

Traffic Engineering, Transportation Planning & Design

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David R. Shropshire, PE, PP
A Andrew Feranda, PE, PTOE, CME
Randal C. Barranger, PE
Nathan B. Mosley, PE, CME

May 16, 2025

Mr. Jason M. Fogler, PE
MidAtlantic Engineering Partners
1971 Highway 34 - Suite 201
Wall Township, NJ 07719

(via email: JFogler@MidAtlanticEng.com)

Re: **Traffic Engineering Assessment
Beachway Avenue Residential
Keansburg Borough, Monmouth County, NJ
SA Project No. 24334**

Dear Jay:

At your request, Shropshire Associates prepared this Traffic Engineering Assessment for the proposed residential development along Beachway Avenue in the Borough of Keansburg, Monmouth County. The site is currently vacant and has two (2) curb openings along Beachway Avenue. The proposal is to construct three-story multi-family buildings with a total of 64 units and corresponding site improvements for access circulation and parking. A total of 142 parking spaces will be provided. The site has two (2) existing driveways along Beachway Avenue that will be improved for the future site. The purpose of this assessment is to determine the amount of traffic to be generated by the proposed residential development and to analyze the impact of site traffic on the adjacent roadway network.

Existing Conditions

A field reconnaissance was conducted to determine the features of the adjacent roadways in the study area. A brief description of the roadways and intersections within the study area are provided below.

In the vicinity of the site, **Beachway Avenue** is a two (2) lane local roadway under the jurisdiction of the Borough of Keansburg. Beachway Avenue has an approximate cartway width of 24 feet with one (1) 12 foot lane in each direction. The posted speed limit along this section of Beachway Avenue is 25 MPH. For the purpose of this study, Beachway Avenue is assumed to extend in a general north-south direction.

In the vicinity of the site, **Oakwood Place** is a two (2) lane local roadway under the jurisdiction of the Borough of Keansburg. Oakwood Place has an approximate cartway width of 30 feet with one (1) 15 foot lane in each direction. The posted speed limit along this section of Oakwood Place is 25 MPH. For the purpose of this study, Oakwood Place is assumed to extend in a general east-west direction.



In the vicinity of the site, **Seabreeze Way** is a two (2) lane local roadway under the jurisdiction of the Borough of Keansburg. Seabreeze Way has an approximate cartway width of 26 feet with one (1) 13 foot lane in each direction. The posted speed limit along Seabreeze Way is 25 MPH. For the purpose of this study, Seabreeze Way is assumed to extend in a general east-west direction.

In the vicinity of the site, **Charles Avenue** is a two (2) lane local roadway under the jurisdiction of the Borough of Keansburg. Charles Avenue has an approximate cartway width of 28 feet with one (1) 14 foot lane in each direction. The posted speed limit along Charles Avenue is 25 MPH. For the purpose of this study, Charles Avenue is assumed to extend in a general north-south direction.

The **Beachway Avenue/Oakwood Place** intersection is a T-type intersection that is stop-controlled along the westbound Oakwood Place approach. All approaches consist of a single lane for all permitted units.

The **Beachway Avenue/Seabreeze Way/Charles Avenue** intersection is a four-way intersection that is stop-controlled along the eastbound Charles Avenue approach and the westbound Seabreeze Way approach. All approaches consist of a single lane for all permitted movements.

Traffic Count Data

To determine the amount of traffic on the adjacent roadway network, manual turning movement counts (MTMC) were conducted on Thursday, May 25, 2023 during the morning (7:00AM-9:00AM) and afternoon (4:00PM-6:00PM) commuter peak periods. A summary of the traffic counts can be found in the appendix to this assessment, with the existing AM and PM peak hour volumes shown in Figure 1.

Future Conditions

The traffic resulting from the proposed development will not affect the adjacent roadway network until it is fully built-out and occupied, which is anticipated to be by the year 2027.

An NJDOT prescribed seasonal factor of 1.014% was applied to adjust existing volumes to account for the additional traffic in the vicinity of the site during the peak time of year. It can be expected that the traffic volumes along the adjacent roadway network will increase as a result of other developments in the area of the site and general area traffic growth.

Based on the *Annual Background Growth Table* prepared by the New Jersey Department of Transportation (NJDOT), a 2.75% annual traffic growth is projected along Beachway Avenue vicinity of the site. By applying a 2.75% annual growth rate to the respective 2027 roadway volumes, the 2027 No-Build volumes were estimated and are shown on Figure 2.

Trip Generation

The proposed development includes three (3) four-story condominium buildings with a total of 64 units. The amount of traffic to be generated by the proposed condominium can best be estimated based on data published by the Institute of Transportation Engineers (ITE). ITE has compiled data from thousands of studies for various land uses, independent variables and study periods, and published the results in *Trip Generation, 11th Edition*. The proposed



development is most similar to ITE Land Use 221: Multifamily Housing (Mid Rise). The detailed trip generation worksheets are attached for reference. The trips generated by the proposed development are summarized in Table 1.

Table 1						
ITE Trip Generation - Beachway Avenue Condominiums						
Land Use	AM Peak Hour			PM Peak Hour		
	In	Out	Total	In	Out	Total
Residential Condos (64 Units)	5	19	24	15	10	25

The site traffic generated by this development was distributed to the adjacent roadway network in a manner in which residents are expected to travel. The site trips were assigned based on existing traffic distributions in the vicinity of the site. The resulting trip distributions and site traffic assignments are illustrated on Figure 3 and 4; respectively. In order to project the 2027 Build traffic conditions, the 2027 No-Build traffic volumes (Figure 2) were combined with the site traffic assignments (Figure 4). The 2027 Build traffic volumes are illustrated on Figure 5.

Operational Analysis

In order to measure the quality of the traffic flow for the adjacent roadway and proposed driveways, capacity analyses have been completed based upon the methods outlined in the *2010 Highway Capacity Manual*. Capacity analysis is a procedure used to estimate the ability of the roadway network to carry traffic. Capacity analyses are performed based on a Level of Service methodology. Level of Service (LOS) is a qualitative measure that characterizes the operational conditions of a roadway or intersection based on the perceptions by motorists and passengers. Levels of Service are defined for each type of facility (i.e. freeways, highways, signalized intersections, unsignalized intersections). These Levels of Service range from LOS A to LOS F, with a LOS A representing the best operating conditions and a LOS F representing the worst operating conditions.

The determination for the Level of Service for an unsignalized intersection is based upon the average control delay associated with each minor movement (i.e. yielding left-turn movements from the major roads and stop-controlled movements from the minor approaches). The Level of Service criteria for unsignalized intersections is summarized below in Table 2.

Table 2	
Level of Service Criteria	
Level of Service	Unsignalized Delay (sec)
A	≤ 10
B	> 10 and ≤ 15
C	> 15 and ≤ 25
D	> 25 and ≤ 35
E	> 35 and ≤ 50
F	> 50



In order to assess the traffic impact of the proposed development, the roadway network was evaluated under the Existing, 2027 No-Build and 2027 Build conditions using the above-described methodology. A detailed description of the study intersections' operations under the three scenarios is provided below, with the resulting Existing, No-Build and Build Levels of Service illustrated on Figures 6, 7, and 8; respectively. The capacity analysis worksheets are attached for reference.

Beachway Avenue/Seabreeze Way/Charles Avenue Intersection

Under the Existing conditions, all individual movements at the intersection currently operate with LOS A during the weekday AM and weekday PM peak hours with the exception of the westbound Seabreeze Way approach which operates with LOS B during the weekday AM and weekday PM peak hours.

Under the 2027 No-Build conditions, all individual movements will continue to operate at existing levels of service.

Under the 2027 Build conditions all individual movements will continue to operate at 2027 No-Build levels of service with the exception of the eastbound Charles Avenue approach which will operate at LOS B during the weekday PM peak hour.

Beachway Avenue/Oakwood Place Intersection

Under the Existing conditions, all individual movements at the intersection currently operate with LOS A during the weekday AM and weekday PM peak hours.

Under the 2027 No-Build and Build scenarios, all individual movements will continue to operate at existing levels of service, LOS A.

Site Driveways/Beachway Avenue Intersections

Under the 2027 Build conditions, two (2) new driveways will be constructed along southbound Beachway Avenue to provide access to the proposed development. With all the driveways, the northbound Beachway Avenue conflicting left-turn movements will operate at a LOS A during the weekday AM and weekday PM peak hours. Both the outbound driveway movements will operate at a LOS A during both the weekday AM and the weekday PM peak hours.

Air Quality Analysis

NJDEP Protocol

The New Jersey Department of Environmental Protection (NJDEP) outlines an air quality evaluation protocol in *Air Quality Analysis for Intersections*. NJDEP requires dispersion modeling to demonstrate that the National Ambient Air Quality Standards (NAAQS) for carbon monoxide will not be exceeded due to the additional traffic to be generated by a proposed development. As per N.J.A.C. 7:27-13.5, carbon monoxide concentrations shall not exceed 35 ppm for one-hour average concentrations and 9 ppm for eight-hour average concentrations.



Levels of service (LOS) results are the basis for determining whether or not an intersection requires dispersion modeling. Generally, a LOS A, B or C indicates that vehicle delays at an intersection are not significant enough to generate excessive CO concentrations. At signalized intersections, any movement that functions at a LOS D, E or F requires CO dispersion modeling. For unsignalized intersections, a LOS E or F on the stop-controlled approaches, and a LOS D, E or F for the major street left-turn movement indicates the need for CO dispersion modeling.

Data Analysis

The intersections to be analyzed for air quality violations are dependent on the levels of service at each intersection. Based on the levels of service presented in this Traffic Engineering Assessment report and the NJDEP protocol, dispersion modeling is not required for any existing and future study intersections.

Site Layout

The proposal is to construct a total of 64 condominium units to be located along the ocean side of Beachway Avenue in three (3) separate four-story buildings. Buildings # 1 and # 3 on each end have 20 units and Building # 2 in the middle has 24 units. Each building has underdeck garages and driveways providing 88 parking spaces. Additionally, there are 44 shared parking spaces onsite including seven (7) handicap (HC) parking spaces and seven (7) electronic vehicle (EV) charging spaces. One of the EV charging spaces is HC accessible.

The site will have two (2) full movement driveways along Beachway Avenue that provide access to 24 ft wide two-way circulation aisle that loops around the buildings. The circulation aisle around the building is designated for No Parking as a Fire Lane. Sidewalk is provided along the site's Beachway Avenue frontage and connecting sidewalk and crosswalks are provided onsite. Additionally, 14 parallel parking spaces will be provided along Beachway Avenue.

Conclusion

Based on the traffic analysis provided in this report, the proposed residential development, including 64 units, will have a minimal impact on the adjacent roadway network and the study intersections based on the following findings:

- The proposed site will generate 24 AM trips and 25 PM trips during the critical morning and afternoon peak hours. These trips will be distributed over two (2) driveways for access to Beachway Avenue.
- Under the Build conditions, all individual movements at the site driveway and study intersections will operate with a LOS B or better.
- Under the Build conditions, all the individual movements at the site driveways will operate at a LOS A.
- The site is designed to meet all applicable traffic design standards and requirements.

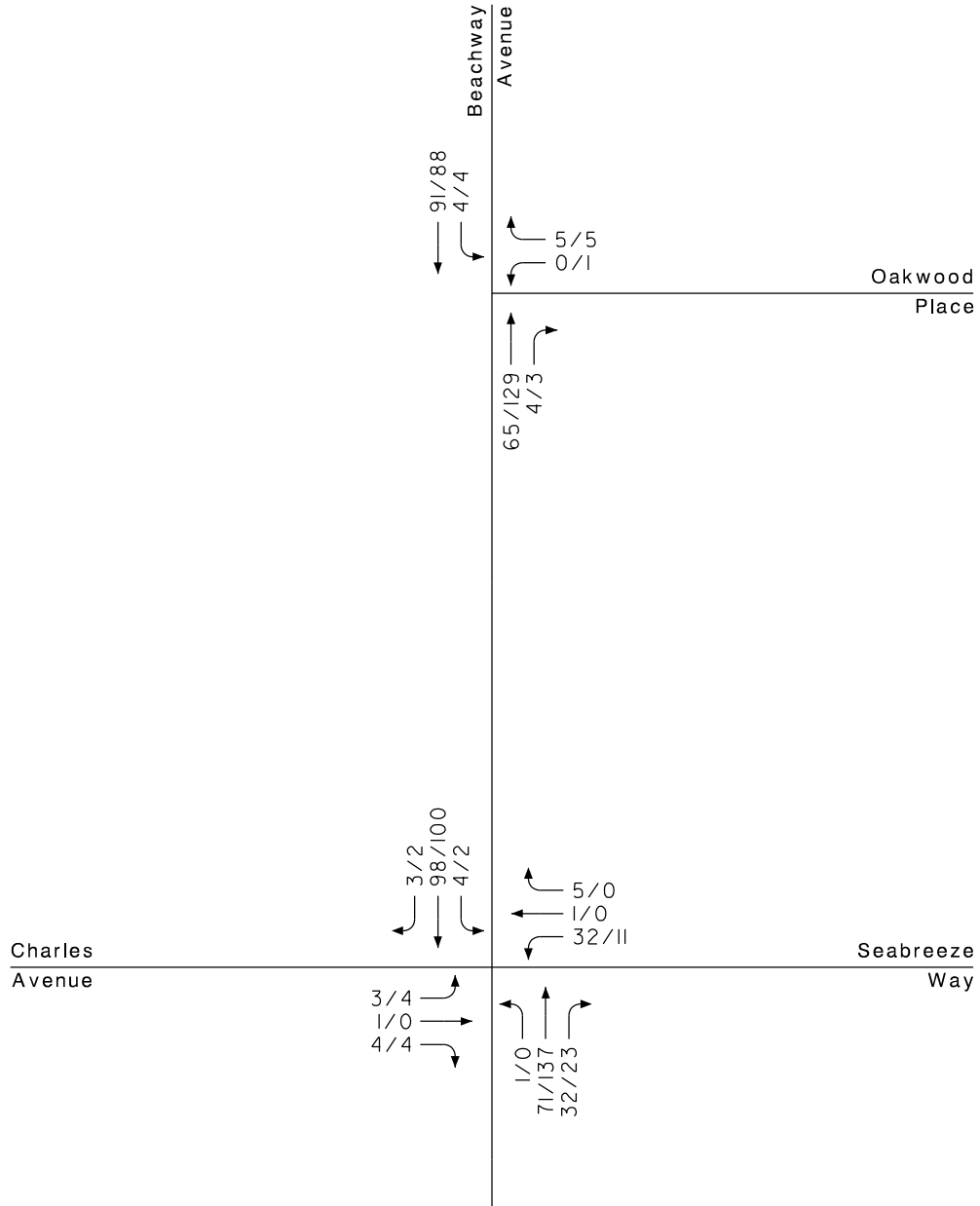


Please call if you have any questions.

Sincerely,
Shropshire Associates LLC

A handwritten signature in black ink that reads "A Andrew Feranda". The signature is written in a cursive, flowing style.

A Andrew Feranda, PE, PTOE, CME
Professional Engineer
N.J. License No. 42893
AAF/jab
Attachments

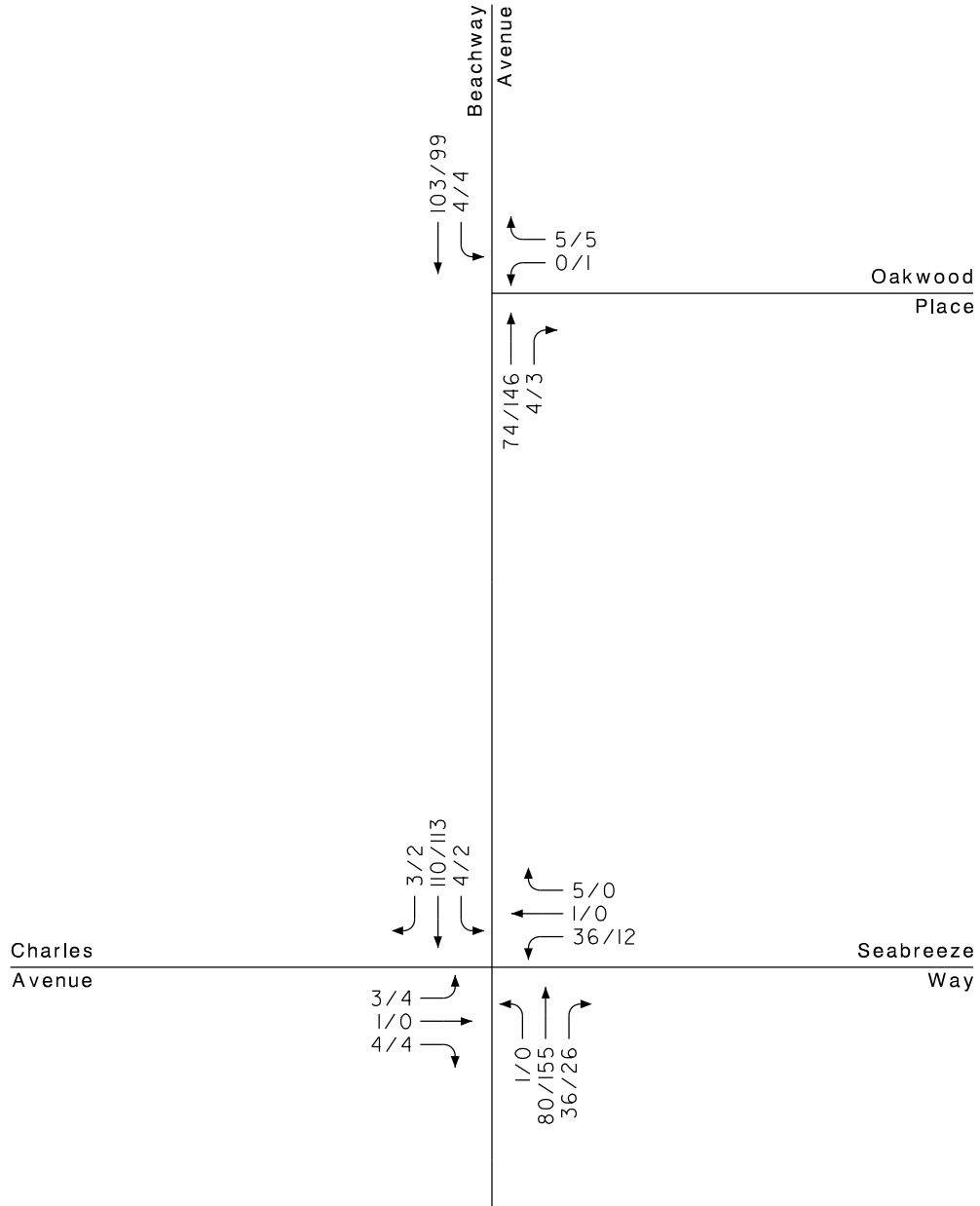
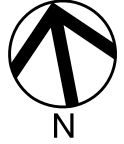


Beachway Avenue Residential Development

Keensburg Borough, Monmouth County, NJ

May 2025

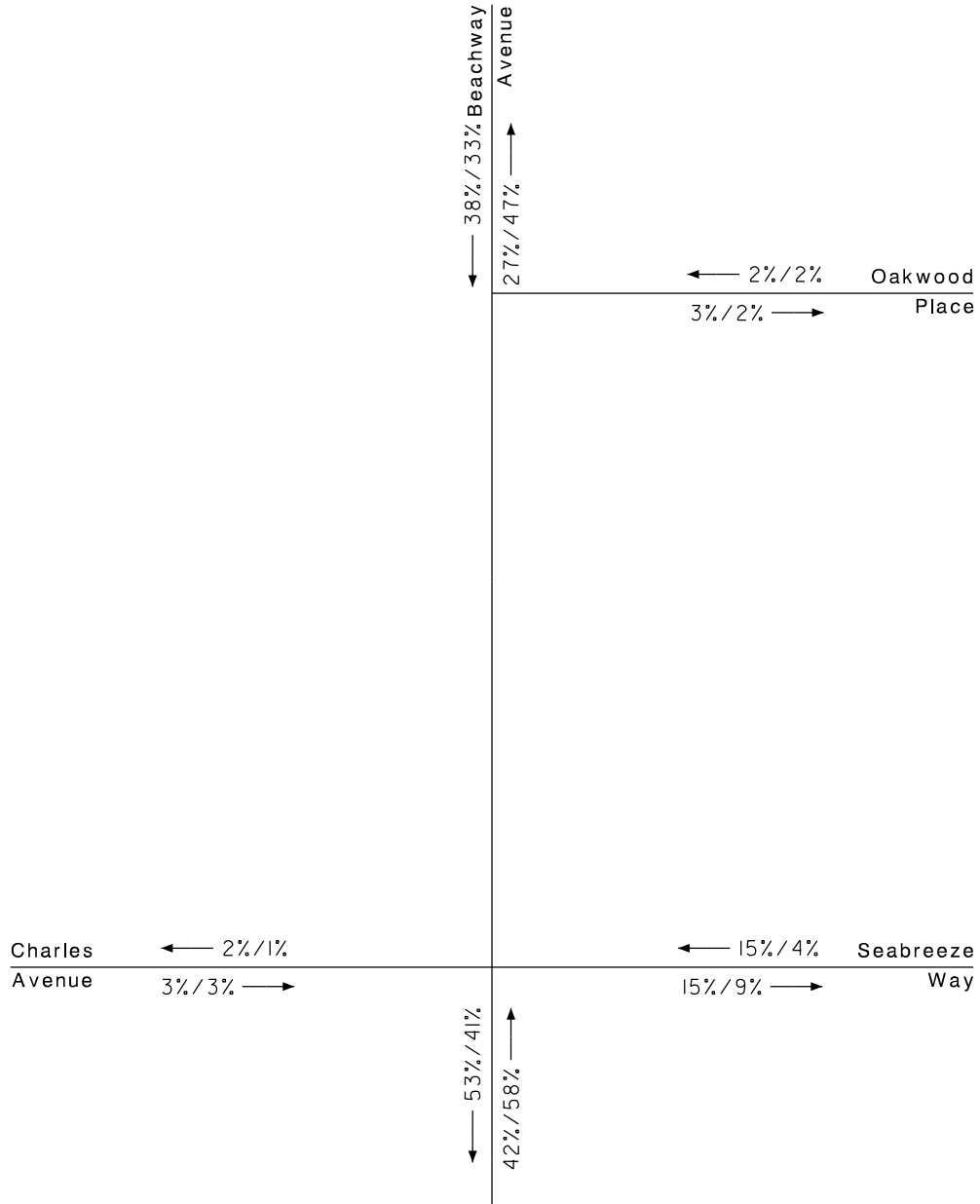
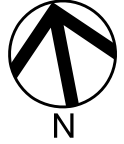
AM/PM PEAK HOUR



Beachway Avenue Residential Development

Keensburg Borough, Monmouth County, NJ
 May 2025

AM/PM PEAK HOUR

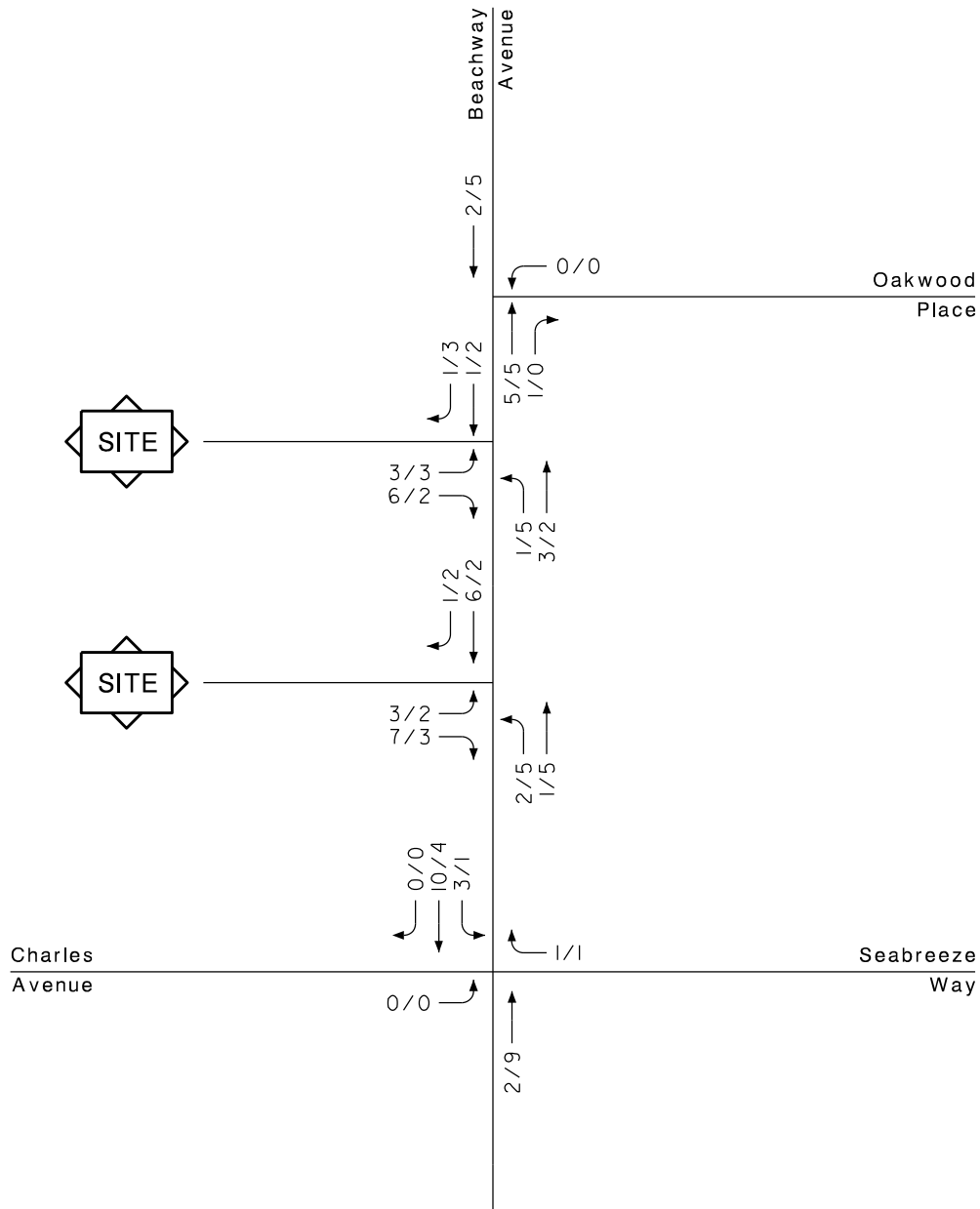
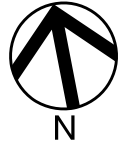


Beachway Avenue Residential Development

Keensburg Borough, Monmouth County, NJ

May 2025

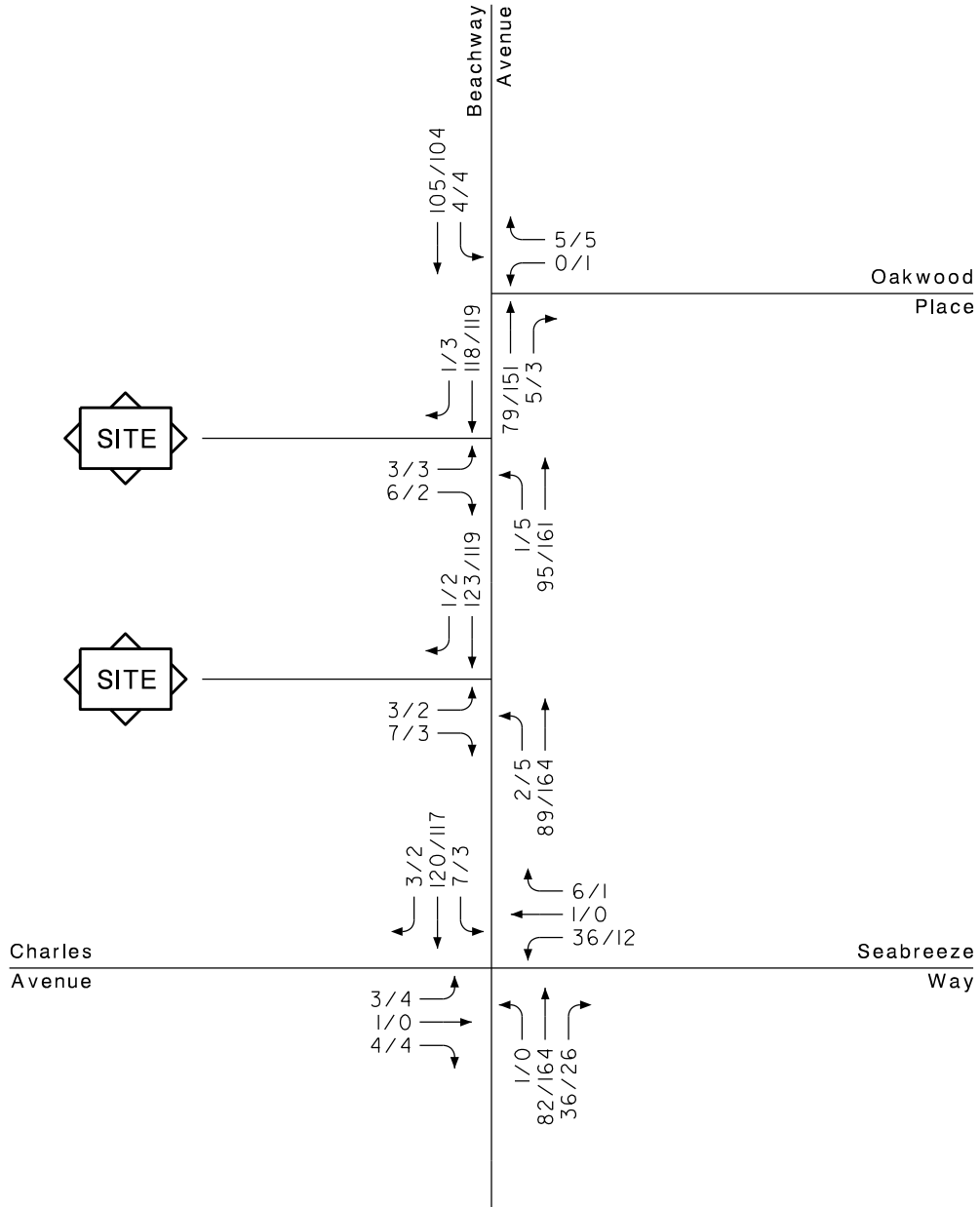
AM/PM PEAK HOUR



Beachway Avenue Residential Development

Keensburg Borough, Monmouth County, NJ
 May 2025

AM/PM PEAK HOUR

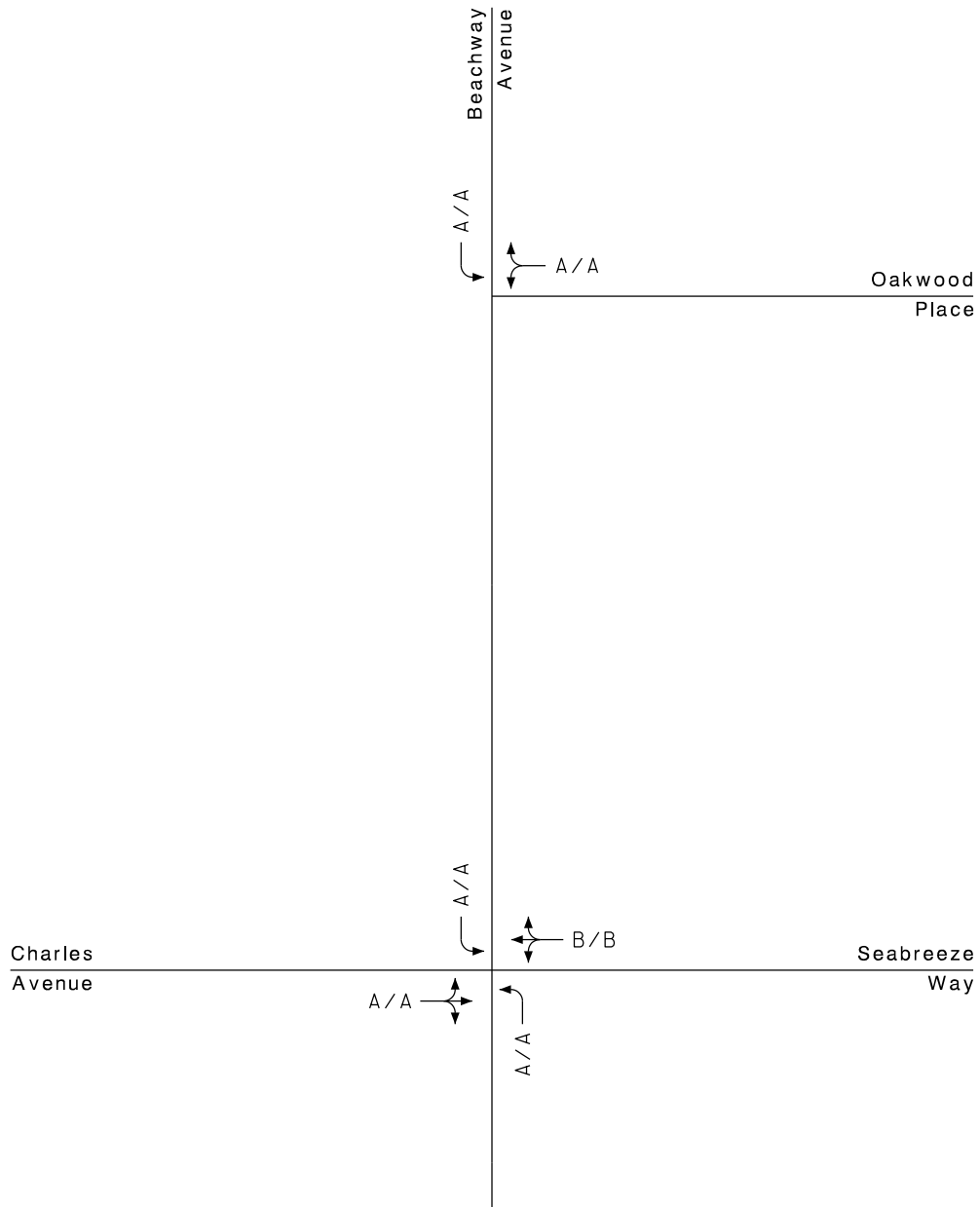


Beachway Avenue Residential Development

Keensburg Borough, Monmouth County, NJ

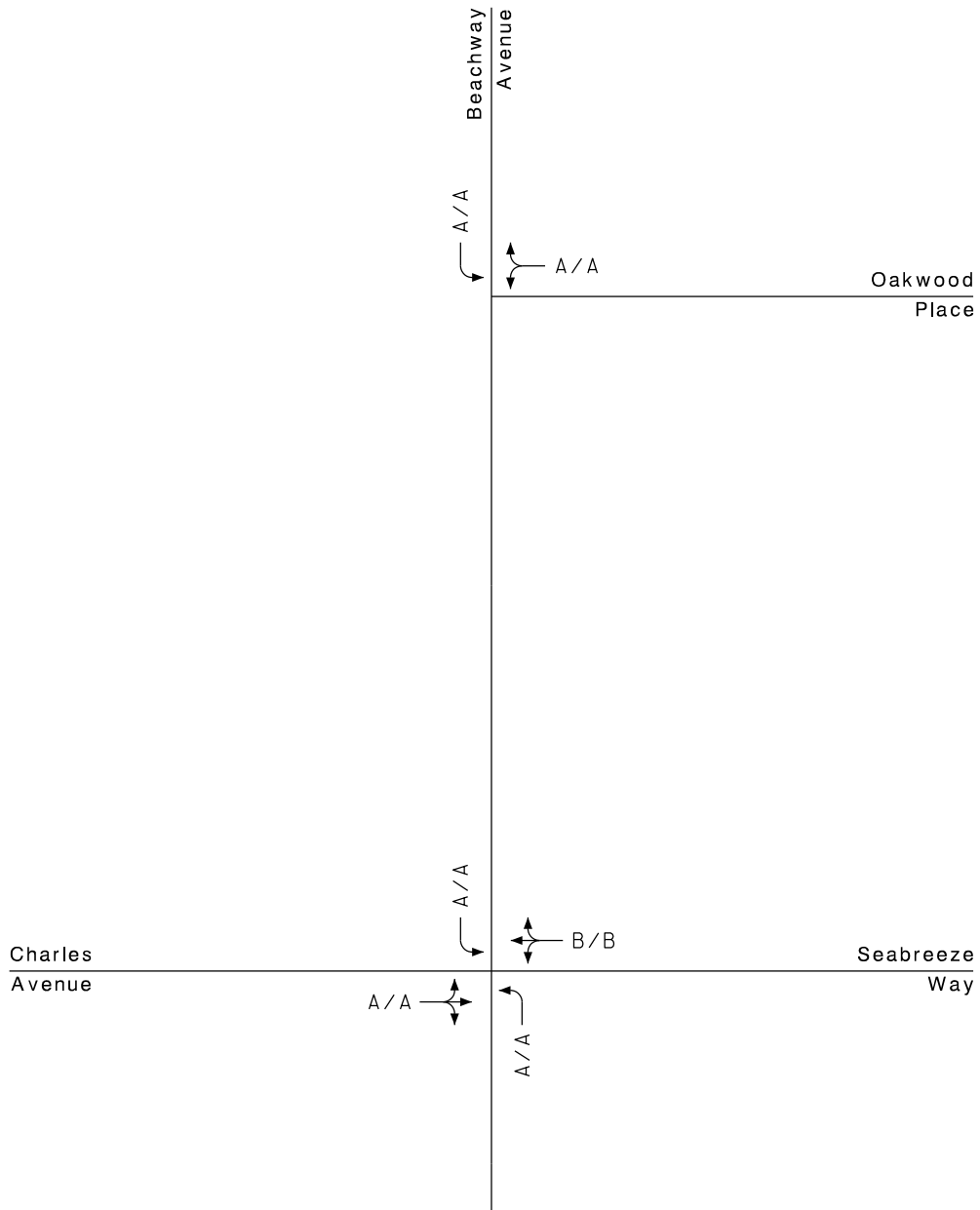
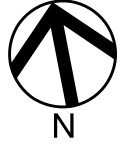
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AM/PM PEAK HOUR



Beachway Avenue Residential Development Keensburg Borough, Monmouth County, NJ May 2025

AM/PM PEAK HOUR

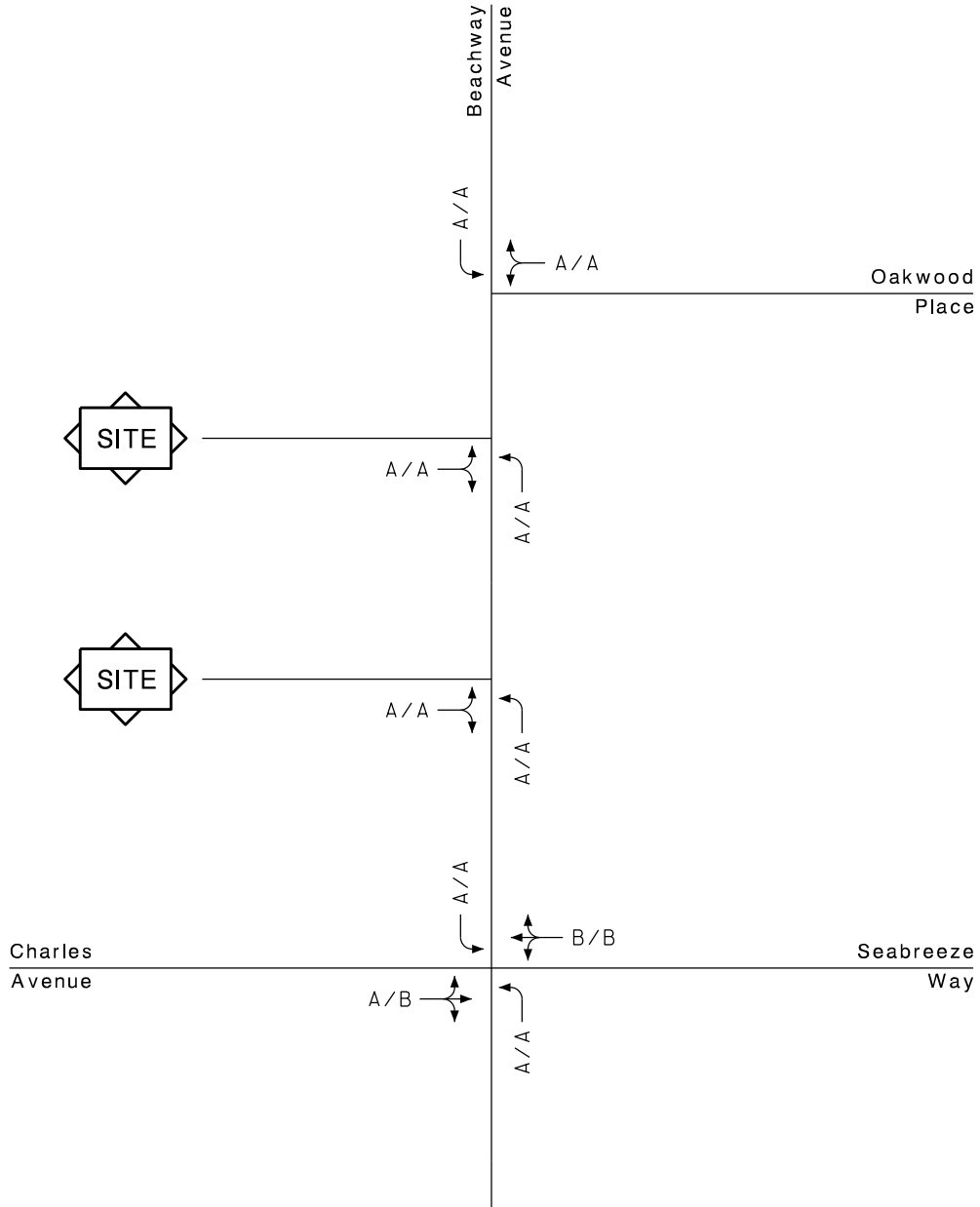
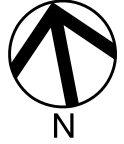


Beachway Avenue Residential Development

Keensburg Borough, Monmouth County, NJ

May 2025

AM/PM PEAK HOUR



Beachway Avenue Residential Development

Keensburg Borough, Monmouth County, NJ

May 2025

AM/PM PEAK HOUR

Shropshire Associates LLC

277 Whitehorse Pike, Suite 203

Atco, NJ 08004

N/S Route: Laurel Ave./Beachway Ave.
 E/W Route: Seabreeze Way/Charles Ave.
 Keansburg/Monmouth County/NJ
 Thursday/Clear/JH/D4-2870

File Name : 23131001
 Site Code : 23131001
 Start Date : 5/25/2023
 Page No : 1

Groups Printed- Unshifted - Tractor Trailers

Start Time	Beachway Ave. Southbound				Seabreeze Way Westbound				Laurel Ave. Northbound				Charles Ave. Eastbound				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
07:00 AM	1	27	1	29	4	0	8	12	3	20	0	23	4	0	1	5	69
07:15 AM	0	18	4	22	1	0	5	6	3	10	0	13	0	0	0	0	41
07:30 AM	3	25	2	30	2	1	8	11	6	10	0	16	3	0	0	3	60
07:45 AM	0	30	0	30	1	0	9	10	10	22	1	33	1	0	1	2	75
Total	4	100	7	111	8	1	30	39	22	62	1	85	8	0	2	10	245
08:00 AM	0	25	0	25	1	0	7	8	9	19	0	28	0	1	2	3	64
08:15 AM	0	18	2	20	1	0	8	9	7	20	0	27	0	0	0	0	56
08:30 AM	0	17	2	19	1	0	9	10	1	12	1	14	0	0	0	0	43
08:45 AM	0	19	1	20	1	0	4	5	2	21	0	23	0	0	0	0	48
Total	0	79	5	84	4	0	28	32	19	72	1	92	0	1	2	3	211
*** BREAK ***																	
04:00 PM	0	28	1	29	0	0	3	3	7	38	0	45	2	0	2	4	81
04:15 PM	0	21	0	21	0	0	4	4	2	38	0	40	1	0	1	2	67
04:30 PM	2	26	0	28	0	0	3	3	7	36	0	43	1	0	0	1	75
04:45 PM	0	25	1	26	0	0	1	1	7	25	0	32	0	0	1	1	60
Total	2	100	2	104	0	0	11	11	23	137	0	160	4	0	4	8	283
05:00 PM	0	24	0	24	1	0	2	3	1	39	0	40	1	0	0	1	68
05:15 PM	0	10	0	10	0	0	2	2	6	37	0	43	1	0	0	1	56
05:30 PM	0	30	0	30	0	0	5	5	2	32	1	35	1	0	0	1	71
05:45 PM	0	18	0	18	0	0	6	6	7	40	1	48	1	0	0	1	73
Total	0	82	0	82	1	0	15	16	16	148	2	166	4	0	0	4	268
Grand Total	6	361	14	381	13	1	84	98	80	419	4	503	16	1	8	25	1007
Apprch %	1.6	94.8	3.7		13.3	1	85.7		15.9	83.3	0.8		64	4	32		
Total %	0.6	35.8	1.4	37.8	1.3	0.1	8.3	9.7	7.9	41.6	0.4	50	1.6	0.1	0.8	2.5	
Unshifted	6	361	14	381	13	1	84	98	80	419	4	503	16	1	8	25	1007
% Unshifted	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Tractor Trailers	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Tractor Trailers	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Shropshire Associates LLC

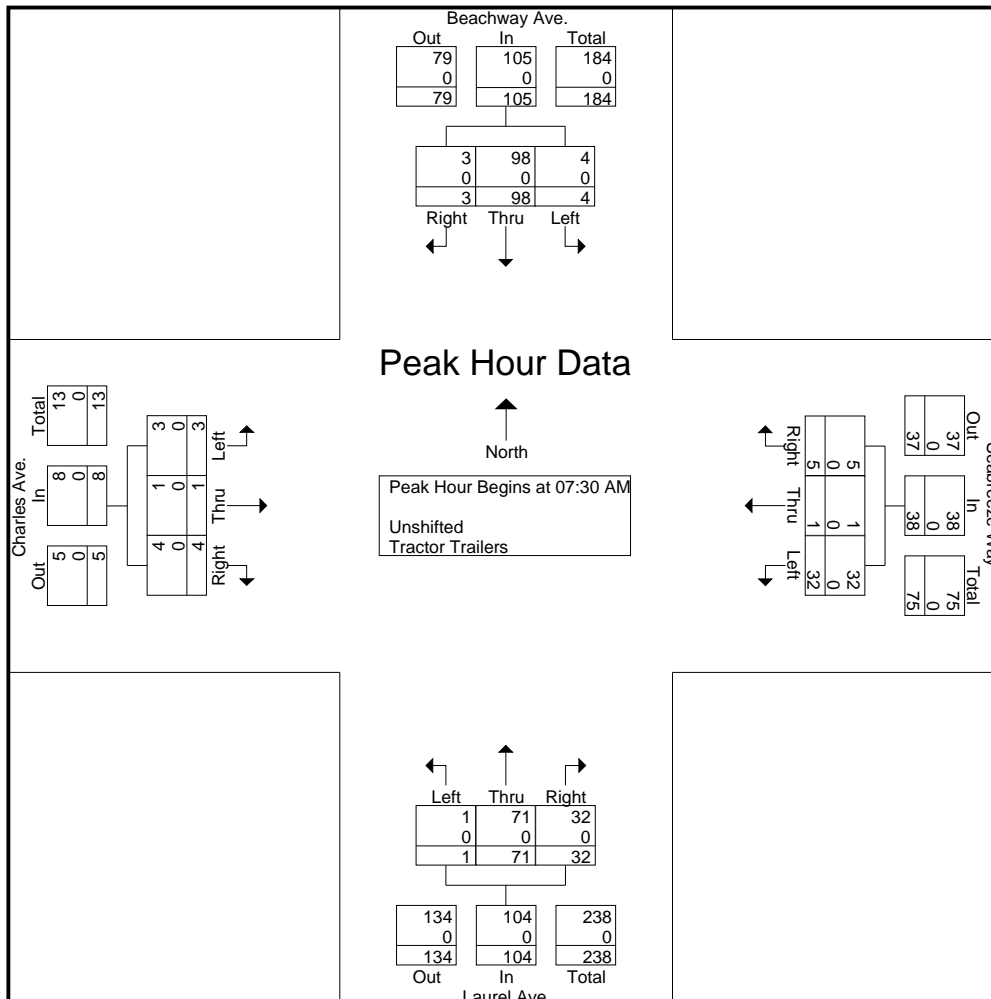
277 Whitehorse Pike, Suite 203

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N/S Route: Laurel Ave./Beachway Ave.
 E/W Route: Seabreeze Way/Charles Ave.
 Keansburg/Monmouth County/NJ
 Thursday/Clear/JH/D4-2870

File Name : 23131001
 Site Code : 23131001
 Start Date : 5/25/2023
 Page No : 2

Start Time	Beachway Ave. Southbound				Seabreeze Way Westbound				Laurel Ave. Northbound				Charles Ave. Eastbound				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	3	25	2	30	2	1	8	11	6	10	0	16	3	0	0	3	60
07:45 AM	0	30	0	30	1	0	9	10	10	22	1	33	1	0	1	2	75
08:00 AM	0	25	0	25	1	0	7	8	9	19	0	28	0	1	2	3	64
08:15 AM	0	18	2	20	1	0	8	9	7	20	0	27	0	0	0	0	56
Total Volume	3	98	4	105	5	1	32	38	32	71	1	104	4	1	3	8	255
% App. Total	2.9	93.3	3.8		13.2	2.6	84.2		30.8	68.3	1		50	12.5	37.5		
PHF	.250	.817	.500	.875	.625	.250	.889	.864	.800	.807	.250	.788	.333	.250	.375	.667	.850
Unshifted	3	98	4	105	5	1	32	38	32	71	1	104	4	1	3	8	255
% Unshifted	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Tractor Trailers	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Tractor Trailers	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0



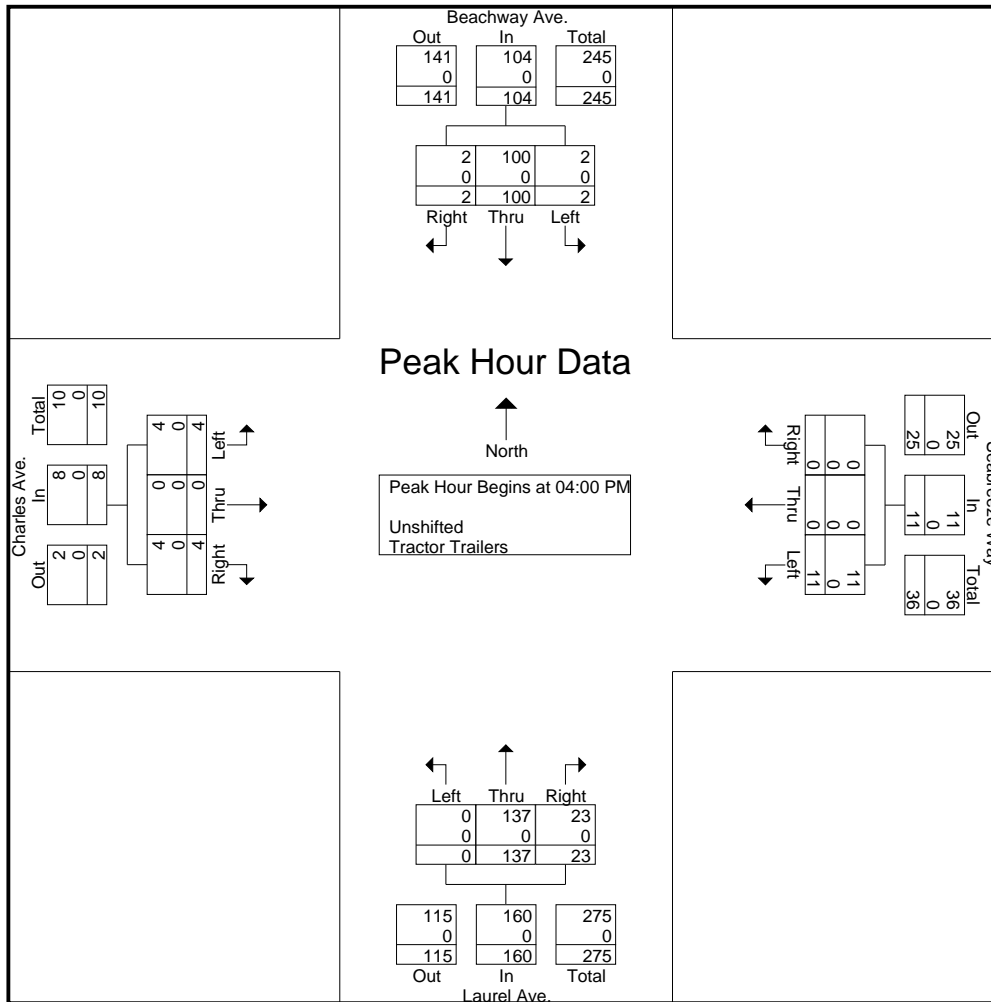
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Site Code : 23131001
Start Date : 5/25/2023
Page No : 3

Start Time	Beachway Ave. Southbound				Seabreeze Way Westbound				Laurel Ave. Northbound				Charles Ave. Eastbound				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	28	1	29	0	0	3	3	7	38	0	45	2	0	2	4	81
04:15 PM	0	21	0	21	0	0	4	4	2	38	0	40	1	0	1	2	67
04:30 PM	2	26	0	28	0	0	3	3	7	36	0	43	1	0	0	1	75
04:45 PM	0	25	1	26	0	0	1	1	7	25	0	32	0	0	1	1	60
Total Volume	2	100	2	104	0	0	11	11	23	137	0	160	4	0	4	8	283
% App. Total	1.9	96.2	1.9		0	0	100		14.4	85.6	0		50	0	50		
PHF	.250	.893	.500	.897	.000	.000	.688	.688	.821	.901	.000	.889	.500	.000	.500	.500	.873
Unshifted	2	100	2	104	0	0	11	11	23	137	0	160	4	0	4	8	283
% Unshifted	100	100	100	100	0	0	100	100	100	100	0	100	100	0	100	100	100
Tractor Trailers	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Tractor Trailers	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0



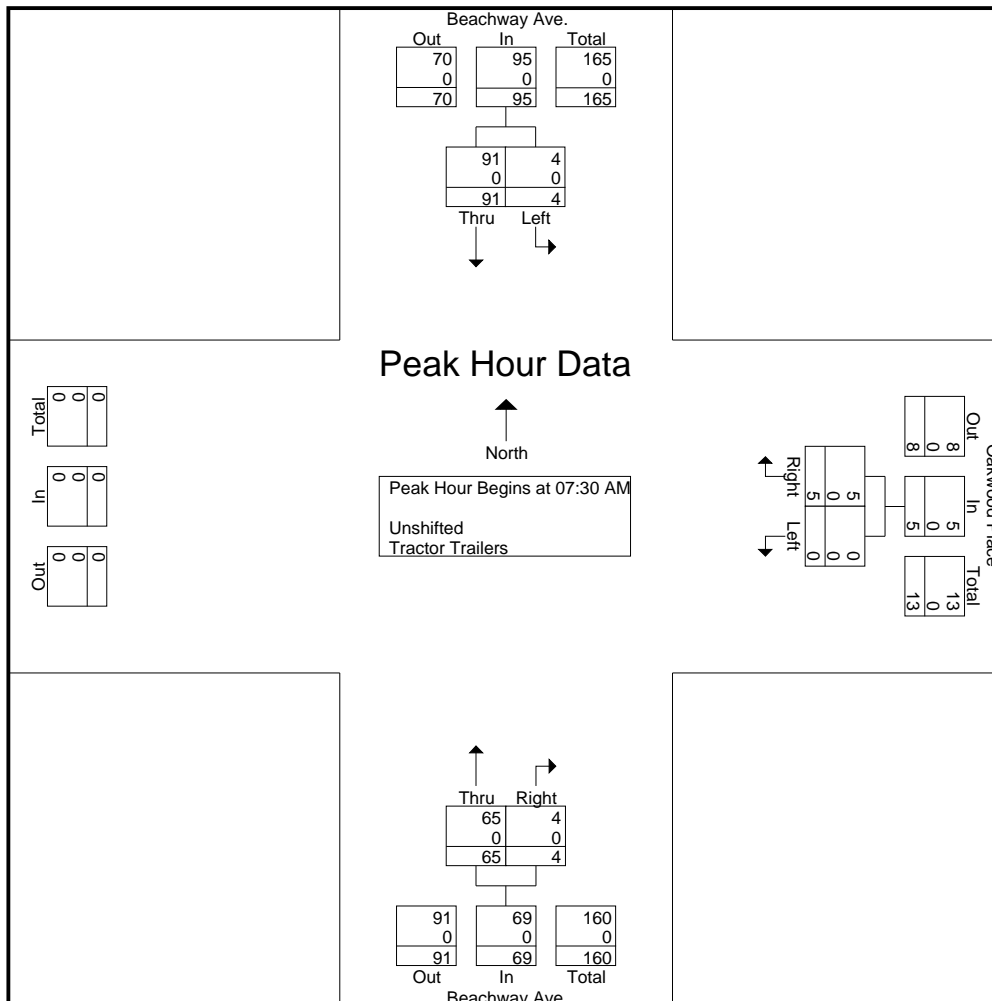
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277 Whitehorse Pike, Suite 203
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N/S Route: Beachway Ave.
E/W Route: Oakwood Place
Keansburg/Monmouth County/NJ
Thursday/Clear/EM/D4-3730

File Name : 23131002
Site Code : 23131002
Start Date : 5/25/2023
Page No : 2

Start Time	Beachway Ave. Southbound			Oakwood Place Westbound			Beachway Ave. Northbound			Int. Total
	Thru	Left	App. Total	Right	Left	App. Total	Right	Thru	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:30 AM										
07:30 AM	25	0	25	2	0	2	0	11	11	38
07:45 AM	25	2	27	0	0	0	1	20	21	48
08:00 AM	23	1	24	1	0	1	2	15	17	42
08:15 AM	18	1	19	2	0	2	1	19	20	41
Total Volume	91	4	95	5	0	5	4	65	69	169
% App. Total	95.8	4.2		100	0		5.8	94.2		
PHF	.910	.500	.880	.625	.000	.625	.500	.813	.821	.880
Unshifted	91	4	95	5	0	5	4	65	69	169
% Unshifted	100	100	100	100	0	100	100	100	100	100
Tractor Trailers	0	0	0	0	0	0	0	0	0	0
% Tractor Trailers	0	0	0	0	0	0	0	0	0	0



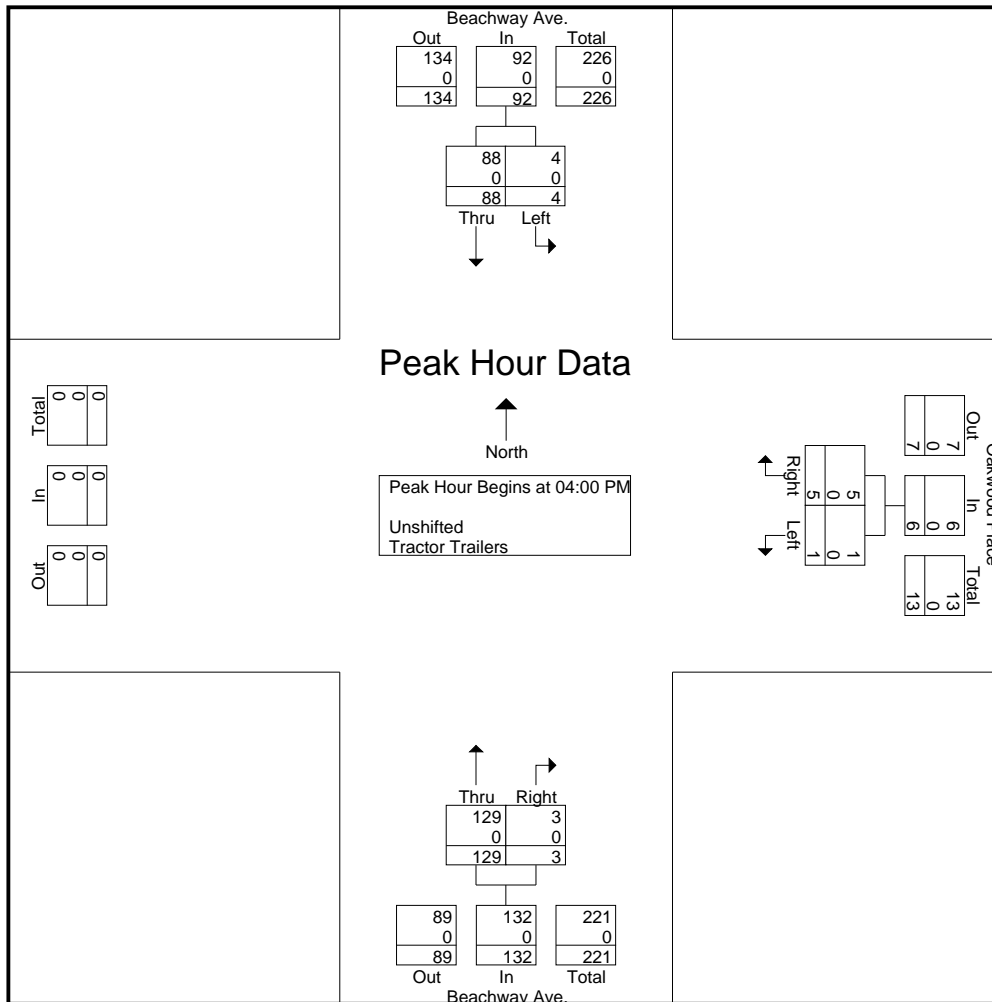
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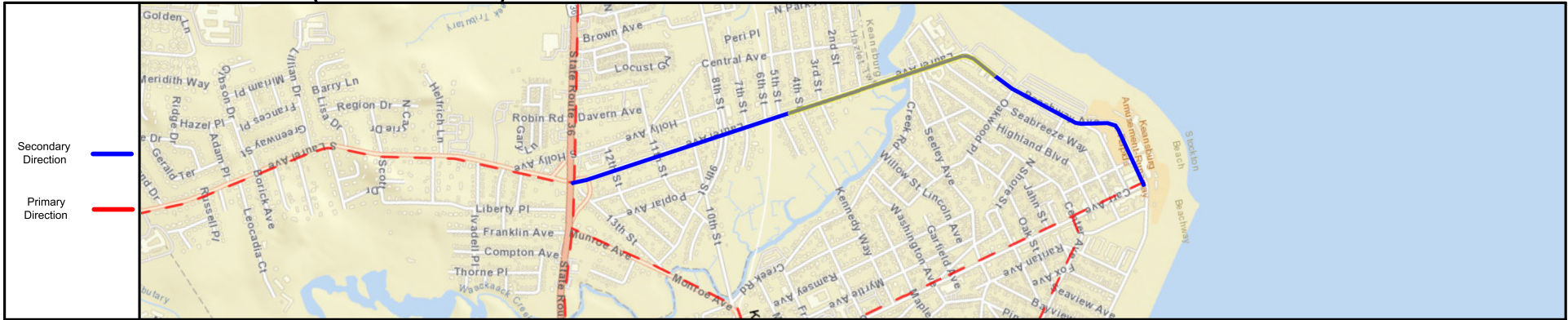
File Name : 23131002
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Start Date : 5/25/2023
Page No : 3

Start Time	Beachway Ave. Southbound			Oakwood Place Westbound			Beachway Ave. Northbound			Int. Total
	Thru	Left	App. Total	Right	Left	App. Total	Right	Thru	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:00 PM										
04:00 PM	18	1	19	2	1	3	0	33	33	55
04:15 PM	17	1	18	1	0	1	1	38	39	58
04:30 PM	29	1	30	2	0	2	2	32	34	66
04:45 PM	24	1	25	0	0	0	0	26	26	51
Total Volume	88	4	92	5	1	6	3	129	132	230
% App. Total	95.7	4.3		83.3	16.7		2.3	97.7		
PHF	.759	1.00	.767	.625	.250	.500	.375	.849	.846	.871
Unshifted	88	4	92	5	1	6	3	129	132	230
% Unshifted	100	100	100	100	100	100	100	100	100	100
Tractor Trailers	0	0	0	0	0	0	0	0	0	0
% Tractor Trailers	0	0	0	0	0	0	0	0	0	0

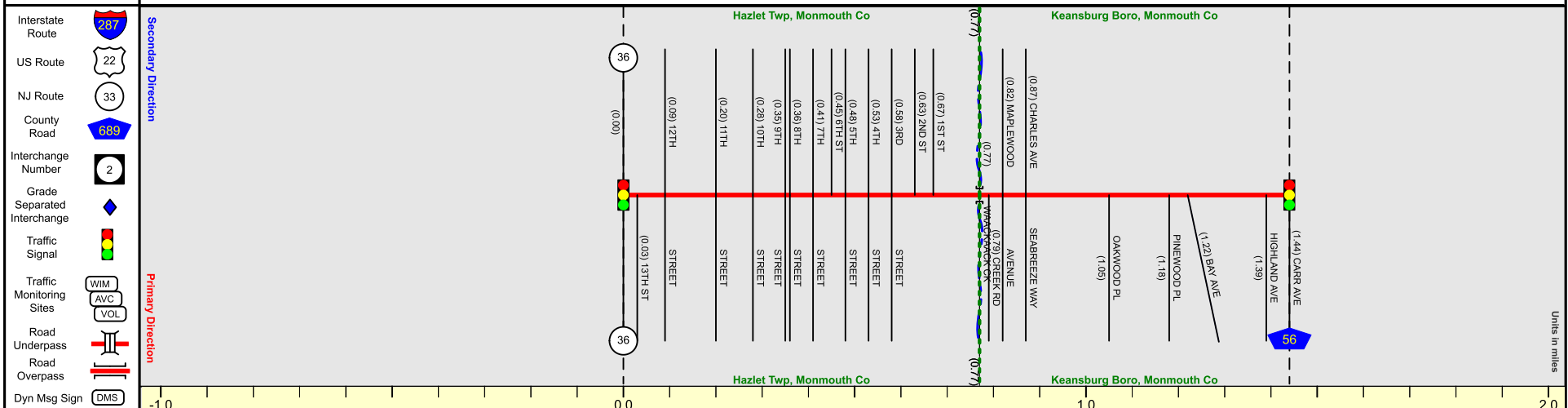


LAUREL AVE (South to North)

Mile Posts: 0.000 - 1.440



Pavement	
Shoulder	
Number of Lanes	
Speed Limit	
Street Name	



Street Name	Laurel Avenue	Beachway
Jurisdiction	Municipal	
Functional Class	Urban Major Collector	
Federal Aid - NHS Sy	STP	
Control Section		End Laurel Ave MP=1.44
Speed Limit	35	25
Number of Lanes	2	
Med. Type	None	
Med. Width		
Pavement	40	26 + 32 + 28 + 40
Shoulder		
Traffic Volume		
Traffic Sta. ID		
Structure No.	1300R11	
Enlarged Views		

SRI = 13391283_

Date last inventoried: July 2017

Multifamily Housing (Mid-Rise) Not Close to Rail Transit (221)

Vehicle Trip Ends vs: Dwelling Units
 On a: Weekday,
 Peak Hour of Adjacent Street Traffic,
 One Hour Between 7 and 9 a.m.

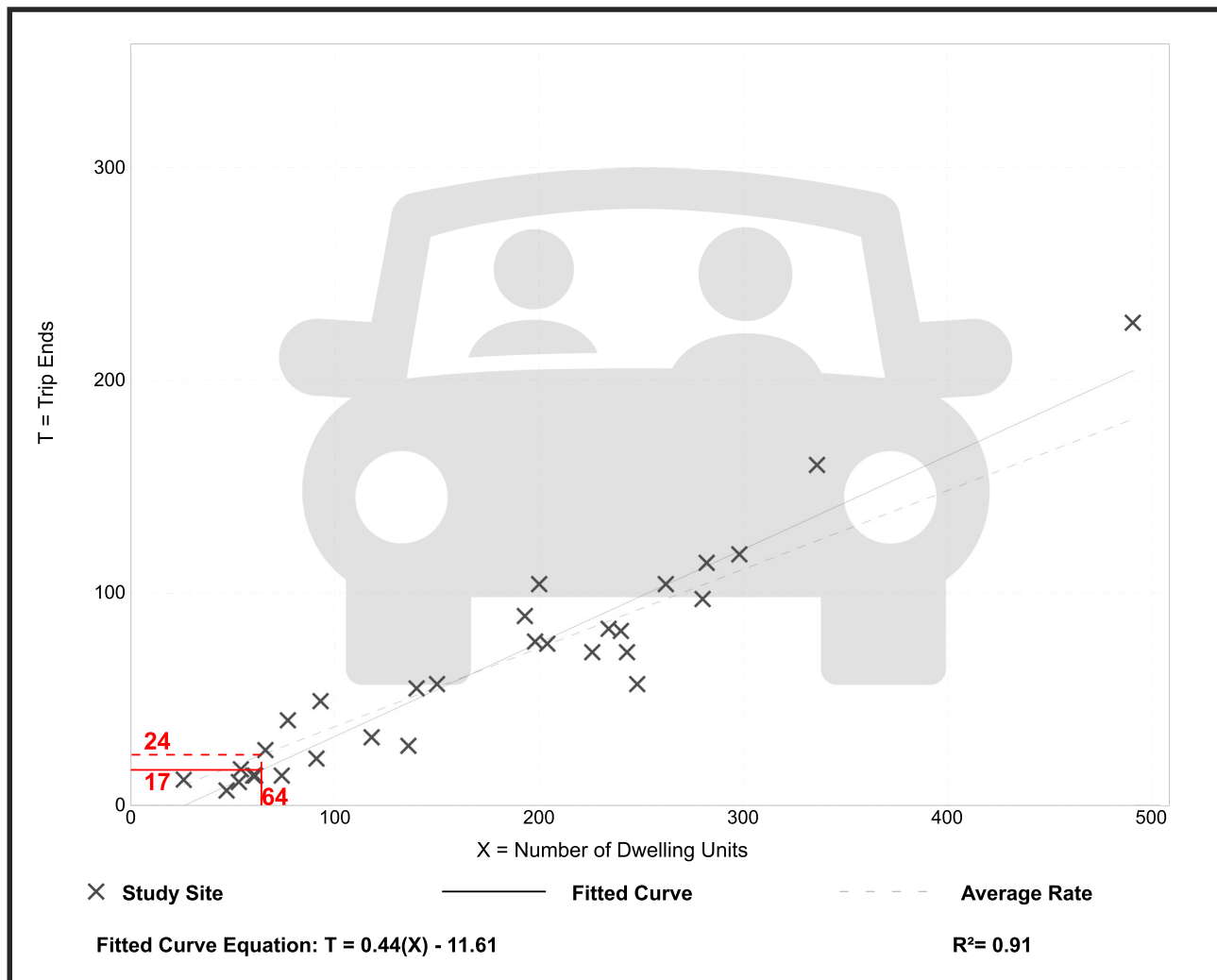
Setting/Location: General Urban/Suburban

Number of Studies: 30
 Avg. Num. of Dwelling Units: 173
 Directional Distribution: 23% entering, 77% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.37	0.15 - 0.53	0.09

Data Plot and Equation



Multifamily Housing (Mid-Rise) Not Close to Rail Transit (221)

Vehicle Trip Ends vs: Dwelling Units
 On a: Weekday,
 Peak Hour of Adjacent Street Traffic,
 One Hour Between 4 and 6 p.m.

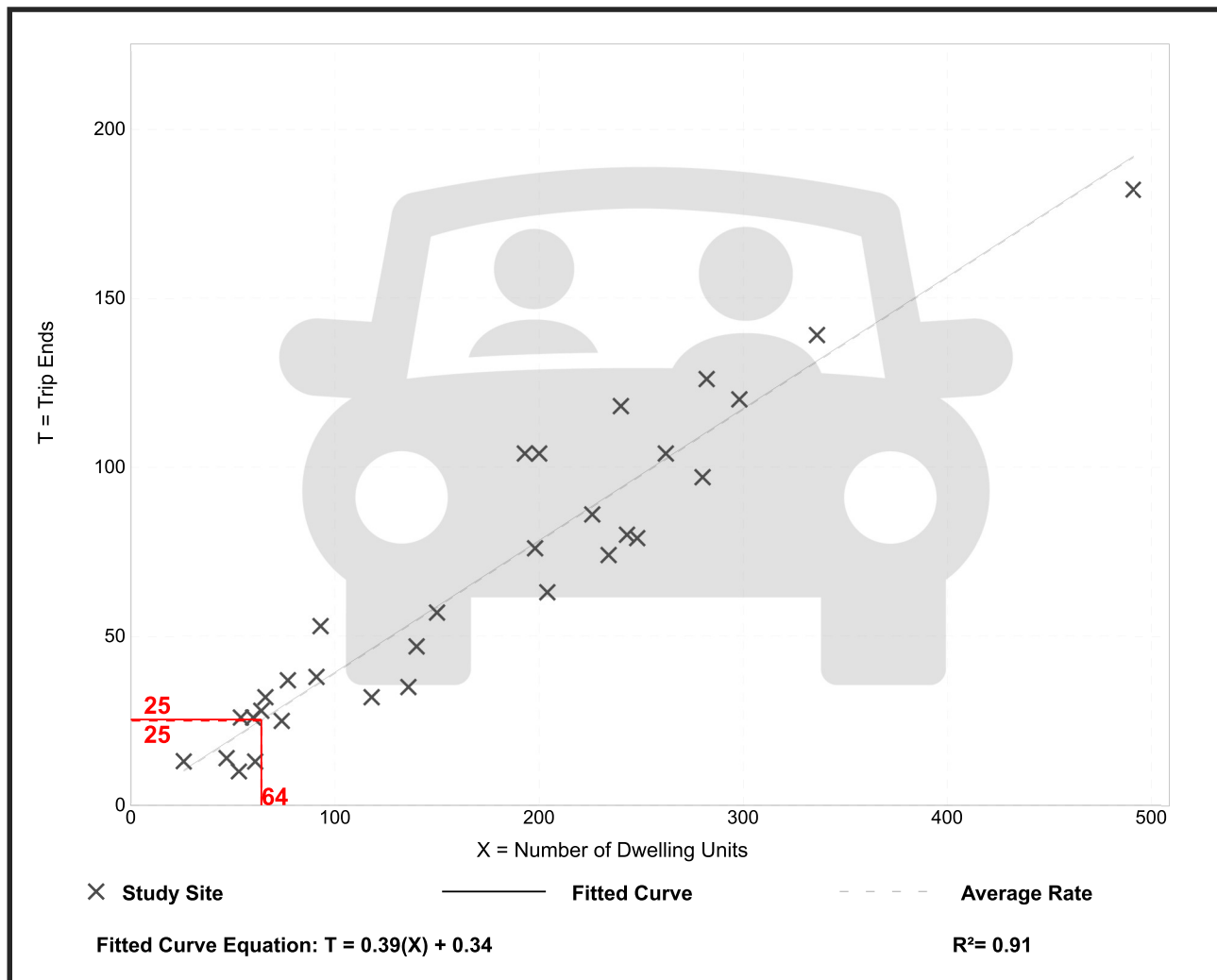
Setting/Location: General Urban/Suburban

Number of Studies: 31
 Avg. Num. of Dwelling Units: 169
 Directional Distribution: 61% entering, 39% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.39	0.19 - 0.57	0.08

Data Plot and Equation



Intersection						
Int Delay, s/veh	0.4					
Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations	W		T			T
Traffic Vol, veh/h	0	5	65	4	4	91
Future Vol, veh/h	0	5	65	4	4	91
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	88	88	88	88	88	88
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	6	74	5	5	103

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	190	77	0	0	79
Stage 1	77	-	-	-	-
Stage 2	113	-	-	-	-
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	804	990	-	-	1532
Stage 1	951	-	-	-	-
Stage 2	917	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	802	990	-	-	1532
Mov Cap-2 Maneuver	802	-	-	-	-
Stage 1	951	-	-	-	-
Stage 2	914	-	-	-	-

Approach	NW	NE	SW
HCM Control Delay, s	8.7	0	0.3
HCM LOS	A		

Minor Lane/Major Mvmt	NET	NERNWLn1	SWL	SWT
Capacity (veh/h)	-	-	990	1532
HCM Lane V/C Ratio	-	-	0.006	0.003
HCM Control Delay (s)	-	-	8.7	7.4
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0	0

Intersection												
Int Delay, s/veh	2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	3	1	4	32	1	5	1	71	32	4	98	3
Future Vol, veh/h	3	1	4	32	1	5	1	71	32	4	98	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
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	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	4	1	5	38	1	6	1	84	38	5	115	4

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	236	251	117	235	234	103	119	0	0	122	0	0
Stage 1	127	127	-	105	105	-	-	-	-	-	-	-
Stage 2	109	124	-	130	129	-	-	-	-	-	-	-
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	723	656	941	724	670	957	1482	-	-	1478	-	-
Stage 1	882	795	-	906	812	-	-	-	-	-	-	-
Stage 2	901	797	-	878	793	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	715	653	941	717	667	957	1482	-	-	1478	-	-
Mov Cap-2 Maneuver	715	653	-	717	667	-	-	-	-	-	-	-
Stage 1	881	792	-	905	811	-	-	-	-	-	-	-
Stage 2	893	796	-	869	790	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB			
HCM Control Delay, s	9.5		10.2		0.1		0.3			
HCM LOS	A		B							

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1482	-	-	802	740	1478	-
HCM Lane V/C Ratio	0.001	-	-	0.012	0.06	0.003	-
HCM Control Delay (s)	7.4	0	-	9.5	10.2	7.4	0
HCM Lane LOS	A	A	-	A	B	A	A
HCM 95th %tile Q(veh)	0	-	-	0	0.2	0	-

Intersection						
Int Delay, s/veh	0.4					
Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	1	5	129	3	4	88
Future Vol, veh/h	1	5	129	3	4	88
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	87	87	87	87	87	87
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	1	6	148	3	5	101

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	261	150	0	0	151
Stage 1	150	-	-	-	-
Stage 2	111	-	-	-	-
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	732	902	-	-	1442
Stage 1	883	-	-	-	-
Stage 2	919	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	729	902	-	-	1442
Mov Cap-2 Maneuver	729	-	-	-	-
Stage 1	883	-	-	-	-
Stage 2	915	-	-	-	-

Approach	NW	NE	SW
HCM Control Delay, s	9.2	0	0.3
HCM LOS	A		

Minor Lane/Major Mvmt	NET	NERNWLn1	SWL	SWT
Capacity (veh/h)	-	-	868	1442
HCM Lane V/C Ratio	-	-	0.008	0.003
HCM Control Delay (s)	-	-	9.2	7.5
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0	0

Intersection												
Int Delay, s/veh	0.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	4	0	4	11	0	0	0	137	23	2	100	2
Future Vol, veh/h	4	0	4	11	0	0	0	137	23	2	100	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
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	87	87	87	87	87	87	87	87	87	87	87	87
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	5	0	5	13	0	0	0	157	26	2	115	2

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	290	303	116	293	291	170	117	0	0	183	0	0
Stage 1	120	120	-	170	170	-	-	-	-	-	-	-
Stage 2	170	183	-	123	121	-	-	-	-	-	-	-
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	666	613	942	663	623	879	1484	-	-	1404	-	-
Stage 1	889	800	-	837	762	-	-	-	-	-	-	-
Stage 2	837	752	-	886	800	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	665	612	942	659	622	879	1484	-	-	1404	-	-
Mov Cap-2 Maneuver	665	612	-	659	622	-	-	-	-	-	-	-
Stage 1	889	798	-	837	762	-	-	-	-	-	-	-
Stage 2	837	752	-	880	798	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	9.7		10.6		0		0.1	
HCM LOS	A		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1484	-	-	780	659	1404	-	-
HCM Lane V/C Ratio	-	-	-	0.012	0.019	0.002	-	-
HCM Control Delay (s)	0	-	-	9.7	10.6	7.6	0	-
HCM Lane LOS	A	-	-	A	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0.1	0	-	-

Intersection						
Int Delay, s/veh	0.4					
Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	0	5	74	4	4	103
Future Vol, veh/h	0	5	74	4	4	103
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	88	88	88	88	88	88
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	6	84	5	5	117

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	214	87	0	0	89	0
Stage 1	87	-	-	-	-	-
Stage 2	127	-	-	-	-	-
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	779	977	-	-	1519	-
Stage 1	941	-	-	-	-	-
Stage 2	904	-	-	-	-	-
Platoon blocked, %			-	-		
Mov Cap-1 Maneuver	776	977	-	-	1519	-
Mov Cap-2 Maneuver	776	-	-	-	-	-
Stage 1	941	-	-	-	-	-
Stage 2	900	-	-	-	-	-

Approach	NW	NE	SW
HCM Control Delay, s	8.7	0	0.3
HCM LOS	A		

Minor Lane/Major Mvmt	NET	NERNWLn1	SWL	SWT
Capacity (veh/h)	-	-	977	1519
HCM Lane V/C Ratio	-	-	0.006	0.003
HCM Control Delay (s)	-	-	8.7	7.4
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0	0

Intersection												
Int Delay, s/veh	2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	3	1	4	36	1	5	1	80	36	4	110	3
Future Vol, veh/h	3	1	4	36	1	5	1	80	36	4	110	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
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	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	4	1	5	42	1	6	1	94	42	5	129	4

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	262	279	131	261	260	115	133	0	0	136	0	0
Stage 1	141	141	-	117	117	-	-	-	-	-	-	-
Stage 2	121	138	-	144	143	-	-	-	-	-	-	-
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	695	632	924	696	648	943	1464	-	-	1461	-	-
Stage 1	867	784	-	892	803	-	-	-	-	-	-	-
Stage 2	888	786	-	864	782	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	687	629	924	689	645	943	1464	-	-	1461	-	-
Mov Cap-2 Maneuver	687	629	-	689	645	-	-	-	-	-	-	-
Stage 1	866	781	-	891	802	-	-	-	-	-	-	-
Stage 2	880	785	-	855	779	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	9.7		10.4		0.1		0.3	
HCM LOS	A		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1464	-	-	778	711	1461	-	-
HCM Lane V/C Ratio	0.001	-	-	0.012	0.069	0.003	-	-
HCM Control Delay (s)	7.5	0	-	9.7	10.4	7.5	0	-
HCM Lane LOS	A	A	-	A	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0.2	0	-	-

Intersection						
Int Delay, s/veh	0.3					
Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	1	5	146	3	4	99
Future Vol, veh/h	1	5	146	3	4	99
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	87	87	87	87	87	87
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	1	6	168	3	5	114

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	294	170	0	0	171	0
Stage 1	170	-	-	-	-	-
Stage 2	124	-	-	-	-	-
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	701	879	-	-	1418	-
Stage 1	865	-	-	-	-	-
Stage 2	907	-	-	-	-	-
Platoon blocked, %			-	-		
Mov Cap-1 Maneuver	698	879	-	-	1418	-
Mov Cap-2 Maneuver	698	-	-	-	-	-
Stage 1	865	-	-	-	-	-
Stage 2	903	-	-	-	-	-

Approach	NW	NE	SW
HCM Control Delay, s	9.3	0	0.3
HCM LOS	A		

Minor Lane/Major Mvmt	NET	NERNWLn1	SWL	SWT
Capacity (veh/h)	-	-	843	1418
HCM Lane V/C Ratio	-	-	0.008	0.003
HCM Control Delay (s)	-	-	9.3	7.5
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0	0

Intersection												
Int Delay, s/veh	0.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	4	0	4	12	0	0	0	155	26	2	113	2
Future Vol, veh/h	4	0	4	12	0	0	0	155	26	2	113	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
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	87	87	87	87	87	87	87	87	87	87	87	87
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	5	0	5	14	0	0	0	178	30	2	130	2

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	328	343	131	331	329	193	132	0	0	208	0	0
Stage 1	135	135	-	193	193	-	-	-	-	-	-	-
Stage 2	193	208	-	138	136	-	-	-	-	-	-	-
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	629	583	924	626	593	854	1466	-	-	1375	-	-
Stage 1	873	789	-	813	745	-	-	-	-	-	-	-
Stage 2	813	734	-	870	788	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	628	582	924	622	592	854	1466	-	-	1375	-	-
Mov Cap-2 Maneuver	628	582	-	622	592	-	-	-	-	-	-	-
Stage 1	873	787	-	813	745	-	-	-	-	-	-	-
Stage 2	813	734	-	864	786	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.9	10.9	0	0.1
HCM LOS	A	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1466	-	-	748	622	1375	-	-
HCM Lane V/C Ratio	-	-	-	0.012	0.022	0.002	-	-
HCM Control Delay (s)	0	-	-	9.9	10.9	7.6	0	-
HCM Lane LOS	A	-	-	A	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0.1	0	-	-

Intersection						
Int Delay, s/veh	0.4					
Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	0	5	79	5	4	105
Future Vol, veh/h	0	5	79	5	4	105
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	88	88	88	88	88	88
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	6	90	6	5	119

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	222	93	0	0	96	0
Stage 1	93	-	-	-	-	-
Stage 2	129	-	-	-	-	-
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	771	970	-	-	1510	-
Stage 1	936	-	-	-	-	-
Stage 2	902	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	768	970	-	-	1510	-
Mov Cap-2 Maneuver	768	-	-	-	-	-
Stage 1	936	-	-	-	-	-
Stage 2	898	-	-	-	-	-

Approach	NW	NE	SW
HCM Control Delay, s	8.7	0	0.3
HCM LOS	A		

Minor Lane/Major Mvmt	NET	NERNWLn1	SWL	SWT
Capacity (veh/h)	-	-	970	1510
HCM Lane V/C Ratio	-	-	0.006	0.003
HCM Control Delay (s)	-	-	8.7	7.4
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0	0

Intersection												
Int Delay, s/veh	2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	3	1	4	36	1	6	1	82	36	7	120	3
Future Vol, veh/h	3	1	4	36	1	6	1	82	36	7	120	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
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	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	4	1	5	42	1	7	1	96	42	8	141	4

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	282	299	143	281	280	117	145	0	0	138	0	0
Stage 1	159	159	-	119	119	-	-	-	-	-	-	-
Stage 2	123	140	-	162	161	-	-	-	-	-	-	-
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	674	616	910	675	632	941	1450	-	-	1458	-	-
Stage 1	848	770	-	890	801	-	-	-	-	-	-	-
Stage 2	886	785	-	845	769	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	665	612	910	667	628	941	1450	-	-	1458	-	-
Mov Cap-2 Maneuver	665	612	-	667	628	-	-	-	-	-	-	-
Stage 1	847	765	-	889	800	-	-	-	-	-	-	-
Stage 2	877	784	-	834	764	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	9.8		10.6		0.1		0.4	
HCM LOS	A		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1450	-	-	759	694	1458	-
HCM Lane V/C Ratio	0.001	-	-	0.012	0.073	0.006	-
HCM Control Delay (s)	7.5	0	-	9.8	10.6	7.5	0
HCM Lane LOS	A	A	-	A	B	A	A
HCM 95th %tile Q(veh)	0	-	-	0	0.2	0	-

Intersection						
Int Delay, s/veh	0.4					
Movement	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations	T			T		T
Traffic Vol, veh/h	3	6	1	95	118	1
Future Vol, veh/h	3	6	1	95	118	1
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	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	3	7	1	103	128	1

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	234	129	129	0	0
Stage 1	129	-	-	-	-
Stage 2	105	-	-	-	-
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	759	926	1469	-	-
Stage 1	902	-	-	-	-
Stage 2	924	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	758	926	1469	-	-
Mov Cap-2 Maneuver	758	-	-	-	-
Stage 1	901	-	-	-	-
Stage 2	924	-	-	-	-

Approach	SE	NE	SW
HCM Control Delay, s	9.2	0.1	0
HCM LOS	A		

Minor Lane/Major Mvmt	NEL	NET	SELn1	SWT	SWR
Capacity (veh/h)	1469	-	862	-	-
HCM Lane V/C Ratio	0.001	-	0.011	-	-
HCM Control Delay (s)	7.5	0	9.2	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection						
Int Delay, s/veh	0.5					
Movement	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Vol, veh/h	3	7	2	89	123	1
Future Vol, veh/h	3	7	2	89	123	1
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	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	3	8	2	97	134	1

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	236	135	135	0	-	0
Stage 1	135	-	-	-	-	-
Stage 2	101	-	-	-	-	-
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	757	919	1462	-	-	-
Stage 1	896	-	-	-	-	-
Stage 2	928	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	756	919	1462	-	-	-
Mov Cap-2 Maneuver	756	-	-	-	-	-
Stage 1	895	-	-	-	-	-
Stage 2	928	-	-	-	-	-

Approach	SE	NE	SW
HCM Control Delay, s	9.2	0.2	0
HCM LOS	A		

Minor Lane/Major Mvmt	NEL	NET SELn1	SWT	SWR
Capacity (veh/h)	1462	-	863	-
HCM Lane V/C Ratio	0.001	-	0.013	-
HCM Control Delay (s)	7.5	0	9.2	-
HCM Lane LOS	A	A	A	-
HCM 95th %tile Q(veh)	0	-	0	-

Intersection						
Int Delay, s/veh	0.3					
Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	1	5	151	3	4	104
Future Vol, veh/h	1	5	151	3	4	104
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	87	87	87	87	87	87
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	1	6	174	3	5	120

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	306	176	0	0	177	0
Stage 1	176	-	-	-	-	-
Stage 2	130	-	-	-	-	-
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	690	872	-	-	1411	-
Stage 1	859	-	-	-	-	-
Stage 2	901	-	-	-	-	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	687	872	-	-	1411	-
Mov Cap-2 Maneuver	687	-	-	-	-	-
Stage 1	859	-	-	-	-	-
Stage 2	897	-	-	-	-	-

Approach	NW	NE	SW
HCM Control Delay, s	9.3	0	0.3
HCM LOS	A		

Minor Lane/Major Mvmt	NET	NERNWLn1	SWL	SWT
Capacity (veh/h)	-	-	835	1411
HCM Lane V/C Ratio	-	-	0.008	0.003
HCM Control Delay (s)	-	-	9.3	7.6
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0	0

Intersection												
Int Delay, s/veh	0.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	4	0	4	12	0	1	0	164	26	3	117	2
Future Vol, veh/h	4	0	4	12	0	1	0	164	26	3	117	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
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	87	87	87	87	87	87	87	87	87	87	87	87
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	5	0	5	14	0	1	0	189	30	3	134	2

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	346	360	135	348	346	204	136	0	0	219	0	0
Stage 1	141	141	-	204	204	-	-	-	-	-	-	-
Stage 2	205	219	-	144	142	-	-	-	-	-	-	-
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	612	570	919	610	580	842	1461	-	-	1362	-	-
Stage 1	867	784	-	803	737	-	-	-	-	-	-	-
Stage 2	802	726	-	864	783	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	610	569	919	606	579	842	1461	-	-	1362	-	-
Mov Cap-2 Maneuver	610	569	-	606	579	-	-	-	-	-	-	-
Stage 1	867	782	-	803	737	-	-	-	-	-	-	-
Stage 2	801	726	-	858	781	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	10		11		0		0.2	
HCM LOS	B		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1461	-	-	733	619	1362	-	-
HCM Lane V/C Ratio	-	-	-	0.013	0.024	0.003	-	-
HCM Control Delay (s)	0	-	-	10	11	7.7	0	-
HCM Lane LOS	A	-	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0.1	0	-	-

Intersection						
Int Delay, s/veh	0.3					
Movement	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Vol, veh/h	3	2	5	161	119	3
Future Vol, veh/h	3	2	5	161	119	3
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	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	3	2	5	175	129	3

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	316	131	132	0	0
Stage 1	131	-	-	-	-
Stage 2	185	-	-	-	-
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	681	924	1466	-	-
Stage 1	900	-	-	-	-
Stage 2	852	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	678	924	1466	-	-
Mov Cap-2 Maneuver	678	-	-	-	-
Stage 1	896	-	-	-	-
Stage 2	852	-	-	-	-

Approach	SE	NE	SW
HCM Control Delay, s	9.8	0.2	0
HCM LOS	A		

Minor Lane/Major Mvmt	NEL	NET	SELn1	SWT	SWR
Capacity (veh/h)	1466	-	759	-	-
HCM Lane V/C Ratio	0.004	-	0.007	-	-
HCM Control Delay (s)	7.5	0	9.8	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection						
Int Delay, s/veh	0.3					
Movement	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Vol, veh/h	2	3	5	164	119	2
Future Vol, veh/h	2	3	5	164	119	2
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	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	3	5	178	129	2

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	318	130	131	0	0
Stage 1	130	-	-	-	-
Stage 2	188	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-
Pot Cap-1 Maneuver	675	920	1454	-	-
Stage 1	896	-	-	-	-
Stage 2	844	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	672	920	1454	-	-
Mov Cap-2 Maneuver	672	-	-	-	-
Stage 1	892	-	-	-	-
Stage 2	844	-	-	-	-

Approach	SE	NE	SW
HCM Control Delay, s	9.5	0.2	0
HCM LOS	A		

Minor Lane/Major Mvmt	NEL	NET	SELn1	SWT	SWR
Capacity (veh/h)	1454	-	802	-	-
HCM Lane V/C Ratio	0.004	-	0.007	-	-
HCM Control Delay (s)	7.5	0	9.5	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-