0	*0*
12:00 PM	17	18	3	3	*41*	0	2	0	0	*2*	0	0	0	1	*1*
12:15 PM	15	13	3	4	*35*	0	3	0	0	*3*	0	0	0	0	*0*
12:30 PM	15	16	7	1	*39*	0	1	0	0	*1*	0	0	0	0	*0*
12:45 PM	**13**	**15**	**7**	**3**	***38***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***
1:00 PM	**13**	**16**	**1**	**2**	***32***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**1**	***1***
1:15 PM	**15**	**21**	**5**	**2**	***43***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**1**	**2**	***3***
1:30 PM	**12**	**23**	**5**	**3**	***43***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***
Count Total	117	135	33	23	*308*	0	8	0	0	*8*	0	0	1	4	*5*
Peak Hr	**53**	**75**	**18**	**10**	***156***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**1**	**3**	***4***

Mark Skaggs: 425 - 250 - 0777 mark.skaggs@idaxdata.com

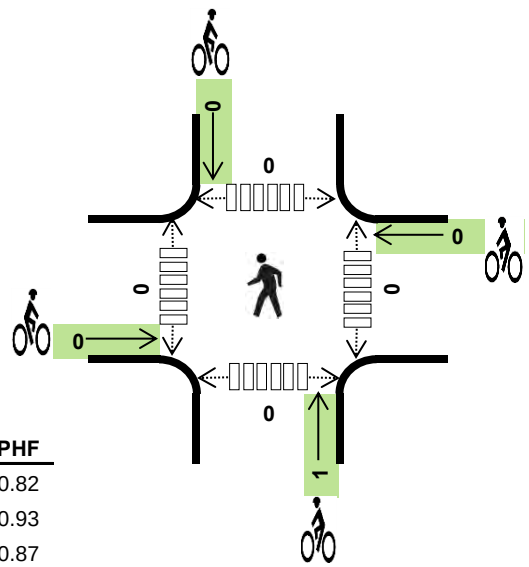
405 NB RAMPS
SR 169

Date: Thu, Oct 02, 2014
Count Period: 12:15 PM to 2:15 PM
Peak Hour: 1:15 PM to 2:15 PM

Peak Hour



	HV %:	PHF
EB	5.9%	0.82
WB	8.4%	0.93
NB	10.0%	0.87
SB	5.3%	0.91
TOTAL	7.3%	0.95



Two-Hour Count Summaries

Interval Start	SR 169 Eastbound			SR 169 Westbound			405 NB RAMPS Northbound			405 NB RAMPS Southbound			15-min Total	Rolling One Hour
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
12:15 PM	23	165	0	0	174	96	0	0	109	0	0	135	702	
12:30 PM	15	175	0	0	186	95	0	0	94	0	0	139	704	
12:45 PM	6	159	0	0	166	99	0	0	117	0	0	125	672	
1:00 PM	18	212	0	0	169	108	0	0	110	0	0	166	783	2,861
1:15 PM	**22**	**146**	**0**	**0**	**192**	**98**	**0**	**0**	**117**	**0**	**0**	**155**	**730**	2,889
1:30 PM	**22**	**216**	**0**	**0**	**196**	**85**	**0**	**0**	**122**	**0**	**0**	**179**	**820**	3,005
1:45 PM	**17**	**269**	**0**	**0**	**175**	**71**	**0**	**0**	**137**	**0**	**0**	**182**	**851**	3,184
2:00 PM	**11**	**232**	**0**	**0**	**179**	**86**	**0**	**0**	**152**	**0**	**0**	**196**	**856**	**3,257**
Count Total	134	1,574	0	0	1,437	738	0	0	958	0	0	1,277	6,118	
Peak Hr	**72**	**863**	**0**	**0**	**742**	**340**	**0**	**0**	**528**	**0**	**0**	**712**	**3,257**	

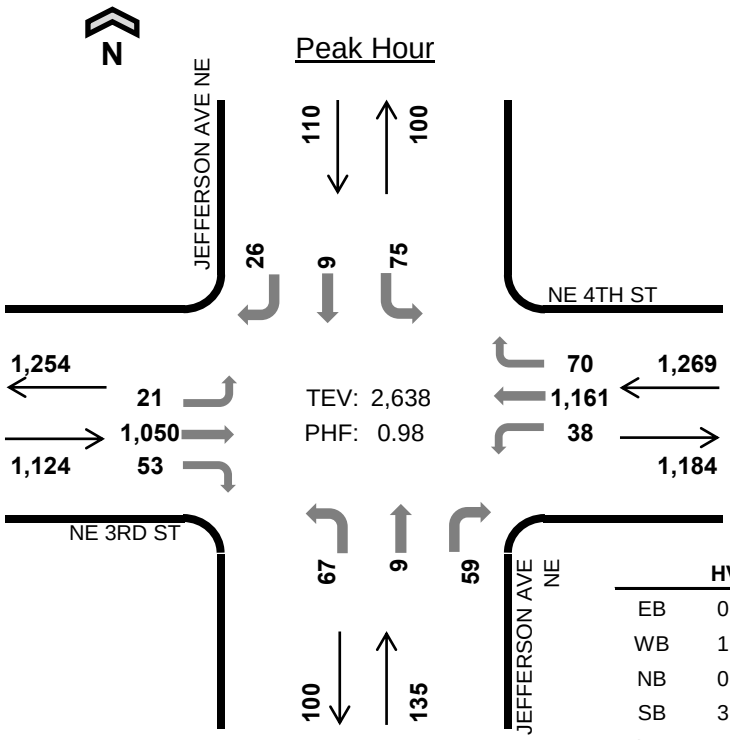
Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
12:15 PM	17	24	19	1	*61*	0	0	0	0	*0*	0	0	0	0	*0*
12:30 PM	13	30	12	4	*59*	0	0	0	0	*0*	0	0	0	0	*0*
12:45 PM	13	30	11	9	*63*	0	0	0	0	*0*	0	0	0	0	*0*
1:00 PM	14	30	9	7	*60*	0	0	0	0	*0*	0	0	0	0	*0*
1:15 PM	**9**	**37**	**13**	**7**	***66***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***
1:30 PM	**10**	**18**	**18**	**8**	***54***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***
1:45 PM	**16**	**22**	**9**	**15**	***62***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***
2:00 PM	**20**	**14**	**13**	**8**	***55***	**0**	**0**	**1**	**0**	***1***	**0**	**0**	**0**	**0**	***0***
Count Total	112	205	104	59	*480*	0	0	1	0	*1*	0	0	0	0	*0*
Peak Hr	**55**	**91**	**53**	**38**	***237***	**0**	**0**	**1**	**0**	***1***	**0**	**0**	**0**	**0**	***0***

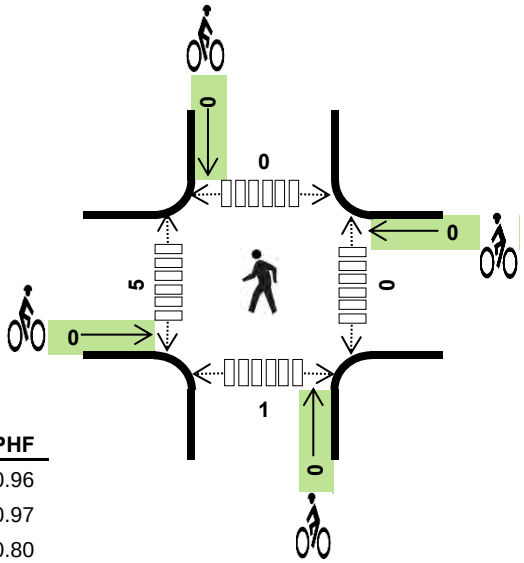
Mark Skaggs: 425 - 250 - 0777 mark.skaggs@idaxdata.com

Jefferson AVE NE
NE 4TH ST

Date: Sat, Oct 04, 2014
Count Period: 11:45 AM to 1:45 PM
Peak Hour: 12:00 PM to 1:00 PM



	HV %:	PHF
EB	0.7%	0.96
WB	1.0%	0.97
NB	0.7%	0.80
SB	3.6%	0.81
TOTAL	1.0%	0.98



Two-Hour Count Summaries

Interval Start	NE 3RD ST Eastbound			NE 4TH ST Westbound			Jefferson AVE NE Northbound			Jefferson AVE NE Southbound			15-min Total	Rolling One Hour
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
11:45 AM	6	253	15	15	303	18	24	1	12	12	0	4	663	
12:00 PM	**2**	**264**	**18**	**10**	**289**	**15**	**9**	**2**	**14**	**21**	**3**	**8**	**655**	
12:15 PM	**6**	**246**	**9**	**8**	**299**	**19**	**16**	**3**	**9**	**23**	**3**	**8**	**649**	
12:30 PM	**10**	**262**	**14**	**8**	**294**	**14**	**22**	**4**	**14**	**15**	**1**	**6**	**664**	2,631
12:45 PM	**3**	**278**	**12**	**12**	**279**	**22**	**20**	**0**	**22**	**16**	**2**	**4**	**670**	**2,638**
1:00 PM	8	232	10	11	294	17	35	5	17	13	2	5	649	2,632
1:15 PM	4	245	13	9	294	11	20	5	19	11	1	9	641	2,624
1:30 PM	6	251	10	10	290	24	22	1	15	11	5	6	651	2,611
Count Total	45	2,031	101	83	2,342	140	168	21	122	122	17	50	5,242	
Peak Hr	**21**	**1,050**	**53**	**38**	**1,161**	**70**	**67**	**9**	**59**	**75**	**9**	**26**	**2,638**	

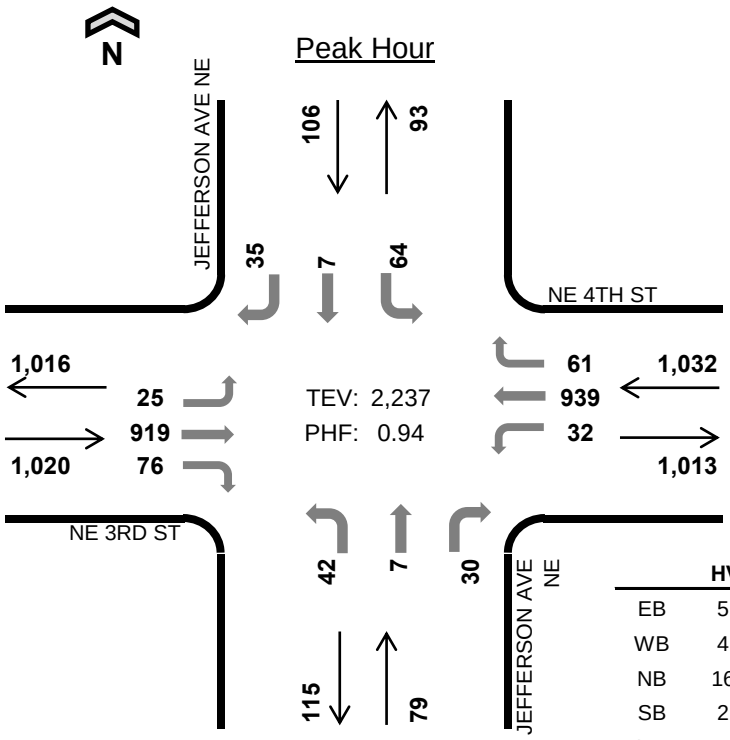
Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
11:45 AM	3	3	1	1	*8*	0	0	0	0	*0*	0	2	0	0	*2*
12:00 PM	**0**	**4**	**0**	**1**	***5***	**0**	**0**	**0**	**0**	***0***	**0**	**4**	**0**	**0**	***4***
12:15 PM	**3**	**4**	**0**	**1**	***8***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**1**	***1***
12:30 PM	**3**	**2**	**1**	**1**	***7***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***
12:45 PM	**2**	**3**	**0**	**1**	***6***	**0**	**0**	**0**	**0**	***0***	**0**	**1**	**0**	**0**	***1***
1:00 PM	4	3	1	0	*8*	0	0	0	0	*0*	0	0	0	0	*0*
1:15 PM	1	6	0	1	*8*	0	0	0	0	*0*	0	6	0	0	*6*
1:30 PM	5	4	0	0	*9*	0	0	0	0	*0*	0	0	0	0	*0*
Count Total	21	29	3	6	*59*	0	0	0	0	*0*	0	13	0	1	*14*
Peak Hr	**8**	**13**	**1**	**4**	***26***	**0**	**0**	**0**	**0**	***0***	**0**	**5**	**0**	**1**	***6***

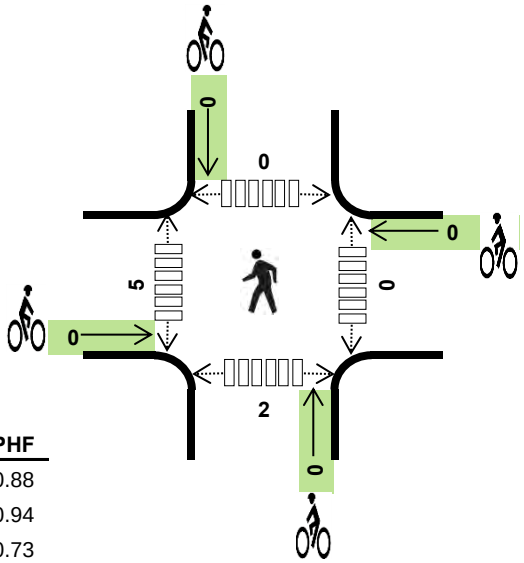
Mark Skaggs: 425 - 250 - 0777 mark.skaggs@idaxdata.com

Jefferson AVE NE
NE 4TH ST

Date: Thu, Oct 02, 2014
Count Period: 12:15 PM to 2:15 PM
Peak Hour: 1:15 PM to 2:15 PM



	HV %:	PHF
EB	5.3%	0.88
WB	4.3%	0.94
NB	16.5%	0.73
SB	2.8%	0.76
TOTAL	5.1%	0.94



Two-Hour Count Summaries

Interval Start	NE 3RD ST Eastbound			NE 4TH ST Westbound			Jefferson AVE NE Northbound			Jefferson AVE NE Southbound			15-min Total	Rolling One Hour
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
12:15 PM	6	202	13	6	229	15	12	2	2	16	0	6	509	
12:30 PM	3	176	7	5	242	19	9	0	7	18	0	6	492	
12:45 PM	4	170	21	5	242	20	12	4	3	15	1	3	500	
1:00 PM	4	194	19	6	227	12	17	0	12	15	2	5	513	2,014
1:15 PM	**4**	**192**	**13**	**11**	**232**	**19**	**7**	**4**	**6**	**17**	**0**	**7**	**512**	2,017
1:30 PM	**7**	**244**	**17**	**4**	**259**	**12**	**15**	**2**	**10**	**19**	**2**	**3**	**594**	2,119
1:45 PM	**6**	**251**	**32**	**10**	**238**	**23**	**4**	**0**	**9**	**13**	**3**	**7**	**596**	2,215
2:00 PM	**8**	**232**	**14**	**7**	**210**	**7**	**16**	**1**	**5**	**15**	**2**	**18**	**535**	**2,237**
Count Total	42	1,661	136	54	1,879	127	92	13	54	128	10	55	4,251	
Peak Hr	**25**	**919**	**76**	**32**	**939**	**61**	**42**	**7**	**30**	**64**	**7**	**35**	**2,237**	

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
12:15 PM	9	2	2	1	*14*	0	0	0	0	*0*	0	0	0	0	*0*
12:30 PM	14	9	4	1	*28*	0	0	0	0	*0*	0	0	0	0	*0*
12:45 PM	11	11	3	2	*27*	0	0	0	0	*0*	0	0	0	0	*0*
1:00 PM	11	11	7	2	*31*	0	0	0	0	*0*	0	0	0	0	*0*
1:15 PM	**10**	**12**	**4**	**1**	***27***	**0**	**0**	**0**	**0**	***0***	**0**	**1**	**0**	**2**	***3***
1:30 PM	**13**	**9**	**4**	**0**	***26***	**0**	**0**	**0**	**0**	***0***	**0**	**2**	**0**	**0**	***2***
1:45 PM	**18**	**13**	**1**	**2**	***34***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***
2:00 PM	**13**	**10**	**4**	**0**	***27***	**0**	**0**	**0**	**0**	***0***	**0**	**2**	**0**	**0**	***2***
Count Total	99	77	29	9	*214*	0	0	0	0	*0*	0	5	0	2	*7*
Peak Hr	**54**	**44**	**13**	**3**	***114***	**0**	**0**	**0**	**0**	***0***	**0**	**5**	**0**	**2**	***7***

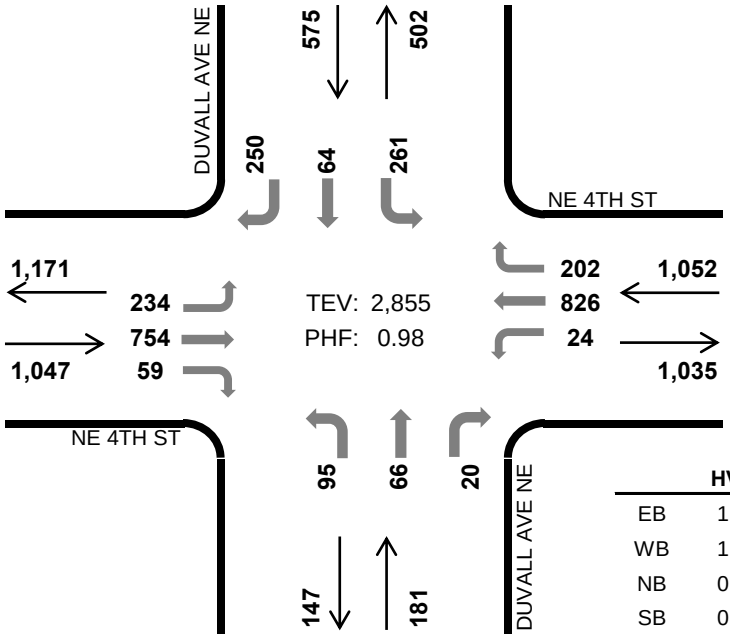
Mark Skaggs: 425 - 250 - 0777 mark.skaggs@idaxdata.com

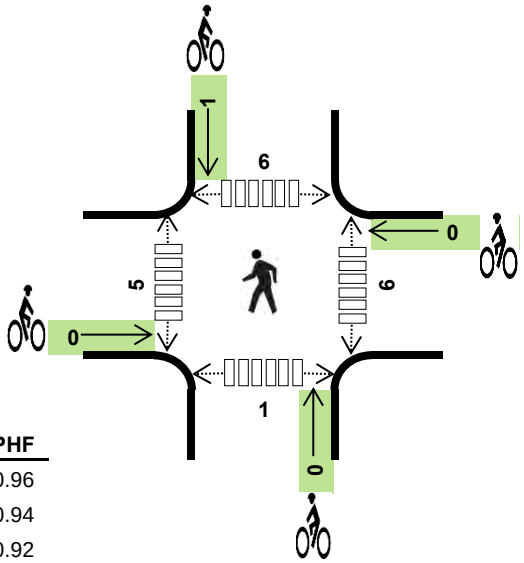
Duvall AVE NE
NE 4TH ST

Date: Sat, Oct 04, 2014
Count Period: 11:45 AM to 1:45 PM
Peak Hour: 11:45 AM to 12:45 PM

N

Peak Hour





	HV %:	PHF
EB	1.4%	0.96
WB	1.0%	0.94
NB	0.6%	0.92
SB	0.3%	0.91
TOTAL	1.0%	0.98

Two-Hour Count Summaries

Interval Start	NE 4TH ST Eastbound			NE 4TH ST Westbound			Duvall AVE NE Northbound			Duvall AVE NE Southbound			15-min Total	Rolling One Hour
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
11:45 AM	**61**	**199**	**13**	**4**	**198**	**51**	**19**	**11**	**10**	**72**	**11**	**75**	**724**	
12:00 PM	**55**	**186**	**17**	**7**	**200**	**45**	**28**	**13**	**3**	**65**	**28**	**47**	**694**	
12:15 PM	**68**	**177**	**14**	**6**	**214**	**60**	**25**	**20**	**4**	**69**	**11**	**57**	**725**	
12:30 PM	**50**	**192**	**15**	**7**	**214**	**46**	**23**	**22**	**3**	**55**	**14**	**71**	**712**	**2,855**
12:45 PM	54	193	10	13	209	52	22	10	8	46	17	64	698	2,829
1:00 PM	64	168	18	8	172	46	19	11	5	59	25	62	657	2,792
1:15 PM	45	182	11	6	194	56	19	12	4	56	16	67	668	2,735
1:30 PM	56	177	15	6	191	70	14	20	3	54	12	49	667	2,690
Count Total	453	1,474	113	57	1,592	426	169	119	40	476	134	492	5,545	
Peak Hr	**234**	**754**	**59**	**24**	**826**	**202**	**95**	**66**	**20**	**261**	**64**	**250**	**2,855**	

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
11:45 AM	**3**	**4**	**0**	**1**	***8***	**0**	**0**	**0**	**1**	***1***	**0**	**0**	**2**	**0**	***2***
12:00 PM	**5**	**4**	**1**	**0**	***10***	**0**	**0**	**0**	**0**	***0***	**3**	**0**	**4**	**1**	***8***
12:15 PM	**4**	**2**	**0**	**1**	***7***	**0**	**0**	**0**	**0**	***0***	**2**	**2**	**0**	**0**	***4***
12:30 PM	**3**	**0**	**0**	**0**	***3***	**0**	**0**	**0**	**0**	***0***	**1**	**3**	**0**	**0**	***4***
12:45 PM	2	1	1	0	*4*	0	0	0	1	*1*	0	0	0	0	*0*
1:00 PM	2	3	2	1	*8*	0	0	0	0	*0*	0	0	1	0	*1*
1:15 PM	0	3	0	2	*5*	0	0	0	0	*0*	0	1	6	0	*7*
1:30 PM	1	0	1	2	*4*	0	0	0	0	*0*	0	0	0	0	*0*
Count Total	20	17	5	7	*49*	0	0	0	2	*2*	6	6	13	1	*26*
Peak Hr	**15**	**10**	**1**	**2**	***28***	**0**	**0**	**0**	**1**	***1***	**6**	**5**	**6**	**1**	***18***

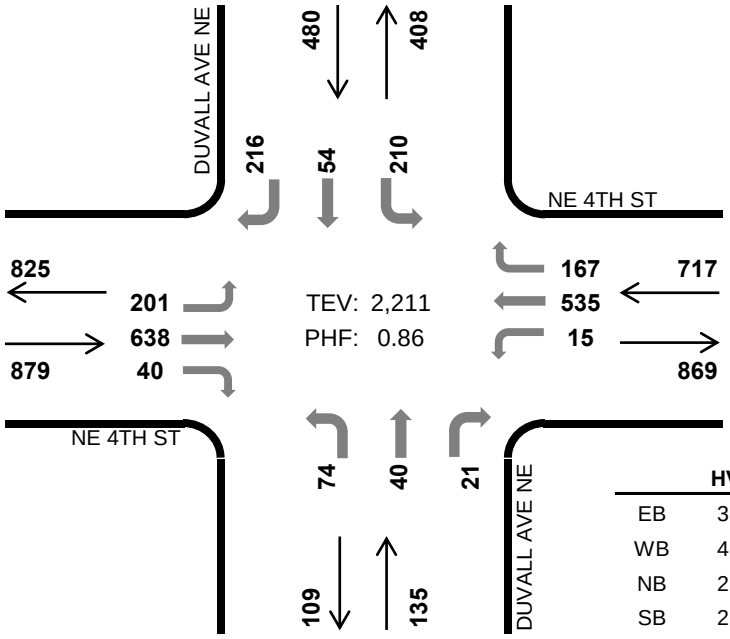
Mark Skaggs: 425 - 250 - 0777 mark.skaggs@idaxdata.com

Duvall AVE NE
NE 4TH ST

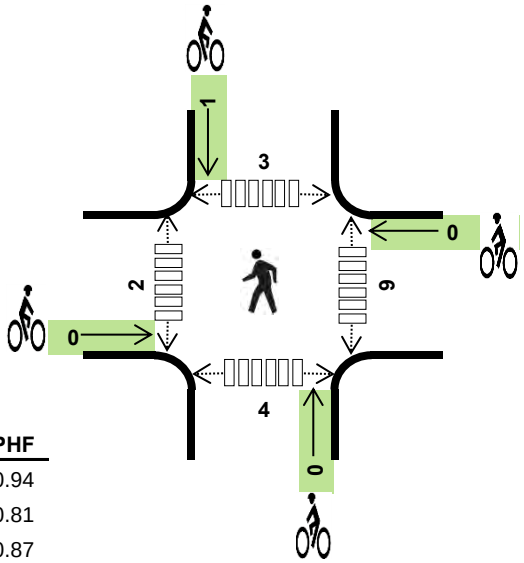
Date: Thu, Oct 02, 2014
Count Period: 12:15 PM to 2:15 PM
Peak Hour: 1:15 PM to 2:15 PM

N

Peak Hour



	HV %:	PHF
EB	3.1%	0.94
WB	4.2%	0.81
NB	2.2%	0.87
SB	2.1%	0.79
TOTAL	3.2%	0.86



Two-Hour Count Summaries

Interval Start	NE 4TH ST Eastbound			NE 4TH ST Westbound			Duvall AVE NE Northbound			Duvall AVE NE Southbound			15-min Total	Rolling One Hour
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
12:15 PM	37	143	14	6	127	36	19	19	5	42	22	57	527	
12:30 PM	48	110	13	4	166	37	22	8	6	40	14	54	522	
12:45 PM	43	133	15	1	135	35	17	9	6	46	8	45	493	
1:00 PM	37	119	9	2	127	34	24	12	4	46	10	49	473	2,015
1:15 PM	**46**	**141**	**7**	**3**	**126**	**40**	**18**	**12**	**4**	**50**	**14**	**48**	**509**	1,997
1:30 PM	**54**	**168**	**8**	**3**	**142**	**40**	**17**	**9**	**6**	**44**	**13**	**52**	**556**	2,031
1:45 PM	**50**	**158**	**13**	**4**	**104**	**33**	**15**	**10**	**5**	**48**	**14**	**46**	**500**	2,038
2:00 PM	**51**	**171**	**12**	**5**	**163**	**54**	**24**	**9**	**6**	**68**	**13**	**70**	**646**	**2,211**
Count Total	366	1,143	91	28	1,090	309	156	88	42	384	108	421	4,226	
Peak Hr	**201**	**638**	**40**	**15**	**535**	**167**	**74**	**40**	**21**	**210**	**54**	**216**	**2,211**	

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
12:15 PM	7	9	3	3	*22*	0	0	0	0	*0*	0	1	5	2	*8*
12:30 PM	7	8	0	3	*18*	0	0	0	0	*0*	0	2	2	0	*4*
12:45 PM	5	6	1	2	*14*	0	0	6	0	*6*	2	1	0	4	*7*
1:00 PM	5	2	2	4	*13*	0	0	0	0	*0*	4	0	0	4	*8*
1:15 PM	**2**	**9**	**1**	**0**	***12***	**0**	**0**	**0**	**0**	***0***	**3**	**0**	**1**	**0**	***4***
1:30 PM	**11**	**3**	**0**	**3**	***17***	**0**	**0**	**0**	**0**	***0***	**2**	**0**	**0**	**1**	***3***
1:45 PM	**5**	**10**	**0**	**4**	***19***	**0**	**0**	**0**	**1**	***1***	**4**	**2**	**1**	**1**	***8***
2:00 PM	**9**	**8**	**2**	**3**	***22***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**1**	**2**	***3***
Count Total	51	55	9	22	*137*	0	0	6	1	*7*	15	6	10	14	*45*
Peak Hr	**27**	**30**	**3**	**10**	***70***	**0**	**0**	**0**	**1**	***1***	**9**	**2**	**3**	**4**	***18***

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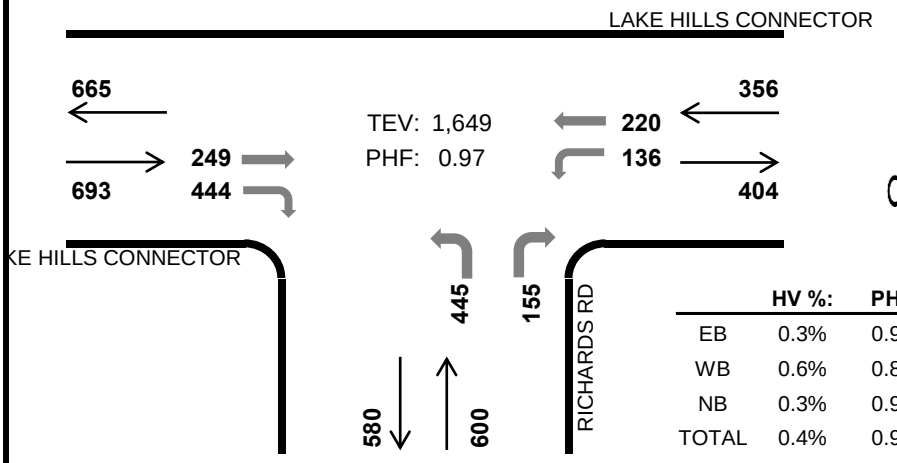
RICHARDS RD
LAKE HILLS CONNECTOR

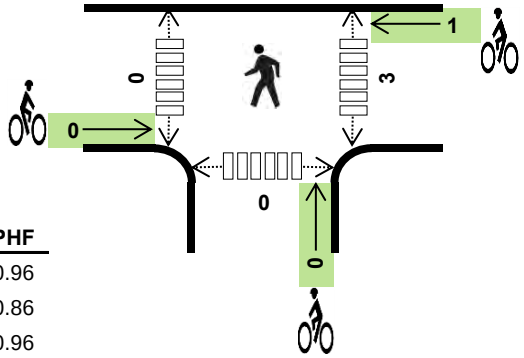
N

Peak Hour

Date: Sat, Dec 06, 2014
Count Period: 1:30 PM to 3:30 PM
Peak Hour: 2:30 PM to 3:30 PM



	HV %:	PHF
EB	0.3%	0.96
WB	0.6%	0.86
NB	0.3%	0.96
TOTAL	0.4%	0.97



Two-Hour Count Summaries

Interval Start	LAKE HILLS CONNECTOR			LAKE HILLS CONNECTOR			RICHARDS RD			RICHARDS RD			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
1:30 PM	0	57	91	23	50	0	132	0	28	0	0	0	381	
1:45 PM	0	48	111	23	63	0	119	0	30	0	0	0	394	
2:00 PM	0	57	123	25	46	0	111	0	40	0	0	0	402	
2:15 PM	0	54	89	18	60	0	129	0	27	0	0	0	377	1,554
2:30 PM	**0**	**62**	**110**	**26**	**57**	**0**	**107**	**0**	**39**	**0**	**0**	**0**	**401**	1,574
2:45 PM	**0**	**68**	**112**	**36**	**54**	**0**	**106**	**0**	**36**	**0**	**0**	**0**	**412**	1,592
3:00 PM	**0**	**58**	**117**	**36**	**44**	**0**	**111**	**0**	**46**	**0**	**0**	**0**	**412**	1,602
3:15 PM	**0**	**61**	**105**	**38**	**65**	**0**	**121**	**0**	**34**	**0**	**0**	**0**	**424**	**1,649**
Count Total	0	465	858	225	439	0	936	0	280	0	0	0	3,203	
Peak Hr	**0**	**249**	**444**	**136**	**220**	**0**	**445**	**0**	**155**	**0**	**0**	**0**	**1,649**	

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
1:30 PM	0	1	1	0	*2*	0	0	0	0	*0*	0	0	0	0	*0*
1:45 PM	1	0	1	0	*2*	0	0	0	0	*0*	0	0	0	0	*0*
2:00 PM	0	1	0	0	*1*	0	0	0	0	*0*	0	0	0	0	*0*
2:15 PM	0	0	0	0	*0*	0	0	0	0	*0*	1	0	0	0	*1*
2:30 PM	**0**	**1**	**0**	**0**	***1***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***
2:45 PM	**1**	**0**	**0**	**0**	***1***	**0**	**1**	**0**	**0**	***1***	**1**	**0**	**0**	**0**	***1***
3:00 PM	**0**	**1**	**1**	**0**	***2***	**0**	**0**	**0**	**0**	***0***	**1**	**0**	**0**	**0**	***1***
3:15 PM	**1**	**0**	**1**	**0**	***2***	**0**	**0**	**0**	**0**	***0***	**1**	**0**	**0**	**0**	***1***
Count Total	3	4	4	0	*11*	0	1	0	0	*1*	4	0	0	0	*4*
Peak Hr	**2**	**2**	**2**	**0**	***6***	**0**	**1**	**0**	**0**	***1***	**3**	**0**	**0**	**0**	***3***

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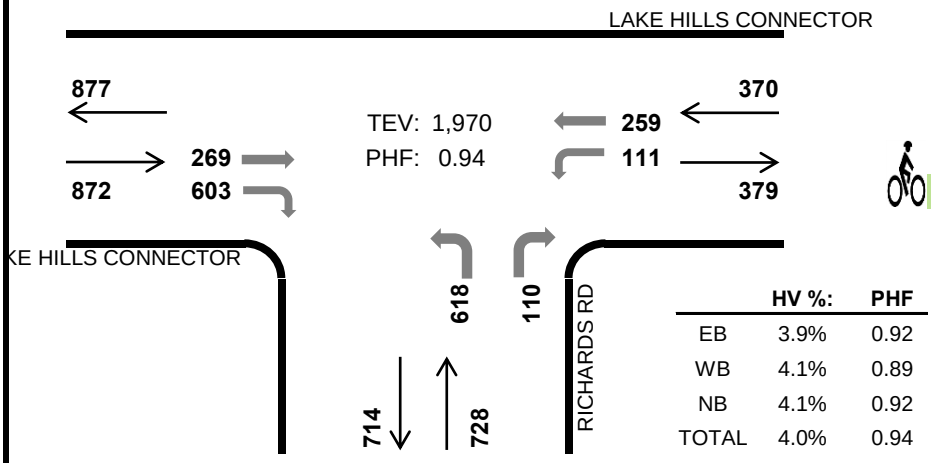
RICHARDS RD
LAKE HILLS CONNECTOR

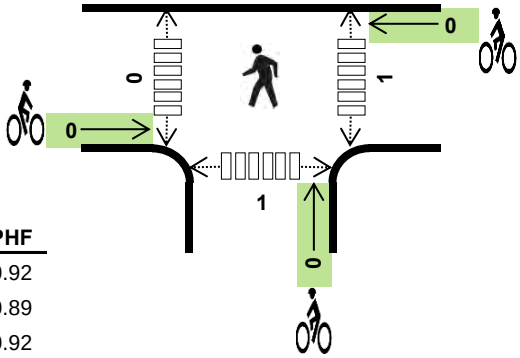
N

Peak Hour

Date: Tue, Nov 25, 2014
Count Period: 12:30 PM to 2:30 PM
Peak Hour: 1:30 PM to 2:30 PM



	HV %:	PHF
EB	3.9%	0.92
WB	4.1%	0.89
NB	4.1%	0.92
TOTAL	4.0%	0.94



Two-Hour Count Summaries

Interval Start	LAKE HILLS CONNECTOR			LAKE HILLS CONNECTOR			RICHARDS RD			RICHARDS RD			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
12:30 PM	0	43	137	16	75	0	136	0	41	0	0	0	448	
12:45 PM	0	58	136	27	57	0	130	0	22	0	0	0	430	
1:00 PM	0	49	152	25	55	0	131	0	31	0	0	0	443	
1:15 PM	0	72	170	33	37	0	135	0	29	0	0	0	476	1,797
1:30 PM	**0**	**52**	**167**	**30**	**64**	**0**	**138**	**0**	**33**	**0**	**0**	**0**	**484**	1,833
1:45 PM	**0**	**68**	**122**	**22**	**62**	**0**	**153**	**0**	**26**	**0**	**0**	**0**	**453**	1,856
2:00 PM	**0**	**64**	**162**	**29**	**59**	**0**	**173**	**0**	**24**	**0**	**0**	**0**	**511**	1,924
2:15 PM	**0**	**85**	**152**	**30**	**74**	**0**	**154**	**0**	**27**	**0**	**0**	**0**	**522**	**1,970**
Count Total	0	491	1,198	212	483	0	1,150	0	233	0	0	0	3,767	
Peak Hr	**0**	**269**	**603**	**111**	**259**	**0**	**618**	**0**	**110**	**0**	**0**	**0**	**1,970**	

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
12:30 PM	7	2	1	0	*10*	0	0	1	0	*1*	0	0	0	0	*0*
12:45 PM	8	3	6	0	*17*	0	0	0	0	*0*	1	0	0	0	*1*
1:00 PM	11	3	7	0	*21*	0	0	0	0	*0*	0	0	0	0	*0*
1:15 PM	10	4	6	0	*20*	0	0	0	0	*0*	0	0	0	0	*0*
1:30 PM	**13**	**3**	**6**	**0**	***22***	**0**	**0**	**0**	**0**	***0***	**1**	**0**	**0**	**0**	***1***
1:45 PM	**7**	**4**	**7**	**0**	***18***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***
2:00 PM	**8**	**3**	**7**	**0**	***18***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**1**	***1***
2:15 PM	**6**	**5**	**10**	**0**	***21***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***
Count Total	70	27	50	0	*147*	0	0	1	0	*1*	2	0	0	1	*3*
Peak Hr	**34**	**15**	**30**	**0**	***79***	**0**	**0**	**0**	**0**	***0***	**1**	**0**	**0**	**1**	***2***

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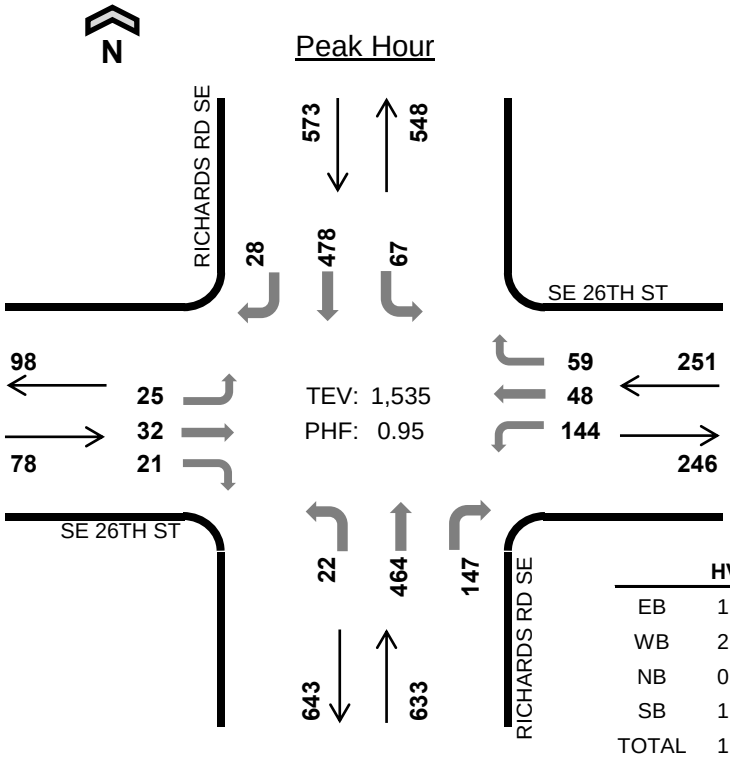
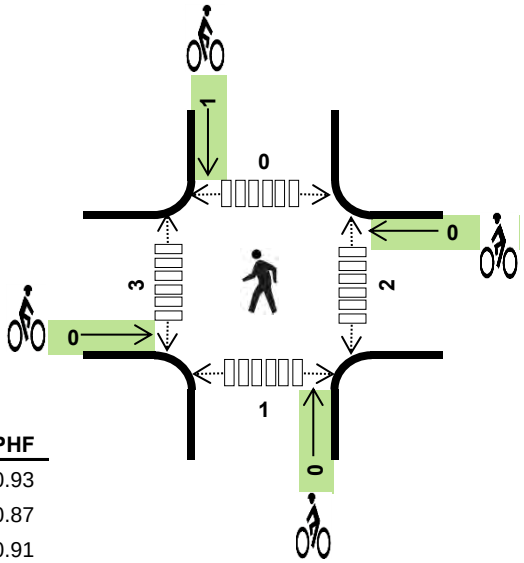
RICHARDS RD SE
SE 26TH ST

Date: Sat, Oct 04, 2014
Count Period: 1:30 PM to 3:30 PM
Peak Hour: 2:30 PM to 3:30 PM

Peak Hour



	HV %:	PHF
EB	1.3%	0.93
WB	2.4%	0.87
NB	0.9%	0.91
SB	1.2%	0.89
TOTAL	1.3%	0.95



Two-Hour Count Summaries

Interval Start	SE 26TH ST Eastbound			SE 26TH ST Westbound			RICHARDS RD SE Northbound			RICHARDS RD SE Southbound			15-min Total	Rolling One Hour
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
1:30 PM	8	10	8	40	13	16	4	134	46	7	78	4	368	
1:45 PM	4	9	10	47	12	26	6	107	50	14	128	5	418	
2:00 PM	5	13	2	37	11	17	5	114	35	23	111	6	379	
2:15 PM	5	7	6	37	10	15	5	117	27	10	96	7	342	1,507
2:30 PM	**6**	**9**	**6**	**28**	**8**	**14**	**4**	**120**	**38**	**19**	**101**	**5**	**358**	1,497
2:45 PM	**8**	**8**	**4**	**36**	**15**	**19**	**4**	**106**	**31**	**14**	**137**	**10**	**392**	1,471
3:00 PM	**5**	**7**	**5**	**48**	**13**	**11**	**10**	**122**	**42**	**20**	**113**	**6**	**402**	1,494
3:15 PM	**6**	**8**	**6**	**32**	**12**	**15**	**4**	**116**	**36**	**14**	**127**	**7**	**383**	**1,535**
Count Total	47	71	47	305	94	133	42	936	305	121	891	50	3,042	
Peak Hr	**25**	**32**	**21**	**144**	**48**	**59**	**22**	**464**	**147**	**67**	**478**	**28**	**1,535**	

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
1:30 PM	1	2	0	1	*4*	0	0	0	1	*1*	0	0	0	1	*1*
1:45 PM	0	3	1	0	*4*	0	0	0	0	*0*	1	0	0	0	*1*
2:00 PM	0	1	6	1	*8*	0	1	0	0	*1*	0	0	0	0	*0*
2:15 PM	1	3	3	1	*8*	0	0	0	0	*0*	0	1	0	0	*1*
2:30 PM	**1**	**1**	**2**	**1**	***5***	**0**	**0**	**0**	**0**	***0***	**0**	**2**	**0**	**0**	***2***
2:45 PM	**0**	**4**	**0**	**2**	***6***	**0**	**0**	**0**	**1**	***1***	**0**	**1**	**0**	**1**	***2***
3:00 PM	**0**	**0**	**2**	**2**	***4***	**0**	**0**	**0**	**0**	***0***	**1**	**0**	**0**	**0**	***1***
3:15 PM	**0**	**1**	**2**	**2**	***5***	**0**	**0**	**0**	**0**	***0***	**1**	**0**	**0**	**0**	***1***
Count Total	3	15	16	10	*44*	0	1	0	2	*3*	3	4	0	2	*9*
Peak Hr	**1**	**6**	**6**	**7**	***20***	**0**	**0**	**0**	**1**	***1***	**2**	**3**	**0**	**1**	***6***

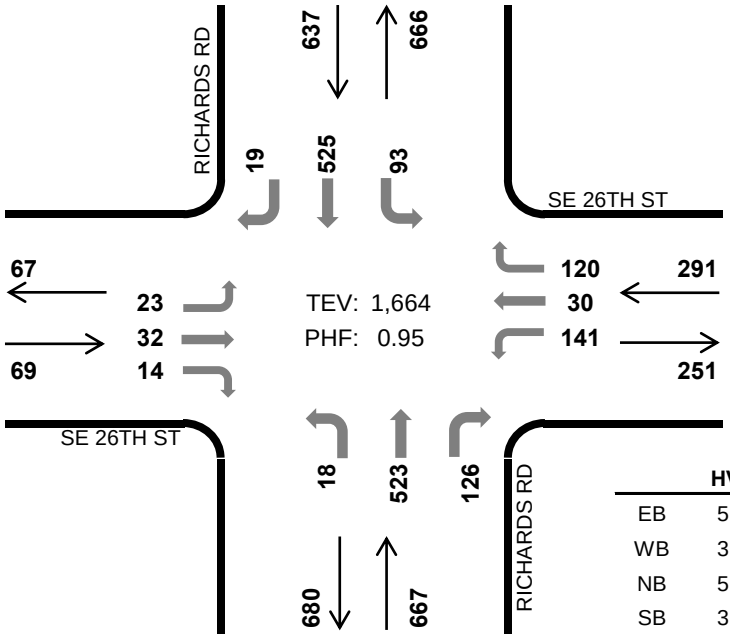
Mark Skaggs: 425 - 250 - 0777 mark.skaggs@idaxdata.com

RICHARDS RD
SE 26TH ST

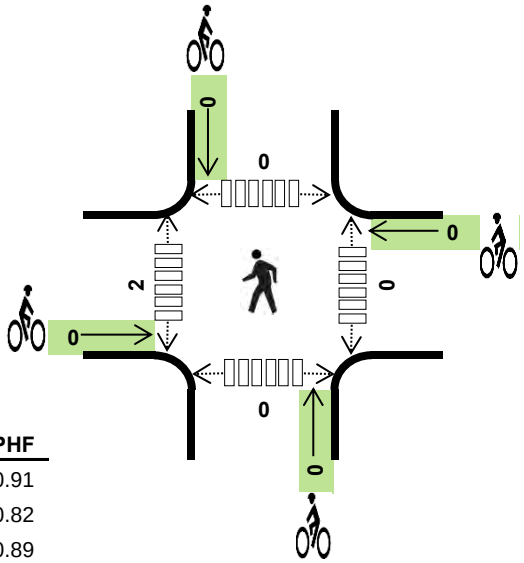
Date: Tue, Oct 07, 2014
Count Period: 12:30 PM to 2:30 PM
Peak Hour: 1:00 PM to 2:00 PM

N

Peak Hour



	HV %:	PHF
EB	5.8%	0.91
WB	3.8%	0.82
NB	5.7%	0.89
SB	3.6%	0.94
TOTAL	4.6%	0.95



Two-Hour Count Summaries

Interval Start	SE 26TH ST Eastbound			SE 26TH ST Westbound			RICHARDS RD Northbound			RICHARDS RD Southbound			15-min Total	Rolling One Hour
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
12:30 PM	3	11	3	40	10	33	4	129	41	14	112	4	404	
12:45 PM	5	10	4	45	9	21	4	135	36	32	109	3	413	
1:00 PM	**8**	**8**	**3**	**40**	**6**	**29**	**5**	**122**	**37**	**21**	**121**	**4**	**404**	
1:15 PM	**5**	**9**	**4**	**24**	**9**	**24**	**5**	**109**	**30**	**23**	**142**	**4**	**388**	1,609
1:30 PM	**3**	**10**	**4**	**27**	**7**	**36**	**4**	**154**	**29**	**27**	**132**	**5**	**438**	1,643
1:45 PM	**7**	**5**	**3**	**50**	**8**	**31**	**4**	**138**	**30**	**22**	**130**	**6**	**434**	**1,664**
2:00 PM	4	6	2	29	6	31	6	116	29	18	127	5	379	1,639
2:15 PM	6	10	5	41	9	33	4	117	31	20	119	3	398	1,649
Count Total	41	69	28	296	64	238	36	1,020	263	177	992	34	3,258	
Peak Hr	**23**	**32**	**14**	**141**	**30**	**120**	**18**	**523**	**126**	**93**	**525**	**19**	**1,664**	

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

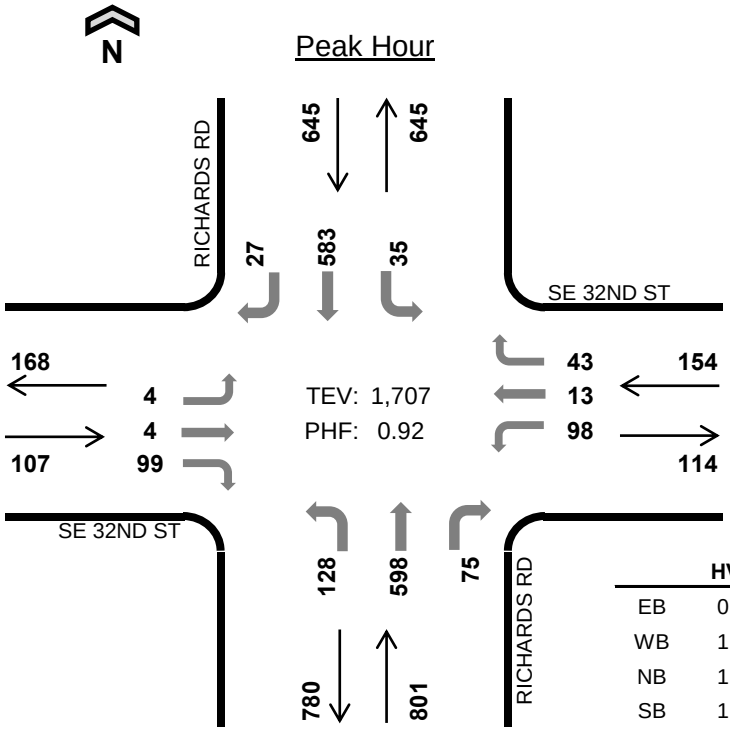
Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
12:30 PM	0	3	7	7	*17*	0	0	0	0	*0*	1	0	0	0	*1*
12:45 PM	1	1	8	5	*15*	0	0	0	0	*0*	0	2	0	0	*2*
1:00 PM	**1**	**2**	**8**	**8**	***19***	**0**	**0**	**0**	**0**	***0***	**0**	**1**	**0**	**0**	***1***
1:15 PM	**2**	**2**	**10**	**3**	***17***	**0**	**0**	**0**	**0**	***0***	**0**	**1**	**0**	**0**	***1***
1:30 PM	**1**	**3**	**10**	**8**	***22***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***
1:45 PM	**0**	**4**	**10**	**4**	***18***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***
2:00 PM	1	3	5	6	*15*	0	0	0	0	*0*	0	0	0	0	*0*
2:15 PM	2	0	8	3	*13*	0	0	0	0	*0*	0	2	0	0	*2*
Count Total	8	18	66	44	*136*	0	0	0	0	*0*	1	6	0	0	*7*
Peak Hr	**4**	**11**	**38**	**23**	***76***	**0**	**0**	**0**	**0**	***0***	**0**	**2**	**0**	**0**	***2***

Mark Skaggs: 425 - 250 - 0777 mark.skaggs@idaxdata.com

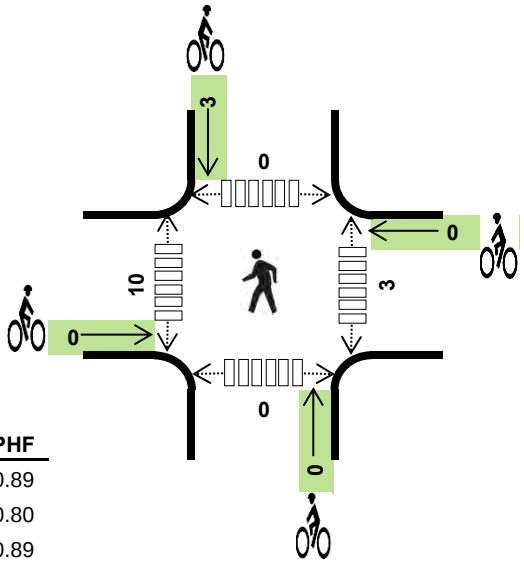
RICHARDS RD
SE 32ND ST

Date: Sat, Oct 04, 2014
Count Period: 1:30 PM to 3:30 PM
Peak Hour: 1:30 PM to 2:30 PM

Peak Hour



	HV %:	PHF
EB	0.9%	0.89
WB	1.3%	0.80
NB	1.4%	0.89
SB	1.2%	0.90
TOTAL	1.3%	0.92



Two-Hour Count Summaries

Interval Start	SE 32ND ST Eastbound			SE 32ND ST Westbound			RICHARDS RD Northbound			RICHARDS RD Southbound			15-min Total	Rolling One Hour
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
1:30 PM	**1**	**2**	**26**	**34**	**3**	**11**	**28**	**151**	**15**	**11**	**126**	**8**	**416**	
1:45 PM	**2**	**1**	**22**	**19**	**2**	**12**	**33**	**163**	**29**	**9**	**164**	**7**	**463**	
2:00 PM	**1**	**0**	**22**	**25**	**4**	**9**	**33**	**141**	**17**	**6**	**154**	**4**	**416**	
2:15 PM	**0**	**1**	**29**	**20**	**4**	**11**	**34**	**143**	**14**	**9**	**139**	**8**	**412**	**1,707**
2:30 PM	1	1	18	28	1	4	37	156	21	8	129	6	410	1,701
2:45 PM	2	2	18	3	2	17	30	131	14	7	144	7	377	1,615
3:00 PM	2	1	25	14	2	10	24	182	18	4	159	12	453	1,652
3:15 PM	2	0	27	18	0	14	20	138	24	6	152	8	409	1,649
Count Total	11	8	187	161	18	88	239	1,205	152	60	1,167	60	3,356	
Peak Hr	**4**	**4**	**99**	**98**	**13**	**43**	**128**	**598**	**75**	**35**	**583**	**27**	**1,707**	

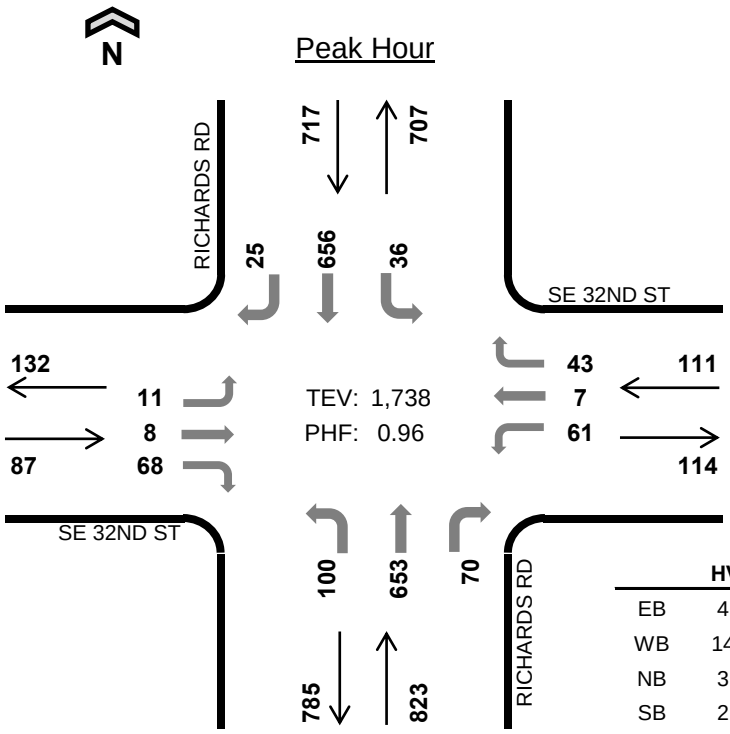
Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

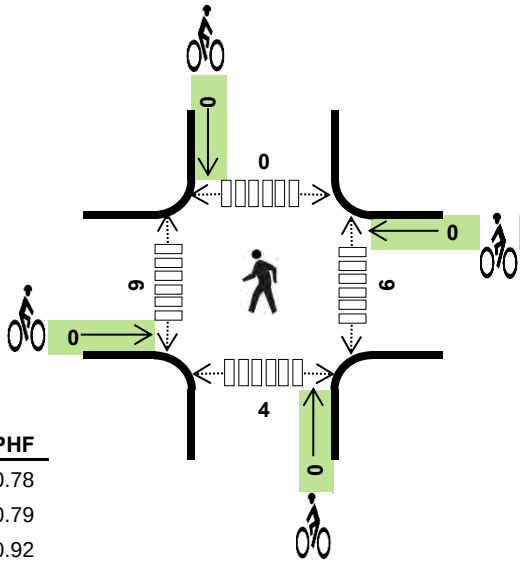
Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
1:30 PM	**0**	**1**	**0**	**1**	***2***	**0**	**0**	**0**	**1**	***1***	**0**	**2**	**0**	**0**	***2***
1:45 PM	**0**	**1**	**1**	**1**	***3***	**0**	**0**	**0**	**1**	***1***	**0**	**1**	**0**	**0**	***1***
2:00 PM	**0**	**0**	**5**	**2**	***7***	**0**	**0**	**0**	**0**	***0***	**2**	**0**	**0**	**0**	***2***
2:15 PM	**1**	**0**	**5**	**4**	***10***	**0**	**0**	**0**	**1**	***1***	**1**	**7**	**0**	**0**	***8***
2:30 PM	0	3	3	2	*8*	0	0	0	0	*0*	1	1	0	0	*2*
2:45 PM	2	1	1	3	*7*	0	0	0	0	*0*	0	0	0	0	*0*
3:00 PM	1	2	1	0	*4*	0	0	0	0	*0*	2	0	0	0	*2*
3:15 PM	0	1	2	1	*4*	0	0	0	0	*0*	5	2	2	0	*9*
Count Total	4	9	18	14	*45*	0	0	0	3	*3*	11	13	2	0	*26*
Peak Hr	**1**	**2**	**11**	**8**	***22***	**0**	**0**	**0**	**3**	***3***	**3**	**10**	**0**	**0**	***13***

Mark Skaggs: 425 - 250 - 0777 mark.skaggs@idaxdata.com

RICHARDS RD
SE 32ND ST

Date: Tue, Oct 07, 2014
Count Period: 12:30 PM to 2:30 PM
Peak Hour: 1:00 PM to 2:00 PM





	HV %:	PHF
EB	4.6%	0.78
WB	14.4%	0.79
NB	3.9%	0.92
SB	2.9%	0.90
TOTAL	4.2%	0.96

Two-Hour Count Summaries

Interval Start	SE 32ND ST Eastbound			SE 32ND ST Westbound			RICHARDS RD Northbound			RICHARDS RD Southbound			15-min Total	Rolling One Hour
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
12:30 PM	6	2	18	20	2	11	18	153	23	10	140	9	412	
12:45 PM	2	2	15	16	5	11	27	169	18	5	154	12	436	
1:00 PM	**1**	**2**	**16**	**15**	**1**	**13**	**31**	**156**	**23**	**6**	**154**	**6**	**424**	
1:15 PM	**2**	**3**	**16**	**19**	**2**	**8**	**20**	**156**	**15**	**7**	**161**	**9**	**418**	1,690
1:30 PM	**6**	**2**	**20**	**9**	**3**	**6**	**32**	**175**	**16**	**12**	**157**	**6**	**444**	1,722
1:45 PM	**2**	**1**	**16**	**18**	**1**	**16**	**17**	**166**	**16**	**11**	**184**	**4**	**452**	**1,738**
2:00 PM	4	0	18	12	2	8	26	160	15	3	164	11	423	1,737
2:15 PM	4	0	19	15	1	5	15	154	17	8	165	14	417	1,736
Count Total	27	12	138	124	17	78	186	1,289	143	62	1,279	71	3,426	
Peak Hr	**11**	**8**	**68**	**61**	**7**	**43**	**100**	**653**	**70**	**36**	**656**	**25**	**1,738**	

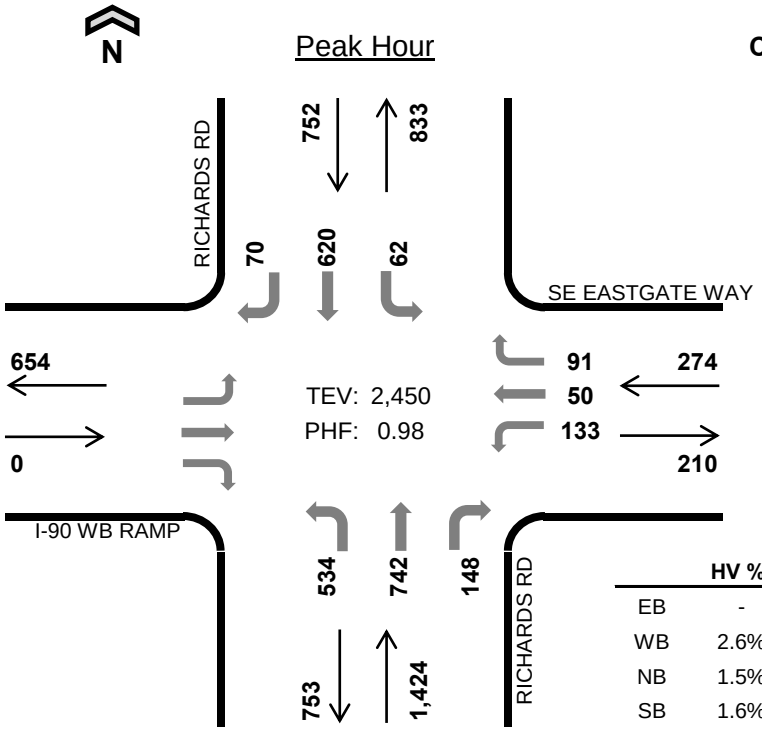
Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
12:30 PM	1	6	10	7	*24*	0	0	0	0	*0*	2	0	1	0	*3*
12:45 PM	1	5	11	4	*21*	0	0	0	0	*0*	8	2	0	0	*10*
1:00 PM	**0**	**4**	**13**	**5**	***22***	**0**	**0**	**0**	**0**	***0***	**1**	**2**	**0**	**0**	***3***
1:15 PM	**1**	**3**	**8**	**8**	***20***	**0**	**0**	**0**	**0**	***0***	**2**	**5**	**0**	**2**	***9***
1:30 PM	**2**	**3**	**4**	**5**	***14***	**0**	**0**	**0**	**0**	***0***	**3**	**2**	**0**	**2**	***7***
1:45 PM	**1**	**6**	**7**	**3**	***17***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***
2:00 PM	0	4	5	6	*15*	0	0	0	0	*0*	0	0	0	0	*0*
2:15 PM	1	2	11	2	*16*	0	0	0	0	*0*	1	0	0	0	*1*
Count Total	7	33	69	40	*149*	0	0	0	0	*0*	17	11	1	4	*33*
Peak Hr	**4**	**16**	**32**	**21**	***73***	**0**	**0**	**0**	**0**	***0***	**6**	**9**	**0**	**4**	***19***

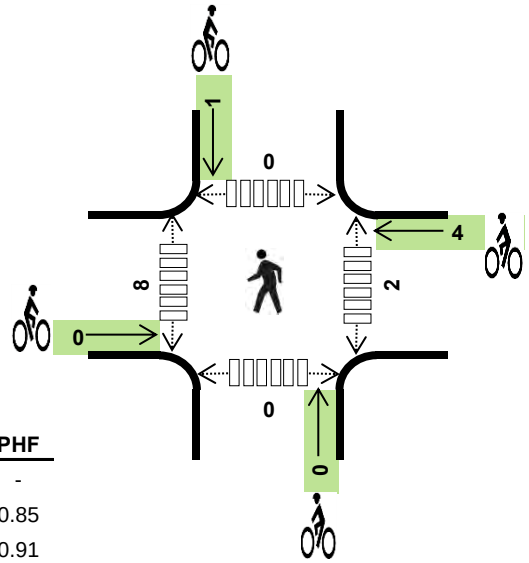
Mark Skaggs: 425 - 250 - 0777 mark.skaggs@idaxdata.com

RICHARDS RD
SE EASTGATE WAY

Date: Sat, Oct 04, 2014
Count Period: 1:30 PM to 3:30 PM
Peak Hour: 1:45 PM to 2:45 PM



	HV %:	PHF
EB	-	-
WB	2.6%	0.85
NB	1.5%	0.91
SB	1.6%	0.89
TOTAL	1.6%	0.98



Two-Hour Count Summaries

Interval Start	I-90 WB RAMP			SE EASTGATE WAY			RICHARDS RD			RICHARDS RD			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
1:30 PM	0	0	0	27	7	24	127	189	32	11	149	14	580	
1:45 PM	**0**	**0**	**0**	**37**	**12**	**32**	**116**	**187**	**32**	**19**	**175**	**18**	**628**	
2:00 PM	**0**	**0**	**0**	**26**	**13**	**18**	**160**	**189**	**41**	**16**	**142**	**20**	**625**	
2:15 PM	**0**	**0**	**0**	**35**	**12**	**17**	**125**	**170**	**39**	**16**	**155**	**17**	**586**	2,419
2:30 PM	**0**	**0**	**0**	**35**	**13**	**24**	**133**	**196**	**36**	**11**	**148**	**15**	**611**	**2,450**
2:45 PM	0	0	0	46	6	18	141	145	45	23	124	14	562	2,384
3:00 PM	0	0	0	38	9	30	129	209	24	14	168	14	635	2,394
3:15 PM	0	0	0	48	7	23	117	163	25	15	176	9	583	2,391
Count Total	0	0	0	292	79	186	1,048	1,448	274	125	1,237	121	4,810	
Peak Hr	**0**	**0**	**0**	**133**	**50**	**91**	**534**	**742**	**148**	**62**	**620**	**70**	**2,450**	

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
1:30 PM	0	1	0	4	*5*	0	0	0	0	*0*	0	3	1	0	*4*
1:45 PM	**0**	**1**	**5**	**2**	***8***	**0**	**0**	**0**	**1**	***1***	**0**	**2**	**0**	**0**	***2***
2:00 PM	**0**	**1**	**5**	**2**	***8***	**0**	**4**	**0**	**0**	***4***	**1**	**2**	**0**	**0**	***3***
2:15 PM	**0**	**1**	**8**	**5**	***14***	**0**	**0**	**0**	**0**	***0***	**0**	**4**	**0**	**0**	***4***
2:30 PM	**0**	**4**	**3**	**3**	***10***	**0**	**0**	**0**	**0**	***0***	**1**	**0**	**0**	**0**	***1***
2:45 PM	0	2	4	2	*8*	0	1	1	0	*2*	0	0	0	0	*0*
3:00 PM	0	0	6	2	*8*	0	0	0	0	*0*	4	0	0	0	*4*
3:15 PM	0	4	3	3	*10*	0	0	0	0	*0*	0	2	0	1	*3*
Count Total	0	14	34	23	*71*	0	5	1	1	*7*	6	13	1	1	*21*
Peak Hr	**0**	**7**	**21**	**12**	***40***	**0**	**4**	**0**	**1**	***5***	**2**	**8**	**0**	**0**	***10***

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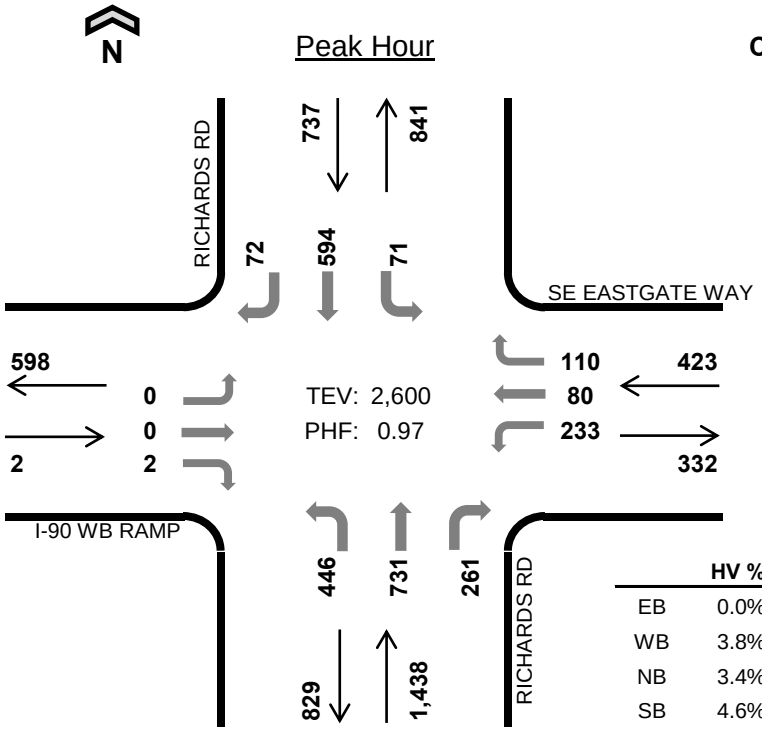
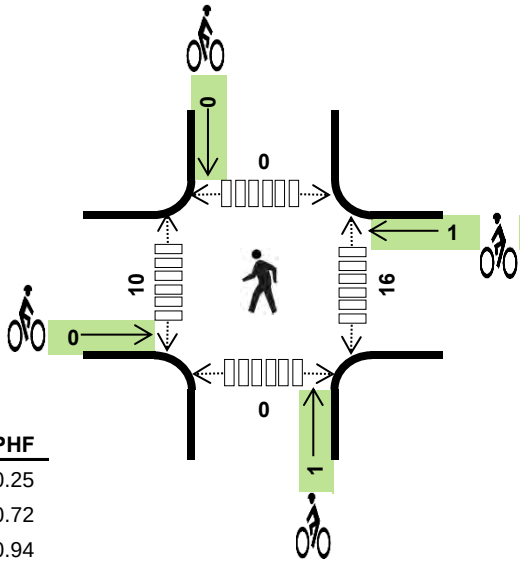
RICHARDS RD
SE EASTGATE WAY

Date: Tue, Oct 07, 2014
Count Period: 12:30 PM to 2:30 PM
Peak Hour: 12:30 PM to 1:30 PM

Peak Hour



	HV %:	PHF
EB	0.0%	0.25
WB	3.8%	0.72
NB	3.4%	0.94
SB	4.6%	0.94
TOTAL	3.8%	0.97



Two-Hour Count Summaries

Interval Start	I-90 WB RAMP			SE EASTGATE WAY			RICHARDS RD			RICHARDS RD			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
12:30 PM	**0**	**0**	**2**	**86**	**29**	**31**	**112**	**176**	**57**	**12**	**151**	**14**	**670**	
12:45 PM	**0**	**0**	**0**	**56**	**19**	**25**	**109**	**199**	**74**	**26**	**122**	**24**	**654**	
1:00 PM	**0**	**0**	**0**	**41**	**9**	**24**	**112**	**188**	**72**	**17**	**150**	**26**	**639**	
1:15 PM	**0**	**0**	**0**	**50**	**23**	**30**	**113**	**168**	**58**	**16**	**171**	**8**	**637**	**2,600**
1:30 PM	0	0	0	38	17	29	92	184	60	18	165	9	612	2,542
1:45 PM	0	0	0	37	16	24	122	175	59	22	188	14	657	2,545
2:00 PM	0	0	0	82	24	25	121	173	50	10	152	20	657	2,563
2:15 PM	0	0	0	42	14	18	111	157	47	14	167	19	589	2,515
Count Total	0	0	2	432	151	206	892	1,420	477	135	1,266	134	5,115	
Peak Hr	**0**	**0**	**2**	**233**	**80**	**110**	**446**	**731**	**261**	**71**	**594**	**72**	**2,600**	

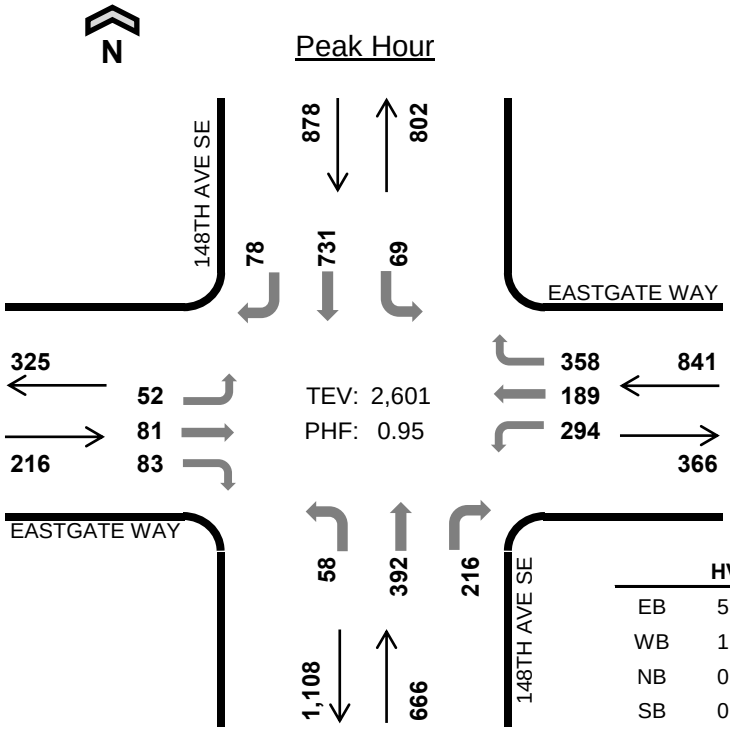
Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
12:30 PM	**0**	**6**	**11**	**10**	***27***	**0**	**0**	**0**	**0**	***0***	**4**	**3**	**0**	**0**	***7***
12:45 PM	**0**	**1**	**14**	**10**	***25***	**0**	**0**	**0**	**0**	***0***	**6**	**3**	**0**	**0**	***9***
1:00 PM	**0**	**4**	**16**	**4**	***24***	**0**	**0**	**1**	**0**	***1***	**0**	**0**	**0**	**0**	***0***
1:15 PM	**0**	**5**	**8**	**10**	***23***	**0**	**1**	**0**	**0**	***1***	**6**	**4**	**0**	**0**	***10***
1:30 PM	0	2	5	4	*11*	0	0	1	0	*1*	0	1	0	0	*1*
1:45 PM	0	4	12	4	*20*	0	0	0	0	*0*	0	0	0	0	*0*
2:00 PM	0	4	12	8	*24*	0	0	0	0	*0*	0	2	0	0	*2*
2:15 PM	0	3	15	6	*24*	0	0	0	0	*0*	0	3	0	0	*3*
Count Total	0	29	93	56	*178*	0	1	2	0	*3*	16	16	0	0	*32*
Peak Hr	**0**	**16**	**49**	**34**	***99***	**0**	**1**	**1**	**0**	***2***	**16**	**10**	**0**	**0**	***26***

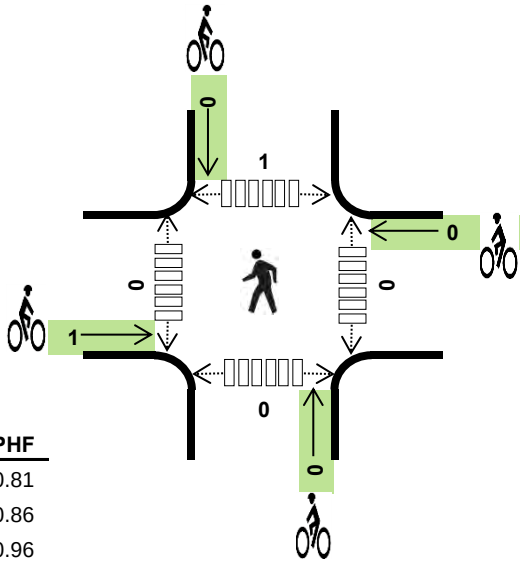
Mark Skaggs: 425 - 250 - 0777 mark.skaggs@idaxdata.com

148TH AVE SE
EASTGATE WAY

Date: Sat, Oct 11, 2014
Count Period: 1:30 PM to 3:30 PM
Peak Hour: 1:30 PM to 2:30 PM



	HV %:	PHF
EB	5.1%	0.81
WB	1.0%	0.86
NB	0.3%	0.96
SB	0.3%	0.91
TOTAL	0.9%	0.95



Two-Hour Count Summaries

Interval Start	EASTGATE WAY Eastbound			EASTGATE WAY Westbound			148TH AVE SE Northbound			148TH AVE SE Southbound			15-min Total	Rolling One Hour
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
1:30 PM	**16**	**23**	**28**	**91**	**40**	**113**	**19**	**94**	**57**	**21**	**164**	**20**	**686**	
1:45 PM	**16**	**22**	**14**	**64**	**52**	**93**	**14**	**107**	**49**	**13**	**169**	**16**	**629**	
2:00 PM	**11**	**20**	**21**	**82**	**54**	**74**	**15**	**97**	**61**	**18**	**193**	**22**	**668**	
2:15 PM	**9**	**16**	**20**	**57**	**43**	**78**	**10**	**94**	**49**	**17**	**205**	**20**	**618**	**2,601**
2:30 PM	16	16	23	62	20	67	10	76	53	17	180	22	562	2,477
2:45 PM	21	20	28	52	42	88	8	70	56	52	198	76	711	2,559
3:00 PM	14	21	15	52	37	86	17	79	51	34	193	48	647	2,538
3:15 PM	14	14	21	57	44	72	13	85	49	12	166	18	565	2,485
Count Total	117	152	170	517	332	671	106	702	425	184	1,468	242	5,086	
Peak Hr	**52**	**81**	**83**	**294**	**189**	**358**	**58**	**392**	**216**	**69**	**731**	**78**	**2,601**	

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
1:30 PM	**3**	**1**	**0**	**0**	***4***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**1**	**0**	***1***
1:45 PM	**5**	**3**	**1**	**2**	***11***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***
2:00 PM	**2**	**3**	**0**	**1**	***6***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***
2:15 PM	**1**	**1**	**1**	**0**	***3***	**1**	**0**	**0**	**0**	***1***	**0**	**0**	**0**	**0**	***0***
2:30 PM	3	0	1	2	*6*	0	0	0	0	*0*	0	0	0	0	*0*
2:45 PM	4	0	2	0	*6*	0	0	0	0	*0*	0	0	0	0	*0*
3:00 PM	2	1	1	1	*5*	0	0	0	0	*0*	0	0	0	0	*0*
3:15 PM	3	2	2	1	*8*	0	0	0	0	*0*	0	0	0	0	*0*
Count Total	23	11	8	7	*49*	1	0	0	0	*1*	0	0	1	0	*1*
Peak Hr	**11**	**8**	**2**	**3**	***24***	**1**	**0**	**0**	**0**	***1***	**0**	**0**	**1**	**0**	***1***

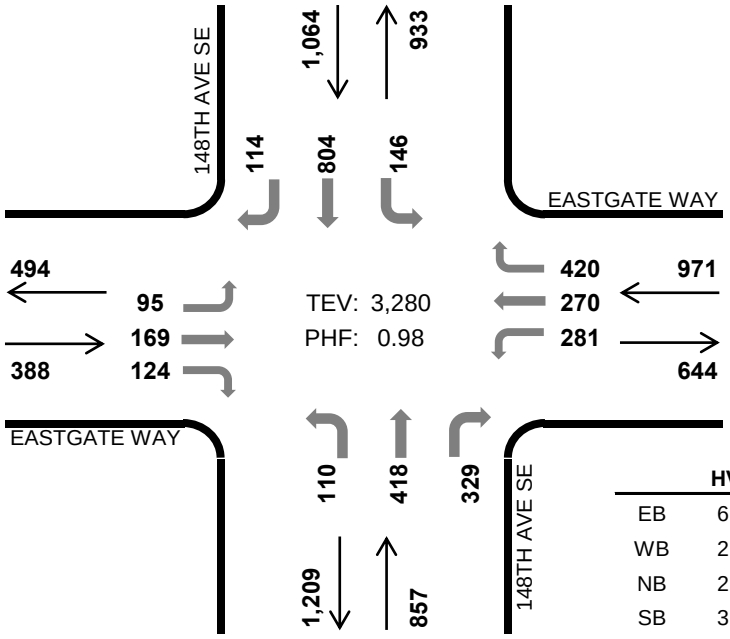
Mark Skaggs: 425 - 250 - 0777 mark.skaggs@idaxdata.com

148TH AVE SE
EASTGATE WAY

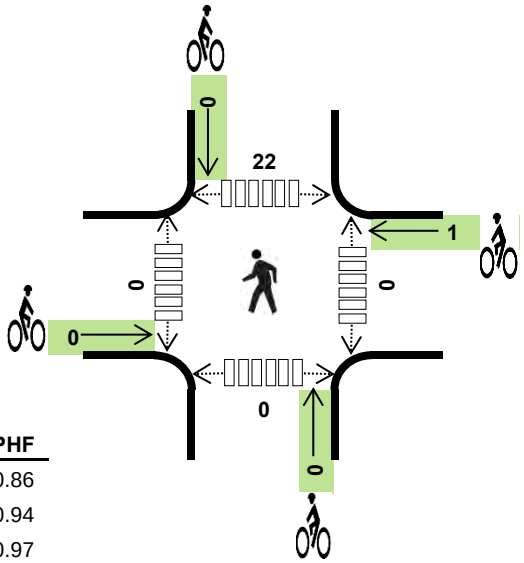
Date: Tue, Oct 07, 2014
Count Period: 12:30 PM to 2:30 PM
Peak Hour: 12:30 PM to 1:30 PM

N

Peak Hour



	HV %:	PHF
EB	6.7%	0.86
WB	2.3%	0.94
NB	2.1%	0.97
SB	3.0%	0.90
TOTAL	3.0%	0.98



Two-Hour Count Summaries

Interval Start	EASTGATE WAY Eastbound			EASTGATE WAY Westbound			148TH AVE SE Northbound			148TH AVE SE Southbound			15-min Total	Rolling One Hour
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
12:30 PM	**34**	**45**	**34**	**62**	**75**	**91**	**27**	**95**	**83**	**41**	**223**	**31**	**841**	
12:45 PM	**19**	**33**	**31**	**79**	**61**	**104**	**32**	**111**	**74**	**39**	**170**	**23**	**776**	
1:00 PM	**26**	**48**	**28**	**63**	**74**	**122**	**27**	**98**	**97**	**34**	**187**	**25**	**829**	
1:15 PM	**16**	**43**	**31**	**77**	**60**	**103**	**24**	**114**	**75**	**32**	**224**	**35**	**834**	**3,280**
1:30 PM	21	35	26	70	41	67	26	95	86	38	232	25	762	3,201
1:45 PM	19	44	26	69	47	90	22	94	83	14	146	30	684	3,109
2:00 PM	32	32	40	60	59	77	21	91	64	25	205	26	732	3,012
2:15 PM	23	31	25	74	48	95	24	114	77	20	189	22	742	2,920
Count Total	190	311	241	554	465	749	203	812	639	243	1,576	217	6,200	
Peak Hr	**95**	**169**	**124**	**281**	**270**	**420**	**110**	**418**	**329**	**146**	**804**	**114**	**3,280**	

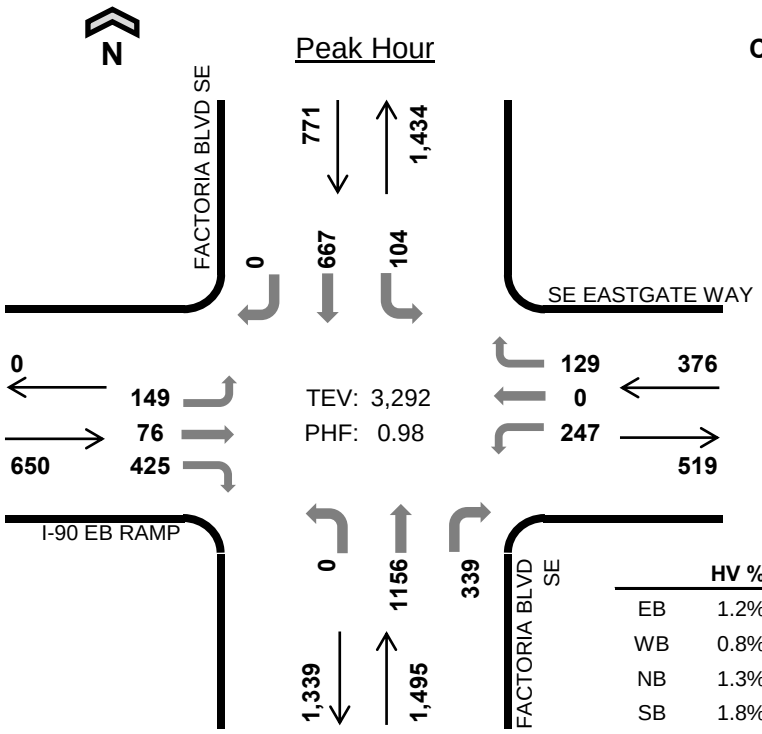
Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
12:30 PM	**6**	**7**	**2**	**6**	***21***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**7**	**0**	***7***
12:45 PM	**8**	**2**	**3**	**9**	***22***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**3**	**0**	***3***
1:00 PM	**4**	**7**	**3**	**8**	***22***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**5**	**0**	***5***
1:15 PM	**8**	**6**	**10**	**9**	***33***	**0**	**1**	**0**	**0**	***1***	**0**	**0**	**7**	**0**	***7***
1:30 PM	6	3	4	8	*21*	0	2	0	0	*2*	0	0	5	0	*5*
1:45 PM	6	4	1	8	*19*	0	0	0	0	*0*	0	0	7	0	*7*
2:00 PM	4	6	6	7	*23*	0	0	0	0	*0*	0	0	3	0	*3*
2:15 PM	7	5	8	5	*25*	0	0	0	0	*0*	0	0	3	0	*3*
Count Total	49	40	37	60	*186*	0	3	0	0	*3*	0	0	40	0	*40*
Peak Hr	**26**	**22**	**18**	**32**	***98***	**0**	**1**	**0**	**0**	***1***	**0**	**0**	**22**	**0**	***22***

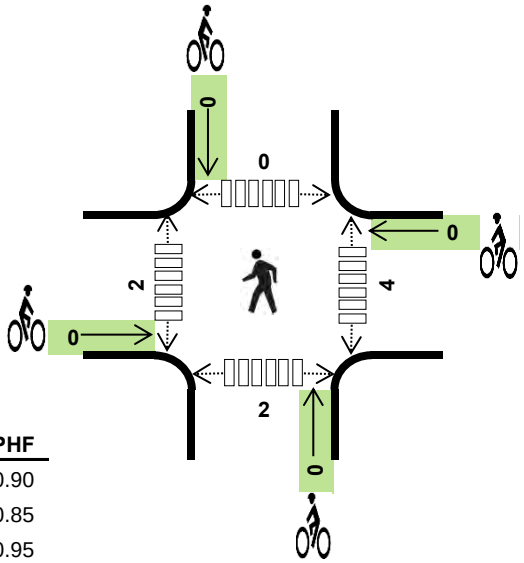
Mark Skaggs: 425 - 250 - 0777 mark.skaggs@idaxdata.com

FACTORIA BLVD SE
SE EASTGATE WAY

Date: Sat, Oct 04, 2014
Count Period: 1:30 PM to 3:30 PM
Peak Hour: 1:45 PM to 2:45 PM



	HV %:	PHF
EB	1.2%	0.90
WB	0.8%	0.85
NB	1.3%	0.95
SB	1.8%	0.94
TOTAL	1.3%	0.98



Two-Hour Count Summaries

Interval Start	I-90 EB RAMP			SE EASTGATE WAY			FACTORIA BLVD SE			FACTORIA BLVD SE			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
1:30 PM	37	24	87	68	0	34	0	274	98	29	163	0	814	
1:45 PM	**41**	**19**	**117**	**63**	**0**	**34**	**0**	**267**	**87**	**26**	**178**	**0**	**832**	
2:00 PM	**41**	**14**	**89**	**58**	**0**	**27**	**0**	**311**	**81**	**29**	**144**	**0**	**794**	
2:15 PM	**25**	**17**	**107**	**76**	**0**	**34**	**0**	**295**	**83**	**32**	**170**	**0**	**839**	3,279
2:30 PM	**42**	**26**	**112**	**50**	**0**	**34**	**0**	**283**	**88**	**17**	**175**	**0**	**827**	**3,292**
2:45 PM	37	23	105	75	0	41	0	237	79	25	171	0	793	3,253
3:00 PM	31	20	102	65	0	37	0	278	84	17	178	0	812	3,271
3:15 PM	30	10	104	60	0	34	0	250	92	23	218	0	821	3,253
Count Total	284	153	823	515	0	275	0	2,195	692	198	1,397	0	6,532	
Peak Hr	**149**	**76**	**425**	**247**	**0**	**129**	**0**	**1,156**	**339**	**104**	**667**	**0**	**3,292**	

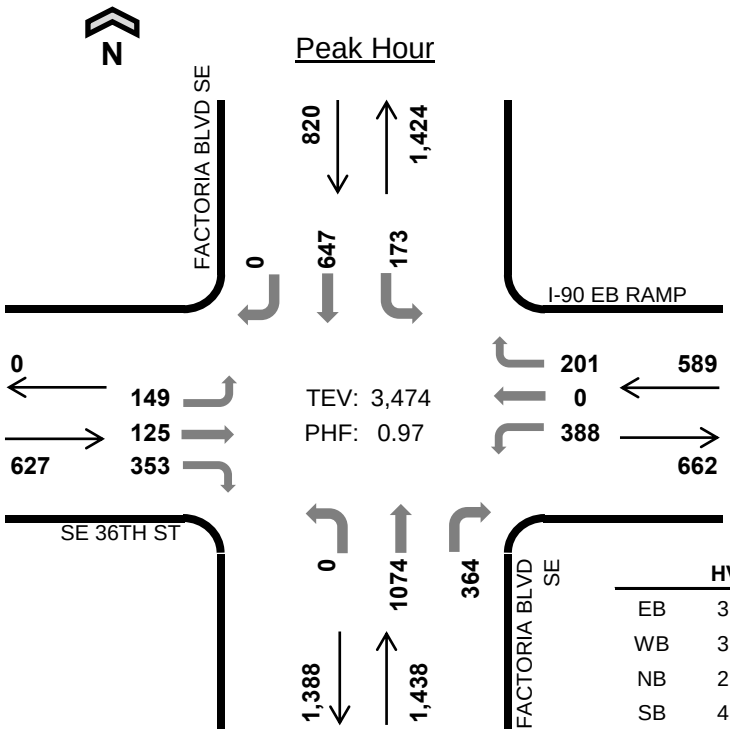
Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
1:30 PM	2	2	0	2	*6*	0	0	0	0	*0*	0	0	0	0	*0*
1:45 PM	**3**	**1**	**6**	**4**	***14***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***
2:00 PM	**4**	**2**	**3**	**3**	***12***	**0**	**0**	**0**	**0**	***0***	**2**	**0**	**0**	**2**	***4***
2:15 PM	**0**	**0**	**7**	**4**	***11***	**0**	**0**	**0**	**0**	***0***	**2**	**0**	**0**	**0**	***2***
2:30 PM	**1**	**0**	**3**	**3**	***7***	**0**	**0**	**0**	**0**	***0***	**0**	**2**	**0**	**0**	***2***
2:45 PM	1	1	1	5	*8*	0	0	0	0	*0*	0	3	0	1	*4*
3:00 PM	3	2	2	1	*8*	0	0	0	0	*0*	2	1	0	0	*3*
3:15 PM	1	1	4	3	*9*	0	0	0	0	*0*	1	1	0	0	*2*
Count Total	15	9	26	25	*75*	0	0	0	0	*0*	7	7	0	3	*17*
Peak Hr	**8**	**3**	**19**	**14**	***44***	**0**	**0**	**0**	**0**	***0***	**4**	**2**	**0**	**2**	***8***

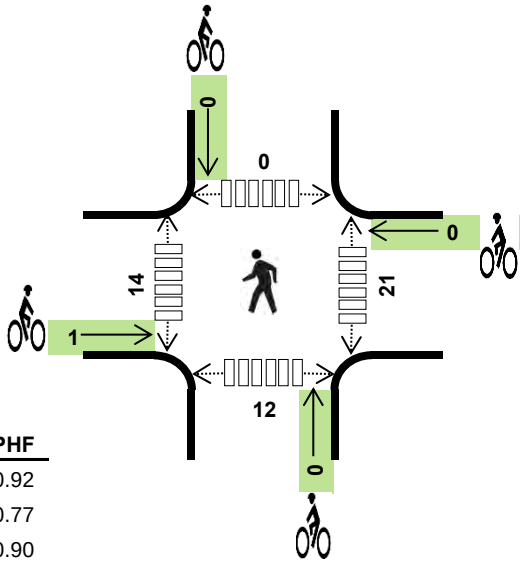
Mark Skaggs: 425 - 250 - 0777 mark.skaggs@idaxdata.com

FACTORIA BLVD SE
I-90 EB RAMP

Date: Tue, Oct 07, 2014
Count Period: 12:30 PM to 2:30 PM
Peak Hour: 12:30 PM to 1:30 PM



	HV %:	PHF
EB	3.5%	0.92
WB	3.2%	0.77
NB	2.6%	0.90
SB	4.1%	0.94
TOTAL	3.2%	0.97



Two-Hour Count Summaries

Interval Start	SE 36TH ST			I-90 EB RAMP			FACTORIA BLVD SE			FACTORIA BLVD SE			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
12:30 PM	**44**	**35**	**91**	**137**	**0**	**54**	**0**	**234**	**75**	**34**	**178**	**0**	**882**	
12:45 PM	**33**	**28**	**91**	**103**	**0**	**52**	**0**	**304**	**97**	**44**	**147**	**0**	**899**	
1:00 PM	**40**	**30**	**84**	**79**	**0**	**47**	**0**	**272**	**106**	**47**	**152**	**0**	**857**	
1:15 PM	**32**	**32**	**87**	**69**	**0**	**48**	**0**	**264**	**86**	**48**	**170**	**0**	**836**	**3,474**
1:30 PM	33	31	64	68	0	52	0	269	88	34	166	0	805	3,397
1:45 PM	49	40	79	72	0	51	0	245	78	49	179	0	842	3,340
2:00 PM	34	22	79	67	0	66	0	262	88	31	161	0	810	3,293
2:15 PM	36	35	104	61	0	50	0	260	80	48	170	0	844	3,301
Count Total	301	253	679	656	0	420	0	2,110	698	335	1,323	0	6,775	
Peak Hr	**149**	**125**	**353**	**388**	**0**	**201**	**0**	**1,074**	**364**	**173**	**647**	**0**	**3,474**	

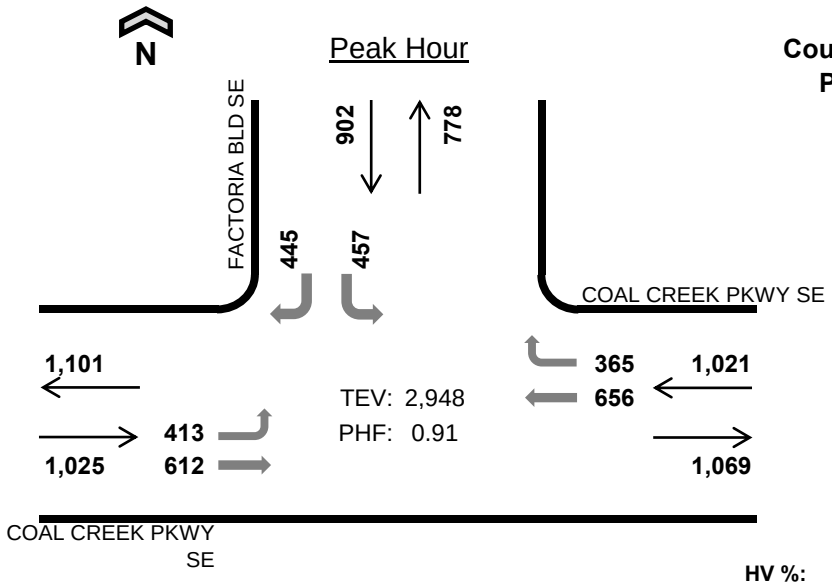
Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

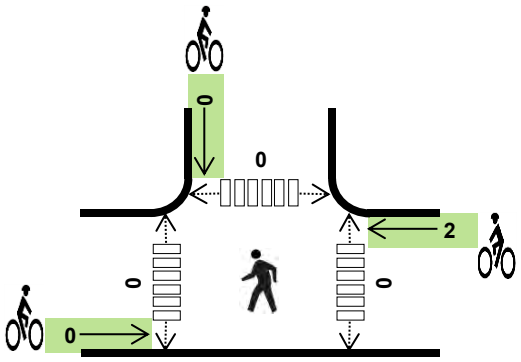
Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
12:30 PM	**12**	**7**	**9**	**13**	***41***	**1**	**0**	**0**	**0**	***1***	**10**	**0**	**0**	**4**	***14***
12:45 PM	**6**	**4**	**10**	**10**	***30***	**0**	**0**	**0**	**0**	***0***	**6**	**6**	**0**	**3**	***15***
1:00 PM	**3**	**5**	**9**	**4**	***21***	**0**	**0**	**0**	**0**	***0***	**1**	**2**	**0**	**1**	***4***
1:15 PM	**1**	**3**	**9**	**7**	***20***	**0**	**0**	**0**	**0**	***0***	**4**	**6**	**0**	**4**	***14***
1:30 PM	5	2	5	3	*15*	2	1	0	0	*3*	0	1	0	0	*1*
1:45 PM	3	5	7	3	*18*	0	0	0	0	*0*	0	0	0	1	*1*
2:00 PM	6	2	7	4	*19*	0	0	0	0	*0*	0	5	0	1	*6*
2:15 PM	5	3	8	6	*22*	0	0	0	0	*0*	0	4	0	1	*5*
Count Total	41	31	64	50	*186*	3	1	0	0	*4*	21	24	0	15	*60*
Peak Hr	**22**	**19**	**37**	**34**	***112***	**1**	**0**	**0**	**0**	***1***	**21**	**14**	**0**	**12**	***47***

Mark Skaggs: 425 - 250 - 0777 mark.skaggs@idaxdata.com

FACTORIA BLD SE
COAL CREEK PKWY SE

Date: Sat, Oct 04, 2014
Count Period: 1:30 PM to 3:30 PM
Peak Hour: 2:00 PM to 3:00 PM





	HV %:	PHF
EB	1.0%	0.87
WB	0.7%	0.99
SB	1.6%	0.82
TOTAL	1.1%	0.91

Two-Hour Count Summaries

Interval Start	COAL CREEK PKWY SE Eastbound			COAL CREEK PKWY SE Westbound			FACTORIA BLD SE Northbound			FACTORIA BLD SE Southbound			15-min Total	Rolling One Hour
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
1:30 PM	104	168	0	0	139	93	0	0	0	103	0	99	706	
1:45 PM	92	160	0	0	170	81	0	0	0	102	0	98	703	
2:00 PM	**113**	**164**	**0**	**0**	**165**	**92**	**0**	**0**	**0**	**136**	**0**	**140**	**810**	
2:15 PM	**88**	**144**	**0**	**0**	**158**	**90**	**0**	**0**	**0**	**115**	**0**	**98**	**693**	2,912
2:30 PM	**78**	**142**	**0**	**0**	**167**	**90**	**0**	**0**	**0**	**89**	**0**	**97**	**663**	2,869
2:45 PM	**134**	**162**	**0**	**0**	**166**	**93**	**0**	**0**	**0**	**117**	**0**	**110**	**782**	**2,948**
3:00 PM	88	155	0	0	142	80	0	0	0	99	0	112	676	2,814
3:15 PM	81	178	0	0	170	83	0	0	0	125	0	89	726	2,847
Count Total	778	1,273	0	0	1,277	702	0	0	0	886	0	843	5,759	
Peak Hr	**413**	**612**	**0**	**0**	**656**	**365**	**0**	**0**	**0**	**457**	**0**	**445**	**2,948**	

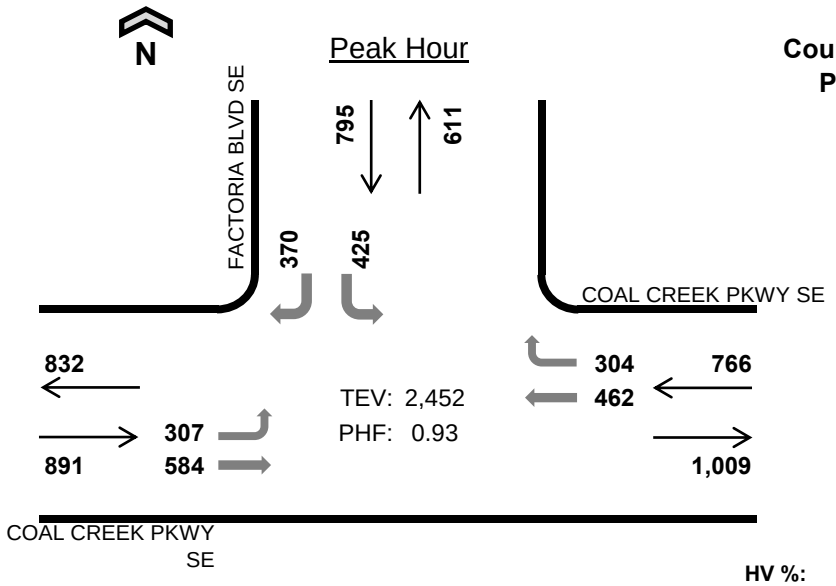
Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

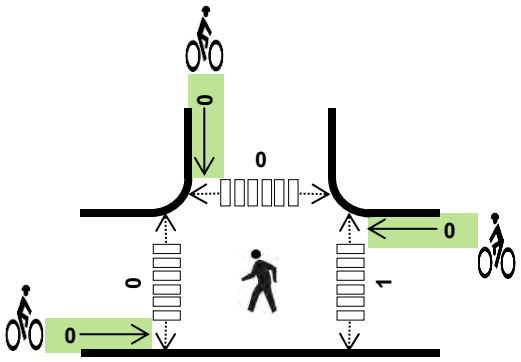
Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
1:30 PM	5	3	0	2	*10*	0	0	0	1	*1*	0	0	0	0	*0*
1:45 PM	2	1	0	6	*9*	0	0	0	0	*0*	0	0	0	0	*0*
2:00 PM	**6**	**1**	**0**	**1**	***8***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***
2:15 PM	**2**	**2**	**0**	**3**	***7***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***
2:30 PM	**2**	**2**	**0**	**5**	***9***	**0**	**1**	**0**	**0**	***1***	**0**	**0**	**0**	**0**	***0***
2:45 PM	**0**	**2**	**0**	**5**	***7***	**0**	**1**	**0**	**0**	***1***	**0**	**0**	**0**	**0**	***0***
3:00 PM	1	5	0	0	*6*	0	0	0	0	*0*	0	0	0	0	*0*
3:15 PM	1	0	0	3	*4*	0	0	0	0	*0*	0	0	0	0	*0*
Count Total	19	16	0	25	*60*	0	2	0	1	*3*	0	0	0	0	*0*
Peak Hr	**10**	**7**	**0**	**14**	***31***	**0**	**2**	**0**	**0**	***2***	**0**	**0**	**0**	**0**	***0***

Mark Skaggs: 425 - 250 - 0777 mark.skaggs@idaxdata.com

FACTORIA BLVD SE
COAL CREEK PKWY SE

Date: Tue, Oct 07, 2014
Count Period: 12:30 PM to 2:30 PM
Peak Hour: 1:30 PM to 2:30 PM





	HV %:	PHF
EB	3.3%	0.92
WB	3.5%	0.84
SB	3.1%	0.96
TOTAL	3.3%	0.93

Two-Hour Count Summaries

Interval Start	COAL CREEK PKWY SE Eastbound			COAL CREEK PKWY SE Westbound			FACTORIA BLVD SE Northbound			FACTORIA BLVD SE Southbound			15-min Total	Rolling One Hour
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
12:30 PM	102	115	0	0	151	58	0	0	0	110	0	96	632	
12:45 PM	85	106	0	0	120	79	0	0	0	72	0	82	544	
1:00 PM	94	97	0	0	95	71	0	0	0	110	0	63	530	
1:15 PM	82	127	0	0	119	70	0	0	0	113	0	78	589	2,295
1:30 PM	**78**	**140**	**0**	**0**	**111**	**66**	**0**	**0**	**0**	**114**	**0**	**77**	**586**	2,249
1:45 PM	**72**	**128**	**0**	**0**	**101**	**62**	**0**	**0**	**0**	**102**	**0**	**102**	**567**	2,272
2:00 PM	**76**	**154**	**0**	**0**	**114**	**85**	**0**	**0**	**0**	**113**	**0**	**95**	**637**	2,379
2:15 PM	**81**	**162**	**0**	**0**	**136**	**91**	**0**	**0**	**0**	**96**	**0**	**96**	**662**	**2,452**
Count Total	670	1,029	0	0	947	582	0	0	0	830	0	689	4,747	
Peak Hr	**307**	**584**	**0**	**0**	**462**	**304**	**0**	**0**	**0**	**425**	**0**	**370**	**2,452**	

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

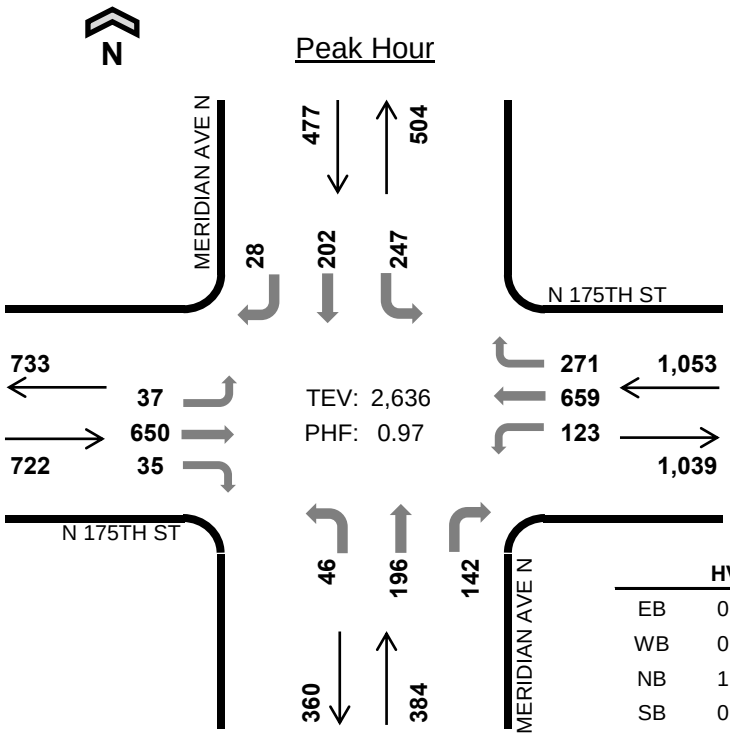
Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
12:30 PM	7	8	0	6	*21*	1	0	0	0	*1*	0	0	0	0	*0*
12:45 PM	7	3	0	4	*14*	0	0	0	0	*0*	0	0	0	0	*0*
1:00 PM	13	7	0	4	*24*	0	0	0	0	*0*	0	0	1	0	*1*
1:15 PM	6	7	0	7	*20*	0	0	0	0	*0*	0	0	0	0	*0*
1:30 PM	**5**	**8**	**0**	**5**	***18***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***
1:45 PM	**9**	**7**	**0**	**8**	***24***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***
2:00 PM	**7**	**8**	**0**	**6**	***21***	**0**	**0**	**0**	**0**	***0***	**1**	**0**	**0**	**0**	***1***
2:15 PM	**8**	**4**	**0**	**6**	***18***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***
Count Total	62	52	0	46	*160*	1	0	0	0	*1*	1	0	1	0	*2*
Peak Hr	**29**	**27**	**0**	**25**	***81***	**0**	**0**	**0**	**0**	***0***	**1**	**0**	**0**	**0**	***1***

Mark Skaggs: 425 - 250 - 0777 mark.skaggs@idaxdata.com

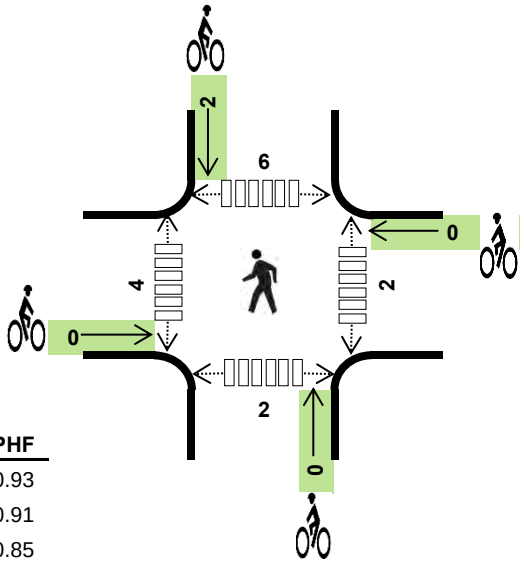
MERIDIAN AVE N
N 175TH ST

Date: Sat, Oct 04, 2014
Count Period: 1:30 PM to 3:30 PM
Peak Hour: 2:15 PM to 3:15 PM

Peak Hour



	HV %:	PHF
EB	0.6%	0.93
WB	0.9%	0.91
NB	1.6%	0.85
SB	0.8%	0.94
TOTAL	0.9%	0.97



Two-Hour Count Summaries

Interval Start	N 175TH ST Eastbound			N 175TH ST Westbound			MERIDIAN AVE N Northbound			MERIDIAN AVE N Southbound			15-min Total	Rolling One Hour
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
1:30 PM	9	184	13	33	162	56	18	25	20	77	42	5	644	
1:45 PM	7	150	6	31	150	62	6	40	36	80	45	14	627	
2:00 PM	8	166	12	30	197	55	6	27	34	44	35	9	623	
2:15 PM	**6**	**179**	**7**	**32**	**162**	**59**	**8**	**49**	**38**	**74**	**45**	**8**	**667**	2,561
2:30 PM	**15**	**170**	**9**	**30**	**167**	**73**	**12**	**42**	**27**	**43**	**52**	**8**	**648**	2,565
2:45 PM	**8**	**157**	**10**	**33**	**169**	**87**	**13**	**49**	**33**	**61**	**56**	**6**	**682**	2,620
3:00 PM	**8**	**144**	**9**	**28**	**161**	**52**	**13**	**56**	**44**	**69**	**49**	**6**	**639**	**2,636**
3:15 PM	8	164	16	32	170	64	8	47	30	50	46	4	639	2,608
Count Total	69	1,314	82	249	1,338	508	84	335	262	498	370	60	5,169	
Peak Hr	**37**	**650**	**35**	**123**	**659**	**271**	**46**	**196**	**142**	**247**	**202**	**28**	**2,636**	

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

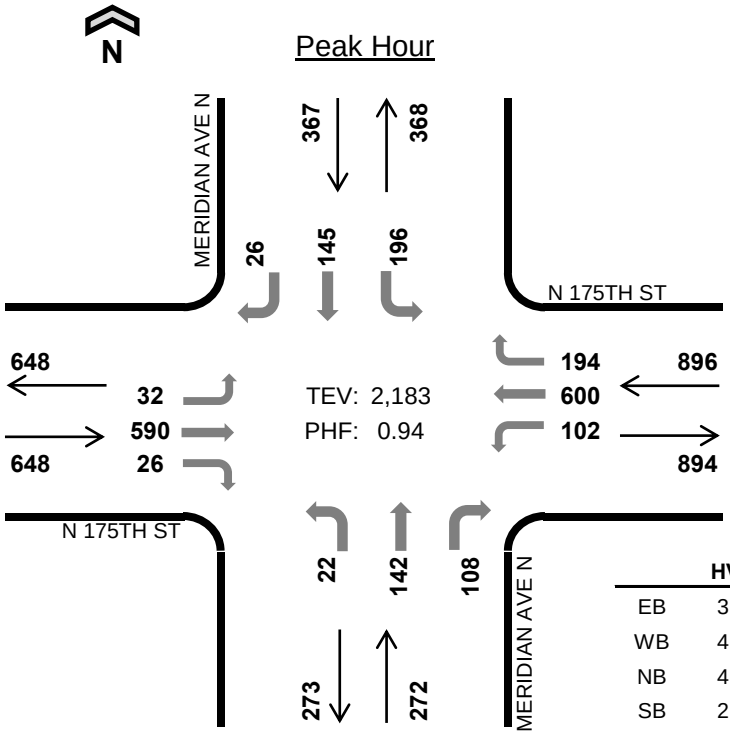
Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
1:30 PM	2	4	2	4	*12*	0	0	0	1	*1*	1	1	1	0	*3*
1:45 PM	2	5	1	2	*10*	0	0	0	0	*0*	0	0	0	8	*8*
2:00 PM	0	1	0	3	*4*	0	0	0	1	*1*	1	0	3	1	*5*
2:15 PM	**3**	**3**	**3**	**0**	***9***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**3**	**0**	***3***
2:30 PM	**0**	**1**	**1**	**1**	***3***	**0**	**0**	**0**	**0**	***0***	**1**	**2**	**2**	**0**	***5***
2:45 PM	**0**	**3**	**1**	**0**	***4***	**0**	**0**	**0**	**2**	***2***	**0**	**0**	**1**	**2**	***3***
3:00 PM	**1**	**3**	**1**	**3**	***8***	**0**	**0**	**0**	**0**	***0***	**1**	**2**	**0**	**0**	***3***
3:15 PM	2	6	1	0	*9*	0	0	0	0	*0*	0	0	0	1	*1*
Count Total	10	26	10	13	*59*	0	0	0	4	*4*	4	5	10	12	*31*
Peak Hr	**4**	**10**	**6**	**4**	***24***	**0**	**0**	**0**	**2**	***2***	**2**	**4**	**6**	**2**	***14***

Mark Skaggs: 425 - 250 - 0777 mark.skaggs@idaxdata.com

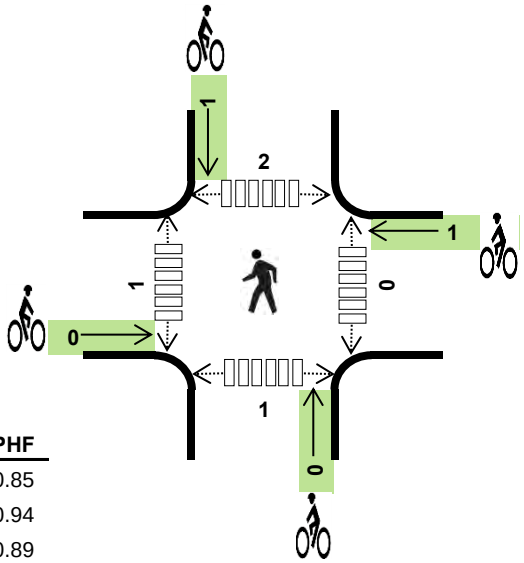
MERIDIAN AVE N
N 175TH ST

Date: Tue, Oct 07, 2014
Count Period: 12:00 PM to 2:00 PM
Peak Hour: 1:00 PM to 2:00 PM

Peak Hour



	HV %:	PHF
EB	3.7%	0.85
WB	4.0%	0.94
NB	4.4%	0.89
SB	2.5%	0.86
TOTAL	3.7%	0.94



Two-Hour Count Summaries

Interval Start	N 175TH ST Eastbound			N 175TH ST Westbound			MERIDIAN AVE N Northbound			MERIDIAN AVE N Southbound			15-min Total	Rolling One Hour
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
12:00 PM	6	138	8	32	133	48	11	61	36	50	44	11	578	
12:15 PM	12	154	6	14	156	34	12	36	27	53	35	6	545	
12:30 PM	4	193	5	21	123	41	11	26	15	54	32	9	534	
12:45 PM	6	141	15	16	129	36	4	32	21	45	39	8	492	2,149
1:00 PM	**3**	**143**	**6**	**19**	**159**	**61**	**8**	**40**	**28**	**41**	**32**	**8**	**548**	2,119
1:15 PM	**10**	**146**	**5**	**30**	**114**	**42**	**5**	**32**	**33**	**54**	**48**	**5**	**524**	2,098
1:30 PM	**11**	**127**	**7**	**27**	**162**	**44**	**6**	**37**	**24**	**45**	**34**	**8**	**532**	2,096
1:45 PM	**8**	**174**	**8**	**26**	**165**	**47**	**3**	**33**	**23**	**56**	**31**	**5**	**579**	**2,183**
Count Total	60	1,216	60	185	1,141	353	60	297	207	398	295	60	4,332	
Peak Hr	**32**	**590**	**26**	**102**	**600**	**194**	**22**	**142**	**108**	**196**	**145**	**26**	**2,183**	

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
12:00 PM	7	9	3	2	*21*	0	0	0	0	*0*	0	2	0	2	*4*
12:15 PM	7	3	1	1	*12*	0	0	0	0	*0*	0	2	0	0	*2*
12:30 PM	7	6	4	1	*18*	0	0	0	0	*0*	1	0	0	1	*2*
12:45 PM	6	9	6	2	*23*	0	0	0	0	*0*	0	0	0	0	*0*
1:00 PM	**5**	**8**	**4**	**0**	***17***	**0**	**1**	**0**	**0**	***1***	**0**	**0**	**2**	**1**	***3***
1:15 PM	**7**	**5**	**4**	**4**	***20***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***
1:30 PM	**7**	**14**	**1**	**3**	***25***	**0**	**0**	**0**	**0**	***0***	**0**	**1**	**0**	**0**	***1***
1:45 PM	**5**	**9**	**3**	**2**	***19***	**0**	**0**	**0**	**1**	***1***	**0**	**0**	**0**	**0**	***0***
Count Total	51	63	26	15	*155*	0	1	0	1	*2*	1	5	2	4	*12*
Peak Hr	**24**	**36**	**12**	**9**	***81***	**0**	**1**	**0**	**1**	***2***	**0**	**1**	**2**	**1**	***4***

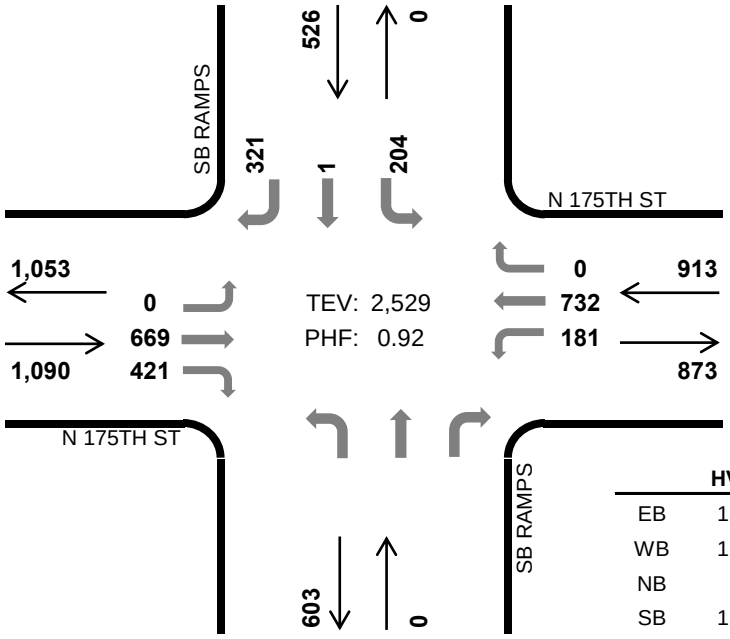
Mark Skaggs: 425 - 250 - 0777 mark.skaggs@idaxdata.com

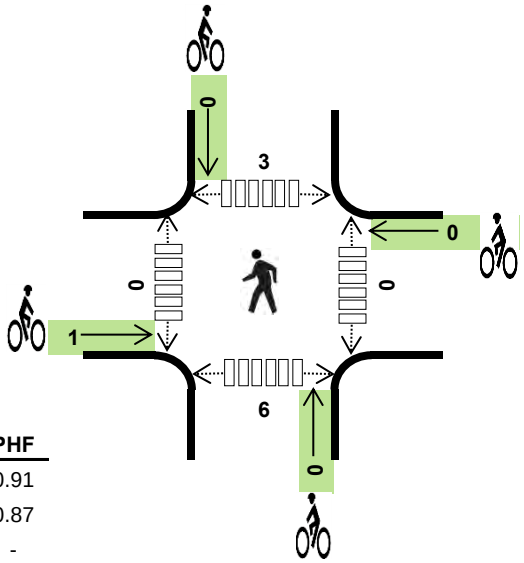
SB RAMPS
N 175TH ST

Date: Sat, Oct 04, 2014
Count Period: 1:30 PM to 3:30 PM
Peak Hour: 1:30 PM to 2:30 PM

N

Peak Hour





	HV %:	PHF
EB	1.3%	0.91
WB	1.3%	0.87
NB	-	-
SB	1.0%	0.90
TOTAL	1.2%	0.92

Two-Hour Count Summaries

Interval Start	N 175TH ST Eastbound			N 175TH ST Westbound			SB RAMPS Northbound			SB RAMPS Southbound			15-min Total	Rolling One Hour
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
1:30 PM	**0**	**164**	**130**	**39**	**173**	**0**	**0**	**0**	**0**	**51**	**1**	**80**	**638**	
1:45 PM	**0**	**155**	**96**	**39**	**159**	**0**	**0**	**0**	**0**	**54**	**0**	**92**	**595**	
2:00 PM	**0**	**150**	**95**	**45**	**196**	**0**	**0**	**0**	**0**	**56**	**0**	**68**	**610**	
2:15 PM	**0**	**200**	**100**	**58**	**204**	**0**	**0**	**0**	**0**	**43**	**0**	**81**	**686**	**2,529**
2:30 PM	0	159	78	32	162	0	0	1	0	50	0	97	579	2,470
2:45 PM	0	163	91	35	209	0	0	0	0	43	0	59	600	2,475
3:00 PM	0	157	96	41	187	0	0	0	0	33	0	79	593	2,458
3:15 PM	0	161	92	47	175	0	0	0	0	38	0	76	589	2,361
Count Total	0	1,309	778	336	1,465	0	0	1	0	368	1	632	4,890	
Peak Hr	**0**	**669**	**421**	**181**	**732**	**0**	**0**	**0**	**0**	**204**	**1**	**321**	**2,529**	

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
1:30 PM	**2**	**3**	**0**	**2**	***7***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**2**	***2***
1:45 PM	**5**	**4**	**0**	**1**	***10***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**3**	***3***
2:00 PM	**2**	**1**	**0**	**1**	***4***	**1**	**0**	**0**	**0**	***1***	**0**	**0**	**2**	**1**	***3***
2:15 PM	**5**	**4**	**0**	**1**	***10***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**1**	**0**	***1***
2:30 PM	0	1	0	0	*1*	0	0	0	0	*0*	0	0	1	0	*1*
2:45 PM	0	3	0	2	*5*	0	0	0	0	*0*	0	0	1	1	*2*
3:00 PM	4	3	0	1	*8*	0	0	0	0	*0*	0	0	0	0	*0*
3:15 PM	1	1	0	2	*4*	0	0	0	0	*0*	0	0	2	1	*3*
Count Total	19	20	0	10	*49*	1	0	0	0	*1*	0	0	7	8	*15*
Peak Hr	**14**	**12**	**0**	**5**	***31***	**1**	**0**	**0**	**0**	***1***	**0**	**0**	**3**	**6**	***9***

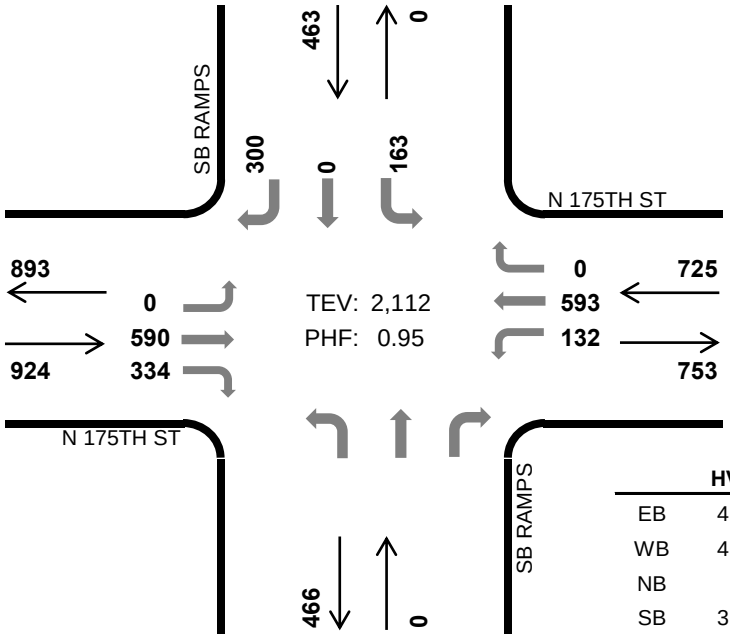
Mark Skaggs: 425 - 250 - 0777 mark.skaggs@idaxdata.com

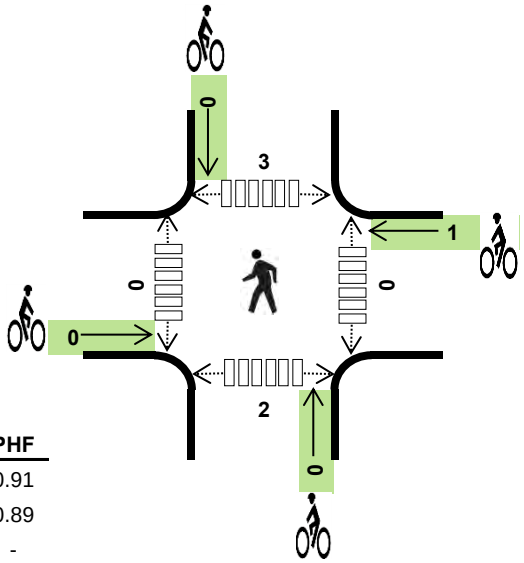
SB RAMPS
N 175TH ST

Date: Tue, Oct 07, 2014
Count Period: 12:00 PM to 2:00 PM
Peak Hour: 1:00 PM to 2:00 PM

N

Peak Hour





	HV %:	PHF
EB	4.0%	0.91
WB	4.4%	0.89
NB	-	-
SB	3.9%	0.80
TOTAL	4.1%	0.95

Two-Hour Count Summaries

Interval Start	N 175TH ST Eastbound			N 175TH ST Westbound			SB RAMPS Northbound			SB RAMPS Southbound			15-min Total	Rolling One Hour
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
12:00 PM	0	134	93	25	164	0	0	0	0	22	0	68	506	
12:15 PM	0	132	99	41	150	0	0	0	0	36	0	60	518	
12:30 PM	0	185	97	41	115	0	0	0	0	27	0	67	532	
12:45 PM	0	114	83	29	131	0	0	0	0	31	0	71	459	2,015
1:00 PM	**0**	**136**	**80**	**28**	**145**	**0**	**0**	**0**	**0**	**31**	**0**	**68**	**488**	1,997
1:15 PM	**0**	**172**	**82**	**38**	**144**	**0**	**0**	**0**	**0**	**39**	**0**	**69**	**544**	2,023
1:30 PM	**0**	**128**	**82**	**31**	**172**	**0**	**0**	**0**	**0**	**32**	**0**	**79**	**524**	2,015
1:45 PM	**0**	**154**	**90**	**35**	**132**	**0**	**0**	**0**	**0**	**61**	**0**	**84**	**556**	**2,112**
Count Total	0	1,155	706	268	1,153	0	0	0	0	279	0	566	4,127	
Peak Hr	**0**	**590**	**334**	**132**	**593**	**0**	**0**	**0**	**0**	**163**	**0**	**300**	**2,112**	

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
12:00 PM	9	11	0	3	*23*	0	0	0	0	*0*	0	0	0	1	*1*
12:15 PM	6	2	0	3	*11*	0	0	0	0	*0*	0	0	0	0	*0*
12:30 PM	8	6	0	5	*19*	0	0	0	0	*0*	0	0	1	0	*1*
12:45 PM	6	8	0	4	*18*	0	0	0	0	*0*	0	0	1	0	*1*
1:00 PM	**10**	**3**	**0**	**4**	***17***	**0**	**1**	**0**	**0**	***1***	**0**	**0**	**3**	**1**	***4***
1:15 PM	**12**	**5**	**0**	**5**	***22***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***
1:30 PM	**10**	**16**	**0**	**5**	***31***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**1**	***1***
1:45 PM	**5**	**8**	**0**	**4**	***17***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***
Count Total	66	59	0	33	*158*	0	1	0	0	*1*	0	0	5	3	*8*
Peak Hr	**37**	**32**	**0**	**18**	***87***	**0**	**1**	**0**	**0**	***1***	**0**	**0**	**3**	**2**	***5***

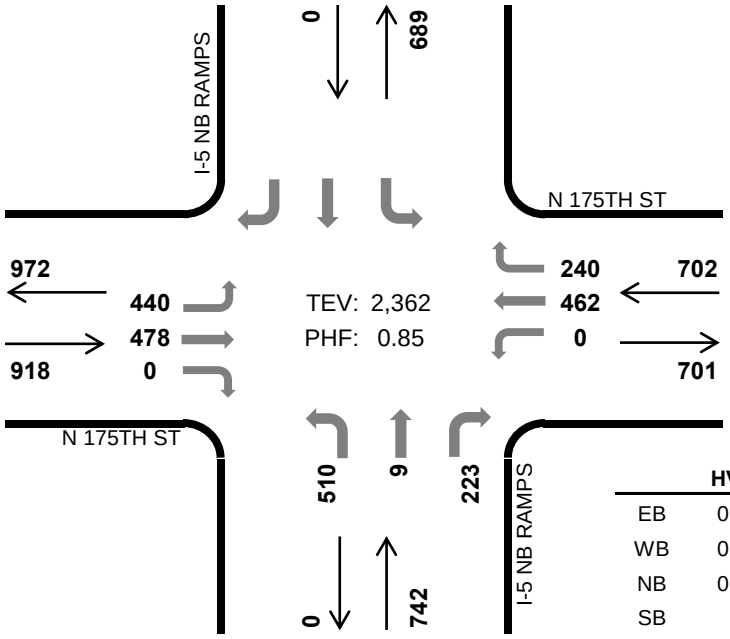
Mark Skaggs: 425 - 250 - 0777 mark.skaggs@idaxdata.com

I-5 NB RAMPS
N 175TH ST

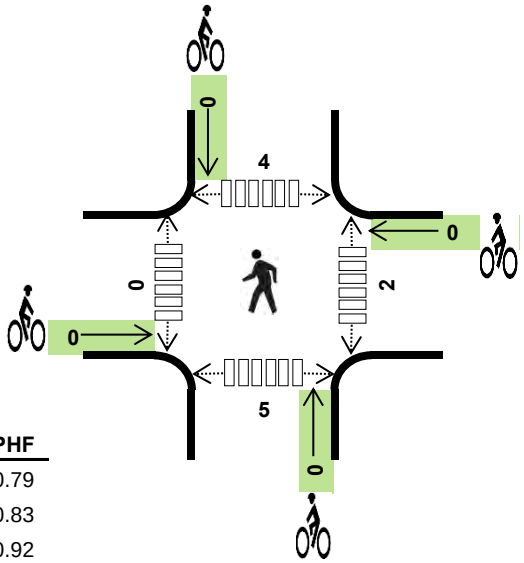
Date: Sat, Oct 04, 2014
Count Period: 1:30 PM to 3:30 PM
Peak Hour: 2:00 PM to 3:00 PM

N

Peak Hour



	HV %:	PHF
EB	0.3%	0.79
WB	0.9%	0.83
NB	0.7%	0.92
SB	-	-
TOTAL	0.6%	0.85



Two-Hour Count Summaries

Interval Start	N 175TH ST Eastbound			N 175TH ST Westbound			I-5 NB RAMPS Northbound			I-5 NB RAMPS Southbound			15-min Total	Rolling One Hour
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
1:30 PM	78	103	0	0	125	58	107	1	40	0	0	0	512	
1:45 PM	108	138	0	0	81	63	117	2	33	0	0	0	542	
2:00 PM	**111**	**105**	**0**	**0**	**131**	**53**	**103**	**1**	**45**	**0**	**0**	**0**	**549**	
2:15 PM	**146**	**143**	**0**	**0**	**147**	**65**	**133**	**2**	**61**	**0**	**0**	**0**	**697**	2,300
2:30 PM	**108**	**108**	**0**	**0**	**88**	**69**	**131**	**1**	**64**	**0**	**0**	**0**	**569**	2,357
2:45 PM	**75**	**122**	**0**	**0**	**96**	**53**	**143**	**5**	**53**	**0**	**0**	**0**	**547**	**2,362**
3:00 PM	92	108	0	0	92	64	130	0	44	0	0	0	530	2,343
3:15 PM	98	107	0	0	105	46	117	0	40	0	0	0	513	2,159
Count Total	816	934	0	0	865	471	981	12	380	0	0	0	4,459	
Peak Hr	**440**	**478**	**0**	**0**	**462**	**240**	**510**	**9**	**223**	**0**	**0**	**0**	**2,362**	

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
1:30 PM	1	3	1	0	*5*	0	0	0	0	*0*	0	0	0	1	*1*
1:45 PM	0	2	3	0	*5*	0	0	0	0	*0*	0	0	0	4	*4*
2:00 PM	**0**	**1**	**0**	**0**	***1***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**3**	***3***
2:15 PM	**2**	**2**	**2**	**0**	***6***	**0**	**0**	**0**	**0**	***0***	**1**	**0**	**1**	**2**	***4***
2:30 PM	**0**	**1**	**1**	**0**	***2***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**1**	**0**	***1***
2:45 PM	**1**	**2**	**2**	**0**	***5***	**0**	**0**	**0**	**0**	***0***	**1**	**0**	**2**	**0**	***3***
3:00 PM	2	1	2	0	*5*	0	0	0	0	*0*	0	0	0	1	*1*
3:15 PM	3	2	2	0	*7*	0	0	0	0	*0*	0	0	0	1	*1*
Count Total	9	14	13	0	*36*	0	0	0	0	*0*	2	0	4	12	*18*
Peak Hr	**3**	**6**	**5**	**0**	***14***	**0**	**0**	**0**	**0**	***0***	**2**	**0**	**4**	**5**	***11***

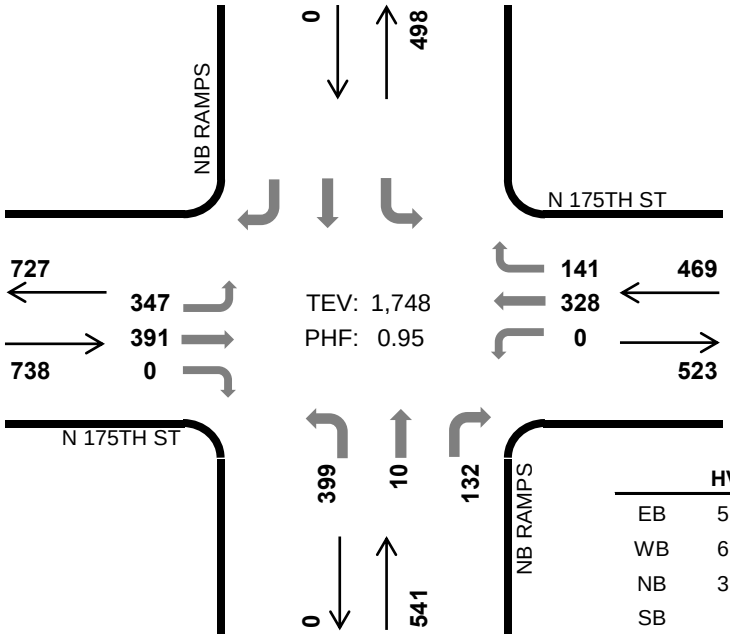
Mark Skaggs: 425 - 250 - 0777 mark.skaggs@idaxdata.com

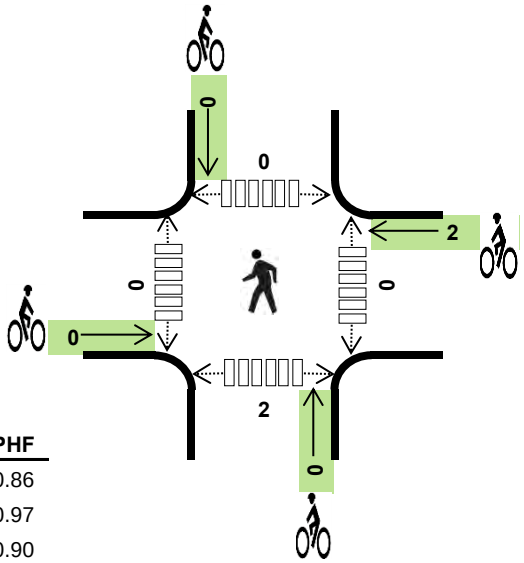
NB RAMPS
N 175TH ST

Date: Tue, Oct 07, 2014
Count Period: 12:00 PM to 2:00 PM
Peak Hour: 1:00 PM to 2:00 PM

N

Peak Hour





	HV %:	PHF
EB	5.0%	0.86
WB	6.0%	0.97
NB	3.9%	0.90
SB	-	-
TOTAL	4.9%	0.95

Two-Hour Count Summaries

Interval Start	N 175TH ST Eastbound			N 175TH ST Westbound			NB RAMPS Northbound			NB RAMPS Southbound			15-min Total	Rolling One Hour
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
12:00 PM	78	93	0	0	73	23	105	2	46	0	0	0	420	
12:15 PM	82	85	0	0	87	32	93	1	36	0	0	0	416	
12:30 PM	112	92	0	0	85	43	81	2	42	0	0	0	457	
12:45 PM	86	73	0	0	70	34	94	0	40	0	0	0	397	1,690
1:00 PM	**76**	**83**	**0**	**0**	**76**	**45**	**104**	**1**	**32**	**0**	**0**	**0**	**417**	1,687
1:15 PM	**107**	**107**	**0**	**0**	**86**	**31**	**81**	**1**	**34**	**0**	**0**	**0**	**447**	1,718
1:30 PM	**66**	**86**	**0**	**0**	**89**	**31**	**111**	**2**	**38**	**0**	**0**	**0**	**423**	1,684
1:45 PM	**98**	**115**	**0**	**0**	**77**	**34**	**103**	**6**	**28**	**0**	**0**	**0**	**461**	**1,748**
Count Total	705	734	0	0	643	273	772	15	296	0	0	0	3,438	
Peak Hr	**347**	**391**	**0**	**0**	**328**	**141**	**399**	**10**	**132**	**0**	**0**	**0**	**1,748**	

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
12:00 PM	10	5	8	0	*23*	0	0	0	0	*0*	1	0	0	0	*1*
12:15 PM	9	2	5	0	*16*	0	0	0	0	*0*	0	0	1	0	*1*
12:30 PM	4	6	3	0	*13*	0	0	0	0	*0*	0	0	0	0	*0*
12:45 PM	2	8	8	0	*18*	0	0	0	0	*0*	0	0	0	0	*0*
1:00 PM	**13**	**5**	**2**	**0**	***20***	**0**	**1**	**0**	**0**	***1***	**0**	**0**	**0**	**1**	***1***
1:15 PM	**11**	**5**	**2**	**0**	***18***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***
1:30 PM	**4**	**10**	**11**	**0**	***25***	**0**	**1**	**0**	**0**	***1***	**0**	**0**	**0**	**1**	***1***
1:45 PM	**9**	**8**	**6**	**0**	***23***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***
Count Total	62	49	45	0	*156*	0	2	0	0	*2*	1	0	1	2	*4*
Peak Hr	**37**	**28**	**21**	**0**	***86***	**0**	**2**	**0**	**0**	***2***	**0**	**0**	**0**	**2**	***2***

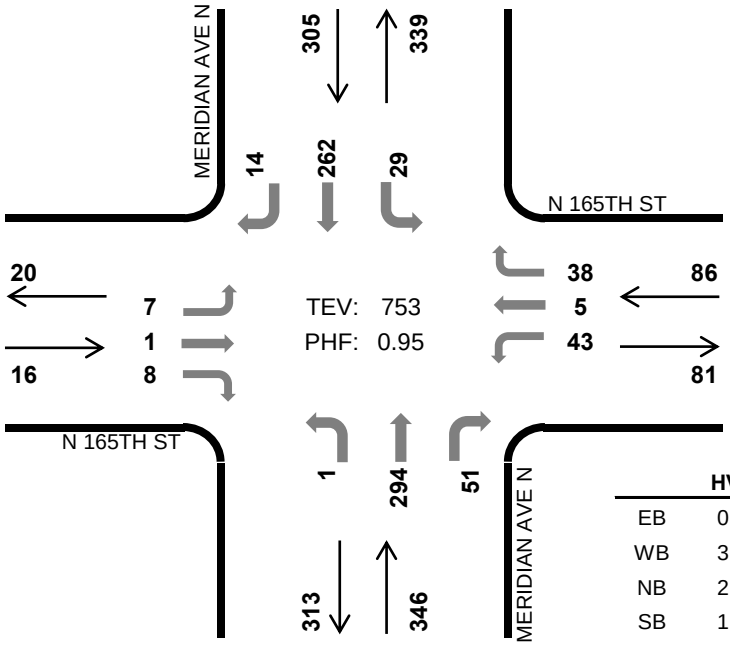
Mark Skaggs: 425 - 250 - 0777 mark.skaggs@idaxdata.com

MERIDIAN AVE N
N 165TH ST

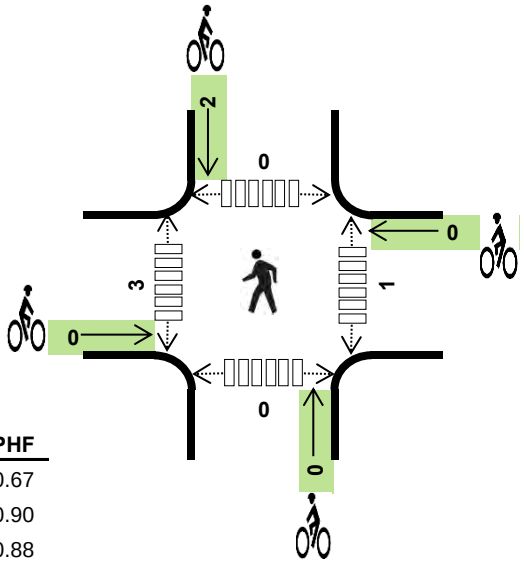
Date: Sat, Oct 04, 2014
Count Period: 1:30 PM to 3:30 PM
Peak Hour: 2:15 PM to 3:15 PM

N

Peak Hour



	HV %:	PHF
EB	0.0%	0.67
WB	3.5%	0.90
NB	2.3%	0.88
SB	1.6%	0.85
TOTAL	2.1%	0.95



Two-Hour Count Summaries

Interval Start	N 165TH ST Eastbound			N 165TH ST Westbound			MERIDIAN AVE N Northbound			MERIDIAN AVE N Southbound			15-min Total	Rolling One Hour
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
1:30 PM	2	1	1	10	0	8	0	60	14	8	66	0	170	
1:45 PM	0	0	0	14	0	9	0	56	15	6	59	4	163	
2:00 PM	2	0	0	8	0	10	3	51	15	5	60	1	155	
2:15 PM	**2**	**0**	**2**	**11**	**2**	**11**	**0**	**72**	**15**	**8**	**55**	**2**	**180**	668
2:30 PM	**0**	**0**	**3**	**10**	**1**	**9**	**0**	**64**	**14**	**5**	**67**	**3**	**176**	674
2:45 PM	**3**	**0**	**3**	**12**	**1**	**6**	**1**	**71**	**11**	**8**	**76**	**6**	**198**	709
3:00 PM	**2**	**1**	**0**	**10**	**1**	**12**	**0**	**87**	**11**	**8**	**64**	**3**	**199**	**753**
3:15 PM	0	0	1	15	1	4	0	64	10	6	66	4	171	744
Count Total	11	2	10	90	6	69	4	525	105	54	513	23	1,412	
Peak Hr	**7**	**1**	**8**	**43**	**5**	**38**	**1**	**294**	**51**	**29**	**262**	**14**	**753**	

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

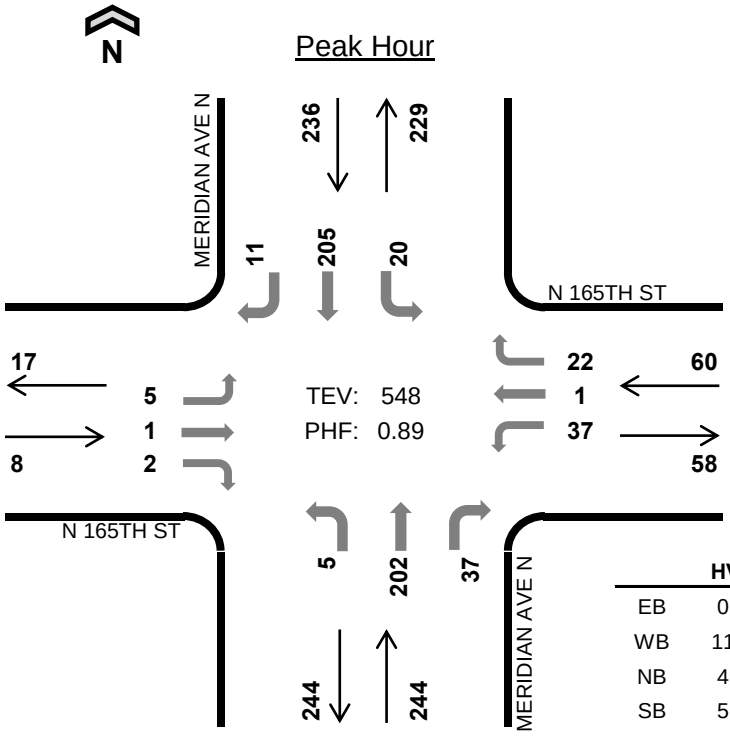
Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
1:30 PM	0	1	2	1	*4*	0	0	0	1	*1*	0	2	0	0	*2*
1:45 PM	0	2	1	1	*4*	0	0	0	0	*0*	0	0	0	0	*0*
2:00 PM	0	0	1	2	*3*	0	0	0	0	*0*	0	4	0	0	*4*
2:15 PM	**0**	**1**	**3**	**1**	***5***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***
2:30 PM	**0**	**1**	**1**	**2**	***4***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***
2:45 PM	**0**	**1**	**2**	**0**	***3***	**0**	**0**	**0**	**2**	***2***	**1**	**1**	**0**	**0**	***2***
3:00 PM	**0**	**0**	**2**	**2**	***4***	**0**	**0**	**0**	**0**	***0***	**0**	**2**	**0**	**0**	***2***
3:15 PM	0	0	2	0	*2*	0	0	0	0	*0*	0	0	0	1	*1*
Count Total	0	6	14	9	*29*	0	0	0	3	*3*	1	9	0	1	*11*
Peak Hr	**0**	**3**	**8**	**5**	***16***	**0**	**0**	**0**	**2**	***2***	**1**	**3**	**0**	**0**	***4***

Mark Skaggs: 425 - 250 - 0777 mark.skaggs@idaxdata.com

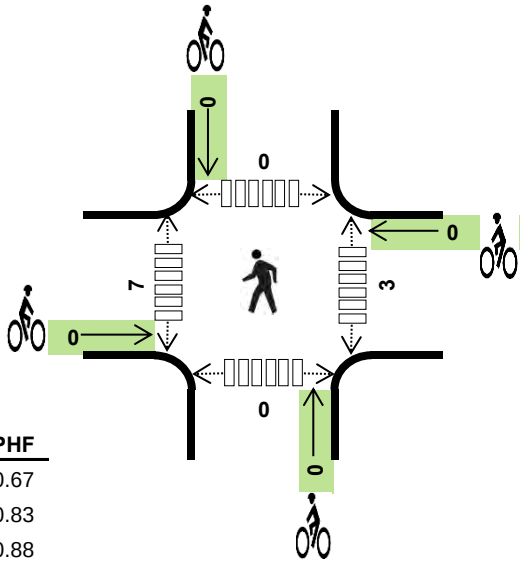
MERIDIAN AVE N
N 165TH ST

Date: Tue, Oct 07, 2014
Count Period: 12:00 PM to 2:00 PM
Peak Hour: 1:00 PM to 2:00 PM

Peak Hour



	HV %:	PHF
EB	0.0%	0.67
WB	11.7%	0.83
NB	4.5%	0.88
SB	5.1%	0.84
TOTAL	5.5%	0.89



Two-Hour Count Summaries

Interval Start	N 165TH ST Eastbound			N 165TH ST Westbound			MERIDIAN AVE N Northbound			MERIDIAN AVE N Southbound			15-min Total	Rolling One Hour
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
12:00 PM	2	0	0	11	0	2	0	43	9	6	56	2	131	
12:15 PM	3	0	1	12	0	10	0	50	11	5	52	1	145	
12:30 PM	1	0	0	6	0	5	1	42	10	3	45	4	117	
12:45 PM	1	0	1	2	0	4	0	45	5	3	43	1	105	498
1:00 PM	**2**	**1**	**0**	**10**	**0**	**8**	**0**	**53**	**13**	**3**	**51**	**2**	**143**	510
1:15 PM	**2**	**0**	**1**	**7**	**0**	**5**	**2**	**57**	**10**	**6**	**60**	**4**	**154**	519
1:30 PM	**0**	**0**	**0**	**7**	**1**	**4**	**0**	**49**	**8**	**4**	**45**	**2**	**120**	522
1:45 PM	**1**	**0**	**1**	**13**	**0**	**5**	**3**	**43**	**6**	**7**	**49**	**3**	**131**	**548**
Count Total	12	1	4	68	1	43	6	382	72	37	401	19	1,046	
Peak Hr	**5**	**1**	**2**	**37**	**1**	**22**	**5**	**202**	**37**	**20**	**205**	**11**	**548**	

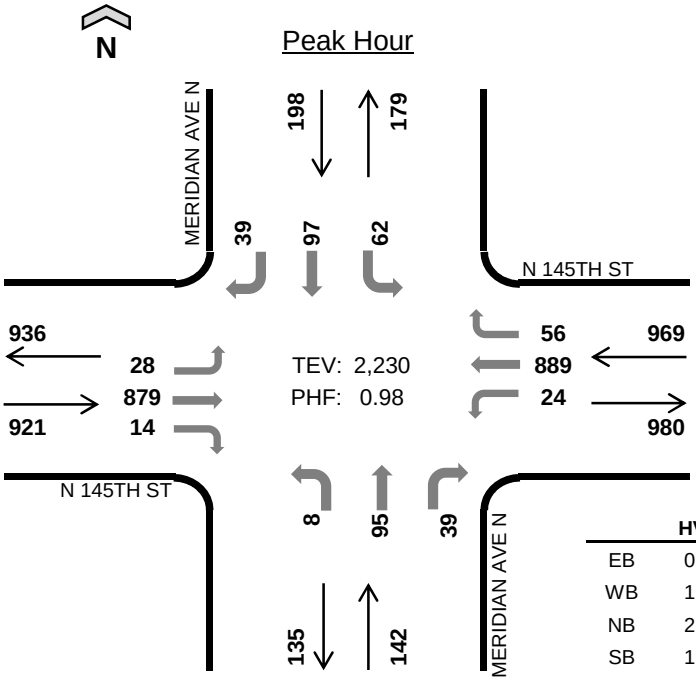
Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
12:00 PM	0	3	3	6	*12*	0	0	0	0	*0*	0	1	0	1	*2*
12:15 PM	0	3	1	0	*4*	0	0	0	1	*1*	1	1	0	0	*2*
12:30 PM	0	1	5	0	*6*	0	0	0	0	*0*	1	0	0	0	*1*
12:45 PM	0	0	6	3	*9*	0	0	0	0	*0*	0	0	0	0	*0*
1:00 PM	**0**	**2**	**6**	**3**	***11***	**0**	**0**	**0**	**0**	***0***	**1**	**0**	**0**	**0**	***1***
1:15 PM	**0**	**3**	**0**	**2**	***5***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***
1:30 PM	**0**	**1**	**2**	**3**	***6***	**0**	**0**	**0**	**0**	***0***	**1**	**7**	**0**	**0**	***8***
1:45 PM	**0**	**1**	**3**	**4**	***8***	**0**	**0**	**0**	**0**	***0***	**1**	**0**	**0**	**0**	***1***
Count Total	0	14	26	21	*61*	0	0	0	1	*1*	5	9	0	1	*15*
Peak Hr	**0**	**7**	**11**	**12**	***30***	**0**	**0**	**0**	**0**	***0***	**3**	**7**	**0**	**0**	***10***

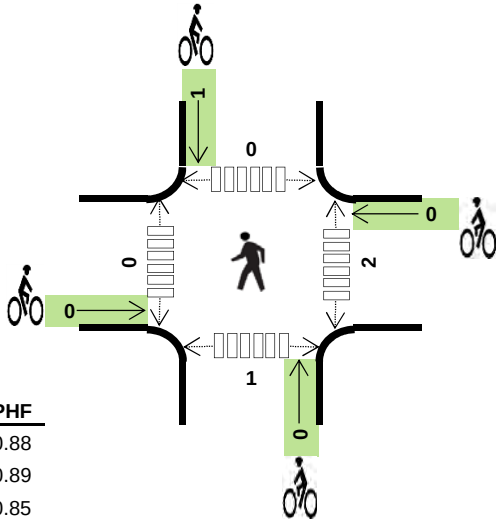
Mark Skaggs: 425 - 250 - 0777 mark.skaggs@idaxdata.com

MERIDIAN AVE N
N 145TH ST

Date: Sat, Oct 04, 2014
Count Period: 1:30 PM to 3:30 PM
Peak Hour: 1:30 PM to 2:30 PM



	HV %:	PHF
EB	0.8%	0.88
WB	1.2%	0.89
NB	2.8%	0.85
SB	1.5%	0.92
TOTAL	1.2%	0.98



Two-Hour Count Summaries

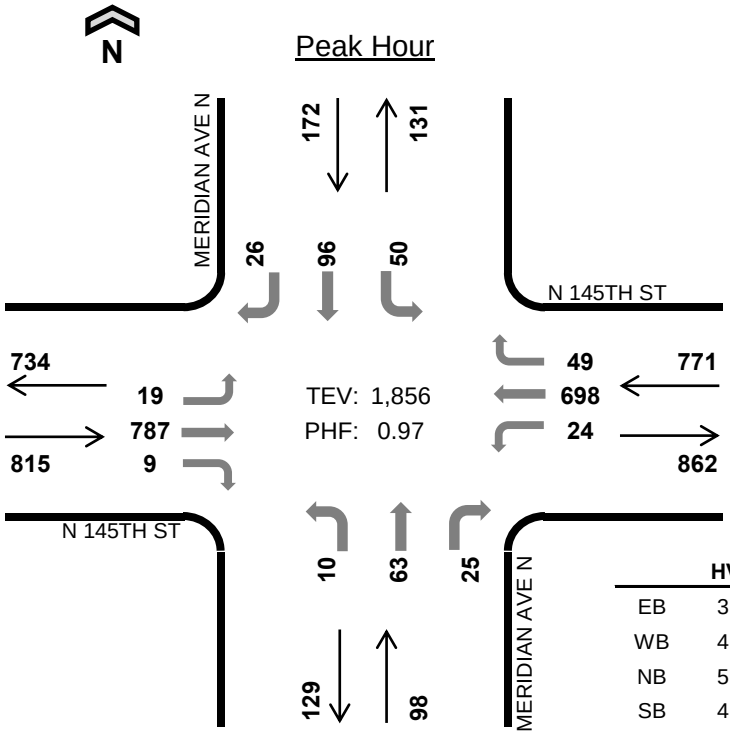
Interval Start	N 145TH ST Eastbound			N 145TH ST Westbound			MERIDIAN AVE N Northbound			MERIDIAN AVE N Southbound			15-min Total	Rolling One Hour
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
1:30 PM	**5**	**252**	**4**	**3**	**212**	**12**	**3**	**18**	**8**	**13**	**27**	**7**	**564**	
1:45 PM	**9**	**232**	**5**	**6**	**208**	**12**	**1**	**28**	**13**	**15**	**26**	**13**	**568**	
2:00 PM	**6**	**212**	**3**	**10**	**222**	**13**	**2**	**24**	**11**	**17**	**23**	**12**	**555**	
2:15 PM	**8**	**183**	**2**	**5**	**247**	**19**	**2**	**25**	**7**	**17**	**21**	**7**	**543**	**2,230**
2:30 PM	4	190	3	2	205	11	5	29	9	20	19	6	503	2,169
2:45 PM	7	201	2	7	218	19	0	18	4	22	28	13	539	2,140
3:00 PM	11	221	1	7	196	13	5	21	8	19	25	11	538	2,123
3:15 PM	4	183	4	5	212	10	1	16	6	13	29	12	495	2,075
Count Total	54	1,674	24	45	1,720	109	19	179	66	136	198	81	4,305	
Peak Hr	**28**	**879**	**14**	**24**	**889**	**56**	**8**	**95**	**39**	**62**	**97**	**39**	**2,230**	

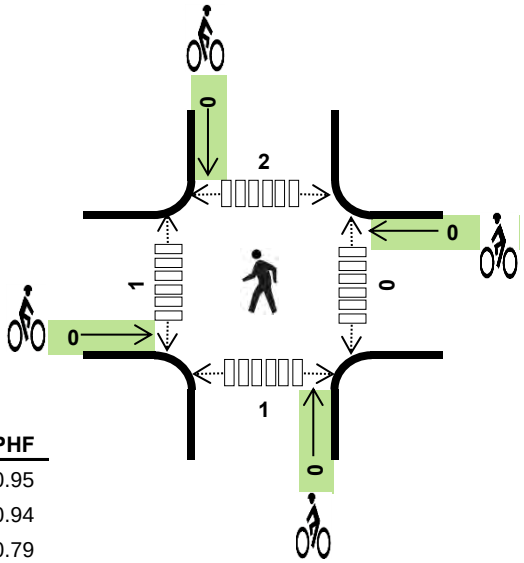
Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
1:30 PM	**2**	**1**	**0**	**0**	***3***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***
1:45 PM	**2**	**5**	**1**	**2**	***10***	**0**	**0**	**0**	**1**	***1***	**0**	**0**	**0**	**0**	***0***
2:00 PM	**2**	**0**	**1**	**1**	***4***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**1**	***1***
2:15 PM	**1**	**6**	**2**	**0**	***9***	**0**	**0**	**0**	**0**	***0***	**2**	**0**	**0**	**0**	***2***
2:30 PM	4	2	0	1	*7*	0	0	0	0	*0*	0	0	0	0	*0*
2:45 PM	4	4	1	1	*10*	0	0	0	0	*0*	0	2	0	0	*2*
3:00 PM	2	0	0	1	*3*	0	0	0	0	*0*	1	2	0	0	*3*
3:15 PM	0	2	2	1	*5*	0	0	0	0	*0*	0	0	0	0	*0*
Count Total	17	20	7	7	*51*	0	0	0	1	*1*	3	4	0	1	*8*
Peak Hr	**7**	**12**	**4**	**3**	***26***	**0**	**0**	**0**	**1**	***1***	**2**	**0**	**0**	**1**	***3***

MERIDIAN AVE N
N 145TH ST

Date: Tue, Oct 07, 2014
Count Period: 12:00 PM to 2:00 PM
Peak Hour: 1:00 PM to 2:00 PM





	HV %:	PHF
EB	3.2%	0.95
WB	4.2%	0.94
NB	5.1%	0.79
SB	4.7%	0.93
TOTAL	3.8%	0.97

Two-Hour Count Summaries

Interval Start	N 145TH ST Eastbound			N 145TH ST Westbound			MERIDIAN AVE N Northbound			MERIDIAN AVE N Southbound			15-min Total	Rolling One Hour
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
12:00 PM	6	165	5	5	178	16	1	12	6	21	21	10	446	
12:15 PM	5	185	3	7	151	7	2	24	11	11	25	10	441	
12:30 PM	6	201	3	0	187	12	3	9	4	13	12	7	457	
12:45 PM	3	206	4	4	185	3	4	19	4	11	13	4	460	1,804
1:00 PM	**8**	**204**	**2**	**8**	**159**	**9**	**3**	**14**	**5**	**9**	**22**	**10**	**453**	1,811
1:15 PM	**3**	**189**	**3**	**2**	**181**	**8**	**1**	**21**	**9**	**11**	**26**	**6**	**460**	1,830
1:30 PM	**4**	**190**	**2**	**7**	**177**	**15**	**4**	**13**	**6**	**17**	**24**	**5**	**464**	1,837
1:45 PM	**4**	**204**	**2**	**7**	**181**	**17**	**2**	**15**	**5**	**13**	**24**	**5**	**479**	**1,856**
Count Total	39	1,544	24	40	1,399	87	20	127	50	106	167	57	3,660	
Peak Hr	**19**	**787**	**9**	**24**	**698**	**49**	**10**	**63**	**25**	**50**	**96**	**26**	**1,856**	

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
12:00 PM	6	7	0	3	*16*	0	0	0	0	*0*	0	0	0	0	*0*
12:15 PM	10	6	3	2	*21*	0	0	0	0	*0*	0	0	0	1	*1*
12:30 PM	8	10	1	0	*19*	0	0	0	0	*0*	0	0	0	0	*0*
12:45 PM	6	10	2	1	*19*	0	0	0	0	*0*	0	0	0	0	*0*
1:00 PM	**4**	**9**	**1**	**0**	***14***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***
1:15 PM	**8**	**7**	**1**	**3**	***19***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**1**	**0**	***1***
1:30 PM	**9**	**6**	**2**	**2**	***19***	**0**	**0**	**0**	**0**	***0***	**0**	**1**	**1**	**0**	***2***
1:45 PM	**5**	**10**	**1**	**3**	***19***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**1**	***1***
Count Total	56	65	11	14	*146*	0	0	0	0	*0*	0	1	2	2	*5*
Peak Hr	**26**	**32**	**5**	**8**	***71***	**0**	**0**	**0**	**0**	***0***	**0**	**1**	**2**	**1**	***4***

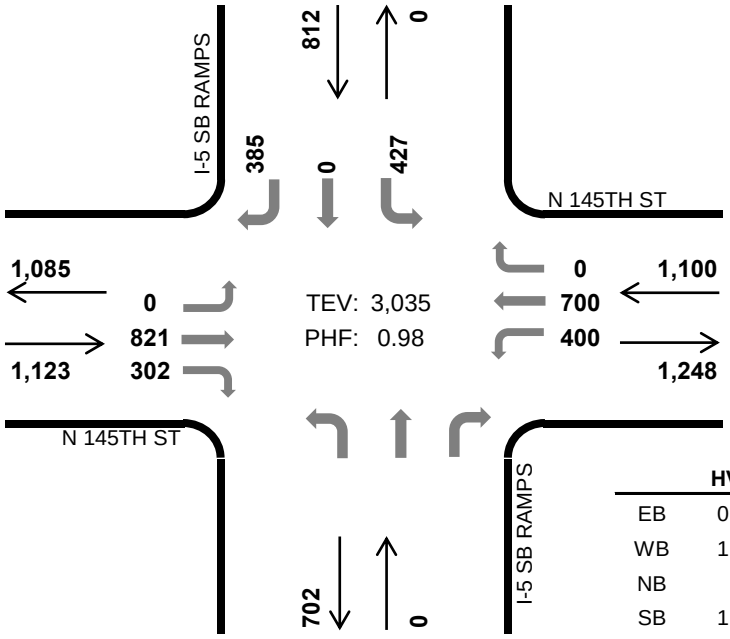
Mark Skaggs: 425 - 250 - 0777 mark.skaggs@idaxdata.com

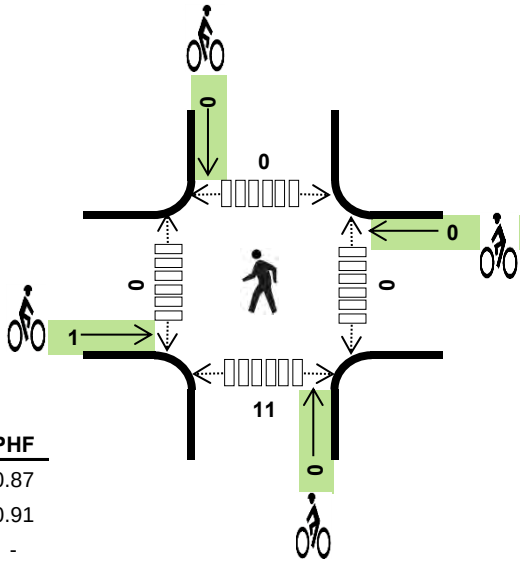
I-5 SB RAMPS
N 145TH ST

Date: Sat, Oct 04, 2014
Count Period: 1:30 PM to 3:30 PM
Peak Hour: 1:30 PM to 2:30 PM

N

Peak Hour





	HV %:	PHF
EB	0.9%	0.87
WB	1.4%	0.91
NB	-	-
SB	1.0%	0.92
TOTAL	1.1%	0.98

Two-Hour Count Summaries

Interval Start	N 145TH ST Eastbound			N 145TH ST Westbound			I-5 SB RAMPS Northbound			I-5 SB RAMPS Southbound			15-min Total	Rolling One Hour
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
1:30 PM	**0**	**221**	**60**	**95**	**173**	**0**	**0**	**0**	**0**	**111**	**0**	**98**	**758**	
1:45 PM	**0**	**229**	**95**	**100**	**148**	**0**	**0**	**0**	**0**	**107**	**0**	**98**	**777**	
2:00 PM	**0**	**186**	**84**	**103**	**198**	**0**	**0**	**0**	**0**	**91**	**0**	**86**	**748**	
2:15 PM	**0**	**185**	**63**	**102**	**181**	**0**	**0**	**0**	**0**	**118**	**0**	**103**	**752**	**3,035**
2:30 PM	0	157	61	79	166	0	0	0	0	130	0	97	690	2,967
2:45 PM	0	202	59	86	179	0	0	0	0	110	0	98	734	2,924
3:00 PM	0	208	64	108	157	0	0	0	0	100	0	91	728	2,904
3:15 PM	0	170	61	96	172	0	0	0	0	124	0	89	712	2,864
Count Total	0	1,558	547	769	1,374	0	0	0	0	891	0	760	5,899	
Peak Hr	**0**	**821**	**302**	**400**	**700**	**0**	**0**	**0**	**0**	**427**	**0**	**385**	**3,035**	

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
1:30 PM	**1**	**4**	**0**	**0**	***5***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**4**	***4***
1:45 PM	**3**	**6**	**0**	**2**	***11***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**2**	***2***
2:00 PM	**2**	**1**	**0**	**1**	***4***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***
2:15 PM	**4**	**4**	**0**	**5**	***13***	**1**	**0**	**0**	**0**	***1***	**0**	**0**	**0**	**5**	***5***
2:30 PM	3	1	0	3	*7*	0	0	0	0	*0*	0	0	0	1	*1*
2:45 PM	5	2	0	3	*10*	0	0	0	0	*0*	0	0	0	1	*1*
3:00 PM	2	0	0	4	*6*	0	0	0	0	*0*	0	0	0	0	*0*
3:15 PM	4	4	0	5	*13*	0	0	0	0	*0*	0	0	0	1	*1*
Count Total	24	22	0	23	*69*	1	0	0	0	*1*	0	0	0	14	*14*
Peak Hr	**10**	**15**	**0**	**8**	***33***	**1**	**0**	**0**	**0**	***1***	**0**	**0**	**0**	**11**	***11***

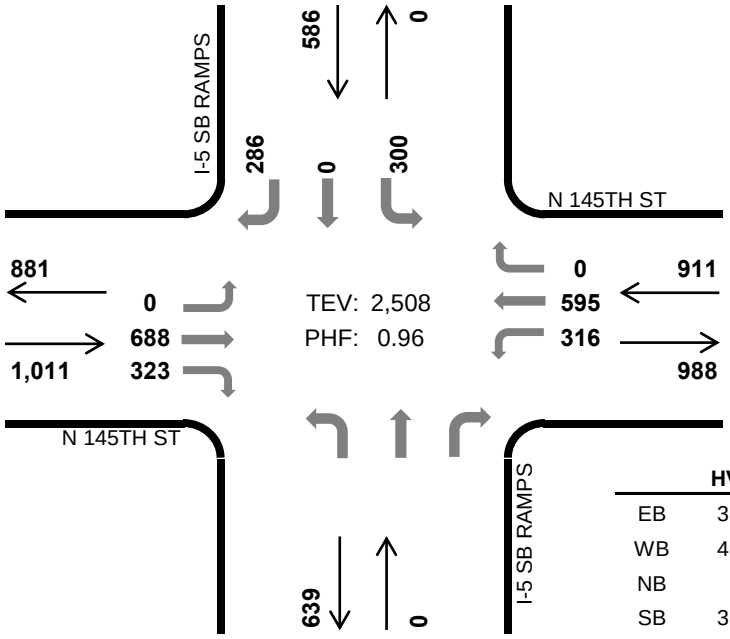
Mark Skaggs: 425 - 250 - 0777 mark.skaggs@idaxdata.com

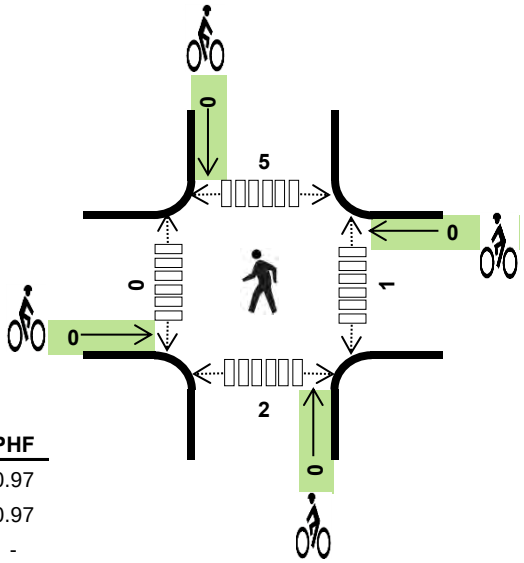
I-5 SB RAMPS
N 145TH ST

Date: Tue, Oct 07, 2014
Count Period: 12:00 PM to 2:00 PM
Peak Hour: 12:30 PM to 1:30 PM

N

Peak Hour





	HV %:	PHF
EB	3.1%	0.97
WB	4.4%	0.97
NB	-	-
SB	3.6%	0.93
TOTAL	3.7%	0.96

Two-Hour Count Summaries

Interval Start	N 145TH ST Eastbound			N 145TH ST Westbound			I-5 SB RAMPS Northbound			I-5 SB RAMPS Southbound			15-min Total	Rolling One Hour
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
12:00 PM	0	152	66	75	144	0	0	0	0	57	0	78	572	
12:15 PM	0	150	80	89	138	0	0	0	0	85	0	58	600	
12:30 PM	**0**	**167**	**87**	**84**	**146**	**0**	**0**	**0**	**0**	**73**	**0**	**74**	**631**	
12:45 PM	**0**	**171**	**90**	**81**	**155**	**0**	**0**	**0**	**0**	**89**	**0**	**68**	**654**	2,457
1:00 PM	**0**	**176**	**82**	**67**	**146**	**0**	**0**	**0**	**0**	**63**	**0**	**84**	**618**	2,503
1:15 PM	**0**	**174**	**64**	**84**	**148**	**0**	**0**	**0**	**0**	**75**	**0**	**60**	**605**	**2,508**
1:30 PM	0	162	76	77	147	0	0	0	0	80	0	77	619	2,496
1:45 PM	0	168	70	70	158	0	0	0	0	83	0	88	637	2,479
Count Total	0	1,320	615	627	1,182	0	0	0	0	605	0	587	4,936	
Peak Hr	**0**	**688**	**323**	**316**	**595**	**0**	**0**	**0**	**0**	**300**	**0**	**286**	**2,508**	

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
12:00 PM	6	9	0	6	*21*	0	0	0	0	*0*	0	0	0	1	*1*
12:15 PM	8	7	0	8	*23*	0	0	0	0	*0*	0	0	0	0	*0*
12:30 PM	**7**	**9**	**0**	**8**	***24***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**1**	**0**	***1***
12:45 PM	**9**	**12**	**0**	**7**	***28***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**1**	**1**	***2***
1:00 PM	**5**	**11**	**0**	**2**	***18***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**3**	**0**	***3***
1:15 PM	**10**	**8**	**0**	**4**	***22***	**0**	**0**	**0**	**0**	***0***	**1**	**0**	**0**	**1**	***2***
1:30 PM	8	10	0	4	*22*	0	0	0	0	*0*	0	0	0	0	*0*
1:45 PM	7	9	0	1	*17*	0	0	0	0	*0*	0	0	0	0	*0*
Count Total	60	75	0	40	*175*	0	0	0	0	*0*	1	0	5	3	*9*
Peak Hr	**31**	**40**	**0**	**21**	***92***	**0**	**0**	**0**	**0**	***0***	**1**	**0**	**5**	**2**	***8***

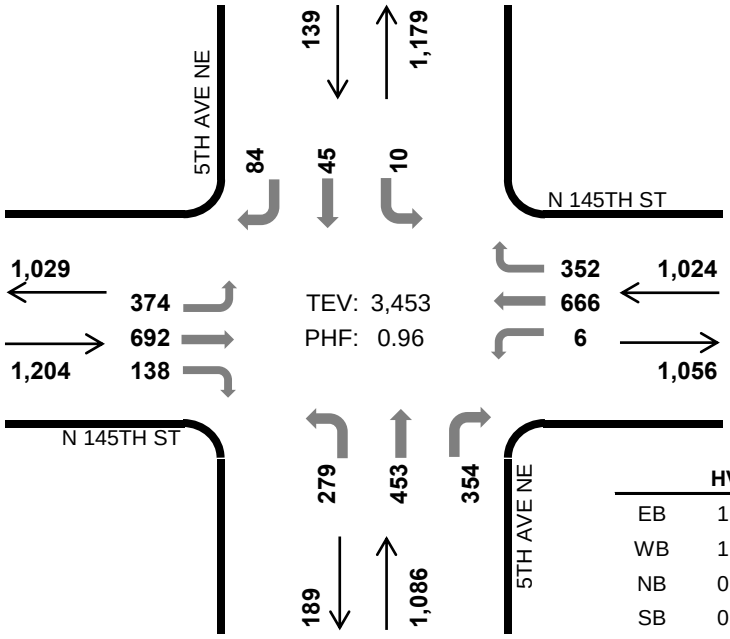
Mark Skaggs: 425 - 250 - 0777 mark.skaggs@idaxdata.com

5TH AVE NE
N 145TH ST

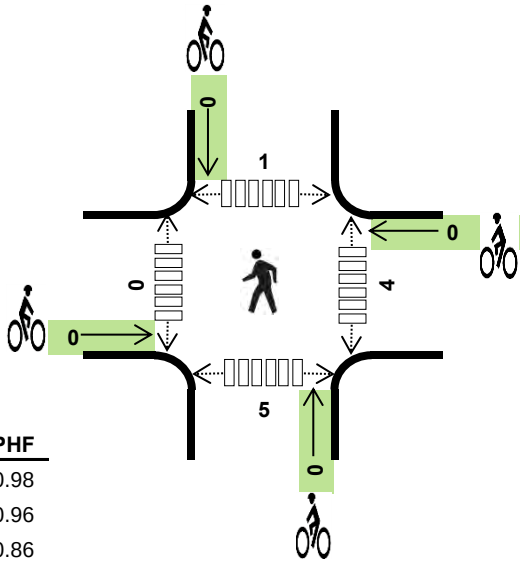
Date: Sat, Oct 04, 2014
Count Period: 1:30 PM to 3:30 PM
Peak Hour: 2:15 PM to 3:15 PM

N

Peak Hour



	HV %:	PHF
EB	1.4%	0.98
WB	1.5%	0.96
NB	0.6%	0.86
SB	0.7%	0.91
TOTAL	1.2%	0.96



Two-Hour Count Summaries

Interval Start	N 145TH ST Eastbound			N 145TH ST Westbound			5TH AVE NE Northbound			5TH AVE NE Southbound			15-min Total	Rolling One Hour
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
1:30 PM	93	182	36	1	167	90	74	98	85	4	15	17	862	
1:45 PM	107	197	26	1	180	70	59	89	68	6	13	29	845	
2:00 PM	96	169	14	2	203	75	67	122	72	6	12	18	856	
2:15 PM	**100**	**181**	**27**	**1**	**169**	**97**	**78**	**120**	**81**	**3**	**10**	**21**	**888**	3,451
2:30 PM	**87**	**170**	**39**	**0**	**166**	**91**	**54**	**88**	**76**	**2**	**14**	**16**	**803**	3,392
2:45 PM	**93**	**173**	**33**	**4**	**173**	**72**	**81**	**135**	**98**	**4**	**11**	**20**	**897**	3,444
3:00 PM	**94**	**168**	**39**	**1**	**158**	**92**	**66**	**110**	**99**	**1**	**10**	**27**	**865**	**3,453**
3:15 PM	87	176	33	1	174	76	69	92	111	7	11	20	857	3,422
Count Total	757	1,416	247	11	1,390	663	548	854	690	33	96	168	6,873	
Peak Hr	**374**	**692**	**138**	**6**	**666**	**352**	**279**	**453**	**354**	**10**	**45**	**84**	**3,453**	

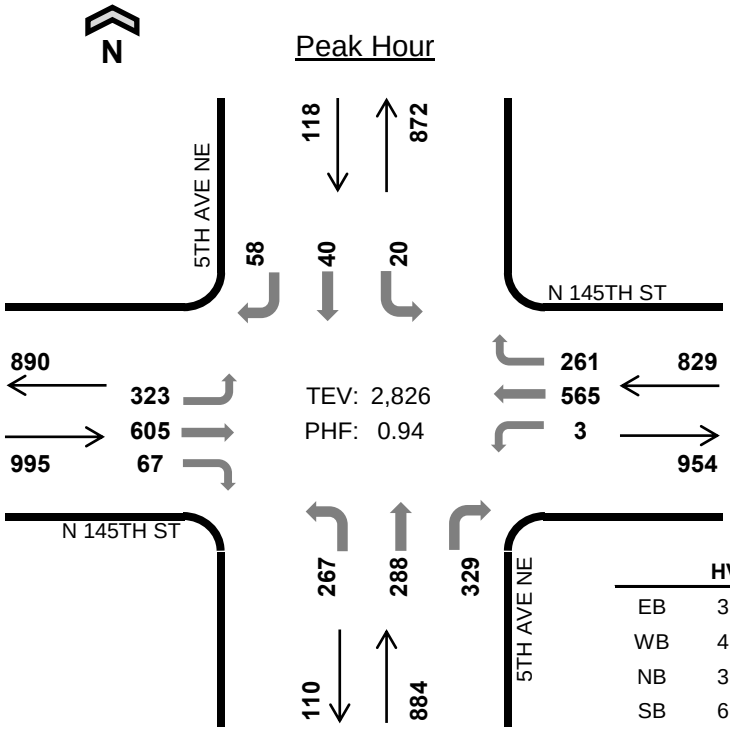
Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
1:30 PM	2	5	2	2	*11*	0	0	0	0	*0*	3	0	0	1	*4*
1:45 PM	4	7	1	1	*13*	0	0	0	0	*0*	0	0	0	1	*1*
2:00 PM	2	1	2	1	*6*	0	0	0	0	*0*	0	0	0	0	*0*
2:15 PM	**3**	**6**	**1**	**0**	***10***	**0**	**0**	**0**	**0**	***0***	**1**	**0**	**0**	**1**	***2***
2:30 PM	**4**	**4**	**1**	**1**	***10***	**0**	**0**	**0**	**0**	***0***	**1**	**0**	**1**	**3**	***5***
2:45 PM	**5**	**3**	**2**	**0**	***10***	**0**	**0**	**0**	**0**	***0***	**2**	**0**	**0**	**1**	***3***
3:00 PM	**5**	**2**	**3**	**0**	***10***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***
3:15 PM	9	4	3	1	*17*	0	0	0	0	*0*	2	0	0	0	*2*
Count Total	34	32	15	6	*87*	0	0	0	0	*0*	9	0	1	7	*17*
Peak Hr	**17**	**15**	**7**	**1**	***40***	**0**	**0**	**0**	**0**	***0***	**4**	**0**	**1**	**5**	***10***

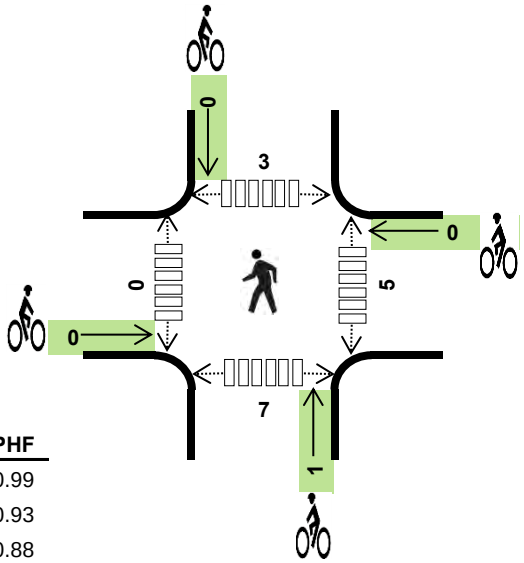
Mark Skaggs: 425 - 250 - 0777 mark.skaggs@idaxdata.com

5TH AVE NE
N 145TH ST

Date: Tue, Oct 07, 2014
Count Period: 12:00 PM to 2:00 PM
Peak Hour: 12:45 PM to 1:45 PM



	HV %:	PHF
EB	3.0%	0.99
WB	4.9%	0.93
NB	3.8%	0.88
SB	6.8%	0.82
TOTAL	4.0%	0.94



Two-Hour Count Summaries

Interval Start	N 145TH ST Eastbound			N 145TH ST Westbound			5TH AVE NE Northbound			5TH AVE NE Southbound			15-min Total	Rolling One Hour
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
12:00 PM	65	128	20	1	137	55	65	53	75	2	15	14	630	
12:15 PM	75	140	25	2	166	49	51	55	88	4	13	10	678	
12:30 PM	69	132	21	4	156	56	62	72	70	3	19	13	677	
12:45 PM	**76**	**149**	**26**	**1**	**151**	**72**	**73**	**94**	**83**	**4**	**11**	**14**	**754**	2,739
1:00 PM	**87**	**152**	**8**	**1**	**129**	**65**	**66**	**53**	**77**	**3**	**14**	**9**	**664**	2,773
1:15 PM	**80**	**157**	**12**	**1**	**157**	**62**	**56**	**77**	**74**	**4**	**5**	**18**	**703**	2,798
1:30 PM	**80**	**147**	**21**	**0**	**128**	**62**	**72**	**64**	**95**	**9**	**10**	**17**	**705**	**2,826**
1:45 PM	87	140	22	0	123	61	81	85	100	4	14	18	735	2,807
Count Total	619	1,145	155	10	1,147	482	526	553	662	33	101	113	5,546	
Peak Hr	**323**	**605**	**67**	**3**	**565**	**261**	**267**	**288**	**329**	**20**	**40**	**58**	**2,826**	

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
12:00 PM	8	7	7	1	*23*	0	0	0	0	*0*	0	0	0	1	*1*
12:15 PM	9	6	9	2	*26*	0	0	0	0	*0*	1	0	0	3	*4*
12:30 PM	8	9	5	1	*23*	0	0	0	0	*0*	0	0	1	2	*3*
12:45 PM	**13**	**15**	**9**	**2**	***39***	**0**	**0**	**1**	**0**	***1***	**1**	**0**	**0**	**2**	***3***
1:00 PM	**4**	**8**	**9**	**1**	***22***	**0**	**0**	**0**	**0**	***0***	**1**	**0**	**2**	**0**	***3***
1:15 PM	**5**	**8**	**7**	**3**	***23***	**0**	**0**	**0**	**0**	***0***	**2**	**0**	**1**	**3**	***6***
1:30 PM	**8**	**10**	**9**	**2**	***29***	**0**	**0**	**0**	**0**	***0***	**1**	**0**	**0**	**2**	***3***
1:45 PM	5	6	7	0	*18*	0	0	0	0	*0*	1	0	1	3	*5*
Count Total	60	69	62	12	*203*	0	0	1	0	*1*	7	0	5	16	*28*
Peak Hr	**30**	**41**	**34**	**8**	***113***	**0**	**0**	**1**	**0**	***1***	**5**	**0**	**3**	**7**	***15***

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ATTACHMENT H

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	465	290	125	520	0	0	0	0	285	5	30
Number	5	2	12	1	6	16				3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1743	1743	1727	1727	0				1570	1570	1900
Adj Flow Rate, veh/h	0	489	0	132	547	0				333	0	0
Adj No. of Lanes	0	2	1	1	2	0				2	1	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, %	0	9	9	10	10	0				21	21	21
Cap, veh/h	0	2082	931	641	2421	0				435	229	0
Arrive On Green	0.00	0.63	0.00	0.05	0.74	0.00				0.15	0.00	0.00
Sat Flow, veh/h	0	3399	1482	1645	3368	0				2991	1570	0
Grp Volume(v), veh/h	0	489	0	132	547	0				333	0	0
Grp Sat Flow(s),veh/h/ln	0	1656	1482	1645	1641	0				1495	1570	0
Q Serve(g_s), s	0.0	5.8	0.0	2.3	4.7	0.0				9.6	0.0	0.0
Cycle Q Clear(g_c), s	0.0	5.8	0.0	2.3	4.7	0.0				9.6	0.0	0.0
Prop In Lane	0.00		1.00	1.00		0.00				1.00		0.00
Lane Grp Cap(c), veh/h	0	2082	931	641	2421	0				435	229	0
V/C Ratio(X)	0.00	0.23	0.00	0.21	0.23	0.00				0.76	0.00	0.00
Avail Cap(c_a), veh/h	0	2082	931	827	2421	0				1063	558	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)	0.00	1.00	0.00	1.00	1.00	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	7.3	0.0	4.7	3.7	0.0				37.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.3	0.0	0.2	0.2	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(-26165%),veh/ln	0.0	2.7	0.0	1.1	2.2	0.0				4.2	0.0	0.0
LnGrp Delay(d),s/veh	0.0	7.5	0.0	4.8	3.9	0.0				40.4	0.0	0.0
LnGrp LOS		A		A	A					D		
Approach Vol, veh/h		489			679						333	
Approach Delay, s/veh		7.5			4.1						40.4	
Approach LOS		A			A						D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	9.8	62.1				71.9		18.1
Change Period (Y+Rc), s	5.0	5.5				5.5		5.0
Max Green Setting (Gmax), s	15.0	27.5				47.5		32.0
Max Q Clear Time (g_c+I1), s	4.3	7.8				6.7		11.6
Green Ext Time (p_c), s	0.2	10.5				15.1		1.5

Intersection Summary	
HCM 2010 Ctrl Delay	13.3
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	235	525	0	0	360	340	275	5	165	0	0	0
Number	5	2	12	1	6	16	7	4	14			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1667	1667	0	0	1624	1624	1652	1652	1900			
Adj Flow Rate, veh/h	250	559	0	0	383	0	237	83	176			
Adj No. of Lanes	1	2	0	0	2	1	1	1	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, %	14	14	0	0	17	17	15	15	15			
Cap, veh/h	632	2114	0	0	1589	711	340	102	216			
Arrive On Green	0.10	0.67	0.00	0.00	0.52	0.00	0.22	0.22	0.22			
Sat Flow, veh/h	1587	3250	0	0	3167	1380	1573	473	1002			
Grp Volume(v), veh/h	250	559	0	0	383	0	237	0	259			
Grp Sat Flow(s),veh/h/ln	1587	1583	0	0	1543	1380	1573	0	1475			
Q Serve(g_s), s	6.2	6.4	0.0	0.0	6.2	0.0	12.5	0.0	15.0			
Cycle Q Clear(g_c), s	6.2	6.4	0.0	0.0	6.2	0.0	12.5	0.0	15.0			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		0.68			
Lane Grp Cap(c), veh/h	632	2114	0	0	1589	711	340	0	318			
V/C Ratio(X)	0.40	0.26	0.00	0.00	0.24	0.00	0.70	0.00	0.81			
Avail Cap(c_a), veh/h	831	2114	0	0	1589	711	524	0	492			
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	0.00	0.00	1.00	0.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	7.7	6.0	0.0	0.0	12.1	0.0	32.6	0.0	33.6			
Incr Delay (d2), s/veh	0.4	0.3	0.0	0.0	0.4	0.0	3.1	0.0	6.8			
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(-26165%),veh/ln	2.7	2.9	0.0	0.0	2.7	0.0	5.7	0.0	6.7			
LnGrp Delay(d),s/veh	8.1	6.3	0.0	0.0	12.4	0.0	35.7	0.0	40.4			
LnGrp LOS	A	A			B		D		D			
Approach Vol, veh/h		809			383			496				
Approach Delay, s/veh		6.9			12.4			38.2				
Approach LOS		A			B			D				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		65.6		24.4	13.7	51.9		
Change Period (Y+Rc), s		5.5		5.0	5.0	5.5		
Max Green Setting (Gmax), s		49.5		30.0	20.0	24.5		
Max Q Clear Time (g_c+I1), s		8.4		17.0	8.2	8.2		
Green Ext Time (p_c), s		13.0		2.4	0.6	8.3		

Intersection Summary	
HCM 2010 Ctrl Delay	17.3
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Vol, veh/h	40	640	655	20	20	40
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	50	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	19	19	17	17	27	27
Mvmt Flow	44	703	720	22	22	44

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	742	0	-	0	1171	371
Stage 1	-	-	-	-	731	-
Stage 2	-	-	-	-	440	-
Critical Hdwy	4.48	-	-	-	7.34	7.44
Critical Hdwy Stg 1	-	-	-	-	6.34	-
Critical Hdwy Stg 2	-	-	-	-	6.34	-
Follow-up Hdwy	2.39	-	-	-	3.77	3.57
Pot Cap-1 Maneuver	758	-	-	-	152	560
Stage 1	-	-	-	-	377	-
Stage 2	-	-	-	-	549	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	758	-	-	-	143	560
Mov Cap-2 Maneuver	-	-	-	-	143	-
Stage 1	-	-	-	-	377	-
Stage 2	-	-	-	-	517	-

Approach	EB	WB	SB
HCM Control Delay, s	0.6	0	19.6
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	758	-	-	-	143	560
HCM Lane V/C Ratio	0.058	-	-	-	0.154	0.078
HCM Control Delay (s)	10	-	-	-	34.7	12
HCM Lane LOS	B	-	-	-	D	B
HCM 95th %tile Q(veh)	0.2	-	-	-	0.5	0.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	5	5	5	110	5	290	5	395	70	310	355	5
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1681	1681	1681	1667	1667	1900	1583	1583	1900
Adj Flow Rate, veh/h	5	5	5	118	0	315	5	425	75	333	382	5
Adj No. of Lanes	0	1	0	1	0	2	1	2	0	2	2	0
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, %	0	0	0	13	13	13	14	14	14	20	20	20
Cap, veh/h	11	11	11	237	0	859	11	644	113	447	1172	15
Arrive On Green	0.02	0.02	0.02	0.15	0.00	0.15	0.01	0.24	0.24	0.15	0.39	0.39
Sat Flow, veh/h	589	589	589	1601	0	2858	1587	2689	471	2925	3041	40
Grp Volume(v), veh/h	15	0	0	118	0	315	5	249	251	333	189	198
Grp Sat Flow(s),veh/h/ln	1767	0	0	1601	0	1429	1587	1583	1576	1463	1504	1576
Q Serve(g_s), s	0.4	0.0	0.0	3.1	0.0	3.9	0.1	6.4	6.5	4.9	4.0	4.0
Cycle Q Clear(g_c), s	0.4	0.0	0.0	3.1	0.0	3.9	0.1	6.4	6.5	4.9	4.0	4.0
Prop In Lane	0.33		0.33	1.00		1.00	1.00		0.30	1.00		0.03
Lane Grp Cap(c), veh/h	34	0	0	237	0	859	11	379	378	447	580	608
V/C Ratio(X)	0.45	0.00	0.00	0.50	0.00	0.37	0.47	0.66	0.66	0.75	0.33	0.33
Avail Cap(c_a), veh/h	389	0	0	741	0	1759	175	558	556	516	630	660
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	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.0	0.0	0.0	17.8	0.0	12.5	22.5	15.6	15.6	18.4	9.8	9.8
Incr Delay (d2), s/veh	3.4	0.0	0.0	0.6	0.0	0.1	11.4	0.7	0.8	4.0	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	0.2	0.0	0.0	1.4	0.0	1.5	0.1	2.8	2.9	2.2	1.6	1.7
LnGrp Delay(d),s/veh	25.5	0.0	0.0	18.4	0.0	12.6	33.8	16.3	16.4	22.4	9.9	9.9
LnGrp LOS	C			B		B	C	B	B	C	A	A
Approach Vol, veh/h		15			433			505			720	
Approach Delay, s/veh		25.5			14.2			16.5			15.7	
Approach LOS		C			B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	11.9	15.9		5.9	5.3	22.5		11.7
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0
Max Green Setting (Gmax), s	8.0	16.0		10.0	5.0	19.0		21.0
Max Q Clear Time (g_c+I1), s	6.9	8.5		2.4	2.1	6.0		5.9
Green Ext Time (p_c), s	0.1	2.3		0.0	0.0	3.1		0.8

Intersection Summary	
HCM 2010 Ctrl Delay	15.6
HCM 2010 LOS	B

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	490	345	115	470	0	0	0	0	145	0	30
Number	5	2	12	1	6	16				3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1845	1845	1863	1863	0				1776	1776	1900
Adj Flow Rate, veh/h	0	516	0	121	495	0				183	0	0
Adj No. of Lanes	0	2	1	1	2	0				2	1	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, %	0	3	3	2	2	0				7	7	7
Cap, veh/h	0	1307	585	588	2114	0				439	231	0
Arrive On Green	0.00	0.37	0.00	0.09	0.60	0.00				0.13	0.00	0.00
Sat Flow, veh/h	0	3597	1568	1774	3632	0				3382	1776	0
Grp Volume(v), veh/h	0	516	0	121	495	0				183	0	0
Grp Sat Flow(s),veh/h/ln	0	1752	1568	1774	1770	0				1691	1776	0
Q Serve(g_s), s	0.0	4.2	0.0	1.4	2.5	0.0				1.9	0.0	0.0
Cycle Q Clear(g_c), s	0.0	4.2	0.0	1.4	2.5	0.0				1.9	0.0	0.0
Prop In Lane	0.00		1.00	1.00		0.00				1.00		0.00
Lane Grp Cap(c), veh/h	0	1307	585	588	2114	0				439	231	0
V/C Ratio(X)	0.00	0.39	0.00	0.21	0.23	0.00				0.42	0.00	0.00
Avail Cap(c_a), veh/h	0	1867	835	743	2989	0				2813	1477	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)	0.00	1.00	0.00	1.00	1.00	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	8.9	0.0	5.3	3.6	0.0				15.4	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.3	0.0	0.2	0.1	0.0				0.8	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
%ile BackOfQ(-26165%),veh/ln	0.0	2.1	0.0	0.7	1.2	0.0				0.9	0.0	0.0
LnGrp Delay(d),s/veh	0.0	9.1	0.0	5.5	3.7	0.0				16.2	0.0	0.0
LnGrp LOS		A		A	A					B		
Approach Vol, veh/h		516			616						183	
Approach Delay, s/veh		9.1			4.1						16.2	
Approach LOS		A			A						B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	8.6	19.9				28.5		10.0
Change Period (Y+Rc), s	5.0	5.5				5.5		5.0
Max Green Setting (Gmax), s	7.0	20.5				32.5		32.0
Max Q Clear Time (g_c+I1), s	3.4	6.2				4.5		3.9
Green Ext Time (p_c), s	0.1	8.2				12.3		0.8

Intersection Summary	
HCM 2010 Ctrl Delay	7.8
HCM 2010 LOS	A

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	265	370	0	0	320	205	270	0	90	0	0	0
Number	5	2	12	1	6	16	7	4	14			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1810	1810	0	0	1827	1827	1827	1827	1900			
Adj Flow Rate, veh/h	276	385	0	0	333	0	188	131	94			
Adj No. of Lanes	1	2	0	0	2	1	1	1	0			
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	5	0	0	4	4	4	4	4			
Cap, veh/h	607	1799	0	0	882	394	387	220	158			
Arrive On Green	0.15	0.52	0.00	0.00	0.25	0.00	0.22	0.22	0.22			
Sat Flow, veh/h	1723	3529	0	0	3563	1553	1740	991	711			
Grp Volume(v), veh/h	276	385	0	0	333	0	188	0	225			
Grp Sat Flow(s),veh/h/ln	1723	1719	0	0	1736	1553	1740	0	1701			
Q Serve(g_s), s	4.3	2.5	0.0	0.0	3.3	0.0	3.9	0.0	4.9			
Cycle Q Clear(g_c), s	4.3	2.5	0.0	0.0	3.3	0.0	3.9	0.0	4.9			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		0.42			
Lane Grp Cap(c), veh/h	607	1799	0	0	882	394	387	0	378			
V/C Ratio(X)	0.45	0.21	0.00	0.00	0.38	0.00	0.49	0.00	0.59			
Avail Cap(c_a), veh/h	644	2415	0	0	1429	639	1285	0	1257			
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	0.00	0.00	1.00	0.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	7.9	5.3	0.0	0.0	12.7	0.0	14.0	0.0	14.4			
Incr Delay (d2), s/veh	0.5	0.1	0.0	0.0	0.6	0.0	1.1	0.0	1.8			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(-26165%),veh/ln	2.1	1.2	0.0	0.0	1.6	0.0	2.0	0.0	2.4			
LnGrp Delay(d),s/veh	8.4	5.4	0.0	0.0	13.3	0.0	15.1	0.0	16.2			
LnGrp LOS	A	A			B		B		B			
Approach Vol, veh/h		661			333			413				
Approach Delay, s/veh		6.6			13.3			15.7				
Approach LOS		A			B			B				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		27.1		14.2	11.1	16.0		
Change Period (Y+Rc), s		5.5		5.0	5.0	5.5		
Max Green Setting (Gmax), s		29.0		30.5	7.0	17.0		
Max Q Clear Time (g_c+I1), s		4.5		6.9	6.3	5.3		
Green Ext Time (p_c), s		7.9		2.4	0.1	5.2		

Intersection Summary	
HCM 2010 Ctrl Delay	10.9
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Vol, veh/h	65	390	450	35	15	80
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	50	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	5	5	2	2	13	13
Mvmt Flow	70	419	484	38	16	86

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	522	0	-	0	852	261
Stage 1	-	-	-	-	503	-
Stage 2	-	-	-	-	349	-
Critical Hdwy	4.2	-	-	-	7.06	7.16
Critical Hdwy Stg 1	-	-	-	-	6.06	-
Critical Hdwy Stg 2	-	-	-	-	6.06	-
Follow-up Hdwy	2.25	-	-	-	3.63	3.43
Pot Cap-1 Maneuver	1020	-	-	-	278	705
Stage 1	-	-	-	-	542	-
Stage 2	-	-	-	-	654	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1020	-	-	-	259	705
Mov Cap-2 Maneuver	-	-	-	-	259	-
Stage 1	-	-	-	-	542	-
Stage 2	-	-	-	-	609	-

Approach	EB	WB	SB
HCM Control Delay, s	1.3	0	12.2
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1020	-	-	-	259	705
HCM Lane V/C Ratio	0.069	-	-	-	0.062	0.122
HCM Control Delay (s)	8.8	-	-	-	19.8	10.8
HCM Lane LOS	A	-	-	-	C	B
HCM 95th %tile Q(veh)	0.2	-	-	-	0.2	0.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	100	5	195	0	295	130	140	270	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1881	1881	1881	1845	1845	1900	1792	1792	1900
Adj Flow Rate, veh/h	0	0	0	103	0	204	0	304	134	144	278	0
Adj No. of Lanes	0	1	0	1	0	2	1	2	0	2	2	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	1	1	1	3	3	3	6	6	6
Cap, veh/h	0	6	0	268	0	846	6	601	259	380	1797	0
Arrive On Green	0.00	0.00	0.00	0.15	0.00	0.15	0.00	0.25	0.25	0.11	0.53	0.00
Sat Flow, veh/h	0	1900	0	1792	0	3198	1757	2387	1029	3312	3495	0
Grp Volume(v), veh/h	0	0	0	103	0	204	0	221	217	144	278	0
Grp Sat Flow(s),veh/h/ln	0	1900	0	1792	0	1599	1757	1752	1663	1656	1703	0
Q Serve(g_s), s	0.0	0.0	0.0	1.6	0.0	1.6	0.0	3.4	3.5	1.2	1.3	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	1.6	0.0	1.6	0.0	3.4	3.5	1.2	1.3	0.0
Prop In Lane	0.00		0.00	1.00		1.00	1.00		0.62	1.00		0.00
Lane Grp Cap(c), veh/h	0	6	0	268	0	846	6	441	419	380	1797	0
V/C Ratio(X)	0.00	0.00	0.00	0.38	0.00	0.24	0.00	0.50	0.52	0.38	0.15	0.00
Avail Cap(c_a), veh/h	0	613	0	1213	0	2532	283	904	858	854	2087	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)	0.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	11.9	0.0	9.0	0.0	9.9	10.0	12.7	3.8	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.3	0.0	0.1	0.0	0.3	0.4	0.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	0.0	0.0	0.0	0.8	0.0	0.7	0.0	1.6	1.6	0.6	0.6	0.0
LnGrp Delay(d),s/veh	0.0	0.0	0.0	12.2	0.0	9.0	0.0	10.3	10.3	12.9	3.8	0.0
LnGrp LOS				B		A		B	B	B	A	
Approach Vol, veh/h		0			307			438			422	
Approach Delay, s/veh		0.0			10.1			10.3			6.9	
Approach LOS					B			B			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	8.6	12.8		0.0	0.0	21.4		9.6
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0
Max Green Setting (Gmax), s	8.0	16.0		10.0	5.0	19.0		21.0
Max Q Clear Time (g_c+I1), s	3.2	5.5		0.0	0.0	3.3		3.6
Green Ext Time (p_c), s	0.1	2.4		0.0	0.0	2.8		0.5

Intersection Summary	
HCM 2010 Ctrl Delay	9.0
HCM 2010 LOS	A

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	720	330	715	1025	0	0	0	0	515	5	35
Number	5	2	12	1	6	16				3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1743	1743	1727	1727	0				1570	1570	1900
Adj Flow Rate, veh/h	0	758	0	753	1079	0				580	0	0
Adj No. of Lanes	0	2	1	1	2	0				2	1	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, %	0	9	9	10	10	0				21	21	21
Cap, veh/h	0	874	391	763	2343	0				631	332	0
Arrive On Green	0.00	0.26	0.00	0.41	0.71	0.00				0.21	0.00	0.00
Sat Flow, veh/h	0	3399	1482	1645	3368	0				2991	1570	0
Grp Volume(v), veh/h	0	758	0	753	1079	0				580	0	0
Grp Sat Flow(s),veh/h/ln	0	1656	1482	1645	1641	0				1495	1570	0
Q Serve(g_s), s	0.0	30.6	0.0	56.5	19.6	0.0				26.6	0.0	0.0
Cycle Q Clear(g_c), s	0.0	30.6	0.0	56.5	19.6	0.0				26.6	0.0	0.0
Prop In Lane	0.00		1.00	1.00		0.00				1.00		0.00
Lane Grp Cap(c), veh/h	0	874	391	763	2343	0				631	332	0
V/C Ratio(X)	0.00	0.87	0.00	0.99	0.46	0.00				0.92	0.00	0.00
Avail Cap(c_a), veh/h	0	874	391	763	2343	0				684	359	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)	0.00	1.00	0.00	1.00	1.00	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	49.2	0.0	32.8	8.5	0.0				54.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	11.3	0.0	29.4	0.7	0.0				17.0	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(-26165%),veh/ln	0.0	15.4	0.0	34.9	9.1	0.0				12.4	0.0	0.0
LnGrp Delay(d),s/veh	0.0	60.5	0.0	62.1	9.2	0.0				71.1	0.0	0.0
LnGrp LOS		E		E	A					E		
Approach Vol, veh/h		758			1832						580	
Approach Delay, s/veh		60.5			30.9						71.1	
Approach LOS		E			C						E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	63.0	42.4				105.4		34.6
Change Period (Y+Rc), s	5.0	5.5				5.5		5.0
Max Green Setting (Gmax), s	58.0	34.5				97.5		32.0
Max Q Clear Time (g_c+I1), s	58.5	32.6				21.6		28.6
Green Ext Time (p_c), s	0.0	1.8				45.3		1.0

Intersection Summary	
HCM 2010 Ctrl Delay	45.4
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	270	975	0	0	1415	820	315	5	440	0	0	0
Number	5	2	12	1	6	16	7	4	14			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1667	1667	0	0	1624	1624	1652	1652	1900			
Adj Flow Rate, veh/h	287	1037	0	0	1505	0	335	5	468			
Adj No. of Lanes	1	2	0	0	2	1	1	1	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, %	14	14	0	0	17	17	15	15	15			
Cap, veh/h	224	1972	0	0	1473	659	443	4	392			
Arrive On Green	0.10	0.62	0.00	0.00	0.48	0.00	0.28	0.28	0.28			
Sat Flow, veh/h	1587	3250	0	0	3167	1380	1573	15	1392			
Grp Volume(v), veh/h	287	1037	0	0	1505	0	335	0	473			
Grp Sat Flow(s),veh/h/ln	1587	1583	0	0	1543	1380	1573	0	1407			
Q Serve(g_s), s	11.0	20.2	0.0	0.0	52.5	0.0	21.4	0.0	31.0			
Cycle Q Clear(g_c), s	11.0	20.2	0.0	0.0	52.5	0.0	21.4	0.0	31.0			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		0.99			
Lane Grp Cap(c), veh/h	224	1972	0	0	1473	659	443	0	396			
V/C Ratio(X)	1.28	0.53	0.00	0.00	1.02	0.00	0.76	0.00	1.19			
Avail Cap(c_a), veh/h	224	1972	0	0	1473	659	443	0	396			
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	0.00	0.00	1.00	0.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	34.9	11.6	0.0	0.0	28.8	0.0	36.0	0.0	39.5			
Incr Delay (d2), s/veh	155.8	1.0	0.0	0.0	29.2	0.0	7.5	0.0	109.3			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(-26165%),veh/ln	16.5	9.1	0.0	0.0	28.3	0.0	10.2	0.0	24.0			
LnGrp Delay(d),s/veh	190.7	12.6	0.0	0.0	57.9	0.0	43.5	0.0	148.8			
LnGrp LOS	F	B			F		D		F			
Approach Vol, veh/h		1324			1505			808				
Approach Delay, s/veh		51.2			57.9			105.1				
Approach LOS		D			E			F				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		74.0		36.0	16.0	58.0		
Change Period (Y+Rc), s		5.5		5.0	5.0	5.5		
Max Green Setting (Gmax), s		68.5		31.0	11.0	52.5		
Max Q Clear Time (g_c+I1), s		22.2		33.0	13.0	54.5		
Green Ext Time (p_c), s		42.1		0.0	0.0	0.0		

Intersection Summary	
HCM 2010 Ctrl Delay	66.0
HCM 2010 LOS	E

Notes

User approved volume balancing among the lanes for turning movement.

Intersection	
Int Delay, s/veh	41.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Vol, veh/h	45	1360	2185	25	25	45
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	50	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	19	19	17	17	27	27
Mvmt Flow	49	1495	2401	27	27	49

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	2429	0	-	0	3261	1214
Stage 1	-	-	-	-	2415	-
Stage 2	-	-	-	-	846	-
Critical Hdwy	4.48	-	-	-	7.34	7.44
Critical Hdwy Stg 1	-	-	-	-	6.34	-
Critical Hdwy Stg 2	-	-	-	-	6.34	-
Follow-up Hdwy	2.39	-	-	-	3.77	3.57
Pot Cap-1 Maneuver	148	-	-	-	~ 4	141
Stage 1	-	-	-	-	37	-
Stage 2	-	-	-	-	324	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	148	-	-	-	~ 3	141
Mov Cap-2 Maneuver	-	-	-	-	~ 3	-
Stage 1	-	-	-	-	37	-
Stage 2	-	-	-	-	217	-

Approach	EB	WB	SB
HCM Control Delay, s	1.3	0	$ 2143.7
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	148	-	-	-	3	141
HCM Lane V/C Ratio	0.334	-	-	-	9.158	0.351
HCM Control Delay (s)	41.1	-	-	$ 5923.8		43.7
HCM Lane LOS	E	-	-	-	F	E
HCM 95th %tile Q(veh)	1.4	-	-	-	5.1	1.4

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	5	5	5	485	5	1770	5	450	235	980	405	5
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1681	1681	1681	1667	1667	1900	1583	1583	1900
Adj Flow Rate, veh/h	5	5	5	522	0	1906	5	484	253	1054	435	5
Adj No. of Lanes	0	1	0	1	0	2	1	2	0	2	2	0
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, %	0	0	0	13	13	13	14	14	14	20	20	20
Cap, veh/h	9	9	9	473	0	1748	10	466	242	926	1651	19
Arrive On Green	0.02	0.02	0.02	0.30	0.00	0.30	0.01	0.23	0.23	0.32	0.54	0.54
Sat Flow, veh/h	589	589	589	1601	0	2858	1587	2007	1043	2925	3046	35
Grp Volume(v), veh/h	15	0	0	522	0	1906	5	381	356	1054	215	225
Grp Sat Flow(s),veh/h/ln	1767	0	0	1601	0	1429	1587	1583	1466	1463	1504	1577
Q Serve(g_s), s	1.2	0.0	0.0	42.0	0.0	42.0	0.4	33.0	33.0	45.0	10.8	10.9
Cycle Q Clear(g_c), s	1.2	0.0	0.0	42.0	0.0	42.0	0.4	33.0	33.0	45.0	10.8	10.9
Prop In Lane	0.33		0.33	1.00		1.00	1.00		0.71	1.00		0.02
Lane Grp Cap(c), veh/h	28	0	0	473	0	1748	10	367	340	926	815	855
V/C Ratio(X)	0.54	0.00	0.00	1.10	0.00	1.09	0.50	1.04	1.05	1.14	0.26	0.26
Avail Cap(c_a), veh/h	124	0	0	473	0	1748	56	367	340	926	815	855
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	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	69.5	0.0	0.0	50.1	0.0	27.6	70.4	54.6	54.6	48.6	17.4	17.4
Incr Delay (d2), s/veh	5.9	0.0	0.0	72.8	0.0	50.6	13.6	57.2	61.1	75.6	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	0.6	0.0	0.0	28.1	0.0	46.3	0.2	20.2	19.1	27.8	4.5	4.7
LnGrp Delay(d),s/veh	75.4	0.0	0.0	122.9	0.0	78.2	84.1	111.8	115.8	124.3	17.5	17.5
LnGrp LOS	E			F		F	F	F	F	F	B	B
Approach Vol, veh/h		15			2428			742			1494	
Approach Delay, s/veh		75.4			87.8			113.5			92.8	
Approach LOS		E			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	50.0	38.0		7.2	5.9	82.1		47.0
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0
Max Green Setting (Gmax), s	45.0	33.0		10.0	5.0	73.0		42.0
Max Q Clear Time (g_c+I1), s	47.0	35.0		3.2	2.4	12.9		44.0
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	5.9		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	93.4
HCM 2010 LOS	F

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	740	395	285	650	0	0	0	0	345	0	35
Number	5	2	12	1	6	16				3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1845	1845	1863	1863	0				1776	1776	1900
Adj Flow Rate, veh/h	0	779	0	300	684	0				398	0	0
Adj No. of Lanes	0	2	1	1	2	0				2	1	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, %	0	3	3	2	2	0				7	7	7
Cap, veh/h	0	1353	605	519	2176	0				619	325	0
Arrive On Green	0.00	0.39	0.00	0.13	0.61	0.00				0.18	0.00	0.00
Sat Flow, veh/h	0	3597	1568	1774	3632	0				3382	1776	0
Grp Volume(v), veh/h	0	779	0	300	684	0				398	0	0
Grp Sat Flow(s),veh/h/ln	0	1752	1568	1774	1770	0				1691	1776	0
Q Serve(g_s), s	0.0	9.1	0.0	4.7	4.8	0.0				5.7	0.0	0.0
Cycle Q Clear(g_c), s	0.0	9.1	0.0	4.7	4.8	0.0				5.7	0.0	0.0
Prop In Lane	0.00		1.00	1.00		0.00				1.00		0.00
Lane Grp Cap(c), veh/h	0	1353	605	519	2176	0				619	325	0
V/C Ratio(X)	0.00	0.58	0.00	0.58	0.31	0.00				0.64	0.00	0.00
Avail Cap(c_a), veh/h	0	1518	679	625	2555	0				2084	1094	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)	0.00	1.00	0.00	1.00	1.00	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	12.6	0.0	8.2	4.8	0.0				19.7	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.6	0.0	1.0	0.2	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
%ile BackOfQ(-26165%),veh/ln	0.0	4.4	0.0	2.3	2.3	0.0				2.8	0.0	0.0
LnGrp Delay(d),s/veh	0.0	13.2	0.0	9.3	4.9	0.0				21.0	0.0	0.0
LnGrp LOS		B		A	A					C		
Approach Vol, veh/h		779			984						398	
Approach Delay, s/veh		13.2			6.3						21.0	
Approach LOS		B			A						C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	11.9	25.5				37.4		14.5
Change Period (Y+Rc), s	5.0	5.5				5.5		5.0
Max Green Setting (Gmax), s	10.0	22.5				37.5		32.0
Max Q Clear Time (g_c+I1), s	6.7	11.1				6.8		7.7
Green Ext Time (p_c), s	0.3	8.9				19.1		1.8

Intersection Summary	
HCM 2010 Ctrl Delay	11.5
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	305	780	0	0	635	350	310	0	340	0	0	0
Number	5	2	12	1	6	16	7	4	14			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1810	1810	0	0	1827	1827	1827	1827	1900			
Adj Flow Rate, veh/h	318	812	0	0	661	0	323	0	354			
Adj No. of Lanes	1	2	0	0	2	1	1	1	0			
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	5	0	0	4	4	4	4	4			
Cap, veh/h	482	1833	0	0	1035	463	520	0	464			
Arrive On Green	0.15	0.53	0.00	0.00	0.30	0.00	0.30	0.00	0.30			
Sat Flow, veh/h	1723	3529	0	0	3563	1553	1740	0	1553			
Grp Volume(v), veh/h	318	812	0	0	661	0	323	0	354			
Grp Sat Flow(s),veh/h/ln	1723	1719	0	0	1736	1553	1740	0	1553			
Q Serve(g_s), s	7.3	9.0	0.0	0.0	10.3	0.0	10.0	0.0	12.9			
Cycle Q Clear(g_c), s	7.3	9.0	0.0	0.0	10.3	0.0	10.0	0.0	12.9			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	482	1833	0	0	1035	463	520	0	464			
V/C Ratio(X)	0.66	0.44	0.00	0.00	0.64	0.00	0.62	0.00	0.76			
Avail Cap(c_a), veh/h	601	2145	0	0	1110	497	849	0	758			
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	0.00	0.00	1.00	0.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	12.3	8.9	0.0	0.0	19.0	0.0	18.9	0.0	19.9			
Incr Delay (d2), s/veh	1.9	0.2	0.0	0.0	1.7	0.0	1.5	0.0	3.2			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(-26165%),veh/ln	3.6	4.2	0.0	0.0	5.1	0.0	5.0	0.0	5.9			
LnGrp Delay(d),s/veh	14.1	9.2	0.0	0.0	20.7	0.0	20.3	0.0	23.1			
LnGrp LOS	B	A			C		C		C			
Approach Vol, veh/h		1130			661			677				
Approach Delay, s/veh		10.6			20.7			21.8				
Approach LOS		B			C			C				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		38.8		23.7	14.7	24.1		
Change Period (Y+Rc), s		5.5		5.0	5.0	5.5		
Max Green Setting (Gmax), s		39.0		30.5	14.0	20.0		
Max Q Clear Time (g_c+I1), s		11.0		14.9	9.3	12.3		
Green Ext Time (p_c), s		18.1		3.8	0.4	6.3		

Intersection Summary	
HCM 2010 Ctrl Delay	16.4
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Vol, veh/h	75	1040	900	40	15	90
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	50	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	5	5	2	2	13	13
Mvmt Flow	81	1118	968	43	16	97

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1011	0	-	0	1709	505
Stage 1	-	-	-	-	989	-
Stage 2	-	-	-	-	720	-
Critical Hdwy	4.2	-	-	-	7.06	7.16
Critical Hdwy Stg 1	-	-	-	-	6.06	-
Critical Hdwy Stg 2	-	-	-	-	6.06	-
Follow-up Hdwy	2.25	-	-	-	3.63	3.43
Pot Cap-1 Maneuver	664	-	-	-	73	484
Stage 1	-	-	-	-	297	-
Stage 2	-	-	-	-	415	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	664	-	-	-	64	484
Mov Cap-2 Maneuver	-	-	-	-	64	-
Stage 1	-	-	-	-	297	-
Stage 2	-	-	-	-	364	-

Approach	EB	WB	SB
HCM Control Delay, s	0.8	0	23.6
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	664	-	-	-	64	484
HCM Lane V/C Ratio	0.121	-	-	-	0.252	0.2
HCM Control Delay (s)	11.2	-	-	-	79.2	14.3
HCM Lane LOS	B	-	-	-	F	B
HCM 95th %tile Q(veh)	0.4	-	-	-	0.9	0.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	210	5	605	0	335	300	755	310	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1881	1881	1881	1845	1845	1900	1792	1792	1900
Adj Flow Rate, veh/h	0	0	0	216	0	627	0	345	309	778	320	0
Adj No. of Lanes	0	1	0	1	0	2	1	2	0	2	2	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	1	1	1	3	3	3	6	6	6
Cap, veh/h	0	3	0	347	0	1514	3	449	395	926	2127	0
Arrive On Green	0.00	0.00	0.00	0.19	0.00	0.19	0.00	0.25	0.25	0.28	0.62	0.00
Sat Flow, veh/h	0	1900	0	1792	0	3198	1757	1766	1557	3312	3495	0
Grp Volume(v), veh/h	0	0	0	216	0	627	0	342	312	778	320	0
Grp Sat Flow(s),veh/h/ln	0	1900	0	1792	0	1599	1757	1752	1570	1656	1703	0
Q Serve(g_s), s	0.0	0.0	0.0	6.1	0.0	7.1	0.0	10.0	10.2	12.2	2.1	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	6.1	0.0	7.1	0.0	10.0	10.2	12.2	2.1	0.0
Prop In Lane	0.00		0.00	1.00		1.00	1.00		0.99	1.00		0.00
Lane Grp Cap(c), veh/h	0	3	0	347	0	1514	3	445	399	926	2127	0
V/C Ratio(X)	0.00	0.00	0.00	0.62	0.00	0.41	0.00	0.77	0.78	0.84	0.15	0.00
Avail Cap(c_a), veh/h	0	345	0	683	0	2114	159	541	485	1323	2127	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)	0.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	20.4	0.0	9.5	0.0	19.0	19.1	18.7	4.3	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.7	0.0	0.1	0.0	4.2	5.3	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(-26165%),veh/ln	0.0	0.0	0.0	3.1	0.0	3.1	0.0	5.3	5.0	5.8	1.0	0.0
LnGrp Delay(d),s/veh	0.0	0.0	0.0	21.0	0.0	9.6	0.0	23.2	24.4	21.1	4.3	0.0
LnGrp LOS				C		A		C	C	C	A	
Approach Vol, veh/h		0			843			654			1098	
Approach Delay, s/veh		0.0			12.5			23.8			16.2	
Approach LOS					B			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	20.4	19.0		0.0	0.0	39.4		15.7
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0
Max Green Setting (Gmax), s	22.0	17.0		10.0	5.0	34.0		21.0
Max Q Clear Time (g_c+I1), s	14.2	12.2		0.0	0.0	4.1		9.1
Green Ext Time (p_c), s	1.2	1.8		0.0	0.0	4.7		1.6

Intersection Summary	
HCM 2010 Ctrl Delay	16.9
HCM 2010 LOS	B

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	730	330	732	1035	0	0	0	0	530	5	35
Number	5	2	12	1	6	16				3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1743	1743	1727	1727	0				1570	1570	1900
Adj Flow Rate, veh/h	0	768	0	771	1089	0				596	0	0
Adj No. of Lanes	0	2	1	1	2	0				2	1	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, %	0	9	9	10	10	0				21	21	21
Cap, veh/h	0	860	385	756	2329	0				644	338	0
Arrive On Green	0.00	0.26	0.00	0.41	0.71	0.00				0.22	0.00	0.00
Sat Flow, veh/h	0	3399	1482	1645	3368	0				2991	1570	0
Grp Volume(v), veh/h	0	768	0	771	1089	0				596	0	0
Grp Sat Flow(s),veh/h/ln	0	1656	1482	1645	1641	0				1495	1570	0
Q Serve(g_s), s	0.0	31.3	0.0	58.0	20.2	0.0				27.3	0.0	0.0
Cycle Q Clear(g_c), s	0.0	31.3	0.0	58.0	20.2	0.0				27.3	0.0	0.0
Prop In Lane	0.00		1.00	1.00		0.00				1.00		0.00
Lane Grp Cap(c), veh/h	0	860	385	756	2329	0				644	338	0
V/C Ratio(X)	0.00	0.89	0.00	1.02	0.47	0.00				0.93	0.00	0.00
Avail Cap(c_a), veh/h	0	860	385	756	2329	0				684	359	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)	0.00	1.00	0.00	1.00	1.00	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	50.0	0.0	33.7	8.8	0.0				53.8	0.0	0.0
Incr Delay (d2), s/veh	0.0	13.7	0.0	37.7	0.7	0.0				18.2	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(-26165%),veh/ln	0.0	15.9	0.0	37.1	9.3	0.0				13.0	0.0	0.0
LnGrp Delay(d),s/veh	0.0	63.6	0.0	71.5	9.5	0.0				72.0	0.0	0.0
LnGrp LOS		E		F	A					E		
Approach Vol, veh/h		768			1860						596	
Approach Delay, s/veh		63.6			35.2						72.0	
Approach LOS		E			D						E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	63.0	41.8				104.8		35.2
Change Period (Y+Rc), s	5.0	5.5				5.5		5.0
Max Green Setting (Gmax), s	58.0	34.5				97.5		32.0
Max Q Clear Time (g_c+I1), s	60.0	33.3				22.2		29.3
Green Ext Time (p_c), s	0.0	1.2				45.8		0.8

Intersection Summary	
HCM 2010 Ctrl Delay	48.8
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	270	1000	0	0	1441	835	315	5	457	0	0	0
Number	5	2	12	1	6	16	7	4	14			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1667	1667	0	0	1624	1624	1652	1652	1900			
Adj Flow Rate, veh/h	287	1064	0	0	1533	0	335	5	486			
Adj No. of Lanes	1	2	0	0	2	1	1	1	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, %	14	14	0	0	17	17	15	15	15			
Cap, veh/h	224	1972	0	0	1473	659	443	4	392			
Arrive On Green	0.10	0.62	0.00	0.00	0.48	0.00	0.28	0.28	0.28			
Sat Flow, veh/h	1587	3250	0	0	3167	1380	1573	14	1392			
Grp Volume(v), veh/h	287	1064	0	0	1533	0	335	0	491			
Grp Sat Flow(s),veh/h/ln	1587	1583	0	0	1543	1380	1573	0	1406			
Q Serve(g_s), s	11.0	21.0	0.0	0.0	52.5	0.0	21.4	0.0	31.0			
Cycle Q Clear(g_c), s	11.0	21.0	0.0	0.0	52.5	0.0	21.4	0.0	31.0			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		0.99			
Lane Grp Cap(c), veh/h	224	1972	0	0	1473	659	443	0	396			
V/C Ratio(X)	1.28	0.54	0.00	0.00	1.04	0.00	0.76	0.00	1.24			
Avail Cap(c_a), veh/h	224	1972	0	0	1473	659	443	0	396			
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	0.00	0.00	1.00	0.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	34.9	11.8	0.0	0.0	28.8	0.0	36.0	0.0	39.5			
Incr Delay (d2), s/veh	155.8	1.1	0.0	0.0	34.9	0.0	7.5	0.0	127.3			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(-26165%),veh/ln	16.5	9.3	0.0	0.0	29.4	0.0	10.2	0.0	26.0			
LnGrp Delay(d),s/veh	190.7	12.9	0.0	0.0	63.6	0.0	43.5	0.0	166.8			
LnGrp LOS	F	B			F		D		F			
Approach Vol, veh/h		1351			1533			826				
Approach Delay, s/veh		50.6			63.6			116.8				
Approach LOS		D			E			F				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		74.0		36.0	16.0	58.0		
Change Period (Y+Rc), s		5.5		5.0	5.0	5.5		
Max Green Setting (Gmax), s		68.5		31.0	11.0	52.5		
Max Q Clear Time (g_c+I1), s		23.0		33.0	13.0	54.5		
Green Ext Time (p_c), s		41.8		0.0	0.0	0.0		

Intersection Summary	
HCM 2010 Ctrl Delay	70.7
HCM 2010 LOS	E

Notes

User approved volume balancing among the lanes for turning movement.

Intersection	
Int Delay, s/veh	189.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Vol, veh/h	86	1360	2185	32	32	86
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	50	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	19	19	17	17	27	27
Mvmt Flow	95	1495	2401	35	35	95

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	2436	0	-	0	3355	1218
Stage 1	-	-	-	-	2419	-
Stage 2	-	-	-	-	936	-
Critical Hdwy	4.48	-	-	-	7.34	7.44
Critical Hdwy Stg 1	-	-	-	-	6.34	-
Critical Hdwy Stg 2	-	-	-	-	6.34	-
Follow-up Hdwy	2.39	-	-	-	3.77	3.57
Pot Cap-1 Maneuver	147	-	-	-	~ 4	140
Stage 1	-	-	-	-	37	-
Stage 2	-	-	-	-	288	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	147	-	-	-	~ 1	140
Mov Cap-2 Maneuver	-	-	-	-	~ 1	-
Stage 1	-	-	-	-	37	-
Stage 2	-	-	-	-	102	-

Approach	EB	WB	SB
HCM Control Delay, s	3.9	0	$ 6036.4
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	147	-	-	-	1	140
HCM Lane V/C Ratio	0.643	-	-	-	35.165	0.675
HCM Control Delay (s)	65.5	-	-	$	22065.1	72.3
HCM Lane LOS	F	-	-	-	F	F
HCM 95th %tile Q(veh)	3.5	-	-	-	6.3	3.8

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	5	5	5	485	5	1772	5	455	235	982	410	5
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1681	1681	1681	1667	1667	1900	1583	1583	1900
Adj Flow Rate, veh/h	5	5	5	522	0	1908	5	489	253	1056	441	5
Adj No. of Lanes	0	1	0	1	0	2	1	2	0	2	2	0
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, %	0	0	0	13	13	13	14	14	14	20	20	20
Cap, veh/h	9	9	9	473	0	1748	10	467	241	926	1652	19
Arrive On Green	0.02	0.02	0.02	0.30	0.00	0.30	0.01	0.23	0.23	0.32	0.54	0.54
Sat Flow, veh/h	589	589	589	1601	0	2858	1587	2014	1037	2925	3047	35
Grp Volume(v), veh/h	15	0	0	522	0	1908	5	384	358	1056	218	228
Grp Sat Flow(s),veh/h/ln	1767	0	0	1601	0	1429	1587	1583	1468	1463	1504	1577
Q Serve(g_s), s	1.2	0.0	0.0	42.0	0.0	42.0	0.4	33.0	33.0	45.0	11.0	11.0
Cycle Q Clear(g_c), s	1.2	0.0	0.0	42.0	0.0	42.0	0.4	33.0	33.0	45.0	11.0	11.0
Prop In Lane	0.33		0.33	1.00		1.00	1.00		0.71	1.00		0.02
Lane Grp Cap(c), veh/h	28	0	0	473	0	1748	10	367	341	926	815	855
V/C Ratio(X)	0.54	0.00	0.00	1.10	0.00	1.09	0.50	1.04	1.05	1.14	0.27	0.27
Avail Cap(c_a), veh/h	124	0	0	473	0	1748	56	367	341	926	815	855
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	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	69.5	0.0	0.0	50.1	0.0	27.6	70.4	54.6	54.6	48.6	17.4	17.4
Incr Delay (d2), s/veh	5.9	0.0	0.0	72.8	0.0	51.0	13.6	59.1	63.0	76.5	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	0.6	0.0	0.0	28.1	0.0	46.4	0.2	20.4	19.3	28.0	4.6	4.8
LnGrp Delay(d),s/veh	75.4	0.0	0.0	122.9	0.0	78.6	84.1	113.7	117.7	125.1	17.5	17.5
LnGrp LOS	E			F		F	F	F	F	F	B	B
Approach Vol, veh/h		15			2430			747			1502	
Approach Delay, s/veh		75.4			88.1			115.4			93.2	
Approach LOS		E			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	50.0	38.0		7.2	5.9	82.1		47.0
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0
Max Green Setting (Gmax), s	45.0	33.0		10.0	5.0	73.0		42.0
Max Q Clear Time (g_c+I1), s	47.0	35.0		3.2	2.4	13.0		44.0
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	5.9		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	94.0
HCM 2010 LOS	F

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	747	395	298	657	0	0	0	0	353	0	35
Number	5	2	12	1	6	16				3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1845	1845	1863	1863	0				1776	1776	1900
Adj Flow Rate, veh/h	0	786	0	314	692	0				407	0	0
Adj No. of Lanes	0	2	1	1	2	0				2	1	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, %	0	3	3	2	2	0				7	7	7
Cap, veh/h	0	1343	601	521	2178	0				626	329	0
Arrive On Green	0.00	0.38	0.00	0.14	0.62	0.00				0.19	0.00	0.00
Sat Flow, veh/h	0	3597	1568	1774	3632	0				3382	1776	0
Grp Volume(v), veh/h	0	786	0	314	692	0				407	0	0
Grp Sat Flow(s),veh/h/ln	0	1752	1568	1774	1770	0				1691	1776	0
Q Serve(g_s), s	0.0	9.4	0.0	5.0	4.9	0.0				5.9	0.0	0.0
Cycle Q Clear(g_c), s	0.0	9.4	0.0	5.0	4.9	0.0				5.9	0.0	0.0
Prop In Lane	0.00		1.00	1.00		0.00				1.00		0.00
Lane Grp Cap(c), veh/h	0	1343	601	521	2178	0				626	329	0
V/C Ratio(X)	0.00	0.59	0.00	0.60	0.32	0.00				0.65	0.00	0.00
Avail Cap(c_a), veh/h	0	1497	670	614	2520	0				2055	1079	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)	0.00	1.00	0.00	1.00	1.00	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	12.9	0.0	8.5	4.8	0.0				19.9	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.6	0.0	1.2	0.2	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
%ile BackOfQ(-26165%),veh/ln	0.0	4.6	0.0	2.5	2.4	0.0				2.8	0.0	0.0
LnGrp Delay(d),s/veh	0.0	13.6	0.0	9.7	5.0	0.0				21.3	0.0	0.0
LnGrp LOS		B		A	A					C		
Approach Vol, veh/h		786			1006						407	
Approach Delay, s/veh		13.6			6.5						21.3	
Approach LOS		B			A						C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	12.2	25.7				37.9		14.8
Change Period (Y+Rc), s	5.0	5.5				5.5		5.0
Max Green Setting (Gmax), s	10.0	22.5				37.5		32.0
Max Q Clear Time (g_c+I1), s	7.0	11.4				6.9		7.9
Green Ext Time (p_c), s	0.3	8.8				19.3		1.9

Intersection Summary	
HCM 2010 Ctrl Delay	11.7
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	305	795	0	0	655	358	310	0	353	0	0	0
Number	5	2	12	1	6	16	7	4	14			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1810	1810	0	0	1827	1827	1827	1827	1900			
Adj Flow Rate, veh/h	318	828	0	0	682	0	323	0	368			
Adj No. of Lanes	1	2	0	0	2	1	1	1	0			
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	5	0	0	4	4	4	4	4			
Cap, veh/h	470	1819	0	0	1028	460	533	0	475			
Arrive On Green	0.15	0.53	0.00	0.00	0.30	0.00	0.31	0.00	0.31			
Sat Flow, veh/h	1723	3529	0	0	3563	1553	1740	0	1553			
Grp Volume(v), veh/h	318	828	0	0	682	0	323	0	368			
Grp Sat Flow(s),veh/h/ln	1723	1719	0	0	1736	1553	1740	0	1553			
Q Serve(g_s), s	7.5	9.5	0.0	0.0	11.0	0.0	10.1	0.0	13.7			
Cycle Q Clear(g_c), s	7.5	9.5	0.0	0.0	11.0	0.0	10.1	0.0	13.7			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	470	1819	0	0	1028	460	533	0	475			
V/C Ratio(X)	0.68	0.46	0.00	0.00	0.66	0.00	0.61	0.00	0.77			
Avail Cap(c_a), veh/h	582	2103	0	0	1089	487	832	0	743			
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	0.00	0.00	1.00	0.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	12.8	9.3	0.0	0.0	19.7	0.0	18.8	0.0	20.1			
Incr Delay (d2), s/veh	2.3	0.3	0.0	0.0	2.0	0.0	1.3	0.0	3.3			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(-26165%),veh/ln	3.8	4.5	0.0	0.0	5.5	0.0	5.0	0.0	6.3			
LnGrp Delay(d),s/veh	15.0	9.6	0.0	0.0	21.7	0.0	20.2	0.0	23.4			
LnGrp LOS	B	A			C		C		C			
Approach Vol, veh/h		1146			682			691				
Approach Delay, s/veh		11.1			21.7			21.9				
Approach LOS		B			C			C				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		39.2		24.5	14.9	24.4		
Change Period (Y+Rc), s		5.5		5.0	5.0	5.5		
Max Green Setting (Gmax), s		39.0		30.5	14.0	20.0		
Max Q Clear Time (g_c+I1), s		11.5		15.7	9.5	13.0		
Green Ext Time (p_c), s		18.3		3.8	0.4	5.9		

Intersection Summary	
HCM 2010 Ctrl Delay	16.9
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Intersection	
Int Delay, s/veh	2.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Vol, veh/h	103	1040	900	45	20	118
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	50	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	5	5	2	2	13	13
Mvmt Flow	111	1118	968	48	22	127

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1016	0	-	0	1773	508
Stage 1	-	-	-	-	992	-
Stage 2	-	-	-	-	781	-
Critical Hdwy	4.2	-	-	-	7.06	7.16
Critical Hdwy Stg 1	-	-	-	-	6.06	-
Critical Hdwy Stg 2	-	-	-	-	6.06	-
Follow-up Hdwy	2.25	-	-	-	3.63	3.43
Pot Cap-1 Maneuver	661	-	-	-	66	482
Stage 1	-	-	-	-	295	-
Stage 2	-	-	-	-	385	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	661	-	-	-	55	482
Mov Cap-2 Maneuver	-	-	-	-	55	-
Stage 1	-	-	-	-	295	-
Stage 2	-	-	-	-	320	-

Approach	EB	WB	SB
HCM Control Delay, s	1	0	28.5
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	661	-	-	-	55	482
HCM Lane V/C Ratio	0.168	-	-	-	0.391	0.263
HCM Control Delay (s)	11.5	-	-	-	107.5	15.1
HCM Lane LOS	B	-	-	-	F	C
HCM 95th %tile Q(veh)	0.6	-	-	-	1.4	1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	210	5	606	0	339	300	756	314	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1881	1881	1881	1845	1845	1900	1792	1792	1900
Adj Flow Rate, veh/h	0	0	0	216	0	628	0	349	309	779	324	0
Adj No. of Lanes	0	1	0	1	0	2	1	2	0	2	2	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	1	1	1	3	3	3	6	6	6
Cap, veh/h	0	3	0	347	0	1515	3	452	394	927	2128	0
Arrive On Green	0.00	0.00	0.00	0.19	0.00	0.19	0.00	0.25	0.25	0.28	0.62	0.00
Sat Flow, veh/h	0	1900	0	1792	0	3198	1757	1776	1548	3312	3495	0
Grp Volume(v), veh/h	0	0	0	216	0	628	0	344	314	779	324	0
Grp Sat Flow(s),veh/h/ln	0	1900	0	1792	0	1599	1757	1752	1571	1656	1703	0
Q Serve(g_s), s	0.0	0.0	0.0	6.1	0.0	7.1	0.0	10.1	10.3	12.2	2.2	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	6.1	0.0	7.1	0.0	10.1	10.3	12.2	2.2	0.0
Prop In Lane	0.00		0.00	1.00		1.00	1.00		0.99	1.00		0.00
Lane Grp Cap(c), veh/h	0	3	0	347	0	1515	3	446	400	927	2128	0
V/C Ratio(X)	0.00	0.00	0.00	0.62	0.00	0.41	0.00	0.77	0.78	0.84	0.15	0.00
Avail Cap(c_a), veh/h	0	344	0	682	0	2112	159	540	484	1321	2128	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)	0.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	20.4	0.0	9.5	0.0	19.1	19.2	18.7	4.3	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.7	0.0	0.1	0.0	4.4	5.5	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	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	0.0	0.0	0.0	3.1	0.0	3.1	0.0	5.4	5.1	5.8	1.0	0.0
LnGrp Delay(d),s/veh	0.0	0.0	0.0	21.1	0.0	9.6	0.0	23.5	24.6	21.1	4.3	0.0
LnGrp LOS				C		A		C	C	C	A	
Approach Vol, veh/h		0			844			658			1103	
Approach Delay, s/veh		0.0			12.5			24.0			16.2	
Approach LOS					B			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	20.4	19.0		0.0	0.0	39.5		15.7
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0
Max Green Setting (Gmax), s	22.0	17.0		10.0	5.0	34.0		21.0
Max Q Clear Time (g_c+I1), s	14.2	12.3		0.0	0.0	4.2		9.1
Green Ext Time (p_c), s	1.2	1.8		0.0	0.0	4.7		1.6

Intersection Summary	
HCM 2010 Ctrl Delay	17.0
HCM 2010 LOS	B

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	731	330	739	1036	0	0	0	0	539	5	35
Number	5	2	12	1	6	16				3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1743	1743	1727	1727	0				1570	1570	1900
Adj Flow Rate, veh/h	0	769	0	778	1091	0				605	0	0
Adj No. of Lanes	0	2	1	1	2	0				2	1	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, %	0	9	9	10	10	0				21	21	21
Cap, veh/h	0	852	381	754	2321	0				651	342	0
Arrive On Green	0.00	0.26	0.00	0.41	0.71	0.00				0.22	0.00	0.00
Sat Flow, veh/h	0	3399	1482	1645	3368	0				2991	1570	0
Grp Volume(v), veh/h	0	769	0	778	1091	0				605	0	0
Grp Sat Flow(s),veh/h/ln	0	1656	1482	1645	1641	0				1495	1570	0
Q Serve(g_s), s	0.0	31.4	0.0	58.0	20.4	0.0				27.8	0.0	0.0
Cycle Q Clear(g_c), s	0.0	31.4	0.0	58.0	20.4	0.0				27.8	0.0	0.0
Prop In Lane	0.00		1.00	1.00		0.00				1.00		0.00
Lane Grp Cap(c), veh/h	0	852	381	754	2321	0				651	342	0
V/C Ratio(X)	0.00	0.90	0.00	1.03	0.47	0.00				0.93	0.00	0.00
Avail Cap(c_a), veh/h	0	852	381	754	2321	0				684	359	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)	0.00	1.00	0.00	1.00	1.00	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	50.3	0.0	33.9	9.0	0.0				53.7	0.0	0.0
Incr Delay (d2), s/veh	0.0	14.7	0.0	41.2	0.7	0.0				18.9	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(-26165%),veh/ln	0.0	16.2	0.0	37.7	9.3	0.0				13.2	0.0	0.0
LnGrp Delay(d),s/veh	0.0	65.0	0.0	75.1	9.7	0.0				72.5	0.0	0.0
LnGrp LOS		E		F	A					E		
Approach Vol, veh/h		769			1869						605	
Approach Delay, s/veh		65.0			36.9						72.5	
Approach LOS		E			D						E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	63.0	41.5				104.5		35.5
Change Period (Y+Rc), s	5.0	5.5				5.5		5.0
Max Green Setting (Gmax), s	58.0	34.5				97.5		32.0
Max Q Clear Time (g_c+I1), s	60.0	33.4				22.4		29.8
Green Ext Time (p_c), s	0.0	1.0				45.8		0.7

Intersection Summary	
HCM 2010 Ctrl Delay	50.2
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	270	1010	0	0	1450	844	315	5	464	0	0	0
Number	5	2	12	1	6	16	7	4	14			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1667	1667	0	0	1624	1624	1652	1652	1900			
Adj Flow Rate, veh/h	287	1074	0	0	1543	0	335	5	494			
Adj No. of Lanes	1	2	0	0	2	1	1	1	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, %	14	14	0	0	17	17	15	15	15			
Cap, veh/h	224	1972	0	0	1473	659	443	4	392			
Arrive On Green	0.10	0.62	0.00	0.00	0.48	0.00	0.28	0.28	0.28			
Sat Flow, veh/h	1587	3250	0	0	3167	1380	1573	14	1392			
Grp Volume(v), veh/h	287	1074	0	0	1543	0	335	0	499			
Grp Sat Flow(s),veh/h/ln	1587	1583	0	0	1543	1380	1573	0	1406			
Q Serve(g_s), s	11.0	21.3	0.0	0.0	52.5	0.0	21.4	0.0	31.0			
Cycle Q Clear(g_c), s	11.0	21.3	0.0	0.0	52.5	0.0	21.4	0.0	31.0			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		0.99			
Lane Grp Cap(c), veh/h	224	1972	0	0	1473	659	443	0	396			
V/C Ratio(X)	1.28	0.54	0.00	0.00	1.05	0.00	0.76	0.00	1.26			
Avail Cap(c_a), veh/h	224	1972	0	0	1473	659	443	0	396			
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	0.00	0.00	1.00	0.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	34.9	11.8	0.0	0.0	28.8	0.0	36.0	0.0	39.5			
Incr Delay (d2), s/veh	155.8	1.1	0.0	0.0	37.1	0.0	7.5	0.0	135.5			
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(-26165%),veh/ln	16.5	9.5	0.0	0.0	29.9	0.0	10.2	0.0	26.9			
LnGrp Delay(d),s/veh	190.7	12.9	0.0	0.0	65.8	0.0	43.5	0.0	175.0			
LnGrp LOS	F	B			F		D		F			
Approach Vol, veh/h		1361			1543			834				
Approach Delay, s/veh		50.4			65.8			122.2				
Approach LOS		D			E			F				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		74.0		36.0	16.0	58.0		
Change Period (Y+Rc), s		5.5		5.0	5.0	5.5		
Max Green Setting (Gmax), s		68.5		31.0	11.0	52.5		
Max Q Clear Time (g_c+I1), s		23.3		33.0	13.0	54.5		
Green Ext Time (p_c), s		41.7		0.0	0.0	0.0		

Intersection Summary	
HCM 2010 Ctrl Delay	72.8
HCM 2010 LOS	E

Notes

User approved volume balancing among the lanes for turning movement.

Intersection	
Int Delay, s/veh	231.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Vol, veh/h	105	1360	2185	36	36	105
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	50	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	19	19	17	17	27	27
Mvmt Flow	115	1495	2401	40	40	115

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	2441	0	-	0	3399	1220
Stage 1	-	-	-	-	2421	-
Stage 2	-	-	-	-	978	-
Critical Hdwy	4.48	-	-	-	7.34	7.44
Critical Hdwy Stg 1	-	-	-	-	6.34	-
Critical Hdwy Stg 2	-	-	-	-	6.34	-
Follow-up Hdwy	2.39	-	-	-	3.77	3.57
Pot Cap-1 Maneuver	146	-	-	-	~ 3	140
Stage 1	-	-	-	-	~ 37	-
Stage 2	-	-	-	-	273	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	146	-	-	-	~ 1	140
Mov Cap-2 Maneuver	-	-	-	-	~ 1	-
Stage 1	-	-	-	-	~ 37	-
Stage 2	-	-	-	-	58	-

Approach	EB	WB	SB
HCM Control Delay, s	6.3	0	$ 6221.6
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	146	-	-	-	1	140
HCM Lane V/C Ratio	0.79	-	-	-	39.56	0.824
HCM Control Delay (s)	87.3	-	-	$ 24086.3		96.5
HCM Lane LOS	F	-	-	-	F	F
HCM 95th %tile Q(veh)	4.9	-	-	-	7	5.2

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	5	5	5	485	5	1774	5	457	235	984	412	5
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1681	1681	1681	1667	1667	1900	1583	1583	1900
Adj Flow Rate, veh/h	5	5	5	522	0	1911	5	491	253	1058	443	5
Adj No. of Lanes	0	1	0	1	0	2	1	2	0	2	2	0
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, %	0	0	0	13	13	13	14	14	14	20	20	20
Cap, veh/h	9	9	9	473	0	1748	10	468	240	926	1652	19
Arrive On Green	0.02	0.02	0.02	0.30	0.00	0.30	0.01	0.23	0.23	0.32	0.54	0.54
Sat Flow, veh/h	589	589	589	1601	0	2858	1587	2017	1034	2925	3047	34
Grp Volume(v), veh/h	15	0	0	522	0	1911	5	385	359	1058	219	229
Grp Sat Flow(s),veh/h/ln	1767	0	0	1601	0	1429	1587	1583	1468	1463	1504	1577
Q Serve(g_s), s	1.2	0.0	0.0	42.0	0.0	42.0	0.4	33.0	33.0	45.0	11.1	11.1
Cycle Q Clear(g_c), s	1.2	0.0	0.0	42.0	0.0	42.0	0.4	33.0	33.0	45.0	11.1	11.1
Prop In Lane	0.33		0.33	1.00		1.00	1.00		0.70	1.00		0.02
Lane Grp Cap(c), veh/h	28	0	0	473	0	1748	10	367	341	926	815	855
V/C Ratio(X)	0.54	0.00	0.00	1.10	0.00	1.09	0.50	1.05	1.05	1.14	0.27	0.27
Avail Cap(c_a), veh/h	124	0	0	473	0	1748	56	367	341	926	815	855
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	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	69.5	0.0	0.0	50.1	0.0	27.6	70.4	54.6	54.6	48.6	17.4	17.5
Incr Delay (d2), s/veh	5.9	0.0	0.0	72.8	0.0	51.7	13.6	59.9	63.8	77.3	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	0.6	0.0	0.0	28.1	0.0	46.6	0.2	20.5	19.4	28.1	4.6	4.9
LnGrp Delay(d),s/veh	75.4	0.0	0.0	122.9	0.0	79.3	84.1	114.5	118.4	126.0	17.5	17.5
LnGrp LOS	E			F		F	F	F	F	F	B	B
Approach Vol, veh/h		15			2433			749			1506	
Approach Delay, s/veh		75.4			88.6			116.2			93.7	
Approach LOS		E			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	50.0	38.0		7.2	5.9	82.1		47.0
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0
Max Green Setting (Gmax), s	45.0	33.0		10.0	5.0	73.0		42.0
Max Q Clear Time (g_c+I1), s	47.0	35.0		3.2	2.4	13.1		44.0
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	6.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	94.6
HCM 2010 LOS	F

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	747	395	304	657	0	0	0	0	373	0	35
Number	5	2	12	1	6	16				3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1845	1845	1863	1863	0				1776	1776	1900
Adj Flow Rate, veh/h	0	786	0	320	692	0				428	0	0
Adj No. of Lanes	0	2	1	1	2	0				2	1	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, %	0	3	3	2	2	0				7	7	7
Cap, veh/h	0	1328	594	519	2165	0				648	340	0
Arrive On Green	0.00	0.38	0.00	0.14	0.61	0.00				0.19	0.00	0.00
Sat Flow, veh/h	0	3597	1568	1774	3632	0				3382	1776	0
Grp Volume(v), veh/h	0	786	0	320	692	0				428	0	0
Grp Sat Flow(s),veh/h/ln	0	1752	1568	1774	1770	0				1691	1776	0
Q Serve(g_s), s	0.0	9.6	0.0	5.2	5.0	0.0				6.3	0.0	0.0
Cycle Q Clear(g_c), s	0.0	9.6	0.0	5.2	5.0	0.0				6.3	0.0	0.0
Prop In Lane	0.00		1.00	1.00		0.00				1.00		0.00
Lane Grp Cap(c), veh/h	0	1328	594	519	2165	0				648	340	0
V/C Ratio(X)	0.00	0.59	0.00	0.62	0.32	0.00				0.66	0.00	0.00
Avail Cap(c_a), veh/h	0	1476	660	603	2483	0				2025	1063	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)	0.00	1.00	0.00	1.00	1.00	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	13.3	0.0	8.8	5.0	0.0				20.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.7	0.0	1.5	0.2	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
%ile BackOfQ(-26165%),veh/ln	0.0	4.7	0.0	2.6	2.5	0.0				3.0	0.0	0.0
LnGrp Delay(d),s/veh	0.0	14.0	0.0	10.3	5.2	0.0				21.4	0.0	0.0
LnGrp LOS		B		B	A					C		
Approach Vol, veh/h		786			1012						428	
Approach Delay, s/veh		14.0			6.8						21.4	
Approach LOS		B			A						C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	12.4	25.8				38.2		15.2
Change Period (Y+Rc), s	5.0	5.5				5.5		5.0
Max Green Setting (Gmax), s	10.0	22.5				37.5		32.0
Max Q Clear Time (g_c+I1), s	7.2	11.6				7.0		8.3
Green Ext Time (p_c), s	0.3	8.7				19.2		2.0

Intersection Summary	
HCM 2010 Ctrl Delay	12.1
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	305	814	0	0	660	378	310	0	359	0	0	0
Number	5	2	12	1	6	16	7	4	14			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1810	1810	0	0	1827	1827	1827	1827	1900			
Adj Flow Rate, veh/h	318	848	0	0	688	0	323	0	374			
Adj No. of Lanes	1	2	0	0	2	1	1	1	0			
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	5	0	0	4	4	4	4	4			
Cap, veh/h	467	1814	0	0	1025	458	538	0	480			
Arrive On Green	0.15	0.53	0.00	0.00	0.30	0.00	0.31	0.00	0.31			
Sat Flow, veh/h	1723	3529	0	0	3563	1553	1740	0	1553			
Grp Volume(v), veh/h	318	848	0	0	688	0	323	0	374			
Grp Sat Flow(s),veh/h/ln	1723	1719	0	0	1736	1553	1740	0	1553			
Q Serve(g_s), s	7.6	9.9	0.0	0.0	11.2	0.0	10.1	0.0	14.1			
Cycle Q Clear(g_c), s	7.6	9.9	0.0	0.0	11.2	0.0	10.1	0.0	14.1			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	467	1814	0	0	1025	458	538	0	480			
V/C Ratio(X)	0.68	0.47	0.00	0.00	0.67	0.00	0.60	0.00	0.78			
Avail Cap(c_a), veh/h	576	2086	0	0	1080	483	826	0	737			
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	0.00	0.00	1.00	0.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	13.0	9.5	0.0	0.0	19.9	0.0	18.8	0.0	20.2			
Incr Delay (d2), s/veh	2.4	0.3	0.0	0.0	2.2	0.0	1.3	0.0	3.5			
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(-26165%),veh/ln	2.8	4.8	0.0	0.0	5.7	0.0	5.0	0.0	6.5			
LnGrp Delay(d),s/veh	15.4	9.8	0.0	0.0	22.1	0.0	20.1	0.0	23.7			
LnGrp LOS	B	A			C		C		C			
Approach Vol, veh/h		1166			688			697				
Approach Delay, s/veh		11.3			22.1			22.0				
Approach LOS		B			C			C				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		39.4		24.9	14.9	24.5		
Change Period (Y+Rc), s		5.5		5.0	5.0	5.5		
Max Green Setting (Gmax), s		39.0		30.5	14.0	20.0		
Max Q Clear Time (g_c+I1), s		11.9		16.1	9.6	13.2		
Green Ext Time (p_c), s		18.3		3.8	0.4	5.8		

Intersection Summary	
HCM 2010 Ctrl Delay	17.1
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Intersection	
Int Delay, s/veh	3.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Vol, veh/h	128	1040	900	50	25	143
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	50	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	5	5	2	2	13	13
Mvmt Flow	138	1118	968	54	27	154

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1022	0	-	0	1829	511
Stage 1	-	-	-	-	995	-
Stage 2	-	-	-	-	834	-
Critical Hdwy	4.2	-	-	-	7.06	7.16
Critical Hdwy Stg 1	-	-	-	-	6.06	-
Critical Hdwy Stg 2	-	-	-	-	6.06	-
Follow-up Hdwy	2.25	-	-	-	3.63	3.43
Pot Cap-1 Maneuver	657	-	-	-	60	480
Stage 1	-	-	-	-	294	-
Stage 2	-	-	-	-	360	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	657	-	-	-	47	480
Mov Cap-2 Maneuver	-	-	-	-	47	-
Stage 1	-	-	-	-	294	-
Stage 2	-	-	-	-	284	-

Approach	EB	WB	SB
HCM Control Delay, s	1.3	0	36.8
HCM LOS			E

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	657	-	-	-	47	480
HCM Lane V/C Ratio	0.209	-	-	-	0.572	0.32
HCM Control Delay (s)	11.9	-	-	-	155.5	16
HCM Lane LOS	B	-	-	-	F	C
HCM 95th %tile Q(veh)	0.8	-	-	-	2.2	1.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	210	5	608	0	342	300	758	317	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1881	1881	1881	1845	1845	1900	1792	1792	1900
Adj Flow Rate, veh/h	0	0	0	216	0	630	0	353	309	781	327	0
Adj No. of Lanes	0	1	0	1	0	2	1	2	0	2	2	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	1	1	1	3	3	3	6	6	6
Cap, veh/h	0	3	0	348	0	1518	3	454	392	929	2129	0
Arrive On Green	0.00	0.00	0.00	0.19	0.00	0.19	0.00	0.25	0.25	0.28	0.63	0.00
Sat Flow, veh/h	0	1900	0	1792	0	3198	1757	1785	1540	3312	3495	0
Grp Volume(v), veh/h	0	0	0	216	0	630	0	346	316	781	327	0
Grp Sat Flow(s),veh/h/ln	0	1900	0	1792	0	1599	1757	1752	1573	1656	1703	0
Q Serve(g_s), s	0.0	0.0	0.0	6.1	0.0	7.1	0.0	10.2	10.4	12.3	2.2	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	6.1	0.0	7.1	0.0	10.2	10.4	12.3	2.2	0.0
Prop In Lane	0.00		0.00	1.00		1.00	1.00		0.98	1.00		0.00
Lane Grp Cap(c), veh/h	0	3	0	348	0	1518	3	446	400	929	2129	0
V/C Ratio(X)	0.00	0.00	0.00	0.62	0.00	0.42	0.00	0.78	0.79	0.84	0.15	0.00
Avail Cap(c_a), veh/h	0	344	0	680	0	2111	159	539	483	1317	2129	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)	0.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	20.4	0.0	9.5	0.0	19.2	19.2	18.7	4.3	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.7	0.0	0.1	0.0	4.6	5.7	2.5	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	0.0	0.0	0.0	3.1	0.0	3.1	0.0	5.5	5.1	5.9	1.0	0.0
LnGrp Delay(d),s/veh	0.0	0.0	0.0	21.1	0.0	9.6	0.0	23.8	25.0	21.2	4.3	0.0
LnGrp LOS				C		A		C	C	C	A	
Approach Vol, veh/h		0			846			662			1108	
Approach Delay, s/veh		0.0			12.5			24.4			16.2	
Approach LOS					B			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	20.5	19.1		0.0	0.0	39.6		15.7
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0
Max Green Setting (Gmax), s	22.0	17.0		10.0	5.0	34.0		21.0
Max Q Clear Time (g_c+I1), s	14.3	12.4		0.0	0.0	4.2		9.1
Green Ext Time (p_c), s	1.2	1.7		0.0	0.0	4.8		1.6

Intersection Summary	
HCM 2010 Ctrl Delay	17.1
HCM 2010 LOS	B

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	80	845	0	0	730	360	0	0	485	0	0	680
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0			3.0	3.0			3.0			5.0
Lane Util. Factor	1.00	0.95			0.91	1.00			1.00			1.00
Frt	1.00	1.00			1.00	0.85			0.86			0.86
Flt Protected	0.95	1.00			1.00	1.00			1.00			1.00
Satd. Flow (prot)	1719	3438			4715	1468			1494			1565
Flt Permitted	0.95	1.00			1.00	1.00			1.00			1.00
Satd. Flow (perm)	1719	3438			4715	1468			1494			1565
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	85	899	0	0	777	383	0	0	516	0	0	723
RTOR Reduction (vph)	0	0	0	0	0	124	0	0	115	0	0	633
Lane Group Flow (vph)	85	899	0	0	777	259	0	0	401	0	0	90
Heavy Vehicles (%)	5%	5%	5%	10%	10%	10%	10%	10%	10%	5%	5%	5%
Turn Type	Prot	NA			NA	Perm			Perm			Over
Protected Phases	1	6 8			2							1
Permitted Phases						2			2			
Actuated Green, G (s)	14.9	120.0			81.1	81.1			81.1			14.9
Effective Green, g (s)	14.9	120.0			81.1	81.1			81.1			14.9
Actuated g/C Ratio	0.12	1.00			0.68	0.68			0.68			0.12
Clearance Time (s)	5.0				3.0	3.0			3.0			5.0
Vehicle Extension (s)	3.0				0.2	0.2			0.2			3.0
Lane Grp Cap (vph)	213	3438			3186	992			1009			194
v/s Ratio Prot	0.05	c0.26			0.16							c0.06
v/s Ratio Perm						0.18			c0.27			
v/c Ratio	0.40	0.26			0.24	0.26			0.40			0.46
Uniform Delay, d1	48.4	0.0			7.5	7.7			8.6			48.8
Progression Factor	0.71	1.00			1.00	1.00			1.00			1.00
Incremental Delay, d2	0.9	0.0			0.0	0.1			0.1			1.7
Delay (s)	35.3	0.0			7.6	7.7			8.7			50.6
Level of Service	D	A			A	A			A			D
Approach Delay (s)		3.1			7.6			8.7			50.6	
Approach LOS		A			A			A			D	

Intersection Summary			
HCM 2000 Control Delay	15.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	63.7%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	400	275	60	325	275	780	0	0	0	605	735	410
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0		5.0	5.0	4.0				5.0	5.0	5.0
Lane Util. Factor	0.97	0.95		1.00	0.95	1.00				0.91	0.86	0.91
Frpb, ped/bikes	1.00	1.00		1.00	1.00	1.00				1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00				1.00	1.00	1.00
Frt	1.00	0.97		1.00	1.00	0.85				1.00	0.99	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00				0.95	0.99	1.00
Satd. Flow (prot)	3367	3369		1687	3374	1509				1535	3009	1374
Flt Permitted	0.95	1.00		0.95	1.00	1.00				0.95	0.99	1.00
Satd. Flow (perm)	3367	3369		1687	3374	1509				1535	3009	1374
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	440	302	66	357	302	857	0	0	0	665	808	451
RTOR Reduction (vph)	0	17	0	0	0	20	0	0	0	0	2	196
Lane Group Flow (vph)	440	351	0	357	302	837	0	0	0	492	1024	210
Confl. Peds. (#/hr)			1	1								
Heavy Vehicles (%)	4%	4%	4%	7%	7%	7%	0%	0%	0%	7%	7%	7%
Turn Type	Prot	NA		Split	NA	custom				Split	NA	Perm
Protected Phases	5	2		3	3	7				4	4	
Permitted Phases						3						4
Actuated Green, G (s)	20.9	20.9		32.0	32.0	90.1				52.1	52.1	52.1
Effective Green, g (s)	20.9	20.9		32.0	32.0	90.1				52.1	52.1	52.1
Actuated g/C Ratio	0.17	0.17		0.27	0.27	0.75				0.43	0.43	0.43
Clearance Time (s)	5.0	5.0		5.0	5.0	4.0				5.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0				3.0	3.0	3.0
Lane Grp Cap (vph)	586	586		449	899	1133				666	1306	596
v/s Ratio Prot	c0.13	0.10		0.21	0.09	c0.55				0.32	0.34	
v/s Ratio Perm												0.15
v/c Ratio	0.75	0.60		0.80	0.34	0.74				0.74	0.78	0.35
Uniform Delay, d1	47.1	45.7		40.9	35.4	8.4				28.3	29.1	22.7
Progression Factor	1.00	1.00		0.96	1.00	0.73				1.02	1.05	2.18
Incremental Delay, d2	5.4	1.7		8.4	0.2	2.3				4.9	3.2	1.1
Delay (s)	52.5	47.4		47.7	35.6	8.4				33.8	33.8	50.4
Level of Service	D	D		D	D	A				C	C	D
Approach Delay (s)		50.1			23.0			0.0			37.3	
Approach LOS		D			C			A			D	

Intersection Summary			
HCM 2000 Control Delay	34.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	68.2%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	160	300	305	710	215	235	110	455	610	200	690	120
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	4.0	5.0	5.0	4.0
Lane Util. Factor	0.91	0.91	1.00	0.91	0.91	1.00	1.00	0.91	1.00	1.00	0.91	1.00
Frpb, ped/bikes	1.00	1.00	0.99	1.00	1.00	0.97	1.00	1.00	0.99	1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	0.97	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1579	3316	1532	1579	3225	1513	1736	4988	1534	1671	4803	1476
Flt Permitted	0.95	1.00	1.00	0.95	0.97	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1579	3316	1532	1579	3225	1513	1736	4988	1534	1671	4803	1476
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	176	330	335	780	236	258	121	500	670	220	758	132
RTOR Reduction (vph)	0	0	157	0	0	202	0	0	0	0	0	0
Lane Group Flow (vph)	158	348	179	390	626	56	121	500	670	220	758	132
Confl. Peds. (#/hr)	8		1	1		8	3		1	1		3
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	8%	8%	8%
Turn Type	Split	NA	Perm	Split	NA	Perm	Prot	NA	Free	Prot	NA	Free
Protected Phases	2	2		1	1		3	8		7	4	
Permitted Phases			2			1			Free			Free
Actuated Green, G (s)	26.1	26.1	26.1	26.0	26.0	26.0	12.1	27.1	120.0	20.8	35.8	120.0
Effective Green, g (s)	26.1	26.1	26.1	26.0	26.0	26.0	12.1	27.1	120.0	20.8	35.8	120.0
Actuated g/C Ratio	0.22	0.22	0.22	0.22	0.22	0.22	0.10	0.23	1.00	0.17	0.30	1.00
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Vehicle Extension (s)	6.0	6.0	6.0	7.0	7.0	7.0	3.0	4.0		4.0	5.0	
Lane Grp Cap (vph)	343	721	333	342	698	327	175	1126	1534	289	1432	1476
v/s Ratio Prot	0.10	0.10		c0.25	0.19		c0.07	0.10		c0.13	c0.16	
v/s Ratio Perm			c0.12			0.04			0.44			0.09
v/c Ratio	0.46	0.48	0.54	1.14	1.09dl	0.17	0.69	0.44	0.44	0.76	0.53	0.09
Uniform Delay, d1	40.8	41.0	41.6	47.0	45.7	38.2	52.1	40.0	0.0	47.2	35.1	0.0
Progression Factor	1.00	1.00	1.00	0.89	0.88	1.68	1.05	1.14	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.7	1.4	3.9	91.4	15.5	0.8	8.2	0.9	0.6	11.9	1.4	0.1
Delay (s)	43.6	42.5	45.5	133.1	55.5	65.2	62.9	46.4	0.6	59.1	36.5	0.1
Level of Service	D	D	D	F	E	E	E	D	A	E	D	A
Approach Delay (s)		43.9			81.2			24.2			36.6	
Approach LOS		D			F			C			D	

Intersection Summary			
HCM 2000 Control Delay	47.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	69.7%	ICU Level of Service	C
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.
c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	20	880	80	30	955	65	45	5	35	65	5	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.1	5.1		5.1	5.1		5.1	5.1			5.1	5.1
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00			1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00			1.00	0.98
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00			1.00	1.00
Frt	1.00	0.99		1.00	0.99		1.00	0.87			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00			0.96	1.00
Satd. Flow (prot)	1719	3389		1736	3438		1512	1385			1729	1514
Flt Permitted	0.95	1.00		0.95	1.00		0.71	1.00			0.71	1.00
Satd. Flow (perm)	1719	3389		1736	3438		1127	1385			1283	1514
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	22	946	86	32	1027	70	48	5	38	70	5	22
RTOR Reduction (vph)	0	4	0	0	2	0	0	34	0	0	0	20
Lane Group Flow (vph)	22	1028	0	32	1095	0	48	9	0	0	75	2
Confl. Peds. (#/hr)			2	2			3					3
Heavy Vehicles (%)	5%	5%	5%	4%	4%	4%	19%	19%	19%	5%	5%	5%
Turn Type	Prot	NA		Prot	NA		Perm	NA		Perm	NA	Perm
Protected Phases	5	2		1	6			4			4	
Permitted Phases							4			4		4
Actuated Green, G (s)	4.8	86.3		5.2	86.7		13.2	13.2			13.2	13.2
Effective Green, g (s)	4.8	86.3		5.2	86.7		13.2	13.2			13.2	13.2
Actuated g/C Ratio	0.04	0.72		0.04	0.72		0.11	0.11			0.11	0.11
Clearance Time (s)	5.1	5.1		5.1	5.1		5.1	5.1			5.1	5.1
Vehicle Extension (s)	3.0	6.0		3.0	6.0		3.0	3.0			3.0	3.0
Lane Grp Cap (vph)	68	2437		75	2483		123	152			141	166
v/s Ratio Prot	0.01	0.30		c0.02	c0.32			0.01				
v/s Ratio Perm							0.04				c0.06	0.00
v/c Ratio	0.32	0.42		0.43	0.44		0.39	0.06			0.53	0.01
Uniform Delay, d1	56.0	6.8		55.9	6.8		49.7	47.8			50.5	47.6
Progression Factor	1.02	0.64		1.09	0.49		1.00	1.00			1.00	1.00
Incremental Delay, d2	2.5	0.5		3.8	0.6		2.0	0.2			3.8	0.0
Delay (s)	59.8	4.8		64.8	3.9		51.7	48.0			54.3	47.6
Level of Service	E	A		E	A		D	D			D	D
Approach Delay (s)		6.0			5.6			50.0			52.8	
Approach LOS		A			A			D			D	

Intersection Summary			
HCM 2000 Control Delay	9.4	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	15.3
Intersection Capacity Utilization	51.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	185	585	35	10	500	145	75	45	20	190	50	195
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.1	5.1		5.1	5.1	4.0		5.1		5.1	5.1	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00		0.95	0.95	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.98		1.00		1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00		1.00		1.00	1.00	1.00
Frt	1.00	0.99		1.00	1.00	0.85		0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.97		0.95	0.97	1.00
Satd. Flow (prot)	1752	3468		1736	3471	1520		1769		1665	1702	1548
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.76		0.95	0.97	1.00
Satd. Flow (perm)	1752	3468		1736	3471	1520		1377		1665	1702	1548
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	201	636	38	11	543	158	82	49	22	207	54	212
RTOR Reduction (vph)	0	3	0	0	0	0	0	5	0	0	0	0
Lane Group Flow (vph)	201	671	0	11	543	158	0	148	0	128	133	212
Confl. Peds. (#/hr)	2		6	6		2	2		13	13		2
Confl. Bikes (#/hr)												1
Heavy Vehicles (%)	3%	3%	3%	4%	4%	4%	2%	2%	2%	3%	3%	3%
Turn Type	Prot	NA		Prot	NA	Free	Perm	NA		Split	NA	Free
Protected Phases	5	2		1	6			3		4	4	
Permitted Phases						Free	3					Free
Actuated Green, G (s)	17.9	63.4		1.5	47.0	120.0		18.2		16.5	16.5	120.0
Effective Green, g (s)	17.9	63.4		1.5	47.0	120.0		18.2		16.5	16.5	120.0
Actuated g/C Ratio	0.15	0.53		0.01	0.39	1.00		0.15		0.14	0.14	1.00
Clearance Time (s)	5.1	5.1		5.1	5.1			5.1		5.1	5.1	
Vehicle Extension (s)	3.0	4.0		3.0	4.0			4.0		4.0	4.0	
Lane Grp Cap (vph)	261	1832		21	1359	1520		208		228	234	1548
v/s Ratio Prot	c0.11	0.19		0.01	c0.16					0.08	c0.08	
v/s Ratio Perm						0.10		c0.11				0.14
v/c Ratio	0.77	0.37		0.52	0.40	0.10		0.71		0.56	0.57	0.14
Uniform Delay, d1	49.1	16.6		58.9	26.3	0.0		48.4		48.4	48.4	0.0
Progression Factor	1.07	0.51		1.00	1.00	1.00		1.00		1.00	1.00	1.00
Incremental Delay, d2	12.4	0.5		21.6	0.9	0.1		11.6		3.8	3.8	0.2
Delay (s)	65.0	9.0		80.5	27.2	0.1		60.0		52.2	52.2	0.2
Level of Service	E	A		F	C	A		E		D	D	A
Approach Delay (s)		21.8			22.0			60.0			28.9	
Approach LOS		C			C			E			C	

Intersection Summary			
HCM 2000 Control Delay	26.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	20.4
Intersection Capacity Utilization	55.9%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	90	890	0	0	970	565	0	0	470	0	0	695
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0			3.0	3.0			3.0			5.0
Lane Util. Factor	1.00	0.95			0.91	1.00			1.00			1.00
Frpb, ped/bikes	1.00	1.00			1.00	0.98			1.00			1.00
Flpb, ped/bikes	1.00	1.00			1.00	1.00			1.00			1.00
Frt	1.00	1.00			1.00	0.85			0.86			0.86
Flt Protected	0.95	1.00			1.00	1.00			1.00			1.00
Satd. Flow (prot)	1703	3406			4988	1517			1580			1611
Flt Permitted	0.95	1.00			1.00	1.00			1.00			1.00
Satd. Flow (perm)	1703	3406			4988	1517			1580			1611
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	91	899	0	0	980	571	0	0	475	0	0	702
RTOR Reduction (vph)	0	0	0	0	0	183	0	0	113	0	0	618
Lane Group Flow (vph)	91	899	0	0	980	388	0	0	362	0	0	84
Confl. Peds. (#/hr)			1	1								
Confl. Bikes (#/hr)						6						
Heavy Vehicles (%)	6%	6%	6%	4%	4%	4%	4%	4%	4%	2%	2%	2%
Turn Type	Prot	NA			NA	Perm			Perm			Over
Protected Phases	1	6 8			2							1
Permitted Phases						2			2			
Actuated Green, G (s)	14.3	120.0			81.6	81.6			81.6			14.3
Effective Green, g (s)	14.3	120.0			81.6	81.6			81.6			14.3
Actuated g/C Ratio	0.12	1.00			0.68	0.68			0.68			0.12
Clearance Time (s)	5.0				3.0	3.0			3.0			5.0
Vehicle Extension (s)	3.0				0.2	0.2			0.2			3.0
Lane Grp Cap (vph)	202	3406			3391	1031			1074			191
v/s Ratio Prot	c0.05	c0.26			0.20							0.05
v/s Ratio Perm						c0.26			0.23			
v/c Ratio	0.45	0.26			0.29	0.38			0.34			0.44
Uniform Delay, d1	49.2	0.0			7.6	8.3			8.0			49.1
Progression Factor	0.69	1.00			1.00	1.00			1.00			1.00
Incremental Delay, d2	1.1	0.0			0.0	0.1			0.1			1.6
Delay (s)	35.0	0.0			7.7	8.3			8.0			50.7
Level of Service	D	A			A	A			A			D
Approach Delay (s)		3.2			7.9			8.0			50.7	
Approach LOS		A			A			A			D	

Intersection Summary			
HCM 2000 Control Delay	14.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	69.3%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	460	280	70	470	285	865	0	0	0	680	785	435
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0		5.0	5.0	4.0				5.0	5.0	5.0
Lane Util. Factor	0.97	0.95		1.00	0.95	1.00				0.91	0.86	0.91
Frpb, ped/bikes	1.00	1.00		1.00	1.00	1.00				1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00				1.00	1.00	1.00
Frt	1.00	0.97		1.00	1.00	0.85				1.00	0.99	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00				0.95	0.99	1.00
Satd. Flow (prot)	3467	3457		1770	3539	1583				1579	3093	1413
Flt Permitted	0.95	1.00		0.95	1.00	1.00				0.95	0.99	1.00
Satd. Flow (perm)	3467	3457		1770	3539	1583				1579	3093	1413
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	469	286	71	480	291	883	0	0	0	694	801	444
RTOR Reduction (vph)	0	19	0	0	0	10	0	0	0	0	2	222
Lane Group Flow (vph)	469	338	0	480	291	873	0	0	0	500	1037	178
Confl. Peds. (#/hr)			1	1								
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	0%	0%	0%	4%	4%	4%
Turn Type	Prot	NA		Split	NA	custom				Split	NA	Perm
Protected Phases	5	2		3	3	7				4	4	
Permitted Phases						3						4
Actuated Green, G (s)	20.6	20.6		35.9	35.9	90.4				48.5	48.5	48.5
Effective Green, g (s)	20.6	20.6		35.9	35.9	90.4				48.5	48.5	48.5
Actuated g/C Ratio	0.17	0.17		0.30	0.30	0.75				0.40	0.40	0.40
Clearance Time (s)	5.0	5.0		5.0	5.0	4.0				5.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0				3.0	3.0	3.0
Lane Grp Cap (vph)	595	593		529	1058	1192				638	1250	571
v/s Ratio Prot	c0.14	0.10		c0.27	0.08	0.55				0.32	c0.34	
v/s Ratio Perm												0.13
v/c Ratio	0.79	0.57		0.91	0.28	0.73				0.78	0.83	0.31
Uniform Delay, d1	47.6	45.6		40.5	32.1	8.1				31.2	32.0	24.4
Progression Factor	1.00	1.00		0.99	1.06	0.73				1.14	1.16	3.34
Incremental Delay, d2	6.8	1.3		17.5	0.1	2.1				6.4	4.4	1.0
Delay (s)	54.5	46.9		57.6	34.3	8.1				42.1	41.7	82.4
Level of Service	D	D		E	C	A				D	D	F
Approach Delay (s)		51.2			27.0			0.0			50.2	
Approach LOS		D			C			A			D	

Intersection Summary			
HCM 2000 Control Delay	41.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	79.3%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	165	220	150	820	265	245	90	430	800	265	860	115
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	4.0	5.0	5.0	4.0
Lane Util. Factor	0.91	0.91	1.00	0.91	0.91	1.00	1.00	0.91	1.00	1.00	0.91	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.98	1.00	1.00	0.99	1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	0.99	1.00	0.95	0.97	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1643	3432	1577	1626	3323	1562	1787	5136	1575	1736	4988	1532
Flt Permitted	0.95	0.99	1.00	0.95	0.97	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1643	3432	1577	1626	3323	1562	1787	5136	1575	1736	4988	1532
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	170	227	155	845	273	253	93	443	825	273	887	119
RTOR Reduction (vph)	0	0	129	0	0	198	0	0	0	0	0	0
Lane Group Flow (vph)	129	268	26	422	696	55	93	443	825	273	887	119
Confl. Peds. (#/hr)	6		7	7		6	4		10	10		4
Confl. Bikes (#/hr)						1						
Heavy Vehicles (%)	0%	0%	0%	1%	1%	1%	1%	1%	1%	4%	4%	4%
Turn Type	Split	NA	Perm	Split	NA	Perm	Prot	NA	Free	Prot	NA	Free
Protected Phases	2	2		1	1		3	8		7	4	
Permitted Phases			2			1			Free			Free
Actuated Green, G (s)	20.3	20.3	20.3	26.0	26.0	26.0	11.5	28.2	120.0	25.5	42.2	120.0
Effective Green, g (s)	20.3	20.3	20.3	26.0	26.0	26.0	11.5	28.2	120.0	25.5	42.2	120.0
Actuated g/C Ratio	0.17	0.17	0.17	0.22	0.22	0.22	0.10	0.23	1.00	0.21	0.35	1.00
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Vehicle Extension (s)	6.0	6.0	6.0	7.0	7.0	7.0	3.0	4.0		4.0	5.0	
Lane Grp Cap (vph)	277	580	266	352	719	338	171	1206	1575	368	1754	1532
v/s Ratio Prot	0.08	0.08		c0.26	0.21		0.05	0.09		c0.16	0.18	
v/s Ratio Perm			0.02			0.04			c0.52			0.08
v/c Ratio	0.47	0.46	0.10	1.20	1.15dl	0.16	0.54	0.37	0.52	0.74	0.51	0.08
Uniform Delay, d1	45.0	44.9	42.1	47.0	46.6	38.2	51.7	38.4	0.0	44.2	30.7	0.0
Progression Factor	1.00	1.00	1.00	0.70	0.69	0.84	1.03	1.12	1.00	1.00	1.00	1.00
Incremental Delay, d2	3.5	1.6	0.5	112.2	25.2	0.7	2.4	0.6	0.9	8.3	1.0	0.1
Delay (s)	48.4	46.6	42.6	145.1	57.3	33.0	55.6	43.7	0.9	52.5	31.7	0.1
Level of Service	D	D	D	F	E	C	E	D	A	D	C	A
Approach Delay (s)		45.9			79.8			18.5			33.2	
Approach LOS		D			E			B			C	

Intersection Summary			
HCM 2000 Control Delay	44.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	76.8%	ICU Level of Service	D
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.
c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	20	1050	55	40	1160	70	65	10	60	75	10	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.1	5.1		5.1	5.1		5.1	5.1			5.1	5.1
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00			1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00			1.00	0.98
Flpb, ped/bikes	1.00	1.00		1.00	1.00		0.99	1.00			1.00	1.00
Frt	1.00	0.99		1.00	0.99		1.00	0.87			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00			0.96	1.00
Satd. Flow (prot)	1787	3544		1787	3544		1778	1639			1750	1525
Flt Permitted	0.95	1.00		0.95	1.00		0.69	1.00			0.70	1.00
Satd. Flow (perm)	1787	3544		1787	3544		1292	1639			1279	1525
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	20	1071	56	41	1184	71	66	10	61	77	10	26
RTOR Reduction (vph)	0	2	0	0	2	0	0	53	0	0	0	23
Lane Group Flow (vph)	20	1125	0	41	1253	0	66	18	0	0	87	3
Confl. Peds. (#/hr)			1	1			5					5
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	4%	4%	4%
Turn Type	Prot	NA		Prot	NA		Perm	NA		Perm	NA	Perm
Protected Phases	5	2		1	6			4			4	
Permitted Phases							4			4		4
Actuated Green, G (s)	3.3	82.5		6.9	86.1		15.3	15.3			15.3	15.3
Effective Green, g (s)	3.3	82.5		6.9	86.1		15.3	15.3			15.3	15.3
Actuated g/C Ratio	0.03	0.69		0.06	0.72		0.13	0.13			0.13	0.13
Clearance Time (s)	5.1	5.1		5.1	5.1		5.1	5.1			5.1	5.1
Vehicle Extension (s)	3.0	6.0		3.0	6.0		3.0	3.0			3.0	3.0
Lane Grp Cap (vph)	49	2436		102	2542		164	208			163	194
v/s Ratio Prot	0.01	0.32		c0.02	c0.35			0.01				
v/s Ratio Perm							0.05				c0.07	0.00
v/c Ratio	0.41	0.46		0.40	0.49		0.40	0.09			0.53	0.02
Uniform Delay, d1	57.4	8.6		54.6	7.4		48.1	46.2			49.0	45.8
Progression Factor	1.05	0.80		1.04	0.34		1.00	1.00			1.00	1.00
Incremental Delay, d2	4.7	0.5		2.2	0.6		1.6	0.2			3.3	0.0
Delay (s)	65.1	7.4		59.2	3.1		49.8	46.4			52.3	45.8
Level of Service	E	A		E	A		D	D			D	D
Approach Delay (s)		8.4			4.9			48.0			50.8	
Approach LOS		A			A			D			D	

Intersection Summary			
HCM 2000 Control Delay	10.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	15.3
Intersection Capacity Utilization	58.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	225	750	55	35	835	205	100	65	20	235	70	240
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.1	5.1		5.1	5.1	4.0		5.1		5.1	5.1	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00		0.95	0.95	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.98		1.00		1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00		1.00		1.00	1.00	1.00
Frt	1.00	0.99		1.00	1.00	0.85		0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.97		0.95	0.97	1.00
Satd. Flow (prot)	1770	3497		1787	3574	1564		1796		1715	1757	1593
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.74		0.95	0.97	1.00
Satd. Flow (perm)	1770	3497		1787	3574	1564		1370		1715	1757	1593
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	230	765	56	36	852	209	102	66	20	240	71	245
RTOR Reduction (vph)	0	4	0	0	0	0	0	3	0	0	0	0
Lane Group Flow (vph)	230	817	0	36	852	209	0	185	0	154	157	245
Confl. Peds. (#/hr)	4		1	1		4	5		6	6		5
Confl. Bikes (#/hr)												1
Heavy Vehicles (%)	2%	2%	2%	1%	1%	1%	1%	1%	1%	0%	0%	0%
Turn Type	Prot	NA		Prot	NA	Free	Perm	NA		Split	NA	Free
Protected Phases	5	2		1	6			3		4	4	
Permitted Phases						Free	3					Free
Actuated Green, G (s)	18.8	57.1		4.7	43.0	120.0		20.9		16.9	16.9	120.0
Effective Green, g (s)	18.8	57.1		4.7	43.0	120.0		20.9		16.9	16.9	120.0
Actuated g/C Ratio	0.16	0.48		0.04	0.36	1.00		0.17		0.14	0.14	1.00
Clearance Time (s)	5.1	5.1		5.1	5.1			5.1		5.1	5.1	
Vehicle Extension (s)	3.0	4.0		3.0	4.0			4.0		4.0	4.0	
Lane Grp Cap (vph)	277	1663		69	1280	1564		238		241	247	1593
v/s Ratio Prot	c0.13	0.23		0.02	c0.24					c0.09	0.09	
v/s Ratio Perm						0.13		c0.13				0.15
v/c Ratio	0.83	0.49		0.52	0.67	0.13		0.78		0.64	0.64	0.15
Uniform Delay, d1	49.1	21.5		56.5	32.4	0.0		47.3		48.7	48.6	0.0
Progression Factor	1.01	0.57		1.00	1.00	1.00		1.00		1.00	1.00	1.00
Incremental Delay, d2	17.3	1.0		6.9	2.7	0.2		15.4		6.1	5.9	0.2
Delay (s)	67.1	13.3		63.5	35.2	0.2		62.7		54.8	54.6	0.2
Level of Service	E	B		E	D	A		E		D	D	A
Approach Delay (s)		25.1			29.4			62.7			30.7	
Approach LOS		C			C			E			C	

Intersection Summary			
HCM 2000 Control Delay	30.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	20.4
Intersection Capacity Utilization	66.1%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	95	1010	0	0	870	430	0	0	580	0	0	815
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0			3.0	3.0			3.0			5.0
Lane Util. Factor	1.00	0.95			0.91	1.00			1.00			1.00
Frt	1.00	1.00			1.00	0.85			0.86			0.86
Flt Protected	0.95	1.00			1.00	1.00			1.00			1.00
Satd. Flow (prot)	1719	3438			4715	1468			1494			1565
Flt Permitted	0.95	1.00			1.00	1.00			1.00			1.00
Satd. Flow (perm)	1719	3438			4715	1468			1494			1565
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	101	1074	0	0	926	457	0	0	617	0	0	867
RTOR Reduction (vph)	0	0	0	0	0	304	0	0	194	0	0	192
Lane Group Flow (vph)	101	1074	0	0	926	153	0	0	423	0	0	675
Heavy Vehicles (%)	5%	5%	5%	10%	10%	10%	10%	10%	10%	5%	5%	5%
Turn Type	Prot	NA			NA	Perm			Perm			Over
Protected Phases	1	6 8			2							1
Permitted Phases						2			2			
Actuated Green, G (s)	54.1	120.0			40.1	40.1			40.1			54.1
Effective Green, g (s)	54.1	120.0			40.1	40.1			40.1			54.1
Actuated g/C Ratio	0.45	1.00			0.33	0.33			0.33			0.45
Clearance Time (s)	5.0				3.0	3.0			3.0			5.0
Vehicle Extension (s)	3.0				0.2	0.2			0.2			3.0
Lane Grp Cap (vph)	774	3438			1575	490			499			705
v/s Ratio Prot	0.06	c0.31			0.20							c0.43
v/s Ratio Perm						0.10			c0.28			
v/c Ratio	0.13	0.31			0.59	0.31			0.85			0.96
Uniform Delay, d1	19.2	0.0			33.1	29.7			37.1			31.8
Progression Factor	1.65	1.00			1.00	1.00			1.00			1.00
Incremental Delay, d2	0.0	0.0			0.4	0.1			12.1			23.6
Delay (s)	31.8	0.0			33.5	29.8			49.2			55.4
Level of Service	C	A			C	C			D			E
Approach Delay (s)		2.8			32.3			49.2			55.4	
Approach LOS		A			C			D			E	

Intersection Summary			
HCM 2000 Control Delay	31.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	74.8%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	480	330	70	390	330	930	0	0	0	725	880	490
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0		5.0	5.0	4.0				5.0	5.0	5.0
Lane Util. Factor	0.97	0.95		1.00	0.95	1.00				0.91	0.86	0.91
Frpb, ped/bikes	1.00	1.00		1.00	1.00	1.00				1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00				1.00	1.00	1.00
Frt	1.00	0.97		1.00	1.00	0.85				1.00	0.99	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00				0.95	0.99	1.00
Satd. Flow (prot)	3367	3371		1687	3374	1509				1535	3009	1374
Flt Permitted	0.95	1.00		0.95	1.00	1.00				0.95	0.99	1.00
Satd. Flow (perm)	3367	3371		1687	3374	1509				1535	3009	1374
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	527	363	77	429	363	1022	0	0	0	797	967	538
RTOR Reduction (vph)	0	15	0	0	0	4	0	0	0	0	2	241
Lane Group Flow (vph)	527	425	0	429	363	1018	0	0	0	590	1226	243
Confl. Peds. (#/hr)			1	1								
Heavy Vehicles (%)	4%	4%	4%	7%	7%	7%	0%	0%	0%	7%	7%	7%
Turn Type	Prot	NA		Split	NA	custom				Split	NA	Perm
Protected Phases	5	2		3	3	7				4	4	
Permitted Phases						3						4
Actuated Green, G (s)	20.0	20.0		31.8	31.8	91.0				53.2	53.2	53.2
Effective Green, g (s)	20.0	20.0		31.8	31.8	91.0				53.2	53.2	53.2
Actuated g/C Ratio	0.17	0.17		0.27	0.27	0.76				0.44	0.44	0.44
Clearance Time (s)	5.0	5.0		5.0	5.0	4.0				5.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0				3.0	3.0	3.0
Lane Grp Cap (vph)	561	561		447	894	1144				680	1333	609
v/s Ratio Prot	c0.16	0.13		c0.25	0.11	c0.67				0.38	0.41	
v/s Ratio Perm												0.18
v/c Ratio	0.94	0.76		0.96	0.41	0.89				0.87	0.92	0.40
Uniform Delay, d1	49.4	47.7		43.5	36.3	10.8				30.2	31.4	22.6
Progression Factor	1.00	1.00		1.14	1.16	1.46				0.85	0.86	1.96
Incremental Delay, d2	23.7	5.8		24.0	0.2	5.8				8.4	7.1	1.1
Delay (s)	73.1	53.5		73.6	42.4	21.6				33.9	33.9	45.3
Level of Service	E	D		E	D	C				C	C	D
Approach Delay (s)		64.2			38.0			0.0			36.3	
Approach LOS		E			D			A			D	

Intersection Summary			
HCM 2000 Control Delay	42.2	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	79.2%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	190	360	365	850	255	280	130	545	730	240	825	145
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	4.0	5.0	5.0	4.0
Lane Util. Factor	0.91	0.91	1.00	0.91	0.91	1.00	1.00	0.91	1.00	1.00	0.91	1.00
Frpb, ped/bikes	1.00	1.00	0.99	1.00	1.00	0.97	1.00	1.00	0.99	1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	0.97	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1579	3317	1532	1579	3224	1513	1736	4988	1534	1671	4803	1476
Flt Permitted	0.95	1.00	1.00	0.95	0.97	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1579	3317	1532	1579	3224	1513	1736	4988	1534	1671	4803	1476
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	209	396	401	934	280	308	143	599	802	264	907	159
RTOR Reduction (vph)	0	0	157	0	0	208	0	0	0	0	0	0
Lane Group Flow (vph)	188	417	244	467	747	100	143	599	802	264	907	159
Confl. Peds. (#/hr)	8		1	1		8	3		1	1		3
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	8%	8%	8%
Turn Type	Split	NA	Perm	Split	NA	Perm	Prot	NA	Free	Prot	NA	Free
Protected Phases	2	2		1	1		3	8		7	4	
Permitted Phases			2			1			Free			Free
Actuated Green, G (s)	22.0	22.0	22.0	39.0	39.0	39.0	11.8	17.2	120.0	21.8	27.2	120.0
Effective Green, g (s)	22.0	22.0	22.0	39.0	39.0	39.0	11.8	17.2	120.0	21.8	27.2	120.0
Actuated g/C Ratio	0.18	0.18	0.18	0.32	0.32	0.32	0.10	0.14	1.00	0.18	0.23	1.00
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Vehicle Extension (s)	6.0	6.0	6.0	7.0	7.0	7.0	3.0	4.0		4.0	5.0	
Lane Grp Cap (vph)	289	608	280	513	1047	491	170	714	1534	303	1088	1476
v/s Ratio Prot	0.12	0.13		c0.30	0.23		0.08	c0.12		0.16	c0.19	
v/s Ratio Perm			c0.16			0.07			c0.52			0.11
v/c Ratio	0.65	0.69	0.87	0.91	0.87dl	0.20	0.84	0.84	0.52	0.87	0.83	0.11
Uniform Delay, d1	45.4	45.8	47.6	38.8	35.6	29.3	53.2	50.1	0.0	47.7	44.2	0.0
Progression Factor	1.00	1.00	1.00	0.93	0.92	1.79	1.12	1.13	1.00	1.00	1.00	1.00
Incremental Delay, d2	8.2	4.8	27.0	21.0	3.5	0.7	14.1	5.0	0.5	23.4	7.5	0.1
Delay (s)	53.6	50.6	74.6	57.3	36.1	53.1	73.6	61.4	0.5	71.2	51.8	0.1
Level of Service	D	D	E	E	D	D	E	E	A	E	D	A
Approach Delay (s)		60.7			46.0			30.9			49.5	
Approach LOS		E			D			C			D	

Intersection Summary			
HCM 2000 Control Delay	45.3	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	77.4%	ICU Level of Service	D
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.
c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	25	1050	95	35	1140	80	55	5	40	80	5	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.1	5.1		5.1	5.1		5.1	5.1			5.1	5.1
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00			1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00			1.00	0.98
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00			1.00	1.00
Frt	1.00	0.99		1.00	0.99		1.00	0.87			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00			0.95	1.00
Satd. Flow (prot)	1719	3389		1736	3437		1512	1382			1728	1514
Flt Permitted	0.95	1.00		0.95	1.00		0.68	1.00			0.70	1.00
Satd. Flow (perm)	1719	3389		1736	3437		1079	1382			1272	1514
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	27	1129	102	38	1226	86	59	5	43	86	5	27
RTOR Reduction (vph)	0	4	0	0	3	0	0	37	0	0	0	23
Lane Group Flow (vph)	27	1227	0	38	1309	0	59	11	0	0	91	4
Confl. Peds. (#/hr)			2	2			3					3
Heavy Vehicles (%)	5%	5%	5%	4%	4%	4%	19%	19%	19%	5%	5%	5%
Turn Type	Prot	NA		Prot	NA		Perm	NA		Perm	NA	Perm
Protected Phases	5	2		1	6			4			4	
Permitted Phases							4			4		4
Actuated Green, G (s)	4.9	83.5		5.4	84.0		15.8	15.8			15.8	15.8
Effective Green, g (s)	4.9	83.5		5.4	84.0		15.8	15.8			15.8	15.8
Actuated g/C Ratio	0.04	0.70		0.05	0.70		0.13	0.13			0.13	0.13
Clearance Time (s)	5.1	5.1		5.1	5.1		5.1	5.1			5.1	5.1
Vehicle Extension (s)	3.0	6.0		3.0	6.0		3.0	3.0			3.0	3.0
Lane Grp Cap (vph)	70	2358		78	2405		142	181			167	199
v/s Ratio Prot	0.02	0.36		c0.02	c0.38			0.01				
v/s Ratio Perm							0.05				c0.07	0.00
v/c Ratio	0.39	0.52		0.49	0.54		0.42	0.06			0.54	0.02
Uniform Delay, d1	56.1	8.7		55.9	8.7		47.9	45.6			48.7	45.3
Progression Factor	0.99	1.00		1.01	0.58		1.00	1.00			1.00	1.00
Incremental Delay, d2	2.7	0.6		4.5	0.9		2.0	0.1			3.6	0.0
Delay (s)	58.2	9.3		60.9	5.9		49.8	45.7			52.3	45.4
Level of Service	E	A		E	A		D	D			D	D
Approach Delay (s)		10.4			7.5			48.0			50.7	
Approach LOS		B			A			D			D	

Intersection Summary			
HCM 2000 Control Delay	12.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	15.3
Intersection Capacity Utilization	57.1%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	220	700	40	10	600	175	90	55	25	225	60	235
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.1	5.1		5.1	5.1	4.0		5.1		5.1	5.1	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00		0.95	0.95	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.98		1.00		1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00		0.99	1.00	1.00		1.00		1.00	1.00	1.00
Frt	1.00	0.99		1.00	1.00	0.85		0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.97		0.95	0.97	1.00
Satd. Flow (prot)	1752	3470		1725	3471	1520		1769		1665	1703	1548
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.75		0.95	0.97	1.00
Satd. Flow (perm)	1752	3470		1725	3471	1520		1358		1665	1703	1548
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	239	761	43	11	652	190	98	60	27	245	65	255
RTOR Reduction (vph)	0	3	0	0	0	0	0	6	0	0	0	0
Lane Group Flow (vph)	239	802	0	11	652	190	0	179	0	154	156	255
Confl. Peds. (#/hr)	2		6	6		2	2		13	13		2
Confl. Bikes (#/hr)												1
Heavy Vehicles (%)	3%	3%	3%	4%	4%	4%	2%	2%	2%	3%	3%	3%
Turn Type	Prot	NA		Prot	NA	Free	Perm	NA		Split	NA	Free
Protected Phases	5	2		1	6			3		4	4	
Permitted Phases						Free	3					Free
Actuated Green, G (s)	20.4	60.0		0.8	40.4	120.0		21.0		17.8	17.8	120.0
Effective Green, g (s)	20.4	60.0		0.8	40.4	120.0		21.0		17.8	17.8	120.0
Actuated g/C Ratio	0.17	0.50		0.01	0.34	1.00		0.18		0.15	0.15	1.00
Clearance Time (s)	5.1	5.1		5.1	5.1			5.1		5.1	5.1	
Vehicle Extension (s)	3.0	4.0		3.0	4.0			4.0		4.0	4.0	
Lane Grp Cap (vph)	297	1735		11	1168	1520		237		246	252	1548
v/s Ratio Prot	c0.14	0.23		0.01	c0.19					c0.09	0.09	
v/s Ratio Perm						0.12		c0.13				0.16
v/c Ratio	0.80	0.46		1.00	0.56	0.12		0.76		0.63	0.62	0.16
Uniform Delay, d1	47.9	19.5		59.6	32.5	0.0		47.1		48.0	47.9	0.0
Progression Factor	0.88	0.92		1.00	1.00	1.00		1.00		1.00	1.00	1.00
Incremental Delay, d2	13.2	0.8		271.4	1.9	0.2		13.6		5.5	5.1	0.2
Delay (s)	55.5	18.7		331.0	34.4	0.2		60.7		53.5	53.0	0.2
Level of Service	E	B		F	C	A		E		D	D	A
Approach Delay (s)		27.1			30.6			60.7			29.3	
Approach LOS		C			C			E			C	

Intersection Summary			
HCM 2000 Control Delay	31.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	20.4
Intersection Capacity Utilization	59.7%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	110	1065	0	0	1160	675	0	0	560	0	0	830
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0			3.0	3.0			3.0			5.0
Lane Util. Factor	1.00	0.95			0.91	1.00			1.00			1.00
Frpb, ped/bikes	1.00	1.00			1.00	0.97			1.00			1.00
Flpb, ped/bikes	1.00	1.00			1.00	1.00			1.00			1.00
Frt	1.00	1.00			1.00	0.85			0.86			0.86
Flt Protected	0.95	1.00			1.00	1.00			1.00			1.00
Satd. Flow (prot)	1703	3406			4988	1512			1580			1611
Flt Permitted	0.95	1.00			1.00	1.00			1.00			1.00
Satd. Flow (perm)	1703	3406			4988	1512			1580			1611
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	111	1076	0	0	1172	682	0	0	566	0	0	838
RTOR Reduction (vph)	0	0	0	0	0	434	0	0	184	0	0	205
Lane Group Flow (vph)	111	1076	0	0	1172	248	0	0	382	0	0	633
Confl. Peds. (#/hr)			1	1								
Confl. Bikes (#/hr)						6						
Heavy Vehicles (%)	6%	6%	6%	4%	4%	4%	4%	4%	4%	2%	2%	2%
Turn Type	Prot	NA			NA	Perm			Perm			Over
Protected Phases	1	6 8			2							1
Permitted Phases						2			2			
Actuated Green, G (s)	50.2	120.0			43.7	43.7			43.7			50.2
Effective Green, g (s)	50.2	120.0			43.7	43.7			43.7			50.2
Actuated g/C Ratio	0.42	1.00			0.36	0.36			0.36			0.42
Clearance Time (s)	5.0				3.0	3.0			3.0			5.0
Vehicle Extension (s)	3.0				0.2	0.2			0.2			3.0
Lane Grp Cap (vph)	712	3406			1816	550			575			673
v/s Ratio Prot	0.07	c0.32			0.23							c0.39
v/s Ratio Perm						0.16			c0.24			
v/c Ratio	0.16	0.32			0.65	0.45			0.66			0.94
Uniform Delay, d1	21.7	0.0			31.7	29.0			32.0			33.5
Progression Factor	1.64	1.00			1.00	1.00			1.00			1.00
Incremental Delay, d2	0.0	0.0			0.6	0.2			2.3			21.4
Delay (s)	35.6	0.0			32.3	29.2			34.3			54.8
Level of Service	D	A			C	C			C			D
Approach Delay (s)		3.4			31.2			34.3			54.8	
Approach LOS		A			C			C			D	

Intersection Summary			
HCM 2000 Control Delay	28.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	81.3%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	550	335	85	560	340	1035	0	0	0	815	940	520
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0		5.0	5.0	4.0				5.0	5.0	5.0
Lane Util. Factor	0.97	0.95		1.00	0.95	1.00				0.91	0.86	0.91
Frpb, ped/bikes	1.00	1.00		1.00	1.00	1.00				1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00				1.00	1.00	1.00
Frt	1.00	0.97		1.00	1.00	0.85				1.00	0.99	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00				0.95	0.99	1.00
Satd. Flow (prot)	3467	3455		1770	3539	1583				1579	3093	1413
Flt Permitted	0.95	1.00		0.95	1.00	1.00				0.95	0.99	1.00
Satd. Flow (perm)	3467	3455		1770	3539	1583				1579	3093	1413
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	561	342	87	571	347	1056	0	0	0	832	959	531
RTOR Reduction (vph)	0	19	0	0	0	4	0	0	0	0	2	235
Lane Group Flow (vph)	561	410	0	571	347	1052	0	0	0	599	1243	243
Confl. Peds. (#/hr)			1	1								
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	0%	0%	0%	4%	4%	4%
Turn Type	Prot	NA		Split	NA	custom				Split	NA	Perm
Protected Phases	5	2		3	3	7				4	4	
Permitted Phases						3						4
Actuated Green, G (s)	19.0	19.0		38.0	38.0	92.0				48.0	48.0	48.0
Effective Green, g (s)	19.0	19.0		38.0	38.0	92.0				48.0	48.0	48.0
Actuated g/C Ratio	0.16	0.16		0.32	0.32	0.77				0.40	0.40	0.40
Clearance Time (s)	5.0	5.0		5.0	5.0	4.0				5.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0				3.0	3.0	3.0
Lane Grp Cap (vph)	548	547		560	1120	1213				631	1237	565
v/s Ratio Prot	c0.16	0.12		c0.32	0.10	0.66				0.38	c0.40	
v/s Ratio Perm												0.17
v/c Ratio	1.02	0.75		1.02	0.31	0.87				0.95	1.00	0.43
Uniform Delay, d1	50.5	48.2		41.0	31.1	9.7				34.8	36.0	26.1
Progression Factor	1.00	1.00		1.22	1.24	1.69				0.85	0.86	2.04
Incremental Delay, d2	44.6	5.7		35.4	0.1	4.5				18.1	21.1	1.5
Delay (s)	95.1	54.0		85.4	38.8	20.9				47.7	52.0	54.6
Level of Service	F	D		F	D	C				D	D	D
Approach Delay (s)		77.3			42.7			0.0			51.4	
Approach LOS		E			D			A			D	

Intersection Summary			
HCM 2000 Control Delay	53.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.01		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	92.3%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	195	265	180	980	315	295	110	515	955	315	1030	135
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	4.0	5.0	5.0	4.0
Lane Util. Factor	0.91	0.91	1.00	0.91	0.91	1.00	1.00	0.91	1.00	1.00	0.91	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.98	1.00	1.00	0.99	1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	0.99	1.00	0.95	0.97	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1643	3432	1577	1626	3323	1563	1787	5136	1575	1736	4988	1532
Flt Permitted	0.95	0.99	1.00	0.95	0.97	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1643	3432	1577	1626	3323	1563	1787	5136	1575	1736	4988	1532
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	201	273	186	1010	325	304	113	531	985	325	1062	139
RTOR Reduction (vph)	0	0	129	0	0	205	0	0	0	0	0	0
Lane Group Flow (vph)	153	321	57	505	830	99	113	531	985	325	1062	139
Confl. Peds. (#/hr)	6		7	7		6	4		10	10		4
Confl. Bikes (#/hr)						1						
Heavy Vehicles (%)	0%	0%	0%	1%	1%	1%	1%	1%	1%	4%	4%	4%
Turn Type	Split	NA	Perm	Split	NA	Perm	Prot	NA	Free	Prot	NA	Free
Protected Phases	2	2		1	1		3	8		7	4	
Permitted Phases			2			1			Free			Free
Actuated Green, G (s)	19.8	19.8	19.8	39.0	39.0	39.0	8.8	17.7	120.0	23.5	32.4	120.0
Effective Green, g (s)	19.8	19.8	19.8	39.0	39.0	39.0	8.8	17.7	120.0	23.5	32.4	120.0
Actuated g/C Ratio	0.17	0.17	0.17	0.32	0.32	0.32	0.07	0.15	1.00	0.20	0.27	1.00
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Vehicle Extension (s)	6.0	6.0	6.0	7.0	7.0	7.0	3.0	4.0		4.0	5.0	
Lane Grp Cap (vph)	271	566	260	528	1079	507	131	757	1575	339	1346	1532
v/s Ratio Prot	0.09	0.09		c0.31	0.25		0.06	0.10		c0.19	0.21	
v/s Ratio Perm			0.04			0.06			c0.63			0.09
v/c Ratio	0.56	0.57	0.22	0.96	0.92dl	0.19	0.86	0.70	0.63	0.96	0.79	0.09
Uniform Delay, d1	46.1	46.2	43.4	39.7	36.5	29.2	55.0	48.6	0.0	47.8	40.6	0.0
Progression Factor	1.00	1.00	1.00	0.74	0.72	1.22	1.11	1.14	1.00	1.00	1.00	1.00
Incremental Delay, d2	5.5	2.7	1.2	26.9	4.1	0.6	19.8	2.1	0.7	37.8	4.8	0.1
Delay (s)	51.6	48.8	44.6	56.4	30.3	36.3	81.0	57.4	0.7	85.6	45.4	0.1
Level of Service	D	D	D	E	C	D	F	E	A	F	D	A
Approach Delay (s)		48.3			39.4			24.8			49.8	
Approach LOS		D			D			C			D	

Intersection Summary			
HCM 2000 Control Delay	39.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	85.1%	ICU Level of Service	E
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.
c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	25	1255	65	50	1385	85	80	10	70	90	10	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.1	5.1		5.1	5.1		5.1	5.1			5.1	5.1
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00			1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00			1.00	0.98
Flpb, ped/bikes	1.00	1.00		1.00	1.00		0.99	1.00			1.00	1.00
Frt	1.00	0.99		1.00	0.99		1.00	0.87			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00			0.96	1.00
Satd. Flow (prot)	1787	3544		1787	3543		1778	1634			1748	1525
Flt Permitted	0.95	1.00		0.95	1.00		0.65	1.00			0.69	1.00
Satd. Flow (perm)	1787	3544		1787	3543		1208	1634			1260	1525
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	26	1281	66	51	1413	87	82	10	71	92	10	31
RTOR Reduction (vph)	0	2	0	0	2	0	0	61	0	0	0	27
Lane Group Flow (vph)	26	1345	0	51	1498	0	82	20	0	0	102	4
Confl. Peds. (#/hr)			1	1			5					5
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	4%	4%	4%
Turn Type	Prot	NA		Prot	NA		Perm	NA		Perm	NA	Perm
Protected Phases	5	2		1	6			4			4	
Permitted Phases							4			4		4
Actuated Green, G (s)	4.5	80.6		7.4	83.5		16.7	16.7			16.7	16.7
Effective Green, g (s)	4.5	80.6		7.4	83.5		16.7	16.7			16.7	16.7
Actuated g/C Ratio	0.04	0.67		0.06	0.70		0.14	0.14			0.14	0.14
Clearance Time (s)	5.1	5.1		5.1	5.1		5.1	5.1			5.1	5.1
Vehicle Extension (s)	3.0	6.0		3.0	6.0		3.0	3.0			3.0	3.0
Lane Grp Cap (vph)	67	2380		110	2465		168	227			175	212
v/s Ratio Prot	0.01	0.38		c0.03	c0.42			0.01				
v/s Ratio Perm							0.07				c0.08	0.00
v/c Ratio	0.39	0.57		0.46	0.61		0.49	0.09			0.58	0.02
Uniform Delay, d1	56.4	10.4		54.4	9.6		47.7	45.0			48.4	44.6
Progression Factor	1.03	0.88		1.03	0.75		1.00	1.00			1.00	1.00
Incremental Delay, d2	2.7	0.7		1.8	0.7		2.2	0.2			4.9	0.0
Delay (s)	60.6	9.9		58.0	7.9		49.9	45.2			53.3	44.6
Level of Service	E	A		E	A		D	D			D	D
Approach Delay (s)		10.9			9.5			47.6			51.2	
Approach LOS		B			A			D			D	

Intersection Summary			
HCM 2000 Control Delay	13.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	15.3
Intersection Capacity Utilization	66.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	270	895	65	40	1000	245	120	80	25	280	85	285
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.1	5.1		5.1	5.1	4.0		5.1		5.1	5.1	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00		0.95	0.95	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.98		1.00		1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00		1.00		1.00	1.00	1.00
Frt	1.00	0.99		1.00	1.00	0.85		0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.97		0.95	0.97	1.00
Satd. Flow (prot)	1770	3498		1787	3574	1564		1795		1715	1757	1593
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.73		0.95	0.97	1.00
Satd. Flow (perm)	1770	3498		1787	3574	1564		1345		1715	1757	1593
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	276	913	66	41	1020	250	122	82	26	286	87	291
RTOR Reduction (vph)	0	4	0	0	0	0	0	4	0	0	0	0
Lane Group Flow (vph)	276	975	0	41	1020	250	0	226	0	183	190	291
Confl. Peds. (#/hr)	4		1	1		4	5		6	6		5
Confl. Bikes (#/hr)												1
Heavy Vehicles (%)	2%	2%	2%	1%	1%	1%	1%	1%	1%	0%	0%	0%
Turn Type	Prot	NA		Prot	NA	Free	Perm	NA		Split	NA	Free
Protected Phases	5	2		1	6			3		4	4	
Permitted Phases						Free	3					Free
Actuated Green, G (s)	23.5	51.5		4.1	32.1	120.0		24.8		19.2	19.2	120.0
Effective Green, g (s)	23.5	51.5		4.1	32.1	120.0		24.8		19.2	19.2	120.0
Actuated g/C Ratio	0.20	0.43		0.03	0.27	1.00		0.21		0.16	0.16	1.00
Clearance Time (s)	5.1	5.1		5.1	5.1			5.1		5.1	5.1	
Vehicle Extension (s)	3.0	4.0		3.0	4.0			4.0		4.0	4.0	
Lane Grp Cap (vph)	346	1501		61	956	1564		277		274	281	1593
v/s Ratio Prot	c0.16	0.28		0.02	c0.29					0.11	c0.11	
v/s Ratio Perm						0.16		c0.17				0.18
v/c Ratio	0.80	0.65		0.67	1.07	0.16		0.82		0.67	0.68	0.18
Uniform Delay, d1	46.0	27.1		57.3	44.0	0.0		45.4		47.4	47.5	0.0
Progression Factor	0.92	0.83		1.00	1.00	1.00		1.00		1.00	1.00	1.00
Incremental Delay, d2	10.6	1.9		25.4	48.7	0.2		17.5		6.6	6.9	0.3
Delay (s)	53.0	24.4		82.7	92.6	0.2		62.9		54.0	54.3	0.3
Level of Service	D	C		F	F	A		E		D	D	A
Approach Delay (s)		30.7			74.7			62.9			30.6	
Approach LOS		C			E			E			C	

Intersection Summary			
HCM 2000 Control Delay	49.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	20.4
Intersection Capacity Utilization	74.9%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	95	1016	0	0	876	430	0	0	580	0	0	817
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0			3.0	3.0			3.0			5.0
Lane Util. Factor	1.00	0.95			0.91	1.00			1.00			1.00
Frt	1.00	1.00			1.00	0.85			0.86			0.86
Flt Protected	0.95	1.00			1.00	1.00			1.00			1.00
Satd. Flow (prot)	1719	3438			4715	1468			1494			1565
Flt Permitted	0.95	1.00			1.00	1.00			1.00			1.00
Satd. Flow (perm)	1719	3438			4715	1468			1494			1565
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	101	1081	0	0	932	457	0	0	617	0	0	869
RTOR Reduction (vph)	0	0	0	0	0	305	0	0	193	0	0	192
Lane Group Flow (vph)	101	1081	0	0	932	152	0	0	424	0	0	677
Heavy Vehicles (%)	5%	5%	5%	10%	10%	10%	10%	10%	10%	5%	5%	5%
Turn Type	Prot	NA			NA	Perm			Perm			Over
Protected Phases	1	6 8			2							1
Permitted Phases						2			2			
Actuated Green, G (s)	54.1	120.0			39.8	39.8			39.8			54.1
Effective Green, g (s)	54.1	120.0			39.8	39.8			39.8			54.1
Actuated g/C Ratio	0.45	1.00			0.33	0.33			0.33			0.45
Clearance Time (s)	5.0				3.0	3.0			3.0			5.0
Vehicle Extension (s)	3.0				0.2	0.2			0.2			3.0
Lane Grp Cap (vph)	774	3438			1563	486			495			705
v/s Ratio Prot	0.06	c0.31			0.20							c0.43
v/s Ratio Perm						0.10			c0.28			
v/c Ratio	0.13	0.31			0.60	0.31			0.86			0.96
Uniform Delay, d1	19.2	0.0			33.4	29.9			37.4			31.9
Progression Factor	1.66	1.00			1.00	1.00			1.00			1.00
Incremental Delay, d2	0.0	0.0			0.4	0.1			13.1			24.5
Delay (s)	31.9	0.0			33.8	30.0			50.6			56.4
Level of Service	C	A			C	C			D			E
Approach Delay (s)		2.7			32.6			50.6			56.4	
Approach LOS		A			C			D			E	

Intersection Summary			
HCM 2000 Control Delay	31.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	75.0%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	483	330	70	390	330	938	0	0	0	731	882	493
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0		5.0	5.0	4.0				5.0	5.0	5.0
Lane Util. Factor	0.97	0.95		1.00	0.95	1.00				0.91	0.86	0.91
Frpb, ped/bikes	1.00	1.00		1.00	1.00	1.00				1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00				1.00	1.00	1.00
Frt	1.00	0.97		1.00	1.00	0.85				1.00	0.99	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00				0.95	0.99	1.00
Satd. Flow (prot)	3367	3371		1687	3374	1509				1535	3009	1374
Flt Permitted	0.95	1.00		0.95	1.00	1.00				0.95	0.99	1.00
Satd. Flow (perm)	3367	3371		1687	3374	1509				1535	3009	1374
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	531	363	77	429	363	1031	0	0	0	803	969	542
RTOR Reduction (vph)	0	15	0	0	0	4	0	0	0	0	2	243
Lane Group Flow (vph)	531	425	0	429	363	1027	0	0	0	594	1230	245
Confl. Peds. (#/hr)			1	1								
Heavy Vehicles (%)	4%	4%	4%	7%	7%	7%	0%	0%	0%	7%	7%	7%
Turn Type	Prot	NA		Split	NA	custom				Split	NA	Perm
Protected Phases	5	2		3	3	7				4	4	
Permitted Phases						3						4
Actuated Green, G (s)	20.0	20.0		31.8	31.8	91.0				53.2	53.2	53.2
Effective Green, g (s)	20.0	20.0		31.8	31.8	91.0				53.2	53.2	53.2
Actuated g/C Ratio	0.17	0.17		0.27	0.27	0.76				0.44	0.44	0.44
Clearance Time (s)	5.0	5.0		5.0	5.0	4.0				5.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0				3.0	3.0	3.0
Lane Grp Cap (vph)	561	561		447	894	1144				680	1333	609
v/s Ratio Prot	c0.16	0.13		0.25	0.11	c0.68				0.39	0.41	
v/s Ratio Perm												0.18
v/c Ratio	0.95	0.76		0.96	0.41	0.90				0.87	0.92	0.40
Uniform Delay, d1	49.5	47.7		43.5	36.3	11.0				30.3	31.5	22.6
Progression Factor	1.00	1.00		1.14	1.16	1.47				0.84	0.85	1.94
Incremental Delay, d2	25.1	5.8		23.8	0.2	6.2				8.6	7.2	1.1
Delay (s)	74.6	53.5		73.5	42.4	22.3				34.2	34.0	44.9
Level of Service	E	D		E	D	C				C	C	D
Approach Delay (s)		65.0			38.4			0.0			36.4	
Approach LOS		E			D			A			D	

Intersection Summary			
HCM 2000 Control Delay	42.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.96		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	79.4%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	190	360	365	861	255	282	130	545	741	242	825	145
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	4.0	5.0	5.0	4.0
Lane Util. Factor	0.91	0.91	1.00	0.91	0.91	1.00	1.00	0.91	1.00	1.00	0.91	1.00
Frpb, ped/bikes	1.00	1.00	0.99	1.00	1.00	0.97	1.00	1.00	0.99	1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	0.97	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1579	3317	1532	1579	3224	1513	1736	4988	1534	1671	4803	1476
Flt Permitted	0.95	1.00	1.00	0.95	0.97	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1579	3317	1532	1579	3224	1513	1736	4988	1534	1671	4803	1476
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	209	396	401	946	280	310	143	599	814	266	907	159
RTOR Reduction (vph)	0	0	157	0	0	209	0	0	0	0	0	0
Lane Group Flow (vph)	188	417	244	473	753	101	143	599	814	266	907	159
Confl. Peds. (#/hr)	8		1	1		8	3		1	1		3
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	8%	8%	8%
Turn Type	Split	NA	Perm	Split	NA	Perm	Prot	NA	Free	Prot	NA	Free
Protected Phases	2	2		1	1		3	8		7	4	
Permitted Phases			2			1			Free			Free
Actuated Green, G (s)	22.0	22.0	22.0	39.0	39.0	39.0	11.8	17.2	120.0	21.8	27.2	120.0
Effective Green, g (s)	22.0	22.0	22.0	39.0	39.0	39.0	11.8	17.2	120.0	21.8	27.2	120.0
Actuated g/C Ratio	0.18	0.18	0.18	0.32	0.32	0.32	0.10	0.14	1.00	0.18	0.23	1.00
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Vehicle Extension (s)	6.0	6.0	6.0	7.0	7.0	7.0	3.0	4.0		4.0	5.0	
Lane Grp Cap (vph)	289	608	280	513	1047	491	170	714	1534	303	1088	1476
v/s Ratio Prot	0.12	0.13		c0.30	0.23		0.08	c0.12		0.16	c0.19	
v/s Ratio Perm			c0.16			0.07			c0.53			0.11
v/c Ratio	0.65	0.69	0.87	0.92	0.88dl	0.21	0.84	0.84	0.53	0.88	0.83	0.11
Uniform Delay, d1	45.4	45.8	47.6	39.0	35.7	29.3	53.2	50.1	0.0	47.8	44.2	0.0
Progression Factor	1.00	1.00	1.00	0.93	0.91	1.74	1.12	1.13	1.00	1.00	1.00	1.00
Incremental Delay, d2	8.2	4.8	27.0	22.7	3.6	0.7	13.6	4.8	0.5	24.2	7.5	0.1
Delay (s)	53.6	50.6	74.6	59.0	36.1	51.7	73.1	61.3	0.5	72.0	51.8	0.1
Level of Service	D	D	E	E	D	D	E	E	A	E	D	A
Approach Delay (s)		60.7			46.3			30.6			49.7	
Approach LOS		E			D			C			D	

Intersection Summary			
HCM 2000 Control Delay	45.3	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	77.8%	ICU Level of Service	D
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.
c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	25	1050	108	41	1140	80	68	6	46	80	6	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.1	5.1		5.1	5.1		5.1	5.1			5.1	5.1
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00			1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00			1.00	0.98
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00			1.00	1.00
Frt	1.00	0.99		1.00	0.99		1.00	0.87			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00			0.96	1.00
Satd. Flow (prot)	1719	3383		1736	3437		1512	1383			1729	1514
Flt Permitted	0.95	1.00		0.95	1.00		0.68	1.00			0.70	1.00
Satd. Flow (perm)	1719	3383		1736	3437		1075	1383			1267	1514
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	27	1129	116	44	1226	86	73	6	49	86	6	27
RTOR Reduction (vph)	0	4	0	0	3	0	0	43	0	0	0	23
Lane Group Flow (vph)	27	1241	0	44	1309	0	73	12	0	0	92	4
Confl. Peds. (#/hr)			2	2			3					3
Heavy Vehicles (%)	5%	5%	5%	4%	4%	4%	19%	19%	19%	5%	5%	5%
Turn Type	Prot	NA		Prot	NA		Perm	NA		Perm	NA	Perm
Protected Phases	5	2		1	6			4			4	
Permitted Phases							4			4		4
Actuated Green, G (s)	4.9	81.8		7.0	83.9		15.9	15.9			15.9	15.9
Effective Green, g (s)	4.9	81.8		7.0	83.9		15.9	15.9			15.9	15.9
Actuated g/C Ratio	0.04	0.68		0.06	0.70		0.13	0.13			0.13	0.13
Clearance Time (s)	5.1	5.1		5.1	5.1		5.1	5.1			5.1	5.1
Vehicle Extension (s)	3.0	6.0		3.0	6.0		3.0	3.0			3.0	3.0
Lane Grp Cap (vph)	70	2306		101	2403		142	183			167	200
v/s Ratio Prot	0.02	0.37		c0.03	c0.38			0.01				
v/s Ratio Perm							0.07				c0.07	0.00
v/c Ratio	0.39	0.54		0.44	0.54		0.51	0.07			0.55	0.02
Uniform Delay, d1	56.1	9.6		54.6	8.8		48.5	45.6			48.7	45.3
Progression Factor	0.99	1.00		1.01	0.58		1.00	1.00			1.00	1.00
Incremental Delay, d2	2.7	0.7		2.9	0.9		3.1	0.2			3.9	0.0
Delay (s)	58.0	10.3		58.0	6.0		51.6	45.7			52.6	45.3
Level of Service	E	B		E	A		D	D			D	D
Approach Delay (s)		11.3			7.7			49.1			50.9	
Approach LOS		B			A			D			D	

Intersection Summary			
HCM 2000 Control Delay	12.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	15.3
Intersection Capacity Utilization	57.1%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	221	703	40	10	603	175	90	55	25	225	60	236
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.1	5.1		5.1	5.1	4.0		5.1		5.1	5.1	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00		0.95	0.95	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.98		1.00		1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00		0.99	1.00	1.00		1.00		1.00	1.00	1.00
Frt	1.00	0.99		1.00	1.00	0.85		0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.97		0.95	0.97	1.00
Satd. Flow (prot)	1752	3470		1725	3471	1520		1769		1665	1703	1548
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.75		0.95	0.97	1.00
Satd. Flow (perm)	1752	3470		1725	3471	1520		1358		1665	1703	1548
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	240	764	43	11	655	190	98	60	27	245	65	257
RTOR Reduction (vph)	0	3	0	0	0	0	0	6	0	0	0	0
Lane Group Flow (vph)	240	805	0	11	655	190	0	179	0	154	156	257
Confl. Peds. (#/hr)	2		6	6		2	2		13	13		2
Confl. Bikes (#/hr)												1
Heavy Vehicles (%)	3%	3%	3%	4%	4%	4%	2%	2%	2%	3%	3%	3%
Turn Type	Prot	NA		Prot	NA	Free	Perm	NA		Split	NA	Free
Protected Phases	5	2		1	6			3		4	4	
Permitted Phases						Free	3					Free
Actuated Green, G (s)	20.5	60.0		0.8	40.3	120.0		21.0		17.8	17.8	120.0
Effective Green, g (s)	20.5	60.0		0.8	40.3	120.0		21.0		17.8	17.8	120.0
Actuated g/C Ratio	0.17	0.50		0.01	0.34	1.00		0.18		0.15	0.15	1.00
Clearance Time (s)	5.1	5.1		5.1	5.1			5.1		5.1	5.1	
Vehicle Extension (s)	3.0	4.0		3.0	4.0			4.0		4.0	4.0	
Lane Grp Cap (vph)	299	1735		11	1165	1520		237		246	252	1548
v/s Ratio Prot	c0.14	0.23		0.01	c0.19					c0.09	0.09	
v/s Ratio Perm						0.12		c0.13				0.17
v/c Ratio	0.80	0.46		1.00	0.56	0.12		0.76		0.63	0.62	0.17
Uniform Delay, d1	47.8	19.5		59.6	32.6	0.0		47.1		48.0	47.9	0.0
Progression Factor	0.87	0.87		1.00	1.00	1.00		1.00		1.00	1.00	1.00
Incremental Delay, d2	12.8	0.8		271.4	2.0	0.2		13.6		5.5	5.1	0.2
Delay (s)	54.3	17.8		331.0	34.6	0.2		60.7		53.5	53.0	0.2
Level of Service	D	B		F	C	A		E		D	D	A
Approach Delay (s)		26.2			30.8			60.7			29.2	
Approach LOS		C			C			E			C	

Intersection Summary			
HCM 2000 Control Delay	30.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	20.4
Intersection Capacity Utilization	59.8%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	110	1066	0	0	1161	675	0	0	560	0	0	831
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0			3.0	3.0			3.0			5.0
Lane Util. Factor	1.00	0.95			0.91	1.00			1.00			1.00
Frpb, ped/bikes	1.00	1.00			1.00	0.97			1.00			1.00
Flpb, ped/bikes	1.00	1.00			1.00	1.00			1.00			1.00
Frt	1.00	1.00			1.00	0.85			0.86			0.86
Flt Protected	0.95	1.00			1.00	1.00			1.00			1.00
Satd. Flow (prot)	1703	3406			4988	1512			1580			1611
Flt Permitted	0.95	1.00			1.00	1.00			1.00			1.00
Satd. Flow (perm)	1703	3406			4988	1512			1580			1611
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	111	1077	0	0	1173	682	0	0	566	0	0	839
RTOR Reduction (vph)	0	0	0	0	0	434	0	0	183	0	0	204
Lane Group Flow (vph)	111	1077	0	0	1173	248	0	0	383	0	0	635
Confl. Peds. (#/hr)			1	1								
Confl. Bikes (#/hr)						6						
Heavy Vehicles (%)	6%	6%	6%	4%	4%	4%	4%	4%	4%	2%	2%	2%
Turn Type	Prot	NA			NA	Perm			Perm			Over
Protected Phases	1	6 8			2							1
Permitted Phases						2			2			
Actuated Green, G (s)	50.3	120.0			43.6	43.6			43.6			50.3
Effective Green, g (s)	50.3	120.0			43.6	43.6			43.6			50.3
Actuated g/C Ratio	0.42	1.00			0.36	0.36			0.36			0.42
Clearance Time (s)	5.0				3.0	3.0			3.0			5.0
Vehicle Extension (s)	3.0				0.2	0.2			0.2			3.0
Lane Grp Cap (vph)	713	3406			1812	549			574			675
v/s Ratio Prot	0.07	c0.32			0.24							c0.39
v/s Ratio Perm						0.16			c0.24			
v/c Ratio	0.16	0.32			0.65	0.45			0.67			0.94
Uniform Delay, d1	21.7	0.0			31.8	29.1			32.1			33.4
Progression Factor	1.64	1.00			1.00	1.00			1.00			1.00
Incremental Delay, d2	0.0	0.0			0.6	0.2			2.3			21.2
Delay (s)	35.5	0.0			32.4	29.3			34.4			54.6
Level of Service	D	A			C	C			C			D
Approach Delay (s)		3.3			31.3			34.4			54.6	
Approach LOS		A			C			C			D	

Intersection Summary			
HCM 2000 Control Delay	28.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	81.4%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	551	335	85	560	340	1038	0	0	0	816	941	521
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0		5.0	5.0	4.0				5.0	5.0	5.0
Lane Util. Factor	0.97	0.95		1.00	0.95	1.00				0.91	0.86	0.91
Frpb, ped/bikes	1.00	1.00		1.00	1.00	1.00				1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00				1.00	1.00	1.00
Frt	1.00	0.97		1.00	1.00	0.85				1.00	0.99	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00				0.95	0.99	1.00
Satd. Flow (prot)	3467	3455		1770	3539	1583				1579	3093	1413
Flt Permitted	0.95	1.00		0.95	1.00	1.00				0.95	0.99	1.00
Satd. Flow (perm)	3467	3455		1770	3539	1583				1579	3093	1413
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	562	342	87	571	347	1059	0	0	0	833	960	532
RTOR Reduction (vph)	0	19	0	0	0	4	0	0	0	0	2	236
Lane Group Flow (vph)	562	410	0	571	347	1055	0	0	0	600	1244	243
Confl. Peds. (#/hr)			1	1								
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	0%	0%	0%	4%	4%	4%
Turn Type	Prot	NA		Split	NA	custom				Split	NA	Perm
Protected Phases	5	2		3	3	7				4	4	
Permitted Phases						3						4
Actuated Green, G (s)	19.0	19.0		38.0	38.0	92.0				48.0	48.0	48.0
Effective Green, g (s)	19.0	19.0		38.0	38.0	92.0				48.0	48.0	48.0
Actuated g/C Ratio	0.16	0.16		0.32	0.32	0.77				0.40	0.40	0.40
Clearance Time (s)	5.0	5.0		5.0	5.0	4.0				5.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0				3.0	3.0	3.0
Lane Grp Cap (vph)	548	547		560	1120	1213				631	1237	565
v/s Ratio Prot	c0.16	0.12		c0.32	0.10	0.67				0.38	c0.40	
v/s Ratio Perm												0.17
v/c Ratio	1.03	0.75		1.02	0.31	0.87				0.95	1.01	0.43
Uniform Delay, d1	50.5	48.2		41.0	31.1	9.8				34.9	36.0	26.1
Progression Factor	1.00	1.00		1.22	1.24	1.69				0.85	0.86	2.04
Incremental Delay, d2	45.1	5.7		35.4	0.1	4.5				18.3	21.2	1.5
Delay (s)	95.6	54.0		85.3	38.7	21.1				47.8	52.1	54.7
Level of Service	F	D		F	D	C				D	D	D
Approach Delay (s)		77.6			42.7			0.0			51.5	
Approach LOS		E			D			A			D	

Intersection Summary			
HCM 2000 Control Delay	53.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.01		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	92.4%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	195	265	180	984	315	295	110	515	959	315	1030	135
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	4.0	5.0	5.0	4.0
Lane Util. Factor	0.91	0.91	1.00	0.91	0.91	1.00	1.00	0.91	1.00	1.00	0.91	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.98	1.00	1.00	0.99	1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	0.99	1.00	0.95	0.97	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1643	3432	1577	1626	3323	1563	1787	5136	1575	1736	4988	1532
Flt Permitted	0.95	0.99	1.00	0.95	0.97	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1643	3432	1577	1626	3323	1563	1787	5136	1575	1736	4988	1532
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	201	273	186	1014	325	304	113	531	989	325	1062	139
RTOR Reduction (vph)	0	0	129	0	0	205	0	0	0	0	0	0
Lane Group Flow (vph)	153	321	57	507	832	99	113	531	989	325	1062	139
Confl. Peds. (#/hr)	6		7	7		6	4		10	10		4
Confl. Bikes (#/hr)						1						
Heavy Vehicles (%)	0%	0%	0%	1%	1%	1%	1%	1%	1%	4%	4%	4%
Turn Type	Split	NA	Perm	Split	NA	Perm	Prot	NA	Free	Prot	NA	Free
Protected Phases	2	2		1	1		3	8		7	4	
Permitted Phases			2			1			Free			Free
Actuated Green, G (s)	19.8	19.8	19.8	39.0	39.0	39.0	8.8	17.7	120.0	23.5	32.4	120.0
Effective Green, g (s)	19.8	19.8	19.8	39.0	39.0	39.0	8.8	17.7	120.0	23.5	32.4	120.0
Actuated g/C Ratio	0.17	0.17	0.17	0.32	0.32	0.32	0.07	0.15	1.00	0.20	0.27	1.00
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Vehicle Extension (s)	6.0	6.0	6.0	7.0	7.0	7.0	3.0	4.0		4.0	5.0	
Lane Grp Cap (vph)	271	566	260	528	1079	507	131	757	1575	339	1346	1532
v/s Ratio Prot	0.09	0.09		c0.31	0.25		0.06	0.10		c0.19	0.21	
v/s Ratio Perm			0.04			0.06			c0.63			0.09
v/c Ratio	0.56	0.57	0.22	0.96	0.92dl	0.19	0.86	0.70	0.63	0.96	0.79	0.09
Uniform Delay, d1	46.1	46.2	43.4	39.7	36.5	29.2	55.0	48.6	0.0	47.8	40.6	0.0
Progression Factor	1.00	1.00	1.00	0.74	0.72	1.21	1.12	1.14	1.00	1.00	1.00	1.00
Incremental Delay, d2	5.5	2.7	1.2	27.6	4.1	0.6	19.6	2.1	0.7	37.8	4.8	0.1
Delay (s)	51.6	48.8	44.6	57.2	30.4	36.0	80.9	57.3	0.7	85.6	45.4	0.1
Level of Service	D	D	D	E	C	D	F	E	A	F	D	A
Approach Delay (s)		48.3			39.7			24.7			49.8	
Approach LOS		D			D			C			D	

Intersection Summary			
HCM 2000 Control Delay	39.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	85.2%	ICU Level of Service	E
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.
c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	25	1255	69	54	1385	85	84	10	74	90	10	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.1	5.1		5.1	5.1		5.1	5.1			5.1	5.1
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00			1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00			1.00	0.98
Flpb, ped/bikes	1.00	1.00		1.00	1.00		0.99	1.00			1.00	1.00
Frt	1.00	0.99		1.00	0.99		1.00	0.87			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00			0.96	1.00
Satd. Flow (prot)	1787	3543		1787	3543		1778	1632			1748	1525
Flt Permitted	0.95	1.00		0.95	1.00		0.65	1.00			0.68	1.00
Satd. Flow (perm)	1787	3543		1787	3543		1208	1632			1247	1525
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	26	1281	70	55	1413	87	86	10	76	92	10	31
RTOR Reduction (vph)	0	2	0	0	2	0	0	65	0	0	0	27
Lane Group Flow (vph)	26	1349	0	55	1498	0	86	21	0	0	102	4
Confl. Peds. (#/hr)			1	1			5					5
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	4%	4%	4%
Turn Type	Prot	NA		Prot	NA		Perm	NA		Perm	NA	Perm
Protected Phases	5	2		1	6			4			4	
Permitted Phases							4			4		4
Actuated Green, G (s)	4.5	80.4		7.6	83.5		16.7	16.7			16.7	16.7
Effective Green, g (s)	4.5	80.4		7.6	83.5		16.7	16.7			16.7	16.7
Actuated g/C Ratio	0.04	0.67		0.06	0.70		0.14	0.14			0.14	0.14
Clearance Time (s)	5.1	5.1		5.1	5.1		5.1	5.1			5.1	5.1
Vehicle Extension (s)	3.0	6.0		3.0	6.0		3.0	3.0			3.0	3.0
Lane Grp Cap (vph)	67	2373		113	2465		168	227			173	212
v/s Ratio Prot	0.01	0.38		c0.03	c0.42			0.01				
v/s Ratio Perm							0.07				c0.08	0.00
v/c Ratio	0.39	0.57		0.49	0.61		0.51	0.09			0.59	0.02
Uniform Delay, d1	56.4	10.6		54.3	9.6		47.9	45.0			48.4	44.6
Progression Factor	1.04	0.88		1.03	0.75		1.00	1.00			1.00	1.00
Incremental Delay, d2	2.7	0.7		1.9	0.7		2.6	0.2			5.1	0.0
Delay (s)	61.1	10.0		57.9	7.9		50.5	45.2			53.5	44.6
Level of Service	E	B		E	A		D	D			D	D
Approach Delay (s)		11.0			9.7			47.8			51.4	
Approach LOS		B			A			D			D	

Intersection Summary			
HCM 2000 Control Delay	14.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	15.3
Intersection Capacity Utilization	67.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	270	898	65	40	1003	245	120	80	25	280	85	285
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.1	5.1		5.1	5.1	4.0		5.1		5.1	5.1	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00		0.95	0.95	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.98		1.00		1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00		1.00		1.00	1.00	1.00
Frt	1.00	0.99		1.00	1.00	0.85		0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.97		0.95	0.97	1.00
Satd. Flow (prot)	1770	3498		1787	3574	1564		1795		1715	1757	1593
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.73		0.95	0.97	1.00
Satd. Flow (perm)	1770	3498		1787	3574	1564		1345		1715	1757	1593
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	276	916	66	41	1023	250	122	82	26	286	87	291
RTOR Reduction (vph)	0	4	0	0	0	0	0	4	0	0	0	0
Lane Group Flow (vph)	276	978	0	41	1023	250	0	226	0	183	190	291
Confl. Peds. (#/hr)	4		1	1		4	5		6	6		5
Confl. Bikes (#/hr)												1
Heavy Vehicles (%)	2%	2%	2%	1%	1%	1%	1%	1%	1%	0%	0%	0%
Turn Type	Prot	NA		Prot	NA	Free	Perm	NA		Split	NA	Free
Protected Phases	5	2		1	6			3		4	4	
Permitted Phases						Free	3					Free
Actuated Green, G (s)	23.5	51.5		4.1	32.1	120.0		24.8		19.2	19.2	120.0
Effective Green, g (s)	23.5	51.5		4.1	32.1	120.0		24.8		19.2	19.2	120.0
Actuated g/C Ratio	0.20	0.43		0.03	0.27	1.00		0.21		0.16	0.16	1.00
Clearance Time (s)	5.1	5.1		5.1	5.1			5.1		5.1	5.1	
Vehicle Extension (s)	3.0	4.0		3.0	4.0			4.0		4.0	4.0	
Lane Grp Cap (vph)	346	1501		61	956	1564		277		274	281	1593
v/s Ratio Prot	c0.16	0.28		0.02	c0.29					0.11	c0.11	
v/s Ratio Perm						0.16		c0.17				0.18
v/c Ratio	0.80	0.65		0.67	1.07	0.16		0.82		0.67	0.68	0.18
Uniform Delay, d1	46.0	27.1		57.3	44.0	0.0		45.4		47.4	47.5	0.0
Progression Factor	0.92	0.83		1.00	1.00	1.00		1.00		1.00	1.00	1.00
Incremental Delay, d2	10.5	1.9		25.4	49.8	0.2		17.5		6.6	6.9	0.3
Delay (s)	53.0	24.3		82.7	93.7	0.2		62.9		54.0	54.3	0.3
Level of Service	D	C		F	F	A		E		D	D	A
Approach Delay (s)		30.6			75.6			62.9			30.6	
Approach LOS		C			E			E			C	

Intersection Summary			
HCM 2000 Control Delay	49.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	20.4
Intersection Capacity Utilization	75.0%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	240	610	110	220	555	120
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0	4.0	4.0	4.0
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	1.00
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3438	1538	1736	3471	3502	1594
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3438	1538	1736	3471	3502	1594
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	250	635	115	229	578	125
RTOR Reduction (vph)	0	389	0	0	0	94
Lane Group Flow (vph)	250	246	115	229	578	31
Confl. Peds. (#/hr)		1	1			1
Heavy Vehicles (%)	5%	5%	4%	4%	0%	0%
Turn Type	NA	Prot	Prot	NA	Prot	Perm
Protected Phases	2	2	1	6	8	
Permitted Phases						8
Actuated Green, G (s)	22.8	22.8	7.6	36.4	14.5	14.5
Effective Green, g (s)	22.8	22.8	7.6	36.4	14.5	14.5
Actuated g/C Ratio	0.39	0.39	0.13	0.62	0.25	0.25
Clearance Time (s)	5.0	5.0	5.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1330	595	224	2145	862	392
v/s Ratio Prot	0.07	c0.16	c0.07	0.07	c0.17	
v/s Ratio Perm						0.02
v/c Ratio	0.19	0.41	0.51	0.11	0.67	0.08
Uniform Delay, d1	11.9	13.2	23.9	4.6	20.0	17.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.3	2.1	2.0	0.0	2.1	0.1
Delay (s)	12.2	15.3	25.9	4.6	22.1	17.2
Level of Service	B	B	C	A	C	B
Approach Delay (s)	14.4			11.7	21.2	
Approach LOS	B			B	C	

Intersection Summary			
HCM 2000 Control Delay	16.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	58.9	Sum of lost time (s)	15.0
Intersection Capacity Utilization	51.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	25	30	15	140	30	120	20	525	125	95	525	20
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1900	1827	1827	1900	1792	1792	1900	1827	1827	1900
Adj Flow Rate, veh/h	26	32	16	147	32	126	21	553	132	100	553	21
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	6	6	6	4	4	4	6	6	6	4	4	4
Cap, veh/h	317	238	119	419	68	269	485	1061	252	484	1515	57
Arrive On Green	0.21	0.21	0.21	0.21	0.21	0.21	0.03	0.39	0.39	0.08	0.44	0.44
Sat Flow, veh/h	1177	1129	564	1326	324	1277	1707	2730	649	1740	3410	129
Grp Volume(v), veh/h	26	0	48	147	0	158	21	344	341	100	281	293
Grp Sat Flow(s),veh/h/ln	1177	0	1693	1326	0	1602	1707	1703	1676	1740	1736	1804
Q Serve(g_s), s	0.8	0.0	1.0	4.3	0.0	3.7	0.3	6.6	6.6	1.4	4.5	4.6
Cycle Q Clear(g_c), s	4.5	0.0	1.0	5.3	0.0	3.7	0.3	6.6	6.6	1.4	4.5	4.6
Prop In Lane	1.00		0.33	1.00		0.80	1.00		0.39	1.00		0.07
Lane Grp Cap(c), veh/h	317	0	357	419	0	338	485	662	651	484	771	802
V/C Ratio(X)	0.08	0.00	0.13	0.35	0.00	0.47	0.04	0.52	0.52	0.21	0.36	0.37
Avail Cap(c_a), veh/h	875	0	1160	1048	0	1097	642	1054	1037	601	1127	1172
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.6	0.0	13.6	15.7	0.0	14.6	7.4	9.9	9.9	6.9	7.8	7.8
Incr Delay (d2), s/veh	0.1	0.0	0.2	0.5	0.0	1.0	0.0	0.6	0.7	0.2	0.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	0.3	0.0	0.5	1.6	0.0	1.7	0.1	3.2	3.1	0.7	2.2	2.3
LnGrp Delay(d),s/veh	16.7	0.0	13.7	16.2	0.0	15.6	7.4	10.6	10.6	7.1	8.1	8.1
LnGrp LOS	B		B	B		B	A	B	B	A	A	A
Approach Vol, veh/h		74			305			706			674	
Approach Delay, s/veh		14.8			15.9			10.5			7.9	
Approach LOS		B			B			B			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	8.0	20.9		13.4	5.6	23.3		13.4
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	6.3	26.2		29.0	5.0	27.5		29.0
Max Q Clear Time (g_c+I1), s	3.4	8.6		6.5	2.3	6.6		7.3
Green Ext Time (p_c), s	0.1	7.6		1.8	0.0	8.3		1.8

Intersection Summary	
HCM 2010 Ctrl Delay	10.6
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	10	10	70	60	5	45	100	655	70	35	655	25
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		1.00	0.99		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1810	1810	1900	1900	1667	1900	1827	1827	1900	1845	1845	1900
Adj Flow Rate, veh/h	10	10	0	62	5	0	104	682	73	36	682	26
Adj No. of Lanes	1	1	0	0	1	0	1	2	0	1	2	0
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	5	5	14	14	14	4	4	4	3	3	3
Cap, veh/h	413	203	0	358	10	0	590	1852	198	571	2016	77
Arrive On Green	0.11	0.11	0.00	0.11	0.11	0.00	0.59	0.59	0.59	0.59	0.59	0.59
Sat Flow, veh/h	1354	1810	0	1117	90	0	722	3162	338	697	3442	131
Grp Volume(v), veh/h	10	10	0	67	0	0	104	374	381	36	347	361
Grp Sat Flow(s),veh/h/ln	1354	1810	0	1208	0	0	722	1736	1764	697	1752	1820
Q Serve(g_s), s	0.0	0.1	0.0	1.5	0.0	0.0	2.6	3.4	3.4	0.9	3.0	3.1
Cycle Q Clear(g_c), s	0.2	0.1	0.0	1.6	0.0	0.0	5.6	3.4	3.4	4.3	3.0	3.1
Prop In Lane	1.00		0.00	0.93		0.00	1.00		0.19	1.00		0.07
Lane Grp Cap(c), veh/h	413	203	0	368	0	0	590	1017	1034	571	1027	1066
V/C Ratio(X)	0.02	0.05	0.00	0.18	0.00	0.00	0.18	0.37	0.37	0.06	0.34	0.34
Avail Cap(c_a), veh/h	1442	1578	0	1328	0	0	773	1456	1480	747	1470	1527
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	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	11.8	11.8	0.0	12.5	0.0	0.0	4.6	3.3	3.3	4.4	3.2	3.2
Incr Delay (d2), s/veh	0.0	0.1	0.0	0.2	0.0	0.0	0.1	0.2	0.2	0.0	0.2	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(-26165%),veh/ln	0.1	0.1	0.0	0.5	0.0	0.0	0.5	1.6	1.7	0.2	1.5	1.6
LnGrp Delay(d),s/veh	11.8	11.9	0.0	12.8	0.0	0.0	4.8	3.5	3.5	4.4	3.4	3.4
LnGrp LOS	B	B		B			A	A	A	A	A	A
Approach Vol, veh/h		20			67			859			744	
Approach Delay, s/veh		11.9			12.8			3.6			3.4	
Approach LOS		B			B			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		22.0		7.8		22.0		7.8
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5
Max Green Setting (Gmax), s		25.0		26.0		25.0		26.0
Max Q Clear Time (g_c+I1), s		7.6		2.2		6.3		3.6
Green Ext Time (p_c), s		9.8		0.4		10.2		0.4

Intersection Summary	
HCM 2010 Ctrl Delay	4.0
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	165	65	105	440	715	250	75	675	55
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		0.97	1.00		0.99
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1827	1827	1827	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h				118	139	0	454	737	258	77	696	57
Adj No. of Lanes				1	1	1	1	2	1	1	4	1
Peak Hour Factor				0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %				4	4	4	3	3	3	3	3	3
Cap, veh/h				224	235	200	673	1883	820	115	1395	340
Arrive On Green				0.13	0.13	0.00	0.38	0.54	0.54	0.07	0.22	0.22
Sat Flow, veh/h				1740	1827	1553	1757	3505	1526	1757	6346	1547
Grp Volume(v), veh/h				118	139	0	454	737	258	77	696	57
Grp Sat Flow(s),veh/h/ln				1740	1827	1553	1757	1752	1526	1757	1586	1547
Q Serve(g_s), s				3.2	3.6	0.0	10.8	6.2	4.7	2.2	4.8	1.5
Cycle Q Clear(g_c), s				3.2	3.6	0.0	10.8	6.2	4.7	2.2	4.8	1.5
Prop In Lane				1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h				224	235	200	673	1883	820	115	1395	340
V/C Ratio(X)				0.53	0.59	0.00	0.67	0.39	0.31	0.67	0.50	0.17
Avail Cap(c_a), veh/h				935	981	834	926	2650	1154	227	2272	554
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh				20.5	20.7	0.0	12.9	6.8	6.5	23.0	17.2	15.9
Incr Delay (d2), s/veh				1.9	2.4	0.0	1.2	0.1	0.2	6.5	0.3	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
%ile BackOfQ(-26165%),veh/ln				1.6	2.0	0.0	5.4	3.0	2.0	1.3	2.2	0.7
LnGrp Delay(d),s/veh				22.4	23.0	0.0	14.1	6.9	6.7	29.5	17.5	16.1
LnGrp LOS				C	C		B	A	A	C	B	B
Approach Vol, veh/h					257			1449			830	
Approach Delay, s/veh					22.7			9.1			18.5	
Approach LOS					C			A			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2			5	6		8
Phs Duration (G+Y+Rc), s	7.8	31.5			23.8	15.5		11.0
Change Period (Y+Rc), s	4.5	4.5			4.5	4.5		4.5
Max Green Setting (Gmax), s	6.5	38.0			26.5	18.0		27.0
Max Q Clear Time (g_c+I1), s	4.2	8.2			12.8	6.8		5.6
Green Ext Time (p_c), s	0.0	9.0			6.5	3.8		1.0

Intersection Summary	
HCM 2010 Ctrl Delay	13.6
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	155	135	315	290	0	200	0	1050	360	180	665	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1845	0	1845	0	1863	1863	1863	1863	0
Adj Flow Rate, veh/h	160	139	325	299	0	206	0	1082	371	186	686	0
Adj No. of Lanes	1	1	1	2	0	1	0	3	1	1	3	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	3	0	3	0	2	2	2	2	0
Cap, veh/h	497	522	435	0	0	0	0	2137	661	359	2926	0
Arrive On Green	0.28	0.28	0.28	0.00	0.00	0.00	0.00	0.42	0.42	0.08	0.58	0.00
Sat Flow, veh/h	1774	1863	1552		0		0	5253	1574	1774	5253	0
Grp Volume(v), veh/h	160	139	325		0.0		0	1082	371	186	686	0
Grp Sat Flow(s),veh/h/ln	1774	1863	1552				0	1695	1574	1774	1695	0
Q Serve(g_s), s	4.5	3.6	11.9				0.0	9.8	11.2	3.4	4.1	0.0
Cycle Q Clear(g_c), s	4.5	3.6	11.9				0.0	9.8	11.2	3.4	4.1	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	497	522	435				0	2137	661	359	2926	0
V/C Ratio(X)	0.32	0.27	0.75				0.00	0.51	0.56	0.52	0.23	0.00
Avail Cap(c_a), veh/h	1081	1135	945				0	2527	782	368	3343	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	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	17.8	17.5	20.4				0.0	13.3	13.7	9.8	6.5	0.0
Incr Delay (d2), s/veh	0.4	0.3	2.6				0.0	0.2	0.7	1.2	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(-26165%),veh/ln	2.2	1.9	5.4				0.0	4.5	4.9	1.7	1.9	0.0
LnGrp Delay(d),s/veh	18.1	17.7	23.0				0.0	13.5	14.5	11.0	6.5	0.0
LnGrp LOS	B	B	C					B	B	B	A	
Approach Vol, veh/h		624						1453			872	
Approach Delay, s/veh		20.6						13.8			7.5	
Approach LOS		C						B			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	9.7	30.7		22.0		40.4		
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5		
Max Green Setting (Gmax), s	5.5	31.0		38.0		41.0		
Max Q Clear Time (g_c+I1), s	5.4	13.2		13.9		6.1		
Green Ext Time (p_c), s	0.0	12.7		2.5		19.8		

Intersection Summary	
HCM 2010 Ctrl Delay	13.3
HCM 2010 LOS	B

Notes

User approved changes to right turn type.

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	325	490	425	270	440	320
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1827	1827	1845	1845
Adj Flow Rate, veh/h	339	510	443	281	458	333
Adj No. of Lanes	2	2	2	1	2	1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	4	4	4	4	3	3
Cap, veh/h	792	2026	884	747	773	724
Arrive On Green	0.23	0.58	0.25	0.25	0.23	0.23
Sat Flow, veh/h	3375	3563	3563	1550	3408	1568
Grp Volume(v), veh/h	339	510	443	281	458	333
Grp Sat Flow(s),veh/h/ln	1688	1736	1736	1550	1704	1568
Q Serve(g_s), s	4.1	3.4	5.2	5.5	5.7	0.0
Cycle Q Clear(g_c), s	4.1	3.4	5.2	5.5	5.7	0.0
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	792	2026	884	747	773	724
V/C Ratio(X)	0.43	0.25	0.50	0.38	0.59	0.46
Avail Cap(c_a), veh/h	2804	6899	3687	1999	3548	2000
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.5	4.8	15.1	7.8	16.4	8.8
Incr Delay (d2), s/veh	0.4	0.1	0.4	0.3	0.7	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	1.9	1.6	2.5	3.4	2.7	4.4
LnGrp Delay(d),s/veh	15.9	4.9	15.6	8.1	17.1	9.2
LnGrp LOS	B	A	B	A	B	A
Approach Vol, veh/h		849	724		791	
Approach Delay, s/veh		9.3	12.7		13.8	
Approach LOS		A	B		B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		32.3		15.3	15.7	16.6		
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5		
Max Green Setting (Gmax), s		94.5		49.5	39.5	50.5		
Max Q Clear Time (g_c+I1), s		5.4		7.7	6.1	7.5		
Green Ext Time (p_c), s		5.4		3.1	5.2	4.4		

Intersection Summary	
HCM 2010 Ctrl Delay	11.8
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	80	170	110	280	220	380	100	400	340	120	790	115
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.93	1.00		0.96	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1776	1776	1776	1863	1863	1863	1863	1863	1900	1845	1845	1900
Adj Flow Rate, veh/h	86	242	79	301	237	409	108	430	0	129	849	0
Adj No. of Lanes	1	2	1	2	1	1	1	2	0	1	2	0
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, %	7	7	7	2	2	2	2	2	2	3	3	3
Cap, veh/h	175	367	228	1060	574	593	233	1044	0	307	1115	0
Arrive On Green	0.10	0.10	0.10	0.31	0.31	0.31	0.05	0.29	0.00	0.08	0.32	0.00
Sat Flow, veh/h	1691	3551	1404	3442	1863	1525	1774	3632	0	1757	3597	0
Grp Volume(v), veh/h	86	242	79	301	237	409	108	430	0	129	849	0
Grp Sat Flow(s),veh/h/ln	1691	1776	1404	1721	1863	1525	1774	1770	0	1757	1752	0
Q Serve(g_s), s	4.0	5.5	0.0	5.5	8.4	18.8	0.0	8.1	0.0	4.7	18.2	0.0
Cycle Q Clear(g_c), s	4.0	5.5	0.0	5.5	8.4	18.8	0.0	8.1	0.0	4.7	18.2	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.00	1.00		0.00
Lane Grp Cap(c), veh/h	175	367	228	1060	574	593	233	1044	0	307	1115	0
V/C Ratio(X)	0.49	0.66	0.35	0.28	0.41	0.69	0.46	0.41	0.00	0.42	0.76	0.00
Avail Cap(c_a), veh/h	289	608	323	1298	702	699	350	1699	0	445	1808	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	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	35.4	36.0	31.2	21.9	22.9	21.5	35.9	23.6	0.0	23.6	25.6	0.0
Incr Delay (d2), s/veh	2.1	2.0	0.9	0.1	0.5	2.3	1.4	0.3	0.0	0.9	1.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	2.0	2.8	1.7	2.7	4.4	8.3	2.5	4.0	0.0	2.3	8.9	0.0
LnGrp Delay(d),s/veh	37.5	38.1	32.1	22.1	23.4	23.8	37.3	23.9	0.0	24.5	26.7	0.0
LnGrp LOS	D	D	C	C	C	C	D	C		C	C	
Approach Vol, veh/h		407			947			538			978	
Approach Delay, s/veh		36.8			23.2			26.6			26.4	
Approach LOS		D			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	11.0	29.1		13.1	9.1	31.1		30.2
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	13.1	40.1		14.3	10.1	43.1		31.5
Max Q Clear Time (g_c+I1), s	6.7	10.1		7.5	2.0	20.2		20.8
Green Ext Time (p_c), s	0.2	3.4		1.2	2.0	6.4		3.2

Intersection Summary	
HCM 2010 Ctrl Delay	26.9
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	240	435	105	215	455	140
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0	4.0	4.0	4.0
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	1.00
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3610	1615	1787	3574	3502	1592
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3610	1615	1787	3574	3502	1592
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	247	448	108	222	469	144
RTOR Reduction (vph)	0	269	0	0	0	111
Lane Group Flow (vph)	247	179	108	222	469	33
Confl. Peds. (#/hr)						2
Heavy Vehicles (%)	0%	0%	1%	1%	0%	0%
Turn Type	NA	Prot	Prot	NA	Prot	Perm
Protected Phases	2	2	1	6	8	
Permitted Phases						8
Actuated Green, G (s)	22.8	22.8	7.3	36.1	13.0	13.0
Effective Green, g (s)	22.8	22.8	7.3	36.1	13.0	13.0
Actuated g/C Ratio	0.40	0.40	0.13	0.63	0.23	0.23
Clearance Time (s)	5.0	5.0	5.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1441	644	228	2259	797	362
v/s Ratio Prot	0.07	c0.11	c0.06	0.06	c0.13	
v/s Ratio Perm						0.02
v/c Ratio	0.17	0.28	0.47	0.10	0.59	0.09
Uniform Delay, d1	11.1	11.6	23.1	4.1	19.7	17.4
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.3	1.1	1.6	0.0	1.1	0.1
Delay (s)	11.3	12.7	24.7	4.1	20.8	17.5
Level of Service	B	B	C	A	C	B
Approach Delay (s)	12.2			10.9	20.0	
Approach LOS	B			B	C	

Intersection Summary			
HCM 2000 Control Delay	14.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	57.1	Sum of lost time (s)	15.0
Intersection Capacity Utilization	40.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	25	35	20	140	45	65	20	455	130	65	445	30
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1827	1827	1900	1863	1863	1900	1881	1881	1900
Adj Flow Rate, veh/h	27	37	21	149	48	69	21	484	138	69	473	32
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	0
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, %	3	3	3	4	4	4	2	2	2	1	1	1
Cap, veh/h	308	223	127	360	136	195	576	1341	380	546	1788	121
Arrive On Green	0.20	0.20	0.20	0.20	0.20	0.20	0.02	0.49	0.49	0.06	0.53	0.53
Sat Flow, veh/h	1256	1105	627	1312	673	967	1774	2722	771	1792	3392	229
Grp Volume(v), veh/h	27	0	58	149	0	117	21	314	308	69	248	257
Grp Sat Flow(s),veh/h/ln	1256	0	1733	1312	0	1639	1774	1770	1723	1792	1787	1834
Q Serve(g_s), s	1.0	0.0	1.5	5.8	0.0	3.4	0.3	6.0	6.1	1.0	4.2	4.2
Cycle Q Clear(g_c), s	4.4	0.0	1.5	7.3	0.0	3.4	0.3	6.0	6.1	1.0	4.2	4.2
Prop In Lane	1.00		0.36	1.00		0.59	1.00		0.45	1.00		0.12
Lane Grp Cap(c), veh/h	308	0	349	360	0	331	576	872	849	546	942	967
V/C Ratio(X)	0.09	0.00	0.17	0.41	0.00	0.35	0.04	0.36	0.36	0.13	0.26	0.27
Avail Cap(c_a), veh/h	719	0	917	789	0	868	693	872	849	619	942	967
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.7	0.0	18.1	21.1	0.0	18.8	6.5	8.6	8.6	6.1	7.1	7.1
Incr Delay (d2), s/veh	0.1	0.0	0.2	0.8	0.0	0.6	0.0	1.2	1.2	0.1	0.7	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(-26165%),veh/ln	0.4	0.0	0.7	2.1	0.0	1.6	0.1	3.2	3.1	0.5	2.2	2.3
LnGrp Delay(d),s/veh	20.8	0.0	18.3	21.9	0.0	19.4	6.5	9.7	9.8	6.2	7.8	7.8
LnGrp LOS	C		B	C		B	A	A	A	A	A	A
Approach Vol, veh/h		85			266			643			574	
Approach Delay, s/veh		19.1			20.8			9.7			7.6	
Approach LOS		B			C			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	7.8	31.5		15.6	5.9	33.4		15.6
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	5.5	27.0		29.0	5.0	27.5		29.0
Max Q Clear Time (g_c+I1), s	3.0	8.1		6.4	2.3	6.2		9.3
Green Ext Time (p_c), s	0.0	7.0		1.6	0.0	7.3		1.5

Intersection Summary	
HCM 2010 Ctrl Delay	11.3
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	5	5	85	75	10	40	135	570	65	30	565	25
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1900	1845	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	5	5	0	77	10	0	139	588	67	31	582	26
Adj No. of Lanes	1	1	0	0	1	0	1	2	0	1	2	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	3	3	3	3	3	3	2	2	2	2	2	2
Cap, veh/h	414	175	0	362	15	0	659	1859	211	635	2001	89
Arrive On Green	0.09	0.09	0.00	0.09	0.09	0.00	0.58	0.58	0.58	0.58	0.58	0.58
Sat Flow, veh/h	1385	1845	0	1235	160	0	807	3201	364	773	3446	154
Grp Volume(v), veh/h	5	5	0	87	0	0	139	324	331	31	298	310
Grp Sat Flow(s),veh/h/ln	1385	1845	0	1395	0	0	807	1770	1796	773	1770	1831
Q Serve(g_s), s	0.0	0.1	0.0	1.6	0.0	0.0	2.9	2.6	2.6	0.6	2.4	2.4
Cycle Q Clear(g_c), s	0.1	0.1	0.0	1.7	0.0	0.0	5.3	2.6	2.6	3.2	2.4	2.4
Prop In Lane	1.00		0.00	0.89		0.00	1.00		0.20	1.00		0.08
Lane Grp Cap(c), veh/h	414	175	0	377	0	0	659	1027	1043	635	1027	1063
V/C Ratio(X)	0.01	0.03	0.00	0.23	0.00	0.00	0.21	0.32	0.32	0.05	0.29	0.29
Avail Cap(c_a), veh/h	1581	1729	0	1584	0	0	918	1595	1618	883	1595	1650
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	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	11.4	11.4	0.0	12.2	0.0	0.0	4.3	3.0	3.0	3.8	2.9	2.9
Incr Delay (d2), s/veh	0.0	0.1	0.0	0.3	0.0	0.0	0.2	0.2	0.2	0.0	0.2	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(-26165%),veh/ln	0.0	0.0	0.0	0.7	0.0	0.0	0.6	1.3	1.3	0.1	1.1	1.2
LnGrp Delay(d),s/veh	11.4	11.5	0.0	12.5	0.0	0.0	4.4	3.2	3.2	3.8	3.1	3.1
LnGrp LOS	B	B		B			A	A	A	A	A	A
Approach Vol, veh/h		10			87			794			639	
Approach Delay, s/veh		11.4			12.5			3.4			3.1	
Approach LOS		B			B			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		20.6		7.1		20.6		7.1
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5
Max Green Setting (Gmax), s		25.0		26.0		25.0		26.0
Max Q Clear Time (g_c+I1), s		7.3		2.1		5.2		3.7
Green Ext Time (p_c), s		8.7		0.4		9.2		0.4

Intersection Summary	
HCM 2010 Ctrl Delay	3.8
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	140	45	75	560	700	160	65	570	65
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		0.97	1.00		0.96
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1845	1845	1845	1881	1881	1881	1863	1863	1863
Adj Flow Rate, veh/h				97	117	0	589	737	168	68	600	68
Adj No. of Lanes				1	1	1	1	2	1	1	4	1
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				3	3	3	1	1	1	2	2	2
Cap, veh/h				194	204	173	765	2020	880	107	1272	303
Arrive On Green				0.11	0.11	0.00	0.43	0.57	0.57	0.06	0.20	0.20
Sat Flow, veh/h				1757	1845	1568	1792	3574	1558	1774	6408	1525
Grp Volume(v), veh/h				97	117	0	589	737	168	68	600	68
Grp Sat Flow(s),veh/h/ln				1757	1845	1568	1792	1787	1558	1774	1602	1525
Q Serve(g_s), s				2.7	3.1	0.0	14.4	5.8	2.7	1.9	4.2	1.9
Cycle Q Clear(g_c), s				2.7	3.1	0.0	14.4	5.8	2.7	1.9	4.2	1.9
Prop In Lane				1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h				194	204	173	765	2020	880	107	1272	303
V/C Ratio(X)				0.50	0.57	0.00	0.77	0.36	0.19	0.63	0.47	0.22
Avail Cap(c_a), veh/h				928	974	828	928	2691	1173	208	2255	537
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh				21.4	21.6	0.0	12.5	6.1	5.4	23.5	18.1	17.2
Incr Delay (d2), s/veh				2.0	2.5	0.0	3.3	0.1	0.1	6.0	0.3	0.4
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln				1.4	1.7	0.0	7.7	2.8	1.1	1.1	1.9	0.8
LnGrp Delay(d),s/veh				23.4	24.1	0.0	15.8	6.2	5.5	29.5	18.4	17.6
LnGrp LOS				C	C		B	A	A	C	B	B
Approach Vol, veh/h					214			1494			736	
Approach Delay, s/veh					23.8			9.9			19.3	
Approach LOS					C			A			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2			5	6		8
Phs Duration (G+Y+Rc), s	7.6	33.4			26.3	14.7		10.1
Change Period (Y+Rc), s	4.5	4.5			4.5	4.5		4.5
Max Green Setting (Gmax), s	6.0	38.5			26.5	18.0		27.0
Max Q Clear Time (g_c+I1), s	3.9	7.8			16.4	6.2		5.1
Green Ext Time (p_c), s	0.0	9.4			5.5	3.4		0.9

Intersection Summary	
HCM 2010 Ctrl Delay	14.0
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	145	80	415	260	0	135	0	1125	330	105	660	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1881	1881	0	1881	0	1881	1881	1863	1863	0
Adj Flow Rate, veh/h	149	82	428	268	0	139	0	1160	340	108	680	0
Adj No. of Lanes	1	1	1	2	0	1	0	3	1	1	3	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	1	1	1	1	0	1	0	1	1	2	2	0
Cap, veh/h	570	598	507	0	0	0	0	2217	687	303	2829	0
Arrive On Green	0.32	0.32	0.32	0.00	0.00	0.00	0.00	0.43	0.43	0.06	0.56	0.00
Sat Flow, veh/h	1792	1881	1594		0		0	5305	1592	1774	5253	0
Grp Volume(v), veh/h	149	82	428		0.0		0	1160	340	108	680	0
Grp Sat Flow(s),veh/h/ln	1792	1881	1594				0	1712	1592	1774	1695	0
Q Serve(g_s), s	4.4	2.2	17.9				0.0	11.9	11.0	2.2	4.9	0.0
Cycle Q Clear(g_c), s	4.4	2.2	17.9				0.0	11.9	11.0	2.2	4.9	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	570	598	507				0	2217	687	303	2829	0
V/C Ratio(X)	0.26	0.14	0.84				0.00	0.52	0.49	0.36	0.24	0.00
Avail Cap(c_a), veh/h	951	999	847				0	2217	687	317	2829	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	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	18.2	17.4	22.7				0.0	14.9	14.7	10.7	8.1	0.0
Incr Delay (d2), s/veh	0.2	0.1	4.1				0.0	0.9	2.5	0.7	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	2.2	1.2	8.4				0.0	5.8	5.3	1.1	2.3	0.0
LnGrp Delay(d),s/veh	18.4	17.5	26.8				0.0	15.8	17.2	11.4	8.3	0.0
LnGrp LOS	B	B	C					B	B	B	A	
Approach Vol, veh/h		659						1500			788	
Approach Delay, s/veh		23.8						16.1			8.8	
Approach LOS		C						B			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	8.9	35.4		27.3		44.3		
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5		
Max Green Setting (Gmax), s	5.0	30.3		38.0		39.8		
Max Q Clear Time (g_c+I1), s	4.2	13.9		19.9		6.9		
Green Ext Time (p_c), s	0.0	12.2		2.4		19.7		

Intersection Summary	
HCM 2010 Ctrl Delay	15.9
HCM 2010 LOS	B

Notes

User approved changes to right turn type.

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	415	610	655	365	455	445
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.98	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1881	1881	1863	1863
Adj Flow Rate, veh/h	456	670	720	401	500	489
Adj No. of Lanes	2	2	2	1	2	1
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	1	1	1	1	2	2
Cap, veh/h	521	2057	1200	916	842	625
Arrive On Green	0.15	0.58	0.34	0.34	0.24	0.24
Sat Flow, veh/h	3476	3668	3668	1564	3442	1583
Grp Volume(v), veh/h	456	670	720	401	500	489
Grp Sat Flow(s),veh/h/ln	1738	1787	1787	1564	1721	1583
Q Serve(g_s), s	6.4	4.9	8.4	7.2	6.4	6.0
Cycle Q Clear(g_c), s	6.4	4.9	8.4	7.2	6.4	6.0
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	521	2057	1200	916	842	625
V/C Ratio(X)	0.88	0.33	0.60	0.44	0.59	0.78
Avail Cap(c_a), veh/h	521	2927	2070	1297	2062	1186
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.8	5.6	13.8	5.9	16.7	13.3
Incr Delay (d2), s/veh	15.4	0.1	0.5	0.3	0.7	2.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	4.2	2.4	4.2	5.0	3.1	9.0
LnGrp Delay(d),s/veh	36.2	5.6	14.3	6.3	17.4	15.5
LnGrp LOS	D	A	B	A	B	B
Approach Vol, veh/h		1126	1121		989	
Approach Delay, s/veh		18.0	11.4		16.4	
Approach LOS		B	B		B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		33.3		16.8	12.0	21.3		
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5		
Max Green Setting (Gmax), s		41.0		30.0	7.5	29.0		
Max Q Clear Time (g_c+I1), s		6.9		8.4	8.4	10.4		
Green Ext Time (p_c), s		7.4		3.8	0.0	6.4		

Intersection Summary	
HCM 2010 Ctrl Delay	15.3
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	55	70	90	255	160	305	45	335	220	105	775	140
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1810	1810	1810	1881	1881	1881	1881	1881	1900	1900	1900	1900
Adj Flow Rate, veh/h	41	157	67	283	178	339	50	372	0	117	861	0
Adj No. of Lanes	1	2	1	2	1	1	1	2	0	1	2	0
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, %	5	5	5	1	1	1	1	1	1	0	0	0
Cap, veh/h	151	317	204	911	493	534	243	1033	0	336	1135	0
Arrive On Green	0.09	0.09	0.09	0.26	0.26	0.26	0.05	0.29	0.00	0.07	0.31	0.00
Sat Flow, veh/h	1723	3619	1516	3476	1881	1599	1792	3668	0	1810	3705	0
Grp Volume(v), veh/h	41	157	67	283	178	339	50	372	0	117	861	0
Grp Sat Flow(s),veh/h/ln	1723	1810	1516	1738	1881	1599	1792	1787	0	1810	1805	0
Q Serve(g_s), s	1.4	2.6	0.0	4.1	4.8	11.1	0.0	5.1	0.0	3.1	13.3	0.0
Cycle Q Clear(g_c), s	1.4	2.6	0.0	4.1	4.8	11.1	0.0	5.1	0.0	3.1	13.3	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.00	1.00		0.00
Lane Grp Cap(c), veh/h	151	317	204	911	493	534	243	1033	0	336	1135	0
V/C Ratio(X)	0.27	0.50	0.33	0.31	0.36	0.63	0.21	0.36	0.00	0.35	0.76	0.00
Avail Cap(c_a), veh/h	430	902	450	1739	941	915	306	1363	0	401	1469	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	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	26.5	27.1	24.4	18.4	18.7	17.5	26.4	17.5	0.0	18.0	19.2	0.0
Incr Delay (d2), s/veh	1.0	1.2	0.9	0.2	0.4	1.3	0.4	0.2	0.0	0.6	1.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	0.7	1.3	1.1	2.0	2.5	5.0	0.8	2.6	0.0	1.6	6.8	0.0
LnGrp Delay(d),s/veh	27.5	28.3	25.3	18.6	19.1	18.7	26.8	17.8	0.0	18.6	20.9	0.0
LnGrp LOS	C	C	C	B	B	B	C	B		B	C	
Approach Vol, veh/h		265			800			422			978	
Approach Delay, s/veh		27.4			18.8			18.8			20.6	
Approach LOS		C			B			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	9.0	22.5		9.9	7.4	24.0		20.8
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	6.7	23.7		15.5	5.1	25.3		31.1
Max Q Clear Time (g_c+I1), s	5.1	7.1		4.6	2.0	15.3		13.1
Green Ext Time (p_c), s	0.0	2.3		0.9	0.8	4.2		3.2

Intersection Summary	
HCM 2010 Ctrl Delay	20.5
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	285	730	130	265	665	145
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0	4.0	4.0	4.0
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	1.00
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3438	1538	1736	3471	3502	1594
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3438	1538	1736	3471	3502	1594
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	297	760	135	276	693	151
RTOR Reduction (vph)	0	477	0	0	0	112
Lane Group Flow (vph)	297	283	135	276	693	39
Confl. Peds. (#/hr)		1	1			1
Heavy Vehicles (%)	5%	5%	4%	4%	0%	0%
Turn Type	NA	Prot	Prot	NA	Prot	Perm
Protected Phases	2	2	1	6	8	
Permitted Phases						8
Actuated Green, G (s)	22.7	22.7	8.3	37.0	15.9	15.9
Effective Green, g (s)	22.7	22.7	8.3	37.0	15.9	15.9
Actuated g/C Ratio	0.37	0.37	0.14	0.61	0.26	0.26
Clearance Time (s)	5.0	5.0	5.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1281	573	236	2108	914	416
v/s Ratio Prot	0.09	c0.18	c0.08	0.08	c0.20	
v/s Ratio Perm						0.02
v/c Ratio	0.23	0.49	0.57	0.13	0.76	0.09
Uniform Delay, d1	13.1	14.7	24.6	5.1	20.7	17.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.4	3.0	3.3	0.0	3.6	0.1
Delay (s)	13.5	17.7	28.0	5.1	24.4	17.1
Level of Service	B	B	C	A	C	B
Approach Delay (s)	16.5			12.6	23.1	
Approach LOS	B			B	C	

Intersection Summary			
HCM 2000 Control Delay	18.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	60.9	Sum of lost time (s)	15.0
Intersection Capacity Utilization	60.1%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	30	35	20	165	35	145	25	625	150	115	625	25
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1900	1827	1827	1900	1792	1792	1900	1827	1827	1900
Adj Flow Rate, veh/h	32	37	21	174	37	153	26	658	158	121	658	26
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	6	6	6	4	4	4	6	6	6	4	4	4
Cap, veh/h	297	251	142	419	73	300	438	1106	265	434	1560	62
Arrive On Green	0.23	0.23	0.23	0.23	0.23	0.23	0.03	0.41	0.41	0.08	0.46	0.46
Sat Flow, veh/h	1144	1075	610	1314	312	1288	1707	2725	654	1740	3404	134
Grp Volume(v), veh/h	32	0	58	174	0	190	26	411	405	121	335	349
Grp Sat Flow(s),veh/h/ln	1144	0	1685	1314	0	1600	1707	1703	1675	1740	1736	1803
Q Serve(g_s), s	1.2	0.0	1.3	5.9	0.0	5.0	0.4	9.2	9.2	1.9	6.3	6.3
Cycle Q Clear(g_c), s	6.2	0.0	1.3	7.2	0.0	5.0	0.4	9.2	9.2	1.9	6.3	6.3
Prop In Lane	1.00		0.36	1.00		0.81	1.00		0.39	1.00		0.07
Lane Grp Cap(c), veh/h	297	0	393	419	0	373	438	691	680	434	795	826
V/C Ratio(X)	0.11	0.00	0.15	0.42	0.00	0.51	0.06	0.59	0.60	0.28	0.42	0.42
Avail Cap(c_a), veh/h	713	0	1006	897	0	955	562	919	904	516	983	1021
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.9	0.0	14.8	17.6	0.0	16.2	8.0	11.3	11.3	7.9	8.8	8.8
Incr Delay (d2), s/veh	0.2	0.0	0.2	0.7	0.0	1.1	0.1	0.8	0.8	0.3	0.4	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	0.4	0.0	0.6	2.2	0.0	2.3	0.2	4.4	4.3	0.9	3.1	3.2
LnGrp Delay(d),s/veh	19.1	0.0	15.0	18.3	0.0	17.3	8.0	12.1	12.1	8.2	9.2	9.2
LnGrp LOS	B		B	B		B	A	B	B	A	A	A
Approach Vol, veh/h		90			364			842			805	
Approach Delay, s/veh		16.4			17.8			12.0			9.0	
Approach LOS		B			B			B			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	8.5	24.2		15.8	6.0	26.8		15.8
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	6.3	26.2		29.0	5.0	27.5		29.0
Max Q Clear Time (g_c+I1), s	3.9	11.2		8.2	2.4	8.3		9.2
Green Ext Time (p_c), s	0.1	8.3		2.2	0.0	9.7		2.1

Intersection Summary	
HCM 2010 Ctrl Delay	12.1
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	10	10	85	70	5	55	120	785	85	40	785	30
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		1.00	0.99		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1810	1810	1900	1900	1667	1900	1827	1827	1900	1845	1845	1900
Adj Flow Rate, veh/h	10	10	0	73	5	0	125	818	89	42	818	31
Adj No. of Lanes	1	1	0	0	1	0	1	2	0	1	2	0
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	5	5	14	14	14	4	4	4	3	3	3
Cap, veh/h	393	208	0	338	9	0	529	1945	212	507	2122	80
Arrive On Green	0.11	0.11	0.00	0.11	0.11	0.00	0.62	0.62	0.62	0.62	0.62	0.62
Sat Flow, veh/h	1355	1810	0	1129	77	0	633	3156	343	605	3442	130
Grp Volume(v), veh/h	10	10	0	78	0	0	125	450	457	42	416	433
Grp Sat Flow(s),veh/h/ln	1355	1810	0	1206	0	0	633	1736	1763	605	1752	1821
Q Serve(g_s), s	0.0	0.2	0.0	2.0	0.0	0.0	4.1	4.5	4.5	1.3	4.0	4.0
Cycle Q Clear(g_c), s	0.2	0.2	0.0	2.1	0.0	0.0	8.2	4.5	4.5	5.8	4.0	4.0
Prop In Lane	1.00		0.00	0.94		0.00	1.00		0.19	1.00		0.07
Lane Grp Cap(c), veh/h	393	208	0	347	0	0	529	1070	1087	507	1080	1122
V/C Ratio(X)	0.03	0.05	0.00	0.23	0.00	0.00	0.24	0.42	0.42	0.08	0.39	0.39
Avail Cap(c_a), veh/h	1290	1405	0	1180	0	0	612	1296	1316	586	1308	1359
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	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.2	13.2	0.0	14.1	0.0	0.0	5.3	3.3	3.3	4.8	3.2	3.2
Incr Delay (d2), s/veh	0.0	0.1	0.0	0.3	0.0	0.0	0.2	0.3	0.3	0.1	0.2	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(-26165%),veh/ln	0.1	0.1	0.0	0.7	0.0	0.0	0.7	2.2	2.2	0.2	1.9	2.0
LnGrp Delay(d),s/veh	13.2	13.3	0.0	14.5	0.0	0.0	5.5	3.6	3.6	4.9	3.5	3.4
LnGrp LOS	B	B		B			A	A	A	A	A	A
Approach Vol, veh/h		20			78			1032			891	
Approach Delay, s/veh		13.3			14.5			3.8			3.5	
Approach LOS		B			B			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		25.1		8.3		25.1		8.3
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5
Max Green Setting (Gmax), s		25.0		26.0		25.0		26.0
Max Q Clear Time (g_c+I1), s		10.2		2.2		7.8		4.1
Green Ext Time (p_c), s		10.5		0.4		11.7		0.4

Intersection Summary	
HCM 2010 Ctrl Delay	4.2
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	195	80	125	525	855	300	90	805	65
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		0.97	1.00		0.99
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1827	1827	1827	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h				142	165	0	541	881	309	93	830	67
Adj No. of Lanes				1	1	1	1	2	1	1	4	1
Peak Hour Factor				0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %				4	4	4	3	3	3	3	3	3
Cap, veh/h				244	257	218	705	1959	853	119	1430	349
Arrive On Green				0.14	0.14	0.00	0.40	0.56	0.56	0.07	0.23	0.23
Sat Flow, veh/h				1740	1827	1553	1757	3505	1526	1757	6346	1547
Grp Volume(v), veh/h				142	165	0	541	881	309	93	830	67
Grp Sat Flow(s),veh/h/ln				1740	1827	1553	1757	1752	1526	1757	1586	1547
Q Serve(g_s), s				4.4	4.9	0.0	15.4	8.6	6.5	3.0	6.8	2.0
Cycle Q Clear(g_c), s				4.4	4.9	0.0	15.4	8.6	6.5	3.0	6.8	2.0
Prop In Lane				1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h				244	257	218	705	1959	853	119	1430	349
V/C Ratio(X)				0.58	0.64	0.00	0.77	0.45	0.36	0.78	0.58	0.19
Avail Cap(c_a), veh/h				811	852	724	804	2299	1001	197	1972	481
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh				23.3	23.5	0.0	15.0	7.5	7.1	26.6	20.0	18.2
Incr Delay (d2), s/veh				2.2	2.7	0.0	4.0	0.2	0.3	10.7	0.4	0.3
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln				2.3	2.7	0.0	8.1	4.1	2.7	1.8	3.0	0.9
LnGrp Delay(d),s/veh				25.5	26.2	0.0	19.0	7.7	7.3	37.3	20.4	18.4
LnGrp LOS				C	C		B	A	A	D	C	B
Approach Vol, veh/h					307			1731			990	
Approach Delay, s/veh					25.9			11.2			21.8	
Approach LOS					C			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2			5	6		8
Phs Duration (G+Y+Rc), s	8.4	36.9			27.7	17.5		12.6
Change Period (Y+Rc), s	4.5	4.5			4.5	4.5		4.5
Max Green Setting (Gmax), s	6.5	38.0			26.5	18.0		27.0
Max Q Clear Time (g_c+I1), s	5.0	10.6			17.4	8.8		6.9
Green Ext Time (p_c), s	0.0	11.2			5.8	4.0		1.3

Intersection Summary	
HCM 2010 Ctrl Delay	16.1
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	185	160	375	345	0	240	0	1255	430	215	795	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1845	0	1845	0	1863	1863	1863	1863	0
Adj Flow Rate, veh/h	191	165	387	356	0	247	0	1294	443	222	820	0
Adj No. of Lanes	1	1	1	2	0	1	0	3	1	1	3	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	3	0	3	0	2	2	2	2	0
Cap, veh/h	551	579	483	0	0	0	0	2054	636	328	2867	0
Arrive On Green	0.31	0.31	0.31	0.00	0.00	0.00	0.00	0.40	0.40	0.10	0.56	0.00
Sat Flow, veh/h	1774	1863	1553		0		0	5253	1574	1774	5253	0
Grp Volume(v), veh/h	191	165	387		0.0		0	1294	443	222	820	0
Grp Sat Flow(s),veh/h/ln	1774	1863	1553				0	1695	1574	1774	1695	0
Q Serve(g_s), s	6.0	4.8	16.4				0.0	14.6	16.8	4.8	6.0	0.0
Cycle Q Clear(g_c), s	6.0	4.8	16.4				0.0	14.6	16.8	4.8	6.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	551	579	483				0	2054	636	328	2867	0
V/C Ratio(X)	0.35	0.28	0.80				0.00	0.63	0.70	0.68	0.29	0.00
Avail Cap(c_a), veh/h	939	986	822				0	2167	671	420	3244	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	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	19.1	18.7	22.7				0.0	17.1	17.8	14.0	8.1	0.0
Incr Delay (d2), s/veh	0.4	0.3	3.1				0.0	0.5	3.0	2.9	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	3.0	2.5	7.4				0.0	6.9	7.8	2.5	2.8	0.0
LnGrp Delay(d),s/veh	19.5	19.0	25.9				0.0	17.7	20.7	16.9	8.2	0.0
LnGrp LOS	B	B	C					B	C	B	A	
Approach Vol, veh/h		743						1737			1042	
Approach Delay, s/veh		22.7						18.4			10.1	
Approach LOS		C						B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	11.5	33.5		26.8		45.0		
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5		
Max Green Setting (Gmax), s	10.7	30.6		38.0		45.8		
Max Q Clear Time (g_c+I1), s	6.8	18.8		18.4		8.0		
Green Ext Time (p_c), s	0.2	10.1		2.9		25.6		

Intersection Summary	
HCM 2010 Ctrl Delay	16.9
HCM 2010 LOS	B

Notes

User approved changes to right turn type.

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	390	585	510	325	525	380
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1827	1827	1845	1845
Adj Flow Rate, veh/h	406	609	531	339	547	396
Adj No. of Lanes	2	2	2	1	2	1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	4	4	4	4	3	3
Cap, veh/h	842	2075	938	800	837	776
Arrive On Green	0.25	0.60	0.27	0.27	0.25	0.25
Sat Flow, veh/h	3375	3563	3563	1550	3408	1568
Grp Volume(v), veh/h	406	609	531	339	547	396
Grp Sat Flow(s),veh/h/ln	1688	1736	1736	1550	1704	1568
Q Serve(g_s), s	5.9	4.9	7.6	7.8	8.3	0.0
Cycle Q Clear(g_c), s	5.9	4.9	7.6	7.8	8.3	0.0
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	842	2075	938	800	837	776
V/C Ratio(X)	0.48	0.29	0.57	0.42	0.65	0.51
Avail Cap(c_a), veh/h	2320	5709	3051	1744	2936	1742
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.4	5.6	18.1	8.6	19.5	9.8
Incr Delay (d2), s/veh	0.4	0.1	0.5	0.4	0.9	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	2.8	2.3	3.7	5.1	4.0	6.4
LnGrp Delay(d),s/veh	18.8	5.7	18.6	9.0	20.4	10.3
LnGrp LOS	B	A	B	A	C	B
Approach Vol, veh/h		1015	870		943	
Approach Delay, s/veh		11.0	14.9		16.1	
Approach LOS		B	B		B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		38.9		18.6	18.8	20.0		
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5		
Max Green Setting (Gmax), s		94.5		49.5	39.5	50.5		
Max Q Clear Time (g_c+I1), s		6.9		10.3	7.9	9.8		
Green Ext Time (p_c), s		6.8		3.8	6.5	5.5		

Intersection Summary	
HCM 2010 Ctrl Delay	13.9
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	95	205	130	335	265	455	120	480	405	145	945	135
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.93	1.00		0.96	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1776	1776	1776	1863	1863	1863	1863	1863	1900	1845	1845	1900
Adj Flow Rate, veh/h	102	290	93	360	285	489	129	516	0	156	1016	0
Adj No. of Lanes	1	2	1	2	1	1	1	2	0	1	2	0
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, %	7	7	7	2	2	2	2	2	2	3	3	3
Cap, veh/h	185	389	230	1070	579	611	196	1108	0	311	1224	0
Arrive On Green	0.11	0.11	0.11	0.31	0.31	0.31	0.05	0.31	0.00	0.09	0.35	0.00
Sat Flow, veh/h	1691	3551	1410	3442	1863	1525	1774	3632	0	1757	3597	0
Grp Volume(v), veh/h	102	290	93	360	285	489	129	516	0	156	1016	0
Grp Sat Flow(s),veh/h/ln	1691	1776	1410	1721	1863	1525	1774	1770	0	1757	1752	0
Q Serve(g_s), s	5.7	7.9	0.5	8.0	12.4	28.4	0.9	11.7	0.0	6.6	26.5	0.0
Cycle Q Clear(g_c), s	5.7	7.9	0.5	8.0	12.4	28.4	0.9	11.7	0.0	6.6	26.5	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.00	1.00		0.00
Lane Grp Cap(c), veh/h	185	389	230	1070	579	611	196	1108	0	311	1224	0
V/C Ratio(X)	0.55	0.75	0.40	0.34	0.49	0.80	0.66	0.47	0.00	0.50	0.83	0.00
Avail Cap(c_a), veh/h	242	509	278	1086	588	618	287	1422	0	390	1513	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	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	42.1	43.1	37.6	26.5	28.0	26.7	44.2	27.6	0.0	26.2	29.8	0.0
Incr Delay (d2), s/veh	2.5	4.3	1.1	0.2	0.6	7.4	3.7	0.3	0.0	1.2	3.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	2.8	4.1	2.3	3.8	6.5	13.1	3.6	5.8	0.0	3.3	13.4	0.0
LnGrp Delay(d),s/veh	44.7	47.4	38.7	26.7	28.6	34.1	47.9	27.9	0.0	27.4	33.1	0.0
LnGrp LOS	D	D	D	C	C	C	D	C		C	C	
Approach Vol, veh/h		485			1134			645			1172	
Approach Delay, s/veh		45.1			30.4			31.9			32.4	
Approach LOS		D			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	13.1	35.7		15.4	9.5	39.3		35.5
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	13.1	40.1		14.3	10.1	43.1		31.5
Max Q Clear Time (g_c+I1), s	8.6	13.7		9.9	2.9	28.5		30.4
Green Ext Time (p_c), s	0.2	4.1		1.0	2.2	6.3		0.6

Intersection Summary	
HCM 2010 Ctrl Delay	33.4
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	285	520	125	255	545	165
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0	4.0	4.0	4.0
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	1.00
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3610	1615	1787	3574	3502	1592
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3610	1615	1787	3574	3502	1592
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	294	536	129	263	562	170
RTOR Reduction (vph)	0	330	0	0	0	128
Lane Group Flow (vph)	294	206	129	263	562	42
Confl. Peds. (#/hr)						2
Heavy Vehicles (%)	0%	0%	1%	1%	0%	0%
Turn Type	NA	Prot	Prot	NA	Prot	Perm
Protected Phases	2	2	1	6	8	
Permitted Phases						8
Actuated Green, G (s)	22.8	22.8	8.0	36.8	14.5	14.5
Effective Green, g (s)	22.8	22.8	8.0	36.8	14.5	14.5
Actuated g/C Ratio	0.38	0.38	0.13	0.62	0.24	0.24
Clearance Time (s)	5.0	5.0	5.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1387	620	241	2217	856	389
v/s Ratio Prot	0.08	c0.13	c0.07	0.07	c0.16	
v/s Ratio Perm						0.03
v/c Ratio	0.21	0.33	0.54	0.12	0.66	0.11
Uniform Delay, d1	12.2	12.9	23.9	4.6	20.2	17.4
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.3	1.4	2.3	0.0	1.8	0.1
Delay (s)	12.6	14.3	26.2	4.6	22.0	17.5
Level of Service	B	B	C	A	C	B
Approach Delay (s)	13.7			11.7	20.9	
Approach LOS	B			B	C	

Intersection Summary			
HCM 2000 Control Delay	16.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	59.3	Sum of lost time (s)	15.0
Intersection Capacity Utilization	46.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	30	40	25	165	55	80	25	545	155	80	530	35
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1827	1827	1900	1863	1863	1900	1881	1881	1900
Adj Flow Rate, veh/h	32	43	27	176	59	85	27	580	165	85	564	37
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	0
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, %	3	3	3	4	4	4	2	2	2	1	1	1
Cap, veh/h	316	243	153	381	154	222	510	1280	363	476	1716	112
Arrive On Green	0.23	0.23	0.23	0.23	0.23	0.23	0.03	0.47	0.47	0.06	0.50	0.50
Sat Flow, veh/h	1226	1060	666	1298	672	968	1774	2720	772	1792	3400	223
Grp Volume(v), veh/h	32	0	70	176	0	144	27	377	368	85	296	305
Grp Sat Flow(s),veh/h/ln	1226	0	1726	1298	0	1640	1774	1770	1723	1792	1787	1835
Q Serve(g_s), s	1.3	0.0	1.9	7.2	0.0	4.3	0.4	8.2	8.3	1.3	5.6	5.7
Cycle Q Clear(g_c), s	5.6	0.0	1.9	9.1	0.0	4.3	0.4	8.2	8.3	1.3	5.6	5.7
Prop In Lane	1.00		0.39	1.00		0.59	1.00		0.45	1.00		0.12
Lane Grp Cap(c), veh/h	316	0	396	381	0	376	510	833	811	476	902	926
V/C Ratio(X)	0.10	0.00	0.18	0.46	0.00	0.38	0.05	0.45	0.45	0.18	0.33	0.33
Avail Cap(c_a), veh/h	654	0	872	739	0	829	610	833	811	532	902	926
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.0	0.0	17.8	21.4	0.0	18.7	7.4	10.2	10.2	7.2	8.4	8.4
Incr Delay (d2), s/veh	0.1	0.0	0.2	0.9	0.0	0.6	0.0	1.8	1.8	0.2	1.0	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	0.4	0.0	0.9	2.7	0.0	2.0	0.2	4.4	4.3	0.6	3.0	3.0
LnGrp Delay(d),s/veh	21.2	0.0	18.0	22.3	0.0	19.3	7.4	12.0	12.1	7.4	9.4	9.4
LnGrp LOS	C		B	C		B	A	B	B	A	A	A
Approach Vol, veh/h		102			320			772			686	
Approach Delay, s/veh		19.0			20.9			11.9			9.1	
Approach LOS		B			C			B			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	8.2	31.5		17.7	6.2	33.5		17.7
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	5.5	27.0		29.0	5.0	27.5		29.0
Max Q Clear Time (g_c+I1), s	3.3	10.3		7.6	2.4	7.7		11.1
Green Ext Time (p_c), s	0.0	8.0		1.9	0.0	8.7		1.8

Intersection Summary	
HCM 2010 Ctrl Delay	12.8
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	5	5	100	90	10	50	160	680	80	35	675	30
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1900	1845	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	5	5	0	93	10	0	165	701	82	36	696	31
Adj No. of Lanes	1	1	0	0	1	0	1	2	0	1	2	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	3	3	3	3	3	3	2	2	2	2	2	2
Cap, veh/h	395	184	0	344	13	0	602	1956	229	576	2113	94
Arrive On Green	0.10	0.10	0.00	0.10	0.10	0.00	0.61	0.61	0.61	0.61	0.61	0.61
Sat Flow, veh/h	1385	1845	0	1256	135	0	723	3191	373	686	3447	153
Grp Volume(v), veh/h	5	5	0	103	0	0	165	389	394	36	357	370
Grp Sat Flow(s),veh/h/ln	1385	1845	0	1391	0	0	723	1770	1794	686	1770	1831
Q Serve(g_s), s	0.0	0.1	0.0	2.2	0.0	0.0	4.5	3.4	3.4	0.9	3.1	3.1
Cycle Q Clear(g_c), s	0.1	0.1	0.0	2.3	0.0	0.0	7.6	3.4	3.4	4.3	3.1	3.1
Prop In Lane	1.00		0.00	0.90		0.00	1.00		0.21	1.00		0.08
Lane Grp Cap(c), veh/h	395	184	0	357	0	0	602	1085	1100	576	1085	1122
V/C Ratio(X)	0.01	0.03	0.00	0.29	0.00	0.00	0.27	0.36	0.36	0.06	0.33	0.33
Avail Cap(c_a), veh/h	1406	1530	0	1397	0	0	735	1411	1430	702	1411	1460
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	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.7	12.7	0.0	13.8	0.0	0.0	4.8	3.0	3.0	4.1	2.9	2.9
Incr Delay (d2), s/veh	0.0	0.1	0.0	0.4	0.0	0.0	0.2	0.2	0.2	0.0	0.2	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(-26165%),veh/ln	0.0	0.0	0.0	0.9	0.0	0.0	0.9	1.7	1.7	0.2	1.5	1.6
LnGrp Delay(d),s/veh	12.8	12.8	0.0	14.2	0.0	0.0	5.0	3.2	3.2	4.1	3.1	3.1
LnGrp LOS	B	B		B			A	A	A	A	A	A
Approach Vol, veh/h		10			103			948			763	
Approach Delay, s/veh		12.8			14.2			3.5			3.2	
Approach LOS		B			B			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		23.7		7.6		23.7		7.6
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5
Max Green Setting (Gmax), s		25.0		26.0		25.0		26.0
Max Q Clear Time (g_c+I1), s		9.6		2.1		6.3		4.3
Green Ext Time (p_c), s		9.7		0.5		11.0		0.5

Intersection Summary	
HCM 2010 Ctrl Delay	4.0
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	165	55	90	670	835	190	80	680	80
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		0.97	1.00		0.96
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1845	1845	1845	1881	1881	1881	1863	1863	1863
Adj Flow Rate, veh/h				116	139	0	705	879	200	84	716	84
Adj No. of Lanes				1	1	1	1	2	1	1	4	1
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				3	3	3	1	1	1	2	2	2
Cap, veh/h				214	224	191	790	2084	908	113	1318	314
Arrive On Green				0.12	0.12	0.00	0.44	0.58	0.58	0.06	0.21	0.21
Sat Flow, veh/h				1757	1845	1568	1792	3574	1558	1774	6408	1526
Grp Volume(v), veh/h				116	139	0	705	879	200	84	716	84
Grp Sat Flow(s),veh/h/ln				1757	1845	1568	1792	1787	1558	1774	1602	1526
Q Serve(g_s), s				3.6	4.2	0.0	21.1	7.9	3.6	2.7	5.8	2.7
Cycle Q Clear(g_c), s				3.6	4.2	0.0	21.1	7.9	3.6	2.7	5.8	2.7
Prop In Lane				1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h				214	224	191	790	2084	908	113	1318	314
V/C Ratio(X)				0.54	0.62	0.00	0.89	0.42	0.22	0.74	0.54	0.27
Avail Cap(c_a), veh/h				814	855	727	815	2362	1029	183	1980	471
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh				24.1	24.3	0.0	15.0	6.7	5.8	26.8	20.7	19.5
Incr Delay (d2), s/veh				2.1	2.8	0.0	11.9	0.1	0.1	9.2	0.4	0.5
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln				1.9	2.3	0.0	13.0	3.8	1.5	1.6	2.6	1.2
LnGrp Delay(d),s/veh				26.2	27.1	0.0	26.9	6.9	5.9	36.0	21.0	19.9
LnGrp LOS				C	C		C	A	A	D	C	B
Approach Vol, veh/h					255			1784			884	
Approach Delay, s/veh					26.7			14.7			22.4	
Approach LOS					C			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2			5	6		8
Phs Duration (G+Y+Rc), s	8.2	38.5			30.2	16.5		11.6
Change Period (Y+Rc), s	4.5	4.5			4.5	4.5		4.5
Max Green Setting (Gmax), s	6.0	38.5			26.5	18.0		27.0
Max Q Clear Time (g_c+I1), s	4.7	9.9			23.1	7.8		6.2
Green Ext Time (p_c), s	0.0	11.8			2.6	3.7		1.0

Intersection Summary	
HCM 2010 Ctrl Delay	18.1
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	175	95	495	310	0	160	0	1345	395	125	790	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1881	1881	0	1881	0	1881	1881	1863	1863	0
Adj Flow Rate, veh/h	180	98	510	320	0	165	0	1387	407	129	814	0
Adj No. of Lanes	1	1	1	2	0	1	0	3	1	1	3	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	1	1	1	1	0	1	0	1	1	2	2	0
Cap, veh/h	652	685	580	0	0	0	0	2044	633	250	2638	0
Arrive On Green	0.36	0.36	0.36	0.00	0.00	0.00	0.00	0.40	0.40	0.06	0.52	0.00
Sat Flow, veh/h	1792	1881	1595		0		0	5305	1591	1774	5253	0
Grp Volume(v), veh/h	180	98	510		0.0		0	1387	407	129	814	0
Grp Sat Flow(s),veh/h/ln	1792	1881	1595				0	1712	1591	1774	1695	0
Q Serve(g_s), s	5.5	2.7	22.9				0.0	17.1	15.9	3.1	7.0	0.0
Cycle Q Clear(g_c), s	5.5	2.7	22.9				0.0	17.1	15.9	3.1	7.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	652	685	580				0	2044	633	250	2638	0
V/C Ratio(X)	0.28	0.14	0.88				0.00	0.68	0.64	0.52	0.31	0.00
Avail Cap(c_a), veh/h	887	932	790				0	2044	633	255	2638	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	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	17.3	16.4	22.8				0.0	19.0	18.7	15.4	10.6	0.0
Incr Delay (d2), s/veh	0.2	0.1	8.6				0.0	1.8	5.0	1.7	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	2.7	1.4	11.4				0.0	8.3	7.8	1.6	3.3	0.0
LnGrp Delay(d),s/veh	17.5	16.5	31.4				0.0	20.9	23.6	17.1	10.9	0.0
LnGrp LOS	B	B	C					C	C	B	B	
Approach Vol, veh/h		788						1794			943	
Approach Delay, s/veh		26.4						21.5			11.7	
Approach LOS		C						C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	9.3	35.0		32.4		44.3		
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5		
Max Green Setting (Gmax), s	5.0	30.3		38.0		39.8		
Max Q Clear Time (g_c+I1), s	5.1	19.1		24.9		9.0		
Green Ext Time (p_c), s	0.0	9.8		2.6		22.7		

Intersection Summary	
HCM 2010 Ctrl Delay	20.0
HCM 2010 LOS	B

Notes

User approved changes to right turn type.

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	495	730	785	435	545	530
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.98	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1881	1881	1863	1863
Adj Flow Rate, veh/h	544	802	863	478	599	582
Adj No. of Lanes	2	2	2	1	2	1
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	1	1	1	1	2	2
Cap, veh/h	421	1944	1250	1044	1069	684
Arrive On Green	0.12	0.54	0.35	0.35	0.31	0.31
Sat Flow, veh/h	3476	3668	3668	1564	3442	1583
Grp Volume(v), veh/h	544	802	863	478	599	582
Grp Sat Flow(s),veh/h/ln	1738	1787	1787	1564	1721	1583
Q Serve(g_s), s	7.5	8.2	12.8	9.2	9.0	12.9
Cycle Q Clear(g_c), s	7.5	8.2	12.8	9.2	9.0	12.9
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	421	1944	1250	1044	1069	684
V/C Ratio(X)	1.29	0.41	0.69	0.46	0.56	0.85
Avail Cap(c_a), veh/h	421	2369	1675	1230	1669	960
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.2	8.3	17.2	5.1	17.8	15.8
Incr Delay (d2), s/veh	147.8	0.1	0.8	0.3	0.5	5.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	12.2	4.0	6.4	7.7	4.3	14.5
LnGrp Delay(d),s/veh	175.0	8.4	18.0	5.4	18.3	21.1
LnGrp LOS	F	A	B	A	B	C
Approach Vol, veh/h		1346	1341		1181	
Approach Delay, s/veh		75.7	13.5		19.7	
Approach LOS		E	B		B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		38.1		23.7	12.0	26.1		
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5		
Max Green Setting (Gmax), s		41.0		30.0	7.5	29.0		
Max Q Clear Time (g_c+I1), s		10.2		14.9	9.5	14.8		
Green Ext Time (p_c), s		9.2		4.3	0.0	6.8		

Intersection Summary	
HCM 2010 Ctrl Delay	37.0
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	65	85	110	305	190	365	55	400	265	125	925	165
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1810	1810	1810	1881	1881	1881	1881	1881	1900	1900	1900	1900
Adj Flow Rate, veh/h	48	189	81	339	211	406	61	444	0	139	1028	0
Adj No. of Lanes	1	2	1	2	1	1	1	2	0	1	2	0
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, %	5	5	5	1	1	1	1	1	1	0	0	0
Cap, veh/h	158	332	214	1004	544	592	201	1047	0	325	1176	0
Arrive On Green	0.09	0.09	0.09	0.29	0.29	0.29	0.05	0.29	0.00	0.08	0.33	0.00
Sat Flow, veh/h	1723	3619	1516	3476	1881	1599	1792	3668	0	1810	3705	0
Grp Volume(v), veh/h	48	189	81	339	211	406	61	444	0	139	1028	0
Grp Sat Flow(s),veh/h/ln	1723	1810	1516	1738	1881	1599	1792	1787	0	1810	1805	0
Q Serve(g_s), s	1.9	3.7	0.0	5.6	6.6	15.7	0.0	7.4	0.0	4.3	19.7	0.0
Cycle Q Clear(g_c), s	1.9	3.7	0.0	5.6	6.6	15.7	0.0	7.4	0.0	4.3	19.7	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.00	1.00		0.00
Lane Grp Cap(c), veh/h	158	332	214	1004	544	592	201	1047	0	325	1176	0
V/C Ratio(X)	0.30	0.57	0.38	0.34	0.39	0.69	0.30	0.42	0.00	0.43	0.87	0.00
Avail Cap(c_a), veh/h	364	764	394	1471	796	807	239	1153	0	343	1243	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	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	31.2	32.0	28.7	20.6	20.9	19.5	33.0	21.0	0.0	20.7	23.4	0.0
Incr Delay (d2), s/veh	1.1	1.5	1.1	0.2	0.5	1.5	0.8	0.3	0.0	0.9	6.9	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(-26165%),veh/ln	1.0	1.9	1.5	2.7	3.5	7.1	1.2	3.7	0.0	2.2	10.8	0.0
LnGrp Delay(d),s/veh	32.2	33.5	29.8	20.8	21.4	21.0	33.8	21.2	0.0	21.6	30.3	0.0
LnGrp LOS	C	C	C	C	C	C	C	C		C	C	
Approach Vol, veh/h		318			956			505			1167	
Approach Delay, s/veh		32.3			21.0			22.8			29.2	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	10.5	26.0		11.2	8.1	28.4		25.7
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	6.7	23.7		15.5	5.1	25.3		31.1
Max Q Clear Time (g_c+I1), s	6.3	9.4		5.7	2.0	21.7		17.7
Green Ext Time (p_c), s	0.0	2.7		1.1	0.9	2.2		3.5

Intersection Summary	
HCM 2010 Ctrl Delay	25.8
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	285	771	130	265	706	145
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0	4.0	4.0	4.0
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	1.00
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3438	1538	1736	3471	3502	1594
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3438	1538	1736	3471	3502	1594
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	297	803	135	276	735	151
RTOR Reduction (vph)	0	507	0	0	0	111
Lane Group Flow (vph)	297	296	135	276	735	40
Confl. Peds. (#/hr)		1	1			1
Heavy Vehicles (%)	5%	5%	4%	4%	0%	0%
Turn Type	NA	Prot	Prot	NA	Prot	Perm
Protected Phases	2	2	1	6	8	
Permitted Phases						8
Actuated Green, G (s)	22.7	22.7	8.4	37.1	16.5	16.5
Effective Green, g (s)	22.7	22.7	8.4	37.1	16.5	16.5
Actuated g/C Ratio	0.37	0.37	0.14	0.60	0.27	0.27
Clearance Time (s)	5.0	5.0	5.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1266	566	236	2090	938	426
v/s Ratio Prot	0.09	c0.19	c0.08	0.08	c0.21	
v/s Ratio Perm						0.03
v/c Ratio	0.23	0.52	0.57	0.13	0.78	0.09
Uniform Delay, d1	13.4	15.2	24.9	5.3	20.9	16.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.4	3.4	3.3	0.0	4.3	0.1
Delay (s)	13.9	18.6	28.2	5.3	25.2	17.0
Level of Service	B	B	C	A	C	B
Approach Delay (s)	17.4			12.9	23.8	
Approach LOS	B			B	C	

Intersection Summary			
HCM 2000 Control Delay	19.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	61.6	Sum of lost time (s)	15.0
Intersection Capacity Utilization	62.7%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	30	35	20	168	35	145	25	666	153	115	666	25
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1900	1827	1827	1900	1792	1792	1900	1827	1827	1900
Adj Flow Rate, veh/h	32	37	21	177	37	153	26	701	161	121	701	26
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	6	6	6	4	4	4	6	6	6	4	4	4
Cap, veh/h	291	250	142	413	73	300	425	1148	263	421	1598	59
Arrive On Green	0.23	0.23	0.23	0.23	0.23	0.23	0.03	0.42	0.42	0.08	0.47	0.47
Sat Flow, veh/h	1144	1075	610	1314	312	1288	1707	2751	631	1740	3413	127
Grp Volume(v), veh/h	32	0	58	177	0	190	26	434	428	121	356	371
Grp Sat Flow(s),veh/h/ln	1144	0	1685	1314	0	1600	1707	1703	1679	1740	1736	1804
Q Serve(g_s), s	1.3	0.0	1.4	6.2	0.0	5.2	0.4	10.0	10.0	1.9	6.9	6.9
Cycle Q Clear(g_c), s	6.5	0.0	1.4	7.6	0.0	5.2	0.4	10.0	10.0	1.9	6.9	6.9
Prop In Lane	1.00		0.36	1.00		0.81	1.00		0.38	1.00		0.07
Lane Grp Cap(c), veh/h	291	0	392	413	0	373	425	711	701	421	812	845
V/C Ratio(X)	0.11	0.00	0.15	0.43	0.00	0.51	0.06	0.61	0.61	0.29	0.44	0.44
Avail Cap(c_a), veh/h	685	0	972	866	0	923	544	915	902	470	950	987
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.6	0.0	15.3	18.3	0.0	16.8	8.0	11.4	11.4	8.0	8.9	8.9
Incr Delay (d2), s/veh	0.2	0.0	0.2	0.7	0.0	1.1	0.1	0.9	0.9	0.4	0.4	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	0.4	0.0	0.6	2.3	0.0	2.4	0.2	4.7	4.7	0.9	3.4	3.5
LnGrp Delay(d),s/veh	19.8	0.0	15.5	19.0	0.0	17.9	8.0	12.3	12.3	8.4	9.3	9.3
LnGrp LOS	B		B	B		B	A	B	B	A	A	A
Approach Vol, veh/h		90			367			888			848	
Approach Delay, s/veh		17.0			18.4			12.2			9.2	
Approach LOS		B			B			B			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	8.6	25.5		16.2	6.0	28.0		16.2
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	5.5	27.0		29.0	5.0	27.5		29.0
Max Q Clear Time (g_c+I1), s	3.9	12.0		8.5	2.4	8.9		9.6
Green Ext Time (p_c), s	0.0	8.8		2.2	0.0	10.1		2.1

Intersection Summary	
HCM 2010 Ctrl Delay	12.3
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	10	10	85	100	5	100	120	785	115	85	785	30
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		1.00	0.99		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1810	1810	1900	1900	1667	1900	1827	1827	1900	1845	1845	1900
Adj Flow Rate, veh/h	10	10	0	104	5	0	125	818	120	89	818	31
Adj No. of Lanes	1	1	0	0	1	0	1	2	0	1	2	0
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	5	5	14	14	14	4	4	4	3	3	3
Cap, veh/h	423	250	0	360	10	0	510	1839	270	475	2086	79
Arrive On Green	0.14	0.14	0.00	0.14	0.14	0.00	0.61	0.61	0.61	0.61	0.61	0.61
Sat Flow, veh/h	1357	1810	0	1157	70	0	633	3035	445	588	3442	130
Grp Volume(v), veh/h	10	10	0	109	0	0	125	468	470	89	416	433
Grp Sat Flow(s),veh/h/ln	1357	1810	0	1227	0	0	633	1736	1744	588	1752	1820
Q Serve(g_s), s	0.0	0.2	0.0	2.8	0.0	0.0	4.5	5.1	5.1	3.4	4.3	4.3
Cycle Q Clear(g_c), s	0.2	0.2	0.0	3.0	0.0	0.0	8.8	5.1	5.1	8.5	4.3	4.3
Prop In Lane	1.00		0.00	0.95		0.00	1.00		0.26	1.00		0.07
Lane Grp Cap(c), veh/h	423	250	0	370	0	0	510	1051	1057	475	1062	1103
V/C Ratio(X)	0.02	0.04	0.00	0.29	0.00	0.00	0.24	0.44	0.44	0.19	0.39	0.39
Avail Cap(c_a), veh/h	1238	1337	0	1124	0	0	576	1233	1239	537	1245	1293
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	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.1	13.1	0.0	14.4	0.0	0.0	5.9	3.7	3.7	6.0	3.6	3.6
Incr Delay (d2), s/veh	0.0	0.1	0.0	0.4	0.0	0.0	0.2	0.3	0.3	0.2	0.2	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(-26165%),veh/ln	0.1	0.1	0.0	1.0	0.0	0.0	0.8	2.4	2.4	0.6	2.0	2.1
LnGrp Delay(d),s/veh	13.2	13.2	0.0	14.8	0.0	0.0	6.1	4.0	4.0	6.2	3.8	3.8
LnGrp LOS	B	B		B			A	A	A	A	A	A
Approach Vol, veh/h		20			109			1063			938	
Approach Delay, s/veh		13.2			14.8			4.3			4.0	
Approach LOS		B			B			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		25.8		9.4		25.8		9.4
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5
Max Green Setting (Gmax), s		25.0		26.0		25.0		26.0
Max Q Clear Time (g_c+I1), s		10.8		2.2		10.5		5.0
Green Ext Time (p_c), s		10.5		0.6		10.7		0.6

Intersection Summary	
HCM 2010 Ctrl Delay	4.8
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	195	80	144	525	866	300	93	824	73
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		0.97	1.00		0.99
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1827	1827	1827	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h				142	165	0	541	893	309	96	849	75
Adj No. of Lanes				1	1	1	1	2	1	1	4	1
Peak Hour Factor				0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %				4	4	4	3	3	3	3	3	3
Cap, veh/h				244	256	218	704	1956	852	123	1445	352
Arrive On Green				0.14	0.14	0.00	0.40	0.56	0.56	0.07	0.23	0.23
Sat Flow, veh/h				1740	1827	1553	1757	3505	1526	1757	6346	1547
Grp Volume(v), veh/h				142	165	0	541	893	309	96	849	75
Grp Sat Flow(s),veh/h/ln				1740	1827	1553	1757	1752	1526	1757	1586	1547
Q Serve(g_s), s				4.5	5.0	0.0	15.5	8.8	6.5	3.1	7.0	2.3
Cycle Q Clear(g_c), s				4.5	5.0	0.0	15.5	8.8	6.5	3.1	7.0	2.3
Prop In Lane				1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h				244	256	218	704	1956	852	123	1445	352
V/C Ratio(X)				0.58	0.64	0.00	0.77	0.46	0.36	0.78	0.59	0.21
Avail Cap(c_a), veh/h				806	846	719	799	2225	969	226	1960	478
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh				23.5	23.7	0.0	15.1	7.6	7.1	26.7	20.1	18.3
Incr Delay (d2), s/veh				2.2	2.7	0.0	4.0	0.2	0.3	10.2	0.4	0.3
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln				2.3	2.7	0.0	8.3	4.3	2.8	1.9	3.0	1.0
LnGrp Delay(d),s/veh				25.7	26.4	0.0	19.2	7.8	7.4	36.9	20.4	18.6
LnGrp LOS				C	C		B	A	A	D	C	B
Approach Vol, veh/h					307			1743			1020	
Approach Delay, s/veh					26.0			11.3			21.9	
Approach LOS					C			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2			5	6		8
Phs Duration (G+Y+Rc), s	8.6	37.0			27.8	17.8		12.7
Change Period (Y+Rc), s	4.5	4.5			4.5	4.5		4.5
Max Green Setting (Gmax), s	7.5	37.0			26.5	18.0		27.0
Max Q Clear Time (g_c+I1), s	5.1	10.8			17.5	9.0		7.0
Green Ext Time (p_c), s	0.0	11.1			5.8	4.0		1.3

Intersection Summary	
HCM 2010 Ctrl Delay	16.3
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	193	160	375	345	0	240	0	1258	430	230	798	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1845	0	1845	0	1863	1863	1863	1863	0
Adj Flow Rate, veh/h	199	165	387	356	0	247	0	1297	443	237	823	0
Adj No. of Lanes	1	1	1	2	0	1	0	3	1	1	3	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	3	0	3	0	2	2	2	2	0
Cap, veh/h	551	579	482	0	0	0	0	2034	629	335	2873	0
Arrive On Green	0.31	0.31	0.31	0.00	0.00	0.00	0.00	0.40	0.40	0.10	0.56	0.00
Sat Flow, veh/h	1774	1863	1553		0		0	5253	1573	1774	5253	0
Grp Volume(v), veh/h	199	165	387		0.0		0	1297	443	237	823	0
Grp Sat Flow(s),veh/h/ln	1774	1863	1553				0	1695	1573	1774	1695	0
Q Serve(g_s), s	6.3	4.8	16.5				0.0	14.9	17.0	5.2	6.1	0.0
Cycle Q Clear(g_c), s	6.3	4.8	16.5				0.0	14.9	17.0	5.2	6.1	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	551	579	482				0	2034	629	335	2873	0
V/C Ratio(X)	0.36	0.29	0.80				0.00	0.64	0.70	0.71	0.29	0.00
Avail Cap(c_a), veh/h	932	979	816				0	2138	661	426	3235	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	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	19.4	18.9	22.9				0.0	17.5	18.1	14.2	8.2	0.0
Incr Delay (d2), s/veh	0.4	0.3	3.2				0.0	0.6	3.2	3.8	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	3.2	2.5	7.5				0.0	7.0	7.9	2.8	2.8	0.0
LnGrp Delay(d),s/veh	19.7	19.1	26.0				0.0	18.1	21.3	18.1	8.2	0.0
LnGrp LOS	B	B	C					B	C	B	A	
Approach Vol, veh/h		751						1740			1060	
Approach Delay, s/veh		22.9						18.9			10.4	
Approach LOS		C						B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	11.9	33.4		27.0		45.3		
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5		
Max Green Setting (Gmax), s	11.1	30.4		38.0		46.0		
Max Q Clear Time (g_c+I1), s	7.2	19.0		18.5		8.1		
Green Ext Time (p_c), s	0.2	9.8		2.9		25.7		

Intersection Summary	
HCM 2010 Ctrl Delay	17.2
HCM 2010 LOS	B

Notes

User approved changes to right turn type.

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	393	585	510	325	525	383
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1827	1827	1845	1845
Adj Flow Rate, veh/h	409	609	531	339	547	399
Adj No. of Lanes	2	2	2	1	2	1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	4	4	4	4	3	3
Cap, veh/h	844	2076	937	800	837	777
Arrive On Green	0.25	0.60	0.27	0.27	0.25	0.25
Sat Flow, veh/h	3375	3563	3563	1550	3408	1568
Grp Volume(v), veh/h	409	609	531	339	547	399
Grp Sat Flow(s),veh/h/ln	1688	1736	1736	1550	1704	1568
Q Serve(g_s), s	6.0	4.9	7.6	7.8	8.3	0.0
Cycle Q Clear(g_c), s	6.0	4.9	7.6	7.8	8.3	0.0
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	844	2076	937	800	837	777
V/C Ratio(X)	0.48	0.29	0.57	0.42	0.65	0.51
Avail Cap(c_a), veh/h	2315	5696	3044	1741	2930	1740
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.4	5.6	18.1	8.7	19.5	9.8
Incr Delay (d2), s/veh	0.4	0.1	0.5	0.4	0.9	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	2.8	2.3	3.7	5.1	4.0	6.4
LnGrp Delay(d),s/veh	18.9	5.7	18.7	9.0	20.4	10.4
LnGrp LOS	B	A	B	A	C	B
Approach Vol, veh/h		1018	870		946	
Approach Delay, s/veh		11.0	14.9		16.2	
Approach LOS		B	B		B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		38.9		18.6	18.9	20.0		
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5		
Max Green Setting (Gmax), s		94.5		49.5	39.5	50.5		
Max Q Clear Time (g_c+I1), s		6.9		10.3	8.0	9.8		
Green Ext Time (p_c), s		6.9		3.8	6.5	5.5		

Intersection Summary	
HCM 2010 Ctrl Delay	13.9
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	95	205	130	335	280	455	120	480	405	145	945	135
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.93	1.00		0.96	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1776	1776	1776	1863	1863	1863	1863	1863	1900	1845	1845	1900
Adj Flow Rate, veh/h	102	290	93	360	301	489	129	516	0	156	1016	0
Adj No. of Lanes	1	2	1	2	1	1	1	2	0	1	2	0
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, %	7	7	7	2	2	2	2	2	2	3	3	3
Cap, veh/h	185	389	230	1070	579	611	196	1108	0	311	1223	0
Arrive On Green	0.11	0.11	0.11	0.31	0.31	0.31	0.05	0.31	0.00	0.09	0.35	0.00
Sat Flow, veh/h	1691	3551	1410	3442	1863	1525	1774	3632	0	1757	3597	0
Grp Volume(v), veh/h	102	290	93	360	301	489	129	516	0	156	1016	0
Grp Sat Flow(s),veh/h/ln	1691	1776	1410	1721	1863	1525	1774	1770	0	1757	1752	0
Q Serve(g_s), s	5.7	7.9	0.5	8.0	13.3	28.4	0.9	11.7	0.0	6.6	26.5	0.0
Cycle Q Clear(g_c), s	5.7	7.9	0.5	8.0	13.3	28.4	0.9	11.7	0.0	6.6	26.5	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.00	1.00		0.00
Lane Grp Cap(c), veh/h	185	389	230	1070	579	611	196	1108	0	311	1223	0
V/C Ratio(X)	0.55	0.75	0.40	0.34	0.52	0.80	0.66	0.47	0.00	0.50	0.83	0.00
Avail Cap(c_a), veh/h	242	509	278	1086	588	618	287	1421	0	390	1513	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	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	42.1	43.1	37.6	26.5	28.3	26.7	44.2	27.6	0.0	26.2	29.8	0.0
Incr Delay (d2), s/veh	2.5	4.3	1.1	0.2	0.8	7.4	3.7	0.3	0.0	1.2	3.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	2.8	4.1	2.3	3.8	6.9	13.1	3.6	5.8	0.0	3.3	13.4	0.0
LnGrp Delay(d),s/veh	44.7	47.4	38.7	26.7	29.1	34.1	48.0	27.9	0.0	27.4	33.1	0.0
LnGrp LOS	D	D	D	C	C	C	D	C		C	C	
Approach Vol, veh/h		485			1150			645			1172	
Approach Delay, s/veh		45.1			30.4			31.9			32.4	
Approach LOS		D			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	13.1	35.7		15.4	9.5	39.4		35.5
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	13.1	40.1		14.3	10.1	43.1		31.5
Max Q Clear Time (g_c+I1), s	8.6	13.7		9.9	2.9	28.5		30.4
Green Ext Time (p_c), s	0.2	4.1		1.0	2.2	6.3		0.6

Intersection Summary	
HCM 2010 Ctrl Delay	33.4
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	285	569	125	255	594	165
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0	4.0	4.0	4.0
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	1.00
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3610	1615	1787	3574	3502	1592
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3610	1615	1787	3574	3502	1592
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	294	587	129	263	612	170
RTOR Reduction (vph)	0	364	0	0	0	127
Lane Group Flow (vph)	294	223	129	263	612	43
Confl. Peds. (#/hr)						2
Heavy Vehicles (%)	0%	0%	1%	1%	0%	0%
Turn Type	NA	Prot	Prot	NA	Prot	Perm
Protected Phases	2	2	1	6	8	
Permitted Phases						8
Actuated Green, G (s)	22.8	22.8	8.0	36.8	15.1	15.1
Effective Green, g (s)	22.8	22.8	8.0	36.8	15.1	15.1
Actuated g/C Ratio	0.38	0.38	0.13	0.61	0.25	0.25
Clearance Time (s)	5.0	5.0	5.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1374	614	238	2195	882	401
v/s Ratio Prot	0.08	c0.14	c0.07	0.07	c0.17	
v/s Ratio Perm						0.03
v/c Ratio	0.21	0.36	0.54	0.12	0.69	0.11
Uniform Delay, d1	12.5	13.3	24.2	4.8	20.3	17.2
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.4	1.7	2.5	0.0	2.4	0.1
Delay (s)	12.9	15.0	26.8	4.8	22.7	17.3
Level of Service	B	B	C	A	C	B
Approach Delay (s)	14.3			12.0	21.5	
Approach LOS	B			B	C	

Intersection Summary			
HCM 2000 Control Delay	16.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	59.9	Sum of lost time (s)	15.0
Intersection Capacity Utilization	49.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	30	40	25	171	55	80	25	594	161	80	579	35
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1827	1827	1900	1863	1863	1900	1881	1881	1900
Adj Flow Rate, veh/h	32	43	27	182	59	85	27	632	171	85	616	37
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	0
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, %	3	3	3	4	4	4	2	2	2	1	1	1
Cap, veh/h	321	248	155	386	157	226	483	1289	348	451	1717	103
Arrive On Green	0.23	0.23	0.23	0.23	0.23	0.23	0.03	0.47	0.47	0.06	0.50	0.50
Sat Flow, veh/h	1226	1060	666	1298	672	968	1774	2753	744	1792	3421	205
Grp Volume(v), veh/h	32	0	70	182	0	144	27	406	397	85	321	332
Grp Sat Flow(s),veh/h/ln	1226	0	1726	1298	0	1640	1774	1770	1728	1792	1787	1839
Q Serve(g_s), s	1.3	0.0	1.9	7.5	0.0	4.3	0.4	9.1	9.2	1.3	6.3	6.3
Cycle Q Clear(g_c), s	5.6	0.0	1.9	9.4	0.0	4.3	0.4	9.1	9.2	1.3	6.3	6.3
Prop In Lane	1.00		0.39	1.00		0.59	1.00		0.43	1.00		0.11
Lane Grp Cap(c), veh/h	321	0	403	386	0	383	483	828	809	451	897	923
V/C Ratio(X)	0.10	0.00	0.17	0.47	0.00	0.38	0.06	0.49	0.49	0.19	0.36	0.36
Avail Cap(c_a), veh/h	651	0	868	735	0	824	583	828	809	506	897	923
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.9	0.0	17.7	21.4	0.0	18.6	7.5	10.6	10.6	7.4	8.7	8.7
Incr Delay (d2), s/veh	0.1	0.0	0.2	0.9	0.0	0.6	0.0	2.1	2.1	0.2	1.1	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	0.4	0.0	0.9	2.8	0.0	2.0	0.2	4.9	4.8	0.7	3.3	3.4
LnGrp Delay(d),s/veh	21.0	0.0	17.9	22.3	0.0	19.2	7.6	12.7	12.7	7.6	9.8	9.8
LnGrp LOS	C		B	C		B	A	B	B	A	A	A
Approach Vol, veh/h		102			326			830			738	
Approach Delay, s/veh		18.9			20.9			12.5			9.6	
Approach LOS		B			C			B			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	8.2	31.5		18.0	6.3	33.5		18.0
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	5.5	27.0		29.0	5.0	27.5		29.0
Max Q Clear Time (g_c+I1), s	3.3	11.2		7.6	2.4	8.3		11.4
Green Ext Time (p_c), s	0.0	8.4		1.9	0.0	9.3		1.8

Intersection Summary	
HCM 2010 Ctrl Delay	13.1
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	5	5	100	144	10	104	160	680	134	89	675	30
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1900	1845	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	5	5	0	148	10	0	165	701	138	92	696	31
Adj No. of Lanes	1	1	0	0	1	0	1	2	0	1	2	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	3	3	3	3	3	3	2	2	2	2	2	2
Cap, veh/h	458	282	0	399	13	0	557	1736	342	507	2031	90
Arrive On Green	0.15	0.15	0.00	0.15	0.15	0.00	0.59	0.59	0.59	0.59	0.59	0.59
Sat Flow, veh/h	1385	1845	0	1304	88	0	723	2946	580	652	3447	153
Grp Volume(v), veh/h	5	5	0	158	0	0	165	421	418	92	357	370
Grp Sat Flow(s),veh/h/ln	1385	1845	0	1392	0	0	723	1770	1756	652	1770	1831
Q Serve(g_s), s	0.0	0.1	0.0	3.7	0.0	0.0	5.3	4.5	4.5	3.1	3.6	3.6
Cycle Q Clear(g_c), s	0.1	0.1	0.0	3.8	0.0	0.0	8.9	4.5	4.5	7.6	3.6	3.6
Prop In Lane	1.00		0.00	0.94		0.00	1.00		0.33	1.00		0.08
Lane Grp Cap(c), veh/h	458	282	0	412	0	0	557	1043	1035	507	1043	1079
V/C Ratio(X)	0.01	0.02	0.00	0.38	0.00	0.00	0.30	0.40	0.40	0.18	0.34	0.34
Avail Cap(c_a), veh/h	1280	1375	0	1251	0	0	650	1268	1259	590	1268	1312
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	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.6	12.6	0.0	14.2	0.0	0.0	6.0	3.9	3.9	5.9	3.7	3.7
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.6	0.0	0.0	0.3	0.3	0.3	0.2	0.2	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(-26165%),veh/ln	0.0	0.0	0.0	1.5	0.0	0.0	1.1	2.2	2.2	0.6	1.7	1.8
LnGrp Delay(d),s/veh	12.6	12.6	0.0	14.8	0.0	0.0	6.3	4.1	4.1	6.1	3.9	3.9
LnGrp LOS	B	B		B			A	A	A	A	A	A
Approach Vol, veh/h		10			158			1004			819	
Approach Delay, s/veh		12.6			14.8			4.5			4.1	
Approach LOS		B			B			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		25.1		9.8		25.1		9.8
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5
Max Green Setting (Gmax), s		25.0		26.0		25.0		26.0
Max Q Clear Time (g_c+I1), s		10.9		2.1		9.6		5.8
Green Ext Time (p_c), s		9.6		0.9		10.3		0.8

Intersection Summary	
HCM 2010 Ctrl Delay	5.2
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	165	55	122	670	857	190	86	723	86
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		0.97	1.00		0.96
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1845	1845	1845	1881	1881	1881	1863	1863	1863
Adj Flow Rate, veh/h				116	139	0	705	902	200	91	761	91
Adj No. of Lanes				1	1	1	1	2	1	1	4	1
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				3	3	3	1	1	1	2	2	2
Cap, veh/h				213	223	190	785	2089	910	117	1358	324
Arrive On Green				0.12	0.12	0.00	0.44	0.58	0.58	0.07	0.21	0.21
Sat Flow, veh/h				1757	1845	1568	1792	3574	1558	1774	6408	1527
Grp Volume(v), veh/h				116	139	0	705	902	200	91	761	91
Grp Sat Flow(s),veh/h/ln				1757	1845	1568	1792	1787	1558	1774	1602	1527
Q Serve(g_s), s				3.7	4.2	0.0	21.5	8.3	3.6	3.0	6.3	2.9
Cycle Q Clear(g_c), s				3.7	4.2	0.0	21.5	8.3	3.6	3.0	6.3	2.9
Prop In Lane				1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h				213	223	190	785	2089	910	117	1358	324
V/C Ratio(X)				0.55	0.62	0.00	0.90	0.43	0.22	0.78	0.56	0.28
Avail Cap(c_a), veh/h				804	845	718	805	2333	1017	180	1956	466
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh				24.4	24.6	0.0	15.4	6.8	5.8	27.1	20.8	19.5
Incr Delay (d2), s/veh				2.2	2.8	0.0	12.8	0.1	0.1	11.0	0.4	0.5
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln				1.9	2.3	0.0	13.4	4.0	1.6	1.8	2.8	1.3
LnGrp Delay(d),s/veh				26.6	27.5	0.0	28.1	7.0	6.0	38.2	21.1	19.9
LnGrp LOS				C	C		C	A	A	D	C	B
Approach Vol, veh/h					255			1807			943	
Approach Delay, s/veh					27.1			15.1			22.7	
Approach LOS					C			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2			5	6		8
Phs Duration (G+Y+Rc), s	8.4	39.0			30.3	17.0		11.6
Change Period (Y+Rc), s	4.5	4.5			4.5	4.5		4.5
Max Green Setting (Gmax), s	6.0	38.5			26.5	18.0		27.0
Max Q Clear Time (g_c+I1), s	5.0	10.3			23.5	8.3		6.2
Green Ext Time (p_c), s	0.0	12.0			2.3	3.9		1.0

Intersection Summary	
HCM 2010 Ctrl Delay	18.5
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	181	95	495	310	0	166	0	1356	395	157	801	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1881	1881	0	1881	0	1881	1881	1863	1863	0
Adj Flow Rate, veh/h	187	98	510	320	0	171	0	1398	407	162	826	0
Adj No. of Lanes	1	1	1	2	0	1	0	3	1	1	3	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	1	1	1	1	0	1	0	1	1	2	2	0
Cap, veh/h	652	685	581	0	0	0	0	2028	628	253	2637	0
Arrive On Green	0.36	0.36	0.36	0.00	0.00	0.00	0.00	0.39	0.39	0.07	0.52	0.00
Sat Flow, veh/h	1792	1881	1595		0		0	5305	1591	1774	5253	0
Grp Volume(v), veh/h	187	98	510		0.0		0	1398	407	162	826	0
Grp Sat Flow(s),veh/h/ln	1792	1881	1595				0	1712	1591	1774	1695	0
Q Serve(g_s), s	5.7	2.7	22.9				0.0	17.4	16.0	4.0	7.2	0.0
Cycle Q Clear(g_c), s	5.7	2.7	22.9				0.0	17.4	16.0	4.0	7.2	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	652	685	581				0	2028	628	253	2637	0
V/C Ratio(X)	0.29	0.14	0.88				0.00	0.69	0.65	0.64	0.31	0.00
Avail Cap(c_a), veh/h	887	932	790				0	2028	628	253	2637	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	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	17.3	16.4	22.8				0.0	19.3	18.9	16.2	10.6	0.0
Incr Delay (d2), s/veh	0.2	0.1	8.6				0.0	1.9	5.1	5.3	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	2.8	1.4	11.4				0.0	8.5	7.8	2.3	3.4	0.0
LnGrp Delay(d),s/veh	17.6	16.5	31.4				0.0	21.3	24.0	21.5	10.9	0.0
LnGrp LOS	B	B	C					C	C	C	B	
Approach Vol, veh/h		795						1805			988	
Approach Delay, s/veh		26.3						21.9			12.7	
Approach LOS		C						C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	9.5	34.8		32.4		44.3		
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5		
Max Green Setting (Gmax), s	5.0	30.3		38.0		39.8		
Max Q Clear Time (g_c+I1), s	6.0	19.4		24.9		9.2		
Green Ext Time (p_c), s	0.0	9.6		2.7		22.8		

Intersection Summary	
HCM 2010 Ctrl Delay	20.3
HCM 2010 LOS	C

Notes

User approved changes to right turn type.

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	501	730	785	441	551	536
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.98	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1881	1881	1863	1863
Adj Flow Rate, veh/h	551	802	863	485	605	589
Adj No. of Lanes	2	2	2	1	2	1
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	1	1	1	1	2	2
Cap, veh/h	417	1932	1246	1049	1085	689
Arrive On Green	0.12	0.54	0.35	0.35	0.32	0.32
Sat Flow, veh/h	3476	3668	3668	1564	3442	1583
Grp Volume(v), veh/h	551	802	863	485	605	589
Grp Sat Flow(s),veh/h/ln	1738	1787	1787	1564	1721	1583
Q Serve(g_s), s	7.5	8.3	13.0	9.4	9.1	13.4
Cycle Q Clear(g_c), s	7.5	8.3	13.0	9.4	9.1	13.4
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	417	1932	1246	1049	1085	689
V/C Ratio(X)	1.32	0.42	0.69	0.46	0.56	0.85
Avail Cap(c_a), veh/h	417	2346	1659	1230	1653	950
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.5	8.5	17.5	5.1	17.8	15.9
Incr Delay (d2), s/veh	160.3	0.1	0.8	0.3	0.5	5.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	12.8	4.0	6.5	7.9	4.4	14.9
LnGrp Delay(d),s/veh	187.8	8.6	18.3	5.4	18.2	21.6
LnGrp LOS	F	A	B	A	B	C
Approach Vol, veh/h		1353	1348		1194	
Approach Delay, s/veh		81.6	13.7		19.9	
Approach LOS		F	B		B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		38.3		24.2	12.0	26.3		
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5		
Max Green Setting (Gmax), s		41.0		30.0	7.5	29.0		
Max Q Clear Time (g_c+I1), s		10.3		15.4	9.5	15.0		
Green Ext Time (p_c), s		9.2		4.3	0.0	6.8		

Intersection Summary	
HCM 2010 Ctrl Delay	39.2
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	65	85	116	305	218	365	61	400	265	125	925	165
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1810	1810	1810	1881	1881	1881	1881	1881	1900	1900	1900	1900
Adj Flow Rate, veh/h	48	192	86	339	242	406	68	444	0	139	1028	0
Adj No. of Lanes	1	2	1	2	1	1	1	2	0	1	2	0
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, %	5	5	5	1	1	1	1	1	1	0	0	0
Cap, veh/h	160	335	219	1008	546	594	203	1049	0	323	1170	0
Arrive On Green	0.09	0.09	0.09	0.29	0.29	0.29	0.05	0.29	0.00	0.08	0.32	0.00
Sat Flow, veh/h	1723	3619	1516	3476	1881	1599	1792	3668	0	1810	3705	0
Grp Volume(v), veh/h	48	192	86	339	242	406	68	444	0	139	1028	0
Grp Sat Flow(s),veh/h/ln	1723	1810	1516	1738	1881	1599	1792	1787	0	1810	1805	0
Q Serve(g_s), s	1.9	3.8	0.0	5.7	7.8	15.9	0.0	7.4	0.0	4.4	20.0	0.0
Cycle Q Clear(g_c), s	1.9	3.8	0.0	5.7	7.8	15.9	0.0	7.4	0.0	4.4	20.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.00	1.00		0.00
Lane Grp Cap(c), veh/h	160	335	219	1008	546	594	203	1049	0	323	1170	0
V/C Ratio(X)	0.30	0.57	0.39	0.34	0.44	0.68	0.33	0.42	0.00	0.43	0.88	0.00
Avail Cap(c_a), veh/h	360	756	395	1457	789	800	236	1142	0	339	1231	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	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	31.4	32.3	28.8	20.7	21.5	19.7	33.2	21.1	0.0	20.9	23.7	0.0
Incr Delay (d2), s/veh	1.0	1.5	1.2	0.2	0.6	1.5	1.0	0.3	0.0	0.9	7.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	1.0	2.0	1.6	2.8	4.1	7.2	1.4	3.7	0.0	2.2	11.0	0.0
LnGrp Delay(d),s/veh	32.5	33.8	30.0	20.9	22.0	21.1	34.1	21.4	0.0	21.8	31.0	0.0
LnGrp LOS	C	C	C	C	C	C	C	C		C	C	
Approach Vol, veh/h		326			987			512			1167	
Approach Delay, s/veh		32.6			21.3			23.1			29.9	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	10.5	26.3		11.4	8.3	28.5		26.0
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	6.7	23.7		15.5	5.1	25.3		31.1
Max Q Clear Time (g_c+I1), s	6.4	9.4		5.8	2.0	22.0		17.9
Green Ext Time (p_c), s	0.0	2.7		1.1	0.9	2.1		3.6

Intersection Summary	
HCM 2010 Ctrl Delay	26.2
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	285	775	130	265	710	145
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0	4.0	4.0	4.0
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	1.00
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3438	1538	1736	3471	3502	1594
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3438	1538	1736	3471	3502	1594
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	297	807	135	276	740	151
RTOR Reduction (vph)	0	510	0	0	0	110
Lane Group Flow (vph)	297	297	135	276	740	41
Confl. Peds. (#/hr)		1	1			1
Heavy Vehicles (%)	5%	5%	4%	4%	0%	0%
Turn Type	NA	Prot	Prot	NA	Prot	Perm
Protected Phases	2	2	1	6	8	
Permitted Phases						8
Actuated Green, G (s)	22.7	22.7	8.4	37.1	16.6	16.6
Effective Green, g (s)	22.7	22.7	8.4	37.1	16.6	16.6
Actuated g/C Ratio	0.37	0.37	0.14	0.60	0.27	0.27
Clearance Time (s)	5.0	5.0	5.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1264	565	236	2087	942	428
v/s Ratio Prot	0.09	c0.19	c0.08	0.08	c0.21	
v/s Ratio Perm						0.03
v/c Ratio	0.23	0.53	0.57	0.13	0.79	0.09
Uniform Delay, d1	13.5	15.3	25.0	5.3	20.9	16.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.4	3.5	3.3	0.0	4.4	0.1
Delay (s)	13.9	18.8	28.3	5.4	25.3	17.0
Level of Service	B	B	C	A	C	B
Approach Delay (s)	17.5			12.9	23.9	
Approach LOS	B			B	C	

Intersection Summary			
HCM 2000 Control Delay	19.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	61.7	Sum of lost time (s)	15.0
Intersection Capacity Utilization	62.9%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	30	35	20	170	35	145	25	670	155	115	670	25
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1900	1827	1827	1900	1792	1792	1900	1827	1827	1900
Adj Flow Rate, veh/h	32	37	21	179	37	153	26	705	163	121	705	26
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	6	6	6	4	4	4	6	6	6	4	4	4
Cap, veh/h	292	251	143	414	73	301	423	1148	265	418	1599	59
Arrive On Green	0.23	0.23	0.23	0.23	0.23	0.23	0.03	0.42	0.42	0.08	0.47	0.47
Sat Flow, veh/h	1144	1075	610	1314	312	1288	1707	2747	635	1740	3414	126
Grp Volume(v), veh/h	32	0	58	179	0	190	26	437	431	121	358	373
Grp Sat Flow(s),veh/h/ln	1144	0	1685	1314	0	1600	1707	1703	1679	1740	1736	1804
Q Serve(g_s), s	1.3	0.0	1.4	6.3	0.0	5.2	0.4	10.1	10.2	1.9	7.0	7.0
Cycle Q Clear(g_c), s	6.5	0.0	1.4	7.7	0.0	5.2	0.4	10.1	10.2	1.9	7.0	7.0
Prop In Lane	1.00		0.36	1.00		0.81	1.00		0.38	1.00		0.07
Lane Grp Cap(c), veh/h	292	0	394	414	0	374	423	711	701	418	813	845
V/C Ratio(X)	0.11	0.00	0.15	0.43	0.00	0.51	0.06	0.61	0.61	0.29	0.44	0.44
Avail Cap(c_a), veh/h	681	0	967	861	0	919	541	910	897	467	945	983
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.6	0.0	15.3	18.4	0.0	16.8	8.0	11.5	11.5	8.1	9.0	9.0
Incr Delay (d2), s/veh	0.2	0.0	0.2	0.7	0.0	1.1	0.1	0.9	0.9	0.4	0.4	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	0.4	0.0	0.7	2.4	0.0	2.4	0.2	4.9	4.8	0.9	3.4	3.5
LnGrp Delay(d),s/veh	19.8	0.0	15.5	19.1	0.0	17.9	8.1	12.4	12.4	8.4	9.4	9.4
LnGrp LOS	B		B	B		B	A	B	B	A	A	A
Approach Vol, veh/h		90			369			894			852	
Approach Delay, s/veh		17.0			18.5			12.3			9.2	
Approach LOS		B			B			B			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	8.6	25.6		16.3	6.0	28.2		16.3
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	5.5	27.0		29.0	5.0	27.5		29.0
Max Q Clear Time (g_c+I1), s	3.9	12.2		8.5	2.4	9.0		9.7
Green Ext Time (p_c), s	0.0	8.8		2.2	0.0	10.1		2.1

Intersection Summary	
HCM 2010 Ctrl Delay	12.3
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	10	10	85	110	5	104	120	785	125	89	785	30
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		1.00	0.99		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1810	1810	1900	1900	1667	1900	1827	1827	1900	1845	1845	1900
Adj Flow Rate, veh/h	10	10	0	115	5	0	125	818	130	93	818	31
Adj No. of Lanes	1	1	0	0	1	0	1	2	0	1	2	0
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	5	5	14	14	14	4	4	4	3	3	3
Cap, veh/h	435	269	0	369	12	0	502	1801	286	463	2068	78
Arrive On Green	0.15	0.15	0.00	0.15	0.15	0.00	0.60	0.60	0.60	0.60	0.60	0.60
Sat Flow, veh/h	1358	1810	0	1165	78	0	633	2998	476	583	3442	130
Grp Volume(v), veh/h	10	10	0	120	0	0	125	474	474	93	416	433
Grp Sat Flow(s),veh/h/ln	1358	1810	0	1243	0	0	633	1736	1739	583	1752	1820
Q Serve(g_s), s	0.0	0.2	0.0	3.1	0.0	0.0	4.6	5.4	5.4	3.7	4.5	4.5
Cycle Q Clear(g_c), s	0.2	0.2	0.0	3.3	0.0	0.0	9.1	5.4	5.4	9.1	4.5	4.5
Prop In Lane	1.00		0.00	0.96		0.00	1.00		0.27	1.00		0.07
Lane Grp Cap(c), veh/h	435	269	0	381	0	0	502	1043	1044	463	1053	1094
V/C Ratio(X)	0.02	0.04	0.00	0.31	0.00	0.00	0.25	0.45	0.45	0.20	0.40	0.40
Avail Cap(c_a), veh/h	1217	1311	0	1104	0	0	563	1209	1211	519	1221	1268
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	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.1	13.1	0.0	14.4	0.0	0.0	6.1	3.9	3.9	6.4	3.8	3.8
Incr Delay (d2), s/veh	0.0	0.1	0.0	0.5	0.0	0.0	0.3	0.3	0.3	0.2	0.2	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(-26165%),veh/ln	0.1	0.1	0.0	1.1	0.0	0.0	0.8	2.6	2.6	0.6	2.2	2.2
LnGrp Delay(d),s/veh	13.1	13.1	0.0	14.9	0.0	0.0	6.4	4.2	4.2	6.7	4.0	4.0
LnGrp LOS	B	B		B			A	A	A	A	A	A
Approach Vol, veh/h		20			120			1073			942	
Approach Delay, s/veh		13.1			14.9			4.5			4.3	
Approach LOS		B			B			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		26.1		9.8		26.1		9.8
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5
Max Green Setting (Gmax), s		25.0		26.0		25.0		26.0
Max Q Clear Time (g_c+I1), s		11.1		2.2		11.1		5.3
Green Ext Time (p_c), s		10.4		0.7		10.4		0.7

Intersection Summary	
HCM 2010 Ctrl Delay	5.0
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	195	80	148	525	873	300	95	836	70
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		0.97	1.00		0.99
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1827	1827	1827	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h				142	165	0	541	900	309	98	862	72
Adj No. of Lanes				1	1	1	1	2	1	1	4	1
Peak Hour Factor				0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %				4	4	4	3	3	3	3	3	3
Cap, veh/h				244	256	217	703	1954	851	126	1454	355
Arrive On Green				0.14	0.14	0.00	0.40	0.56	0.56	0.07	0.23	0.23
Sat Flow, veh/h				1740	1827	1553	1757	3505	1526	1757	6346	1547
Grp Volume(v), veh/h				142	165	0	541	900	309	98	862	72
Grp Sat Flow(s),veh/h/ln				1740	1827	1553	1757	1752	1526	1757	1586	1547
Q Serve(g_s), s				4.5	5.0	0.0	15.6	8.9	6.6	3.2	7.1	2.2
Cycle Q Clear(g_c), s				4.5	5.0	0.0	15.6	8.9	6.6	3.2	7.1	2.2
Prop In Lane				1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h				244	256	217	703	1954	851	126	1454	355
V/C Ratio(X)				0.58	0.64	0.00	0.77	0.46	0.36	0.78	0.59	0.20
Avail Cap(c_a), veh/h				803	843	717	796	2217	966	225	1953	476
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh				23.5	23.8	0.0	15.2	7.7	7.2	26.7	20.1	18.2
Incr Delay (d2), s/veh				2.2	2.7	0.0	4.1	0.2	0.3	10.0	0.4	0.3
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln				2.3	2.7	0.0	8.3	4.3	2.8	1.9	3.2	1.0
LnGrp Delay(d),s/veh				25.8	26.5	0.0	19.3	7.9	7.4	36.7	20.5	18.5
LnGrp LOS				C	C		B	A	A	D	C	B
Approach Vol, veh/h					307			1750			1032	
Approach Delay, s/veh					26.1			11.3			21.9	
Approach LOS					C			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2			5	6		8
Phs Duration (G+Y+Rc), s	8.7	37.1			27.9	17.9		12.7
Change Period (Y+Rc), s	4.5	4.5			4.5	4.5		4.5
Max Green Setting (Gmax), s	7.5	37.0			26.5	18.0		27.0
Max Q Clear Time (g_c+I1), s	5.2	10.9			17.6	9.1		7.0
Green Ext Time (p_c), s	0.0	11.2			5.8	4.0		1.3

Intersection Summary	
HCM 2010 Ctrl Delay	16.3
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	190	160	375	345	0	240	0	1269	430	233	809	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1845	0	1845	0	1863	1863	1863	1863	0
Adj Flow Rate, veh/h	196	165	387	356	0	247	0	1308	443	240	834	0
Adj No. of Lanes	1	1	1	2	0	1	0	3	1	1	3	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	3	0	3	0	2	2	2	2	0
Cap, veh/h	550	578	482	0	0	0	0	2040	631	335	2879	0
Arrive On Green	0.31	0.31	0.31	0.00	0.00	0.00	0.00	0.40	0.40	0.10	0.57	0.00
Sat Flow, veh/h	1774	1863	1553		0		0	5253	1573	1774	5253	0
Grp Volume(v), veh/h	196	165	387		0.0		0	1308	443	240	834	0
Grp Sat Flow(s),veh/h/ln	1774	1863	1553				0	1695	1573	1774	1695	0
Q Serve(g_s), s	6.2	4.9	16.7				0.0	15.1	17.1	5.3	6.2	0.0
Cycle Q Clear(g_c), s	6.2	4.9	16.7				0.0	15.1	17.1	5.3	6.2	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	550	578	482				0	2040	631	335	2879	0
V/C Ratio(X)	0.36	0.29	0.80				0.00	0.64	0.70	0.72	0.29	0.00
Avail Cap(c_a), veh/h	926	973	811				0	2145	664	422	3235	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	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	19.5	19.0	23.1				0.0	17.6	18.2	14.4	8.2	0.0
Incr Delay (d2), s/veh	0.4	0.3	3.2				0.0	0.6	3.1	4.2	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	3.1	2.6	7.5				0.0	7.1	7.9	2.9	2.9	0.0
LnGrp Delay(d),s/veh	19.9	19.3	26.3				0.0	18.2	21.3	18.6	8.2	0.0
LnGrp LOS	B	B	C					B	C	B	A	
Approach Vol, veh/h		748						1751			1074	
Approach Delay, s/veh		23.0						19.0			10.6	
Approach LOS		C						B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	12.0	33.7		27.1		45.7		
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5		
Max Green Setting (Gmax), s	11.1	30.7		38.0		46.3		
Max Q Clear Time (g_c+I1), s	7.3	19.1		18.7		8.2		
Green Ext Time (p_c), s	0.2	10.0		2.9		26.1		

Intersection Summary	
HCM 2010 Ctrl Delay	17.3
HCM 2010 LOS	B

Notes

User approved changes to right turn type.

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	399	585	510	330	530	389
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1827	1827	1845	1845
Adj Flow Rate, veh/h	416	609	531	344	552	405
Adj No. of Lanes	2	2	2	1	2	1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	4	4	4	4	3	3
Cap, veh/h	847	2079	940	803	841	780
Arrive On Green	0.25	0.60	0.27	0.27	0.25	0.25
Sat Flow, veh/h	3375	3563	3563	1550	3408	1568
Grp Volume(v), veh/h	416	609	531	344	552	405
Grp Sat Flow(s),veh/h/ln	1688	1736	1736	1550	1704	1568
Q Serve(g_s), s	6.1	5.0	7.7	8.0	8.5	0.0
Cycle Q Clear(g_c), s	6.1	5.0	7.7	8.0	8.5	0.0
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	847	2079	940	803	841	780
V/C Ratio(X)	0.49	0.29	0.56	0.43	0.66	0.52
Avail Cap(c_a), veh/h	2288	5630	3009	1727	2896	1725
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.6	5.7	18.3	8.7	19.7	9.9
Incr Delay (d2), s/veh	0.4	0.1	0.5	0.4	0.9	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	2.9	2.4	3.7	5.2	4.1	6.6
LnGrp Delay(d),s/veh	19.1	5.8	18.8	9.1	20.6	10.5
LnGrp LOS	B	A	B	A	C	B
Approach Vol, veh/h		1025	875		957	
Approach Delay, s/veh		11.2	15.0		16.3	
Approach LOS		B	B		B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		39.4		18.9	19.1	20.3		
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5		
Max Green Setting (Gmax), s		94.5		49.5	39.5	50.5		
Max Q Clear Time (g_c+I1), s		7.0		10.5	8.1	10.0		
Green Ext Time (p_c), s		6.9		3.9	6.5	5.5		

Intersection Summary	
HCM 2010 Ctrl Delay	14.1
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	95	205	130	335	283	455	120	480	405	145	945	135
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.93	1.00		0.96	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1776	1776	1776	1863	1863	1863	1863	1863	1900	1845	1845	1900
Adj Flow Rate, veh/h	102	290	93	360	304	489	129	516	0	156	1016	0
Adj No. of Lanes	1	2	1	2	1	1	1	2	0	1	2	0
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, %	7	7	7	2	2	2	2	2	2	3	3	3
Cap, veh/h	185	389	230	1070	579	611	196	1108	0	311	1223	0
Arrive On Green	0.11	0.11	0.11	0.31	0.31	0.31	0.05	0.31	0.00	0.09	0.35	0.00
Sat Flow, veh/h	1691	3551	1410	3442	1863	1525	1774	3632	0	1757	3597	0
Grp Volume(v), veh/h	102	290	93	360	304	489	129	516	0	156	1016	0
Grp Sat Flow(s),veh/h/ln	1691	1776	1410	1721	1863	1525	1774	1770	0	1757	1752	0
Q Serve(g_s), s	5.7	7.9	0.5	8.0	13.4	28.4	0.9	11.7	0.0	6.6	26.5	0.0
Cycle Q Clear(g_c), s	5.7	7.9	0.5	8.0	13.4	28.4	0.9	11.7	0.0	6.6	26.5	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.00	1.00		0.00
Lane Grp Cap(c), veh/h	185	389	230	1070	579	611	196	1108	0	311	1223	0
V/C Ratio(X)	0.55	0.75	0.40	0.34	0.52	0.80	0.66	0.47	0.00	0.50	0.83	0.00
Avail Cap(c_a), veh/h	242	509	278	1086	588	618	287	1421	0	390	1513	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	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	42.1	43.1	37.6	26.5	28.3	26.7	44.2	27.6	0.0	26.2	29.8	0.0
Incr Delay (d2), s/veh	2.5	4.3	1.1	0.2	0.8	7.4	3.7	0.3	0.0	1.2	3.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	2.8	4.1	2.3	3.8	7.1	13.1	3.6	5.8	0.0	3.3	13.4	0.0
LnGrp Delay(d),s/veh	44.7	47.4	38.7	26.7	29.2	34.1	48.0	27.9	0.0	27.4	33.1	0.0
LnGrp LOS	D	D	D	C	C	C	D	C		C	C	
Approach Vol, veh/h		485			1153			645			1172	
Approach Delay, s/veh		45.1			30.5			31.9			32.4	
Approach LOS		D			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	13.1	35.8		15.4	9.5	39.4		35.5
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	13.1	40.1		14.3	10.1	43.1		31.5
Max Q Clear Time (g_c+I1), s	8.6	13.7		9.9	2.9	28.5		30.4
Green Ext Time (p_c), s	0.2	4.1		1.0	2.2	6.3		0.6

Intersection Summary	
HCM 2010 Ctrl Delay	33.4
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	285	570	125	255	595	165
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0	4.0	4.0	4.0
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	1.00
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3610	1615	1787	3574	3502	1592
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3610	1615	1787	3574	3502	1592
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	294	588	129	263	613	170
RTOR Reduction (vph)	0	364	0	0	0	127
Lane Group Flow (vph)	294	224	129	263	613	43
Confl. Peds. (#/hr)						2
Heavy Vehicles (%)	0%	0%	1%	1%	0%	0%
Turn Type	NA	Prot	Prot	NA	Prot	Perm
Protected Phases	2	2	1	6	8	
Permitted Phases						8
Actuated Green, G (s)	22.8	22.8	8.0	36.8	15.1	15.1
Effective Green, g (s)	22.8	22.8	8.0	36.8	15.1	15.1
Actuated g/C Ratio	0.38	0.38	0.13	0.61	0.25	0.25
Clearance Time (s)	5.0	5.0	5.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1374	614	238	2195	882	401
v/s Ratio Prot	0.08	c0.14	c0.07	0.07	c0.18	
v/s Ratio Perm						0.03
v/c Ratio	0.21	0.36	0.54	0.12	0.70	0.11
Uniform Delay, d1	12.5	13.3	24.2	4.8	20.3	17.2
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.4	1.7	2.5	0.0	2.4	0.1
Delay (s)	12.9	15.0	26.8	4.8	22.7	17.3
Level of Service	B	B	C	A	C	B
Approach Delay (s)	14.3			12.0	21.5	
Approach LOS	B			B	C	

Intersection Summary			
HCM 2000 Control Delay	16.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	59.9	Sum of lost time (s)	15.0
Intersection Capacity Utilization	49.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	30	40	25	172	55	80	25	595	162	80	580	35
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1827	1827	1900	1863	1863	1900	1881	1881	1900
Adj Flow Rate, veh/h	32	43	27	183	59	85	27	633	172	85	617	37
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	0
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, %	3	3	3	4	4	4	2	2	2	1	1	1
Cap, veh/h	321	248	156	387	157	227	482	1286	349	450	1716	103
Arrive On Green	0.23	0.23	0.23	0.23	0.23	0.23	0.03	0.47	0.47	0.06	0.50	0.50
Sat Flow, veh/h	1226	1060	666	1298	672	968	1774	2751	746	1792	3421	205
Grp Volume(v), veh/h	32	0	70	183	0	144	27	407	398	85	322	332
Grp Sat Flow(s),veh/h/ln	1226	0	1726	1298	0	1640	1774	1770	1727	1792	1787	1839
Q Serve(g_s), s	1.3	0.0	1.9	7.6	0.0	4.3	0.4	9.2	9.2	1.3	6.3	6.3
Cycle Q Clear(g_c), s	5.6	0.0	1.9	9.4	0.0	4.3	0.4	9.2	9.2	1.3	6.3	6.3
Prop In Lane	1.00		0.39	1.00		0.59	1.00		0.43	1.00		0.11
Lane Grp Cap(c), veh/h	321	0	404	387	0	384	482	828	808	450	896	922
V/C Ratio(X)	0.10	0.00	0.17	0.47	0.00	0.38	0.06	0.49	0.49	0.19	0.36	0.36
Avail Cap(c_a), veh/h	650	0	867	735	0	824	582	828	808	505	896	922
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.9	0.0	17.6	21.4	0.0	18.6	7.6	10.6	10.6	7.5	8.7	8.8
Incr Delay (d2), s/veh	0.1	0.0	0.2	0.9	0.0	0.6	0.0	2.1	2.1	0.2	1.1	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	0.4	0.0	0.9	2.8	0.0	2.0	0.2	4.9	4.8	0.7	3.3	3.4
LnGrp Delay(d),s/veh	21.0	0.0	17.9	22.3	0.0	19.2	7.6	12.7	12.8	7.7	9.9	9.8
LnGrp LOS	C		B	C		B	A	B	B	A	A	A
Approach Vol, veh/h		102			327			832			739	
Approach Delay, s/veh		18.8			20.9			12.6			9.6	
Approach LOS		B			C			B			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	8.2	31.5		18.0	6.3	33.5		18.0
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	5.5	27.0		29.0	5.0	27.5		29.0
Max Q Clear Time (g_c+I1), s	3.3	11.2		7.6	2.4	8.3		11.4
Green Ext Time (p_c), s	0.0	8.4		2.0	0.0	9.4		1.8

Intersection Summary	
HCM 2010 Ctrl Delay	13.2
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	5	5	100	159	10	106	160	680	149	91	675	30
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1900	1845	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	5	5	0	164	10	0	165	701	154	94	696	31
Adj No. of Lanes	1	1	0	0	1	0	1	2	0	1	2	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	3	3	3	3	3	3	2	2	2	2	2	2
Cap, veh/h	478	311	0	416	13	0	544	1675	368	487	2002	89
Arrive On Green	0.17	0.17	0.00	0.17	0.17	0.00	0.58	0.58	0.58	0.58	0.58	0.58
Sat Flow, veh/h	1385	1845	0	1313	80	0	723	2883	633	642	3447	153
Grp Volume(v), veh/h	5	5	0	174	0	0	165	430	425	94	357	370
Grp Sat Flow(s),veh/h/ln	1385	1845	0	1393	0	0	723	1770	1746	642	1770	1831
Q Serve(g_s), s	0.0	0.1	0.0	4.2	0.0	0.0	5.6	4.8	4.8	3.4	3.8	3.8
Cycle Q Clear(g_c), s	0.1	0.1	0.0	4.3	0.0	0.0	9.4	4.8	4.8	8.3	3.8	3.8
Prop In Lane	1.00		0.00	0.94		0.00	1.00		0.36	1.00		0.08
Lane Grp Cap(c), veh/h	478	311	0	429	0	0	544	1028	1014	487	1028	1063
V/C Ratio(X)	0.01	0.02	0.00	0.41	0.00	0.00	0.30	0.42	0.42	0.19	0.35	0.35
Avail Cap(c_a), veh/h	1248	1336	0	1214	0	0	627	1232	1216	561	1232	1275
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	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.5	12.4	0.0	14.2	0.0	0.0	6.4	4.2	4.2	6.5	4.0	4.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.6	0.0	0.0	0.3	0.3	0.3	0.2	0.2	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(-26165%),veh/ln	0.0	0.0	0.0	1.7	0.0	0.0	1.1	2.3	2.3	0.6	1.8	1.9
LnGrp Delay(d),s/veh	12.5	12.5	0.0	14.9	0.0	0.0	6.7	4.4	4.4	6.6	4.2	4.1
LnGrp LOS	B	B		B			A	A	A	A	A	A
Approach Vol, veh/h		10			174			1020			821	
Approach Delay, s/veh		12.5			14.9			4.8			4.4	
Approach LOS		B			B			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		25.4		10.5		25.4		10.5
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5
Max Green Setting (Gmax), s		25.0		26.0		25.0		26.0
Max Q Clear Time (g_c+I1), s		11.4		2.1		10.3		6.3
Green Ext Time (p_c), s		9.5		1.0		10.1		0.9

Intersection Summary	
HCM 2010 Ctrl Delay	5.6
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	165	55	127	670	867	190	87	736	87
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		0.97	1.00		0.96
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1845	1845	1845	1881	1881	1881	1863	1863	1863
Adj Flow Rate, veh/h				116	139	0	705	913	200	92	775	92
Adj No. of Lanes				1	1	1	1	2	1	1	4	1
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				3	3	3	1	1	1	2	2	2
Cap, veh/h				212	223	190	783	2090	911	118	1370	327
Arrive On Green				0.12	0.12	0.00	0.44	0.58	0.58	0.07	0.21	0.21
Sat Flow, veh/h				1757	1845	1568	1792	3574	1558	1774	6408	1527
Grp Volume(v), veh/h				116	139	0	705	913	200	92	775	92
Grp Sat Flow(s),veh/h/ln				1757	1845	1568	1792	1787	1558	1774	1602	1527
Q Serve(g_s), s				3.7	4.2	0.0	21.6	8.4	3.6	3.0	6.4	3.0
Cycle Q Clear(g_c), s				3.7	4.2	0.0	21.6	8.4	3.6	3.0	6.4	3.0
Prop In Lane				1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h				212	223	190	783	2090	911	118	1370	327
V/C Ratio(X)				0.55	0.62	0.00	0.90	0.44	0.22	0.78	0.57	0.28
Avail Cap(c_a), veh/h				801	841	715	802	2325	1013	180	1949	464
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh				24.5	24.7	0.0	15.5	6.9	5.9	27.2	20.8	19.5
Incr Delay (d2), s/veh				2.2	2.8	0.0	13.0	0.1	0.1	11.5	0.4	0.5
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln				1.9	2.3	0.0	13.4	4.1	1.6	1.9	2.8	1.3
LnGrp Delay(d),s/veh				26.7	27.6	0.0	28.5	7.0	6.0	38.7	21.2	19.9
LnGrp LOS				C	C		C	A	A	D	C	B
Approach Vol, veh/h					255			1818			959	
Approach Delay, s/veh					27.2			15.2			22.7	
Approach LOS					C			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2			5	6		8
Phs Duration (G+Y+Rc), s	8.4	39.1			30.4	17.2		11.7
Change Period (Y+Rc), s	4.5	4.5			4.5	4.5		4.5
Max Green Setting (Gmax), s	6.0	38.5			26.5	18.0		27.0
Max Q Clear Time (g_c+I1), s	5.0	10.4			23.6	8.4		6.2
Green Ext Time (p_c), s	0.0	12.1			2.3	3.9		1.0

Intersection Summary	
HCM 2010 Ctrl Delay	18.6
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	182	95	495	310	0	167	0	1364	395	162	809	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1881	1881	0	1881	0	1881	1881	1863	1863	0
Adj Flow Rate, veh/h	188	98	510	320	0	172	0	1406	407	167	834	0
Adj No. of Lanes	1	1	1	2	0	1	0	3	1	1	3	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	1	1	1	1	0	1	0	1	1	2	2	0
Cap, veh/h	652	685	581	0	0	0	0	2028	628	252	2637	0
Arrive On Green	0.36	0.36	0.36	0.00	0.00	0.00	0.00	0.39	0.39	0.07	0.52	0.00
Sat Flow, veh/h	1792	1881	1595		0		0	5305	1591	1774	5253	0
Grp Volume(v), veh/h	188	98	510		0.0		0	1406	407	167	834	0
Grp Sat Flow(s),veh/h/ln	1792	1881	1595				0	1712	1591	1774	1695	0
Q Serve(g_s), s	5.7	2.7	22.9				0.0	17.5	16.0	4.1	7.2	0.0
Cycle Q Clear(g_c), s	5.7	2.7	22.9				0.0	17.5	16.0	4.1	7.2	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	652	685	581				0	2028	628	252	2637	0
V/C Ratio(X)	0.29	0.14	0.88				0.00	0.69	0.65	0.66	0.32	0.00
Avail Cap(c_a), veh/h	887	931	790				0	2028	628	252	2637	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	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	17.3	16.4	22.8				0.0	19.4	18.9	16.3	10.6	0.0
Incr Delay (d2), s/veh	0.2	0.1	8.6				0.0	2.0	5.1	6.3	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	2.9	1.4	11.4				0.0	8.6	7.8	2.4	3.5	0.0
LnGrp Delay(d),s/veh	17.6	16.5	31.4				0.0	21.3	24.0	22.6	11.0	0.0
LnGrp LOS	B	B	C					C	C	C	B	
Approach Vol, veh/h		796						1813			1001	
Approach Delay, s/veh		26.3						21.9			12.9	
Approach LOS		C						C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	9.5	34.8		32.4		44.3		
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5		
Max Green Setting (Gmax), s	5.0	30.3		38.0		39.8		
Max Q Clear Time (g_c+I1), s	6.1	19.5		24.9		9.2		
Green Ext Time (p_c), s	0.0	9.5		2.7		22.9		

Intersection Summary	
HCM 2010 Ctrl Delay	20.4
HCM 2010 LOS	C

Notes

User approved changes to right turn type.

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	507	730	785	442	552	542
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.98	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1881	1881	1863	1863
Adj Flow Rate, veh/h	557	802	863	486	607	596
Adj No. of Lanes	2	2	2	1	2	1
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	1	1	1	1	2	2
Cap, veh/h	414	1921	1241	1054	1100	694
Arrive On Green	0.12	0.54	0.35	0.35	0.32	0.32
Sat Flow, veh/h	3476	3668	3668	1564	3442	1583
Grp Volume(v), veh/h	557	802	863	486	607	596
Grp Sat Flow(s),veh/h/ln	1738	1787	1787	1564	1721	1583
Q Serve(g_s), s	7.5	8.4	13.1	9.5	9.2	13.9
Cycle Q Clear(g_c), s	7.5	8.4	13.1	9.5	9.2	13.9
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	414	1921	1241	1054	1100	694
V/C Ratio(X)	1.35	0.42	0.70	0.46	0.55	0.86
Avail Cap(c_a), veh/h	414	2325	1645	1231	1638	942
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.8	8.7	17.7	5.1	17.7	15.9
Incr Delay (d2), s/veh	171.4	0.1	0.8	0.3	0.4	6.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	13.4	4.2	6.5	8.1	4.4	1.2
LnGrp Delay(d),s/veh	199.2	8.8	18.5	5.4	18.1	22.0
LnGrp LOS	F	A	B	A	B	C
Approach Vol, veh/h		1359	1349		1203	
Approach Delay, s/veh		86.9	13.8		20.1	
Approach LOS		F	B		C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		38.4		24.6	12.0	26.4		
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5		
Max Green Setting (Gmax), s		41.0		30.0	7.5	29.0		
Max Q Clear Time (g_c+I1), s		10.4		15.9	9.5	15.1		
Green Ext Time (p_c), s		9.3		4.3	0.0	6.8		

Intersection Summary	
HCM 2010 Ctrl Delay	41.1
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	65	85	117	305	222	365	62	400	265	125	925	165
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1810	1810	1810	1881	1881	1881	1881	1881	1900	1900	1900	1900
Adj Flow Rate, veh/h	48	192	87	339	247	406	69	444	0	139	1028	0
Adj No. of Lanes	1	2	1	2	1	1	1	2	0	1	2	0
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, %	5	5	5	1	1	1	1	1	1	0	0	0
Cap, veh/h	160	335	219	1009	546	594	204	1050	0	322	1169	0
Arrive On Green	0.09	0.09	0.09	0.29	0.29	0.29	0.05	0.29	0.00	0.08	0.32	0.00
Sat Flow, veh/h	1723	3619	1516	3476	1881	1599	1792	3668	0	1810	3705	0
Grp Volume(v), veh/h	48	192	87	339	247	406	69	444	0	139	1028	0
Grp Sat Flow(s),veh/h/ln	1723	1810	1516	1738	1881	1599	1792	1787	0	1810	1805	0
Q Serve(g_s), s	1.9	3.8	0.0	5.7	8.0	15.9	0.0	7.4	0.0	4.4	20.0	0.0
Cycle Q Clear(g_c), s	1.9	3.8	0.0	5.7	8.0	15.9	0.0	7.4	0.0	4.4	20.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.00	1.00		0.00
Lane Grp Cap(c), veh/h	160	335	219	1009	546	594	204	1050	0	322	1169	0
V/C Ratio(X)	0.30	0.57	0.40	0.34	0.45	0.68	0.34	0.42	0.00	0.43	0.88	0.00
Avail Cap(c_a), veh/h	360	755	395	1455	788	799	235	1140	0	339	1230	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	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	31.5	32.3	28.9	20.7	21.5	19.7	33.2	21.2	0.0	21.0	23.7	0.0
Incr Delay (d2), s/veh	1.0	1.5	1.2	0.2	0.6	1.5	1.0	0.3	0.0	0.9	7.4	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(-26165%),veh/ln	1.0	2.0	1.7	2.8	4.2	7.2	1.4	3.7	0.0	2.2	11.0	0.0
LnGrp Delay(d),s/veh	32.5	33.8	30.0	20.9	22.1	21.1	34.2	21.4	0.0	21.9	31.1	0.0
LnGrp LOS	C	C	C	C	C	C	C	C		C	C	
Approach Vol, veh/h		327			992			513			1167	
Approach Delay, s/veh		32.6			21.3			23.1			30.0	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	10.5	26.3		11.4	8.3	28.5		26.1
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	6.7	23.7		15.5	5.1	25.3		31.1
Max Q Clear Time (g_c+I1), s	6.4	9.4		5.8	2.0	22.0		17.9
Green Ext Time (p_c), s	0.0	2.7		1.1	0.9	2.1		3.7

Intersection Summary	
HCM 2010 Ctrl Delay	26.2
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	30	625	35	85	540	160	40	155	100	200	150	35
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1900	1845	1845	1900	1810	1810	1810	1863	1863	1900
Adj Flow Rate, veh/h	32	672	38	91	581	172	43	167	108	138	269	38
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	2	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	4	4	4	3	3	3	5	5	5	2	2	2
Cap, veh/h	59	1054	60	116	927	274	249	261	220	267	482	67
Arrive On Green	0.03	0.32	0.32	0.07	0.35	0.35	0.14	0.14	0.14	0.15	0.15	0.15
Sat Flow, veh/h	1740	3339	189	1757	2667	787	1723	1810	1525	1774	3197	446
Grp Volume(v), veh/h	32	349	361	91	381	372	43	167	108	138	155	152
Grp Sat Flow(s),veh/h/ln	1740	1736	1793	1757	1752	1702	1723	1810	1525	1774	1863	1780
Q Serve(g_s), s	1.1	10.7	10.7	3.2	11.2	11.3	1.4	5.4	4.0	4.4	4.8	4.9
Cycle Q Clear(g_c), s	1.1	10.7	10.7	3.2	11.2	11.3	1.4	5.4	4.0	4.4	4.8	4.9
Prop In Lane	1.00		0.11	1.00		0.46	1.00		1.00	1.00		0.25
Lane Grp Cap(c), veh/h	59	548	566	116	609	592	249	261	220	267	281	268
V/C Ratio(X)	0.54	0.64	0.64	0.78	0.63	0.63	0.17	0.64	0.49	0.52	0.55	0.57
Avail Cap(c_a), veh/h	140	673	695	199	736	714	584	614	517	659	692	661
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.4	18.2	18.2	28.5	16.8	16.9	23.2	25.0	24.4	24.2	24.4	24.4
Incr Delay (d2), s/veh	7.4	1.4	1.4	10.8	1.2	1.3	0.3	2.6	1.7	1.5	1.7	1.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	0.7	5.3	5.4	1.9	5.6	5.5	0.7	2.9	1.8	2.3	2.6	2.5
LnGrp Delay(d),s/veh	36.8	19.6	19.5	39.2	18.0	18.1	23.6	27.6	26.1	25.8	26.1	26.3
LnGrp LOS	D	B	B	D	B	B	C	C	C	C	C	C
Approach Vol, veh/h		742			844			318			445	
Approach Delay, s/veh		20.3			20.4			26.5			26.0	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	9.1	24.5		14.3	7.1	26.5		13.9
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0
Max Green Setting (Gmax), s	7.0	24.0		23.0	5.0	26.0		21.0
Max Q Clear Time (g_c+I1), s	5.2	12.7		6.9	3.1	13.3		7.4
Green Ext Time (p_c), s	0.0	6.7		2.0	0.0	7.3		1.2

Intersection Summary	
HCM 2010 Ctrl Delay	22.2
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	565	370	135	560	0	0	0	0	115	0	265
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0	5.0	4.6	5.0						5.0	5.0
Lane Util. Factor		0.91	0.91	1.00	0.95						1.00	1.00
Frpb, ped/bikes		1.00	0.99	1.00	1.00						1.00	1.00
Flpb, ped/bikes		1.00	1.00	1.00	1.00						1.00	1.00
Frt		0.98	0.85	1.00	1.00						1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00						0.95	1.00
Satd. Flow (prot)		3286	1409	1735	3471						1736	1553
Flt Permitted		1.00	1.00	0.27	1.00						0.95	1.00
Satd. Flow (perm)		3286	1409	484	3471						1736	1553
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	595	389	142	589	0	0	0	0	121	0	279
RTOR Reduction (vph)	0	11	181	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	673	119	142	589	0	0	0	0	0	121	279
Confl. Peds. (#/hr)	2		1	1		2						
Heavy Vehicles (%)	3%	3%	3%	4%	4%	4%	0%	0%	0%	4%	4%	4%
Turn Type		NA	Perm	pm+pt	NA					Perm	NA	Perm
Protected Phases		2		1	6						4	
Permitted Phases			2	6						4		4
Actuated Green, G (s)		29.7	29.7	32.7	22.9						20.8	20.8
Effective Green, g (s)		29.7	29.7	32.7	22.9						20.8	20.8
Actuated g/C Ratio		0.40	0.40	0.44	0.31						0.28	0.28
Clearance Time (s)		5.0	5.0	4.6	5.0						5.0	5.0
Vehicle Extension (s)		4.0	4.0	4.5	4.0						5.0	5.0
Lane Grp Cap (vph)		1302	558	374	1061						482	431
v/s Ratio Prot		c0.20		c0.05	0.17							
v/s Ratio Perm			0.08	0.12							0.07	c0.18
v/c Ratio		0.52	0.21	0.38	0.56						0.25	0.65
Uniform Delay, d1		17.2	14.9	20.3	21.7						21.0	23.8
Progression Factor		1.00	1.00	1.47	0.66						1.00	1.00
Incremental Delay, d2		0.5	0.3	1.1	0.8						0.6	4.5
Delay (s)		17.6	15.2	30.8	15.2						21.6	28.4
Level of Service		B	B	C	B						C	C
Approach Delay (s)		16.9			18.2			0.0			26.3	
Approach LOS		B			B			A			C	

Intersection Summary			
HCM 2000 Control Delay	19.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	74.9	Sum of lost time (s)	14.6
Intersection Capacity Utilization	52.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	360	345	0	0	315	130	375	5	165	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.6	5.0			5.0		5.0	5.0	5.0			
Lane Util. Factor	1.00	0.95			0.91		0.95	0.95	1.00			
Frpb, ped/bikes	1.00	1.00			0.99		1.00	1.00	0.99			
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00			
Frt	1.00	1.00			0.96		1.00	1.00	0.85			
Flt Protected	0.95	1.00			1.00		0.95	0.95	1.00			
Satd. Flow (prot)	1735	3471			4694		1649	1655	1533			
Flt Permitted	0.46	1.00			1.00		0.95	0.95	1.00			
Satd. Flow (perm)	832	3471			4694		1649	1655	1533			
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	391	375	0	0	342	141	408	5	179	0	0	0
RTOR Reduction (vph)	0	0	0	0	86	0	0	0	0	0	0	0
Lane Group Flow (vph)	391	375	0	0	397	0	208	205	179	0	0	0
Confl. Peds. (#/hr)	1					1			1	1		
Heavy Vehicles (%)	4%	4%	4%	5%	5%	5%	4%	4%	4%	0%	0%	0%
Turn Type	pm+pt	NA			NA		Perm	NA	Perm			
Protected Phases	5	2			6			8				
Permitted Phases	2						8		8			
Actuated Green, G (s)	44.5	29.7			22.9		20.8	20.8	20.8			
Effective Green, g (s)	44.5	29.7			22.9		20.8	20.8	20.8			
Actuated g/C Ratio	0.59	0.40			0.31		0.28	0.28	0.28			
Clearance Time (s)	4.6	5.0			5.0		5.0	5.0	5.0			
Vehicle Extension (s)	3.5	4.0			4.0		5.0	5.0	5.0			
Lane Grp Cap (vph)	694	1376			1435		457	459	425			
v/s Ratio Prot	c0.12	0.11			0.08							
v/s Ratio Perm	c0.21						c0.13	0.12	0.12			
v/c Ratio	0.56	0.27			0.28		0.46	0.45	0.42			
Uniform Delay, d1	11.9	15.3			19.7		22.4	22.3	22.1			
Progression Factor	0.64	0.42			1.00		1.00	1.00	1.00			
Incremental Delay, d2	1.1	0.1			0.1		1.5	1.4	1.4			
Delay (s)	8.7	6.5			19.9		23.9	23.8	23.5			
Level of Service	A	A			B		C	C	C			
Approach Delay (s)		7.6			19.9			23.7			0.0	
Approach LOS		A			B			C			A	

Intersection Summary			
HCM 2000 Control Delay	16.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	74.9	Sum of lost time (s)	14.6
Intersection Capacity Utilization	52.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	1.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	5	0	5	30	0	20	5	180	35	15	195	10
Conflicting Peds, #/hr	2	0	3	3	0	2	3	0	3	2	0	2
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	86	86	86	86	86	86	86	86	86	86	86	86
Heavy Vehicles, %	0	0	0	14	14	14	7	7	7	4	4	4
Mvmt Flow	6	0	6	35	0	23	6	209	41	17	227	12

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	526	535	239	517	520	235	241	0	0	253	0	0
Stage 1	270	270	-	244	244	-	-	-	-	-	-	-
Stage 2	256	265	-	273	276	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.24	6.64	6.34	4.17	-	-	4.14	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.24	5.64	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.24	5.64	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.626	4.126	3.426	2.263	-	-	2.236	-	-
Pot Cap-1 Maneuver	466	454	805	450	444	775	1297	-	-	1301	-	-
Stage 1	740	690	-	734	682	-	-	-	-	-	-	-
Stage 2	753	693	-	707	660	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	443	443	801	438	433	772	1294	-	-	1299	-	-
Mov Cap-2 Maneuver	443	443	-	438	433	-	-	-	-	-	-	-
Stage 1	734	678	-	729	677	-	-	-	-	-	-	-
Stage 2	725	688	-	690	648	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	11.4	12.6	0.2	0.5
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1294	-	-	570	530	1299	-	-
HCM Lane V/C Ratio	0.004	-	-	0.02	0.11	0.013	-	-
HCM Control Delay (s)	7.8	0	-	11.4	12.6	7.8	0	-
HCM Lane LOS	A	A	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.4	0	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	20	755	15	15	700	40	10	65	25	55	70	30
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1827	1900	1900	1827	1900	1900	1792	1900	1900	1827	1900
Adj Flow Rate, veh/h	20	770	15	15	714	41	10	66	26	56	71	31
Adj No. of Lanes	0	2	0	0	2	0	0	2	0	0	2	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	4	4	4	4	4	4	6	6	6	4	4	4
Cap, veh/h	76	2446	47	66	2368	134	69	249	91	150	163	74
Arrive On Green	0.74	0.74	0.74	0.74	0.74	0.74	0.11	0.11	0.11	0.11	0.11	0.11
Sat Flow, veh/h	40	3310	64	26	3204	182	146	2246	821	681	1468	670
Grp Volume(v), veh/h	416	0	389	402	0	368	55	0	47	87	0	71
Grp Sat Flow(s),veh/h/ln	1762	0	1651	1782	0	1630	1727	0	1486	1275	0	1544
Q Serve(g_s), s	0.0	0.0	6.4	0.0	0.0	6.1	0.0	0.0	2.3	3.3	0.0	3.5
Cycle Q Clear(g_c), s	6.2	0.0	6.4	5.9	0.0	6.1	2.2	0.0	2.3	5.6	0.0	3.5
Prop In Lane	0.05		0.04	0.04		0.11	0.18		0.55	0.65		0.43
Lane Grp Cap(c), veh/h	1349	0	1220	1364	0	1205	245	0	165	215	0	171
V/C Ratio(X)	0.31	0.00	0.32	0.30	0.00	0.31	0.22	0.00	0.29	0.40	0.00	0.42
Avail Cap(c_a), veh/h	1349	0	1220	1364	0	1205	558	0	446	485	0	463
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.95	0.00	0.95	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	3.5	0.0	3.6	3.5	0.0	3.5	32.6	0.0	32.7	34.2	0.0	33.2
Incr Delay (d2), s/veh	0.6	0.0	0.7	0.5	0.0	0.6	0.5	0.0	0.9	1.2	0.0	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	3.2	0.0	3.2	3.1	0.0	2.9	1.1	0.0	1.0	1.9	0.0	1.5
LnGrp Delay(d),s/veh	4.1	0.0	4.2	4.0	0.0	4.1	33.1	0.0	33.6	35.5	0.0	34.8
LnGrp LOS	A		A	A		A	C		C	D		C
Approach Vol, veh/h		805			770			102			158	
Approach Delay, s/veh		4.2			4.1			33.3			35.1	
Approach LOS		A			A			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		65.1		14.9		65.1		14.9
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0
Max Green Setting (Gmax), s		44.0		24.0		44.0		24.0
Max Q Clear Time (g_c+I1), s		8.4		7.6		8.1		4.3
Green Ext Time (p_c), s		13.7		1.3		13.8		1.4

Intersection Summary	
HCM 2010 Ctrl Delay	8.4
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	640	325	330	585	0	0	0	0	305	0	280
Number	5	2	12	1	6	16				3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1845	1845	1827	1827	0				1900	1810	1810
Adj Flow Rate, veh/h	0	681	0	351	622	0				324	0	298
Adj No. of Lanes	0	2	1	1	2	0				0	1	1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94				0.94	0.94	0.94
Percent Heavy Veh, %	0	3	3	4	4	0				5	5	5
Cap, veh/h	0	1038	464	701	2325	0				381	0	340
Arrive On Green	0.00	0.30	0.00	0.64	1.00	0.00				0.22	0.00	0.22
Sat Flow, veh/h	0	3597	1568	1740	3563	0				1723	0	1538
Grp Volume(v), veh/h	0	681	0	351	622	0				324	0	298
Grp Sat Flow(s),veh/h/ln	0	1752	1568	1740	1736	0				1723	0	1538
Q Serve(g_s), s	0.0	18.7	0.0	0.0	0.0	0.0				19.8	0.0	20.6
Cycle Q Clear(g_c), s	0.0	18.7	0.0	0.0	0.0	0.0				19.8	0.0	20.6
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1038	464	701	2325	0				381	0	340
V/C Ratio(X)	0.00	0.66	0.00	0.50	0.27	0.00				0.85	0.00	0.88
Avail Cap(c_a), veh/h	0	1561	698	701	2325	0				454	0	405
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.94	0.00	0.65	0.65	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	33.8	0.0	12.2	0.0	0.0				41.1	0.0	41.4
Incr Delay (d2), s/veh	0.0	1.0	0.0	0.3	0.2	0.0				12.5	0.0	16.8
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(-26165%),veh/ln	0.0	9.1	0.0	3.9	0.1	0.0				10.8	0.0	10.3
LnGrp Delay(d),s/veh	0.0	34.8	0.0	12.5	0.2	0.0				53.6	0.0	58.2
LnGrp LOS		C		B	A					D		E
Approach Vol, veh/h		681			973						622	
Approach Delay, s/veh		34.8			4.6						55.8	
Approach LOS		C			A						E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	41.1	38.6				79.7		30.3
Change Period (Y+Rc), s	6.0	* 6				6.0		6.0
Max Green Setting (Gmax), s	14.4	* 49				69.0		29.0
Max Q Clear Time (g_c+I1), s	2.0	20.7				2.0		22.6
Green Ext Time (p_c), s	5.0	7.2				8.0		1.7

Intersection Summary	
HCM 2010 Ctrl Delay	27.6
HCM 2010 LOS	C

Notes

* HCM 2010 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												
Volume (veh/h)	285	550	90	10	610	230	250	275	315	15	60	50
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1827	1900	1827	1900	1827	1827	1827	1810	1810	1810
Adj Flow Rate, veh/h	313	604	99	11	670	253	192	418	346	16	66	55
Adj No. of Lanes	1	2	1	0	2	0	1	2	1	1	1	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
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	5	5	5
Cap, veh/h	381	1996	887	39	972	364	394	827	346	96	101	85
Arrive On Green	0.12	0.58	0.58	0.41	0.41	0.41	0.23	0.23	0.23	0.06	0.06	0.06
Sat Flow, veh/h	1740	3471	1542	14	2394	895	1740	3654	1529	1723	1810	1522
Grp Volume(v), veh/h	313	604	99	511	0	423	192	418	346	16	66	55
Grp Sat Flow(s),veh/h/ln	1740	1736	1542	1805	0	1498	1740	1827	1529	1723	1810	1522
Q Serve(g_s), s	10.9	9.8	3.2	0.0	0.0	25.7	10.6	11.0	24.9	1.0	3.9	3.9
Cycle Q Clear(g_c), s	10.9	9.8	3.2	25.3	0.0	25.7	10.6	11.0	24.9	1.0	3.9	3.9
Prop In Lane	1.00		1.00	0.02		0.60	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	381	1996	887	766	0	608	394	827	346	96	101	85
V/C Ratio(X)	0.82	0.30	0.11	0.67	0.00	0.70	0.49	0.51	1.00	0.17	0.65	0.65
Avail Cap(c_a), veh/h	482	1996	887	766	0	608	394	827	346	233	245	206
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)	0.74	0.74	0.74	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.6	12.0	10.6	26.9	0.0	27.0	37.0	37.2	42.5	49.5	50.9	50.9
Incr Delay (d2), s/veh	6.7	0.3	0.2	4.5	0.0	6.5	0.9	0.5	48.3	0.8	7.0	8.0
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(-26165%),veh/ln	5.9	4.8	1.4	13.7	0.0	11.7	5.2	5.6	15.1	0.5	2.2	1.8
LnGrp Delay(d),s/veh	27.3	12.3	10.8	31.5	0.0	33.5	37.9	37.7	90.9	50.3	57.8	58.9
LnGrp LOS	C	B	B	C		C	D	D	F	D	E	E
Approach Vol, veh/h		1016			934			956			137	
Approach Delay, s/veh		16.8			32.4			57.0			57.4	
Approach LOS		B			C			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		8
Phs Duration (G+Y+Rc), s		68.8		11.2	18.6	50.2		30.0
Change Period (Y+Rc), s		5.5		5.1	5.1	5.5		5.1
Max Green Setting (Gmax), s		54.5		14.9	19.9	29.5		24.9
Max Q Clear Time (g_c+I1), s		11.8		5.9	12.9	27.7		26.9
Green Ext Time (p_c), s		19.2		0.3	0.6	1.5		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	36.0
HCM 2010 LOS	D

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	35	670	40	125	695	275	220	190	30	40	165	130
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1881	1881	1900	1863	1863	1863	1881	1881	1900
Adj Flow Rate, veh/h	36	698	42	130	724	286	229	198	31	42	172	135
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	2	0
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, %	0	0	0	1	1	1	2	2	2	1	1	1
Cap, veh/h	65	1032	62	166	887	350	313	329	278	261	293	215
Arrive On Green	0.04	0.30	0.30	0.09	0.35	0.35	0.18	0.18	0.18	0.15	0.15	0.15
Sat Flow, veh/h	1810	3459	208	1792	2501	988	1774	1863	1573	1792	2010	1477
Grp Volume(v), veh/h	36	364	376	130	517	493	229	198	31	42	160	147
Grp Sat Flow(s),veh/h/ln	1810	1805	1862	1792	1787	1702	1774	1863	1573	1792	1881	1606
Q Serve(g_s), s	1.4	12.4	12.4	5.0	18.3	18.3	8.5	6.8	1.2	1.4	5.5	6.0
Cycle Q Clear(g_c), s	1.4	12.4	12.4	5.0	18.3	18.3	8.5	6.8	1.2	1.4	5.5	6.0
Prop In Lane	1.00		0.11	1.00		0.58	1.00		1.00	1.00		0.92
Lane Grp Cap(c), veh/h	65	539	556	166	634	604	313	329	278	261	274	234
V/C Ratio(X)	0.55	0.68	0.68	0.79	0.82	0.82	0.73	0.60	0.11	0.16	0.58	0.63
Avail Cap(c_a), veh/h	130	570	588	231	666	635	534	561	474	591	621	530
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.1	21.5	21.5	31.0	20.4	20.4	27.1	26.5	24.1	26.0	27.8	28.0
Incr Delay (d2), s/veh	7.1	3.0	2.9	11.2	7.5	7.8	3.3	1.8	0.2	0.3	2.0	2.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	0.8	6.6	6.8	3.0	10.2	9.8	4.4	3.7	0.5	0.7	3.0	2.8
LnGrp Delay(d),s/veh	40.2	24.5	24.4	42.1	27.9	28.3	30.4	28.2	24.3	26.3	29.8	30.7
LnGrp LOS	D	C	C	D	C	C	C	C	C	C	C	C
Approach Vol, veh/h		776			1140			458			349	
Approach Delay, s/veh		25.2			29.7			29.1			29.8	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	11.4	25.8		15.2	7.5	29.7		17.3
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0
Max Green Setting (Gmax), s	9.0	22.0		23.0	5.0	26.0		21.0
Max Q Clear Time (g_c+I1), s	7.0	14.4		8.0	3.4	20.3		10.5
Green Ext Time (p_c), s	0.1	5.7		1.7	0.0	4.4		1.4

Intersection Summary	
HCM 2010 Ctrl Delay	28.3
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	670	365	170	770	0	0	0	0	190	0	305
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0	5.0	4.6	5.0						5.0	5.0
Lane Util. Factor		0.91	0.91	1.00	0.95						1.00	1.00
Frpb, ped/bikes		1.00	0.99	1.00	1.00						1.00	1.00
Flpb, ped/bikes		1.00	1.00	1.00	1.00						1.00	1.00
Frt		0.99	0.85	1.00	1.00						1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00						0.95	1.00
Satd. Flow (prot)		3381	1435	1787	3574						1787	1599
Flt Permitted		1.00	1.00	0.22	1.00						0.95	1.00
Satd. Flow (perm)		3381	1435	423	3574						1787	1599
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	728	397	185	837	0	0	0	0	207	0	332
RTOR Reduction (vph)	0	6	214	0	0	0	0	0	0	0	0	219
Lane Group Flow (vph)	0	782	123	185	837	0	0	0	0	0	207	113
Confl. Peds. (#/hr)	5		2	2		5						
Confl. Bikes (#/hr)			1									
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	0%	0%	0%	1%	1%	1%
Turn Type		NA	Perm	pm+pt	NA					Perm	NA	Perm
Protected Phases		2		1	6						4	
Permitted Phases			2	6						4		4
Actuated Green, G (s)		29.1	29.1	31.0	31.0						23.1	23.1
Effective Green, g (s)		29.1	29.1	31.0	31.0						23.1	23.1
Actuated g/C Ratio		0.36	0.36	0.39	0.39						0.29	0.29
Clearance Time (s)		5.0	5.0	4.6	5.0						5.0	5.0
Vehicle Extension (s)		4.0	4.0	4.5	4.0						5.0	5.0
Lane Grp Cap (vph)		1229	521	388	1384						515	461
v/s Ratio Prot		c0.23		0.08	c0.23							
v/s Ratio Perm			0.09	0.11							0.12	0.07
v/c Ratio		0.64	0.24	0.48	0.60						0.40	0.24
Uniform Delay, d1		21.1	17.7	18.1	19.6						22.9	21.8
Progression Factor		1.00	1.00	0.72	0.75						1.00	1.00
Incremental Delay, d2		1.2	0.3	1.5	0.8						1.1	0.6
Delay (s)		22.3	18.0	14.4	15.4						24.0	22.4
Level of Service		C	B	B	B						C	C
Approach Delay (s)		21.0			15.3			0.0			23.0	
Approach LOS		C			B			A			C	

Intersection Summary			
HCM 2000 Control Delay	19.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	14.6
Intersection Capacity Utilization	75.7%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	440	480	0	0	460	240	510	10	225	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.6	5.0			5.0		5.0	5.0	5.0			
Lane Util. Factor	1.00	0.95			0.91		0.95	0.95	1.00			
Frpb, ped/bikes	1.00	1.00			0.99		1.00	1.00	0.99			
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00			
Frt	1.00	1.00			0.95		1.00	1.00	0.85			
Flt Protected	0.95	1.00			1.00		0.95	0.95	1.00			
Satd. Flow (prot)	1804	3610			4827		1692	1700	1577			
Flt Permitted	0.33	1.00			1.00		0.95	0.95	1.00			
Satd. Flow (perm)	626	3610			4827		1692	1700	1577			
Peak-hour factor, PHF	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Adj. Flow (vph)	518	565	0	0	541	282	600	12	265	0	0	0
RTOR Reduction (vph)	0	0	0	0	104	0	0	0	188	0	0	0
Lane Group Flow (vph)	518	565	0	0	719	0	306	306	77	0	0	0
Confl. Peds. (#/hr)	4		5	5		4	4		2	2		4
Confl. Bikes (#/hr)						1						
Heavy Vehicles (%)	0%	0%	0%	1%	1%	1%	1%	1%	1%	0%	0%	0%
Turn Type	pm+pt	NA			NA		Perm	NA	Perm			
Protected Phases	5	2			6			8				
Permitted Phases	2						8		8			
Actuated Green, G (s)	29.5	29.1			31.0		23.1	23.1	23.1			
Effective Green, g (s)	29.5	29.1			31.0		23.1	23.1	23.1			
Actuated g/C Ratio	0.37	0.36			0.39		0.29	0.29	0.29			
Clearance Time (s)	4.6	5.0			5.0		5.0	5.0	5.0			
Vehicle Extension (s)	3.5	4.0			4.0		5.0	5.0	5.0			
Lane Grp Cap (vph)	397	1313			1870		488	490	455			
v/s Ratio Prot	c0.18	0.16			c0.15							
v/s Ratio Perm	c0.30						c0.18	0.18	0.05			
v/c Ratio	1.30	0.43			0.38		0.63	0.62	0.17			
Uniform Delay, d1	24.6	19.2			17.6		24.7	24.7	21.3			
Progression Factor	0.66	0.65			1.00		1.00	1.00	1.00			
Incremental Delay, d2	152.9	0.3			0.2		3.5	3.5	0.4			
Delay (s)	169.2	12.7			17.8		28.3	28.2	21.6			
Level of Service	F	B			B		C	C	C			
Approach Delay (s)		87.6			17.8			26.2			0.0	
Approach LOS		F			B			C			A	

Intersection Summary			
HCM 2000 Control Delay	47.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	14.6
Intersection Capacity Utilization	75.7%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Int Delay, s/veh	2.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	5	0	10	40	5	35	5	260	55	25	260	10
Conflicting Peds, #/hr	5	0	5	1	0	1	5	0	1	1	0	5
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	0	0	0	4	4	4	2	2	2	2	2	2
Mvmt Flow	6	0	11	45	6	39	6	292	62	28	292	11

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	717	725	308	700	700	329	308	0	0	355	0	0
Stage 1	359	359	-	335	335	-	-	-	-	-	-	-
Stage 2	358	366	-	365	365	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.14	6.54	6.24	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.14	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.14	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.536	4.036	3.336	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	347	354	737	351	361	708	1253	-	-	1204	-	-
Stage 1	663	631	-	675	639	-	-	-	-	-	-	-
Stage 2	664	626	-	650	620	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	313	340	731	335	347	704	1248	-	-	1199	-	-
Mov Cap-2 Maneuver	313	340	-	335	347	-	-	-	-	-	-	-
Stage 1	656	611	-	670	635	-	-	-	-	-	-	-
Stage 2	615	622	-	619	600	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	12.4	15.4	0.1	0.7
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1248	-	-	506	436	1199	-	-
HCM Lane V/C Ratio	0.005	-	-	0.033	0.206	0.023	-	-
HCM Control Delay (s)	7.9	0	-	12.4	15.4	8.1	0	-
HCM Lane LOS	A	A	-	B	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.8	0.1	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	25	785	10	25	890	60	10	95	30	75	90	40
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		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
Adj Sat Flow, veh/h/ln	1900	1881	1900	1900	1881	1900	1900	1845	1900	1900	1863	1900
Adj Flow Rate, veh/h	26	818	10	26	927	62	10	99	31	78	94	42
Adj No. of Lanes	0	2	0	0	2	0	0	2	0	0	2	0
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, %	1	1	1	1	1	1	3	3	3	2	2	2
Cap, veh/h	85	2352	28	76	2251	148	66	382	112	187	210	99
Arrive On Green	0.70	0.70	0.70	0.70	0.70	0.70	0.15	0.15	0.15	0.15	0.15	0.15
Sat Flow, veh/h	53	3370	41	41	3226	213	98	2510	734	726	1377	651
Grp Volume(v), veh/h	434	0	420	527	0	488	75	0	65	113	0	101
Grp Sat Flow(s),veh/h/ln	1759	0	1705	1806	0	1674	1796	0	1546	1187	0	1567
Q Serve(g_s), s	0.0	0.0	7.9	0.0	0.0	9.9	0.0	0.0	3.0	4.9	0.0	4.7
Cycle Q Clear(g_c), s	7.3	0.0	7.9	9.4	0.0	9.9	2.9	0.0	3.0	7.9	0.0	4.7
Prop In Lane	0.06		0.02	0.05		0.13	0.13		0.47	0.69		0.42
Lane Grp Cap(c), veh/h	1275	0	1189	1307	0	1168	324	0	235	257	0	239
V/C Ratio(X)	0.34	0.00	0.35	0.40	0.00	0.42	0.23	0.00	0.28	0.44	0.00	0.42
Avail Cap(c_a), veh/h	1275	0	1189	1307	0	1168	580	0	464	463	0	470
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.66	0.00	0.66	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	4.8	0.0	4.8	5.1	0.0	5.2	30.0	0.0	30.0	32.6	0.0	30.7
Incr Delay (d2), s/veh	0.7	0.0	0.8	0.6	0.0	0.7	0.4	0.0	0.6	1.2	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(-26165%),veh/ln	4.0	0.0	3.9	5.1	0.0	4.7	1.5	0.0	1.3	2.4	0.0	2.1
LnGrp Delay(d),s/veh	5.5	0.0	5.7	5.7	0.0	5.9	30.3	0.0	30.6	33.8	0.0	31.9
LnGrp LOS	A		A	A		A	C		C	C		C
Approach Vol, veh/h		854			1015			140			214	
Approach Delay, s/veh		5.6			5.8			30.5			32.9	
Approach LOS		A			A			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		61.8		18.2		61.8		18.2
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0
Max Green Setting (Gmax), s		44.0		24.0		44.0		24.0
Max Q Clear Time (g_c+I1), s		9.9		9.9		11.9		5.0
Green Ext Time (p_c), s		2.4		1.7		2.4		2.0

Intersection Summary	
HCM 2010 Ctrl Delay	9.9
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	730	265	370	725	0	0	0	0	450	0	385
Number	5	2	12	1	6	16				3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1881	1881	1900	1881	0				1900	1881	1881
Adj Flow Rate, veh/h	0	753	0	381	747	0				464	0	397
Adj No. of Lanes	0	2	1	0	3	0				0	1	1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97				0.97	0.97	0.97
Percent Heavy Veh, %	1	1	1	1	1	0				1	1	1
Cap, veh/h	0	1730	774	128	1508	0				551	0	492
Arrive On Green	0.00	0.48	0.00	0.48	0.48	0.00				0.31	0.00	0.31
Sat Flow, veh/h	0	3668	1599	6	3271	0				1792	0	1599
Grp Volume(v), veh/h	0	753	0	381	747	0				464	0	397
Grp Sat Flow(s),veh/h/ln	0	1787	1599	6	1558	0				1792	0	1599
Q Serve(g_s), s	0.0	7.9	0.0	25.6	9.4	0.0				13.9	0.0	13.2
Cycle Q Clear(g_c), s	0.0	7.9	0.0	25.6	9.4	0.0				13.9	0.0	13.2
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1730	774	0	1508	0				551	0	492
V/C Ratio(X)	0.00	0.44	0.00	0.00	0.50	0.00				0.84	0.00	0.81
Avail Cap(c_a), veh/h	0	1730	774	0	1517	0				623	0	556
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	9.7	0.0	0.0	10.1	0.0				18.6	0.0	18.3
Incr Delay (d2), s/veh	0.0	0.2	0.0	0.0	0.4	0.0				9.3	0.0	7.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	0.0	3.9	0.0	0.0	4.0	0.0				8.2	0.0	6.8
LnGrp Delay(d),s/veh	0.0	9.9	0.0	0.0	10.4	0.0				27.9	0.0	26.1
LnGrp LOS		A			B					C		C
Approach Vol, veh/h		753			1128						861	
Approach Delay, s/veh		9.9			6.9						27.1	
Approach LOS		A			A						C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2				6		8
Phs Duration (G+Y+Rc), s		33.8				33.8		23.7
Change Period (Y+Rc), s		6.0				6.0		6.0
Max Green Setting (Gmax), s		18.4				28.0		20.0
Max Q Clear Time (g_c+I1), s		9.9				27.6		15.9
Green Ext Time (p_c), s		7.6				0.2		1.8

Intersection Summary	
HCM 2010 Ctrl Delay	14.1
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	375	695	115	5	710	335	280	465	325	15	45	75
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	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
Adj Sat Flow, veh/h/ln	1900	1881	1900	1900	1881	1900	1881	1881	1881	1863	1863	1863
Adj Flow Rate, veh/h	391	724	120	5	740	349	259	531	339	16	47	78
Adj No. of Lanes	0	2	0	0	2	0	1	2	1	1	1	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
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	2	2	2
Cap, veh/h	55	947	157	29	1526	715	344	722	305	54	57	46
Arrive On Green	0.66	0.66	0.66	0.66	0.66	0.66	0.19	0.19	0.19	0.03	0.03	0.03
Sat Flow, veh/h	2	1432	237	4	2307	1081	1792	3762	1589	1774	1863	1521
Grp Volume(v), veh/h	391	0	844	604	0	490	259	531	339	16	47	78
Grp Sat Flow(s),veh/h/ln	2	0	1669	1874	0	1518	1792	1881	1589	1774	1863	1521
Q Serve(g_s), s	135.0	0.0	46.7	0.0	0.0	21.8	18.4	17.9	25.9	1.2	3.4	4.1
Cycle Q Clear(g_c), s	135.0	0.0	46.7	21.6	0.0	21.8	18.4	17.9	25.9	1.2	3.4	4.1
Prop In Lane	1.00		0.14	0.01		0.71	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	0	0	1104	1266	0	1004	344	722	305	54	57	46
V/C Ratio(X)	0.00	0.00	0.76	0.48	0.00	0.49	0.75	0.74	1.11	0.30	0.83	1.69
Avail Cap(c_a), veh/h	0	0	1104	1266	0	1004	344	722	305	54	57	46
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	15.6	11.4	0.0	11.4	51.5	51.3	54.5	64.0	65.1	65.4
Incr Delay (d2), s/veh	0.0	0.0	3.3	0.3	0.0	0.4	9.1	3.9	85.1	3.0	62.9	386.6
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(-26165%),veh/ln	0.0	0.0	22.4	11.2	0.0	9.2	10.0	9.7	18.6	0.6	2.7	6.7
LnGrp Delay(d),s/veh	0.0	0.0	19.0	11.7	0.0	11.9	60.6	55.3	139.7	67.1	128.0	452.0
LnGrp LOS			B	B		B	E	E	F	E	F	F
Approach Vol, veh/h		1235			1094			1129			141	
Approach Delay, s/veh		13.0			11.8			81.8			300.3	
Approach LOS		B			B			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		94.8		9.2		94.8		31.0
Change Period (Y+Rc), s		5.5		5.1		5.5		5.1
Max Green Setting (Gmax), s		89.3		4.1		81.1		25.9
Max Q Clear Time (g_c+I1), s		137.0		6.1		23.8		27.9
Green Ext Time (p_c), s		0.0		0.0		44.6		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	45.5
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	30	640	35	85	550	165	40	160	100	205	155	35
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1900	1845	1845	1900	1810	1810	1810	1863	1863	1900
Adj Flow Rate, veh/h	32	688	38	91	591	177	43	172	108	220	167	38
Adj No. of Lanes	1	2	0	1	2	0	1	2	1	1	2	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	4	4	4	3	3	3	5	5	5	2	2	2
Cap, veh/h	59	1023	56	117	900	269	219	436	193	319	517	115
Arrive On Green	0.03	0.31	0.31	0.07	0.34	0.34	0.13	0.13	0.13	0.18	0.18	0.18
Sat Flow, veh/h	1740	3344	185	1757	2660	795	1723	3438	1524	1774	2876	639
Grp Volume(v), veh/h	32	357	369	91	389	379	43	172	108	220	101	104
Grp Sat Flow(s),veh/h/ln	1740	1736	1793	1757	1752	1702	1723	1719	1524	1774	1770	1745
Q Serve(g_s), s	1.1	11.2	11.2	3.2	11.8	11.8	1.4	2.9	4.2	7.2	3.1	3.2
Cycle Q Clear(g_c), s	1.1	11.2	11.2	3.2	11.8	11.8	1.4	2.9	4.2	7.2	3.1	3.2
Prop In Lane	1.00		0.10	1.00		0.47	1.00		1.00	1.00		0.37
Lane Grp Cap(c), veh/h	59	531	548	117	593	576	219	436	193	319	318	313
V/C Ratio(X)	0.54	0.67	0.67	0.78	0.66	0.66	0.20	0.39	0.56	0.69	0.32	0.33
Avail Cap(c_a), veh/h	140	613	633	254	731	710	581	1159	513	655	653	644
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.6	18.9	18.9	28.6	17.5	17.5	24.4	25.0	25.6	23.9	22.2	22.3
Incr Delay (d2), s/veh	7.4	2.4	2.3	10.5	1.5	1.6	0.4	0.6	2.5	2.7	0.6	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	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	0.7	5.7	5.9	1.9	5.9	5.7	0.7	1.4	1.9	3.8	1.6	1.6
LnGrp Delay(d),s/veh	37.0	21.3	21.2	39.1	19.1	19.2	24.8	25.6	28.1	26.6	22.8	22.9
LnGrp LOS	D	C	C	D	B	B	C	C	C	C	C	C
Approach Vol, veh/h		758			859			323			425	
Approach Delay, s/veh		21.9			21.2			26.3			24.8	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	9.2	24.1		16.2	7.1	26.1		12.9
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0
Max Green Setting (Gmax), s	9.0	22.0		23.0	5.0	26.0		21.0
Max Q Clear Time (g_c+I1), s	5.2	13.2		9.2	3.1	13.8		6.2
Green Ext Time (p_c), s	0.1	5.7		1.5	0.0	7.2		1.3

Intersection Summary	
HCM 2010 Ctrl Delay	22.8
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	580	380	140	575	0	0	0	0	120	0	270
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0	5.0	4.6	5.0						5.0	5.0
Lane Util. Factor		0.91	0.91	1.00	0.95						1.00	1.00
Frpb, ped/bikes		1.00	0.99	1.00	1.00						1.00	1.00
Flpb, ped/bikes		1.00	1.00	1.00	1.00						1.00	1.00
Frt		0.98	0.85	1.00	1.00						1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00						0.95	1.00
Satd. Flow (prot)		3286	1409	1735	3471						1736	1553
Flt Permitted		1.00	1.00	0.25	1.00						0.95	1.00
Satd. Flow (perm)		3286	1409	466	3471						1736	1553
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	611	400	147	605	0	0	0	0	126	0	284
RTOR Reduction (vph)	0	11	185	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	692	123	147	605	0	0	0	0	0	126	284
Confl. Peds. (#/hr)	2		1	1		2						
Heavy Vehicles (%)	3%	3%	3%	4%	4%	4%	0%	0%	0%	4%	4%	4%
Turn Type		NA	Perm	pm+pt	NA					Perm	NA	Perm
Protected Phases		2		1	6						4	
Permitted Phases			2	6						4		4
Actuated Green, G (s)		30.4	30.4	33.3	23.5						21.1	21.1
Effective Green, g (s)		30.4	30.4	33.3	23.5						21.1	21.1
Actuated g/C Ratio		0.40	0.40	0.44	0.31						0.28	0.28
Clearance Time (s)		5.0	5.0	4.6	5.0						5.0	5.0
Vehicle Extension (s)		4.0	4.0	4.5	4.0						5.0	5.0
Lane Grp Cap (vph)		1316	564	368	1074						482	431
v/s Ratio Prot		c0.21		c0.05	0.17							
v/s Ratio Perm			0.09	0.12							0.07	c0.18
v/c Ratio		0.53	0.22	0.40	0.56						0.26	0.66
Uniform Delay, d1		17.3	14.9	21.0	21.9						21.3	24.2
Progression Factor		1.00	1.00	1.48	0.67						1.00	1.00
Incremental Delay, d2		0.5	0.3	1.2	0.8						0.6	4.8
Delay (s)		17.8	15.2	32.2	15.5						21.9	29.1
Level of Service		B	B	C	B						C	C
Approach Delay (s)		17.0			18.8			0.0			26.9	
Approach LOS		B			B			A			C	

Intersection Summary			
HCM 2000 Control Delay	19.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	75.9	Sum of lost time (s)	14.6
Intersection Capacity Utilization	53.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	370	355	0	0	320	135	385	5	170	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.6	5.0			5.0		5.0	5.0	5.0			
Lane Util. Factor	1.00	0.95			0.91		0.95	0.95	1.00			
Frpb, ped/bikes	1.00	1.00			0.99		1.00	1.00	0.99			
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00			
Frt	1.00	1.00			0.96		1.00	1.00	0.85			
Flt Protected	0.95	1.00			1.00		0.95	0.95	1.00			
Satd. Flow (prot)	1735	3471			4690		1649	1655	1533			
Flt Permitted	0.45	1.00			1.00		0.95	0.95	1.00			
Satd. Flow (perm)	816	3471			4690		1649	1655	1533			
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	402	386	0	0	348	147	418	5	185	0	0	0
RTOR Reduction (vph)	0	0	0	0	88	0	0	0	0	0	0	0
Lane Group Flow (vph)	402	386	0	0	407	0	213	210	185	0	0	0
Confl. Peds. (#/hr)	1					1			1	1		
Heavy Vehicles (%)	4%	4%	4%	5%	5%	5%	4%	4%	4%	0%	0%	0%
Turn Type	pm+pt	NA			NA		Perm	NA	Perm			
Protected Phases	5	2			6			8				
Permitted Phases	2						8		8			
Actuated Green, G (s)	45.2	30.4			23.5		21.1	21.1	21.1			
Effective Green, g (s)	45.2	30.4			23.5		21.1	21.1	21.1			
Actuated g/C Ratio	0.60	0.40			0.31		0.28	0.28	0.28			
Clearance Time (s)	4.6	5.0			5.0		5.0	5.0	5.0			
Vehicle Extension (s)	3.5	4.0			4.0		5.0	5.0	5.0			
Lane Grp Cap (vph)	688	1390			1452		458	460	426			
v/s Ratio Prot	c0.13	0.11			0.09							
v/s Ratio Perm	c0.22						c0.13	0.13	0.12			
v/c Ratio	0.58	0.28			0.28		0.47	0.46	0.43			
Uniform Delay, d1	12.5	15.3			19.8		22.7	22.7	22.5			
Progression Factor	0.66	0.42			1.00		1.00	1.00	1.00			
Incremental Delay, d2	1.3	0.1			0.1		1.6	1.5	1.5			
Delay (s)	9.5	6.6			19.9		24.3	24.2	24.0			
Level of Service	A	A			B		C	C	C			
Approach Delay (s)		8.1			19.9			24.1			0.0	
Approach LOS		A			B			C			A	

Intersection Summary			
HCM 2000 Control Delay	16.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	75.9	Sum of lost time (s)	14.6
Intersection Capacity Utilization	53.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	1.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	5	0	5	30	0	20	5	185	35	15	200	10
Conflicting Peds, #/hr	2	0	3	3	0	2	3	0	3	2	0	2
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	86	86	86	86	86	86	86	86	86	86	86	86
Heavy Vehicles, %	0	0	0	14	14	14	7	7	7	4	4	4
Mvmt Flow	6	0	6	35	0	23	6	215	41	17	233	12

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	538	546	244	529	532	240	247	0	0	259	0	0
Stage 1	276	276	-	250	250	-	-	-	-	-	-	-
Stage 2	262	270	-	279	282	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.24	6.64	6.34	4.17	-	-	4.14	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.24	5.64	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.24	5.64	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.626	4.126	3.426	2.263	-	-	2.236	-	-
Pot Cap-1 Maneuver	457	448	800	442	437	770	1290	-	-	1294	-	-
Stage 1	735	685	-	728	678	-	-	-	-	-	-	-
Stage 2	747	690	-	702	656	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	435	437	796	430	426	767	1287	-	-	1292	-	-
Mov Cap-2 Maneuver	435	437	-	430	426	-	-	-	-	-	-	-
Stage 1	729	673	-	723	673	-	-	-	-	-	-	-
Stage 2	720	685	-	685	645	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	11.5	12.8	0.2	0.5
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1287	-	-	563	522	1292	-	-
HCM Lane V/C Ratio	0.005	-	-	0.021	0.111	0.013	-	-
HCM Control Delay (s)	7.8	0	-	11.5	12.8	7.8	0	-
HCM Lane LOS	A	A	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.4	0	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	20	770	15	15	715	40	10	65	25	55	70	30
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1827	1900	1900	1827	1900	1900	1792	1900	1900	1827	1900
Adj Flow Rate, veh/h	20	786	15	15	730	41	10	66	26	56	71	31
Adj No. of Lanes	0	2	0	0	2	0	0	2	0	0	2	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	4	4	4	4	4	4	6	6	6	4	4	4
Cap, veh/h	75	2446	46	65	2370	132	69	251	92	150	164	75
Arrive On Green	0.74	0.74	0.74	0.74	0.74	0.74	0.11	0.11	0.11	0.11	0.11	0.11
Sat Flow, veh/h	38	3313	62	25	3210	178	146	2247	821	683	1468	670
Grp Volume(v), veh/h	424	0	397	411	0	375	55	0	47	87	0	71
Grp Sat Flow(s),veh/h/ln	1763	0	1651	1782	0	1631	1727	0	1486	1276	0	1544
Q Serve(g_s), s	0.0	0.0	6.6	0.0	0.0	6.3	0.0	0.0	2.3	3.3	0.0	3.4
Cycle Q Clear(g_c), s	6.3	0.0	6.6	6.1	0.0	6.3	2.2	0.0	2.3	5.6	0.0	3.4
Prop In Lane	0.05		0.04	0.04		0.11	0.18		0.55	0.65		0.43
Lane Grp Cap(c), veh/h	1349	0	1219	1363	0	1204	246	0	166	217	0	172
V/C Ratio(X)	0.31	0.00	0.33	0.30	0.00	0.31	0.22	0.00	0.28	0.40	0.00	0.41
Avail Cap(c_a), veh/h	1349	0	1219	1363	0	1204	600	0	483	521	0	502
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.94	0.00	0.94	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	3.6	0.0	3.6	3.5	0.0	3.6	32.6	0.0	32.6	34.2	0.0	33.1
Incr Delay (d2), s/veh	0.6	0.0	0.7	0.5	0.0	0.6	0.5	0.0	0.9	1.2	0.0	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	3.4	0.0	3.2	3.2	0.0	2.9	1.1	0.0	1.0	1.9	0.0	1.5
LnGrp Delay(d),s/veh	4.2	0.0	4.3	4.1	0.0	4.2	33.0	0.0	33.5	35.4	0.0	34.7
LnGrp LOS	A		A	A		A	C		C	D		C
Approach Vol, veh/h		821			786			102			158	
Approach Delay, s/veh		4.2			4.1			33.3			35.1	
Approach LOS		A			A			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		65.1		14.9		65.1		14.9
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0
Max Green Setting (Gmax), s		42.0		26.0		42.0		26.0
Max Q Clear Time (g_c+I1), s		8.6		7.6		8.3		4.3
Green Ext Time (p_c), s		13.8		1.4		13.9		1.4

Intersection Summary	
HCM 2010 Ctrl Delay	8.4
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	655	330	335	600	0	0	0	0	310	0	285
Number	5	2	12	1	6	16				3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1845	1845	1827	1827	0				1900	1810	1810
Adj Flow Rate, veh/h	0	697	0	356	638	0				330	0	303
Adj No. of Lanes	0	2	1	1	2	0				0	1	1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94				0.94	0.94	0.94
Percent Heavy Veh, %	0	3	3	4	4	0				5	5	5
Cap, veh/h	0	1065	476	677	2299	0				394	0	352
Arrive On Green	0.00	0.30	0.00	0.61	1.00	0.00				0.23	0.00	0.23
Sat Flow, veh/h	0	3597	1568	1740	3563	0				1723	0	1538
Grp Volume(v), veh/h	0	697	0	356	638	0				330	0	303
Grp Sat Flow(s),veh/h/ln	0	1752	1568	1740	1736	0				1723	0	1538
Q Serve(g_s), s	0.0	19.0	0.0	0.0	0.0	0.0				20.1	0.0	20.8
Cycle Q Clear(g_c), s	0.0	19.0	0.0	0.0	0.0	0.0				20.1	0.0	20.8
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1065	476	677	2299	0				394	0	352
V/C Ratio(X)	0.00	0.65	0.00	0.53	0.28	0.00				0.84	0.00	0.86
Avail Cap(c_a), veh/h	0	1065	476	677	2299	0				517	0	461
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.94	0.00	0.71	0.71	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	33.3	0.0	13.6	0.0	0.0				40.5	0.0	40.7
Incr Delay (d2), s/veh	0.0	1.6	0.0	0.4	0.2	0.0				9.0	0.0	12.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	0.0	9.4	0.0	4.3	0.1	0.0				10.5	0.0	10.0
LnGrp Delay(d),s/veh	0.0	34.8	0.0	14.0	0.2	0.0				49.5	0.0	53.0
LnGrp LOS		C		B	A					D		D
Approach Vol, veh/h		697			994						633	
Approach Delay, s/veh		34.8			5.2						51.2	
Approach LOS		C			A						D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	39.4	39.4				78.8		31.2
Change Period (Y+Rc), s	6.0	* 6				6.0		6.0
Max Green Setting (Gmax), s	27.4	* 32				65.0		33.0
Max Q Clear Time (g_c+I1), s	2.0	21.0				2.0		22.8
Green Ext Time (p_c), s	7.2	4.6				8.2		2.3

Intersection Summary	
HCM 2010 Ctrl Delay	26.6
HCM 2010 LOS	C

Notes

* HCM 2010 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												
Volume (veh/h)	290	560	90	10	625	235	255	280	320	15	60	50
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1827	1900	1827	1900	1827	1827	1827	1810	1810	1810
Adj Flow Rate, veh/h	319	615	99	11	687	258	196	426	352	16	66	55
Adj No. of Lanes	1	2	1	0	2	0	1	2	1	1	1	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
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	5	5	5
Cap, veh/h	381	2033	903	39	1002	373	380	797	333	92	97	81
Arrive On Green	0.12	0.59	0.59	0.42	0.42	0.42	0.22	0.22	0.22	0.05	0.05	0.05
Sat Flow, veh/h	1740	3471	1542	14	2398	892	1740	3654	1528	1723	1810	1521
Grp Volume(v), veh/h	319	615	99	523	0	433	196	426	352	16	66	55
Grp Sat Flow(s),veh/h/ln	1740	1736	1542	1805	0	1499	1740	1827	1528	1723	1810	1521
Q Serve(g_s), s	10.9	9.8	3.1	0.0	0.0	26.0	10.9	11.3	24.0	1.0	3.9	3.9
Cycle Q Clear(g_c), s	10.9	9.8	3.1	25.6	0.0	26.0	10.9	11.3	24.0	1.0	3.9	3.9
Prop In Lane	1.00		1.00	0.02		0.60	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	381	2033	903	788	0	627	380	797	333	92	97	81
V/C Ratio(X)	0.84	0.30	0.11	0.66	0.00	0.69	0.52	0.53	1.06	0.17	0.68	0.68
Avail Cap(c_a), veh/h	444	2033	903	788	0	627	380	797	333	103	109	91
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)	0.64	0.64	0.64	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.4	11.5	10.1	26.1	0.0	26.2	37.9	38.1	43.0	49.7	51.1	51.1
Incr Delay (d2), s/veh	7.8	0.2	0.2	4.4	0.0	6.2	1.2	0.7	64.6	0.9	14.0	15.8
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(-26165%),veh/ln	6.0	4.8	1.4	13.9	0.0	11.8	5.4	5.8	16.1	0.5	2.4	2.0
LnGrp Delay(d),s/veh	28.1	11.7	10.2	30.5	0.0	32.4	39.1	38.8	107.6	50.6	65.2	66.9
LnGrp LOS	C	B	B	C		C	D	D	F	D	E	E
Approach Vol, veh/h		1033			956			974			137	
Approach Delay, s/veh		16.6			31.3			63.7			64.2	
Approach LOS		B			C			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		8
Phs Duration (G+Y+Rc), s		69.9		11.0	18.4	51.5		29.1
Change Period (Y+Rc), s		5.5		5.1	5.1	5.5		5.1
Max Green Setting (Gmax), s		63.7		6.6	17.3	41.3		24.0
Max Q Clear Time (g_c+I1), s		11.8		5.9	12.9	28.0		26.0
Green Ext Time (p_c), s		21.3		0.0	0.4	9.5		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	38.1
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	35	685	40	130	710	280	225	195	30	40	170	135
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1881	1881	1900	1863	1863	1863	1881	1881	1900
Adj Flow Rate, veh/h	36	714	42	135	740	292	234	203	31	42	177	141
Adj No. of Lanes	1	2	0	1	2	0	1	2	1	1	2	0
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, %	0	0	0	1	1	1	2	2	2	1	1	1
Cap, veh/h	65	1024	60	170	888	350	317	633	281	269	292	219
Arrive On Green	0.04	0.30	0.30	0.10	0.35	0.35	0.18	0.18	0.18	0.15	0.15	0.15
Sat Flow, veh/h	1810	3464	204	1792	2503	988	1774	3539	1573	1792	1943	1455
Grp Volume(v), veh/h	36	372	384	135	528	504	234	203	31	42	162	156
Grp Sat Flow(s),veh/h/ln	1810	1805	1863	1792	1787	1704	1774	1770	1573	1792	1787	1611
Q Serve(g_s), s	1.4	13.0	13.1	5.3	19.3	19.3	8.9	3.6	1.2	1.5	6.0	6.5
Cycle Q Clear(g_c), s	1.4	13.0	13.1	5.3	19.3	19.3	8.9	3.6	1.2	1.5	6.0	6.5
Prop In Lane	1.00		0.11	1.00		0.58	1.00		1.00	1.00		0.90
Lane Grp Cap(c), veh/h	65	533	551	170	634	605	317	633	281	269	268	242
V/C Ratio(X)	0.56	0.70	0.70	0.79	0.83	0.83	0.74	0.32	0.11	0.16	0.60	0.65
Avail Cap(c_a), veh/h	127	582	600	201	651	621	522	1042	463	577	576	519
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.8	22.3	22.3	31.6	21.1	21.1	27.7	25.5	24.5	26.4	28.3	28.5
Incr Delay (d2), s/veh	7.3	3.3	3.2	16.7	8.9	9.3	3.3	0.3	0.2	0.3	2.2	2.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	0.8	7.0	7.2	3.4	11.1	10.7	4.6	1.8	0.5	0.7	3.1	3.1
LnGrp Delay(d),s/veh	41.1	25.6	25.5	48.3	30.0	30.4	31.1	25.8	24.7	26.7	30.5	31.4
LnGrp LOS	D	C	C	D	C	C	C	C	C	C	C	C
Approach Vol, veh/h		792			1167			468			360	
Approach Delay, s/veh		26.3			32.3			28.4			30.4	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	11.8	26.1		15.7	7.6	30.3		17.8
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0
Max Green Setting (Gmax), s	8.0	23.0		23.0	5.0	26.0		21.0
Max Q Clear Time (g_c+I1), s	7.3	15.1		8.5	3.4	21.3		10.9
Green Ext Time (p_c), s	0.0	6.0		1.7	0.0	3.8		1.5

Intersection Summary	
HCM 2010 Ctrl Delay	29.7
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	685	375	175	785	0	0	0	0	195	0	310
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0	5.0	4.6	5.0						5.0	5.0
Lane Util. Factor		0.91	0.91	1.00	0.95						1.00	1.00
Frpb, ped/bikes		1.00	0.99	1.00	1.00						1.00	1.00
Flpb, ped/bikes		1.00	1.00	1.00	1.00						1.00	1.00
Frt		0.99	0.85	1.00	1.00						1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00						0.95	1.00
Satd. Flow (prot)		3381	1435	1787	3574						1787	1599
Flt Permitted		1.00	1.00	0.22	1.00						0.95	1.00
Satd. Flow (perm)		3381	1435	413	3574						1787	1599
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	745	408	190	853	0	0	0	0	212	0	337
RTOR Reduction (vph)	0	6	221	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	800	126	190	853	0	0	0	0	0	212	337
Confl. Peds. (#/hr)	5		2	2		5						
Confl. Bikes (#/hr)			1									
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	0%	0%	0%	1%	1%	1%
Turn Type		NA	Perm	pm+pt	NA					Perm	NA	Perm
Protected Phases		2		1	6						4	
Permitted Phases			2	6						4		4
Actuated Green, G (s)		29.5	29.5	31.4	31.4						23.9	23.9
Effective Green, g (s)		29.5	29.5	31.4	31.4						23.9	23.9
Actuated g/C Ratio		0.36	0.36	0.39	0.39						0.29	0.29
Clearance Time (s)		5.0	5.0	4.6	5.0						5.0	5.0
Vehicle Extension (s)		4.0	4.0	4.5	4.0						5.0	5.0
Lane Grp Cap (vph)		1228	521	383	1382						525	470
v/s Ratio Prot		c0.24		0.08	c0.24							
v/s Ratio Perm			0.09	0.11							0.12	c0.21
v/c Ratio		0.65	0.24	0.50	0.62						0.40	0.72
Uniform Delay, d1		21.6	18.0	18.5	20.1						22.9	25.6
Progression Factor		1.00	1.00	0.72	0.75						1.00	1.00
Incremental Delay, d2		1.4	0.3	1.6	0.9						1.1	6.4
Delay (s)		22.9	18.4	14.9	15.9						24.0	32.0
Level of Service		C	B	B	B						C	C
Approach Delay (s)		21.6			15.7			0.0			28.9	
Approach LOS		C			B			A			C	

Intersection Summary			
HCM 2000 Control Delay	20.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	81.2	Sum of lost time (s)	14.6
Intersection Capacity Utilization	77.1%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	450	490	0	0	470	245	520	10	230	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.6	5.0			5.0		5.0	5.0	5.0			
Lane Util. Factor	1.00	0.95			0.91		0.95	0.95	1.00			
Frpb, ped/bikes	1.00	1.00			0.99		1.00	1.00	0.99			
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00			
Frt	1.00	1.00			0.95		1.00	1.00	0.85			
Flt Protected	0.95	1.00			1.00		0.95	0.95	1.00			
Satd. Flow (prot)	1804	3610			4827		1692	1700	1577			
Flt Permitted	0.32	1.00			1.00		0.95	0.95	1.00			
Satd. Flow (perm)	614	3610			4827		1692	1700	1577			
Peak-hour factor, PHF	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Adj. Flow (vph)	529	576	0	0	553	288	612	12	271	0	0	0
RTOR Reduction (vph)	0	0	0	0	104	0	0	0	0	0	0	0
Lane Group Flow (vph)	529	576	0	0	737	0	312	312	271	0	0	0
Confl. Peds. (#/hr)	4		5	5		4	4		2	2		4
Confl. Bikes (#/hr)						1						
Heavy Vehicles (%)	0%	0%	0%	1%	1%	1%	1%	1%	1%	0%	0%	0%
Turn Type	pm+pt	NA			NA		Perm	NA	Perm			
Protected Phases	5	2			6			8				
Permitted Phases	2						8		8			
Actuated Green, G (s)	29.9	29.5			31.4		23.9	23.9	23.9			
Effective Green, g (s)	29.9	29.5			31.4		23.9	23.9	23.9			
Actuated g/C Ratio	0.37	0.36			0.39		0.29	0.29	0.29			
Clearance Time (s)	4.6	5.0			5.0		5.0	5.0	5.0			
Vehicle Extension (s)	3.5	4.0			4.0		5.0	5.0	5.0			
Lane Grp Cap (vph)	391	1311			1866		498	500	464			
v/s Ratio Prot	c0.19	0.16			c0.15							
v/s Ratio Perm	c0.31						c0.18	0.18	0.17			
v/c Ratio	1.35	0.44			0.39		0.63	0.62	0.58			
Uniform Delay, d1	25.0	19.6			18.0		24.8	24.8	24.4			
Progression Factor	0.67	0.65			1.00		1.00	1.00	1.00			
Incremental Delay, d2	173.3	0.3			0.2		3.5	3.4	2.9			
Delay (s)	190.0	13.0			18.2		28.3	28.2	27.3			
Level of Service	F	B			B		C	C	C			
Approach Delay (s)		97.7			18.2			27.9			0.0	
Approach LOS		F			B			C			A	

Intersection Summary			
HCM 2000 Control Delay	52.2	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	81.2	Sum of lost time (s)	14.6
Intersection Capacity Utilization	77.1%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Int Delay, s/veh	2.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	5	0	10	40	5	35	5	265	55	25	265	10
Conflicting Peds, #/hr	5	0	5	1	0	1	5	0	1	1	0	5
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	0	0	0	4	4	4	2	2	2	2	2	2
Mvmt Flow	6	0	11	45	6	39	6	298	62	28	298	11

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	728	737	313	711	711	335	314	0	0	361	0	0
Stage 1	365	365	-	341	341	-	-	-	-	-	-	-
Stage 2	363	372	-	370	370	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.14	6.54	6.24	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.14	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.14	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.536	4.036	3.336	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	341	348	732	345	356	702	1246	-	-	1198	-	-
Stage 1	658	627	-	670	635	-	-	-	-	-	-	-
Stage 2	660	622	-	646	617	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	307	335	726	329	342	698	1241	-	-	1193	-	-
Mov Cap-2 Maneuver	307	335	-	329	342	-	-	-	-	-	-	-
Stage 1	651	607	-	665	631	-	-	-	-	-	-	-
Stage 2	611	618	-	616	597	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	12.5	15.6	0.1	0.7
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1241	-	-	499	429	1193	-	-
HCM Lane V/C Ratio	0.005	-	-	0.034	0.21	0.024	-	-
HCM Control Delay (s)	7.9	0	-	12.5	15.6	8.1	0	-
HCM Lane LOS	A	A	-	B	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.8	0.1	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	25	805	10	25	910	60	10	95	30	75	90	40
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		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
Adj Sat Flow, veh/h/ln	1900	1881	1900	1900	1881	1900	1900	1845	1900	1900	1863	1900
Adj Flow Rate, veh/h	26	839	10	26	948	62	10	99	31	78	94	42
Adj No. of Lanes	0	2	0	0	2	0	0	2	0	0	2	0
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, %	1	1	1	1	1	1	3	3	3	2	2	2
Cap, veh/h	83	2353	28	75	2253	145	66	384	112	187	211	99
Arrive On Green	0.70	0.70	0.70	0.70	0.70	0.70	0.15	0.15	0.15	0.15	0.15	0.15
Sat Flow, veh/h	51	3375	40	40	3231	208	98	2510	734	727	1377	651
Grp Volume(v), veh/h	445	0	430	538	0	498	75	0	65	113	0	101
Grp Sat Flow(s),veh/h/ln	1761	0	1705	1805	0	1675	1796	0	1546	1188	0	1567
Q Serve(g_s), s	0.0	0.0	8.2	0.0	0.0	10.3	0.0	0.0	3.0	4.9	0.0	4.7
Cycle Q Clear(g_c), s	7.5	0.0	8.2	9.7	0.0	10.3	2.9	0.0	3.0	7.9	0.0	4.7
Prop In Lane	0.06		0.02	0.05		0.12	0.13		0.47	0.69		0.42
Lane Grp Cap(c), veh/h	1275	0	1189	1306	0	1168	326	0	236	258	0	240
V/C Ratio(X)	0.35	0.00	0.36	0.41	0.00	0.43	0.23	0.00	0.28	0.44	0.00	0.42
Avail Cap(c_a), veh/h	1275	0	1189	1306	0	1168	602	0	483	480	0	490
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.84	0.00	0.84	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	4.8	0.0	4.9	5.1	0.0	5.2	29.9	0.0	30.0	32.6	0.0	30.7
Incr Delay (d2), s/veh	0.8	0.0	0.9	0.8	0.0	1.0	0.4	0.0	0.6	1.2	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(-26165%),veh/ln	4.1	0.0	4.1	5.2	0.0	5.0	1.5	0.0	1.3	2.4	0.0	2.1
LnGrp Delay(d),s/veh	5.6	0.0	5.8	5.9	0.0	6.2	30.3	0.0	30.6	33.7	0.0	31.9
LnGrp LOS	A		A	A		A	C		C	C		C
Approach Vol, veh/h		875			1036			140			214	
Approach Delay, s/veh		5.7			6.1			30.4			32.8	
Approach LOS		A			A			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		61.8		18.2		61.8		18.2
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0
Max Green Setting (Gmax), s		43.0		25.0		43.0		25.0
Max Q Clear Time (g_c+I1), s		10.2		9.9		12.3		5.0
Green Ext Time (p_c), s		2.5		1.8		2.5		2.0

Intersection Summary	
HCM 2010 Ctrl Delay	9.9
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	745	270	380	740	0	0	0	0	460	0	395
Number	5	2	12	1	6	16				3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1881	1881	1881	1881	0				1900	1881	1881
Adj Flow Rate, veh/h	0	768	0	392	763	0				474	0	407
Adj No. of Lanes	0	2	1	1	2	0				0	1	1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97				0.97	0.97	0.97
Percent Heavy Veh, %	0	1	1	1	1	0				1	1	1
Cap, veh/h	0	1042	466	444	1886	0				483	0	432
Arrive On Green	0.00	0.29	0.00	0.14	0.53	0.00				0.27	0.00	0.27
Sat Flow, veh/h	0	3668	1599	1792	3668	0				1792	0	1599
Grp Volume(v), veh/h	0	768	0	392	763	0				474	0	407
Grp Sat Flow(s),veh/h/ln	0	1787	1599	1792	1787	0				1792	0	1599
Q Serve(g_s), s	0.0	11.5	0.0	8.4	7.6	0.0				15.6	0.0	14.8
Cycle Q Clear(g_c), s	0.0	11.5	0.0	8.4	7.6	0.0				15.6	0.0	14.8
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1042	466	444	1886	0				483	0	432
V/C Ratio(X)	0.00	0.74	0.00	0.88	0.40	0.00				0.98	0.00	0.94
Avail Cap(c_a), veh/h	0	1085	485	444	1929	0				483	0	432
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	18.9	0.0	13.9	8.4	0.0				21.5	0.0	21.2
Incr Delay (d2), s/veh	0.0	2.8	0.0	18.2	0.2	0.0				35.7	0.0	29.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	0.0	6.1	0.0	4.5	3.8	0.0				12.4	0.0	10.0
LnGrp Delay(d),s/veh	0.0	21.8	0.0	32.1	8.6	0.0				57.2	0.0	50.6
LnGrp LOS		C		C	A					E		D
Approach Vol, veh/h		768			1155						881	
Approach Delay, s/veh		21.8			16.6						54.1	
Approach LOS		C			B						D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	14.0	23.3				37.3		22.0
Change Period (Y+Rc), s	5.6	6.0				6.0		6.0
Max Green Setting (Gmax), s	8.4	18.0				32.0		16.0
Max Q Clear Time (g_c+I1), s	10.4	13.5				9.6		17.6
Green Ext Time (p_c), s	0.0	3.8				14.7		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	29.8
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	385	710	120	5	725	345	285	475	330	15	45	75
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1881	1900	1881	1900	1881	1881	1881	1863	1863	1863
Adj Flow Rate, veh/h	401	740	125	5	755	359	264	541	344	16	47	78
Adj No. of Lanes	1	2	1	0	2	0	1	2	1	1	1	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
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	2	2	2
Cap, veh/h	426	2222	990	30	941	444	378	794	336	81	85	70
Arrive On Green	0.17	0.62	0.62	0.41	0.41	0.41	0.21	0.21	0.21	0.05	0.05	0.05
Sat Flow, veh/h	1792	3574	1593	4	2299	1086	1792	3762	1590	1774	1863	1542
Grp Volume(v), veh/h	401	740	125	618	0	501	264	541	344	16	47	78
Grp Sat Flow(s),veh/h/ln	1792	1787	1593	1874	0	1516	1792	1881	1590	1774	1863	1542
Q Serve(g_s), s	20.1	12.8	4.2	0.0	0.0	37.7	17.6	17.1	27.3	1.1	3.2	5.9
Cycle Q Clear(g_c), s	20.1	12.8	4.2	37.4	0.0	37.7	17.6	17.1	27.3	1.1	3.2	5.9
Prop In Lane	1.00		1.00	0.01		0.72	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	426	2222	990	795	0	620	378	794	336	81	85	70
V/C Ratio(X)	0.94	0.33	0.13	0.78	0.00	0.81	0.70	0.68	1.02	0.20	0.55	1.11
Avail Cap(c_a), veh/h	449	2380	1061	852	0	667	378	794	336	81	85	70
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.5	11.7	10.0	33.6	0.0	33.7	47.2	47.0	51.0	59.4	60.4	61.7
Incr Delay (d2), s/veh	27.7	0.1	0.1	4.5	0.0	7.1	5.6	2.4	55.6	1.2	7.5	140.0
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	0.5
%ile BackOfQ(-26165%),veh/ln	17.3	6.3	1.8	20.4	0.0	17.0	9.3	9.1	17.1	0.6	1.8	5.2
LnGrp Delay(d),s/veh	61.2	11.8	10.1	38.1	0.0	40.9	52.7	49.4	106.6	60.6	67.9	202.2
LnGrp LOS	E	B	B	D		D	D	D	F	E	E	F
Approach Vol, veh/h		1266			1119			1149			141	
Approach Delay, s/veh		27.3			39.3			67.3			141.4	
Approach LOS		C			D			E			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		8
Phs Duration (G+Y+Rc), s		85.9		11.0	27.5	58.4		32.4
Change Period (Y+Rc), s		5.5		5.1	5.1	5.5		5.1
Max Green Setting (Gmax), s		86.1		5.9	24.1	56.9		27.3
Max Q Clear Time (g_c+I1), s		14.8		7.9	22.1	39.7		29.3
Green Ext Time (p_c), s		31.9		0.0	0.3	13.2		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	47.8
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	30	640	38	96	550	165	43	162	111	205	157	35
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1900	1845	1845	1900	1810	1810	1810	1863	1863	1900
Adj Flow Rate, veh/h	32	688	41	103	591	177	46	174	119	220	169	38
Adj No. of Lanes	1	2	0	1	2	0	1	2	1	1	2	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	4	4	4	3	3	3	5	5	5	2	2	2
Cap, veh/h	59	1002	60	132	911	272	229	456	202	316	514	113
Arrive On Green	0.03	0.30	0.30	0.08	0.34	0.34	0.13	0.13	0.13	0.18	0.18	0.18
Sat Flow, veh/h	1740	3328	198	1757	2660	795	1723	3438	1524	1774	2883	633
Grp Volume(v), veh/h	32	359	370	103	389	379	46	174	119	220	102	105
Grp Sat Flow(s),veh/h/ln	1740	1736	1791	1757	1752	1702	1723	1719	1524	1774	1770	1746
Q Serve(g_s), s	1.2	11.6	11.7	3.7	12.0	12.1	1.5	3.0	4.7	7.4	3.2	3.4
Cycle Q Clear(g_c), s	1.2	11.6	11.7	3.7	12.0	12.1	1.5	3.0	4.7	7.4	3.2	3.4
Prop In Lane	1.00		0.11	1.00		0.47	1.00		1.00	1.00		0.36
Lane Grp Cap(c), veh/h	59	523	539	132	600	583	229	456	202	316	315	311
V/C Ratio(X)	0.54	0.69	0.69	0.78	0.65	0.65	0.20	0.38	0.59	0.70	0.32	0.34
Avail Cap(c_a), veh/h	136	597	616	247	712	691	565	1128	500	638	636	627
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.4	19.7	19.7	29.1	17.8	17.8	24.7	25.4	26.1	24.7	22.9	23.0
Incr Delay (d2), s/veh	7.5	2.8	2.7	9.4	1.6	1.7	0.4	0.5	2.7	2.8	0.6	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	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	0.7	6.0	6.2	2.1	6.0	5.8	0.8	1.4	2.1	3.8	1.6	1.7
LnGrp Delay(d),s/veh	38.0	22.5	22.4	38.4	19.4	19.4	25.2	25.9	28.8	27.4	23.5	23.6
LnGrp LOS	D	C	C	D	B	B	C	C	C	C	C	C
Approach Vol, veh/h		761			871			339			427	
Approach Delay, s/veh		23.1			21.6			26.8			25.6	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	9.8	24.3		16.4	7.2	26.9		13.5
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0
Max Green Setting (Gmax), s	9.0	22.0		23.0	5.0	26.0		21.0
Max Q Clear Time (g_c+I1), s	5.7	13.7		9.4	3.2	14.1		6.7
Green Ext Time (p_c), s	0.1	5.5		1.5	0.0	7.1		1.4

Intersection Summary	
HCM 2010 Ctrl Delay	23.5
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	589	382	140	578	0	0	0	0	120	0	278
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0	5.0	4.6	5.0						5.0	5.0
Lane Util. Factor		0.91	0.91	1.00	0.95						1.00	1.00
Frpb, ped/bikes		1.00	0.99	1.00	1.00						1.00	1.00
Flpb, ped/bikes		1.00	1.00	1.00	1.00						1.00	1.00
Frt		0.98	0.85	1.00	1.00						1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00						0.95	1.00
Satd. Flow (prot)		3287	1409	1735	3471						1736	1553
Flt Permitted		1.00	1.00	0.25	1.00						0.95	1.00
Satd. Flow (perm)		3287	1409	454	3471						1736	1553
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	620	402	147	608	0	0	0	0	126	0	293
RTOR Reduction (vph)	0	11	186	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	701	124	147	608	0	0	0	0	0	126	293
Confl. Peds. (#/hr)	2		1	1		2						
Heavy Vehicles (%)	3%	3%	3%	4%	4%	4%	0%	0%	0%	4%	4%	4%
Turn Type		NA	Perm	pm+pt	NA					Perm	NA	Perm
Protected Phases		2		1	6						4	
Permitted Phases			2	6						4		4
Actuated Green, G (s)		30.5	30.5	33.5	23.7						21.5	21.5
Effective Green, g (s)		30.5	30.5	33.5	23.7						21.5	21.5
Actuated g/C Ratio		0.40	0.40	0.44	0.31						0.28	0.28
Clearance Time (s)		5.0	5.0	4.6	5.0						5.0	5.0
Vehicle Extension (s)		4.0	4.0	4.5	4.0						5.0	5.0
Lane Grp Cap (vph)		1312	562	363	1076						488	437
v/s Ratio Prot		c0.21		c0.05	0.18							
v/s Ratio Perm			0.09	0.13							0.07	c0.19
v/c Ratio		0.53	0.22	0.40	0.57						0.26	0.67
Uniform Delay, d1		17.5	15.1	21.5	22.0						21.3	24.3
Progression Factor		1.00	1.00	1.47	0.67						1.00	1.00
Incremental Delay, d2		0.5	0.3	1.2	0.8						0.6	5.2
Delay (s)		18.1	15.4	32.9	15.7						21.9	29.5
Level of Service		B	B	C	B						C	C
Approach Delay (s)		17.2			19.0			0.0			27.2	
Approach LOS		B			B			A			C	

Intersection Summary			
HCM 2000 Control Delay	19.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	76.4	Sum of lost time (s)	14.6
Intersection Capacity Utilization	54.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	378	357	0	0	322	135	387	5	170	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.6	5.0			5.0		5.0	5.0	5.0			
Lane Util. Factor	1.00	0.95			0.91		0.95	0.95	1.00			
Frpb, ped/bikes	1.00	1.00			0.99		1.00	1.00	0.99			
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00			
Frt	1.00	1.00			0.96		1.00	1.00	0.85			
Flt Protected	0.95	1.00			1.00		0.95	0.95	1.00			
Satd. Flow (prot)	1735	3471			4691		1649	1655	1533			
Flt Permitted	0.45	1.00			1.00		0.95	0.95	1.00			
Satd. Flow (perm)	813	3471			4691		1649	1655	1533			
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	411	388	0	0	350	147	421	5	185	0	0	0
RTOR Reduction (vph)	0	0	0	0	87	0	0	0	0	0	0	0
Lane Group Flow (vph)	411	388	0	0	410	0	215	211	185	0	0	0
Confl. Peds. (#/hr)	1					1			1	1		
Heavy Vehicles (%)	4%	4%	4%	5%	5%	5%	4%	4%	4%	0%	0%	0%
Turn Type	pm+pt	NA			NA		Perm	NA	Perm			
Protected Phases	5	2			6			8				
Permitted Phases	2						8		8			
Actuated Green, G (s)	45.3	30.5			23.7		21.5	21.5	21.5			
Effective Green, g (s)	45.3	30.5			23.7		21.5	21.5	21.5			
Actuated g/C Ratio	0.59	0.40			0.31		0.28	0.28	0.28			
Clearance Time (s)	4.6	5.0			5.0		5.0	5.0	5.0			
Vehicle Extension (s)	3.5	4.0			4.0		5.0	5.0	5.0			
Lane Grp Cap (vph)	682	1385			1455		464	465	431			
v/s Ratio Prot	c0.13	0.11			0.09							
v/s Ratio Perm	c0.23						c0.13	0.13	0.12			
v/c Ratio	0.60	0.28			0.28		0.46	0.45	0.43			
Uniform Delay, d1	12.7	15.5			19.9		22.7	22.6	22.4			
Progression Factor	0.66	0.42			1.00		1.00	1.00	1.00			
Incremental Delay, d2	1.5	0.1			0.1		1.5	1.5	1.4			
Delay (s)	9.8	6.7			20.1		24.2	24.1	23.9			
Level of Service	A	A			C		C	C	C			
Approach Delay (s)		8.3			20.1			24.1			0.0	
Approach LOS		A			C			C			A	

Intersection Summary			
HCM 2000 Control Delay	16.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	76.4	Sum of lost time (s)	14.6
Intersection Capacity Utilization	54.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	2.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	5	0	5	46	0	36	5	185	51	31	200	10
Conflicting Peds, #/hr	2	0	3	3	0	2	3	0	3	2	0	2
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	86	86	86	86	86	86	86	86	86	86	86	86
Heavy Vehicles, %	0	0	0	14	14	14	7	7	7	4	4	4
Mvmt Flow	6	0	6	53	0	42	6	215	59	36	233	12

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	593	602	244	575	578	250	247	0	0	277	0	0
Stage 1	313	313	-	259	259	-	-	-	-	-	-	-
Stage 2	280	289	-	316	319	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.24	6.64	6.34	4.17	-	-	4.14	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.24	5.64	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.24	5.64	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.626	4.126	3.426	2.263	-	-	2.236	-	-
Pot Cap-1 Maneuver	420	416	800	412	411	760	1290	-	-	1274	-	-
Stage 1	702	661	-	720	672	-	-	-	-	-	-	-
Stage 2	731	677	-	670	632	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	383	398	796	395	393	757	1287	-	-	1272	-	-
Mov Cap-2 Maneuver	383	398	-	395	393	-	-	-	-	-	-	-
Stage 1	696	638	-	714	666	-	-	-	-	-	-	-
Stage 2	685	671	-	642	610	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	12.1	13.9	0.2	1
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1287	-	-	517	500	1272	-	-
HCM Lane V/C Ratio	0.005	-	-	0.022	0.191	0.028	-	-
HCM Control Delay (s)	7.8	0	-	12.1	13.9	7.9	0	-
HCM Lane LOS	A	A	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.7	0.1	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	26	770	15	15	715	49	10	65	25	64	70	36
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1827	1900	1900	1827	1900	1900	1792	1900	1900	1827	1900
Adj Flow Rate, veh/h	27	786	15	15	730	50	10	66	26	65	71	37
Adj No. of Lanes	0	2	0	0	2	0	0	2	0	0	2	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	4	4	4	4	4	4	6	6	6	4	4	4
Cap, veh/h	91	2373	45	65	2310	156	70	273	99	165	160	88
Arrive On Green	0.73	0.73	0.73	0.73	0.73	0.73	0.12	0.12	0.12	0.12	0.12	0.12
Sat Flow, veh/h	60	3256	61	25	3169	215	141	2255	819	738	1317	724
Grp Volume(v), veh/h	424	0	404	416	0	379	55	0	47	95	0	78
Grp Sat Flow(s),veh/h/ln	1725	0	1652	1784	0	1624	1729	0	1487	1243	0	1535
Q Serve(g_s), s	0.0	0.0	7.0	0.0	0.0	6.6	0.0	0.0	2.3	4.0	0.0	3.8
Cycle Q Clear(g_c), s	6.6	0.0	7.0	6.4	0.0	6.6	2.2	0.0	2.3	6.3	0.0	3.8
Prop In Lane	0.06		0.04	0.04		0.13	0.18		0.55	0.69		0.47
Lane Grp Cap(c), veh/h	1305	0	1204	1347	0	1184	263	0	180	227	0	186
V/C Ratio(X)	0.32	0.00	0.34	0.31	0.00	0.32	0.21	0.00	0.26	0.42	0.00	0.42
Avail Cap(c_a), veh/h	1305	0	1204	1347	0	1184	600	0	483	513	0	499
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.94	0.00	0.94	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	3.8	0.0	3.9	3.8	0.0	3.8	31.9	0.0	31.9	33.9	0.0	32.6
Incr Delay (d2), s/veh	0.7	0.0	0.8	0.6	0.0	0.7	0.4	0.0	0.8	1.2	0.0	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	3.4	0.0	3.4	3.3	0.0	3.1	1.1	0.0	1.0	2.1	0.0	1.7
LnGrp Delay(d),s/veh	4.5	0.0	4.6	4.4	0.0	4.5	32.3	0.0	32.7	35.1	0.0	34.1
LnGrp LOS	A		A	A		A	C		C	D		C
Approach Vol, veh/h		828			795			102			173	
Approach Delay, s/veh		4.6			4.4			32.5			34.7	
Approach LOS		A			A			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		64.3		15.7		64.3		15.7
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0
Max Green Setting (Gmax), s		42.0		26.0		42.0		26.0
Max Q Clear Time (g_c+I1), s		9.0		8.3		8.6		4.3
Green Ext Time (p_c), s		14.0		1.4		14.1		1.6

Intersection Summary	
HCM 2010 Ctrl Delay	8.8
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	658	336	335	609	0	0	0	0	310	0	285
Number	5	2	12	1	6	16				3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1845	1845	1827	1827	0				1900	1810	1810
Adj Flow Rate, veh/h	0	700	0	356	648	0				330	0	303
Adj No. of Lanes	0	2	1	1	2	0				0	1	1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94				0.94	0.94	0.94
Percent Heavy Veh, %	0	3	3	4	4	0				5	5	5
Cap, veh/h	0	1067	477	675	2299	0				394	0	352
Arrive On Green	0.00	0.30	0.00	0.61	1.00	0.00				0.23	0.00	0.23
Sat Flow, veh/h	0	3597	1568	1740	3563	0				1723	0	1538
Grp Volume(v), veh/h	0	700	0	356	648	0				330	0	303
Grp Sat Flow(s),veh/h/ln	0	1752	1568	1740	1736	0				1723	0	1538
Q Serve(g_s), s	0.0	19.1	0.0	0.0	0.0	0.0				20.1	0.0	20.8
Cycle Q Clear(g_c), s	0.0	19.1	0.0	0.0	0.0	0.0				20.1	0.0	20.8
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1067	477	675	2299	0				394	0	352
V/C Ratio(X)	0.00	0.66	0.00	0.53	0.28	0.00				0.84	0.00	0.86
Avail Cap(c_a), veh/h	0	1067	477	675	2299	0				517	0	461
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.94	0.00	0.70	0.70	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	33.2	0.0	13.7	0.0	0.0				40.5	0.0	40.7
Incr Delay (d2), s/veh	0.0	1.6	0.0	0.4	0.2	0.0				9.0	0.0	12.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	0.0	9.5	0.0	4.3	0.1	0.0				10.5	0.0	10.0
LnGrp Delay(d),s/veh	0.0	34.8	0.0	14.1	0.2	0.0				49.5	0.0	53.0
LnGrp LOS		C		B	A					D		D
Approach Vol, veh/h		700			1004						633	
Approach Delay, s/veh		34.8			5.1						51.2	
Approach LOS		C			A						D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	39.3	39.5				78.8		31.2
Change Period (Y+Rc), s	6.0	* 6				6.0		6.0
Max Green Setting (Gmax), s	27.4	* 32				65.0		33.0
Max Q Clear Time (g_c+I1), s	2.0	21.1				2.0		22.8
Green Ext Time (p_c), s	7.3	4.6				8.4		2.3

Intersection Summary	
HCM 2010 Ctrl Delay	26.5
HCM 2010 LOS	C

Notes

* HCM 2010 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												
Volume (veh/h)	290	563	90	10	628	235	261	280	320	15	60	50
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1827	1900	1827	1900	1827	1827	1827	1810	1810	1810
Adj Flow Rate, veh/h	319	619	99	11	690	258	198	432	352	16	66	55
Adj No. of Lanes	1	2	1	0	2	0	1	2	1	1	1	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
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	5	5	5
Cap, veh/h	381	2033	903	39	1004	372	380	797	333	92	97	81
Arrive On Green	0.12	0.59	0.59	0.42	0.42	0.42	0.22	0.22	0.22	0.05	0.05	0.05
Sat Flow, veh/h	1740	3471	1542	14	2401	890	1740	3654	1528	1723	1810	1521
Grp Volume(v), veh/h	319	619	99	524	0	435	198	432	352	16	66	55
Grp Sat Flow(s),veh/h/ln	1740	1736	1542	1805	0	1499	1740	1827	1528	1723	1810	1521
Q Serve(g_s), s	10.9	9.9	3.1	0.0	0.0	26.2	11.0	11.5	24.0	1.0	3.9	3.9
Cycle Q Clear(g_c), s	10.9	9.9	3.1	25.8	0.0	26.2	11.0	11.5	24.0	1.0	3.9	3.9
Prop In Lane	1.00		1.00	0.02		0.59	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	381	2033	903	788	0	627	380	797	333	92	97	81
V/C Ratio(X)	0.84	0.30	0.11	0.67	0.00	0.69	0.52	0.54	1.06	0.17	0.68	0.68
Avail Cap(c_a), veh/h	443	2033	903	788	0	627	380	797	333	103	109	91
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)	0.64	0.64	0.64	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.4	11.5	10.1	26.1	0.0	26.2	37.9	38.1	43.0	49.7	51.1	51.1
Incr Delay (d2), s/veh	7.9	0.2	0.2	4.4	0.0	6.2	1.3	0.7	64.6	0.9	14.0	15.8
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(-26165%),veh/ln	6.0	4.8	1.4	13.9	0.0	11.8	5.4	5.9	16.1	0.5	2.4	2.0
LnGrp Delay(d),s/veh	28.3	11.7	10.2	30.5	0.0	32.5	39.2	38.9	107.6	50.6	65.2	66.9
LnGrp LOS	C	B	B	C		C	D	D	F	D	E	E
Approach Vol, veh/h		1037			959			982			137	
Approach Delay, s/veh		16.7			31.4			63.6			64.2	
Approach LOS		B			C			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		8
Phs Duration (G+Y+Rc), s		69.9		11.0	18.4	51.5		29.1
Change Period (Y+Rc), s		5.5		5.1	5.1	5.5		5.1
Max Green Setting (Gmax), s		63.7		6.6	17.3	41.3		24.0
Max Q Clear Time (g_c+I1), s		11.9		5.9	12.9	28.2		26.0
Green Ext Time (p_c), s		21.4		0.0	0.4	9.4		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	38.1
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	35	685	41	135	710	280	226	196	35	40	171	135
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1881	1881	1900	1863	1863	1863	1881	1881	1900
Adj Flow Rate, veh/h	36	714	43	141	740	292	235	204	36	42	178	141
Adj No. of Lanes	1	2	0	1	2	0	1	2	1	1	2	0
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, %	0	0	0	1	1	1	2	2	2	1	1	1
Cap, veh/h	65	1017	61	177	894	353	318	634	282	269	292	218
Arrive On Green	0.04	0.29	0.29	0.10	0.36	0.36	0.18	0.18	0.18	0.15	0.15	0.15
Sat Flow, veh/h	1810	3459	208	1792	2503	988	1774	3539	1573	1792	1948	1451
Grp Volume(v), veh/h	36	372	385	141	528	504	235	204	36	42	162	157
Grp Sat Flow(s),veh/h/ln	1810	1805	1862	1792	1787	1704	1774	1770	1573	1792	1787	1611
Q Serve(g_s), s	1.4	13.2	13.2	5.5	19.4	19.4	9.0	3.6	1.4	1.5	6.1	6.6
Cycle Q Clear(g_c), s	1.4	13.2	13.2	5.5	19.4	19.4	9.0	3.6	1.4	1.5	6.1	6.6
Prop In Lane	1.00		0.11	1.00		0.58	1.00		1.00	1.00		0.90
Lane Grp Cap(c), veh/h	65	531	547	177	638	608	318	634	282	269	268	242
V/C Ratio(X)	0.56	0.70	0.70	0.80	0.83	0.83	0.74	0.32	0.13	0.16	0.61	0.65
Avail Cap(c_a), veh/h	126	577	595	199	646	616	518	1033	459	573	571	515
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.1	22.6	22.6	31.7	21.1	21.1	27.9	25.7	24.8	26.6	28.6	28.8
Incr Delay (d2), s/veh	7.3	3.5	3.4	18.1	8.7	9.1	3.4	0.3	0.2	0.3	2.2	2.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	0.8	7.0	7.2	3.6	11.1	10.6	4.7	1.8	0.6	0.7	3.2	3.1
LnGrp Delay(d),s/veh	41.5	26.0	26.0	49.8	29.8	30.2	31.3	26.0	25.0	26.9	30.8	31.7
LnGrp LOS	D	C	C	D	C	C	C	C	C	C	C	C
Approach Vol, veh/h		793			1173			475			361	
Approach Delay, s/veh		26.7			32.4			28.6			30.7	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	12.1	26.1		15.8	7.6	30.7		17.9
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0
Max Green Setting (Gmax), s	8.0	23.0		23.0	5.0	26.0		21.0
Max Q Clear Time (g_c+I1), s	7.5	15.2		8.6	3.4	21.4		11.0
Green Ext Time (p_c), s	0.0	5.9		1.7	0.0	3.7		1.5

Intersection Summary	
HCM 2010 Ctrl Delay	29.9
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	689	376	175	786	0	0	0	0	195	0	312
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0	5.0	4.6	5.0						5.0	5.0
Lane Util. Factor		0.91	0.91	1.00	0.95						1.00	1.00
Frpb, ped/bikes		1.00	0.99	1.00	1.00						1.00	1.00
Flpb, ped/bikes		1.00	1.00	1.00	1.00						1.00	1.00
Frt		0.99	0.85	1.00	1.00						1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00						0.95	1.00
Satd. Flow (prot)		3381	1435	1787	3574						1787	1599
Flt Permitted		1.00	1.00	0.22	1.00						0.95	1.00
Satd. Flow (perm)		3381	1435	413	3574						1787	1599
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	749	409	190	854	0	0	0	0	212	0	339
RTOR Reduction (vph)	0	6	222	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	804	126	190	854	0	0	0	0	0	212	339
Confl. Peds. (#/hr)	5		2	2		5						
Confl. Bikes (#/hr)			1									
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	0%	0%	0%	1%	1%	1%
Turn Type		NA	Perm	pm+pt	NA					Perm	NA	Perm
Protected Phases		2		1	6						4	
Permitted Phases			2	6						4		4
Actuated Green, G (s)		29.4	29.4	31.4	31.4						24.0	24.0
Effective Green, g (s)		29.4	29.4	31.4	31.4						24.0	24.0
Actuated g/C Ratio		0.36	0.36	0.39	0.39						0.30	0.30
Clearance Time (s)		5.0	5.0	4.6	5.0						5.0	5.0
Vehicle Extension (s)		4.0	4.0	4.5	4.0						5.0	5.0
Lane Grp Cap (vph)		1224	519	383	1382						528	472
v/s Ratio Prot		c0.24		0.08	c0.24							
v/s Ratio Perm			0.09	0.11							0.12	c0.21
v/c Ratio		0.66	0.24	0.50	0.62						0.40	0.72
Uniform Delay, d1		21.7	18.1	18.5	20.1						22.9	25.6
Progression Factor		1.00	1.00	0.72	0.75						1.00	1.00
Incremental Delay, d2		1.4	0.3	1.6	0.9						1.0	6.4
Delay (s)		23.1	18.4	14.9	15.9						23.9	32.0
Level of Service		C	B	B	B						C	C
Approach Delay (s)		21.7			15.7			0.0			28.9	
Approach LOS		C			B			A			C	

Intersection Summary			
HCM 2000 Control Delay	20.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	81.2	Sum of lost time (s)	14.6
Intersection Capacity Utilization	77.3%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	452	491	0	0	471	245	521	10	230	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.6	5.0			5.0		5.0	5.0	5.0			
Lane Util. Factor	1.00	0.95			0.91		0.95	0.95	1.00			
Frpb, ped/bikes	1.00	1.00			0.99		1.00	1.00	0.99			
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00			
Frt	1.00	1.00			0.95		1.00	1.00	0.85			
Flt Protected	0.95	1.00			1.00		0.95	0.95	1.00			
Satd. Flow (prot)	1804	3610			4828		1692	1700	1577			
Flt Permitted	0.32	1.00			1.00		0.95	0.95	1.00			
Satd. Flow (perm)	614	3610			4828		1692	1700	1577			
Peak-hour factor, PHF	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Adj. Flow (vph)	532	578	0	0	554	288	613	12	271	0	0	0
RTOR Reduction (vph)	0	0	0	0	104	0	0	0	0	0	0	0
Lane Group Flow (vph)	532	578	0	0	738	0	313	312	271	0	0	0
Confl. Peds. (#/hr)	4		5	5		4	4		2	2		4
Confl. Bikes (#/hr)						1						
Heavy Vehicles (%)	0%	0%	0%	1%	1%	1%	1%	1%	1%	0%	0%	0%
Turn Type	pm+pt	NA			NA		Perm	NA	Perm			
Protected Phases	5	2			6			8				
Permitted Phases	2						8		8			
Actuated Green, G (s)	29.8	29.4			31.4		24.0	24.0	24.0			
Effective Green, g (s)	29.8	29.4			31.4		24.0	24.0	24.0			
Actuated g/C Ratio	0.37	0.36			0.39		0.30	0.30	0.30			
Clearance Time (s)	4.6	5.0			5.0		5.0	5.0	5.0			
Vehicle Extension (s)	3.5	4.0			4.0		5.0	5.0	5.0			
Lane Grp Cap (vph)	389	1307			1866		500	502	466			
v/s Ratio Prot	c0.19	0.16			c0.15							
v/s Ratio Perm	c0.31						c0.18	0.18	0.17			
v/c Ratio	1.37	0.44			0.40		0.63	0.62	0.58			
Uniform Delay, d1	25.1	19.7			18.0		24.7	24.7	24.3			
Progression Factor	0.67	0.65			1.00		1.00	1.00	1.00			
Incremental Delay, d2	179.6	0.3			0.2		3.4	3.4	2.9			
Delay (s)	196.3	13.1			18.2		28.2	28.1	27.2			
Level of Service	F	B			B		C	C	C			
Approach Delay (s)		100.9			18.2			27.8			0.0	
Approach LOS		F			B			C			A	

Intersection Summary			
HCM 2000 Control Delay	53.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	81.2	Sum of lost time (s)	14.6
Intersection Capacity Utilization	77.3%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Int Delay, s/veh	2.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	5	0	10	50	5	42	5	265	65	32	265	10
Conflicting Peds, #/hr	5	0	5	1	0	1	5	0	1	1	0	5
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	0	0	0	4	4	4	2	2	2	2	2	2
Mvmt Flow	6	0	11	56	6	47	6	298	73	36	298	11

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	753	763	313	733	733	340	314	0	0	372	0	0
Stage 1	380	380	-	347	347	-	-	-	-	-	-	-
Stage 2	373	383	-	386	386	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.14	6.54	6.24	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.14	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.14	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.536	4.036	3.336	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	329	337	732	334	345	698	1246	-	-	1186	-	-
Stage 1	646	617	-	665	631	-	-	-	-	-	-	-
Stage 2	652	616	-	633	607	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	290	321	726	316	329	695	1241	-	-	1181	-	-
Mov Cap-2 Maneuver	290	321	-	316	329	-	-	-	-	-	-	-
Stage 1	639	592	-	660	627	-	-	-	-	-	-	-
Stage 2	596	612	-	598	582	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	12.7	16.7	0.1	0.8
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1241	-	-	484	415	1181	-	-
HCM Lane V/C Ratio	0.005	-	-	0.035	0.263	0.03	-	-
HCM Control Delay (s)	7.9	0	-	12.7	16.7	8.1	0	-
HCM Lane LOS	A	A	-	B	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	1	0.1	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	27	805	10	25	910	66	10	95	30	81	90	42
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		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
Adj Sat Flow, veh/h/ln	1900	1881	1900	1900	1881	1900	1900	1845	1900	1900	1863	1900
Adj Flow Rate, veh/h	28	839	10	26	948	69	10	99	31	84	94	44
Adj No. of Lanes	0	2	0	0	2	0	0	2	0	0	2	0
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, %	1	1	1	1	1	1	3	3	3	2	2	2
Cap, veh/h	87	2322	27	75	2219	159	66	397	116	197	209	104
Arrive On Green	0.69	0.69	0.69	0.69	0.69	0.69	0.16	0.16	0.16	0.16	0.16	0.16
Sat Flow, veh/h	57	3355	39	40	3206	230	97	2512	733	757	1323	656
Grp Volume(v), veh/h	444	0	433	542	0	501	75	0	65	117	0	105
Grp Sat Flow(s),veh/h/ln	1746	0	1705	1806	0	1671	1796	0	1546	1171	0	1566
Q Serve(g_s), s	0.0	0.0	8.4	0.0	0.0	10.5	0.0	0.0	3.0	5.4	0.0	4.8
Cycle Q Clear(g_c), s	7.6	0.0	8.4	10.0	0.0	10.5	2.8	0.0	3.0	8.3	0.0	4.8
Prop In Lane	0.06		0.02	0.05		0.14	0.13		0.47	0.72		0.42
Lane Grp Cap(c), veh/h	1256	0	1180	1297	0	1156	335	0	244	262	0	247
V/C Ratio(X)	0.35	0.00	0.37	0.42	0.00	0.43	0.22	0.00	0.27	0.45	0.00	0.42
Avail Cap(c_a), veh/h	1256	0	1180	1297	0	1156	602	0	483	475	0	489
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.84	0.00	0.84	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	5.0	0.0	5.1	5.3	0.0	5.4	29.6	0.0	29.6	32.5	0.0	30.4
Incr Delay (d2), s/veh	0.8	0.0	0.9	0.8	0.0	1.0	0.3	0.0	0.6	1.2	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(-26165%),veh/ln	4.2	0.0	4.1	5.4	0.0	5.0	1.5	0.0	1.3	2.5	0.0	2.2
LnGrp Delay(d),s/veh	5.8	0.0	6.0	6.2	0.0	6.4	29.9	0.0	30.2	33.6	0.0	31.5
LnGrp LOS	A		A	A		A	C		C	C		C
Approach Vol, veh/h		877			1043			140			222	
Approach Delay, s/veh		5.9			6.3			30.0			32.7	
Approach LOS		A			A			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		61.4		18.6		61.4		18.6
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0
Max Green Setting (Gmax), s		43.0		25.0		43.0		25.0
Max Q Clear Time (g_c+I1), s		10.4		10.3		12.5		5.0
Green Ext Time (p_c), s		2.5		1.8		2.5		2.1

Intersection Summary	
HCM 2010 Ctrl Delay	10.1
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	747	274	380	746	0	0	0	0	460	0	395
Number	5	2	12	1	6	16				3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1881	1881	1881	1881	0				1900	1881	1881
Adj Flow Rate, veh/h	0	770	0	392	769	0				474	0	407
Adj No. of Lanes	0	2	1	1	2	0				0	1	1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97				0.97	0.97	0.97
Percent Heavy Veh, %	0	1	1	1	1	0				1	1	1
Cap, veh/h	0	1043	467	444	1887	0				483	0	431
Arrive On Green	0.00	0.29	0.00	0.14	0.53	0.00				0.27	0.00	0.27
Sat Flow, veh/h	0	3668	1599	1792	3668	0				1792	0	1599
Grp Volume(v), veh/h	0	770	0	392	769	0				474	0	407
Grp Sat Flow(s),veh/h/ln	0	1787	1599	1792	1787	0				1792	0	1599
Q Serve(g_s), s	0.0	11.5	0.0	8.4	7.7	0.0				15.6	0.0	14.8
Cycle Q Clear(g_c), s	0.0	11.5	0.0	8.4	7.7	0.0				15.6	0.0	14.8
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1043	467	444	1887	0				483	0	431
V/C Ratio(X)	0.00	0.74	0.00	0.88	0.41	0.00				0.98	0.00	0.94
Avail Cap(c_a), veh/h	0	1085	485	444	1929	0				483	0	431
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	19.0	0.0	13.9	8.4	0.0				21.5	0.0	21.2
Incr Delay (d2), s/veh	0.0	2.8	0.0	18.4	0.2	0.0				35.8	0.0	29.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	0.0	6.1	0.0	4.5	3.8	0.0				12.4	0.0	10.0
LnGrp Delay(d),s/veh	0.0	21.8	0.0	32.3	8.6	0.0				57.3	0.0	50.6
LnGrp LOS		C		C	A					E		D
Approach Vol, veh/h		770			1161						881	
Approach Delay, s/veh		21.8			16.6						54.2	
Approach LOS		C			B						D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	14.0	23.3				37.3		22.0
Change Period (Y+Rc), s	5.6	6.0				6.0		6.0
Max Green Setting (Gmax), s	8.4	18.0				32.0		16.0
Max Q Clear Time (g_c+I1), s	10.4	13.5				9.7		17.6
Green Ext Time (p_c), s	0.0	3.8				14.8		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	29.8
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	385	712	120	5	727	345	289	475	330	15	45	75
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1881	1900	1881	1900	1881	1881	1881	1863	1863	1863
Adj Flow Rate, veh/h	401	742	125	5	757	359	265	545	344	16	47	78
Adj No. of Lanes	1	2	1	0	2	0	1	2	1	1	1	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
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	2	2	2
Cap, veh/h	426	2223	991	30	942	444	378	794	335	81	85	70
Arrive On Green	0.17	0.62	0.62	0.41	0.41	0.41	0.21	0.21	0.21	0.05	0.05	0.05
Sat Flow, veh/h	1792	3574	1593	4	2301	1084	1792	3762	1590	1774	1863	1542
Grp Volume(v), veh/h	401	742	125	619	0	502	265	545	344	16	47	78
Grp Sat Flow(s),veh/h/ln	1792	1787	1593	1874	0	1516	1792	1881	1590	1774	1863	1542
Q Serve(g_s), s	20.1	12.8	4.2	0.0	0.0	37.8	17.7	17.3	27.3	1.1	3.2	5.9
Cycle Q Clear(g_c), s	20.1	12.8	4.2	37.5	0.0	37.8	17.7	17.3	27.3	1.1	3.2	5.9
Prop In Lane	1.00		1.00	0.01		0.72	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	426	2223	991	795	0	620	378	794	335	81	85	70
V/C Ratio(X)	0.94	0.33	0.13	0.78	0.00	0.81	0.70	0.69	1.03	0.20	0.55	1.11
Avail Cap(c_a), veh/h	449	2378	1060	851	0	667	378	794	335	81	85	70
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.6	11.7	10.0	33.6	0.0	33.8	47.3	47.1	51.0	59.5	60.5	61.7
Incr Delay (d2), s/veh	27.8	0.1	0.1	4.6	0.0	7.2	5.7	2.5	55.8	1.2	7.6	140.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4
%ile BackOfQ(-26165%),veh/ln	17.3	6.3	1.8	20.4	0.0	17.0	9.4	9.3	17.1	0.6	1.8	5.3
LnGrp Delay(d),s/veh	61.4	11.8	10.1	38.2	0.0	41.0	53.0	49.6	106.9	60.6	68.0	202.6
LnGrp LOS	E	B	B	D		D	D	D	F	E	E	F
Approach Vol, veh/h		1268			1121			1154			141	
Approach Delay, s/veh		27.3			39.4			67.4			141.6	
Approach LOS		C			D			E			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		8
Phs Duration (G+Y+Rc), s		86.0		11.0	27.5	58.5		32.4
Change Period (Y+Rc), s		5.5		5.1	5.1	5.5		5.1
Max Green Setting (Gmax), s		86.1		5.9	24.1	56.9		27.3
Max Q Clear Time (g_c+I1), s		14.8		7.9	22.1	39.8		29.3
Green Ext Time (p_c), s		32.0		0.0	0.3	13.1		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	47.9
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	30	640	40	103	550	165	45	163	118	205	158	35
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1900	1845	1845	1900	1810	1810	1810	1863	1863	1900
Adj Flow Rate, veh/h	32	688	43	111	591	177	48	175	127	220	170	38
Adj No. of Lanes	1	2	0	1	2	0	1	2	1	1	2	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	4	4	4	3	3	3	5	5	5	2	2	2
Cap, veh/h	59	988	62	142	918	274	236	471	209	315	512	112
Arrive On Green	0.03	0.30	0.30	0.08	0.35	0.35	0.14	0.14	0.14	0.18	0.18	0.18
Sat Flow, veh/h	1740	3317	207	1757	2660	795	1723	3438	1525	1774	2886	630
Grp Volume(v), veh/h	32	360	371	111	389	379	48	175	127	220	103	105
Grp Sat Flow(s),veh/h/ln	1740	1736	1789	1757	1752	1702	1723	1719	1525	1774	1770	1747
Q Serve(g_s), s	1.2	12.0	12.0	4.0	12.2	12.2	1.6	3.0	5.1	7.6	3.3	3.4
Cycle Q Clear(g_c), s	1.2	12.0	12.0	4.0	12.2	12.2	1.6	3.0	5.1	7.6	3.3	3.4
Prop In Lane	1.00		0.12	1.00		0.47	1.00		1.00	1.00		0.36
Lane Grp Cap(c), veh/h	59	517	533	142	605	588	236	471	209	315	314	310
V/C Ratio(X)	0.55	0.70	0.70	0.78	0.64	0.65	0.20	0.37	0.61	0.70	0.33	0.34
Avail Cap(c_a), veh/h	133	586	604	243	699	679	555	1107	491	626	624	616
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.0	20.3	20.3	29.4	18.0	18.0	25.0	25.6	26.5	25.2	23.4	23.5
Incr Delay (d2), s/veh	7.7	3.1	3.0	8.9	1.6	1.7	0.4	0.5	2.8	2.8	0.6	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	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	0.7	6.1	6.3	2.3	6.1	6.0	0.8	1.5	2.3	4.0	1.6	1.7
LnGrp Delay(d),s/veh	38.7	23.3	23.3	38.2	19.6	19.7	25.4	26.1	29.3	28.0	24.0	24.1
LnGrp LOS	D	C	C	D	B	B	C	C	C	C	C	C
Approach Vol, veh/h		763			879			350			428	
Approach Delay, s/veh		24.0			22.0			27.2			26.1	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	10.3	24.4		16.6	7.2	27.5		13.9
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0
Max Green Setting (Gmax), s	9.0	22.0		23.0	5.0	26.0		21.0
Max Q Clear Time (g_c+I1), s	6.0	14.0		9.6	3.2	14.2		7.1
Green Ext Time (p_c), s	0.1	5.3		1.5	0.0	7.1		1.4

Intersection Summary	
HCM 2010 Ctrl Delay	24.1
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	595	383	140	580	0	0	0	0	120	0	283
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0	5.0	4.6	5.0						5.0	5.0
Lane Util. Factor		0.91	0.91	1.00	0.95						1.00	1.00
Frpb, ped/bikes		1.00	0.99	1.00	1.00						1.00	1.00
Flpb, ped/bikes		1.00	1.00	1.00	1.00						1.00	1.00
Frt		0.98	0.85	1.00	1.00						1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00						0.95	1.00
Satd. Flow (prot)		3287	1409	1735	3471						1736	1553
Flt Permitted		1.00	1.00	0.24	1.00						0.95	1.00
Satd. Flow (perm)		3287	1409	445	3471						1736	1553
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	626	403	147	611	0	0	0	0	126	0	298
RTOR Reduction (vph)	0	11	186	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	708	124	147	611	0	0	0	0	0	126	298
Confl. Peds. (#/hr)	2		1	1		2						
Heavy Vehicles (%)	3%	3%	3%	4%	4%	4%	0%	0%	0%	4%	4%	4%
Turn Type		NA	Perm	pm+pt	NA					Perm	NA	Perm
Protected Phases		2		1	6						4	
Permitted Phases			2	6						4		4
Actuated Green, G (s)		30.7	30.7	33.6	23.8						21.8	21.8
Effective Green, g (s)		30.7	30.7	33.6	23.8						21.8	21.8
Actuated g/C Ratio		0.40	0.40	0.44	0.31						0.28	0.28
Clearance Time (s)		5.0	5.0	4.6	5.0						5.0	5.0
Vehicle Extension (s)		4.0	4.0	4.5	4.0						5.0	5.0
Lane Grp Cap (vph)		1312	562	358	1074						492	440
v/s Ratio Prot		c0.22		c0.05	0.18							
v/s Ratio Perm			0.09	0.13							0.07	c0.19
v/c Ratio		0.54	0.22	0.41	0.57						0.26	0.68
Uniform Delay, d1		17.7	15.2	21.9	22.3						21.3	24.4
Progression Factor		1.00	1.00	1.48	0.68						1.00	1.00
Incremental Delay, d2		0.5	0.3	1.3	0.8						0.6	5.3
Delay (s)		18.2	15.5	33.7	15.9						21.9	29.8
Level of Service		B	B	C	B						C	C
Approach Delay (s)		17.4			19.4			0.0			27.4	
Approach LOS		B			B			A			C	

Intersection Summary			
HCM 2000 Control Delay	20.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	76.9	Sum of lost time (s)	14.6
Intersection Capacity Utilization	54.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	383	358	0	0	323	135	388	5	170	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.6	5.0			5.0		5.0	5.0	5.0			
Lane Util. Factor	1.00	0.95			0.91		0.95	0.95	1.00			
Frpb, ped/bikes	1.00	1.00			0.99		1.00	1.00	0.99			
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00			
Frt	1.00	1.00			0.96		1.00	1.00	0.85			
Flt Protected	0.95	1.00			1.00		0.95	0.95	1.00			
Satd. Flow (prot)	1735	3471			4692		1649	1655	1533			
Flt Permitted	0.44	1.00			1.00		0.95	0.95	1.00			
Satd. Flow (perm)	811	3471			4692		1649	1655	1533			
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	416	389	0	0	351	147	422	5	185	0	0	0
RTOR Reduction (vph)	0	0	0	0	87	0	0	0	0	0	0	0
Lane Group Flow (vph)	416	389	0	0	411	0	215	212	185	0	0	0
Confl. Peds. (#/hr)	1					1			1	1		
Heavy Vehicles (%)	4%	4%	4%	5%	5%	5%	4%	4%	4%	0%	0%	0%
Turn Type	pm+pt	NA			NA		Perm	NA	Perm			
Protected Phases	5	2			6			8				
Permitted Phases	2						8		8			
Actuated Green, G (s)	45.5	30.7			23.8		21.8	21.8	21.8			
Effective Green, g (s)	45.5	30.7			23.8		21.8	21.8	21.8			
Actuated g/C Ratio	0.59	0.40			0.31		0.28	0.28	0.28			
Clearance Time (s)	4.6	5.0			5.0		5.0	5.0	5.0			
Vehicle Extension (s)	3.5	4.0			4.0		5.0	5.0	5.0			
Lane Grp Cap (vph)	680	1385			1452		467	469	434			
v/s Ratio Prot	c0.13	0.11			0.09							
v/s Ratio Perm	c0.23						c0.13	0.13	0.12			
v/c Ratio	0.61	0.28			0.28		0.46	0.45	0.43			
Uniform Delay, d1	12.9	15.6			20.1		22.7	22.6	22.5			
Progression Factor	0.65	0.42			1.00		1.00	1.00	1.00			
Incremental Delay, d2	1.6	0.1			0.1		1.5	1.4	1.4			
Delay (s)	10.0	6.7			20.2		24.2	24.1	23.9			
Level of Service	A	A			C		C	C	C			
Approach Delay (s)		8.4			20.2			24.1			0.0	
Approach LOS		A			C			C			A	

Intersection Summary			
HCM 2000 Control Delay	16.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	76.9	Sum of lost time (s)	14.6
Intersection Capacity Utilization	54.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	3.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	5	0	5	55	0	46	5	185	60	41	200	10
Conflicting Peds, #/hr	2	0	3	3	0	2	3	0	3	2	0	2
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	86	86	86	86	86	86	86	86	86	86	86	86
Heavy Vehicles, %	0	0	0	14	14	14	7	7	7	4	4	4
Mvmt Flow	6	0	6	64	0	53	6	215	70	48	233	12

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	628	637	244	605	608	255	247	0	0	288	0	0
Stage 1	337	337	-	265	265	-	-	-	-	-	-	-
Stage 2	291	300	-	340	343	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.24	6.64	6.34	4.17	-	-	4.14	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.24	5.64	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.24	5.64	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.626	4.126	3.426	2.263	-	-	2.236	-	-
Pot Cap-1 Maneuver	398	398	800	393	395	755	1290	-	-	1263	-	-
Stage 1	681	645	-	715	668	-	-	-	-	-	-	-
Stage 2	721	669	-	650	617	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	354	376	796	373	373	752	1287	-	-	1261	-	-
Mov Cap-2 Maneuver	354	376	-	373	373	-	-	-	-	-	-	-
Stage 1	675	615	-	709	662	-	-	-	-	-	-	-
Stage 2	665	663	-	615	588	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	12.5	14.8	0.2	1.3
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1287	-	-	490	484	1261	-	-
HCM Lane V/C Ratio	0.005	-	-	0.024	0.243	0.038	-	-
HCM Control Delay (s)	7.8	0	-	12.5	14.8	8	0	-
HCM Lane LOS	A	A	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.9	0.1	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	30	770	15	15	715	55	10	65	25	70	70	40
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1827	1900	1900	1827	1900	1900	1792	1900	1900	1827	1900
Adj Flow Rate, veh/h	31	786	15	15	730	56	10	66	26	71	71	41
Adj No. of Lanes	0	2	0	0	2	0	0	2	0	0	2	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	4	4	4	4	4	4	6	6	6	4	4	4
Cap, veh/h	101	2328	44	64	2272	172	71	287	104	175	157	96
Arrive On Green	0.72	0.72	0.72	0.72	0.72	0.72	0.13	0.13	0.13	0.13	0.13	0.13
Sat Flow, veh/h	73	3221	61	24	3143	238	138	2260	818	769	1233	754
Grp Volume(v), veh/h	423	0	409	420	0	381	55	0	47	100	0	83
Grp Sat Flow(s),veh/h/ln	1702	0	1652	1785	0	1620	1729	0	1487	1227	0	1529
Q Serve(g_s), s	0.0	0.0	7.3	0.0	0.0	6.8	0.0	0.0	2.3	4.4	0.0	4.0
Cycle Q Clear(g_c), s	6.7	0.0	7.3	6.6	0.0	6.8	2.2	0.0	2.3	6.7	0.0	4.0
Prop In Lane	0.07		0.04	0.04		0.15	0.18		0.55	0.71		0.49
Lane Grp Cap(c), veh/h	1279	0	1194	1337	0	1171	273	0	189	233	0	194
V/C Ratio(X)	0.33	0.00	0.34	0.31	0.00	0.33	0.20	0.00	0.25	0.43	0.00	0.43
Avail Cap(c_a), veh/h	1279	0	1194	1337	0	1171	600	0	483	509	0	497
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.94	0.00	0.94	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	4.0	0.0	4.1	4.0	0.0	4.0	31.4	0.0	31.5	33.7	0.0	32.2
Incr Delay (d2), s/veh	0.7	0.0	0.8	0.6	0.0	0.7	0.4	0.0	0.7	1.2	0.0	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	3.5	0.0	3.6	3.5	0.0	3.2	1.1	0.0	1.0	2.2	0.0	1.8
LnGrp Delay(d),s/veh	4.7	0.0	4.9	4.6	0.0	4.7	31.8	0.0	32.2	35.0	0.0	33.7
LnGrp LOS	A		A	A		A	C		C	C		C
Approach Vol, veh/h		832			801			102			183	
Approach Delay, s/veh		4.8			4.6			32.0			34.4	
Approach LOS		A			A			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		63.8		16.2		63.8		16.2
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0
Max Green Setting (Gmax), s		42.0		26.0		42.0		26.0
Max Q Clear Time (g_c+I1), s		9.3		8.7		8.8		4.3
Green Ext Time (p_c), s		14.1		1.5		14.2		1.6

Intersection Summary	
HCM 2010 Ctrl Delay	9.0
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	660	340	335	615	0	0	0	0	310	0	285
Number	5	2	12	1	6	16				3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1845	1845	1827	1827	0				1900	1810	1810
Adj Flow Rate, veh/h	0	702	0	356	654	0				330	0	303
Adj No. of Lanes	0	2	1	1	2	0				0	1	1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94				0.94	0.94	0.94
Percent Heavy Veh, %	0	3	3	4	4	0				5	5	5
Cap, veh/h	0	1069	478	674	2299	0				394	0	352
Arrive On Green	0.00	0.31	0.00	0.61	1.00	0.00				0.23	0.00	0.23
Sat Flow, veh/h	0	3597	1568	1740	3563	0				1723	0	1538
Grp Volume(v), veh/h	0	702	0	356	654	0				330	0	303
Grp Sat Flow(s),veh/h/ln	0	1752	1568	1740	1736	0				1723	0	1538
Q Serve(g_s), s	0.0	19.1	0.0	0.0	0.0	0.0				20.1	0.0	20.8
Cycle Q Clear(g_c), s	0.0	19.1	0.0	0.0	0.0	0.0				20.1	0.0	20.8
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1069	478	674	2299	0				394	0	352
V/C Ratio(X)	0.00	0.66	0.00	0.53	0.28	0.00				0.84	0.00	0.86
Avail Cap(c_a), veh/h	0	1069	478	674	2299	0				517	0	461
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.93	0.00	0.70	0.70	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	33.2	0.0	13.7	0.0	0.0				40.5	0.0	40.7
Incr Delay (d2), s/veh	0.0	1.6	0.0	0.4	0.2	0.0				9.0	0.0	12.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	0.0	9.5	0.0	4.3	0.1	0.0				10.5	0.0	10.0
LnGrp Delay(d),s/veh	0.0	34.8	0.0	14.1	0.2	0.0				49.5	0.0	53.0
LnGrp LOS		C		B	A					D		D
Approach Vol, veh/h		702			1010						633	
Approach Delay, s/veh		34.8			5.1						51.2	
Approach LOS		C			A						D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	39.3	39.6				78.8		31.2
Change Period (Y+Rc), s	6.0	* 6				6.0		6.0
Max Green Setting (Gmax), s	27.4	* 32				65.0		33.0
Max Q Clear Time (g_c+I1), s	2.0	21.1				2.0		22.8
Green Ext Time (p_c), s	7.3	4.6				8.5		2.3

Intersection Summary	
HCM 2010 Ctrl Delay	26.4
HCM 2010 LOS	C

Notes

* HCM 2010 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												
Volume (veh/h)	290	565	90	10	630	235	265	280	320	15	60	50
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1827	1900	1827	1900	1827	1827	1827	1810	1810	1810
Adj Flow Rate, veh/h	319	621	99	11	692	258	200	436	352	16	66	55
Adj No. of Lanes	1	2	1	0	2	0	1	2	1	1	1	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
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	5	5	5
Cap, veh/h	380	2033	903	39	1005	371	380	797	333	92	97	81
Arrive On Green	0.12	0.59	0.59	0.42	0.42	0.42	0.22	0.22	0.22	0.05	0.05	0.05
Sat Flow, veh/h	1740	3471	1542	14	2403	888	1740	3654	1528	1723	1810	1521
Grp Volume(v), veh/h	319	621	99	525	0	436	200	436	352	16	66	55
Grp Sat Flow(s),veh/h/ln	1740	1736	1542	1805	0	1500	1740	1827	1528	1723	1810	1521
Q Serve(g_s), s	10.9	9.9	3.1	0.0	0.0	26.2	11.2	11.7	24.0	1.0	3.9	3.9
Cycle Q Clear(g_c), s	10.9	9.9	3.1	25.8	0.0	26.2	11.2	11.7	24.0	1.0	3.9	3.9
Prop In Lane	1.00		1.00	0.02		0.59	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	380	2033	903	788	0	627	380	797	333	92	97	81
V/C Ratio(X)	0.84	0.31	0.11	0.67	0.00	0.70	0.53	0.55	1.06	0.17	0.68	0.68
Avail Cap(c_a), veh/h	443	2033	903	788	0	627	380	797	333	103	109	91
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)	0.63	0.63	0.63	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.4	11.5	10.1	26.1	0.0	26.3	38.0	38.2	43.0	49.7	51.1	51.1
Incr Delay (d2), s/veh	7.9	0.2	0.2	4.4	0.0	6.3	1.4	0.8	64.6	0.9	14.0	15.8
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(-26165%),veh/ln	6.0	4.8	1.4	14.0	0.0	11.9	5.5	6.0	16.1	0.5	2.4	2.0
LnGrp Delay(d),s/veh	28.4	11.7	10.2	30.6	0.0	32.5	39.3	39.0	107.6	50.6	65.2	66.9
LnGrp LOS	C	B	B	C		C	D	D	F	D	E	E
Approach Vol, veh/h		1039			961			988			137	
Approach Delay, s/veh		16.7			31.5			63.5			64.2	
Approach LOS		B			C			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		8
Phs Duration (G+Y+Rc), s		69.9		11.0	18.4	51.5		29.1
Change Period (Y+Rc), s		5.5		5.1	5.1	5.5		5.1
Max Green Setting (Gmax), s		63.7		6.6	17.3	41.3		24.0
Max Q Clear Time (g_c+I1), s		11.9		5.9	12.9	28.2		26.0
Green Ext Time (p_c), s		21.5		0.0	0.4	9.4		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	38.1
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	35	685	41	135	710	280	226	196	35	40	171	135
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1881	1881	1900	1863	1863	1863	1881	1881	1900
Adj Flow Rate, veh/h	36	714	43	141	740	292	235	204	36	42	178	141
Adj No. of Lanes	1	2	0	1	2	0	1	2	1	1	2	0
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, %	0	0	0	1	1	1	2	2	2	1	1	1
Cap, veh/h	65	1017	61	177	894	353	318	634	282	269	292	218
Arrive On Green	0.04	0.29	0.29	0.10	0.36	0.36	0.18	0.18	0.18	0.15	0.15	0.15
Sat Flow, veh/h	1810	3459	208	1792	2503	988	1774	3539	1573	1792	1948	1451
Grp Volume(v), veh/h	36	372	385	141	528	504	235	204	36	42	162	157
Grp Sat Flow(s),veh/h/ln	1810	1805	1862	1792	1787	1704	1774	1770	1573	1792	1787	1611
Q Serve(g_s), s	1.4	13.2	13.2	5.5	19.4	19.4	9.0	3.6	1.4	1.5	6.1	6.6
Cycle Q Clear(g_c), s	1.4	13.2	13.2	5.5	19.4	19.4	9.0	3.6	1.4	1.5	6.1	6.6
Prop In Lane	1.00		0.11	1.00		0.58	1.00		1.00	1.00		0.90
Lane Grp Cap(c), veh/h	65	531	547	177	638	608	318	634	282	269	268	242
V/C Ratio(X)	0.56	0.70	0.70	0.80	0.83	0.83	0.74	0.32	0.13	0.16	0.61	0.65
Avail Cap(c_a), veh/h	126	577	595	199	646	616	518	1033	459	573	571	515
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.1	22.6	22.6	31.7	21.1	21.1	27.9	25.7	24.8	26.6	28.6	28.8
Incr Delay (d2), s/veh	7.3	3.5	3.4	18.1	8.7	9.1	3.4	0.3	0.2	0.3	2.2	2.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	0.8	7.0	7.2	3.6	11.1	10.6	4.7	1.8	0.6	0.7	3.2	3.1
LnGrp Delay(d),s/veh	41.5	26.0	26.0	49.8	29.8	30.2	31.3	26.0	25.0	26.9	30.8	31.7
LnGrp LOS	D	C	C	D	C	C	C	C	C	C	C	C
Approach Vol, veh/h		793			1173			475			361	
Approach Delay, s/veh		26.7			32.4			28.6			30.7	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	12.1	26.1		15.8	7.6	30.7		17.9
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0
Max Green Setting (Gmax), s	8.0	23.0		23.0	5.0	26.0		21.0
Max Q Clear Time (g_c+I1), s	7.5	15.2		8.6	3.4	21.4		11.0
Green Ext Time (p_c), s	0.0	5.9		1.7	0.0	3.7		1.5

Intersection Summary	
HCM 2010 Ctrl Delay	29.9
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	689	376	175	786	0	0	0	0	195	0	312
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0	5.0	4.6	5.0						5.0	5.0
Lane Util. Factor		0.91	0.91	1.00	0.95						1.00	1.00
Frpb, ped/bikes		1.00	0.99	1.00	1.00						1.00	1.00
Flpb, ped/bikes		1.00	1.00	1.00	1.00						1.00	1.00
Frt		0.99	0.85	1.00	1.00						1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00						0.95	1.00
Satd. Flow (prot)		3381	1435	1787	3574						1787	1599
Flt Permitted		1.00	1.00	0.22	1.00						0.95	1.00
Satd. Flow (perm)		3381	1435	413	3574						1787	1599
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	749	409	190	854	0	0	0	0	212	0	339
RTOR Reduction (vph)	0	6	222	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	804	126	190	854	0	0	0	0	0	212	339
Confl. Peds. (#/hr)	5		2	2		5						
Confl. Bikes (#/hr)			1									
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	0%	0%	0%	1%	1%	1%
Turn Type		NA	Perm	pm+pt	NA					Perm	NA	Perm
Protected Phases		2		1	6						4	
Permitted Phases			2	6						4		4
Actuated Green, G (s)		29.4	29.4	31.4	31.4						24.0	24.0
Effective Green, g (s)		29.4	29.4	31.4	31.4						24.0	24.0
Actuated g/C Ratio		0.36	0.36	0.39	0.39						0.30	0.30
Clearance Time (s)		5.0	5.0	4.6	5.0						5.0	5.0
Vehicle Extension (s)		4.0	4.0	4.5	4.0						5.0	5.0
Lane Grp Cap (vph)		1224	519	383	1382						528	472
v/s Ratio Prot		c0.24		0.08	c0.24							
v/s Ratio Perm			0.09	0.11							0.12	c0.21
v/c Ratio		0.66	0.24	0.50	0.62						0.40	0.72
Uniform Delay, d1		21.7	18.1	18.5	20.1						22.9	25.6
Progression Factor		1.00	1.00	0.72	0.75						1.00	1.00
Incremental Delay, d2		1.4	0.3	1.6	0.9						1.0	6.4
Delay (s)		23.1	18.4	14.9	15.9						23.9	32.0
Level of Service		C	B	B	B						C	C
Approach Delay (s)		21.7			15.7			0.0			28.9	
Approach LOS		C			B			A			C	

Intersection Summary			
HCM 2000 Control Delay	20.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	81.2	Sum of lost time (s)	14.6
Intersection Capacity Utilization	77.3%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	452	491	0	0	471	245	521	10	230	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.6	5.0			5.0		5.0	5.0	5.0			
Lane Util. Factor	1.00	0.95			0.91		0.95	0.95	1.00			
Frpb, ped/bikes	1.00	1.00			0.99		1.00	1.00	0.99			
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00	1.00			
Frt	1.00	1.00			0.95		1.00	1.00	0.85			
Flt Protected	0.95	1.00			1.00		0.95	0.95	1.00			
Satd. Flow (prot)	1804	3610			4828		1692	1700	1577			
Flt Permitted	0.32	1.00			1.00		0.95	0.95	1.00			
Satd. Flow (perm)	614	3610			4828		1692	1700	1577			
Peak-hour factor, PHF	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Adj. Flow (vph)	532	578	0	0	554	288	613	12	271	0	0	0
RTOR Reduction (vph)	0	0	0	0	104	0	0	0	0	0	0	0
Lane Group Flow (vph)	532	578	0	0	738	0	313	312	271	0	0	0
Confl. Peds. (#/hr)	4		5	5		4	4		2	2		4
Confl. Bikes (#/hr)						1						
Heavy Vehicles (%)	0%	0%	0%	1%	1%	1%	1%	1%	1%	0%	0%	0%
Turn Type	pm+pt	NA			NA		Perm	NA	Perm			
Protected Phases	5	2			6			8				
Permitted Phases	2						8		8			
Actuated Green, G (s)	29.8	29.4			31.4		24.0	24.0	24.0			
Effective Green, g (s)	29.8	29.4			31.4		24.0	24.0	24.0			
Actuated g/C Ratio	0.37	0.36			0.39		0.30	0.30	0.30			
Clearance Time (s)	4.6	5.0			5.0		5.0	5.0	5.0			
Vehicle Extension (s)	3.5	4.0			4.0		5.0	5.0	5.0			
Lane Grp Cap (vph)	389	1307			1866		500	502	466			
v/s Ratio Prot	c0.19	0.16			c0.15							
v/s Ratio Perm	c0.31						c0.18	0.18	0.17			
v/c Ratio	1.37	0.44			0.40		0.63	0.62	0.58			
Uniform Delay, d1	25.1	19.7			18.0		24.7	24.7	24.3			
Progression Factor	0.67	0.65			1.00		1.00	1.00	1.00			
Incremental Delay, d2	179.6	0.3			0.2		3.4	3.4	2.9			
Delay (s)	196.3	13.1			18.2		28.2	28.1	27.2			
Level of Service	F	B			B		C	C	C			
Approach Delay (s)		100.9			18.2			27.8			0.0	
Approach LOS		F			B			C			A	

Intersection Summary			
HCM 2000 Control Delay	53.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	81.2	Sum of lost time (s)	14.6
Intersection Capacity Utilization	77.3%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Int Delay, s/veh	2.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	5	0	10	50	5	42	5	265	65	32	265	10
Conflicting Peds, #/hr	5	0	5	1	0	1	5	0	1	1	0	5
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	0	0	0	4	4	4	2	2	2	2	2	2
Mvmt Flow	6	0	11	56	6	47	6	298	73	36	298	11

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	753	763	313	733	733	340	314	0	0	372	0	0
Stage 1	380	380	-	347	347	-	-	-	-	-	-	-
Stage 2	373	383	-	386	386	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.14	6.54	6.24	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.14	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.14	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.536	4.036	3.336	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	329	337	732	334	345	698	1246	-	-	1186	-	-
Stage 1	646	617	-	665	631	-	-	-	-	-	-	-
Stage 2	652	616	-	633	607	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	290	321	726	316	329	695	1241	-	-	1181	-	-
Mov Cap-2 Maneuver	290	321	-	316	329	-	-	-	-	-	-	-
Stage 1	639	592	-	660	627	-	-	-	-	-	-	-
Stage 2	596	612	-	598	582	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	12.7	16.7	0.1	0.8
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1241	-	-	484	415	1181	-	-
HCM Lane V/C Ratio	0.005	-	-	0.035	0.263	0.03	-	-
HCM Control Delay (s)	7.9	0	-	12.7	16.7	8.1	0	-
HCM Lane LOS	A	A	-	B	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	1	0.1	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	27	805	10	25	910	66	10	95	30	81	90	42
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		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
Adj Sat Flow, veh/h/ln	1900	1881	1900	1900	1881	1900	1900	1845	1900	1900	1863	1900
Adj Flow Rate, veh/h	28	839	10	26	948	69	10	99	31	84	94	44
Adj No. of Lanes	0	2	0	0	2	0	0	2	0	0	2	0
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, %	1	1	1	1	1	1	3	3	3	2	2	2
Cap, veh/h	87	2322	27	75	2219	159	66	397	116	197	209	104
Arrive On Green	0.69	0.69	0.69	0.69	0.69	0.69	0.16	0.16	0.16	0.16	0.16	0.16
Sat Flow, veh/h	57	3355	39	40	3206	230	97	2512	733	757	1323	656
Grp Volume(v), veh/h	444	0	433	542	0	501	75	0	65	117	0	105
Grp Sat Flow(s),veh/h/ln	1746	0	1705	1806	0	1671	1796	0	1546	1171	0	1566
Q Serve(g_s), s	0.0	0.0	8.4	0.0	0.0	10.5	0.0	0.0	3.0	5.4	0.0	4.8
Cycle Q Clear(g_c), s	7.6	0.0	8.4	10.0	0.0	10.5	2.8	0.0	3.0	8.3	0.0	4.8
Prop In Lane	0.06		0.02	0.05		0.14	0.13		0.47	0.72		0.42
Lane Grp Cap(c), veh/h	1256	0	1180	1297	0	1156	335	0	244	262	0	247
V/C Ratio(X)	0.35	0.00	0.37	0.42	0.00	0.43	0.22	0.00	0.27	0.45	0.00	0.42
Avail Cap(c_a), veh/h	1256	0	1180	1297	0	1156	602	0	483	475	0	489
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.84	0.00	0.84	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	5.0	0.0	5.1	5.3	0.0	5.4	29.6	0.0	29.6	32.5	0.0	30.4
Incr Delay (d2), s/veh	0.8	0.0	0.9	0.8	0.0	1.0	0.3	0.0	0.6	1.2	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(-26165%),veh/ln	4.2	0.0	4.1	5.4	0.0	5.0	1.5	0.0	1.3	2.5	0.0	2.2
LnGrp Delay(d),s/veh	5.8	0.0	6.0	6.2	0.0	6.4	29.9	0.0	30.2	33.6	0.0	31.5
LnGrp LOS	A		A	A		A	C		C	C		C
Approach Vol, veh/h		877			1043			140			222	
Approach Delay, s/veh		5.9			6.3			30.0			32.7	
Approach LOS		A			A			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		61.4		18.6		61.4		18.6
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0
Max Green Setting (Gmax), s		43.0		25.0		43.0		25.0
Max Q Clear Time (g_c+I1), s		10.4		10.3		12.5		5.0
Green Ext Time (p_c), s		2.5		1.8		2.5		2.1

Intersection Summary	
HCM 2010 Ctrl Delay	10.1
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	747	274	380	746	0	0	0	0	460	0	395
Number	5	2	12	1	6	16				3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1881	1881	1881	1881	0				1900	1881	1881
Adj Flow Rate, veh/h	0	770	0	392	769	0				474	0	407
Adj No. of Lanes	0	2	1	1	2	0				0	1	1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97				0.97	0.97	0.97
Percent Heavy Veh, %	0	1	1	1	1	0				1	1	1
Cap, veh/h	0	1043	467	444	1887	0				483	0	431
Arrive On Green	0.00	0.29	0.00	0.14	0.53	0.00				0.27	0.00	0.27
Sat Flow, veh/h	0	3668	1599	1792	3668	0				1792	0	1599
Grp Volume(v), veh/h	0	770	0	392	769	0				474	0	407
Grp Sat Flow(s),veh/h/ln	0	1787	1599	1792	1787	0				1792	0	1599
Q Serve(g_s), s	0.0	11.5	0.0	8.4	7.7	0.0				15.6	0.0	14.8
Cycle Q Clear(g_c), s	0.0	11.5	0.0	8.4	7.7	0.0				15.6	0.0	14.8
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1043	467	444	1887	0				483	0	431
V/C Ratio(X)	0.00	0.74	0.00	0.88	0.41	0.00				0.98	0.00	0.94
Avail Cap(c_a), veh/h	0	1085	485	444	1929	0				483	0	431
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	19.0	0.0	13.9	8.4	0.0				21.5	0.0	21.2
Incr Delay (d2), s/veh	0.0	2.8	0.0	18.4	0.2	0.0				35.8	0.0	29.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	0.0	6.1	0.0	4.5	3.8	0.0				12.4	0.0	10.0
LnGrp Delay(d),s/veh	0.0	21.8	0.0	32.3	8.6	0.0				57.3	0.0	50.6
LnGrp LOS		C		C	A					E		D
Approach Vol, veh/h		770			1161						881	
Approach Delay, s/veh		21.8			16.6						54.2	
Approach LOS		C			B						D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	14.0	23.3				37.3		22.0
Change Period (Y+Rc), s	5.6	6.0				6.0		6.0
Max Green Setting (Gmax), s	8.4	18.0				32.0		16.0
Max Q Clear Time (g_c+I1), s	10.4	13.5				9.7		17.6
Green Ext Time (p_c), s	0.0	3.8				14.8		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	29.8
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	385	712	120	5	727	345	289	475	330	15	45	75
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1881	1900	1881	1900	1881	1881	1881	1863	1863	1863
Adj Flow Rate, veh/h	401	742	125	5	757	359	265	545	344	16	47	78
Adj No. of Lanes	1	2	1	0	2	0	1	2	1	1	1	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
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	2	2	2
Cap, veh/h	426	2223	991	30	942	444	378	794	335	81	85	70
Arrive On Green	0.17	0.62	0.62	0.41	0.41	0.41	0.21	0.21	0.21	0.05	0.05	0.05
Sat Flow, veh/h	1792	3574	1593	4	2301	1084	1792	3762	1590	1774	1863	1542
Grp Volume(v), veh/h	401	742	125	619	0	502	265	545	344	16	47	78
Grp Sat Flow(s),veh/h/ln	1792	1787	1593	1874	0	1516	1792	1881	1590	1774	1863	1542
Q Serve(g_s), s	20.1	12.8	4.2	0.0	0.0	37.8	17.7	17.3	27.3	1.1	3.2	5.9
Cycle Q Clear(g_c), s	20.1	12.8	4.2	37.5	0.0	37.8	17.7	17.3	27.3	1.1	3.2	5.9
Prop In Lane	1.00		1.00	0.01		0.72	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	426	2223	991	795	0	620	378	794	335	81	85	70
V/C Ratio(X)	0.94	0.33	0.13	0.78	0.00	0.81	0.70	0.69	1.03	0.20	0.55	1.11
Avail Cap(c_a), veh/h	449	2378	1060	851	0	667	378	794	335	81	85	70
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.6	11.7	10.0	33.6	0.0	33.8	47.3	47.1	51.0	59.5	60.5	61.7
Incr Delay (d2), s/veh	27.8	0.1	0.1	4.6	0.0	7.2	5.7	2.5	55.8	1.2	7.6	140.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4
%ile BackOfQ(-26165%),veh/ln	17.3	6.3	1.8	20.4	0.0	17.0	9.4	9.3	17.1	0.6	1.8	5.3
LnGrp Delay(d),s/veh	61.4	11.8	10.1	38.2	0.0	41.0	53.0	49.6	106.9	60.6	68.0	202.6
LnGrp LOS	E	B	B	D		D	D	D	F	E	E	F
Approach Vol, veh/h		1268			1121			1154			141	
Approach Delay, s/veh		27.3			39.4			67.4			141.6	
Approach LOS		C			D			E			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		8
Phs Duration (G+Y+Rc), s		86.0		11.0	27.5	58.5		32.4
Change Period (Y+Rc), s		5.5		5.1	5.1	5.5		5.1
Max Green Setting (Gmax), s		86.1		5.9	24.1	56.9		27.3
Max Q Clear Time (g_c+I1), s		14.8		7.9	22.1	39.8		29.3
Green Ext Time (p_c), s		32.0		0.0	0.3	13.1		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	47.9
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

ATTACHMENT I

Attachment I

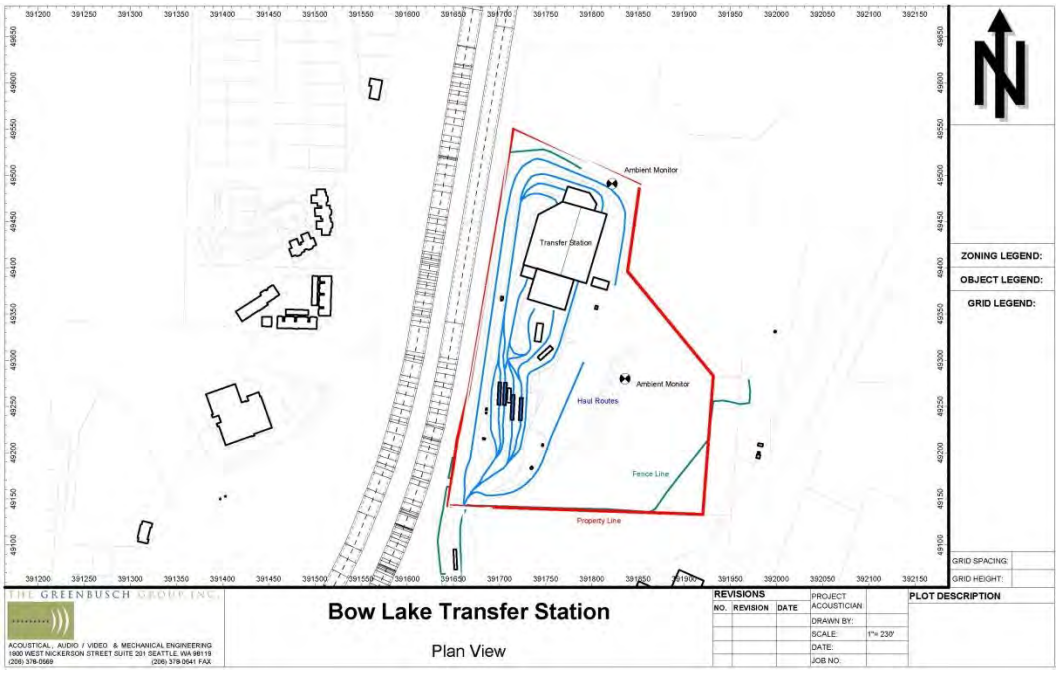

Figure A-4
Bow Lake Noise Model

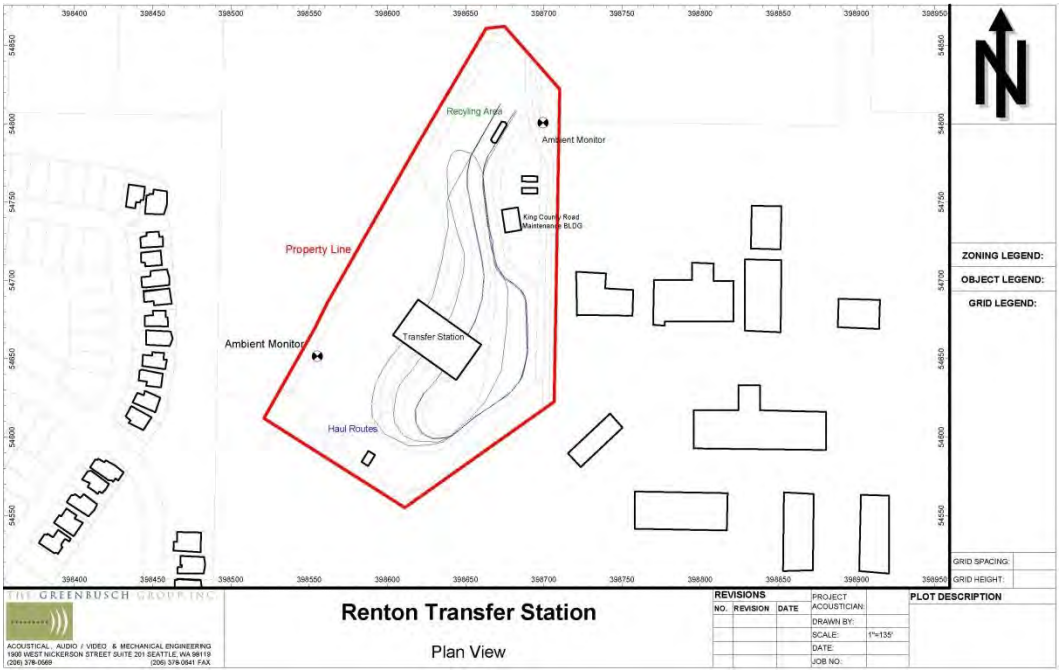

Figure A-5
Renton Noise Model

Figure A-6
Shoreline Noise Model