

# Memorandum

Date: October 19, 2022  
To: Emily Benoit, City of Vancouver  
From: Camilo Alvarez Tuta, EIT & Kara Hall, PE  
Subject: **SE 34<sup>th</sup> Street Safety & Mobility Project Technical Approach & Findings**

PT21-0068

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## Introduction

This memorandum provides an overview of the SE 34<sup>th</sup> Street Safety & Mobility Project, including project goals and the changes to the corridor this project is evaluating. The project overview is followed by a description of the technical approach and findings for existing and future conditions along the SE 34<sup>th</sup> Street corridor.

The analysis presented in this memorandum was completed to quantify the changes in vehicle operations within the study area if one travel lane in each direction were to be repurposed to add facilities for people biking and using other small mobility devices. The analysis presented in this memorandum will inform conversations with City staff and community members to determine if repurposing a travel lane is feasible on this corridor and to identify areas where additional design considerations may be needed based on vehicle operations or safety concerns.

## Project Overview

The SE 34<sup>th</sup> Street Safety & Mobility Project is an opportunity for the City to improve safety and mobility on SE 34<sup>th</sup> Street between SE 162<sup>nd</sup> Avenue and SE 192<sup>nd</sup> Avenue, as shown on **Figure 1**. As the City prepares for a microsurfacing project that will repave SE 34<sup>th</sup> Street, this project is evaluating changes to the corridor that could be incorporated in that project, including:

- Repurposing a travel lane to add bike lanes and/or shared facilities for people rolling, walking, and biking.
- Safety improvements at intersections and crossings to better accommodate people rolling, walking, and biking.
- Traffic calming design features to lower traffic speeds.



## Project Goals

This study was initiated to identify solutions that, when paired with the planned microsurfacing project, would improve safety and mobility along the SE 34<sup>th</sup> Street corridor. To align solutions with those outcomes, three study goals have been developed. Each goal is supported by several performance metrics, which will be used to measure alignment of potential solutions with the project goals. The three goals and related performance metrics are shown in **Table 1** below.

## Proposed Roadway Changes

Analysis completed for the “with Lane Reduction” scenarios, described in the following sections, assumes removal of one travel lane in the eastbound and westbound direction on SE 34<sup>th</sup> Street between the SE 162<sup>nd</sup> Avenue and SE 192<sup>nd</sup> Avenue. To accommodate the change in the number of travel lanes on SE 34<sup>th</sup> Street, a reduction in the number of turn lanes for the following movements would be required at the SE 164<sup>th</sup> Avenue and SE 192<sup>nd</sup> Avenue intersections:

- Eastbound left-turn at SE 164<sup>th</sup> Avenue, reduction from dual left-turn lanes to a single left-turn lane
- Westbound left-turn at SE 164<sup>th</sup> Avenue, reduction from dual left-turn lanes to a single left-turn lane
- Northbound left-turn at SE 192<sup>nd</sup> Avenue, reduction from dual left-turn lanes to a single left-turn lane

The existing lane configurations and lane configurations analyzed for the “with Lane Reduction” scenarios are shown on **Figure 2** and **Figure 3**, respectively.

The analysis presented below is based on the current proposed design as of October 2022. Lane configurations and traffic analysis for previous design alternative can be found in **Appendix A**. Updates to the proposed design from the analysis presented in March 2022 include:

- Beginning/ending the on-street mobility lane west of SE 192<sup>nd</sup> Avenue to maintain vehicle capacity on the southbound and westbound approaches at the SE 192<sup>nd</sup> Avenue intersection. By adjusting the extents of the on-street mobility lane, the dual southbound left-turn lanes on SE 192<sup>nd</sup> Avenue can be maintained, along with three lanes on the westbound approach on SE 34<sup>th</sup> Street at SE 192<sup>nd</sup> Avenue.
- Revising lane geometry on the westbound approach at SE 192<sup>nd</sup> Avenue to provide one left-turn lane, one through-lane, and a right-turn lane.

These changes were made to maintain capacity for vehicles on key movements using the SE 192<sup>nd</sup> Avenue and SE 34<sup>th</sup> Street intersection while maintaining safety for people using the proposed mobility lane.



Figure 1. Project Study Area





**Table 1. Project Goals & Performance Metrics**

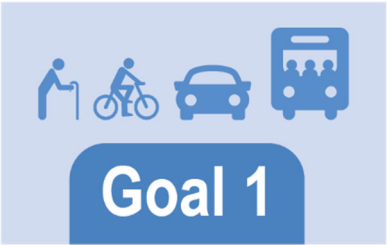


Study Goal	Performance Metrics
 <p><b>Goal 1</b></p> <p><i>Improve comfort and mobility for all users</i></p>	<ul style="list-style-type: none"> <li>• Creates an east-west connection for people biking</li> <li>• Improves access to existing transit service</li> <li>• Adds aesthetic amenities</li> <li>• Does not substantially add to vehicular delays</li> </ul>
 <p><b>Goal 2</b></p> <p><i>Prioritize safety for all users</i></p>	<ul style="list-style-type: none"> <li>• Uses traffic calming to lower speeds</li> <li>• Improves locations with a high number of crashes or conflict points</li> <li>• Supports safe pedestrian crossings near key destinations</li> </ul>
 <p><b>Goal 3</b></p> <p><i>Facilitate near-term implementation</i></p>	<ul style="list-style-type: none"> <li>• Leverages low-cost solutions</li> <li>• Can be implemented with the planned overlay</li> <li>• Is eligible for outside funding</li> </ul>



Figure 2. Existing Lane Configurations

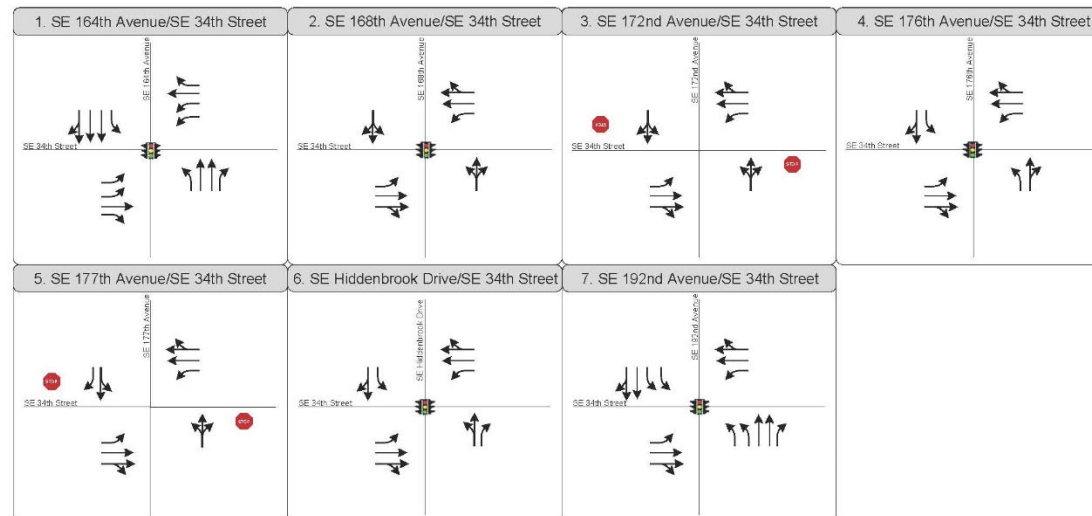




Figure 3. With Repurposed Lane Configurations





## Existing Plans & Data Sets

This evaluation began with an assessment of existing conditions, including a field visit to observe travel patterns along the corridor and a review of existing plans pertaining to the corridor. The review of existing plans included the following documents:

- Vancouver Innovation Center Comprehensive Plan
- City of Vancouver 2004 Transportation System Plan (TSP)

### *Vancouver Innovation Center Comprehensive Plan*

The Vancouver Innovation Center (VIC) is a 179-acre campus located north of SE 34<sup>th</sup> Street between SE 176<sup>th</sup> Avenue and SE 192<sup>nd</sup> Avenue. The VIC Master Plan was recently updated to incorporate a mix of light industrial/employment, school, residential, and mixed-use land uses. This update also included traffic analysis and recommended changes to several intersections along SE 34<sup>th</sup> Street. The assumptions in the VIC Master Plan have been reviewed and incorporated in this evaluation as described in the future conditions section below.

### *City of Vancouver 2004 Transportation System Plan (TSP)*

While the City is currently in the process of updating its TSP, the adopted TSP, completed in 2004, identified several improvements along SE 34<sup>th</sup> Street that have not been completed:

- Proposed bike lanes along SE 34<sup>th</sup> Street from 164<sup>th</sup> Avenue to 192<sup>nd</sup> Avenue (*to be evaluated by this study*)
- Proposed Phase 1 Intelligent Transportation System (ITS) Route along SE 34<sup>th</sup> Street

Coordination with City staff resulted in the determination that there have not been any ITS improvements on the corridor since the TSP was developed and there are no planned ITS projects at this time.

## Data Sets

The existing conditions evaluation for this project relied on data provided by the City and traffic count data collected in January 2022. Each data set used in this evaluation is described below.

### *Bicycle & Pedestrian Data*

Evaluation of conditions for people walking was completed using GIS data provided by the City and field observations. Data provided by the City included sidewalk locations, sidewalk width, and the location of Americans with Disabilities Act (ADA) compliant curb ramps. Data provided by the City also ranks sidewalk pavement condition on a scale of one (good) to six (poor). The data also included a similar scoring criterion for ramp condition.



An inventory of bicycle facilities on the corridor and surrounding roadway network was completed using Clark County's GIS data.

#### *Transit Data*

The location of transit stops and routes near the corridor were included in the GIS data provided by the City. Stop amenities along the corridor were identified using Google Street View and field observations. Published schedule data on C-Tran's website was used to determine transit headways and operating hours along the corridor.

#### *Crash Data*

Crash data was provided by the City and uses data available from the Washington State Department of Transportation (WSDOT) from 2014 to 2020. Data analyzed for this assessment includes:

- the types of users involved in the crash (vehicles, bicyclists, or pedestrians)
- injuries and their severity
- the circumstances surrounding the crash

#### *Freight*

The WSDOT 2019 Freight and Goods Transportation System (FGTS) which classifies freight corridors by modes in Washington State based on annual freight tonnage moved, including truck, rail, and waterway freight corridors was used to determine the freight classification for this corridor.

#### *Vehicle Data*

Field observations and aerial photos were used to identify the corridor cross-section, presence of medians, intersection lane configurations, and the posted speed limit along SE 34<sup>th</sup> Street. City GIS confirmed the right-of-way (ROW) width along the corridor for planning purposes.

Traffic volume data was collected at nine intersections during the AM and PM peak period on January 13, 2022. A 24-hour roadway count was also collected just east of SE 164<sup>th</sup> Avenue. **Table 2** provides a summary of count data collected along the SE 34<sup>th</sup> Street corridor.





**Table 2. Traffic Count Locations**

Location	Data Collected
SE 164 <sup>th</sup> Avenue & SE 34 <sup>th</sup> Street	AM Peak Period (7:00-9:00AM) & PM Peak Period (4:00-6:00PM) Turning Movement Counts by Mode
SE 168 <sup>th</sup> Avenue & SE 34 <sup>th</sup> Street	
Pedestrian Signal & SE 34 <sup>th</sup> Street	
SE 172 <sup>nd</sup> Avenue & SE 34 <sup>th</sup> Street	
SE 176 <sup>th</sup> Avenue & SE 34 <sup>th</sup> Street	
SE 177 <sup>th</sup> Avenue & SE 34 <sup>th</sup> Street	
Hiddenbrook Drive & SE 34 <sup>th</sup> Street	
SE 192 <sup>nd</sup> Avenue & SE 34 <sup>th</sup> Street	
SE 196 <sup>th</sup> Avenue & SE 34 <sup>th</sup> Street	
Segment between 164 <sup>th</sup> Avenue & 168 <sup>th</sup> Avenue	24-hour Tube Count

## Existing Conditions Approach and Findings

An analysis of current traffic conditions was completed to understand how the corridor operates today and to confirm that the analysis tools are calibrated to local conditions and accurately reflect conditions in the field.







The following section describes the analysis methodology for traffic operations and findings for existing conditions.

### Level of Service and Delay

Intersection operations analysis was completed using the methodology documented in the Highway Capacity Manual, 6<sup>th</sup> Edition (HCM). Under this approach, intersection level of service (LOS), is determined by assigning a letter grade, from A (the best) to F (the worst), based on the level of delay experienced by drivers at the intersection. For signalized and all-way stop-controlled (AWSC) intersections, LOS is assigned using the average delay for all approaches. For two-way stop-controlled (TWSC) intersections, LOS is assigned based on the movement with the highest delay. The LOS and delay thresholds based on HCM methodology are presented in **Table 3**.



**Table 3. Level of Service Definitions**

Level of Service	Description	Signalized Intersection Delay (seconds/vehicle)	Unsignalized Intersection Delay (seconds/vehicle)
 <b>A</b>	Free-flowing Conditions	≤ 10	0-10
 <b>B</b>	Stable Flow (slight delays)	>10-20	>10-15
 <b>C</b>	Stable Flow (acceptable delays)	>20-35	>15-25
 <b>D</b>	Approaching Unstable Flow (tolerable delay)	>35-55	>25-35
 <b>E</b>	Unstable Flow (intolerable delay)	>55-80	>35-50
 <b>F</b>	Forced Flow (congested and queues fail to clear)	>80	>50

Source: Highway Capacity Manual, 6th Edition

In addition to LOS and delay, vehicle queueing and travel time on SE 34<sup>th</sup> Street between SE 164<sup>th</sup> Avenue and SE 192<sup>nd</sup> Avenue were also evaluated. All traffic operations analysis was completed using the microsimulation software Simtraffic, a microsimulation module included in Synchro 11. SimTraffic captures the observed characteristics of driver behavior and models the interaction between vehicles in a study network. For this study, microsimulation was used to accurately reflect operations along the corridor including driver behavior, the impact of the mid-block pedestrian crossing on traffic flow, and to capture the effects of any spillback between intersections that may occur as traffic volume increases in the future.

Results for LOS, queueing, and travel time along the corridor are based on the average results from ten statistically valid microsimulation runs for both the AM peak hour (7:45-8:45AM) and the PM peak hour (4:00-5:00PM).

### Existing Conditions

For an overview of existing conditions for all users, see the existing conditions figures included as **Attachment A** to this memorandum.

#### Multimodal Users

Existing infrastructure for people walking and biking is shown on the attached Existing Infrastructure figure, included as **Attachment A**. As shown on the figure, sidewalks are provided throughout the study area on both sides of SE 34<sup>th</sup> Street. Along the corridor, sidewalks are generally six feet wide, with several sections where width varies from four feet to greater than six feet, predominantly on the south side of SE 34<sup>th</sup> Street.



Today, there are no bicycle facilities on SE 34<sup>th</sup> Street except for the segment between SE 164<sup>th</sup> Avenue and SE 162<sup>nd</sup> Avenue where an on-street bike lane is provided for people biking in the westbound direction. There are also on-street bike lanes provided on several roadways that connect to SE 34<sup>th</sup> Street, including:

- SE 162<sup>nd</sup> Avenue north of SE 34<sup>th</sup> Street
- SE 168<sup>th</sup> Avenue north of SE 34<sup>th</sup> Street
- SE 176<sup>th</sup> Avenue north of SE 34<sup>th</sup> Street
- SE 192<sup>nd</sup> Avenue north and south of SE 34<sup>th</sup> Street

### Transit

Transit service along SE 34<sup>th</sup> Street is provided by C-Tran and there are a total of four stops in each direction along the corridor. The location of transit stops along SE 34<sup>th</sup> Street are shown on the attached Existing Infrastructure figure.

Today, the corridor is served by Route 37 which operates with 15-minute headways during the weekday peak hours, 20-minute headways on Saturdays, and 30-minute headways on Sundays.

Transit ridership data from September 2022 is presented in **Table 4**. Based on the data presented below, an average of 1.6 people per day get on and off the bus at the stops with the study area and the average time it takes a bus to pick-up or drop-off riders is 19 seconds.

**Table 4. September 2022 Transit Data**

Stop Location	Number of People Getting On Per Day	Number of People Getting Off Per Day	Number of Ramp Deployments Per Day	Average Stop Time (Seconds)
<b>Eastbound Stops</b>				
SE 172 <sup>nd</sup> Avenue	3	1	0.67	0:00:17
SE 176 <sup>th</sup> Avenue	1	0	0	0:00:18
SE 189 <sup>th</sup> Avenue	3	3	0.3	0:00:20
Hiddenbrook Drive	1	2	0	0:00:16
<b>Westbound Stops</b>				
Hiddenbrook Drive	1	2	0	0:00:17
SE 189 <sup>th</sup> Avenue	4	3	0.2	0:00:23
SE 177 <sup>th</sup> Avenue	0	0	0	0:00:25



**Table 4. September 2022 Transit Data**

Stop Location	Number of People Getting On Per Day	Number of People Getting Off Per Day	Number of Ramp Deployments Per Day	Average Stop Time (Seconds)
SE 172 <sup>nd</sup> Avenue	0	2	0	0:00:15

Source: C-Tran, September 2022

### *Safety*

To understand the type of safety improvements that may need to be incorporated in this project, an analysis of crash data provided by the City for the time period from 2014 to 2020 was analyzed. This data was analyzed to identify locations where a high number of crashes have occurred, understand the severity of crashes that have occurred, and to identify the contributing factors to crashes along the corridor.

The location of crashes that have occurred on SE 34<sup>th</sup> Street between SE 162<sup>nd</sup> Avenue and SE 196<sup>th</sup> Avenue are shown on the Safety figure, included as an attachment to this memorandum. The contributing factor for all crashes is also shown on the figure. The highest number of crashes occurred at the SE 164<sup>th</sup> Avenue and SE 192<sup>nd</sup> Avenue intersections, with a total of 26 crashes occurring at both intersections. During the time period analyzed, there were two crashes involving a pedestrian and two crashes involving a bicyclist. Three of the four crashes involving a person walking or biking involved a vehicle that was turning.

Another important safety consideration for this corridor is the interaction between freight vehicles and other more vulnerable users, particularly people walking and biking. In the state of Washington, truck corridors are classified into five tiers, T-1 which carries the most goods to T-5. The SE 34<sup>th</sup> Street corridor is designated by WSDOT as a T-3 freight route according to the published FGTS maps. While SE 34<sup>th</sup> Street is not a high-priority freight corridor, as the proposed design is developed, consideration should be given to the types of freight vehicles that use the corridor. Potential design features that can provide the greatest separation between those vehicles and people walking and biking should be explored.

### *Vehicles*

Traffic operations analysis for the existing conditions was completed using the traffic counts collected in January 2022, lane configurations based on field observations, and signal timing information provided by the City. Traffic count data is provided in **Appendix B**.

Under existing conditions, all study intersections operate at LOS C or better, indicating that there is sufficient capacity to serve the peak hour demand. Traffic operations results for the AM and PM



peak hour are presented in **Table 5**. For detailed LOS and queue results, see the technical reports provided in **Appendix C** and **Appendix D**. Delay and LOS by movement for the SE 164<sup>th</sup> and SE 192<sup>nd</sup> Avenue intersections can be found in **Appendix E**.

**Table 5. Existing Conditions LOS Summary**

Location	Intersection Control	AM Peak Hour		PM Peak Hour	
		LOS	Delay (seconds)	LOS	Delay (seconds)
SE 164 <sup>th</sup> Avenue & SE 34 <sup>th</sup> Street	Signalized	C	22	C	22
SE 168 <sup>th</sup> Avenue & SE 34 <sup>th</sup> Street	Signalized	A	4	A	5
SE 172 <sup>nd</sup> Avenue & SE 34 <sup>th</sup> Street	Side-Street Stop-Controlled <sup>1</sup>	A	8 <sup>2</sup>	B	10 <sup>2</sup>
SE 176 <sup>th</sup> Avenue & SE 34 <sup>th</sup> Street	Signalized	A	7	A	9
SE 177 <sup>th</sup> Avenue & SE 34 <sup>th</sup> Street	Side-Street Stop-Controlled <sup>1</sup>	A	8 <sup>2</sup>	A	8 <sup>2</sup>
Hiddenbrook Drive & SE 34 <sup>th</sup> Street	Signalized	B	11	A	9
SE 192 <sup>nd</sup> Avenue & SE 34 <sup>th</sup> Street	Signalized	B	19	C	24

**Notes:**

<sup>1</sup> For side street stop-controlled intersections, the movement with the highest delay is reported.

<sup>2</sup> Movement with the highest delay is the northbound left turn.

Queuing was evaluated at the SE 164<sup>th</sup> Avenue and SE 192<sup>nd</sup> Avenue intersections, as those are the primary intersections where queueing was observed to occur today and where repurposing a travel lane is most likely to increase queueing. The maximum queues under existing conditions are shown in **Table 6**. Under existing conditions, only the westbound left-turn at SE 192<sup>nd</sup> Avenue was found to exceed available storage during the peak hours. For detailed queueing results, see **Appendix C**.



**Table 6. Existing Conditions Queueing Results**

Intersection	Approach	Movement	Storage (ft)	Maximum Vehicle Queue (ft)	
				AM	PM
SE 164 <sup>th</sup> Avenue & SE 34 <sup>th</sup> Street	EB	L	175	75	125
		T	350	125	150
		R	350	100	125
	NB	L	400	175	275
		T	700	325	400
		R	700	75	125
	SB	L	250	225	225
		T	1,150	250	300
		TR	1,150	150	200
	WB	L	925	225	200
		T	925	125	150
		R	175	100	125
SE 192 <sup>nd</sup> Avenue & SE 34 <sup>th</sup> Street	EB	L	175	125	150
		T	450	125	125
		TR	450	150	200
	NB	L	375	125	150
		T	725	225	250
		R	375	125	100
	SB	L	325	175	200
		T	525	175	250
		TR	525	150	250
	WB	L	175	175	<b>225</b>



Intersection	Approach	Movement	Storage (ft)	Maximum Vehicle Queue (ft)	
				AM	PM
		T	425	100	225
		TR	425	125	175

**Notes:**

L= Left, T=Through, R=Right, TR=Through/Right

NB=Northbound, SB=Southbound, EB=Eastbound, WB =Westbound

Locations where queue exceeds available storage are shown in **bold red** text.

Travel time for SE 34<sup>th</sup> Street between SE 192<sup>nd</sup> Avenue and SE 164<sup>th</sup> Avenue was also evaluated for vehicles traveling in the eastbound and westbound direction. As shown in **Table 7**, travel time is highest in the eastbound direction during both peak hours under existing conditions.

**Table 7. Existing Travel Time**

Direction	Peak Hour Travel Time (min:sec)	
	AM	PM
Eastbound between SE 164 <sup>th</sup> Avenue and SE 192 <sup>nd</sup> Avenue	4:29	4:31
Westbound between SE 192 <sup>nd</sup> Avenue and SE 164 <sup>th</sup> Avenue	4:00	4:21



## Existing with Lane Reduction Findings

To understand near-term changes to corridor operations resulting from repurposing a travel lane, an Existing with Lane Reduction scenario was evaluated. This evaluation used the existing traffic volume data and the “with Lane Reduction” lane configurations shown on **Figure 3**.

Intersection delay and LOS for the Existing with Lane Reduction scenario are presented in **Table 8** along with a comparison to existing results. Under existing conditions, repurposing a travel lane would result in minimal increase in delay along the corridor, with the largest increase in intersection delay (five seconds) occurring at the SE 177<sup>th</sup> Avenue intersection during the PM peak hour. LOS C or better would be maintained at all study intersections.

Vehicle queues at the SE 164<sup>th</sup> Avenue and SE 192<sup>nd</sup> Avenue were also evaluated to determine if queues could be accommodated within existing storage with the removal of dual left-turn lanes at those intersections. As shown in **Table 9**, most movements would experience an increase in vehicle queues of approximately one to two vehicle lengths. At SE 164<sup>th</sup> Avenue, the westbound left-turn would experience the largest increase in queue (125 feet during the AM peak hour and 100 feet during the PM peak hour). Changes at this intersection would also increase the queue for the southbound left-turn, which is at capacity under existing conditions. At SE 192<sup>nd</sup> Avenue, the eastbound through movement would experience the largest increase in queue, increasing 100 feet during the AM peak hour and 200 feet during the PM peak hour. The queue for the eastbound left-turn would also increase by 75 feet during the PM peak hour, causing that movement to exceed available storage.

Lastly, to understand how repurposing a travel lane would change vehicle travel at the corridor level, travel time under existing conditions was compared to travel time under the Existing with Lane Reduction scenario. It is important to note, that it was assumed that under the “with Lane Reduction” scenario, the posted speed would be lowered to improve the safety and comfort of people walking and biking. For the “with Lane Reduction” scenarios, the speed limit for SE 34<sup>th</sup> Street was changed from 40 miles per hour (mph) to 30 mph in Synchro/SimTraffic. As shown in **Table 10**, the proposed changes would increase corridor travel time by less than one minute for both eastbound and westbound vehicles during the peak hours.





**Table 8. Existing with Lane Reduction LOS Summary**

Location	Intersection Control	Existing				Existing with Lane Reduction				Delay Change from Existing (seconds)	
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		AM	PM
		LOS	Delay (seconds)	LOS	Delay (seconds)	LOS	Delay (seconds)	LOS	Delay (seconds)		
SE 164 <sup>th</sup> Avenue & SE 34 <sup>th</sup> Street	Signalized	C	22	C	22	C	25	C	25	+3	+3
SE 168 <sup>th</sup> Avenue & SE 34 <sup>th</sup> Street	Signalized	A	4	A	5	A	5	A	7	+1	+2
SE 172 <sup>nd</sup> Avenue & SE 34 <sup>th</sup> Street	Side-Street Stop-Controlled <sup>1</sup>	A	8 <sup>2</sup>	B	10 <sup>2</sup>	A	9 <sup>2</sup>	B	13 <sup>2</sup>	+1	+3
SE 176 <sup>th</sup> Avenue & SE 34 <sup>th</sup> Street	Signalized	A	7	A	9	A	8	A	10	+1	+1
SE 177 <sup>th</sup> Avenue & SE 34 <sup>th</sup> Street	Side-Street Stop-Controlled <sup>1</sup>	A	8 <sup>2</sup>	A	8 <sup>2</sup>	A	8 <sup>2</sup>	<b>B</b>	13 <sup>2</sup>	+0	+5
Hiddenbrook Drive & SE 34 <sup>th</sup> Street	Signalized	B	11	A	9	B	12	<b>B</b>	10	+1	+1
SE 192 <sup>nd</sup> Avenue & SE 34 <sup>th</sup> Street	Signalized	B	19	C	24	B	19	C	27	+0	+3

Notes:

**Bold text** indicates LOS change from Existing.

<sup>1</sup> For side street stop-controlled intersections, the movement with the highest delay is reported.

<sup>2</sup> Movement with the highest delay is the northbound left turn.



**Table 9. Existing with Lane Reduction Queue Summary**

				Maximum Queue (ft)					
Intersection	Approach	Movement	Storage (ft)	Existing		Existing with Lane Reduction		Change in Queue Length (ft)	
				Peak Hour		Peak Hour			
				AM	PM	AM	PM	AM	PM
SE 164th Avenue & SE 34th Street	EB	L	175	75	125	75	125	+0	+25
		T	350	125	150	125	175	+0	+0
		R	350	100	125	100	125	+0	-50
	NB	L	400	175	275	175	225	+0	-25
		T	700	325	400	325	375	+25	+25
		R	700	75	125	100	150	+0	+75
	SB	L	250	225	225	225	300	+0	+50
		T	1,150	250	300	250	350	+25	+50
		TR	1,150	150	200	175	250	+125	+100
	WB	L	925	225	200	350	300	+0	+25
		T	925	125	150	125	175	+0	+50
		R	175	100	125	100	175	+0	+75



Maximum Queue (ft)									
Intersection	Approach	Movement	Storage (ft)	Existing		Existing with Lane Reduction		Change in Queue Length (ft)	
				Peak Hour		Peak Hour			
				AM	PM	AM	PM	AM	PM
SE 192nd Avenue & SE 34th Street	EB	L	175	125	150	125	225	+100	+200
		T	450	125	125	225	325	-	-
		TR	450	150	200	-	-	+25	+0
	NB	L	375	125	150	150	150	+0	+50
		T	725	225	250	225	300	+0	-25
		R	375	125	100	125	75	+0	+25
	SB	L	325	175	200	175	225	+25	+0
		T	525	175	250	200	250	+25	+0
		TR	525	150	250	175	250	+25	+0
	WB	L	175	175	225	200	225	+75	+75
		T	425	100	225	175	300	-50	-100
		TR / R*	425	125	175	75	75	+0	+25

**Notes:**

L= Left, T=Through, R=Right, TR=Through/Right, R\*=Right with "Lane Reduction" Scenario  
NB=Northbound, SB=Southbound, EB=Eastbound, WB =Westbound  
Locations where queue exceeds available storage are shown in **bold red** text.



**Table 10. Existing with Lane Reduction Travel Time Summary**

Direction	Peak Hour Travel Time (min:sec)				Travel Time Change from Existing (min:sec)	
	Existing		Existing with Lane Reduction			
	AM	PM	AM	PM	AM	PM
Eastbound between SE 164 <sup>th</sup> Avenue and SE 192 <sup>nd</sup> Avenue	4:29	4:31	5:10	5:14	+0:40	+0:43
Westbound between SE 192 <sup>nd</sup> Avenue and SE 164 <sup>th</sup> Avenue	4:00	4:21	4:43	4:52	+0:43	+0:31

## Future Conditions

This section describes the scenarios representing future conditions that were evaluated, the methodology used to develop traffic volume forecasts, and the technical findings for each of the scenarios.

### Future Forecasts

To understand how SE 34<sup>th</sup> Street would operate with a road diet in place, two future scenarios were evaluated: 2027 and 2040. Assumptions and methodology used to develop traffic volume forecasts for each scenario is described below.

#### 2027

This near-term scenario was evaluated to understand how the corridor would operate if growth were to occur at two percent per year, a more aggressive growth rate than is forecast to occur based on the regional travel demand model, accounting for a return to normal traffic conditions post-COVID. To develop turning movement forecasts for 2027, an annual growth rate of two percent per year for five years was applied to traffic counts collected in January 2022. See the AM and PM Peak Hour Volume figures, included as an attachment to this memorandum for detailed turning movement forecasts in 2027.

#### 2040

This scenario reflects approximately 20 years of growth and was evaluated to understand how SE 34<sup>th</sup> Street would operate in the long-term. To develop traffic forecasts for this scenario, growth rates derived from the regional travel demand model, provided by the Southwest Washington Regional Transportation Council (SW RTC), were applied to forecasts developed for 2027 to reflect an additional 13 years of growth. Data provided by SW RTC indicates that volume will increase at



an annual rate of 0.9 percent per year during the AM peak hour and 1.1 percent per year during the PM peak hour.

The VIC is also expected to be fully built out by 2036. To account for the increase in traffic that is expected to occur when the site is fully built out, trips traveling to and from the VIC were added to the 2040 forecasts developed for this study. Trips were added using the trip generation, distribution, and assignment documented in the *Traffic Impact Analysis for the Vancouver Innovation Center Master Plan (November 2020)*. See the attached AM and PM Peak Hour Volume figures, detailed turning movement forecasts in 2040.

## 2027 Operations Findings

Findings for the 2027 “No Build” scenario, which assumes that there are no changes to the existing roadway network, and the “with Lane Reduction” scenario are presented in **Table 11** through **Table 13** below.

With no changes to the roadway network, intersections along SE 34<sup>th</sup> Street would operate at LOS C or better during the peak hours indicating sufficient capacity to serve peak demand and little to no congestion would be expected along the corridor. With the lane reduction in place, only the SE 164<sup>th</sup> Avenue intersection would operate at LOS D during the PM peak hour. This intersection would also experience the largest increase in delay, 14 seconds during the PM peak hour.

By 2027, the removal of left-turn lanes and changes to intersection lane configurations would cause vehicle queues for the following movements to exceed capacity:

- Northbound left-turn and through at SE 164<sup>th</sup> Avenue during the PM peak hour
- Eastbound left-turn at SE 192<sup>nd</sup> Avenue during the AM peak hour

At the corridor level, repurposing a travel lane would result in a travel time increase of less than one minute for both eastbound and westbound vehicles during the peak hours. During the AM peak hour, the largest increase in travel time would be 44 seconds for drivers traveling westbound between SE 192<sup>nd</sup> Avenue and SE 164<sup>th</sup> Avenue. During the PM peak hour, the largest increase in travel time (38 seconds) would occur for eastbound drivers.



**Table 11. 2027 LOS Summary**

Location	Intersection Control	2027 No Build				2027 with Lane Reduction				Delay Change from No Build (seconds)	
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		AM	PM
		LOS	Delay (seconds)	LOS	Delay (seconds)	LOS	Delay (seconds)	LOS	Delay (seconds)		
SE 164 <sup>th</sup> Avenue & SE 34 <sup>th</sup> Street	Signalized	C	24	C	27	C	26	<b>D</b>	41	+2	+14
SE 168 <sup>th</sup> Avenue & SE 34 <sup>th</sup> Street	Signalized	A	4	A	6	A	6	A	8	+2	+2
SE 172 <sup>nd</sup> Avenue & SE 34 <sup>th</sup> Street	Side-Street Stop-Controlled <sup>1</sup>	B	11 <sup>2</sup>	C	19 <sup>2</sup>	B	12 <sup>2</sup>	C	19 <sup>2</sup>	+1	+0
SE 176 <sup>th</sup> Avenue & SE 34 <sup>th</sup> Street	Signalized	A	9	B	10	<b>B</b>	10	B	13	+1	+3
SE 177 <sup>th</sup> Avenue & SE 34 <sup>th</sup> Street	Side-Street Stop-Controlled <sup>1</sup>	A	10 <sup>2</sup>	B	12	A	9 <sup>2</sup>	<b>C</b>	16 <sup>2</sup>	-1	+4
Hiddenbrook Drive & SE 34 <sup>th</sup> Street	Signalized	B	12	B	11	B	14	B	13	+2	+2
SE 192 <sup>nd</sup> Avenue & SE 34 <sup>th</sup> Street	Signalized	C	21	C	28	C	21	C	29	+0	+1

Notes:

**Bold text** indicates LOS change from No Build.

<sup>1</sup> For side street stop-controlled intersections, the movement with the highest delay is reported.

<sup>2</sup> Movement with the highest delay is the northbound left turn.



**Table 12. 2027 Queue Summary**

				Maximum Queue (ft)					
Intersection	Approach	Movement	Storage (ft)	2027 No Build		2027 with Lane Reduction		Change in Queue Length from No Build (ft)	
				Peak Hour		Peak Hour			
				AM	PM	AM	PM	AM	PM
SE 164th Avenue & SE 34th Street	EB	L	175	100	150	75	175	-25	+25
		T	350	125	200	150	200	+25	+0
		R	350	100	150	100	125	+0	-25
	NB	L	400	225	275	175	475	-50	+200
		T	700	350	450	375	775	+25	+325
		R	700	125	175	100	325	-25	+150
	SB	L	250	275	275	275	300	0	+25
		T	1,150	275	350	300	400	+25	+50
		TR	1,150	175	250	200	300	+25	+50
	WB	L	925	250	200	400	400	+150	+200
		T	925	150	325	200	325	+50	+0
		R	175	125	200	100	200	-25	+0
SE 192nd Avenue & SE 34th Street	EB	L	175	150	175	200	225	+50	+50
		T	450	150	150	275	375	+125	+225



Intersection	Approach	Movement	Storage (ft)	Maximum Queue (ft)					
				2027 No Build		2027 with Lane Reduction		Change in Queue Length from No Build (ft)	
				Peak Hour		Peak Hour			
				AM	PM	AM	PM	AM	PM
		TR	450	175	200	-	-	-	-
	NB	L	375	125	150	125	175	+0	+25
		T	725	225	275	250	350	+25	+75
		R	375	125	100	125	75	+0	-25
	SB	L	325	200	225	200	225	+0	+0
		T	525	225	300	200	275	-25	-25
		TR	525	200	250	200	275	+0	+25
	WB	L	175	175	225	200	225	+25	+0
		T	425	125	300	200	325	+75	+25
		TR	425	150	225	75	100	-75	-125

**Notes:**

L= Left, T=Through, R=Right, TR=Through/Right

NB=Northbound, SB=Southbound, EB=Eastbound, WB =Westbound

Locations where queue exceeds available storage are shown in **bold red** text.





**Table 13. 2027 Travel Time Summary**

Direction	Peak Hour Travel Time (min:sec)				Travel Time Change from No Build (min:sec)	
	No Build		No Build with Lane Reduction			
	AM	PM	AM	PM	AM	PM
Eastbound between SE 164 <sup>th</sup> Avenue and SE 192 <sup>nd</sup> Avenue	4:29	4:41	5:12	5:19	+0:44	+0:38
Westbound between SE 192 <sup>nd</sup> Avenue and SE 164 <sup>th</sup> Avenue	3:56	4:30	4:44	5:05	+0:48	+0:35

## 2040 Operations Findings

By 2040, under the No Build scenario, congestion along SE 34<sup>th</sup> Street is expected to increase, particularly during the PM peak hour. Findings for 2040 conditions are presented in **Table 14** through **Table 16**.

With no changes to the roadway network, the SE 164<sup>th</sup> Street and the SE 172<sup>nd</sup> Avenue intersections would operate at LOS D and LOS E, respectively, during the PM peak hour. During the AM peak hour, LOS and delay at interchanges would not increase substantially with the project in place. During the PM peak hour, four intersections would experience a large increase in delay and change in LOS. Those intersections are:

- SE 164<sup>th</sup> Avenue (LOS C to LOS E)
- SE 172<sup>nd</sup> Avenue (LOS E to LOS F)
- SE 177<sup>th</sup> Avenue (LOS C to LOS F)
- SE 192<sup>nd</sup> Avenue (LOS C to LOS E)

Queueing results for the 2040 scenarios indicate that vehicle queues will exceed available capacity for several movements at the SE 164<sup>th</sup> Avenue and SE 192<sup>nd</sup> Avenue intersections. Repurposing a travel lane would extend queues, particularly during the PM peak hour. On SE 164<sup>th</sup> and SE 192<sup>nd</sup> Avenues, long-term improvements outside the scope of this project may be needed to accommodate queueing at those intersections.

Consistent with findings for intersection operations and queueing, travel time along the corridor is expected to increase by 2040. Repurposing a travel lane would result in travel time increases of less than one minute during the AM peak hour. A more substantial increase would be expected



during the PM peak hour with travel time increasing by approximately two and a half minutes for eastbound vehicles and one minute for westbound vehicles with the lane reduction in place.



**Table 14. 2040 LOS Summary**

Location	Intersection Control	2040 No Build				2040 with Lane Reduction				Delay Change from No Build (seconds)	
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		AM	PM
		LOS	Delay (seconds)	LOS	Delay (seconds)	LOS	Delay (seconds)	LOS	Delay (seconds)		
SE 164 <sup>th</sup> Avenue & SE 34 <sup>th</sup> Street	Signalized	C	28	D	38	C	34	<b>E</b>	79	+6	+41
SE 168 <sup>th</sup> Avenue & SE 34 <sup>th</sup> Street	Signalized	A	5	A	7	A	8	<b>B</b>	15	+3	+8
SE 172 <sup>nd</sup> Avenue & SE 34 <sup>th</sup> Street	Side-Street Stop-Controlled <sup>1</sup>	C	19 <sup>2</sup>	E	38 <sup>2</sup>	C	25 <sup>2</sup>	<b>F</b>	52 <sup>2</sup>	+6	+14
SE 176 <sup>th</sup> Avenue & SE 34 <sup>th</sup> Street	Signalized	A	8	B	12	A	10	<b>C</b>	21	+2	+9
SE 177 <sup>th</sup> Avenue & SE 34 <sup>th</sup> Street	Side-Street Stop-Controlled <sup>1</sup>	B	13 <sup>2</sup>	C	20 <sup>2</sup>	<b>C</b>	16 <sup>2</sup>	<b>F</b>	98 <sup>2</sup>	+3	+78
Hiddenbrook Drive & SE 34 <sup>th</sup> Street	Signalized	B	19	B	18	B	19	<b>C</b>	23	+0	+5
SE 192 <sup>nd</sup> Avenue & SE 34 <sup>th</sup> Street	Signalized	C	24	C	33	C	24	<b>E</b>	61	+0	+28

Notes:

**Bold text** indicates LOS change from No Build.

<sup>1</sup> For side street stop-controlled intersections, the movement with the highest delay is reported.

<sup>2</sup> Movement with the highest delay is the northbound left turn.



**Table 15. 2040 Queue Summary**

Intersection   Approach   Movement   Storage (ft)				Maximum Queue (ft)					
				2040 No Build		2040 with Lane Reduction		Change in Queue Length from No Build (ft)	
				Peak Hour		Peak Hour			
AM	PM	AM	PM	AM	PM	AM	PM		
SE 164th Avenue & SE 34th Street	EB	L	175	100	175	100	150	+0	-25
		T	350	150	175	150	175	+0	+0
		R	350	125	175	125	175	+0	+0
	NB¹	L	400	200	450	375	475	+175	+25
		T	700	425	750	525	950	+100	+200
		R	700	225	300	200	500	-25	+200
	SB	L	250	300	300	300	325	+0	+25
		T	1,150	325	450	400	825	+75	+375
		TR	1,150	225	350	250	575	+25	+225
	WB	L	925	300	350	475	475	+175	+125
		T	925	175	275	500	825	+325	+550
		R	175	100	200	125	200	+25	+0



				Maximum Queue (ft)					
Intersection	Approach	Movement	Storage (ft)	2040 No Build		2040 with Lane Reduction		Change in Queue Length from No Build (ft)	
				Peak Hour		Peak Hour			
				AM	PM	AM	PM	AM	PM
SE 192nd Avenue & SE 34th Street	EB	L	175	150	200	225	225	+75	+25
		T	450	150	225	375	550	+225	+325
		TR	450	200	275	-	-	-	-
	NB	L	375	175	200	225	475	+50	+275
		T	725	275	375	325	700	+50	+325
		R	375	175	125	150	450	-25	+325
	SB	L	325	225	275	175	350	-50	+75
		T	525	275	325	275	450	+0	+125
		TR	525	250	325	250	425	+0	+100
	WB	L	175	225	225	225	225	+0	+0
		T	425	200	400	275	425	+75	+25
		TR	425	175	325	100	200	-75	-125

**Notes:**

L= Left, T=Through, R=Right, TR=Through/Right

NB=Northbound, SB=Southbound, EB=Eastbound, WB =Westbound

Locations where queue exceeds available storage are shown in **bold red** text.

<sup>1</sup>Queues may be overestimated due to limitations of Simtraffic under congested conditions for network entry links..



**Table 16. 2040 Travel Time Summary**

Direction	Peak Hour Travel Time (min:sec)				Travel Time Change from No Build (min:sec)	
	No Build		No Build with Lane Reduction			
	AM	PM	AM	PM	AM	PM
Eastbound between SE 164 <sup>th</sup> Avenue and SE 192 <sup>nd</sup> Avenue	4:28	4:47	5:18	7:20	+0:50	+2:33
Westbound between SE 192 <sup>nd</sup> Avenue and SE 164 <sup>th</sup> Avenue	4:08	4:28	4:49	5:14	+0:41	+0:47

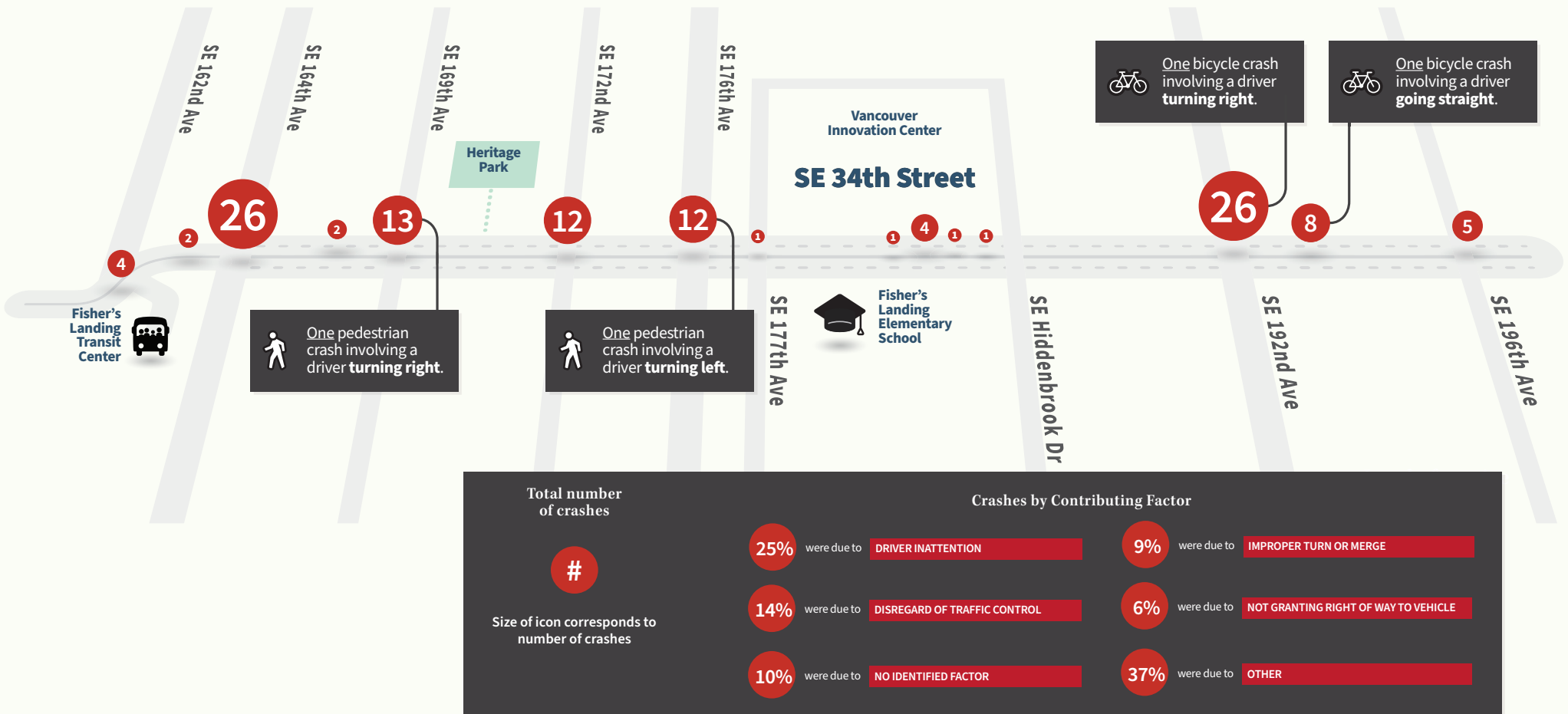
## Summary

Key takeaways from the analysis presented in the sections above include:

- One travel lane in the eastbound and westbound direction can be repurposed to provide dedicated space for people walking and biking with minimal impact to vehicle operations under existing and 2027 conditions.
- By 2040, congestion on SE 34<sup>th</sup> Street is expected to increase, particularly during the PM peak hour when intersection operations will begin to degrade under the No Build scenario.
- Repurposing a travel lane under 2040 conditions would increase intersection delay, queuing, and travel time on SE 34<sup>th</sup> Street during the PM peak hour at SE 164<sup>th</sup> Avenue, SE 192<sup>nd</sup> Avenue and stop-controlled intersections along the corridor.

# Attachment A

## SE 34<sup>th</sup> Street Safety



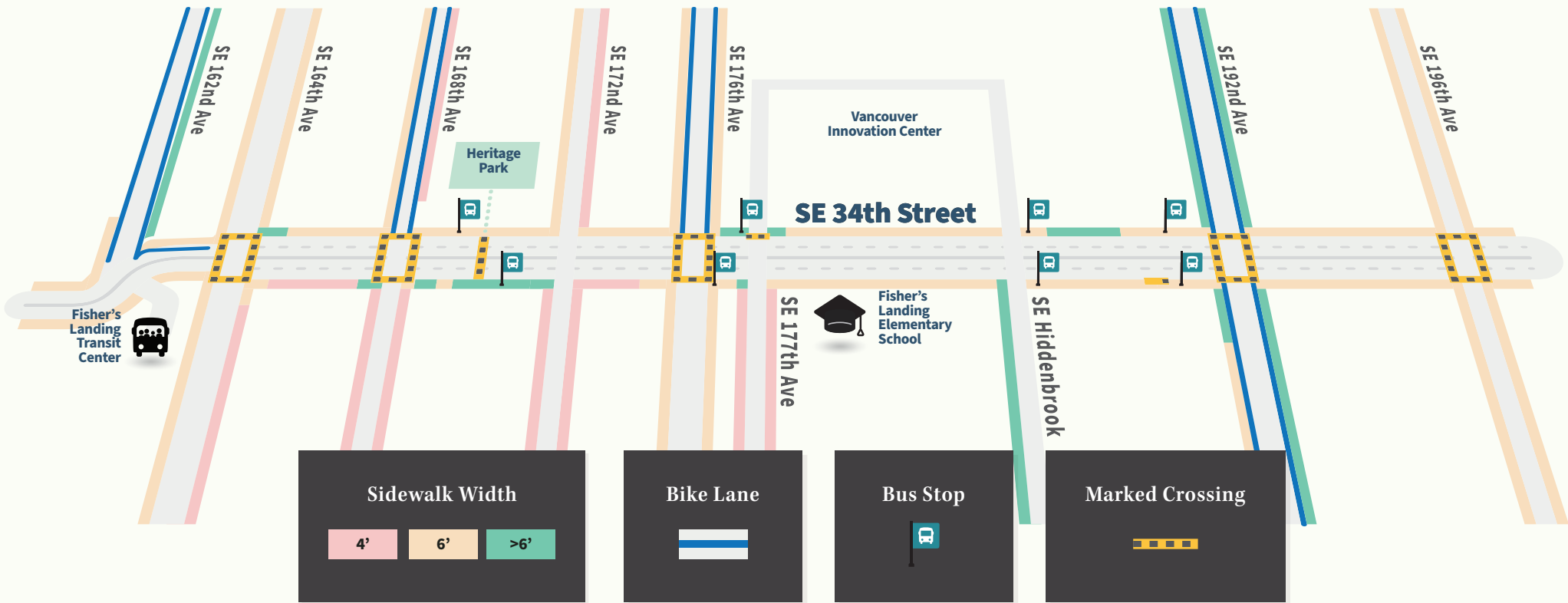
Fatal crashes: none  
Between 2014 and 2020, 86 crashes occurred on the corridor.

Source: WSDOT (2014-2020)

## Attachment A

SE 34<sup>th</sup> Street

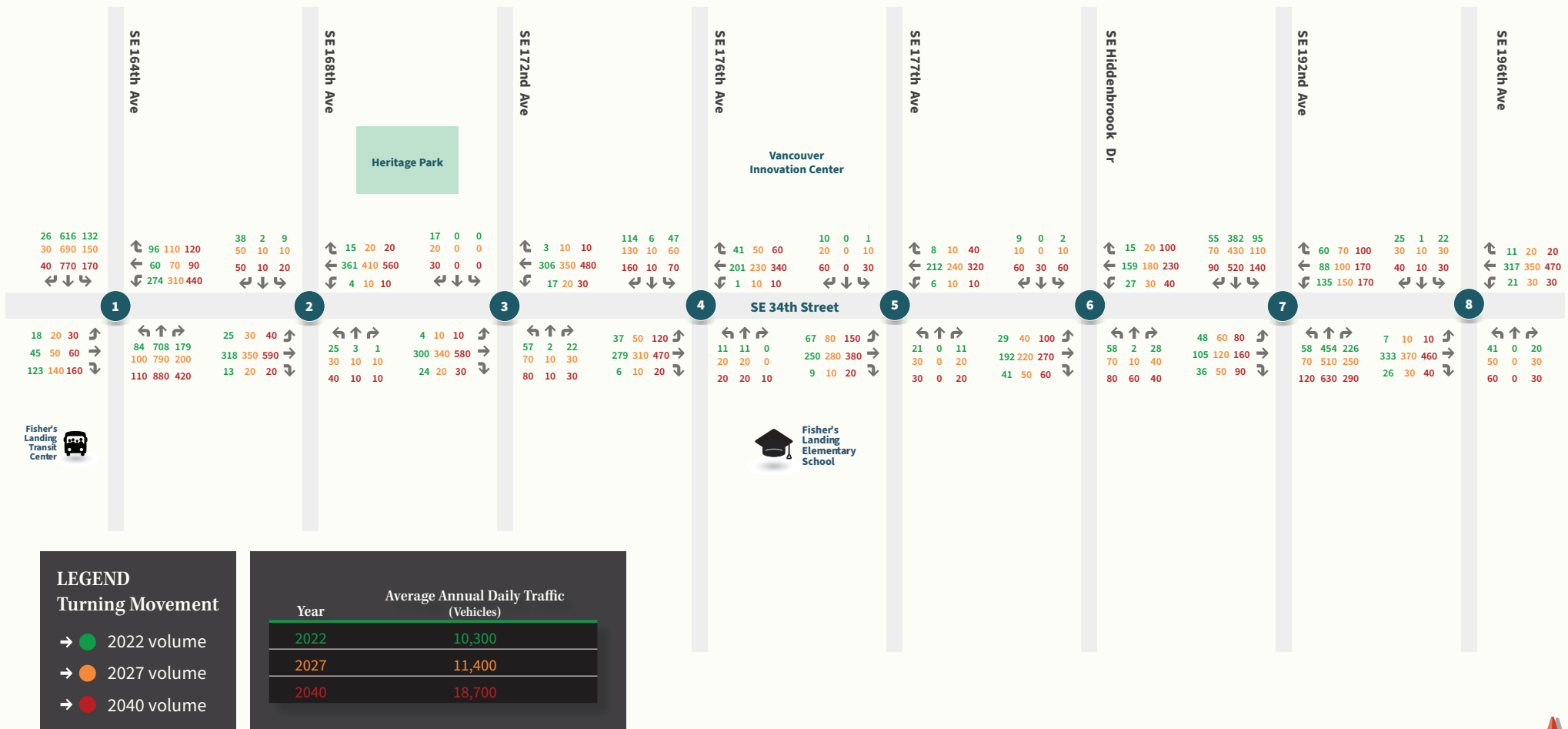
# Existing Infrastructure



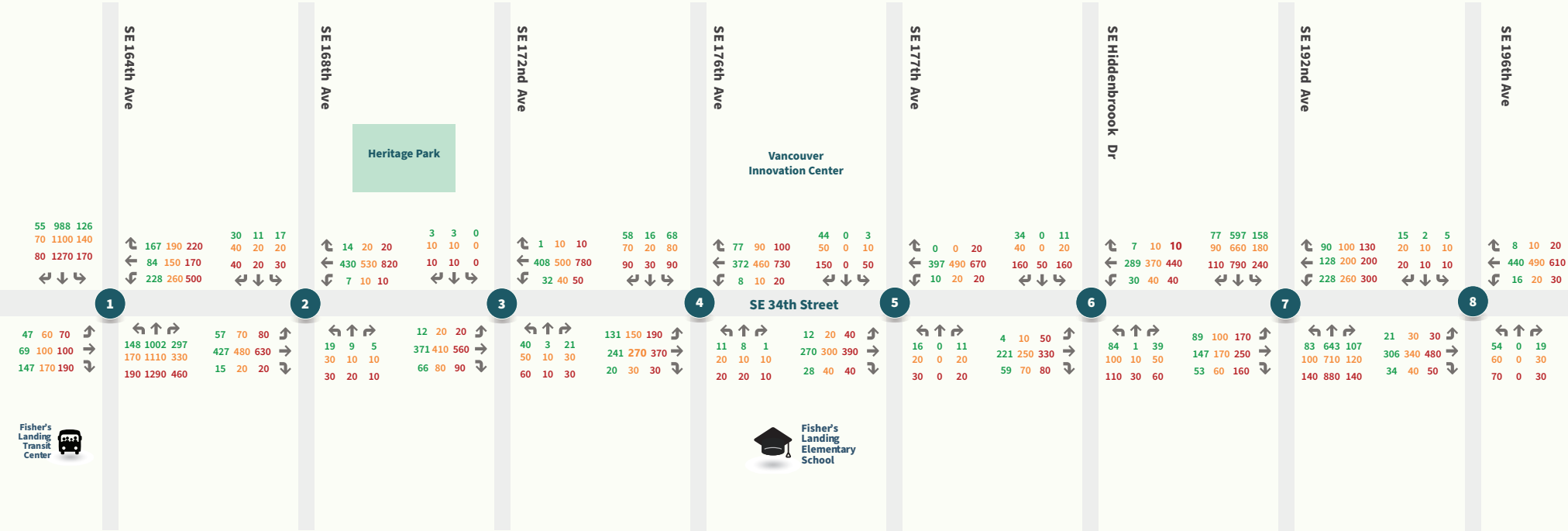


## SE 34th Street

## AM Peak Hour Turning Movement Volume



# SE 34th Street PM Peak Hour Turning Movement Volume



## LEGEND Turning Movement

- ● 2022 volume
- ● 2027 volume
- ● 2040 volume

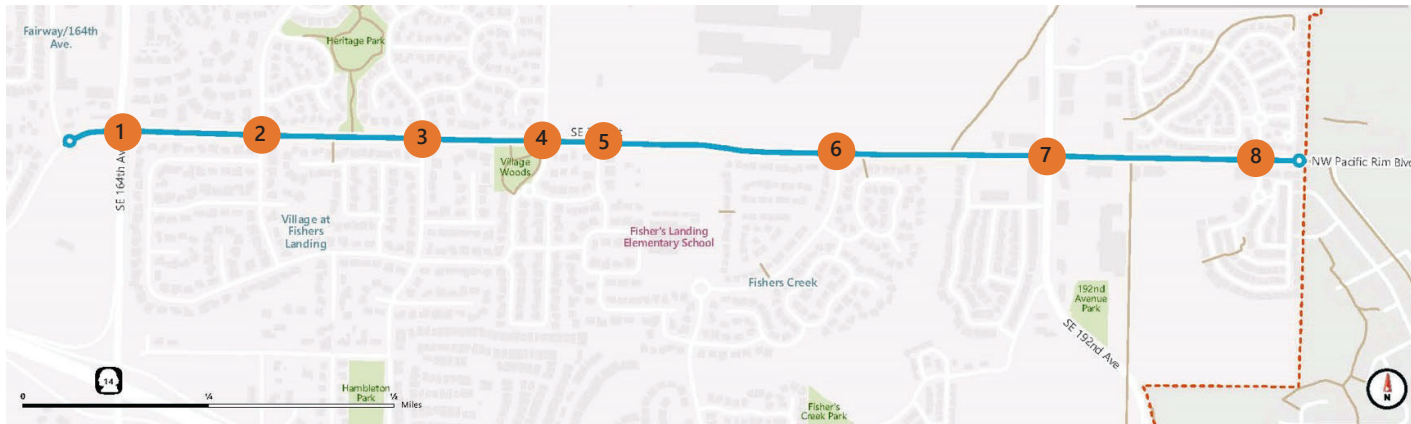
## Average Annual Daily Traffic (Vehicles)

Year	Average Annual Daily Traffic (Vehicles)
2022	10,300
2027	11,400
2040	18,700





## Appendix A: March 2022 Findings



1. SE 164th Avenue/SE 34th Street	2. SE 168th Avenue/SE 34th Street	3. SE 172nd Avenue/SE 34th Street	4. SE 176th Avenue/SE 34th Street
5. SE 177th Avenue/SE 34th Street	6. SE Hiddenbrook Drive/SE 34th Street	7. SE 192nd Avenue/SE 34th Street	8. SE 196th Avenue/SE 34th Street

### Legend:

- Study Intersection
- Stop Control
- Signal Control
- Lane Configuration

**SimTraffic Post-Processor**  
**Average Results from 10 Runs**  
**Volume and Delay by Movement**

**SE 34th Street**  
**Existing Conditions**  
**AM Peak Hour**

**Intersection 1**                      **164th Avenue/34th Street**                      **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	84	82	97.7%	40.3	6.9	D
	Through	708	720	101.7%	17.9	2.8	B
	Right Turn	179	177	98.7%	2.5	0.4	A
	Subtotal	971	979	100.8%	17.0	2.3	B
SB	Left Turn	132	135	102.1%	52.8	5.0	D
	Through	616	619	100.4%	17.1	3.3	B
	Right Turn	26	29	110.8%	5.7	4.9	A
	Subtotal	774	782	101.0%	23.2	2.5	C
EB	Left Turn	18	17	95.6%	61.6	14.0	E
	Through	45	48	105.6%	50.6	9.4	D
	Right Turn	123	121	98.0%	4.8	1.4	A
	Subtotal	186	185	99.6%	22.7	3.9	C
WB	Left Turn	274	275	100.4%	47.3	5.1	D
	Through	54	54	99.6%	34.1	9.4	C
	Right Turn	96	100	104.6%	4.6	1.2	A
	Subtotal	424	429	101.3%	36.0	4.8	D
Total		2,355	2,376	100.9%	22.9	1.6	C

**Intersection 2**                      **168th Avenue/34th Street**                      **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	25	21	85.6%	10.8	4.6	B
	Through	3	3	100.0%	9.2	11.7	A
	Right Turn	1	2	160.0%	0.5	1.2	A
	Subtotal	29	26	89.7%	10.7	4.4	B
SB	Left Turn	9	9	101.1%	11.5	8.4	B
	Through	2	2	100.0%	1.7	3.7	A
	Right Turn	38	39	101.6%	3.2	1.1	A
	Subtotal	49	50	101.4%	4.9	2.1	A
EB	Left Turn	25	25	99.6%	7.2	4.9	A
	Through	318	324	101.8%	4.3	1.7	A
	Right Turn	13	12	93.8%	3.5	4.9	A
	Subtotal	356	361	101.4%	4.5	1.9	A
WB	Left Turn	4	5	115.0%	5.7	7.1	A
	Through	361	372	103.0%	3.5	1.2	A
	Right Turn	15	15	99.3%	1.1	0.9	A
	Subtotal	380	391	103.0%	3.5	1.2	A
Total		814	828	101.7%	4.3	0.9	A

**SimTraffic Post-Processor**  
**Average Results from 10 Runs**  
**Volume and Delay by Movement**

**SE 34th Street**  
**Existing Conditions**  
**AM Peak Hour**

**Intersection 3**

**Pedestrian Crossing/34th Street**

**Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
SB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
EB	Left Turn						
	Through	328	335	102.1%	1.7	0.6	A
	Right Turn						
	Subtotal	328	335	102.1%	1.7	0.6	A
WB	Left Turn						
	Through	380	389	102.2%	1.1	0.9	A
	Right Turn						
	Subtotal	380	389	102.2%	1.1	0.9	A
Total		708	723	102.2%	1.4	0.7	A

**Intersection 4**

**172nd Avenue/34th Street**

**Side-street Stop**

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	57	56	98.2%	9.3	2.6	A
	Through	2	1	40.0%	0.5	1.5	A
	Right Turn	22	24	108.6%	5.2	3.6	A
	Subtotal	81	81	99.6%	8.0	2.6	A
SB	Left Turn						
	Through						
	Right Turn	17	15	90.0%	2.8	0.5	A
	Subtotal	17	15	90.0%	2.8	0.5	A
EB	Left Turn	4	4	110.0%	0.5	0.6	A
	Through	300	303	101.0%	0.6	0.2	A
	Right Turn	24	25	102.5%	0.4	0.5	A
	Subtotal	328	332	101.3%	0.6	0.2	A
WB	Left Turn	17	18	106.5%	3.2	1.3	A
	Through	306	318	103.8%	0.9	0.1	A
	Right Turn	3	3	110.0%	0.4	0.5	A
	Subtotal	326	339	104.0%	1.0	0.2	A
Total		752	767	102.0%	1.6	0.4	A

**SimTraffic Post-Processor**  
**Average Results from 10 Runs**  
**Volume and Delay by Movement**

**SE 34th Street**  
**Existing Conditions**  
**AM Peak Hour**

**Intersection 5**

**176th Avenue/34th Street**

**Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	11	10	87.3%	40.2	28.6	D
	Through	11	11	100.0%	43.4	18.5	D
	Right Turn						
	Subtotal	22	21	93.6%	43.8	12.3	D
SB	Left Turn	47	43	92.1%	46.6	10.4	D
	Through	6	6	101.7%	29.7	27.2	C
	Right Turn	114	117	102.6%	5.9	1.7	A
	Subtotal	167	166	99.6%	18.3	3.6	B
EB	Left Turn	37	34	91.6%	4.6	2.1	A
	Through	279	291	104.3%	1.9	0.5	A
	Right Turn	6	6	105.0%	0.7	0.9	A
	Subtotal	322	331	102.9%	2.2	0.5	A
WB	Left Turn	1	1	50.0%	1.2	3.2	A
	Through	201	214	106.4%	2.1	0.7	A
	Right Turn	41	38	91.7%	0.8	0.7	A
	Subtotal	243	252	103.7%	2.0	0.6	A
Total		754	770	102.1%	6.7	1.4	A

**Intersection 6**

**177th Avenue/34th Street**

**Side-street Stop**

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	21	21	100.0%	6.8	1.9	A
	Through						
	Right Turn	11	11	99.1%	3.3	0.7	A
	Subtotal	32	32	99.7%	5.4	1.4	A
SB	Left Turn	1	0	30.0%	0.4	1.2	A
	Through						
	Right Turn	10	12	117.0%	2.5	1.3	A
	Subtotal	11	12	109.1%	2.4	1.3	A
EB	Left Turn	67	68	101.5%	3.0	0.6	A
	Through	250	261	104.4%	0.8	0.2	A
	Right Turn	9	10	111.1%	0.5	0.8	A
	Subtotal	326	339	104.0%	1.3	0.2	A
WB	Left Turn	6	6	96.7%	2.0	1.8	A
	Through	212	219	103.2%	1.4	0.3	A
	Right Turn	8	9	107.5%	1.1	1.1	A
	Subtotal	226	233	103.1%	1.4	0.2	A
Total		595	616	103.5%	1.6	0.2	A

**SimTraffic Post-Processor**  
**Average Results from 10 Runs**  
**Volume and Delay by Movement**

**SE 34th Street**  
**Existing Conditions**  
**AM Peak Hour**

**Intersection 7**

**Hiddenbrook Drive/34th Street**

**Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	58	58	99.3%	42.8	7.1	D
	Through	2	2	120.0%	38.8	34.2	D
	Right Turn	28	26	92.9%	4.4	0.8	A
	Subtotal	88	86	97.7%	31.6	4.2	C
SB	Left Turn	2	2	75.0%	14.8	26.1	B
	Through						
	Right Turn	9	10	106.7%	3.4	1.4	A
	Subtotal	11	11	100.9%	6.8	6.4	A
EB	Left Turn	29	26	89.7%	42.8	9.5	D
	Through	192	200	104.3%	2.2	0.9	A
	Right Turn	41	41	101.0%	1.0	0.5	A
	Subtotal	262	268	102.1%	6.4	1.8	A
WB	Left Turn	27	26	94.8%	40.7	11.0	D
	Through	159	166	104.7%	2.3	1.2	A
	Right Turn	15	14	91.3%	0.5	0.8	A
	Subtotal	201	206	102.3%	7.0	3.5	A
Total		562	570	101.5%	10.6	2.0	B

**Intersection 8**

**192nd Avenue/34th Street**

**Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	58	56	96.9%	44.8	8.2	D
	Through	454	457	100.7%	13.1	2.1	B
	Right Turn	226	230	101.8%	3.1	0.8	A
	Subtotal	738	743	100.7%	12.6	1.3	B
SB	Left Turn	95	92	97.1%	44.8	7.1	D
	Through	382	385	100.9%	10.5	2.4	B
	Right Turn	55	55	100.4%	5.0	2.5	A
	Subtotal	532	533	100.1%	16.2	1.8	B
EB	Left Turn	48	50	104.4%	33.7	8.4	C
	Through	105	104	99.4%	38.5	6.2	D
	Right Turn	36	35	98.1%	16.2	5.9	B
	Subtotal	189	190	100.4%	33.4	5.0	C
WB	Left Turn	135	140	103.8%	36.4	4.8	D
	Through	88	94	106.3%	41.0	10.5	D
	Right Turn	60	59	98.0%	10.3	4.4	B
	Subtotal	283	292	103.3%	32.2	6.3	C
Total		1,742	1,758	100.9%	19.0	1.3	B



**SimTraffic Post-Processor**  
**Average Results from 10 Runs**  
**Volume and Delay by Movement**

**SE 34th Street**  
**Existing Conditions**  
**AM Peak Hour**

**Intersection 9**

**196th Avenue/34th Street**

**Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	41	40	96.3%	9.1	2.5	A
	Through						
	Right Turn	20	19	94.5%	2.5	0.9	A
	Subtotal	61	58	95.7%	7.0	1.7	A
SB	Left Turn	22	19	87.7%	9.8	3.7	A
	Through	1	1	100.0%	2.9	6.3	A
	Right Turn	25	23	90.0%	3.0	1.4	A
	Subtotal	48	43	89.2%	7.1	2.6	A
EB	Left Turn	7	6	87.1%	12.8	8.4	B
	Through	333	333	100.0%	4.8	1.3	A
	Right Turn	26	27	103.8%	2.2	1.7	A
	Subtotal	366	366	100.0%	4.8	1.2	A
WB	Left Turn	21	18	87.1%	11.5	3.6	B
	Through	317	327	103.2%	3.7	0.9	A
	Right Turn	11	14	127.3%	2.3	1.2	A
	Subtotal	349	359	103.0%	4.1	0.7	A
Total		824	827	100.3%	4.8	0.5	A

**SimTraffic Post-Processor**  
**Average Results from 10 Runs**  
**Volume and Delay by Movement**

**SE 34th Street**  
**Existing Conditions**  
**PM Peak Hour**

**Intersection 1**                      **164th Avenue/34th Street**                      **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	148	145	97.6%	52.2	11.9	D
	Through	1,002	993	99.1%	19.0	2.3	B
	Right Turn	297	287	96.6%	3.4	0.7	A
	Subtotal	1,447	1,425	98.5%	19.0	2.4	B
SB	Left Turn	126	120	95.2%	54.2	7.3	D
	Through	988	971	98.3%	18.0	1.9	B
	Right Turn	55	59	106.5%	5.5	2.0	A
	Subtotal	1,169	1,149	98.3%	21.6	2.7	C
EB	Left Turn	47	49	105.1%	54.9	13.1	D
	Through	76	80	105.0%	50.0	8.5	D
	Right Turn	147	154	104.8%	6.0	1.5	A
	Subtotal	270	283	104.9%	25.6	3.2	C
WB	Left Turn	228	222	97.4%	43.6	4.9	D
	Through	84	89	105.4%	43.3	7.8	D
	Right Turn	167	173	103.7%	7.0	1.1	A
	Subtotal	479	484	101.0%	31.5	3.2	C
Total		3,365	3,341	99.3%	22.4	1.3	C

**Intersection 2**                      **168th Avenue/34th Street**                      **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	19	16	84.7%	11.6	8.1	B
	Through	9	12	128.9%	21.4	10.7	C
	Right Turn	5	6	120.0%	3.5	2.1	A
	Subtotal	33	34	102.1%	13.8	5.2	B
SB	Left Turn	17	16	95.3%	11.2	4.8	B
	Through	11	13	118.2%	14.8	7.5	B
	Right Turn	30	29	96.0%	4.0	1.4	A
	Subtotal	58	58	100.0%	8.6	2.0	A
EB	Left Turn	57	58	102.3%	10.9	3.8	B
	Through	427	418	97.9%	4.9	1.5	A
	Right Turn	15	16	106.7%	3.3	2.9	A
	Subtotal	499	493	98.7%	5.6	1.6	A
WB	Left Turn	7	7	104.3%	4.3	3.5	A
	Through	430	438	101.8%	4.2	1.3	A
	Right Turn	14	13	95.0%	3.1	3.8	A
	Subtotal	451	458	101.6%	4.2	1.3	A
Total		1,041	1,043	100.2%	5.4	1.3	A

**SimTraffic Post-Processor**  
**Average Results from 10 Runs**  
**Volume and Delay by Movement**

**SE 34th Street**  
**Existing Conditions**  
**PM Peak Hour**

**Intersection 3**

**Pedestrian Crossing/34th Street**

**Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
SB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
EB	Left Turn						
	Through	449	440	98.0%	1.4	0.6	A
	Right Turn						
	Subtotal	449	440	98.0%	1.4	0.6	A
WB	Left Turn						
	Through	451	454	100.8%	0.4	0.2	A
	Right Turn						
	Subtotal	451	454	100.8%	0.4	0.2	A
Total		900	895	99.4%	0.9	0.3	A

**Intersection 4**

**172nd Avenue/34th Street**

**Side-street Stop**

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	40	40	99.8%	12.3	2.1	B
	Through	3	3	110.0%	6.9	11.2	A
	Right Turn	21	22	102.4%	6.3	3.5	A
	Subtotal	64	65	101.1%	10.2	2.3	B
SB	Left Turn						
	Through	3	3	103.3%	9.1	10.4	A
	Right Turn	3	3	86.7%	1.0	1.7	A
	Subtotal	6	6	95.0%	8.7	9.5	A
EB	Left Turn	12	11	90.8%	3.2	2.6	A
	Through	371	361	97.4%	0.7	0.3	A
	Right Turn	66	64	97.6%	0.4	0.3	A
	Subtotal	449	437	97.3%	0.7	0.3	A
WB	Left Turn	32	33	104.1%	4.6	1.0	A
	Through	408	419	102.6%	1.7	0.4	A
	Right Turn	1	2	160.0%	0.6	1.2	A
	Subtotal	441	454	102.8%	1.9	0.4	A
Total		960	961	100.1%	1.9	0.3	A

**SimTraffic Post-Processor**  
**Average Results from 10 Runs**  
**Volume and Delay by Movement**

**SE 34th Street**  
**Existing Conditions**  
**PM Peak Hour**

**Intersection 5**

**176th Avenue/34th Street**

**Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	11	11	100.0%	33.7	14.8	C
	Through	8	8	95.0%	41.4	18.4	D
	Right Turn	1	2	210.0%	1.1	1.7	A
	Subtotal	20	21	103.5%	37.5	7.6	D
SB	Left Turn	68	62	91.6%	44.2	10.8	D
	Through	16	17	107.5%	39.7	17.9	D
	Right Turn	58	61	105.9%	9.3	4.4	A
	Subtotal	142	141	99.2%	27.9	6.5	C
EB	Left Turn	131	128	97.3%	7.2	2.2	A
	Through	241	241	100.0%	2.7	0.9	A
	Right Turn	20	21	102.5%	0.9	0.7	A
	Subtotal	392	389	99.2%	4.0	1.1	A
WB	Left Turn	8	8	100.0%	10.5	9.4	B
	Through	372	374	100.4%	6.6	2.5	A
	Right Turn	77	78	101.8%	3.7	1.5	A
	Subtotal	457	460	100.7%	6.1	2.2	A
Total		1,011	1,011	100.0%	8.9	2.0	A

**Intersection 6**

**177th Avenue/34th Street**

**Side-street Stop**

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	16	16	98.8%	8.6	3.0	A
	Through						
	Right Turn	11	11	103.6%	3.3	1.2	A
	Subtotal	27	27	100.7%	6.1	1.7	A
SB	Left Turn	3	2	70.0%	1.7	3.0	A
	Through						
	Right Turn	44	45	102.0%	4.4	1.1	A
	Subtotal	47	47	100.0%	4.4	1.0	A
EB	Left Turn	12	12	98.3%	3.5	2.2	A
	Through	270	264	97.6%	0.8	0.2	A
	Right Turn	28	25	90.7%	0.4	0.3	A
	Subtotal	310	301	97.0%	0.9	0.2	A
WB	Left Turn	10	10	100.0%	2.6	1.3	A
	Through	397	405	102.1%	1.7	0.2	A
	Right Turn						
	Subtotal	407	415	102.1%	1.7	0.2	A
Total		791	790	99.9%	1.7	0.2	A

**SimTraffic Post-Processor**  
**Average Results from 10 Runs**  
**Volume and Delay by Movement**

**SE 34th Street**  
**Existing Conditions**  
**PM Peak Hour**

**Intersection 7**

**Hiddenbrook Drive/34th Street**

**Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	84	83	98.3%	39.5	6.9	D
	Through	1	1	100.0%	4.4	9.9	A
	Right Turn	39	40	102.8%	4.6	0.5	A
	Subtotal	124	124	99.8%	27.4	4.2	C
SB	Left Turn	11	10	93.6%	35.2	20.7	D
	Through						
	Right Turn	34	35	103.8%	4.2	0.8	A
	Subtotal	45	46	101.3%	11.8	5.7	B
EB	Left Turn	4	4	87.5%	27.3	27.8	C
	Through	221	220	99.6%	3.6	0.9	A
	Right Turn	59	54	91.2%	2.0	1.2	A
	Subtotal	284	277	97.7%	3.9	1.4	A
WB	Left Turn	30	30	100.0%	45.2	8.6	D
	Through	289	299	103.6%	2.8	0.8	A
	Right Turn	7	8	107.1%	1.3	2.0	A
	Subtotal	326	337	103.3%	6.6	0.9	A
Total		779	784	100.6%	9.5	1.5	A

**Intersection 8**

**192nd Avenue/34th Street**

**Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	83	81	97.1%	44.8	5.6	D
	Through	643	657	102.1%	20.1	2.2	C
	Right Turn	107	104	97.2%	3.9	1.0	A
	Subtotal	833	841	101.0%	20.5	1.8	C
SB	Left Turn	158	156	98.4%	52.0	9.4	D
	Through	597	609	101.9%	18.0	1.8	B
	Right Turn	77	75	97.1%	10.6	2.7	B
	Subtotal	832	839	100.8%	24.0	2.4	C
EB	Left Turn	89	86	96.1%	28.7	4.4	C
	Through	147	145	98.6%	41.0	4.3	D
	Right Turn	53	58	109.4%	27.2	4.7	C
	Subtotal	289	289	99.8%	34.4	2.9	C
WB	Left Turn	228	233	102.1%	36.5	5.5	D
	Through	128	136	106.1%	32.0	4.3	C
	Right Turn	90	91	100.9%	12.9	5.4	B
	Subtotal	446	460	103.0%	30.8	4.2	C
Total		2,400	2,428	101.2%	25.3	1.5	C

**SimTraffic Post-Processor**  
**Average Results from 10 Runs**  
**Volume and Delay by Movement**

**SE 34th Street**  
**Existing Conditions**  
**PM Peak Hour**

**Intersection 9**

**196th Avenue/34th Street**

**Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	54	51	93.7%	10.5	3.5	B
	Through						
	Right Turn	19	23	119.5%	3.2	1.4	A
	Subtotal	73	73	100.4%	8.6	2.7	A
SB	Left Turn	5	4	78.0%	8.5	10.5	A
	Through	2	3	165.0%	5.5	9.6	A
	Right Turn	15	16	108.0%	4.1	1.1	A
	Subtotal	22	23	106.4%	6.8	3.4	A
EB	Left Turn	21	26	121.4%	10.5	2.7	B
	Through	306	299	97.8%	4.6	1.9	A
	Right Turn	34	30	88.2%	3.1	2.2	A
	Subtotal	361	355	98.3%	5.0	1.7	A
WB	Left Turn	16	15	92.5%	12.0	5.8	B
	Through	440	449	102.1%	4.9	1.6	A
	Right Turn	8	9	117.5%	3.7	8.4	A
	Subtotal	464	473	102.0%	5.1	1.7	A
Total		920	925	100.5%	5.3	1.6	A

**SimTraffic Post-Processor**  
**Average Results from 10 Runs**  
**Volume and Delay by Movement**

**SE 34th Street**  
**Existing Conditions Alternative 1**  
**AM Peak Hour**

**Intersection 1**                      **164th Avenue/34th Street**                      **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	84	87	103.3%	51.5	10.4	D
	Through	708	704	99.4%	24.6	4.0	C
	Right Turn	179	182	101.4%	3.4	0.9	A
	Subtotal	971	972	100.1%	23.2	3.1	C
SB	Left Turn	132	128	97.2%	54.9	6.6	D
	Through	616	612	99.3%	20.0	2.7	B
	Right Turn	26	27	102.7%	7.1	5.9	A
	Subtotal	774	767	99.0%	26.0	2.8	C
EB	Left Turn	18	17	96.1%	46.3	21.6	D
	Through	45	45	99.6%	52.8	12.1	D
	Right Turn	123	123	100.2%	5.4	0.7	A
	Subtotal	186	185	99.6%	22.8	6.6	C
WB	Left Turn	274	275	100.5%	44.0	5.2	D
	Through	54	61	112.2%	27.8	6.6	C
	Right Turn	96	99	103.4%	5.0	0.7	A
	Subtotal	424	435	102.7%	33.2	3.4	C
Total		2,355	2,359	100.2%	26.0	2.1	C

**Intersection 2**                      **168th Avenue/34th Street**                      **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	25	26	103.2%	15.4	6.9	B
	Through	3	4	120.0%	7.2	10.9	A
	Right Turn	1	2	230.0%	2.1	4.4	A
	Subtotal	29	32	109.3%	14.4	6.2	B
SB	Left Turn	9	9	97.8%	15.5	5.6	B
	Through	2	2	80.0%	4.8	8.7	A
	Right Turn	38	38	100.5%	5.4	2.0	A
	Subtotal	49	49	99.2%	7.4	2.7	A
EB	Left Turn	25	22	88.4%	8.6	5.3	A
	Through	318	323	101.4%	5.3	1.4	A
	Right Turn	13	13	101.5%	3.4	3.5	A
	Subtotal	356	358	100.5%	5.3	1.4	A
WB	Left Turn	4	2	50.0%	6.0	9.4	A
	Through	361	375	103.8%	3.7	1.1	A
	Right Turn	15	15	96.7%	3.1	2.2	A
	Subtotal	380	391	102.9%	3.8	1.2	A
Total		814	829	101.9%	5.1	1.1	A

**SimTraffic Post-Processor**  
**Average Results from 10 Runs**  
**Volume and Delay by Movement**

**SE 34th Street**  
**Existing Conditions Alternative 1**  
**AM Peak Hour**

**Intersection 3**

**Pedestrian Crossing/34th Street**

**Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
SB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
EB	Left Turn						
	Through	328	336	102.3%	2.7	1.6	A
	Right Turn						
	Subtotal	328	336	102.3%	2.7	1.6	A
WB	Left Turn						
	Through	380	389	102.4%	1.4	0.8	A
	Right Turn						
	Subtotal	380	389	102.4%	1.4	0.8	A
Total		708	725	102.4%	2.0	1.1	A

**Intersection 4**

**172nd Avenue/34th Street**

**Side-street Stop**

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	57	61	107.5%	9.2	2.3	A
	Through	2	2	85.0%	4.4	7.3	A
	Right Turn	22	21	94.1%	5.0	2.1	A
	Subtotal	81	84	103.3%	8.1	1.9	A
SB	Left Turn						
	Through						
	Right Turn	17	18	105.9%	4.2	3.0	A
	Subtotal	17	18	105.9%	4.2	3.0	A
EB	Left Turn	4	4	95.0%	1.5	1.8	A
	Through	300	303	101.1%	1.1	0.3	A
	Right Turn	24	27	114.2%	0.7	0.3	A
	Subtotal	328	334	102.0%	1.0	0.3	A
WB	Left Turn	17	17	100.6%	3.0	1.2	A
	Through	306	310	101.4%	1.3	0.2	A
	Right Turn	3	4	143.3%	0.7	1.0	A
	Subtotal	326	332	101.7%	1.3	0.2	A
Total		752	768	102.1%	2.0	0.3	A



**SimTraffic Post-Processor**  
**Average Results from 10 Runs**  
**Volume and Delay by Movement**

**SE 34th Street**  
**Existing Conditions Alternative 1**  
**AM Peak Hour**

**Intersection 5**

**176th Avenue/34th Street**

**Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	11	11	102.7%	45.5	23.3	D
	Through	11	12	108.2%	40.5	17.8	D
	Right Turn						
	Subtotal	22	23	105.5%	50.5	16.1	D
SB	Left Turn	47	46	97.4%	46.7	13.4	D
	Through	6	7	115.0%	46.7	19.9	D
	Right Turn	114	113	99.3%	8.3	3.5	A
	Subtotal	167	166	99.3%	20.8	7.4	C
EB	Left Turn	37	35	93.5%	4.6	1.9	A
	Through	279	287	102.8%	2.9	0.9	A
	Right Turn	6	6	95.0%	2.2	3.6	A
	Subtotal	322	327	101.6%	3.1	0.9	A
WB	Left Turn	1	1	50.0%	1.8	4.8	A
	Through	201	212	105.3%	3.9	1.2	A
	Right Turn	41	39	95.9%	2.2	1.4	A
	Subtotal	243	251	103.5%	3.6	1.0	A
Total		754	768	101.8%	8.4	1.8	A

**Intersection 6**

**177th Avenue/34th Street**

**Side-street Stop**

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	21	21	98.6%	9.7	5.5	A
	Through						
	Right Turn	11	10	88.2%	3.8	1.2	A
	Subtotal	32	30	95.0%	6.9	2.1	A
SB	Left Turn	1	1	70.0%	2.1	5.4	A
	Through						
	Right Turn	10	10	101.0%	3.1	1.2	A
	Subtotal	11	11	98.2%	3.9	2.3	A
EB	Left Turn	67	65	97.2%	3.4	0.7	A
	Through	250	260	103.8%	0.9	0.2	A
	Right Turn	9	10	113.3%	0.7	0.7	A
	Subtotal	326	335	102.7%	1.4	0.3	A
WB	Left Turn	6	5	85.0%	4.5	2.2	A
	Through	212	219	103.4%	2.1	0.7	A
	Right Turn	8	9	106.3%	0.9	0.9	A
	Subtotal	226	233	103.0%	2.1	0.7	A
Total		595	609	102.3%	2.0	0.3	A

**SimTraffic Post-Processor**  
**Average Results from 10 Runs**  
**Volume and Delay by Movement**

**SE 34th Street**  
**Existing Conditions Alternative 1**  
**AM Peak Hour**

**Intersection 7**

**Hiddenbrook Drive/34th Street**

**Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	58	55	95.3%	43.5	9.3	D
	Through	2	3	125.0%	31.5	29.1	C
	Right Turn	28	27	96.4%	4.5	0.6	A
	Subtotal	88	85	96.4%	30.1	4.8	C
SB	Left Turn	2	2	90.0%	10.1	21.4	B
	Through						
	Right Turn	9	8	87.8%	3.5	2.9	A
	Subtotal	11	10	88.2%	8.1	10.5	A
EB	Left Turn	29	25	84.5%	44.6	12.7	D
	Through	192	199	103.4%	4.1	1.2	A
	Right Turn	41	39	94.1%	4.0	1.6	A
	Subtotal	262	262	99.8%	8.4	1.9	A
WB	Left Turn	27	29	105.9%	45.0	6.0	D
	Through	159	170	106.6%	3.4	1.2	A
	Right Turn	15	16	105.3%	0.8	1.3	A
	Subtotal	201	214	106.4%	9.2	2.0	A
Total		562	570	101.4%	12.1	1.9	B

**Intersection 8**

**192nd Avenue/34th Street**

**Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	58	58	100.3%	44.7	7.5	D
	Through	454	455	100.2%	14.2	2.3	B
	Right Turn	226	224	99.2%	4.3	0.8	A
	Subtotal	738	737	99.9%	13.7	2.0	B
SB	Left Turn	95	98	102.9%	51.4	14.8	D
	Through	382	383	100.2%	11.5	2.6	B
	Right Turn	55	59	107.8%	4.8	2.1	A
	Subtotal	532	540	101.4%	19.0	4.7	B
EB	Left Turn	48	50	103.3%	27.0	9.0	C
	Through	105	109	103.5%	37.0	5.9	D
	Right Turn	36	37	102.8%	24.3	13.4	C
	Subtotal	189	195	103.3%	32.5	6.4	C
WB	Left Turn	135	134	99.5%	34.0	5.6	C
	Through	88	97	110.6%	38.6	8.0	D
	Right Turn	60	64	107.0%	22.8	6.4	C
	Subtotal	283	296	104.5%	32.9	5.7	C
Total		1,742	1,768	101.5%	20.5	2.2	C

SimTraffic Post-Processor  
Average Results from 10 Runs  
Volume and Delay by Movement

SE 34th Street  
Existing Conditions Alternative 1  
AM Peak Hour

Intersection 9

196th Avenue/34th Street

Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	41	42	103.4%	9.5	3.7	A
	Through						
	Right Turn	20	20	100.5%	3.5	1.6	A
	Subtotal	61	63	102.5%	7.5	2.4	A
SB	Left Turn	22	23	105.5%	10.2	3.6	B
	Through	1	1	110.0%	7.1	11.5	A
	Right Turn	25	28	110.4%	2.8	1.0	A
	Subtotal	48	52	108.1%	7.0	2.7	A
EB	Left Turn	7	6	87.1%	16.9	11.2	B
	Through	333	331	99.2%	6.1	1.7	A
	Right Turn	26	29	109.6%	4.0	1.9	A
	Subtotal	366	365	99.8%	6.1	1.7	A
WB	Left Turn	21	19	88.1%	15.4	5.8	B
	Through	317	325	102.4%	4.3	1.2	A
	Right Turn	11	12	110.9%	1.0	1.1	A
	Subtotal	349	355	101.8%	4.7	1.2	A
Total		824	835	101.3%	5.7	1.3	A

**SimTraffic Post-Processor**  
**Average Results from 10 Runs**  
**Volume and Delay by Movement**

**SE 34th Street**  
**Existing Alternative 1**  
**PM Peak Hour**

**Intersection 1**                      **164th Avenue/34th Street**                      **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	148	147	99.5%	47.8	13.4	D
	Through	1,002	998	99.6%	25.6	7.0	C
	Right Turn	297	293	98.8%	4.6	1.2	A
	Subtotal	1,447	1,439	99.4%	24.0	5.5	C
SB	Left Turn	126	125	98.9%	59.4	8.7	E
	Through	988	995	100.7%	25.3	2.6	C
	Right Turn	55	59	106.4%	12.5	4.4	B
	Subtotal	1,169	1,178	100.8%	28.2	2.5	C
EB	Left Turn	47	47	99.6%	54.3	9.0	D
	Through	76	77	101.4%	50.2	6.1	D
	Right Turn	147	142	96.3%	7.7	1.5	A
	Subtotal	270	266	98.3%	28.4	4.2	C
WB	Left Turn	228	234	102.8%	50.2	5.8	D
	Through	84	84	100.2%	37.7	8.6	D
	Right Turn	167	169	101.1%	7.5	1.1	A
	Subtotal	479	487	101.8%	33.0	3.6	C
Total		3,365	3,370	100.2%	27.0	2.8	C

**Intersection 2**                      **168th Avenue/34th Street**                      **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	19	18	93.7%	14.6	6.0	B
	Through	9	10	110.0%	18.0	15.8	B
	Right Turn	5	6	122.0%	2.8	3.6	A
	Subtotal	33	34	102.4%	14.2	6.6	B
SB	Left Turn	17	16	93.5%	10.4	5.4	B
	Through	11	11	98.2%	11.2	5.2	B
	Right Turn	30	31	104.3%	5.0	2.7	A
	Subtotal	58	58	100.0%	8.4	2.7	A
EB	Left Turn	57	59	103.9%	11.1	4.5	B
	Through	427	424	99.3%	5.6	2.0	A
	Right Turn	15	17	113.3%	4.8	2.2	A
	Subtotal	499	500	100.3%	6.3	1.9	A
WB	Left Turn	7	6	81.4%	7.2	9.2	A
	Through	430	441	102.6%	5.3	1.4	A
	Right Turn	14	13	95.7%	2.6	2.9	A
	Subtotal	451	460	102.0%	5.3	1.4	A
Total		1,041	1,052	101.1%	6.2	1.5	A

**SimTraffic Post-Processor**  
**Average Results from 10 Runs**  
**Volume and Delay by Movement**

**SE 34th Street**  
**Existing Alternative 1**  
**PM Peak Hour**

**Intersection 3**

**Pedestrian Crossing/34th Street**

**Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
SB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
EB	Left Turn						
	Through	449	449	99.9%	1.6	0.6	A
	Right Turn						
	Subtotal	449	449	99.9%	1.6	0.6	A
WB	Left Turn						
	Through	451	456	101.1%	1.1	0.7	A
	Right Turn						
	Subtotal	451	456	101.1%	1.1	0.7	A
Total		900	905	100.5%	1.4	0.6	A

**Intersection 4**

**172nd Avenue/34th Street**

**Side-street Stop**

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	40	43	106.8%	13.6	3.7	B
	Through	3	4	130.0%	8.3	7.0	A
	Right Turn	21	21	99.0%	5.9	3.1	A
	Subtotal	64	67	105.3%	10.8	2.7	B
SB	Left Turn						
	Through	3	2	70.0%	2.3	3.8	A
	Right Turn	3	3	90.0%	2.3	2.1	A
	Subtotal	6	5	80.0%	3.7	2.9	A
EB	Left Turn	12	11	95.0%	4.6	2.0	A
	Through	371	365	98.5%	1.7	0.3	A
	Right Turn	66	68	103.6%	0.9	0.2	A
	Subtotal	449	445	99.1%	1.6	0.3	A
WB	Left Turn	32	33	102.5%	7.2	3.1	A
	Through	408	419	102.6%	1.7	0.1	A
	Right Turn	1	1	60.0%	0.0	0.0	A
	Subtotal	441	452	102.5%	2.1	0.3	A
Total		960	970	101.0%	2.4	0.4	A

**SimTraffic Post-Processor**  
**Average Results from 10 Runs**  
**Volume and Delay by Movement**

**SE 34th Street**  
**Existing Alternative 1**  
**PM Peak Hour**

**Intersection 5**

**176th Avenue/34th Street**

**Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	11	10	87.3%	25.1	19.1	C
	Through	8	11	141.3%	36.8	16.2	D
	Right Turn	1	2	190.0%	2.5	4.7	A
	Subtotal	20	23	114.0%	31.9	12.1	C
SB	Left Turn	68	65	94.9%	42.4	6.7	D
	Through	16	15	94.4%	43.0	24.3	D
	Right Turn	58	60	103.4%	12.0	6.6	B
	Subtotal	142	140	98.3%	29.3	6.0	C
EB	Left Turn	131	127	96.9%	9.6	0.9	A
	Through	241	245	101.8%	4.3	1.0	A
	Right Turn	20	19	97.0%	3.1	2.0	A
	Subtotal	392	392	99.9%	5.9	1.1	A
WB	Left Turn	8	7	88.8%	6.1	4.0	A
	Through	372	375	100.8%	6.0	2.0	A
	Right Turn	77	78	101.6%	4.3	1.5	A
	Subtotal	457	460	100.7%	5.8	1.8	A
Total		1,011	1,015	100.3%	9.7	1.5	A

**Intersection 6**

**177th Avenue/34th Street**

**Side-street Stop**

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	16	15	90.6%	9.0	4.7	A
	Through						
	Right Turn	11	11	99.1%	3.6	1.0	A
	Subtotal	27	25	94.1%	6.3	3.0	A
SB	Left Turn	3	3	96.7%	4.8	8.0	A
	Through						
	Right Turn	44	44	100.9%	5.5	2.4	A
	Subtotal	47	47	100.6%	5.8	2.4	A
EB	Left Turn	12	12	97.5%	3.3	3.0	A
	Through	270	268	99.3%	1.1	0.2	A
	Right Turn	28	28	100.4%	0.7	0.2	A
	Subtotal	310	308	99.3%	1.1	0.2	A
WB	Left Turn	10	11	113.0%	4.2	2.0	A
	Through	397	408	102.7%	2.5	0.3	A
	Right Turn						
	Subtotal	407	419	103.0%	2.6	0.3	A
Total		791	800	101.1%	2.4	0.3	A

**SimTraffic Post-Processor**  
**Average Results from 10 Runs**  
**Volume and Delay by Movement**

**SE 34th Street**  
**Existing Alternative 1**  
**PM Peak Hour**

**Intersection 7**

**Hiddenbrook Drive/34th Street**

**Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	84	83	98.3%	34.6	4.5	C
	Through	1	1	100.0%	12.6	21.6	B
	Right Turn	39	42	107.4%	5.4	1.0	A
	Subtotal	124	126	101.2%	25.1	3.9	C
SB	Left Turn	11	11	95.5%	33.9	18.5	C
	Through						
	Right Turn	34	37	109.1%	5.0	1.0	A
	Subtotal	45	48	105.8%	11.4	3.8	B
EB	Left Turn	4	3	75.0%	22.0	26.9	C
	Through	221	225	101.8%	6.9	1.7	A
	Right Turn	59	59	99.3%	4.1	2.7	A
	Subtotal	284	287	100.9%	6.8	1.9	A
WB	Left Turn	30	30	99.3%	45.5	12.0	D
	Through	289	301	104.0%	4.0	0.8	A
	Right Turn	7	7	97.1%	1.3	2.0	A
	Subtotal	326	337	103.5%	7.8	1.6	A
Total		779	797	102.3%	10.4	1.2	B

**Intersection 8**

**192nd Avenue/34th Street**

**Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	83	83	99.6%	49.3	5.0	D
	Through	643	632	98.2%	25.0	2.8	C
	Right Turn	107	111	103.7%	5.4	1.1	A
	Subtotal	833	825	99.1%	24.5	2.7	C
SB	Left Turn	158	153	96.8%	42.7	5.4	D
	Through	597	597	100.0%	19.8	3.3	B
	Right Turn	77	80	103.5%	12.9	4.5	B
	Subtotal	832	829	99.7%	23.3	2.8	C
EB	Left Turn	89	86	96.6%	29.4	5.4	C
	Through	147	155	105.4%	45.0	4.8	D
	Right Turn	53	53	100.0%	31.9	6.7	C
	Subtotal	289	294	101.7%	38.3	4.8	D
WB	Left Turn	228	229	100.6%	41.1	6.1	D
	Through	128	129	100.4%	34.4	3.5	C
	Right Turn	90	96	106.8%	26.7	4.4	C
	Subtotal	446	454	101.8%	36.0	3.8	D
Total		2,400	2,402	100.1%	27.9	1.9	C

**SimTraffic Post-Processor**  
**Average Results from 10 Runs**  
**Volume and Delay by Movement**

**SE 34th Street**  
**Existing Alternative 1**  
**PM Peak Hour**

**Intersection 9**

**196th Avenue/34th Street**

**Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	54	52	96.7%	12.0	1.6	B
	Through						
	Right Turn	19	21	112.1%	3.6	1.9	A
	Subtotal	73	74	100.7%	9.6	1.9	A
SB	Left Turn	5	5	100.0%	4.3	5.0	A
	Through	2	1	70.0%	5.2	7.4	A
	Right Turn	15	13	88.7%	4.1	2.9	A
	Subtotal	22	20	89.5%	5.5	3.0	A
EB	Left Turn	21	21	97.6%	13.2	3.5	B
	Through	306	306	100.0%	5.3	1.9	A
	Right Turn	34	37	109.4%	4.3	1.9	A
	Subtotal	361	364	100.7%	5.5	1.9	A
WB	Left Turn	16	15	93.1%	13.6	5.3	B
	Through	440	451	102.5%	5.5	1.4	A
	Right Turn	8	7	91.3%	2.5	3.2	A
	Subtotal	464	473	102.0%	5.7	1.4	A
Total		920	930	101.1%	5.9	1.4	A



SimTraffic Post-Processor  
Average Results from 10 Runs  
Volume and Delay by Movement

SE 34th Street  
2027 No Build  
AM Peak Hour

Intersection 1                      164th Avenue/34th Street                      Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	100	101	101.0%	42.4	7.6	D
	Through	790	791	100.1%	18.3	2.4	B
	Right Turn	200	203	101.6%	5.4	0.7	A
	Subtotal	1,090	1,095	100.4%	18.3	1.4	B
SB	Left Turn	150	146	97.5%	48.1	6.5	D
	Through	690	701	101.6%	17.6	2.3	B
	Right Turn	30	33	110.0%	5.8	4.7	A
	Subtotal	870	880	101.2%	22.4	2.3	C
EB	Left Turn	20	19	93.0%	59.1	16.0	E
	Through	50	53	106.6%	51.4	9.7	D
	Right Turn	140	145	103.8%	5.5	1.1	A
	Subtotal	210	217	103.4%	22.6	3.5	C
WB	Left Turn	310	311	100.4%	44.9	5.4	D
	Through	70	73	104.9%	33.5	5.0	C
	Right Turn	110	115	104.6%	5.7	0.9	A
	Subtotal	490	500	102.0%	34.3	3.1	C
Total		2,660	2,692	101.2%	23.1	1.4	C

Intersection 2                      168th Avenue/34th Street                      Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	30	28	92.7%	17.3	5.0	B
	Through	10	11	114.0%	17.3	11.1	B
	Right Turn	10	10	104.0%	3.8	4.4	A
	Subtotal	50	50	99.2%	15.3	4.7	B
SB	Left Turn	10	8	81.0%	11.1	12.1	B
	Through	10	9	91.0%	16.2	12.2	B
	Right Turn	50	51	101.0%	4.0	1.0	A
	Subtotal	70	68	96.7%	7.0	3.0	A
EB	Left Turn	30	30	99.7%	9.2	4.2	A
	Through	350	357	102.1%	4.6	1.4	A
	Right Turn	20	19	94.5%	2.7	2.2	A
	Subtotal	400	406	101.5%	4.9	1.4	A
WB	Left Turn	10	9	88.0%	6.4	5.8	A
	Through	410	421	102.8%	3.6	1.0	A
	Right Turn	20	19	94.5%	1.7	2.1	A
	Subtotal	440	449	102.0%	3.6	1.0	A
Total		960	972	101.3%	5.0	1.1	A

SimTraffic Post-Processor  
Average Results from 10 Runs  
Volume and Delay by Movement

SE 34th Street  
2027 No Build  
AM Peak Hour

Intersection 3 Pedestrian Crossing/34th Street Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
SB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
EB	Left Turn						
	Through	370	377	101.9%	1.8	0.4	A
	Right Turn						
	Subtotal	370	377	101.9%	1.8	0.4	A
WB	Left Turn						
	Through	440	447	101.5%	1.0	0.3	A
	Right Turn						
	Subtotal	440	447	101.5%	1.0	0.3	A
Total		810	824	101.7%	1.3	0.3	A

Intersection 4 172nd Avenue/34th Street Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	70	69	98.1%	8.8	1.3	A
	Through	10	10	104.0%	8.1	5.0	A
	Right Turn	30	32	108.0%	5.8	1.5	A
	Subtotal	110	112	101.4%	8.1	0.8	A
SB	Left Turn						
	Through						
	Right Turn	20	21	107.0%	3.1	0.8	A
	Subtotal	20	21	107.0%	3.1	0.8	A
EB	Left Turn	10	9	92.0%	2.2	2.1	A
	Through	340	346	101.6%	0.6	0.1	A
	Right Turn	20	20	100.5%	0.1	0.1	A
	Subtotal	370	375	101.3%	0.6	0.1	A
WB	Left Turn	20	18	92.0%	2.9	1.0	A
	Through	350	360	102.9%	1.1	0.2	A
	Right Turn	10	11	110.0%	1.4	1.2	A
	Subtotal	380	390	102.5%	1.2	0.2	A
Total		880	897	102.0%	2.0	0.2	A

SimTraffic Post-Processor  
Average Results from 10 Runs  
Volume and Delay by Movement

SE 34th Street  
2027 No Build  
AM Peak Hour

Intersection 5                      176th Avenue/34th Street                      Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	20	18	90.0%	40.9	20.6	D
	Through	20	22	109.5%	38.6	6.0	D
	Right Turn						
	Subtotal	40	40	99.8%	41.4	7.1	D
SB	Left Turn	60	60	99.2%	50.5	8.5	D
	Through	10	10	103.0%	43.1	22.0	D
	Right Turn	130	128	98.5%	8.6	4.3	A
	Subtotal	200	198	99.0%	23.1	3.1	C
EB	Left Turn	50	51	101.0%	5.0	1.8	A
	Through	310	321	103.6%	2.6	1.2	A
	Right Turn	10	9	88.0%	3.9	7.8	A
	Subtotal	370	380	102.8%	3.0	1.2	A
WB	Left Turn	10	9	92.0%	5.7	6.6	A
	Through	230	244	106.0%	3.8	1.0	A
	Right Turn	50	48	95.6%	1.4	0.8	A
	Subtotal	290	301	103.8%	3.5	1.0	A
Total		900	919	102.1%	9.5	1.1	A

Intersection 6                      177th Avenue/34th Street                      Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	30	33	110.3%	8.6	2.1	A
	Through						
	Right Turn	20	20	97.5%	3.7	1.4	A
	Subtotal	50	53	105.2%	6.9	1.4	A
SB	Left Turn	10	8	76.0%	7.5	3.3	A
	Through						
	Right Turn	20	22	108.5%	3.2	1.1	A
	Subtotal	30	29	97.7%	4.7	1.5	A
EB	Left Turn	80	77	96.0%	2.5	0.5	A
	Through	280	297	106.0%	0.9	0.2	A
	Right Turn	10	12	116.0%	0.3	0.3	A
	Subtotal	370	385	104.1%	1.2	0.3	A
WB	Left Turn	10	9	85.0%	1.5	1.4	A
	Through	240	241	100.3%	1.3	0.2	A
	Right Turn	10	10	102.0%	0.3	0.2	A
	Subtotal	260	259	99.7%	1.2	0.2	A
Total		710	727	102.3%	1.8	0.2	A

SimTraffic Post-Processor  
Average Results from 10 Runs  
Volume and Delay by Movement

SE 34th Street  
2027 No Build  
AM Peak Hour

Intersection 7 Hiddenbrook Drive/34th Street Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	70	72	102.3%	39.8	5.1	D
	Through	10	11	106.0%	39.2	24.1	D
	Right Turn	40	39	96.5%	5.1	1.0	A
	Subtotal	120	121	100.7%	29.4	5.2	C
SB	Left Turn	10	10	99.0%	34.2	15.2	C
	Through						
	Right Turn	10	11	114.0%	3.2	1.2	A
	Subtotal	20	21	106.5%	21.0	9.1	C
EB	Left Turn	40	39	98.5%	41.3	8.2	D
	Through	220	231	104.8%	3.7	1.1	A
	Right Turn	50	46	92.4%	1.8	1.1	A
	Subtotal	310	316	102.0%	8.3	2.4	A
WB	Left Turn	30	29	98.0%	37.9	12.2	D
	Through	180	177	98.2%	3.1	1.9	A
	Right Turn	20	21	103.0%	1.7	1.9	A
	Subtotal	230	227	98.6%	7.2	3.5	A
Total		680	685	100.7%	12.3	2.5	B

Intersection 8 192nd Avenue/34th Street Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	70	69	98.9%	44.5	6.8	D
	Through	510	512	100.5%	13.0	1.9	B
	Right Turn	250	251	100.4%	6.8	0.7	A
	Subtotal	830	833	100.3%	13.7	1.5	B
SB	Left Turn	110	112	101.5%	50.6	9.7	D
	Through	430	418	97.3%	12.6	1.8	B
	Right Turn	70	67	95.9%	5.8	2.6	A
	Subtotal	610	597	97.9%	18.8	3.4	B
EB	Left Turn	60	59	97.8%	32.2	5.7	C
	Through	120	125	104.1%	41.3	4.2	D
	Right Turn	50	52	104.4%	18.8	6.3	B
	Subtotal	230	236	102.5%	34.3	3.5	C
WB	Left Turn	150	147	98.0%	37.1	4.1	D
	Through	100	100	100.1%	34.4	5.1	C
	Right Turn	70	69	99.0%	9.9	3.1	A
	Subtotal	320	316	98.9%	29.9	4.4	C
Total		1,990	1,982	99.6%	20.3	1.8	C

SimTraffic Post-Processor  
Average Results from 10 Runs  
Volume and Delay by Movement

SE 34th Street  
2027 No Build  
AM Peak Hour

Intersection 9

196th Avenue/34th Street

Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	50	51	101.6%	11.9	3.3	B
	Through						
	Right Turn	30	29	98.0%	3.4	1.1	A
	Subtotal	80	80	100.3%	9.0	2.5	A
SB	Left Turn	30	31	102.7%	11.2	2.6	B
	Through	10	9	91.0%	12.9	8.8	B
	Right Turn	30	27	89.3%	3.6	1.7	A
	Subtotal	70	67	95.3%	8.8	1.8	A
EB	Left Turn	10	9	93.0%	13.1	5.2	B
	Through	370	376	101.7%	5.3	1.2	A
	Right Turn	30	32	105.7%	4.1	2.1	A
	Subtotal	410	417	101.8%	5.5	1.1	A
WB	Left Turn	30	29	96.7%	15.1	5.6	B
	Through	350	342	97.8%	4.8	1.4	A
	Right Turn	20	18	89.5%	1.9	1.0	A
	Subtotal	400	389	97.3%	5.3	1.2	A
Total		960	954	99.3%	5.9	0.8	A

SimTraffic Post-Processor  
Average Results from 10 Runs  
Volume and Delay by Movement

SE 34th Street  
2027 No Build  
PM Peak Hour

Intersection 1                      164th Avenue/34th Street                      Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	170	173	101.5%	61.5	18.7	E
	Through	1,110	1,113	100.3%	23.9	2.9	C
	Right Turn	330	340	102.9%	7.9	0.7	A
	Subtotal	1,610	1,626	101.0%	24.9	4.0	C
SB	Left Turn	140	143	102.1%	65.1	11.9	E
	Through	1,100	1,118	101.6%	23.5	3.0	C
	Right Turn	70	71	101.1%	11.6	5.4	B
	Subtotal	1,310	1,332	101.6%	27.2	3.6	C
EB	Left Turn	60	56	93.5%	75.3	12.2	E
	Through	100	98	97.7%	50.9	7.1	D
	Right Turn	170	161	94.6%	8.2	1.9	A
	Subtotal	330	315	95.4%	34.2	4.6	C
WB	Left Turn	260	257	98.7%	48.6	5.9	D
	Through	150	161	107.3%	40.7	7.0	D
	Right Turn	190	194	102.1%	11.2	2.6	B
	Subtotal	600	612	101.9%	34.6	2.1	C
Total		3,850	3,883	100.9%	27.9	2.5	C

Intersection 2                      168th Avenue/34th Street                      Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	30	29	98.0%	19.1	7.7	B
	Through	10	11	107.0%	16.5	10.2	B
	Right Turn	10	12	121.0%	7.9	11.2	A
	Subtotal	50	52	104.4%	15.5	4.9	B
SB	Left Turn	20	18	90.0%	14.8	8.4	B
	Through	20	20	97.5%	13.7	5.1	B
	Right Turn	40	39	97.8%	5.8	1.9	A
	Subtotal	80	77	95.8%	10.4	4.2	B
EB	Left Turn	70	73	104.6%	12.3	3.1	B
	Through	480	494	103.0%	4.9	1.3	A
	Right Turn	20	21	106.0%	2.9	1.4	A
	Subtotal	570	589	103.3%	5.7	1.3	A
WB	Left Turn	10	9	88.0%	4.7	3.6	A
	Through	530	547	103.1%	4.7	1.8	A
	Right Turn	20	21	106.5%	2.2	1.8	A
	Subtotal	560	577	103.0%	4.6	1.8	A
Total		1,260	1,294	102.7%	5.9	1.3	A

SimTraffic Post-Processor  
Average Results from 10 Runs  
Volume and Delay by Movement

SE 34th Street  
2027 No Build  
PM Peak Hour

Intersection 3 Pedestrian Crossing/34th Street Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
SB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
EB	Left Turn						
	Through	510	523	102.5%	1.6	0.6	A
	Right Turn						
	Subtotal	510	523	102.5%	1.6	0.6	A
WB	Left Turn						
	Through	560	572	102.2%	0.9	0.7	A
	Right Turn						
	Subtotal	560	572	102.2%	0.9	0.7	A
Total		1,070	1,095	102.3%	1.3	0.6	A

Intersection 4 172nd Avenue/34th Street Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	50	49	97.2%	15.4	3.4	C
	Through	10	12	122.0%	21.8	16.8	C
	Right Turn	30	32	105.3%	9.0	3.9	A
	Subtotal	90	92	102.7%	13.9	4.3	B
SB	Left Turn	10	11	114.0%	10.0	5.1	A
	Through	10	11	113.0%	16.4	9.2	C
	Right Turn	10	11	108.0%	5.5	6.2	A
	Subtotal	30	34	111.7%	11.9	6.6	B
EB	Left Turn	20	18	89.0%	3.2	1.3	A
	Through	410	421	102.6%	1.1	0.3	A
	Right Turn	80	79	99.1%	0.9	0.6	A
	Subtotal	510	518	101.5%	1.1	0.3	A
WB	Left Turn	40	39	98.0%	5.0	1.2	A
	Through	500	523	104.5%	2.0	0.4	A
	Right Turn	10	9	90.0%	2.2	2.1	A
	Subtotal	550	571	103.8%	2.2	0.3	A
Total		1,180	1,214	102.9%	3.0	0.5	A

SimTraffic Post-Processor  
Average Results from 10 Runs  
Volume and Delay by Movement

SE 34th Street  
2027 No Build  
PM Peak Hour

Intersection 5

176th Avenue/34th Street

Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	20	20	99.5%	39.4	13.6	D
	Through	10	9	90.0%	37.3	22.8	D
	Right Turn	10	11	105.0%	3.8	2.4	A
	Subtotal	40	39	98.5%	31.6	11.0	C
SB	Left Turn	80	79	98.8%	46.6	6.1	D
	Through	20	19	95.0%	35.9	11.6	D
	Right Turn	70	76	108.6%	9.1	2.2	A
	Subtotal	170	174	102.4%	29.2	6.2	C
EB	Left Turn	150	152	101.0%	9.0	4.3	A
	Through	270	289	107.1%	3.7	1.3	A
	Right Turn	30	31	103.3%	1.5	0.8	A
	Subtotal	450	472	104.8%	5.2	2.1	A
WB	Left Turn	10	10	95.0%	8.8	9.0	A
	Through	460	470	102.2%	7.2	1.4	A
	Right Turn	90	89	98.8%	6.2	4.3	A
	Subtotal	560	569	101.6%	7.0	1.6	A
Total		1,220	1,254	102.8%	10.3	1.6	B

Intersection 6

177th Avenue/34th Street

Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	20	20	99.0%	9.3	2.9	A
	Through						
	Right Turn	20	23	115.5%	3.6	1.0	A
	Subtotal	40	43	107.3%	6.4	1.7	A
SB	Left Turn	10	9	87.0%	7.6	4.3	A
	Through						
	Right Turn	50	50	99.4%	4.7	1.6	A
	Subtotal	60	58	97.3%	5.3	1.6	A
EB	Left Turn	20	21	104.5%	4.3	1.3	A
	Through	300	312	103.9%	1.0	0.3	A
	Right Turn	40	41	103.0%	0.6	0.2	A
	Subtotal	360	374	103.8%	1.2	0.3	A
WB	Left Turn	20	20	102.0%	3.1	1.2	A
	Through	490	500	102.0%	2.0	0.3	A
	Right Turn						
	Subtotal	510	520	102.0%	2.0	0.3	A
Total		970	995	102.6%	2.1	0.2	A



SimTraffic Post-Processor  
Average Results from 10 Runs  
Volume and Delay by Movement

SE 34th Street  
2027 No Build  
PM Peak Hour

Intersection 7

Hiddenbrook Drive/34th Street

Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	100	101	101.4%	35.6	4.5	D
	Through	10	9	87.0%	45.4	21.6	D
	Right Turn	50	56	111.4%	5.8	1.5	A
	Subtotal	160	166	103.6%	26.6	4.0	C
SB	Left Turn	20	19	94.0%	37.9	10.6	D
	Through						
	Right Turn	40	40	100.0%	4.6	1.0	A
	Subtotal	60	59	98.0%	16.3	3.4	B
EB	Left Turn	10	10	100.0%	43.7	16.0	D
	Through	250	257	102.7%	6.0	1.1	A
	Right Turn	70	76	107.9%	4.0	1.5	A
	Subtotal	330	342	103.7%	6.9	1.0	A
WB	Left Turn	40	41	102.8%	46.8	8.7	D
	Through	370	382	103.3%	4.1	1.1	A
	Right Turn	10	8	78.0%	2.8	4.0	A
	Subtotal	420	431	102.7%	8.6	1.7	A
Total		970	998	102.9%	11.5	1.2	B

Intersection 8

192nd Avenue/34th Street

Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	100	102	101.9%	46.2	6.6	D
	Through	710	714	100.6%	19.4	2.6	B
	Right Turn	120	118	98.4%	6.3	0.9	A
	Subtotal	930	934	100.4%	20.8	2.6	C
SB	Left Turn	180	181	100.4%	57.4	6.8	E
	Through	660	665	100.7%	18.0	3.3	B
	Right Turn	90	93	103.0%	10.9	4.3	B
	Subtotal	930	938	100.9%	25.6	3.6	C
EB	Left Turn	100	104	104.1%	30.7	4.0	C
	Through	170	171	100.8%	36.8	3.7	D
	Right Turn	60	67	112.3%	26.7	6.9	C
	Subtotal	330	343	103.9%	33.0	2.5	C
WB	Left Turn	260	251	96.4%	37.3	2.0	D
	Through	200	205	102.3%	29.7	4.2	C
	Right Turn	100	103	103.0%	18.1	3.7	B
	Subtotal	560	558	99.7%	30.8	2.2	C
Total		2,750	2,774	100.9%	26.0	1.9	C

SimTraffic Post-Processor  
Average Results from 10 Runs  
Volume and Delay by Movement

SE 34th Street  
2027 No Build  
PM Peak Hour

Intersection 9

196th Avenue/34th Street

Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	60	60	100.5%	12.8	3.6	B
	Through						
	Right Turn	30	31	104.3%	3.8	1.1	A
	Subtotal	90	92	101.8%	9.6	2.8	A
SB	Left Turn	10	9	87.0%	8.0	4.8	A
	Through	10	12	115.0%	7.2	3.3	A
	Right Turn	20	20	101.0%	3.5	1.2	A
	Subtotal	40	40	101.0%	5.8	2.1	A
EB	Left Turn	30	30	99.7%	12.9	3.3	B
	Through	340	340	99.9%	5.0	1.3	A
	Right Turn	40	40	99.8%	3.4	1.2	A
	Subtotal	410	409	99.8%	5.5	1.0	A
WB	Left Turn	20	17	87.0%	16.7	5.1	B
	Through	490	488	99.6%	5.8	1.6	A
	Right Turn	10	9	89.0%	3.0	2.3	A
	Subtotal	520	514	98.9%	6.1	1.6	A
Total		1,060	1,056	99.6%	6.2	1.1	A

SimTraffic Post-Processor  
Average Results from 10 Runs  
Volume and Delay by Movement

SE 34th Street  
2027\_Alt\_1  
AM Peak Hour

Intersection 1                      164th Avenue/34th Street                      Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	100	98	97.9%	41.1	8.4	D
	Through	790	796	100.7%	25.9	4.4	C
	Right Turn	200	207	103.5%	3.5	0.7	A
	Subtotal	1,090	1,101	101.0%	23.0	3.6	C
SB	Left Turn	150	140	93.0%	55.8	4.8	E
	Through	690	695	100.7%	24.4	3.2	C
	Right Turn	30	29	95.7%	9.0	2.6	A
	Subtotal	870	863	99.2%	29.0	2.6	C
EB	Left Turn	20	20	97.5%	54.2	15.3	D
	Through	50	50	100.0%	51.2	9.0	D
	Right Turn	140	147	105.1%	5.8	1.7	A
	Subtotal	210	217	103.1%	20.0	2.8	B
WB	Left Turn	310	313	101.0%	44.5	4.3	D
	Through	70	71	100.7%	27.9	5.6	C
	Right Turn	110	112	101.5%	5.4	1.3	A
	Subtotal	490	495	101.0%	33.0	3.2	C
Total		2,660	2,675	100.6%	26.7	1.7	C

Intersection 2                      168th Avenue/34th Street                      Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	30	29	97.0%	17.8	4.7	B
	Through	10	11	109.0%	16.8	8.1	B
	Right Turn	10	10	100.0%	7.4	5.4	A
	Subtotal	50	50	100.0%	15.6	4.6	B
SB	Left Turn	10	9	85.0%	14.6	13.1	B
	Through	10	10	99.0%	12.4	10.7	B
	Right Turn	50	49	97.6%	5.6	0.9	A
	Subtotal	70	67	96.0%	7.8	2.3	A
EB	Left Turn	30	31	104.3%	9.8	3.8	A
	Through	350	347	99.1%	4.8	0.4	A
	Right Turn	20	21	103.0%	3.4	1.5	A
	Subtotal	400	399	99.7%	5.2	0.7	A
WB	Left Turn	10	8	80.0%	8.8	4.9	A
	Through	410	419	102.1%	5.2	1.6	A
	Right Turn	20	20	99.5%	4.8	3.1	A
	Subtotal	440	446	101.5%	5.2	1.6	A
Total		960	962	100.2%	6.0	1.0	A

SimTraffic Post-Processor  
Average Results from 10 Runs  
Volume and Delay by Movement

SE 34th Street  
2027\_Alt\_1  
AM Peak Hour

Intersection 3

Pedestrian Crossing/34th Street

Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
SB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
EB	Left Turn						
	Through	370	368	99.3%	2.3	0.9	A
	Right Turn						
	Subtotal	370	368	99.3%	2.3	0.9	A
WB	Left Turn						
	Through	440	444	100.9%	1.4	1.0	A
	Right Turn						
	Subtotal	440	444	100.9%	1.4	1.0	A
Total		810	812	100.2%	1.8	0.9	A

Intersection 4

172nd Avenue/34th Street

Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	70	70	99.6%	11.0	3.3	B
	Through	10	11	109.0%	9.9	4.0	A
	Right Turn	30	29	96.7%	6.3	2.0	A
	Subtotal	110	110	99.6%	9.8	2.7	A
SB	Left Turn						
	Through						
	Right Turn	20	20	100.0%	4.9	2.4	A
	Subtotal	20	20	100.0%	4.9	2.4	A
EB	Left Turn	10	10	102.0%	3.1	1.1	A
	Through	340	334	98.3%	1.0	0.2	A
	Right Turn	20	21	103.0%	0.5	0.5	A
	Subtotal	370	365	98.7%	1.0	0.2	A
WB	Left Turn	20	23	117.0%	4.2	1.1	A
	Through	350	356	101.8%	1.5	0.3	A
	Right Turn	10	11	113.0%	0.4	0.4	A
	Subtotal	380	391	102.9%	1.6	0.2	A
Total		880	886	100.6%	2.4	0.4	A

**SimTraffic Post-Processor**  
**Average Results from 10 Runs**  
**Volume and Delay by Movement**

**SE 34th Street**  
**2027\_Alt\_1**  
**AM Peak Hour**

**Intersection 5**

**176th Avenue/34th Street**

**Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	20	18	89.0%	44.9	15.5	D
	Through	20	21	104.0%	40.1	13.0	D
	Right Turn						
	Subtotal	40	39	96.5%	44.1	9.5	D
SB	Left Turn	60	56	94.0%	43.3	5.6	D
	Through	10	11	106.0%	44.2	16.3	D
	Right Turn	130	129	99.2%	8.4	3.2	A
	Subtotal	200	196	98.0%	20.6	3.4	C
EB	Left Turn	50	46	92.8%	7.2	2.2	A
	Through	310	309	99.6%	3.7	1.3	A
	Right Turn	10	9	94.0%	1.4	2.0	A
	Subtotal	370	365	98.6%	4.1	1.3	A
WB	Left Turn	10	10	102.0%	6.7	3.7	A
	Through	230	249	108.1%	4.7	1.7	A
	Right Turn	50	53	106.4%	2.7	2.3	A
	Subtotal	290	312	107.6%	4.5	1.6	A
Total		900	911	101.3%	9.7	1.3	A

**Intersection 6**

**177th Avenue/34th Street**

**Side-street Stop**

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	30	32	108.0%	8.5	2.6	A
	Through						
	Right Turn	20	22	111.5%	4.5	1.0	A
	Subtotal	50	55	109.4%	6.7	1.2	A
SB	Left Turn	10	9	85.0%	8.5	4.4	A
	Through						
	Right Turn	20	23	115.5%	3.6	1.3	A
	Subtotal	30	32	105.3%	5.8	1.8	A
EB	Left Turn	80	75	94.0%	3.4	0.6	A
	Through	280	282	100.7%	1.1	0.2	A
	Right Turn	10	11	111.0%	0.5	0.5	A
	Subtotal	370	368	99.5%	1.5	0.2	A
WB	Left Turn	10	10	103.0%	4.6	2.0	A
	Through	240	252	104.9%	2.2	0.6	A
	Right Turn	10	11	109.0%	2.0	1.7	A
	Subtotal	260	273	105.0%	2.3	0.5	A
Total		710	727	102.5%	2.4	0.3	A

**SimTraffic Post-Processor**  
**Average Results from 10 Runs**  
**Volume and Delay by Movement**

**SE 34th Street**  
**2027\_Alt\_1**  
**AM Peak Hour**

**Intersection 7**

**Hiddenbrook Drive/34th Street**

**Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	70	72	102.3%	38.1	4.3	D
	Through	10	10	98.0%	31.1	17.7	C
	Right Turn	40	41	103.5%	4.8	1.2	A
	Subtotal	120	123	102.3%	27.3	4.5	C
SB	Left Turn	10	10	103.0%	37.9	30.3	D
	Through						
	Right Turn	10	13	125.0%	3.8	1.4	A
	Subtotal	20	23	114.0%	17.9	11.8	B
EB	Left Turn	40	36	90.5%	48.0	7.8	D
	Through	220	221	100.5%	4.4	1.4	A
	Right Turn	50	48	95.4%	3.1	1.8	A
	Subtotal	310	305	98.4%	9.7	1.5	A
WB	Left Turn	30	29	95.3%	46.9	11.6	D
	Through	180	190	105.4%	4.1	1.9	A
	Right Turn	20	20	99.5%	1.5	1.7	A
	Subtotal	230	238	103.6%	9.6	3.2	A
Total		680	689	101.3%	12.9	1.9	B

**Intersection 8**

**192nd Avenue/34th Street**

**Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	70	71	101.1%	42.9	5.7	D
	Through	510	513	100.5%	16.4	2.8	B
	Right Turn	250	249	99.7%	4.7	0.9	A
	Subtotal	830	833	100.3%	15.3	1.8	B
SB	Left Turn	110	111	100.5%	41.9	7.1	D
	Through	430	427	99.3%	13.6	2.3	B
	Right Turn	70	72	102.4%	5.9	3.0	A
	Subtotal	610	609	99.9%	17.7	2.0	B
EB	Left Turn	60	60	100.2%	34.0	7.1	C
	Through	120	129	107.1%	38.2	7.7	D
	Right Turn	50	50	100.4%	27.4	6.3	C
	Subtotal	230	239	103.8%	35.2	5.4	D
WB	Left Turn	150	152	101.0%	38.5	9.8	D
	Through	100	106	105.7%	39.0	9.9	D
	Right Turn	70	63	89.9%	20.1	4.3	C
	Subtotal	320	320	100.0%	35.2	6.8	D
Total		1,990	2,001	100.5%	21.5	1.8	C

**SimTraffic Post-Processor**  
**Average Results from 10 Runs**  
**Volume and Delay by Movement**

**SE 34th Street**  
**2027\_Alt\_1**  
**AM Peak Hour**

**Intersection 9**

**196th Avenue/34th Street**

**Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	50	50	100.6%	11.8	2.3	B
	Through						
	Right Turn	30	33	109.0%	4.4	2.5	A
	Subtotal	80	83	103.8%	9.1	2.1	A
SB	Left Turn	30	30	98.3%	11.5	3.5	B
	Through	10	11	111.0%	10.2	5.4	B
	Right Turn	30	32	105.3%	4.4	1.8	A
	Subtotal	70	72	103.1%	8.2	2.1	A
EB	Left Turn	10	11	106.0%	18.5	6.7	B
	Through	370	376	101.7%	8.1	2.3	A
	Right Turn	30	31	101.7%	6.1	2.4	A
	Subtotal	410	417	101.8%	8.3	2.2	A
WB	Left Turn	30	28	94.0%	16.0	2.9	B
	Through	350	341	97.5%	6.6	2.0	A
	Right Turn	20	21	104.5%	3.6	2.7	A
	Subtotal	400	390	97.6%	7.1	1.8	A
Total		960	963	100.3%	7.9	1.4	A

SimTraffic Post-Processor  
Average Results from 10 Runs  
Volume and Delay by Movement

SE 34th Street  
2027\_Alt\_1  
PM Peak Hour

Intersection 1 164th Avenue/34th Street

Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	170	169	99.6%	68.9	13.6	E
	Through	1,110	1,095	98.7%	62.9	12.6	E
	Right Turn	330	332	100.5%	6.5	1.2	A
	Subtotal	1,610	1,596	99.1%	51.5	9.2	D
SB	Left Turn	140	140	100.3%	43.1	9.1	D
	Through	1,100	1,100	100.0%	26.2	2.7	C
	Right Turn	70	67	96.0%	14.4	6.1	B
	Subtotal	1,310	1,307	99.8%	27.6	3.3	C
EB	Left Turn	60	57	95.3%	54.7	8.5	D
	Through	100	103	103.2%	54.8	6.9	D
	Right Turn	170	176	103.5%	7.0	1.5	A
	Subtotal	330	336	101.9%	29.6	3.5	C
WB	Left Turn	260	266	102.1%	44.6	4.6	D
	Through	150	155	103.5%	34.7	6.7	C
	Right Turn	190	198	104.4%	7.8	1.7	A
	Subtotal	600	619	103.2%	30.8	2.9	C
Total		3,850	3,859	100.2%	38.0	4.0	D

Intersection 2 168th Avenue/34th Street

Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	30	27	89.3%	18.8	7.6	B
	Through	10	9	93.0%	8.3	6.3	A
	Right Turn	10	11	114.0%	5.8	4.4	A
	Subtotal	50	48	95.0%	12.0	3.9	B
SB	Left Turn	20	21	102.5%	15.8	6.6	B
	Through	20	22	109.5%	19.2	5.6	B
	Right Turn	40	41	101.8%	7.7	3.1	A
	Subtotal	80	83	103.9%	12.8	3.0	B
EB	Left Turn	70	71	100.9%	15.7	4.1	B
	Through	480	492	102.5%	6.2	1.4	A
	Right Turn	20	21	105.5%	4.3	2.8	A
	Subtotal	570	584	102.4%	7.2	1.4	A
WB	Left Turn	10	10	99.0%	13.7	8.6	B
	Through	530	558	105.3%	6.7	1.7	A
	Right Turn	20	22	108.0%	5.0	5.1	A
	Subtotal	560	590	105.3%	6.7	1.6	A
Total		1,260	1,304	103.5%	7.6	1.2	A



SimTraffic Post-Processor  
Average Results from 10 Runs  
Volume and Delay by Movement

SE 34th Street  
2027\_Alt\_1  
PM Peak Hour

Intersection 3

Pedestrian Crossing/34th Street

Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
SB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
EB	Left Turn						
	Through	510	523	102.6%	1.8	0.5	A
	Right Turn						
	Subtotal	510	523	102.6%	1.8	0.5	A
WB	Left Turn						
	Through	560	585	104.5%	1.3	0.9	A
	Right Turn						
	Subtotal	560	585	104.5%	1.3	0.9	A
Total		1,070	1,109	103.6%	1.6	0.7	A

Intersection 4

172nd Avenue/34th Street

Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	50	49	98.4%	16.4	5.2	C
	Through	10	9	88.0%	10.1	6.7	B
	Right Turn	30	32	108.0%	8.5	3.9	A
	Subtotal	90	90	100.4%	13.0	3.4	B
SB	Left Turn	10	9	86.0%	16.6	7.5	C
	Through	10	10	98.0%	15.2	10.4	C
	Right Turn	10	10	97.0%	7.1	4.7	A
	Subtotal	30	28	93.7%	14.8	6.6	B
EB	Left Turn	20	17	87.0%	4.3	1.2	A
	Through	410	420	102.4%	1.8	0.4	A
	Right Turn	80	82	101.9%	1.1	0.3	A
	Subtotal	510	519	101.7%	1.7	0.4	A
WB	Left Turn	40	40	100.5%	5.2	0.9	A
	Through	500	535	107.1%	2.2	0.3	A
	Right Turn	10	11	108.0%	1.7	1.1	A
	Subtotal	550	586	106.6%	2.4	0.3	A
Total		1,180	1,224	103.7%	3.2	0.3	A

SimTraffic Post-Processor  
Average Results from 10 Runs  
Volume and Delay by Movement

SE 34th Street  
2027\_Alt\_1  
PM Peak Hour

Intersection 5                      176th Avenue/34th Street                      Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	20	19	96.0%	44.3	13.8	D
	Through	10	10	104.0%	36.8	22.8	D
	Right Turn	10	10	102.0%	3.6	2.0	A
	Subtotal	40	40	99.5%	35.4	10.3	D
SB	Left Turn	80	79	99.1%	41.7	6.3	D
	Through	20	21	106.0%	44.8	12.6	D
	Right Turn	70	77	109.4%	14.1	5.1	B
	Subtotal	170	177	104.2%	29.7	4.3	C
EB	Left Turn	150	155	103.3%	15.2	5.5	B
	Through	270	281	104.2%	4.4	0.6	A
	Right Turn	30	30	101.3%	3.0	1.7	A
	Subtotal	450	467	103.7%	7.9	2.0	A
WB	Left Turn	10	11	105.0%	8.2	3.0	A
	Through	460	484	105.2%	8.6	1.3	A
	Right Turn	90	90	99.8%	6.0	1.6	A
	Subtotal	560	584	104.3%	8.2	1.3	A
Total		1,220	1,268	103.9%	12.0	1.1	B

Intersection 6                      177th Avenue/34th Street                      Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	20	21	104.0%	13.3	4.8	B
	Through						
	Right Turn	20	21	107.0%	4.6	1.7	A
	Subtotal	40	42	105.5%	8.4	2.3	A
SB	Left Turn	10	12	115.0%	15.8	9.4	C
	Through						
	Right Turn	50	51	101.8%	8.0	2.9	A
	Subtotal	60	62	104.0%	9.4	3.0	A
EB	Left Turn	20	18	89.5%	6.4	4.0	A
	Through	300	307	102.4%	1.2	0.2	A
	Right Turn	40	40	100.0%	0.6	0.2	A
	Subtotal	360	365	101.4%	1.4	0.1	A
WB	Left Turn	20	18	87.5%	6.1	1.5	A
	Through	490	514	105.0%	3.4	0.6	A
	Right Turn						
	Subtotal	510	532	104.3%	3.5	0.6	A
Total		970	1,002	103.2%	3.3	0.6	A

**SimTraffic Post-Processor**  
**Average Results from 10 Runs**  
**Volume and Delay by Movement**

**SE 34th Street**  
**2027\_Alt\_1**  
**PM Peak Hour**

**Intersection 7**

**Hiddenbrook Drive/34th Street**

**Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	100	106	105.5%	39.3	4.6	D
	Through	10	10	96.0%	38.3	23.5	D
	Right Turn	50	52	104.6%	7.0	1.2	A
	Subtotal	160	167	104.6%	30.0	4.7	C
SB	Left Turn	20	20	101.5%	32.9	11.7	C
	Through						
	Right Turn	40	41	102.0%	6.1	1.5	A
	Subtotal	60	61	101.8%	15.7	5.2	B
EB	Left Turn	10	8	77.0%	45.1	24.7	D
	Through	250	260	104.2%	7.9	1.1	A
	Right Turn	70	71	101.1%	6.4	1.8	A
	Subtotal	330	339	102.7%	8.7	0.9	A
WB	Left Turn	40	37	92.3%	44.4	11.0	D
	Through	370	386	104.3%	5.2	0.9	A
	Right Turn	10	10	103.0%	2.1	2.4	A
	Subtotal	420	433	103.1%	8.4	1.6	A
Total		970	1,001	103.2%	12.8	1.2	B

**Intersection 8**

**192nd Avenue/34th Street**

**Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	100	99	99.2%	53.4	8.9	D
	Through	710	707	99.6%	29.2	4.1	C
	Right Turn	120	120	100.1%	6.4	1.3	A
	Subtotal	930	926	99.6%	28.8	3.4	C
SB	Left Turn	180	180	100.0%	52.9	13.7	D
	Through	660	661	100.1%	23.2	3.0	C
	Right Turn	90	100	110.9%	16.9	4.5	B
	Subtotal	930	941	101.1%	28.3	3.8	C
EB	Left Turn	100	101	100.5%	34.0	6.6	C
	Through	170	179	105.1%	45.5	10.0	D
	Right Turn	60	64	106.2%	33.4	9.3	C
	Subtotal	330	343	103.9%	40.0	6.5	D
WB	Left Turn	260	261	100.5%	46.8	13.9	D
	Through	200	200	99.9%	38.0	5.7	D
	Right Turn	100	97	97.4%	29.0	4.5	C
	Subtotal	560	558	99.7%	40.8	8.7	D
Total		2,750	2,768	100.7%	32.4	3.2	C

SimTraffic Post-Processor  
Average Results from 10 Runs  
Volume and Delay by Movement

SE 34th Street  
2027\_Alt\_1  
PM Peak Hour

Intersection 9

196th Avenue/34th Street

Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	60	58	97.0%	13.4	2.5	B
	Through						
	Right Turn	30	30	101.3%	4.2	1.4	A
	Subtotal	90	89	98.4%	10.3	2.2	B
SB	Left Turn	10	9	89.0%	12.0	6.4	B
	Through	10	9	89.0%	5.7	6.1	A
	Right Turn	20	19	96.0%	4.7	2.4	A
	Subtotal	40	37	92.5%	7.1	3.4	A
EB	Left Turn	30	31	102.0%	19.0	6.6	B
	Through	340	348	102.5%	6.8	1.0	A
	Right Turn	40	39	98.0%	4.7	1.8	A
	Subtotal	410	418	102.0%	7.5	1.3	A
WB	Left Turn	20	18	91.5%	16.9	4.8	B
	Through	490	486	99.1%	8.6	2.0	A
	Right Turn	10	11	107.0%	6.3	7.4	A
	Subtotal	520	515	98.9%	8.8	2.0	A
Total		1,060	1,058	99.8%	8.3	1.6	A

SimTraffic Post-Processor  
Average Results from 10 Runs  
Volume and Delay by Movement

SE 34th Street  
2040 No Build  
AM Peak Hour

Intersection 1                      164th Avenue/34th Street                      Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	110	108	98.1%	43.5	7.7	D
	Through	880	902	102.5%	27.2	5.4	C
	Right Turn	420	422	100.5%	10.3	3.1	B
	Subtotal	1,410	1,432	101.6%	23.4	3.1	C
SB	Left Turn	170	173	101.9%	56.0	5.9	E
	Through	770	771	100.1%	23.5	4.2	C
	Right Turn	40	40	99.3%	12.3	3.9	B
	Subtotal	980	984	100.4%	28.9	3.9	C
EB	Left Turn	30	27	89.3%	50.2	17.5	D
	Through	60	62	102.7%	51.1	9.4	D
	Right Turn	160	166	103.8%	7.1	1.3	A
	Subtotal	250	255	101.8%	22.4	3.7	C
WB	Left Turn	440	440	100.0%	42.2	3.8	D
	Through	90	91	101.6%	36.2	4.3	D
	Right Turn	120	118	98.4%	6.5	1.0	A
	Subtotal	650	649	99.9%	34.9	2.3	C
Total		3,290	3,320	100.9%	27.2	2.0	C

Intersection 2                      168th Avenue/34th Street                      Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	40	40	99.0%	13.8	4.2	B
	Through	10	12	122.0%	15.7	10.1	B
	Right Turn	10	11	112.0%	6.8	3.0	A
	Subtotal	60	63	105.0%	12.9	3.0	B
SB	Left Turn	20	21	104.5%	19.0	7.0	B
	Through	10	9	85.0%	16.2	10.2	B
	Right Turn	50	46	92.4%	5.6	2.4	A
	Subtotal	80	76	94.5%	10.2	3.0	B
EB	Left Turn	40	38	93.8%	9.7	3.1	A
	Through	590	597	101.1%	5.2	1.3	A
	Right Turn	20	22	110.5%	3.1	2.0	A
	Subtotal	650	656	100.9%	5.4	1.1	A
WB	Left Turn	10	10	104.0%	8.6	4.0	A
	Through	560	565	100.9%	3.7	0.9	A
	Right Turn	20	20	102.0%	2.5	2.6	A
	Subtotal	590	596	101.0%	3.8	0.9	A
Total		1,380	1,391	100.8%	5.3	0.9	A

SimTraffic Post-Processor  
Average Results from 10 Runs  
Volume and Delay by Movement

SE 34th Street  
2040 No Build  
AM Peak Hour

Intersection 3

Pedestrian Crossing/34th Street

Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
SB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
EB	Left Turn						
	Through	620	630	101.6%	1.9	0.4	A
	Right Turn						
	Subtotal	620	630	101.6%	1.9	0.4	A
WB	Left Turn						
	Through	590	598	101.3%	0.9	0.7	A
	Right Turn						
	Subtotal	590	598	101.3%	0.9	0.7	A
Total		1,210	1,228	101.5%	1.4	0.6	A

Intersection 4

172nd Avenue/34th Street

Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	80	80	99.6%	21.8	9.2	C
	Through	10	12	115.0%	24.0	11.9	C
	Right Turn	30	29	95.3%	13.0	7.5	B
	Subtotal	120	120	99.8%	20.1	8.0	C
SB	Left Turn						
	Through						
	Right Turn	30	31	103.3%	3.7	1.7	A
	Subtotal	30	31	103.3%	3.7	1.7	A
EB	Left Turn	10	10	100.0%	3.0	2.2	A
	Through	580	585	100.9%	0.8	0.1	A
	Right Turn	30	33	111.3%	0.2	0.2	A
	Subtotal	620	629	101.4%	0.8	0.1	A
WB	Left Turn	30	32	105.0%	4.7	1.0	A
	Through	480	489	101.9%	1.5	0.2	A
	Right Turn	10	10	103.0%	1.0	0.5	A
	Subtotal	520	531	102.1%	1.6	0.2	A
Total		1,290	1,310	101.6%	3.0	1.1	A

SimTraffic Post-Processor  
Average Results from 10 Runs  
Volume and Delay by Movement

SE 34th Street  
2040 No Build  
AM Peak Hour

Intersection 5

176th Avenue/34th Street

Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	20	21	103.0%	44.9	20.7	D
	Through	20	21	107.0%	41.6	13.3	D
	Right Turn	10	10	101.0%	17.2	14.7	B
	Subtotal	50	52	104.2%	38.3	10.7	D
SB	Left Turn	70	71	100.7%	45.3	7.1	D
	Through	10	10	95.0%	20.1	12.7	C
	Right Turn	160	166	103.4%	7.2	2.1	A
	Subtotal	240	246	102.3%	19.7	3.4	B
EB	Left Turn	120	124	103.3%	7.3	1.5	A
	Through	470	472	100.5%	3.1	0.9	A
	Right Turn	20	20	101.0%	1.4	1.2	A
	Subtotal	610	617	101.1%	3.9	0.7	A
WB	Left Turn	10	10	95.0%	5.2	5.0	A
	Through	340	344	101.2%	5.3	1.1	A
	Right Turn	60	60	100.2%	2.4	0.9	A
	Subtotal	410	414	100.9%	4.9	1.1	A
Total		1,310	1,328	101.4%	8.5	0.9	A

Intersection 6

177th Avenue/34th Street

Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	30	30	100.0%	11.9	3.3	B
	Through						
	Right Turn	20	20	102.0%	3.9	1.1	A
	Subtotal	50	50	100.8%	8.6	2.2	A
SB	Left Turn	30	26	88.0%	11.8	6.5	B
	Through						
	Right Turn	60	63	105.5%	4.0	0.8	A
	Subtotal	90	90	99.7%	6.5	1.7	A
EB	Left Turn	150	148	98.4%	3.8	0.7	A
	Through	380	389	102.3%	1.1	0.3	A
	Right Turn	20	20	99.5%	0.4	0.4	A
	Subtotal	550	556	101.2%	1.8	0.3	A
WB	Left Turn	10	9	89.0%	3.3	2.7	A
	Through	320	323	100.8%	2.3	0.4	A
	Right Turn	40	38	94.3%	1.6	0.6	A
	Subtotal	370	369	99.8%	2.3	0.4	A
Total		1,060	1,066	100.5%	2.7	0.2	A

SimTraffic Post-Processor  
Average Results from 10 Runs  
Volume and Delay by Movement

SE 34th Street  
2040 No Build  
AM Peak Hour

Intersection 7

Hiddenbrook Drive/34th Street

Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	80	77	95.6%	35.5	8.8	D
	Through	60	61	101.8%	44.3	9.5	D
	Right Turn	40	43	106.3%	5.4	1.0	A
	Subtotal	180	180	100.1%	31.6	6.2	C
SB	Left Turn	60	61	102.0%	43.5	8.6	D
	Through	30	28	94.3%	33.4	13.1	C
	Right Turn	60	62	103.8%	8.9	2.7	A
	Subtotal	150	152	101.2%	26.2	5.3	C
EB	Left Turn	100	105	104.5%	41.4	4.9	D
	Through	270	271	100.2%	6.5	1.4	A
	Right Turn	60	57	95.5%	3.4	1.9	A
	Subtotal	430	432	100.5%	15.2	2.5	B
WB	Left Turn	40	37	93.0%	42.8	10.7	D
	Through	230	231	100.3%	8.8	2.4	A
	Right Turn	100	98	97.9%	4.4	1.6	A
	Subtotal	370	366	98.9%	11.3	2.4	B
Total		1,130	1,130	100.0%	18.1	2.1	B

Intersection 8

192nd Avenue/34th Street

Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	120	112	92.9%	43.0	7.9	D
	Through	630	641	101.7%	14.9	2.3	B
	Right Turn	290	295	101.8%	8.1	0.8	A
	Subtotal	1,040	1,048	100.7%	16.0	1.6	B
SB	Left Turn	140	137	97.6%	85.8	12.5	F
	Through	520	519	99.7%	16.1	2.5	B
	Right Turn	90	93	102.9%	9.6	3.9	A
	Subtotal	750	748	99.7%	28.4	4.6	C
EB	Left Turn	80	78	97.8%	31.8	7.8	C
	Through	160	165	103.3%	37.2	5.0	D
	Right Turn	90	93	103.7%	20.1	4.8	C
	Subtotal	330	337	102.0%	31.1	4.5	C
WB	Left Turn	170	177	104.2%	32.6	5.8	C
	Through	170	166	97.6%	33.6	4.4	C
	Right Turn	100	99	99.3%	18.1	4.3	B
	Subtotal	440	442	100.5%	29.5	3.5	C
Total		2,560	2,575	100.6%	23.9	2.1	C



SimTraffic Post-Processor  
Average Results from 10 Runs  
Volume and Delay by Movement

SE 34th Street  
2040 No Build  
AM Peak Hour

Intersection 9

196th Avenue/34th Street

Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		LOS
			Average	Percent	Average	Std. Dev.	
NB	Left Turn	60	58	96.3%	13.3	2.9	B
	Through						
	Right Turn	30	30	99.7%	4.2	1.4	A
	Subtotal	90	88	97.4%	10.1	2.7	B
SB	Left Turn	30	30	100.7%	10.5	3.5	B
	Through	10	12	121.0%	9.9	6.5	A
	Right Turn	40	43	107.8%	3.7	0.9	A
	Subtotal	80	85	106.8%	7.2	1.6	A
EB	Left Turn	10	11	110.0%	17.7	11.6	B
	Through	460	457	99.2%	6.3	1.6	A
	Right Turn	40	39	97.8%	4.6	1.5	A
	Subtotal	510	507	99.3%	6.4	1.5	A
WB	Left Turn	30	29	97.3%	17.1	5.1	B
	Through	470	470	100.0%	5.8	1.7	A
	Right Turn	20	21	104.5%	3.0	2.1	A
	Subtotal	520	520	100.0%	6.2	1.7	A
Total		1,200	1,200	100.0%	6.7	1.3	A

SimTraffic Post-Processor  
Average Results from 10 Runs  
Volume and Delay by Movement

SE 34th Street  
2040 No Build  
PM Peak Hour

Intersection 1                      164th Avenue/34th Street                      Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	190	181	95.4%	67.1	14.6	E
	Through	1,290	1,285	99.6%	58.7	12.6	E
	Right Turn	460	467	101.6%	11.1	1.9	B
	Subtotal	1,940	1,934	99.7%	48.2	10.1	D
SB	Left Turn	170	170	100.2%	75.3	19.4	E
	Through	1,270	1,263	99.5%	32.9	3.3	C
	Right Turn	80	75	94.0%	22.3	5.3	C
	Subtotal	1,520	1,509	99.3%	37.7	4.7	D
EB	Left Turn	70	70	100.3%	70.6	22.4	E
	Through	100	104	104.4%	52.6	6.9	D
	Right Turn	190	190	99.9%	11.4	3.4	B
	Subtotal	360	364	101.2%	35.3	4.7	D
WB	Left Turn	500	503	100.6%	39.5	2.1	D
	Through	170	165	96.9%	35.4	5.9	D
	Right Turn	220	224	101.7%	13.0	3.0	B
	Subtotal	890	891	100.2%	32.0	2.1	C
Total		4,710	4,698	99.8%	40.7	4.2	D

Intersection 2                      168th Avenue/34th Street                      Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	30	29	97.7%	19.6	4.8	B
	Through	20	19	93.0%	19.1	9.4	B
	Right Turn	10	12	115.0%	5.5	2.5	A
	Subtotal	60	59	99.0%	16.3	3.7	B
SB	Left Turn	30	30	101.0%	17.1	4.7	B
	Through	20	19	96.5%	15.4	5.7	B
	Right Turn	40	39	97.3%	7.0	1.4	A
	Subtotal	90	89	98.3%	12.2	1.9	B
EB	Left Turn	80	76	94.4%	16.2	4.9	B
	Through	630	652	103.5%	5.6	1.4	A
	Right Turn	20	24	119.5%	4.7	2.1	A
	Subtotal	730	752	103.0%	6.6	1.6	A
WB	Left Turn	10	10	100.0%	11.6	7.6	B
	Through	820	826	100.7%	5.5	1.2	A
	Right Turn	20	20	98.0%	2.5	2.7	A
	Subtotal	850	855	100.6%	5.5	1.1	A
Total		1,730	1,755	101.4%	6.7	1.2	A

SimTraffic Post-Processor  
Average Results from 10 Runs  
Volume and Delay by Movement

SE 34th Street  
2040 No Build  
PM Peak Hour

Intersection 3 Pedestrian Crossing/34th Street Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
SB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
EB	Left Turn						
	Through	670	687	102.5%	1.8	0.5	A
	Right Turn						
	Subtotal	670	687	102.5%	1.8	0.5	A
WB	Left Turn						
	Through	850	858	101.0%	0.8	0.3	A
	Right Turn						
	Subtotal	850	858	101.0%	0.8	0.3	A
Total		1,520	1,545	101.7%	1.2	0.3	A

Intersection 4 172nd Avenue/34th Street Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	60	56	92.7%	27.2	9.8	D
	Through	10	9	92.0%	22.2	15.5	C
	Right Turn	30	27	91.3%	14.6	12.0	B
	Subtotal	100	92	92.2%	23.5	9.9	C
SB	Left Turn						
	Through	10	11	110.0%	23.0	11.4	C
	Right Turn	10	11	109.0%	6.6	6.0	A
	Subtotal	20	22	109.5%	15.9	9.1	C
EB	Left Turn	20	22	109.5%	6.9	1.8	A
	Through	560	566	101.1%	1.2	0.3	A
	Right Turn	90	96	106.8%	0.8	0.4	A
	Subtotal	670	684	102.1%	1.3	0.3	A
WB	Left Turn	50	49	98.0%	7.2	1.9	A
	Through	780	795	101.9%	2.8	0.5	A
	Right Turn	10	10	103.0%	2.2	1.6	A
	Subtotal	840	854	101.7%	3.1	0.5	A
Total		1,630	1,653	101.4%	3.6	0.9	A

SimTraffic Post-Processor  
Average Results from 10 Runs  
Volume and Delay by Movement

SE 34th Street  
2040 No Build  
PM Peak Hour

Intersection 5

176th Avenue/34th Street

Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	20	19	93.5%	36.4	13.6	D
	Through	20	17	85.0%	36.8	11.5	D
	Right Turn	10	13	125.0%	8.9	10.2	A
	Subtotal	50	48	96.4%	31.0	9.2	C
SB	Left Turn	90	87	96.4%	45.5	5.4	D
	Through	30	31	104.0%	39.1	10.9	D
	Right Turn	90	88	98.2%	13.8	4.6	B
	Subtotal	210	206	98.3%	31.9	4.8	C
EB	Left Turn	190	194	102.0%	12.5	2.8	B
	Through	370	367	99.3%	3.8	0.7	A
	Right Turn	30	32	105.0%	2.4	1.0	A
	Subtotal	590	593	100.5%	6.5	1.3	A
WB	Left Turn	20	20	99.5%	5.8	4.2	A
	Through	730	736	100.8%	8.1	1.6	A
	Right Turn	100	100	100.4%	6.8	1.4	A
	Subtotal	850	856	100.7%	7.9	1.6	A
Total		1,700	1,704	100.2%	11.1	1.5	B

Intersection 6

177th Avenue/34th Street

Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	30	29	96.7%	14.4	5.8	B
	Through						
	Right Turn	20	21	106.0%	5.7	2.7	A
	Subtotal	50	50	100.4%	11.3	4.6	B
SB	Left Turn	50	47	93.8%	16.2	3.2	C
	Through						
	Right Turn	150	149	99.3%	9.8	2.9	A
	Subtotal	200	196	97.9%	11.5	2.2	B
EB	Left Turn	40	42	103.8%	5.1	1.8	A
	Through	390	386	98.9%	1.1	0.1	A
	Right Turn	40	40	98.8%	0.6	0.3	A
	Subtotal	470	467	99.3%	1.5	0.3	A
WB	Left Turn	20	20	99.0%	3.9	2.8	A
	Through	670	684	102.0%	3.0	0.3	A
	Right Turn	20	20	99.5%	2.2	1.3	A
	Subtotal	710	723	101.9%	3.0	0.3	A
Total		1,430	1,436	100.4%	3.9	0.6	A

SimTraffic Post-Processor  
Average Results from 10 Runs  
Volume and Delay by Movement

SE 34th Street  
2040 No Build  
PM Peak Hour

Intersection 7

Hiddenbrook Drive/34th Street

Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	110	108	98.1%	33.5	5.4	C
	Through	30	33	109.0%	38.2	9.7	D
	Right Turn	60	64	107.0%	6.3	1.5	A
	Subtotal	200	205	102.4%	26.5	4.2	C
SB	Left Turn	160	161	100.5%	34.8	5.5	C
	Through	50	53	106.0%	28.3	5.0	C
	Right Turn	160	167	104.4%	13.5	4.1	B
	Subtotal	370	381	102.9%	24.5	3.8	C
EB	Left Turn	50	50	100.0%	40.7	6.5	D
	Through	330	320	97.0%	8.8	1.4	A
	Right Turn	80	83	103.3%	5.4	3.3	A
	Subtotal	460	453	98.4%	12.2	2.2	B
WB	Left Turn	40	40	99.5%	43.8	10.0	D
	Through	440	448	101.8%	9.9	3.2	A
	Right Turn						
	Subtotal	480	488	101.6%	12.8	3.1	B
Total		1,510	1,526	101.1%	17.5	1.4	B

Intersection 8

192nd Avenue/34th Street

Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	140	134	95.5%	54.1	9.3	D
	Through	880	875	99.4%	28.1	2.3	C
	Right Turn	140	143	102.2%	7.6	1.6	A
	Subtotal	1,160	1,152	99.3%	28.6	2.8	C
SB	Left Turn	240	238	99.3%	65.3	9.3	E
	Through	790	781	98.8%	26.2	3.8	C
	Right Turn	110	114	103.3%	20.5	7.0	C
	Subtotal	1,140	1,133	99.4%	33.9	4.5	C
EB	Left Turn	170	171	100.8%	26.8	4.5	C
	Through	250	248	99.3%	38.2	3.5	D
	Right Turn	160	159	99.1%	31.6	6.7	C
	Subtotal	580	578	99.7%	33.1	3.1	C
WB	Left Turn	300	299	99.5%	42.7	8.1	D
	Through	200	209	104.6%	31.5	3.2	C
	Right Turn	130	132	101.4%	21.0	3.2	C
	Subtotal	630	640	101.5%	34.3	4.7	C
Total		3,510	3,502	99.8%	32.1	2.2	C

SimTraffic Post-Processor  
Average Results from 10 Runs  
Volume and Delay by Movement

SE 34th Street  
2040 No Build  
PM Peak Hour

Intersection 9

196th Avenue/34th Street

Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	70	72	102.9%	12.7	3.2	B
	Through						
	Right Turn	30	30	99.3%	3.5	1.6	A
	Subtotal	100	102	101.8%	10.2	2.7	B
SB	Left Turn	10	9	92.0%	9.7	6.7	A
	Through	10	11	106.0%	11.3	5.6	B
	Right Turn	20	23	115.5%	4.0	1.5	A
	Subtotal	40	43	107.3%	7.1	2.0	A
EB	Left Turn	30	30	99.3%	15.9	4.8	B
	Through	480	472	98.4%	6.4	2.1	A
	Right Turn	50	52	104.8%	3.9	1.0	A
	Subtotal	560	555	99.0%	6.6	1.9	A
WB	Left Turn	30	30	100.7%	14.0	3.1	B
	Through	610	606	99.4%	6.2	1.8	A
	Right Turn	20	21	102.5%	3.2	3.3	A
	Subtotal	660	657	99.5%	6.4	1.7	A
Total		1,360	1,356	99.7%	6.8	1.7	A

**SimTraffic Post-Processor**  
**Average Results from 10 Runs**  
**Volume and Delay by Movement**

**SE 34th Street**  
**2040 Alt 1**  
**AM Peak Hour**

**Intersection 1**                      **164th Avenue/34th Street**                      **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	110	105	95.7%	52.1	11.3	D
	Through	880	871	98.9%	44.3	7.1	D
	Right Turn	420	418	99.6%	6.6	1.2	A
	Subtotal	1,410	1,394	98.9%	33.1	5.2	C
SB	Left Turn	170	168	98.8%	71.0	14.5	E
	Through	770	793	102.9%	32.0	5.5	C
	Right Turn	40	42	104.8%	13.9	5.7	B
	Subtotal	980	1,003	102.3%	38.1	6.8	D
EB	Left Turn	30	28	94.3%	45.2	11.3	D
	Through	60	65	108.0%	43.9	6.9	D
	Right Turn	160	162	101.3%	6.8	1.5	A
	Subtotal	250	255	102.1%	22.0	3.9	C
WB	Left Turn	440	432	98.2%	42.5	5.8	D
	Through	90	91	101.4%	27.1	8.3	C
	Right Turn	120	119	99.2%	6.5	1.7	A
	Subtotal	650	642	98.8%	33.5	5.1	C
Total		3,290	3,294	100.1%	33.8	4.0	C

**Intersection 2**                      **168th Avenue/34th Street**                      **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	40	40	100.5%	16.5	4.0	B
	Through	10	12	117.0%	19.4	10.8	B
	Right Turn	10	10	98.0%	8.7	7.6	A
	Subtotal	60	62	102.8%	15.4	4.2	B
SB	Left Turn	20	21	103.0%	15.9	6.6	B
	Through	10	11	109.0%	17.3	7.9	B
	Right Turn	50	48	95.4%	6.8	1.7	A
	Subtotal	80	79	99.0%	10.4	1.7	B
EB	Left Turn	40	37	91.5%	14.0	4.8	B
	Through	590	598	101.3%	7.6	1.3	A
	Right Turn	20	22	110.5%	6.1	2.6	A
	Subtotal	650	656	101.0%	7.9	1.3	A
WB	Left Turn	10	10	100.0%	12.2	4.9	B
	Through	560	559	99.9%	6.4	1.7	A
	Right Turn	20	20	100.0%	4.1	2.4	A
	Subtotal	590	589	99.9%	6.4	1.7	A
Total		1,380	1,386	100.5%	7.8	1.2	A

**SimTraffic Post-Processor**  
**Average Results from 10 Runs**  
**Volume and Delay by Movement**

**SE 34th Street**  
**2040 Alt 1**  
**AM Peak Hour**

**Intersection 3**

**Pedestrian Crossing/34th Street**

**Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
SB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
EB	Left Turn						
	Through	620	630	101.5%	3.1	1.4	A
	Right Turn						
	Subtotal	620	630	101.5%	3.1	1.4	A
WB	Left Turn						
	Through	590	589	99.7%	2.0	1.3	A
	Right Turn						
	Subtotal	590	589	99.7%	2.0	1.3	A
Total		1,210	1,218	100.7%	2.6	1.3	A

**Intersection 4**

**172nd Avenue/34th Street**

**Side-street Stop**

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	80	78	97.9%	30.2	15.6	D
	Through	10	12	122.0%	23.2	22.5	C
	Right Turn	30	30	99.3%	22.6	15.2	C
	Subtotal	120	120	100.3%	28.0	14.3	D
SB	Left Turn						
	Through						
	Right Turn	30	32	107.7%	7.6	3.6	A
	Subtotal	30	32	107.7%	7.6	3.6	A
EB	Left Turn	10	10	103.0%	3.4	1.2	A
	Through	580	586	101.0%	1.6	0.1	A
	Right Turn	30	32	105.7%	1.0	0.4	A
	Subtotal	620	628	101.2%	1.6	0.1	A
WB	Left Turn	30	29	98.0%	8.3	3.0	A
	Through	480	481	100.3%	1.7	0.2	A
	Right Turn	10	11	114.0%	1.1	0.6	A
	Subtotal	520	522	100.4%	2.0	0.3	A
Total		1,290	1,303	101.0%	4.3	1.7	A



**SimTraffic Post-Processor**  
**Average Results from 10 Runs**  
**Volume and Delay by Movement**

**SE 34th Street**  
**2040 Alt 1**  
**AM Peak Hour**

**Intersection 5**

**176th Avenue/34th Street**

**Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	20	19	96.5%	39.2	11.0	D
	Through	20	20	99.0%	38.3	12.7	D
	Right Turn	10	11	110.0%	8.2	2.9	A
	Subtotal	50	50	100.2%	33.6	5.6	C
SB	Left Turn	70	68	96.7%	41.2	4.9	D
	Through	10	9	86.0%	36.6	14.4	D
	Right Turn	160	167	104.2%	8.6	2.1	A
	Subtotal	240	243	101.3%	19.3	3.6	B
EB	Left Turn	120	120	100.1%	8.3	2.0	A
	Through	470	478	101.7%	5.1	1.5	A
	Right Turn	20	20	102.0%	2.8	2.2	A
	Subtotal	610	619	101.4%	5.6	1.4	A
WB	Left Turn	10	9	92.0%	7.1	3.5	A
	Through	340	339	99.7%	6.2	1.5	A
	Right Turn	60	62	103.5%	3.8	2.0	A
	Subtotal	410	410	100.1%	5.9	1.6	A
Total		1,310	1,322	100.9%	9.3	1.7	A

**Intersection 6**

**177th Avenue/34th Street**

**Side-street Stop**

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	30	27	91.3%	16.4	6.6	C
	Through						
	Right Turn	20	22	112.0%	6.8	4.7	A
	Subtotal	50	50	99.6%	11.8	4.3	B
SB	Left Turn	30	31	104.0%	14.3	4.7	B
	Through						
	Right Turn	60	64	107.0%	5.2	1.4	A
	Subtotal	90	95	106.0%	8.1	1.9	A
EB	Left Turn	150	147	98.2%	5.5	1.5	A
	Through	380	398	104.7%	1.3	0.3	A
	Right Turn	20	17	85.0%	0.9	0.6	A
	Subtotal	550	562	102.2%	2.4	0.4	A
WB	Left Turn	10	10	99.0%	6.1	3.3	A
	Through	320	314	98.0%	2.8	0.5	A
	Right Turn	40	38	94.0%	2.7	1.2	A
	Subtotal	370	361	97.6%	2.9	0.4	A
Total		1,060	1,069	100.8%	3.5	0.3	A

**SimTraffic Post-Processor**  
**Average Results from 10 Runs**  
**Volume and Delay by Movement**

**SE 34th Street**  
**2040 Alt 1**  
**AM Peak Hour**

**Intersection 7**

**Hiddenbrook Drive/34th Street**

**Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	80	73	91.0%	33.7	7.5	C
	Through	60	64	106.8%	41.1	6.2	D
	Right Turn	40	39	97.0%	5.9	1.4	A
	Subtotal	180	176	97.6%	30.5	4.7	C
SB	Left Turn	60	59	97.5%	39.0	5.5	D
	Through	30	31	104.0%	33.4	7.5	C
	Right Turn	60	59	98.5%	9.5	3.6	A
	Subtotal	150	149	99.2%	26.3	5.2	C
EB	Left Turn	100	101	101.4%	40.2	3.2	D
	Through	270	278	102.9%	9.1	1.4	A
	Right Turn	60	61	102.0%	6.8	1.9	A
	Subtotal	430	440	102.4%	16.0	1.9	B
WB	Left Turn	40	37	91.8%	45.7	7.5	D
	Through	230	230	100.0%	11.6	3.7	B
	Right Turn	100	97	97.2%	7.7	2.7	A
	Subtotal	370	364	98.3%	13.9	2.9	B
Total		1,130	1,129	99.9%	19.0	1.5	B

**Intersection 8**

**192nd Avenue/34th Street**

**Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	120	107	89.4%	47.0	3.7	D
	Through	630	643	102.0%	23.0	3.1	C
	Right Turn	290	294	101.2%	7.2	0.9	A
	Subtotal	1,040	1,044	100.4%	20.9	1.8	C
SB	Left Turn	140	140	99.7%	41.3	4.5	D
	Through	520	517	99.4%	19.6	2.6	B
	Right Turn	90	89	98.3%	12.0	3.4	B
	Subtotal	750	745	99.3%	22.6	2.2	C
EB	Left Turn	80	81	101.6%	32.7	6.7	C
	Through	160	169	105.6%	40.5	8.3	D
	Right Turn	90	90	99.7%	32.9	10.7	C
	Subtotal	330	340	103.0%	36.9	7.5	D
WB	Left Turn	170	162	95.5%	32.1	7.9	C
	Through	170	181	106.2%	31.3	7.1	C
	Right Turn	100	100	100.0%	24.3	5.4	C
	Subtotal	440	443	100.7%	30.1	5.2	C
Total		2,560	2,572	100.4%	25.1	1.8	C

**SimTraffic Post-Processor**  
**Average Results from 10 Runs**  
**Volume and Delay by Movement**

**SE 34th Street**  
**2040 Alt 1**  
**AM Peak Hour**

**Intersection 9**

**196th Avenue/34th Street**

**Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	60	60	100.3%	12.7	3.9	B
	Through						
	Right Turn	30	30	98.7%	5.0	2.0	A
	Subtotal	90	90	99.8%	9.9	2.6	A
SB	Left Turn	30	28	91.7%	13.2	7.0	B
	Through	10	12	120.0%	10.0	6.6	A
	Right Turn	40	40	101.0%	5.4	2.1	A
	Subtotal	80	80	99.9%	8.4	1.6	A
EB	Left Turn	10	10	99.0%	17.5	8.4	B
	Through	460	464	100.8%	9.6	2.2	A
	Right Turn	40	45	112.3%	7.2	3.0	A
	Subtotal	510	519	101.7%	9.5	2.3	A
WB	Left Turn	30	28	92.0%	18.7	6.4	B
	Through	470	470	100.0%	7.3	2.4	A
	Right Turn	20	20	100.5%	5.2	2.4	A
	Subtotal	520	518	99.6%	7.8	2.5	A
Total		1,200	1,206	100.5%	8.7	1.7	A

**SimTraffic Post-Processor**  
**Average Results from 10 Runs**  
**Volume and Delay by Movement**

**SE 34th Street**  
**2040 Alt 1**  
**PM Peak Hour**

**Intersection 1**                      **164th Avenue/34th Street**                      **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	190	168	88.6%	136.0	36.1	F
	Through	1,290	1,117	86.6%	127.4	4.1	F
	Right Turn	460	403	87.7%	19.2	2.1	B
	Subtotal	1,940	1,689	87.0%	102.0	6.3	F
SB	Left Turn	170	162	95.1%	224.7	82.7	F
	Through	1,270	1,271	100.1%	58.1	10.0	E
	Right Turn	80	78	97.8%	34.4	7.2	C
	Subtotal	1,520	1,511	99.4%	76.1	18.1	E
EB	Left Turn	70	70	100.0%	53.5	11.6	D
	Through	100	101	100.8%	49.9	7.6	D
	Right Turn	190	192	100.8%	11.5	3.0	B
	Subtotal	360	362	100.6%	30.9	5.3	C
WB	Left Turn	500	506	101.1%	48.3	14.3	D
	Through	170	175	102.9%	32.4	10.1	C
	Right Turn	220	207	94.1%	11.3	6.0	B
	Subtotal	890	888	99.7%	36.7	11.8	D
Total		4,710	4,450	94.5%	73.6	6.1	E

**Intersection 2**                      **168th Avenue/34th Street**                      **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	30	29	96.0%	17.3	6.3	B
	Through	20	20	97.5%	16.4	5.5	B
	Right Turn	10	11	111.0%	8.5	5.2	A
	Subtotal	60	59	99.0%	15.2	3.8	B
SB	Left Turn	30	29	96.3%	20.7	6.3	C
	Through	20	17	85.0%	20.5	8.3	C
	Right Turn	40	41	102.3%	13.0	4.2	B
	Subtotal	90	87	96.4%	17.5	3.6	B
EB	Left Turn	80	73	91.1%	29.8	12.2	C
	Through	630	585	92.8%	8.1	2.3	A
	Right Turn	20	18	89.0%	5.6	5.3	A
	Subtotal	730	675	92.5%	10.7	3.0	B
WB	Left Turn	10	10	101.0%	19.7	9.4	B
	Through	820	824	100.5%	13.1	4.4	B
	Right Turn	20	23	114.0%	12.8	6.9	B
	Subtotal	850	857	100.9%	13.2	4.4	B
Total		1,730	1,679	97.0%	12.5	3.1	B

SimTraffic Post-Processor  
Average Results from 10 Runs  
Volume and Delay by Movement

SE 34th Street  
2040 Alt 1  
PM Peak Hour

Intersection 3

Pedestrian Crossing/34th Street

Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
SB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
EB	Left Turn						
	Through	670	628	93.7%	2.5	1.3	A
	Right Turn						
	Subtotal	670	628	93.7%	2.5	1.3	A
WB	Left Turn						
	Through	850	854	100.5%	1.8	0.8	A
	Right Turn						
	Subtotal	850	854	100.5%	1.8	0.8	A
Total		1,520	1,482	97.5%	2.1	0.8	A

Intersection 4

172nd Avenue/34th Street

Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	60	60	100.2%	41.1	13.1	E
	Through	10	9	88.0%	43.2	21.1	E
	Right Turn	30	31	102.0%	25.6	17.7	D
	Subtotal	100	100	99.5%	36.6	13.7	E
SB	Left Turn						
	Through	10	8	81.0%	33.1	26.5	D
	Right Turn	10	9	87.0%	6.4	5.3	A
	Subtotal	20	17	84.0%	24.4	24.2	C
EB	Left Turn	20	19	93.0%	7.1	4.1	A
	Through	560	520	92.9%	2.1	0.3	A
	Right Turn	90	85	94.0%	1.2	0.3	A
	Subtotal	670	624	93.1%	2.1	0.3	A
WB	Left Turn	50	48	96.4%	7.4	1.4	A
	Through	780	800	102.5%	2.9	0.2	A
	Right Turn	10	10	100.0%	2.1	1.3	A
	Subtotal	840	858	102.1%	3.1	0.2	A
Total		1,630	1,598	98.0%	5.0	1.1	A

**SimTraffic Post-Processor**  
**Average Results from 10 Runs**  
**Volume and Delay by Movement**

**SE 34th Street**  
**2040 Alt 1**  
**PM Peak Hour**

**Intersection 5**

**176th Avenue/34th Street**

**Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	20	19	92.5%	44.0	18.3	D
	Through	20	18	88.0%	36.8	16.5	D
	Right Turn	10	10	99.0%	17.2	11.9	B
	Subtotal	50	46	92.0%	36.1	7.3	D
SB	Left Turn	90	86	95.8%	49.5	4.9	D
	Through	30	29	95.0%	41.8	10.5	D
	Right Turn	90	92	102.6%	25.4	4.4	C
	Subtotal	210	207	98.6%	38.0	3.4	D
EB	Left Turn	190	173	91.1%	30.0	4.8	C
	Through	370	360	97.2%	5.9	1.9	A
	Right Turn	30	28	94.7%	3.3	2.1	A
	Subtotal	590	561	95.1%	13.1	1.9	B
WB	Left Turn	20	19	93.0%	13.1	3.2	B
	Through	730	736	100.9%	17.1	3.1	B
	Right Turn	100	96	96.4%	15.1	4.2	B
	Subtotal	850	851	100.2%	16.8	3.1	B
Total		1,700	1,666	98.0%	19.0	2.3	B

**Intersection 6**

**177th Avenue/34th Street**

**Side-street Stop**

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	30	27	89.0%	48.6	30.8	E
	Through						
	Right Turn	20	21	105.5%	26.1	28.1	D
	Subtotal	50	48	95.6%	38.7	29.0	E
SB	Left Turn	50	48	95.8%	32.3	23.1	D
	Through						
	Right Turn	150	153	101.9%	70.6	33.0	F
	Subtotal	200	201	100.4%	60.6	28.3	F
EB	Left Turn	40	34	85.8%	10.0	3.5	A
	Through	390	376	96.4%	1.4	0.3	A
	Right Turn	40	39	97.0%	0.9	0.3	A
	Subtotal	470	449	95.6%	1.9	0.4	A
WB	Left Turn	20	20	98.0%	8.1	1.9	A
	Through	670	681	101.6%	8.1	3.0	A
	Right Turn	20	18	90.0%	5.7	3.0	A
	Subtotal	710	718	101.2%	8.1	2.9	A
Total		1,430	1,416	99.0%	13.5	4.7	B

**SimTraffic Post-Processor**  
**Average Results from 10 Runs**  
**Volume and Delay by Movement**

**SE 34th Street**  
**2040 Alt 1**  
**PM Peak Hour**

**Intersection 7**

**Hiddenbrook Drive/34th Street**

**Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	110	110	99.7%	39.9	5.7	D
	Through	30	28	93.3%	43.3	11.3	D
	Right Turn	60	62	103.3%	7.2	3.0	A
	Subtotal	200	200	99.9%	31.5	5.0	C
SB	Left Turn	160	162	100.9%	40.0	17.0	D
	Through	50	52	103.6%	30.5	4.0	C
	Right Turn	160	157	98.3%	14.7	2.4	B
	Subtotal	370	371	100.2%	27.7	7.2	C
EB	Left Turn	50	46	92.4%	44.9	14.0	D
	Through	330	322	97.6%	21.9	26.4	C
	Right Turn	80	77	96.8%	17.9	25.8	B
	Subtotal	460	446	96.9%	23.8	24.8	C
WB	Left Turn	40	40	99.8%	39.9	9.7	D
	Through	440	451	102.5%	11.3	2.0	B
	Right Turn						
	Subtotal	480	491	102.3%	13.9	2.2	B
Total		1,510	1,507	99.8%	22.4	8.5	C

**Intersection 8**

**192nd Avenue/34th Street**

**Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	140	137	97.8%	138.9	75.0	F
	Through	880	861	97.8%	78.4	35.8	E
	Right Turn	140	135	96.7%	15.4	11.3	B
	Subtotal	1,160	1,133	97.7%	79.3	34.6	E
SB	Left Turn	240	239	99.5%	118.5	62.9	F
	Through	790	788	99.8%	44.3	13.1	D
	Right Turn	110	117	106.1%	36.6	17.1	D
	Subtotal	1,140	1,144	100.3%	60.4	24.2	E
EB	Left Turn	170	159	93.4%	79.8	18.6	E
	Through	250	252	100.7%	91.4	19.0	F
	Right Turn	160	153	95.8%	86.8	20.6	F
	Subtotal	580	564	97.2%	87.0	18.9	F
WB	Left Turn	300	300	99.9%	48.5	23.0	D
	Through	200	200	99.8%	33.8	13.1	C
	Right Turn	130	126	96.5%	30.0	13.5	C
	Subtotal	630	625	99.2%	40.5	17.6	D
Total		3,510	3,465	98.7%	67.3	16.6	E

**SimTraffic Post-Processor**  
**Average Results from 10 Runs**  
**Volume and Delay by Movement**

**SE 34th Street**  
**2040 Alt 1**  
**PM Peak Hour**

**Intersection 9**

**196th Avenue/34th Street**

**Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	70	69	98.6%	12.4	3.2	B
	Through						
	Right Turn	30	29	96.7%	5.2	2.4	A
	Subtotal	100	98	98.0%	10.3	3.0	B
SB	Left Turn	10	11	112.0%	10.3	8.5	B
	Through	10	11	112.0%	9.6	8.2	A
	Right Turn	20	19	95.0%	6.6	2.8	A
	Subtotal	40	41	103.5%	9.2	3.8	A
EB	Left Turn	30	28	92.0%	19.9	5.6	B
	Through	480	473	98.5%	8.3	1.6	A
	Right Turn	50	50	100.0%	5.8	2.1	A
	Subtotal	560	550	98.3%	8.7	1.5	A
WB	Left Turn	30	28	94.7%	16.6	3.4	B
	Through	610	605	99.2%	9.4	1.4	A
	Right Turn	20	19	95.0%	8.5	2.7	A
	Subtotal	660	652	98.8%	9.7	1.4	A
Total		1,360	1,342	98.7%	9.3	1.1	A



Intersection 1 164th Avenue/34th Street Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	25	5	75	10	75	18	0%	0%
	Through	350	50	8	100	14	125	29	0%	0%
	Right Turn	350	50	6	75	11	100	15	0%	0%
NB	Left Turn	400	75	8	150	17	175	19	0%	0%
	Through	700	175	17	275	26	350	58	0%	0%
	Right Turn	700	50	3	75	7	100	23	0%	0%
SB	Left Turn	1,250	125	6	200	9	225	28	0%	0%
	Through	1,000	150	12	225	18	250	36	0%	0%
	Through/Right	1,000	50	8	100	24	175	46	0%	0%
WB	Left Turn	925	125	6	200	14	225	20	0%	0%
	Through	925	50	5	100	12	125	21	0%	0%
	Right Turn	175	50	4	75	11	100	36	0%	0%

Intersection 2 168th Avenue/34th Street Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	25	3	50	6	75	19	0%	0%
	Through	925	25	3	75	9	100	26	0%	0%
	Through/Right	925	50	5	75	9	125	25	0%	0%
NB	Shared	375	25	4	50	4	75	7	0%	0%
SB	Shared	350	50	2	75	2	75	7	0%	0%
WB	Left Turn	125	25	2	25	8	50	10	0%	0%
	Through	600	50	5	75	9	125	25	0%	0%
	Through/Right	600	25	4	75	11	100	30	0%	0%

Intersection 3

Pedestrian Crossing/34th Street

Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Through	600	25	5	50	17	75	36	0%	0%
WB	Through	475	25	4	50	13	100	23	0%	0%
0										
0										

Intersection 4

172nd Avenue/34th Street

Side-street Stop

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	25	1	25	5	50	9	0%	0%
NB	Shared	450	50	3	75	6	100	14	0%	0%
SB	Shared	75	25	2	50	3	50	0	0%	0%
WB	Left Turn	150	25	2	25	4	50	6	0%	0%
	Through	825	25	0	25	5	25	14	0%	0%
	Through/Right	825	25	1	25	6	25	18	0%	0%

Intersection 5

176th Avenue/34th Street

Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	25	4	50	7	50	15	0%	0%
	Through	825	25	3	50	8	75	22	0%	0%
	Through/Right	825	25	3	50	8	75	13	0%	0%
NB	Left Turn	400	25	4	50	7	75	13	0%	0%
	Through/Right	400	25	3	50	6	50	11	0%	0%
SB	Left Turn	175	50	5	100	8	100	19	0%	0%
	Through/Right	275	50	3	100	14	125	36	0%	0%
WB	Left Turn	100	25	1	25	5	25	12	0%	0%
	Through	325	25	3	50	8	50	19	0%	0%
	Through/Right	325	25	3	75	7	75	17	0%	0%

Intersection 6

177th Avenue/34th Street

Side-street Stop

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	25	2	50	5	75	14	0%	0%
	Through/Right	325	25	1	25	7	25	20	0%	0%
NB	Shared	300	25	3	50	2	75	7	0%	0%
SB	Left/Through	175	25	1	25	5	25	11	0%	0%
	Right Turn	175	25	2	50	4	50	10	0%	0%
WB	Left Turn	175	25	1	25	6	25	12	0%	0%
	Through/Right	1,650	25	1	25	7	25	21	0%	0%

Intersection 7

Hiddenbrook Drive/34th Street

Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	25	5	75	7	100	16	0%	0%
	Through	1,650	25	1	50	6	75	22	0%	0%
	Through/Right	1,650	25	5	75	10	75	18	0%	0%
NB	Left/Through	250	50	7	100	14	125	24	0%	0%
	Right Turn	125	25	3	50	5	75	14	0%	0%
SB	Left Turn	175	25	2	25	7	50	14	0%	0%
	Through/Right	175	25	3	50	7	50	7	0%	0%
WB	Left Turn	150	25	4	75	9	75	19	0%	0%
	Through	875	25	2	25	7	50	17	0%	0%
	Through/Right	875	25	3	50	10	75	14	0%	0%

Intersection 8

192nd Avenue/34th Street

Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	50	4	100	5	125	10	0%	0%
	Through	450	50	4	100	7	125	19	0%	0%
	Through/Right	450	75	4	125	11	150	32	0%	0%
NB	Left Turn	375	50	8	100	11	100	26	0%	0%
	Through	725	125	7	200	10	225	33	0%	0%
	Right Turn	375	50	6	100	14	125	26	0%	0%
SB	Left Turn	325	75	9	150	26	175	58	0%	0%
	Through	525	100	9	175	17	200	39	0%	0%
	Through/Right	525	75	6	125	20	150	24	0%	0%
WB	Left Turn	175	100	8	175	16	200	26	2%	0%
	Through	425	50	7	100	29	125	65	0%	0%
	Through/Right	425	50	6	100	12	125	25	0%	0%

Intersection 9

196th Avenue/34th Street

Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	25	3	50	6	50	7	0%	0%
	Through	950	25	4	75	10	100	25	0%	0%
	Through/Right	950	50	4	100	10	125	26	0%	0%
NB	Left Turn	75	50	3	75	3	75	11	1%	0%
	Through/Right	175	25	5	50	9	50	21	0%	0%
SB	Left Turn	125	25	3	50	9	75	29	0%	0%
	Through/Right	275	25	4	50	6	50	15	0%	0%
WB	Left Turn	175	25	4	50	6	75	15	0%	0%
	Through	500	50	8	100	22	125	37	0%	0%
	Through/Right	500	50	6	75	8	100	18	0%	0%

Intersection 1 164th Avenue/34th Street Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	50	15	100	30	125	37	0%	0%
	Through	350	75	7	125	12	150	31	0%	0%
	Right Turn	350	50	4	100	8	125	17	0%	0%
NB	Left Turn	400	125	10	225	27	250	78	0%	0%
	Through	700	225	20	350	32	375	48	0%	0%
	Right Turn	700	50	4	100	9	125	21	0%	0%
SB	Left Turn	1,250	100	13	175	24	250	45	0%	0%
	Through	1,000	175	12	275	19	325	42	1%	0%
	Through/Right	1,000	75	16	175	22	200	24	0%	0%
WB	Left Turn	925	125	8	175	15	200	21	0%	0%
	Through	925	75	6	150	17	200	63	0%	0%
	Right Turn	175	75	6	125	16	150	40	0%	0%

Intersection 2 168th Avenue/34th Street Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	50	4	75	10	100	17	0%	0%
	Through	925	50	6	75	12	125	32	0%	0%
	Through/Right	925	50	3	100	8	125	24	0%	0%
NB	Shared	375	25	4	75	8	75	17	0%	0%
SB	Shared	350	50	3	75	6	100	11	0%	0%
WB	Left Turn	125	25	2	25	7	50	15	0%	0%
	Through	600	50	8	100	15	125	27	0%	0%
	Through/Right	600	50	8	125	18	175	57	0%	0%

Intersection 3

Pedestrian Crossing/34th Street

Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Through	600	25	3	50	22	75	54	0%	0%
WB	Through	475	25	5	25	23	50	42	0%	0%
SB	Left Turn	150	25	0	25	0	25	0	0%	0%
O										

Intersection 4

172nd Avenue/34th Street

Side-street Stop

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	25	1	25	6	50	10	0%	0%
	Through/Right	475	25	1	25	6	25	18	0%	0%
NB	Shared	450	50	3	75	9	100	16	0%	0%
SB	Shared	75	25	3	25	7	50	8	0%	0%
WB	Left Turn	150	25	4	50	8	50	15	0%	0%
	Through	150	25	0	25	0	25	0	0%	0%
	Through/Right	150	25	0	25	0	25	0	0%	0%

Intersection 5

176th Avenue/34th Street

Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	50	8	100	14	100	23	0%	0%
	Through	825	25	4	50	9	75	20	0%	0%
	Through/Right	825	25	5	75	12	75	22	0%	0%
NB	Left Turn	400	25	4	50	8	75	18	0%	0%
	Through/Right	400	25	4	50	8	75	20	0%	0%
SB	Left Turn	175	75	4	100	10	125	20	0%	0%
	Through/Right	275	50	5	100	15	125	23	0%	0%
WB	Left Turn	100	25	2	25	10	50	28	0%	0%
	Through	325	50	8	100	21	125	37	1%	0%
	Through/Right	325	75	11	125	26	175	44	0%	0%

Intersection 6

177th Avenue/34th Street

Side-street Stop

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	25	2	25	6	50	1	0%	0%
	Through/Right	325	25	0	25	3	25	9	0%	0%
NB	Shared	300	25	3	50	2	50	10	0%	0%
SB	Left/Through	175	25	1	25	3	50	1	0%	0%
	Right Turn	175	25	3	50	6	75	12	0%	0%
WB	Left Turn	175	25	2	25	7	25	2	0%	0%
	Through	175	25	0	25	0	25	0	0%	0%
	Through/Right	175	25	0	25	0	25	0	0%	0%



Intersection 7

Hiddenbrook Drive/34th Street

Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	25	2	25	8	50	14	0%	0%
	Through	1,650	25	5	75	9	75	12	0%	0%
	Through/Right	1,650	25	5	75	8	100	17	0%	0%
NB	Left/Through	250	75	7	125	13	150	23	1%	0%
	Right Turn	125	25	5	50	14	75	38	0%	0%
SB	Left Turn	175	25	3	50	6	50	12	0%	0%
	Through/Right	175	25	3	75	4	75	14	0%	0%
WB	Left Turn	150	25	6	75	11	100	14	0%	0%
	Through	875	25	2	50	9	75	22	0%	0%
	Through/Right	875	25	4	75	9	75	18	0%	0%

Intersection 8

192nd Avenue/34th Street

Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	75	8	125	11	150	21	0%	0%
	Through	450	75	8	125	17	150	32	0%	0%
	Through/Right	450	100	9	175	18	200	37	0%	0%
NB	Left Turn	375	75	6	125	15	150	53	0%	0%
	Through	725	175	8	250	21	275	36	0%	0%
	Right Turn	375	50	2	75	6	75	14	0%	0%
SB	Left Turn	325	125	10	175	25	225	30	0%	0%
	Through	525	150	10	225	10	275	23	0%	0%
	Through/Right	525	125	9	200	17	250	29	0%	0%
WB	Left Turn	175	150	7	225	15	225	1	7%	0%
	Through	425	75	9	175	34	300	61	0%	0%
	Through/Right	425	75	9	125	23	175	63	0%	0%

Intersection 9

196th Avenue/34th Street

Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	25	3	75	5	75	7	0%	0%
	Through	950	25	4	75	9	100	18	0%	0%
	Through/Right	950	50	6	100	7	125	14	0%	0%
NB	Left Turn	75	50	2	75	8	75	13	2%	0%
	Through/Right	175	25	3	50	6	50	21	0%	0%
SB	Left Turn	125	25	3	25	7	50	1	0%	0%
	Through/Right	275	25	2	50	3	50	7	0%	0%
WB	Left Turn	175	25	3	50	5	50	12	0%	0%
	Through	500	75	7	125	12	150	27	0%	0%
	Through/Right	500	50	3	75	8	100	24	0%	0%

Intersection 1 164th Avenue/34th Street Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	25	6	75	15	100	47	0%	0%
	Through	350	50	8	100	18	150	44	0%	0%
	Right Turn	175	50	4	75	15	125	42	0%	0%
NB	Left Turn	400	100	8	150	21	200	64	0%	0%
	Through	700	200	10	300	38	375	63	0%	0%
	Right Turn	700	25	5	75	13	100	21	0%	0%
SB	Left Turn	1,250	125	10	200	15	250	26	0%	0%
	Through	1,025	150	11	225	18	250	26	0%	0%
	Through/Right	1,025	50	7	125	20	175	28	0%	0%
WB	Left Turn	425	225	8	350	22	400	43	0%	0%
	Through	925	50	6	100	10	125	29	0%	0%
	Right Turn	175	50	3	75	5	100	14	0%	0%

Intersection 2 168th Avenue/34th Street Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	25	4	50	16	75	53	0%	0%
	Through/Right	925	75	7	150	25	200	49	0%	0%
NB	Shared	375	25	4	75	7	75	21	0%	0%
SB	Shared	350	50	4	75	3	75	13	0%	0%
WB	Left Turn	125	25	1	25	8	25	17	0%	0%
	Through/Right	600	75	6	150	17	175	45	1%	0%

Intersection 3

Pedestrian Crossing/34th Street

Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Through	600	25	8	100	35	175	77	0%	0%
WB	Through	475	25	7	75	29	125	61	0%	0%
SB	Left Turn	150	25	0	25	0	25	0	0%	0%
O										

Intersection 4

172nd Avenue/34th Street

Side-street Stop

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	25	1	25	6	25	17	0%	0%
	Through/Right	475	25	0	25	5	25	15	0%	0%
NB	Shared	450	50	4	75	10	100	19	0%	0%
SB	Shared	100	25	4	50	4	50	12	0%	0%
WB	Left Turn	150	25	2	25	6	50	0	0%	0%
	Through/Right	825	25	0	25	0	25	10	0%	0%

Intersection 5

176th Avenue/34th Street

Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	25	3	50	6	75	11	0%	0%
	Through/Right	825	50	7	125	16	150	37	0%	0%
NB	Left Turn	400	25	4	50	8	50	15	0%	0%
	Through/Right	400	25	3	50	5	50	11	0%	0%
SB	Left Turn	175	50	4	100	9	100	15	0%	0%
	Through/Right	300	50	4	100	12	125	32	0%	0%
WB	Left Turn	100	25	0	25	5	25	15	0%	0%
	Through/Right	325	50	6	125	9	150	24	2%	0%

Intersection 6

177th Avenue/34th Street

Side-street Stop

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	25	4	50	9	75	18	0%	0%
	Through/Right	325	25	0	25	3	25	7	0%	0%
NB	Shared	325	25	3	50	3	75	8	0%	0%
SB	Left/Through	200	25	1	25	6	25	15	0%	0%
	Right Turn	200	25	2	25	5	50	11	0%	0%
WB	Left Turn	175	25	1	25	6	50	9	0%	0%
	Through/Right	1,650	25	1	25	6	25	17	0%	0%

Intersection 7

Hiddenbrook Drive/34th Street

Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	25	3	75	11	100	27	0%	0%
	Through/Right	1,650	50	7	100	18	150	33	0%	0%
NB	Left/Through	250	50	5	100	10	125	31	0%	0%
	Right Turn	125	25	2	50	4	75	14	0%	0%
SB	Left Turn	175	25	2	25	7	50	10	0%	0%
	Through/Right	175	25	2	50	4	50	7	0%	0%
WB	Left Turn	150	50	5	75	12	100	23	0%	0%
	Through/Right	875	25	3	75	9	125	30	0%	0%

Intersection 8

192nd Avenue/34th Street

Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	50	8	125	24	175	51	0%	0%
	Through/Right	475	125	9	200	28	250	45	3%	0%
NB	Left Turn	375	75	5	125	8	150	18	0%	0%
	Through	750	125	12	200	20	200	32	0%	0%
	Right Turn	375	50	5	100	10	125	23	0%	0%
SB	Left Turn	325	100	12	150	24	200	34	0%	0%
	Through	525	100	9	175	15	200	27	0%	0%
	Through/Right	525	75	10	125	19	175	33	0%	0%
WB	Left Turn	175	100	11	175	17	200	30	1%	0%
	Through/Right	425	100	10	175	23	225	43	2%	0%

Intersection 9

196th Avenue/34th Street

Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	25	2	50	5	50	9	0%	0%
	Through/Right	950	75	6	150	14	200	43	0%	0%
NB	Left Turn	75	50	3	75	6	75	15	1%	0%
	Through/Right	175	25	3	50	9	75	27	0%	0%
SB	Left Turn	125	25	2	50	4	50	12	0%	0%
	Through/Right	275	25	2	50	7	75	26	0%	0%
WB	Left Turn	175	25	5	50	7	50	14	0%	0%
	Through	500	75	7	125	12	150	26	0%	0%
	Right Turn	175	25	1	25	5	50	2	0%	0%

Intersection 1

164th Avenue/34th Street

Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	50	9	100	17	125	27	0%	0%
	Through	350	75	9	150	16	175	43	1%	0%
	Right Turn	175	75	6	100	15	150	36	0%	0%
NB	Left Turn	400	125	14	225	42	300	101	0%	0%
	Through	700	250	15	375	46	450	70	1%	0%
	Right Turn	700	50	6	100	11	125	24	0%	0%
SB	Left Turn	1,250	125	10	225	20	300	23	0%	0%
	Through	1,025	225	10	300	18	350	39	3%	0%
	Through/Right	1,025	125	10	225	11	250	26	0%	0%
WB	Left Turn	425	200	8	300	11	350	17	0%	0%
	Through	925	75	9	125	22	175	65	0%	0%
	Right Turn	175	75	7	100	19	150	42	0%	0%

Intersection 2

168th Avenue/34th Street

Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	50	4	75	11	100	30	0%	0%
	Through/Right	925	75	6	150	14	200	58	1%	0%
NB	Shared	375	50	4	75	7	100	18	0%	0%
SB	Shared	350	50	3	75	11	100	23	0%	0%
WB	Left Turn	125	25	2	25	5	50	1	0%	0%
	Through/Right	600	100	11	200	27	250	35	3%	0%



Intersection 3

Pedestrian Crossing/34th Street

Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Through	600	25	5	50	28	100	72	0%	0%
WB	Through	475	25	7	50	34	100	66	0%	0%
SB	Left Turn	150	25	0	25	0	25	0	0%	0%
O										

Intersection 4

172nd Avenue/34th Street

Side-street Stop

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	25	2	25	6	50	1	0%	0%
	Through/Right	475	25	1	25	9	25	24	0%	0%
NB	Shared	450	50	3	75	7	100	28	0%	0%
SB	Shared	100	25	1	25	3	50	0	0%	0%
WB	Left Turn	150	25	5	50	11	75	19	0%	0%
	Through/Right	150	25	0	25	0	25	0	0%	0%

Intersection 5

176th Avenue/34th Street

Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	50	5	100	17	125	40	0%	0%
	Through/Right	825	50	6	100	23	150	40	0%	0%
NB	Left Turn	400	25	1	50	4	50	10	0%	0%
	Through/Right	400	25	3	50	5	50	12	0%	0%
SB	Left Turn	175	75	6	100	13	150	27	0%	0%
	Through/Right	300	50	6	100	16	125	32	0%	0%
WB	Left Turn	100	25	2	25	10	50	28	0%	0%
	Through/Right	325	100	16	200	32	250	45	5%	0%

Intersection 6

177th Avenue/34th Street

Side-street Stop

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	25	1	25	4	50	6	0%	0%
	Through/Right	325	25	0	25	2	25	5	0%	0%
NB	Shared	325	25	3	50	3	50	11	0%	0%
SB	Left/Through	200	25	2	25	7	25	9	0%	0%
	Right Turn	200	25	2	50	9	75	18	0%	0%
WB	Left Turn	175	25	2	25	7	50	9	0%	0%

Intersection 7

Hiddenbrook Drive/34th Street

Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	25	1	25	4	50	10	0%	0%
	Through/Right	1,650	75	9	150	24	200	46	0%	0%
NB	Left/Through	250	75	3	150	11	175	30	2%	0%
	Right Turn	125	25	3	75	11	75	39	0%	0%
SB	Left Turn	175	25	5	50	10	75	16	0%	0%
	Through/Right	175	25	3	75	4	75	12	0%	0%
WB	Left Turn	150	50	5	75	9	75	13	0%	0%
	Through/Right	875	50	6	100	18	150	32	0%	0%

Intersection 8

192nd Avenue/34th Street

Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	75	11	175	26	225	23	0%	0%
	Through/Right	475	175	11	275	18	300	35	10%	0%
NB	Left Turn	375	75	9	125	13	175	27	0%	0%
	Through	750	175	10	275	19	300	34	0%	0%
	Right Turn	375	50	4	75	7	75	15	0%	0%
SB	Left Turn	325	125	5	200	19	250	66	0%	0%
	Through	525	150	11	250	15	300	38	0%	0%
	Through/Right	525	125	10	200	19	275	50	0%	0%
WB	Left Turn	175	150	10	250	11	225	1	9%	0%
	Through/Right	425	150	17	275	29	350	55	5%	0%

Intersection 9

196th Avenue/34th Street

Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	25	3	50	4	75	10	0%	0%
	Through/Right	950	75	8	125	14	175	29	0%	0%
NB	Left Turn	75	50	3	75	3	75	9	1%	0%
	Through/Right	175	25	2	50	3	50	11	0%	0%
SB	Left Turn	125	25	2	25	5	50	1	0%	0%
	Through/Right	275	25	2	25	4	50	10	0%	0%
WB	Left Turn	175	25	2	50	4	50	11	0%	0%
	Through	500	75	9	175	29	225	58	1%	0%
	Right Turn	175	25	2	25	7	50	10	0%	0%

Intersection 1

164th Avenue/34th Street

Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	25	7	75	14	75	26	0%	0%
	Through	350	75	7	125	19	150	39	0%	0%
	Right Turn	350	50	3	100	6	125	12	0%	0%
NB	Left Turn	400	100	11	175	25	200	43	0%	0%
	Through	875	200	15	300	15	325	28	0%	0%
	Right Turn	875	75	4	100	8	100	11	0%	0%
SB	Left Turn	1,250	125	8	225	13	250	35	0%	0%
	Through	1,175	150	9	225	13	275	42	0%	0%
	Through/Right	1,175	50	11	125	24	175	26	0%	0%
WB	Left Turn	925	150	7	200	15	225	38	0%	0%
	Through	925	75	8	125	15	150	29	0%	0%
	Right Turn	175	50	4	75	9	100	22	0%	0%

Intersection 2

168th Avenue/34th Street

Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	25	3	50	6	75	15	0%	0%
	Through	925	50	4	75	10	100	23	0%	0%
	Through/Right	925	50	4	75	11	125	28	0%	0%
NB	Shared	375	50	3	75	10	100	22	0%	0%
SB	Shared	350	50	3	75	6	75	15	0%	0%
WB	Left Turn	125	25	3	25	6	50	8	0%	0%
	Through	600	50	8	100	15	125	28	0%	0%
	Through/Right	600	25	4	75	10	100	20	0%	0%

Intersection 3

Pedestrian Crossing/34th Street

Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Through	600	25	4	50	17	100	31	0%	0%
WB	Through	475	25	4	50	14	100	22	0%	0%
SB	Left Turn	150	25	0	25	0	25	0	0%	0%
O										

Intersection 4

172nd Avenue/34th Street

Side-street Stop

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	25	1	25	7	50	13	0%	0%
	Through	475	25	1	25	9	25	27	0%	0%
	Through/Right	475	25	1	25	14	25	38	0%	0%
NB	Shared	450	50	4	75	9	100	22	0%	0%
SB	Shared	75	25	3	50	3	50	9	0%	0%
WB	Left Turn	150	25	2	25	5	50	2	0%	0%
	Through	150	25	0	25	0	25	0	0%	0%
	Through/Right	150	25	0	25	0	25	0	0%	0%

Intersection 5

176th Avenue/34th Street

Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	25	3	50	8	75	22	0%	0%
	Through	825	25	4	75	9	100	16	0%	0%
	Through/Right	825	25	4	75	15	100	28	0%	0%
NB	Left Turn	400	25	3	75	5	75	18	0%	0%
	Through/Right	400	25	6	75	11	100	19	0%	0%
SB	Left Turn	175	75	5	100	12	125	25	0%	0%
	Through/Right	275	75	6	125	12	175	28	0%	0%
WB	Left Turn	100	25	2	25	5	50	8	0%	0%
	Through	325	25	4	50	9	75	19	0%	0%
	Through/Right	325	50	5	75	10	100	26	0%	0%

Intersection 6

177th Avenue/34th Street

Side-street Stop

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	25	4	50	11	75	24	0%	0%
	Through	175	25	0	25	0	25	0	0%	0%
	Through/Right	175	25	0	25	0	25	0	0%	0%
NB	Shared	300	50	3	75	5	75	8	0%	0%
SB	Left/Through	175	25	2	25	3	50	9	0%	0%
	Right Turn	175	25	2	50	4	50	14	0%	0%
WB	Left Turn	175	25	1	25	4	25	8	0%	0%
	Through/Right	1,650	25	0	25	3	25	9	0%	0%

Intersection 7

Hiddenbrook Drive/34th Street

Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	50	6	75	12	100	20	0%	0%
	Through	1,650	25	4	75	12	100	27	0%	0%
	Through/Right	1,650	25	3	75	7	100	22	0%	0%
NB	Left/Through	250	75	7	125	13	125	20	1%	0%
	Right Turn	125	25	3	50	6	75	20	0%	0%
SB	Left Turn	175	25	5	50	9	50	11	0%	0%
	Through/Right	175	25	3	50	6	50	0	0%	0%
WB	Left Turn	150	25	5	75	9	75	14	0%	0%
	Through	875	25	3	50	9	50	19	0%	0%
	Through/Right	875	25	4	50	10	75	23	0%	0%

Intersection 8

192nd Avenue/34th Street

Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	50	8	100	16	125	18	0%	0%
	Through	450	50	4	100	8	125	20	0%	0%
	Through/Right	450	75	4	125	14	150	29	0%	0%
NB	Left Turn	375	50	5	100	10	125	21	0%	0%
	Through	875	125	9	200	16	225	19	0%	0%
	Right Turn	375	75	5	125	12	150	30	0%	0%
SB	Left Turn	325	100	10	150	24	175	31	0%	0%
	Through	625	100	9	175	13	200	26	0%	0%
	Through/Right	625	75	9	150	14	175	21	0%	0%
WB	Left Turn	175	100	7	175	20	200	28	1%	0%
	Through	425	50	5	100	22	125	70	0%	0%
	Through/Right	425	50	6	100	12	125	22	0%	0%



Intersection 9

196th Avenue/34th Street

Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	25	3	50	6	50	12	0%	0%
	Through	950	50	7	100	11	125	26	0%	0%
	Through/Right	950	75	4	125	12	125	27	0%	0%
NB	Left Turn	75	50	4	75	8	75	17	1%	0%
	Through/Right	175	25	4	50	9	75	22	0%	0%
SB	Left Turn	125	25	2	75	4	75	13	0%	0%
	Through/Right	275	25	4	50	6	75	18	0%	0%
WB	Left Turn	175	25	4	75	6	75	13	0%	0%
	Through	500	50	7	100	13	125	41	0%	0%
	Through/Right	500	50	6	100	12	125	23	0%	0%

Intersection 1

164th Avenue/34th Street

Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	50	28	100	59	150	76	0%	0%
	Through	350	100	11	150	17	200	34	1%	0%
	Right Turn	350	75	5	100	14	125	25	0%	0%
NB	Left Turn	400	150	13	250	24	300	68	0%	0%
	Through	875	275	13	400	37	450	67	1%	0%
	Right Turn	875	75	6	125	19	150	35	0%	0%
SB	Left Turn	1,250	150	10	250	18	300	25	1%	0%
	Through	1,175	225	10	325	18	350	33	4%	0%
	Through/Right	1,175	150	12	250	14	275	33	0%	0%
WB	Left Turn	925	125	9	175	18	200	34	0%	0%
	Through	925	125	14	225	37	275	103	2%	0%
	Right Turn	175	75	8	150	18	200	3	0%	0%

Intersection 2

168th Avenue/34th Street

Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	50	3	75	6	100	9	0%	0%
	Through	925	50	5	100	12	125	26	0%	0%
	Through/Right	925	50	5	100	13	125	32	0%	0%
NB	Shared	375	50	4	75	8	100	13	0%	0%
SB	Shared	350	50	3	75	9	100	25	0%	0%
WB	Left Turn	125	25	1	25	4	50	1	0%	0%
	Through	600	50	8	100	16	150	28	0%	0%
	Through/Right	600	75	6	125	17	175	38	0%	0%

Intersection 3

Pedestrian Crossing/34th Street

Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Through	600	25	5	50	27	100	65	0%	0%
WB	Through	475	25	5	50	27	100	54	0%	0%
SB	Left Turn	150	25	0	25	0	25	0	0%	0%
O										

Intersection 4

172nd Avenue/34th Street

Side-street Stop

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	25	2	25	4	50	1	0%	0%
	Through/Right	475	25	1	25	6	25	15	0%	0%
NB	Shared	450	50	3	100	7	125	21	0%	0%
SB	Shared	75	25	2	75	3	75	11	0%	0%
WB	Left Turn	150	25	3	50	5	50	11	0%	0%
	Through/Right	825	25	0	25	3	25	8	0%	0%

Intersection 5

176th Avenue/34th Street

Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	50	6	100	10	125	25	0%	0%
	Through	825	25	4	75	10	100	20	0%	0%
	Through/Right	825	25	4	75	7	100	18	0%	0%
NB	Left Turn	400	25	4	75	8	75	16	0%	0%
	Through/Right	400	25	5	50	8	75	21	0%	0%
SB	Left Turn	175	75	5	125	10	150	18	0%	0%
	Through/Right	275	50	5	100	14	125	33	0%	0%
WB	Left Turn	100	25	2	25	7	50	7	0%	0%
	Through	325	50	8	125	17	150	33	2%	0%
	Through/Right	325	75	7	175	14	200	23	0%	0%

Intersection 6

177th Avenue/34th Street

Side-street Stop

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	25	2	50	4	50	10	0%	0%
	Through/Right	325	25	1	25	6	25	16	0%	0%
NB	Shared	300	50	3	75	5	75	13	0%	0%
SB	Left/Through	175	25	2	50	4	50	0	0%	0%
	Right Turn	175	25	4	50	8	75	16	0%	0%
WB	Left Turn	175	25	2	25	5	50	15	0%	0%
	Through/Right	1,650	25	0	25	3	25	7	0%	0%

Intersection 7

Hiddenbrook Drive/34th Street

Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	25	3	50	6	50	9	0%	0%
	Through	1,650	25	5	75	11	100	21	0%	0%
	Through/Right	1,650	50	6	100	12	125	22	0%	0%
NB	Left/Through	250	100	9	175	28	200	44	3%	0%
	Right Turn	125	50	5	75	20	125	60	0%	0%
SB	Left Turn	175	25	2	50	4	75	11	0%	0%
	Through/Right	175	25	3	75	5	75	13	0%	0%
WB	Left Turn	150	50	5	75	12	100	21	0%	0%
	Through	875	25	7	75	17	100	27	0%	0%
	Through/Right	875	50	6	75	16	125	27	0%	0%

Intersection 8

192nd Avenue/34th Street

Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	75	7	125	12	150	19	0%	0%
	Through	450	75	5	125	10	150	25	0%	0%
	Through/Right	450	100	6	175	16	175	26	0%	0%
NB	Left Turn	375	75	5	125	11	150	36	0%	0%
	Through	875	175	8	275	19	300	48	0%	0%
	Right Turn	375	50	3	75	6	75	7	0%	0%
SB	Left Turn	325	125	13	200	24	250	23	0%	0%
	Through	625	150	11	250	19	275	41	0%	0%
	Through/Right	625	150	12	225	16	250	40	0%	0%
WB	Left Turn	175	150	9	225	9	225	1	10%	0%
	Through	425	100	16	200	43	325	44	0%	0%
	Through/Right	425	100	9	175	21	250	70	0%	0%

Intersection 9

196th Avenue/34th Street

Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	25	4	75	6	75	18	0%	0%
	Through	950	50	6	75	13	100	18	0%	0%
	Through/Right	950	50	7	100	12	125	22	0%	0%
NB	Left Turn	75	50	4	75	7	75	10	2%	0%
	Through/Right	175	25	4	50	7	75	23	0%	0%
SB	Left Turn	125	25	3	50	6	50	15	0%	0%
	Through/Right	275	25	2	50	3	75	13	0%	0%
WB	Left Turn	175	25	2	50	3	50	9	0%	0%
	Through	500	75	8	125	14	150	24	0%	0%
	Through/Right	500	50	5	100	10	125	23	0%	0%

Intersection 1

164th Avenue/34th Street

Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	25	4	75	7	75	12	0%	0%
	Through	350	75	6	125	11	150	19	0%	0%
	Right Turn	350	50	6	100	13	125	28	0%	0%
WB	Left Turn	425	225	19	375	40	400	61	1%	0%
	Through	925	75	12	150	64	225	175	0%	0%
	Right Turn	200	50	3	75	14	125	48	0%	0%
NB	Left Turn	1,400	100	13	150	25	175	34	0%	0%
	Through	700	225	15	325	23	400	51	0%	0%
	Right Turn	700	50	3	75	10	100	21	0%	0%
SB	Left Turn	250	125	10	200	22	250	38	0%	0%
	Through	1,025	175	16	250	19	300	37	1%	0%
	Through/Right	1,025	75	13	150	31	200	36	0%	0%

Intersection 2

168th Avenue/34th Street

Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	25	3	50	6	75	13	0%	0%
	Through/Right	925	75	9	150	20	200	43	0%	0%
WB	Through/Right	600	25	12	50	26	50	30	0%	0%
NB	Shared	375	75	15	150	35	200	72	1%	0%
SB	Shared	350	50	4	75	7	75	14	0%	0%

Intersection 3

Pedestrian Crossing/34th Street

Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Through	600	25	6	75	24	150	36	0%	0%
WB	Through	475	25	10	75	34	150	55	0%	0%
0										
0										

Intersection 4

172nd Avenue/34th Street

Side-street Stop

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	25	3	25	10	50	15	0%	0%
WB	Left Turn	150	25	4	25	11	50	11	0%	0%
NB	Shared	450	50	22	50	28	75	29	0%	0%
SB	Shared	100	50	16	75	17	75	19	0%	0%



Intersection 5

176th Avenue/34th Street

Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	25	4	75	7	75	11	0%	0%
	Through/Right	825	50	6	125	20	175	58	0%	0%
WB	Left Turn	100	25	3	25	8	50	10	0%	0%
	Through/Right	325	75	8	125	16	175	29	3%	0%
NB	Left Turn	400	25	4	75	10	75	24	0%	0%
	Through/Right	400	25	4	75	10	100	14	0%	0%
SB	Left Turn	175	50	5	100	12	150	31	0%	0%
	Through/Right	300	75	7	125	23	150	53	0%	0%

Intersection 6

177th Avenue/34th Street

Side-street Stop

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	25	4	50	8	75	19	0%	0%
WB	Left Turn	175	25	8	25	12	50	10	0%	0%
NB	Shared	325	25	13	50	19	75	19	0%	0%
SB	Left/Through	200	25	10	50	13	50	18	0%	0%
	Right Turn	200	25	6	50	12	50	19	0%	0%

Intersection 7

Hiddenbrook Drive/34th Street

Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	50	4	75	7	100	14	0%	0%
	Through/Right	1,650	50	5	100	12	150	32	0%	0%
WB	Left Turn	150	25	2	75	6	100	21	0%	0%
	Through/Right	875	50	7	100	18	150	28	0%	0%
NB	Left/Through	250	75	11	125	21	150	22	1%	0%
	Right Turn	125	25	3	50	6	75	14	0%	0%
SB	Left Turn	175	25	5	50	8	50	11	0%	0%
	Through/Right	175	25	3	50	5	50	10	0%	0%

Intersection 8

192nd Avenue/34th Street

Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	50	8	125	26	200	54	0%	0%
	Through/Right	475	150	13	250	34	275	49	6%	0%
WB	Left Turn	175	100	11	200	22	225	16	2%	0%
	Through/Right	425	100	10	200	21	250	39	2%	0%
NB	Left Turn	375	75	8	125	14	150	18	0%	0%
	Through	750	150	8	225	16	250	37	0%	0%
	Right Turn	375	75	6	100	13	125	24	0%	0%
SB	Left Turn	325	100	14	175	23	200	36	0%	0%
	Through	525	125	7	200	18	225	35	0%	0%
	Through/Right	525	75	8	150	17	200	33	0%	0%

Intersection 9

196th Avenue/34th Street

Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	25	2	50	13	75	51	0%	0%
	Through/Right	950	100	8	175	18	225	54	1%	0%
WB	Left Turn	175	25	3	75	6	75	15	0%	0%
	Through/Right	500	75	7	150	17	200	53	0%	0%
NB	Left Turn	75	50	4	75	4	75	11	2%	0%
	Through/Right	175	25	3	50	7	75	18	0%	0%
SB	Left Turn	125	25	3	50	3	75	5	0%	0%
	Through/Right	275	25	4	75	6	75	15	0%	0%

Intersection 1

164th Avenue/34th Street

Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	75	8	125	15	150	30	0%	0%
	Through	350	100	8	175	17	200	26	1%	0%
	Right Turn	350	75	2	100	10	125	25	0%	0%
WB	Left Turn	425	225	12	325	22	350	33	0%	0%
	Through	925	125	8	200	23	250	66	2%	0%
	Right Turn	200	75	9	150	21	200	4	0%	0%
NB	Left Turn	1,400	200	28	425	53	450	0	0%	0%
	Through	700	425	34	600	70	675	75	13%	1%
	Right Turn	700	75	15	175	84	300	266	0%	0%
SB	Left Turn	250	125	12	250	24	300	8	0%	0%
	Through	1,025	250	13	350	21	400	36	7%	0%
	Through/Right	1,025	150	11	275	14	300	34	0%	0%

Intersection 2

168th Avenue/34th Street

Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	50	9	100	27	175	53	0%	0%
	Through/Right	925	100	9	175	26	250	48	1%	0%
WB	Left Turn	125	25	2	50	12	75	41	0%	0%
	Through/Right	600	125	13	225	32	300	62	4%	0%
NB	Shared	375	50	6	75	10	100	19	0%	0%
SB	Shared	350	50	3	100	7	125	20	0%	0%

Intersection 3

Pedestrian Crossing/34th Street

Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Through	600	25	5	50	27	100	46	0%	0%
WB	Through	475	25	5	75	35	150	98	0%	0%
0										
0										

Intersection 4

172nd Avenue/34th Street

Side-street Stop

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	25	3	50	8	50	12	0%	0%
WB	Left Turn	150	25	9	50	21	75	27	0%	0%
NB	Shared	450	50	14	75	16	75	20	0%	0%
SB	Shared	100	50	14	75	18	100	28	0%	0%

Intersection 5

176th Avenue/34th Street

Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	75	7	125	16	150	34	0%	0%
	Through/Right	825	50	8	125	16	175	36	0%	0%
WB	Left Turn	100	25	4	50	16	100	44	0%	0%
	Through/Right	325	125	15	250	33	300	28	9%	0%
NB	Left Turn	400	25	4	75	6	75	11	0%	0%
	Through/Right	400	25	4	50	9	75	14	0%	0%
SB	Left Turn	175	75	5	125	11	150	13	0%	0%
	Through/Right	300	75	7	100	14	150	24	0%	0%

Intersection 6

177th Avenue/34th Street

Side-street Stop

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	25	4	50	9	50	11	0%	0%
	Through/Right	1,650	25	11	25	12	50	21	0%	0%
WB	Left Turn	175	25	4	25	12	50	21	0%	0%
	Through/Right	1,650	25	11	50	17	75	40	0%	0%
NB	Shared	325	25	10	50	11	75	36	0%	0%
	Through/Right	325	25	10	50	11	75	36	0%	0%
SB	Left/Through	200	25	9	50	14	75	24	0%	0%
	Right Turn	200	25	12	50	25	50	33	0%	0%

Intersection 7

Hiddenbrook Drive/34th Street

Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	25	20	50	43	75	64	0%	0%
	Through/Right	1,650	75	12	150	34	200	68	1%	0%
WB	Left Turn	150	50	5	75	13	100	31	0%	0%
	Through/Right	875	75	12	150	18	200	28	2%	0%
NB	Left/Through	250	100	25	150	42	200	54	5%	0%
	Right Turn	125	50	7	75	18	150	50	0%	0%
SB	Left Turn	175	25	3	75	5	75	12	0%	0%
	Through/Right	175	25	10	75	19	75	23	0%	0%

Intersection 8

192nd Avenue/34th Street

Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	100	13	200	30	225	1	0%	0%
	Through/Right	475	175	16	325	36	375	61	13%	0%
WB	Left Turn	175	175	10	275	7	225	0	16%	0%
	Through/Right	425	225	40	375	76	425	45	13%	2%
NB	Left Turn	375	100	14	175	36	225	72	0%	0%
	Through	750	225	15	300	27	350	42	0%	0%
	Right Turn	375	50	3	75	8	100	20	0%	0%
SB	Left Turn	325	150	13	225	33	275	41	0%	0%
	Through	525	175	12	275	22	325	38	0%	0%
	Through/Right	525	150	10	250	21	275	40	0%	0%

Intersection 9

196th Avenue/34th Street

Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	50	4	75	14	100	58	0%	0%
	Through/Right	950	100	10	175	20	200	43	1%	0%
WB	Left Turn	175	25	5	50	15	75	51	0%	0%
	Through/Right	500	125	6	200	24	275	71	2%	0%
NB	Left Turn	75	50	4	75	6	100	12	2%	0%
	Through/Right	175	25	3	50	5	50	24	0%	0%
SB	Left Turn	125	25	4	50	9	50	10	0%	0%
	Through/Right	275	25	3	50	5	50	16	0%	0%



Intersection 1

164th Avenue/34th Street

Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	50	4	75	11	100	24	0%	0%
	Through	350	75	6	125	11	150	27	0%	0%
	Right Turn	350	75	3	100	10	125	32	0%	0%
NB	Left Turn	400	100	16	175	51	225	121	0%	0%
	Through	875	250	23	375	42	450	81	1%	0%
	Right Turn	875	100	10	175	21	225	29	0%	0%
SB	Left Turn	1,250	150	11	250	21	275	37	1%	0%
	Through	1,175	175	15	250	18	325	49	1%	0%
	Through/Right	1,175	75	14	175	26	200	30	0%	0%
WB	Left Turn	925	175	11	250	15	275	29	0%	0%
	Through	925	75	7	150	17	200	49	0%	0%
	Right Turn	175	50	5	100	17	150	59	0%	0%

Intersection 2

168th Avenue/34th Street

Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	25	3	75	7	75	14	0%	0%
	Through	925	50	7	125	14	150	27	0%	0%
	Through/Right	925	50	8	100	20	150	40	0%	0%
NB	Shared	375	50	5	75	14	100	39	0%	0%
SB	Shared	350	50	6	75	12	100	28	0%	0%
WB	Left Turn	125	25	3	50	8	50	1	0%	0%
	Through	600	50	7	125	16	125	37	0%	0%
	Through/Right	600	50	5	100	11	125	28	0%	0%

Intersection 3

Pedestrian Crossing/34th Street

Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Through	600	25	3	50	14	125	29	0%	0%
WB	Through	475	25	4	75	14	125	33	0%	0%
SB	Left Turn	150	25	0	25	0	25	0	0%	0%
0										

Intersection 4

172nd Avenue/34th Street

Side-street Stop

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	25	3	25	10	50	17	0%	0%
	Through	475	25	0	25	3	25	12	0%	0%
	Through/Right	150	25	0	25	0	25	0	0%	0%
NB	Shared	450	75	7	100	23	150	30	0%	0%
SB	Shared	75	25	4	50	3	50	12	0%	0%
WB	Left Turn	150	25	4	50	7	50	17	0%	0%
	Through/Right	825	25	0	25	3	25	7	0%	0%

Intersection 5

176th Avenue/34th Street

Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	50	6	100	11	125	26	0%	0%
	Through	825	50	8	100	17	125	31	0%	0%
	Through/Right	825	50	7	75	19	100	37	0%	0%
NB	Left Turn	400	25	4	75	7	75	14	0%	0%
	Through/Right	400	25	5	75	10	100	26	0%	0%
SB	Left Turn	175	75	6	125	11	150	31	0%	0%
	Through/Right	275	75	5	125	19	175	53	0%	0%
WB	Left Turn	100	25	1	25	2	50	1	0%	0%
	Through	325	50	5	75	10	100	19	1%	0%
	Through/Right	325	50	4	100	9	125	24	0%	0%

Intersection 6

177th Avenue/34th Street

Side-street Stop

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	50	2	75	5	100	19	0%	0%
	Through	325	25	1	25	6	25	17	0%	0%
	Through/Right	150	25	0	25	0	25	0	0%	0%
NB	Shared	300	50	3	75	5	75	7	0%	0%
SB	Left/Through	175	25	3	50	7	75	18	0%	0%
	Right Turn	175	50	2	75	5	75	15	0%	0%
WB	Left Turn	175	25	2	25	6	25	8	0%	0%
	Through/Right	1,650	25	1	25	6	25	18	0%	0%

Intersection 7

Hiddenbrook Drive/34th Street

Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	100	14	150	26	175	23	1%	0%
	Through	1,650	25	3	75	13	100	34	0%	0%
	Through/Right	1,650	50	8	100	17	150	31	0%	0%
NB	Left/Through	250	100	9	175	14	200	23	7%	0%
	Right Turn	125	50	5	75	23	150	60	0%	0%
SB	Left Turn	175	50	6	100	11	150	14	0%	0%
	Through/Right	175	75	4	100	13	150	28	0%	0%
WB	Left Turn	150	50	5	75	9	100	18	0%	0%
	Through	875	25	4	75	11	100	22	0%	0%
	Through/Right	875	50	5	100	10	150	22	0%	0%

Intersection 8

192nd Avenue/34th Street

Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	75	5	125	11	125	17	0%	0%
	Through	450	75	8	125	10	175	19	0%	0%
	Through/Right	450	100	6	175	11	175	23	0%	0%
NB	Left Turn	375	100	8	150	23	175	40	0%	0%
	Through	875	150	15	250	24	275	27	0%	0%
	Right Turn	375	75	4	125	13	150	27	0%	0%
SB	Left Turn	325	125	15	200	26	225	16	0%	0%
	Through	625	125	10	225	18	250	38	0%	0%
	Through/Right	625	100	12	200	22	225	49	0%	0%
WB	Left Turn	175	100	8	175	17	200	23	2%	0%
	Through	425	75	5	125	18	175	57	0%	0%
	Through/Right	425	100	9	150	14	175	19	0%	0%

Intersection 9

196th Avenue/34th Street

Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	25	4	50	7	50	11	0%	0%
	Through	950	50	4	100	10	150	17	0%	0%
	Through/Right	950	75	6	125	14	150	24	0%	0%
NB	Left Turn	75	50	2	75	6	75	10	2%	0%
	Through/Right	175	25	3	50	9	75	32	0%	0%
SB	Left Turn	125	25	4	50	6	75	15	0%	0%
	Through/Right	275	50	3	75	8	75	24	0%	0%
WB	Left Turn	175	25	4	75	8	75	24	0%	0%
	Through	500	75	9	125	19	150	30	0%	0%
	Through/Right	500	50	8	100	23	150	53	0%	0%

Intersection 1

164th Avenue/34th Street

Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	50	38	100	72	150	88	0%	0%
	Through	350	100	6	175	15	200	37	1%	0%
	Right Turn	350	75	9	125	23	175	44	0%	0%
NB	Left Turn	400	225	50	425	101	450	68	0%	0%
	Through	875	475	69	700	134	775	137	18%	1%
	Right Turn	875	125	40	250	167	375	280	0%	1%
SB	Left Turn	1,250	200	15	325	23	300	1	3%	0%
	Through	1,175	300	18	400	31	475	81	12%	0%
	Through/Right	1,175	200	14	325	23	350	33	0%	0%
WB	Left Turn	925	200	11	275	19	300	34	0%	0%
	Through	925	125	18	225	46	325	117	3%	0%
	Right Turn	175	100	11	175	23	200	1	0%	0%

Intersection 2

168th Avenue/34th Street

Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	50	4	100	10	100	20	0%	0%
	Through	925	50	7	100	15	150	23	0%	0%
	Through/Right	925	75	6	125	9	150	27	0%	0%
NB	Shared	375	50	5	100	14	125	37	0%	0%
SB	Shared	350	50	4	100	10	100	13	0%	0%
WB	Left Turn	125	25	2	50	5	50	16	0%	0%
	Through	600	75	8	175	33	225	63	1%	0%
	Through/Right	600	75	14	150	32	200	45	0%	0%

Intersection 3

Pedestrian Crossing/34th Street

Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Through	600	25	4	50	18	100	44	0%	0%
WB	Through	475	25	4	50	22	100	46	0%	0%
SB	Left Turn	150	25	0	25	0	25	0	0%	0%
0										

Intersection 4

172nd Avenue/34th Street

Side-street Stop

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	25	3	50	5	50	11	0%	0%
	Through	475	25	0	25	3	25	8	0%	0%
	Through/Right	475	25	1	25	7	25	18	0%	0%
NB	Shared	450	75	8	100	17	125	26	0%	0%
SB	Shared	75	25	3	50	5	50	12	0%	0%
WB	Left Turn	150	25	2	50	5	75	12	0%	0%
	Through/Right	825	25	0	25	3	25	8	0%	0%

Intersection 5

176th Avenue/34th Street

Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	75	6	125	13	150	21	0%	0%
	Through	825	50	6	75	11	125	34	0%	0%
	Through/Right	825	50	5	75	10	125	23	0%	0%
NB	Left Turn	400	25	2	50	5	75	10	0%	0%
	Through/Right	400	25	3	75	6	75	12	0%	0%
SB	Left Turn	175	75	7	125	14	150	30	0%	0%
	Through/Right	275	75	7	125	18	175	33	0%	0%
WB	Left Turn	100	25	3	50	10	75	35	0%	0%
	Through	325	100	14	175	27	225	45	6%	0%
	Through/Right	325	125	13	225	28	250	39	0%	0%

Intersection 6

177th Avenue/34th Street

Side-street Stop

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	25	2	50	5	75	11	0%	0%
	Through/Right	325	25	0	25	2	25	7	0%	0%
NB	Shared	300	50	4	75	6	75	9	0%	0%
SB	Left/Through	175	50	3	75	7	100	20	0%	0%
	Right Turn	175	75	6	100	12	125	26	0%	0%
WB	Left Turn	175	25	2	50	8	50	16	0%	0%
	Through/Right	1,650	25	1	25	4	25	12	0%	0%



Intersection 7

Hiddenbrook Drive/34th Street

Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	50	5	100	9	100	10	0%	0%
	Through	1,650	50	3	100	5	125	17	0%	0%
	Through/Right	1,650	75	6	125	14	150	29	0%	0%
NB	Left/Through	250	100	11	175	21	225	34	6%	0%
	Right Turn	125	50	6	75	24	150	56	0%	0%
SB	Left Turn	175	125	7	175	11	200	11	0%	2%
	Through/Right	175	100	8	175	12	200	15	0%	3%
WB	Left Turn	150	50	5	75	10	100	19	0%	0%
	Through	875	50	8	125	14	150	31	0%	0%
	Through/Right	875	75	7	125	14	150	18	0%	0%

Intersection 8

192nd Avenue/34th Street

Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	100	6	175	12	200	26	1%	0%
	Through	450	125	8	200	16	225	33	1%	0%
	Through/Right	450	175	12	250	22	300	44	0%	0%
NB	Left Turn	375	100	8	175	18	200	57	0%	0%
	Through	875	250	16	350	34	375	49	0%	0%
	Right Turn	375	50	5	100	9	125	22	0%	0%
SB	Left Turn	325	175	18	250	21	300	65	0%	0%
	Through	625	225	11	325	18	375	60	1%	0%
	Through/Right	625	200	10	300	33	350	65	0%	0%
WB	Left Turn	175	175	15	250	14	225	0	21%	0%
	Through	425	125	40	300	82	375	46	0%	1%
	Through/Right	425	125	24	225	60	300	91	0%	0%

Intersection 9

196th Avenue/34th Street

Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	25	4	75	5	75	11	0%	0%
	Through	950	50	8	100	12	125	17	0%	0%
	Through/Right	950	75	7	125	14	150	18	0%	0%
NB	Left Turn	75	50	5	75	6	100	10	4%	0%
	Through/Right	175	25	5	50	7	75	20	0%	0%
SB	Left Turn	125	25	3	50	7	50	6	0%	0%
	Through/Right	275	25	2	50	5	50	15	0%	0%
WB	Left Turn	175	25	3	75	3	75	9	0%	0%
	Through	500	100	8	150	19	200	35	1%	0%
	Through/Right	500	50	7	100	13	150	18	0%	0%

Intersection 1

164th Avenue/34th Street

Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	50	5	75	12	100	29	0%	0%
	Through	350	75	6	125	11	150	23	0%	0%
	Right Turn	350	75	6	100	16	150	30	0%	0%
NB	Left Turn	400	100	11	200	51	350	130	0%	0%
	Through	700	300	23	450	51	500	63	3%	0%
	Right Turn	700	75	8	150	21	175	37	0%	0%
SB	Left Turn	1,250	175	18	275	36	275	33	4%	0%
	Through	1,025	225	18	350	54	400	107	3%	0%
	Through/Right	1,025	125	9	225	23	250	42	0%	0%
WB	Left Turn	425	300	21	450	37	475	28	3%	0%
	Through	925	100	20	250	105	475	221	0%	0%
	Right Turn	175	50	2	75	10	100	37	0%	0%

Intersection 2

168th Avenue/34th Street

Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	25	6	75	24	150	77	0%	0%
	Through/Right	925	125	6	225	18	275	31	2%	0%
NB	Shared	375	50	5	75	11	125	33	0%	0%
SB	Shared	350	50	5	75	8	100	15	0%	0%
WB	Left Turn	125	25	4	50	14	75	42	0%	0%
	Through/Right	600	125	11	200	27	275	57	3%	0%

Intersection 3

Pedestrian Crossing/34th Street

Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Through	600	50	10	150	36	250	65	0%	0%
WB	Through	475	25	8	125	22	225	45	0%	0%
SB	Left Turn	150	25	0	25	0	25	0	0%	0%
O										

Intersection 4

172nd Avenue/34th Street

Side-street Stop

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	25	2	25	8	50	18	0%	0%
	Through/Right	475	25	1	25	11	50	32	0%	0%
NB	Shared	450	75	8	125	28	150	52	0%	0%
SB	Shared	100	25	2	75	5	75	11	0%	0%
WB	Left Turn	150	25	3	50	7	75	23	0%	0%
	Through/Right	825	25	1	25	11	25	32	0%	0%

Intersection 5

176th Avenue/34th Street

Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	50	4	100	20	150	48	0%	0%
	Through/Right	825	100	11	200	26	250	61	1%	0%
NB	Left Turn	400	25	6	50	10	75	11	0%	0%
	Through/Right	400	50	4	75	9	100	20	0%	0%
SB	Left Turn	175	75	8	125	15	125	21	0%	0%
	Through/Right	300	75	5	125	10	150	20	0%	0%
WB	Left Turn	100	25	3	50	15	75	45	0%	0%
	Through/Right	325	100	8	175	14	200	28	5%	0%

Intersection 6

177th Avenue/34th Street

Side-street Stop

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	50	5	75	13	100	25	0%	0%
	Through/Right	325	25	1	25	8	25	24	0%	0%
NB	Shared	325	50	3	75	5	75	15	0%	0%
SB	Left/Through	200	25	3	50	7	75	21	0%	0%
	Right Turn	200	50	3	50	6	75	14	0%	0%
WB	Left Turn	175	25	2	25	6	50	7	0%	0%
	Through/Right	1,650	25	1	25	10	25	29	0%	0%

Intersection 7

Hiddenbrook Drive/34th Street

Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	100	7	150	14	175	23	0%	0%
	Through/Right	1,650	100	9	175	13	225	37	1%	0%
NB	Left/Through	250	100	5	175	13	225	34	6%	0%
	Right Turn	125	25	6	75	20	150	64	0%	0%
SB	Left Turn	175	50	5	100	10	125	19	0%	0%
	Through/Right	175	50	4	100	11	125	25	0%	0%
WB	Left Turn	150	50	8	100	24	125	53	0%	0%
	Through/Right	875	100	13	200	29	275	58	3%	0%

Intersection 8

192nd Avenue/34th Street

Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	100	10	200	26	225	1	0%	0%
	Through/Right	475	175	21	300	40	375	58	13%	0%
NB	Left Turn	375	100	9	175	16	200	24	0%	0%
	Through	750	200	9	275	19	300	28	0%	0%
	Right Turn	375	75	4	125	9	175	34	0%	0%
SB	Left Turn	325	125	11	200	23	225	49	0%	0%
	Through	525	150	14	250	22	275	39	0%	0%
	Through/Right	525	125	15	225	28	275	43	0%	0%
WB	Left Turn	175	125	12	200	26	225	20	2%	0%
	Through/Right	425	175	22	275	44	350	82	9%	0%

Intersection 9

196th Avenue/34th Street

Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	25	5	50	17	75	52	0%	0%
	Through/Right	950	125	16	200	31	250	45	2%	0%
NB	Left Turn	75	50	3	75	6	100	10	2%	0%
	Through/Right	175	25	4	75	9	100	27	0%	0%
SB	Left Turn	125	25	5	50	5	75	8	0%	0%
	Through/Right	275	50	5	75	4	75	13	0%	0%
WB	Left Turn	175	25	4	50	6	75	15	0%	0%
	Through/Right	500	100	9	200	26	250	68	1%	0%

Intersection 1

164th Avenue/34th Street

Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	75	12	125	19	150	30	0%	0%
	Through	350	100	9	150	22	200	49	1%	0%
	Right Turn	350	75	11	125	19	150	32	0%	0%
NB	Left Turn	400	350	97	550	145	425	98	1%	0%
	Through	700	675	147	750	138	725	110	56%	47%
	Right Turn	700	575	184	900	279	700	186	0%	39%
SB	Left Turn	1,250	250	37	350	38	300	14	38%	0%
	Through	1,025	475	145	725	244	725	228	19%	0%
	Through/Right	1,025	275	70	450	131	525	167	0%	0%
WB	Left Turn	425	375	46	500	51	475	28	11%	0%
	Through	925	250	112	600	258	725	247	3%	0%
	Right Turn	175	75	10	150	24	200	31	0%	0%

Intersection 2

168th Avenue/34th Street

Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	50	11	125	25	200	48	0%	0%
	Through/Right	925	125	17	250	41	325	79	3%	0%
NB	Shared	375	50	3	75	4	100	9	0%	0%
SB	Shared	350	50	6	100	17	125	29	0%	0%
WB	Left Turn	125	25	4	50	21	75	54	0%	0%
	Through/Right	600	200	41	350	78	425	92	12%	0%



Intersection 3

Pedestrian Crossing/34th Street

Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Through	600	25	10	75	52	150	102	0%	0%
WB	Through	475	25	18	100	77	200	124	0%	0%
SB	Left Turn	150	25	0	25	0	25	0	0%	0%
O										

Intersection 4

172nd Avenue/34th Street

Side-street Stop

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	25	4	50	7	50	13	0%	0%
	Through/Right	475	25	1	25	6	25	12	0%	0%
NB	Shared	450	75	9	125	18	150	37	0%	0%
SB	Shared	100	25	3	50	3	75	13	0%	0%
WB	Left Turn	150	25	3	75	8	75	25	0%	0%
	Through/Right	825	25	0	25	3	25	10	0%	0%

Intersection 5

176th Avenue/34th Street

Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	100	14	150	24	175	33	2%	0%
	Through/Right	825	75	12	175	24	225	52	1%	0%
NB	Left Turn	400	25	5	50	9	75	21	0%	0%
	Through/Right	400	25	5	75	8	75	20	0%	0%
SB	Left Turn	175	75	5	125	12	150	29	0%	0%
	Through/Right	300	75	8	150	20	175	29	0%	0%
WB	Left Turn	100	25	8	50	28	100	39	0%	0%
	Through/Right	325	225	48	350	69	325	30	21%	4%

Intersection 6

177th Avenue/34th Street

Side-street Stop

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	25	5	50	8	75	13	0%	0%
	Through/Right	325	25	0	25	2	25	5	0%	0%
NB	Shared	325	50	3	75	8	100	15	0%	0%
SB	Left/Through	200	50	16	125	47	175	68	0%	2%
	Right Turn	200	100	27	200	55	200	47	0%	11%
WB	Left Turn	175	25	4	50	26	100	85	0%	0%
	Through/Right	1,650	50	24	150	74	250	106	2%	0%

Intersection 7

Hiddenbrook Drive/34th Street

Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	75	14	150	36	200	43	0%	0%
	Through/Right	1,650	150	63	300	159	350	201	8%	0%
NB	Left/Through	250	100	9	200	25	250	42	8%	1%
	Right Turn	125	50	5	100	21	175	39	0%	0%
SB	Left Turn	175	125	21	200	36	200	35	0%	4%
	Through/Right	175	100	16	175	27	200	26	0%	2%
WB	Left Turn	150	50	8	100	22	175	41	0%	0%
	Through/Right	875	125	19	250	18	325	36	6%	0%

Intersection 8

192nd Avenue/34th Street

Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	175	36	275	32	225	0	5%	0%
	Through/Right	475	400	74	525	62	475	6	58%	25%
NB	Left Turn	375	225	72	425	117	450	91	6%	0%
	Through	750	375	115	600	206	625	168	16%	3%
	Right Turn	375	100	75	250	196	325	175	0%	0%
SB	Left Turn	325	250	84	375	87	375	63	22%	0%
	Through	525	325	111	475	138	500	111	4%	15%
	Through/Right	525	300	111	450	137	450	120	0%	2%
WB	Left Turn	175	175	34	250	41	225	20	20%	0%
	Through/Right	425	225	60	400	106	400	75	11%	4%

Intersection 9

196th Avenue/34th Street

Signal

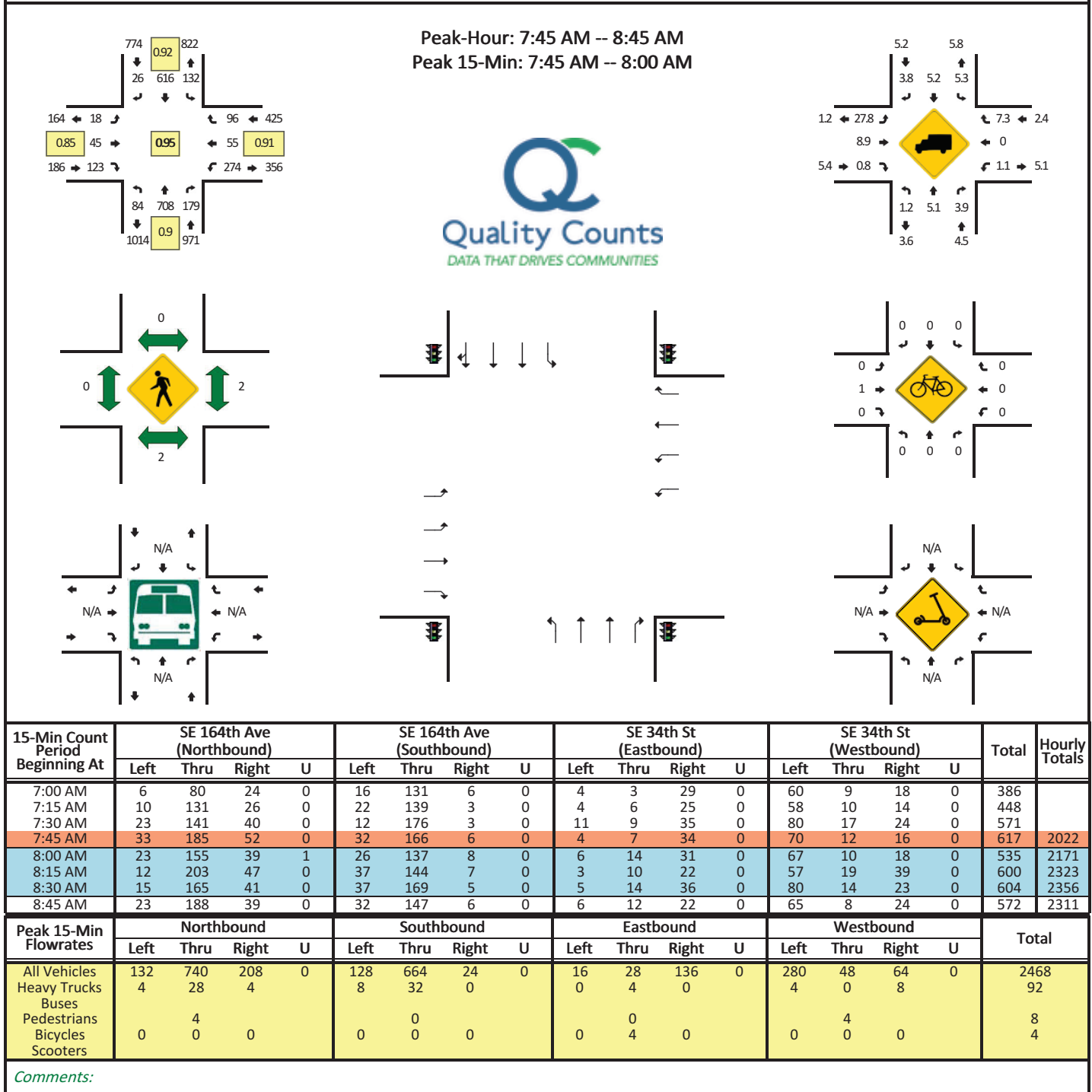
Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	25	7	75	16	100	46	0%	0%
	Through/Right	950	125	10	200	23	250	32	2%	0%
NB	Left Turn	75	50	4	75	6	75	11	3%	0%
	Through/Right	175	25	2	50	2	75	8	0%	0%
SB	Left Turn	125	25	7	50	10	50	14	0%	0%
	Through/Right	275	25	4	50	5	75	11	0%	0%
WB	Left Turn	175	50	7	75	27	125	73	0%	0%
	Through/Right	500	125	16	250	33	300	67	3%	0%



## **Appendix B: Traffic Count Data**

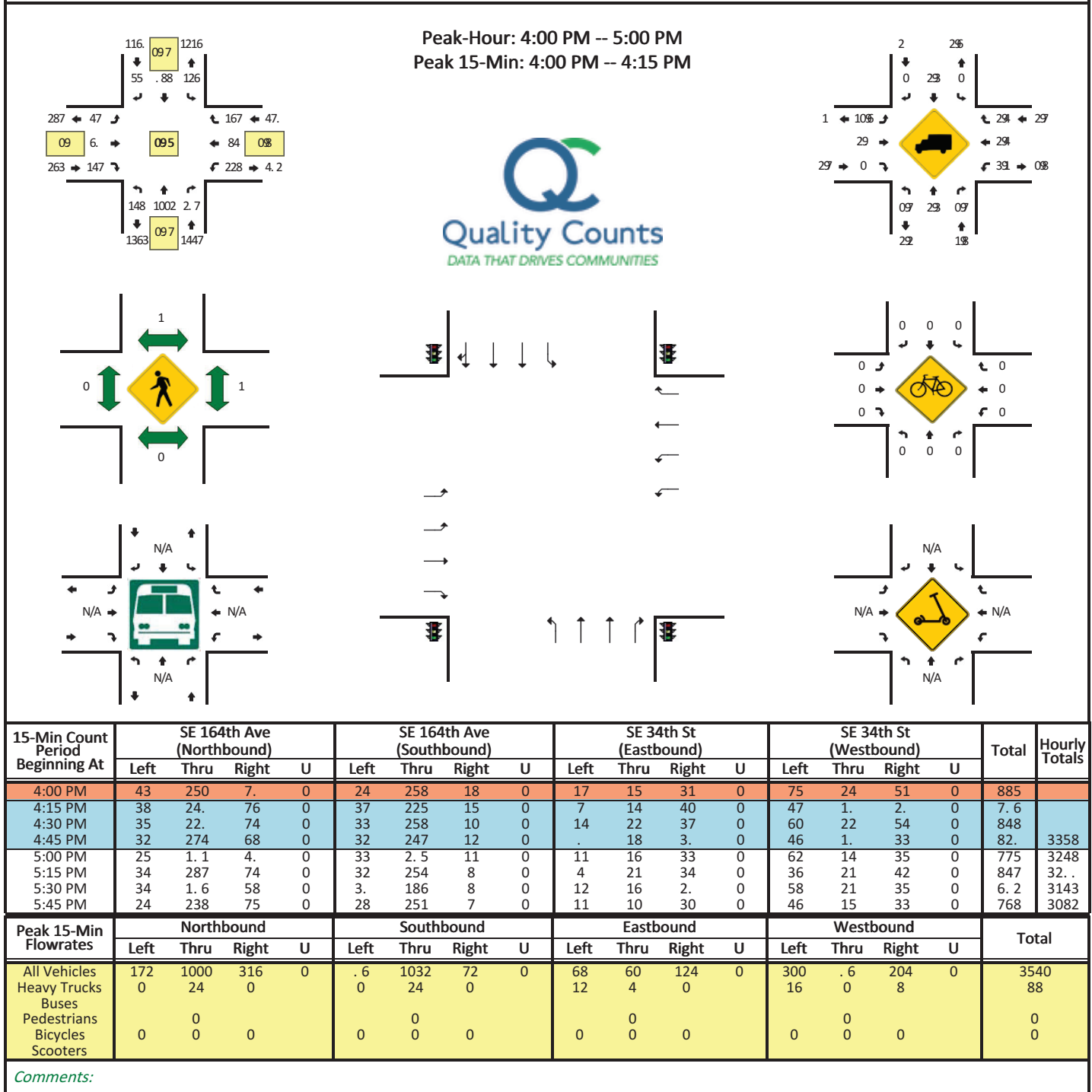
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**CITY/STATE:** Vancouver, WA

**QC JOB #:** 15672601  
**DATE:** Thu, Jan 13 2022



**LOCATION:** SE 164th Ave -- SE 34th St  
**CITY/STATE:** Vancouver, WA

**QC JOB #:** 15672602  
**DATE:** Thu, Jan 13 2022



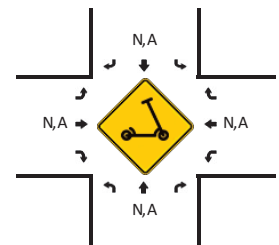
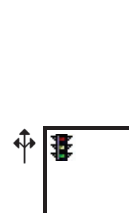
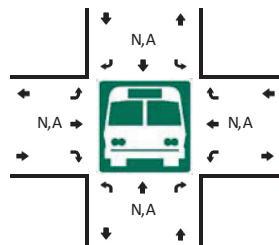
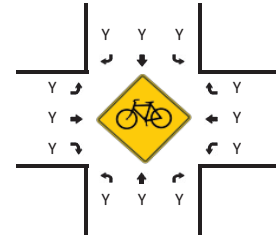
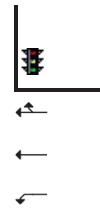
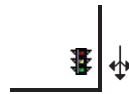
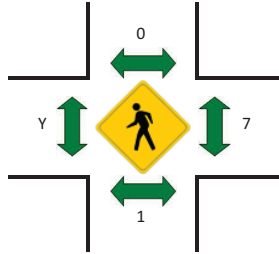
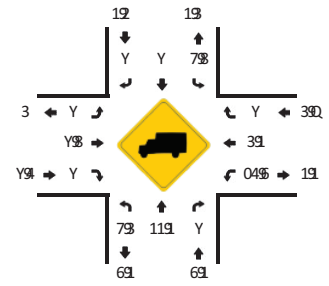
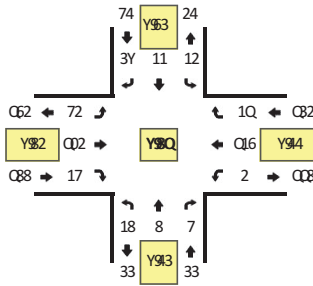
LOCATION: SE 164th Ave -- SE 30th St

J C B# 5: 176206YQ

CITY/STATE: Vancouver WA

ATE: Thursday 13 0Y00

Peak-Hour: QYY PM -- 7:YY PM  
Peak 17-Min: Q3Y PM -- QQ7 PM



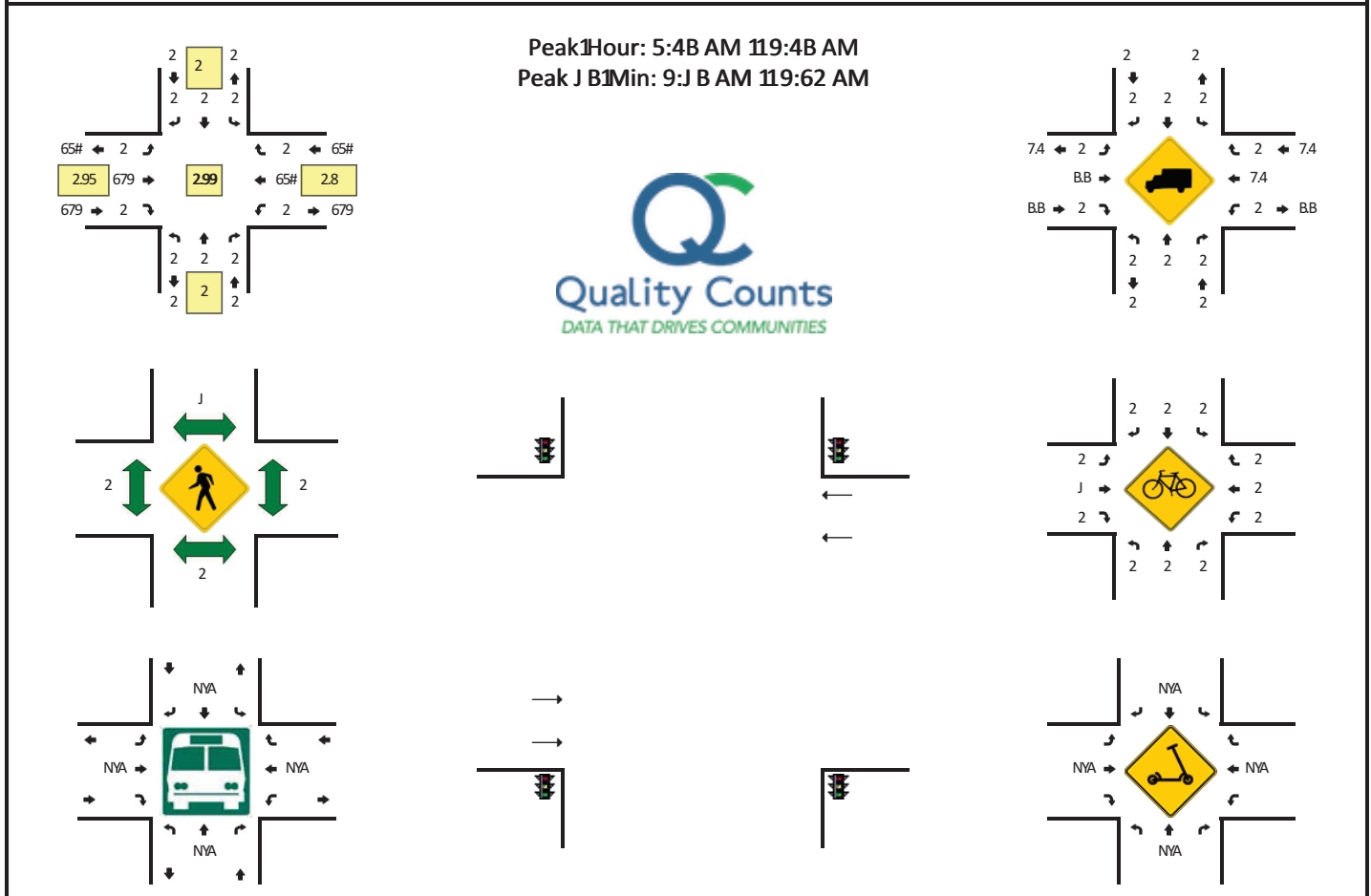
17-Min Count Period Beginning At	SE 164th Ave (Northbound)				SE 164th Ave (Southbound)				SE 30th St (Eastbound)				SE 30th St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
QYY PM	7	Y	0	Y	Q	0	6	Y	1Q	1Y4	0	Y	0	112	7	Y	062	
Q17 PM	7	0	Y	Y	3	3	0	Y	10	1Y8	6	1	Y	87	7	Y	003	
Q3Y PM	3	Q	0	Y	Q	1	1Y	Y	17	1Y6	Q	Y	3	114	0	Y	020	
QQ7 PM	6	3	1	Y	6	7	10	Y	1Q	1YQ	3	1	0	46	0	Y	0Q7	1Y02
7:YY PM	13	1	Y	Y	1	0	2	Y	11	46	2	1	1	80	3	Y	007	847
7:17 PM	Q	0	1	Y	4	Y	1Y	Y	13	1Y7	2	Y	1	28	7	Y	037	822
7:3Y PM	6	Y	1	Y	3	0	2	Y	13	82	3	1	3	88	7	Y	0QY	8Q7
7:Q7 PM	2	0	Y	Y	6	0	2	Y	11	84	Q	Y	1	22	6	Y	001	801
Peak 17-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	10	16	4	Y	16	Q	QY	Y	6Y	QQQ	16	Y	10	Q20	4	Y	1Y44	
Heavy Trucks	Y	Y	Y		Y	Y	Y		Y	4	Y		Y	Q	Y		10	
#uses																		
Pedestrians		Y				Y				Y				Q			Q	
#bicycles	Y	Y	Y		Y	Y	Y		Y	Y	Y		Y	Y	Y		Y	
Scooters																		

Comments:



**LOCATION:** Pedestrian Signal 11SE 64th St  
**CITY/STATE:** Vancou/er, WA

**v C -03 Q J B#57#2B**  
**DATE:** Thu, -an J 6 7277

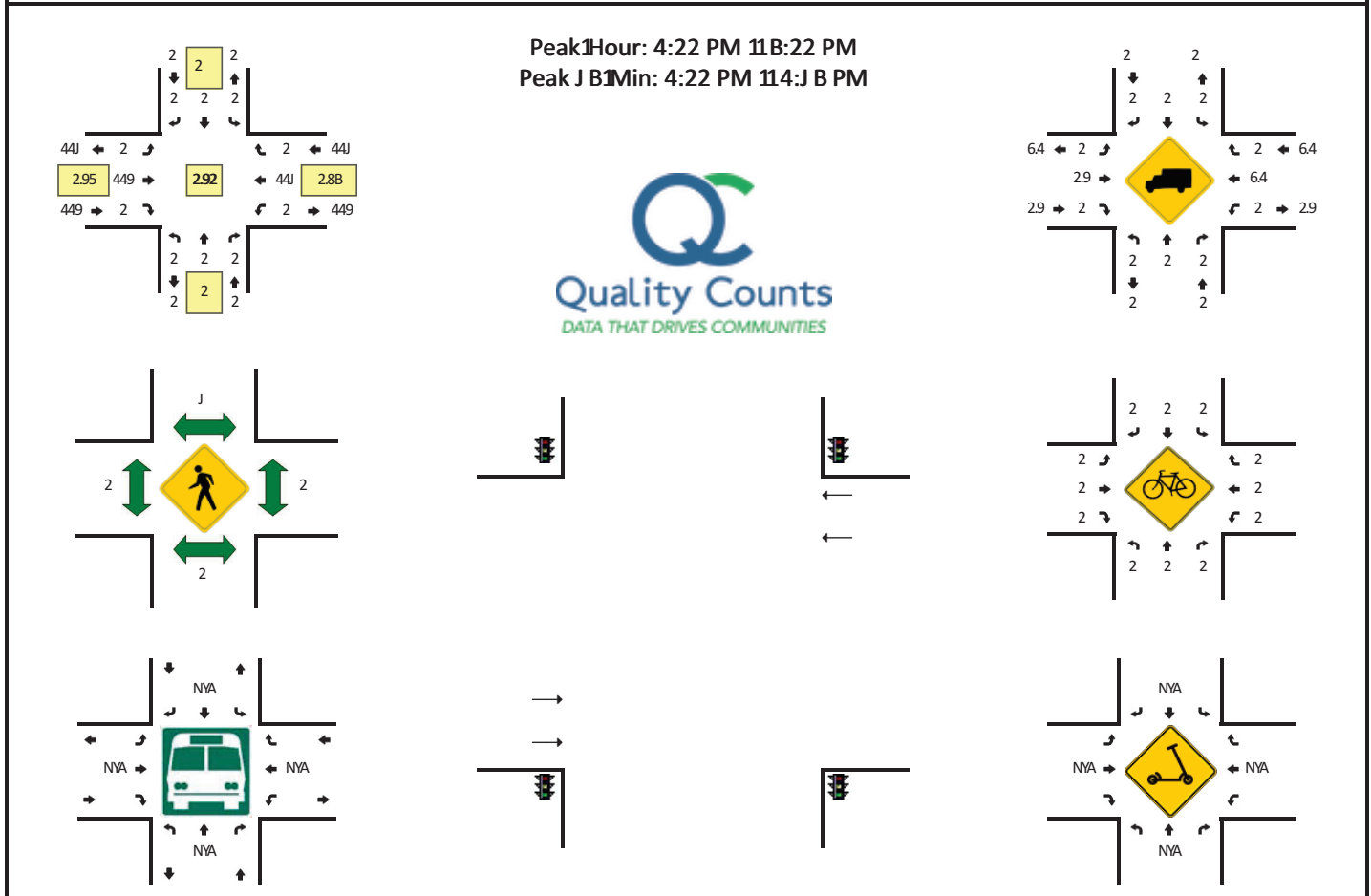


J B1Min Count Period Beginning At	Pedestrian Signal (Northbound)				Pedestrian Signal (Southbound)				SE 64th St (Eastbound)				SE 64th St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
5:22 AM	2	2	2	2	2	2	2	2	2	65	2	2	2	56	2	2	J J 2	
5:J B AM	2	2	2	2	2	2	2	2	2	B4	2	2	2	#8	2	2	J 76	
5:62 AM	2	2	2	2	2	2	2	2	2	#6	2	2	2	89	2	2	J #J	
5:4B AM	2	2	2	2	2	2	2	2	2	9B	2	2	2	95	2	2	J 57	B##
9:22 AM	2	2	2	2	2	2	2	2	2	5J	2	2	2	9J	2	2	J B7	#29
9:J B AM	2	2	2	2	2	2	2	2	2	84	2	2	2	J 2B	2	2	J 88	#94
9:62 AM	2	2	2	2	2	2	2	2	2	59	2	2	2	J 26	2	2	J 9J	524
9:4B AM	2	2	2	2	2	2	2	2	2	92	2	2	2	55	2	2	J B5	#98
Peak J B1Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	2	2	2	2	2	2	2	2	2	65#	2	2	2	472	2	2	58#	
Heavy Trucks	2	2	2		2	2	2		2	72	2		2	2	2		72	
Buses																		
Pedestrians		2				2				2				2			2	
Bicycles	2	2	2		2	2	2		2	2	2		2	2	2		2	
Scooters																		

**Comments:**

**LOCATION:** Pedestrian Signal 11SE 64th St  
**CITY/STATE:** Vancou/er, WA

**v C -03 Q J B#57#2#**  
**DATE:** Thu, -an J 6 7277

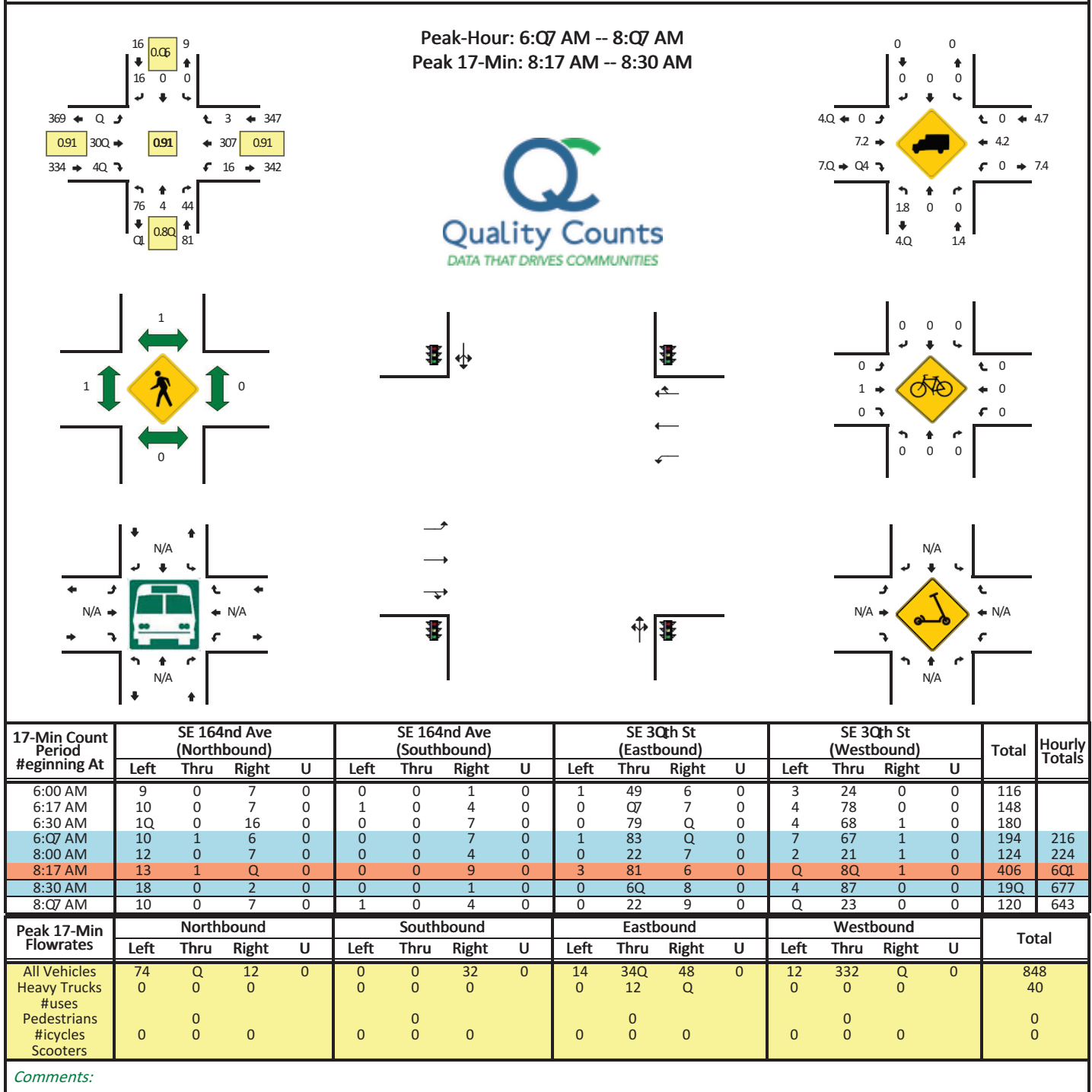


J B1Min Count Period Beginning At	Pedestrian Signal (Northbound)				Pedestrian Signal (Southbound)				SE 64th St (Eastbound)				SE 64th St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:22 PM	2	2	2	2	2	2	2	2	2	J J #	2	2	2	J 62	2	2	74#	
4:J B PM	2	2	2	2	2	2	2	2	2	J J J	2	2	2	94	2	2	72B	
4:62 PM	2	2	2	2	2	2	2	2	2	J J 7	2	2	2	J 7B	2	2	765	
4:4B PM	2	2	2	2	2	2	2	2	2	J J 2	2	2	2	97	2	2	727	892
B:22 PM	2	2	2	2	2	2	2	2	2	59	2	2	2	98	2	2	J 55	87J
B:J B PM	2	2	2	2	2	2	2	2	2	J J #	2	2	2	8B	2	2	72J	8J 5
B:62 PM	2	2	2	2	2	2	2	2	2	J 27	2	2	2	J 2B	2	2	725	585
B:4B PM	2	2	2	2	2	2	2	2	2	J 24	2	2	2	8B	2	2	J 89	554
Peak J B1Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	2	2	2	2	2	2	2	2	2	4#4	2	2	2	B72	2	2	984	
Hea/y Trucks	2	2	2		2	2	2		2	4	2		2	67	2		6#	
3uses																		
Pedestrians		2				2				2				2			2	
3icycles	2	2	2		2	2	2		2	2	2		2	2	2		2	
Scooters																		

Comments:

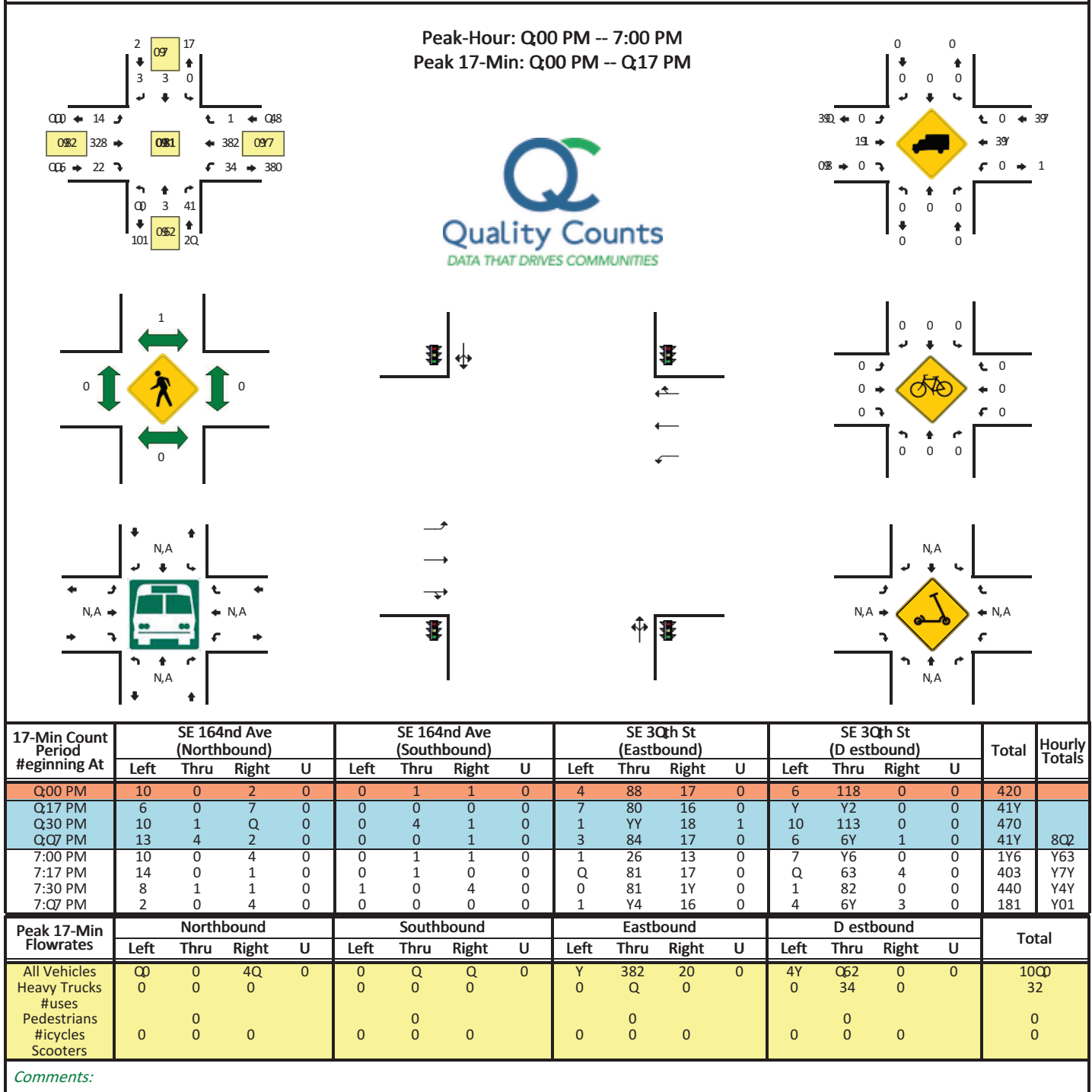
**LOCATION:** SE 164nd Ave -- SE 3Qth St  
**CITY/STATE:** Vancouver, WA

**J C B# 5:** 17264206  
**DATE:** Thu, Ban 13 4044



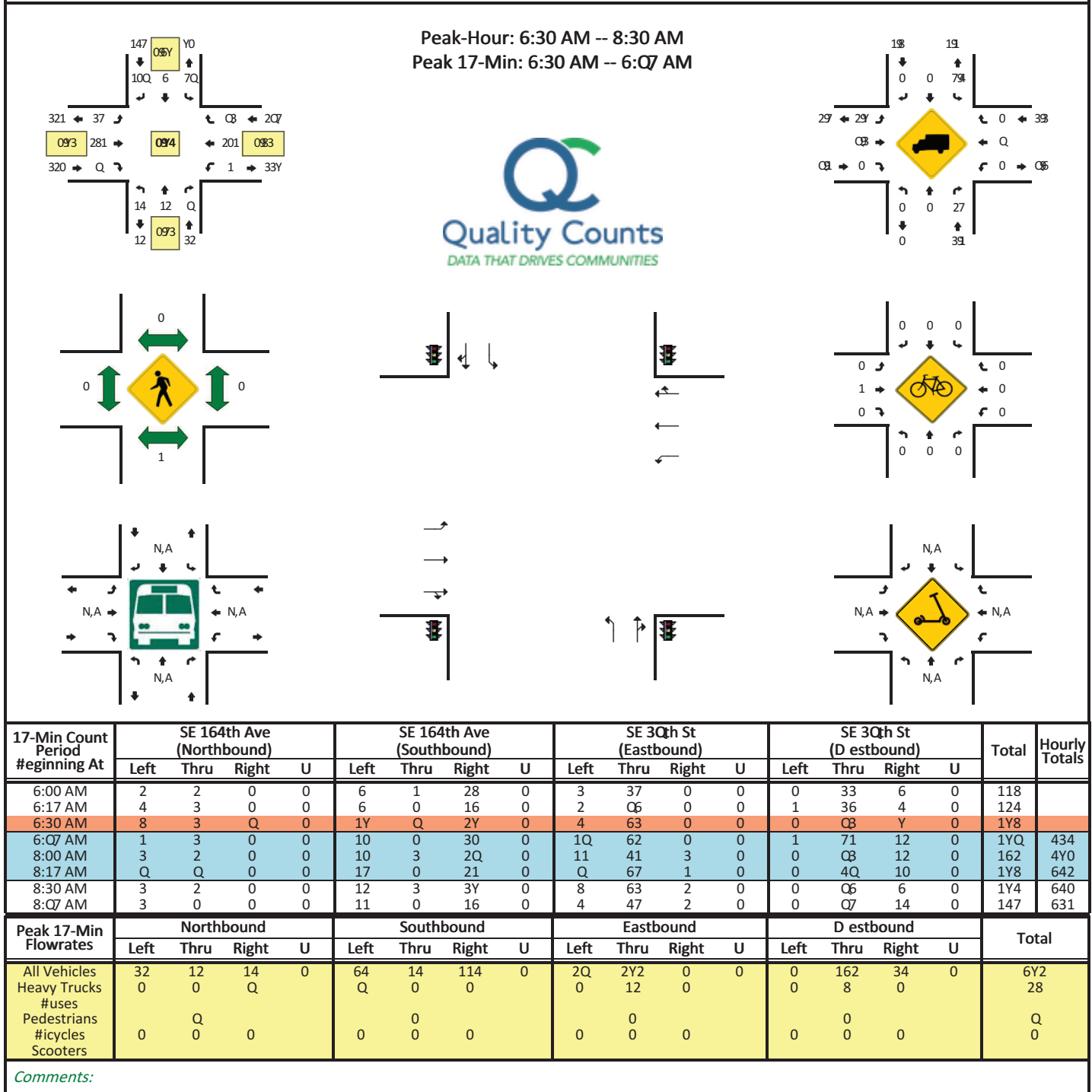
LOCATION: SE 164nd Ave -- SE 3Qth St  
CITY/STATE: Vancouver WA

J C B# 5: 1726420Y  
ATE: ThuVan 13 4044



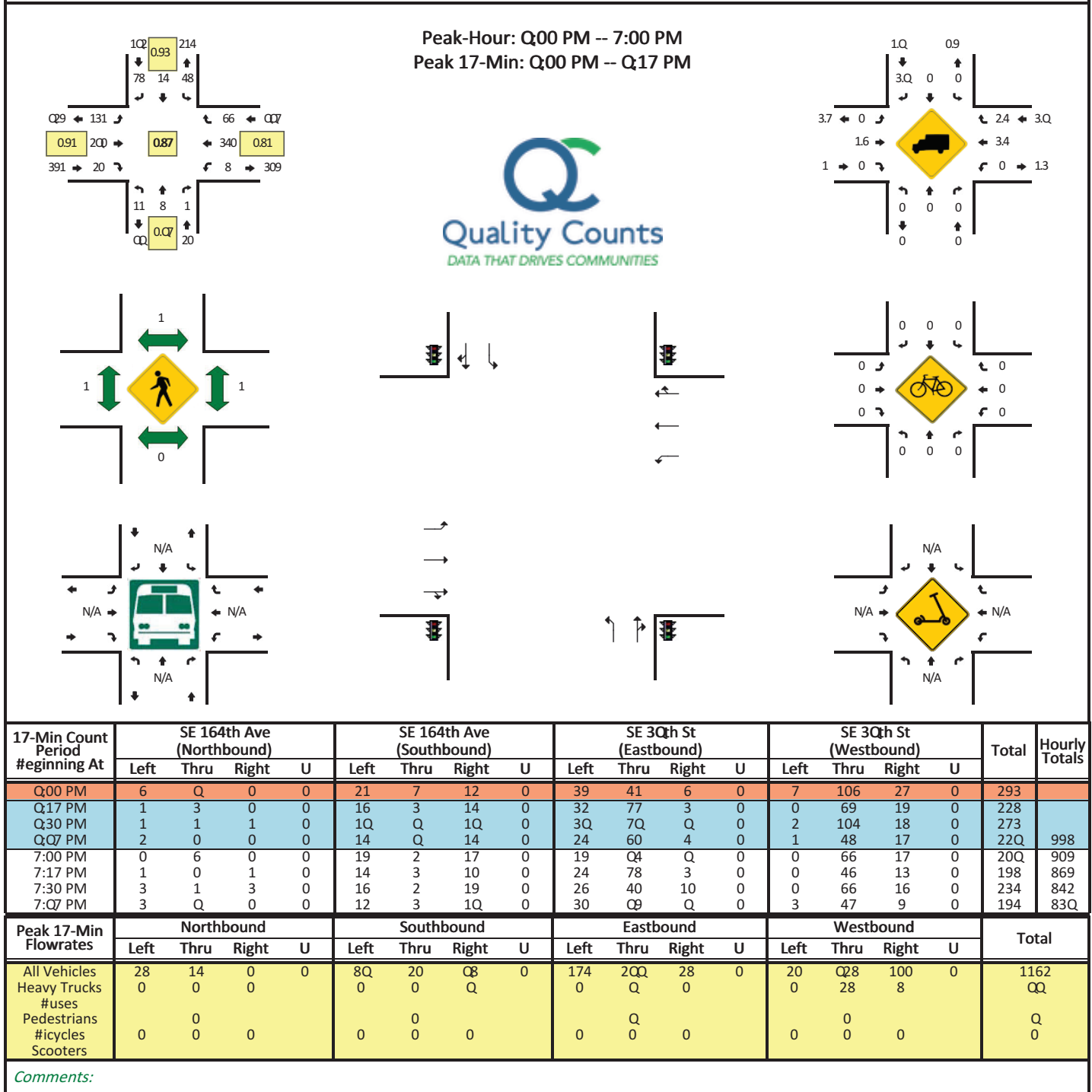
LOCATION: SE 164th Ave -- SE 30th St  
CITY/STATE: Vancouver WA

J C B# 5: 1746240Y  
ATE: Thu Jan 13 2022



**LOCATION:** SE 164th Ave -- SE 30th St  
**CITY/STATE:** Vancouver, WA

**J C B# 5:** 17462410  
**DATE:** Thu, Jan 13 2022

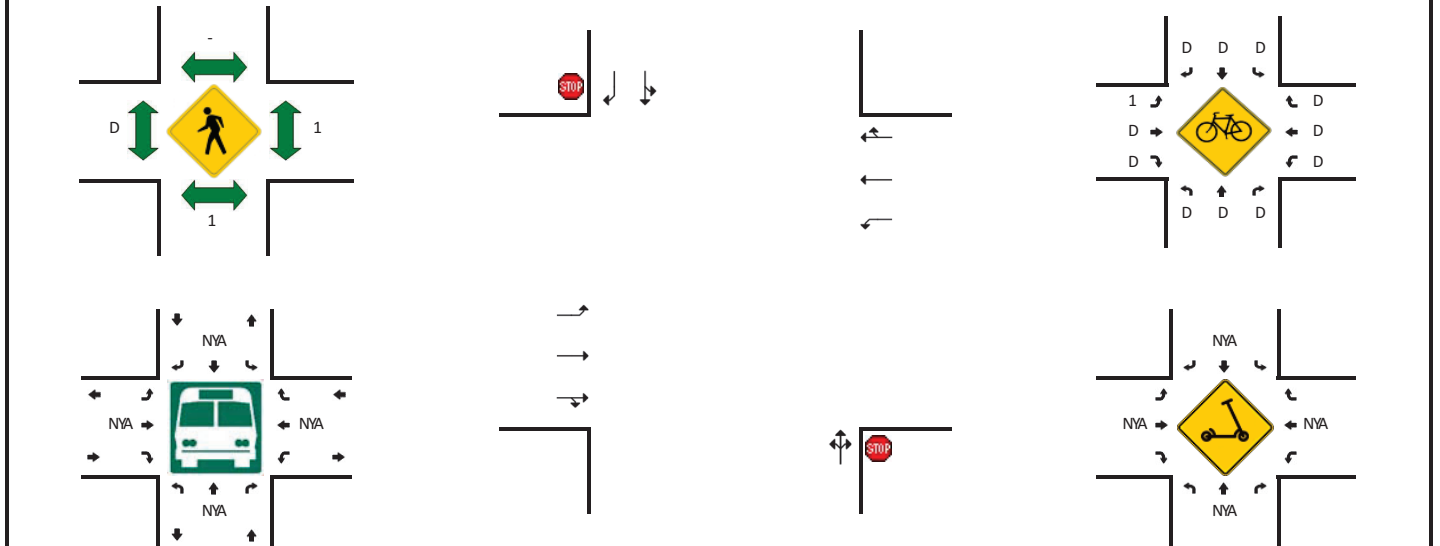


LOCATION: SE 166th A4e w SE - 3th St

CITY/STATE: Vancouver, WA

QC JOB #: 15762711

DATE: Thu/Jan 1- 2022

Peak Hour: 6:- DAM w 9:- DAM  
Peak 15Min: 9:15 AM w 9:- DAM

15Min Count Period Beginning At	SE 166th A4e (Northbound)				SE 166th A4e (Southbound)				SE - 3th St (Eastbound)				SE - 3th St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
6:00 AM	5	D	D	D	1	D	1	D	12	-1	D	D	1	-2	1	D	93	
6:15 AM	-	D	2	D	D	D	1	D	8	3D	3	D	D	3D	D	D	88	
6:- DAM	5	D	-	D	1	D	D	D	22	6D	-	D	D	36	2	D	15-	
6:35 AM	3	D	3	D	1	D	-	D	2D	58	1	D	1	56	5	D	155	381
9:00 AM	5	D	-	D	D	D	D	D	15	52	-	D	2	38	1	D	1-D	5-6
9:15 AM	9	D	-	D	D	D	1	D	18	78	2	1	2	73	D	D	178	7D6
9:- DAM	3	D	1	D	D	D	7	D	12	61	-	D	1	3-	2	D	13-	586
9:35 AM	-	D	1	D	D	D	3	D	1-	56	7	D	2	55	1	D	132	593
Peak 15Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	-2	D	12	D	D	D	3	D	67	267	9	3	9	257	D	D	767	
Heavy Trucks	D	D	D		D	D	D		3	12	D		D	D	D		17	
Buses																		
Pedestrians		D				3				D				D			3	
Bicycles	D	D	D		D	D	D		D	D	D		D	D	D		D	
Scooters																		

Comments:

Report generated on 1/21/2022 9:52 AM

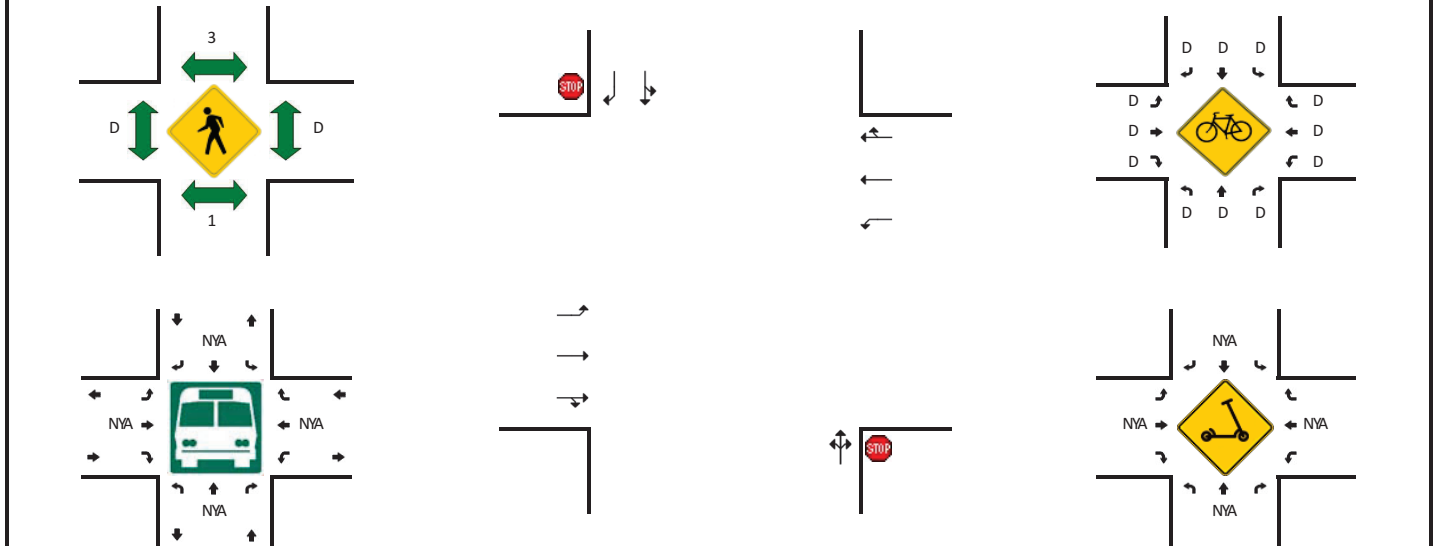
SOURCE: Quality Counts/LLC (<http://www.qualitycounts.net>) 196659D2212

LOCATION: SE 166th A4e w SE - 3th St

CITY/STATE: Vancouver, WA

QC JOB #: 15762712

DATE: Thu/Jan 1- 2022

Peak Hour: 3:00 PM w 5:00 PM  
Peak 15 Min: 3:00 PM w 3:15 PM

15 Min Count Period Beginning At	SE 166th A4e (Northbound)				SE 166th A4e (Southbound)				SE - 3th St (Eastbound)				SE - 3th St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
3:00 PM	-	D	3	D	1	D	17	D	1	6	3	D	-	117	D	D	221	
3:15 PM	3	D	2	1	1	D	11	D	3	72	9	D	-	85	D	D	182	
3:30 PM	7	D	-	D	1	D	12	D	D	73	3	D	1	112	D	D	205	
3:45 PM	2	D	2	D	D	D	5	D	6	78	11	D	-	61	D	D	179	665
5:00 PM	2	D	1	D	D	D	1	D	1	58	6	D	1	66	D	D	170	613
5:15 PM	D	D	1	D	1	D	7	D	5	73	6	D	-	67	1	D	173	797
5:30 PM	11	D	2	D	2	D	11	D	1	79	6	D	5	65	D	D	185	767
5:45 PM	1	D	D	D	D	D	8	D	-	51	8	D	D	75	D	D	124	732
Peak 15 Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	12	D	17	D	3	D	73	D	3	292	17	D	12	373	D	D	883	
Heavy Trucks	D	D	D		D	D	8		D	3	D		D	28	D		30	
Buses																		
Pedestrians		D				D				D				D			D	
Bicycles	D	D	D		D	D	D		D	D	D		D	D	D		D	
Motorcycles																		

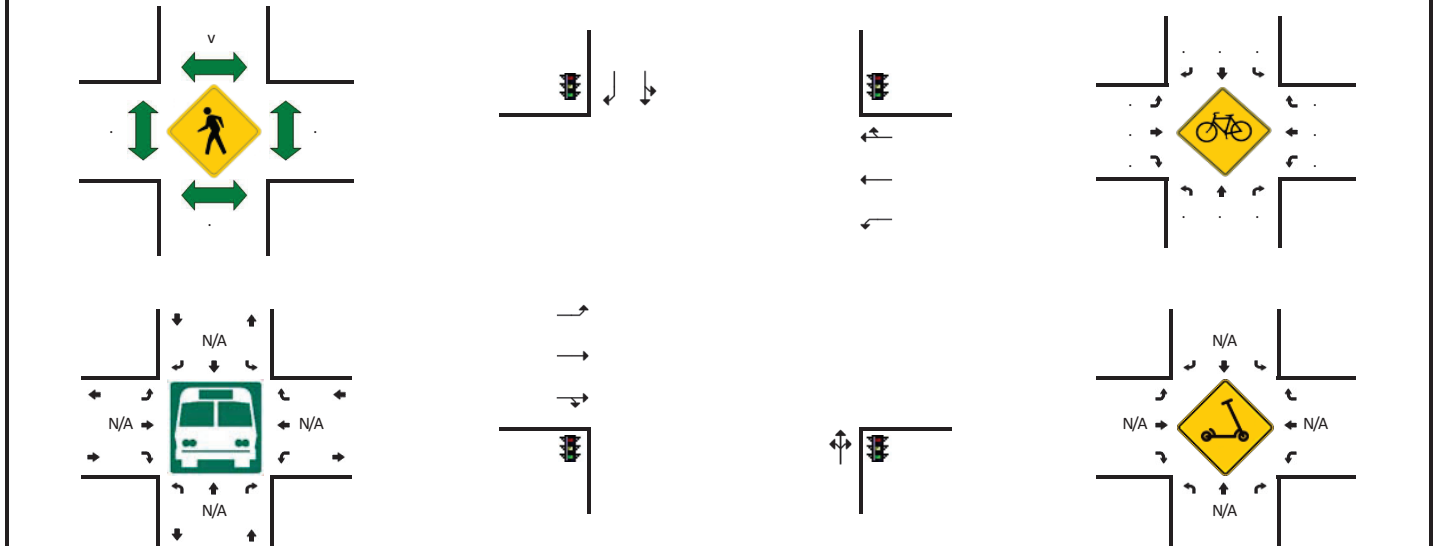
Comments:



LOCATION: SE 1iddenbrook 6r 4SE v- th St  
CITY/STATE: Vancou, erV A

3 C O J B: #57207#v  
6ATE: ThuV an #v 0. 00

Peak 41 our: 2:v. AM 4Htv. AM  
Peak #54Min: H:#5 AM 4Htv. AM



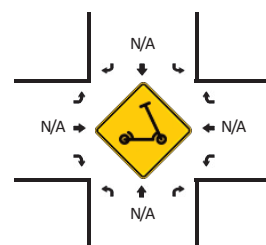
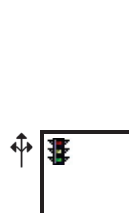
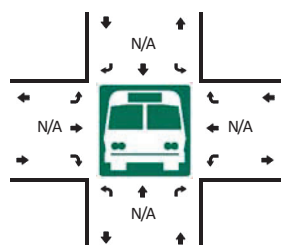
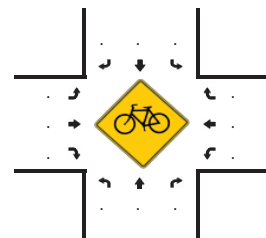
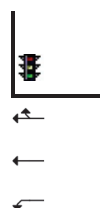
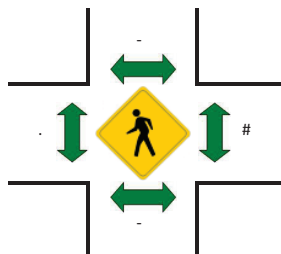
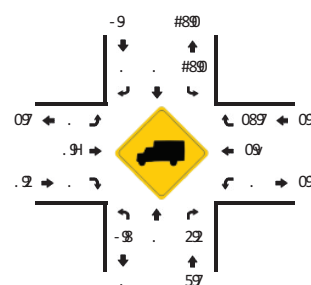
#54Min Count Period Beginning At	SE 1iddenbrook 6r (Northbound)				SE 1iddenbrook 6r (Southbound)				SE v- th St (Eastbound)				SE v- th St (D estbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
2:.. AM	5	.	-	.	v	.	#	.	v	05	0	#	0	0H	#	.	25	
2:#5 AM	#0	.	2	#	.	.	#	.	.	v#	5	.	0	02	0	.	HH	
2:v. AM	#9	#	9	.	.	.	#	.	5	79	-	.	0	vv	0	.	#- 5	
2:- 5 AM	#9	.	##	.	.	.	#	.	H	5v	-	.	2	- #	0	.	#- 7	- 5-
H.. AM	#0	.	H	.	.	.	#	.	-	-.	#.	.	2	v2	v	.	#00	5. #
H:#5 AM	#5	#	-	.	0	.	-	.	##	- 7	#5	.	5	- 2	5	.	#55	57H
Htv. AM	#0	#	5	.	.	.	v	.	7	5.	#0	.	H	v#	5	.	#vv	557
H:- 5 AM	#7	.	5	.	#	.	v	.	0	v5	00	.	9	-.	0	.	#v5	5- 5
Peak #54Min Flowrates	Northbound				Southbound				Eastbound				D estbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	7.	-	#7	.	H	.	#7	.	--	#H	7.	.	0.	#HH	0.	.	70.	#0
1 ea, y Trucks	.	.	.	.	.	.	.	.	H	-	.	.	.	.	.	.	.	.
J uses	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Pedestrians	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
J icycles	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Scooters	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

Comments:

Report generated on #/0#/0. 00 H:50 AM

SOURCE: 3 uality CountsWLC (<http://www8qualitycounts8net>) #4H2245H. 400#0

3C QJ B: #57207#-  
6ATE: ThuVn #v 0. 00



*Comments:*

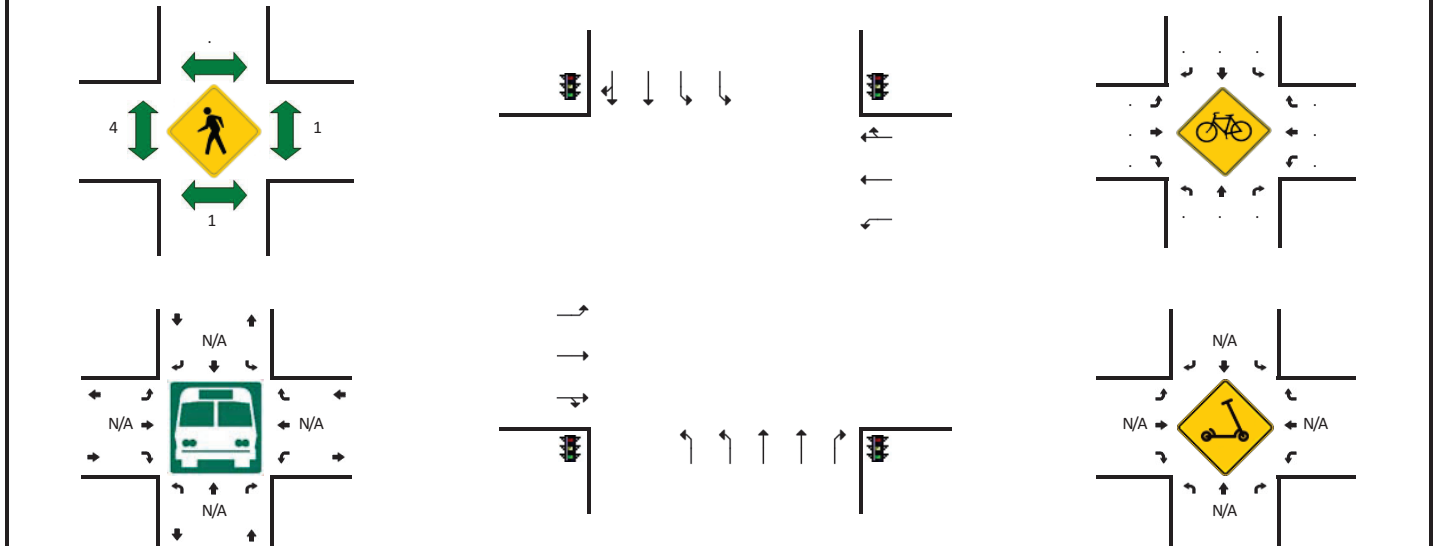
LOCATION: SE 164nd Ave -- SE 3Qth St

CITY/STATE: Vancouver, WA

J C B# 5: 17204217

DATE: Thu, Ban 13 4. 44

Peak-Hour: 0:Q7 AM -- 8:Q7 AM  
Peak 17-Min: 0:Q7 AM -- 8:.. AM



17-Min Count Period Beginning At	SE 164nd Ave (Northbound)				SE 164nd Ave (Southbound)				SE 3Qth St (Eastbound)				SE 3Qth St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
0:.. AM	7	02	Q	1	13	82	8	.	14	13	7	.	31	10	14	.	343	
0:17 AM	1.	80	23	.	14	8.	1.	.	8	13	7	.	37	1Q	8	.	3Q7	
0:3. AM	1Q	66	3Q	.	13	60	6	.	31	40	11	.	48	1.	8	.	381	
0:Q7 AM	17	130	26	.	12	64	4.	.	11	42	1.	.	46	44	8	.	Q77	17. Q
8:.. AM	11	64	38	.	40	1. Q	1Q	.	14	41	6	.	3.	16	18	.	367	1702
8:17 AM	4.	110	78	.	48	67	1.	.	17	4Q	7	.	46	43	13	.	Q80	1228
8:3. AM	14	1.8	21	.	44	61	11	4	1.	3Q	14	.	Q	4Q	41	.	Q77	10Q4
8:Q7 AM	4Q	111	47	.	40	06	13	.	11	41	7	.	36	16	47	.	366	1282
Peak 17-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	2.	7Q8	402	.	2Q	328	8.	.	Q	1. Q	Q	.	112	88	34	.	184.	
Heavy Trucks	Q	4Q	.	.	.	14	Q	.	.	.	12	.	Q	.	.	.	2Q	
#uses																		
Pedestrians		Q				.				Q				.	.	.	8	
#icycles	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	
Scooters	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	

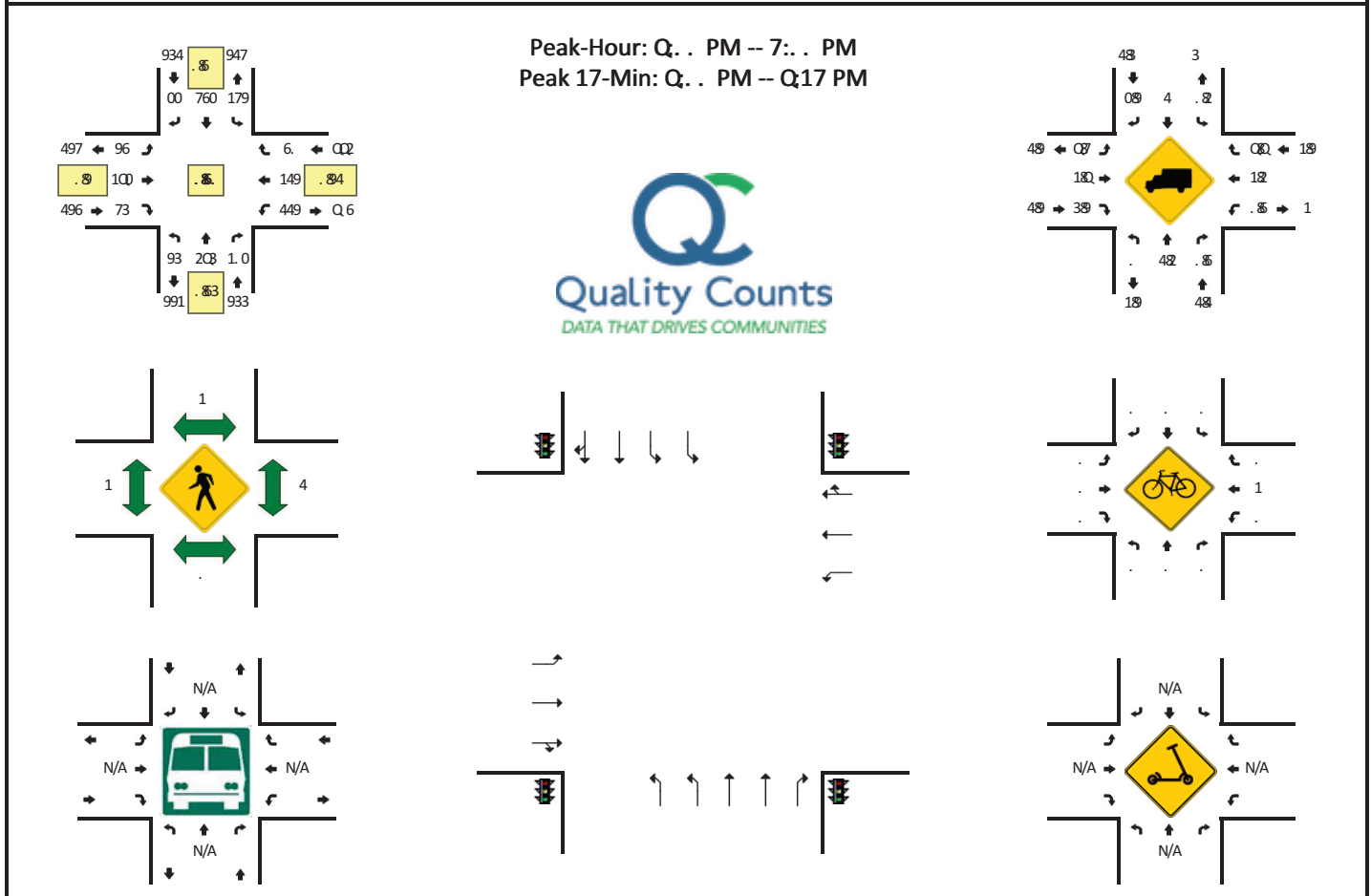
Comments:

Report generated on 1/41/4. 44 8:74 AM

SOURCE: J uality Counts, LLC (<http://www9qualitycounts9net>) 1-800-78. -4414

**LOCATION:** SE 164nd Ave -- SE 3Qth St  
**CITY/STATE:** Vancouver, WA

**J C B# 5:** 17204212  
**DATE:** Thu, Ban 13 4. 44



17-Min Count Period #beginning At	SE 164nd Ave (Northbound)				SE 164nd Ave (Southbound)				SE 3Qth St (Eastbound)				SE 3Qth St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
Q. . PM	40	173	47	4	Q6	129	17	.	33	Q7	14	.	Q0	34	3.	.	227	
Q17 PM	16	172	4.	1	Q7	174	42	3	19	32	14	.	Q0	32	43	.	76Q	
Q3. PM	41	102	42	.	37	1Q4	44	.	41	31	17	.	22	3Q	16	.	2. 9	
Q07 PM	13	179	32	.	42	137	1Q	.	10	37	1Q	.	Q1	42	19	.	733	4Q .
7: . PM	10	143	33	.	33	126	13	.	4.	31	11	.	Q2	40	4Q	.	700	4314
7:17 PM	1Q	12Q	43	.	Q9	136	4.	.	1Q	Q	9	.	Q9	43	42	.	720	4497
7:3. PM	1Q	1Q9	33	.	32	142	19	.	12	36	13	.	Q	43	17	.	741	4169
7:Q7 PM	4.	11.	42	.	4Q	113	17	.	11	4Q	0	.	1Q	43	10	.	Q Q	4. 26
Peak 17-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	1. 9	214	1. .	9	162	204	2. .	.	134	19.	Q9	.	462	149	14.	.	422.	
Heavy Trucks	.	4.	.	.	.	9	Q	.	14	Q	.	.	Q	.	9	.	2.	
#uses	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	
Pedestrians	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	
#bicycles	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	
Scooters	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	

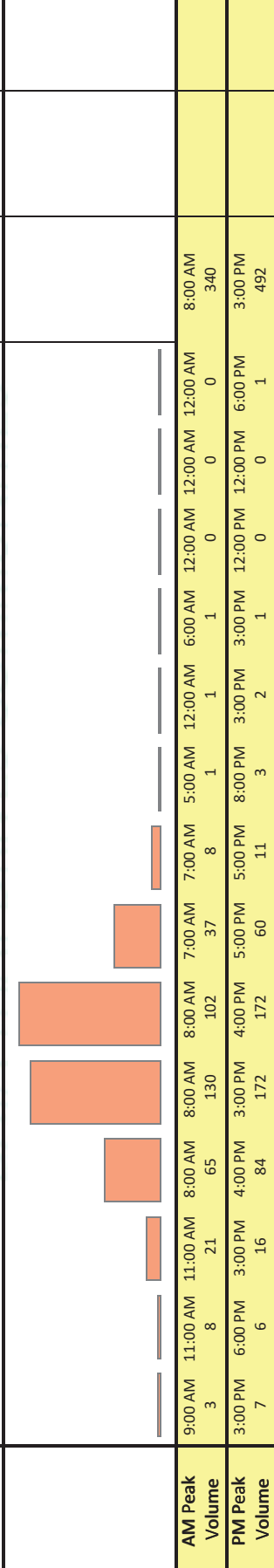
**Comments:**

Type of report: Tube Count - Speed Data

**LOCATION:** SE 34th Street East of 164th Ave  
**SPECIFIC LOCATION:**  
**CITY/STATE:** Vancouver, WA


**QC JOB #:** 15672617  
**DIRECTION:** EB  
**DATE:** Jan 13 2022

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
12:00 AM	0	0	0	6	12	8	5	0	0	1	0	0	0	0	32	31-40	20
01:00 AM	0	0	0	2	1	4	3	2	0	0	0	0	0	0	12	36-45	7
02:00 AM	0	0	0	1	7	4	1	1	0	1	0	0	0	0	15	31-40	11
03:00 AM	0	0	0	0	8	3	1	0	0	0	0	0	0	0	12	31-40	11
04:00 AM	0	1	1	4	5	5	4	2	0	0	0	0	0	0	22	31-40	10
05:00 AM	2	0	2	5	17	33	20	5	1	0	0	0	0	0	85	36-45	53
06:00 AM	0	0	1	9	45	58	25	6	1	0	1	0	0	0	146	31-40	103
07:00 AM	2	0	5	24	78	89	37	8	1	0	0	0	0	0	244	31-40	167
08:00 AM	0	0	13	65	130	102	26	3	1	0	0	0	0	0	340	31-40	232
09:00 AM	3	0	13	41	83	90	20	2	0	0	0	0	0	0	252	31-40	173
10:00 AM	0	0	17	37	91	69	16	1	0	0	0	0	0	0	231	31-40	160
11:00 AM	2	8	21	62	78	74	21	0	0	0	0	0	0	0	266	31-40	152
12:00 PM	2	4	11	45	122	101	31	5	0	0	0	0	0	0	321	31-40	223
01:00 PM	4	2	13	43	107	128	18	7	0	0	0	0	0	0	322	31-40	235
02:00 PM	3	1	9	50	119	136	31	6	1	1	0	0	0	0	357	31-40	255
03:00 PM	7	2	16	71	172	165	51	5	0	2	1	0	0	0	492	31-40	337
04:00 PM	0	3	15	84	148	172	59	7	0	0	0	0	0	0	488	31-40	320
05:00 PM	3	3	10	66	145	145	60	11	2	0	0	0	0	0	445	31-40	290
06:00 PM	2	6	7	42	83	146	47	6	1	0	0	0	0	1	341	31-40	229
07:00 PM	0	0	4	13	78	89	36	5	1	0	0	0	0	0	226	31-40	167
08:00 PM	1	0	1	12	56	57	30	7	3	0	0	0	0	0	167	31-40	113
09:00 PM	1	0	1	10	40	61	17	3	1	1	0	0	0	0	135	31-40	101
10:00 PM	1	0	1	11	18	27	9	2	0	0	0	0	0	0	69	31-40	45
11:00 PM	0	0	1	12	8	22	7	4	1	0	0	0	0	0	55	31-40	30
Day Total Percent	33 0.7%	30 0.6%	162 3.2%	715 14.1%	1651 32.5%	1788 35.2%	575 11.3%	98 1.9%	14 0.3%	6 0.1%	2 0%	0 0%	0 0%	1 0%	5075	31-40	3439



Type of report: Tube Count - Speed Data

SUMMARY - Tube Count - Speed Data

QC JOB #: 15672617 DIRECTION: EB DATE: Jan 13 2022														
LOCATION: SE 34th Street East of 164th Ave CITY/STATE: Vancouver, WA														
SPECIFIC LOCATION:														
Speed Range	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999
Grand Total	33	30	162	715	1651	1788	575	98	14	6	2	0	0	1
Percent	0.7%	0.6%	3.2%	14.1%	32.5%	35.2%	11.3%	1.9%	0.3%	0.1%	0%	0%	0%	0%
Cumulative Percent	0.7%	1.2%	4.4%	18.5%	51.1%	86.3%	97.6%	99.5%	99.8%	99.9%	100%	100%	100%	100%
ADT 5075														
Comments:														
85th Percentile: 40 MPH Mean Speed(Average): 34 MPH Median: 35 MPH Mode: 38 MPH														

Report generated on 1/18/2022 4:02 PM

SOURCE: Quality Counts, LLC (<http://www.qualitycounts.net>)

**LOCATION:** SE 34th Street East of 164th Ave  
**SPECIFIC LOCATION:**  
**CITY/STATE:** Vancouver, WA

**QC JOB #:** 15672617  
**DIRECTION:** EB  
**DATE:** Jan 13 2022

Start Time	Motorcycles	Cars & Trailer	2 Axle Long	Buses	2 Axle Tire	3 Axle Single	4 Axle Single	<5 Axle Double	5 Axle Double	>6 Axle Double	<6 Axle Multi	6 Axle Multi	>6 Axle Multi	Not Classified	Total
12:00 AM	0	28	3	0	1	0	0	0	0	0	0	0	0	0	32
01:00 AM	0	8	4	0	0	0	0	0	0	0	0	0	0	0	12
02:00 AM	0	14	1	0	0	0	0	0	0	0	0	0	0	0	15
03:00 AM	0	10	2	0	0	0	0	0	0	0	0	0	0	0	12
04:00 AM	0	20	1	0	0	0	0	0	0	1	0	0	0	0	22
05:00 AM	0	64	16	1	0	1	0	0	1	0	0	0	0	2	85
06:00 AM	0	111	23	4	6	0	0	1	1	0	0	0	0	0	146
07:00 AM	0	193	32	3	13	0	1	0	0	0	0	0	0	2	244
08:00 AM	0	259	54	4	17	3	0	1	0	1	0	0	0	1	340
09:00 AM	0	195	32	3	17	1	0	1	0	0	0	0	0	3	252
10:00 AM	1	190	31	2	4	0	0	2	1	0	0	0	0	0	231
11:00 AM	2	205	39	4	11	0	0	2	0	0	0	0	0	3	266
12:00 PM	1	255	44	3	14	0	0	1	1	0	0	0	0	2	321
01:00 PM	0	258	41	2	14	1	0	0	2	0	0	0	0	4	322
02:00 PM	1	286	42	3	14	0	2	6	0	0	0	0	0	3	357
03:00 PM	2	383	72	7	15	1	0	6	0	0	0	0	0	6	492
04:00 PM	2	404	63	2	14	0	0	2	0	0	0	0	0	1	488
05:00 PM	1	375	53	3	8	1	0	0	0	0	0	0	0	4	445
06:00 PM	1	290	32	1	12	1	0	2	0	0	0	0	0	2	341
07:00 PM	0	198	21	2	4	0	1	0	0	0	0	0	0	0	226
08:00 PM	0	147	15	0	3	0	1	0	0	0	0	0	0	1	167
09:00 PM	0	118	13	0	3	0	0	0	0	0	0	0	0	1	135
10:00 PM	0	61	6	0	1	0	0	0	0	0	0	0	0	1	69
11:00 PM	0	51	2	0	2	0	0	0	0	0	0	0	0	0	55
Day Total	11	4123	642	44	173	9	5	24	6	2	0	0	0	36	5075
Percent	0.2%	81.2%	12.7%	0.9%	3.4%	0.2%	0.1%	0.5%	0.1%	0%	0%	0%	0%	0.7%	

ADT  
5075

Start Time	Motorcycles	Cars & Trailer	2 Axle Long	Buses	2 Axle Tire	3 Axle Single	4 Axle Single	<5 Axle Double	5 Axle Double	>6 Axle Double	<6 Axle Multi	6 Axle Multi	>6 Axle Multi	Not Classified	Total
11:00 AM	2	259	54	4	17	3	1	2	1	1	0	0	0	3	340
3:00 PM	2	404	72	7	15	1	2	6	2	0	0	0	0	6	492

Comments:

Report generated on 1/18/2022 4:02 PM

SOURCE: Quality Counts, LLC (<http://www.qualitycounts.net>)

LOCATION: SE 34th Street East of 164th Ave

SPECIFIC LOCATION:

CITY/STATE: Vancouver, WA

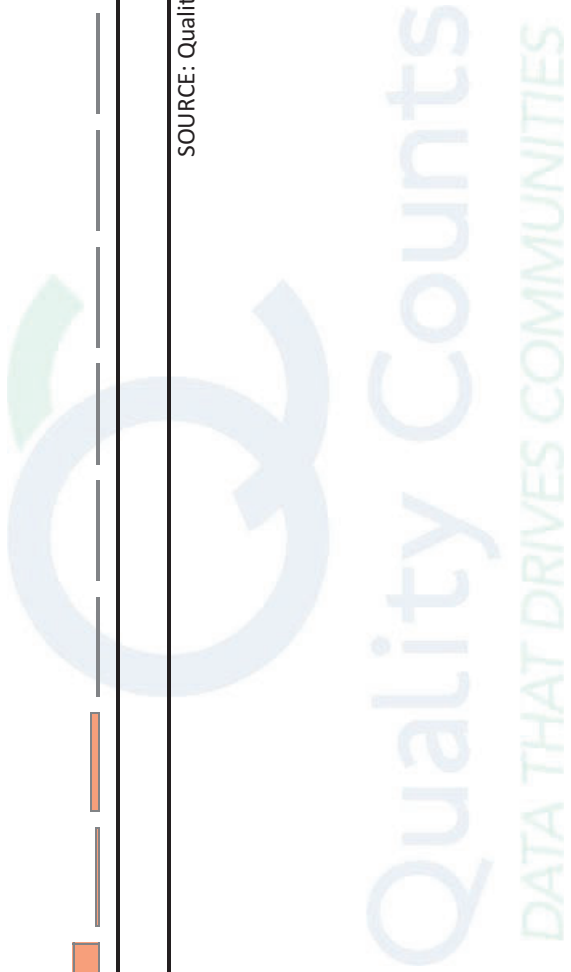
QC JOB #: 15672617

DIRECTION: EB

DATE: Jan 13 2022

	Motorcycles	Cars & Trailer	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axle Double	5 Axle Double	>6 Axle Double	<6 Axle Multi	6 Axle Multi	>6 Axle Multi	Not Classified	Total
Grand Total	11	4123	642	44	173	9	5	24	6	2	0	0	0	36	5075
Percent	0.2%	81.2%	12.7%	0.9%	3.4%	0.2%	0.1%	0.5%	0.1%	0%	0%	0%	0%	0.7%	
ADT 5075															

Comments:





LOCATION: SE 34th Street East of 164th Ave

SPECIFIC LOCATION:

CITY/STATE: Vancouver, WA

QC JOB #: 15672617

DIRECTION: EB

DATE: Jan 13 2022 - Jan 13 2022

Start Time	Mon	Tue	Wed	Thu 13 Jan 22	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM				32		32			32	
01:00 AM				12		12			12	
02:00 AM				15		15			15	
03:00 AM				12		12			12	
04:00 AM				22		22			22	
05:00 AM				85		85			85	
06:00 AM				146		146			146	
07:00 AM				244		244			244	
08:00 AM				340		340			340	
09:00 AM				252		252			252	
10:00 AM				231		231			231	
11:00 AM				266		266			266	
12:00 PM				321		321			321	
01:00 PM				322		322			322	
02:00 PM				357		357			357	
03:00 PM				492		492			492	
04:00 PM				488		488			488	
05:00 PM				445		445			445	
06:00 PM				341		341			341	
07:00 PM				226		226			226	
08:00 PM				167		167			167	
09:00 PM				135		135			135	
10:00 PM				69		69			69	
11:00 PM				55		55			55	
Day Total				5075		5075			5075	
% Weekday Average				100%						
% Week Average				100%		100%				
AM Peak Volume				8:00 AM 340		8:00 AM 340			8:00 AM 340	
PM Peak Volume				3:00 PM 492		3:00 PM 492			3:00 PM 492	
Comments:										

LOCATION: SE 34th Street East of 164th Ave

SPECIFIC LOCATION:

CITY/STATE: , anVwvuyr/ A

QC JOB #: 15672617

DIRECTION: EBY/ B

DATE: Jan 13 2022

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	PaVd Speed	Number in PaVd
12:00 AM	0	0	1	8	16	13	8	0	1	1	0	0	0	0	48	31-40	29
01:00 AM	0	0	0	5	3	10	6	2	1	0	0	0	0	0	27	36-45	16
02:00 AM	0	0	2	2	9	8	5	3	0	1	0	0	0	0	30	31-40	17
03:00 AM	0	0	2	3	10	7	4	4	1	0	0	0	0	0	31	31-40	17
04:00 AM	0	1	3	9	11	29	13	9	1	0	0	0	0	0	76	36-45	42
05:00 AM	2	0	5	18	45	61	70	18	8	1	0	0	0	0	228	36-45	131
06:00 AM	2	0	9	38	77	124	90	19	9	3	1	0	0	0	372	36-45	214
07:00 AM	4	0	11	79	161	229	114	23	4	0	0	1	0	0	626	31-40	390
08:00 AM	4	1	23	105	222	249	114	19	3	0	1	0	0	0	741	31-40	471
09:00 AM	5	1	18	79	186	242	64	17	1	1	0	0	0	0	614	31-40	428
10:00 AM	2	1	27	76	181	175	59	17	1	0	0	0	0	0	539	31-40	356
11:00 AM	4	8	27	109	154	174	91	17	5	0	0	0	0	0	589	31-40	328
12:00 PM	3	4	15	83	193	194	94	31	2	1	0	0	0	0	620	31-40	387
01:00 PM	4	2	22	99	201	228	62	19	2	2	0	0	0	0	641	31-40	429
02:00 PM	3	2	13	87	200	281	98	23	4	1	0	0	0	0	712	31-40	481
03:00 PM	8	2	25	124	285	329	110	21	3	2	1	0	0	0	910	31-40	614
04:00 PM	1	3	24	148	294	325	128	24	3	1	0	0	0	0	951	31-40	619
05:00 PM	6	4	19	116	251	280	140	28	6	0	0	0	0	0	850	31-40	531
06:00 PM	3	7	7	75	148	229	105	24	2	0	0	0	0	1	601	31-40	377
07:00 PM	0	1	7	28	103	139	80	14	4	0	0	0	0	0	376	31-40	242
08:00 PM	1	0	2	17	73	91	59	22	3	1	0	0	0	0	269	31-40	164
09:00 PM	1	0	4	21	59	87	43	9	5	1	0	0	0	0	230	31-40	146
10:00 PM	1	0	3	18	28	42	26	7	3	0	0	0	0	0	128	31-40	70
11:00 PM	0	0	1	16	12	36	20	5	1	0	0	0	0	0	91	36-45	56
Day Total	54	37	270	1363	2922	3582	1603	375	73	16	3	1	0	1	10300	31-40	6504
PerVnt	0.5%	0.4%	2.6%	13.2%	28.4%	34.8%	15.6%	3.6%	0.7%	0.2%	0%	0%	0%	0%			
AM Peak , olume	9:00 AM 5	11:00 AM 8	10:00 AM 27	11:00 AM 109	8:00 AM 222	8:00 AM 249	7:00 AM 114	7:00 AM 23	6:00 AM 9	6:00 AM 3	6:00 AM 1	7:00 AM 1	12:00 AM 0	12:00 AM 0	8:00 AM 741		
PM Peak , olume	3:00 PM 8	6:00 PM 7	3:00 PM 25	4:00 PM 148	4:00 PM 294	3:00 PM 329	5:00 PM 140	12:00 PM 31	5:00 PM 6	1:00 PM 2	3:00 PM 1	12:00 PM 0	12:00 PM 0	6:00 PM 1	4:00 PM 951		
Comments:																	

Type of report: Tube Count - Speed Data

SUMMARY - Tube Count - Speed Data

LOCATION: SE 34th Street East of 164th Ave														
SPECIFIC LOCATION:														
CITY/STATE: , anWuverY/ A														
QC JOB #:15672617														
DIRECTION: EB/ B														
DATE: Jan 13 2022														
Speed Range	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999
Grand Total	54	37	270	1363	2922	3582	1603	375	73	16	3	1	0	1
PerVnt	0.5%	0.4%	2.6%	13.2%	28.4%	34.8%	15.6%	3.6%	0.7%	0.2%	0%	0%	0%	0%
Cumulative PerVnt	0.5%	0.9%	3.5%	16.7%	45.1%	79.9%	95.4%	99.1%	99.8%	100%	100%	100%	100%	100%
ADT 10300														
Comments:														
85th PerVntile: 42 MPH Mean Speed(Average): 35 MPH Median: 36 MPH Mode: 38 MPH														

Report generated on 1c18c2022 4:02 PM

SOURCE: Quality CountsYLLC (<http://ccwww.qualityVounts.net>)

LOCATION: SE 34th Street East of 164th Ave  
SPECIFIC LOCATION:  
CITY, STATE: Vancouver/ A

QC JOB #: 15672617  
DIRECTION: EB/ B  
DATE: Jan 13 2022

Start Time	Motorcycles	Cars & Trailer	2 Axle Long	Buses	2 Axle Tire	3 Axle Single	4 Axle Single	<5 Axle Double	5 Axle Double	>6 Axle Double	<6 Axle Multi	6 Axle Multi	>6 Axle Multi	Not Classified	Total
12:00 AM	0	43	4	0	1	0	0	0	0	0	0	0	0	0	48
01:00 AM	0	21	5	0	1	0	0	0	0	0	0	0	0	0	27
02:00 AM	0	27	3	0	0	0	0	0	0	0	0	0	0	0	30
03:00 AM	0	28	3	0	0	0	0	0	0	0	0	0	0	0	31
04:00 AM	1	61	7	0	6	0	0	0	0	1	0	0	0	0	76
05:00 AM	0	165	40	2	17	1	0	0	1	0	0	0	0	2	228
06:00 AM	0	287	51	7	18	0	0	3	1	2	0	1	0	2	372
07:00 AM	1	494	93	6	25	0	1	1	0	1	0	0	0	4	626
08:00 AM	0	573	115	7	33	4	0	2	1	1	0	0	0	5	741
09:00 AM	0	457	88	7	47	1	1	6	2	0	0	0	0	5	614
10:00 AM	4	393	101	4	26	2	0	6	1	0	0	0	0	2	539
11:00 AM	2	443	92	8	31	1	1	6	0	0	0	0	0	5	589
12:00 PM	2	473	95	5	32	1	1	6	1	1	0	0	0	3	620
01:00 PM	0	499	89	5	33	2	0	5	4	0	0	0	0	4	641
02:00 PM	4	539	102	7	44	0	2	11	0	0	0	0	0	3	712
03:00 PM	4	699	139	12	35	2	0	11	0	0	0	1	0	7	910
04:00 PM	5	754	137	8	31	0	0	12	1	1	0	0	0	2	951
05:00 PM	2	694	114	5	25	1	0	2	0	0	0	0	0	7	850
06:00 PM	1	504	67	3	19	1	0	3	0	0	0	0	0	3	601
07:00 PM	0	323	37	4	11	0	1	0	0	0	0	0	0	0	376
08:00 PM	0	226	31	0	9	0	1	1	0	0	0	0	0	1	269
09:00 PM	0	201	23	0	5	0	0	0	0	0	0	0	0	1	230
10:00 PM	0	115	10	1	1	0	0	0	0	0	0	0	0	1	128
11:00 PM	0	84	4	0	3	0	0	0	0	0	0	0	0	0	91
Day Total	26	8103	1450	91	453	16	8	75	12	7	0	2	0	57	10300
Percent	0.3%	78.7%	14.1%	0.9%	4.4%	0.2%	0.1%	0.7%	0.1%	0.1%	0%	0%	0%	0.6%	
ADT 10300															
AM Peak Volume	10:00 AM 4	8:00 AM 573	8:00 AM 115	11:00 AM 8	9:00 AM 47	8:00 AM 4	7:00 AM 1	9:00 AM 6	9:00 AM 2	6:00 AM 2	12:00 AM 0	6:00 AM 1	12:00 AM 0	8:00 AM 5	8:00 AM 741
PM Peak Volume	4:00 PM 5	4:00 PM 754	3:00 PM 139	3:00 PM 12	2:00 PM 44	1:00 PM 2	2:00 PM 2	4:00 PM 12	1:00 PM 4	12:00 PM 1	12:00 PM 0	3:00 PM 1	12:00 PM 0	3:00 PM 7	4:00 PM 951
Comments:															

LOCATION: SE 34th Street East of 164th Ave

SPECIFIC LOCATION:

CIT, STATE: Vancouver/ A

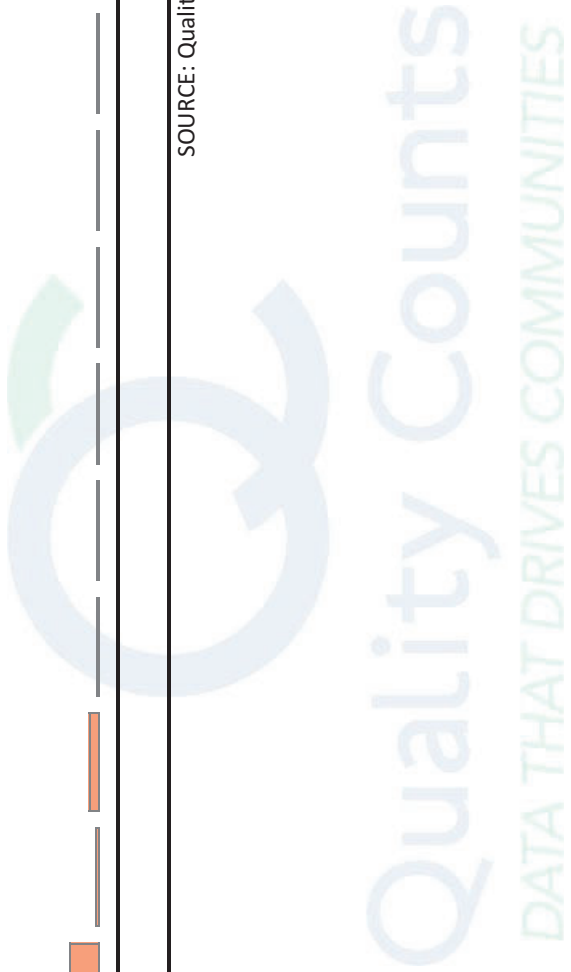
QC JOB #: 15672617

DIRECTION: EB/ B

DATE: Jan 13 2022

	Motorcycles	Cars & Trailer	2 Axle Long	Buses	2 Axle Tire	3 Axle Single	4 Axle Single	<5 Axle Double	5 Axle Double	>6 Axle Double	<6 Axle Multi	6 Axle Multi	>6 Axle Multi	Not Classified	Total
Grand Total	26	8103	1450	91	453	16	8	75	12	7	0	2	0	57	10300
Percent	0.3%	78.7%	14.1%	0.9%	4.4%	0.2%	0.1%	0.7%	0.1%	0.1%	0%	0%	0%	0.6%	
ADT 10300															

Comments:



LOCATION: SE 34th Street East of 164th Ave

























SPECIFIC LOCATION:

CITc, STATE: VanouverY/ A

QC JOB #: 15672617

DIRECTION: EBY/ B

DATE: Jan 13 2022 - Jan 13 2022

Start Time	Mon	Tue	/ ed	Thu 13 Jan 22	Fri	Average / eekday Hourly TrafficW	Sat	Sun	Average / eek Hourly TrafficW	Average / eek Profile
12:00 AM				48		48			48	
01:00 AM				27		27			27	
02:00 AM				30		30			30	
03:00 AM				31		31			31	
04:00 AM				76		76			76	
05:00 AM				228		228			228	
06:00 AM				372		372			372	
07:00 AM				626		626			626	
08:00 AM				741		741			741	
09:00 AM				614		614			614	
10:00 AM				539		539			539	
11:00 AM				589		589			589	
12:00 PM				620		620			620	
01:00 PM				641		641			641	
02:00 PM				712		712			712	
03:00 PM				910		910			910	
04:00 PM				951		951			951	
05:00 PM				850		850			850	
06:00 PM				601		601			601	
07:00 PM				376		376			376	
08:00 PM				269		269			269	
09:00 PM				230		230			230	
10:00 PM				128		128			128	
11:00 PM				91		91			91	
Day Total				10300		10300			10300	
% / eekday Average				100%						
% / eek Average				100%		100%				
AM Peak Volume				8:00 AM 741		8:00 AM 741			8:00 AM 741	
PM Peak Volume				4:00 PM 951		4:00 PM 951			4:00 PM 951	
Comments:										

Type of report: Tube Count - Speed Data

LOCATION: SE 34th Street East of 164th Ave

SPECIFIC LOCATION:


CIT/STATE: can, ouerW A

QC JOB #: 15672617

DIRECTION: Y B

DATE: Jan 13 2022

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pa, e Speed	Number in Pa, e
12:00 AM	0	0	1	2	4	5	3	0	1	0	0	0	0	0	16	31-40	9
01:00 AM	0	0	0	3	2	6	3	0	1	0	0	0	0	0	15	36-45	9
02:00 AM	0	0	2	1	2	4	4	2	0	0	0	0	0	0	15	36-45	8
03:00 AM	0	0	2	3	2	4	3	4	1	0	0	0	0	0	19	40-49	7
04:00 AM	0	0	2	5	6	24	9	7	1	0	0	0	0	0	54	36-45	33
05:00 AM	0	0	3	13	28	28	50	13	7	1	0	0	0	0	143	36-45	78
06:00 AM	2	0	8	29	32	66	65	13	8	3	0	0	0	0	226	36-45	131
07:00 AM	2	0	6	55	83	140	77	15	3	0	0	1	0	0	382	31-40	223
08:00 AM	4	1	10	40	92	147	88	16	2	0	1	0	0	0	401	31-40	239
09:00 AM	2	1	5	38	103	152	44	15	1	1	0	0	0	0	362	31-40	255
10:00 AM	2	1	10	39	90	106	43	16	1	0	0	0	0	0	308	31-40	196
11:00 AM	2	0	6	47	76	100	70	17	5	0	0	0	0	0	323	31-40	176
12:00 PM	1	0	4	38	71	93	63	26	2	1	0	0	0	0	299	31-40	164
01:00 PM	0	0	9	56	94	100	44	12	2	2	0	0	0	0	319	31-40	194
02:00 PM	0	1	4	37	81	145	67	17	3	0	0	0	0	0	355	31-40	226
03:00 PM	1	0	9	53	113	164	59	16	3	0	0	0	0	0	418	31-40	277
04:00 PM	1	0	9	64	146	153	69	17	3	1	0	0	0	0	463	31-40	299
05:00 PM	3	1	9	50	106	135	80	17	4	0	0	0	0	0	405	31-40	241
06:00 PM	1	1	0	33	65	83	58	18	1	0	0	0	0	0	260	31-40	148
07:00 PM	0	1	3	15	25	50	44	9	3	0	0	0	0	0	150	36-45	94
08:00 PM	0	0	1	5	17	34	29	15	0	1	0	0	0	0	102	36-45	63
09:00 PM	0	0	3	11	19	26	26	6	4	0	0	0	0	0	95	36-45	52
10:00 PM	0	0	2	7	10	15	17	5	3	0	0	0	0	0	59	36-45	32
11:00 PM	0	0	0	4	4	14	13	1	0	0	0	0	0	0	36	36-45	27
Day Total Per, ent	21 0.4%	7 0.1%	108 2.1%	648 12.4%	1271 24.3%	1794 34.3%	1028 19.7%	277 5.3%	59 1.1%	10 0.2%	1 0%	1 0%	0 0%	0	5225	31-40	3065



8:00 AM	4	1	10	55	103	152	88	17	8	3	1	1	0	0	8:00 AM
9:00 AM	4	1	10	55	103	152	88	17	8	3	1	1	0	0	401
10:00 AM	3	1	9	64	146	153	80	26	4	2	0	0	0	0	463

Comments:

Report generated on 1/18/2022 4:02 PM

SOURCE: Quality CountsWLC (http://www.quality\_counts.net)

Type of report: Tube Count - Speed Data

SUMMAR/ - Tube Count - Speed Data

QC JOB #: 15672617 DIRECTION: Y B DATE: Jan 13 2022																	
LOCATION: SE 34th Street East of 164th Ave SPECIFIC LOCATION: CIT/STATE: can, ouerW A																	
Speed Range	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pa, e Speed	Number in Pa, e
Grand Total	21 0.4%	7 0.1%	108 2.1%	648 12.4%	1271 24.3%	1794 34.3%	1028 19.7%	277 5.3%	59 1.1%	10 0.2%	1 0%	1 0%	0 0%	0 0%	5225	31-40	3065
Cumulative Per, ent	0.4%	0.5%	2.6%	15%	39.3%	73.7%	93.3%	98.6%	99.8%	100%	100%	100%	100%	100%			
ADT 5225															85th Per, entile: 43 MPH Mean Speed(Average): 36 MPH Median: 37 MPH Mode: 38 MPH		
Comments:																	

Report generated on 1V18V2022 4:02 PM

SOURCE: Quality CountsWLC (<http://www.quality.cunts.net>)





**LOCATION:** SE 34th Street East of 164th Ave  
**SPECIFIC LOCATION:**  
**CITY, STATE:** VancouverWA

**QC JOB #:** 15672617  
**DIRECTION:** Y B  
**DATE:** Jan 13 2022

Start Time	Motorcycles	Cars & Trailer	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axle Double	5 Axle Double	>6 Axle Double	<6 Axle Multi	6 Axle Multi	>6 Axle Multi	Not Classified	Total
12:00 AM	0	15	1	0	0	0	0	0	0	0	0	0	0	0	16
01:00 AM	0	13	1	0	1	0	0	0	0	0	0	0	0	0	15
02:00 AM	0	13	2	0	0	0	0	0	0	0	0	0	0	0	15
03:00 AM	0	18	1	0	0	0	0	0	0	0	0	0	0	0	19
04:00 AM	1	41	6	0	6	0	0	0	0	0	0	0	0	0	54
05:00 AM	0	101	24	1	17	0	0	0	0	0	0	0	0	0	143
06:00 AM	0	176	28	3	12	0	0	2	0	2	0	1	0	2	226
07:00 AM	1	301	61	3	12	0	0	1	0	1	0	0	0	2	382
08:00 AM	0	314	61	3	16	1	0	1	1	0	0	0	0	4	401
09:00 AM	0	262	56	4	30	0	1	5	2	0	0	0	0	2	362
10:00 AM	3	203	70	2	22	2	0	4	0	0	0	0	0	2	308
11:00 AM	0	238	53	4	20	1	1	4	0	0	0	0	0	2	323
12:00 PM	1	218	51	2	18	1	1	5	0	1	0	0	0	1	299
01:00 PM	0	241	48	3	19	1	0	5	2	0	0	0	0	0	319
02:00 PM	3	253	60	4	30	0	0	5	0	0	0	0	0	0	355
03:00 PM	2	316	67	5	20	1	0	5	0	0	0	1	0	1	418
04:00 PM	3	350	74	6	17	0	0	10	1	1	0	0	0	1	463
05:00 PM	1	319	61	2	17	0	0	2	0	0	0	0	0	3	405
06:00 PM	0	214	35	2	7	0	0	1	0	0	0	0	0	1	260
07:00 PM	0	125	16	2	7	0	0	0	0	0	0	0	0	0	150
08:00 PM	0	79	16	0	6	0	0	1	0	0	0	0	0	0	102
09:00 PM	0	83	10	0	2	0	0	0	0	0	0	0	0	0	95
10:00 PM	0	54	4	1	0	0	0	0	0	0	0	0	0	0	59
11:00 PM	0	33	2	0	1	0	0	0	0	0	0	0	0	0	36
Day Total	15	3980	808	47	280	7	3	51	6	5	0	2	0	21	5225
Percent	0.3%	76.2%	15.5%	0.9%	5.4%	0.1%	0.1%	1%	0.1%	0.1%	0%	0%	0%	0.4%	
ADT 5225															
AM Peak Volume	10:00 AM 3	8:00 AM 314	10:00 AM 70	9:00 AM 4	9:00 AM 30	10:00 AM 2	9:00 AM 1	9:00 AM 5	9:00 AM 2	6:00 AM 2	12:00 AM 0	6:00 AM 1	12:00 AM 0	8:00 AM 4	8:00 AM 401
PM Peak Volume	2:00 PM 3	4:00 PM 350	4:00 PM 74	4:00 PM 6	2:00 PM 30	12:00 PM 1	12:00 PM 1	4:00 PM 10	1:00 PM 2	12:00 PM 1	12:00 PM 0	3:00 PM 1	12:00 PM 0	5:00 PM 3	4:00 PM 463
<i>Comments:</i>															

LOCATION: SE 34th Street East of 164th Ave

SPECIFIC LOCATION:

CITY, STATE: VancouverW A

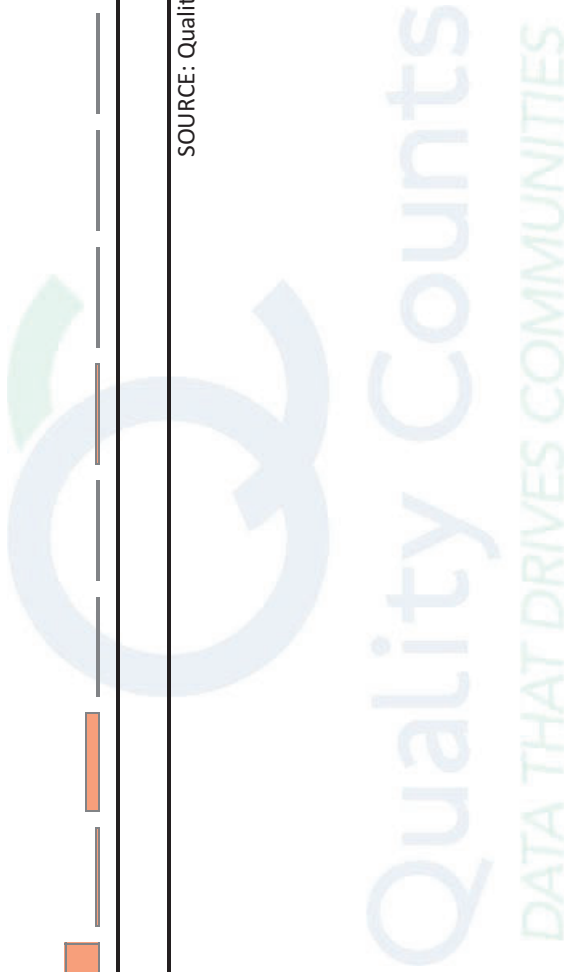
QC JOB #: 15672617

DIRECTION: Y B

DATE: Jan 13 2022

	Motorcycles	Cars & Trailer	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axle Double	5 Axle Double	>6 Axle Double	<6 Axle Multi	6 Axle Multi	>6 Axle Multi	Not Classified	Total
Grand Total	15	3980	808	47	280	7	3	51	6	5	0	2	0	21	5225
Percent	0.3%	76.2%	15.5%	0.9%	5.4%	0.1%	0.1%	1%	0.1%	0.1%	0%	0%	0%	0.4%	
ADT 5225															

Comments:



QC JOB #: 15672617

DIRECTION: Y B

DATE: Jan 13 2022 - Jan 13 2022

LOCATION: SE 34th Street East of 164th Ave

SPECIFIC LOCATION:

CIT/STATE: Van, ouve

W A

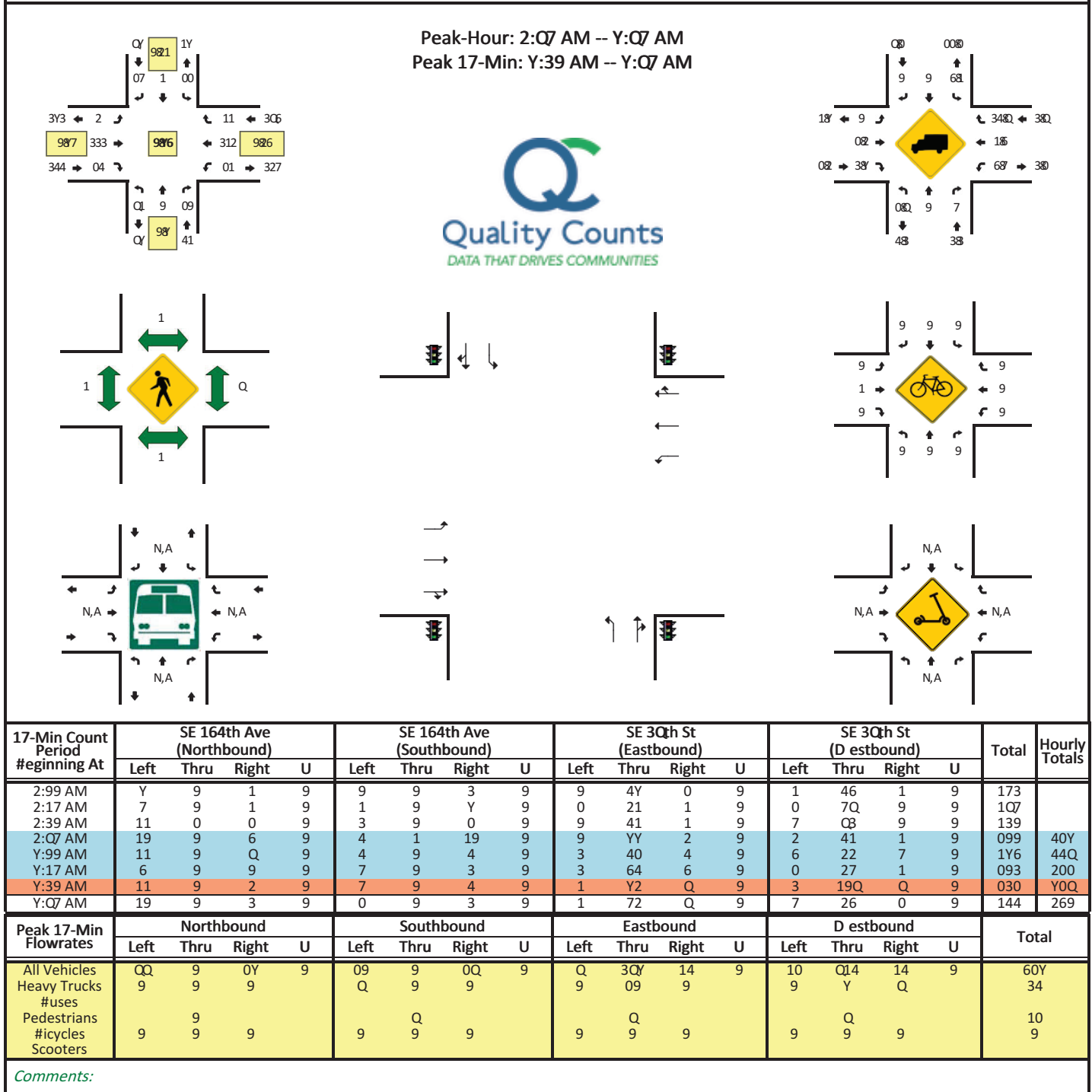
Start Time	Mon	Tue	Y ed	Thu 13 Jan 22	Fri	Average Y eekday Hourly Traffi,	Sat	Sun	Average Y eek Hourly Traffi,	Average Y eek Profile
12:00 AM				16		16			16	<div></div>
01:00 AM				15		15			15	<div></div>
02:00 AM				15		15			15	<div></div>
03:00 AM				18		18			18	<div></div>
04:00 AM				54		54			54	<div></div>
05:00 AM				143		143			143	<div></div>
06:00 AM				226		226			226	<div></div>
07:00 AM				392		392			392	<div></div>
09:00 AM				401		401			401	<div></div>
08:00 AM				362		362			362	<div></div>
10:00 AM				309		309			309	<div></div>
11:00 AM				323		323			323	<div></div>
12:00 PM				288		288			288	<div></div>
01:00 PM				318		318			318	<div></div>
02:00 PM				355		355			355	<div></div>
03:00 PM				419		419			419	<div></div>
04:00 PM				463		463			463	<div></div>
05:00 PM				405		405			405	<div></div>
06:00 PM				260		260			260	<div></div>
07:00 PM				150		150			150	<div></div>
09:00 PM				102		102			102	<div></div>
08:00 PM				85		85			85	<div></div>
10:00 PM				58		58			58	<div></div>
11:00 PM				36		36			36	<div></div>
Day Total				5225		5225			5225	
% Y eekday Average				100%						
% Y eek Average				100%		100%				
AM Peak Volume				9:00 AM 401		9:00 AM 401			9:00 AM 401	
PM Peak Volume				4:00 PM 463		4:00 PM 463			4:00 PM 463	
Comments:										

LOCATION: SE 164th Ave -- SE 30th St

CITY/STATE: Vancouver WA

JCB# 5: 1742041Y

ATE: Thu Jan 13 0900

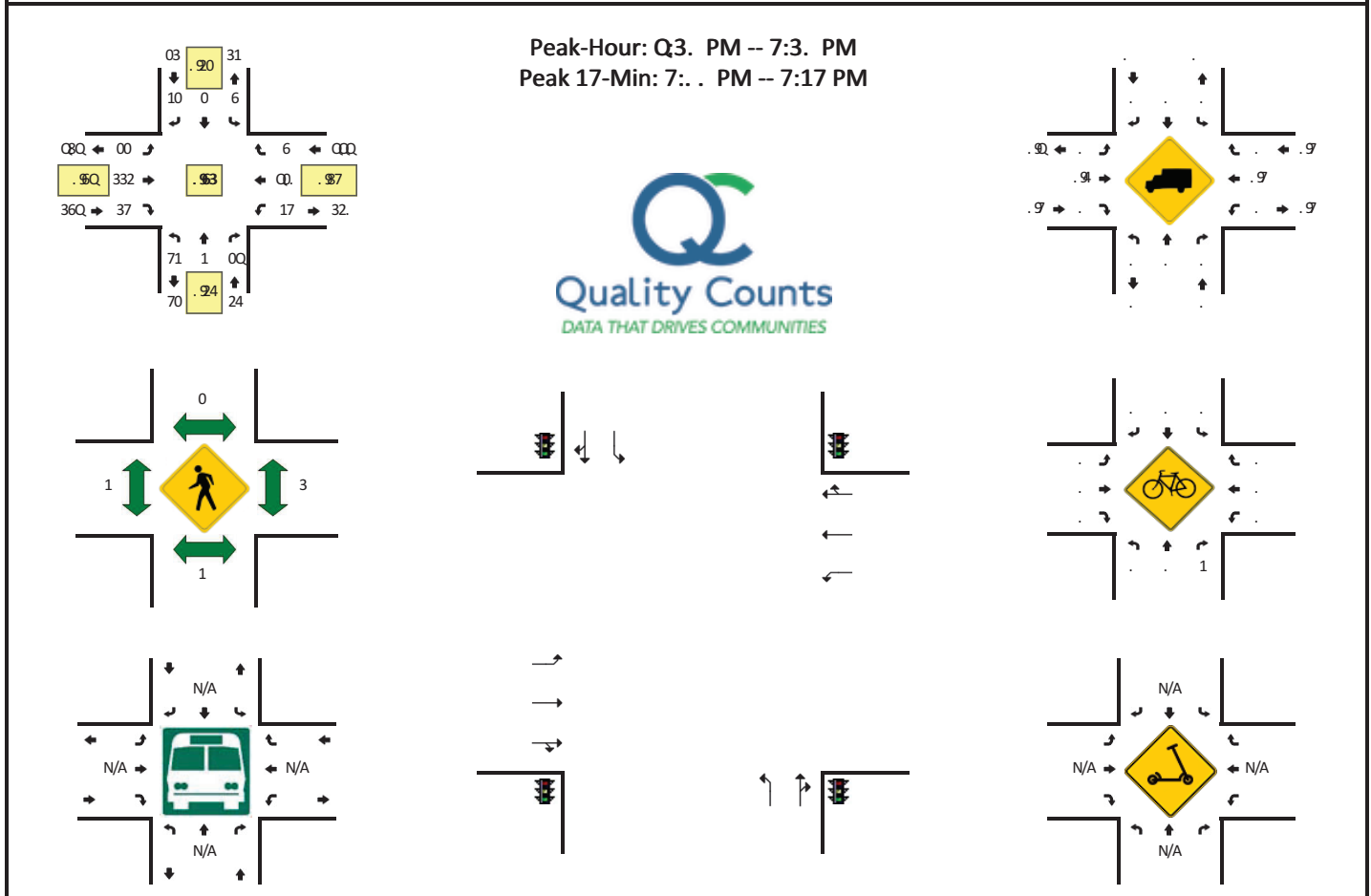


Report generated on 1,01,0900 Y:70 AM

SOURCE: Quality Counts WLC (http://www.qualitycounts.net) 1-Y22-7Y9-0010

LOCATION: SE 164th Ave -- SE 30th St  
CITY/STATE: Vancouver, WA

J C B# 5: 17420416  
DATE: Thu, Jan 13 00.00



17-Min Count Period Beginning At	SE 164th Ave (Northbound)				SE 164th Ave (Southbound)				SE 30th St (Eastbound)				SE 30th St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
Q.. PM	13	.	0	.	1	.	3	.	Q	23	1.	0	3	100	3	.	074	
Q:17 PM	11	.	Q	.	1	1	4	.	3	21	4	0	7	1..	1	.	011	
Q3. PM	18	.	2	.	1	.	3	.	Q	22	2	.	4	1..	3	.	004	
Q:07 PM	10	.	4	.	0	1	3	.	4	87	11	.	0	68	1	.	002	60.
7:.. PM	6	.	7	.	3	1	Q	.	Q	87	1.	.	0	107	Q	.	070	614
7:17 PM	10	1	4	.	3	.	0	.	2	6.	2	1	7	62	1	.	030	632
7:3. PM	10	.	3	.	3	.	Q	.	2	88	1.	.	1	48	.	.	164	6.2
7:Q7 PM	4	.	0	.	0	.	1	.	4	24	4	0	1	43	1	.	144	8Q4
Peak 17-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	34	.	0.	.	10	Q	14	.	14	3Q	Q	.	8	7..	14	.	1..8	
Heavy Trucks	.	.	.	.	.	.	.	.	.	.	.	.	.	Q	.	.	Q	
#uses	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	
Pedestrians	.	.	.	.	.	Q	.	.	.	Q	.	.	.	.	.	.	8	
#icycles	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	
Scooters	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	

Comments:



## **Appendix C: Level of Service Results**

SimTraffic Post-Processor  
Average Results from 10 Runs  
Volume and Delay by Movement

SE 34th Street  
Existing  
AM Peak Hour

Intersection 1                      164th Avenue/34th Street                      Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	84	81	96.4%	41.8	8.1	D
	Through	708	709	100.1%	16.6	2.4	B
	Right Turn	179	184	102.6%	2.2	0.5	A
	Subtotal	971	973	100.2%	16.2	2.3	B
SB	Left Turn	132	126	95.7%	51.8	9.0	D
	Through	616	621	100.8%	15.9	3.1	B
	Right Turn	26	30	115.4%	4.8	2.6	A
	Subtotal	774	777	100.4%	21.9	4.6	C
EB	Left Turn	18	18	102.2%	59.8	24.1	E
	Through	45	46	101.3%	49.6	14.1	D
	Right Turn	123	125	101.6%	6.1	1.2	A
	Subtotal	186	189	101.6%	23.6	4.9	C
WB	Left Turn	274	261	95.1%	46.5	6.0	D
	Through	54	55	101.3%	37.7	10.4	D
	Right Turn	96	93	96.7%	4.7	1.1	A
	Subtotal	424	408	96.3%	36.3	4.1	D
Total		2,355	2,348	99.7%	22.3	2.1	C

Intersection 2                      168th Avenue/34th Street                      Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	25	23	93.2%	12.5	5.8	B
	Through	3	3	90.0%	7.6	12.1	A
	Right Turn	1	2	160.0%	2.2	2.7	A
	Subtotal	29	28	95.2%	12.2	6.1	B
SB	Left Turn	9	8	90.0%	9.6	8.1	A
	Through	2	3	135.0%	6.5	11.0	A
	Right Turn	38	34	90.0%	3.6	0.5	A
	Subtotal	49	45	91.8%	5.3	1.8	A
EB	Left Turn	25	23	92.4%	7.7	4.7	A
	Through	318	323	101.4%	4.6	1.8	A
	Right Turn	13	13	99.2%	2.3	1.8	A
	Subtotal	356	359	100.7%	4.8	1.8	A
WB	Left Turn	4	3	82.5%	3.6	5.2	A
	Through	361	352	97.5%	2.6	0.9	A
	Right Turn	15	16	104.0%	1.2	1.4	A
	Subtotal	380	371	97.6%	2.6	0.9	A
Total		814	802	98.5%	4.0	1.3	A

SimTraffic Post-Processor  
Average Results from 10 Runs  
Volume and Delay by Movement

SE 34th Street  
Existing  
AM Peak Hour

Intersection 3

SE 172nd Avenue/SE 34th Street

Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	57	53	92.5%	7.7	1.7	A
	Through	2	2	110.0%	1.4	2.8	A
	Right Turn	22	23	104.5%	4.0	1.5	A
	Subtotal	81	78	96.2%	6.7	1.6	A
SB	Left Turn						
	Through						
	Right Turn	17	17	97.1%	4.2	3.7	A
	Subtotal	17	17	97.1%	4.2	3.7	A
EB	Left Turn	4	3	72.5%	0.7	0.8	A
	Through	300	304	101.2%	0.6	0.3	A
	Right Turn	24	25	102.1%	0.2	0.1	A
	Subtotal	328	331	100.9%	0.6	0.3	A
WB	Left Turn	17	16	92.9%	2.8	2.1	A
	Through	306	303	99.0%	1.0	0.3	A
	Right Turn	3	3	113.3%	0.7	1.0	A
	Subtotal	326	322	98.8%	1.1	0.3	A
Total		752	748	99.4%	1.6	0.4	A

Intersection 4

176th Avenue/34th Street

Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	11	10	92.7%	48.0	20.8	D
	Through	11	11	102.7%	35.3	19.2	D
	Right Turn						
	Subtotal	22	22	97.7%	40.7	11.9	D
SB	Left Turn	47	48	102.3%	45.6	8.2	D
	Through	6	5	81.7%	33.3	21.9	C
	Right Turn	114	113	99.5%	5.5	1.6	A
	Subtotal	167	166	99.6%	19.4	5.0	B
EB	Left Turn	37	32	87.6%	3.5	1.6	A
	Through	279	290	103.8%	2.0	0.8	A
	Right Turn	6	7	111.7%	0.5	0.5	A
	Subtotal	322	329	102.1%	2.2	0.9	A
WB	Left Turn	1	1	70.0%	0.5	1.1	A
	Through	201	202	100.6%	2.8	1.1	A
	Right Turn	41	40	98.3%	1.2	0.7	A
	Subtotal	243	243	100.1%	2.5	0.9	A
Total		754	760	100.8%	7.4	1.4	A



SimTraffic Post-Processor  
Average Results from 10 Runs  
Volume and Delay by Movement

SE 34th Street  
Existing  
AM Peak Hour

Intersection 5

177th Avenue/34th Street

Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	21	22	102.4%	6.8	2.5	A
	Through						
	Right Turn	11	11	100.0%	3.0	0.5	A
	Subtotal	32	33	101.6%	5.7	1.8	A
SB	Left Turn	1	0	40.0%	0.0	0.0	A
	Through						
	Right Turn	10	9	89.0%	3.4	1.8	A
	Subtotal	11	9	84.5%	3.4	1.8	A
EB	Left Turn	67	65	96.9%	2.3	0.8	A
	Through	250	265	105.8%	0.8	0.2	A
	Right Turn	9	9	103.3%	0.4	0.6	A
	Subtotal	326	339	103.9%	1.1	0.4	A
WB	Left Turn	6	5	81.7%	1.4	1.4	A
	Through	212	210	99.2%	1.2	0.2	A
	Right Turn	8	9	115.0%	1.2	1.0	A
	Subtotal	226	224	99.3%	1.3	0.2	A
Total		595	605	101.7%	1.4	0.2	A

Intersection 6

SE Hiddenbrook Drive/34th Street

Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	58	56	96.4%	41.0	8.4	D
	Through	2	2	110.0%	13.5	23.8	B
	Right Turn	28	29	101.8%	4.7	0.8	A
	Subtotal	88	87	98.4%	30.1	6.2	C
SB	Left Turn	2	2	85.0%	16.5	27.6	B
	Through						
	Right Turn	9	12	127.8%	3.6	1.4	A
	Subtotal	11	13	120.0%	8.1	8.8	A
EB	Left Turn	29	30	103.1%	39.6	10.6	D
	Through	192	200	104.4%	2.5	0.9	A
	Right Turn	41	40	98.3%	1.0	0.4	A
	Subtotal	262	271	103.3%	7.1	1.5	A
WB	Left Turn	27	25	91.5%	41.2	13.6	D
	Through	159	157	98.4%	2.2	0.6	A
	Right Turn	15	16	104.7%	1.0	1.4	A
	Subtotal	201	197	98.0%	8.1	3.0	A
Total		562	567	100.9%	10.8	1.9	B

SimTraffic Post-Processor  
Average Results from 10 Runs  
Volume and Delay by Movement

SE 34th Street  
Existing  
AM Peak Hour

Intersection 7

SE 192nd Avenue/34th Street

Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	58	52	88.8%	49.3	9.6	D
	Through	454	445	98.0%	12.3	2.5	B
	Right Turn	226	236	104.2%	3.4	0.7	A
	Subtotal	738	732	99.2%	11.7	1.8	B
SB	Left Turn	95	91	96.2%	44.7	9.7	D
	Through	382	384	100.4%	9.5	1.8	A
	Right Turn	55	56	102.4%	4.6	2.6	A
	Subtotal	532	531	99.9%	15.4	3.4	B
EB	Left Turn	48	49	101.5%	34.7	8.4	C
	Through	105	111	105.7%	39.3	5.2	D
	Right Turn	36	39	108.3%	17.4	7.6	B
	Subtotal	189	199	105.1%	34.4	5.0	C
WB	Left Turn	135	135	99.8%	37.3	4.9	D
	Through	88	88	100.2%	37.5	6.3	D
	Right Turn	60	61	102.3%	10.9	6.8	B
	Subtotal	283	284	100.5%	32.5	3.8	C
Total		1,742	1,747	100.3%	18.8	1.5	B

SimTraffic Post-Processor  
Average Results from 10 Runs  
Volume and Delay by Movement

34th Street  
Existing\_PM  
PM Peak Hour

Intersection 1 SE 164th Avenue/SE 34th Street Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	148	148	99.9%	51.9	7.7	D
	Through	1,002	995	99.3%	19.1	2.5	B
	Right Turn	297	291	98.0%	3.5	0.7	A
	Subtotal	1,447	1,434	99.1%	19.0	2.1	B
SB	Left Turn	126	125	99.5%	47.6	8.6	D
	Through	988	977	98.8%	17.8	2.0	B
	Right Turn	55	52	94.5%	8.3	2.4	A
	Subtotal	1,169	1,154	98.7%	20.7	2.5	C
EB	Left Turn	47	47	100.0%	55.7	11.1	E
	Through	76	77	100.8%	52.9	9.6	D
	Right Turn	147	150	101.8%	6.4	1.0	A
	Subtotal	270	273	101.2%	29.1	4.5	C
WB	Left Turn	228	223	97.9%	45.8	2.8	D
	Through	84	85	101.3%	44.2	8.8	D
	Right Turn	167	163	97.8%	6.8	0.9	A
	Subtotal	479	472	98.5%	32.5	3.0	C
Total		3,365	3,333	99.1%	22.3	1.7	C

Intersection 2 SE 168th Avenue/SE 34th Street Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	19	19	99.5%	12.9	4.7	B
	Through	9	9	102.2%	15.8	11.4	B
	Right Turn	5	5	104.0%	3.9	2.7	A
	Subtotal	33	33	100.9%	12.3	3.3	B
SB	Left Turn	17	15	90.6%	13.4	4.2	B
	Through	11	11	103.6%	10.7	7.3	B
	Right Turn	30	29	97.0%	4.1	2.0	A
	Subtotal	58	56	96.4%	8.5	1.0	A
EB	Left Turn	57	62	107.9%	7.5	1.5	A
	Through	427	424	99.2%	4.4	1.3	A
	Right Turn	15	14	96.0%	3.1	3.8	A
	Subtotal	499	499	100.1%	4.8	1.2	A
WB	Left Turn	7	8	108.6%	4.7	5.1	A
	Through	430	427	99.2%	3.7	1.3	A
	Right Turn	14	14	96.4%	1.9	2.6	A
	Subtotal	451	448	99.2%	3.7	1.3	A
Total		1,041	1,036	99.5%	4.8	1.1	A

SimTraffic Post-Processor  
Average Results from 10 Runs  
Volume and Delay by Movement

34th Street  
Existing\_PM  
PM Peak Hour

Intersection 43

Pedestrian Crossing/SE 34th Street

Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
SB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
EB	Left Turn						
	Through	449	444	98.8%	1.1	0.3	A
	Right Turn						
	Subtotal	449	444	98.8%	1.1	0.3	A
WB	Left Turn						
	Through	451	447	99.0%	0.6	0.5	A
	Right Turn						
	Subtotal	451	447	99.0%	0.6	0.5	A
Total		900	890	98.9%	0.9	0.3	A

Intersection 3

SE 172nd Avenue/SE 34th Street

Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	40	37	93.3%	10.4	2.7	B
	Through	3	3	103.3%	7.5	9.1	A
	Right Turn	21	20	96.2%	4.2	1.9	A
	Subtotal	64	61	94.7%	9.0	2.5	A
SB	Left Turn						
	Through	3	2	76.7%	5.6	6.9	A
	Right Turn	3	4	140.0%	1.9	1.9	A
	Subtotal	6	7	108.3%	5.5	5.2	A
EB	Left Turn	12	10	85.8%	1.5	1.2	A
	Through	371	359	96.8%	0.8	0.3	A
	Right Turn	66	70	106.7%	0.5	0.2	A
	Subtotal	449	440	98.0%	0.8	0.3	A
WB	Left Turn	32	30	92.8%	3.2	0.9	A
	Through	408	414	101.4%	1.7	0.3	A
	Right Turn	1	1	120.0%	0.7	1.4	A
	Subtotal	441	445	100.8%	1.8	0.3	A
Total		960	952	99.1%	1.8	0.2	A

SimTraffic Post-Processor  
Average Results from 10 Runs  
Volume and Delay by Movement

34th Street  
Existing\_PM  
PM Peak Hour

Intersection 4 SE 176th Avenue/SE 34th Street Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	11	9	77.3%	42.9	20.4	D
	Through	8	10	128.8%	42.2	28.6	D
	Right Turn	1	2	190.0%	2.2	2.3	A
	Subtotal	20	21	103.5%	40.8	20.0	D
SB	Left Turn	68	68	100.4%	37.8	7.3	D
	Through	16	16	97.5%	39.5	22.1	D
	Right Turn	58	60	103.8%	9.5	3.8	A
	Subtotal	142	144	101.5%	25.7	3.9	C
EB	Left Turn	131	127	97.0%	7.8	2.4	A
	Through	241	237	98.4%	2.7	0.9	A
	Right Turn	20	20	100.0%	1.8	1.5	A
	Subtotal	392	384	98.0%	4.4	0.9	A
WB	Left Turn	8	8	98.8%	5.9	5.3	A
	Through	372	367	98.7%	7.0	2.3	A
	Right Turn	77	76	98.8%	4.9	3.0	A
	Subtotal	457	451	98.8%	6.7	2.3	A
Total		1,011	1,000	99.0%	9.0	1.6	A

Intersection 5 SE 177th Avenue/SE 34th Street Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	16	13	80.6%	8.2	3.4	A
	Through						
	Right Turn	11	10	89.1%	2.8	1.1	A
	Subtotal	27	23	84.1%	6.4	2.7	A
SB	Left Turn	3	2	76.7%	2.6	2.9	A
	Through						
	Right Turn	44	43	98.6%	4.2	1.3	A
	Subtotal	47	46	97.2%	4.2	1.2	A
EB	Left Turn	12	11	90.8%	2.7	2.8	A
	Through	270	267	99.0%	0.8	0.3	A
	Right Turn	28	26	92.5%	0.5	0.3	A
	Subtotal	310	304	98.1%	0.9	0.3	A
WB	Left Turn	10	10	100.0%	2.5	2.0	A
	Through	397	401	101.1%	1.5	0.3	A
	Right Turn						
	Subtotal	407	411	101.0%	1.6	0.3	A
Total		791	784	99.1%	1.6	0.2	A

SimTraffic Post-Processor  
Average Results from 10 Runs  
Volume and Delay by Movement

34th Street  
Existing\_PM  
PM Peak Hour

Intersection 6 SE Hiddenbrook Drive/SE 34th Street Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	84	78	92.3%	36.3	10.0	D
	Through	1	1	130.0%	6.2	17.5	A
	Right Turn	39	38	97.4%	4.4	0.7	A
	Subtotal	124	117	94.2%	25.5	5.6	C
SB	Left Turn	11	9	82.7%	38.3	15.6	D
	Through						
	Right Turn	34	36	104.4%	4.2	0.7	A
	Subtotal	45	45	99.1%	14.3	7.5	B
EB	Left Turn	4	4	102.5%	9.8	17.5	A
	Through	221	220	99.7%	4.1	1.4	A
	Right Turn	59	56	94.1%	2.3	1.1	A
	Subtotal	284	280	98.6%	4.0	1.5	A
WB	Left Turn	30	28	93.0%	42.7	10.4	D
	Through	289	298	103.2%	2.7	0.7	A
	Right Turn	7	6	88.6%	2.2	4.0	A
	Subtotal	326	332	101.9%	6.3	2.3	A
Total		779	774	99.3%	8.8	1.7	A

Intersection 33 Driveway/SE 34th Street Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn						
	Through						
	Right Turn	18	17	92.2%	5.4	1.3	A
	Subtotal	18	17	92.2%	5.4	1.3	A
SB	Left Turn						
	Through						
	Right Turn	38	37	96.8%	5.6	0.7	A
	Subtotal	38	37	96.8%	5.6	0.7	A
EB	Left Turn						
	Through	271	272	100.3%	0.8	0.3	A
	Right Turn						
	Subtotal	271	272	100.3%	0.8	0.3	A
WB	Left Turn						
	Through	288	287	99.5%	1.3	0.1	A
	Right Turn						
	Subtotal	288	287	99.5%	1.3	0.1	A
Total		615	612	99.5%	1.5	0.2	A

SimTraffic Post-Processor  
Average Results from 10 Runs  
Volume and Delay by Movement

34th Street  
Existing\_PM  
PM Peak Hour

Intersection 7

SE 192nd Avenue/SE 34th Street

Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	83	82	98.7%	46.5	6.5	D
	Through	643	645	100.3%	17.6	2.4	B
	Right Turn	107	107	99.8%	3.7	1.0	A
	Subtotal	833	834	100.1%	18.7	1.7	B
SB	Left Turn	158	156	98.5%	52.0	8.3	D
	Through	597	585	98.1%	16.4	2.4	B
	Right Turn	77	79	102.1%	9.8	2.6	A
	Subtotal	832	820	98.5%	22.4	3.4	C
EB	Left Turn	89	84	94.3%	28.3	4.0	C
	Through	147	149	101.6%	37.5	3.7	D
	Right Turn	53	53	100.6%	19.1	6.2	B
	Subtotal	289	287	99.1%	31.3	3.1	C
WB	Left Turn	228	239	104.7%	35.1	3.2	D
	Through	128	129	100.5%	34.0	3.1	C
	Right Turn	90	82	90.6%	16.0	4.1	B
	Subtotal	446	449	100.7%	31.2	1.5	C
Total		2,400	2,389	99.5%	23.7	1.9	C

Intersection 30

Shopping Center Driveway/SE 34th Street

Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
SB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
EB	Left Turn						
	Through	361	359	99.3%	1.2	0.1	A
	Right Turn	51	52	101.8%	1.2	0.3	A
	Subtotal	412	411	99.6%	1.2	0.1	A
WB	Left Turn						
	Through	446	456	102.2%	1.3	0.2	A
	Right Turn	63	60	95.9%	0.8	0.4	A
	Subtotal	509	516	101.4%	1.2	0.2	A
Total		921	927	100.6%	1.2	0.1	A

SimTraffic Post-Processor  
Average Results from 10 Runs  
Volume and Delay by Movement

SE 34th Street  
Existing Build Alternative  
AM Peak Hour

Intersection 1                      164th Avenue/34th Street                      Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	84	84	100.5%	44.4	6.8	D
	Through	708	716	101.2%	23.5	4.0	C
	Right Turn	179	173	96.6%	3.3	0.9	A
	Subtotal	971	974	100.3%	21.9	3.4	C
SB	Left Turn	132	131	99.0%	54.1	6.5	D
	Through	616	626	101.6%	19.6	3.2	B
	Right Turn	26	30	114.2%	6.8	5.6	A
	Subtotal	774	786	101.6%	25.2	2.9	C
EB	Left Turn	18	18	97.8%	49.8	22.1	D
	Through	45	45	99.3%	48.3	6.1	D
	Right Turn	123	122	99.5%	5.6	1.0	A
	Subtotal	186	185	99.3%	22.0	3.9	C
WB	Left Turn	274	265	96.8%	45.3	6.6	D
	Through	54	57	105.9%	26.4	7.6	C
	Right Turn	96	94	97.8%	4.2	0.7	A
	Subtotal	424	416	98.2%	34.1	4.8	C
Total		2,355	2,361	100.3%	25.3	2.8	C

Intersection 2                      168th Avenue/34th Street                      Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	25	22	87.6%	16.5	6.4	B
	Through	3	3	110.0%	11.0	11.8	B
	Right Turn	1	1	130.0%	1.7	2.5	A
	Subtotal	29	27	91.4%	15.1	5.4	B
SB	Left Turn	9	8	85.6%	14.0	9.4	B
	Through	2	2	80.0%	4.7	11.0	A
	Right Turn	38	38	99.7%	4.9	1.7	A
	Subtotal	49	47	96.3%	6.9	2.6	A
EB	Left Turn	25	20	80.4%	8.5	3.7	A
	Through	318	319	100.2%	5.0	1.1	A
	Right Turn	13	13	100.0%	3.0	2.1	A
	Subtotal	356	352	98.8%	5.1	1.1	A
WB	Left Turn	4	4	100.0%	1.7	2.6	A
	Through	361	358	99.1%	4.0	1.2	A
	Right Turn	15	17	112.0%	1.5	2.0	A
	Subtotal	380	379	99.6%	3.9	1.2	A
Total		814	804	98.8%	5.1	0.9	A



SimTraffic Post-Processor  
Average Results from 10 Runs  
Volume and Delay by Movement

SE 34th Street  
Existing Build Alternative  
AM Peak Hour

Intersection 3

SE 172nd Avenue/SE 34th Street

Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	57	56	98.1%	8.7	1.6	A
	Through	2	2	110.0%	1.7	3.6	A
	Right Turn	22	20	92.7%	4.7	1.5	A
	Subtotal	81	79	96.9%	7.6	1.2	A
SB	Left Turn						
	Through						
	Right Turn	17	15	90.6%	3.7	1.6	A
	Subtotal	17	15	90.6%	3.7	1.6	A
EB	Left Turn	4	3	77.5%	2.6	2.6	A
	Through	300	300	99.9%	0.9	0.2	A
	Right Turn	24	24	101.3%	0.7	0.5	A
	Subtotal	328	327	99.8%	0.9	0.2	A
WB	Left Turn	17	16	92.9%	3.9	1.5	A
	Through	306	312	101.9%	1.3	0.3	A
	Right Turn	3	4	120.0%	0.8	0.9	A
	Subtotal	326	331	101.6%	1.4	0.3	A
Total		752	752	100.0%	1.9	0.3	A

Intersection 4

176th Avenue/34th Street

Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	11	12	104.5%	43.3	24.7	D
	Through	11	12	104.5%	37.4	17.1	D
	Right Turn						
	Subtotal	22	23	104.5%	40.5	12.2	D
SB	Left Turn	47	47	98.9%	49.9	8.6	D
	Through	6	6	93.3%	38.7	27.5	D
	Right Turn	114	116	101.4%	7.6	2.3	A
	Subtotal	167	168	100.4%	19.4	3.2	B
EB	Left Turn	37	37	100.5%	4.8	1.3	A
	Through	279	282	100.9%	2.7	1.2	A
	Right Turn	6	7	113.3%	1.4	1.0	A
	Subtotal	322	326	101.1%	2.9	1.1	A
WB	Left Turn	1	0	30.0%	1.2	3.7	A
	Through	201	208	103.4%	4.4	1.5	A
	Right Turn	41	41	99.5%	2.9	2.9	A
	Subtotal	243	249	102.5%	4.1	1.5	A
Total		754	765	101.5%	8.3	1.5	A

SimTraffic Post-Processor  
Average Results from 10 Runs  
Volume and Delay by Movement

SE 34th Street  
Existing Build Alternative  
AM Peak Hour

Intersection 5

177th Avenue/34th Street

Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	21	21	101.0%	7.6	1.7	A
	Through						
	Right Turn	11	14	122.7%	3.3	1.3	A
	Subtotal	32	35	108.4%	6.1	0.6	A
SB	Left Turn	1	0	40.0%	0.3	1.0	A
	Through						
	Right Turn	10	10	103.0%	3.0	0.8	A
	Subtotal	11	11	97.3%	2.9	0.8	A
EB	Left Turn	67	66	98.5%	3.2	0.8	A
	Through	250	255	102.1%	0.8	0.2	A
	Right Turn	9	9	103.3%	0.7	0.7	A
	Subtotal	326	331	101.4%	1.3	0.3	A
WB	Left Turn	6	7	108.3%	3.2	3.3	A
	Through	212	214	100.9%	2.1	0.6	A
	Right Turn	8	9	116.3%	0.9	0.8	A
	Subtotal	226	230	101.6%	2.1	0.6	A
Total		595	606	101.8%	1.9	0.2	A

Intersection 6

SE Hiddenbrook Drive/34th Street

Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	58	59	101.2%	40.4	7.9	D
	Through	2	3	125.0%	19.7	33.8	B
	Right Turn	28	30	108.2%	4.7	0.6	A
	Subtotal	88	92	104.0%	28.8	7.0	C
SB	Left Turn	2	2	100.0%	13.7	18.7	B
	Through						
	Right Turn	9	10	110.0%	2.9	1.6	A
	Subtotal	11	12	108.2%	10.1	15.9	B
EB	Left Turn	29	29	100.7%	42.6	9.6	D
	Through	192	195	101.7%	2.7	0.9	A
	Right Turn	41	41	100.0%	2.4	1.3	A
	Subtotal	262	265	101.3%	8.1	2.7	A
WB	Left Turn	27	23	84.1%	44.0	10.7	D
	Through	159	161	101.4%	3.4	1.0	A
	Right Turn	15	14	94.7%	1.0	1.0	A
	Subtotal	201	198	98.6%	8.6	2.0	A
Total		562	567	100.9%	11.6	2.0	B

SimTraffic Post-Processor  
Average Results from 10 Runs  
Volume and Delay by Movement

SE 34th Street  
Existing Build Alternative  
AM Peak Hour

Intersection 7

SE 192nd Avenue/34th Street

Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	58	59	101.0%	45.3	10.0	D
	Through	454	459	101.1%	14.5	3.1	B
	Right Turn	226	224	99.3%	3.5	0.9	A
	Subtotal	738	742	100.6%	13.5	1.9	B
SB	Left Turn	95	92	96.9%	46.4	8.0	D
	Through	382	384	100.6%	11.4	1.8	B
	Right Turn	55	56	101.5%	5.2	2.6	A
	Subtotal	532	532	100.0%	17.4	2.6	B
EB	Left Turn	48	47	97.1%	30.5	5.7	C
	Through	105	114	108.7%	38.8	4.4	D
	Right Turn	36	34	94.2%	25.5	9.8	C
	Subtotal	189	195	103.0%	33.9	4.5	C
WB	Left Turn	135	137	101.8%	38.1	5.0	D
	Through	88	83	94.7%	32.3	7.3	C
	Right Turn	60	61	100.8%	4.1	1.3	A
	Subtotal	283	281	99.4%	28.8	3.4	C
Total		1,742	1,750	100.5%	19.4	1.7	B

SimTraffic Post-Processor  
Average Results from 10 Runs  
Volume and Delay by Movement

SE 34th Street  
Existing Build Alternative  
PM Peak Hour

Intersection 1                      164th Avenue/34th Street                      Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	148	146	98.7%	42.3	5.0	D
	Through	1,002	985	98.3%	22.1	4.5	C
	Right Turn	297	300	100.9%	4.5	1.0	A
	Subtotal	1,447	1,431	98.9%	20.6	3.9	C
SB	Left Turn	126	122	97.1%	55.2	6.5	E
	Through	988	987	99.9%	24.4	2.8	C
	Right Turn	55	55	99.8%	10.6	5.1	B
	Subtotal	1,169	1,164	99.6%	27.0	3.0	C
EB	Left Turn	47	46	98.7%	53.1	10.0	D
	Through	76	78	102.9%	49.3	4.0	D
	Right Turn	147	149	101.4%	6.8	1.7	A
	Subtotal	270	274	101.4%	26.8	2.9	C
WB	Left Turn	228	214	93.6%	49.0	5.5	D
	Through	84	81	96.3%	40.1	5.7	D
	Right Turn	167	166	99.5%	7.5	2.0	A
	Subtotal	479	461	96.2%	32.1	3.4	C
Total		3,365	3,329	98.9%	24.9	2.5	C

Intersection 2                      168th Avenue/34th Street                      Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	19	18	92.6%	20.8	12.3	C
	Through	9	10	107.8%	19.3	10.4	B
	Right Turn	5	6	124.0%	3.0	3.1	A
	Subtotal	33	34	101.5%	16.3	7.1	B
SB	Left Turn	17	18	102.9%	12.5	5.5	B
	Through	11	13	118.2%	15.0	5.7	B
	Right Turn	30	29	97.3%	5.3	1.6	A
	Subtotal	58	60	102.9%	10.5	1.8	B
EB	Left Turn	57	53	93.7%	12.4	5.1	B
	Through	427	435	101.9%	5.7	1.5	A
	Right Turn	15	17	110.7%	3.9	3.1	A
	Subtotal	499	505	101.3%	6.3	1.5	A
WB	Left Turn	7	6	90.0%	7.9	11.0	A
	Through	430	417	97.1%	5.8	1.9	A
	Right Turn	14	13	95.0%	5.8	4.3	A
	Subtotal	451	437	96.9%	5.9	1.8	A
Total		1,041	1,036	99.5%	6.7	1.4	A

SimTraffic Post-Processor  
Average Results from 10 Runs  
Volume and Delay by Movement

SE 34th Street  
Existing Build Alternative  
PM Peak Hour

Intersection 3

SE 172nd Avenue/SE 34th Street

Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	40	36	88.8%	12.7	3.4	B
	Through	3	3	96.7%	4.7	5.5	A
	Right Turn	21	21	100.0%	5.8	2.6	A
	Subtotal	64	59	92.8%	10.2	2.9	B
SB	Left Turn						
	Through	3	3	103.3%	3.8	6.2	A
	Right Turn	3	3	90.0%	2.5	2.7	A
	Subtotal	6	6	96.7%	5.2	5.5	A
EB	Left Turn	12	12	100.0%	2.9	1.6	A
	Through	371	375	101.0%	1.8	0.5	A
	Right Turn	66	70	105.6%	0.9	0.4	A
	Subtotal	449	456	101.6%	1.7	0.4	A
WB	Left Turn	32	33	104.4%	5.5	1.7	A
	Through	408	407	99.9%	1.7	0.4	A
	Right Turn	1	1	140.0%	0.0	0.1	A
	Subtotal	441	442	100.3%	2.0	0.3	A
Total		960	964	100.4%	2.4	0.4	A

Intersection 4

176th Avenue/34th Street

Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	11	10	89.1%	35.3	26.2	D
	Through	8	7	88.8%	32.7	24.7	C
	Right Turn	1	1	110.0%	2.4	4.1	A
	Subtotal	20	18	90.0%	32.3	11.9	C
SB	Left Turn	68	66	97.4%	46.0	9.7	D
	Through	16	15	96.3%	36.9	15.8	D
	Right Turn	58	57	97.9%	10.9	4.0	B
	Subtotal	142	138	97.5%	29.8	4.3	C
EB	Left Turn	131	126	95.9%	9.4	2.0	A
	Through	241	252	104.6%	3.5	1.1	A
	Right Turn	20	22	109.0%	2.5	3.1	A
	Subtotal	392	400	101.9%	5.4	1.1	A
WB	Left Turn	8	8	93.8%	7.4	6.7	A
	Through	372	370	99.6%	6.6	2.7	A
	Right Turn	77	79	103.1%	4.8	2.0	A
	Subtotal	457	457	100.1%	6.3	2.3	A
Total		1,011	1,013	100.2%	9.8	1.5	A

SimTraffic Post-Processor  
Average Results from 10 Runs  
Volume and Delay by Movement

SE 34th Street  
Existing Build Alternative  
PM Peak Hour

Intersection 5

177th Avenue/34th Street

Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	16	17	106.9%	13.2	5.7	B
	Through						
	Right Turn	11	12	111.8%	8.0	12.1	A
	Subtotal	27	29	108.9%	10.3	7.1	B
SB	Left Turn	3	3	113.3%	7.8	8.5	A
	Through						
	Right Turn	44	43	97.7%	4.5	1.0	A
	Subtotal	47	46	98.7%	4.9	1.2	A
EB	Left Turn	12	12	97.5%	4.3	3.6	A
	Through	270	274	101.3%	1.0	0.2	A
	Right Turn	28	29	101.8%	0.6	0.3	A
	Subtotal	310	314	101.2%	1.1	0.2	A
WB	Left Turn	10	9	90.0%	4.5	1.6	A
	Through	397	402	101.2%	2.8	0.6	A
	Right Turn						
	Subtotal	407	411	100.9%	2.9	0.5	A
Total		791	800	101.2%	2.6	0.4	A

Intersection 6

SE Hiddenbrook Drive/34th Street

Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	84	86	101.9%	36.4	5.1	D
	Through	1	1	140.0%	8.2	18.1	A
	Right Turn	39	45	114.1%	5.3	0.6	A
	Subtotal	124	132	106.0%	24.5	3.3	C
SB	Left Turn	11	11	98.2%	27.2	18.7	C
	Through						
	Right Turn	34	36	105.3%	5.4	1.1	A
	Subtotal	45	47	103.6%	10.9	4.7	B
EB	Left Turn	4	4	97.5%	20.7	23.6	C
	Through	221	230	103.9%	6.7	1.6	A
	Right Turn	59	57	96.1%	4.4	2.0	A
	Subtotal	284	290	102.2%	6.6	1.6	A
WB	Left Turn	30	31	101.7%	43.8	12.8	D
	Through	289	287	99.4%	4.5	1.6	A
	Right Turn	7	9	124.3%	3.2	3.7	A
	Subtotal	326	327	100.2%	7.6	1.5	A
Total		779	795	102.1%	10.3	1.4	B

SimTraffic Post-Processor  
Average Results from 10 Runs  
Volume and Delay by Movement

SE 34th Street  
Existing Build Alternative  
PM Peak Hour

Intersection 7

SE 192nd Avenue/34th Street

Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	83	79	94.8%	47.7	5.5	D
	Through	643	634	98.6%	25.1	2.3	C
	Right Turn	107	105	98.1%	4.1	1.0	A
	Subtotal	833	818	98.2%	24.4	2.1	C
SB	Left Turn	158	155	98.4%	40.6	3.4	D
	Through	597	580	97.2%	19.1	3.2	B
	Right Turn	77	74	96.1%	12.1	4.0	B
	Subtotal	832	809	97.3%	22.4	2.6	C
EB	Left Turn	89	92	102.8%	32.9	5.0	C
	Through	147	155	105.4%	46.5	9.3	D
	Right Turn	53	53	99.6%	37.2	13.4	D
	Subtotal	289	299	103.6%	40.7	8.3	D
WB	Left Turn	228	232	101.6%	44.1	17.7	D
	Through	128	131	102.0%	32.8	6.5	C
	Right Turn	90	94	104.8%	5.9	1.9	A
	Subtotal	446	457	102.4%	33.0	9.5	C
Total		2,400	2,383	99.3%	27.4	2.4	C

SimTraffic Post-Processor  
Average Results from 10 Runs  
Volume and Delay by Movement

34th Street  
2027\_AM  
AM Peak Hour

Intersection 1 SE 164th Avenue/SE 34th Street Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	100	97	97.3%	43.3	6.6	D
	Through	790	801	101.3%	19.4	2.5	B
	Right Turn	200	200	99.8%	5.8	0.9	A
	Subtotal	1,090	1,098	100.7%	18.9	2.5	B
SB	Left Turn	150	145	96.7%	51.9	3.3	D
	Through	690	696	100.9%	18.2	2.8	B
	Right Turn	30	27	90.7%	8.6	5.2	A
	Subtotal	870	868	99.8%	23.4	2.4	C
EB	Left Turn	20	20	99.5%	57.1	15.6	E
	Through	50	47	93.6%	44.2	9.2	D
	Right Turn	140	141	100.6%	6.6	1.3	A
	Subtotal	210	208	98.8%	21.0	4.4	C
WB	Left Turn	310	308	99.4%	46.6	5.2	D
	Through	70	77	110.3%	35.1	4.8	D
	Right Turn	110	112	102.1%	6.8	1.4	A
	Subtotal	490	498	101.6%	36.8	3.6	D
Total		2,660	2,671	100.4%	24.1	1.7	C

Intersection 2 SE 168th Avenue/SE 34th Street Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	30	31	103.3%	11.9	3.6	B
	Through	10	11	109.0%	15.8	11.4	B
	Right Turn	10	11	107.0%	4.3	3.4	A
	Subtotal	50	53	105.2%	10.9	4.5	B
SB	Left Turn	10	10	98.0%	8.7	7.9	A
	Through	10	10	96.0%	12.5	5.4	B
	Right Turn	50	50	100.0%	3.6	0.9	A
	Subtotal	70	69	99.1%	6.0	1.5	A
EB	Left Turn	30	25	84.0%	8.1	2.1	A
	Through	350	352	100.5%	4.2	1.2	A
	Right Turn	20	19	95.5%	2.5	1.7	A
	Subtotal	400	396	99.0%	4.4	1.0	A
WB	Left Turn	10	10	101.0%	5.0	5.1	A
	Through	410	421	102.7%	3.4	1.6	A
	Right Turn	20	22	108.0%	1.9	2.3	A
	Subtotal	440	453	102.9%	3.3	1.6	A
Total		960	971	101.1%	4.4	1.0	A



SimTraffic Post-Processor  
Average Results from 10 Runs  
Volume and Delay by Movement

34th Street  
2027\_AM  
AM Peak Hour

Intersection 43

Pedestrian Crossing/SE 34th Street

Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
SB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
EB	Left Turn						
	Through	370	376	101.7%	1.6	1.3	A
	Right Turn						
	Subtotal	370	376	101.7%	1.6	1.3	A
WB	Left Turn						
	Through	440	453	103.0%	1.2	0.8	A
	Right Turn						
	Subtotal	440	453	103.0%	1.2	0.8	A
Total		810	829	102.4%	1.4	1.0	A

Intersection 3

SE 172nd Avenue/SE 34th Street

Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	70	75	107.6%	9.9	2.7	A
	Through	10	10	102.0%	10.8	4.2	B
	Right Turn	30	27	90.7%	6.1	3.2	A
	Subtotal	110	113	102.5%	9.3	2.6	A
SB	Left Turn						
	Through						
	Right Turn	20	20	99.0%	4.0	1.3	A
	Subtotal	20	20	99.0%	4.0	1.3	A
EB	Left Turn	10	9	89.0%	2.6	2.2	A
	Through	340	343	100.9%	0.6	0.3	A
	Right Turn	20	23	113.0%	0.2	0.4	A
	Subtotal	370	375	101.3%	0.6	0.3	A
WB	Left Turn	20	19	93.0%	2.4	0.7	A
	Through	350	362	103.3%	1.2	0.3	A
	Right Turn	10	9	93.0%	0.6	0.6	A
	Subtotal	380	389	102.5%	1.2	0.3	A
Total		880	897	101.9%	2.0	0.3	A

SimTraffic Post-Processor  
Average Results from 10 Runs  
Volume and Delay by Movement

34th Street  
2027\_AM  
AM Peak Hour

Intersection 4

SE 176th Avenue/SE 34th Street

Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	20	19	92.5%	35.5	12.3	D
	Through	20	20	99.0%	38.7	16.3	D
	Right Turn						
	Subtotal	40	38	95.8%	38.4	10.6	D
SB	Left Turn	60	59	98.8%	42.3	6.4	D
	Through	10	10	98.0%	40.1	20.2	D
	Right Turn	130	134	102.8%	10.1	5.6	B
	Subtotal	200	203	101.4%	21.1	5.1	C
EB	Left Turn	50	46	92.0%	4.9	1.7	A
	Through	310	318	102.5%	2.3	0.9	A
	Right Turn	10	10	104.0%	0.8	1.1	A
	Subtotal	370	374	101.1%	2.6	0.8	A
WB	Left Turn	10	10	104.0%	3.9	4.4	A
	Through	230	241	104.6%	3.6	1.2	A
	Right Turn	50	50	100.6%	1.8	1.5	A
	Subtotal	290	301	103.9%	3.3	1.1	A
Total		900	917	101.8%	8.6	1.9	A

Intersection 5

SE 177th Avenue/SE 34th Street

Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	30	31	102.7%	8.0	1.8	A
	Through						
	Right Turn	20	25	123.0%	3.6	0.6	A
	Subtotal	50	55	110.8%	5.8	1.3	A
SB	Left Turn	10	10	102.0%	9.8	4.2	A
	Through						
	Right Turn	20	21	103.5%	3.2	0.6	A
	Subtotal	30	31	103.0%	5.4	1.6	A
EB	Left Turn	80	83	103.4%	2.9	0.6	A
	Through	280	288	102.8%	1.0	0.3	A
	Right Turn	10	11	112.0%	0.8	0.5	A
	Subtotal	370	382	103.2%	1.4	0.3	A
WB	Left Turn	10	9	93.0%	1.9	1.4	A
	Through	240	245	102.1%	1.4	0.3	A
	Right Turn	10	11	105.0%	0.7	0.8	A
	Subtotal	260	265	101.8%	1.4	0.3	A
Total		710	733	103.2%	1.9	0.2	A

SimTraffic Post-Processor  
Average Results from 10 Runs  
Volume and Delay by Movement

34th Street  
2027\_AM  
AM Peak Hour

Intersection 6 SE Hiddenbrook Drive/SE 34th Street Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	70	69	98.3%	37.4	3.0	D
	Through	10	11	113.0%	44.4	12.8	D
	Right Turn	40	45	112.0%	4.7	0.8	A
	Subtotal	120	125	104.1%	28.0	4.7	C
SB	Left Turn	10	8	84.0%	42.9	28.4	D
	Through						
	Right Turn	10	12	116.0%	3.6	1.0	A
	Subtotal	20	20	100.0%	19.1	10.5	B
EB	Left Turn	40	38	94.0%	47.0	5.6	D
	Through	220	225	102.4%	3.0	0.7	A
	Right Turn	50	51	102.8%	1.7	0.9	A
	Subtotal	310	314	101.4%	7.8	2.1	A
WB	Left Turn	30	27	90.0%	39.0	11.6	D
	Through	180	186	103.1%	2.6	0.8	A
	Right Turn	20	21	105.0%	0.9	0.8	A
	Subtotal	230	234	101.5%	7.2	2.0	A
Total		680	693	101.9%	12.1	1.2	B

Intersection 33 Driveway/SE 34th Street Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
SB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
EB	Left Turn						
	Through	230	237	103.2%	1.2	0.3	A
	Right Turn	40	43	106.5%	0.9	0.4	A
	Subtotal	270	280	103.7%	1.2	0.2	A
WB	Left Turn						
	Through	230	236	102.6%	1.6	0.3	A
	Right Turn	10	10	100.0%	1.2	1.1	A
	Subtotal	240	246	102.5%	1.6	0.3	A
Total		510	526	103.1%	1.4	0.2	A

SimTraffic Post-Processor  
Average Results from 10 Runs  
Volume and Delay by Movement

34th Street  
2027\_AM  
AM Peak Hour

Intersection 7

SE 192nd Avenue/SE 34th Street

Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	70	74	105.0%	42.2	7.8	D
	Through	510	506	99.2%	13.5	2.4	B
	Right Turn	250	253	101.0%	7.4	1.0	A
	Subtotal	830	832	100.2%	14.1	1.5	B
SB	Left Turn	110	106	96.7%	52.1	15.0	D
	Through	430	448	104.1%	13.8	1.8	B
	Right Turn	70	67	95.4%	6.7	2.6	A
	Subtotal	610	621	101.8%	20.0	4.3	B
EB	Left Turn	60	61	101.0%	33.0	11.6	C
	Through	120	127	105.6%	36.3	4.6	D
	Right Turn	50	49	97.0%	26.8	10.2	C
	Subtotal	230	236	102.5%	34.0	4.0	C
WB	Left Turn	150	155	103.1%	33.2	3.4	C
	Through	100	105	105.3%	29.9	5.7	C
	Right Turn	70	67	95.3%	10.6	4.8	B
	Subtotal	320	327	102.1%	27.4	3.5	C
Total		1,990	2,015	101.3%	20.5	1.5	C

Intersection 30

Shopping Center Driveway/SE 34th Street

Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
SB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
EB	Left Turn	10	10	100.0%	5.9	4.5	A
	Through	410	423	103.2%	1.1	0.1	A
	Right Turn	60	58	96.5%	1.3	0.4	A
	Subtotal	480	491	102.3%	1.3	0.1	A
WB	Left Turn						
	Through	320	330	103.1%	1.6	0.2	A
	Right Turn	110	113	102.3%	1.5	0.2	A
	Subtotal	430	442	102.9%	1.6	0.1	A
Total		910	933	102.6%	1.4	0.1	A

SimTraffic Post-Processor  
Average Results from 10 Runs  
Volume and Delay by Movement

34th Street  
2027\_PM  
PM Peak Hour

Intersection 1 SE 164th Avenue/SE 34th Street Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	170	164	96.6%	55.8	10.3	E
	Through	1,110	1,107	99.7%	25.3	3.4	C
	Right Turn	330	343	103.9%	8.1	0.8	A
	Subtotal	1,610	1,614	100.3%	24.6	2.7	C
SB	Left Turn	140	146	104.0%	54.2	5.9	D
	Through	1,100	1,100	100.0%	22.8	1.8	C
	Right Turn	70	71	101.0%	12.0	4.6	B
	Subtotal	1,310	1,316	100.4%	25.7	1.9	C
EB	Left Turn	60	57	94.3%	67.2	26.4	E
	Through	100	103	103.4%	50.8	9.4	D
	Right Turn	170	170	100.1%	7.9	2.1	A
	Subtotal	330	330	100.0%	32.5	8.0	C
WB	Left Turn	260	257	98.8%	40.6	4.4	D
	Through	150	159	106.1%	39.8	7.3	D
	Right Turn	190	194	102.1%	10.8	2.8	B
	Subtotal	600	610	101.7%	31.1	4.2	C
Total		3,850	3,870	100.5%	26.6	2.3	C

Intersection 2 SE 168th Avenue/SE 34th Street Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	30	29	96.0%	14.8	7.1	B
	Through	10	10	99.0%	15.4	11.2	B
	Right Turn	10	9	93.0%	7.0	6.6	A
	Subtotal	50	48	96.0%	14.1	5.5	B
SB	Left Turn	20	21	104.5%	14.1	5.4	B
	Through	20	19	95.0%	15.8	6.6	B
	Right Turn	40	41	102.8%	5.7	1.7	A
	Subtotal	80	81	101.3%	11.3	2.4	B
EB	Left Turn	70	71	101.6%	11.0	3.2	B
	Through	480	509	106.1%	5.1	0.7	A
	Right Turn	20	21	105.5%	3.0	1.5	A
	Subtotal	570	602	105.5%	5.8	0.8	A
WB	Left Turn	10	10	98.0%	6.9	6.4	A
	Through	530	542	102.2%	4.5	1.5	A
	Right Turn	20	21	103.0%	2.2	1.3	A
	Subtotal	560	572	102.1%	4.5	1.4	A
Total		1,260	1,303	103.4%	5.9	1.2	A

SimTraffic Post-Processor  
Average Results from 10 Runs  
Volume and Delay by Movement

34th Street  
2027\_PM  
PM Peak Hour

Intersection 43

Pedestrian Crossing/SE 34th Street

Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
SB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
EB	Left Turn						
	Through	510	540	106.0%	1.3	0.2	A
	Right Turn						
	Subtotal	510	540	106.0%	1.3	0.2	A
WB	Left Turn						
	Through	560	570	101.7%	0.8	0.7	A
	Right Turn						
	Subtotal	560	570	101.7%	0.8	0.7	A
Total		1,070	1,110	103.7%	1.0	0.5	A

Intersection 3

SE 172nd Avenue/SE 34th Street

Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	50	52	104.2%	11.6	2.0	B
	Through	10	10	95.0%	16.0	13.7	C
	Right Turn	30	30	100.3%	5.0	1.7	A
	Subtotal	90	92	101.9%	9.8	1.6	A
SB	Left Turn	10	10	100.0%	9.5	5.9	A
	Through	10	9	90.0%	13.9	6.3	B
	Right Turn	10	10	104.0%	4.5	3.4	A
	Subtotal	30	29	98.0%	9.9	3.6	A
EB	Left Turn	20	20	99.0%	2.7	1.6	A
	Through	410	427	104.1%	1.0	0.2	A
	Right Turn	80	85	106.3%	0.6	0.3	A
	Subtotal	510	532	104.2%	1.0	0.2	A
WB	Left Turn	40	43	107.3%	5.4	2.1	A
	Through	500	519	103.8%	1.9	0.3	A
	Right Turn	10	10	99.0%	1.5	1.0	A
	Subtotal	550	572	104.0%	2.2	0.4	A
Total		1,180	1,225	103.8%	2.5	0.4	A

SimTraffic Post-Processor  
Average Results from 10 Runs  
Volume and Delay by Movement

34th Street  
2027\_PM  
PM Peak Hour

Intersection 4 SE 176th Avenue/SE 34th Street Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	20	18	87.5%	44.6	15.6	D
	Through	10	8	76.0%	44.7	17.8	D
	Right Turn	10	11	108.0%	6.8	6.0	A
	Subtotal	40	36	89.8%	34.3	10.8	C
SB	Left Turn	80	81	101.0%	43.3	6.6	D
	Through	20	20	102.0%	32.2	16.3	C
	Right Turn	70	68	97.7%	13.3	6.4	B
	Subtotal	170	170	99.8%	30.5	5.4	C
EB	Left Turn	150	156	103.8%	9.6	1.9	A
	Through	270	289	107.0%	3.2	0.5	A
	Right Turn	30	29	96.3%	2.8	2.9	A
	Subtotal	450	474	105.2%	5.2	1.0	A
WB	Left Turn	10	9	90.0%	8.2	5.9	A
	Through	460	479	104.1%	6.9	1.5	A
	Right Turn	90	86	96.0%	5.1	1.3	A
	Subtotal	560	574	102.5%	6.6	1.4	A
Total		1,220	1,253	102.7%	10.2	1.4	B

Intersection 5 SE 177th Avenue/SE 34th Street Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	20	19	92.5%	11.8	5.7	B
	Through						
	Right Turn	20	19	94.5%	3.8	1.1	A
	Subtotal	40	37	93.5%	8.2	4.3	A
SB	Left Turn	10	10	100.0%	10.0	6.2	A
	Through						
	Right Turn	50	50	100.0%	5.7	2.3	A
	Subtotal	60	60	100.0%	6.5	2.8	A
EB	Left Turn	20	21	107.0%	4.7	2.9	A
	Through	300	316	105.2%	1.0	0.2	A
	Right Turn	40	39	97.3%	0.6	0.1	A
	Subtotal	360	376	104.4%	1.2	0.3	A
WB	Left Turn	20	19	93.0%	4.7	2.4	A
	Through	490	510	104.1%	2.2	0.4	A
	Right Turn						
	Subtotal	510	529	103.6%	2.3	0.4	A
Total		970	1,002	103.3%	2.4	0.5	A

SimTraffic Post-Processor  
Average Results from 10 Runs  
Volume and Delay by Movement

34th Street  
2027\_PM  
PM Peak Hour

Intersection 6 SE Hiddenbrook Drive/SE 34th Street Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	100	99	98.8%	35.0	4.8	D
	Through	10	9	94.0%	35.5	26.8	D
	Right Turn	50	54	107.2%	5.4	0.6	A
	Subtotal	160	162	101.1%	25.3	4.1	C
SB	Left Turn	20	21	102.5%	34.2	10.3	C
	Through						
	Right Turn	40	41	103.0%	4.8	1.4	A
	Subtotal	60	62	102.8%	14.3	3.7	B
EB	Left Turn	10	10	98.0%	41.6	21.8	D
	Through	250	262	104.9%	5.9	1.0	A
	Right Turn	70	71	101.6%	3.1	1.7	A
	Subtotal	330	343	104.0%	6.8	1.6	A
WB	Left Turn	40	43	106.8%	47.1	13.8	D
	Through	370	394	106.5%	5.2	1.0	A
	Right Turn	10	11	112.0%	1.5	1.0	A
	Subtotal	420	448	106.6%	8.8	1.6	A
Total		970	1,015	104.6%	11.3	1.0	B

Intersection 33 Driveway/SE 34th Street Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	34	37	108.8%	7.5	1.1	A
	Through						
	Right Turn	20	19	93.5%	6.6	1.7	A
	Subtotal	54	56	103.1%	7.2	0.7	A
SB	Left Turn	10	9	90.0%	6.6	3.4	A
	Through						
	Right Turn	36	36	100.8%	6.3	0.8	A
	Subtotal	46	45	98.5%	6.5	1.1	A
EB	Left Turn						
	Through	300	317	105.6%	1.0	0.1	A
	Right Turn	20	22	109.0%	1.0	0.7	A
	Subtotal	320	339	105.8%	1.0	0.2	A
WB	Left Turn						
	Through	350	364	103.9%	1.3	0.1	A
	Right Turn	40	40	99.5%	1.5	0.5	A
	Subtotal	390	404	103.5%	1.4	0.1	A
Total		810	843	104.1%	1.8	0.1	A



SimTraffic Post-Processor  
Average Results from 10 Runs  
Volume and Delay by Movement

34th Street  
2027\_PM  
PM Peak Hour

Intersection 7

SE 192nd Avenue/SE 34th Street

Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	100	103	102.6%	45.1	3.8	D
	Through	710	715	100.7%	20.0	2.4	C
	Right Turn	120	128	106.3%	6.5	0.8	A
	Subtotal	930	945	101.6%	20.8	2.3	C
SB	Left Turn	180	178	99.1%	61.2	9.4	E
	Through	660	668	101.2%	19.8	2.8	B
	Right Turn	90	96	106.3%	14.5	2.9	B
	Subtotal	930	942	101.3%	27.4	3.0	C
EB	Left Turn	100	97	97.0%	34.6	6.2	C
	Through	170	184	108.5%	40.9	5.1	D
	Right Turn	60	60	100.3%	24.9	7.2	C
	Subtotal	330	342	103.5%	36.6	4.7	D
WB	Left Turn	260	259	99.7%	45.1	11.7	D
	Through	200	208	103.9%	34.2	5.2	C
	Right Turn	100	102	101.8%	19.4	3.7	B
	Subtotal	560	569	101.6%	36.7	7.0	D
Total		2,750	2,798	101.7%	28.2	2.4	C

Intersection 30

Shopping Center Driveway/SE 34th Street

Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	12	13	106.7%	10.1	2.8	B
	Through						
	Right Turn						
	Subtotal	12	13	106.7%	10.1	2.8	B
SB	Left Turn						
	Through						
	Right Turn	41	42	101.7%	6.7	0.7	A
	Subtotal	41	42	101.7%	6.7	0.7	A
EB	Left Turn	9	11	117.8%	5.5	3.0	A
	Through	410	429	104.7%	1.5	0.1	A
	Right Turn	51	52	101.0%	1.4	0.3	A
	Subtotal	470	491	104.5%	1.6	0.1	A
WB	Left Turn						
	Through	507	516	101.8%	1.5	0.2	A
	Right Turn	63	61	96.7%	1.1	0.3	A
	Subtotal	570	577	101.3%	1.5	0.2	A
Total		1,093	1,123	102.7%	1.8	0.1	A

SimTraffic Post-Processor  
Average Results from 10 Runs  
Volume and Delay by Movement

34th Street  
2027\_PM  
PM Peak Hour

Intersection 8

SE 196th Avenue/SE 34th Street

Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	60	61	101.3%	12.3	2.8	B
	Through						
	Right Turn	30	33	109.0%	4.0	1.0	A
	Subtotal	90	94	103.9%	9.5	2.3	A
SB	Left Turn	10	11	110.0%	15.5	5.0	B
	Through	10	12	123.0%	11.1	8.0	B
	Right Turn	20	21	106.5%	3.8	1.4	A
	Subtotal	40	45	111.5%	7.7	2.0	A
EB	Left Turn	30	32	106.3%	15.2	4.4	B
	Through	340	357	105.1%	5.3	1.4	A
	Right Turn	40	43	108.3%	4.7	3.0	A
	Subtotal	410	433	105.5%	6.0	1.8	A
WB	Left Turn	20	20	101.5%	14.8	6.2	B
	Through	490	487	99.4%	6.0	1.6	A
	Right Turn	10	13	126.0%	2.7	2.6	A
	Subtotal	520	520	100.0%	6.3	1.6	A
Total		1,060	1,091	102.9%	6.5	1.4	A

SimTraffic Post-Processor  
Average Results from 10 Runs  
Volume and Delay by Movement

SE 34th Street  
2027 Build Alternative  
AM Peak Hour

Intersection 1                      164th Avenue/34th Street                      Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	100	102	101.6%	47.5	5.6	D
	Through	790	782	99.0%	24.4	4.2	C
	Right Turn	200	202	101.1%	4.5	1.4	A
	Subtotal	1,090	1,086	99.6%	23.0	3.0	C
SB	Left Turn	150	148	98.7%	52.0	6.9	D
	Through	690	679	98.3%	21.1	3.7	C
	Right Turn	30	33	109.0%	7.5	4.9	A
	Subtotal	870	859	98.8%	26.3	3.1	C
EB	Left Turn	20	21	104.0%	53.1	15.2	D
	Through	50	51	101.8%	59.2	13.5	E
	Right Turn	140	144	102.5%	5.1	1.0	A
	Subtotal	210	215	102.5%	21.6	3.5	C
WB	Left Turn	310	309	99.7%	44.6	2.9	D
	Through	70	76	108.6%	38.3	7.8	D
	Right Turn	110	114	103.5%	5.3	0.7	A
	Subtotal	490	499	101.9%	35.0	2.5	C
Total		2,660	2,659	100.0%	26.0	2.1	C

Intersection 2                      168th Avenue/34th Street                      Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	30	28	94.0%	17.0	6.5	B
	Through	10	10	101.0%	17.7	12.0	B
	Right Turn	10	11	113.0%	5.3	5.8	A
	Subtotal	50	50	99.2%	14.7	3.9	B
SB	Left Turn	10	10	103.0%	14.3	9.5	B
	Through	10	7	74.0%	12.3	9.4	B
	Right Turn	50	49	98.0%	5.7	2.2	A
	Subtotal	70	67	95.3%	7.8	3.8	A
EB	Left Turn	30	28	94.3%	11.3	3.9	B
	Through	350	357	102.1%	5.8	2.1	A
	Right Turn	20	20	98.5%	3.2	2.5	A
	Subtotal	400	405	101.3%	6.1	2.2	A
WB	Left Turn	10	9	89.0%	6.5	6.5	A
	Through	410	423	103.0%	5.0	1.3	A
	Right Turn	20	20	100.5%	3.0	2.6	A
	Subtotal	440	452	102.6%	5.0	1.3	A
Total		960	973	101.4%	6.2	1.3	A

SimTraffic Post-Processor  
Average Results from 10 Runs  
Volume and Delay by Movement

SE 34th Street  
2027 Build Alternative  
AM Peak Hour

Intersection 3

SE 172nd Avenue/SE 34th Street

Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	70	70	100.6%	10.4	2.9	B
	Through	10	9	87.0%	11.7	8.9	B
	Right Turn	30	30	99.0%	7.7	4.1	A
	Subtotal	110	109	98.9%	10.0	3.3	B
SB	Left Turn						
	Through						
	Right Turn	20	23	114.5%	4.1	2.4	A
	Subtotal	20	23	114.5%	4.1	2.4	A
EB	Left Turn	10	8	79.0%	4.3	5.2	A
	Through	340	348	102.4%	1.1	0.3	A
	Right Turn	20	22	109.5%	0.6	0.5	A
	Subtotal	370	378	102.2%	1.1	0.3	A
WB	Left Turn	20	18	89.0%	5.8	6.3	A
	Through	350	360	102.8%	1.5	0.2	A
	Right Turn	10	11	113.0%	0.9	0.6	A
	Subtotal	380	389	102.3%	1.6	0.3	A
Total		880	899	102.1%	2.5	0.7	A

Intersection 4

176th Avenue/34th Street

Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	20	20	99.0%	51.1	9.3	D
	Through	20	22	108.0%	46.4	6.2	D
	Right Turn						
	Subtotal	40	41	103.5%	48.1	6.1	D
SB	Left Turn	60	62	102.5%	46.9	7.0	D
	Through	10	11	111.0%	32.6	25.2	C
	Right Turn	130	128	98.6%	8.7	4.4	A
	Subtotal	200	201	100.4%	22.2	4.5	C
EB	Left Turn	50	49	97.2%	5.2	1.3	A
	Through	310	326	105.2%	3.6	1.0	A
	Right Turn	10	10	98.0%	2.0	2.3	A
	Subtotal	370	384	103.9%	3.7	0.9	A
WB	Left Turn	10	9	93.0%	8.3	9.9	A
	Through	230	243	105.7%	4.7	1.9	A
	Right Turn	50	47	94.0%	2.3	1.5	A
	Subtotal	290	299	103.2%	4.4	1.7	A
Total		900	926	102.9%	10.1	1.6	B

SimTraffic Post-Processor  
Average Results from 10 Runs  
Volume and Delay by Movement

SE 34th Street  
2027 Build Alternative  
AM Peak Hour

Intersection 5

177th Avenue/34th Street

Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	30	29	97.7%	8.9	2.4	A
	Through						
	Right Turn	20	19	94.5%	5.2	2.2	A
	Subtotal	50	48	96.4%	7.1	1.8	A
SB	Left Turn	10	9	94.0%	9.4	3.7	A
	Through						
	Right Turn	20	19	94.0%	3.5	0.7	A
	Subtotal	30	28	94.0%	6.2	1.5	A
EB	Left Turn	80	79	98.6%	3.6	0.8	A
	Through	280	302	107.9%	0.9	0.1	A
	Right Turn	10	10	98.0%	0.6	0.4	A
	Subtotal	370	391	105.6%	1.5	0.3	A
WB	Left Turn	10	10	102.0%	4.2	2.4	A
	Through	240	247	102.8%	2.1	0.4	A
	Right Turn	10	11	113.0%	1.7	0.8	A
	Subtotal	260	268	103.1%	2.1	0.4	A
Total		710	735	103.6%	2.3	0.3	A

Intersection 6

SE Hiddenbrook Drive/34th Street

Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	70	72	102.7%	37.9	2.7	D
	Through	10	13	132.0%	46.4	15.1	D
	Right Turn	40	41	102.8%	5.0	0.5	A
	Subtotal	120	126	105.2%	27.6	3.9	C
SB	Left Turn	10	12	115.0%	40.1	23.4	D
	Through						
	Right Turn	10	12	124.0%	4.0	2.2	A
	Subtotal	20	24	119.5%	24.2	14.1	C
EB	Left Turn	40	40	100.3%	42.3	8.2	D
	Through	220	227	103.3%	4.9	1.7	A
	Right Turn	50	51	101.0%	3.4	1.6	A
	Subtotal	310	318	102.5%	9.8	2.2	A
WB	Left Turn	30	32	107.0%	46.1	10.2	D
	Through	180	183	101.8%	4.1	1.4	A
	Right Turn	20	21	104.5%	2.4	1.4	A
	Subtotal	230	236	102.7%	9.2	1.2	A
Total		680	704	103.5%	13.6	1.2	B

SimTraffic Post-Processor  
Average Results from 10 Runs  
Volume and Delay by Movement

SE 34th Street  
2027 Build Alternative  
AM Peak Hour

Intersection 7

SE 192nd Avenue/34th Street

Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	70	67	96.0%	44.6	5.4	D
	Through	510	512	100.4%	15.4	1.8	B
	Right Turn	250	251	100.4%	3.9	1.1	A
	Subtotal	830	830	100.0%	14.2	1.1	B
SB	Left Turn	110	112	101.6%	40.5	4.5	D
	Through	430	428	99.6%	12.4	2.1	B
	Right Turn	70	73	104.9%	5.8	2.7	A
	Subtotal	610	614	100.6%	16.8	2.4	B
EB	Left Turn	60	60	100.3%	33.6	8.0	C
	Through	120	132	110.0%	46.1	4.2	D
	Right Turn	50	51	102.4%	31.8	13.0	C
	Subtotal	230	243	105.8%	40.3	4.8	D
WB	Left Turn	150	152	101.6%	39.9	6.4	D
	Through	100	108	108.1%	34.3	5.2	C
	Right Turn	70	74	105.1%	4.1	1.0	A
	Subtotal	320	334	104.4%	30.2	3.6	C
Total		1,990	2,021	101.6%	20.8	1.1	C

SimTraffic Post-Processor  
Average Results from 10 Runs  
Volume and Delay by Movement

SE 34th Street  
2027 Build Alternative  
PM Peak Hour

Intersection 1                      164th Avenue/34th Street                      Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	170	171	100.8%	72.9	19.8	E
	Through	1,110	1,104	99.4%	68.0	21.7	E
	Right Turn	330	324	98.2%	6.6	1.4	A
	Subtotal	1,610	1,599	99.3%	57.0	18.0	E
SB	Left Turn	140	140	100.0%	41.4	6.0	D
	Through	1,100	1,099	99.9%	25.1	2.2	C
	Right Turn	70	71	101.3%	12.9	3.8	B
	Subtotal	1,310	1,310	100.0%	26.3	2.2	C
EB	Left Turn	60	61	101.7%	61.9	11.9	E
	Through	100	98	97.5%	52.1	5.5	D
	Right Turn	170	175	102.6%	7.2	2.6	A
	Subtotal	330	333	100.9%	29.9	3.1	C
WB	Left Turn	260	263	101.3%	45.7	4.1	D
	Through	150	154	102.6%	38.9	5.8	D
	Right Turn	190	181	95.3%	7.8	1.6	A
	Subtotal	600	598	99.7%	31.9	3.5	C
Total		3,850	3,841	99.8%	40.7	7.4	D

Intersection 2                      168th Avenue/34th Street                      Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	30	30	98.7%	18.0	5.7	B
	Through	10	11	110.0%	14.6	8.5	B
	Right Turn	10	11	105.0%	5.7	4.3	A
	Subtotal	50	51	102.2%	15.8	4.8	B
SB	Left Turn	20	20	102.0%	16.7	7.4	B
	Through	20	18	89.5%	17.1	8.4	B
	Right Turn	40	37	92.8%	7.3	2.6	A
	Subtotal	80	75	94.3%	12.6	3.3	B
EB	Left Turn	70	67	96.1%	15.8	7.5	B
	Through	480	479	99.8%	6.1	1.6	A
	Right Turn	20	22	109.5%	5.3	4.1	A
	Subtotal	570	568	99.6%	7.2	2.0	A
WB	Left Turn	10	11	105.0%	11.3	6.5	B
	Through	530	536	101.1%	7.1	2.2	A
	Right Turn	20	21	104.5%	6.0	3.7	A
	Subtotal	560	567	101.3%	7.1	2.2	A
Total		1,260	1,262	100.1%	7.8	1.9	A

SimTraffic Post-Processor  
Average Results from 10 Runs  
Volume and Delay by Movement

SE 34th Street  
2027 Build Alternative  
PM Peak Hour

Intersection 3

SE 172nd Avenue/SE 34th Street

Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	50	49	98.2%	19.0	10.2	C
	Through	10	11	109.0%	15.1	7.9	C
	Right Turn	30	29	96.3%	9.1	4.0	A
	Subtotal	90	89	98.8%	15.3	7.0	C
SB	Left Turn	10	10	97.0%	11.2	8.0	B
	Through	10	9	92.0%	11.7	9.3	B
	Right Turn	10	10	98.0%	10.1	8.7	B
	Subtotal	30	29	95.7%	11.5	6.4	B
EB	Left Turn	20	19	93.5%	5.2	2.1	A
	Through	410	403	98.4%	1.6	0.3	A
	Right Turn	80	81	101.4%	0.8	0.4	A
	Subtotal	510	503	98.6%	1.6	0.3	A
WB	Left Turn	40	39	96.5%	5.9	2.1	A
	Through	500	517	103.4%	2.3	0.2	A
	Right Turn	10	11	109.0%	1.3	1.5	A
	Subtotal	550	566	103.0%	2.4	0.3	A
Total		1,180	1,187	100.6%	3.4	1.0	A

Intersection 4

176th Avenue/34th Street

Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	20	19	96.5%	35.7	11.2	D
	Through	10	11	111.0%	29.9	16.4	C
	Right Turn	10	11	110.0%	6.4	4.1	A
	Subtotal	40	41	103.5%	27.7	9.1	C
SB	Left Turn	80	80	100.3%	41.9	4.4	D
	Through	20	21	103.0%	39.9	10.5	D
	Right Turn	70	71	100.7%	14.1	3.5	B
	Subtotal	170	171	100.8%	29.6	4.3	C
EB	Left Turn	150	147	98.1%	14.4	4.8	B
	Through	270	275	101.7%	4.2	1.3	A
	Right Turn	30	30	99.3%	2.8	2.1	A
	Subtotal	450	451	100.3%	7.3	2.5	A
WB	Left Turn	10	10	97.0%	10.9	7.6	B
	Through	460	469	101.9%	11.4	2.8	B
	Right Turn	90	97	107.3%	9.2	3.9	A
	Subtotal	560	575	102.7%	11.0	2.9	B
Total		1,220	1,239	101.6%	12.9	2.5	B



SimTraffic Post-Processor  
Average Results from 10 Runs  
Volume and Delay by Movement

SE 34th Street  
2027 Build Alternative  
PM Peak Hour

Intersection 5                      177th Avenue/34th Street                      Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	20	18	89.5%	16.1	11.0	C
	Through						
	Right Turn	20	22	108.0%	4.6	1.5	A
	Subtotal	40	40	98.8%	9.7	5.7	A
SB	Left Turn	10	11	107.0%	10.2	9.1	B
	Through						
	Right Turn	50	54	107.6%	7.9	3.0	A
	Subtotal	60	65	107.5%	8.6	4.2	A
EB	Left Turn	20	19	94.0%	6.9	3.4	A
	Through	300	302	100.7%	1.2	0.2	A
	Right Turn	40	41	101.8%	0.6	0.2	A
	Subtotal	360	362	100.4%	1.5	0.3	A
WB	Left Turn	20	20	98.5%	4.4	1.6	A
	Through	490	510	104.1%	4.2	0.8	A
	Right Turn						
	Subtotal	510	530	103.9%	4.2	0.8	A
Total		970	995	102.6%	3.7	0.7	A

Intersection 6                      SE Hiddenbrook Drive/34th Street                      Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	100	109	109.0%	33.9	3.3	C
	Through	10	10	104.0%	42.1	9.4	D
	Right Turn	50	54	107.8%	6.7	1.3	A
	Subtotal	160	173	108.3%	25.6	3.0	C
SB	Left Turn	20	17	86.0%	41.7	12.1	D
	Through						
	Right Turn	40	41	102.5%	5.4	0.8	A
	Subtotal	60	58	97.0%	16.8	5.6	B
EB	Left Turn	10	10	104.0%	35.9	14.0	D
	Through	250	254	101.8%	8.7	2.1	A
	Right Turn	70	69	98.6%	5.6	2.1	A
	Subtotal	330	334	101.2%	9.1	1.7	A
WB	Left Turn	40	44	110.5%	43.3	7.1	D
	Through	370	386	104.2%	6.9	1.6	A
	Right Turn	10	11	106.0%	3.7	3.1	A
	Subtotal	420	440	104.9%	10.6	1.8	B
Total		970	1,006	103.7%	13.3	1.2	B

SimTraffic Post-Processor  
Average Results from 10 Runs  
Volume and Delay by Movement

SE 34th Street  
2027 Build Alternative  
PM Peak Hour

Intersection 7

SE 192nd Avenue/34th Street

Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	100	99	99.2%	51.3	7.0	D
	Through	710	716	100.8%	28.0	4.7	C
	Right Turn	120	117	97.3%	4.6	1.1	A
	Subtotal	930	932	100.2%	27.5	3.9	C
SB	Left Turn	180	187	103.8%	39.5	4.2	D
	Through	660	675	102.3%	22.0	2.6	C
	Right Turn	90	89	99.1%	16.1	2.7	B
	Subtotal	930	951	102.3%	24.8	1.7	C
EB	Left Turn	100	95	95.3%	36.9	13.1	D
	Through	170	175	103.0%	47.6	16.3	D
	Right Turn	60	61	101.0%	36.2	17.2	D
	Subtotal	330	331	100.3%	42.7	15.1	D
WB	Left Turn	260	255	98.2%	38.3	5.6	D
	Through	200	213	106.3%	33.3	3.1	C
	Right Turn	100	100	100.0%	7.1	1.7	A
	Subtotal	560	568	101.4%	30.4	3.7	C
Total		2,750	2,782	101.1%	29.0	3.1	C

**SimTraffic Post-Processor**  
**Average Results from 10 Runs**  
**Volume and Delay by Movement**

**34th Street**  
**2040 No Build**  
**AM Peak Hour**

**Intersection 1**                      **SE 164th Avenue/SE 34th Street**                      **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	110	113	102.5%	45.0	8.3	D
	Through	880	878	99.8%	29.3	5.4	C
	Right Turn	420	424	101.0%	10.5	1.7	B
	Subtotal	1,410	1,415	100.4%	25.2	3.5	C
SB	Left Turn	170	172	101.2%	54.6	7.0	D
	Through	770	760	98.7%	23.3	3.1	C
	Right Turn	40	41	103.5%	10.8	4.0	B
	Subtotal	980	974	99.4%	28.4	3.6	C
EB	Left Turn	30	26	85.7%	58.3	11.7	E
	Through	60	62	103.7%	49.5	4.3	D
	Right Turn	160	164	102.6%	7.3	1.0	A
	Subtotal	250	252	100.8%	23.6	1.7	C
WB	Left Turn	440	428	97.2%	43.3	4.9	D
	Through	90	94	104.0%	35.0	5.8	D
	Right Turn	120	120	99.8%	6.8	1.9	A
	Subtotal	650	641	98.6%	35.4	3.7	D
Total		3,290	3,282	99.8%	28.1	2.7	C

**Intersection 2**                      **SE 168th Avenue/SE 34th Street**                      **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	40	37	92.5%	17.0	5.4	B
	Through	10	10	95.0%	18.6	11.8	B
	Right Turn	10	11	105.0%	6.6	4.8	A
	Subtotal	60	57	95.0%	15.0	3.5	B
SB	Left Turn	20	21	106.0%	16.7	7.8	B
	Through	10	11	105.0%	19.1	6.0	B
	Right Turn	50	48	96.2%	5.3	2.1	A
	Subtotal	80	80	99.8%	10.3	2.2	B
EB	Left Turn	40	39	97.0%	10.0	2.9	B
	Through	590	595	100.8%	4.9	0.8	A
	Right Turn	20	24	120.5%	2.6	1.3	A
	Subtotal	650	658	101.2%	5.1	0.7	A
WB	Left Turn	10	9	88.0%	7.4	8.2	A
	Through	560	557	99.5%	3.8	0.8	A
	Right Turn	20	18	90.5%	1.9	2.3	A
	Subtotal	590	584	99.0%	3.9	0.8	A
Total		1,380	1,378	99.9%	5.3	0.6	A

SimTraffic Post-Processor  
Average Results from 10 Runs  
Volume and Delay by Movement

34th Street  
2040 No Build  
AM Peak Hour

Intersection 43

Pedestrian Crossing/SE 34th Street

Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
SB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
EB	Left Turn						
	Through	620	628	101.3%	2.2	0.8	A
	Right Turn						
	Subtotal	620	628	101.3%	2.2	0.8	A
WB	Left Turn						
	Through	590	587	99.5%	1.1	0.6	A
	Right Turn						
	Subtotal	590	587	99.5%	1.1	0.6	A
Total		1,210	1,216	100.5%	1.7	0.6	A

Intersection 3

SE 172nd Avenue/SE 34th Street

Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	80	81	101.8%	19.4	9.6	C
	Through	10	11	106.0%	15.5	5.1	C
	Right Turn	30	30	100.3%	10.4	5.7	B
	Subtotal	120	122	101.8%	17.0	7.4	C
SB	Left Turn						
	Through						
	Right Turn	30	31	102.3%	4.1	0.9	A
	Subtotal	30	31	102.3%	4.1	0.9	A
EB	Left Turn	10	11	105.0%	2.2	1.2	A
	Through	580	592	102.0%	0.8	0.2	A
	Right Turn	30	27	88.3%	0.6	0.8	A
	Subtotal	620	629	101.4%	0.8	0.2	A
WB	Left Turn	30	30	101.0%	4.6	1.3	A
	Through	480	479	99.8%	1.6	0.4	A
	Right Turn	10	10	101.0%	1.3	1.3	A
	Subtotal	520	520	99.9%	1.8	0.4	A
Total		1,290	1,301	100.9%	2.8	0.6	A

SimTraffic Post-Processor  
Average Results from 10 Runs  
Volume and Delay by Movement

34th Street  
2040 No Build  
AM Peak Hour

Intersection 4

SE 176th Avenue/SE 34th Street

Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	20	19	94.5%	43.8	11.9	D
	Through	20	22	112.0%	43.2	11.6	D
	Right Turn	10	12	122.0%	14.9	18.6	B
	Subtotal	50	54	107.0%	36.8	10.0	D
SB	Left Turn	70	67	96.0%	41.7	7.1	D
	Through	10	10	98.0%	43.7	14.4	D
	Right Turn	160	157	98.2%	8.5	1.9	A
	Subtotal	240	234	97.5%	20.2	1.8	C
EB	Left Turn	120	119	98.9%	6.3	0.9	A
	Through	470	483	102.7%	3.3	0.9	A
	Right Turn	20	22	111.0%	1.3	1.0	A
	Subtotal	610	623	102.2%	3.7	0.7	A
WB	Left Turn	10	10	95.0%	5.9	4.6	A
	Through	340	343	100.8%	4.7	1.2	A
	Right Turn	60	58	96.3%	2.9	1.1	A
	Subtotal	410	410	100.0%	4.5	1.0	A
Total		1,310	1,321	100.8%	8.2	0.8	A

Intersection 5

SE 177th Avenue/SE 34th Street

Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	30	27	88.7%	11.7	4.7	B
	Through						
	Right Turn	20	23	115.5%	5.1	2.4	A
	Subtotal	50	50	99.4%	8.5	2.7	A
SB	Left Turn	30	32	105.0%	11.9	5.7	B
	Through						
	Right Turn	60	68	112.5%	3.5	0.6	A
	Subtotal	90	99	110.0%	6.0	1.4	A
EB	Left Turn	150	147	97.9%	4.3	1.1	A
	Through	380	394	103.7%	1.0	0.2	A
	Right Turn	20	21	103.5%	0.9	0.5	A
	Subtotal	550	562	102.1%	1.9	0.4	A
WB	Left Turn	10	11	107.0%	2.7	1.9	A
	Through	320	318	99.3%	2.4	0.4	A
	Right Turn	40	42	103.8%	1.7	0.6	A
	Subtotal	370	370	99.9%	2.3	0.4	A
Total		1,060	1,080	101.9%	2.7	0.4	A

SimTraffic Post-Processor  
Average Results from 10 Runs  
Volume and Delay by Movement

34th Street  
2040 No Build  
AM Peak Hour

Intersection 6

SE Hiddenbrook Drive/SE 34th Street

Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	80	75	94.0%	38.2	6.3	D
	Through	60	58	97.0%	45.5	7.9	D
	Right Turn	40	41	102.0%	4.9	0.8	A
	Subtotal	180	174	96.8%	32.2	4.8	C
SB	Left Turn	60	61	101.7%	42.7	5.2	D
	Through	30	30	101.0%	33.4	4.5	C
	Right Turn	60	62	103.3%	11.1	4.0	B
	Subtotal	150	153	102.2%	27.5	3.3	C
EB	Left Turn	100	110	110.3%	40.6	2.7	D
	Through	270	276	102.1%	5.9	1.6	A
	Right Turn	60	60	100.2%	4.3	1.6	A
	Subtotal	430	446	103.8%	15.0	1.6	B
WB	Left Turn	40	38	96.0%	46.7	11.5	D
	Through	230	234	101.7%	9.3	2.5	A
	Right Turn	100	98	97.7%	5.4	1.7	A
	Subtotal	370	370	100.0%	12.5	2.2	B
Total		1,130	1,144	101.2%	18.7	1.9	B

Intersection 33

Driveway/SE 34th Street

Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
SB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
EB	Left Turn						
	Through	330	342	103.5%	1.6	0.4	A
	Right Turn	40	41	101.5%	1.5	0.7	A
	Subtotal	370	382	103.3%	1.5	0.4	A
WB	Left Turn						
	Through	370	373	100.8%	1.9	0.2	A
	Right Turn	10	10	101.0%	1.9	1.1	A
	Subtotal	380	383	100.8%	1.9	0.2	A
Total		750	765	102.0%	1.7	0.2	A

SimTraffic Post-Processor  
Average Results from 10 Runs  
Volume and Delay by Movement

34th Street  
2040 No Build  
AM Peak Hour

Intersection 7

SE 192nd Avenue/SE 34th Street

Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	120	116	96.7%	43.0	4.0	D
	Through	630	636	100.9%	16.5	1.9	B
	Right Turn	290	291	100.2%	8.0	1.1	A
	Subtotal	1,040	1,042	100.2%	17.0	1.2	B
SB	Left Turn	140	142	101.4%	78.1	15.7	E
	Through	520	523	100.5%	17.8	3.2	B
	Right Turn	90	91	101.3%	9.3	2.2	A
	Subtotal	750	756	100.8%	28.6	4.1	C
EB	Left Turn	80	76	94.4%	27.2	7.0	C
	Through	160	170	106.1%	34.9	4.6	C
	Right Turn	90	96	106.9%	23.9	6.5	C
	Subtotal	330	341	103.5%	30.3	4.4	C
WB	Left Turn	170	179	105.2%	31.1	4.4	C
	Through	170	168	98.8%	31.7	5.6	C
	Right Turn	100	103	103.2%	15.8	4.2	B
	Subtotal	440	450	102.3%	27.8	4.1	C
Total		2,560	2,589	101.1%	24.1	1.4	C

Intersection 30

Shopping Center Driveway/SE 34th Street

Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
SB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
EB	Left Turn	20	21	106.0%	4.9	1.5	A
	Through	510	529	103.8%	1.2	0.1	A
	Right Turn	60	62	102.8%	1.1	0.3	A
	Subtotal	590	612	103.8%	1.3	0.2	A
WB	Left Turn	30	30	100.3%	6.1	1.6	A
	Through	440	455	103.5%	2.1	0.6	A
	Right Turn	100	103	103.3%	1.8	0.6	A
	Subtotal	570	589	103.3%	2.3	0.6	A
Total		1,160	1,201	103.5%	1.8	0.3	A

SimTraffic Post-Processor  
Average Results from 10 Runs  
Volume and Delay by Movement

34th Street  
2040 No Build  
PM Peak Hour

Intersection 1 SE 164th Avenue/SE 34th Street Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	190	181	95.2%	66.4	16.2	E
	Through	1,290	1,276	98.9%	48.2	16.4	D
	Right Turn	460	459	99.8%	12.1	2.0	B
	Subtotal	1,940	1,916	98.8%	41.7	11.1	D
SB	Left Turn	170	175	103.2%	76.8	15.7	E
	Through	1,270	1,268	99.9%	31.7	3.9	C
	Right Turn	80	80	99.5%	21.0	5.4	C
	Subtotal	1,520	1,523	100.2%	35.9	3.3	D
EB	Left Turn	70	67	96.1%	69.0	13.9	E
	Through	100	102	101.9%	53.4	5.1	D
	Right Turn	190	194	102.3%	12.1	3.8	B
	Subtotal	360	364	101.0%	35.6	4.1	D
WB	Left Turn	500	489	97.8%	46.1	6.3	D
	Through	170	174	102.6%	37.8	4.7	D
	Right Turn	220	221	100.6%	13.1	2.5	B
	Subtotal	890	885	99.4%	36.1	4.6	D
Total		4,710	4,688	99.5%	38.3	4.9	D

Intersection 2 SE 168th Avenue/SE 34th Street Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	30	31	104.7%	14.1	5.6	B
	Through	20	21	105.0%	20.4	9.5	C
	Right Turn	10	11	114.0%	7.2	3.7	A
	Subtotal	60	64	106.3%	15.4	4.8	B
SB	Left Turn	30	29	97.3%	19.3	3.5	B
	Through	20	19	97.0%	16.7	10.2	B
	Right Turn	40	39	98.0%	6.3	1.5	A
	Subtotal	90	88	97.6%	12.9	3.0	B
EB	Left Turn	80	80	100.3%	18.6	7.0	B
	Through	630	642	102.0%	6.0	1.1	A
	Right Turn	20	23	117.0%	3.7	2.4	A
	Subtotal	730	746	102.2%	7.4	1.6	A
WB	Left Turn	10	10	95.0%	5.1	4.2	A
	Through	820	814	99.3%	5.9	1.9	A
	Right Turn	20	22	112.0%	3.1	4.8	A
	Subtotal	850	846	99.5%	5.8	2.0	A
Total		1,730	1,743	100.8%	7.2	1.4	A



SimTraffic Post-Processor  
Average Results from 10 Runs  
Volume and Delay by Movement

34th Street  
2040 No Build  
PM Peak Hour

Intersection 43

Pedestrian Crossing/SE 34th Street

Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
SB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
EB	Left Turn						
	Through	670	674	100.6%	1.7	0.4	A
	Right Turn						
	Subtotal	670	674	100.6%	1.7	0.4	A
WB	Left Turn						
	Through	850	853	100.4%	1.1	0.6	A
	Right Turn						
	Subtotal	850	853	100.4%	1.1	0.6	A
Total		1,520	1,527	100.5%	1.4	0.4	A

Intersection 3

SE 172nd Avenue/SE 34th Street

Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	60	56	93.5%	28.3	23.6	D
	Through	10	11	106.0%	37.9	35.3	E
	Right Turn	30	31	101.7%	13.6	13.7	B
	Subtotal	100	97	97.2%	24.9	20.6	C
SB	Left Turn						
	Through	10	10	95.0%	21.7	14.6	C
	Right Turn	10	11	113.0%	7.3	5.4	A
	Subtotal	20	21	104.0%	14.7	9.8	B
EB	Left Turn	20	20	101.0%	5.3	3.2	A
	Through	560	566	101.0%	1.0	0.2	A
	Right Turn	90	86	96.0%	0.6	0.3	A
	Subtotal	670	672	100.3%	1.1	0.2	A
WB	Left Turn	50	49	98.6%	5.7	1.2	A
	Through	780	789	101.2%	2.9	0.4	A
	Right Turn	10	10	96.0%	2.7	1.6	A
	Subtotal	840	848	101.0%	3.1	0.4	A
Total		1,630	1,638	100.5%	3.6	1.2	A

SimTraffic Post-Processor  
Average Results from 10 Runs  
Volume and Delay by Movement

34th Street  
2040 No Build  
PM Peak Hour

Intersection 4

SE 176th Avenue/SE 34th Street

Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	20	21	104.5%	41.5	14.2	D
	Through	20	21	104.5%	34.4	19.7	C
	Right Turn	10	10	103.0%	7.7	5.9	A
	Subtotal	50	52	104.2%	31.9	10.3	C
SB	Left Turn	90	86	95.2%	45.4	5.7	D
	Through	30	30	100.7%	32.9	5.4	C
	Right Turn	90	92	102.6%	13.1	3.2	B
	Subtotal	210	208	99.1%	29.2	3.5	C
EB	Left Turn	190	194	101.9%	16.0	4.4	B
	Through	370	372	100.5%	4.5	1.1	A
	Right Turn	30	30	99.0%	2.5	2.1	A
	Subtotal	590	595	100.9%	8.3	2.2	A
WB	Left Turn	20	18	91.0%	7.4	2.6	A
	Through	730	723	99.0%	8.9	1.7	A
	Right Turn	100	98	97.8%	5.4	1.5	A
	Subtotal	850	839	98.7%	8.5	1.6	A
Total		1,700	1,694	99.7%	11.7	1.5	B

Intersection 5

SE 177th Avenue/SE 34th Street

Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	30	30	98.7%	19.5	6.2	C
	Through						
	Right Turn	20	21	103.5%	5.1	3.9	A
	Subtotal	50	50	100.6%	13.5	3.9	B
SB	Left Turn	50	51	102.2%	18.3	9.3	C
	Through						
	Right Turn	150	146	97.6%	8.1	2.9	A
	Subtotal	200	198	98.8%	10.8	3.7	B
EB	Left Turn	40	39	97.0%	5.5	1.6	A
	Through	390	388	99.6%	1.3	0.3	A
	Right Turn	40	41	102.0%	0.7	0.2	A
	Subtotal	470	468	99.6%	1.6	0.3	A
WB	Left Turn	20	19	93.5%	5.2	2.0	A
	Through	670	663	99.0%	3.1	0.3	A
	Right Turn	20	20	98.0%	2.4	1.4	A
	Subtotal	710	702	98.8%	3.1	0.4	A
Total		1,430	1,417	99.1%	4.0	0.7	A

SimTraffic Post-Processor  
Average Results from 10 Runs  
Volume and Delay by Movement

34th Street  
2040 No Build  
PM Peak Hour

Intersection 6

SE Hiddenbrook Drive/SE 34th Street

Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	110	109	99.2%	35.3	4.9	D
	Through	30	31	103.7%	35.9	8.6	D
	Right Turn	60	64	105.8%	5.8	1.3	A
	Subtotal	200	204	101.9%	26.5	4.0	C
SB	Left Turn	160	166	103.7%	35.5	4.6	D
	Through	50	50	99.4%	33.2	6.4	C
	Right Turn	160	159	99.3%	16.2	3.1	B
	Subtotal	370	374	101.2%	26.4	3.1	C
EB	Left Turn	50	47	94.0%	47.9	7.2	D
	Through	330	326	98.8%	9.0	2.1	A
	Right Turn	80	84	105.1%	4.8	1.9	A
	Subtotal	460	457	99.4%	12.3	2.3	B
WB	Left Turn	40	42	104.5%	46.7	6.4	D
	Through	440	434	98.7%	8.3	1.4	A
	Right Turn						
	Subtotal	480	476	99.2%	12.2	2.2	B
Total		1,510	1,511	100.1%	17.7	1.4	B

Intersection 33

Driveway/SE 34th Street

Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn						
	Through						
	Right Turn	20	20	98.5%	5.6	1.3	A
	Subtotal	20	20	98.5%	5.6	1.3	A
SB	Left Turn	10	8	82.0%	8.0	5.9	A
	Through						
	Right Turn	40	38	95.0%	6.6	1.6	A
	Subtotal	50	46	92.4%	7.3	2.1	A
EB	Left Turn						
	Through	550	556	101.2%	1.2	0.2	A
	Right Turn						
	Subtotal	550	556	101.2%	1.2	0.2	A
WB	Left Turn						
	Through	440	437	99.3%	1.3	0.2	A
	Right Turn	10	12	117.0%	1.3	0.8	A
	Subtotal	450	449	99.7%	1.2	0.2	A
Total		1,070	1,071	100.1%	1.6	0.3	A

SimTraffic Post-Processor  
Average Results from 10 Runs  
Volume and Delay by Movement

34th Street  
2040 No Build  
PM Peak Hour

Intersection 7

SE 192nd Avenue/SE 34th Street

Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	140	135	96.4%	57.8	11.1	E
	Through	880	887	100.8%	28.2	2.6	C
	Right Turn	140	140	100.1%	8.3	1.7	A
	Subtotal	1,160	1,162	100.1%	29.6	3.0	C
SB	Left Turn	240	239	99.5%	64.9	10.7	E
	Through	790	788	99.8%	25.7	2.6	C
	Right Turn	110	112	101.5%	22.7	5.8	C
	Subtotal	1,140	1,139	99.9%	33.9	4.6	C
EB	Left Turn	170	161	94.8%	28.7	3.9	C
	Through	250	263	105.3%	35.5	4.2	D
	Right Turn	160	164	102.5%	29.8	5.9	C
	Subtotal	580	588	101.4%	31.9	2.7	C
WB	Left Turn	300	305	101.8%	45.7	13.3	D
	Through	200	203	101.4%	30.5	3.2	C
	Right Turn	130	129	98.8%	19.3	4.1	B
	Subtotal	630	637	101.1%	35.8	7.1	D
Total		3,510	3,526	100.4%	32.5	2.0	C

SimTraffic Post-Processor  
Average Results from 10 Runs  
Volume and Delay by Movement

SE 34th Street  
2040 Build Alternative  
AM Peak Hour

Intersection 1                      164th Avenue/34th Street                      Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	110	114	103.5%	51.7	6.4	D
	Through	880	888	100.9%	44.0	8.6	D
	Right Turn	420	415	98.7%	6.2	1.0	A
	Subtotal	1,410	1,417	100.5%	33.9	6.2	C
SB	Left Turn	170	170	100.2%	62.0	8.6	E
	Through	770	751	97.5%	29.2	2.5	C
	Right Turn	40	39	97.0%	13.1	3.7	B
	Subtotal	980	960	98.0%	34.5	3.1	C
EB	Left Turn	30	29	95.0%	59.1	14.0	E
	Through	60	60	100.5%	58.3	11.3	E
	Right Turn	160	159	99.4%	7.2	1.4	A
	Subtotal	250	248	99.1%	23.6	4.4	C
WB	Left Turn	440	436	99.0%	46.3	6.2	D
	Through	90	93	103.2%	28.7	7.6	C
	Right Turn	120	120	100.0%	6.8	1.7	A
	Subtotal	650	649	99.8%	36.0	4.1	D
Total		3,290	3,273	99.5%	33.8	2.5	C

Intersection 2                      168th Avenue/34th Street                      Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	40	40	100.0%	18.1	4.3	B
	Through	10	10	97.0%	17.9	11.9	B
	Right Turn	10	10	101.0%	8.5	5.7	A
	Subtotal	60	60	99.7%	16.7	2.5	B
SB	Left Turn	20	18	92.0%	18.4	7.1	B
	Through	10	12	117.0%	16.2	8.3	B
	Right Turn	50	52	104.4%	8.9	2.1	A
	Subtotal	80	82	102.9%	12.4	2.7	B
EB	Left Turn	40	39	97.3%	17.1	5.8	B
	Through	590	593	100.4%	7.6	1.5	A
	Right Turn	20	23	113.5%	5.7	3.0	A
	Subtotal	650	654	100.6%	8.1	1.6	A
WB	Left Turn	10	9	93.0%	10.9	7.8	B
	Through	560	558	99.7%	6.4	1.0	A
	Right Turn	20	18	90.5%	6.4	2.2	A
	Subtotal	590	586	99.3%	6.5	1.0	A
Total		1,380	1,382	100.1%	8.1	0.9	A

SimTraffic Post-Processor  
Average Results from 10 Runs  
Volume and Delay by Movement

SE 34th Street  
2040 Build Alternative  
AM Peak Hour

Intersection 3

SE 172nd Avenue/SE 34th Street

Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	80	78	97.6%	24.9	5.4	C
	Through	10	11	113.0%	17.3	14.0	C
	Right Turn	30	29	97.7%	17.0	9.3	C
	Subtotal	120	119	98.9%	22.8	5.1	C
SB	Left Turn						
	Through						
	Right Turn	30	28	93.3%	6.4	2.5	A
	Subtotal	30	28	93.3%	6.4	2.5	A
EB	Left Turn	10	9	92.0%	4.0	2.3	A
	Through	580	579	99.9%	1.7	0.5	A
	Right Turn	30	31	103.7%	1.0	0.5	A
	Subtotal	620	620	99.9%	1.7	0.5	A
WB	Left Turn	30	30	98.3%	7.2	2.9	A
	Through	480	481	100.1%	1.7	0.3	A
	Right Turn	10	10	98.0%	1.2	1.1	A
	Subtotal	520	520	100.0%	2.0	0.3	A
Total		1,290	1,286	99.7%	3.7	0.5	A

Intersection 4

176th Avenue/34th Street

Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	20	20	97.5%	44.7	16.7	D
	Through	20	20	100.0%	27.5	13.6	C
	Right Turn	10	10	99.0%	5.9	4.7	A
	Subtotal	50	49	98.8%	31.5	8.3	C
SB	Left Turn	70	64	91.7%	43.3	6.5	D
	Through	10	11	108.0%	42.7	24.9	D
	Right Turn	160	159	99.1%	10.9	4.5	B
	Subtotal	240	234	97.3%	21.4	5.0	C
EB	Left Turn	120	118	98.6%	8.3	1.3	A
	Through	470	479	101.9%	5.8	1.1	A
	Right Turn	20	19	94.5%	3.0	2.2	A
	Subtotal	610	616	101.0%	6.2	1.0	A
WB	Left Turn	10	9	93.0%	7.6	7.2	A
	Through	340	344	101.0%	6.7	2.2	A
	Right Turn	60	63	105.2%	3.7	1.7	A
	Subtotal	410	416	101.4%	6.3	1.9	A
Total		1,310	1,315	100.4%	10.0	1.3	A

SimTraffic Post-Processor  
Average Results from 10 Runs  
Volume and Delay by Movement

SE 34th Street  
2040 Build Alternative  
AM Peak Hour

Intersection 5

177th Avenue/34th Street

Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	30	27	91.3%	16.2	5.2	C
	Through						
	Right Turn	20	21	103.0%	6.8	2.5	A
	Subtotal	50	48	96.0%	11.4	3.8	B
SB	Left Turn	30	31	103.7%	14.7	6.4	B
	Through						
	Right Turn	60	65	107.7%	5.4	1.5	A
	Subtotal	90	96	106.3%	8.3	2.4	A
EB	Left Turn	150	149	99.4%	4.6	0.8	A
	Through	380	394	103.6%	1.2	0.2	A
	Right Turn	20	19	97.0%	1.0	0.7	A
	Subtotal	550	562	102.2%	2.2	0.3	A
WB	Left Turn	10	7	73.0%	4.2	2.9	A
	Through	320	315	98.4%	2.7	0.4	A
	Right Turn	40	39	97.3%	2.3	0.8	A
	Subtotal	370	361	97.6%	2.7	0.3	A
Total		1,060	1,067	100.6%	3.4	0.6	A

Intersection 6

SE Hiddenbrook Drive/34th Street

Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	80	75	93.3%	39.8	7.1	D
	Through	60	64	106.7%	45.8	7.8	D
	Right Turn	40	41	101.5%	7.2	2.1	A
	Subtotal	180	179	99.6%	35.8	5.4	D
SB	Left Turn	60	60	99.5%	34.2	3.8	C
	Through	30	30	100.3%	33.6	8.4	C
	Right Turn	60	58	96.2%	9.1	2.7	A
	Subtotal	150	148	98.3%	23.5	2.1	C
EB	Left Turn	100	99	98.7%	39.2	5.0	D
	Through	270	274	101.4%	8.0	0.9	A
	Right Turn	60	61	101.8%	5.1	2.1	A
	Subtotal	430	434	100.8%	15.1	2.1	B
WB	Left Turn	40	43	106.3%	42.5	6.7	D
	Through	230	227	98.5%	11.9	2.1	B
	Right Turn	100	97	97.4%	8.0	1.4	A
	Subtotal	370	366	99.0%	14.1	2.2	B
Total		1,130	1,127	99.7%	19.2	1.2	B

SimTraffic Post-Processor  
Average Results from 10 Runs  
Volume and Delay by Movement

SE 34th Street  
2040 Build Alternative  
AM Peak Hour

Intersection 7

SE 192nd Avenue/34th Street

Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	120	112	93.0%	46.7	5.2	D
	Through	630	624	99.0%	22.9	3.7	C
	Right Turn	290	289	99.7%	5.4	1.2	A
	Subtotal	1,040	1,024	98.5%	20.6	2.7	C
SB	Left Turn	140	140	100.3%	40.7	5.3	D
	Through	520	528	101.5%	20.3	2.6	C
	Right Turn	90	92	101.9%	11.7	4.1	B
	Subtotal	750	760	101.3%	23.0	2.3	C
EB	Left Turn	80	75	93.4%	31.4	8.7	C
	Through	160	173	107.8%	40.3	7.8	D
	Right Turn	90	91	100.8%	33.9	10.3	C
	Subtotal	330	338	102.4%	36.9	6.9	D
WB	Left Turn	170	166	97.8%	35.6	7.9	D
	Through	170	176	103.2%	28.3	4.8	C
	Right Turn	100	102	101.8%	5.2	1.3	A
	Subtotal	440	444	100.8%	25.8	3.9	C
Total		2,560	2,566	100.2%	24.4	1.7	C



SimTraffic Post-Processor  
Average Results from 10 Runs  
Volume and Delay by Movement

SE 34th Street  
2040 Build Alternative  
PM Peak Hour

Intersection 1                      164th Avenue/34th Street                      Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	190	165	86.9%	138.7	19.5	F
	Through	1,290	1,126	87.3%	141.0	3.7	F
	Right Turn	460	415	90.2%	19.4	1.7	B
	Subtotal	1,940	1,706	87.9%	112.7	4.4	F
SB	Left Turn	170	158	92.9%	256.5	104.5	F
	Through	1,270	1,253	98.6%	57.9	16.6	E
	Right Turn	80	75	93.4%	39.8	15.0	D
	Subtotal	1,520	1,485	97.7%	77.0	22.8	E
EB	Left Turn	70	69	99.1%	55.9	9.0	E
	Through	100	95	95.4%	49.5	5.0	D
	Right Turn	190	200	105.1%	11.9	3.0	B
	Subtotal	360	364	101.2%	31.3	3.2	C
WB	Left Turn	500	506	101.2%	56.6	12.3	E
	Through	170	173	101.6%	32.0	4.5	C
	Right Turn	220	215	97.5%	11.1	4.4	B
	Subtotal	890	893	100.3%	40.8	8.9	D
Total		4,710	4,448	94.4%	79.9	7.1	E

Intersection 2                      168th Avenue/34th Street                      Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	30	28	94.7%	18.8	6.9	B
	Through	20	19	95.5%	10.9	7.0	B
	Right Turn	10	12	119.0%	9.5	4.2	A
	Subtotal	60	59	99.0%	13.8	4.7	B
SB	Left Turn	30	27	91.3%	12.9	4.8	B
	Through	20	21	104.5%	17.3	8.7	B
	Right Turn	40	44	109.3%	9.9	2.7	A
	Subtotal	90	92	102.2%	12.1	2.1	B
EB	Left Turn	80	76	95.4%	40.8	32.9	D
	Through	630	583	92.6%	9.1	3.2	A
	Right Turn	20	20	102.0%	7.0	3.4	A
	Subtotal	730	680	93.2%	12.7	6.9	B
WB	Left Turn	10	10	98.0%	17.8	11.7	B
	Through	820	834	101.7%	16.3	12.2	B
	Right Turn	20	19	97.0%	13.8	15.3	B
	Subtotal	850	863	101.5%	16.3	12.2	B
Total		1,730	1,695	97.9%	14.6	9.2	B

SimTraffic Post-Processor  
Average Results from 10 Runs  
Volume and Delay by Movement

SE 34th Street  
2040 Build Alternative  
PM Peak Hour

Intersection 3

SE 172nd Avenue/SE 34th Street

Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	60	58	97.3%	43.2	30.8	E
	Through	10	12	117.0%	51.8	42.2	F
	Right Turn	30	34	111.7%	30.0	23.4	D
	Subtotal	100	104	103.6%	40.1	30.0	E
SB	Left Turn						
	Through	10	9	92.0%	30.8	22.0	D
	Right Turn	10	9	87.0%	11.1	6.6	B
	Subtotal	20	18	89.5%	21.0	12.2	C
EB	Left Turn	20	17	82.5%	6.6	4.3	A
	Through	560	522	93.1%	1.9	0.3	A
	Right Turn	90	79	87.9%	1.2	0.4	A
	Subtotal	670	617	92.1%	1.9	0.3	A
WB	Left Turn	50	50	99.0%	9.1	2.9	A
	Through	780	804	103.1%	2.7	0.3	A
	Right Turn	10	11	108.0%	1.9	0.8	A
	Subtotal	840	864	102.9%	3.1	0.3	A
Total		1,630	1,603	98.3%	5.4	2.4	A

Intersection 4

176th Avenue/34th Street

Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	20	20	101.0%	47.4	9.2	D
	Through	20	22	110.0%	42.5	26.5	D
	Right Turn	10	10	100.0%	17.3	19.3	B
	Subtotal	50	52	104.4%	38.8	7.1	D
SB	Left Turn	90	86	96.0%	44.5	7.2	D
	Through	30	29	95.7%	37.9	15.3	D
	Right Turn	90	87	97.0%	23.9	5.4	C
	Subtotal	210	202	96.4%	34.8	4.8	C
EB	Left Turn	190	181	95.3%	31.9	5.1	C
	Through	370	356	96.1%	6.7	1.1	A
	Right Turn	30	28	93.7%	4.8	3.3	A
	Subtotal	590	565	95.7%	15.0	1.5	B
WB	Left Turn	20	18	88.0%	12.5	6.8	B
	Through	730	747	102.3%	20.1	3.1	C
	Right Turn	100	100	100.0%	16.8	4.4	B
	Subtotal	850	864	101.7%	19.6	3.1	B
Total		1,700	1,683	99.0%	20.6	2.1	C

SimTraffic Post-Processor  
Average Results from 10 Runs  
Volume and Delay by Movement

SE 34th Street  
2040 Build Alternative  
PM Peak Hour

Intersection 5                      177th Avenue/34th Street                      Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	30	30	99.3%	72.4	60.0	F
	Through						
	Right Turn	20	22	111.0%	50.8	74.3	F
	Subtotal	50	52	104.0%	61.2	66.7	F
SB	Left Turn	50	48	96.2%	26.7	16.6	D
	Through						
	Right Turn	150	155	103.3%	97.8	83.2	F
	Subtotal	200	203	101.6%	82.6	65.5	F
EB	Left Turn	40	36	88.8%	8.7	4.5	A
	Through	390	372	95.4%	1.3	0.2	A
	Right Turn	40	38	95.5%	0.9	0.3	A
	Subtotal	470	446	94.9%	1.8	0.3	A
WB	Left Turn	20	19	95.0%	9.3	2.7	A
	Through	670	684	102.1%	10.5	3.1	B
	Right Turn	20	19	93.5%	5.1	3.2	A
	Subtotal	710	722	101.6%	10.3	3.0	B
Total		1,430	1,423	99.5%	16.6	7.1	C

Intersection 6                      SE Hiddenbrook Drive/34th Street                      Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	110	104	94.1%	40.3	5.7	D
	Through	30	28	92.3%	35.7	9.6	D
	Right Turn	60	58	96.3%	9.3	9.4	A
	Subtotal	200	189	94.5%	30.7	3.0	C
SB	Left Turn	160	158	98.5%	42.0	27.7	D
	Through	50	52	104.2%	28.9	8.2	C
	Right Turn	160	164	102.4%	14.0	3.5	B
	Subtotal	370	374	100.9%	27.4	11.0	C
EB	Left Turn	50	44	88.2%	55.2	38.2	E
	Through	330	324	98.1%	21.9	33.0	C
	Right Turn	80	75	94.3%	19.6	36.4	B
	Subtotal	460	443	96.3%	24.8	33.5	C
WB	Left Turn	40	40	98.8%	49.0	8.0	D
	Through	440	459	104.4%	11.3	2.0	B
	Right Turn						
	Subtotal	480	499	103.9%	14.3	2.0	B
Total		1,510	1,504	99.6%	22.6	13.2	C

SimTraffic Post-Processor  
Average Results from 10 Runs  
Volume and Delay by Movement

SE 34th Street  
2040 Build Alternative  
PM Peak Hour

Intersection 7

SE 192nd Avenue/34th Street

Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	140	141	101.0%	176.8	73.1	F
	Through	880	882	100.2%	82.7	25.7	F
	Right Turn	140	145	103.6%	12.4	5.6	B
	Subtotal	1,160	1,169	100.7%	85.9	25.1	F
SB	Left Turn	240	245	102.2%	44.3	3.5	D
	Through	790	798	101.0%	32.6	3.0	C
	Right Turn	110	108	97.8%	29.1	6.1	C
	Subtotal	1,140	1,151	101.0%	34.7	2.5	C
EB	Left Turn	170	162	95.5%	84.9	19.8	F
	Through	250	235	93.8%	100.2	23.7	F
	Right Turn	160	149	93.1%	91.2	24.8	F
	Subtotal	580	546	94.1%	93.6	22.9	F
WB	Left Turn	300	303	101.0%	46.7	10.7	D
	Through	200	207	103.5%	26.8	7.1	C
	Right Turn	130	125	95.8%	7.8	2.6	A
	Subtotal	630	635	100.7%	33.5	7.2	C
Total		3,510	3,500	99.7%	61.4	9.3	E



## Appendix D: Queue Results

Intersection 1

164th Avenue/34th Street

Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	25	6	75	23	75	43	0%	0%
	Through	350	50	8	100	18	125	24	0%	0%
	Right Turn	350	50	4	75	9	100	12	0%	0%
NB	Left Turn	400	75	11	150	20	175	36	0%	0%
	Through	875	175	9	275	21	325	60	0%	0%
	Right Turn	875	50	5	75	11	75	20	0%	0%
SB	Left Turn	1,250	125	7	200	18	225	34	0%	0%
	Through	1,000	125	9	225	17	250	38	0%	0%
	Through/Right	1,000	50	5	100	11	150	26	0%	0%
WB	Left Turn	925	125	10	200	12	225	35	0%	0%
	Through	925	50	8	100	13	125	23	0%	0%
	Right Turn	175	50	3	75	4	100	18	0%	0%

Intersection 2

168th Avenue/34th Street

Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	25	4	50	10	75	23	0%	0%
	Through	925	25	5	75	18	125	51	0%	0%
	Through/Right	925	25	7	75	15	125	38	0%	0%
NB	Shared	375	25	3	75	6	75	15	0%	0%
SB	Shared	350	50	3	75	5	75	11	0%	0%
WB	Left Turn	125	25	1	25	6	50	10	0%	0%
	Through	600	25	7	75	16	100	32	0%	0%
	Through/Right	600	25	5	75	12	100	26	0%	0%

Intersection 3

SE 172nd Avenue/SE 34th Street

Side-street Stop

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	25	1	25	7	25	16	0%	0%
	Through	475	25	1	25	6	25	17	0%	0%
	Through/Right	475	25	1	25	6	25	14	0%	0%
NB	Shared	450	50	3	75	7	75	14	0%	0%
SB	Shared	75	25	2	50	3	50	0	0%	0%
WB	Left Turn	150	25	2	25	6	50	8	0%	0%
	Through	825	25	0	25	3	25	10	0%	0%
	Through/Right	825	25	1	25	6	25	17	0%	0%

Intersection 4

176th Avenue/34th Street

Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	25	4	50	8	50	13	0%	0%
	Through	825	25	4	50	11	75	23	0%	0%
	Through/Right	825	25	4	50	9	75	18	0%	0%
NB	Left Turn	400	25	3	50	6	50	11	0%	0%
	Through/Right	400	25	4	50	8	75	21	0%	0%
SB	Left Turn	175	50	8	100	16	125	35	0%	0%
	Through/Right	275	50	5	100	15	125	45	0%	0%
WB	Left Turn	100	25	1	25	5	25	13	0%	0%
	Through	325	25	3	50	7	75	15	0%	0%
	Through/Right	325	25	4	75	7	100	12	0%	0%

Intersection 5

177th Avenue/34th Street

Side-street Stop

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	25	3	50	8	75	16	0%	0%
	Through/Right	325	25	0	25	4	25	10	0%	0%
NB	Shared	300	25	4	50	4	50	15	0%	0%
SB	Left/Through	175	25	1	25	5	25	14	0%	0%
	Right Turn	175	25	2	25	4	50	9	0%	0%
WB	Left Turn	175	25	1	25	6	25	13	0%	0%
	Through/Right	1,650	25	1	25	4	25	9	0%	0%

Intersection 6

SE Hiddenbrook Drive/34th Street

Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	50	5	75	13	100	25	0%	0%
	Through	1,650	25	3	50	8	75	18	0%	0%
	Through/Right	1,650	25	5	75	9	75	18	0%	0%
NB	Left/Through	250	50	7	100	13	125	19	0%	0%
	Right Turn	125	25	4	50	7	75	12	0%	0%
SB	Left Turn	175	25	1	25	6	50	1	0%	0%
	Through/Right	175	25	2	50	3	50	8	0%	0%
WB	Left Turn	150	25	5	75	9	75	22	0%	0%
	Through	875	25	2	25	8	50	18	0%	0%
	Through/Right	875	25	2	50	6	75	17	0%	0%



Intersection 7

SE 192nd Avenue/34th Street

Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	50	6	100	13	125	22	0%	0%
	Through	450	50	8	100	14	125	18	0%	0%
	Through/Right	450	75	6	125	11	150	10	0%	0%
NB	Left Turn	375	50	6	100	16	125	39	0%	0%
	Through	725	125	10	200	28	225	58	0%	0%
	Right Turn	375	50	6	100	13	125	15	0%	0%
SB	Left Turn	325	75	10	150	24	175	59	0%	0%
	Through	525	100	9	175	15	175	18	0%	0%
	Through/Right	525	50	8	125	20	150	33	0%	0%
WB	Left Turn	175	100	11	150	21	175	29	1%	0%
	Through	425	50	5	75	9	100	18	0%	0%
	Through/Right	425	50	6	100	11	125	18	0%	0%

Intersection 8

SE 196th Avenue & SE 34th Street, All Intervals

0

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	25	3	50	6	50	1	0%	0%
	Through	950	25	4	75	9	100	16	0%	0%
	Through/Right	950	50	6	100	10	125	20	0%	0%
NB	Left Turn	75	50	3	75	5	75	12	1%	0%
	Through/Right	175	25	2	50	5	75	21	0%	0%
SB	Left Turn	125	25	3	50	4	75	10	0%	0%
	Through/Right	275	25	5	50	7	75	12	0%	0%
WB	Left Turn	175	25	4	50	6	75	15	0%	0%
	Through	500	50	4	100	5	100	12	0%	0%
	Through/Right	500	50	6	75	11	100	16	0%	0%

Intersection 1

SE 164th Avenue/SE 34th Street

Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	50	6	100	11	125	12	0%	0%
	Through	350	75	5	125	13	150	20	0%	0%
	Right Turn	350	50	4	100	7	125	14	0%	0%
NB	Left Turn	400	125	13	225	39	275	75	0%	0%
	Through	875	225	14	350	25	400	45	0%	0%
	Right Turn	875	50	6	100	11	125	20	0%	0%
SB	Left Turn	1,250	100	9	175	19	225	51	0%	0%
	Through	1,000	200	9	275	12	300	30	2%	0%
	Through/Right	1,000	75	7	175	13	200	17	0%	0%
WB	Left Turn	925	125	8	175	19	200	39	0%	0%
	Through	925	75	7	125	14	150	23	0%	0%
	Right Turn	175	75	6	100	13	125	33	0%	0%

Intersection 2

SE 168th Avenue/SE 34th Street

Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	25	2	75	3	75	16	0%	0%
	Through	925	50	5	75	9	125	24	0%	0%
	Through/Right	925	50	6	100	11	100	22	0%	0%
NB	Shared	375	50	5	75	8	100	27	0%	0%
SB	Shared	350	50	4	75	6	75	15	0%	0%
WB	Left Turn	125	25	2	25	6	50	1	0%	0%
	Through	600	50	5	100	14	125	24	0%	0%
	Through/Right	600	50	5	100	10	125	19	0%	0%

Intersection 3

SE 172nd Avenue/SE 34th Street

Side-street Stop

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	25	1	25	5	50	1	0%	0%
	Through/Right	475	25	0	25	4	25	11	0%	0%
NB	Shared	450	50	3	75	7	75	18	0%	0%
SB	Shared	75	25	3	50	6	50	0	0%	0%
WB	Left Turn	150	25	3	50	6	50	11	0%	0%

Intersection 4

SE 176th Avenue/SE 34th Street

Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	50	5	100	12	125	19	0%	0%
	Through	825	25	3	50	7	75	15	0%	0%
	Through/Right	825	25	4	75	12	75	18	0%	0%
NB	Left Turn	400	25	2	50	4	50	11	0%	0%
	Through/Right	400	25	3	50	6	50	14	0%	0%
SB	Left Turn	175	75	6	125	13	150	27	0%	0%
	Through/Right	275	50	4	100	9	125	15	0%	0%
WB	Left Turn	100	25	2	25	9	50	28	0%	0%
	Through	325	50	9	100	20	125	34	1%	0%
	Through/Right	325	75	9	125	16	150	20	0%	0%

Intersection 5

SE 177th Avenue/SE 34th Street

Side-street Stop

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	25	2	25	5	50	2	0%	0%
NB	Shared	300	25	4	50	3	50	11	0%	0%
SB	Left/Through	175	25	1	25	6	25	9	0%	0%
	Right Turn	175	25	3	50	5	75	7	0%	0%
WB	Left Turn	175	25	1	25	4	25	1	0%	0%

Intersection 6

SE Hiddenbrook Drive/SE 34th Street

Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	25	2	25	6	50	9	0%	0%
	Through	1,650	25	3	75	8	75	10	0%	0%
	Through/Right	1,650	50	4	75	9	100	16	0%	0%
NB	Left/Through	250	75	6	125	11	125	18	1%	0%
	Right Turn	125	25	3	50	7	75	17	0%	0%
SB	Left Turn	175	25	4	50	9	50	16	0%	0%
	Through/Right	175	25	3	75	5	75	10	0%	0%
WB	Left Turn	150	25	5	75	10	75	21	0%	0%
	Through	875	25	3	50	11	75	23	0%	0%
	Through/Right	875	25	3	50	8	100	14	0%	0%

Intersection 7

SE 192nd Avenue/SE 34th Street

Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	75	8	125	16	150	35	0%	0%
	Through	450	75	7	125	7	125	18	0%	0%
	Through/Right	450	100	7	150	12	200	19	0%	0%
NB	Left Turn	375	75	7	125	16	150	47	0%	0%
	Through	725	175	10	250	13	250	26	0%	0%
	Right Turn	375	25	3	75	7	100	20	0%	0%
SB	Left Turn	325	125	11	175	24	200	21	0%	0%
	Through	525	150	10	225	17	250	29	0%	0%
	Through/Right	525	125	8	200	11	250	32	0%	0%
WB	Left Turn	175	150	10	225	14	225	5	8%	0%
	Through	425	75	13	150	50	225	90	0%	0%
	Through/Right	425	75	8	125	14	175	29	0%	0%

Intersection 8

SE 196th Avenue/SE 34th Street

Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	25	3	50	5	75	11	0%	0%
	Through	950	25	3	75	5	100	11	0%	0%
	Through/Right	950	50	5	100	8	100	13	0%	0%
NB	Left Turn	75	50	4	75	5	75	8	1%	0%
	Through/Right	175	25	2	50	5	50	12	0%	0%
SB	Left Turn	125	25	2	25	5	50	1	0%	0%
	Through/Right	275	25	2	50	4	50	11	0%	0%
WB	Left Turn	175	25	4	50	4	50	10	0%	0%
	Through	500	75	7	125	13	150	19	0%	0%
	Through/Right	500	50	6	75	10	100	18	0%	0%

SimTraffic Post-Processor  
Average Results from 10 Runs  
Queue Length By Lane Group

SE 34th Street  
Existing Build Alternative  
AM Peak Hour

Intersection 1

SE 164th Avenue/SE 34th Street

Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	25	3	75	9	75	21	0%	0%
	Through	350	50	6	100	14	125	17	0%	0%
	Right Turn	350	50	3	75	6	100	11	0%	0%
NB	Left Turn	400	75	12	150	33	175	48	0%	0%
	Through	900	175	9	300	19	325	39	0%	0%
	Right Turn	900	25	4	75	14	100	40	0%	0%
SB	Left Turn	250	125	11	200	19	225	23	0%	0%
	Through	1,025	150	11	225	20	250	26	0%	0%
	Through/Right	1,025	50	11	125	25	175	39	0%	0%
	Left Turn	425	200	8	300	13	350	39	0%	0%
	Through	925	50	8	100	10	125	27	0%	0%
	Right Turn	175	50	4	75	7	100	39	0%	0%

Intersection 2

SE 168th Avenue/SE 34th Street

Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	25	3	50	16	75	51	0%	0%
	Through/Right	925	50	10	150	24	225	35	0%	0%
NB	Shared	375	25	3	50	5	75	19	0%	0%
SB	Shared	350	50	3	75	5	75	14	0%	0%
	Left Turn	125	25	2	25	16	50	42	0%	0%
	Through/Right	600	50	12	125	14	175	30	1%	0%

SimTraffic Post-Processor  
Average Results from 10 Runs  
Queue Length By Lane Group

SE 34th Street  
Existing Build Alternative  
AM Peak Hour

Intersection 3

SE 172nd Avenue/SE 34th Street

Side-street Stop

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	25	1	25	7	25	16	0%	0%
	Through/Right	475	25	0	25	4	25	12	0%	0%
NBWB	Right Turn	275	25	0	25	0	25	0	0%	0%
		275	25	0	25	0	25	0	0%	0%
SB	Shared	100	25	3	50	6	50	10	0%	0%
WB	Left Turn	150	25	2	25	5	50	7	0%	0%

Intersection 4

SE 176th Avenue/SE 34th Street

Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	25	3	50	6	75	13	0%	0%
	Through/Right	825	50	7	100	17	150	42	0%	0%
NB	Left Turn	400	25	2	50	5	75	9	0%	0%
	Through/Right	400	25	3	50	7	75	17	0%	0%
SB	Left Turn	175	50	6	100	16	125	30	0%	0%
	Through/Right	300	50	3	100	12	150	44	0%	0%
WB	Left Turn	100	25	0	25	4	25	13	0%	0%
	Through/Right	325	50	7	125	18	150	39	2%	0%

SimTraffic Post-Processor  
Average Results from 10 Runs  
Queue Length By Lane Group

SE 34th Street  
Existing Build Alternative  
AM Peak Hour

Intersection 5

SE 177th Avenue/SE 34th Street

Side-street Stop

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	25	3	50	7	75	17	0%	0%
	Through/Right	325	25	0	25	3	25	8	0%	0%
NB	Shared	325	25	4	50	5	75	20	0%	0%
SB	Left/Through	200	25	1	25	5	25	14	0%	0%
	Right Turn	200	25	2	25	3	25	0	0%	0%
WB	Left Turn	175	25	1	25	6	25	12	0%	0%
	Through	1,650	25	0	25	4	25	11	0%	0%
	Right Turn	175	25	0	25	3	25	9	0%	0%

Intersection 6

SE Hiddenbrook Drive/SE 34th Street

Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	50	4	75	14	100	44	0%	0%
	Through/Right	1,650	50	6	100	17	150	38	0%	0%
NB	Left/Through	275	50	7	100	17	125	30	0%	0%
	Right Turn	125	25	4	50	8	75	23	0%	0%
SB	Left Turn	175	25	1	25	8	50	13	0%	0%
	Through/Right	175	25	4	50	7	50	0	0%	0%
WB	Left Turn	150	25	2	50	5	75	13	0%	0%
	Through/Right	875	25	4	75	8	100	15	0%	0%



SimTraffic Post-Processor  
Average Results from 10 Runs  
Queue Length By Lane Group

SE 34th Street  
Existing Build Alternative  
AM Peak Hour

Intersection 7

SE 192nd Avenue/SE 34th Street

Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	50	4	100	14	125	45	0%	0%
	Through/Right	450	125	8	175	18	225	36	2%	0%
NB	Left Turn	375	50	6	100	15	150	28	0%	0%
	Through	725	125	9	200	19	225	29	0%	0%
	Right Turn	375	50	5	100	13	125	21	0%	0%
SB	Left Turn	325	75	8	125	24	175	51	0%	0%
	Through	525	100	9	150	15	200	31	0%	0%
	Through/Right	525	50	9	125	17	175	19	0%	0%
WB	Left Turn	175	100	11	150	23	200	33	1%	0%
	Through	400	75	10	125	28	175	75	0%	0%
	Right Turn	400	25	4	50	10	75	15	0%	0%

SimTraffic Post-Processor  
Average Results from 10 Runs  
Queue Length By Lane Group

SE 34th Street  
Existing Build Alternative  
PM Peak Hour

Intersection 1

SE 164th Avenue/SE 34th Street

Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	50	6	100	14	125	34	0%	0%
	Through	350	75	5	125	11	175	19	0%	0%
	Right Turn	350	50	2	100	4	125	15	0%	0%
NB	Left Turn	400	125	6	200	17	225	25	0%	0%
	Through	900	225	12	350	20	375	45	0%	0%
	Right Turn	900	50	8	100	15	150	34	0%	0%
SB	Left Turn	250	125	18	225	34	300	38	0%	0%
	Through	1,025	225	11	300	19	350	39	3%	0%
	Through/Right	1,025	125	11	225	13	250	27	0%	0%
	Left Turn	425	175	11	275	24	300	34	0%	0%
	Through	925	75	8	150	21	175	40	0%	0%
	Right Turn	175	75	6	100	16	175	49	0%	0%

Intersection 2

SE 168th Avenue/SE 34th Street

Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	50	5	75	10	100	28	0%	0%
	Through/Right	925	75	10	175	22	225	55	1%	0%
NB	Shared	375	25	5	75	10	75	19	0%	0%
SB	Shared	350	50	3	75	5	100	16	0%	0%
	Left Turn	125	25	2	25	5	50	8	0%	0%
	Through/Right	600	75	11	175	26	225	51	2%	0%

Intersection 3

SE 172nd Avenue/SE 34th Street

Side-street Stop

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	25	2	25	6	50	1	0%	0%
	Right Turn	275	25	0	25	0	25	0	0%	0%
NBWB	Right Turn	275	25	0	25	0	25	0	0%	0%
SB	Shared	100	25	3	25	7	50	7	0%	0%
WB	Left Turn	150	25	3	50	6	50	13	0%	0%

Intersection 4

SE 176th Avenue/SE 34th Street

Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	50	4	100	9	125	31	0%	0%
	Through/Right	825	50	6	100	13	150	71	0%	0%
NB	Left Turn	400	25	3	50	5	50	12	0%	0%
	Through/Right	400	25	4	50	7	50	11	0%	0%
SB	Left Turn	175	75	6	100	12	125	23	0%	0%
	Through/Right	300	50	7	100	15	125	32	0%	0%
WB	Left Turn	100	25	4	25	16	50	40	0%	0%
	Through/Right	325	75	17	175	38	250	57	5%	0%

SimTraffic Post-Processor  
Average Results from 10 Runs  
Queue Length By Lane Group

SE 34th Street  
Existing Build Alternative  
PM Peak Hour

Intersection 5

SE 177th Avenue/SE 34th Street

Side-street Stop

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	25	2	25	4	50	8	0%	0%
NB	Shared	325	25	4	50	6	75	16	0%	0%
SB	Left/Through	200	25	2	25	6	50	1	0%	0%
	Right Turn	200	25	3	50	6	75	9	0%	0%
WB	Left Turn	175	25	2	25	7	25	11	0%	0%
	Through	2,100	150	37	275	60	350	72	0%	0%

Intersection 6

SE Hiddenbrook Drive/ SE 34th Street

Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	25	2	25	6	50	9	0%	0%
	Through/Right	1,650	50	7	125	16	175	38	0%	0%
NB	Left/Through	275	75	7	150	19	175	33	2%	0%
	Right Turn	125	25	3	75	11	100	34	0%	0%
SB	Left Turn	175	25	5	50	8	75	18	0%	0%
	Through/Right	175	25	5	75	6	75	22	0%	0%
WB	Left Turn	150	50	4	75	10	75	16	0%	0%
	Through/Right	875	50	6	125	15	175	33	0%	0%

SimTraffic Post-Processor  
Average Results from 10 Runs  
Queue Length By Lane Group

SE 34th Street  
Existing Build Alternative  
PM Peak Hour

Intersection 7

SE 192nd Avenue/SE 34th Street

Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	75	9	150	22	225	23	1%	0%
	Through/Right	450	150	15	275	24	325	51	11%	0%
NB	Left Turn	375	75	7	125	14	150	27	0%	0%
	Through	725	175	13	275	18	300	39	0%	0%
	Right Turn	375	50	4	75	7	75	11	0%	0%
SB	Left Turn	325	100	8	175	20	225	45	0%	0%
	Through	525	150	7	225	16	250	27	0%	0%
	Through/Right	525	100	11	200	22	250	28	0%	0%
WB	Left Turn	175	150	13	225	21	225	7	11%	0%
	Through	400	125	37	225	87	300	92	1%	1%
	Right Turn	400	50	3	75	10	75	22	0%	0%

Intersection 1

SE 164th Avenue/SE 34th Street

Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	25	4	75	9	100	19	0%	0%
	Through	350	50	5	100	10	125	23	0%	0%
	Right Turn	350	50	4	100	9	100	14	0%	0%
NB	Left Turn	400	100	7	175	13	225	41	0%	0%
	Through	875	200	16	300	28	350	47	0%	0%
	Right Turn	875	50	2	100	8	125	18	0%	0%
SB	Left Turn	1,250	125	8	225	17	275	31	1%	0%
	Through	1,200	150	15	225	21	275	40	0%	0%
	Through/Right	1,200	50	6	125	14	175	27	0%	0%
WB	Left Turn	925	150	9	200	15	250	37	0%	0%
	Through	925	75	8	125	18	150	37	0%	0%
	Right Turn	175	50	2	75	11	125	49	0%	0%

Intersection 2

SE 168th Avenue/SE 34th Street

Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	25	3	50	7	75	17	0%	0%
	Through	925	25	6	75	13	100	20	0%	0%
	Through/Right	925	50	6	75	10	100	26	0%	0%
NB	Shared	375	50	4	75	5	100	15	0%	0%
SB	Shared	350	50	4	75	7	75	15	0%	0%
WB	Left Turn	125	25	2	25	7	50	8	0%	0%
	Through	600	50	6	75	13	100	20	0%	0%
	Through/Right	600	50	6	75	13	100	15	0%	0%

Intersection 3

SE 172nd Avenue/SE 34th Street

Side-street Stop

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	25	2	25	9	50	15	0%	0%
	Shared	450	50	3	100	8	125	27	0%	0%
	SB	75	25	2	50	2	50	7	0%	0%
WB	Left Turn	150	25	2	25	5	50	8	0%	0%
	Through	825	25	0	25	5	25	16	0%	0%
	Through/Right	825	25	1	25	10	25	29	0%	0%

Intersection 4

SE 176th Avenue/SE 34th Street

Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	25	5	50	10	75	21	0%	0%
	Through	825	25	5	75	12	100	26	0%	0%
	Through/Right	825	25	4	75	8	100	24	0%	0%
NB	Left Turn	400	25	4	75	16	75	45	0%	0%
	Through/Right	400	25	6	75	14	100	28	0%	0%
	SB	175	75	5	125	12	150	29	0%	0%
WB	Left Turn	100	25	2	25	5	50	7	0%	0%
	Through	325	25	5	50	8	75	14	0%	0%
	Through/Right	325	50	4	75	11	100	19	0%	0%

Intersection 5

SE 177th Avenue/SE 34th Street

Side-street Stop

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	25	4	50	8	75	22	0%	0%
	Through	325	25	0	25	3	25	9	0%	0%
	Through/Right	325	25	0	25	2	25	5	0%	0%
NB	Shared	300	50	2	75	3	75	1	0%	0%
	Left/Through	200	25	2	50	3	50	10	0%	0%
	Right Turn	200	25	3	50	7	75	20	0%	0%
SB	Left Turn	175	25	1	25	6	25	12	0%	0%
	Through	1,650	25	0	25	4	25	12	0%	0%
	Through/Right	1,650	25	1	25	5	25	13	0%	0%
WB	Left Turn	175	25	1	25	6	25	12	0%	0%
	Through	1,650	25	0	25	4	25	12	0%	0%
	Through/Right	1,650	25	1	25	5	25	13	0%	0%

Intersection 6

SE Hiddenbrook Drive/SE 34th Street

Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	50	5	75	7	100	11	0%	0%
	Through	1,650	25	4	50	10	75	14	0%	0%
	Through/Right	1,650	25	4	75	9	100	18	0%	0%
NB	Left/Through	250	75	8	125	13	150	23	1%	0%
	Right Turn	125	25	2	50	4	75	7	0%	0%
SB	Left Turn	175	25	2	50	4	50	11	0%	0%
	Through/Right	175	25	2	50	4	50	9	0%	0%
WB	Left Turn	150	25	4	75	7	75	12	0%	0%
	Through	875	25	2	50	8	50	15	0%	0%
	Through/Right	875	25	4	50	10	75	21	0%	0%



Intersection 7

SE 192nd Avenue/SE 34th Street

Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	50	7	100	17	150	42	0%	0%
	Through	450	50	6	100	19	150	42	0%	0%
	Through/Right	450	75	6	125	15	175	21	0%	0%
NB	Left Turn	375	50	9	100	11	125	29	0%	0%
	Through	875	125	12	200	26	225	31	0%	0%
	Right Turn	375	75	4	125	9	125	16	0%	0%
SB	Left Turn	325	100	13	150	41	200	75	0%	0%
	Through	625	125	6	200	12	225	24	0%	0%
	Through/Right	625	75	7	150	13	200	31	0%	0%
WB	Left Turn	175	100	9	150	8	175	21	1%	0%
	Through	425	50	6	100	12	125	31	0%	0%
	Through/Right	425	50	6	100	14	150	32	0%	0%

Intersection 8

SE 196th Avenue/SE 34th Street

Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	25	2	50	5	50	10	0%	0%
	Through	950	50	8	100	14	100	20	0%	0%
	Through/Right	950	75	6	100	9	125	16	0%	0%
NB	Left Turn	75	50	3	75	6	75	11	1%	0%
	Through/Right	175	25	3	50	6	75	21	0%	0%
SB	Left Turn	125	25	3	50	5	75	12	0%	0%
	Through/Right	275	25	4	75	7	75	12	0%	0%
WB	Left Turn	175	25	4	75	7	75	10	0%	0%
	Through	500	50	7	100	12	125	19	0%	0%
	Through/Right	500	50	5	100	8	100	14	0%	0%

Intersection 1

SE 164th Avenue/SE 34th Street

Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	50	31	100	65	150	87	0%	0%
	Through	350	100	13	150	21	200	28	1%	0%
	Right Turn	350	75	7	100	13	150	27	0%	0%
NB	Left Turn	400	150	19	225	44	275	95	0%	0%
	Through	875	275	17	400	25	450	71	1%	0%
	Right Turn	875	75	5	150	12	175	19	0%	0%
SB	Left Turn	1,250	125	12	225	20	275	43	0%	0%
	Through	1,200	225	14	300	17	350	37	3%	0%
	Through/Right	1,200	150	14	225	12	250	24	0%	0%
WB	Left Turn	925	125	10	175	13	200	24	0%	0%
	Through	925	125	14	250	41	325	75	3%	0%
	Right Turn	175	75	9	175	21	200	0	0%	0%

Intersection 2

SE 168th Avenue/SE 34th Street

Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	50	4	75	7	100	17	0%	0%
	Through	925	50	5	100	11	125	26	0%	0%
	Through/Right	925	50	7	100	15	125	27	0%	0%
NB	Shared	375	50	5	75	10	100	29	0%	0%
SB	Shared	350	50	5	75	10	100	19	0%	0%
WB	Left Turn	125	25	3	25	7	50	2	0%	0%
	Through	600	50	8	100	17	150	40	0%	0%
	Through/Right	600	50	7	125	18	175	46	0%	0%

Intersection 3

SE 172nd Avenue/SE 34th Street

Side-street Stop

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	25	2	50	5	50	11	0%	0%
	Through	475	25	0	25	2	25	7	0%	0%
	Through/Right	475	25	1	25	5	25	12	0%	0%
NB	Shared	450	50	5	75	9	100	24	0%	0%
SB	Shared	75	25	3	50	5	75	13	0%	0%
WB	Left Turn	150	25	5	50	10	100	21	0%	0%
	Through/Right	825	25	0	25	3	25	10	0%	0%

Intersection 4

SE 176th Avenue/SE 34th Street

Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	50	4	100	12	125	24	0%	0%
	Through	825	25	5	50	10	75	16	0%	0%
	Through/Right	825	25	5	75	6	100	20	0%	0%
NB	Left Turn	400	25	3	50	6	75	13	0%	0%
	Through/Right	400	25	4	50	7	75	18	0%	0%
SB	Left Turn	175	75	5	125	15	150	15	0%	0%
	Through/Right	300	50	5	100	15	125	29	0%	0%
WB	Left Turn	100	25	2	25	10	50	28	0%	0%
	Through	325	50	7	125	11	150	24	3%	0%
	Through/Right	325	75	9	150	14	175	24	0%	0%

Intersection 5

SE 177th Avenue/SE 34th Street

Side-street Stop

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	25	2	50	4	50	8	0%	0%
	Through/Right	325	25	1	25	4	25	19	0%	0%
NB	Shared	300	25	3	75	5	75	14	0%	0%
SB	Left/Through	200	25	2	50	5	50	12	0%	0%
	Right Turn	200	25	3	50	5	75	10	0%	0%
WB	Left Turn	175	25	2	25	6	50	20	0%	0%
	Through/Right	1,650	25	0	25	3	25	7	0%	0%

Intersection 6

SE Hiddenbrook Drive/SE 34th Street

Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	25	3	50	8	50	16	0%	0%
	Through	1,650	25	4	75	9	100	14	0%	0%
	Through/Right	1,650	50	3	100	6	100	11	0%	0%
NB	Left/Through	250	100	9	150	17	200	26	4%	0%
	Right Turn	125	50	4	100	20	150	55	0%	0%
SB	Left Turn	175	25	4	75	6	75	9	0%	0%
	Through/Right	175	50	5	75	9	75	18	0%	0%
WB	Left Turn	150	50	5	75	7	100	16	0%	0%
	Through	875	25	3	75	8	125	23	0%	0%
	Through/Right	875	50	4	100	11	125	26	0%	0%

Intersection 7

SE 192nd Avenue/SE 34th Street

Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	75	8	125	14	175	34	1%	0%
	Through	450	75	3	150	9	150	17	0%	0%
	Through/Right	450	125	7	175	10	200	27	0%	0%
NB	Left Turn	375	75	7	125	14	150	38	0%	0%
	Through	875	175	7	250	12	275	27	0%	0%
	Right Turn	375	50	4	75	7	100	21	0%	0%
SB	Left Turn	325	125	14	200	26	225	21	0%	0%
	Through	625	175	13	250	22	300	50	0%	0%
	Through/Right	625	150	10	225	16	250	34	0%	0%
WB	Left Turn	175	150	12	250	13	225	1	12%	0%
	Through	425	100	12	225	49	300	74	0%	0%
	Through/Right	425	100	6	175	17	225	46	0%	0%

Intersection 1 164th Avenue/34th Street Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	25	3	75	8	75	17	0%	0%
	Through	350	50	4	100	12	150	29	0%	0%
	Right Turn	350	50	4	75	10	100	23	0%	0%
NB	Left Turn	400	100	9	150	14	175	25	0%	0%
	Through	900	225	13	325	27	375	43	0%	0%
	Right Turn	900	50	7	100	14	100	26	0%	0%
SB	Left Turn	250	150	10	225	17	275	29	1%	0%
	Through	1,025	175	11	275	18	300	33	1%	0%
	Through/Right	1,025	75	10	150	14	200	18	0%	0%
	Left Turn	425	250	18	350	38	400	48	0%	0%
	Through	925	75	7	150	51	200	171	0%	0%
	Right Turn	200	50	3	75	5	100	10	0%	0%

Intersection 2 168th Avenue/34th Street Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	25	3	50	13	100	66	0%	0%
	Through/Right	925	75	13	150	33	225	75	1%	0%
NB	Shared	375	50	5	75	9	100	20	0%	0%
SB	Shared	350	50	4	75	4	75	10	0%	0%
	Left Turn	125	25	3	50	8	50	11	0%	0%
	Through/Right	600	75	6	175	17	225	44	2%	0%

Intersection 3

SE 172nd Avenue/SE 34th Street

Side-street Stop

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	25	2	25	8	50	17	0%	0%
	Through/Right	475	25	0	25	4	25	12	0%	0%
NB	Shared	450	50	5	100	7	100	11	0%	0%
SB	Shared	100	25	3	50	4	50	16	0%	0%
WB	Left Turn	150	25	2	25	6	50	6	0%	0%
	Through/Right	825	25	0	25	2	25	7	0%	0%

Intersection 4

176th Avenue/34th Street

Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	25	3	50	6	75	13	0%	0%
	Through/Right	825	50	7	125	16	150	28	0%	0%
NB	Left Turn	400	25	4	75	8	75	17	0%	0%
	Through/Right	400	25	3	75	6	100	20	0%	0%
SB	Left Turn	175	75	5	100	8	125	19	0%	0%
	Through/Right	300	75	8	100	18	125	30	0%	0%
WB	Left Turn	100	25	3	50	10	50	28	0%	0%
	Through/Right	325	75	6	125	14	175	39	2%	0%

Intersection 5

177th Avenue/34th Street

Side-street Stop

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	25	4	50	8	75	18	0%	0%
	Through/Right	325	25	0	25	3	25	17	0%	0%
NB	Shared	325	50	2	75	5	75	15	0%	0%
SB	Left/Through	200	25	3	50	6	50	11	0%	0%
	Right Turn	200	25	2	50	4	50	13	0%	0%
WB	Left Turn	175	25	2	25	7	50	12	0%	0%
	Through	1,650	25	1	25	7	25	18	0%	0%
	Right Turn	175	25	0	25	0	25	7	0%	0%

Intersection 6

SE Hiddenbrook Drive/SE 34th Street

Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	50	8	100	19	125	45	0%	0%
	Through/Right	1,650	50	7	125	18	200	34	0%	0%
NB	Left/Through	275	75	6	125	14	150	28	1%	0%
	Right Turn	125	25	5	50	8	75	42	0%	0%
SB	Left Turn	200	25	3	50	6	75	11	0%	0%
	Through/Right	200	25	2	50	4	50	0	0%	0%
WB	Left Turn	150	50	4	75	8	100	18	0%	0%
	Through/Right	875	50	4	100	11	125	25	0%	0%



Intersection 7

SE 192nd Avenue/34th Street

Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	75	8	125	27	200	51	0%	0%
	Through/Right	450	150	10	225	18	275	42	6%	0%
NB	Left Turn	375	75	9	125	16	125	23	0%	0%
	Through	725	150	12	225	17	250	27	0%	0%
	Right Turn	375	50	5	100	10	125	24	0%	0%
SB	Left Turn	325	100	12	150	27	200	33	0%	0%
	Through	525	100	7	175	10	200	17	0%	0%
	Through/Right	525	75	7	150	13	200	19	0%	0%
WB	Left Turn	175	100	11	175	18	200	22	2%	0%
	Through	425	75	11	150	34	200	54	0%	0%
	Right Turn	425	25	4	50	9	75	12	0%	0%

SimTraffic Post-Processor  
Average Results from 10 Runs  
Queue Length By Lane Group

SE 34th Street  
2027 Build Alternative  
PM Peak Hour

Intersection 1 164th Avenue/34th Street Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	75	11	125	27	175	42	0%	0%
	Through	350	100	10	150	25	200	37	1%	0%
	Right Turn	350	50	5	100	11	125	24	0%	0%
NB	Left Turn	400	225	48	450	81	475	0	0%	0%
	Through	900	475	85	725	166	775	146	20%	1%
	Right Turn	900	100	49	225	219	325	326	0%	0%
SB	Left Turn	250	125	11	250	26	300	18	0%	0%
	Through	1,025	250	11	375	23	400	43	8%	0%
	Through/Right	1,025	175	9	275	17	300	24	0%	0%
	Left Turn	425	200	10	325	22	400	53	0%	0%
	Through	925	125	14	225	40	325	96	2%	0%
	Right Turn	200	75	9	150	23	200	4	0%	0%

Intersection 2 168th Avenue/34th Street Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	50	5	100	19	125	57	0%	0%
	Through/Right	925	100	9	175	24	250	54	1%	0%
NB	Shared	375	50	6	75	9	100	19	0%	0%
SB	Shared	350	50	5	75	7	100	14	0%	0%
	Left Turn	125	25	4	50	20	50	41	0%	0%
	Through/Right	600	125	9	225	32	300	79	4%	0%

Intersection 3

SE 172nd Avenue/SE 34th Street

Side-street Stop

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	25	3	50	6	50	1	0%	0%
	Through/Right	475	25	1	25	5	25	12	0%	0%
NBWB	Right Turn	275	25	0	25	0	25	0	0%	0%
		275	25	0	25	0	25	0	0%	0%
SB	Shared	100	25	5	50	4	75	13	0%	0%
WB	Left Turn	150	25	5	50	8	75	17	0%	0%
	Through/Right	825	25	0	25	3	25	10	0%	0%

Intersection 4

176th Avenue/34th Street

Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	75	9	125	18	150	39	0%	0%
	Through/Right	825	50	5	125	17	150	43	0%	0%
NB	Left Turn	400	25	4	50	6	75	11	0%	0%
	Through/Right	400	25	5	50	8	75	15	0%	0%
SB	Left Turn	175	75	7	125	13	150	16	0%	0%
	Through/Right	300	50	4	100	9	125	21	0%	0%
WB	Left Turn	100	25	2	50	12	100	44	0%	0%
	Through/Right	325	150	13	300	24	325	5	14%	1%

Intersection 5

177th Avenue/34th Street

Side-street Stop

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	25	3	50	5	50	12	0%	0%
NB	Shared	325	50	3	75	5	75	14	0%	0%
SB	Left/Through	200	25	2	50	4	50	11	0%	0%
	Right Turn	200	50	4	75	8	75	18	0%	0%
WB	Left Turn	175	25	2	25	6	50	7	0%	0%
	Through	1,650	25	5	75	25	150	62	0%	0%

Intersection 6

SE Hiddenbrook Drive & SE 34th Street

Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	25	2	50	5	75	9	0%	0%
	Through/Right	1,650	75	11	150	19	225	40	1%	0%
NB	Left/Through	275	100	8	175	18	225	44	5%	0%
	Right Turn	125	50	4	75	14	150	53	0%	0%
SB	Left Turn	200	25	3	50	8	75	14	0%	0%
	Through/Right	200	25	3	75	6	75	18	0%	0%
WB	Left Turn	150	50	4	100	13	125	40	0%	0%
	Through/Right	875	75	13	175	27	225	52	1%	0%

Intersection 7

SE 192nd Avenue/34th Street

Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	100	13	175	32	225	1	0%	0%
	Through/Right	450	175	14	300	36	375	54	13%	0%
NB	Left Turn	375	75	8	150	21	175	34	0%	0%
	Through	725	200	14	300	20	350	39	0%	0%
	Right Turn	375	50	4	75	6	75	15	0%	0%
SB	Left Turn	325	125	10	175	11	225	23	0%	0%
	Through	525	175	11	250	17	275	25	0%	0%
	Through/Right	525	150	11	250	11	275	27	0%	0%
WB	Left Turn	175	150	17	250	17	225	1	11%	0%
	Through	425	150	31	275	66	325	59	4%	1%
	Right Turn	425	50	3	75	9	100	27	0%	0%

Intersection 1

SE 164th Avenue/SE 34th Street

Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	50	8	75	17	100	28	0%	0%
	Through	350	75	5	125	11	150	11	0%	0%
	Right Turn	350	75	4	100	8	125	25	0%	0%
NB	Left Turn	400	100	15	175	30	200	44	0%	0%
	Through	875	250	15	375	37	425	51	0%	0%
	Right Turn	875	100	9	175	21	225	33	0%	0%
SB	Left Turn	1,250	150	13	250	19	300	24	1%	0%
	Through	1,200	175	17	275	29	325	52	1%	0%
	Through/Right	1,200	100	18	175	21	225	24	0%	0%
WB	Left Turn	925	175	12	250	26	300	36	0%	0%
	Through	925	75	7	150	13	175	17	0%	0%
	Right Turn	175	50	5	75	14	100	35	0%	0%

Intersection 2

SE 168th Avenue/SE 34th Street

Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	25	4	75	7	75	12	0%	0%
	Through	925	50	5	125	17	150	46	0%	0%
	Through/Right	925	50	5	100	17	125	31	0%	0%
NB	Shared	375	50	4	75	7	100	15	0%	0%
SB	Shared	350	50	3	75	9	100	20	0%	0%
WB	Left Turn	125	25	2	25	6	50	7	0%	0%
	Through	600	50	8	100	14	125	20	0%	0%
	Through/Right	600	50	7	100	12	125	23	0%	0%

Intersection 3

SE 172nd Avenue/SE 34th Street

Side-street Stop

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	25	2	25	6	50	16	0%	0%
	Through	475	25	1	25	5	25	16	0%	0%
	Through/Right	475	25	0	25	2	25	7	0%	0%
NB	Shared	450	75	4	100	14	150	31	0%	0%
SB	Shared	75	25	2	50	4	50	17	0%	0%
WB	Left Turn	150	25	2	50	5	75	17	0%	0%
	Through	825	25	1	25	7	25	20	0%	0%
	Through/Right	825	25	1	25	7	25	20	0%	0%

Intersection 4

SE 176th Avenue/SE 34th Street

Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	50	4	75	9	100	15	0%	0%
	Through	825	50	6	100	14	125	29	0%	0%
	Through/Right	825	50	4	75	9	100	22	0%	0%
NB	Left Turn	400	25	4	75	10	75	18	0%	0%
	Through/Right	400	50	2	75	8	100	15	0%	0%
SB	Left Turn	175	75	5	125	14	150	31	0%	0%
	Through/Right	300	75	7	125	21	175	44	0%	0%
WB	Left Turn	100	25	2	25	4	50	1	0%	0%
	Through	325	50	6	75	11	100	25	0%	0%
	Through/Right	325	50	5	100	11	125	21	0%	0%

Intersection 5

SE 177th Avenue/SE 34th Street

Side-street Stop

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	50	3	75	8	100	28	0%	0%
	Through/Right	325	25	1	25	6	25	17	0%	0%
NB	Shared	300	50	3	75	6	75	13	0%	0%
SB	Left/Through	200	25	4	50	5	75	13	0%	0%
	Right Turn	200	50	1	50	3	75	13	0%	0%
WB	Left Turn	175	25	2	25	7	25	8	0%	0%
	Through	1,650	25	0	25	3	25	9	0%	0%
	Through/Right	1,650	25	1	25	7	50	17	0%	0%

Intersection 6

SE Hiddenbrook Drive/SE 34th Street

Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	100	6	150	12	175	22	1%	0%
	Through	1,650	25	6	75	15	125	30	0%	0%
	Through/Right	1,650	50	7	100	11	150	31	0%	0%
NB	Left/Through	250	100	14	175	24	200	39	6%	0%
	Right Turn	125	25	7	75	30	125	63	0%	0%
SB	Left Turn	175	75	7	100	11	125	19	0%	0%
	Through/Right	175	75	9	125	18	150	24	0%	0%
WB	Left Turn	150	50	4	75	10	100	17	0%	0%
	Through	875	50	4	75	9	100	19	0%	0%
	Through/Right	875	50	6	100	11	125	22	0%	0%



Intersection 7

SE 192nd Avenue/SE 34th Street

Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	75	4	125	11	150	22	0%	0%
	Through	450	75	7	125	13	150	22	0%	0%
	Through/Right	450	100	6	175	12	200	23	0%	0%
NB	Left Turn	375	75	8	150	18	175	43	0%	0%
	Through	875	175	12	250	24	275	35	0%	0%
	Right Turn	375	100	6	150	17	175	26	0%	0%
SB	Left Turn	325	150	17	225	26	225	25	0%	0%
	Through	625	150	9	225	17	275	44	0%	0%
	Through/Right	625	125	10	200	21	250	34	0%	0%
WB	Left Turn	175	100	9	175	8	225	15	2%	0%
	Through	425	75	4	125	15	200	48	0%	0%
	Through/Right	425	100	9	150	15	175	29	0%	0%

Intersection 1

SE 164th Avenue/SE 34th Street

Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	75	23	125	44	175	57	0%	0%
	Through	350	100	6	150	12	175	18	1%	0%
	Right Turn	350	75	10	125	24	175	39	0%	0%
NB	Left Turn	400	225	40	450	80	450	1	0%	0%
	Through	875	450	62	675	130	750	126	15%	0%
	Right Turn	875	125	15	200	68	300	205	0%	0%
SB	Left Turn	1,250	175	14	300	17	300	1	2%	0%
	Through	1,200	275	21	400	41	450	85	11%	0%
	Through/Right	1,200	200	15	300	19	350	38	0%	0%
WB	Left Turn	925	200	15	300	33	350	73	0%	0%
	Through	925	150	8	250	23	275	46	4%	0%
	Right Turn	175	100	11	200	21	200	0	1%	0%

Intersection 2

SE 168th Avenue/SE 34th Street

Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	50	7	100	13	125	28	0%	0%
	Through	925	50	6	125	15	150	24	0%	0%
	Through/Right	925	75	5	125	13	150	25	0%	0%
NB	Shared	375	50	5	100	12	125	27	0%	0%
SB	Shared	350	50	4	100	9	100	12	0%	0%
WB	Left Turn	125	25	2	50	5	50	9	0%	0%
	Through	600	75	9	175	23	225	63	1%	0%
	Through/Right	600	75	7	150	25	200	55	0%	0%

Intersection 3

SE 172nd Avenue/SE 34th Street

Side-street Stop

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	25	3	50	7	50	11	0%	0%
	Through	475	25	1	25	6	25	18	0%	0%
	Through/Right	475	25	1	25	7	25	13	0%	0%
NB	Shared	450	75	5	100	24	150	42	0%	0%
SB	Shared	75	25	5	50	6	75	12	0%	0%
WB	Left Turn	150	25	4	50	7	75	13	0%	0%
	Through/Right	825	25	0	25	4	25	11	0%	0%

Intersection 4

SE 176th Avenue/SE 34th Street

Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	75	8	125	17	175	25	0%	0%
	Through	825	50	5	75	12	125	31	0%	0%
	Through/Right	825	50	5	100	10	125	16	0%	0%
NB	Left Turn	400	25	4	75	11	75	22	0%	0%
	Through/Right	400	25	4	75	8	100	18	0%	0%
SB	Left Turn	175	75	4	150	12	175	25	0%	0%
	Through/Right	300	75	7	125	14	175	43	0%	0%
WB	Left Turn	100	25	4	50	14	100	41	0%	0%
	Through	325	100	9	175	13	200	29	6%	0%
	Through/Right	325	125	13	200	16	225	19	0%	0%

Intersection 5

SE 177th Avenue/SE 34th Street

Side-street Stop

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	25	3	50	5	75	13	0%	0%
	Through/Right	325	25	0	25	3	25	8	0%	0%
NB	Shared	300	50	2	75	5	75	10	0%	0%
SB	Left/Through	200	50	4	75	7	100	14	0%	0%
	Right Turn	200	50	4	100	10	150	28	0%	0%
WB	Left Turn	175	25	2	25	7	50	15	0%	0%
	Through/Right	1,650	25	1	25	5	25	13	0%	0%

Intersection 6

SE Hiddenbrook Drive/SE 34th Street

Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	50	6	100	15	125	22	0%	0%
	Through	1,650	50	5	100	10	125	15	0%	0%
	Through/Right	1,650	75	3	125	11	150	16	0%	0%
NB	Left/Through	250	100	13	175	28	225	24	7%	0%
	Right Turn	125	50	4	100	15	175	34	0%	0%
SB	Left Turn	175	125	7	200	11	200	7	0%	3%
	Through/Right	175	100	12	175	15	200	13	0%	3%
WB	Left Turn	150	50	5	75	12	100	18	0%	0%
	Through	875	50	6	100	15	125	27	0%	0%
	Through/Right	875	75	7	125	14	150	25	0%	0%

Intersection 7

SE 192nd Avenue/SE 34th Street

Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	100	11	175	12	200	21	1%	0%
	Through	450	125	6	200	14	225	29	1%	0%
	Through/Right	450	175	9	250	17	275	29	0%	0%
NB	Left Turn	375	100	10	175	20	200	27	0%	0%
	Through	875	250	13	350	19	375	29	0%	0%
	Right Turn	375	50	4	100	8	125	10	0%	0%
SB	Left Turn	325	175	15	250	22	275	30	0%	0%
	Through	625	200	11	300	19	325	27	0%	0%
	Through/Right	625	200	12	300	21	325	28	0%	0%
WB	Left Turn	175	175	14	250	15	225	1	23%	0%
	Through	425	150	34	325	86	400	68	0%	1%
	Through/Right	425	125	8	225	32	325	71	0%	0%

SimTraffic Post-Processor  
Average Results from 10 Runs  
Queue Length By Lane Group  
Intersection 1

164th Avenue/34th Street

SE 34th Street  
2040 Build Alternative  
AM Peak Hour  
Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	50	6	75	11	100	22	0%	0%
	Through	350	75	8	125	15	150	17	0%	0%
	Right Turn	350	75	5	100	13	125	32	0%	0%
NB	Left Turn	400	125	17	225	58	375	129	0%	0%
	Through	900	300	26	450	50	525	91	3%	0%
	Right Turn	900	75	5	150	11	200	17	0%	0%
SB	Left Turn	250	175	11	275	14	300	9	2%	0%
	Through	1,025	200	12	325	41	400	102	2%	0%
	Through/Right	1,025	100	13	225	20	250	35	0%	0%
	Left Turn	425	300	16	475	24	475	5	4%	0%
	Through	925	100	31	300	142	500	235	0%	0%
	Right Turn	175	50	6	100	20	125	50	0%	0%

Intersection 2

168th Avenue/34th Street

Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	50	3	75	21	100	57	0%	0%
	Through/Right	925	125	13	225	38	300	94	2%	0%
NB	Shared	375	50	5	75	10	100	24	0%	0%
SB	Shared	350	50	3	75	7	100	11	0%	0%
	Left Turn	125	25	2	50	6	50	11	0%	0%
	Through/Right	600	125	8	200	18	275	41	3%	0%

Intersection 3

SE 172nd Avenue/SE 34th Street

Side-street Stop

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	25	2	25	7	50	13	0%	0%
	Through/Right	475	25	1	25	9	25	25	0%	0%
NBWB	Right Turn	275	25	0	25	0	25	0	0%	0%
		275	25	0	25	0	25	0	0%	0%
SB	Shared	100	25	3	50	4	75	10	0%	0%
WB	Left Turn	150	25	3	50	6	50	15	0%	0%
	Through/Right	825	25	0	25	4	25	11	0%	0%

Intersection 4

176th Avenue/34th Street

Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	50	4	100	12	150	54	0%	0%
	Through/Right	825	100	9	200	25	250	62	1%	0%
NB	Left Turn	400	25	4	75	6	75	15	0%	0%
	Through/Right	400	25	5	75	9	100	18	0%	0%
SB	Left Turn	175	75	8	125	18	125	22	0%	0%
	Through/Right	300	75	10	125	23	175	40	0%	0%
WB	Left Turn	100	25	4	50	13	50	37	0%	0%
	Through/Right	325	100	10	200	22	250	47	6%	0%

Intersection 5

177th Avenue/34th Street

Side-street Stop

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	50	4	75	8	100	15	0%	0%
	Through/Right	325	25	0	25	3	25	9	0%	0%
NB	Shared	325	50	5	75	8	100	19	0%	0%
SB	Left/Through	200	25	4	50	5	75	13	0%	0%
	Right Turn	200	50	3	75	8	75	11	0%	0%
WB	Left Turn	175	25	1	25	5	50	1	0%	0%
	Through	2,375	250	10	375	19	425	32	0%	0%
	Right Turn	175	25	1	25	5	25	11	0%	0%

Intersection 6

SE Hiddenbrook Drive & SE 34th Street

Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	75	7	150	18	200	31	1%	0%
	Through/Right	1,650	100	10	175	24	225	64	1%	0%
NB	Left/Through	275	100	9	175	16	225	31	7%	0%
	Right Turn	125	25	3	75	17	150	59	0%	0%
SB	Left Turn	175	50	7	100	8	125	16	0%	0%
	Through/Right	175	50	6	100	19	125	32	0%	0%
WB	Left Turn	150	50	7	100	20	125	43	0%	0%
	Through/Right	875	100	13	200	31	250	64	2%	0%



Intersection 7

SE 192nd Avenue/34th Street

Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	75	10	175	23	225	1	0%	0%
	Through/Right	450	200	20	325	49	375	70	15%	0%
NB	Left Turn	375	100	12	175	19	225	31	0%	0%
	Through	725	175	11	275	21	325	44	0%	0%
	Right Turn	375	75	6	125	20	150	41	0%	0%
SB	Left Turn	325	100	8	150	16	175	21	0%	0%
	Through	525	150	9	225	18	275	34	0%	0%
	Through/Right	525	125	12	225	19	250	37	0%	0%
WB	Left Turn	175	100	9	200	17	225	13	3%	0%
	Through	425	125	10	200	19	275	46	2%	0%
	Right Turn	425	50	4	75	8	100	23	0%	0%

SimTraffic Post-Processor  
Average Results from 10 Runs  
Queue Length By Lane Group

SE 34th Street  
2040 Build Alternative  
PM Peak Hour

Intersection 1 164th Avenue/34th Street Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	75	7	125	8	150	13	0%	0%
	Through	350	100	10	150	19	175	26	1%	0%
	Right Turn	350	75	11	150	18	175	25	0%	0%
NB	Left Turn	400	375	24	600	13	475	0	1%	0%
	Through	900	875	54	1,025	76	950	12	62%	54%
	Right Turn	900	775	119	1,150	168	925	16	0%	43%
SB	Left Turn	250	275	25	350	19	325	0	41%	0%
	Through	1,025	500	111	775	193	825	187	23%	1%
	Through/Right	1,025	300	49	500	103	575	113	0%	0%
	Left Turn	425	375	21	525	19	475	0	11%	0%
	Through	925	250	62	650	159	825	120	2%	0%
	Right Turn	175	75	11	150	24	200	34	0%	0%

Intersection 2 168th Avenue/34th Street Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	75	11	150	31	200	44	0%	0%
	Through/Right	925	150	15	275	36	375	81	3%	0%
NB	Shared	375	50	4	100	8	125	21	0%	0%
SB	Shared	350	50	6	100	11	125	17	0%	0%
	Left Turn	125	25	7	75	28	150	60	0%	0%
	Through/Right	600	250	47	450	92	525	73	16%	1%

Intersection 3

SE 172nd Avenue/SE 34th Street

Side-street Stop

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	25	3	50	7	50	12	0%	0%
	Through/Right	475	25	1	25	7	25	19	0%	0%
NBWB	Right Turn	275	25	0	25	0	25	0	0%	0%
		275	25	0	25	0	25	0	0%	0%
SB	Shared	525	25	3	50	7	50	18	0%	0%
WB	Left Turn	150	25	6	75	13	100	41	0%	0%
	Through/Right	825	25	6	25	40	75	91	0%	0%

Intersection 4

176th Avenue/34th Street

Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	100	9	175	10	200	17	3%	0%
	Through/Right	825	75	9	175	19	225	38	1%	0%
NB	Left Turn	400	25	4	75	10	75	21	0%	0%
	Through/Right	400	50	5	75	7	100	18	0%	0%
SB	Left Turn	175	75	5	125	11	175	24	0%	0%
	Through/Right	300	75	6	150	11	175	29	1%	0%
WB	Left Turn	100	25	4	75	9	125	0	0%	0%
	Through/Right	325	250	26	375	13	325	3	25%	6%

Intersection 5

177th Avenue/34th Street

Side-street Stop

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	25	3	50	6	50	13	0%	0%
	Through/Right	325	25	1	25	6	25	18	0%	0%
NB	Shared	325	50	17	125	51	150	81	0%	0%
SB	Left/Through	200	50	16	125	51	150	63	0%	2%
	Right Turn	200	125	32	200	45	225	24	0%	19%
WB	Left Turn	175	25	5	50	29	100	70	0%	0%
	Through	1,650	75	29	250	61	375	128	3%	0%
	Right Turn	175	25	10	50	53	125	106	0%	0%

Intersection 6

SE Hiddenbrook Drive/SE 34th Street

Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	50	7	125	28	175	57	0%	0%
	Through/Right	1,650	150	32	300	115	350	177	7%	0%
NB	Left/Through	275	100	11	175	25	225	35	8%	0%
	Right Turn	125	50	5	100	22	175	24	0%	0%
SB	Left Turn	175	125	10	200	21	200	12	0%	4%
	Through/Right	175	100	7	175	11	200	13	0%	1%
WB	Left Turn	150	50	6	100	20	175	35	0%	0%
	Through/Right	875	150	20	250	42	300	59	6%	0%

Intersection 7

SE 192nd Avenue/34th Street

Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	175	200	17	300	16	225	0	4%	0%
	Through/Right	450	475	60	550	49	550	18	66%	47%
NB	Left Turn	375	250	64	450	97	475	37	3%	0%
	Through	725	425	81	650	121	700	122	21%	2%
	Right Turn	375	125	49	350	143	450	125	0%	0%
SB	Left Turn	325	150	20	250	33	350	73	0%	0%
	Through	525	250	8	375	25	450	72	2%	0%
	Through/Right	525	225	8	350	26	425	55	0%	0%
WB	Left Turn	175	175	10	275	6	225	1	21%	0%
	Through	425	175	22	375	40	425	22	3%	2%
	Right Turn	425	50	5	100	27	200	109	0%	0%



## **Appendix E: LOS by Movement**

Intersection	Approach	Movement	Existing					2027					2040				
			No Build		Build		Delta (Seconds)	No Build		Build		Delta (Seconds)	No Build		Build		Delta (Seconds)
			Delay (Seconds)	LOS	Delay (Seconds)	LOS		Delay (Seconds)	LOS	Delay (Seconds)	LOS		Delay (Seconds)	LOS			
SE 164th Avenue & SE 34th Street	NB	Left Turn	42	D	44	D	3	43	D	47	D	4	45	D	52	D	7
		Through	17	B	23	C	7	19	B	24	C	5	29	C	44	D	15
		Right Turn	2	A	3	A	1	6	A	4	A	-1	11	B	6	A	-4
		Approach	16	B	22	C	6	19	B	23	C	4	25	C	34	C	9
	SB	Left Turn	52	D	54	D	2	52	D	52	D	0	55	D	62	E	7
		Through	16	B	20	B	4	18	B	21	C	3	23	C	29	C	6
		Right Turn	5	A	7	A	2	9	A	7	A	-1	11	B	13	B	2
		Approach	22	C	25	C	3	23	C	26	C	3	28	C	34	C	6
	EB	Left Turn	60	E	50	D	-10	57	E	53	D	-4	58	E	59	E	1
		Through	50	D	48	D	-1	44	D	59	E	15	50	D	58	E	9
		Right Turn	6	A	6	A	0	7	A	5	A	-2	7	A	7	A	0
		Approach	24	C	22	C	-2	21	C	22	C	1	24	C	24	C	0
	WB	Left Turn	47	D	45	D	-1	47	D	45	D	-2	43	D	46	D	3
		Through	38	D	26	C	-11	35	D	38	D	3	35	D	29	C	-6
		Right Turn	5	A	4	A	0	7	A	5	A	-1	7	A	7	A	0
		Approach	36	D	34	C	-2	37	D	35	C	-2	35	D	36	D	1
Intersection		22	C	25	C	3	24	C	26	C	2	28	C	34	C	6	
NB	Left Turn	49	D	45	D	-4	42	D	45	D	2	43	D	47	D	4	
	Through	12	B	14	B	2	14	B	15	B	2	16	B	23	C	6	
	Right Turn	3	A	3	A	0	7	A	4	A	-3	8	A	5	A	-3	
	Approach	12	B	13	B	2	14	B	14	B	0	17	B	21	C	4	
SB	Left Turn	45	D	46	D	2	52	D	41	D	-12	78	E	41	D	-37	
	Through	9	A	11	B	2	14	B	12	B	-1	18	B	20	C	3	
	Right Turn	5	A	5	A	1	7	A	6	A	-1	9	A	12	B	2	
	Approach	15	B	17	B	2	20	B	17	B	-3	29	C	23	C	-6	
EB	Left Turn	35	C	30	C	-4	33	C	34	C	1	27	C	31	C	4	
	Through	39	D	39	D	0	36	D	46	D	10	35	C	40	D	5	
	Right Turn	17	B	25	C	8	27	C	32	C	5	24	C	34	C	10	
	Approach	34	C	34	C	-1	34	C	40	D	6	30	C	37	D	7	
WB	Left Turn	37	D	38	D	1	33	C	40	D	7	31	C	36	D	5	
	Through	37	D	32	C	-5	30	C	34	C	4	32	C	28	C	-3	
	Right Turn	11	B	4	A	-7	11	B	4	A	-7	16	B	5	A	-11	
	Approach	33	C	29	C	-4	27	C	30	C	3	28	C	26	C	-2	
Intersection		19	B	19	B	1	21	C	21	C	0	24	C	24	C	0	

Intersection	Approach	Movement	Existing					2027					2040					
			No Build		Build		Delta (Seconds)	No Build		Build		Delta (Seconds)	No Build		Build		Delta (Seconds)	
			Delay (Seconds)	LOS	Delay (Seconds)	LOS		Delay (Seconds)	LOS	Delay (Seconds)	LOS		Delay (Seconds)	LOS				
SE 164th Avenue & SE 34th Street	NB	Left Turn	52	D	42	D	-10	56	E	73	E	17	66	E	139	F	72	
		Through	19	B	22	C	3	25	C	68	E	43	48	D	141	F	93	
		Right Turn	4	A	4	A	1	8	A	7	A	-1	12	B	19	B	7	
		Approach	19	B	21	C	2	25	C	57	E	32	42	D	113	F	71	
	SB	Left Turn	48	D	55	E	8	54	D	41	D	-13	77	E	256	F	180	
		Through	18	B	24	C	7	23	C	25	C	2	32	C	58	E	26	
		Right Turn	8	A	11	B	2	12	B	13	B	1	21	C	40	D	19	
		Approach	21	C	27	C	6	26	C	26	C	1	36	D	77	E	41	
	EB	Left Turn	56	E	53	D	-3	67	E	62	E	-5	69	E	56	E	-13	
		Through	53	D	49	D	-4	51	D	52	D	1	53	D	50	D	-4	
		Right Turn	6	A	7	A	0	8	A	7	A	-1	12	B	12	B	0	
		Approach	29	C	27	C	-2	33	C	30	C	-3	36	D	31	C	-4	
	WB	Left Turn	46	D	49	D	3	41	D	46	D	5	46	D	57	E	11	
		Through	44	D	40	D	-4	40	D	39	D	-1	38	D	32	C	-6	
		Right Turn	7	A	8	A	1	11	B	8	A	-3	13	B	11	B	-2	
		Approach	32	C	32	C	0	31	C	32	C	1	36	D	41	D	5	
	Intersection			22	C	25	C	3	27	C	41	D	14	38	D	79	E	41
	NB	Left Turn	46	D	48	D	1	15	B	51	D	37	58	E	177	F	119	
		Through	18	B	25	C	7	15	B	28	C	13	28	C	83	F	54	
		Right Turn	4	A	4	A	0	7	A	5	A	-2	8	A	12	B	4	
Approach		19	B	24	C	6	14	B	28	C	13	30	C	86	F	56		
SB	Left Turn	52	D	41	D	-11	14	B	40	D	25	65	E	44	D	-21		
	Through	16	B	19	B	3	16	B	22	C	6	26	C	33	C	7		
	Right Turn	10	A	12	B	2	6	A	16	B	10	23	C	29	C	6		
	Approach	22	C	22	C	0	11	B	25	C	14	34	C	35	C	1		
EB	Left Turn	28	C	33	C	5	11	B	37	D	26	29	C	85	F	56		
	Through	37	D	46	D	9	5	A	48	D	43	36	D	100	F	65		
	Right Turn	19	B	37	D	18	3	A	36	D	33	30	C	91	F	61		
	Approach	31	C	41	D	9	6	A	43	D	37	32	C	94	F	62		
WB	Left Turn	35	D	44	D	9	7	A	38	D	31	46	D	47	D	1		
	Through	34	C	33	C	-1	5	A	33	C	29	30	C	27	C	-4		
	Right Turn	16	B	6	A	-10	2	A	7	A	5	19	B	8	A	-12		
	Approach	31	C	33	C	2	4	A	30	C	26	36	D	33	C	-2		
Intersection			24	C	27	C	4	6	A	29	C	23	33	C	61	E	29	