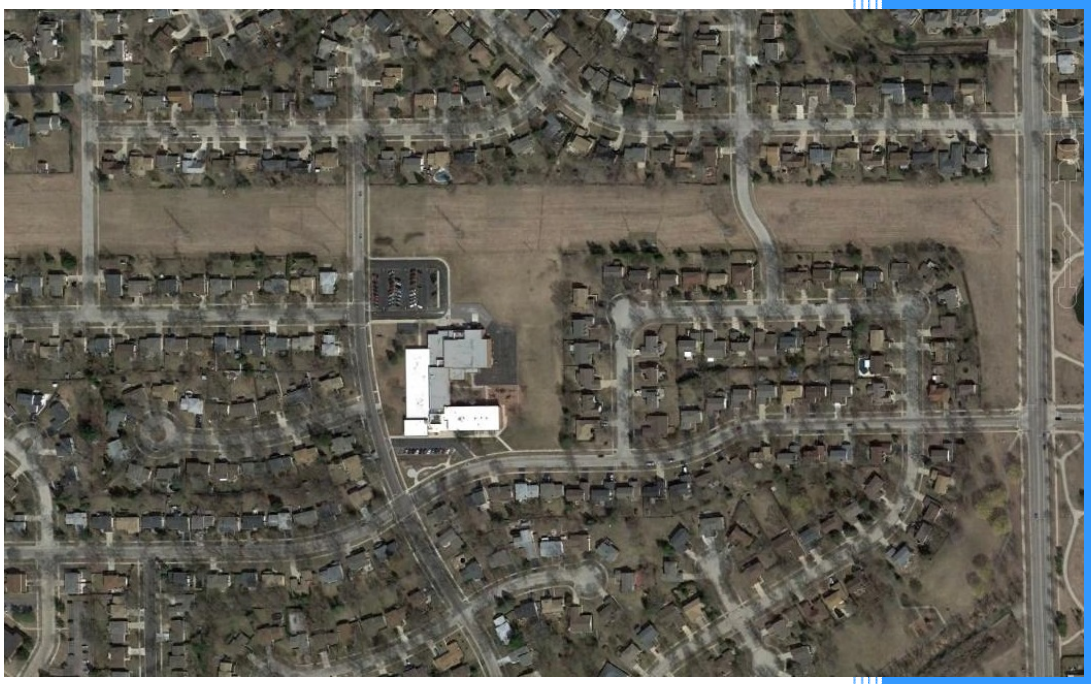
July 2015

Ivy Hill Elementary School

Traffic and Parking Study



Prepared for:

Arlington Heights School District 25

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INTRODUCTION

Eriksson Engineering Associates, Ltd. (EEA) was retained by Arlington Heights School District 25 (AHSD 25) to conduct a traffic and parking study for the proposed expansion of Ivy Hill Elementary School in Arlington Heights, Illinois. Ivy Hill School is located at the northeast corner of Valley Lane and Burke Drive. The current enrollment of the school is 562 students in kindergarten through 5th grade with 68 staff members. Access to the school is provided by a bus loading zone with its entrance from Valley Lane and exit on Burke Drive. Parent loading occurs around the perimeter of the staff/visitor parking lot with a separate entrance and exit on Burke Drive.

A new gym, common areas, and classrooms will be added on the eastern side of the building. The school population is expected to grow 14% to 641 students over a period of several years. Staff growth will be one person for a total of 69 staff.

The purpose of the study was to observe the existing traffic patterns around the school, determine the traffic characteristics of the existing and expanded school, review the parking needs, and develop roadway and parking recommendations.

EXISTING CONDITIONS

School Location and Area Land-Uses

The existing school is located at the northeast corner of the Valley Lane and Burke Drive in Arlington Heights, Illinois. It is located in a single-family neighborhood with Commonwealth Edison power lines along its north border. **Figure 1** illustrates the site and the surrounding land-uses and roads. (Note: all figures are located at the end of the report).

The boundaries of the school attendance area is Rand Road to the south, Windsor Drive to the east, Hintz Road to the north, and includes a neighborhood north of Hintz Road and west of Kennicott Avenue. Students living south of Palatine Road and west of Arlington Heights Road are eligible for busing. The Ivy Hill School boundary map is included in the **Appendix**.

Bicycle and Pedestrian Routes

Valley Lane, east of Burke Drive, is an on-street bike route leading towards Lake Arlington Park. Burke Road north of Valley Lane is a planned bikeway. Public sidewalks are located on both sides of the streets around the school. The All-Way Stop Controlled (AWSC) intersections on Burke Drive at Valley Lane and Ivy Lane have crosswalks with crossing guards before and after school.

Roadway Characteristics

A description of the area roadways providing access to the site is provided below:

Burke Drive is a north-south local roadway extending north from Palatine Road to north of Appletree Lane. It has one travel lane in each direction. At Ivy Lane and Valley Lane, it has an AWSC intersection with painted crosswalks. The posted speed limit is 25 miles per hour and is under the jurisdiction of the Village of Arlington Heights.

Valley Lane is a collector road that extends from Arlington Heights Road east to Windsor Drive and Lake Arlington. At its intersection with Burke Drive, it has one travel lane in each direction and is an AWSC. The posted speed limit is 25 miles per hour and is under the jurisdiction of the Village of Arlington Heights.

Ivy Lane is a local road that extends east from Arlington Heights Road to Burke Drive. The posted speed limit is 25 miles per hour and is under the jurisdiction of the Village of Arlington Heights.

Figure 2 illustrates the existing loading and parking regulations around the school. The streets around the school are posted with 20 mph School Speed Zone signs.

Existing Traffic Volumes

Ivy Hill School starts the school day at 9:05 AM and ends at 3:35 PM. Weekday morning (8:00 to 9:30 AM) and afternoon (3:00 to 4:30 PM) manual traffic counts of vehicles and pedestrians were conducted in May, 2015 at the following intersections:

- Valley Lane and Burke Drive
- Ivy Lane/School Parking Lot Entrance and Burke Drive
- School Parking Lot Exit and Burke Drive
- School Bus Loading Area Entrance and Exit

These counts showed the peak-hours of traffic occurring from 8:30 to 9:30 AM and 3:30 to 4:30 PM on a school day. The existing traffic volumes are shown in **Figure 2** and included in the **Appendix**.

School Operations

All school bus loading occurs in the southern parking lot that can accommodate the six buses currently serving the school. Buses enter from Valley Lane and exit onto Burke Drive. Thirteen parking spaces are provided in the bus loading area that is occupied by staff vehicles which do not interfere with bus operations.

The main student loading area is provided in the north parking lot. Parents enter the south entrance (inbound only) and travel counter clockwise through the lot and unload/load their students on the passenger side of the car. A sidewalk is provided on the north, south, and east perimeter of the lot. The doors for the school are near the southeast corner of the lot.

During the morning arrival, parent enter the lot and drop-off their students in the southern part of the parking lot. In the afternoon dismissal, parents use the majority of the parking lot perimeter. Some parents do park in the lot and walk their student in or out of school. The perimeter of the lot with sidewalk is approximately 560 feet long with capacity for 28 vehicles.

On-street loading is permitted on the east side of Burke Drive and the north side of Valley Lane south of the school. Those areas are signed “Student: Drop-off and Pick-up/8 AM to 4 PM/ School Days/ No Unattended Vehicles”.

As with most other schools, congestion occurs in the area and lasts 10 to 15 minutes during the peak arrival and dismissal periods. However, overall the traffic generally operates well around the school.

Traffic exiting the north parking lot is restricted to right-turns out (No Left-Turns) from 8:30-9:30 AM and 3:00-4:00 PM. The traffic counts showed that 26% of the morning and 36% of the afternoon exiting traffic from the main lot turned left in violation of the restriction. This is equivalent of 24 to 29 vehicles per hour. This additional southbound traffic on Burke Drive did not create congestion at the Ivy Lane stop sign.

SITE TRAFFIC CHARACTERISTICS

Site Plan

The proposed building plan shows the addition on the east side of the existing school building with additional commons space, a new gym, and new classrooms. School bus loading in the southern parking lot will be extended to the east to accommodate additional buses. No changes to the northern parking lot are proposed.

Trip Generation

Ivy Hill School currently serves 562 students and uses six school buses for transportation. With the expansion, the school can accommodate up to 641 students and would need eight school buses to transport students. It is anticipated that most of the 79 additional students will come from areas that provide bus service.

Traffic estimates were made for the site using data provided by the Institute of Transportation Engineer's Trip Generation 9th Ed. manual which contains trip generation surveys of other elementary schools. The rate of vehicle trip generation was applied to the proposed increase in students with the results shown in **Table 1**. The two additional buses were added separately to the traffic volumes.

Table 1
Site Traffic Volumes

Expansion	Morning Arrival			Afternoon Dismissal		
	In	Out	Total	In	Out	Total
79 Additional Students	20	15	35	10	12	22
2 Additional School Buses	2	2	4	2	2	4
Total	22	17	39	12	14	26

Trip Distribution

The trip distribution for school is based on the existing traffic volumes at the school, and the road network. The trip distribution for the school is shown on **Table 2** and **Figure 4**.

Table 2
Directional Distribution

Direction	Inbound		Outbound	
	Morning	Afternoon	Morning	Afternoon
North on Burke Drive	28%	29%	74%	64%
South on Burke Drive	8%	14%	10%	21%
West on Ivy Lane	45%	21%	5%	3%
East on Valley Lane	8%	14%	4%	6%
West on Valley Lane	11%	22%	7%	6%
Total	**100%**	**100%**	**100%**	**100%**

Trip Assignment

The additional vehicular trips that are generated by the school expansion were distributed to the local roadways based on the directional distribution analysis. **Figure 5** displays the trip assignment for the projected site traffic volumes. **Figure 6** shows the Total Traffic volumes, which are the sum of the existing traffic volumes and the site traffic volumes.

Intersection Capacity Analyses

An intersection's ability to accommodate traffic flow is based on the average control delay experienced by vehicles passing through the intersection. The intersection and individual traffic movements are assigned a level of service (LOS), ranging from A to F. Control delay consists of the initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. LOS A has the best traffic flow and least delay. LOS E represents saturated or at capacity conditions. LOS F experiences oversaturated conditions with extensive delays. The Highway Capacity Manual definitions for levels of service and the corresponding control delay for both signalized and unsignalized intersections are shown in **Table 3**.

Table 3
Level of Service Criteria for Intersections

Level of Service	Description	Control Delay (seconds/vehicle)	
		Signals	Stop Signs
A	Minimal delay and few stops	<10	<10
B	Low delay with more stops	>10-20	>10-15
C	Light congestion	>20-35	>15-25
D	Congestion is more noticeable with longer delays	>35-55	>25-35
E	High delays and number of stops	>55-80	>35-50
F	Unacceptable delays / over capacity	>80	>50

Source: Highway Capacity Manual 2010

Capacity analyses were conducted for each intersection using the computer program Highway Capacity Software (HCS) to determine the existing operating conditions of the access system. These analyses were performed for the weekday peak-hours. Copies of the capacity analysis summaries are included in the **Appendix**.

Table 4 shows the existing level of service results for each intersection, which are working well during the peak-hours under existing and projected traffic conditions. The additional school traffic will have no impact on the intersection level of service and a nominal increase in vehicular delays.

Table 4
Intersection Level of Service and Delay

Intersection	Movement	AM Arrival		PM Dismissal	
		Existing	Total	Existing	Total
Parking Lot Exit At Burke Drive	WB Left	A-9.6	A-9.8	B-10.0	B-10.1
	WB Right	A-9.1	A-9.3	A-9.2	A-9.2
Ivy Lane/Parking Entrance At Burke Drive	SB Lt/Th/Rt	A-8.0	A-8.2	A-8.0	A-8.1
	NB Lt/Th/Rt	A-7.2	A-7.3	A-7.6	A-7.6
	EB Lt/Th/Rt	A-7.9	A-8.0	A-7.7	A-7.7
School Bus Exit At Burke Drive	WB Left/Right	B-10.8	B-11.0	B-11.2	B-11.4
Burke Drive at Valley Lane	SB Lt/Th/Rt	A-7.7	A-7.7	A-8.5	A-8.6
	EB Lt/Th/Rt	A-7.8	A-7.9	A-8.6	A-8.7
	NB Lt/Th/Rt	A-7.5	A-7.5	A-7.9	A-7.9
	WB Lt/Th/Rt	A-7.7	A-7.7	A-8.1	A-8.2
School Bus Entrance On Valley Lane	WB Left	A-8.5	A-8.5	A-8.5	A-8.5

RECOMMENDATIONS

The following recommendations were developed for Ivy Hill School and its proposed expansion based on this traffic study:

- Traffic conditions will continue work well around the school with the expansion.
- Expand the bus loading area to the east to accommodate two additional busses and relocate the entry driveway from Valley Lane. A bus turning radius analysis has been completed to ensure that the buses can turn into the driveway from both directions.
- The school website has a page with the school's arrival and dismissal procedures for parents. Currently it is not working and should be repaired and updated if necessary.
- The violation of the "Right-turn only" restriction for traffic exiting the north parking lot should continue to be monitored to determine if it increases and causes problems on southbound Burke Drive. If it does become a problem, school staff can place traffic cones or barriers to prevent left-turning traffic.

PARKING

The existing and proposed site plan provides a total of 72 parking spaces including three accessible spaces. The north lot has 59 spaces and the south lot has 13 spaces. Truck loading is provided on the northeast side of the building.

The Village of Arlington Heights Zoning Ordinance requires elementary schools to provide two parking spaces per each employee (69 staff) and one per classroom (35 rooms) for a total of 173 spaces. A parking variation of 101 spaces would be required.

National parking data is available from the Institute of Transportation Engineers (ITE) in their publication *Parking Generation*, 4th Edition for elementary schools (Land Use Code 520). The peak demand in the ITE data was 0.17 spaces per student (641 students) or 109 spaces.

Parking counts were conducted on Wednesday May 27, 2015 after the morning arrival period which found 55 vehicles parked on-site including staff and visitors. No on-street parking near the school was observed. The school currently has 68 staff members but they are not all present on-site at the same time. Sufficient parking is available at the school to accommodate current and projected staff and visitor parking needs during a typical school day.

Parking for special events at the school can be accommodated by a combination of the off-street parking and on-street parking by the school on Ivy Lane, Valley Lane, and Burke Drive after school hours (4:00 PM).

The existing parking supply of 72 spaces meets the existing and projected parking needs of the school during the day for staff and visitors without impacting on-street parking. Special event parking is available on-street near the school.

SUMMARY

This report summarizes the results of traffic and parking study for the expansion of Ivy Hill Elementary School in Arlington Heights, Illinois. The findings of the study area:

- The volume of additional school traffic generated by the school expansion is low due to one additional staff member and the majority of the additional students will be bused to school.
- The net change in area traffic volumes is nominal.
- The school website has a page with the school's arrival and dismissal procedures for parents. Currently it is not working and should be repaired and updated if necessary.
- The violation of the "Right-turn only" restriction for traffic exiting the north parking lot should continue to be monitored to determine if it increases and causes problems on southbound Burke Drive. If it does become a problem, school staff can place traffic cones or barriers to prevent left-turning traffic.
- Parking for the school provides 72 on-site parking spaces will meet its projected needs but will require a variation of 101spaces from the zoning code requirements.

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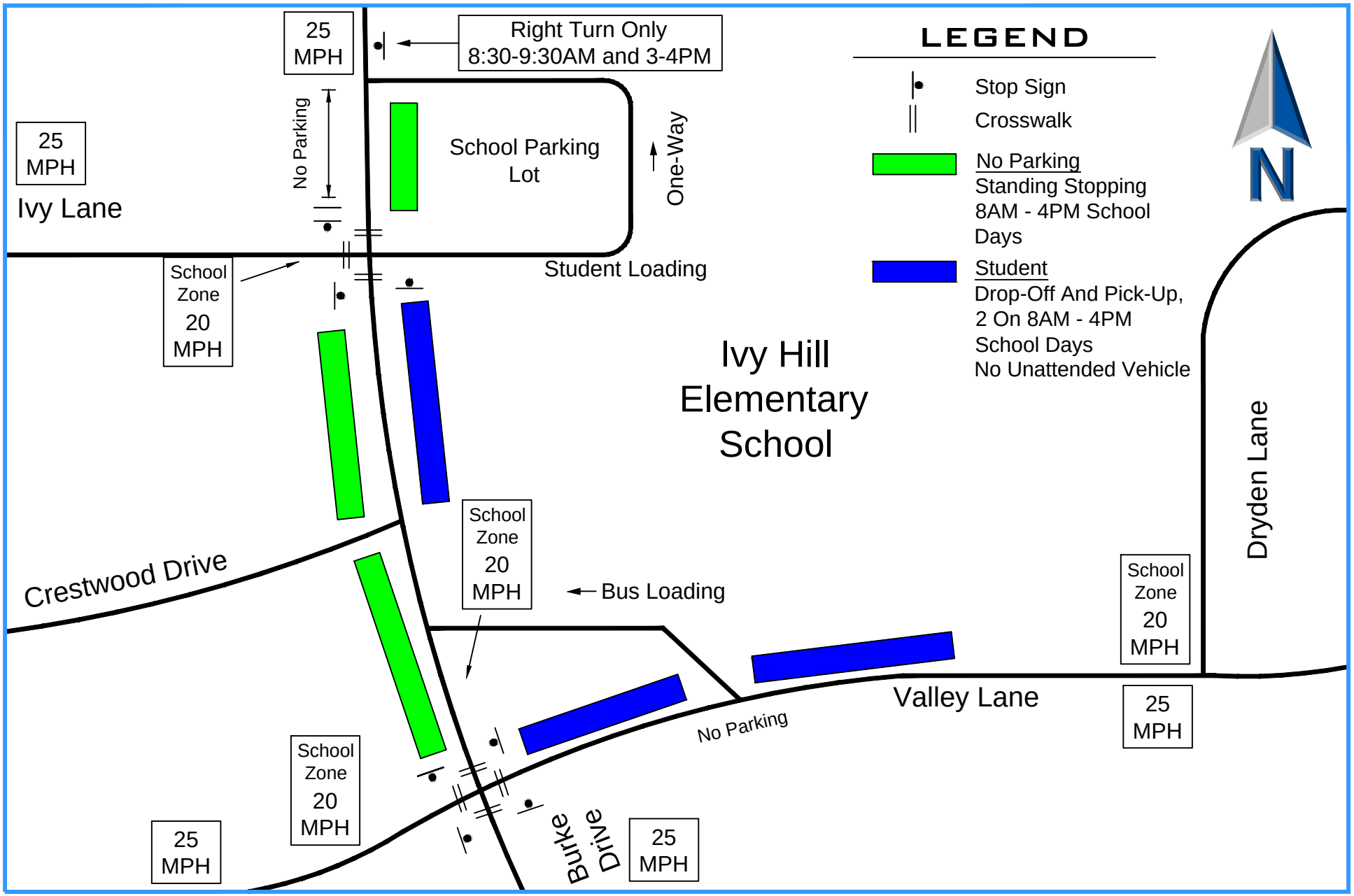
School Location and Area Roadways

Figure 1



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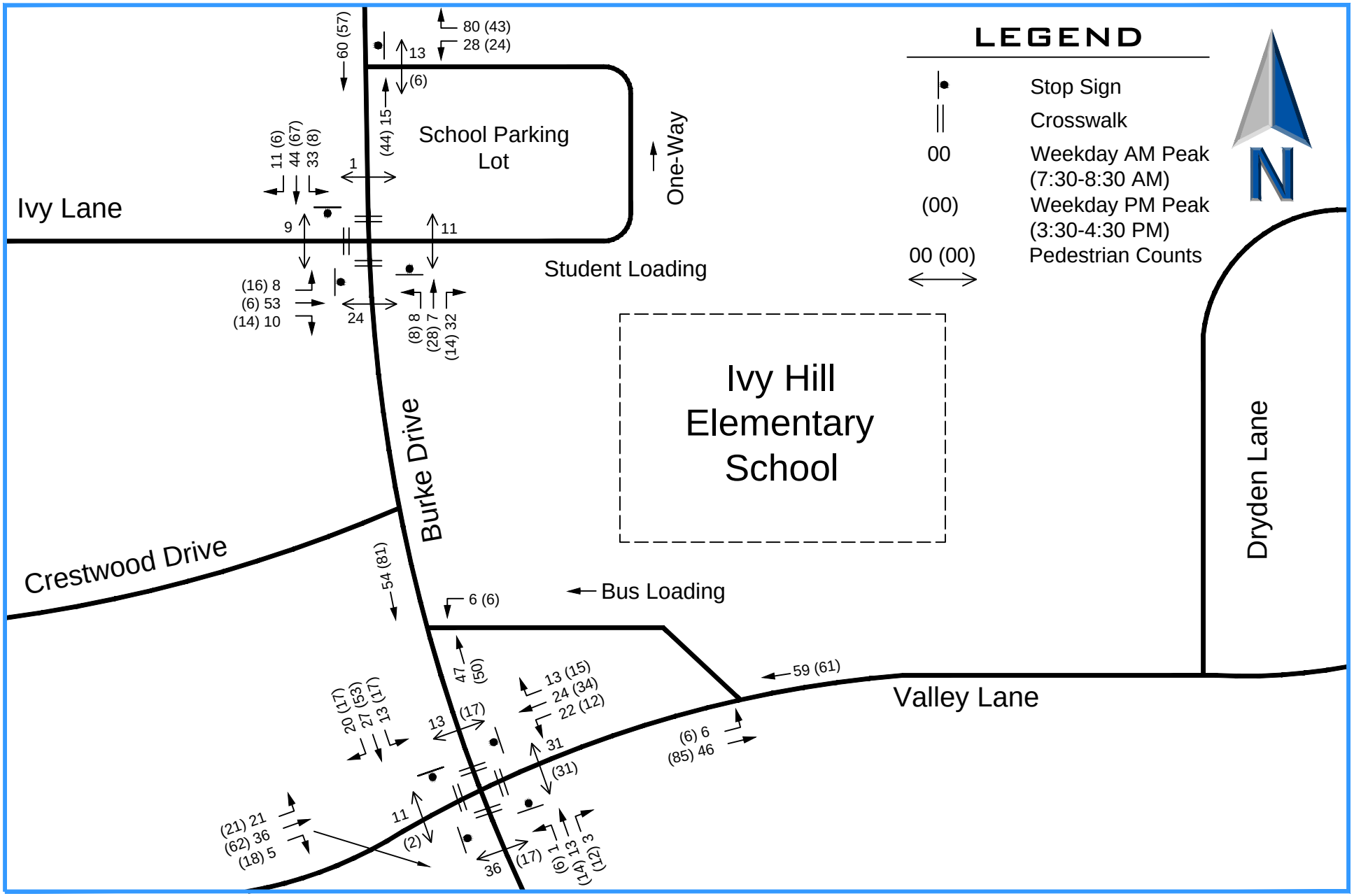
Existing Traffic Control and Parking

Figure 2



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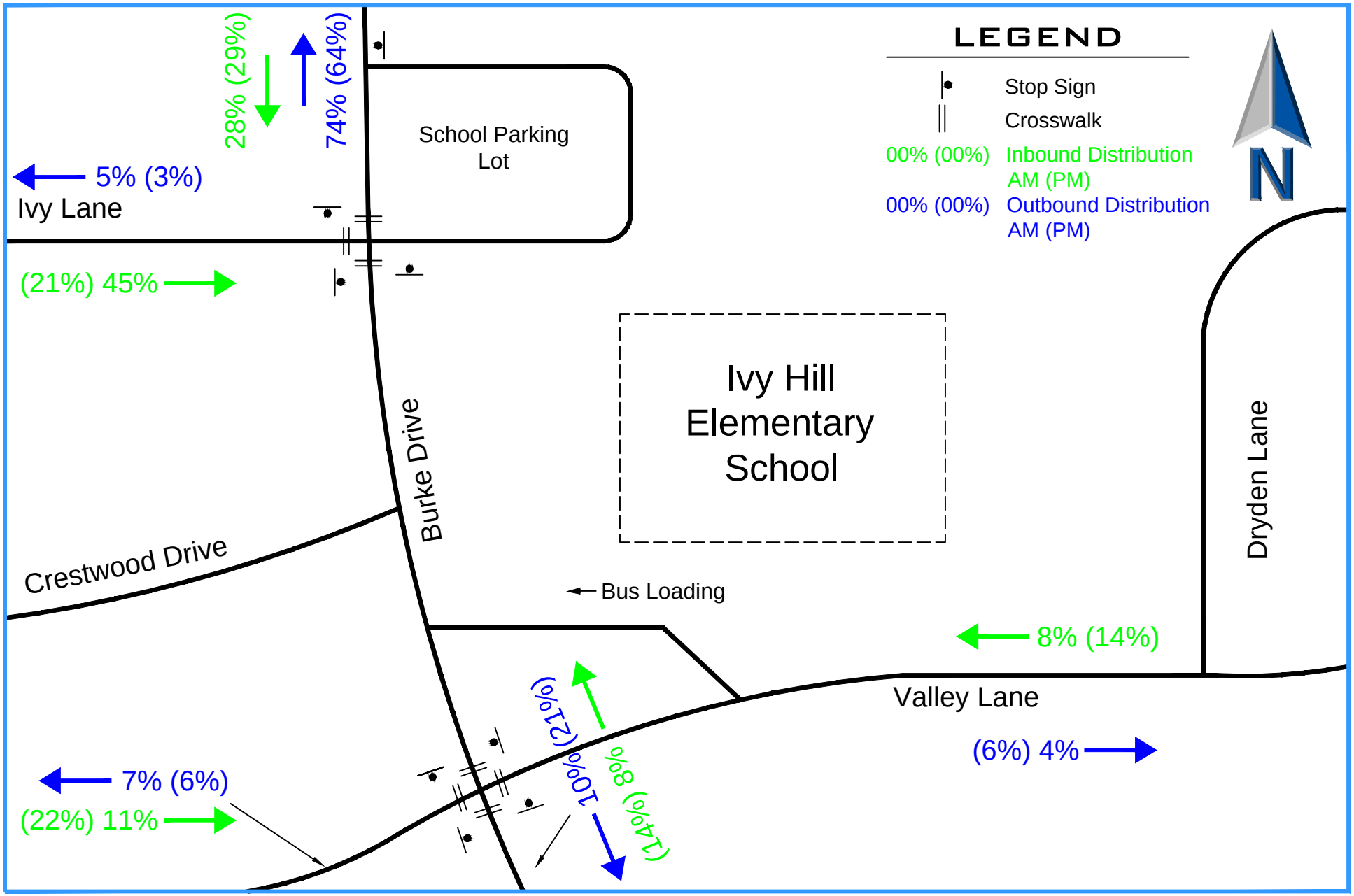
Existing Traffic Volumes

Figure 3



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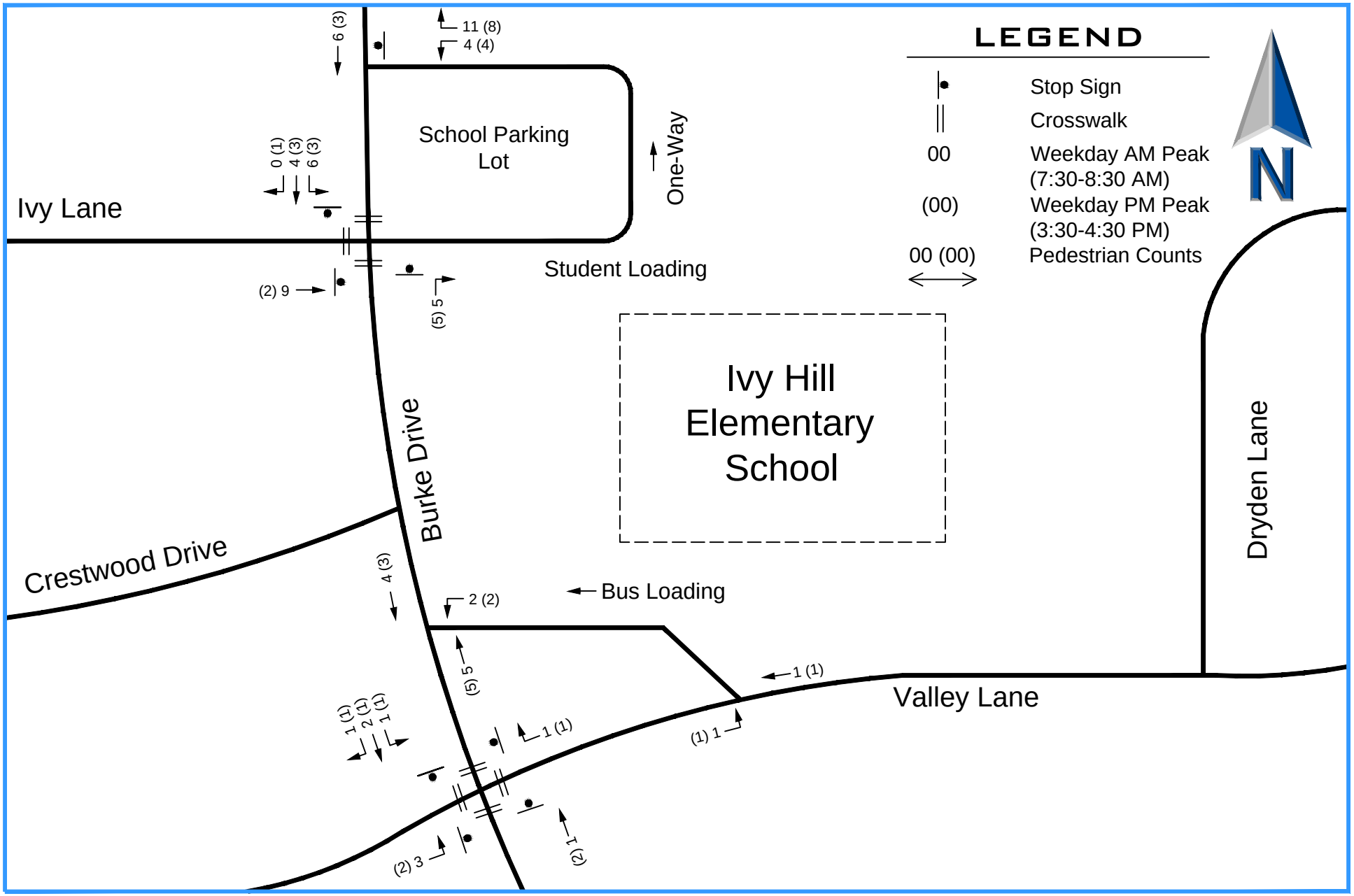
Directional Distribution

Figure 4



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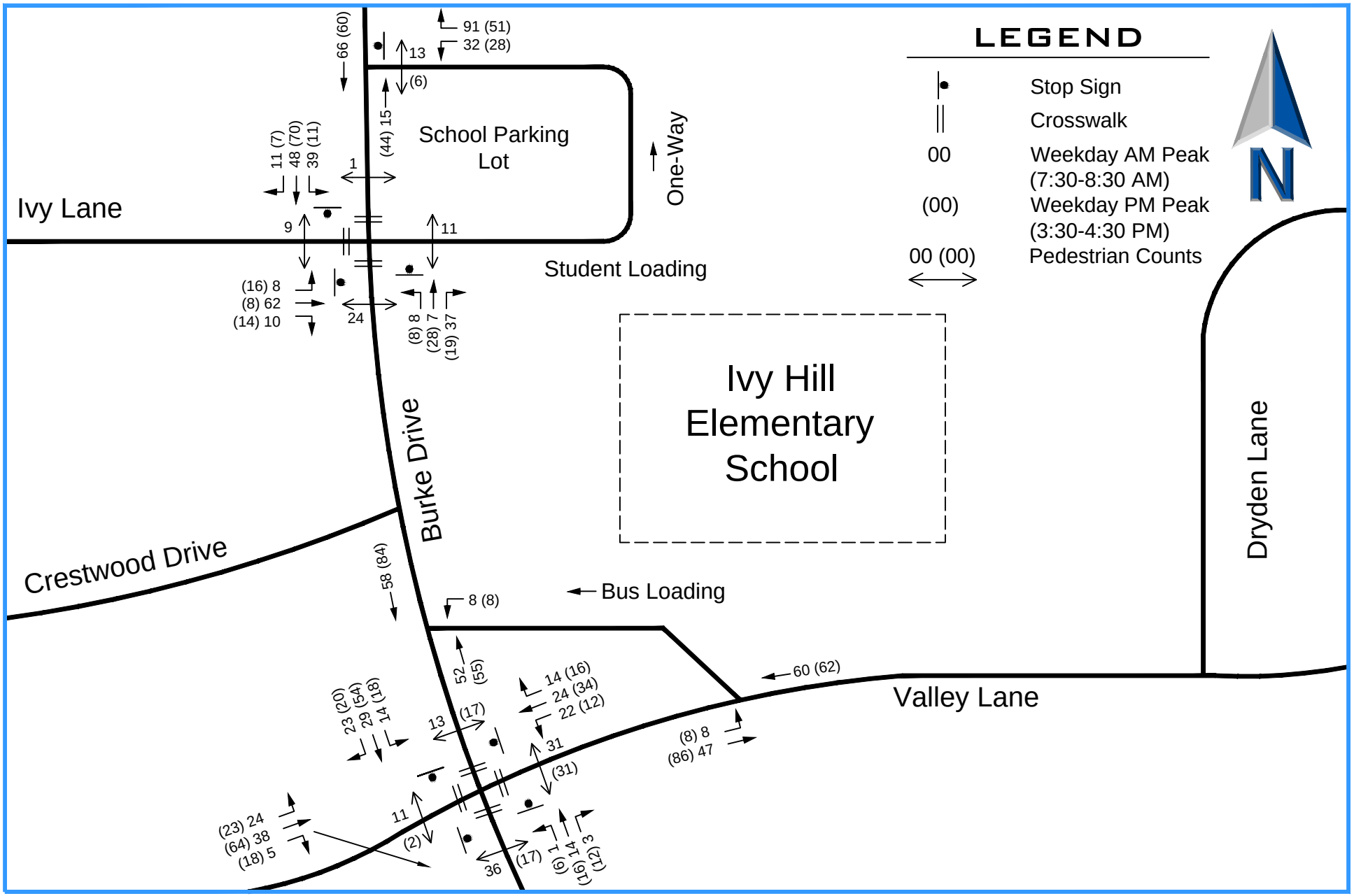
Additional School Traffic Assignment

Figure 5



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Total Traffic Volumes

Figure 6

Traffic and Parking Study
Appendix

- School Boundaries and Bussing Areas
- 2015 Existing Traffic Counts
- 2015 Existing Capacity Analyses
- Total Capacity Analyses

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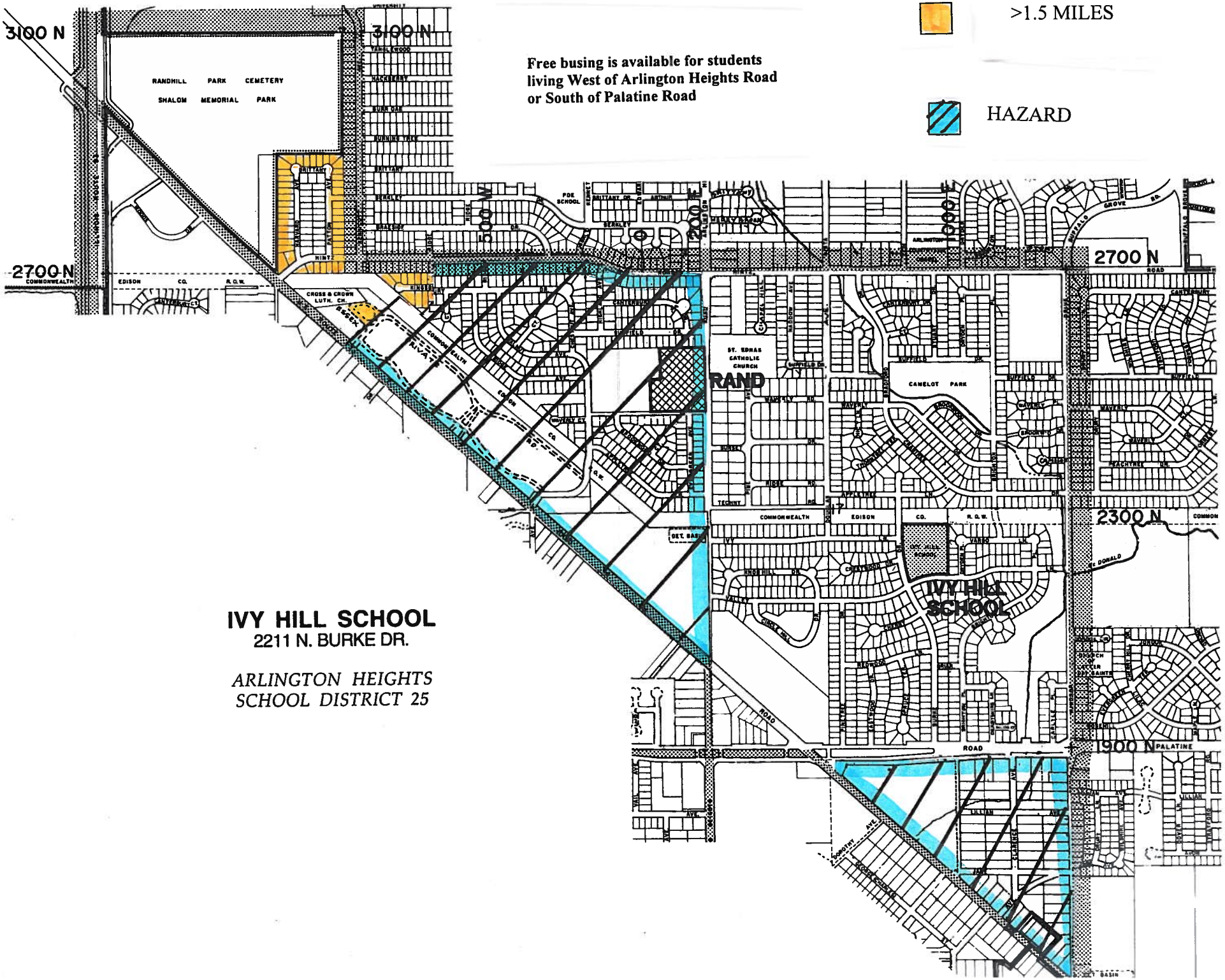
>1.5 MILES
HAZARD
Free busing is available for students
living West of Arlington Heights Road
or South of Palatine Road
IVY HILL SCHOOL
2211 N. BURKE DR.
ARLINGTON HEIGHTS
SCHOOL DISTRICT 25
3100 N
2700 N
2300 N
1900 N
RANDHILL PARK CEMETERY
SHALOM MEMORIAL PARK
ST. EDNAS CATHOLIC CHURCH
CAMELOT PARK
IVY HILL SCHOOL
PALATINE ROAD

Intersection Counts
Valley Lane at Burke Drive

Arlington Heights School District 25																Arlington Heights, Illinois			
	Burke Drive Southbound			Valley Lane Westbound			Burke Drive Northbound			Valley Lane Eastbound			15	60	Peak	Pedestrian Counts			
Begin	Right		Left	Right		Left	Right		Left	Right		Left	Minute	Minute	Hour	North	East	South	West
Time	Turn	Through	Turn	Turn	Through	Turn	Turn	Through	Turn	Turn	Through	Turn	Totals	Totals	Factor	Leg	Leg	Leg	Leg
	Wednesday May 27, 2015																		
8:00 AM	0	6	1	2	4	5	1	4	0	1	9	4	37	184	0.63	2	1	0	0
8:15 AM	1	1	2	0	3	0	3	0	0	2	9	0	21	193	0.66	3	0	0	0
8:30 AM	3	7	4	3	7	7	1	4	1	0	13	3	53	**198**	**0.68**	3	2	1	0
8:45 AM	10	4	5	7	12	7	0	6	0	1	10	11	73			9	28	33	9
9:00 AM	7	11	3	3	3	6	1	2	0	0	5	5	46			1	0	0	1
9:15 AM	0	5	1	0	2	2	1	1	0	4	8	2	26			0	1	2	1
Total	21	34	16	15	31	27	7	17	1	8	54	25				18	32	36	11
8:30-9:30 AM	**20**	**27**	**13**	**13**	**24**	**22**	**3**	**13**	**1**	**5**	**36**	**21**	**198**			**13**	**31**	**36**	**11**
	Wednesday May 27, 2015																		
3:00 PM	2	8	4	6	2	1	0	1	0	2	12	7	45	264	0.62	0	0	1	6
3:15 PM	0	4	1	9	5	1	2	4	1	2	15	9	53	274	0.65	1	7	5	0
3:30 PM	14	20	8	5	8	1	5	8	1	4	18	14	106	**281**	**0.66**	15	25	3	0
3:45 PM	3	12	2	5	10	6	4	3	0	1	13	1	60			1	5	3	1
4:00 PM	0	10	3	2	9	3	1	2	1	7	13	4	55			0	0	0	0
4:15 PM	0	11	4	3	7	2	2	1	4	6	18	2	60			1	1	1	1
Total	19	65	22	30	41	14	14	19	7	22	89	37				18	38	13	8
3:30-4:30 PM	**17**	**53**	**17**	**15**	**34**	**12**	**12**	**14**	**6**	**18**	**62**	**21**	**281**			**17**	**31**	**7**	**2**

Intersection Counts
Ivy Lane/School Lot Entrance at Burke Drive

Arlington Heights School District 25													Arlington Heights, Illinois			
	Burke Drive Southbound			Burke Drive Northbound			Ivy Lane Eastbound			15 Minute	60 Minute	Peak Hour	Pedestrian Counts			
Begin	Right		Left	Right		Left	Right		Left				North	East	South	West
Time	Turn	Through	Turn	Turn	Through	Turn	Turn	Through	Turn	Totals	Totals	Factor	Leg	Leg	Leg	Leg
	Wednesday May 27, 2015															
8:00 AM	3	8	1	9	0	1	1	12	0	35	159	0.54	2	2	0	1
8:15 AM	2	3	1	3	1	0	1	4	0	15	198	0.67	0	0	0	0
8:30 AM	3	8	3	6	1	2	4	8	1	36	**201**	**0.68**	0	5	2	0
8:45 AM	3	9	23	10	1	3	2	19	3	73			0	4	8	2
9:00 AM	4	16	6	13	4	1	3	24	3	74			0	0	11	6
9:15 AM	1	6	1	3	1	2	1	2	1	18			1	2	3	1
Total	16	50	35	44	8	9	12	69	8				3	13	24	10
8:30-9:30 AM	**11**	**39**	**33**	**32**	**7**	**8**	**10**	**53**	**8**	**201**			**1**	**11**	**24**	**9**
	Thursday May 28, 2016															
3:00 PM	2	1	4	5	4	4	3	3	4	30	133	0.71				
3:15 PM	2	4	5	2	1	1	9	10	0	34	123	0.65				
3:30 PM	2	6	5	11	6	1	3	6	7	47	**104**	**0.55**				
3:45 PM	0	5	1	1	6	2	4	0	3	22						
4:00 PM	2	6	1	1	0	2	4	0	4	20						
4:15 PM	2	4	1	1	1	1	3	0	2	15						
Total	10	26	17	21	18	11	26	19	20							
3:30-4:30 PM	**6**	**21**	**8**	**14**	**13**	**6**	**14**	**6**	**16**	**104**						

Intersection Counts
Burke Drive at School Lot Exit

Arlington Heights School District 25	Arlington Heights, Illinois							
	Burke Drive		Parking Lot Westbound					
	SB	NB			15	60	Peak	Pedestrians
Begin			Right	Left	Minute	Minute	Hour	East
Time	Through	Through	Turn	Turn	Totals	Totals	Factor	Leg
	Wednesday May 27, 2015							
8:00 AM	6	0	1	7	14	108	0.39	1
8:15 AM	2	1	1	4	8	169	0.56	0
8:30 AM	6	2	6	2	16	**171**	**0.57**	4
8:45 AM	25	5	32	8	70			8
9:00 AM	14	6	40	15	75			0
9:15 AM	4	1	2	3	10			1
Total	57	15	82	39				14
8:30-9:30 AM	**49**	**14**	**80**	**28**	**171**			**13**
	Thursday May 28, 2016							
3:00 PM			0	3	3	59	0.42	0
3:15 PM			1	1	2	67	0.48	2
3:30 PM			30	5	35	**67**	**0.48**	5
3:45 PM			8	11	19			1
4:00 PM			4	7	11			0
4:15 PM			1	1	2			0
Total	0	0	44	28				8
3:30-4:30 PM	**0**	**0**	**43**	**24**	**67**			**6**

TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*SBC*
Agency/Co.	*ERIKSSON ENGINEERING*
Date Performed	*6/22/2015*
Analysis Time Period	*AM Arrival*

Site Information

Intersection	*Valley/School Bus Entry*
Jurisdiction	*Arlington Heights*
Analysis Year	*2015 Existing Counts*

Project Description *Ivy Hill School*

East/West Street: *Valley Lane* | North/South Street: *School Bus Entrance*

Intersection Orientation: *East-West* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*6*	*46*			*59*	*0*
Peak-Hour Factor, PHF	*0.50*	*0.60*	*1.00*	*0.50*	*0.60*	*0.60*
Hourly Flow Rate, HFR (veh/h)	*12*	*76*	*0*	*0*	*98*	*0*
Percent Heavy Vehicles	*100*	--	--	*100*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration	*LT*					*TR*
Upstream Signal		*0*			*0*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)						
Peak-Hour Factor, PHF	*1.00*	*0.60*	*1.00*	*1.00*	*0.60*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*0*	*0*	*0*	*0*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration						

Delay, Queue Length, and Level of Service

Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LT*							
v (veh/h)	*12*							
C (m) (veh/h)	*1054*							
v/c	*0.01*							
95% queue length	*0.03*							
Control Delay (s/veh)	*8.5*							
LOS	*A*							
Approach Delay (s/veh)	--	--						
Approach LOS	--	--						

TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*SBC*
Agency/Co.	*ERIKSSON ENGINEERING*
Date Performed	*6/22/2015*
Analysis Time Period	*PM Dismissal*

Site Information

Intersection	*Valley/School Bus Entry*
Jurisdiction	*Arlington Heights*
Analysis Year	*2015 Existing Counts*

Project Description *Ivy Hill School*

East/West Street: *Valley Lane* | North/South Street: *School Bus Entrance*

Intersection Orientation: *East-West* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*6*	*85*			*61*	*0*
Peak-Hour Factor, PHF	*0.50*	*0.60*	*1.00*	*0.50*	*0.60*	*0.60*
Hourly Flow Rate, HFR (veh/h)	*12*	*141*	*0*	*0*	*101*	*0*
Percent Heavy Vehicles	*100*	--	--	*100*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration	*LT*					*TR*
Upstream Signal		*0*			*0*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)						
Peak-Hour Factor, PHF	*1.00*	*0.60*	*1.00*	*1.00*	*0.60*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*0*	*0*	*0*	*0*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration						

Delay, Queue Length, and Level of Service

Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LT*							
v (veh/h)	*12*							
C (m) (veh/h)	*1051*							
v/c	*0.01*							
95% queue length	*0.03*							
Control Delay (s/veh)	*8.5*							
LOS	*A*							
Approach Delay (s/veh)	--	--						
Approach LOS	--	--						

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*SBC*
Agency/Co.	*ERIKSSON ENGINEERING*
Date Performed	*6/22/2015*
Analysis Time Period	*AM Arrival*

Site Information

Intersection	*Burke/School Bus Exit*
Jurisdiction	*Arlington Heights*
Analysis Year	*2015 Existing Counts*

Project Description *Ivy Hill School*

East/West Street: *School Bus Exit* | North/South Street: *Burke Drive*

Intersection Orientation: *North-South* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*47*			*54*	
Peak-Hour Factor, PHF	*1.00*	*0.60*	*1.00*	*1.00*	*0.60*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*78*	*0*	*0*	*89*	*0*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration		*T*			*T*	
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)				*6*		*0*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*0.50*	*1.00*	*0.50*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*0*	*12*	*0*	*0*
Percent Heavy Vehicles	*0*	*0*	*0*	*100*	*0*	*2*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration					*LR*	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration				*LR*				
v (veh/h)				*12*				
C (m) (veh/h)				*633*				
v/c				*0.02*				
95% queue length				*0.06*				
Control Delay (s/veh)				*10.8*				
LOS				*B*				
Approach Delay (s/veh)	--	--	*10.8*					
Approach LOS	--	--	*B*					

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TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*SBC*	Intersection	*Burke/School Bus Exit*
Agency/Co.	*ERIKSSON ENGINEERING*	Jurisdiction	*Arlington Heights*
Date Performed	*6/22/2015*	Analysis Year	*2015 Existing Counts*
Analysis Time Period	*PM Dismissal*		

Project Description *Ivy Hill School*

East/West Street: *School Bus Exit* | North/South Street: *Burke Drive*

Intersection Orientation: *North-South* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*50*			*81*	
Peak-Hour Factor, PHF	*1.00*	*0.60*	*1.00*	*1.00*	*0.60*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*83*	*0*	*0*	*134*	*0*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration		*T*			*T*	
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)				*6*		*0*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*0.50*	*1.00*	*0.50*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*0*	*12*	*0*	*0*
Percent Heavy Vehicles	*0*	*0*	*0*	*100*	*0*	*2*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration					*LR*	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration				*LR*				
v (veh/h)				*12*				
C (m) (veh/h)				*588*				
v/c				*0.02*				
95% queue length				*0.06*				
Control Delay (s/veh)				*11.2*				
LOS				*B*				
Approach Delay (s/veh)	--	--	*11.2*					
Approach LOS	--	--	*B*					

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*SBC*
Agency/Co.	*ERIKSSON ENGINEERING*
Date Performed	*6/22/2015*
Analysis Time Period	*AM ARRIVAL*

Site Information

Intersection	*Burke/Parking Exit*
Jurisdiction	*Arlington Heights*
Analysis Year	*2015 Existing Counts*

Project Description *Ivy Hill School*

East/West Street: *School Parking Exit* | North/South Street: *Burke Drive*

Intersection Orientation: *North-South* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*15*			*60*	
Peak-Hour Factor, PHF	*1.00*	*0.57*	*1.00*	*1.00*	*0.57*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*26*	*0*	*0*	*105*	*0*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration		*T*			*T*	
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)				*28*		*80*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*0.57*	*1.00*	*0.57*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*0*	*49*	*0*	*140*
Percent Heavy Vehicles	*0*	*0*	*0*	*2*	*0*	*2*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*1*	*0*	*1*
Configuration				*L*		*R*

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration			*L*		*R*			
v (veh/h)			*49*		*140*			
C (m) (veh/h)			*840*		*1022*			
v/c			*0.06*		*0.14*			
95% queue length			*0.19*		*0.47*			
Control Delay (s/veh)			*9.6*		*9.1*			
LOS			*A*		*A*			
Approach Delay (s/veh)	--	--	*9.2*					
Approach LOS	--	--	*A*					

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*SBC*
Agency/Co.	*ERIKSSON ENGINEERING*
Date Performed	*6/22/2015*
Analysis Time Period	*PM Dismissal*

Site Information

Intersection	*Burke/Parking Exit*
Jurisdiction	*Arlington Heights*
Analysis Year	*2015 Existing Counts*

Project Description *Ivy Hill School*

East/West Street: *School Parking Exit* | North/South Street: *Burke Drive*

Intersection Orientation: *North-South* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*44*			*57*	
Peak-Hour Factor, PHF	*1.00*	*0.48*	*1.00*	*1.00*	*0.48*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*91*	*0*	*0*	*118*	*0*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration		*T*			*T*	
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)				*24*		*43*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*0.48*	*1.00*	*0.48*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*0*	*50*	*0*	*89*
Percent Heavy Vehicles	*0*	*0*	*0*	*2*	*0*	*2*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*1*	*0*	*1*
Configuration				*L*		*R*

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration			*L*		*R*			
v (veh/h)			*50*		*89*			
C (m) (veh/h)			*769*		*954*			
v/c			*0.07*		*0.09*			
95% queue length			*0.21*		*0.31*			
Control Delay (s/veh)			*10.0*		*9.2*			
LOS			*B*		*A*			
Approach Delay (s/veh)	--	--	*9.5*					
Approach LOS	--	--	*A*					

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ALL-WAY STOP CONTROL ANALYSIS

General Information

Analyst	*SBC*
Agency/Co.	*Eriksson Engineering*
Date Performed	*6/26/2015*
Analysis Time Period	*AM Arrival*

Site Information

Intersection	*Ivy and Burke*
Jurisdiction	*Arlington Heights*
Analysis Year	*2015 Existing Volumes*

Project ID

East/West Street: *Ivy Lane* North/South Street: *Burke Drive*

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*8*	*53*	*10*			
%Thrus Left Lane						

Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*8*	*7*	*32*	*33*	*44*	*11*
%Thrus Left Lane						

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	*LTR*				*LTR*		*LTR*	
PHF	*0.68*				*0.68*		*0.68*	
Flow Rate (veh/h)	*102*				*68*		*128*	
% Heavy Vehicles	*2*				*2*		*2*	
No. Lanes	*1*		*0*		*1*		*1*	
Geometry Group	*1*				*1*		*1*	
Duration, T	*0.25*							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	*0.1*				*0.2*		*0.4*	
Prop. Right-Turns	*0.1*				*0.7*		*0.1*	
Prop. Heavy Vehicle	*0.0*				*0.0*		*0.0*	
hLT-adj	*0.2*	*0.2*			*0.2*	*0.2*	*0.2*	*0.2*
hRT-adj	*-0.6*	*-0.6*			*-0.6*	*-0.6*	*-0.6*	*-0.6*
hHV-adj	*1.7*	*1.7*			*1.7*	*1.7*	*1.7*	*1.7*
hadj, computed	*-0.0*				*-0.3*		*0.0*	

Departure Headway and Service Time

hd, initial value (s)	*3.20*				*3.20*		*3.20*	
x, initial	*0.09*				*0.06*		*0.11*	
hd, final value (s)	*4.30*				*3.92*		*4.24*	
x, final value	*0.12*				*0.07*		*0.15*	
Move-up time, m (s)	*2.0*				*2.0*		*2.0*	
Service Time, t_s (s)	*2.3*				*1.9*		*2.2*	

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	*352*				*318*		*378*	
Delay (s/veh)	*7.89*				*7.23*		*7.99*	
LOS	*A*				*A*		*A*	
Approach: Delay (s/veh)	*7.89*				*7.23*		*7.99*	
LOS	*A*				*A*		*A*	
Intersection Delay (s/veh)	*7.78*							
Intersection LOS	*A*							

ALL-WAY STOP CONTROL ANALYSIS

General Information

Analyst	*SBC*
Agency/Co.	*Eriksson Engineering*
Date Performed	*6/26/2015*
Analysis Time Period	*PM Dismissal*

Site Information

Intersection	*Ivy and Burke*
Jurisdiction	*Arlington Heights*
Analysis Year	*2015 Existing Volumes*

Project ID

East/West Street: *Ivy Lane* North/South Street: *Burke Drive*

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*16*	*6*	*14*			
%Thrus Left Lane						

Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*8*	*28*	*19*	*8*	*67*	*6*
%Thrus Left Lane						

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	*LTR*				*LTR*		*LTR*	
PHF	*0.55*				*0.55*		*0.55*	
Flow Rate (veh/h)	*64*				*98*		*145*	
% Heavy Vehicles	*2*				*2*		*2*	
No. Lanes	*1*		*0*		*1*		*1*	
Geometry Group	*1*				*1*		*1*	
Duration, T	*0.25*							

Saturation Headway Adjustment Worksheet

	Eastbound		Westbound		Northbound		Southbound	
Prop. Left-Turns	*0.5*				*0.1*		*0.1*	
Prop. Right-Turns	*0.4*				*0.3*		*0.1*	
Prop. Heavy Vehicle	*0.0*				*0.0*		*0.0*	
hLT-adj	*0.2*	*0.2*			*0.2*	*0.2*	*0.2*	*0.2*
hRT-adj	*-0.6*	*-0.6*			*-0.6*	*-0.6*	*-0.6*	*-0.6*
hHV-adj	*1.7*	*1.7*			*1.7*	*1.7*	*1.7*	*1.7*
hadj, computed	*-0.1*				*-0.1*		*0.0*	

Departure Headway and Service Time

	Eastbound		Westbound		Northbound		Southbound	
hd, initial value (s)	*3.20*				*3.20*		*3.20*	
x, initial	*0.06*				*0.09*		*0.13*	
hd, final value (s)	*4.31*				*4.05*		*4.16*	
x, final value	*0.08*				*0.11*		*0.17*	
Move-up time, m (s)	*2.0*				*2.0*		*2.0*	
Service Time, t_s (s)	*2.3*				*2.0*		*2.2*	

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	*314*				*348*		*395*	
Delay (s/veh)	*7.67*				*7.55*		*7.99*	
LOS	*A*				*A*		*A*	
Approach: Delay (s/veh)	*7.67*				*7.55*		*7.99*	
LOS	*A*				*A*		*A*	
Intersection Delay (s/veh)	*7.78*							
Intersection LOS	*A*							

ALL-WAY STOP CONTROL ANALYSIS

General Information

Analyst	*SBC*
Agency/Co.	*Eriksson Engineering*
Date Performed	*6/26/2015*
Analysis Time Period	*AM Arrival*

Site Information

Intersection	*Valley and Burke*
Jurisdiction	*Arlington Heights*
Analysis Year	*2015 Existing Volumes*

Project ID

East/West Street: *Valley Lane* North/South Street: *Burke Drive*

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*21*	*36*	*5*	*22*	*24*	*13*
%Thrus Left Lane						

Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*1*	*13*	*3*	*13*	*27*	*20*
%Thrus Left Lane						

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	*LTR*		*LTR*		*LTR*		*LTR*	
PHF	*0.68*		*0.68*		*0.68*		*0.68*	
Flow Rate (veh/h)	*89*		*86*		*24*		*87*	
% Heavy Vehicles	*2*		*2*		*2*		*2*	
No. Lanes	*1*		*1*		*1*		*1*	
Geometry Group	*1*		*1*		*1*		*1*	
Duration, T	*0.25*							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	*0.3*		*0.4*		*0.0*		*0.2*	
Prop. Right-Turns	*0.1*		*0.2*		*0.2*		*0.3*	
Prop. Heavy Vehicle	*0.0*		*0.0*		*0.0*		*0.0*	
hLT-adj	*0.2*	*0.2*	*0.2*	*0.2*	*0.2*	*0.2*	*0.2*	*0.2*
hRT-adj	*-0.6*	*-0.6*	*-0.6*	*-0.6*	*-0.6*	*-0.6*	*-0.6*	*-0.6*
hHV-adj	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*
hadj, computed	*0.1*		*-0.0*		*-0.1*		*-0.1*	

Departure Headway and Service Time

hd, initial value (s)	*3.20*		*3.20*		*3.20*		*3.20*	
x, initial	*0.08*		*0.08*		*0.02*		*0.08*	
hd, final value (s)	*4.29*		*4.22*		*4.33*		*4.20*	
x, final value	*0.11*		*0.10*		*0.03*		*0.10*	
Move-up time, m (s)	*2.0*		*2.0*		*2.0*		*2.0*	
Service Time, t_s (s)	*2.3*		*2.2*		*2.3*		*2.2*	

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	*339*		*336*		*274*		*337*	
Delay (s/veh)	*7.80*		*7.69*		*7.46*		*7.67*	
LOS	*A*		*A*		*A*		*A*	
Approach: Delay (s/veh)	*7.80*		*7.69*		*7.46*		*7.67*	
LOS	*A*		*A*		*A*		*A*	
Intersection Delay (s/veh)	*7.70*							
Intersection LOS	*A*							

ALL-WAY STOP CONTROL ANALYSIS

General Information

Analyst	*SBC*
Agency/Co.	*Eriksson Engineering*
Date Performed	*6/26/2015*
Analysis Time Period	*PM Dismissal*

Site Information

Intersection	*Valley and Burke*
Jurisdiction	*Arlington Heights*
Analysis Year	*2015 Existing Volumes*

Project ID

East/West Street: *Valley Lane* North/South Street: *Burke Drive*

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*21*	*62*	*18*	*12*	*34*	*15*
%Thrus Left Lane						

Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*6*	*14*	*12*	*17*	*53*	*17*
%Thrus Left Lane						

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	*LTR*		*LTR*		*LTR*		*LTR*	
PHF	*0.60*		*0.60*		*0.60*		*0.60*	
Flow Rate (veh/h)	*166*		*99*		*51*		*144*	
% Heavy Vehicles	*2*		*2*		*2*		*2*	
No. Lanes	*1*		*1*		*1*		*1*	
Geometry Group	*1*		*1*		*1*		*1*	
Duration, T	*0.25*							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	*0.2*		*0.2*		*0.2*		*0.2*	
Prop. Right-Turns	*0.2*		*0.2*		*0.4*		*0.2*	
Prop. Heavy Vehicle	*0.0*		*0.0*		*0.0*		*0.0*	
hLT-adj	*0.2*	*0.2*	*0.2*	*0.2*	*0.2*	*0.2*	*0.2*	*0.2*
hRT-adj	*-0.6*	*-0.6*	*-0.6*	*-0.6*	*-0.6*	*-0.6*	*-0.6*	*-0.6*
hHV-adj	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*
hadj, computed	*-0.0*		*-0.1*		*-0.2*		*-0.0*	

Departure Headway and Service Time

hd, initial value (s)	*3.20*		*3.20*		*3.20*		*3.20*	
x, initial	*0.15*		*0.09*		*0.05*		*0.13*	
hd, final value (s)	*4.46*		*4.49*		*4.55*		*4.54*	
x, final value	*0.21*		*0.12*		*0.06*		*0.18*	
Move-up time, m (s)	*2.0*		*2.0*		*2.0*		*2.0*	
Service Time, t_s (s)	*2.5*		*2.5*		*2.5*		*2.5*	

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	*416*		*349*		*301*		*394*	
Delay (s/veh)	*8.60*		*8.12*		*7.86*		*8.54*	
LOS	*A*		*A*		*A*		*A*	
Approach: Delay (s/veh)	*8.60*		*8.12*		*7.86*		*8.54*	
LOS	*A*		*A*		*A*		*A*	
Intersection Delay (s/veh)	*8.40*							
Intersection LOS	*A*							

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*AJB*
Agency/Co.	*ERIKSSON ENGINEERING*
Date Performed	*7/6/2015*
Analysis Time Period	*AM Arrival*

Site Information

Intersection	*Valley/School Bus Entry*
Jurisdiction	*Arlington Heights*
Analysis Year	*Total Traffic Volumes*

Project Description *Ivy Hill School*

East/West Street: *Valley Lane* | North/South Street: *School Bus Entrance*

Intersection Orientation: *East-West* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*8*	*47*			*60*	*0*
Peak-Hour Factor, PHF	*0.50*	*0.60*	*1.00*	*0.50*	*0.60*	*0.60*
Hourly Flow Rate, HFR (veh/h)	*16*	*78*	*0*	*0*	*99*	*0*
Percent Heavy Vehicles	*100*	--	--	*100*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration	*LT*					*TR*
Upstream Signal		*0*			*0*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)						
Peak-Hour Factor, PHF	*1.00*	*0.60*	*1.00*	*1.00*	*0.60*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*0*	*0*	*0*	*0*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration						

Delay, Queue Length, and Level of Service

Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LT*							
v (veh/h)	*16*							
C (m) (veh/h)	*1053*							
v/c	*0.02*							
95% queue length	*0.05*							
Control Delay (s/veh)	*8.5*							
LOS	*A*							
Approach Delay (s/veh)	--	--						
Approach LOS	--	--						

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*AJB*
Agency/Co.	*ERIKSSON ENGINEERING*
Date Performed	*7/6/2015*
Analysis Time Period	*PM Dismissal*

Site Information

Intersection	*Valley/School Bus Entry*
Jurisdiction	*Arlington Heights*
Analysis Year	*Total Traffic Volumes*

Project Description *Ivy Hill School*

East/West Street: *Valley Lane* | North/South Street: *School Bus Entrance*

Intersection Orientation: *East-West* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*8*	*86*			*62*	*0*
Peak-Hour Factor, PHF	*0.50*	*0.60*	*1.00*	*0.50*	*0.60*	*0.60*
Hourly Flow Rate, HFR (veh/h)	*16*	*143*	*0*	*0*	*103*	*0*
Percent Heavy Vehicles	*100*	--	--	*100*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration	*LT*					*TR*
Upstream Signal		*0*			*0*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)						
Peak-Hour Factor, PHF	*1.00*	*0.60*	*1.00*	*1.00*	*0.60*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*0*	*0*	*0*	*0*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration						

Delay, Queue Length, and Level of Service

Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LT*							
v (veh/h)	*16*							
C (m) (veh/h)	*1049*							
v/c	*0.02*							
95% queue length	*0.05*							
Control Delay (s/veh)	*8.5*							
LOS	*A*							
Approach Delay (s/veh)	--	--						
Approach LOS	--	--						

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*AJB*
Agency/Co.	*ERIKSSON ENGINEERING*
Date Performed	*7/6/2015*
Analysis Time Period	*AM Arrival*

Site Information

Intersection	*Burke/School Bus Exit*
Jurisdiction	*Arlington Heights*
Analysis Year	*Total Traffic Volumes*

Project Description *Ivy Hill School*

East/West Street: *School Bus Exit* | North/South Street: *Burke Drive*

Intersection Orientation: *North-South* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*52*			*58*	
Peak-Hour Factor, PHF	*1.00*	*0.60*	*1.00*	*1.00*	*0.60*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*86*	*0*	*0*	*96*	*0*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration		*T*			*T*	
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)				*8*		*0*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*0.50*	*1.00*	*0.50*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*0*	*16*	*0*	*0*
Percent Heavy Vehicles	*0*	*0*	*0*	*100*	*0*	*2*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration					*LR*	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration				*LR*				
v (veh/h)				*16*				
C (m) (veh/h)				*619*				
v/c				*0.03*				
95% queue length				*0.08*				
Control Delay (s/veh)				*11.0*				
LOS				*B*				
Approach Delay (s/veh)	--	--	*11.0*					
Approach LOS	--	--	*B*					

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*AJB*
Agency/Co.	*ERIKSSON ENGINEERING*
Date Performed	*7/6/2015*
Analysis Time Period	*PM Dismissal*

Site Information

Intersection	*Burke/School Bus Exit*
Jurisdiction	*Arlington Heights*
Analysis Year	*Total Traffic Volumes*

Project Description *Ivy Hill School*

East/West Street: *School Bus Exit* | North/South Street: *Burke Drive*

Intersection Orientation: *North-South* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*55*			*84*	
Peak-Hour Factor, PHF	*1.00*	*0.60*	*1.00*	*1.00*	*0.60*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*91*	*0*	*0*	*139*	*0*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration		*T*			*T*	
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)				*8*		*0*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*0.50*	*1.00*	*0.50*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*0*	*16*	*0*	*0*
Percent Heavy Vehicles	*0*	*0*	*0*	*100*	*0*	*2*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration					*LR*	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration				*LR*				
v (veh/h)				*16*				
C (m) (veh/h)				*577*				
v/c				*0.03*				
95% queue length				*0.09*				
Control Delay (s/veh)				*11.4*				
LOS				*B*				
Approach Delay (s/veh)	--	--	*11.4*					
Approach LOS	--	--	*B*					

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*AJB*
Agency/Co.	*ERIKSSON ENGINEERING*
Date Performed	*7/6/2015*
Analysis Time Period	*PM Dismissal*

Site Information

Intersection	*Burke/Parking Exit*
Jurisdiction	*Arlington Heights*
Analysis Year	*Total Traffic Volumes*

Project Description *Ivy Hill School*

East/West Street: *School Parking Exit* | North/South Street: *Burke Drive*

Intersection Orientation: *North-South* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*15*			*66*	
Peak-Hour Factor, PHF	*1.00*	*0.48*	*1.00*	*1.00*	*0.48*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*31*	*0*	*0*	*137*	*0*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration		*T*			*T*	
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)				*32*		*91*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*0.48*	*1.00*	*0.48*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*0*	*66*	*0*	*189*
Percent Heavy Vehicles	*0*	*0*	*0*	*2*	*0*	*2*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*1*	*0*	*1*
Configuration				*L*		*R*

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration			*L*		*R*			
v (veh/h)			*66*		*189*			
C (m) (veh/h)			*812*		*1030*			
v/c			*0.08*		*0.18*			
95% queue length			*0.26*		*0.67*			
Control Delay (s/veh)			*9.8*		*9.3*			
LOS			*A*		*A*			
Approach Delay (s/veh)	--	--	*9.4*					
Approach LOS	--	--	*A*					

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*AJB*
Agency/Co.	*ERIKSSON ENGINEERING*
Date Performed	*7/6/2015*
Analysis Time Period	*PM Dismissal*

Site Information

Intersection	*Burke/Parking Exit*
Jurisdiction	*Arlington Heights*
Analysis Year	*Total Traffic Volumes*

Project Description *Ivy Hill School*

East/West Street: *School Parking Exit* | North/South Street: *Burke Drive*

Intersection Orientation: *North-South* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*44*			*60*	
Peak-Hour Factor, PHF	*1.00*	*0.48*	*1.00*	*1.00*	*0.48*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*91*	*0*	*0*	*125*	*0*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration		*T*			*T*	
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)				*28*		*51*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*0.48*	*1.00*	*0.48*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*0*	*58*	*0*	*106*
Percent Heavy Vehicles	*0*	*0*	*0*	*2*	*0*	*2*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*1*	*0*	*1*
Configuration				*L*		*R*

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration			*L*		*R*			
v (veh/h)			*58*		*106*			
C (m) (veh/h)			*762*		*954*			
v/c			*0.08*		*0.11*			
95% queue length			*0.25*		*0.37*			
Control Delay (s/veh)			*10.1*		*9.2*			
LOS			*B*		*A*			
Approach Delay (s/veh)	--	--	*9.6*					
Approach LOS	--	--	*A*					

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ALL-WAY STOP CONTROL ANALYSIS

General Information

Analyst	*AJB*
Agency/Co.	*Eriksson Engineering*
Date Performed	*7/6/2015*
Analysis Time Period	*AM Arrival*

Site Information

Intersection	*Ivy and Burke*
Jurisdiction	*Arlington Heights*
Analysis Year	*Total Traffic Volumes*

Project ID

East/West Street: *Ivy Lane* North/South Street: *Burke Drive*

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*8*	*62*	*10*	*0*	*0*	*0*
%Thrus Left Lane						

Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*8*	*7*	*37*	*39*	*48*	*11*
%Thrus Left Lane						

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	*LTR*				*LTR*		*LTR*	
PHF	*0.68*				*0.68*		*0.68*	
Flow Rate (veh/h)	*116*				*75*		*143*	
% Heavy Vehicles	*2*				*2*		*2*	
No. Lanes	*1*		*0*		*1*		*1*	
Geometry Group	*1*				*1*		*1*	
Duration, T	*0.25*							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	*0.1*				*0.1*		*0.4*	
Prop. Right-Turns	*0.1*				*0.7*		*0.1*	
Prop. Heavy Vehicle	*0.0*				*0.0*		*0.0*	
hLT-adj	*0.2*	*0.2*			*0.2*	*0.2*	*0.2*	*0.2*
hRT-adj	*-0.6*	*-0.6*			*-0.6*	*-0.6*	*-0.6*	*-0.6*
hHV-adj	*1.7*	*1.7*			*1.7*	*1.7*	*1.7*	*1.7*
hadj, computed	*-0.0*				*-0.4*		*0.0*	

Departure Headway and Service Time

hd, initial value (s)	*3.20*				*3.20*		*3.20*	
x, initial	*0.10*				*0.07*		*0.13*	
hd, final value (s)	*4.36*				*3.96*		*4.29*	
x, final value	*0.14*				*0.08*		*0.17*	
Move-up time, m (s)	*2.0*				*2.0*		*2.0*	
Service Time, t_s (s)	*2.4*				*2.0*		*2.3*	

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	*366*				*325*		*393*	
Delay (s/veh)	*8.07*				*7.31*		*8.18*	
LOS	*A*				*A*		*A*	
Approach: Delay (s/veh)	*8.07*				*7.31*		*8.18*	
LOS	*A*				*A*		*A*	
Intersection Delay (s/veh)	*7.94*							
Intersection LOS	*A*							

ALL-WAY STOP CONTROL ANALYSIS

General Information

Analyst	*AJB*
Agency/Co.	*Eriksson Engineering*
Date Performed	*7/6/2015*
Analysis Time Period	*PM Dismissal*

Site Information

Intersection	*Ivy and Burke*
Jurisdiction	*Arlington Heights*
Analysis Year	*Total Traffic Volumes*

Project ID

East/West Street: *Ivy Lane* North/South Street: *Burke Drive*

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*16*	*8*	*14*	*0*	*0*	*0*
%Thrus Left Lane						

Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*8*	*28*	*19*	*11*	*70*	*7*
%Thrus Left Lane						

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	*LTR*				*LTR*		*LTR*	
PHF	*0.55*				*0.55*		*0.55*	
Flow Rate (veh/h)	*68*				*98*		*158*	
% Heavy Vehicles	*2*				*2*		*2*	
No. Lanes	*1*		*0*		*1*		*1*	
Geometry Group	*1*				*1*		*1*	
Duration, T	*0.25*							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	*0.4*				*0.1*		*0.1*	
Prop. Right-Turns	*0.4*				*0.3*		*0.1*	
Prop. Heavy Vehicle	*0.0*				*0.0*		*0.0*	
hLT-adj	*0.2*	*0.2*			*0.2*	*0.2*	*0.2*	*0.2*
hRT-adj	*-0.6*	*-0.6*			*-0.6*	*-0.6*	*-0.6*	*-0.6*
hHV-adj	*1.7*	*1.7*			*1.7*	*1.7*	*1.7*	*1.7*
hadj, computed	*-0.1*				*-0.1*		*0.0*	

Departure Headway and Service Time

hd, initial value (s)	*3.20*				*3.20*		*3.20*	
x, initial	*0.06*				*0.09*		*0.14*	
hd, final value (s)	*4.35*				*4.07*		*4.17*	
x, final value	*0.08*				*0.11*		*0.18*	
Move-up time, m (s)	*2.0*				*2.0*		*2.0*	
Service Time, t_s (s)	*2.3*				*2.1*		*2.2*	

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	*318*				*348*		*408*	
Delay (s/veh)	*7.74*				*7.58*		*8.10*	
LOS	*A*				*A*		*A*	
Approach: Delay (s/veh)	*7.74*				*7.58*		*8.10*	
LOS	*A*				*A*		*A*	
Intersection Delay (s/veh)	*7.87*							
Intersection LOS	*A*							

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ALL-WAY STOP CONTROL ANALYSIS

General Information

Analyst	*AJB*
Agency/Co.	*Eriksson Engineering*
Date Performed	*7/6/2015*
Analysis Time Period	*AM Arrival*

Site Information

Intersection	*Valley and Burke*
Jurisdiction	*Arlington Heights*
Analysis Year	*Total Traffic Volumes*

Project ID

East/West Street: *Valley Lane* North/South Street: *Burke Drive*

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*24*	*38*	*5*	*22*	*24*	*14*
%Thrus Left Lane						

Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*1*	*14*	*3*	*14*	*29*	*23*
%Thrus Left Lane						

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	*LTR*		*LTR*		*LTR*		*LTR*	
PHF	*0.68*		*0.68*		*0.68*		*0.68*	
Flow Rate (veh/h)	*97*		*87*		*25*		*95*	
% Heavy Vehicles	*2*		*2*		*2*		*2*	
No. Lanes	*1*		*1*		*1*		*1*	
Geometry Group	*1*		*1*		*1*		*1*	
Duration, T	*0.25*							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	*0.4*		*0.4*		*0.0*		*0.2*	
Prop. Right-Turns	*0.1*		*0.2*		*0.2*		*0.3*	
Prop. Heavy Vehicle	*0.0*		*0.0*		*0.0*		*0.0*	
hLT-adj	*0.2*	*0.2*	*0.2*	*0.2*	*0.2*	*0.2*	*0.2*	*0.2*
hRT-adj	*-0.6*	*-0.6*	*-0.6*	*-0.6*	*-0.6*	*-0.6*	*-0.6*	*-0.6*
hHV-adj	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*
hadj, computed	*0.1*		*-0.0*		*-0.1*		*-0.1*	

Departure Headway and Service Time

hd, initial value (s)	*3.20*		*3.20*		*3.20*		*3.20*	
x, initial	*0.09*		*0.08*		*0.02*		*0.08*	
hd, final value (s)	*4.33*		*4.25*		*4.37*		*4.21*	
x, final value	*0.12*		*0.10*		*0.03*		*0.11*	
Move-up time, m (s)	*2.0*		*2.0*		*2.0*		*2.0*	
Service Time, t_s (s)	*2.3*		*2.2*		*2.4*		*2.2*	

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	*347*		*337*		*275*		*345*	
Delay (s/veh)	*7.90*		*7.73*		*7.50*		*7.74*	
LOS	*A*		*A*		*A*		*A*	
Approach: Delay (s/veh)	*7.90*		*7.73*		*7.50*		*7.74*	
LOS	*A*		*A*		*A*		*A*	
Intersection Delay (s/veh)	*7.77*							
Intersection LOS	*A*							

ALL-WAY STOP CONTROL ANALYSIS

General Information

Analyst	*AJB*
Agency/Co.	*Eriksson Engineering*
Date Performed	*7/6/2015*
Analysis Time Period	*PM Dismissal*

Site Information

Intersection	*Valley and Burke*
Jurisdiction	*Arlington Heights*
Analysis Year	*Total Traffic Volumes*

Project ID

East/West Street: *Valley Lane* North/South Street: *Burke Drive*

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*23*	*64*	*18*	*12*	*34*	*16*
%Thrus Left Lane						

Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*6*	*16*	*12*	*18*	*54*	*20*
%Thrus Left Lane						

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	*LTR*		*LTR*		*LTR*		*LTR*	
PHF	*0.60*		*0.60*		*0.60*		*0.60*	
Flow Rate (veh/h)	*173*		*101*		*54*		*151*	
% Heavy Vehicles	*2*		*2*		*2*		*2*	
No. Lanes	*1*		*1*		*1*		*1*	
Geometry Group	*1*		*1*		*1*		*1*	
Duration, T	*0.25*							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	*0.2*		*0.2*		*0.2*		*0.2*	
Prop. Right-Turns	*0.2*		*0.3*		*0.4*		*0.2*	
Prop. Heavy Vehicle	*0.0*		*0.0*		*0.0*		*0.0*	
hLT-adj	*0.2*	*0.2*	*0.2*	*0.2*	*0.2*	*0.2*	*0.2*	*0.2*
hRT-adj	*-0.6*	*-0.6*	*-0.6*	*-0.6*	*-0.6*	*-0.6*	*-0.6*	*-0.6*
hHV-adj	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*
hadj, computed	*-0.0*		*-0.1*		*-0.1*		*-0.1*	

Departure Headway and Service Time

hd, initial value (s)	*3.20*		*3.20*		*3.20*		*3.20*	
x, initial	*0.15*		*0.09*		*0.05*		*0.13*	
hd, final value (s)	*4.49*		*4.52*		*4.59*		*4.56*	
x, final value	*0.22*		*0.13*		*0.07*		*0.19*	
Move-up time, m (s)	*2.0*		*2.0*		*2.0*		*2.0*	
Service Time, t_s (s)	*2.5*		*2.5*		*2.6*		*2.6*	

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	*423*		*351*		*304*		*401*	
Delay (s/veh)	*8.72*		*8.17*		*7.93*		*8.63*	
LOS	*A*		*A*		*A*		*A*	
Approach: Delay (s/veh)	*8.72*		*8.17*		*7.93*		*8.63*	
LOS	*A*		*A*		*A*		*A*	
Intersection Delay (s/veh)	*8.49*							
Intersection LOS	*A*							

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