Appendix A Gambell Street Redevelopment Plan: Preferred Alternative and Analysis

Gambell Street Redevelopment Plan: Preferred Alternative and Analysis

Gambell Street Redevelopment and Implementation Plan

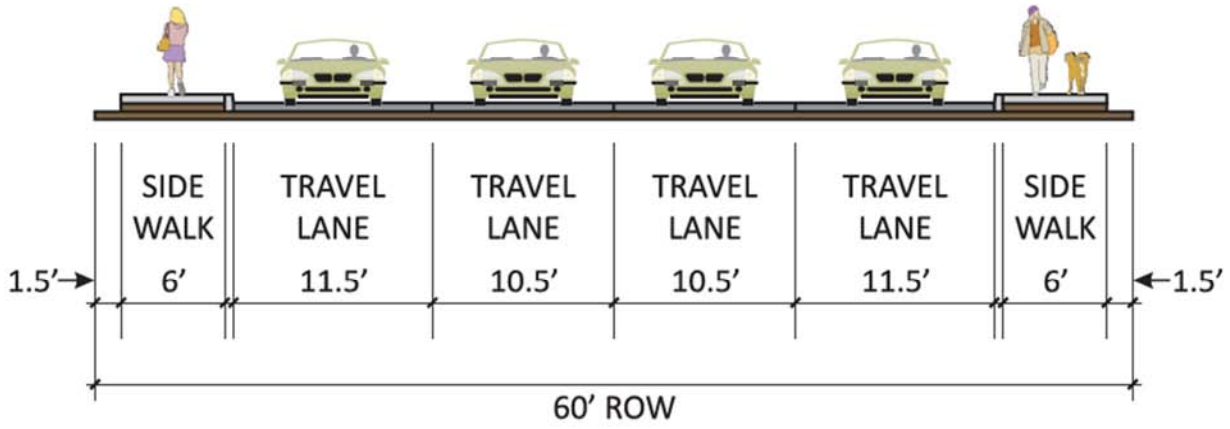
Date:	June 10, 2013	Project #:13489
To:	Paul Fuhs, Fairview Business Association	
From:	Kelly Laustsen; Andy Daleiden, PE; Bob Kniefel, PE; Gary Katsion, PE; and Marc Butorac, PE, PTOE; (Kittelson & Associates, Inc.) / Jim Potts, PE and Jordan Engel (CH2M Hill)	
cc:	Project Management Team (PMT)	

This memorandum analyzes the impacts of converting Gambell Street from four to three lanes between 3rd and 15th Avenues.

BACKGROUND

Gambell Street has a 60' right-of-way (ROW) that is constrained by businesses and parking lots to both the east and west. The existing cross-section is shown in Exhibit 1.

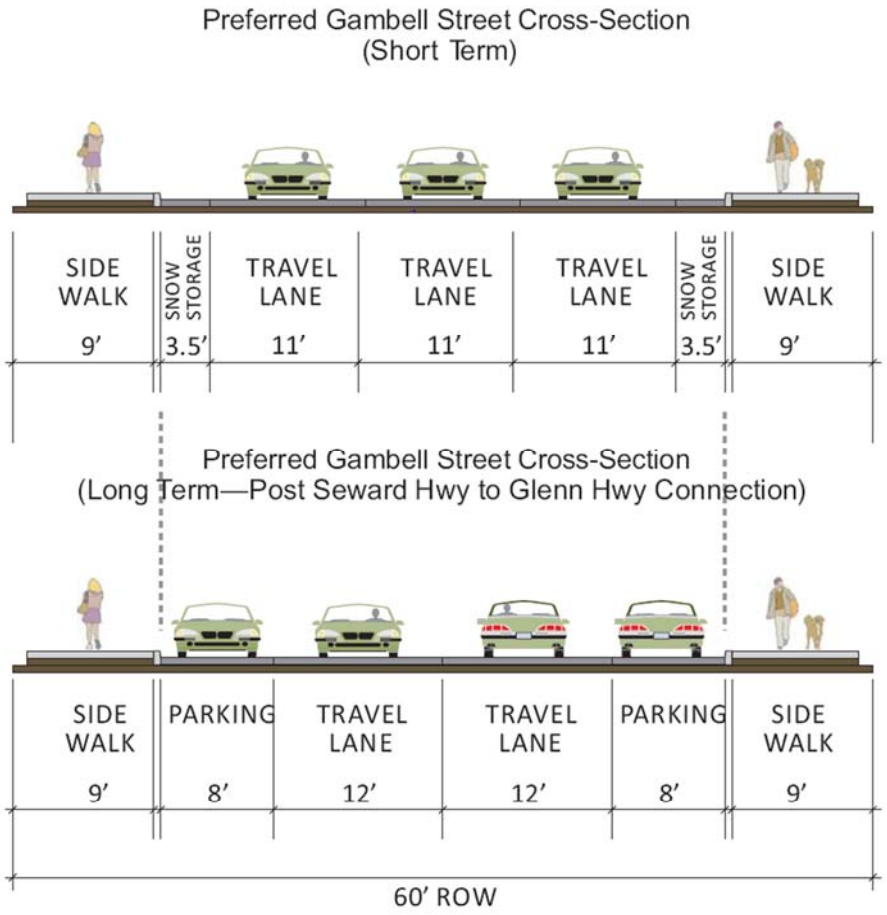
Exhibit 1: Existing Cross-Section



As seen in the exhibit, there is currently no allowance made for snow storage and little separation between pedestrians and vehicles. In order to improve the streetscape of the roadway, the Gambell Street Redevelopment and Implementation Plan has assessed other potential cross-sections. Based on

extensive public input through a three-day project Charette and focused stakeholder meetings, the cross-section shown in Exhibit 2 was preferred for the corridor.

Exhibit 2: Preferred Streetscape Cross-Section Alternative



Advantages of the preferred cross-section include:

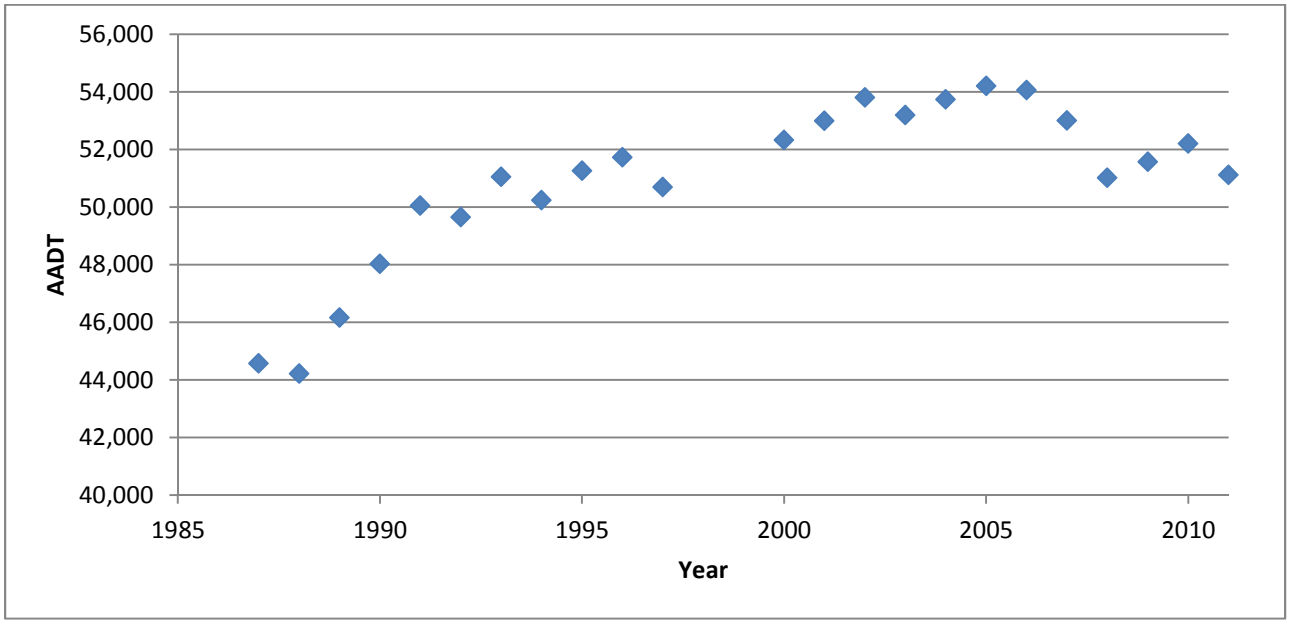
- Provides snow storage in 3.5 foot shoulders and the portion of sidewalks closest to the curb allowing adequate pedestrian connectivity and utilization of all three vehicular travel lanes during winter time conditions versus the 3 out of 4 currently utilized due to the lack of snow storage;
- Maintains long-term flexibility (i.e., conversion to a two-way street with on-street parking as part of the Seward Highway to Glenn Highway Connection project);
- Changes the pedestrian and vehicular environment to better match the needs of the business district, and allows additional aesthetic enhancements to occur along Gambell Street; and
- Provides sufficient space for pedestrians year round, addresses ADA deficiencies, eliminates splash conflicts with outside vehicular lanes, and reduces crossing distances and exposure for pedestrians, bicycles, and vehicles.

In order to ensure that a three-lane cross section also provides for adequate vehicular capacity on the corridor, an analysis was performed to assess the impacts on vehicular operations. The results are discussed in the following sections.

INTERSECTION OPERATIONS

The operations at the signalized and unsignalized study intersections on Gambell Street were assessed assuming a three-lane cross-section (see Appendix A for illustrations of this preferred lane geometry). A variety of data was utilized for the operations analysis, including existing traffic counts at several intersections on the corridor (at 4th, 6th,and 9th), as well as turning movement counts conducted during the PM peak hour on a typical mid-week day in early May 2013. Volumes were projected for 2035 based on an assessment of historical growth on the corridor and the 2035 Metropolitan Transportation Plan (MTP) model projections. Based on historical traffic volumes taken from the permanent traffic recorder located at Ingra Street and Gambell Street near Chester Creek (shown in Exhibit 3), traffic volumes grew about 0.6% annually between 1987 and 2011 . It should be noted that recent system improvements (e.g., C Street and Lake Otis Improvements) have actually resulted in an interim drop in traffic on the corridor. This trend will reverse in the future as those new improvements begin to approach capacity and motorist redistribute back onto the corridor with continue regional and local population and employment growth. The 2035 "no build" MTP model, which assumes no changes to the transportation network, shows a growth rate of approximately 1% per year over the corridor. Therefore, an annual growth rate of 1% was used to develop future traffic volumes.

Exhibit 3: Historical AADT data at Gambell St/Ingra St/15th ***[****Error! Reference source not found.****]***



The existing and future traffic volumes and operations are compared in Figures 1 and 2, respectively. The current cycle length (60 seconds) was not adjusted for existing operations. For the future scenario, the cycle length was extended (to 120 seconds). As seen in the figures, converting Gambell Street from four to three lanes has negligible impacts on operations, except at Gambell Street/15th Avenue. At this intersection, operations degrade to a LOS E during existing conditions and LOS F under future 2035 conditions with the elimination of one of the through lanes without the introduction of the Seward Highway to Glenn Highway Connection. Table 1 shows several scenarios for potential improvements at the Gambell Street/15th Avenue intersection.

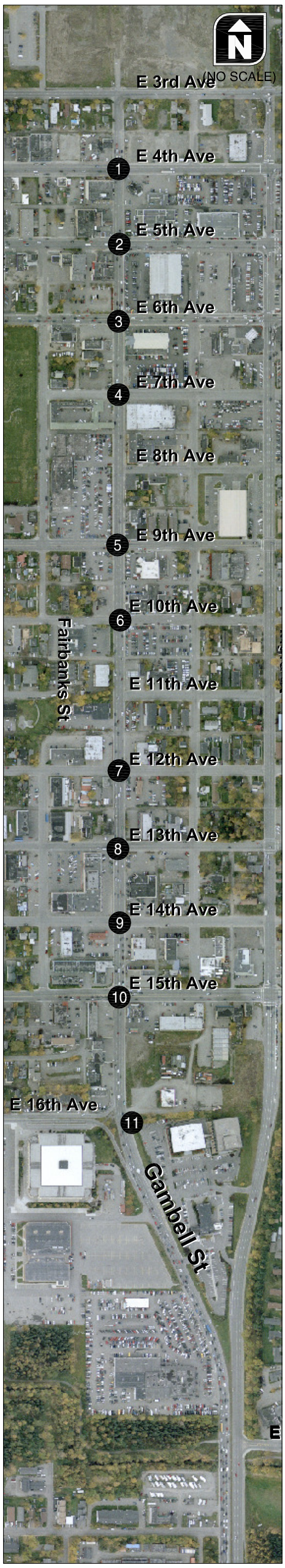
Table 1: Intersection Operations at Gambell Street/15th Avenue under 3-lane configuration

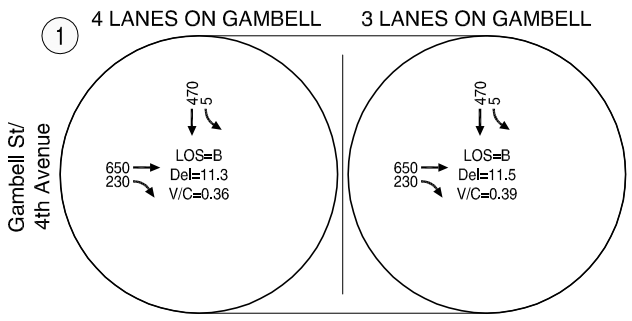
	Existing PM Peak Hour		2035 PM Peak Hour	
	LOS	v/c	LOS	v/c
4-Lane Section (Existing)	C	0.83	D	0.98
3-Lane Section	E	0.97	F	1.10
3-Lane Section with Southbound Left-Turn Lane	C	0.88	D	1.02
3-Lane Section with Southbound Left-Turn Lane and Dual Westbound Lefts	C	0.83	D	0.90

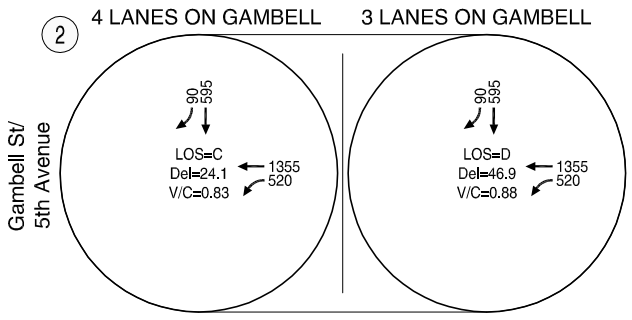
As seen in Table 1, operations at Gambell Street/15th Avenue can be mitigated with the addition of a southbound left-turn lane. Adding a second westbound left-turn lane further improves intersection operations. Therefore, with a three-lane section and the addition of an exclusive southbound left-turn lane at 15th Avenue, all intersections are projected to operate within standards under both existing and future conditions. A concept sketch of the Gambell Street/15th Avenue intersection with an exclusive left-turn lane is provided in Figure 3. Analysis sheets for all scenarios are provided in Appendix B.

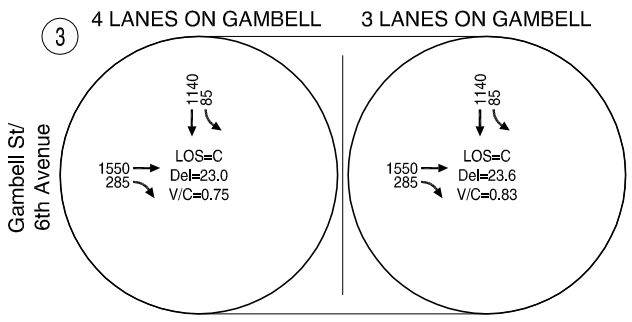
ROADWAY SPEEDS

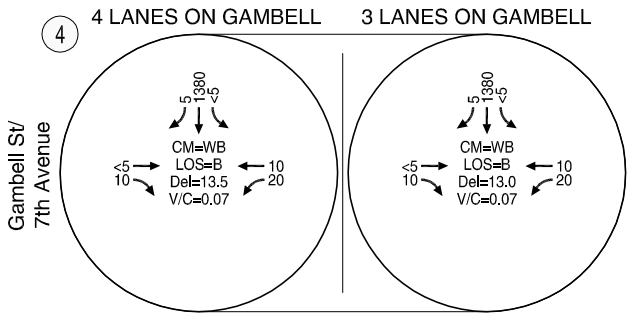
The posted speed limit on Gambell Street is 35 miles per hour. Based on speed data collected on the corridor during May 2013, existing 85th percentile speeds are generally between 30 and 35 miles per hour. The proposed cross-section eliminates a lane which will increase the volume of vehicles using each lane and therefore may slightly slow speeds. However, the cross-section also provides for wider lanes and more clearance space on both sides of the roadway. Therefore, speeds are not anticipated to change significantly with the proposed cross-section.

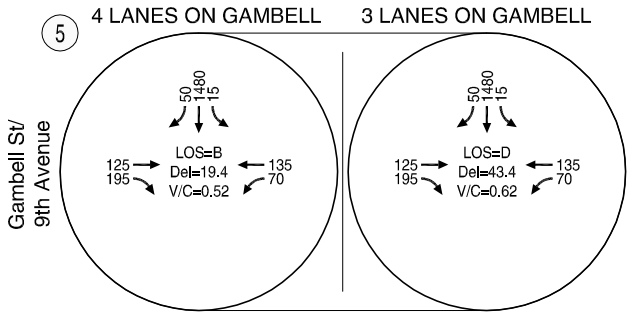


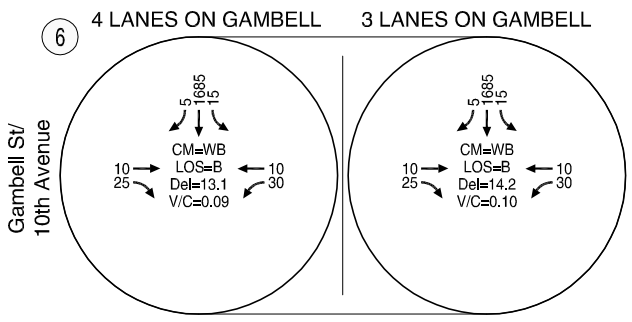


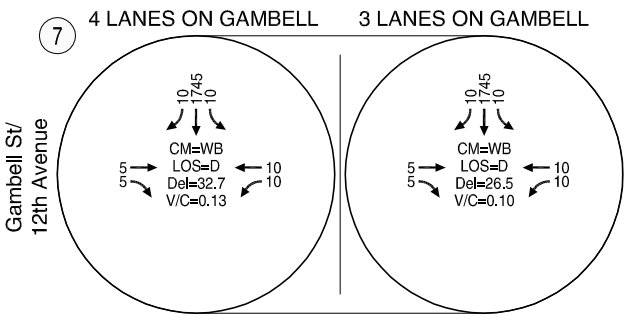


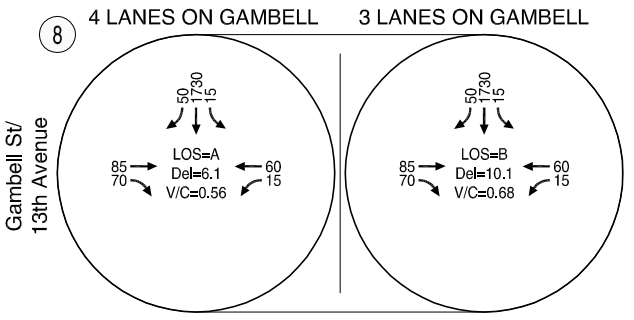


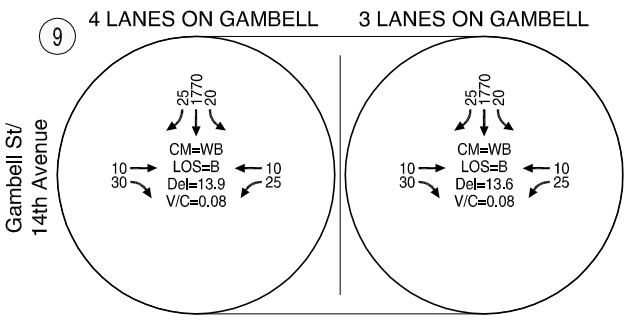


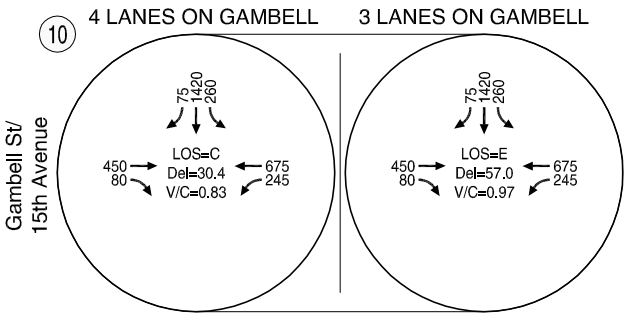


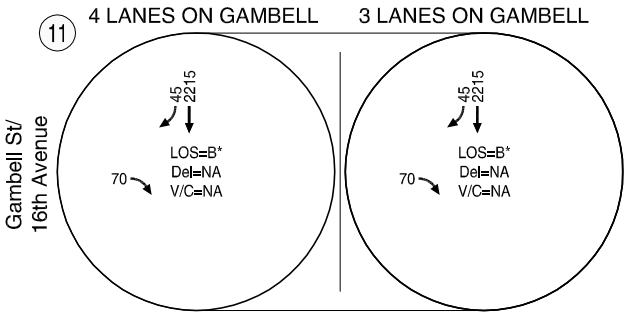












Legend

CM = CRITICAL MOVEMENT (UNSIGNALIZED)
LOS = INTERSECTION LEVEL OF SERVICE (SIGNALIZED)/CRITICAL MOVEMENT LEVEL OF SERVICE (UNSIGNALIZED)
Del = INTERSECTION AVERAGE CONTROL DELAY (SIGNALIZED)/CRITICAL MOVEMENT CONTROL DELAY (UNSIGNALIZED)
V/C = CRITICAL VOLUME-TO-CAPACITY RATIO
* ANALYSIS BASED ON 2010 MERGE METHODOLOGY

Existing Traffic Operations
Weekday PM Peak Hour
4 Lane versus 3 Lane Cross-Section

Source: Municipality of Anchorage and Traffic Counts Collected May 2013

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Figure 1

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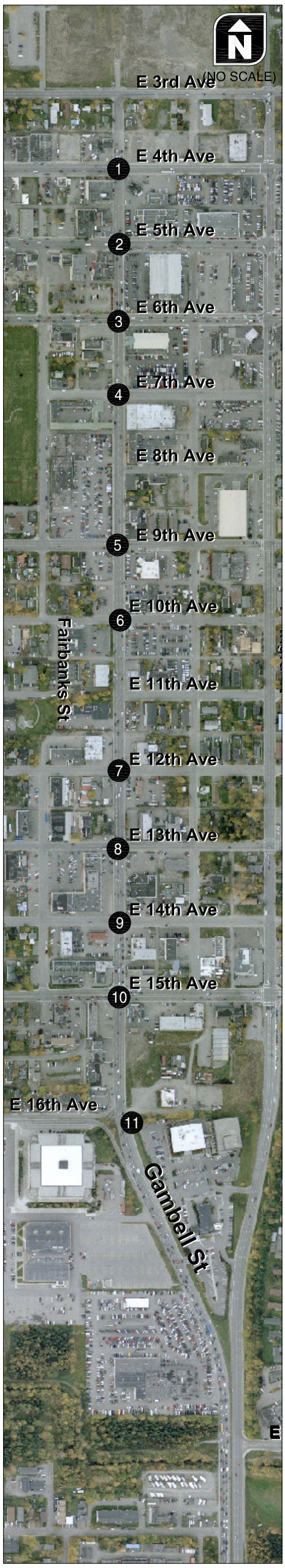

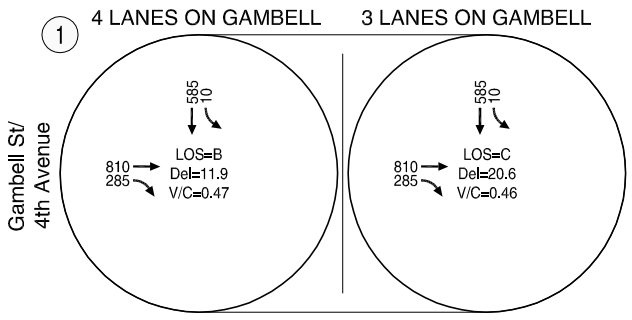

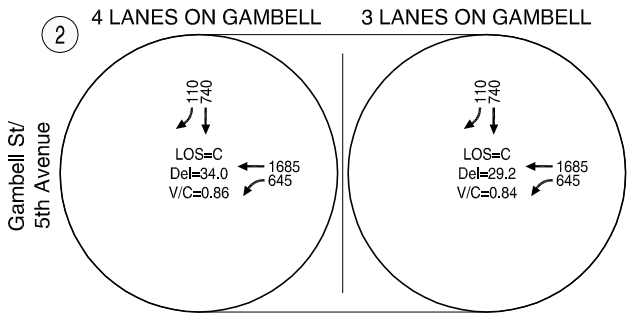

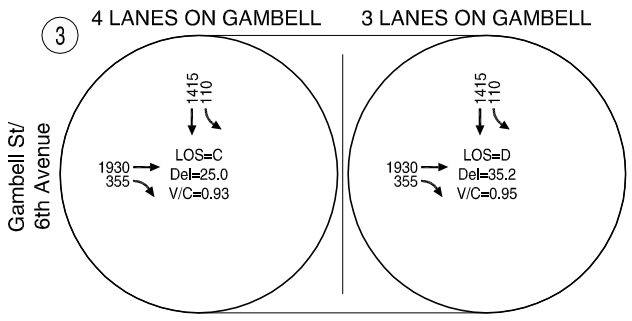

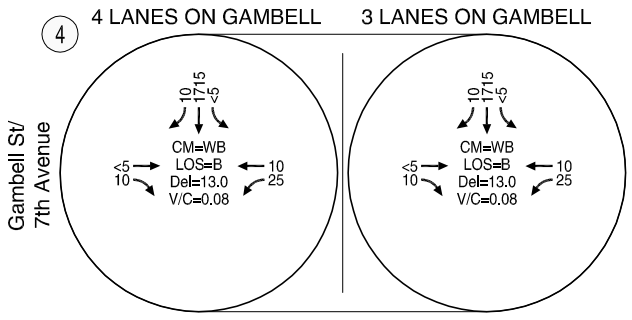

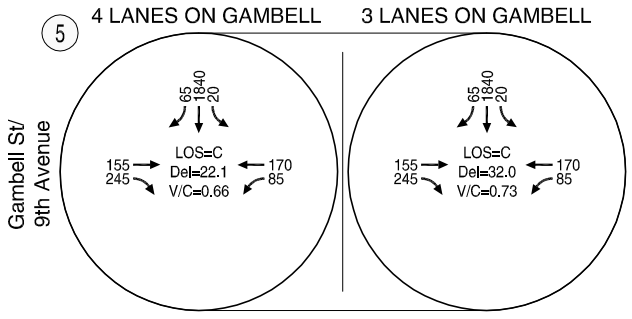

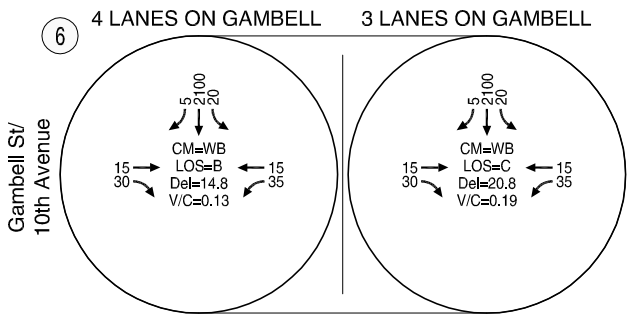

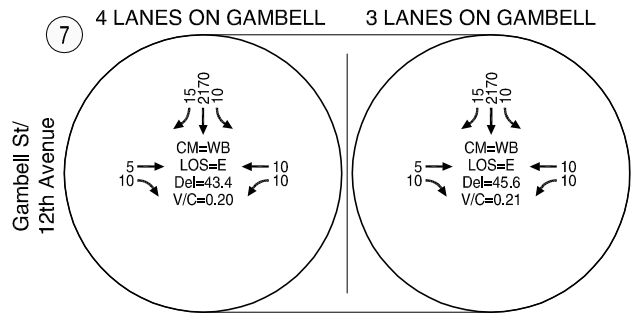

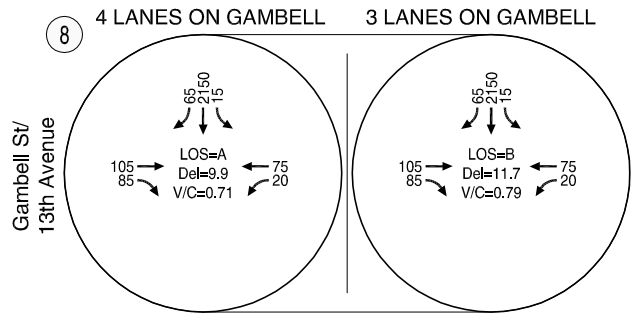

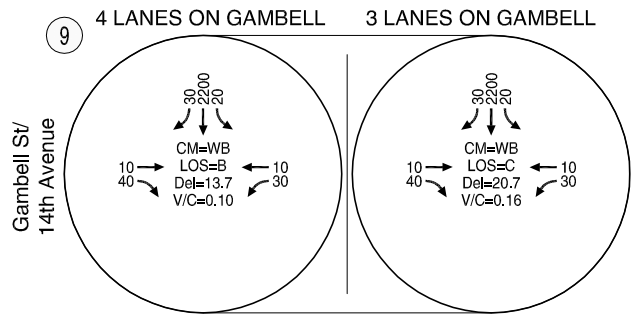

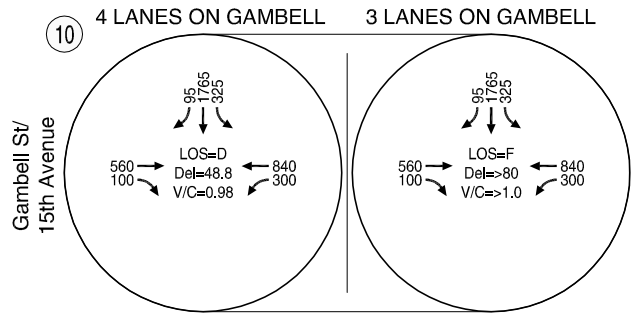

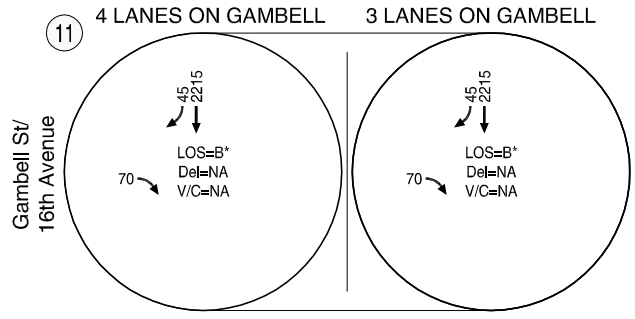

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* ANALYSIS BASED ON 2010 MERGE METHODOLOGY

Year 2035 Traffic Operations
Weekday PM Peak Hour
4 Lane versus 3 Lane Cross-Section

Source: Municipality of Anchorage and Traffic Counts Collected May 2013

gambellstreet REDEVELOPMENT

Figure 2

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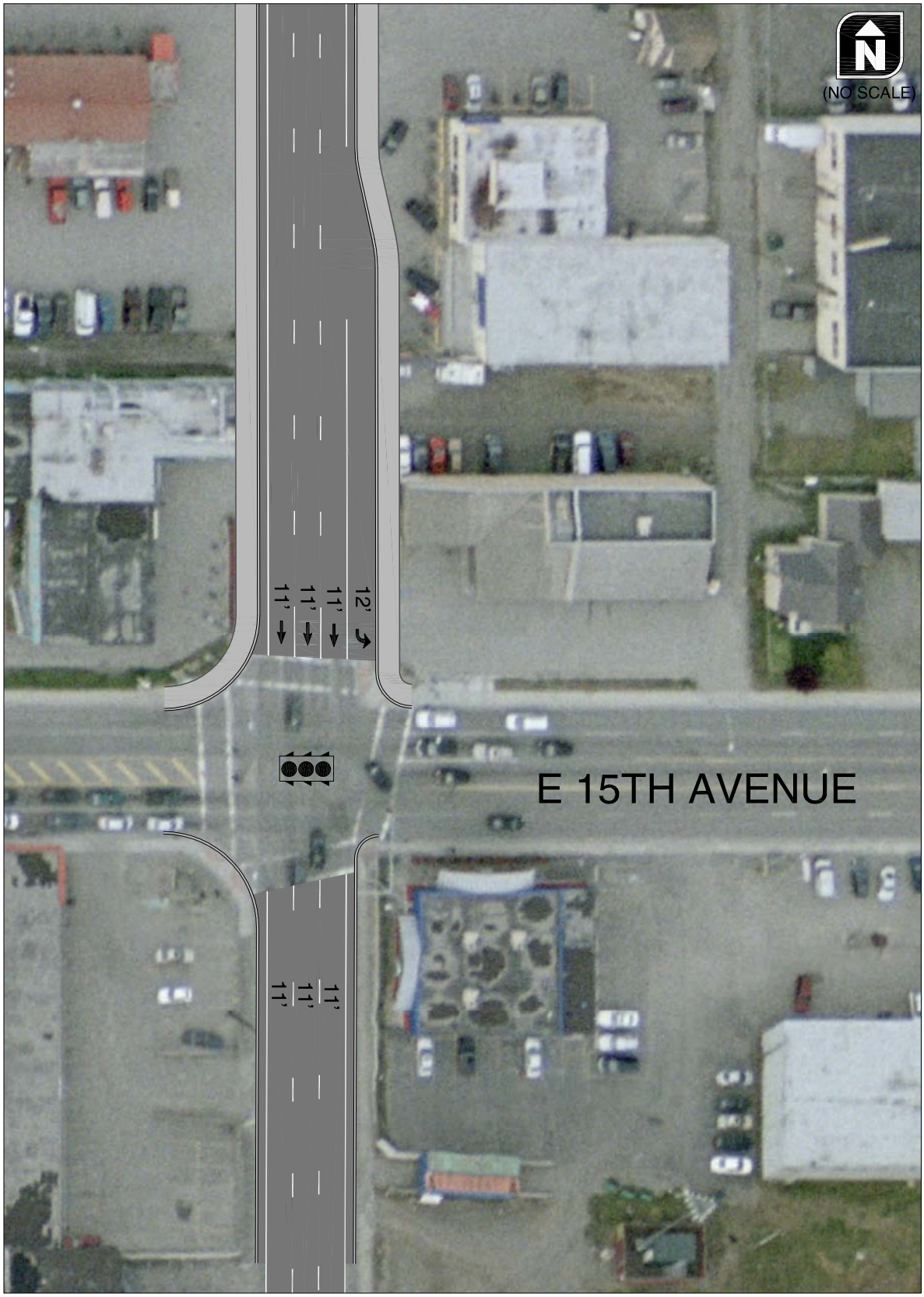

Gambell Street/15h Avenue
Southbound Left-Turn Lane Concept Sketch

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Figure 3

LANE USAGE

Gambell Street does not currently have any turn lanes for accesses or cross-streets within the study area. Therefore, there is the potential for the outside lanes to be used mainly as turn lanes with the center two lanes considered through lanes. Concerns were raised by stakeholders at the Gambell Street Redevelopment and Implementation Project Charette that with conversion to a three-lane section, only one effective through lane may remain. In order to address this concern, further analysis was conducted with the following conclusions:

- *Existing turning volumes*: as seen in Figure 1, existing turn volumes are relatively low except at the 15th Avenue intersection where a turn lane is recommended. Therefore, the impact of turning vehicles on operations is likely not significant.
- *Existing lane usage*: video footage was taken at the study intersections during the PM peak hour and multiple site visits were conducted. These observations showed that through vehicles are currently using all four lanes. Trucks appear to generally utilize the interior lanes, but also use all four lanes. It can be expected that vehicles will utilize all three travel lanes with the reduced cross-section.
- *Accesses*: with the consolidation and improvement of accesses in the future (which can be done with the three-lane conversion), the influence of turning vehicles on lane usage should be reduced.
- *Lane width*: the recommended cross-section widens the travel lanes and provides additional clearance space, which is expected to improve lane usage.

ROADWAY CONSISTENCY

While Gambell Street is currently four-lanes between 3rd Avenue and Fireweed Lane, it is three lanes south of Fireweed lane. Therefore, the extra capacity from the fourth lane is ineffective and does not produce any net gains in operations on the roadway. The four lanes may serve to get vehicles to Fireweed Lane faster, but this intersection serves as a bottleneck that slows traffic through the transition to three lanes. On the approach to the intersection, the left-side travel lane on Gambell Street becomes an exclusive left-turn lane, creating a trap lane that generates friction and weaving movements on the approach to Fireweed Lane. As observed during several site visits to the corridor, the intersection generates significant southbound queues and delays.

Converting Gambell Street to three-lanes north of Fireweed Lane improves the consistency of the roadway. In addition, a left-turn lane can be added on the approach to the intersection, as shown in Exhibit 4, removing the trap-lane and improving operations on the approach.

Exhibit 4: Gambell Street Approach to Fireweed Lane (Southbound)

WINTER CONDITIONS (SNOW REMOVAL/STORAGE)

The current four-lane cross section on Gambell Street does not adequately provide for snow storage or removal. As expressed through meetings with the Project Management Team and stakeholders during the Charette, winter conditions are currently an issue on Gambell Street. The road effectively has three-lanes during the winter, as snow occupies a portion of the roadway and reduces the drivable cross-section. The proposed three-lane cross-section for Gambell Street provides 3.5-foot shoulders for snow storage, as well as wide, 9-foot sidewalks. In addition, the travel lanes are wider, further improving operations and safety on the roadway during snow conditions. This cross-section allows for adequate snow storage and should also reduce the splash exposure to pedestrians from the outside travel lanes as snow melts.

ACCESS MANAGEMENT

Technical Memorandum #2: Existing and Future Conditions, prepared for the Gambell Street Redevelopment Project, assessed existing accesses along the corridor. As noted in the report, there are currently areas along the corridor with poorly defined accesses or multiple access points to a single use. The proposed cross-section would require resetting of the curb line, which would provide the opportunity to consolidate or improve access management on the corridor. This would improve the efficiency of operations and also provide safety benefits along the corridor as well as improve on-site parking and circulation for businesses.

COMPARISON TO SIMILAR THREE-LANE ROADWAYS

There are several one-way streets in the vicinity of Gambell Street that have similar or higher traffic volumes than Gambell Street and are served by three lanes. A few examples are listed in Table 2.

Table 2: Three-Lane Roadways with Comparable AADTs to Gambell Street

Roadway	Section	2011 AADT	Number of Travel Lanes
Gambell Street	South of 9th Avenue	19,543	4
Gambell Street	South of 15th Avenue	23,603	4
5th Avenue	West of Ingra Street	28,787	3
6th Avenue	East of Ingra Street	22,749	3
C Street	South of Northern Lights Blvd	21,892	3

This further suggests that Gambell Street can operate effectively with three travel lanes.

CONCLUSIONS

Based on the above findings, the project team concludes that Gambell Street can operate effectively with a three-lane cross-section under both existing and future conditions, provided that an exclusive left-turn lane is provided at 15th Avenue. In addition, a three-lane cross-section provides enhanced pedestrian facilities, improved operations during snow conditions, an opportunity to improve access management, and safety benefits. The proposed cross-section also allows the street to potentially be converted from one-way to two-way traffic with on-street parking following the implementation of the Seward Highway to Glenn Highway Connection Project in the future.

Appendix A Preferred Alternative Layout

Legend

TRAFFIC SIGNAL

Preferred Alternative
Gambell Street
Anchorage, AK

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Figure 4-A

Legend

TRAFFIC SIGNAL

Preferred Alternative
Gambell Street
Anchorage, AK

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Figure 4-B

(1" = 100')

E 12TH AVENUE

E 13TH AVENUE

E 14TH AVENUE

E 15TH AVENUE

11'
11'
11'

12'
11'
11'
11'

11'
11'
11'

Legend

TRAFFIC SIGNAL

Preferred Alternative
Gambell Street
Anchorage, AK

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Figure 4-C

(1"=100')

Legend

TRAFFIC SIGNAL

Preferred Alternative
Gambell Street
Anchorage, AK

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Figure 4-D

(1"=100')

12'
11'
12'
11'

E FIREWEED LN

Legend

TRAFFIC SIGNAL

Preferred Alternative
Gambell Street
Anchorage, AK

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Figure 4-E

Appendix B Synchro Analysis Sheets

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	650	231	0	0	0	0	0	0	7	469	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.1									4.2	
Lane Util. Factor		0.91									0.91	
Frpb, ped/bikes		0.99									1.00	
Flpb, ped/bikes		1.00									1.00	
Frt		0.96									1.00	
Flt Protected		1.00									1.00	
Satd. Flow (prot)		4213									4419	
Flt Permitted		1.00									1.00	
Satd. Flow (perm)		4213									4419	
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)	0	714	254	0	0	0	0	0	0	8	515	0
RTOR Reduction (vph)	0	53	0	0	0	0	0	0	0	0	3	0
Lane Group Flow (vph)	0	915	0	0	0	0	0	0	0	0	520	0
Confl. Peds. (#/hr)	29		20	20		29	41		21	21		41
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Turn Type										Split		
Protected Phases		2								1	1	
Permitted Phases												
Actuated Green, G (s)		29.9									19.8	
Effective Green, g (s)		30.9									20.8	
Actuated g/C Ratio		0.51									0.35	
Clearance Time (s)		5.1									5.2	
Lane Grp Cap (vph)		2170									1532	
v/s Ratio Prot		c0.22									c0.12	
v/s Ratio Perm												
v/c Ratio		0.42									0.34	
Uniform Delay, d1		9.0									14.5	
Progression Factor		1.00									1.00	
Incremental Delay, d2		0.6									0.6	
Delay (s)		9.6									15.1	
Level of Service		A									B	
Approach Delay (s)		9.6			0.0			0.0			15.1	
Approach LOS		A			A			A			B	

Intersection Summary			
HCM Average Control Delay	11.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.3
Intersection Capacity Utilization	44.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

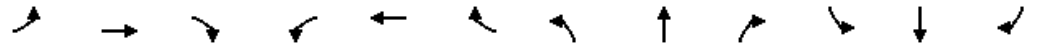
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	520	1355	0	0	0	0	0	595	88
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)				4.0	4.0						18.6	
Lane Util. Factor				0.86	0.86						0.91	
Frpb, ped/bikes				1.00	1.00						1.00	
Flpb, ped/bikes				1.00	1.00						1.00	
Frt				1.00	1.00						0.98	
Flt Protected				0.95	1.00						1.00	
Satd. Flow (prot)				1261	4007						4185	
Flt Permitted				0.95	1.00						1.00	
Satd. Flow (perm)				1261	4007						4185	
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)	0	0	0	553	1441	0	0	0	0	0	633	94
RTOR Reduction (vph)	0	0	0	1	1	0	0	0	0	0	16	0
Lane Group Flow (vph)	0	0	0	480	1512	0	0	0	0	0	711	0
Confl. Peds. (#/hr)	2					2	16		8	8		16
Confl. Bikes (#/hr)						3						1
Heavy Vehicles (%)	0%	0%	0%	5%	4%	0%	0%	0%	0%	0%	3%	5%
Turn Type				Split								
Protected Phases				2	2						1	
Permitted Phases												
Actuated Green, G (s)				28.0	28.0						7.4	
Effective Green, g (s)				29.0	29.0						8.4	
Actuated g/C Ratio				0.48	0.48						0.14	
Clearance Time (s)				5.0	5.0						19.6	
Lane Grp Cap (vph)				609	1937						586	
v/s Ratio Prot				c0.38	0.38						c0.17	
v/s Ratio Perm												
v/c Ratio				0.79	0.78						1.21	
Uniform Delay, d1				12.9	12.9						25.8	
Progression Factor				1.00	1.00						0.65	
Incremental Delay, d2				10.0	3.2						110.1	
Delay (s)				22.9	16.1						127.0	
Level of Service				C	B						F	
Approach Delay (s)		0.0			17.7			0.0			127.0	
Approach LOS		A			B			A			F	

Intersection Summary			
HCM Average Control Delay	46.9	HCM Level of Service	D
HCM Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	22.6
Intersection Capacity Utilization	68.6%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	1550	284	0	0	0	0	0	0	87	1138	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.2	4.2								4.0	
Lane Util. Factor		0.86	0.86								0.91	
Frpb, ped/bikes		1.00	1.00								1.00	
Flpb, ped/bikes		1.00	1.00								1.00	
Frt		1.00	0.85								1.00	
Flt Protected		1.00	1.00								1.00	
Satd. Flow (prot)		4167	1184								4407	
Flt Permitted		1.00	1.00								1.00	
Satd. Flow (perm)		4167	1184								4407	
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	1685	309	0	0	0	0	0	0	95	1237	0
RTOR Reduction (vph)	0	3	13	0	0	0	0	0	0	0	2	0
Lane Group Flow (vph)	0	1713	265	0	0	0	0	0	0	0	1330	0
Confl. Peds. (#/hr)	24		6	6		24	6		7	7		6
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Turn Type			Prot							Split		
Protected Phases		2	2							1	1	
Permitted Phases												
Actuated Green, G (s)		24.8	24.8								25.0	
Effective Green, g (s)		25.8	25.8								26.0	
Actuated g/C Ratio		0.43	0.43								0.43	
Clearance Time (s)		5.2	5.2								5.0	
Lane Grp Cap (vph)		1792	509								1910	
v/s Ratio Prot		c0.41	0.22								c0.30	
v/s Ratio Perm												
v/c Ratio		0.96	0.52								0.70	
Uniform Delay, d1		16.6	12.6								13.8	
Progression Factor		1.00	1.00								1.19	
Incremental Delay, d2		13.1	3.8								0.9	
Delay (s)		29.7	16.4								17.3	
Level of Service		C	B								B	
Approach Delay (s)		27.8			0.0			0.0			17.3	
Approach LOS		C			A			A			B	

Intersection Summary			
HCM Average Control Delay	23.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.2
Intersection Capacity Utilization	74.5%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	2	8	21	9	0	0	0	0	0	1379	7
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			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
Hourly flow rate (vph)	0	2	8	22	9	0	0	0	0	0	1452	7
Pedestrians		31			4			6			1	
Lane Width (ft)		12.0			12.0			0.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		3			0			0			0	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								652			428	
pX, platoon unblocked	0.82	0.82	0.82	0.82	0.82		0.82					
vC, conflicting volume	1492	1490	525	503	1494	5	1490			4		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	811	809	0	0	814	5	809			4		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	99	99	97	96	100	100			100		
cM capacity (veh/h)	207	251	867	804	249	1078	656			1625		

Direction, Lane #	EB 1	WB 1	SB 1	SB 2	SB 3
Volume Total	11	32	363	726	370
Volume Left	0	22	0	0	0
Volume Right	8	0	0	0	7
cSH	581	482	1625	1700	1700
Volume to Capacity	0.02	0.07	0.00	0.43	0.22
Queue Length 95th (ft)	1	4	0	0	0
Control Delay (s)	11.3	13.0	0.0	0.0	0.0
Lane LOS	B	B			
Approach Delay (s)	11.3	13.0	0.0		
Approach LOS	B	B			

Intersection Summary				
Average Delay	0.4			
Intersection Capacity Utilization	42.7%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	3	123	197	69	136	0	0	0	0	14	1478	52
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.1	4.1		4.1						4.1	
Lane Util. Factor		1.00	1.00		0.95						0.91	
Frpb, ped/bikes		1.00	1.00		1.00						1.00	
Flpb, ped/bikes		1.00	1.00		1.00						1.00	
Frt		1.00	0.85		1.00						0.99	
Flt Protected		1.00	1.00		0.98						1.00	
Satd. Flow (prot)		1617	1377		3026						4395	
Flt Permitted		0.99	1.00		0.85						1.00	
Satd. Flow (perm)		1608	1377		2614						4395	
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)	3	134	214	75	148	0	0	0	0	15	1607	57
RTOR Reduction (vph)	0	0	150	0	0	0	0	0	0	0	6	0
Lane Group Flow (vph)	0	137	64	0	223	0	0	0	0	0	1673	0
Confl. Peds. (#/hr)	27		2	2		27	9		7	7		9
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Turn Type	Perm		Prot	pm+pt						Split		
Protected Phases		6	6	5	2					8	8	
Permitted Phases	6			2								
Actuated Green, G (s)		16.9	16.9		28.9						20.9	
Effective Green, g (s)		17.9	17.9		29.9						21.9	
Actuated g/C Ratio		0.30	0.30		0.50						0.36	
Clearance Time (s)		5.1	5.1		5.1						5.1	
Lane Grp Cap (vph)		480	411		1357						1604	
v/s Ratio Prot			0.05		c0.02						c0.38	
v/s Ratio Perm		c0.09			0.06							
v/c Ratio		0.29	0.16		0.16						1.04	
Uniform Delay, d1		16.1	15.5		8.2						19.1	
Progression Factor		1.00	1.00		1.00						1.00	
Incremental Delay, d2		1.5	0.8		0.3						34.5	
Delay (s)		17.6	16.3		8.5						53.6	
Level of Service		B	B		A						D	
Approach Delay (s)		16.8			8.5			0.0			53.6	
Approach LOS		B			A			A			D	

Intersection Summary			
HCM Average Control Delay	43.4	HCM Level of Service	D
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	12.3
Intersection Capacity Utilization	75.2%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	11	24	29	12	0	0	0	0	17	1686	5
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			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
Hourly flow rate (vph)	0	12	26	31	13	0	0	0	0	18	1813	5
Pedestrians		31			10			3			4	
Lane Width (ft)		12.0			12.0			0.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		3			1			0			0	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								1142			298	
pX, platoon unblocked	0.67	0.67	0.67	0.67	0.67		0.67					
vC, conflicting volume	1894	1893	641	686	1896	14	1849			10		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	607	607	0	0	611	14	541			10		
tC, single (s)	7.5	6.5	6.9	7.6	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.6	4.0	3.3	2.2			2.2		
p0 queue free %	100	96	96	95	95	100	100			99		
cM capacity (veh/h)	232	265	712	602	263	1056	677			1609		

Direction, Lane #	EB 1	WB 1	SB 1	SB 2	SB 3
Volume Total	38	44	472	906	459
Volume Left	0	31	18	0	0
Volume Right	26	0	0	0	5
cSH	465	437	1609	1700	1700
Volume to Capacity	0.08	0.10	0.01	0.53	0.27
Queue Length 95th (ft)	5	7	1	0	0
Control Delay (s)	13.4	14.2	0.4	0.0	0.0
Lane LOS	B	B	A		
Approach Delay (s)	13.4	14.2	0.1		
Approach LOS	B	B			

Intersection Summary				
Average Delay	0.7			
Intersection Capacity Utilization	52.3%	ICU Level of Service	A	
Analysis Period (min)	15			

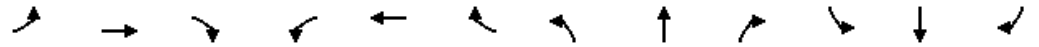
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	6	7	9	8	0	0	0	0	10	1744	11
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	0	7	8	10	9	0	0	0	0	11	1960	12
Pedestrians		73			21			2			23	
Lane Width (ft)		12.0			12.0			0.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		6			2			0			2	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								413			1027	
pX, platoon unblocked	0.75	0.75	0.75	0.75	0.75		0.75					
vC, conflicting volume	2089	2082	734	710	2088	44	2045			21		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1291	1282	0	0	1291	44	1233			21		
tC, single (s)	7.5	6.5	6.9	7.5	6.7	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.1	3.3	2.2			2.2		
p0 queue free %	100	94	99	98	91	100	100			99		
cM capacity (veh/h)	74	115	770	672	103	986	404			1580		

Direction, Lane #	EB 1	WB 1	SB 1	SB 2	SB 3
Volume Total	15	19	501	980	502
Volume Left	0	10	11	0	0
Volume Right	8	0	0	0	12
cSH	212	186	1580	1700	1700
Volume to Capacity	0.07	0.10	0.01	0.58	0.30
Queue Length 95th (ft)	4	7	0	0	0
Control Delay (s)	23.3	26.5	0.2	0.0	0.0
Lane LOS	C	D	A		
Approach Delay (s)	23.3	26.5	0.1		
Approach LOS	C	D			

Intersection Summary				
Average Delay	0.5			
Intersection Capacity Utilization	54.7%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	1	83	68	17	59	0	0	0	0	13	1728	52
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.0			4.0						4.0	
Lane Util. Factor		1.00			1.00						0.91	
Frpb, ped/bikes		0.97			1.00						1.00	
Flpb, ped/bikes		1.00			0.99						1.00	
Frt		0.94			1.00						1.00	
Flt Protected		1.00			0.99						1.00	
Satd. Flow (prot)		1465			1545						4259	
Flt Permitted		1.00			0.93						1.00	
Satd. Flow (perm)		1464			1451						4259	
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	1	93	76	19	66	0	0	0	0	15	1942	58
RTOR Reduction (vph)	0	3	0	0	0	0	0	0	0	0	5	0
Lane Group Flow (vph)	0	167	0	0	85	0	0	0	0	0	2010	0
Confl. Peds. (#/hr)	21		45	45		21	64		4	4		64
Confl. Bikes (#/hr)			1			1						
Heavy Vehicles (%)	0%	2%	0%	6%	2%	0%	0%	0%	0%	0%	3%	4%
Turn Type	Perm			Perm						Split		
Protected Phases		6			2					8	8	
Permitted Phases	6			2								
Actuated Green, G (s)		20.0			20.0						30.0	
Effective Green, g (s)		21.0			21.0						31.0	
Actuated g/C Ratio		0.35			0.35						0.52	
Clearance Time (s)		5.0			5.0						5.0	
Lane Grp Cap (vph)		512			508						2200	
v/s Ratio Prot											c0.47	
v/s Ratio Perm		c0.11			0.06							
v/c Ratio		0.33			0.17						0.91	
Uniform Delay, d1		14.3			13.5						13.3	
Progression Factor		1.00			1.00						0.39	
Incremental Delay, d2		1.7			0.7						4.2	
Delay (s)		16.0			14.2						9.4	
Level of Service		B			B						A	
Approach Delay (s)		16.0			14.2			0.0			9.4	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	10.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	68.4%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	10	31	23	10	0	0	0	0	18	1768	25
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
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
Hourly flow rate (vph)	0	11	34	25	11	0	0	0	0	20	1943	27
Pedestrians		17			3			1			8	
Lane Width (ft)		12.0			12.0			0.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		1			0			0			1	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								361			359	
pX, platoon unblocked	0.60	0.60	0.60	0.60	0.60		0.60					
vC, conflicting volume	2027	2016	679	731	2030	11	1987			3		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	381	363	0	0	386	11	315			3		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	97	95	95	97	100	100			99		
cM capacity (veh/h)	312	331	646	556	321	1064	744			1628		

Direction, Lane #	EB 1	WB 1	SB 1	SB 2	SB 3
Volume Total	45	36	505	971	513
Volume Left	0	25	20	0	0
Volume Right	34	0	0	0	27
cSH	524	456	1628	1700	1700
Volume to Capacity	0.09	0.08	0.01	0.57	0.30
Queue Length 95th (ft)	6	5	1	0	0
Control Delay (s)	12.5	13.6	0.4	0.0	0.0
Lane LOS	B	B	A		
Approach Delay (s)	12.5	13.6	0.1		
Approach LOS	B	B			

Intersection Summary				
Average Delay	0.6			
Intersection Capacity Utilization	54.6%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	451	80	243	673	0	0	0	0	261	1419	76
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.1		4.1	4.1						4.0	
Lane Util. Factor		0.95		1.00	0.95						0.91	
Frpb, ped/bikes		1.00		1.00	1.00						1.00	
Flpb, ped/bikes		1.00		1.00	1.00						1.00	
Frt		0.98		1.00	1.00						0.99	
Flt Protected		1.00		0.95	1.00						0.99	
Satd. Flow (prot)		2973		1480	3018						4248	
Flt Permitted		1.00		0.23	1.00						0.99	
Satd. Flow (perm)		2973		364	3018						4248	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	501	89	270	748	0	0	0	0	290	1577	84
RTOR Reduction (vph)	0	24	0	0	0	0	0	0	0	0	8	0
Lane Group Flow (vph)	0	566	0	270	748	0	0	0	0	0	1943	0
Confl. Peds. (#/hr)	6					6	1					1
Confl. Bikes (#/hr)			1			2						
Heavy Vehicles (%)	0%	1%	1%	4%	2%	0%	0%	0%	0%	1%	3%	1%
Turn Type				pm+pt						Split		
Protected Phases		8		7	4					6	6	
Permitted Phases				4								
Actuated Green, G (s)		15.0		27.1	27.1						22.4	
Effective Green, g (s)		16.0		28.1	28.1						23.8	
Actuated g/C Ratio		0.27		0.47	0.47						0.40	
Clearance Time (s)		5.1		5.1	5.1						5.4	
Vehicle Extension (s)		0.2		1.5	0.2						0.2	
Lane Grp Cap (vph)		793		319	1413						1685	
v/s Ratio Prot		0.19		c0.11	0.25						c0.46	
v/s Ratio Perm				c0.28								
v/c Ratio		0.71		0.85	0.53						1.15	
Uniform Delay, d1		19.9		11.5	11.3						18.1	
Progression Factor		1.00		1.00	1.00						0.81	
Incremental Delay, d2		5.4		17.6	1.4						72.7	
Delay (s)		25.3		29.2	12.7						87.3	
Level of Service		C		C	B						F	
Approach Delay (s)		25.3			17.1			0.0			87.3	
Approach LOS		C			B			A			F	

Intersection Summary			
HCM Average Control Delay	57.0	HCM Level of Service	E
HCM Volume to Capacity ratio	0.97		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.1
Intersection Capacity Utilization	83.9%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	451	80	243	673	0	0	0	0	261	1419	76
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.1		4.1	4.1					4.0	4.0	
Lane Util. Factor		0.95		1.00	0.95					1.00	0.91	
Frpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	
Frt		0.98		1.00	1.00					1.00	0.99	
Flt Protected		1.00		0.95	1.00					0.95	1.00	
Satd. Flow (prot)		2973		1480	3018					1524	4263	
Flt Permitted		1.00		0.23	1.00					0.95	1.00	
Satd. Flow (perm)		2973		364	3018					1524	4263	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	501	89	270	748	0	0	0	0	290	1577	84
RTOR Reduction (vph)	0	24	0	0	0	0	0	0	0	0	10	0
Lane Group Flow (vph)	0	566	0	270	748	0	0	0	0	290	1651	0
Confl. Peds. (#/hr)	6					6	1					1
Confl. Bikes (#/hr)			1			2						
Heavy Vehicles (%)	0%	1%	1%	4%	2%	0%	0%	0%	0%	1%	3%	1%
Turn Type				pm+pt						Split		
Protected Phases		8		7	4					6	6	
Permitted Phases				4								
Actuated Green, G (s)		15.0		27.2	27.2					22.3	22.3	
Effective Green, g (s)		16.0		28.2	28.2					23.7	23.7	
Actuated g/C Ratio		0.27		0.47	0.47					0.39	0.39	
Clearance Time (s)		5.1		5.1	5.1					5.4	5.4	
Vehicle Extension (s)		0.2		1.5	0.2					0.2	0.2	
Lane Grp Cap (vph)		793		322	1418					602	1684	
v/s Ratio Prot		0.19		c0.11	0.25					0.19	c0.39	
v/s Ratio Perm				c0.28								
v/c Ratio		0.71		0.84	0.53					0.48	0.98	
Uniform Delay, d1		19.9		11.5	11.2					13.6	17.9	
Progression Factor		1.00		1.00	1.00					0.97	0.84	
Incremental Delay, d2		5.4		16.4	1.4					1.3	11.4	
Delay (s)		25.3		27.9	12.6					14.5	26.4	
Level of Service		C		C	B					B	C	
Approach Delay (s)		25.3			16.7			0.0			24.7	
Approach LOS		C			B			A			C	

Intersection Summary			
HCM Average Control Delay	22.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.1
Intersection Capacity Utilization	77.7%	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)	0	451	80	243	673	0	0	0	0	261	1419	76
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.1		4.1	4.1					4.0	4.0	
Lane Util. Factor		0.95		0.97	0.95					1.00	0.91	
Frpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	
Frt		0.98		1.00	1.00					1.00	0.99	
Flt Protected		1.00		0.95	1.00					0.95	1.00	
Satd. Flow (prot)		2973		2871	3018					1524	4263	
Flt Permitted		1.00		0.23	1.00					0.95	1.00	
Satd. Flow (perm)		2973		705	3018					1524	4263	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	501	89	270	748	0	0	0	0	290	1577	84
RTOR Reduction (vph)	0	24	0	0	0	0	0	0	0	0	10	0
Lane Group Flow (vph)	0	566	0	270	748	0	0	0	0	290	1651	0
Confl. Peds. (#/hr)	6					6	1					1
Confl. Bikes (#/hr)			1			2						
Heavy Vehicles (%)	0%	1%	1%	4%	2%	0%	0%	0%	0%	1%	3%	1%
Turn Type				pm+pt						Split		
Protected Phases		8		7	4					6	6	
Permitted Phases				4								
Actuated Green, G (s)		15.0		27.1	27.1					22.4	22.4	
Effective Green, g (s)		16.0		28.1	28.1					23.8	23.8	
Actuated g/C Ratio		0.27		0.47	0.47					0.40	0.40	
Clearance Time (s)		5.1		5.1	5.1					5.4	5.4	
Vehicle Extension (s)		0.2		1.5	0.2					0.2	0.2	
Lane Grp Cap (vph)		793		619	1413					605	1691	
v/s Ratio Prot		c0.19		0.06	c0.25					0.19	c0.39	
v/s Ratio Perm				0.15								
v/c Ratio		0.71		0.44	0.53					0.48	0.98	
Uniform Delay, d1		19.9		10.2	11.3					13.5	17.8	
Progression Factor		1.00		1.00	1.00					0.97	0.83	
Incremental Delay, d2		5.4		0.2	1.4					1.3	10.7	
Delay (s)		25.3		10.4	12.7					14.3	25.6	
Level of Service		C		B	B					B	C	
Approach Delay (s)		25.3			12.1			0.0			23.9	
Approach LOS		C			B			A			C	

Intersection Summary			
HCM Average Control Delay	20.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	12.2
Intersection Capacity Utilization	70.1%	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)	0	808	287	0	0	0	0	0	0	9	584	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.1									4.2	
Lane Util. Factor		0.91									0.91	
Frpb, ped/bikes		0.99									1.00	
Flpb, ped/bikes		1.00									1.00	
Frt		0.96									1.00	
Flt Protected		1.00									1.00	
Satd. Flow (prot)		4192									4419	
Flt Permitted		1.00									1.00	
Satd. Flow (perm)		4192									4419	
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)	0	888	315	0	0	0	0	0	0	10	642	0
RTOR Reduction (vph)	0	26	0	0	0	0	0	0	0	0	1	0
Lane Group Flow (vph)	0	1177	0	0	0	0	0	0	0	0	651	0
Confl. Peds. (#/hr)	29		20	20		29	41		21	21		41
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Turn Type										Split		
Protected Phases		2								1	1	
Permitted Phases												
Actuated Green, G (s)		69.9									39.8	
Effective Green, g (s)		70.9									40.8	
Actuated g/C Ratio		0.59									0.34	
Clearance Time (s)		5.1									5.2	
Lane Grp Cap (vph)		2477									1502	
v/s Ratio Prot		c0.28									c0.15	
v/s Ratio Perm												
v/c Ratio		0.48									0.43	
Uniform Delay, d1		14.0									30.7	
Progression Factor		1.00									1.00	
Incremental Delay, d2		0.7									0.9	
Delay (s)		14.6									31.6	
Level of Service		B									C	
Approach Delay (s)		14.6			0.0			0.0			31.6	
Approach LOS		B			A			A			C	

Intersection Summary			
HCM Average Control Delay	20.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.3
Intersection Capacity Utilization	49.1%	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)	0	0	0	647	1687	0	0	0	0	0	741	110
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)				4.0	4.0						18.6	
Lane Util. Factor				0.86	0.86						0.91	
Frpb, ped/bikes				1.00	1.00						0.99	
Flpb, ped/bikes				1.00	1.00						1.00	
Frt				1.00	1.00						0.98	
Flt Protected				0.95	1.00						1.00	
Satd. Flow (prot)				1261	4008						4178	
Flt Permitted				0.95	1.00						1.00	
Satd. Flow (perm)				1261	4008						4178	
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)	0	0	0	688	1795	0	0	0	0	0	788	117
RTOR Reduction (vph)	0	0	0	6	4	0	0	0	0	0	10	0
Lane Group Flow (vph)	0	0	0	593	1880	0	0	0	0	0	895	0
Confl. Peds. (#/hr)	2					2	16		8	8		16
Confl. Bikes (#/hr)						3						1
Heavy Vehicles (%)	0%	0%	0%	5%	4%	0%	0%	0%	0%	0%	3%	5%
Turn Type				Split								
Protected Phases				2	2						1	
Permitted Phases												
Actuated Green, G (s)				66.0	66.0						29.4	
Effective Green, g (s)				67.0	67.0						30.4	
Actuated g/C Ratio				0.56	0.56						0.25	
Clearance Time (s)				5.0	5.0						19.6	
Lane Grp Cap (vph)				704	2238						1058	
v/s Ratio Prot				c0.47	0.47						c0.21	
v/s Ratio Perm												
v/c Ratio				0.84	0.84						0.85	
Uniform Delay, d1				22.1	22.0						42.6	
Progression Factor				1.00	1.00						0.59	
Incremental Delay, d2				11.7	4.0						7.7	
Delay (s)				33.8	26.0						32.6	
Level of Service				C	C						C	
Approach Delay (s)		0.0			27.9			0.0			32.6	
Approach LOS		A			C			A			C	

Intersection Summary			
HCM Average Control Delay	29.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	22.6
Intersection Capacity Utilization	78.9%	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)	0	1930	354	0	0	0	0	0	0	109	1416	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.2	4.2								4.0	
Lane Util. Factor		0.86	0.86								0.91	
Frpb, ped/bikes		1.00	1.00								1.00	
Flpb, ped/bikes		1.00	1.00								1.00	
Frt		1.00	0.85								1.00	
Flt Protected		1.00	1.00								1.00	
Satd. Flow (prot)		4166	1184								4407	
Flt Permitted		1.00	1.00								1.00	
Satd. Flow (perm)		4166	1184								4407	
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	2098	385	0	0	0	0	0	0	118	1539	0
RTOR Reduction (vph)	0	1	2	0	0	0	0	0	0	0	2	0
Lane Group Flow (vph)	0	2136	344	0	0	0	0	0	0	0	1655	0
Confl. Peds. (#/hr)	24		6	6		24	6		7	7		6
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Turn Type			Prot							Split		
Protected Phases		2	2							1	1	
Permitted Phases												
Actuated Green, G (s)		63.8	63.8								46.0	
Effective Green, g (s)		64.8	64.8								47.0	
Actuated g/C Ratio		0.54	0.54								0.39	
Clearance Time (s)		5.2	5.2								5.0	
Lane Grp Cap (vph)		2250	639								1726	
v/s Ratio Prot		c0.51	0.29								c0.38	
v/s Ratio Perm												
v/c Ratio		0.95	0.54								0.96	
Uniform Delay, d1		26.0	17.9								35.6	
Progression Factor		1.00	1.00								0.75	
Incremental Delay, d2		10.3	3.2								10.0	
Delay (s)		36.3	21.1								36.8	
Level of Service		D	C								D	
Approach Delay (s)		34.2			0.0			0.0			36.8	
Approach LOS		C			A			A			D	

Intersection Summary			
HCM Average Control Delay	35.2	HCM Level of Service	D
HCM Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.2
Intersection Capacity Utilization	90.6%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	2	10	26	11	0	0	0	0	0	1716	9
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			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
Hourly flow rate (vph)	0	2	11	27	12	0	0	0	0	0	1806	9
Pedestrians		31			4			6			1	
Lane Width (ft)		12.0			12.0			0.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		3			0			0			0	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								652			428	
pX, platoon unblocked	0.66	0.66	0.66	0.66	0.66		0.66					
vC, conflicting volume	1849	1846	644	624	1851	5	1847			4		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	494	490	0	0	497	5	491			4		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	99	99	96	96	100	100			100		
cM capacity (veh/h)	283	310	703	650	307	1078	698			1625		

Direction, Lane #	EB 1	WB 1	SB 1	SB 2	SB 3
Volume Total	13	39	452	903	461
Volume Left	0	27	0	0	0
Volume Right	11	0	0	0	9
cSH	580	488	1625	1700	1700
Volume to Capacity	0.02	0.08	0.00	0.53	0.27
Queue Length 95th (ft)	1	5	0	0	0
Control Delay (s)	11.3	13.0	0.0	0.0	0.0
Lane LOS	B	B			
Approach Delay (s)	11.3	13.0	0.0		
Approach LOS	B	B			

Intersection Summary				
Average Delay	0.3			
Intersection Capacity Utilization	49.8%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	3	153	245	86	169	0	0	0	0	18	1839	65
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.1	4.1		4.1						4.1	
Lane Util. Factor		1.00	1.00		0.95						0.91	
Frpb, ped/bikes		1.00	1.00		1.00						1.00	
Flpb, ped/bikes		1.00	1.00		1.00						1.00	
Frt		1.00	0.85		1.00						0.99	
Flt Protected		1.00	1.00		0.98						1.00	
Satd. Flow (prot)		1617	1377		3025						4394	
Flt Permitted		0.99	1.00		0.72						1.00	
Satd. Flow (perm)		1610	1377		2212						4394	
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)	3	166	266	93	184	0	0	0	0	20	1999	71
RTOR Reduction (vph)	0	0	41	0	0	0	0	0	0	0	3	0
Lane Group Flow (vph)	0	169	225	0	277	0	0	0	0	0	2087	0
Confl. Peds. (#/hr)	27		2	2		27	9		7	7		9
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Turn Type	Perm		Prot	pm+pt						Split		
Protected Phases		6	6	5	2					8	8	
Permitted Phases	6			2								
Actuated Green, G (s)		31.9	31.9		42.0						67.8	
Effective Green, g (s)		32.9	32.9		43.0						68.8	
Actuated g/C Ratio		0.27	0.27		0.36						0.57	
Clearance Time (s)		5.1	5.1		5.1						5.1	
Lane Grp Cap (vph)		441	378		833						2519	
v/s Ratio Prot			c0.16		c0.02						c0.48	
v/s Ratio Perm		0.10			0.10							
v/c Ratio		0.38	0.59		0.33						0.83	
Uniform Delay, d1		35.3	37.8		28.0						20.8	
Progression Factor		1.00	1.00		1.00						1.35	
Incremental Delay, d2		2.5	6.7		1.1						2.1	
Delay (s)		37.8	44.5		29.1						30.3	
Level of Service		D	D		C						C	
Approach Delay (s)		41.9			29.1			0.0			30.3	
Approach LOS		D			C			A			C	

Intersection Summary			
HCM Average Control Delay	32.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.3
Intersection Capacity Utilization	86.3%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	14	30	36	15	0	0	0	0	21	2099	6
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			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
Hourly flow rate (vph)	0	15	32	39	16	0	0	0	0	23	2257	6
Pedestrians		31			10			3			4	
Lane Width (ft)		12.0			12.0			0.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		3			1			0			0	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								1142			298	
pX, platoon unblocked	0.63	0.63	0.63	0.63	0.63		0.63					
vC, conflicting volume	2348	2346	790	850	2350	14	2294			10		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1063	1059	0	0	1064	14	976			10		
tC, single (s)	7.5	6.5	6.9	7.6	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.6	4.0	3.3	2.2			2.2		
p0 queue free %	100	89	95	93	88	100	100			99		
cM capacity (veh/h)	96	135	665	525	134	1056	436			1609		

Direction, Lane #	EB 1	WB 1	SB 1	SB 2	SB 3
Volume Total	47	55	587	1128	571
Volume Left	0	39	23	0	0
Volume Right	32	0	0	0	6
cSH	295	282	1609	1700	1700
Volume to Capacity	0.16	0.19	0.01	0.66	0.34
Queue Length 95th (ft)	11	14	1	0	0
Control Delay (s)	19.5	20.8	0.4	0.0	0.0
Lane LOS	C	C	A		
Approach Delay (s)	19.5	20.8	0.1		
Approach LOS	C	C			

Intersection Summary				
Average Delay	1.0			
Intersection Capacity Utilization	61.1%	ICU Level of Service	B	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	7	9	11	10	0	0	0	0	12	2171	14
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	0	8	10	12	11	0	0	0	0	13	2439	16
Pedestrians		73			21			2			23	
Lane Width (ft)		12.0			12.0			0.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		6			2			0			2	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								413			1027	
pX, platoon unblocked	0.66	0.66	0.66	0.66	0.66		0.66					
vC, conflicting volume	2576	2568	896	877	2576	44	2528			21		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1575	1563	0	0	1575	44	1502			21		
tC, single (s)	7.5	6.5	6.9	7.5	6.7	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.1	3.3	2.2			2.2		
p0 queue free %	100	88	98	98	81	100	100			99		
cM capacity (veh/h)	37	68	674	559	59	986	279			1580		

Direction, Lane #	EB 1	WB 1	SB 1	SB 2	SB 3
Volume Total	18	24	623	1220	626
Volume Left	0	12	13	0	0
Volume Right	10	0	0	0	16
cSH	137	112	1580	1700	1700
Volume to Capacity	0.13	0.21	0.01	0.72	0.37
Queue Length 95th (ft)	9	15	1	0	0
Control Delay (s)	35.1	45.6	0.3	0.0	0.0
Lane LOS	E	E	A		
Approach Delay (s)	35.1	45.6	0.1		
Approach LOS	E	E			

Intersection Summary				
Average Delay	0.7			
Intersection Capacity Utilization	63.3%	ICU Level of Service	B	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	1	103	85	21	73	0	0	0	0	16	2151	65
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.0			4.0						4.0	
Lane Util. Factor		1.00			1.00						0.91	
Frpb, ped/bikes		0.95			1.00						0.99	
Flpb, ped/bikes		1.00			0.99						1.00	
Frt		0.94			1.00						1.00	
Flt Protected		1.00			0.99						1.00	
Satd. Flow (prot)		1432			1541						4246	
Flt Permitted		1.00			0.91						1.00	
Satd. Flow (perm)		1432			1414						4246	
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	1	116	96	24	82	0	0	0	0	18	2417	73
RTOR Reduction (vph)	0	5	0	0	0	0	0	0	0	0	2	0
Lane Group Flow (vph)	0	208	0	0	106	0	0	0	0	0	2506	0
Confl. Peds. (#/hr)	21		45	45		21	64		4	4		64
Confl. Bikes (#/hr)			1			1						
Heavy Vehicles (%)	0%	2%	0%	6%	2%	0%	0%	0%	0%	0%	3%	4%
Turn Type	Perm			Perm						Split		
Protected Phases		6			2					8	8	
Permitted Phases	6			2								
Actuated Green, G (s)		28.0			28.0						82.0	
Effective Green, g (s)		29.0			29.0						83.0	
Actuated g/C Ratio		0.24			0.24						0.69	
Clearance Time (s)		5.0			5.0						5.0	
Lane Grp Cap (vph)		346			342						2937	
v/s Ratio Prot											c0.59	
v/s Ratio Perm		0.15			0.07							
v/c Ratio		0.60			0.31						0.85	
Uniform Delay, d1		40.4			37.3						13.9	
Progression Factor		1.00			1.00						0.36	
Incremental Delay, d2		7.5			2.3						2.4	
Delay (s)		47.9			39.6						7.5	
Level of Service		D			D						A	
Approach Delay (s)		47.9			39.6			0.0			7.5	
Approach LOS		D			D			A			A	

Intersection Summary			
HCM Average Control Delay	11.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	83.3%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	12	39	29	12	0	0	0	0	22	2201	31
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
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
Hourly flow rate (vph)	0	13	43	32	13	0	0	0	0	24	2419	34
Pedestrians		17			3			1			8	
Lane Width (ft)		12.0			12.0			0.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		1			0			0			1	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								361			359	
pX, platoon unblocked	0.57	0.57	0.57	0.57	0.57		0.57					
vC, conflicting volume	2516	2504	841	908	2521	11	2470			3		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	996	975	0	0	1006	11	915			3		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	91	93	93	90	100	100			99		
cM capacity (veh/h)	101	139	609	489	133	1064	421			1628		

Direction, Lane #	EB 1	WB 1	SB 1	SB 2	SB 3
Volume Total	56	45	629	1209	639
Volume Left	0	32	24	0	0
Volume Right	43	0	0	0	34
cSH	339	275	1628	1700	1700
Volume to Capacity	0.17	0.16	0.01	0.71	0.38
Queue Length 95th (ft)	12	12	1	0	0
Control Delay (s)	17.7	20.7	0.4	0.0	0.0
Lane LOS	C	C	A		
Approach Delay (s)	17.7	20.7	0.1		
Approach LOS	C	C			

Intersection Summary				
Average Delay	0.9			
Intersection Capacity Utilization	63.7%	ICU Level of Service	B	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	561	100	302	838	0	0	0	0	325	1766	95
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.1		4.1	4.1						4.0	
Lane Util. Factor		0.95		1.00	0.95						0.91	
Frpb, ped/bikes		1.00		1.00	1.00						1.00	
Flpb, ped/bikes		1.00		1.00	1.00						1.00	
Frt		0.98		1.00	1.00						0.99	
Flt Protected		1.00		0.95	1.00						0.99	
Satd. Flow (prot)		2973		1480	3018						4248	
Flt Permitted		1.00		0.13	1.00						0.99	
Satd. Flow (perm)		2973		208	3018						4248	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	623	111	336	931	0	0	0	0	361	1962	106
RTOR Reduction (vph)	0	12	0	0	0	0	0	0	0	0	4	0
Lane Group Flow (vph)	0	722	0	336	931	0	0	0	0	0	2425	0
Confl. Peds. (#/hr)	6					6	1					1
Confl. Bikes (#/hr)			1			2						
Heavy Vehicles (%)	0%	1%	1%	4%	2%	0%	0%	0%	0%	1%	3%	1%
Turn Type				pm+pt						Split		
Protected Phases		8		7	4					6	6	
Permitted Phases				4								
Actuated Green, G (s)		24.9		48.9	48.9						60.6	
Effective Green, g (s)		25.9		49.9	49.9						62.0	
Actuated g/C Ratio		0.22		0.42	0.42						0.52	
Clearance Time (s)		5.1		5.1	5.1						5.4	
Vehicle Extension (s)		0.2		1.5	0.2						0.2	
Lane Grp Cap (vph)		642		297	1255						2195	
v/s Ratio Prot		0.24		c0.19	0.31						c0.57	
v/s Ratio Perm				c0.28								
v/c Ratio		1.12		1.13	0.74						1.10	
Uniform Delay, d1		47.0		35.7	29.6						29.0	
Progression Factor		1.00		1.00	1.00						1.04	
Incremental Delay, d2		75.1		92.5	4.0						51.6	
Delay (s)		122.2		128.1	33.6						81.9	
Level of Service		F		F	C						F	
Approach Delay (s)		122.2			58.7			0.0			81.9	
Approach LOS		F			E			A			F	

Intersection Summary			
HCM Average Control Delay	81.9	HCM Level of Service	F
HCM Volume to Capacity ratio	1.10		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.1
Intersection Capacity Utilization	102.0%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	561	100	302	838	0	0	0	0	325	1766	95
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.1		4.1	4.1					4.0	4.0	
Lane Util. Factor		0.95		1.00	0.95					1.00	0.91	
Frpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	
Frt		0.98		1.00	1.00					1.00	0.99	
Flt Protected		1.00		0.95	1.00					0.95	1.00	
Satd. Flow (prot)		2973		1480	3018					1524	4262	
Flt Permitted		1.00		0.12	1.00					0.95	1.00	
Satd. Flow (perm)		2973		192	3018					1524	4262	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	623	111	336	931	0	0	0	0	361	1962	106
RTOR Reduction (vph)	0	12	0	0	0	0	0	0	0	0	5	0
Lane Group Flow (vph)	0	722	0	336	931	0	0	0	0	361	2063	0
Confl. Peds. (#/hr)	6					6	1					1
Confl. Bikes (#/hr)			1			2						
Heavy Vehicles (%)	0%	1%	1%	4%	2%	0%	0%	0%	0%	1%	3%	1%
Turn Type				pm+pt						Split		
Protected Phases		8		7	4					6	6	
Permitted Phases				4								
Actuated Green, G (s)		27.3		52.9	52.9					56.6	56.6	
Effective Green, g (s)		28.3		53.9	53.9					58.0	58.0	
Actuated g/C Ratio		0.24		0.45	0.45					0.48	0.48	
Clearance Time (s)		5.1		5.1	5.1					5.4	5.4	
Vehicle Extension (s)		0.2		1.5	0.2					0.2	0.2	
Lane Grp Cap (vph)		701		317	1356					737	2060	
v/s Ratio Prot		0.24		c0.19	0.31					0.24	c0.48	
v/s Ratio Perm				c0.29								
v/c Ratio		1.03		1.06	0.69					0.49	1.00	
Uniform Delay, d1		45.9		36.1	26.3					21.0	31.0	
Progression Factor		1.00		1.00	1.00					1.22	1.13	
Incremental Delay, d2		41.8		67.2	2.9					1.3	15.2	
Delay (s)		87.6		103.3	29.2					26.9	50.2	
Level of Service		F		F	C					C	D	
Approach Delay (s)		87.6			48.8			0.0			46.7	
Approach LOS		F			D			A			D	

Intersection Summary			
HCM Average Control Delay	54.1	HCM Level of Service	D
HCM Volume to Capacity ratio	1.02		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.1
Intersection Capacity Utilization	94.2%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	561	100	302	838	0	0	0	0	325	1766	95
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.1		4.1	4.1					4.0	4.0	
Lane Util. Factor		0.95		0.97	0.95					1.00	0.91	
Frpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	
Frt		0.98		1.00	1.00					1.00	0.99	
Flt Protected		1.00		0.95	1.00					0.95	1.00	
Satd. Flow (prot)		2973		2871	3018					1524	4262	
Flt Permitted		1.00		0.13	1.00					0.95	1.00	
Satd. Flow (perm)		2973		405	3018					1524	4262	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	623	111	336	931	0	0	0	0	361	1962	106
RTOR Reduction (vph)	0	9	0	0	0	0	0	0	0	0	5	0
Lane Group Flow (vph)	0	725	0	336	931	0	0	0	0	361	2063	0
Confl. Peds. (#/hr)	6					6	1					1
Confl. Bikes (#/hr)			1			2						
Heavy Vehicles (%)	0%	1%	1%	4%	2%	0%	0%	0%	0%	1%	3%	1%
Turn Type				pm+pt						Split		
Protected Phases		8		7	4					6	6	
Permitted Phases				4								
Actuated Green, G (s)		32.0		47.9	47.9					61.6	61.6	
Effective Green, g (s)		33.0		48.9	48.9					63.0	63.0	
Actuated g/C Ratio		0.28		0.41	0.41					0.52	0.52	
Clearance Time (s)		5.1		5.1	5.1					5.4	5.4	
Vehicle Extension (s)		0.2		1.5	0.2					0.2	0.2	
Lane Grp Cap (vph)		818		408	1230					800	2238	
v/s Ratio Prot		c0.24		0.08	c0.31					0.24	c0.48	
v/s Ratio Perm				0.26								
v/c Ratio		0.89		0.82	0.76					0.45	0.92	
Uniform Delay, d1		41.7		27.2	30.5					17.7	26.2	
Progression Factor		1.00		1.00	1.00					1.17	1.05	
Incremental Delay, d2		13.6		12.1	4.4					1.0	4.7	
Delay (s)		55.3		39.3	34.8					21.8	32.1	
Level of Service		E		D	C					C	C	
Approach Delay (s)		55.3			36.0			0.0			30.6	
Approach LOS		E			D			A			C	

Intersection Summary			
HCM Average Control Delay	36.2	HCM Level of Service	D
HCM Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.2
Intersection Capacity Utilization	84.7%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Appendix B Agency Response Letter

Agency Response Letter

Gambell Street Redevelopment and Implementation Plan

Date:	September 19, 2013	Project #:13489
To:	Kenneth Morton, PE, Regional Preconstruction Engineer (DOT/PF) Stephanie Mormilo, PE, Municipal Traffic Engineer (MOA) Jennifer Witt, Chief, Planning & Administration (DOT/PF) Alan Hartig, ROW Permits Supervisor, Right of Way Section (DOT/PF) Scott Thomas, Traffic & Safety Engineer (DOT/PF) Bart Rudolph (DOT/PF)	
From:	Kelly Laustsen; Bob Kniefel, PE; and Marc Butorac, PE, PTOE; (Kittelson & Associates, Inc.) / Jim Potts, PE (CH2M Hill)	
cc:	Project Management Team (PMT); Paul Fuhs, Fairview Business Association	

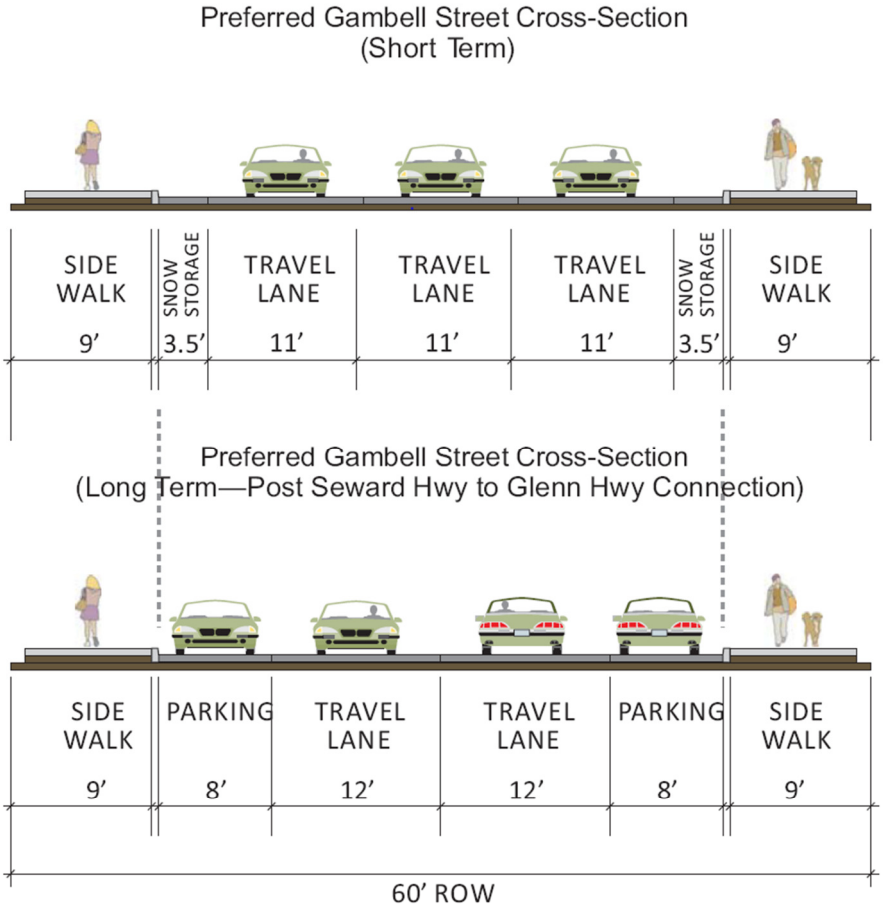
This memorandum responds to the comments and questions raised by the Alaska Department of Transportation and Public Facilities (DOT/PF) and Municipality of Anchorage related to the 4 to 3 lane conversion concept developed for Gambell Street between 3rd and 15th Avenue. Specifically, this memorandum responds to the July 9th, 2013 letter from Kenneth Morton at the DOT/PF related to the concept study (*Attachment A*) and comments on the *Gambell Street Redevelopment and Implementation Plan* provided by Stephanie Mormilo from the Municipality of Anchorage in an email dated June 28th, 2013 (*Attachment B*).

BACKGROUND

The *Gambell Street Redevelopment and Implementation Plan* was developed in order to identify and evaluate improvements for Gambell Street that would improve the corridor's safety, efficiency, appearance, and pedestrian business friendliness. The Plan was developed based on extensive public involvement through the summer of 2013 and input from a Project Management Team (PMT), including representation from the Fairview Business Association (FBA), Municipality of Anchorage (MOA), Fairview Community Council (FVCC), and Municipal Light and Power (ML&P). The final plan is provided in *Attachment C*. A key component of the plan is the conversion of Gambell Street from 4 to 3

lanes between 3rd and 15th Avenue in order to improve pedestrian safety and the streetscape of the roadway, as shown in Exhibit 1.

Exhibit 1: Preferred Streetscape Cross-Section Alternative



Advantages of the preferred cross-section include:

- Provides snow storage in 3.5 foot shoulders and the portion of sidewalks closest to the curb allowing adequate pedestrian connectivity and utilization of all three vehicular travel lanes during winter time conditions versus the 3 out of 4 currently utilized due to the lack of snow storage;
- Maintains long-term flexibility (i.e., conversion to a two-way street with on-street parking as part of the Seward Highway to Glenn Highway Connection project) assuming through traffic is diverted on to a new facility in the future;
- Changes the pedestrian and vehicular environment to better match the needs of the business district, and allows additional aesthetic enhancements to occur along Gambell Street; and

- Provides sufficient space for pedestrians year round, addresses ADA deficiencies, eliminates splash conflicts with outside vehicular lanes, and reduces crossing distances and exposure for pedestrians, bicycles, and vehicles.

Additional analysis was conducted to assess the impact of the conversion on vehicular capacity, which is recorded in the memo *Gambell Street Redevelopment Plan: Preferred Alternative and Analysis (Attachment D).* This memo discusses the impact of the conversion on intersection operations, roadway speeds, lane usage, roadway consistency, and access management. It concludes that Gambell Street can operate effectively with a three-lane cross section under both existing and future (2035) conditions without the Seward/Glenn Highway connection, provided that an exclusive left-turn lane is provided at 15th Avenue.

AGENCY RESPONSE

The following sections include a summary of the comments received from the ADOT/PF and MOA and the actions taken or responses to the specific issues identified. Responses to these comments are highlighted in ***blue italics***.

Alaska Department of Transportation and Public Facilities

The DOT/PF provided comments on the 4 to 3 lane conversion concept in a letter from Kenneth Morton, dated July 9, 2013. The letter recommended a process for concept studies by DOT/PF, which includes the following steps:

1. Obtain Municipal support for the concept and related studies - ***Members of the Gambell Street PMT successfully presented the 4 to 3 lane conversion concept to the Assembly during its work session on September 6, 2013. The Assembly will vote on a resolution to adopt the concept during its meeting on September 24, 2013.***
2. Determine if ML&P supports significant changes to transmission lines. ***Members of the Gambell Street PMT met with ML&P to discuss the undergrounding of the utility poles on Gambell Street as part of the 4 to 3 lane conversion. ML&P is open to supporting the undergrounding and working with the project team to refine the cost estimates of undergrounding.***
3. Provide a review section in the concept study covering AMATS MTP consistency. ***The project team has introduced the concept to the technical and policy committee. The intention is to move the project into the MTP in fall 2013 as AMATS works to update the plan.***
4. Provide a signed "planning consistency and certification" page. ***The project team will move forward with obtaining a signed "planning consistency and certification" page post the September 24, 2013 Assembly meeting.***
5. If the traffic studies are accepted by DOT/PF, this would launch permitting and an agreement towards any plan for design, construction, and maintenance. ***Updated materials (including this memo) presenting the 4 to 3 lane conversion will be presented to the DOT/PF for approval following the Assembly meeting.***

The DOT/PF raised the following questions about the 4 to 3 lane conversion (responses provided in ***blue italic*** text):

- How long does a 4 to 3 lane conversion perform when projecting from now to 2035? ***The memo "Gambell Street Redevelopment Plan: Preferred Alternative and Analysis" analyzes the impacts of converting Gambell street from 4 to 3 lanes between 3rd and 15th Avenue. It includes an assessment of intersection operations on the corridor for existing and 2035 conditions. The 2035 traffic volumes were developed based on historical growth and the 2035 Metropolitan Transportation Plan (MTP) projections in the "no build" model, which assumes no changes to the transportation network. The analysis showed that all intersections operate acceptably with the exception of Gambell St/15th Avenue, which can be mitigated with the addition of a southbound left-turn lane. The memo also discusses the potential impacts to roadway speeds and lane usage with the conversion, with the conclusion that neither will be significantly impacted. The conversion provides the advantages of improved roadway consistency with the intersection at Fireweed Lane (which currently has an exclusive left-turn trap lane and three southbound lanes beyond the intersection) and improved winter conditions. In addition, a comparison of Gambell Street to similar three-lane roadways in the vicinity of the corridor show that there are several one-way streets with similar or higher traffic volumes than Gambell Street would see based upon the adopted 2035 MTP. (see page 9).***
    - How long if the Seward/Glenn Highway is not connected until 2035? ***The assumption for our analysis was the no-build option which means it did not include the Seward/Glenn Highway connection. As such, the Gambell Street corridor under the proposed 3-lane section will continue to work through the 2035 planning horizon. If the Seward/Glenn Highway connection is constructed, then the volumes on Gambell Street will decrease, which will improve the operations of the corridor. Therefore, the analysis assumed a conservative scenario.***
    - How long does it perform if Ingra/Gambell is extended north to KABATA? ***The plan for the implementation of the extension of KABATA to the Gambell/Ingra corridor is based upon the completion of the Glenn/Seward highway connection. Even as a four-lane section, Gambell Street cannot serve the anticipated increase in volumes associated with KABATA and therefore a new north-south connection will be necessary. To this point, both the MTP and KABATA recognize that the KABATA connection cannot be made until the Glenn/Seward Highway connection is completed, which will reduce the volumes on Gambell Street (thus improving operations).***
- What are the utility impacts and planning level cost estimates? ***Planning-level cost estimates for the 4 to 3 lane conversion are included in the Implementation section of the "Gambell Street Redevelopment and Implementation Plan" in Table 6, starting on page 58. The undergrounding of the utilities is estimated at $9,000,000 and the Gambell Street***

Redevelopment Plan 4- to 3-Lane Conversion Project is estimated at $11,500,000, which includes the upgrading of the storm drain system and minor utility work. The plan recommends implementing these projects, as well as a Pedestrian Scale Lighting Demonstration Project, as part of the resurfacing project funded for Ingra and Gambell. Implementing these projects together saves costs and unnecessary prolonged impacts to residents, business, local and statewide freight movement, and the traveling public.

- Will ML&P support the project through relocation or undergrounding? ***ML&P served on the PMT for the Gambell Street project and was consulted throughout the development of the Redevelopment and Implementation Plan. ML&P has a five-year-plan for the "removal of non-conforming overhead lines in accordance with MOA Title 21.90." Title 21.90 quires Anchorage utilities to spend 2% of a three-year rolling average of the utility's annual gross retail revenues derived from utility service connections to undergrounding existing overhead lines. Gambell Street between 3rd and 16th Avenue is listed in the plan as a future project consideration.***
- Will the storm drain system require a replacement or modification? ***The portion of the storm drain on Gambell Street from 10th Avenue to 11th Avenue is owned by the MOA, with the rest in the DOT ownership. The MOA section of the storm drain system flows west to Cordova Street and then south and west to A Street. The storm drains would have to be relocated with the 4 to 3 lane conversion, but there are no major concerns associated with the storm drain system relocation.***

Municipality of Anchorage

Stephanie Mormilo provided comments on the draft *Gambell Street Redevelopment and Implementation Plan* via an email on June 28th, 2013. Her comments were incorporated in to final plan provided in *Attachment C.* Individual responses to her comments are recorded below (in ***blue italic*** text).

- Overall - While the concept of converting Gambell Street from 4 to 3 lanes sounds appealing due to the amenities it will provide, I am hesitant to agree with the findings without further analysis. There are too many "what-if's" related to the proposed major transportation connections within the MTP that could significantly impact this corridor and once a lane of traffic is removed, there is no going back. This project needs to be added to the MTP model to evaluate the impacts to the overall transportation system within the Municipality. It also needs to be ranked with all of the other projects so that it is being accurately compared and evaluated for funding. ***The memo "Gambell Street Redevelopment Plan: Preferred Alternative and Analysis" provides additional analysis on the 4 to 3 lane concept. The project team recognizes the uncertainty on the corridor related to the proposed major transportation connections within the MTP. Therefore, the analysis took a conservative approach and assessed operations on the corridor based on***

the 2035 "no build" MTP model which shows an average annual growth rate for traffic volumes on Gambell of about 1%. The ultimate Glenn/Seward Highway connection improvements envisioned for the area in the 2035 "build" MTP model show a significant reduction in traffic volumes along Gambell Street. These improvements include a phased-approach to the Seward/Glenn Highway Connection, starting at the southern end of the Seward Highway. The first and second phases of the project address congestion at 36th Avenue and in Midtown. Given that Gambell Street is a southbound facility and is metered from the Fifth and Sixth Avenue signals, these improvements are not anticipated to substantially increase traffic volumes along Gambell Street. Improvements between 36th Avenue and Chester Creek would allow traffic to move more freely south of 15th Avenue by relieving bottlenecks along Seward Highway. The only improvement the project team envisions creating a capacity issue on Gambell Street is the construction of KABATA without the Glenn/Seward Highway Connection which, as noted previously, is infeasible given that even a four-lane section could not support the traffic volumes anticipated from KABATA. As a result, KABATA will necessitate the Seward/Glenn Highway Connection being in place which allows the Gambell Street conversion from 4 to 3 lanes to occur without creating a near- and long-term bottleneck scenario.

The project team has introduced the 4 to 3 lane concept to the AMATS technical and policy committee. The intention is to move the project in to the MTP this fall as AMATS works to update the plan.

- Page 9 - Please remove my name from the Project Management Team (PMT) roster. I have had little to no involvement in the development of this project and was never asked to be a member of the PMT. ***Change made.***
- Page 17 - Table 2 - Please include an objective that evaluates the life of the project. Is this proposed solution something that will be successful in meeting the mobility, access, safety and livability goals for 5 years? 10 years? 20 years? ***Objective added under goal of mobility: "Enhance current and future operations on the corridor (projecting through 2035)." (page 20)***
- Page 30 - Figure 3 - Volumes are difficult to read on the aerial photo. Please consider fading the aerial. ***Change made.***
- Page 47 - CE-6: Enhanced pedestrian crossings - Our standard for markings is inlaid Methylmethacrylate markings, not thermoplastic. Traffic does not support marking or providing flashers at unsignalized locations. While each intersection is a legal crossing location within the Municipality, due care should still be taken by pedestrians. In our experience, markings and signals at uncontrolled locations give the pedestrians a false sense of security that they have the ROW and that vehicles will stop. ***MOA standard for Methylmethacrylate markings noted in the plan. Plan notes that adding pedestrian signals or flashers would "require further study and coordination with local agencies". (page 51)***

- Page 50 - AE-1: Gateway treatment - Traffic does not support a gateway feature that overhangs the public ROW. We have concerns with visual impacts/distractions from the traffic control devices, conflicts with oversized vehicles, and a fear that people will climb the feature as this happens quite frequently with other existing artistic pieces throughout the Municipality. ***Image showing gateway feature overhanging the public ROW removed. Plan notes that "Care should be taken to ensure that any gateway features do not distract from the traffic control devices, conflict with oversized vehicles, or provide other safety hazards. The gateway treatment should be refined as part of the final design and permitting process." (page 53)***
- Page 51 - AE-4: Landscaping Treatments - Any landscaping considered for the roadside needs to be thoroughly evaluated. It will be an impediment for snow storage/removal and the likelihood of survival is very low due to harsh environment. ***Text added to specify that "any landscaping considered for the roadside needs to be thoroughly evaluated ensuring that it does not impede snow storage or removal." (page 54)***

NEXT STEPS

Next steps for the project include:

- Endorsement of conceptual Gambell Redevelopment Plan by Assembly
- Provision of information requested by DOT Ken Morton letter *(via this memorandum)*
- Refinement of traffic engineering by MTP and DOT
- Cost estimate for undergrounding utilities and storm drains
- Coordination with DOT repaving of Gambell in 2015
- Incorporation of plan into Fairview Community Plan
- Adoption of Fairview Community Plan by MOA

ATTACHMENTS:

A: Letter from Alaska Department of Transportation and Public Facilities (DOT/PF)

B: Comments from Stephanie Mormilo (Municipality of Anchorage)

C: Gambell Street Redevelopment and Implementation Plan

D: Gambell Street Redevelopment Plan: Preferred Alternative and Analysis

THE STATE of ALASKA
GOVERNOR SEAN PARNELL

Department of Transportation and Public Facilities

DESIGN & ENGINEERING SERVICES
Preconstruction Engineer's Office

PO Box 196900
Anchorage, Alaska 99519-6900
Phone: 907.269.0588
Toll Free: 800.770.5263
TDD: 907.269.0473
TTY: 800.770.8973
Fax: 907.243.4409

July 9, 2013

Mr. Paul Fuhs
Fairview Business Association
319 E 11th Ave
Anchorage, AK 99501

Dear Mr. Fuhs:

Thank you for meeting to discuss a process for concept studies by DOT/PF. The following process is recommended:

1. Obtain Municipal support for the concept and related studies
2. Determine if ML&P supports significant changes to the transmission lines.
3. Provide a review section in the concept study covering AMATS MTP consistency.
4. Provide a signed "planning consistency and certification" page.
5. If the traffic studies are accepted by DOT/PF, this would launch permitting and an agreement towards any plan for design, construction, and maintenance.

DOT/PF supports performing a detailed analysis of a 4 lane to 3 lane conversion. This appears to produce benefits to sidewalks, shoulders, and maintenance under today's traffic conditions. However, at 21,000 vehicles per day, Gambell Street appears to be nearing estimated capacity limits leaving little room for growth. We are very concerned about traffic growth during the stages of implementing the MTP. Without the Seward and Glenn Highway connection in place, traffic could rise to more than 30,000 vehicles per day. This would appear to necessitate retaining four lanes.

The questions we will want to see addressed in our review process include:

- How long does a 4 to 3 lane conversion perform when projecting from now to 2035?
  - How long if the Seward/Glenn Highway is not connected until 2035?
  - How long does it perform if Ingra/Gambell is extended north to KABATA?

- What are the utility impacts and planning level cost estimates?
  - Will ML&P support the project through relocation or undergrounding?
  - Will the storm drain system require a replacement or a modification?

Please coordinate all DOT/PF review meetings, documents, and comments through Bart Rudolph, AMATS Area Planner. He can be reached at 269-0515 or bart.rudolph@alaska.gov.

Sincerely,

Kenneth M. Morton, P.E.
Regional Preconstruction Engineer

cc: Jennifer Witt, Chief, Planning & Administration
Ken Morton, Regional Preconstruction Engineer
Alan Hartig, ROW Permits Supervisor, Right of Way Section
Scott Thomas, DOT/PF Traffic & Safety Engineer
Stephanie Mormillo, P.E., Municipal Traffic Engineer

From: Mormilo, Stephanie L. [mailto:MormiloSL@ci.anchorage.ak.us]
Sent: Friday, June 28, 2013 4:11 PM
To: Engel, Jordan/ANC
Cc: Bunnell Kristine
Subject: Comments on Gambell St Redevelopment and Implementation Plan

Hi, Jordan.

Here are my comments on the Gambell Street Redevelopment and Implementation Plan:

Overall - While the concept of converting Gambell Street from 4 to 3 lanes sounds appealing due to the amenities it will provide, I am hesitant to agree with the findings without further analysis. There are too many "what-if's" related to the proposed major transportation connections within the MTP that could significantly impact this corridor and once a lane of traffic is removed, there is no going back. This project needs to be added to the MTP model to evaluate the impacts to the overall transportation system within the Municipality. It also needs to be ranked with all of the other projects so that it is being accurately compared and evaluated for funding.

Page 9 - Please remove my name from the Project Management Team (PMT) roster. I have had little to no involvement in the development of this project and was never asked to be a member of the PMT.

Page 17 - Table 2 - Please include an objective that evaluates the life of the project. Is this proposed solution something that will be successful in meeting the mobility, access, safety and livability goals for 5 years? 10 years? 20 years?

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Page 50 - AE-1: Gateway treatment - Traffic does not support a gateway feature that overhangs the public ROW. We have concerns with visual impacts/distractions from the traffic control devices, conflicts with oversized vehicles, and a fear that people will climb the feature as this happens quite frequently with other existing artistic pieces throughout the Municipality.

Page 51 - AE-4: Landscaping Treatments - Any landscaping considered for the roadside needs to be thoroughly evaluated. It will be an impediment for snow storage/removal and the likelihood of survival is very low due to harsh environment.

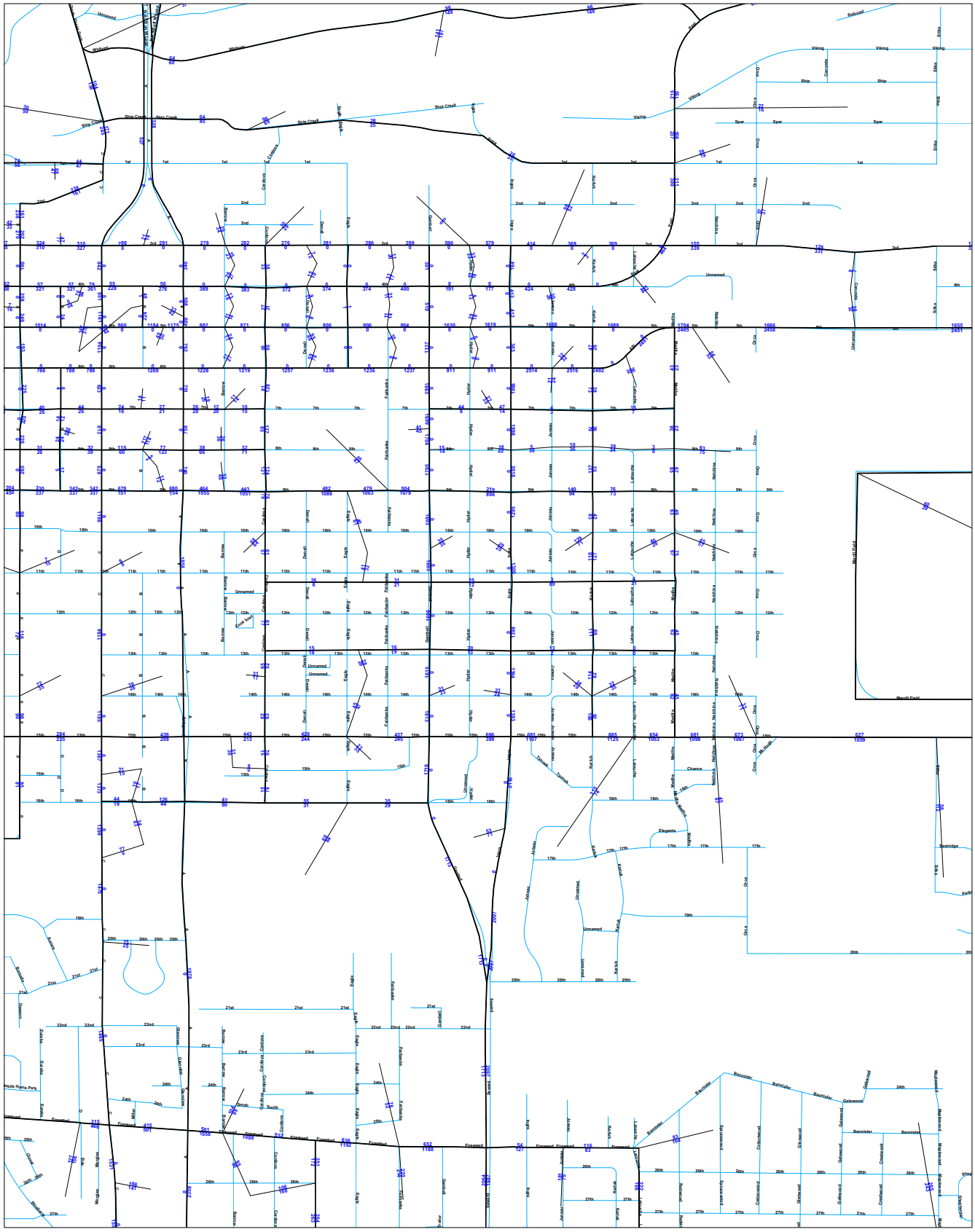
Please let me know if you have any questions.
Thank you for the opportunity to provide comments.

Regards,
Stephanie

Stephanie Mormilo, P.E.
Municipal Traffic Engineer
MOA Traffic Division, Public Works Department
4700 Elmore Road, 2nd Floor | Anchorage, AK 99507
907-343-8406 (main) | 907-343-8070 (direct)

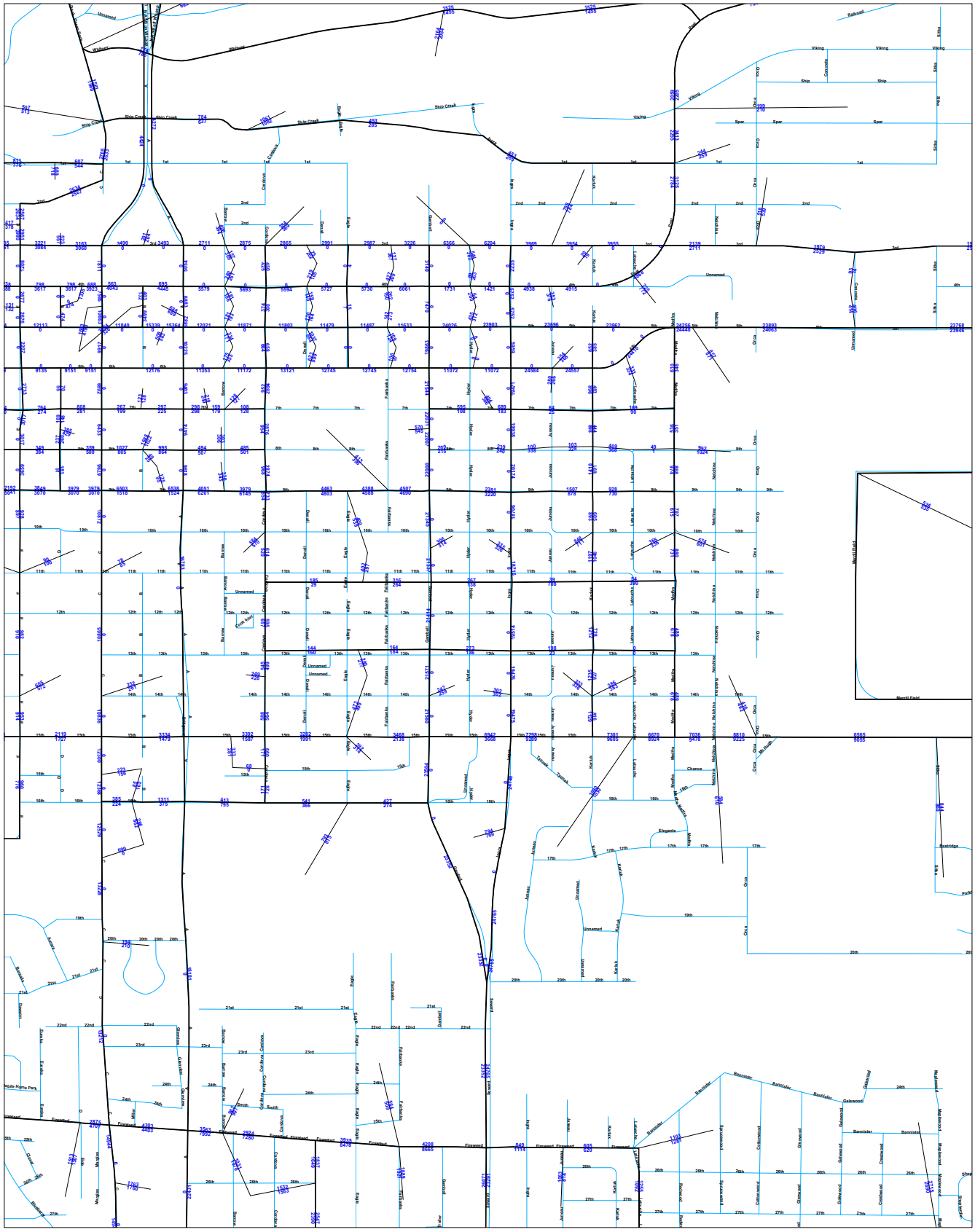
Appendix C Model Outputs

Project #17352 Gambell Street - Year 2007 Base Year Model
PM Peak Hour Volume



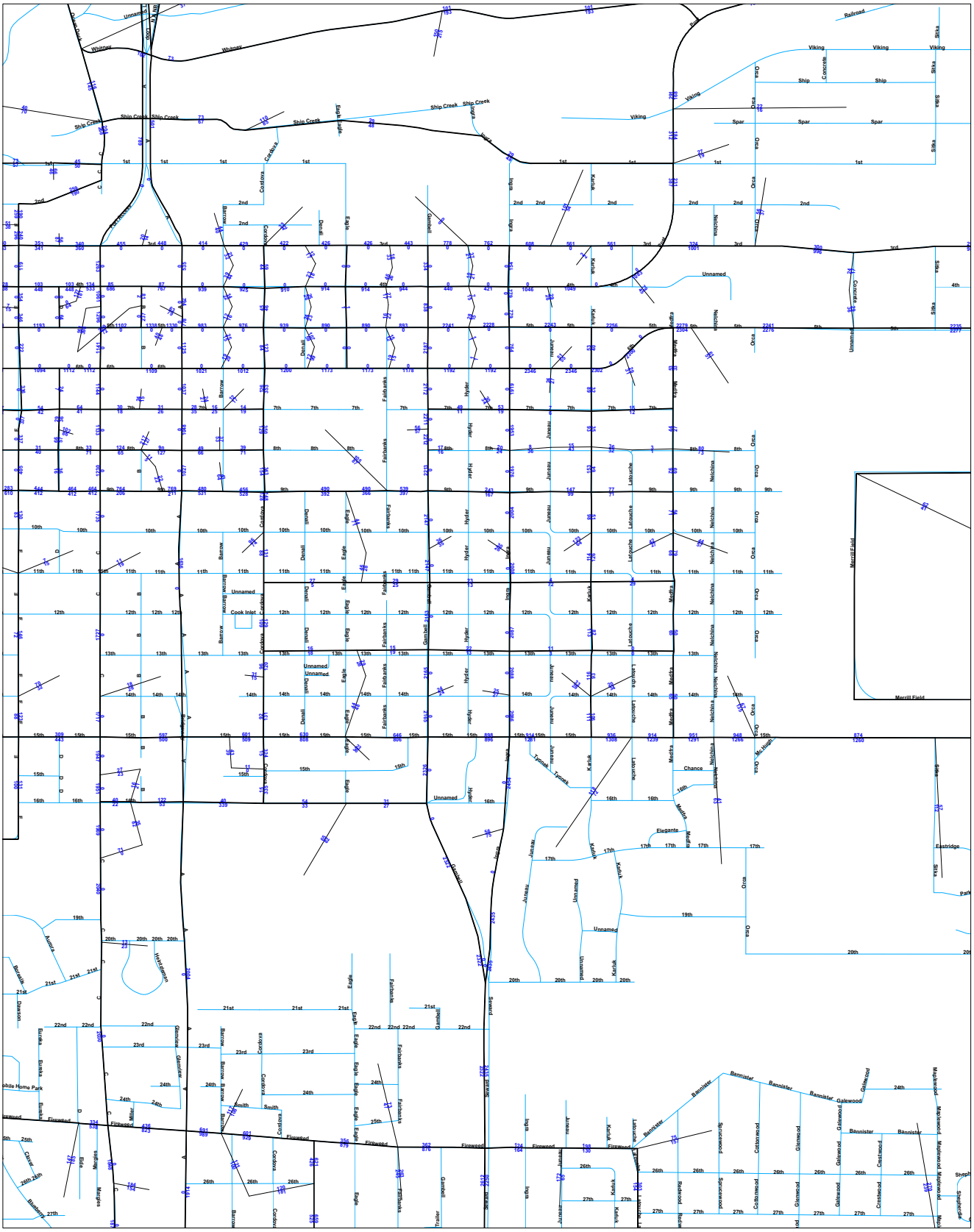
2014/04/16

Project #17352 Gambell Street - Year 2007 Base Year Model
Daily Volume

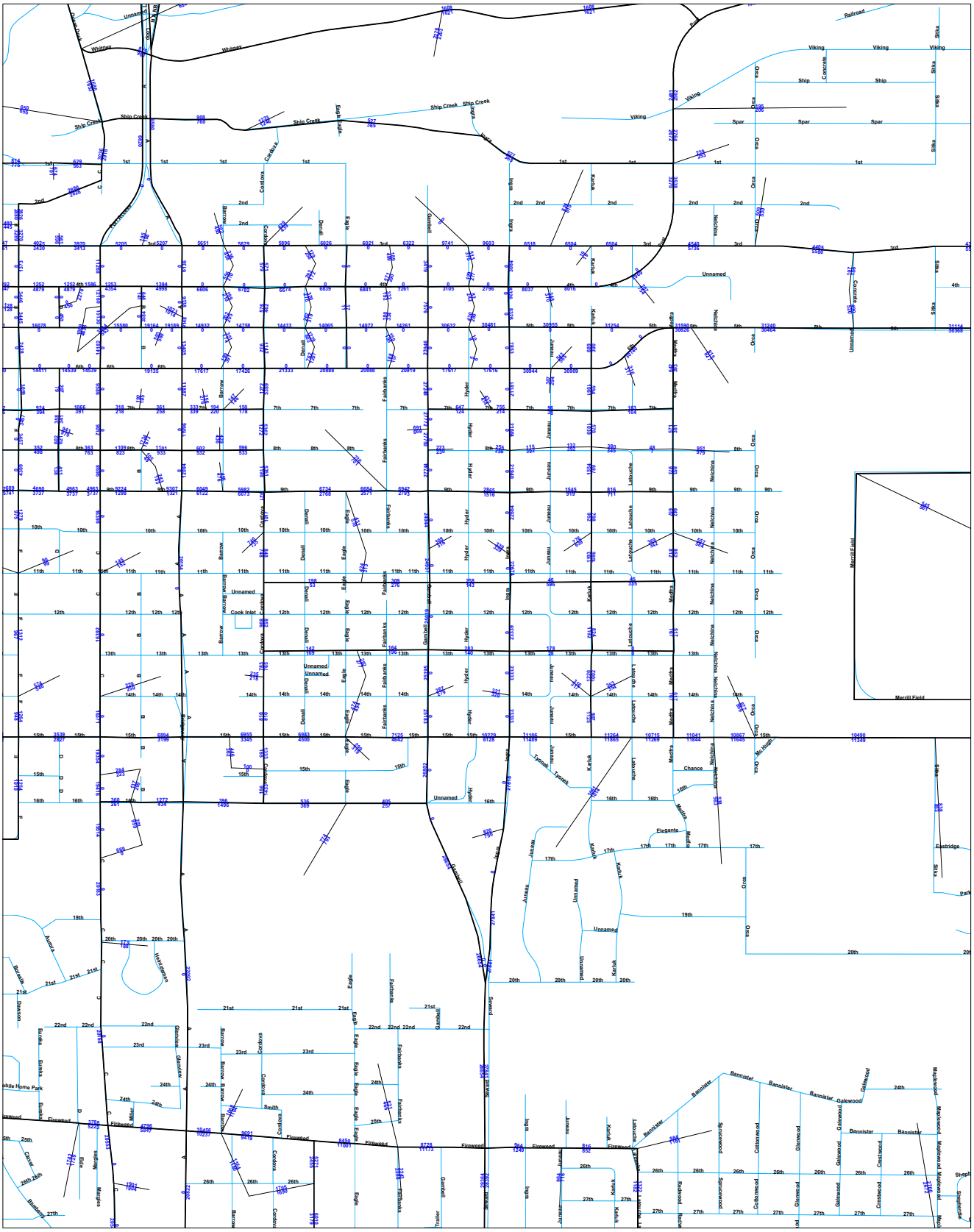


2014/04/16

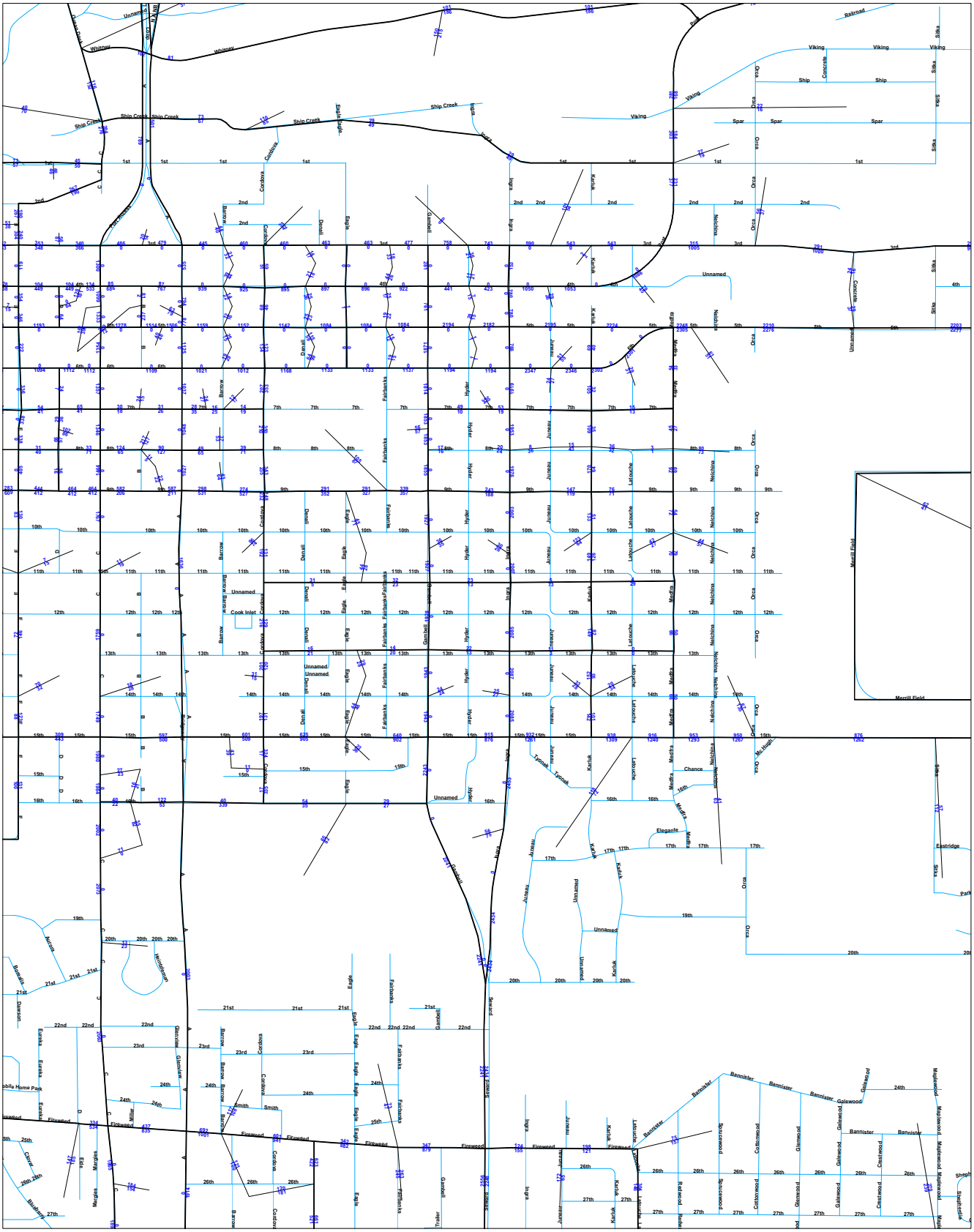
Project #17352 Year 2025 No Build Model - 4 Lanes on Gambell Street
PM Peak Hour Volume



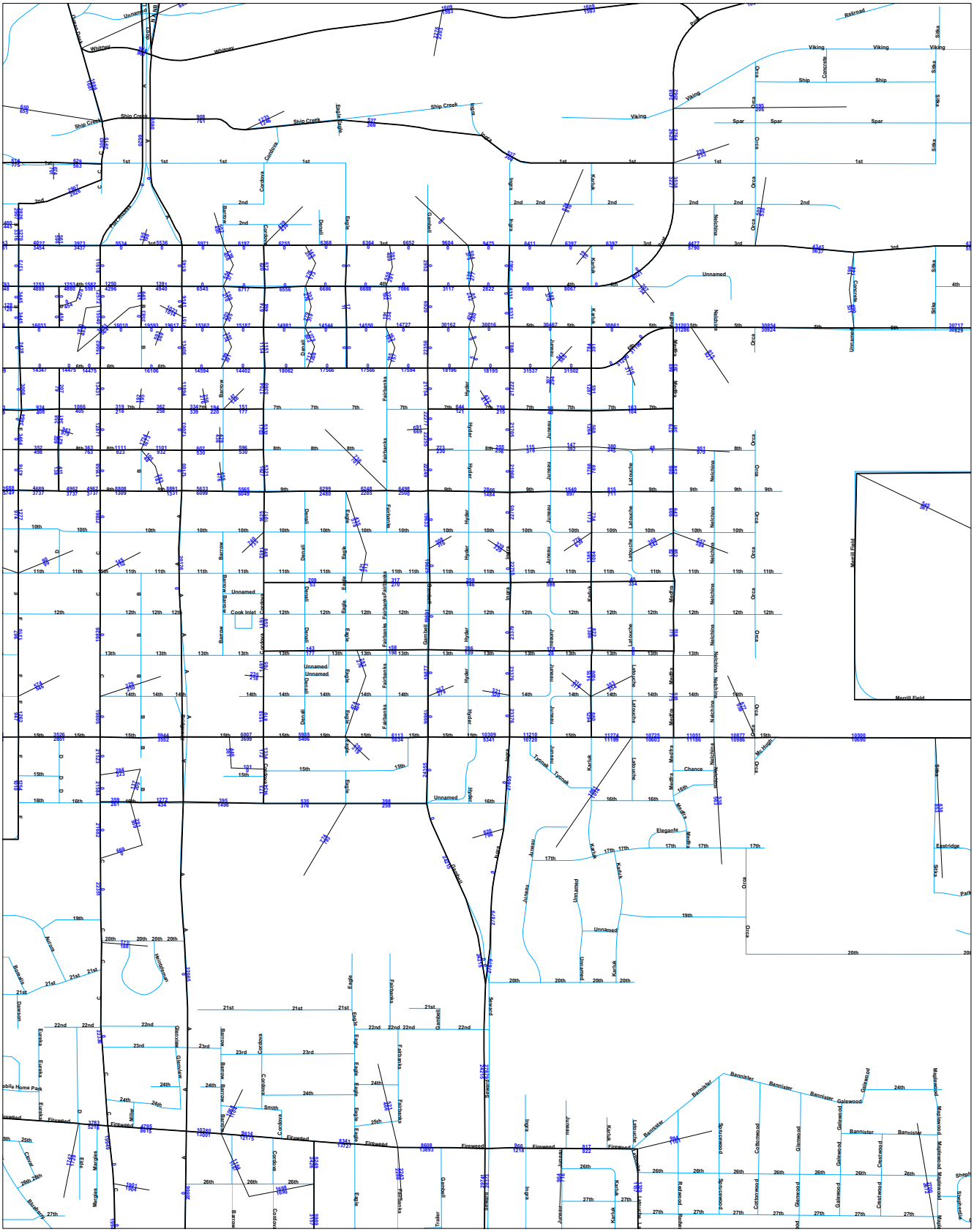
Project #17352 Year 2025 No Build Model - 4 Lanes on Gambell Street
Daily Volume



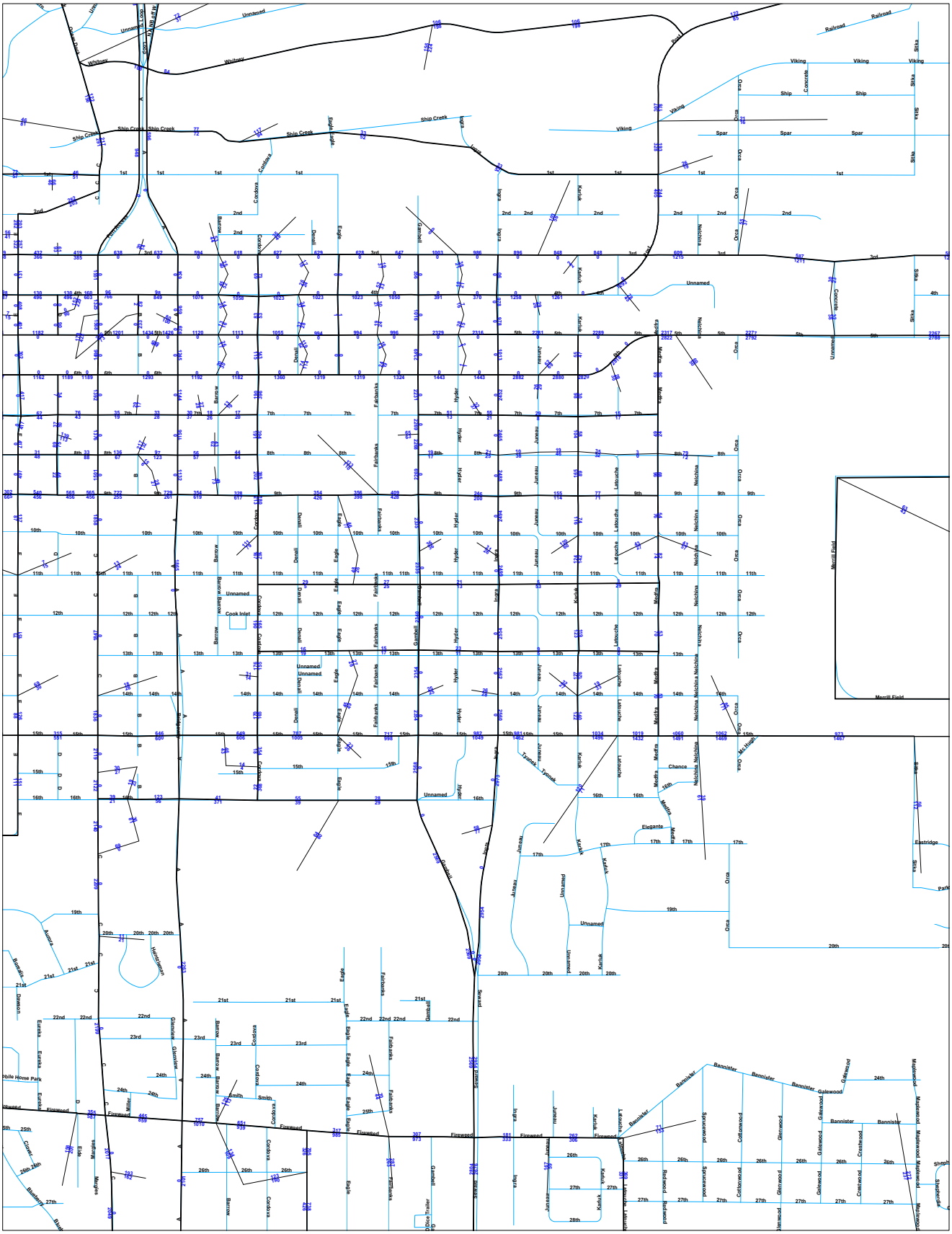
Project #17352 Year 2025 Base Model - 3 Lanes on Gambell Street
PM Peak Hour Volume



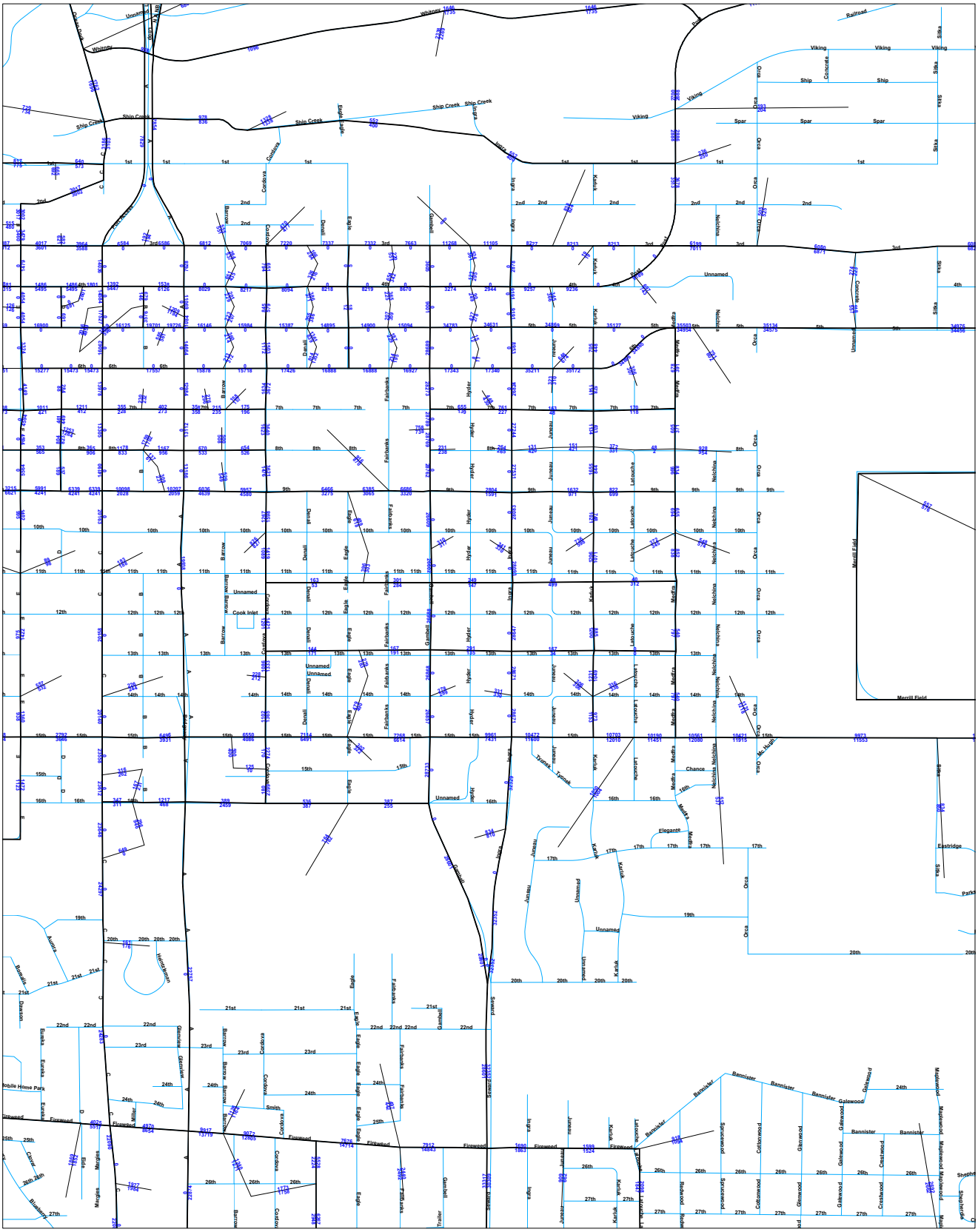
Project #17352 Year 2025 Base Model - 3 Lanes on Gambell Street
Daily Volume



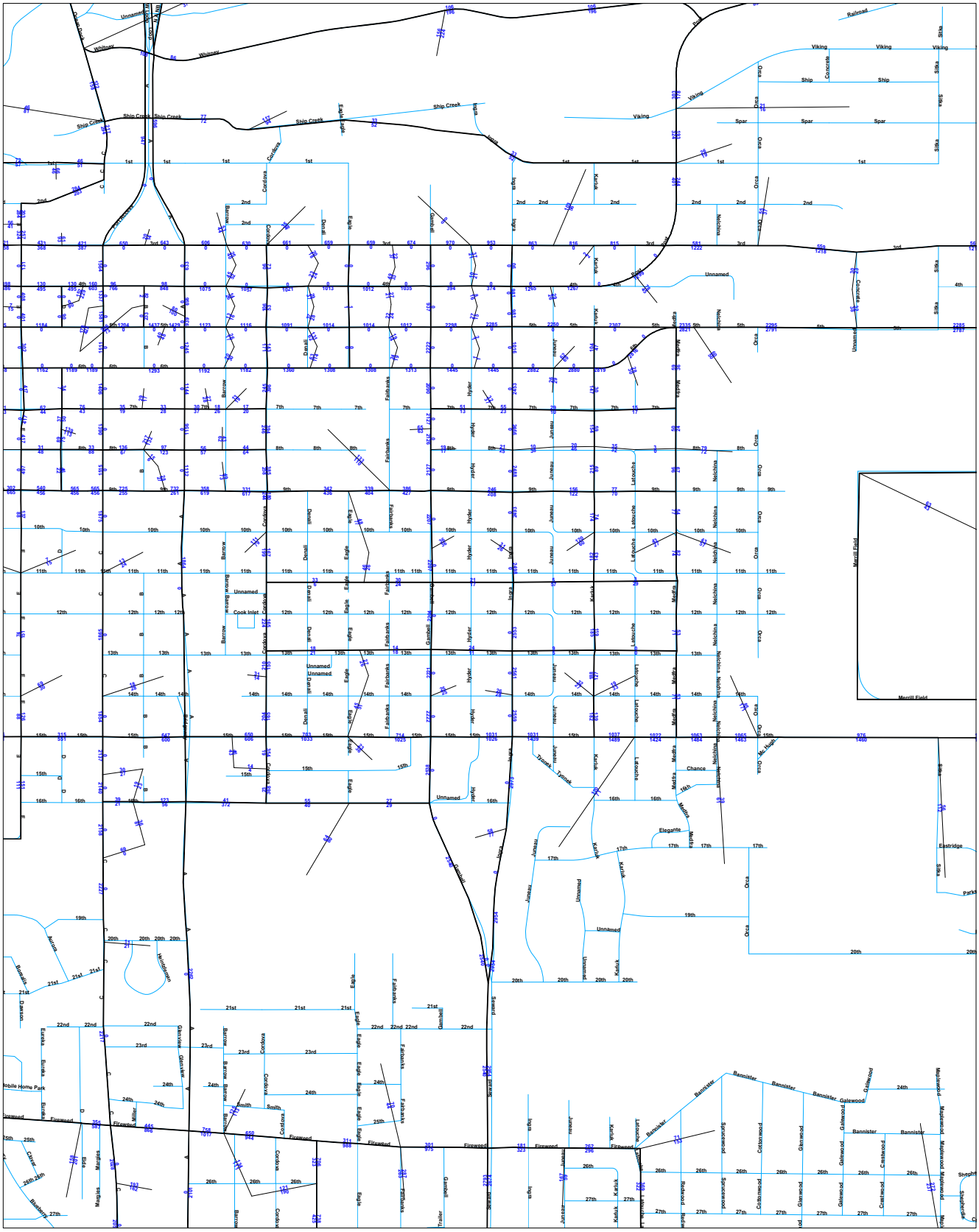
Project #17352 Year 2035 No Build Model - 4 Lanes on Gambell Street
PM Peak Hour Volume



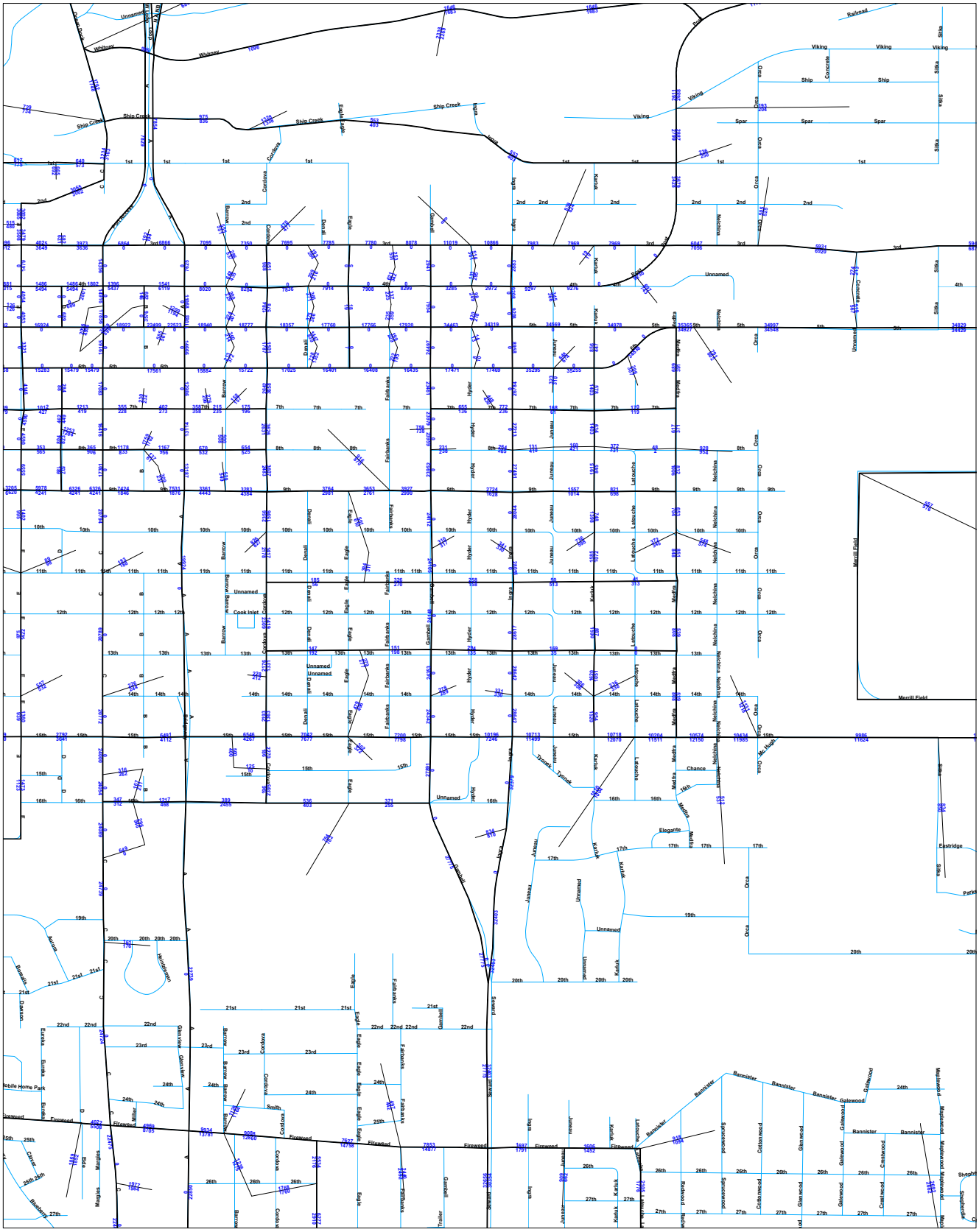
Project #17352 Year 2035 No Build Model - 4 Lanes on Gambell Street
Daily Volume



Project #17352 Year 2035 Base Model - 3 Lanes on Gambell Street
PM Peak Hour Volume



Project #17352 Year 2035 Base Model - 3 Lanes on Gambell Street
Daily Volume



Appendix D Existing Traffic Counts

Municipality of Anchorage
Traffic Department
Gambell & 4th
AM Peak

Weather: Sunny
Counters: 3024,3025
Counted By: JE,TF

File Name : Gambell & 4th-AM
Site Code : 05251001
Start Date : 5/25/2010

Groups Printed- Unshifted

	Gambell Southbound					4th Street Westbound					Gambell Northbound					4th Street Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
07:00 AM	0	40	1	2	43	0	0	0	2	2	0	0	0	0	0	10	37	0	1	48	93
07:15 AM	0	48	2	0	50	0	0	0	1	1	0	0	0	0	0	22	41	0	1	64	115
07:30 AM	0	55	0	4	59	0	0	0	3	3	0	0	0	1	1	13	42	0	2	57	120
07:45 AM	0	77	3	5	85	0	0	0	10	10	0	0	0	8	8	32	65	0	10	107	210
Total	0	220	6	11	237	0	0	0	16	16	0	0	0	9	9	77	185	0	14	276	538
08:00 AM	0	82	1	8	91	0	0	0	8	8	0	0	0	11	11	29	59	0	11	99	209
08:15 AM	0	52	1	3	56	0	0	0	5	5	0	0	0	0	0	26	44	0	4	74	135
08:30 AM	0	61	0	6	67	0	0	0	4	4	0	0	0	0	0	24	54	0	4	82	153
08:45 AM	0	64	0	15	79	0	0	0	6	6	0	0	0	2	2	22	53	0	5	80	167
Total	0	259	2	32	293	0	0	0	23	23	0	0	0	13	13	101	210	0	24	335	664
Grand Total	0	479	8	43	530	0	0	0	39	39	0	0	0	22	22	178	395	0	38	611	1202
Apprch %	0.0	90.4	1.5	8.1		0.0	0.0	0.0	100.0		0.0	0.0	0.0	100.0		29.1	64.6	0.0	6.2		
Total %	0.0	39.9	0.7	3.6	44.1	0.0	0.0	0.0	3.2	3.2	0.0	0.0	0.0	1.8	1.8	14.8	32.9	0.0	3.2	50.8	

	Gambell Southbound					4th Street Westbound					Gambell Northbound					4th Street Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour From 07:00 AM to 08:45 AM - Peak 1 of 1																					
By Approach	07:45 AM					07:45 AM					07:15 AM					07:45 AM					
Volume	0	272	5	22	299	0	0	0	27	27	0	0	0	20	20	111	222	0	29	362	
Percent	0.0	91.0	1.7	7.4		0.0	0.0	0.0	100.0		0.0	0.0	0.0	100.0		30.7	61.3	0.0	8.0		
High Int.	08:00 AM					07:45 AM					08:00 AM					07:45 AM					
Volume	0	82	1	8	91	0	0	0	10	10	0	0	0	11	11	32	65	0	10	107	
Peak Factor					0.821					0.675					0.455					0.846	

Municipality of Anchorage
Traffic Department
Gambell & 4th
Mid Peak

Weather: Sunny
Counters: 3024,3025
Counted By: JE,TF

File Name : Gambell & 4th-Mid
Site Code : 05241002
Start Date : 5/24/2010
Page No : 1

Groups Printed- Unshifted

	Gambell Southbound					4th Street Westbound					Gambell Northbound					4th Street Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
11:00 AM	0	89	1	5	95	0	0	0	3	3	0	0	0	6	6	54	52	0	12	118	222
11:15 AM	1	76	2	10	89	0	0	0	4	4	0	0	0	9	9	48	71	0	22	141	243
11:30 AM	0	78	2	11	91	0	0	0	16	16	0	0	0	8	8	54	82	0	14	150	265
11:45 AM	0	95	3	13	111	0	0	0	20	20	0	0	0	5	5	44	105	0	8	157	293
Total	1	338	8	39	386	0	0	0	43	43	0	0	0	28	28	200	310	0	56	566	1023
12:00 PM	0	92	0	9	101	0	0	0	4	4	0	0	0	9	9	75	86	0	17	178	292
12:15 PM	0	99	4	11	114	0	0	0	12	12	0	0	0	20	20	56	83	0	28	167	313
12:30 PM	0	95	6	14	115	0	0	0	15	15	0	0	0	20	20	59	89	0	28	176	326
12:45 PM	0	92	1	12	105	0	0	0	11	11	0	0	0	13	13	48	98	0	23	169	298
Total	0	378	11	46	435	0	0	0	42	42	0	0	0	62	62	238	356	0	96	690	1229
Grand Total	1	716	19	85	821	0	0	0	85	85	0	0	0	90	90	438	666	0	152	1256	2252
Apprch %	0.1	87.2	2.3	10.4		0.0	0.0	0.0	100.0		0.0	0.0	0.0	100.0		34.9	53.0	0.0	12.1		
Total %	0.0	31.8	0.8	3.8	36.5	0.0	0.0	0.0	3.8	3.8	0.0	0.0	0.0	4.0	4.0	19.4	29.6	0.0	6.7	55.8	

	Gambell Southbound					4th Street Westbound					Gambell Northbound					4th Street Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour From 11:00 AM to 12:45 PM - Peak 1 of 1																					
By Approach	11:45 AM					11:30 AM					12:00 PM					12:00 PM					
Volume	0	381	13	47	441	0	0	0	52	52	0	0	0	62	62	238	356	0	96	690	
Percent	0.0	86.4	2.9	10.7		0.0	0.0	0.0	100.0		0.0	0.0	0.0	100.0		34.5	51.6	0.0	13.9		
High Int.	12:30 PM					11:45 AM					12:15 PM					12:00 PM					
Volume	0	95	6	14	115	0	0	0	20	20	0	0	0	20	20	75	86	0	17	178	
Peak Factor					0.959					0.650					0.775					0.969	

Municipality of Anchorage
Traffic Department
Gambell & 4th
PM Peak

Weather: Sunny
Counters: 3024,3025
Counted By: JE,TF

File Name : Gambell & 4th-PM
Site Code : 05241003
Start Date : 5/24/2010
Page No : 1

Groups Printed- Unshifted

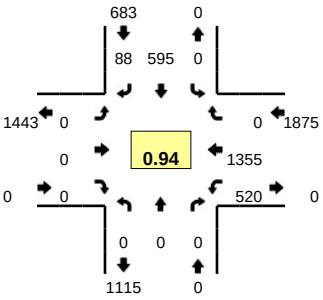
	Gambell Southbound					4th Street Westbound					Gambell Northbound					4th Street Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
04:00 PM	0	126	1	3	130	0	0	0	12	12	0	0	0	2	2	57	115	0	12	184	328
04:15 PM	0	122	0	6	128	0	0	0	2	2	0	0	0	7	7	70	124	0	17	211	348
04:30 PM	0	134	1	6	141	0	0	0	4	4	0	0	0	8	8	67	189	0	13	269	422
04:45 PM	0	131	4	11	146	0	0	0	6	6	0	0	0	6	6	74	142	0	7	223	381
Total	0	513	6	26	545	0	0	0	24	24	0	0	0	23	23	268	570	0	49	887	1479
05:00 PM	0	147	1	7	155	0	0	0	6	6	0	0	0	3	3	72	187	0	11	270	434
05:15 PM	0	98	2	5	105	0	0	0	5	5	0	0	0	3	3	38	188	0	10	236	349
05:30 PM	0	81	0	1	82	0	0	0	1	1	0	0	0	0	0	58	148	0	5	211	294
05:45 PM	0	81	1	0	82	0	0	0	0	0	0	0	0	3	3	44	118	0	5	167	252
Total	0	407	4	13	424	0	0	0	12	12	0	0	0	9	9	212	641	0	31	884	1329
Grand Total	0	920	10	39	969	0	0	0	36	36	0	0	0	32	32	480	1211	0	80	1771	2808
Apprch %	0.0	94.9	1.0	4.0		0.0	0.0	0.0	100.0		0.0	0.0	0.0	100.0		27.1	68.4	0.0	4.5		
Total %	0.0	32.8	0.4	1.4	34.5	0.0	0.0	0.0	1.3	1.3	0.0	0.0	0.0	1.1	1.1	17.1	43.1	0.0	2.8	63.1	

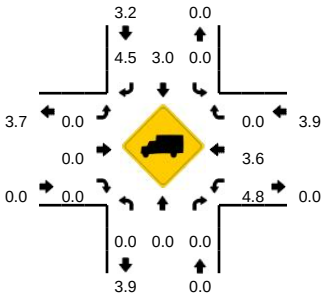
	Gambell Southbound					4th Street Westbound					Gambell Northbound					4th Street Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour From 04:00 PM to 05:45 PM - Peak 1 of 1																					
By Approach	04:15 PM					04:00 PM					04:15 PM					04:30 PM					
Volume	0	534	6	30	570	0	0	0	24	24	0	0	0	24	24	251	706	0	41	998	
Percent	0.0	93.7	1.1	5.3		0.0	0.0	0.0	100.0		0.0	0.0	0.0	100.0		25.2	70.7	0.0	4.1		
High Int.	05:00 PM					04:00 PM					04:30 PM					05:00 PM					
Volume	0	147	1	7	155	0	0	0	12	12	0	0	0	8	8	72	187	0	11	270	
Peak Factor					0.919					0.500					0.750					0.924	

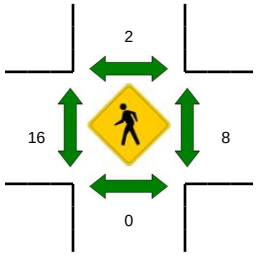
Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

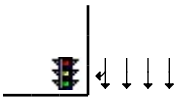
LOCATION: Gambell St -- E 5th Ave | **QC JOB #:** 10955208
CITY/STATE: Anchorage, AK | **DATE:** Tue, May 07 2013

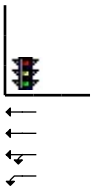
Peak-Hour: 4:20 PM -- 5:20 PM
Peak 15-Min: 4:35 PM -- 4:50 PM

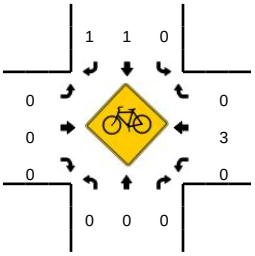


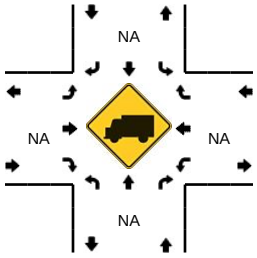


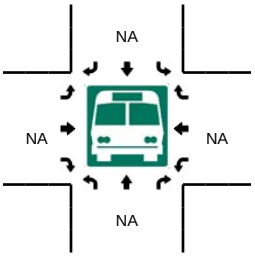












5-Min Count Period Beginning At	Gambell St (Northbound)				Gambell St (Southbound)				E 5th Ave (Eastbound)				E 5th Ave (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	0	0	0	0	38	3	0	0	0	1	0	38	107	0	0	187	
4:05 PM	0	0	0	0	0	61	4	0	0	0	0	0	43	106	0	0	214	
4:10 PM	0	0	0	0	0	49	11	0	0	0	0	0	44	89	0	0	193	
4:15 PM	0	0	0	0	0	47	4	0	0	0	0	0	52	87	0	0	190	
4:20 PM	0	0	0	0	0	32	7	0	0	0	0	0	43	109	0	0	191	
4:25 PM	0	0	0	0	0	48	7	0	0	0	0	0	54	133	0	0	242	
4:30 PM	0	0	0	0	0	64	8	0	0	0	0	0	41	89	0	0	202	
4:35 PM	0	0	0	0	0	66	6	0	0	0	0	0	36	120	0	0	228	
4:40 PM	0	0	0	0	0	42	7	0	0	0	0	0	56	132	0	0	237	
4:45 PM	0	0	0	0	0	48	10	0	0	0	0	0	40	119	0	0	217	
4:50 PM	0	0	0	0	0	48	10	0	0	0	0	0	32	105	0	0	195	
4:55 PM	0	0	0	0	0	30	6	0	0	0	0	0	46	111	0	0	193	2489
5:00 PM	0	0	0	0	0	33	8	0	0	0	0	0	40	104	0	0	185	2487
5:05 PM	0	0	0	0	0	66	9	0	0	0	0	0	43	123	0	0	241	2514
5:10 PM	0	0	0	0	0	58	3	0	0	0	0	0	44	100	0	0	205	2526
5:15 PM	0	0	0	0	0	60	7	0	0	0	0	0	45	110	0	0	222	2558
5:20 PM	0	0	0	0	0	35	1	0	0	0	0	0	35	117	0	0	188	2555
5:25 PM	0	0	0	0	0	34	6	0	0	0	0	0	38	103	0	0	181	2494
5:30 PM	0	0	0	0	0	44	5	0	0	0	0	0	41	92	0	0	182	2474
5:35 PM	0	0	0	0	0	39	3	0	0	0	0	0	46	100	0	0	188	2434
5:40 PM	0	0	0	0	0	44	3	0	0	0	0	0	48	117	0	0	212	2409
5:45 PM	0	0	0	0	0	32	6	0	0	0	0	0	38	90	0	0	166	2358
5:50 PM	0	0	0	0	0	41	6	0	0	0	0	0	49	93	0	0	189	2352
5:55 PM	0	0	0	0	0	35	4	0	0	0	0	0	40	96	0	0	175	2334

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	0	0	0	624	92	0	0	0	0	0	528	1484	0	0	2728
Heavy Trucks	0	0	0		0	28	4		0	0	0		44	40	0		116
Pedestrians		0				0				12				0			12
Bicycles	0	0	0		0	0	0		0	0	0		0	1	0		1
Railroad																	
Stopped Buses																	

Comments:

Report generated on 5/14/2013 12:03 PM

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

Municipality of Anchorage
Traffic Department
Gambell & 6th Avenue
AM Peak

Weather: Sunny
Counter: 2820, 2821
Counted by: JS, CJD

File Name : Am
Site Code : 08231101
Start Date : 8/23/2011
Page No : 1

Groups Printed- Unshifted

	Gambell Southbound					6th Avenue Westbound					Gambell Northbound					6th Avenue Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
07:00 AM	0	203	8	0	211	0	0	0	0	0	0	0	0	0	0	15	147	0	0	162	373
07:15 AM	0	221	11	0	232	0	0	0	0	0	0	0	0	1	1	26	134	0	0	160	393
07:30 AM	0	251	9	3	263	0	0	0	2	2	0	0	0	1	1	27	200	0	0	227	493
07:45 AM	0	249	9	2	260	0	0	0	0	0	0	0	0	0	0	32	167	0	0	199	459
Total	0	924	37	5	966	0	0	0	2	2	0	0	0	2	2	100	648	0	0	748	1718
08:00 AM	0	243	16	0	259	0	0	0	1	1	0	0	0	3	3	29	172	0	0	201	464
08:15 AM	0	244	17	1	262	0	0	0	1	1	0	0	0	1	1	37	152	0	0	189	453
08:30 AM	0	209	20	0	229	0	0	0	3	3	0	0	0	0	0	42	168	0	1	211	443
08:45 AM	0	233	13	2	248	0	0	0	3	3	0	0	0	3	3	39	176	0	0	215	469
Total	0	929	66	3	998	0	0	0	8	8	0	0	0	7	7	147	668	0	1	816	1829
Grand Total	0	1853	103	8	1964	0	0	0	10	10	0	0	0	9	9	247	1316	0	1	1564	3547
Apprch %	0.0	94.3	5.2	0.4		0.0	0.0	0.0	100.0		0.0	0.0	0.0	100.0		15.8	84.1	0.0	0.1		
Total %	0.0	52.2	2.9	0.2	55.4	0.0	0.0	0.0	0.3	0.3	0.0	0.0	0.0	0.3	0.3	7.0	37.1	0.0	0.0	44.1	

	Gambell Southbound					6th Avenue Westbound					Gambell Northbound					6th Avenue Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour From 07:00 AM to 08:45 AM - Peak 1 of 1																					
By Approach	07:30 AM					08:00 AM					08:00 AM					07:30 AM					
Volume	0	987	51	6	1044	0	0	0	8	8	0	0	0	7	7	125	691	0	0	816	
Percent	0.0	94.5	4.9	0.6		0.0	0.0	0.0	100.0		0.0	0.0	0.0	100.0		15.3	84.7	0.0	0.0		
High Int.	07:30 AM					08:30 AM					08:00 AM					07:30 AM					
Volume	0	251	9	3	263	0	0	0	3	3	0	0	0	3	3	27	200	0	0	227	
Peak Factor					0.992					0.667					0.583					0.899	

Municipality of Anchorage
Traffic Department
Gambell & 6th Avenue
Mid Peak

Weather: Sunny
Counter: 2820, 2821
Counted by: JS,CJD

File Name : Mid
Site Code : 08221102
Start Date : 8/22/2011

Groups Printed- Unshifted

	Gambell Southbound					6th Avenue Westbound					Gambell Northbound					6th Avenue Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
11:00 AM	0	211	25	3	239	0	0	0	2	2	0	0	0	5	5	33	181	0	3	217	463
11:15 AM	0	209	21	6	236	0	0	0	1	1	0	0	0	5	5	53	173	0	0	226	468
11:30 AM	0	253	23	5	281	0	0	0	0	0	0	0	0	2	2	55	206	0	1	262	545
11:45 AM	0	259	22	4	285	0	0	0	1	1	0	0	0	2	2	46	186	0	0	232	520
Total	0	932	91	18	1041	0	0	0	4	4	0	0	0	14	14	187	746	0	4	937	1996
12:00 PM	0	265	37	2	304	0	0	0	4	4	0	0	0	0	0	53	215	0	2	270	578
12:15 PM	0	249	22	7	278	0	0	0	0	0	0	0	0	5	5	59	201	0	1	261	544
12:30 PM	0	235	26	3	264	0	0	0	7	7	0	0	0	8	8	57	241	0	0	298	577
12:45 PM	0	231	24	11	266	0	0	0	3	3	0	0	0	4	4	51	227	3	0	281	554
Total	0	980	109	23	1112	0	0	0	14	14	0	0	0	17	17	220	884	3	3	1110	2253
Grand Total	0	1912	200	41	2153	0	0	0	18	18	0	0	0	31	31	407	1630	3	7	2047	4249
Apprch %	0.0	88.8	9.3	1.9		0.0	0.0	0.0	100.0		0.0	0.0	0.0	100.0		19.9	79.6	0.1	0.3		
Total %	0.0	45.0	4.7	1.0	50.7	0.0	0.0	0.0	0.4	0.4	0.0	0.0	0.0	0.7	0.7	9.6	38.4	0.1	0.2	48.2	

	Gambell Southbound					6th Avenue Westbound					Gambell Northbound					6th Avenue Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour From 11:00 AM to 12:45 PM - Peak 1 of 1																					
By Approach	11:30 AM					12:00 PM					12:00 PM					12:00 PM					
Volume	0	1026	104	18	1148	0	0	0	14	14	0	0	0	17	17	220	884	3	3	1110	
Percent	0.0	89.4	9.1	1.6		0.0	0.0	0.0	100.0		0.0	0.0	0.0	100.0		19.8	79.6	0.3	0.3		
High Int.	12:00 PM					12:30 PM					12:30 PM					12:30 PM					
Volume	0	265	37	2	304	0	0	0	7	7	0	0	0	8	8	57	241	0	0	298	
Peak Factor					0.944					0.500					0.531					0.931	

Municipality of Anchorage
Traffic Department
Gambell & 6th Avenue
PM Peak

Weather: Sunny
Counter: 2821, 2820
Counted by: JS, CJD

File Name : PM
Site Code : 08221103
Start Date : 8/22/2011

Groups Printed- Unshifted

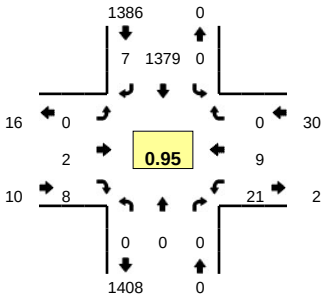
	Gambell Southbound					6th Avenue Westbound					Gambell Northbound					6th Avenue Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
04:00 PM	0	331	29	7	367	0	0	0	1	1	0	0	0	0	0	75	432	0	2	509	877
04:15 PM	0	265	25	2	292	0	0	0	3	3	0	0	0	1	1	70	337	0	0	407	703
04:30 PM	0	341	28	3	372	0	0	0	4	4	0	0	0	1	1	93	402	0	1	496	873
04:45 PM	0	262	17	10	289	0	0	0	2	2	0	0	0	2	2	62	387	0	5	454	747
Total	0	1199	99	22	1320	0	0	0	10	10	0	0	0	4	4	300	1558	0	8	1866	3200
05:00 PM	0	333	26	6	365	0	0	0	1	1	0	0	0	3	3	74	427	0	0	501	870
05:15 PM	0	249	20	5	274	0	0	0	0	0	0	0	0	0	0	67	399	0	0	466	740
05:30 PM	0	260	21	3	284	0	0	0	3	3	0	0	0	10	10	62	363	0	2	427	724
05:45 PM	0	220	17	3	240	0	0	0	2	2	0	0	0	2	2	54	308	0	3	365	609
Total	0	1062	84	17	1163	0	0	0	6	6	0	0	0	15	15	257	1497	0	5	1759	2943
Grand Total	0	2261	183	39	2483	0	0	0	16	16	0	0	0	19	19	557	3055	0	13	3625	6143
Apprch %	0.0	91.1	7.4	1.6		0.0	0.0	0.0	100.0		0.0	0.0	0.0	100.0		15.4	84.3	0.0	0.4		
Total %	0.0	36.8	3.0	0.6	40.4	0.0	0.0	0.0	0.3	0.3	0.0	0.0	0.0	0.3	0.3	9.1	49.7	0.0	0.2	59.0	

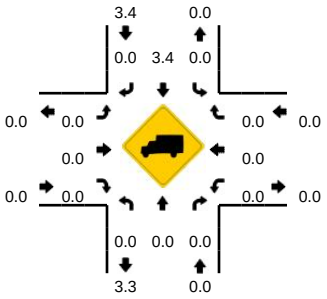
	Gambell Southbound					6th Avenue Westbound					Gambell Northbound					6th Avenue Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour From 04:00 PM to 05:45 PM - Peak 1 of 1																					
By Approach	04:00 PM					04:00 PM					04:45 PM					04:30 PM					
Volume	0	1199	99	22	1320	0	0	0	10	10	0	0	0	15	15	296	1615	0	6	1917	
Percent	0.0	90.8	7.5	1.7		0.0	0.0	0.0	100.0		0.0	0.0	0.0	100.0		15.4	84.2	0.0	0.3		
High Int.	04:30 PM					04:30 PM					05:30 PM					05:00 PM					
Volume	0	341	28	3	372	0	0	0	4	4	0	0	0	10	10	74	427	0	0	501	
Peak Factor					0.887					0.625					0.375					0.957	

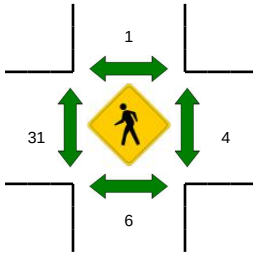
Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

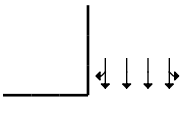
LOCATION: Gambell St -- E 7th Ave | **QC JOB #:** 10955207
CITY/STATE: Anchorage, AK | **DATE:** Tue, May 07 2013

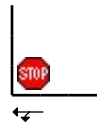
Peak-Hour: 4:20 PM -- 5:20 PM
Peak 15-Min: 5:05 PM -- 5:20 PM

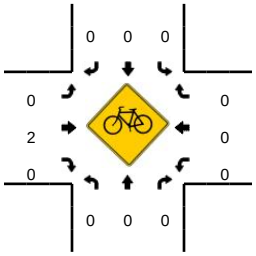


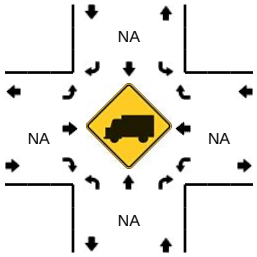


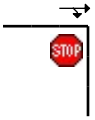


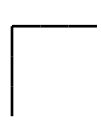


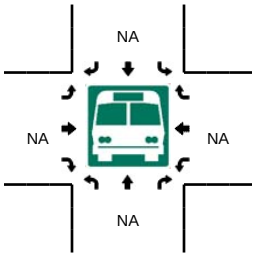












5-Min Count Period Beginning At	Gambell St (Northbound)				Gambell St (Southbound)				E 7th Ave (Eastbound)				E 7th Ave (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	0	0	0	0	90	0	0	0	1	2	0	3	0	0	0	96	
4:05 PM	0	0	0	0	0	135	1	0	0	0	2	0	2	0	0	0	140	
4:10 PM	0	0	0	0	1	88	0	0	0	0	1	0	4	2	0	0	96	
4:15 PM	0	0	0	0	1	122	0	0	0	0	0	0	0	2	0	0	125	
4:20 PM	0	0	0	0	0	106	0	0	0	0	1	0	4	0	0	0	111	
4:25 PM	0	0	0	0	0	121	0	0	0	0	1	0	2	2	0	0	126	
4:30 PM	0	0	0	0	0	113	0	0	0	0	0	0	3	0	0	0	116	
4:35 PM	0	0	0	0	0	127	0	0	0	0	0	0	1	1	0	0	129	
4:40 PM	0	0	0	0	0	116	2	0	0	0	1	0	1	2	0	0	122	
4:45 PM	0	0	0	0	0	118	1	0	0	0	2	0	0	0	0	0	121	
4:50 PM	0	0	0	0	0	104	2	0	0	1	1	0	1	1	0	0	110	
4:55 PM	0	0	0	0	0	93	0	0	0	0	1	0	0	1	0	0	95	1387
5:00 PM	0	0	0	0	0	112	0	0	0	1	0	0	5	2	0	0	120	1411
5:05 PM	0	0	0	0	0	131	1	0	0	0	0	0	0	0	0	0	132	1403
5:10 PM	0	0	0	0	0	115	1	0	0	0	0	0	1	0	0	0	117	1424
5:15 PM	0	0	0	0	0	123	0	0	0	0	1	0	3	0	0	0	127	1426
5:20 PM	0	0	0	0	0	91	1	0	0	0	0	0	3	0	0	0	95	1410
5:25 PM	0	0	0	0	0	84	0	0	0	0	3	0	4	0	0	0	91	1375
5:30 PM	0	0	0	0	0	91	1	0	0	1	0	0	2	0	0	0	95	1354
5:35 PM	0	0	0	0	0	86	2	0	0	1	0	0	4	0	0	0	93	1318
5:40 PM	0	0	0	0	0	107	1	0	0	0	0	0	1	0	0	0	109	1305
5:45 PM	0	0	0	0	1	86	0	0	0	0	1	0	0	1	0	0	89	1273
5:50 PM	0	0	0	0	0	101	2	0	0	0	1	0	1	0	0	0	105	1268
5:55 PM	0	0	0	0	0	84	0	0	0	0	0	0	1	0	0	0	85	1258

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	0	0	0	1476	8	0	0	0	4	0	16	0	0	0	1504
Heavy Trucks	0	0	0		0	44	0		0	0	0		0	0	0		44
Pedestrians		4				4				16				8			32
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

Report generated on 5/14/2013 12:03 PM

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

Municipality of Anchorage
Traffic Department
Gambell & 9th
AM Peak

Weather: Rainy
Counter: 3024, 2206
Counted by: JE,CD

File Name : Gambell & 9th-AM
Site Code : 06151001
Start Date : 6/15/2010
Page No : 1

Groups Printed- Unshifted

	Gambell Southbound					East 9th Westbound					Gambell Northbound					East 9th Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
07:00 AM	4	199	2	3	208	0	52	5	0	57	0	0	0	0	0	9	11	0	0	20	285
07:15 AM	6	236	2	2	246	0	84	11	0	95	0	0	0	1	1	8	12	0	2	22	364
07:30 AM	5	290	2	1	298	0	86	5	1	92	0	0	0	0	0	13	12	0	1	26	416
07:45 AM	8	256	5	3	272	0	115	10	0	125	0	0	0	2	2	6	15	0	0	21	420
Total	23	981	11	9	1024	0	337	31	1	369	0	0	0	3	3	36	50	0	3	89	1485
08:00 AM	7	269	6	0	282	0	107	9	3	119	0	0	0	1	1	22	5	0	0	27	429
08:15 AM	6	257	2	2	267	0	74	16	1	91	0	0	0	1	1	16	10	0	1	27	386
08:30 AM	6	285	5	3	299	0	60	9	3	72	0	0	0	1	1	12	9	0	0	21	393
08:45 AM	9	257	3	2	271	0	66	19	4	89	0	0	0	2	2	11	8	0	0	19	381
Total	28	1068	16	7	1119	0	307	53	11	371	0	0	0	5	5	61	32	0	1	94	1589
Grand Total	51	2049	27	16	2143	0	644	84	12	740	0	0	0	8	8	97	82	0	4	183	3074
Apprch %	2.4	95.6	1.3	0.7		0.0	87.0	11.4	1.6		0.0	0.0	0.0	100.0		53.0	44.8	0.0	2.2		
Total %	1.7	66.7	0.9	0.5	69.7	0.0	20.9	2.7	0.4	24.1	0.0	0.0	0.0	0.3	0.3	3.2	2.7	0.0	0.1	6.0	

	Gambell Southbound					East 9th Westbound					Gambell Northbound					East 9th Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour From 07:00 AM to 08:45 AM - Peak 1 of 1																					
By Approach	07:45 AM					07:15 AM					07:45 AM					07:30 AM					
Volume	27	1067	18	8	1120	0	392	35	4	431	0	0	0	5	5	57	42	0	2	101	
Percent	2.4	95.3	1.6	0.7		0.0	91.0	8.1	0.9		0.0	0.0	0.0	100.0		56.4	41.6	0.0	2.0		
High Int.	08:30 AM					07:45 AM					07:45 AM					08:00 AM					
Volume	6	285	5	3	299	0	115	10	0	125	0	0	0	2	2	22	5	0	0	27	
Peak Factor					0.936					0.862					0.625					0.935	

Municipality of Anchorage
Traffic Department
Gambell & 9th
Mid Peak

Weather: Rainy
Counters: 3024, 2206
Counted by: JE,CD

File Name : Gambell & 9th-Mid
Site Code : 06151002
Start Date : 6/15/2010

Groups Printed- Unshifted

	Gambell Southbound					East 9th Westbound					Gambell Northbound					East 9th Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
11:00 AM	4	268	5	1	278	0	42	12	1	55	0	0	0	0	0	23	25	0	0	48	381
11:15 AM	8	298	2	4	312	0	46	16	3	65	0	0	0	0	0	20	13	0	1	34	411
11:30 AM	14	338	3	9	364	0	49	23	1	73	0	0	0	0	0	16	20	0	1	37	474
11:45 AM	10	359	5	7	381	0	50	17	0	67	0	0	0	0	0	28	18	0	1	47	495
Total	36	1263	15	21	1335	0	187	68	5	260	0	0	0	0	0	87	76	0	3	166	1761
12:00 PM	10	323	2	3	338	0	44	19	1	64	0	0	0	0	0	36	19	0	0	55	457
12:15 PM	6	323	4	2	335	0	42	21	2	65	0	0	0	2	2	34	22	0	1	57	459
12:30 PM	13	333	6	7	359	0	50	32	1	83	0	0	0	1	1	28	25	0	0	53	496
12:45 PM	6	348	6	3	363	0	46	19	1	66	0	0	0	0	0	39	16	0	2	57	486
Total	35	1327	18	15	1395	0	182	91	5	278	0	0	0	3	3	137	82	0	3	222	1898
Grand Total	71	2590	33	36	2730	0	369	159	10	538	0	0	0	3	3	224	158	0	6	388	3659
Apprch %	2.6	94.9	1.2	1.3		0.0	68.6	29.6	1.9		0.0	0.0	0.0	100.0		57.7	40.7	0.0	1.5		
Total %	1.9	70.8	0.9	1.0	74.6	0.0	10.1	4.3	0.3	14.7	0.0	0.0	0.0	0.1	0.1	6.1	4.3	0.0	0.2	10.6	

	Gambell Southbound					East 9th Westbound					Gambell Northbound					East 9th Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour From 11:00 AM to 12:45 PM - Peak 1 of 1																					
By Approach	11:30 AM					11:45 AM					11:45 AM					12:00 PM					
Volume	40	1343	14	21	1418	0	186	89	4	279	0	0	0	3	3	137	82	0	3	222	
Percent	2.8	94.7	1.0	1.5		0.0	66.7	31.9	1.4		0.0	0.0	0.0	100.0		61.7	36.9	0.0	1.4		
High Int.	11:45 AM					12:30 PM					12:15 PM					12:15 PM					
Volume	10	359	5	7	381	0	50	32	1	83	0	0	0	2	2	34	22	0	1	57	
Peak Factor					0.930					0.840					0.375					0.974	

Municipality of Anchorage
Traffic Department
Gambell & 9th
PM Peak

Weather: Cloudy
Counters: 3024, 2206
Counted by: JE,CD

File Name : Gambell & 9th-PM
Site Code : 06141003
Start Date : 6/14/2010
Page No : 1

Groups Printed- Unshifted

	Gambell Southbound					East 9th Westbound					Gambell Northbound					East 9th Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
04:00 PM	12	404	3	2	421	0	48	18	5	71	0	0	0	1	1	57	27	0	1	85	578
04:15 PM	12	319	6	8	345	0	42	20	3	65	0	0	0	0	0	51	20	0	2	73	483
04:30 PM	15	463	6	9	493	0	35	14	3	52	0	0	0	0	0	56	35	3	2	96	641
04:45 PM	22	397	2	9	430	0	30	28	1	59	0	0	0	2	2	52	30	0	4	86	577
Total	61	1583	17	28	1689	0	155	80	12	247	0	0	0	3	3	216	112	3	9	340	2279
05:00 PM	11	391	4	6	412	0	44	13	0	57	0	0	0	0	0	61	32	0	1	94	563
05:15 PM	10	391	4	3	408	0	42	22	3	67	0	0	0	0	0	50	40	0	2	92	567
05:30 PM	12	332	5	6	355	0	39	14	0	53	0	0	0	0	0	36	23	0	0	59	467
05:45 PM	5	292	3	8	308	0	32	15	4	51	0	0	0	1	1	38	23	0	0	61	421
Total	38	1406	16	23	1483	0	157	64	7	228	0	0	0	1	1	185	118	0	3	306	2018
Grand Total	99	2989	33	51	3172	0	312	144	19	475	0	0	0	4	4	401	230	3	12	646	4297
Apprch %	3.1	94.2	1.0	1.6		0.0	65.7	30.3	4.0		0.0	0.0	0.0	100.0		62.1	35.6	0.5	1.9		
Total %	2.3	69.6	0.8	1.2	73.8	0.0	7.3	3.4	0.4	11.1	0.0	0.0	0.0	0.1	0.1	9.3	5.4	0.1	0.3	15.0	

	Gambell Southbound					East 9th Westbound					Gambell Northbound					East 9th Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour From 04:00 PM to 05:45 PM - Peak 1 of 1																					
By Approach	04:30 PM					04:00 PM					04:00 PM					04:30 PM					
Volume	58	1642	16	27	1743	0	155	80	12	247	0	0	0	3	3	219	137	3	9	368	
Percent	3.3	94.2	0.9	1.5		0.0	62.8	32.4	4.9		0.0	0.0	0.0	100.0		59.5	37.2	0.8	2.4		
High Int.	04:30 PM					04:00 PM					04:45 PM					04:30 PM					
Volume	15	463	6	9	493	0	48	18	5	71	0	0	0	2	2	56	35	3	2	96	
Peak Factor					0.884					0.870					0.375					0.958	

Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

LOCATION: Gambell St -- E 10th Ave

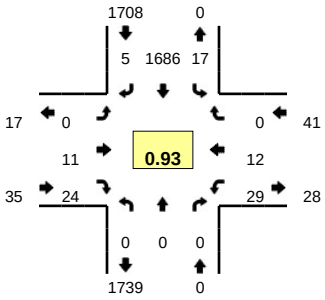
CITY/STATE: Anchorage, AK

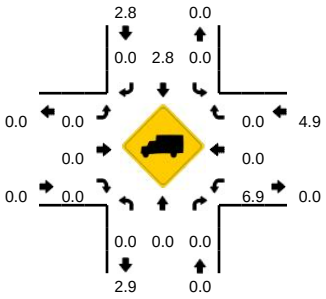
QC JOB #: 10955209

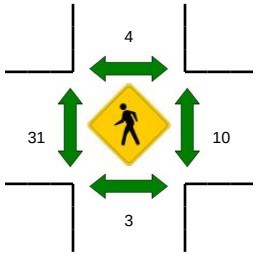
DATE: Tue, May 07 2013

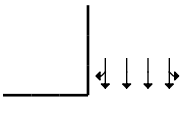
Peak-Hour: 4:20 PM -- 5:20 PM

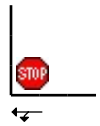
Peak 15-Min: 4:35 PM -- 4:50 PM

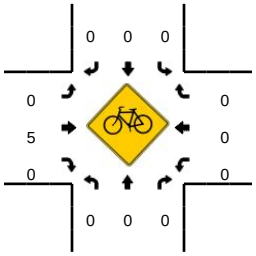


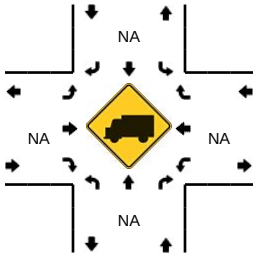


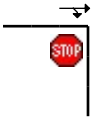


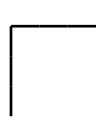


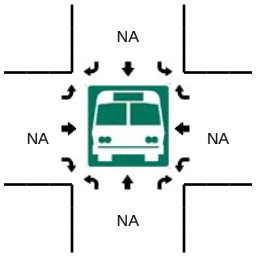












5-Min Count Period Beginning At	Gambell St (Northbound)				Gambell St (Southbound)				E 10th Ave (Eastbound)				E 10th Ave (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	0	0	0	1	120	0	0	0	3	1	0	1	1	0	0	127	
4:05 PM	0	0	0	0	0	156	1	0	0	1	3	0	7	0	0	0	168	
4:10 PM	0	0	0	0	1	125	0	0	0	1	6	0	0	0	0	0	133	
4:15 PM	0	0	0	0	0	110	2	0	0	2	2	0	2	4	0	0	122	
4:20 PM	0	0	0	0	1	137	0	0	0	0	2	0	1	2	0	0	143	
4:25 PM	0	0	0	0	1	146	1	0	0	0	3	0	5	0	0	0	156	
4:30 PM	0	0	0	0	0	146	0	0	0	0	3	0	0	0	0	0	149	
4:35 PM	0	0	0	0	1	138	1	0	0	1	2	0	5	2	0	0	150	
4:40 PM	0	0	0	0	1	151	0	0	0	2	2	0	3	1	0	0	160	
4:45 PM	0	0	0	0	1	161	0	0	0	1	3	0	3	1	0	0	170	
4:50 PM	0	0	0	0	1	119	0	0	0	0	2	0	2	1	0	0	125	
4:55 PM	0	0	0	0	2	108	0	0	0	3	1	0	1	1	0	0	116	1719
5:00 PM	0	0	0	0	2	143	2	0	0	2	1	0	4	1	0	0	155	1747
5:05 PM	0	0	0	0	3	155	1	0	0	0	0	0	2	2	0	0	163	1742
5:10 PM	0	0	0	0	3	149	0	0	0	1	3	0	1	1	0	0	158	1767
5:15 PM	0	0	0	0	1	133	0	0	0	1	2	0	2	0	0	0	139	1784
5:20 PM	0	0	0	0	3	111	0	0	0	0	3	0	1	0	0	0	118	1759
5:25 PM	0	0	0	0	2	122	0	0	0	2	1	0	4	3	0	0	134	1737
5:30 PM	0	0	0	0	2	125	0	0	0	1	2	0	2	3	0	0	135	1723
5:35 PM	0	0	0	0	4	105	1	0	0	1	4	0	3	3	0	0	121	1694
5:40 PM	0	0	0	0	2	127	1	0	0	1	0	0	2	1	0	0	134	1668
5:45 PM	0	0	0	0	1	107	0	0	0	0	0	0	2	1	0	0	111	1609
5:50 PM	0	0	0	0	6	117	2	0	0	1	2	0	4	2	0	0	134	1618
5:55 PM	0	0	0	0	4	87	0	0	0	0	0	0	1	2	0	0	94	1596

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	0	0	12	1800	4	0	0	16	28	0	44	16	0	0	1920
Heavy Trucks	0	0	0		0	56	0		0	0	0		0	0	0		56
Pedestrians		0				4				24				4			32
Bicycles	0	0	0		0	0	0		0	3	0		0	0	0		3
Railroad																	
Stopped Buses																	

Comments:

Report generated on 5/14/2013 12:03 PM

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

Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

LOCATION: Gambell St -- E 12th Ave

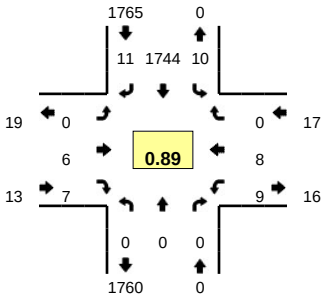
CITY/STATE: Anchorage, AK

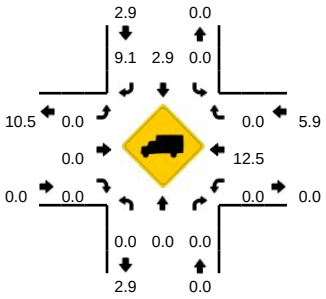
QC JOB #: 10955206

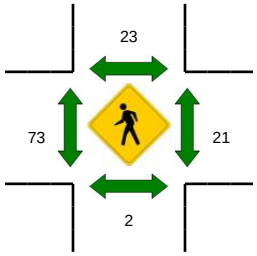
DATE: Tue, May 07 2013

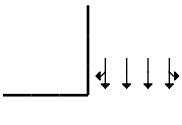
Peak-Hour: 4:20 PM -- 5:20 PM

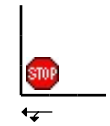
Peak 15-Min: 4:35 PM -- 4:50 PM

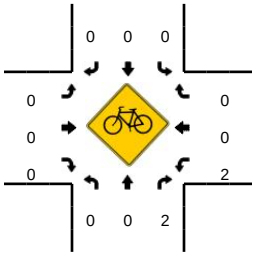


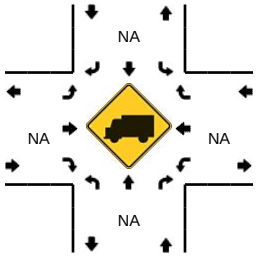


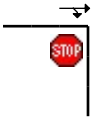


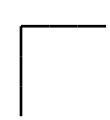


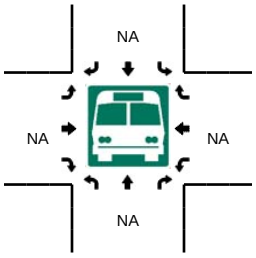












5-Min Count Period Beginning At	Gambell St (Northbound)				Gambell St (Southbound)				E 12th Ave (Eastbound)				E 12th Ave (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	0	0	0	1	137	3	0	0	2	1	0	1	0	0	0	145	
4:05 PM	0	0	0	0	0	139	0	0	0	2	0	0	0	0	0	0	141	
4:10 PM	0	0	0	0	2	130	1	0	0	0	0	0	0	0	0	0	133	
4:15 PM	0	0	0	0	0	131	1	0	0	0	1	0	0	0	0	0	133	
4:20 PM	0	0	0	0	3	130	2	0	0	0	0	0	1	0	0	0	136	
4:25 PM	0	0	0	0	0	139	2	0	0	0	0	0	0	1	0	0	142	
4:30 PM	0	0	0	0	3	130	1	0	0	0	1	0	0	0	0	0	135	
4:35 PM	0	0	0	0	0	163	0	0	0	1	0	0	0	2	0	0	166	
4:40 PM	0	0	0	0	0	178	1	0	0	0	1	0	2	0	0	0	182	
4:45 PM	0	0	0	0	1	155	0	0	0	0	0	0	0	1	0	0	157	
4:50 PM	0	0	0	0	0	113	0	0	0	0	1	0	3	1	0	0	118	
4:55 PM	0	0	0	0	2	127	1	0	0	0	0	0	0	2	0	0	132	1720
5:00 PM	0	0	0	0	0	139	2	0	0	3	1	0	1	1	0	0	147	1722
5:05 PM	0	0	0	0	0	150	1	0	0	1	0	0	1	0	0	0	153	1734
5:10 PM	0	0	0	0	0	162	0	0	0	0	1	0	1	0	0	0	164	1765
5:15 PM	0	0	0	0	1	158	1	0	0	1	2	0	0	0	0	0	163	1795
5:20 PM	0	0	0	0	1	119	1	0	0	0	2	0	1	1	0	0	125	1784
5:25 PM	0	0	0	0	1	123	2	0	0	0	2	0	0	2	0	0	130	1772
5:30 PM	0	0	0	0	3	117	1	0	0	3	1	0	0	0	0	0	125	1762
5:35 PM	0	0	0	0	0	126	0	0	0	2	0	0	3	0	0	0	131	1727
5:40 PM	0	0	0	0	3	127	2	0	0	1	0	0	1	1	0	0	135	1680
5:45 PM	0	0	0	0	0	101	0	0	0	2	1	0	1	0	0	0	105	1628
5:50 PM	0	0	0	0	0	111	1	0	0	1	1	0	1	1	0	0	116	1626
5:55 PM	0	0	0	0	0	104	0	0	0	0	3	0	0	0	0	0	107	1601

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	0	0	4	1984	4	0	0	4	4	0	8	12	0	0	2020
Heavy Trucks	0	0	0		0	72	0		0	0	0		0	0	0		72
Pedestrians		0				8				60				12			80
Bicycles	0	0	1		0	0	0		0	0	0		0	0	0		1
Railroad																	
Stopped Buses																	

Comments:

Report generated on 5/14/2013 12:03 PM

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

Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

LOCATION: Gambell St -- E 13th Ave

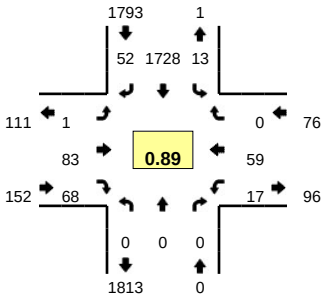
CITY/STATE: Anchorage, AK

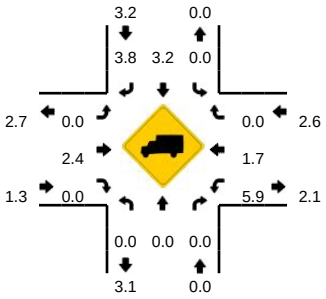
QC JOB #: 10955205

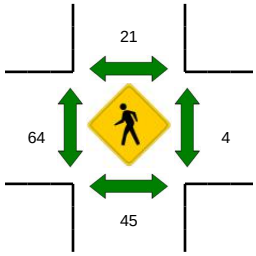
DATE: Tue, May 07 2013

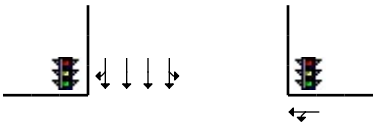
Peak-Hour: 4:20 PM -- 5:20 PM

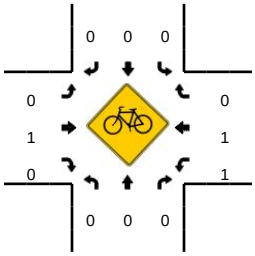
Peak 15-Min: 5:05 PM -- 5:20 PM

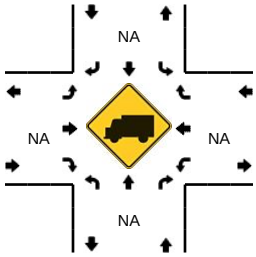


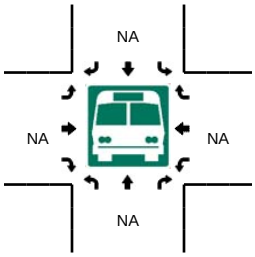












5-Min Count Period Beginning At	Gambell St (Northbound)				Gambell St (Southbound)				E 13th Ave (Eastbound)				E 13th Ave (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	0	0	0	1	133	6	0	0	8	4	0	5	7	0	0	164	
4:05 PM	0	0	0	0	2	125	3	0	0	8	6	0	3	2	0	0	149	
4:10 PM	0	0	0	0	1	124	1	0	0	9	6	0	5	5	0	0	151	
4:15 PM	1	0	0	0	1	113	2	0	0	7	5	0	1	6	0	0	136	
4:20 PM	0	0	0	0	0	143	5	0	0	3	7	0	3	1	0	0	162	
4:25 PM	0	0	0	0	0	138	4	0	0	9	6	0	3	4	0	0	164	
4:30 PM	0	0	0	0	3	146	5	0	1	6	3	0	0	2	0	0	166	
4:35 PM	0	0	0	0	1	176	3	0	0	5	9	0	4	5	0	0	203	
4:40 PM	0	0	0	0	0	155	5	0	0	9	3	0	0	5	0	0	177	
4:45 PM	0	0	0	0	1	137	3	0	0	14	5	0	0	8	0	0	168	
4:50 PM	0	0	0	0	0	128	5	0	0	3	7	0	1	8	0	0	152	
4:55 PM	0	0	0	0	2	100	3	0	0	2	3	0	1	2	0	0	113	1905
5:00 PM	0	0	0	0	0	124	8	0	0	4	8	0	1	6	0	0	151	1892
5:05 PM	0	0	0	0	0	153	2	0	0	7	8	0	0	5	0	0	175	1918
5:10 PM	0	0	0	0	5	165	3	0	0	12	4	0	0	7	0	0	196	1963
5:15 PM	0	0	0	0	1	163	6	0	0	9	5	0	4	6	0	0	194	2021
5:20 PM	0	0	0	0	2	103	4	0	0	5	10	0	3	4	0	0	131	1990
5:25 PM	0	0	0	0	4	100	11	0	0	7	8	0	0	5	0	0	135	1961
5:30 PM	0	0	0	0	0	116	3	0	0	6	5	0	0	5	0	0	135	1930
5:35 PM	0	0	0	0	1	112	5	0	0	7	7	0	4	7	0	0	143	1870
5:40 PM	0	0	0	0	0	130	4	0	0	10	9	0	2	3	0	0	158	1851
5:45 PM	0	0	0	0	0	101	3	0	0	6	2	0	0	5	0	0	117	1800
5:50 PM	0	0	0	0	1	117	6	0	0	6	5	0	1	2	0	0	138	1786
5:55 PM	0	0	0	0	1	113	6	0	0	9	2	0	2	0	0	0	133	1806

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	0	0	24	1924	44	0	0	112	68	0	16	72	0	0	2260
Heavy Trucks	0	0	0		0	40	8		0	4	0		0	4	0		56
Pedestrians		44				36				84				8			172
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

Report generated on 5/14/2013 12:03 PM

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

Type of peak hour being reported: Intersection Peak

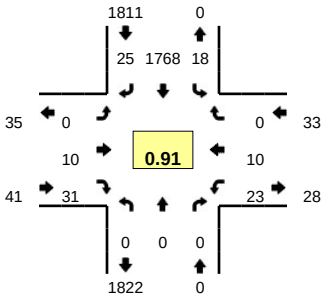
Method for determining peak hour: Total Entering Volume

LOCATION: Gambell St -- E 14th St

CITY/STATE: Anchorage, AK

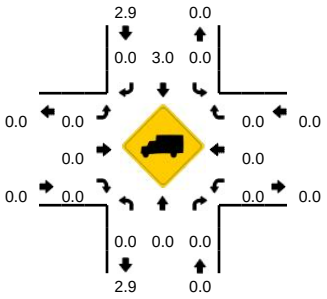
QC JOB #: 10955204

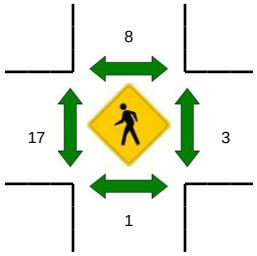
DATE: Tue, May 07 2013

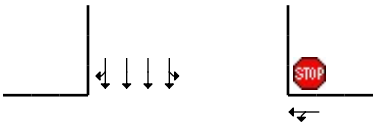


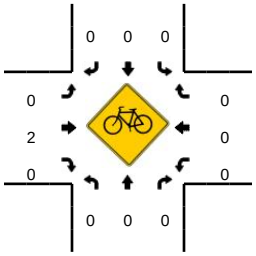
Peak-Hour: 4:20 PM -- 5:20 PM

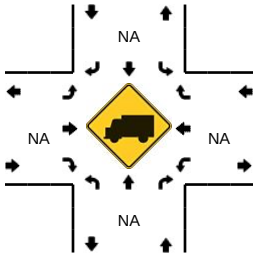
Peak 15-Min: 5:05 PM -- 5:20 PM

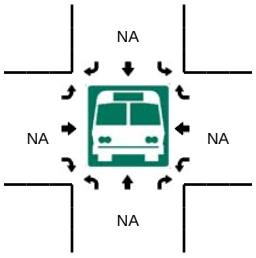












5-Min Count Period Beginning At	Gambell St (Northbound)				Gambell St (Southbound)				E 14th St (Eastbound)				E 14th St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	0	0	0	1	141	1	0	0	2	2	0	1	2	0	0	150	
4:05 PM	0	0	0	0	2	124	2	0	0	2	4	0	1	1	0	0	136	
4:10 PM	0	0	0	0	1	131	1	0	0	0	2	0	2	1	0	0	138	
4:15 PM	0	0	0	0	1	129	3	0	0	0	5	0	1	0	0	0	139	
4:20 PM	0	0	0	0	1	146	4	0	0	0	3	0	3	1	0	0	158	
4:25 PM	0	0	0	0	1	146	1	0	0	0	0	0	1	1	0	0	150	
4:30 PM	0	0	0	0	1	144	2	0	0	0	5	0	1	1	0	0	154	
4:35 PM	0	0	0	0	4	170	3	0	0	0	3	0	5	0	0	0	185	
4:40 PM	0	0	0	0	1	156	0	0	0	0	3	0	3	0	0	0	163	
4:45 PM	0	0	0	0	3	142	2	0	0	2	6	0	3	2	0	0	160	
4:50 PM	0	0	0	0	2	127	1	0	0	2	3	0	2	0	0	0	137	
4:55 PM	0	0	0	0	0	112	2	0	0	1	5	0	0	0	0	0	120	1790
5:00 PM	0	0	0	0	3	130	2	0	0	2	0	0	0	1	0	0	138	1778
5:05 PM	0	0	0	0	0	160	1	0	0	0	2	0	2	2	0	0	167	1809
5:10 PM	0	0	0	0	1	168	2	0	0	2	1	0	2	0	0	0	176	1847
5:15 PM	0	0	0	0	1	167	5	0	0	1	0	0	1	2	0	0	177	1885
5:20 PM	0	0	0	0	1	106	10	0	0	1	1	0	0	0	0	0	119	1846
5:25 PM	0	0	0	0	0	112	2	0	0	2	2	0	2	4	0	0	124	1820
5:30 PM	0	0	0	0	2	102	2	0	0	0	1	0	0	2	0	0	109	1775
5:35 PM	0	0	0	0	1	131	3	0	0	0	3	0	2	2	0	0	142	1732
5:40 PM	0	0	0	0	4	136	2	0	0	6	1	0	0	0	0	0	149	1718
5:45 PM	0	0	0	0	1	103	1	0	0	2	2	0	0	4	0	0	113	1671
5:50 PM	0	0	0	0	2	121	2	0	0	2	2	0	3	0	0	0	132	1666
5:55 PM	0	0	0	0	0	116	2	0	0	1	1	0	0	1	0	0	121	1667

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	0	0	8	1980	32	0	0	12	12	0	20	16	0	0	2080
Heavy Trucks	0	0	0		0	36	0		0	0	0		0	0	0		36
Pedestrians		0				8				20				8			36
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

Report generated on 5/14/2013 12:03 PM

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

Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

LOCATION: Gambell St -- E 15th Ave

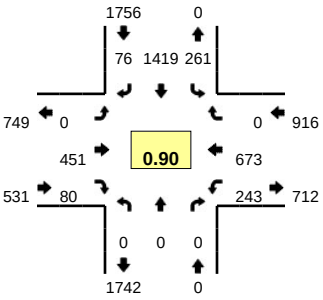
CITY/STATE: Anchorage, AK

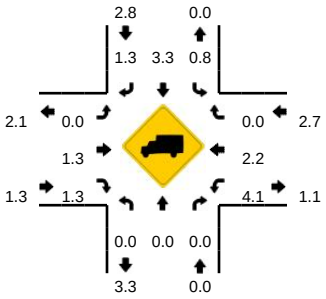
QC JOB #: 10955203

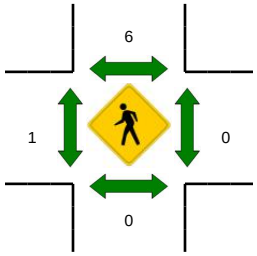
DATE: Tue, May 07 2013

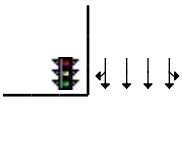
Peak-Hour: 4:20 PM -- 5:20 PM

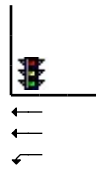
Peak 15-Min: 5:05 PM -- 5:20 PM

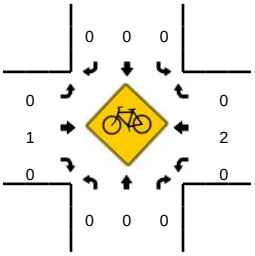


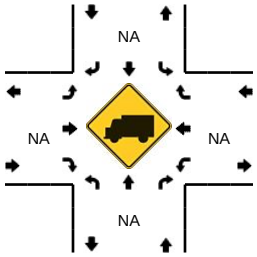


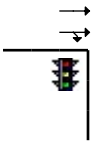


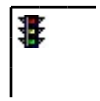


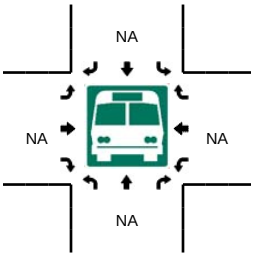












5-Min Count Period Beginning At	Gambell St (Northbound)				Gambell St (Southbound)				E 15th Ave (Eastbound)				E 15th Ave (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	0	0	0	20	127	4	0	0	21	5	0	23	67	0	0	267	
4:05 PM	0	0	0	0	19	103	7	0	0	38	9	0	25	63	0	0	264	
4:10 PM	0	0	0	0	21	116	8	0	0	30	14	0	28	70	0	0	287	
4:15 PM	0	0	0	0	8	99	11	0	0	38	8	0	19	51	0	0	234	
4:20 PM	0	0	0	0	13	123	5	0	0	30	7	0	25	48	0	0	251	
4:25 PM	0	0	0	0	10	125	6	0	0	32	7	0	23	50	0	0	253	
4:30 PM	0	0	0	0	18	131	2	0	0	28	6	0	20	53	0	0	258	
4:35 PM	0	0	0	0	26	140	9	0	0	30	10	0	26	56	0	0	297	
4:40 PM	0	0	0	0	25	137	2	0	0	43	6	0	22	46	0	0	281	
4:45 PM	0	0	0	0	28	99	9	0	0	46	5	0	15	48	0	0	250	
4:50 PM	0	0	0	0	18	110	9	0	0	30	8	0	19	62	0	0	256	
4:55 PM	0	0	0	0	21	77	5	0	0	35	9	0	24	60	0	0	231	3129
5:00 PM	0	0	0	0	18	88	7	0	0	39	7	0	16	63	0	0	238	3100
5:05 PM	0	0	0	0	33	119	9	0	0	54	5	0	14	59	0	0	293	3129
5:10 PM	0	0	0	0	21	135	5	0	0	46	6	0	21	76	0	0	310	3152
5:15 PM	0	0	0	0	30	135	8	0	0	38	4	0	18	52	0	0	285	3203
5:20 PM	0	0	0	0	13	96	5	0	0	48	3	0	20	50	0	0	235	3187
5:25 PM	0	0	0	0	14	85	10	0	0	46	7	0	19	69	0	0	250	3184
5:30 PM	0	0	0	0	24	73	12	0	0	31	11	0	22	66	0	0	239	3165
5:35 PM	0	0	0	0	18	84	4	0	0	29	6	0	26	64	0	0	231	3099
5:40 PM	0	0	0	0	20	117	3	0	0	32	6	0	19	52	0	0	249	3067
5:45 PM	0	0	0	0	13	89	5	0	0	29	7	0	18	46	0	0	207	3024
5:50 PM	0	0	0	0	12	108	6	0	0	36	9	0	19	46	0	0	236	3004
5:55 PM	0	0	0	0	10	105	6	0	0	13	4	0	17	38	0	0	193	2966

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	0	0	336	1556	88	0	0	552	60	0	212	748	0	0	3552
Heavy Trucks	0	0	0		4	32	0		0	4	0		8	24	0		72
Pedestrians		0				16				0				0			16
Bicycles	0	0	0		0	0	0		0	0	0		0	1	0		1
Railroad																	
Stopped Buses																	

Comments:

Report generated on 5/14/2013 12:03 PM

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

Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

LOCATION: Gambell St -- EB E 16th Ave

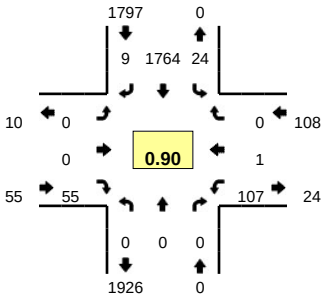
CITY/STATE: Anchorage, AK

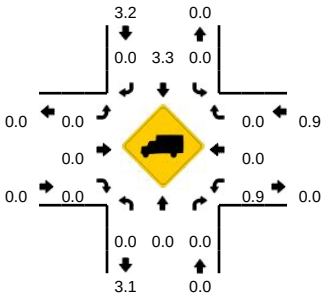
QC JOB #: 10955201

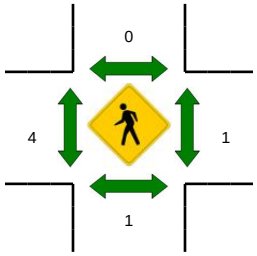
DATE: Tue, May 07 2013

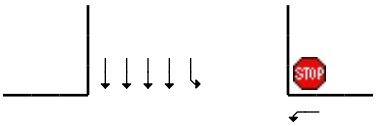
Peak-Hour: 4:20 PM -- 5:20 PM

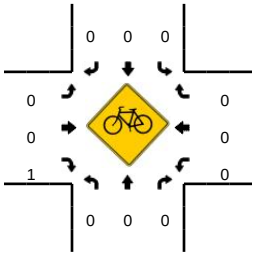
Peak 15-Min: 4:25 PM -- 4:40 PM

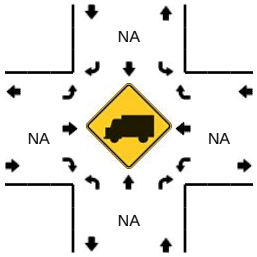


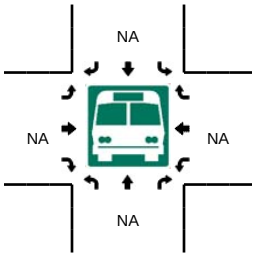












5-Min Count Period Beginning At	Gambell St (Northbound)				Gambell St (Southbound)				EB E 16th Ave (Eastbound)				EB E 16th Ave (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
4:05 PM	0	0	0	0	3	52	0	0	0	0	2	0	0	0	0	0	57	
4:10 PM	0	0	0	0	1	144	0	0	0	0	7	0	3	0	0	0	155	
4:15 PM	0	0	0	0	4	121	0	0	0	0	7	0	4	0	0	0	136	
4:20 PM	0	0	0	0	6	142	0	0	0	0	9	0	4	0	0	0	161	
4:25 PM	0	0	0	0	1	163	3	0	0	0	7	0	13	0	0	0	187	
4:30 PM	0	0	0	0	2	159	0	0	0	0	2	0	5	0	0	0	168	
4:35 PM	0	0	0	0	1	179	2	0	0	0	3	0	3	1	0	0	189	
4:40 PM	0	0	0	0	3	167	0	0	0	0	6	0	1	0	0	0	177	
4:45 PM	0	0	0	0	1	135	1	0	0	0	4	0	8	0	0	0	149	
4:50 PM	0	0	0	0	0	137	1	0	0	0	1	0	10	0	0	0	149	
4:55 PM	0	0	0	0	2	116	0	0	0	0	6	0	9	0	0	0	133	1661
5:00 PM	0	0	0	0	3	112	1	0	0	0	3	0	31	0	0	0	150	1811
5:05 PM	0	0	0	0	1	144	0	0	0	0	1	0	8	0	0	0	154	1908
5:10 PM	0	0	0	0	2	156	0	0	0	0	5	0	11	0	0	0	174	1927
5:15 PM	0	0	0	0	2	154	1	0	0	0	8	0	4	0	0	0	169	1960
5:20 PM	0	0	0	0	1	112	1	0	0	0	6	0	5	0	0	0	125	1924
5:25 PM	0	0	0	0	2	105	1	0	0	0	6	0	5	0	0	0	119	1856
5:30 PM	0	0	0	0	3	97	1	0	0	1	6	0	5	0	0	0	113	1801
5:35 PM	0	0	0	0	1	130	4	0	0	0	0	0	6	0	0	0	141	1753
5:40 PM	0	0	0	0	2	136	3	0	0	0	3	0	4	0	0	0	148	1724
5:45 PM	0	0	0	0	1	104	5	0	0	0	5	0	5	0	0	0	120	1695
5:50 PM	0	0	0	0	2	133	4	0	0	0	2	0	7	0	0	0	148	1694
5:55 PM	0	0	0	0	1	122	2	0	0	0	2	0	12	0	0	0	139	1700

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	0	0	16	2004	20	0	0	0	48	0	84	4	0	0	2176
Heavy Trucks	0	0	0		0	84	0		0	0	0		4	0	0		88
Pedestrians		0				0				4				0			4
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

Report generated on 5/14/2013 12:03 PM

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

Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

LOCATION: Gambell St -- WB E 16th Ave

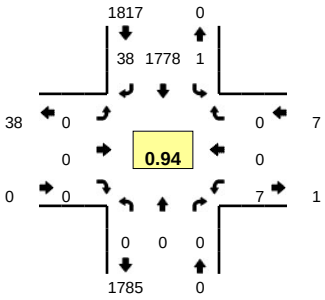
CITY/STATE: Anchorage, AK

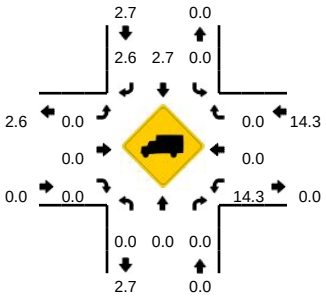
QC JOB #: 10955202

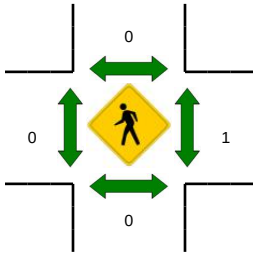
DATE: Tue, May 07 2013

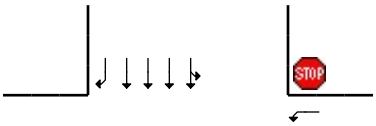
Peak-Hour: 4:15 PM -- 5:15 PM

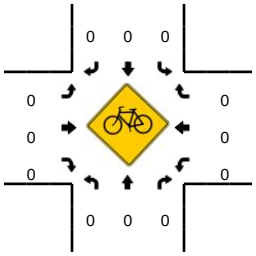
Peak 15-Min: 4:40 PM -- 4:55 PM

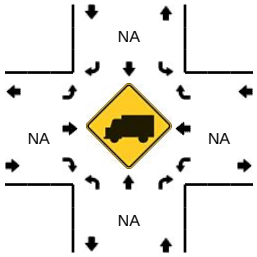


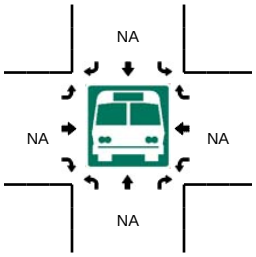












5-Min Count Period Beginning At	Gambell St (Northbound)				Gambell St (Southbound)				WB E 16th Ave (Eastbound)				WB E 16th Ave (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
4:05 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
4:10 PM	0	0	0	0	0	25	1	0	0	0	0	0	1	0	0	0	27	
4:15 PM	0	0	0	0	0	160	4	0	0	0	0	0	0	0	0	0	164	
4:20 PM	0	0	0	0	0	150	5	0	0	0	0	0	2	0	0	0	157	
4:25 PM	0	0	0	0	0	157	2	0	0	0	0	0	0	0	0	0	159	
4:30 PM	0	0	0	0	1	142	2	0	0	0	0	0	0	0	0	0	145	
4:35 PM	0	0	0	0	0	151	5	0	0	0	0	0	2	0	0	0	158	
4:40 PM	0	0	0	0	0	163	1	0	0	0	0	0	2	0	0	0	166	
4:45 PM	0	0	0	0	0	155	0	0	0	0	0	0	0	0	0	0	155	
4:50 PM	0	0	0	0	0	162	1	0	0	0	0	0	0	0	0	0	163	
4:55 PM	0	0	0	0	0	136	3	0	0	0	0	0	0	0	0	0	139	1433
5:00 PM	0	0	0	0	0	116	2	0	0	0	0	0	0	0	0	0	118	1551
5:05 PM	0	0	0	0	0	149	5	0	0	0	0	0	1	0	0	0	155	1706
5:10 PM	0	0	0	0	0	137	8	0	0	0	0	0	0	0	0	0	145	1824
5:15 PM	0	0	0	0	0	135	3	0	0	0	0	0	0	0	0	0	138	1798
5:20 PM	0	0	0	0	0	122	7	0	0	0	0	0	0	0	0	0	129	1770
5:25 PM	0	0	0	0	0	122	4	0	0	0	0	0	0	0	0	0	126	1737
5:30 PM	0	0	0	0	1	104	7	0	0	0	0	0	2	0	0	0	114	1706
5:35 PM	0	0	0	0	1	144	4	0	0	0	0	0	1	0	0	0	150	1698
5:40 PM	0	0	0	0	0	132	10	0	0	0	0	0	0	0	0	0	142	1674
5:45 PM	0	0	0	0	1	102	4	0	0	0	0	0	0	0	0	0	107	1626
5:50 PM	0	0	0	0	1	116	7	0	0	0	0	0	0	0	0	0	124	1587
5:55 PM	0	0	0	0	1	120	8	0	0	0	0	0	0	0	0	0	129	1577

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	0	0	0	1920	8	0	0	0	0	0	8	0	0	0	1936
Heavy Trucks	0	0	0		0	56	0		0	0	0		0	0	0		56
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

Report generated on 5/14/2013 12:03 PM

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

Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

LOCATION: Gambell St -- E 15th Ave

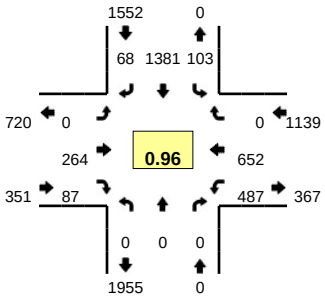
CITY/STATE: Anchorage, AK

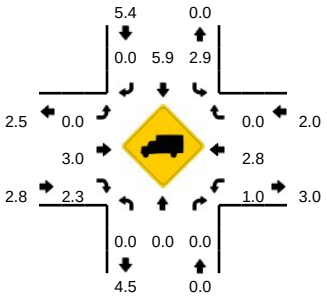
QC JOB #: 10955304

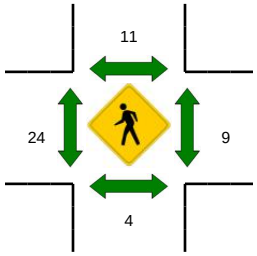
DATE: Mon, May 13 2013

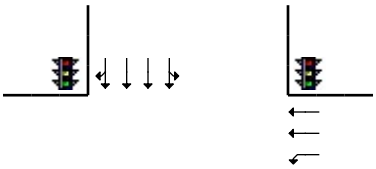
Peak-Hour: 1:00 PM -- 2:00 PM

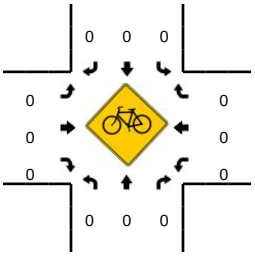
Peak 15-Min: 1:10 PM -- 1:25 PM

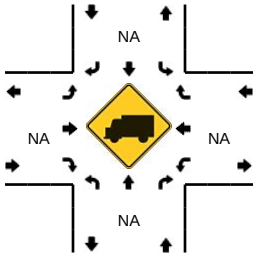


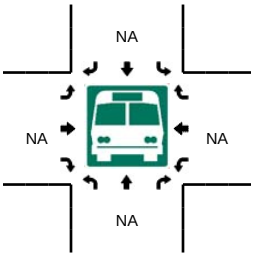












5-Min Count Period Beginning At	Gambell St (Northbound)				Gambell St (Southbound)				E 15th Ave (Eastbound)				E 15th Ave (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
1:00 PM	0	0	0	0	6	134	7	0	0	20	2	0	36	43	0	0	248	
1:05 PM	0	0	0	0	13	111	6	0	0	28	7	0	32	40	0	0	237	
1:10 PM	0	0	0	0	10	108	6	0	0	19	12	0	41	62	0	0	258	
1:15 PM	0	0	0	0	9	127	6	0	0	20	10	0	47	62	0	0	281	
1:20 PM	0	0	0	0	9	113	4	0	0	19	14	0	43	49	0	0	251	
1:25 PM	0	0	0	0	8	133	6	0	0	20	10	0	38	43	0	0	258	
1:30 PM	0	0	0	0	4	114	9	0	0	19	7	0	37	44	0	0	234	
1:35 PM	0	0	0	0	12	104	4	0	0	27	5	0	39	57	0	0	248	
1:40 PM	0	0	0	0	4	112	5	0	0	23	10	0	35	76	0	0	265	
1:45 PM	0	0	0	0	9	118	4	0	0	31	4	0	41	60	0	0	267	
1:50 PM	0	0	0	0	7	107	4	0	0	17	4	0	50	60	0	0	249	
1:55 PM	0	0	0	0	12	100	7	0	0	21	2	0	48	56	0	0	246	3042
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2794
2:05 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2557
2:10 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2299
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2018
2:20 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1767
2:25 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1509
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1275
2:35 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1027
2:40 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	762
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	495
2:50 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	246
2:55 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	0	0	112	1392	64	0	0	232	144	0	524	692	0	0	3160
Heavy Trucks	0	0	0		4	68	0		0	4	4		0	16	0		96
Pedestrians		0				4				8				0			12
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

Report generated on 5/24/2013 12:21 AM

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

Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

LOCATION: Gambell St -- E 15th Ave

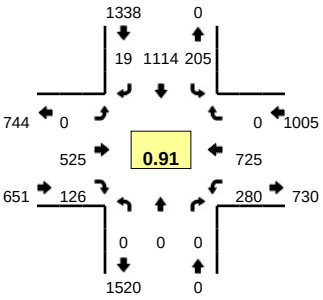
CITY/STATE: Anchorage, AK

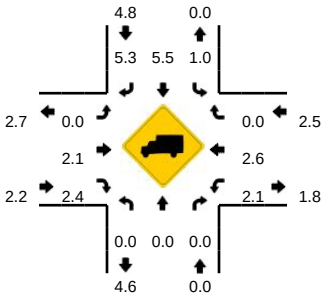
QC JOB #: 10955305

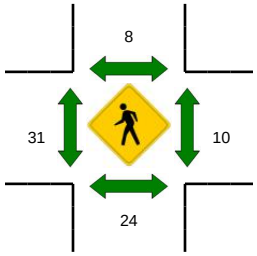
DATE: Mon, May 13 2013

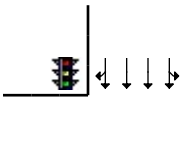
Peak-Hour: 4:00 PM -- 5:00 PM

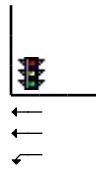
Peak 15-Min: 4:45 PM -- 5:00 PM

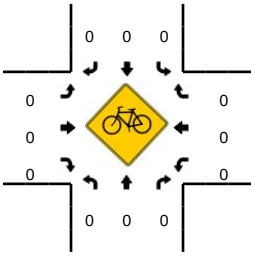


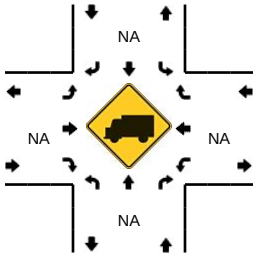


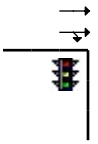


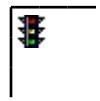


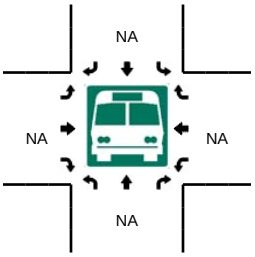












5-Min Count Period Beginning At	Gambell St (Northbound)				Gambell St (Southbound)				E 15th Ave (Eastbound)				E 15th Ave (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	0	0	0	12	94	6	0	0	35	13	0	27	61	0	0	248	
4:05 PM	0	0	0	0	15	88	0	0	0	42	12	0	30	77	0	0	264	
4:10 PM	0	0	0	0	11	93	1	0	0	43	12	0	30	57	0	0	247	
4:15 PM	0	0	0	0	27	86	0	0	0	56	10	0	28	59	0	0	266	
4:20 PM	0	0	0	0	9	92	0	0	0	47	7	0	19	48	0	0	222	
4:25 PM	0	0	0	0	15	82	1	0	0	40	3	0	16	47	0	0	204	
4:30 PM	0	0	0	0	16	73	2	0	0	34	9	0	13	63	0	0	210	
4:35 PM	0	0	0	0	24	83	0	0	0	44	6	0	21	73	0	0	251	
4:40 PM	0	0	0	0	19	94	2	0	0	49	10	0	29	56	0	0	259	
4:45 PM	0	0	0	0	19	79	1	0	0	44	15	0	23	63	0	0	244	
4:50 PM	0	0	0	0	17	112	2	0	0	36	17	0	28	55	0	0	267	
4:55 PM	0	0	0	0	21	138	4	0	0	55	12	0	16	66	0	0	312	2994
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2746
5:05 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2482
5:10 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2235
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1969
5:20 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1747
5:25 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1543
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1333
5:35 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1082
5:40 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	823
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	579
5:50 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	312
5:55 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	0	0	228	1316	28	0	0	540	176	0	268	736	0	0	3292
Heavy Trucks	0	0	0		0	60	0		0	20	0		4	8	0		92
Pedestrians		32				12				32				12			88
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

Report generated on 5/24/2013 12:21 AM

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

Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

LOCATION: Gambell St -- E 15th Ave

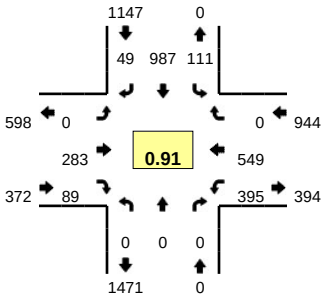
CITY/STATE: Anchorage, AK

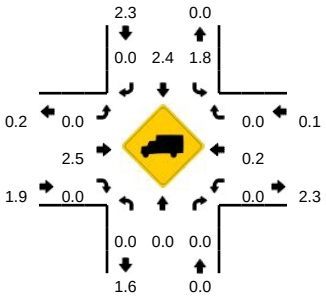
QC JOB #: 10955306

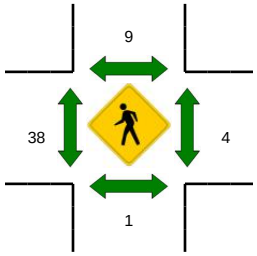
DATE: Mon, May 13 2013

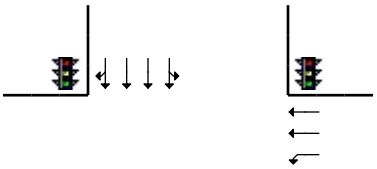
Peak-Hour: 6:00 PM -- 7:00 PM

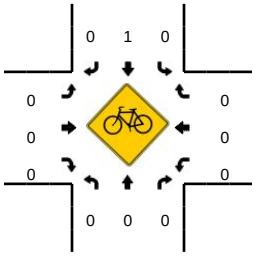
Peak 15-Min: 6:00 PM -- 6:15 PM

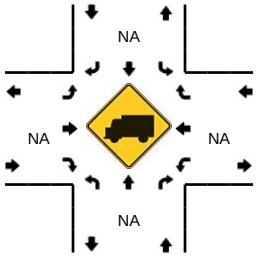


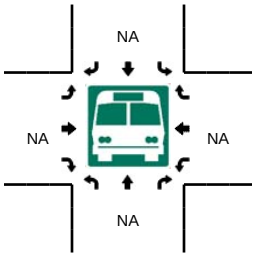












5-Min Count Period Beginning At	Gambell St (Northbound)				Gambell St (Southbound)				E 15th Ave (Eastbound)				E 15th Ave (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
6:00 PM	0	0	0	0	16	98	2	0	0	29	8	0	37	57	0	0	247	
6:05 PM	0	0	0	0	10	80	1	0	0	30	7	0	37	55	0	0	220	
6:10 PM	0	0	0	0	10	85	4	0	0	32	7	0	29	41	0	0	208	
6:15 PM	0	0	0	0	7	80	4	0	0	28	8	0	43	51	0	0	221	
6:20 PM	0	0	0	0	11	99	4	0	0	26	5	0	29	52	0	0	226	
6:25 PM	0	0	0	0	15	84	4	0	0	27	9	0	31	46	0	0	216	
6:30 PM	0	0	0	0	8	83	9	0	0	14	11	0	39	37	0	0	201	
6:35 PM	0	0	0	0	4	71	3	0	0	23	10	0	35	37	0	0	183	
6:40 PM	0	0	0	0	7	81	8	0	0	23	7	0	38	40	0	0	204	
6:45 PM	0	0	0	0	10	82	5	0	0	20	7	0	26	50	0	0	200	
6:50 PM	0	0	0	0	8	71	1	0	0	17	5	0	28	45	0	0	175	
6:55 PM	0	0	0	0	5	73	4	0	0	14	5	0	23	38	0	0	162	2463
7:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2216
7:05 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1996
7:10 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1788
7:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1567
7:20 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1341
7:25 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1125
7:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	924
7:35 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	741
7:40 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	537
7:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	337
7:50 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	162
7:55 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	0	0	144	1052	28	0	0	364	88	0	412	612	0	0	2700
Heavy Trucks	0	0	0		4	12	0		0	12	0		0	0	0		28
Pedestrians		0				0				16				4			20
Bicycles	0	0	0		0	1	0		0	0	0		0	0	0		1
Railroad																	
Stopped Buses																	

Comments:

Report generated on 5/24/2013 12:21 AM

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

Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

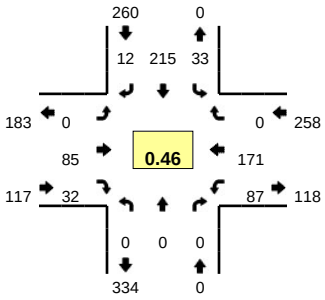
LOCATION: Gambell St -- E 15th Ave

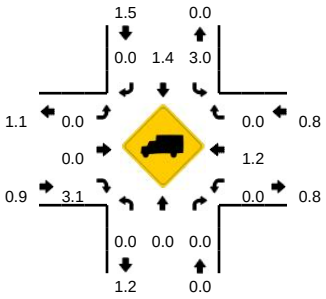
CITY/STATE: Anchorage, AK

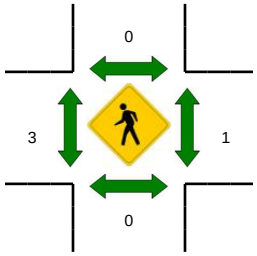
QC JOB #: 10955312

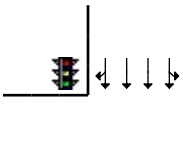
DATE: Mon, May 13 2013

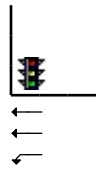
Peak-Hour: 8:00 PM -- 9:00 PM
Peak 15-Min: 8:00 PM -- 8:15 PM

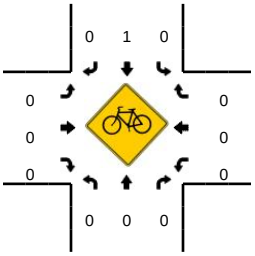


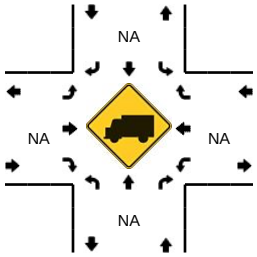


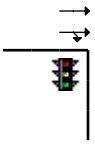


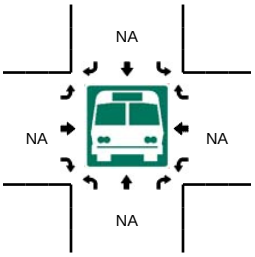












5-Min Count Period Beginning At	Gambell St (Northbound)				Gambell St (Southbound)				E 15th Ave (Eastbound)				E 15th Ave (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
8:00 PM	0	0	0	0	5	44	3	0	0	16	4	0	18	28	0	0	118	
8:05 PM	0	0	0	0	1	35	2	0	0	17	3	0	16	42	0	0	116	
8:10 PM	0	0	0	0	10	37	1	0	0	11	8	0	19	25	0	0	111	
8:15 PM	0	0	0	0	9	24	0	0	0	8	8	0	16	32	0	0	97	
8:20 PM	0	0	0	0	5	50	5	0	0	21	5	0	9	26	0	0	121	
8:25 PM	0	0	0	0	3	25	1	0	0	12	4	0	9	18	0	0	72	
8:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:35 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:40 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:50 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:55 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	635
9:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	517
9:05 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	401
9:10 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	290
9:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	193
9:20 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	72
9:25 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:35 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:40 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:50 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:55 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	0	0	64	464	24	0	0	176	60	0	212	380	0	0	1380
Heavy Trucks	0	0	0		4	0	0		0	0	4		0	4	0		12
Pedestrians		0				0				12				4			16
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

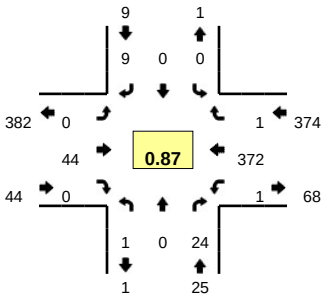
Report generated on 5/24/2013 12:21 AM

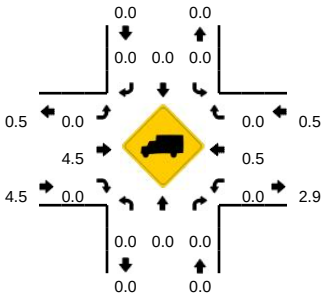
SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

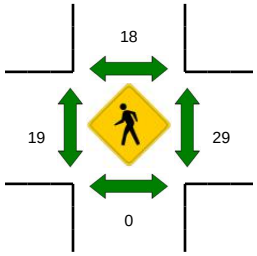
Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

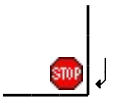
LOCATION: Sullivan Arena -- E 16th Ave | **QC JOB #:** 10955307
CITY/STATE: Anchorage, AK | **DATE:** Mon, May 13 2013

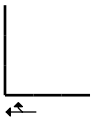
Peak-Hour: 1:00 PM -- 2:00 PM
Peak 15-Min: 1:40 PM -- 1:55 PM

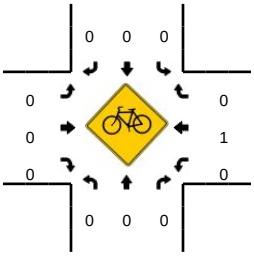


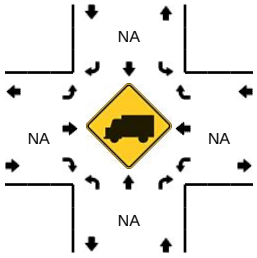


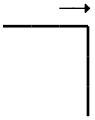


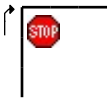


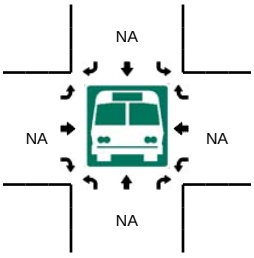












5-Min Count Period Beginning At	Sullivan Arena (Northbound)				Sullivan Arena (Southbound)				E 16th Ave (Eastbound)				E 16th Ave (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
1:00 PM	0	0	4	0	0	0	2	0	0	6	0	0	0	22	0	0	34	
1:05 PM	0	0	2	0	0	0	0	0	0	4	0	0	0	33	0	0	39	
1:10 PM	0	0	2	0	0	0	1	0	0	3	0	0	0	27	0	0	33	
1:15 PM	1	0	3	0	0	0	3	0	0	3	0	0	0	38	0	0	48	
1:20 PM	0	0	4	0	0	0	0	0	0	2	0	0	0	40	0	0	46	
1:25 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	32	0	0	32	
1:30 PM	0	0	3	0	0	0	0	0	0	2	0	0	0	35	0	0	40	
1:35 PM	0	0	1	0	0	0	1	0	0	2	0	0	0	27	0	0	31	
1:40 PM	0	0	1	0	0	0	0	0	0	8	0	0	1	37	0	0	47	
1:45 PM	0	0	1	0	0	0	1	0	0	4	0	0	0	27	0	0	33	
1:50 PM	0	0	3	0	0	0	1	0	0	5	0	0	0	40	1	0	50	
1:55 PM	0	0	0	0	0	0	0	0	0	5	0	0	0	14	0	0	19	452
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	418
2:05 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	379
2:10 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	346
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	298
2:20 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	252
2:25 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	220
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	180
2:35 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	149
2:40 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	102
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	69
2:50 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	19
2:55 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	20	0	0	0	8	0	0	68	0	0	4	416	4	0	520
Heavy Trucks	0	0	0		0	0	0		0	0	0		0	4	0		4
Pedestrians		0				28				40				36			104
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

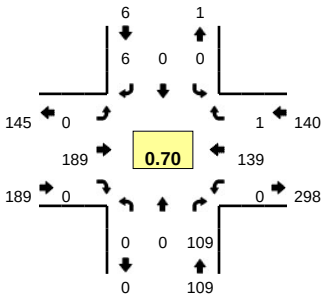
Report generated on 5/24/2013 12:21 AM

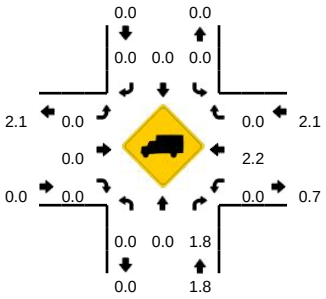
SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

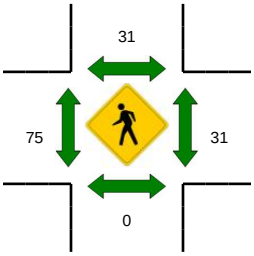
Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

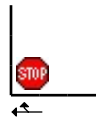
LOCATION: Sullivan Arena -- E 16th Ave | **QC JOB #:** 10955308
CITY/STATE: Anchorage, AK | **DATE:** Mon, May 13 2013

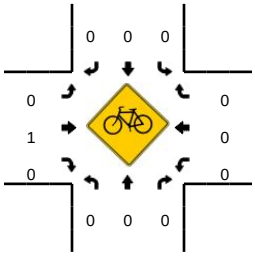
Peak-Hour: 4:00 PM -- 5:00 PM
Peak 15-Min: 4:15 PM -- 4:30 PM

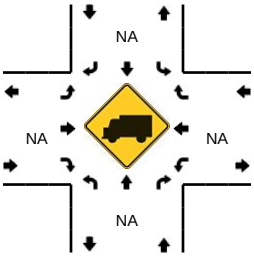


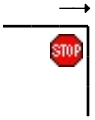


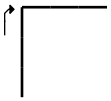


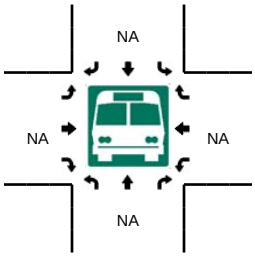












5-Min Count Period Beginning At	Sullivan Arena (Northbound)				Sullivan Arena (Southbound)				E 16th Ave (Eastbound)				E 16th Ave (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	0	10	0	0	0	0	0	0	10	0	0	0	8	0	0	28	
4:05 PM	0	0	9	0	0	0	0	0	0	24	0	0	0	11	0	0	44	
4:10 PM	0	0	5	0	0	0	1	0	0	32	0	0	0	11	0	0	49	
4:15 PM	0	0	11	0	0	0	0	0	0	38	0	0	0	9	0	0	58	
4:20 PM	0	0	7	0	0	0	1	0	0	24	0	0	0	17	1	0	50	
4:25 PM	0	0	11	0	0	0	0	0	0	28	0	0	0	11	0	0	50	
4:30 PM	0	0	14	0	0	0	2	0	0	13	0	0	0	12	0	0	41	
4:35 PM	0	0	22	0	0	0	1	0	0	4	0	0	0	23	0	0	50	
4:40 PM	0	0	15	0	0	0	1	0	0	4	0	0	0	10	0	0	30	
4:45 PM	0	0	2	0	0	0	0	0	0	5	0	0	0	7	0	0	14	
4:50 PM	0	0	3	0	0	0	0	0	0	6	0	0	0	14	0	0	23	
4:55 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	6	0	0	7	444
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	416
5:05 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	372
5:10 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	323
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	265
5:20 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	215
5:25 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	165
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	124
5:35 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	74
5:40 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	44
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	30
5:50 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
5:55 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	116	0	0	0	4	0	0	360	0	0	0	148	4	0	632
Heavy Trucks	0	0	0		0	0	0		0	0	0		0	4	0		4
Pedestrians		0				60				48				12			120
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

Report generated on 5/24/2013 12:21 AM

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

Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

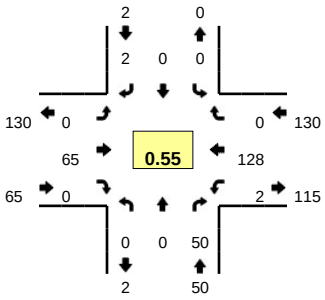
LOCATION: Sullivan Arena -- E 16th Ave

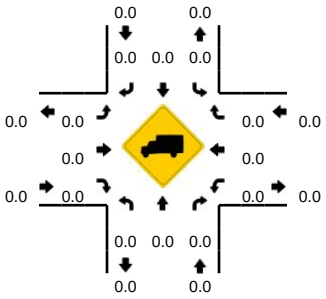
QC JOB #: 10955309

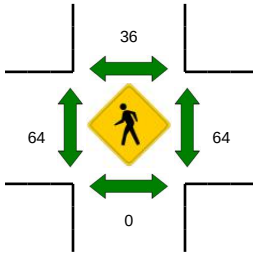
CITY/STATE: Anchorage, AK

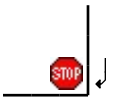
DATE: Mon, May 13 2013

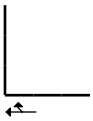
Peak-Hour: 6:00 PM -- 7:00 PM
Peak 15-Min: 6:00 PM -- 6:15 PM

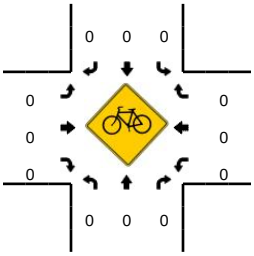


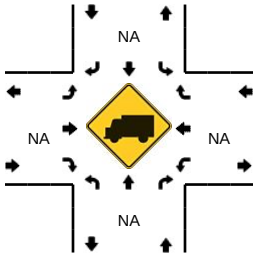


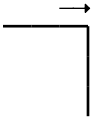


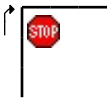


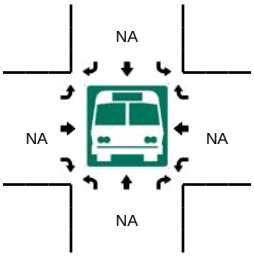












5-Min Count Period Beginning At	Sullivan Arena (Northbound)				Sullivan Arena (Southbound)				E 16th Ave (Eastbound)				E 16th Ave (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
6:00 PM	0	0	9	0	0	0	1	0	0	3	0	0	0	24	0	0	37	
6:05 PM	0	0	8	0	0	0	0	0	0	12	0	0	2	20	0	0	42	
6:10 PM	0	0	8	0	0	0	0	0	0	12	0	0	0	13	0	0	33	
6:15 PM	0	0	5	0	0	0	0	0	0	5	0	0	0	24	0	0	34	
6:20 PM	0	0	6	0	0	0	0	0	0	1	0	0	0	27	0	0	34	
6:25 PM	0	0	1	0	0	0	0	0	0	3	0	0	0	10	0	0	14	
6:30 PM	0	0	2	0	0	0	0	0	0	5	0	0	0	2	0	0	9	
6:35 PM	0	0	6	0	0	0	1	0	0	5	0	0	0	1	0	0	13	
6:40 PM	0	0	2	0	0	0	0	0	0	5	0	0	0	4	0	0	11	
6:45 PM	0	0	1	0	0	0	0	0	0	2	0	0	0	2	0	0	5	
6:50 PM	0	0	0	0	0	0	0	0	0	6	0	0	0	1	0	0	7	
6:55 PM	0	0	2	0	0	0	0	0	0	6	0	0	0	0	0	0	8	247
7:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	210
7:05 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	168
7:10 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	135
7:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	101
7:20 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	67
7:25 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	53
7:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	44
7:35 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	31
7:40 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20
7:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15
7:50 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
7:55 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	100	0	0	0	4	0	0	108	0	0	8	228	0	0	448
Heavy Trucks	0	0	0		0	0	0		0	0	0		0	0	0		0
Pedestrians		0				8				64				0			72
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

Report generated on 5/24/2013 12:21 AM

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

Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

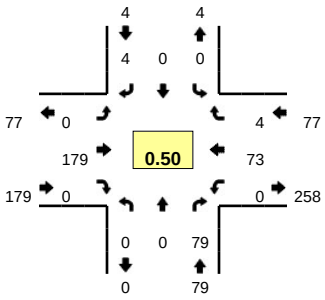
LOCATION: Sullivan Arena -- E 16th Ave

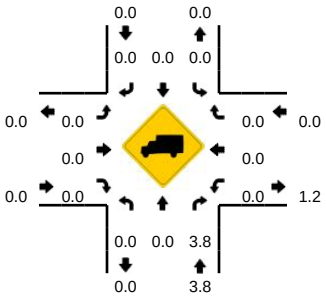
QC JOB #: 10955311

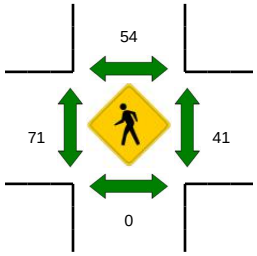
CITY/STATE: Anchorage, AK

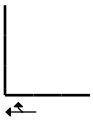
DATE: Mon, May 13 2013

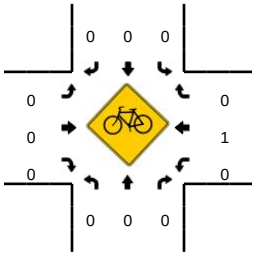
Peak-Hour: 9:00 PM -- 10:00 PM
Peak 15-Min: 9:00 PM -- 9:15 PM

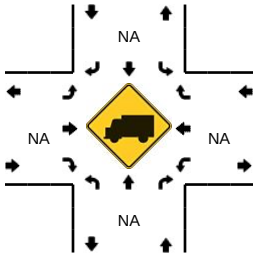


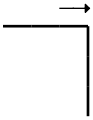


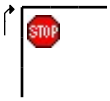


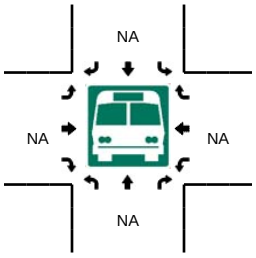












5-Min Count Period Beginning At	Sullivan Arena (Northbound)				Sullivan Arena (Southbound)				E 16th Ave (Eastbound)				E 16th Ave (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
9:00 PM	0	0	16	0	0	0	0	0	0	29	0	0	0	16	1	0	62	
9:05 PM	0	0	7	0	0	0	0	0	0	26	0	0	0	12	2	0	47	
9:10 PM	0	0	13	0	0	0	1	0	0	35	0	0	0	9	1	0	59	
9:15 PM	0	0	12	0	0	0	1	0	0	23	0	0	0	16	0	0	52	
9:20 PM	0	0	8	0	0	0	0	0	0	30	0	0	0	4	0	0	42	
9:25 PM	0	0	11	0	0	0	2	0	0	6	0	0	0	6	0	0	25	
9:30 PM	0	0	7	0	0	0	0	0	0	3	0	0	0	2	0	0	12	
9:35 PM	0	0	3	0	0	0	0	0	0	9	0	0	0	2	0	0	14	
9:40 PM	0	0	1	0	0	0	0	0	0	6	0	0	0	4	0	0	11	
9:45 PM	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	4	
9:50 PM	0	0	1	0	0	0	0	0	0	4	0	0	0	1	0	0	6	
9:55 PM	0	0	0	0	0	0	0	0	0	4	0	0	0	1	0	0	5	339
10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	277
10:05 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	230
10:10 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	171
10:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	119
10:20 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	77
10:25 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	52
10:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	40
10:35 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	26
10:40 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15
10:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11
10:50 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
10:55 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

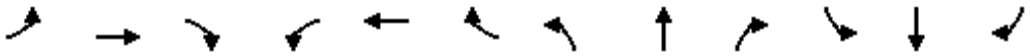
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	144	0	0	0	4	0	0	360	0	0	0	148	16	0	672
Heavy Trucks	0	0	4		0	0	0		0	0	0		0	0	0		4
Pedestrians		0				132				188				96			416
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

Report generated on 5/24/2013 12:21 AM

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

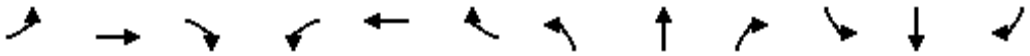
Appendix E Synchro Output Sheets



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	2	8	24	9	0	0	0	0	11	1819	7
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			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
Hourly flow rate (vph)	0	2	8	25	9	0	0	0	0	12	1915	7
Pedestrians		31			4			6			1	
Lane Width (ft)		12.0			12.0			0.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		3			0			0			0	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								652			428	
pX, platoon unblocked	0.74	0.74	0.74	0.74	0.74		0.74					
vC, conflicting volume	1978	1977	519	521	1980	5	1953			4		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	576	573	0	0	578	5	542			4		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	99	99	97	97	100	100			99		
cM capacity (veh/h)	277	309	788	727	307	1078	749			1625		

Direction, Lane #	EB 1	WB 1	SB 1	SB 2	SB 3	SB 4
Volume Total	11	35	331	638	638	326
Volume Left	0	25	12	0	0	0
Volume Right	8	0	0	0	0	7
cSH	601	530	1625	1700	1700	1700
Volume to Capacity	0.02	0.07	0.01	0.38	0.38	0.19
Queue Length 95th (ft)	1	4	0	0	0	0
Control Delay (s)	11.1	12.3	0.3	0.0	0.0	0.0
Lane LOS	B	B	A			
Approach Delay (s)	11.1	12.3	0.1			
Approach LOS	B	B				

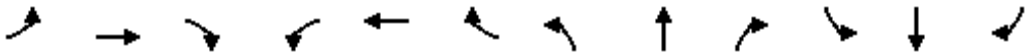
Intersection Summary				
Average Delay	0.3			
Intersection Capacity Utilization	44.4%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	11	24	29	12	0	0	0	0	17	2167	5
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			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
Hourly flow rate (vph)	0	12	26	31	13	0	0	0	0	18	2330	5
Pedestrians		31			10			3			4	
Lane Width (ft)		12.0			12.0			0.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		3			1			0			0	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								1142			298	
pX, platoon unblocked	0.80	0.80	0.80	0.80	0.80		0.80					
vC, conflicting volume	2411	2410	619	664	2413	14	2366			10		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1502	1502	0	0	1505	14	1447			10		
tC, single (s)	7.5	6.5	6.9	7.6	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.6	4.0	3.3	2.2			2.2		
p0 queue free %	100	87	97	95	86	100	100			99		
cM capacity (veh/h)	57	94	848	675	93	1056	369			1609		

Direction, Lane #	EB 1	WB 1	SB 1	SB 2	SB 3	SB 4
Volume Total	38	44	407	777	777	394
Volume Left	0	31	18	0	0	0
Volume Right	26	0	0	0	0	5
cSH	240	239	1609	1700	1700	1700
Volume to Capacity	0.16	0.18	0.01	0.46	0.46	0.23
Queue Length 95th (ft)	11	13	1	0	0	0
Control Delay (s)	22.8	23.4	0.4	0.0	0.0	0.0
Lane LOS	C	C	A			
Approach Delay (s)	22.8	23.4	0.1			
Approach LOS	C	C				

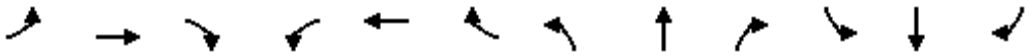
Intersection Summary				
Average Delay	0.8			
Intersection Capacity Utilization	50.4%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	6	7	9	8	0	0	0	0	10	2245	11
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	0	7	8	10	9	0	0	0	0	11	2522	12
Pedestrians		73			21			2			23	
Lane Width (ft)		12.0			12.0			0.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		6			2			0			2	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								413			1027	
pX, platoon unblocked	0.85	0.85	0.85	0.85	0.85		0.85					
vC, conflicting volume	2652	2645	712	687	2651	44	2608			21		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	2071	2064	0	0	2071	44	2020			21		
tC, single (s)	7.5	6.5	6.9	7.5	6.7	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.1	3.3	2.2			2.2		
p0 queue free %	100	84	99	99	76	100	100			99		
cM capacity (veh/h)	19	43	873	704	37	986	229			1580		

Direction, Lane #	EB 1	WB 1	SB 1	SB 2	SB 3	SB 4
Volume Total	15	19	432	841	841	433
Volume Left	0	10	11	0	0	0
Volume Right	8	0	0	0	0	12
cSH	88	74	1580	1700	1700	1700
Volume to Capacity	0.17	0.26	0.01	0.49	0.49	0.25
Queue Length 95th (ft)	11	18	0	0	0	0
Control Delay (s)	53.6	69.6	0.3	0.0	0.0	0.0
Lane LOS	F	F	A			
Approach Delay (s)	53.6	69.6	0.0			
Approach LOS	F	F				

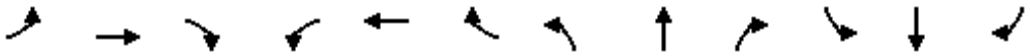
Intersection Summary				
Average Delay	0.9			
Intersection Capacity Utilization	52.8%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	10	31	25	10	0	0	0	0	18	2254	25
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
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
Hourly flow rate (vph)	0	11	34	27	11	0	0	0	0	20	2477	27
Pedestrians		17			3			1			8	
Lane Width (ft)		12.0			12.0			0.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		1			0			0			1	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								361			359	
pX, platoon unblocked	0.66	0.66	0.66	0.66	0.66		0.66					
vC, conflicting volume	2561	2550	651	702	2564	11	2521			3		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	814	798	0	0	819	11	755			3		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	95	95	95	95	100	100			99		
cM capacity (veh/h)	166	207	713	608	201	1064	565			1628		

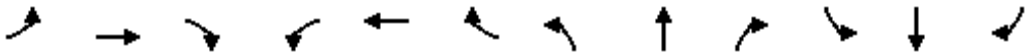
Direction, Lane #	EB 1	WB 1	SB 1	SB 2	SB 3	SB 4
Volume Total	45	38	433	826	826	440
Volume Left	0	27	20	0	0	0
Volume Right	34	0	0	0	0	27
cSH	447	386	1628	1700	1700	1700
Volume to Capacity	0.10	0.10	0.01	0.49	0.49	0.26
Queue Length 95th (ft)	7	7	1	0	0	0
Control Delay (s)	14.0	15.4	0.4	0.0	0.0	0.0
Lane LOS	B	C	A			
Approach Delay (s)	14.0	15.4	0.1			
Approach LOS	B	C				

Intersection Summary				
Average Delay	0.5			
Intersection Capacity Utilization	52.3%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	891	517	0	0	0	0	0	0	7	491	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		3.5									3.5	
Lane Util. Factor		0.91									0.86	
Frpb, ped/bikes		0.99									1.00	
Flpb, ped/bikes		1.00									1.00	
Frt		0.94									1.00	
Flt Protected		1.00									1.00	
Satd. Flow (prot)		4140									5569	
Flt Permitted		1.00									1.00	
Satd. Flow (perm)		4140									5569	
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)	0	979	568	0	0	0	0	0	0	8	540	0
RTOR Reduction (vph)	0	24	0	0	0	0	0	0	0	0	2	0
Lane Group Flow (vph)	0	1523	0	0	0	0	0	0	0	0	546	0
Confl. Peds. (#/hr)	29		20	20		29	41		21	21		41
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Turn Type										Split		
Protected Phases		2								1	1	
Permitted Phases												
Actuated Green, G (s)		18.4									13.4	
Effective Green, g (s)		19.4									14.4	
Actuated g/C Ratio		0.48									0.35	
Clearance Time (s)		4.5									4.5	
Vehicle Extension (s)		0.2									0.2	
Lane Grp Cap (vph)		1969									1966	
v/s Ratio Prot		c0.37									c0.10	
v/s Ratio Perm												
v/c Ratio		0.77									0.28	
Uniform Delay, d1		8.9									9.5	
Progression Factor		1.00									1.00	
Incremental Delay, d2		1.8									0.0	
Delay (s)		10.7									9.5	
Level of Service		B									A	
Approach Delay (s)		10.7			0.0			0.0			9.5	
Approach LOS		B			A			A			A	

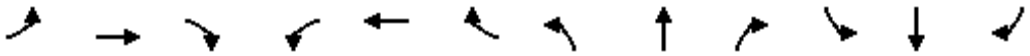
Intersection Summary			
HCM Average Control Delay	10.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	40.8	Sum of lost time (s)	7.0
Intersection Capacity Utilization	55.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	1006	1412	0	0	0	0	0	904	88
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)				4.5	4.5						4.5	
Lane Util. Factor				0.86	0.86						0.86	
Frpb, ped/bikes				1.00	1.00						1.00	
Flpb, ped/bikes				1.00	1.00						1.00	
Frt				1.00	1.00						0.99	
Flt Protected				0.95	0.99						1.00	
Satd. Flow (prot)				1261	3964						5316	
Flt Permitted				0.95	0.99						1.00	
Satd. Flow (perm)				1261	3964						5316	
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)	0	0	0	1070	1502	0	0	0	0	0	962	94
RTOR Reduction (vph)	0	0	0	13	13	0	0	0	0	0	17	0
Lane Group Flow (vph)	0	0	0	608	1938	0	0	0	0	0	1039	0
Confl. Peds. (#/hr)	2					2	16		8	8		16
Confl. Bikes (#/hr)						3						1
Heavy Vehicles (%)	0%	0%	0%	5%	4%	0%	0%	0%	0%	0%	3%	5%
Turn Type				Split								
Protected Phases				2	2						1	
Permitted Phases												
Actuated Green, G (s)				38.0	38.0						18.1	
Effective Green, g (s)				39.0	39.0						19.1	
Actuated g/C Ratio				0.58	0.58						0.28	
Clearance Time (s)				5.5	5.5						5.5	
Vehicle Extension (s)				0.2	0.2						0.2	
Lane Grp Cap (vph)				733	2304						1513	
v/s Ratio Prot				0.48	c0.49						c0.20	
v/s Ratio Perm												
v/c Ratio				0.83	0.84						0.69	
Uniform Delay, d1				11.4	11.5						21.3	
Progression Factor				1.00	1.00						1.00	
Incremental Delay, d2				7.4	2.8						1.0	
Delay (s)				18.7	14.3						22.4	
Level of Service				B	B						C	
Approach Delay (s)		0.0			15.4			0.0			22.4	
Approach LOS		A			B			A			C	

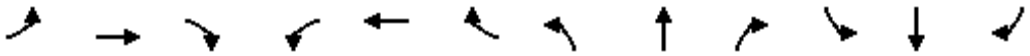
Intersection Summary			
HCM Average Control Delay	17.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	67.1	Sum of lost time (s)	9.0
Intersection Capacity Utilization	66.8%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



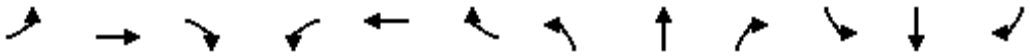
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	1550	284	0	0	0	0	0	0	375	1589	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.5	4.5								4.5	
Lane Util. Factor		0.86	0.86								0.86	
Frpb, ped/bikes		1.00	1.00								1.00	
Flpb, ped/bikes		1.00	1.00								1.00	
Frt		1.00	0.85								1.00	
Flt Protected		1.00	1.00								0.99	
Satd. Flow (prot)		4167	1184								5520	
Flt Permitted		1.00	1.00								0.99	
Satd. Flow (perm)		4167	1184								5520	
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	1685	309	0	0	0	0	0	0	408	1727	0
RTOR Reduction (vph)	0	2	5	0	0	0	0	0	0	0	2	0
Lane Group Flow (vph)	0	1714	273	0	0	0	0	0	0	0	2133	0
Confl. Peds. (#/hr)	24		6	6		24	6		7	7		6
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Turn Type			Prot							Split		
Protected Phases		2	2							1	1	
Permitted Phases												
Actuated Green, G (s)		44.2	44.2								42.3	
Effective Green, g (s)		45.2	45.2								43.3	
Actuated g/C Ratio		0.46	0.46								0.44	
Clearance Time (s)		5.5	5.5								5.5	
Vehicle Extension (s)		0.2	0.2								0.2	
Lane Grp Cap (vph)		1932	549								2451	
v/s Ratio Prot		c0.41	0.23								c0.39	
v/s Ratio Perm												
v/c Ratio		0.89	0.50								0.87	
Uniform Delay, d1		23.8	18.2								24.6	
Progression Factor		1.00	1.00								1.00	
Incremental Delay, d2		5.2	0.3								3.6	
Delay (s)		29.0	18.5								28.1	
Level of Service		C	B								C	
Approach Delay (s)		27.6			0.0			0.0			28.1	
Approach LOS		C			A			A			C	

Intersection Summary			
HCM Average Control Delay	27.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	97.5	Sum of lost time (s)	9.0
Intersection Capacity Utilization	80.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	123	201	81	142	0	0	0	0	14	1940	60
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.5	4.5		4.5						4.5	
Lane Util. Factor		1.00	1.00		0.95						0.86	
Frpb, ped/bikes		1.00	1.00		1.00						1.00	
Flpb, ped/bikes		1.00	1.00		1.00						1.00	
Frt		1.00	0.85		1.00						1.00	
Flt Protected		1.00	1.00		0.98						1.00	
Satd. Flow (prot)		1620	1377		3021						5541	
Flt Permitted		1.00	1.00		0.67						1.00	
Satd. Flow (perm)		1620	1377		2069						5541	
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	134	218	88	154	0	0	0	0	15	2109	65
RTOR Reduction (vph)	0	0	55	0	0	0	0	0	0	0	3	0
Lane Group Flow (vph)	0	134	163	0	242	0	0	0	0	0	2186	0
Confl. Peds. (#/hr)	27		2	2		27	9		7	7		9
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Turn Type			Prot	pm+pt						Split		
Protected Phases		6	6	5	2					8	8	
Permitted Phases				2								
Actuated Green, G (s)		16.4	16.4		26.9						69.6	
Effective Green, g (s)		17.4	17.4		27.9						70.6	
Actuated g/C Ratio		0.16	0.16		0.26						0.66	
Clearance Time (s)		5.5	5.5		5.5						5.5	
Vehicle Extension (s)		0.2	0.2		0.2						0.2	
Lane Grp Cap (vph)		262	223		590						3639	
v/s Ratio Prot		0.08	c0.12		c0.02						c0.39	
v/s Ratio Perm					0.08							
v/c Ratio		0.51	0.73		0.41						0.60	
Uniform Delay, d1		41.2	42.8		33.0						10.5	
Progression Factor		1.00	1.00		1.00						1.00	
Incremental Delay, d2		0.7	9.7		0.2						0.7	
Delay (s)		41.9	52.5		33.2						11.2	
Level of Service		D	D		C						B	
Approach Delay (s)		48.4			33.2			0.0			11.2	
Approach LOS		D			C			A			B	

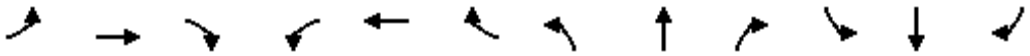
Intersection Summary			
HCM Average Control Delay	17.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	107.5	Sum of lost time (s)	13.5
Intersection Capacity Utilization	73.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	83	68	17	59	0	0	0	0	26	2213	52
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.5			4.5						4.5	
Lane Util. Factor		1.00			1.00						0.86	
Frpb, ped/bikes		0.97			1.00						1.00	
Flpb, ped/bikes		1.00			0.99						1.00	
Frt		0.94			1.00						1.00	
Flt Protected		1.00			0.99						1.00	
Satd. Flow (prot)		1466			1544						5376	
Flt Permitted		1.00			0.92						1.00	
Satd. Flow (perm)		1466			1430						5376	
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	0	93	76	19	66	0	0	0	0	29	2487	58
RTOR Reduction (vph)	0	4	0	0	0	0	0	0	0	0	4	0
Lane Group Flow (vph)	0	165	0	0	85	0	0	0	0	0	2570	0
Confl. Peds. (#/hr)	21		45	45		21	64		4	4		64
Confl. Bikes (#/hr)			1			1						
Heavy Vehicles (%)	0%	2%	0%	6%	2%	0%	0%	0%	0%	0%	3%	4%
Turn Type				Perm						Split		
Protected Phases		6			2					8	8	
Permitted Phases				2								
Actuated Green, G (s)		14.5			14.5						32.9	
Effective Green, g (s)		15.5			15.5						33.9	
Actuated g/C Ratio		0.27			0.27						0.58	
Clearance Time (s)		5.5			5.5						5.5	
Vehicle Extension (s)		0.2			0.2						0.2	
Lane Grp Cap (vph)		389			380						3121	
v/s Ratio Prot		c0.11									c0.48	
v/s Ratio Perm					0.06							
v/c Ratio		0.43			0.22						0.82	
Uniform Delay, d1		17.8			16.8						9.8	
Progression Factor		1.00			1.00						1.00	
Incremental Delay, d2		0.3			0.1						1.8	
Delay (s)		18.0			16.9						11.6	
Level of Service		B			B						B	
Approach Delay (s)		18.0			16.9			0.0			11.6	
Approach LOS		B			B			A			B	

Intersection Summary			
HCM Average Control Delay	12.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	58.4	Sum of lost time (s)	9.0
Intersection Capacity Utilization	69.3%	ICU Level of Service	C
Analysis Period (min)	15		

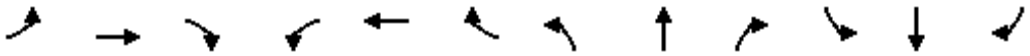
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	897	182	263	829	0	0	0	0	295	1835	111
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.5		4.5	4.5						4.1	
Lane Util. Factor		0.95		1.00	0.95						0.86	
Frpb, ped/bikes		1.00		1.00	1.00						1.00	
Flpb, ped/bikes		1.00		1.00	1.00						1.00	
Frt		0.97		1.00	1.00						0.99	
Flt Protected		1.00		0.95	1.00						0.99	
Satd. Flow (prot)		2964		1480	3018						5350	
Flt Permitted		1.00		0.11	1.00						0.99	
Satd. Flow (perm)		2964		173	3018						5350	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	997	202	292	921	0	0	0	0	328	2039	123
RTOR Reduction (vph)	0	14	0	0	0	0	0	0	0	0	6	0
Lane Group Flow (vph)	0	1185	0	292	921	0	0	0	0	0	2484	0
Confl. Peds. (#/hr)	6					6	1					1
Confl. Bikes (#/hr)			1			2						
Heavy Vehicles (%)	0%	1%	1%	4%	2%	0%	0%	0%	0%	1%	3%	1%
Turn Type				pm+pt						Split		
Protected Phases		8		7	4					6	6	
Permitted Phases				4								
Actuated Green, G (s)		30.6		49.6	49.6						55.1	
Effective Green, g (s)		31.6		50.6	50.6						56.5	
Actuated g/C Ratio		0.27		0.44	0.44						0.49	
Clearance Time (s)		5.5		5.5	5.5						5.5	
Vehicle Extension (s)		0.2		1.5	0.2						0.2	
Lane Grp Cap (vph)		810		239	1320						2613	
v/s Ratio Prot		c0.40		c0.15	0.31						c0.46	
v/s Ratio Perm				0.38								
v/c Ratio		1.46		1.22	0.70						0.95	
Uniform Delay, d1		42.0		33.8	26.4						28.3	
Progression Factor		1.00		1.00	1.00						1.00	
Incremental Delay, d2		215.2		131.3	1.3						8.7	
Delay (s)		257.3		165.2	27.7						36.9	
Level of Service		F		F	C						D	
Approach Delay (s)		257.3			60.8			0.0			36.9	
Approach LOS		F			E			A			D	

Intersection Summary			
HCM Average Control Delay	96.7	HCM Level of Service	F
HCM Volume to Capacity ratio	1.15		
Actuated Cycle Length (s)	115.7	Sum of lost time (s)	13.1
Intersection Capacity Utilization	102.5%	ICU Level of Service	G
Analysis Period (min)	15		

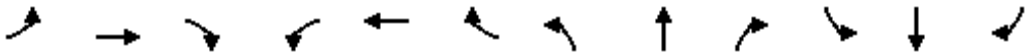
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	2	8	24	9	0	0	0	0	10	1478	7
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			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
Hourly flow rate (vph)	0	2	8	25	9	0	0	0	0	11	1556	7
Pedestrians		31			4			6			1	
Lane Width (ft)		12.0			12.0			0.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		3			0			0			0	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								652			428	
pX, platoon unblocked	0.72	0.72	0.72	0.72	0.72		0.72					
vC, conflicting volume	1617	1616	559	559	1619	5	1594			4		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	518	516	0	0	521	5	486			4		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	99	99	96	97	100	100			99		
cM capacity (veh/h)	298	325	769	711	323	1078	767			1625		

Direction, Lane #	EB 1	WB 1	SB 1	SB 2	SB 3
Volume Total	11	35	399	778	396
Volume Left	0	25	11	0	0
Volume Right	8	0	0	0	7
cSH	604	536	1625	1700	1700
Volume to Capacity	0.02	0.06	0.01	0.46	0.23
Queue Length 95th (ft)	1	4	0	0	0
Control Delay (s)	11.1	12.2	0.2	0.0	0.0
Lane LOS	B	B	A		
Approach Delay (s)	11.1	12.2	0.1		
Approach LOS	B	B			

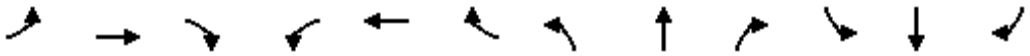
Intersection Summary				
Average Delay	0.4			
Intersection Capacity Utilization	47.3%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	11	24	29	12	0	0	0	0	17	1948	5
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			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
Hourly flow rate (vph)	0	12	26	31	13	0	0	0	0	18	2095	5
Pedestrians		31			10			3			4	
Lane Width (ft)		12.0			12.0			0.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		3			1			0			0	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								1142			298	
pX, platoon unblocked	0.64	0.64	0.64	0.64	0.64		0.64					
vC, conflicting volume	2175	2175	735	779	2178	14	2131			10		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	875	875	0	0	879	14	806			10		
tC, single (s)	7.5	6.5	6.9	7.6	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.6	4.0	3.3	2.2			2.2		
p0 queue free %	100	93	96	94	93	100	100			99		
cM capacity (veh/h)	140	178	682	566	177	1056	517			1609		

Direction, Lane #	EB 1	WB 1	SB 1	SB 2	SB 3
Volume Total	38	44	542	1047	529
Volume Left	0	31	18	0	0
Volume Right	26	0	0	0	5
cSH	360	344	1609	1700	1700
Volume to Capacity	0.10	0.13	0.01	0.62	0.31
Queue Length 95th (ft)	7	9	1	0	0
Control Delay (s)	16.2	17.0	0.4	0.0	0.0
Lane LOS	C	C	A		
Approach Delay (s)	16.2	17.0	0.1		
Approach LOS	C	C			

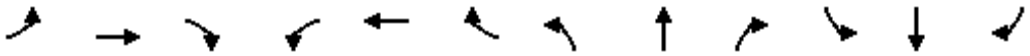
Intersection Summary				
Average Delay	0.7			
Intersection Capacity Utilization	57.5%	ICU Level of Service	B	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	6	7	9	8	0	0	0	0	10	2024	11
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	0	7	8	10	9	0	0	0	0	11	2274	12
Pedestrians		73			21			2			23	
Lane Width (ft)		12.0			12.0			0.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		6			2			0			2	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								413			1027	
pX, platoon unblocked	0.72	0.72	0.72	0.72	0.72		0.72					
vC, conflicting volume	2403	2397	839	815	2403	44	2360			21		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1574	1565	0	0	1574	44	1513			21		
tC, single (s)	7.5	6.5	6.9	7.5	6.7	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.1	3.3	2.2			2.2		
p0 queue free %	100	91	99	98	86	100	100			99		
cM capacity (veh/h)	42	74	734	624	65	986	301			1580		

Direction, Lane #	EB 1	WB 1	SB 1	SB 2	SB 3
Volume Total	15	19	580	1137	581
Volume Left	0	10	11	0	0
Volume Right	8	0	0	0	12
cSH	143	124	1580	1700	1700
Volume to Capacity	0.10	0.15	0.01	0.67	0.34
Queue Length 95th (ft)	7	11	0	0	0
Control Delay (s)	33.0	39.4	0.2	0.0	0.0
Lane LOS	D	E	A		
Approach Delay (s)	33.0	39.4	0.1		
Approach LOS	D	E			

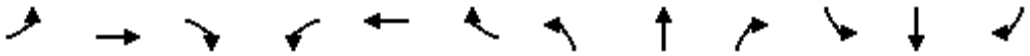
Intersection Summary				
Average Delay	0.6			
Intersection Capacity Utilization	60.2%	ICU Level of Service	B	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	10	31	25	10	0	0	0	0	18	2032	25
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
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
Hourly flow rate (vph)	0	11	34	27	11	0	0	0	0	20	2233	27
Pedestrians		17			3			1			8	
Lane Width (ft)		12.0			12.0			0.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		1			0			0			1	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								361			359	
pX, platoon unblocked	0.58	0.58	0.58	0.58	0.58		0.58					
vC, conflicting volume	2317	2306	776	827	2320	11	2277			3		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	767	749	0	0	773	11	700			3		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	94	95	95	94	100	100			99		
cM capacity (veh/h)	158	195	629	531	189	1064	522			1628		

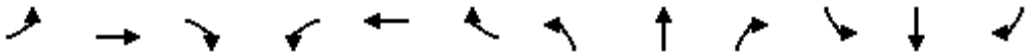
Direction, Lane #	EB 1	WB 1	SB 1	SB 2	SB 3
Volume Total	45	38	578	1116	586
Volume Left	0	27	20	0	0
Volume Right	34	0	0	0	27
cSH	407	350	1628	1700	1700
Volume to Capacity	0.11	0.11	0.01	0.66	0.34
Queue Length 95th (ft)	7	7	1	0	0
Control Delay (s)	14.9	16.6	0.4	0.0	0.0
Lane LOS	B	C	A		
Approach Delay (s)	14.9	16.6	0.1		
Approach LOS	B	C			

Intersection Summary				
Average Delay	0.6			
Intersection Capacity Utilization	59.9%	ICU Level of Service	B	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	892	470	0	0	0	0	0	0	7	469	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		3.5									3.5	
Lane Util. Factor		0.91									0.91	
Frpb, ped/bikes		0.99									1.00	
Flpb, ped/bikes		1.00									1.00	
Frt		0.95									1.00	
Flt Protected		1.00									1.00	
Satd. Flow (prot)		4158									4419	
Flt Permitted		1.00									1.00	
Satd. Flow (perm)		4158									4419	
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)	0	980	516	0	0	0	0	0	0	8	515	0
RTOR Reduction (vph)	0	28	0	0	0	0	0	0	0	0	1	0
Lane Group Flow (vph)	0	1468	0	0	0	0	0	0	0	0	522	0
Confl. Peds. (#/hr)	29		20	20		29	41		21	21		41
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Turn Type										Split		
Protected Phases		2								1	1	
Permitted Phases												
Actuated Green, G (s)		17.5									13.4	
Effective Green, g (s)		18.5									14.4	
Actuated g/C Ratio		0.46									0.36	
Clearance Time (s)		4.5									4.5	
Vehicle Extension (s)		0.2									0.2	
Lane Grp Cap (vph)		1928									1595	
v/s Ratio Prot		c0.35									c0.12	
v/s Ratio Perm												
v/c Ratio		0.76									0.33	
Uniform Delay, d1		8.9									9.2	
Progression Factor		1.00									1.00	
Incremental Delay, d2		1.6									0.0	
Delay (s)		10.5									9.3	
Level of Service		B									A	
Approach Delay (s)		10.5			0.0			0.0			9.3	
Approach LOS		B			A			A			A	

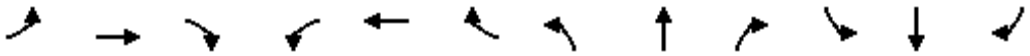
Intersection Summary			
HCM Average Control Delay	10.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	39.9	Sum of lost time (s)	7.0
Intersection Capacity Utilization	55.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	777	1595	0	0	0	0	0	818	95
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)				4.5	4.5						4.5	
Lane Util. Factor				0.86	0.86						0.91	
Frpb, ped/bikes				1.00	1.00						1.00	
Flpb, ped/bikes				1.00	1.00						1.00	
Frt				1.00	1.00						0.98	
Flt Protected				0.95	0.99						1.00	
Satd. Flow (prot)				1261	3992						4206	
Flt Permitted				0.95	0.99						1.00	
Satd. Flow (perm)				1261	3992						4206	
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)	0	0	0	827	1697	0	0	0	0	0	870	101
RTOR Reduction (vph)	0	0	0	20	14	0	0	0	0	0	10	0
Lane Group Flow (vph)	0	0	0	592	1898	0	0	0	0	0	961	0
Confl. Peds. (#/hr)	2					2	16		8	8		16
Confl. Bikes (#/hr)						3						1
Heavy Vehicles (%)	0%	0%	0%	5%	4%	0%	0%	0%	0%	0%	3%	5%
Turn Type				Split								
Protected Phases				2	2						1	
Permitted Phases												
Actuated Green, G (s)				38.4	38.4						21.0	
Effective Green, g (s)				39.4	39.4						22.0	
Actuated g/C Ratio				0.56	0.56						0.31	
Clearance Time (s)				5.5	5.5						5.5	
Vehicle Extension (s)				0.2	0.2						0.2	
Lane Grp Cap (vph)				706	2234						1314	
v/s Ratio Prot				0.47	c0.48						c0.23	
v/s Ratio Perm												
v/c Ratio				0.84	0.85						0.73	
Uniform Delay, d1				12.9	13.0						21.6	
Progression Factor				1.00	1.00						1.00	
Incremental Delay, d2				8.3	3.1						1.8	
Delay (s)				21.1	16.1						23.4	
Level of Service				C	B						C	
Approach Delay (s)		0.0			17.3			0.0			23.4	
Approach LOS		A			B			A			C	

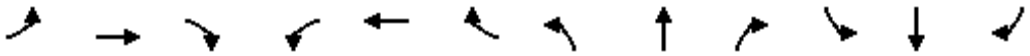
Intersection Summary			
HCM Average Control Delay	19.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	70.4	Sum of lost time (s)	9.0
Intersection Capacity Utilization	69.7%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



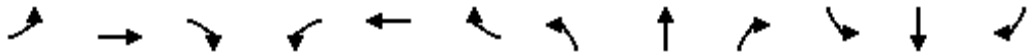
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	1550	284	0	0	0	0	0	0	399	1235	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.5	4.5								4.5	
Lane Util. Factor		0.86	0.86								0.91	
Frpb, ped/bikes		1.00	1.00								1.00	
Flpb, ped/bikes		1.00	1.00								1.00	
Frt		1.00	0.85								1.00	
Flt Protected		1.00	1.00								0.99	
Satd. Flow (prot)		4167	1184								4369	
Flt Permitted		1.00	1.00								0.99	
Satd. Flow (perm)		4167	1184								4369	
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	1685	309	0	0	0	0	0	0	434	1342	0
RTOR Reduction (vph)	0	2	16	0	0	0	0	0	0	0	2	0
Lane Group Flow (vph)	0	1714	262	0	0	0	0	0	0	0	1774	0
Confl. Peds. (#/hr)	24		6	6		24	6		7	7		6
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Turn Type			Prot							Split		
Protected Phases		2	2							1	1	
Permitted Phases												
Actuated Green, G (s)		45.2	45.2								45.8	
Effective Green, g (s)		46.2	46.2								46.8	
Actuated g/C Ratio		0.45	0.45								0.46	
Clearance Time (s)		5.5	5.5								5.5	
Vehicle Extension (s)		0.2	0.2								0.2	
Lane Grp Cap (vph)		1887	536								2005	
v/s Ratio Prot		c0.41	0.22								c0.41	
v/s Ratio Perm												
v/c Ratio		0.91	0.49								0.88	
Uniform Delay, d1		25.9	19.6								25.1	
Progression Factor		1.00	1.00								1.00	
Incremental Delay, d2		6.7	0.3								4.9	
Delay (s)		32.6	19.9								30.1	
Level of Service		C	B								C	
Approach Delay (s)		30.8			0.0			0.0			30.1	
Approach LOS		C			A			A			C	

Intersection Summary			
HCM Average Control Delay	30.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	102.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	84.8%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	123	221	100	136	0	0	0	0	14	1682	52
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.5	4.5		4.5						4.5	
Lane Util. Factor		1.00	1.00		0.95						0.91	
Frpb, ped/bikes		1.00	1.00		1.00						1.00	
Flpb, ped/bikes		1.00	1.00		1.00						1.00	
Frt		1.00	0.85		1.00						1.00	
Flt Protected		1.00	1.00		0.98						1.00	
Satd. Flow (prot)		1620	1377		3012						4398	
Flt Permitted		1.00	1.00		0.73						1.00	
Satd. Flow (perm)		1620	1377		2243						4398	
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	134	240	109	148	0	0	0	0	15	1828	57
RTOR Reduction (vph)	0	0	53	0	0	0	0	0	0	0	4	0
Lane Group Flow (vph)	0	134	187	0	257	0	0	0	0	0	1896	0
Confl. Peds. (#/hr)	27		2	2		27	9		7	7		9
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Turn Type			Prot	pm+pt						Split		
Protected Phases		6	6	5	2					8	8	
Permitted Phases				2								
Actuated Green, G (s)		15.4	15.4		26.1						35.0	
Effective Green, g (s)		16.4	16.4		27.1						36.0	
Actuated g/C Ratio		0.23	0.23		0.38						0.50	
Clearance Time (s)		5.5	5.5		5.5						5.5	
Vehicle Extension (s)		0.2	0.2		0.2						0.2	
Lane Grp Cap (vph)		368	313		909						2196	
v/s Ratio Prot		0.08	c0.14		c0.02						c0.43	
v/s Ratio Perm					0.08							
v/c Ratio		0.36	0.60		0.28						0.86	
Uniform Delay, d1		23.5	24.9		15.7						15.9	
Progression Factor		1.00	1.00		1.00						1.00	
Incremental Delay, d2		0.2	2.1		0.1						3.7	
Delay (s)		23.7	27.0		15.8						19.6	
Level of Service		C	C		B						B	
Approach Delay (s)		25.8			15.8			0.0			19.6	
Approach LOS		C			B			A			B	

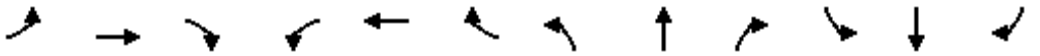
Intersection Summary			
HCM Average Control Delay	20.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	72.1	Sum of lost time (s)	13.5
Intersection Capacity Utilization	79.8%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	83	68	18	59	0	0	0	0	26	1990	52
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.5			4.5						4.5	
Lane Util. Factor		1.00			1.00						0.91	
Frpb, ped/bikes		0.97			1.00						1.00	
Flpb, ped/bikes		1.00			0.99						1.00	
Frt		0.94			1.00						1.00	
Flt Protected		1.00			0.99						1.00	
Satd. Flow (prot)		1461			1541						4262	
Flt Permitted		1.00			0.91						1.00	
Satd. Flow (perm)		1461			1417						4262	
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	0	93	76	20	66	0	0	0	0	29	2236	58
RTOR Reduction (vph)	0	7	0	0	0	0	0	0	0	0	3	0
Lane Group Flow (vph)	0	162	0	0	86	0	0	0	0	0	2320	0
Confl. Peds. (#/hr)	21		45	45		21	64		4	4		64
Confl. Bikes (#/hr)			1			1						
Heavy Vehicles (%)	0%	2%	0%	6%	2%	0%	0%	0%	0%	0%	3%	4%
Turn Type				Perm						Split		
Protected Phases		6			2					8	8	
Permitted Phases				2								
Actuated Green, G (s)		14.6			14.6						41.8	
Effective Green, g (s)		15.6			15.6						42.8	
Actuated g/C Ratio		0.23			0.23						0.64	
Clearance Time (s)		5.5			5.5						5.5	
Vehicle Extension (s)		0.2			0.2						0.2	
Lane Grp Cap (vph)		338			328						2706	
v/s Ratio Prot		c0.11									c0.54	
v/s Ratio Perm					0.06							
v/c Ratio		0.48			0.26						0.86	
Uniform Delay, d1		22.4			21.2						9.9	
Progression Factor		1.00			1.00						1.00	
Incremental Delay, d2		0.4			0.2						2.8	
Delay (s)		22.8			21.3						12.7	
Level of Service		C			C						B	
Approach Delay (s)		22.8			21.3			0.0			12.7	
Approach LOS		C			C			A			B	

Intersection Summary			
HCM Average Control Delay	13.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	67.4	Sum of lost time (s)	9.0
Intersection Capacity Utilization	78.9%	ICU Level of Service	D
Analysis Period (min)	15		

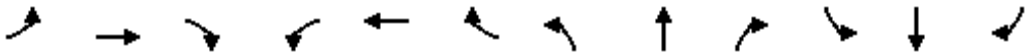
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	914	261	272	836	0	0	0	0	261	1664	98
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.5		4.5	4.5					4.1	4.1	
Lane Util. Factor		0.95		1.00	0.95					1.00	0.91	
Frpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	
Frt		0.97		1.00	1.00					1.00	0.99	
Flt Protected		1.00		0.95	1.00					0.95	1.00	
Satd. Flow (prot)		2938		1480	3018					1524	4259	
Flt Permitted		1.00		0.10	1.00					0.95	1.00	
Satd. Flow (perm)		2938		148	3018					1524	4259	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	1016	290	302	929	0	0	0	0	290	1849	109
RTOR Reduction (vph)	0	12	0	0	0	0	0	0	0	0	5	0
Lane Group Flow (vph)	0	1294	0	302	929	0	0	0	0	290	1953	0
Confl. Peds. (#/hr)	6					6	1					1
Confl. Bikes (#/hr)			1			2						
Heavy Vehicles (%)	0%	1%	1%	4%	2%	0%	0%	0%	0%	1%	3%	1%
Turn Type				pm+pt						Split		
Protected Phases		8		7	4					6	6	
Permitted Phases				4								
Actuated Green, G (s)		36.5		54.5	54.5					54.3	54.3	
Effective Green, g (s)		37.5		55.5	55.5					55.7	55.7	
Actuated g/C Ratio		0.31		0.46	0.46					0.46	0.46	
Clearance Time (s)		5.5		5.5	5.5					5.5	5.5	
Vehicle Extension (s)		0.2		1.5	0.2					0.2	0.2	
Lane Grp Cap (vph)		920		219	1398					709	1980	
v/s Ratio Prot		0.44		c0.16	0.31					0.19	c0.46	
v/s Ratio Perm				c0.48								
v/c Ratio		1.41		1.38	0.66					0.41	0.99	
Uniform Delay, d1		41.1		35.8	24.9					21.2	31.7	
Progression Factor		1.00		1.00	1.00					1.00	1.00	
Incremental Delay, d2		189.6		196.5	0.9					0.1	16.9	
Delay (s)		230.8		232.3	25.9					21.3	48.5	
Level of Service		F		F	C					C	D	
Approach Delay (s)		230.8			76.5			0.0			45.0	
Approach LOS		F			E			A			D	

Intersection Summary			
HCM Average Control Delay	103.8	HCM Level of Service	F
HCM Volume to Capacity ratio	1.16		
Actuated Cycle Length (s)	119.8	Sum of lost time (s)	8.6
Intersection Capacity Utilization	108.3%	ICU Level of Service	G
Analysis Period (min)	15		

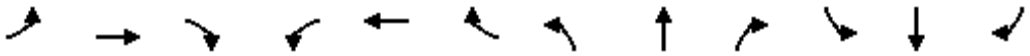
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	2	8	26	9	0	0	0	0	13	1875	7
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			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
Hourly flow rate (vph)	0	2	8	27	9	0	0	0	0	14	1974	7
Pedestrians		31			4			6			1	
Lane Width (ft)		12.0			12.0			0.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		3			0			0			0	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								652			428	
pX, platoon unblocked												
vC, conflicting volume	2041	2040	534	540	2043	5	2012			4		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	2041	2040	534	540	2043	5	2012			4		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	96	98	93	83	100	100			99		
cM capacity (veh/h)	28	55	483	396	55	1078	280			1625		

Direction, Lane #	EB 1	WB 1	SB 1	SB 2	SB 3	SB 4
Volume Total	11	37	343	658	658	336
Volume Left	0	27	14	0	0	0
Volume Right	8	0	0	0	0	7
cSH	189	152	1625	1700	1700	1700
Volume to Capacity	0.06	0.24	0.01	0.39	0.39	0.20
Queue Length 95th (ft)	4	18	1	0	0	0
Control Delay (s)	25.1	36.0	0.4	0.0	0.0	0.0
Lane LOS	D	E	A			
Approach Delay (s)	25.1	36.0	0.1			
Approach LOS	D	E				

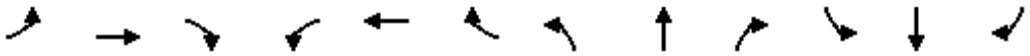
Intersection Summary				
Average Delay	0.8			
Intersection Capacity Utilization	45.4%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	11	24	29	12	0	0	0	0	17	2355	5
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			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
Hourly flow rate (vph)	0	12	26	31	13	0	0	0	0	18	2532	5
Pedestrians		31			10			3			4	
Lane Width (ft)		12.0			12.0			0.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		3			1			0			0	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								1142			298	
pX, platoon unblocked	0.76	0.76	0.76	0.76	0.76		0.76					
vC, conflicting volume	2613	2613	670	714	2615	14	2569			10		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1548	1548	0	0	1551	14	1490			10		
tC, single (s)	7.5	6.5	6.9	7.6	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.6	4.0	3.3	2.2			2.2		
p0 queue free %	100	86	97	95	85	100	100			99		
cM capacity (veh/h)	50	84	809	635	83	1056	339			1609		

Direction, Lane #	EB 1	WB 1	SB 1	SB 2	SB 3	SB 4
Volume Total	38	44	440	844	844	427
Volume Left	0	31	18	0	0	0
Volume Right	26	0	0	0	0	5
cSH	217	216	1609	1700	1700	1700
Volume to Capacity	0.17	0.20	0.01	0.50	0.50	0.25
Queue Length 95th (ft)	12	15	1	0	0	0
Control Delay (s)	25.0	25.9	0.4	0.0	0.0	0.0
Lane LOS	C	D	A			
Approach Delay (s)	25.0	25.9	0.1			
Approach LOS	C	D				

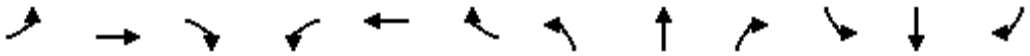
Intersection Summary				
Average Delay	0.9			
Intersection Capacity Utilization	53.2%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	6	7	9	8	0	0	0	0	10	2432	11
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	0	7	8	10	9	0	0	0	0	11	2733	12
Pedestrians		73			21			2			23	
Lane Width (ft)		12.0			12.0			0.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		6			2			0			2	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								413			1027	
pX, platoon unblocked	0.84	0.84	0.84	0.84	0.84		0.84					
vC, conflicting volume	2862	2855	764	740	2861	44	2818			21		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	2280	2272	0	0	2279	44	2228			21		
tC, single (s)	7.5	6.5	6.9	7.5	6.7	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.1	3.3	2.2			2.2		
p0 queue free %	100	79	99	98	66	100	100			99		
cM capacity (veh/h)	12	32	864	662	27	986	188			1580		

Direction, Lane #	EB 1	WB 1	SB 1	SB 2	SB 3	SB 4
Volume Total	15	19	467	911	911	468
Volume Left	0	10	11	0	0	0
Volume Right	8	0	0	0	0	12
cSH	66	54	1580	1700	1700	1700
Volume to Capacity	0.22	0.35	0.01	0.54	0.54	0.28
Queue Length 95th (ft)	15	25	0	0	0	0
Control Delay (s)	74.9	103.9	0.2	0.0	0.0	0.0
Lane LOS	F	F	A			
Approach Delay (s)	74.9	103.9	0.0			
Approach LOS	F	F				

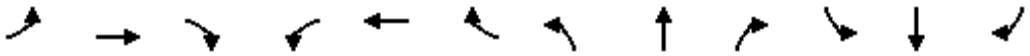
Intersection Summary				
Average Delay	1.1			
Intersection Capacity Utilization	55.6%	ICU Level of Service	B	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	10	31	26	10	0	0	0	0	19	2441	25
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
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
Hourly flow rate (vph)	0	11	34	29	11	0	0	0	0	21	2682	27
Pedestrians		17			3			1			8	
Lane Width (ft)		12.0			12.0			0.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		1			0			0			1	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								361			359	
pX, platoon unblocked	0.63	0.63	0.63	0.63	0.63		0.63					
vC, conflicting volume	2768	2758	702	756	2772	11	2727			3		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	833	816	0	0	838	11	767			3		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	94	95	95	94	100	100			99		
cM capacity (veh/h)	151	190	673	569	185	1064	528			1628		

Direction, Lane #	EB 1	WB 1	SB 1	SB 2	SB 3	SB 4
Volume Total	45	40	468	894	894	475
Volume Left	0	29	21	0	0	0
Volume Right	34	0	0	0	0	27
cSH	416	361	1628	1700	1700	1700
Volume to Capacity	0.11	0.11	0.01	0.53	0.53	0.28
Queue Length 95th (ft)	7	7	1	0	0	0
Control Delay (s)	14.7	16.2	0.4	0.0	0.0	0.0
Lane LOS	B	C	A			
Approach Delay (s)	14.7	16.2	0.1			
Approach LOS	B	C				

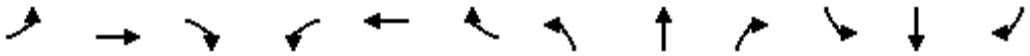
Intersection Summary				
Average Delay	0.5			
Intersection Capacity Utilization	55.2%	ICU Level of Service	B	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	841	673	0	0	0	0	0	0	7	512	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		3.5									3.5	
Lane Util. Factor		0.91									0.86	
Frpb, ped/bikes		0.99									1.00	
Flpb, ped/bikes		1.00									1.00	
Frt		0.93									1.00	
Flt Protected		1.00									1.00	
Satd. Flow (prot)		4079									5569	
Flt Permitted		1.00									1.00	
Satd. Flow (perm)		4079									5569	
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)	0	924	740	0	0	0	0	0	0	8	563	0
RTOR Reduction (vph)	0	20	0	0	0	0	0	0	0	0	1	0
Lane Group Flow (vph)	0	1644	0	0	0	0	0	0	0	0	570	0
Confl. Peds. (#/hr)	29		20	20		29	41		21	21		41
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Turn Type										Split		
Protected Phases		2								1	1	
Permitted Phases												
Actuated Green, G (s)		21.0									13.5	
Effective Green, g (s)		22.0									14.5	
Actuated g/C Ratio		0.51									0.33	
Clearance Time (s)		4.5									4.5	
Vehicle Extension (s)		0.2									0.2	
Lane Grp Cap (vph)		2063									1856	
v/s Ratio Prot		c0.40									c0.10	
v/s Ratio Perm												
v/c Ratio		1.04dr									0.31	
Uniform Delay, d1		8.9									10.8	
Progression Factor		1.00									1.00	
Incremental Delay, d2		2.1									0.0	
Delay (s)		11.0									10.8	
Level of Service		B									B	
Approach Delay (s)		11.0			0.0			0.0			10.8	
Approach LOS		B			A			A			B	

Intersection Summary			
HCM Average Control Delay	10.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	43.5	Sum of lost time (s)	7.0
Intersection Capacity Utilization	58.8%	ICU Level of Service	B
Analysis Period (min)	15		

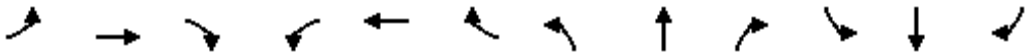
dr Defacto Right Lane. Recode with 1 though lane as a right lane.
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	995	1510	0	0	0	0	0	1078	92
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)				4.5	4.5						4.5	
Lane Util. Factor				0.86	0.86						0.86	
Frpb, ped/bikes				1.00	1.00						1.00	
Flpb, ped/bikes				1.00	1.00						1.00	
Frt				1.00	1.00						0.99	
Flt Protected				0.95	0.99						1.00	
Satd. Flow (prot)				1261	3970						5326	
Flt Permitted				0.95	0.99						1.00	
Satd. Flow (perm)				1261	3970						5326	
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)	0	0	0	1059	1606	0	0	0	0	0	1147	98
RTOR Reduction (vph)	0	0	0	6	6	0	0	0	0	0	13	0
Lane Group Flow (vph)	0	0	0	640	2013	0	0	0	0	0	1232	0
Confl. Peds. (#/hr)	2					2	16		8	8		16
Confl. Bikes (#/hr)						3						1
Heavy Vehicles (%)	0%	0%	0%	5%	4%	0%	0%	0%	0%	0%	3%	5%
Turn Type				Split								
Protected Phases				2	2						1	
Permitted Phases												
Actuated Green, G (s)				44.9	44.9						22.2	
Effective Green, g (s)				45.9	45.9						23.2	
Actuated g/C Ratio				0.59	0.59						0.30	
Clearance Time (s)				5.5	5.5						5.5	
Vehicle Extension (s)				0.2	0.2						0.2	
Lane Grp Cap (vph)				741	2333						1582	
v/s Ratio Prot				c0.51	0.51						c0.23	
v/s Ratio Perm												
v/c Ratio				0.86	0.86						0.78	
Uniform Delay, d1				13.5	13.5						25.1	
Progression Factor				1.00	1.00						1.00	
Incremental Delay, d2				9.9	3.4						2.3	
Delay (s)				23.4	16.9						27.4	
Level of Service				C	B						C	
Approach Delay (s)		0.0			18.5			0.0			27.4	
Approach LOS		A			B			A			C	

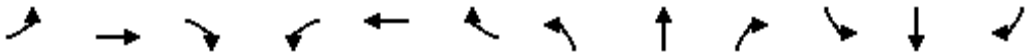
Intersection Summary			
HCM Average Control Delay	21.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	78.1	Sum of lost time (s)	9.0
Intersection Capacity Utilization	71.2%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



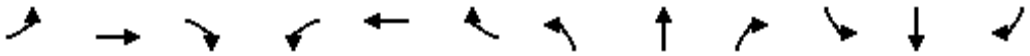
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	1593	284	0	0	0	0	0	0	539	1640	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.5	4.5								4.5	
Lane Util. Factor		0.86	0.86								0.86	
Frpb, ped/bikes		1.00	1.00								1.00	
Flpb, ped/bikes		1.00	1.00								1.00	
Frt		1.00	0.85								1.00	
Flt Protected		1.00	1.00								0.99	
Satd. Flow (prot)		4167	1184								5505	
Flt Permitted		1.00	1.00								0.99	
Satd. Flow (perm)		4167	1184								5505	
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	1732	309	0	0	0	0	0	0	586	1783	0
RTOR Reduction (vph)	0	1	4	0	0	0	0	0	0	0	2	0
Lane Group Flow (vph)	0	1762	274	0	0	0	0	0	0	0	2367	0
Confl. Peds. (#/hr)	24		6	6		24	6		7	7		6
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Turn Type			Prot							Split		
Protected Phases		2	2							1	1	
Permitted Phases												
Actuated Green, G (s)		49.0	49.0								49.7	
Effective Green, g (s)		50.0	50.0								50.7	
Actuated g/C Ratio		0.46	0.46								0.46	
Clearance Time (s)		5.5	5.5								5.5	
Vehicle Extension (s)		0.2	0.2								0.2	
Lane Grp Cap (vph)		1899	540								2544	
v/s Ratio Prot		c0.42	0.23								c0.43	
v/s Ratio Perm												
v/c Ratio		0.93	0.51								0.93	
Uniform Delay, d1		28.1	21.1								27.8	
Progression Factor		1.00	1.00								1.00	
Incremental Delay, d2		8.3	0.3								6.8	
Delay (s)		36.5	21.4								34.6	
Level of Service		D	C								C	
Approach Delay (s)		34.4			0.0			0.0			34.6	
Approach LOS		C			A			A			C	

Intersection Summary			
HCM Average Control Delay	34.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	109.7	Sum of lost time (s)	9.0
Intersection Capacity Utilization	87.8%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	3	123	215	100	136	0	0	0	0	14	2096	52
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.5	4.5		4.5						4.5	
Lane Util. Factor		1.00	1.00		0.95						0.86	
Frpb, ped/bikes		1.00	1.00		1.00						1.00	
Flpb, ped/bikes		1.00	1.00		1.00						1.00	
Frt		1.00	0.85		1.00						1.00	
Flt Protected		1.00	1.00		0.98						1.00	
Satd. Flow (prot)		1616	1377		3012						5547	
Flt Permitted		0.99	1.00		0.66						1.00	
Satd. Flow (perm)		1605	1377		2033						5547	
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)	3	134	234	109	148	0	0	0	0	15	2278	57
RTOR Reduction (vph)	0	0	48	0	0	0	0	0	0	0	2	0
Lane Group Flow (vph)	0	137	186	0	257	0	0	0	0	0	2348	0
Confl. Peds. (#/hr)	27		2	2		27	9		7	7		9
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Turn Type	Perm		Prot	pm+pt						Split		
Protected Phases		6	6	5	2					8	8	
Permitted Phases	6			2								
Actuated Green, G (s)		18.0	18.0		28.5						69.7	
Effective Green, g (s)		19.0	19.0		29.5						70.7	
Actuated g/C Ratio		0.17	0.17		0.27						0.65	
Clearance Time (s)		5.5	5.5		5.5						5.5	
Vehicle Extension (s)		0.2	0.2		0.2						0.2	
Lane Grp Cap (vph)		279	240		603						3591	
v/s Ratio Prot			c0.14		c0.02						c0.42	
v/s Ratio Perm		0.09			0.09							
v/c Ratio		0.49	0.78		0.43						0.65	
Uniform Delay, d1		40.7	43.1		32.9						11.8	
Progression Factor		1.00	1.00		1.00						1.00	
Incremental Delay, d2		0.5	13.3		0.2						0.9	
Delay (s)		41.2	56.3		33.0						12.7	
Level of Service		D	E		C						B	
Approach Delay (s)		50.8			33.0			0.0			12.7	
Approach LOS		D			C			A			B	

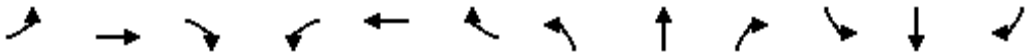
Intersection Summary			
HCM Average Control Delay	19.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	109.2	Sum of lost time (s)	13.5
Intersection Capacity Utilization	76.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	1	83	68	19	59	0	0	0	0	24	2401	52
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.5			4.5						4.5	
Lane Util. Factor		1.00			1.00						0.86	
Frpb, ped/bikes		0.97			1.00						1.00	
Flpb, ped/bikes		1.00			0.99						1.00	
Frt		0.94			1.00						1.00	
Flt Protected		1.00			0.99						1.00	
Satd. Flow (prot)		1463			1541						5377	
Flt Permitted		1.00			0.91						1.00	
Satd. Flow (perm)		1462			1413						5377	
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	1	93	76	21	66	0	0	0	0	27	2698	58
RTOR Reduction (vph)	0	2	0	0	0	0	0	0	0	0	3	0
Lane Group Flow (vph)	0	168	0	0	87	0	0	0	0	0	2780	0
Confl. Peds. (#/hr)	21		45	45		21	64		4	4		64
Confl. Bikes (#/hr)			1			1						
Heavy Vehicles (%)	0%	2%	0%	6%	2%	0%	0%	0%	0%	0%	3%	4%
Turn Type	Perm			Perm						Split		
Protected Phases		6			2					8	8	
Permitted Phases	6			2								
Actuated Green, G (s)		14.5			14.5						37.6	
Effective Green, g (s)		15.5			15.5						38.6	
Actuated g/C Ratio		0.25			0.25						0.61	
Clearance Time (s)		5.5			5.5						5.5	
Vehicle Extension (s)		0.2			0.2						0.2	
Lane Grp Cap (vph)		359			347						3289	
v/s Ratio Prot											c0.52	
v/s Ratio Perm		c0.11			0.06							
v/c Ratio		0.47			0.25						0.85	
Uniform Delay, d1		20.3			19.1						9.8	
Progression Factor		1.00			1.00						1.00	
Incremental Delay, d2		0.4			0.1						2.1	
Delay (s)		20.6			19.3						11.9	
Level of Service		C			B						B	
Approach Delay (s)		20.6			19.3			0.0			11.9	
Approach LOS		C			B			A			B	

Intersection Summary			
HCM Average Control Delay	12.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	63.1	Sum of lost time (s)	9.0
Intersection Capacity Utilization	71.9%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



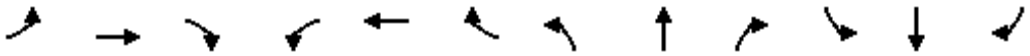
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	1044	227	285	889	0	0	0	0	301	2009	121
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.5		4.5	4.5						4.1	
Lane Util. Factor		0.95		1.00	0.95						0.86	
Frpb, ped/bikes		1.00		1.00	1.00						1.00	
Flpb, ped/bikes		1.00		1.00	1.00						1.00	
Frt		0.97		1.00	1.00						0.99	
Flt Protected		1.00		0.95	1.00						0.99	
Satd. Flow (prot)		2959		1480	3018						5352	
Flt Permitted		1.00		0.11	1.00						0.99	
Satd. Flow (perm)		2959		178	3018						5352	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	1160	252	317	988	0	0	0	0	334	2232	134
RTOR Reduction (vph)	0	8	0	0	0	0	0	0	0	0	6	0
Lane Group Flow (vph)	0	1404	0	317	988	0	0	0	0	0	2694	0
Confl. Peds. (#/hr)	6					6	1					1
Confl. Bikes (#/hr)			1			2						
Heavy Vehicles (%)	0%	1%	1%	4%	2%	0%	0%	0%	0%	1%	3%	1%
Turn Type				pm+pt						Split		
Protected Phases		8		7	4					6	6	
Permitted Phases				4								
Actuated Green, G (s)		29.6		46.6	46.6						59.7	
Effective Green, g (s)		30.6		47.6	47.6						61.1	
Actuated g/C Ratio		0.26		0.41	0.41						0.52	
Clearance Time (s)		5.5		5.5	5.5						5.5	
Vehicle Extension (s)		0.2		1.5	0.2						0.2	
Lane Grp Cap (vph)		772		211	1225						2788	
v/s Ratio Prot		c0.47		c0.16	0.33						c0.50	
v/s Ratio Perm				0.45								
v/c Ratio		1.82		1.50	0.81						0.97	
Uniform Delay, d1		43.3		32.8	30.8						27.1	
Progression Factor		1.00		1.00	1.00						1.00	
Incremental Delay, d2		373.4		249.2	3.8						10.2	
Delay (s)		416.8		282.0	34.5						37.3	
Level of Service		F		F	C						D	
Approach Delay (s)		416.8			94.6			0.0			37.3	
Approach LOS		F			F			A			D	

Intersection Summary			
HCM Average Control Delay	150.1	HCM Level of Service	F
HCM Volume to Capacity ratio	1.28		
Actuated Cycle Length (s)	117.3	Sum of lost time (s)	13.1
Intersection Capacity Utilization	113.7%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

HCM Unsignalized Intersection Capacity Analysis
105: E 7th Ave & Gambell St

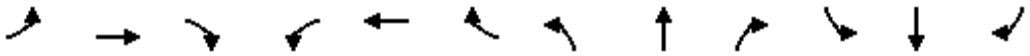
4/20/2014



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	2	8	26	9	0	0	0	0	13	1734	7
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			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
Hourly flow rate (vph)	0	2	8	27	9	0	0	0	0	14	1825	7
Pedestrians		31			4			6			1	
Lane Width (ft)		12.0			12.0			0.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		3			0			0			0	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								652			428	
pX, platoon unblocked	0.60	0.60	0.60	0.60	0.60		0.60					
vC, conflicting volume	1893	1891	649	655	1895	5	1864			4		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	125	122	0	0	128	5	75			4		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	99	95	98	100	100			99		
cM capacity (veh/h)	467	443	633	583	440	1078	892			1625		

Direction, Lane #	EB 1	WB 1	SB 1	SB 2	SB 3
Volume Total	11	37	470	913	464
Volume Left	0	27	14	0	0
Volume Right	8	0	0	0	7
cSH	583	538	1625	1700	1700
Volume to Capacity	0.02	0.07	0.01	0.54	0.27
Queue Length 95th (ft)	1	4	1	0	0
Control Delay (s)	11.3	12.2	0.3	0.0	0.0
Lane LOS	B	B	A		
Approach Delay (s)	11.3	12.2	0.1		
Approach LOS	B	B			

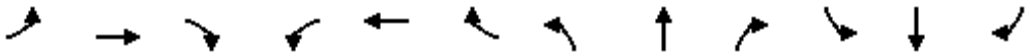
Intersection Summary				
Average Delay	0.4			
Intersection Capacity Utilization	52.5%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	11	24	29	12	0	0	0	0	17	2227	5
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			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
Hourly flow rate (vph)	0	12	26	31	13	0	0	0	0	18	2395	5
Pedestrians		31			10			3			4	
Lane Width (ft)		12.0			12.0			0.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		3			1			0			0	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								1142			298	
pX, platoon unblocked	0.57	0.57	0.57	0.57	0.57		0.57					
vC, conflicting volume	2475	2475	835	879	2478	14	2431			10		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	935	934	0	0	939	14	857			10		
tC, single (s)	7.5	6.5	6.9	7.6	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.6	4.0	3.3	2.2			2.2		
p0 queue free %	100	92	96	94	91	100	100			99		
cM capacity (veh/h)	111	145	603	492	144	1056	438			1609		

Direction, Lane #	EB 1	WB 1	SB 1	SB 2	SB 3
Volume Total	38	44	617	1197	604
Volume Left	0	31	18	0	0
Volume Right	26	0	0	0	5
cSH	303	289	1609	1700	1700
Volume to Capacity	0.12	0.15	0.01	0.70	0.36
Queue Length 95th (ft)	8	11	1	0	0
Control Delay (s)	18.6	19.7	0.3	0.0	0.0
Lane LOS	C	C	A		
Approach Delay (s)	18.6	19.7	0.1		
Approach LOS	C	C			

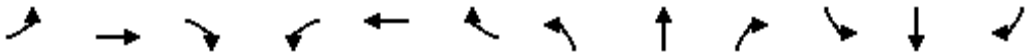
Intersection Summary				
Average Delay	0.7			
Intersection Capacity Utilization	63.1%	ICU Level of Service	B	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	6	7	9	8	0	0	0	0	10	2301	11
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	0	7	8	10	9	0	0	0	0	11	2585	12
Pedestrians		73			21			2			23	
Lane Width (ft)		12.0			12.0			0.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		6			2			0			2	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								413			1027	
pX, platoon unblocked	0.62	0.62	0.62	0.62	0.62		0.62					
vC, conflicting volume	2715	2708	943	919	2714	44	2671			21		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1612	1601	0	0	1611	44	1541			21		
tC, single (s)	7.5	6.5	6.9	7.5	6.7	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.1	3.3	2.2			2.2		
p0 queue free %	100	89	99	98	83	100	100			99		
cM capacity (veh/h)	33	61	633	529	53	986	254			1580		

Direction, Lane #	EB 1	WB 1	SB 1	SB 2	SB 3
Volume Total	15	19	658	1293	659
Volume Left	0	10	11	0	0
Volume Right	8	0	0	0	12
cSH	118	101	1580	1700	1700
Volume to Capacity	0.12	0.19	0.01	0.76	0.39
Queue Length 95th (ft)	8	13	0	0	0
Control Delay (s)	39.8	48.6	0.2	0.0	0.0
Lane LOS	E	E	A		
Approach Delay (s)	39.8	48.6	0.1		
Approach LOS	E	E			

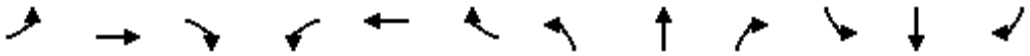
Intersection Summary				
Average Delay	0.6			
Intersection Capacity Utilization	65.7%	ICU Level of Service	C	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	10	31	26	10	0	0	0	0	19	2309	25
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
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
Hourly flow rate (vph)	0	11	34	29	11	0	0	0	0	21	2537	27
Pedestrians		17			3			1			8	
Lane Width (ft)		12.0			12.0			0.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		1			0			0			1	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								361			359	
pX, platoon unblocked	0.50	0.50	0.50	0.50	0.50		0.50					
vC, conflicting volume	2623	2613	878	931	2627	11	2582			3		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	765	744	0	0	771	11	682			3		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	93	94	94	93	100	100			99		
cM capacity (veh/h)	135	168	540	449	162	1064	456			1628		

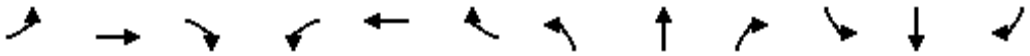
Direction, Lane #	EB 1	WB 1	SB 1	SB 2	SB 3
Volume Total	45	40	655	1269	662
Volume Left	0	29	21	0	0
Volume Right	34	0	0	0	27
cSH	351	301	1628	1700	1700
Volume to Capacity	0.13	0.13	0.01	0.75	0.39
Queue Length 95th (ft)	9	9	1	0	0
Control Delay (s)	16.8	18.8	0.4	0.0	0.0
Lane LOS	C	C	A		
Approach Delay (s)	16.8	18.8	0.1		
Approach LOS	C	C			

Intersection Summary				
Average Delay	0.7			
Intersection Capacity Utilization	65.5%	ICU Level of Service	C	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	541	428	0	0	0	0	0	0	9	677	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		3.5									3.5	
Lane Util. Factor		0.91									0.91	
Frpb, ped/bikes		0.99									1.00	
Flpb, ped/bikes		1.00									1.00	
Frt		0.93									1.00	
Flt Protected		1.00									1.00	
Satd. Flow (prot)		4086									4420	
Flt Permitted		1.00									1.00	
Satd. Flow (perm)		4086									4420	
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)	0	595	470	0	0	0	0	0	0	10	744	0
RTOR Reduction (vph)	0	9	0	0	0	0	0	0	0	0	1	0
Lane Group Flow (vph)	0	1056	0	0	0	0	0	0	0	0	753	0
Confl. Peds. (#/hr)	29		20	20		29	41		21	21		41
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Turn Type										Split		
Protected Phases		2								1	1	
Permitted Phases												
Actuated Green, G (s)		14.4									13.3	
Effective Green, g (s)		15.4									14.3	
Actuated g/C Ratio		0.42									0.39	
Clearance Time (s)		4.5									4.5	
Vehicle Extension (s)		0.2									0.2	
Lane Grp Cap (vph)		1715									1722	
v/s Ratio Prot		c0.26									c0.17	
v/s Ratio Perm												
v/c Ratio		0.62									0.44	
Uniform Delay, d1		8.3									8.2	
Progression Factor		1.00									1.00	
Incremental Delay, d2		0.5									0.1	
Delay (s)		8.8									8.3	
Level of Service		A									A	
Approach Delay (s)		8.8			0.0			0.0			8.3	
Approach LOS		A			A			A			A	

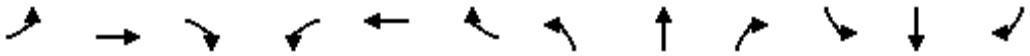
Intersection Summary			
HCM Average Control Delay	8.6	HCM Level of Service	A
HCM Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	36.7	Sum of lost time (s)	7.0
Intersection Capacity Utilization	48.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	947	1527	0	0	0	0	0	999	91
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)				4.5	4.5						4.5	
Lane Util. Factor				0.86	0.86						0.91	
Frpb, ped/bikes				1.00	1.00						1.00	
Flpb, ped/bikes				1.00	1.00						1.00	
Frt				1.00	1.00						0.99	
Flt Protected				0.95	0.99						1.00	
Satd. Flow (prot)				1261	3975						4222	
Flt Permitted				0.95	0.99						1.00	
Satd. Flow (perm)				1261	3975						4222	
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)	0	0	0	1007	1624	0	0	0	0	0	1063	97
RTOR Reduction (vph)	0	0	0	9	9	0	0	0	0	0	11	0
Lane Group Flow (vph)	0	0	0	625	1988	0	0	0	0	0	1149	0
Confl. Peds. (#/hr)	2					2	16		8	8		16
Confl. Bikes (#/hr)						3						1
Heavy Vehicles (%)	0%	0%	0%	5%	4%	0%	0%	0%	0%	0%	3%	5%
Turn Type				Split								
Protected Phases				2	2						1	
Permitted Phases												
Actuated Green, G (s)				44.8	44.8						26.5	
Effective Green, g (s)				45.8	45.8						27.5	
Actuated g/C Ratio				0.56	0.56						0.33	
Clearance Time (s)				5.5	5.5						5.5	
Vehicle Extension (s)				0.2	0.2						0.2	
Lane Grp Cap (vph)				702	2212						1411	
v/s Ratio Prot				0.50	c0.50						c0.27	
v/s Ratio Perm												
v/c Ratio				0.89	0.90						0.81	
Uniform Delay, d1				16.0	16.2						25.1	
Progression Factor				1.00	1.00						1.00	
Incremental Delay, d2				12.9	5.2						3.5	
Delay (s)				28.9	21.4						28.6	
Level of Service				C	C						C	
Approach Delay (s)		0.0			23.2			0.0			28.6	
Approach LOS		A			C			A			C	

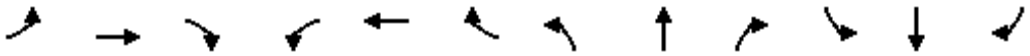
Intersection Summary			
HCM Average Control Delay	24.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	82.3	Sum of lost time (s)	9.0
Intersection Capacity Utilization	75.5%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



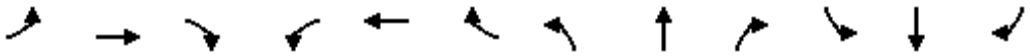
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	1560	285	0	0	0	0	0	0	574	1497	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.5	4.5								4.5	
Lane Util. Factor		0.86	0.86								0.91	
Frpb, ped/bikes		1.00	1.00								1.00	
Flpb, ped/bikes		1.00	1.00								1.00	
Frt		1.00	0.85								1.00	
Flt Protected		1.00	1.00								0.99	
Satd. Flow (prot)		4167	1184								4362	
Flt Permitted		1.00	1.00								0.99	
Satd. Flow (perm)		4167	1184								4362	
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	1696	310	0	0	0	0	0	0	624	1627	0
RTOR Reduction (vph)	0	2	8	0	0	0	0	0	0	0	1	0
Lane Group Flow (vph)	0	1725	271	0	0	0	0	0	0	0	2250	0
Confl. Peds. (#/hr)	24		6	6		24	6		7	7		6
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Turn Type			Prot							Split		
Protected Phases		2	2							1	1	
Permitted Phases												
Actuated Green, G (s)		49.4	49.4								59.5	
Effective Green, g (s)		50.4	50.4								60.5	
Actuated g/C Ratio		0.42	0.42								0.50	
Clearance Time (s)		5.5	5.5								5.5	
Vehicle Extension (s)		0.2	0.2								0.2	
Lane Grp Cap (vph)		1752	498								2201	
v/s Ratio Prot		c0.41	0.23								c0.52	
v/s Ratio Perm												
v/c Ratio		0.98	0.55								1.02	
Uniform Delay, d1		34.4	26.1								29.7	
Progression Factor		1.00	1.00								1.00	
Incremental Delay, d2		17.8	0.7								25.0	
Delay (s)		52.2	26.8								54.7	
Level of Service		D	C								D	
Approach Delay (s)		48.6			0.0			0.0			54.7	
Approach LOS		D			A			A			D	

Intersection Summary			
HCM Average Control Delay	51.8	HCM Level of Service	D
HCM Volume to Capacity ratio	1.01		
Actuated Cycle Length (s)	119.9	Sum of lost time (s)	9.0
Intersection Capacity Utilization	95.1%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	3	123	218	102	136	0	0	0	0	14	1962	52
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.5	4.5		4.5						4.5	
Lane Util. Factor		1.00	1.00		0.95						0.91	
Frpb, ped/bikes		1.00	1.00		1.00						1.00	
Flpb, ped/bikes		1.00	1.00		1.00						1.00	
Frt		1.00	0.85		1.00						1.00	
Flt Protected		1.00	1.00		0.98						1.00	
Satd. Flow (prot)		1617	1377		3012						4401	
Flt Permitted		0.99	1.00		0.69						1.00	
Satd. Flow (perm)		1605	1377		2130						4401	
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)	3	134	237	111	148	0	0	0	0	15	2133	57
RTOR Reduction (vph)	0	0	46	0	0	0	0	0	0	0	3	0
Lane Group Flow (vph)	0	137	191	0	259	0	0	0	0	0	2202	0
Confl. Peds. (#/hr)	27		2	2		27	9		7	7		9
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Turn Type	Perm		Prot	pm+pt						Split		
Protected Phases		6	6	5	2					8	8	
Permitted Phases	6			2								
Actuated Green, G (s)		16.8	16.8		27.6						46.1	
Effective Green, g (s)		17.8	17.8		28.6						47.1	
Actuated g/C Ratio		0.21	0.21		0.34						0.56	
Clearance Time (s)		5.5	5.5		5.5						5.5	
Vehicle Extension (s)		0.2	0.2		0.2						0.2	
Lane Grp Cap (vph)		337	289		785						2447	
v/s Ratio Prot			c0.14		c0.02						c0.50	
v/s Ratio Perm		0.09			0.09							
v/c Ratio		0.41	0.66		0.33						0.90	
Uniform Delay, d1		28.9	30.7		20.9						16.7	
Progression Factor		1.00	1.00		1.00						1.00	
Incremental Delay, d2		0.3	4.4		0.1						4.9	
Delay (s)		29.2	35.0		21.0						21.6	
Level of Service		C	D		C						C	
Approach Delay (s)		32.9			21.0			0.0			21.6	
Approach LOS		C			C			A			C	

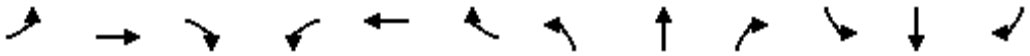
Intersection Summary			
HCM Average Control Delay	23.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	84.7	Sum of lost time (s)	13.5
Intersection Capacity Utilization	85.9%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	1	83	68	19	59	0	0	0	0	24	2267	52
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.5			4.5						4.5	
Lane Util. Factor		1.00			1.00						0.91	
Frpb, ped/bikes		0.97			1.00						1.00	
Flpb, ped/bikes		1.00			0.99						1.00	
Frt		0.94			1.00						1.00	
Flt Protected		1.00			0.99						1.00	
Satd. Flow (prot)		1455			1539						4264	
Flt Permitted		1.00			0.92						1.00	
Satd. Flow (perm)		1454			1431						4264	
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	1	93	76	21	66	0	0	0	0	27	2547	58
RTOR Reduction (vph)	0	4	0	0	0	0	0	0	0	0	2	0
Lane Group Flow (vph)	0	166	0	0	87	0	0	0	0	0	2630	0
Confl. Peds. (#/hr)	21		45	45		21	64		4	4		64
Confl. Bikes (#/hr)			1			1						
Heavy Vehicles (%)	0%	2%	0%	6%	2%	0%	0%	0%	0%	0%	3%	4%
Turn Type	Perm			Perm						Split		
Protected Phases		6			2					8	8	
Permitted Phases	6			2								
Actuated Green, G (s)		14.7			14.7						53.1	
Effective Green, g (s)		15.7			15.7						54.1	
Actuated g/C Ratio		0.20			0.20						0.69	
Clearance Time (s)		5.5			5.5						5.5	
Vehicle Extension (s)		0.2			0.2						0.2	
Lane Grp Cap (vph)		290			285						2927	
v/s Ratio Prot											c0.62	
v/s Ratio Perm		c0.11			0.06							
v/c Ratio		0.57			0.31						0.90	
Uniform Delay, d1		28.5			26.9						10.1	
Progression Factor		1.00			1.00						1.00	
Incremental Delay, d2		1.7			0.2						4.0	
Delay (s)		30.2			27.1						14.1	
Level of Service		C			C						B	
Approach Delay (s)		30.2			27.1			0.0			14.1	
Approach LOS		C			C			A			B	

Intersection Summary			
HCM Average Control Delay	15.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	78.8	Sum of lost time (s)	9.0
Intersection Capacity Utilization	83.5%	ICU Level of Service	E
Analysis Period (min)	15		

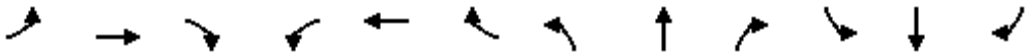
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	536	95	536	918	0	0	0	0	786	1862	90
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.5		4.5	4.5					4.1	4.1	
Lane Util. Factor		0.95		1.00	0.95					1.00	0.91	
Frpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	
Flpb, ped/bikes		1.00		1.00	1.00					1.00	1.00	
Frt		0.98		1.00	1.00					1.00	0.99	
Flt Protected		1.00		0.95	1.00					0.95	1.00	
Satd. Flow (prot)		2973		1480	3018					1524	4265	
Flt Permitted		1.00		0.12	1.00					0.95	1.00	
Satd. Flow (perm)		2973		192	3018					1524	4265	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	596	106	596	1020	0	0	0	0	873	2069	100
RTOR Reduction (vph)	0	5	0	0	0	0	0	0	0	0	4	0
Lane Group Flow (vph)	0	697	0	596	1020	0	0	0	0	873	2165	0
Confl. Peds. (#/hr)	6					6	1					1
Confl. Bikes (#/hr)			1			2						
Heavy Vehicles (%)	0%	1%	1%	4%	2%	0%	0%	0%	0%	1%	3%	1%
Turn Type				pm+pt						Split		
Protected Phases		8		7	4					6	6	
Permitted Phases				4								
Actuated Green, G (s)		28.5		42.5	42.5					65.5	65.5	
Effective Green, g (s)		29.5		43.5	43.5					66.9	66.9	
Actuated g/C Ratio		0.25		0.37	0.37					0.56	0.56	
Clearance Time (s)		5.5		5.5	5.5					5.5	5.5	
Vehicle Extension (s)		0.2		1.5	0.2					0.2	0.2	
Lane Grp Cap (vph)		737		173	1103					857	2398	
v/s Ratio Prot		0.23		c0.28	0.34					c0.57	0.51	
v/s Ratio Perm				c0.99								
v/c Ratio		0.95		3.45	0.92					1.02	0.90	
Uniform Delay, d1		44.0		31.3	36.2					26.0	23.2	
Progression Factor		1.00		1.00	1.00					1.00	1.00	
Incremental Delay, d2		20.7		1114.8	12.5					35.5	5.1	
Delay (s)		64.7		1146.1	48.7					61.6	28.3	
Level of Service		E		F	D					E	C	
Approach Delay (s)		64.7			453.4			0.0			37.8	
Approach LOS		E			F			A			D	

Intersection Summary			
HCM Average Control Delay	166.6	HCM Level of Service	F
HCM Volume to Capacity ratio	1.92		
Actuated Cycle Length (s)	119.0	Sum of lost time (s)	8.6
Intersection Capacity Utilization	117.7%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	1593	284	0	0	0	0	0	0	539	1640	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.5	4.5							4.5	4.5	
Lane Util. Factor		0.86	0.86							1.00	0.91	
Frpb, ped/bikes		1.00	1.00							1.00	1.00	
Flpb, ped/bikes		1.00	1.00							1.00	1.00	
Frt		1.00	0.85							1.00	1.00	
Flt Protected		1.00	1.00							0.95	1.00	
Satd. Flow (prot)		4167	1184							1539	4423	
Flt Permitted		1.00	1.00							0.95	1.00	
Satd. Flow (perm)		4167	1184							1539	4423	
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	1732	309	0	0	0	0	0	0	586	1783	0
RTOR Reduction (vph)	0	1	4	0	0	0	0	0	0	2	0	0
Lane Group Flow (vph)	0	1762	274	0	0	0	0	0	0	584	1783	0
Confl. Peds. (#/hr)	24		6	6		24	6		7	7		6
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Turn Type			Prot							Split		
Protected Phases		2	2							1	1	
Permitted Phases												
Actuated Green, G (s)		48.5	48.5							46.3	46.3	
Effective Green, g (s)		49.5	49.5							47.3	47.3	
Actuated g/C Ratio		0.47	0.47							0.45	0.45	
Clearance Time (s)		5.5	5.5							5.5	5.5	
Vehicle Extension (s)		0.2	0.2							0.2	0.2	
Lane Grp Cap (vph)		1950	554							688	1977	
v/s Ratio Prot		c0.42	0.23							0.38	c0.40	
v/s Ratio Perm												
v/c Ratio		0.90	0.49							0.85	0.90	
Uniform Delay, d1		25.9	19.5							26.1	27.1	
Progression Factor		1.00	1.00							1.00	1.00	
Incremental Delay, d2		6.2	0.3							9.2	6.0	
Delay (s)		32.2	19.7							35.3	33.1	
Level of Service		C	B							D	C	
Approach Delay (s)		30.5			0.0			0.0			33.7	
Approach LOS		C			A			A			C	

Intersection Summary			
HCM Average Control Delay	32.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	105.8	Sum of lost time (s)	9.0
Intersection Capacity Utilization	83.3%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			