TRAFFIC IMPACT STUDY

For

MERIDIA, VILLAGE COMMONS I, SOUTH ORANGE, LLC

Meridia Village Commons Proposed Mixed Use Building
4th Street & Valley Street
Block 2303, Lots 7-11
Township of South Orange Village
Essex County, New Jersey

Prepared by:

1904 Main Street | 245 Main Street, Suite 110
Lake Como, NJ 07719 | Chester, NJ 07930
(732) 681-0760

Joseph J. Staigar, PE, PP
NJ PE License #30024

Craig W. Peregoy, PE
NJ PE License #45880

June 19, 2017
Revised: October 6, 2017

1084-16-015T

INTRODUCTION

It is proposed to construct a 5 story building with 4,412 square feet of ground floor retail space, a 4,412 square foot restaurant and one hundred six (106) residential units (The Project). The site is located in the southwest quadrant of the intersection of Valley Street (CR 638) with Fourth Street, in the Township of South Orange Village, Essex County, New Jersey as shown on Figure 1 contained in Appendix A. The site is designated as Block 2303 – Lots 7-11 on the Township Tax Maps. Parking will be provided via one hundred twenty four (124) parking stalls on the lower level of the building, six (6) parallel parking spaces on Valley Street and eleven (11) parallel parking spaces on Fourth Street. Access to the proposed site will be provided via one (1) full movement driveway along Fourth Street. The property is currently occupied by four dwellings and an automotive service center, with access provided via two (2) full movement driveways along Fourth Street and six (6) full movement driveways along Valley Street.

Dynamic Traffic, LLC has been retained to prepare this study to assess the traffic impact associated with the construction of The Project on the adjacent roadway network. This study documents the methodology, analyses, findings and conclusions of our study and includes:

- A detailed field inspection was conducted to obtain an inventory of existing roadway geometry, traffic control, pedestrian crossings, sidewalk widths and location and geometry of existing driveways and intersections.

- Existing traffic and pedestrian data was collected via manual turning movement (MTM) counts during the weekday AM and weekday PM peak periods at four intersections in the vicinity of the site.

- Projections of traffic to be generated by the proposed development were prepared utilizing trip generation data as published by the Institute of Transportation Engineers. Site traffic was then assigned to the adjacent street system based upon the anticipated directional distribution.

- Capacity analyses were conducted for the Existing, No Build and Build conditions for the study intersection and the site driveways.

- The proposed site driveway was inspected for adequacy of geometric design, spacing and/or alignment to streets and driveways on the opposite side of the street, relationship to other driveways adjacent to the development, and conformance with accepted design standards.

EXISTING CONDITIONS

A review of the existing roadway conditions near the subject site was conducted to provide the basis for assessing the traffic impact of the development. This included field investigations of the surrounding roadways and intersections, collection of traffic volume data, and extensive analyses.

Existing Roadway Conditions

The following are descriptions of the roadways in the study area:

Valley Street (CR 638) is an urban minor arterial roadway under the jurisdiction of Essex County. In the vicinity of the site the posted speed limit is 30 miles per hour and the roadway provides one travel lane in each direction with a general north/south orientation. On-street parking is permitted along both sides of the roadway with curb and sidewalk provided along both sides of the roadway. Valley Street provides a straight horizontal alignment and a relatively flat vertical alignment. The land uses along Valley Street in the vicinity of The Project are a mix of commercial and residential.

Academy Street is an urban major collector roadway under the jurisdiction of the Township of South Orange Village. In the vicinity of the site the posted speed limit is 25 miles per hour and the roadway provides one travel lane in each direction with a general north/south orientation. On-street parking is permitted along the west side of the roadway with curb and sidewalk provided along both sides of the roadway. Academy Street provides a straight horizontal alignment and a relatively flat vertical alignment. The land uses along Academy Street in the vicinity of The Project are primarily residential.

Fourth Street is a local roadway under the jurisdiction of the Township of South Orange Village. In the vicinity of the site the speed limit is not posted and the roadway provides one travel lane for each direction of travel with a general east/west orientation. Fourth Street to the east of Academy Street provides one travel lane for one-way travel in the westbound direction. On-street parking is permitted along the south side of the roadway with curb and sidewalk provided along both sides of the roadway. Fourth Street provides a straight horizontal alignment and an uphill vertical alignment from west to east. The roadway is approximately ¼ of a mile long traversing from Prospect Street to its terminus just west of the site at the New Jersey Transit Rail Lines. At this western terminus there is access to the PSE&G utilities substation which will remain as existing. On school days during the hours of 7:30 AM to 5:00 PM Fourth Street is closed from Academy Street to Prospect Street in front of Our Lady of Sorrows School/Church. The land uses along Fourth Street in the vicinity of The Project are primarily commercial to the west of Valley Street and primarily residential to the east of Valley Street.

Third Street is a local roadway under the jurisdiction of the Township of South Orange Village. In the vicinity of the site the speed limit is not posted and the roadway provides one travel lane for each direction of travel with a general east/west orientation. On-street parking is permitted along the north side of the roadway with curb and sidewalk provided along both sides of the roadway. Third Street provides a straight horizontal alignment and an uphill vertical alignment from west to east. The roadway is approximately ½ of a mile long traversing from Prospect Street to South Ridgewood Road. The land uses along Third Street in the vicinity of The Project are a mix of commercial and residential.

Massel Terrace is a local roadway under the jurisdiction of the Township of South Orange Village. In the vicinity of the site the speed limit is not posted and the roadway provides one travel lane for each direction of travel with a general east/west orientation. On-street parking is permitted along both sides of the roadway with curb and sidewalk provided along both sides of the roadway. Massel Terrace provides a straight horizontal alignment and an uphill vertical alignment from west to east. The roadway is approximately 440 feet long traversing from Prospect Street to Academy Street. The land uses along Massel Terrace in the vicinity of The Project are primarily residential.

Existing Traffic Volumes

Manual turning movement (MTM) counts were conducted on Wednesday, June 7, 2017 between 7:00 AM and 9:00 AM and between 4:30 PM and 6:30 PM at the intersections of Valley Street with Fourth Street, Valley Street with Third Street, Valley Street with Massel Terrace and Academy Street with Fourth Street. Review of the collected traffic data reveals that the weekday morning peak street hour (PSH) occurs between 7:30–8:30 AM and the Evening PSH occurs between 5:15–6:15 PM. Figure 2 in Appendix A shows the existing peak hour traffic volumes at the study intersection.

Existing Pedestrian Movements

Pedestrian counts were also conducted on Wednesday, June 7, 2017 between 7:00 AM and 9:00 AM and between 4:30 PM and 6:30 PM at the intersections of Valley Street with Fourth Street, Valley Street with Third Street, Valley Street with Massel Terrace and Academy Street with Fourth Street. The following Table I summarizes the results of the pedestrian counts during the peak hours of the roadway. The pedestrian movements were utilized in the capacity analysis that are included in Appendix C.

Table I
Pedestrian Volumes

Intersection	Approach	Pedestrians per Hour	
		AM PSH	PM PSH
Valley Street and Third Street	Eastbound	19	17
	Westbound	33	18
	Northbound	19	20
	Southbound	85	15
Valley Street and Fourth Street	Eastbound	35	21
	Westbound	34	12
	Northbound	1	1
	Southbound	13	3
Valley Street and Massel Terrace	Westbound	32	18
	Northbound	0	0
	Southbound	0	0
Fourth Street and Academy Street	Eastbound	24	9
	Westbound	44	5
	Northbound	3	3
	Southbound	24	1

Existing Capacity Analysis

The methodology utilized in the capacity analyses is described in the, *Highway Capacity Manual 2010*, published by the Transportation Research Board. In general, the term Level of Service (LOS) is used to provide a "qualitative" evaluation of capacity based upon certain "quantitative" calculations related to empirical values, such as traffic volume and intersection control.

At the signalized intersections, factors that affect the various approach capacities include width of approach, number of lanes, signal "green time", turning percentages, truck volumes, etc. However, delays cannot be related to capacity in a simple one-to-one fashion. For example, it is possible to have delays in the Level of Service "F" range without exceeding roadway capacity. Substantial delays can exist without exceeding capacity if one or more of the following conditions exist: long signal cycle lengths; a particular traffic movement experiences a long red time; or progressive movement for a particular lane group is poor. Table II describes the level of service ranges for signalized intersections.

Table II
Level of Service Criteria
for Signalized Intersections

Level of Service	Average Control Delay (seconds per vehicle)
A	0.0 to 10.0
B	10.1 to 20.0
C	20.1 to 35.0
D	35.1 to 55.0
E	55.1 to 80.0
F	greater than 80.0

When analyzing an unsignalized intersection, it is assumed that both the major street through and right turn movements are unimpeded and have the right-of-way over all side street traffic and left turns from the major street. All other turning movements in the intersection cross, merge with, or are otherwise impeded by major street movements. Traffic delays at unsignalized intersections are determined by sequentially processing these impeded movements. Table III describes the level of service ranges for unsignalized (stop controlled) intersections.

Table III
Level of Service Criteria
for Unsignalized Intersections

Level of Service	Average Control Delay (seconds per vehicle)
a	0.0 to 10.0
b	10.1 to 15.0
c	15.1 to 25.0
d	25.1 to 35.0
e	35.1 to 50.0
f	greater than 50.0

All capacity analyses were performed utilizing the SYNCHRO software package. Table IV summarizes the existing levels of service (LOS) and delay in seconds per vehicle. All Capacity analysis calculation worksheets are contained in Appendix C.

Table IV
Existing Levels of Service

Intersection	Direction/ Movement		AM PSH	PM PSH
Valley Street and Third Street	EB	LTR	C (22)	C (22)
	WB	LTR	C (24)	C (22)
	NB	LTR	C (22)	C (24)
	SB	LTR	C (21)	B (20)
	Overall		C (22)	C (22)
Valley Street and Fourth Street	EB	LTR	b (14)	d (29)
	WB	LTR	c (17)	c (19)
	NB	LTR	a (9)	a (0)
	SB	LTR	a (9)	a (9)
Valley Street and Massel Terrace	WB	LR	b (14)	c (20)
	SB	LT	a (8)	a (9)
Fourth Street and Academy Street	EB	LR	b (12)	b (10)
	WB	L	b (12)	b (10)
		TR	b (11)	a (10)
	NB	LT	a (8)	a (7)

A (#) - Signalized Intersection Level of Service (seconds of delay per vehicle)
a (#) - Unsignalized Intersection Level of Service (seconds of delay per vehicle)

The following are discussions pertaining to each of the existing intersections analyzed. It should be noted that the existing percentage of trucks and peak hour factors were used in the existing analysis.

Valley Street and Third Street

Third Street intersects Valley Street to form a four-leg signalized intersection. All four approaches provide a shared left turn/through/right turn lane. The intersection has crosswalks on all four legs of the intersections with only the southwest corner having an ADA compliant detectable warning surface. Pedestrian-oriented traffic signals are provided although "Man/Hand" pedestrian signal heads are not. The sidewalks in the vicinity of this intersection range from 5' to 8' wide.

A review of the existing analysis reveals that the intersection operates at overall acceptable level of service "C" during the AM and PM analyzed peak periods. See Table IV for the individual movement levels of service and delays.

Valley Street and Fourth Street

Fourth Street intersects Valley Street to form a four-leg unsignalized intersection with Fourth Street under stop control. All four approaches provide a shared left turn/through/right turn lane. The intersection has crosswalks on all four legs of the intersections with no ADA compliant detectable warning surfaces present. The sidewalks in the vicinity of this intersection range from 3' to 4' wide.

A review of the existing analysis reveals that the individual intersection movements operate at acceptable level of service "C" or better during the AM and PM analyzed peak periods. See Table IV for the individual movement levels of service and delays.

Valley Street and Massel Terrace

Massel Terrace intersects Valley Street to form an unsignalized T-intersection with Massel Terrace under stop control. The westbound approach of Massel Terrace provides a shared left turn/right turn lane. The northbound and southbound approaches of Valley Street provide a shared through/right turn lane and a shared left turn/through lane respectively. The intersection has a crosswalk to cross the Massel Terrace leg of the intersection with no ADA compliant curb ramps present. The sidewalks in the vicinity of this intersection range from 5' to 8' wide.

A review of the existing analysis reveals that the individual intersection movements operate at acceptable level of service "C" or better during the AM and PM analyzed peak periods. See Table IV for the individual movement levels of service and delays.

Fourth Street and Academy Street

Fourth Street intersects Academy Street to form a four-leg unsignalized intersection with Fourth Street under stop control. The eastbound approach of Fourth Street provides a shared left turn/through lane. The westbound approach of Fourth Street provides a left turn lane and a shared through/right turn lane. The northbound and southbound approaches of Academy Street provide a shared left turn/through lane and a shared through/right turn lane respectively. The intersection has crosswalks on all four legs of the intersection with only the northeast and southeast corners having ADA compliant detectable warning surfaces. The sidewalks in the vicinity of this intersection range from 4' to 8' wide.

A review of the existing analysis reveals that the individual intersection movements operate at favorable level of service "B" or better during the AM and PM analyzed peak periods. See Table IV for the individual movement levels of service and delays.

FUTURE CONDITIONS

Traffic volumes and operational analyses were developed for both the Future No Build and Build conditions. The no build conditions provide a baseline for assessing the impact of site development traffic on the roadway system. The process of developing the No Build and Build traffic volumes and the subsequent analyses is outlined below.

Regardless of whether the subject site is developed or not, traffic volumes on the surrounding roadways are expected to increase as a result of developments throughout the region. A growth rate for roadways within the study area was obtained from the NJDOT Annual Background Growth Rate Table, which indicates a growth rate of 2.0% per year.

Future No Build traffic volumes were developed by applying the background growth rate of 2.0% per year for two (2) years to the study area roadways existing traffic volumes. Figure 3, in Appendix A of this report, shows the Future No Build traffic volumes.

Traffic Generation

Projections of future traffic volumes were developed utilizing data as published in the Institute of Transportation Engineers (ITE) publication *Trip Generation, 9th Edition* for Land Use Code (LUC) 223 – Mid-Rise Apartments, LUC 932 – High-Turnover (Sit-Down) Restaurant and LUC 820 – Shopping Center. Table V summarizes the projected trips generated by the proposed development utilizing the ITE data.

Table V
Trip Generation

Land Use	AM PSH			PM PSH		
	In	Out	Total	In	Out	Total
106 Residential Units	9	21	30	23	17	40
4,412 Square Foot Shopping Center	2	2	4	8	8	16
4,412 Square Foot Restaurant	26	22	48	26	17	43
Total	37	45	82	57	42	99

The ITE publication *Trip Generation Handbook, 9th Edition*, recognizes that when land uses are proximate to each other, individual land uses tend to interact, reducing the overall trip generation for the site. In order to perform a more conservative analysis no credit was taken for the "internally captured" trips associated with the individual uses. It should also be noted that, conservatively, no credit was taken for passby trips associated with the shopping center portion of the site.

One of the attractive features for prospective tenants is that within a half mile of the site there is access to New Jersey Transit bus lines 92, 107 and the Morris & Essex Rail Line. However, no adjustments are made to the ITE trip rate data to account for the likely high utilization of mass transit for daily commutation purposes for the future tenants of the proposed building. Furthermore no credit was

taken for the existing use of the site which currently generates traffic. All trip generation was considered an increase over vacant land. This allows for a conservative projection of a "worst case" scenario.

Once the magnitude of traffic to be generated by the site is known, it is necessary to assign that traffic to the adjacent street system. The distribution of site traffic to the surrounding roadways is based on the location of primary arterial roadways, major signalized intersections, and existing traffic patterns. Located in Appendix A, Figure 4 illustrates the site generated traffic volumes. The site generated volumes were added to the Future No Build traffic volumes to generate the Future Build traffic volumes, which are shown in Figure 5.

Future Capacity Analysis

Operational conditions at the study intersections were analyzed under the No Build and Build conditions and are summarized in Table VI below.

Table VI
Future Levels of Service

Intersection	Direction/ Movement		AM PSH		PM PSH	
			No Build	Build	No Build	Build
Valley Street and Third Street	EB	LTR	C (23)	C (23)	C (22)	C (23)
	WB	LTR	C (25)	C (25)	C (22)	C (22)
	NB	LTR	C (23)	C (26)	C (27)	C (30)
	SB	LTR	C (21)	C (22)	C (21)	C (22)
	Overall		C (23)	C (24)	C (23)	C (25)
Valley Street and Fourth Street	EB	LTR	b (14)	e (36)	d (31)	e (48)
	WB	LTR	c (18)	c (20)	c (20)	d (26)
	NB	LTR	a (9)	a (9)	a (0)	a (9)
	SB	LTR	a (9)	a (10)	a (9)	a (9)
Valley Street and Massel Terrace	WB	LR	b (15)	b (15)	c (21)	c (22)
	SB	LT	a (8)	a (9)	a (9)	a (9)
Fourth Street and Academy Street	EB	LR	b (12)	b (12)	b (11)	b (11)
	WB	L	b (13)	b (13)	b (10)	b (10)
		TR	b (11)	b (11)	a (10)	b (10)
	NB	LT	a (8)	a (8)	a (8)	a (8)
Site Driveway and Fourth Street	WB	LT	-	a (7)	-	a (7)
	NB	R	-	a (9)	-	a (9)

A (#) - Signalized Intersection Level of Service (seconds of delay per vehicle)
a (#) - Unsignalized Intersection Level of Service (seconds of delay per vehicle)

Valley Street and Third Street

With the addition of the site traffic the intersection will continue to operate at overall acceptable level of service "C" or better during the AM and PM peak hours, maintaining the no build levels of service. See Table VI for the individual movement levels of service and delays.

Valley Street and Fourth Street

With the addition of the site traffic the individual intersection movements will operate at level of service "E" or better during the AM and PM peak hours. See Table VI for the individual movement levels of service and delays. It should also be noted that the sidewalks along the property frontage will be improved and widened and that ADA compliant curb ramps will be installed in the southwest corner of the intersection.

Valley Street and Massel Terrace

With the addition of the site traffic the individual intersection movements will continue to operate at acceptable level of service "C" or better during the AM and PM peak hours, maintaining the no build levels of service. See Table VI for the individual movement levels of service and delays.

Academy Street and Fourth Street

With the addition of the site traffic the individual intersection movements will continue to operate at favorable level of service "B" or better during the AM and PM peak hours, maintaining the no build levels of service. See Table VI for the individual movement levels of service and delays.

Fourth Street and the Site Driveway

The site driveway is proposed to intersect Fourth Street to form a three-leg unsignalized intersection with the site driveway under stop control. The eastbound and westbound approaches of Fourth Street will provide a shared through/right turn lane and a shared left turn/through lane respectively. The northbound approach of the site driveway will provide one lane for left and right turns.

With the addition of the site traffic the individual intersection movements will operate at favorable level of service "A" during the AM and PM analyzed peak periods. See Table VI for the individual movement levels of service and delays. Access to the PSE& G substation exists to the west of the site driveway and will remain. It is expected that this minimally utilized access point will continue to function adequately in its existing location.

SITE PLAN

Site Access

The site plan was reviewed with respect to the site access and on-site circulation design. As noted previously, access to The Project will be provided via one (1) full movement driveway along Fourth Street. The proposed access layout is an improvement over the existing layout which currently provides two (2) full movement driveways along Valley Street and six (6) full movement driveways along Fourth Street. A loading zone will be provided along Fourth Street and loading/unloading will be conducted during off peak hours of the surrounding roadways.

FINDINGS & CONCLUSIONS

Findings

Based upon the detailed analyses as documented herein, the following findings are noted:

- The proposed 5,152 square feet of retail space, 5,093 square foot restaurant and 106 residential units will generate 42 entering trips and 48 exiting trips during the morning peak hour and 62 entering trips and 47 exiting trips during the evening peak hour. This is based on a conservative assessment of trip generation with no credit for mass transit usage, internal trips or passby trips.

- Access to the site will be provided via one (1) full movement driveway along Fourth Street. Sidewalks and pedestrian amenities will be upgraded along the subject property frontages.

- With the addition of the site generated traffic, the intersection of Valley Street with Third Street will continue to operate at overall acceptable level of service "C" or better during the AM and PM peak hours, maintaining the no build levels of service.

- With the addition of the site generated traffic, the individual intersection movements of Valley Street with Fourth Street will operate at level of service "E" or better during the AM and PM peak hours.

- With the addition of the site generated traffic, the individual intersection movements of Valley Street with Massel Terrace will continue to operate at acceptable level of service "C" or better during the AM and PM peak hours, maintaining the no build level of service.

- With the addition of the site generated traffic, the individual intersection movements of Academy Street with Fourth Street will continue to operate at acceptable level of service "B" or better during the AM and PM peak hours, maintaining the no build level of service.

- With the addition of the site generated traffic, the individual intersection movements of Fourth Street and the site driveway will operate at favorable level of service "A" during the AM and PM peak hours.

- The on-site parking is compatible with roadway traffic as required by the redevelopment plan.

- As proposed, The Project's site driveways have been designed to provide for safe and efficient movement of vehicles on-site.

Conclusions

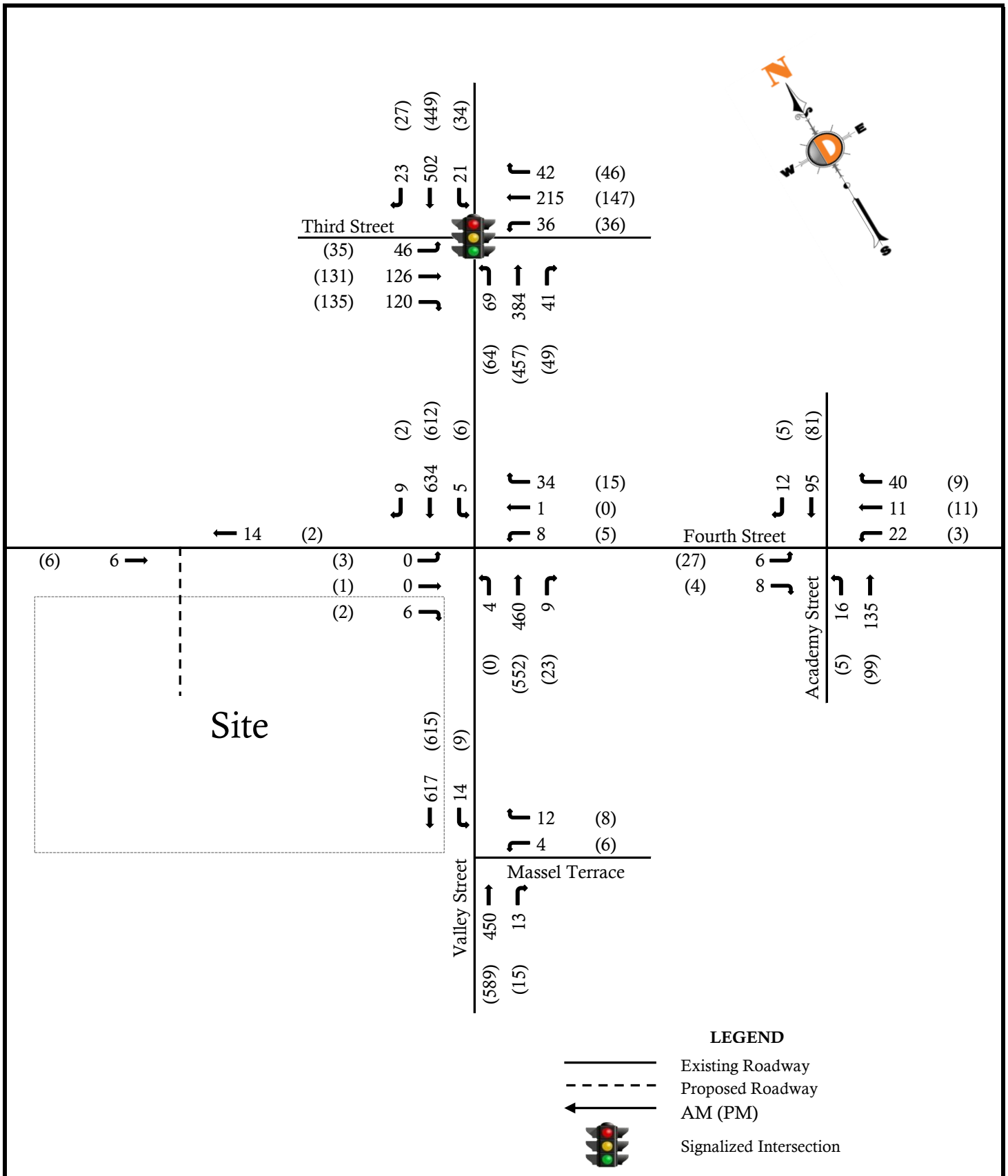
Based upon our Traffic Impact Study as detailed in the body of this report, it is the professional opinion of Dynamic Traffic LLC that the adjacent street system of the Township of South Orange Village and County of Essex will not experience any significant degradation in operating conditions with the construction of The Project. The site driveway is located to provide safe and efficient access to the adjacent roadway system.

Appendix A
Volume Figures

Proposed Development
Traffic Impact Study
1084-16-015T
6/19/2017

Figure 1

Site Location Map



Proposed Development
Traffic Impact Study
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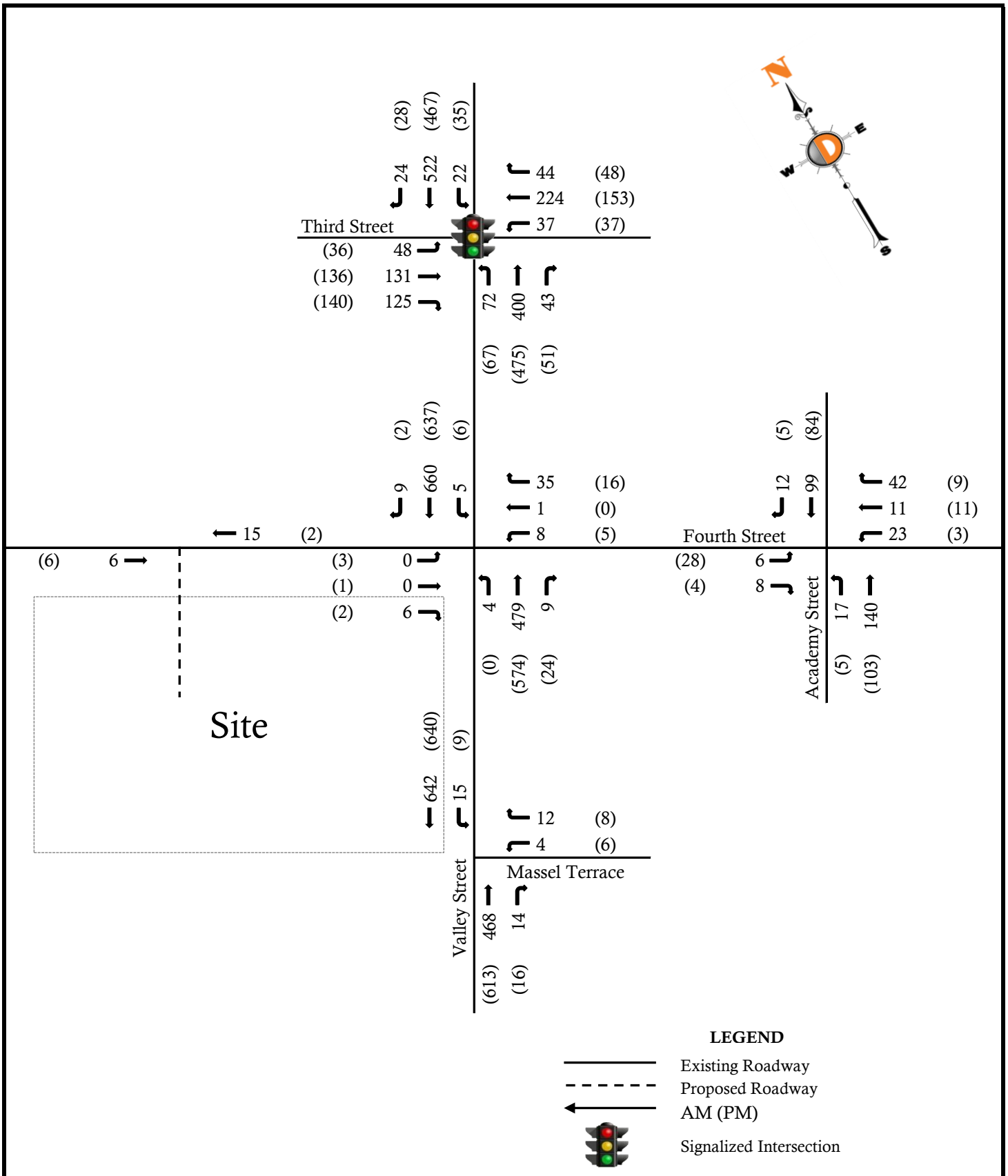
6/19/2017

Figure 2

Existing Traffic Volumes



Proposed Development
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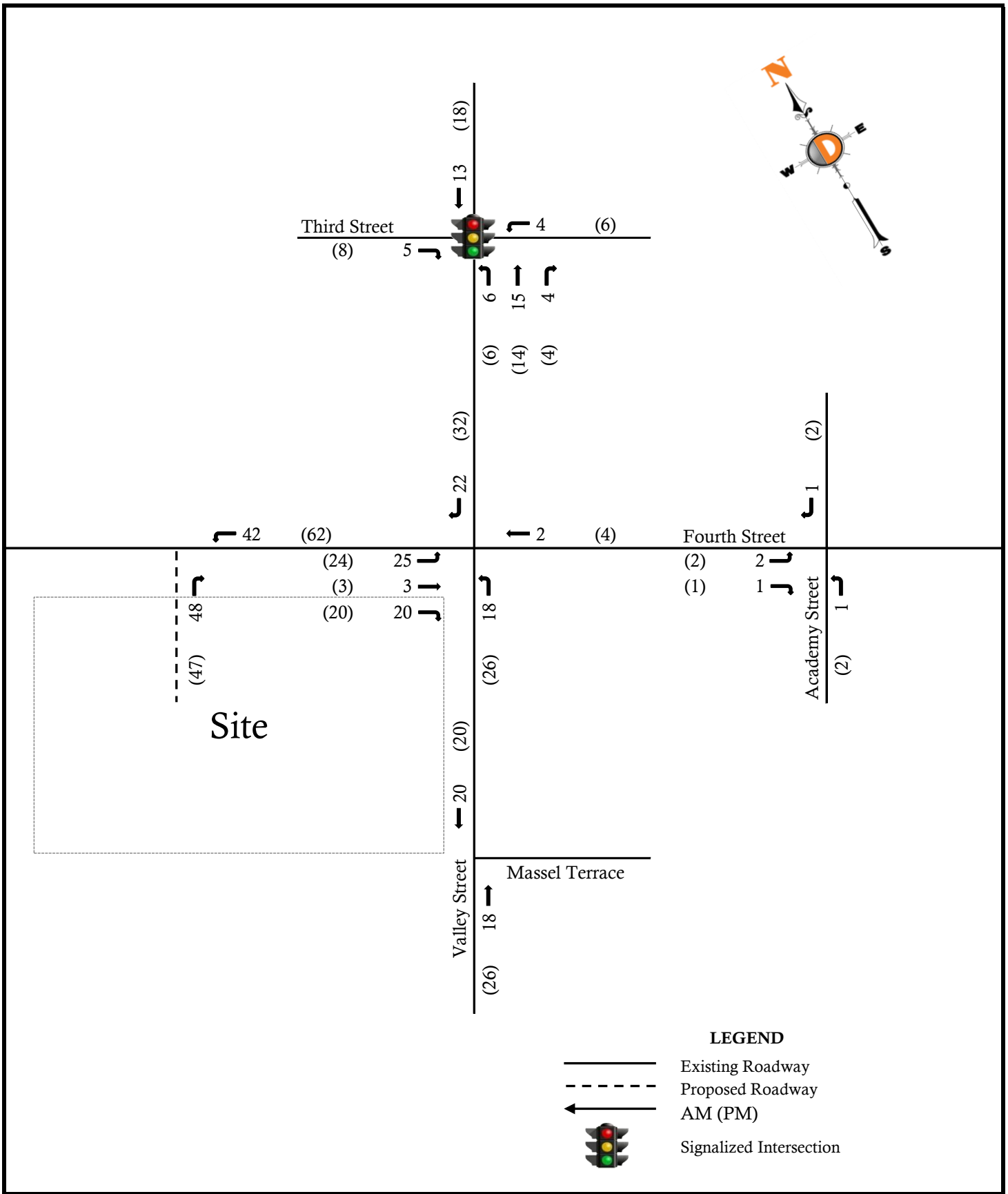
Figure 3

Future No Build Traffic Volumes



Proposed Development
Traffic Impact Study
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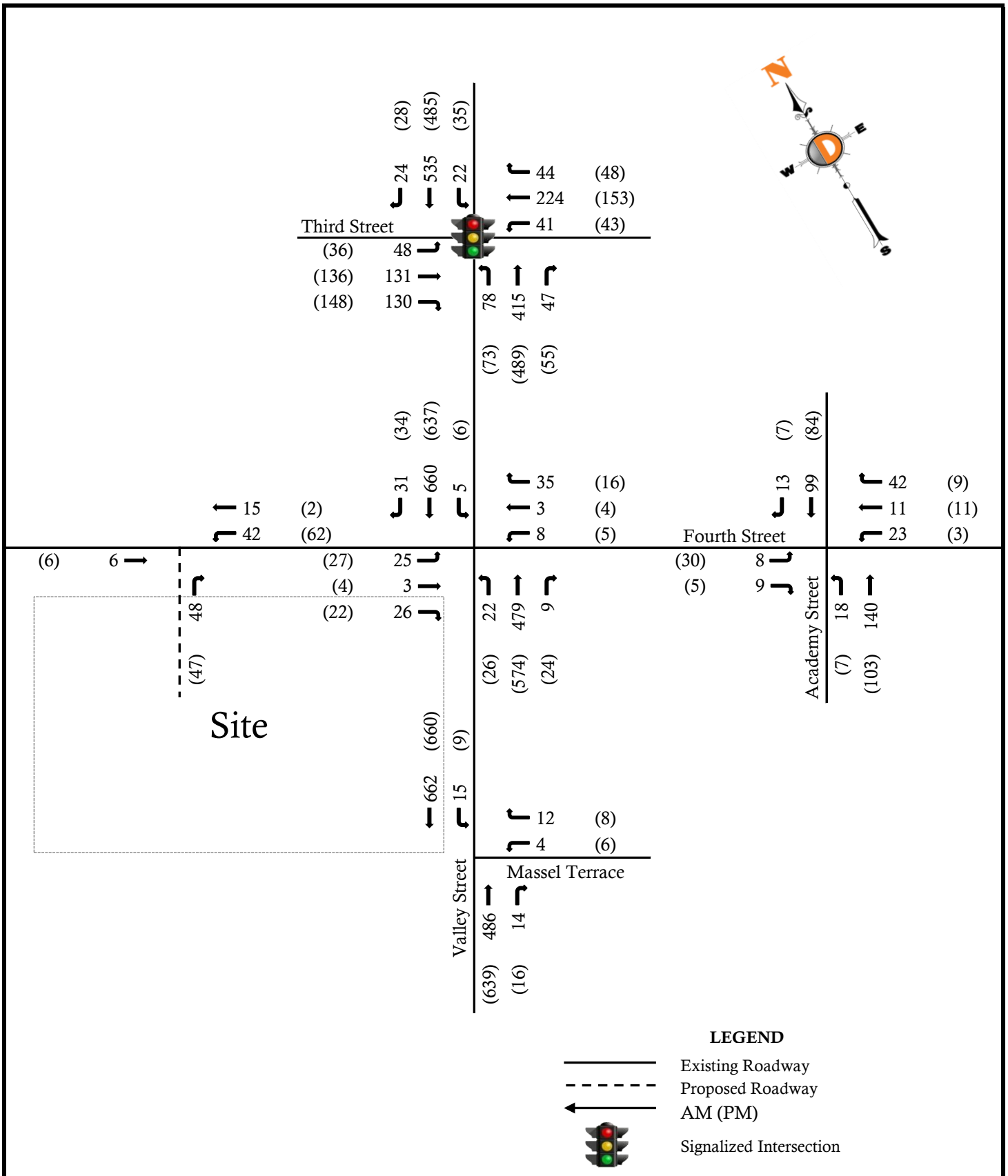
Figure 4

Total Site Generated Trips



Proposed Development
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Figure 5

Build Traffic Volumes

Appendix B
Traffic Counts

Dynamic Traffic, LLC

1904 Main Street, Lake Como, NJ, 07719
245 Main Street - Suite 110, Chester, NJ, 07930
(732) 681-0760

E/W: 4th Street
N/S: Academy Street
Town/County: South Orange/Essex
Job #: 1084-16-015T

File Name : Academy St & 4th St AM & PM
Site Code : 00000000
Start Date : 6/7/2017
Page No : 1

Groups Printed- Cars - Trucks

	4th Street Eastbound					4th Street Westbound					Academy Street Northbound					Academy Street Southbound							
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	0	0	0	0	0	1	1	0	1	2	0	6	0	1	7	0	7	0	1	7	2	16	18
07:15 AM	3	0	0	12	15	1	1	4	2	6	1	11	0	1	13	0	5	1	17	6	19	40	59
07:30 AM	0	0	0	9	9	2	2	7	6	11	3	23	0	0	26	0	22	2	6	24	12	70	82
07:45 AM	4	0	3	6	13	12	5	25	20	42	3	53	0	2	58	0	32	1	12	33	32	146	178
Total	7	0	3	27	37	16	9	36	29	61	7	93	0	4	104	0	66	4	36	70	65	272	337
08:00 AM	0	0	4	7	11	8	4	8	15	20	6	29	0	0	35	0	25	5	5	30	20	96	116
08:15 AM	2	0	1	2	5	0	0	0	3	0	4	30	0	1	35	0	16	4	1	20	4	60	64
08:30 AM	2	0	1	2	5	0	0	0	2	0	4	24	0	0	28	0	16	1	0	17	2	50	52
08:45 AM	2	0	1	2	5	0	0	0	0	0	3	18	0	1	22	0	5	2	3	7	3	34	37
Total	6	0	7	13	26	8	4	8	20	20	17	101	0	2	120	0	62	12	9	74	29	240	269
*** BREAK ***																							
04:30 PM	3	0	1	1	5	2	3	0	2	5	1	24	0	0	25	0	15	1	1	16	3	51	54
04:45 PM	6	0	1	2	9	2	1	0	2	3	4	26	0	0	30	0	18	1	2	19	4	61	65
Total	9	0	2	3	14	4	4	0	4	8	5	50	0	0	55	0	33	2	3	35	7	112	119
05:00 PM	5	0	1	3	9	4	4	1	1	9	1	25	0	1	27	0	20	1	0	21	1	66	67
05:15 PM	7	0	0	1	8	0	3	1	1	4	1	33	0	0	34	0	16	0	0	16	1	62	63
05:30 PM	5	0	2	1	8	1	3	2	0	6	2	22	0	0	24	0	26	1	0	27	0	65	65
05:45 PM	2	0	2	1	5	0	3	3	2	6	2	25	0	0	27	0	14	2	1	16	3	54	57
Total	19	0	5	6	30	5	13	7	4	25	6	105	0	1	112	0	76	4	1	80	5	247	252
06:00 PM	13	0	0	6	19	2	2	3	2	7	0	19	0	3	22	0	25	2	0	27	2	75	77
06:15 PM	7	1	0	3	11	0	2	0	0	2	1	12	0	0	13	0	16	1	0	17	0	43	43
Grand Total	61	1	17	58	137	35	34	54	59	123	36	380	0	10	426	0	278	25	49	303	108	989	1097
Apprch %	44.5	0.7	12.4	42.3		28.5	27.6	43.9			8.5	89.2	0	2.3		0	91.7	8.3					
Total %	6.2	0.1	1.7	5.9	13.9	3.5	3.4	5.5		12.4	3.6	38.4	0	1	43.1	0	28.1	2.5		30.6	9.8	90.2	
Cars	60	1	17	58	136	35	34	54		182	35	377	0	10	422	0	278	24		351	0	0	1091
% Cars	98.4	100	100	100	99.3	100	100	100	100	100	97.2	99.2	0	100	99.1	0	100	96	100	99.7	0	0	99.5
Trucks	1	0	0	0	1	0	0	0		0	1	3	0	0	4	0	0	1		1	0	0	6
% Trucks	1.6	0	0	0	0.7	0	0	0	0	0	2.8	0.8	0	0	0.9	0	0	4	0	0.3	0	0	0.5

Dynamic Traffic, LLC

1904 Main Street, Lake Como, NJ, 07719
254 Main Street - Suite 110, Chester, NJ, 07930
(732) 681-0760

E/W: 4th Street
N/S: Valley Street
Town/County: South Orange/Essex
Job #: 1084-16-015T

File Name : Valley Street & 3rd Street AM & PM
Site Code : 00000000
Start Date : 6/7/2017
Page No : 1

Groups Printed- Cars - Trucks

	3rd Street Eastbound					3rd Street Westbound					Valley Street Northbound					Valley Street Southbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	7	10	7	1	25	6	17	3	6	32	10	49	5	0	64	2	32	4	7	45	166
07:15 AM	2	10	22	5	39	7	23	9	5	44	16	57	4	2	79	3	95	6	7	111	273
07:30 AM	13	16	36	4	69	10	41	6	6	63	21	93	10	2	126	7	129	7	6	149	407
07:45 AM	9	34	30	7	80	9	57	12	6	84	22	97	9	6	134	3	126	4	36	169	467
Total	31	70	95	17	213	32	138	30	23	223	69	296	28	10	403	15	382	21	56	474	1313
08:00 AM	11	40	26	2	79	8	70	16	16	110	12	98	10	8	128	6	123	5	38	172	489
08:15 AM	13	36	28	6	83	9	47	8	5	69	14	96	12	3	125	5	124	7	5	141	418
08:30 AM	7	22	30	2	61	7	58	6	2	73	14	60	6	2	82	7	88	3	6	104	320
08:45 AM	10	26	24	4	64	6	69	8	4	87	14	77	6	1	98	9	82	6	7	104	353
Total	41	124	108	14	287	30	244	38	27	339	54	331	34	14	433	27	417	21	56	521	1580
*** BREAK ***																					
04:30 PM	7	41	17	2	67	8	30	10	3	51	13	100	5	1	119	9	91	6	6	112	349
04:45 PM	6	35	16	2	59	7	24	10	1	42	15	86	4	2	107	8	88	7	6	109	317
Total	13	76	33	4	126	15	54	20	4	93	28	186	9	3	226	17	179	13	12	221	666
05:00 PM	10	33	21	1	65	7	42	14	3	66	12	102	4	5	123	14	85	7	3	109	363
05:15 PM	6	25	24	4	59	12	39	14	2	67	13	114	11	4	142	8	104	3	2	117	385
05:30 PM	8	33	35	2	78	10	38	9	4	61	13	112	12	2	139	8	104	6	5	123	401
05:45 PM	9	25	35	2	71	9	43	9	8	69	18	116	13	4	151	8	107	10	6	131	422
Total	33	116	115	9	273	38	162	46	17	263	56	444	40	15	555	38	400	26	16	480	1571
06:00 PM	12	48	41	9	110	5	27	14	4	50	20	115	13	10	158	10	134	8	2	154	472
06:15 PM	12	39	27	5	83	5	31	12	4	52	15	96	8	1	120	7	93	4	3	107	362
Grand Total	142	473	419	58	1092	125	656	160	79	1020	242	1468	132	53	1895	114	1605	93	145	1957	5964
Apprch %	13	43.3	38.4	5.3		12.3	64.3	15.7	7.7		12.8	77.5	7	2.8		5.8	82	4.8	7.4		
Total %	2.4	7.9	7	1	18.3	2.1	11	2.7	1.3	17.1	4.1	24.6	2.2	0.9	31.8	1.9	26.9	1.6	2.4	32.8	
Cars	121	473	418	58	1070	124	654	158	79	1015	238	1457	130	53	1878	112	1585	93	145	1935	5898
% Cars	85.2	100	99.8	100	98	99.2	99.7	98.8	100	99.5	98.3	99.3	98.5	100	99.1	98.2	98.8	100	100	98.9	98.9
Trucks	21	0	1	0	22	1	2	2	0	5	4	11	2	0	17	2	20	0	0	22	66
% Trucks	14.8	0	0.2	0	2	0.8	0.3	1.2	0	0.5	1.7	0.7	1.5	0	0.9	1.8	1.2	0	0	1.1	1.1

Dynamic Traffic, LLC

1904 Main Street, Lake Como, NJ, 07719
254 Main Street - Suite 110, Chester, NJ, 07930
(732) 681-0760

E/W: 4th Street
N/S: Valley Street
Town/County: South Orange/Essex
Job #: 1084-16-015T

File Name : Valley Street & 4th Street AM & PM
Site Code : 00000000
Start Date : 6/7/2017

Groups Printed- Cars - Trucks

	4th Street Eastbound					4th Street Westbound					Valley Street Northbound					Valley Street Southbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	0	0	0	6	6	0	0	1	2	3	3	71	0	3	77	0	94	1	2	97	183
07:15 AM	1	1	0	16	18	4	0	1	11	16	2	86	1	2	91	1	143	0	3	147	272
07:30 AM	0	0	2	9	11	2	0	6	6	14	1	104	1	0	106	1	168	3	1	173	304
07:45 AM	0	0	1	6	7	2	0	8	18	28	2	125	4	0	131	1	156	1	6	164	330
Total	1	1	3	37	42	8	0	16	37	61	8	386	6	5	405	3	561	5	12	581	1089
08:00 AM	0	0	2	13	15	2	1	14	6	23	1	122	1	0	124	2	152	4	3	161	323
08:15 AM	0	0	1	7	8	2	0	6	4	12	0	109	3	1	113	1	158	1	3	163	296
08:30 AM	1	0	2	7	10	1	0	4	2	7	2	98	2	1	103	1	128	3	1	133	253
08:45 AM	2	0	1	5	8	1	0	6	5	12	2	114	1	0	117	4	128	5	0	137	274
Total	3	0	6	32	41	6	1	30	17	54	5	443	7	2	457	8	566	13	7	594	1146
*** BREAK ***																					
04:30 PM	0	1	1	11	13	2	0	3	7	12	0	131	2	0	133	0	168	1	1	170	328
04:45 PM	1	0	1	7	9	2	0	2	3	7	0	121	6	2	129	1	134	0	1	136	281
Total	1	1	2	18	22	4	0	5	10	19	0	252	8	2	262	1	302	1	2	306	609
05:00 PM	1	0	1	4	6	1	0	7	2	10	1	133	5	0	139	2	146	1	0	149	304
05:15 PM	0	0	1	5	6	0	0	3	1	4	0	146	5	0	151	1	158	1	0	160	321
05:30 PM	1	1	0	5	7	1	0	2	2	5	0	121	5	0	126	1	150	1	1	153	291
05:45 PM	2	0	1	3	6	1	0	7	6	14	0	129	5	0	134	2	142	0	2	146	300
Total	4	1	3	17	25	3	0	19	11	33	1	529	20	0	550	6	596	3	3	608	1216
06:00 PM	0	0	0	8	8	3	0	3	3	9	0	156	8	1	165	2	162	0	0	164	346
06:15 PM	0	0	0	7	7	3	0	1	3	7	0	130	2	1	133	2	142	0	1	145	292
Grand Total	9	3	14	119	145	27	1	74	81	183	14	1896	51	11	1972	22	2329	22	25	2398	4698
Apprch %	6.2	2.1	9.7	82.1		14.8	0.5	40.4	44.3		0.7	96.1	2.6	0.6		0.9	97.1	0.9	1		
Total %	0.2	0.1	0.3	2.5	3.1	0.6	0	1.6	1.7	3.9	0.3	40.4	1.1	0.2	42	0.5	49.6	0.5	0.5	51	
Cars	9	3	14	119	145	27	1	74	81	183	14	1863	51	11	1939	22	2294	22	25	2363	4630
% Cars	100	100	100	100	100	100	100	100	100	100	100	98.3	100	100	98.3	100	98.5	100	100	98.5	98.6
Trucks	0	0	0	0	0	0	0	0	0	0	0	33	0	0	33	0	35	0	0	35	68
% Trucks	0	0	0	0	0	0	0	0	0	0	0	1.7	0	0	1.7	0	1.5	0	0	1.5	1.4

Dynamic Traffic, LLC

1904 Main Street, Lake Como, NJ, 07719
245 Main Street - Suite 110, Chester, NJ, 07930
(732) 681-0760

E/W: Massel Terrace
N/S: Valley Street
Town/County: South Orange/Essex
Job #: 1084-16-015T

File Name : Valley Street & Massel Terrace AM & PM
Site Code : 00000000
Start Date : 6/7/2017
Page No : 1

Groups Printed- Cars - Trucks

	Massel Terrace Eastbound					Massel Terrace Westbound					Valley Street Northbound					Valley Street Southbound							
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	0	0	0	6	6	1	0	3	3	4	0	69	0	0	69	0	94	0	0	94	3	173	176
07:15 AM	0	0	0	14	14	0	0	2	9	2	0	91	0	0	91	0	136	0	0	136	9	243	252
07:30 AM	0	0	0	9	9	2	0	4	8	6	0	101	2	0	103	1	169	0	0	170	8	288	296
07:45 AM	0	0	0	8	8	2	0	1	15	3	0	122	7	0	129	8	150	0	0	158	15	298	313
Total	0	0	0	37	37	5	0	10	35	15	0	383	9	0	392	9	549	0	0	558	35	1002	1037
08:00 AM	0	0	0	13	13	0	0	2	7	2	0	123	0	0	123	3	136	0	0	139	7	277	284
08:15 AM	0	0	0	3	3	0	0	5	2	5	0	104	4	0	108	2	162	0	0	164	2	280	282
08:30 AM	0	0	0	11	11	1	0	0	3	1	0	100	1	0	101	1	129	0	0	130	3	243	246
08:45 AM	0	0	0	8	8	0	0	2	3	2	0	115	0	0	115	0	121	0	0	121	3	246	249
Total	0	0	0	35	35	1	0	9	15	10	0	442	5	0	447	6	548	0	0	554	15	1046	1061
*** BREAK ***																							
04:30 PM	0	0	0	5	5	0	0	3	5	3	0	129	3	0	132	2	145	0	0	147	5	287	292
04:45 PM	0	0	0	2	2	3	0	0	2	3	0	138	1	1	140	3	147	0	0	150	2	295	297
Total	0	0	0	7	7	3	0	3	7	6	0	267	4	1	272	5	292	0	0	297	7	582	589
05:00 PM	0	0	0	4	4	0	0	0	4	0	0	134	6	0	140	0	152	0	0	152	4	296	300
05:15 PM	0	0	0	1	1	1	0	2	1	3	0	155	2	0	157	1	156	0	0	157	1	318	319
05:30 PM	0	0	0	3	3	1	0	3	3	4	0	135	1	0	136	3	151	0	0	154	3	297	300
05:45 PM	0	0	0	10	10	3	0	1	10	4	0	122	9	0	131	3	141	0	0	144	10	289	299
Total	0	0	0	18	18	5	0	6	18	11	0	546	18	0	564	7	600	0	0	607	18	1200	1218
06:00 PM	0	0	0	4	4	1	0	2	4	3	0	177	3	0	180	2	167	0	0	169	4	356	360
06:15 PM	0	0	0	1	1	0	0	2	1	2	0	133	3	1	137	1	153	0	0	154	1	294	295
Grand Total	0	0	0	102	102	15	0	32	80	47	0	1948	42	2	1992	30	2309	0	0	2339	80	4480	4560
Apprch %	0	0	0	100		31.9	0	68.1			0	97.8	2.1	0.1		1.3	98.7	0					
Total %	0	0	0	2.3	2.3	0.3	0	0.7		1	0	43.5	0.9	0	44.5	0.7	51.5	0		52.2	1.8	98.2	
Cars	0	0	0	102	102	15	0	32		127	0	1926	42	2	1970	30	2284	0		2314	0	0	4513
% Cars	0	0	0	100	100	100	0	100	100	100	0	98.9	100	100	98.9	100	98.9	0	0	98.9	0	0	99
Trucks	0	0	0	0	0	0	0	0		0	0	22	0	0	22	0	25	0		25	0	0	47
% Trucks	0	0	0	0	0	0	0	0	0	0	0	1.1	0	0	1.1	0	1.1	0	0	1.1	0	0	1

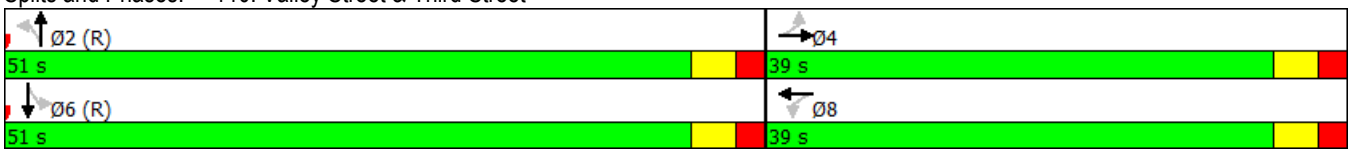
Appendix C
Capacity Analysis

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	46	126	120	36	215	42	69	384	41	21	502	23
Future Volume (vph)	46	126	120	36	215	42	69	384	41	21	502	23
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		331			354			500			230	
Travel Time (s)		9.0			9.7			11.4			5.2	
Confl. Peds. (#/hr)	85		19	19		85	19		33	33		19
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	20%	0%	1%	0%	1%	2%	2%	3%	0%	10%	3%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	321	0	0	322	0	0	543	0	0	600	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	39.0	39.0		39.0	39.0		51.0	51.0		51.0	51.0	
Total Split (s)	39.0	39.0		39.0	39.0		51.0	51.0		51.0	51.0	
Total Split (%)	43.3%	43.3%		43.3%	43.3%		56.7%	56.7%		56.7%	56.7%	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		5.0			5.0			5.0			5.0	
Lead/Lag												
Lead-Lag Optimize?												
Act Effct Green (s)		34.0			34.0			46.0			46.0	
Actuated g/C Ratio		0.38			0.38			0.51			0.51	
v/c Ratio		0.53			0.50			0.68			0.66	
Control Delay		22.4			24.1			21.8			20.5	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		22.4			24.1			21.8			20.5	
LOS		C			C			C			C	
Approach Delay		22.4			24.1			21.8			20.5	
Approach LOS		C			C			C			C	
Queue Length 50th (ft)		119			133			218			238	
Queue Length 95th (ft)		201			213			339			357	
Internal Link Dist (ft)		251			274			420			150	
Turn Bay Length (ft)												
Base Capacity (vph)		605			640			795			908	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.53			0.50			0.68			0.66	

Intersection Summary	
Area Type:	Other
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 90	

Control Type: Pretimed	
Maximum v/c Ratio: 0.68	
Intersection Signal Delay: 21.9	Intersection LOS: C
Intersection Capacity Utilization 89.1%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 110: Valley Street & Third Street

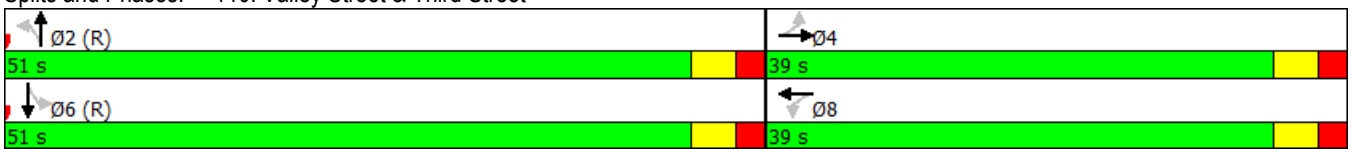


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	35	131	135	36	147	46	64	457	49	34	449	27
Future Volume (vph)	35	131	135	36	147	46	64	457	49	34	449	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		331			354			500			230	
Travel Time (s)		9.0			9.7			11.4			5.2	
Confl. Peds. (#/hr)	15		20	20		15	17		18	18		17
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	14%	0%	0%	0%	1%	0%	5%	0%	0%	0%	1%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	338	0	0	257	0	0	640	0	0	572	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	39.0	39.0		39.0	39.0		51.0	51.0		51.0	51.0	
Total Split (s)	39.0	39.0		39.0	39.0		51.0	51.0		51.0	51.0	
Total Split (%)	43.3%	43.3%		43.3%	43.3%		56.7%	56.7%		56.7%	56.7%	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		5.0			5.0			5.0			5.0	
Lead/Lag												
Lead-Lag Optimize?												
Act Effct Green (s)		34.0			34.0			46.0			46.0	
Actuated g/C Ratio		0.38			0.38			0.51			0.51	
v/c Ratio		0.53			0.40			0.76			0.64	
Control Delay		21.7			21.6			24.4			20.0	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		21.7			21.6			24.4			20.0	
LOS		C			C			C			B	
Approach Delay		21.7			21.6			24.4			20.0	
Approach LOS		C			C			C			B	
Queue Length 50th (ft)		122			98			272			223	
Queue Length 95th (ft)		202			161			410			330	
Internal Link Dist (ft)		251			274			420			150	
Turn Bay Length (ft)												
Base Capacity (vph)		641			636			846			893	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.53			0.40			0.76			0.64	

Intersection Summary	
Area Type:	Other
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 90	

Control Type: Pretimed	
Maximum v/c Ratio: 0.76	
Intersection Signal Delay: 22.1	Intersection LOS: C
Intersection Capacity Utilization 83.3%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 110: Valley Street & Third Street

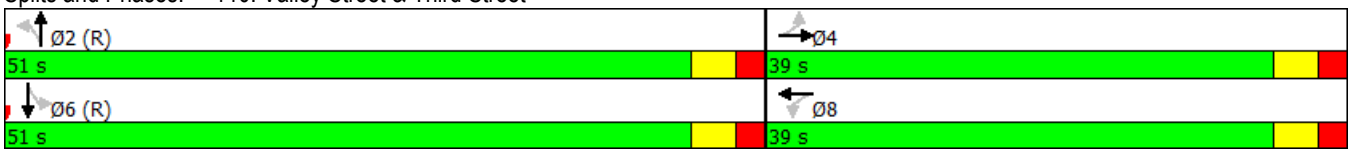


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	48	131	125	37	224	44	72	400	43	22	522	24
Future Volume (vph)	48	131	125	37	224	44	72	400	43	22	522	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		331			354			500			230	
Travel Time (s)		9.0			9.7			11.4			5.2	
Confl. Peds. (#/hr)	85		19	19		85	19		33	33		19
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	20%	0%	1%	0%	1%	2%	2%	3%	0%	10%	3%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	334	0	0	335	0	0	566	0	0	624	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	39.0	39.0		39.0	39.0		51.0	51.0		51.0	51.0	
Total Split (s)	39.0	39.0		39.0	39.0		51.0	51.0		51.0	51.0	
Total Split (%)	43.3%	43.3%		43.3%	43.3%		56.7%	56.7%		56.7%	56.7%	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		5.0			5.0			5.0			5.0	
Lead/Lag												
Lead-Lag Optimize?												
Act Effct Green (s)		34.0			34.0			46.0			46.0	
Actuated g/C Ratio		0.38			0.38			0.51			0.51	
v/c Ratio		0.55			0.52			0.72			0.69	
Control Delay		23.1			24.6			23.3			21.4	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		23.1			24.6			23.3			21.4	
LOS		C			C			C			C	
Approach Delay		23.1			24.6			23.3			21.4	
Approach LOS		C			C			C			C	
Queue Length 50th (ft)		126			140			234			253	
Queue Length 95th (ft)		212			223			367			379	
Internal Link Dist (ft)		251			274			420			150	
Turn Bay Length (ft)												
Base Capacity (vph)		602			641			785			907	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.55			0.52			0.72			0.69	

Intersection Summary	
Area Type:	Other
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 90	

Control Type: Pretimed	
Maximum v/c Ratio: 0.72	
Intersection Signal Delay: 22.9	Intersection LOS: C
Intersection Capacity Utilization 91.2%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 110: Valley Street & Third Street

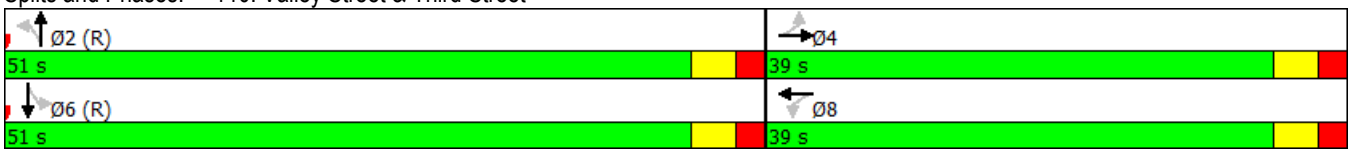


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	36	136	140	37	153	48	67	475	51	35	467	28
Future Volume (vph)	36	136	140	37	153	48	67	475	51	35	467	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		331			354			500			230	
Travel Time (s)		9.0			9.7			11.4			5.2	
Confl. Peds. (#/hr)	15		20	20		15	17		18	18		17
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	14%	0%	0%	0%	1%	0%	5%	0%	0%	0%	1%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	350	0	0	268	0	0	666	0	0	595	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	39.0	39.0		39.0	39.0		51.0	51.0		51.0	51.0	
Total Split (s)	39.0	39.0		39.0	39.0		51.0	51.0		51.0	51.0	
Total Split (%)	43.3%	43.3%		43.3%	43.3%		56.7%	56.7%		56.7%	56.7%	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		5.0			5.0			5.0			5.0	
Lead/Lag												
Lead-Lag Optimize?												
Act Effct Green (s)		34.0			34.0			46.0			46.0	
Actuated g/C Ratio		0.38			0.38			0.51			0.51	
v/c Ratio		0.55			0.42			0.79			0.67	
Control Delay		22.3			21.9			26.6			20.8	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		22.3			21.9			26.6			20.8	
LOS		C			C			C			C	
Approach Delay		22.3			21.9			26.6			20.8	
Approach LOS		C			C			C			C	
Queue Length 50th (ft)		130			104			293			237	
Queue Length 95th (ft)		212			169			442			351	
Internal Link Dist (ft)		251			274			420			150	
Turn Bay Length (ft)												
Base Capacity (vph)		640			635			839			890	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.55			0.42			0.79			0.67	

Intersection Summary	
Area Type:	Other
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 90	

Control Type: Pretimed	
Maximum v/c Ratio: 0.79	
Intersection Signal Delay: 23.3	Intersection LOS: C
Intersection Capacity Utilization 85.5%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 110: Valley Street & Third Street

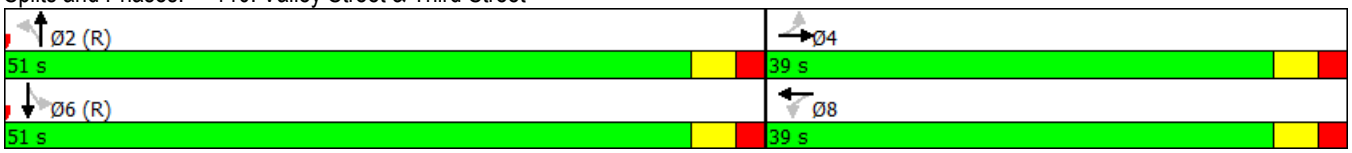


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	48	131	130	41	224	44	78	415	47	22	535	24
Future Volume (vph)	48	131	130	41	224	44	78	415	47	22	535	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		331			354			500			230	
Travel Time (s)		9.0			9.7			11.4			5.2	
Confl. Peds. (#/hr)	85		19	19		85	19		33	33		19
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	20%	0%	1%	0%	1%	2%	2%	3%	0%	10%	3%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	340	0	0	339	0	0	594	0	0	638	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	39.0	39.0		39.0	39.0		51.0	51.0		51.0	51.0	
Total Split (s)	39.0	39.0		39.0	39.0		51.0	51.0		51.0	51.0	
Total Split (%)	43.3%	43.3%		43.3%	43.3%		56.7%	56.7%		56.7%	56.7%	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		5.0			5.0			5.0			5.0	
Lead/Lag												
Lead-Lag Optimize?												
Act Effct Green (s)		34.0			34.0			46.0			46.0	
Actuated g/C Ratio		0.38			0.38			0.51			0.51	
v/c Ratio		0.56			0.53			0.77			0.70	
Control Delay		23.2			24.8			26.2			22.0	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		23.2			24.8			26.2			22.0	
LOS		C			C			C			C	
Approach Delay		23.2			24.8			26.2			22.0	
Approach LOS		C			C			C			C	
Queue Length 50th (ft)		129			143			256			262	
Queue Length 95th (ft)		216			227			407			394	
Internal Link Dist (ft)		251			274			420			150	
Turn Bay Length (ft)												
Base Capacity (vph)		603			636			767			906	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.56			0.53			0.77			0.70	

Intersection Summary	
Area Type:	Other
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 90	

Control Type: Pretimed	
Maximum v/c Ratio: 0.77	
Intersection Signal Delay: 24.0	Intersection LOS: C
Intersection Capacity Utilization 95.3%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 110: Valley Street & Third Street



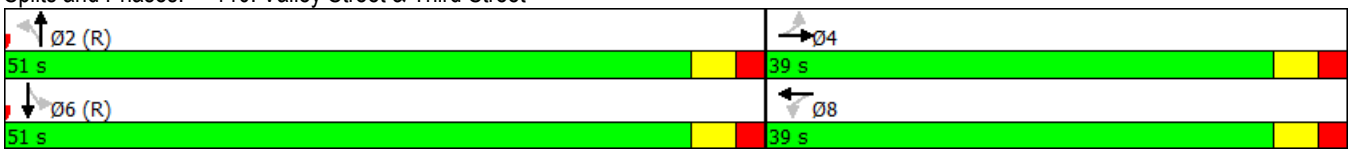
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	36	136	148	43	153	48	73	489	55	35	485	28
Future Volume (vph)	36	136	148	43	153	48	73	489	55	35	485	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		331			354			500			230	
Travel Time (s)		9.0			9.7			11.4			5.2	
Confl. Peds. (#/hr)	15		20	20		15	17		18	18		17
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	14%	0%	0%	0%	1%	0%	5%	0%	0%	0%	1%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	359	0	0	274	0	0	693	0	0	615	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	39.0	39.0		39.0	39.0		51.0	51.0		51.0	51.0	
Total Split (s)	39.0	39.0		39.0	39.0		51.0	51.0		51.0	51.0	
Total Split (%)	43.3%	43.3%		43.3%	43.3%		56.7%	56.7%		56.7%	56.7%	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		5.0			5.0			5.0			5.0	
Lead/Lag												
Lead-Lag Optimize?												
Act Effct Green (s)		34.0			34.0			46.0			46.0	
Actuated g/C Ratio		0.38			0.38			0.51			0.51	
v/c Ratio		0.56			0.44			0.84			0.69	
Control Delay		22.5			22.3			30.4			21.6	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		22.5			22.3			30.4			21.6	
LOS		C			C			C			C	
Approach Delay		22.5			22.3			30.4			21.6	
Approach LOS		C			C			C			C	
Queue Length 50th (ft)		133			107			319			249	
Queue Length 95th (ft)		217			174			#537			368	
Internal Link Dist (ft)		251			274			420			150	
Turn Bay Length (ft)												
Base Capacity (vph)		642			623			821			891	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.56			0.44			0.84			0.69	

Intersection Summary	
Area Type:	Other
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 90	

Control Type: Pretimed	
Maximum v/c Ratio: 0.84	
Intersection Signal Delay: 25.0	Intersection LOS: C
Intersection Capacity Utilization 88.9%	ICU Level of Service E
Analysis Period (min) 15	

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

Splits and Phases: 110: Valley Street & Third Street



Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	6	8	1	34	4	460	9	5	634	9
Future Vol, veh/h	0	0	6	8	1	34	4	460	9	5	634	9
Conflicting Peds, #/hr	13	0	1	1	0	13	35	0	34	34	0	35
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0	0	3	0	0	2	0
Mvmt Flow	0	0	6	8	1	36	4	484	9	5	667	9

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1245	1252	708	1217	1252	536	711	0	0	527	0	0
Stage 1	717	717	-	531	531	-	-	-	-	-	-	-
Stage 2	528	535	-	686	721	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	152	174	438	159	174	549	898	-	-	1050	-	-
Stage 1	424	437	-	536	529	-	-	-	-	-	-	-
Stage 2	538	527	-	441	435	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	133	161	423	150	161	525	868	-	-	1016	-	-
Mov Cap-2 Maneuver	133	161	-	150	161	-	-	-	-	-	-	-
Stage 1	407	419	-	516	509	-	-	-	-	-	-	-
Stage 2	491	507	-	431	417	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	13.6	17	0.1	0.1
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	868	-	-	423	346	1016	-	-
HCM Lane V/C Ratio	0.005	-	-	0.015	0.131	0.005	-	-
HCM Control Delay (s)	9.2	0	-	13.6	17	8.6	0	-
HCM Lane LOS	A	A	-	B	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0.4	0	-	-

Intersection	
Int Delay, s/veh	0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	4	12	450	13	14	617
Future Vol, veh/h	4	12	450	13	14	617
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	0	0	0	2	0	2
Mvmt Flow	4	13	469	14	15	643

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1149	476	0	0	483	0
Stage 1	476	-	-	-	-	-
Stage 2	673	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	221	593	-	-	1090	-
Stage 1	629	-	-	-	-	-
Stage 2	511	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	216	593	-	-	1090	-
Mov Cap-2 Maneuver	216	-	-	-	-	-
Stage 1	616	-	-	-	-	-
Stage 2	511	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	14.1	0	0.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	413	1090	-
HCM Lane V/C Ratio	-	-	0.04	0.013	-
HCM Control Delay (s)	-	-	14.1	8.3	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Intersection	
Int Delay, s/veh	3.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	6	0	8	22	11	40	16	135	0	0	95	12
Future Vol, veh/h	6	0	8	22	11	40	16	135	0	0	95	12
Conflicting Peds, #/hr	24	0	3	3	0	24	24	0	44	44	0	24
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	0	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	64	64	64	64	64	64	64	64	64	64	64	64
Heavy Vehicles, %	0	0	0	0	0	0	6	1	0	0	0	8
Mvmt Flow	9	0	13	34	17	63	25	211	0	0	148	19

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	507	443	185	428	452	235	191	0	-	-	-	0
Stage 1	182	182	-	261	261	-	-	-	-	-	-	-
Stage 2	325	261	-	167	191	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.16	-	-	-	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.254	-	-	-	-	-
Pot Cap-1 Maneuver	479	512	862	541	506	809	1359	-	0	0	-	-
Stage 1	824	753	-	748	696	-	-	-	0	0	-	-
Stage 2	692	696	-	840	746	-	-	-	0	0	-	-
Platoon blocked, %								-			-	-
Mov Cap-1 Maneuver	403	489	840	523	484	791	1328	-	-	-	-	-
Mov Cap-2 Maneuver	403	489	-	523	484	-	-	-	-	-	-	-
Stage 1	789	736	-	732	681	-	-	-	-	-	-	-
Stage 2	594	681	-	825	729	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	11.5	11.3	0.8	0
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	WBLn1	WBLn2	SBT	SBR
Capacity (veh/h)	1328	-	573	523	696	-	-
HCM Lane V/C Ratio	0.019	-	0.038	0.066	0.114	-	-
HCM Control Delay (s)	7.8	0	11.5	12.4	10.8	-	-
HCM Lane LOS	A	A	B	B	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.1	0.2	0.4	-	-

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	3	1	2	5	0	15	0	552	23	6	612	2
Future Vol, veh/h	3	1	2	5	0	15	0	552	23	6	612	2
Conflicting Peds, #/hr	3	0	1	1	0	3	21	0	12	12	0	21
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	0	0	0	0	0	0	0	1	0	0	1	0
Mvmt Flow	3	1	2	6	0	17	0	620	26	7	688	2

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1369	1382	711	1351	1370	648	711	0	0	658	0	0
Stage 1	724	724	-	645	645	-	-	-	-	-	-	-
Stage 2	645	658	-	706	725	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	125	145	436	129	148	474	898	-	-	939	-	-
Stage 1	420	433	-	464	471	-	-	-	-	-	-	-
Stage 2	464	464	-	430	433	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	117	139	427	125	142	467	880	-	-	928	-	-
Mov Cap-2 Maneuver	117	139	-	125	142	-	-	-	-	-	-	-
Stage 1	412	419	-	459	466	-	-	-	-	-	-	-
Stage 2	446	459	-	421	419	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	28.5	19.1	0	0.1
HCM LOS	D	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	880	-	-	160	277	928	-	-
HCM Lane V/C Ratio	-	-	-	0.042	0.081	0.007	-	-
HCM Control Delay (s)	0	-	-	28.5	19.1	8.9	0	-
HCM Lane LOS	A	-	-	D	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.3	0	-	-

Intersection	
Int Delay, s/veh	0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	6	8	589	15	9	615
Future Vol, veh/h	6	8	589	15	9	615
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	0	0	1	0	0	1
Mvmt Flow	7	9	662	17	10	691

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1382	671	0	0	679	0
Stage 1	671	-	-	-	-	-
Stage 2	711	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	160	460	-	-	923	-
Stage 1	512	-	-	-	-	-
Stage 2	490	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	157	460	-	-	923	-
Mov Cap-2 Maneuver	157	-	-	-	-	-
Stage 1	503	-	-	-	-	-
Stage 2	490	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	20.2	0	0.1
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	252	923	-
HCM Lane V/C Ratio	-	-	0.062	0.011	-
HCM Control Delay (s)	-	-	20.2	8.9	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0	-

Intersection	
Int Delay, s/veh	2.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	27	0	4	3	11	9	5	99	0	0	81	5
Future Vol, veh/h	27	0	4	3	11	9	5	99	0	0	81	5
Conflicting Peds, #/hr	1	0	3	3	0	1	9	0	5	5	0	9
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	0	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	85	85	85	85	85	85	85	85	85	85	85
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	32	0	5	4	13	11	6	116	0	0	95	6

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	248	235	110	232	238	117	110	0	-	-	-	0
Stage 1	107	107	-	128	128	-	-	-	-	-	-	-
Stage 2	141	128	-	104	110	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	-	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	-	-	-
Pot Cap-1 Maneuver	710	669	949	727	666	941	1493	-	0	0	-	-
Stage 1	903	811	-	881	794	-	-	-	0	0	-	-
Stage 2	867	794	-	907	808	-	-	-	0	0	-	-
Platoon blocked, %								-			-	-
Mov Cap-1 Maneuver	683	660	938	719	657	940	1480	-	-	-	-	-
Mov Cap-2 Maneuver	683	660	-	719	657	-	-	-	-	-	-	-
Stage 1	891	804	-	877	791	-	-	-	-	-	-	-
Stage 2	839	791	-	900	801	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.4	9.9	0.4	0
HCM LOS	B	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	WBLn1	WBLn2	SBT	SBR
Capacity (veh/h)	1480	-	708	719	760	-	-
HCM Lane V/C Ratio	0.004	-	0.052	0.005	0.031	-	-
HCM Control Delay (s)	7.4	0	10.4	10	9.9	-	-
HCM Lane LOS	A	A	B	B	A	-	-
HCM 95th %tile Q(veh)	0	-	0.2	0	0.1	-	-

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	6	8	1	35	4	479	9	5	660	9
Future Vol, veh/h	0	0	6	8	1	35	4	479	9	5	660	9
Conflicting Peds, #/hr	13	0	1	1	0	13	35	0	34	34	0	35
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0	0	3	0	0	2	0
Mvmt Flow	0	0	6	8	1	37	4	504	9	5	695	9

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1294	1300	736	1265	1300	556	739	0	0	547	0	0
Stage 1	745	745	-	551	551	-	-	-	-	-	-	-
Stage 2	549	555	-	714	749	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	141	163	422	147	163	534	876	-	-	1033	-	-
Stage 1	409	424	-	522	519	-	-	-	-	-	-	-
Stage 2	524	516	-	425	422	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	123	150	408	138	150	510	847	-	-	1000	-	-
Mov Cap-2 Maneuver	123	150	-	138	150	-	-	-	-	-	-	-
Stage 1	393	407	-	502	499	-	-	-	-	-	-	-
Stage 2	476	496	-	415	405	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	14	17.7	0.1	0.1
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	847	-	-	408	330	1000	-	-
HCM Lane V/C Ratio	0.005	-	-	0.015	0.14	0.005	-	-
HCM Control Delay (s)	9.3	0	-	14	17.7	8.6	0	-
HCM Lane LOS	A	A	-	B	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0.5	0	-	-

Intersection	
Int Delay, s/veh	0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	4	12	468	14	15	642
Future Vol, veh/h	4	12	468	14	15	642
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	0	0	0	2	0	2
Mvmt Flow	4	13	488	15	16	669

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1197	496	0	0	503	0
Stage 1	496	-	-	-	-	-
Stage 2	701	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	207	578	-	-	1072	-
Stage 1	616	-	-	-	-	-
Stage 2	496	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	202	578	-	-	1072	-
Mov Cap-2 Maneuver	202	-	-	-	-	-
Stage 1	601	-	-	-	-	-
Stage 2	496	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	14.5	0	0.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	394	1072	-
HCM Lane V/C Ratio	-	-	0.042	0.015	-
HCM Control Delay (s)	-	-	14.5	8.4	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Intersection	
Int Delay, s/veh	3.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	6	0	8	23	11	42	17	140	0	0	99	12
Future Vol, veh/h	6	0	8	23	11	42	17	140	0	0	99	12
Conflicting Peds, #/hr	24	0	3	3	0	24	24	0	44	44	0	24
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	0	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	64	64	64	64	64	64	64	64	64	64	64	64
Heavy Vehicles, %	0	0	0	0	0	0	6	1	0	0	0	8
Mvmt Flow	9	0	13	36	17	66	27	219	0	0	155	19

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	528	462	192	447	471	243	198	0	-	-	-	0
Stage 1	189	189	-	273	273	-	-	-	-	-	-	-
Stage 2	339	273	-	174	198	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.16	-	-	-	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.254	-	-	-	-	-
Pot Cap-1 Maneuver	464	500	855	525	494	801	1351	-	0	0	-	-
Stage 1	817	748	-	737	688	-	-	-	0	0	-	-
Stage 2	680	688	-	833	741	-	-	-	0	0	-	-
Platoon blocked, %								-			-	-
Mov Cap-1 Maneuver	388	478	833	507	472	783	1320	-	-	-	-	-
Mov Cap-2 Maneuver	388	478	-	507	472	-	-	-	-	-	-	-
Stage 1	780	731	-	720	672	-	-	-	-	-	-	-
Stage 2	580	672	-	818	724	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	11.7	11.4	0.8	0
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	WBLn1	WBLn2	SBT	SBR
Capacity (veh/h)	1320	-	558	507	689	-	-
HCM Lane V/C Ratio	0.02	-	0.039	0.071	0.12	-	-
HCM Control Delay (s)	7.8	0	11.7	12.6	10.9	-	-
HCM Lane LOS	A	A	B	B	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.1	0.2	0.4	-	-

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	3	1	2	5	0	16	0	574	24	6	637	2
Future Vol, veh/h	3	1	2	5	0	16	0	574	24	6	637	2
Conflicting Peds, #/hr	3	0	1	1	0	3	21	0	12	12	0	21
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	0	0	0	0	0	0	0	1	0	0	1	0
Mvmt Flow	3	1	2	6	0	18	0	645	27	7	716	2

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1423	1436	739	1405	1424	674	739	0	0	684	0	0
Stage 1	752	752	-	671	671	-	-	-	-	-	-	-
Stage 2	671	684	-	734	753	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	115	135	421	118	137	458	876	-	-	919	-	-
Stage 1	405	421	-	449	458	-	-	-	-	-	-	-
Stage 2	449	452	-	415	420	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	107	129	412	114	131	451	858	-	-	908	-	-
Mov Cap-2 Maneuver	107	129	-	114	131	-	-	-	-	-	-	-
Stage 1	397	407	-	444	453	-	-	-	-	-	-	-
Stage 2	430	447	-	406	406	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	30.5	19.9	0	0.1
HCM LOS	D	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	858	-	-	148	265	908	-	-
HCM Lane V/C Ratio	-	-	-	0.046	0.089	0.007	-	-
HCM Control Delay (s)	0	-	-	30.5	19.9	9	0	-
HCM Lane LOS	A	-	-	D	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.3	0	-	-

Intersection	
Int Delay, s/veh	0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	6	8	613	16	9	640
Future Vol, veh/h	6	8	613	16	9	640
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	0	0	1	0	0	1
Mvmt Flow	7	9	689	18	10	719

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1437	698	0	0	707	0
Stage 1	698	-	-	-	-	-
Stage 2	739	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	148	444	-	-	901	-
Stage 1	497	-	-	-	-	-
Stage 2	476	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	145	444	-	-	901	-
Mov Cap-2 Maneuver	145	-	-	-	-	-
Stage 1	488	-	-	-	-	-
Stage 2	476	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	21.3	0	0.1
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	236	901	-
HCM Lane V/C Ratio	-	-	0.067	0.011	-
HCM Control Delay (s)	-	-	21.3	9	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0	-

Intersection	
Int Delay, s/veh	2.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	28	0	4	3	11	9	5	103	0	0	84	5
Future Vol, veh/h	28	0	4	3	11	9	5	103	0	0	84	5
Conflicting Peds, #/hr	1	0	3	3	0	1	9	0	5	5	0	9
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	0	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	85	85	85	85	85	85	85	85	85	85	85
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	33	0	5	4	13	11	6	121	0	0	99	6

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	257	244	114	241	247	122	114	0	-	-	-	0
Stage 1	111	111	-	133	133	-	-	-	-	-	-	-
Stage 2	146	133	-	108	114	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	-	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	-	-	-
Pot Cap-1 Maneuver	700	661	944	717	659	935	1488	-	0	0	-	-
Stage 1	899	807	-	875	790	-	-	-	0	0	-	-
Stage 2	861	790	-	902	805	-	-	-	0	0	-	-
Platoon blocked, %								-			-	-
Mov Cap-1 Maneuver	673	652	933	709	650	934	1475	-	-	-	-	-
Mov Cap-2 Maneuver	673	652	-	709	650	-	-	-	-	-	-	-
Stage 1	887	800	-	872	787	-	-	-	-	-	-	-
Stage 2	833	787	-	895	798	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.5	9.9	0.3	0
HCM LOS	B	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	WBLn1	WBLn2	SBT	SBR
Capacity (veh/h)	1475	-	697	709	753	-	-
HCM Lane V/C Ratio	0.004	-	0.054	0.005	0.031	-	-
HCM Control Delay (s)	7.5	0	10.5	10.1	9.9	-	-
HCM Lane LOS	A	A	B	B	A	-	-
HCM 95th %tile Q(veh)	0	-	0.2	0	0.1	-	-

Intersection	
Int Delay, s/veh	2.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	25	3	26	8	3	35	22	479	9	5	660	31
Future Vol, veh/h	25	3	26	8	3	35	22	479	9	5	660	31
Conflicting Peds, #/hr	13	0	1	1	0	13	35	0	34	34	0	35
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0	0	3	0	0	2	0
Mvmt Flow	26	3	27	8	3	37	23	504	9	5	695	33

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1345	1350	748	1327	1362	556	763	0	0	547	0	0
Stage 1	757	757	-	589	589	-	-	-	-	-	-	-
Stage 2	588	593	-	738	773	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	130	152	416	134	149	534	859	-	-	1033	-	-
Stage 1	403	419	-	498	499	-	-	-	-	-	-	-
Stage 2	499	497	-	413	412	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	109	136	402	114	133	510	830	-	-	1000	-	-
Mov Cap-2 Maneuver	109	136	-	114	133	-	-	-	-	-	-	-
Stage 1	374	402	-	463	464	-	-	-	-	-	-	-
Stage 2	436	462	-	378	395	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	36.2	20.2	0.4	0.1
HCM LOS	E	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	830	-	-	171	285	1000	-	-
HCM Lane V/C Ratio	0.028	-	-	0.332	0.17	0.005	-	-
HCM Control Delay (s)	9.5	0	-	36.2	20.2	8.6	0	-
HCM Lane LOS	A	A	-	E	C	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	1.4	0.6	0	-	-

Intersection	
Int Delay, s/veh	0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	4	12	486	14	15	662
Future Vol, veh/h	4	12	486	14	15	662
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	0	0	0	2	0	2
Mvmt Flow	4	13	506	15	16	690

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1236	514	0	0	521	0
Stage 1	514	-	-	-	-	-
Stage 2	722	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	196	564	-	-	1056	-
Stage 1	605	-	-	-	-	-
Stage 2	485	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	191	564	-	-	1056	-
Mov Cap-2 Maneuver	191	-	-	-	-	-
Stage 1	590	-	-	-	-	-
Stage 2	485	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	14.9	0	0.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	379	1056	-
HCM Lane V/C Ratio	-	-	0.044	0.015	-
HCM Control Delay (s)	-	-	14.9	8.5	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Intersection	
Int Delay, s/veh	3.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	8	0	9	23	11	42	18	140	0	0	99	13
Future Vol, veh/h	8	0	9	23	11	42	18	140	0	0	99	13
Conflicting Peds, #/hr	24	0	3	3	0	24	24	0	44	44	0	24
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	0	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	64	64	64	64	64	64	64	64	64	64	64	64
Heavy Vehicles, %	0	0	0	0	0	0	6	1	0	0	0	8
Mvmt Flow	13	0	14	36	17	66	28	219	0	0	155	20

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	530	464	192	450	474	243	199	0	-	-	-	0
Stage 1	189	189	-	275	275	-	-	-	-	-	-	-
Stage 2	341	275	-	175	199	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.16	-	-	-	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.254	-	-	-	-	-
Pot Cap-1 Maneuver	463	498	855	523	492	801	1350	-	0	0	-	-
Stage 1	817	748	-	736	686	-	-	-	0	0	-	-
Stage 2	678	686	-	832	740	-	-	-	0	0	-	-
Platoon blocked, %								-			-	-
Mov Cap-1 Maneuver	387	475	833	503	469	783	1319	-	-	-	-	-
Mov Cap-2 Maneuver	387	475	-	503	469	-	-	-	-	-	-	-
Stage 1	779	731	-	718	670	-	-	-	-	-	-	-
Stage 2	577	670	-	816	723	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	12	11.5	0.9	0
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	WBLn1	WBLn2	SBT	SBR
Capacity (veh/h)	1319	-	540	503	687	-	-
HCM Lane V/C Ratio	0.021	-	0.049	0.071	0.121	-	-
HCM Control Delay (s)	7.8	0	12	12.7	11	-	-
HCM Lane LOS	A	A	B	B	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.2	0.2	0.4	-	-

Intersection	
Int Delay, s/veh	6.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	6	0	42	15	0	48
Future Vol, veh/h	6	0	42	15	0	48
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	63	63	63	63	63	63
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	10	0	67	24	0	76

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	10	0	168	10
Stage 1	-	-	-	-	10	-
Stage 2	-	-	-	-	158	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1610	-	822	1071
Stage 1	-	-	-	-	1013	-
Stage 2	-	-	-	-	871	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1610	-	787	1071
Mov Cap-2 Maneuver	-	-	-	-	787	-
Stage 1	-	-	-	-	970	-
Stage 2	-	-	-	-	871	-

Approach	EB	WB	NB
HCM Control Delay, s	0	5.4	8.6
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1071	-	-	1610	-
HCM Lane V/C Ratio	0.071	-	-	0.041	-
HCM Control Delay (s)	8.6	-	-	7.3	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0.1	-

Intersection	
Int Delay, s/veh	2.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	27	4	22	5	4	16	26	574	24	6	637	34
Future Vol, veh/h	27	4	22	5	4	16	26	574	24	6	637	34
Conflicting Peds, #/hr	3	0	1	1	0	3	21	0	12	12	0	21
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	0	0	0	0	0	0	0	1	0	0	1	0
Mvmt Flow	30	4	24	5	4	18	29	631	26	7	700	37

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1470	1481	741	1462	1486	659	758	0	0	669	0	0
Stage 1	754	754	-	714	714	-	-	-	-	-	-	-
Stage 2	716	727	-	748	772	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	106	127	420	108	126	467	862	-	-	931	-	-
Stage 1	404	420	-	425	438	-	-	-	-	-	-	-
Stage 2	424	432	-	408	412	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	92	115	411	93	114	460	845	-	-	920	-	-
Mov Cap-2 Maneuver	92	115	-	93	114	-	-	-	-	-	-	-
Stage 1	375	406	-	397	410	-	-	-	-	-	-	-
Stage 2	381	404	-	375	398	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	48.4	25.6	0.4	0.1
HCM LOS	E	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	845	-	-	139	202	920	-	-
HCM Lane V/C Ratio	0.034	-	-	0.419	0.136	0.007	-	-
HCM Control Delay (s)	9.4	0	-	48.4	25.6	8.9	0	-
HCM Lane LOS	A	A	-	E	D	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	1.8	0.5	0	-	-

Intersection	
Int Delay, s/veh	0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	6	8	639	16	9	660
Future Vol, veh/h	6	8	639	16	9	660
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	0	0	1	0	0	1
Mvmt Flow	7	9	718	18	10	742

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1489	727	0	0	736	0
Stage 1	727	-	-	-	-	-
Stage 2	762	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	138	427	-	-	879	-
Stage 1	482	-	-	-	-	-
Stage 2	464	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	135	427	-	-	879	-
Mov Cap-2 Maneuver	135	-	-	-	-	-
Stage 1	473	-	-	-	-	-
Stage 2	464	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	22.4	0	0.1
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	222	879	-
HCM Lane V/C Ratio	-	-	0.071	0.012	-
HCM Control Delay (s)	-	-	22.4	9.1	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0	-

Intersection	
Int Delay, s/veh	2.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	30	0	5	3	11	9	7	103	0	0	84	7
Future Vol, veh/h	30	0	5	3	11	9	7	103	0	0	84	7
Conflicting Peds, #/hr	1	0	3	3	0	1	9	0	5	5	0	9
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	0	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	85	85	85	85	85	85	85	85	85	85	85
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	35	0	6	4	13	11	8	121	0	0	99	8

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	262	249	115	246	253	122	116	0	-	-	-	0
Stage 1	112	112	-	137	137	-	-	-	-	-	-	-
Stage 2	150	137	-	109	116	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	-	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	-	-	-
Pot Cap-1 Maneuver	695	657	943	712	654	935	1485	-	0	0	-	-
Stage 1	898	807	-	871	787	-	-	-	0	0	-	-
Stage 2	857	787	-	901	803	-	-	-	0	0	-	-
Platoon blocked, %								-			-	-
Mov Cap-1 Maneuver	667	647	932	702	644	934	1472	-	-	-	-	-
Mov Cap-2 Maneuver	667	647	-	702	644	-	-	-	-	-	-	-
Stage 1	885	800	-	866	782	-	-	-	-	-	-	-
Stage 2	827	782	-	893	796	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.5	10	0.5	0
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	WBLn1	WBLn2	SBT	SBR
Capacity (veh/h)	1472	-	695	702	749	-	-
HCM Lane V/C Ratio	0.006	-	0.059	0.005	0.031	-	-
HCM Control Delay (s)	7.5	0	10.5	10.2	10	-	-
HCM Lane LOS	A	A	B	B	B	-	-
HCM 95th %tile Q(veh)	0	-	0.2	0	0.1	-	-

Intersection	
Int Delay, s/veh	7.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	6	0	62	2	0	47
Future Vol, veh/h	6	0	62	2	0	47
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	67	67	67	67	67	67
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	9	0	93	3	0	70

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	9	0	198	9
Stage 1	-	-	-	-	9	-
Stage 2	-	-	-	-	189	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1611	-	791	1073
Stage 1	-	-	-	-	1014	-
Stage 2	-	-	-	-	843	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1611	-	745	1073
Mov Cap-2 Maneuver	-	-	-	-	745	-
Stage 1	-	-	-	-	955	-
Stage 2	-	-	-	-	843	-

Approach	EB	WB	NB
HCM Control Delay, s	0	7.1	8.6
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1073	-	-	1611	-
HCM Lane V/C Ratio	0.065	-	-	0.057	-
HCM Control Delay (s)	8.6	-	-	7.4	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0.2	-