ML Hawk Realty, LLC

The Preserve at Rolling Greens

Ten Rod Road (Route 102)
North Kingstown, Rhode Island

TRAFFIC IMPACT ANALYSIS

(Proposed The Preserve at Rolling Greens Driveway Location)

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1.0 INTRODUCTION

1.1 Purpose of Study

This traffic study was prepared at the request of ML Hawk Realty, LLC in connection with its study of the proposed development of The Preserve at Rolling Greens on Ten Rod Road (R.I. Route 102) in North Kingstown, Rhode Island. For the benefit of the boards and the citizens of North Kingstown, the traffic impacts of the proposed development have been evaluated. The study analyzes traffic use attributable to the proposed development of the site and discusses transportation impacts in the vicinity of the site.

1.2 Description of Project

The project site is located on Ten Rod Road, as shown in Figure 1. The proposed development includes the construction of 14 single-family homes, 32 duplexes (64 units), 13 townhouses, 9 cottages, 6 live/work units (consisting of office space on the bottom floor and an apartment above), a 3,600 square-foot drive-in bank, a 15,000 pharmacy with a drive-through window, a 5,000 square-foot sit-down restaurant, and 33,134 square feet of retail space. The residential component of the development, with the exception of the 6 live/work units, will be age restricted to residents 55 years and older. The existing Rolling Greens Golf Course will remain open. Access to the parcel will be provided through two driveways on Ten Rod Road, one driveway at the existing signalized intersection of Ten Rod Road and South County Trail (R.I. Route 2) and an entrance-only driveway across from Plain Road. Several existing driveways will be closed as part of this project.

2.0 EXISTING CONDITIONS

2.1 Study Area

The project will primarily utilize Ten Rod Road for access to and from the site. Ten Rod Road is classified as an Urban Principal Arterial, as presented in Technical Paper 155, Rhode Island Statewide Planning Program, Department of Administration, 2005. By definition, an arterial highway emphasizes a high level of mobility for through traffic while providing access to local roadways.

The intersection of Ten Rod Road, South County Trail, and the Oatley's Restaurant driveway is a four-way signalized intersection. Ten Rod Road at its intersection with South County Trail is a three-lane, two-way bituminous roadway. The eastbound approach of Ten Rod Road at the intersection consists of a 12-foot left turn lane, a 17-foot travel lane, and a 3-foot shoulder that widens at the intersection. The westbound approach of Ten Rod Road consists of a 12-foot left turn lane, a 12-foot travel lane, and a 6-foot shoulder. The speed limit is posted at 40 mph in the eastbound direction and 45 mph in the westbound direction. There is curb on both sides of the roadway at the intersection. There are utility poles located on the south side of the roadway. South County Trail at its intersection with Ten Rod Road is a two-lane, two-way bituminous roadway, approximately 43 feet in width, with 12-foot travel lanes, an 8-foot western shoulder, a 7-foot eastern shoulder, and a 4-foot striped median. Right-turning vehicles from South County Trail northbound

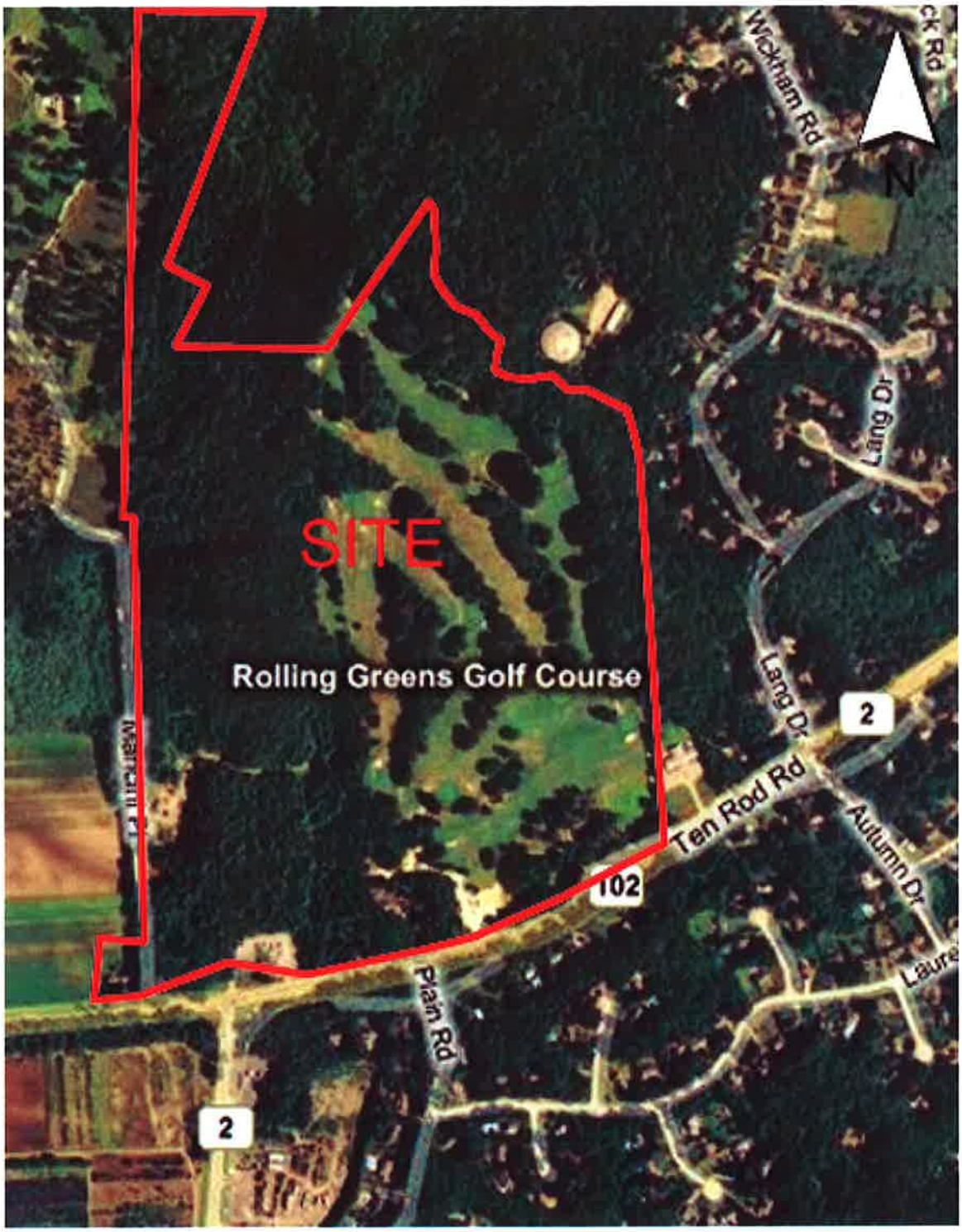


Figure 1

Location Map
ML Hawk Realty, LLC
The Preserve at Rolling Greens
Ten Rod Road
North Kingstown, Rhode Island

use a 17-foot wide channelized right turn lane that has a free movement onto Ten Rod Road eastbound. There are utility poles located on the east side of the roadway. The Oatley's Restaurant driveway is a two-lane, two-way bituminous roadway, approximately 28 feet in width. Land use in the area is commercial and residential.

The intersection of Ten Rod Road and Plain Road is a three-way unsignalized intersection. Ten Rod Road at its intersection with Plain Road is a four-lane, two-way bituminous roadway, approximately 52 feet in width, with 12-foot and 10-foot westbound travel lanes, 11-foot and 10-foot eastbound travel lanes, a 5-foot northern shoulder, and a 4-foot southern shoulder. There is no curb or sidewalk. There are utility poles located on the south side of the roadway. Plain Road at its intersection with Ten Rod Road is a two-lane, two-way bituminous roadway, approximately 29 feet in width. There are utility poles located on the east side of the roadway.

The intersection of Ten Rod Road and the existing Rolling Greens Golf Course driveway is a three-way unsignalized intersection. Ten Rod Road at its intersection with the existing Rolling Greens Golf Course driveway is a four-lane, two-way bituminous roadway, approximately 52 feet in width, with 12-foot and 10-foot westbound travel lanes, 11-foot and 10-foot eastbound travel lanes, a 5-foot northern shoulder, and a 4-foot southern shoulder. There is no curb or sidewalk. There are utility poles located on the south side of the roadway. The existing Rolling Greens Golf Course driveway is unpaved and is approximately 38 feet in width.

The intersection of Ten Rod Road, Lang Drive, and Autumn Drive is a four-way signalized intersection. Ten Rod Road at its intersection with Lang Drive is a four-lane, two-way bituminous roadway, approximately 51 feet in width, with 11-foot inside travel lanes, 10-foot outside travel lanes, a 4-foot northern shoulder, and a 5-foot southern shoulder. There is no curb or sidewalk. There are utility poles located on the south side of the roadway. Lang Drive at its intersection with Ten Rod Road is a two-lane, two-way bituminous roadway, approximately 25 feet in width. There are utility poles located on the west side of the roadway. Autumn Drive at its intersection with Ten Rod Road is a two-lane, two-way bituminous roadway, approximately 26 feet in width. There are utility poles located on the west side of the roadway up to the Mountain Laurel entrance.

2.2 Data Collection

Traffic turning movement counts were conducted at the intersections of Ten Rod Road, South County Trail and the Oatley's Restaurant driveway; Ten Rod Road, Plain Road, and the existing Rolling Greens Golf Course driveway; and Ten Rod Road, Lang Drive, and Autumn Drive between the hours of 6:00 and 10:00 A.M. and 2:00 and 6:00 P.M. on Tuesday, July 13, 2010. In addition, traffic turning movement counts were conducted at these intersections between the hours of 10:00 A.M. and 2:00 P.M. on Saturday, July 17, 2010. The traffic count data is shown in Appendix A.

The calculated A.M. peak hour for all of the study intersections is 7:30 – 8:30. The P.M. peak hour for all of the study intersections is 4:45 – 5:45. The Saturday midday peak hour for all of the study intersections is 12:00 – 1:00.

Pertinent field observations including existing stopping sight distance, location of existing utilities, posted speed limits, traffic control devices, etc. were made on July 20, 2010. Accident data (Appendix D) for the period January 1, 2007, through July 9, 2010, was obtained from the North Kingstown Police Department. In addition, traffic speed data (shown in Appendix E) using radar was acquired on Ten Rod Road in the vicinity of the site on July 23, 2010.

3.0 TRAFFIC FORECASTS

3.1 Traffic Volumes

Existing traffic volumes for the study area were developed from traffic data obtained by Automated Counts & Traffic Surveys, Inc. (A.C.T.S).

The total 24-hour two-way traffic volume (expanded from the 8-hour traffic counts using Rhode Island Department of Transportation (RIDOT) expansion factors) on Ten Rod Road in the vicinity of the site is approximately 25,600 vehicles per day. The A.M. peak hour for the intersection of Ten Rod Road, South County Trail, and the Oatley's Restaurant driveway, as indicated in Section 2.2, occurred between 7:30 and 8:30, with two-way traffic volumes on Ten Rod Road, South County Trail, and the Oatley's Restaurant driveway of 2,022 vehicles, 1,362 vehicles, and 65 vehicles, respectively. The P.M. peak hour was measured between 4:45 and 5:45, and the two-way traffic volumes were 2,351 vehicles on Ten Rod Road, 1,715 vehicles on South County Trail, and 43 vehicles on the Oatley's Restaurant driveway. The Saturday midday peak hour occurred between 12:00 and 1:00, with two-way traffic volumes on Ten Rod Road, South County Trail, and the Oatley's Restaurant driveway of 2,009 vehicles, 1,234 vehicles, and 83 vehicles, respectively.

The A.M. peak hour for the intersections of Ten Rod Road with Plain Road and the existing Rolling Greens Golf Course driveway, as indicated in Section 2.2, occurred between 7:30 and 8:30, with two-way traffic volumes on Ten Rod Road, Plain Road, and the existing Rolling Greens Golf Course driveway of 2,140 vehicles, 57 vehicles, and 35 vehicles, respectively. The P.M. peak hour was measured between 4:45 and 5:45, and the two-way traffic volumes were 2,404 vehicles on Ten Rod Road, 44 vehicles on Plain Road, and 5 vehicles on the existing Rolling Greens Golf Course driveway. The Saturday midday peak hour occurred between 12:00 and 1:00, with two-way traffic volumes on Ten Rod Road, Plain Road, and the existing Rolling Greens Golf Course driveway of 2,073 vehicles, 66 vehicles, and 19 vehicles, respectively.

The A.M. peak hour for the intersection of Ten Rod Road, Lang Drive, and Autumn Drive, as indicated in Section 2.2, occurred between 7:30 and 8:30, with two-way traffic volumes on Ten Rod Road, Lang Drive, and Autumn Drive of 2,253 vehicles, 50 vehicles, and 80 vehicles, respectively. The P.M. peak hour was measured between 4:45 and 5:45, and the two-way traffic volumes were 2,517 vehicles on Ten Rod Road, 78 vehicles on Lang Drive, and 86 vehicles on Autumn Drive. The Saturday midday peak hour for the intersection of Ten Rod Road, Lang Drive, and Autumn Drive occurred between 12:00 and 1:00, with two-way traffic volumes on Ten Rod Road, Lang Drive, and Autumn Drive of 2,191 vehicles, 68 vehicles, and 76 vehicles, respectively.

The traffic anticipated to be generated by the development was added to the turning movement count volumes for use in determining levels of service (LOS).

3.2 Vehicle Trip Generation

To evaluate the traffic impacts of the proposed development, it is necessary to determine the amount of traffic expected to be generated by the proposed improvements. The trip generation calculations are based on data compiled in Trip Generation (8th edition), an informational report published by the Institute of Transportation Engineers (ITE). Trip Generation is a tool for planners, transportation professionals, zoning boards, and others who are interested in estimating the number of vehicle trips generated by a proposed development or land use. This document is based on more than 4,800 trip generation studies submitted to the Institute by public agencies, developers, consulting firms, and associations.

The residential components of the development, with the exception of the 6 live/work units, will be age restricted to residents 55 years and older. Although Trip Generation contains information on age-restricted uses, it is believed that those land use codes might underestimate the anticipated number of trips. Therefore, it was conservatively assumed that the proposed development would generate trips based on non-age-restricted uses. The number of trips anticipated to be generated by the addition of 14 single-family homes was estimated using ITE Trip Generation Land Use Code 210, Single-Family Detached Housing, which sets forth trips generated at facilities similar to the proposed use. The number of trips anticipated to be generated by the addition of 64 duplex units was estimated using ITE Trip Generation Land Use Code 230, Residential Condominium/ Townhouse, which sets forth trips generated at facilities similar to the proposed use. The number of trips anticipated to be generated by the addition of 13 townhouses was also estimated using ITE Trip Generation Land Use Code 230, Residential Condominium/ Townhouse, which sets forth trips generated at facilities similar to the proposed use. The number of trips anticipated to be generated by the addition of 9 cottages was also estimated using ITE Trip Generation Land Use Code 230, Residential Condominium/ Townhouse, which sets forth trips generated at facilities similar to the proposed use. The number of trips anticipated to be generated by the addition of 6 live/work units was estimated using ITE Trip Generation Land Use Code 220, Apartment, and Land Use Code 710, General Office Building, which sets forth trips generated at facilities similar to the proposed use.

The number of trips anticipated to be generated by a 15,000 square foot pharmacy was estimated using ITE Trip Generation Land Use Code 881, Pharmacy/Drugstore with Drive-Through Window, which sets forth trips generated at facilities similar to the proposed use. The number of trips anticipated to be generated by a 3,600 square foot bank was estimated using ITE Trip Generation Land Use Code 912, Drive-in Bank, which sets forth trips generated at facilities similar to the proposed use. The number of trips anticipated to be generated by a 5,000 square foot restaurant was estimated using ITE Trip Generation Land Use Code 932, High-Turnover (Sit-Down) Restaurant, which sets forth trips generated at facilities similar to the proposed use. The number of trips anticipated to be generated by the construction of 33,134 square feet of retail space was estimated using ITE Trip Generation Land Use Code 814, Specialty Retail Center. This Land Use Code, however, does not include information for the A.M. or Saturday midday peak hours. ITE Trip Generation Land Use Code 820, Shopping Center, therefore was used to estimate the trips generated

during the A.M. and Saturday midday peak hours, since this is the one that is most closely related to the use of the proposed improvements.

The volumes anticipated to be generated by the proposed development during the A.M., P.M., and Saturday midday peak hours can be found in Table No. 1.

Table No. 1
Trip Generation Summary
Total New Trips

Time Period	Direction	14 Single-Family Homes	64 Duplex Units, 13 Townhomes, 9 Cottages	6 Live/ Work Units	15,000 SF Pharmacy	3,600 SF Bank	5,000 SF Restaurant	33,134 SF of Retail Space	Pass-by Trips	Total New Trips
A.M. Peak Hour	Enter	3	8	15	23	25	30	20	39	85
	Exit	8	38	4	17	20	28	13	30	98
P.M. Peak Hour	Enter	11	36	6	78	47	33	44	74	181
	Exit	7	17	14	77	46	23	57	74	167
Saturday Midday Peak Hour	Enter	7	22	5	59	50	37	84	80	184
	Exit	6	18	4	59	46	33	78	74	170

It is important to note that trip generation analysis yields the number of vehicle trips that a site is expected to generate at its driveways. Many land uses, including pharmacies, banks, restaurants, and retail space, do not generate vehicle trips that are all new to the roadway system. A portion of their trips are intermediate stops from vehicle trips already "passing by" on adjacent roads. Thus, when distributing the forecasted trips (based on the trip generation rates) to the adjacent streets, a reduction is made to account for those trips already there that will be attracted to the proposed development. The pass-by rates and calculations can be found in Appendix B. The pass-by trips are shown in Table No. 1.

With mixed-use developments, a reduction can also be made to account for internal trips, which are defined as trips among the various land uses within the site. To be conservative, however, internal trips were not subtracted for the proposed development.

The distribution of the anticipated new vehicle trips by direction was based upon the existing trip patterns observed in the traffic count data. These trips were added to the existing volumes that were counted for analysis of the build conditions. The trip generation calculations and the distribution of the traffic anticipated to be generated by the proposed development are shown in Appendix B.

4.0 CAPACITY ANALYSIS

4.1 General

Capacity analyses in this report focus on the peak hours of traffic volume because they represent the most critical periods for operations and have the highest capacity requirements. If traffic operates at acceptable levels of service during the peak hours, then it will operate at acceptable levels during the remaining hours of the day.

4.2 Intersections

The intersection capacity analysis was prepared using the Highway Capacity Manual, 2010 edition, published by the Transportation Research Board. The analysis utilizes the concept of Level of Service. The term "level of service" is defined as a qualitative measure describing operational conditions within a traffic stream based on service measures such as speed and travel time, freedom to maneuver, traffic interruptions, comfort and convenience. There are six levels of service utilized for the analysis. They are given letter designations from A to F, with Level of Service A representing the most favorable operating conditions and Level of Service F the least. Level of Service F is assigned to the movement if the volume-to-capacity ratio for the movement exceeds 1.0, regardless of the control delay. The level of service criteria for unsignalized and signalized intersections is shown in Table No. 2.

The computer software, Synchro 8, was utilized to perform the capacity analysis for the unsignalized and signalized intersections. Multi-lane roundabout capacity analysis was performed using the computer software VISSIM.

Table No. 2
Level of Service Criteria for Unsignalized and Signalized Intersections
Source: Highway Capacity Manual, 2010

Level Of Service	Average Total Delay (Sec./Veh)	
	Unsignalized Intersection	Signalized Intersection
A	≤10	≤10
B	>10 and ≤15	>10 and ≤20
C	>15 and ≤25	>20 and ≤35
D	>25 and ≤35	>35 and ≤55
E	>35 and ≤50	>55 and ≤80
F	>50	>80

A conservative build-out year of 2015 was used. The existing traffic counts were expanded using an annual growth rate of 1.23%, which was obtained from Statewide Planning.

4.2.1 Unsignalized Intersection Capacity Analysis

Unsignalized intersection capacity analysis for the intersections of Ten Rod Road and Plain Road and Ten Rod Road and the existing Rolling Greens Golf Course driveway was undertaken using the A.M., P.M., and Saturday midday peak hour traffic volumes under no-build conditions. Unsignalized intersection capacity analysis for the intersection of Ten Rod Road, Plain Road, and the proposed The Preserve at Rolling Greens entrance-only driveway was undertaken using the A.M., P.M., and Saturday midday peak hour traffic volumes under build conditions. The capacity analysis computations are included in Appendix C. A summary of the level of service for these intersections is shown in Table Nos. 3, 4, and 5 for the A.M., P.M., and Saturday midday peak hour, respectively.

Table No. 3
A.M. Peak Hour - Level of Service Summary
Unsignalized Intersections

Intersection/ Critical Movement	Level of Service	
	2015 No-Build	2015 Build
Ten Rod Road/Existing Rolling Greens Golf Course Driveway		
Eastbound Approach	A (0.1)	N/A
Southbound Approach	E (44.6)	N/A
Ten Rod Road/Plain Road		
Westbound Approach	A (0.7)	N/A
Northbound Approach	C (18.3)	N/A
Ten Rod Road/Plain Road/Proposed The Preserve at Rolling Greens Entrance-Only Driveway		
Eastbound Approach	N/A	A (0.1)
Westbound Approach	N/A	A (1.0)
Northbound Approach	N/A	C (20.8)

Table No. 4
P.M. Peak Hour - Level of Service Summary
Unsignalized Intersections

Intersection/ Critical Movement	Level of Service	
	2015 No-Build	2015 Build
Ten Rod Road/Existing Rolling Greens Golf Course Driveway		
Eastbound Approach	A (0.0)	N/A
Southbound Approach	B (14.0)	N/A
Ten Rod Road/Plain Road		
Westbound Approach	A (0.6)	N/A
Northbound Approach	B (14.7)	N/A
Ten Rod Road/Plain Road/Proposed The Preserve at Rolling Greens Entrance-Only Driveway		
Eastbound Approach	N/A	A (0.0)
Westbound Approach	N/A	A (0.9)
Northbound Approach	N/A	C (15.4)

Table No. 5
Saturday Midday Peak Hour - Level of Service Summary
Unsignalized Intersections

Intersection/ Critical Movement	Level of Service	
	2015 No-Build	2015 Build
Ten Rod Road/Existing Rolling Greens Golf Course Driveway		
Eastbound Approach	A (0.0)	N/A
Southbound Approach	E (38.9)	N/A
Ten Rod Road/Plain Road		
Westbound Approach	A (0.7)	N/A
Northbound Approach	C (18.0)	N/A
Ten Rod Road/Plain Road/Proposed The Preserve at Rolling Greens Entrance-Only Driveway		
Eastbound Approach	N/A	A (0.0)
Westbound Approach	N/A	A (1.1)
Northbound Approach	N/A	C (23.2)

The unsignalized intersection capacity analysis shows that the Plain Road approach of the intersection of Ten Rod Road, Plain Road, and the proposed The Preserve at Rolling Greens entrance-only driveway will operate at an acceptable level of service during the A.M., P.M., and Saturday midday peak hours. Ten Rod Road will operate at excellent levels of service during the A.M., P.M., and Saturday midday peak hours.

4.2.2 Signalized Intersection Capacity Analysis

As of September 2012, the intersection of Ten Rod Road, South County Trail, and the Oatley's Restaurant driveway is signalized, however, the final design of a roundabout at this intersection has been authorized by RIDOT. Therefore, this intersection was analyzed with a traffic signal and with a roundabout under no-build and build conditions.

Signalized intersection capacity analysis for the intersection of Ten Rod Road, South County Trail, and the Oatley's Restaurant driveway was undertaken using the A.M., P.M., and Saturday midday peak hour traffic volumes under no-build conditions. Signalized intersection capacity analysis for the intersection of Ten Rod Road, South County Trail, and the Preserve at Rolling Greens driveway was undertaken using the A.M., P.M., and Saturday midday peak hour traffic volumes under build conditions. The proposed The Preserve at Rolling Greens driveway approach will operate with two lanes under build conditions. Signalized intersection capacity analysis for the intersection of Ten Rod Road, Lang Drive, and Autumn Drive was undertaken using the A.M., P.M., and Saturday midday peak hour traffic volumes under no-build and build conditions. Left turn lanes are proposed at this intersection and are anticipated to be installed by the 2015 build-out date. The capacity analysis computations are included in Appendix C. A summary of the level of service for these intersections is shown in Table Nos. 6, 7, and 8 for the A.M., P.M., and Saturday midday peak hour, respectively.

Table No. 6
A.M. Peak Hour - Level of Service Summary
Signalized Intersections

Intersection/ Critical Movement	Level of Service	
	2015 No-Build	2015 Build
Ten Rod Road/South County Trail/Oatley's Restaurant Driveway		
Overall Intersection	C (32.2)	N/A
Eastbound Approach	C (27.5)	N/A
Westbound Approach	D (35.2)	N/A
Northbound Approach	C (33.5)	N/A
Southbound Approach	D (36.0)	N/A
Ten Rod Road/South County Trail /Proposed The Preserve at Rolling Greens Driveway		
Overall Intersection	N/A	D (52.1)
Eastbound Approach	N/A	C (28.1)
Westbound Approach	N/A	E (72.4)
Northbound Approach	N/A	C (34.0)
Southbound Approach	N/A	D (38.1)
Ten Rod Road/Lang Drive/Autumn Drive		
Overall Intersection	A (8.6)	A (8.7)
Eastbound Approach	A (9.0)	A (9.1)
Westbound Approach	A (7.4)	A (7.5)
Northbound Approach	A (9.4)	A (9.6)
Southbound Approach	C (20.4)	C (21.0)

Table No. 7
P.M. Peak Hour - Level of Service Summary
Signalized Intersections

Intersection/ Critical Movement	Level of Service	
	2015 No-Build	2015 Build
Ten Rod Road/South County Trail/Oatley's Restaurant Driveway		
Overall Intersection	B (18.7)	N/A
Eastbound Approach	C (25.8)	N/A
Westbound Approach	B (15.4)	N/A
Northbound Approach	D (35.7)	N/A
Southbound Approach	C (26.4)	N/A
Ten Rod Road/South County Trail /Proposed The Preserve at Rolling Greens Driveway		
Overall Intersection	N/A	D (36.3)
Eastbound Approach	N/A	C (30.5)
Westbound Approach	N/A	D (37.8)
Northbound Approach	N/A	D (36.1)
Southbound Approach	N/A	D (38.1)
Ten Rod Road/Lang Drive/Autumn Drive		
Overall Intersection	A (9.1)	A (9.4)
Eastbound Approach	B (11.0)	B (11.3)
Westbound Approach	A (7.1)	A (7.4)
Northbound Approach	B (13.1)	B (13.3)
Southbound Approach	C (21.7)	C (22.5)

Table No. 8
Saturday Midday Peak Hour - Level of Service Summary
Signalized Intersections

Intersection/ Critical Movement	Level of Service	
	2015 No-Build	2015 Build
Ten Rod Road/South County Trail/Oatley's Restaurant Driveway		
Overall Intersection	C (23.0)	N/A
Eastbound Approach	C (26.2)	N/A
Westbound Approach	C (20.3)	N/A
Northbound Approach	D (35.3)	N/A
Southbound Approach	C (31.8)	N/A
Ten Rod Road/South County Trail /Proposed The Preserve at Rolling Greens Driveway		
Overall Intersection	N/A	D (47.1)
Eastbound Approach	N/A	C (28.1)
Westbound Approach	N/A	E (59.9)
Northbound Approach	N/A	D (36.7)
Southbound Approach	N/A	D (38.0)
Ten Rod Road/Lang Drive/Autumn Drive		
Overall Intersection	A (9.8)	A (10.0)
Eastbound Approach	B (10.2)	B (10.4)
Westbound Approach	A (9.0)	A (9.3)
Northbound Approach	B (10.1)	B (10.4)
Southbound Approach	B (18.7)	B (19.4)

The signalized intersection capacity analysis shows that the overall intersection level of service of Ten Rod Road, South County Trail, and the proposed The Preserve at Rolling Greens driveway will change, from LOS C to LOS D, during the A.M. and Saturday midday peak hours, and from LOS B to LOS D, during the P.M. peak hour. All of the approaches of this intersection will operate at acceptable levels of service, with the exception of the westbound approach, which will operate at LOS E during the A.M. and Saturday midday peak hours. The signalized intersection capacity analysis shows that there will be no change in the overall intersection level of service at the intersection of Ten Rod Road, Lang Drive, and Autumn Drive during the A.M., P.M., and Saturday midday peak hours.

Due to the fact that a roundabout is currently under design for the intersection of Ten Rod Road, South County Trail, and the Oatley's driveway, mitigation to the existing signal timings was not performed to try to improve the levels of service. If the roundabout is not installed, the signal timings should be modified, which will result in improved levels of service.

4.2.3 Roundabout Capacity Analysis

Capacity analysis for the intersection of Ten Rod Road, South County Trail, and the Oatley's Restaurant driveway was undertaken with the installation of a partial dual-lane roundabout using the A.M., P.M., and Saturday midday peak hour traffic volumes under no-build conditions. Capacity analysis for the intersection of Ten Rod Road, South County Trail, and the Preserve at Rolling Greens driveway was undertaken with the installation of a partial dual-lane roundabout using the

A.M., P.M., and Saturday midday peak hour traffic volumes under build conditions. The proposed The Preserve at Rolling Greens driveway approach will operate with two lanes under build conditions. The capacity analysis computations are included in Appendix C. A summary of the level of service for these intersections is shown in Table Nos. 9, 10, and 11 for the A.M., P.M., and Saturday midday peak hour, respectively.

Table No. 9
A.M. Peak Hour - Level of Service Summary
Roundabout

Intersection/ Critical Movement	Level of Service	
	2015 No-Build	2015 Build
Ten Rod Road/South County Trail/Oatley's Restaurant Driveway		
Overall Intersection	A (9.3)	N/A
Eastbound Approach	D (31.4)	N/A
Westbound Approach	A (1.8)	N/A
Northbound Approach	A (0.2)	N/A
Southbound Approach	A (0.0)	N/A
Ten Rod Road/South County Trail /Proposed The Preserve at Rolling Greens Driveway		
Overall Intersection	N/A	B (10.1)
Eastbound Approach	N/A	D (34.2)
Westbound Approach	N/A	A (2.1)
Northbound Approach	N/A	A (0.5)
Southbound Approach	N/A	A (0.5)

Table No. 10
P.M. Peak Hour - Level of Service Summary
Roundabout

Intersection/ Critical Movement	Level of Service	
	2015 No-Build	2015 Build
Ten Rod Road/South County Trail/Oatley's Restaurant Driveway		
Overall Intersection	A (2.7)	N/A
Eastbound Approach	B (11.9)	N/A
Westbound Approach	A (2.2)	N/A
Northbound Approach	A (0.3)	N/A
Southbound Approach	A (0.0)	N/A
Ten Rod Road/South County Trail /Proposed The Preserve at Rolling Greens Driveway		
Overall Intersection	N/A	A (3.6)
Eastbound Approach	N/A	B (14.6)
Westbound Approach	N/A	A (3.5)
Northbound Approach	N/A	A (0.6)
Southbound Approach	N/A	A (0.5)

Table No. 11
Saturday Midday Peak Hour - Level of Service Summary
Roundabout

Intersection/ Critical Movement	Level of Service	
	2015 No-Build	2015 Build
Ten Rod Road/South County Trail/Oatley's Restaurant Driveway		
Overall Intersection	A (8.1)	N/A
Eastbound Approach	D (27.9)	N/A
Westbound Approach	A (2.3)	N/A
Northbound Approach	A (0.4)	N/A
Southbound Approach	A (0.0)	N/A
Ten Rod Road/South County Trail /Proposed The Preserve at Rolling Greens Driveway		
Overall Intersection	N/A	B (12.2)
Eastbound Approach	N/A	E (43.4)
Westbound Approach	N/A	A (3.5)
Northbound Approach	N/A	A (0.9)
Southbound Approach	N/A	A (0.8)

The roundabout capacity analysis shows that the intersection of Ten Rod Road, South County Trail, and the proposed The Preserve at Rolling Greens driveway will operate at LOS A during the A.M. peak hour and LOS B during the P.M. and Saturday midday peak hours. All of the approaches of the roundabout will operate at acceptable levels of service during the A.M., P.M., and Saturday midday peak hours, with the exception of the eastbound approach, which will operate at LOS E during the Saturday midday peak hour. It should be noted that the HCM methodology uses unsignalized intersection delay thresholds to determine the levels of service.

5.0 SAFETY ANALYSIS

5.1 Geometrics

The geometric configurations of the intersections affected by traffic generated by the proposed development were examined with regard to safe stopping sight distance using principles presented in A Policy on Geometric Design of Highways and Streets, 2011, of the American Association of State Highway and Transportation Officials (AASHTO). AASHTO provides recommendations for necessary sight distance at intersections.

A conservative design speed of 45 mph was utilized for the eastbound direction of Ten Rod Road in the vicinity of the proposed site based on an observed 85th percentile speed of 43.4 mph (see Appendix E). The minimum safe stopping distance for roadways with a design speed of 45 mph is 360 feet, as required by AASHTO, Table 3-1, Stopping Sight Distance, P. 3-4. The existing sight distance from the west to the proposed unsignalized site driveway at Plain Road is unrestricted from the intersection of Ten Rod Road, South County Trail, and the Oatley's Restaurant driveway, which is in excess of the minimum safe stopping distance.

A conservative design speed of 55 mph was utilized for the westbound direction of Ten Rod Road in the vicinity of the proposed site based on an observed 85th percentile speed of 53 mph (see Appendix E). The minimum safe stopping distance for roadways with a design speed of 55 mph is 495 feet, as required by AASHTO, Exhibit 3-1, Stopping Sight Distance, P. 112. The existing sight distance from the east to the proposed unsignalized site driveway at Plain Road is 360 feet. It is recommended that trees and bushes within the sight line be trimmed/removed to increase the sight distance from the east. Once a preliminary site plan has been developed, the limits of the trimming/removal will be determined.

5.2 Accident History

Accident data for the study area was obtained from the North Kingstown Police Department for the period from January 1, 2007 to July 9, 2010. A summary of the data received is contained in Appendix D. There were forty-three accidents at the intersection of Ten Rod Road, South County Trail, and the Oatley's Restaurant driveway, as shown in Table No. 12. These accidents included eighteen rear end accidents, twelve angle accidents, two head-on collisions, one sideswipe, and one broadside at the traffic signal. The high number of rear end accidents that occurred at this intersection is typical for a signalized intersection. There were also seven rear end accidents, one rollover, and one vehicle that lost control and left the roadway on the free channelized right turn from South County Trail northbound to Ten Rod Road eastbound. The channelized right turn lane is a free movement, however, operators that are unfamiliar with the area tend to yield or stop to wait for a break in traffic on Ten Rod Road, resulting in the high number of rear end accidents. Six accidents occurred on wet, snowy, or slushy pavement and sixteen accidents resulted in injuries. The installation of a roundabout will greatly reduce the number and severity of the accidents at this intersection.

The eleven accidents at the intersection of Ten Rod Road and the eastern Oatley's Restaurant driveway included six angle accidents, four broadsides, and one sideswipe. Two accidents occurred on wet pavement and seven accidents resulted in injuries.

There were two accidents on Ten Rod Road between South County Trail and Plain Road. Both of these accidents involved trees falling on vehicles, one accident occurred on icy pavement, and one accident resulted in an injury.

The three accidents at the intersection of Ten Rod Road and Plain Road included three rear end accidents, they all occurred on dry pavement, and two accidents resulted in injuries.

There was one accident at the intersection of Ten Rod Road and the Rolling Greens Golf Course driveway. This accident was a rear end accident, it occurred on dry pavement, and there were no injuries reported.

The ten accidents on Ten Rod Road between Plain Road and Lang Drive/Autumn Drive included three rear end accidents, three vehicles that lost control and left the roadway, two sideswipes, one angle accident, and one vehicle that struck a deer. Three of these accidents occurred on wet or snowy pavement and four accidents resulted in injuries.

Table No. 12
Summary of Accidents
Source: North Kingstown Police Department

Accident Location	January 1, 2007 to July 9, 2010
Intersection of Ten Rod Road, South County Trail, and the Oatley's Restaurant Driveway	43
Intersection of Ten Rod Road and the Eastern Oatley's Restaurant Driveway	11
Ten Rod Road between South County Trail and Plain Road	2
Intersection of Ten Rod Road and Plain Road	3
Intersection of Ten Rod Road and the Rolling Greens Golf Course Driveway	1
Ten Rod Road between Plain Road and Lang Drive/Autumn Drive	10
Intersection of Ten Rod Road, Lang Drive, and Autumn Drive	21
TOTAL	91

There were twenty-one accidents at the intersection of Ten Rod Road, Lang Drive, and Autumn Drive. These accidents included eleven rear end accidents, six angle accidents, one broadside, one head-on collision, one vehicle that lost control and left the roadway, and one vehicle that struck a deer. Five accidents occurred on wet or sandy pavement and eight accidents resulted in injuries. The installation of a traffic signal will likely reduce the severity of accidents at this intersection and may reduce the number of accidents as well.

Considering the high volume of traffic and the high speed limit on Ten Rod Road, the number of accidents that occurred over this three-year plus period does not indicate the presence of unusual conditions that might be worsened by the addition of the traffic generated by the development. In addition, this development will result in the closure of several driveways including the eastern Oatley's Restaurant driveway. RIDOT is designing improvements to the intersections of Ten Rod Road, South County Trail, and the Oatley's Restaurant driveway and Ten Rod Road, Lang Drive, and Autumn Drive.

5.3 Site Circulation

Once a preliminary site plan has been developed, it will be reviewed with regard to layout and vehicular/pedestrian circulation. The proposed site will be designed to accommodate the safe movement of emergency vehicles to and from the development.

6.0 CONCLUSIONS AND RECOMMENDATIONS

This traffic impact analysis was conducted to evaluate the impacts on surrounding roadways and intersections due to the proposed The Preserve at Rolling Greens on Ten Rod Road in North Kingstown, Rhode Island. The unsignalized intersection capacity analysis shows that the Plain Road approach of the intersection of Ten Rod Road, Plain Road, and the proposed The Preserve at Rolling Greens entrance-only driveway will operate at an acceptable level of service during the A.M., P.M., and Saturday midday peak hours. Ten Rod Road will operate at excellent levels of service during the A.M., P.M., and Saturday midday peak hours.

The signalized intersection capacity analysis shows that the overall intersection level of service of Ten Rod Road, South County Trail, and the proposed The Preserve at Rolling Greens driveway will change, from LOS C to LOS D, during the A.M. and Saturday midday peak hours, and from LOS B to LOS D, during the P.M. peak hour. All of the approaches of this intersection will operate at acceptable levels of service, with the exception of the westbound approach, which will operate at LOS E during the A.M. and Saturday midday peak hours. Due to the fact that a roundabout is currently under design for the intersection of Ten Rod Road, South County Trail, and the Oatley's driveway, mitigation to the existing signal timings was not performed to try to improve the levels of service. If the roundabout is not installed, the signal timings should be modified, which will result in improved levels of service. The signalized intersection capacity analysis shows that there will be no change in the overall intersection level of service at the intersection of Ten Rod Road, Lang Drive, and Autumn Drive during the A.M., P.M., and Saturday midday peak hours.

The roundabout capacity analysis shows that the intersection of Ten Rod Road, South County Trail, and the proposed The Preserve at Rolling Greens driveway will operate at LOS A during the A.M. peak hour and LOS B during the P.M. and Saturday midday peak hours. All of the approaches of the roundabout will operate at acceptable levels of service during the A.M., P.M., and Saturday midday peak hours, with the exception of the eastbound approach, which will operate at LOS E during the Saturday midday peak hour.

The geometric configuration of the existing roadways is such that adequate safe stopping sight distances exist for traffic passing and/or utilizing the site, with the exception of the proposed unsignalized driveway at Plain Road. It is recommended that trees and bushes within the sight line be trimmed/removed to increase the sight distance from the east. There are no existing unsafe conditions in the vicinity of the development that might be worsened by the addition of the anticipated traffic.

Based upon the analyses, traffic operations on the surrounding roadways and intersections will experience minimal change with the addition of the traffic generated by the proposed improvements. No reduction in safety will occur due to the development as proposed and due to the removal of several driveways, there will be a reduction in conflict points, which will actually improve safety in the area.

APPENDIX A: TRAFFIC COUNTS

AUTOMATED COUNTS & TRAFFIC SURVEYS INC.
2 BURCHARD AVENUE
LITTLE COMPTON, RI 02837
(401)635-1650

Weather : HHH
Counter : D-2618
Counted by: RJS
Comments: N KINGSTOWN

Site Code : 10071302
Start Date: 07/13/10
File I.D. : BANK0703
Page : 1

AUTOS

	ROLLING GRNS Southbound				RTE 102 Westbound				PLAIN RD Northbound				RTE 102 Eastbound				
	Left	Thru	Right	PEDS	Left	Thru	Right	PEDS	Left	Thru	Right	PEDS	Left	Thru	Right	PEDS	Total
Date 07/13/10																	
06:00	0	0	0	0	0	56	1	0	0	0	0	0	0	105	0	0	162
06:15	0	0	0	0	0	88	0	0	1	0	1	0	0	156	0	0	246
06:30	1	0	0	0	2	117	1	0	1	0	3	0	0	184	0	0	309
06:45	0	0	0	0	3	111	0	0	0	0	3	0	0	212	0	0	329
Hr Total	1	0	0	0	5	372	2	0	2	0	7	0	0	657	0	0	1046
07:00	0	0	1	0	0	110	1	0	0	0	4	0	0	218	0	0	334
07:15	0	0	0	0	1	163	2	0	0	0	1	0	1	274	0	0	442
07:30	0	0	0	0	5	191	1	0	0	0	3	0	0	280	0	0	480
07:45	0	0	0	0	5	224	4	0	0	0	9	0	0	313	0	0	555
Hr Total	0	0	1	0	11	688	8	0	0	0	17	0	1	1085	0	0	1811
08:00	1	0	1	0	11	182	10	0	0	0	6	0	4	277	1	0	493
08:15	2	0	0	0	7	196	12	0	1	0	7	0	0	270	1	0	496
08:30	2	0	0	0	1	207	4	0	0	0	5	0	0	240	0	0	459
08:45	0	0	0	0	4	215	1	0	1	0	5	0	1	218	0	0	445
Hr Total	5	0	1	0	23	800	27	0	2	0	23	0	5	1005	2	0	1893
09:00	1	0	2	0	3	181	6	0	0	0	0	0	1	204	0	0	398
09:15	0	0	1	0	3	161	2	0	0	0	4	0	0	176	0	0	347
09:30	0	0	0	0	5	170	1	0	0	0	4	0	0	181	1	0	362
09:45	1	0	0	0	4	165	5	0	0	0	3	0	1	168	1	0	348
Hr Total	2	0	3	0	15	677	14	0	0	0	11	0	2	729	2	0	1455
---------- * BREAK * ----------																	
14:00	1	0	1	0	5	164	0	0	0	0	1	0	1	136	0	0	309
14:15	2	0	0	0	3	195	1	0	0	0	3	0	0	206	2	0	412
14:30	2	1	1	0	4	196	4	0	0	0	6	0	1	164	0	0	379
14:45	1	0	0	0	3	196	16	0	0	0	4	0	1	192	0	0	413
Hr Total	6	1	2	0	15	751	21	0	0	0	14	0	3	698	2	0	1513
15:00	1	0	0	0	6	222	6	0	1	0	4	0	2	210	1	0	453
15:15	3	0	2	0	6	226	2	0	0	0	2	0	1	246	0	0	488
15:30	5	0	5	1	6	247	5	0	0	0	5	0	0	226	0	0	500
15:45	6	1	1	0	5	270	7	0	0	0	3	0	1	225	0	0	519
Hr Total	15	1	8	1	23	965	20	0	1	0	14	0	4	907	1	0	1960
16:00	0	0	0	0	5	261	4	0	0	0	1	0	0	216	0	0	487
16:15	2	0	1	0	4	276	0	0	1	0	4	0	1	253	0	0	542
16:30	0	0	0	0	7	265	1	0	0	0	0	0	1	251	1	0	526
16:45	0	0	1	0	3	305	0	0	0	0	4	0	0	262	0	0	575
Hr Total	2	0	2	0	19	1107	5	0	1	0	9	0	2	982	1	0	2130

AUTOMATED COUNTS & TRAFFIC SURVEYS INC.
2 BURCHARD AVENUE
LITTLE COMPTON, RI 02837
(401)635-1650

Weather : HHH
Counter : D-2618
Counted by: RJS
Comments: N KINGSTOWN

Site Code : 10071302
Start Date: 07/13/10
File I.D. : BANK0703
Page : 2

AUTOS

	ROLLING GRNS Southbound				RTE 102 Westbound				PLAIN RD Northbound				RTE 102 Eastbound				
	Left	Thru	Right	PEDS	Left	Thru	Right	PEDS	Left	Thru	Right	PEDS	Left	Thru	Right	PEDS	Total
Date 07/13/10																	
17:00	0	1	1	0	7	270	0	0	0	0	5	0	0	310	1	0	595
17:15	0	0	1	0	10	276	0	0	0	0	4	0	1	316	0	0	608
17:30	0	0	0	0	4	304	0	0	0	0	5	0	0	272	0	0	585
17:45	1	0	0	0	14	259	0	0	0	0	5	0	0	212	1	0	492
Hr Total	1	1	2	0	35	1109	0	0	0	0	19	0	1	1110	2	0	2280
TOTAL	32	3	19	1	146	6469	97	0	6	0	114	0	18	7173	10	0	14088

AUTOMATED COUNTS & TRAFFIC SURVEYS INC.
2 BURCHARD AVENUE
LITTLE COMPTON, RI 02837
(401)635-1650

Weather : HHH
Counter : D-2618
Counted by: RJS
Comments: N KINGSTOWN

Site Code : 10071302
Start Date: 07/13/10
File I.D. : BANK0703
Page : 1

HEAVY VEHICLES

	ROLLING GRNS Southbound				RTE 102 Westbound				PLAIN RD Northbound				RTE 102 Eastbound				
	Left	Thru	Right	Other	Left	Thru	Right	Other	Left	Thru	Right	Other	Left	Thru	Right	Other	Total
Date 07/13/10																	
06:00	0	0	0	0	0	1	0	0	0	0	0	0	0	3	0	0	4
06:15	0	0	0	0	0	1	0	0	0	0	0	0	0	10	0	0	11
06:30	0	0	0	0	0	7	0	0	0	0	0	0	0	10	0	0	17
06:45	0	0	0	0	0	17	0	0	0	0	0	0	0	9	0	0	26
Hr Total	0	0	0	0	0	26	0	0	0	0	0	0	0	32	0	0	58
07:00	0	0	0	0	1	10	0	0	0	0	0	0	0	7	0	0	18
07:15	0	0	0	0	0	12	0	0	0	0	0	0	0	15	0	0	27
07:30	0	0	0	0	0	16	0	0	0	0	1	0	0	14	0	0	31
07:45	0	0	0	0	0	11	0	0	0	0	0	0	0	18	0	0	29
Hr Total	0	0	0	0	1	49	0	0	0	0	1	0	0	54	0	0	105
08:00	0	0	0	0	0	14	0	0	0	0	0	0	0	17	0	0	31
08:15	0	0	0	0	0	21	0	0	0	0	0	0	0	12	0	0	33
08:30	0	0	0	0	0	19	0	0	0	0	0	0	0	15	0	0	34
08:45	0	0	0	0	0	9	0	0	0	0	0	0	0	9	0	0	18
Hr Total	0	0	0	0	0	63	0	0	0	0	0	0	0	53	0	0	116
09:00	0	0	0	0	0	14	0	0	0	0	0	0	0	19	0	0	33
09:15	0	0	0	0	1	20	0	0	0	0	0	0	0	10	0	0	31
09:30	0	0	0	0	1	19	0	0	0	0	0	0	0	19	0	0	39
09:45	0	0	0	0	0	18	0	0	0	0	0	0	1	14	0	0	33
Hr Total	0	0	0	0	2	71	0	0	0	0	0	0	1	62	0	0	136
* BREAK *																	
14:00	0	0	0	0	0	18	0	0	0	0	0	0	0	9	0	0	27
14:15	0	0	0	0	0	12	0	0	0	0	1	0	0	10	0	0	23
14:30	0	0	0	0	0	14	0	0	0	0	0	0	0	13	0	0	27
14:45	0	0	0	0	0	13	0	0	0	0	0	0	0	12	0	0	25
Hr Total	0	0	0	0	0	57	0	0	0	0	1	0	0	44	0	0	102
15:00	0	0	0	0	0	14	0	0	0	0	0	0	0	13	0	0	27
15:15	0	0	0	0	0	16	0	0	0	0	0	0	0	16	0	0	32
15:30	0	0	0	0	0	11	1	0	0	0	0	0	0	11	0	0	23
15:45	0	0	0	0	0	8	0	0	0	0	0	0	0	11	0	0	19
Hr Total	0	0	0	0	0	49	1	0	0	0	0	0	0	51	0	0	101
16:00	0	0	0	0	1	9	0	0	0	0	0	0	0	17	0	0	27
16:15	0	0	0	0	0	11	0	0	0	0	1	0	0	8	0	0	20
16:30	0	0	0	0	0	7	0	0	0	0	0	0	0	10	0	0	17
16:45	0	0	0	0	0	4	0	0	0	0	0	0	0	10	0	0	14
Hr Total	0	0	0	0	1	31	0	0	0	0	1	0	0	45	0	0	78

Weather : HHH
Counter : D-2618
Counted by: RJS
Comments: N KINGSTOWN

AUTOMATED COUNTS & TRAFFIC SURVEYS INC.
2 BURCHARD AVENUE
LITTLE COMPTON, RI 02837
(401)635-1650

Site Code : 10071302
Start Date: 07/13/10
File I.D. : BANK0703
Page : 2

HEAVY VEHICLES

	ROLLING GRNS Southbound				RTE 102 Westbound				PLAIN RD Northbound				RTE 102 Eastbound				
	Left	Thru	Right	Other	Left	Thru	Right	Other	Left	Thru	Right	Other	Left	Thru	Right	Other	Total
Date 07/13/10																	
17:00	0	0	0	0	0	4	0	0	0	0	0	0	0	6	0	0	10
17:15	0	0	0	0	0	9	0	0	0	0	0	0	0	6	0	0	15
17:30	0	0	0	0	0	3	0	0	0	0	0	0	0	5	0	0	8
17:45	0	0	0	0	0	1	0	0	0	0	0	0	0	3	0	0	4
Hr Total	0	0	0	0	0	17	0	0	0	0	0	0	0	20	0	0	37
TOTAL	0	0	0	0	4	363	1	0	0	0	3	0	1	361	0	0	733

AUTOMATED COUNTS & TRAFFIC SURVEYS INC.
2 BURCHARD AVENUE
LITTLE COMPTON, RI 02837
(401)635-1650

Weather : HHH
Counter : D-2618
Counted by: RJS
Comments: N KINGSTOWN

Site Code : 10071302
Start Date: 07/13/10
File I.D. : BANK0703
Page : 1

AUTOS, HEAVY VEHICLES

	ROLLING GRNS Southbound				RTE 102 Westbound				PLAIN RD Northbound				RTE 102 Eastbound				
	Left	Thru	Right	PEDS	Left	Thru	Right	PEDS	Left	Thru	Right	PEDS	Left	Thru	Right	PEDS	Total
Date 07/13/10																	
06:00	0	0	0	0	0	57	1	0	0	0	0	0	0	108	0	0	166
06:15	0	0	0	0	0	89	0	0	1	0	1	0	0	166	0	0	257
06:30	1	0	0	0	2	124	1	0	1	0	3	0	0	194	0	0	326
06:45	0	0	0	0	3	128	0	0	0	0	3	0	0	221	0	0	355
Hr Total	1	0	0	0	5	398	2	0	2	0	7	0	0	689	0	0	1104
07:00	0	0	1	0	1	120	1	0	0	0	4	0	0	225	0	0	352
07:15	0	0	0	0	1	175	2	0	0	0	1	0	1	289	0	0	469
07:30	0	0	0	0	5	207	1	0	0	0	4	0	0	294	0	0	511
07:45	0	0	0	0	5	235	4	0	0	0	9	0	0	331	0	0	584
Hr Total	0	0	1	0	12	737	8	0	0	0	18	0	1	1139	0	0	1916
08:00	1	0	1	0	11	196	10	0	0	0	6	0	4	294	1	0	524
08:15	2	0	0	0	7	217	12	0	1	0	7	0	0	282	1	0	529
08:30	2	0	0	0	1	226	4	0	0	0	5	0	0	255	0	0	493
08:45	0	0	0	0	4	224	1	0	1	0	5	0	1	227	0	0	463
Hr Total	5	0	1	0	23	863	27	0	2	0	23	0	5	1058	2	0	2009
09:00	1	0	2	0	3	195	6	0	0	0	0	0	1	223	0	0	431
09:15	0	0	1	0	4	181	2	0	0	0	4	0	0	186	0	0	378
09:30	0	0	0	0	6	189	1	0	0	0	4	0	0	200	1	0	401
09:45	1	0	0	0	4	183	5	0	0	0	3	0	2	182	1	0	381
Hr Total	2	0	3	0	17	748	14	0	0	0	11	0	3	791	2	0	1591
---------- * BREAK * ----------																	
14:00	1	0	1	0	5	182	0	0	0	0	1	0	1	145	0	0	336
14:15	2	0	0	0	3	207	1	0	0	0	4	0	0	216	2	0	435
14:30	2	1	1	0	4	210	4	0	0	0	6	0	1	177	0	0	406
14:45	1	0	0	0	3	209	16	0	0	0	4	0	1	204	0	0	438
Hr Total	6	1	2	0	15	808	21	0	0	0	15	0	3	742	2	0	1615
15:00	1	0	0	0	6	236	6	0	1	0	4	0	2	223	1	0	480
15:15	3	0	2	0	6	242	2	0	0	0	2	0	1	262	0	0	520
15:30	5	0	5	1	6	258	6	0	0	0	5	0	0	237	0	0	523
15:45	6	1	1	0	5	278	7	0	0	0	3	0	1	236	0	0	538
Hr Total	15	1	8	1	23	1014	21	0	1	0	14	0	4	958	1	0	2061
16:00	0	0	0	0	6	270	4	0	0	0	1	0	0	233	0	0	514
16:15	2	0	1	0	4	287	0	0	1	0	5	0	1	261	0	0	562
16:30	0	0	0	0	7	272	1	0	0	0	0	0	1	261	1	0	543
16:45	0	0	1	0	3	309	0	0	0	0	4	0	0	272	0	0	589
Hr Total	2	0	2	0	20	1138	5	0	1	0	10	0	2	1027	1	0	2208

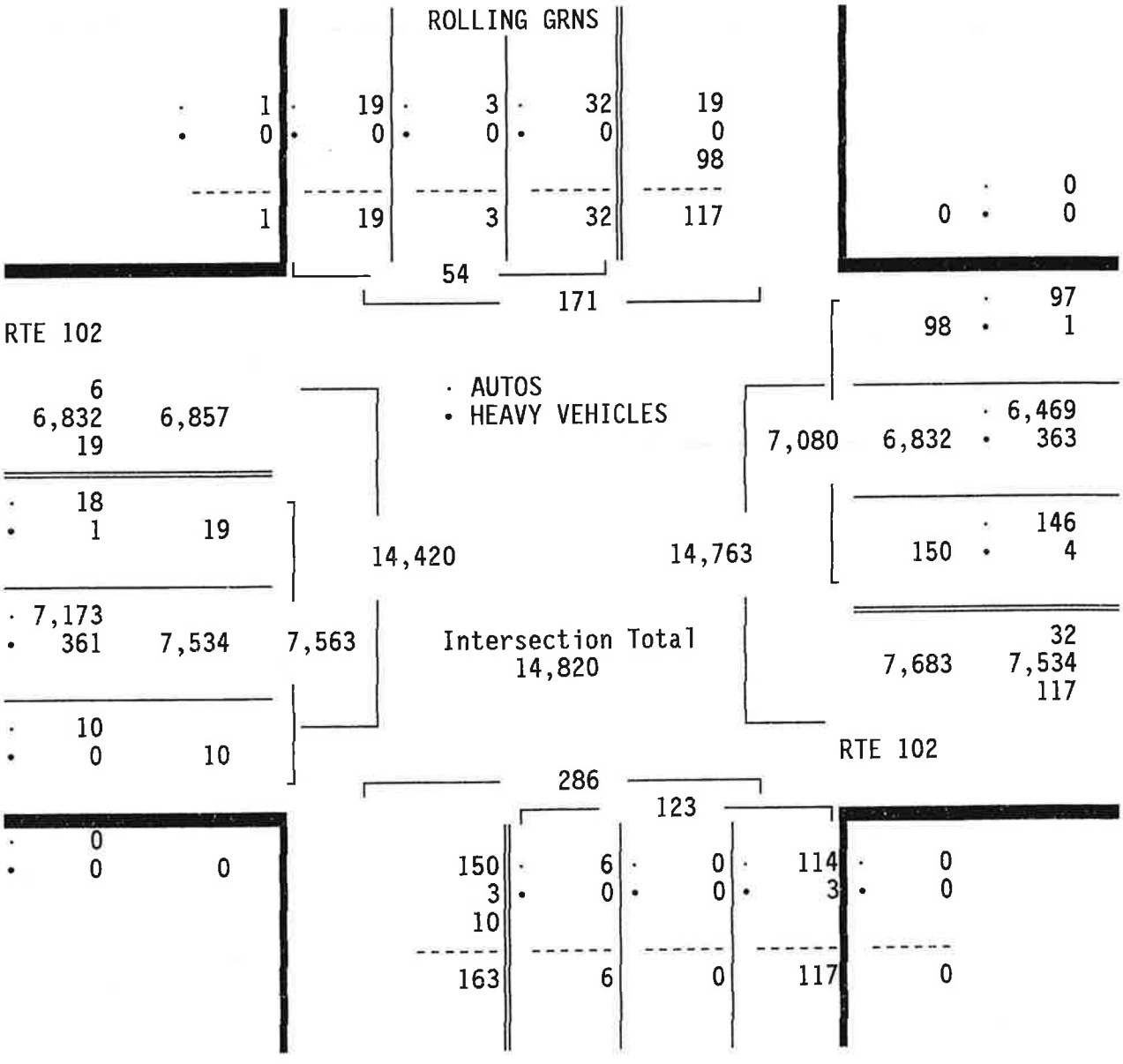
AUTOMATED COUNTS & TRAFFIC SURVEYS INC.
2 BURCHARD AVENUE
LITTLE COMPTON, RI 02837
(401)635-1650

Weather : HHH
Counter : D-2618
Counted by: RJS
Comments: N KINGSTOWN

Site Code : 10071302
Start Date: 07/13/10
File I.D. : BANK0703
Page : 2

AUTOS, HEAVY VEHICLES

	ROLLING GRNS Southbound				RTE 102 Westbound				PLAIN RD Northbound				RTE 102 Eastbound				
	Left	Thru	Right	PEDS	Left	Thru	Right	PEDS	Left	Thru	Right	PEDS	Left	Thru	Right	PEDS	Total
Date 07/13/10																	
17:00	0	1	1	0	7	274	0	0	0	0	5	0	0	316	1	0	605
17:15	0	0	1	0	10	285	0	0	0	0	4	0	1	322	0	0	623
17:30	0	0	0	0	4	307	0	0	0	0	5	0	0	277	0	0	593
17:45	1	0	0	0	14	260	0	0	0	0	5	0	0	215	1	0	496
Hr Total	1	1	2	0	35	1126	0	0	0	0	19	0	1	1130	2	0	2317
TOTAL	32	3	19	1	150	6832	98	0	6	0	117	0	19	7534	10	0	14821



AUTOMATED COUNTS & TRAFFIC SURVEYS INC.
2 BURCHARD AVENUE
LITTLE COMPTON, RI 02837
(401)635-1650

Weather : HHH
Counter : D-2618
Counted by: RJS
Comments: N KINGSTOWN

Site Code : 10071302
Start Date: 07/13/10
File I.D. : BANK0703
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AUTOS, HEAVY VEHICLES

	ROLLING GRNS Southbound				RTE 102 Westbound				PLAIN RD Northbound				RTE 102 Eastbound				
	Left	Thru	Right	PEDS	Left	Thru	Right	PEDS	Left	Thru	Right	PEDS	Left	Thru	Right	PEDS	Total
Date 07/13/10																	
Peak Hour Analysis By Individual Approach for the Period: 06:00 to 12:00 on 07/13/10																	
Peak start	08:15				07:45				07:45				07:15				
Volume	5	0	2	0	24	874	30	0	1	0	27	0	5	1208	1	0	
Percent	71%	0%	29%	0%	3%	94%	3%	0%	4%	0%	96%	0%	0%	100%	0%	0%	
Pk total	7				928				28				1214				
Highest	09:00				07:45				07:45				07:45				
Volume	1	0	2	0	5	235	4	0	0	0	9	0	0	331	0	0	
Hi total	3				244				9				331				
PHF	.58				.95				.78				.92				

AUTOMATED COUNTS & TRAFFIC SURVEYS INC.
2 BURCHARD AVENUE
LITTLE COMPTON, RI 02837
(401)635-1650

Weather : HHH
Counter : D-2618
Counted by: RJS
Comments: N KINGSTOWN

Site Code : 10071302
Start Date: 07/13/10
File I.D. : BANK0703
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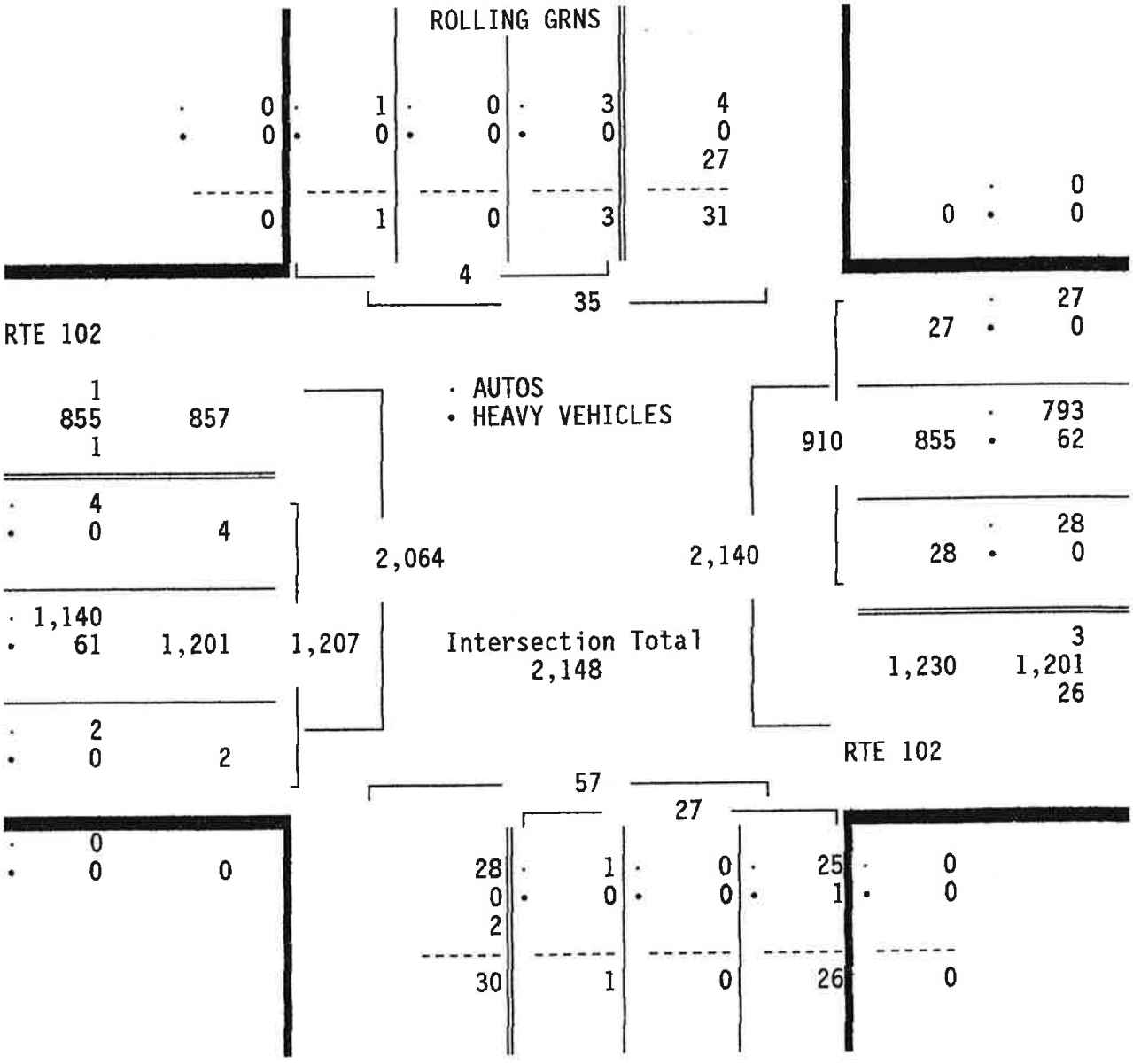
AUTOS, HEAVY VEHICLES

	ROLLING GRNS Southbound				RTE 102 Westbound				PLAIN RD Northbound				RTE 102 Eastbound				
	Left	Thru	Right	PEDS	Left	Thru	Right	PEDS	Left	Thru	Right	PEDS	Left	Thru	Right	PEDS	Total
Date 07/13/10																	
Peak Hour Analysis By Entire Intersection for the Period: 06:00 to 12:00 on 07/13/10																	
Peak start	07:30				07:30				07:30				07:30				
Volume	3	0	1	0	28	855	27	0	1	0	26	0	4	1201	2	0	
Percent	75%	0%	25%	0%	3%	94%	3%	0%	4%	0%	96%	0%	0%	100%	0%	0%	
Pk total	4				910				27				1207				
Highest	08:00				07:45				07:45				07:45				
Volume	1	0	1	0	5	235	4	0	0	0	9	0	0	331	0	0	
Hi total	2				244				9				331				
PHF	.50				.93				.75				.91				



AUTOMATED COUNTS & TRAFFIC SURVEYS INC.
2 BURCHARD AVENUE
LITTLE COMPTON, RI 02837
(401)635-1650

Weather : HHH
Counter : D-2618
Counted by: RJS
Comments: N KINGSTOWN

Site Code : 10071302
Start Date: 07/13/10
File I.D. : BANK0703
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AUTOS, HEAVY VEHICLES

	ROLLING GRNS Southbound				RTE 102 Westbound				PLAIN RD Northbound				RTE 102 Eastbound				
	Left	Thru	Right	PEDS	Left	Thru	Right	PEDS	Left	Thru	Right	PEDS	Left	Thru	Right	PEDS	Total
Date 07/13/10																	
Peak Hour Analysis By Individual Approach for the Period: 12:00 to 18:00 on 07/13/10																	
Peak start	15:00				16:45				17:00				16:45				
Volume	15	1	8	1	24	1175	0	0	0	0	19	0	1	1187	1	0	
Percent	60%	4%	32%	4%	2%	98%	0%	0%	0%	0%	100%	0%	0%	100%	0%	0%	
Pk total	25				1199				19				1189				
Highest	15:30				16:45				17:00				17:15				
Volume	5	0	5	1	3	309	0	0	0	0	5	0	1	322	0	0	
Hi total	11				312				5				323				
PHF	.57				.96				.95				.92				

AUTOMATED COUNTS & TRAFFIC SURVEYS INC.
2 BURCHARD AVENUE
LITTLE COMPTON, RI 02837
(401)635-1650

Weather : HHH
Counter : D-2618
Counted by: RJS
Comments: N KINGSTOWN

Site Code : 10071302
Start Date: 07/13/10
File I.D. : BANK0703
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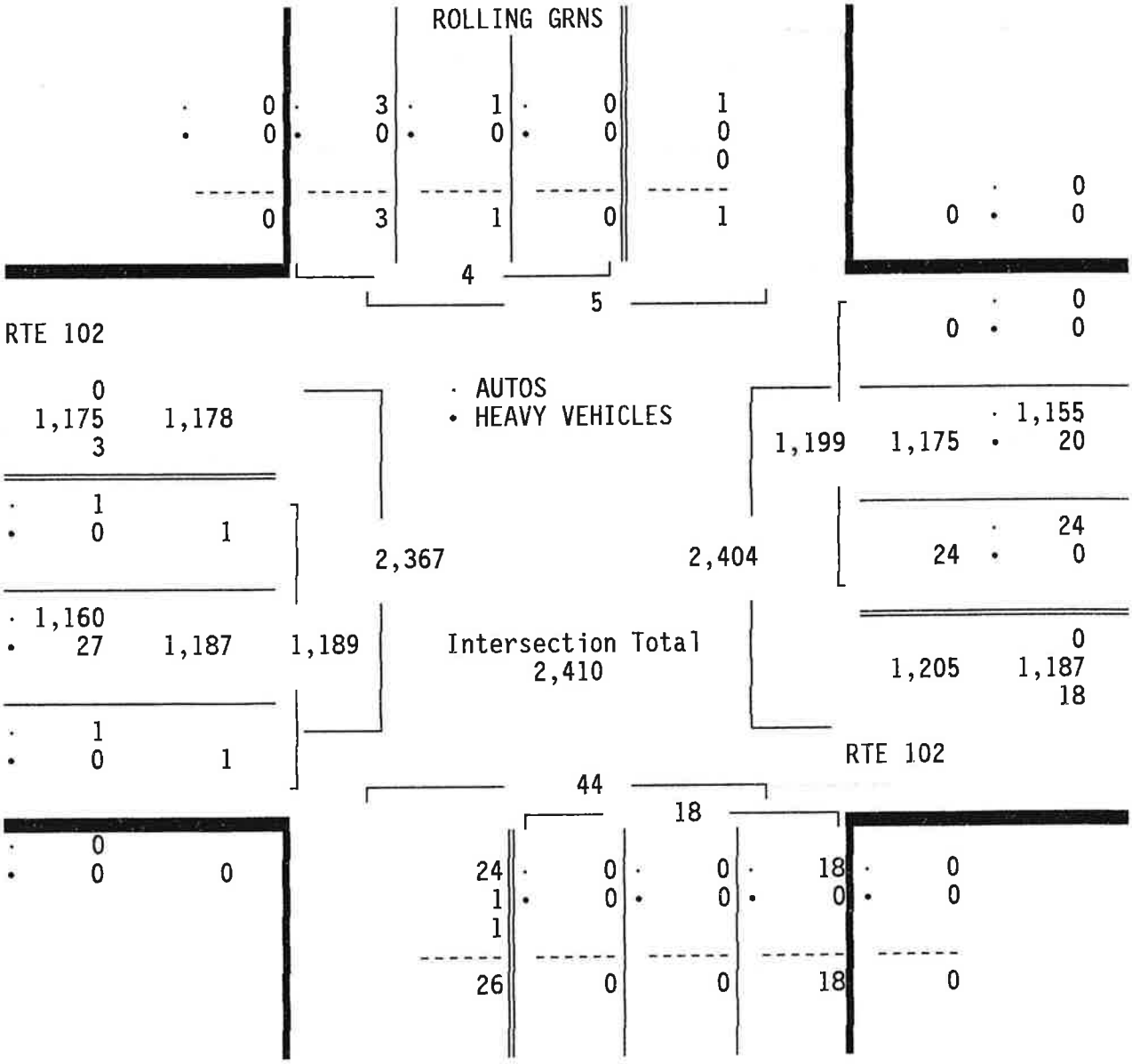
AUTOS, HEAVY VEHICLES

	ROLLING GRNS Southbound				RTE 102 Westbound				PLAIN RD Northbound				RTE 102 Eastbound				
	Left	Thru	Right	PEDS	Left	Thru	Right	PEDS	Left	Thru	Right	PEDS	Left	Thru	Right	PEDS	Total
Date 07/13/10																	
Peak Hour Analysis By Entire Intersection for the Period: 12:00 to 18:00 on 07/13/10																	
Peak start	16:45				16:45				16:45				16:45				
Volume	0	1	3	0	24	1175	0	0	0	0	18	0	1	1187	1	0	
Percent	0%	25%	75%	0%	2%	98%	0%	0%	0%	0%	100%	0%	0%	100%	0%	0%	
Pk total	4				1199				18				1189				
Highest	17:00				16:45				17:00				17:15				
Volume	0	1	1	0	3	309	0	0	0	0	5	0	1	322	0	0	
Hi total	2				312				5				323				
PHF	.50				.96				.90				.92				



AUTOMATED COUNTS & TRAFFIC SURVEYS INC.
2 BURCHARD AVENUE
LITTLE COMPTON, RI 02837
(401)635-1650

Weather : HHH
Counter : D-2618
Counted by: RJS
Comments: N KINGSTOWN

Site Code : 10071702
Start Date: 07/17/10
File I.D. : BANK0704
Page : 1

AUTOS

	ROLLING GRNS Southbound				RTE 102 Westbound				PLAIN RD Northbound				RTE 102 Eastbound				
	Left	Thru	Right	PEDS	Left	Thru	Right	PEDS	Left	Thru	Right	PEDS	Left	Thru	Right	PEDS	Total
Date 07/17/10																	
10:00	1	0	1	0	3	214	0	0	0	0	4	0	0	178	0	0	401
10:15	5	0	0	0	4	219	3	0	2	0	5	0	0	194	2	0	434
10:30	2	0	0	0	2	221	2	0	0	0	4	0	1	212	0	0	444
10:45	1	0	2	0	8	240	1	0	1	0	4	0	2	255	1	0	515
Hr Total	9	0	3	0	17	894	6	0	3	0	17	0	3	839	3	0	1794
11:00	1	0	1	0	7	250	3	0	0	0	4	0	1	208	2	0	477
11:15	3	0	1	0	9	249	2	0	0	0	3	0	1	239	0	0	507
11:30	1	0	0	0	14	279	0	0	0	0	2	0	0	219	0	0	515
11:45	1	0	0	0	8	238	2	0	0	0	3	0	0	220	1	0	473
Hr Total	6	0	2	0	38	1016	7	0	0	0	12	0	2	886	3	0	1972
12:00	1	0	1	0	6	266	3	0	1	0	5	0	0	214	1	0	498
12:15	2	0	2	0	10	264	1	0	0	0	5	0	0	253	0	0	537
12:30	2	0	3	0	19	284	0	0	1	0	2	0	0	224	0	0	535
12:45	1	0	2	0	5	241	0	0	0	0	9	0	1	208	1	0	468
Hr Total	6	0	8	0	40	1055	4	0	2	0	21	0	1	899	2	0	2038
13:00	2	0	0	0	6	240	2	0	0	0	8	0	0	211	0	0	469
13:15	0	0	0	0	6	298	2	0	0	0	3	0	0	211	1	0	521
13:30	0	0	0	0	7	226	0	0	0	0	0	0	0	217	0	0	450
13:45	4	0	0	0	5	256	0	0	0	0	4	0	0	200	0	0	469
Hr Total	6	0	0	0	24	1020	4	0	0	0	15	0	0	839	1	0	1909
TOTAL	27	0	13	0	119	3985	21	0	5	0	65	0	6	3463	9	0	7713

AUTOMATED COUNTS & TRAFFIC SURVEYS INC.
2 BURCHARD AVENUE
LITTLE COMPTON, RI 02837
(401)635-1650

Weather : HHH
Counter : D-2618
Counted by: RJS
Comments: N KINGSTOWN

Site Code : 10071702
Start Date: 07/17/10
File I.D. : BANK0704
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HEAVY VEHICLES

	ROLLING GRNS Southbound				RTE 102 Westbound				PLAIN RD Northbound				RTE 102 Eastbound				
	Left	Thru	Right	Other	Left	Thru	Right	Other	Left	Thru	Right	Other	Left	Thru	Right	Other	Total
Date 07/17/10																	
10:00	0	0	0	0	0	9	0	0	0	0	0	0	0	13	0	0	22
10:15	0	0	0	0	0	6	0	0	0	0	0	0	0	7	0	0	13
10:30	0	0	0	0	0	4	0	0	0	0	0	0	0	4	0	0	8
10:45	0	0	0	0	0	7	0	0	0	0	0	0	0	9	1	0	17
Hr Total	0	0	0	0	0	26	0	0	0	0	0	0	0	33	1	0	60
11:00	0	0	0	0	1	9	0	0	0	0	0	0	0	6	0	0	16
11:15	0	0	0	0	0	2	0	0	0	0	0	0	0	6	0	0	8
11:30	0	0	0	0	0	6	0	0	0	0	0	0	0	5	0	0	11
11:45	0	0	0	0	0	8	0	0	0	0	0	0	0	3	0	0	11
Hr Total	0	0	0	0	1	25	0	0	0	0	0	0	0	20	0	0	46
12:00	0	0	0	0	0	3	0	0	0	0	0	0	0	6	0	0	9
12:15	0	0	0	0	0	6	0	0	0	0	0	0	0	6	0	0	12
12:30	0	0	0	0	0	5	0	0	0	0	0	0	0	4	0	0	9
12:45	0	0	0	0	0	7	0	0	0	0	0	0	0	11	1	0	19
Hr Total	0	0	0	0	0	21	0	0	0	0	0	0	0	27	1	0	49
13:00	0	0	0	0	0	6	0	0	0	0	0	0	0	5	0	0	11
13:15	0	0	0	0	0	4	0	0	0	0	0	0	0	9	0	0	13
13:30	0	0	0	0	0	4	0	0	0	0	0	0	0	6	0	0	10
13:45	0	0	0	0	0	3	0	0	0	0	0	0	0	3	0	0	6
Hr Total	0	0	0	0	0	17	0	0	0	0	0	0	0	23	0	0	40
TOTAL	0	0	0	0	1	89	0	0	0	0	0	0	0	103	2	0	195

AUTOMATED COUNTS & TRAFFIC SURVEYS INC.
2 BURCHARD AVENUE
LITTLE COMPTON, RI 02837
(401)635-1650

Weather : HHH
Counter : D-2618
Counted by: RJS
Comments: N KINGSTOWN

Site Code : 10071702
Start Date: 07/17/10
File I.D. : BANK0704
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AUTOS, HEAVY VEHICLES

	ROLLING GRNS Southbound				RTE 102 Westbound				PLAIN RD Northbound				RTE 102 Eastbound				
	Left	Thru	Right	PEDS	Left	Thru	Right	PEDS	Left	Thru	Right	PEDS	Left	Thru	Right	PEDS	Total
Date 07/17/10																	
10:00	1	0	1	0	3	223	0	0	0	0	4	0	0	191	0	0	423
10:15	5	0	0	0	4	225	3	0	2	0	5	0	0	201	2	0	447
10:30	2	0	0	0	2	225	2	0	0	0	4	0	1	216	0	0	452
10:45	1	0	2	0	8	247	1	0	1	0	4	0	2	264	2	0	532
Hr Total	9	0	3	0	17	920	6	0	3	0	17	0	3	872	4	0	1854
11:00	1	0	1	0	8	259	3	0	0	0	4	0	1	214	2	0	493
11:15	3	0	1	0	9	251	2	0	0	0	3	0	1	245	0	0	515
11:30	1	0	0	0	14	285	0	0	0	0	2	0	0	224	0	0	526
11:45	1	0	0	0	8	246	2	0	0	0	3	0	0	223	1	0	484
Hr Total	6	0	2	0	39	1041	7	0	0	0	12	0	2	906	3	0	2018
12:00	1	0	1	0	6	269	3	0	1	0	5	0	0	220	1	0	507
12:15	2	0	2	0	10	270	1	0	0	0	5	0	0	259	0	0	549
12:30	2	0	3	0	19	289	0	0	1	0	2	0	0	228	0	0	544
12:45	1	0	2	0	5	248	0	0	0	0	9	0	1	219	2	0	487
Hr Total	6	0	8	0	40	1076	4	0	2	0	21	0	1	926	3	0	2087
13:00	2	0	0	0	6	246	2	0	0	0	8	0	0	216	0	0	480
13:15	0	0	0	0	6	302	2	0	0	0	3	0	0	220	1	0	534
13:30	0	0	0	0	7	230	0	0	0	0	0	0	0	223	0	0	460
13:45	4	0	0	0	5	259	0	0	0	0	4	0	0	203	0	0	475
Hr Total	6	0	0	0	24	1037	4	0	0	0	15	0	0	862	1	0	1949
TOTAL	27	0	13	0	120	4074	21	0	5	0	65	0	6	3566	11	0	7908

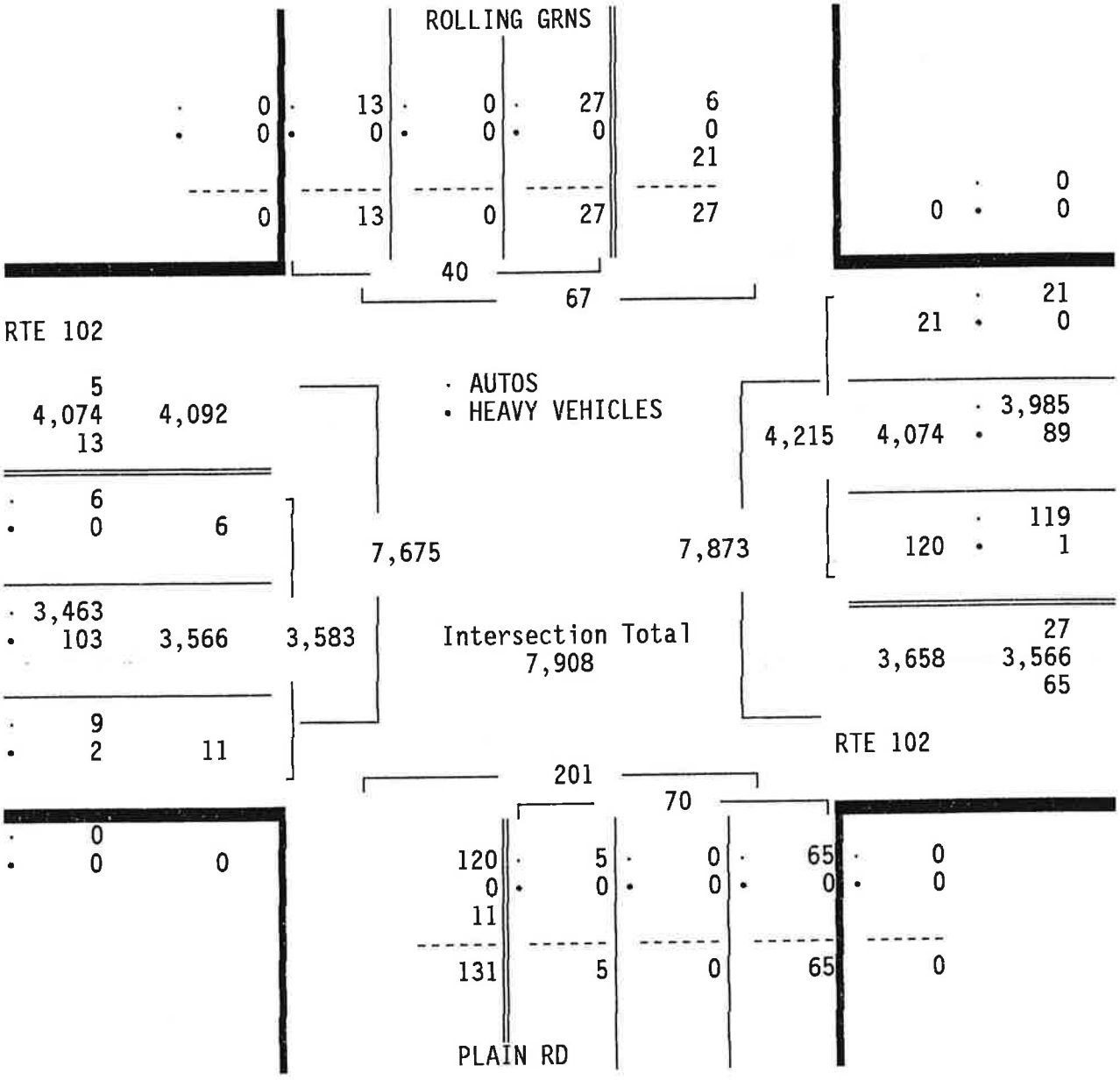
Weather : HHH
Counter : D-2618
Counted by: RJS
Comments: N KINGSTOWN

AUTOMATED COUNTS & TRAFFIC SURVEYS INC.
2 BURCHARD AVENUE
LITTLE COMPTON, RI 02837
(401)635-1650

Site Code : 10071702
Start Date: 07/17/10
File I.D. : BANK0704

AUTOS, HEAVY VEHICLES

Date 07/17/10	ROLLING GRNS Southbound				RTE 102 Westbound				PLAIN RD Northbound				RTE 102 Eastbound				Total
	Left	Thru	Right	PEDS	Left	Thru	Right	PEDS	Left	Thru	Right	PEDS	Left	Thru	Right	PEDS	
	0	13	0	27	0	0	0	0	6	0	21	27	0	0	0	0	67
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	21	0	21
	0	13	0	27	0	0	0	0	6	0	21	27	0	0	21	0	88
	40																



AUTOMATED COUNTS & TRAFFIC SURVEYS INC.
2 BURCHARD AVENUE
LITTLE COMPTON, RI 02837
(401)635-1650

Weather : HHH
Counter : D-2618
Counted by: RJS
Comments: N KINGSTOWN

Site Code : 10071702
Start Date: 07/17/10
File I.D. : BANK0704

AUTOS, HEAVY VEHICLES

	ROLLING GRNS Southbound				RTE 102 Westbound				PLAIN RD Northbound				RTE 102 Eastbound				
	Left	Thru	Right	PEDS	Left	Thru	Right	PEDS	Left	Thru	Right	PEDS	Left	Thru	Right	PEDS	Total
Date 07/17/10																	
Peak Hour Analysis By Individual Approach for the Period: 10:00 to 14:00 on 07/17/10																	
Peak start	12:15				12:30				12:15				10:45				
Volume	7	0	7	0	36	1085	4	0	1	0	24	0	4	947	4	0	
Percent	50%	0%	50%	0%	3%	96%	0%	0%	4%	0%	96%	0%	0%	99%	0%	0%	
Pk total	14				1125				25				955				
Highest	12:30				13:15				12:45				10:45				
Volume	2	0	3	0	6	302	2	0	0	0	9	0	2	264	2	0	
Hi total	5				310				9				268				
PHF	.70				.91				.69				.89				

AUTOMATED COUNTS & TRAFFIC SURVEYS INC.
2 BURCHARD AVENUE
LITTLE COMPTON, RI 02837
(401)635-1650

Weather : HHH
Counter : D-2618
Counted by: RJS
Comments: N KINGSTOWN

Site Code : 10071702
Start Date: 07/17/10
File I.D. : BANK0704
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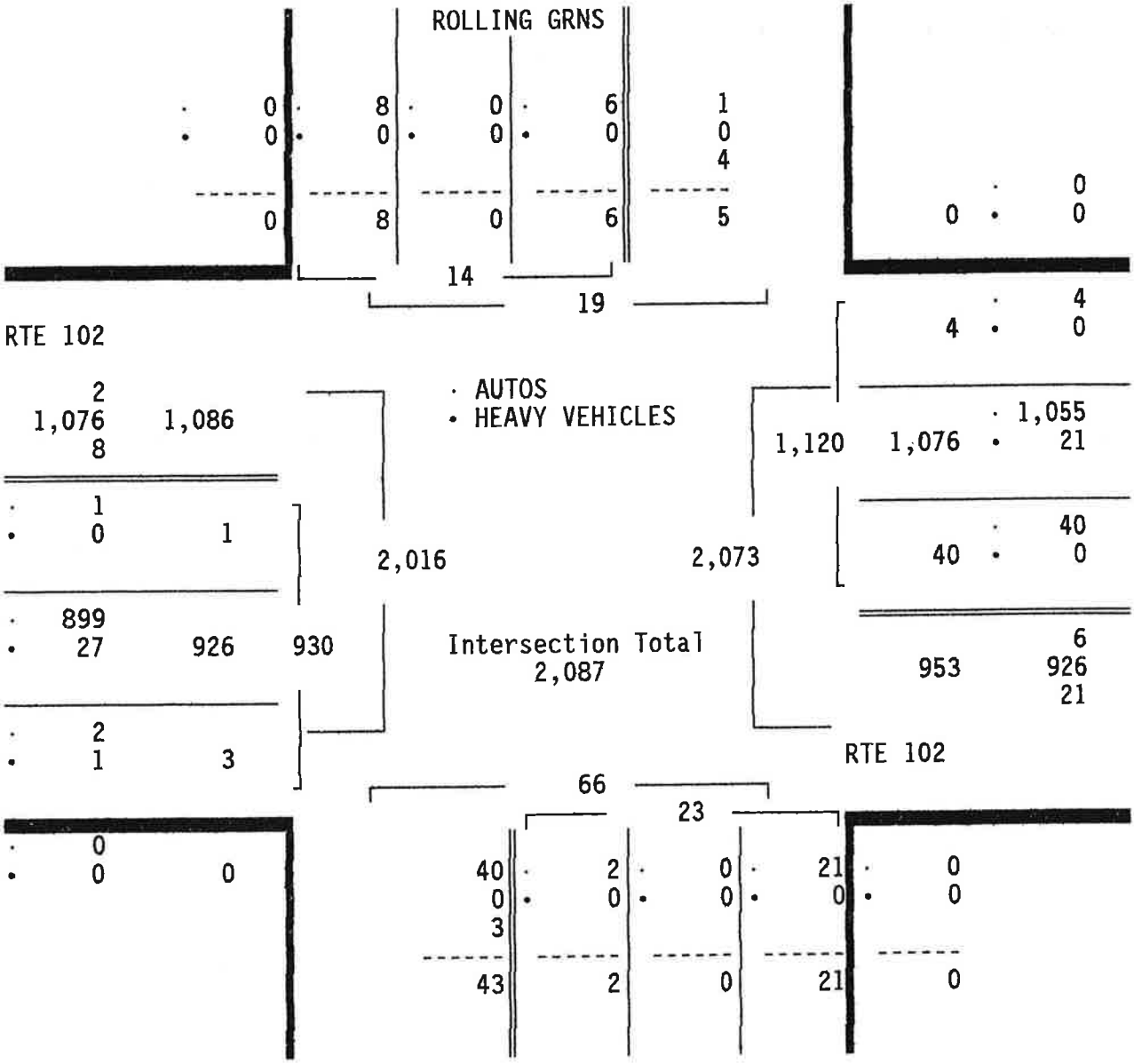
AUTOS, HEAVY VEHICLES

	ROLLING GRNS Southbound				RTE 102 Westbound				PLAIN RD Northbound				RTE 102 Eastbound				
	Left	Thru	Right	PEDS	Left	Thru	Right	PEDS	Left	Thru	Right	PEDS	Left	Thru	Right	PEDS	Total
Date 07/17/10																	
Peak Hour Analysis By Entire Intersection for the Period: 10:00 to 14:00 on 07/17/10																	
Peak start	12:00				12:00				12:00				12:00				
Volume	6	0	8	0	40	1076	4	0	2	0	21	0	1	926	3	0	
Percent	43%	0%	57%	0%	4%	96%	0%	0%	9%	0%	91%	0%	0%	100%	0%	0%	
Pk total	14				1120				23				930				
Highest	12:30				12:30				12:45				12:15				
Volume	2	0	3	0	19	289	0	0	0	0	9	0	0	259	0	0	
Hi total	5				308				9				259				
PHF	.70				.91				.64				.90				



AUTOMATED COUNTS & TRAFFIC SURVEYS INC.
2 BURCHARD AVENUE
LITTLE COMPTON, RI 02837
(401)635-1650

Weather : HHH
Counter : D-2619
Counted by: SCS
Comments: N KINGSTOWN

Site Code : 10071303
Start Date: 07/13/10
File I.D. : BANK0705
Page : 1

AUTOS

	OATLEYS Southbound				RTE 102 Westbound				RTE 2 Northbound				RTE 102 Eastbound				
	Left	Thru	Right	PEDS	Left	Thru	Right	PEDS	Left	Thru	Right	PEDS	Left	Thru	Right	PEDS	Total
Date 07/13/10																	
06:00	0	0	0	0	40	12	0	0	0	0	51	0	1	56	4	0	164
06:15	0	2	0	0	58	27	1	0	0	0	74	0	1	81	1	0	245
06:30	2	0	0	0	99	22	1	0	2	1	84	0	3	99	7	0	320
06:45	3	2	2	0	86	29	0	0	1	2	111	0	0	101	3	0	340
Hr Total	5	4	2	0	283	90	2	0	3	3	320	0	5	337	15	0	1069
07:00	1	1	0	0	75	31	0	0	3	1	101	0	1	121	3	0	338
07:15	2	1	2	0	124	43	0	0	4	0	155	0	0	119	5	0	455
07:30	5	11	1	0	114	41	0	0	6	1	143	0	2	145	7	0	476
07:45	2	16	1	0	150	63	0	0	4	2	168	0	1	146	7	0	560
Hr Total	10	29	4	0	463	178	0	0	17	4	567	0	4	531	22	0	1829
08:00	2	8	0	0	142	40	0	0	3	0	154	0	0	124	11	0	484
08:15	5	3	3	0	146	42	0	0	3	1	153	0	0	117	5	0	478
08:30	1	3	2	0	151	60	0	0	6	0	128	0	0	107	4	0	462
08:45	1	6	6	0	155	45	0	0	7	1	133	0	2	102	7	0	465
Hr Total	9	20	11	0	594	187	0	0	19	2	568	0	2	450	27	0	1889
09:00	3	7	3	0	134	63	0	0	10	1	118	0	1	86	10	0	436
09:15	3	2	2	0	104	53	0	0	1	0	103	0	1	72	4	0	345
09:30	4	0	1	0	116	51	0	0	3	2	90	0	0	91	5	0	363
09:45	3	2	2	0	113	54	0	0	6	0	87	0	2	81	2	0	352
Hr Total	13	11	8	0	467	221	0	0	20	3	398	0	4	330	21	0	1496
* BREAK *																	
14:00	2	2	1	0	95	67	0	0	4	3	82	0	0	57	8	0	321
14:15	2	2	1	0	122	70	0	0	5	2	127	0	0	81	7	0	419
14:30	2	3	1	0	116	83	0	0	2	1	96	0	1	67	7	0	379
14:45	2	4	1	0	106	84	0	0	8	1	126	0	0	67	7	0	406
Hr Total	8	11	4	0	439	304	0	0	19	7	431	0	1	272	29	0	1525
15:00	2	1	3	0	134	86	0	0	5	2	133	0	0	83	8	0	457
15:15	6	1	3	1	110	106	0	0	8	1	179	0	0	65	10	0	490
15:30	3	4	1	0	135	112	0	0	8	1	152	0	0	77	3	0	496
15:45	3	2	3	0	141	136	0	0	10	0	159	0	1	65	2	0	522
Hr Total	14	8	10	1	520	440	0	0	31	4	623	0	1	290	23	0	1965
16:00	1	2	7	0	138	118	0	0	16	1	161	0	1	56	5	0	506
16:15	1	3	6	0	159	115	1	0	6	0	186	0	0	80	8	0	565
16:30	1	2	2	0	166	114	0	0	10	2	181	0	0	78	6	0	562
16:45	1	5	2	0	177	125	0	0	13	1	197	0	0	64	2	0	587
Hr Total	4	12	17	0	640	472	1	0	45	4	725	0	1	278	21	0	2220

AUTOMATED COUNTS & TRAFFIC SURVEYS INC.
2 BURCHARD AVENUE
LITTLE COMPTON, RI 02837
(401)635-1650

Weather : HHH
Counter : D-2619
Counted by: SCS
Comments: N KINGSTOWN

Site Code : 10071303
Start Date: 07/13/10
File I.D. : BANK0705
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AUTOS

	OATLEYS Southbound				RTE 102 Westbound				RTE 2 Northbound				RTE 102 Eastbound				
	Left	Thru	Right	PEDS	Left	Thru	Right	PEDS	Left	Thru	Right	PEDS	Left	Thru	Right	PEDS	Total
Date 07/13/10																	
17:00	1	7	4	0	166	92	0	0	5	2	249	0	0	91	8	0	625
17:15	1	7	1	0	168	97	0	0	10	1	251	0	0	72	7	0	615
17:30	0	5	1	0	188	109	0	0	6	0	202	0	0	61	5	0	577
17:45	2	7	3	0	175	92	0	0	8	2	166	0	2	56	5	0	518
Hr Total	4	26	9	0	697	390	0	0	29	5	868	0	2	280	25	0	2335
TOTAL	67	121	65	1	4103	2282	3	0	183	32	4500	0	20	2768	183	0	14328

AUTOMATED COUNTS & TRAFFIC SURVEYS INC.
2 BURCHARD AVENUE
LITTLE COMPTON, RI 02837
(401)635-1650

Weather : HHH
Counter : D-2619
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Comments: N KINGSTOWN

Site Code : 10071303
Start Date: 07/13/10
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HEAVY VEHICLES

	OATLEYS Southbound				RTE 102 Westbound				RTE 2 Northbound				RTE 102 Eastbound				
	Left	Thru	Right	Other	Left	Thru	Right	Other	Left	Thru	Right	Other	Left	Thru	Right	Other	Total
Date 07/13/10																	
06:00	0	0	0	0	0	1	0	0	0	0	1	0	0	2	1	0	5
06:15	2	0	0	0	0	1	1	0	0	0	6	0	0	3	1	0	14
06:30	0	0	0	0	6	0	0	0	0	0	6	0	0	3	0	0	15
06:45	0	0	0	0	16	1	0	0	0	1	6	0	0	1	0	0	25
Hr Total	2	0	0	0	22	3	1	0	0	1	19	0	0	9	2	0	59
07:00	1	1	0	0	6	1	0	0	0	0	5	0	0	1	0	0	15
07:15	0	0	0	0	8	2	0	0	0	0	8	0	0	7	1	0	26
07:30	0	1	0	0	13	1	0	0	0	0	12	0	0	2	0	0	29
07:45	0	0	0	0	10	1	0	0	0	0	12	0	0	4	2	0	29
Hr Total	1	2	0	0	37	5	0	0	0	0	37	0	0	14	3	0	99
08:00	0	0	0	0	15	1	0	0	0	0	15	0	0	2	1	0	34
08:15	0	0	0	0	13	6	0	0	1	0	9	0	0	4	0	0	33
08:30	0	0	0	0	10	10	0	0	1	1	10	0	0	5	0	0	37
08:45	0	0	0	0	7	0	0	0	0	0	6	0	0	3	0	0	16
Hr Total	0	0	0	0	45	17	0	0	2	1	40	0	0	14	1	0	120
09:00	1	0	0	0	16	0	0	0	2	0	15	0	0	1	0	0	35
09:15	0	1	0	0	14	6	0	0	1	0	9	0	0	2	1	0	34
09:30	0	0	1	0	15	4	0	0	0	1	14	0	0	7	0	0	42
09:45	0	0	0	0	10	5	0	0	2	0	11	0	0	2	2	0	32
Hr Total	1	1	1	0	55	15	0	0	5	1	49	0	0	12	3	0	143
---------- * BREAK * ----------																	
14:00	0	0	0	0	12	8	0	0	0	0	8	0	0	1	1	0	30
14:15	0	0	0	0	12	1	0	0	0	0	9	0	0	1	1	0	24
14:30	0	0	0	0	10	4	0	0	1	0	7	1	1	5	1	0	30
14:45	1	0	0	0	8	3	0	0	0	0	5	0	0	6	1	0	24
Hr Total	1	0	0	0	42	16	0	0	1	0	29	1	1	13	4	0	108
15:00	0	0	0	0	8	4	0	0	1	0	11	0	0	0	0	0	24
15:15	0	0	0	0	9	7	0	0	0	0	14	0	0	1	0	0	31
15:30	0	0	0	0	6	5	0	0	0	0	8	0	0	2	1	0	22
15:45	0	0	0	0	2	3	0	0	2	0	7	0	0	3	1	0	18
Hr Total	0	0	0	0	25	19	0	0	3	0	40	0	0	6	2	0	95
16:00	0	0	0	0	4	5	0	0	2	0	12	0	0	4	1	0	28
16:15	0	0	0	0	3	5	0	0	2	0	6	0	0	2	1	0	19
16:30	0	0	0	0	1	6	0	0	0	0	9	0	0	1	0	0	17
16:45	0	1	0	0	1	2	0	0	0	0	7	0	1	3	0	0	15
Hr Total	0	1	0	0	9	18	0	0	4	0	34	0	1	10	2	0	79

AUTOMATED COUNTS & TRAFFIC SURVEYS INC.
2 BURCHARD AVENUE
LITTLE COMPTON, RI 02837
(401)635-1650

Weather : HHH
Counter : D-2619
Counted by: SCS
Comments: N KINGSTOWN

Site Code : 10071303
Start Date: 07/13/10
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HEAVY VEHICLES

	OATLEYS Southbound				RTE 102 Westbound				RTE 2 Northbound				RTE 102 Eastbound				
	Left	Thru	Right	Other	Left	Thru	Right	Other	Left	Thru	Right	Other	Left	Thru	Right	Other	Total
Date 07/13/10																	
17:00	0	0	0	0	1	0	0	0	1	0	4	0	0	1	0	0	7
17:15	0	0	1	0	10	1	0	0	0	0	3	0	0	2	0	0	17
17:30	0	0	0	0	1	1	0	0	1	1	2	0	0	0	0	0	6
17:45	0	0	0	0	0	1	0	0	0	0	2	0	0	1	1	0	5
Hr Total	0	0	1	0	12	3	0	0	2	1	11	0	0	4	1	0	35
TOTAL	5	4	2	0	247	96	1	0	17	4	259	1	2	82	18	0	738

AUTOMATED COUNTS & TRAFFIC SURVEYS INC.
2 BURCHARD AVENUE
LITTLE COMPTON, RI 02837
(401)635-1650

Weather : HHH
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AUTOS, HEAVY VEHICLES

	OATLEYS Southbound				RTE 102 Westbound				RTE 2 Northbound				RTE 102 Eastbound				
	Left	Thru	Right	PEDS	Left	Thru	Right	PEDS	Left	Thru	Right	PEDS	Left	Thru	Right	PEDS	Total
Date 07/13/10																	
06:00	0	0	0	0	40	13	0	0	0	0	52	0	1	58	5	0	169
06:15	2	2	0	0	58	28	2	0	0	0	80	0	1	84	2	0	259
06:30	2	0	0	0	105	22	1	0	2	1	90	0	3	102	7	0	335
06:45	3	2	2	0	102	30	0	0	1	3	117	0	0	102	3	0	365
Hr Total	7	4	2	0	305	93	3	0	3	4	339	0	5	346	17	0	1128
07:00	2	2	0	0	81	32	0	0	3	1	106	0	1	122	3	0	353
07:15	2	1	2	0	132	45	0	0	4	0	163	0	0	126	6	0	481
07:30	5	12	1	0	127	42	0	0	6	1	155	0	2	147	7	0	505
07:45	2	16	1	0	160	64	0	0	4	2	180	0	1	150	9	0	589
Hr Total	11	31	4	0	500	183	0	0	17	4	604	0	4	545	25	0	1928
08:00	2	8	0	0	157	41	0	0	3	0	169	0	0	126	12	0	518
08:15	5	3	3	0	159	48	0	0	4	1	162	0	0	121	5	0	511
08:30	1	3	2	0	161	70	0	0	7	1	138	0	0	112	4	0	499
08:45	1	6	6	0	162	45	0	0	7	1	139	0	2	105	7	0	481
Hr Total	9	20	11	0	639	204	0	0	21	3	608	0	2	464	28	0	2009
09:00	4	7	3	0	150	63	0	0	12	1	133	0	1	87	10	0	471
09:15	3	3	2	0	118	59	0	0	2	0	112	0	1	74	5	0	379
09:30	4	0	2	0	131	55	0	0	3	3	104	0	0	98	5	0	405
09:45	3	2	2	0	123	59	0	0	8	0	98	0	2	83	4	0	384
Hr Total	14	12	9	0	522	236	0	0	25	4	447	0	4	342	24	0	1639
---------- * BREAK * ----------																	
14:00	2	2	1	0	107	75	0	0	4	3	90	0	0	58	9	0	351
14:15	2	2	1	0	134	71	0	0	5	2	136	0	0	82	8	0	443
14:30	2	3	1	0	126	87	0	0	3	1	103	1	2	72	8	0	409
14:45	3	4	1	0	114	87	0	0	8	1	131	0	0	73	8	0	430
Hr Total	9	11	4	0	481	320	0	0	20	7	460	1	2	285	33	0	1633
15:00	2	1	3	0	142	90	0	0	6	2	144	0	0	83	8	0	481
15:15	6	1	3	1	119	113	0	0	8	1	193	0	0	66	10	0	521
15:30	3	4	1	0	141	117	0	0	8	1	160	0	0	79	4	0	518
15:45	3	2	3	0	143	139	0	0	12	0	166	0	1	68	3	0	540
Hr Total	14	8	10	1	545	459	0	0	34	4	663	0	1	296	25	0	2060
16:00	1	2	7	0	142	123	0	0	18	1	173	0	1	60	6	0	534
16:15	1	3	6	0	162	120	1	0	8	0	192	0	0	82	9	0	584
16:30	1	2	2	0	167	120	0	0	10	2	190	0	0	79	6	0	579
16:45	1	6	2	0	178	127	0	0	13	1	204	0	1	67	2	0	602
Hr Total	4	13	17	0	649	490	1	0	49	4	759	0	2	288	23	0	2299

AUTOMATED COUNTS & TRAFFIC SURVEYS INC.
2 BURCHARD AVENUE
LITTLE COMPTON, RI 02837
(401)635-1650

Weather : HHH
Counter : D-2619
Counted by: SCS
Comments: N KINGSTOWN

Site Code : 10071303
Start Date: 07/13/10
File I.D. : BANK0705
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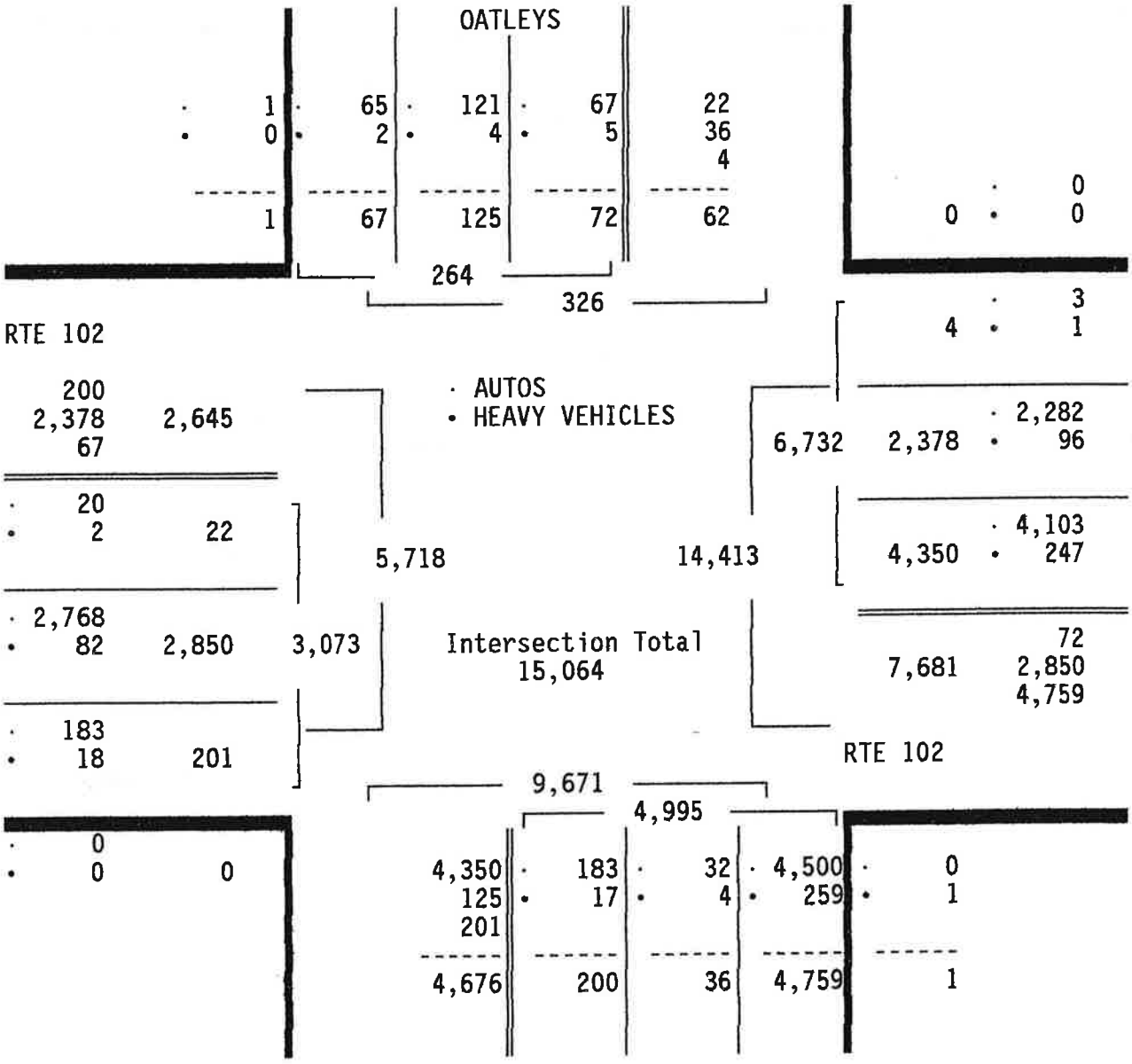
AUTOS, HEAVY VEHICLES

	OATLEYS Southbound				RTE 102 Westbound				RTE 2 Northbound				RTE 102 Eastbound				
	Left	Thru	Right	PEDS	Left	Thru	Right	PEDS	Left	Thru	Right	PEDS	Left	Thru	Right	PEDS	Total
Date 07/13/10																	
17:00	1	7	4	0	167	92	0	0	6	2	253	0	0	92	8	0	632
17:15	1	7	2	0	178	98	0	0	10	1	254	0	0	74	7	0	632
17:30	0	5	1	0	189	110	0	0	7	1	204	0	0	61	5	0	583
17:45	2	7	3	0	175	93	0	0	8	2	168	0	2	57	6	0	523
Hr Total	4	26	10	0	709	393	0	0	31	6	879	0	2	284	26	0	2370
TOTAL	72	125	67	1	4350	2378	4	0	200	36	4759	1	22	2850	201	0	15066



AUTOMATED COUNTS & TRAFFIC SURVEYS INC.
2 BURCHARD AVENUE
LITTLE COMPTON, RI 02837
(401)635-1650

Weather : HHH
Counter : D-2619
Counted by: SCS
Comments: N KINGSTOWN

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AUTOS, HEAVY VEHICLES

	OATLEYS Southbound				RTE 102 Westbound				RTE 2 Northbound				RTE 102 Eastbound				
	Left	Thru	Right	PEDS	Left	Thru	Right	PEDS	Left	Thru	Right	PEDS	Left	Thru	Right	PEDS	Total
Date 07/13/10																	
Peak Hour Analysis By Individual Approach for the Period: 06:00 to 12:00 on 07/13/10																	
Peak start	07:30				07:45				07:15				07:15				
Volume	14	39	5	0	637	223	0	0	17	3	667	0	3	549	34	0	
Percent	24%	67%	9%	0%	74%	26%	0%	0%	2%	0%	97%	0%	1%	94%	6%	0%	
Pk total	58				860				687				586				
Highest	07:45				08:30				07:45				07:45				
Volume	2	16	1	0	161	70	0	0	4	2	180	0	1	150	9	0	
Hi total	19				231				186				160				
PHF	.76				.93				.92				.92				

AUTOMATED COUNTS & TRAFFIC SURVEYS INC.
2 BURCHARD AVENUE
LITTLE COMPTON, RI 02837
(401)635-1650

Weather : HHH
Counter : D-2619
Counted by: SCS
Comments: N KINGSTOWN

Site Code : 10071303
Start Date: 07/13/10
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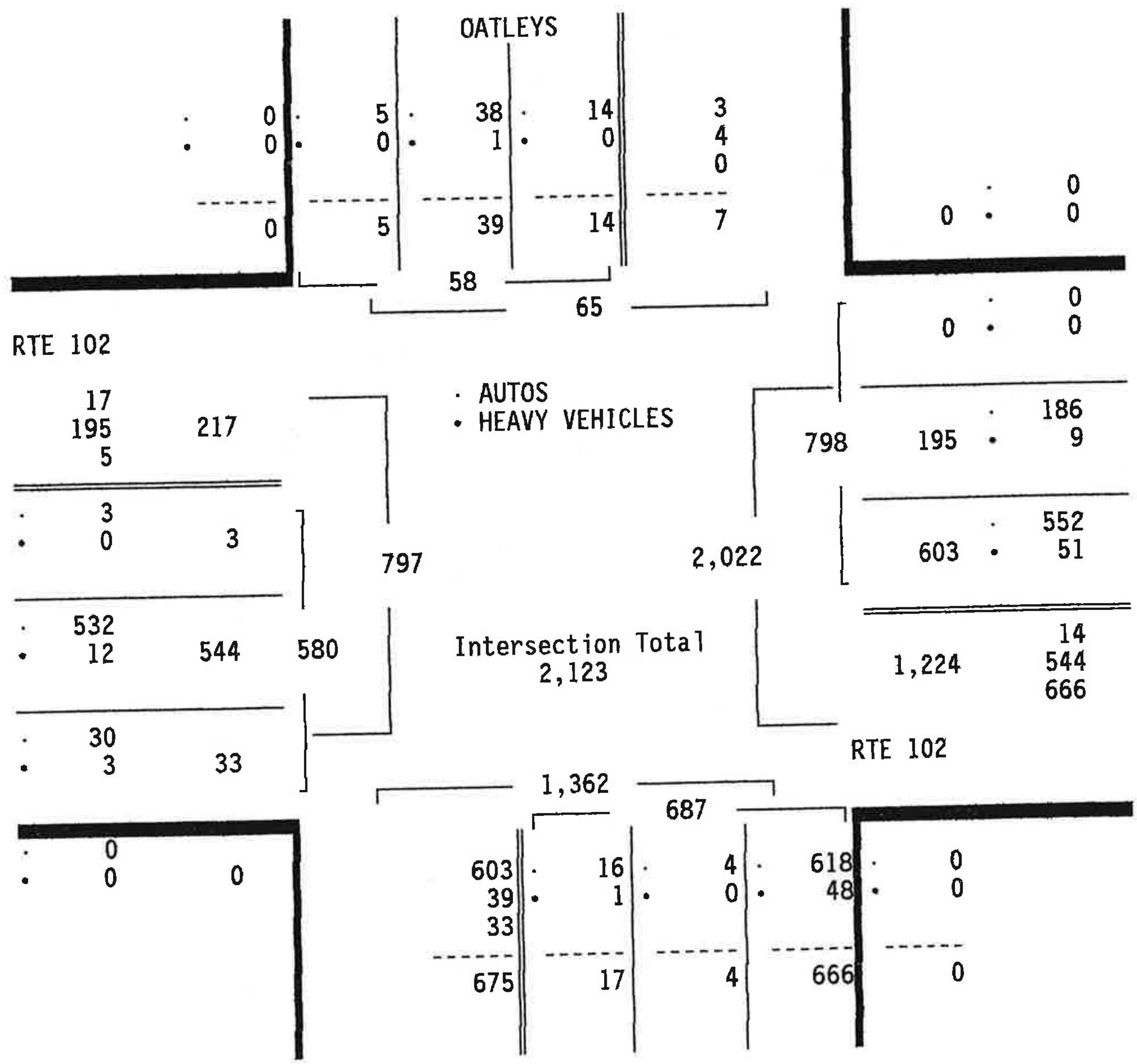
AUTOS, HEAVY VEHICLES

	OATLEYS Southbound				RTE 102 Westbound				RTE 2 Northbound				RTE 102 Eastbound				
	Left	Thru	Right	PEDS	Left	Thru	Right	PEDS	Left	Thru	Right	PEDS	Left	Thru	Right	PEDS	Total
Date 07/13/10																	
Peak Hour Analysis By Entire Intersection for the Period: 06:00 to 12:00 on 07/13/10																	
Peak start	07:30				07:30				07:30				07:30				
Volume	14	39	5	0	603	195	0	0	17	4	666	0	3	544	33	0	
Percent	24%	67%	9%	0%	76%	24%	0%	0%	2%	1%	97%	0%	1%	94%	6%	0%	
Pk total	58				798				687				580				
Highest	07:45				07:45				07:45				07:45				
Volume	2	16	1	0	160	64	0	0	4	2	180	0	1	150	9	0	
Hi total	19				224				186				160				
PHF	.76				.89				.92				.91				



AUTOMATED COUNTS & TRAFFIC SURVEYS INC.
2 BURCHARD AVENUE
LITTLE COMPTON, RI 02837
(401)635-1650

Weather : HHH
Counter : D-2619
Counted by: SCS
Comments: N KINGSTOWN

Site Code : 10071303
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AUTOS, HEAVY VEHICLES

	OATLEYS Southbound				RTE 102 Westbound				RTE 2 Northbound				RTE 102 Eastbound				
	Left	Thru	Right	PEDS	Left	Thru	Right	PEDS	Left	Thru	Right	PEDS	Left	Thru	Right	PEDS	Total
Date 07/13/10																	
Peak Hour Analysis By Individual Approach for the Period: 12:00 to 18:00 on 07/13/10																	
Peak start	17:00				16:00				16:45				16:15				
Volume	4	26	10	0	649	490	1	0	36	5	915	0	1	320	25	0	
Percent	10%	65%	25%	0%	57%	43%	0%	0%	4%	1%	96%	0%	0%	92%	7%	0%	
Pk total	40				1140				956				346				
Highest	17:00				16:45				17:15				17:00				
Volume	1	7	4	0	178	127	0	0	10	1	254	0	0	92	8	0	
Hi total	12				305				265				100				
PHF	.83				.93				.90				.86				

AUTOMATED COUNTS & TRAFFIC SURVEYS INC.
2 BURCHARD AVENUE
LITTLE COMPTON, RI 02837
(401)635-1650

Weather : HHH
Counter : D-2619
Counted by: SCS
Comments: N KINGSTOWN

Site Code : 10071303
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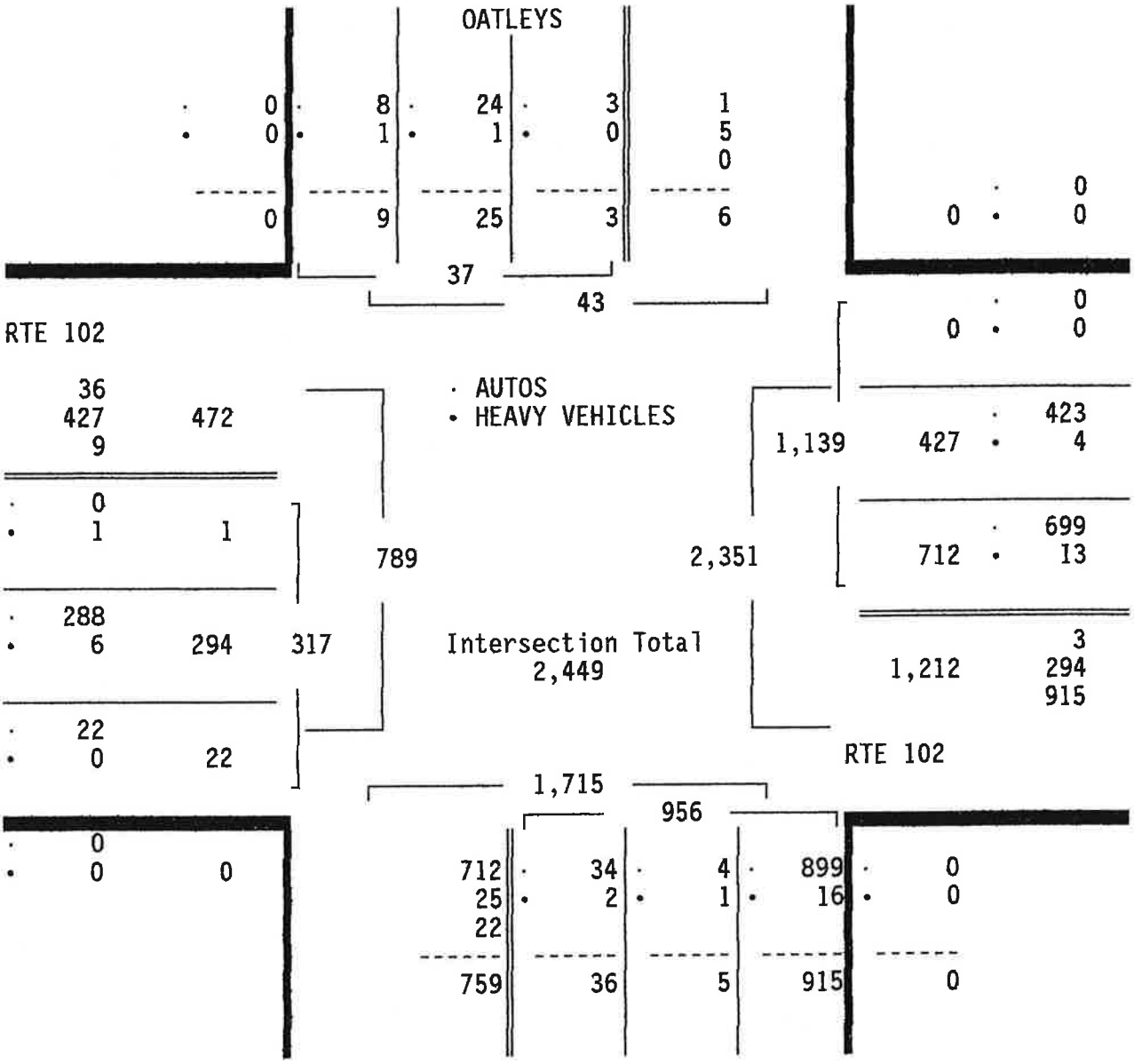
AUTOS, HEAVY VEHICLES

	OATLEYS Southbound				RTE 102 Westbound				RTE 2 Northbound				RTE 102 Eastbound				
	Left	Thru	Right	PEDS	Left	Thru	Right	PEDS	Left	Thru	Right	PEDS	Left	Thru	Right	PEDS	Total
Date 07/13/10																	
Peak Hour Analysis By Entire Intersection for the Period: 12:00 to 18:00 on 07/13/10																	
Peak start	16:45				16:45				16:45				16:45				
Volume	3	25	9	0	712	427	0	0	36	5	915	0	1	294	22	0	
Percent	8%	68%	24%	0%	63%	37%	0%	0%	4%	1%	96%	0%	0%	93%	7%	0%	
Pk total	37				1139				956				317				
Highest	17:00				16:45				17:15				17:00				
Volume	1	7	4	0	178	127	0	0	10	1	254	0	0	92	8	0	
Hi total	12				305				265				100				
PHF	.77				.93				.90				.79				



Weather : HHH
Counter : D-2619
Counted by: SCS
Comments: N KINGSTOWN

AUTOMATED COUNTS & TRAFFIC SURVEYS INC.
2 BURCHARD AVENUE
LITTLE COMPTON, RI 02837
(401)635-1650

Site Code : 10071703
Start Date: 07/17/10
File I.D. : BANK0706
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AUTOS

	OATLEYS Southbound				RTE 102 Westbound				RTE 2 Northbound				RTE 102 Eastbound				
	Left	Thru	Right	PEDS	Left	Thru	Right	PEDS	Left	Thru	Right	PEDS	Left	Thru	Right	PEDS	Total
Date 07/17/10																	
10:00	8	3	5	0	143	61	0	0	3	1	85	0	4	79	13	0	405
10:15	3	4	4	0	144	67	1	0	8	0	110	0	1	93	9	0	444
10:30	3	3	3	0	142	69	2	0	7	1	102	0	1	106	15	0	454
10:45	3	9	2	0	144	79	1	0	8	0	137	0	1	118	9	0	511
Hr Total	17	19	14	0	573	276	4	0	26	2	434	0	7	396	46	0	1814
11:00	7	10	2	0	150	85	1	0	8	1	104	0	1	100	10	0	479
11:15	4	8	1	0	152	88	3	0	4	0	115	0	1	118	16	0	510
11:30	2	17	8	0	132	119	2	0	5	2	90	0	0	125	14	0	516
11:45	6	16	3	0	147	72	0	0	2	2	104	0	0	99	22	0	473
Hr Total	19	51	14	0	581	364	6	0	19	5	413	0	2	442	62	0	1978
12:00	4	9	3	0	156	105	0	0	7	3	98	0	0	119	21	0	525
12:15	5	9	2	0	158	105	1	0	7	1	134	0	0	112	11	0	545
12:30	2	13	3	0	170	114	0	0	9	5	98	0	1	114	13	0	542
12:45	4	10	4	0	158	94	2	0	9	0	99	0	1	114	10	0	505
Hr Total	15	41	12	0	642	418	3	0	32	9	429	0	2	459	55	0	2117
13:00	3	13	4	0	149	85	1	0	12	1	106	0	0	107	5	0	486
13:15	11	9	8	0	179	121	2	0	7	2	97	0	4	116	11	0	567
13:30	7	4	4	0	168	89	0	0	9	1	110	0	1	95	18	0	506
13:45	2	0	5	0	196	103	0	0	5	1	110	0	0	91	7	0	520
Hr Total	23	26	21	0	692	398	3	0	33	5	423	0	5	409	41	0	2079
TOTAL	74	137	61	0	2488	1456	16	0	110	21	1699	0	16	1706	204	0	7988

Weather : HHH
Counter : D-2619
Counted by: SCS
Comments: N KINGSTOWN

AUTOMATED COUNTS & TRAFFIC SURVEYS INC.
2 BURCHARD AVENUE
LITTLE COMPTON, RI 02837
(401)635-1650

Site Code : 10071703
Start Date: 07/17/10
File I.D. : BANK0706
Page : 1

HEAVY VEHICLES

	OATLEYS Southbound				RTE 102 Westbound				RTE 2 Northbound				RTE 102 Eastbound				
	Left	Thru	Right	Other	Left	Thru	Right	Other	Left	Thru	Right	Other	Left	Thru	Right	Other	Total
Date 07/17/10																	
10:00	0	0	0	0	4	5	0	0	0	0	5	0	0	5	1	0	20
10:15	0	0	0	0	3	3	1	0	2	0	6	0	0	1	0	0	16
10:30	0	0	2	0	1	2	0	0	0	0	2	0	0	3	0	0	10
10:45	0	1	1	0	3	2	0	0	0	0	5	0	0	4	0	0	16
Hr Total	0	1	3	0	11	12	1	0	2	0	18	0	0	13	1	0	62
11:00	0	0	0	0	4	3	0	0	1	0	6	0	0	0	0	0	14
11:15	0	0	0	0	3	0	0	0	0	0	5	0	0	1	0	0	9
11:30	0	0	0	0	2	3	0	0	1	0	5	0	0	1	0	0	12
11:45	0	0	0	0	6	3	0	0	1	0	1	0	0	3	2	0	16
Hr Total	0	0	0	0	15	9	0	0	3	0	17	0	0	5	2	0	51
12:00	0	0	0	0	2	1	0	0	0	0	3	0	0	3	1	0	10
12:15	0	0	0	0	3	2	0	0	2	0	2	0	0	4	0	0	13
12:30	0	0	0	0	3	1	0	0	0	0	1	0	0	2	1	0	8
12:45	0	0	1	0	4	3	0	0	1	0	3	0	0	6	0	0	18
Hr Total	0	0	1	0	12	7	0	0	3	0	9	0	0	15	2	0	49
13:00	0	0	0	0	3	2	0	0	0	0	4	0	0	2	0	0	11
13:15	1	0	0	0	4	0	0	0	0	0	3	0	0	5	1	0	14
13:30	0	2	1	0	2	2	0	0	0	0	4	0	0	2	0	0	13
13:45	0	0	0	0	3	0	0	0	0	0	1	0	0	1	1	0	6
Hr Total	1	2	1	0	12	4	0	0	0	0	12	0	0	10	2	0	44
TOTAL	1	3	5	0	50	32	1	0	8	0	56	0	0	43	7	0	206

AUTOMATED COUNTS & TRAFFIC SURVEYS INC.
2 BURCHARD AVENUE
LITTLE COMPTON, RI 02837
(401)635-1650

Weather : HHH
Counter : D-2619
Counted by: SCS
Comments: N KINGSTOWN

Site Code : 10071703
Start Date: 07/17/10
File I.D. : BANK0706
Page : 1

AUTOS, HEAVY VEHICLES

	OATLEYS Southbound				RTE 102 Westbound				RTE 2 Northbound				RTE 102 Eastbound				
	Left	Thru	Right	PEDS	Left	Thru	Right	PEDS	Left	Thru	Right	PEDS	Left	Thru	Right	PEDS	Total
Date 07/17/10																	
10:00	8	3	5	0	147	66	0	0	3	1	90	0	4	84	14	0	425
10:15	3	4	4	0	147	70	2	0	10	0	116	0	1	94	9	0	460
10:30	3	3	5	0	143	71	2	0	7	1	104	0	1	109	15	0	464
10:45	3	10	3	0	147	81	1	0	8	0	142	0	1	122	9	0	527
Hr Total	17	20	17	0	584	288	5	0	28	2	452	0	7	409	47	0	1876
11:00	7	10	2	0	154	88	1	0	9	1	110	0	1	100	10	0	493
11:15	4	8	1	0	155	88	3	0	4	0	120	0	1	119	16	0	519
11:30	2	17	8	0	134	122	2	0	6	2	95	0	0	126	14	0	528
11:45	6	16	3	0	153	75	0	0	3	2	105	0	0	102	24	0	489
Hr Total	19	51	14	0	596	373	6	0	22	5	430	0	2	447	64	0	2029
12:00	4	9	3	0	158	106	0	0	7	3	101	0	0	122	22	0	535
12:15	5	9	2	0	161	107	1	0	9	1	136	0	0	116	11	0	558
12:30	2	13	3	0	173	115	0	0	9	5	99	0	1	116	14	0	550
12:45	4	10	5	0	162	97	2	0	10	0	102	0	1	120	10	0	523
Hr Total	15	41	13	0	654	425	3	0	35	9	438	0	2	474	57	0	2166
13:00	3	13	4	0	152	87	1	0	12	1	110	0	0	109	5	0	497
13:15	12	9	8	0	183	121	2	0	7	2	100	0	4	121	12	0	581
13:30	7	6	5	0	170	91	0	0	9	1	114	0	1	97	18	0	519
13:45	2	0	5	0	199	103	0	0	5	1	111	0	0	92	8	0	526
Hr Total	24	28	22	0	704	402	3	0	33	5	435	0	5	419	43	0	2123
TOTAL	75	140	66	0	2538	1488	17	0	118	21	1755	0	16	1749	211	0	8194

AUTOMATED COUNTS & TRAFFIC SURVEYS INC.
2 BURCHARD AVENUE
LITTLE COMPTON, RI 02837
(401)635-1650

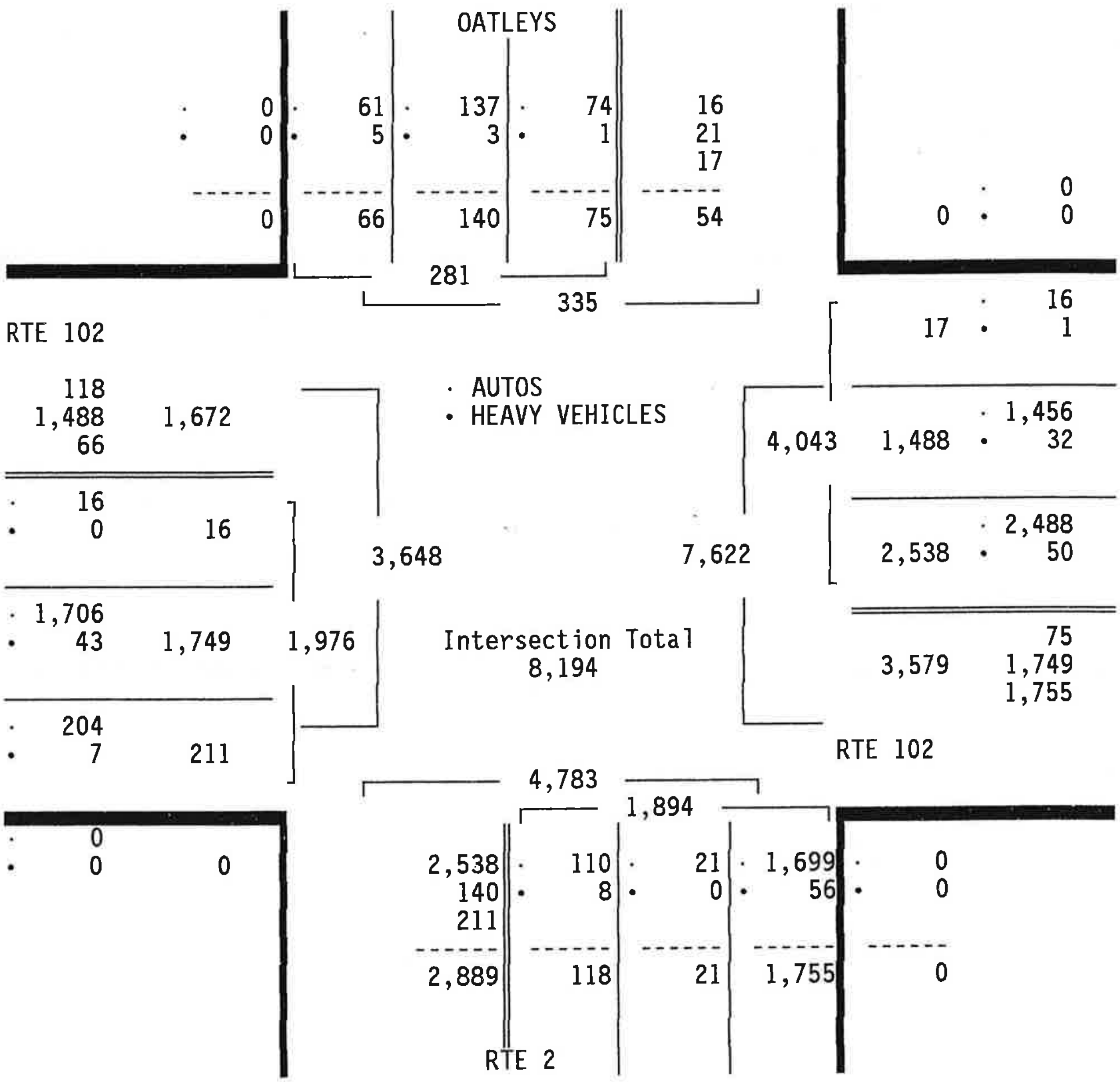
Weather : HHH
Counter : D-2619
Counted by: SCS
Comments: N KINGSTOWN

Site Code : 10071703
Start Date: 07/17/10
File I.D. : BANK0706
Page : 2

AUTOS, HEAVY VEHICLES

OATLEYS Southbound				RTE 102 Westbound				RTE 2 Northbound				RTE 102 Eastbound				
Left	Thru	Right	PEDS	Left	Thru	Right	PEDS	Left	Thru	Right	PEDS	Left	Thru	Right	PEDS	Total

Date 07/17/10



AUTOMATED COUNTS & TRAFFIC SURVEYS INC.
2 BURCHARD AVENUE
LITTLE COMPTON, RI 02837
(401)635-1650

Weather : HHH
Counter : D-2619
Counted by: SCS
Comments: N KINGSTOWN

Site Code : 10071703
Start Date: 07/17/10
File I.D. : BANK0706
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AUTOS, HEAVY VEHICLES

	OATLEYS Southbound				RTE 102 Westbound				RTE 2 Northbound				RTE 102 Eastbound				
	Left	Thru	Right	PEDS	Left	Thru	Right	PEDS	Left	Thru	Right	PEDS	Left	Thru	Right	PEDS	Total
Date 07/17/10																	
Peak Hour Analysis By Individual Approach for the Period: 10:00 to 14:00 on 07/17/10																	
Peak start	12:30				13:00				10:15				11:15				
Volume	21	45	20	0	704	402	3	0	34	2	472	0	1	469	76	0	
Percent	24%	52%	23%	0%	63%	36%	0%	0%	7%	0%	93%	0%	0%	86%	14%	0%	
Pk total	86				1109				508				546				
Highest	13:15				13:15				10:45				12:00				
Volume	12	9	8	0	183	121	2	0	8	0	142	0	0	122	22	0	
Hi total	29				306				150				144				
PHF	.74				.91				.85				.95				

Weather : HHH
Counter : D-2619
Counted by: SCS
Comments: N KINGSTOWN

AUTOMATED COUNTS & TRAFFIC SURVEYS INC.
2 BURCHARD AVENUE
LITTLE COMPTON, RI 02837
(401)635-1650

Site Code : 10071703
Start Date: 07/17/10
File I.D. : BANK0706
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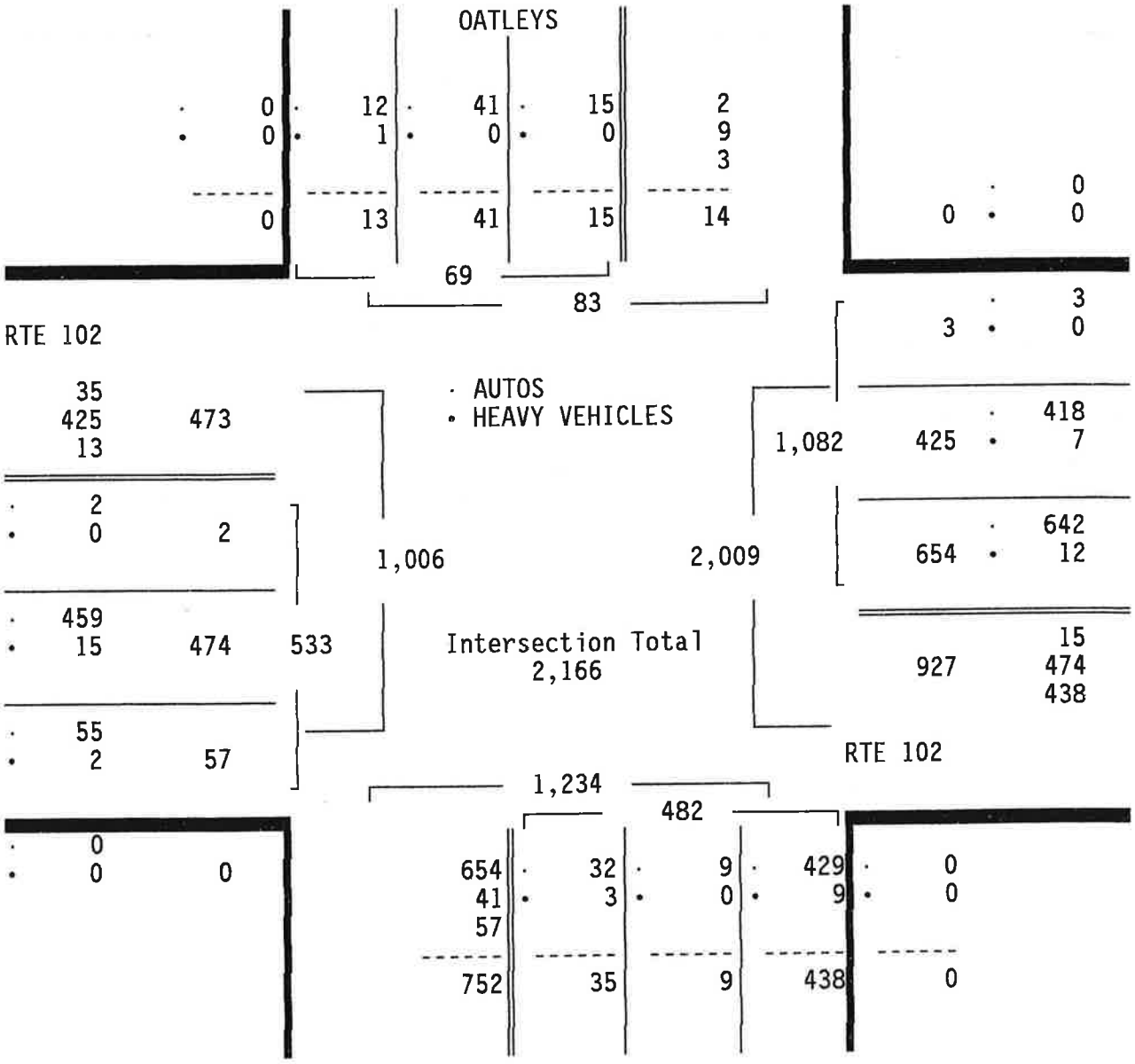
AUTOS, HEAVY VEHICLES

	OATLEYS Southbound				RTE 102 Westbound				RTE 2 Northbound				RTE 102 Eastbound				
	Left	Thru	Right	PEDS	Left	Thru	Right	PEDS	Left	Thru	Right	PEDS	Left	Thru	Right	PEDS	Total
Date 07/17/10																	
Peak Hour Analysis By Entire Intersection for the Period: 10:00 to 14:00 on 07/17/10																	
Peak start	12:00				12:00				12:00				12:00				
Volume	15	41	13	0	654	425	3	0	35	9	438	0	2	474	57	0	
Percent	22%	59%	19%	0%	60%	39%	0%	0%	7%	2%	91%	0%	0%	89%	11%	0%	
Pk total	69				1082				482				533				
Highest	12:45				12:30				12:15				12:00				
Volume	4	10	5	0	173	115	0	0	9	1	136	0	0	122	22	0	
Hi total	19				288				146				144				
PHF	.91				.94				.83				.93				



AUTOMATED COUNTS & TRAFFIC SURVEYS INC.
2 BURCHARD AVENUE
LITTLE COMPTON, RI 02837
(401)635-1650

Weather : HHH
Counter : D-2614
Counted by: RP
Comments: N KINGSTOWN

Site Code : 10071301
Start Date: 07/13/10
File I.D. : BANK0701
Page : 1

AUTOS

	LANG DR Southbound				RTE 102 Westbound				AUTUMN DR Northbound				RTE 102 Eastbound				
	Left	Thru	Right	PEDS	Left	Thru	Right	PEDS	Left	Thru	Right	PEDS	Left	Thru	Right	PEDS	Total
Date 07/13/10																	
06:00	1	0	1	0	0	58	1	0	0	0	4	0	0	100	0	0	165
06:15	1	0	1	0	1	89	0	0	0	0	4	0	0	169	0	0	265
06:30	4	0	1	0	0	125	3	0	1	0	2	0	1	189	0	0	326
06:45	3	0	3	0	1	113	2	0	1	0	6	0	0	221	0	0	350
Hr Total	9	0	6	0	2	385	6	0	2	0	16	0	1	679	0	0	1106
07:00	3	0	1	0	0	117	2	0	0	0	10	0	0	225	0	0	358
07:15	4	0	2	0	2	171	1	0	0	0	7	0	1	284	0	0	472
07:30	3	0	5	0	3	206	3	0	0	0	14	0	0	299	0	0	533
07:45	7	0	1	0	2	234	2	0	0	0	19	0	0	317	1	0	583
Hr Total	17	0	9	0	7	728	8	0	0	0	50	0	1	1125	1	0	1946
08:00	6	0	1	0	4	207	3	0	1	0	11	0	3	309	0	0	545
08:15	8	1	2	0	8	223	3	0	1	1	13	0	0	285	0	0	545
08:30	11	0	3	0	4	220	2	0	0	0	12	0	2	247	0	0	501
08:45	5	1	0	0	4	226	3	0	0	0	7	0	0	234	0	0	480
Hr Total	30	2	6	0	20	876	11	0	2	1	43	0	5	1075	0	0	2071
09:00	6	0	3	0	5	192	2	0	0	0	6	0	2	216	1	0	433
09:15	2	0	0	0	7	174	4	0	0	0	10	0	2	186	0	0	385
09:30	7	0	0	0	6	184	2	0	0	0	7	0	1	195	0	0	402
09:45	3	0	3	0	6	184	4	0	0	0	9	0	2	172	0	0	383
Hr Total	18	0	6	0	24	734	12	0	0	0	32	0	7	769	1	0	1603
---------- * BREAK * ----------																	
14:00	1	0	1	0	4	182	4	0	0	0	8	0	2	138	0	0	340
14:15	2	0	2	0	12	205	4	0	0	0	8	0	0	207	0	0	440
14:30	4	0	0	0	7	219	3	0	0	0	5	0	2	184	0	0	424
14:45	4	0	0	0	7	220	6	0	2	0	7	0	0	206	0	0	452
Hr Total	11	0	3	0	30	826	17	0	2	0	28	0	4	735	0	0	1656
15:00	2	0	1	0	9	248	6	0	0	0	11	0	2	218	0	0	497
15:15	3	0	2	0	8	238	11	0	2	0	6	0	2	258	1	0	531
15:30	4	0	3	0	11	267	3	0	1	0	9	0	4	240	0	0	542
15:45	5	1	5	0	6	276	5	0	0	0	3	0	2	245	0	0	548
Hr Total	14	1	11	0	34	1029	25	0	3	0	29	0	10	961	1	0	2118
16:00	4	0	0	0	8	280	9	0	0	0	7	0	2	225	0	0	535
16:15	1	0	0	0	11	290	8	0	0	0	8	0	1	256	0	0	575
16:30	3	0	0	0	12	289	7	0	0	0	8	0	1	262	1	0	583
16:45	3	0	0	0	20	313	16	0	0	0	8	0	3	267	0	0	630
Hr Total	11	0	0	0	51	1172	40	0	0	0	31	0	7	1010	1	0	2323

AUTOMATED COUNTS & TRAFFIC SURVEYS INC.
2 BURCHARD AVENUE
LITTLE COMPTON, RI 02837
(401)635-1650

Weather : HHH
Counter : D-2614
Counted by: RP
Comments: N KINGSTOWN

Site Code : 10071301
Start Date: 07/13/10
File I.D. : BANK0701

AUTOS

	LANG DR Southbound				RTE 102 Westbound				AUTUMN DR Northbound				RTE 102 Eastbound				
	Left	Thru	Right	PEDS	Left	Thru	Right	PEDS	Left	Thru	Right	PEDS	Left	Thru	Right	PEDS	Total
Date 07/13/10																	
17:00	2	0	2	0	11	276	7	0	0	0	4	0	10	300	0	0	612
17:15	3	0	3	0	14	294	11	0	0	0	8	0	2	317	0	0	652
17:30	1	0	3	0	14	310	10	0	1	0	6	0	2	283	0	0	630
17:45	6	0	0	0	11	278	7	0	0	0	7	0	2	226	0	0	537
Hr Total	12	0	8	0	50	1158	35	0	1	0	25	0	16	1126	0	0	2431
TOTAL	122	3	49	0	218	6908	154	0	10	1	254	0	51	7480	4	0	15254

AUTOMATED COUNTS & TRAFFIC SURVEYS INC.
2 BURCHARD AVENUE
LITTLE COMPTON, RI 02837
(401)635-1650

Weather : HHH
Counter : D-2614
Counted by: RP
Comments: N KINGSTOWN

Site Code : 10071301
Start Date: 07/13/10
File I.D. : BANK0701
Page : 1

HEAVY VEHICLES

	LANG DR Southbound				RTE 102 Westbound				AUTUMN DR Northbound				RTE 102 Eastbound				
	Left	Thru	Right	Other	Left	Thru	Right	Other	Left	Thru	Right	Other	Left	Thru	Right	Other	Total
Date 07/13/10																	
06:00	1	0	0	0	0	1	0	0	0	0	0	0	0	2	0	0	4
06:15	0	0	0	0	0	1	0	0	0	0	0	0	0	6	0	0	7
06:30	0	0	0	0	0	4	1	0	0	0	0	0	0	5	0	0	10
06:45	0	0	0	0	0	14	0	0	0	0	0	0	0	4	0	0	18
Hr Total	1	0	0	0	0	20	1	0	0	0	0	0	0	17	0	0	39
07:00	0	0	0	0	0	5	0	0	0	0	0	0	0	2	0	0	7
07:15	0	0	0	0	0	7	0	0	0	0	0	0	0	7	0	0	14
07:30	1	0	0	0	0	10	0	0	0	0	0	0	0	7	0	0	18
07:45	0	0	0	0	0	9	0	0	0	0	0	0	0	5	0	0	14
Hr Total	1	0	0	0	0	31	0	0	0	0	0	0	0	21	0	0	53
08:00	0	0	0	0	1	8	0	0	0	0	0	0	0	5	0	0	14
08:15	0	0	0	0	0	12	0	0	0	0	0	0	0	6	0	0	18
08:30	0	2	0	0	1	15	0	0	0	0	0	0	0	10	0	0	28
08:45	0	0	0	0	0	9	0	0	0	0	0	0	0	3	0	0	12
Hr Total	0	2	0	0	2	44	0	0	0	0	0	0	0	24	0	0	72
09:00	0	0	0	0	0	9	0	0	0	0	0	0	0	10	0	0	19
09:15	0	0	0	0	0	12	0	0	0	0	0	0	0	8	0	0	20
09:30	0	0	0	0	0	14	0	0	0	0	0	0	0	9	0	0	23
09:45	0	0	0	0	0	10	0	0	0	0	0	0	0	10	0	0	20
Hr Total	0	0	0	0	0	45	0	0	0	0	0	0	0	37	0	0	82
---------- * BREAK * ----------																	
14:00	0	0	0	0	0	10	0	0	0	0	0	0	0	6	0	0	16
14:15	0	0	0	0	0	6	0	0	0	0	0	0	0	6	0	0	12
14:30	0	0	1	0	0	8	0	0	0	0	0	0	0	7	0	0	16
14:45	0	0	0	0	0	9	0	0	0	0	0	0	0	6	0	0	15
Hr Total	0	0	1	0	0	33	0	0	0	0	0	0	0	25	0	0	59
15:00	0	0	0	0	0	6	0	0	0	0	1	0	0	6	0	0	13
15:15	0	0	0	0	0	12	0	0	0	0	0	0	0	7	0	0	19
15:30	0	0	0	0	0	9	0	0	0	0	0	0	0	5	0	0	14
15:45	0	0	0	0	0	4	0	0	0	0	0	0	0	4	0	0	8
Hr Total	0	0	0	0	0	31	0	0	0	0	1	0	0	22	0	0	54
16:00	0	0	0	0	0	4	0	0	0	0	0	0	0	7	0	0	11
16:15	0	0	0	0	0	7	0	0	0	1	0	0	0	5	0	0	13
16:30	0	0	0	0	0	3	0	0	0	0	0	0	0	2	0	0	5
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3
Hr Total	0	0	0	0	0	14	0	0	0	1	0	0	0	17	0	0	32

AUTOMATED COUNTS & TRAFFIC SURVEYS INC.
2 BURCHARD AVENUE
LITTLE COMPTON, RI 02837
(401)635-1650

Weather : HHH
Counter : D-2614
Counted by: RP
Comments: N KINGSTOWN

Site Code : 10071301
Start Date: 07/13/10
File I.D. : BANK0701
Page : 2

HEAVY VEHICLES

	LANG DR Southbound				RTE 102 Westbound				AUTUMN DR Northbound				RTE 102 Eastbound				
	Left	Thru	Right	Other	Left	Thru	Right	Other	Left	Thru	Right	Other	Left	Thru	Right	Other	Total
Date 07/13/10																	
17:00	0	0	0	0	0	5	0	0	0	0	0	0	0	2	0	0	7
17:15	0	0	0	0	0	4	0	0	0	0	0	0	0	2	0	0	6
17:30	0	0	0	0	0	2	0	0	0	0	0	0	0	1	0	0	3
17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
Hr Total	0	0	0	0	0	11	0	0	0	0	0	0	0	6	0	0	17
TOTAL	2	2	1	0	2	229	1	0	0	1	1	0	0	169	0	0	408

Weather : HHH
Counter : D-2614
Counted by: RP
Comments: N KINGSTOWN

AUTOMATED COUNTS & TRAFFIC SURVEYS INC.
2 BURCHARD AVENUE
LITTLE COMPTON, RI 02837
(401)635-1650

Site Code : 10071301
Start Date: 07/13/10
File I.D. : BANK0701
Page : 1

AUTOS, HEAVY VEHICLES

	LANG DR Southbound				RTE 102 Westbound				AUTUMN DR Northbound				RTE 102 Eastbound				
	Left	Thru	Right	PEDS	Left	Thru	Right	PEDS	Left	Thru	Right	PEDS	Left	Thru	Right	PEDS	Total
Date 07/13/10																	
06:00	2	0	1	0	0	59	1	0	0	0	4	0	0	102	0	0	169
06:15	1	0	1	0	1	90	0	0	0	0	4	0	0	175	0	0	272
06:30	4	0	1	0	0	129	4	0	1	0	2	0	1	194	0	0	336
06:45	3	0	3	0	1	127	2	0	1	0	6	0	0	225	0	0	368
Hr Total	10	0	6	0	2	405	7	0	2	0	16	0	1	696	0	0	1145
07:00	3	0	1	0	0	122	2	0	0	0	10	0	0	227	0	0	365
07:15	4	0	2	0	2	178	1	0	0	0	7	0	1	291	0	0	486
07:30	4	0	5	0	3	216	3	0	0	0	14	0	0	306	0	0	551
07:45	7	0	1	0	2	243	2	0	0	0	19	0	0	322	1	0	597
Hr Total	18	0	9	0	7	759	8	0	0	0	50	0	1	1146	1	0	1999
08:00	6	0	1	0	5	215	3	0	1	0	11	0	3	314	0	0	559
08:15	8	1	2	0	8	235	3	0	1	1	13	0	0	291	0	0	563
08:30	11	2	3	0	5	235	2	0	0	0	12	0	2	257	0	0	529
08:45	5	1	0	0	4	235	3	0	0	0	7	0	0	237	0	0	492
Hr Total	30	4	6	0	22	920	11	0	2	1	43	0	5	1099	0	0	2143
09:00	6	0	3	0	5	201	2	0	0	0	6	0	2	226	1	0	452
09:15	2	0	0	0	7	186	4	0	0	0	10	0	2	194	0	0	405
09:30	7	0	0	0	6	198	2	0	0	0	7	0	1	204	0	0	425
09:45	3	0	3	0	6	194	4	0	0	0	9	0	2	182	0	0	403
Hr Total	18	0	6	0	24	779	12	0	0	0	32	0	7	806	1	0	1685
---------- * BREAK * ----------																	
14:00	1	0	1	0	4	192	4	0	0	0	8	0	2	144	0	0	356
14:15	2	0	2	0	12	211	4	0	0	0	8	0	0	213	0	0	452
14:30	4	0	1	0	7	227	3	0	0	0	5	0	2	191	0	0	440
14:45	4	0	0	0	7	229	6	0	2	0	7	0	0	212	0	0	467
Hr Total	11	0	4	0	30	859	17	0	2	0	28	0	4	760	0	0	1715
15:00	2	0	1	0	9	254	6	0	0	0	12	0	2	224	0	0	510
15:15	3	0	2	0	8	250	11	0	2	0	6	0	2	265	1	0	550
15:30	4	0	3	0	11	276	3	0	1	0	9	0	4	245	0	0	556
15:45	5	1	5	0	6	280	5	0	0	0	3	0	2	249	0	0	556
Hr Total	14	1	11	0	34	1060	25	0	3	0	30	0	10	983	1	0	2172
16:00	4	0	0	0	8	284	9	0	0	0	7	0	2	232	0	0	546
16:15	1	0	0	0	11	297	8	0	0	1	8	0	1	261	0	0	588
16:30	3	0	0	0	12	292	7	0	0	0	8	0	1	264	1	0	588
16:45	3	0	0	0	20	313	16	0	0	0	8	0	3	270	0	0	633
Hr Total	11	0	0	0	51	1186	40	0	0	1	31	0	7	1027	1	0	2355

AUTOMATED COUNTS & TRAFFIC SURVEYS INC.
2 BURCHARD AVENUE
LITTLE COMPTON, RI 02837
(401)635-1650

Weather : HHH
Counter : D-2614
Counted by: RP
Comments: N KINGSTOWN

Site Code : 10071301
Start Date: 07/13/10
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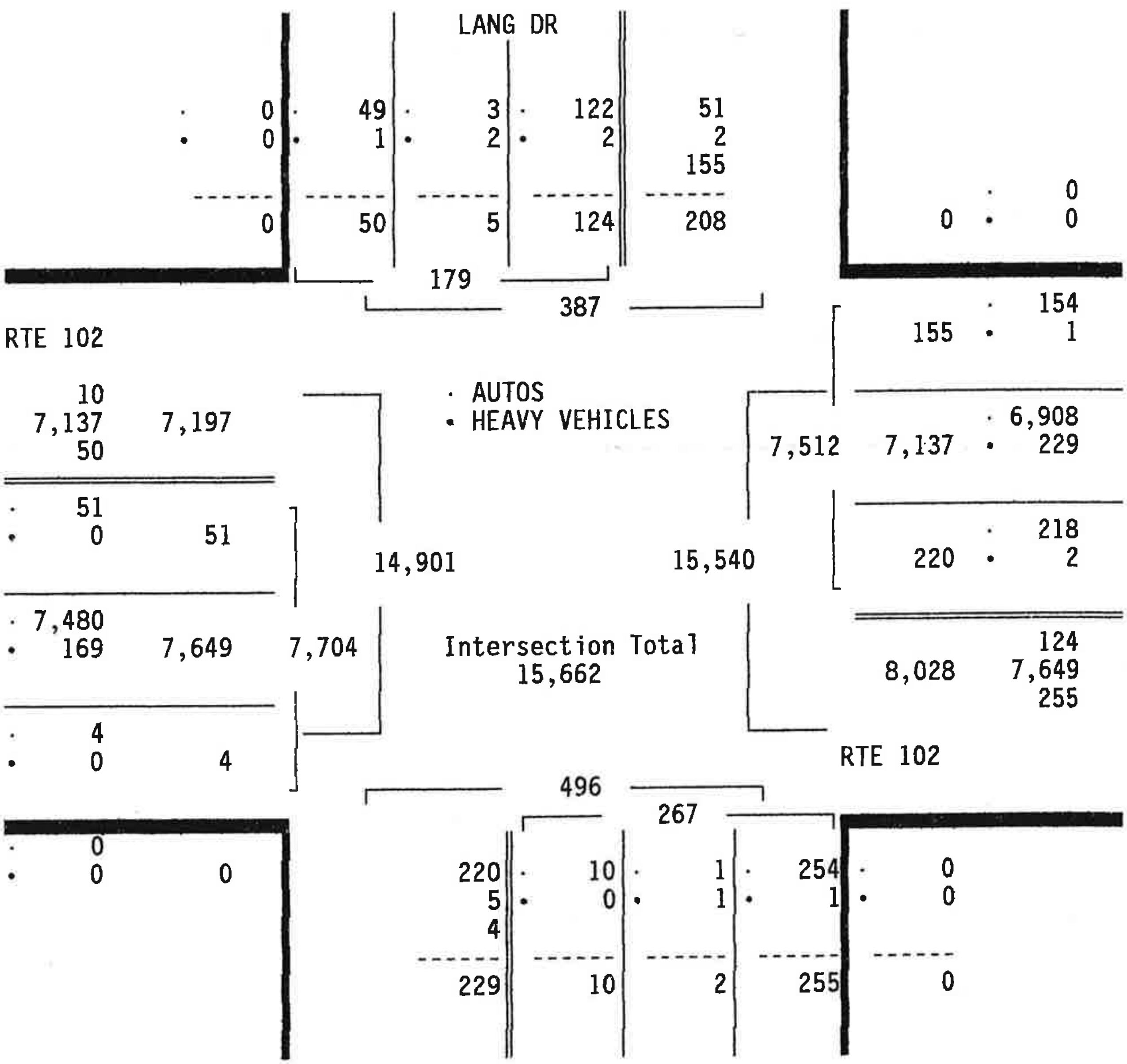
AUTOS, HEAVY VEHICLES

	LANG DR Southbound				RTE 102 Westbound				AUTUMN DR Northbound				RTE 102 Eastbound				
Date 07/13/10	Left	Thru	Right	PEDS	Left	Thru	Right	PEDS	Left	Thru	Right	PEDS	Left	Thru	Right	PEDS	Total
17:00	2	0	2	0	11	281	7	0	0	0	4	0	10	302	0	0	619
17:15	3	0	3	0	14	298	11	0	0	0	8	0	2	319	0	0	658
17:30	1	0	3	0	14	312	10	0	1	0	6	0	2	284	0	0	633
17:45	6	0	0	0	11	278	7	0	0	0	7	0	2	227	0	0	538
Hr Total	12	0	8	0	50	1169	35	0	1	0	25	0	16	1132	0	0	2448
TOTAL	124	5	50	0	220	7137	155	0	10	2	255	0	51	7649	4	0	15662



AUTOMATED COUNTS & TRAFFIC SURVEYS INC.
2 BURCHARD AVENUE
LITTLE COMPTON, RI 02837
(401)635-1650

Weather : HHH
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AUTOS, HEAVY VEHICLES

	LANG DR Southbound				RTE 102 Westbound				AUTUMN DR Northbound				RTE 102 Eastbound				
	Left	Thru	Right	PEDS	Left	Thru	Right	PEDS	Left	Thru	Right	PEDS	Left	Thru	Right	PEDS	Total
Date 07/13/10																	
Peak Hour Analysis By Individual Approach for the Period: 06:00 to 12:00 on 07/13/10																	
Peak start	07:45				07:45				07:30				07:15				
Volume	32	3	7	0	20	928	10	0	2	1	57	0	4	1233	1	0	
Percent	76%	7%	17%	0%	2%	97%	1%	0%	3%	2%	95%	0%	0%	100%	0%	0%	
Pk total	42				958				60				1238				
Highest	08:30				07:45				07:45				07:45				
Volume	11	2	3	0	2	243	2	0	0	0	19	0	0	322	1	0	
Hi total	16				247				19				323				
PHF	.66				.97				.79				.96				

AUTOMATED COUNTS & TRAFFIC SURVEYS INC.
2 BURCHARD AVENUE
LITTLE COMPTON, RI 02837
(401)635-1650

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Comments: N KINGSTOWN

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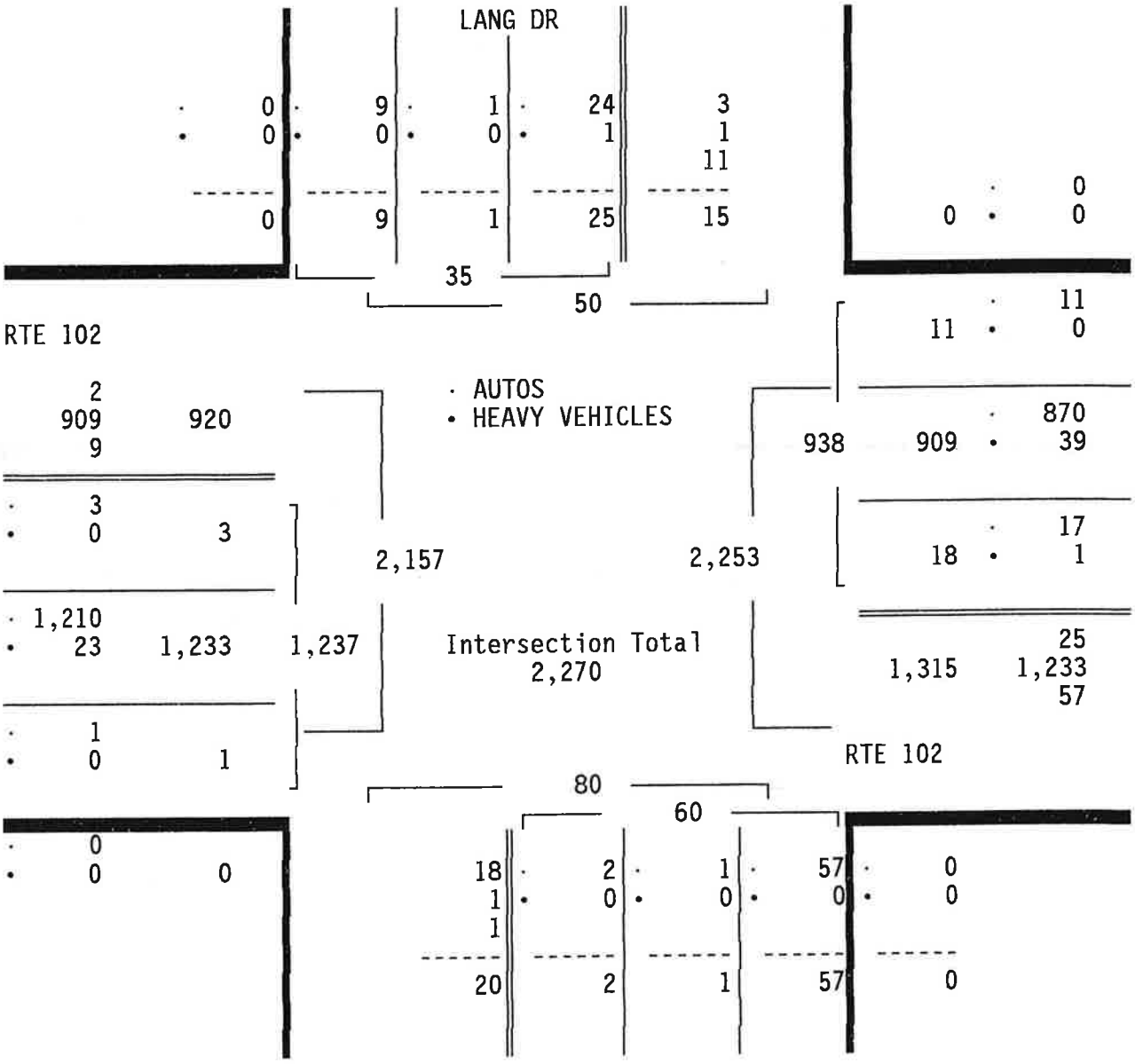
AUTOS, HEAVY VEHICLES

	LANG DR Southbound				RTE 102 Westbound				AUTUMN DR Northbound				RTE 102 Eastbound				
	Left	Thru	Right	PEDS	Left	Thru	Right	PEDS	Left	Thru	Right	PEDS	Left	Thru	Right	PEDS	Total
Date 07/13/10																	
Peak Hour Analysis By Entire Intersection for the Period: 06:00 to 12:00 on 07/13/10																	
Peak start	07:30				07:30				07:30				07:30				
Volume	25	1	9	0	18	909	11	0	2	1	57	0	3	1233	1	0	
Percent	71%	3%	26%	0%	2%	97%	1%	0%	3%	2%	95%	0%	0%	100%	0%	0%	
Pk total	35				938				60				1237				
Highest	08:15				07:45				07:45				07:45				
Volume	8	1	2	0	2	243	2	0	0	0	19	0	0	322	1	0	
Hi total	11				247				19				323				
PHF	.80				.95				.79				.96				



AUTOMATED COUNTS & TRAFFIC SURVEYS INC.
2 BURCHARD AVENUE
LITTLE COMPTON, RI 02837
(401)635-1650

Weather : HHH
Counter : D-2614
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AUTOS, HEAVY VEHICLES

	LANG DR Southbound				RTE 102 Westbound				AUTUMN DR Northbound				RTE 102 Eastbound				
	Left	Thru	Right	PEDS	Left	Thru	Right	PEDS	Left	Thru	Right	PEDS	Left	Thru	Right	PEDS	Total
Date 07/13/10																	
Peak Hour Analysis By Individual Approach for the Period: 12:00 to 18:00 on 07/13/10																	
Peak start	15:15				16:45				14:45				16:45				
Volume	16	1	10	0	59	1204	44	0	5	0	34	0	17	1175	0	0	
Percent	59%	4%	37%	0%	5%	92%	3%	0%	13%	0%	87%	0%	1%	99%	0%	0%	
Pk total	27				1307				39				1192				
Highest	15:45				16:45				15:00				17:15				
Volume	5	1	5	0	20	313	16	0	0	0	12	0	2	319	0	0	
Hi total	11				349				12				321				
PHF	.61				.94				.81				.93				

AUTOMATED COUNTS & TRAFFIC SURVEYS INC.
2 BURCHARD AVENUE
LITTLE COMPTON, RI 02837
(401)635-1650

Weather : HHH
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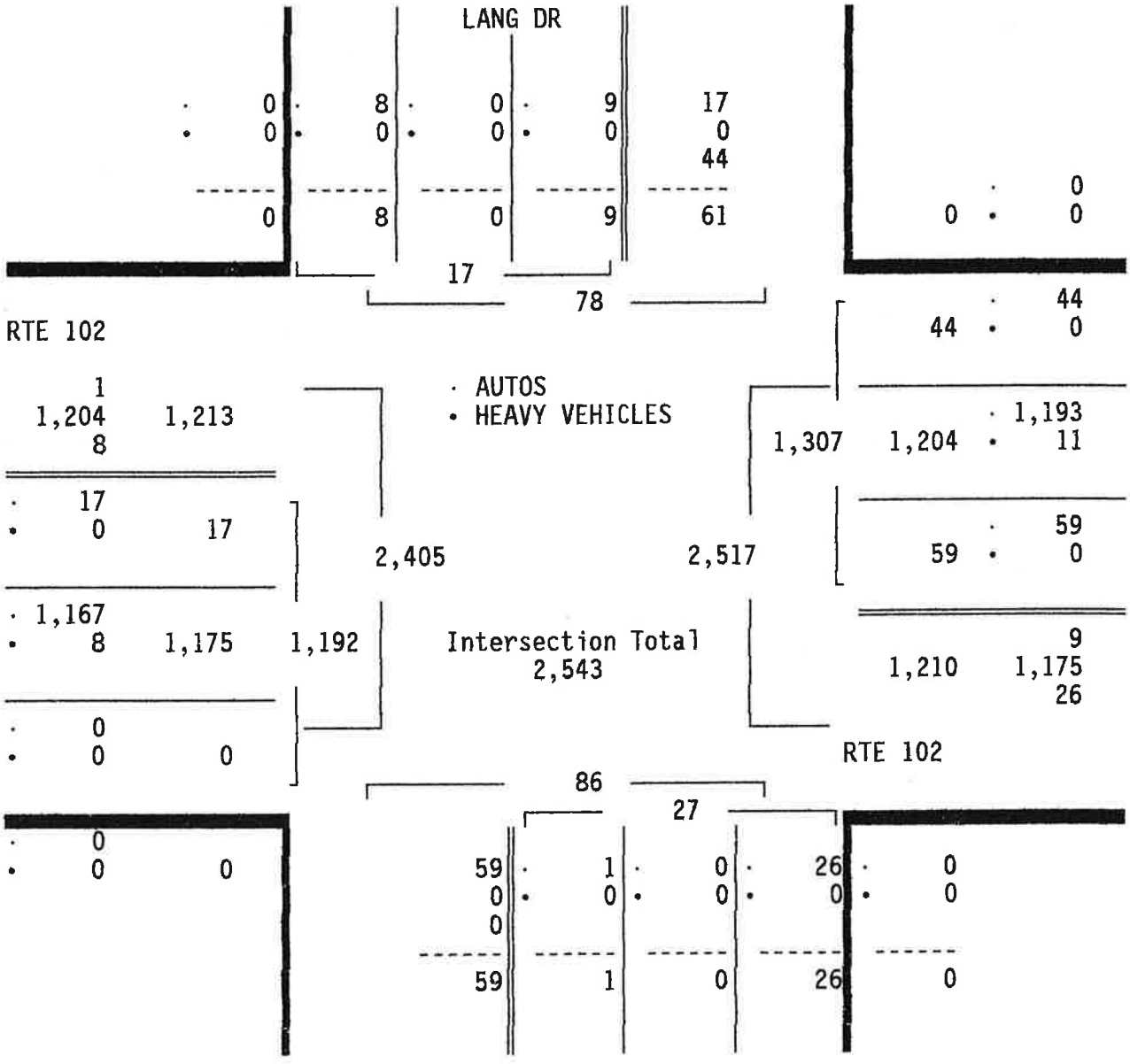
Counted by: RP
Comments: N KINGSTOWN

Site Code : 10071301
Start Date: 07/13/10
File I.D. : BANK0701

AUTOS, HEAVY VEHICLES

	LANG DR Southbound				RTE 102 Westbound				AUTUMN DR Northbound				RTE 102 Eastbound				
	Left	Thru	Right	PEDS	Left	Thru	Right	PEDS	Left	Thru	Right	PEDS	Left	Thru	Right	PEDS	Total
Date 07/13/10																	
Peak Hour Analysis By Entire Intersection for the Period: 12:00 to 18:00 on 07/13/10																	
Peak start	16:45				16:45				16:45				16:45				
Volume	9	0	8	0	59	1204	44	0	1	0	26	0	17	1175	0	0	
Percent	53%	0%	47%	0%	5%	92%	3%	0%	4%	0%	96%	0%	1%	99%	0%	0%	
Pk total	17				1307				27				1192				
Highest	17:15				16:45				16:45				17:15				
Volume	3	0	3	0	20	313	16	0	0	0	8	0	2	319	0	0	
Hi total	6				349				8				321				
PHF	.71				.94				.84				.93				



AUTOMATED COUNTS & TRAFFIC SURVEYS INC.
2 BURCHARD AVENUE
LITTLE COMPTON, RI 02837
(401)635-1650

Weather : HHH
Counter : D-2614
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Comments: N KINGSTOWN

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AUTOS

	LANG DR Southbound				RTE 102 Westbound				AUTUMN DR Northbound				RTE 102 Eastbound				
	Left	Thru	Right	PEDS	Left	Thru	Right	PEDS	Left	Thru	Right	PEDS	Left	Thru	Right	PEDS	Total
Date 07/17/10																	
10:00	4	0	2	0	9	227	8	0	0	1	12	0	4	184	0	0	451
10:15	5	0	4	0	9	228	4	0	0	0	9	0	1	220	0	0	480
10:30	4	0	0	0	6	223	3	0	0	0	7	0	1	220	0	0	464
10:45	6	0	0	0	9	267	2	0	0	0	13	0	1	270	0	0	568
Hr Total	19	0	6	0	33	945	17	0	0	1	41	0	7	894	0	0	1963
11:00	3	0	3	0	8	280	5	0	0	0	8	0	1	224	0	0	532
11:15	4	0	2	0	8	261	7	0	0	0	10	0	0	252	0	0	544
11:30	3	0	2	0	9	309	8	0	1	0	7	0	0	240	0	0	579
11:45	2	0	1	0	12	253	10	0	1	0	12	0	3	220	0	0	514
Hr Total	12	0	8	0	37	1103	30	0	2	0	37	0	4	936	0	0	2169
12:00	4	0	0	0	10	280	8	0	0	0	7	0	4	217	0	0	530
12:15	3	0	4	0	13	278	2	0	1	0	7	0	2	262	0	0	572
12:30	9	0	4	0	8	304	10	0	0	0	14	0	0	225	0	0	574
12:45	4	0	3	0	3	266	6	0	0	0	11	0	3	228	1	0	525
Hr Total	20	0	11	0	34	1128	26	0	1	0	39	0	9	932	1	0	2201
13:00	8	0	2	0	7	238	6	0	0	0	4	0	1	215	0	0	481
13:15	0	0	2	0	8	308	2	0	1	0	7	0	2	209	0	0	539
13:30	2	0	1	0	4	241	7	0	0	0	11	0	3	225	0	0	494
13:45	2	0	2	0	9	263	6	0	0	0	12	0	0	219	0	0	513
Hr Total	12	0	7	0	28	1050	21	0	1	0	34	0	6	868	0	0	2027
TOTAL	63	0	32	0	132	4226	94	0	4	1	151	0	26	3630	1	0	8360

AUTOMATED COUNTS & TRAFFIC SURVEYS INC.
2 BURCHARD AVENUE
LITTLE COMPTON, RI 02837
(401)635-1650

Weather : HHH
Counter : D-2614
Counted by: RP
Comments: N KINGSTOWN

Site Code : 10071701
Start Date: 07/17/10
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HEAVY VEHICLES

	LANG DR Southbound				RTE 102 Westbound				AUTUMN DR Northbound				RTE 102 Eastbound				
	Left	Thru	Right	Other	Left	Thru	Right	Other	Left	Thru	Right	Other	Left	Thru	Right	Other	Total
Date 07/17/10																	
10:00	0	0	0	0	0	2	0	0	0	0	0	0	0	2	0	0	4
10:15	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2
10:30	0	0	0	0	0	1	0	0	0	0	0	0	0	3	0	0	4
10:45	0	0	0	0	0	1	0	0	0	0	0	0	0	2	0	0	3
Hr Total	0	0	0	0	0	6	0	0	0	0	0	0	0	7	0	0	13
11:00	0	0	0	0	0	1	0	0	0	0	0	0	0	2	0	0	3
11:15	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
11:30	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2
11:45	0	0	0	0	0	2	0	0	0	0	0	0	0	2	0	0	4
Hr Total	0	0	0	0	0	5	0	0	0	0	0	0	0	5	0	0	10
12:00	0	0	1	0	0	0	0	0	0	0	0	0	0	3	0	0	4
12:15	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	2
12:30	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	2
12:45	0	0	0	0	0	3	0	0	0	0	0	0	0	3	0	0	6
Hr Total	0	0	1	0	0	5	0	0	0	1	0	0	0	7	0	0	14
13:00	0	0	0	0	0	2	0	0	0	0	0	0	0	1	0	0	3
13:15	0	0	0	0	0	1	0	0	0	0	0	0	0	3	0	0	4
13:30	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
13:45	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Hr Total	0	0	1	0	0	3	0	0	0	0	0	0	0	5	0	0	9
TOTAL	0	0	2	0	0	19	0	0	0	1	0	0	0	24	0	0	46

AUTOMATED COUNTS & TRAFFIC SURVEYS INC.
2 BURCHARD AVENUE
LITTLE COMPTON, RI 02837
(401)635-1650

Weather : HHH
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Counted by: RP
Comments: N KINGSTOWN

Site Code : 10071701
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AUTOS, HEAVY VEHICLES

	LANG DR Southbound				RTE 102 Westbound				AUTUMN DR Northbound				RTE 102 Eastbound				
	Left	Thru	Right	PEDS	Left	Thru	Right	PEDS	Left	Thru	Right	PEDS	Left	Thru	Right	PEDS	Total
Date 07/17/10																	
10:00	4	0	2	0	9	229	8	0	0	1	12	0	4	186	0	0	455
10:15	5	0	4	0	9	230	4	0	0	0	9	0	1	220	0	0	482
10:30	4	0	0	0	6	224	3	0	0	0	7	0	1	223	0	0	468
10:45	6	0	0	0	9	268	2	0	0	0	13	0	1	272	0	0	571
Hr Total	19	0	6	0	33	951	17	0	0	1	41	0	7	901	0	0	1976
11:00	3	0	3	0	8	281	5	0	0	0	8	0	1	226	0	0	535
11:15	4	0	2	0	8	261	7	0	0	0	10	0	0	253	0	0	545
11:30	3	0	2	0	9	311	8	0	1	0	7	0	0	240	0	0	581
11:45	2	0	1	0	12	255	10	0	1	0	12	0	3	222	0	0	518
Hr Total	12	0	8	0	37	1108	30	0	2	0	37	0	4	941	0	0	2179
12:00	4	0	1	0	10	280	8	0	0	0	7	0	4	220	0	0	534
12:15	3	0	4	0	13	279	2	0	1	1	7	0	2	262	0	0	574
12:30	9	0	4	0	8	305	10	0	0	0	14	0	0	226	0	0	576
12:45	4	0	3	0	3	269	6	0	0	0	11	0	3	231	1	0	531
Hr Total	20	0	12	0	34	1133	26	0	1	1	39	0	9	939	1	0	2215
13:00	8	0	2	0	7	240	6	0	0	0	4	0	1	216	0	0	484
13:15	0	0	2	0	8	309	2	0	1	0	7	0	2	212	0	0	543
13:30	2	0	1	0	4	241	7	0	0	0	11	0	3	226	0	0	495
13:45	2	0	3	0	9	263	6	0	0	0	12	0	0	219	0	0	514
Hr Total	12	0	8	0	28	1053	21	0	1	0	34	0	6	873	0	0	2036
TOTAL	63	0	34	0	132	4245	94	0	4	2	151	0	26	3654	1	0	8406

AUTOMATED COUNTS & TRAFFIC SURVEYS INC.
2 BURCHARD AVENUE
LITTLE COMPTON, RI 02837
(401)635-1650

Weather : HHH
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Comments: N KINGSTOWN

Site Code : 10071701
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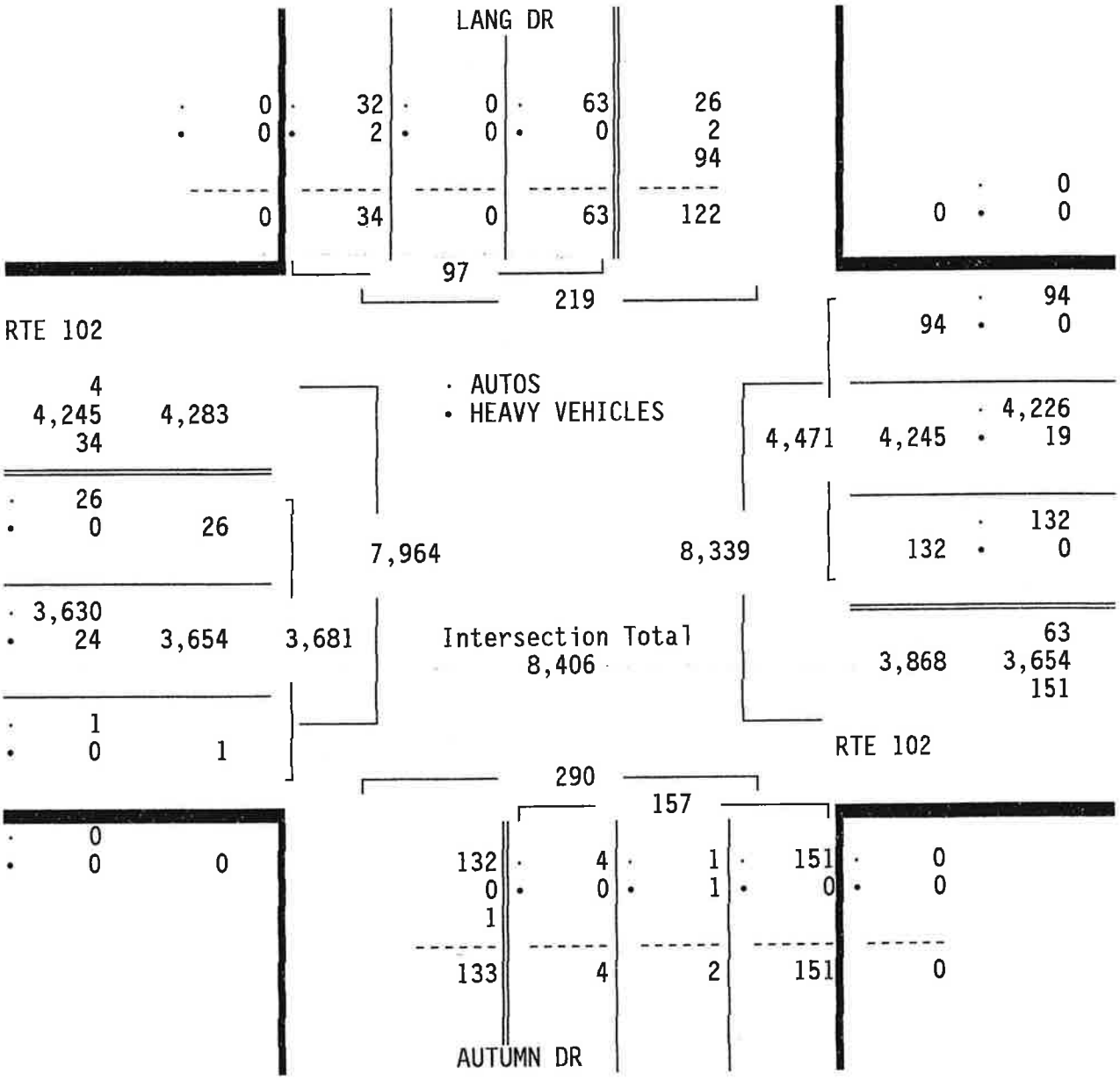
AUTOS, HEAVY VEHICLES

	LANG DR Southbound				RTE 102 Westbound				AUTUMN DR Northbound				RTE 102 Eastbound				
Date 07/17/10	Left	Thru	Right	PEDS	Left	Thru	Right	PEDS	Left	Thru	Right	PEDS	Left	Thru	Right	PEDS	Total
	0	34	0	63	0	32	0	63	26				0	0	94	0	122
	0	0	0	2	0	2	0	0	2				0	0	0	0	4
									94				0	0	0	0	94
	0	34	0	63	0	34	0	63	122				0	0	94	0	220



AUTOMATED COUNTS & TRAFFIC SURVEYS INC.
2 BURCHARD AVENUE
LITTLE COMPTON, RI 02837
(401)635-1650

Weather : HHH
Counter : D-2614
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Site Code : 10071701
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AUTOS, HEAVY VEHICLES

	LANG DR Southbound				RTE 102 Westbound				AUTUMN DR Northbound				RTE 102 Eastbound				
	Left	Thru	Right	PEDS	Left	Thru	Right	PEDS	Left	Thru	Right	PEDS	Left	Thru	Right	PEDS	Total
Date 07/17/10																	
Peak Hour Analysis By Individual Approach for the Period: 10:00 to 12:00 on 07/17/10																	
Peak start	11:45				11:30				11:45				10:45				
Volume	18	0	10	0	44	1125	28	0	2	1	40	0	2	991	0	0	
Percent	64%	0%	36%	0%	4%	94%	2%	0%	5%	2%	93%	0%	0%	100%	0%	0%	
Pk total	28				1197				43				993				
Highest	12:30				11:30				12:30				10:45				
Volume	9	0	4	0	9	311	8	0	0	0	14	0	1	272	0	0	
Hi total	13				328				14				273				
PHF	.54				.91				.77				.91				

AUTOMATED COUNTS & TRAFFIC SURVEYS INC.
2 BURCHARD AVENUE
LITTLE COMPTON, RI 02837
(401)635-1650

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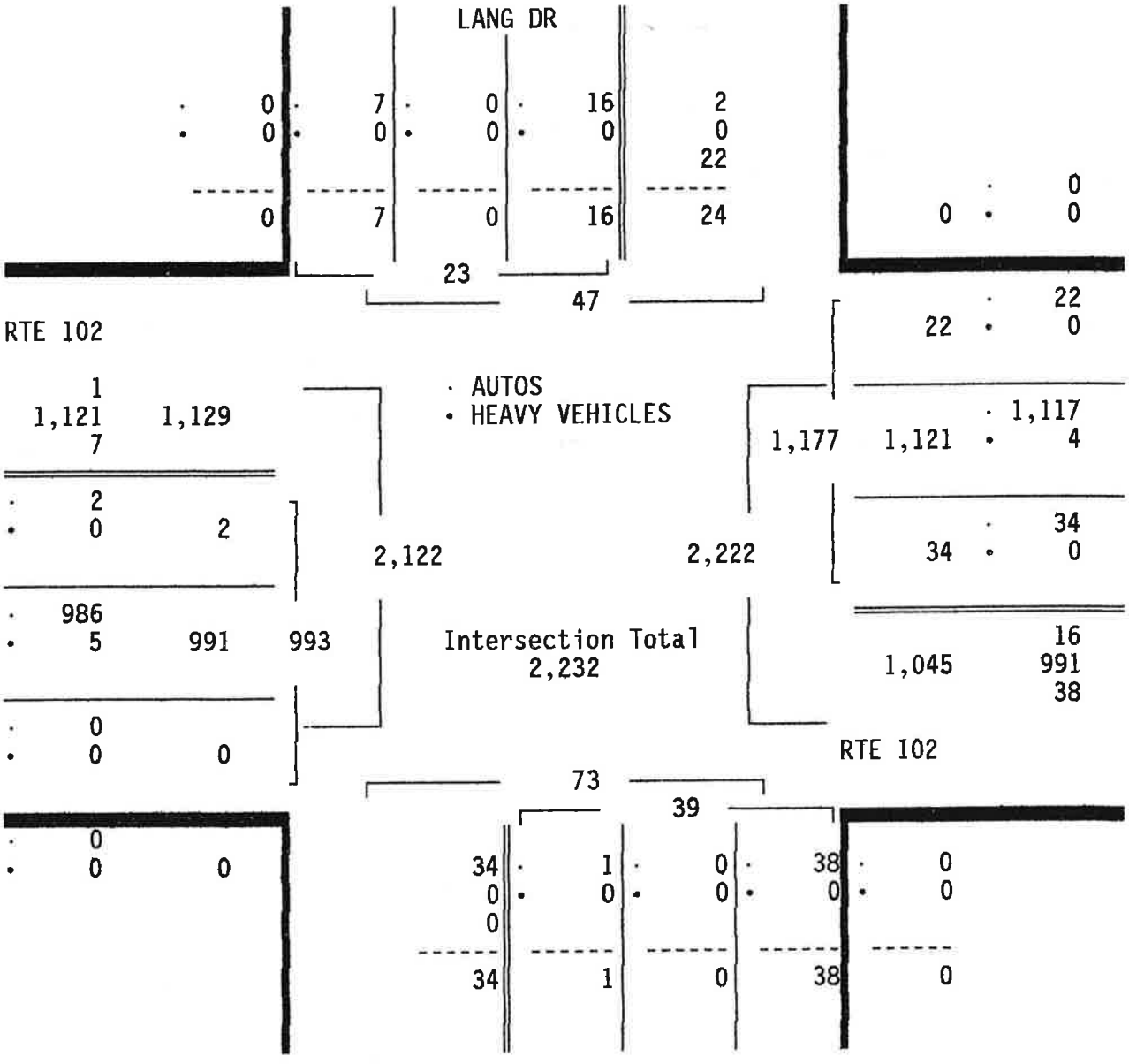
Comments: N KINGSTOWN

Site Code : 10071701
Start Date: 07/17/10
File I.D. : BANK0702
Page : 4

AUTOS, HEAVY VEHICLES

	LANG DR Southbound				RTE 102 Westbound				AUTUMN DR Northbound				RTE 102 Eastbound				
	Left	Thru	Right	PEDS	Left	Thru	Right	PEDS	Left	Thru	Right	PEDS	Left	Thru	Right	PEDS	Total
Date 07/17/10																	
Peak Hour Analysis By Entire Intersection for the Period: 10:00 to 12:00 on 07/17/10																	
Peak start	10:45				10:45				10:45				10:45				
Volume	16	0	7	0	34	1121	22	0	1	0	38	0	2	991	0	0	
Percent	70%	0%	30%	0%	3%	95%	2%	0%	3%	0%	97%	0%	0%	100%	0%	0%	
Pk total	23				1177				39				993				
Highest	10:45				11:30				10:45				10:45				
Volume	6	0	0	0	9	311	8	0	0	0	13	0	1	272	0	0	
Hi total	6				328				13				273				
PHF	.96				.90				.75				.91				



AUTOMATED COUNTS & TRAFFIC SURVEYS INC.
2 BURCHARD AVENUE
LITTLE COMPTON, RI 02837
(401)635-1650

Weather : HHH
Counter : D-2614
Counted by: RP
Comments: N KINGSTOWN

Site Code : 10071701
Start Date: 07/17/10
File I.D. : BANK0702
Page : 5

AUTOS, HEAVY VEHICLES

	LANG DR Southbound				RTE 102 Westbound				AUTUMN DR Northbound				RTE 102 Eastbound				
	Left	Thru	Right	PEDS	Left	Thru	Right	PEDS	Left	Thru	Right	PEDS	Left	Thru	Right	PEDS	Total
Date 07/17/10																	
Peak Hour Analysis By Individual Approach for the Period: 12:00 to 14:00 on 07/17/10																	
Peak start	12:15				12:00				12:00				12:00				
Volume	24	0	13	0	34	1133	26	0	1	1	39	0	9	939	1	0	
Percent	65%	0%	35%	0%	3%	95%	2%	0%	2%	2%	95%	0%	1%	99%	0%	0%	
Pk total	37				1193				41				949				
Highest	12:30				12:30				12:30				12:15				
Volume	9	0	4	0	8	305	10	0	0	0	14	0	2	262	0	0	
Hi total	13				323				14				264				
PHF	.71				.92				.73				.90				

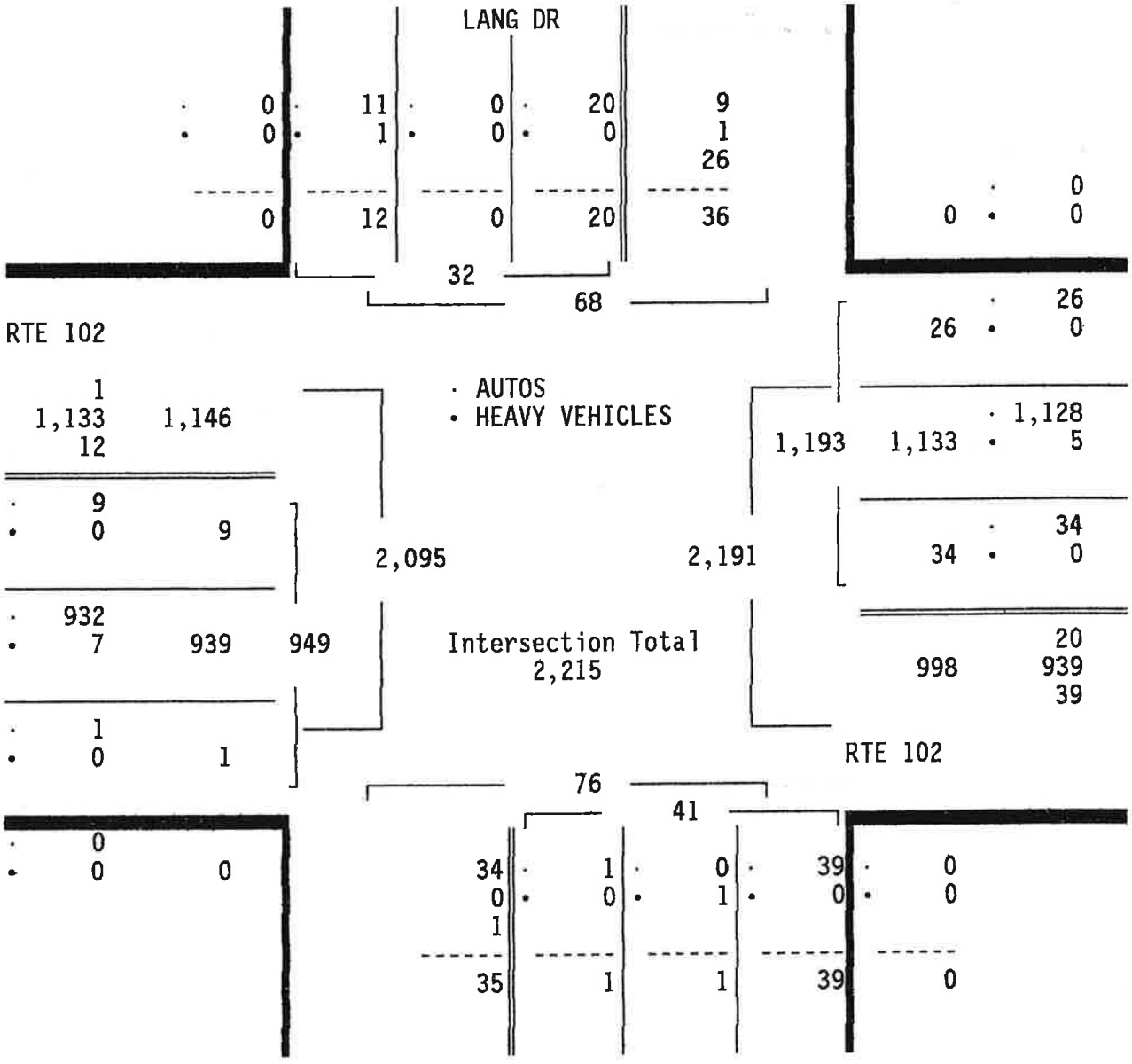
AUTOMATED COUNTS & TRAFFIC SURVEYS INC.
2 BURCHARD AVENUE
LITTLE COMPTON, RI 02837
(401)635-1650

Weather : HHH
Counter : D-2614
Counted by: RP
Comments: N KINGSTOWN

Site Code : 10071701
Start Date: 07/17/10
File I.D. : BANK0702
Page : 6

AUTOS, HEAVY VEHICLES

	LANG DR Southbound				RTE 102 Westbound				AUTUMN DR Northbound				RTE 102 Eastbound				
	Left	Thru	Right	PEDS	Left	Thru	Right	PEDS	Left	Thru	Right	PEDS	Left	Thru	Right	PEDS	Total
Date 07/17/10																	
Peak Hour Analysis By Entire Intersection for the Period: 12:00 to 14:00 on 07/17/10																	
Peak start	12:00				12:00				12:00				12:00				
Volume	20	0	12	0	34	1133	26	0	1	1	39	0	9	939	1	0	
Percent	62%	0%	38%	0%	3%	95%	2%	0%	2%	2%	95%	0%	1%	99%	0%	0%	
Pk total	32				1193				41				949				
Highest	12:30				12:30				12:30				12:15				
Volume	9	0	4	0	8	305	10	0	0	0	14	0	2	262	0	0	
Hi total	13				323				14				264				
PHF	.62				.92				.73				.90				



APPENDIX B: TRIP GENERATION

2nd Revision September 20, 2012
Revised April 30, 2012
July 21, 2010
BAI No. 210037

Trip Generation Calculations
The Preserve at Rolling Greens
Ten Rod Road
North Kingstown, RI

Land Use No. 210
Single-Family Detached Housing

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

Number of Dwelling Units	14
Average Trip Generation Rate	0.75
Directional Distribution	25% entering, 75% exiting

0.75 x 14 = 10.5, say 11 total trips

11 x 0.25 = 2.75, say 3 trips entering

11 x 0.75 = 8.25, say 8 trips exiting

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

Number of Dwelling Units	14
Fitted Curve Equation	Ln (T) = 0.90 Ln (X) + 0.51, where T = Trips and X = No. of Units
Directional Distribution	63% entering, 37% exiting

0.90 Ln (14) + 0.51 = 17.91, say 18 total trips

18 x 0.63 = 11.34, say 11 trips entering

18 x 0.37 = 6.66, say 7 trips exiting

Trip Generation Calculations
The Preserve at Rolling Greens
Ten Rod Road
North Kingstown, RI

Average Vehicle Trip Ends vs: Dwelling Units
Saturday
Peak Hour of Generator

Number of Dwelling Units	14
Average Trip Generation Rate	0.93
Directional Distribution	53% entering, 47% exiting

0.93 x 14 = 13.02, say 13 total trips

13 x 0.53 = 6.89, say 7 trips entering

13 x 0.47 = 6.11, say 6 trips exiting

Land Use No. 230
Residential Condominium/Townhouse

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

Number of Dwelling Units	86
Fitted Curve Equation	Ln (T) = 0.80 Ln (X) + 0.26, where T = Trips and X = No. of Units
Directional Distribution	17% entering, 83% exiting

0.80 Ln (86) + 0.26 = 45.76, say 46 total trips

46 x 0.17 = 7.82, say 8 trips entering

46 x 0.83 = 38.18, say 38 trips exiting

Trip Generation Calculations
The Preserve at Rolling Greens
Ten Rod Road
North Kingstown, RI

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

Number of Dwelling Units	86
Fitted Curve Equation	Ln (T) = 0.82 Ln (X) + 0.32, where T = Trips and X = No. of Units
Directional Distribution	67% entering, 33% exiting

0.82 Ln (86) + 0.32 = 53.12, say 53 total trips

53 x 0.67 = 35.51, say 36 trips entering

53 x 0.33 = 17.49, say 17 trips exiting

Average Vehicle Trip Ends vs: Dwelling Units
Saturday
Peak Hour of Generator

Number of Dwelling Units	86
Average Trip Generation Rate	0.47
Directional Distribution	54% entering, 46% exiting

0.47 x 86 = 40.42, say 40 total trips

40 x 0.54 = 21.6, say 22 trips entering

40 x 0.46 = 18.4, say 18 trips exiting

Trip Generation Calculations
The Preserve at Rolling Greens
Ten Rod Road
North Kingstown, RI

Land Use No. 220
Apartment

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

Number of Dwelling Units	6
Average Trip Generation Rate	0.51
Directional Distribution	20% entering, 80% exiting

0.51 x 6 = 3.06, say 3 total trips

3 x 0.20 = 0.6, say 1 trip entering

3 x 0.80 = 2.4, say 2 trips exiting

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

Number of Dwelling Units	6
Average Trip Generation Rate	0.62
Directional Distribution	65% entering, 35% exiting

0.62 x 6 = 3.72, say 4 total trips

4 x 0.65 = 2.6, say 3 trips entering

4 x 0.35 = 1.4, say 1 trip exiting

Trip Generation Calculations
The Preserve at Rolling Greens
Ten Rod Road
North Kingstown, RI

Average Vehicle Trip Ends vs: Dwelling Units
Saturday
Peak Hour of Generator

Number of Dwelling Units	6
Average Trip Generation Rate	0.52
Directional Distribution	50% entering, 50% exiting

0.52 x 6 = 3.12, say 3 total trips

3 x 0.50 = 1.5, say 2 trips entering

3 x 0.50 = 1.5, say 1 trip exiting

Land Use No. 710
General Office Building

Average Vehicle Trip Ends vs: 1000 Sq. Feet Gross Floor Area
Weekday
A.M. Peak Hour

Number of 1000 Sq. Feet GFA	10.45
Average Trip Generation Rate	1.55
Directional Distribution	88% entering, 12% exiting

1.55 x 10.45 = 16.2, say 16 total trips

16 x 0.88 = 14.08, say 14 trips entering

16 x 0.12 = 1.92, say 2 trips exiting

Trip Generation Calculations
The Preserve at Rolling Greens
Ten Rod Road
North Kingstown, RI

Average Vehicle Trip Ends vs: 1000 Sq. Feet Gross Floor Area
Weekday
P.M. Peak Hour

Number of 1000 Sq. Feet GFA	10.45
Average Trip Generation Rate	1.49
Directional Distribution	17% entering, 83% exiting

1.49 x 10.45 = 15.57, say 16 total trips

16 x 0.17 = 2.72, say 3 trips entering

16 x 0.83 = 13.28, say 13 trips exiting

Average Vehicle Trip Ends vs: 1000 Sq. Feet Gross Floor Area
Saturday
Peak Hour of Generator

Number of 1000 Sq. Feet GFA	10.45
Fitted Curve Equation	Ln (T) = 0.81 Ln (X) – 0.12, where T = Trips and X = 1000 Sq. Feet GFA
Directional Distribution	54% entering, 46% exiting

0.81 Ln (10.45) – 0.12 = 5.93, say 6 total trips

6 x 0.54 = 3.24, say 3 trips entering

6 x 0.46 = 2.76, say 3 trips exiting

Trip Generation Calculations
The Preserve at Rolling Greens
Ten Rod Road
North Kingstown, RI

Land Use No. 881
Pharmacy/Drugstore with Drive-Through Window

Average Vehicle Trip Ends vs: 1000 Sq. Feet Gross Floor Area
Weekday
Peak Hour of Adjacent Street Traffic
One Hour Between 7 and 9 a.m.

1000 Sq. Feet Gross Floor Area	15
Average Trip Generation Rate	2.66
Directional Distribution	57% entering, 43% exiting

2.66 x 15 = 39.9, say 40 total trips

40 x 0.57 = 22.8, say 23 trip entering

40 x 0.43 = 17.2, say 17 trips exiting

Average Vehicle Trip Ends vs: 1000 Sq. Feet Gross Floor Area
Weekday
Peak Hour of Adjacent Street Traffic
One Hour Between 4 and 6 p.m.

1000 Sq. Feet Gross Floor Area	15
Average Trip Generation Rate	10.35
Directional Distribution	50 % entering, 50% exiting

10.35 x 15 = 155.25, say 155 total trips

155 x 0.50 = 77.5, say 78 trips entering

155 x 0.50 = 77.5, say 77 trips exiting

Trip Generation Calculations
The Preserve at Rolling Greens
Ten Rod Road
North Kingstown, RI

Average Vehicle Trip Ends vs: 1000 Sq. Feet Gross Floor Area
Saturday
Peak Hour of Generator

1000 Sq. Feet Gross Floor Area	15
Average Trip Generation Rate	7.85
Directional Distribution	50% entering, 50% exiting

7.85 x 15 = 117.75, say 118 total trips

118 x 0.50 = 59 trips entering

118 x 0.50 = 59 trips exiting

Land Use No. 912
Drive-in Bank

Average Vehicle Trip Ends vs: 1000 Square Feet Gross Floor Area
Weekday
Peak Hour of Adjacent Street Traffic
One Hour Between 7 and 9 a.m.

1000 Sq. Feet Gross Floor Area	3.6
Average Trip Generation Rate	12.35
Directional Distribution	56% entering, 44% exiting

12.35 x 3.6 = 44.46, say 45 total trips

45 x 0.56 = 25.2, say 25 trips entering

45 x 0.44 = 19.8, say 20 trips exiting

Trip Generation Calculations
The Preserve at Rolling Greens
Ten Rod Road
North Kingstown, RI

Average Vehicle Trip Ends vs: 1000 Square Feet Gross Floor Area
Weekday
Peak Hour of Adjacent Street Traffic
One Hour Between 4 and 6 p.m.

1000 Sq. Feet Gross Floor Area	3.6
Average Trip Generation Rate	25.82
Directional Distribution	50% entering, 50% exiting

25.82 x 3.6 = 92.95, say 93 total trips

93 x 0.50 = 46.5, say 47 trips entering

93 x 0.50 = 46.5, say 46 trips exiting

Average Vehicle Trip Ends vs: 1000 Square Feet Gross Floor Area
Saturday
Peak Hour of Generator

1000 Sq. Feet Gross Floor Area	3.6
Average Trip Generation Rate	26.53
Directional Distribution	52% entering, 48% exiting

26.53 x 3.6 = 95.51, say 96 total trips

96 x 0.52 = 49.92, say 50 trips entering

96 x 0.48 = 46.08, say 46 trips exiting

Trip Generation Calculations
The Preserve at Rolling Greens
Ten Rod Road
North Kingstown, RI

Land Use No. 932
High-Turnover (Sit-Down) Restaurant

Average Vehicle Trip Ends vs: 1000 square feet Gross Floor Area
Weekday
Peak Hour of Adjacent Street Traffic
One Hour Between 7 and 9 a.m.

Number of 1000 sq. ft. GFA	5
Average Trip Generation rate	11.52
Directional Distribution	52% entering, 48% exiting

11.52 x 5 = 57.6, say 58 total trips

58 x 0.52 = 30.16, say 30 trips entering

58 x 0.48 = 27.84, say 28 trips exiting

Average Vehicle Trip Ends vs: 1000 square feet Gross Floor Area
Weekday
Peak Hour of Adjacent Street Traffic
One Hour Between 4 and 6 p.m.

Number of 1000 sq. ft. GFA	5
Average Trip Generation rate	11.15
Directional Distribution	59% entering, 41% exiting

11.15 x 5 = 55.75, say 56 total trips

56 x 0.59 = 33.04, say 33 trips entering

56 x 0.41 = 22.96, say 23 trips exiting

Trip Generation Calculations
The Preserve at Rolling Greens
Ten Rod Road
North Kingstown, RI

Average Vehicle Trip Ends vs: 1000 square feet Gross Floor Area
Saturday
Peak Hour of Generator

Number of 1000 sq. ft. GFA	5
Average Trip Generation rate	14.07
Directional Distribution	53% entering, 47% exiting

14.07 x 5 = 70.35, say 70 total trips

70 x 0.53 = 37.1, say 37 trips entering

70 x 0.47 = 32.9, say 33 trips exiting

Land Use No. 820
Shopping Center

Average Vehicle Trip Ends vs: 1000 Square Feet Gross Leasable Area
Weekday
Peak Hour of Adjacent Street Traffic
One Hour Between 7 and 9 a.m.

1000 Sq. Feet Gross Leasable Area	33.134
Average Trip Generation Rate	1.00
Directional Distribution	61% entering, 39% exiting

1.00 x 33.134 = 33.13, say 33 total trips

33 x 0.61 = 20.13, say 20 trips entering

33 x 0.39 = 12.87, say 13 trips exiting

Trip Generation Calculations
The Preserve at Rolling Greens
Ten Rod Road
North Kingstown, RI

Average Vehicle Trip Ends vs: 1000 Square Feet Gross Leasable Area
Saturday
Peak Hour of Generator

1000 Sq. Feet Gross Leasable Area	33.134
Average Trip Generation Rate	4.89
Directional Distribution	52% entering, 48% exiting

4.89 x 33.134 = 162.03, say 162 total trips

162 x 0.52 = 84.24, say 84 trips entering

162 x 0.48 = 77.76, say 78 trips exiting

Land Use No. 814
Specialty Retail Center

Average Vehicle Trip Ends vs: 1000 Square Feet Gross Leasable Area
Weekday
Peak Hour of Adjacent Street Traffic
One Hour Between 4 and 6 p.m.

1000 Sq. Feet Gross Leasable Area	33.134
Fitted Curve Equation	T = 2.40 (X) + 21.48, where T = Trips and X = 1000 SF GLA
Directional Distribution	44% entering, 56% exiting

2.40 (33.134) + 21.48 = 101 total trips

101 x 0.44 = 44.44, say 44 trips entering

101 x 0.56 = 56.56, say 57 trips exiting

Trip Generation Calculations
The Preserve at Rolling Greens
Ten Rod Road
North Kingstown, RI

Pass-by Trips

Data from ITE indicates that pass-by trips for customers of pharmacies with drive-through windows range from 41% to 58%, with an average rate of 49% during the P.M. peak period. A conservative pass-by rate of 25% was used in this analysis. Since ITE does not provide data for the A.M. or Saturday midday peak periods, the 25% pass-by rate was also used for these periods.

Data from ITE indicates that pass-by trips for customers of drive-in banks range from 15% to 64%, with an average rate of 47% during the P.M. peak period. The average pass-by rate of 47% was used in this analysis. Since ITE does not provide data for the A.M. or Saturday midday peak periods, the 47% pass-by rate of was also used for these periods.

Data from ITE indicates that pass-by trips for customers of high-turnover (sit-down) restaurants range from 23% to 63%, with an average rate of 43% during the P.M. peak period. The average pass-by rate of 43% was used in this analysis. Since ITE does not provide data for the A.M. or Saturday midday peak periods, the 43% pass-by rate of was also used for these periods.

Data from ITE indicates that pass-by trips for customers of shopping centers range from 8% to 89% during the P.M. peak period and between 10% and 56% during the Saturday midday peak period. Figures 5.5 and 5.7 from the ITE Trip Generation Handbook were used to determine the pass-by trip rates for the P.M. and Saturday peaks, respectively, for the proposed 25,925 square feet of retail space. A conservative pass-by rate of 40% was used for the P.M. peak period and a conservative pass-by rate of 30% was used for the Saturday midday peak period. Since there is no data for the A.M. peak period, it was assumed to be equal to the P.M. peak period.

A.M. Peak Hour

Land Use No. 881
Pharmacy with Drive-Through Window

A pass-by trip rate of 25% was used for this study. The calculations are as follows:

Entering: 23 (Total Trips) x 0.25 = 5.75, say 6 pass-by trips
Exiting: 17 (Total Trips) x 0.25 = 4.25, say 4 pass-by trips

Trip Generation Calculations
The Preserve at Rolling Greens
Ten Rod Road
North Kingstown, RI

Land Use No. 912
Drive-in Bank

A pass-by trip rate of 47% was used for this study. The calculations are as follows:

Entering: 25 (Total Trips) x 0.47 = 11.75, say 12 pass-by trips
Exiting: 20 (Total Trips) x 0.47 = 9.4, say 9 pass-by trips

Land Use No. 932
High-Turnover (Sit-Down) Restaurant

A pass-by trip rate of 43% was used for this study. The calculations are as follows:

Entering: 30 (Total Trips) x 0.43 = 12.9, say 13 pass-by trips
Exiting: 28 (Total Trips) x 0.43 = 12.04, say 12 pass-by trips

Land Use No. 820
Shopping Center

A pass-by trip rate of 40% was used for this study. The calculations are as follows:

Entering: 20 (Total Trips) x 0.40 = 8 pass-by trips
Exiting: 13 (Total Trips) x 0.40 = 5.2, say 5 pass-by trips

P.M. Peak Hour

Land Use No. 881
Pharmacy with Drive-Through Window

A pass-by trip rate of 25% was used for this study. The calculations are as follows:

Entering: 78 (Total Trips) x 0.25 = 19.5, say 20 pass-by trips
Exiting: 77 (Total Trips) x 0.25 = 19.25, say 19 pass-by trips

Trip Generation Calculations
The Preserve at Rolling Greens
Ten Rod Road
North Kingstown, RI

Land Use No. 912
Drive-in Bank

A pass-by trip rate of 47% was used for this study. The calculations are as follows:

Entering: 47 (Total Trips) x 0.47 = 22.09, say 22 pass-by trips
Exiting: 46 (Total Trips) x 0.47 = 21.62, say 22 pass-by trips

Land Use No. 932
High-Turnover (Sit-Down) Restaurant

A pass-by trip rate of 43% was used for this study. The calculations are as follows:

Entering: 33 (Total Trips) x 0.43 = 14.19, say 14 pass-by trips
Exiting: 23 (Total Trips) x 0.43 = 9.89, say 10 pass-by trips

Land Use No. 820
Shopping Center

A pass-by trip rate of 40% was used for this study. The calculations are as follows:

Entering: 44 (Total Trips) x 0.40 = 17.6, say 18 pass-by trips
Exiting: 57 (Total Trips) x 0.40 = 22.8, say 23 pass-by trips

Saturday Midday Peak Hour

Land Use No. 881
Pharmacy with Drive-Through Window

A pass-by trip rate of 25% was used for this study. The calculations are as follows:

Entering: 59 (Total Trips) x 0.25 = 14.75, say 15 pass-by trips
Exiting: 59 (Total Trips) x 0.25 = 14.75, say 15 pass-by trips

Trip Generation Calculations
The Preserve at Rolling Greens
Ten Rod Road
North Kingstown, RI

Land Use No. 912
Drive-in Bank

A pass-by trip rate of 47% was used for this study. The calculations are as follows:

Entering: 50 (Total Trips) x 0.47 = 23.5, say 24 pass-by trips
Exiting: 46 (Total Trips) x 0.47 = 21.62, say 22 pass-by trips

Land Use No. 932
High-Turnover (Sit-Down) Restaurant

A pass-by trip rate of 43% was used for this study. The calculations are as follows:

Entering: 37 (Total Trips) x 0.43 = 15.91, say 16 pass-by trips
Exiting: 33 (Total Trips) x 0.43 = 14.19, say 14 pass-by trips

Land Use No. 820
Shopping Center

A pass-by trip rate of 30% was used for this study. The calculations are as follows:

Entering: 84 (Total Trips) x 0.30 = 25.2, say 25 pass-by trips
Exiting: 78 (Total Trips) x 0.30 = 23.4, say 23 pass-by trips

Trip Generation Calculations
The Preserve at Rolling Greens
Ten Rod Road
North Kingstown, RI

Total A.M. Peak Generated Traffic:

3 + 8 + 15 + 23 + 25 + 30 + 20 – 6 – 12 – 13 – 8 = **85 trips entering**

8 + 38 + 4 + 17 + 20 + 28 + 13 – 4 – 9 – 12 – 5 = **98 trips exiting**

Total P.M. Peak Generated Traffic:

11 + 36 + 6 + 78 + 47 + 33 + 44 – 20 – 22 – 14 – 18 = **181 trips entering**

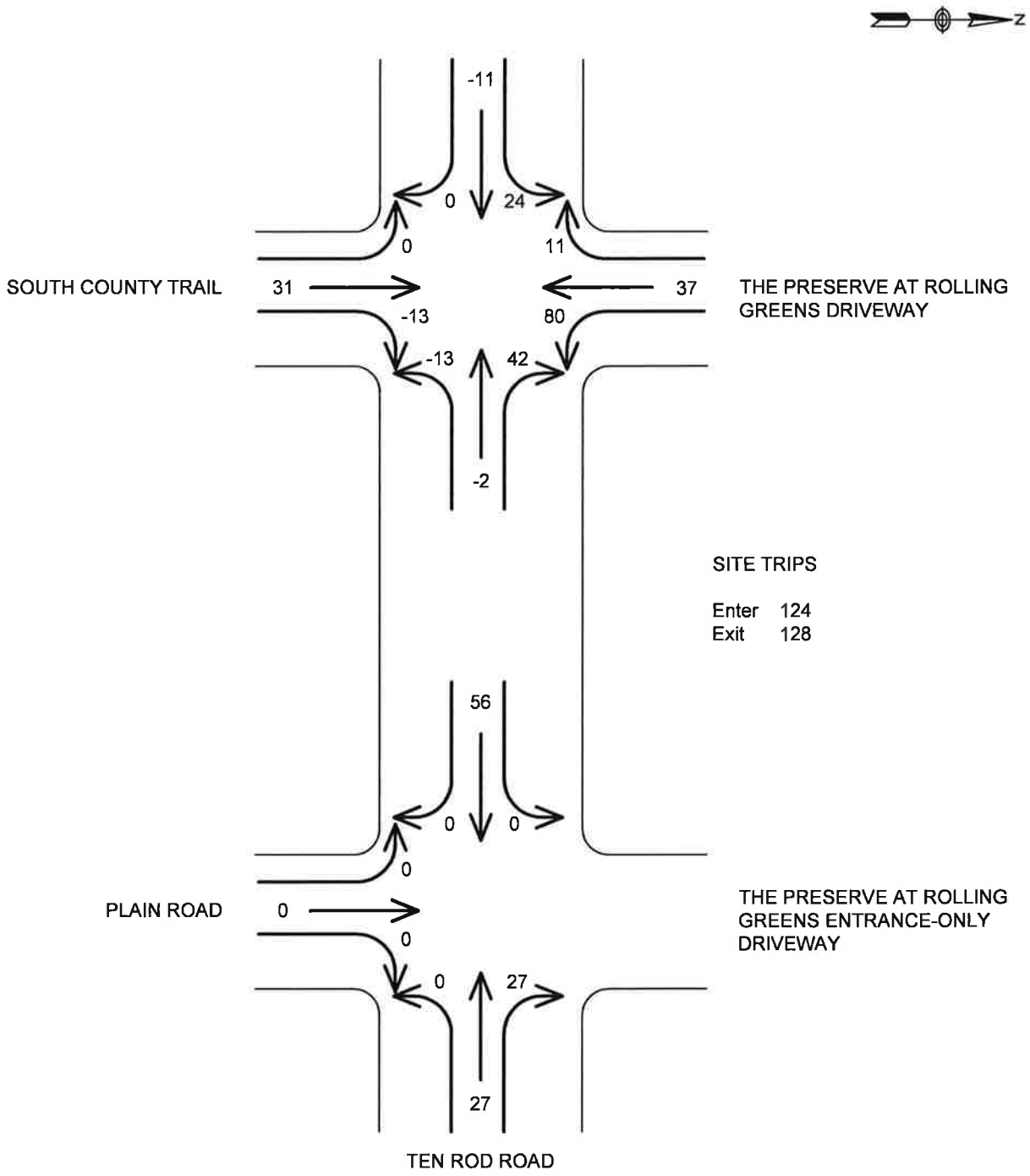
7 +17 + 14 + 77 + 46 + 23 + 57 – 19 – 22 – 10 – 23 = **167 trips exiting**

Total Saturday Midday Peak Generated Traffic:

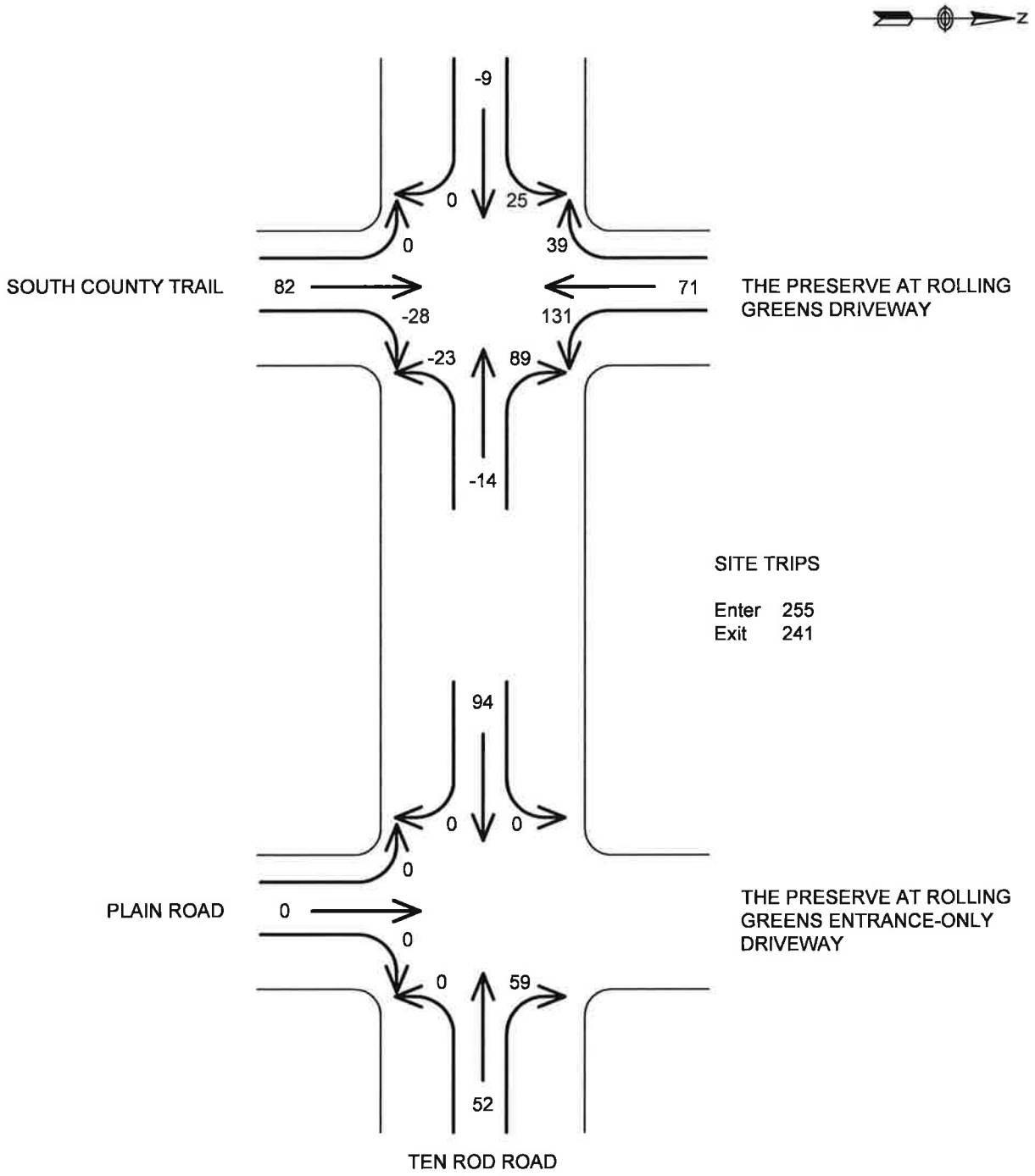
7 + 22 + 5 + 59 + 50 + 37 + 84 – 15 – 24 – 16 – 25 = **184 trips entering**

6 + 18 + 4 + 59 + 46 + 33 + 78 – 15 – 22 – 14 – 23 = **170 trips exiting**

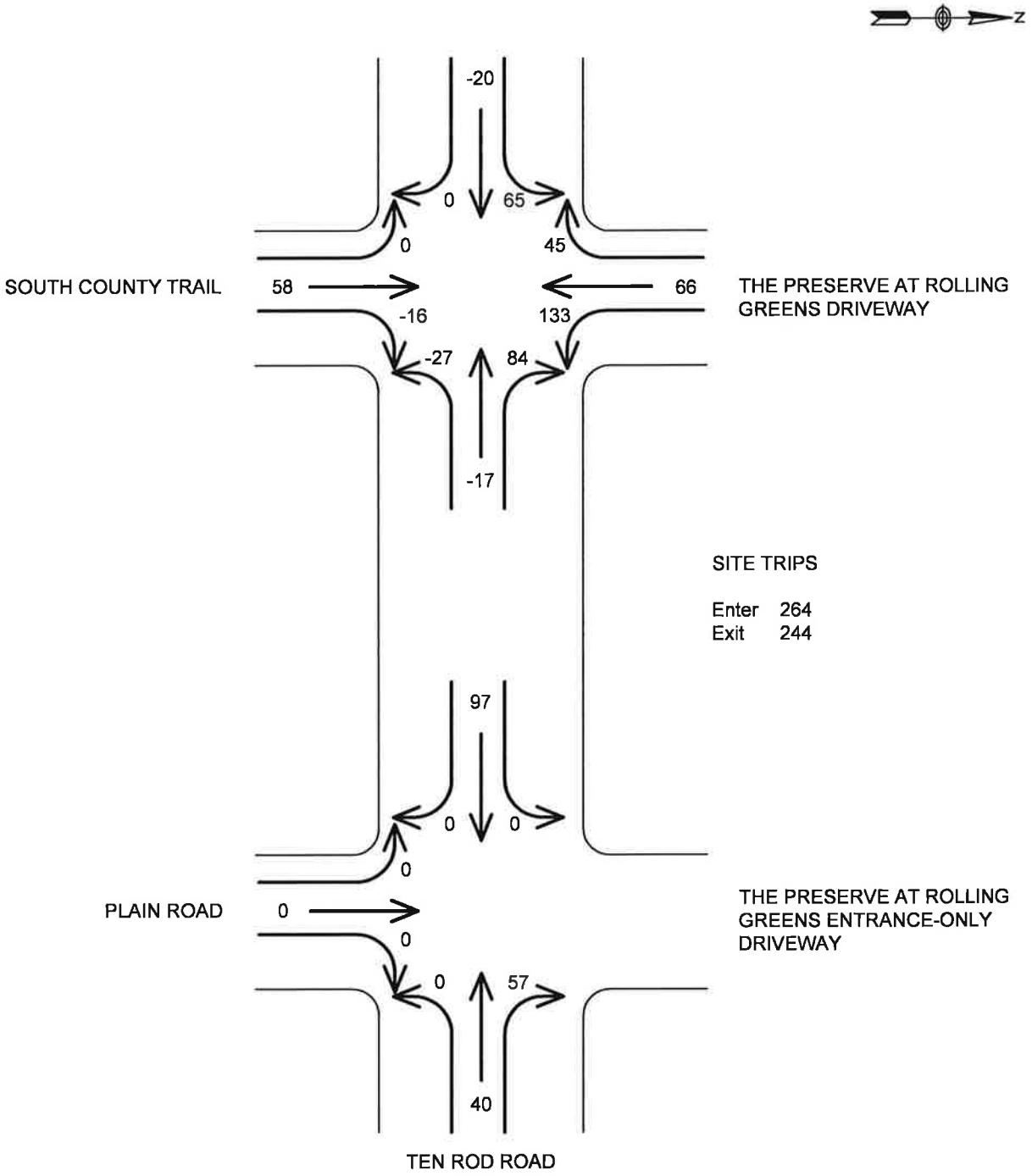
TRAFFIC VOLUMES
THE PRESERVE AT ROLLING GREENS
TEN ROD ROAD, NORTH KINGSTOWN, RI
SITE GENERATED TRIPS - AM PEAK



TRAFFIC VOLUMES
THE PRESERVE AT ROLLING GREENS
TEN ROD ROAD, NORTH KINGSTOWN, RI
SITE GENERATED TRIPS - PM PEAK

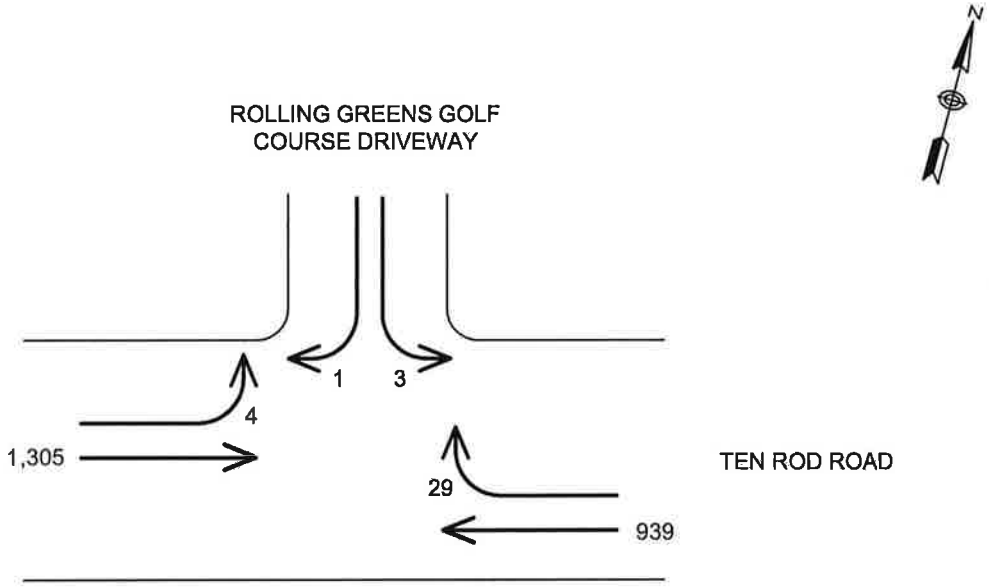


TRAFFIC VOLUMES
THE PRESERVE AT ROLLING GREENS
TEN ROD ROAD, NORTH KINGSTOWN, RI
SITE GENERATED TRIPS - SATURDAY MIDDAY PEAK

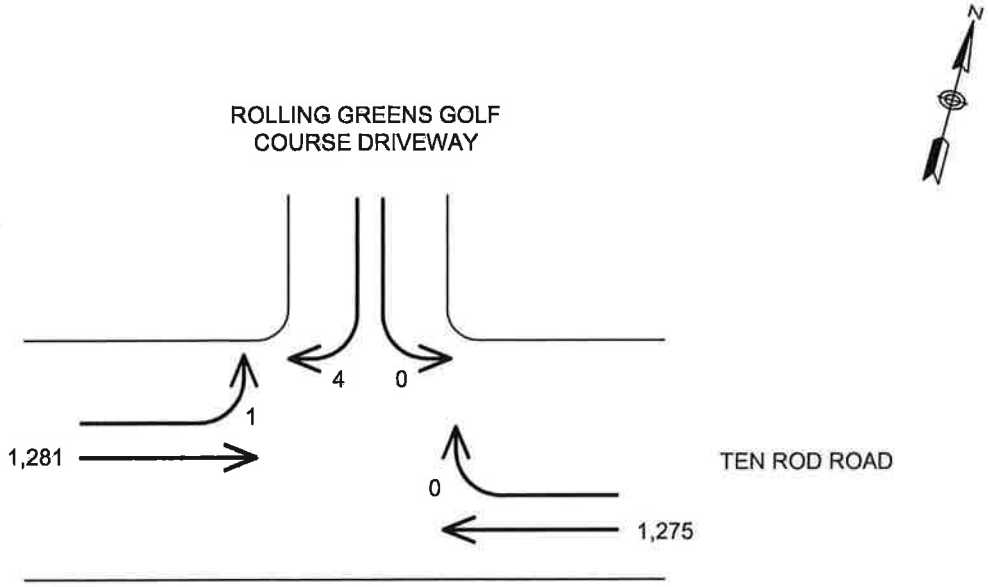


APPENDIX C: INTERSECTION CAPACITY ANALYSIS COMPUTATIONS

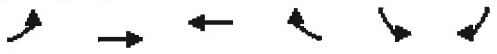
TRAFFIC VOLUMES
THE PRESERVE AT ROLLING GREENS
TEN ROD ROAD, NORTH KINGSTOWN, RI
NO BUILD CONDITIONS



AM PEAK



PM PEAK



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	4	1305	939	29	3	1
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.91	0.91	0.93	0.93	0.50	0.50
Hourly flow rate (vph)	4	1434	1010	31	6	2
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		1048				
pX, platoon unblocked						
vC, conflicting volume	1041				1751	520
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1041				1751	520
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				92	100
cM capacity (veh/h)	676				78	506

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1
Volume Total	482	956	673	368	8
Volume Left	4	0	0	0	6
Volume Right	0	0	0	31	2
cSH	676	1700	1700	1700	99
Volume to Capacity	0.01	0.56	0.40	0.22	0.08
Queue Length 95th (ft)	0	0	0	0	6
Control Delay (s)	0.2	0.0	0.0	0.0	44.6
Lane LOS	A				E
Approach Delay (s)	0.1		0.0		44.6
Approach LOS					E

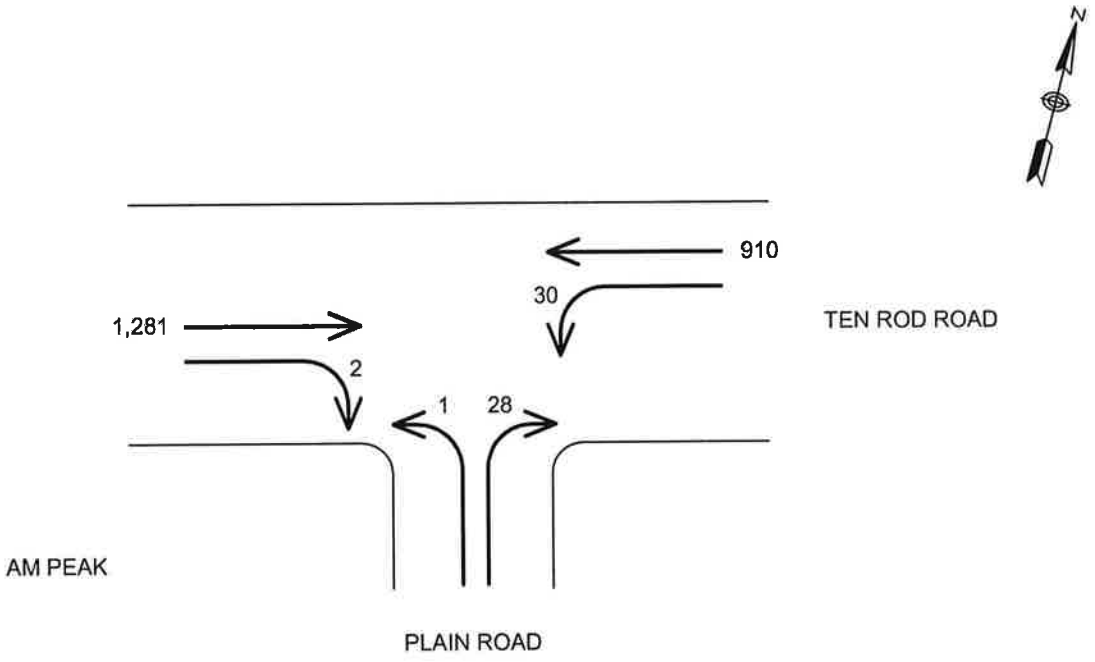
Intersection Summary			
Average Delay	0.2		
Intersection Capacity Utilization	48.9%	ICU Level of Service	A
Analysis Period (min)	15		

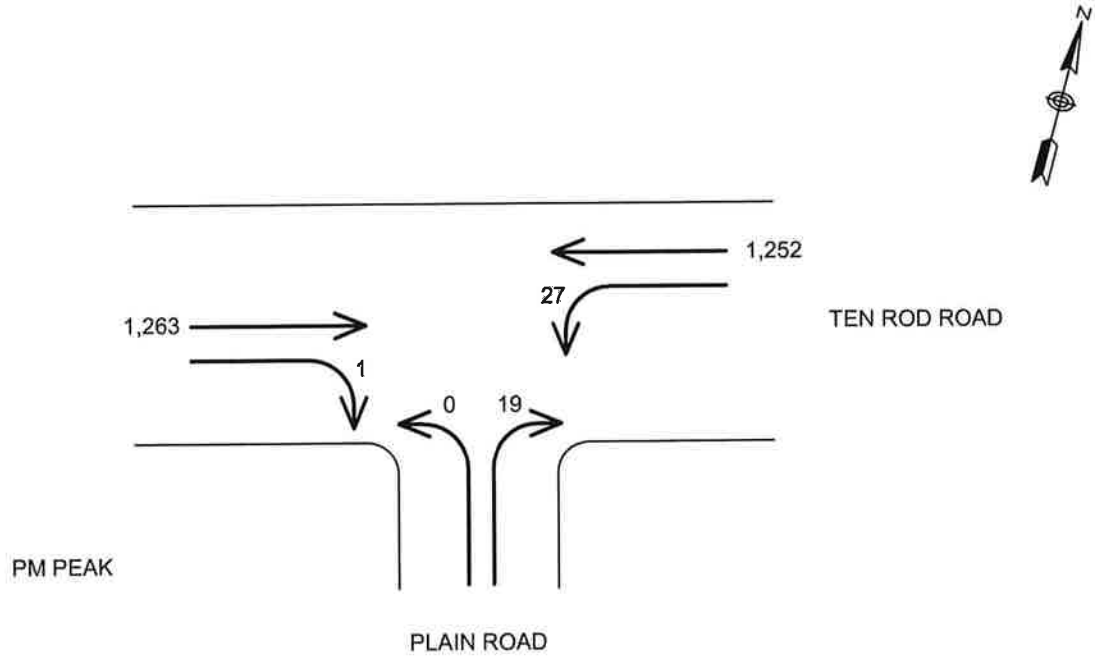
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	1	1281	1275	0	0	4
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.96	0.96	0.50	0.50
Hourly flow rate (vph)	1	1392	1328	0	0	8
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		1048				
pX, platoon unblocked						
vC, conflicting volume	1328				2026	664
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1328				2026	664
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	98
cM capacity (veh/h)	526				51	408

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1
Volume Total	465	928	885	443	8
Volume Left	1	0	0	0	0
Volume Right	0	0	0	0	8
cSH	526	1700	1700	1700	408
Volume to Capacity	0.00	0.55	0.52	0.26	0.02
Queue Length 95th (ft)	0	0	0	0	1
Control Delay (s)	0.1	0.0	0.0	0.0	14.0
Lane LOS	A				B
Approach Delay (s)	0.0		0.0		14.0
Approach LOS					B

Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	46.1%	ICU Level of Service	A
Analysis Period (min)	15		

TRAFFIC VOLUMES
THE PRESERVE AT ROLLING GREENS
TEN ROD ROAD, NORTH KINGSTOWN, RI
NO BUILD CONDITIONS





Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	1281	2	30	910	1	28
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.91	0.91	0.93	0.93	0.75	0.75
Hourly flow rate (vph)	1408	2	32	978	1	37
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	772					
pX, platoon unblocked						
vC, conflicting volume			1410		1963	705
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1410		1963	705
tC, single (s)			4.1		6.8	7.0
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			93		97	90
cM capacity (veh/h)			490		53	374

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	938	471	358	652	39
Volume Left	0	0	32	0	1
Volume Right	0	2	0	0	37
cSH	1700	1700	490	1700	309
Volume to Capacity	0.55	0.28	0.07	0.38	0.12
Queue Length 95th (ft)	0	0	5	0	11
Control Delay (s)	0.0	0.0	2.1	0.0	18.3
Lane LOS			A		C
Approach Delay (s)	0.0		0.7		18.3
Approach LOS					C

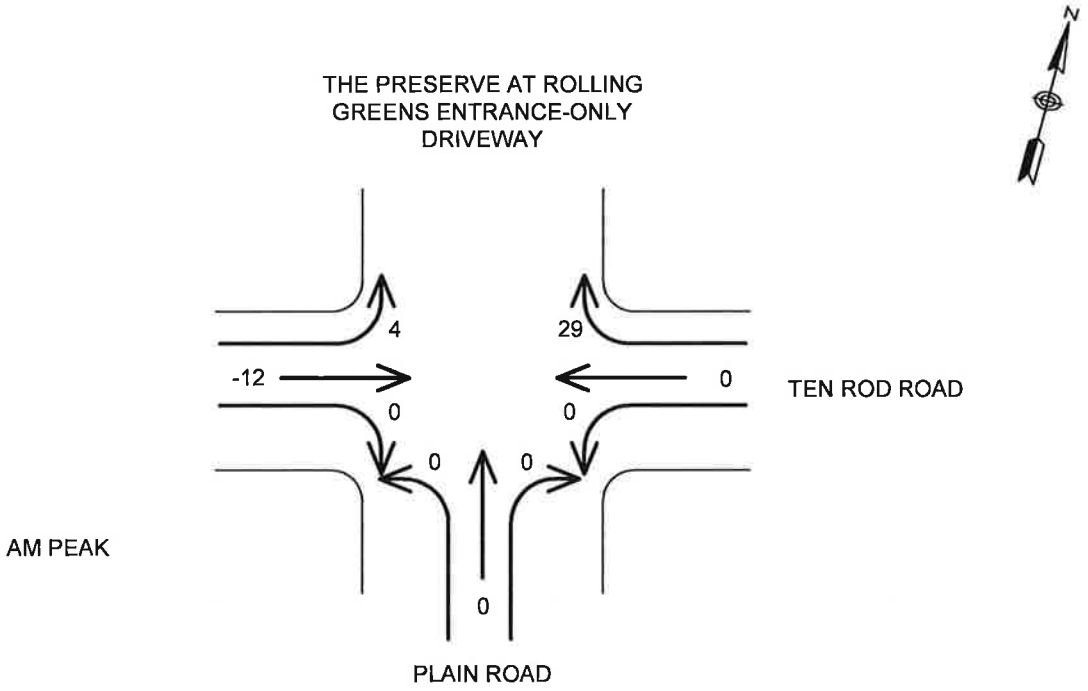
Intersection Summary			
Average Delay	0.6		
Intersection Capacity Utilization	56.9%	ICU Level of Service	B
Analysis Period (min)	15		

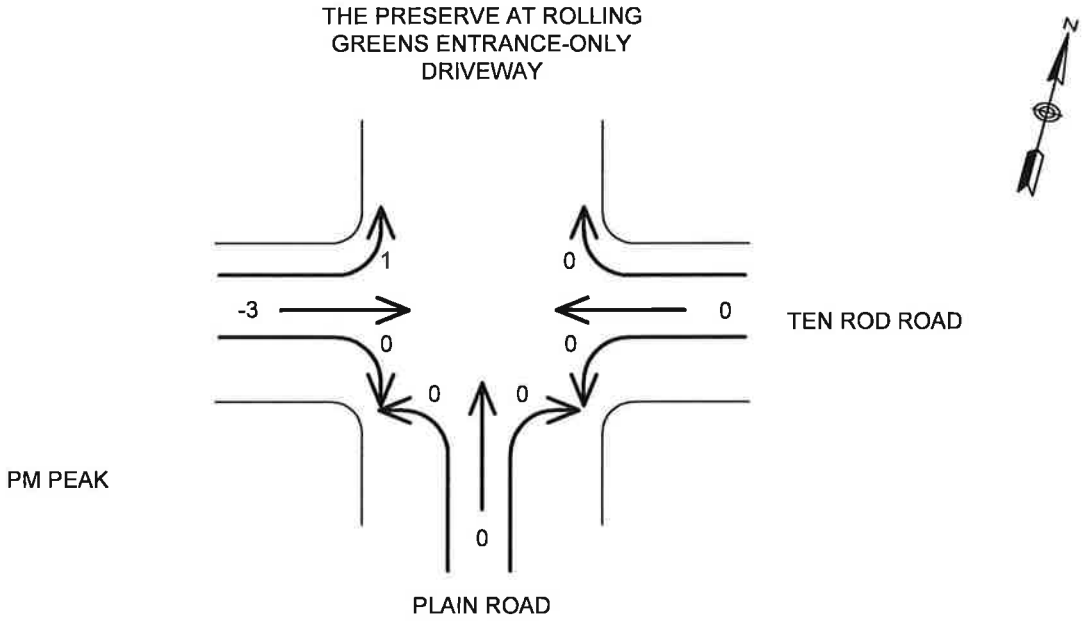
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	1263	1	27	1252	0	19
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.96	0.96	0.90	0.90
Hourly flow rate (vph)	1373	1	28	1304	0	21
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	772					
pX, platoon unblocked						
vC, conflicting volume			1374		2082	687
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1374		2082	687
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			94		100	95
cM capacity (veh/h)			506		44	394

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	915	459	463	869	21
Volume Left	0	0	28	0	0
Volume Right	0	1	0	0	21
cSH	1700	1700	506	1700	394
Volume to Capacity	0.54	0.27	0.06	0.51	0.05
Queue Length 95th (ft)	0	0	4	0	4
Control Delay (s)	0.0	0.0	1.6	0.0	14.7
Lane LOS			A		B
Approach Delay (s)	0.0		0.6		14.7
Approach LOS					B

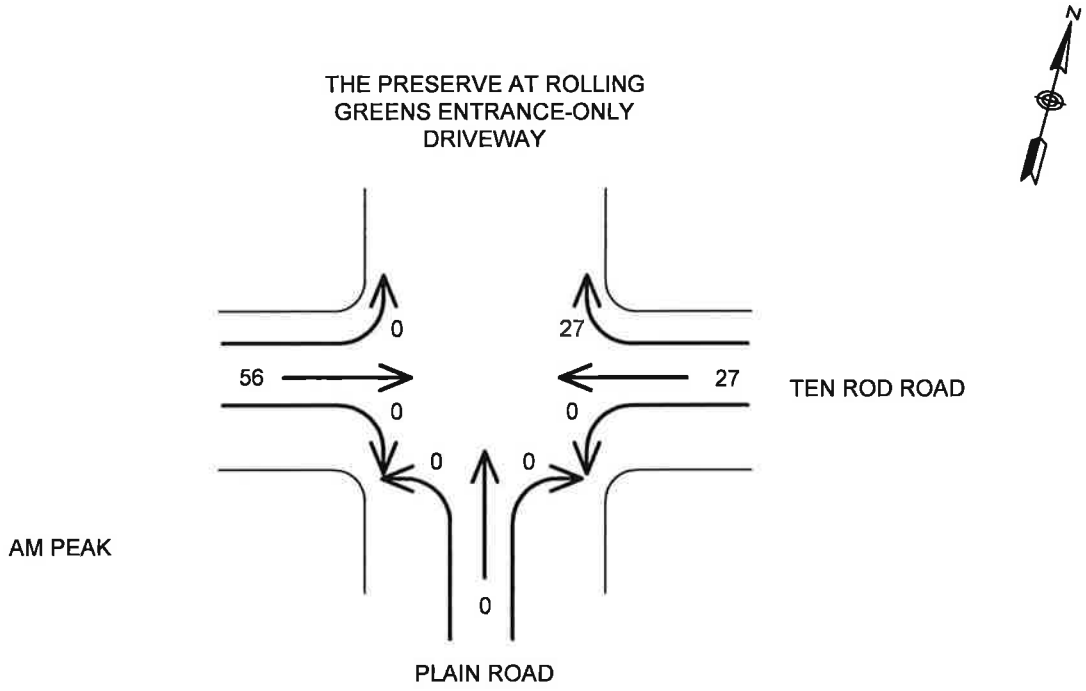
Intersection Summary			
Average Delay	0.4		
Intersection Capacity Utilization	63.9%	ICU Level of Service	B
Analysis Period (min)	15		

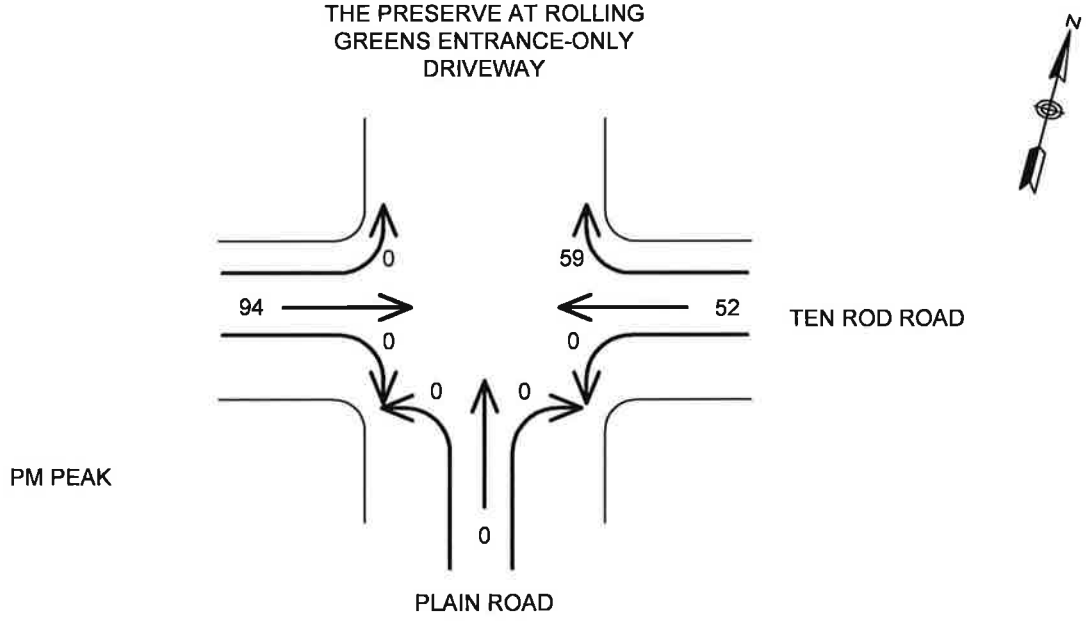
TRAFFIC VOLUMES
THE PRESERVE AT ROLLING GREENS
TEN ROD ROAD, NORTH KINGSTOWN, RI
REDISTRIBUTED TRIPS



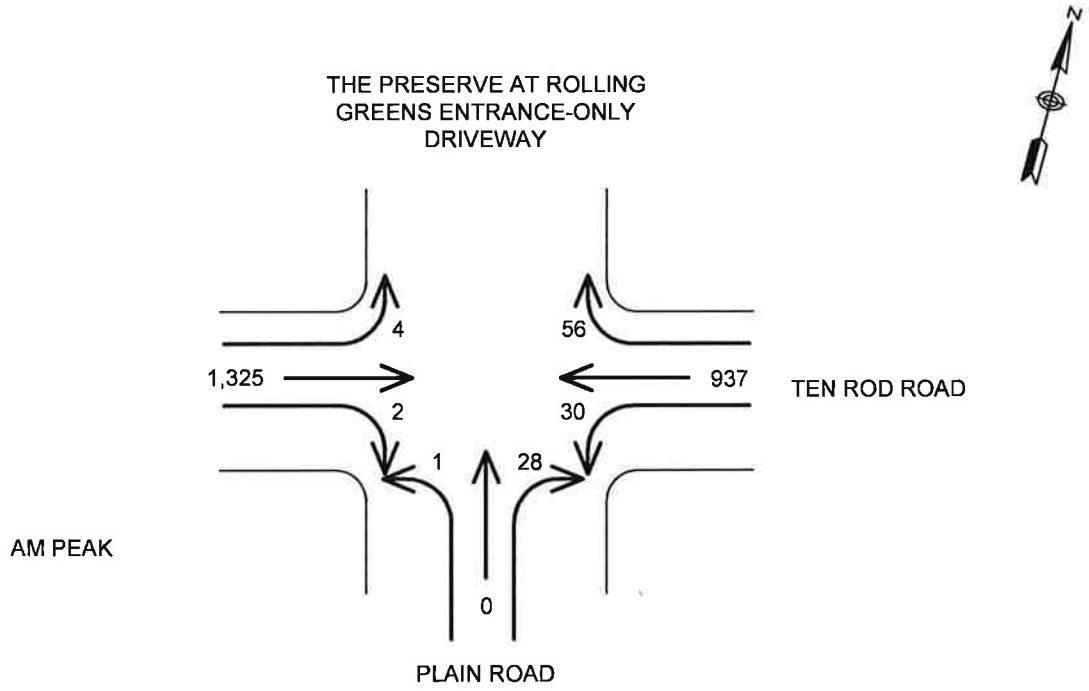


TRAFFIC VOLUMES
THE PRESERVE AT ROLLING GREENS
TEN ROD ROAD, NORTH KINGSTOWN, RI
SITE GENERATED TRIPS

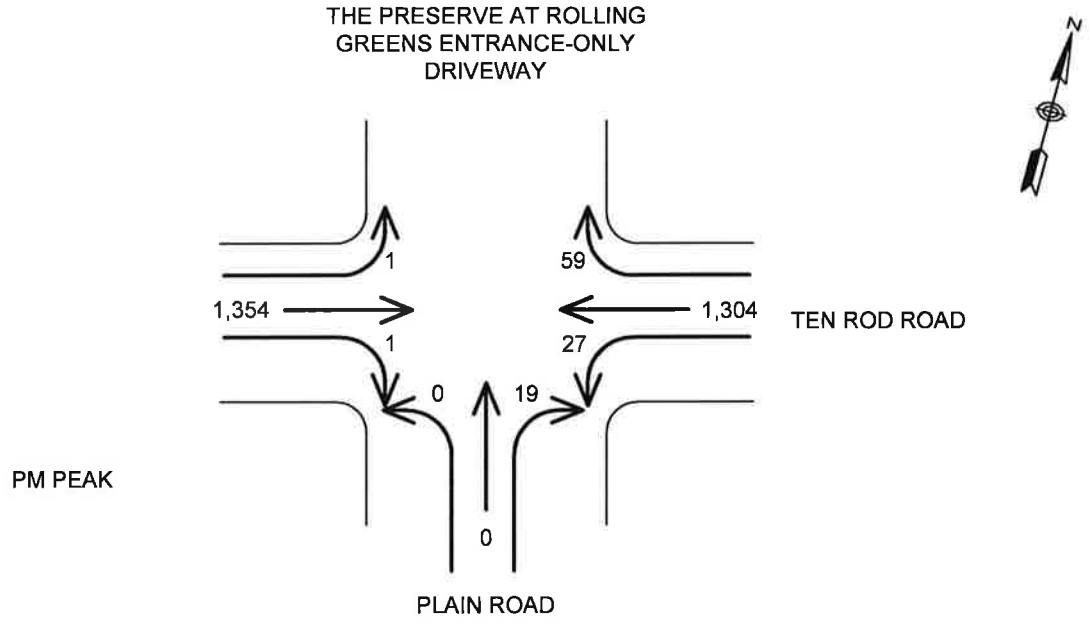




TRAFFIC VOLUMES
THE PRESERVE AT ROLLING GREENS
TEN ROD ROAD, NORTH KINGSTOWN, RI
BUILD CONDITIONS



AM PEAK

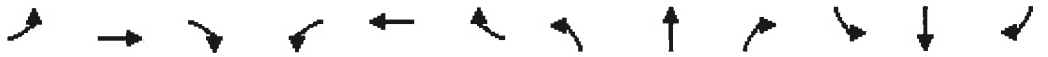


PM PEAK

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	4	1325	2	30	937	56	1	0	28	0	0	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.91	0.91	0.91	0.93	0.93	0.93	0.75	0.75	0.75	0.50	0.50	0.50
Hourly flow rate (vph)	4	1456	2	32	1008	60	1	0	37	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		772										
pX, platoon unblocked												
vC, conflicting volume	1068			1458			2034	2598	729	1876	2569	534
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1068			1458			2034	2598	729	1876	2569	534
tC, single (s)	4.1			4.1			7.5	6.5	7.0	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			93			96	100	90	100	100	100
cM capacity (veh/h)	660			470			32	23	361	38	24	496

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	732	730	536	564	39
Volume Left	4	0	32	0	1
Volume Right	0	2	0	60	37
cSH	660	1700	470	1700	267
Volume to Capacity	0.01	0.43	0.07	0.33	0.14
Queue Length 95th (ft)	1	0	6	0	12
Control Delay (s)	0.2	0.0	2.0	0.0	20.8
Lane LOS	A		A		C
Approach Delay (s)	0.1		1.0		20.8
Approach LOS					C

Intersection Summary			
Average Delay	0.8		
Intersection Capacity Utilization	59.5%	ICU Level of Service	B
Analysis Period (min)	15		

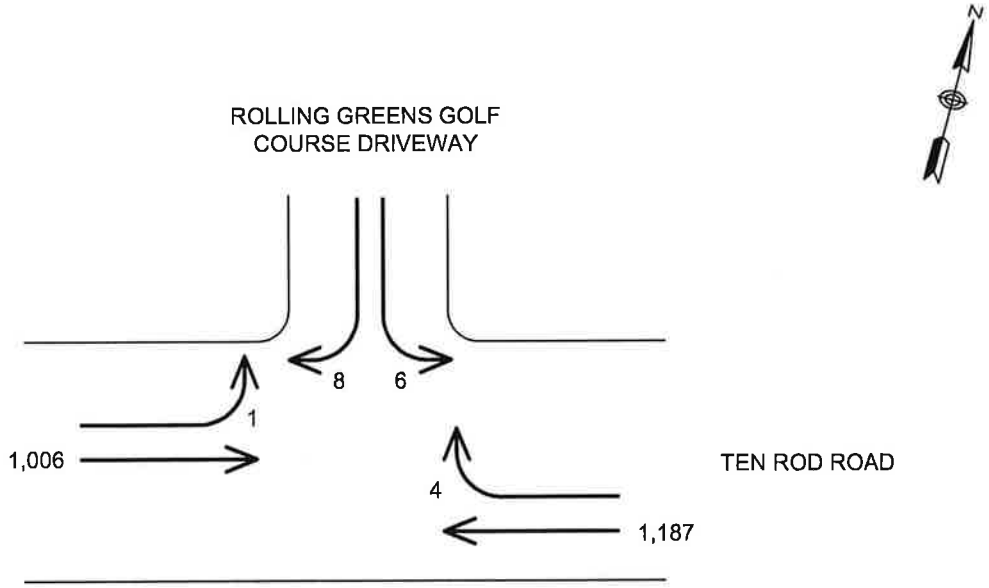


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	1	1354	1	27	1304	59	0	0	19	0	0	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.96	0.96	0.92	0.90	0.90	0.90	0.50	0.50	0.50
Hourly flow rate (vph)	1	1472	1	28	1358	64	0	0	21	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		772										
pX, platoon unblocked												
vC, conflicting volume	1422			1473			2210	2953	736	2206	2922	711
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1422			1473			2210	2953	736	2206	2922	711
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			94			100	100	94	100	100	100
cM capacity (veh/h)	485			464			24	14	366	23	15	380

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	737	737	707	743	21
Volume Left	1	0	28	0	0
Volume Right	0	1	0	64	21
cSH	485	1700	464	1700	366
Volume to Capacity	0.00	0.43	0.06	0.44	0.06
Queue Length 95th (ft)	0	0	5	0	5
Control Delay (s)	0.1	0.0	1.8	0.0	15.4
Lane LOS	A		A		C
Approach Delay (s)	0.0		0.9		15.4
Approach LOS					C

Intersection Summary			
Average Delay	0.6		
Intersection Capacity Utilization	67.3%	ICU Level of Service	C
Analysis Period (min)	15		

TRAFFIC VOLUMES
THE PRESERVE AT ROLLING GREENS
TEN ROD ROAD, NORTH KINGSTOWN, RI
NO BUILD CONDITIONS



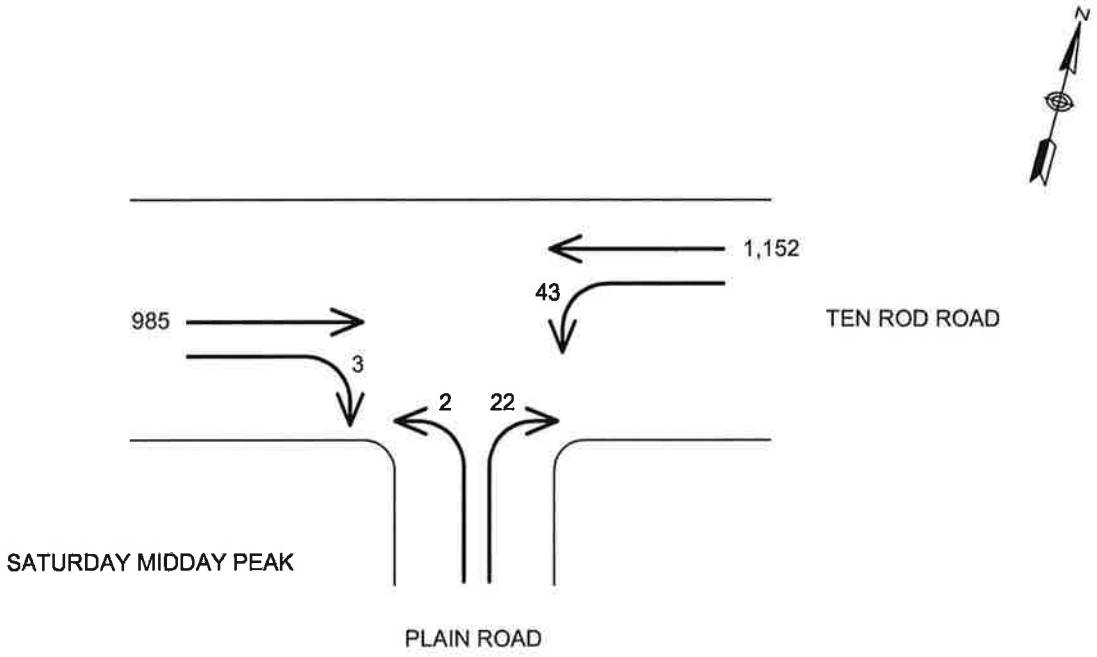
SATURDAY MIDDAY PEAK

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	1	1006	1187	4	6	8
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.90	0.90	0.91	0.91	0.70	0.70
Hourly flow rate (vph)	1	1118	1304	4	9	11
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		1048				
pX, platoon unblocked						
vC, conflicting volume	1309				1868	654
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1309				1868	654
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				87	97
cM capacity (veh/h)	535				65	414

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1
Volume Total	374	745	870	439	20
Volume Left	1	0	0	0	9
Volume Right	0	0	0	4	11
cSH	535	1700	1700	1700	126
Volume to Capacity	0.00	0.44	0.51	0.26	0.16
Queue Length 95th (ft)	0	0	0	0	14
Control Delay (s)	0.1	0.0	0.0	0.0	38.9
Lane LOS	A				E
Approach Delay (s)	0.0		0.0		38.9
Approach LOS					E

Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	42.9%	ICU Level of Service	A
Analysis Period (min)	15		

TRAFFIC VOLUMES
THE PRESERVE AT ROLLING GREENS
TEN ROD ROAD, NORTH KINGSTOWN, RI
NO BUILD CONDITIONS



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	985	3	43	1152	2	22
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.91	0.91	0.64	0.64
Hourly flow rate (vph)	1094	3	47	1266	3	34
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	772					
pX, platoon unblocked						
vC, conflicting volume			1098		1824	549
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1098		1824	549
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			93		95	93
cM capacity (veh/h)			643		65	485

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	730	368	469	844	38
Volume Left	0	0	47	0	3
Volume Right	0	3	0	0	34
cSH	1700	1700	643	1700	315
Volume to Capacity	0.43	0.22	0.07	0.50	0.12
Queue Length 95th (ft)	0	0	6	0	10
Control Delay (s)	0.0	0.0	2.1	0.0	18.0
Lane LOS			A		C
Approach Delay (s)	0.0		0.7		18.0
Approach LOS					C

Intersection Summary			
Average Delay	0.7		
Intersection Capacity Utilization	73.2%	ICU Level of Service	D
Analysis Period (min)	15		

TRAFFIC VOLUMES
THE PRESERVE AT ROLLING GREENS
TEN ROD ROAD, NORTH KINGSTOWN, RI
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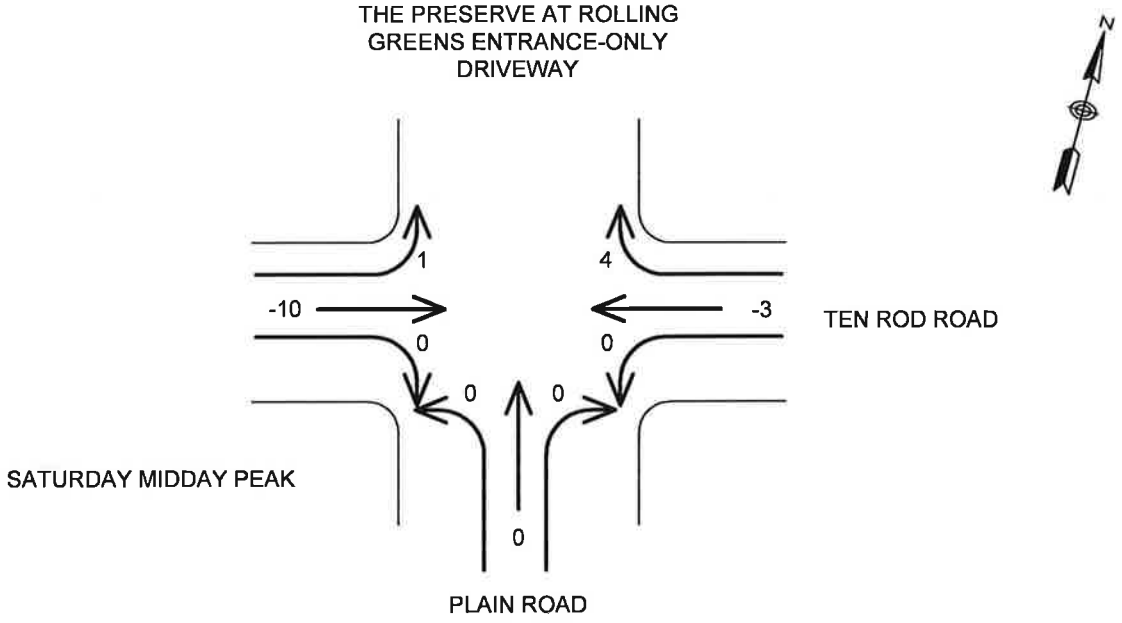
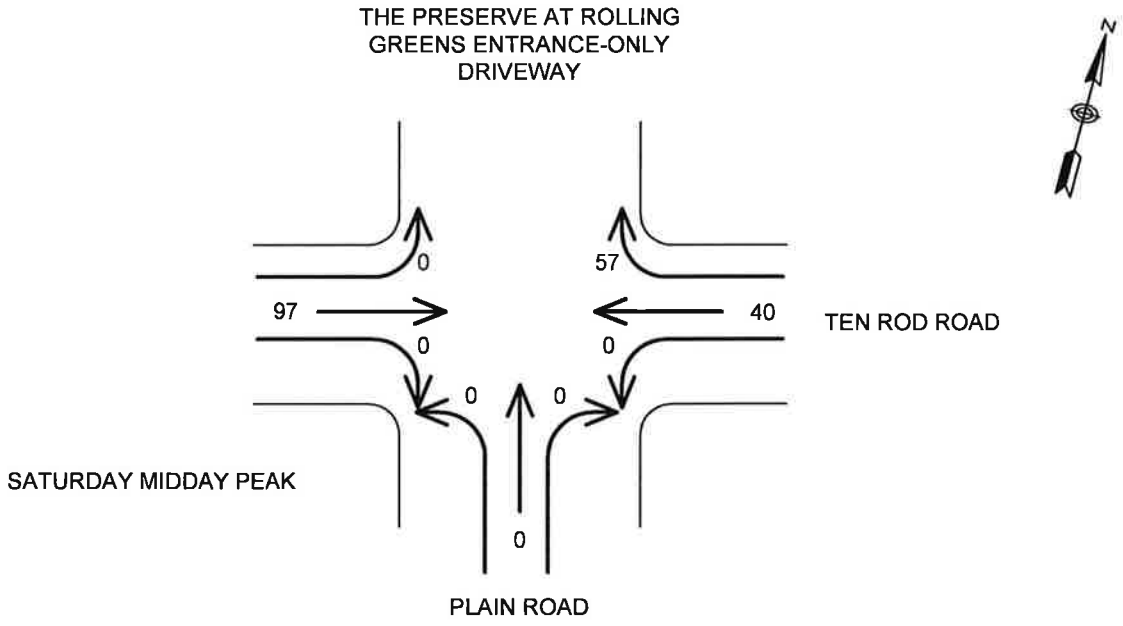
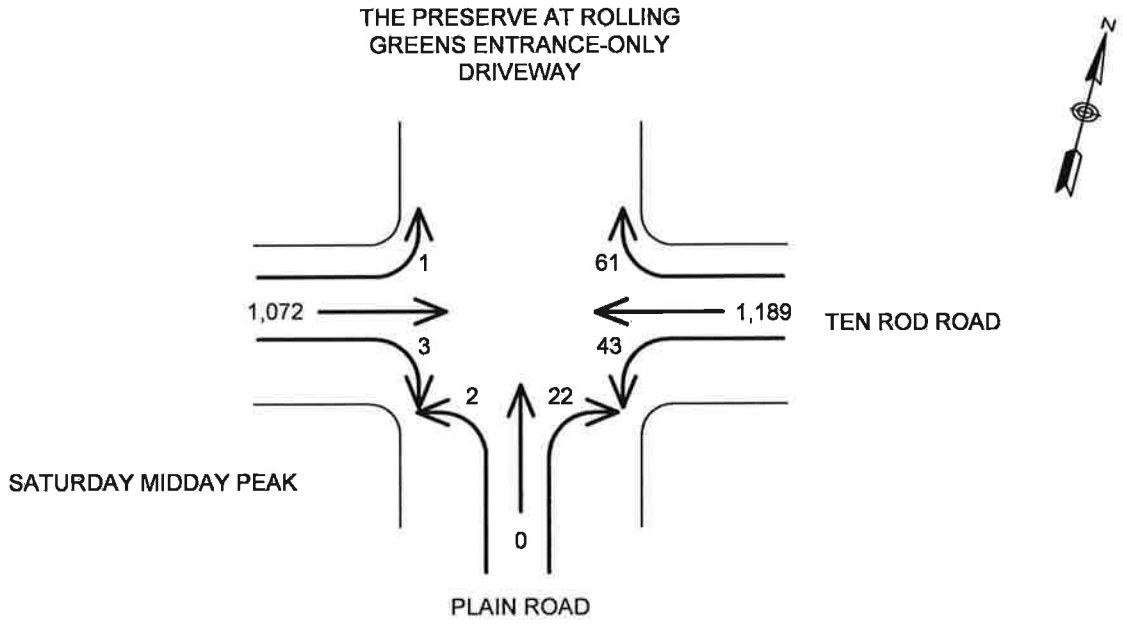
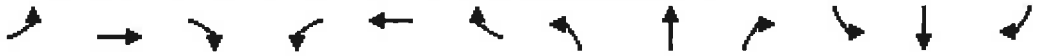


TRAFFIC VOLUMES
THE PRESERVE AT ROLLING GREENS
TEN ROD ROAD, NORTH KINGSTOWN, RI
SITE GENERATED TRIPS



TRAFFIC VOLUMES
THE PRESERVE AT ROLLING GREENS
TEN ROD ROAD, NORTH KINGSTOWN, RI
BUILD CONDITIONS



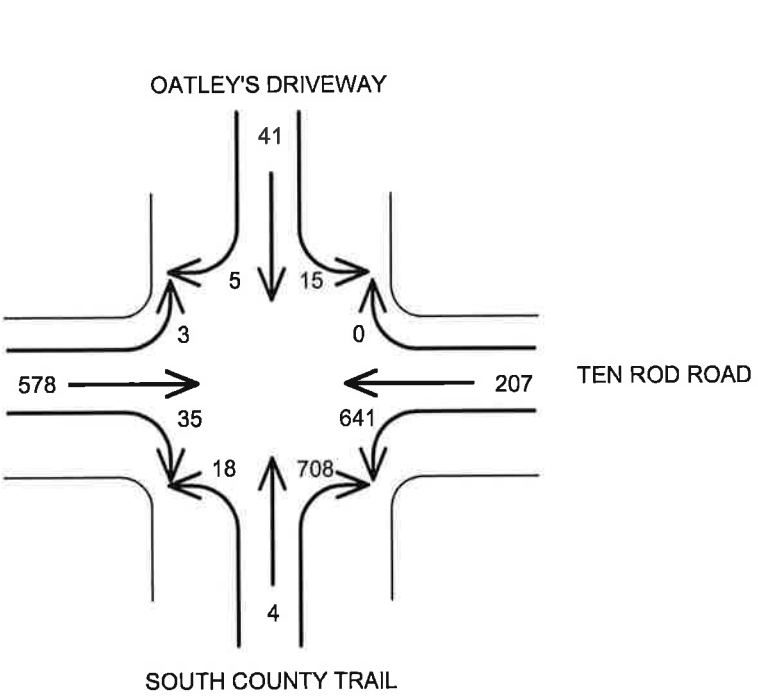


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	1	1072	3	43	1189	61	2	0	22	0	0	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.91	0.91	0.91	0.64	0.64	0.64	0.70	0.70	0.70
Hourly flow rate (vph)	1	1191	3	47	1307	67	3	0	34	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		772										
pX, platoon unblocked												
vC, conflicting volume	1374			1194			1943	2663	597	2067	2631	687
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1374			1194			1943	2663	597	2067	2631	687
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			92			92	100	92	100	100	100
cM capacity (veh/h)	506			592			37	20	451	28	22	394

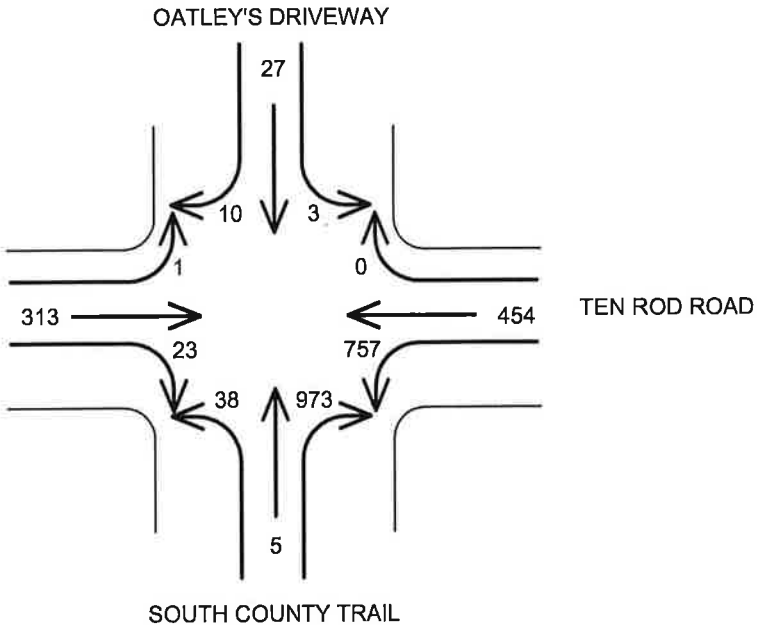
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	597	599	701	720	38
Volume Left	1	0	47	0	3
Volume Right	0	3	0	67	34
cSH	506	1700	592	1700	235
Volume to Capacity	0.00	0.35	0.08	0.42	0.16
Queue Length 95th (ft)	0	0	6	0	14
Control Delay (s)	0.1	0.0	2.2	0.0	23.2
Lane LOS	A		A		C
Approach Delay (s)	0.0		1.1		23.2
Approach LOS					C

Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	76.3%	ICU Level of Service	D
Analysis Period (min)	15		

TRAFFIC VOLUMES
THE PRESERVE AT ROLLING GREENS
TEN ROD ROAD, NORTH KINGSTOWN, RI
NO BUILD CONDITIONS



AM PEAK



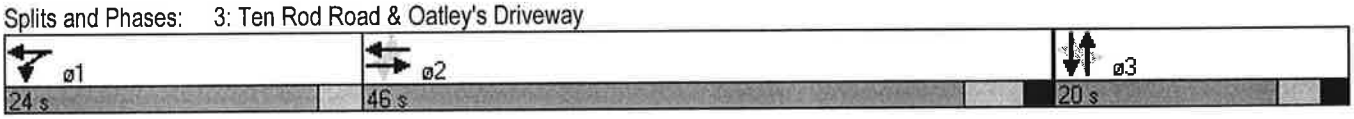
PM PEAK

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↰	↑			↕			↕	
Volume (vph)	3	578	35	641	207	0	18	4	0	15	41	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	16	12	12	12	12	12	12	12	12	14	12
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.992									0.988	
Flt Protected				0.950				0.960			0.988	
Satd. Flow (prot)	0	2086	0	1671	1810	0	0	1737	0	0	1940	0
Flt Permitted		0.999		0.263				0.834			0.908	
Satd. Flow (perm)	0	2084	0	463	1810	0	0	1509	0	0	1782	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4									5	
Link Speed (mph)		45			55			40			25	
Link Distance (ft)		475			772			722			274	
Travel Time (s)		7.2			9.6			12.3			7.5	
Peak Hour Factor	0.91	0.91	0.91	0.89	0.89	0.89	0.92	0.92	0.92	0.76	0.76	0.76
Heavy Vehicles (%)	0%	2%	9%	8%	5%	0%	6%	0%	0%	0%	3%	0%
Adj. Flow (vph)	3	635	38	720	233	0	20	4	0	20	54	7
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	676	0	720	233	0	0	24	0	0	81	0
Turn Type	Perm			pm+pt			Perm			Perm		
Protected Phases		2		1	1 2			3			3	
Permitted Phases	2			1 2			3			3		
Detector Phase	2	2		1	1 2		3	3		3	3	
Switch Phase												
Minimum Initial (s)	10.0	10.0		5.0			5.0	5.0		5.0	5.0	
Minimum Split (s)	16.0	16.0		9.0			10.0	10.0		10.0	10.0	
Total Split (s)	46.0	46.0	0.0	24.0	70.0	0.0	20.0	20.0	0.0	20.0	20.0	0.0
Total Split (%)	51.1%	51.1%	0.0%	26.7%	77.8%	0.0%	22.2%	22.2%	0.0%	22.2%	22.2%	0.0%
Maximum Green (s)	40.0	40.0		21.0			15.0	15.0		15.0	15.0	
Yellow Time (s)	4.0	4.0		3.0			3.0	3.0		3.0	3.0	
All-Red Time (s)	2.0	2.0		0.0			2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	4.0	3.0	3.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0			2.4	2.4		2.4	2.4	
Recall Mode	Min	Min		None			None	None		None	None	
Act Effct Green (s)		27.7		53.0	57.1			8.1			8.1	
Actuated g/C Ratio		0.40		0.76	0.82			0.12			0.12	
v/c Ratio		0.81		0.98	0.16			0.14			0.38	
Control Delay		27.5		45.8	2.5			33.5			36.0	
Queue Delay		0.0		0.0	0.0			0.0			0.0	
Total Delay		27.5		45.8	2.5			33.5			36.0	
LOS		C		D	A			C			D	
Approach Delay		27.5			35.2			33.5			36.0	
Approach LOS		C			D			C			D	

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 69.6
Natural Cycle: 80
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.98
Intersection Signal Delay: 32.2 Intersection LOS: C
Intersection Capacity Utilization 84.9% ICU Level of Service E
Analysis Period (min) 15

Splits and Phases: 3: Ten Rod Road & Oatley's Driveway



AM Peak - No Build

Delay

Intersection	Approach	Movement	Run 1 Delay(s)	Run 1 Volume	Run 2 Delay(s)	Run 2 Volume	Run 3 Delay(s)	Run 3 Volume	LOS	Average(s)	Standard Deviation(s)	Min(s)	Max(s)
Intersection of Ten Rod Road and South County Trail	NB	Left 2	3.5	19	3.9	19	4.8	14		4	5.8	0.2	33.5
		Through	2.6	3	5.1	4	7.3	1		4.4	5.7	0.2	16.8
		Right 2	0.1	706	0.1	707	0.1	713		0.1	0.3	0	2.7
		Total	0.2	728	0.2	730	0.2	728		0.2	1.2	0	33.5
	EB	Left 2	15.3	4	48.2	3	43	2		32.4	35.4	2.5	111.8
		Through	31.6	570	34.9	574	27.9	576		31.5	21.8	0.2	119
		Right 2	33.6	32	33.6	33	23.8	30		30.5	24.3	0.3	109.2
		Total	31.6	606	34.9	610	27.7	608		31.4	22	0.2	119
	SB	Left 2	0	12	0	20	0	14		0	1.7	0	9.6
		Through	0	44	0	39	0	43		0	1	0	3.6
		Right 2	0	5	0	2	0	4		0	1	0	1.4
		Total	0	61	0	61	0	61		0	1.2	0	9.6
	WB	Left 2	1.7	642	1.8	633	1.7	638		1.7	1.5	0.2	23.3
		Through	2	198	2	204	2	202		2	1.6	0.2	11.8
		Total	1.8	840	1.8	837	1.8	840		1.8	1.5	0.2	23.3
Total			9.3	2235	10.3	2238	8.3	2237	A	9.3	17.8	0	119
NETWORK TOTAL			9.3	2235	10.3	2238	8.3	2237		9.3	17.8	0	119

Queue Lengths

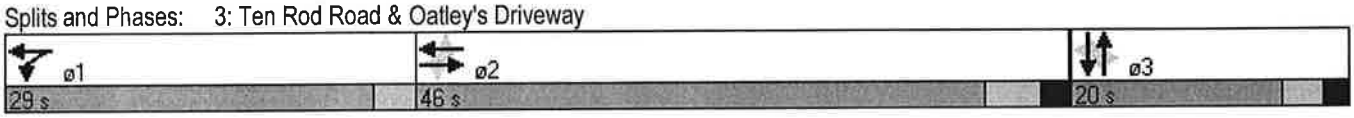
Intersection	Approach	Movement	95% Queues per Run 1	2	3	Max	95%	Median	Average	Standard Deviation	95% Queue > Storage
Intersection of Ten Rod Road and South County Trail	NB	U-turn Marke	0	0	0	0	0	0	0	0	0
		Left 2	0	0	0	0	0	0	0	0	0
		Through	0	0	0	0	0	0	0	0	0
		Right 2	0	0	0	0	0	0	0	0	0
	EB	U-turn Marke	129.2	119	47.2	158.3	118.5	0	12.2	35.2	0
		Left 2	129.2	119	47.2	158.3	118.5	0	12.2	35.2	0
		Through	129.2	119	47.2	158.3	118.5	0	12.2	35.2	0
		Right 2	129.2	119	47.2	158.3	118.5	0	12.2	35.2	0
	SB	U-turn Marke	0	0	0	0	0	0	0	0	0
		Left 2	0	0	0	0	0	0	0	0	0
		Through	0	0	0	0	0	0	0	0	0
		Right 2	0	0	0	0	0	0	0	0	0
	WB	U-turn Marke	0	0	0	0	0	0	0	0	0
		Left 2	0	0	0	0	0	0	0	0	0
		Through	0	0	0	0	0	0	0	0	0
		Right 2	0	0	0	0	0	0	0	0	0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	1	313	23	757	454	0	38	5	0	3	27	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	16	12	12	12	12	12	12	12	12	14	12
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.991									0.966	
Flt Protected				0.950				0.958			0.996	
Satd. Flow (prot)	0	2090	0	1770	1881	0	0	1689	0	0	1849	0
Flt Permitted		0.999		0.355				0.716			0.968	
Satd. Flow (perm)	0	2088	0	661	1881	0	0	1263	0	0	1797	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5									13	
Link Speed (mph)		45			55			40			25	
Link Distance (ft)		475			772			722			274	
Travel Time (s)		7.2			9.6			12.3			7.5	
Peak Hour Factor	0.79	0.79	0.79	0.93	0.93	0.93	0.90	0.90	0.90	0.77	0.77	0.77
Heavy Vehicles (%)	100%	2%	0%	2%	1%	0%	6%	20%	0%	0%	4%	11%
Adj. Flow (vph)	1	396	29	814	488	0	42	6	0	4	35	13
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	426	0	814	488	0	0	48	0	0	52	0
Turn Type	Perm			pm+pt			Perm			Perm		
Protected Phases		2		1	1 2			3			3	
Permitted Phases	2			1 2			3			3		
Detector Phase	2	2		1	1 2		3	3		3	3	
Switch Phase												
Minimum Initial (s)	10.0	10.0		5.0			5.0	5.0		5.0	5.0	
Minimum Split (s)	16.0	16.0		9.0			10.0	10.0		10.0	10.0	
Total Split (s)	46.0	46.0	0.0	29.0	75.0	0.0	20.0	20.0	0.0	20.0	20.0	0.0
Total Split (%)	48.4%	48.4%	0.0%	30.5%	78.9%	0.0%	21.1%	21.1%	0.0%	21.1%	21.1%	0.0%
Maximum Green (s)	40.0	40.0		26.0			15.0	15.0		15.0	15.0	
Yellow Time (s)	4.0	4.0		3.0			3.0	3.0		3.0	3.0	
All-Red Time (s)	2.0	2.0		0.0			2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	4.0	3.0	3.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0			2.4	2.4		2.4	2.4	
Recall Mode	Min	Min		None			None	None		None	None	
Act Effct Green (s)		19.7		48.3	52.5			7.7			7.7	
Actuated g/C Ratio		0.31		0.75	0.82			0.12			0.12	
v/c Ratio		0.66		0.87	0.32			0.32			0.23	
Control Delay		25.8		22.8	3.1			35.7			26.4	
Queue Delay		0.0		0.0	0.0			0.0			0.0	
Total Delay		25.8		22.8	3.1			35.7			26.4	
LOS		C		C	A			D			C	
Approach Delay		25.8			15.4			35.7			26.4	
Approach LOS		C			B			D			C	

Intersection Summary

Area Type: Other
Cycle Length: 95
Actuated Cycle Length: 64.4
Natural Cycle: 60
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.87
Intersection Signal Delay: 18.7 Intersection LOS: B
Intersection Capacity Utilization 81.4% ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 3: Ten Rod Road & Oatley's Driveway



PM Peak - No Build

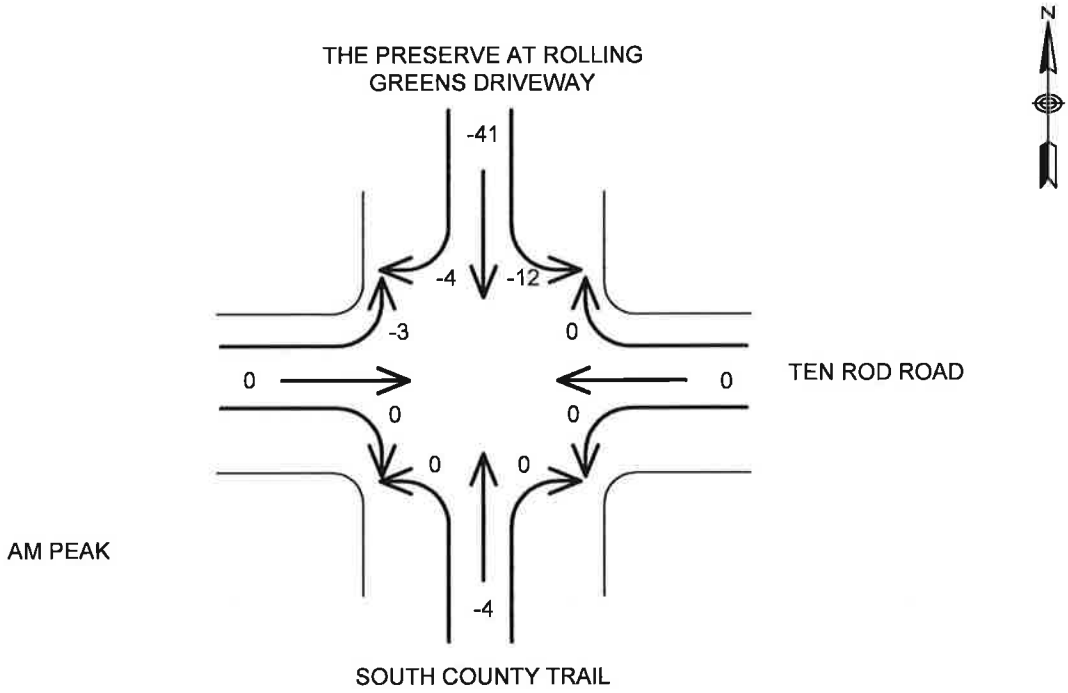
Delay

Intersection	Approach	Movement	Run 1 Delay(s)	Run 1 Volume	Run 2 Delay(s)	Run 2 Volume	Run 3 Delay(s)	Run 3 Volume	LOS	Average(s)	Standard Deviation(s)	Min(s)	Max(s)
Intersection of Ten Rod Road and South County Trail	NB	Left 2	2.2	39	2.2	37	2.5	31		2.3	2.7	0.1	12.6
		Through	2.1	8	3.6	11	0.9	2		2.8	3.6	0.3	12.5
		Right 2	0.2	966	0.2	967	0.1	979		0.2	0.4	0	3.9
		Total	0.3	1013	0.3	1015	0.2	1012		0.3	0.8	0	12.6
	EB	Left 2	5.5	1	12.6	2	0	0		10.3	8.6	5.1	20.2
		Through	12.1	316	13.8	310	10.6	313		12.2	11.8	0.2	68.1
		Right 2	8.3	18	11.4	24	6.3	21		8.8	11.6	0.3	56.6
		Total	11.9	335	13.6	336	10.3	334		11.9	11.8	0.2	68.1
	SB	Left 2	0	1	1.2	6	0	3		0.6	3.3	0	9.8
		Through	0	31	0	29	0	28		0	1.1	0	3.1
		Right 2	0	8	0	5	0	9		0	0.8	0	1.4
		Total	0	40	0.2	40	0	40		0	1.4	0	9.8
	WB	Left 2	2.1	757	2	735	2.1	761		2.1	1.5	0.2	13.1
		Through	2.6	439	2.4	451	2.4	435		2.5	1.9	0.2	15.9
		Total	2.3	1196	2.2	1186	2.2	1196		2.2	1.7	0.2	15.9
Total			2.7	2584	2.9	2577	2.4	2582	A	2.7	5.8	0	68.1
NETWORK TOTAL			2.7	2584	2.9	2577	2.4	2582		2.7	5.8	0	68.1

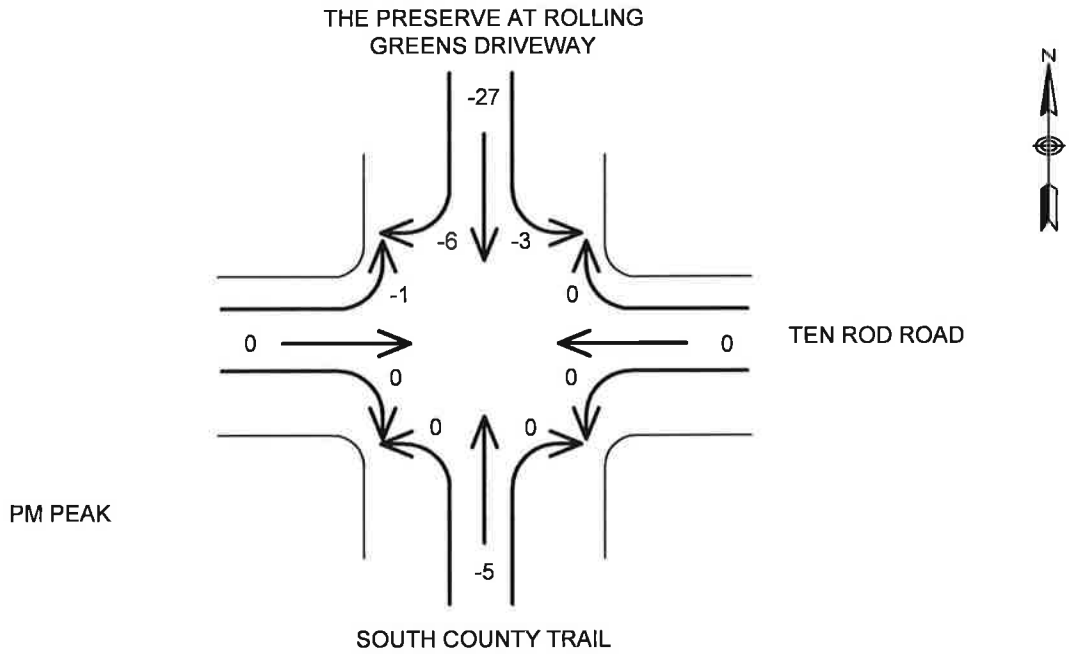
Queue Lengths

Intersection	Approach	Movement	95% Queues per Run 1	95% Queues per Run 2	95% Queues per Run 3	Max	95%	Median	Average	Standard Deviation	95% Queue > Storage
Intersection of Ten Rod Road and South County Trail	NB	U-turn Marke	0	0	0	0	0	0	0	0	0
		Left 2	0	0	0	0	0	0	0	0	0
		Through	0	0	0	0	0	0	0	0	0
		Right 2	0	0	0	0	0	0	0	0	0
	EB	U-turn Marke	0	0	0	0	0	0	0	0	0
		Left 2	0	0	0	0	0	0	0	0	0
		Through	0	0	0	0	0	0	0	0	0
		Right 2	0	0	0	0	0	0	0	0	0
	SB	U-turn Marke	0	0	0	0	0	0	0	0	0
		Left 2	0	0	0	0	0	0	0	0	0
		Through	0	0	0	0	0	0	0	0	0
		Right 2	0	0	0	0	0	0	0	0	0
	WB	U-turn Marke	0	0	0	53	0	0	0	0.5	0
		Left 2	0	0	0	53	0	0	0	0.5	0
		Through	0	0	0	53	0	0	0	0.5	0
		Right 2	0	0	0	53	0	0	0	0.5	0

TRAFFIC VOLUMES
THE PRESERVE AT ROLLING GREENS
TEN ROD ROAD, NORTH KINGSTOWN, RI
REDISTRIBUTED TRIPS

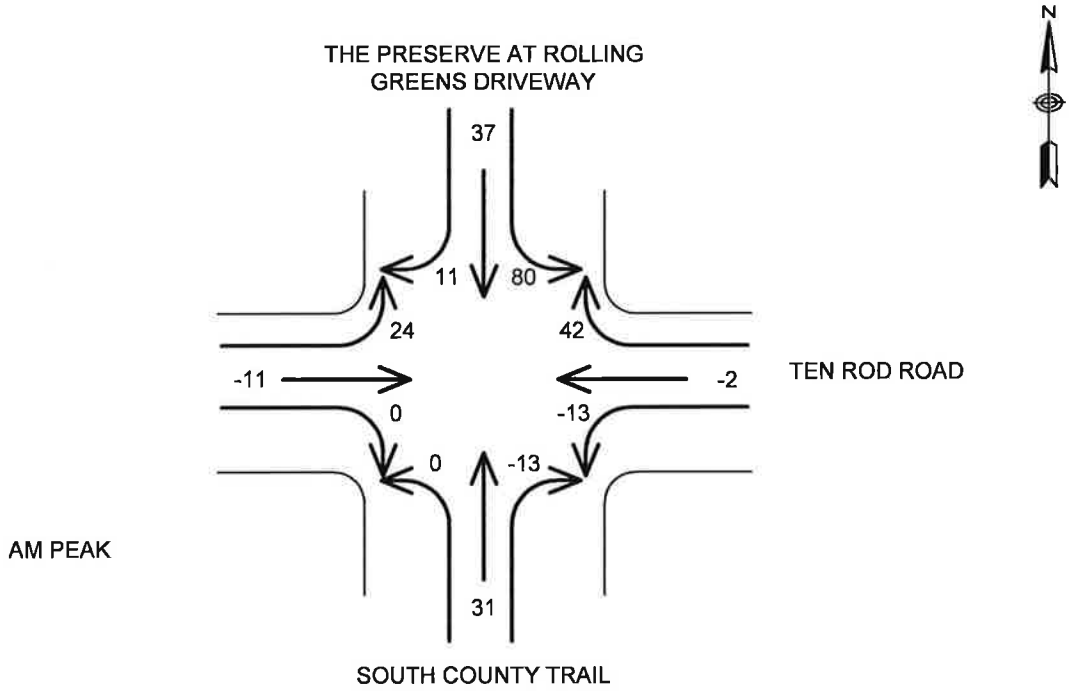


AM PEAK



PM PEAK

TRAFFIC VOLUMES
THE PRESERVE AT ROLLING GREENS
TEN ROD ROAD, NORTH KINGSTOWN, RI
SITE GENERATED TRIPS



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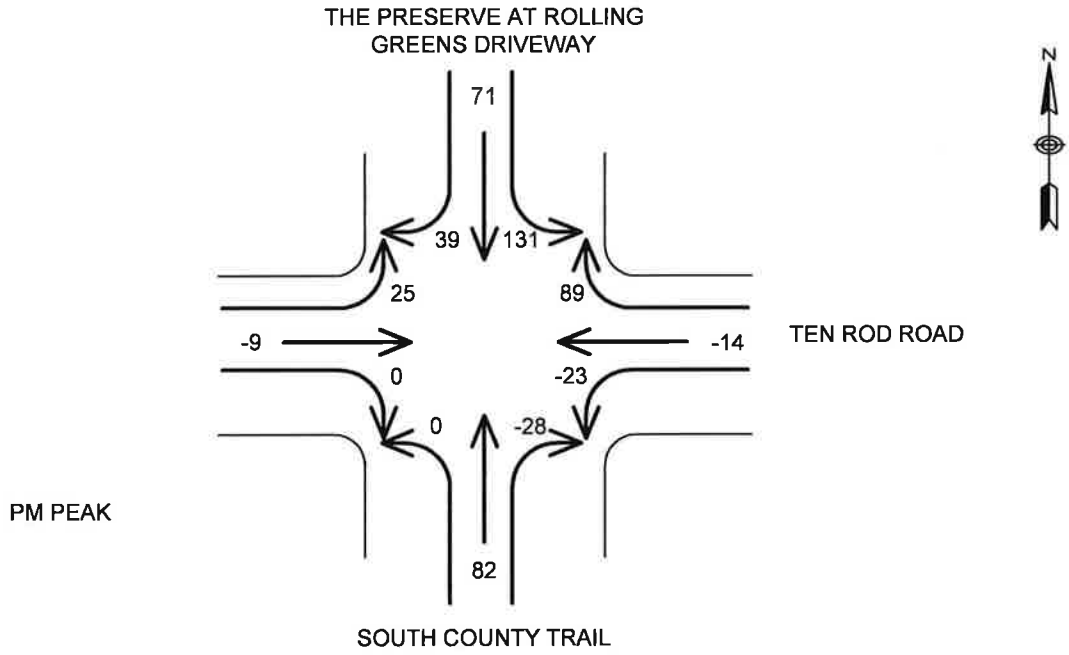
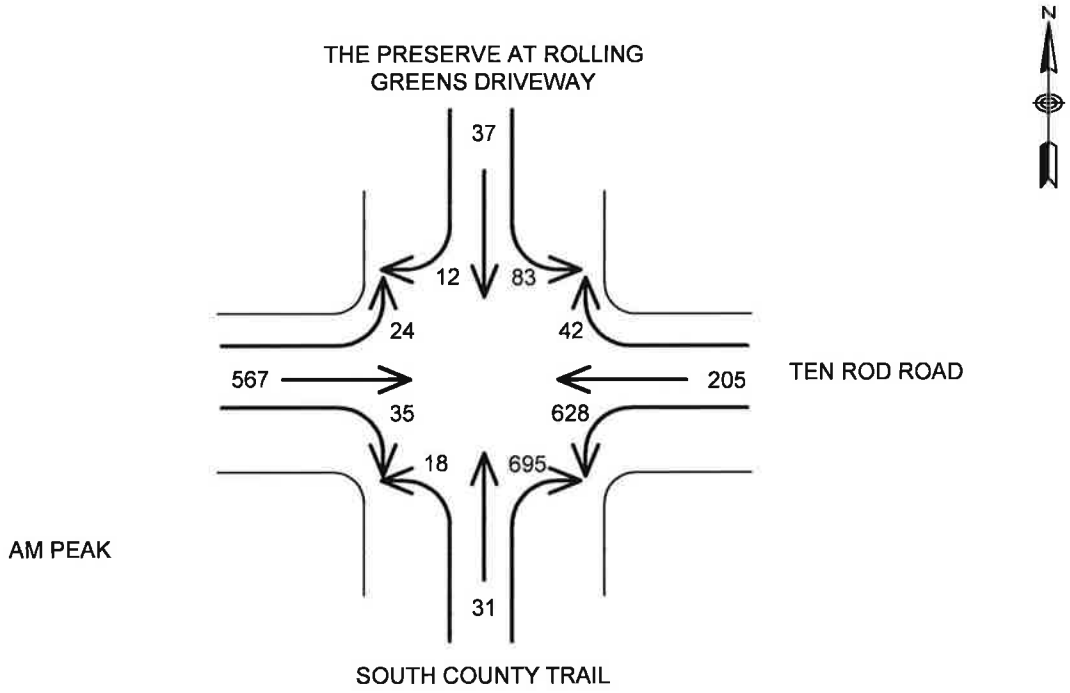


PM PEAK

TRAFFIC VOLUMES
THE PRESERVE AT ROLLING GREENS
TEN ROD ROAD, NORTH KINGSTOWN, RI
BUILD CONDITIONS



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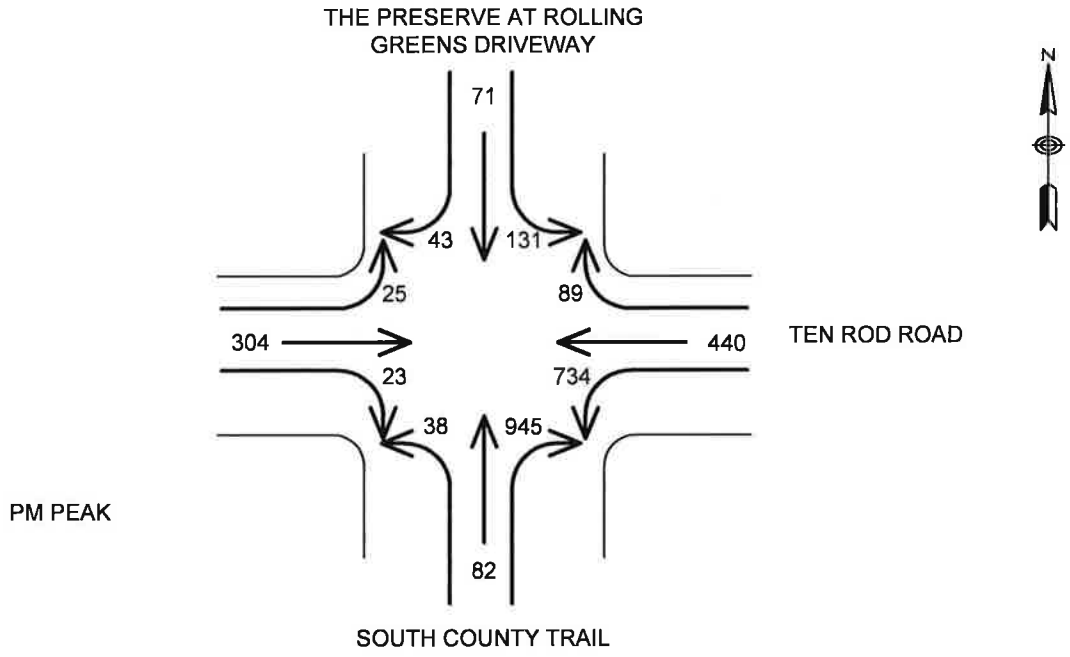

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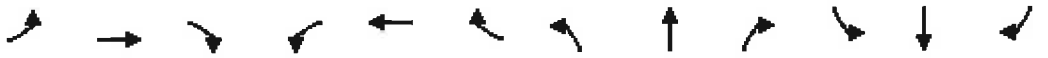


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	24	567	35	628	205	42	18	31	0	83	37	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	16	12	12	12	12	12	12	12	12	14	12
Storage Length (ft)	75		0	0		0	0		0	100		0
Storage Lanes	1		0	1		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.991			0.975						0.963	
Flt Protected	0.950			0.950				0.982		0.950		
Satd. Flow (prot)	1805	2084	0	1671	1779	0	0	1825	0	1805	1909	0
Flt Permitted	0.589			0.142				0.851		0.722		
Satd. Flow (perm)	1119	2084	0	250	1779	0	0	1582	0	1372	1909	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4			32						16	
Link Speed (mph)		45			55			40			25	
Link Distance (ft)		475			772			722			274	
Travel Time (s)		7.2			9.6			12.3			7.5	
Peak Hour Factor	0.91	0.91	0.91	0.89	0.89	0.89	0.92	0.92	0.92	0.76	0.76	0.76
Heavy Vehicles (%)	0%	2%	9%	8%	5%	0%	6%	0%	0%	0%	3%	0%
Adj. Flow (vph)	26	623	38	706	230	47	20	34	0	109	49	16
Shared Lane Traffic (%)												
Lane Group Flow (vph)	26	661	0	706	277	0	0	54	0	109	65	0
Turn Type	Perm	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases		2		1	1 2			3			3	
Permitted Phases	2			1 2			3			3		
Detector Phase	2	2		1	1 2		3	3		3	3	
Switch Phase												
Minimum Initial (s)	10.0	10.0		5.0			5.0	5.0		5.0	5.0	
Minimum Split (s)	16.0	16.0		9.0			10.0	10.0		10.0	10.0	
Total Split (s)	46.0	46.0		24.0			20.0	20.0		20.0	20.0	
Total Split (%)	51.1%	51.1%		26.7%			22.2%	22.2%		22.2%	22.2%	
Yellow Time (s)	4.0	4.0		3.0			3.0	3.0		3.0	3.0	
All-Red Time (s)	2.0	2.0		0.0			2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0				0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0		3.0				5.0		5.0	5.0	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?												
Recall Mode	Min	Min		None			None	None		None	None	
Act Effct Green (s)	28.1	28.1		53.6	57.7			10.1		10.1	10.1	
Actuated g/C Ratio	0.39	0.39		0.75	0.80			0.14		0.14	0.14	
v/c Ratio	0.06	0.81		1.13	0.19			0.24		0.57	0.23	
Control Delay	14.6	28.6		99.8	2.8			34.0		44.7	27.0	
Queue Delay	0.0	0.0		0.0	0.0			0.0		0.0	0.0	
Total Delay	14.6	28.6		99.8	2.8			34.0		44.7	27.0	
LOS	B	C		F	A			C		D	C	
Approach Delay		28.1			72.4			34.0			38.1	
Approach LOS		C			E			C			D	
Queue Length 50th (ft)	7	261		~358	24			23		48	21	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 95th (ft)	23	**423**		#676	**55**			**61**		91	**49**	
Internal Link Dist (ft)		395			692			642			194	
Turn Bay Length (ft)	**75**									**100**		
Base Capacity (vph)	661	1233		627	1572			350		304	435	
Starvation Cap Reductn	**0**	**0**		**0**	**0**			**0**		**0**	**0**	
Spillback Cap Reductn	0	0		0	0			0		0	0	
Storage Cap Reductn	**0**	**0**		**0**	**0**			**0**		**0**	**0**	
Reduced v/c Ratio	0.04	0.54		1.13	0.18			0.15		0.36	0.15	

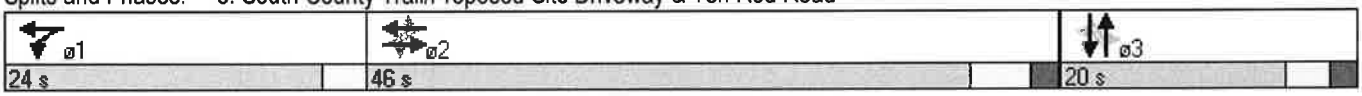
Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 71.9
Natural Cycle: 80
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.13
Intersection Signal Delay: 52.1 Intersection LOS: D
Intersection Capacity Utilization 89.9% **ICU Level of Service E**
Analysis Period (min) 15

~ **Volume exceeds capacity, queue is theoretically infinite.**
Queue shown is maximum after two cycles.

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

Splits and Phases: 3: South County Trail/Proposed Site Driveway & Ten Rod Road



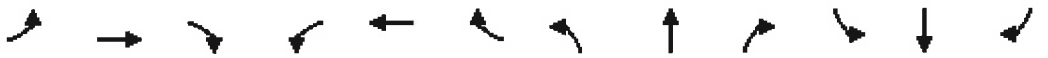
AM Peak - Build

Delay

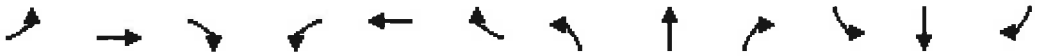
Intersection	Approach	Movement	Run 1 Delay(s)	Run 1 Volume	Run 2 Delay(s)	Run 2 Volume	Run 3 Delay(s)	Run 3 Volume	LOS	Average(s)	Standard Deviation(s)	Min(s)	Max(s)
Intersection of Ten Rod Road and South County Trail	NB	Left 2	3.4	19	5.3	19	3.1	13		4	4.1	0.2	15.8
		Through	4.1	36	3.6	31	4.9	35		4.2	4.4	0.2	18.4
		Right 2	0.2	685	0.2	694	0.1	693		0.2	0.6	0	6.1
		Total	0.5	740	0.5	744	0.4	741		0.5	1.6	0	18.4
	EB	Left 2	27.9	35	60.7	15	24.9	32		32.7	25.4	0.5	119.1
		Through	29.5	552	44.2	562	29.5	555		34.5	23.7	0.3	117.4
		Right 2	28.6	32	37	33	24.3	29		30.2	20.8	0.4	94.7
		Total	29.4	619	44.2	610	29	616		34.2	23.6	0.3	119.1
	SB	Left 2	0.7	55	1.5	45	1.7	38		1.2	4.8	0	34.5
		Through	0	31	0	31	0	43		0	2.1	0	16.2
		Right 2	0	13	0.7	11	0	8		0	2.5	0	12.5
		Total	0.4	99	0.9	87	0.7	89		0.5	3.8	0	34.5
	WB	Left 2	2.1	611	2	638	2.2	610		2.1	1.9	0.2	17
		Through	2.7	194	2.1	191	2.3	194		2.4	2.2	0.2	21.5
		Right 2	1.8	59	1.5	32	1.4	59		1.6	1.4	0.2	7.1
		Total	2.2	864	2	861	2.2	863		2.1	1.9	0.2	21.5
Total			8.8	2322	12.7	2302	8.7	2309	B	10.1	19.1	0	119.1
NETWORK TOTAL			8.8	2322	12.7	2302	8.7	2309		10.1	19.1	0	119.1

Queue Lengths

Intersection	Approach	Movement	95% Queues per Run 1	95% Queues per Run 2	95% Queues per Run 3	Max	95%	Median	Average	Standard Deviation	95% Queue > Storage
Intersection of Ten Rod Road and South County Trail	NB	U-turn Marke	0	0	0	0	0	0	0	0	0
		Left 2	0	0	0	0	0	0	0	0	0
		Through	0	0	0	0	0	0	0	0	0
		Right 2	0	0	0	0	0	0	0	0	0
	EB	U-turn Marke	115.7	135.1	81.1	166.6	126.6	0	18.9	41.6	0
		Left 2	115.7	135.1	81.1	166.6	126.6	0	18.9	41.6	0
		Through	115.7	135.1	81.1	166.6	126.6	0	18.9	41.6	0
		Right 2	115.7	135.1	81.1	166.6	126.6	0	18.9	41.6	0
	SB	U-turn Marke	0	0	0	0	0	0	0	0	0
		Left 2	0	0	0	0	0	0	0	0	0
		Through	0	0	0	0	0	0	0	0	0
		Right 2	0	0	0	0	0	0	0	0	0
	WB	U-turn Marke	0	0	0	0	0	0	0	0	0
		Left 2	0	0	0	0	0	0	0	0	0
		Through	0	0	0	0	0	0	0	0	0
		Right 2	0	0	0	0	0	0	0	0	0



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	25	304	23	734	440	89	38	82	0	131	71	43
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	16	12	12	12	12	12	12	12	12	14	12
Storage Length (ft)	75		0	0		0	0		0	100		0
Storage Lanes	1		0	1		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.989			0.975						0.943	
Flt Protected	0.950			0.950				0.984		0.950		
Satd. Flow (prot)	1641	2091	0	1770	1837	0	0	1618	0	1805	1792	0
Flt Permitted	0.451			0.265				0.857		0.662		
Satd. Flow (perm)	779	2091	0	494	1837	0	0	1409	0	1258	1792	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5			32						27	
Link Speed (mph)		45			55			40			25	
Link Distance (ft)		475			772			722			274	
Travel Time (s)		7.2			9.6			12.3			7.5	
Peak Hour Factor	0.79	0.79	0.79	0.93	0.93	0.93	0.90	0.90	0.90	0.77	0.77	0.77
Heavy Vehicles (%)	10%	2%	0%	2%	1%	0%	6%	20%	0%	0%	4%	11%
Adj. Flow (vph)	32	385	29	789	473	96	42	91	0	170	92	56
Shared Lane Traffic (%)												
Lane Group Flow (vph)	32	414	0	789	569	0	0	133	0	170	148	0
Turn Type	Perm	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases		2		1	1 2			3			3	
Permitted Phases	2			1 2			3			3		
Detector Phase	2	2		1	1 2		3	3		3	3	
Switch Phase												
Minimum Initial (s)	10.0	10.0		5.0			5.0	5.0		5.0	5.0	
Minimum Split (s)	16.0	16.0		9.0			10.0	10.0		10.0	10.0	
Total Split (s)	46.0	46.0		29.0			20.0	20.0		20.0	20.0	
Total Split (%)	48.4%	48.4%		30.5%			21.1%	21.1%		21.1%	21.1%	
Yellow Time (s)	4.0	4.0		3.0			3.0	3.0		3.0	3.0	
All-Red Time (s)	2.0	2.0		0.0			2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0				0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0		3.0				5.0		5.0	5.0	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?												
Recall Mode	Min	Min		None			None	None		None	None	
Act Effct Green (s)	21.4	21.4		50.6	53.6			15.0		15.0	15.0	
Actuated g/C Ratio	0.28	0.28		0.66	0.70			0.20		0.20	0.20	
v/c Ratio	0.15	0.71		1.04	0.44			0.48		0.69	0.40	
Control Delay	21.5	31.2		60.9	5.8			36.1		47.6	27.1	
Queue Delay	0.0	0.0		0.0	0.0			0.0		0.0	0.0	
Total Delay	21.5	31.2		60.9	5.8			36.1		47.6	27.1	
LOS	C	C		E	A			D		D	C	
Approach Delay		30.5			37.8			36.1			38.1	
Approach LOS		C			D			D			D	
Queue Length 50th (ft)	11	173		~329	90			57		76	50	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 95th (ft)	**27**	**220**		**#591**	**138**			**124**		**#147**	**94**	
Internal Link Dist (ft)		395			692			642			194	
Turn Bay Length (ft)	**75**									**100**		
Base Capacity (vph)	409	1101		761	1717			277		247	375	
Starvation Cap Reductn	**0**	**0**		**0**	**0**			**0**		**0**	**0**	
Spillback Cap Reductn	0	0		0	0			0		0	0	
Storage Cap Reductn	**0**	**0**		**0**	**0**			**0**		**0**	**0**	
Reduced v/c Ratio	0.08	0.38		1.04	0.33			0.48		0.69	0.39	

Intersection Summary

Area Type: Other
Cycle Length: 95
Actuated Cycle Length: 76.6
Natural Cycle: 65
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.04
Intersection Signal Delay: 36.3 Intersection LOS: D
Intersection Capacity Utilization 84.5% **ICU Level of Service E**
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: South County Trail/Proposed Site Driveway & Ten Rod Road

PM Peak - Build

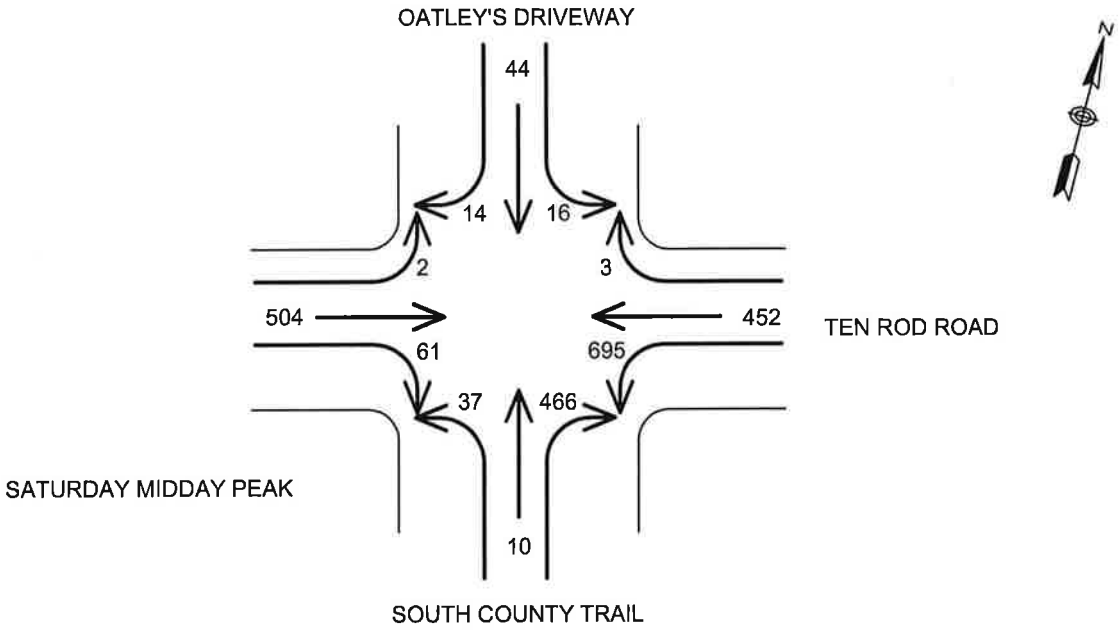
Delay

Intersection	Approach	Movement	Run 1		Run 2		Run 3		LOS	Average(s)	Standard Deviation(s)	Min(s)	Max(s)
			Delay(s)	Volume	Delay(s)	Volume	Delay(s)	Volume					
Intersection of Ten Rod Road and South County Trail	NB	Left 2	2.9	38	2.4	37	2	28		2.5	2.8	0.2	14.9
		Through	3.1	103	3.5	88	2.2	84		3	3.5	0.1	19.3
		Right 2	0.3	921	0.3	938	0.3	948		0.3	0.6	0	5.5
		Total	0.7	1062	0.6	1063	0.5	1060		0.6	1.5	0	19.3
	EB	Left 2	15.3	41	10.4	20	16.5	32		14.7	15.5	0.3	70.5
		Through	13	291	15.4	307	16.5	296		15	13.6	0.2	76.9
		Right 2	11.6	17	9.5	23	9	21		9.9	10.9	0.3	47.6
		Total	13.2	349	14.7	350	16	349		14.6	13.7	0.2	76.9
	SB	Left 2	1.6	69	2	60	1.6	63		1.7	5.8	0	39.1
		Through	0	64	0	56	0.2	70		0	1.9	0	13.7
		Right 2	0	34	0	36	0	39		0	1.3	0	6
		Total	0.7	167	0.8	152	0.7	172		0.5	4	0	39.1
	WB	Left 2	3.4	717	3	726	3.4	704		3.2	2.7	0.2	26
		Through	4.2	424	3.8	439	4.2	433		4.1	3.1	0.3	22.6
		Right 2	3.1	103	3.2	75	3.6	112		3.4	2.8	0.2	14.7
		Total	3.6	1244	3.3	1240	3.7	1249		3.5	2.9	0.2	26
Total			3.5	2822	3.6	2805	3.8	2830	A	3.6	6.9	0	76.9
NETWORK TOTAL			3.5	2822	3.6	2805	3.8	2830		3.6	6.9	0	76.9

Queue Lengths

Intersection	Approach	Movement	95% Queues per Run 1	2	3	Max	95%	Median	Average	Standard Deviation	95% Queue > Storage
			1	2	3						
Intersection of Ten Rod Road and South County Trail	NB	U-turn Marke	0	0	0	0	0	0	0	0	0
		Left 2	0	0	0	0	0	0	0	0	0
		Through	0	0	0	0	0	0	0	0	0
		Right 2	0	0	0	0	0	0	0	0	0
	EB	U-turn Marke	0	0	0	0	0	0	0	0	0
		Left 2	0	0	0	0	0	0	0	0	0
		Through	0	0	0	0	0	0	0	0	0
		Right 2	0	0	0	0	0	0	0	0	0
	SB	U-turn Marke	0	0	0	0	0	0	0	0	0
		Left 2	0	0	0	0	0	0	0	0	0
		Through	0	0	0	0	0	0	0	0	0
		Right 2	0	0	0	0	0	0	0	0	0
	WB	U-turn Marke	0	0	0	58.1	0	0	0	0.6	0
		Left 2	0	0	0	58.1	0	0	0	0.6	0
		Through	0	0	0	58.1	0	0	0	0.6	0
		Right 2	0	0	0	58.1	0	0	0	0.6	0

TRAFFIC VOLUMES
THE PRESERVE AT ROLLING GREENS
TEN ROD ROAD, NORTH KINGSTOWN, RI
NO BUILD CONDITIONS



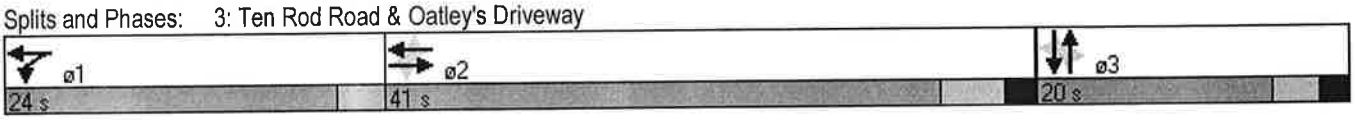
SATURDAY MIDDAY PEAK

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↰	↕			↕			↕	
Volume (vph)	2	504	61	695	452	3	37	10	0	16	44	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	16	12	12	12	12	12	12	12	12	14	12
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.985			0.999						0.975	
Flt Protected				0.950				0.962			0.989	
Satd. Flow (prot)	0	2057	0	1770	1861	0	0	1707	0	0	1926	0
Flt Permitted		0.999		0.286				0.850			0.907	
Satd. Flow (perm)	0	2055	0	533	1861	0	0	1508	0	0	1766	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		9			1						12	
Link Speed (mph)		45			55			40			25	
Link Distance (ft)		475			772			722			274	
Travel Time (s)		7.2			9.6			12.3			7.5	
Peak Hour Factor	0.93	0.93	0.93	0.94	0.94	0.94	0.83	0.83	0.83	0.91	0.91	0.91
Heavy Vehicles (%)	0%	3%	4%	2%	2%	0%	9%	0%	0%	0%	0%	8%
Adj. Flow (vph)	2	542	66	739	481	3	45	12	0	18	48	15
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	610	0	739	484	0	0	57	0	0	81	0
Turn Type	Perm			pm+pt			Perm			Perm		
Protected Phases		2		1	1 2			3			3	
Permitted Phases	2			1 2			3			3		
Detector Phase	2	2		1	1 2		3	3		3	3	
Switch Phase												
Minimum Initial (s)	10.0	10.0		5.0			5.0	5.0		5.0	5.0	
Minimum Split (s)	16.0	16.0		9.0			10.0	10.0		10.0	10.0	
Total Split (s)	41.0	41.0	0.0	24.0	65.0	0.0	20.0	20.0	0.0	20.0	20.0	0.0
Total Split (%)	48.2%	48.2%	0.0%	28.2%	76.5%	0.0%	23.5%	23.5%	0.0%	23.5%	23.5%	0.0%
Maximum Green (s)	35.0	35.0		21.0			15.0	15.0		15.0	15.0	
Yellow Time (s)	4.0	4.0		3.0			3.0	3.0		3.0	3.0	
All-Red Time (s)	2.0	2.0		0.0			2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	4.0	3.0	3.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0			2.4	2.4		2.4	2.4	
Recall Mode	Min	Min		None			None	None		None	None	
Act Effct Green (s)		25.4		50.6	54.6			7.9			7.9	
Actuated g/C Ratio		0.38		0.76	0.81			0.12			0.12	
v/c Ratio		0.78		0.91	0.32			0.32			0.37	
Control Delay		26.2		31.5	3.1			35.3			31.8	
Queue Delay		0.0		0.0	0.0			0.0			0.0	
Total Delay		26.2		31.5	3.1			35.3			31.8	
LOS		C		C	A			D			C	
Approach Delay		26.2			20.3			35.3			31.8	
Approach LOS		C			C			D			C	

Intersection Summary

Area Type: Other
Cycle Length: 85
Actuated Cycle Length: 67
Natural Cycle: 60
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.91
Intersection Signal Delay: 23.0 Intersection LOS: C
Intersection Capacity Utilization 88.8% ICU Level of Service E
Analysis Period (min) 15

Splits and Phases: 3: Ten Rod Road & Oatley's Driveway



Saturday Midday Peak - No Build

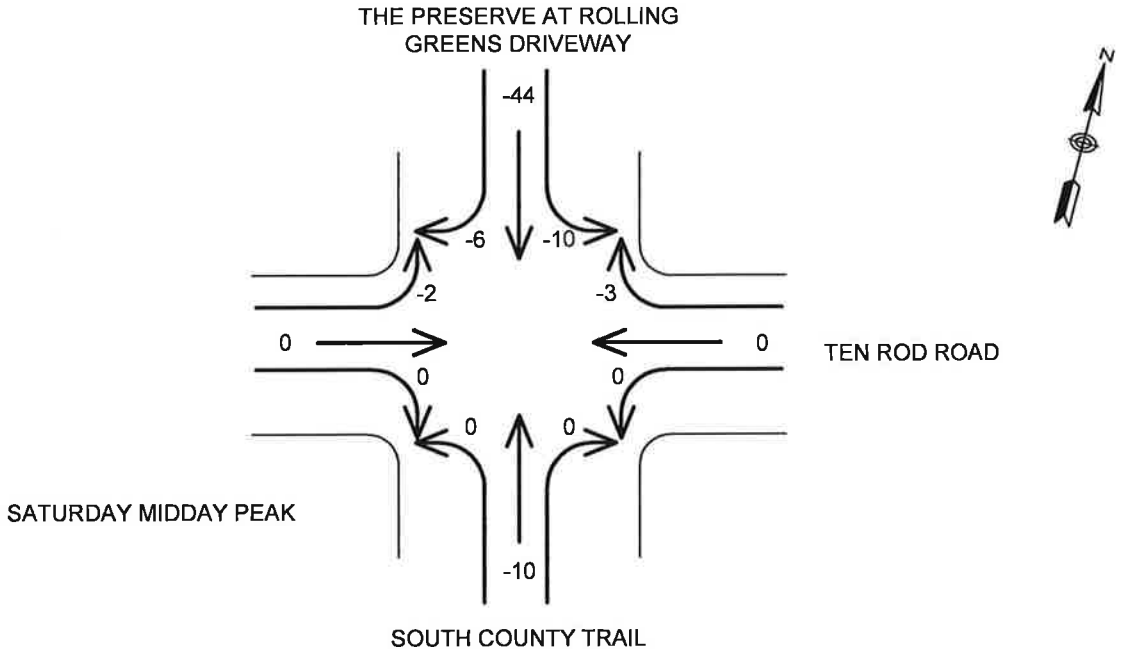
Delay

Intersection	Approach	Movement	Run 1 Delay(s)	Run 1 Volume	Run 2 Delay(s)	Run 2 Volume	Run 3 Delay(s)	Run 3 Volume	LOS	Average(s)	Standard Deviation(s)	Min(s)	Max(s)
Intersection of Ten Rod Road and South County Trail	NB	Left 2	3.3	50	4.7	34	2.4	33		3.5	4.2	0.1	20.2
		Through	3.4	14	2.8	13	2	4		2.9	3.2	0.1	12.6
		Right 2	0.1	447	0.1	466	0.1	473		0.1	0.3	0	3.3
		Total	0.5	511	0.5	513	0.3	510		0.4	1.6	0	20.2
	EB	Left 2	0.4	1	49.9	2	26.1	1		31.6	32.8	0.4	77.9
		Through	28.8	503	31	507	25.4	500		28.4	20.3	0.3	112.7
		Right 2	26	55	23.5	56	20.5	61		23.2	18.5	0.4	82
		Total	28.5	559	30.3	565	24.9	562		27.9	20.2	0.3	112.7
	SB	Left 2	0.2	13	0	22	0.3	13		0.1	1.9	0	8
		Through	0	51	0	39	0	47		0	1.2	0	5.3
		Right 2	0	10	0.1	13	0	14		0	1.1	0	2.1
		Total	0	74	0	74	0.1	74		0	1.4	0	8
	WB	Left 2	2.2	696	2	672	2	695		2.1	1.6	0.2	15
		Through	2.9	432	2.6	451	2.7	433		2.7	2.2	0.2	17
		Right 2	1.6	3	2.3	3	2.2	2		2	1.6	0.5	4.7
		Total	2.5	1131	2.2	1126	2.3	1130		2.3	1.9	0.2	17
Total			8.4	2275	8.7	2278	7.4	2276	A	8.1	15.2	0	112.7
NETWORK TOTAL			8.4	2275	8.7	2278	7.4	2276		8.1	15.2	0	112.7

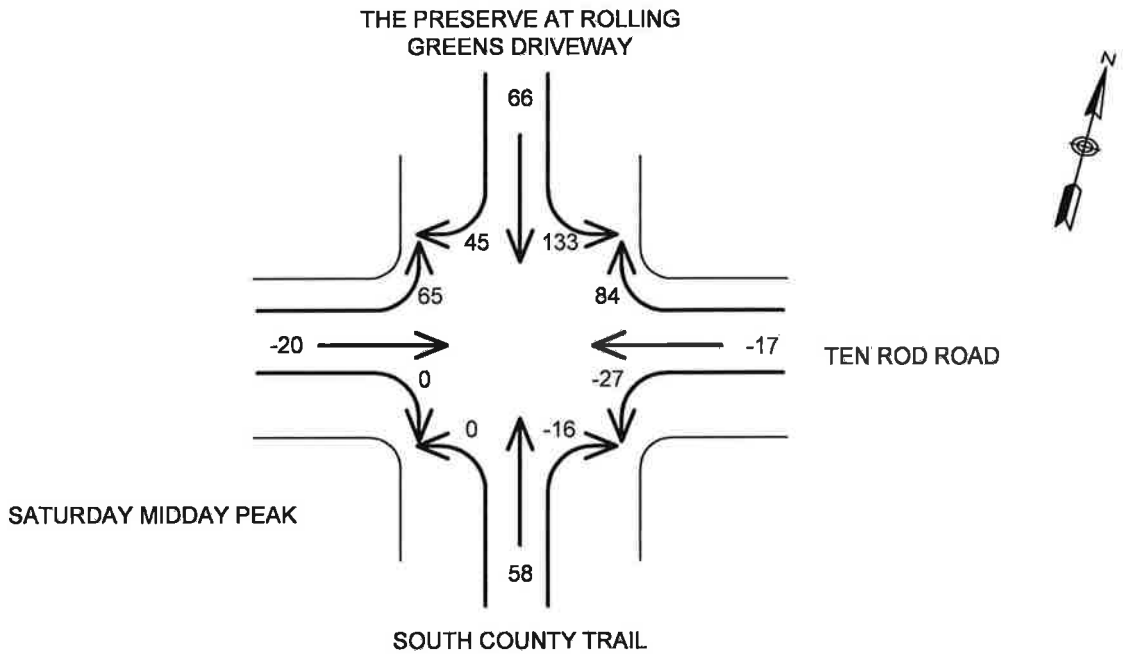
Queue Lengths

Intersection	Approach	Movement	95% Queues per Run 1	2	3	Max	95%	Median	Average	Standard Deviation	95% Queue > Storage
Intersection of Ten Rod Road and South County Trail	NB	U-turn Marke	0	0	0	0	0	0	0	0	0
		Left 2	0	0	0	0	0	0	0	0	0
		Through	0	0	0	0	0	0	0	0	0
		Right 2	0	0	0	0	0	0	0	0	0
	EB	U-turn Marke	99.7	90.2	25.5	158.2	81.7	0	6.9	26.9	0
		Left 2	99.7	90.2	25.5	158.2	81.7	0	6.9	26.9	0
		Through	99.7	90.2	25.5	158.2	81.7	0	6.9	26.9	0
		Right 2	99.7	90.2	25.5	158.2	81.7	0	6.9	26.9	0
	SB	U-turn Marke	0	0	0	0	0	0	0	0	0
		Left 2	0	0	0	0	0	0	0	0	0
		Through	0	0	0	0	0	0	0	0	0
		Right 2	0	0	0	0	0	0	0	0	0
	WB	U-turn Marke	0	0	0	23.7	0	0	0	0.3	0
		Left 2	0	0	0	23.7	0	0	0	0.3	0
		Through	0	0	0	23.7	0	0	0	0.3	0
		Right 2	0	0	0	23.7	0	0	0	0.3	0

TRAFFIC VOLUMES
THE PRESERVE AT ROLLING GREENS
TEN ROD ROAD, NORTH KINGSTOWN, RI
REDISTRIBUTED TRIPS

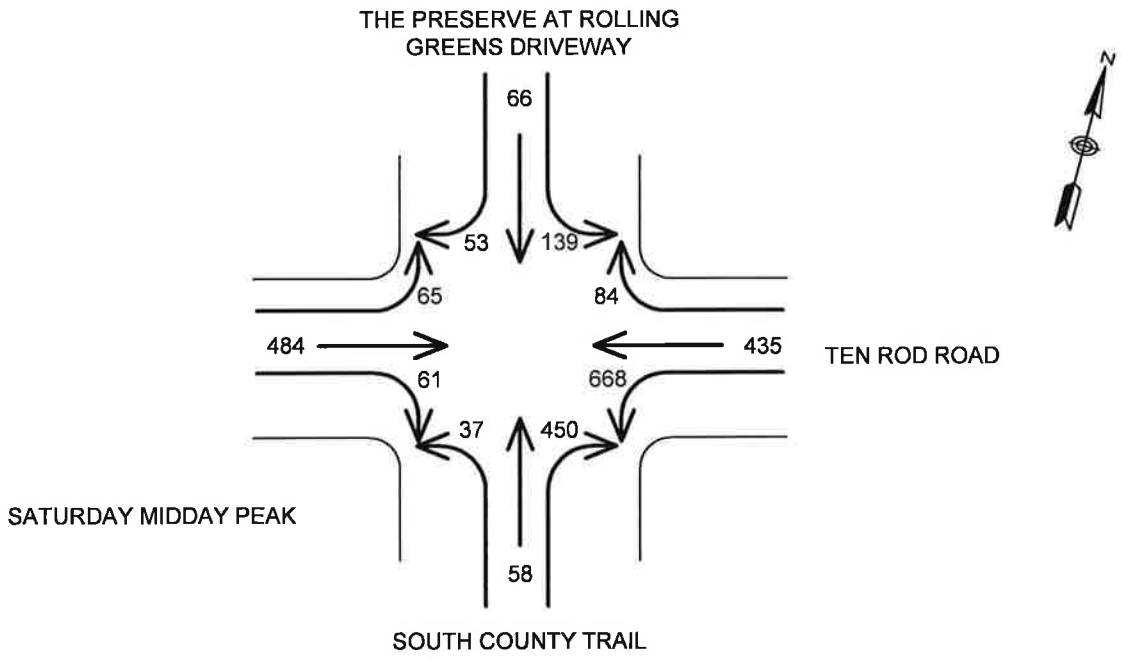


TRAFFIC VOLUMES
THE PRESERVE AT ROLLING GREENS
TEN ROD ROAD, NORTH KINGSTOWN, RI
SITE GENERATED TRIPS



SATURDAY MIDDAY PEAK

TRAFFIC VOLUMES
THE PRESERVE AT ROLLING GREENS
TEN ROD ROAD, NORTH KINGSTOWN, RI
BUILD CONDITIONS



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	65	484	61	668	435	84	37	58	0	139	66	53
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	16	12	12	12	12	12	12	12	12	14	12
Storage Length (ft)	75		0	0		0	0		0	100		0
Storage Lanes	1		0	1		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.983			0.976						0.934	
Flt Protected	0.950			0.950				0.981		0.950		
Satd. Flow (prot)	1805	2053	0	1770	1824	0	0	1800	0	1805	1828	0
Flt Permitted	0.458			0.166				0.822		0.699		
Satd. Flow (perm)	870	2053	0	309	1824	0	0	1509	0	1328	1828	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		9			30						41	
Link Speed (mph)		45			55			40			25	
Link Distance (ft)		475			772			722			274	
Travel Time (s)		7.2			9.6			12.3			7.5	
Peak Hour Factor	0.93	0.93	0.93	0.94	0.94	0.94	0.83	0.83	0.83	0.91	0.91	0.91
Heavy Vehicles (%)	0%	3%	4%	2%	2%	0%	9%	0%	0%	0%	0%	8%
Adj. Flow (vph)	70	520	66	711	463	89	45	70	0	153	73	58
Shared Lane Traffic (%)												
Lane Group Flow (vph)	70	586	0	711	552	0	0	115	0	153	131	0
Turn Type	Perm	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases		2		1	1 2			3			3	
Permitted Phases	2			1 2			3			3		
Detector Phase	2	2		1	1 2		3	3		3	3	
Switch Phase												
Minimum Initial (s)	10.0	10.0		5.0			5.0	5.0		5.0	5.0	
Minimum Split (s)	16.0	16.0		9.0			10.0	10.0		10.0	10.0	
Total Split (s)	41.0	41.0		24.0			20.0	20.0		20.0	20.0	
Total Split (%)	48.2%	48.2%		28.2%			23.5%	23.5%		23.5%	23.5%	
Yellow Time (s)	4.0	4.0		3.0			3.0	3.0		3.0	3.0	
All-Red Time (s)	2.0	2.0		0.0			2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0				0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0		3.0				5.0		5.0	5.0	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?												
Recall Mode	Min	Min		None			None	None		None	None	
Act Effct Green (s)	27.3	27.3		51.8	54.8			12.5		12.5	12.5	
Actuated g/C Ratio	0.36	0.36		0.69	0.73			0.17		0.17	0.17	
v/c Ratio	0.22	0.78		1.14	0.41			0.46		0.70	0.39	
Control Delay	18.6	29.3		102.4	5.1			36.7		49.2	24.9	
Queue Delay	0.0	0.0		0.0	0.0			0.0		0.0	0.0	
Total Delay	18.6	29.3		102.4	5.1			36.7		49.2	24.9	
LOS	B	C		F	A			D		D	C	
Approach Delay		28.1			59.9			36.7			38.0	
Approach LOS		C			E			D			D	
Queue Length 50th (ft)	23	243		~361	84			50		70	38	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 95th (ft)	53	365		#612	134			97		#157	94	
Internal Link Dist (ft)		395			692			642			194	
Turn Bay Length (ft)	75									100		
Base Capacity (vph)	410	973		625	1515			305		268	402	
Starvation Cap Reductn	0	0		0	0			0		0	0	
Spillback Cap Reductn	0	0		0	0			0		0	0	
Storage Cap Reductn	0	0		0	0			0		0	0	
Reduced v/c Ratio	0.17	0.60		1.14	0.36			0.38		0.57	0.33	

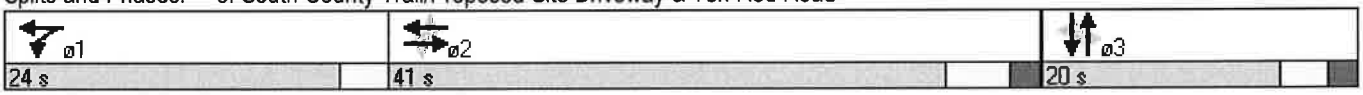
Intersection Summary

Area Type: Other
Cycle Length: 85
Actuated Cycle Length: 75.5
Natural Cycle: 55
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.14
Intersection Signal Delay: 47.1 Intersection LOS: D
Intersection Capacity Utilization 93.0% ICU Level of Service F
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

Splits and Phases: 3: South County Trail/Proposed Site Driveway & Ten Rod Road



Saturday Midday Peak - Build

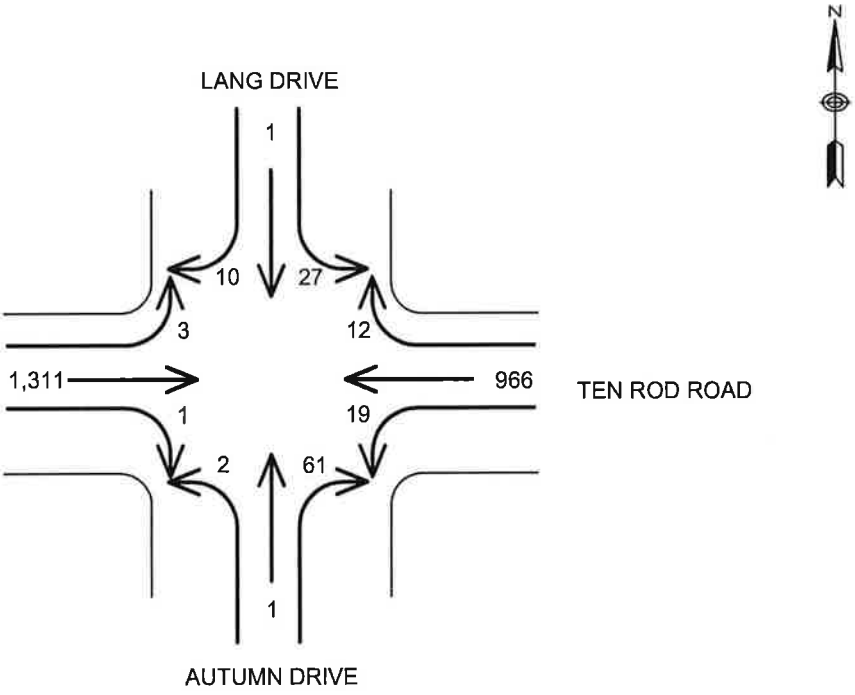
Delay

Intersection	Approach	Movement	Run 1		Run 2		Run 3		LOS	Average(s)	Standard Deviation(s)	Min(s)	Max(s)
			Delay(s)	Volume	Delay(s)	Volume	Delay(s)	Volume					
Intersection of Ten Rod Road and South County Trail	NB	Left 2	3.2	47	6.6	35	2.9	34		4.1	4.5	0.2	21.6
		Through	4.4	65	4.4	63	4.4	40		4.4	5.1	0.1	37.5
		Right 2	0.1	430	0.2	447	0.1	469		0.1	0.4	0	3.5
		Total	0.9	542	1.1	545	0.6	543		0.9	2.6	0	37.5
	EB	Left 2	31.8	83	54.1	51	35.5	68		38.7	23.9	0.4	107.7
		Through	33.8	463	57.8	472	40.6	470		44.1	26.2	0.3	118.9
		Right 2	32.3	57	52.5	54	43	60		42.4	26.3	0.3	98.3
		Total	33.4	603	57	577	40.3	598		43.4	26	0.3	118.9
	SB	Left 2	2.2	67	2.1	61	1.6	69		2	5.4	0	42.4
		Through	0.4	60	0.5	73	0	54		0.3	3.7	0	39.8
		Right 2	0	41	0.1	45	0	53		0	1.9	0	10.2
		Total	1	168	0.9	179	0.6	176		0.8	4.2	0	42.4
	WB	Left 2	3.6	652	3.1	656	2.7	639		3.1	2.7	0.2	30.1
		Through	4.9	424	3.7	446	3.5	419		4	3.4	0.2	26.7
		Right 2	4	99	3.2	70	2.7	109		3.3	3.5	0.2	27.8
		Total	4.1	1175	3.3	1172	3	1167		3.5	3.1	0.2	30.1
Total			10.3	2488	15.2	2473	11.3	2484	B	12.2	21.8	0	118.9
NETWORK TOTAL			10.3	2488	15.2	2473	11.3	2484		12.2	21.8	0	118.9

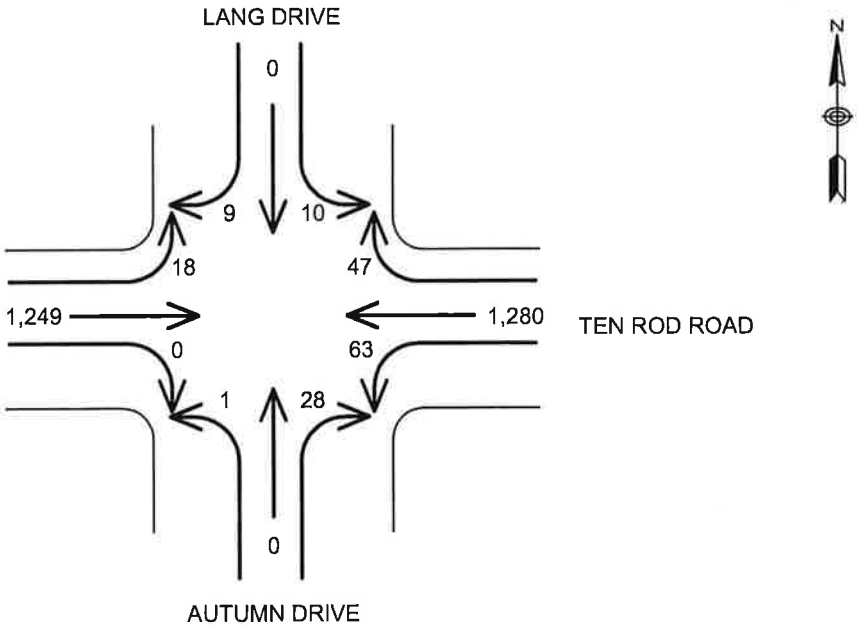
Queue Lengths

Intersection	Approach	Movement	95% Queues per Run 1	2	3	Max	95%	Median	Average	Standard Deviation	95% Queue > Storage
			1	2	3						
Intersection of Ten Rod Road and South County Trail	NB	U-turn Marke	0	0	0	0	0	0	0	0	0
		Left 2	0	0	0	0	0	0	0	0	0
		Through	0	0	0	0	0	0	0	0	0
		Right 2	0	0	0	0	0	0	0	0	0
	EB	U-turn Marke	117.8	140.5	136.2	169.1	136.6	0	31.4	52.2	0
		Left 2	117.8	140.5	136.2	169.1	136.6	0	31.4	52.2	0
		Through	117.8	140.5	136.2	169.1	136.6	0	31.4	52.2	0
		Right 2	117.8	140.5	136.2	169.1	136.6	0	31.4	52.2	0
	SB	U-turn Marke	0	0	0	0	0	0	0	0	0
		Left 2	0	0	0	0	0	0	0	0	0
		Through	0	0	0	0	0	0	0	0	0
		Right 2	0	0	0	0	0	0	0	0	0
	WB	U-turn Marke	0	0	0	0	0	0	0	0	0
		Left 2	0	0	0	0	0	0	0	0	0
		Through	0	0	0	0	0	0	0	0	0
		Right 2	0	0	0	0	0	0	0	0	0

TRAFFIC VOLUMES
THE PRESERVE AT ROLLING GREENS
TEN ROD ROAD, NORTH KINGSTOWN, RI
NO BUILD CONDITIONS



AM PEAK



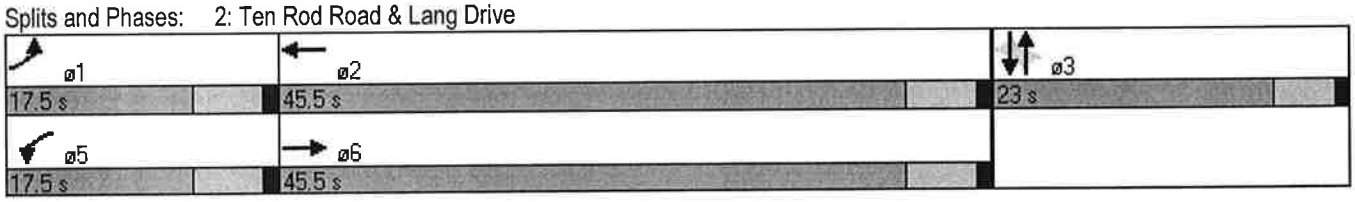
PM PEAK

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	3	1311	1	19	966	12	2	1	61	27	1	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	12	12	11	12	12	13	12	12	12	12
Storage Length (ft)	50		0	50		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.998			0.872			0.966	
Flt Protected	0.950			0.950				0.998			0.965	
Satd. Flow (prot)	1805	3421	0	1703	3350	0	0	1709	0	0	1721	0
Flt Permitted	0.950			0.950				0.985			0.735	
Satd. Flow (perm)	1805	3421	0	1703	3350	0	0	1686	0	0	1311	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					2			77			12	
Link Speed (mph)		45			55			30			30	
Link Distance (ft)		1532			1372			543			441	
Travel Time (s)		23.2			17.0			12.3			10.0	
Peak Hour Factor	0.96	0.96	0.96	0.95	0.95	0.95	0.79	0.79	0.79	0.80	0.80	0.80
Heavy Vehicles (%)	0%	2%	0%	6%	4%	0%	0%	0%	0%	4%	0%	0%
Adj. Flow (vph)	3	1366	1	20	1017	13	3	1	77	34	1	12
Shared Lane Traffic (%)												
Lane Group Flow (vph)	3	1367	0	20	1030	0	0	81	0	0	47	0
Turn Type	Prot			Prot			Perm			Perm		
Protected Phases	1	6		5	2			3			3	
Permitted Phases							3			3		
Detector Phase	1	6		5	2		3	3		3	3	
Switch Phase												
Minimum Initial (s)	5.0	8.0		5.0	8.0		8.0	8.0		8.0	8.0	
Minimum Split (s)	10.5	13.5		10.5	13.5		13.0	13.0		13.0	13.0	
Total Split (s)	17.5	45.5	0.0	17.5	45.5	0.0	23.0	23.0	0.0	23.0	23.0	0.0
Total Split (%)	20.3%	52.9%	0.0%	20.3%	52.9%	0.0%	26.7%	26.7%	0.0%	26.7%	26.7%	0.0%
Maximum Green (s)	12.0	40.0		12.0	40.0		18.0	18.0		18.0	18.0	
Yellow Time (s)	4.5	4.5		4.5	4.5		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	4.0	5.5	5.5	4.0	5.0	5.0	4.0	5.0	5.0	4.0
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	None		None	None	
Act Effct Green (s)	7.1	30.5		7.7	30.7			10.4			10.4	
Actuated g/C Ratio	0.15	0.66		0.17	0.67			0.23			0.23	
v/c Ratio	0.01	0.60		0.07	0.46			0.18			0.15	
Control Delay	27.0	9.0		25.8	7.1			9.4			20.4	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay	27.0	9.0		25.8	7.1			9.4			20.4	
LOS	C	A		C	A			A			C	
Approach Delay		9.0			7.4			9.4			20.4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS		A			A			A			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 86			
Actuated Cycle Length: 46.1			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.60			
Intersection Signal Delay: 8.6		Intersection LOS: A	
Intersection Capacity Utilization 53.8%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 2: Ten Rod Road & Lang Drive

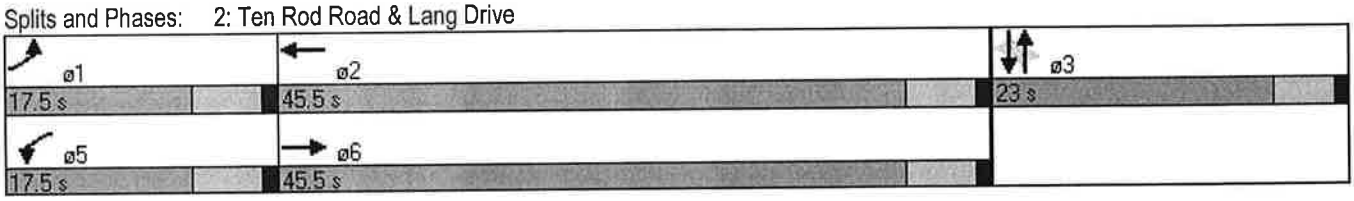


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	18	1249	0	63	1280	47	1	0	28	10	0	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	12	12	11	12	12	13	12	12	12	12
Storage Length (ft)	50		0	50		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.995			0.869			0.935	
Flt Protected	0.950			0.950				0.999			0.975	
Satd. Flow (prot)	1805	3455	0	1805	3439	0	0	1704	0	0	1732	0
Flt Permitted	0.950			0.950				0.988			0.868	
Satd. Flow (perm)	1805	3455	0	1805	3439	0	0	1686	0	0	1542	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					6			33			13	
Link Speed (mph)		45			55			30			30	
Link Distance (ft)		1532			1372			543			441	
Travel Time (s)		23.2			17.0			12.3			10.0	
Peak Hour Factor	0.93	0.93	0.93	0.94	0.94	0.94	0.84	0.84	0.84	0.71	0.71	0.71
Heavy Vehicles (%)	0%	1%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	19	1343	0	67	1362	50	1	0	33	14	0	13
Shared Lane Traffic (%)												
Lane Group Flow (vph)	19	1343	0	67	1412	0	0	34	0	0	27	0
Turn Type	Prot			Prot			Perm			Perm		
Protected Phases	1	6		5	2			3			3	
Permitted Phases							3			3		
Detector Phase	1	6		5	2		3	3		3	3	
Switch Phase												
Minimum Initial (s)	5.0	8.0		5.0	8.0		8.0	8.0		8.0	8.0	
Minimum Split (s)	10.5	13.5		10.5	13.5		13.0	13.0		13.0	13.0	
Total Split (s)	17.5	45.5	0.0	17.5	45.5	0.0	23.0	23.0	0.0	23.0	23.0	0.0
Total Split (%)	20.3%	52.9%	0.0%	20.3%	52.9%	0.0%	26.7%	26.7%	0.0%	26.7%	26.7%	0.0%
Maximum Green (s)	12.0	40.0		12.0	40.0		18.0	18.0		18.0	18.0	
Yellow Time (s)	4.5	4.5		4.5	4.5		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	4.0	5.5	5.5	4.0	5.0	5.0	4.0	5.0	5.0	4.0
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	None		None	None	
Act Effct Green (s)	8.4	35.9		9.8	40.6			11.1			11.1	
Actuated g/C Ratio	0.17	0.71		0.19	0.80			0.22			0.22	
v/c Ratio	0.06	0.55		0.19	0.51			0.09			0.08	
Control Delay	30.0	10.8		27.7	6.1			13.1			21.7	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay	30.0	10.8		27.7	6.1			13.1			21.7	
LOS	C	B		C	A			B			C	
Approach Delay		11.0			7.1			13.1			21.7	

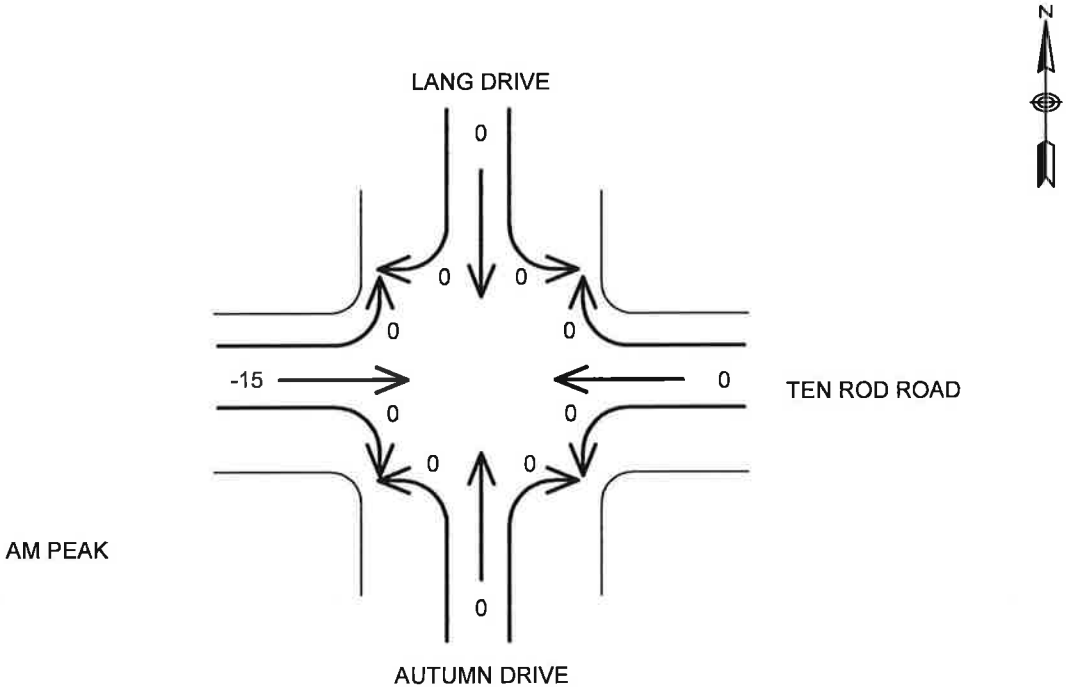
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS		B			A			B			C	

Intersection Summary	
Area Type:	Other
Cycle Length: 86	
Actuated Cycle Length: 50.5	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.55	
Intersection Signal Delay: 9.1	Intersection LOS: A
Intersection Capacity Utilization 61.0%	ICU Level of Service B
Analysis Period (min) 15	

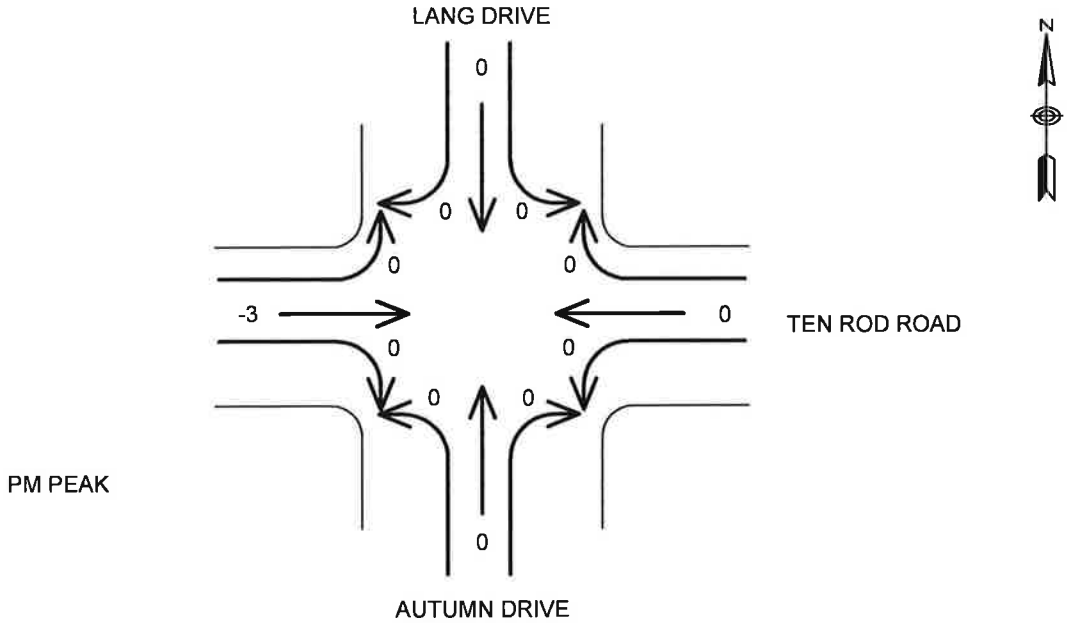
Splits and Phases: 2: Ten Rod Road & Lang Drive



TRAFFIC VOLUMES
THE PRESERVE AT ROLLING GREENS
TEN ROD ROAD, NORTH KINGSTOWN, RI
REDISTRIBUTED TRIPS

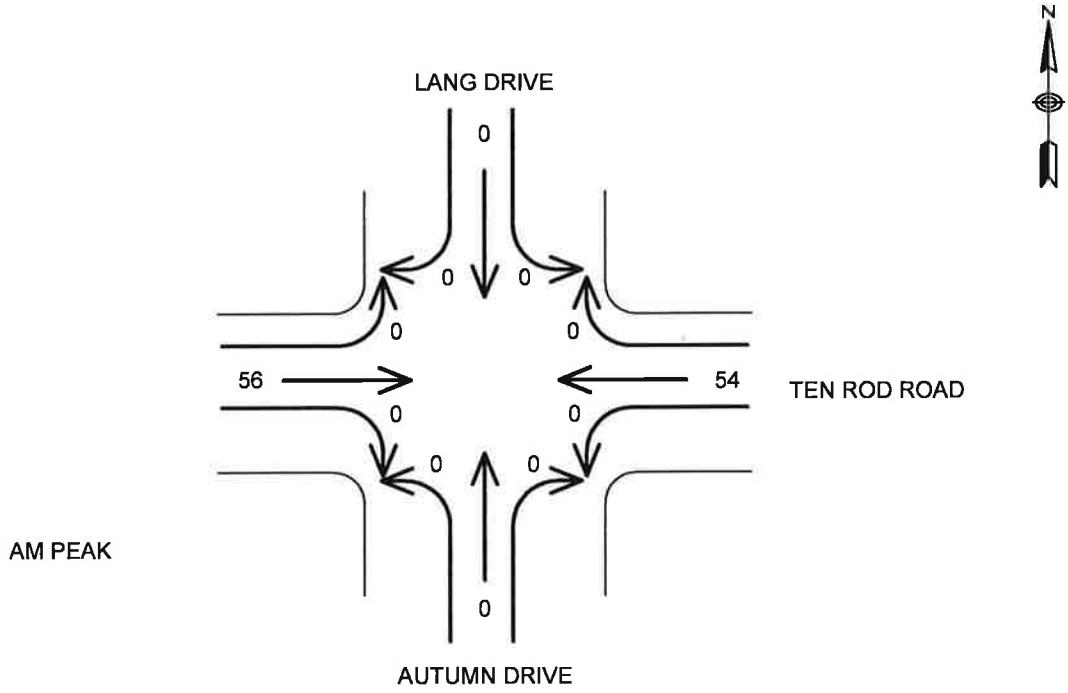


AM PEAK



PM PEAK

TRAFFIC VOLUMES
THE PRESERVE AT ROLLING GREENS
TEN ROD ROAD, NORTH KINGSTOWN, RI
SITE GENERATED TRIPS



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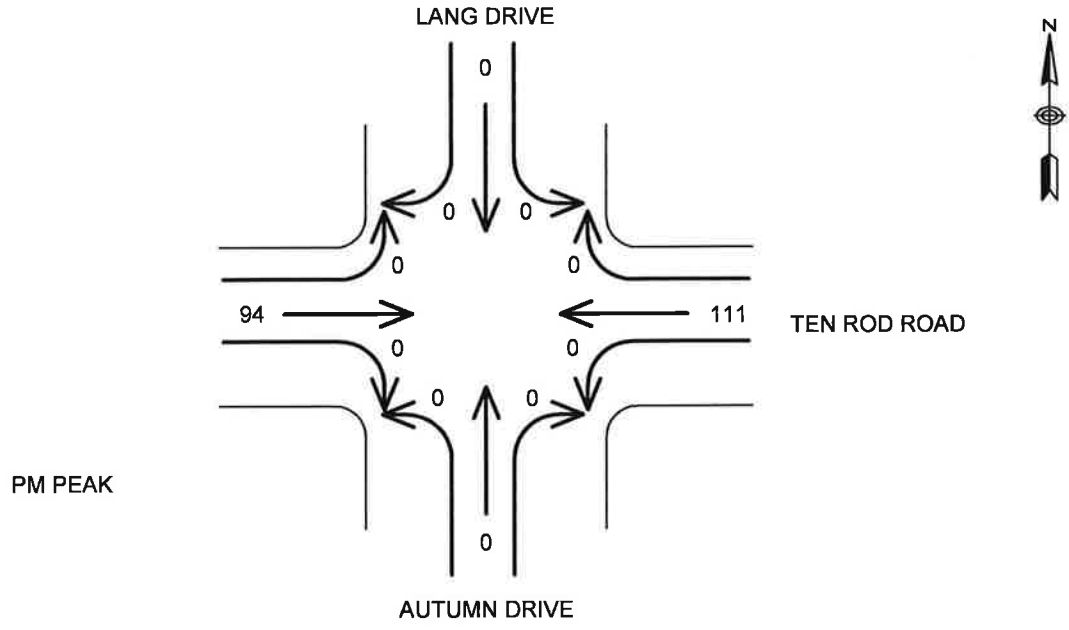
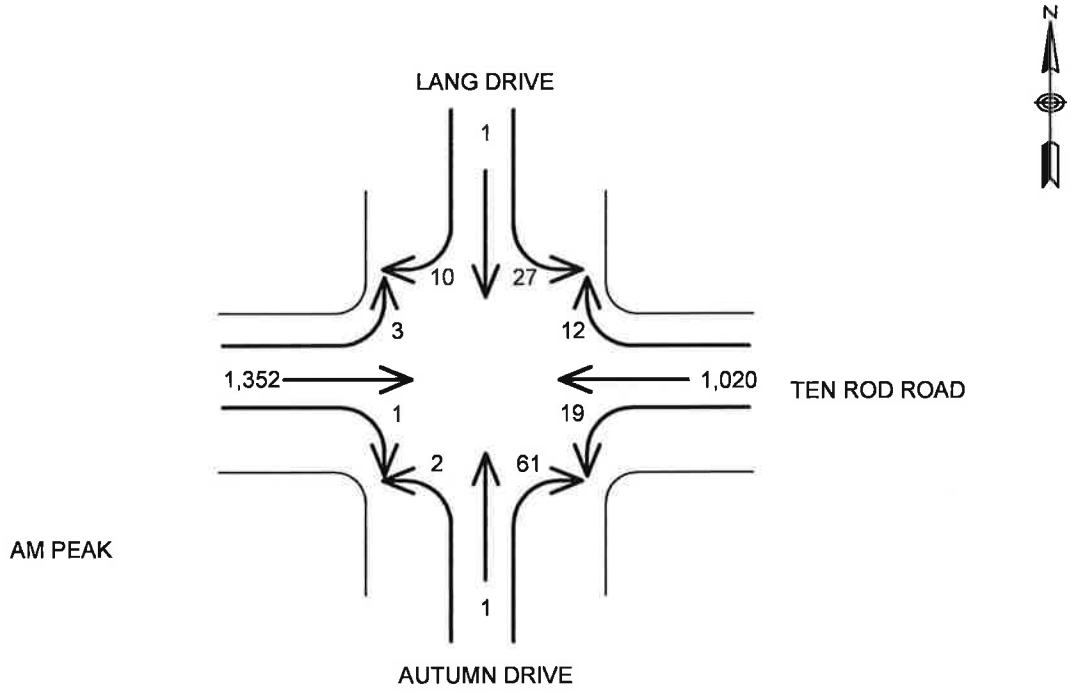
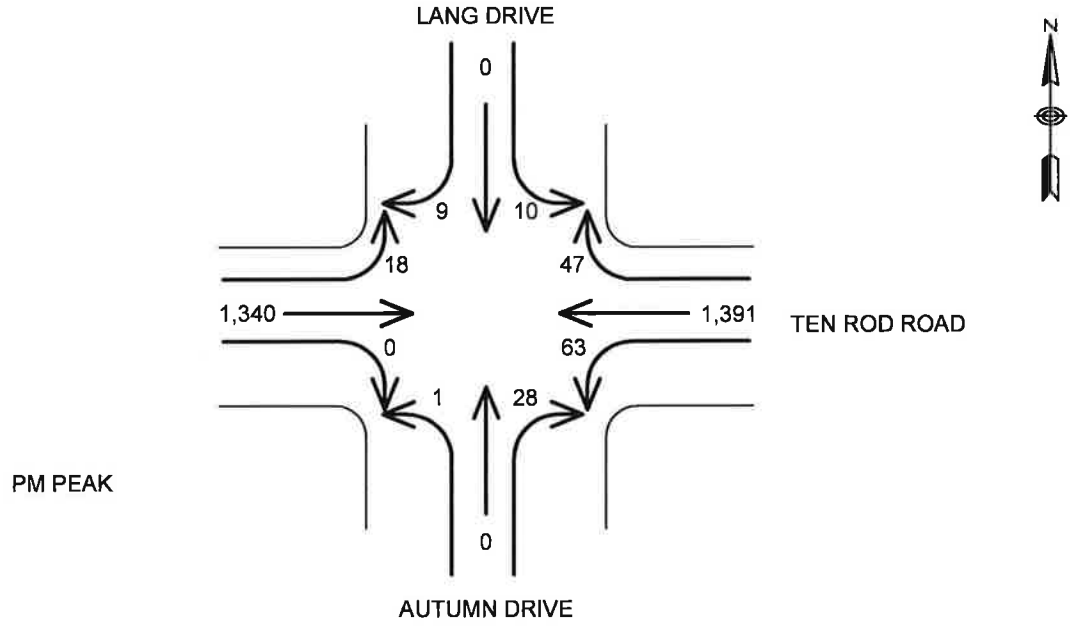


PM PEAK

TRAFFIC VOLUMES
THE PRESERVE AT ROLLING GREENS
TEN ROD ROAD, NORTH KINGSTOWN, RI
BUILD CONDITIONS



AM PEAK



PM PEAK

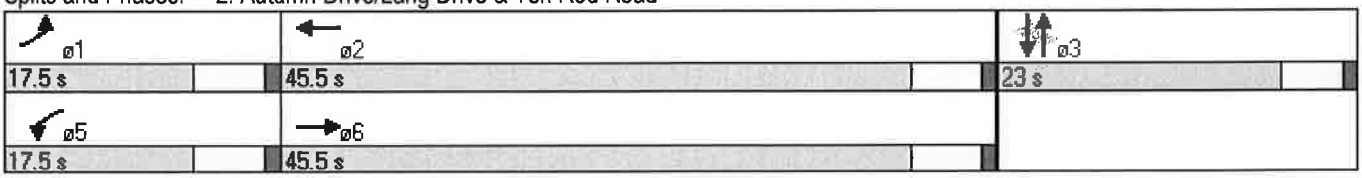
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	3	1352	1	19	1020	12	2	1	61	27	1	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	12	12	11	12	12	13	12	12	12	12
Storage Length (ft)	50		0	50		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.998			0.872			0.966	
Flt Protected	0.950			0.950				0.998			0.965	
Satd. Flow (prot)	1805	3421	0	1703	3350	0	0	1709	0	0	1721	0
Flt Permitted	0.950			0.950				0.985			0.735	
Satd. Flow (perm)	1805	3421	0	1703	3350	0	0	1686	0	0	1311	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					2			77			12	
Link Speed (mph)		45			55			30			30	
Link Distance (ft)		1804			1372			543			441	
Travel Time (s)		27.3			17.0			12.3			10.0	
Peak Hour Factor	0.96	0.96	0.96	0.95	0.95	0.95	0.79	0.79	0.79	0.80	0.80	0.80
Heavy Vehicles (%)	0%	2%	0%	6%	4%	0%	0%	0%	0%	4%	0%	0%
Adj. Flow (vph)	3	1408	1	20	1074	13	3	1	77	34	1	12
Shared Lane Traffic (%)												
Lane Group Flow (vph)	3	1409	0	20	1087	0	0	81	0	0	47	0
Turn Type	Prot	NA		Prot	NA		Perm	NA		Perm	NA	
Protected Phases	1	6		5	2			3			3	
Permitted Phases							3			3		
Detector Phase	1	6		5	2		3	3		3	3	
Switch Phase												
Minimum Initial (s)	5.0	8.0		5.0	8.0		8.0	8.0		8.0	8.0	
Minimum Split (s)	10.5	13.5		10.5	13.5		13.0	13.0		13.0	13.0	
Total Split (s)	17.5	45.5		17.5	45.5		23.0	23.0		23.0	23.0	
Total Split (%)	20.3%	52.9%		20.3%	52.9%		26.7%	26.7%		26.7%	26.7%	
Yellow Time (s)	4.5	4.5		4.5	4.5		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0			0.0	
Total Lost Time (s)	5.5	5.5		5.5	5.5			5.0			5.0	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		None	None		None	None	
Act Effct Green (s)	7.1	31.7		7.6	31.9			10.3			10.3	
Actuated g/C Ratio	0.15	0.67		0.16	0.67			0.22			0.22	
v/c Ratio	0.01	0.62		0.07	0.48			0.19			0.16	
Control Delay	27.7	9.1		26.4	7.2			9.6			21.0	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay	27.7	9.1		26.4	7.2			9.6			21.0	
LOS	C	A		C	A			A			C	
Approach Delay		9.1			7.5			9.6			21.0	
Approach LOS		A			A			A			C	
Queue Length 50th (ft)	1	110		4	73			1			8	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 95th (ft)	**9**	**331**		**28**	**210**			29			**38**	
Internal Link Dist (ft)		1724			1292			463			361	
Turn Bay Length (ft)	**50**			**50**								
Base Capacity (vph)	570	2807		537	2764			839			627	
Starvation Cap Reductn	**0**	**0**		**0**	**0**			**0**			**0**	
Spillback Cap Reductn	0	0		0	0			0			0	
Storage Cap Reductn	**0**	**0**		**0**	**0**			**0**			**0**	
Reduced v/c Ratio	0.01	0.50		0.04	0.39			0.10			0.07	

Intersection Summary

Area Type: Other
Cycle Length: 86
Actuated Cycle Length: 47.3
Natural Cycle: 60
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.62
Intersection Signal Delay: 8.7 Intersection LOS: A
Intersection Capacity Utilization 55.0% **ICU Level of Service A**
Analysis Period (min) 15

Splits and Phases: 2: Autumn Drive/Lang Drive & Ten Rod Road



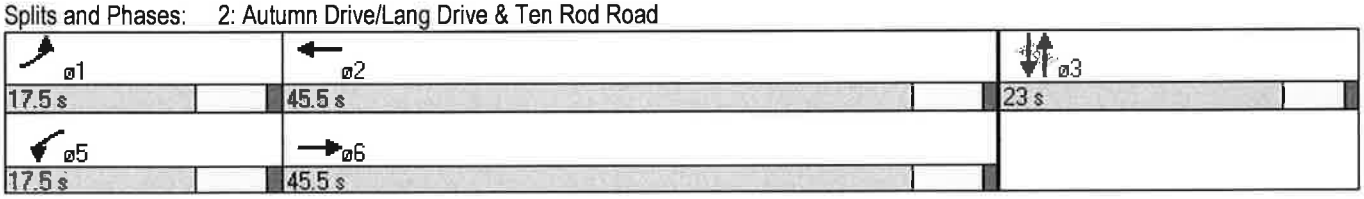
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	18	1340	0	63	1391	47	1	0	28	10	0	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	12	12	11	12	12	13	12	12	12	12
Storage Length (ft)	50		0	50		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.995			0.869			0.935	
Flt Protected	0.950			0.950				0.999			0.975	
Satd. Flow (prot)	1805	3455	0	1805	3439	0	0	1704	0	0	1732	0
Flt Permitted	0.950			0.950				0.988			0.844	
Satd. Flow (perm)	1805	3455	0	1805	3439	0	0	1686	0	0	1499	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					5			*33			*13	
Link Speed (mph)		45			55			30			30	
Link Distance (ft)		1805			1372			543			441	
Travel Time (s)		27.3			17.0			12.3			10.0	
Peak Hour Factor	0.93	0.93	0.93	0.94	0.94	0.94	0.84	0.84	0.84	0.71	0.71	0.71
Heavy Vehicles (%)	0%	1%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	19	1441	0	67	1480	50	1	0	33	14	0	13
Shared Lane Traffic (%)												
Lane Group Flow (vph)	19	1441	0	67	1530	0	0	34	0	0	27	0
Turn Type	Prot	NA		Prot	NA		Perm	NA		Perm	NA	
Protected Phases	1	6		5	2			3			3	
Permitted Phases							3			3		
Detector Phase	1	6		5	2		3	3		3	3	
Switch Phase												
Minimum Initial (s)	5.0	8.0		5.0	8.0		8.0	8.0		8.0	8.0	
Minimum Split (s)	10.5	13.5		10.5	13.5		13.0	13.0		13.0	13.0	
Total Split (s)	17.5	45.5		17.5	45.5		23.0	23.0		23.0	23.0	
Total Split (%)	20.3%	52.9%		20.3%	52.9%		26.7%	26.7%		26.7%	26.7%	
Yellow Time (s)	4.5	4.5		4.5	4.5		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0			0.0	
Total Lost Time (s)	5.5	5.5		5.5	5.5			5.0			5.0	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		None	None		None	None	
Act Effct Green (s)	7.9	38.6		9.4	43.3			10.4			10.4	
Actuated g/C Ratio	0.15	0.72		0.18	0.81			0.19			0.19	
v/c Ratio	0.07	0.58		0.21	0.55			0.10			0.09	
Control Delay	31.0	11.0		29.1	6.5			13.3			22.5	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay	31.0	11.0		29.1	6.5			13.3			22.5	
LOS	C	B		C	A			B			C	
Approach Delay		11.3			7.4			13.3			22.5	
Approach LOS		B			A			B			C	
Queue Length 50th (ft)	7	236		26	125			0			5	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 95th (ft)	27	350		63	349			22			21	
Internal Link Dist (ft)		1725			1292			463			361	
Turn Bay Length (ft)	50			50								
Base Capacity (vph)	526	2532		526	2786			756			663	
Starvation Cap Reductn	0	0		0	0			0			0	
Spillback Cap Reductn	0	0		0	0			0			0	
Storage Cap Reductn	0	0		0	0			0			0	
Reduced v/c Ratio	0.04	0.57		0.13	0.55			0.04			0.04	

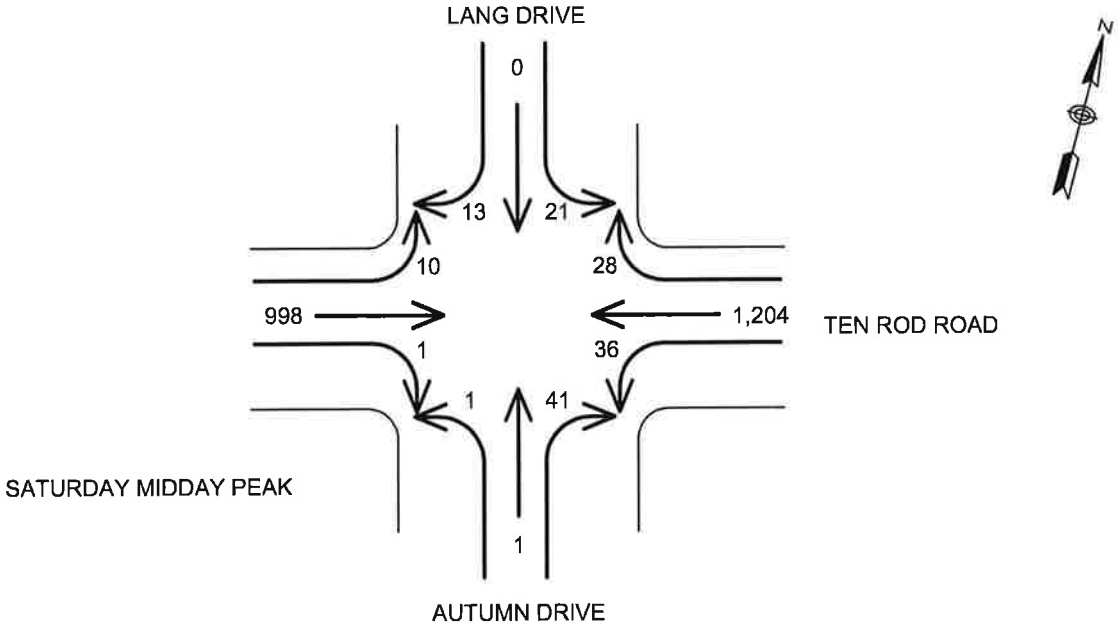
Intersection Summary

Area Type: Other
Cycle Length: 86
Actuated Cycle Length: 53.5
Natural Cycle: 60
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.58
Intersection Signal Delay: 9.4 Intersection LOS: A
Intersection Capacity Utilization 64.1% **ICU Level of Service C**
Analysis Period (min) 15
* **User Entered Value**

Splits and Phases: 2: Autumn Drive/Lang Drive & Ten Rod Road



TRAFFIC VOLUMES
THE PRESERVE AT ROLLING GREENS
TEN ROD ROAD, NORTH KINGSTOWN, RI
NO BUILD CONDITIONS



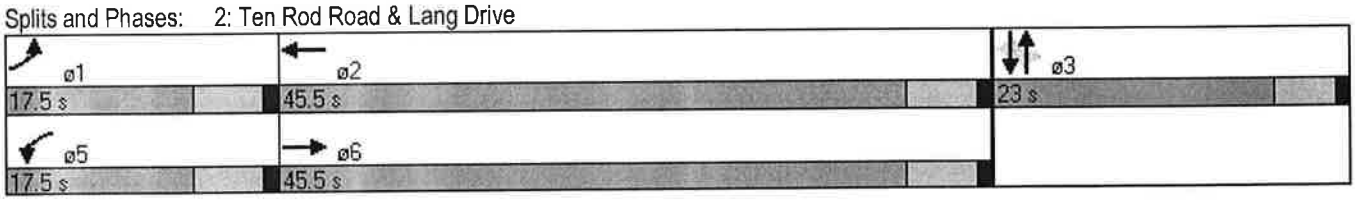
SATURDAY MIDDAY PEAK

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	10	998	1	36	1204	28	1	1	41	21	0	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	12	12	11	12	12	13	12	12	12	12
Storage Length (ft)	50		0	50		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.997			0.870			0.948	
Flt Protected	0.950			0.950				0.999			0.970	
Satd. Flow (prot)	1805	3455	0	1805	3446	0	0	1677	0	0	1695	0
Flt Permitted	0.950			0.950				0.993			0.777	
Satd. Flow (perm)	1805	3455	0	1805	3446	0	0	1667	0	0	1358	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					3			56			21	
Link Speed (mph)		45			55			30			30	
Link Distance (ft)		1532			1372			543			441	
Travel Time (s)		23.2			17.0			12.3			10.0	
Peak Hour Factor	0.90	0.90	0.90	0.92	0.92	0.92	0.73	0.73	0.73	0.62	0.62	0.62
Heavy Vehicles (%)	0%	1%	0%	0%	1%	0%	0%	100%	0%	0%	0%	8%
Adj. Flow (vph)	11	1109	1	39	1309	30	1	1	56	34	0	21
Shared Lane Traffic (%)												
Lane Group Flow (vph)	11	1110	0	39	1339	0	0	58	0	0	55	0
Turn Type	Prot			Prot			Perm			Perm		
Protected Phases	1	6		5	2			3			3	
Permitted Phases							3			3		
Detector Phase	1	6		5	2		3	3		3	3	
Switch Phase												
Minimum Initial (s)	5.0	8.0		5.0	8.0		8.0	8.0		8.0	8.0	
Minimum Split (s)	10.5	13.5		10.5	13.5		13.0	13.0		13.0	13.0	
Total Split (s)	17.5	45.5	0.0	17.5	45.5	0.0	23.0	23.0	0.0	23.0	23.0	0.0
Total Split (%)	20.3%	52.9%	0.0%	20.3%	52.9%	0.0%	26.7%	26.7%	0.0%	26.7%	26.7%	0.0%
Maximum Green (s)	12.0	40.0		12.0	40.0		18.0	18.0		18.0	18.0	
Yellow Time (s)	4.5	4.5		4.5	4.5		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	4.0	5.5	5.5	4.0	5.0	5.0	4.0	5.0	5.0	4.0
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	None		None	None	
Act Effct Green (s)	7.5	28.4		8.3	30.7			10.5			10.5	
Actuated g/C Ratio	0.16	0.61		0.18	0.66			0.23			0.23	
v/c Ratio	0.04	0.52		0.12	0.59			0.14			0.17	
Control Delay	26.7	10.1		25.2	8.6			10.1			18.7	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay	26.7	10.1		25.2	8.6			10.1			18.7	
LOS	C	B		C	A			B			B	
Approach Delay		10.2			9.0			10.1			18.7	

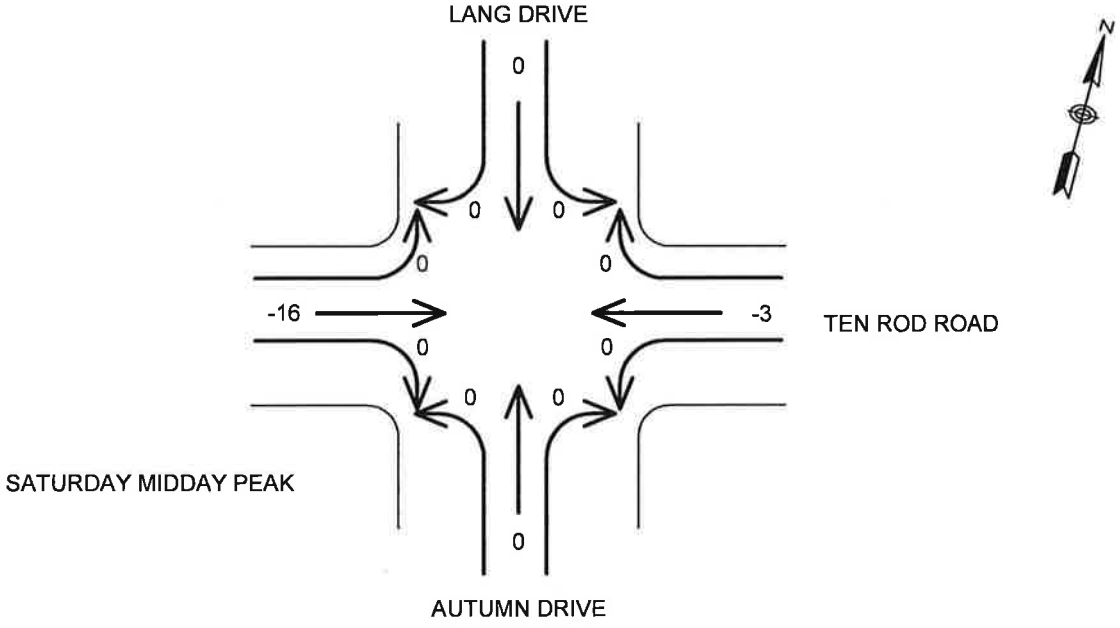
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS		B			A			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 86			
Actuated Cycle Length: 46.3			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.59			
Intersection Signal Delay: 9.8		Intersection LOS: A	
Intersection Capacity Utilization 51.5%		ICU Level of Service A	
Analysis Period (min) 15			

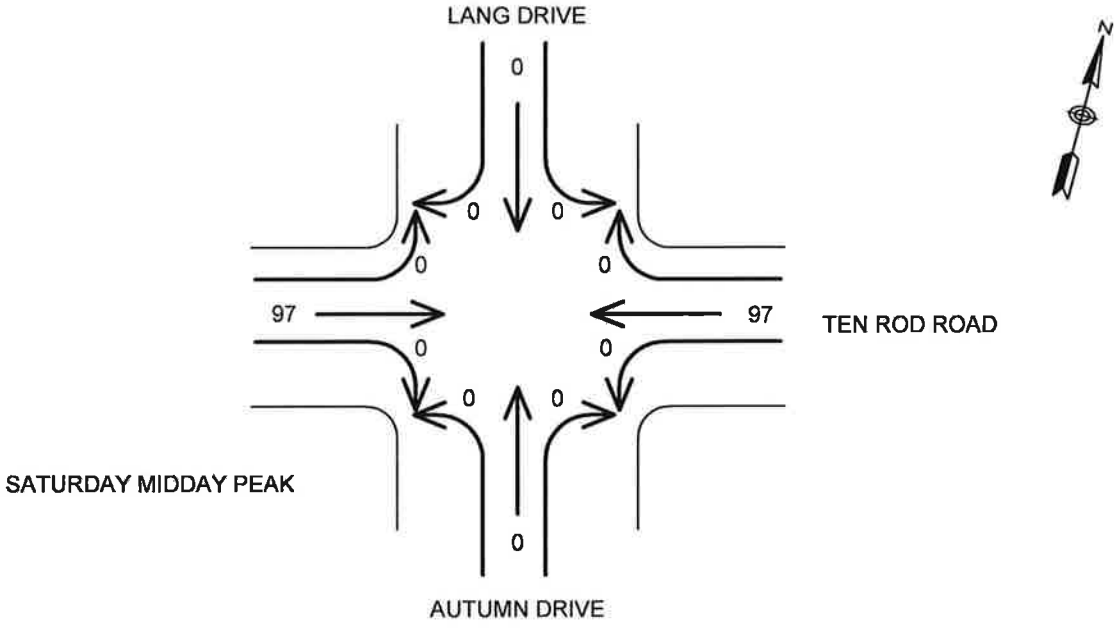
Splits and Phases: 2: Ten Rod Road & Lang Drive



TRAFFIC VOLUMES
THE PRESERVE AT ROLLING GREENS
TEN ROD ROAD, NORTH KINGSTOWN, RI
REDISTRIBUTED TRIPS

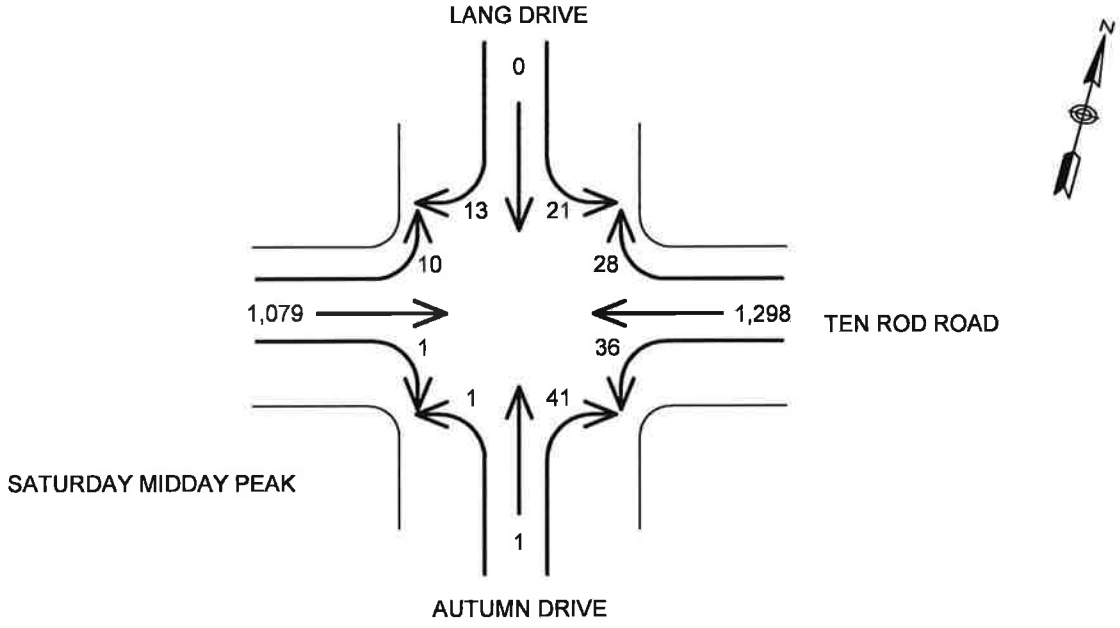


TRAFFIC VOLUMES
THE PRESERVE AT ROLLING GREENS
TEN ROD ROAD, NORTH KINGSTOWN, RI
SITE GENERATED TRIPS



SATURDAY MIDDAY PEAK

TRAFFIC VOLUMES
THE PRESERVE AT ROLLING GREENS
TEN ROD ROAD, NORTH KINGSTOWN, RI
BUILD CONDITIONS



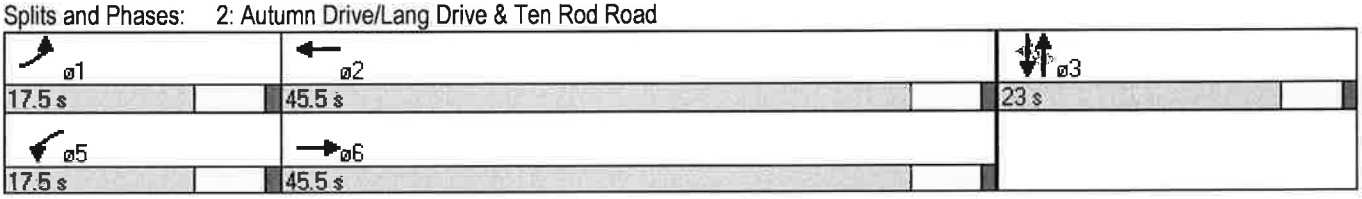
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	10	1079	1	36	1298	28	1	1	41	21	0	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	12	12	11	12	12	13	12	12	12	12
Storage Length (ft)	50		0	50		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.997			0.870			0.948	
Flt Protected	0.950			0.950				0.999			0.970	
Satd. Flow (prot)	1805	3455	0	1805	3445	0	0	1677	0	0	1695	0
Flt Permitted	0.950			0.950				0.993			0.777	
Satd. Flow (perm)	1805	3455	0	1805	3445	0	0	1667	0	0	1358	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					3			56			*21	
Link Speed (mph)		45			55			30			30	
Link Distance (ft)		1809			1372			543			441	
Travel Time (s)		27.4			17.0			12.3			10.0	
Peak Hour Factor	0.90	0.90	0.90	0.92	0.92	0.92	0.73	0.73	0.73	0.62	0.62	0.62
Heavy Vehicles (%)	0%	1%	0%	0%	1%	0%	0%	100%	0%	0%	0%	8%
Adj. Flow (vph)	11	1199	1	39	1411	30	1	1	56	34	0	21
Shared Lane Traffic (%)												
Lane Group Flow (vph)	11	1200	0	39	1441	0	0	58	0	0	55	0
Turn Type	Prot	NA		Prot	NA		Perm	NA		Perm	NA	
Protected Phases	1	6		5	2			3			3	
Permitted Phases							3			3		
Detector Phase	1	6		5	2		3	3		3	3	
Switch Phase												
Minimum Initial (s)	5.0	8.0		5.0	8.0		8.0	8.0		8.0	8.0	
Minimum Split (s)	10.5	13.5		10.5	13.5		13.0	13.0		13.0	13.0	
Total Split (s)	17.5	45.5		17.5	45.5		23.0	23.0		23.0	23.0	
Total Split (%)	20.3%	52.9%		20.3%	52.9%		26.7%	26.7%		26.7%	26.7%	
Yellow Time (s)	4.5	4.5		4.5	4.5		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0			0.0	
Total Lost Time (s)	5.5	5.5		5.5	5.5			5.0			5.0	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		None	None		None	None	
Act Effct Green (s)	7.4	30.6		8.2	32.9			10.4			10.4	
Actuated g/C Ratio	0.15	0.63		0.17	0.68			0.21			0.21	
v/c Ratio	0.04	0.55		0.13	0.62			0.14			0.18	
Control Delay	27.6	10.2		26.2	8.8			10.4			19.4	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay	27.6	10.2		26.2	8.8			10.4			19.4	
LOS	C	B		C	A			B			B	
Approach Delay		10.4			9.3			10.4			19.4	
Approach LOS		B			A			B			B	
Queue Length 50th (ft)	3	84		9	113			1			8	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 95th (ft)	**19**	**266**		**43**	**333**			**21**			**28**	
Internal Link Dist (ft)		1729			1292			463			361	
Turn Bay Length (ft)	**50**			**50**								
Base Capacity (vph)	557	2782		557	2823			801			639	
Starvation Cap Reductn	**0**	**0**		**0**	**0**			**0**			**0**	
Spillback Cap Reductn	0	0		0	0			0			0	
Storage Cap Reductn	**0**	**0**		**0**	**0**			**0**			**0**	
Reduced v/c Ratio	0.02	0.43		0.07	0.51			0.07			0.09	

Intersection Summary

Area Type: Other
Cycle Length: 86
Actuated Cycle Length: 48.5
Natural Cycle: 60
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.62
Intersection Signal Delay: 10.0 Intersection LOS: A
Intersection Capacity Utilization 54.1% **ICU Level of Service A**
Analysis Period (min) 15
* **User Entered Value**

Splits and Phases: 2: Autumn Drive/Lang Drive & Ten Rod Road



APPENDIX D: ACCIDENT DATA SUMMARY

Project: The Preserve at Rolling Greens
North Kingstown, Rhode Island

BAI Project No.: 210037

Person No.

O	Operator
P	Passenger
M	Motorcycle
B	Bicyclist
NA	Not Available

Accident Type

A	Angle
BACKED INTO	Backed Into
BS	Broadside
HO	Head-On
LC	Lost Control
M	Merging
NA	Not Available
OBJECT	Object
PED	Pedestrian Involved
RE	Rear-End
RO	Rollover
ROR	Run Off Road
SS	Sideswipe

Weather

NAC	No Adverse Condition

Project : The Preserve at Rolling Greens
North Kingstown, Rhode Island

BAI Project No.: 210037

ACCIDENT DATA

Accident No.	Report No.	Vehicle No.	Date	Direction of Travel	Intersection/Accident Location	Person No.	No. of Injuries	Fatalities	Accident Type	Pavement Condition	Weather	Lighting	Military Time	Day
1	07-287-AC	1	3/31/2007	EAST	INTERSECTION OF ROUTE 102 AND OATLEY'S DRIVEWAY	O	0	0	BS	DRY	NAC	DAYLIGHT	1514	SAT
		2		WEST		M/P	2							
2	07-306-AC	1	4/9/2007	WEST	INTERSECTION OF ROUTE 102 AND OATLEY'S DRIVEWAY	O	0	0	BS	DRY	NAC	DAYLIGHT	1541	MON
		2		SOUTH		O	1							
3	07-325-AC	1	4/14/2007	WEST	INTERSECTION OF ROUTE 102 AND ROUTE 2	O	0	0	A	DRY	CLOUDY	DARK (LIGHTED)	2001	SAT
		2		EAST		O/P	0							
4	07-424-AC	1	5/26/2007	WEST	INTERSECTION OF ROUTE 102 AND ROUTE 2	O/P	1	0	A	DRY	NAC	DAYLIGHT	1028	SAT
		2		EAST		O	0							
5	07-571-AC	1	7/5/2007	WEST	INTERSECTION OF ROUTE 102 AND ROUTE 2	O/2P	0	0	A	WET	CLOUDY	DAYLIGHT	0907	THURS
		2		EAST		O	0							
6	07-578-AC	1	7/6/2007	WEST	AT LANE DROP TO WEST OF ROUTE 2	O	0	0	SS	DRY	NAC	DAYLIGHT	1550	FRI
		2		WEST		O	0							
7	07-582-AC	1	7/7/2007	EAST	INTERSECTION OF ROUTE 102 AND OATLEY'S DRIVEWAY	O/P	0	0	A	DRY	NAC	DAYLIGHT	1239	SAT
		2		WEST		O	0							
8	07-587-AC	1	7/8/2007	WEST	INTERSECTION OF ROUTE 102 AND OATLEY'S DRIVEWAY	O	0	0	SS	DRY	NAC	DAYLIGHT	1355	SUN
		2		WEST		M	1							
9	07-663-AC	1	7/28/2007	EAST	INTERSECTION OF ROUTE 102 AND OATLEY'S DRIVEWAY	O/P	0	0	BS	DRY	NAC	DAYLIGHT	1211	SAT
		2		WEST		O	1							
10	07-756-AC	1	9/1/2007	NORTH	INTERSECTION OF ROUTE 102 AND ROUTE 2 (FREE RIGHT)	O	0	0	RO	DRY	NAC	DARK	2022	SAT
11	07-883-AC	1	10/20/2007	NORTH	INTERSECTION OF ROUTE 102 AND ROUTE 2 (FREE RIGHT)	O	0	0	RE	DRY	NAC	DAYLIGHT	1654	SAT
		2		NORTH		O	0							
12	07-969-AC	1	11/21/2007	WEST	INTERSECTION OF ROUTE 102 AND ROUTE 2	O/P	0	0	RE	DRY	NAC	DARK	1715	WED
		2		WEST		O	0							
13	07-1094-AC	1	12/28/2007	WEST	INTERSECTION OF ROUTE 102 AND ROUTE 2	O/P	0	0	RE	DRY	NAC	DARK (LIGHTED)	1723	FRI
		2		WEST		O	0							
14	08-251-AC	1	3/28/2008	EAST	INTERSECTION OF ROUTE 102 AND ROUTE 2	O/P	2	0	HO	DRY	NAC	DARK (LIGHTED)	2206	FRI
		2		WEST		O/P	2							
15	08-265-AC	1	4/4/2008	EAST	INTERSECTION OF ROUTE 102 AND ROUTE 2	O	1	0	A	WET	RAIN	DARK (LIGHTED)	2112	FRI
		2		WEST		O	1							
16	08-283-AC	1	4/15/2008	NORTH	INTERSECTION OF ROUTE 102 AND ROUTE 2 (FREE RIGHT)	O	0	0	RE	DRY	NAC	DAYLIGHT	1015	TUES
		2		NORTH		O	0							
17	08-417-AC	1	6/1/2008	EAST	INTERSECTION OF ROUTE 102 AND ROUTE 2	O/P	1	0	A	DRY	NAC	DAYLIGHT	1158	SUN
		2		WEST		O	0							
18	08-442-AC	1	6/7/2008	EAST	INTERSECTION OF ROUTE 102 AND ROUTE 2	O	0	0	A	DRY	NAC	DAYLIGHT	1419	SAT
		2		WEST		O/P	0							
19	08-604-AC	1	7/30/2008	EAST	INTERSECTION OF ROUTE 102 AND ROUTE 2	O	0	0	RE	DRY	NAC	DAYLIGHT	0743	WED
		2		EAST		O	0							
20	08-655-AC	1	8/22/2008	NORTH	INTERSECTION OF ROUTE 102 AND ROUTE 2 (FREE RIGHT)	O/2P	0	0	RE	DRY	NAC	DAYLIGHT	1427	FRI
		2		NORTH		O	0							
21	08-717-AC	1	9/15/2008	EAST	INTERSECTION OF ROUTE 102 AND ROUTE 2	O	0	0	RE	DRY	NAC	DAYLIGHT	0733	MON
		2		EAST		O	0							
				EAST		O	0							
22	08-778-AC	1	10/5/2008	WEST	INTERSECTION OF ROUTE 102 AND OATLEY'S DRIVEWAY	O/P	0	0	A	WET	RAIN	DAYLIGHT	1005	SUN
		2		SOUTH		O/2P	0							
23	08-832-AC	1	10/24/2008	WEST	INTERSECTION OF ROUTE 102 AND ROUTE 2	O	0	0	RE	DRY	NAC	DAYLIGHT	1715	FRI
		2		WEST		O	0							

Project : The Preserve at Rolling Greens
North Kingstown, Rhode Island

BAI Project No.: 210037

ACCIDENT DATA

Accident No.	Report No.	Vehicle No.	Date	Direction of Travel	Intersection/Accident Location	Person No.	No. of Injuries	Fatalities	Accident Type	Pavement Condition	Weather	Lighting	Military Time	Day
24	08-834-AC	1	10/25/2008	WEST	INTERSECTION OF ROUTE 102 AND ROUTE 2	O	0	0	RE	DRY	CLOUDY	DAYLIGHT	1714	SAT
		2		WEST		O/P	0							
25	08-898-AC	1	11/15/2008	EAST	INTERSECTION OF ROUTE 102 AND ROUTE 2	O/3P	4	0	HO	WET	RAIN	DAYLIGHT	1605	SAT
		2		WEST		O	1							
26	08-968-AC	1	12/14/2008	EAST	INTERSECTION OF ROUTE 102 AND ROUTE 2	O	0	0	A	DRY	NAC	DAYLIGHT	1426	SUN
		2		WEST		O	1							
27	08-977-AC	1	12/16/2008	NORTH	INTERSECTION OF ROUTE 102 AND ROUTE 2 (FREE RIGHT)	O	0	0	RE	WET	CLOUDY	DAYLIGHT	1140	TUES
		2		NORTH		O	0							
28	08-1004-AC	1	12/22/2008	WEST	INTERSECTION OF ROUTE 102 AND ROUTE 2	O/P	1	0	RE	WET	RAIN	DAYLIGHT	1633	MON
		2		WEST		O	0							
29	09-65-AC	1	1/22/2009	NORTH	INTERSECTION OF ROUTE 102 AND ROUTE 2 (FREE RIGHT)	O	1	0	RE	DRY	NAC	DAYLIGHT	0915	THURS
		2		NORTH		O	0							
30	09-75-AC	1	1/26/2009	WEST	INTERSECTION OF ROUTE 102 AND ROUTE 2	O/P	0	0	BS	DRY	NAC	DARK (NOT LIT)	1850	MON
		2		EAST		O/2P	0							
31	09-128-AC	1	2/12/2009	EAST	ROUTE 102 BETWEEN ROUTE 2 AND PLAIN ROAD	O	0	0	TREE	DRY	NAC	DAYLIGHT	1428	THURS
32	09-231-AC	1	3/27/2009	WEST	INTERSECTION OF ROUTE 102 AND ROUTE 2	O	0	0	RE	DRY	NAC	DAYLIGHT	0952	FRI
		2		WEST		O/2P	0							
		3		WEST		O	0							
33	09-266-AC	1	4/7/2009	EAST	INTERSECTION OF ROUTE 102 AND ROUTE 2	O	0	0	RE	DRY	NAC	DAYLIGHT	1453	TUES
		2		EAST		O	0							
34	09-274-AC	1	4/11/2009	WEST	INTERSECTION OF ROUTE 102 AND OATLEY'S DRIVEWAY	O	0	0	A	WET	NAC	DARK (NOT LIT)	0003	SAT
		2		SOUTH		O/P	0							
35	09-314-AC	1	4/29/2009	EAST	INTERSECTION OF ROUTE 102 AND ROUTE 2	O	0	0	A	DRY	NAC	DAYLIGHT	1207	WED
		2		WEST		O	0							
36	09-354-AC	1	5/11/2009	EAST	INTERSECTION OF ROUTE 102 AND ROUTE 2	O	0	0	A	DRY	NAC	DAYLIGHT	0835	MON
		2		WEST		O	1							
37	09-373-AC	1	5/20/2009	EAST	INTERSECTION OF ROUTE 102 AND ROUTE 2	O	1	0	RE	DRY	NAC	DAYLIGHT	1036	WED
		2		EAST		O	0							
38	09-386-AC	1	5/22/2009	WEST	INTERSECTION OF ROUTE 102 AND OATLEY'S DRIVEWAY	O/P	1	0	A	DRY	NAC	DAYLIGHT	1212	FRI
		2		EAST		O	0							
39	09-450-AC	1	6/15/2009	EAST	INTERSECTION OF ROUTE 102 AND ROUTE 2	O	0	0	RE	DRY	NAC	DAYLIGHT	0922	MON
		2		EAST		O	0							
40	09-489-AC	1	6/26/2009	WEST	INTERSECTION OF ROUTE 102 AND ROUTE 2	O/P	1	0	A	DRY	NAC	DAYLIGHT	1247	FRI
		2		EAST		O	0							
41	09-558-AC	1	7/14/2009	WEST	INTERSECTION OF ROUTE 102 AND ROUTE 2	O/P	1	0	RE	DRY	NAC	DAYLIGHT	1300	TUES
		2		WEST		O/3P	3							
		3		WEST		O	0							
42	09-572-AC	1	7/18/2009	WEST	INTERSECTION OF ROUTE 102 AND ROUTE 2	O	0	0	RE	DRY	NAC	DAYLIGHT	0851	SAT
		2		WEST		O/P	2							
43	09-609-AC	1	7/28/2009	EAST	INTERSECTION OF ROUTE 102 AND ROUTE 2	O	0	0	RE	DRY	NAC	DAYLIGHT	0932	TUES
		2		EAST		O	0							
44	09-623-AC	1	8/3/2009	NORTH	INTERSECTION OF ROUTE 102 AND ROUTE 2 (FREE RIGHT)	O	O	0	RE	DRY	NAC	DAYLIGHT	0936	MON
		2		NORTH		O	O							
45	09-626-AC	1	8/3/2009	WEST	INTERSECTION OF ROUTE 102 AND OATLEY'S DRIVEWAY	O	0	0	A	DRY	NAC	DAYLIGHT	1635	MON
		2		SOUTH		O/2P	1							
46	09-643-AC	1	8/8/2009	WEST	INTERSECTION OF ROUTE 102 AND OATLEY'S DRIVEWAY	O/P	0	0	BS	DRY	NAC	DAYLIGHT	0945	SAT
		2		EAST		O	0							

Project : The Preserve at Rolling Greens
North Kingstown, Rhode Island

BAI Project No.: 210037

ACCIDENT DATA

Accident No.	Report No.	Vehicle No.	Date	Direction of Travel	Intersection/Accident Location	Person No.	No. of Injuries	Fatalities	Accident Type	Pavement Condition	Weather	Lighting	Military Time	Day
47	09-645-AC	1	8/8/2009	EAST	INTERSECTION OF ROUTE 102 AND OATLEY'S DRIVEWAY	O/P	0	0	A	DRY	NAC	DAYLIGHT	1114	SAT
		2		WEST		O/P	1							
48	10-120-AC	1	2/10/2010	NORTH	INTERSECTION OF ROUTE 102 AND ROUTE 2 (FREE RIGHT)	O	1	0	LC	SNOW	SNOW	DAYLIGHT	1134	WED
49	10-209-AC	1	3/7/2010	WEST	INTERSECTION OF ROUTE 102 AND ROUTE 2	O	0	0	A	DRY	NAC	DAYLIGHT	1735	SUN
		2		EAST		O	0							
50	10-328-AC	1	4/26/2010	EAST	INTERSECTION OF ROUTE 102 AND ROUTE 2	O	1	0	A	WET	CLOUDY	DAYLIGHT	1733	MON
		2		WEST		O	1							
51	10-451-AC	1	6/4/2010	EAST	INTERSECTION OF ROUTE 102 AND ROUTE 2	O	0	0	RE	DRY	NAC	DAYLIGHT	0832	FRI
		2		EAST		O	0							
52	07-374-AC	1	5/8/2007	WEST	INTERSECTION OF ROUTE 102 AND AUTUMN DRIVE	O	1	0	RE	DRY	NAC	DAYLIGHT	1728	TUES
		2		WEST		O/P	0							
53	07-632-AC	1	7/20/2007	EAST	ROUTE 102 BETWEEN PLAIN ROAD AND AUTUMN DRIVE	O/5P	1	0	LC	DRY	NAC	DAYLIGHT	1900	FRI
54	07-979-AC	1	11/26/2007	WEST	INTERSECTION OF ROUTE 102 AND AUTUMN DRIVE	O	0	0	RE	WET	RAIN	DAYLIGHT	1510	MON
		2		WEST		O/P	0							
55	08-170-AC	1	2/28/2008	EAST	INTERSECTION OF ROUTE 102 AND AUTUMN DRIVE	O/P	1	0	LC	DRY	NAC	DAYLIGHT	0752	THURS
56	09-996-AC	1	12/16/2009	WEST	INTERSECTION OF ROUTE 102 AND AUTUMN DRIVE	O	0	0	HO	DRY	NAC	DAYLIGHT	1208	WED
		2		EAST		O	0							
57	10-15-AC	1	1/4/2010	EAST	INTERSECTION OF ROUTE 102 AND AUTUMN DRIVE	O	0	0	A	SAND	NAC	DUSK	1558	MON
		2		WEST		O	0							
58	10-365-AC	1	5/10/2010	EAST	INTERSECTION OF ROUTE 102 AND AUTUMN DRIVE	O	1	0	RE	DRY	NAC	DAYLIGHT	1253	MON
		2		EAST		O	0							
59	10-460-AC	1	6/6/2010	WEST	ROUTE 102 BETWEEN PLAIN ROAD AND AUTUMN DRIVE	O	0	0	RE	WET	RAIN	DAYLIGHT	1815	SUN
		2		WEST		O/P	1							
60	07-362-AC	1	5/2/2007	EAST	INTERSECTION OF ROUTE 102 AND LANG DRIVE	O	0	0	DEER	WET	NAC	DAYLIGHT	1249	WED
61	07-448-AC	1	6/4/2007	EAST	INTERSECTION OF ROUTE 102 AND LANG DRIVE	O	1	0	A	WET	RAIN	DAYLIGHT	1540	MON
		2		EAST		O	0							
62	07-596-AC	1	7/11/2007	EAST	ROUTE 102 BETWEEN PLAIN ROAD AND AUTUMN DRIVE	O	0	0	SS	DRY	NAC	DAYLIGHT	1326	WED
		2		EAST		O	0							
63	07-623-AC	1	7/19/2007	EAST	INTERSECTION OF ROUTE 102 AND LANG DRIVE	O	0	0	RE	DRY	NAC	DAYLIGHT	1436	THURS
		2		EAST		O	0							
64	07-696-AC	1	8/14/2007	EAST	INTERSECTION OF ROUTE 102 AND LANG DRIVE	O	0	0	RE	DRY	NAC	DAYLIGHT	0738	TUES
		2		EAST		O	1							
65	07-755-AC	1	9/1/2007	WEST	INTERSECTION OF ROUTE 102 AND LANG DRIVE	O	0	0	A	DRY	NAC	DAYLIGHT	1247	SAT
		2		SOUTH		O/P	0							
66	08-67-AC	1	1/24/2008	WEST	INTERSECTION OF ROUTE 102 AND LANG DRIVE	O	0	0	RE	DRY	NAC	DUSK	1642	THURS
		2		WEST		O	0							
67	08-165-AC	1	2/26/2008	WEST	INTERSECTION OF ROUTE 102 AND LANG DRIVE	O	0	0	BS	WET	RAIN	DAYLIGHT	1603	TUES
		2		SOUTH		O	0							
68	08-288-AC	1	4/17/2008	WEST	INTERSECTION OF ROUTE 102 AND LANG DRIVE	O	0	0	RE	DRY	NAC	DAYLIGHT	0954	THURS
		2		WEST		O/P	0							
69	08-497-AC	1	6/25/2008	WEST	ROUTE 102 BETWEEN PLAIN ROAD AND AUTUMN DRIVE	O	0	0	LC	DRY	NAC	DAYLIGHT	0913	WED
70	08-884-AC	1	11/10/2008	WEST	INTERSECTION OF ROUTE 102 AND LANG DRIVE	O	1	0	RE	DRY	NAC	DAYLIGHT	1537	MON
		2		WEST		O/P	1							

Project : The Preserve at Rolling Greens
North Kingstown, Rhode Island

BAI Project No.: 210037

ACCIDENT DATA

Accident No.	Report No.	Vehicle No.	Date	Direction of Travel	Intersection/Accident Location	Person No.	No. of Injuries	Fatalities	Accident Type	Pavement Condition	Weather	Lighting	Military Time	Day
71	09-191-AC	1	3/6/2009	EAST	INTERSECTION OF ROUTE 102 AND LANG DRIVE	O	0	0	RE	DRY	NAC	DARK (LIGHTED)	2159	FRI
		2		EAST		O/P	0							
72	09-393-AC	1	5/24/2009	WEST	INTERSECTION OF ROUTE 102 AND LANG DRIVE	O/P	1	0	RE	DRY	NAC	DAYLIGHT	1704	SUN
		2		WEST		O/4P	0							
73	09-481-AC	1	6/23/2009	EAST	ROUTE 102 BETWEEN PLAIN ROAD AND AUTUMN DRIVE	O/P	1	0	RE	DRY	RAIN	DAYLIGHT	1706	TUES
		2		EAST		O	0							
74	09-837-AC	1	10/22/2009	SOUTH	INTERSECTION OF ROUTE 102 AND LANG DRIVE	O	0	0	A	DRY	NAC	DAYLIGHT	1512	THURS
		2		WEST		O	0							
75	10-121-AC	1	2/10/2010	EAST	ROUTE 102 BETWEEN PLAIN ROAD AND AUTUMN DRIVE	O	0	0	SS	SNOW	SNOW	DAYLIGHT	1148	WED
		2		WEST		O	0							
76	10-192-AC	1	2/27/2010	WEST	ROUTE 102 BETWEEN PLAIN ROAD AND AUTUMN DRIVE	O	0	0	A	DRY	NAC	DARK (LIGHTED)	1824	SAT
		2		WEST		O	0							
77	10-384-AC	1	5/15/2010	WEST	INTERSECTION OF ROUTE 102 AND LANG DRIVE	O/2P	2	0	RE	DRY	NAC	DAYLIGHT	1620	SAT
		2		WEST		O/P	1							
		3		WEST		O	0							
78	10-529-AC	1	6/29/2010	EAST	INTERSECTION OF ROUTE 102 AND LANG DRIVE	O	0	0	A	DRY	NAC	DAYLIGHT	1633	TUES
		2		EAST		O	0							
79	10-534-AC	1	7/1/2010	SOUTH	INTERSECTION OF ROUTE 102 AND LANG DRIVE	O	0	0	A	DRY	NAC	DAYLIGHT	1811	TUES
		2		WEST		O/P	0							
80	07-685-AC	1	8/6/2007	EAST	INTERSECTION OF ROUTE 102 AND ROLLING GREENS DRIVEWAY	O	0	0	RE	DRY	NAC	DAYLIGHT	1155	MON
		2		EAST		O	0							
81	07-926-AC	1	11/4/2007	WEST	INTERSECTION OF ROUTE 102 AND PLAIN ROAD	O	0	0	RE	DRY	NAC	DAYLIGHT	1212	SUN
		2		WEST		O	0							
82	07-987-AC	1	12/1/2007	WEST	ROUTE 102 BETWEEN PLAIN ROAD AND AUTUMN DRIVE	O/P	0	0	DEER	DRY	NAC	DARK (LIGHTED)	1839	SAT
83	07-1089-AC	1	12/24/2007	NORTH	INTERSECTION OF ROUTE 102 AND ROUTE 2 (FREE RIGHT)	O	0	0	RE	DRY	NAC	DAYLIGHT	1522	MON
		2		NORTH		O/4P	0							
84	08-103-AC	1	2/10/2008	EAST	ROUTE 102 BETWEEN ROUTE 2 AND PLAIN ROAD	O/P	1	0	TREE	ICY	WINDY	DARK (NOT LIT)	1850	SUN
85	08-306-AC	1	4/25/2008	WEST	INTERSECTION OF ROUTE 102 AND ROUTE 2	O	1	0	RE	DRY	NAC	DAYLIGHT	1704	FRI
		2		WEST		O	0							
86	08-528-AC	1	7/3/2008	WEST	INTERSECTION OF ROUTE 102 AND ROUTE 2	O/P	0	0	RE	DRY	NAC	DAYLIGHT	1659	THURS
		2		WEST		O								
87	08-573-AC	1	7/19/2008	WEST	INTERSECTION OF ROUTE 102 AND ROUTE 2	O	0	0	RE	SLUSH	RAIN	DARK (LIGHTED)	1218	SAT
		2		WEST		O	0							
88	08-730-AC	1	9/19/2008	EAST	ROUTE 102 BETWEEN PLAIN ROAD AND AUTUMN DRIVE	O	1	0	RE	DRY	NAC	DAYLIGHT	1606	FRI
		2		EAST		O	0							
89	08-950-AC	1	12/7/2008	WEST	ROUTE 102 BETWEEN PLAIN ROAD AND AUTUMN DRIVE	O	0	0	LC	SNOW	SNOW	DAYLIGHT	0704	SUN
90	09-415-AC	1	6/2/2009	WEST	INTERSECTION OF ROUTE 102 AND PLAIN ROAD	O/2P	1	0	RE	DRY	NAC	DAYLIGHT	1604	TUES
		2		WEST		O/P	0							
91	10-71-AC	1	1/22/2010	WEST	INTERSECTION OF ROUTE 102 AND PLAIN ROAD	O	1	0	RE	DRY	NAC	DARK (NOT LIT)	1850	FRI
		2		WEST		O	0							
							55	0						

APPENDIX E: SPEED DATA

A.C.T.S.
RADAR SPEED SURVEY

ROUTE 102 N KINGSTOWN RI @ PLAIN ROAD

DATE: 07/23/10 TIME START: 10:25 TIME END: 11:15 WEATHER: DRY ROAD TYPE: ARTERIAL

DIRECTION: EAST SPEED LIMIT: 40 OBSERVER: SCS CALIBRATION TEST: YES

SPEED	FREQUENCY	Fi*Xi	ACUM TOTAL	ACUM %	PERCENTAGE DISTRIBUTION 0---5---10---15---20---25
36	1	36	1	2.5	*****
37	3	111	4	10.0	**********
38	3	114	7	17.5	**********
39	3	117	10	25.0	**********
40	5	200	15	37.5	*************************
41	8	328	23	57.5	**
42	6	252	29	72.5	******************************
43	4	172	33	82.5	********************
44	2	88	35	87.5	**********
45	1	45	36	90.0	*****
46	2	92	38	95.0	**********
47	0	0	38	95.0	
48	1	48	39	97.5	*****
49	0	0	39	97.5	
50	1	50	40	100.0	*****

REMARKS: RTE 102 @ PLAIN RD N KINGSTOWN RI

85th Percentile.: 43.4 mph
10 mph Pace.....: 37 - 46
Percent in Pace.: 92.5 %
Vehicles in Pace: 37

Average Speed.....: 41.3 mph
50th Percentile....: 40.6 mph
90th Percentile....: 45 mph
95th Percentile....: 46 mph

A.C.T.S.
RADAR SPEED SURVEY

ROUTE 102 N KINGSTOWN RI @ PLAIN ROAD

DATE: 07/23/10 TIME START: 10:25 TIME END: 11:15 WEATHER: DRY ROAD TYPE: ARTERIAL

DIRECTION: WEST SPEED LIMIT: 40 OBSERVER: SCS CALIBRATION TEST: YES

SPEED	FREQUENCY	Fi*Xi	ACUM TOTAL	ACUM %	PERCENTAGE DISTRIBUTION 0---5---10---15---20---25
41	4	164	4	10.0	**********
42	1	42	5	12.5	*****
43	1	43	6	15.0	*****
44	2	88	8	20.0	**********
45	6	270	14	35.0	**********
46	3	138	17	42.5	**********
47	2	94	19	47.5	**********
48	1	48	20	50.0	*****
49	5	245	25	62.5	**********
50	3	150	28	70.0	**********
51	3	153	31	77.5	**********
52	1	52	32	80.0	*****
53	2	106	34	85.0	**********
54	2	108	36	90.0	**********
55	2	110	38	95.0	**********
56	2	112	40	100.0	**********

REMARKS: RTE 102 @ PLAIN RD N KINGSTOWN RI

85th Percentile.: 53 mph
10 mph Pace.....: 44 - 53
Percent in Pace.: 70 %
Vehicles in Pace: 28

Average Speed.....: 48 mph
50th Percentile....: 48 mph
90th Percentile....: 54 mph
95th Percentile....: 55 mph

APPENDIX F: SUPPLEMENTAL PLANS

THE PRESERVE AT ROLLING GREENS

MASTER PLAN

AUGUST 23, 2012

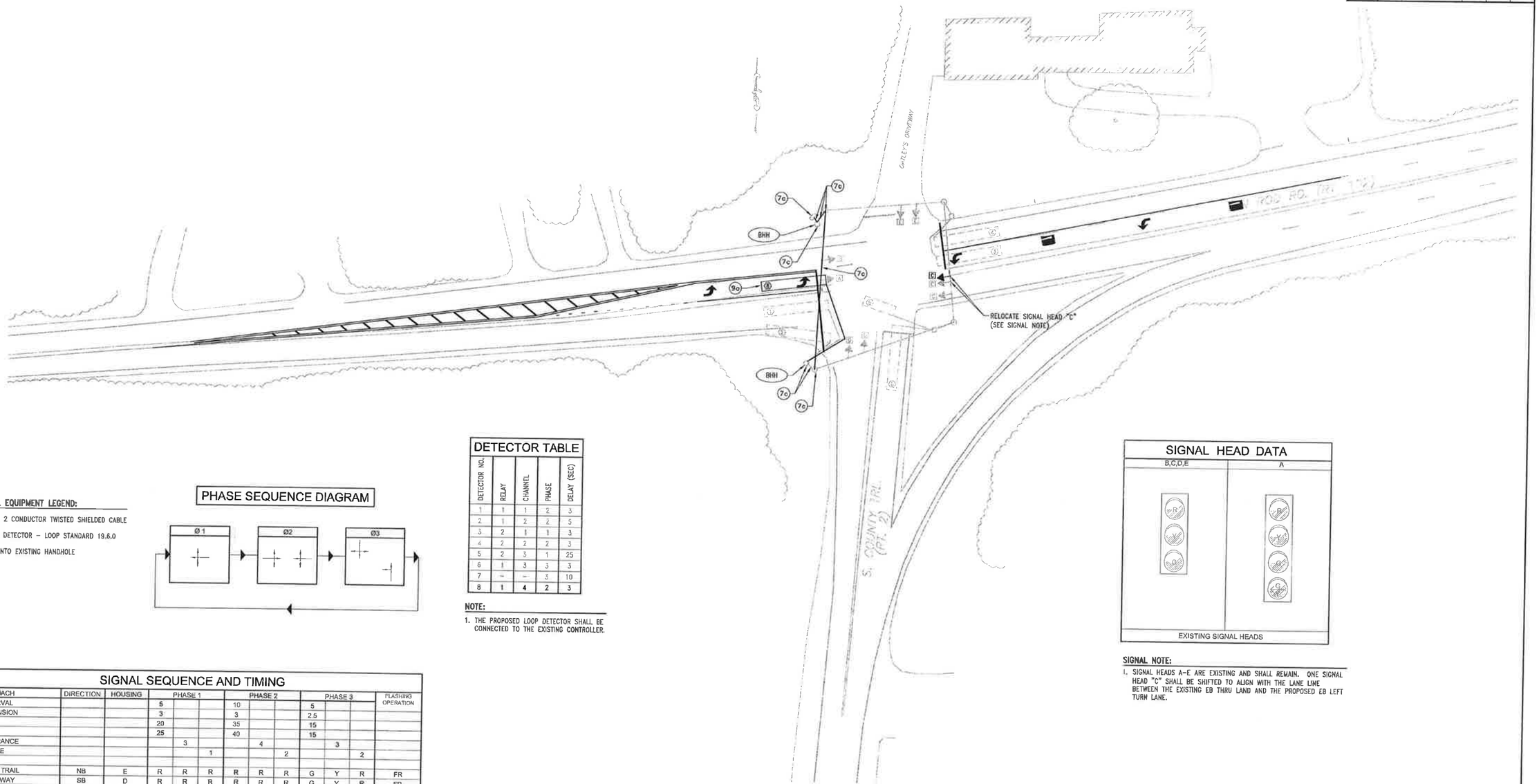
N

SCALE 1"=80'-0"

UNION STUDIO

ARCHITECTURE & COMMUNITY DESIGN

FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	RI			3	3



TRAFFIC SIGNAL EQUIPMENT LEGEND:

- (7c) 14 AWG 2 CONDUCTOR TWISTED SHIELDED CABLE
- (9o) TRAFFIC DETECTOR – LOOP STANDARD 19.6.0
- (BHH) BREAK INTO EXISTING HANDHOLE

PHASE SEQUENCE DIAGRAM

DETECTOR TABLE

DETECTOR NO.	RELAY	CHANNEL	PHASE	DELAY (SEC)
1	1	1	2	3
2	1	2	2	5
3	2	1	1	3
4	2	2	2	3
5	2	3	1	25
6	1	3	3	3
7	–	–	3	10
8	1	4	2	3

NOTE:

1. THE PROPOSED LOOP DETECTOR SHALL BE CONNECTED TO THE EXISTING CONTROLLER.

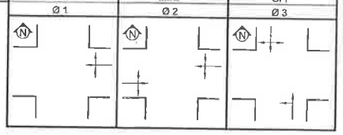
SIGNAL HEAD DATA

SIGNAL NOTE:

1. SIGNAL HEADS A–E ARE EXISTING AND SHALL REMAIN. ONE SIGNAL HEAD "C" SHALL BE SHIFTED TO ALIGN WITH THE LANE LINE BETWEEN THE EXISTING EB THRU LAND AND THE PROPOSED EB LEFT TURN LANE.

SIGNAL SEQUENCE AND TIMING

APPROACH	DIRECTION	HOUSING	PHASE 1			PHASE 2			PHASE 3			FLASHING OPERATION
MINIMUM INTERVAL			5			10			5			
VEHICLE EXTENSION			3			3			2.5			
MAXIMUM 1			20			35			15			
MAXIMUM 2			25			40			15			
YELLOW CLEARANCE				3			4			3		
RED CLEARANCE					1			2			2	
SOUTH COUNTY TRAIL	NB	E	R	R	R	R	R	R	G	Y	R	FR
OATLEY'S DRIVEWAY	SB	D	R	R	R	R	R	R	G	Y	R	FR
TEN ROD ROAD	EB	C	R	R	R	G	Y	R	R	R	R	FY
TEN ROD ROAD	WB	B	G	Y[3]	R[3]	G	Y	R	R	R	R	FY
TEN ROD ROAD	WBLT	A	~~G~~/G	~~Y~~/Y[3]	R[3]	G	Y	R	R	R	R	FY
DETECTOR			NON - LOCK			NON - LOCK			NON - LOCK			
RECALL			OFF			MIN.			OFF			
			Ø 1			Ø 2			Ø 3			



NOTES:

1. FLASHING OPERATIONS FOR CONFLICTING PHASES SHALL BE WIRED AND PROGRAMMED PER MUTCD; PROGRAM FLASH SHALL NOT BE USED.
2. MAXIMUM 2 TIMINGS FOR PHASE 2 SHALL BE USED MONDAY THROUGH FRIDAY FROM 7AM – 9AM AND 3PM – 6PM. MAXIMUM 2 TIMINGS FOR PHASE 1 SHALL BE USED MONDAY THROUGH FRIDAY FROM 3PM – 6PM. MAXIMUM 1 TIMINGS SHALL BE USED AT ALL OTHER TIMES.
3. TO REMAIN GREEN IF PHASE 2 IS NEXT.

JOHN P SHEVLIN
No. 6358
REGISTERED PROFESSIONAL ENGINEER

PARE CORPORATION
ENGINEERS · SCIENTISTS · PLANNERS
8 BLACKSTONE VALLEY PLACE
LINCOLN, RI 02865
401-334-4100

TRAFFIC SIGNAL No.: 614

REVISIONS NO.	DATE	BY

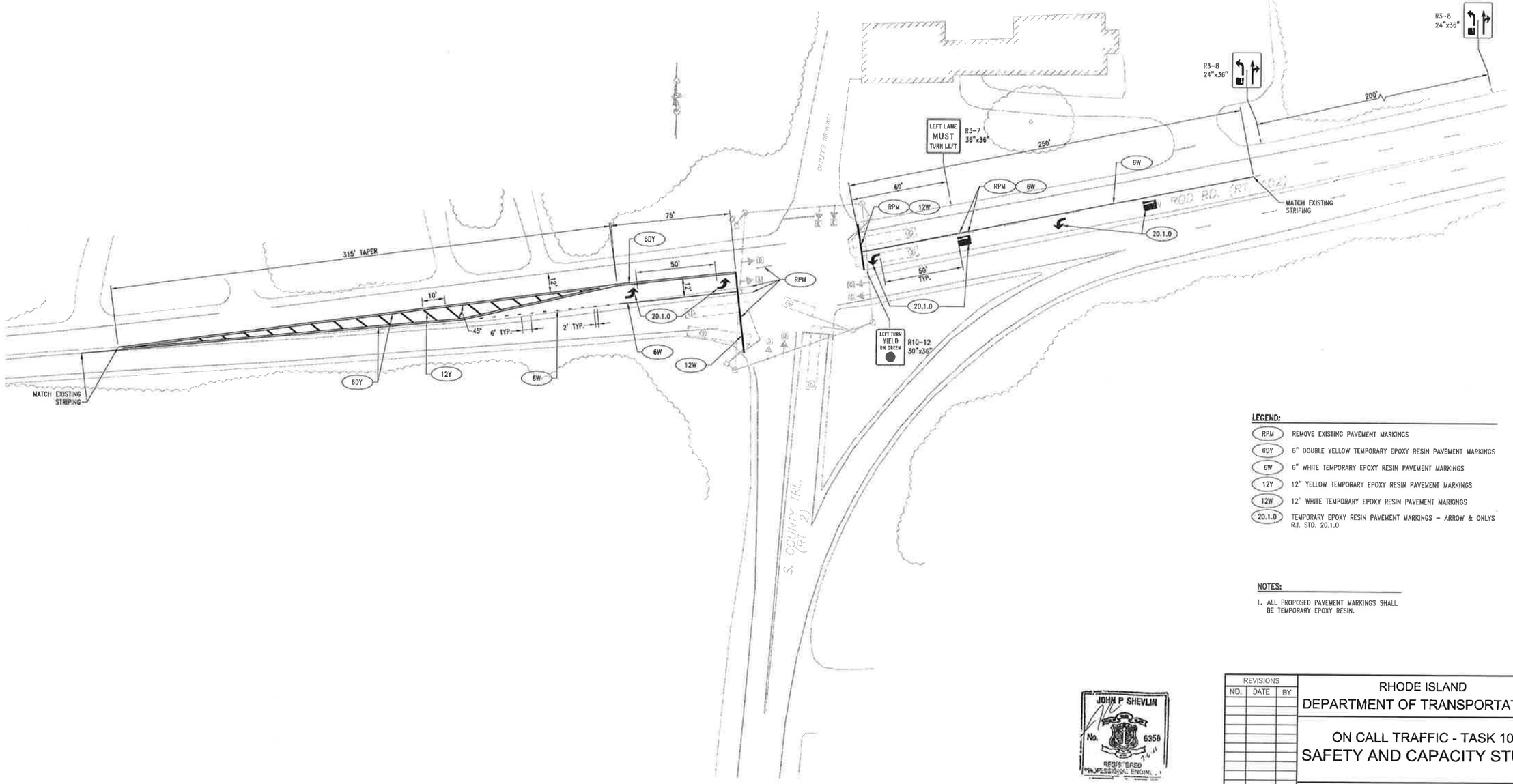
RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

ON CALL TRAFFIC - TASK 10
SAFETY AND CAPACITY STUDY

SIGNAL PLAN–TRAFFIC SIGNAL No. 614
TEN ROD ROAD (RT 102) &
SOUTH COUNTY TRAIL (RT 2)
NORTH KINGSTOWN RHODE ISLAND

CHECKED BY _____ DATE _____ SCALE 1"=30'

FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	RI			1	3



LEGEND:

RPM	REMOVE EXISTING PAVEMENT MARKINGS
6DY	6" DOUBLE YELLOW TEMPORARY EPOXY RESIN PAVEMENT MARKINGS
6W	6" WHITE TEMPORARY EPOXY RESIN PAVEMENT MARKINGS
12Y	12" YELLOW TEMPORARY EPOXY RESIN PAVEMENT MARKINGS
12W	12" WHITE TEMPORARY EPOXY RESIN PAVEMENT MARKINGS
20.1.0	TEMPORARY EPOXY RESIN PAVEMENT MARKINGS – ARROW & ONLYS R.I. STD. 20.1.0

NOTES:

1. ALL PROPOSED PAVEMENT MARKINGS SHALL BE TEMPORARY EPOXY RESIN.

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8 BLACKSTONE VALLEY PLACE
LINCOLN, RI 02865
401-334-4100

REVISIONS		
NO.	DATE	BY

RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

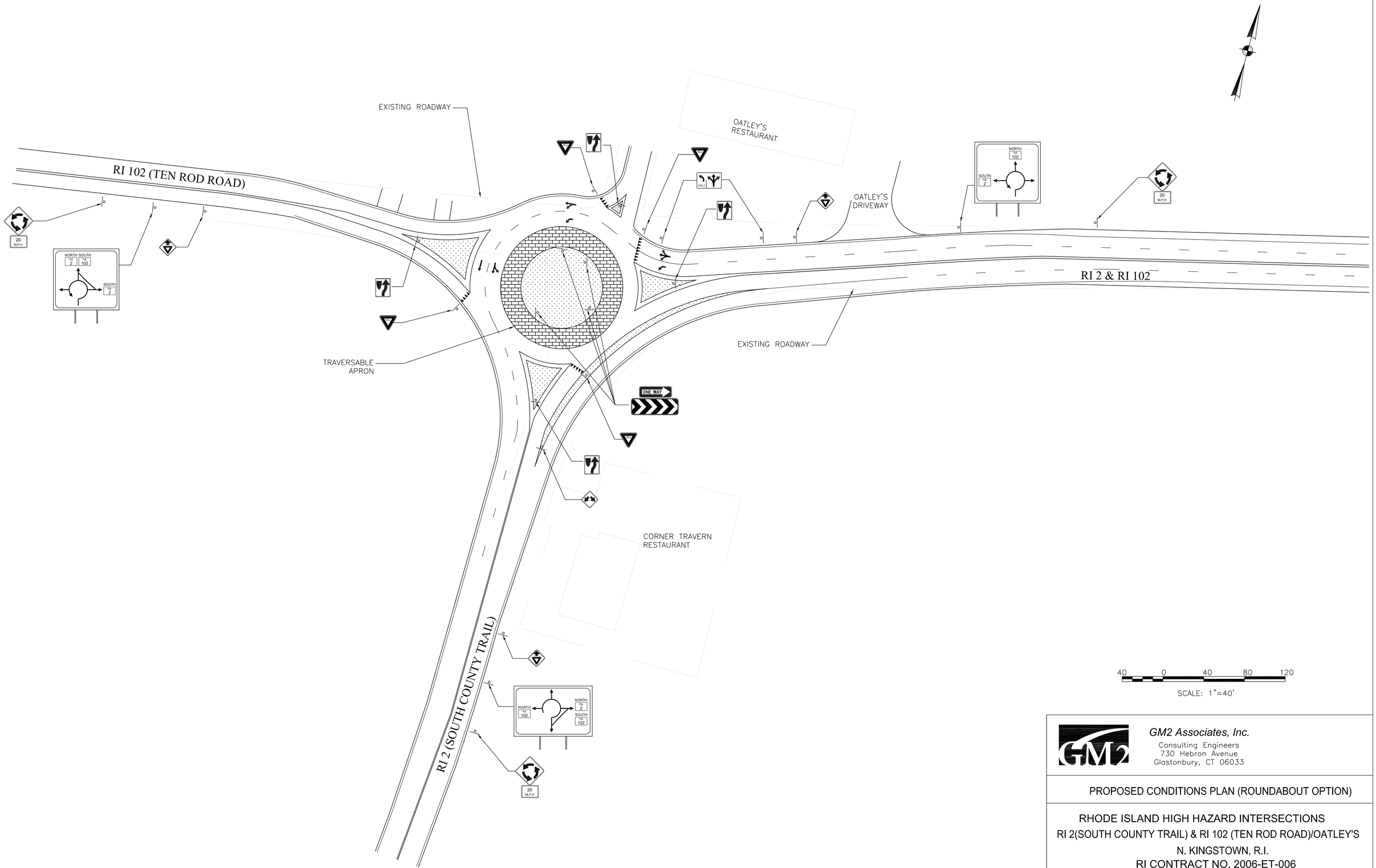
ON CALL TRAFFIC - TASK 10
SAFETY AND CAPACITY STUDY

GENERAL PLAN

TEN ROD ROAD (RT 102) &
SOUTH COUNTY TRAIL (RT 2)

NORTH KINGSTOWN RHODE ISLAND

CHECKED BY _____ DATE _____ SCALE 1"=30'



40 0 40 80 120

SCALE: 1"=40'

GM2 Associates, Inc.
Consulting Engineers
730 Hebron Avenue
Glastonbury, CT 06033

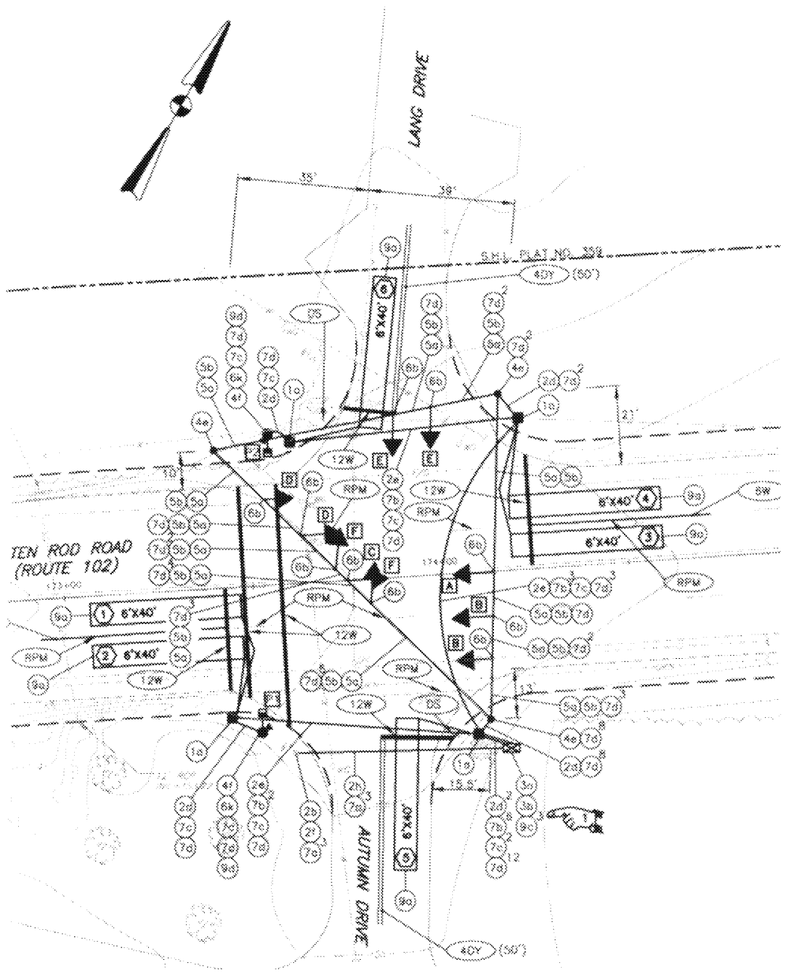
PROPOSED CONDITIONS PLAN (ROUNDABOUT OPTION)

RHODE ISLAND HIGH HAZARD INTERSECTIONS
RI 2(SOUTH COUNTY TRAIL) & RI 102 (TEN ROD ROAD)/OATLEY'S
N. KINGSTOWN, R.I.
RI CONTRACT NO. 2006-ET-006

FIGURE 2R

FED. ROAD DIV. NO.	STATE	FED.ROAD. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
1	R.I.		2009	18	24

R-1



CONSTRUCTION NOTES:

1. THE TRAFFIC SIGNAL CONTROLLER IS TO BE WIRED FOR A FIVE PHASE OPERATION SO WHEN THE SIGNAL MODIFICATIONS ARE COMPLETED, A NEW BACK PANEL WILL NOT BE NECESSARY.

3. TREE TRIMMING IS REQUIRED TO INSTALL MAST ARM AND POLE IN THE NORTHEAST CORNER. ALL REQUIRED TREE TRIMMING SHALL BE COORDINATED DURING CONSTRUCTION WITH THE RIDOT STATEWIDE TREE TRIMMING CONTRACT. CONTACT RESIDENT ENGINEER STEVE SARACINO AT 641-8932 FOURTEEN (14) DAYS PRIOR TO TREE TRIMMING BEING REQUIRED.

5. THE CONTRACTOR IS REQUIRED TO PROVIDE TWO PORTABLE CHANGEABLE MESSAGE SIGNS FOR THIS INTERSECTION. THE EXACT LOCATION WILL BE DETERMINED BY THE CONTRACTOR AND THE RESIDENT ENGINEER, HOWEVER THE INTENT IS TO PLACE THEM APPROXIMATELY 1/4 MILE FROM THE INTERSECTION ALONG EACH TEN ROD ROAD APPROACH. THESE SIGNS ARE TO BE PLACED TWO WEEKS PRIOR TO THE ACTIVATION DATE AND SHALL REMAIN IN PLACE FOR A PERIOD OF FOUR WEEKS. THE SIGN SHALL CONTAIN THE FOLLOWING MESSAGES:

4. PROPOSED SIGNAL HEADS A AND C ARE TO BE BAGGED UNTIL SUCH TIME THAT THE PROPOSED HIGHWAY WIDENING IS COMPLETED.

BE PREPARED TO STOP
AND
NEW SIGNAL AHEAD

DETECTOR TABLE

DETECTOR	SIZE	RELAY NO.	SLOT	PHASE	DELAY
1	6' x 40'	1	2	8	3
2	6' x 40'	1	2	6	3
3	6' x 40'	1	2	2	3
4	6' x 40'	1	2	2	3
5	6' x 40'	2	4	3	3
6	6' x 40'	2	4	3	3

PROPOSED SIGNAL HEAD DATA

A,B,C,D,E,F

R
Y
G

ALL 12" LENSES

NOTES:
1. ALL TRAFFIC AND PEDESTRIAN SIGNAL HEADS ARE PROPOSED.
2. ALL RED, YELLOW, AND GREEN SIGNAL DISPLAYS SHALL BE EQUIPPED WITH LED MODULES.

TRAFFIC SIGNAL EQUIPMENT LEGEND

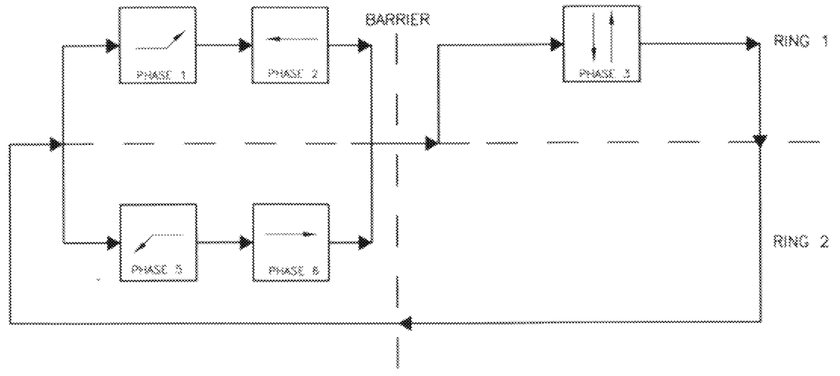
NO.	LEGEND	DESCRIPTION
1a	■	PRECAST TYPE "A" HANDHOLE, STD. 18.2.0
1b		BREAK INTO EXISTING HANDHOLE
2a	.....	2" RIGID STEEL CONDUIT – UNDERGROUND
2b	.....	2" RIGID STEEL CONDUIT – OVERHEAD
2c	———	2" SCHEDULE 40 POLYVINYL CHLORIDE PLASTIC CONDUIT – UNDERGROUND
2d	———	3" SCHEDULE 40 POLYVINYL CHLORIDE PLASTIC CONDUIT – UNDERGROUND
2e	———	3" SCHEDULE 80 POLYVINYL CHLORIDE PLASTIC CONDUIT – UNDER EXISTING PAVEMENT
2f	.....	2" SCHEDULE 40 POLYVINYL CHLORIDE PLASTIC CONDUIT – OVERHEAD
2h	.....	2 INCH RIGID STEEL CONDUIT – UNDER EXISTING PAVEMENT
3a	⊠	ACTUATED CONTROLLER TS-2, TYPE 1 W/8 PHASE ASSEMBLY GROUND MOUNTED INCLUDING FOUNDATION AND CABINET, STD. 19.1.0
3b		3 WIRE 120/240 METER SOCKET WITH MANUAL BY-PASS
3c		REPROGRAM EXISTING CONTROLLER AND REWIRE BACKPANEL
4c	•——	40 FOOT GAL. STEEL MAST ARM TRAFFIC SIGNAL POST AND FOUNDATION, STD. 19.2.0
4d	•——	45 FOOT GAL. STEEL MAST ARM TRAFFIC SIGNAL POST AND FOUNDATION, STD. 19.2.0
4e	●	TRAFFIC SIGNAL STANDARD GALVANIZED STEEL, STD. 19.3.0
4f	●	TRAFFIC SIGNAL STANDARD, 8 FOOT, ALUMINUM PEDESTAL POLE AND FOUNDATION, STD. 19.4.0
4g	●	TRAFFIC SIGNAL STANDARD, 15 FOOT, ALUMINUM PEDESTAL POLE AND FOUNDATION, STD. 19.4.0
4i	•——	25 FOOT GAL. STEEL MAST ARM TRAFFIC SIGNAL POST AND FOUNDATION, STD. 19.2.0
4j	•——	50 FOOT GAL. STEEL MAST ARM TRAFFIC SIGNAL POST AND FOUNDATION, STD. 19.2.0
5a		SPAN AND MESSENGER WIRE 6/18"
5b		TETHER WIRE 5/16" WITH BREAKAWAY DISCONNECTS
6a	→■	F&I 1 SECTION DUAL IND DUAL ROW LED ARROW 12 INCH TO EXISTING SIGNAL HEAD (SPAN MOUNTED)
6b	→■	1 WAY 3 SECTION SPAN MOUNTED SIGNAL HEAD 12 INCH
6c	→■	2 WAY 3 SECTION SPAN MOUNTED SIGNAL HEAD 12 INCH
6e	→■	F&I 1 SECTION DUAL IND DUAL ROW LED ARROW 12 INCH TO EXISTING SIGNAL HEAD (MAST ARM MOUNTED)
6f	→■	1 WAY 3 SECTION MAST ARM MOUNTED SIGNAL HEAD 12 INCH
6g	→■	1 WAY 3 SECTION MAST ARM MOUNTED SIGNAL HEAD 2-12 INCH SECTIONS, 1-8 INCH SECTION
6i	→■	1 WAY 3 SECTION BRACKET MOUNTED SIGNAL HEAD 12 INCH
6j	→■	1 WAY 3 SECTION PEDESTAL MOUNTED SIGNAL HEAD 12 INCH
6k	→■	1 WAY PEDESTAL MOUNTED L.E.D. PEDESTRIAN SIGNAL HEAD 12 INCH WITH COUNTDOWN TIMER 12 INCH
6l	→■	1 WAY BRACKET MOUNTED L.E.D. PEDESTRIAN SIGNAL HEAD 12 INCH WITH COUNTDOWN TIMER 12 INCH
6m	→■	2 WAY PEDESTAL MOUNTED L.E.D. PEDESTRIAN SIGNAL HEAD 12 INCH WITH COUNTDOWN TIMER 12 INCH
6n	✚	4 WAY 2-3 SECTION, 2-4 SECTION SPAN MOUNTED SIGNAL HEAD 12 INCH (WITH 2 DUAL IND DUAL ROW ARROW)
7a		8 AWG SINGLE CONDUCTOR CABLE 600V INSULATION
7b		14 AWG 2 CONDUCTOR TWISTED SHIELDED CABLE
7c		14 AWG 3 CONDUCTOR CABLE
7d		14 AWG 5 CONDUCTOR CABLE
7e		14 AWG 7 CONDUCTOR CABLE
9a	⬚	TRAFFIC DETECTORS – LOOP, STD. 19.6.0
9c		TRAFFIC DETECTOR RELAY – LOOP 4 CHANNEL
9d	▸	HEAVY DUTY PEDESTRIAN DETECTOR PUSHBUTTON WITH SIGN

PROPOSED PHASING, SEQUENCE AND TIMING DIAGRAM

APPROACH	DIRECTION	HOUSING	ø1	ø2	ø3	ø5	ø6	FLASHING OPERATION
MINIMUM INTERVAL			8	8	8	6	8	
VEHICLE EXTENSION			3.0	3.0	3.0	3.0	3.0	
MAXIMUM 1			12	40	18	32	40	
MAXIMUM 2								
YELLOW CLEARANCE			4.5	4.5	4.0	4.5	4.5	
RED CLEARANCE			1.0	1.0	1.0	1.0	1.0	
PEDESTRIAN WALK					7.0			
PED. CLEARANCE					15.0			
TEN ROD ROAD	EB LT.	A	→C→Y→R	→R→R→R	→R→R→R	→R→R→R	→R→R→R	→FY
TEN ROD ROAD	EB	B	R R R	R R R	R R R	R R R	G Y R	FY
TEN ROD ROAD	WB LT.	C	→R→R→R	→R→R→R	→R→R→R	→C→Y→R	→R→R→R	→FY
TEN ROD ROAD	WB	D	R R R	G Y R	R R R	R R R	R R R	FY
AUTUMN DRIVE	NB	E	R R R	R R R	C Y R	R R R	R R R	FR
LANG DRIVE	SB	F	R R R	R R R	G Y R	R R R	R R R	FR
TEN ROD ROAD	N-S	P1-P2		DW DW DW	W/FDW DW DW		DW DW DW	
DETECTOR			NON-LOCK	NON-LOCK	NON-LOCK	NON-LOCK	NON-LOCK	
RECALL			OFF	OFF	OFF	OFF	OFF	
			ø1	ø2	ø3	ø5	ø6	

E: PHASES 1 AND 5 WILL NOT BE USED UNTIL SUCH TIME THAT THAT THE HIGHWAYS IMPROVEMENTS ARE COMPLETED AND ADDITIONAL TRAFFIC SIGNAL HEADS ARE ACTIVATED.

NDUM NO. 3



PHASE SEQUENCE DIAGRAM

REVISIONS		
NO.	DATE	BY
1	06/13/08	DB

RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

TRAFFIC SIGNAL INSTALLATIONS
STATE TRAFFIC COMMISSION
CONTRACT 3 - SOUTH AND CENTRAL
COVENTRY, EAST GREENWICH, EXETER, NORTH KINGSTOWN, SOUTH KINGSTOWN, WARWICK AND WEST WARWICK

TRAFFIC SIGNAL PLAN NO. 5
TEN ROD ROAD AT
LANG STREET/AUTUMN DRIVE

CHECKED BY:_____ DATE: SEPT. 2009 SCALE: 1"=20'

CROSSMAN ENGINEERING, INC.
Civil · Transportation · Environmental · Site Planning · Land Surveying
151 Clairemont Road
Warwick, Rhode Island 02886

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FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
1	RI			20	22

MATCHLINE TO SIGNING AND STRIPING PLAN NO. 1

MATCHLINE TO SIGNING AND STRIPING PLAN NO. 3

EXISTING S.H.L. PLAT NO. 359

EXISTING S.H.L. PLAT NO. 359

TEN ROD ROAD (ROUTE 102)

BASELINE PLAT NO. 359

5' SHOULDER
11' TRAVEL LANE
11' TRAVEL LANE
12' TURN LANE
11' TRAVEL LANE
11' TRAVEL LANE
5' SHOULDER

170+00 171+00 172+00 173+00 174+00 175+00

LANG DRIVE

OLD TEN ROD ROAD

AUTUMN DRIVE

ASF#1 ASF#2 ASF#3 ASF#4 ASF#5 ASF#6 ASF#7

ASF#1A ASF#2A ASF#3A ASF#4A ASF#5A

RIP-RAP

6W 6WS 4DY 8Y (TYP.) 12W 20.1.0

STOP SIGN NO. 2.01 R1-1 30"X30" 24.2.0

SIGN NO. 2.02
SOUTH M3-3 24"X12"
RI 4 M1-5 24"X24"
M5-1(R) 21"X15"
24.2.0

R.I.H.B. FOUND

BENCHMARK:
NAIL FOUND 1' UP ON POLE #126
ELEV. 155.76

REVISIONS		
NO.	DATE	BY

RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

TRAFFIC SIGNAL INSTALLATIONS
STATE TRAFFIC COMMISSION
AUTUMN DRIVE / LANG DRIVE
NORTH KINGSTOWN RHODE ISLAND

TEN ROD ROAD (ROUTE 102) SIGNING AND STRIPING
PLAN NO. 2

CHECKED BY _____ DATE _____ SCALE 1" = 20'

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Warwick, Rhode Island 02886

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