



CLOUGH HARBOUR & ASSOCIATES LLP

March 3, 2006

Mr. Harry Coldreck
Mohegan Sun Casino
1 Mohegan Sun Boulevard
Uncasville, CT 06382

Re: Mohegan Sun at Pocono Downs Traffic Impact Study
CHA File: 13989

Dear Mr. Coldreck:

The Traffic Impact Study completed in October 2005 for the Mohegan Sun at Pocono Downs Casino and Raceway identified the impacts of this project on the operations and safety of the transportation system and identified improvements as mitigation of these impacts. Recognizing the unique traffic characteristics of this project, and with the agreement of PennDOT District 4-0, these impacts and mitigations will be re-evaluated by an updated study to be completed after the Spring 2006 opening of the site and based on actual traffic data to be collected at the site. The findings and recommendations indicated in the October 2005 study should therefore be considered Preliminary and may be subject to change based on the results of the follow-up study.

The preliminary findings and information presented in the October 2005 Study can be released to interested/involved agencies as applicable with the understanding that findings and recommendations may be revised or superseded based on the outcome of the follow-up study.

Please contact Dennis Hilton at (518) 453-2823 with any comments or questions.

Sincerely,

CLOUGH HARBOUR & ASSOCIATES LLP

A handwritten signature in black ink, appearing to read 'Ray J. Rumanowski'.

Raymond J. Rumanowski, P.E.
Partner

DCK/dcc

TRAFFIC IMPACT STUDY

MOHEGAN SUN AT POCONO DOWNS WILKES-BARRE, PENNSYLVANIA

Prepared For:

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450 Church Street
Hartford, CT 06103

October 2005

Prepared By:



TRAFFIC IMPACT STUDY
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October 2005

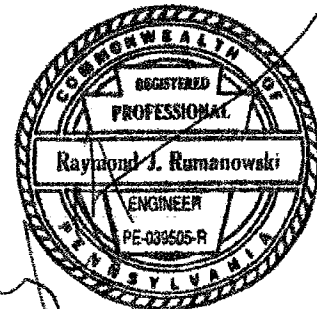


TABLE OF CONTENTS

TABLE OF CONTENTS	I
EXECUTIVE SUMMARY	IV
1.0 INTRODUCTION.....	1
1.1 Background	1
1.2 Project Description	1
2.0 EXISTING CONDITIONS.....	1
2.1 Roadway Network	1
2.2 Existing Traffic Volumes	2
2.3 Safety Considerations	3
2.4 Sight Distance	5
3.0 CASE STUDIES.....	6
3.1 Buffalo Raceway	6
3.2 Saratoga Gaming & Raceway	7
4.0 FUTURE CONDITIONS	7
4.1 No-Build Condition	7
4.2 Trip Generation	8
4.2.1 Daily Site Traffic.....	8
4.2.2 Peak Hour Site Traffic.....	9
4.3 Trip Distribution	10
4.4 Build Condition	11
4.5 Other Projects	11
4.5.1 Miracle Development	11
4.5.2 Discount Retail	11
4.5.3 FOCUS 81- Emergency Detour Route.....	11
5.0 CAPACITY ANALYSES	12
5.1 Existing Condition	12
5.2 No-Build Condition	13

5.3	Build Condition	13
6.0	RECOMMENDATIONS	21
6.1	2007 (ETC) Improvements	21
6.2	2017 (ETC+10) Improvements.....	22
6.3	Signal Warrant Analysis	24
7.0	CONCLUSION	25

APPENDICES

FIGURES	APPENDIX A
PROPOSED SITE LAYOUT	APPENDIX B
STUDY AREA TRAFFIC COUNT DATA.....	APPENDIX C
CASE STUDY DATA.....	APPENDIX D
CALCULATIONS.....	APPENDIX E
LEVEL OF SERVICE CRITERIA.....	APPENDIX F
CAPACITY ANALYSIS WORKSHEETS.....	APPENDIX G

LIST OF TABLES

Table 1	Daily Traffic Volumes	3
Table 2	Accident Type Summary	3
Table 3	Accident Severity Summary	4
Table 4	Intersection Site Distance	5
Table 5	Proposed Land Uses	8
Table 6	Daily Site Generated Trips	9
Table 7	Peak Hour Site Generated Trips	10
Table 8	Intersection Level of Service – 2005 Existing Condition	16
Table 9	Intersection Level of Service – 2007 (ETC) No-Build Condition	17
Table 10	Intersection Level of Service – 2017 (ETC+10) No-Build Condition	18
Table 11	Intersection Level of Service – 2007 (ETC) Build Condition	19
Table 12	Intersection Level of Service – 2017 (ETC+10) Build Condition	20
Table 13	Intersection Level of Service – 2007 (ETC) Build Condition w/ Improvements.....	22
Table 14	Intersection Level of Service – 2017 (ETC+10) Build Condition w/ Improvements.....	24

EXECUTIVE SUMMARY

Mohegan Sun at Pocono Downs (MSPD) is located on State Route 315 in Plains Township, Luzerne County, Pennsylvania. The owners of the MSPD are proposing to expand the amenities at this site to provide gaming and entertainment facilities, including a gaming area with 2,000 slot machines, dining and drinking establishments, a nightclub and some retail shops. The purpose of this study is to estimate the traffic generated by the proposed expansion and to identify the associated traffic impacts on the operations of the adjacent street network.

The study area established for the traffic evaluations includes the section of SR 315 from the SR 309 Interchange 105 north to the I-81 Interchange 175. The study area also includes the intersection of East Main Street and Scott Street, and the site access drives with SR 315 and with East Main Street.

Gaming facilities operating in conjunction with racetracks are a relatively recent entertainment venue. As such, there is limited data available from traditional published resources, such as ITE's *Trip Generation*, for estimating the trip generation characteristics of these facilities. Consequently, traffic volume data was collected at two existing gaming and raceway facilities to provide a basis for estimating the traffic generation of the proposed MSPD project. This data was used to establish the periods of peak traffic generation of the site as well as to provide a basis for estimating the trip generation of the proposed facilities at MSPD.

The peak periods for study of the project's traffic impacts were identified from the case studies, and in consultation with PennDOT. These peak periods as follows:

- Friday: 4 pm to 8 pm
- Saturday: 11 am to 1 pm
- Saturday: 5 pm to 8 pm

Traffic volume data was collected at the primary study intersections within the study area to identify traffic flow conditions during these peak study periods. This data was collected in August 2005.

The estimated time of completion (ETC) of the proposed expansion at MSPD is 2007. "No-Build" traffic volumes were developed to identify the future operations of the study area intersections without the proposed expansion, and to provide a context for evaluating the effect of the traffic generated by the project. A growth rate of 2% per year was applied to the 2005 Existing condition peak hour traffic volumes to obtain the 2007 (ETC) No-Build traffic volumes. Volumes were also developed to represent background traffic conditions for a planning horizon ten years beyond the planned opening of the MSPD facility (ETC+10) based on this 2% annual growth rate.

The traffic generated by the proposed expansion at MSPD was estimated based on the traffic characteristics of the case study sites and using data published by the Institute of Transportation Engineers (ITE) in the 7th edition of *Trip Generation*. The traffic generated by the proposed MSPD project was distributed to the study area roadway network based on an evaluation of existing traffic patterns and based on population distributions within the anticipated market area of the project. The table below summarizes the estimate traffic to be generated by the proposed MSPD site development.

Site Generated Trips

Land Use	Friday PM Peak Hour			Saturday Midday Peak Hour			Saturday PM Peak Hour		
	Entering	Exiting	Total	Entering	Exiting	Total	Entering	Exiting	Total
Gaming	425	425	850	652	492	1,144	341	453	794
Dining, Entertainment & Retail	134	105	239	152	108	260	152	108	260
TOTAL	559	530	1,089	804	600	1,404	493	561	1,054

To determine the impact of the proposed project on the operations of the adjacent transportation system, traffic operations were analyzed for the three peak-hour study conditions, representing the peak hour of adjacent street traffic and the peak hour of site generation, for the following conditions:

- 2005 Existing Conditions
- 2007 (ETC) No-Build Conditions
- 2007 (ETC) Build Conditions
- 2017 (ETC+10) No-Build Conditions
- 2017 (ETC+10) Build Conditions

Based on the criteria that No Build levels of service (LOS) shall be maintained at the study area intersections for the Build condition, improvements were identified at locations where the Build condition LOS is less than that of the No Build condition. Improvements were identified for the appropriate design year (ETC or ETC+10) when they are needed.

For the 2007 (ETC) Build condition, there is a change in overall LOS from the ETC No-Build condition during one or more of the peak hours of study at the following intersections:

- SR 315 and Laird Street/Woodlands Inn
- SR 315 and SR 309 interchange

The 2007 (ETC) No-Build overall LOS is maintained at these intersections by implementing the following improvements:

- SR 315 & Laird Street/Woodlands Inn: signal timing adjustments; revise signal offsets.
- SR 315 and SR 309 NB Ramps: construct a separate left-turn lane on SR 309 NB off-ramp approach; replace and/or modify the existing signal equipment to provide signal displays and vehicle detection, and modify signal timing and phasing.
- SR 315 and SR 309 SB Ramps: signal timing adjustments.

A traffic signal is recommended for the opening of the expanded site to serve the turn movements into and out of the MSPD site entrance on SR 315. Actuation of the site approach and the Mid-Atlantic approach will reduce unnecessary delay to the SR 315 traffic.

For the 2017 (ETC+10) Build condition, there is a change in overall LOS from the ETC+10 No-Build condition during one or more of the peak hours of study at the following intersections:

- SR 315 & Oak Street/Armstrong Street
- SR 315 and Motorworld/Hampton Inn
- SR 315 and SR 309 interchange.

The 2017 No Build overall LOS is maintained at these intersections by implementing the following improvements:

- SR 315 & Oak Street/Armstrong Street construct exclusive left-turn lane on Armstrong Street approach; replace and/or modify the existing signal equipment to provide signal displays and vehicle detection, and modify signal timing and phasing.
- SR 315 & Motorworld/Hampton Inn: signal timing adjustments; revise signal offsets.
- SR 315 and SR 309 NB Ramps: same as 2007 (ETC) improvements.
- SR 315 and SR 309 SB Ramps: same as 2007 (ETC) improvements.

It is also recommended that Variable Message Signs be deployed at several strategic locations to manage traffic flow along the SR 315 corridor. In particular, these Intelligent Transportation System (ITS) devices can be used to inform site traffic of peak-hour delays that may exist at the SR 309 interchange and to advise of alternate routing via the I81 interchange. This system management strategy can help to optimize the effective utilization of existing capacity along SR 315, and to manage delay at the SR 309 interchange to maintain levels of service that are comparable to the No-Build condition. This improvement is also consistent with the ITS incident management system that is being studied for the corridor.

It is noted that the improvements identified for the ETC+10 conditions reflect the cumulative effects of general traffic growth and the generation of site traffic. These improvements are not required to address the conditions at the time of opening of the site. It is therefore recommended that traffic conditions be monitored at the site after a period of establishment to verify the traffic generation of the site and to monitor the need for these future improvements.

With the implementation of these improvements, the transportation system will continue to provide operations with the traffic generated by MSPD that are comparable to No-Build conditions.

1.0 INTRODUCTION

1.1 Background

Mohegan Sun at Pocono Downs (MSPD) is located in Plains Township, Pennsylvania on State Route 315 in Luzerne County. The raceway hosts live harness racing four to five days per week during the months of April through November. The facility is open year-round, seven days per week for simulcast wagering on thoroughbred and harness races across the country. In January of 2005, the racetrack and its off-track wagering facilities were purchased by the Mohegan Tribal Gaming Authority.

1.2 Project Description

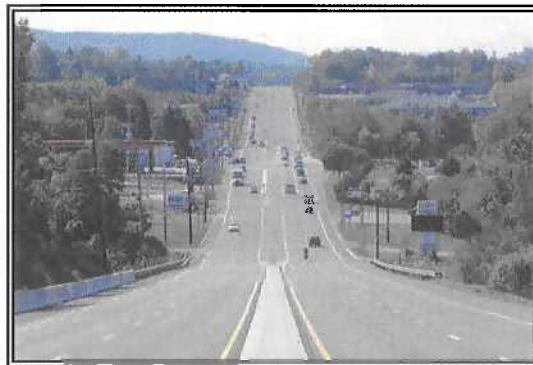
MSPD is proposing to expand their facilities to include a gaming area with 2,000 slot machines, 4 dining establishments, a food court, four drinking areas and/or lounges, a nightclub and some retail shops. The purpose of this study is to estimate the traffic generated by the proposed expansion and to identify the associated traffic impacts on the operations of the adjacent street network.

2.0 EXISTING CONDITIONS

2.1 Roadway Network

The MSPD site is located on SR 315 in the City of Wilkes-Barre, Pennsylvania. SR 315 is generally a four-lane roadway with a posted speed limit of 45 mph and runs in a north-south direction. Some segments have five lanes to provide a two-way left-turn lane or exclusive turn lanes at intersections. This route provides regional access to the site from Interstate 81 (interchange 175) and Interstate 476 (interchange 105).

The MSPD site can also be accessed from East Main Street (SR 2020), which is a two-lane roadway with a posted speed limit of 35 mph and runs in an east-west direction. The project study area can be seen on Figure 1 in Appendix A.



View of SR 315 looking South from a vantage north of the Mohegan Sun at Pocono Downs site

Preliminary evaluations of the extent and scope of the traffic study were reviewed with the Pennsylvania Department of Transportation (PennDOT). Based on this consultation, the following intersections and interchanges were identified for the study:

- SR 315 & I-81 Dupont/Pittson interchange (Exit 175)
- SR 315 & Oak Street/Armstrong Street
- SR 315 & Old Boston Road
- SR 315 & Laflin Road

-
- SR 315 & Sunshine Market Entrance
 - SR 315 & MSPD Site Access
 - SR 315 & Jumper Road/East Main Street (SR 2020)
 - SR 315 & Woodlands/Laird Street
 - SR 315 & Motor World Drive
 - SR 315 & Cross Valley Expressway (SR 309) interchange
 - East Main Street & MSPD Site Access
 - East Main Street & Scott Street/First Street

The I-81 northbound off-ramp to SR 315 northbound at interchange 175 is controlled by the traffic signal that also controls operations at the intersection of SR 315, Oak Street and Armstrong Street. The other I-81 ramps at this interchange with SR 315 are merge/diverge ramps. All of the study area intersections are signal controlled, except for the access drives for the MSPD project site and at the intersection of East Main Street with Scott Street and First Street. These intersections are controlled by STOP signs on the minor street approaches. The traffic signals on SR 315 from the SR 309 interchange to East Main Street are coordinated to provide progressive traffic flow along SR 315.

2.2 Existing Traffic Volumes

In order to evaluate the current operating conditions at the study area intersections, traffic volume data was collected at each study intersection for the peak hours of adjacent street traffic and the peak hours of site-generated traffic. In order to identify the peak hours of site traffic, sample data was collected at case study sites of Gaming & Raceway facilities in Saratoga, New York and Hamburg (Buffalo), New York. The data collected at these case study sites indicates that the peak hours of operation at these gaming facilities typically occur on Friday evening, Saturday midday, and Saturday evening. This data was reviewed with PennDOT to establish the study periods to be considered for the impact analysis. Based on this data review, turning movement counts were conducted at the study area intersections for the following days and time periods:

- Friday: 4 pm to 8 pm
- Saturday: 11 am to 1 pm
- Saturday: 5 pm to 8 pm

This data was collected in August 2005, and therefore captured the peak seasonal traffic in the region. Regular harness racing activity at MSPD was in operation during the time of the traffic counts and is accounted for in the existing traffic volumes. The 2005 Existing Friday PM, Saturday Midday and Saturday PM peak hour volumes are shown on Figures 2 through 4 in Appendix A.

Automatic Traffic Recorder (ATR) machines were placed on SR 315 and on East Main Street for the period of August 26 to September 2, 2005 to identify the daily traffic volumes on these roadways for average daily conditions, for Friday conditions and for Saturday conditions. This data is summarized in Table 1.

**Table 1
Daily Traffic Volumes**

Roadway/Direction	ADT	Friday	Saturday
SR 315	17,115	19,755	16,640
Northbound	8,610	9,735	8,475
Southbound	8,505	10,020	8,165
East Main Street	7,700	8,905	6,910
Eastbound	3,840	4,670	3,450
Westbound	3,860	4,235	3,460

2.3 Safety Considerations

Accident history reports were obtained from PennDOT for the three most recent years available (2000, 2001, and 2003) for the study area intersections and roadways. Accident history reports are not available for the year 2002. There were 361 recorded crashes within the study area over the 3-years documented. Table 2 provides a summary of the accident records by type of accident at each study location.

**Table 2
Accident Type Summary
2000, 2001, 2003**

Location		Accident Type <i>(see below for explanation of abbreviations)</i>							Total	
		A	RE	FO	SS	HO	B	P		NC
Intersections	SR 315 at I-81 Ramps	1	8	1	1	0	0	0	0	11
	SR 315 at Oak/Armstrong	0	0	0	0	0	0	0	0	0
	SR 315 at Old Boston Rd	5	1	0	0	0	0	0	0	6
	SR 315 at Laffin Rd	2	4	0	0	0	0	0	0	6
	SR 315 at Sunshine Market	2	4	1	0	0	0	0	0	7
	SR 315 at MSPD	0	1	0	0	0	0	0	0	1
	SR 315 at Jumper/East Main	4	2	1	1	0	1	0	0	9
	SR 315 at Woodlands/Laird	5	15	0	0	0	0	0	0	20
	SR 315 at Motor World	1	7	0	0	1	0	0	1	10
	SR 315 at SR 309 ramps	7	49	4	1	0	0	0	0	61
	East Main at MSPD	0	0	0	0	0	0	0	0	0
	East Main at Scott	0	1	1	0	0	0	0	0	2
Links	SR 315: I-81 to SR 309	36	146	14	5	5	1	1	4	212
	East Main St: SR 315 to Scott St	4	4	4	1	1	1	1	0	16

Abbreviations:

A=Right-Angle, RE=Rear End, FO=Fixed Object, SS=Side Swipe, HO=Head On, B=Backing, P=Pedestrian, NC=Non-Collision

As indicated in this table, the predominant type of accident within the study area is the rear-end crash, which accounts for two-thirds (67%) of the total crash history.

Table 3 provides a summary of the severity of the accidents within the study area. As indicated by the data in this table, approximately 70% of the recorded crashes resulted in personal injury. There was one fatality.

Table 3 also presents the accident rates for each intersection and roadway link in the study area. The accident rate provides a correlation of the accident frequencies to other factors such as traffic volume and length of roadway.

**Table 3
Accident Severity Summary
2000, 2001, 2003**

	Location	Severity			Total	Accident Rate
		Fatality	Personal Injury	Property Damage		
Intersections	SR 315 at I-81 Ramps	0	8	3	11	0.33
	SR 315 at Oak/Armstrong	0	0	0	0	0.00
	SR 315 at Old Boston Rd	0	5	1	6	0.44
	SR 315 at Laflin Rd	0	2	4	6	0.34
	SR 315 at Sunshine Market	0	3	4	7	0.46
	SR 315 at MSPD Access	1	0	0	1	0.07
	SR 315 at Jumper/East Main	0	7	2	9	0.49
	SR 315 at Woodlands/Laird	0	14	6	20	0.95
	SR 315 at Motor World	0	10	0	10	0.42
	SR 315 at SR 309 ramps	0	48	13	61	0.79
	East Main at MSPD Access	0	0	0	0	0.00
	East Main at Scott	0	1	1	2	0.20
Links	SR 315: I-81 to SR 309	1	151	60	212	1.92
	East Main St: SR 315 to Scott St	0	10	6	16	1.93

¹ Note: Intersection Accident Rates are stated as accidents per million entering vehicles; Link Accident Rates are stated as accidents per million vehicle miles.

The statewide average accident rate for roadways with similar characteristics as SR 315 is 2.54 accidents per million vehicle miles (acc/mvm). As shown in Table 3, the accident rate for SR 315 is lower than the statewide average, at 1.92 acc/mvm. The statewide average rate for roadways with similar characteristics as East Main Street is 2.01 acc/mvm, while the accident rate for East Main Street is 1.93 acc/mvm. These data indicate that the accident history on the study area roadway system is consistent with average statewide conditions and are not indicative of any specific safety deficiencies.

Statewide averages are not available for intersections, so there is no basis for direct comparison of the intersection accident rates. However, it is noted that most of the accident rates at the study intersections are generally comparable, with the exceptions of the following locations:

- SR 315 & Woodlands/Laird
- SR 315 & SR 309 interchange

With the exception of these two locations, the intersections experienced an average of less than four accidents per year. This crash experience is not indicative of a safety problem. At the intersection with Laird Street, the higher occurrence of accidents in comparison to the other intersections may be attributed to the geometry. The Laird Street and Woodlands Inn approaches are slightly offset, which may cause some confusion and/or conflicting vehicle maneuvers. At the intersection with the SR 309 ramps, most of these are rear-end type accidents, indicating that they may be a result of long queues and abrupt stops being made on either SR 315 or the off ramps.

2.4 Sight Distance

The sight distances at the two access drives to the MSPD site were reviewed to determine the sufficiency of the sight lines from the driveways to provide safe access to SR 315 and East Main Street. The sight distance conditions at the existing horseman's access from the site to SR 315 were also reviewed. Guidelines for intersection sight distance are provided in *Geometric Design of Highways and Streets 2004* published by the American Association of State Highway and Transportation Officials (AASHTO).



Horseman's Entrance at SR 315
Looking Left

Intersection sight distance from a stop controlled minor street approach is based on the design speed of the intersecting major street. There are two sets of criteria; one for left turn from a stop and one for right-turn from a stop. However, the criteria for left-turn from a stop must be met looking both to the left and to the right. The posted speeds on SR 315 and East Main Street are 45 mph and 35 mph, respectively. It was assumed that the 85th percentile design speeds are 10 mph greater than the posted speeds and these design speeds were used in identifying the appropriate sight distance criteria. Table 4 below summarizes the measured sight distance and intersection sight distance criteria at each site access point.

Table 4
Intersection Sight Distance

Driveway	Left-Turn		Right-Turn	
	Criteria	Measured	Criteria	Measured
MSPD entrance on SR 315	610'	>610'	530'	>530'
MSPD entrance on East Main Street	500'	>500'	430'	>430'
Horseman's entrance on SR 315	610'	240'	530'	>900'



Horseman's Entrance at SR 315
Looking Right

The horseman's entrance on SR 315 approaches the intersection at a very steep slope. The measured sight distance to the left is greater than 900 feet and to the right is approximately 240 feet, less than half of the 500 foot requirement. The volumes on this driveway are low and generally would not occur during the peak hours of the adjacent roadways. In addition, there is a center two-way left-turn lane within this segment of SR 315, which would allow vehicles that are turning left from the site to cross just the southbound lanes and use the center lane as a refuge. Then the maneuver into the northbound lanes could be finished from the center lane, where sight lines are sufficient to safely enter the through travel lane.

From this evaluation, it was determined that the access drives serving the patrons and employees of MSPD meet or exceed the AASHTO criteria.

3.0 CASE STUDIES

Gaming facilities operating in conjunction with racetracks are a relatively recent entertainment venue. As such, there is limited data available from traditional published resources, such as ITE's *Trip Generation*, for estimating the trip generation characteristics of these facilities. Consequently, traffic volume data was collected at two existing gaming and raceway facilities to provide a basis for estimating the traffic generation of the proposed MSPD project. Two sites located in New York State were selected for these case studies: Buffalo Raceway and Saratoga Gaming and Raceway. As noted previously, this data was used to establish the periods of peak traffic generation of the site as well as to provide a basis for estimating the trip generation of the proposed facilities at MSPD.

3.1 Buffalo Raceway

The first case study site was the Buffalo Raceway located in Hamburg, New York. Traffic volumes were recorded at this site during the months of June 2005 and July 2005. Buffalo Raceway is located on the Hamburg Fairgrounds and has a gaming facility with approximately 1,000 video lottery terminals (VLTs), and hosts harness racing for six months of the year. The traffic data collected at this site indicate general patterns of hourly and daily distributions that are consistent with the data that was collected at the Saratoga site. However, the site traffic for this facility was not "self-contained" and therefore may have included traffic influenced by other uses of the fairgrounds. In addition, the configuration of the count equipment produced volume outputs that proved inconclusive as to the directional distribution of the data. While the data that was collected was useful in supporting the identification of peak traffic periods, there were too many uncontrollable variables to produce reliable data for estimating trip rates for application to the MSPD study site. The data collected at this case study site is included in Appendix D.

3.2 Saratoga Gaming & Raceway

Traffic volumes were collected at the Saratoga Gaming & Raceway in Saratoga Springs, New York in the month of June 2005. Saratoga Gaming & Raceway has a gaming facility with approximately 1,300 VLTs and hosts harness racing during 11 months of the year. The gaming facility opened in January of 2004. Entering and exiting volumes at all driveways serving the site were recorded over a continuous ten-day period (including two weekends) to identify the peak hours and the trip patterns associated with the site operations. Summaries of this data, including plotted graphs of the hourly distributions of site volumes are provided in Appendix D. This data indicates that the peak periods of overall entering and exiting site traffic occurred during the following times:

- Friday: 6 pm to 8 pm
- Saturday: 11 am to 1 pm
- Saturday: 6 pm to 8 pm

Attendance data for the gaming and harness track facilities at Saratoga Gaming & Raceway were compiled for the same days of the traffic data collection. This data was reviewed to estimate the association of vehicle trips to these primary site activities. Evaluations of this traffic volume and concurrent attendance data, indicate that the average vehicle occupancy of persons traveling to the site is 2.2 people per vehicle. Based on this data and isolating the attendance data for the harness track component of the site activities, it is estimated that the gaming component of the Saratoga site (including the ancillary food service and bar amenities) generated traffic at the following rates on a daily and peak hour basis for Friday and Saturday:

Daily Trip Rates

- Friday 5.50 trips per VLT
- Saturday 7.50 trips per VLT

Peak Hour Trip Rates

- Friday PM Peak Hour: 0.425 trips per VLT
- Saturday Midday Peak Hour: 0.572 trips per VLT
- Saturday PM Peak Hour: 0.397 trips per VLT

The Saratoga Gaming & Raceway facility represents an excellent case study for MSPD, due to the fact that both sites are located in areas that are seasonal tourist destinations. The correlation of VLT stations to the supporting amenities such as restaurants and bars is also comparable between the sites, which enabled the correlation of trip rates that considered all of these incorporated uses within the project.

4.0 FUTURE CONDITIONS

4.1 No-Build Condition

The estimated time of completion (ETC) of the proposed expansion at MSPD is 2007. "No-Build" traffic volumes were developed to determine the future operations of the study area intersections without the proposed expansion, to provide a context for evaluating the effect of the traffic generated by the project. A growth rate of 2% per year was provided by PennDOT. It was applied to the 2005 Existing condition peak hour traffic volumes to obtain the 2007 (ETC) No-

Build traffic volumes. Volumes were also developed to represent background traffic conditions for a planning horizon ten years beyond the planned opening of the MSPD facility (ETC+10) based on this 2% annual growth rate. Figures 5 through 10 in Appendix A show the resulting ETC and ETC+10 No-Build peak hour volumes.

4.2 Trip Generation

The traffic generated by the proposed expansion at MSPD was estimated based on the traffic characteristics of the case study sites and using data published by the Institute of Transportation Engineers (ITE) in the 7th edition of *Trip Generation*. Table 5 summarizes the proposed MSPD site development. A figure of the proposed site layout can be found in Appendix B.

**Table 5
Proposed Land Uses**

Space	Units	Area (Square feet)
Gaming	2,000 slots	54,100
<i>Restaurants</i>		
Buffet	300 seats	14,700
Restaurant #1	175 seats	8,300
Restaurant #2	180 seats	11,200
Restaurant #3	200 seats	12,000
Quick Serve (Food court)	250 seats	13,600
<i>Drinking Places</i>		
Center Casino Lounge	142 seats	3,000
Perimeter Bars (2)	185 seats	3,800
VIP Bar/Lounge	25 seats	1,200
Night Club	2,200 occupants	17,000
Retail	-	16,000

4.2.1 Daily Site Traffic

Estimations of daily site traffic were made for all of the proposed site land uses. The trip generation rates developed from the data collected at the case study sites were used in estimating the trip generation of the gaming facility at MSPD. As noted in the Section 3.0 discussion of the case studies, the trip rates developed from this data, although correlated to the number of gaming stations, include not only the gaming activities but also the traffic associated with employee trips and the on-site support services, such as eating and drinking establishments.

To account for variations between the study sites and the configuration of the MSPD site, the sizes of the food and drink amenities at the case study sites were correlated to the number of gaming stations. This correlation was then applied to the number of proposed slot machines at the MSPD site to estimate the amount of space allocated to food and drink services in MSPD that is represented in the slot-based trip rates. It is estimated from this assessment that approximately 58% of the food services and all of the drinking services at the MSPD facility are accounted for within the trip rates. The traffic generated by the remaining food services and night club are anticipated to generate additional site trips that are not represented in the rates derived from the case study data. These additional site trips were estimated based on data published in the ITE *Trip Generation* report. Table 6 summarizes the estimated daily trips generated by each land use.

**Table 6
Daily Site Generated Trips**

Land Use	Friday			Saturday		
	Entering	Exiting	Total	Entering	Exiting	Total
Gaming	5,500	5,500	11,000	7,500	7,500	15,000
Restaurants	862	862	1,724	993	993	1,986
Nightclub	846	846	1,692	846	846	1,692
Retail ¹	-	-	-	-	-	-
TOTAL	7,208	7,208	14,416	9,339	9,339	18,678

¹ – trips generated by the retail component are estimated to be ancillary to the other primary on-site uses, and therefore will not generate additional primary trips entering or exiting the site.

It is assumed that the retail space will primarily be supported by site patrons and will not be a significant independent generator of destination trips. Therefore, it is estimated that the traffic generated by this use is represented by the traffic estimated to be generated by the other primary uses of the site.

Based on these assessments, it is estimated that the proposed facilities at MSPD will generate 14,416 daily vehicle trips on Fridays and 18,678 daily vehicle trips on Saturdays. These are the two peak days of the week of site activity. These daily trips include patrons, employees and service delivery trips entering and exiting the site.

4.2.2 Peak Hour Site Traffic

The peak hour site generated trips were generated in the same manner as the daily site generated trips. The trip generation rates developed from the case study data were used in estimating the peak hour trips for the gaming facility and a portion of its supporting amenities. Data available in *Trip Generation* was used for estimating the trips generated by the other restaurant spaces.

Some of the site land uses included in the proposed program, while they are expected to generate trips on a daily basis, will not generate a significant number of trips during the peak hours of entire facility. The proposed nightclub is not expected to generate a significant number of trips during the evaluated peak hours. Nightclubs are generally not open for business until at least 9 pm. The PM peak hours being evaluated occur no later than 8 pm. Some employee trips associated with the night club component of the site may occur during the evaluated peak hours, but these employee trips are not anticipated to be significant in relation to the trips generated by the other site uses. Therefore, the nightclub was not included in the peak hour site generated traffic.

It is noted that the traffic data collected at the case study sites indicates that all of the traffic generated by the sites during the study periods was automobile traffic. Anecdotal information provided by the management of the case study sites indicates that these facilities typically do not receive tour bus traffic. While the MSPD site includes accommodation for bus loading/unloading and parking, it is anticipated that bus trips will not be a major element of the daily trip generation of the site, consistent with the case study sites. Further, the limited number of bus trips that may

occur are not expected to happen during the peak hours of operation of the facility, since arrivals would be anticipated to occur before the dinner peak, and departures would likely be later in the evening. Because of these considerations, it is estimated that all of the peak hour site trips will be automobile trips.

Table 7 summarizes the total site generated trips estimated for the proposed MSPD expansion during the Friday PM, Saturday Midday and Saturday PM peak hours, respectively.

**Table 7
Peak Hour Site Generated Trips**

Land Use	Friday PM Peak Hour			Saturday Midday Peak Hour			Saturday PM Peak Hour		
	Entering	Exiting	Total	Entering	Exiting	Total	Entering	Exiting	Total
Gaming	425	425	850	652	492	1,144	341	453	794
Dining, Entertainment & Retail	134	105	239	152	108	260	152	108	260
TOTAL	559	530	1,089	804	600	1,404	493	561	1,054

4.3 Trip Distribution

The traffic generated by the proposed MSPD project was distributed to the study area roadway network based on an evaluation of existing traffic patterns and based on population distributions within the anticipated market area of the project. Census demographic information was compiled to determine the origin of potential patrons (18 years of age or older) of the gaming facility within a two-hour driving distance. Within this two-hour driving distance, to the east and south, are two heavily populated areas; New York City and Philadelphia. The population in these metropolitan areas comprises approximately 92% of the total resident population within the estimated "capture" area of the MSPD site. However, since there are major casino destinations (Atlantic City, Connecticut) that are within the same travel time of these cities as the MSPD site, it is estimated that a larger segment of patrons to the MSPD will have origins and destinations to the west and north than would otherwise be indicated by the population distribution. Another factor influencing the trip distribution patterns to the site is the effect of established tourism in the Wilkes-Barre area that will draw from people that are vacationing in the region, which would indicate a lower distribution from the east and south.

A review of existing traffic patterns in the study area further supports this premise. On a daily basis, the traffic on SR 315 is equally distributed northbound and southbound. During the three peak periods during which traffic counts were conducted, the distribution of traffic on SR 315 was approximately 65% traveling to/from the south and 35% traveling to/from the north. This distribution of traffic was seen consistently during all three peak periods, which includes two Saturday peak periods. Since the Saturday peak periods represent discretionary trips and not that of commuter traffic, it indicates that this distribution of traffic is also applicable to visitor trips to MSPD.

Based on these factors, it is estimated that the distribution of site-generated trips during the peak hours will be 60% traveling to/from the south of the site on SR 315, 35% traveling to/from the north of the site on SR 315 and 5% traveling to/from east of the site on East Main Street. The

trips were distributed to the likely routes (I-81, I-476, SR 309, SR 315) by which they would arrive and depart. The existing site driveway on SR 315 is planned to serve patrons of MSPD and the existing site driveway on East Main Street will be used only by employees, buses and deliveries. Since the trips expected at this site driveway will likely occur outside of the peak hours being evaluated, an assumption was made that 95% of the site generated trips will enter and exit on SR 315 and 5% will enter and exit on East Main Street. The distributed site trips can be seen on Figures 11 through 13 in Appendix A.

4.4 Build Condition

The No-Build traffic volumes were combined with the distributed site generated trips to obtain the Build condition volumes. This represents the future peak hour traffic conditions with the trips associated with the proposed site expansion. The ETC and ETC+10 Build condition traffic volumes are presented on Figures 14 through 19 in Appendix A.

4.5 Other Projects

There are other proposed developments and improvement projects within the proximity of the MSPD study area that will generate additional trips and/or modify the operations on SR 315. However, these projects are still in the permitting and/or design process, so their impacts and/or improvements to the roadway network are not known at this time. Once the projects have been approved and a schedule for construction has been determined, further evaluations can be conducted to include the effects of these projects.

4.5.1 Miracle Development

The Miracle Development is proposing Center Point, a proposed mixed-use development located on Armstrong Street east of SR 315. The development consists of two pieces; Center Point East is a 370 acre parcel located east of I-476 and Center Point West is a 125 acre parcel located between SR 315 and I-476. The development includes commercial, industrial and retail uses. As a mitigation measure to accommodate the site generated traffic, geometric modifications will be made to the intersection of SR 315 and Oak Street/Armstrong Street, including the realignment of Armstrong Street.

4.5.2 Discount Retail

There is a proposed shopping center, to include a Super Wal-Mart store, north of the study area. It is to be located off of SR 315 at the intersection with Main Street. The expected opening of the site is 2006.

4.5.3 FOCUS 81- Emergency Detour Route

As part of an ongoing initiative to develop short and long term strategies to improve safety and relieve congestion on I-81, known as "Focus 81", an emergency detour route study was conducted to develop methods to divert traffic from I-81 in the event of an incident. A project to create an incident management system for the I-81 corridor is being considered by PennDOT. This system would provide communications systems and signal coordination of all of the signals on SR 315 between I-81 interchanges 170 and 175. In addition to providing improved traffic

progression capabilities during normal traffic conditions, this system would facilitate improved traffic management during incidents along the I-81 corridor by diverting traffic to SR 315, and modifying signal operations to accommodate the resulting traffic patterns. The implementation of this system would require upgrade improvements to the signals to provide uniform equipment and communication protocols. Jurisdictional issues among involved municipalities would also need to be coordinated. There is currently no anticipated schedule for the implementation of this project.

5.0 CAPACITY ANALYSES

The operating conditions of transportation facilities are evaluated based on the relationship of existing or projected traffic volumes to the theoretical capacity of the highway facility. Various factors affect capacity including traffic volume, travel speed, roadway geometry, grade, number and width of travel lanes and intersection control. The current standards for evaluating capacity and operating conditions are contained in the 2000 *Highway Capacity Manual*, published by the Transportation Research Board. The procedures describe operating conditions in terms of Level of Service (LOS). In general, "A" represents the best operating condition and "F" represents the worst. Level of service "D" or better normally represents acceptable operating conditions. Descriptions of levels of service and the associated performance measures set forth in the HCM 2000 are provided in Appendix F.

To determine the impact of the proposed project on the operations of the adjacent transportation system, traffic operations were analyzed for the three peak-hour study conditions, representing the peak hour of adjacent street traffic and the peak hour of site generation, for the following conditions:

- 2005 Existing Conditions
- 2007 (ETC) No-Build Conditions
- 2007 (ETC+10) Build Conditions
- 2017 (ETC) No-Build Conditions
- 2017 (ETC+10) Build Conditions

The traffic operations within the study area for these conditions are described below. The computation worksheet summaries are provided in Appendix G.

5.1 Existing Condition

The operating conditions of the signalized and unsignalized intersections within the study area were analyzed for the existing roadway geometry, signal timings and traffic volumes conditions. The intersection levels of service (LOS) for the 2005 Existing condition are presented in Table 8. As shown, all of the study area intersections currently operate at an overall LOS D or better for all three peak periods.

The only intersection approach that operates below LOS D during the evaluated peak hours is the Laird Street approach of the intersection of SR 315 at Laird Street and Woodlands Inn. It operates at LOS F and LOS E during the Friday PM and Saturday Midday peak hours, respectively. Factors that contribute to the delay on the side-street approaches include: (1) the priority of signal time allocated to the SR 315 approaches for progressive movement of the arterial through traffic; (2) the alignment of the side-street approaches which necessitates a split-phase operation; and (3) the peaking characteristics of traffic flow on the Laird Street

approach.(peak hour factor of 0.53, which indicates that approximately half of the hourly volume on this approach occurs within a 15-minute duration).

5.2 No-Build Condition

The future operating conditions of the study area intersections were analyzed without the proposed expansion at MSPD to provide a context for evaluating the impacts associated with the project. These capacity analyses were conducted using the No-Build condition volumes with existing roadway geometry and traffic signal timing parameters. The No-Build condition was evaluated for the ETC and ETC+10 design years; the results can be seen in Tables 9 and 10.

For the 2007 (ETC) No-Build condition, all of the study area intersections operate at an overall LOS D or better during all three peak periods, except for one location: the intersection of SR 315 at Laird Street and Woodlands Inn. This intersection is projected to operate at an overall LOS E during the Friday PM peak hour. This change in level of service from existing conditions (from LOS D to LOS E) is primarily attributable to the same combination of signal timing, intersection alignment and side-street volume peaking characteristics. While these conditions will cause the noted change in overall LOS, it is noted that the level of service for the mainline movements on SR 315 will be LOS B (northbound) and LOS C (southbound).

The analyses of the 2017 (ETC+10) No-Build conditions show that operations at two intersections within the study area will be LOS E or F as a result of the trend of volume increases associated with general growth and demographic changes in the region over this 10-year period. These intersections are: (1) SR 315 and Laird Street/Woodlands Inn; and (2) SR 315 and Oak Street/Armstrong Street. All of the other study area intersections are projected to operate at an overall LOS D or better during the three peak periods.

The factors noted at the intersection of SR 315 and Laird Street will continue to be exacerbated by increased traffic volumes associated with general background growth. The side-street delay will also affect operations during the Saturday peak hours. However, the mainline operations will continue to be LOS B or C in this 10-year design horizon.

The projected LOS E conditions at the intersection of SR 315 and Oak Street/Armstrong Street occurs during the Friday PM peak hour condition. The operation during the Saturday Midday and Saturday PM peak hours is projected to be LOS C. The LOS E conditions during the Friday PM peak hour are associated with the northbound approach of SR 315, which will operate at LOS E, and the Oak St approach, which will operate at LOS F during this peak hour.

The northbound off-ramp approach of SR 309 at the intersection with SR 315 is noted to operate at LOS E during the Friday PM peak hour in the ETC+10 No-Build condition. This delay is largely associated with the signal timing and phasing at the interchange. The overall intersection operation is projected to be LOS C.

5.3 Build Condition

An evaluation of the operating conditions of the study area intersections with the addition of the MSPD site generated trips was conducted. The intersections were analyzed using the ETC and ETC+10 Build condition traffic volumes with the existing roadway geometry and signal timings.

The 2007 (ETC) and 2017 (ETC+10) Build condition LOS are summarized in Tables 11 and 12, respectively.

For the 2007 (ETC) Build condition, there is a change in overall LOS from the ETC No-Build condition during one or more of the peak hours of study at the following intersections:

- SR 315 and Laird Street/Woodlands Inn
- SR 315 and SR 309 interchange.

The projected change in operations at these locations, and the associated peak hour, are summarized below.

- SR 315 & Laird Street/Woodlands Inn: changes from LOS E to LOS F during the Friday PM peak hour.
- SR 315 and SR 309 NB Ramps: changes from LOS B to LOS D during the Friday PM peak hour and LOS B to LOS C during the Saturday Midday peak hour.
- SR 315 and SR 309 SB Ramps: changes from LOS B to LOS C during the Friday PM peak hour, LOS A to LOS C during the Saturday Midday peak hour, and LOS A to LOS B during the Saturday PM peak hour.

The operations of the MSPD site access intersection with SR 315 is projected to operate at LOS F during all of the peak hours under the current Stop sign control.

Recommendations to address these changes in level of service and to provide acceptable operations at the site access for the ETC design year are described in Section 6.0-Recommendations.

For the 2017 (ETC+10) Build condition, there is a change in overall LOS from the ETC+10 No-Build condition during one or more of the peak hours of study at the following intersections:

- SR 315 and Motorworld/Hampton Inn
- SR 315 and SR 309 interchange.

The projected change in operations at these locations for the ETC+10 design year, and the associated peak hour, are summarized below.

- SR 315 & Motorworld/Hampton Inn: changes from LOS A to LOS B during the Friday PM and Saturday PM peak hours.
- SR 315 and SR 309 NB Ramps: changes from LOS C to LOS E during the Friday PM peak hour, LOS C to LOS D during the Saturday Midday peak hour, and LOS B to LOS C during the Saturday PM peak hour.

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- SR 315 and SR 309 SB Ramps: changes from LOS C to LOS D during the Friday PM peak hour, LOS B to LOS D during the Saturday Midday peak hour, and LOS A to LOS C during the Saturday PM peak hour.

It is noted that the intersection operations at SR 315 and Laird Street/Woodlands Inn will not change between the No-Build and Build condition, although the intersection operation will be LOS F during the Friday PM peak hour.

The operations of the MSPD site access intersection with SR 315 is projected to operate at LOS F during all of the peak hours under the current Stop sign control.

Recommendations to address these changes in level of service and to provide acceptable operations at the site access for the ETC design year are described in Section 6.0 - Recommendations.

**Table 8
Intersection Level of Service
2005 Existing Condition**

Intersection		Fri PM	Sat Midday	Sat PM
SIGNALIZED INTERSECTIONS				
SR 315 at Oak St/Armstrong St				
SR 315	NB	C (33.0)*	C (21.3)	B (16.5)
SR 315	SB	C (31.8)	C (22.7)	B (18.3)
Oak St	EB	D (35.4)	B (18.9)	B (17.5)
Armstrong St	WB	B (18.2)	B (15.3)	B (14.8)
OVERALL		C (32.0)	C (20.9)	B (17.3)
SR 315 at Old Boston Road				
SR 315	NB	A (4.4)	A (2.6)	A (2.7)
SR 315	SB	A (4.4)	A (2.6)	A (2.9)
Old Boston Rd	WB	B (11.8)	C (21.8)	B (19.3)
OVERALL		A (5.3)	A (4.2)	A (4.4)
SR 315 at Laffin Rd				
SR 315	NB	A (4.2)	A (2.7)	A (3.9)
SR 315	SB	B (11.9)	A (9.6)	B (11.6)
Laffin Rd	EB	B (19.2)	C (20.8)	B (18.1)
OVERALL		A (8.8)	A (8.1)	B (10.2)
SR 315 at Sunshine Market				
SR 315	NB	A (3.9)	A (3.7)	A (2.5)
SR 315	SB	A (8.5)	A (8.4)	A (6.3)
Sunshine Market	EB	B (18.6)	B (18.0)	B (19.3)
OVERALL		A (7.7)	A (8.4)	A (6.1)
SR 315 at East Main St/Jumper Rd				
SR 315	NB	B (19.0)	B (13.4)	B (10.3)
SR 315	SB	B (14.2)	B (15.1)	B (11.5)
East Main St	EB	C (34.8)	C (24.5)	C (24.6)
Jumper Rd	WB	D (36.4)	C (26.3)	C (25.7)
OVERALL		C (22.2)	B (17.9)	B (16.0)
SR 315 at Laird St/Woodlands Inn				
SR 315	NB	B (15.4)	B (10.4)	B (12.8)
SR 315	SB	C (27.1)	B (12.8)	B (12.6)
Laird St	EB	F (219.1)	E (72.8)	D (40.4)
Woodlands Inn	WB	D (45.3)	D (37.1)	C (34.6)
OVERALL		D (46.8)	B (16.6)	B (15.0)
SR 315 at Motorworld/Hampton Inn				
SR 315	NB	A (4.7)	A (4.7)	A (7.7)
SR 315	SB	A (1.9)	A (6.9)	A (7.6)
Motorworld	EB	D (40.6)	C (25.0)	B (16.3)
Hampton Inn	WB	D (41.9)	C (25.1)	B (16.0)
OVERALL		A (8.7)	A (8.1)	A (9.2)
SR 315 at SR 309 Northbound Ramps				
SR 315	NB	A (5.0)	A (7.8)	A (5.8)
SR 315	SB	B (19.8)	B (17.4)	B (14.2)
SR 309 NB off ramp	EB	D (48.2)	C (32.2)	D (37.7)
Army Reserve	WB	C (33.8)	D (38.4)	A (0.0)
OVERALL		B (14.4)	B (13.4)	B (10.6)
SR 315 at SR 309 Southbound Ramps				
SR 315	NB	B (17.1)	B (11.2)	A (6.3)
SR 315	SB	A (7.2)	A (3.7)	A (2.8)
SR 309 SB off ramp	EB	D (36.9)	D (36.6)	D (38.0)
OVERALL		B (14.6)	A (9.2)	A (6.3)
UNSIGNALIZED INTERSECTIONS				
SR 315 at MSPD				
SR 315 Left-turn	NB	A (8.8)	A (8.9)	A (8.2)
SR 315 Left-turn	SB	A (0.0)	A (0.0)	A (8.2)
MSPD Left-turn	EB	C (20.4)	C (19.5)	C (16.5)
MSPD Right-turn	EB	B (10.2)	B (10.4)	A (9.4)
Mid-Atlantic	WB	A (0.0)	C (17.7)	A (9.6)
East Main St at MSPD				
East Main St Left-turn	EB	A (1.7)	A (0.9)	A (2.0)
MSPD Left-turn	SB	B (12.0)	B (13.0)	B (11.3)
MSPD Right-turn	SB	A (9.7)	A (9.8)	A (9.3)
East Main St at Scott St/First St				
East Main St Left-turn	EB	A (2.3)	A (1.4)	A (1.4)
East Main St Left-turn	WB	A (3.9)	A (2.1)	A (2.1)
Scott St	NB	B (13.3)	B (10.8)	B (10.8)
First St	SB	C (15.4)	B (10.6)	B (10.6)

*A (0.0) = LOS (Delay), where delay is given in seconds per vehicle

**Table 9
Intersection Level of Service
2007 (ETC) No-Build Condition**

Intersection		Fri PM	Sat Midday	Sat PM
SIGNALIZED INTERSECTIONS				
SR 315 at Oak St/Armstrong St				
SR 315	NB	D (39.7)*	C (22.5)	B (17.3)
SR 315	SB	C (32.7)	C (24.1)	B (19.1)
Oak St	EB	D (40.7)	B (19.4)	B (18.2)
Armstrong St	WB	B (18.2)	B (15.7)	B (15.2)
OVERALL		D (36.4)	C (22.0)	B (18.1)
SR 315 at Old Boston Road				
SR 315	NB	A (4.5)	A (2.6)	A (3.2)
SR 315	SB	A (4.6)	A (2.7)	A (3.3)
Old Boston Rd	WB	B (11.5)	C (21.2)	B (17.8)
OVERALL		A (5.5)	A (4.1)	A (4.6)
SR 315 at Laffin Rd				
SR 315	NB	A (4.4)	A (3.5)	A (3.9)
SR 315	SB	B (11.9)	B (10.5)	B (11.7)
Laffin Rd	EB	B (19.4)	B (18.9)	B (18.3)
OVERALL		A (8.9)	A (8.7)	B (10.3)
SR 315 at Sunshine Market				
SR 315	NB	A (4.0)	A (3.7)	A (2.6)
SR 315	SB	A (8.6)	A (8.5)	A (6.3)
Sunshine Market	EB	B (19.0)	B (18.2)	B (19.2)
OVERALL		A (7.8)	A (8.5)	A (6.1)
SR 315 at East Main St/Jumper Rd				
SR 315	NB	C (22.1)	B (12.6)	B (10.3)
SR 315	SB	B (16.1)	B (14.3)	B (11.5)
East Main St	EB	C (32.1)	C (26.7)	C (24.6)
Jumper Rd	WB	C (35.0)	C (26.9)	C (25.8)
OVERALL		C (23.4)	B (17.9)	B (16.1)
SR 315 at Laird St/Woodlands Inn				
SR 315	NB	B (15.0)	B (10.5)	B (12.9)
SR 315	SB	C (27.6)	B (12.8)	B (12.8)
Laird St	EB	F (332.4)	E (75.0)	D (40.5)
Woodlands Inn	WB	D (45.3)	D (37.1)	C (34.5)
OVERALL		E (61.1)	B (16.8)	B (15.1)
SR 315 at Motorworld/Hampton Inn				
SR 315	NB	A (4.8)	A (5.5)	A (7.8)
SR 315	SB	A (2.0)	A (9.1)	A (7.7)
Motorworld	EB	D (40.5)	C (24.9)	B (16.1)
Hampton Inn	WB	D (41.9)	C (24.9)	B (15.9)
OVERALL		A (8.7)	A (9.4)	A (9.2)
SR 315 at SR 309 Northbound Ramps				
SR 315	NB	A (5.5)	A (9.0)	A (6.5)
SR 315	SB	C (21.7)	B (18.4)	B (15.2)
SR 309 NB off ramp	EB	D (50.7)	D (38.7)	D (37.6)
Army Reserve	WB	C (33.8)	C (32.1)	A (0.0)
OVERALL		B (15.7)	B (14.5)	B (11.4)
SR 315 at SR 309 Southbound Ramps				
SR 315	NB	B (18.3)	B (12.3)	A (7.0)
SR 315	SB	A (7.8)	A (4.1)	A (2.6)
SR 309 SB off ramp	EB	D (36.8)	D (36.5)	D (38.0)
OVERALL		B (15.5)	A (9.9)	A (6.7)
UNSIGNALIZED INTERSECTIONS				
SR 315 at MSPD				
SR 315 Left-turn	NB	A (8.9)	A (9.0)	A (8.2)
SR 315 Left-turn	SB	A (0.0)	A (0.0)	A (8.3)
MSPD Left-turn	EB	C (21.0)	C (20.1)	C (16.8)
MSPD Right-turn	EB	B (10.3)	B (10.5)	A (9.5)
Mid-Atlantic	WB	A (0.0)	C (18.1)	A (9.6)
East Main St at MSPD				
East Main St Left-turn	EB	A (1.7)	A (0.8)	A (2.1)
MSPD Left-turn	SB	B (12.2)	B (13.3)	B (11.4)
MSPD Right-turn	SB	A (9.8)	A (8.4)	A (9.4)
East Main St at Scott St/First St				
East Main St Left-turn	EB	A (2.4)	A (1.5)	A (2.3)
East Main St Left-turn	WB	A (3.9)	A (2.1)	A (3.4)
Scott St	NB	B (13.8)	B (10.9)	B (10.5)
First St	SB	C (16.0)	B (11.8)	B (12.2)

*A (0.0) = LOS (Delay), where delay is given in seconds per vehicle

**Table 10
Intersection Level of Service
2017 (ETC+10) No-Build Condition**

Intersection		Fri PM	Sat Midday	Sat PM
SIGNALIZED INTERSECTIONS				
SR 315 at Oak St/Armstrong St				
SR 315	NB	E (78.1)*	C (32.9)	C (21.4)
SR 315	SB	C (34.6)	D (35.3)	C (25.1)
Oak St	EB	F (111.1)	C (24.0)	C (22.4)
Armstrong St	WB	C (20.6)	B (17.5)	B (17.5)
OVERALL		E (70.3)	C (31.0)	C (22.9)
SR 315 at Old Boston Road				
SR 315	NB	A (4.7)	A (2.6)	A (3.3)
SR 315	SB	A (4.8)	A (2.7)	A (3.5)
Old Boston Rd	WB	B (12.0)	C (20.3)	B (17.2)
OVERALL		A (5.7)	A (4.1)	A (4.8)
SR 315 at Laffin Rd				
SR 315	NB	A (5.1)	A (3.6)	A (4.7)
SR 315	SB	B (12.2)	B (11.7)	B (12.5)
Laffin Rd	EB	C (22.2)	B (19.9)	B (15.0)
OVERALL		A (9.6)	A (9.4)	B (10.2)
SR 315 at Sunshine Market				
SR 315	NB	A (4.6)	A (4.0)	A (3.5)
SR 315	SB	A (8.8)	A (8.5)	A (8.4)
Sunshine Market	EB	C (20.5)	B (17.0)	B (16.2)
OVERALL		A (8.4)	A (8.4)	A (7.1)
SR 315 at East Main St/Jumper Rd				
SR 315	NB	C (25.6)	B (13.7)	B (12.3)
SR 315	SB	B (19.6)	B (14.8)	B (14.6)
East Main St	EB	C (34.2)	C (27.6)	C (25.5)
Jumper Rd	WB	C (32.9)	C (27.7)	C (26.9)
OVERALL		C (25.8)	B (18.7)	B (18.1)
SR 315 at Laird St/Woodlands Inn				
SR 315	NB	B (15.7)	B (11.1)	A (9.8)
SR 315	SB	C (32.4)	B (13.6)	B (13.6)
Laird St	EB	F (1399.8)	F (127.0)	F (83.7)
Woodlands Inn	WB	D (45.6)	D (36.7)	D (36.5)
OVERALL		F (197.9)	C (20.9)	B (19.5)
SR 315 at Motorworld/Hampton Inn				
SR 315	NB	A (6.1)	A (5.5)	A (8.0)
SR 315	SB	A (2.3)	A (8.9)	A (7.8)
Motorworld	EB	D (41.7)	C (24.2)	B (15.7)
Hampton Inn	WB	D (43.3)	C (24.3)	B (15.4)
OVERALL		A (9.6)	A (9.3)	A (9.3)
SR 315 at SR 309 Northbound Ramps				
SR 315	NB	A (7.4)	B (15.5)	B (13.1)
SR 315	SB	D (36.9)	C (29.2)	C (21.9)
SR 309 NB off ramp	EB	E (66.5)	D (36.1)	D (37.6)
Army Reserve	WB	C (33.4)	C (29.8)	A (0.0)
OVERALL		C (24.6)	C (22.2)	B (17.7)
SR 315 at SR 309 Southbound Ramps				
SR 315	NB	C (29.6)	C (21.0)	B (11.1)
SR 315	SB	B (12.6)	A (8.5)	A (3.9)
SR 309 SB off ramp	EB	D (37.3)	D (36.2)	D (37.9)
OVERALL		C (22.8)	B (16.2)	A (9.4)
UNSIGNALIZED INTERSECTIONS				
SR 315 at MSPD				
SR 315 Left-turn	NB	A (9.4)	A (9.6)	A (8.5)
SR 315 Left-turn	SB	A (0.0)	A (0.0)	A (8.6)
MSPD Left-turn	EB	D (25.5)	C (24.0)	C (19.2)
MSPD Right-turn	EB	B (10.9)	B (11.2)	A (9.8)
Mid-Atlantic	WB	A (0.0)	C (21.0)	A (10.0)
East Main St at MSPD				
East Main St Left-turn	EB	A (1.9)	A (1.0)	A (2.2)
MSPD Left-turn	SB	B (13.5)	C (15.1)	B (12.4)
MSPD Right-turn	SB	B (10.2)	B (10.4)	A (9.7)
East Main St at Scott St/First St				
East Main St Left-turn	EB	A (2.7)	A (1.6)	A (2.5)
East Main St Left-turn	WB	A (4.2)	A (2.3)	A (3.5)
Scott St	NB	C (18.0)	B (11.9)	B (11.3)
First St	SB	C (20.0)	B (13.3)	B (13.9)

*A (0.0) = LOS (Delay), where delay is given in seconds per vehicle

**Table 11
Intersection Level of Service
2007 (ETC) Build Condition**

Intersection		Fri PM	Sat Midday	Sat PM
SIGNALIZED INTERSECTIONS				
SR 315 at Oak St/Armstrong St				
SR 315	NB	D (54.4)*	C (29.6)	C (20.2)
SR 315	SB	D (38.1)	D (44.8)	C (25.2)
Oak St	EB	D (51.6)	C (21.0)	C (21.9)
Armstrong St	WB	C (20.4)	B (17.1)	B (18.4)
OVERALL		D (46.7)	C (33.6)	C (22.4)
SR 315 at Old Boston Road				
SR 315	NB	A (4.8)	A (2.9)	A (3.4)
SR 315	SB	A (5.0)	A (3.0)	A (3.6)
Old Boston Rd	WB	B (11.9)	C (21.2)	B (17.8)
OVERALL		A (5.6)	A (3.9)	A (4.5)
SR 315 at Laffin Rd				
SR 315	NB	A (5.3)	A (3.8)	A (4.5)
SR 315	SB	B (11.4)	B (11.1)	B (11.3)
Laffin Rd	EB	C (23.3)	C (22.0)	C (20.7)
OVERALL		A (9.3)	A (9.0)	B (10.1)
SR 315 at Sunshine Market				
SR 315	NB	A (4.8)	A (4.1)	A (3.0)
SR 315	SB	A (8.7)	A (8.8)	A (6.5)
Sunshine Market	EB	C (21.9)	C (22.2)	C (20.8)
OVERALL		A (8.2)	A (8.8)	A (6.1)
SR 315 at East Main St/Jumper Rd				
SR 315	NB	C (31.6)	B (14.7)	B (12.4)
SR 315	SB	B (19.4)	B (15.0)	B (14.6)
East Main St	EB	C (31.7)	C (31.0)	C (28.3)
Jumper Rd	WB	C (35.0)	C (31.2)	C (29.5)
OVERALL		C (27.2)	B (18.5)	B (17.3)
SR 315 at Laird St/Woodlands Inn				
SR 315	NB	B (15.3)	B (12.1)	B (14.0)
SR 315	SB	D (37.5)	B (13.6)	B (13.9)
Laird St	EB	F (614.5)	F (90.3)	D (49.2)
Woodlands Inn	WB	D (45.3)	D (41.0)	D (37.2)
OVERALL		F (82.2)	B (16.6)	B (15.7)
SR 315 at Motorworld/Hampton Inn				
SR 315	NB	A (5.9)	A (6.0)	A (7.8)
SR 315	SB	A (2.8)	A (8.9)	A (7.7)
Motorworld	EB	D (41.2)	C (28.4)	B (18.1)
Hampton Inn	WB	D (41.9)	C (28.5)	B (18.0)
OVERALL		A (8.3)	A (9.0)	A (9.0)
SR 315 at SR 309 Northbound Ramps				
SR 315	NB	A (6.4)	A (9.3)	B (10.4)
SR 315	SB	C (32.6)	C (29.8)	C (22.4)
SR 309 NB off ramp	EB	F (270.1)	E (70.0)	D (39.4)
Army Reserve	WB	C (33.3)	C (25.6)	A (0.0)
OVERALL		D (42.1)	C (24.2)	B (18.1)
SR 315 at SR 309 Southbound Ramps				
SR 315	NB	C (28.8)	C (32.1)	C (22.4)
SR 315	SB	B (16.1)	A (9.5)	A (7.9)
SR 309 SB off ramp	EB	D (42.2)	D (36.2)	D (36.2)
OVERALL		C (25.1)	C (22.3)	B (17.6)
UNSIGNALIZED INTERSECTIONS				
SR 315 at MSPD				
SR 315 Left-turn	NB	B (11.3)	B (14.5)	A (9.5)
SR 315 Left-turn	SB	A (0.0)	A (0.0)	A (8.3)
MSPD Left-turn	EB	F (173.8)	F (308.5)	F (115.2)
MSPD Right-turn	EB	C (15.7)	C (18.5)	B (13.1)
Mid-Atlantic	WB	A (0.0)	C (18.1)	A (9.6)
East Main St at MSPD				
East Main St Left-turn	EB	A (2.2)	A (1.6)	A (2.4)
MSPD Left-turn	SB	B (12.7)	B (14.2)	B (11.9)
MSPD Right-turn	SB	A (10.0)	B (10.1)	A (9.6)
East Main St at Scott St/First St				
East Main St Left-turn	EB	A (2.3)	A (1.3)	A (2.2)
East Main St Left-turn	WB	A (3.8)	A (2.0)	A (3.1)
Scott St	NB	B (14.6)	B (11.4)	B (10.8)
First St	SB	C (17.1)	B (12.4)	B (12.8)

*A (0.0) = LOS (Delay), where delay is given in seconds per vehicle

**Table 12
Intersection Level of Service
2017 (ETC+10) Build Condition**

Intersection		Fri/PM	Sat Midday	Sat/PM
SIGNALIZED INTERSECTIONS				
SR 315 at Oak St/Armstrong St				
SR 315	NB	F (96.8)*	D (43.7)	C (31.7)
SR 315	SB	D (49.5)	F (135.0)	D (41.1)
Oak St	EB	F (120.7)	C (22.6)	C (21.9)
Armstrong St	WB	C (21.6)	B (16.8)	B (17.4)
OVERALL		F (83.3)	E (74.5)	C (32.6)
SR 315 at Old Boston Road				
SR 315	NB	A (5.0)	A (2.8)	A (3.5)
SR 315	SB	A (5.2)	A (3.0)	A (3.8)
Old Boston Rd	WB	B (12.8)	C (20.7)	B (17.5)
OVERALL		A (5.9)	A (3.8)	A (4.7)
SR 315 at Laffin Rd				
SR 315	NB	A (6.5)	A (4.2)	A (5.6)
SR 315	SB	B (11.6)	B (11.6)	B (12.6)
Laffin Rd	EB	C (26.8)	C (23.3)	B (17.0)
OVERALL		B (10.3)	A (9.6)	B (10.6)
SR 315 at Sunshine Market				
SR 315	NB	A (5.6)	A (5.5)	A (4.1)
SR 315	SB	A (8.7)	B (11.0)	A (8.6)
Sunshine Market	EB	C (24.0)	B (19.0)	B (17.8)
OVERALL		A (8.9)	A (10.0)	A (7.3)
SR 315 at East Main St/Jumper Rd				
SR 315	NB	C (31.1)	B (15.0)	B (13.5)
SR 315	SB	C (20.2)	B (15.3)	B (15.1)
East Main St	EB	C (33.7)	C (33.7)	C (28.7)
Jumper Rd	WB	D (35.9)	C (34.0)	C (30.7)
OVERALL		C (27.8)	B (19.6)	B (18.4)
SR 315 at Laird St/Woodlands Inn				
SR 315	NB	B (17.5)	B (13.3)	B (13.7)
SR 315	SB	D (45.3)	B (14.8)	B (14.6)
Laird St	EB	F (1652.9)	F (150.2)	F (106.8)
Woodlands Inn	WB	D (45.6)	D (40.5)	D (40.7)
OVERALL		F (191.9)	C (20.6)	B (18.3)
SR 315 at Motorworld/Hampton Inn				
SR 315	NB	A (7.6)	A (6.4)	A (9.5)
SR 315	SB	A (4.5)	A (9.1)	A (9.1)
Motorworld	EB	D (44.6)	C (27.9)	B (17.1)
Hampton Inn	WB	D (43.3)	C (28.1)	B (16.8)
OVERALL		B (10.4)	A (9.4)	B (10.3)
SR 315 at SR 309 Northbound Ramps				
SR 315	NB	A (8.6)	A (9.7)	B (13.1)
SR 315	SB	F (83.5)	E (79.8)	C (32.9)
SR 309 NB off ramp	EB	F (338.4)	F (144.4)	D (41.3)
Army Reserve	WB	C (33.4)	C (25.6)	A (0.0)
OVERALL		E (71.6)	D (53.2)	C (24.1)
SR 315 at SR 309 Southbound Ramps				
SR 315	NB	D (53.5)	E (64.1)	C (30.2)
SR 315	SB	C (31.3)	B (16.4)	B (10.6)
SR 309 SB off ramp	EB	D (48.8)	D (35.9)	D (36.1)
OVERALL		D (43.1)	D (39.6)	C (22.5)
UNSIGNALIZED INTERSECTIONS				
SR 315 at MSPD				
SR 315 Left-turn	NB	B (12.8)	C (18.4)	B (10.1)
SR 315 Left-turn	SB	A (0.0)	A (0.0)	A (8.6)
MSPD Left-turn	EB	F (308.6)	F (483.1)	F (194.8)
MSPD Right-turn	EB	C (18.4)	C (23.0)	B (14.1)
Mid-Atlantic	WB	A (0.0)	C (21.0)	A (10.0)
East Main St at MSPD				
East Main St Left-turn	EB	A (2.3)	A (1.6)	A (2.5)
MSPD Left-turn	SB	B (14.1)	C (16.5)	B (13.0)
MSPD Right-turn	SB	B (10.4)	B (10.6)	A (9.9)
East Main St at Scott St/First St				
East Main St Left-turn	EB	A (2.7)	A (1.5)	A (2.4)
East Main St Left-turn	WB	A (4.2)	A (2.2)	A (3.3)
Scott St	NB	C (19.7)	B (12.6)	B (11.7)
First St	SB	C (23.9)	B (14.1)	B (14.7)

*A (0.0) = LOS (Delay), where delay is given in seconds per vehicle

6.0 RECOMMENDATIONS

In order to maintain No-Build operating conditions, improvements will be necessary at some of the study area intersections, as noted in Section 5.0 – Capacity Analyses. The recommended improvements at these locations have been identified to coincide with the respective design year horizons to consider the improvements recommended to address operations at the year of opening of the proposed facility (ETC) and to address the long-range operations for the ETC+10 design horizon.

6.1 2007 (ETC) Improvements

The 2007 (ETC) No-Build overall LOS is maintained at the intersection of SR 315 & Laird Street/Woodlands Inn by making signal timing adjustments during the Friday PM peak hour. This intersection is coordinated with the East Main Street and Motorworld intersections. A modification of the signal offsets used in the coordination plans improves the progression of traffic on SR 315 at all three intersections. Similar timing adjustments were made to this intersection during the Saturday Midday peak hour, when the intersections run in an uncoordinated mode, to maintain the No-Build condition LOS E on the Laird Street approach.

At the intersection of SR 315 and the MSPD entrance, a traffic signal is recommended to serve the turn movements into and out of the site (see signal warrant analysis in Section 6.3). Signalization will provide an overall LOS C or better during all of the peak periods. Actuation of the site approach and the Mid-Atlantic approach will reduce unnecessary delay to the SR 315 traffic. A schematic of the recommended geometry and signalization at this intersection is shown on Figure 20 in Appendix A.

The intersection of SR 315 at the SR 309 northbound ramps will require additional geometry in order to accommodate the site generated traffic. The construction of an exclusive left-turn lane to supplement the existing shared through/left-turn lane is recommended on the off-ramp approach. A schematic of the recommended geometry is shown on Figure 21 in Appendix A.

Table 13 summarizes the 2007 (ETC) intersection operations with these improvements in place.

**Table 13
Intersection Level of Service
2007 (ETC) Build Condition
With Improvements**

Intersection		Fri PM	Sat Midday	Sat PM
SIGNALIZED INTERSECTIONS				
SR 315 at East Main St/Jumper Rd				
SR 315	NB	A (5.1)	No Timing Improvements Necessary	No Timing Improvements Necessary
SR 315	SB	B (14.2)		
East Main St	EB	D (36.9)		
Jumper Rd	WB	D (36.6)		
OVERALL		B (15.5)		
SR 315 at Laird St/Woodlands Inn				
SR 315	NB	A (9.5)	B (10.4) B (11.2) E (56.7) D (37.6)	No Timing Improvements Necessary
SR 315	SB	B (11.4)		
Laird St	EB	D (42.0)		
Woodlands Inn	WB	D (45.8)		
OVERALL		B (14.0)	B (13.3)	
SR 315 at Motorworld/Hampton Inn				
SR 315	NB	A (5.9)	No Timing Improvements Necessary	No Timing Improvements Necessary
SR 315	SB	A (3.7)		
Motorworld	EB	D (41.9)		
Hampton Inn	WB	D (41.2)		
OVERALL		A (8.8)		
SR 315 at SR 309 Northbound Ramps				
SR 315	NB	A (7.8)	A (9.5) C (25.5) D (44.3) D (42.1)	A (4.9) B (16.3) D (38.1) A (0.0)
SR 315	SB	C (34.2)		
SR 309 NB off ramp	EB	D (43.8)		
Army Reserve	WB	D (45.3)		
OVERALL		C (23.7)	B (19.8)	B (12.7)
SR 315 at SR 309 Southbound Ramps				
SR 315	NB	C (28.8)	B (17.5) A (9.8) D (41.5) B (16.8)	B (14.3) A (3.9) D (35.6) B (11.9)
SR 315	SB	B (17.4)		
SR 309 SB off ramp	EB	D (42.2)		
OVERALL		C (25.7)		
SR 315 at MSPD				
SR 315	NB	B (10.9)	B (19.8) C (29.0) C (29.8) C (23.5)	A (9.7) B (15.5) C (21.7) B (17.8)
SR 315	SB	C (23.8)		
MSPD	EB	B (19.1)		
Mid-Atlantic	WB	A (0.0)		
OVERALL		B (17.6)	C (25.6)	B (15.0)

*A (0.0) = LOS (Delay), where delay is given in seconds per vehicle

6.2 2017 (ETC+10) Improvements

Additional improvements to address the projected changes in operations between No-Build and Build conditions for the ETC+10 design year were also identified. Recommended improvements at the following intersections pertain to modification of the signal timings to accommodate the changes in projected peak hour traffic flow.

- SR 315 & Oak Street/Armstrong Street
- SR 315 & East Main Street (SR 2020)/ Jumper Road
- SR 315 & Laird Street/Woodlands Inn
- SR 315 & Motorworld Drive/Hampton Inn

At the intersection of SR 315 and Oak Street/Armstrong Street, signal timing adjustments were made to maintain the ETC+10 No-Build overall LOS E. However, note that while No-Build LOS

have been maintained, the Oak Street approach continues to operate at LOS F and the northbound approach of SR 315 continues to operate at LOS E.

As in the ETC conditions, the timing and phasing improvements at the signals at East Main Street, Laird Street, and Motorworld considered factors such as offsets and coordination of the mainline green time allocation to preserve this function.

At the intersection of SR 315 and the SR 309 ramps, with the improvements recommended for ETC conditions, both intersections will operate at an overall LOS D during the Friday PM peak hour. This is a change from the overall LOS C operations that are projected for this interchange in the No-Build condition. The conditions at this location were further evaluated to identify additional improvements to increase the capacity of the interchange to achieve LOS C operations for the Build condition in this ETC+10 design year. Based on these evaluations, additional through travel lanes on SR 315 are indicated to achieve this level of service during the Friday PM peak hour. However, this improvement would involve an extensive, cost-prohibitive reconstruction of the interchange, including widening of the SR 315 bridge structures.

A recommended alternative improvement strategy is to provide Variable Message Signs at strategic locations to notify site patrons of traffic conditions at the SR 309 interchange and direct them to alternate routes, such as to the I-81 interchange. A diversion of 30% of the site traffic that is estimated to enter and exit the site via SR 309 to instead access the site via the I-81 interchange will maintain No-Build operations at the ramp intersections (NB ramp intersection overall LOS C; SB ramp intersection overall LOS D, though just 0.1 seconds of delay over threshold for LOS C). This improvement is also consistent with the ITS incident management system that is being studied for the corridor. Improvements at the intersection of SR 315 and Oak Street/Armstrong Street to accommodate the traffic diversion effected by the implementation of the VMS devices at No-Build levels of service include the addition of an exclusive left-turn lane on the Armstrong Street approach and left-turn phases for Oak Street and Armstrong Street. This intersection will operate at an overall LOS D during the Friday PM peak hour with these improvements, which is comparable to the operation in the No-Build condition.

Table 14 summarizes the 2017 (ETC) intersection operations with these improvements in place.

It is noted that the improvements identified for the ETC+10 conditions reflect the cumulative effects of general traffic growth and the generation of site traffic. These improvements are not required to address the conditions at the time of opening of the site. It is therefore recommended that traffic conditions be monitored at the site after a period of establishment to verify the traffic generation of the site and to monitor the need for these future improvements.

**Table 14
Intersection Level of Service
2017 (ETC+10) Build Condition
With Improvements**

Intersection		Fri PM	Sat Midday	Sat PM
SIGNALIZED INTERSECTIONS				
SR 315 at Oak St/Armstrong St				
SR 315	NB	E (65.1)	No	No
SR 315	SB	D (51.7)	Timing	Timing
Oak St	EB	F (138.4)	Improvements	Improvements
Armstrong St	WB	C (23.6)	Necessary	Necessary
OVERALL		E (74.5)		
SR 315 at East Main St/Jumper Rd				
SR 315	NB	A (5.4)	No	No
SR 315	SB	B (16.4)	Timing	Timing
East Main St	EB	C (34.6)	Improvements	Improvements
Jumper Rd	WB	D (36.6)	Necessary	Necessary
OVERALL		B (16.6)		
SR 315 at Laird St/Woodlands Inn				
SR 315	NB	B (14.0)	B (17.7)	No
SR 315	SB	B (15.7)	B (18.6)	Timing
Laird St	EB	D (48.3)	E (56.4)	Improvements
Woodlands Inn	WB	D (46.4)	D (36.5)	Necessary
OVERALL		B (18.8)	C (20.3)	
SR 315 at Motorworld/Hampton Inn				
SR 315	NB	A (6.4)	No	No
SR 315	SB	A (5.1)	Timing	Timing
Motorworld	EB	D (44.6)	Improvements	Improvements
Hampton Inn	WB	D (43.3)	Necessary	Necessary
OVERALL		B (10.2)		
SR 315 at SR 309 Northbound Ramps				
SR 315	NB	B (15.4)	B (13.6)	A (7.1)
SR 315	SB	D (51.9)	D (45.8)	C (23.7)
SR 309 NB off ramp	EB	D (48.0)	D (54.0)	D (44.2)
Army Reserve	WB	D (49.3)	D (48.8)	A (0.0)
OVERALL		D (35.6)	C (31.3)	B (17.3)
SR 315 at SR 309 Southbound Ramps				
SR 315	NB	D (43.8)	C (28.1)	B (15.5)
SR 315	SB	D (38.5)	A (9.8)	A (5.3)
SR 309 SB off ramp	EB	D (51.3)	D (50.4)	D (39.5)
OVERALL		D (42.5)	C (22.2)	B (13.3)
SR 315 at MSPD				
SR 315	NB	B (13.0)	B (18.9)	B (12.7)
SR 315	SB	C (25.0)	C (34.3)	B (17.2)
MSPD	EB	C (24.6)	D (38.6)	C (22.2)
Mid-Atlantic	WB	A (0.0)	C (28.5)	B (17.7)
OVERALL		C (20.1)	C (29.2)	B (16.7)

*A (0.0) = LOS (Delay), where delay is given in seconds per vehicle

6.3 Signal Warrant Analysis

A peak hour signal warrant analysis was conducted for the MSPD site entrance on SR 315. Criteria established in the *Manual of Uniform Traffic Control Devices, Millennium Edition*, published by FHWA, was used to analyze the intersection. The 2007 (ETC) peak hour volumes for the three peak periods evaluated exceed the criteria for the peak hour warrant. However, the warrant states that the traffic conditions for one hour of an *average* day must meet the criteria.

Using the daily traffic volumes collected on SR 315, it was determined that the weekday average PM peak hour traffic on SR 315 near the site entrance is 1,308 vehicles. Applying the growth rate of 2%, it was estimated that the 2007 (ETC) weekday average PM peak hour volume will be

approximately 1,360 on SR 315. Using the criteria for the peak hour warrant, the PM peak hour volumes exiting the site during this average condition PM peak hour would have to be greater than 235 vehicles in order to meet the warrant. Hence, the exiting traffic during an average weekday PM peak hour could be up to 55% less than the Friday PM peak hour and the signal warrant would still be met. Data from the test site indicates that the average weekday PM peak hour site traffic was only 14% less than the Friday PM peak hour. From this, it is assumed that this intersection will exceed the criteria required for the peak hour signal warrant, and that a signal is warranted at this site entrance.

7.0 CONCLUSION

The proposed expansion at MSPD includes 2,000 slot machines, 4 dining establishments, a food court, four drinking areas and/or lounges, a nightclub and some retail shops. Data collected at case study sites that contain similar uses was used in determining the typical peak hours of operation at these types of facilities. This data indicated that the peak periods of overall entering and exiting site traffic occurs during the following times:

- Friday: 6 pm to 8 pm
- Saturday: 11 am to 1 pm
- Saturday: 6 pm to 8 pm

The data collected at the case study sites was also used in developing a rate at which trips are generated at these types of facilities. Information published in ITE's *Trip Generation* was also used to estimate the trips generated by other ancillary uses, such as restaurants and the nightclub, that are not included in the rate developed from case study data.

It is estimated that the proposed expansion at MSPD will generate the following trips during the peak hours of the site:

- Friday PM: 1,089 trips (559 entering, 530 exiting)
- Saturday Midday: 1,404 trips (804 entering, 600 exiting)
- Saturday PM: 1,054 trips (493 entering, 561 exiting)

The impact of these site trips on the operations of the adjacent street system were evaluated for the year of opening of the expanded facilities (2007) and for a 10-year horizon beyond (2017). These impacts were evaluated by comparing the estimated No-Build and Build volume conditions for these two design years. An evaluation of the 2007 (ETC) Build condition indicates that there is a change in overall LOS from the ETC No-Build condition during one or more of the peak hours of study at the following intersections:

- SR 315 and Oak Street/Armstrong Street
- SR 315 and Laird Street/Woodlands Inn
- SR 315 and SR 309 interchange.

For the 2017 (ETC+10) Build condition, there is a change in overall LOS from the ETC+10 No-Build condition during one or more of the peak hours of study at the following intersections:

- SR 315 and Motorworld/Hampton Inn
- SR 315 and SR 309 interchange.

In order to maintain No-Build operating conditions, improvements are recommended at these locations. These recommended improvements include modifications of existing signal timings, and geometric improvements, and are described below:

2007 (ETC) Condition Improvements:

- SR 315 & MSPD Site Access: Geometric Improvements and install traffic signal.
- SR 315 & Laird Street/Woodlands Inn: signal timing adjustments; revise signal offsets.
- SR 315 and SR 309 NB Ramps: construct a separate left-turn lane on SR 309 NB off-ramp approach; replace and/or modify the existing signal equipment to provide signal displays and vehicle detection, and modify signal timing and phasing.
- SR 315 and SR 309 SB Ramps: signal timing adjustments.

2017 (ETC+10) Condition Improvements:

- SR 315 & Oak Street/Armstrong Street construct exclusive left-turn lane on Armstrong Street approach; replace and/or modify the existing signal equipment to provide signal displays and vehicle detection, and modify signal timing and phasing.
- SR 315 & Motorworld/Hampton Inn: signal timing adjustments; revise signal offsets.
- SR 315 and SR 309 NB Ramps: same as 2007 (ETC) improvements.
- SR 315 and SR 309 SB Ramps: same as 2007 (ETC) improvements.
- SR 315 corridor deploy Variable Message Signs as part of a Travel Demand Management solution to inform motorists of traffic conditions and alternate routes

With the implementation of these improvements, the transportation system will continue to provide operations with the traffic generated by MSPD that are comparable to No-Build conditions.

TRAFFIC IMPACT STUDY TECHNICAL APPENDIX

MOHEGAN SUN AT POCONO DOWNS WILKES-BARRE, PENNSYLVANIA

Prepared For:

Jeter Cook & Jepson Architects, Inc.
450 Church Street
Hartford, CT 06103

October 2005

Prepared By:

**MOHEGAN
SUN**
AT POCONO DOWNS



CHIA

CLOUGH HARBOUR & ASSOCIATES LLP

**TRAFFIC IMPACT STUDY
TECHNICAL APPENDIX**

MOHEGAN SUN AT POCONO DOWNS

WILKES-BARRE, PENNSYLVANIA



Prepared For:

Jeter Cook & Jepson Architects, Inc.
450 Church Street
Hartford, CT 06103

Prepared By:



CLOUGH HARBOUR & ASSOCIATES LLP

Scranton Life Building, Suite 700
538 Spruce Street
Scranton, Pennsylvania 18503

(570) 341-1313

CHA Project No. 13989

October 2005

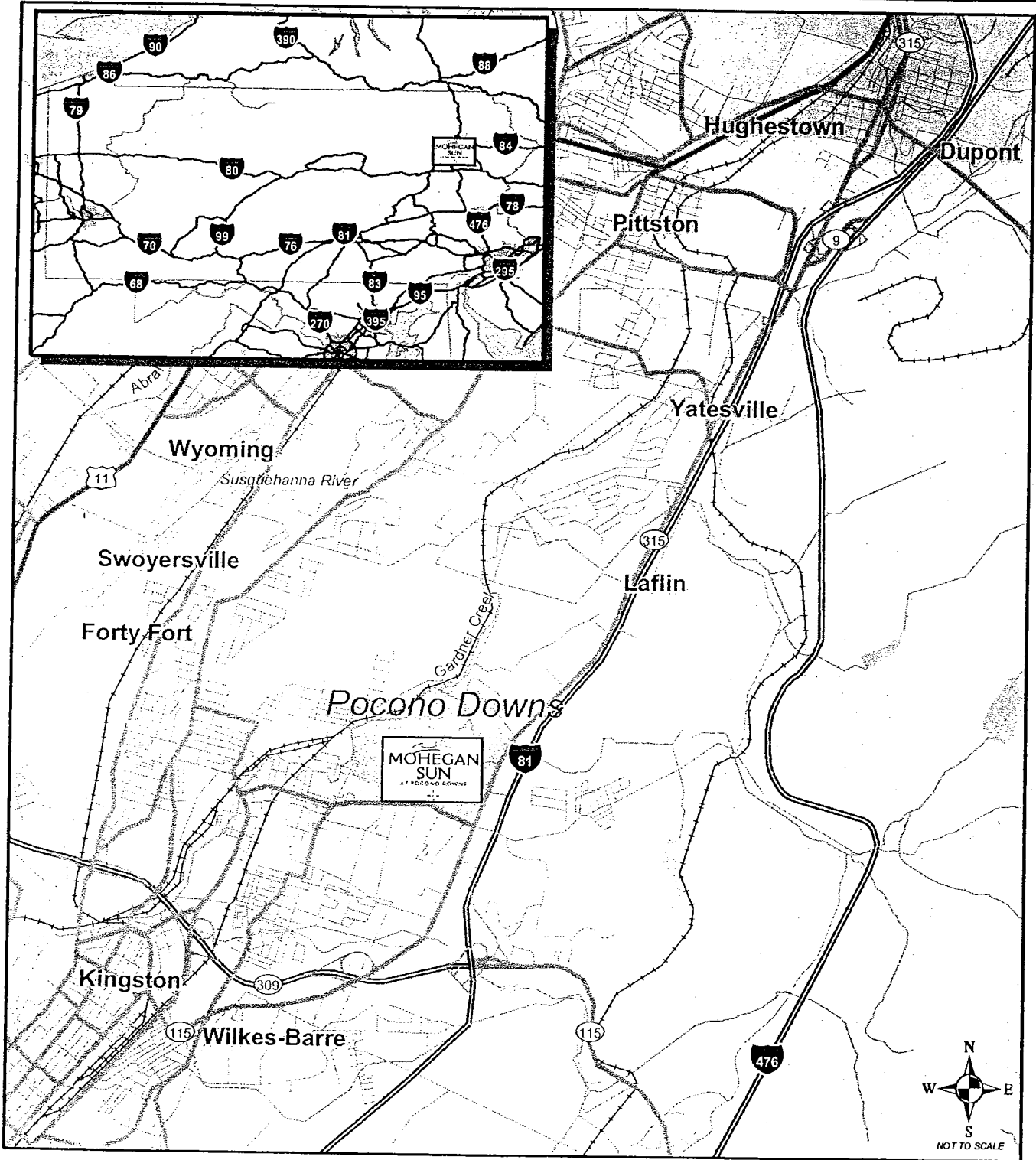
APPENDICES

FIGURES	APPENDIX A
PROPOSED SITE LAYOUT	APPENDIX B
STUDY AREA TRAFFIC COUNT DATA	APPENDIX C
CASE STUDY DATA	APPENDIX D
CALCULATIONS	APPENDIX E
LEVEL OF SERVICE CRITERIA	APPENDIX F
CAPACITY ANALYSIS WORKSHEETS	APPENDIX G

APPENDIX A

FIGURES

MOHEGAN SUN AT POCONO DOWNS PROJECT LOCATION MAP



CHA

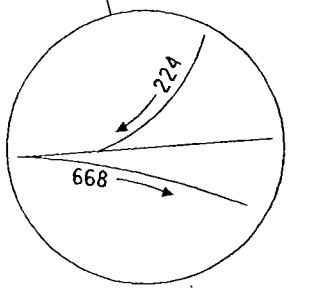
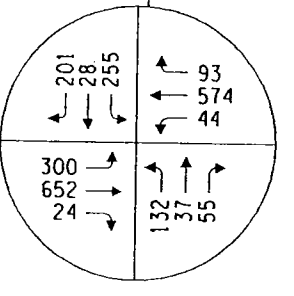
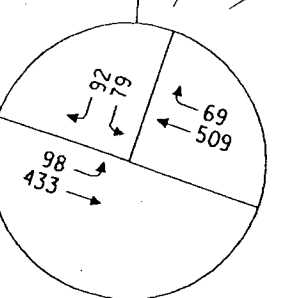
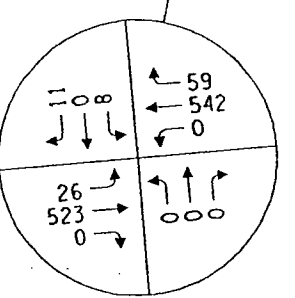
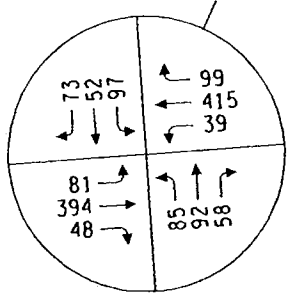
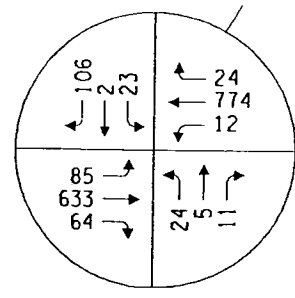
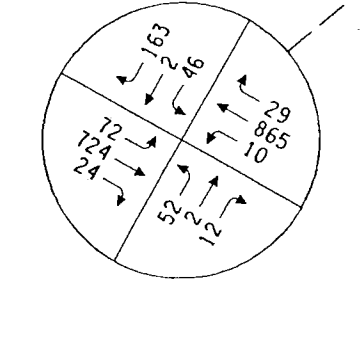
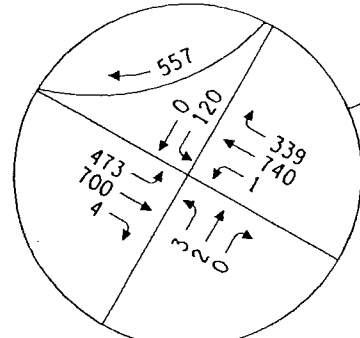
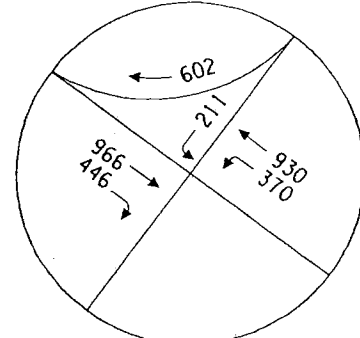
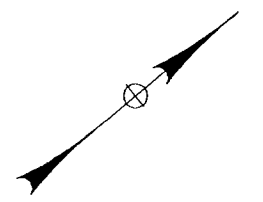
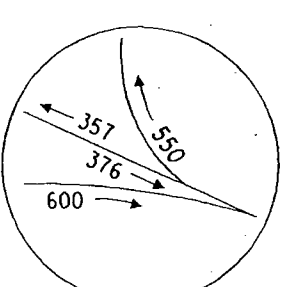
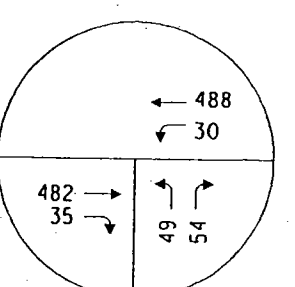
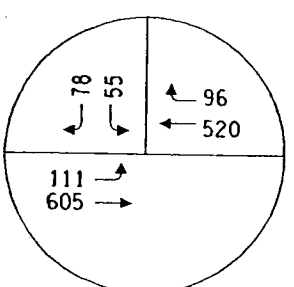
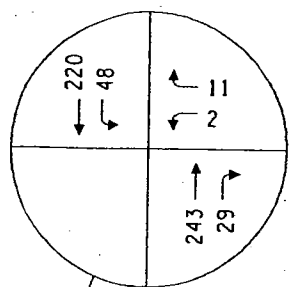
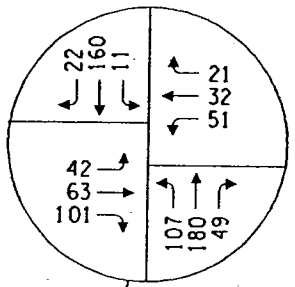
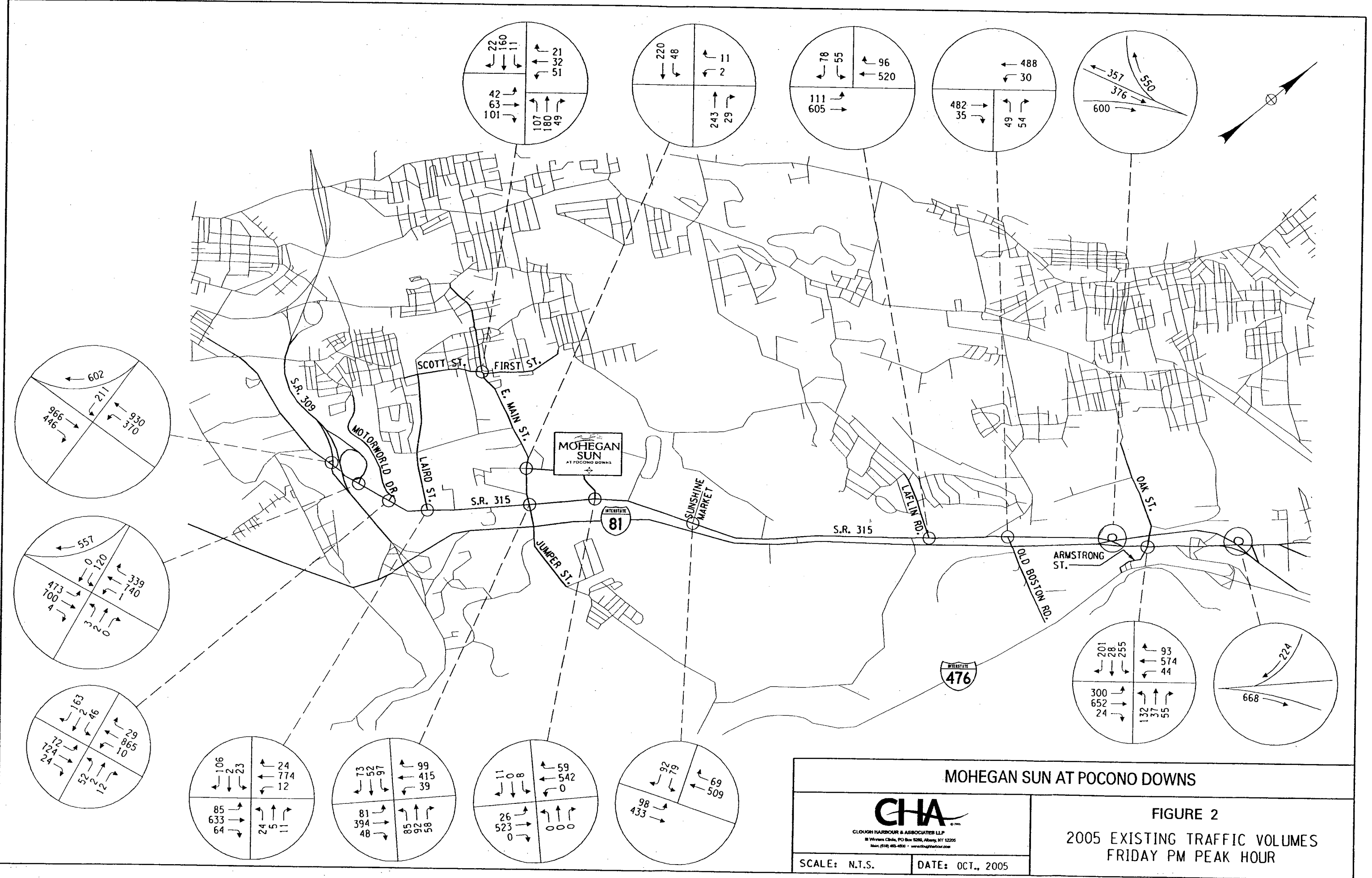
CLOUGH HARBOUR & ASSOCIATES LLP

FIGURE 1

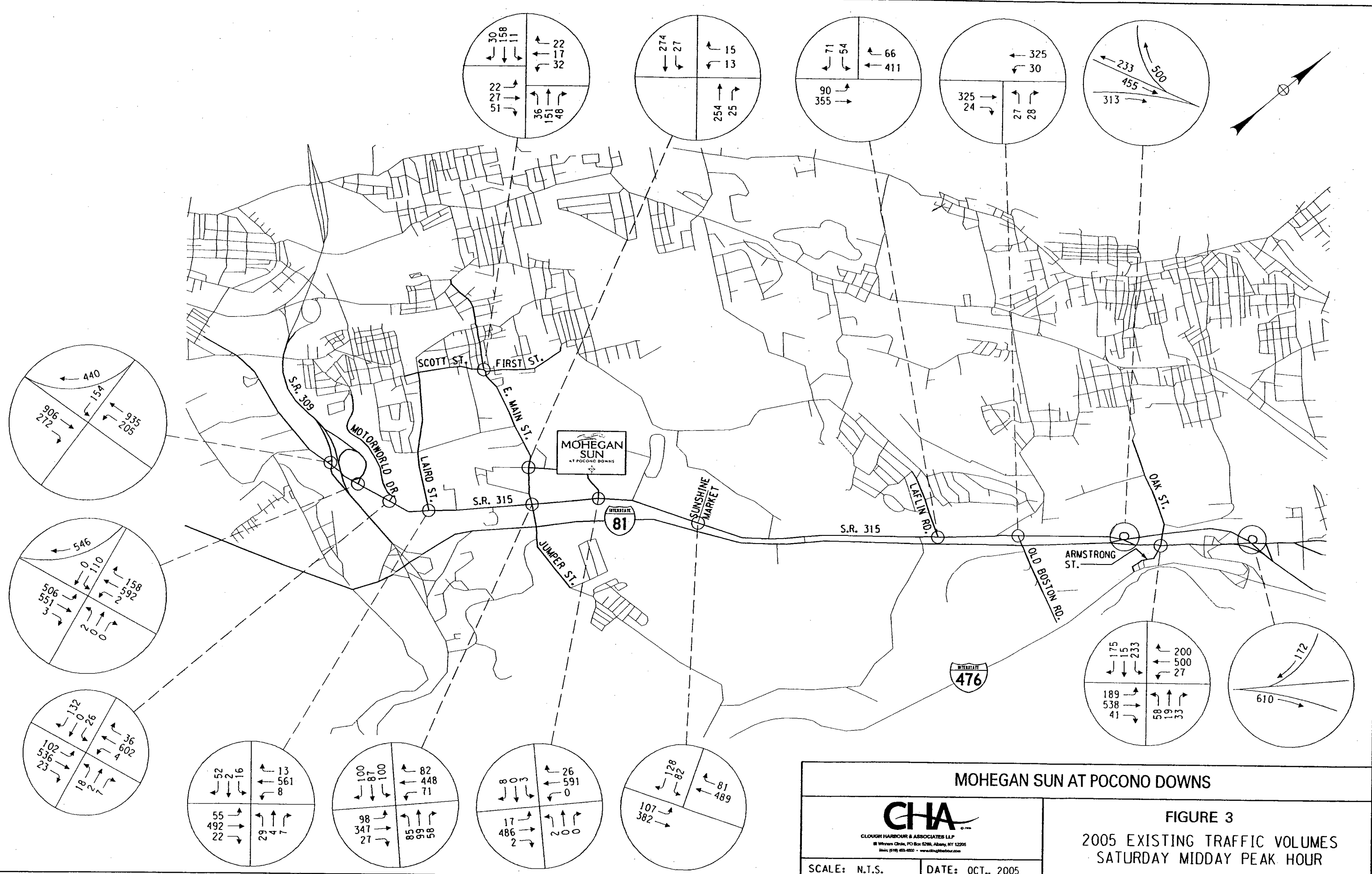
**MOHEGAN
SUN**
AT POCONO DOWNS



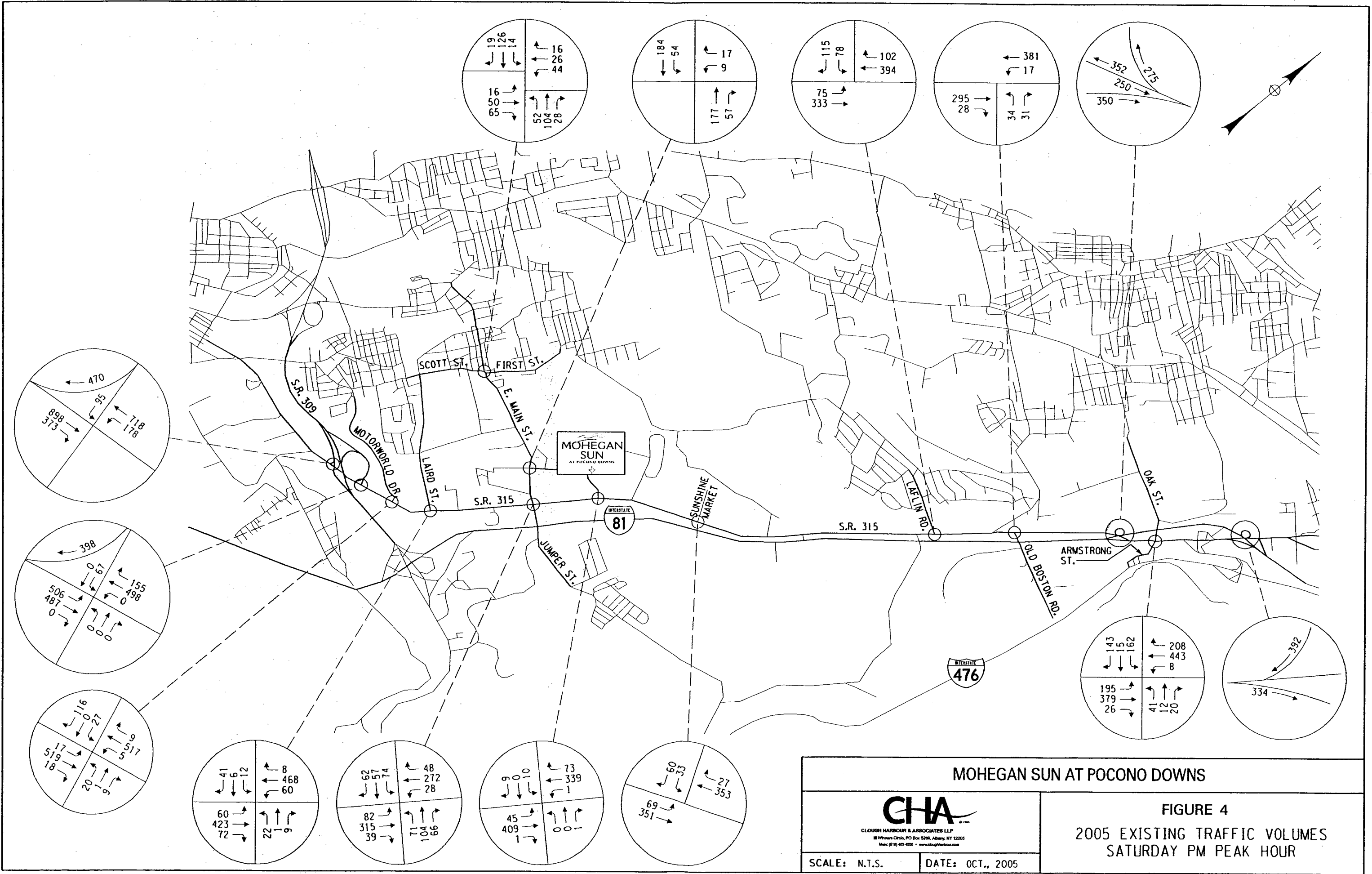
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 DATE/TIME: 12/29/2005
 USER: 2467



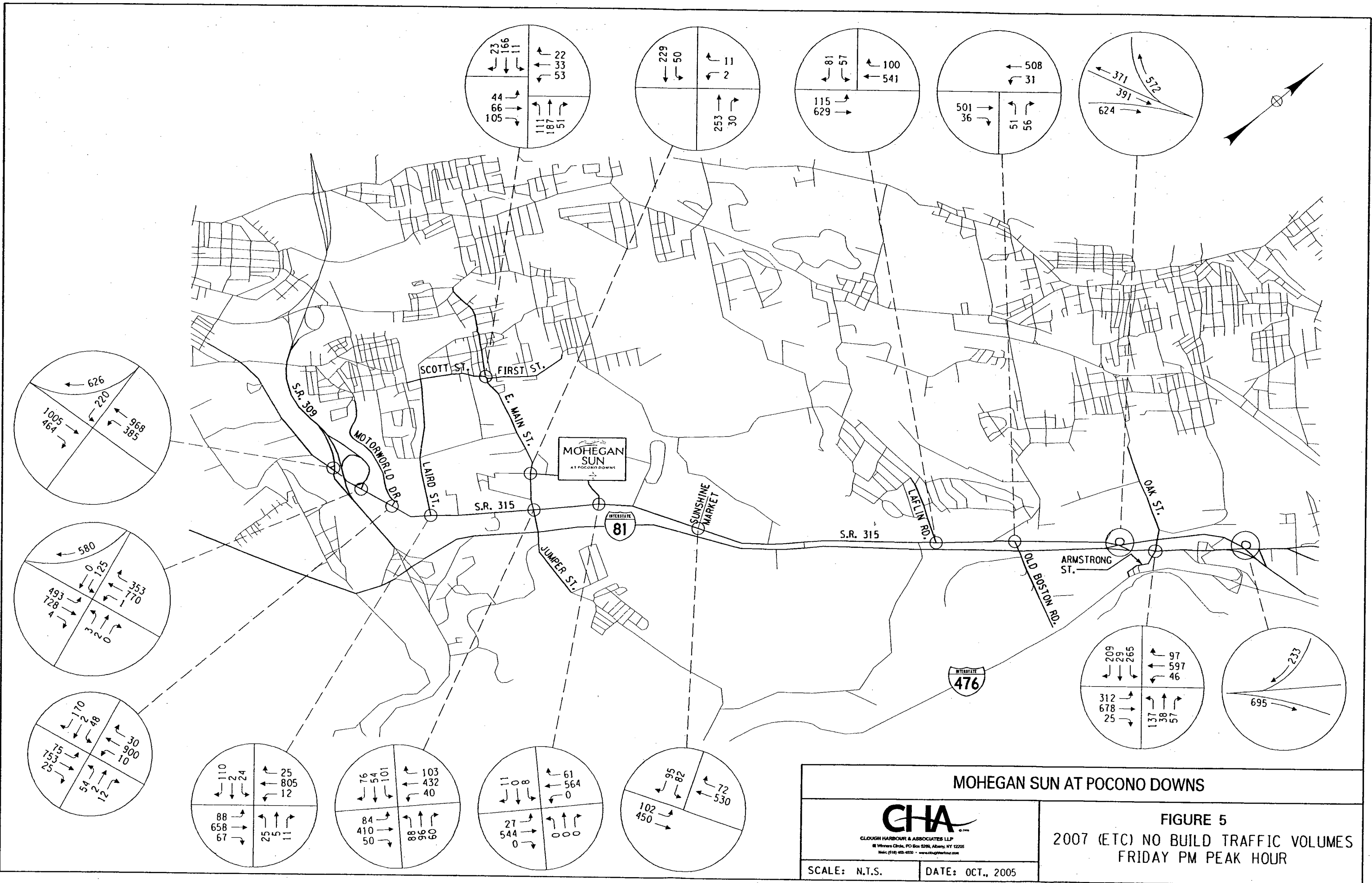
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 USER: #2467




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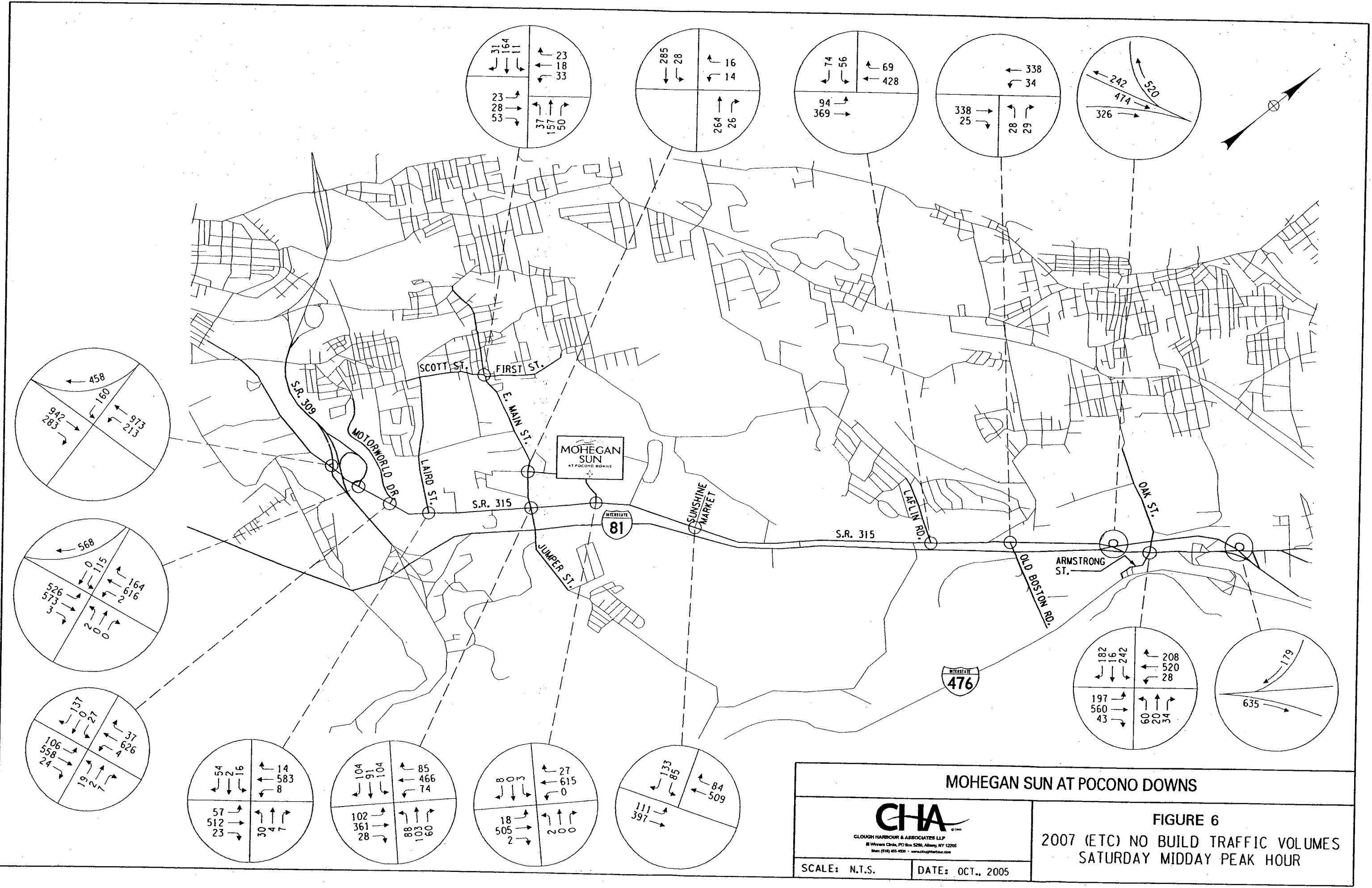



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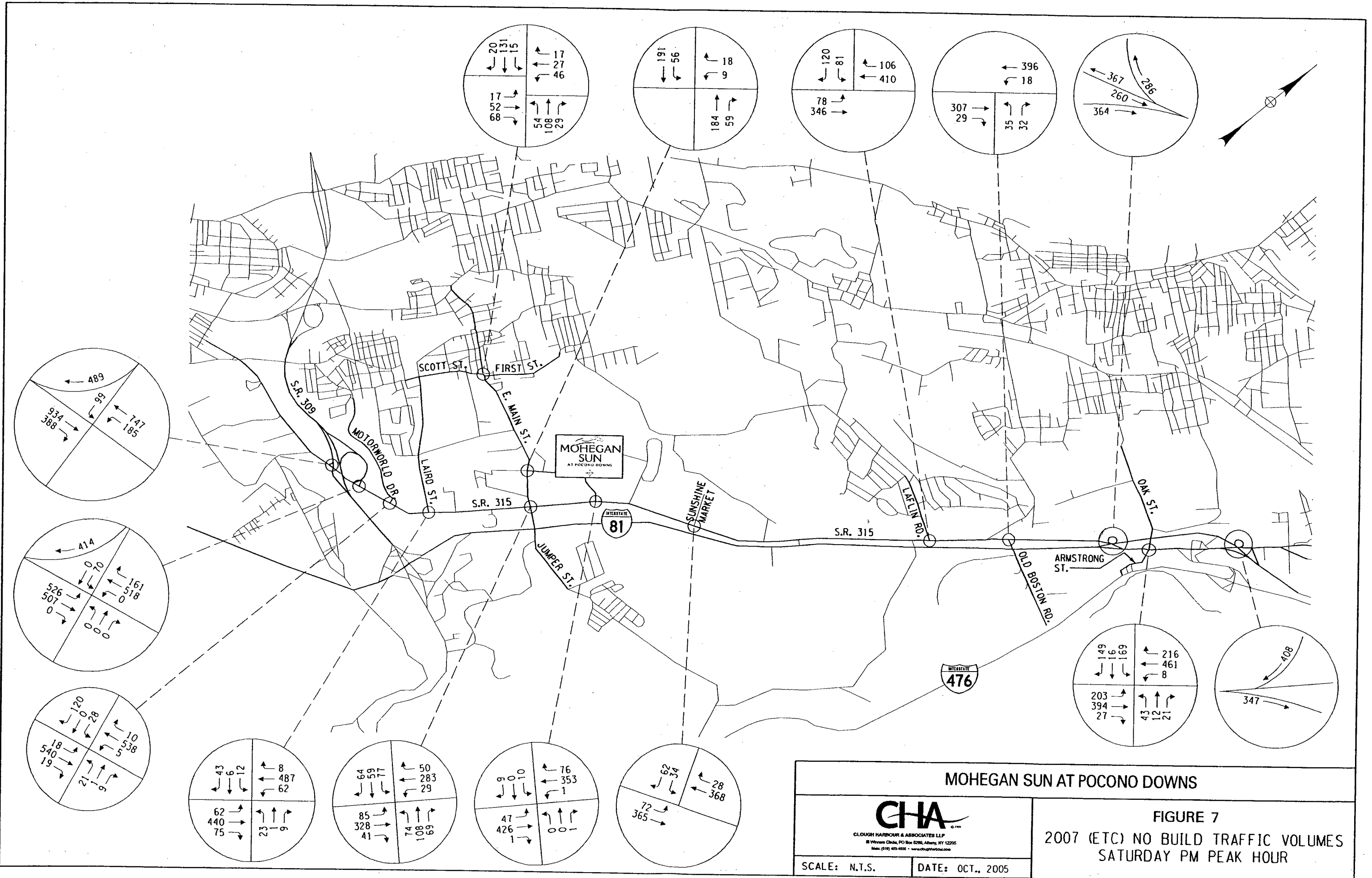
MOHEGAN SUN AT POCONO DOWNS	
 <small>CLOUGH HARBOUR & ASSOCIATES LLP 11 Winers Circle, PO Box 5290, Albany, NY 12205 Tel: (518) 455-4500 • www.cha.com</small>	
SCALE: N.T.S.	DATE: OCT., 2005
FIGURE 5 2007 (ETC) NO BUILD TRAFFIC VOLUMES FRIDAY PM PEAK HOUR	

FILE NAME: \\s13989\mstn\fig6.dgn
 DATE/TIME: 10/3/2005
 USER: #2467



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 <small>CLOUGH HARBOUR & ASSOCIATES LLP 81 Western Circle, PO Box 5290, Albany, NY 12205 Main: (518) 485-4000</small>	
SCALE: N.T.S.	DATE: OCT., 2005
FIGURE 6 2007 (ETC) NO BUILD TRAFFIC VOLUMES SATURDAY MIDDAY PEAK HOUR	

FILE NAME: \\u:\013989\MS\TIN\fig7.dgn
 DATE/TIME: 10/3/2005
 USER: =2467



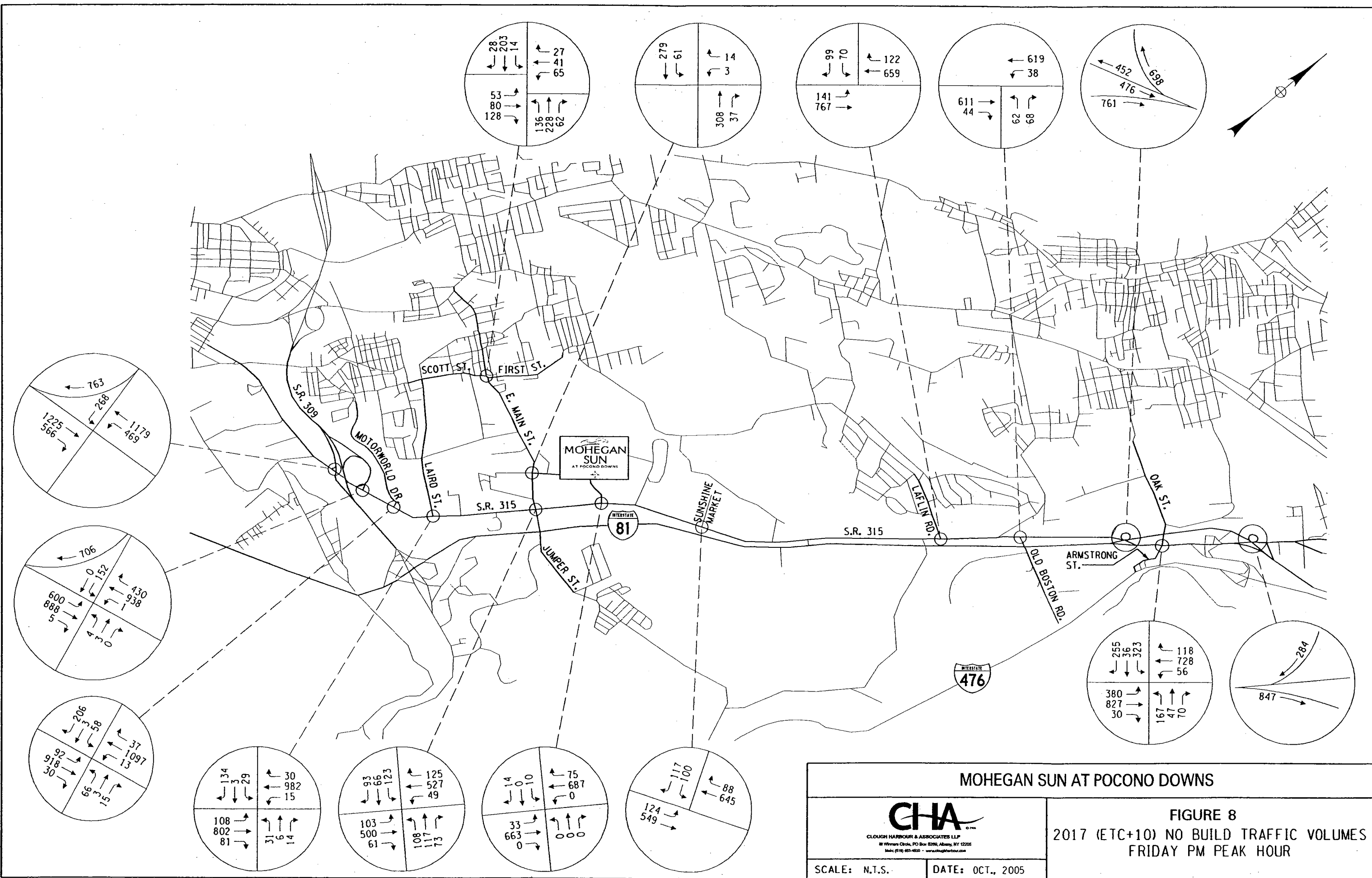
MOHEGAN SUN AT POCONO DOWNS


FIGURE 7
 2007 (ETC) NO BUILD TRAFFIC VOLUMES
 SATURDAY PM PEAK HOUR

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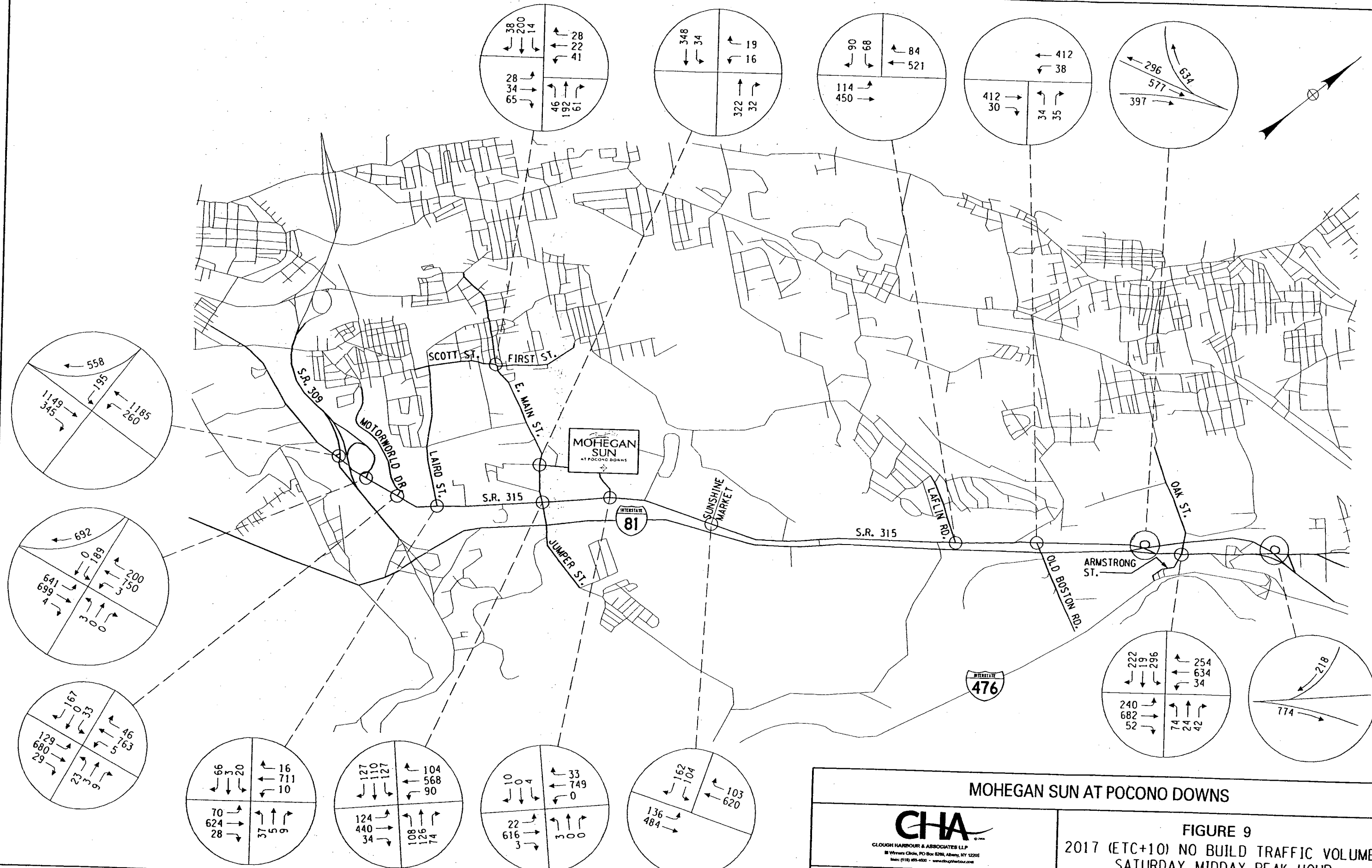
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 USER: 2467



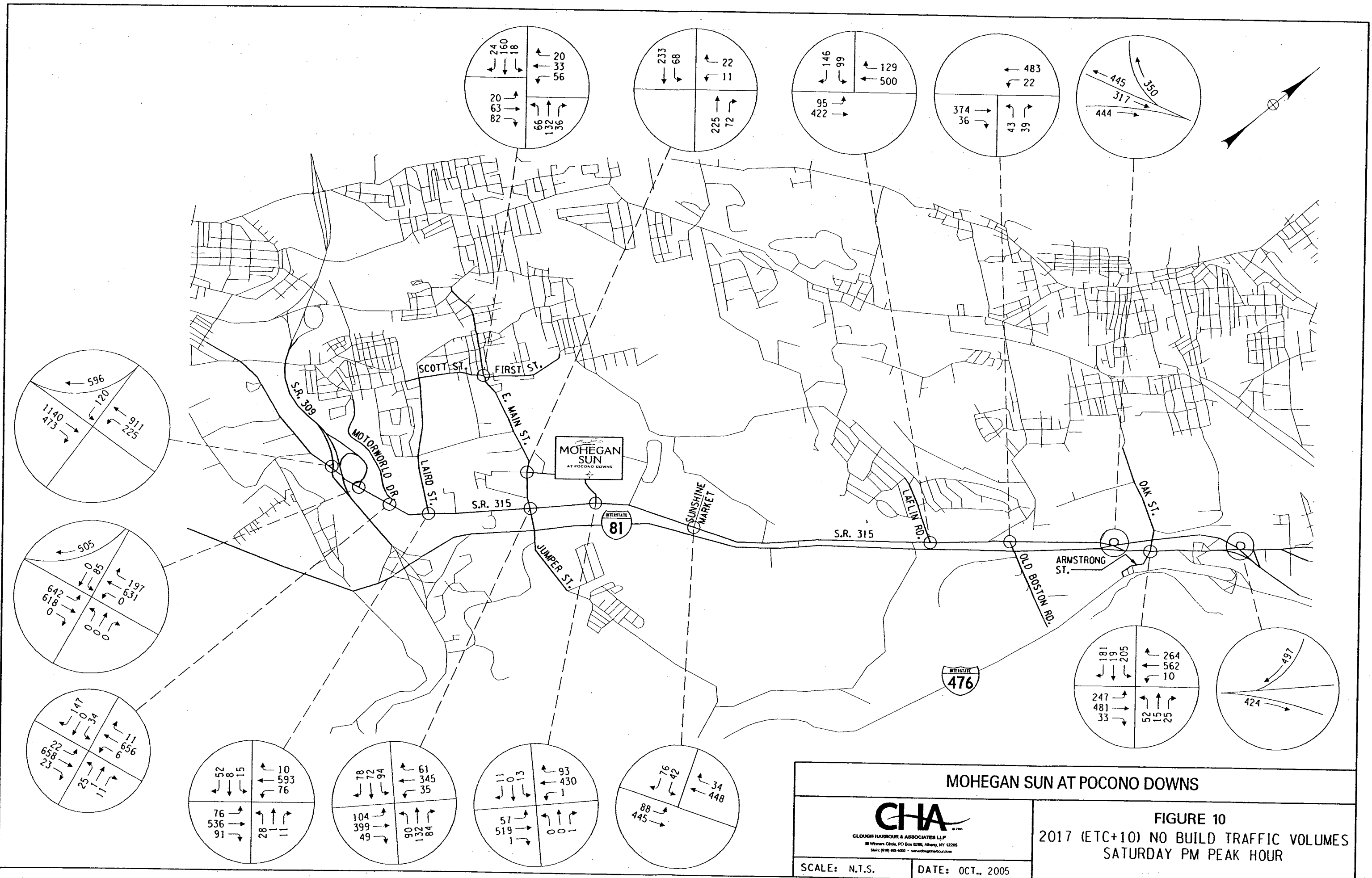
MOHEGAN SUN AT POCONO DOWNS	
 <small>CLOUGH HARBOUR & ASSOCIATES LLP 40 Wilmore Circle, PO Box 5206, Albany, NY 12205 Phone: (518) 433-4000 • www.roughharbour.com</small>	
FIGURE 8	
2017 (ETC+10) NO BUILD TRAFFIC VOLUMES	
FRIDAY PM PEAK HOUR	
SCALE: N.T.S.	DATE: OCT., 2005

FILE NAME: u:\13989\AMSTN\fig9.dgn
 DATE/TIM: 10/3/2005
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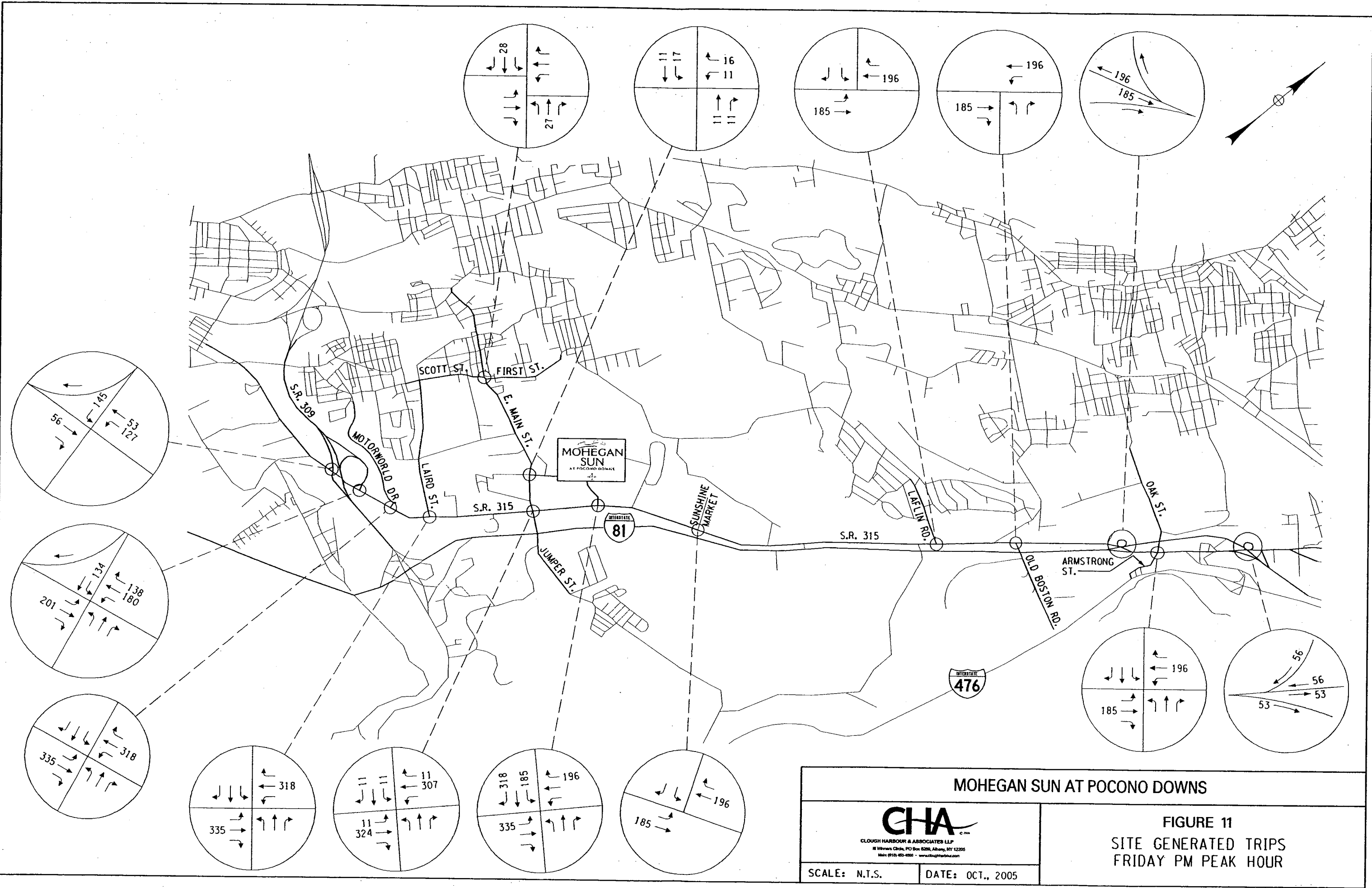



MOHEGAN SUN AT POCONO DOWNS	
 <small>Clough Harbour & Associates LLP 11 Wynton Circle, PO Box 6280, Albany, NY 12205 Phone: (518) 485-4500 - www.cha-group.com</small>	
SCALE: N.T.S.	DATE: OCT., 2005
FIGURE 9 2017 (ETC+10) NO BUILD TRAFFIC VOLUMES SATURDAY MIDDAY PEAK HOUR	

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 DATE/TIN: 10/3/2005
 USER: #2467

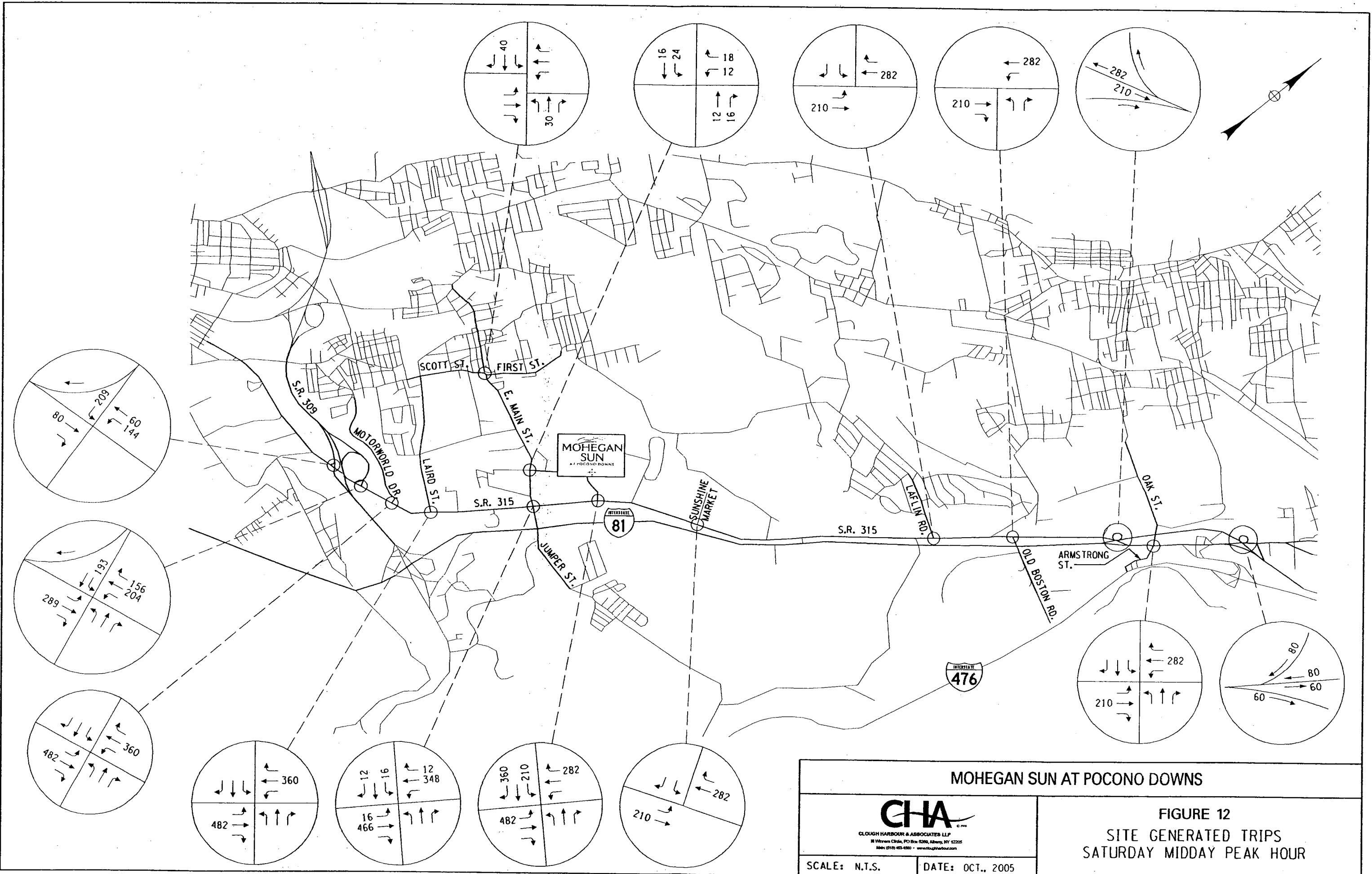



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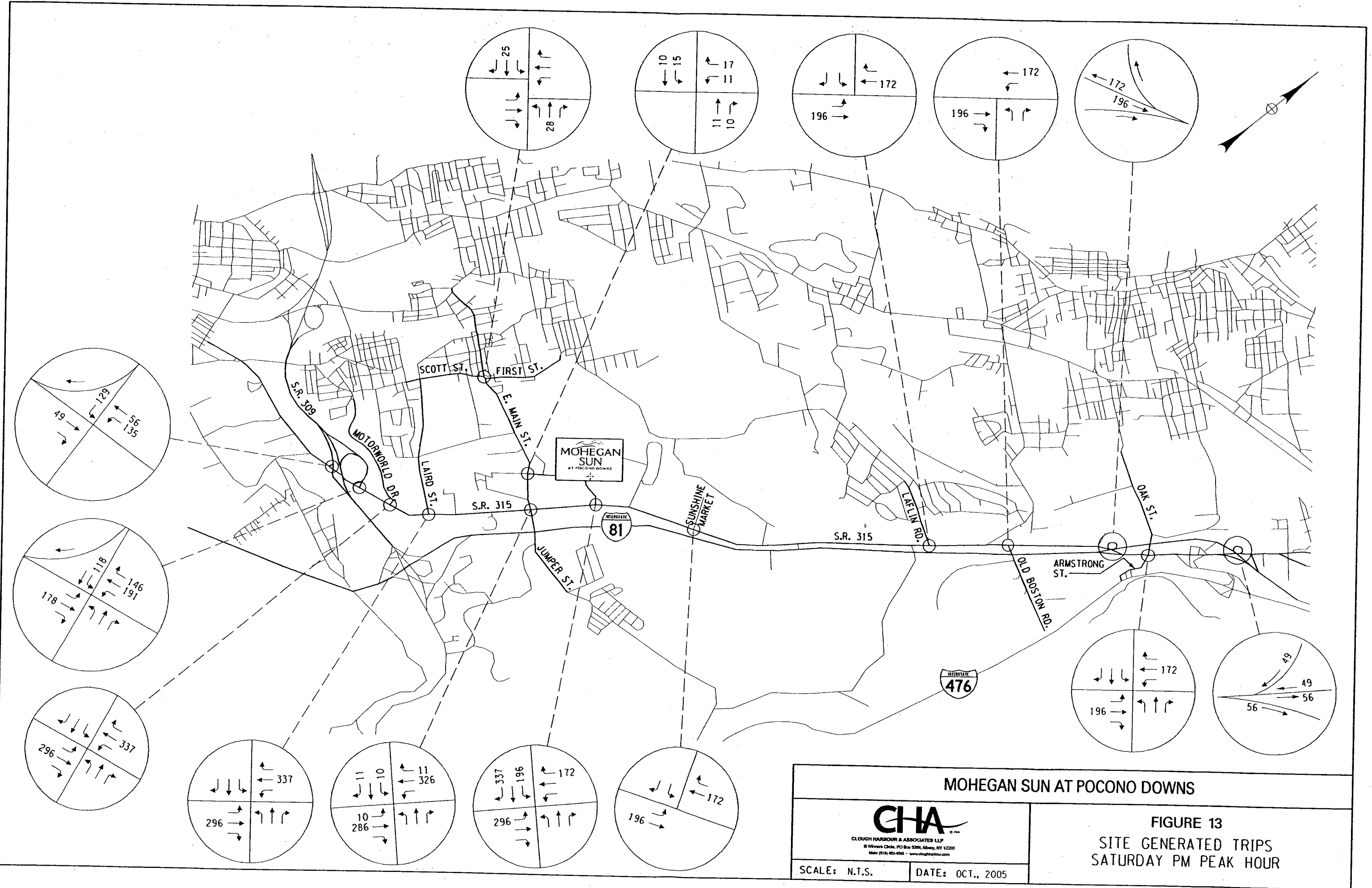
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 CHA <small>CLOUGH HARBOUR & ASSOCIATES LLP 11 Wilbur Circle, PO Box 6266, Albany, NY 12205 Mac (518) 485-4888 • www.chaugharbour.com</small>	
SCALE: N.T.S.	DATE: OCT., 2005
FIGURE 11 SITE GENERATED TRIPS FRIDAY PM PEAK HOUR	


FILE NAME: j:\13989\MS\T10-17-05\fig12.dgn
 DATE/TIME: 0/17/2005
 USER: USEK -2467



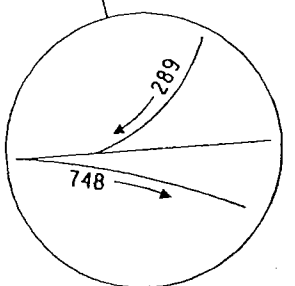
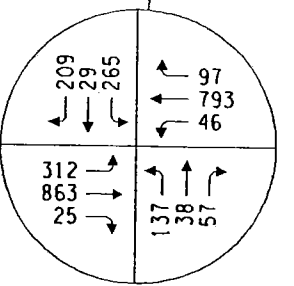
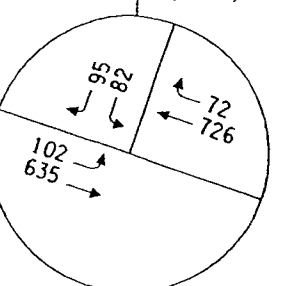
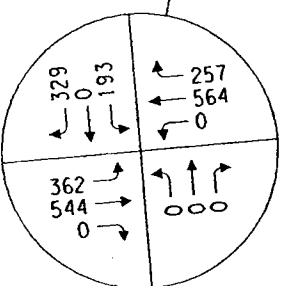
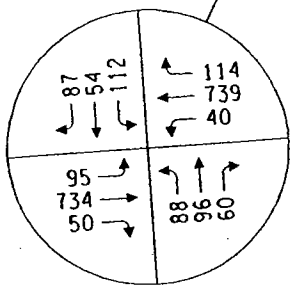
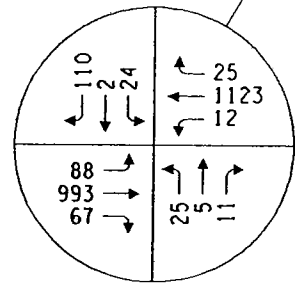
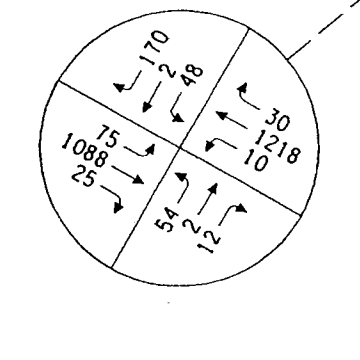
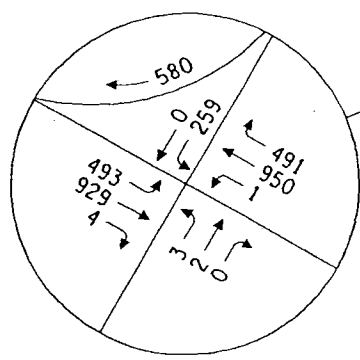
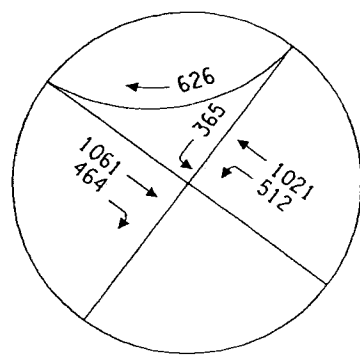
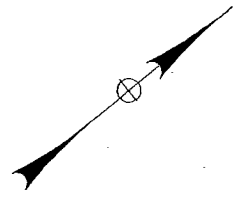
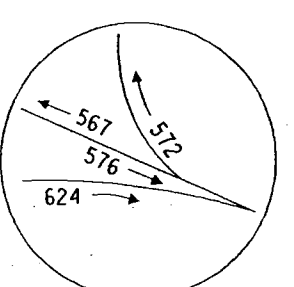
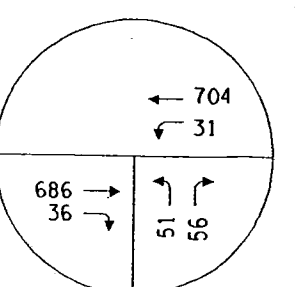
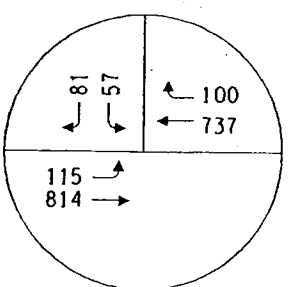
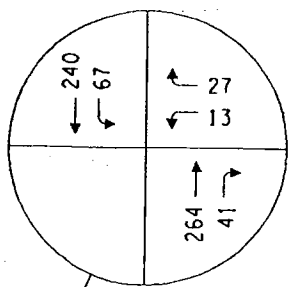
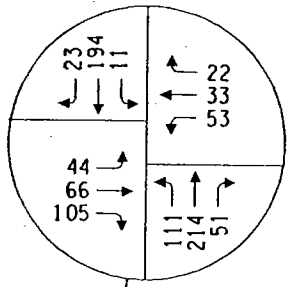
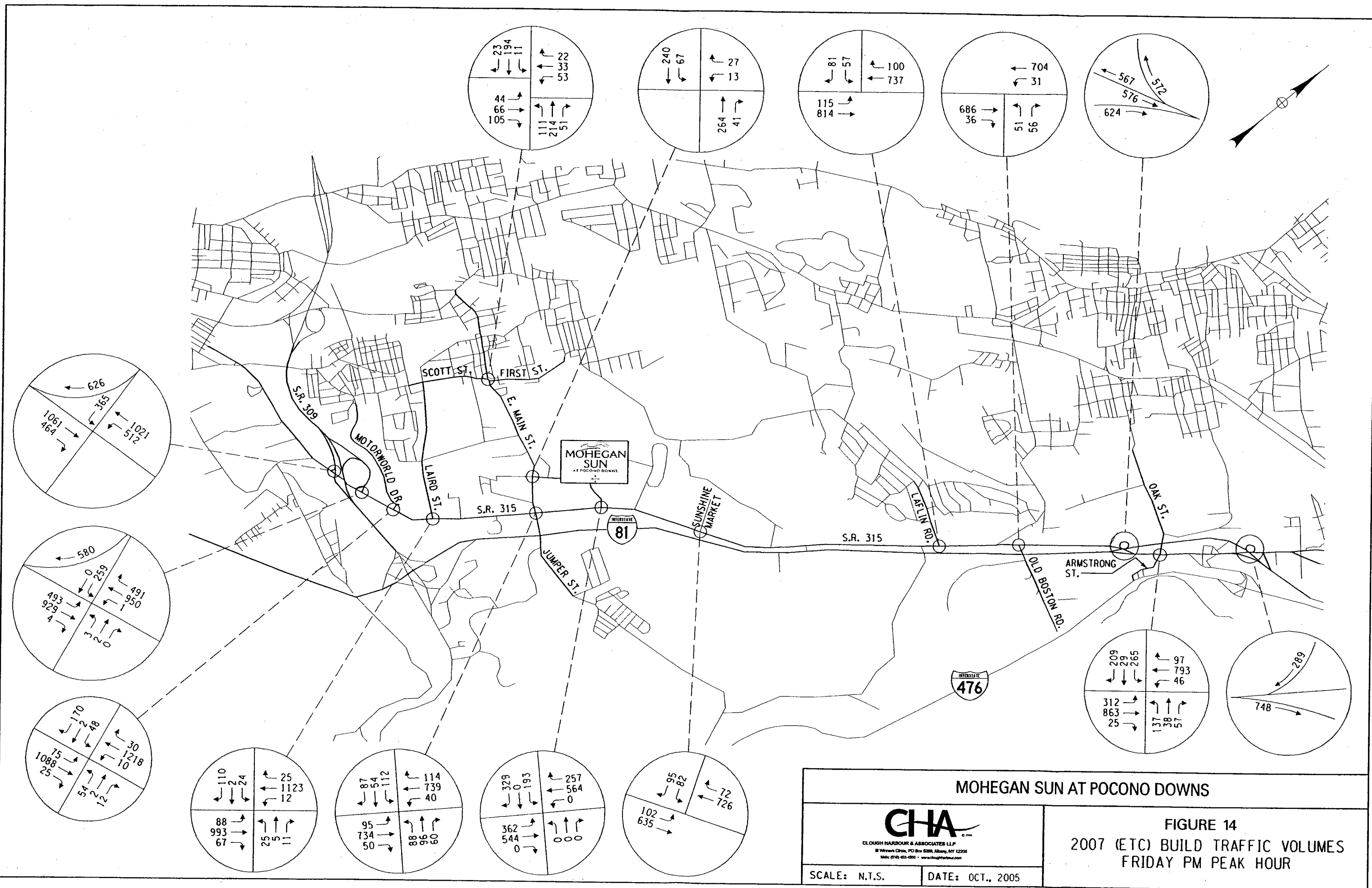
MOHEGAN SUN AT POCONO DOWNS	
 <small>CLOUGH HARBOUR & ASSOCIATES LLP 11 Wynton Circle, PO Box 6280, Albany, NY 12205 518-419-4300 • www.cloughharbour.com</small>	
SCALE: N.T.S.	DATE: OCT., 2005
FIGURE 12 SITE GENERATED TRIPS SATURDAY MIDDAY PEAK HOUR	

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 DATE/TIME: 10/17/2005
 USER: =2467

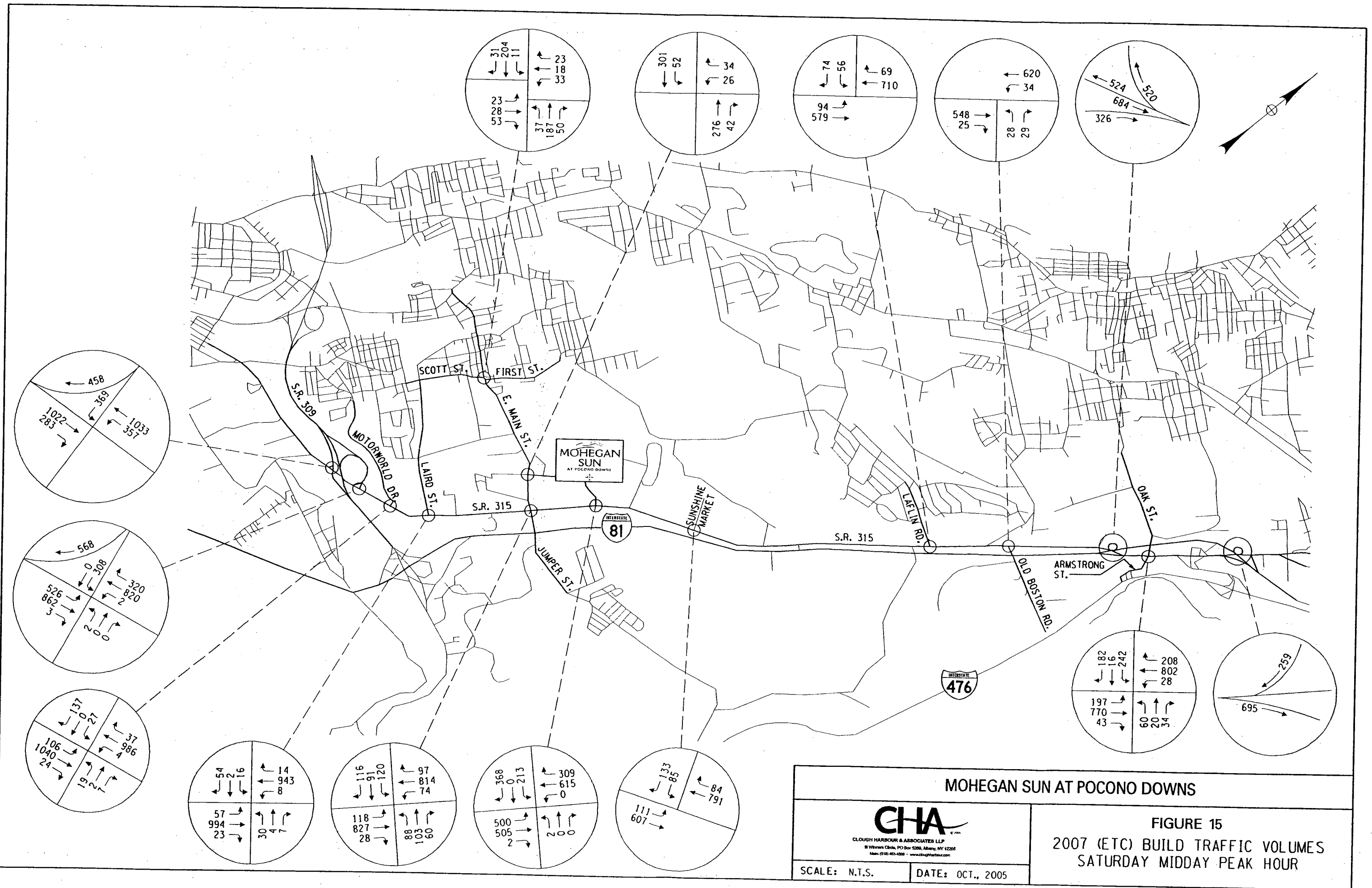


MOHEGAN SUN AT POCONO DOWNS	
 <small>CLOUGH HARBOUR & ASSOCIATES LLP 11 Wynton Circle, PO Box 5200, Albany, NY 12205 Main: (518) 483-4500 • www.cloughharbour.com</small>	
SCALE: N.T.S.	DATE: OCT., 2005
FIGURE 13 SITE GENERATED TRIPS SATURDAY PM PEAK HOUR	

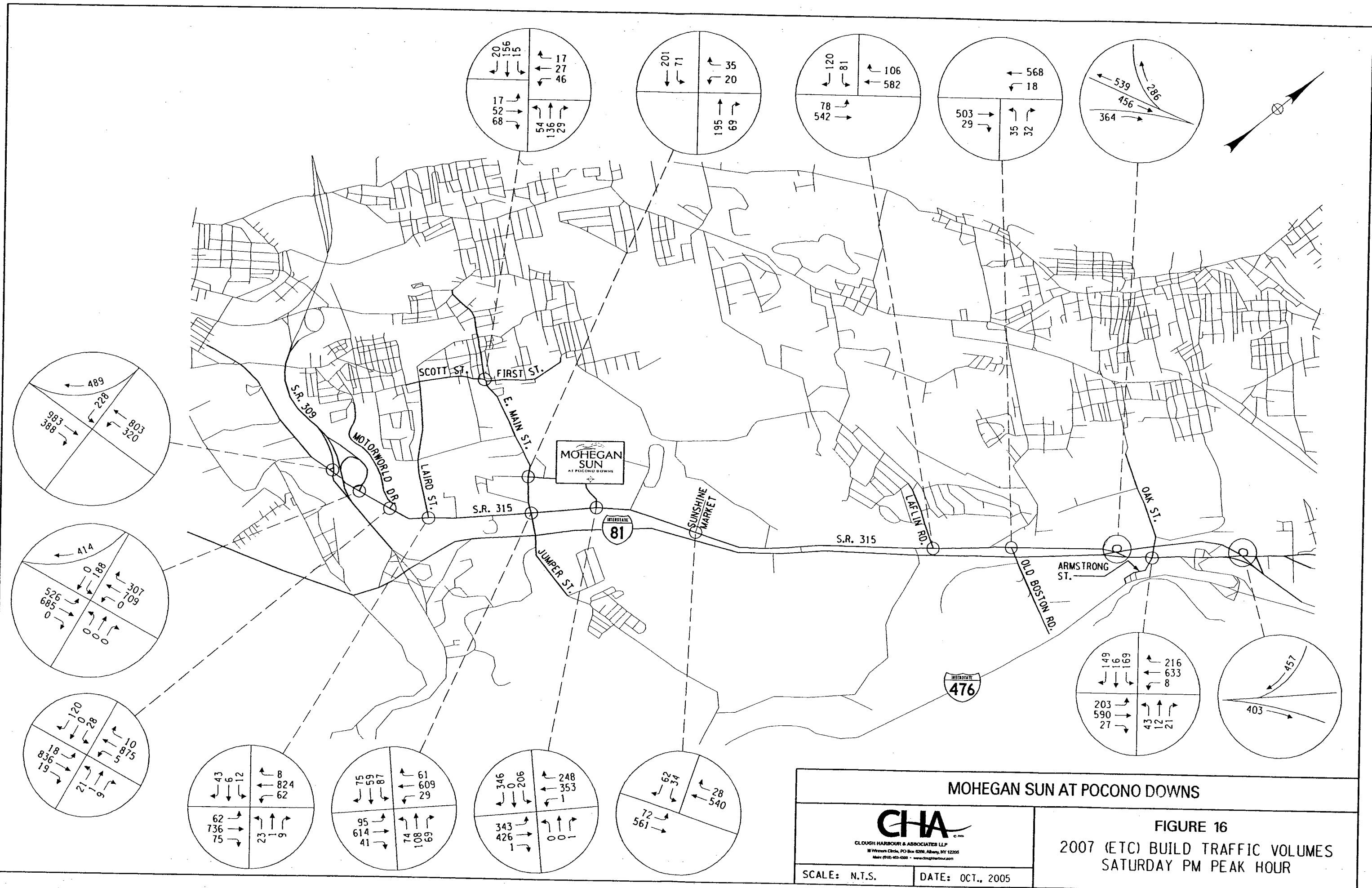
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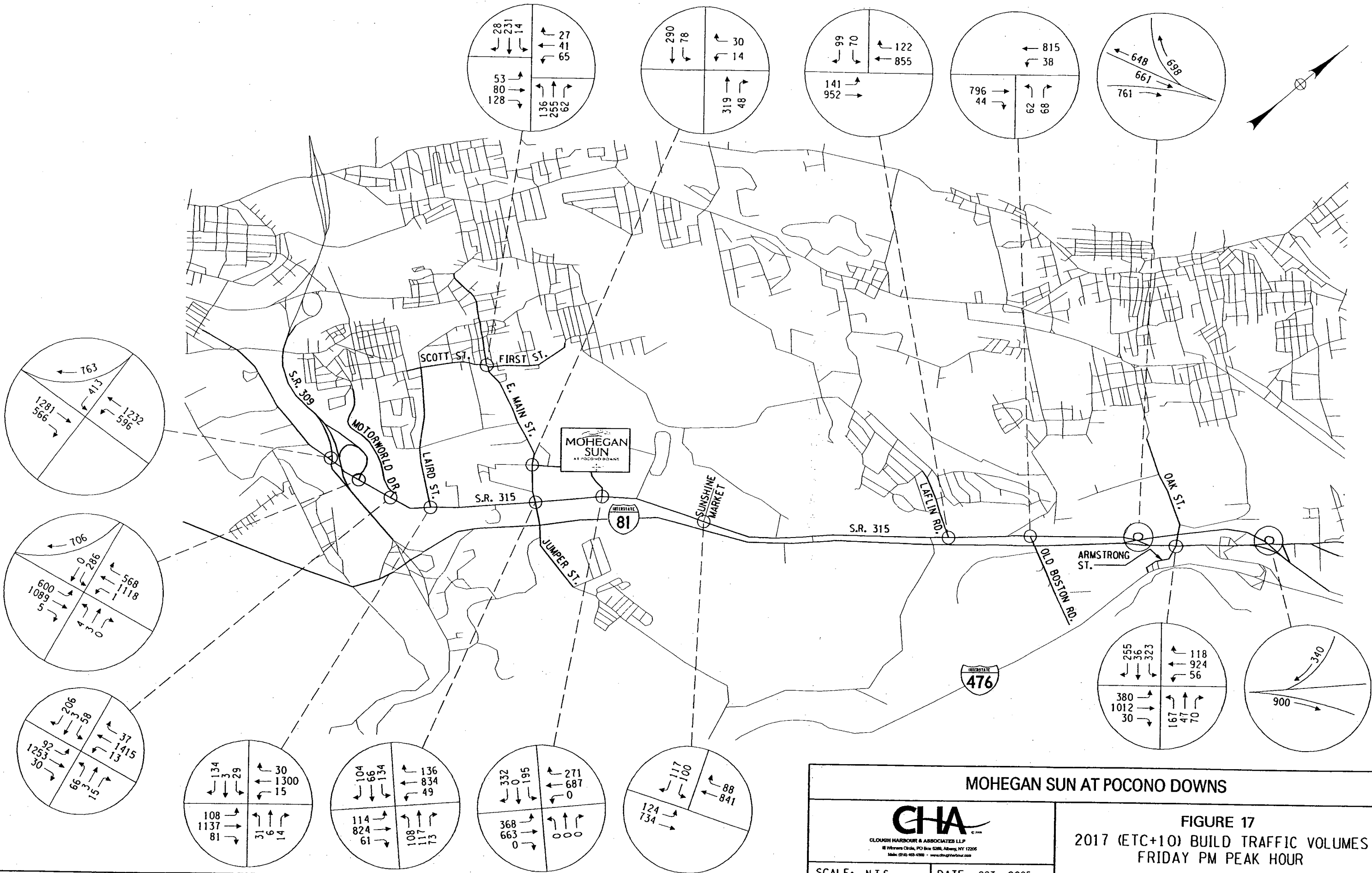
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 USER: 2467



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 DATE/TIME: 10/17/2005
 USER: #2467



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 DATE/TIME: 10/17/2005
 USER: 2467



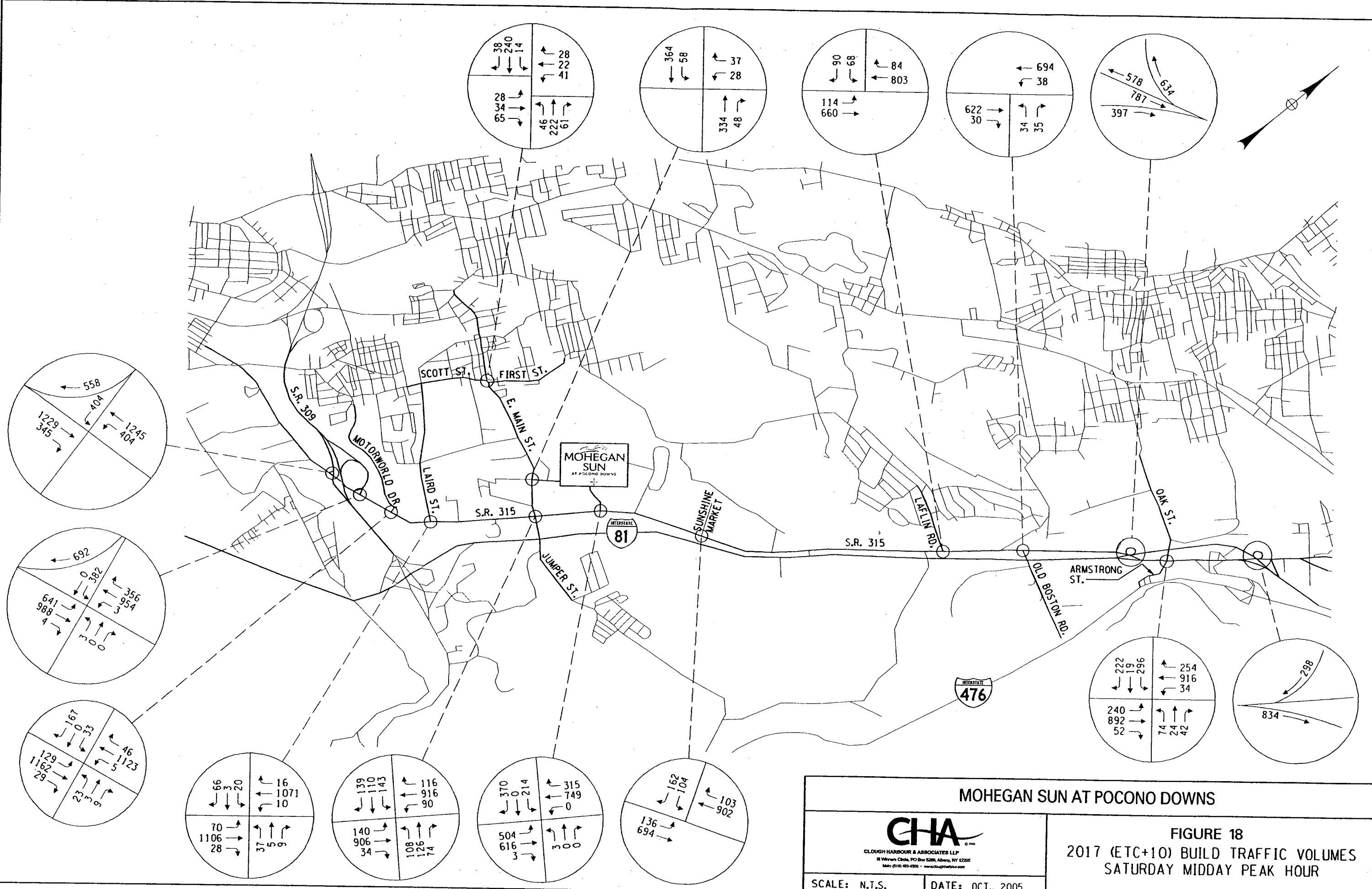
MOHEGAN SUN AT POCONO DOWNS

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FIGURE 17
2017 (ETC+10) BUILD TRAFFIC VOLUMES
FRIDAY PM PEAK HOUR

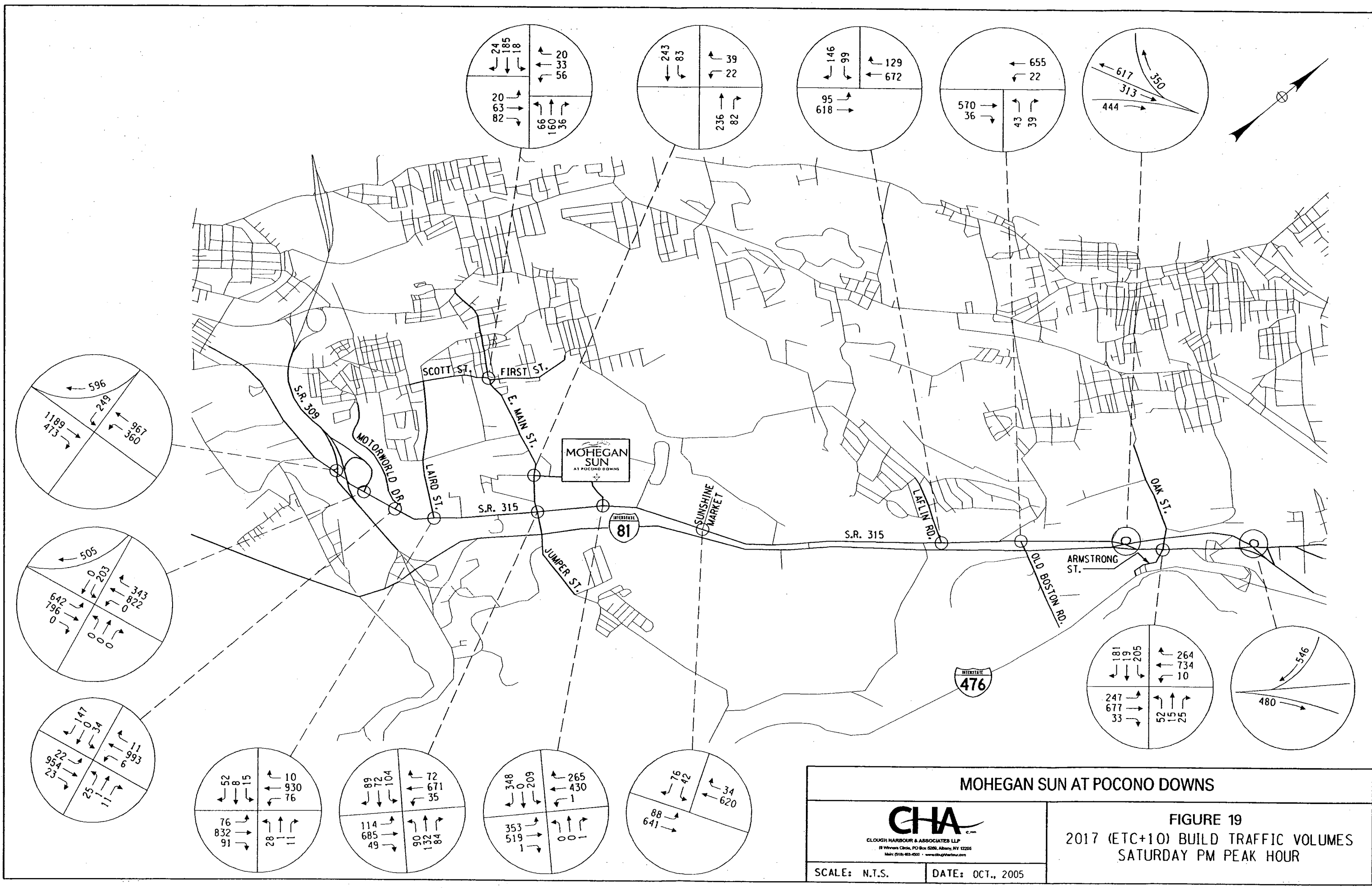
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 DATE/TIME: 10/17/2005
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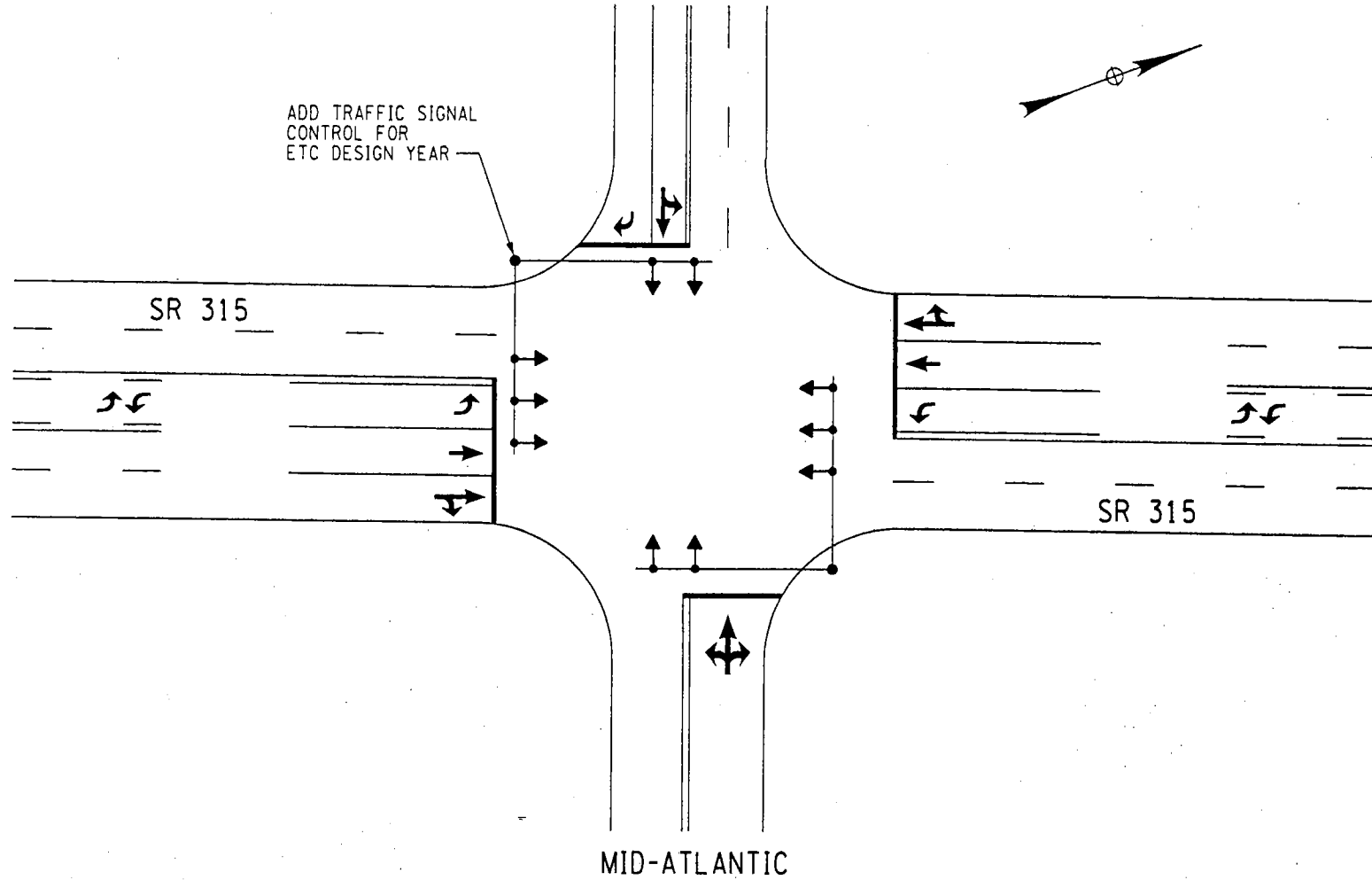
MOHEGAN SUN AT POCONO DOWNS	
CHA CLOUGH HARBOUR & ASSOCIATES LLP 11 Wilton Circle, PO Box 5208, Albany, NY 12205 Main: (518) 433-4200 - www.cloughharbour.com	
SCALE: N.T.S.	DATE: OCT., 2005
FIGURE 18 2017 (ETC+10) BUILD TRAFFIC VOLUMES SATURDAY MIDDAY PEAK HOUR	

FILE NAME: U:\13989\MS\TN\10-17-05\fig19.dgn
 DATE/TIME: 10/17/2005
 USER: #2467



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 CHA <small>CLOUGH HARBOUR & ASSOCIATES LLP</small> <small>11 Wilton Circle, PO Box 5200, Albany, NY 12205</small> <small>Met: (518) 463-0201 www.cloughharbour.com</small>	
SCALE: N.T.S.	DATE: OCT., 2005
FIGURE 19 2017 (ETC+10) BUILD TRAFFIC VOLUMES SATURDAY PM PEAK HOUR	

MOHEGAN SUN AT POCONO DOWNS



MOHEGAN SUN AT POCONO DOWNS



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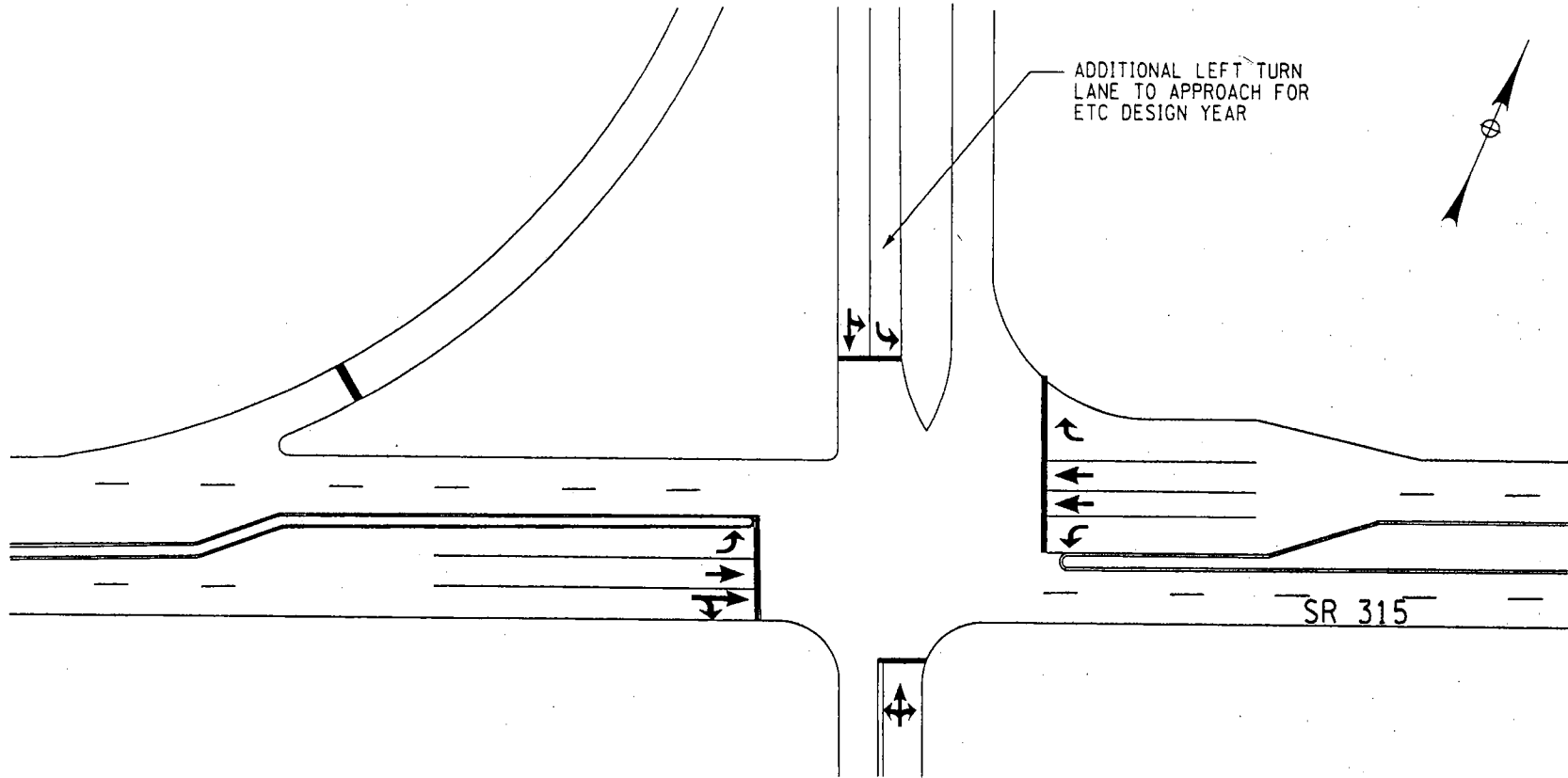
FIGURE 20
RECOMMENDED IMPROVEMENTS
SR 315 AT MSPD ENTRANCE

SCALE: N.T.S.

DATE: OCT., 2005

SR 309 NB RAMPS

ADDITIONAL LEFT TURN
LANE TO APPROACH FOR
ETC DESIGN YEAR



NOTE:

EXISTING TRAFFIC SIGNAL EQUIPMENT
WOULD BE MODIFIED TO ACCOMMODATE
LEFT-TURN ARROWS FOR NB OFF-RAMP
APPROACH AND DETECTION IN LEFT-TURN
LANE.

ARMY RESERVE

SR 315

MOHEGAN SUN AT POCONO DOWNS



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FIGURE 21
RECOMMENDED IMPROVEMENTS
SR 315 AT SR 309 RAMPS

SCALE: N.T.S.

DATE: OCT., 2005

APPENDIX B
STUDY AREA
TRAFFIC COUNT DATA

MANUAL TRAFFIC COUNT FORM

INTERSECTION: SB 315/1-81 <i>Northbound On Ramp</i> <i>South Bound Offramp</i>						INTERSECTION SKETCH				
EAST / WEST STREET:										
NORTH / SOUTH STREET:										
PEAK: <i>Fri PM 4-8</i>			PROJECT NO:							
DATE: <i>8/26/05</i>			RECORDER:							
DAY: <i>SB</i>		WEATHER:								
TIME	OFF CARS	OFF TRUCK	ON CARS	ON TRUCKS	TOTAL	SB	NB	SB	NB	Total
4:15	29	10	142	23	204	39	11	115		
4:30	37	10	132	18	197	47		150		
4:45	39	5	151	16	211	44		167	<i>6668</i>	
5:00	36	5	141	15	197	41		156	(115-5:15)	
5:15	60	10	174	21	265	70		195	<i>(4:15-5:15)</i>	
5:30	52	5	130	18	205	57	<i>224</i>	148		
5:45	46	6	114	14	180	52	<i>5:00</i>	128		
6:00	36	9	124	11	180	45	<i>6:00</i>	135		
6:15	32	4	123	10	169	36		133		
6:30	22	1	125	9	157	23		134		
6:45	34	6	120	8	168	40		128		
7:00	20	4	121	8	153	24		129		
7:15	14	7	96	16	133	21		112		
7:30	11	3	101	7	122	14		108		
7:45	19	8	100	5	132	27		105		
8:00	21	7	91	8	127	28		99		
						13% HV		10% HV		
						.80 PHE		6.80 PHE		

PETRA Traffic Count Report
Clough, Harbour & Associates LLP
 III Winners Circle
 Albany, NY 12205

Project: Pocono Downs
 Project #: 13989
 Location: Wilkes-Barre, PA

File Name : 315 - I-81SBonNBOff Fr
 Site Code : 02040802
 Start Date : 08/26/2005
 Page No : 1

Groups Printed- Cars - SU Trucks - MU Trucks

Start Time	Southbound					I-81 SB on ramp Westbound					Northbound					I-81 NB off ramp Eastbound				
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	
04:00 PM	0	0	0	0	0	0	122	1	0	123	0	0	0	0	0	0	161	0	0	161
04:15 PM	0	0	0	0	0	0	124	0	0	124	0	0	0	0	0	1	167	0	0	168
04:30 PM	0	0	0	0	0	0	139	0	0	139	0	0	0	0	0	0	144	0	0	144
04:45 PM	0	0	0	0	0	0	134	0	0	134	0	0	0	0	0	0	162	0	0	162
Total	0	0	0	0	0	0	519	1	0	520	0	0	0	0	0	1	634	0	0	635
05:00 PM	0	0	0	0	0	0	157	0	0	157	0	0	0	0	0	0	165	0	0	165
05:15 PM	0	0	0	0	0	0	140	0	0	140	0	0	0	0	0	0	148	0	0	148
05:30 PM	0	0	0	0	0	0	121	0	0	121	0	0	0	0	0	0	129	0	0	129
05:45 PM	0	0	0	0	0	0	109	0	0	109	0	0	0	0	0	0	124	0	0	124
Total	0	0	0	0	0	0	527	0	0	527	0	0	0	0	0	0	566	0	0	566
06:00 PM	0	0	0	0	0	0	105	0	0	105	0	0	0	0	0	0	130	0	0	130
06:15 PM	0	0	0	0	0	0	100	0	0	100	0	0	0	0	0	0	114	0	0	114
06:30 PM	0	0	0	0	0	0	102	0	0	102	0	0	0	0	0	0	121	0	0	121
06:45 PM	0	0	0	0	0	0	103	0	0	103	0	0	0	0	0	0	87	0	0	87
Total	0	0	0	0	0	0	410	0	0	410	0	0	0	0	0	0	452	0	0	452
07:00 PM	0	0	0	0	0	0	67	0	0	67	0	0	0	0	0	0	97	0	0	97
07:15 PM	0	0	0	0	0	0	71	0	0	71	0	0	0	0	0	0	86	0	0	86
07:30 PM	0	0	0	0	0	0	61	0	0	61	0	0	0	0	0	0	66	0	0	66
07:45 PM	0	0	0	0	0	0	79	0	0	79	0	0	0	0	0	0	85	0	0	85
Total	0	0	0	0	0	0	278	0	0	278	0	0	0	0	0	0	334	0	0	334
Grand Total	0	0	0	0	0	0	1734	1	0	1735	0	0	0	0	0	1	1986	0	0	1987
Apprch %	0.0	0.0	0.0	0.0		0.0	99.9	0.1	0.0		0.0	0.0	0.0	0.0		0.1	99.9	0.0	0.0	
Total %	0.0	0.0	0.0	0.0	0.0	0.0	46.6	0.0	0.0	46.6	0.0	0.0	0.0	0.0	0.0	0.0	53.4	0.0	0.0	53.4

Start Time	Southbound					I-81 SB on ramp Westbound					Northbound					I-81 NB off ramp Eastbound				
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total
Peak Hour From 04:00 PM to 07:45 PM - Peak 1 of 1																				
Intersection	04:15 PM																			
Volume	0	0	0	0	0	0	554	0	0	554	0	0	0	0	0	1	638	0	0	639
Percent	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		0.2	99.8	0.0	0.0	
05:00	0	0	0	0	0	0	157	0	0	157	0	0	0	0	0	0	165	0	0	165
Peak Factor																				
High Int.	3:45:00 PM					05:00 PM					3:45:00 PM					04:15 PM				
Volume	0	0	0	0	0	0	157	0	0	157	0	0	0	0	0	1	167	0	0	168
Peak Factor						0.882										0.951				

PETRA Traffic Count Report
Clough, Harbour & Associates LLP

Project: Pocono Downs
 Project #: 13989
 Location: Wilkes-Barre, PA

III Winners Circle
 Albany, NY 12205

File Name : 315 - I-81SBonNBOff F
 Site Code : 02040802
 Start Date : 08/26/2005
 Page No : 1

Groups Printed- SU Trucks - MU Trucks

Start Time	Southbound					I-81 SB on ramp Westbound					Northbound					I-81 NB off ramp Eastbound				
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	
04:00 PM	0	0	0	0	0	0	15	0	0	15	0	0	0	0	0	0	13	0	0	13
04:15 PM	0	0	0	0	0	0	27	0	0	27	0	0	0	0	0	0	19	0	0	19
04:30 PM	0	0	0	0	0	0	15	0	0	15	0	0	0	0	0	0	15	0	0	15
04:45 PM	0	0	0	0	0	0	13	0	0	13	0	0	0	0	0	0	14	0	0	14
Total	0	0	0	0	0	0	70	0	0	70	0	0	0	0	0	0	61	0	0	61
05:00 PM	0	0	0	0	0	0	18	0	0	18	0	0	0	0	0	0	12	0	0	12
05:15 PM	0	0	0	0	0	0	15	0	0	15	0	0	0	0	0	0	11	0	0	11
05:30 PM	0	0	0	0	0	0	17	0	0	17	0	0	0	0	0	0	13	0	0	13
05:45 PM	0	0	0	0	0	0	16	0	0	16	0	0	0	0	0	0	16	0	0	16
Total	0	0	0	0	0	0	66	0	0	66	0	0	0	0	0	0	52	0	0	52
06:00 PM	0	0	0	0	0	0	16	0	0	16	0	0	0	0	0	0	21	0	0	21
06:15 PM	0	0	0	0	0	0	9	0	0	9	0	0	0	0	0	0	17	0	0	17
06:30 PM	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	0	22	0	0	22
06:45 PM	0	0	0	0	0	0	15	0	0	15	0	0	0	0	0	0	6	0	0	6
Total	0	0	0	0	0	0	47	0	0	47	0	0	0	0	0	0	66	0	0	66
07:00 PM	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	16	0	0	16
07:15 PM	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	11	0	0	11
07:30 PM	0	0	0	0	0	0	10	0	0	10	0	0	0	0	0	0	4	0	0	4
07:45 PM	0	0	0	0	0	0	11	0	0	11	0	0	0	0	0	0	10	0	0	10
Total	0	0	0	0	0	0	30	0	0	30	0	0	0	0	0	0	41	0	0	41
Grand Total	0	0	0	0	0	0	213	0	0	213	0	0	0	0	0	0	220	0	0	220
Apprch %	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0	
Total %	0.0	0.0	0.0	0.0	0.0	0.0	49.2	0.0	0.0	49.2	0.0	0.0	0.0	0.0	0.0	0.0	50.8	0.0	0.0	50.8

Start Time	Southbound					I-81 SB on ramp Westbound					Northbound					I-81 NB off ramp Eastbound						
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total		
Peak Hour From 04:00 PM to 07:45 PM - Peak 1 of 1																						
Intersection	04:15 PM																					
Volume	0	0	0	0	0	0	73	0	0	73	0	0	0	0	0	0	60	0	0	60		
Percent	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0			
04:15 Volume	0	0	0	0	0	0	27	0	0	27	0	0	0	0	0	0	19	0	0	19		
Peak Factor																						
High Int.	3:45:00 PM					04:15 PM					3:45:00 PM					04:15 PM						
Volume	0	0	0	0	0	0	27	0	0	27	0	0	0	0	0	0	19	0	0	19		
Peak Factor											0.676											0.789

PETRA Traffic Count Report
Clough, Harbour & Associates LLP
III Winners Circle
Albany, NY 12205

Project: Pocono Downs
 Project #: 13989
 Location: Wilkes-Barre, PA

File Name : 315 - Oak Arm F
 Site Code : 01040803
 Start Date : 08/19/2005
 Page No : 1

Groups Printed- Cars - SU Trucks - MU Trucks

Start Time	SR 315 Southbound					Armstrong Westbound					SR 315 Northbound					Oak St Eastbound				
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	
04:00 PM	14	149	4	0	167	41	4	19	3	67	55	173	8	0	236	68	17	46	0	131
04:15 PM	15	113	29	0	157	23	10	11	0	44	90	138	11	0	239	57	7	40	0	104
04:30 PM	6	141	24	0	171	52	17	15	0	84	76	173	1	0	250	57	4	58	0	119
04:45 PM	9	171	36	1	217	16	6	10	0	32	79	168	4	0	251	73	0	57	0	130
Total	44	574	93	1	712	132	37	55	3	227	300	652	24	0	976	255	28	201	0	484
05:00 PM	7	131	25	0	163	34	13	19	0	66	61	125	2	0	188	37	1	44	0	82
05:15 PM	6	152	32	0	190	8	6	11	0	25	81	180	7	0	268	77	2	71	2	152
05:30 PM	2	154	44	0	200	26	4	17	0	47	42	149	11	0	202	50	5	59	0	114
05:45 PM	10	115	49	0	174	26	4	9	0	39	64	126	2	0	192	51	4	47	0	102
Total	25	552	150	0	727	94	27	56	0	177	248	580	22	0	850	215	12	221	2	450
06:00 PM	6	154	36	0	196	16	3	9	0	28	48	126	5	0	179	51	3	44	0	98
06:15 PM	4	124	38	0	166	12	4	7	0	23	45	103	10	0	158	32	5	46	0	83
06:30 PM	7	152	34	0	193	18	9	8	0	35	49	119	10	0	178	38	3	34	0	75
06:45 PM	6	129	48	0	183	28	5	4	1	38	32	79	5	0	116	51	3	35	0	89
Total	23	559	156	0	738	74	21	28	1	124	174	427	30	0	631	172	14	159	0	345
07:00 PM	5	134	55	0	194	15	4	6	0	25	13	120	3	0	136	51	3	29	0	83
07:15 PM	3	100	68	0	171	12	2	4	0	18	17	190	9	0	216	48	4	27	0	79
07:30 PM	0	95	56	0	151	15	3	8	0	26	30	210	7	0	247	37	6	20	0	63
07:45 PM	5	92	46	0	143	7	5	4	0	16	29	231	9	0	269	57	4	32	0	93
Total	13	421	225	0	659	49	14	22	0	85	89	751	28	0	868	193	17	108	0	318
Grand Total	105	2106	624	1	2836	349	99	161	4	613	811	2410	104	0	3325	835	71	689	2	1597
Apprch %	3.7	74.3	22.0	0.0		56.9	16.2	26.3	0.7		24.4	72.5	3.1	0.0		52.3	4.4	43.1	0.1	
Total %	1.3	25.2	7.5	0.0	33.9	4.2	1.2	1.9	0.0	7.3	9.7	28.8	1.2	0.0	39.7	10.0	0.8	8.2	0.0	19.1

Start Time	SR 315 Southbound					Armstrong Westbound					SR 315 Northbound					Oak St Eastbound				
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total
Peak Hour From 04:00 PM to 07:45 PM - Peak 1 of 1																				
Intersection	04:00 PM																			
Volume	44	574	93	1	712	132	37	55	3	227	300	652	24	0	976	255	28	201	0	484
Percent	6.2	80.6	13.1	0.1		58.1	16.3	24.2	1.3		30.7	66.8	2.5	0.0		52.7	5.8	41.5	0.0	
04:45																				
Volume	9	171	36	1	217	16	6	10	0	32	79	168	4	0	251	73	0	57	0	130
Peak Factor																				
High Int.	04:45 PM					04:30 PM					04:45 PM					04:00 PM				
Volume	9	171	36	1	217	52	17	15	0	84	79	168	4	0	251	68	17	46	0	131
Peak Factor	0.820					0.676					0.972					0.924				

PETRA Traffic Count Report
Clough, Harbour & Associates LLP
 III Winners Circle
 Albany, NY 12205

Project: Pocono Downs
 Project #: 13989
 Location: Wilkes-Barre, PA

File Name : 315 - Oak Arm F
 Site Code : 01040803
 Start Date : 08/19/2005
 Page No : 1

Groups Printed- SU Trucks - MU Trucks

Start Time	SR 315 Southbound					Armstrong Westbound					SR 315 Northbound					Oak St Eastbound				
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	
04:00 PM	5	11	0	0	16	7	0	9	0	16	3	16	3	0	22	2	2	3	0	7
04:15 PM	6	11	0	0	17	6	0	1	0	7	3	7	5	0	15	1	0	0	0	1
04:30 PM	4	13	2	0	19	18	3	3	0	24	2	10	0	0	12	0	0	0	0	0
04:45 PM	4	14	1	0	19	6	0	5	0	11	5	9	1	0	15	1	0	1	0	2
Total	19	49	3	0	71	37	3	18	0	58	13	42	9	0	64	4	2	4	0	10
05:00 PM	5	17	1	0	23	3	2	8	0	13	4	11	1	0	16	2	0	0	0	2
05:15 PM	6	13	2	0	21	3	0	5	0	8	3	8	5	0	16	0	2	0	0	2
05:30 PM	2	15	1	0	18	4	0	4	0	8	0	3	5	0	8	0	0	2	0	2
05:45 PM	6	15	0	0	21	8	1	1	0	10	2	8	0	0	10	1	1	1	0	3
Total	19	60	4	0	83	18	3	18	0	39	9	30	11	0	50	3	3	3	0	9
06:00 PM	3	12	0	0	15	2	0	4	0	6	2	12	3	0	17	0	0	0	0	0
06:15 PM	4	10	1	0	15	3	0	4	0	7	2	13	4	0	19	1	2	0	0	3
06:30 PM	3	13	0	0	16	2	1	3	0	6	2	10	8	0	20	1	0	1	0	2
06:45 PM	4	8	3	0	15	3	0	0	0	3	0	9	4	0	13	1	2	1	0	4
Total	14	43	4	0	61	10	1	11	0	22	6	44	19	0	69	3	4	2	0	9
07:00 PM	3	9	2	0	14	3	1	2	0	6	1	7	2	0	10	0	0	1	0	1
07:15 PM	1	7	4	0	12	7	0	1	0	8	0	15	7	0	22	0	2	1	0	3
07:30 PM	0	8	2	0	10	2	0	3	0	5	0	22	6	0	28	0	1	0	0	1
07:45 PM	1	8	0	0	9	0	0	1	0	1	1	15	8	0	24	0	2	0	0	2
Total	5	32	8	0	45	12	1	7	0	20	2	59	23	0	84	0	5	2	0	7
Grand Total	57	184	19	0	260	77	8	54	0	139	30	175	62	0	267	10	14	11	0	35
Apprch %	21.9	70.8	7.3	0.0		55.4	5.8	38.8	0.0		11.2	65.5	23.2	0.0		28.6	40.0	31.4	0.0	
Total %	8.1	26.2	2.7	0.0	37.1	11.0	1.1	7.7	0.0	19.8	4.3	25.0	8.8	0.0	38.1	1.4	2.0	1.6	0.0	5.0

Start Time	SR 315 Southbound					Armstrong Westbound					SR 315 Northbound					Oak St Eastbound				
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total
Peak Hour From 04:00 PM to 07:45 PM - Peak 1 of 1																				
Intersection	04:00 PM																			
Volume	19	49	3	0	71	37	3	18	0	58	13	42	9	0	64	4	2	4	0	10
Percent	26.8	69.0	4.2	0.0		63.8	5.2	31.0	0.0		20.3	65.6	14.1	0.0		40.0	20.0	40.0	0.0	
04:00 Volume	5	11	0	0	16	7	0	9	0	16	3	16	3	0	22	2	2	3	0	7
Peak Factor																				
High Int.	04:30 PM					04:30 PM					04:00 PM					04:00 PM				
Volume	4	13	2	0	19	18	3	3	0	24	3	16	3	0	22	2	2	3	0	7
Peak Factor	0.934					0.604					0.727					0.357				

PETRA Traffic Count Report
 Clough, Harbour & Associates LLP

Project: Pocono Downs
 Project #: 13989
 Location: Wilkes-Barre, PA

III Winners Circle
 Albany, NY 12205

File Name : 315 - Old Boston Fri PM
 Site Code : 01040804
 Start Date : 08/12/2005
 Page No : 1

Groups Printed- Cars - SU Trucks - MU Trucks

Start Time	Private Drive Southbound					SR 315 Westbound					Old Boston Rd Northbound					SR 315 Eastbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
04:00 PM	0	0	0	0	0	7	126	1	0	134	22	0	20	0	42	0	125	9	0	134	310
04:15 PM	0	0	0	0	0	6	114	0	0	120	11	0	9	0	20	0	106	11	0	117	257
04:30 PM	0	0	0	0	0	7	116	0	0	123	5	0	13	0	18	0	136	10	0	146	287
04:45 PM	0	0	0	0	0	10	132	0	0	142	11	0	12	0	23	0	115	5	0	120	285
Total	0	0	0	0	0	30	488	1	0	519	49	0	54	0	103	0	482	35	0	517	1139
05:00 PM	0	0	0	0	0	10	119	0	0	129	7	0	7	0	14	0	132	11	0	143	286
05:15 PM	0	0	0	0	0	8	147	0	0	155	4	0	7	0	11	0	97	14	0	111	277
05:30 PM	0	0	0	0	0	3	118	0	0	121	8	0	6	0	14	1	132	8	0	141	276
05:45 PM	0	0	0	0	0	4	106	1	0	111	11	0	7	0	18	0	102	12	0	114	243
Total	0	0	0	0	0	25	490	1	0	516	30	0	27	0	57	1	463	45	0	509	1082
06:00 PM	0	1	1	0	2	3	125	0	0	128	8	0	4	0	12	0	67	4	0	71	213
06:15 PM	0	0	0	0	0	5	81	0	0	86	8	0	4	0	12	0	92	7	0	99	197
06:30 PM	0	0	0	0	0	0	122	0	0	122	6	0	3	0	9	0	82	5	0	87	218
06:45 PM	0	0	0	0	0	0	94	0	0	94	4	0	3	0	7	0	73	2	0	75	176
Total	0	1	1	0	2	8	422	0	0	430	26	0	14	0	40	0	314	18	0	332	804
07:00 PM	0	0	0	0	0	1	87	1	0	89	4	0	2	0	6	0	82	3	0	85	180
07:15 PM	0	0	0	0	0	5	89	0	0	94	0	0	6	0	6	0	56	4	0	60	160
07:30 PM	0	0	0	0	0	5	71	0	0	76	4	0	2	0	6	1	65	4	0	70	152
07:45 PM	0	0	0	0	0	10	71	0	0	81	1	0	8	0	9	0	78	5	0	83	173
Total	0	0	0	0	0	21	318	1	0	340	9	0	18	0	27	1	281	16	0	298	665
Grand Total	0	1	1	0	2	84	1718	3	0	1805	114	0	113	0	227	2	1540	114	0	1656	3690
Approch %	0.0	50.0	50.0	0.0		4.7	95.2	0.2	0.0		50.2	0.0	49.8	0.0		0.1	93.0	6.9	0.0		
Total %	0.0	0.0	0.0	0.0	0.1	2.3	46.6	0.1	0.0	48.9	3.1	0.0	3.1	0.0	6.2	0.1	41.7	3.1	0.0	44.9	

Start Time	Private Drive Southbound					SR 315 Westbound					Old Boston Rd Northbound					SR 315 Eastbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	

Peak Hour From 04:00 PM to 07:45 PM - Peak 1 of 1

Intersection	04:00 PM																				
Volume	0	0	0	0	0	30	488	1	0	519	49	0	54	0	103	0	482	35	0	517	1139
Percent	0.0	0.0	0.0	0.0		5.8	94.0	0.2	0.0		47.6	0.0	52.4	0.0		0.0	93.2	6.8	0.0		
04:00 Volume	0	0	0	0	0	7	126	1	0	134	22	0	20	0	42	0	125	9	0	134	310
Peak Factor																					
High Int.	3:45:00 PM					04:45 PM					04:00 PM					04:30 PM					
Volume	0	0	0	0	0	10	132	0	0	142	22	0	20	0	42	0	136	10	0	146	
Peak Factor	0.914										0.613					0.885					

PETRA Traffic Count Report

Clough, Harbour & Associates LLP

Project: Pocono Downs
 Project #: 13989
 Location: Wilkes-Barre, PA

III Winners Circle
 Albany, NY 12205

File Name : 315 - Old Boston Fri PM
 Site Code : 01040804
 Start Date : 08/12/2005
 Page No : 1

Groups Printed- SU Trucks - MU Trucks

Start Time	Private Drive Southbound					SR 315 Westbound					Old Boston Rd Northbound					SR 315 Eastbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
04:00 PM	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	5	2	0	7	11
04:15 PM	0	0	0	0	0	0	7	0	0	7	1	0	1	0	2	0	3	0	0	3	12
04:30 PM	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	6	1	0	7	11
04:45 PM	0	0	0	0	0	1	6	0	0	7	1	0	0	0	1	0	8	0	0	8	16
Total	0	0	0	0	0	1	21	0	0	22	2	0	1	0	3	0	22	3	0	25	50
05:00 PM	0	0	0	0	0	0	2	0	0	2	1	0	0	0	1	0	5	1	0	6	9
05:15 PM	0	0	0	0	0	0	7	0	0	7	0	0	1	0	1	0	5	2	0	7	15
05:30 PM	0	0	0	0	0	0	6	0	0	6	2	0	0	0	2	0	4	0	0	4	12
05:45 PM	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	7	0	0	7	11
Total	0	0	0	0	0	0	19	0	0	19	3	0	1	0	4	0	21	3	0	24	47
06:00 PM	0	0	0	0	0	0	8	0	0	8	0	0	0	0	0	0	4	0	0	4	12
06:15 PM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	4	0	0	4	6
06:30 PM	0	0	0	0	0	0	8	0	0	8	0	0	0	0	0	0	3	0	0	3	11
06:45 PM	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	3	0	0	3	6
Total	0	0	0	0	0	0	21	0	0	21	0	0	0	0	0	0	14	0	0	14	35
07:00 PM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	6	0	0	6	8
07:15 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	3
07:30 PM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	2
07:45 PM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	2
Total	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	0	8	0	0	8	15
Grand Total	0	0	0	0	0	1	68	0	0	69	5	0	2	0	7	0	65	6	0	71	147
Approch %	0.0	0.0	0.0	0.0		1.4	98.6	0.0	0.0		71.4	0.0	28.6	0.0		0.0	91.5	8.5	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.7	46.3	0.0	0.0	46.9	3.4	0.0	1.4	0.0	4.8	0.0	44.2	4.1	0.0	48.3	

Start Time	Private Drive Southbound					SR 315 Westbound					Old Boston Rd Northbound					SR 315 Eastbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	

Peak Hour From 04:00 PM to 07:45 PM - Peak 1 of 1

Intersection	04:45 PM																				
Volume	0	0	0	0	0	1	21	0	0	22	4	0	1	0	5	0	22	3	0	25	52
Percent	0.0	0.0	0.0	0.0		4.5	95.5	0.0	0.0		80.0	0.0	20.0	0.0		0.0	88.0	12.0	0.0		
04:45 Volume	0	0	0	0	0	1	6	0	0	7	1	0	0	0	1	0	8	0	0	8	16
Peak Factor																					
High Int.	3:45:00 PM					04:45 PM					05:30 PM					04:45 PM					
Volume	0	0	0	0	0	1	6	0	0	7	2	0	0	0	2	0	8	0	0	8	
Peak Factor						0.786					0.625					0.781					

PETRA Traffic Count Report
Clough, Harbour & Associates LLP

Project: Pocono Downs
 Project #: 13989
 Location: Wilkes-Barre, PA

III Winners Circle
 Albany, NY 12205

File Name : 315 - Laflin Fri PM
 Site Code : 01040805
 Start Date : 08/12/2005
 Page No : 1

Groups Printed- Cars - SU Trucks - MU Trucks

Start Time	Laflin Rd Southbound					SR 315 Westbound					Northbound					SR 315 Eastbound					Int. Total
	Left	Thru	Rght	Peds	App. Total	Left	Thru	Rght	Peds	App. Total	Left	Thru	Rght	Peds	App. Total	Left	Thru	Rght	Peds	App. Total	
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
04:00 PM	17	0	25	0	42	0	136	24	0	160	0	0	0	0	0	32	151	0	0	183	385
04:15 PM	12	0	13	0	25	0	122	22	0	144	0	0	0	0	0	16	124	0	0	140	309
04:30 PM	17	0	16	0	33	0	127	21	1	149	0	0	0	0	0	21	176	0	0	197	379
04:45 PM	12	0	19	1	32	0	136	27	0	163	0	0	0	0	0	26	148	0	0	174	369
Total	58	0	73	1	132	0	521	94	1	616	0	0	0	0	0	95	599	0	0	694	1442
05:00 PM	14	0	24	0	38	0	128	24	0	152	0	0	0	0	0	26	143	0	0	169	359
05:15 PM	12	0	19	1	32	0	129	24	0	153	0	0	0	0	0	38	138	0	0	176	361
05:30 PM	21	0	13	0	34	0	132	23	2	157	0	0	0	0	0	28	148	0	0	176	367
05:45 PM	15	0	15	0	30	0	97	25	0	122	0	0	0	0	0	32	118	1	0	151	303
Total	62	0	71	1	134	0	486	96	2	584	0	0	0	0	0	124	547	1	0	672	1390
06:00 PM	11	0	30	0	41	0	119	19	0	138	0	0	0	0	0	27	80	0	0	107	286
06:15 PM	25	0	24	0	49	0	85	17	0	102	0	0	0	0	0	29	110	0	0	139	290
06:30 PM	14	0	16	0	30	0	120	18	0	138	0	0	0	0	0	19	90	0	0	109	277
06:45 PM	15	0	16	0	31	0	105	15	0	120	0	0	0	0	0	17	78	0	0	95	246
Total	65	0	86	0	151	0	429	69	0	498	0	0	0	0	0	92	358	0	0	450	1099
07:00 PM	21	0	20	0	41	0	102	14	0	116	0	0	0	0	0	9	85	0	0	94	251
07:15 PM	14	0	10	0	24	0	90	16	0	106	0	0	0	0	0	13	66	0	0	79	209
07:30 PM	12	0	9	0	21	0	71	16	0	87	0	0	0	0	0	15	83	0	0	98	206
07:45 PM	8	0	15	0	23	0	72	15	0	87	0	0	0	0	0	14	83	0	0	97	207
Total	55	0	54	0	109	0	335	61	0	396	0	0	0	0	0	51	317	0	0	368	873
Grand Total	240	0	284	2	526	0	1771	320	3	2094	0	0	0	0	0	362	1821	1	0	2184	4804
Apprch %	45.6	0.0	54.0	0.4		0.0	84.6	15.3	0.1		0.0	0.0	0.0	0.0		16.6	83.4	0.0	0.0		
Total %	5.0	0.0	5.9	0.0	10.9	0.0	36.9	6.7	0.1	43.6	0.0	0.0	0.0	0.0	0.0	7.5	37.9	0.0	0.0	45.5	

Start Time	Laflin Rd Southbound					SR 315 Westbound					Northbound					SR 315 Eastbound					Int. Total
	Left	Thru	Rght	Peds	App. Total	Left	Thru	Rght	Peds	App. Total	Left	Thru	Rght	Peds	App. Total	Left	Thru	Rght	Peds	App. Total	

Peak Hour From 04:00 PM to 07:45 PM - Peak 1 of 1

Intersection																					
04:30 PM																					
Volume	55	0	78	2	135	0	520	96	1	617	0	0	0	0	0	111	605	0	0	716	1468
Percent	40.7	0.0	57.8	1.5		0.0	84.3	15.6	0.2		0.0	0.0	0.0	0.0		15.5	84.5	0.0	0.0		
04:30 Volume	17	0	16	0	33	0	127	21	1	149	0	0	0	0	0	21	176	0	0	197	379
Peak Factor																					
High Int.																					
05:00 PM																					
Volume	14	0	24	0	38	0	136	27	0	163	0	0	0	0	0	21	176	0	0	197	0.968
Peak Factor					0.888					0.946									0.909		

PETRA Traffic Count Report
 Clough, Harbour & Associates LLP

Project: Pocono Downs
 Project #: 13989
 Location: Wilkes-Barre, PA

III Winners Circle
 Albany, NY 12205

File Name : 315 - Laffin Fri PM
 Site Code : 01040805
 Start Date : 08/12/2005
 Page No : 1

Groups Printed- SU Trucks - MU Trucks

Start Time	Laffin Rd Southbound					SR 315 Westbound					Northbound					SR 315 Eastbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
04:00 PM	1	0	0	0	1	0	3	0	0	3	0	0	0	0	0	1	6	0	0	7	11
04:15 PM	0	0	1	0	1	0	8	0	0	8	0	0	0	0	0	0	0	0	0	0	9
04:30 PM	0	0	0	0	0	0	4	1	0	5	0	0	0	0	0	0	5	0	0	5	10
04:45 PM	0	0	1	0	1	0	9	1	0	10	0	0	0	0	0	0	7	0	0	7	18
Total	1	0	2	0	3	0	24	2	0	26	0	0	0	0	0	1	18	0	0	19	48
05:00 PM	1	0	1	0	2	0	4	0	0	4	0	0	0	0	0	0	2	0	0	2	8
05:15 PM	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	5	0	0	5	9
05:30 PM	1	0	0	0	1	0	9	0	0	9	0	0	0	0	0	1	2	0	0	3	13
05:45 PM	0	0	0	0	0	0	3	1	0	4	0	0	0	0	0	0	6	0	0	6	10
Total	2	0	1	0	3	0	20	1	0	21	0	0	0	0	0	1	15	0	0	16	40
06:00 PM	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	2	0	0	2	6
06:15 PM	1	0	0	0	1	0	3	0	0	3	0	0	0	0	0	0	6	0	0	6	10
06:30 PM	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	2	0	0	2	5
06:45 PM	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	1	0	0	1	5
Total	1	0	0	0	1	0	14	0	0	14	0	0	0	0	0	0	11	0	0	11	26
07:00 PM	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	5	0	0	5	9
07:15 PM	0	0	0	0	0	0	1	1	0	2	0	0	0	0	0	0	1	0	0	1	3
07:30 PM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	2
07:45 PM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	2
Total	0	0	0	0	0	0	9	1	0	10	0	0	0	0	0	0	6	0	0	6	16
Grand Total	4	0	3	0	7	0	67	4	0	71	0	0	0	0	0	2	50	0	0	52	130
Approch %	57.1	0.0	42.9	0.0		0.0	94.4	5.6	0.0		0.0	0.0	0.0	0.0		3.8	96.2	0.0	0.0		
Total %	3.1	0.0	2.3	0.0	5.4	0.0	51.5	3.1	0.0	54.6	0.0	0.0	0.0	0.0	0.0	1.5	38.5	0.0	0.0	40.0	

Start Time	Laffin Rd Southbound					SR 315 Westbound					Northbound					SR 315 Eastbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	

Peak Hour From 04:00 PM to 07:45 PM - Peak 1 of 1

Intersection	04:00 PM																				
Volume	1	0	2	0	3	0	24	2	0	26	0	0	0	0	0	1	18	0	0	19	48
Percent	33.3	0.0	66.7	0.0		0.0	92.3	7.7	0.0		0.0	0.0	0.0	0.0		5.3	94.7	0.0	0.0		
04:45 Volume	0	0	1	0	1	0	9	1	0	10	0	0	0	0	0	0	7	0	0	7	18
Peak Factor	0.667																				
High Int. Volume	04:00 PM					04:45 PM					3:45:00 PM					04:00 PM					
Peak Factor	1	0	0	0	1	0	9	1	0	10	0	0	0	0	0	1	6	0	0	7	0.679
	0.750					0.650															

PETRA Traffic Count Report
 Clough, Harbour & Associates LLP

Project: Pocono Downs
 Project #: 13989
 Location: Wilkes-Barre, PA

III Winners Circle
 Albany, NY 12205

File Name : 315 - Sunshine Access F
 Site Code : 01040806
 Start Date : 08/05/2005
 Page No : 1

Groups Printed- Cars - SU Trucks, Buses - SU Trucks

Start Time	Sunshine Market Access Southbound					SR 315 Westbound					Northbound					SR 315 Eastbound				
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	
04:00 PM	20	0	29	0	49	0	151	17	1	169	0	0	0	0	0	22	150	0	0	172
04:15 PM	18	0	27	0	45	0	134	14	0	148	0	0	0	0	0	27	148	0	0	175
04:30 PM	15	0	31	0	46	0	161	22	0	183	0	0	0	0	0	33	168	1	0	202
04:45 PM	18	0	30	0	48	0	116	25	0	141	0	0	0	0	0	31	147	0	0	178
Total	71	0	117	0	188	0	562	78	1	641	0	0	0	0	0	113	613	1	0	727
05:00 PM	23	0	32	0	55	0	136	15	0	151	0	0	0	0	0	25	158	0	0	183
05:15 PM	23	0	21	0	44	0	152	18	0	170	0	0	0	0	0	35	145	0	0	180
05:30 PM	21	0	28	0	49	0	136	11	0	147	0	0	0	0	0	30	120	0	0	150
05:45 PM	14	0	27	0	41	0	114	16	0	130	0	0	0	0	0	24	131	0	0	155
Total	81	0	108	0	189	0	538	60	0	598	0	0	0	0	0	114	554	0	0	668
06:00 PM	21	0	23	0	44	0	121	15	0	136	0	0	0	0	0	22	90	0	0	112
06:15 PM	16	0	22	0	38	0	105	18	0	123	0	0	0	0	0	25	128	0	0	153
06:30 PM	17	0	23	0	40	0	130	21	0	151	0	0	0	0	0	24	102	0	0	126
06:45 PM	23	0	22	0	45	0	140	13	0	153	0	0	0	0	0	22	89	0	0	111
Total	77	0	90	0	167	0	496	67	0	563	0	0	0	0	0	93	409	0	0	502
07:00 PM	18	0	36	0	54	0	113	11	0	124	0	0	0	0	0	18	84	0	0	102
07:15 PM	11	0	20	0	31	0	85	8	1	94	0	0	0	0	0	14	106	0	0	120
07:30 PM	10	0	18	0	28	0	107	10	1	118	0	0	0	0	0	20	89	0	0	109
07:45 PM	20	0	14	0	34	0	105	3	0	108	0	0	0	0	0	15	108	0	0	123
Total	59	0	88	0	147	0	410	32	2	444	0	0	0	0	0	67	387	0	0	454
Grand Total	288	0	403	0	691	0	2006	237	3	2246	0	0	0	0	0	387	1963	1	0	2351
Approch %	41.7	0.0	58.3	0.0		0.0	89.3	10.6	0.1		0.0	0.0	0.0	0.0		16.5	83.5	0.0	0.0	
Total %	5.4	0.0	7.6	0.0	13.1	0.0	37.9	4.5	0.1	42.5	0.0	0.0	0.0	0.0	0.0	7.3	37.1	0.0	0.0	44.5

Start Time	Sunshine Market Access Southbound					SR 315 Westbound					Northbound					SR 315 Eastbound				
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total
Peak Hour From 04:00 PM to 07:45 PM - Peak 1 of 1																				
Intersection	04:30 PM																			
Volume	79	0	114	0	193	0	565	80	0	645	0	0	0	0	0	124	618	1	0	743
Percent	40.9	0.0	59.1	0.0		0.0	87.6	12.4	0.0		0.0	0.0	0.0	0.0		16.7	83.2	0.1	0.0	
Volume	15	0	31	0	46	0	161	22	0	183	0	0	0	0	0	33	168	1	0	202
Peak Factor																				
High Int.	05:00 PM					04:30 PM					3:45:00 PM					04:30 PM				
Volume	23	0	32	0	55	0	161	22	0	183	0	0	0	0	0	33	168	1	0	202
Peak Factor	0.877					0.881										0.920				

PETRA Traffic Count Report
 Clough, Harbour & Associates LLP

Project: Pocono Downs
 Project #: 13989
 Location: Wilkes-Barre, PA

III Winners Circle
 Albany, NY 12205

File Name : 315 - Sunshine Access F
 Site Code : 01040806
 Start Date : 08/05/2005
 Page No : 1

Groups Printed- SU Trucks, Buses - SU Trucks

Start Time	Sunshine Market Access Southbound					SR 315 Westbound					Northbound					SR 315 Eastbound				
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	
04:00 PM	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	0	5	0	0	5
04:15 PM	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	0	8	0	0	8
04:30 PM	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	5	0	0	5
04:45 PM	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	5	0	0	5
Total	0	0	0	0	0	0	23	0	0	23	0	0	0	0	0	0	23	0	0	23
05:00 PM	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	5	0	0	5
05:15 PM	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	0	6	0	0	6
05:30 PM	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	1	1	0	2
05:45 PM	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	0	5	0	0	5
Total	0	0	0	0	0	0	19	0	0	19	0	0	0	0	0	1	17	0	0	18
06:00 PM	0	0	0	0	0	0	10	0	0	10	0	0	0	0	0	0	2	0	0	2
06:15 PM	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	1	0	0	1
06:30 PM	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	0	3	0	0	3
06:45 PM	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	5	0	0	5
Total	0	0	0	0	0	0	22	0	0	22	0	0	0	0	0	0	11	0	0	11
07:00 PM	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	0	2	0	0	2
07:15 PM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2
07:30 PM	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	1	0	0	1
07:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	7
Total	0	0	0	0	0	0	12	0	0	12	0	0	0	0	0	0	12	0	0	12
Grand Total	0	0	0	0	0	0	76	0	0	76	0	0	0	0	0	1	63	0	0	64
Aprch %	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		1.6	98.4	0.0	0.0	
Total %	0.0	0.0	0.0	0.0	0.0	0.0	54.3	0.0	0.0	54.3	0.0	0.0	0.0	0.0	0.0	0.7	45.0	0.0	0.0	45.7

Start Time	Sunshine Market Access Southbound					SR 315 Westbound					Northbound					SR 315 Eastbound				
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total
Peak Hour From 04:00 PM to 07:45 PM - Peak 1 of 1																				
Intersection	04:00 PM																			
Volume	0	0	0	0	0	0	23	0	0	23	0	0	0	0	0	0	23	0	0	23
Percent	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0	
04:15	04:15 PM																			
Volume	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	0	8	0	0	8
Peak Factor	0.7																			
High Int.	3:45:00 PM																			
Volume	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	0	8	0	0	8
Peak Factor	0.821										0.719									

PETRA Traffic Count Report
Clough, Harbour & Associates LLP

Project: Pocono Downs
 Project #: 13989
 Location: Wilkes-Barre, PA

III Winners Circle
 Albany, NY 12205

File Name : 315 - Pocono Access Fr
 Site Code : 01040807
 Start Date : 08/05/2005
 Page No : 1

Groups Printed- Cars - SU Trucks, Buses - SU Trucks

Start Time	Pocono Downs Access Southbound					SR 315 Westbound					Mid-Atlantic Access Northbound					SR 315 Eastbound					T
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
04:00 PM	2	0	2	0	4	0	179	2	0	181	0	0	1	0	1	4	158	0	0	162	
04:15 PM	2	0	3	0	5	0	160	1	0	161	0	0	0	0	0	2	173	0	0	175	
04:30 PM	4	0	2	0	6	0	198	3	0	201	3	0	1	0	4	1	186	0	0	187	
04:45 PM	5	0	3	0	8	0	156	7	0	163	2	0	0	0	2	7	175	0	0	182	
Total	13	0	10	0	23	0	693	13	0	706	5	0	2	0	7	14	692	0	0	706	1
05:00 PM	5	0	7	0	12	0	180	2	0	182	2	0	0	0	2	7	183	1	0	191	
05:15 PM	4	0	10	0	14	1	176	5	0	182	0	0	1	0	1	10	176	0	0	186	
05:30 PM	3	0	6	0	9	0	143	6	0	149	1	0	0	0	1	6	150	0	0	156	
05:45 PM	4	0	1	0	5	0	131	12	0	143	0	0	0	0	0	6	157	0	0	163	
Total	16	0	24	0	40	1	630	25	0	656	3	0	1	0	4	29	666	1	0	696	1
06:00 PM	4	0	2	0	6	0	141	8	0	149	0	0	0	0	0	4	142	0	0	146	
06:15 PM	1	0	5	0	6	0	120	11	0	131	0	0	0	0	0	8	144	0	0	152	
06:30 PM	1	0	1	0	2	0	132	17	0	149	0	0	0	0	0	7	134	0	0	141	
06:45 PM	2	0	3	0	5	0	149	23	0	172	0	0	0	0	0	7	103	0	0	110	
Total	8	0	11	0	19	0	542	59	0	601	0	0	0	0	0	26	523	0	0	549	1
07:00 PM	1	0	2	0	3	0	125	29	0	154	0	0	0	0	0	14	110	0	0	124	
07:15 PM	4	0	3	0	7	0	90	11	0	101	0	0	0	0	0	16	125	0	0	141	
07:30 PM	3	0	0	0	3	0	101	19	0	120	0	0	0	0	0	13	104	0	0	117	
07:45 PM	2	0	1	0	3	0	102	21	0	123	0	0	0	0	0	10	118	0	0	128	
Total	10	0	6	0	16	0	418	80	0	498	0	0	0	0	0	53	457	0	0	510	1
Grand Total	47	0	51	0	98	1	2283	177	0	2461	8	0	3	0	11	122	2338	1	0	2461	5
Apprch %	48.0	0.0	52.0	0.0		0.0	92.8	7.2	0.0		72.7	0.0	27.3	0.0		5.0	95.0	0.0	0.0		
Total %	0.9	0.0	1.0	0.0	1.9	0.0	45.4	3.5	0.0	48.9	0.2	0.0	0.1	0.0	0.2	2.4	46.5	0.0	0.0	48.9	

Start Time	Pocono Downs Access Southbound					SR 315 Westbound					Mid-Atlantic Access Northbound					SR 315 Eastbound					T
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
Peak Hour From 04:00 PM to 07:45 PM - Peak 1 of 1																					
Intersection	04:30 PM																				
Volume	18	0	22	0	40	1	710	17	0	728	7	0	2	0	9	25	720	1	0	746	1
Percent	45.0	0.0	55.0	0.0		0.1	97.5	2.3	0.0		77.8	0.0	22.2	0.0		3.4	96.5	0.1	0.0		
04:30 Volume	4	0	2	0	6	0	198	3	0	201	3	0	1	0	4	1	186	0	0	187	
Peak Factor																					0.9
High Int.	05:15 PM					04:30 PM					04:30 PM					05:00 PM					
Volume	4	0	10	0	14	0	198	3	0	201	3	0	1	0	4	7	183	1	0	191	
Peak Factor	0.714					0.905					0.563					0.976					

PETRA Traffic Count Report
Clough, Harbour & Associates LLP

Project: Pocono Downs
 Project #: 13989
 Location: Wilkes-Barre, PA

III Winners Circle
 Albany, NY 12205

File Name : 315 - Pocono Access Fr
 Site Code : 01040807
 Start Date : 08/05/2005
 Page No : 1

Groups Printed- SU Trucks, Buses - SU Trucks

Start Time	Pocono Downs Access Southbound					SR 315 Westbound					Mid-Atlantic Access Northbound					SR 315 Eastbound					T
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
04:00 PM	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	4	0	0	4	
04:15 PM	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	8	0	0	8	
04:30 PM	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	4	0	0	4	
04:45 PM	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	5	0	0	5	
Total	0	0	0	0	0	0	18	0	0	18	0	0	0	0	0	0	21	0	0	21	
05:00 PM	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	5	0	0	5	
05:15 PM	0	0	0	0	0	1	4	0	0	5	0	0	0	0	0	0	6	0	0	6	
05:30 PM	0	0	0	0	0	0	2	0	0	2	1	0	0	0	1	0	1	0	0	1	
05:45 PM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	3	0	0	3	
Total	0	0	0	0	0	1	12	0	0	13	1	0	0	0	1	0	15	0	0	15	
06:00 PM	0	0	0	0	0	0	10	0	0	10	0	0	0	0	0	0	2	0	0	2	
06:15 PM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	
06:30 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	
06:45 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	3	0	0	3	
Total	0	0	0	0	0	0	14	0	0	14	0	0	0	0	0	0	7	0	0	7	
07:00 PM	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	0	2	0	0	2	
07:15 PM	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	1	0	0	1	
07:30 PM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	
07:45 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	5	0	0	5	
Total	0	0	0	0	0	0	12	0	0	12	0	0	0	0	0	0	8	0	0	8	
Grand Total	0	0	0	0	0	1	56	0	0	57	1	0	0	0	1	0	51	0	0	51	
Approch %	0.0	0.0	0.0	0.0		1.8	98.2	0.0	0.0		100.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.9	51.4	0.0	0.0	52.3	0.9	0.0	0.0	0.0	0.9	0.0	46.8	0.0	0.0	46.8	

Start Time	Pocono Downs Access Southbound					SR 315 Westbound					Mid-Atlantic Access Northbound					SR 315 Eastbound					T
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
Peak Hour From 04:00 PM to 07:45 PM - Peak 1 of 1																					
Intersection	04:15 PM																				
Volume	0	0	0	0	0	0	18	0	0	18	0	0	0	0	0	0	22	0	0	22	
Percent	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		
04:15 Volume	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	8	0	0	8	
Peak Factor																					0.8
High Int. Volume	3:45:00 PM					04:30 PM					3:45:00 PM					04:15 PM					
Peak Factor																					0.688

PETRA Traffic Count Report
Clough, Harbour & Associates LLP

Project: Pocono Downs
 Project #: 13989
 Location: Wilkes-Barre, PA

III Winners Circle
 Albany, NY 12205

File Name : 315 - East Main Fr
 Site Code : 01040808
 Start Date : 08/05/2005
 Page No : 1

Groups Printed- Cars - SU Trucks, Buses - SU Trucks

Start Time	East Main St. Southbound					SR 315 Westbound					Jumper Rd. Northbound					SR 315 Eastbound					T
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
04:00 PM	28	33	29	0	90	27	121	35	1	184	38	32	33	0	103	32	97	22	0	151	
04:15 PM	30	28	28	0	86	20	109	38	0	167	26	50	24	4	104	22	125	12	0	159	
04:30 PM	33	21	36	0	90	25	128	37	0	190	30	49	39	0	118	22	128	18	0	168	
04:45 PM	36	17	32	0	85	14	88	40	0	142	43	38	28	0	109	28	118	18	0	164	
Total	127	99	125	0	351	86	446	150	1	683	137	169	124	4	434	104	468	70	0	642	2
05:00 PM	33	19	27	0	79	14	132	33	0	179	29	37	30	0	96	25	136	17	0	178	
05:15 PM	30	28	49	0	107	17	129	36	1	183	33	40	35	1	109	32	122	18	0	172	
05:30 PM	32	23	26	0	81	11	109	30	1	151	29	26	21	0	76	31	97	10	0	138	
05:45 PM	23	16	28	0	67	16	78	23	0	117	25	38	25	0	88	15	108	17	0	140	
Total	118	86	130	0	334	58	448	122	2	630	116	141	111	1	369	103	463	62	0	628	1
06:00 PM	24	15	24	0	63	7	94	29	0	130	22	31	23	0	76	22	103	13	0	138	
06:15 PM	25	18	18	0	61	8	79	23	1	111	21	21	13	0	55	19	131	12	0	162	
06:30 PM	32	8	19	0	59	12	107	24	1	144	29	23	17	1	70	26	101	14	0	141	
06:45 PM	23	15	17	0	55	9	104	16	0	129	20	25	10	0	55	20	88	13	0	121	
Total	104	56	78	0	238	36	384	92	2	514	92	100	63	1	256	87	423	52	0	562	1
07:00 PM	20	18	23	0	61	12	81	32	1	126	29	24	15	0	68	24	88	11	0	123	
07:15 PM	35	23	22	0	80	5	62	17	0	84	22	20	17	0	59	28	95	15	0	138	
07:30 PM	19	10	21	0	50	8	66	26	1	101	15	34	12	0	61	17	93	15	0	125	
07:45 PM	33	18	19	0	70	7	74	15	0	96	15	26	13	0	54	14	97	14	0	125	
Total	107	69	85	0	261	32	283	90	2	407	81	104	57	0	242	83	373	55	0	511	1
Grand Total	456	310	418	0	1184	212	1561	454	7	2234	426	514	355	6	1301	377	1727	239	0	2343	7
Approch %	38.5	26.2	35.3	0.0		9.5	69.9	20.3	0.3		32.7	39.5	27.3	0.5		16.1	73.7	10.2	0.0		
Total %	6.5	4.4	5.9	0.0	16.8	3.0	22.1	6.4	0.1	31.6	6.0	7.3	5.0	0.1	18.4	5.3	24.5	3.4	0.0	33.2	

Start Time	East Main St. Southbound					SR 315 Westbound					Jumper Rd. Northbound					SR 315 Eastbound					T
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
Peak Hour From 04:00 PM to 07:45 PM - Peak 1 of 1																					
Intersection	04:30 PM																				
Volume	132	85	144	0	361	70	477	146	1	694	135	164	132	1	432	107	504	71	0	682	2
Percent	36.6	23.5	39.9	0.0		10.1	68.7	21.0	0.1		31.3	38.0	30.6	0.2		15.7	73.9	10.4	0.0		
05:15 Peak	30	28	49	0	107	17	129	36	1	183	33	40	35	1	109	32	122	18	0	172	
Factor																					0.9
High Int.	05:15 PM					04:30 PM					04:30 PM					05:00 PM					
Volume	30	28	49	0	107	25	128	37	0	190	30	49	39	0	118	25	136	17	0	178	
Peak Factor	0.843					0.913					0.915					0.958					

PETRA Traffic Count Report
 Clough, Harbour & Associates LLP
 III Winners Circle
 Albany, NY 12205

Project: Pocono Downs
 Project #: 13989
 Location: Wilkes-Barre, PA

File Name : 315 - East Main F
 Site Code : 01040808
 Start Date : 08/05/2005
 Page No : 1

Groups Printed- SU Trucks, Buses - SU Trucks

Start Time	East Main St. Southbound					SR 315 Westbound					Jumper Rd. Northbound					SR 315 Eastbound				
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	
04:00 PM	0	0	2	0	2	0	3	2	0	5	0	1	0	0	1	5	3	0	0	8
04:15 PM	4	0	2	0	6	0	1	6	0	7	0	0	1	0	1	3	4	0	0	7
04:30 PM	1	0	4	0	5	2	3	3	0	8	0	1	2	0	3	3	4	0	0	7
04:45 PM	3	0	2	0	5	0	0	5	0	5	2	4	0	0	6	3	2	0	0	5
Total	8	0	10	0	18	2	7	16	0	25	2	6	3	0	11	14	13	0	0	27
05:00 PM	3	0	2	0	5	0	1	6	0	7	0	1	2	0	3	4	2	0	0	6
05:15 PM	1	1	2	0	4	1	3	1	0	5	0	3	0	0	3	4	4	0	0	8
05:30 PM	1	0	1	0	2	0	2	4	0	6	0	1	0	0	1	5	0	0	0	5
05:45 PM	3	0	5	0	8	0	0	3	0	3	0	0	1	0	1	0	1	1	0	2
Total	8	1	10	0	19	1	6	14	0	21	0	5	3	0	8	13	7	1	0	21
06:00 PM	2	0	4	0	6	0	4	6	0	10	0	1	1	0	2	4	1	0	0	5
06:15 PM	2	0	1	0	3	0	0	2	0	2	0	0	0	0	0	5	0	0	0	5
06:30 PM	2	0	1	0	3	2	1	2	0	5	0	1	0	0	1	2	1	0	0	3
06:45 PM	2	0	1	0	3	0	0	3	0	3	0	3	1	0	4	0	3	0	0	3
Total	8	0	7	0	15	2	5	13	0	20	0	5	2	0	7	11	5	0	0	16
07:00 PM	0	0	0	0	0	0	1	4	0	5	0	0	0	0	0	1	0	0	0	1
07:15 PM	0	0	1	0	1	0	0	2	0	2	0	0	0	0	0	1	1	0	0	2
07:30 PM	1	0	1	0	2	0	2	2	0	4	0	0	0	0	0	0	0	0	0	0
07:45 PM	5	0	1	0	6	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2
Total	6	0	3	0	9	0	3	8	0	11	0	0	0	0	0	3	2	0	0	5
Grand Total	30	1	30	0	61	5	21	51	0	77	2	16	8	0	26	41	27	1	0	69
Apprch %	49.2	1.6	49.2	0.0		6.5	27.3	66.2	0.0		7.7	61.5	30.8	0.0		59.4	39.1	1.4	0.0	
Total %	12.9	0.4	12.9	0.0	26.2	2.1	9.0	21.9	0.0	33.0	0.9	6.9	3.4	0.0	11.2	17.6	11.6	0.4	0.0	29.6

Start Time	East Main St. Southbound					SR 315 Westbound					Jumper Rd. Northbound					SR 315 Eastbound				
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total
Peak Hour From 04:00 PM to 07:45 PM - Peak 1 of 1																				
Intersection	04:15 PM																			
Volume	11	0	10	0	21	2	5	20	0	27	2	6	5	0	13	13	12	0	0	25
Percent	52.4	0.0	47.6	0.0		7.4	18.5	74.1	0.0		15.4	46.2	38.5	0.0		52.0	48.0	0.0	0.0	
Volume	1	0	4	0	5	2	3	3	0	8	0	1	2	0	3	3	4	0	0	7
Peak Factor																				
High Int.	04:15 PM					04:30 PM					04:45 PM					04:15 PM				
Volume	4	0	2	0	6	2	3	3	0	8	2	4	0	0	6	3	4	0	0	7
Peak Factor	0.875					0.844					0.542					0.893				

PETRA Traffic Count Report
Clough, Harbour & Associates LLP
III Winners Circle
Albany, NY 12205

Project: Pocono Downs
 Project #: 13989
 Location: Wilkes-Barre, PA

File Name : 315 - Laird F
 Site Code : 01040809
 Start Date : 08/12/2005
 Page No : 1

Groups Printed- Cars - SU Trucks - MU Trucks

Start Time	Laird St Southbound					SR 315 Westbound					Woodlands Northbound					SR 315 Eastbound				
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	
03:45 PM	2	0	28	0	30	3	186	8	0	197	7	3	1	0	11	34	155	16	0	205
Total	2	0	28	0	30	3	186	8	0	197	7	3	1	0	11	34	155	16	0	205
04:00 PM	12	0	36	0	48	5	193	8	2	208	13	1	6	0	20	14	123	8	0	145
04:15 PM	3	0	23	0	26	0	197	1	0	198	4	0	0	0	4	16	158	11	0	185
04:30 PM	6	0	21	0	27	3	183	9	0	195	5	0	2	4	11	22	141	13	0	176
04:45 PM	3	0	15	0	18	2	202	1	0	205	6	1	2	0	9	21	167	16	0	204
Total	24	0	95	0	119	10	775	19	2	806	28	2	10	4	44	73	589	48	0	710
05:00 PM	10	1	50	0	61	1	201	10	0	212	7	3	2	0	12	21	163	13	0	197
05:15 PM	4	1	18	0	23	6	174	4	0	184	6	1	5	0	12	21	160	22	0	203
05:30 PM	0	2	20	0	22	0	167	3	0	170	5	1	2	0	8	17	152	23	0	192
05:45 PM	1	0	19	0	20	3	146	3	0	152	5	0	4	0	9	14	135	39	0	188
Total	15	4	107	0	126	10	688	20	0	718	23	5	13	0	41	73	610	97	0	780
06:00 PM	1	2	14	0	17	3	135	4	0	142	12	0	2	0	14	21	126	30	0	177
06:15 PM	3	2	6	0	11	2	130	5	2	139	10	0	2	0	12	19	140	21	0	180
06:30 PM	3	2	12	0	17	3	127	0	0	130	6	1	2	0	9	9	103	25	0	137
06:45 PM	3	0	7	0	10	5	127	2	0	134	11	1	4	0	16	7	106	21	0	134
Total	10	6	39	0	55	13	519	11	2	545	39	2	10	0	51	56	475	97	0	628
07:00 PM	4	0	15	0	19	6	132	1	0	139	7	1	3	0	11	12	118	18	1	149
07:15 PM	5	0	6	0	11	2	119	6	0	127	11	1	5	0	17	5	93	26	0	124
07:30 PM	0	2	13	0	15	7	106	0	0	113	4	0	2	0	6	11	126	31	1	169
Grand Total	60	12	303	0	375	51	2525	65	4	2645	119	14	44	4	181	264	2166	333	2	2765
Apprch %	16.0	3.2	80.8	0.0		1.9	95.5	2.5	0.2		65.7	7.7	24.3	2.2		9.5	78.3	12.0	0.1	
Total %	1.0	0.2	5.1	0.0	6.3	0.9	42.3	1.1	0.1	44.3	2.0	0.2	0.7	0.1	3.0	4.4	36.3	5.6	0.0	46.3

Start Time	Laird St Southbound					SR 315 Westbound					Woodlands Northbound					SR 315 Eastbound				
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total
Peak Hour From 03:45 PM to 07:30 PM - Peak 1 of 1																				
Intersection	04:30 PM																			
Volume	23	2	104	0	129	12	760	24	0	796	24	5	11	4	44	85	631	64	0	780
Percent	17.8	1.6	80.6	0.0		1.5	95.5	3.0	0.0		54.5	11.4	25.0	9.1		10.9	80.9	8.2	0.0	
05:00																				
Volume	10	1	50	0	61	1	201	10	0	212	7	3	2	0	12	21	163	13	0	197
Peak Factor																				
High Int.	05:00 PM					05:00 PM					05:00 PM					04:45 PM				
Volume	10	1	50	0	61	1	201	10	0	212	7	3	2	0	12	21	167	16	0	204
Peak Factor	0.529					0.939					0.917					0.956				

PETRA Traffic Count Report
Clough, Harbour & Associates LLP
III Winners Circle
Albany, NY 12205

Project: Pocono Downs
 Project #: 13989
 Location: Wilkes-Barre, PA

File Name : 315 - Laird Fi
 Site Code : 01040809
 Start Date : 08/12/2005
 Page No : 1

Groups Printed- SU Trucks - MU Trucks

Start Time	Laird St Southbound					SR 315 Westbound					Woodlands Northbound					SR 315 Eastbound				
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	
03:45 PM	0	0	5	0	5	0	10	2	0	12	0	0	0	0	0	1	8	0	0	9
Total	0	0	5	0	5	0	10	2	0	12	0	0	0	0	0	1	8	0	0	9
04:00 PM	0	0	2	0	2	0	2	1	0	3	1	0	0	0	1	0	6	1	0	7
04:15 PM	1	0	2	0	3	0	10	0	0	10	0	0	0	0	0	2	5	0	0	7
04:30 PM	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	0	7	0	0	7
04:45 PM	0	0	1	0	1	0	13	0	0	13	0	0	0	0	0	0	8	0	0	8
Total	1	0	5	0	6	0	31	1	0	32	1	0	0	0	1	2	26	1	0	29
05:00 PM	0	0	2	0	2	1	8	0	0	9	0	0	0	0	0	1	3	0	0	4
05:15 PM	1	0	2	0	3	0	7	0	0	7	0	0	0	0	0	1	6	0	0	7
05:30 PM	0	0	1	0	1	0	4	0	0	4	0	0	0	0	0	0	5	0	0	5
05:45 PM	0	0	1	0	1	0	2	0	0	2	0	0	0	0	0	2	4	0	0	6
Total	1	0	6	0	7	1	21	0	0	22	0	0	0	0	0	4	18	0	0	22
06:00 PM	0	0	1	0	1	0	1	0	0	1	0	0	0	0	0	1	6	0	0	7
06:15 PM	0	1	0	0	1	0	3	0	0	3	0	0	0	0	0	4	5	0	0	9
06:30 PM	0	0	1	0	1	0	6	0	0	6	0	1	1	0	2	0	5	0	0	5
06:45 PM	0	0	0	0	0	1	4	0	0	5	1	0	0	0	1	0	1	0	0	1
Total	0	1	2	0	3	1	14	0	0	15	1	1	1	0	3	5	17	0	0	22
07:00 PM	1	0	2	0	3	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0
07:15 PM	0	0	0	0	0	0	7	1	0	8	0	0	0	0	0	0	1	0	0	1
07:30 PM	0	0	1	0	1	0	1	0	0	1	0	0	0	0	0	0	3	0	0	3
Grand Total	3	1	21	0	25	2	86	4	0	92	2	1	1	0	4	12	73	1	0	86
Apprch %	12.0	4.0	84.0	0.0		2.2	93.5	4.3	0.0		50.0	25.0	25.0	0.0		14.0	84.9	1.2	0.0	
Total %	1.4	0.5	10.1	0.0	12.1	1.0	41.5	1.9	0.0	44.4	1.0	0.5	0.5	0.0	1.9	5.8	35.3	0.5	0.0	41.5

Start Time	Laird St Southbound					SR 315 Westbound					Woodlands Northbound					SR 315 Eastbound				
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total
Peak Hour From 03:45 PM to 07:30 PM - Peak 1 of 1																				
Intersection	03:45 PM																			
Volume	1	0	9	0	10	0	28	3	0	31	1	0	0	0	1	3	26	1	0	30
Percent	10.0	0.0	90.0	0.0		0.0	90.3	9.7	0.0		100.0	0.0	0.0	0.0		10.0	86.7	3.3	0.0	
03:45																				
Volume	0	0	5	0	5	0	10	2	0	12	0	0	0	0	0	1	8	0	0	9
Peak Factor																				
High Int.	03:45 PM					03:45 PM					04:00 PM					03:45 PM				
Volume	0	0	5	0	5	0	10	2	0	12	1	0	0	0	1	1	8	0	0	9
Peak Factor	0.500					0.646					0.250					0.833				

PETRA Traffic Count Report
Clough, Harbour & Associates LLP
III Winners Circle
Albany, NY 12205

Project: Pocono Downs
 Project #: 13989
 Location: Wilkes-Barre, PA

File Name : 315 - Motorworld Fr
 Site Code : 01040810
 Start Date : 08/12/2005
 Page No : 1

Groups Printed- Cars - SU Trucks - MU Trucks

Start Time	Motorworld Southbound					SR 315 Westbound					Hampton Inn Northbound					SR 315 Eastbound				
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	
04:00 PM	9	2	34	0	45	1	246	13	0	260	11	1	6	0	18	19	132	6	0	157
04:15 PM	7	0	26	0	33	2	204	8	0	214	9	0	4	0	13	19	180	13	1	213
04:30 PM	16	1	43	0	60	1	211	5	0	217	16	1	3	0	20	17	180	5	0	202
04:45 PM	14	1	42	2	59	2	205	10	0	217	10	1	3	0	14	21	193	3	0	217
Total	46	4	145	2	197	6	866	36	0	908	46	3	16	0	65	76	685	27	1	789
05:00 PM	9	0	55	0	64	5	260	7	0	272	18	0	2	0	20	15	172	3	0	190
05:15 PM	20	1	28	0	49	0	177	9	2	188	12	1	4	2	19	15	172	3	0	190
05:30 PM	5	0	23	0	28	1	194	2	0	197	3	0	2	0	5	15	177	3	1	196
05:45 PM	4	0	26	0	30	1	167	4	0	172	5	0	3	0	8	12	160	6	0	178
Total	38	1	132	0	171	7	798	22	2	829	38	1	11	2	52	57	681	15	1	754
06:00 PM	9	0	30	0	39	4	144	4	0	152	3	0	1	0	4	14	184	11	0	209
06:15 PM	6	0	22	0	28	2	142	4	2	150	3	0	1	0	4	9	151	10	0	170
06:30 PM	1	0	24	0	25	0	149	2	0	151	6	0	0	0	6	7	132	8	0	147
06:45 PM	4	0	14	0	18	1	146	4	0	151	1	0	3	0	4	8	146	10	0	164
Total	20	0	90	0	110	7	581	14	2	604	13	0	5	0	18	38	613	39	0	690
07:00 PM	5	0	13	0	18	3	132	6	0	141	9	0	3	0	12	15	125	10	0	150
07:15 PM	2	0	11	0	13	1	128	2	0	131	3	0	2	0	5	9	117	6	0	132
07:30 PM	3	0	18	0	21	3	117	4	0	124	6	0	2	0	8	11	157	8	0	176
07:45 PM	5	0	12	0	17	2	93	0	0	95	6	0	1	0	7	2	143	8	0	153
Total	15	0	54	0	69	9	470	12	0	491	24	0	8	0	32	37	542	32	0	611
Grand Total	119	5	421	2	547	29	2715	84	4	2832	121	4	40	2	167	208	2521	113	2	2844
Apprch %	21.8	0.9	77.0	0.4		1.0	95.9	3.0	0.1		72.5	2.4	24.0	1.2		7.3	88.6	4.0	0.1	
Total %	1.9	0.1	6.6	0.0	8.6	0.5	42.5	1.3	0.1	44.3	1.9	0.1	0.6	0.0	2.6	3.3	39.5	1.8	0.0	44.5

Start Time	Motorworld Southbound					SR 315 Westbound					Hampton Inn Northbound					SR 315 Eastbound				
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total
Peak Hour From 04:00 PM to 07:45 PM - Peak 1 of 1																				
Intersection	04:15 PM																			
Volume	46	2	166	2	216	10	880	30	0	920	53	2	12	0	67	72	725	24	1	822
Percent	21.3	0.9	76.9	0.9		1.1	95.7	3.3	0.0		79.1	3.0	17.9	0.0		8.8	88.2	2.9	0.1	
05:00																				
Volume	9	0	55	0	64	5	260	7	0	272	18	0	2	0	20	15	172	3	0	190
Peak Factor																				
High Int.	05:00 PM					05:00 PM					04:30 PM					04:45 PM				
Volume	9	0	55	0	64	5	260	7	0	272	16	1	3	0	20	21	193	3	0	217
Peak Factor	0.844					0.846					0.838					0.947				

PETRA Traffic Count Report
 Clough, Harbour & Associates LLP
 III Winners Circle
 Albany, NY 12205

Project: Pocono Downs
 Project #: 13989
 Location: Wilkes-Barre, PA

File Name : 315 - Motorworld F
 Site Code : 01040810
 Start Date : 08/12/2005
 Page No : 1

Groups Printed- SU Trucks - MU Trucks

Start Time	Motorworld Southbound					SR 315 Westbound					Hampton Inn Northbound					SR 315 Eastbound				
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	
04:00 PM	0	0	1	0	1	0	4	0	0	4	0	0	1	0	1	0	5	0	0	5
04:15 PM	0	0	0	0	0	0	13	0	0	13	0	0	0	0	0	0	7	0	0	7
04:30 PM	0	0	1	0	1	0	6	0	0	6	0	0	0	0	0	0	6	0	0	6
04:45 PM	0	0	0	0	0	1	14	0	0	15	0	0	1	0	1	2	7	0	0	9
Total	0	0	2	0	2	1	37	0	0	38	0	0	2	0	2	2	25	0	0	27
05:00 PM	0	0	1	0	1	0	11	1	0	12	0	0	0	0	0	0	6	0	0	6
05:15 PM	1	0	1	0	2	0	4	0	0	4	0	0	0	0	0	0	4	0	0	4
05:30 PM	0	0	0	0	0	0	5	0	0	5	1	0	0	0	1	1	5	0	0	6
05:45 PM	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	6	0	0	6
Total	1	0	2	0	3	0	25	1	0	26	1	0	0	0	1	1	21	0	0	22
06:00 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2	10	0	0	12
06:15 PM	0	0	2	0	2	0	3	0	0	3	0	0	0	0	0	0	3	0	0	3
06:30 PM	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	5	0	0	5
06:45 PM	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	1	0	0	1
Total	0	0	2	0	2	0	13	0	0	13	0	0	0	0	0	2	19	0	0	21
07:00 PM	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	1	0	0	1
07:15 PM	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	0	0	0	0	0
07:30 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	3	0	0	3
07:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
Total	0	0	0	0	0	0	12	0	0	12	0	0	0	0	0	0	5	0	0	5
Grand Total	1	0	6	0	7	1	87	1	0	89	1	0	2	0	3	5	70	0	0	75
Apprch %	14.3	0.0	85.7	0.0		1.1	97.8	1.1	0.0		33.3	0.0	66.7	0.0		6.7	93.3	0.0	0.0	
Total %	0.6	0.0	3.4	0.0	4.0	0.6	50.0	0.6	0.0	51.1	0.6	0.0	1.1	0.0	1.7	2.9	40.2	0.0	0.0	43.1

Start Time	Motorworld Southbound					SR 315 Westbound					Hampton Inn Northbound					SR 315 Eastbound				
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total
Peak Hour From 04:00 PM to 07:45 PM - Peak 1 of 1																				
Intersection	04:15 PM																			
Volume	0	0	2	0	2	1	44	1	0	46	0	0	1	0	1	2	26	0	0	28
Percent	0.0	0.0	100.0	0.0		2.2	95.7	2.2	0.0		0.0	0.0	100.0	0.0		7.1	92.9	0.0	0.0	
04:45	04:45 PM																			
Volume	0	0	0	0	0	1	14	0	0	15	0	0	1	0	1	2	7	0	0	9
Peak Factor	0.500																			
High Int.	04:30 PM					04:45 PM					04:45 PM					04:45 PM				
Volume	0	0	1	0	1	1	14	0	0	15	0	0	1	0	1	2	7	0	0	9
Peak Factor	0.500					0.767					0.250					0.778				

PETRA Traffic Count Report
Clough, Harbour & Associates LLP

Project: Pocono Downs
 Project #: 13989
 Location: Wilkes-Barre, PA

III Winners Circle
 Albany, NY 12205

File Name : 315 - 309 NB ramps Fr
 Site Code : 01040811
 Start Date : 08/26/2005
 Page No : 1

Groups Printed- Cars - SU Trucks - MU Trucks

Start Time	309 NB off ramp Southbound					SR 315 Westbound					Army Reserve Northbound					SR 315 Eastbound				
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	
04:00 PM	24	9	109	13	155	0	176	103	1	280	0	1	0	0	1	131	187	1	0	319
04:15 PM	42	0	141	1	184	0	145	93	2	240	0	1	0	1	2	154	228	1	0	383
04:30 PM	44	0	187	0	231	0	212	103	0	315	0	0	0	0	0	139	187	0	0	326
04:45 PM	35	0	162	0	197	0	210	98	0	308	2	1	0	0	3	147	218	3	0	368
Total	145	9	599	14	767	0	743	397	3	1143	2	3	0	1	6	571	820	5	0	1396
05:00 PM	25	0	136	0	161	1	266	87	0	354	1	0	0	0	1	135	219	1	0	355
05:15 PM	34	0	134	0	168	1	189	88	4	282	0	0	0	0	0	106	184	0	0	290
05:30 PM	33	0	117	0	150	0	185	69	4	258	1	0	0	0	1	152	182	1	0	335
05:45 PM	27	0	132	0	159	1	189	72	0	262	2	0	0	0	2	154	175	3	0	332
Total	119	0	519	0	638	3	829	316	8	1156	4	0	0	0	4	547	760	5	0	1312
06:00 PM	19	0	110	0	129	0	168	82	2	252	1	0	8	0	9	168	173	1	0	342
06:15 PM	38	0	104	0	142	0	127	41	0	168	2	0	0	0	2	144	137	2	0	283
06:30 PM	42	0	99	0	141	0	144	48	1	193	1	0	0	0	1	140	156	0	0	296
06:45 PM	31	0	82	5	118	0	113	24	1	138	0	0	0	0	0	128	133	0	0	261
Total	130	0	395	5	530	0	552	195	4	751	4	0	8	0	12	580	599	3	0	1182
07:00 PM	31	0	99	0	130	0	133	32	1	166	0	0	0	1	1	136	148	0	0	284
07:15 PM	19	0	67	1	87	1	112	31	0	144	2	0	0	0	2	122	141	0	0	263
07:30 PM	14	0	75	1	90	0	100	19	0	119	0	0	0	0	0	136	119	0	0	255
07:45 PM	24	0	85	1	110	0	86	36	1	123	0	0	0	0	0	172	130	0	0	302
Total	88	0	326	3	417	1	431	118	2	552	2	0	0	1	3	566	538	0	0	1104
08:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	482	9	1839	22	2352	4	2555	1026	17	3602	12	3	8	2	25	2264	2717	13	0	4994
Apprch %	20.5	0.4	78.2	0.9		0.1	70.9	28.5	0.5		48.0	12.0	32.0	8.0		45.3	54.4	0.3	0.0	
Total %	4.4	0.1	16.8	0.2	21.4	0.0	23.3	9.4	0.2	32.8	0.1	0.0	0.1	0.0	0.2	20.6	24.8	0.1	0.0	45.5

Start Time	309 NB off ramp Southbound					SR 315 Westbound					Army Reserve Northbound					SR 315 Eastbound				
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total
Peak Hour From 04:00 PM to 08:00 PM - Peak 1 of 1																				
Intersection	04:15 PM																			
Volume	146	0	626	1	773	1	833	381	2	1217	3	2	0	1	6	575	852	5	0	1432
Percent	18.9	0.0	81.0	0.1		0.1	68.4	31.3	0.2		50.0	33.3	0.0	16.7		40.2	59.5	0.3	0.0	
04:45 Volume	35	0	162	0	197	0	210	98	0	308	2	1	0	0	3	147	218	3	0	368
Peak Factor																				
High Int.	04:30 PM					05:00 PM					04:45 PM					04:15 PM				
Volume	44	0	187	0	231	1	266	87	0	354	2	1	0	0	3	154	228	1	0	383
Peak Factor	0.837					0.859					0.500					0.935				

PETRA Traffic Count Report
Clough, Harbour & Associates LLP
 III Winners Circle
 Albany, NY 12205

Project: Pocono Downs
 Project #: 13989
 Location: Wilkes-Barre, PA

File Name : 315 - 309 NB ramps Fr
 Site Code : 01040811
 Start Date : 08/26/2005
 Page No : 1

Groups Printed- SU Trucks - MU Trucks

Start Time	309 NB off ramp Southbound					SR 315 Westbound					Army Reserve Northbound					SR 315 Eastbound				
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	
04:00 PM	2	0	3	0	5	0	6	3	0	9	0	0	0	0	0	0	7	0	0	7
04:15 PM	6	0	1	0	7	0	2	1	0	3	0	0	0	0	0	0	5	0	0	5
04:30 PM	6	0	0	0	6	0	9	0	0	9	0	0	0	0	0	0	3	0	0	3
04:45 PM	2	0	0	0	2	0	5	0	0	5	0	0	0	0	0	0	6	0	0	6
Total	16	0	4	0	20	0	22	4	0	26	0	0	0	0	0	0	21	0	0	21
05:00 PM	2	0	3	0	5	0	1	2	0	3	0	0	0	0	0	0	3	0	0	3
05:15 PM	2	0	0	0	2	0	6	1	0	7	0	0	0	0	0	0	3	0	0	3
05:30 PM	3	0	2	0	5	0	4	1	0	5	0	0	0	0	0	0	0	0	0	0
05:45 PM	2	0	2	0	4	0	4	0	0	4	0	0	0	0	0	0	1	0	0	1
Total	9	0	7	0	16	0	15	4	0	19	0	0	0	0	0	0	7	0	0	7
06:00 PM	0	0	1	0	1	0	3	2	0	5	0	0	1	0	1	0	0	0	0	0
06:15 PM	2	0	3	0	5	0	4	1	0	5	0	0	0	0	0	0	3	0	0	3
06:30 PM	3	0	1	0	4	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2
06:45 PM	4	0	0	0	4	0	0	1	0	1	0	0	0	0	0	0	2	0	0	2
Total	9	0	5	0	14	0	7	4	0	11	0	0	1	0	1	1	6	0	0	7
07:00 PM	1	0	0	0	1	0	6	0	0	6	0	0	0	0	0	0	0	0	0	0
07:15 PM	0	0	3	0	3	0	3	1	0	4	0	0	0	0	0	0	0	0	0	0
07:30 PM	2	0	1	0	3	0	4	1	0	5	0	0	0	0	0	0	0	0	0	0
07:45 PM	3	0	3	0	6	0	0	1	0	1	0	0	0	0	0	0	2	0	0	2
Total	6	0	7	0	13	0	13	3	0	16	0	0	0	0	0	0	2	0	0	2
08:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	40	0	23	0	63	0	57	15	0	72	0	0	1	0	1	1	36	0	0	37
Apprch %	63.5	0.0	36.5	0.0		0.0	79.2	20.8	0.0		0.0	0.0	100.0	0.0		2.7	97.3	0.0	0.0	
Total %	23.1	0.0	13.3	0.0	36.4	0.0	32.9	8.7	0.0	41.6	0.0	0.0	0.6	0.0	0.6	0.6	20.8	0.0	0.0	21.4

Start Time	309 NB off ramp Southbound					SR 315 Westbound					Army Reserve Northbound					SR 315 Eastbound				
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total
Peak Hour From 04:00 PM to 08:00 PM - Peak 1 of 1																				
Intersection	04:00 PM																			
Volume	16	0	4	0	20	0	22	4	0	26	0	0	0	0	0	0	21	0	0	21
Percent	80.0	0.0	20.0	0.0		0.0	84.6	15.4	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0	
04:00 Volume	2	0	3	0	5	0	6	3	0	9	0	0	0	0	0	0	7	0	0	7
Peak Factor																				
High Int.	04:15 PM																			
Volume	6	0	1	0	7	0	6	3	0	9	0	0	0	0	0	0	7	0	0	7
Peak Factor	0.714					0.722										0.750				

PETRA Traffic Count Report
Clough, Harbour & Associates LLP

Project: Pocono Downs
 Project #: 13989
 Location: Wilkes-Barre, PA

III Winners Circle
 Albany, NY 12205

File Name : 315 - 309 SB ramps F
 Site Code : 01040812
 Start Date : 08/26/2005
 Page No : 1

Groups Printed- Cars - SU Trucks - MU Trucks

Start Time	309 SB off ramp Southbound					SR 315 Westbound					309 SB on ramp (one way) Northbound					SR 315 Eastbound				
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	
04:15 PM	64	4	0	0	68	104	0	0	0	104	0	0	0	0	0	0	0	170	0	170
04:30 PM	51	2	0	0	53	127	10	0	0	137	0	0	0	0	0	0	0	153	0	153
04:45 PM	62	0	53	0	115	103	248	0	0	351	0	0	0	0	0	0	291	140	0	431
Total	177	6	53	0	236	334	258	0	0	592	0	0	0	0	0	0	291	463	0	754
05:00 PM	61	1	0	0	62	128	269	0	0	397	0	0	0	0	0	0	312	138	0	450
05:15 PM	70	0	0	0	70	85	237	0	0	322	0	0	0	0	0	0	275	133	4	412
05:30 PM	56	1	0	0	57	87	255	0	0	342	0	0	0	0	0	0	263	116	1	380
05:45 PM	45	0	0	0	45	60	229	0	0	289	0	0	0	3	3	0	297	115	0	412
Total	232	2	0	0	234	360	990	0	0	1350	0	0	0	3	3	0	1147	502	5	1654
06:00 PM	57	0	0	1	58	72	229	0	0	301	0	0	0	0	0	0	277	110	0	387
06:15 PM	36	0	1	0	37	61	196	0	0	257	0	0	0	0	0	0	252	103	0	355
06:30 PM	62	1	0	0	63	56	201	0	0	257	0	0	0	0	0	0	253	109	0	362
06:45 PM	56	0	0	0	56	34	191	0	0	225	0	0	0	0	0	0	238	80	1	319
Total	211	1	1	1	214	223	817	0	0	1040	0	0	0	0	0	0	1020	402	1	1423
07:00 PM	82	2	0	0	84	59	180	2	0	241	0	0	0	0	0	0	224	87	1	312
07:15 PM	39	1	1	0	41	44	166	0	0	210	0	0	0	0	0	0	248	88	0	336
07:30 PM	47	0	0	0	47	36	168	0	0	204	0	0	0	0	0	0	248	92	0	340
07:45 PM	44	1	0	0	45	35	163	0	0	198	0	0	0	0	0	0	296	99	0	395
Total	212	4	1	0	217	174	677	2	0	853	0	0	0	0	0	0	1016	366	1	1383
08:00 PM	36	0	0	0	36	39	132	0	0	171	0	0	0	0	0	0	292	85	0	377
Grand Total	868	13	55	1	937	1130	2874	2	0	4006	0	0	0	3	3	0	3766	1818	7	5591
Apprch %	92.6	1.4	5.9	0.1		28.2	71.7	0.0	0.0		0.0	0.0	0.0	100.0		0.0	67.4	32.5	0.1	
Total %	8.2	0.1	0.5	0.0	8.9	10.7	27.3	0.0	0.0	38.0	0.0	0.0	0.0	0.0	0.0	0.0	35.7	17.3	0.1	53.1

Start Time	309 SB off ramp Southbound					SR 315 Westbound					309 SB on ramp (one way) Northbound					SR 315 Eastbound				
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total
Peak Hour From 04:15 PM to 08:00 PM - Peak 1 of 1																				
Intersection	04:45 PM																			
Volume	249	2	53	0	304	403	1009	0	0	1412	0	0	0	0	0	0	1141	527	5	1673
Percent	81.9	0.7	17.4	0.0		28.5	71.5	0.0	0.0		0.0	0.0	0.0	0.0		0.0	68.2	31.5	0.3	
Volume	05:00																			
Volume	61	1	0	0	62	128	269	0	0	397	0	0	0	0	0	0	312	138	0	450
Peak Factor																				
High Int.	04:45 PM					05:00 PM					4:00:00 PM					05:00 PM				
Volume	62	0	53	0	115	128	269	0	0	397	0	0	0	0	0	0	312	138	0	450
Peak Factor	0.661					0.889										0.929				

PETRA Traffic Count Report
Clough, Harbour & Associates LLP

Project: Pocono Downs
 Project #: 13989
 Location: Wilkes-Barre, PA

III Winners Circle
 Albany, NY 12205

File Name : 315 - 309 SB ramps Fr
 Site Code : 01040812
 Start Date : 08/26/2005
 Page No : 1

Groups Printed- SU Trucks - MU Trucks

Start Time	309 SB off ramp Southbound					SR 315 Westbound					309 SB on ramp (one way) Northbound					SR 315 Eastbound				
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	
04:15 PM	4	0	0	0	4	6	0	0	0	6	0	0	0	0	0	0	0	0	0	0
04:30 PM	1	0	0	0	1	6	0	0	0	6	0	0	0	0	0	0	0	2	0	2
04:45 PM	4	0	1	0	5	4	2	0	0	6	0	0	0	0	0	0	4	1	0	5
Total	9	0	1	0	10	16	2	0	0	18	0	0	0	0	0	0	4	3	0	7
05:00 PM	0	0	0	0	0	2	2	0	0	4	0	0	0	0	0	0	4	2	0	6
05:15 PM	2	0	0	0	2	8	2	0	0	10	0	0	0	0	0	0	2	0	0	2
05:30 PM	0	0	0	0	0	3	2	0	0	5	0	0	0	0	0	0	0	1	0	1
05:45 PM	1	0	0	0	1	2	4	0	0	6	0	0	0	0	0	0	0	1	0	1
Total	3	0	0	0	3	15	10	0	0	25	0	0	0	0	0	0	6	4	0	10
06:00 PM	1	0	0	0	1	3	1	0	0	4	0	0	0	0	0	0	1	0	0	1
06:15 PM	0	0	0	0	0	5	1	0	0	6	0	0	0	0	0	0	0	3	0	3
06:30 PM	1	0	0	0	1	2	0	0	0	2	0	0	0	0	0	0	1	0	0	1
06:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	3
Total	2	0	0	0	2	10	2	0	0	12	0	0	0	0	0	0	3	5	0	8
07:00 PM	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0
07:15 PM	0	0	0	0	0	1	5	0	0	6	0	0	0	0	0	0	0	0	0	0
07:30 PM	0	0	0	0	0	4	1	0	0	5	0	0	0	0	0	0	1	0	0	1
07:45 PM	3	1	0	0	4	1	2	0	0	3	0	0	0	0	0	0	0	0	0	0
Total	3	1	0	0	4	8	8	0	0	16	0	0	0	0	0	0	1	0	0	1
08:00 PM	0	0	0	0	0	2	1	0	0	3	0	0	0	0	0	0	1	3	0	4
Grand Total	17	1	1	0	19	51	23	0	0	74	0	0	0	0	0	0	15	15	0	30
Apprch %	89.5	5.3	5.3	0.0		68.9	31.1	0.0	0.0		0.0	0.0	0.0	0.0		0.0	50.0	50.0	0.0	
Total %	13.8	0.8	0.8	0.0	15.4	41.5	18.7	0.0	0.0	60.2	0.0	0.0	0.0	0.0	0.0	0.0	12.2	12.2	0.0	24.4

Start Time	309 SB off ramp Southbound					SR 315 Westbound					309 SB on ramp (one way) Northbound					SR 315 Eastbound				
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total
Peak Hour From 04:15 PM to 08:00 PM - Peak 1 of 1																				
Intersection	04:30 PM																			
Volume	7	0	1	0	8	20	6	0	0	26	0	0	0	0	0	0	10	5	0	15
Percent	87.5	0.0	12.5	0.0		76.9	23.1	0.0	0.0		0.0	0.0	0.0	0.0		0.0	66.7	33.3	0.0	
04:45	4	0	1	0	5	4	2	0	0	6	0	0	0	0	0	0	4	1	0	5
Peak Factor																				
High Int.	04:45 PM					05:15 PM					4:00:00 PM					05:00 PM				
Volume	4	0	1	0	5	8	2	0	0	10	0	0	0	0	0	0	4	2	0	6
Peak Factor	0.400					0.650										0.625				

PETRA Traffic Count Report
Clough, Harbour & Associates LLP
III Winners Circle
Albany, NY 12205

Project: Pocono Downs
 Project #: 13989
 Location: Wilkes-Barre, PA

File Name : E. Main - Scott Fr
 Site Code : 01040814
 Start Date : 08/26/2005
 Page No : 1

Groups Printed- Cars - SU Trucks - MU Trucks

Start Time	East Main St Southbound					First St Westbound					East Main St Northbound					Scott St Eastbound				
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	
04:00 PM	1	53	5	0	59	5	2	3	0	10	22	63	10	0	95	6	10	16	0	32
04:15 PM	6	35	6	1	48	4	7	2	3	16	26	28	5	4	63	6	7	19	3	35
04:30 PM	2	39	2	1	44	8	9	3	2	22	24	44	12	0	80	10	16	29	1	56
04:45 PM	4	53	3	1	61	18	9	9	0	36	31	35	11	0	77	10	12	27	0	49
Total	13	180	16	3	212	35	27	17	5	84	103	170	38	4	315	32	45	91	4	172
05:00 PM	1	35	9	0	45	11	6	5	1	23	26	60	18	0	104	11	20	18	2	51
05:15 PM	4	33	8	4	49	14	8	4	3	29	26	41	8	6	81	11	15	27	3	56
05:30 PM	4	44	3	1	52	8	13	5	1	27	18	46	10	0	74	8	8	16	0	32
05:45 PM	7	39	8	2	56	14	8	4	6	32	25	32	11	0	68	14	7	26	1	48
Total	16	151	28	7	202	47	35	18	11	111	95	179	47	6	327	44	50	87	6	187
06:00 PM	6	51	7	0	64	10	6	8	0	24	26	36	9	0	71	7	14	25	2	48
06:15 PM	3	35	2	0	40	11	8	7	0	26	15	37	9	1	62	16	11	19	1	47
06:30 PM	5	31	5	0	41	16	6	3	0	25	13	20	12	0	45	14	18	33	0	65
06:45 PM	3	43	4	0	50	12	10	3	0	25	28	35	10	0	73	5	9	17	0	31
Total	17	160	18	0	195	49	30	21	0	100	82	128	40	1	251	42	52	94	3	191
07:00 PM	5	33	5	0	43	9	1	7	0	17	26	15	10	0	51	13	16	11	0	40
07:15 PM	4	45	9	0	58	10	3	4	0	17	13	37	9	0	59	8	11	13	0	32
07:30 PM	1	44	9	2	56	11	6	10	0	27	16	28	10	0	54	10	5	13	0	28
07:45 PM	4	26	6	0	36	12	6	6	0	24	19	19	5	0	43	4	11	22	0	37
Total	14	148	29	2	193	42	16	27	0	85	74	99	34	0	207	35	43	59	0	137
Grand Total	60	639	91	12	802	173	108	83	16	380	354	576	159	11	1100	153	190	331	13	687
Apprch %	7.5	79.7	11.3	1.5		45.5	28.4	21.8	4.2		32.2	52.4	14.5	1.0		22.3	27.7	48.2	1.9	
Total %	2.0	21.5	3.1	0.4	27.0	5.8	3.6	2.8	0.5	12.8	11.9	19.4	5.4	0.4	37.0	5.2	6.4	11.1	0.4	23.1

Start Time	East Main St Southbound					First St Westbound					East Main St Northbound					Scott St Eastbound				
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total
Peak Hour From 04:00 PM to 07:45 PM - Peak 1 of 1																				
Intersection	04:30 PM																			
Volume	11	160	22	6	199	51	32	21	6	110	107	180	49	6	342	42	63	101	6	212
Percent	5.5	80.4	11.1	3.0		46.4	29.1	19.1	5.5		31.3	52.6	14.3	1.8		19.8	29.7	47.6	2.8	
05:00	1	35	9	0	45	11	6	5	1	23	26	60	18	0	104	11	20	18	2	51
Volume																				
Peak Factor																				
High Int.	04:45 PM					04:45 PM					05:00 PM					04:30 PM				
Volume	4	53	3	1	61	18	9	9	0	36	26	60	18	0	104	10	16	29	1	56
Peak Factor	0.816					0.764					0.822					0.946				

PETRA Traffic Count Report
Clough, Harbour & Associates LLP
III Winners Circle
Albany, NY 12205

Project: Pocono Downs
 Project #: 13989
 Location: Wilkes-Barre, PA

File Name : E. Main - Scott F
 Site Code : 01040814
 Start Date : 08/26/2005
 Page No : 1

Groups Printed- SU Trucks - MU Trucks

Start Time	East Main St Southbound					First St Westbound					East Main St Northbound					Scott St Eastbound				
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	
04:00 PM	1	5	1	0	7	0	0	0	0	0	0	2	0	0	2	0	1	0	0	1
04:15 PM	0	1	0	0	1	0	1	1	0	2	1	0	0	0	1	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	1	0	1	1	1	0	0	2	0	1	1	0	2
04:45 PM	1	0	0	0	1	1	0	0	0	1	0	0	1	0	1	0	1	1	0	2
Total	2	6	1	0	9	1	1	2	0	4	2	3	1	0	6	0	3	2	0	5
05:00 PM	0	0	0	0	0	1	0	0	0	1	0	1	0	0	1	0	0	0	0	0
05:15 PM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	3	0	0	3	0	0	0	0	0	0	2	0	0	2	0	0	1	0	1
05:45 PM	0	1	0	0	1	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0
Total	1	4	0	0	5	1	0	0	0	1	1	3	0	0	4	0	0	1	0	1
06:00 PM	1	2	0	0	3	0	0	1	0	1	0	3	0	0	3	0	0	0	0	0
06:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:30 PM	0	0	1	0	1	0	0	0	0	0	1	0	0	0	1	0	0	1	0	1
06:45 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	1	0	1
Total	1	2	1	0	4	0	0	1	0	1	1	4	0	0	5	0	0	2	0	2
07:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
07:15 PM	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
Grand Total	4	12	3	0	19	2	1	3	0	6	4	10	1	0	15	1	3	5	0	9
Apprch %	21.1	63.2	15.8	0.0		33.3	16.7	50.0	0.0		26.7	66.7	6.7	0.0		11.1	33.3	55.6	0.0	
Total %	8.2	24.5	6.1	0.0	38.8	4.1	2.0	6.1	0.0	12.2	8.2	20.4	2.0	0.0	30.6	2.0	6.1	10.2	0.0	18.4

Start Time	East Main St Southbound					First St Westbound					East Main St Northbound					Scott St Eastbound				
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total
Peak Hour From 04:00 PM to 07:45 PM - Peak 1 of 1																				
Intersection	04:00 PM																			
Volume	2	6	1	0	9	1	1	2	0	4	2	3	1	0	6	0	3	2	0	5
Percent	22.2	66.7	11.1	0.0		25.0	25.0	50.0	0.0		33.3	50.0	16.7	0.0		0.0	60.0	40.0	0.0	
04:00	1	5	1	0	7	0	0	0	0	0	0	2	0	0	2	0	1	0	0	1
Volume																				
Peak Factor																				
High Int.	04:00 PM					04:15 PM					04:00 PM					04:30 PM				
Volume	1	5	1	0	7	0	1	1	0	2	0	2	0	0	2	0	1	1	0	2
Peak Factor	0.321					0.500					0.750					0.625				

PETRA Traffic Count Report

Clough, Harbour & Associates LLP

Project: Pocono Downs
 Project #: 13989
 Location: Wilkes-Barre, PA

III Winners Circle
 Albany, NY 12205

File Name : E. Main - Pocono Access F
 Site Code : 01040813
 Start Date : 08/05/2005
 Page No : 1

Groups Printed- Cars - SU Trucks, Buses - SU Trucks

Start Time	Pocono Downs Access Southbound					East Main St. Westbound					Northbound					East Main St. Eastbound				
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	
03:00 PM	2	0	5	0	7	0	80	2	0	82	0	0	0	0	0	3	71	0	0	74
03:15 PM	3	0	6	0	9	0	92	3	0	95	0	0	0	0	0	4	65	0	0	69
03:30 PM	3	0	1	0	4	0	92	2	0	94	0	0	0	0	0	5	69	0	0	74
03:45 PM	3	0	6	0	9	0	88	6	0	94	0	0	0	0	0	10	64	0	0	74
Total	11	0	18	0	29	0	352	13	0	365	0	0	0	0	0	22	269	0	0	291
04:00 PM	2	0	7	0	9	0	88	3	0	91	0	0	0	3	3	4	68	0	0	72
04:15 PM	1	0	8	0	9	0	75	1	0	76	0	0	0	0	0	6	80	0	0	86
04:30 PM	6	0	6	0	12	0	71	4	1	76	0	0	0	0	0	7	50	0	0	57
04:45 PM	1	0	1	0	2	0	67	7	0	74	0	0	0	0	0	7	56	0	0	63
Total	10	0	22	0	32	0	301	15	1	317	0	0	0	3	3	24	254	0	0	278
05:00 PM	1	0	3	0	4	0	67	6	1	74	0	1	0	0	1	7	55	0	1	63
05:15 PM	0	0	2	0	2	0	52	4	0	56	0	0	0	0	0	9	49	0	0	58
05:30 PM	0	0	4	0	4	0	61	9	0	70	0	0	0	0	0	12	48	0	0	60
05:45 PM	1	0	2	0	3	0	52	9	0	61	0	0	0	0	0	15	47	0	0	62
Total	2	0	11	0	13	0	232	28	1	261	0	1	0	0	1	43	199	0	1	243
06:00 PM	0	0	3	0	3	0	55	10	0	65	0	0	0	0	0	16	53	0	0	69
06:15 PM	3	0	0	0	3	0	43	9	1	53	0	0	0	0	0	13	61	0	4	78
06:30 PM	0	0	2	0	2	0	55	8	1	64	0	0	0	0	0	6	47	0	0	53
06:45 PM	0	0	4	0	4	0	42	7	0	49	0	0	0	0	0	5	56	0	0	61
Total	3	0	9	0	12	0	195	34	2	231	0	0	0	0	0	40	217	0	4	261
Grand Total	26	0	60	0	86	0	1080	90	4	1174	0	1	0	3	4	129	939	0	5	1073
Apprch %	30.2	0.0	69.8	0.0		0.0	92.0	7.7	0.3		0.0	25.0	0.0	75.0		12.0	87.5	0.0	0.5	
Total %	1.1	0.0	2.6	0.0	3.7	0.0	46.2	3.9	0.2	50.2	0.0	0.0	0.0	0.1	0.2	5.5	40.2	0.0	0.2	45.9

Start Time	Pocono Downs Access Southbound					East Main St. Westbound					Northbound					East Main St. Eastbound				
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total
Peak Hour From 03:00 PM to 06:45 PM - Peak 1 of 1																				
Intersection	03:15 PM																			
Volume	11	0	20	0	31	0	360	14	0	374	0	0	0	3	3	23	266	0	0	289
Percent	35.5	0.0	64.5	0.0		0.0	96.3	3.7	0.0		0.0	0.0	0.0	100.0		8.0	92.0	0.0	0.0	
03:45 Volume	3	0	6	0	9	0	88	6	0	94	0	0	0	0	0	10	64	0	0	74
Peak Factor																				
High Int. Volume	03:15 PM					03:15 PM					04:00 PM					03:30 PM				
Peak Factor	0.861					0.984					0.250					0.976				

PETRA Traffic Count Report
Clough, Harbour & Associates LLP

Project: Pocono Downs
 Project #: 13989
 Location: Wilkes-Barre, PA

III Winners Circle
 Albany, NY 12205

File Name : E. Main - Pocono Access F
 Site Code : 01040813
 Start Date : 08/05/2005
 Page No : 1

Groups Printed- SU Trucks, Buses - SU Trucks

Start Time	Pocono Downs Access Southbound					East Main St. Westbound					Northbound					East Main St. Eastbound				
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	
03:00 PM	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	0	3	0	0	3
03:15 PM	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	2	0	0	2
03:30 PM	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	3	0	0	3
03:45 PM	0	0	0	0	0	0	8	0	0	8	0	0	0	0	0	0	3	0	0	3
Total	0	0	0	0	0	0	23	0	0	23	0	0	0	0	0	0	11	0	0	11
04:00 PM	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	2	0	0	2
04:15 PM	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	2	0	0	2
04:30 PM	0	0	0	0	0	0	8	0	0	8	0	0	0	0	0	0	1	0	0	1
04:45 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	4	0	0	4
Total	0	0	0	0	0	0	18	0	0	18	0	0	0	0	0	0	9	0	0	9
05:00 PM	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	0	4	0	0	4
05:15 PM	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	1	0	0	1
05:30 PM	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	1	0	0	1
Total	0	0	0	0	0	0	17	0	0	17	0	0	0	0	0	0	6	0	0	6
06:00 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0
06:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
06:30 PM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	4	0	0	4
06:45 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	3	0	0	3
Total	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	8	0	0	8
Grand Total	0	0	0	0	0	0	62	0	0	62	0	0	0	0	0	0	34	0	0	34
Apprch %	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0	
Total %	0.0	0.0	0.0	0.0	0.0	0.0	64.6	0.0	0.0	64.6	0.0	0.0	0.0	0.0	0.0	0.0	35.4	0.0	0.0	35.4

Start Time	Pocono Downs Access Southbound					East Main St. Westbound					Northbound					East Main St. Eastbound				
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total
Peak Hour From 03:00 PM to 06:45 PM - Peak 1 of 1																				
Intersection																				
03:00 PM																				
Volume	0	0	0	0	0	0	23	0	0	23	0	0	0	0	0	0	11	0	0	11
Percent	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0	
03:45 PM																				
Volume	0	0	0	0	0	0	8	0	0	8	0	0	0	0	0	0	3	0	0	3
Peak Factor																				
High Int.	2:45:00 PM					03:45 PM					2:45:00 PM					03:00 PM				
Volume	0	0	0	0	0	0	8	0	0	8	0	0	0	0	0	0	3	0	0	3
Peak Factor						0.719										0.917				

MANUAL TRAFFIC COUNT FORM

J-81

INTERSECTION: SR 315/1-81 NORTHBOUND ON RAMP
SOUTHBOUND OFF RAMP

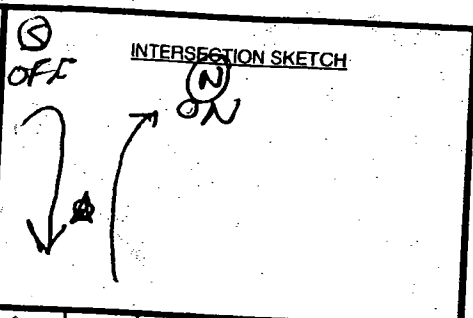
EAST/WEST STREET: _____

NORTH/SOUTH STREET: J-81

PEAK: Sat Mid 11-1pm PROJECT NO: _____

DATE: 8/27/05 RECORDER: LEE

DAY: SAT WEATHER: Dark & Cloudy



Note:
= TRUCKS &
BUSES

TIME	ON	T-OV	OFF	T-OV	TOTAL	NB on	SB off		Total
11:15	126	11	31	3	171	137	34		
11:30	116	12	25	6	159	128	31		
11:45	160	15	24	5	204	175	29		
12:00 pm	135	10	23	4	172	145	27		
12:15	140	12	29	2	183	152	31		
12:30	127	11	33	4	175	138	37	172	
12:45	108	15	40	10	173	123	50	172	
1:00	126	19	48	6	193	139	54	172	

Check notes on Back.

PETRA Traffic Count Report
 Clough, Harbour & Associates LLP

Project: Pocono Downs
 Project #: 13989
 Location: Wilkes-Barre, PA

III Winners Circle
 Albany, NY 12205

File Name : 315 - I-81SBonNBOff Sa
 Site Code : 02110102
 Start Date : 08/27/2005
 Page No : 1

Groups Printed- Cars - SU Trucks - MU Trucks

Start Time	Southbound					I-81 SB on ramp Westbound					Northbound					I-81 NB off ramp Eastbound				
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	
11:00 AM	0	0	0	0	0	0	141	0	0	141	0	0	0	0	0	0	56	0	0	56
11:15 AM	0	0	0	0	0	0	128	0	0	128	0	0	0	0	0	0	33	0	0	33
11:30 AM	0	0	0	0	0	0	124	0	0	124	0	0	0	0	0	0	37	0	0	37
11:45 AM	0	0	0	0	0	0	132	0	0	132	0	0	0	0	0	0	42	0	0	42
Total	0	0	0	0	0	0	525	0	0	525	0	0	0	0	0	0	168	0	0	168
12:00 PM	0	0	0	0	0	0	143	0	0	143	0	0	0	0	0	0	71	0	0	71
12:15 PM	0	0	0	0	0	0	129	0	0	129	0	0	0	0	0	0	88	0	0	88
12:30 PM	0	0	0	0	0	0	130	0	0	130	0	0	0	0	0	0	75	0	0	75
12:45 PM	0	0	0	0	0	0	139	0	0	139	0	0	0	0	0	0	79	0	0	79
Total	0	0	0	0	0	0	541	0	0	541	0	0	0	0	0	0	313	0	0	313
Grand Total	0	0	0	0	0	0	1066	0	0	1066	0	0	0	0	0	0	481	0	0	481
Apprch %	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0	
Total %	0.0	0.0	0.0	0.0	0.0	0.0	68.9	0.0	0.0	68.9	0.0	0.0	0.0	0.0	0.0	0.0	31.1	0.0	0.0	31.1

Start Time	Southbound					I-81 SB on ramp Westbound					Northbound					I-81 NB off ramp Eastbound				
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total
Peak Hour From	11:00 AM to 12:45 PM - Peak 1 of 1																			
Intersection	12:00 PM																			
Volume	0	0	0	0	0	0	541	0	0	541	0	0	0	0	0	0	313	0	0	313
Percent	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0	
12:45																				
Volume	0	0	0	0	0	0	139	0	0	139	0	0	0	0	0	0	79	0	0	79
Peak Factor																				
High Int.	10:45:00 AM					12:00 PM					10:45:00 AM					12:15 PM				
Volume	0	0	0	0	0	0	143	0	0	143	0	0	0	0	0	0	88	0	0	88
Peak Factor						0.946										0.889				

PETRA Traffic Count Report
 Clough, Harbour & Associates LLP

Project: Pocono Downs
 Project #: 13989
 Location: Wilkes-Barre, PA

III Winners Circle
 Albany, NY 12205

File Name : 315 - I-81SBonNBOff Se
 Site Code : 02110102
 Start Date : 08/27/2005
 Page No : 1

Groups Printed- SU Trucks - MU Trucks

Start Time	Southbound					I-81 SB on ramp Westbound					Northbound					I-81 NB off ramp Eastbound					
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
11:00 AM	0	0	0	0	0	0	11	0	0	11	0	0	0	0	0	0	9	0	0	0	9
11:15 AM	0	0	0	0	0	0	13	0	0	13	0	0	0	0	0	0	3	0	0	0	3
11:30 AM	0	0	0	0	0	0	8	0	0	8	0	0	0	0	0	0	4	0	0	0	4
11:45 AM	0	0	0	0	0	0	8	0	0	8	0	0	0	0	0	0	5	0	0	0	5
Total	0	0	0	0	0	0	40	0	0	40	0	0	0	0	0	0	21	0	0	0	21
12:00 PM	0	0	0	0	0	0	14	0	0	14	0	0	0	0	0	0	6	0	0	0	6
12:15 PM	0	0	0	0	0	0	11	0	0	11	0	0	0	0	0	0	5	0	0	0	5
12:30 PM	0	0	0	0	0	0	11	0	0	11	0	0	0	0	0	0	6	0	0	0	6
12:45 PM	0	0	0	0	0	0	11	0	0	11	0	0	0	0	0	0	6	0	0	0	6
Total	0	0	0	0	0	0	47	0	0	47	0	0	0	0	0	0	23	0	0	0	23
Grand Total	0	0	0	0	0	0	87	0	0	87	0	0	0	0	0	0	44	0	0	0	44
Apprch %	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	66.4	0.0	0.0	66.4	0.0	0.0	0.0	0.0	0.0	0.0	33.6	0.0	0.0	0.0	33.6

Start Time	Southbound					I-81 SB on ramp Westbound					Northbound					I-81 NB off ramp Eastbound				
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total
Peak Hour From 11:00 AM to 12:45 PM - Peak 1 of 1																				
Intersection	12:00 PM																			
Volume	0	0	0	0	0	0	47	0	0	47	0	0	0	0	0	0	23	0	0	23
Percent	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0	
Volume	0	0	0	0	0	0	14	0	0	14	0	0	0	0	0	0	6	0	0	6
Peak Factor																				
High Int.	10:45:00 AM					12:00 PM					10:45:00 AM					12:00 PM				
Volume	0	0	0	0	0	0	14	0	0	14	0	0	0	0	0	0	6	0	0	6
Peak Factor						0.839										0.958				

PETRA Traffic Count Report
 Clough, Harbour & Associates LLP
 III Winners Circle
 Albany, NY 12205

Project: Pocono Downs
 Project #: 13989
 Location: Wilkes-Barre, PA

File Name : 315 - Oak Arm Sa
 Site Code : 02110103
 Start Date : 08/20/2005
 Page No : 1

Groups Printed- Cars - SU Trucks - MU Trucks

Start Time	SR 315 Southbound					Armstrong Westbound					SR 315 Northbound					Oak St Eastbound				
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	
11:00 AM	8	116	36	0	160	14	4	7	0	25	37	116	3	0	156	55	4	33	1	93
11:15 AM	8	132	51	1	192	11	3	10	0	24	59	125	7	0	191	65	8	32	0	105
11:30 AM	5	125	58	0	188	9	4	13	0	26	38	123	6	0	167	49	3	40	0	92
11:45 AM	3	92	55	0	150	15	5	8	0	28	46	127	11	0	184	80	4	28	2	114
Total	24	465	200	1	690	49	16	38	0	103	180	491	27	0	698	249	19	133	3	404
12:00 PM	7	116	51	0	174	13	7	9	0	29	44	128	8	0	180	58	6	35	0	99
12:15 PM	10	112	69	0	191	19	3	8	0	30	55	143	12	0	210	43	3	36	0	82
12:30 PM	7	105	71	0	183	11	4	8	0	23	44	140	10	0	194	52	2	34	0	88
12:45 PM	4	115	63	0	182	6	5	6	0	17	51	122	10	0	183	59	3	32	0	94
Total	28	448	254	0	730	49	19	31	0	99	194	533	40	0	767	212	14	137	0	363
Grand Total	52	913	454	1	1420	98	35	69	0	202	374	1024	67	0	1465	461	33	270	3	767
Apprch %	3.7	64.3	32.0	0.1		48.5	17.3	34.2	0.0		25.5	69.9	4.6	0.0		60.1	4.3	35.2	0.4	
Total %	1.3	23.7	11.8	0.0	36.8	2.5	0.9	1.8	0.0	5.2	9.7	26.6	1.7	0.0	38.0	12.0	0.9	7.0	0.1	19.9

Start Time	SR 315 Southbound					Armstrong Westbound					SR 315 Northbound					Oak St Eastbound				
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total
Peak Hour From 11:00 AM to 12:45 PM - Peak 1 of 1																				
Intersection	11:45 AM																			
Volume	27	425	246	0	698	58	19	33	0	110	189	538	41	0	768	233	15	133	2	383
Percent	3.9	60.9	35.2	0.0		52.7	17.3	30.0	0.0		24.6	70.1	5.3	0.0		60.8	3.9	34.7	0.5	
Volume	10	112	69	0	191	19	3	8	0	30	55	143	12	0	210	43	3	36	0	82
Peak Factor																				
High Int.	12:15 PM					12:15 PM					12:15 PM					11:45 AM				
Volume	10	112	69	0	191	19	3	8	0	30	55	143	12	0	210	80	4	28	2	114
Peak Factor	0.914					0.917					0.914					0.840				

PETRA Traffic Count Report
Clough, Harbour & Associates LLP
 III Winners Circle
 Albany, NY 12205

Project: Pocono Downs
 Project #: 13989
 Location: Wilkes-Barre, PA

File Name : 315 - Oak Arm Sat
 Site Code : 02110103
 Start Date : 08/20/2005
 Page No : 1

Groups Printed- SU Trucks - MU Trucks

Start Time	SR 315 Southbound					Armstrong Westbound					SR 315 Northbound					Oak St Eastbound				
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	
11:00 AM	5	11	1	0	17	7	0	4	0	11	1	5	3	0	9	0	0	1	0	1
11:15 AM	4	7	1	0	12	1	0	5	0	6	2	5	3	0	10	2	0	1	0	3
11:30 AM	1	11	4	0	16	5	0	7	0	12	0	10	4	0	14	1	0	1	0	2
11:45 AM	1	5	3	0	9	5	1	2	0	8	2	6	4	0	12	1	0	1	0	2
Total	11	34	9	0	54	18	1	18	0	37	5	26	14	0	45	4	0	4	0	8
12:00 PM	0	9	3	0	12	1	0	3	0	4	1	2	4	0	7	2	0	1	0	3
12:15 PM	6	4	3	0	13	3	0	1	0	4	1	6	7	0	14	0	0	0	0	0
12:30 PM	3	5	2	0	10	4	0	5	0	9	0	4	2	0	6	1	0	1	0	2
12:45 PM	1	7	1	0	9	2	1	2	0	5	1	8	5	0	14	1	0	1	0	2
Total	10	25	9	0	44	10	1	11	0	22	3	20	18	0	41	4	0	3	0	7
Grand Total	21	59	18	0	98	28	2	29	0	59	8	46	32	0	86	8	0	7	0	15
Apprch %	21.4	60.2	18.4	0.0		47.5	3.4	49.2	0.0		9.3	53.5	37.2	0.0		53.3	0.0	46.7	0.0	
Total %	8.1	22.9	7.0	0.0	38.0	10.9	0.8	11.2	0.0	22.9	3.1	17.8	12.4	0.0	33.3	3.1	0.0	2.7	0.0	5.8

Start Time	SR 315 Southbound					Armstrong Westbound					SR 315 Northbound					Oak St Eastbound				
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total
Peak Hour From	11:00 AM to 12:45 PM - Peak 1 of 1																			
Intersection	11:00 AM																			
Volume	11	34	9	0	54	18	1	18	0	37	5	26	14	0	45	4	0	4	0	8
Percent	20.4	63.0	16.7	0.0		48.6	2.7	48.6	0.0		11.1	57.8	31.1	0.0		50.0	0.0	50.0	0.0	
11:30	1	11	4	0	16	5	0	7	0	12	0	10	4	0	14	1	0	1	0	2
Volume																				
Peak Factor																				
High Int.	11:00 AM																			
Volume	5	11	1	0	17	5	0	7	0	12	0	10	4	0	14	2	0	1	0	3
Peak Factor	0.794					0.771					0.804					0.667				

0.8

PETRA Traffic Count Report
 Clough, Harbour & Associates LLP
 III Winners Circle
 Albany, NY 12205

Project: Pocono Downs
 Project #: 13989
 Location: Wilkes-Barre, PA

File Name : 315 - Old Boston Sa
 Site Code : 02110104
 Start Date : 08/13/2005
 Page No : 1

Groups Printed- Cars - SU Trucks - MU Trucks

Start Time	Private Drive Southbound					SR 315 Westbound					Old Boston Rd Northbound					SR 315 Eastbound				
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	
11:00 AM	0	0	0	0	0	8	80	0	0	88	2	0	3	0	5	0	58	9	1	68
11:15 AM	1	0	0	0	1	8	80	1	0	89	11	0	12	0	23	0	80	9	0	89
11:30 AM	0	0	0	0	0	9	80	0	0	89	4	0	14	0	18	0	65	9	0	74
11:45 AM	0	0	0	0	0	9	87	0	0	96	6	0	6	0	12	0	82	8	0	90
Total	1	0	0	0	1	34	327	1	0	362	23	0	35	0	58	0	285	35	1	321
12:00 PM	0	0	0	0	0	11	87	0	0	98	5	0	7	0	12	0	70	3	0	73
12:15 PM	0	0	0	0	0	8	101	0	0	109	11	0	6	0	17	0	88	6	0	94
12:30 PM	0	0	0	0	0	5	100	0	0	105	5	0	9	0	14	1	85	7	0	93
12:45 PM	0	0	0	0	0	3	86	0	0	89	8	0	3	0	11	0	82	10	0	92
Total	0	0	0	0	0	27	374	0	0	401	29	0	25	0	54	1	325	26	0	352
Grand Total	1	0	0	0	1	61	701	1	0	763	52	0	60	0	112	1	610	61	1	673
Approch %	100.0	0.0	0.0	0.0		8.0	91.9	0.1	0.0		46.4	0.0	53.6	0.0		0.1	90.6	9.1	0.1	
Total %	0.1	0.0	0.0	0.0	0.1	3.9	45.3	0.1	0.0	49.3	3.4	0.0	3.9	0.0	7.2	0.1	39.4	3.9	0.1	43.4

Start Time	Private Drive Southbound					SR 315 Westbound					Old Boston Rd Northbound					SR 315 Eastbound				
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total
Peak Hour From 11:00 AM to 12:45 PM - Peak 1 of 1																				
Intersection	11:45 AM																			
Volume	0	0	0	0	0	33	375	0	0	408	27	0	28	0	55	1	325	24	0	350
Percent	0.0	0.0	0.0	0.0		8.1	91.9	0.0	0.0		49.1	0.0	50.9	0.0		0.3	92.9	6.9	0.0	
Volume	0	0	0	0	0	8	101	0	0	109	11	0	6	0	17	0	88	6	0	94
Peak Factor																				
High Int.	10:45:00 AM					12:15 PM					12:15 PM					12:15 PM				
Volume	0	0	0	0	0	8	101	0	0	109	11	0	6	0	17	0	88	6	0	94
Peak Factor						0.936					0.809					0.931				

PETRA Traffic Count Report
 Clough, Harbour & Associates LLP
 III Winners Circle
 Albany, NY 12205

Project: Pocono Downs
 Project #: 13989
 Location: Wilkes-Barre, PA

File Name : 315 - Old Boston Sa
 Site Code : 02110104
 Start Date : 08/13/2005
 Page No : 1

Groups Printed- SU Trucks - MU Trucks

Start Time	Private Drive Southbound					SR 315 Westbound					Old Boston Rd Northbound					SR 315 Eastbound				
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	
11:00 AM	0	0	0	0	0	0	1	0	0	1	1	0	0	0	1	0	2	1	0	3
11:15 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2
11:30 AM	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	2	0	0	2	0	0	1	0	1	0	0	1	0	1
Total	0	0	0	0	0	1	5	0	0	6	1	0	1	0	2	0	4	2	0	6
12:00 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2
12:15 PM	0	0	0	0	0	0	1	0	0	1	3	0	0	0	3	0	3	0	0	3
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
12:45 PM	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	1	0	0	1
Total	0	0	0	0	0	0	7	0	0	7	3	0	0	0	3	0	7	0	0	7
Grand Total	0	0	0	0	0	1	12	0	0	13	4	0	1	0	5	0	11	2	0	13
Apprch %	0.0	0.0	0.0	0.0		7.7	92.3	0.0	0.0		80.0	0.0	20.0	0.0		0.0	84.6	15.4	0.0	
Total %	0.0	0.0	0.0	0.0	0.0	3.2	38.7	0.0	0.0	41.9	12.9	0.0	3.2	0.0	16.1	0.0	35.5	6.5	0.0	41.9

Start Time	Private Drive Southbound					SR 315 Westbound					Old Boston Rd Northbound					SR 315 Eastbound				
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total
Peak Hour From	11:00 AM to 12:45 PM - Peak 1 of 1																			
Intersection	12:00 PM																			
Volume	0	0	0	0	0	0	7	0	0	7	3	0	0	0	3	0	7	0	0	7
Percent	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		100.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0	
12:15																				
Volume	0	0	0	0	0	0	1	0	0	1	3	0	0	0	3	0	3	0	0	3
Peak Factor																				
High Int.	10:45:00 AM																			
Volume	0	0	0	0	0	0	5	0	0	5	3	0	0	0	3	0	3	0	0	3
Peak Factor						0.350					0.250					0.583				

PETRA Traffic Count Report
Clough, Harbour & Associates LLP
III Winners Circle
Albany, NY 12205

Project: Pocono Downs
 Project #: 13989
 Location: Wilkes-Barre, PA

File Name : 315 - Laflin Sat
 Site Code : 02110105
 Start Date : 08/13/2005
 Page No : 1

Groups Printed- Cars - SU Trucks - MU Trucks

Start Time	Laflin Rd Southbound					SR 315 Westbound					Northbound					SR 315 Eastbound				
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	
11:00 AM	11	0	20	0	31	0	94	19	0	113	0	0	0	0	0	19	77	0	0	96
11:15 AM	15	0	26	0	41	0	114	11	0	125	0	0	0	0	0	26	101	0	0	127
11:30 AM	8	0	25	0	33	0	90	12	0	102	0	0	0	0	0	20	89	0	0	109
11:45 AM	17	0	23	0	40	0	93	13	0	106	0	0	0	0	0	28	74	0	0	102
Total	51	0	94	0	145	0	391	55	0	446	0	0	0	0	0	93	341	0	0	434
12:00 PM	18	0	12	0	30	0	96	15	0	111	0	0	0	0	0	21	73	0	0	94
12:15 PM	15	0	16	0	31	0	121	14	0	135	0	0	0	0	0	22	94	0	0	116
12:30 PM	10	0	19	0	29	0	99	21	0	120	0	0	0	0	0	20	96	0	0	116
12:45 PM	11	0	24	0	35	0	95	16	0	111	0	0	0	0	0	27	92	1	0	120
Total	54	0	71	0	125	0	411	66	0	477	0	0	0	0	0	90	355	1	0	446
Grand Total	105	0	165	0	270	0	802	121	0	923	0	0	0	0	0	183	696	1	0	880
Apprch %	38.9	0.0	61.1	0.0		0.0	86.9	13.1	0.0		0.0	0.0	0.0	0.0		20.8	79.1	0.1	0.0	
Total %	5.1	0.0	8.0	0.0	13.0	0.0	38.7	5.8	0.0	44.5	0.0	0.0	0.0	0.0	0.0	8.8	33.6	0.0	0.0	42.5

Start Time	Laflin Rd Southbound					SR 315 Westbound					Northbound					SR 315 Eastbound				
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total
Peak Hour From	11:00 AM to 12:45 PM - Peak 1 of 1																			
Intersection	12:00 PM																			
Volume	54	0	71	0	125	0	411	66	0	477	0	0	0	0	0	90	355	1	0	446
Percent	43.2	0.0	56.8	0.0		0.0	86.2	13.8	0.0		0.0	0.0	0.0	0.0		20.2	79.6	0.2	0.0	
12:15 PM																				
Volume	15	0	16	0	31	0	121	14	0	135	0	0	0	0	0	22	94	0	0	116
Peak Factor																				
High Int.	12:45 PM																			
Volume	11	0	24	0	35	0	121	14	0	135	0	0	0	0	0	27	92	1	0	120
Peak Factor	0.893					0.883										0.929				

PETRA Traffic Count Report
Clough, Harbour & Associates LLP
III Winners Circle
Albany, NY 12205

Project: Pocono Downs
 Project #: 13989
 Location: Wilkes-Barre, PA

File Name : 315 - Laflin Sa
 Site Code : 02110105
 Start Date : 08/13/2005
 Page No : 1

Groups Printed- SU Trucks - MU Trucks

Start Time	Laffin Rd Southbound					SR 315 Westbound					Northbound					SR 315 Eastbound					
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
11:00 AM	0	0	1	0	1	0	3	0	0	3	0	0	0	0	0	0	0	3	0	0	3
11:15 AM	1	0	3	0	4	0	2	0	0	2	0	0	0	0	0	0	2	1	0	0	3
11:30 AM	0	0	0	0	0	0	2	1	0	3	0	0	0	0	0	0	1	1	0	0	2
11:45 AM	1	0	0	0	1	0	2	0	0	2	0	0	0	0	0	0	0	3	0	0	3
Total	2	0	4	0	6	0	9	1	0	10	0	0	0	0	0	0	3	8	0	0	11
12:00 PM	0	0	0	0	0	0	2	1	0	3	0	0	0	0	0	0	0	2	0	0	2
12:15 PM	1	0	1	0	2	0	4	1	0	5	0	0	0	0	0	0	1	4	0	0	5
12:30 PM	1	0	0	0	1	0	3	0	0	3	0	0	0	0	0	0	0	1	0	0	1
12:45 PM	1	0	0	0	1	0	2	1	0	3	0	0	0	0	0	0	0	0	0	0	0
Total	3	0	1	0	4	0	11	3	0	14	0	0	0	0	0	0	1	7	0	0	8
Grand Total	5	0	5	0	10	0	20	4	0	24	0	0	0	0	0	0	4	15	0	0	19
Approch %	50.0	0.0	50.0	0.0		0.0	83.3	16.7	0.0		0.0	0.0	0.0	0.0		21.1	78.9	0.0	0.0		
Total %	9.4	0.0	9.4	0.0	18.9	0.0	37.7	7.5	0.0	45.3	0.0	0.0	0.0	0.0	0.0	7.5	28.3	0.0	0.0	35.8	

Start Time	Laffin Rd Southbound					SR 315 Westbound					Northbound					SR 315 Eastbound				
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total
Peak Hour From 11:00 AM to 12:45 PM - Peak 1 of 1																				
Intersection	11:30 AM																			
Volume	2	0	1	0	3	0	10	3	0	13	0	0	0	0	0	2	10	0	0	12
Percent	66.7	0.0	33.3	0.0		0.0	76.9	23.1	0.0		0.0	0.0	0.0	0.0		16.7	83.3	0.0	0.0	
Volume	1	0	1	0	2	0	4	1	0	5	0	0	0	0	0	1	4	0	0	5
Peak Factor																				
High Int.	12:15 PM																			
Volume	1	0	1	0	2	0	4	1	0	5	0	0	0	0	0	1	4	0	0	5
Peak Factor	0.375					0.650										0.600				

PETRA Traffic Count Report
Clough, Harbour & Associates LLP

Project: Pocono Downs
 Project #: 13989
 Location: Wilkes-Barre, PA

III Winners Circle
 Albany, NY 12205

File Name : 315 - Sunshine Access Sa
 Site Code : 02110106
 Start Date : 08/06/2005
 Page No : 1

Groups Printed- Cars - SU Trucks, Buses - SU Trucks

Start Time	SR 315 Southbound					Westbound					SR 315 Northbound					Sunshine Market Access Eastbound				
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	
11:00 AM	0	92	10	0	102	0	0	0	0	0	28	65	0	0	93	15	0	26	0	41
11:15 AM	0	96	18	1	115	0	0	0	0	0	34	82	0	0	116	21	0	37	0	58
11:30 AM	0	124	22	0	146	0	0	0	0	0	31	63	0	0	94	7	0	33	0	40
11:45 AM	0	127	18	0	145	0	0	0	0	0	34	93	0	0	127	20	0	24	0	44
Total	0	439	68	1	508	0	0	0	0	0	127	303	0	0	430	63	0	120	0	183
12:00 PM	0	110	18	0	128	0	0	0	0	0	27	98	0	0	125	22	0	35	0	57
12:15 PM	0	118	20	0	138	0	0	0	0	0	27	102	0	0	129	15	0	27	0	42
12:30 PM	0	93	18	0	111	0	0	0	0	0	24	109	0	0	133	18	0	31	0	49
12:45 PM	0	101	12	0	113	0	0	0	0	0	26	115	0	0	141	14	0	26	0	40
Total	0	422	68	0	490	0	0	0	0	0	104	424	0	0	528	69	0	119	0	188
Grand Total	0	861	136	1	998	0	0	0	0	0	231	727	0	0	958	132	0	239	0	371
Approch %	0.0	86.3	13.6	0.1		0.0	0.0	0.0	0.0		24.1	75.9	0.0	0.0		35.6	0.0	64.4	0.0	
Total %	0.0	37.0	5.8	0.0	42.9	0.0	0.0	0.0	0.0	0.0	9.9	31.2	0.0	0.0	41.2	5.7	0.0	10.3	0.0	15.9

Start Time	SR 315 Southbound					Westbound					SR 315 Northbound					Sunshine Market Access Eastbound				
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total
Peak Hour From 11:00 AM to 12:45 PM - Peak 1 of 1																				
Intersection	11:45 AM																			
Volume	0	448	74	0	522	0	0	0	0	0	112	402	0	0	514	75	0	117	0	192
Percent	0.0	85.8	14.2	0.0		0.0	0.0	0.0	0.0		21.8	78.2	0.0	0.0		39.1	0.0	60.9	0.0	
Volume Peak	0	127	18	0	145	0	0	0	0	0	34	93	0	0	127	20	0	24	0	44
Factor																				
High Int.	11:45 AM					10:45:00 AM					12:30 PM					12:00 PM				
Volume Peak	0	127	18	0	145	0	0	0	0	0	24	109	0	0	133	22	0	35	0	57
Factor	0.900										0.966					0.842				

PETRA Traffic Count Report
 Clough, Harbour & Associates LLP

Project: Pocono Downs
 Project #: 13989
 Location: Wilkes-Barre, PA

III Winners Circle
 Albany, NY 12205

File Name : 315 - Sunshine Access Sa
 Site Code : 02110106
 Start Date : 08/06/2005
 Page No : 1

Groups Printed- SU Trucks, Buses - SU Trucks

Start Time	SR 315 Southbound					Westbound					SR 315 Northbound					Sunshine Market Access Eastbound				
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	
11:00 AM	0	7	0	0	7	0	0	0	0	0	1	1	0	0	2	0	0	1	0	1
11:15 AM	0	2	0	0	2	0	0	0	0	0	0	5	0	0	5	3	0	2	0	5
11:30 AM	0	6	1	0	7	0	0	0	0	0	0	3	0	0	3	0	0	2	0	2
11:45 AM	0	5	1	0	6	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0
Total	0	20	2	0	22	0	0	0	0	0	1	13	0	0	14	3	0	5	0	8
12:00 PM	0	5	0	0	5	0	0	0	0	0	0	3	0	0	3	1	0	0	0	1
12:15 PM	0	3	0	0	3	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0
12:30 PM	0	1	0	0	1	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0
12:45 PM	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	11	0	0	11	0	0	0	0	0	0	7	0	0	7	1	0	0	0	1
Grand Total	0	31	2	0	33	0	0	0	0	0	1	20	0	0	21	4	0	5	0	9
Approch %	0.0	93.9	6.1	0.0		0.0	0.0	0.0	0.0		4.8	95.2	0.0	0.0		44.4	0.0	55.6	0.0	
Total %	0.0	49.2	3.2	0.0	52.4	0.0	0.0	0.0	0.0	0.0	1.6	31.7	0.0	0.0	33.3	6.3	0.0	7.9	0.0	14.3

Start Time	SR 315 Southbound					Westbound					SR 315 Northbound					Sunshine Market Access Eastbound				
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total
Peak Hour From 11:00 AM to 12:45 PM - Peak 1 of 1																				
Intersection	11:00 AM																			
Volume	0	20	2	0	22	0	0	0	0	0	1	13	0	0	14	3	0	5	0	8
Percent	0.0	90.9	9.1	0.0		0.0	0.0	0.0	0.0		7.1	92.9	0.0	0.0		37.5	0.0	62.5	0.0	
Volume Peak Factor	0	6	1	0	7	0	0	0	0	0	0	3	0	0	3	0	0	2	0	2
High Int. Peak Factor	11:00 AM					10:45:00 AM					11:15 AM					11:15 AM				
Volume	0	7	0	0	7	0	0	0	0	0	0	5	0	0	5	3	0	2	0	5
Factor	0.786										0.700					0.400				

PETRA Traffic Count Report
Clough, Harbour & Associates LLP

Project: Pocono Downs
 Project #: 13989
 Location: Wilkes-Barre, PA

III Winners Circle
 Albany, NY 12205

File Name : 315 - Pocono Access Sat
 Site Code : 02110107
 Start Date : 08/06/2005
 Page No : 1

Groups Printed- Cars - SU Trucks, Buses - SU Trucks

Start Time	Pocono Downs Access Southbound					SR 315 Westbound					Mid-Atlantic Access Northbound					SR 315 Eastbound				
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	
11:00 AM	0	0	2	0	2	0	118	4	0	122	0	0	0	0	0	3	113	0	0	116
11:15 AM	0	0	2	0	2	0	142	7	0	149	0	0	0	0	0	4	107	0	0	111
11:30 AM	1	0	3	0	4	0	161	6	0	167	0	0	0	0	0	7	110	1	0	118
11:45 AM	1	0	1	0	2	0	141	5	0	146	1	0	0	0	1	3	122	0	0	125
Total	2	0	8	0	10	0	562	22	0	584	1	0	0	0	1	17	452	1	0	470
12:00 PM	0	0	2	0	2	0	156	6	0	162	0	0	0	0	0	2	127	1	0	130
12:15 PM	1	0	2	0	3	0	133	9	0	142	1	0	0	0	1	5	127	0	0	132
12:30 PM	2	0	1	0	3	0	139	3	0	142	0	0	0	0	0	6	123	0	0	129
12:45 PM	1	0	4	0	5	0	117	5	0	122	0	0	0	0	0	5	140	0	0	145
Total	4	0	9	0	13	0	545	23	0	568	1	0	0	0	1	18	517	1	0	536
Grand Total	6	0	17	0	23	0	1107	45	0	1152	2	0	0	0	2	35	969	2	0	1006
Apprch %	26.1	0.0	73.9	0.0		0.0	96.1	3.9	0.0		100.0	0.0	0.0	0.0		3.5	96.3	0.2	0.0	
Total %	0.3	0.0	0.8	0.0	1.1	0.0	50.7	2.1	0.0	52.8	0.1	0.0	0.0	0.0	0.1	1.6	44.4	0.1	0.0	46.1

Start Time	Pocono Downs Access Southbound					SR 315 Westbound					Mid-Atlantic Access Northbound					SR 315 Eastbound				
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total
Peak Hour From 11:00 AM to 12:45 PM - Peak 1 of 1																				
Intersection	11:30 AM																			
Volume	3	0	8	0	11	0	591	26	0	617	2	0	0	0	2	17	486	2	0	505
Percent	27.3	0.0	72.7	0.0		0.0	95.8	4.2	0.0		100.0	0.0	0.0	0.0		3.4	96.2	0.4	0.0	
12:00 Volume	0	0	2	0	2	0	156	6	0	162	0	0	0	0	0	2	127	1	0	130
Peak Factor	0.688																			
High Int. Volume	11:30 AM					11:30 AM					11:45 AM					12:15 PM				
Peak	1	0	3	0	4	0	161	6	0	167	1	0	0	0	1	5	127	0	0	132
Factor	0.688					0.924					0.500					0.956				

PETRA Traffic Count Report
Clough, Harbour & Associates LLP

Project: Pocono Downs
 Project #: 13989
 Location: Wilkes-Barre, PA

III Winners Circle
 Albany, NY 12205

File Name : 315 - Pocono Access Sa
 Site Code : 02110107
 Start Date : 08/06/2005
 Page No : 1

Groups Printed- SU Trucks, Buses - SU Trucks

Start Time	Pocono Downs Access Southbound					SR 315 Westbound					Mid-Atlantic Access Northbound					SR 315 Eastbound					
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
11:00 AM	0	0	0	0	0	0	10	0	0	10	0	0	0	0	0	0	10	0	0	0	0
11:15 AM	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	4	0	0	0	4
11:30 AM	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	0	7	0	0	0	7
11:45 AM	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	3	0	0	0	3
Total	0	0	0	0	0	0	24	0	0	24	0	0	0	0	0	0	24	0	0	0	24
12:00 PM	0	0	0	0	0	0	2	1	0	3	0	0	0	0	0	0	2	1	0	0	3
12:15 PM	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	3	0	0	0	3
12:30 PM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	2	0	0	0	2
12:45 PM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	2	0	0	0	2
Total	0	0	0	0	0	0	9	1	0	10	0	0	0	0	0	0	9	1	0	0	10
Grand Total	0	0	0	0	0	0	33	1	0	34	0	0	0	0	0	0	33	1	0	0	34
Apprch %	0.0	0.0	0.0	0.0		0.0	97.1	2.9	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	63.5	1.9	0.0	65.4	0.0	0.0	0.0	0.0	0.0	0.0	34.6	0.0	0.0	0.0	34.6

Start Time	Pocono Downs Access Southbound					SR 315 Westbound					Mid-Atlantic Access Northbound					SR 315 Eastbound				
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total
Peak Hour From 11:00 AM to 12:45 PM - Peak 1 of 1																				
Intersection																				
11:00 AM																				
Volume	0	0	0	0	0	0	24	0	0	24	0	0	0	0	0	0	13	0	0	13
Percent	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0	
11:00 Volume	0	0	0	0	0	0	10	0	0	10	0	0	0	0	0	0	4	0	0	4
Peak Factor																				
High Int.																				
10:45:00 AM																				
Volume	0	0	0	0	0	0	10	0	0	10	0	0	0	0	0	0	4	0	0	4
Peak Factor																				
	0.600										0.813									

PETRA Traffic Count Report
 Clough, Harbour & Associates LLP
 III Winners Circle
 Albany, NY 12205

Project: Pocono Downs
 Project #: 13989
 Location: Wilkes-Barre, PA

File Name : 315 - East Main Sat
 Site Code : 02110108
 Start Date : 08/06/2005
 Page No : 1

Groups Printed- Cars - SU Trucks, Buses - SU Trucks

Start Time	East Main St. Southbound					SR 315 Westbound					Jumper Rd. Northbound					SR 315 Eastbound					T
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0
11:00 AM	28	19	21	0	68	9	83	13	0	105	19	28	9	0	56	29	63	12	0	104	1
11:15 AM	17	17	20	0	54	20	82	14	0	116	18	28	9	0	55	13	76	7	0	96	
11:30 AM	22	16	14	0	52	13	91	6	0	110	14	14	10	0	38	13	68	6	0	87	
11:45 AM	28	21	20	0	69	14	83	22	0	119	21	27	11	0	59	25	72	6	0	103	
Total	95	73	75	0	243	56	339	55	0	450	72	97	39	0	208	80	279	31	0	390	1
12:00 PM	39	20	26	0	85	11	100	25	0	136	20	27	18	0	65	23	86	9	0	118	
12:15 PM	21	23	23	0	67	17	89	14	0	120	26	29	12	0	67	30	103	3	0	136	
12:30 PM	19	23	29	2	73	18	88	11	0	117	23	23	16	0	62	30	85	10	0	125	
12:45 PM	25	24	26	0	75	11	83	16	0	110	20	25	15	0	60	19	87	6	0	112	
Total	104	90	104	2	300	57	360	66	0	483	89	104	61	0	254	102	361	28	0	491	1
Grand Total	199	163	179	2	543	113	699	121	0	933	161	201	100	0	462	182	640	59	0	881	2
Approch %	36.6	30.0	33.0	0.4		12.1	74.9	13.0	0.0		34.8	43.5	21.6	0.0		20.7	72.6	6.7	0.0		
Total %	7.1	5.8	6.3	0.1	19.3	4.0	24.8	4.3	0.0	33.1	5.7	7.1	3.5	0.0	16.4	6.5	22.7	2.1	0.0	31.3	

Start Time	East Main St. Southbound					SR 315 Westbound					Jumper Rd. Northbound					SR 315 Eastbound					T
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
Peak Hour From 11:00 AM to 12:45 PM - Peak 1 of 1																					
Intersection	12:00 PM																				
Volume	104	90	104	2	300	57	360	66	0	483	89	104	61	0	254	102	361	28	0	491	1
Percent	34.7	30.0	34.7	0.7		11.8	74.5	13.7	0.0		35.0	40.9	24.0	0.0		20.8	73.5	5.7	0.0		
Volume	39	20	26	0	85	11	100	25	0	136	20	27	18	0	65	23	86	9	0	118	
Peak Factor																					0.9
High Int.	12:00 PM																				
Volume	39	20	26	0	85	11	100	25	0	136	26	29	12	0	67	30	103	3	0	136	
Peak Factor	0.882					0.888					0.948					0.903					

PETRA Traffic Count Report
 Clough, Harbour & Associates LLP
 III Winners Circle
 Albany, NY 12205

Project: Pocono Downs
 Project #: 13989
 Location: Wilkes-Barre, PA

File Name : 315 - East Main Sa
 Site Code : 02110108
 Start Date : 08/06/2005
 Page No : 1

Groups Printed- SU Trucks, Buses - SU Trucks

Start Time	East Main St. Southbound					SR 315 Westbound					Jumper Rd. Northbound					SR 315 Eastbound				
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	
11:00 AM	0	1	0	0	1	0	10	1	0	11	1	2	3	0	6	0	1	0	0	1
11:15 AM	0	0	1	0	1	1	3	0	0	4	0	0	0	0	0	0	3	0	0	3
11:30 AM	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	5	0	0	5
11:45 AM	1	0	0	0	1	0	1	1	0	2	0	0	0	0	0	1	2	0	0	3
Total	1	1	1	0	3	1	19	2	0	22	1	2	3	0	6	1	11	0	0	12
12:00 PM	1	0	0	0	1	0	1	1	0	2	0	1	1	0	2	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	2	3	0	0	5
12:30 PM	0	0	1	0	1	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0
12:45 PM	1	0	1	0	2	0	2	0	0	2	0	2	0	0	2	1	0	0	0	1
Total	2	0	2	0	4	0	6	1	0	7	0	3	1	0	4	3	3	0	0	6
Grand Total	3	1	3	0	7	1	25	3	0	29	1	5	4	0	10	4	14	0	0	18
Apprch %	42.9	14.3	42.9	0.0		3.4	86.2	10.3	0.0		10.0	50.0	40.0	0.0		22.2	77.8	0.0	0.0	
Total %	4.7	1.6	4.7	0.0	10.9	1.6	39.1	4.7	0.0	45.3	1.6	7.8	6.3	0.0	15.6	6.3	21.9	0.0	0.0	28.1

Start Time	East Main St. Southbound					SR 315 Westbound					Jumper Rd. Northbound					SR 315 Eastbound				
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total
Peak Hour From 11:00 AM to 12:45 PM - Peak 1 of 1																				
Intersection	11:00 AM																			
Volume	1	1	1	0	3	1	19	2	0	22	1	2	3	0	6	1	11	0	0	12
Percent	33.3	33.3	33.3	0.0		4.5	86.4	9.1	0.0		16.7	33.3	50.0	0.0		8.3	91.7	0.0	0.0	
11:00 AM	0	1	0	0	1	0	10	1	0	11	1	2	3	0	6	0	1	0	0	1
Volume Peak																				
Factor																				
High Int.	11:00 AM					11:00 AM					11:00 AM					11:30 AM				
Volume	0	1	0	0	1	0	10	1	0	11	1	2	3	0	6	0	5	0	0	5
Peak Factor	0.750					0.500					0.250					0.600				

PETRA Traffic Count Report
 Clough, Harbour & Associates LLP
 III Winners Circle
 Albany, NY 12205

Project: Pocono Downs
 Project #: 13989
 Location: Wilkes-Barre, PA

File Name : 315 - Laird Sa
 Site Code : 02110109
 Start Date : 08/13/2005
 Page No : 1

Groups Printed- Cars - SU Trucks - MU Trucks

Start Time	Laird St Southbound					SR 315 Westbound					Woodlands Northbound					SR 315 Eastbound				
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	
11:00 AM	3	2	12	0	17	5	128	15	0	148	12	1	3	0	16	8	93	4	0	105
11:15 AM	7	2	11	0	20	2	131	3	0	136	8	2	0	0	10	18	127	3	1	149
11:30 AM	1	0	22	0	23	3	150	3	0	156	8	0	3	0	11	13	115	9	0	137
11:45 AM	5	0	6	0	11	3	148	2	0	153	2	1	2	1	6	10	120	3	0	133
Total	16	4	51	0	71	13	557	23	0	593	30	4	8	1	43	49	455	19	1	524
12:00 PM	3	0	14	0	17	0	136	5	0	141	11	1	2	0	14	11	104	6	0	121
12:15 PM	3	0	8	0	11	4	122	2	0	128	7	0	4	0	11	9	117	4	0	130
12:30 PM	1	0	8	0	9	4	132	2	0	138	6	0	0	0	6	11	136	8	0	155
12:45 PM	2	0	9	0	11	3	138	4	0	145	12	0	1	0	13	16	145	9	1	171
Total	9	0	39	0	48	11	528	13	0	552	36	1	7	0	44	47	502	27	1	577
Grand Total	25	4	90	0	119	24	1085	36	0	1145	66	5	15	1	87	96	957	46	2	1101
Apprch %	21.0	3.4	75.6	0.0		2.1	94.8	3.1	0.0		75.9	5.7	17.2	1.1		8.7	86.9	4.2	0.2	
Total %	1.0	0.2	3.7	0.0	4.9	1.0	44.2	1.5	0.0	46.7	2.7	0.2	0.6	0.0	3.5	3.9	39.0	1.9	0.1	44.9

Start Time	Laird St Southbound					SR 315 Westbound					Woodlands Northbound					SR 315 Eastbound				
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total
Peak Hour From	11:00 AM to 12:45 PM - Peak 1 of 1																			
Intersection	11:15 AM																			
Volume	16	2	53	0	71	8	565	13	0	586	29	4	7	1	41	52	466	21	1	540
Percent	22.5	2.8	74.6	0.0		1.4	96.4	2.2	0.0		70.7	9.8	17.1	2.4		9.6	86.3	3.9	0.2	
11:30																				
Volume	1	0	22	0	23	3	150	3	0	156	8	0	3	0	11	13	115	9	0	137
Peak Factor																				
High Int.	11:30 AM																			
Volume	1	0	22	0	23	3	150	3	0	156	11	1	2	0	14	18	127	3	1	149
Peak Factor	0.772					0.939					0.732					0.906				

0.9

PETRA Traffic Count Report
 Clough, Harbour & Associates LLP
 III Winners Circle
 Albany, NY 12205

Project: Pocono Downs
 Project #: 13989
 Location: Wilkes-Barre, PA

File Name : 315 - Laird St
 Site Code : 02110109
 Start Date : 08/13/2005
 Page No : 1

Groups Printed- SU Trucks - MU Trucks

Start Time	Laird St Southbound					SR 315 Westbound					Woodlands Northbound					SR 315 Eastbound				
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approch %	0.0	0.0	0.0	0.0		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 %																				

Start Time	Laird St Southbound					SR 315 Westbound					Woodlands Northbound					SR 315 Eastbound				
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total
Peak Hour From	11:00 AM to 12:45 PM - Peak 1 of 1																			
Intersection	11:00 AM																			
Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Percent	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	
11:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Peak Factor																				
High Int.	10:45:00 AM					10:45:00 AM					10:45:00 AM					10:45:00 AM				
Volume																				
Peak Factor																				

PETRA Traffic Count Report
 Clough, Harbour & Associates LLP
 III Winners Circle
 Albany, NY 12205

Project: Pocono Downs
 Project #: 13989
 Location: Wilkes-Barre, PA

File Name : 315 - Motorworld Sal
 Site Code : 02110110
 Start Date : 08/13/2005
 Page No : 1

Groups Printed- Cars - SU Trucks - MU Trucks

Start Time	Motorworld Southbound					SR 315 Westbound					Hampton Inn Northbound					SR 315 Eastbound				
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	
11:00 AM	2	0	25	0	27	2	159	4	0	165	5	0	2	0	7	27	112	5	0	144
11:15 AM	11	1	37	0	49	0	159	5	0	164	6	0	4	1	11	20	146	3	0	169
11:30 AM	4	0	33	0	37	2	164	6	0	172	5	0	1	0	6	23	117	1	0	141
11:45 AM	0	0	33	0	33	3	141	3	0	147	4	0	2	0	6	28	138	2	0	168
Total	17	1	128	0	146	7	623	18	0	648	20	0	9	1	30	98	513	11	0	622
12:00 PM	7	0	33	0	40	0	157	6	0	163	6	1	2	1	10	21	106	7	0	134
12:15 PM	6	0	35	0	41	1	140	13	0	154	2	0	3	0	5	30	139	8	0	177
12:30 PM	8	0	33	0	41	1	130	9	0	140	5	0	2	0	7	27	157	6	0	190
12:45 PM	6	0	30	0	36	2	170	7	0	179	5	1	1	0	7	30	163	3	0	196
Total	27	0	131	0	158	4	597	35	0	636	18	2	8	1	29	108	565	24	0	697
Grand Total	44	1	259	0	304	11	1220	53	0	1284	38	2	17	2	59	206	1078	35	0	1319
Apprch %	14.5	0.3	85.2	0.0		0.9	95.0	4.1	0.0		64.4	3.4	28.8	3.4		15.6	81.7	2.7	0.0	
Total %	1.5	0.0	8.7	0.0	10.2	0.4	41.1	1.8	0.0	43.3	1.3	0.1	0.6	0.1	2.0	6.9	36.3	1.2	0.0	44.5

Start Time	Motorworld Southbound					SR 315 Westbound					Hampton Inn Northbound					SR 315 Eastbound				
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total

Peak Hour From 11:00 AM to 12:45 PM - Peak 1 of 1

Intersection	12:00 PM																				
Volume	27	0	131	0	158	4	597	35	0	636	18	2	8	1	29	108	565	24	0	697	
Percent	17.1	0.0	82.9	0.0		0.6	93.9	5.5	0.0		62.1	6.9	27.6	3.4		15.5	81.1	3.4	0.0		
12:45																					
Volume	6	0	30	0	36	2	170	7	0	179	5	1	1	0	7	30	163	3	0	196	
Peak Factor																					
High Int.	12:15 PM					12:45 PM					12:00 PM					12:45 PM					
Volume	6	0	35	0	41	2	170	7	0	179	6	1	2	1	10	30	163	3	0	196	
Peak Factor					0.963					0.888					0.725					0.889	

PETRA Traffic Count Report
Clough, Harbour & Associates LLP
III Winners Circle
Albany, NY 12205

Project: Pocono Downs
 Project #: 13989
 Location: Wilkes-Barre, PA

File Name : 315 - Motorworld Sat
 Site Code : 02110110
 Start Date : 08/13/2005
 Page No : 1

Groups Printed- SU Trucks - MU Trucks

Start Time	Motorworld Southbound					SR 315 Westbound					Hampton Inn Northbound					SR 315 Eastbound				
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	
11:00 AM	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	3	0	0	3
11:15 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	3	0	0	3
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
11:45 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	3	0	0	3
Total	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	10	0	0	10
12:00 PM	0	0	1	0	1	0	3	0	0	3	0	0	0	0	0	0	3	0	0	3
12:15 PM	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	3	0	0	3
12:30 PM	0	0	0	0	0	0	3	1	0	4	0	0	0	0	0	0	1	0	0	1
12:45 PM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1
Total	0	0	1	0	1	0	11	1	0	12	0	0	0	0	0	0	8	0	0	8
Grand Total	0	0	1	0	1	0	16	1	0	17	0	0	0	0	0	2	18	0	0	20
Apprch %	0.0	0.0	100.0	0.0		0.0	94.1	5.9	0.0		0.0	0.0	0.0	0.0		10.0	90.0	0.0	0.0	
Total %	0.0	0.0	2.6	0.0	2.6	0.0	42.1	2.6	0.0	44.7	0.0	0.0	0.0	0.0	0.0	5.3	47.4	0.0	0.0	52.6

Start Time	Motorworld Southbound					SR 315 Westbound					Hampton Inn Northbound					SR 315 Eastbound				
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total
Peak Hour From 11:00 AM to 12:45 PM - Peak 1 of 1																				
Intersection	11:45 AM																			
Volume	0	0	1	0	1	0	10	1	0	11	0	0	0	0	0	1	10	0	0	11
Percent	0.0	0.0	100.0	0.0		0.0	90.9	9.1	0.0		0.0	0.0	0.0	0.0		9.1	90.9	0.0	0.0	
Volume	0	0	1	0	1	0	3	0	0	3	0	0	0	0	0	0	3	0	0	3
Peak Factor																				
High Int.	12:00 PM					12:30 PM					10:45:00 AM					11:45 AM				
Volume	0	0	1	0	1	0	3	1	0	4	0	0	0	0	0	1	3	0	0	4
Peak Factor	0.250					0.688										0.688				

PETRA Traffic Count Report
Clough, Harbour & Associates LLP

Project: Pocono Downs
 Project #: 13989
 Location: Wilkes-Barre, PA

III Winners Circle
 Albany, NY 12205

File Name : 315 - 309 NB ramps Sat
 Site Code : 02110111
 Start Date : 08/20/2005
 Page No : 1

Groups Printed- Cars - SU Trucks - MU Trucks

Start Time	309 NB off ramp Southbound					SR 315 Westbound					Army Reserve Northbound					SR 315 Eastbound				
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	
11:00 AM	22	0	104	0	126	0	144	49	0	193	0	0	0	0	0	91	138	0	0	229
11:15 AM	19	0	113	0	132	0	135	50	0	185	2	0	0	0	2	106	126	2	0	234
11:30 AM	19	0	94	0	113	0	161	33	0	194	2	0	0	0	2	113	139	0	0	252
11:45 AM	23	0	126	0	149	0	160	42	0	202	0	0	0	0	0	119	153	0	0	272
Total	83	0	437	0	520	0	600	174	0	774	4	0	0	0	4	429	556	2	0	987
12:00 PM	23	0	154	0	177	0	179	39	0	218	1	0	0	0	1	129	132	1	0	262
12:15 PM	28	0	141	0	169	2	154	48	2	206	1	0	0	0	1	127	133	0	0	260
12:30 PM	25	0	127	0	152	0	142	49	0	191	0	0	0	0	0	126	151	2	0	279
12:45 PM	38	0	138	0	176	0	132	26	2	160	0	0	0	0	0	140	152	0	0	292
Total	114	0	560	0	674	2	607	162	4	775	2	0	0	0	2	522	568	3	0	1093
Grand Total	197	0	997	0	1194	2	1207	336	4	1549	6	0	0	0	6	951	1124	5	0	2080
Apprch %	16.5	0.0	83.5	0.0		0.1	77.9	21.7	0.3		100.0	0.0	0.0	0.0		45.7	54.0	0.2	0.0	
Total %	4.1	0.0	20.6	0.0	24.7	0.0	25.0	7.0	0.1	32.1	0.1	0.0	0.0	0.0	0.1	19.7	23.3	0.1	0.0	43.1

Start Time	309 NB off ramp Southbound					SR 315 Westbound					Army Reserve Northbound					SR 315 Eastbound				
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total
Peak Hour From	11:00 AM to 12:45 PM - Peak 1 of 1																			
Intersection	12:00 PM																			
Volume	114	0	560	0	674	2	607	162	4	775	2	0	0	0	2	522	568	3	0	1093
Percent	16.9	0.0	83.1	0.0		0.3	78.3	20.9	0.5		100.0	0.0	0.0	0.0		47.8	52.0	0.3	0.0	
12:00	23	0	154	0	177	0	179	39	0	218	1	0	0	0	1	129	132	1	0	262
Peak Factor																				
High Int.	12:00 PM																			
Volume	23	0	154	0	177	0	179	39	0	218	1	0	0	0	1	140	152	0	0	292
Peak Factor	0.952					0.889					0.500					0.936				

PETRA Traffic Count Report
 Clough, Harbour & Associates LLP

Project: Pocono Downs
 Project #: 13989
 Location: Wilkes-Barre, PA

III Winners Circle
 Albany, NY 12205

File Name : 315 - 309 NB ramps Sa
 Site Code : 02110111
 Start Date : 08/20/2005
 Page No : 1

Groups Printed- SU Trucks - MU Trucks

Start Time	309 NB off ramp Southbound					SR 315 Westbound					Army Reserve Northbound					SR 315 Eastbound				
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	
11:00 AM	3	0	0	0	3	0	0	2	0	2	0	0	0	0	0	0	5	0	0	5
11:15 AM	2	0	0	0	2	0	0	2	0	2	0	0	0	0	0	0	1	0	0	1
11:30 AM	3	0	0	0	3	0	0	1	0	1	0	0	0	0	0	0	1	0	0	1
11:45 AM	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	4	0	0	4
Total	8	0	0	0	8	0	0	7	0	7	0	0	0	0	0	0	11	0	0	11
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3
12:15 PM	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	1	1	0	0	2
12:30 PM	2	0	0	0	2	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0
12:45 PM	1	0	0	0	1	0	0	1	0	1	0	0	0	0	0	0	1	0	0	1
Total	3	0	0	0	3	0	0	5	0	5	0	0	0	0	0	1	5	0	0	6
Grand Total	11	0	0	0	11	0	0	12	0	12	0	0	0	0	0	1	16	0	0	17
Approch %	100.0	0.0	0.0	0.0		0.0	0.0	100.0	0.0		0.0	0.0	0.0	0.0		5.9	94.1	0.0	0.0	
Total %	27.5	0.0	0.0	0.0	27.5	0.0	0.0	30.0	0.0	30.0	0.0	0.0	0.0	0.0	0.0	2.5	40.0	0.0	0.0	42.5

Start Time	309 NB off ramp Southbound					SR 315 Westbound					Army Reserve Northbound					SR 315 Eastbound				
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total
Peak Hour From 11:00 AM to 12:45 PM - Peak 1 of 1																				
Intersection	11:00 AM																			
Volume	8	0	0	0	8	0	0	7	0	7	0	0	0	0	0	0	11	0	0	11
Percent	100.0	0.0	0.0	0.0		0.0	0.0	100.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0	
Volume	3	0	0	0	3	0	0	2	0	2	0	0	0	0	0	0	5	0	0	5
Peak Factor																				
High Int.	11:00 AM					11:00 AM					10:45:00 AM					11:00 AM				
Volume	3	0	0	0	3	0	0	2	0	2	0	0	0	0	0	0	5	0	0	5
Peak Factor	0.667					0.875										0.550				

PETRA Traffic Count Report
Clough, Harbour & Associates LLP

Project: Pocono Downs
 Project #: 13989
 Location: Wilkes-Barre, PA

III Winners Circle
 Albany, NY 12205

File Name : 315 - 309 SB ramps Sat
 Site Code : 02110112
 Start Date : 08/27/2005
 Page No : 1

Groups Printed- Cars - SU Trucks - MU Trucks

Start Time	309 SB off ramp Southbound					SR 315 Westbound					309 SB on ramp (one way) Northbound					SR 315 Eastbound				
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	
11:00 AM	48	1	1	0	50	63	250	0	0	313	0	0	0	0	0	0	230	53	0	283
11:15 AM	70	0	2	0	72	55	244	0	0	299	0	0	0	0	0	0	256	80	0	336
11:30 AM	57	0	0	0	57	71	251	0	0	322	0	0	0	0	0	0	252	79	0	331
11:45 AM	57	0	1	0	58	64	258	0	0	322	0	0	0	0	0	0	249	94	5	348
Total	232	1	4	0	237	253	1003	0	0	1256	0	0	0	0	0	0	987	306	5	1298
12:00 PM	59	1	8	0	68	77	312	0	0	389	0	0	0	0	0	0	296	111	0	407
12:15 PM	55	11	7	0	73	93	369	1	0	463	0	0	0	0	0	0	442	111	0	553
12:30 PM	60	0	1	0	61	66	340	0	0	406	0	0	0	0	0	0	367	111	0	478
12:45 PM	70	0	5	0	75	55	305	0	0	360	0	0	0	0	0	0	334	99	0	433
Total	244	12	21	0	277	291	1326	1	0	1618	0	0	0	0	0	0	1439	432	0	1871
Grand Total	476	13	25	0	514	544	2329	1	0	2874	0	0	0	0	0	0	2426	738	5	3169
Apprch %	92.6	2.5	4.9	0.0		18.9	81.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	76.6	23.3	0.2	
Total %	7.3	0.2	0.4	0.0	7.8	8.3	35.5	0.0	0.0	43.8	0.0	0.0	0.0	0.0	0.0	0.0	37.0	11.3	0.1	48.3

Start Time	309 SB off ramp Southbound					SR 315 Westbound					309 SB on ramp (one way) Northbound					SR 315 Eastbound				
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total
Peak Hour From 11:00 AM to 12:45 PM - Peak 1 of 1																				
Intersection	12:00 PM																			
Volume	244	12	21	0	277	291	1326	1	0	1618	0	0	0	0	0	0	1439	432	0	1871
Percent	88.1	4.3	7.6	0.0		18.0	82.0	0.1	0.0		0.0	0.0	0.0	0.0		0.0	76.9	23.1	0.0	
Volume	55	11	7	0	73	93	369	1	0	463	0	0	0	0	0	0	442	111	0	553
Peak Factor																				
High Int.	12:45 PM																			
Volume	70	0	5	0	75	93	369	1	0	463	0	0	0	0	0	0	442	111	0	553
Peak Factor	0.923					0.874										0.846				

PETRA Traffic Count Report
Clough, Harbour & Associates LLP

Project: Pocono Downs
 Project #: 13989
 Location: Wilkes-Barre, PA

III Winners Circle
 Albany, NY 12205

File Name : 315 - 309 SB ramps Sat
 Site Code : 02110112
 Start Date : 08/27/2005
 Page No : 1

Groups Printed- SU Trucks - MU Trucks

Start Time	309 SB off ramp Southbound					SR 315 Westbound					309 SB on ramp (one way) Northbound					SR 315 Eastbound				
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	
11:00 AM	1	0	0	0	1	1	1	0	0	2	0	0	0	0	0	0	0	3	0	3
11:15 AM	1	0	0	0	1	1	2	0	0	3	0	0	0	0	0	0	1	0	0	1
11:30 AM	4	0	0	0	4	3	1	0	0	4	0	0	0	0	0	0	2	2	0	4
11:45 AM	0	0	0	0	0	2	3	0	0	5	0	0	0	0	0	0	0	1	0	1
Total	6	0	0	0	6	7	7	0	0	14	0	0	0	0	0	0	3	6	0	9
12:00 PM	5	0	0	0	5	4	5	0	0	9	0	0	0	0	0	0	5	3	0	8
12:15 PM	3	0	0	0	3	3	2	0	0	5	0	0	0	0	0	0	2	3	0	5
12:30 PM	1	0	0	0	1	1	3	0	0	4	0	0	0	0	0	0	2	1	0	3
12:45 PM	1	0	0	0	1	5	1	0	0	6	0	0	0	0	0	0	0	2	0	2
Total	10	0	0	0	10	13	11	0	0	24	0	0	0	0	0	0	9	9	0	18
Grand Total	16	0	0	0	16	20	18	0	0	38	0	0	0	0	0	0	12	15	0	27
Apprch %	100.0	0.0	0.0	0.0		52.6	47.4	0.0	0.0		0.0	0.0	0.0	0.0		0.0	44.4	55.6	0.0	
Total %	19.8	0.0	0.0	0.0	19.8	24.7	22.2	0.0	0.0	46.9	0.0	0.0	0.0	0.0	0.0	0.0	14.8	18.5	0.0	33.3

Start Time	309 SB off ramp Southbound					SR 315 Westbound					309 SB on ramp (one way) Northbound					SR 315 Eastbound				
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total
Peak Hour From 11:00 AM to 12:45 PM - Peak 1 of 1																				
Intersection	11:30 AM																			
Volume	12	0	0	0	12	12	11	0	0	23	0	0	0	0	0	0	9	9	0	18
Percent	100.0	0.0	0.0	0.0		52.2	47.8	0.0	0.0		0.0	0.0	0.0	0.0		0.0	50.0	50.0	0.0	
Volume	5	0	0	0	5	4	5	0	0	9	0	0	0	0	0	0	5	3	0	8
Peak Factor																				
High Int.	12:00 PM																			
Volume	5	0	0	0	5	4	5	0	0	9	0	0	0	0	0	0	5	3	0	8
Peak Factor	0.600					0.639										0.563				

PETRA Traffic Count Report
 Clough, Harbour & Associates LLP

Project: Pocono Downs
 Project #: 13989
 Location: Wilkes-Barre, PA

III Winners Circle File Name : E. Main - Pocono Access Sa
 Albany, NY 12205 Site Code : 02110113
 Start Date : 08/06/2005
 Page No : 1

Groups Printed- Cars - SU Trucks, Buses - SU Trucks

Start Time	Pocono Downs Access Southbound					East Main St. Westbound					Northbound					East Main St. Eastbound				
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	
10:00 AM	0	0	1	0	1	0	58	1	0	59	0	0	0	1	1	7	54	0	0	61
10:15 AM	1	0	4	0	5	0	63	6	0	69	0	0	0	0	0	9	56	0	0	65
10:30 AM	0	0	4	0	4	0	45	3	0	48	0	0	0	0	0	4	58	0	0	62
10:45 AM	3	0	3	0	6	0	56	8	0	64	0	0	0	0	0	7	69	0	0	76
Total	4	0	12	0	16	0	222	18	0	240	0	0	0	1	1	27	237	0	0	264
11:00 AM	8	0	5	0	13	0	68	9	0	77	0	0	0	0	0	4	75	0	0	79
11:15 AM	2	0	4	0	6	0	56	2	0	58	0	0	0	0	0	4	64	0	0	68
11:30 AM	0	0	3	0	3	0	69	6	1	76	0	0	0	0	0	12	67	0	0	79
11:45 AM	1	0	1	0	2	0	61	5	0	66	0	0	0	0	0	6	68	0	0	74
Total	11	0	13	0	24	0	254	22	1	277	0	0	0	0	0	26	274	0	0	300
Grand Total	15	0	25	0	40	0	476	40	1	517	0	0	0	1	1	53	511	0	0	564
Approch %	37.5	0.0	62.5	0.0		0.0	92.1	7.7	0.2		0.0	0.0	0.0	100.0		9.4	90.6	0.0	0.0	
Total %	1.3	0.0	2.2	0.0	3.6	0.0	42.4	3.6	0.1	46.1	0.0	0.0	0.0	0.1	0.1	4.7	45.5	0.0	0.0	50.3

Start Time	Pocono Downs Access Southbound					East Main St. Westbound					Northbound					East Main St. Eastbound				
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total
Peak Hour From 10:00 AM to 11:45 AM - Peak 1 of 1																				
Intersection																				
10:45 AM																				
Volume	13	0	15	0	28	0	249	25	1	275	0	0	0	0	0	27	275	0	0	302
Percent	46.4	0.0	53.6	0.0		0.0	90.5	9.1	0.4		0.0	0.0	0.0	0.0		8.9	91.1	0.0	0.0	
11:00 AM																				
Volume	8	0	5	0	13	0	68	9	0	77	0	0	0	0	0	4	75	0	0	79
Peak Factor																				
High Int.																				
11:00 AM																				
Volume	8	0	5	0	13	0	68	9	0	77	0	0	0	0	0	4	75	0	0	79
Peak Factor	0.538					0.893										0.956				

PETRA Traffic Count Report
 Clough, Harbour & Associates LLP

Project: Pocono Downs
 Project #: 13989
 Location: Wilkes-Barre, PA

III Winners Circle File Name : E. Main - Pocono Access Sat
 Albany, NY 12205 Site Code : 02110113
 Start Date : 08/06/2005
 Page No : 1

Groups Printed- SU Trucks, Buses - SU Trucks

Start Time	Pocono Downs Access Southbound					East Main St. Westbound					Northbound					East Main St. Eastbound				
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	
10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1	0	0	0	1
10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1	0	0	0	1
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1	0	0	0	1
Approch %	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		100.0	0.0	0.0	0.0	
Total %	0.0	0.0	0.0	0.0	0.0	0.0	50.0	0.0	0.0	50.0	0.0	0.0	0.0	0.0	0.0	50.0	0.0	0.0	0.0	50.0

Start Time	Pocono Downs Access Southbound					East Main St. Westbound					Northbound					East Main St. Eastbound					
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
Peak Hour From 10:00 AM to 11:45 AM - Peak 1 of 1																					
Intersection																					
10:00 AM																					
Volume	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1	0	0	0	1	
Percent	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		100.0	0.0	0.0	0.0		
10:30 AM																					
Volume	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1	0	0	0	1	
Peak Factor																					
High Int.																					
9:45:00 AM																					
Volume	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1	0	0	0	1	
Peak Factor																					
											0.250										

PETRA Traffic Count Report
Clough, Harbour & Associates LLP
 III Winners Circle
 Albany, NY 12205

Project: Pocono Downs
 Project #: 13989
 Location: Wilkes-Barre, PA

File Name : E. Main - Scott Sat
 Site Code : 02110114
 Start Date : 08/20/2005
 Page No : 1

Groups Printed- Cars - SU Trucks - MU Trucks

Start Time	East Main St Southbound					First St Westbound					East Main St Northbound					Scott St Eastbound				
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	
11:00 AM	3	48	2	0	53	11	1	2	0	14	9	34	8	0	51	10	8	12	0	30
11:15 AM	8	37	2	0	47	13	3	3	0	19	12	28	7	1	48	3	6	10	0	19
11:30 AM	3	33	0	0	36	10	7	3	0	20	12	32	6	0	50	4	5	14	0	23
11:45 AM	1	45	4	0	50	13	2	6	0	21	13	30	6	0	49	4	7	14	0	25
Total	15	163	8	0	186	47	13	14	0	74	46	124	27	1	198	21	26	50	0	97
12:00 PM	3	46	7	0	56	6	4	8	0	18	8	46	13	0	67	9	6	11	0	26
12:15 PM	0	36	9	0	45	10	4	3	0	17	10	45	5	0	60	6	2	14	0	22
12:30 PM	2	35	5	0	42	6	5	7	0	18	4	27	11	0	42	4	13	15	0	32
12:45 PM	6	41	9	0	56	10	4	4	0	18	14	33	11	0	58	3	6	11	0	20
Total	11	158	30	0	199	32	17	22	0	71	36	151	40	0	227	22	27	51	0	100
Grand Total	26	321	38	0	385	79	30	36	0	145	82	275	67	1	425	43	53	101	0	197
Apprch %	6.8	83.4	9.9	0.0		54.5	20.7	24.8	0.0		19.3	64.7	15.8	0.2		21.8	26.9	51.3	0.0	
Total %	2.3	27.9	3.3	0.0	33.4	6.9	2.6	3.1	0.0	12.6	7.1	23.9	5.8	0.1	36.9	3.7	4.6	8.8	0.0	17.1

Start Time	East Main St Southbound					First St Westbound					East Main St Northbound					Scott St Eastbound				
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total
Peak Hour From 11:00 AM to 12:45 PM - Peak 1 of 1																				
Intersection 12:00 PM																				
Volume	11	158	30	0	199	32	17	22	0	71	36	151	40	0	227	22	27	51	0	100
Percent	5.5	79.4	15.1	0.0		45.1	23.9	31.0	0.0		15.9	66.5	17.6	0.0		22.0	27.0	51.0	0.0	
12:00	3	46	7	0	56	6	4	8	0	18	8	46	13	0	67	9	6	11	0	26
Peak Factor																				
High Int. 12:00 PM																				
Volume	3	46	7	0	56	6	4	8	0	18	8	46	13	0	67	4	13	15	0	32
Peak Factor	0.888					0.986					0.847					0.781				

0.8

PETRA Traffic Count Report
Clough, Harbour & Associates LLP
III Winners Circle
Albany, NY 12205

Project: Pocono Downs
 Project #: 13989
 Location: Wilkes-Barre, PA

File Name : E. Main - Scott Sat
 Site Code : 02110114
 Start Date : 08/20/2005
 Page No : 1

Groups Printed- SU Trucks - MU Trucks

Start Time	East Main St Southbound					First St Westbound					East Main St Northbound					Scott St Eastbound				
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	
11:00 AM	1	1	1	0	3	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0
11:30 AM	0	1	0	0	1	0	0	1	0	1	0	1	0	0	1	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0	0	1	2	0	0	3	0	0	0	0	0
Total	1	2	1	0	4	0	0	1	0	1	1	5	0	0	6	0	0	0	0	0
12:00 PM	0	0	1	0	1	0	0	0	0	0	0	1	1	0	2	0	0	0	0	0
12:15 PM	0	2	0	0	2	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	1	0	1
12:45 PM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	1	2	1	0	4	1	0	1	0	2	0	1	1	0	2	0	0	1	0	1
Grand Total	2	4	2	0	8	1	0	2	0	3	1	6	1	0	8	0	0	1	0	1
Apprch %	25.0	50.0	25.0	0.0		33.3	0.0	66.7	0.0		12.5	75.0	12.5	0.0		0.0	0.0	100.0	0.0	
Total %	10.0	20.0	10.0	0.0	40.0	5.0	0.0	10.0	0.0	15.0	5.0	30.0	5.0	0.0	40.0	0.0	0.0	5.0	0.0	5.0

Start Time	East Main St Southbound					First St Westbound					East Main St Northbound					Scott St Eastbound				
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total
Peak Hour From	11:00 AM to 12:45 PM - Peak 1 of 1																			
Intersection	11:30 AM																			
Volume	0	3	1	0	4	1	0	1	0	2	1	4	1	0	6	0	0	0	0	0
Percent	0.0	75.0	25.0	0.0		50.0	0.0	50.0	0.0		16.7	66.7	16.7	0.0		0.0	0.0	0.0	0.0	
12:15																				
Volume	0	2	0	0	2	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0
Peak Factor																				
High Int.	12:15 PM																			
Volume	0	2	0	0	2	0	0	1	0	1	1	2	0	0	3	0	0	0	0	0
Peak Factor	0.500					0.500					0.500					1.0				

MANUAL TRAFFIC COUNT FORM

INTERSECTION: SR 215/11-21 Northbound On Ramp
Southbound Off Ramp

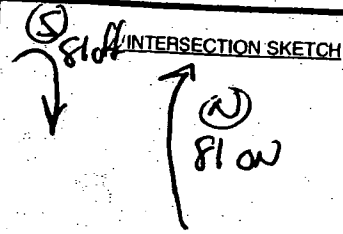
EAST / WEST STREET:

NORTH / SOUTH STREET:

PEAK: 5-8 PM 5-8pm PROJECT NO:

DATE: 9/27/05 RECORDER: LEE

DAY: SAT WEATHER: Light Rain



Note:
F = TRUCKS
& Buses

TIME	OFF	T-OFF	ON	T-ON	Total	NB on	SB off	Total
5:15	72	6	93	3	174	78	96	
5:30	63	2	117	0	182	65	117	392
5:45	58	0	95	1	154	58	96	(5:00-6:00)
6:00	66	1	79	4	180	67	83	
6:15	49	1	94	2	141	45	96	
6:30	79	1	96	1	177	80	97	
6:45	79	4	93	0	176	83	93	
7:00	99	2	89	2	192	101	91	
7:15	69	1	79	3	152	70	82	
7:30	76	1	73	4	154	77	77	
7:45	63	1	81	4	149	64	85	
8:00	60	0	58	6	124	60	64	

PETRA Traffic Count Report
 Clough, Harbour & Associates LLP
 III Winners Circle
 Albany, NY 12205

Project: Pocono Downs
 Project #: 13989
 Location: Wilkes-Barre, PA

File Name : 315 - I-81SBonNBOff S
 Site Code : 02050802
 Start Date : 08/27/2005
 Page No : 1

Groups Printed- Cars - SU Trucks - MU Trucks

Start Time	Southbound					I-81 SB on ramp Westbound					Northbound					I-81 NB off ramp Eastbound				
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	
05:00 PM	0	0	0	0	0	0	75	0	0	75	0	0	0	0	0	0	102	0	0	102
05:15 PM	0	0	0	0	0	0	52	0	0	52	0	0	0	0	0	0	83	0	0	83
05:30 PM	0	0	0	0	0	0	78	0	0	78	0	0	0	0	0	0	82	0	0	82
05:45 PM	0	0	0	0	0	0	61	0	0	61	0	0	0	0	0	0	83	0	0	83
Total	0	0	0	0	0	0	266	0	0	266	0	0	0	0	0	0	350	0	0	350
06:00 PM	0	0	0	0	0	0	60	0	0	60	0	0	0	0	0	0	73	0	0	73
06:15 PM	0	0	0	0	0	0	48	0	0	48	0	0	0	0	0	0	77	0	0	77
06:30 PM	0	0	0	0	0	0	90	0	0	90	0	0	0	0	0	0	67	0	0	67
06:45 PM	0	0	0	0	0	0	77	0	0	77	0	0	0	0	0	0	58	0	0	58
Total	0	0	0	0	0	0	275	0	0	275	0	0	0	0	0	0	275	0	0	275
07:00 PM	0	0	0	0	0	0	55	0	0	55	0	0	0	0	0	0	70	0	0	70
07:15 PM	0	0	0	0	0	0	54	0	0	54	0	0	0	0	0	0	69	0	0	69
07:30 PM	0	0	0	0	0	0	48	0	0	48	0	0	0	0	0	0	76	0	0	76
07:45 PM	0	0	0	0	0	0	50	0	0	50	0	0	0	0	0	0	63	0	0	63
Total	0	0	0	0	0	0	207	0	0	207	0	0	0	0	0	0	278	0	0	278
Grand Total	0	0	0	0	0	0	748	0	0	748	0	0	0	0	0	0	903	0	0	903
Apprch %	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0	
Total %	0.0	0.0	0.0	0.0	0.0	0.0	45.3	0.0	0.0	45.3	0.0	0.0	0.0	0.0	0.0	0.0	54.7	0.0	0.0	54.7

Start Time	Southbound					I-81 SB on ramp Westbound					Northbound					I-81 NB off ramp Eastbound				
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total
Peak Hour From 05:00 PM to 07:45 PM - Peak 1 of 1																				
Intersection	05:00 PM																			
Volume	0	0	0	0	0	0	266	0	0	266	0	0	0	0	0	0	350	0	0	350
Percent	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0	
Volume	0	0	0	0	0	0	75	0	0	75	0	0	0	0	0	0	102	0	0	102
Peak Factor																				
High Int.	4:45:00 PM					05:30 PM					4:45:00 PM					05:00 PM				
Volume	0	0	0	0	0	0	78	0	0	78	0	0	0	0	0	0	102	0	0	102
Peak Factor						0.853										0.8				
																0.858				

PETRA Traffic Count Report
Clough, Harbour & Associates LLP
 III Winners Circle
 Albany, NY 12205

Project: Pocono Downs
 Project #: 13989
 Location: Wilkes-Barre, PA

File Name : 315 - I-81SBonNBOff Sa
 Site Code : 02050802
 Start Date : 08/27/2005
 Page No : 1

Groups Printed- SU Trucks - MU Trucks

Start Time	Southbound					I-81 SB on ramp Westbound					Northbound					I-81 NB off ramp Eastbound				
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	
05:00 PM	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	7	0	0	7
05:15 PM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	4	0	0	4
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	7
05:45 PM	0	0	0	0	0	0	9	0	0	9	0	0	0	0	0	0	7	0	0	7
Total	0	0	0	0	0	0	16	0	0	16	0	0	0	0	0	0	25	0	0	25
06:00 PM	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	0	6	0	0	6
06:15 PM	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	4	0	0	4
06:30 PM	0	0	0	0	0	0	9	0	0	9	0	0	0	0	0	0	1	0	0	1
06:45 PM	0	0	0	0	0	0	12	0	0	12	0	0	0	0	0	0	3	0	0	3
Total	0	0	0	0	0	0	32	0	0	32	0	0	0	0	0	0	14	0	0	14
07:00 PM	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	4	0	0	4
07:15 PM	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	3	0	0	3
07:30 PM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	3	0	0	3
07:45 PM	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	2	0	0	2
Total	0	0	0	0	0	0	12	0	0	12	0	0	0	0	0	0	12	0	0	12
Grand Total	0	0	0	0	0	0	60	0	0	60	0	0	0	0	0	0	51	0	0	51
Apprch %	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0	
Total %	0.0	0.0	0.0	0.0	0.0	0.0	54.1	0.0	0.0	54.1	0.0	0.0	0.0	0.0	0.0	0.0	45.9	0.0	0.0	45.9

Start Time	Southbound					I-81 SB on ramp Westbound					Northbound					I-81 NB off ramp Eastbound				
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total
Peak Hour From 05:00 PM to 07:45 PM - Peak 1 of 1																				
Intersection	05:45 PM																			
Volume	0	0	0	0	0	0	29	0	0	29	0	0	0	0	0	0	18	0	0	18
Percent	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0	
Volume	0	0	0	0	0	0	9	0	0	9	0	0	0	0	0	0	7	0	0	7
Peak Factor																				
High Int.	4:45:00 PM					05:45 PM					4:45:00 PM					05:45 PM				
Volume	0	0	0	0	0	0	9	0	0	9	0	0	0	0	0	0	7	0	0	7
Peak Factor						0.806										0.643				

PETRA Traffic Count Report
Clough, Harbour & Associates LLP
III Winners Circle
Albany, NY 12205

Project: Pocono Downs
 Project #: 13989
 Location: Wilkes-Barre, PA

File Name : 315 - Oak Arm Sa
 Site Code : 02050803
 Start Date : 08/20/2005
 Page No : 1

Groups Printed- Cars - SU Trucks - MU Trucks

Start Time	SR 315 Southbound					Armstrong Westbound					SR 315 Northbound					Oak St Eastbound				
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	
05:00 PM	3	95	53	0	151	11	5	5	0	21	49	111	9	0	169	49	3	30	0	82
05:15 PM	2	91	50	0	143	3	3	5	0	11	45	110	4	0	159	53	4	36	0	93
05:30 PM	1	85	52	0	138	4	3	4	0	11	51	91	2	1	145	51	3	41	0	95
05:45 PM	2	93	51	0	146	2	0	3	0	5	51	89	2	0	142	40	1	34	0	75
Total	8	364	206	0	578	20	11	17	0	48	196	401	17	1	615	193	11	141	0	345
06:00 PM	2	101	55	0	158	7	4	2	0	13	42	115	8	0	165	42	5	34	0	81
06:15 PM	2	92	57	0	151	4	1	2	0	7	45	73	5	0	123	37	2	41	0	80
06:30 PM	2	121	43	0	166	17	3	4	0	24	52	92	9	0	153	37	3	30	0	70
06:45 PM	2	129	53	0	184	13	4	12	0	29	56	99	4	0	159	46	4	38	0	88
Total	8	443	208	0	659	41	12	20	0	73	195	379	26	0	600	162	14	143	0	319
07:00 PM	4	115	54	0	173	7	1	5	0	13	48	73	2	0	123	45	2	31	0	78
07:15 PM	5	85	48	0	138	9	3	2	0	14	66	94	4	0	164	45	3	26	0	74
07:30 PM	5	85	39	0	129	1	2	2	0	5	65	81	3	0	149	32	0	35	0	67
07:45 PM	3	64	48	0	115	6	4	5	0	15	56	105	4	0	165	47	2	34	0	83
Total	17	349	189	0	555	23	10	14	0	47	235	353	13	0	601	169	7	126	0	302
Grand Total	33	1156	603	0	1792	84	33	51	0	168	626	1133	56	1	1816	524	32	410	0	966
Apprch %	1.8	64.5	33.6	0.0		50.0	19.6	30.4	0.0		34.5	62.4	3.1	0.1		54.2	3.3	42.4	0.0	
Total %	0.7	24.4	12.7	0.0	37.8	1.8	0.7	1.1	0.0	3.5	13.2	23.9	1.2	0.0	38.3	11.1	0.7	8.6	0.0	20.4

Start Time	SR 315 Southbound					Armstrong Westbound					SR 315 Northbound					Oak St Eastbound				
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total
Peak Hour From 05:00 PM to 07:45 PM - Peak 1 of 1																				
Intersection	06:00 PM																			
Volume	8	443	208	0	659	41	12	20	0	73	195	379	26	0	600	162	14	143	0	319
Percent	1.2	67.2	31.6	0.0		56.2	16.4	27.4	0.0		32.5	63.2	4.3	0.0		50.8	4.4	44.8	0.0	
Volume	2	129	53	0	184	13	4	12	0	29	56	99	4	0	159	46	4	38	0	88
Peak Factor																				
High Int.	06:45 PM																			
Volume	2	129	53	0	184	13	4	12	0	29	42	115	8	0	165	46	4	38	0	88
Peak Factor	0.895					0.629					0.909					0.906				

PETRA Traffic Count Report
 Clough, Harbour & Associates LLP
 III Winners Circle
 Albany, NY 12205

Project: Pocono Downs
 Project #: 13989
 Location: Wilkes-Barre, PA

File Name : 315 - Oak Arm Sa
 Site Code : 02050803
 Start Date : 08/20/2005
 Page No : 1

Groups Printed- SU Trucks - MU Trucks

Start Time	SR 315 Southbound					Armstrong Westbound					SR 315 Northbound					Oak St Eastbound				
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	
05:00 PM	1	0	0	0	1	2	0	3	0	5	1	3	4	0	8	1	0	1	0	2
05:15 PM	1	5	1	0	7	1	0	3	0	4	0	3	1	0	4	0	0	1	0	1
05:30 PM	1	1	0	0	2	1	0	2	0	3	1	7	0	0	8	0	0	0	0	0
05:45 PM	2	5	0	0	7	0	0	1	0	1	0	4	1	0	5	0	0	0	0	0
Total	5	11	1	0	17	4	0	9	0	13	2	17	6	0	25	1	0	2	0	3
06:00 PM	0	5	1	0	6	1	0	1	0	2	0	4	1	0	5	0	0	0	0	0
06:15 PM	0	2	0	0	2	2	1	0	0	3	1	2	0	0	3	0	0	1	0	1
06:30 PM	0	1	0	0	1	1	0	1	0	2	0	1	2	0	3	0	0	0	0	0
06:45 PM	0	6	1	0	7	0	0	0	0	0	1	4	1	0	6	2	0	0	0	2
Total	0	14	2	0	16	4	1	2	0	7	2	11	4	0	17	2	0	1	0	3
07:00 PM	0	0	1	0	1	0	0	1	0	1	1	1	0	0	2	0	0	1	0	1
07:15 PM	0	6	0	0	6	1	0	1	0	2	3	2	1	0	6	1	0	0	0	1
07:30 PM	0	4	0	0	4	0	0	2	0	2	0	0	1	0	1	1	0	0	0	1
07:45 PM	2	2	1	0	5	1	0	2	0	3	0	3	0	0	3	0	0	0	0	0
Total	2	12	2	0	16	2	0	6	0	8	4	6	2	0	12	2	0	1	0	3
Grand Total	7	37	5	0	49	10	1	17	0	28	8	34	12	0	54	5	0	4	0	9
Apprch %	14.3	75.5	10.2	0.0		35.7	3.6	60.7	0.0		14.8	63.0	22.2	0.0		55.6	0.0	44.4	0.0	
Total %	5.0	26.4	3.6	0.0	35.0	7.1	0.7	12.1	0.0	20.0	5.7	24.3	8.6	0.0	38.6	3.6	0.0	2.9	0.0	6.4

Start Time	SR 315 Southbound					Armstrong Westbound					SR 315 Northbound					Oak St Eastbound				
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total
Peak Hour From 05:00 PM to 07:45 PM - Peak 1 of 1																				
Intersection	05:00 PM																			
Volume	5	11	1	0	17	4	0	9	0	13	2	17	6	0	25	1	0	2	0	3
Percent	29.4	64.7	5.9	0.0		30.8	0.0	69.2	0.0		8.0	68.0	24.0	0.0		33.3	0.0	66.7	0.0	
05:15 Volume	1	5	1	0	7	1	0	3	0	4	0	3	1	0	4	0	0	1	0	1
Peak Factor																				
High Int.	05:15 PM					05:00 PM					05:00 PM					05:00 PM				
Volume	1	5	1	0	7	2	0	3	0	5	1	3	4	0	8	1	0	1	0	2
Peak Factor	0.607					0.650					0.781					0.375				

PETRA Traffic Count Report
Clough, Harbour & Associates LLP
III Winners Circle
Albany, NY 12205

Project: Pocono Downs
 Project #: 13989
 Location: Wilkes-Barre, PA

File Name : 315 - Old Boston Sa
 Site Code : 02050804
 Start Date : 08/13/2005
 Page No : 1

Groups Printed- Cars - SU Trucks - MU Trucks

Start Time	Private Drive Southbound					SR 315 Westbound					Old Boston Rd Northbound					SR 315 Eastbound				
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	
05:00 PM	0	0	0	0	0	4	79	0	0	83	12	0	10	0	22	1	68	14	0	83
05:15 PM	0	0	0	0	0	3	89	0	0	92	7	0	9	0	16	0	78	7	0	85
05:30 PM	0	0	0	0	0	5	101	1	0	107	7	0	8	0	15	0	66	3	0	69
05:45 PM	0	0	0	0	0	5	112	0	0	117	8	0	4	0	12	0	83	4	0	87
Total	0	0	0	0	0	17	381	1	0	399	34	0	31	0	65	1	295	28	0	324
06:00 PM	0	0	0	0	0	5	83	0	0	88	3	0	5	0	8	0	64	3	0	67
06:15 PM	0	0	0	0	0	3	76	0	0	79	4	0	9	0	13	0	56	8	0	64
06:30 PM	0	0	0	0	0	6	84	0	0	90	4	0	7	0	11	0	59	4	0	63
06:45 PM	0	0	0	0	0	7	90	0	0	97	3	0	7	0	10	0	66	5	0	71
Total	0	0	0	0	0	21	333	0	0	354	14	0	28	0	42	0	245	20	0	265
07:00 PM	0	0	0	0	0	9	88	0	0	97	2	0	3	0	5	0	58	6	0	64
07:15 PM	0	0	0	0	0	4	81	0	0	85	5	0	5	0	10	0	61	3	0	64
07:30 PM	0	0	0	0	0	7	80	0	0	87	4	0	5	0	9	0	68	5	0	73
07:45 PM	0	0	0	0	0	8	74	0	0	82	8	0	6	0	14	0	58	5	0	63
Total	0	0	0	0	0	28	323	0	0	351	19	0	19	0	38	0	245	19	0	264
Grand Total	0	0	0	0	0	66	1037	1	0	1104	67	0	78	0	145	1	785	67	0	853
Apprch %	0.0	0.0	0.0	0.0		6.0	93.9	0.1	0.0		46.2	0.0	53.8	0.0		0.1	92.0	7.9	0.0	
Total %	0.0	0.0	0.0	0.0	0.0	3.1	49.3	0.0	0.0	52.5	3.2	0.0	3.7	0.0	6.9	0.0	37.3	3.2	0.0	40.6

Start Time	Private Drive Southbound					SR 315 Westbound					Old Boston Rd Northbound					SR 315 Eastbound							
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total			
Peak Hour From 05:00 PM to 07:45 PM - Peak 1 of 1																							
Intersection	05:00 PM																						
Volume	0	0	0	0	0	17	381	1	0	399	34	0	31	0	65	1	295	28	0	324			
Percent	0.0	0.0	0.0	0.0		4.3	95.5	0.3	0.0		52.3	0.0	47.7	0.0		0.3	91.0	8.6	0.0				
05:45																							
Volume	0	0	0	0	0	5	112	0	0	117	8	0	4	0	12	0	83	4	0	87			
Peak Factor																							
High Int.	4:45:00 PM					05:45 PM					05:00 PM					05:45 PM							
Volume	0	0	0	0	0	5	112	0	0	117	12	0	10	0	22	0	83	4	0	87			
Peak Factor											0.853											0.739	0.931

PETRA Traffic Count Report
 Clough, Harbour & Associates LLP
 III Winners Circle
 Albany, NY 12205

Project: Pocono Downs
 Project #: 13989
 Location: Wilkes-Barre, PA

File Name : 315 - Old Boston Sat
 Site Code : 02050804
 Start Date : 08/13/2005
 Page No : 1

Groups Printed- SU Trucks - MU Trucks

Start Time	Private Drive Southbound					SR 315 Westbound					Old Boston Rd Northbound					SR 315 Eastbound				
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	1	0	1
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
Total	0	0	0	0	0	0	0	0	0	0	1	0	2	0	3	0	0	3	0	3
06:00 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0
06:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0
06:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:45 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	2	0	0	2	1	0	0	0	1	0	0	0	0	0
07:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
07:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0
07:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	1	0	1
Total	0	0	0	0	0	0	1	0	0	1	1	0	0	0	1	0	0	2	0	2
Grand Total	0	0	0	0	0	0	3	0	0	3	3	0	2	0	5	0	0	5	0	5
Apprch %	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		60.0	0.0	40.0	0.0		0.0	0.0	100.0	0.0	
Total %	0.0	0.0	0.0	0.0	0.0	0.0	23.1	0.0	0.0	23.1	23.1	0.0	15.4	0.0	38.5	0.0	0.0	38.5	0.0	38.5

Start Time	Private Drive Southbound					SR 315 Westbound					Old Boston Rd Northbound					SR 315 Eastbound				
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total
Peak Hour From 05:00 PM to 07:45 PM - Peak 1 of 1																				
Intersection 05:00 PM																				
Volume	0	0	0	0	0	0	0	0	0	0	1	0	2	0	3	0	0	3	0	3
Percent	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		33.3	0.0	66.7	0.0		0.0	0.0	100.0	0.0	
05:30																				
Volume	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	1	0	1
Peak Factor																				
High Int. 4:45:00 PM						4:45:00 PM					05:15 PM					05:00 PM				
Volume	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	0	0	1	0	1
Peak Factor											0.375					0.750				

PETRA Traffic Count Report
Clough, Harbour & Associates LLP
III Winners Circle
Albany, NY 12205

Project: Pocono Downs
 Project #: 13989
 Location: Wilkes-Barre, PA

File Name : 315 - Laffin Sat
 Site Code : 02050805
 Start Date : 08/13/2005
 Page No : 1

Groups Printed- Cars - SU Trucks - MU Trucks

Start Time	Laffin Rd Southbound					SR 315 Westbound					Northbound					SR 315 Eastbound					T
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
05:00 PM	28	0	41	0	69	0	92	11	0	103	0	0	0	0	0	11	83	0	0	94	
05:15 PM	23	0	29	0	52	1	101	16	0	118	0	0	0	0	0	22	75	0	0	97	
05:30 PM	10	0	16	0	26	0	97	37	0	134	0	0	0	0	0	26	91	0	0	117	
05:45 PM	17	0	29	0	46	0	104	38	0	142	0	0	0	0	0	16	84	0	0	100	
Total	78	0	115	0	193	1	394	102	0	497	0	0	0	0	0	75	333	0	0	408	1
06:00 PM	15	0	24	0	39	0	80	30	0	110	0	0	0	0	0	25	79	0	0	104	
06:15 PM	14	0	18	0	32	0	97	15	0	112	0	0	0	0	0	21	71	0	0	92	
06:30 PM	8	0	19	0	27	0	91	16	0	107	0	0	0	0	0	12	73	0	0	85	
06:45 PM	10	0	15	0	25	0	102	10	0	112	0	0	0	0	0	20	81	0	0	101	
Total	47	0	76	0	123	0	370	71	0	441	0	0	0	0	0	78	304	0	0	382	
07:00 PM	13	0	16	0	29	0	101	14	0	115	0	0	0	0	0	19	75	0	0	94	
07:15 PM	9	0	14	0	23	0	88	20	0	108	0	0	0	0	0	15	91	0	0	106	
07:30 PM	9	0	12	0	21	0	87	15	0	102	0	0	0	0	0	21	86	0	0	107	
07:45 PM	12	0	10	0	22	0	83	21	0	104	0	0	0	0	0	10	75	0	0	85	
Total	43	0	52	0	95	0	359	70	0	429	0	0	0	0	0	65	327	0	0	392	
Grand Total	168	0	243	0	411	1	1123	243	0	1367	0	0	0	0	0	218	964	0	0	1182	2
Approch %	40.9	0.0	59.1	0.0		0.1	82.2	17.8	0.0		0.0	0.0	0.0	0.0		18.4	81.6	0.0	0.0		
Total %	5.7	0.0	8.2	0.0	13.9	0.0	37.9	8.2	0.0	46.2	0.0	0.0	0.0	0.0	0.0	7.4	32.6	0.0	0.0	39.9	

Start Time	Laffin Rd Southbound					SR 315 Westbound					Northbound					SR 315 Eastbound					T
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
Peak Hour From 05:00 PM to 07:45 PM - Peak 1 of 1																					
Intersection	05:00 PM																				
Volume	78	0	115	0	193	1	394	102	0	497	0	0	0	0	0	75	333	0	0	408	1
Percent	40.4	0.0	59.6	0.0		0.2	79.3	20.5	0.0		0.0	0.0	0.0	0.0		18.4	81.6	0.0	0.0		
05:45 Volume	17	0	29	0	46	0	104	38	0	142	0	0	0	0	0	16	84	0	0	100	
Peak Factor	0.699																				
High Int.	05:00 PM					05:45 PM					4:45:00 PM					05:30 PM					0.95
Volume	28	0	41	0	69	0	104	38	0	142	0	0	0	0	0	26	91	0	0	117	
Peak Factor	0.699					0.875										0.872					

PETRA Traffic Count Report
Clough, Harbour & Associates LLP
III Winners Circle
Albany, NY 12205

Project: Pocono Downs
 Project #: 13989
 Location: Wilkes-Barre, PA

File Name : 315 - Lafin S
 Site Code : 02050805
 Start Date : 08/13/2005
 Page No : 1

Groups Printed- SU Trucks - MU Trucks

Start Time	Lafin Rd Southbound					SR 315 Westbound					Northbound					SR 315 Eastbound					
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.0	1.0	1.0	1.0		
05:15 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2	0	0	0	2
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2
Total	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	6	0	0	0	6
06:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:15 PM	0	0	1	0	1	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	0
06:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
06:45 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	0	1
Total	0	0	1	0	1	0	4	0	0	4	0	0	0	0	0	0	2	0	0	0	2
07:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
07:15 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0
07:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	1	0	0	0	1
Grand Total	0	0	1	0	1	0	7	0	0	7	0	0	0	0	0	0	9	0	0	0	9
Apprch %	0.0	0.0	100.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		9
Total %	0.0	0.0	5.9	0.0	5.9	0.0	41.2	0.0	0.0	41.2	0.0	0.0	0.0	0.0	0.0	0.0	52.9	0.0	0.0		52.9

Start Time	Lafin Rd Southbound					SR 315 Westbound					Northbound					SR 315 Eastbound				
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total
Peak Hour From	05:00 PM to 07:45 PM - Peak 1 of 1																			
Intersection	05:30 PM																			
Volume	0	0	1	0	1	0	3	0	0	3	0	0	0	0	0	0	4	0	0	4
Percent	0.0	0.0	100.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0	
06:15	0	0	1	0	1	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0
Volume	0	0	1	0	1	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0
Peak Factor																				
High Int.	06:15 PM																			
Volume	0	0	1	0	1	0	3	0	0	3	0	0	0	0	0	0	2	0	0	2
Peak Factor	0.250										0.250									
04:45:00 PM																				
Volume																				
Peak Factor																				
05:30 PM																				
Volume																				
Peak Factor																				
0.5																				
0.500																				

PETRA Traffic Count Report
 Clough, Harbour & Associates LLP

Project: Pocono Downs
 Project #: 13989
 Location: Wilkes-Barre, PA

III Winners Circle
 Albany, NY 12205

File Name : 315 - Sunshine Access S
 Site Code : 02050806
 Start Date : 08/06/2005
 Page No : 1

Groups Printed- Cars - SU Trucks, Buses - SU Trucks

Start Time	SR 315 Southbound					Westbound					SR 315 Northbound					Sunshine Market Access Eastbound				
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	
05:00 PM	0	96	11	0	107	0	0	0	0	0	21	111	0	0	132	15	0	26	0	41
05:15 PM	0	91	10	0	101	0	0	0	0	0	20	100	0	0	120	16	0	14	0	30
05:30 PM	0	112	16	0	128	0	0	0	1	1	8	89	0	0	97	16	0	20	0	36
05:45 PM	2	91	10	0	103	0	0	0	0	0	22	85	0	0	107	9	0	17	0	26
Total	2	390	47	0	439	0	0	0	1	1	71	385	0	0	456	56	0	77	0	133
06:00 PM	0	87	6	0	93	0	0	0	0	0	15	107	0	0	122	13	0	21	0	34
06:15 PM	0	74	10	0	84	0	0	0	0	0	13	104	0	0	117	10	0	12	0	22
06:30 PM	0	107	11	0	118	0	0	0	0	0	20	79	0	0	99	11	0	19	0	30
06:45 PM	0	131	6	0	137	0	0	0	0	0	14	84	0	0	98	13	0	15	0	28
Total	0	399	33	0	432	0	0	0	0	0	62	374	0	0	436	47	0	67	0	114
07:00 PM	0	105	5	0	110	0	0	0	0	0	20	74	0	0	94	11	0	20	0	31
07:15 PM	0	91	13	0	104	0	0	0	0	0	23	89	0	0	112	9	0	9	0	18
07:30 PM	0	102	5	0	107	0	0	0	0	0	12	93	0	0	105	8	0	17	0	25
07:45 PM	0	64	5	0	69	0	0	0	0	0	11	82	0	0	93	5	0	15	0	20
Total	0	362	28	0	390	0	0	0	0	0	66	338	0	0	404	33	0	61	0	94
Grand Total	2	1151	108	0	1261	0	0	0	1	1	199	1097	0	0	1296	136	0	205	0	341
Apprch %	0.2	91.3	8.6	0.0		0.0	0.0	0.0	100.0		15.4	84.6	0.0	0.0		39.9	0.0	60.1	0.0	
Total %	0.1	39.7	3.7	0.0	43.5	0.0	0.0	0.0	0.0	0.0	6.9	37.8	0.0	0.0	44.7	4.7	0.0	7.1	0.0	11.8

Start Time	SR 315 Southbound					Westbound					SR 315 Northbound					Sunshine Market Access Eastbound				
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total
Peak Hour From 05:00 PM to 07:45 PM - Peak 1 of 1																				
Intersection	05:00 PM																			
Volume	2	390	47	0	439	0	0	0	1	1	71	385	0	0	456	56	0	77	0	133
Percent	0.5	88.8	10.7	0.0		0.0	0.0	0.0	100.0		15.6	84.4	0.0	0.0		42.1	0.0	57.9	0.0	
05:00 Volume	0	96	11	0	107	0	0	0	0	0	21	111	0	0	132	15	0	26	0	41
Peak Factor																				
High Int.	05:30 PM					05:30 PM					05:00 PM					05:00 PM				
Volume	0	112	16	0	128	0	0	0	1	1	21	111	0	0	132	15	0	26	0	41
Peak Factor	0.857					0.250					0.864					0.811				

PETRA Traffic Count Report
 Clough, Harbour & Associates LLP

Project: Pocono Downs
 Project #: 13989
 Location: Wilkes-Barre, PA

III Winners Circle
 Albany, NY 12205

File Name : 315 - Sunshine Access Sa
 Site Code : 02050806
 Start Date : 08/06/2005
 Page No : 1

Groups Printed- SU Trucks, Buses - SU Trucks

Start Time	SR 315 Southbound					Westbound					SR 315 Northbound					Sunshine Market Access Eastbound				
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	
05:00 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0
05:30 PM	0	3	0	0	3	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0
05:45 PM	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0
Total	0	8	0	0	8	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0
06:00 PM	0	2	0	0	2	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0
06:15 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:30 PM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0
06:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	3	0	0	3	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0
07:00 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 PM	0	4	0	0	4	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0
07:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	6	0	0	6	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0
Grand Total	0	17	0	0	17	0	0	0	0	0	0	13	0	0	13	0	0	0	0	0
Apprch %	0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0	
Total %	0.0	56.7	0.0	0.0	56.7	0.0	0.0	0.0	0.0	0.0	0.0	43.3	0.0	0.0	43.3	0.0	0.0	0.0	0.0	0.0

Start Time	SR 315 Southbound					Westbound					SR 315 Northbound					Sunshine Market Access Eastbound				
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total
Peak Hour From 05:00 PM to 07:45 PM - Peak 1 of 1																				
Intersection																				
05:15 PM																				
Volume	0	9	0	0	9	0	0	0	0	0	0	8	0	0	8	0	0	0	0	0
Percent	0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0	
06:00																				
Volume	0	2	0	0	2	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0
Peak Factor																				
High Int.																				
05:30 PM						4:45:00 PM						06:00 PM						4:45:00 PM		
Volume	0	3	0	0	3	0	0	0	0	0	0	3	0	0	3					
Peak Factor	0.750										0.667									

PETRA Traffic Count Report
 Clough, Harbour & Associates LLP

Project: Pocono Downs
 Project #: 13989
 Location: Wilkes-Barre, PA

III Winners Circle
 Albany, NY 12205

File Name : 315 - Pocono Access Sa
 Site Code : 02050807
 Start Date : 08/06/2005
 Page No : 1

Groups Printed- Cars - SU Trucks, Buses - SU Trucks

Start Time	Pocono Downs Access Southbound					SR 315 Westbound					Mid-Atlantic Access Northbound					SR 315 Eastbound				
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	
05:00 PM	6	0	5	0	11	0	101	5	0	106	0	0	0	0	0	10	138	0	1	149
05:15 PM	4	0	1	0	5	0	107	3	0	110	0	0	0	0	0	6	101	0	0	107
05:30 PM	3	0	7	0	10	0	116	7	0	123	0	0	0	0	0	3	105	0	0	108
05:45 PM	10	0	7	0	17	0	102	4	0	106	0	0	0	0	0	6	114	0	0	120
Total	23	0	20	0	43	0	426	19	0	445	0	0	0	0	0	25	458	0	1	484
06:00 PM	11	0	10	0	21	0	89	8	0	97	0	0	0	0	0	11	122	0	0	133
06:15 PM	4	0	2	0	6	0	95	7	0	102	0	0	0	0	0	6	117	0	0	123
06:30 PM	1	0	3	0	4	0	122	14	0	136	1	0	0	0	1	5	111	0	0	116
06:45 PM	4	0	2	0	6	0	126	19	0	145	0	0	0	0	0	23	98	0	0	121
Total	20	0	17	0	37	0	432	48	0	480	1	0	0	0	1	45	448	0	0	493
07:00 PM	4	0	3	0	7	0	86	23	0	109	0	0	0	0	0	12	108	0	0	120
07:15 PM	2	0	1	0	3	1	96	27	0	124	0	0	1	0	1	14	108	0	0	122
07:30 PM	2	0	2	0	4	0	81	12	0	93	0	0	0	0	0	9	99	0	0	108
07:45 PM	2	0	3	0	5	0	76	11	0	87	0	0	0	0	0	10	94	1	0	105
Total	10	0	9	0	19	1	339	73	0	413	0	0	1	0	1	45	409	1	0	455
Grand Total	53	0	46	0	99	1	1197	140	0	1338	1	0	1	0	2	115	1315	1	1	1432
Apprch %	53.5	0.0	46.5	0.0		0.1	89.5	10.5	0.0		50.0	0.0	50.0	0.0		8.0	91.8	0.1	0.1	
Total %	1.8	0.0	1.6	0.0	3.4	0.0	41.7	4.9	0.0	46.6	0.0	0.0	0.0	0.0	0.1	4.0	45.8	0.0	0.0	49.9

Start Time	Pocono Downs Access Southbound					SR 315 Westbound					Mid-Atlantic Access Northbound					SR 315 Eastbound				
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total
Peak Hour From 05:00 PM to 07:45 PM - Peak 1 of 1																				
Intersection	06:30 PM																			
Volume	11	0	9	0	20	1	430	83	0	514	1	0	1	0	2	54	425	0	0	479
Percent	55.0	0.0	45.0	0.0		0.2	83.7	16.1	0.0		50.0	0.0	50.0	0.0		11.3	88.7	0.0	0.0	
06:45 Peak	4	0	2	0	6	0	126	19	0	145	0	0	0	0	0	23	98	0	0	121
Factor																				
High Int.	07:00 PM					06:45 PM					06:30 PM					07:15 PM				
Volume	4	0	3	0	7	0	126	19	0	145	1	0	0	0	1	14	108	0	0	122
Peak Factor	0.714					0.886					0.500					0.982				

PETRA Traffic Count Report
 Clough, Harbour & Associates LLP

Project: Pocono Downs
 Project #: 13989
 Location: Wilkes-Barre, PA

III Winners Circle
 Albany, NY 12205

File Name : 315 - Pocono Access Sa
 Site Code : 02050807
 Start Date : 08/06/2005
 Page No : 1

Groups Printed- SU Trucks, Buses - SU Trucks

Start Time	Pocono Downs Access Southbound					SR 315 Westbound					Mid-Atlantic Access Northbound					SR 315 Eastbound					T
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
05:00 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	
05:15 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	
05:30 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	
05:45 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	
Total	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	6	0	0	6	
06:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	
06:15 PM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
06:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
06:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	
07:00 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	
07:15 PM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2	
07:30 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	
07:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	
Total	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	6	0	0	6	
Grand Total	1	0	0	0	1	0	8	0	0	8	0	0	0	0	0	1	12	0	0	13	
Apprch %	100.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		7.7	92.3	0.0	0.0		
Total %	4.5	0.0	0.0	0.0	4.5	0.0	36.4	0.0	0.0	36.4	0.0	0.0	0.0	0.0	0.0	4.5	54.5	0.0	0.0	59.1	

Start Time	Pocono Downs Access Southbound					SR 315 Westbound					Mid-Atlantic Access Northbound					SR 315 Eastbound					T	
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total		
Peak Hour From 05:00 PM to 07:45 PM - Peak 1 of 1																						
Intersection	05:00 PM																					
Volume	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	6	0	0	6		
Percent	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0			
05:30 Volume	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2		
Peak Factor																						
High Int. Volume	4:45:00 PM					05:00 PM					4:45:00 PM					05:15 PM						
Peak Factor	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2		
											1.000											0.750

PETRA Traffic Count Report
 Clough, Harbour & Associates LLP
 III Winners Circle
 Albany, NY 12205

Project: Pocono Downs
 Project #: 13989
 Location: Wilkes-Barre, PA

File Name : 315 - East Main St
 Site Code : 02050808
 Start Date : 08/06/2005
 Page No : 1

Groups Printed- Cars - SU Trucks, Buses - SU Trucks

Start Time	East Main St. Southbound					SR 315 Westbound					Jumper Rd. Northbound					SR 315 Eastbound				
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	
05:00 PM	24	16	13	0	53	7	76	14	0	97	19	27	14	0	60	14	112	9	0	135
05:15 PM	13	12	25	0	50	8	78	9	0	95	19	14	11	0	44	16	78	9	0	103
05:30 PM	28	13	16	0	57	16	87	9	0	112	20	21	8	0	49	16	76	14	0	106
05:45 PM	27	16	17	0	60	10	73	19	0	102	18	20	11	0	49	19	81	13	0	113
Total	92	57	71	0	220	41	314	51	0	406	76	82	44	0	202	65	347	45	0	457
06:00 PM	25	11	13	0	49	9	61	12	0	82	24	21	19	0	64	14	95	7	0	116
06:15 PM	18	17	15	0	50	7	74	11	0	92	18	26	19	0	63	16	82	6	0	104
06:30 PM	21	12	21	0	54	5	97	12	0	114	17	15	11	0	43	19	80	7	0	106
06:45 PM	19	6	13	0	38	9	87	19	0	115	16	30	15	0	61	24	90	9	0	123
Total	83	46	62	0	191	30	319	54	0	403	75	92	64	0	231	73	347	29	0	449
07:00 PM	21	14	17	0	52	4	61	11	0	76	25	24	19	0	68	21	74	6	0	101
07:15 PM	15	11	12	0	38	14	68	8	0	90	16	29	16	0	61	29	84	4	0	117
07:30 PM	14	14	15	0	43	4	67	10	0	81	12	28	14	0	54	17	78	14	0	109
07:45 PM	21	16	15	0	52	4	54	15	0	73	16	20	15	0	51	12	67	13	0	92
Total	71	55	59	0	185	26	250	44	0	320	69	101	64	0	234	79	303	37	0	419
Grand Total	246	158	192	0	596	97	883	149	0	1129	220	275	172	0	667	217	997	111	0	1325
Apprch %	41.3	26.5	32.2	0.0		8.6	78.2	13.2	0.0		33.0	41.2	25.8	0.0		16.4	75.2	8.4	0.0	
Total %	6.6	4.3	5.2	0.0	16.0	2.6	23.8	4.0	0.0	30.4	5.9	7.4	4.6	0.0	17.9	5.8	26.8	3.0	0.0	35.6

Start Time	East Main St. Southbound					SR 315 Westbound					Jumper Rd. Northbound					SR 315 Eastbound				
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total
Peak Hour From 05:00 PM to 07:45 PM - Peak 1 of 1																				
Intersection	05:00 PM																			
Volume	92	57	71	0	220	41	314	51	0	406	76	82	44	0	202	65	347	45	0	457
Percent	41.8	25.9	32.3	0.0		10.1	77.3	12.6	0.0		37.6	40.6	21.8	0.0		14.2	75.9	9.8	0.0	
Volume	24	16	13	0	53	7	76	14	0	97	19	27	14	0	60	14	112	9	0	135
Peak Factor																				
High Int.	05:45 PM					05:30 PM					05:00 PM					05:00 PM				
Volume	27	16	17	0	60	16	87	9	0	112	19	27	14	0	60	14	112	9	0	135
Peak Factor	0.917					0.906					0.842					0.846				

PETRA Traffic Count Report
 Clough, Harbour & Associates LLP
 III Winners Circle
 Albany, NY 12205

Project: Pocono Downs
 Project #: 13989
 Location: Wilkes-Barre, PA

File Name : 315 - East Main S.
 Site Code : 02050808
 Start Date : 08/06/2005
 Page No : 1

Groups Printed- SU Trucks, Buses - SU Trucks

Start Time	East Main St. Southbound					SR 315 Westbound					Jumper Rd. Northbound					SR 315 Eastbound				
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	
05:00 PM	0	0	0	0	0	0	1	0	0	1	0	0	1	0	1	0	1	0	0	1
05:15 PM	0	0	0	0	0	0	0	1	0	1	1	0	1	0	2	0	2	0	0	2
05:30 PM	0	0	0	0	0	0	1	0	0	1	1	0	0	0	1	0	2	0	0	2
05:45 PM	0	0	0	0	0	0	1	0	0	1	0	0	1	0	1	0	0	0	0	0
Total	0	0	0	0	0	0	3	1	0	4	2	0	3	0	5	0	5	0	0	5
06:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0
06:15 PM	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	1	0	1	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0
07:00 PM	0	0	1	0	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0
07:15 PM	1	0	0	0	1	0	2	0	0	2	0	0	1	0	1	1	0	0	0	1
07:30 PM	0	0	0	0	0	0	1	0	0	1	0	1	0	0	1	1	1	0	0	2
07:45 PM	0	0	1	0	1	0	0	0	0	0	0	0	1	0	1	0	4	1	0	5
Total	1	0	2	0	3	1	3	0	0	4	0	1	2	0	3	2	5	1	0	8
Grand Total	1	0	3	0	4	1	6	1	0	8	2	1	6	0	9	2	10	1	0	13
Approch %	25.0	0.0	75.0	0.0		12.5	75.0	12.5	0.0		22.2	11.1	66.7	0.0		15.4	76.9	7.7	0.0	
Total %	2.9	0.0	8.8	0.0	11.8	2.9	17.6	2.9	0.0	23.5	5.9	2.9	17.6	0.0	26.5	5.9	29.4	2.9	0.0	38.2

Start Time	East Main St. Southbound					SR 315 Westbound					Jumper Rd. Northbound					SR 315 Eastbound				
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total
Peak Hour From 05:00 PM to 07:45 PM - Peak 1 of 1																				
Intersection	07:00 PM																			
Volume	1	0	2	0	3	1	3	0	0	4	0	1	2	0	3	2	5	1	0	8
Percent	33.3	0.0	66.7	0.0		25.0	75.0	0.0	0.0		0.0	33.3	66.7	0.0		25.0	62.5	12.5	0.0	
07:45	0	0	1	0	1	0	0	0	0	0	0	0	1	0	1	0	4	1	0	5
Volume																				
Peak Factor																				
High Int.	07:00 PM																			
Volume	0	0	1	0	1	07:15 PM					07:15 PM					07:45 PM				
Peak Factor	0.750					0.500					0.750					0.400				

PETRA Traffic Count Report
Clough, Harbour & Associates LLP
III Winners Circle
Albany, NY 12205

Project: Pocono Downs
 Project #: 13989
 Location: Wilkes-Barre, PA

File Name : 315 - Laird S
 Site Code : 02050809
 Start Date : 08/13/2005
 Page No : 1

Groups Printed- Cars - SU Trucks - MU Trucks

Start Time	Laird St Southbound					SR 315 Westbound					Woodlands Northbound					SR 315 Eastbound				
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	
05:00 PM	4	1	13	0	18	20	108	1	0	129	7	0	5	1	13	22	116	25	0	163
05:15 PM	0	1	7	0	8	19	128	3	0	150	6	1	3	0	10	11	105	18	0	134
05:30 PM	3	1	12	0	16	15	110	1	1	127	5	0	0	0	5	13	99	16	0	128
05:45 PM	5	3	8	0	16	5	114	3	0	122	4	0	1	0	5	14	105	13	0	132
Total	12	6	40	0	58	59	460	8	1	528	22	1	9	1	33	60	425	72	0	557
06:00 PM	2	0	10	0	12	4	110	5	0	119	6	0	1	0	7	7	95	19	0	121
06:15 PM	4	1	17	0	22	8	98	1	0	107	4	0	0	0	4	15	111	18	0	144
06:30 PM	2	0	6	0	8	9	111	3	0	123	4	2	3	1	10	16	101	19	2	138
06:45 PM	2	0	5	0	7	6	121	5	0	132	3	0	2	0	5	14	110	27	0	151
Total	10	1	38	0	49	27	440	14	0	481	17	2	6	1	26	52	417	83	2	554
07:00 PM	2	1	5	0	8	2	86	1	0	89	5	0	2	0	7	7	103	14	0	124
07:15 PM	2	0	11	0	13	3	106	6	0	115	7	0	2	0	9	6	109	20	0	135
07:30 PM	4	1	7	0	12	5	79	1	0	85	6	0	4	0	10	14	124	19	0	157
07:45 PM	2	1	10	0	13	5	89	4	0	98	3	0	1	4	8	15	98	9	0	122
Total	10	3	33	0	46	15	360	12	0	387	21	0	9	4	34	42	434	62	0	538
Grand Total	32	10	111	0	153	101	1260	34	1	1396	60	3	24	6	93	154	1276	217	2	1649
Apprch %	20.9	6.5	72.5	0.0		7.2	90.3	2.4	0.1		64.5	3.2	25.8	6.5		9.3	77.4	13.2	0.1	
Total %	1.0	0.3	3.4	0.0	4.6	3.1	38.3	1.0	0.0	42.4	1.8	0.1	0.7	0.2	2.8	4.7	38.8	6.6	0.1	50.1

Start Time	Laird St Southbound					SR 315 Westbound					Woodlands Northbound					SR 315 Eastbound				
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total
Peak Hour From 05:00 PM to 07:45 PM - Peak 1 of 1																				
Intersection	05:00 PM																			
Volume	12	6	40	0	58	59	460	8	1	528	22	1	9	1	33	60	425	72	0	557
Percent	20.7	10.3	69.0	0.0		11.2	87.1	1.5	0.2		66.7	3.0	27.3	3.0		10.8	76.3	12.9	0.0	
Volume	4	1	13	0	18	20	108	1	0	129	7	0	5	1	13	22	116	25	0	163
Peak Factor																				
High Int.	05:00 PM					05:15 PM					05:00 PM					05:00 PM				
Volume	4	1	13	0	18	19	128	3	0	150	7	0	5	1	13	22	116	25	0	163
Peak Factor	0.806					0.880					0.635					0.854				

PETRA Traffic Count Report
 Clough, Harbour & Associates LLP
 III Winners Circle
 Albany, NY 12205

Project: Pocono Downs
 Project #: 13989
 Location: Wilkes-Barre, PA

File Name : 315 - Laird S
 Site Code : 02050809
 Start Date : 08/13/2005
 Page No : 1

Groups Printed- SU Trucks - MU Trucks

Start Time	Laird St Southbound					SR 315 Westbound					Woodlands Northbound					SR 315 Eastbound				
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Apprch %	0.0	0.0	0.0	0.0		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 %																				

Start Time	Laird St Southbound					SR 315 Westbound					Woodlands Northbound					SR 315 Eastbound				
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total
Peak Hour From	05:00 PM to 07:45 PM - Peak 1 of 1																			
Intersection	05:00 PM																			
Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Percent	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	
05:45																				
Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Peak Factor																				
High Int.	4:45:00 PM					4:45:00 PM					4:45:00 PM					4:45:00 PM				
Volume																				
Peak Factor																				

PETRA Traffic Count Report
Clough, Harbour & Associates LLP
III Winners Circle
Albany, NY 12205

Project: Pocono Downs
 Project #: 13989
 Location: Wilkes-Barre, PA

File Name : 315 - Motorworld Sa
 Site Code : 02050810
 Start Date : 08/13/2005
 Page No : 1

Groups Printed: Cars - SU Trucks - MU Trucks

Start Time	Motorworld Southbound					SR 315 Westbound					Hampton Inn Northbound					SR 315 Eastbound				
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	
05:00 PM	11	0	48	0	59	1	141	3	0	145	6	0	2	0	8	3	154	6	0	163
05:15 PM	3	0	25	0	28	0	133	1	0	134	4	0	0	0	4	5	117	3	0	125
05:30 PM	8	0	31	1	40	2	132	2	0	136	4	1	4	0	9	5	113	4	0	122
05:45 PM	5	0	14	0	19	2	120	3	0	125	6	0	3	0	9	4	133	5	0	142
Total	27	0	118	1	146	5	526	9	0	540	20	1	9	0	30	17	517	18	0	552
06:00 PM	3	0	14	0	17	0	119	1	0	120	7	0	0	0	7	3	126	3	0	132
06:15 PM	2	0	2	0	4	0	128	2	0	130	3	0	4	0	7	1	134	9	0	144
06:30 PM	1	0	2	0	3	0	129	1	0	130	5	0	2	0	7	2	135	9	0	146
06:45 PM	3	0	3	0	6	0	123	1	0	124	7	1	0	0	8	4	141	6	0	151
Total	9	0	21	0	30	0	499	5	0	504	22	1	6	0	29	10	536	27	0	573
07:00 PM	1	0	2	0	3	1	101	0	0	102	11	0	1	0	12	4	126	9	0	139
07:15 PM	1	0	0	0	1	3	117	0	0	120	0	0	2	0	2	4	148	5	0	157
07:30 PM	1	0	1	0	2	1	95	0	0	96	2	0	0	0	2	1	137	7	0	145
07:45 PM	1	0	2	0	3	2	89	1	0	92	6	0	3	0	9	3	131	8	0	142
Total	4	0	5	0	9	7	402	1	0	410	19	0	6	0	25	12	542	29	0	583
Grand Total	40	0	144	1	185	12	1427	15	0	1454	61	2	21	0	84	39	1595	74	0	1708
Apprch %	21.6	0.0	77.8	0.5		0.8	98.1	1.0	0.0		72.6	2.4	25.0	0.0		2.3	93.4	4.3	0.0	
Total %	1.2	0.0	4.2	0.0	5.4	0.3	41.6	0.4	0.0	42.4	1.8	0.1	0.6	0.0	2.4	1.1	46.5	2.2	0.0	49.8

Start Time	Motorworld Southbound					SR 315 Westbound					Hampton Inn Northbound					SR 315 Eastbound				
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total
Peak Hour From 05:00 PM to 07:45 PM - Peak 1 of 1																				
Intersection	05:00 PM																			
Volume	27	0	118	1	146	5	526	9	0	540	20	1	9	0	30	17	517	18	0	552
Percent	18.5	0.0	80.8	0.7		0.9	97.4	1.7	0.0		66.7	3.3	30.0	0.0		3.1	93.7	3.3	0.0	
05:00 Volume	11	0	48	0	59	1	141	3	0	145	6	0	2	0	8	3	154	6	0	163
Peak Factor																				
High Int.	05:00 PM					05:00 PM					05:30 PM					05:00 PM				
Volume	11	0	48	0	59	1	141	3	0	145	4	1	4	0	9	3	154	6	0	163
Peak Factor	0.619					0.931					0.833					0.847				

PETRA Traffic Count Report
Clough, Harbour & Associates LLP

Project: Pocono Downs
 Project #: 13989
 Location: Wilkes-Barre, PA

III Winners Circle
 Albany, NY 12205

File Name : 315 - Motorworld Sa
 Site Code : 02050810
 Start Date : 08/13/2005
 Page No : 1

Groups Printed- SU Trucks - MU Trucks

Start Time	Motorworld Southbound					SR 315 Westbound					Hampton Inn Northbound					SR 315 Eastbound				
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	
05:00 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	1	0	0	1
05:45 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2
Total	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	4	0	0	4
06:00 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0
06:15 PM	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0
06:30 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0
06:45 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	1	0	1
Total	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	0	0	1	0	1
07:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	2	0	0	2
07:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 PM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2
07:45 PM	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	7	0	0	7	0	0	1	0	1	0	4	0	0	4
Grand Total	0	0	0	0	0	0	18	0	0	18	0	0	1	0	1	0	8	1	0	9
Apprch %	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	100.0	0.0		0.0	88.9	11.1	0.0	
Total %	0.0	0.0	0.0	0.0	0.0	0.0	64.3	0.0	0.0	64.3	0.0	0.0	3.6	0.0	3.6	0.0	28.6	3.6	0.0	32.1

Start Time	Motorworld Southbound					SR 315 Westbound					Hampton Inn Northbound					SR 315 Eastbound				
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total
Peak Hour From 05:00 PM to 07:45 PM - Peak 1 of 1																				
Intersection	07:00 PM																			
Volume	0	0	0	0	0	0	7	0	0	7	0	0	1	0	1	0	4	0	0	4
Percent	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	100.0	0.0		0.0	100.0	0.0	0.0	
07:45																				
Volume	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	0	0	0	0
Peak Factor																				
High Int.	4:45:00 PM					07:45 PM					07:00 PM					07:00 PM				
Volume	0	0	0	0	0	0	5	0	0	5	0	0	1	0	1	0	2	0	0	2
Peak Factor						0.350					0.250					0.500				

0.6

PETRA Traffic Count Report
 Clough, Harbour & Associates LLP

Project: Pocono Downs
 Project #: 13989
 Location: Wilkes-Barre, PA

III Winners Circle
 Albany, NY 12205

File Name : 315 - 309 NB ramps S
 Site Code : 02050811
 Start Date : 08/20/2005
 Page No : 1

Groups Printed- Cars - SU Trucks - MU Trucks

Start Time	309 NB off ramp Southbound					SR 315 Westbound					Army Reserve Northbound					SR 315 Eastbound				
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	
05:00 PM	15	0	91	0	106	0	140	58	0	198	0	0	0	0	0	145	126	0	0	271
05:15 PM	16	0	105	0	121	0	155	56	0	211	0	0	0	0	0	150	149	0	0	299
05:30 PM	22	0	111	0	133	0	126	38	0	164	0	0	0	0	0	148	140	0	0	288
05:45 PM	21	0	95	0	116	0	132	30	0	162	0	0	0	0	0	152	130	0	0	282
Total	74	0	402	0	476	0	553	182	0	735	0	0	0	0	0	595	545	0	0	1140
06:00 PM	20	0	119	0	139	0	125	43	0	168	0	0	0	0	0	145	154	0	0	299
06:15 PM	18	0	94	0	112	0	102	23	0	125	0	0	0	0	0	143	141	0	0	284
06:30 PM	24	0	110	1	135	1	112	28	0	141	0	0	1	0	1	133	134	0	0	267
06:45 PM	25	0	96	0	121	0	116	28	0	144	0	0	0	0	0	136	153	0	0	289
Total	87	0	419	1	507	1	455	122	0	578	0	0	1	0	1	557	582	0	0	1139
07:00 PM	22	0	99	0	121	0	117	28	0	145	0	0	0	0	0	131	162	0	0	293
07:15 PM	23	0	94	0	117	0	99	20	0	119	0	0	0	0	0	127	120	0	0	247
07:30 PM	13	0	90	0	103	0	99	28	0	127	0	0	0	0	0	140	131	0	0	271
07:45 PM	17	0	84	0	101	0	77	28	0	105	0	0	0	0	0	151	159	0	0	310
Total	75	0	367	0	442	0	392	104	0	496	0	0	0	0	0	549	572	0	0	1121
Grand Total	236	0	1188	1	1425	1	1400	408	0	1809	0	0	1	0	1	1701	1699	0	0	3400
Apprch %	16.6	0.0	83.4	0.1		0.1	77.4	22.6	0.0		0.0	0.0	100.0	0.0		50.0	50.0	0.0	0.0	
Total %	3.6	0.0	17.9	0.0	21.5	0.0	21.1	6.1	0.0	27.3	0.0	0.0	0.0	0.0	0.0	25.6	25.6	0.0	0.0	51.2

Start Time	309 NB off ramp Southbound					SR 315 Westbound					Army Reserve Northbound					SR 315 Eastbound				
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total
Peak Hour From 05:00 PM to 07:45 PM - Peak 1 of 1																				
Intersection	05:15 PM																			
Volume	79	0	430	0	509	0	538	167	0	705	0	0	0	0	0	595	573	0	0	1168
Percent	15.5	0.0	84.5	0.0		0.0	76.3	23.7	0.0		0.0	0.0	0.0	0.0		50.9	49.1	0.0	0.0	
Volume	16	0	105	0	121	0	155	56	0	211	0	0	0	0	0	150	149	0	0	299
Peak Factor																				
High Int.	06:00 PM					05:15 PM					4:45:00 PM					05:15 PM				
Volume	20	0	119	0	139	0	155	56	0	211	0	0	0	0	0	150	149	0	0	299
Peak Factor	0.915					0.835										0.977				

PETRA Traffic Count Report
Clough, Harbour & Associates LLP

Project: Pocono Downs
 Project #: 13989
 Location: Wilkes-Barre, PA

III Winners Circle
 Albany, NY 12205

File Name : 315 - 309 NB ramps S
 Site Code : 02050811
 Start Date : 08/20/2005
 Page No : 1

Groups Printed- SU Trucks - MU Trucks

Start Time	309 NB off ramp Southbound					SR 315 Westbound					Army Reserve Northbound					SR 315 Eastbound					
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2	1	0	0	0	3
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
Total	1	0	0	0	1	0	0	1	0	1	0	0	0	0	0	3	3	0	0	0	6
06:00 PM	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	2
06:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
06:30 PM	1	0	0	0	1	0	0	0	0	0	0	0	1	0	1	1	0	0	0	0	1
06:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
Total	3	0	0	0	3	0	0	0	0	0	0	0	1	0	1	3	2	0	0	0	5
07:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 PM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	3	0	0	0	4
07:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 PM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	1	3	0	0	0	4
Grand Total	6	0	0	0	6	0	0	1	0	1	0	0	1	0	1	7	8	0	0	0	15
Apprch %	100.0	0.0	0.0	0.0		0.0	0.0	100.0	0.0		0.0	0.0	100.0	0.0		46.7	53.3	0.0	0.0		
Total %	26.1	0.0	0.0	0.0	26.1	0.0	0.0	4.3	0.0	4.3	0.0	0.0	4.3	0.0	4.3	30.4	34.8	0.0	0.0		65.2

Start Time	309 NB off ramp Southbound					SR 315 Westbound					Army Reserve Northbound					SR 315 Eastbound				
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total
Peak Hour From 05:00 PM to 07:45 PM - Peak 1 of 1																				
Intersection	05:15 PM																			
Volume	3	0	0	0	3	0	0	1	0	1	0	0	0	0	0	4	4	0	0	8
Percent	100.0	0.0	0.0	0.0		0.0	0.0	100.0	0.0		0.0	0.0	0.0	0.0		50.0	50.0	0.0	0.0	
06:00																				
Volume	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2
Peak Factor																				
High Int.	06:00 PM																			
Volume	2	0	0	0	2	0	0	1	0	1	0	0	0	0	0	2	1	0	0	3
Peak Factor	0.375					0.250										0.667				

PETRA Traffic Count Report
 Clough, Harbour & Associates LLP

Project: Pocono Downs
 Project #: 13989
 Location: Wilkes-Barre, PA

III Winners Circle
 Albany, NY 12205

File Name : 315 - 309 SB ramps S
 Site Code : 02050812
 Start Date : 08/27/2005
 Page No : 1

Groups Printed- Cars - SU Trucks - MU Trucks

Start Time	309 SB off ramp Southbound					SR 315 Westbound					309 SB on ramp (one way) Northbound					SR 315 Eastbound				
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	
05:00 PM	35	2	151	1	189	57	186	0	0	243	0	0	0	0	0	0	265	127	0	392
05:15 PM	24	2	145	0	171	44	193	0	0	237	0	0	0	0	0	0	259	101	0	360
05:30 PM	24	0	105	0	129	49	200	0	0	249	0	0	0	0	0	0	260	114	8	382
05:45 PM	29	2	153	0	184	33	162	0	0	195	0	0	0	0	0	0	271	96	0	367
Total	112	6	554	1	673	183	741	0	0	924	0	0	0	0	0	0	1055	438	8	1501
06:00 PM	39	0	139	0	178	47	181	0	0	228	0	0	0	0	0	0	253	109	0	362
06:15 PM	30	0	140	0	170	31	177	0	0	208	0	0	0	0	0	0	241	96	0	337
06:30 PM	36	0	163	0	199	31	171	0	0	202	0	0	0	0	0	0	217	115	1	333
06:45 PM	58	0	136	0	194	40	180	0	0	220	0	0	0	0	0	0	267	95	0	362
Total	163	0	578	0	741	149	709	0	0	858	0	0	0	0	0	0	978	415	1	1394
07:00 PM	48	1	123	0	172	38	151	0	0	189	0	0	0	1	1	0	215	82	0	297
07:15 PM	58	0	124	0	182	30	148	0	0	178	0	0	0	0	0	0	242	84	0	326
07:30 PM	29	0	120	0	149	28	147	0	0	175	0	0	0	0	0	0	252	91	0	343
07:45 PM	33	0	95	0	128	31	103	0	0	134	0	0	0	0	0	0	213	100	0	313
Total	168	1	462	0	631	127	549	0	0	676	0	0	0	1	1	0	922	357	0	1279
Grand Total	443	7	1594	1	2045	459	1999	0	0	2458	0	0	0	1	1	0	2955	1210	9	4174
Apprch %	21.7	0.3	77.9	0.0		18.7	81.3	0.0	0.0		0.0	0.0	0.0	100.0		0.0	70.8	29.0	0.2	
Total %	5.1	0.1	18.4	0.0	23.6	5.3	23.0	0.0	0.0	28.3	0.0	0.0	0.0	0.0	0.0	0.0	34.1	13.9	0.1	48.1

Start Time	309 SB off ramp Southbound					SR 315 Westbound					309 SB on ramp (one way) Northbound					SR 315 Eastbound				
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total
Peak Hour From 05:00 PM to 07:45 PM - Peak 1 of 1																				
Intersection	05:00 PM																			
Volume	112	6	554	1	673	183	741	0	0	924	0	0	0	0	0	0	1055	438	8	1501
Percent	16.6	0.9	82.3	0.1		19.8	80.2	0.0	0.0		0.0	0.0	0.0	0.0		0.0	70.3	29.2	0.5	
Volume	35	2	151	1	189	57	186	0	0	243	0	0	0	0	0	0	265	127	0	392
Peak Factor	0.890					0.928														
High Int.	05:00 PM					05:30 PM					4:45:00 PM					05:00 PM				
Volume	35	2	151	1	189	49	200	0	0	249	0	0	0	0	0	0	265	127	0	392
Peak Factor	0.890					0.928										0.957				

PETRA Traffic Count Report
Clough, Harbour & Associates LLP

Project: Pocono Downs
 Project #: 13989
 Location: Wilkes-Barre, PA

III Winners Circle
 Albany, NY 12205

File Name : 315 - 309 SB ramps Sa
 Site Code : 02050812
 Start Date : 08/27/2005
 Page No : 1

Groups Printed- SU Trucks - MU Trucks

Start Time	309 SB off ramp Southbound					SR 315 Westbound					309 SB on ramp (one way) Northbound					SR 315 Eastbound				
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	
05:00 PM	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0
05:30 PM	1	0	1	0	2	3	0	0	0	3	0	0	0	0	0	0	1	1	0	2
05:45 PM	0	0	1	0	1	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2
Total	1	0	2	0	3	6	2	0	0	8	0	0	0	0	0	0	3	1	0	4
06:00 PM	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	0	0	1	0	1
06:15 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0
06:30 PM	1	0	0	0	1	3	1	0	0	4	0	0	0	0	0	0	0	0	0	0
06:45 PM	1	0	2	0	3	2	1	0	0	3	0	0	0	0	0	0	0	0	0	0
Total	2	0	2	0	4	6	4	0	0	10	0	0	0	0	0	0	0	1	0	1
07:00 PM	1	0	0	0	1	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1
07:15 PM	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
07:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2
07:45 PM	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0
Total	1	0	1	0	2	1	1	0	0	2	0	0	0	0	0	0	3	1	0	4
Grand Total	4	0	5	0	9	13	7	0	0	20	0	0	0	0	0	0	6	3	0	9
Apprch %	44.4	0.0	55.6	0.0		65.0	35.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	66.7	33.3	0.0	
Total %	10.5	0.0	13.2	0.0	23.7	34.2	18.4	0.0	0.0	52.6	0.0	0.0	0.0	0.0	0.0	0.0	15.8	7.9	0.0	23.7

Start Time	309 SB off ramp Southbound					SR 315 Westbound					309 SB on ramp (one way) Northbound					SR 315 Eastbound				
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total
Peak Hour From 05:00 PM to 07:45 PM - Peak 1 of 1																				
Intersection	05:15 PM																			
Volume	1	0	2	0	3	6	2	0	0	8	0	0	0	0	0	0	3	2	0	5
Percent	33.3	0.0	66.7	0.0		75.0	25.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	60.0	40.0	0.0	
05:30	1	0	1	0	2	3	0	0	0	3	0	0	0	0	0	0	2	0	0	2
Volume																				
Peak Factor																				
High Int.	05:30 PM																			
Volume	1	0	1	0	2	3	0	0	0	3	0	0	0	0	0	0	1	1	0	2
Peak Factor	0.375					0.667					0.5					0.625				

PETRA Traffic Count Report
Clough, Harbour & Associates LLP

Project: Pocono Downs
Project #: 13989
Location: Wilkes-Barre, PA

III Winners Circle File Name : E. Main - Pocono Access S
Albany, NY 12205 Site Code : 02050813
Start Date : 08/06/2005
Page No : 1

Groups Printed- Cars - SU Trucks, Buses - SU Trucks

Start Time	Pocono Downs Access Southbound					East Main St. Westbound					Northbound					East Main St. Eastbound				
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	
04:00 PM	2	0	2	0	4	0	53	6	1	60	0	0	0	0	0	2	52	0	0	54
04:15 PM	3	0	4	0	7	0	44	2	0	46	0	0	0	0	0	8	48	0	0	56
04:30 PM	4	0	8	0	12	0	32	3	0	35	0	0	0	0	0	8	41	0	0	49
04:45 PM	2	0	5	0	7	0	49	5	0	54	0	0	0	0	0	8	61	0	0	69
Total	11	0	19	0	30	0	178	16	1	195	0	0	0	0	0	26	202	0	0	228
05:00 PM	7	0	6	0	13	0	57	4	0	61	0	0	0	0	0	8	43	0	0	51
05:15 PM	0	0	4	0	4	0	38	8	0	46	0	0	0	0	0	6	42	0	0	48
05:30 PM	2	0	5	1	8	0	41	7	0	48	0	0	0	0	0	4	38	0	1	43
05:45 PM	1	0	1	0	2	0	47	10	0	57	0	0	0	0	0	15	42	0	0	57
Total	10	0	16	1	27	0	183	29	0	212	0	0	0	0	0	33	165	0	1	199
06:00 PM	4	0	4	0	8	0	40	13	0	53	0	0	0	0	0	10	34	0	0	44
06:15 PM	0	0	2	0	2	0	35	15	1	51	0	0	0	0	0	10	44	0	0	54
06:30 PM	1	0	4	0	5	0	44	16	1	61	0	0	0	0	0	11	28	0	0	39
06:45 PM	2	0	3	0	5	0	40	7	0	47	0	0	0	0	0	11	37	0	0	48
Total	7	0	13	0	20	0	159	51	2	212	0	0	0	0	0	42	143	0	0	185
Grand Total	28	0	48	1	77	0	520	96	3	619	0	0	0	0	0	101	510	0	1	612
Apprch %	36.4	0.0	62.3	1.3		0.0	84.0	15.5	0.5		0.0	0.0	0.0	0.0		16.5	83.3	0.0	0.2	
Total %	2.1	0.0	3.7	0.1	5.9	0.0	39.8	7.3	0.2	47.3	0.0	0.0	0.0	0.0	0.0	7.7	39.0	0.0	0.1	46.8

Start Time	Pocono Downs Access Southbound					East Main St. Westbound					Northbound					East Main St. Eastbound				
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total
Peak Hour From 04:00 PM to 06:45 PM - Peak 1 of 1																				
Intersection	04:15 PM																			
Volume	16	0	23	0	39	0	182	14	0	196	0	0	0	0	0	32	193	0	0	225
Percent	41.0	0.0	59.0	0.0		0.0	92.9	7.1	0.0		0.0	0.0	0.0	0.0		14.2	85.8	0.0	0.0	
04:45	2	0	5	0	7	0	49	5	0	54	0	0	0	0	0	8	61	0	0	69
Peak Factor																				
High Int.	05:00 PM					05:00 PM					3:45:00 PM					04:45 PM				
Volume	7	0	6	0	13	0	57	4	0	61	0	0	0	0	0	8	61	0	0	69
Peak Factor	0.750					0.803										0.815				

PETRA Traffic Count Report
 Clough, Harbour & Associates LLP

Project: Pocono Downs
 Project #: 13989
 Location: Wilkes-Barre, PA

III Winners Circle File Name : E. Main - Pocono Access S
 Albany, NY 12205 Site Code : 02050813
 Start Date : 08/06/2005
 Page No : 1

Groups Printed- SU Trucks, Buses - SU Trucks

Start Time	Pocono Downs Access Southbound					East Main St. Westbound					Northbound					East Main St. Eastbound				
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Apprch % Total %	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	

Start Time	Pocono Downs Access Southbound					East Main St. Westbound					Northbound					East Main St. Eastbound				
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total
Peak Hour From 04:00 PM to 06:45 PM - Peak 1 of 1																				
Intersection																				
04:00 PM																				
Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Percent	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	
04:45																				
Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Peak Factor																				
High Int.																				
3:45:00 PM						3:45:00 PM					3:45:00 PM					3:45:00 PM				
Volume																				
Peak Factor																				

PETRA Traffic Count Report
Clough, Harbour & Associates LLP

Project: Pocono Downs
 Project #: 13989
 Location: Wilkes-Barre, PA

III Winners Circle
 Albany, NY 12205

File Name : E. Main - Scott St
 Site Code : 02050814
 Start Date : 08/20/2005
 Page No : 1

Groups Printed- Cars - SU Trucks - MU Trucks

Start Time	East Main St Southbound					First St Westbound					East Main St Northbound					Scott St Eastbound				
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	
05:00 PM	3	31	2	0	36	10	3	7	0	20	11	31	7	0	49	9	6	11	0	26
05:15 PM	1	24	1	0	26	17	6	3	0	26	4	28	4	0	36	6	8	9	0	23
05:30 PM	3	35	5	0	43	11	9	10	0	30	8	21	7	0	36	0	4	16	0	20
05:45 PM	7	29	3	0	39	8	6	2	0	16	7	23	6	0	36	3	3	12	0	18
Total	14	119	11	0	144	46	24	22	0	92	30	103	24	0	157	18	21	48	0	87
06:00 PM	6	21	6	0	33	15	8	4	0	27	11	25	8	0	44	5	13	14	0	32
06:15 PM	5	33	5	0	43	4	5	7	0	16	8	23	4	0	35	1	20	12	0	33
06:30 PM	2	27	4	0	33	13	10	1	0	24	15	21	10	0	46	7	10	19	0	36
06:45 PM	1	45	4	0	50	12	3	4	0	19	18	35	6	0	59	3	7	20	0	30
Total	14	126	19	0	159	44	26	16	0	86	52	104	28	0	184	16	50	65	0	131
07:00 PM	1	31	4	0	36	9	9	3	0	21	9	20	10	0	39	4	6	9	0	19
07:15 PM	1	32	4	0	37	12	5	4	0	21	13	22	13	0	48	1	4	11	0	16
07:30 PM	1	24	2	0	27	8	5	0	0	13	11	17	12	0	40	4	6	15	0	25
07:45 PM	5	25	3	0	33	9	7	6	0	22	15	27	12	0	54	3	14	8	0	25
Total	8	112	13	0	133	38	26	13	0	77	48	86	47	0	181	12	30	43	0	85
Grand Total	36	357	43	0	436	128	76	51	0	255	130	293	99	0	522	46	101	156	0	303
Apprch %	8.3	81.9	9.9	0.0		50.2	29.8	20.0	0.0		24.9	56.1	19.0	0.0		15.2	33.3	51.5	0.0	
Total %	2.4	23.5	2.8	0.0	28.8	8.4	5.0	3.4	0.0	16.8	8.6	19.3	6.5	0.0	34.4	3.0	6.7	10.3	0.0	20.0

Start Time	East Main St Southbound					First St Westbound					East Main St Northbound					Scott St Eastbound				
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total
Peak Hour From 05:00 PM to 07:45 PM - Peak 1 of 1																				
Intersection	06:00 PM																			
Volume	14	126	19	0	159	44	26	16	0	86	52	104	28	0	184	16	50	65	0	131
Percent	8.8	79.2	11.9	0.0		51.2	30.2	18.6	0.0		28.3	56.5	15.2	0.0		12.2	38.2	49.6	0.0	
Volume	1	45	4	0	50	12	3	4	0	19	18	35	6	0	59	3	7	20	0	30
Peak Factor																				
High Int.	06:45 PM					06:00 PM					06:45 PM					06:30 PM				
Volume	1	45	4	0	50	15	8	4	0	27	18	35	6	0	59	7	10	19	0	36
Peak Factor	0.795					0.796					0.780					0.910				

PETRA Traffic Count Report
Clough, Harbour & Associates LLP
 III Winners Circle
 Albany, NY 12205

Project: Pocono Downs
 Project #: 13989
 Location: Wilkes-Barre, PA

File Name : E. Main - Scott St
 Site Code : 02050814
 Start Date : 08/20/2005
 Page No : 1

Groups Printed- SU Trucks - MU Trucks

Start Time	East Main St Southbound					First St Westbound					East Main St Northbound					Scott St Eastbound				
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	
05:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	0	1	0	0	1	0	1	1	0	0	0	1	0	0	0	0	0
06:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:30 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0
06:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0
07:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0
07:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0
07:45 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	2	1	0	3	0	0	0	0	0
Grand Total	0	1	0	0	1	0	0	1	0	1	1	3	1	0	5	0	0	0	0	0
Approch %	0.0	100.0	0.0	0.0		0.0	0.0	100.0	0.0		20.0	60.0	20.0	0.0		0.0	0.0	0.0	0.0	
Total %	0.0	14.3	0.0	0.0	14.3	0.0	0.0	14.3	0.0	14.3	14.3	42.9	14.3	0.0	71.4	0.0	0.0	0.0	0.0	0.0

Start Time	East Main St Southbound					First St Westbound					East Main St Northbound					Scott St Eastbound				
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total
Peak Hour From 05:00 PM to 07:45 PM - Peak 1 of 1																				
Intersection	05:00 PM																			
Volume	0	1	0	0	1	0	0	1	0	1	1	0	0	0	1	0	0	0	0	0
Percent	0.0	100.0	0.0	0.0		0.0	0.0	100.0	0.0		100.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	
05:30																				
Volume	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Peak Factor																				
High Int.	05:30 PM					05:15 PM					05:00 PM					4:45:00 PM				
Volume	0	1	0	0	1	0	0	1	0	1	1	0	0	0	1					
Peak Factor	0.250					0.250					0.250					0.7				

JAMAR TRAX Report
 Clough Harbour & Associates
 III Winners Circle, Albany, NY 12205

Page 1
 315 REV
 Site Code: 0000000000001398902
 Station ID: 00000000000000000000
 SR 315 north of PD

Latitude: 0' 0.000 Undefined

Start Time	26-Aug-05	Northbound	Northbound	Southbound	Southbound	Total
12:00 AM	Fri	*	*	*	*	*
01:00		*	*	*	*	*
02:00		*	*	*	*	*
03:00		*	*	*	*	*
04:00		*	*	*	*	*
05:00		*	*	*	*	*
06:00		*	*	*	*	*
07:00		*	*	*	*	*
08:00		*	*	*	*	*
09:00		*	*	*	*	*
10:00		519	2	2	587	1110
11:00		561	3	0	679	1243
12:00 PM		582	0	6	721	1309
01:00		619	0	7	666	1292
02:00		666	0	2	651	1319
03:00		747	0	7	722	1476
04:00		809	0	0	772	1581
05:00		664	2	2	667	1335
06:00		572	0	1	617	1190
07:00		499	0	2	432	933
08:00		482	1	0	322	805
09:00		390	0	0	308	698
10:00		309	0	2	262	573
11:00		262	0	0	180	442
Total		7681	8	31	7586	15306
Percent		50.2%	0.1%	0.2%	49.6%	
AM Peak		11:00	11:00	10:00	11:00	11:00
Vol.		561	3	2	679	1243
PM Peak		16:00	17:00	13:00	16:00	16:00
Vol.		809	2	7	772	1581

JAMAR TRAX Report
 Clough Harbour & Associates
 III Winners Circle, Albany, NY 12205

Site Code: 0000000000001398902
 Station ID: 000000000000000000
 SR 315 north of PD

Latitude: 0' 0.000 Undefined

Start Time	27-Aug-05 Sat	Northbound	Northbound	Southbound	Southbound	Total
12:00 AM		104	0	2	108	214
01:00		112	0	0	59	171
02:00		102	0	0	28	130
03:00		36	0	1	22	59
04:00		45	0	0	30	75
05:00		80	0	0	76	156
06:00		159	0	1	187	347
07:00		178	0	4	238	420
08:00		263	0	2	380	645
09:00		526	0	1	515	1042
10:00		699	0	9	555	1263
11:00		775	18	6	667	1466
12:00 PM		601	7	2	729	1339
01:00		602	0	2	657	1261
02:00		544	0	4	579	1127
03:00		504	12	2	457	975
04:00		529	0	1	481	1011
05:00		515	0	8	485	1008
06:00		454	0	1	487	942
07:00		416	5	7	408	836
08:00		360	0	1	284	645
09:00		322	0	0	271	593
10:00		294	0	0	254	548
11:00		211	0	0	155	366
Total		8431	42	54	8112	16639
Percent		50.7%	0.3%	0.3%	48.8%	
AM Peak		11:00	11:00	10:00	11:00	11:00
Vol.		775	18	9	667	1466
PM Peak		13:00	15:00	17:00	12:00	12:00
Vol.		602	12	8	729	1339

JAMAR TRAX Report
 Clough Harbour & Associates
 III Winners Circle, Albany, NY 12205

Site Code: 0000000000001398902
 Station ID: 000000000000000000
 SR 315 north of PD

Latitude: 0' 0.000 Undefined

Start Time	28-Aug-05 Sun	Northbound	Northbound	Southbound	Southbound	Total
12:00 AM		125	0	0	82	207
01:00		76	0	2	36	114
02:00		83	0	0	28	111
03:00		33	0	0	18	51
04:00		28	0	0	23	51
05:00		58	0	1	34	93
06:00		84	0	0	102	186
07:00		123	0	1	131	255
08:00		181	0	0	170	351
09:00		203	0	2	266	471
10:00		276	0	0	340	616
11:00		328	0	1	479	808
12:00 PM		394	0	4	548	946
01:00		487	4	0	522	1013
02:00		492	0	0	519	1011
03:00		473	6	2	461	942
04:00		554	0	5	424	983
05:00		466	3	0	355	824
06:00		398	1	1	356	756
07:00		322	0	0	299	621
08:00		250	0	0	193	443
09:00		177	0	3	139	319
10:00		158	0	0	128	286
11:00		104	0	0	76	180
Total		5873	14	22	5729	11638
Percent		50.5%	0.1%	0.2%	49.2%	
AM Peak		11:00		01:00	11:00	11:00
Vol.		328		2	479	808
PM Peak		16:00	15:00	16:00	12:00	13:00
Vol.		554	6	5	548	1013

JAMAR TRAX Report
 Clough Harbour & Associates
 III Winners Circle, Albany, NY 12205

Page 4
 315 REV
 Site Code: 0000000000001398902
 Station ID: 000000000000000000
 SR 315 north of PD

Start Time	29-Aug-05	Latitude: 0' 0.000 Undefined				
Time	Mon	Northbound	Northbound	Southbound	Southbound	Total
12:00 AM		58	0	1	53	
01:00		23	0	0	16	112
02:00		24	0	0	18	39
03:00		32	0	0	17	42
04:00		42	0	0	47	49
05:00		121	0	1	133	89
06:00		338	1	2	327	255
07:00		400	0	7	618	668
08:00		387	2	0	547	1025
09:00		545	1	0	515	936
10:00		560	0	3	564	1061
11:00		730	1	0	570	1127
12:00 PM		728	10	7	654	1301
01:00		738	0	3	599	1399
02:00		644	0	22	592	1340
03:00		721	4	6	697	1258
04:00		773	1	4	660	1428
05:00		644	0	17	619	1438
06:00		512	1	4	480	1280
07:00		418	0	1	403	997
08:00		383	0	2	243	822
09:00		267	0	0	179	628
10:00		163	1	0	112	446
11:00		99	0	0	93	276
Total		9350	22	80	8756	192
Percent		51.4%	0.1%	0.4%	48.1%	18208
AM Peak		11:00	08:00	07:00	07:00	
Vol.		730	2	7	618	11:00
PM Peak		16:00	12:00	14:00	15:00	1301
Vol.		773	10	22	697	16:00
						1438

JAMAR TRAX Report
 Clough Harbour & Associates
 III Winners Circle, Albany, NY 12205

Page 6
 315 REV
 Site Code: 0000000000001398902
 Station ID: 000000000000000000
 SR 315 north of PD

Latitude: 0' 0.000 Undefined

Start Time	31-Aug-05 Wed	Northbound	Northbound	Southbound	Southbound	Total
12:00 AM		75	0	0	47	122
01:00		55	0	0	43	98
02:00		53	0	0	24	77
03:00		32	0	0	20	52
04:00		60	0	1	52	113
05:00		119	0	1	130	250
06:00		303	1	10	350	664
07:00		380	0	9	579	968
08:00		393	0	9	609	1011
09:00		414	0	12	497	923
10:00		424	2	6	499	931
11:00		535	0	379	184	1098
12:00 PM		523	0	424	115	1062
01:00		562	0	348	126	1036
02:00		621	1	342	149	1113
03:00		741	0	412	155	1308
04:00		728	3	476	130	1337
05:00		690	2	453	86	1231
06:00		519	0	439	37	995
07:00		381	0	311	11	703
08:00		360	0	238	8	606
09:00		249	0	208	4	461
10:00		209	0	177	6	392
11:00		127	0	121	2	250
Total		8553	9	4376	3863	16801
Percent		50.9%	0.1%	26.0%	23.0%	
AM Peak		11:00	10:00	11:00	08:00	
Vol.		535	2	379	609	
PM Peak		15:00	16:00	16:00	15:00	
Vol.		741	3	476	155	

JAMAR TRAX Report
 Clough Harbour & Associates
 III Winners Circle, Albany, NY 12205

Page 7
 315 REV
 Site Code: 0000000000001398902
 Station ID: 000000000000000000
 SR 315 north of PD

Latitude: 0' 0.000 Undefined

Start Time	01-Sep-05 Thu	Northbound	Northbound	Southbound	Southbound	Total
12:00 AM		82	1	50	0	
01:00		62	0	45	0	133
02:00		41	0	31	1	107
03:00		54	0	29	0	73
04:00		56	0	47	3	83
05:00		122	0	138	2	106
06:00		321	1	337	38	262
07:00		426	1	624	122	697
08:00		441	1	520	101	1173
09:00		379	0	480	64	1063
10:00		464	0	510	89	923
11:00		540	0	491	93	1063
12:00 PM		531	1	531	108	1124
01:00		547	0	509	41	1171
02:00		602	0	565	0	1097
03:00		733	0	677	0	1167
04:00		711	5	670	1	1410
05:00		1013	0	603	0	1387
06:00		712	2	495	0	1616
07:00		468	0	420	0	1209
08:00		449	0	292	0	888
09:00		345	0	172	0	741
10:00		158	0	159	0	517
11:00		135	0	118	0	317
Total		9392	12	8513	663	253
Percent		50.5%	0.1%	45.8%	3.6%	18580
AM Peak		11:00	00:00	07:00	07:00	
Vol.		540	1	624	122	07:00
PM Peak		17:00	16:00	15:00	12:00	1173
Vol.		1013	5	677	108	17:00
						1616

JAMAR TRAX Report
 Clough Harbour & Associates
 III Winners Circle, Albany, NY 12205

Site Code: 0000000000001398902
 Station ID: 00000000000000000000
 SR 315 north of PD

Latitude: 0' 0.000 Undefined

Start Time	02-Sep-05	Northbound	Northbound	Southbound	Southbound	Total
	Fri					
12:00 AM		86	0	61	0	147
01:00		60	0	48	0	108
02:00		67	2	37	0	106
03:00		43	0	39	0	82
04:00		66	0	41	0	107
05:00		136	0	126	0	262
06:00		305	0	355	0	660
07:00		407	0	597	0	1004
08:00		439	0	592	0	1031
09:00		433	0	507	0	940
10:00		512	0	624	0	1136
11:00		553	1	621	0	1175
12:00 PM		610	0	661	0	1271
01:00		615	0	636	0	1251
02:00		658	0	595	0	1253
03:00		*	*	*	*	*
04:00		*	*	*	*	*
05:00		*	*	*	*	*
06:00		*	*	*	*	*
07:00		*	*	*	*	*
08:00		*	*	*	*	*
09:00		*	*	*	*	*
10:00		*	*	*	*	*
11:00		*	*	*	*	*
Total		4990	3	5540	0	10533
Percent		47.4%	0.0%	52.6%	0.0%	
AM Peak		11:00	02:00	10:00		11:00
Vol.		553	2	624		1175
PM Peak		14:00		12:00		12:00
Vol.		658		661		1271
Grand Total		63090	136	18803	43862	125891
Percent		50.1%	0.1%	14.9%	34.8%	
ADT		Not Calculated				

JAMAR TRAX Report
 Clough Harbour & Associates
 III Winners Circle, Albany, NY 12205

Page 1
 E. MAIN
 Site Code: 0000000000001398903
 Station ID: 000000000000000000
 East Main St east of PD

Latitude: 0' 0.000 Undefined

Start Time	22-Aug-05		Tue		Wed		Thu		Fri		Sat		Sun		Week Average			
	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB		
12:00 AM	*	*	*	*	*	*	*	*	*	*	89	69	90	55	90	62		
01:00	*	*	*	*	*	*	*	*	*	*	91	49	50	28	70	38		
02:00	*	*	*	*	*	*	*	*	*	*	69	49	50	37	60	43		
03:00	*	*	*	*	*	*	*	*	*	*	37	29	26	14	32	22		
04:00	*	*	*	*	*	*	*	*	*	*	19	20	13	13	16	16		
05:00	*	*	*	*	*	*	*	*	*	*	23	65	7	31	15	48		
06:00	*	*	*	*	*	*	*	*	*	*	55	90	24	62	40	76		
07:00	*	*	*	*	*	*	*	*	*	*	74	122	50	72	62	97		
08:00	*	*	*	*	*	*	*	*	*	*	100	150	87	89	94	120		
09:00	*	*	*	*	*	*	*	*	*	*	157	202	96	158	126	180		
10:00	*	*	*	*	*	*	*	*	*	*	213	250	159	187	186	218		
11:00	*	*	*	*	*	*	*	*	*	*	266	260	245	283	230	248		
12:00 PM	*	*	*	*	*	*	*	*	*	*	277	313	266	267	244	279		
01:00	*	*	*	*	*	*	*	*	*	*	270	270	236	237	250	242		
02:00	*	*	*	*	*	*	*	*	*	*	291	251	218	211	232	216		
03:00	*	*	*	*	*	*	*	*	*	*	334	323	208	197	242	238		
04:00	*	*	*	*	*	*	*	*	*	*	372	293	207	171	254	211		
05:00	*	*	*	*	*	*	*	*	*	*	368	293	193	182	260	217		
06:00	*	*	*	*	*	*	*	*	*	*	257	290	196	207	222	220		
07:00	*	*	*	*	*	*	*	*	*	*	210	244	145	187	188	193		
08:00	*	*	*	*	*	*	*	*	*	*	192	185	171	130	165	148		
09:00	*	*	*	*	*	*	*	*	*	*	184	134	155	123	146	115		
10:00	*	*	*	*	*	*	*	*	*	*	178	110	151	92	139	93		
11:00	*	*	*	*	*	*	*	*	*	*	174	95	132	79	125	71		
Lane Day	0	0	0	0	0	0	0	0	0	0	3373	3061	3450	3461	2848	2793	3488	3411
AM											6434	3061	6911	3461	5641	2793	6899	3411
Peak Vol.											11:00	11:00	11:00	11:00	11:00	11:00	11:00	11:00
PM											266	260	245	283	179	200	230	248
Peak Vol.											16:00	15:00	12:00	12:00	13:00	12:00	17:00	12:00
											372	323	266	267	244	257	260	279

JAMAR TRAX Report
 Clough Harbour & Associates
 III Winners Circle, Albany, NY 12205

Page 2
 E. MAIN
 Site Code: 0000000000001398903
 Station ID: 000000000000000000
 East Main St east of PD

Latitude: 0' 0.000 Undefined

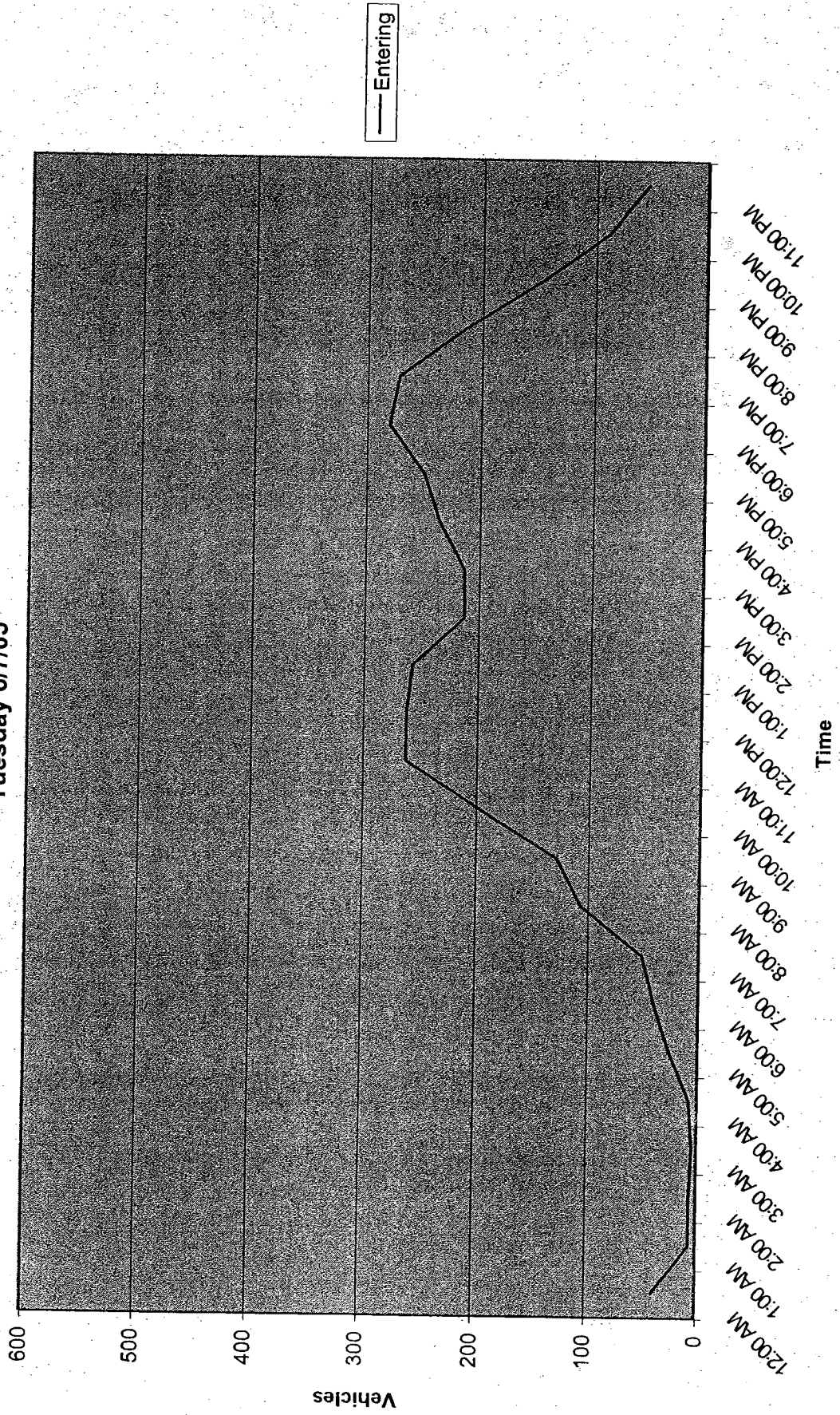
Start Time	29-Aug-05		Tue		Wed		Thu		Fri		Sat		Sun		Week Average	
	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB
12:00 AM	38	29	40	40	91	0	90	19	106	0	*	*	*	*	73	18
01:00	18	13	41	7	81	0	66	13	88	1	*	*	*	*	59	7
02:00	17	6	31	29	62	0	49	10	62	0	*	*	*	*	44	9
03:00	8	8	29	18	43	0	43	14	70	0	*	*	*	*	39	8
04:00	13	25	9	26	49	0	38	6	38	0	*	*	*	*	29	11
05:00	39	85	40	95	124	0	141	6	108	0	*	*	*	*	90	37
06:00	82	181	82	191	248	0	279	16	275	3	*	*	*	*	193	78
07:00	128	290	165	279	449	0	452	31	399	0	*	*	*	*	319	120
08:00	142	281	151	297	455	0	484	3	434	14	*	*	*	*	333	119
09:00	161	205	141	232	379	1	429	1	402	4	*	*	*	*	302	89
10:00	201	210	194	221	397	4	402	3	460	8	*	*	*	*	331	89
11:00	232	257	228	262	473	1	494	2	557	11	*	*	*	*	397	107
12:00 PM	257	279	264	272	515	1	486	0	558	4	*	*	*	*	416	111
01:00	249	252	247	264	461	0	477	1	576	3	*	*	*	*	402	104
02:00	271	216	277	238	524	0	595	0	583	2	*	*	*	*	450	91
03:00	344	288	509	116	676	1	665	5	21	3	*	*	*	*	443	83
04:00	358	246	665	4	636	4	642	3	*	*	*	*	*	*	575	64
05:00	368	258	635	0	570	17	634	7	*	*	*	*	*	*	552	70
06:00	235	176	443	0	481	26	515	1	*	*	*	*	*	*	418	51
07:00	190	201	385	0	341	38	415	16	*	*	*	*	*	*	333	64
08:00	155	137	310	0	264	65	365	6	*	*	*	*	*	*	274	52
09:00	129	109	256	0	217	32	234	1	*	*	*	*	*	*	209	36
10:00	80	71	230	0	192	28	172	0	*	*	*	*	*	*	168	25
11:00	97	78	155	0	171	15	160	0	*	*	*	*	*	*	146	23
Lane Day	3812	3901	5527	2591	7899	233	8327	164	4737	53	0	0	0	0	6595	1466
AM Peak	11:00	07:00	11:00	08:00	11:00	10:00	11:00	07:00	11:00	08:00	0	0	0	0	8061	
PM Peak	17:00	15:00	16:00	12:00	15:00	20:00	15:00	19:00	14:00	12:00						
Vol.	232	290	228	297	473	4	494	31	557	14					397	120
Vol.	368	288	665	272	676	65	665	16	583	4					575	111

Comb. Total 7713 8118 8132 8491 11224 6911 5641 14960
 ADT Not Calculated

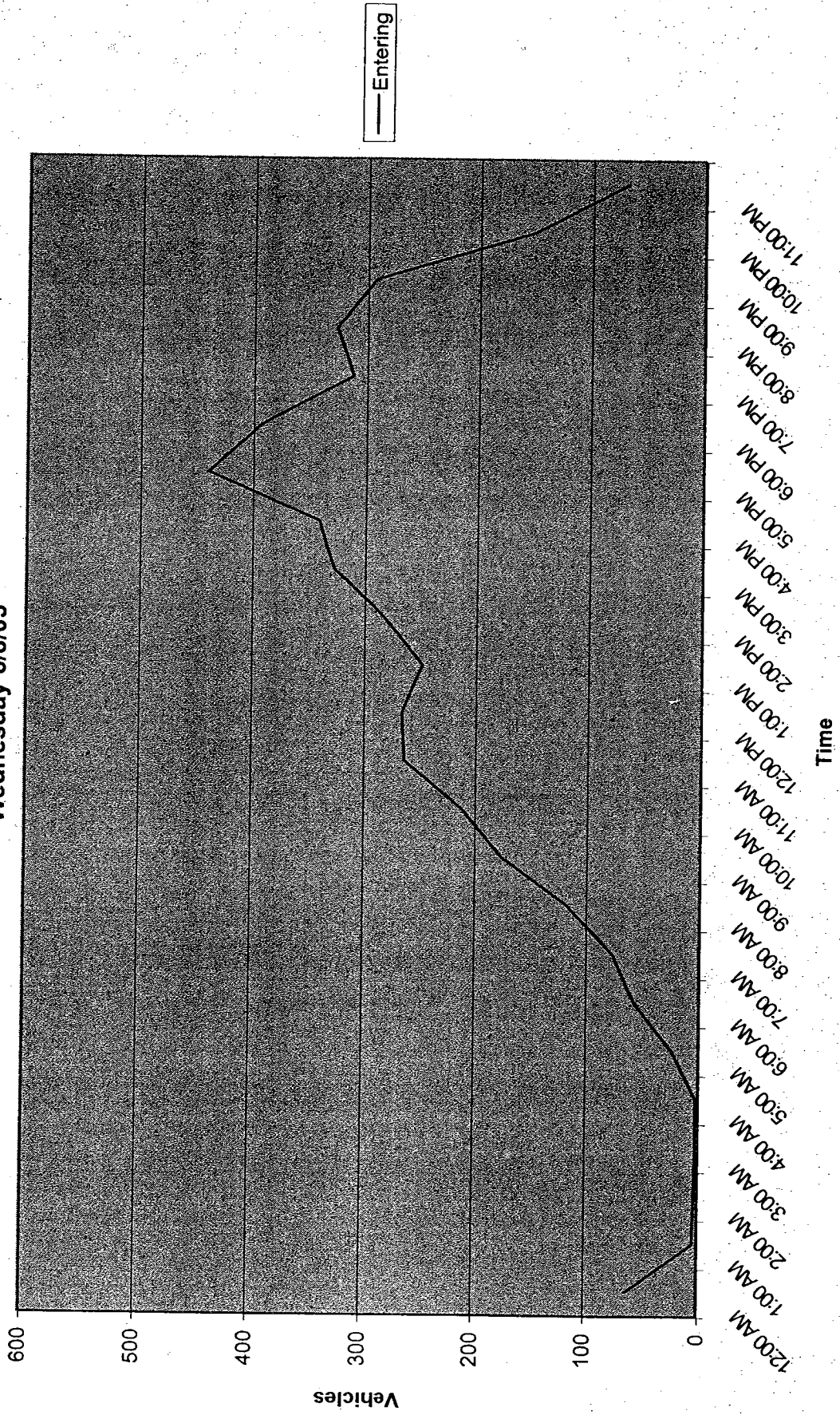
APPENDIX C
CASE-STUDY DATA

BUFFALO RACEWAY		AXLE HITS															
Start Date: 6/7/2005		Tuesday		Wednesday		Thursday		Friday		Saturday		Sunday		Monday		Tuesday	
Start Time: 10:00:00 AM		6/7/2005		6/8/2005		6/9/2005		6/10/2005		6/11/2005		6/12/2005		6/13/2005		6/14/2005	
Time	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total
12:00:00 AM		125	123	115	311	297	128	75									
1:00:00 AM		7	25	14	34	24	10	11									
2:00:00 AM		5	3	8	4	18	6	11									
3:00:00 AM		3	5	14	8	0	0	7									
4:00:00 AM		3	11	8	12	17	10	13									
5:00:00 AM		47	48	50	43	56	38	49									
6:00:00 AM		114	96	93	42	38	58	76									
7:00:00 AM		151	101	99	76	73	103										
8:00:00 AM		232	214	192	206	254	151										
9:00:00 AM		351	260	338	240	389	263										
10:00:00 AM	392	422	399	470	482	564	442										
11:00:00 AM	522	525	425	503	502	719	459										
12:00:00 PM	521	530	535	534	468	801	437										
1:00:00 PM	511	494	666	522	570	760	506										
2:00:00 PM	423	563	691	564	620	665	438										
3:00:00 PM	424	652	833	559	742	611	404										
4:00:00 PM	468	679	926	627	891	559	579										
5:00:00 PM	496	878	1006	801	918	485	489										
6:00:00 PM	557	782	845	838	829	457	652										
7:00:00 PM	541	621	614	768	815	391	397										
8:00:00 PM	427	650	410	792	853	337	367										
9:00:00 PM	292	582	396	726	739	251	239										
10:00:00 PM	173	299	187	507	512	204	118										
11:00:00 PM	103	136	108	294	253	79	98										
TOTAL	5850	8851	8927	9436	10170	8049	6392	242									

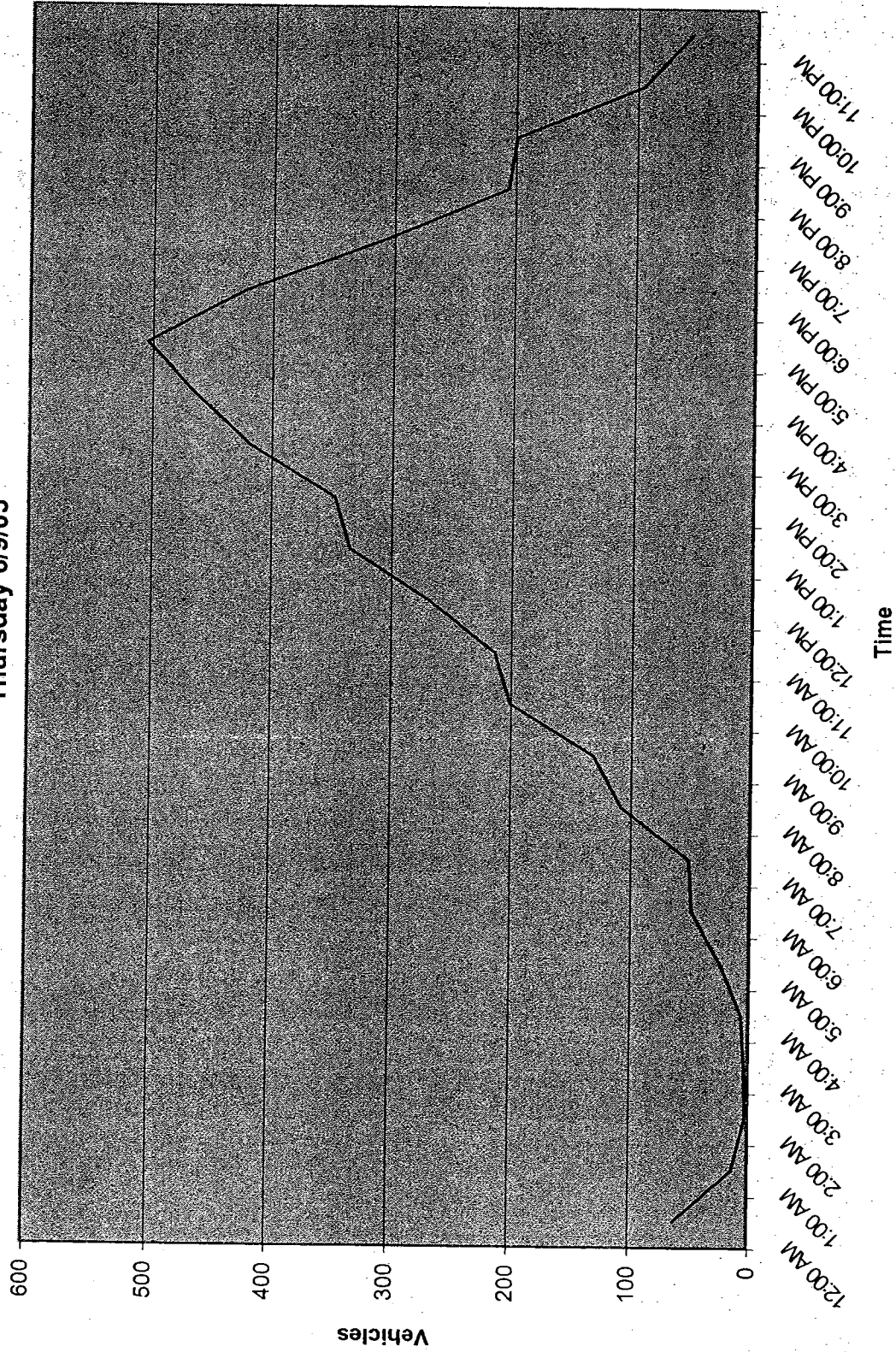
**Hourly Volumes
Buffalo Raceway
Tuesday 6/7/05**



**Hourly Volumes
Buffalo Raceway
Wednesday 6/8/05**

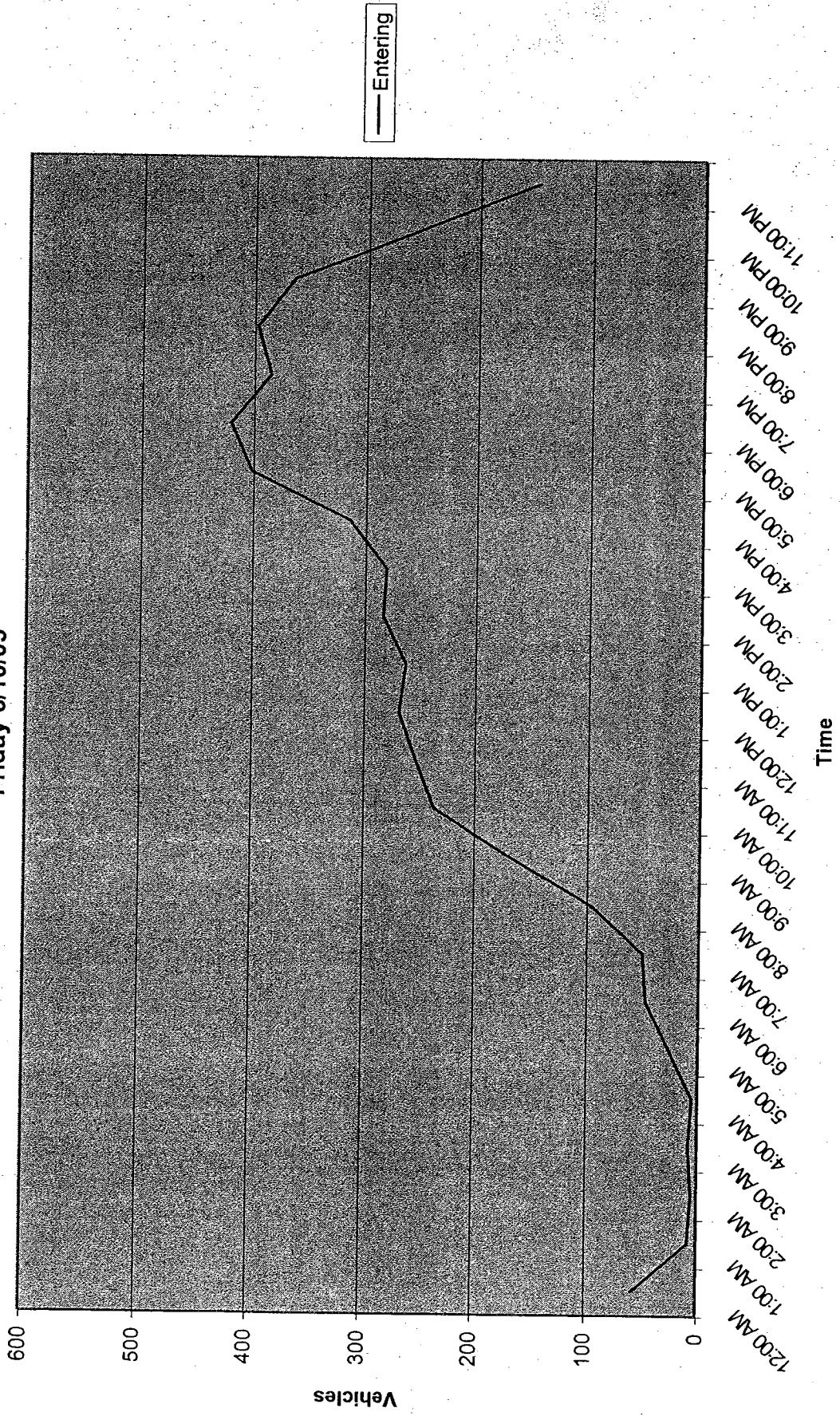


Hourly Volumes
Buffalo Raceway
Thursday 6/9/05

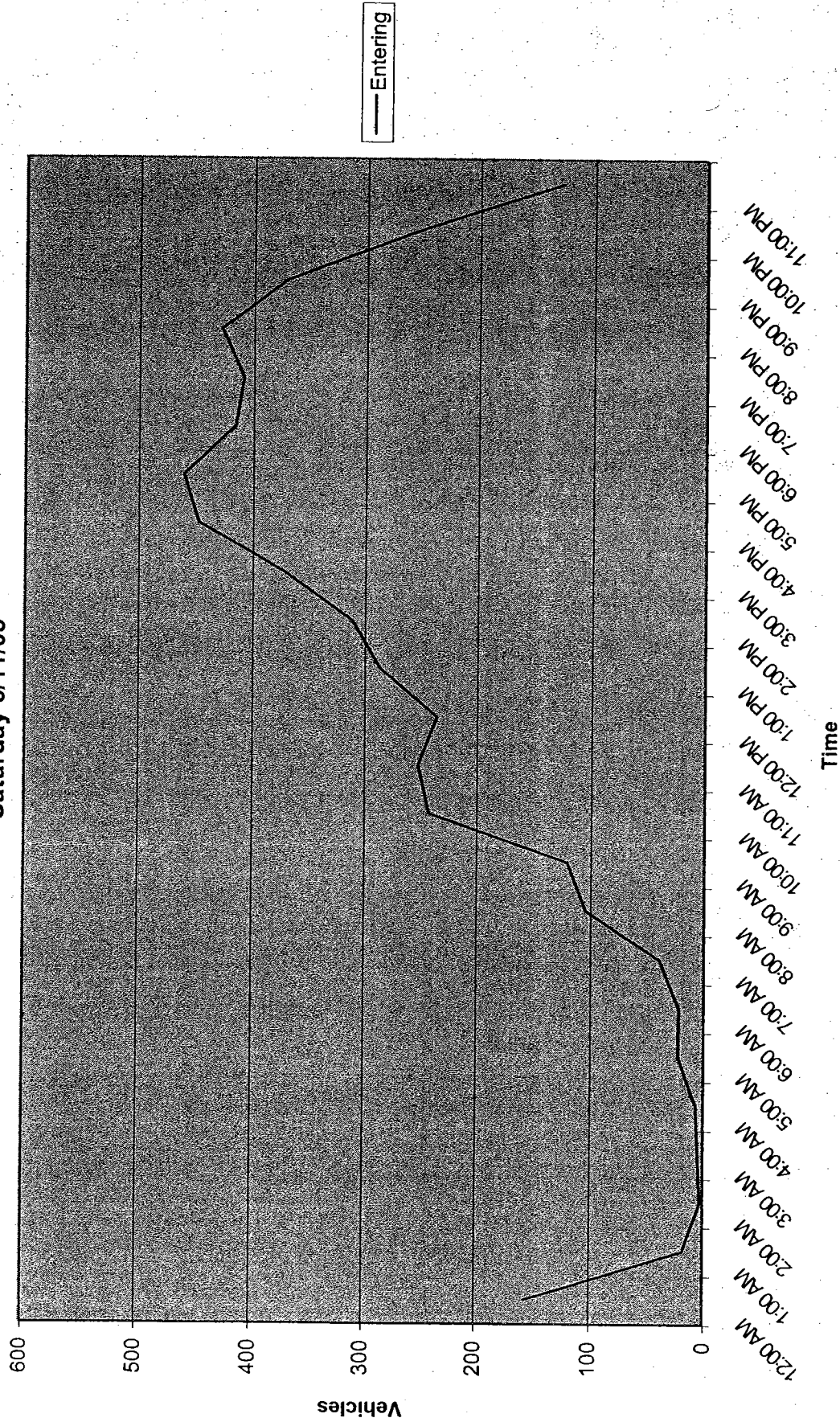


— Entering

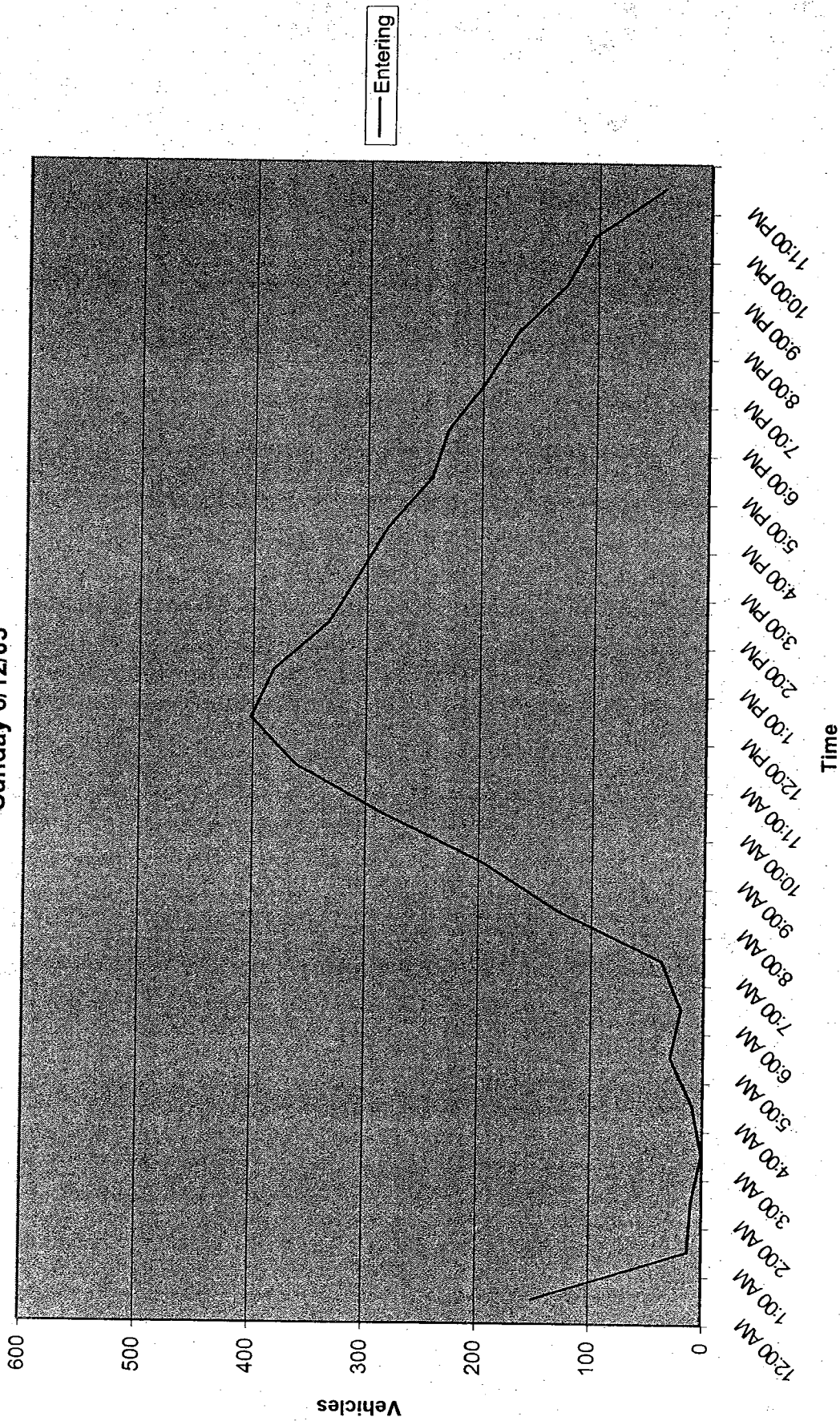
Hourly Volumes
Buffalo Raceway
Friday 6/10/05



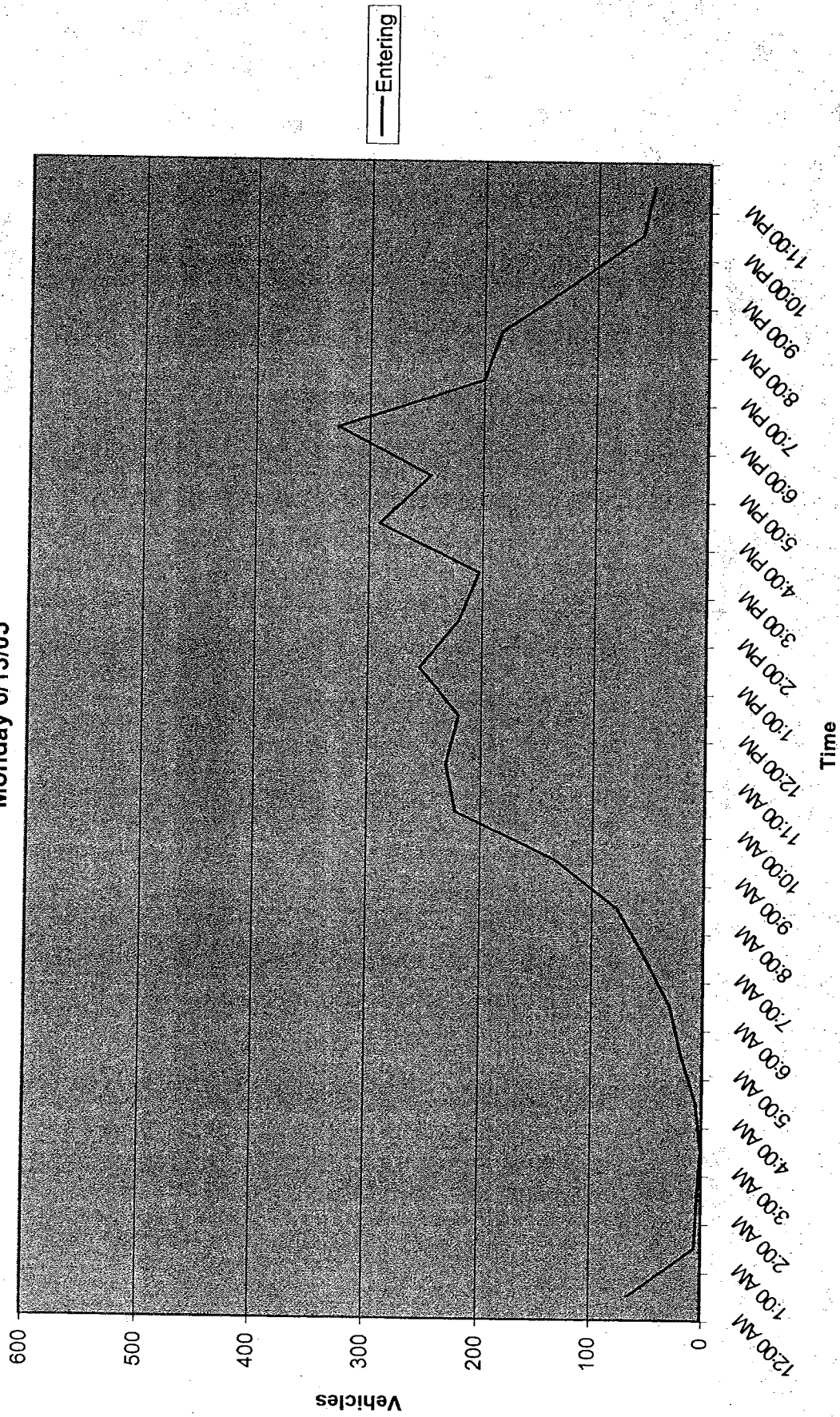
Hourly Volumes
Buffalo Raceway
Saturday 6/11/05



Hourly Volumes
Buffalo Raceway
Sunday 6/12/05



Hourly Volumes
Buffalo Raceway
Monday 6/13/05



Site Code: 100001
 Saratoga Gaming & Raceway
 EB Access Drive @ Jefferson

Time	Friday 8/10/2005		Saturday 8/11/2005		Sunday 8/12/2005		Monday 8/13/2005		Tuesday 8/14/2005		Wednesday 8/15/2005		Thursday 8/16/2005		Friday 8/17/2005		Saturday 8/18/2005		Sunday 8/19/2005		Monday 8/22/2005		
	EB (Entering)	WB (Exiting)	EB (Entering)	WB (Exiting)	EB (Entering)	WB (Exiting)	EB (Entering)	WB (Exiting)	EB (Entering)	WB (Exiting)	EB (Entering)	WB (Exiting)	EB (Entering)	WB (Exiting)	EB (Entering)	WB (Exiting)	EB (Entering)	WB (Exiting)	EB (Entering)	WB (Exiting)	EB (Entering)	WB (Exiting)	
12:00 AM																							
1:00 AM																							
2:00 AM																							
3:00 AM																							
4:00 AM																							
5:00 AM																							
6:00 AM																							
7:00 AM																							
8:00 AM																							
9:00 AM																							
10:00 AM																							
11:00 AM																							
12:00 PM																							
1:00 PM																							
2:00 PM																							
3:00 PM																							
4:00 PM																							
5:00 PM																							
6:00 PM																							
7:00 PM																							
8:00 PM																							
9:00 PM																							
10:00 PM																							
11:00 PM																							
Total	1284	1296	2438	1487	1856	1298	1222	1391	1304	1699	1603	1775	2271	2059	2380	2268	1565	1656	628	393	3241	1021	
2 Way Total			2540		3155		2518	2665		3322		3620	4330		4678		5656		628		1021		

Site Code: 100022
 Saratoga Gaming & Recovery
 NB Entrance Drive @ Crescent

Time	Friday 6/10/2005		Saturday 6/11/2005		Sunday 6/12/2005		Monday 6/13/2005		Tuesday 6/14/2005		Wednesday 6/15/2005		Thursday 6/16/2005		Friday 6/17/2005		Saturday 6/18/2005		Sunday 6/19/2005		Monday 6/20/2005	
	NB (Entering)	SB (Exiting)	NB (Entering)	SB (Exiting)	NB (Entering)	SB (Exiting)	NB (Entering)	SB (Exiting)	NB (Entering)	SB (Exiting)	NB (Entering)	SB (Exiting)	NB (Entering)	SB (Exiting)	NB (Entering)	SB (Exiting)	NB (Entering)	SB (Exiting)	NB (Entering)	SB (Exiting)	NB (Entering)	SB (Exiting)
12:00:00 AM																						
1:00:00 AM	11	78	1	22	1	15	2	11	2	17	2	28	7	27	4	28	13	76	8	125	10	37
2:00:00 AM	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00:00 AM	2	2	1	2	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
6:00:00 AM	2	2	1	2	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
7:00:00 AM	8	4	4	5	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
8:00:00 AM	6	1	25	3	8	4	12	13	3	9	3	6	2	6	3	5	2	2	2	2	2	2
9:00:00 AM	53	9	60	11	27	3	18	5	25	2	35	2	35	5	29	4	75	43	4	9	6	4
10:00:00 AM	84	19	84	57	74	13	58	10	53	13	62	17	68	17	55	13	116	52	56	4	8	3
11:00:00 AM	122	91	150	82	60	43	50	25	55	24	68	45	71	55	90	64	141	81	108	32	45	17
12:00:00 PM	174	108	98	120	52	72	72	72	72	72	72	72	72	72	72	72	72	72	72	72	72	72
1:00:00 PM	146	103	112	85	55	66	66	66	66	66	66	66	66	66	66	66	66	66	66	66	66	66
2:00:00 PM	66	188	74	88	85	43	60	58	58	48	64	64	64	64	64	64	64	64	64	64	64	64
3:00:00 PM	72	70	183	149	70	108	42	60	107	59	130	68	72	74	99	85	159	111	113	100	106	106
4:00:00 PM	82	154	133	149	70	108	42	60	107	59	130	68	72	74	99	85	159	111	113	100	106	106
5:00:00 PM	164	154	154	154	154	154	154	154	154	154	154	154	154	154	154	154	154	154	154	154	154	154
6:00:00 PM	146	69	213	140	40	67	48	51	98	85	148	95	116	55	185	64	245	113	60	75	80	80
7:00:00 PM	139	108	173	140	39	63	42	67	82	100	100	100	100	100	100	100	100	100	100	100	100	100
8:00:00 PM	99	130	129	154	25	63	28	54	27	58	38	135	103	156	102	189	140	84	71	88	88	88
9:00:00 PM	60	176	72	192	20	49	14	48	19	77	20	111	111	100	103	189	140	84	71	88	88	88
10:00:00 PM	36	149	28	176	12	37	4	23	9	42	8	68	14	61	105	151	124	41	41	41	41	41
11:00:00 PM																						
Total	902	828	2066	1978	1101	1315	870	750	829	801	1008	1048	897	1027	1381	1304	1880	1960	1044	1284	287	247
2 Way Total			1828	4082	2416	2616	1402	1630	1630	1630	2057	1984	2095	1984	2695	2695	3950	3950	2044	2338	534	534

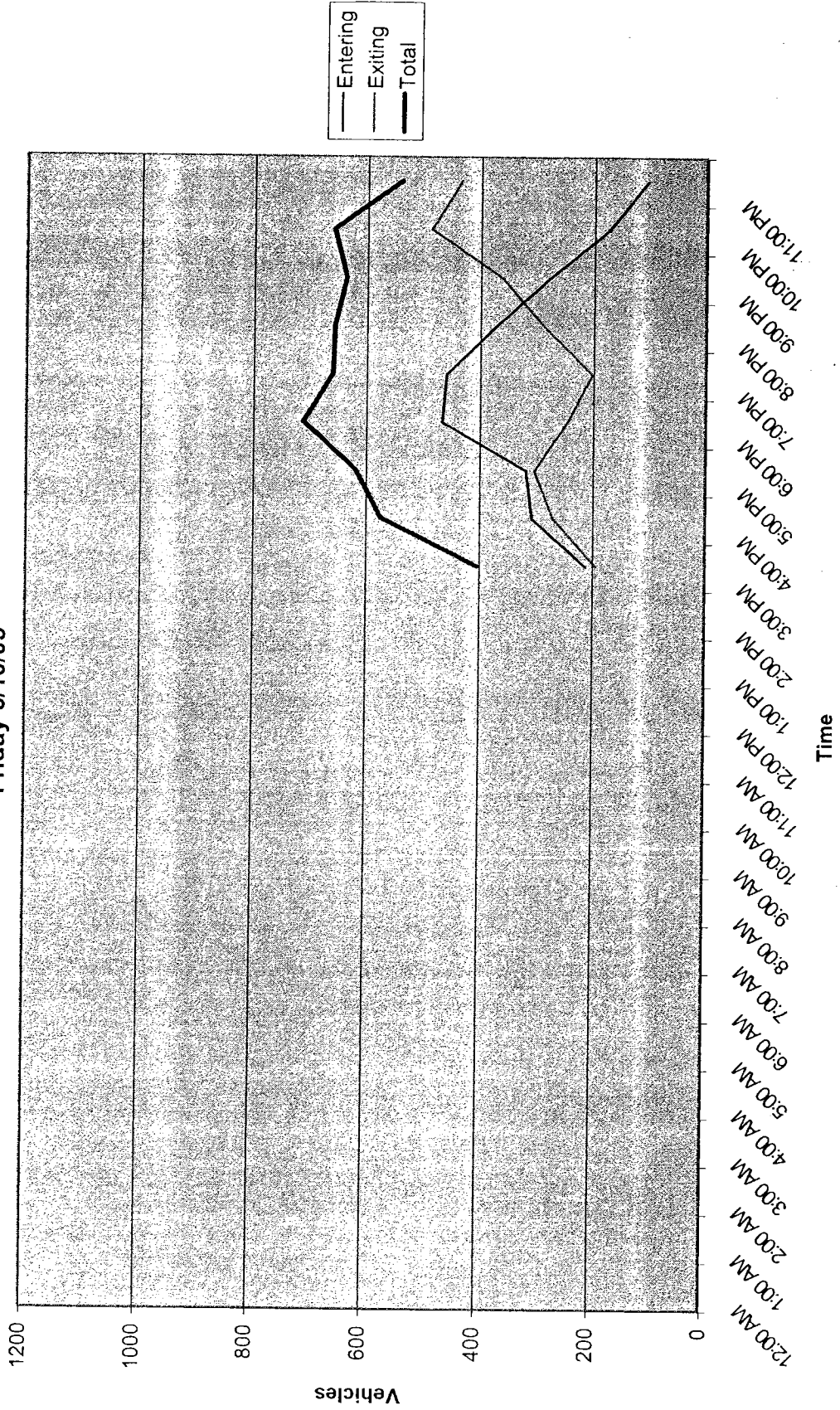
Site Code: 100003
 Streets Cleaning & Rubbery
 WB Acacia Drive South @ Nelson

Time	Friday 6/10/2005		Saturday 6/11/2005		Sunday 6/12/2005		Monday 6/13/2005		Tuesday 6/14/2005		Wednesday 6/15/2005		Thursday 6/16/2005		Friday 6/17/2005		Saturday 6/18/2005		Sunday 6/19/2005		Monday 6/20/2005	
	WB (Entering)	EB (Exiting)	WB (Entering)	EB (Exiting)	WB (Entering)	EB (Exiting)	WB (Entering)	EB (Exiting)	WB (Entering)	EB (Exiting)	WB (Entering)	EB (Exiting)	WB (Entering)	EB (Exiting)	WB (Entering)	EB (Exiting)	WB (Entering)	EB (Exiting)	WB (Entering)	EB (Exiting)	WB (Entering)	EB (Exiting)
12:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:00:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:00:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	158	228	593	672	526	600	172	180	266	227	286	311	316	224	323	271	323	753	256	243	70	48
*2 Wky Total	385	1285	1128	332	483	627	594	1690	499	118												

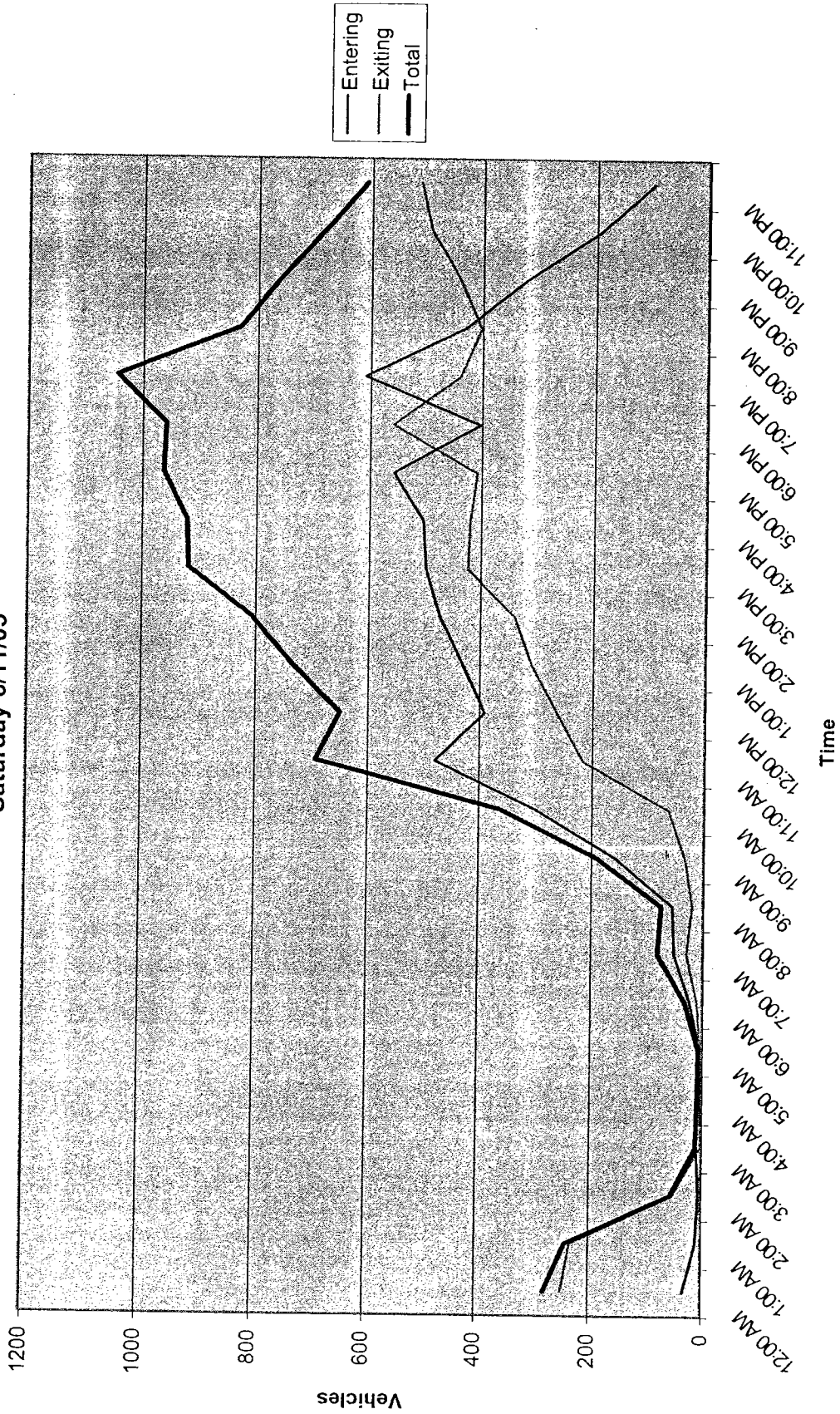
Site Code: 1000004
 Saratoga Gaming & Raceway
 WB Access Drive North @ Nelson

Time	Friday 6/10/2005		Saturday 6/11/2005		Sunday 6/12/2005		Monday 6/13/2005		Tuesday 6/14/2005		Wednesday 6/15/2005		Thursday 6/16/2005		Friday 6/17/2005		Saturday 6/18/2005		Sunday 6/19/2005		Monday 6/20/2005																					
	WB (Entering)	EB (Exiting)	WB (Entering)	EB (Exiting)	WB (Entering)	EB (Exiting)	WB (Entering)	EB (Exiting)	WB (Entering)	EB (Exiting)	WB (Entering)	EB (Exiting)	WB (Entering)	EB (Exiting)	WB (Entering)	EB (Exiting)	WB (Entering)	EB (Exiting)	WB (Entering)	EB (Exiting)	WB (Entering)	EB (Exiting)																				
12:00:00 AM																																										
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10:00:00 PM																																										
11:00:00 PM																																										
Total	328	355	839	781	563	596	283	257	341	337	434	438	507	481	565	544	824	818	404	473	99	104																				
2 Way Total																							683	1820	1152	876	948	1108	1842	877	203											

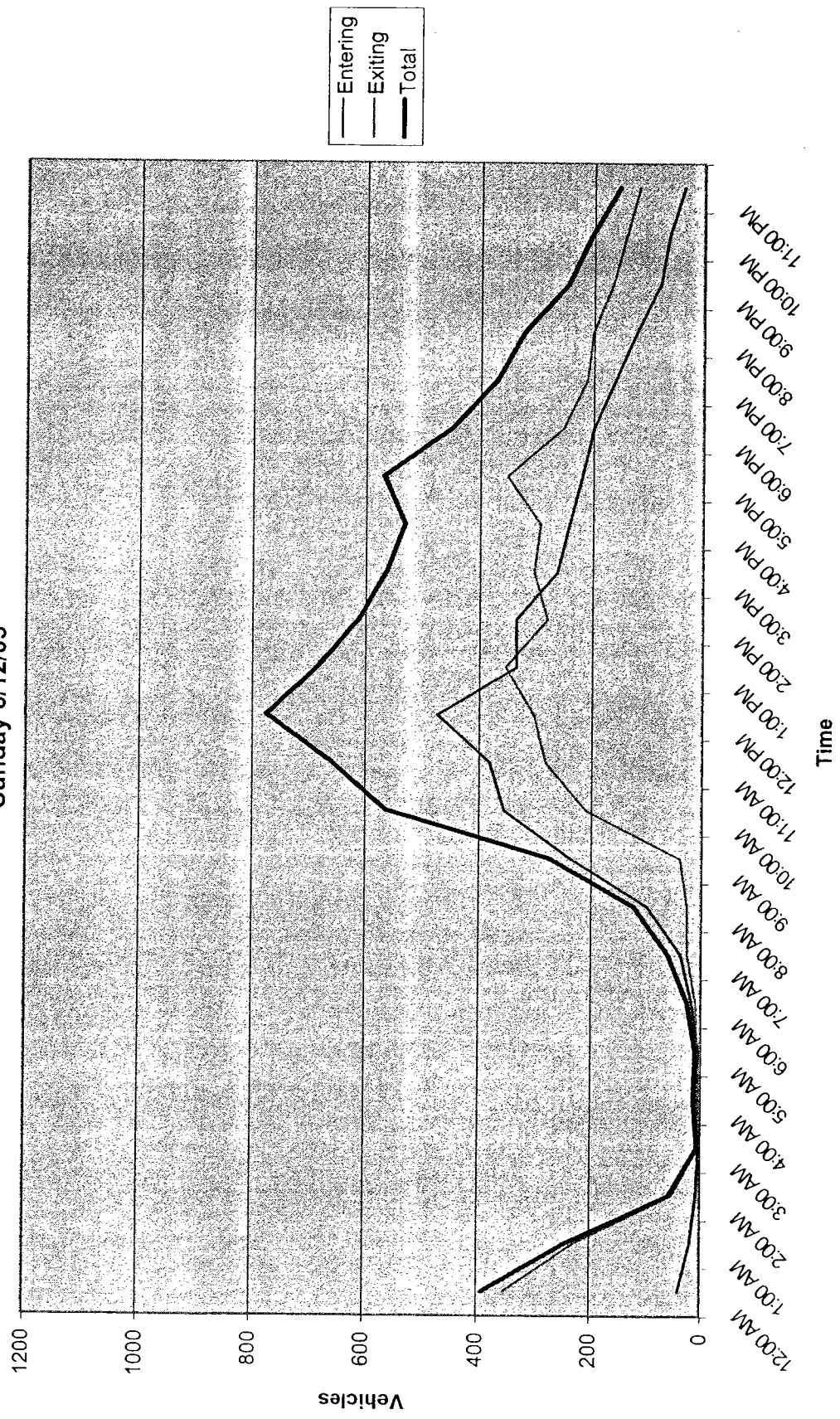
Hourly Volumes
Saratoga Gaming & Raceway
Friday 6/10/05



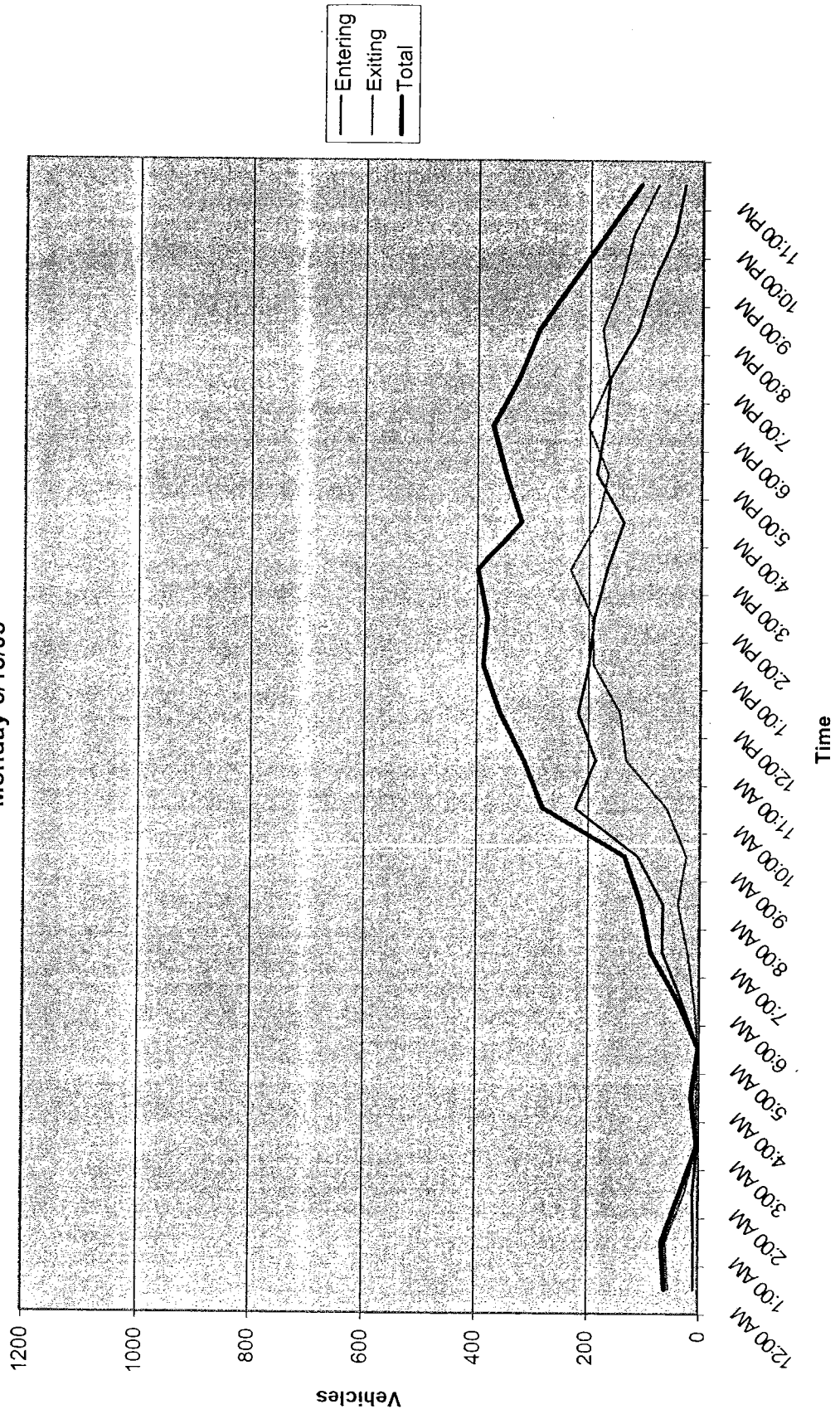
Hourly Volumes
Saratoga Gaming & Raceway
Saturday 6/11/05



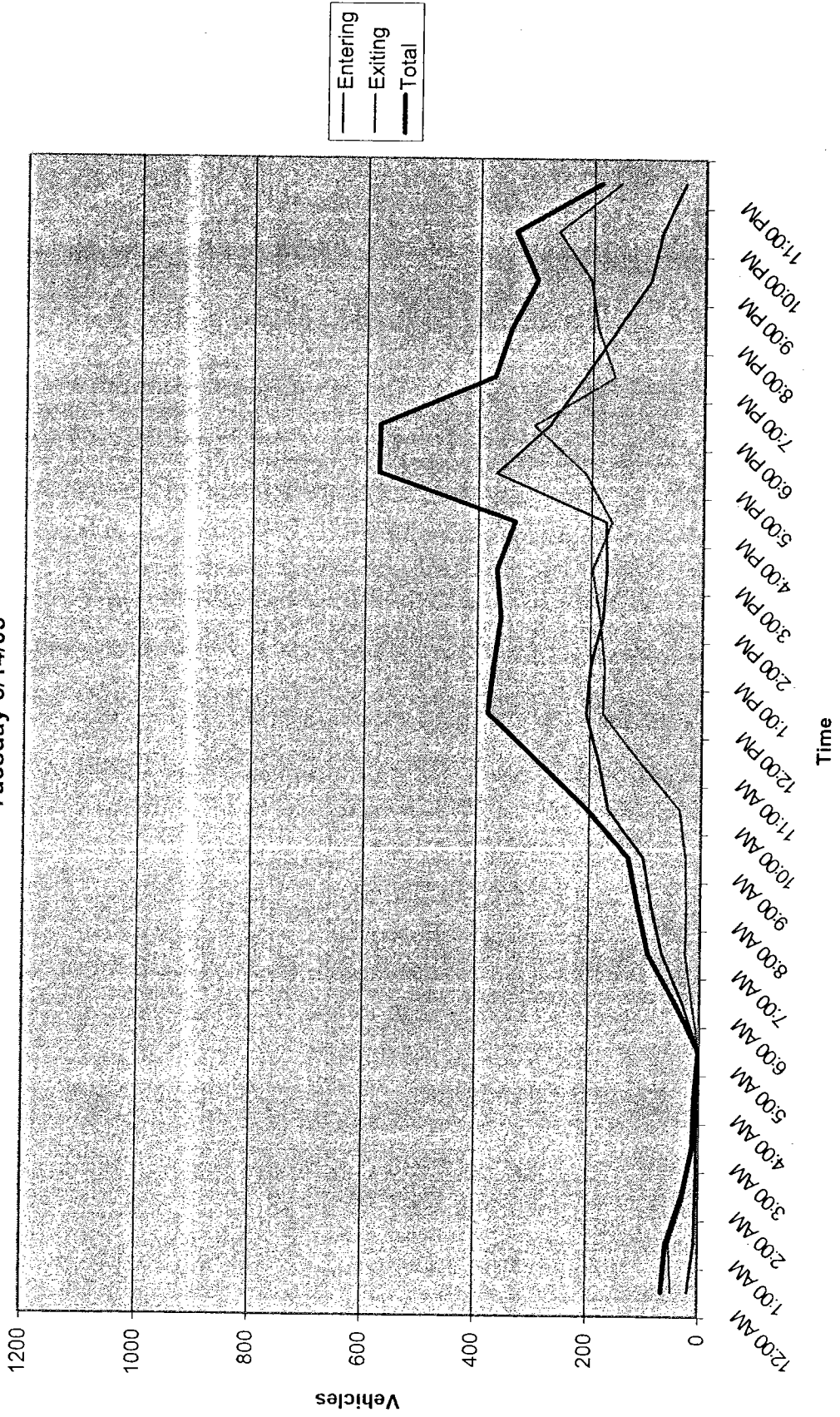
Hourly Volumes
Saratoga Gaming & Raceway
Sunday 6/12/05



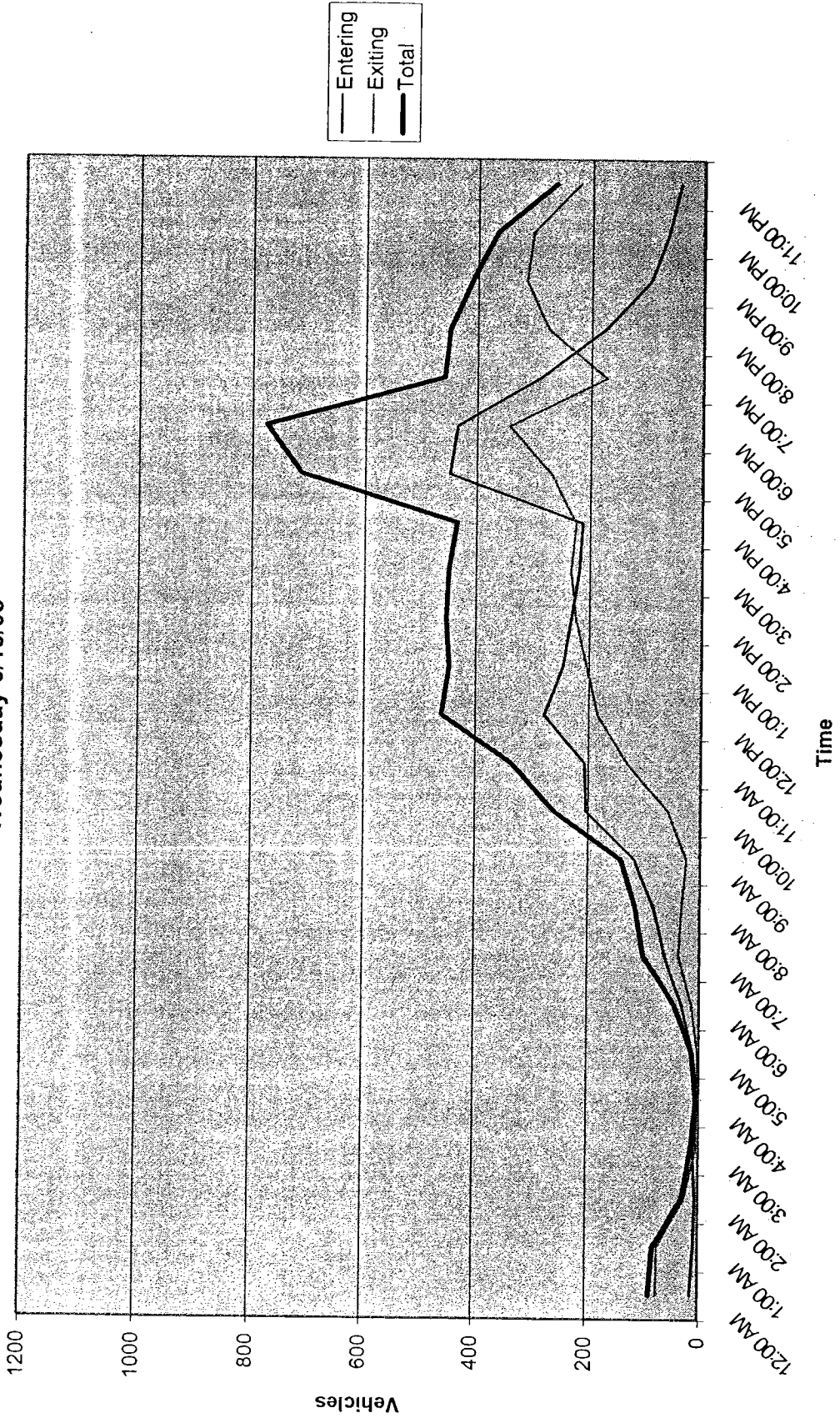
Hourly Volumes
 Saratoga Gaming & Raceway
 Monday 6/13/05



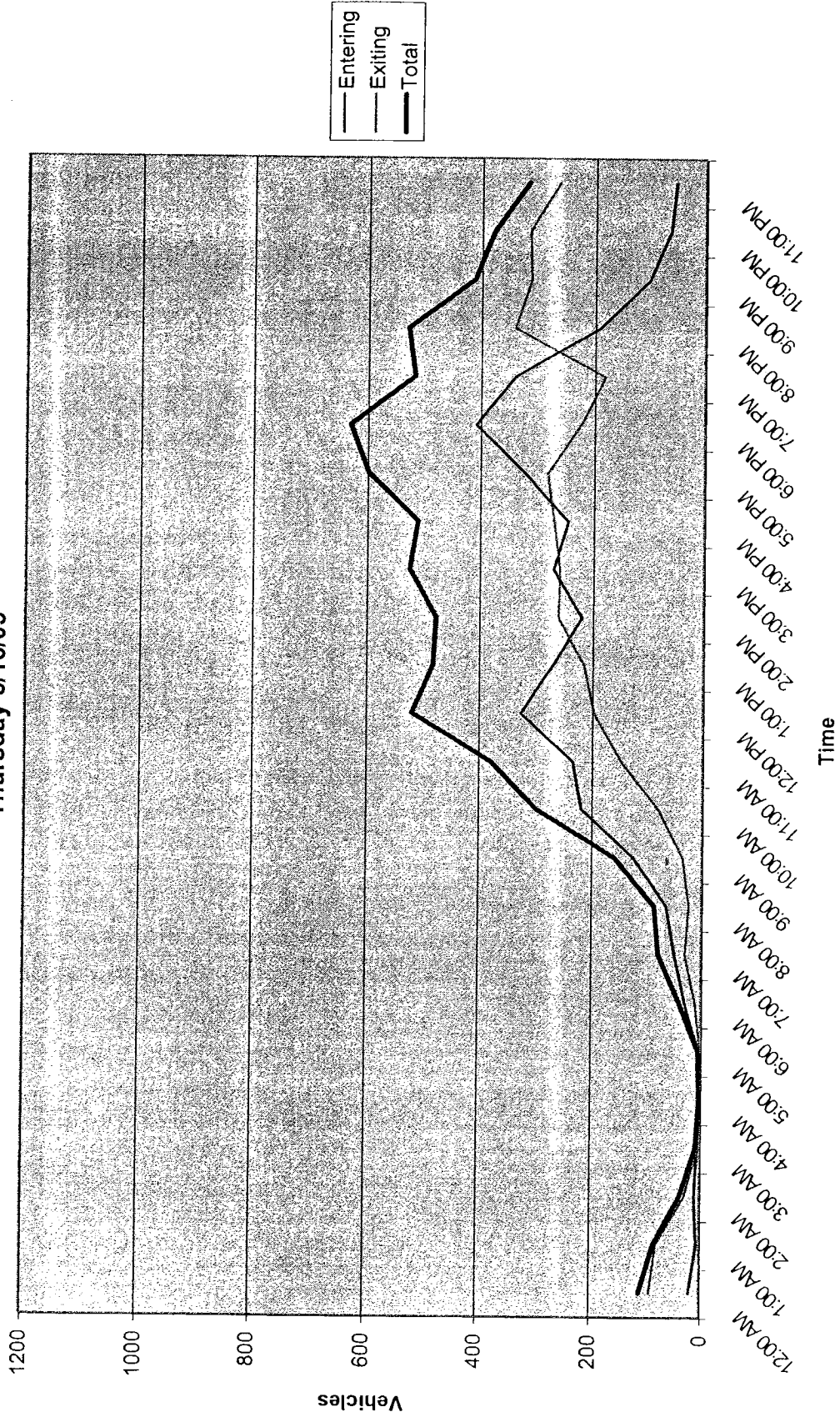
Hourly Volumes
Saratoga Gaming & Raceway
Tuesday 6/14/05



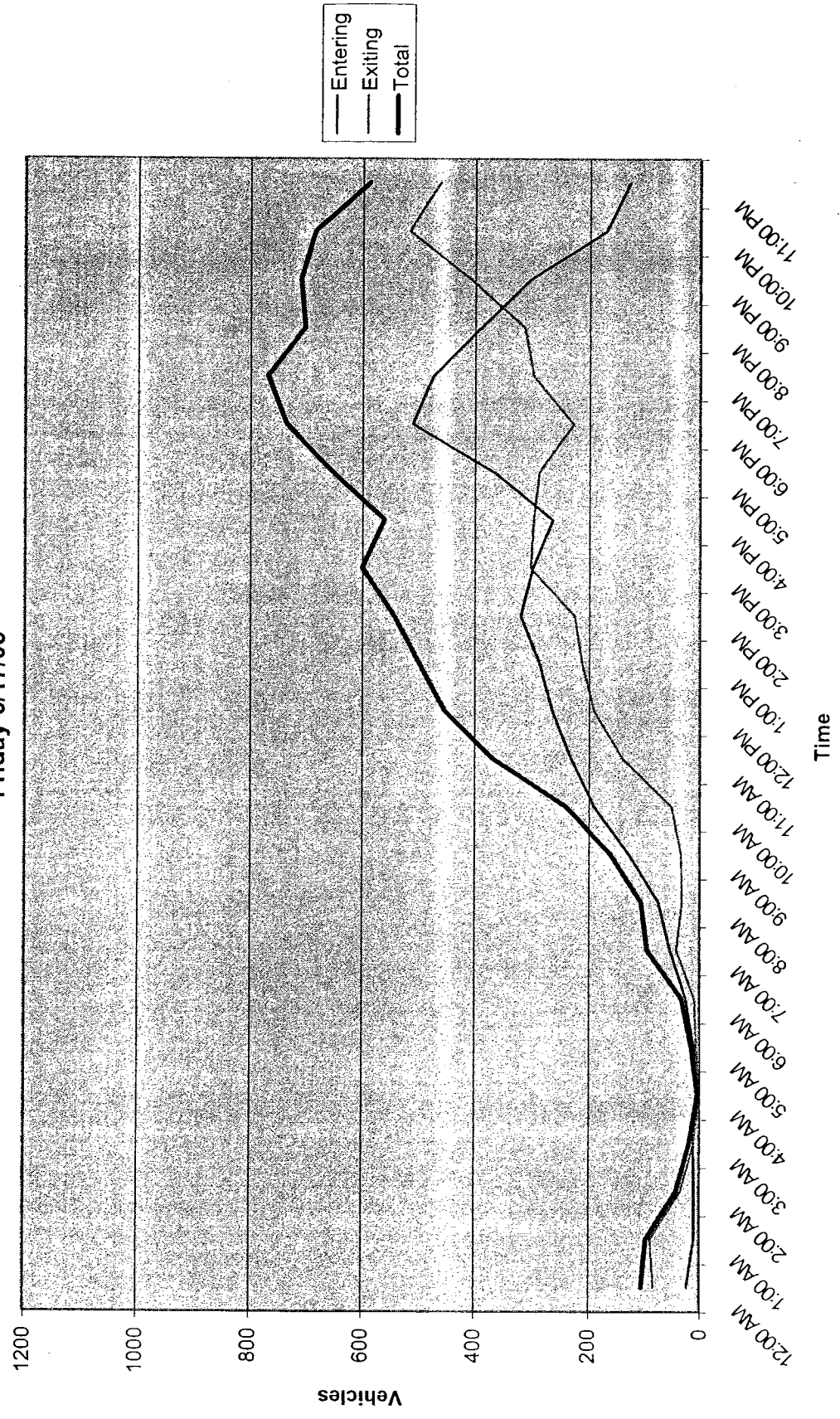
Hourly Volumes
Saratoga Gaming & Raceway
Wednesday 6/15/05



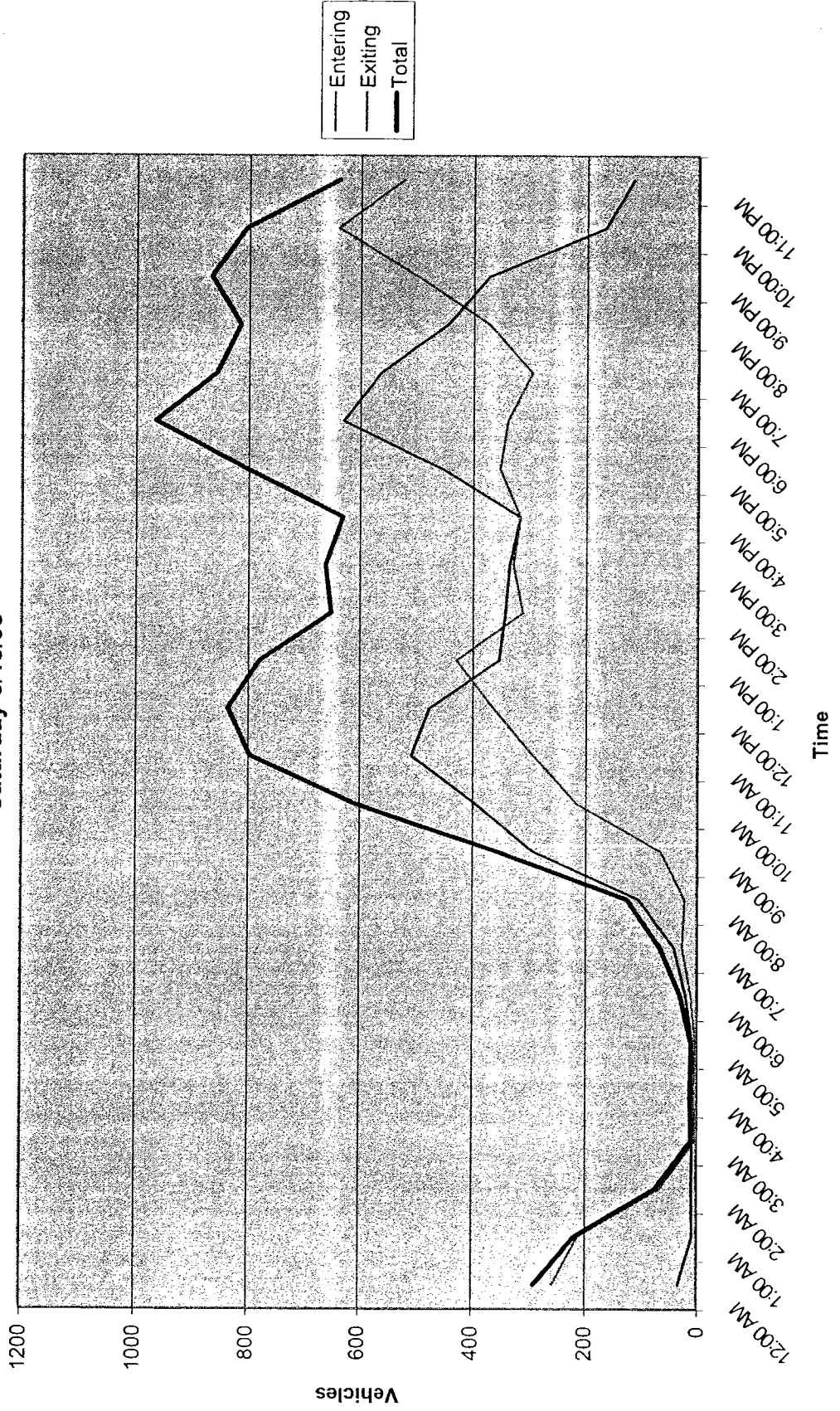
Hourly Volumes
Saratoga Gaming & Raceway
Thursday 6/16/05



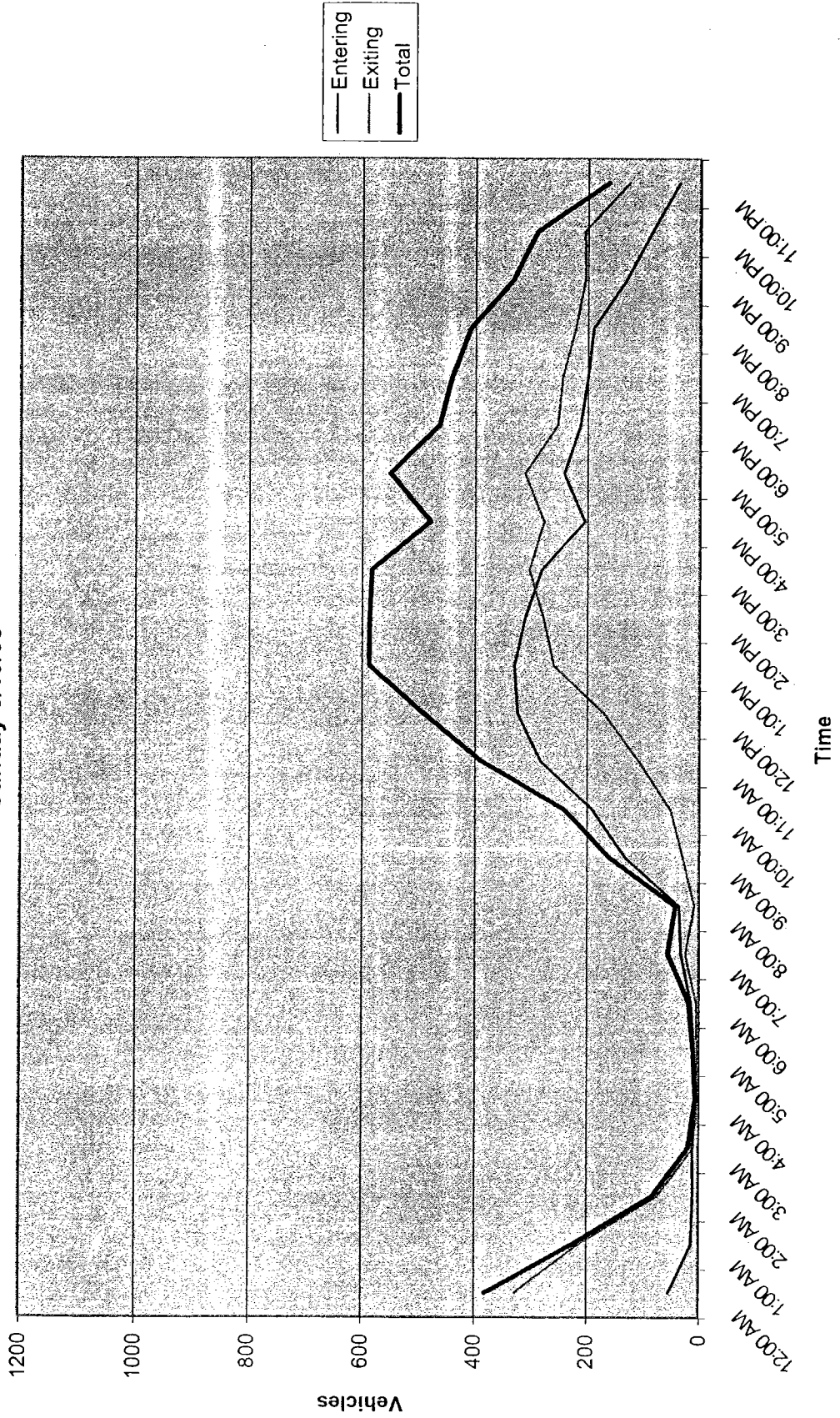
Hourly Volumes
Saratoga Gaming & Raceway
Friday 6/17/05



Hourly Volumes
Saratoga Gaming & Raceway
Saturday 6/18/05



Hourly Volumes
Saratoga Gaming & Raceway
Sunday 6/19/05

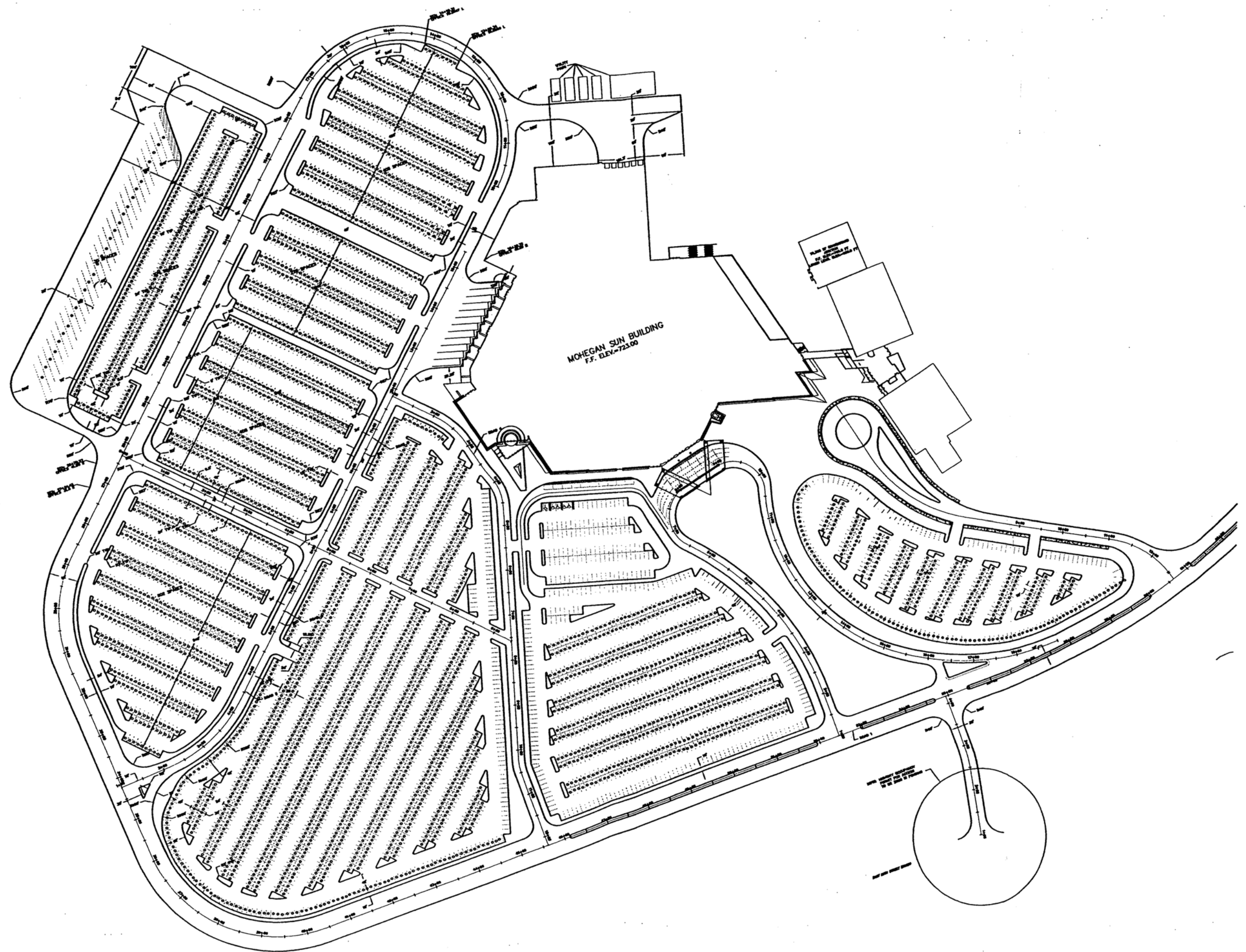


Start Time	06-Jun-05		Tue		Wed		Thu		Fri		Sat		Sun		Week Average	
	Chan 1	Chan 2	Chan 1	Chan 2	Chan 1	Chan 2	Chan 1	Chan 2	Chan 1	Chan 2	Chan 1	Chan 2	Chan 1	Chan 2	Chan 1	Chan 2
12:00	*	*	*	*	1	125	0	123	0	115	1	311	1	297	1	194
AM	*	*	*	*	1	7	0	25	0	14	1	34	1	24	1	21
01:00	*	*	*	*	1	5	0	3	0	8	1	4	1	18	1	8
02:00	*	*	*	*	1	3	0	5	0	14	1	8	1	0	1	6
03:00	*	*	*	*	1	3	0	11	0	8	1	12	1	17	1	10
04:00	*	*	*	*	1	47	0	48	0	50	1	43	1	56	1	49
05:00	*	*	*	*	1	114	0	96	0	93	1	42	1	38	1	77
06:00	*	*	*	*	1	151	0	101	0	99	1	76	1	73	1	100
07:00	*	*	*	*	3	232	0	214	1	192	1	206	2	254	1	220
08:00	*	*	*	*	1	351	0	260	1	338	1	240	0	389	1	316
09:00	*	*	*	*	1	422	0	399	1	470	1	482	0	564	1	455
10:00	*	*	*	*	1	525	0	425	1	503	1	502	1	719	1	533
11:00	*	*	*	*	1	521	0	535	3	534	1	468	1	801	1	565
PM	*	*	*	*	1	494	0	666	2	522	1	570	1	760	1	587
01:00	*	*	*	*	1	563	0	691	0	564	1	620	1	665	1	588
02:00	*	*	*	*	2	423	0	833	0	559	1	742	1	611	1	637
03:00	*	*	*	*	1	424	0	833	0	559	1	742	1	611	1	637
04:00	*	*	*	*	1	468	0	926	0	627	1	891	1	559	1	692
05:00	*	*	*	*	2	496	0	1006	0	801	1	918	1	485	1	764
06:00	*	*	*	*	1	557	0	845	0	838	1	829	1	457	1	718
07:00	*	*	*	*	1	541	0	614	0	768	1	815	1	391	1	625
08:00	*	*	*	*	2	427	0	410	0	792	1	853	1	337	1	578
09:00	*	*	*	*	0	292	0	396	0	726	1	739	1	251	0	498
10:00	*	*	*	*	0	173	0	187	1	507	1	512	2	204	1	314
11:00	*	*	*	*	0	103	0	108	1	294	1	253	0	79	0	162
Lane	0	0	13	5850	25	8851	0	8927	11	9436	24	10170	24	8049	21	8717
Day	0	0	5863	8876	8876	9447	8927	8927	9447	10194	8073	8738	8738	8738	8738	8738
AM	10:00	11:00	07:00	11:00	11:00	08:00	11:00	11:00	00:00	11:00	08:00	11:00	11:00	11:00	00:00	11:00
Peak	1	522	3	525	425	1	503	503	1	502	2	719	2	719	1	533
Vol.	16:00	18:00	14:00	17:00	17:00	12:00	18:00	17:00	12:00	17:00	22:00	12:00	12:00	12:00	12:00	17:00
PM	2	557	2	878	1006	3	838	838	1	918	2	801	2	801	1	764
Peak	2	557	2	878	1006	3	838	838	1	918	2	801	2	801	1	764
Vol.	16:00	18:00	14:00	17:00	17:00	12:00	18:00	17:00	12:00	17:00	22:00	12:00	12:00	12:00	12:00	17:00

Start Time	13-Jun-05		Tue		Wed		Thu		Fri		Sat		Sun		Week Average	
	Chan 1	Chan 2	Chan 1	Chan 2	Chan 1	Chan 2	Chan 1	Chan 2	Chan 1	Chan 2	Chan 1	Chan 2	Chan 1	Chan 2	Chan 1	Chan 2
12:00																
AM	0	128	0	75	*	*	*	*	*	*	*	*	*	*	0	102
01:00	0	10	0	11	*	*	*	*	*	*	*	*	*	*	0	10
02:00	0	6	0	11	*	*	*	*	*	*	*	*	*	*	0	8
03:00	0	0	0	7	*	*	*	*	*	*	*	*	*	*	0	4
04:00	0	10	0	13	*	*	*	*	*	*	*	*	*	*	0	12
05:00	0	38	0	49	*	*	*	*	*	*	*	*	*	*	0	44
06:00	0	58	0	76	*	*	*	*	*	*	*	*	*	*	0	67
07:00	0	103	0	*	*	*	*	*	*	*	*	*	*	*	0	103
08:00	0	151	0	*	*	*	*	*	*	*	*	*	*	*	0	151
09:00	0	263	0	*	*	*	*	*	*	*	*	*	*	*	0	263
10:00	0	442	0	*	*	*	*	*	*	*	*	*	*	*	0	442
11:00	0	459	0	*	*	*	*	*	*	*	*	*	*	*	0	459
12:00																
PM	0	437	0	*	*	*	*	*	*	*	*	*	*	*	0	437
01:00	1	506	0	*	*	*	*	*	*	*	*	*	*	*	1	506
02:00	2	438	0	*	*	*	*	*	*	*	*	*	*	*	2	438
03:00	0	404	0	*	*	*	*	*	*	*	*	*	*	*	0	404
04:00	0	579	0	*	*	*	*	*	*	*	*	*	*	*	0	579
05:00	0	489	0	*	*	*	*	*	*	*	*	*	*	*	0	489
06:00	1	652	0	*	*	*	*	*	*	*	*	*	*	*	1	652
07:00	1	397	0	*	*	*	*	*	*	*	*	*	*	*	1	397
08:00	1	367	0	*	*	*	*	*	*	*	*	*	*	*	1	367
09:00	2	239	0	*	*	*	*	*	*	*	*	*	*	*	2	239
10:00	0	118	0	*	*	*	*	*	*	*	*	*	*	*	0	118
11:00	0	98	0	*	*	*	*	*	*	*	*	*	*	*	0	98
Lane	8	6392	1	242	0	0	0	0	0	0	0	0	0	0	8	6397
Day	6400		243													
AM			11:00	06:00												11:00
Peak			459	76												459
PM																
Peak	14:00	18:00														14:00
Vol.	2	652													2	652

Comb. Total 6400 6106 8876 8927 9447 10194 8073 15135
 ADT Not Calculated

APPENDIX D
PROPOSED SITE LAYOUT



MOHEGAN SUN BUILDING
F.F. ELEV.=723.00

N.T.S.

APPENDIX E
CALCULATIONS



CHA COMPUTATION PAD

COMPLETED BY: CLD

CHECKED BY: EJD

PROJECT NAME: POCONO DOWNS

PROJECT LOCATION: WILKES-BARRE, PA

PROJECT	PHASE	ORG
13989	1012	1318
SHEET #: <u>1</u> OF <u>2</u>		
DATE: <u>10/13/05</u>		
SUBJECT: <u>trip gen</u>		

*CASINO (2,000 SLOTS)

DAILY

FRIDAY → 5.50 trips per slot * 2,000 = 11,000 trips

SATURDAY → 7.50 trips per slot * 2,000 = 15,000 trips

PEAK HOURS

FRI PM → 0.425 trips per slot * 2,000 = 850 trips
50% enter, 50% exit = 425 in, 425 out

SAT MID → 0.572 trips per slot * 2,000 = 1144 trips
57% enter, 43% exit = 652 in; 492 out

SAT PM → 0.397 trips per slot * 2,000 = 794 trips
43% enter, 57% exit = 341 in, 453 out

*RESTAURANTS - QUALITY (265 seats; 8,300 SF) - LOC. 931

DAILY

FRIDAY → Avg. rate = 2.86 * 265 seats = 758 trips
50% enter, 50% exit = 377 in, 379 out

SATURDAY → Avg. rate = 2.81 * 265 seats = 744 trips
50% enter, 50% exit = 372 in, 372 out

PEAK HOURS

FRI PM → $T = 0.40(x) - 31.48 = 0.40(265) - 31.48 = 75$ trips
59% enter, 41% exit = 44 in, 31 out

SAT MID → $T = 0.38(x) - 16.72 = 0.38(265) - 16.72 = 84$ trips
SAT PM → 59% enter, 41% exit = 50 in, 34 out



CHA COMPUTATION PAD

COMPLETED BY: CLD
 CHECKED BY: EJD
 PROJECT NAME: POCONO DOWNS
 PROJECT LOCATION: WILKES-BARRE, PA

PROJECT: 13989 PHASE: 1012 ORG: 1310
 SHEET #: 2 OF 2
 DATE: 10/13/05
 SUBJECT: trip gen

* RESTAURANTS - HIGH TURNOVER (200 seats; 12,000 SF) - LUC 932

DAILY

FRIDAY → Avg rate = $4.83 \times 200 \text{ seats} = 966 \text{ trips}$
 50% enter, 50% exit = 483 in, 483 out

SATURDAY → Avg rate = $6.21 \times 200 \text{ seats} = 1242 \text{ trips}$
 50% enter, 50% exit = 621 in, 621 out

PEAK HOURS

FRI PM → Avg. rate = $0.82 \times 200 \text{ seats} = 164 \text{ trips}$
 55% enter, 45% exit = 90 in, 74 out

SAT PM → Avg. rate = $0.88 \times 200 \text{ seats} = 176 \text{ trips}$
 SAT MID → 58% enter, 42% exit = 102 in, 74 out

* NIGHTCLUB

DAILY

2,200 occupants * 80% avg. occupancy = 1,760 avg. peak occ.

Assume 2.5 people/veh = 704 vehicles ⇒ peak accumulation
 assume this peak accumulation occurs @ 1am & that
 avg stay = 3 hrs.

Time	Occupancy	Vehicles	Enter/Exit	Duration
9 pm	open			
10 pm	20% acc	141	(141 enter, 0 exit)	9-10 pm
11 pm	40% acc	282	(141 enter, 0 exit)	10-11 pm
12 am	80% acc	563	(282 enter, 0 exit)	11-12 am
1 am	100% acc	704	(282 enter, 141 exit)	12-1 am
2 am	80%	563	(0 enter, 141 exit)	1-2 am
3 am	40%	282	(0 enter, 282 exit)	2-3 am
4 am	0%	0	(0 enter, 282 exit)	3-4 am

846 enter, 846 exit

1692 total trips

COMPLETED BY: OLD
 CHECKED BY: EJD
 PROJECT NAME: POCONO DOWNS
 PROJECT LOCATION: WILKES-BARRE, PA

PROJECT	PHASE	ORG
13989	1012	1310
SHEET #:	1	OF 1
DATE:	10/14/05	
SUBJECT:	SIGNAL WARRANT	

2007 (ETC) VOLUMES

	MAJOR	MINOR
FRIDAY PM	1727	522
SAT MID	2187	584
SAT PM	1569	557

These all exceed requirements for meeting peak hour warrant
 For an "average" day, volumes from ATR counts give us:

SR 315 NB → 666
 SR 315 SB → 642

1308 major street (2005) ⇒ 1361 (2007)

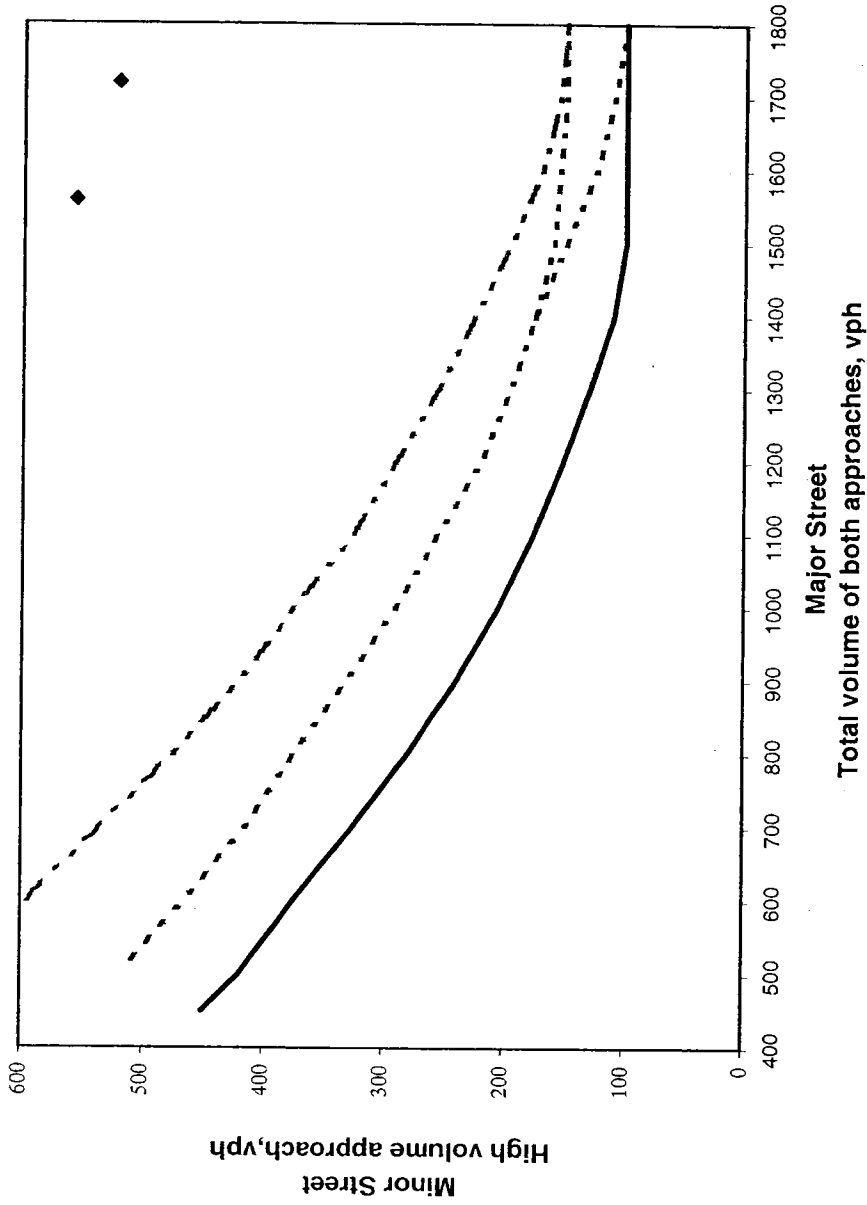
Minor street (site) would have to be ≥ 235 in order to meet warrant in 2007.

Friday PM peak hour volume = 522

$$522 - 235 = \frac{287}{522} = 55\% \text{ reduction from Friday PM peak hour would still meet warrant}$$

Case-study data → avg weekday (Tu-Th) was only 14% lower than Friday

Figure 4C-3. Warrant 3, Peak Hour



Note: Points on graph represent hourly volumes. Points above the respective curve satisfy warrant, points below do not satisfy warrant.

APPENDIX F
LEVEL OF SERVICE CRITERIA

From the *Highway Capacity Manual 2000* published by the Transportation Research Board:

Signalized Intersections

LOS CRITERIA FOR SIGNALIZED INTERSECTIONS

LOS	Control Delay per Vehicle (s/veh)*
A	≤ 10
B	> 10-20
C	> 20-35
D	> 35-55
E	> 55-80
F	> 80

Highway Capacity Manual 2000

* s/veh = seconds per vehicle

LOS A describes operations with low control delay, up to 10 s/veh. This LOS occurs when progression is extremely favorable and most vehicles arrive during the green phase. Most vehicles do not stop at all. Short cycle lengths may tend to contribute to low delay values.

LOS B describes operations with control delay greater than 10 and up to 20 s/veh. This level generally occurs with good progression, short cycle lengths, or both. More vehicles stop than with LOS A, causing higher levels of delay.

LOS C describes operations with control delay greater than 20 and up to 35 s/veh. These higher delays may result from only fair progression, longer cycle lengths, or both. Individual cycle failures may begin to appear at this level. Cycle failure occurs when a green phase does not serve queued vehicles, and overflows occur. The number of vehicles stopping is significant at this level, though many still pass through the intersection without stopping.

LOS D describes operations with control delay greater than 35 and up to 55 s/veh. At LOS D, the influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or high volume-to-capacity (v/c) ratios. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are noticeable.

LOS E describes operations with control delay greater than 55 and up to 80 s/veh. These high delay values generally indicate poor progression, long cycle lengths, and high v/c ratios. Individual cycle failures are frequent.

LOS F describes operations with delay in excess of 80.0 s/veh. This level, considered unacceptable to most drivers, often occurs with over-saturation, that is, when arrival flow rates exceed the capacity of lane groups. It may also occur at high v/c ratios with many individual cycle failures. Poor progression and long cycle lengths may also contribute significantly to high delay levels. Often, vehicles do not pass through the intersection in one signal cycle.

Unsignalized Intersection Delay

The level of service criteria for an unsignalized intersection differs from that of a signalized intersection because of the expectation that signalized intersections encounter more traffic and therefore greater delays. The thresholds for the levels of service of unsignalized intersections are as follows:

LOS CRITERIA FOR UNSIGNALIZED INTERSECTIONS

LOS	Control Delay per Vehicle (s/veh)
A	≤ 10
B	$> 10-15$
C	$> 15-25$
D	$> 25-35$
E	$> 35-50$
F	> 50

Highway Capacity Manual 2000

* s/veh = seconds per vehicle

Levels-of-service A, B, and C are considered acceptable, LOS D is generally considered marginally acceptable/unacceptable, and LOS E and F are considered unacceptable.

Freeway LOS

The level of service (LOS) for freeway is determined by density of vehicles in the freeway section area. The LOS criteria for freeway are as follow:

LOS CRITERIA FOR FREEWAY SEGMENTS

LOS	Density Range (pc/mi/ln)*
A	≤ 11
B	$> 11-18$
C	$> 18-26$
D	$> 26-35$
E	$> 35-45$
F	> 45

Highway Capacity Manual 2000

* pc/mi/ln = passenger cars per mile per lane

LOS A describes free-flow operations. Free-flow speeds prevail. Vehicles are almost completely unimpeded in their ability to maneuver the traffic stream. The effects of incidents or point breakdowns are easily absorbed at this level.

LOS B represents reasonably free flow, and free-flow speeds are maintained. The ability to maneuver within the traffic stream is only slightly restricted, and the general level of physical and psychological comfort provided to drivers is still high. The effects of minor incidents and point breakdowns are still easily absorbed.

LOS C provides for flow with speeds at or near the free-flow speeds of the freeway. Freedom to maneuver within the traffic stream is noticeably restricted, and lane changes require more care and vigilance on the part of the driver. Minor incidents may still be absorbed, but the local deterioration in service will be substantial. Queues may be expected to form behind any significant blockage.

LOS D is the level at which speeds begin to decline slightly with increasing flows and density begins to increase somewhat more quickly. Freedom to maneuver within the traffic stream is more noticeably limited, and the driver experiences reduced physical and psychological comfort levels. Even minor incidents can be expected to create queuing, because the traffic stream has little space to absorb disruptions.

LOS E, at its highest density value, describes operation at capacity. Operations at this level are volatile, because there are virtually no usable gaps in the traffic stream. Vehicles are closely spaced, leaving little room to maneuver within the traffic stream at speeds that still exceed 49 mi/h. Any disruption of the traffic stream, such as vehicles entering from a ramp or a vehicle changing lanes, can establish a disruption wave that propagates throughout the upstream traffic flow. At capacity, the traffic stream has no ability to dissipate even the most minor disruption, and any incident can be expected to produce a serious breakdown with extensive queuing. Maneuverability within the traffic stream is extremely limited, and the level of physical and psychological comfort afforded the driver is poor.

LOS F describes breakdowns in vehicular flow. Such conditions generally exist within queues forming behind breakdown points. Breakdowns occur for a number of reasons:

- Traffic incidents can cause a temporary reduction in the capacity of a short segment, so that the number of vehicles arriving at the point is greater than the number of vehicles that can move through it.
- Points of recurring congestion, such as merge or weaving segments and lane drops, experience very high demand in which the number of vehicles arriving is greater than the number of vehicles discharged.
- In forecasting situations, the projected peak-hour (or other) flow rate can exceed the estimated capacity of the location.

Note that in all cases, breakdown occurs when the ratio of existing demand to actual capacity or of forecast demand to estimated capacity exceeds 1.00. Operations immediately downstream of such a point, however, are generally at or near capacity, and downstream operations improve (assuming that there are no additional downstream bottlenecks) as discharging vehicles move away from the bottleneck.

LOS F operations within a queue are the result of a breakdown or bottleneck at a downstream point. LOS F is also used to describe conditions at the point of the breakdown or bottleneck and the queue discharge flow that occurs at speeds lower than the lowest speed for LOS E, as well as the operations within the queue that forms upstream. Whenever LOS F conditions exist, they have the potential to extend upstream for significant distances.

APPENDIX G
CAPACITY ANALYSIS WORKSHEETS

2005 EXISTING CONDITIONS

HCM Signalized Intersection Capacity Analysis
 28: OAK & SR 315

9/23/2005

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations	↘	↑	↗		↙	↗	↘	↕		↘	↕	↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00		1.00	1.00	1.00	0.95		1.00	0.95	1.00
Frt	1.00	1.00	0.85		1.00	0.85	1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00		0.96	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1433	1508	1282		1793	1583	1641	3264		1687	3374	1509
Flt Permitted	0.61	1.00	1.00		0.75	1.00	0.21	1.00		0.28	1.00	1.00
Satd. Flow (perm)	915	1508	1282		1403	1583	356	3264		501	3374	1509
Volume (vph)	255	28	201	132	37	55	300	652	24	44	574	93
Peak-hour factor, PHF	0.68	0.68	0.68	0.92	0.92	0.92	0.82	0.82	0.82	0.97	0.97	0.97
Adj. Flow (vph)	375	41	296	143	40	60	366	795	29	45	592	96
RTOR Reduction (vph)	0	0	163	0	0	33	0	2	0	0	0	0
Lane Group Flow (vph)	375	41	133	0	183	27	366	822	0	45	592	96
Heavy Vehicles (%)	26%	26%	26%	2%	2%	2%	10%	10%	10%	7%	7%	7%
Turn Type	Perm		Perm	Perm		Perm	pm+pt			pm+pt		Free
Protected Phases		7 8			7 8		1	6		5	2	
Permitted Phases	7 8		7 8	7 8		7 8	6			2		Free
Actuated Green, G (s)	46.0	46.0	46.0		46.0	46.0	48.6	38.1		30.3	25.8	106.6
Effective Green, g (s)	48.0	48.0	48.0		48.0	48.0	50.6	40.1		34.3	27.8	106.6
Actuated g/C Ratio	0.45	0.45	0.45		0.45	0.45	0.47	0.38		0.32	0.26	1.00
Clearance Time (s)							6.0	6.0		6.0	6.0	
Vehicle Extension (s)							3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	412	679	577		632	713	396	1228		234	880	1509
v/s Ratio Prot		0.03					c0.16	0.25		0.01	0.18	
v/s Ratio Perm	c0.41		0.10		0.13	0.02	c0.28			0.05		0.06
v/c Ratio	0.91	0.06	0.23		0.29	0.04	0.92	0.67		0.19	0.67	0.06
Uniform Delay, d1	27.3	16.6	18.0		18.5	16.4	22.0	27.7		25.3	35.3	0.0
Progression Factor	1.00	1.00	1.00		1.00	1.00	1.19	0.84		1.00	1.00	1.00
Incremental Delay, d2	23.8	0.0	0.2		0.3	0.0	25.5	1.3		0.4	2.0	0.1
Delay (s)	51.1	16.6	18.2		18.8	16.4	51.9	24.6		25.7	37.4	0.1
Level of Service	D	B	B		B	B	D	C		C	D	A
Approach Delay (s)		35.4			18.2			33.0			31.8	
Approach LOS		D			B			C			C	

Intersection Summary

HCM Average Control Delay	32.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	106.6	Sum of lost time (s)	8.0
Intersection Capacity Utilization	63.3%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
 10: OLD BOSTON & SR 315

9/23/2005



Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations	↘		↕			↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0			4.0
Lane Util. Factor	1.00		0.95			0.95
Frt	0.93		0.99			1.00
Flt Protected	0.98		1.00			1.00
Satd. Flow (prot)	1642		3403			3529
Flt Permitted	0.98		1.00			0.91
Satd. Flow (perm)	1642		3403			3217
Volume (vph)	49	54	482	35	30	488
Peak-hour factor, PHF	0.61	0.61	0.89	0.89	0.91	0.91
Adj. Flow (vph)	80	89	542	39	33	536
RTOR Reduction (vph)	66	0	7	0	0	0
Lane Group Flow (vph)	103	0	574	0	0	569
Heavy Vehicles (%)	5%	5%	5%	5%	2%	2%
Turn Type					pm+pt	
Protected Phases	4		6		5	2
Permitted Phases					2	2
Actuated Green, G (s)	7.2		19.1			19.1
Effective Green, g (s)	8.2		20.1			20.1
Actuated g/C Ratio	0.23		0.55			0.55
Clearance Time (s)	5.0		5.0			5.0
Vehicle Extension (s)	2.0		1.0			1.0
Lane Grp Cap (vph)	371		1884			1781
v/s Ratio Prot	c0.06		0.17			
v/s Ratio Perm						c0.18
v/c Ratio	0.28		0.30			0.32
Uniform Delay, d1	11.6		4.3			4.4
Progression Factor	1.00		1.00			1.00
Incremental Delay, d2	0.1		0.0			0.0
Delay (s)	11.8		4.4			4.4
Level of Service	B		A			A
Approach Delay (s)	11.8		4.4			4.4
Approach LOS	B		A			A

Intersection Summary

HCM Average Control Delay	5.3	HCM Level of Service	A
HCM Volume to Capacity ratio	0.31		
Actuated Cycle Length (s)	36.3	Sum of lost time (s)	8.0
Intersection Capacity Utilization	44.8%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
 13: LAFLIN & SR 315

9/15/2005



Movement	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations	↵	↵	↵	↑	↑↑	↵
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	1.00
Flt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1770	1583	1752	1845	3471	1553
Flt Permitted	0.95	1.00	0.37	1.00	1.00	1.00
Satd. Flow (perm)	1770	1583	687	1845	3471	1553
Volume (vph)	55	78	111	605	520	96
Peak-hour factor, PHF	0.89	0.89	0.91	0.91	0.95	0.95
Adj. Flow (vph)	62	88	122	665	547	101
RTOR Reduction (vph)	0	61	0	0	0	86
Lane Group Flow (vph)	62	27	122	665	547	15
Heavy Vehicles (%)	2%	2%	3%	3%	4%	4%
Turn Type	custom		pm+pt			Over
Protected Phases	8	8	1	6	2	8
Permitted Phases	8	1	6			
Actuated Green, G (s)	7.8	15.1	43.7	43.7	29.4	7.8
Effective Green, g (s)	9.8	20.1	46.7	46.7	32.4	9.8
Actuated g/C Ratio	0.15	0.31	0.72	0.72	0.50	0.15
Clearance Time (s)	6.0	6.0	7.0	7.0	7.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0	5.0	5.0	3.0
Lane Grp Cap (vph)	269	591	667	1336	1744	236
v/s Ratio Prot	c0.04	0.01	0.03	c0.36	0.16	0.01
v/s Ratio Perm		0.01	0.10			
v/c Ratio	0.23	0.05	0.18	0.50	0.31	0.07
Uniform Delay, d1	24.0	15.5	3.0	3.8	9.5	23.4
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.4	0.0	0.1	0.6	0.2	0.1
Delay (s)	24.5	15.5	3.1	4.5	9.7	23.5
Level of Service	C	B	A	A	A	C
Approach Delay (s)	19.2			4.2	11.9	
Approach LOS	B			A	B	

Intersection Summary

HCM Average Control Delay	8.8	HCM Level of Service	A
HCM Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	64.5	Sum of lost time (s)	8.0
Intersection Capacity Utilization	41.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 4: SUNSHINE MARKET & SR 315

9/15/2005



Movement	SBL	SBR	NEL	NET	SWT	SWR
Lane Configurations	↙	↗	↙	↑	↑↑	↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1805	1615	1770	1863	3471	1553
Flt Permitted	0.95	1.00	0.37	1.00	1.00	1.00
Satd. Flow (perm)	1805	1615	691	1863	3471	1553
Volume (vph)	79	92	98	433	509	69
Peak-hour factor, PHF	0.93	0.93	0.82	0.82	0.92	0.92
Adj. Flow (vph)	85	99	120	528	553	75
RTOR Reduction (vph)	0	62	0	0	0	0
Lane Group Flow (vph)	85	37	120	528	553	75
Heavy Vehicles (%)	0%	0%	2%	2%	4%	4%
Turn Type		pt+ov	pm+pt			Free
Protected Phases	8	1 8	1	6	2	
Permitted Phases			6			Free
Actuated Green, G (s)	8.5	21.2	44.0	44.0	30.3	65.5
Effective Green, g (s)	10.5	24.2	47.0	47.0	33.3	65.5
Actuated g/C Ratio	0.16	0.37	0.72	0.72	0.51	1.00
Clearance Time (s)	6.0		7.0	7.0	7.0	
Vehicle Extension (s)	3.0		3.0	5.0	5.0	
Lane Grp Cap (vph)	289	597	656	1337	1765	1553
v/s Ratio Prot	c0.05	0.02	0.03	c0.28	0.16	
v/s Ratio Perm			0.10			0.05
v/c Ratio	0.29	0.06	0.18	0.39	0.31	0.05
Uniform Delay, d1	24.2	13.3	3.1	3.6	9.4	0.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.6	0.0	0.1	0.4	0.2	0.1
Delay (s)	24.8	13.4	3.3	4.0	9.6	0.1
Level of Service	C	B	A	A	A	A
Approach Delay (s)	18.6			3.9	8.5	
Approach LOS	B			A	A	B

Intersection Summary			
HCM Average Control Delay	7.7	HCM Level of Service	A
HCM Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	65.5	Sum of lost time (s)	8.0
Intersection Capacity Utilization	33.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis

1: EAST MAIN & SR 315

9/15/2005

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations	↘	↑	↗	↘	↑	↗	↘	↕		↘	↕	↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95		1.00	0.95	1.00
Flt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1703	1792	1524	1752	1845	1568	1752	3448		1736	3471	1553
Flt Permitted	0.59	1.00	1.00	0.72	1.00	1.00	0.42	1.00		0.46	1.00	1.00
Satd. Flow (perm)	1054	1792	1524	1330	1845	1568	767	3448		843	3471	1553
Volume (vph)	97	52	73	85	92	58	81	394	48	39	415	99
Peak-hour factor, PHF	0.94	0.94	0.94	0.84	0.84	0.84	0.87	0.87	0.87	0.89	0.89	0.89
Adj. Flow (vph)	103	55	78	101	110	69	93	453	55	44	466	111
RTOR Reduction (vph)	0	0	67	0	0	60	0	8	0	0	0	56
Lane Group Flow (vph)	103	55	11	101	110	9	93	500	0	44	466	56
Heavy Vehicles (%)	6%	6%	6%	3%	3%	3%	3%	3%	3%	4%	4%	4%
Turn Type	pm+pt		Perm	pm+pt		Perm	pm+pt			pm+pt		Perm
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases	8		8	4		4	6			2		2
Actuated Green, G (s)	18.5	10.6	10.6	17.9	10.3	10.3	57.5	50.7		50.1	47.0	47.0
Effective Green, g (s)	24.5	13.6	13.6	23.9	13.3	13.3	63.5	53.7		56.1	50.0	50.0
Actuated g/C Ratio	0.24	0.14	0.14	0.24	0.13	0.13	0.64	0.54		0.56	0.50	0.50
Clearance Time (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0		7.0	7.0	7.0
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0	1.0	1.0		1.0	1.0	1.0
Lane Grp Cap (vph)	329	244	207	363	245	209	584	1852		527	1736	777
v/s Ratio Prot	c0.03	0.03		0.03	c0.06		c0.02	c0.14		0.01	0.13	
v/s Ratio Perm	0.04		0.01	0.04		0.01	0.09			0.04		0.04
v/c Ratio	0.31	0.23	0.05	0.28	0.45	0.04	0.16	0.27		0.08	0.27	0.07
Uniform Delay, d1	30.4	38.5	37.6	30.7	40.0	37.8	7.4	12.5		9.9	14.4	13.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.37	1.62		1.00	1.00	1.00
Incremental Delay, d2	0.2	0.2	0.0	0.2	0.5	0.0	0.0	0.3		0.0	0.4	0.2
Delay (s)	30.6	38.7	37.6	30.9	40.4	37.8	10.2	20.6		9.9	14.8	13.1
Level of Service	C	D	D	C	D	D	B	C		A	B	B
Approach Delay (s)		34.8			36.4			19.0			14.2	
Approach LOS		C			D			B			B	

Intersection Summary

HCM Average Control Delay	22.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	38.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
2: LAIRD & SR 315

9/15/2005



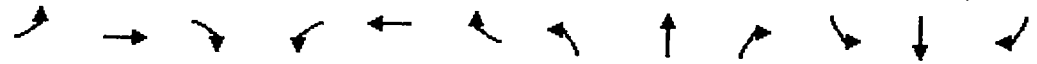
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕		↕	↕		↕	↕		↕	↕	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00		0.95	0.95		1.00	0.95		1.00	0.95	
Frt		0.89		1.00	0.93		1.00	0.99		1.00	1.00	
Flt Protected		0.99		0.95	0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1553		1681	1619		1736	3423		1736	3455	
Flt Permitted		0.20		0.67	0.79		0.19	1.00		0.32	1.00	
Satd. Flow (perm)		316		1180	1296		356	3423		586	3455	
Volume (vph)	23	2	106	24	5	11	85	633	64	12	774	24
Peak-hour factor, PHF	0.53	0.53	0.53	0.92	0.92	0.92	0.96	0.96	0.96	0.94	0.94	0.94
Adj. Flow (vph)	43	4	200	26	5	12	89	659	67	13	823	26
RTOR Reduction (vph)	0	143	0	0	11	0	0	7	0	0	2	0
Lane Group Flow (vph)	0	104	0	17	15	0	89	719	0	13	847	0
Heavy Vehicles (%)	8%	8%	8%	2%	2%	2%	4%	4%	4%	4%	4%	4%
Turn Type	Perm			Perm			pm+pt			pm+pt		
Protected Phases		3			4		1	6		5	2	
Permitted Phases	3			4			6	6		2		
Actuated Green, G (s)		24.4		4.0	4.0		47.9	42.4		39.3	38.1	
Effective Green, g (s)		26.4		6.0	6.0		55.6	46.4		47.3	42.1	
Actuated g/C Ratio		0.26		0.06	0.06		0.56	0.46		0.47	0.42	
Clearance Time (s)		6.0		6.0	6.0		8.0	8.0		8.0	8.0	
Vehicle Extension (s)		2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)		83		71	78		329	1588		337	1455	
v/s Ratio Prot							c0.03	0.21		0.00	c0.25	
v/s Ratio Perm		c0.33		c0.01	0.01		0.12			0.02		
v/c Ratio		1.26		0.24	0.19		0.27	0.45		0.04	0.58	
Uniform Delay, d1		36.8		44.8	44.7		12.5	18.2		14.2	22.2	
Progression Factor		1.00		1.00	1.00		0.95	0.82		1.51	1.15	
Incremental Delay, d2		182.3		0.6	0.4		0.2	0.9		0.0	1.7	
Delay (s)		219.1		45.5	45.1		12.1	15.8		21.4	27.2	
Level of Service		F		D	D		B	B		C	C	
Approach Delay (s)		219.1			45.3			15.4			27.1	
Approach LOS		F			D			B			C	

Intersection Summary

HCM Average Control Delay	46.8	HCM Level of Service	D
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	51.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
17: SR 315 & MOTORWORLD

9/15/2005



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕			↕	↗		↕	↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	1.00
Frt	1.00	1.00		1.00	1.00			1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.95	1.00		0.95	1.00
Satd. Flow (prot)	1752	3488		1719	3421			1794	1599		1795	1599
Flt Permitted	0.22	1.00		0.35	1.00			0.69	1.00		0.69	1.00
Satd. Flow (perm)	409	3488		640	3421			1300	1599		1292	1599
Volume (vph)	72	724	24	10	865	29	52	2	12	46	2	163
Peak-hour factor, PHF	0.95	0.95	0.95	0.85	0.85	0.85	0.84	0.84	0.84	0.84	0.84	0.84
Adj. Flow (vph)	76	762	25	12	1018	34	62	2	14	55	2	194
RTOR Reduction (vph)	0	1	0	0	2	0	0	0	12	0	0	172
Lane Group Flow (vph)	76	786	0	12	1050	0	0	64	2	0	57	22
Heavy Vehicles (%)	3%	3%	3%	5%	5%	5%	1%	1%	1%	1%	1%	1%
Turn Type	pm+pt			pm+pt			Perm		Perm	Perm		Perm
Protected Phases	1	6		5	2			4				8
Permitted Phases	6			2			4		4	8		8
Actuated Green, G (s)	76.1	70.5		67.7	66.3			9.1	9.1			9.1
Effective Green, g (s)	80.9	73.5		72.7	69.3			11.1	11.1			11.1
Actuated g/C Ratio	0.81	0.74		0.73	0.69			0.11	0.11			0.11
Clearance Time (s)	6.0	7.0		6.0	7.0			6.0	6.0			6.0
Vehicle Extension (s)	2.0	2.0		2.0	2.0			2.0	2.0			2.0
Lane Grp Cap (vph)	433	2564		502	2371			144	177			143
v/s Ratio Prot	c0.01	0.23		0.00	c0.31							
v/s Ratio Perm	0.13			0.02				c0.05	0.00			0.04
v/c Ratio	0.18	0.31		0.02	0.44			0.44	0.01			0.40
Uniform Delay, d1	3.0	4.5		3.8	6.8			41.6	39.6			41.3
Progression Factor	1.00	1.00		0.24	0.22			1.00	1.00			1.00
Incremental Delay, d2	0.1	0.3		0.0	0.5			0.8	0.0			0.7
Delay (s)	3.1	4.8		0.9	2.0			42.4	39.6			42.0
Level of Service	A	A		A	A			D	D			D
Approach Delay (s)		4.7			1.9			41.9				40.6
Approach LOS		A			A			D				D

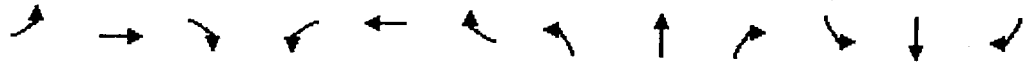
Intersection Summary

HCM Average Control Delay	8.7	HCM Level of Service	A
HCM Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	50.8%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
 22: SR 315 & 309 NB RAMPS

9/15/2005

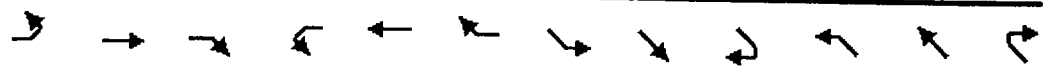


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕	↗		↕			↖	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00			1.00	
Frt	1.00	1.00		1.00	1.00	0.85		1.00			1.00	
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.97			0.95	
Satd. Flow (prot)	1787	3571		1770	3539	1583		1845			1752	
Flt Permitted	0.20	1.00		0.37	1.00	1.00		0.88			0.75	
Satd. Flow (perm)	373	3571		684	3539	1583		1668			1385	
Volume (vph)	473	700	4	1	740	339	3	2	0	120	0	0
Peak-hour factor, PHF	0.94	0.94	0.94	0.86	0.86	0.86	0.50	0.50	0.50	0.84	0.84	0.84
Adj. Flow (vph)	503	745	4	1	860	394	6	4	0	143	0	0
RTOR Reduction (vph)	0	0	0	0	0	223	0	0	0	0	0	0
Lane Group Flow (vph)	503	749	0	1	860	171	0	10	0	0	143	0
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	0%	0%	0%	3%	3%	3%
Turn Type	pm+pt			Perm		Perm	Perm			Perm		
Protected Phases	1	6			2			8				4
Permitted Phases	6			2		2	8			4		
Actuated Green, G (s)	68.6	68.6		38.0	38.0	38.0		11.4				11.4
Effective Green, g (s)	70.6	70.6		40.0	40.0	40.0		13.4				13.4
Actuated g/C Ratio	0.77	0.77		0.43	0.43	0.43		0.15				0.15
Clearance Time (s)	4.0	6.0		6.0	6.0	6.0		6.0				6.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0				3.0
Lane Grp Cap (vph)	695	2740		297	1539	688		243				202
v/s Ratio Prot	c0.21	0.21			0.24							
v/s Ratio Perm	c0.35			0.00		0.11		0.01				c0.10
v/c Ratio	0.72	0.27		0.00	0.56	0.25		0.04				0.71
Uniform Delay, d1	13.2	3.1		14.7	19.4	16.5		33.8				37.4
Progression Factor	0.59	0.24		1.00	1.00	1.00		1.00				1.00
Incremental Delay, d2	3.1	0.2		0.0	1.5	0.9		0.1				10.8
Delay (s)	10.9	0.9		14.7	20.9	17.3		33.8				48.2
Level of Service	B	A		B	C	B		C				D
Approach Delay (s)		5.0			19.8			33.8				48.2
Approach LOS		A			B			C				D

Intersection Summary			
HCM Average Control Delay	14.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	92.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	67.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 24: SR 315 & 309 SB RAMPS

9/15/2005

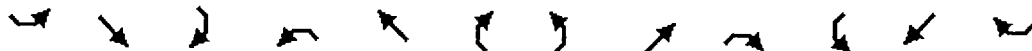


Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR	
Lane Configurations		↑↑	↑	↑	↑↑		↑	↑					
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)		4.0	4.0	4.0	4.0		4.0	4.0					
Lane Util. Factor		0.95	1.00	1.00	0.95		0.95	0.95					
Frt		1.00	0.85	1.00	1.00		1.00	1.00					
Flt Protected		1.00	1.00	0.95	1.00		0.95	0.95					
Satd. Flow (prot)		3574	1599	1770	3539		1665	1665					
Flt Permitted		1.00	1.00	0.16	1.00		0.95	0.95					
Satd. Flow (perm)		3574	1599	304	3539		1665	1665					
Volume (vph)	0	966	446	370	930	0	211	0	0	0	0	0	
Peak-hour factor, PHF	0.93	0.93	0.93	0.89	0.89	0.89	0.66	0.66	0.66	0.92	0.92	0.92	
Adj. Flow (vph)	0	1039	480	416	1045	0	320	0	0	0	0	0	
RTOR Reduction (vph)	0	0	242	0	0	0	0	0	0	0	0	0	
Lane Group Flow (vph)	0	1039	238	416	1045	0	160	160	0	0	0	0	
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	3%	3%	3%	2%	2%	2%	
Turn Type			Perm. pm+pt				Perm						
Protected Phases		6		5	2			4					
Permitted Phases			6	2			4						
Actuated Green, G (s)		43.6	43.6	67.4	67.4		12.6	12.6					
Effective Green, g (s)		45.6	45.6	69.4	69.4		14.6	14.6					
Actuated g/C Ratio		0.50	0.50	0.75	0.75		0.16	0.16					
Clearance Time (s)		6.0	6.0	4.0	6.0		6.0	6.0					
Vehicle Extension (s)		3.0	3.0	3.0	3.0		2.0	2.0					
Lane Grp Cap (vph)		1771	793	545	2670		264	264					
v/s Ratio Prot		0.29		c0.16	0.30								
v/s Ratio Perm			0.15	c0.41			c0.10	0.10					
v/c Ratio		0.59	0.30	0.76	0.39		0.61	0.61					
Uniform Delay, d1		16.5	13.7	15.8	3.9		36.0	36.0					
Progression Factor		1.00	1.00	0.64	0.73		1.00	1.00					
Incremental Delay, d2		1.4	1.0	6.1	0.4		2.7	2.7					
Delay (s)		17.9	14.7	16.2	3.3		38.7	38.7					
Level of Service		B	B	B	A		D	D					
Approach Delay (s)		16.9			7.0			38.7			0.0		
Approach LOS		B			A			D			A		

Intersection Summary			
HCM Average Control Delay	14.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	92.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	64.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Unsignalized Intersection Capacity Analysis
 3: POCONO DOWNS & SR 315

9/23/2005



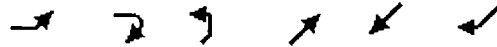
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations	↙				↕			↕		↙	↕	
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	8	0	0	0	0	0	0	523	0	0	542	59
Peak Hour Factor	0.79	0.79	0.79	0.92	0.92	0.92	0.90	0.90	0.90	0.87	0.87	0.87
Hourly flow rate (vph)	10	0	0	0	0	0	0	581	0	0	623	68
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		TWLTL			TWLTL							
Median storage (veh)		0			0							
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	947	1238	345	893	1272	291	691			581		
vC1, stage 1 conf vol	657	657		581	581							
vC2, stage 2 conf vol	291	581		311	691							
vCu, unblocked vol	947	1238	345	893	1272	291	691			581		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)	6.5	5.5		6.5	5.5							
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	96	100	100	100	100	100	100			100		
cM capacity (veh/h)	244	222	651	263	216	706	907			989		

Direction, Lane #	SE 1	NW 1	NE 1	NE 2	SW 1	SW 2	SW 3
Volume Total	10	0	387	194	0	415	275
Volume Left	10	0	0	0	0	0	0
Volume Right	0	0	0	0	0	0	68
cSH	244	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.04	0.00	0.23	0.11	0.00	0.24	0.16
Queue Length 95th (ft)	3	0	0	0	0	0	0
Control Delay (s)	20.4	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	C	A					
Approach Delay (s)	20.4	0.0	0.0		0.0		
Approach LOS	C	A					

Intersection Summary			
Average Delay		0.2	
Intersection Capacity Utilization	26.9%		ICU Level of Service A
Analysis Period (min)		15	

HCM Unsignalized Intersection Capacity Analysis
 8: POCONO DOWNS RT & SR 315

9/23/2005



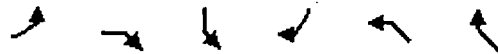
Movement	EBL	EBR	NEL	NET	SWT	SWR
Lane Configurations		↗	↖	↕	↕	
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	0	11	26	523	542	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	12	28	568	589	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	930	295	589			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	930	295	589			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	98	97			
cM capacity (veh/h)	258	702	982			

Direction, Lane #	EB 1	NE 1	NE 2	NE 3	SW 1	SW 2
Volume Total	12	28	284	284	295	295
Volume Left	0	28	0	0	0	0
Volume Right	12	0	0	0	0	0
cSH	702	982	1700	1700	1700	1700
Volume to Capacity	0.02	0.03	0.17	0.17	0.17	0.17
Queue Length 95th (ft)	1	2	0	0	0	0
Control Delay (s)	10.2	8.8	0.0	0.0	0.0	0.0
Lane LOS	B	A				
Approach Delay (s)	10.2	0.4			0.0	
Approach LOS	B					

Intersection Summary						
Average Delay			0.3			
Intersection Capacity Utilization		25.0%		ICU Level of Service		A
Analysis Period (min)		15				

HCM Unsignalized Intersection Capacity Analysis
 14: EAST MAIN & POCONO DOWNS

9/23/2005



Movement	EBL	EBR	SBL	SBR	NWL	NWR
Lane Configurations		↗	↘		↖	↙
Sign Control	Free		Stop		Free	
Grade	0%		0%		0%	
Volume (veh/h)	0	220	2	0	243	29
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	239	2	0	264	32
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			
Median storage veh						
Upstream signal (ft)					1239	
pX, platoon unblocked						
vC, conflicting volume	296		519	280		
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	296		519	280		
tC, single (s)	4.1		6.4	6.2		
tC, 2 stage (s)						
tF (s)	2.2		3.5	3.3		
p0 queue free %	100		100	100		
cM capacity (veh/h)	1266		517	759		

Direction, Lane #	EB 1	SB 1	NW 1
Volume Total	239	2	296
Volume Left	0	2	0
Volume Right	0	0	32
cSH	1700	517	1700
Volume to Capacity	0.14	0.00	0.17
Queue Length 95th (ft)	0	0	0
Control Delay (s)	0.0	12.0	0.0
Lane LOS		B	
Approach Delay (s)	0.0	12.0	0.0
Approach LOS		B	

Intersection Summary			
Average Delay		0.0	
Intersection Capacity Utilization		25.2%	ICU Level of Service A
Analysis Period (min)		15	

HCM Unsignalized Intersection Capacity Analysis
 34: EAST MAIN & POCONO DOWNS RT

9/23/2005



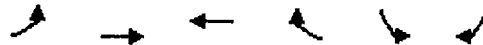
Movement	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations		↕	↕			↕
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	48	220	243	0	0	11
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	52	239	264	0	0	12
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	264				608	264
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	264				608	264
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	96				100	98
cM capacity (veh/h)	1300				441	775

Direction, Lane #	EB 1	WB 1	SW 1
Volume Total	291	264	12
Volume Left	52	0	0
Volume Right	0	0	12
cSH	1300	1700	775
Volume to Capacity	0.04	0.16	0.02
Queue Length 95th (ft)	3	0	1
Control Delay (s)	1.7	0.0	9.7
Lane LOS	A		A
Approach Delay (s)	1.7	0.0	9.7
Approach LOS			A

Intersection Summary			
Average Delay		1.1	
Intersection Capacity Utilization	33.7%		ICU Level of Service
Analysis Period (min)		15	A

HCM Unsignalized Intersection Capacity Analysis
 20: EAST MAIN & FIRST

9/15/2005



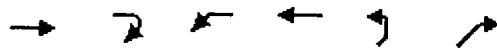
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	74	261	287	49	51	53
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	80	284	312	53	55	58
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	365				783	339
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	365				783	339
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	93				84	92
cM capacity (veh/h)	1193				338	704

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	364	365	113
Volume Left	80	0	55
Volume Right	0	53	58
cSH	1193	1700	460
Volume to Capacity	0.07	0.21	0.25
Queue Length 95th (ft)	5	0	24
Control Delay (s)	2.3	0.0	15.4
Lane LOS	A		C
Approach Delay (s)	2.3	0.0	15.4
Approach LOS			C

Intersection Summary		
Average Delay		3.1
Intersection Capacity Utilization	52.0%	ICU Level of Service
Analysis Period (min)		15

HCM Unsignalized Intersection Capacity Analysis
 19: EAST MAIN & SCOTT

9/15/2005



Movement	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations	↑			↑	↑	
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	171	22	139	201	42	164
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	186	24	151	218	46	178
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			210		718	198
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			210		718	198
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			89		87	79
cM capacity (veh/h)			1361		352	843

Direction, Lane #	EB 1	WB 1	NE 1
Volume Total	210	370	224
Volume Left	0	151	46
Volume Right	24	0	178
cSH	1700	1361	656
Volume to Capacity	0.12	0.11	0.34
Queue Length 95th (ft)	0	9	38
Control Delay (s)	0.0	3.9	13.3
Lane LOS		A	B
Approach Delay (s)	0.0	3.9	13.3
Approach LOS			B

Intersection Summary			
Average Delay		5.5	
Intersection Capacity Utilization		51.0%	ICU Level of Service
Analysis Period (min)		15	A

HCM Signalized Intersection Capacity Analysis
 28: OAK & SR 315

9/23/2005



Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations	↘	↗	↖		↖	↗	↘	↕		↘	↗	↖
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00		1.00	1.00	1.00	0.95		1.00	0.95	1.00
Frt	1.00	1.00	0.85		1.00	0.85	1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00		0.96	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1347	1418	1205		1795	1583	1671	3307		1703	3406	1524
Flt Permitted	0.70	1.00	1.00		0.81	1.00	0.24	1.00		0.41	1.00	1.00
Satd. Flow (perm)	989	1418	1205		1510	1583	425	3307		736	3406	1524
Volume (vph)	233	15	175	58	19	33	189	538	41	27	500	200
Peak-hour factor, PHF	0.92	0.92	0.92	0.84	0.84	0.84	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	253	16	190	69	23	39	208	591	45	30	549	220
RTOR Reduction (vph)	0	0	105	0	0	22	0	3	0	0	0	0
Lane Group Flow (vph)	253	16	85	0	92	17	208	633	0	30	549	220
Heavy Vehicles (%)	34%	34%	34%	2%	2%	2%	8%	8%	8%	6%	6%	6%
Turn Type	Perm		Perm	Perm		Perm	pm+pt			pm+pt		Free
Protected Phases		7 8			7 8		1	6		5	2	
Permitted Phases	7 8		7 8	7 8		7 8	6			2		Free
Actuated Green, G (s)	40.1	40.1	40.1		40.1	40.1	42.5	32.8		26.7	23.0	94.6
Effective Green, g (s)	42.1	42.1	42.1		42.1	42.1	44.5	34.8		30.7	25.0	94.6
Actuated g/C Ratio	0.45	0.45	0.45		0.45	0.45	0.47	0.37		0.32	0.26	1.00
Clearance Time (s)							6.0	6.0		6.0	6.0	
Vehicle Extension (s)							3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	440	631	536		672	704	404	1217		297	900	1524
v/s Ratio Prot		0.01					c0.08	c0.19		0.01	c0.16	
v/s Ratio Perm	c0.26		0.07		0.06	0.01	0.16			0.03		0.14
v/c Ratio	0.57	0.03	0.16		0.14	0.02	0.51	0.52		0.10	0.61	0.14
Uniform Delay, d1	19.6	14.7	15.7		15.5	14.7	16.4	23.4		22.0	30.5	0.0
Progression Factor	1.00	1.00	1.00		1.00	1.00	1.31	0.88		1.00	1.00	1.00
Incremental Delay, d2	1.8	0.0	0.1		0.1	0.0	1.1	0.4		0.1	1.2	0.2
Delay (s)	21.4	14.8	15.8		15.6	14.7	22.5	20.9		22.1	31.7	0.2
Level of Service	C	B	B		B	B	C	C		C	C	A
Approach Delay (s)		18.9			15.3			21.3			22.7	
Approach LOS		B			B			C			C	

Intersection Summary

HCM Average Control Delay	20.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	94.6	Sum of lost time (s)	12.0
Intersection Capacity Utilization	53.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 10: OLD BOSTON & SR 315

9/15/2005



Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations	Y		↑↑			↑↑
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0			4.0
Lane Util. Factor	1.00		0.95			0.95
Frt	0.93		0.99			1.00
Flt Protected	0.98		1.00			1.00
Satd. Flow (prot)	1644		3502			3524
Flt Permitted	0.98		1.00			0.91
Satd. Flow (perm)	1644		3502			3223
Volume (vph)	27	28	325	24	30	325
Peak-hour factor, PHF	0.81	0.81	0.93	0.93	0.94	0.94
Adj. Flow (vph)	33	35	349	26	32	346
RTOR Reduction (vph)	30	0	5	0	0	0
Lane Group Flow (vph)	38	0	370	0	0	378
Heavy Vehicles (%)	5%	5%	2%	2%	2%	2%
Turn Type					pm+pt	
Protected Phases	4		6		5	2
Permitted Phases					2	2
Actuated Green, G (s)	7.2		40.4			40.4
Effective Green, g (s)	8.2		41.4			41.4
Actuated g/C Ratio	0.14		0.72			0.72
Clearance Time (s)	5.0		5.0			5.0
Vehicle Extension (s)	2.0		1.0			1.0
Lane Grp Cap (vph)	234		2517			2317
v/s Ratio Prot	c0.02		0.11			
v/s Ratio Perm						c0.12
v/c Ratio	0.16		0.15			0.16
Uniform Delay, d1	21.7		2.5			2.6
Progression Factor	1.00		1.00			1.00
Incremental Delay, d2	0.1		0.0			0.0
Delay (s)	21.8		2.6			2.6
Level of Service	C		A			A
Approach Delay (s)	21.8		2.6			2.6
Approach LOS	C		A			A

Intersection Summary

HCM Average Control Delay	4.2	HCM Level of Service	A
HCM Volume to Capacity ratio	0.16		
Actuated Cycle Length (s)	57.6	Sum of lost time (s)	8.0
Intersection Capacity Utilization	34.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 13: LAFLIN & SR 315

9/15/2005



Movement	SEL	SER	NEL	NET	SWT	SWP
Lane Configurations	↘	↗	↘	↑	↑↑	↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1770	1583	1752	1845	3505	1568
Flt Permitted	0.95	1.00	0.43	1.00	1.00	1.00
Satd. Flow (perm)	1770	1583	790	1845	3505	1568
Volume (vph)	54	71	90	355	411	66
Peak-hour factor, PHF	0.89	0.89	0.93	0.93	0.88	0.88
Adj. Flow (vph)	61	80	97	382	467	75
RTOR Reduction (vph)	0	60	0	0	0	66
Lane Group Flow (vph)	61	20	97	382	467	9
Heavy Vehicles (%)	2%	2%	3%	3%	3%	3%
Turn Type	custom pm+pt				Over	
Protected Phases	8	8	1	6	2	8
Permitted Phases	8	1	6			
Actuated Green, G (s)	5.7	10.7	43.1	43.1	31.1	5.7
Effective Green, g (s)	7.7	15.7	46.1	46.1	34.1	7.7
Actuated g/C Ratio	0.12	0.25	0.75	0.75	0.55	0.12
Clearance Time (s)	6.0	6.0	7.0	7.0	7.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0	5.0	5.0	3.0
Lane Grp Cap (vph)	221	505	714	1376	1934	195
v/s Ratio Prot	c0.03	0.01	0.02	c0.21	0.13	0.01
v/s Ratio Perm		0.01	0.08			
v/c Ratio	0.28	0.04	0.14	0.28	0.24	0.05
Uniform Delay, d1	24.5	17.4	2.3	2.5	7.2	23.8
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.7	0.0	0.1	0.2	0.1	0.1
Delay (s)	25.2	17.4	2.4	2.7	7.3	23.9
Level of Service	C	B	A	A	A	C
Approach Delay (s)	20.8			2.7	9.6	
Approach LOS	C			A	A	

Intersection Summary

HCM Average Control Delay	8.1	HCM Level of Service	A
HCM Volume to Capacity ratio	0.28		
Actuated Cycle Length (s)	61.8	Sum of lost time (s)	8.0
Intersection Capacity Utilization	29.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 4: SUNSHINE MARKET & SR 315

9/15/2005



Movement	SBL	SBR	NEL	NET	SWT	SWR
Lane Configurations	↙	↘	↙	↑	↑↑	↘
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1736	1553	1752	1845	3471	1553
Flt Permitted	0.95	1.00	0.38	1.00	1.00	1.00
Satd. Flow (perm)	1736	1553	692	1845	3471	1553
Volume (vph)	82	128	107	382	489	81
Peak-hour factor, PHF	0.84	0.84	0.97	0.97	0.90	0.90
Adj. Flow (vph)	98	152	110	394	543	90
RTOR Reduction (vph)	0	95	0	0	0	0
Lane Group Flow (vph)	98	57	110	394	543	90
Heavy Vehicles (%)	4%	4%	3%	3%	4%	4%
Turn Type		pt+ov	pm+pt			Free
Protected Phases	8	1 8	1	6	2	
Permitted Phases			6			Free
Actuated Green, G (s)	9.0	21.7	44.0	44.0	30.3	66.0
Effective Green, g (s)	11.0	24.7	47.0	47.0	33.3	66.0
Actuated g/C Ratio	0.17	0.37	0.71	0.71	0.50	1.00
Clearance Time (s)	6.0		7.0	7.0	7.0	
Vehicle Extension (s)	3.0		3.0	5.0	5.0	
Lane Grp Cap (vph)	289	581	649	1314	1751	1553
v/s Ratio Prot	c0.06	0.04	0.02	c0.21	0.16	
v/s Ratio Perm			0.10			0.06
v/c Ratio	0.34	0.10	0.17	0.30	0.31	0.06
Uniform Delay, d1	24.3	13.4	3.3	3.5	9.6	0.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.7	0.1	0.1	0.3	0.2	0.1
Delay (s)	25.0	13.5	3.4	3.7	9.8	0.1
Level of Service	C	B	A	A	A	A
Approach Delay (s)	18.0			3.7	8.4	
Approach LOS	B			A	A	

Intersection Summary			
HCM Average Control Delay	8.4	HCM Level of Service	A
HCM Volume to Capacity ratio	0.31		
Actuated Cycle Length (s)	66.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	34.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis

1: EAST MAIN & SR 315

9/15/2005

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations	↖	↑	↗	↖	↑	↗	↖	↕	↖	↖	↕	↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	0.95	1.00	1.00
Fr _t	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	1.00	1.00	1.00	0.85
Fl _t Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1787	1881	1599	1770	1863	1583	1770	3501	1719	3438	1538	1538
Fl _t Permitted	0.61	1.00	1.00	0.69	1.00	1.00	0.39	1.00	0.50	1.00	1.00	1.00
Satd. Flow (perm)	1152	1881	1599	1291	1863	1583	726	3501	901	3438	1538	1538
Volume (vph)	100	87	100	85	99	58	98	347	27	71	448	82
Peak-hour factor, PHF	0.88	0.88	0.88	0.95	0.95	0.95	0.90	0.90	0.90	0.89	0.89	0.89
Adj. Flow (vph)	114	99	114	89	104	61	109	386	30	80	503	92
RTOR Reduction (vph)	0	0	93	0	0	51	0	7	0	0	0	55
Lane Group Flow (vph)	114	99	21	89	104	10	109	409	0	80	503	37
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	2%	2%	2%	5%	5%	5%
Turn Type	pm+pt		Perm	pm+pt		Perm	pm+pt			pm+pt		Perm
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases	8		8	4		4	6			2		2
Actuated Green, G (s)	17.0	11.3	11.3	13.8	9.7	9.7	35.4	29.8		32.4	28.3	28.3
Effective Green, g (s)	23.0	14.3	14.3	19.8	12.7	12.7	41.4	32.8		38.4	31.3	31.3
Actuated g/C Ratio	0.30	0.18	0.18	0.26	0.16	0.16	0.54	0.42		0.50	0.40	0.40
Clearance Time (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0		7.0	7.0	7.0
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0	1.0	1.0		1.0	1.0	1.0
Lane Grp Cap (vph)	414	348	296	375	306	260	505	1486		523	1392	623
v/s Ratio Prot	c0.03	0.05		0.02	c0.06		c0.02	0.12		0.01	c0.15	
v/s Ratio Perm	0.05		0.01	0.04		0.01	0.09			0.06		0.02
v/c Ratio	0.28	0.28	0.07	0.24	0.34	0.04	0.22	0.28		0.15	0.36	0.06
Uniform Delay, d ₁	20.4	27.1	26.0	22.5	28.6	27.2	9.1	14.5		10.3	16.0	14.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d ₂	0.1	0.2	0.0	0.1	0.2	0.0	0.1	0.0		0.0	0.1	0.0
Delay (s)	20.5	27.3	26.1	22.6	28.8	27.2	9.2	14.5		10.3	16.1	14.0
Level of Service	C	C	C	C	C	C	A	B		B	B	B
Approach Delay (s)		24.5			26.3			13.4			15.1	
Approach LOS		C			C			B			B	

Intersection Summary

HCM Average Control Delay	17.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	77.3	Sum of lost time (s)	20.0
Intersection Capacity Utilization	40.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
2: LAIRD & SR 315

9/23/2005



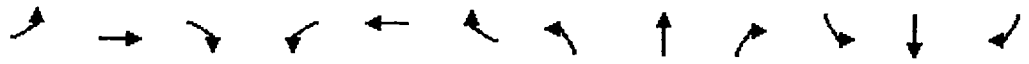
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕		↙	↕		↘	↕		↘	↕	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00		0.95	0.95		1.00	0.95		1.00	0.95	
Frt		0.90		1.00	0.95		1.00	0.99		1.00	1.00	
Flt Protected		0.99		0.95	0.97		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1566		1681	1643		1736	3449		1736	3459	
Flt Permitted		0.21		0.70	0.78		0.34	1.00		0.43	1.00	
Satd. Flow (perm)		333		1234	1323		629	3449		790	3459	
Volume (vph)	16	2	52	29	4	7	55	492	22	8	561	13
Peak-hour factor, PHF	0.77	0.77	0.77	0.73	0.73	0.73	0.91	0.91	0.91	0.94	0.94	0.94
Adj. Flow (vph)	21	3	68	40	5	10	60	541	24	9	597	14
RTOR Reduction (vph)	0	59	0	0	9	0	0	3	0	0	2	0
Lane Group Flow (vph)	0	33	0	23	23	0	60	562	0	9	609	0
Heavy Vehicles (%)	8%	8%	8%	2%	2%	2%	4%	4%	4%	4%	4%	4%
Turn Type	Perm			Perm			pm+pt			pm+pt		
Protected Phases		3			4		1	6		5	2	
Permitted Phases	3			4			6	6		2		
Actuated Green, G (s)		9.7		4.2	4.2		44.9	40.8		38.9	37.8	
Effective Green, g (s)		11.7		6.2	6.2		52.9	44.8		46.9	41.8	
Actuated g/C Ratio		0.14		0.07	0.07		0.63	0.53		0.56	0.50	
Clearance Time (s)		6.0		6.0	6.0		8.0	8.0		8.0	8.0	
Vehicle Extension (s)		2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)		46		91	98		504	1844		500	1725	
v/s Ratio Prot							c0.01	0.16		0.00	c0.18	
v/s Ratio Perm		c0.10		c0.02	0.02		0.06			0.01		
v/c Ratio		0.73		0.25	0.23		0.12	0.30		0.02	0.35	
Uniform Delay, d1		34.5		36.6	36.6		6.3	10.8		8.2	12.8	
Progression Factor		1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		38.3		0.5	0.4		0.0	0.0		0.0	0.0	
Delay (s)		72.8		37.1	37.0		6.4	10.9		8.2	12.8	
Level of Service		E		D	D		A	B		A	B	
Approach Delay (s)		72.8			37.1			10.4			12.8	
Approach LOS		E			D			B			B	

Intersection Summary

HCM Average Control Delay	16.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	83.8	Sum of lost time (s)	20.0
Intersection Capacity Utilization	41.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 17: SR 315 & MOTORWORLD

9/15/2005



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↷		↶	↷			↶	↷		↶	↷
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	1.00
Frt	1.00	0.99		1.00	0.99			1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.96	1.00		0.95	1.00
Satd. Flow (prot)	1770	3517		1770	3510			1819	1615		1787	1599
Flt Permitted	0.32	1.00		0.41	1.00			0.73	1.00		0.74	1.00
Satd. Flow (perm)	595	3517		771	3510			1386	1615		1390	1599
Volume (vph)	102	536	23	4	602	36	18	2	7	26	0	132
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.73	0.73	0.73	0.96	0.96	0.96
Adj. Flow (vph)	115	602	26	4	676	40	25	3	10	27	0	138
RTOR Reduction (vph)	0	3	0	0	5	0	0	0	9	0	0	122
Lane Group Flow (vph)	115	625	0	4	711	0	0	28	1	0	27	16
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	0%	0%	0%	1%	1%	1%
Turn Type	pm+pt			pm+pt			Perm		Perm	Perm		Perm
Protected Phases	1	6		5	2			4				8
Permitted Phases	6			2			4		4	8		8
Actuated Green, G (s)	42.1	37.2		35.3	33.8			5.3	5.3		5.3	5.3
Effective Green, g (s)	47.1	40.2		40.3	36.8			7.3	7.3		7.3	7.3
Actuated g/C Ratio	0.75	0.64		0.64	0.58			0.12	0.12		0.12	0.12
Clearance Time (s)	6.0	7.0		6.0	7.0			6.0	6.0		6.0	6.0
Vehicle Extension (s)	2.0	2.0		2.0	2.0			2.0	2.0		2.0	2.0
Lane Grp Cap (vph)	574	2244		549	2050			161	187		161	185
v/s Ratio Prot	c0.02	0.18		0.00	c0.20							
v/s Ratio Perm	0.13			0.00				c0.02	0.00		0.02	0.01
v/c Ratio	0.20	0.28		0.01	0.35			0.17	0.01		0.17	0.09
Uniform Delay, d1	2.5	5.0		4.1	6.8			25.1	24.6		25.1	24.9
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	1.00
Incremental Delay, d2	0.1	0.0		0.0	0.0			0.2	0.0		0.2	0.1
Delay (s)	2.6	5.0		4.1	6.9			25.3	24.6		25.3	24.9
Level of Service	A	A		A	A			C	C		C	C
Approach Delay (s)		4.7			6.9			25.1			25.0	
Approach LOS		A			A			C			C	

Intersection Summary			
HCM Average Control Delay	8.1	HCM Level of Service	A
HCM Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	63.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	41.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis

22: SR 315 & 309 NB RAMPS

9/15/2005



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕	↗		↕			↕	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00			1.00	
Frt	1.00	1.00		1.00	1.00	0.85		1.00			1.00	
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.95			0.95	
Satd. Flow (prot)	1805	3607		1787	3574	1599		1805			1787	
Flt Permitted	0.29	1.00		0.43	1.00	1.00		0.81			0.76	
Satd. Flow (perm)	544	3607		808	3574	1599		1544			1421	
Volume (vph)	506	551	3	2	592	158	2	0	0	110	0	0
Peak-hour factor, PHF	0.94	0.94	0.94	0.89	0.89	0.89	0.50	0.50	0.50	0.95	0.95	0.95
Adj. Flow (vph)	538	586	3	2	665	178	4	0	0	116	0	0
RTOR Reduction (vph)	0	0	0	0	0	100	0	0	0	0	0	0
Lane Group Flow (vph)	538	589	0	2	665	78	0	4	0	0	116	0
Heavy Vehicles (%)	0%	0%	0%	1%	1%	1%	0%	0%	0%	1%	1%	1%
Turn Type	pm+pt			Perm		Perm	Perm			Perm		
Protected Phases	1	6			2			8				4
Permitted Phases	6			2		2	8		4			
Actuated Green, G (s)	65.2	65.2		36.4	36.4	36.4		10.8			10.8	
Effective Green, g (s)	67.2	67.2		38.4	38.4	38.4		12.8			12.8	
Actuated g/C Ratio	0.76	0.76		0.44	0.44	0.44		0.15			0.15	
Clearance Time (s)	4.0	6.0		6.0	6.0	6.0		6.0			6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0			3.0	
Lane Grp Cap (vph)	771	2754		353	1560	698		225			207	
v/s Ratio Prot	c0.20	0.16			0.19							
v/s Ratio Perm	c0.34			0.00		0.05		0.00			c0.08	
v/c Ratio	0.70	0.21		0.01	0.43	0.11		0.02			0.56	
Uniform Delay, d1	6.3	2.9		14.0	17.2	14.7		32.2			35.0	
Progression Factor	1.01	2.26		1.00	1.00	1.00		1.00			1.00	
Incremental Delay, d2	2.5	0.2		0.0	0.9	0.3		0.0			3.4	
Delay (s)	8.9	6.8		14.0	18.0	15.0		32.2			38.4	
Level of Service	A	A		B	B	B		C			D	
Approach Delay (s)		7.8			17.4			32.2			38.4	
Approach LOS		A			B			C			D	

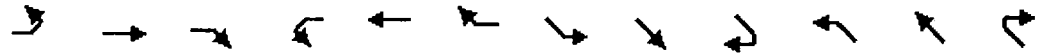
Intersection Summary

HCM Average Control Delay	13.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	88.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	60.1%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
 24: SR 315 & 309 SB RAMPS

9/15/2005



Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations		↑↑	↑	↑	↑↑		↑	↑				
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0		4.0	4.0				
Lane Util. Factor		0.95	1.00	1.00	0.95		0.95	0.95				
Frt		1.00	0.85	1.00	1.00		1.00	1.00				
Flt Protected		1.00	1.00	0.95	1.00		0.95	0.95				
Satd. Flow (prot)		3574	1599	1787	3574		1649	1649				
Flt Permitted		1.00	1.00	0.19	1.00		0.95	0.95				
Satd. Flow (perm)		3574	1599	360	3574		1649	1649				
Volume (vph)	0	906	272	205	935	0	154	0	0	0	0	0
Peak-hour factor, PHF	0.85	0.85	0.85	0.87	0.87	0.87	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	1066	320	236	1075	0	167	0	0	0	0	0
RTOR Reduction (vph)	0	0	130	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	1066	190	236	1075	0	84	83	0	0	0	0
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	4%	4%	4%	2%	2%	2%
Turn Type		Perm pm+pt				Perm						
Protected Phases		6		5	2			4				
Permitted Phases			6	2			4					
Actuated Green, G (s)		50.3	50.3	68.7	68.7		7.3	7.3				
Effective Green, g (s)		52.3	52.3	70.7	70.7		9.3	9.3				
Actuated g/C Ratio		0.59	0.59	0.80	0.80		0.11	0.11				
Clearance Time (s)		6.0	6.0	4.0	6.0		6.0	6.0				
Vehicle Extension (s)		3.0	3.0	3.0	3.0		2.0	2.0				
Lane Grp Cap (vph)		2124	950	523	2871		174	174				
v/s Ratio Prot		c0.30		c0.07	0.30							
v/s Ratio Perm			0.12	0.29			c0.05	0.05				
v/c Ratio		0.50	0.20	0.45	0.37		0.48	0.48				
Uniform Delay, d1		10.3	8.2	4.7	2.4		37.1	37.1				
Progression Factor		1.00	1.00	2.23	0.43		1.00	1.00				
Incremental Delay, d2		0.9	0.5	0.6	0.4		0.8	0.8				
Delay (s)		11.2	8.7	11.2	1.4		37.9	37.8				
Level of Service		B	A	B	A		D	D				
Approach Delay (s)		10.6			3.2			37.8			0.0	
Approach LOS		B			A			D			A	

Intersection Summary

HCM Average Control Delay	8.8	HCM Level of Service	A
HCM Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	88.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	51.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Unsignalized Intersection Capacity Analysis
 3: POCONO DOWNS & SR 315

9/23/2005



Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations	↘				↕			↕		↘	↕	
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	3	0	0	2	0	0	0	486	2	0	591	26
Peak Hour Factor	0.69	0.69	0.69	0.50	0.50	0.50	0.96	0.96	0.96	0.92	0.92	0.92
Hourly flow rate (vph)	4	0	0	4	0	0	0	506	2	0	642	28
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		TWLTL			TWLTL							
Median storage (veh)		0			0							
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	910	1165	335	828	1178	254	671			508		
vC1, stage 1 conf vol	657	657		507	507							
vC2, stage 2 conf vol	253	508		321	671							
vCu, unblocked vol	910	1165	335	828	1178	254	671			508		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.2			4.2		
tC, 2 stage (s)	6.5	5.5		6.5	5.5							
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	98	100	100	99	100	100	100			100		
cM capacity (veh/h)	253	236	666	288	234	751	909			1039		

Direction, Lane #	SE 1	NW 1	NE 1	NE 2	SW 1	SW 2	SW 3
Volume Total	4	4	338	171	0	428	242
Volume Left	4	4	0	0	0	0	0
Volume Right	0	0	0	2	0	0	28
cSH	253	288	1700	1700	1700	1700	1700
Volume to Capacity	0.02	0.01	0.20	0.10	0.00	0.25	0.14
Queue Length 95th (ft)	1	1	0	0	0	0	0
Control Delay (s)	19.5	17.7	0.0	0.0	0.0	0.0	0.0
Lane LOS	C	C					
Approach Delay (s)	19.5	17.7	0.0		0.0		
Approach LOS	C	C					

Intersection Summary

Average Delay	0.1
Intersection Capacity Utilization	27.2%
ICU Level of Service	A
Analysis Period (min)	15

HCM Unsignalized Intersection Capacity Analysis
 8: POCONO DOWNS RT & SR 315

9/23/2005



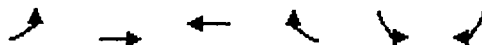
Movement	EBL	EBR	NEL	NET	SWT	SWR
Lane Configurations		↗	↖	↕	↕	
Sign Control	Yield			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	0	8	17	488	591	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	9	18	530	642	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	945	321	642			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	945	321	642			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	99	98			
cM capacity (veh/h)	255	675	938			

Direction, Lane #	EB 1	NE 1	NE 2	NE 3	SW 1	SW 2
Volume Total	9	18	265	265	321	321
Volume Left	0	18	0	0	0	0
Volume Right	9	0	0	0	0	0
cSH	675	938	1700	1700	1700	1700
Volume to Capacity	0.01	0.02	0.16	0.16	0.19	0.19
Queue Length 95th (ft)	1	2	0	0	0	0
Control Delay (s)	10.4	8.9	0.0	0.0	0.0	0.0
Lane LOS	B	A				
Approach Delay (s)	10.4	0.3			0.0	
Approach LOS	B					

Intersection Summary						
Average Delay			0.2			
Intersection Capacity Utilization		26.3%		ICU Level of Service		A
Analysis Period (min)		15				

HCM Unsignalized Intersection Capacity Analysis
 14: EAST MAIN & POCONO DOWNS

9/23/2005



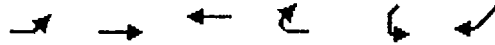
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑		↑	
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	0	274	254	25	13	0
Peak Hour Factor	0.96	0.96	0.89	0.89	0.54	0.54
Hourly flow rate (vph)	0	285	285	28	24	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage (veh)						
Upstream signal (ft)			1223			
pX, platoon unblocked						
vC, conflicting volume	313				585	299
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	313				585	299
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				95	100
cM capacity (veh/h)	1252				477	745

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	285	313	24
Volume Left	0	0	24
Volume Right	0	28	0
cSH	1700	1700	477
Volume to Capacity	0.17	0.18	0.05
Queue Length 95th (ft)	0	0	4
Control Delay (s)	0.0	0.0	13.0
Lane LOS			B
Approach Delay (s)	0.0	0.0	13.0
Approach LOS			B

Intersection Summary			
Average Delay		0.5	
Intersection Capacity Utilization	24.9%		ICU Level of Service A
Analysis Period (min)		15	

HCM Unsignalized Intersection Capacity Analysis
 9: EAST MAIN & POCONO DOWNS RT

9/23/2005



Movement	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations		↕	↑			↗
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	27	274	254	0	0	15
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	29	298	276	0	0	16
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None		
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	276				633	276
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	276				633	276
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	98				100	98
cM capacity (veh/h)	1287				434	763

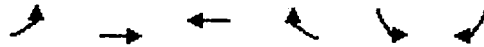
Direction, Lane #	EB 1	WB 1	SW 1
Volume Total	327	276	16
Volume Left	29	0	0
Volume Right	0	0	16
cSH	1287	1700	763
Volume to Capacity	0.02	0.16	0.02
Queue Length 95th (ft)	2	0	2
Control Delay (s)	0.9	0.0	9.8
Lane LOS	A		A
Approach Delay (s)	0.9	0.0	9.8
Approach LOS			A

Intersection Summary			
Average Delay		0.7	
Intersection Capacity Utilization	35.9%		ICU Level of Service A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis

20: EAST MAIN & FIRST

9/15/2005



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	38	209	87	40	32	39
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	41	227	95	43	35	42
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None		
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	138				426	116
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	138				426	116
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	97				94	95
cM capacity (veh/h)	1446				568	936

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	268	138	77
Volume Left	41	0	35
Volume Right	0	43	42
cSH	1446	1700	725
Volume to Capacity	0.03	0.08	0.11
Queue Length 95th (ft)	2	0	9
Control Delay (s)	1.4	0.0	10.6
Lane LOS	A		B
Approach Delay (s)	1.4	0.0	10.6
Approach LOS			B

Intersection Summary		
Average Delay		2.4
Intersection Capacity Utilization	34.3%	ICU Level of Service
Analysis Period (min)		15

HCM Unsignalized Intersection Capacity Analysis
 19: EAST MAIN & SCOTT

9/15/2005



Movement	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations	↕			↕		↕
Sign Control	Free			Free		Stop
Grade	0%			0%		0%
Volume (veh/h)	169	30	53	173	22	78
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	184	33	58	188	24	85
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			216		503	200
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			216		503	200
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			96		95	90
cM capacity (veh/h)			1353		506	841

Direction, Lane #	EB 1	WB 1	NE 1
Volume Total	216	246	109
Volume Left	0	58	24
Volume Right	33	0	85
cSH	1700	1353	734
Volume to Capacity	0.13	0.04	0.15
Queue Length 95th (ft)	0	3	13
Control Delay (s)	0.0	2.1	10.8
Lane LOS		A	B
Approach Delay (s)	0.0	2.1	10.8
Approach LOS			B

Intersection Summary

Average Delay	3.0
Intersection Capacity Utilization	38.8%
ICU Level of Service	A
Analysis Period (min)	15

HCM Signalized Intersection Capacity Analysis
 28: OAK & SR 315

9/23/2005



Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations	↵	↑	↗		↖	↗	↵	↕		↵	↕	↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00		1.00	1.00	1.00	0.95		1.00	0.95	1.00
Frt	1.00	1.00	0.85		1.00	0.85	1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00		0.96	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1530	1610	1369		1811	1599	1752	3471		1736	3471	1553
Flt Permitted	0.72	1.00	1.00		0.82	1.00	0.30	1.00		0.49	1.00	1.00
Satd. Flow (perm)	1158	1610	1369		1551	1599	552	3471		899	3471	1553
Volume (vph)	162	15	143	41	12	20	195	379	26	8	443	208
Peak-hour factor, PHF	0.63	0.63	0.63	0.91	0.91	0.91	0.90	0.90	0.90	0.91	0.91	0.91
Adj. Flow (vph)	257	24	227	45	13	22	217	421	29	9	487	229
RTOR Reduction (vph)	0	0	131	0	0	13	0	3	0	0	0	0
Lane Group Flow (vph)	257	24	96	0	58	9	217	447	0	9	487	229
Heavy Vehicles (%)	18%	18%	18%	1%	1%	1%	3%	3%	3%	4%	4%	4%
Turn Type	Perm		Perm	Perm		Perm	pm+pt			pm+pt		Free
Protected Phases		7 8			7 8		1	6		5	2	
Permitted Phases	7 8		7 8	7 8		7 8	6			2		Free
Actuated Green, G (s)	34.8	34.8	34.8		34.8	34.8	39.9	33.0		23.0	22.1	86.7
Effective Green, g (s)	36.8	36.8	36.8		36.8	36.8	41.9	35.0		27.0	24.1	86.7
Actuated g/C Ratio	0.42	0.42	0.42		0.42	0.42	0.48	0.40		0.31	0.28	1.00
Clearance Time (s)							6.0	6.0		6.0	6.0	
Vehicle Extension (s)							3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	492	683	581		658	679	458	1401		308	965	1553
v/s Ratio Prot		0.01					c0.08	0.13		0.00	0.14	
v/s Ratio Perm	c0.22		0.07		0.04	0.01	c0.15			0.01		0.15
v/c Ratio	0.52	0.04	0.17		0.09	0.01	0.47	0.32		0.03	0.50	0.15
Uniform Delay, d1	18.5	14.6	15.4		14.9	14.4	14.0	17.7		20.7	26.3	0.0
Progression Factor	1.00	1.00	1.00		1.00	1.00	1.10	0.93		1.00	1.00	1.00
Incremental Delay, d2	1.0	0.0	0.1		0.1	0.0	0.8	0.1		0.0	0.4	0.2
Delay (s)	19.5	14.6	15.6		15.0	14.5	16.2	16.7		20.7	26.7	0.2
Level of Service	B	B	B		B	B	B	B		C	C	A
Approach Delay (s)		17.5			14.8			16.5			18.3	
Approach LOS		B			B			B			B	

Intersection Summary

HCM Average Control Delay	17.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	86.7	Sum of lost time (s)	8.0
Intersection Capacity Utilization	48.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 10: OLD BOSTON & SR 315

9/15/2005



Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations	↘		↑↑			↙
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0			4.0
Lane Util. Factor	1.00		0.95			0.95
Fr _t	0.94		0.99			1.00
Fl _t Protected	0.97		1.00			1.00
Satd. Flow (prot)	1650		3528			3602
Fl _t Permitted	0.97		1.00			0.94
Satd. Flow (perm)	1650		3528			3382
Volume (vph)	34	31	295	28	17	381
Peak-hour factor, PHF	0.74	0.74	0.93	0.93	0.85	0.85
Adj. Flow (vph)	46	42	317	30	20	448
RTOR Reduction (vph)	36	0	6	0	0	0
Lane Group Flow (vph)	52	0	341	0	0	468
Heavy Vehicles (%)	5%	5%	1%	1%	0%	0%
Turn Type					pm+pt	
Protected Phases	4		6		5	2
Permitted Phases					2	2
Actuated Green, G (s)	7.0		34.8			34.8
Effective Green, g (s)	8.0		35.8			35.8
Actuated g/C Ratio	0.15		0.69			0.69
Clearance Time (s)	5.0		5.0			5.0
Vehicle Extension (s)	2.0		1.0			1.0
Lane Grp Cap (vph)	255		2438			2337
v/s Ratio Prot	c0.03		0.10			
v/s Ratio Perm						c0.14
v/c Ratio	0.21		0.14			0.20
Uniform Delay, d ₁	19.1		2.7			2.9
Progression Factor	1.00		1.00			1.00
Incremental Delay, d ₂	0.1		0.0			0.0
Delay (s)	19.3		2.7			2.9
Level of Service	B		A			A
Approach Delay (s)	19.3		2.7			2.9
Approach LOS	B		A			A

Intersection Summary

HCM Average Control Delay	4.4	HCM Level of Service	A
HCM Volume to Capacity ratio	0.20		
Actuated Cycle Length (s)	51.8	Sum of lost time (s)	8.0
Intersection Capacity Utilization	33.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 13: LAFLIN & SR 315

9/15/2005



Movement	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations	↙	↗	↙	↑	↑↑	↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1787	1599	1787	1881	3574	1599
Flt Permitted	0.95	1.00	0.43	1.00	1.00	1.00
Satd. Flow (perm)	1787	1599	801	1881	3574	1599
Volume (vph)	78	115	75	333	394	102
Peak-hour factor, PHF	0.70	0.70	0.87	0.87	0.88	0.88
Adj. Flow (vph)	111	164	86	383	448	116
RTOR Reduction (vph)	0	113	0	0	0	95
Lane Group Flow (vph)	111	51	86	383	448	21
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%
Turn Type	custom		pm+pt		Over	
Protected Phases	8	8	1	6	2	8
Permitted Phases	8	1	6			
Actuated Green, G (s)	9.2	14.2	39.4	39.4	27.4	9.2
Effective Green, g (s)	11.2	19.2	42.4	42.4	30.4	11.2
Actuated g/C Ratio	0.18	0.31	0.69	0.69	0.49	0.18
Clearance Time (s)	6.0	6.0	7.0	7.0	7.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0	5.0	5.0	3.0
Lane Grp Cap (vph)	325	602	679	1295	1764	291
v/s Ratio Prot	c0.06	0.02	0.02	c0.20	0.13	0.01
v/s Ratio Perm		0.02	0.07			
v/c Ratio	0.34	0.08	0.13	0.30	0.25	0.07
Uniform Delay, d1	22.0	15.0	3.3	3.8	9.0	20.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.6	0.1	0.1	0.3	0.2	0.1
Delay (s)	22.6	15.0	3.4	4.0	9.2	21.0
Level of Service	C	B	A	A	A	C
Approach Delay (s)	18.1			3.9	11.6	
Approach LOS	B			A	B	

Intersection Summary

HCM Average Control Delay	10.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.31		
Actuated Cycle Length (s)	61.6	Sum of lost time (s)	8.0
Intersection Capacity Utilization	29.4%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
 4: SUNSHINE MARKET & SR 315

9/15/2005



Movement	SBL	SBR	NEL	NET	SWT	SWR
Lane Configurations	↙	↗	↙	↑	↑↑	↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1805	1615	1787	1881	3539	1583
Flt Permitted	0.95	1.00	0.47	1.00	1.00	1.00
Satd. Flow (perm)	1805	1615	878	1881	3539	1583
Volume (vph)	33	60	69	351	353	27
Peak-hour factor, PHF	0.76	0.76	0.90	0.90	0.89	0.89
Adj. Flow (vph)	43	79	77	390	397	30
RTOR Reduction (vph)	0	55	0	0	0	0
Lane Group Flow (vph)	43	24	77	390	397	30
Heavy Vehicles (%)	0%	0%	1%	1%	2%	2%
Turn Type		pt+ov	pm+pt			Free
Protected Phases	8	18	1	6	2	
Permitted Phases			6			Free
Actuated Green, G (s)	5.5	16.4	45.2	45.2	33.3	63.7
Effective Green, g (s)	7.5	19.4	48.2	48.2	36.3	63.7
Actuated g/C Ratio	0.12	0.30	0.76	0.76	0.57	1.00
Clearance Time (s)	6.0		7.0	7.0	7.0	
Vehicle Extension (s)	3.0		3.0	5.0	5.0	
Lane Grp Cap (vph)	213	492	777	1423	2017	1583
v/s Ratio Prot	c0.02	0.01	0.01	c0.21	0.11	
v/s Ratio Perm			0.06			0.02
v/c Ratio	0.20	0.05	0.10	0.27	0.20	0.02
Uniform Delay, d1	25.4	15.6	2.1	2.4	6.6	0.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.5	0.0	0.1	0.2	0.1	0.0
Delay (s)	25.9	15.7	2.2	2.6	6.7	0.0
Level of Service	C	B	A	A	A	A
Approach Delay (s)	19.3			2.5	6.3	
Approach LOS	B			A	A	

Intersection Summary

HCM Average Control Delay	6.1	HCM Level of Service	A
HCM Volume to Capacity ratio	0.26		
Actuated Cycle Length (s)	63.7	Sum of lost time (s)	8.0
Intersection Capacity Utilization	29.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 1: EAST MAIN & SR 315

9/15/2005

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations	↘	↑	↗	↘	↑	↗	↘	↕	↘	↘	↕	↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95		1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	1863	1583	1787	1881	1599	1770	3481		1787	3574	1599
Flt Permitted	0.66	1.00	1.00	0.72	1.00	1.00	0.53	1.00		0.52	1.00	1.00
Satd. Flow (perm)	1224	1863	1583	1346	1881	1599	994	3481		978	3574	1599
Volume (vph)	74	57	62	71	104	66	82	315	39	28	272	48
Peak-hour factor, PHF	0.89	0.89	0.89	0.86	0.86	0.86	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	83	64	70	83	121	77	91	350	43	31	302	53
RTOR Reduction (vph)	0	0	61	0	0	67	0	11	0	0	0	30
Lane Group Flow (vph)	83	64	9	83	121	10	91	382	0	31	302	23
Heavy Vehicles (%)	2%	2%	2%	1%	1%	1%	2%	2%	2%	1%	1%	1%
Turn Type	pm+pt		Perm	pm+pt		Perm	pm+pt			pm+pt		Perm
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases	8		8	4		4	6			2		2
Actuated Green, G (s)	9.6	5.8	5.8	9.6	5.8	5.8	32.6	28.7		28.8	26.8	26.8
Effective Green, g (s)	15.6	8.8	8.8	15.6	8.8	8.8	38.6	31.7		34.8	29.8	29.8
Actuated g/C Ratio	0.23	0.13	0.13	0.23	0.13	0.13	0.57	0.46		0.51	0.44	0.44
Clearance Time (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0		7.0	7.0	7.0
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0	1.0	1.0		1.0	1.0	1.0
Lane Grp Cap (vph)	334	240	204	351	242	206	640	1616		558	1559	698
v/s Ratio Prot	c0.02	0.03		0.02	c0.06		c0.01	c0.11		0.00	0.08	
v/s Ratio Perm	0.03		0.01	0.03		0.01	0.07			0.02		0.01
v/c Ratio	0.25	0.27	0.04	0.24	0.50	0.05	0.14	0.24		0.06	0.19	0.03
Uniform Delay, d1	21.3	26.8	26.1	21.3	27.7	26.1	6.8	11.0		8.4	11.9	11.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.1	0.2	0.0	0.1	0.6	0.0	0.0	0.0		0.0	0.0	0.0
Delay (s)	21.5	27.1	26.1	21.4	28.3	26.1	6.9	11.0		8.4	11.9	11.0
Level of Service	C	C	C	C	C	C	A	B		A	B	B
Approach Delay (s)		24.6			25.7			10.3			11.5	
Approach LOS		C			C			B			B	

Intersection Summary

HCM Average Control Delay	16.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.28		
Actuated Cycle Length (s)	68.3	Sum of lost time (s)	16.0
Intersection Capacity Utilization	34.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis

2: LAIRD & SR 315

9/15/2005



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕		↕	↕		↕	↕		↕	↕	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00		0.95	0.95		1.00	0.95		1.00	0.95	
Frt		0.91		1.00	0.93		1.00	0.98		1.00	1.00	
Flt Protected		0.99		0.95	0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1670		1681	1605		1770	3462		1770	3530	
Flt Permitted		0.21		0.71	0.82		0.40	1.00		0.38	1.00	
Satd. Flow (perm)		347		1256	1347		751	3462		705	3530	
Volume (vph)	12	6	41	22	1	9	60	423	72	60	468	8
Peak-hour factor, PHF	0.81	0.81	0.81	0.64	0.64	0.64	0.85	0.85	0.85	0.88	0.88	0.88
Adj. Flow (vph)	15	7	51	34	2	14	71	498	85	68	532	9
RTOR Reduction (vph)	0	43	0	0	13	0	0	15	0	0	1	0
Lane Group Flow (vph)	0	30	0	21	16	0	71	568	0	68	540	0
Turn Type	Perm			Perm			pm+pt			pm+pt		
Protected Phases		3			4		1	6		5	2	
Permitted Phases	3			4			6	6		2		
Actuated Green, G (s)		9.9		4.1	4.1		37.4	33.3		37.4	33.3	
Effective Green, g (s)		11.9		6.1	6.1		45.4	37.3		45.4	37.3	
Actuated g/C Ratio		0.15		0.08	0.08		0.57	0.47		0.57	0.47	
Clearance Time (s)		6.0		6.0	6.0		8.0	8.0		8.0	8.0	
Vehicle Extension (s)		2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)		52		96	103		533	1626		512	1658	
v/s Ratio Prot							c0.01	c0.16		0.01	0.15	
v/s Ratio Perm		c0.09		c0.02	0.01		0.06			0.06		
v/c Ratio		0.57		0.22	0.16		0.13	0.35		0.13	0.33	
Uniform Delay, d1		31.4		34.4	34.2		7.7	13.4		7.7	13.2	
Progression Factor		1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		9.0		0.4	0.3		0.0	0.0		0.0	0.0	
Delay (s)		40.4		34.8	34.5		7.7	13.4		7.8	13.2	
Level of Service		D		C	C		A	B		A	B	
Approach Delay (s)		40.4			34.6			12.8			12.6	
Approach LOS		D			C			B			B	

Intersection Summary

HCM Average Control Delay	15.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	79.4	Sum of lost time (s)	16.0
Intersection Capacity Utilization	41.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
17: SR 315 & MOTORWORLD

9/15/2005



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕			↕	↗		↕	↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	1.00
Frt	1.00	1.00		1.00	1.00			1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.95	1.00		0.95	1.00
Satd. Flow (prot)	1787	3556		1787	3565			1760	1568		1805	1615
Flt Permitted	0.42	1.00		0.38	1.00			0.74	1.00		0.74	1.00
Satd. Flow (perm)	793	3556		721	3565			1359	1568		1408	1615
Volume (vph)	17	519	18	5	517	9	20	1	9	27	0	116
Peak-hour factor, PHF	0.85	0.85	0.85	0.93	0.93	0.93	0.83	0.83	0.83	0.62	0.62	0.62
Adj. Flow (vph)	20	611	21	5	556	10	24	1	11	44	0	187
RTOR Reduction (vph)	0	3	0	0	2	0	0	0	9	0	0	150
Lane Group Flow (vph)	20	629	0	5	564	0	0	25	2	0	44	37
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	3%	3%	3%	0%	0%	0%
Turn Type	pm+pt			pm+pt			Perm		Perm	Perm		Perm
Protected Phases	1	6		5	2			4			8	
Permitted Phases	6			2			4		4	8		8
Actuated Green, G (s)	22.5	21.3		22.5	21.3			7.9	7.9		7.9	7.9
Effective Green, g (s)	27.5	24.3		27.5	24.3			9.9	9.9		9.9	9.9
Actuated g/C Ratio	0.56	0.49		0.56	0.49			0.20	0.20		0.20	0.20
Clearance Time (s)	6.0	7.0		6.0	7.0			6.0	6.0		6.0	6.0
Vehicle Extension (s)	2.0	2.0		2.0	2.0			2.0	2.0		2.0	2.0
Lane Grp Cap (vph)	506	1749		470	1754			272	314		282	324
v/s Ratio Prot	c0.00	c0.18		0.00	0.16							
v/s Ratio Perm	0.02			0.01				0.02	0.00		c0.03	0.02
v/c Ratio	0.04	0.36		0.01	0.32			0.09	0.01		0.16	0.12
Uniform Delay, d1	4.9	7.7		4.9	7.6			16.1	15.8		16.3	16.2
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	1.00
Incremental Delay, d2	0.0	0.0		0.0	0.0			0.1	0.0		0.1	0.1
Delay (s)	4.9	7.8		4.9	7.6			16.1	15.8		16.4	16.2
Level of Service	A	A		A	A			B	B		B	B
Approach Delay (s)		7.7			7.6			16.0			16.3	
Approach LOS		A			A			B			B	

Intersection Summary

HCM Average Control Delay	9.2	HCM Level of Service	A
HCM Volume to Capacity ratio	0.28		
Actuated Cycle Length (s)	49.4	Sum of lost time (s)	12.0
Intersection Capacity Utilization	37.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 22: SR 315 & 309 NB RAMPS

9/15/2005



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↕		↘	↕	↗		↕			↗	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0					4.0	
Lane Util. Factor	1.00	0.95			0.95	1.00					1.00	
Flt	1.00	1.00			1.00	0.85					1.00	
Flt Protected	0.95	1.00			1.00	1.00					0.95	
Satd. Flow (prot)	1787	3574			3610	1615					1787	
Flt Permitted	0.34	1.00			1.00	1.00					0.76	
Satd. Flow (perm)	639	3574			3610	1615					1424	
Volume (vph)	506	487	0	0	498	155	0	0	0	67	0	0
Peak-hour factor, PHF	0.98	0.98	0.98	0.84	0.84	0.84	0.50	0.50	0.50	0.92	0.92	0.92
Adj. Flow (vph)	516	497	0	0	593	185	0	0	0	73	0	0
RTOR Reduction (vph)	0	0	0	0	0	96	0	0	0	0	0	0
Lane Group Flow (vph)	516	497	0	0	593	89	0	0	0	0	73	0
Heavy Vehicles (%)	1%	1%	1%	0%	0%	0%	0%	0%	0%	1%	1%	1%
Turn Type	pm+pt			Perm		Perm	Perm			Perm		
Protected Phases	1	6			2			8			4	
Permitted Phases	6			2		2	8			4		
Actuated Green, G (s)	67.5	67.5			40.4	40.4					8.5	
Effective Green, g (s)	69.5	69.5			42.4	42.4					10.5	
Actuated g/C Ratio	0.79	0.79			0.48	0.48					0.12	
Clearance Time (s)	4.0	6.0			6.0	6.0					6.0	
Vehicle Extension (s)	3.0	3.0			3.0	3.0					3.0	
Lane Grp Cap (vph)	806	2823			1739	778					170	
v/s Ratio Prot	c0.17	0.14			0.16							
v/s Ratio Perm	c0.34					0.06					c0.05	
v/c Ratio	0.64	0.18			0.34	0.11					0.43	
Uniform Delay, d1	4.2	2.3			14.1	12.5					36.0	
Progression Factor	1.14	2.22			1.00	1.00					1.00	
Incremental Delay, d2	1.7	0.1			0.5	0.3					1.7	
Delay (s)	6.5	5.2			14.7	12.8					37.7	
Level of Service	A	A			B	B					D	
Approach Delay (s)		5.8			14.2			0.0			37.7	
Approach LOS		A			B			A			D	

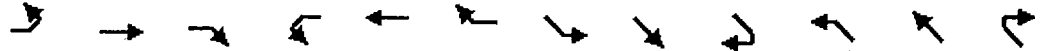
Intersection Summary

HCM Average Control Delay	10.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	88.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	55.9%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
 24: SR 315 & 309 SB RAMPS

9/15/2005



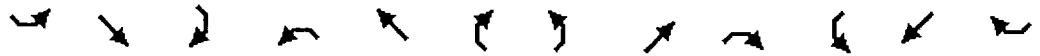
Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations		↑↑	↑	↑	↑↑		↑	↑				
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0		4.0	4.0				
Lane Util. Factor		0.95	1.00	1.00	0.95		0.95	0.95				
Frt		1.00	0.85	1.00	1.00		1.00	1.00				
Flt Protected		1.00	1.00	0.95	1.00		0.95	0.95				
Satd. Flow (prot)		3610	1615	1787	3574		1715	1715				
Flt Permitted		1.00	1.00	0.25	1.00		0.95	0.95				
Satd. Flow (perm)		3610	1615	479	3574		1715	1715				
Volume (vph)	0	898	373	178	718	0	95	0	0	0	0	0
Peak-hour factor, PHF	0.96	0.96	0.96	0.93	0.93	0.93	0.89	0.89	0.89	0.92	0.92	0.92
Adj. Flow (vph)	0	935	389	191	772	0	107	0	0	0	0	0
RTOR Reduction (vph)	0	0	125	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	935	264	191	772	0	54	53	0	0	0	0
Heavy Vehicles (%)	0%	0%	0%	1%	1%	1%	0%	0%	0%	0%	0%	0%
Turn Type		Perm pm+pt				Perm						
Protected Phases		6		5	2			4				
Permitted Phases			6	2			4					
Actuated Green, G (s)		57.7	57.7	70.1	70.1		5.9	5.9				
Effective Green, g (s)		59.7	59.7	72.1	72.1		7.9	7.9				
Actuated g/C Ratio		0.68	0.68	0.82	0.82		0.09	0.09				
Clearance Time (s)		6.0	6.0	4.0	6.0		6.0	6.0				
Vehicle Extension (s)		3.0	3.0	3.0	3.0		2.0	2.0				
Lane Grp Cap (vph)		2449	1096	517	2928		154	154				
v/s Ratio Prot		0.26		c0.04	0.22							
v/s Ratio Perm			0.16	c0.27			c0.03	0.03				
v/c Ratio		0.38	0.24	0.37	0.26		0.35	0.34				
Uniform Delay, d1		6.1	5.4	2.6	1.8		37.6	37.6				
Progression Factor		1.00	1.00	4.08	0.36		1.00	1.00				
Incremental Delay, d2		0.5	0.5	0.4	0.2		0.5	0.5				
Delay (s)		6.6	6.0	11.0	0.9		38.1	38.1				
Level of Service		A	A	B	A		D	D				
Approach Delay (s)		6.4			2.9			38.1			0.0	
Approach LOS		A			A			D			A	

Intersection Summary

HCM Average Control Delay	6.4	HCM Level of Service	A
HCM Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	88.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	49.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Unsignalized Intersection Capacity Analysis
 3: POCONO DOWNS & SR 315

9/23/2005



Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations	↵				↕			↕		↵	↕	
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	10	0	0	0	0	1	0	409	1	1	339	73
Peak Hour Factor	0.68	0.68	0.68	0.25	0.25	0.25	0.93	0.93	0.93	0.83	0.83	0.83
Hourly flow rate (vph)	15	0	0	0	0	4	0	440	1	1	408	88
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		TWLT			TWLT							
Median storage (veh)		0			0							
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	679	896	248	647	939	220	496			441		
vC1, stage 1 conf vol	455	455		440	440							
vC2, stage 2 conf vol	224	441		207	499							
vCu, unblocked vol	679	896	248	647	939	220	496			441		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)	6.5	5.5		6.5	5.5							
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	96	100	100	100	100	99	100			100		
cM capacity (veh/h)	329	291	758	340	282	790	1071			1123		

Direction, Lane #	SE 1	NW 1	NE 1	NE 2	SW 1	SW 2	SW 3
Volume Total	15	4	293	148	1	272	224
Volume Left	15	0	0	0	1	0	0
Volume Right	0	4	0	1	0	0	88
cSH	329	790	1700	1700	1123	1700	1700
Volume to Capacity	0.04	0.01	0.17	0.09	0.00	0.16	0.13
Queue Length 95th (ft)	3	0	0	0	0	0	0
Control Delay (s)	16.5	9.6	0.0	0.0	8.2	0.0	0.0
Lane LOS	C	A			A		
Approach Delay (s)	16.5	9.6	0.0		0.0		
Approach LOS	C	A					

Intersection Summary			
Average Delay		0.3	
Intersection Capacity Utilization	25.6%		ICU Level of Service A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
 9: POCONO DOWNS RT & SR 315

9/23/2005



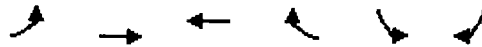
Movement	EBL	EBR	NEL	NET	SWT	SWR
Lane Configurations		↗	↖	↕	↕	
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	0	9	45	410	339	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	10	49	446	368	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	689	184	368			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	689	184	368			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	99	96			
cM capacity (veh/h)	364	827	1187			

Direction, Lane #	EB 1	NE 1	NE 2	NE 3	SW 1	SW 2
Volume Total	10	49	223	223	184	184
Volume Left	0	49	0	0	0	0
Volume Right	10	0	0	0	0	0
cSH	827	1187	1700	1700	1700	1700
Volume to Capacity	0.01	0.04	0.13	0.13	0.11	0.11
Queue Length 95th (ft)	1	3	0	0	0	0
Control Delay (s)	9.4	8.2	0.0	0.0	0.0	0.0
Lane LOS	A	A				
Approach Delay (s)	9.4	0.8			0.0	
Approach LOS	A					

Intersection Summary						
Average Delay		0.6				
Intersection Capacity Utilization		19.4%		ICU Level of Service		A
Analysis Period (min)		15				

HCM Unsignalized Intersection Capacity Analysis
 14: EAST MAIN & POCONO DOWNS

9/23/2005



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑		↑	
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	0	184	177	57	9	0
Peak Hour Factor	0.96	0.96	0.89	0.89	0.54	0.54
Hourly flow rate (vph)	0	192	199	64	17	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage (veh)						
Upstream signal (ft)			1242			
pX, platoon unblocked						
vC, conflicting volume	263				423	231
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	263				423	231
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				97	100
cM capacity (veh/h)	1307				592	813

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	192	263	17
Volume Left	0	0	17
Volume Right	0	64	0
cSH	1700	1700	592
Volume to Capacity	0.11	0.15	0.03
Queue Length 95th (ft)	0	0	2
Control Delay (s)	0.0	0.0	11.3
Lane LOS			B
Approach Delay (s)	0.0	0.0	11.3
Approach LOS			B

Intersection Summary			
Average Delay		0.4	
Intersection Capacity Utilization	22.8%		ICU Level of Service
Analysis Period (min)	15		A

HCM Unsignalized Intersection Capacity Analysis
 8: EAST MAIN & POCONO DOWNS RT

9/23/2005



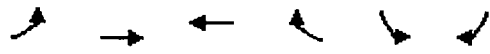
Movement	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations		↕	↑			↗
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	54	184	177	0	0	17
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	59	200	192	0	0	18
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None		
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	192				510	192
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	192				510	192
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	96				100	98
cM capacity (veh/h)	1381				501	849

Direction, Lane #	EB 1	WB 1	SW 1
Volume Total	259	192	18
Volume Left	59	0	0
Volume Right	0	0	18
cSH	1381	1700	849
Volume to Capacity	0.04	0.11	0.02
Queue Length 95th (ft)	3	0	2
Control Delay (s)	2.0	0.0	9.3
Lane LOS	A		A
Approach Delay (s)	2.0	0.0	9.3
Approach LOS			A

Intersection Summary			
Average Delay		1.5	
Intersection Capacity Utilization	28.7%		ICU Level of Service
Analysis Period (min)		15	A

HCM Unsignalized Intersection Capacity Analysis
 20: EAST MAIN & FIRST

9/15/2005



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	38	209	87	40	32	39
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	41	227	95	43	35	42
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	138				426	116
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	138				426	116
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	97				94	95
cM capacity (veh/h)	1446				568	936

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	268	138	77
Volume Left	41	0	35
Volume Right	0	43	42
cSH	1446	1700	725
Volume to Capacity	0.03	0.08	0.11
Queue Length 95th (ft)	2	0	9
Control Delay (s)	1.4	0.0	10.6
Lane LOS	A		B
Approach Delay (s)	1.4	0.0	10.6
Approach LOS			B

Intersection Summary		
Average Delay		2.4
Intersection Capacity Utilization	34.3%	ICU Level of Service
Analysis Period (min)		15
		A

HCM Unsignalized Intersection Capacity Analysis
 19: EAST MAIN & SCOTT

9/15/2005



Movement	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations	↑			↑		↑
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	169	30	53	173	22	78
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	184	33	58	188	24	85
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			216		503	200
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			216		503	200
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			96		95	90
cM capacity (veh/h)			1353		506	841

Direction, Lane #	EB 1	WB 1	NE 1
Volume Total	216	246	109
Volume Left	0	58	24
Volume Right	33	0	85
cSH	1700	1353	734
Volume to Capacity	0.13	0.04	0.15
Queue Length 95th (ft)	0	3	13
Control Delay (s)	0.0	2.1	10.8
Lane LOS		A	B
Approach Delay (s)	0.0	2.1	10.8
Approach LOS			B

Intersection Summary

Average Delay		3.0	
Intersection Capacity Utilization		38.8%	ICU Level of Service A
Analysis Period (min)		15	

2007 (ETC) NO-BUILD CONDITIONS

HCM Signalized Intersection Capacity Analysis
 1: EAST MAIN & SR 315

9/21/2005



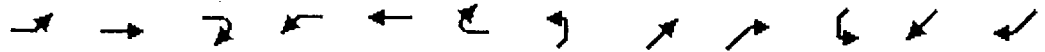
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations	↘	↑	↗	↘	↑	↗	↘	↕		↘	↕	↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95		1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1703	1792	1524	1752	1845	1568	1752	3448		1736	3471	1553
Flt Permitted	0.55	1.00	1.00	0.72	1.00	1.00	0.39	1.00		0.45	1.00	1.00
Satd. Flow (perm)	982	1792	1524	1328	1845	1568	727	3448		814	3471	1553
Volume (vph)	101	54	76	88	96	60	84	410	50	40	432	103
Peak-hour factor, PHF	0.94	0.94	0.94	0.84	0.84	0.84	0.87	0.87	0.87	0.89	0.89	0.89
Adj. Flow (vph)	107	57	81	105	114	71	97	471	57	45	485	116
RTOR Reduction (vph)	0	0	68	0	0	60	0	9	0	0	0	62
Lane Group Flow (vph)	107	57	13	105	114	11	97	519	0	45	485	54
Heavy Vehicles (%)	6%	6%	6%	3%	3%	3%	3%	3%	3%	4%	4%	4%
Turn Type	pm+pt		Perm	pm+pt		Perm	pm+pt			pm+pt		Perm
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases	8		8	4		4	6			2		2
Actuated Green, G (s)	22.6	13.4	13.4	19.6	11.9	11.9	54.8	47.8		47.0	43.9	43.9
Effective Green, g (s)	28.6	16.4	16.4	25.6	14.9	14.9	60.8	50.8		53.0	46.9	46.9
Actuated g/C Ratio	0.29	0.16	0.16	0.26	0.15	0.15	0.61	0.51		0.53	0.47	0.47
Clearance Time (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0		7.0	7.0	7.0
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0	1.0	1.0		1.0	1.0	1.0
Lane Grp Cap (vph)	369	294	250	385	275	234	545	1752		488	1628	728
v/s Ratio Prot	c0.04	0.03		0.03	c0.06		c0.02	c0.15		0.01	0.14	
v/s Ratio Perm	0.05		0.01	0.04		0.01	0.09			0.04		0.04
v/c Ratio	0.29	0.19	0.05	0.27	0.41	0.05	0.18	0.30		0.09	0.30	0.07
Uniform Delay, d1	27.3	36.1	35.3	29.4	38.6	36.5	8.6	14.2		11.3	16.4	14.6
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.42	1.65		1.00	1.00	1.00
Incremental Delay, d2	0.2	0.1	0.0	0.1	0.4	0.0	0.1	0.4		0.0	0.5	0.2
Delay (s)	27.4	36.2	35.3	29.6	39.0	36.5	12.2	23.9		11.4	16.9	14.8
Level of Service	C	D	D	C	D	D	B	C		B	B	B
Approach Delay (s)		32.1			35.0			22.1			16.1	
Approach LOS		C			C			C			B	

Intersection Summary

HCM Average Control Delay	23.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.31		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	38.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 2: LAIRD & SR 315

9/21/2005



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕		↕	↕		↕	↕↔		↕	↕↔	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00		0.95	0.95		1.00	0.95		1.00	0.95	
Frt		0.89		1.00	0.93		1.00	0.99		1.00	1.00	
Flt Protected		0.99		0.95	0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1553		1681	1622		1736	3423		1736	3455	
Flt Permitted		0.19		0.67	0.77		0.19	1.00		0.31	1.00	
Satd. Flow (perm)		291		1180	1274		340	3423		564	3455	
Volume (vph)	24	2	110	25	5	11	88	658	67	12	805	25
Peak-hour factor, PHF	0.53	0.53	0.53	0.92	0.92	0.92	0.96	0.96	0.96	0.94	0.94	0.94
Adj. Flow (vph)	45	4	208	27	5	12	92	685	70	13	856	27
RTOR Reduction (vph)	0	144	0	0	11	0	0	7	0	0	2	0
Lane Group Flow (vph)	0	113	0	17	16	0	92	748	0	13	881	0
Heavy Vehicles (%)	8%	8%	8%	2%	2%	2%	4%	4%	4%	4%	4%	4%
Turn Type	Perm			Perm			pm+pt			pm+pt		
Protected Phases		3			4		1	6		5	2	
Permitted Phases	3			4			6	6		2		
Actuated Green, G (s)		23.5		4.0	4.0		48.8	43.3		40.2	39.0	
Effective Green, g (s)		25.5		6.0	6.0		56.5	47.3		48.2	43.0	
Actuated g/C Ratio		0.26		0.06	0.06		0.56	0.47		0.48	0.43	
Clearance Time (s)		6.0		6.0	6.0		8.0	8.0		8.0	8.0	
Vehicle Extension (s)		2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)		74		71	76		325	1619		333	1486	
v/s Ratio Prot							c0.03	0.22		0.00	c0.25	
v/s Ratio Perm		c0.39		c0.01	0.01		0.13			0.02		
v/c Ratio		1.53		0.24	0.21		0.28	0.46		0.04	0.59	
Uniform Delay, d1		37.2		44.8	44.7		12.3	17.8		13.7	21.8	
Progression Factor		1.00		1.00	1.00		0.98	0.81		1.57	1.19	
Incremental Delay, d2		295.2		0.6	0.5		0.2	0.9		0.0	1.7	
Delay (s)		332.4		45.5	45.2		12.2	15.4		21.6	27.7	
Level of Service		F		D	D		B	B		C	C	
Approach Delay (s)		332.4			45.3			15.0			27.6	
Approach LOS		F			D			B			C	

Intersection Summary

HCM Average Control Delay	61.1	HCM Level of Service	E
HCM Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	52.8%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
 4: SUNSHINE MARKET & SR 315

9/21/2005



Movement	SBL	SBR	NEL	NET	SWT	SWR
Lane Configurations	↵	↗	↵	↑	↑↑	↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1805	1615	1770	1863	3471	1553
Flt Permitted	0.95	1.00	0.36	1.00	1.00	1.00
Satd. Flow (perm)	1805	1615	670	1863	3471	1553
Volume (vph)	82	95	102	450	530	72
Peak-hour factor, PHF	0.93	0.93	0.82	0.82	0.92	0.92
Adj. Flow (vph)	88	102	124	549	576	78
RTOR Reduction (vph)	0	64	0	0	0	0
Lane Group Flow (vph)	88	38	124	549	576	78
Heavy Vehicles (%)	0%	0%	2%	2%	4%	4%
Turn Type		pt+ov	pm+pt			Free
Protected Phases	8	1 8	1	6	2	
Permitted Phases			6			Free
Actuated Green, G (s)	8.6	21.4	44.7	44.7	30.9	66.3
Effective Green, g (s)	10.6	24.4	47.7	47.7	33.9	66.3
Actuated g/C Ratio	0.16	0.37	0.72	0.72	0.51	1.00
Clearance Time (s)	6.0		7.0	7.0	7.0	
Vehicle Extension (s)	3.0		3.0	5.0	5.0	
Lane Grp Cap (vph)	289	594	645	1340	1775	1553
v/s Ratio Prot	c0.05	0.02	0.03	c0.29	0.17	
v/s Ratio Perm			0.11			0.05
v/c Ratio	0.30	0.06	0.19	0.41	0.32	0.05
Uniform Delay, d1	24.6	13.6	3.2	3.7	9.5	0.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.6	0.0	0.1	0.4	0.2	0.1
Delay (s)	25.2	13.6	3.3	4.1	9.7	0.1
Level of Service	C	B	A	A	A	A
Approach Delay (s)	19.0			4.0	8.6	
Approach LOS	B			A	A	

Intersection Summary

HCM Average Control Delay	7.8	HCM Level of Service	A
HCM Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	66.3	Sum of lost time (s)	8.0
Intersection Capacity Utilization	34.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 13: LAFLIN & SR 315

9/21/2005



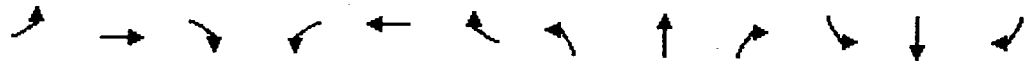
Movement	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations	↶	↶	↶	↶	↶	↶
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1770	1583	1752	1845	3471	1553
Flt Permitted	0.95	1.00	0.36	1.00	1.00	1.00
Satd. Flow (perm)	1770	1583	667	1845	3471	1553
Volume (vph)	57	81	115	629	541	100
Peak-hour factor, PHF	0.89	0.89	0.91	0.91	0.95	0.95
Adj. Flow (vph)	64	91	126	691	569	105
RTOR Reduction (vph)	0	63	0	0	0	89
Lane Group Flow (vph)	64	28	126	691	569	16
Heavy Vehicles (%)	2%	2%	3%	3%	4%	4%
Turn Type	custom		pm+pt			Over
Protected Phases	8	8	1	6	2	8
Permitted Phases	8	1	6			
Actuated Green, G (s)	7.9	15.2	44.1	44.1	29.8	7.9
Effective Green, g (s)	9.9	20.2	47.1	47.1	32.8	9.9
Actuated g/C Ratio	0.15	0.31	0.72	0.72	0.50	0.15
Clearance Time (s)	6.0	6.0	7.0	7.0	7.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0	5.0	5.0	3.0
Lane Grp Cap (vph)	270	589	655	1337	1752	237
v/s Ratio Prot	c0.04	0.01	0.03	c0.37	0.16	0.01
v/s Ratio Perm		0.01	0.11			
v/c Ratio	0.24	0.05	0.19	0.52	0.32	0.07
Uniform Delay, d1	24.2	15.7	3.0	3.9	9.5	23.6
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.5	0.0	0.1	0.7	0.2	0.1
Delay (s)	24.7	15.7	3.2	4.6	9.8	23.7
Level of Service	C	B	A	A	A	C
Approach Delay (s)	19.4			4.4	11.9	
Approach LOS	B			A	B	

Intersection Summary

HCM Average Control Delay	8.9	HCM Level of Service	A
HCM Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	43.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 17: SR 315 & MOTORWORLD

9/21/2005



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕			↕	↗		↖	↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	1.00
Fr _t	1.00	1.00		1.00	1.00			1.00	0.85		1.00	0.85
Fl _t Protected	0.95	1.00		0.95	1.00			0.95	1.00		0.95	1.00
Satd. Flow (prot)	1752	3488		1719	3422			1794	1599		1795	1599
Fl _t Permitted	0.21	1.00		0.34	1.00			0.69	1.00		0.69	1.00
Satd. Flow (perm)	386	3488		619	3422			1297	1599		1289	1599
Volume (vph)	75	753	25	10	900	30	54	2	12	48	2	170
Peak-hour factor, PHF	0.95	0.95	0.95	0.85	0.85	0.85	0.84	0.84	0.84	0.84	0.84	0.84
Adj. Flow (vph)	79	793	26	12	1059	35	64	2	14	57	2	202
RTOR Reduction (vph)	0	1	0	0	2	0	0	0	12	0	0	179
Lane Group Flow (vph)	79	818	0	12	1092	0	0	66	2	0	59	23
Heavy Vehicles (%)	3%	3%	3%	5%	5%	5%	1%	1%	1%	1%	1%	1%
Turn Type	pm+pt			pm+pt			Perm		Perm	Perm		Perm
Protected Phases	1	6		5	2			4			8	
Permitted Phases	6			2			4		4	8		8
Actuated Green, G (s)	76.0	70.4		67.6	66.2			9.2	9.2		9.2	9.2
Effective Green, g (s)	80.8	73.4		72.6	69.2			11.2	11.2		11.2	11.2
Actuated g/C Ratio	0.81	0.73		0.73	0.69			0.11	0.11		0.11	0.11
Clearance Time (s)	6.0	7.0		6.0	7.0			6.0	6.0		6.0	6.0
Vehicle Extension (s)	2.0	2.0		2.0	2.0			2.0	2.0		2.0	2.0
Lane Grp Cap (vph)	416	2560		487	2368			145	179		144	179
v/s Ratio Prot	c0.01	0.23		0.00	c0.32							
v/s Ratio Perm	0.14			0.02				c0.05	0.00		0.05	0.01
v/c Ratio	0.19	0.32		0.02	0.46			0.46	0.01		0.41	0.13
Uniform Delay, d1	3.2	4.6		3.8	7.0			41.5	39.5		41.3	40.0
Progression Factor	1.00	1.00		0.23	0.22			1.00	1.00		1.00	1.00
Incremental Delay, d2	0.1	0.3		0.0	0.5			0.8	0.0		0.7	0.1
Delay (s)	3.3	5.0		0.9	2.0			42.4	39.5		42.0	40.1
Level of Service	A	A		A	A			D	D		D	D
Approach Delay (s)		4.8			2.0			41.9			40.5	
Approach LOS		A			A			D			D	

Intersection Summary

HCM Average Control Delay	8.7	HCM Level of Service	A
HCM Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	52.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 10: OLD BOSTON & SR 315

9/26/2005



Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations	Y		↑↑			↑↑
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0			4.0
Lane Util. Factor	1.00		0.95			0.95
Flt	0.93		0.99			1.00
Flt Protected	0.98		1.00			1.00
Satd. Flow (prot)	1643		3404			3529
Flt Permitted	0.98		1.00			0.91
Satd. Flow (perm)	1643		3404			3210
Volume (vph)	51	56	501	36	31	508
Peak-hour factor, PHF	0.61	0.61	0.89	0.89	0.91	0.91
Adj. Flow (vph)	84	92	563	40	34	558
RTOR Reduction (vph)	65	0	7	0	0	0
Lane Group Flow (vph)	111	0	596	0	0	592
Heavy Vehicles (%)	5%	5%	5%	5%	2%	2%
Turn Type					pm+pt	
Protected Phases	4		6		5	2
Permitted Phases					2	2
Actuated Green, G (s)	7.3		18.5			18.5
Effective Green, g (s)	8.3		19.5			19.5
Actuated g/C Ratio	0.23		0.54			0.54
Clearance Time (s)	5.0		5.0			5.0
Vehicle Extension (s)	2.0		1.0			1.0
Lane Grp Cap (vph)	381		1854			1748
v/s Ratio Prot	c0.07		0.18			
v/s Ratio Perm						c0.18
v/c Ratio	0.29		0.32			0.34
Uniform Delay, d1	11.3		4.5			4.6
Progression Factor	1.00		1.00			1.00
Incremental Delay, d2	0.2		0.0			0.0
Delay (s)	11.5		4.5			4.6
Level of Service	B		A			A
Approach Delay (s)	11.5		4.5			4.6
Approach LOS	B		A			A

Intersection Summary

HCM Average Control Delay	5.5	HCM Level of Service	A
HCM Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	35.8	Sum of lost time (s)	8.0
Intersection Capacity Utilization	46.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 22: SR 315 & 309 NB RAMPS

10/14/2005

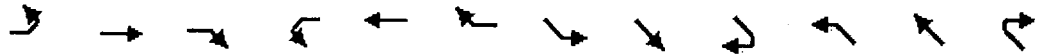
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↙	↕		↙	↕	↗		↕			↕	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00			1.00	
Frt	1.00	1.00		1.00	1.00	0.85		1.00			1.00	
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.97			0.95	
Satd. Flow (prot)	1787	3572		1770	3539	1583		1845			1752	
Flt Permitted	0.17	1.00		0.36	1.00	1.00		0.88			0.75	
Satd. Flow (perm)	327	3572		665	3539	1583		1679			1385	
Volume (vph)	493	728	4	1	770	353	3	2	0	125	0	0
Peak-hour factor, PHF	0.94	0.94	0.94	0.86	0.86	0.86	0.50	0.50	0.50	0.84	0.84	0.84
Adj. Flow (vph)	524	774	4	1	895	410	6	4	0	149	0	0
RTOR Reduction (vph)	0	0	0	0	0	240	0	0	0	0	0	0
Lane Group Flow (vph)	524	778	0	1	895	170	0	10	0	0	149	0
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	0%	0%	0%	3%	3%	3%
Turn Type	pm+pt			Perm		Perm	Perm			Perm		
Protected Phases	1	6			2			8			4	
Permitted Phases	6			2		2	8			4		
Actuated Green, G (s)	68.6	68.6		36.1	36.1	36.1		11.4			11.4	
Effective Green, g (s)	70.6	70.6		38.1	38.1	38.1		13.4			13.4	
Actuated g/C Ratio	0.77	0.77		0.41	0.41	0.41		0.15			0.15	
Clearance Time (s)	4.0	6.0		6.0	6.0	6.0		6.0			6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0			3.0	
Lane Grp Cap (vph)	703	2741		275	1466	656		245			202	
v/s Ratio Prot	c0.23	0.22			0.25							
v/s Ratio Perm	c0.34			0.00		0.26		0.01			c0.11	
v/c Ratio	0.75	0.28		0.00	0.61	0.26		0.04			0.74	
Uniform Delay, d1	15.7	3.2		15.8	21.1	17.7		33.8			37.6	
Progression Factor	0.58	0.16		1.00	1.00	1.00		1.00			1.00	
Incremental Delay, d2	3.5	0.2		0.0	1.9	1.0		0.1			13.1	
Delay (s)	12.6	0.7		15.8	23.0	18.6		33.8			50.7	
Level of Service	B	A		B	C	B		C			D	
Approach Delay (s)		5.5			21.7			33.8			50.7	
Approach LOS		A			C			C			D	

Intersection Summary

HCM Average Control Delay	15.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	92.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	69.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 24: SR 315 & 309 SB RAMPS

10/14/2005



Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations		↑↑	↑	↑	↑↑		↑↑					
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0		4.0					
Lane Util. Factor		0.95	1.00	1.00	0.95		0.97					
Frt		1.00	0.85	1.00	1.00		1.00					
Flt Protected		1.00	1.00	0.95	1.00		0.95					
Satd. Flow (prot)		3574	1599	1770	3539		3400					
Flt Permitted		1.00	1.00	0.14	1.00		0.95					
Satd. Flow (perm)		3574	1599	267	3539		3400					
Volume (vph)	0	1005	464	385	968	0	220	0	0	0	0	0
Peak-hour factor, PHF	0.93	0.93	0.93	0.89	0.89	0.89	0.66	0.66	0.66	0.92	0.92	0.92
Adj. Flow (vph)	0	1081	499	433	1088	0	333	0	0	0	0	0
RTOR Reduction (vph)	0	0	259	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	1081	240	433	1088	0	333	0	0	0	0	0
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	3%	3%	3%	2%	2%	2%
Turn Type			Perm	pm+pt			custom					
Protected Phases		6		5	2							
Permitted Phases			6	2			4					
Actuated Green, G (s)		42.2	42.2	66.9	66.9		13.1					
Effective Green, g (s)		44.2	44.2	68.9	68.9		15.1					
Actuated g/C Ratio		0.48	0.48	0.75	0.75		0.16					
Clearance Time (s)		6.0	6.0	4.0	6.0		6.0					
Vehicle Extension (s)		3.0	3.0	3.0	3.0		2.0					
Lane Grp Cap (vph)		1717	768	538	2650		558					
v/s Ratio Prot		0.30		c0.18	0.31							
v/s Ratio Perm			0.31	c0.42			0.10					
v/c Ratio		0.63	0.31	0.80	0.41		0.60					
Uniform Delay, d1		17.8	14.6	19.0	4.2		35.6					
Progression Factor		1.00	1.00	0.62	0.61		1.00					
Incremental Delay, d2		1.8	1.1	8.2	0.5		1.1					
Delay (s)		19.6	15.7	20.0	3.0		36.8					
Level of Service		B	B	B	A		D					
Approach Delay (s)		18.3			7.8			36.8			0.0	
Approach LOS		B			A			D			A	

Intersection Summary

HCM Average Control Delay	15.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	92.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	65.4%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 28: OAK & SR 315

9/26/2005

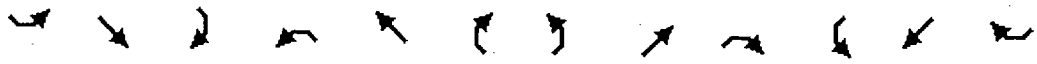
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations	↘	↑	↗		↙	↗	↘	↕		↘	↕	↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00		1.00	1.00	1.00	0.95		1.00	0.95	1.00
Frt	1.00	1.00	0.85		1.00	0.85	1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00		0.96	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1433	1508	1282		1792	1583	1641	3265		1687	3374	1509
Flt Permitted	0.60	1.00	1.00		0.75	1.00	0.19	1.00		0.24	1.00	1.00
Satd. Flow (perm)	904	1508	1282		1397	1583	323	3265		423	3374	1509
Volume (vph)	265	29	209	137	38	57	312	678	25	46	597	97
Peak-hour factor, PHF	0.68	0.68	0.68	0.92	0.92	0.92	0.82	0.82	0.82	0.97	0.97	0.97
Adj. Flow (vph)	390	43	307	149	41	62	380	827	30	47	615	100
RTOR Reduction (vph)	0	0	168	0	0	34	0	2	0	0	0	0
Lane Group Flow (vph)	390	43	139	0	190	28	380	855	0	47	615	100
Heavy Vehicles (%)	26%	26%	26%	2%	2%	2%	10%	10%	10%	7%	7%	7%
Turn Type	Perm		Perm	Perm		Perm	pm+pt			pm+pt		Free
Protected Phases		7 8			7 8		1	6		5	2	
Permitted Phases	7 8		7 8	7 8		7 8	6			2		Free
Actuated Green, G (s)	46.0	46.0	46.0		46.0	46.0	48.3	36.4		31.2	25.3	106.3
Effective Green, g (s)	48.0	48.0	48.0		48.0	48.0	50.3	38.4		35.2	27.3	106.3
Actuated g/C Ratio	0.45	0.45	0.45		0.45	0.45	0.47	0.36		0.33	0.26	1.00
Clearance Time (s)							6.0	6.0		6.0	6.0	
Vehicle Extension (s)							3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	408	681	579		631	715	388	1179		234	867	1509
v/s Ratio Prot		0.03					c0.17	0.26		0.01	0.18	
v/s Ratio Perm	c0.43		0.11		0.14	0.02	c0.29			0.05		0.07
v/c Ratio	0.96	0.06	0.24		0.30	0.04	0.98	0.73		0.20	0.71	0.07
Uniform Delay, d1	28.1	16.5	17.9		18.5	16.3	25.3	29.4		24.8	35.9	0.0
Progression Factor	1.00	1.00	1.00		1.00	1.00	1.24	0.84		1.00	1.00	1.00
Incremental Delay, d2	33.0	0.0	0.2		0.3	0.0	37.7	2.1		0.4	2.7	0.1
Delay (s)	61.1	16.5	18.1		18.8	16.3	69.0	26.8		25.2	38.6	0.1
Level of Service	E	B	B		B	B	E	C		C	D	A
Approach Delay (s)		40.7			18.2			39.7			32.7	
Approach LOS		D			B			D			C	

Intersection Summary

HCM Average Control Delay	36.4	HCM Level of Service	D
HCM Volume to Capacity ratio	0.96		
Actuated Cycle Length (s)	106.3	Sum of lost time (s)	8.0
Intersection Capacity Utilization	65.1%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Unsignalized Intersection Capacity Analysis
 3: POCONO DOWNS & SR 315

10/3/2005



Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations	↵				↕			↕		↵	↕	
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	8	0	0	0	0	0	0	544	0	0	564	61
Peak Hour Factor	0.79	0.79	0.79	0.92	0.92	0.92	0.90	0.90	0.90	0.87	0.87	0.87
Hourly flow rate (vph)	10	0	0	0	0	0	0	604	0	0	648	70
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		TWLTL			TWLTL							
Median storage (veh)		0			0							
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	986	1288	359	929	1323	302	718			604		
vC1, stage 1 conf vol	683	683		604	604							
vC2, stage 2 conf vol	302	604		324	718							
vCu, unblocked vol	986	1288	359	929	1323	302	718			604		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)	6.5	5.5		6.5	5.5							
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	96	100	100	100	100	100	100			100		
cM capacity (veh/h)	235	214	637	254	208	694	885			969		

Direction, Lane #	SE 1	NW 1	NE 1	NE 2	SW 1	SW 2	SW 3
Volume Total	10	0	403	201	0	432	286
Volume Left	10	0	0	0	0	0	0
Volume Right	0	0	0	0	0	0	70
cSH	235	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.04	0.00	0.24	0.12	0.00	0.25	0.17
Queue Length 95th (ft)	3	0	0	0	0	0	0
Control Delay (s)	21.0	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	C	A					
Approach Delay (s)	21.0	0.0	0.0		0.0		
Approach LOS	C	A					

Intersection Summary			
Average Delay		0.2	
Intersection Capacity Utilization	27.5%		ICU Level of Service
Analysis Period (min)	15		A

HCM Unsignalized Intersection Capacity Analysis

8: SR 315 &

9/26/2005



Movement	EBL	EBR	NEL	NET	SWT	SWR
Lane Configurations		↗	↖	↕	↕	
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	0	11	27	544	564	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	12	29	591	613	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	967	307	613			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	967	307	613			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	98	97			
cM capacity (veh/h)	244	689	962			

Direction, Lane #	EB 1	NE 1	NE 2	NE 3	SW 1	SW 2
Volume Total	12	29	296	296	307	307
Volume Left	0	29	0	0	0	0
Volume Right	12	0	0	0	0	0
cSH	689	962	1700	1700	1700	1700
Volume to Capacity	0.02	0.03	0.17	0.17	0.18	0.18
Queue Length 95th (ft)	1	2	0	0	0	0
Control Delay (s)	10.3	8.9	0.0	0.0	0.0	0.0
Lane LOS	B	A				
Approach Delay (s)	10.3	0.4			0.0	
Approach LOS	B					

Intersection Summary		
Average Delay	0.3	
Intersection Capacity Utilization	25.6%	ICU Level of Service
Analysis Period (min)	15	A

HCM Unsignalized Intersection Capacity Analysis
 14: EAST MAIN & POCONO DOWNS

9/26/2005



Movement	EBL	EBR	SBL	SBR	NWL	NWR
Lane Configurations		↗	↘		↙	↖
Sign Control	Free		Stop		Free	
Grade	0%		0%		0%	
Volume (veh/h)	0	229	2	0	253	30
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	249	2	0	275	33
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			
Median storage (veh)						
Upstream signal (ft)					1239	
pX, platoon unblocked						
vC, conflicting volume	308		540	291		
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	308		540	291		
tC, single (s)	4.1		6.4	6.2		
tC, 2 stage (s)						
tF (s)	2.2		3.5	3.3		
p0 queue free %	100		100	100		
cM capacity (veh/h)	1253		503	748		

Direction, Lane #	EB 1	SB 1	NW 1
Volume Total	249	2	308
Volume Left	0	2	0
Volume Right	0	0	33
cSH	1700	503	1700
Volume to Capacity	0.15	0.00	0.18
Queue Length 95th (ft)	0	0	0
Control Delay (s)	0.0	12.2	0.0
Lane LOS		B	
Approach Delay (s)	0.0	12.2	0.0
Approach LOS		B	

Intersection Summary			
Average Delay		0.0	
Intersection Capacity Utilization		25.8%	ICU Level of Service A
Analysis Period (min)		15	

HCM Unsignalized Intersection Capacity Analysis
 34: EAST MAIN & POCONO DOWNS RT

10/3/2005



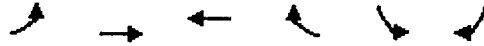
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↑			↗
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	50	229	253	0	0	11
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	54	249	275	0	0	12
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None		
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	275				633	275
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	275				633	275
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	96				100	98
cM capacity (veh/h)	1288				425	764

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	303	275	12
Volume Left	54	0	0
Volume Right	0	0	12
cSH	1288	1700	764
Volume to Capacity	0.04	0.16	0.02
Queue Length 95th (ft)	3	0	1
Control Delay (s)	1.7	0.0	9.8
Lane LOS	A		A
Approach Delay (s)	1.7	0.0	9.8
Approach LOS			A

Intersection Summary			
Average Delay		1.1	
Intersection Capacity Utilization	34.8%		ICU Level of Service A
Analysis Period (min)		15	

HCM Unsignalized Intersection Capacity Analysis
 20: EAST MAIN & FIRST

9/26/2005



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	77	271	298	51	53	55
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	84	295	324	55	58	60
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	379				814	352
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	379				814	352
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	93				82	91
cM capacity (veh/h)	1179				323	692

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	378	379	117
Volume Left	84	0	58
Volume Right	0	55	60
cSH	1179	1700	443
Volume to Capacity	0.07	0.22	0.26
Queue Length 95th (ft)	6	0	26
Control Delay (s)	2.4	0.0	16.0
Lane LOS	A		C
Approach Delay (s)	2.4	0.0	16.0
Approach LOS			C

Intersection Summary			
Average Delay		3.2	
Intersection Capacity Utilization	53.6%		ICU Level of Service A
Analysis Period (min)		15	

HCM Unsignalized Intersection Capacity Analysis
 19: EAST MAIN & SCOTT

9/26/2005



Movement	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations	↖		↗		↘	
Sign Control	Free		Free		Stop	
Grade	0%		0%		0%	
Volume (veh/h)	177	23	144	209	44	171
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	192	25	157	227	48	186
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			217		745	205
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			217		745	205
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			88		86	78
cM capacity (veh/h)			1352		337	836

Direction, Lane #	EB 1	WB 1	NE 1
Volume Total	217	384	234
Volume Left	0	157	48
Volume Right	25	0	186
cSH	1700	1352	642
Volume to Capacity	0.13	0.12	0.36
Queue Length 95th (ft)	0	10	42
Control Delay (s)	0.0	3.9	13.8
Lane LOS		A	B
Approach Delay (s)	0.0	3.9	13.8
Approach LOS			B

Intersection Summary			
Average Delay		5.7	
Intersection Capacity Utilization	52.7%		ICU Level of Service
Analysis Period (min)		15	A

HCM Signalized Intersection Capacity Analysis
 1: EAST MAIN & SR 315

9/21/2005

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations	↖	↑	↗	↖	↑	↗	↖	↕	↗	↖	↕	↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95		1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1787	1881	1599	1770	1863	1583	1770	3501		1719	3438	1538
Flt Permitted	0.67	1.00	1.00	0.69	1.00	1.00	0.38	1.00		0.49	1.00	1.00
Satd. Flow (perm)	1262	1881	1599	1286	1863	1583	709	3501		890	3438	1538
Volume (vph)	104	91	104	88	103	60	102	361	28	74	466	85
Peak-hour factor, PHF	0.88	0.88	0.88	0.95	0.95	0.95	0.90	0.90	0.90	0.89	0.89	0.89
Adj. Flow (vph)	118	103	118	93	108	63	113	401	31	83	524	96
RTOR Reduction (vph)	0	0	101	0	0	54	0	7	0	0	0	56
Lane Group Flow (vph)	118	103	17	93	108	9	113	425	0	83	524	40
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	2%	2%	2%	5%	5%	5%
Turn Type	pm+pt		Perm	pm+pt		Perm	pm+pt			pm+pt		Perm
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases	8		8	4		4	6			2		2
Actuated Green, G (s)	13.7	8.0	8.0	13.5	7.9	7.9	36.1	30.4		32.9	28.8	28.8
Effective Green, g (s)	19.7	11.0	11.0	19.5	10.9	10.9	42.1	33.4		38.9	31.8	31.8
Actuated g/C Ratio	0.26	0.14	0.14	0.26	0.14	0.14	0.55	0.44		0.51	0.42	0.42
Clearance Time (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0		7.0	7.0	7.0
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0	1.0	1.0		1.0	1.0	1.0
Lane Grp Cap (vph)	387	272	231	384	267	227	514	1537		532	1437	643
v/s Ratio Prot	c0.03	0.05		0.03	c0.06		c0.03	0.12		0.01	c0.15	
v/s Ratio Perm	0.04		0.01	0.03		0.01	0.10			0.07		0.03
v/c Ratio	0.30	0.38	0.07	0.24	0.40	0.04	0.22	0.28		0.16	0.36	0.06
Uniform Delay, d1	22.4	29.5	28.1	22.2	29.6	28.1	8.4	13.6		9.6	15.2	13.2
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.2	0.3	0.0	0.1	0.4	0.0	0.1	0.0		0.1	0.1	0.0
Delay (s)	22.5	29.8	28.2	22.3	30.0	28.1	8.4	13.7		9.6	15.3	13.3
Level of Service	C	C	C	C	C	C	A	B		A	B	B
Approach Delay (s)		26.7			26.9			12.6			14.3	
Approach LOS		C			C			B			B	

Intersection Summary

HCM Average Control Delay	17.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	76.1	Sum of lost time (s)	20.0
Intersection Capacity Utilization	41.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 2: LAIRD & SR 315

9/21/2005



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕		↕	↕		↕	↕		↕	↕	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00		0.95	0.95		1.00	0.95		1.00	0.95	
Frt		0.90		1.00	0.95		1.00	0.99		1.00	1.00	
Flt Protected		0.99		0.95	0.97		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1565		1681	1643		1736	3449		1736	3459	
Flt Permitted		0.21		0.70	0.78		0.33	1.00		0.42	1.00	
Satd. Flow (perm)		331		1232	1321		607	3449		765	3459	
Volume (vph)	16	2	54	30	4	7	57	512	23	8	583	14
Peak-hour factor, PHF	0.77	0.77	0.77	0.73	0.73	0.73	0.91	0.91	0.91	0.94	0.94	0.94
Adj. Flow (vph)	21	3	70	41	5	10	63	563	25	9	620	15
RTOR Reduction (vph)	0	60	0	0	9	0	0	3	0	0	2	0
Lane Group Flow (vph)	0	34	0	24	23	0	63	585	0	9	633	0
Heavy Vehicles (%)	8%	8%	8%	2%	2%	2%	4%	4%	4%	4%	4%	4%
Turn Type	Perm			Perm			pm+pt			pm+pt		
Protected Phases		3			4		1	6		5	2	
Permitted Phases	3			4			6	6		2		
Actuated Green, G (s)		9.7		4.2	4.2		45.0	40.9		39.0	37.9	
Effective Green, g (s)		11.7		6.2	6.2		53.0	44.9		47.0	41.9	
Actuated g/C Ratio		0.14		0.07	0.07		0.63	0.54		0.56	0.50	
Clearance Time (s)		6.0		6.0	6.0		8.0	8.0		8.0	8.0	
Vehicle Extension (s)		2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)		46		91	98		492	1846		488	1727	
v/s Ratio Prot							c0.01	0.17		0.00	c0.18	
v/s Ratio Perm		c0.10		c0.02	0.02		0.07			0.01		
v/c Ratio		0.73		0.26	0.23		0.13	0.32		0.02	0.37	
Uniform Delay, d1		34.6		36.7	36.6		6.4	10.9		8.2	12.9	
Progression Factor		1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		40.4		0.6	0.4		0.0	0.0		0.0	0.0	
Delay (s)		75.0		37.3	37.1		6.4	11.0		8.2	12.9	
Level of Service		E		D	D		A	B		A	B	
Approach Delay (s)		75.0			37.1			10.5			12.8	
Approach LOS		E			D			B			B	

Intersection Summary

HCM Average Control Delay	16.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	83.9	Sum of lost time (s)	20.0
Intersection Capacity Utilization	41.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 4: SUNSHINE MARKET & SR 315

9/21/2005



Movement	SBL	SBR	NEL	NET	SWT	SWR
Lane Configurations	↙	↗	↙	↑	↑↑	↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1736	1553	1752	1845	3471	1553
Flt Permitted	0.95	1.00	0.36	1.00	1.00	1.00
Satd. Flow (perm)	1736	1553	671	1845	3471	1553
Volume (vph)	85	133	111	397	509	84
Peak-hour factor, PHF	0.84	0.84	0.97	0.97	0.90	0.90
Adj. Flow (vph)	101	158	114	409	566	93
RTOR Reduction (vph)	0	99	0	0	0	0
Lane Group Flow (vph)	101	59	114	409	566	93
Heavy Vehicles (%)	4%	4%	3%	3%	4%	4%
Turn Type		pt+ov	pm+pt			Free
Protected Phases	8	1 8	1	6	2	
Permitted Phases			6			Free
Actuated Green, G (s)	9.1	21.8	44.4	44.4	30.7	66.5
Effective Green, g (s)	11.1	24.8	47.4	47.4	33.7	66.5
Actuated g/C Ratio	0.17	0.37	0.71	0.71	0.51	1.00
Clearance Time (s)	6.0		7.0	7.0	7.0	
Vehicle Extension (s)	3.0		3.0	5.0	5.0	
Lane Grp Cap (vph)	290	579	636	1315	1759	1553
v/s Ratio Prot	c0.06	0.04	0.03	c0.22	0.16	
v/s Ratio Perm			0.10			0.06
v/c Ratio	0.35	0.10	0.18	0.31	0.32	0.06
Uniform Delay, d1	24.5	13.6	3.3	3.5	9.7	0.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.7	0.1	0.1	0.3	0.2	0.1
Delay (s)	25.2	13.7	3.4	3.8	9.9	0.1
Level of Service	C	B	A	A	A	A
Approach Delay (s)	18.2			3.7	8.5	
Approach LOS	B			A	A	

Intersection Summary			
HCM Average Control Delay	8.5	HCM Level of Service	A
HCM Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	66.5	Sum of lost time (s)	8.0
Intersection Capacity Utilization	34.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 10: OLD BOSTON & SR 315

9/26/2005



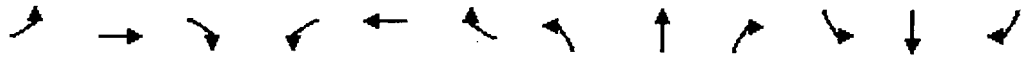
Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations	Y		↑↑		↖↗	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0		4.0	
Lane Util. Factor	1.00		0.95		0.95	
Frt	0.93		0.99		1.00	
Flt Protected	0.98		1.00		1.00	
Satd. Flow (prot)	1645		3502		3525	
Flt Permitted	0.98		1.00		0.91	
Satd. Flow (perm)	1645		3502		3218	
Volume (vph)	28	29	338	25	34	390
Peak-hour factor, PHF	0.81	0.81	0.93	0.93	0.94	0.94
Adj. Flow (vph)	35	36	363	27	36	415
RTOR Reduction (vph)	31	0	5	0	0	0
Lane Group Flow (vph)	40	0	385	0	0	451
Heavy Vehicles (%)	5%	5%	2%	2%	2%	2%
Turn Type					pm+pt	
Protected Phases	4		6		5	
Permitted Phases					2	
Actuated Green, G (s)	7.2		39.2		39.2	
Effective Green, g (s)	8.2		40.2		40.2	
Actuated g/C Ratio	0.15		0.71		0.71	
Clearance Time (s)	5.0		5.0		5.0	
Vehicle Extension (s)	2.0		1.0		1.0	
Lane Grp Cap (vph)	239		2496		2294	
v/s Ratio Prot	c0.02		0.11			
v/s Ratio Perm					c0.14	
v/c Ratio	0.17		0.15		0.20	
Uniform Delay, d1	21.1		2.6		2.7	
Progression Factor	1.00		1.00		1.00	
Incremental Delay, d2	0.1		0.0		0.0	
Delay (s)	21.2		2.6		2.7	
Level of Service	C		A		A	
Approach Delay (s)	21.2		2.6		2.7	
Approach LOS	C		A		A	

Intersection Summary

HCM Average Control Delay	4.1	HCM Level of Service	A
HCM Volume to Capacity ratio	0.19		
Actuated Cycle Length (s)	56.4	Sum of lost time (s)	8.0
Intersection Capacity Utilization	36.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 17: SR 315 & MOTORWORLD

9/21/2005



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕			↕	↗		↖	↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	1.00
Frt	1.00	0.99		1.00	0.99			1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.96	1.00		0.95	1.00
Satd. Flow (prot)	1770	3517		1770	3509			1818	1615		1787	1599
Flt Permitted	0.29	1.00		0.40	1.00			0.74	1.00		0.74	1.00
Satd. Flow (perm)	538	3517		751	3509			1408	1615		1389	1599
Volume (vph)	106	558	24	4	626	37	19	2	7	27	0	137
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.73	0.73	0.73	0.96	0.96	0.96
Adj. Flow (vph)	119	627	27	4	703	42	26	3	10	28	0	143
RTOR Reduction (vph)	0	3	0	0	6	0	0	0	9	0	0	122
Lane Group Flow (vph)	119	651	0	4	739	0	0	29	1	0	28	21
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	0%	0%	0%	1%	1%	1%
Turn Type	pm+pt			pm+pt			Perm		Perm	Perm		Perm
Protected Phases	1	6		5	2			4			8	
Permitted Phases	6			2			4		4	8		8
Actuated Green, G (s)	45.9	38.6		34.5	32.9			7.7	7.7		7.7	7.7
Effective Green, g (s)	49.2	41.6		39.5	35.9			9.7	9.7		9.7	9.7
Actuated g/C Ratio	0.74	0.62		0.59	0.54			0.14	0.14		0.14	0.14
Clearance Time (s)	6.0	7.0		6.0	7.0			6.0	6.0		6.0	6.0
Vehicle Extension (s)	2.0	2.0		2.0	2.0			2.0	2.0		2.0	2.0
Lane Grp Cap (vph)	567	2187		498	1883			204	234		201	232
v/s Ratio Prot	c0.03	0.19		0.00	c0.21							
v/s Ratio Perm	0.13			0.00				c0.02	0.00		0.02	0.01
v/c Ratio	0.21	0.30		0.01	0.39			0.14	0.01		0.14	0.09
Uniform Delay, d1	3.2	5.9		5.6	9.1			25.0	24.5		25.0	24.8
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	1.00
Incremental Delay, d2	0.1	0.0		0.0	0.0			0.1	0.0		0.1	0.1
Delay (s)	3.3	5.9		5.6	9.1			25.1	24.5		25.1	24.8
Level of Service	A	A		A	A			C	C		C	C
Approach Delay (s)		5.5			9.1			24.9			24.9	
Approach LOS		A			A			C			C	

Intersection Summary

HCM Average Control Delay	9.4	HCM Level of Service	A
HCM Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	66.9	Sum of lost time (s)	12.0
Intersection Capacity Utilization	42.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 22: SR 315 & 309 NB RAMPS

9/21/2005



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕	↗		↕			↕	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00			1.00	
Frt	1.00	1.00		1.00	1.00	0.85		1.00			1.00	
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.95			0.95	
Satd. Flow (prot)	1805	3607		1787	3574	1599		1805			1787	
Flt Permitted	0.27	1.00		0.42	1.00	1.00		0.82			0.76	
Satd. Flow (perm)	508	3607		790	3574	1599		1550			1421	
Volume (vph)	526	573	3	2	616	164	2	0	0	115	0	0
Peak-hour factor, PHF	0.94	0.94	0.94	0.89	0.89	0.89	0.50	0.50	0.50	0.95	0.95	0.95
Adj. Flow (vph)	560	610	3	2	692	184	4	0	0	121	0	0
RTOR Reduction (vph)	0	0	0	0	0	106	0	0	0	0	0	0
Lane Group Flow (vph)	560	613	0	2	692	78	0	4	0	0	121	0
Heavy Vehicles (%)	0%	0%	0%	1%	1%	1%	0%	0%	0%	1%	1%	1%
Turn Type	pm+pt			Perm		Perm	Perm			Perm		
Protected Phases	1	6			2			8				4
Permitted Phases	6			2		2	8			4		
Actuated Green, G (s)	65.0	65.0		35.3	35.3	35.3		11.0				11.0
Effective Green, g (s)	67.0	67.0		37.3	37.3	37.3		13.0				13.0
Actuated g/C Ratio	0.76	0.76		0.42	0.42	0.42		0.15				0.15
Clearance Time (s)	4.0	6.0		6.0	6.0	6.0		6.0				6.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0				3.0
Lane Grp Cap (vph)	766	2746		335	1515	678		229				210
v/s Ratio Prot	c0.21	0.17			0.19							
v/s Ratio Perm	c0.34			0.00		0.05		0.00			c0.09	
v/c Ratio	0.73	0.22		0.01	0.46	0.12		0.02			0.58	
Uniform Delay, d1	8.6	3.0		14.6	18.1	15.4		32.0			34.9	
Progression Factor	0.96	2.16		1.00	1.00	1.00		1.00			1.00	
Incremental Delay, d2	3.3	0.2		0.0	1.0	0.3		0.0			3.8	
Delay (s)	11.5	6.7		14.7	19.1	15.7		32.1			38.7	
Level of Service	B	A		B	B	B		C			D	
Approach Delay (s)		9.0			18.4			32.1			38.7	
Approach LOS		A			B			C			D	

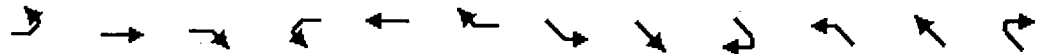
Intersection Summary

HCM Average Control Delay	14.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	88.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	62.1%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
 24: SR 315 & 309 SB RAMPS

10/14/2005



Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations		↑↑	↑	↑	↑↑		↑↑					
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0		4.0					
Lane Util. Factor		0.95	1.00	1.00	0.95		0.97					
Frt		1.00	0.85	1.00	1.00		1.00					
Flt Protected		1.00	1.00	0.95	1.00		0.95					
Satd. Flow (prot)		3574	1599	1787	3574		3367					
Flt Permitted		1.00	1.00	0.17	1.00		0.95					
Satd. Flow (perm)		3574	1599	320	3574		3367					
Volume (vph)	0	942	283	213	973	0	160	0	0	0	0	0
Peak-hour factor, PHF	0.85	0.85	0.85	0.87	0.87	0.87	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	1108	333	245	1118	0	174	0	0	0	0	0
RTOR Reduction (vph)	0	0	144	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	1108	189	245	1118	0	174	0	0	0	0	0
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	4%	4%	4%	2%	2%	2%
Turn Type			Perm	pm+pt			custom					
Protected Phases		6		5	2							
Permitted Phases			6	2			4					
Actuated Green, G (s)		47.9	47.9	67.7	67.7		8.3					
Effective Green, g (s)		49.9	49.9	69.7	69.7		10.3					
Actuated g/C Ratio		0.57	0.57	0.79	0.79		0.12					
Clearance Time (s)		6.0	6.0	4.0	6.0		6.0					
Vehicle Extension (s)		3.0	3.0	3.0	3.0		2.0					
Lane Grp Cap (vph)		2027	907	517	2831		394					
v/s Ratio Prot		c0.31		c0.09	0.31							
v/s Ratio Perm			0.21	0.29			0.05					
v/c Ratio		0.55	0.21	0.47	0.39		0.44					
Uniform Delay, d1		12.0	9.4	6.0	2.8		36.2					
Progression Factor		1.00	1.00	2.16	0.55		1.00					
Incremental Delay, d2		1.1	0.5	0.7	0.4		0.3					
Delay (s)		13.0	9.9	13.7	1.9		36.5					
Level of Service		B	A	B	A		D					
Approach Delay (s)		12.3			4.1			36.5			0.0	
Approach LOS		B			A			D			A	

Intersection Summary

HCM Average Control Delay	9.9	HCM Level of Service	A
HCM Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	88.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	52.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 28: OAK & SR 315

9/26/2005



Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations	↘	↑	↗		↖	↗	↘	↕		↘	↕	↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00		1.00	1.00	1.00	0.95		1.00	0.95	1.00
Frt	1.00	1.00	0.85		1.00	0.85	1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00		0.96	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1347	1418	1205		1796	1583	1671	3307		1703	3406	1524
Flt Permitted	0.70	1.00	1.00		0.81	1.00	0.22	1.00		0.39	1.00	1.00
Satd. Flow (perm)	986	1418	1205		1506	1583	396	3307		702	3406	1524
Volume (vph)	242	16	182	60	20	34	197	560	43	28	520	208
Peak-hour factor, PHF	0.92	0.92	0.92	0.84	0.84	0.84	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	263	17	198	71	24	40	216	615	47	31	571	229
RTOR Reduction (vph)	0	0	109	0	0	22	0	3	0	0	0	0
Lane Group Flow (vph)	263	17	89	0	95	18	216	659	0	31	571	229
Heavy Vehicles (%)	34%	34%	34%	2%	2%	2%	8%	8%	8%	6%	6%	6%
Turn Type	Perm		Perm	Perm		Perm	pm+pt			pm+pt		Free
Protected Phases		7 8			7 8		1	6		5	2	
Permitted Phases	7 8		7 8	7 8		7 8	6			2		Free
Actuated Green, G (s)	42.6	42.6	42.6		42.6	42.6	44.1	34.4		27.7	24.0	98.7
Effective Green, g (s)	44.6	44.6	44.6		44.6	44.6	46.1	36.4		31.7	26.0	98.7
Actuated g/C Ratio	0.45	0.45	0.45		0.45	0.45	0.47	0.37		0.32	0.26	1.00
Clearance Time (s)							6.0	6.0		6.0	6.0	
Vehicle Extension (s)							3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	446	641	545		681	715	393	1220		283	897	1524
v/s Ratio Prot		0.01					c0.09	c0.20		0.01	c0.17	
v/s Ratio Perm	c0.27		0.07		0.06	0.01	0.17			0.03		0.15
v/c Ratio	0.59	0.03	0.16		0.14	0.03	0.55	0.54		0.11	0.64	0.15
Uniform Delay, d1	20.2	15.0	16.0		15.8	15.0	17.6	24.6		23.2	32.2	0.0
Progression Factor	1.00	1.00	1.00		1.00	1.00	1.29	0.87		1.00	1.00	1.00
Incremental Delay, d2	2.0	0.0	0.1		0.1	0.0	1.5	0.5		0.2	1.5	0.2
Delay (s)	22.2	15.0	16.2		15.9	15.0	24.2	21.9		23.3	33.7	0.2
Level of Service	C	B	B		B	B	C	C		C	C	A
Approach Delay (s)		19.4			15.7			22.5			24.1	
Approach LOS		B			B			C			C	

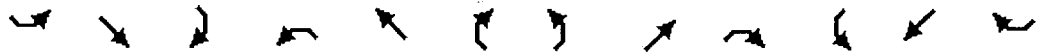
Intersection Summary

HCM Average Control Delay	22.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	98.7	Sum of lost time (s)	12.0
Intersection Capacity Utilization	55.4%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Unsignalized Intersection Capacity Analysis
 3: POCONO DOWNS & SR 315

10/3/2005



Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations	↙				↕			↕		↙	↕	
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	3	0	0	2	0	0	0	505	2	0	615	27
Peak Hour Factor	0.69	0.69	0.69	0.50	0.50	0.50	0.96	0.96	0.96	0.92	0.92	0.92
Hourly flow rate (vph)	4	0	0	4	0	0	0	526	2	0	668	29
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		TWLTL			TWLTL							
Median storage veh		0			0							
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	946	1211	349	861	1225	264	698			528		
vC1, stage 1 conf vol	683	683		527	527							
vC2, stage 2 conf vol	263	528		334	698							
vCu, unblocked vol	946	1211	349	861	1225	264	698			528		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.2			4.2		
tC, 2 stage (s)	6.5	5.5		6.5	5.5							
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	98	100	100	99	100	100	100			100		
cM capacity (veh/h)	243	228	653	278	225	740	888			1021		

Direction, Lane #	SE 1	NW 1	NE 1	NE 2	SW 1	SW 2	SW 3
Volume Total	4	4	351	177	0	446	252
Volume Left	4	4	0	0	0	0	0
Volume Right	0	0	0	2	0	0	29
cSH	243	278	1700	1700	1700	1700	1700
Volume to Capacity	0.02	0.01	0.21	0.10	0.00	0.26	0.15
Queue Length 95th (ft)	1	1	0	0	0	0	0
Control Delay (s)	20.1	18.1	0.0	0.0	0.0	0.0	0.0
Lane LOS	C	C					
Approach Delay (s)	20.1	18.1	0.0		0.0		
Approach LOS	C	C					

Intersection Summary			
Average Delay		0.1	
Intersection Capacity Utilization	27.9%		ICU Level of Service A
Analysis Period (min)		15	

HCM Unsignalized Intersection Capacity Analysis
 8: SR 315 &

9/26/2005



Movement	EBL	EBR	NEL	NET	SWT	SWR
Lane Configurations		↗	↘	↕	↕	
Sign Control	Yield			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	0	8	18	507	617	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	9	20	551	671	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	985	335	671			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	985	335	671			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	99	98			
cM capacity (veh/h)	240	660	916			

Direction, Lane #	EB 1	NE 1	NE 2	NE 3	SW 1	SW 2
Volume Total	9	20	276	276	335	335
Volume Left	0	20	0	0	0	0
Volume Right	9	0	0	0	0	0
cSH	660	916	1700	1700	1700	1700
Volume to Capacity	0.01	0.02	0.16	0.16	0.20	0.20
Queue Length 95th (ft)	1	2	0	0	0	0
Control Delay (s)	10.5	9.0	0.0	0.0	0.0	0.0
Lane LOS	B	A				
Approach Delay (s)	10.5	0.3			0.0	
Approach LOS	B					

Intersection Summary						
Average Delay			0.2			
Intersection Capacity Utilization		27.1%		ICU Level of Service		A
Analysis Period (min)		15				

HCM Unsignalized Intersection Capacity Analysis
 14: EAST MAIN & POCONO DOWNS

9/26/2005



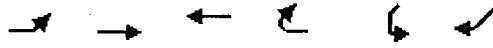
Movement	EBL	EBR	SBL	SBR	NWL	NWR
Lane Configurations		↗	↖		↘	↙
Sign Control	Free		Stop		Free	
Grade	0%		0%		0%	
Volume (veh/h)	0	285	14	0	264	26
Peak Hour Factor	0.96	0.96	0.54	0.54	0.89	0.89
Hourly flow rate (vph)	0	297	26	0	297	29
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			
Median storage (veh)						
Upstream signal (ft)					1239	
pX, platoon unblocked						
vC, conflicting volume	326		608	311		
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	326		608	311		
tC, single (s)	4.1		6.4	6.2		
tC, 2 stage (s)						
tF (s)	2.2		3.5	3.3		
p0 queue free %	100		94	100		
cM capacity (veh/h)	1239		462	734		

Direction, Lane #	EB 1	SB 1	NW 1
Volume Total	297	26	326
Volume Left	0	26	0
Volume Right	0	0	29
cSH	1700	462	1700
Volume to Capacity	0.17	0.06	0.19
Queue Length 95th (ft)	0	4	0
Control Delay (s)	0.0	13.3	0.0
Lane LOS		B	
Approach Delay (s)	0.0	13.3	0.0
Approach LOS		B	

Intersection Summary			
Average Delay		0.5	
Intersection Capacity Utilization		26.2%	ICU Level of Service
Analysis Period (min)		15	A

HCM Unsignalized Intersection Capacity Analysis
 9: EAST MAIN &

9/26/2005



Movement	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations		↑				↑
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	28	285	0	0	0	16
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	30	310	0	0	0	17
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None		
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	0				371	0
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	0				371	0
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	98				100	98
cM capacity (veh/h)	1623				618	1085

Direction, Lane #	EB 1	SW 1
Volume Total	340	17
Volume Left	30	0
Volume Right	0	17
cSH	1623	1085
Volume to Capacity	0.02	0.02
Queue Length 95th (ft)	1	1
Control Delay (s)	0.8	8.4
Lane LOS	A	A
Approach Delay (s)	0.8	8.4
Approach LOS		A

Intersection Summary		
Average Delay	1.2	
Intersection Capacity Utilization	19.9%	ICU Level of Service
Analysis Period (min)	15	A

HCM Unsignalized Intersection Capacity Analysis
 20: EAST MAIN & FIRST

9/26/2005



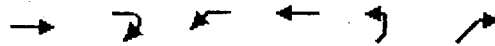
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	39	217	194	50	33	41
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	42	236	211	54	36	45
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None		
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	265				559	238
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	265				559	238
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	97				92	94
cM capacity (veh/h)	1299				474	801

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	278	265	80
Volume Left	42	0	36
Volume Right	0	54	45
cSH	1299	1700	613
Volume to Capacity	0.03	0.16	0.13
Queue Length 95th (ft)	3	0	11
Control Delay (s)	1.5	0.0	11.8
Lane LOS	A		B
Approach Delay (s)	1.5	0.0	11.8
Approach LOS			B

Intersection Summary			
Average Delay		2.2	
Intersection Capacity Utilization	41.2%		ICU Level of Service
Analysis Period (min)		15	A

HCM Unsignalized Intersection Capacity Analysis
 19: EAST MAIN & SCOTT

9/26/2005



Movement	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations	↑			↑		↑
Sign Control	Free			Free		Stop
Grade	0%			0%		0%
Volume (veh/h)	175	31	55	180	23	81
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	190	34	60	196	25	88
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			224			207
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			224			207
tC, single (s)			4.1			6.2
tC, 2 stage (s)						
tF (s)			2.2			3.3
p0 queue free %			96			89
cM capacity (veh/h)			1345			833

Direction, Lane #	EB 1	WB 1	NE 1
Volume Total	224	255	113
Volume Left	0	60	25
Volume Right	34	0	88
cSH	1700	1345	722
Volume to Capacity	0.13	0.04	0.16
Queue Length 95th (ft)	0	3	14
Control Delay (s)	0.0	2.1	10.9
Lane LOS		A	B
Approach Delay (s)	0.0	2.1	10.9
Approach LOS			B

Intersection Summary			
Average Delay			3.0
Intersection Capacity Utilization	39.9%	ICU Level of Service	A
Analysis Period (min)			15

HCM Signalized Intersection Capacity Analysis
 1: EAST MAIN & SR 315

9/21/2005

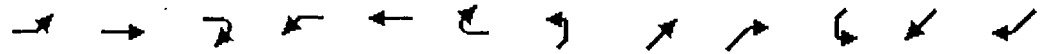
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95		1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	1863	1583	1787	1881	1599	1770	3480		1787	3574	1599
Flt Permitted	0.64	1.00	1.00	0.71	1.00	1.00	0.53	1.00		0.51	1.00	1.00
Satd. Flow (perm)	1191	1863	1583	1343	1881	1599	983	3480		962	3574	1599
Volume (vph)	77	59	64	74	108	69	85	328	41	29	283	50
Peak-hour factor, PHF	0.89	0.89	0.89	0.86	0.86	0.86	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	87	66	72	86	126	80	94	364	46	32	314	56
RTOR Reduction (vph)	0	0	63	0	0	70	0	11	0	0	0	32
Lane Group Flow (vph)	87	66	9	86	126	10	94	399	0	32	314	24
Heavy Vehicles (%)	2%	2%	2%	1%	1%	1%	2%	2%	2%	1%	1%	1%
Turn Type	pm+pt		Perm	pm+pt		Perm	pm+pt			pm+pt		Perm
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases	8		8	4		4	6			2		2
Actuated Green, G (s)	9.7	5.9	5.9	9.7	5.9	5.9	32.7	28.8		28.9	26.9	26.9
Effective Green, g (s)	15.7	8.9	8.9	15.7	8.9	8.9	38.7	31.8		34.9	29.9	29.9
Actuated g/C Ratio	0.23	0.13	0.13	0.23	0.13	0.13	0.56	0.46		0.51	0.44	0.44
Clearance Time (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0		7.0	7.0	7.0
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0	1.0	1.0		1.0	1.0	1.0
Lane Grp Cap (vph)	330	242	206	352	244	208	635	1616		550	1560	698
v/s Ratio Prot	c0.03	0.04		0.02	c0.07		c0.01	c0.11		0.00	0.09	
v/s Ratio Perm	0.03		0.01	0.03		0.01	0.07			0.03		0.02
v/c Ratio	0.26	0.27	0.05	0.24	0.52	0.05	0.15	0.25		0.06	0.20	0.04
Uniform Delay, d1	21.4	26.9	26.1	21.4	27.8	26.1	6.9	11.1		8.4	11.9	11.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.2	0.2	0.0	0.1	0.8	0.0	0.0	0.0		0.0	0.0	0.0
Delay (s)	21.6	27.1	26.1	21.5	28.6	26.1	6.9	11.1		8.4	11.9	11.1
Level of Service	C	C	C	C	C	C	A	B		A	B	B
Approach Delay (s)		24.6			25.8			10.3			11.5	
Approach LOS		C			C			B			B	

Intersection Summary

HCM Average Control Delay	16.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.29		
Actuated Cycle Length (s)	68.5	Sum of lost time (s)	16.0
Intersection Capacity Utilization	34.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
2: LAIRD & SR 315

9/21/2005



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕		↕	↕		↕	↕		↕	↕	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00		0.95	0.95		1.00	0.95		1.00	0.95	
Frt		0.90		1.00	0.93		1.00	0.98		1.00	1.00	
Flt Protected		0.99		0.95	0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1668		1681	1608		1770	3462		1770	3531	
Flt Permitted		0.21		0.71	0.81		0.39	1.00		0.36	1.00	
Satd. Flow (perm)		347		1253	1340		727	3462		679	3531	
Volume (vph)	12	6	43	23	1	9	62	440	75	62	487	8
Peak-hour factor, PHF	0.81	0.81	0.81	0.64	0.64	0.64	0.85	0.85	0.85	0.88	0.88	0.88
Adj. Flow (vph)	15	7	53	36	2	14	73	518	88	70	553	9
RTOR Reduction (vph)	0	45	0	0	13	0	0	15	0	0	1	0
Lane Group Flow (vph)	0	30	0	22	17	0	73	591	0	70	561	0
Turn Type	Perm			Perm			pm+pt			pm+pt		
Protected Phases		3			4		1	6		5	2	
Permitted Phases	3			4			6	6		2		
Actuated Green, G (s)		9.9		4.1	4.1		37.1	33.0		37.1	33.0	
Effective Green, g (s)		11.9		6.1	6.1		45.1	37.0		45.1	37.0	
Actuated g/C Ratio		0.15		0.08	0.08		0.57	0.47		0.57	0.47	
Clearance Time (s)		6.0		6.0	6.0		8.0	8.0		8.0	8.0	
Vehicle Extension (s)		2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)		52		97	103		521	1619		499	1652	
v/s Ratio Prot							0.01	c0.17		c0.01	0.16	
v/s Ratio Perm		c0.09		c0.02	0.01		0.07			0.07		
v/c Ratio		0.58		0.23	0.17		0.14	0.36		0.14	0.34	
Uniform Delay, d1		31.3		34.3	34.1		7.7	13.5		7.8	13.3	
Progression Factor		1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		9.3		0.4	0.3		0.0	0.1		0.0	0.0	
Delay (s)		40.5		34.7	34.4		7.8	13.6		7.8	13.4	
Level of Service		D		C	C		A	B		A	B	
Approach Delay (s)		40.5			34.5			12.9			12.8	
Approach LOS		D			C			B			B	

Intersection Summary

HCM Average Control Delay	15.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	79.1	Sum of lost time (s)	16.0
Intersection Capacity Utilization	41.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
4: SUNSHINE MARKET & SR 315

9/21/2005



Movement	SBL	SBR	NEL	NET	SWT	SWR
Lane Configurations	↵	↗	↵	↑	↑↑	↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	1.00
Fr _t	1.00	0.85	1.00	1.00	1.00	0.85
Fl _t Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1805	1615	1787	1881	3539	1583
Fl _t Permitted	0.95	1.00	0.46	1.00	1.00	1.00
Satd. Flow (perm)	1805	1615	863	1881	3539	1583
Volume (vph)	34	62	72	365	368	28
Peak-hour factor, PHF	0.76	0.76	0.90	0.90	0.89	0.89
Adj. Flow (vph)	45	82	80	406	413	31
RTOR Reduction (vph)	0	57	0	0	0	0
Lane Group Flow (vph)	45	25	80	406	413	31
Heavy Vehicles (%)	0%	0%	1%	1%	2%	2%
Turn Type		pt+ov	pm+pt			Free
Protected Phases	8	1 8	1	6	2	
Permitted Phases			6			Free
Actuated Green, G (s)	5.5	16.4	44.9	44.9	33.0	63.4
Effective Green, g (s)	7.5	19.4	47.9	47.9	36.0	63.4
Actuated g/C Ratio	0.12	0.31	0.76	0.76	0.57	1.00
Clearance Time (s)	6.0		7.0	7.0	7.0	
Vehicle Extension (s)	3.0		3.0	5.0	5.0	
Lane Grp Cap (vph)	214	494	767	1421	2010	1583
v/s Ratio Prot	c0.02	0.02	0.01	c0.22	0.12	
v/s Ratio Perm			0.07			0.02
v/c Ratio	0.21	0.05	0.10	0.29	0.21	0.02
Uniform Delay, d1	25.3	15.5	2.1	2.4	6.7	0.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.5	0.0	0.1	0.2	0.1	0.0
Delay (s)	25.8	15.6	2.2	2.6	6.8	0.0
Level of Service	C	B	A	A	A	A
Approach Delay (s)	19.2			2.6	6.3	
Approach LOS	B			A	A	

Intersection Summary

HCM Average Control Delay	6.1	HCM Level of Service	A
HCM Volume to Capacity ratio	0.28		
Actuated Cycle Length (s)	63.4	Sum of lost time (s)	8.0
Intersection Capacity Utilization	29.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 10: OLD BOSTON & SR 315

9/21/2005



Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations	Y		↑↓			↕↑
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0			4.0
Lane Util. Factor	1.00		0.95			0.95
Flt	0.94		0.99			1.00
Flt Protected	0.97		1.00			1.00
Satd. Flow (prot)	1650		3528			3602
Flt Permitted	0.97		1.00			0.94
Satd. Flow (perm)	1650		3528			3378
Volume (vph)	35	32	307	29	18	396
Peak-hour factor, PHF	0.74	0.74	0.93	0.93	0.85	0.85
Adj. Flow (vph)	47	43	330	31	21	466
RTOR Reduction (vph)	35	0	7	0	0	0
Lane Group Flow (vph)	55	0	354	0	0	487
Heavy Vehicles (%)	5%	5%	1%	1%	0%	0%
Turn Type					pm+pt	
Protected Phases	4		6		5	2
Permitted Phases					2	2
Actuated Green, G (s)	7.9		32.6			32.6
Effective Green, g (s)	8.9		33.6			33.6
Actuated g/C Ratio	0.18		0.67			0.67
Clearance Time (s)	5.0		5.0			5.0
Vehicle Extension (s)	2.0		1.0			1.0
Lane Grp Cap (vph)	291		2347			2248
v/s Ratio Prot	c0.03		0.10			
v/s Ratio Perm						c0.14
v/c Ratio	0.19		0.15			0.22
Uniform Delay, d1	17.7		3.1			3.3
Progression Factor	1.00		1.00			1.00
Incremental Delay, d2	0.1		0.0			0.0
Delay (s)	17.8		3.2			3.3
Level of Service	B		A			A
Approach Delay (s)	17.8		3.2			3.3
Approach LOS	B		A			A

Intersection Summary			
HCM Average Control Delay	4.6	HCM Level of Service	A
HCM Volume to Capacity ratio	0.21		
Actuated Cycle Length (s)	50.5	Sum of lost time (s)	8.0
Intersection Capacity Utilization	35.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 13: LAFLIN & SR 315

9/21/2005



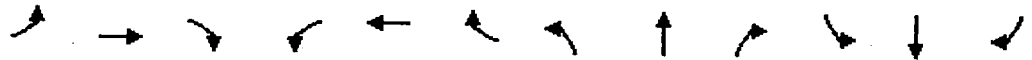
Movement	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations	↘	↗	↘	↑	↗↘	↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	1.00
Fr _t	1.00	0.85	1.00	1.00	1.00	0.85
Fl _t Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1787	1599	1787	1881	3574	1599
Fl _t Permitted	0.95	1.00	0.42	1.00	1.00	1.00
Satd. Flow (perm)	1787	1599	782	1881	3574	1599
Volume (vph)	81	120	78	346	410	106
Peak-hour factor, PHF	0.70	0.70	0.87	0.87	0.88	0.88
Adj. Flow (vph)	116	171	90	398	466	120
RTOR Reduction (vph)	0	118	0	0	0	98
Lane Group Flow (vph)	116	53	90	398	466	22
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%
Turn Type		custom	pm+pt			Over
Protected Phases	8	8	1	6	2	8
Permitted Phases	8	1	6			
Actuated Green, G (s)	9.2	14.2	39.7	39.7	27.7	9.2
Effective Green, g (s)	11.2	19.2	42.7	42.7	30.7	11.2
Actuated g/C Ratio	0.18	0.31	0.69	0.69	0.50	0.18
Clearance Time (s)	6.0	6.0	7.0	7.0	7.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0	5.0	5.0	3.0
Lane Grp Cap (vph)	323	599	669	1298	1773	289
v/s Ratio Prot	c0.06	0.02	0.02	c0.21	0.13	0.01
v/s Ratio Perm		0.02	0.08			
v/c Ratio	0.36	0.09	0.13	0.31	0.26	0.08
Uniform Delay, d1	22.2	15.1	3.4	3.8	9.0	21.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.7	0.1	0.1	0.3	0.2	0.1
Delay (s)	22.9	15.2	3.4	4.1	9.2	21.2
Level of Service	C	B	A	A	A	C
Approach Delay (s)	18.3			3.9	11.7	
Approach LOS	B			A	B	

Intersection Summary

HCM Average Control Delay	10.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	61.9	Sum of lost time (s)	8.0
Intersection Capacity Utilization	30.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 17: SR 315 & MOTORWORLD

9/21/2005



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↗		↖	↑↗			↑	↗		↑	↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	1.00
Fr _t	1.00	0.99		1.00	1.00			1.00	0.85		1.00	0.85
Fl _t Protected	0.95	1.00		0.95	1.00			0.95	1.00		0.95	1.00
Satd. Flow (prot)	1787	3556		1787	3564			1760	1568		1805	1615
Fl _t Permitted	0.41	1.00		0.37	1.00			0.73	1.00		0.74	1.00
Satd. Flow (perm)	768	3556		695	3564			1352	1568		1407	1615
Volume (vph)	18	540	19	5	538	10	21	1	9	28	0	120
Peak-hour factor, PHF	0.85	0.85	0.85	0.93	0.93	0.93	0.83	0.83	0.83	0.62	0.62	0.62
Adj. Flow (vph)	21	635	22	5	578	11	25	1	11	45	0	194
RTOR Reduction (vph)	0	3	0	0	2	0	0	0	9	0	0	155
Lane Group Flow (vph)	21	654	0	5	587	0	0	26	2	0	45	39
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	3%	3%	3%	0%	0%	0%
Turn Type	pm+pt			pm+pt			Perm		Perm	Perm		Perm
Protected Phases	1	6		5	2			4				8
Permitted Phases	6			2			4		4	8		8
Actuated Green, G (s)	22.1	20.9		22.1	20.9			7.8	7.8			7.8
Effective Green, g (s)	27.1	23.9		27.1	23.9			9.8	9.8			9.8
Actuated g/C Ratio	0.55	0.49		0.55	0.49			0.20	0.20			0.20
Clearance Time (s)	6.0	7.0		6.0	7.0			6.0	6.0			6.0
Vehicle Extension (s)	2.0	2.0		2.0	2.0			2.0	2.0			2.0
Lane Grp Cap (vph)	492	1738		457	1742			271	314			282
v/s Ratio Prot	c0.00	c0.18		0.00	0.16							
v/s Ratio Perm	0.02			0.01				0.02	0.00		c0.03	0.02
v/c Ratio	0.04	0.38		0.01	0.34			0.10	0.01		0.16	0.12
Uniform Delay, d1	4.9	7.8		4.9	7.7			15.9	15.7		16.1	16.0
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	1.00
Incremental Delay, d2	0.0	0.1		0.0	0.0			0.1	0.0		0.1	0.1
Delay (s)	4.9	7.9		4.9	7.7			16.0	15.7		16.2	16.1
Level of Service	A	A		A	A			B	B		B	B
Approach Delay (s)		7.8			7.7			15.9			16.1	
Approach LOS		A			A			B			B	

Intersection Summary

HCM Average Control Delay	9.2	HCM Level of Service	A
HCM Volume to Capacity ratio	0.29		
Actuated Cycle Length (s)	48.9	Sum of lost time (s)	12.0
Intersection Capacity Utilization	38.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 22: SR 315 & 309 NB RAMPS

9/21/2005

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕	↗		↕			↕	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0					4.0	
Lane Util. Factor	1.00	0.95			0.95	1.00					1.00	
Frt	1.00	1.00			1.00	0.85					1.00	
Flt Protected	0.95	1.00			1.00	1.00					0.95	
Satd. Flow (prot)	1787	3574			3610	1615					1787	
Flt Permitted	0.32	1.00			1.00	1.00					0.76	
Satd. Flow (perm)	606	3574			3610	1615					1424	
Volume (vph)	526	507	0	0	518	161	0	0	0	70	0	0
Peak-hour factor, PHF	0.98	0.98	0.98	0.84	0.84	0.84	0.50	0.50	0.50	0.92	0.92	0.92
Adj. Flow (vph)	537	517	0	0	617	192	0	0	0	76	0	0
RTOR Reduction (vph)	0	0	0	0	0	103	0	0	0	0	0	0
Lane Group Flow (vph)	537	517	0	0	617	89	0	0	0	0	76	0
Heavy Vehicles (%)	1%	1%	1%	0%	0%	0%	0%	0%	0%	1%	1%	1%
Turn Type	pm+pt			Perm		Perm	Perm			Perm		
Protected Phases	1	6			2			8			4	
Permitted Phases	6			2		2	8			4		
Actuated Green, G (s)	67.3	67.3			39.0	39.0					8.7	
Effective Green, g (s)	69.3	69.3			41.0	41.0					10.7	
Actuated g/C Ratio	0.79	0.79			0.47	0.47					0.12	
Clearance Time (s)	4.0	6.0			6.0	6.0					6.0	
Vehicle Extension (s)	3.0	3.0			3.0	3.0					3.0	
Lane Grp Cap (vph)	803	2815			1682	752					173	
v/s Ratio Prot	c0.18	0.14			0.17							
v/s Ratio Perm	c0.34					0.06					c0.05	
v/c Ratio	0.67	0.18			0.37	0.12					0.44	
Uniform Delay, d1	4.8	2.3			15.1	13.3					35.9	
Progression Factor	1.11	2.37			1.00	1.00					1.00	
Incremental Delay, d2	2.0	0.1			0.6	0.3					1.8	
Delay (s)	7.3	5.7			15.8	13.6					37.6	
Level of Service	A	A			B	B					D	
Approach Delay (s)		6.5			15.2			0.0			37.6	
Approach LOS		A			B			A			D	

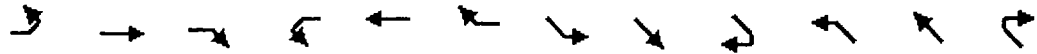
Intersection Summary

HCM Average Control Delay	11.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	88.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	57.3%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
 24: SR 315 & 309 SB RAMPS

9/21/2005



Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations		↑↑	↗	↘	↑↑		↘	↗				
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0		4.0	4.0				
Lane Util. Factor		0.95	1.00	1.00	0.95		0.95	0.95				
Frt		1.00	0.85	1.00	1.00		1.00	1.00				
Flt Protected		1.00	1.00	0.95	1.00		0.95	0.95				
Satd. Flow (prot)		3610	1615	1787	3574		1715	1715				
Flt Permitted		1.00	1.00	0.24	1.00		0.95	0.95				
Satd. Flow (perm)		3610	1615	448	3574		1715	1715				
Volume (vph)	0	934	388	185	747	0	99	0	0	0	0	0
Peak-hour factor, PHF	0.96	0.96	0.96	0.93	0.93	0.93	0.89	0.89	0.89	0.92	0.92	0.92
Adj. Flow (vph)	0	973	404	199	803	0	111	0	0	0	0	0
RTOR Reduction (vph)	0	0	137	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	973	267	199	803	0	56	55	0	0	0	0
Heavy Vehicles (%)	0%	0%	0%	1%	1%	1%	0%	0%	0%	0%	0%	0%
Turn Type			Perm	pm+pt			Perm					
Protected Phases		6		5	2			4				
Permitted Phases			6	2			4					
Actuated Green, G (s)		56.2	56.2	70.0	70.0		6.0	6.0				
Effective Green, g (s)		58.2	58.2	72.0	72.0		8.0	8.0				
Actuated g/C Ratio		0.66	0.66	0.82	0.82		0.09	0.09				
Clearance Time (s)		6.0	6.0	4.0	6.0		6.0	6.0				
Vehicle Extension (s)		3.0	3.0	3.0	3.0		2.0	2.0				
Lane Grp Cap (vph)		2388	1068	516	2924		156	156				
v/s Ratio Prot		c0.27		c0.04	0.22							
v/s Ratio Perm			0.17	0.27			c0.03	0.03				
v/c Ratio		0.41	0.25	0.39	0.27		0.36	0.35				
Uniform Delay, d1		6.9	6.0	2.9	1.9		37.6	37.6				
Progression Factor		1.00	1.00	3.29	0.35		1.00	1.00				
Incremental Delay, d2		0.5	0.6	0.5	0.2		0.5	0.5				
Delay (s)		7.4	6.6	9.9	0.9		38.1	38.1				
Level of Service		A	A	A	A		D	D				
Approach Delay (s)		7.2			2.7			38.1			0.0	
Approach LOS		A			A			D			A	

Intersection Summary

HCM Average Control Delay	6.8	HCM Level of Service	A
HCM Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	88.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	49.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis

28: OAK & SR 315

9/26/2005



Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations	↘	↑	↗		↖	↗	↘	↕	↖	↘	↕	↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00		1.00	1.00	1.00	0.95		1.00	0.95	1.00
Frt	1.00	1.00	0.85		1.00	0.85	1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00		0.96	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1530	1610	1369		1810	1599	1752	3471		1736	3471	1553
Flt Permitted	0.72	1.00	1.00		0.82	1.00	0.28	1.00		0.48	1.00	1.00
Satd. Flow (perm)	1156	1610	1369		1542	1599	522	3471		883	3471	1553
Volume (vph)	169	16	149	43	12	21	203	394	27	8	461	216
Peak-hour factor, PHF	0.63	0.63	0.63	0.91	0.91	0.91	0.90	0.90	0.90	0.91	0.91	0.91
Adj. Flow (vph)	268	25	237	47	13	23	226	438	30	9	507	237
RTOR Reduction (vph)	0	0	136	0	0	13	0	3	0	0	0	0
Lane Group Flow (vph)	268	25	101	0	60	10	226	465	0	9	507	237
Heavy Vehicles (%)	18%	18%	18%	1%	1%	1%	3%	3%	3%	4%	4%	4%
Turn Type	Perm		Perm	Perm		Perm	pm+pt			pm+pt		Free
Protected Phases		7 8			7 8		1	6		5	2	
Permitted Phases	7 8		7 8	7 8		7 8	6			2		Free
Actuated Green, G (s)	36.0	36.0	36.0		36.0	36.0	41.3	34.4		23.6	22.7	89.3
Effective Green, g (s)	38.0	38.0	38.0		38.0	38.0	43.3	36.4		27.6	24.7	89.3
Actuated g/C Ratio	0.43	0.43	0.43		0.43	0.43	0.48	0.41		0.31	0.28	1.00
Clearance Time (s)							6.0	6.0		6.0	6.0	
Vehicle Extension (s)							3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	492	685	583		656	680	454	1415		301	960	1553
v/s Ratio Prot		0.02					c0.08	0.13		0.00	0.15	
v/s Ratio Perm	c0.23		0.07		0.04	0.01	c0.16			0.01		0.15
v/c Ratio	0.54	0.04	0.17		0.09	0.01	0.50	0.33		0.03	0.53	0.15
Uniform Delay, d1	19.2	15.0	15.9		15.3	14.8	14.6	18.1		21.4	27.4	0.0
Progression Factor	1.00	1.00	1.00		1.00	1.00	1.17	0.93		1.00	1.00	1.00
Incremental Delay, d2	1.2	0.0	0.1		0.1	0.0	0.8	0.1		0.0	0.5	0.2
Delay (s)	20.4	15.0	16.0		15.4	14.8	17.9	17.0		21.5	27.9	0.2
Level of Service	C	B	B		B	B	B	B		C	C	A
Approach Delay (s)		18.2			15.2			17.3			19.1	
Approach LOS		B			B			B			B	

Intersection Summary

HCM Average Control Delay	18.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	89.3	Sum of lost time (s)	8.0
Intersection Capacity Utilization	50.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Unsignalized Intersection Capacity Analysis
 3: POCONO DOWNS & SR 315

10/3/2005



Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations	↘				↕			↕		↘	↕	
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	10	0	0	0	0	1	0	426	1	1	353	76
Peak Hour Factor	0.68	0.68	0.68	0.25	0.25	0.25	0.93	0.93	0.93	0.83	0.83	0.83
Hourly flow rate (vph)	15	0	0	0	0	4	0	458	1	1	425	92
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		TWLTL			TWLTL							
Median storage (veh)		0			0							
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	707	933	258	674	978	230	517			459		
vC1, stage 1 conf vol	473	473		459	459							
vC2, stage 2 conf vol	233	459		215	519							
vCu, unblocked vol	707	933	258	674	978	230	517			459		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)	6.5	5.5		6.5	5.5							
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	95	100	100	100	100	99	100			100		
cM capacity (veh/h)	319	283	747	331	273	779	1052			1105		

Direction, Lane #	SE 1	NW 1	NE 1	NE 2	SW 1	SW 2	SW 3
Volume Total	15	4	305	154	1	284	233
Volume Left	15	0	0	0	1	0	0
Volume Right	0	4	0	1	0	0	92
cSH	319	779	1700	1700	1105	1700	1700
Volume to Capacity	0.05	0.01	0.18	0.09	0.00	0.17	0.14
Queue Length 95th (ft)	4	0	0	0	0	0	0
Control Delay (s)	16.8	9.6	0.0	0.0	8.3	0.0	0.0
Lane LOS	C	A			A		
Approach Delay (s)	16.8	9.6	0.0		0.0		
Approach LOS	C	A					

Intersection Summary			
Average Delay		0.3	
Intersection Capacity Utilization	26.1%		ICU Level of Service A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis

9: SR 315 &

10/3/2005



Movement	EBL	EBR	NEL	NET	SWT	SWR
Lane Configurations		↗	↖	↕	↕	
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	0	9	47	427	353	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	10	51	464	384	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	718	192	384			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	718	192	384			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	99	96			
cM capacity (veh/h)	348	817	1171			

Direction, Lane #	EB 1	NE 1	NE 2	NE 3	SW 1	SW 2
Volume Total	10	51	232	232	192	192
Volume Left	0	51	0	0	0	0
Volume Right	10	0	0	0	0	0
cSH	817	1171	1700	1700	1700	1700
Volume to Capacity	0.01	0.04	0.14	0.14	0.11	0.11
Queue Length 95th (ft)	1	3	0	0	0	0
Control Delay (s)	9.5	8.2	0.0	0.0	0.0	0.0
Lane LOS	A	A				
Approach Delay (s)	9.5	0.8			0.0	
Approach LOS	A					

Intersection Summary						
Average Delay			0.6			
Intersection Capacity Utilization	19.8%		ICU Level of Service	A		
Analysis Period (min)	15					

HCM Unsignalized Intersection Capacity Analysis
 14: EAST MAIN & POCONO DOWNS

9/26/2005



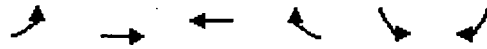
Movement	EBL	EBR	SBL	SBR	NWL	NWR
Lane Configurations		↗	↘		↖	
Sign Control	Free		Stop		Free	
Grade	0%		0%		0%	
Volume (veh/h)	0	191	9	0	184	59
Peak Hour Factor	0.96	0.96	0.54	0.54	0.89	0.89
Hourly flow rate (vph)	0	199	17	0	207	66
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			
Median storage (veh)						
Upstream signal (ft)					1239	
pX, platoon unblocked						
vC, conflicting volume	273		439	240		
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	273		439	240		
tC, single (s)	4.1		6.4	6.2		
tC, 2 stage (s)						
tF (s)	2.2		3.5	3.3		
p0 queue free %	100		97	100		
cM capacity (veh/h)	1296		579	804		

Direction, Lane #	EB 1	SB 1	NW 1
Volume Total	199	17	273
Volume Left	0	17	0
Volume Right	0	0	66
cSH	1700	579	1700
Volume to Capacity	0.12	0.03	0.16
Queue Length 95th (ft)	0	2	0
Control Delay (s)	0.0	11.4	0.0
Lane LOS		B	
Approach Delay (s)	0.0	11.4	0.0
Approach LOS		B	

Intersection Summary		
Average Delay		0.4
Intersection Capacity Utilization	23.8%	ICU Level of Service
Analysis Period (min)		15
		A

HCM Unsignalized Intersection Capacity Analysis
 8: EAST MAIN &

9/26/2005



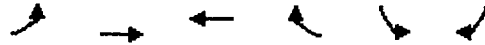
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕			↗
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	56	191	184	0	0	18
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	61	208	200	0	0	20
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None		
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	200				529	200
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	200				529	200
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	96				100	98
cM capacity (veh/h)	1372				487	841

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	268	200	20
Volume Left	61	0	0
Volume Right	0	0	20
cSH	1372	1700	841
Volume to Capacity	0.04	0.12	0.02
Queue Length 95th (ft)	3	0	2
Control Delay (s)	2.1	0.0	9.4
Lane LOS	A		A
Approach Delay (s)	2.1	0.0	9.4
Approach LOS			A

Intersection Summary		
Average Delay		1.5
Intersection Capacity Utilization	29.5%	ICU Level of Service
Analysis Period (min)		15

HCM Unsignalized Intersection Capacity Analysis
 20: EAST MAIN & FIRST

9/26/2005



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	67	199	162	29	46	44
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	73	216	176	32	50	48
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	208				554	192
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	208				554	192
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	95				89	94
cM capacity (veh/h)	1363				467	850

Direction, Lane #	EB T	WB T	SB T
Volume Total	289	208	98
Volume Left	73	0	50
Volume Right	0	32	48
cSH	1363	1700	599
Volume to Capacity	0.05	0.12	0.16
Queue Length 95th (ft)	4	0	15
Control Delay (s)	2.3	0.0	12.2
Lane LOS	A		B
Approach Delay (s)	2.3	0.0	12.2
Approach LOS			B

Intersection Summary			
Average Delay		3.1	
Intersection Capacity Utilization		39.7%	ICU Level of Service A
Analysis Period (min)		15	

HCM Unsignalized Intersection Capacity Analysis
 19: EAST MAIN & SCOTT

9/26/2005



Movement	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations	↑			↑		↑
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	146	20	81	125	17	120
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	159	22	88	136	18	130
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			180		482	170
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			180		482	170
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			94		96	85
cM capacity (veh/h)			1395		509	874

Direction, Lane #	EB 1	WB 1	NE 1
Volume Total	180	224	149
Volume Left	0	88	18
Volume Right	22	0	130
cSH	1700	1395	803
Volume to Capacity	0.11	0.06	0.19
Queue Length 95th (ft)	0	5	17
Control Delay (s)	0.0	3.4	10.5
Lane LOS		A	B
Approach Delay (s)	0.0	3.4	10.5
Approach LOS			B

Intersection Summary			
Average Delay		4.2	
Intersection Capacity Utilization		38.3%	ICU Level of Service
Analysis Period (min)		15	A

2017 (ETC+10) NO-BUILD CONDITIONS

HCM Signalized Intersection Capacity Analysis
1: EAST MAIN & SR 315

9/26/2005

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95		1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1703	1792	1524	1752	1845	1568	1752	3448		1736	3471	1553
Flt Permitted	0.64	1.00	1.00	0.61	1.00	1.00	0.32	1.00		0.37	1.00	1.00
Satd. Flow (perm)	1145	1792	1524	1118	1845	1568	587	3448		683	3471	1553
Volume (vph)	123	66	93	108	117	73	103	500	61	49	527	125
Peak-hour factor, PHF	0.94	0.94	0.94	0.84	0.84	0.84	0.87	0.87	0.87	0.89	0.89	0.89
Adj. Flow (vph)	131	70	99	129	139	87	118	575	70	55	592	140
RTOR Reduction (vph)	0	0	85	0	0	73	0	9	0	0	0	80
Lane Group Flow (vph)	131	70	14	129	139	14	118	636	0	55	592	60
Heavy Vehicles (%)	6%	6%	6%	3%	3%	3%	3%	3%	3%	4%	4%	4%
Turn Type	pm+pt		Perm	pm+pt		Perm	pm+pt			pm+pt		Perm
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases	8		8	4		4	6			2		2
Actuated Green, G (s)	21.0	10.8	10.8	25.8	13.2	13.2	53.4	44.4		43.8	39.6	39.6
Effective Green, g (s)	27.0	13.8	13.8	31.8	16.2	16.2	58.6	47.4		49.8	42.6	42.6
Actuated g/C Ratio	0.27	0.14	0.14	0.32	0.16	0.16	0.59	0.47		0.50	0.43	0.43
Clearance Time (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0		7.0	7.0	7.0
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0	1.0	1.0		1.0	1.0	1.0
Lane Grp Cap (vph)	383	247	210	454	299	254	484	1634		416	1479	662
v/s Ratio Prot	c0.05	0.04		c0.04	c0.08		c0.03	c0.18		0.01	0.17	
v/s Ratio Perm	0.05		0.01	0.05		0.01	0.11			0.06		0.04
v/c Ratio	0.34	0.28	0.07	0.28	0.46	0.06	0.24	0.39		0.13	0.40	0.09
Uniform Delay, d1	28.9	38.7	37.5	25.1	38.0	35.4	10.0	17.0		13.1	19.9	17.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.37	1.60		1.00	1.00	1.00
Incremental Delay, d2	0.2	0.2	0.0	0.1	0.4	0.0	0.1	0.6		0.1	0.8	0.3
Delay (s)	29.1	38.9	37.5	25.3	38.4	35.5	13.9	27.8		13.1	20.7	17.4
Level of Service	C	D	D	C	D	D	B	C		B	C	B
Approach Delay (s)		34.2			32.9			25.6			19.6	
Approach LOS		C			C			C			B	

Intersection Summary

HCM Average Control Delay	25.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	43.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
2: LAIRD & SR 315

9/26/2005



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NEB	SWL	SWT	SWR
Lane Configurations		↕		↕	↕		↕	↕		↕	↕	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00		0.95	0.95		1.00	0.95		1.00	0.95	
Frt		0.89		1.00	0.94		1.00	0.99		1.00	1.00	
Flt Protected		0.99		0.95	0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1554		1681	1626		1736	3424		1736	3456	
Flt Permitted		0.12		0.66	0.75		0.12	1.00		0.24	1.00	
Satd. Flow (perm)		189		1160	1238		228	3424		437	3456	
Volume (vph)	29	3	134	31	6	14	108	802	81	15	982	30
Peak-hour factor, PHF	0.53	0.53	0.53	0.92	0.92	0.92	0.96	0.96	0.96	0.94	0.94	0.94
Adj. Flow (vph)	55	6	253	34	7	15	112	835	84	16	1045	32
RTOR Reduction (vph)	0	146	0	0	14	0	0	7	0	0	2	0
Lane Group Flow (vph)	0	168	0	21	21	0	112	912	0	16	1075	0
Heavy Vehicles (%)	8%	8%	8%	2%	2%	2%	4%	4%	4%	4%	4%	4%
Turn Type	Perm			Perm			pm+pt			pm+pt		
Protected Phases		3			4		1	6		5	2	
Permitted Phases	3			4			6	6		2		
Actuated Green, G (s)		20.7		4.1	4.1		51.8	44.9		42.6	40.3	
Effective Green, g (s)		22.7		6.1	6.1		59.2	48.9		50.6	44.3	
Actuated g/C Ratio		0.23		0.06	0.06		0.59	0.49		0.51	0.44	
Clearance Time (s)		6.0		6.0	6.0		8.0	8.0		8.0	8.0	
Vehicle Extension (s)		2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)		43		71	76		299	1674		303	1531	
v/s Ratio Prot							c0.04	0.27		0.00	c0.31	
v/s Ratio Perm		c0.89		c0.02	0.02		0.18			0.02		
v/c Ratio		3.90		0.30	0.28		0.37	0.55		0.05	0.70	
Uniform Delay, d1		38.6		44.9	44.8		13.2	17.8		12.8	22.5	
Progression Factor		1.00		1.00	1.00		1.95	0.74		1.61	1.33	
Incremental Delay, d2		1361.2		0.8	0.7		0.3	1.2		0.0	2.7	
Delay (s)		1399.8		45.7	45.6		26.0	14.4		20.7	32.5	
Level of Service		F		D	D		C	B		C	C	
Approach Delay (s)	1399.8			45.6			15.7			32.4		
Approach LOS	F			D			B			C		

Intersection Summary

HCM Average Control Delay	197.9	HCM Level of Service	F
HCM Volume to Capacity ratio	1.50		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	60.8%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis

4: SUNSHINE MARKET & SR 315

9/26/2005



Movement	SBL	SBR	NEL	NET	SWT	SWR
Lane Configurations	↶	↷	↶	↷	↷	↷
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1805	1615	1770	1863	3471	1553
Flt Permitted	0.95	1.00	0.31	1.00	1.00	1.00
Satd. Flow (perm)	1805	1615	569	1863	3471	1553
Volume (vph)	100	117	124	549	645	88
Peak-hour factor, PHF	0.93	0.93	0.82	0.82	0.92	0.92
Adj. Flow (vph)	108	126	151	670	701	96
RTOR Reduction (vph)	0	81	0	0	0	0
Lane Group Flow (vph)	108	45	151	670	701	96
Heavy Vehicles (%)	0%	0%	2%	2%	4%	4%
Turn Type		pt+ov	pm+pt			Free
Protected Phases	8	1 8	1	6	2	
Permitted Phases			6			Free
Actuated Green, G (s)	9.3	22.0	47.8	47.8	34.1	70.1
Effective Green, g (s)	11.3	25.0	50.8	50.8	37.1	70.1
Actuated g/C Ratio	0.16	0.36	0.72	0.72	0.53	1.00
Clearance Time (s)	6.0		7.0	7.0	7.0	
Vehicle Extension (s)	3.0		3.0	5.0	5.0	
Lane Grp Cap (vph)	291	576	579	1350	1837	1553
v/s Ratio Prot	c0.06	0.03	0.04	c0.36	0.20	
v/s Ratio Perm			0.15			0.06
v/c Ratio	0.37	0.08	0.26	0.50	0.38	0.06
Uniform Delay, d1	26.2	14.9	3.6	4.1	9.7	0.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.8	0.1	0.2	0.6	0.3	0.1
Delay (s)	27.0	15.0	3.8	4.8	10.0	0.1
Level of Service	C	B	A	A	B	A
Approach Delay (s)	20.5			4.6	8.8	
Approach LOS	C			A	A	

Intersection Summary

HCM Average Control Delay	8.4	HCM Level of Service	A
HCM Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	70.1	Sum of lost time (s)	8.0
Intersection Capacity Utilization	41.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
 10: OLD BOSTON & SR 315

9/26/2005



Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations	Y		↑↑			↑↑
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0			4.0
Lane Util. Factor	1.00		0.95			0.95
Frt	0.93		0.99			1.00
Flt Protected	0.98		1.00			1.00
Satd. Flow (prot)	1643		3404			3529
Flt Permitted	0.98		1.00			0.89
Satd. Flow (perm)	1643		3404			3156
Volume (vph)	62	68	611	44	38	619
Peak-hour factor, PHF	0.61	0.61	0.89	0.89	0.91	0.91
Adj. Flow (vph)	102	111	687	49	42	680
RTOR Reduction (vph)	64	0	7	0	0	0
Lane Group Flow (vph)	149	0	729	0	0	722
Heavy Vehicles (%)	5%	5%	5%	5%	2%	2%
Turn Type					pm+pt	
Protected Phases	4		6		5	2
Permitted Phases					2	2
Actuated Green, G (s)	7.3		18.7			18.7
Effective Green, g (s)	8.3		19.7			19.7
Actuated g/C Ratio	0.23		0.55			0.55
Clearance Time (s)	5.0		5.0			5.0
Vehicle Extension (s)	2.0		1.0			1.0
Lane Grp Cap (vph)	379		1863			1727
v/s Ratio Prot	c0.09		0.21			
v/s Ratio Perm						c0.23
v/c Ratio	0.39		0.39			0.42
Uniform Delay, d1	11.7		4.7			4.8
Progression Factor	1.00		1.00			1.00
Incremental Delay, d2	0.2		0.0			0.1
Delay (s)	12.0		4.7			4.8
Level of Service	B		A			A
Approach Delay (s)	12.0		4.7			4.8
Approach LOS	B		A			A

Intersection Summary

HCM Average Control Delay	5.7	HCM Level of Service	A
HCM Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	36.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	54.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 13: LAFLIN & SR 315

9/26/2005



Movement	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations	↘	↗	↘	↑	↑↑	↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	1.00
Fr _t	1.00	0.85	1.00	1.00	1.00	0.85
Fl _t Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1770	1583	1752	1845	3471	1553
Fl _t Permitted	0.95	1.00	0.31	1.00	1.00	1.00
Satd. Flow (perm)	1770	1583	574	1845	3471	1553
Volume (vph)	70	99	141	767	659	122
Peak-hour factor, PHF	0.89	0.89	0.91	0.91	0.95	0.95
Adj. Flow (vph)	79	111	155	843	694	128
RTOR Reduction (vph)	0	79	0	0	0	110
Lane Group Flow (vph)	79	32	155	843	694	18
Heavy Vehicles (%)	2%	2%	3%	3%	4%	4%
Turn Type	custom		pm+pt			Over
Protected Phases	8	8	1	6	2	8
Permitted Phases	8	1	6			
Actuated Green, G (s)	8.0	15.5	49.5	49.5	35.0	8.0
Effective Green, g (s)	10.0	20.5	52.5	52.5	38.0	10.0
Actuated g/C Ratio	0.14	0.29	0.74	0.74	0.54	0.14
Clearance Time (s)	6.0	6.0	7.0	7.0	7.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0	5.0	5.0	3.0
Lane Grp Cap (vph)	251	550	603	1374	1871	220
v/s Ratio Prot	c0.04	0.01	0.04	c0.46	0.20	0.01
v/s Ratio Perm		0.01	0.15			
v/c Ratio	0.31	0.06	0.26	0.61	0.37	0.08
Uniform Delay, d ₁	27.2	18.0	3.1	4.2	9.4	26.3
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d ₂	0.7	0.0	0.2	1.2	0.3	0.2
Delay (s)	27.9	18.1	3.4	5.4	9.6	26.4
Level of Service	C	B	A	A	A	C
Approach Delay (s)	22.2			5.1	12.2	
Approach LOS	C			A	B	

Intersection Summary			
HCM Average Control Delay	9.6	HCM Level of Service	A
HCM Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	70.5	Sum of lost time (s)	8.0
Intersection Capacity Utilization	50.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 17: SR 315 & MOTORWORLD

9/26/2005



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕			↖	↗		↖	↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	1.00
Flt	1.00	1.00		1.00	1.00			1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.95	1.00		0.95	1.00
Satd. Flow (prot)	1752	3488		1719	3421			1796	1599		1796	1599
Flt Permitted	0.15	1.00		0.27	1.00			0.68	1.00		0.66	1.00
Satd. Flow (perm)	278	3488		482	3421			1286	1599		1246	1599
Volume (vph)	92	918	30	13	1097	37	66	3	15	58	3	206
Peak-hour factor, PHF	0.95	0.95	0.95	0.85	0.85	0.85	0.84	0.84	0.84	0.84	0.84	0.84
Adj. Flow (vph)	97	966	32	15	1291	44	79	4	18	69	4	245
RTOR Reduction (vph)	0	1	0	0	2	0	0	0	16	0	0	169
Lane Group Flow (vph)	97	997	0	15	1333	0	0	83	2	0	73	76
Heavy Vehicles (%)	3%	3%	3%	5%	5%	5%	1%	1%	1%	1%	1%	1%
Turn Type	pm+pt			pm+pt			Perm		Perm	Perm		Perm
Protected Phases	1	6		5	2			4			8	
Permitted Phases	6			2			4		4	8		8
Actuated Green, G (s)	74.1	68.5		68.5	65.7			9.7	9.7		9.7	9.7
Effective Green, g (s)	79.1	71.5		73.5	68.7			11.7	11.7		11.7	11.7
Actuated g/C Ratio	0.79	0.72		0.74	0.69			0.12	0.12		0.12	0.12
Clearance Time (s)	6.0	7.0		6.0	7.0			6.0	6.0		6.0	6.0
Vehicle Extension (s)	2.0	2.0		2.0	2.0			2.0	2.0		2.0	2.0
Lane Grp Cap (vph)	332	2494		414	2350			150	187		146	187
v/s Ratio Prot	c0.02	0.29		0.00	c0.39							
v/s Ratio Perm	0.21			0.02				c0.06	0.00		0.06	0.05
v/c Ratio	0.29	0.40		0.04	0.57			0.55	0.01		0.50	0.41
Uniform Delay, d1	4.7	5.7		3.7	8.0			41.7	39.0		41.4	40.9
Progression Factor	1.00	1.00		0.20	0.22			1.00	1.00		1.00	1.00
Incremental Delay, d2	0.2	0.5		0.0	0.5			2.5	0.0		1.0	0.5
Delay (s)	4.9	6.2		0.7	2.3			44.2	39.0		42.4	41.5
Level of Service	A	A		A	A			D	D		D	D
Approach Delay (s)		6.1			2.3			43.3			41.7	
Approach LOS		A			A			D			D	

Intersection Summary

HCM Average Control Delay	9.6	HCM Level of Service	A
HCM Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	60.1%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 22: SR 315 & 309 NB RAMPS

9/26/2005



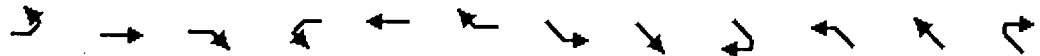
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗	↗		↕			↖	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00			1.00	
Flt	1.00	1.00		1.00	1.00	0.85		1.00			1.00	
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.97			0.95	
Satd. Flow (prot)	1787	3571		1770	3539	1583		1847			1752	
Flt Permitted	0.11	1.00		0.30	1.00	1.00		0.91			0.75	
Satd. Flow (perm)	215	3571		561	3539	1583		1725			1380	
Volume (vph)	600	888	5	1	938	430	4	3	0	152	0	0
Peak-hour factor, PHF	0.94	0.94	0.94	0.86	0.86	0.86	0.50	0.50	0.50	0.84	0.84	0.84
Adj. Flow (vph)	638	945	5	1	1091	500	8	6	0	181	0	0
RTOR Reduction (vph)	0	0	0	0	0	255	0	0	0	0	0	0
Lane Group Flow (vph)	638	950	0	1	1091	245	0	14	0	0	181	0
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	0%	0%	0%	3%	3%	3%
Turn Type	pm+pt			Perm		Perm	Perm				Perm	
Protected Phases	1	6			2			8				4
Permitted Phases	6			2		2	8			4		
Actuated Green, G (s)	68.0	68.0		29.0	29.0	29.0		12.0			12.0	
Effective Green, g (s)	70.0	70.0		31.0	31.0	31.0		14.0			14.0	
Actuated g/C Ratio	0.76	0.76		0.34	0.34	0.34		0.15			0.15	
Clearance Time (s)	4.0	6.0		6.0	6.0	6.0		6.0			6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0			3.0	
Lane Grp Cap (vph)	762	2717		189	1192	533		263			210	
v/s Ratio Prot	c0.32	0.27			c0.31							
v/s Ratio Perm	0.32			0.00		0.15		0.01			c0.13	
v/c Ratio	0.84	0.35		0.01	0.92	0.46		0.05			0.86	
Uniform Delay, d1	20.6	3.6		20.3	29.2	23.9		33.3			38.1	
Progression Factor	0.64	0.05		1.00	1.00	1.00		1.00			1.00	
Incremental Delay, d2	4.6	0.2		0.1	12.3	2.8		0.1			28.5	
Delay (s)	17.7	0.4		20.3	41.6	26.8		33.4			66.5	
Level of Service	B	A		C	D	C		C			E	
Approach Delay (s)		7.4			36.9			33.4			66.5	
Approach LOS		A			D			C			E	

Intersection Summary

HCM Average Control Delay	24.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	92.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	82.4%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 24: SR 315 & 309 SB RAMPS

9/26/2005



Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SEP	NWL	NWT	NWR
Lane Configurations		↑↑	↑	↓	↑↑		↓	↑				
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0		4.0	4.0				
Lane Util. Factor		0.95	1.00	1.00	0.95		0.95	0.95				
Frt		1.00	0.85	1.00	1.00		1.00	1.00				
Flt Protected		1.00	1.00	0.95	1.00		0.95	0.95				
Satd. Flow (prot)		3574	1599	1770	3539		1665	1665				
Flt Permitted		1.00	1.00	0.09	1.00		0.95	0.95				
Satd. Flow (perm)		3574	1599	175	3539		1665	1665				
Volume (vph)	0	1225	566	469	1179	0	268	0	0	0	0	0
Peak-hour factor, PHF	0.93	0.93	0.93	0.89	0.89	0.89	0.66	0.66	0.66	0.92	0.92	0.92
Adj. Flow (vph)	0	1317	609	527	1325	0	406	0	0	0	0	0
RTOR Reduction (vph)	0	0	295	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	1317	314	527	1325	0	203	203	0	0	0	0
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	3%	3%	3%	2%	2%	2%
Turn Type			Perm	pm+pt			Perm					
Protected Phases		6		5	2			4				
Permitted Phases			6	2			4					
Actuated Green, G (s)		36.6	36.6	65.8	65.8		14.2	14.2				
Effective Green, g (s)		38.6	38.6	67.8	67.8		16.2	16.2				
Actuated g/C Ratio		0.42	0.42	0.74	0.74		0.18	0.18				
Clearance Time (s)		6.0	6.0	4.0	6.0		6.0	6.0				
Vehicle Extension (s)		3.0	3.0	3.0	3.0		2.0	2.0				
Lane Grp Cap (vph)		1500	671	566	2608		293	293				
v/s Ratio Prot		0.37		c0.26	0.37							
v/s Ratio Perm			0.20	c0.43			c0.12	0.12				
v/c Ratio		0.88	0.47	0.93	0.51		0.69	0.69				
Uniform Delay, d1		24.5	19.3	26.2	5.1		35.6	35.6				
Progression Factor		1.00	1.00	0.69	0.41		1.00	1.00				
Incremental Delay, d2		7.6	2.3	20.1	0.6		5.6	5.6				
Delay (s)		32.1	21.6	38.3	2.7		41.2	41.2				
Level of Service		C	C	D	A		D	D				
Approach Delay (s)		28.8			12.8			41.2			0.0	
Approach LOS		C			B			D			A	

Intersection Summary

HCM Average Control Delay	22.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	92.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	78.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis

28: OAK & SR 315

9/26/2005



Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations	↘	↑	↗		↙	↗	↘	↕		↘	↕	↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00		1.00	1.00	1.00	0.95		1.00	0.95	1.00
Frt	1.00	1.00	0.85		1.00	0.85	1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00		0.96	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1433	1508	1282		1793	1583	1641	3264		1687	3374	1509
Flt Permitted	0.55	1.00	1.00		0.74	1.00	0.13	1.00		0.14	1.00	1.00
Satd. Flow (perm)	824	1508	1282		1374	1583	231	3264		245	3374	1509
Volume (vph)	323	36	255	167	47	70	380	827	30	56	728	118
Peak-hour factor, PHF	0.68	0.68	0.68	0.92	0.92	0.92	0.82	0.82	0.82	0.97	0.97	0.97
Adj. Flow (vph)	475	53	375	182	51	76	463	1009	37	58	751	122
RTOR Reduction (vph)	0	0	211	0	0	43	0	2	0	0	0	0
Lane Group Flow (vph)	475	53	164	0	233	33	463	1044	0	58	751	122
Heavy Vehicles (%)	26%	26%	26%	2%	2%	2%	10%	10%	10%	7%	7%	7%
Turn Type	Perm		Perm	Perm		Perm	pm+pt			pm+pt		Free
Protected Phases		7 8			7 8		1	6		5	2	
Permitted Phases	7 8		7 8	7 8		7 8	6			2		Free
Actuated Green, G (s)	46.0	46.0	46.0		46.0	46.0	52.0	39.7		35.3	29.0	110.0
Effective Green, g (s)	48.0	48.0	48.0		48.0	48.0	54.0	41.7		39.3	31.0	110.0
Actuated g/C Ratio	0.44	0.44	0.44		0.44	0.44	0.49	0.38		0.36	0.28	1.00
Clearance Time (s)							6.0	6.0		6.0	6.0	
Vehicle Extension (s)							3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	360	658	559		600	691	357	1237		196	951	1509
v/s Ratio Prot		0.04					c0.22	0.32		0.02	0.22	
v/s Ratio Perm	c0.58		0.13		0.17	0.02	c0.41			0.08		0.08
v/c Ratio	1.32	0.08	0.29		0.39	0.05	1.30	0.84		0.30	0.79	0.08
Uniform Delay, d1	31.0	18.1	20.0		21.0	17.8	30.7	31.2		24.8	36.5	0.0
Progression Factor	1.00	1.00	1.00		1.00	1.00	1.09	0.87		1.00	1.00	1.00
Incremental Delay, d2	162.1	0.1	0.3		0.4	0.0	149.6	4.5		0.8	4.4	0.1
Delay (s)	193.1	18.2	20.3		21.5	17.9	183.1	31.6		25.6	40.9	0.1
Level of Service	F	B	C		C	B	F	C		C	D	A
Approach Delay (s)		111.1			20.6			78.1			34.6	
Approach LOS		F			C			E			C	

Intersection Summary

HCM Average Control Delay	70.3	HCM Level of Service	E
HCM Volume to Capacity ratio	1.29		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	75.7%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Unsignalized Intersection Capacity Analysis
 3: POCONO DOWNS & SR 315

10/3/2005



Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations	↙				↕			↕		↙	↕	
Sign Control		Stop			Stop			Free		Free		
Grade		0%			0%			0%		0%		
Volume (veh/h)	10	0	0	0	0	0	0	663	0	0	687	75
Peak Hour Factor	0.79	0.79	0.79	0.92	0.92	0.92	0.90	0.90	0.90	0.87	0.87	0.87
Hourly flow rate (vph)	13	0	0	0	0	0	0	737	0	0	790	86
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		TWLT			TWLT							
Median storage (veh)		0			0							
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1201	1569	438	1131	1613	368	876			737		
vC1, stage 1 conf vol	833	833		737	737							
vC2, stage 2 conf vol	368	737		395	876							
vCu, unblocked vol	1201	1569	438	1131	1613	368	876			737		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)	6.5	5.5		6.5	5.5							
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	93	100	100	100	100	100	100			100		
cM capacity (veh/h)	188	174	567	207	168	629	773			865		

Direction, Lane #	SE 1	NW 1	NE 1	NE 2	SW 1	SW 2	SW 3
Volume Total	13	0	491	246	0	526	349
Volume Left	13	0	0	0	0	0	0
Volume Right	0	0	0	0	0	0	86
cSH	188	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.07	0.00	0.29	0.14	0.00	0.31	0.21
Queue Length 95th (ft)	5	0	0	0	0	0	0
Control Delay (s)	25.5	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	D	A					
Approach Delay (s)	25.5	0.0	0.0	0.0			
Approach LOS	D	A					

Intersection Summary	
Average Delay	0.2
Intersection Capacity Utilization	31.4%
Analysis Period (min)	15
ICU Level of Service	A

HCM Unsignalized Intersection Capacity Analysis
 8: SR 315 &

10/3/2005



Movement	EBL	EBR	NEL	NET	SWT	SWR
Lane Configurations		↗	↖	↑↑	↑↑	
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	0	14	33	663	687	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	15	36	721	747	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1179	373	747			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1179	373	747			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	98	96			
cM capacity (veh/h)	176	624	857			

Direction, Lane #	EB 1	NE 1	NE 2	NE 3	SW 1	SW 2
Volume Total	15	36	360	360	373	373
Volume Left	0	36	0	0	0	0
Volume Right	15	0	0	0	0	0
cSH	624	857	1700	1700	1700	1700
Volume to Capacity	0.02	0.04	0.21	0.21	0.22	0.22
Queue Length 95th (ft)	2	3	0	0	0	0
Control Delay (s)	10.9	9.4	0.0	0.0	0.0	0.0
Lane LOS	B	A				
Approach Delay (s)	10.9	0.4			0.0	
Approach LOS	B					

Intersection Summary		
Average Delay		0.3
Intersection Capacity Utilization	29.0%	ICU Level of Service A
Analysis Period (min)		15

HCM Unsignalized Intersection Capacity Analysis
 14: EAST MAIN & POCONO DOWNS

9/26/2005



Movement	EBL	EBR	SBL	SBR	NWL	NWR
Lane Configurations		↗	↖		↘	↙
Sign Control	Free		Stop		Free	
Grade	0%		0%		0%	
Volume (veh/h)	0	279	3	0	308	37
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	303	3	0	335	40
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			
Median storage (veh)						
Upstream signal (ft)					1239	
pX, platoon unblocked						
vC, conflicting volume	375		658	355		
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	375		658	355		
tC, single (s)	4.1		6.4	6.2		
tC, 2 stage (s)						
tF (s)	2.2		3.5	3.3		
p0 queue free %	100		99	100		
cM capacity (veh/h)	1183		429	689		

Direction, Lane #	EB 1	SB 1	NW 1
Volume Total	303	3	375
Volume Left	0	3	0
Volume Right	0	0	40
cSH	1700	429	1700
Volume to Capacity	0.18	0.01	0.22
Queue Length 95th (ft)	0	1	0
Control Delay (s)	0.0	13.5	0.0
Lane LOS		B	
Approach Delay (s)	0.0	13.5	0.0
Approach LOS		B	

Intersection Summary

Average Delay	0.1		
Intersection Capacity Utilization	29.3%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
 34: EAST MAIN & POCONO DOWNS RT

10/3/2005



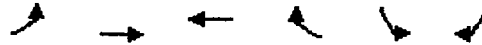
Movement	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations		↕	↑			↗
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	61	279	308	0	0	14
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	66	303	335	0	0	15
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None		
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	335			771	335	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	335			771	335	
tC, single (s)	4.1			6.4	6.2	
tC, 2 stage (s)						
tF (s)	2.2			3.5	3.3	
p0 queue free %	95			100	98	
cM capacity (veh/h)	1225			349	707	

Direction, Lane #	EB 1	WB 1	SW 1
Volume Total	370	335	15
Volume Left	66	0	0
Volume Right	0	0	15
cSH	1225	1700	707
Volume to Capacity	0.05	0.20	0.02
Queue Length 95th (ft)	4	0	2
Control Delay (s)	1.9	0.0	10.2
Lane LOS	A		B
Approach Delay (s)	1.9	0.0	10.2
Approach LOS			B

Intersection Summary			
Average Delay		1.2	
Intersection Capacity Utilization		40.9%	ICU Level of Service A
Analysis Period (min)		15	

HCM Unsignalized Intersection Capacity Analysis
 20: EAST MAIN & FIRST

9/26/2005



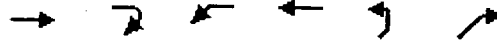
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	94	331	364	62	53	55
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	102	360	396	67	58	60
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	463				993	429
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	463				993	429
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	91				77	90
cM capacity (veh/h)	1098				247	626

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	462	463	117
Volume Left	102	0	58
Volume Right	0	67	60
cSH	1098	1700	357
Volume to Capacity	0.09	0.27	0.33
Queue Length 95th (ft)	8	0	35
Control Delay (s)	2.7	0.0	20.0
Lane LOS	A		C
Approach Delay (s)	2.7	0.0	20.0
Approach LOS			C

Intersection Summary			
Average Delay		3.4	
Intersection Capacity Utilization	61.8%		ICU Level of Service B
Analysis Period (min)		15	

HCM Unsignalized Intersection Capacity Analysis
 19: EAST MAIN & SCOTT

9/26/2005



Movement	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations	↕			↕	↕	
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	217	28	177	255	53	208
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	236	30	192	277	58	226
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			266		913	251
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			266		913	251
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			85		78	71
cM capacity (veh/h)			1298		259	788

Direction, Lane #	EB 1	WB 1	NE 1
Volume Total	266	470	284
Volume Left	0	192	58
Volume Right	30	0	226
cSH	1700	1298	556
Volume to Capacity	0.16	0.15	0.51
Queue Length 95th (ft)	0	13	72
Control Delay (s)	0.0	4.2	18.0
Lane LOS		A	C
Approach Delay (s)	0.0	4.2	18.0
Approach LOS			C

Intersection Summary			
Average Delay		7.0	
Intersection Capacity Utilization		62.1%	ICU Level of Service B
Analysis Period (min)		15	

HCM Signalized Intersection Capacity Analysis

1: EAST MAIN & SR 315

9/26/2005



Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations	↔	↑	↗	↔	↑	↗	↔	↕	↔	↔	↕	↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.99	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1787	1881	1599	1770	1863	1583	1770	3501	1719	3438	1538	1538
Flt Permitted	0.59	1.00	1.00	0.62	1.00	1.00	0.33	1.00	0.41	1.00	1.00	1.00
Satd. Flow (perm)	1119	1881	1599	1154	1863	1583	608	3501	736	3438	1538	1538
Volume (vph)	127	110	127	108	126	74	124	440	34	90	568	104
Peak-hour factor, PHF	0.88	0.88	0.88	0.95	0.95	0.95	0.90	0.90	0.90	0.89	0.89	0.89
Adj. Flow (vph)	144	125	144	114	133	78	138	489	38	101	638	117
RTOR Reduction (vph)	0	0	123	0	0	67	0	7	0	0	0	67
Lane Group Flow (vph)	144	125	21	114	133	11	138	520	0	101	638	50
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	2%	2%	2%	5%	5%	5%
Turn Type	pm+pt		Perm	pm+pt		Perm	pm+pt			pm+pt		Perm
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases	8		8	4		4	6			2		2
Actuated Green, G (s)	14.0	8.4	8.4	14.0	8.4	8.4	36.4	30.5		35.4	30.0	30.0
Effective Green, g (s)	20.0	11.4	11.4	20.0	11.4	11.4	42.4	33.5		41.4	33.0	33.0
Actuated g/C Ratio	0.26	0.15	0.15	0.26	0.15	0.15	0.54	0.43		0.53	0.42	0.42
Clearance Time (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0		7.0	7.0	7.0
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0	1.0	1.0		1.0	1.0	1.0
Lane Grp Cap (vph)	361	275	234	364	273	232	464	1506		497	1456	652
v/s Ratio Prot	c0.04	0.07		0.03	c0.07		c0.03	0.15		0.02	c0.19	
v/s Ratio Perm	0.06		0.01	0.05		0.01	0.13			0.09		0.03
v/c Ratio	0.40	0.45	0.09	0.31	0.49	0.05	0.30	0.35		0.20	0.44	0.08
Uniform Delay, d1	23.4	30.4	28.8	23.0	30.6	28.6	9.1	14.9		9.2	15.9	13.4
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.3	0.4	0.1	0.2	0.5	0.0	0.1	0.1		0.1	0.1	0.0
Delay (s)	23.7	30.8	28.8	23.2	31.1	28.6	9.3	14.9		9.3	16.0	13.4
Level of Service	C	C	C	C	C	C	A	B		A	B	B
Approach Delay (s)		27.6			27.7			13.7			14.8	
Approach LOS		C			C			B			B	

Intersection Summary

HCM Average Control Delay	18.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	77.9	Sum of lost time (s)	16.0
Intersection Capacity Utilization	49.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis

2: LAIRD & SR 315

9/26/2005



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NEB	SWL	SWT	SWR
Lane Configurations		↕		↕	↕		↕	↕		↕	↕	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00		0.95	0.95		1.00	0.95		1.00	0.95	
Frt		0.90		1.00	0.96		1.00	0.99		1.00	1.00	
Flt Protected		0.99		0.95	0.97		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1566		1681	1648		1736	3449		1736	3460	
Flt Permitted		0.21		0.68	0.77		0.27	1.00		0.35	1.00	
Satd. Flow (perm)		331		1208	1303		487	3449		635	3460	
Volume (vph)	20	3	66	37	5	9	70	624	28	10	711	16
Peak-hour factor, PHF	0.77	0.77	0.77	0.73	0.73	0.73	0.91	0.91	0.91	0.94	0.94	0.94
Adj. Flow (vph)	26	4	86	51	7	12	77	686	31	11	756	17
RTOR Reduction (vph)	0	74	0	0	11	0	0	3	0	0	2	0
Lane Group Flow (vph)	0	42	0	29	30	0	77	714	0	11	771	0
Heavy Vehicles (%)	8%	8%	8%	2%	2%	2%	4%	4%	4%	4%	4%	4%
Turn Type	Perm			Perm			pm+pt			pm+pt		
Protected Phases		3			4		1	6		5	2	
Permitted Phases	3			4			6	6		2		
Actuated Green, G (s)		9.7		4.0	4.0		43.0	39.1		37.2	36.2	
Effective Green, g (s)		11.7		6.0	6.0		51.0	43.1		45.2	40.2	
Actuated g/C Ratio		0.14		0.07	0.07		0.62	0.53		0.55	0.49	
Clearance Time (s)		6.0		6.0	6.0		8.0	8.0		8.0	8.0	
Vehicle Extension (s)		2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)		47		89	96		424	1817		418	1700	
v/s Ratio Prot							c0.02	0.21		0.00	c0.22	
v/s Ratio Perm		c0.13		c0.02	0.02		0.10			0.01		
v/c Ratio		0.90		0.33	0.31		0.18	0.39		0.03	0.45	
Uniform Delay, d1		34.5		36.0	35.9		6.9	11.5		8.3	13.6	
Progression Factor		1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		92.5		0.8	0.7		0.1	0.1		0.0	0.1	
Delay (s)		127.0		36.8	36.6		7.0	11.6		8.3	13.7	
Level of Service		F		D	D		A	B		A	B	
Approach Delay (s)		127.0			36.7			11.1			13.6	
Approach LOS		F			D			B			B	

Intersection Summary

HCM Average Control Delay	20.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	81.8	Sum of lost time (s)	20.0
Intersection Capacity Utilization	46.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 4: SUNSHINE MARKET & SR 315

9/26/2005



Movement	SBL	SBR	NEL	NET	SWT	SWR
Lane Configurations	↙	↗	↙	↑	↑↑	↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1736	1553	1752	1845	3471	1553
Flt Permitted	0.95	1.00	0.30	1.00	1.00	1.00
Satd. Flow (perm)	1736	1553	557	1845	3471	1553
Volume (vph)	104	162	136	484	620	103
Peak-hour factor, PHF	0.84	0.84	0.97	0.97	0.90	0.90
Adj. Flow (vph)	124	193	140	499	689	114
RTOR Reduction (vph)	0	121	0	0	0	0
Lane Group Flow (vph)	124	72	140	499	689	114
Heavy Vehicles (%)	4%	4%	3%	3%	4%	4%
Turn Type		pt+ov	pm+pt			Free
Protected Phases	8	1 8	1	6	2	
Permitted Phases			6			Free
Actuated Green, G (s)	8.1	19.6	39.7	39.7	27.2	60.8
Effective Green, g (s)	10.1	22.6	42.7	42.7	30.2	60.8
Actuated g/C Ratio	0.17	0.37	0.70	0.70	0.50	1.00
Clearance Time (s)	6.0		7.0	7.0	7.0	
Vehicle Extension (s)	3.0		3.0	5.0	5.0	
Lane Grp Cap (vph)	288	577	558	1296	1724	1553
v/s Ratio Prot	c0.07	0.05	0.04	c0.27	0.20	
v/s Ratio Perm			0.14			0.07
v/c Ratio	0.43	0.12	0.25	0.39	0.40	0.07
Uniform Delay, d1	22.8	12.6	3.5	3.7	9.6	0.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.0	0.1	0.2	0.4	0.3	0.1
Delay (s)	23.8	12.7	3.8	4.1	9.9	0.1
Level of Service	C	B	A	A	A	A
Approach Delay (s)	17.0			4.0	8.5	
Approach LOS	B			A	A	

Intersection Summary

HCM Average Control Delay	8.4	HCM Level of Service	A
HCM Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	60.8	Sum of lost time (s)	8.0
Intersection Capacity Utilization	40.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 10: OLD BOSTON & SR 315

9/26/2005



Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations	↘		↕		↗	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0		4.0	
Lane Util. Factor	1.00		0.95		0.95	
Frt	0.93		0.99		1.00	
Flt Protected	0.98		1.00		1.00	
Satd. Flow (prot)	1645		3503		3524	
Flt Permitted	0.98		1.00		0.90	
Satd. Flow (perm)	1645		3503		3179	
Volume (vph)	34	35	412	30	38	412
Peak-hour factor, PHF	0.81	0.81	0.93	0.93	0.94	0.94
Adj. Flow (vph)	42	43	443	32	40	438
RTOR Reduction (vph)	37	0	5	0	0	0
Lane Group Flow (vph)	48	0	470	0	0	478
Heavy Vehicles (%)	5%	5%	2%	2%	2%	2%
Turn Type					pm+pt	
Protected Phases	4		6		5 2	
Permitted Phases					2 2	
Actuated Green, G (s)	6.5		36.5		36.5	
Effective Green, g (s)	7.5		37.5		37.5	
Actuated g/C Ratio	0.14		0.71		0.71	
Clearance Time (s)	5.0		5.0		5.0	
Vehicle Extension (s)	2.0		1.0		1.0	
Lane Grp Cap (vph)	233		2479		2249	
v/s Ratio Prot	c0.03		0.13			
v/s Ratio Perm					c0.15	
v/c Ratio	0.21		0.19		0.21	
Uniform Delay, d1	20.1		2.6		2.7	
Progression Factor	1.00		1.00		1.00	
Incremental Delay, d2	0.2		0.0		0.0	
Delay (s)	20.3		2.6		2.7	
Level of Service	C		A		A	
Approach Delay (s)	20.3		2.6		2.7	
Approach LOS	C		A		A	

Intersection Summary

HCM Average Control Delay	4.1	HCM Level of Service	A
HCM Volume to Capacity ratio	0.21		
Actuated Cycle Length (s)	53.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	39.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 13: LAFLIN & SR 315

9/26/2005



Movement	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations	↖	↗	↖	↑	↑↑	↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1770	1583	1752	1845	3505	1568
Flt Permitted	0.95	1.00	0.35	1.00	1.00	1.00
Satd. Flow (perm)	1770	1583	647	1845	3505	1568
Volume (vph)	68	90	114	450	521	84
Peak-hour factor, PHF	0.89	0.89	0.93	0.93	0.88	0.88
Adj. Flow (vph)	76	101	123	484	592	95
RTOR Reduction (vph)	0	70	0	0	0	80
Lane Group Flow (vph)	76	31	123	484	592	15
Heavy Vehicles (%)	2%	2%	3%	3%	3%	3%
Turn Type	custom pm+pt				Over	
Protected Phases	8	8	1	6	2	8
Permitted Phases	8	1	6			
Actuated Green, G (s)	8.1	15.3	44.6	44.6	30.4	8.1
Effective Green, g (s)	10.1	20.3	47.6	47.6	33.4	10.1
Actuated g/C Ratio	0.15	0.31	0.72	0.72	0.51	0.15
Clearance Time (s)	6.0	6.0	7.0	7.0	7.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0	5.0	5.0	3.0
Lane Grp Cap (vph)	272	585	640	1337	1782	241
v/s Ratio Prot	c0.04	0.01	0.03	c0.26	0.17	0.01
v/s Ratio Perm		0.01	0.11			
v/c Ratio	0.28	0.05	0.19	0.36	0.33	0.06
Uniform Delay, d1	24.6	15.9	3.1	3.4	9.6	23.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.6	0.0	0.1	0.4	0.2	0.1
Delay (s)	25.1	16.0	3.2	3.7	9.8	23.9
Level of Service	C	B	A	A	A	C
Approach Delay (s)	19.9			3.6	11.7	
Approach LOS	B			A	B	

Intersection Summary

HCM Average Control Delay	9.4	HCM Level of Service	A
HCM Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	65.7	Sum of lost time (s)	8.0
Intersection Capacity Utilization	34.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 17: SR 315 & MOTORWORLD

9/26/2005



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕			↕	↗		↖	↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	1.00
Fr _t	1.00	0.99		1.00	0.99			1.00	0.85		1.00	0.85
Fl _t Protected	0.95	1.00		0.95	1.00			0.96	1.00		0.95	1.00
Satd. Flow (prot)	1770	3517		1770	3509			1819	1615		1787	1599
Fl _t Permitted	0.23	1.00		0.35	1.00			0.73	1.00		0.73	1.00
Satd. Flow (perm)	426	3517		653	3509			1378	1615		1380	1599
Volume (vph)	129	680	29	5	763	46	23	3	9	33	0	167
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.73	0.73	0.73	0.96	0.96	0.96
Adj. Flow (vph)	145	764	33	6	857	52	32	4	12	34	0	174
RTOR Reduction (vph)	0	3	0	0	6	0	0	0	10	0	0	150
Lane Group Flow (vph)	145	794	0	6	903	0	0	36	2	0	34	24
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	0%	0%	0%	1%	1%	1%
Turn Type	pm+pt			pm+pt			Perm		Perm	Perm		Perm
Protected Phases	1	6		5	2			4			8	
Permitted Phases	6			2			4		4	8		8
Actuated Green, G (s)	42.8	36.6		33.0	31.7			6.7	6.7		6.7	6.7
Effective Green, g (s)	46.9	39.6		38.0	34.7			8.7	8.7		8.7	8.7
Actuated g/C Ratio	0.74	0.62		0.60	0.55			0.14	0.14		0.14	0.14
Clearance Time (s)	6.0	7.0		6.0	7.0			6.0	6.0		6.0	6.0
Vehicle Extension (s)	2.0	2.0		2.0	2.0			2.0	2.0		2.0	2.0
Lane Grp Cap (vph)	487	2190		448	1915			189	221		189	219
v/s Ratio Prot	c0.04	0.23		0.00	c0.26							
v/s Ratio Perm	0.18			0.01			c0.03	0.00			0.02	0.01
v/c Ratio	0.30	0.36		0.01	0.47		0.19	0.01			0.18	0.11
Uniform Delay, d ₁	3.5	5.8		5.2	8.8		24.3	23.7			24.3	24.1
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00			1.00	1.00
Incremental Delay, d ₂	0.1	0.0		0.0	0.1		0.2	0.0			0.2	0.1
Delay (s)	3.7	5.9		5.2	8.9		24.5	23.7			24.5	24.1
Level of Service	A	A		A	A		C	C			C	C
Approach Delay (s)		5.5			8.9		24.3				24.2	
Approach LOS		A			A		C				C	

Intersection Summary

HCM Average Control Delay	9.3	HCM Level of Service	A
HCM Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	63.6	Sum of lost time (s)	12.0
Intersection Capacity Utilization	48.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 22: SR 315 & 309 NB RAMPS

9/26/2005

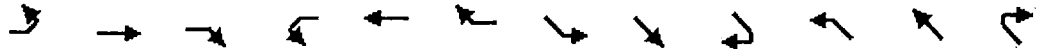


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕	↗		↕			↖	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00			1.00	
Fr _t	1.00	1.00		1.00	1.00	0.85		1.00			1.00	
Fl _t Protected	0.95	1.00		0.95	1.00	1.00		0.95			0.95	
Satd. Flow (prot)	1805	3607		1787	3574	1599		1805			1787	
Fl _t Permitted	0.13	1.00		0.37	1.00	1.00		0.80			0.75	
Satd. Flow (perm)	246	3607		692	3574	1599		1527			1418	
Volume (vph)	641	699	4	3	750	200	3	0	0	139	0	0
Peak-hour factor, PHF	0.94	0.94	0.94	0.89	0.89	0.89	0.50	0.50	0.50	0.95	0.95	0.95
Adj. Flow (vph)	682	744	4	3	843	225	6	0	0	146	0	0
RTOR Reduction (vph)	0	0	0	0	0	153	0	0	0	0	0	0
Lane Group Flow (vph)	682	748	0	3	843	72	0	6	0	0	146	0
Heavy Vehicles (%)	0%	0%	0%	1%	1%	1%	0%	0%	0%	1%	1%	1%
Turn Type	pm+pt			Perm		Perm	Perm			Perm		
Protected Phases	1	6			2		8				4	
Permitted Phases	6			2		2				4		4
Actuated Green, G (s)	62.2	62.2		26.0	26.0	26.0		13.8			13.8	
Effective Green, g (s)	64.2	64.2		28.0	28.0	28.0		15.8			15.8	
Actuated g/C Ratio	0.73	0.73		0.32	0.32	0.32		0.18			0.18	
Clearance Time (s)	4.0	6.0		6.0	6.0	6.0		6.0			6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0			3.0	
Lane Grp Cap (vph)	750	2631		220	1137	509		274			255	
v/s Ratio Prot	c0.33	0.21			0.24							
v/s Ratio Perm	c0.33			0.00		0.04		0.00			c0.10	
v/c Ratio	0.91	0.28		0.01	0.74	0.14		0.02			0.57	
Uniform Delay, d1	20.5	4.1		20.5	26.8	21.4		29.7			33.0	
Progression Factor	0.72	1.29		1.00	1.00	1.00		1.00			1.00	
Incremental Delay, d2	11.6	0.2		0.1	4.4	0.6		0.0			3.1	
Delay (s)	26.5	5.5		20.7	31.1	22.0		29.8			36.1	
Level of Service	C	A		C	C	C		C			D	
Approach Delay (s)		15.5			29.2			29.8			36.1	
Approach LOS		B			C			C			D	

Intersection Summary			
HCM Average Control Delay	22.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	88.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	73.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 24: SR 315 & 309 SB RAMPS

9/26/2005



Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations		↑↑	↑	↑	↑↑		↑	↑				
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0		4.0	4.0				
Lane Util. Factor		0.95	1.00	1.00	0.95		0.95	0.95				
Frt		1.00	0.85	1.00	1.00		1.00	1.00				
Flt Protected		1.00	1.00	0.95	1.00		0.95	0.95				
Satd. Flow (prot)		3574	1599	1787	3574		1649	1649				
Flt Permitted		1.00	1.00	0.08	1.00		0.95	0.95				
Satd. Flow (perm)		3574	1599	158	3574		1649	1649				
Volume (vph)	0	1149	345	260	1185	0	195	0	0	0	0	0
Peak-hour factor, PHF	0.85	0.85	0.85	0.87	0.87	0.87	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	1352	406	299	1362	0	212	0	0	0	0	0
RTOR Reduction (vph)	0	0	205	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	1352	201	299	1362	0	106	106	0	0	0	0
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	4%	4%	4%	2%	2%	2%
Turn Type			Perm	pm+pt			Perm					
Protected Phases		6		5	2			4				
Permitted Phases			6	2			4					
Actuated Green, G (s)		41.5	41.5	67.8	67.8		8.2	8.2				
Effective Green, g (s)		43.5	43.5	69.8	69.8		10.2	10.2				
Actuated g/C Ratio		0.49	0.49	0.79	0.79		0.12	0.12				
Clearance Time (s)		6.0	6.0	4.0	6.0		6.0	6.0				
Vehicle Extension (s)		3.0	3.0	3.0	3.0		2.0	2.0				
Lane Grp Cap (vph)		1767	790	538	2835		191	191				
v/s Ratio Prot		c0.38		c0.14	0.38							
v/s Ratio Perm			0.13	0.30			c0.06	0.06				
v/c Ratio		0.77	0.25	0.56	0.48		0.55	0.55				
Uniform Delay, d1		18.1	12.9	18.6	3.0		36.8	36.8				
Progression Factor		1.00	1.00	1.98	0.57		1.00	1.00				
Incremental Delay, d2		3.2	0.8	1.2	0.6		2.0	2.0				
Delay (s)		21.3	13.6	38.0	2.3		38.7	38.7				
Level of Service		C	B	D	A		D	D				
Approach Delay (s)		19.5			8.7			38.7			0.0	
Approach LOS		B			A			D			A	

Intersection Summary

HCM Average Control Delay	15.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	88.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	61.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
28: OAK & SR 315

9/26/2005

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations	↖	↑	↗		↖	↗	↖	↕	↗	↖	↕	↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00		1.00	1.00	1.00	0.95		1.00	0.95	1.00
Frt	1.00	1.00	0.85		1.00	0.85	1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00		0.96	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1347	1418	1205		1795	1583	1671	3307		1703	3406	1524
Flt Permitted	0.68	1.00	1.00		0.79	1.00	0.13	1.00		0.28	1.00	1.00
Satd. Flow (perm)	960	1418	1205		1473	1583	222	3307		497	3406	1524
Volume (vph)	296	19	222	74	24	42	240	682	52	34	634	254
Peak-hour factor, PHF	0.92	0.92	0.92	0.84	0.84	0.84	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	322	21	241	88	29	50	264	749	57	37	697	279
RTOR Reduction (vph)	0	0	124	0	0	26	0	3	0	0	0	0
Lane Group Flow (vph)	322	21	117	0	117	24	264	803	0	37	697	279
Heavy Vehicles (%)	34%	34%	34%	2%	2%	2%	8%	8%	8%	6%	6%	6%
Turn Type	Perm		Perm	Perm		Perm	pm+pt			pm+pt		Free
Protected Phases		7 8			7 8		1	6		5	2	
Permitted Phases	7 8		7 8	7 8		7 8	6			2		Free
Actuated Green, G (s)	58.4	58.4	58.4		58.4	58.4	53.7	43.3		33.7	29.3	124.1
Effective Green, g (s)	60.4	60.4	60.4		60.4	60.4	55.7	45.3		37.7	31.3	124.1
Actuated g/C Ratio	0.49	0.49	0.49		0.49	0.49	0.45	0.37		0.30	0.25	1.00
Clearance Time (s)							6.0	6.0		6.0	6.0	
Vehicle Extension (s)							3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	467	690	586		717	770	338	1207		213	859	1524
v/s Ratio Prot		0.01					c0.13	0.24		0.01	0.20	
v/s Ratio Perm	c0.34		0.10		0.08	0.02	c0.22			0.04		0.18
v/c Ratio	0.69	0.03	0.20		0.16	0.03	0.78	0.67		0.17	0.81	0.18
Uniform Delay, d1	24.6	16.6	18.1		17.8	16.6	29.7	33.0		30.9	43.6	0.0
Progression Factor	1.00	1.00	1.00		1.00	1.00	1.15	0.84		1.00	1.00	1.00
Incremental Delay, d2	4.2	0.0	0.2		0.1	0.0	10.4	1.3		0.4	5.9	0.3
Delay (s)	28.8	16.6	18.3		17.9	16.6	44.5	29.1		31.3	49.5	0.3
Level of Service	C	B	B		B	B	D	C		C	D	A
Approach Delay (s)		24.0			17.5			32.9			35.3	
Approach LOS		C			B			C			D	

Intersection Summary

HCM Average Control Delay	31.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	124.1	Sum of lost time (s)	8.0
Intersection Capacity Utilization	63.9%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Unsignalized Intersection Capacity Analysis
 3: POCONO DOWNS & SR 315

10/3/2005



Movement	SEL	SET	SEF	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations	↙				↕			↕		↙	↕	
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	4	0	0	3	0	0	0	616	2	0	749	33
Peak Hour Factor	0.69	0.69	0.69	0.50	0.50	0.50	0.96	0.96	0.96	0.92	0.92	0.92
Hourly flow rate (vph)	6	0	0	6	0	0	0	642	2	0	814	36
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		TWLT			TWLT							
Median storage veh		0			0							
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1153	1476	425	1050	1493	322	850			644		
vC1, stage 1 conf vol	832	832		643	643							
vC2, stage 2 conf vol	321	644		407	850							
vCu, unblocked vol	1153	1476	425	1050	1493	322	850			644		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.2			4.2		
tC, 2 stage (s)	6.5	5.5		6.5	5.5							
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	97	100	100	97	100	100	100			100		
cM capacity (veh/h)	196	187	583	231	185	680	778			924		

Direction, Lane #	SE 1	NW 1	NE 1	NE 2	SW 1	SW 2	SW 3
Volume Total	6	6	428	216	0	543	307
Volume Left	6	6	0	0	0	0	0
Volume Right	0	0	0	2	0	0	36
cSH	196	231	1700	1700	1700	1700	1700
Volume to Capacity	0.03	0.03	0.25	0.13	0.00	0.32	0.18
Queue Length 95th (ft)	2	2	0	0	0	0	0
Control Delay (s)	24.0	21.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	C	C					
Approach Delay (s)	24.0	21.0	0.0		0.0		
Approach LOS	C	C					

Intersection Summary	
Average Delay	0.2
Intersection Capacity Utilization	31.8%
ICU Level of Service	A
Analysis Period (min)	15

HCM Unsignalized Intersection Capacity Analysis
 8: SR 315 &

9/26/2005



Movement	EBL	EBR	NEL	NET	SWT	SWR
Lane Configurations		↗	↖	↕	↕	
Sign Control	Yield			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	0	10	22	618	752	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	11	24	672	817	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1201	409	817			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1201	409	817			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	98	97			
cM capacity (veh/h)	172	592	806			

Direction, Lane #	EB 1	NE 1	NE 2	NE 3	SW 1	SW 2
Volume Total	11	24	336	336	409	409
Volume Left	0	24	0	0	0	0
Volume Right	11	0	0	0	0	0
cSH	592	806	1700	1700	1700	1700
Volume to Capacity	0.02	0.03	0.20	0.20	0.24	0.24
Queue Length 95th (ft)	1	2	0	0	0	0
Control Delay (s)	11.2	9.6	0.0	0.0	0.0	0.0
Lane LOS	B	A				
Approach Delay (s)	11.2	0.3			0.0	
Approach LOS	B					

Intersection Summary			
Average Delay		0.2	
Intersection Capacity Utilization	30.8%		ICU Level of Service A
Analysis Period (min)		15	

HCM Unsignalized Intersection Capacity Analysis
 14: EAST MAIN & POCONO DOWNS

9/26/2005



Movement	EBL	EBR	SBL	SBR	NWL	NWR
Lane Configurations		↗	↘		↖	↗
Sign Control	Free		Stop		Free	
Grade	0%		0%		0%	
Volume (veh/h)	0	348	16	0	322	32
Peak Hour Factor	0.96	0.96	0.54	0.54	0.89	0.89
Hourly flow rate (vph)	0	362	30	0	362	36
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			
Median storage (veh)						
Upstream signal (ft)					1239	
pX, platoon unblocked						
vC, conflicting volume	398		742	380		
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	398		742	380		
tC, single (s)	4.1		6.4	6.2		
tC, 2 stage (s)						
tF (s)	2.2		3.5	3.3		
p0 queue free %	100		92	100		
cM capacity (veh/h)	1166		386	672		

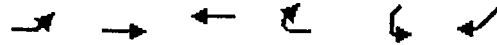
Direction, Lane #	EB 1	SB 1	NW 1
Volume Total	362	30	398
Volume Left	0	30	0
Volume Right	0	0	36
cSH	1700	386	1700
Volume to Capacity	0.21	0.08	0.23
Queue Length 95th (ft)	0	6	0
Control Delay (s)	0.0	15.1	0.0
Lane LOS		C	
Approach Delay (s)	0.0	15.1	0.0
Approach LOS		C	

Intersection Summary

Average Delay		0.6	
Intersection Capacity Utilization		29.8%	ICU Level of Service A
Analysis Period (min)		15	

HCM Unsignalized Intersection Capacity Analysis
 9: EAST MAIN &

9/26/2005



Movement	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations		↕	↑			↗
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	34	348	322	0	0	19
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	37	378	350	0	0	21
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None		
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	350				802	350
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	350				802	350
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	97				100	97
cM capacity (veh/h)	1209				342	693

Direction, Lane #	EB 1	WB 1	SW 1
Volume Total	415	350	21
Volume Left	37	0	0
Volume Right	0	0	21
cSH	1209	1700	693
Volume to Capacity	0.03	0.21	0.03
Queue Length 95th (ft)	2	0	2
Control Delay (s)	1.0	0.0	10.4
Lane LOS	A		B
Approach Delay (s)	1.0	0.0	10.4
Approach LOS			B

Intersection Summary			
Average Delay		0.8	
Intersection Capacity Utilization	43.8%		ICU Level of Service A
Analysis Period (min)		15	

HCM Unsignalized Intersection Capacity Analysis
 20: EAST MAIN & FIRST

9/26/2005



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	48	265	238	61	41	50
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	52	288	259	66	45	54
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	325				684	292
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	325				684	292
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	96				89	93
cM capacity (veh/h)	1235				397	747

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	340	325	99
Volume Left	52	0	45
Volume Right	0	66	54
cSH	1235	1700	534
Volume to Capacity	0.04	0.19	0.19
Queue Length 95th (ft)	3	0	17
Control Delay (s)	1.6	0.0	13.3
Lane LOS	A		B
Approach Delay (s)	1.6	0.0	13.3
Approach LOS			B

Intersection Summary			
Average Delay		2.4	
Intersection Capacity Utilization	48.2%		ICU Level of Service A
Analysis Period (min)		15	

HCM Unsignalized Intersection Capacity Analysis
 19: EAST MAIN & SCOTT

9/26/2005



Movement	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations	↔		↔		↔	
Sign Control	Free		Free		Stop	
Grade	0%		0%		0%	
Volume (veh/h)	214	38	68	220	28	99
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	233	41	74	239	30	108
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			274		640	253
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			274		640	253
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			94		93	86
cM capacity (veh/h)			1289		414	785

Direction, Lane #	EB 1	WB 1	NE 1
Volume Total	274	313	138
Volume Left	0	74	30
Volume Right	41	0	108
cSH	1700	1289	656
Volume to Capacity	0.16	0.06	0.21
Queue Length 95th (ft)	0	5	20
Control Delay (s)	0.0	2.3	11.9
Lane LOS		A	B
Approach Delay (s)	0.0	2.3	11.9
Approach LOS			B

Intersection Summary			
Average Delay		3.3	
Intersection Capacity Utilization	46.6%		ICU Level of Service
Analysis Period (min)		15	A

HCM Signalized Intersection Capacity Analysis
1: EAST MAIN & SR 315

9/26/2005



Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations	↔	↑	↗	↔	↑	↗	↔	↕		↔	↕	↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95		1.00	0.95	1.00
Fr't	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	1863	1583	1787	1881	1599	1770	3482		1787	3574	1599
Flt Permitted	0.55	1.00	1.00	0.70	1.00	1.00	0.44	1.00		0.47	1.00	1.00
Satd. Flow (perm)	1024	1863	1583	1325	1881	1599	829	3482		884	3574	1599
Volume (vph)	94	72	78	90	132	84	104	399	49	35	345	61
Peak-hour factor, PHF	0.89	0.89	0.89	0.86	0.86	0.86	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	106	81	88	105	153	98	116	443	54	39	383	68
RTOR Reduction (vph)	0	0	74	0	0	83	0	10	0	0	0	41
Lane Group Flow (vph)	106	81	14	105	153	15	116	487	0	39	383	27
Heavy Vehicles (%)	2%	2%	2%	1%	1%	1%	2%	2%	2%	1%	1%	1%
Turn Type	pm+pt		Perm	pm+pt		Perm	pm+pt			pm+pt		Perm
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases	8		8	4		4	6			2		2
Actuated Green, G (s)	14.4	8.7	8.7	14.4	8.7	8.7	36.9	31.1		29.9	27.6	27.6
Effective Green, g (s)	20.4	11.7	11.7	20.4	11.7	11.7	42.9	34.1		35.9	30.6	30.6
Actuated g/C Ratio	0.27	0.15	0.15	0.27	0.15	0.15	0.57	0.45		0.47	0.40	0.40
Clearance Time (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0		7.0	7.0	7.0
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0	1.0	1.0		1.0	1.0	1.0
Lane Grp Cap (vph)	361	288	244	410	290	247	578	1566		482	1443	646
v/s Ratio Prot	c0.03	0.04		0.03	c0.08		c0.02	c0.14		0.01	0.11	
v/s Ratio Perm	0.05		0.01	0.04		0.01	0.09			0.03		0.02
v/c Ratio	0.29	0.28	0.06	0.26	0.53	0.06	0.20	0.31		0.08	0.27	0.04
Uniform Delay, d1	21.6	28.3	27.3	21.5	29.5	27.4	7.8	13.3		10.7	15.1	13.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.2	0.2	0.0	0.1	0.8	0.0	0.1	0.0		0.0	0.0	0.0
Delay (s)	21.7	28.5	27.4	21.6	30.3	27.4	7.9	13.4		10.8	15.1	13.7
Level of Service	C	C	C	C	C	C	A	B		B	B	B
Approach Delay (s)		25.5			26.9			12.3			14.6	
Approach LOS		C			C			B			B	

Intersection Summary

HCM Average Control Delay	18.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	75.8	Sum of lost time (s)	16.0
Intersection Capacity Utilization	41.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 2: LAIRD & SR 315

9/26/2005



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕		↗	↕		↖	↕		↖	↕	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00		0.95	0.95		1.00	0.95		1.00	0.95	
Frt		0.91		1.00	0.93		1.00	0.91		1.00	1.00	
Flt Protected		0.99		0.95	0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1673		1681	1606		1770	3203		1770	3531	
Flt Permitted		0.21		0.70	0.80		0.31	1.00		0.65	1.00	
Satd. Flow (perm)		351		1233	1321		579	3203		1202	3531	
Volume (vph)	15	8	52	28	1	11	76	53	91	76	593	10
Peak-hour factor, PHF	0.81	0.81	0.81	0.64	0.64	0.64	0.85	0.85	0.85	0.88	0.88	0.88
Adj. Flow (vph)	19	10	64	44	2	17	89	62	107	86	674	11
RTOR Reduction (vph)	0	55	0	0	16	0	0	55	0	0	1	0
Lane Group Flow (vph)	0	38	0	27	20	0	89	114	0	86	684	0
Turn Type	Perm		Perm			pm+pt		pm+pt				
Protected Phases		3			4		1	6			5	2
Permitted Phases	3			4			6	6		2		
Actuated Green, G (s)		9.6		4.3	4.3		42.3	36.6		39.5	35.2	
Effective Green, g (s)		11.6		6.3	6.3		50.3	40.6		47.5	39.2	
Actuated g/C Ratio		0.14		0.08	0.08		0.61	0.49		0.57	0.47	
Clearance Time (s)		6.0		6.0	6.0		8.0	8.0		8.0	8.0	
Vehicle Extension (s)		2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)		49		94	101		491	1571		746	1672	
v/s Ratio Prot							c0.02	0.04		0.01	c0.19	
v/s Ratio Perm		c0.11		c0.02	0.02		0.09			0.05		
v/c Ratio		0.77		0.29	0.20		0.18	0.07		0.12	0.41	
Uniform Delay, d1		34.3		36.1	35.9		7.2	11.2		7.9	14.2	
Progression Factor		1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		49.3		0.6	0.4		0.1	0.0		0.0	0.1	
Delay (s)		83.7		36.7	36.2		7.3	11.2		7.9	14.3	
Level of Service		F		D	D		A	B		A	B	
Approach Delay (s)		83.7			36.5			9.8			13.6	
Approach LOS		F			D			A			B	

Intersection Summary			
HCM Average Control Delay	19.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	82.8	Sum of lost time (s)	16.0
Intersection Capacity Utilization	42.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Unsignalized Intersection Capacity Analysis
 14: EAST MAIN & POCONO DOWNS

9/26/2005



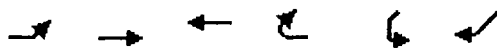
Movement	EBL	EBR	SBL	SBR	NWL	NWR
Lane Configurations		↗	↖		↘	↙
Sign Control	Free		Stop		Free	
Grade	0%		0%		0%	
Volume (veh/h)	0	233	11	0	225	72
Peak Hour Factor	0.96	0.96	0.54	0.54	0.89	0.89
Hourly flow rate (vph)	0	243	20	0	253	81
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			
Median storage (veh)						
Upstream signal (ft)					1239	
pX, platoon unblocked						
vC, conflicting volume	334		536	293		
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	334		536	293		
tC, single (s)	4.1		6.4	6.2		
tC, 2 stage (s)						
tF (s)	2.2		3.5	3.3		
p0 queue free %	100		96	100		
cM capacity (veh/h)	1231		509	751		

Direction, Lane #	EB 1	SB 1	NW 1
Volume Total	243	20	334
Volume Left	0	20	0
Volume Right	0	0	81
cSH	1700	509	1700
Volume to Capacity	0.14	0.04	0.20
Queue Length 95th (ft)	0	3	0
Control Delay (s)	0.0	12.4	0.0
Lane LOS		B	
Approach Delay (s)	0.0	12.4	0.0
Approach LOS		B	

Intersection Summary			
Average Delay		0.4	
Intersection Capacity Utilization	26.9%		ICU Level of Service A
Analysis Period (min)		15	

HCM Unsignalized Intersection Capacity Analysis
 8: EAST MAIN &

9/26/2005



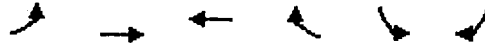
Movement	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations		↕	↑			↗
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	68	233	225	0	0	22
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	74	253	245	0	0	24
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None		
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	245				646	245
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	245				646	245
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	94				100	97
cM capacity (veh/h)	1322				412	794

Direction, Lane #	EB 1	WB 1	SW 1
Volume Total	327	245	24
Volume Left	74	0	0
Volume Right	0	0	24
cSH	1322	1700	794
Volume to Capacity	0.06	0.14	0.03
Queue Length 95th (ft)	4	0	2
Control Delay (s)	2.2	0.0	9.7
Lane LOS	A		A
Approach Delay (s)	2.2	0.0	9.7
Approach LOS			A

Intersection Summary			
Average Delay		1.6	
Intersection Capacity Utilization	34.5%		ICU Level of Service A
Analysis Period (min)		15	

HCM Unsignalized Intersection Capacity Analysis
 20: EAST MAIN & FIRST

9/26/2005



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	81	242	198	36	56	53
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	88	263	215	39	61	58
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	254				674	235
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	254				674	235
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	93				84	93
cM capacity (veh/h)	1311				392	804

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	351	254	118
Volume Left	88	0	61
Volume Right	0	39	58
cSH	1311	1700	522
Volume to Capacity	0.07	0.15	0.23
Queue Length 95th (ft)	5	0	22
Control Delay (s)	2.5	0.0	13.9
Lane LOS	A		B
Approach Delay (s)	2.5	0.0	13.9
Approach LOS			B

Intersection Summary			
Average Delay		3.5	
Intersection Capacity Utilization		46.2%	ICU Level of Service
Analysis Period (min)		15	A

HCM Signalized Intersection Capacity Analysis
 4: SUNSHINE MARKET & SR 315

9/26/2005



Movement	SBL	SBR	NEL	NET	SWT	SWR
Lane Configurations	↶	↷	↶	↷	↶↷	↶↷
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1805	1615	1787	1881	3539	1583
Flt Permitted	0.95	1.00	0.40	1.00	1.00	1.00
Satd. Flow (perm)	1805	1615	745	1881	3539	1583
Volume (vph)	42	76	88	445	448	34
Peak-hour factor, PHF	0.76	0.76	0.90	0.90	0.89	0.89
Adj. Flow (vph)	55	100	98	494	503	38
RTOR Reduction (vph)	0	63	0	0	0	0
Lane Group Flow (vph)	55	37	98	494	503	38
Heavy Vehicles (%)	0%	0%	1%	1%	2%	2%
Turn Type		pt+ov	pm+pt			Free
Protected Phases	8	1 8	1	6	2	
Permitted Phases			6			Free
Actuated Green, G (s)	7.0	19.3	40.6	40.6	27.3	60.6
Effective Green, g (s)	9.0	22.3	43.6	43.6	30.3	60.6
Actuated g/C Ratio	0.15	0.37	0.72	0.72	0.50	1.00
Clearance Time (s)	6.0		7.0	7.0	7.0	
Vehicle Extension (s)	3.0		3.0	5.0	5.0	
Lane Grp Cap (vph)	268	594	696	1353	1770	1583
v/s Ratio Prot	c0.03	0.02	0.02	c0.26	0.14	
v/s Ratio Perm			0.08			0.02
v/c Ratio	0.21	0.06	0.14	0.37	0.28	0.02
Uniform Delay, d1	22.7	12.4	2.8	3.2	8.8	0.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.4	0.0	0.1	0.4	0.2	0.0
Delay (s)	23.0	12.4	2.9	3.6	9.0	0.0
Level of Service	C	B	A	A	A	A
Approach Delay (s)	16.2			3.5	8.4	
Approach LOS	B			A	A	

Intersection Summary

HCM Average Control Delay	7.1	HCM Level of Service	A
HCM Volume to Capacity ratio	0.34		
Actuated Cycle Length (s)	60.6	Sum of lost time (s)	8.0
Intersection Capacity Utilization	33.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 10: OLD BOSTON & SR 315

9/26/2005



Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations	Y		↑↑		↙↘	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0		4.0	
Lane Util. Factor	1.00		0.95		0.95	
Frt	0.94		0.99		1.00	
Flt Protected	0.97		1.00		1.00	
Satd. Flow (prot)	1650		3527		3602	
Flt Permitted	0.97		1.00		0.93	
Satd. Flow (perm)	1650		3527		3357	
Volume (vph)	43	39	374	36	22	483
Peak-hour factor, PHF	0.74	0.74	0.93	0.93	0.85	0.85
Adj. Flow (vph)	58	53	402	39	26	568
RTOR Reduction (vph)	43	0	8	0	0	0
Lane Group Flow (vph)	68	0	433	0	0	594
Heavy Vehicles (%)	5%	5%	1%	1%	0%	0%
Turn Type	pm+pt					
Protected Phases	4	6		5	2	
Permitted Phases				2	2	
Actuated Green, G (s)	7.8		30.9		30.9	
Effective Green, g (s)	8.8		31.9		31.9	
Actuated g/C Ratio	0.18		0.66		0.66	
Clearance Time (s)	5.0		5.0		5.0	
Vehicle Extension (s)	2.0		1.0		1.0	
Lane Grp Cap (vph)	298		2310		2199	
v/s Ratio Prot	c0.04		0.12			
v/s Ratio Perm					c0.18	
v/c Ratio	0.23		0.19		0.27	
Uniform Delay, d1	17.0		3.3		3.5	
Progression Factor	1.00		1.00		1.00	
Incremental Delay, d2	0.1		0.0		0.0	
Delay (s)	17.2		3.3		3.5	
Level of Service	B		A		A	
Approach Delay (s)	17.2		3.3		3.5	
Approach LOS	B		A		A	

Intersection Summary

HCM Average Control Delay	4.8	HCM Level of Service	A
HCM Volume to Capacity ratio	0.26		
Actuated Cycle Length (s)	48.7	Sum of lost time (s)	8.0
Intersection Capacity Utilization	40.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 13: LAFLIN & SR 315

9/26/2005



Movement	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations	↙	↗	↙	↑	↑↑	↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1787	1599	1787	1881	3574	1599
Flt Permitted	0.95	1.00	0.34	1.00	1.00	1.00
Satd. Flow (perm)	1787	1599	635	1881	3574	1599
Volume (vph)	99	146	95	422	500	129
Peak-hour factor, PHF	0.70	0.70	0.87	0.87	0.88	0.88
Adj. Flow (vph)	141	209	109	485	568	147
RTOR Reduction (vph)	0	135	0	0	0	118
Lane Group Flow (vph)	141	74	109	485	568	29
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%
Turn Type	custom		pm+pt		Over	
Protected Phases	8	8	1	6	2	8
Permitted Phases	8	1	6			
Actuated Green, G (s)	8.8	14.4	32.7	32.7	20.1	8.8
Effective Green, g (s)	10.8	19.4	35.7	35.7	23.1	10.8
Actuated g/C Ratio	0.20	0.36	0.66	0.66	0.42	0.20
Clearance Time (s)	6.0	6.0	7.0	7.0	7.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0	5.0	5.0	3.0
Lane Grp Cap (vph)	354	687	598	1232	1515	317
v/s Ratio Prot	c0.08	0.02	0.03	c0.26	0.16	0.02
v/s Ratio Perm		0.03	0.09			
v/c Ratio	0.40	0.11	0.18	0.39	0.37	0.09
Uniform Delay, d1	19.0	11.8	3.9	4.4	10.8	17.8
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.7	0.1	0.1	0.4	0.3	0.1
Delay (s)	19.8	11.8	4.0	4.8	11.1	18.0
Level of Service	B	B	A	A	B	B
Approach Delay (s)	15.0			4.7	12.5	
Approach LOS	B			A	B	

Intersection Summary

HCM Average Control Delay	10.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	54.5	Sum of lost time (s)	8.0
Intersection Capacity Utilization	34.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
17: SR 315 & MOTORWORLD

9/26/2005



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕			↖	↗		↖	↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	1.00
Frt	1.00	0.99		1.00	1.00			1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.95	1.00		0.95	1.00
Satd. Flow (prot)	1787	3556		1787	3565			1760	1568		1805	1615
Flt Permitted	0.34	1.00		0.30	1.00			0.71	1.00		0.74	1.00
Satd. Flow (perm)	637	3556		558	3565			1304	1568		1400	1615
Volume (vph)	22	658	23	6	656	11	25	1	11	34	0	147
Peak-hour factor, PHF	0.85	0.85	0.85	0.93	0.93	0.93	0.83	0.83	0.83	0.62	0.62	0.62
Adj. Flow (vph)	26	774	27	6	705	12	30	1	13	55	0	237
RTOR Reduction (vph)	0	3	0	0	2	0	0	0	10	0	0	191
Lane Group Flow (vph)	26	798	0	6	715	0	0	31	3	0	55	46
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	3%	3%	3%	0%	0%	0%
Turn Type	pm+pt			pm+pt			Perm		Perm	Perm		Perm
Protected Phases	1	6		5	2			4		8		
Permitted Phases	6			2			4		4		8	8
Actuated Green, G (s)	20.5	19.5		20.5	19.5			7.1	7.1		7.1	7.1
Effective Green, g (s)	25.5	22.5		25.5	22.5			9.1	9.1		9.1	9.1
Actuated g/C Ratio	0.55	0.48		0.55	0.48			0.20	0.20		0.20	0.20
Clearance Time (s)	6.0	7.0		6.0	7.0			6.0	6.0		6.0	6.0
Vehicle Extension (s)	2.0	2.0		2.0	2.0			2.0	2.0		2.0	2.0
Lane Grp Cap (vph)	423	1717		384	1721			255	306		273	315
v/s Ratio Prot	c0.00	c0.22		0.00	0.20							
v/s Ratio Perm	0.03			0.01				0.02	0.00		c0.04	0.03
v/c Ratio	0.06	0.47		0.02	0.42			0.12	0.01		0.20	0.15
Uniform Delay, d1	4.9	8.0		4.9	7.8			15.5	15.1		15.7	15.5
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	1.00
Incremental Delay, d2	0.0	0.1		0.0	0.1			0.1	0.0		0.1	0.1
Delay (s)	4.9	8.1		4.9	7.9			15.5	15.1		15.8	15.6
Level of Service	A	A		A	A			B	B		B	B
Approach Delay (s)		8.0			7.8			15.4			15.7	
Approach LOS		A			A			B			B	

Intersection Summary

HCM Average Control Delay	9.3	HCM Level of Service	A
HCM Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	46.6	Sum of lost time (s)	12.0
Intersection Capacity Utilization	43.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 22: SR 315 & 309 NB RAMPS

9/26/2005



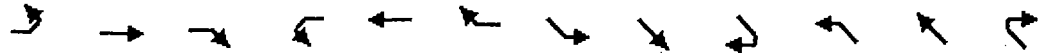
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↕		↘	↕	↗		↕			↕	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0					4.0	
Lane Util. Factor	1.00	0.95			0.95	1.00					1.00	
Frt	1.00	1.00			1.00	0.85					1.00	
Flt Protected	0.95	1.00			1.00	1.00					0.95	
Satd. Flow (prot)	1787	3574			3610	1615					1787	
Flt Permitted	0.22	1.00			1.00	1.00					0.76	
Satd. Flow (perm)	406	3574			3610	1615					1424	
Volume (vph)	642	618	0	0	631	197	0	0	0	85	0	0
Peak-hour factor, PHF	0.98	0.98	0.98	0.84	0.84	0.84	0.50	0.50	0.50	0.92	0.92	0.92
Adj. Flow (vph)	655	631	0	0	751	235	0	0	0	92	0	0
RTOR Reduction (vph)	0	0	0	0	0	146	0	0	0	0	0	0
Lane Group Flow (vph)	655	631	0	0	751	89	0	0	0	0	92	0
Heavy Vehicles (%)	1%	1%	1%	0%	0%	0%	0%	0%	0%	1%	1%	1%
Turn Type	pm+pt			Perm	Perm	Perm				Perm		
Protected Phases	1	6			2			8				4
Permitted Phases	6			2		2	8			4		
Actuated Green, G (s)	66.5	66.5			31.4	31.4						9.5
Effective Green, g (s)	68.5	68.5			33.4	33.4						11.5
Actuated g/C Ratio	0.78	0.78			0.38	0.38						0.13
Clearance Time (s)	4.0	6.0			6.0	6.0						6.0
Vehicle Extension (s)	3.0	3.0			3.0	3.0						3.0
Lane Grp Cap (vph)	804	2782			1370	613						186
v/s Ratio Prot	c0.29	0.18			0.21							
v/s Ratio Perm	c0.35					0.06						c0.06
v/c Ratio	0.81	0.23			0.55	0.15						0.49
Uniform Delay, d1	14.1	2.6			21.4	17.9						35.5
Progression Factor	0.98	2.38			1.00	1.00						1.00
Incremental Delay, d2	5.6	0.2			1.6	0.5						2.1
Delay (s)	19.5	6.4			23.0	18.4						37.6
Level of Service	B	A			C	B						D
Approach Delay (s)		13.1			21.9			0.0				37.6
Approach LOS		B			C			A				D

Intersection Summary

HCM Average Control Delay	17.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	88.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	67.7%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 24: SR 315 & 309 SB RAMPS

9/26/2005



Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations		↑↑	↗	↘	↑↑		↘	↗				
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0		4.0	4.0				
Lane Util. Factor		0.95	1.00	1.00	0.95		0.95	0.95				
Frt		1.00	0.85	1.00	1.00		1.00	1.00				
Flt Protected		1.00	1.00	0.95	1.00		0.95	0.95				
Satd. Flow (prot)		3610	1615	1787	3574		1715	1715				
Flt Permitted		1.00	1.00	0.16	1.00		0.95	0.95				
Satd. Flow (perm)		3610	1615	294	3574		1715	1715				
Volume (vph)	0	1140	473	225	911	0	120	0	0	0	0	0
Peak-hour factor, PHF	0.96	0.96	0.96	0.93	0.93	0.93	0.89	0.89	0.89	0.92	0.92	0.92
Adj. Flow (vph)	0	1188	493	242	980	0	135	0	0	0	0	0
RTOR Reduction (vph)	0	0	202	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	1188	291	242	980	0	68	67	0	0	0	0
Heavy Vehicles (%)	0%	0%	0%	1%	1%	1%	0%	0%	0%	0%	0%	0%
Turn Type			Perm	pm+pt			Perm					
Protected Phases		6		5	2			4				
Permitted Phases			6	2			4					
Actuated Green, G (s)		50.0	50.0	69.5	69.5		6.5	6.5				
Effective Green, g (s)		52.0	52.0	71.5	71.5		8.5	8.5				
Actuated g/C Ratio		0.59	0.59	0.81	0.81		0.10	0.10				
Clearance Time (s)		6.0	6.0	4.0	6.0		6.0	6.0				
Vehicle Extension (s)		3.0	3.0	3.0	3.0		2.0	2.0				
Lane Grp Cap (vph)		2133	954	502	2904		166	166				
v/s Ratio Prot		c0.33		c0.08	0.27							
v/s Ratio Perm			0.18	0.31			c0.04	0.04				
v/c Ratio		0.56	0.31	0.48	0.34		0.41	0.40				
Uniform Delay, d1		11.0	9.0	6.3	2.1		37.4	37.4				
Progression Factor		1.00	1.00	2.39	0.39		1.00	1.00				
Incremental Delay, d2		1.1	0.8	0.7	0.3		0.6	0.6				
Delay (s)		12.0	9.8	15.9	1.1		38.0	38.0				
Level of Service		B	A	B	A		D	D				
Approach Delay (s)		11.4			4.0			38.0			0.0	
Approach LOS		B			A			D			A	

Intersection Summary

HCM Average Control Delay	9.6	HCM Level of Service	A
HCM Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	88.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	57.3%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis

28: OAK & SR 315

9/26/2005



Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations	↔	↑	↗		↖	↗	↔	↕		↖	↕	↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00		1.00	1.00	1.00	0.95		1.00	0.95	1.00
Frt	1.00	1.00	0.85		1.00	0.85	1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00		0.96	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1530	1610	1369		1811	1599	1752	3471		1736	3471	1553
Flt Permitted	0.71	1.00	1.00		0.80	1.00	0.20	1.00		0.44	1.00	1.00
Satd. Flow (perm)	1142	1610	1369		1510	1599	375	3471		799	3471	1553
Volume (vph)	205	19	181	52	15	25	247	481	33	10	562	264
Peak-hour factor, PHF	0.63	0.63	0.63	0.91	0.91	0.91	0.90	0.90	0.90	0.91	0.91	0.91
Adj. Flow (vph)	325	30	287	57	16	27	274	534	37	11	618	290
RTOR Reduction (vph)	0	0	159	0	0	15	0	3	0	0	0	0
Lane Group Flow (vph)	325	30	128	0	73	12	274	568	0	11	618	290
Heavy Vehicles (%)	18%	18%	18%	1%	1%	1%	3%	3%	3%	4%	4%	4%
Turn Type	Perm		Perm	Perm		Perm	pm+pt			pm+pt		Free
Protected Phases		7 8			7 8		1	6		5	2	
Permitted Phases	7 8		7 8	7 8		7 8	6			2		Free
Actuated Green, G (s)	47.3	47.3	47.3		47.3	47.3	50.9	43.9		29.3	28.3	110.2
Effective Green, g (s)	49.3	49.3	49.3		49.3	49.3	52.9	45.9		33.3	30.3	110.2
Actuated g/C Ratio	0.45	0.45	0.45		0.45	0.45	0.48	0.42		0.30	0.27	1.00
Clearance Time (s)							6.0	6.0		6.0	6.0	
Vehicle Extension (s)							3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	511	720	612		676	715	412	1446		267	954	1553
v/s Ratio Prot		0.02					c0.11	0.16		0.00	0.18	
v/s Ratio Perm	c0.28		0.09		0.05	0.01	c0.21			0.01		0.19
v/c Ratio	0.64	0.04	0.21		0.11	0.02	0.67	0.39		0.04	0.65	0.19
Uniform Delay, d1	23.5	17.1	18.6		17.7	17.0	19.8	22.4		27.0	35.2	0.0
Progression Factor	1.00	1.00	1.00		1.00	1.00	0.99	0.90		1.00	1.00	1.00
Incremental Delay, d2	2.6	0.0	0.2		0.1	0.0	3.8	0.2		0.1	1.5	0.3
Delay (s)	26.1	17.2	18.7		17.8	17.0	23.4	20.5		27.1	36.8	0.3
Level of Service	C	B	B		B	B	C	C		C	D	A
Approach Delay (s)		22.4			17.5			21.4			25.1	
Approach LOS		C			B			C			C	

Intersection Summary

HCM Average Control Delay	22.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	110.2	Sum of lost time (s)	8.0
Intersection Capacity Utilization	57.2%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Unsignalized Intersection Capacity Analysis
 3: POCONO DOWNS & SR 315

10/3/2005



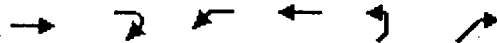
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations	↙				↕			↕		↙	↕	
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	13	0	0	0	0	1	0	519	1	1	430	93
Peak Hour Factor	0.68	0.68	0.68	0.25	0.25	0.25	0.93	0.93	0.93	0.83	0.83	0.83
Hourly flow rate (vph)	19	0	0	0	0	4	0	558	1	1	518	112
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		TWLTL			TWLTL							
Median storage (veh)		0			0							
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	860	1136	315	820	1191	280	630			559		
vC1, stage 1 conf vol	577	577		559	559							
vC2, stage 2 conf vol	283	559		261	633							
vCu, unblocked vol	860	1136	315	820	1191	280	630			559		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)	6.5	5.5		6.5	5.5							
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	93	100	100	100	100	99	100			100		
cM capacity (veh/h)	272	242	687	283	232	724	955			1015		

Direction, Lane #	SE 1	NW 1	NE 1	NE 2	SW 1	SW 2	SW 3
Volume Total	19	4	372	187	1	345	285
Volume Left	19	0	0	0	1	0	0
Volume Right	0	4	0	1	0	0	112
cSH	272	724	1700	1700	1015	1700	1700
Volume to Capacity	0.07	0.01	0.22	0.11	0.00	0.20	0.17
Queue Length 95th (ft)	6	0	0	0	0	0	0
Control Delay (s)	19.2	10.0	0.0	0.0	8.6	0.0	0.0
Lane LOS	C	B			A		
Approach Delay (s)	19.2	10.0	0.0		0.0		
Approach LOS	C	B					

Intersection Summary			
Average Delay		0.3	
Intersection Capacity Utilization	28.9%		ICU Level of Service A
Analysis Period (min)		15	

HCM Unsignalized Intersection Capacity Analysis
 19: EAST MAIN & SCOTT

9/26/2005



Movement	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations	↑			↑		↑
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	178	24	99	152	20	145
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	193	26	108	165	22	158
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			220		587	207
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			220		587	207
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			92		95	81
cM capacity (veh/h)			1350		434	834

Direction, Lane #	EB 1	WB 1	NE 1
Volume Total	220	273	179
Volume Left	0	108	22
Volume Right	26	0	158
cSH	1700	1350	750
Volume to Capacity	0.13	0.08	0.24
Queue Length 95th (ft)	0	6	23
Control Delay (s)	0.0	3.5	11.3
Lane LOS		A	B
Approach Delay (s)	0.0	3.5	11.3
Approach LOS			B

Intersection Summary			
Average Delay		4.5	
Intersection Capacity Utilization		44.4%	ICU Level of Service
Analysis Period (min)		15	A

2007 (ETC) BUILD CONDITIONS

HCM Signalized Intersection Capacity Analysis

28: OAK & SR 315

10/14/2005

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations	↘	↑	↗		↖	↗	↘	↕		↘	↕	↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00		1.00	1.00	1.00	0.95		1.00	0.95	1.00
Frt	1.00	1.00	0.85		1.00	0.85	1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00		0.96	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1433	1508	1282		1792	1583	1641	3268		1687	3374	1509
Flt Permitted	0.59	1.00	1.00		0.75	1.00	0.11	1.00		0.13	1.00	1.00
Satd. Flow (perm)	893	1508	1282		1394	1583	191	3268		228	3374	1509
Volume (vph)	265	29	209	137	38	57	312	863	25	46	793	97
Peak-hour factor, PHF	0.68	0.68	0.68	0.92	0.92	0.92	0.82	0.82	0.82	0.97	0.97	0.97
Adj. Flow (vph)	390	43	307	149	41	62	380	1052	30	47	818	100
RTOR Reduction (vph)	0	0	174	0	0	35	0	2	0	0	0	0
Lane Group Flow (vph)	390	43	133	0	190	27	380	1080	0	47	818	100
Heavy Vehicles (%)	26%	26%	26%	2%	2%	2%	10%	10%	10%	7%	7%	7%
Turn Type	Perm		Perm	Perm		Perm	pm+pt			pm+pt		Free
Protected Phases		7 8			7 8		1	6		5	2	
Permitted Phases	7 8		7 8	7 8		7 8	6			2		Free
Actuated Green, G (s)	46.0	46.0	46.0		46.0	46.0	53.1	41.1		36.1	30.1	111.1
Effective Green, g (s)	48.0	48.0	48.0		48.0	48.0	55.1	43.1		40.1	32.1	111.1
Actuated g/C Ratio	0.43	0.43	0.43		0.43	0.43	0.50	0.39		0.36	0.29	1.00
Clearance Time (s)							6.0	6.0		6.0	6.0	
Vehicle Extension (s)							3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	386	652	554		602	684	343	1268		187	975	1509
v/s Ratio Prot		0.03					c0.19	0.33		0.02	0.24	
v/s Ratio Perm	c0.44		0.24		0.14	0.04	c0.36			0.07		0.07
v/c Ratio	1.01	0.07	0.24		0.32	0.04	1.11	0.85		0.25	0.84	0.07
Uniform Delay, d1	31.5	18.4	20.0		20.7	18.2	33.2	31.1		24.7	37.1	0.0
Progression Factor	1.00	1.00	1.00		1.00	1.00	1.11	0.91		1.00	1.00	1.00
Incremental Delay, d2	48.4	0.0	0.2		0.3	0.0	77.8	5.0		0.7	6.4	0.1
Delay (s)	80.0	18.5	20.2		21.1	18.3	114.7	33.2		25.4	43.5	0.1
Level of Service	E	B	C		C	B	F	C		C	D	A
Approach Delay (s)		51.6			20.4			54.4			38.1	
Approach LOS		D			C			D			D	

Intersection Summary			
HCM Average Control Delay	46.7	HCM Level of Service	D
HCM Volume to Capacity ratio	1.05		
Actuated Cycle Length (s)	111.1	Sum of lost time (s)	8.0
Intersection Capacity Utilization	70.6%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 10: OLD BOSTON & SR 315

10/14/2005

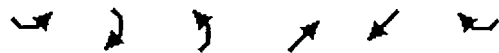


Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations	↘		↕			↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0			4.0
Lane Util. Factor	1.00		0.95			0.95
Frt	0.93		0.99			1.00
Flt Protected	0.98		1.00			1.00
Satd. Flow (prot)	1643		3413			3532
Flt Permitted	0.98		1.00			0.91
Satd. Flow (perm)	1643		3413			3206
Volume (vph)	51	56	686	36	31	704
Peak-hour factor, PHF	0.61	0.61	0.89	0.89	0.91	0.91
Adj. Flow (vph)	84	92	771	40	34	774
RTOR Reduction (vph)	65	0	5	0	0	0
Lane Group Flow (vph)	111	0	806	0	0	808
Heavy Vehicles (%)	5%	5%	5%	5%	2%	2%
Turn Type					pm+pt	
Protected Phases	4		6		5	2
Permitted Phases					2	2
Actuated Green, G (s)	7.4		19.4			19.4
Effective Green, g (s)	8.4		20.4			20.4
Actuated g/C Ratio	0.23		0.55			0.55
Clearance Time (s)	5.0		5.0			5.0
Vehicle Extension (s)	2.0		1.0			1.0
Lane Grp Cap (vph)	375		1892			1777
v/s Ratio Prot	c0.11		0.24			
v/s Ratio Perm						c0.25
v/c Ratio	0.30		0.43			0.45
Uniform Delay, d1	11.8		4.8			4.9
Progression Factor	1.00		1.00			1.00
Incremental Delay, d2	0.2		0.1			0.1
Delay (s)	11.9		4.8			5.0
Level of Service	B		A			A
Approach Delay (s)	11.9		4.8			5.0
Approach LOS	B		A			A

Intersection Summary			
HCM Average Control Delay		5.6	HCM Level of Service A
HCM Volume to Capacity ratio		0.46	
Actuated Cycle Length (s)		36.8	Sum of lost time (s) 8.0
Intersection Capacity Utilization	55.2%		ICU Level of Service B
Analysis Period (min)		15	
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 13: LAFLIN & SR 315

10/14/2005



Movement	SEL	SER	NEL	NET	SWT	SWF
Lane Configurations	↖	↗	↖	↑	↑↑	↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	1.00
Fr _t	1.00	0.85	1.00	1.00	1.00	0.85
Fl _t Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1770	1583	1752	1845	3471	1553
Fl _t Permitted	0.95	1.00	0.28	1.00	1.00	1.00
Satd. Flow (perm)	1770	1583	522	1845	3471	1553
Volume (vph)	57	81	115	814	737	100
Peak-hour factor, PHF	0.89	0.89	0.91	0.91	0.95	0.95
Adj. Flow (vph)	64	91	126	895	776	105
RTOR Reduction (vph)	0	66	0	0	0	91
Lane Group Flow (vph)	64	25	126	895	776	14
Heavy Vehicles (%)	2%	2%	3%	3%	4%	4%
Turn Type	custom		pm+pt			Over
Protected Phases	8	8	1	6	2	8
Permitted Phases	8	1	6			
Actuated Green, G (s)	7.7	14.7	51.6	51.6	37.6	7.7
Effective Green, g (s)	9.7	19.7	54.6	54.6	40.6	9.7
Actuated g/C Ratio	0.13	0.27	0.76	0.76	0.56	0.13
Clearance Time (s)	6.0	6.0	7.0	7.0	7.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0	5.0	5.0	3.0
Lane Grp Cap (vph)	237	519	564	1393	1949	208
v/s Ratio Prot	0.04	0.02	0.03	c0.49	0.22	c0.07
v/s Ratio Perm		0.03	0.14			
v/c Ratio	0.27	0.05	0.22	0.64	0.40	0.07
Uniform Delay, d ₁	28.1	19.4	3.1	4.2	9.0	27.3
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d ₂	0.6	0.0	0.2	1.4	0.3	0.1
Delay (s)	28.7	19.4	3.3	5.6	9.2	27.5
Level of Service	C	B	A	A	A	C
Approach Delay (s)	23.3			5.3	11.4	
Approach LOS	C			A	B	

Intersection Summary

HCM Average Control Delay	9.3	HCM Level of Service	A
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	72.3	Sum of lost time (s)	8.0
Intersection Capacity Utilization	52.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 4: SUNSHINE MARKET & SR 315

10/14/2005



Movement	SBL	SBR	NEL	NET	SWT	SWR
Lane Configurations	↙	↘	↙	↑	↑↑	↘
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1805	1615	1770	1863	3471	1553
Flt Permitted	0.95	1.00	0.28	1.00	1.00	1.00
Satd. Flow (perm)	1805	1615	514	1863	3471	1553
Volume (vph)	82	95	102	635	726	72
Peak-hour factor, PHF	0.93	0.93	0.82	0.82	0.92	0.92
Adj. Flow (vph)	88	102	124	774	789	78
RTOR Reduction (vph)	0	68	0	0	0	0
Lane Group Flow (vph)	88	34	124	774	789	78
Heavy Vehicles (%)	0%	0%	2%	2%	4%	4%
Turn Type		pt+ov	pm+pt			Free
Protected Phases	8	1 8	1	6	2	
Permitted Phases			6			Free
Actuated Green, G (s)	8.6	21.1	50.5	50.5	37.0	72.1
Effective Green, g (s)	10.6	24.1	53.5	53.5	40.0	72.1
Actuated g/C Ratio	0.15	0.33	0.74	0.74	0.55	1.00
Clearance Time (s)	6.0		7.0	7.0	7.0	
Vehicle Extension (s)	3.0		3.0	5.0	5.0	
Lane Grp Cap (vph)	265	540	547	1382	1926	1553
v/s Ratio Prot	c0.05	0.06	0.03	c0.42	0.23	
v/s Ratio Perm			0.14			0.05
v/c Ratio	0.33	0.06	0.23	0.56	0.41	0.05
Uniform Delay, d1	27.6	16.3	3.4	4.1	9.2	0.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.7	0.0	0.2	0.9	0.3	0.1
Delay (s)	28.3	16.4	3.6	5.0	9.5	0.1
Level of Service	C	B	A	A	A	A
Approach Delay (s)	21.9			4.8	8.7	
Approach LOS	C			A	A	

Intersection Summary

HCM Average Control Delay	8.2	HCM Level of Service	A
HCM Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	72.1	Sum of lost time (s)	8.0
Intersection Capacity Utilization	44.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis

1: EAST MAIN & SR 315

10/14/2005

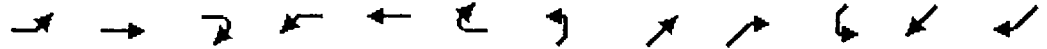
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations	↖	↑	↗	↖	↑	↗	↖	↕	↖	↖	↕	↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95		1.00	0.95	1.00
Fr't	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1703	1792	1524	1752	1845	1568	1752	3472		1736	3471	1553
Flt Permitted	0.53	1.00	1.00	0.72	1.00	1.00	0.22	1.00		0.25	1.00	1.00
Satd. Flow (perm)	957	1792	1524	1328	1845	1568	409	3472		462	3471	1553
Volume (vph)	112	54	87	88	96	60	95	734	50	40	739	114
Peak-hour factor, PHF	0.94	0.94	0.94	0.84	0.84	0.84	0.87	0.87	0.87	0.89	0.89	0.89
Adj. Flow (vph)	119	57	93	105	114	71	109	844	57	45	830	128
RTOR Reduction (vph)	0	0	77	0	0	60	0	4	0	0	0	69
Lane Group Flow (vph)	119	57	16	105	114	11	109	897	0	45	830	59
Heavy Vehicles (%)	6%	6%	6%	3%	3%	3%	3%	3%	3%	4%	4%	4%
Turn Type	pm+pt		Perm	pm+pt		Perm	pm+pt			pm+pt		Perm
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases	8		8	4		4	6			2		2
Actuated Green, G (s)	23.3	13.7	13.7	19.5	11.8	11.8	55.1	47.5		46.1	43.0	43.0
Effective Green, g (s)	29.3	16.7	16.7	25.5	14.8	14.8	60.6	50.5		52.1	46.0	46.0
Actuated g/C Ratio	0.29	0.17	0.17	0.26	0.15	0.15	0.61	0.50		0.52	0.46	0.46
Clearance Time (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0		7.0	7.0	7.0
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0	1.0	1.0		1.0	1.0	1.0
Lane Grp Cap (vph)	374	299	255	384	273	232	390	1753		318	1597	714
v/s Ratio Prot	c0.04	0.03		0.03	c0.06		c0.03	c0.26		0.01	0.24	
v/s Ratio Perm	0.05		0.06	0.04		0.05	0.14			0.07		0.08
v/c Ratio	0.32	0.19	0.06	0.27	0.42	0.05	0.28	0.51		0.14	0.52	0.08
Uniform Delay, d1	26.9	35.8	35.1	29.5	38.7	36.5	10.1	16.5		12.2	19.2	15.2
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	2.00	1.94		1.00	1.00	1.00
Incremental Delay, d2	0.2	0.1	0.0	0.1	0.4	0.0	0.1	0.9		0.1	1.2	0.2
Delay (s)	27.1	35.9	35.1	29.7	39.1	36.6	20.3	32.9		12.3	20.4	15.4
Level of Service	C	D	D	C	D	D	C	C		B	C	B
Approach Delay (s)		31.7			35.0			31.6			19.4	
Approach LOS		C			D			C			B	

Intersection Summary

HCM Average Control Delay	27.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	48.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
2: LAIRD & SR 315

10/14/2005



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕		↕	↕		↕	↕		↕	↕	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00		0.95	0.95		1.00	0.95		1.00	0.95	
Flt		0.89		1.00	0.93		1.00	0.99		1.00	1.00	
Flt Protected		0.99		0.95	0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1553		1681	1622		1736	3438		1736	3460	
Flt Permitted		0.15		0.67	0.77		0.10	1.00		0.18	1.00	
Satd. Flow (perm)		232		1180	1274		179	3438		325	3460	
Volume (vph)	24	2	110	25	5	11	88	993	67	12	1123	25
Peak-hour factor, PHF	0.53	0.53	0.53	0.92	0.92	0.92	0.96	0.96	0.96	0.94	0.94	0.94
Adj. Flow (vph)	45	4	208	27	5	12	92	1034	70	13	1195	27
RTOR Reduction (vph)	0	152	0	0	11	0	0	4	0	0	2	0
Lane Group Flow (vph)	0	105	0	17	16	0	92	1100	0	13	1220	0
Heavy Vehicles (%)	8%	8%	8%	2%	2%	2%	4%	4%	4%	4%	4%	4%
Turn Type	Perm			Perm			pm+pt			pm+pt		
Protected Phases		3			4		1	6		5	2	
Permitted Phases	3			4			6	6		2		
Actuated Green, G (s)		19.2		4.0	4.0		53.2	47.6		44.4	43.2	
Effective Green, g (s)		21.2		6.0	6.0		60.8	51.6		52.4	47.2	
Actuated g/C Ratio		0.21		0.06	0.06		0.61	0.52		0.52	0.47	
Clearance Time (s)		6.0		6.0	6.0		8.0	8.0		8.0	8.0	
Vehicle Extension (s)		2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)		49		71	76		258	1774		244	1633	
v/s Ratio Prot							c0.03	c0.32		0.00	c0.35	
v/s Ratio Perm		c1.11		0.01	c0.02		0.18			0.03		
v/c Ratio		2.14		0.24	0.21		0.36	0.62		0.05	0.75	
Uniform Delay, d1		39.4		44.8	44.7		13.6	17.2		12.5	21.5	
Progression Factor		1.00		1.00	1.00		1.80	0.75		1.70	1.61	
Incremental Delay, d2		575.1		0.6	0.5		0.3	1.5		0.0	3.0	
Delay (s)		614.5		45.5	45.2		24.8	14.5		21.4	37.7	
Level of Service		F		D	D		C	B		C	D	
Approach Delay (s)		614.5			45.3			15.3			37.5	
Approach LOS		F			D			B			D	

Intersection Summary

HCM Average Control Delay	82.2	HCM Level of Service	F
HCM Volume to Capacity ratio	1.90		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	61.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 17: SR 315 & MOTORWORLD

10/14/2005



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↙	↕		↙	↕			↕	↗		↙	↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	1.00
Frt	1.00	1.00		1.00	1.00			1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.95	1.00		0.95	1.00
Satd. Flow (prot)	1752	3493		1719	3426			1794	1599		1795	1599
Flt Permitted	0.12	1.00		0.22	1.00			0.69	1.00		0.69	1.00
Satd. Flow (perm)	226	3493		402	3426			1297	1599		1289	1599
Volume (vph)	75	1088	25	10	1218	30	54	2	12	48	2	170
Peak-hour factor, PHF	0.95	0.95	0.95	0.85	0.85	0.85	0.84	0.84	0.84	0.84	0.84	0.84
Adj. Flow (vph)	79	1145	26	12	1433	35	64	2	14	57	2	202
RTOR Reduction (vph)	0	1	0	0	2	0	0	0	12	0	0	154
Lane Group Flow (vph)	79	1170	0	12	1466	0	0	66	2	0	59	48
Heavy Vehicles (%)	3%	3%	3%	5%	5%	5%	1%	1%	1%	1%	1%	1%
Turn Type	pm+pt			pm+pt			Perm		Perm	Perm		Perm
Protected Phases	1	6		5	2			4			8	
Permitted Phases	6			2			4		4	8		8
Actuated Green, G (s)	76.0	70.4		67.6	66.2			9.2	9.2		9.2	9.2
Effective Green, g (s)	80.8	73.4		72.6	69.2			11.2	11.2		11.2	11.2
Actuated g/C Ratio	0.81	0.73		0.73	0.69			0.11	0.11		0.11	0.11
Clearance Time (s)	6.0	7.0		6.0	7.0			6.0	6.0		6.0	6.0
Vehicle Extension (s)	2.0	2.0		2.0	2.0			2.0	2.0		2.0	2.0
Lane Grp Cap (vph)	299	2564		337	2371			145	179		144	179
v/s Ratio Prot	c0.02	c0.34		0.00	c0.43							
v/s Ratio Perm	0.19			0.02				0.05	0.01		0.05	0.13
v/c Ratio	0.26	0.46		0.04	0.62			0.46	0.01		0.41	0.27
Uniform Delay, d1	5.5	5.3		3.9	8.3			41.5	39.5		41.3	40.7
Progression Factor	1.00	1.00		0.18	0.24			1.00	1.00		1.00	1.00
Incremental Delay, d2	0.2	0.6		0.0	0.8			0.8	0.0		0.7	0.3
Delay (s)	5.6	5.9		0.7	2.8			42.4	39.5		42.0	41.0
Level of Service	A	A		A	A			D	D		D	D
Approach Delay (s)		5.9			2.8			41.9			41.2	
Approach LOS		A			A			D			D	

Intersection Summary

HCM Average Control Delay	8.3	HCM Level of Service	A
HCM Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	61.0%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis

22: SR 315 & 309 NB RAMPS

10/14/2005



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↙	↑↑		↙	↑↑	↗		↕			↖	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00			1.00	
Frt	1.00	1.00		1.00	1.00	0.85		1.00			1.00	
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.97			0.95	
Satd. Flow (prot)	1787	3572		1770	3539	1583		1845			1752	
Flt Permitted	0.11	1.00		0.29	1.00	1.00		1.00			0.75	
Satd. Flow (perm)	203	3572		538	3539	1583		1900			1385	
Volume (vph)	493	929	4	1	950	491	3	2	0	259	0	0
Peak-hour factor, PHF	0.94	0.94	0.94	0.86	0.86	0.86	0.50	0.50	0.50	0.84	0.84	0.84
Adj. Flow (vph)	524	988	4	1	1105	571	6	4	0	308	0	0
RTOR Reduction (vph)	0	0	0	0	0	284	0	0	0	0	0	0
Lane Group Flow (vph)	524	992	0	1	1105	287	0	10	0	0	308	0
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	0%	0%	0%	3%	3%	3%
Turn Type	pm+pt			Perm		Perm	Perm			Perm		
Protected Phases	1	6			2			8			4	
Permitted Phases	6			2		2	8			4		
Actuated Green, G (s)	68.0	68.0		31.0	31.0	31.0		12.0			12.0	
Effective Green, g (s)	70.0	70.0		33.0	33.0	33.0		14.0			14.0	
Actuated g/C Ratio	0.76	0.76		0.36	0.36	0.36		0.15			0.15	
Clearance Time (s)	4.0	6.0		6.0	6.0	6.0		6.0			6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0			3.0	
Lane Grp Cap (vph)	723	2718		193	1269	568		289			211	
v/s Ratio Prot	c0.26	0.28			0.31							
v/s Ratio Perm	0.29			0.00		0.36		0.01			c0.22	
v/c Ratio	0.72	0.36		0.01	0.87	0.51		0.03			1.46	
Uniform Delay, d1	19.3	3.6		19.0	27.5	23.1		33.2			39.0	
Progression Factor	0.84	0.00		1.00	1.00	1.00		1.00			1.00	
Incremental Delay, d2	2.0	0.2		0.0	8.4	3.2		0.0			231.1	
Delay (s)	18.2	0.2		19.0	35.9	26.3		33.3			270.1	
Level of Service	B	A		B	D	C		C			F	
Approach Delay (s)		6.4			32.6			33.3			270.1	
Approach LOS		A			C			C			F	

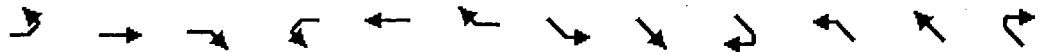
Intersection Summary

HCM Average Control Delay	42.1	HCM Level of Service	D
HCM Volume to Capacity ratio	0.97		
Actuated Cycle Length (s)	92.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	84.6%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
 24: SR 315 & 309 SB RAMPS

10/14/2005



Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations		↑↑	↑	↑	↑↑		↑↑					
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0		4.0					
Lane Util. Factor		0.95	1.00	1.00	0.95		0.97					
Fr _t		1.00	0.85	1.00	1.00		1.00					
Fl _t Protected		1.00	1.00	0.95	1.00		0.95					
Satd. Flow (prot)		3574	1599	1770	3539		3400					
Fl _t Permitted		1.00	1.00	0.10	1.00		0.95					
Satd. Flow (perm)		3574	1599	191	3539		3400					
Volume (vph)	0	1061	464	512	1021	0	365	0	0	0	0	0
Peak-hour factor, PHF	0.93	0.93	0.93	0.89	0.89	0.89	0.66	0.66	0.66	0.92	0.92	0.92
Adj. Flow (vph)	0	1141	499	575	1147	0	553	0	0	0	0	0
RTOR Reduction (vph)	0	0	305	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	1141	194	575	1147	0	553	0	0	0	0	0
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	3%	3%	3%	2%	2%	2%
Turn Type			Perm	pm+pt			custom					
Protected Phases		6		5		2						
Permitted Phases			6	2			4					
Actuated Green, G (s)		33.1	33.1	63.6	63.6		16.4					
Effective Green, g (s)		35.1	35.1	65.6	65.6		18.4					
Actuated g/C Ratio		0.38	0.38	0.71	0.71		0.20					
Clearance Time (s)		6.0	6.0	4.0	6.0		6.0					
Vehicle Extension (s)		3.0	3.0	3.0	3.0		2.0					
Lane Grp Cap (vph)		1364	610	591	2523		680					
v/s Ratio Prot		0.32		c0.28	0.32							
v/s Ratio Perm			0.31	c0.41			0.16					
v/c Ratio		0.84	0.32	0.97	0.45		0.81					
Uniform Delay, d1		25.8	20.0	26.1	5.6		35.2					
Progression Factor		1.00	1.00	0.56	0.46		1.00					
Incremental Delay, d2		6.2	1.4	27.4	0.5		7.0					
Delay (s)		32.1	21.4	42.0	3.1		42.2					
Level of Service		C	C	D	A		D					
Approach Delay (s)		28.8			16.1			42.2			0.0	
Approach LOS		C			B			D			A	

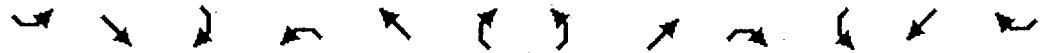
Intersection Summary

HCM Average Control Delay	25.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	92.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	78.1%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Unsignalized Intersection Capacity Analysis
 3: POCONO DOWNS & SR 315

10/14/2005



Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations	↘			↕			↗			↖		
Sign Control	Stop			Stop			Free			Free		
Grade	0%			0%			0%			0%		
Volume (veh/h)	193	0	0	0	0	0	0	544	0	0	564	257
Peak Hour Factor	0.79	0.79	0.79	0.92	0.92	0.92	0.90	0.90	0.90	0.87	0.87	0.87
Hourly flow rate (vph)	244	0	0	0	0	0	0	604	0	0	648	295
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type	TWLTL			TWLTL								
Median storage (veh)	0			0								
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1098	1400	472	929	1548	302	944			604		
vC1, stage 1 conf vol	796	796		604	604							
vC2, stage 2 conf vol	302	604		324	944							
vCu, unblocked vol	1098	1400	472	929	1548	302	944			604		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)	6.5	5.5		6.5	5.5							
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	0	100	100	100	100	100	100			100		
cM capacity (veh/h)	204	195	539	254	173	694	729			969		

Direction, Lane #	SE 1	NW 1	NE 1	NE 2	SW 1	SW 2	SW 3
Volume Total	244	0	403	201	0	432	511
Volume Left	244	0	0	0	0	0	0
Volume Right	0	0	0	0	0	0	295
cSH	204	1700	1700	1700	1700	1700	1700
Volume to Capacity	1.20	0.00	0.24	0.12	0.00	0.25	0.30
Queue Length (ft)	310	0	0	0	0	0	0
Control Delay (s)	173.8	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	F	A					
Approach Delay (s)	173.8	0.0	0.0		0.0		
Approach LOS	F	A					

Intersection Summary

Average Delay	23.7
Intersection Capacity Utilization	41.2%
ICU Level of Service	A
Analysis Period (min)	15

HCM Unsignalized Intersection Capacity Analysis
 8: POCONO DOWNS RT & SR 315

10/14/2005



Movement	EBL	EBR	NEL	NET	SWT	SWR
Lane Configurations		↗	↘	↑↑	↑↑	
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	0	329	362	544	564	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	358	393	591	613	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1696	307	613			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1696	307	613			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	48	59			
cM capacity (veh/h)	49	689	962			

Direction, Lane #	EB 1	NE 1	NE 2	NE 3	SW 1	SW 2
Volume Total	358	393	296	296	307	307
Volume Left	0	393	0	0	0	0
Volume Right	358	0	0	0	0	0
cSH	689	962	1700	1700	1700	1700
Volume to Capacity	0.52	0.41	0.17	0.17	0.18	0.18
Queue Length (ft)	75	50	0	0	0	0
Control Delay (s)	15.7	11.3	0.0	0.0	0.0	0.0
Lane LOS	C	B				
Approach Delay (s)	15.7	4.5			0.0	
Approach LOS	C					

Intersection Summary						
Average Delay			5.1			
Intersection Capacity Utilization		42.6%		ICU Level of Service		A
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis
 14: EAST MAIN & POCONO DOWNS

10/14/2005



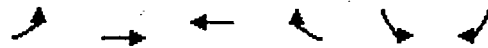
Movement	EBL	EBR	SBL	SBR	NWL	NWR
Lane Configurations		↗	↖		↗	↖
Sign Control	Free		Stop		Free	
Grade	0%		0%		0%	
Volume (veh/h)	0	240	13	0	264	41
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	261	14	0	287	45
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			
Median storage (veh)						
Upstream signal (ft)					1239	
pX, platoon unblocked						
vC, conflicting volume	332		570	309		
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	332		570	309		
tC, single (s)	4.1		6.4	6.2		
tC, 2 stage (s)						
tF (s)	2.2		3.5	3.3		
p0 queue free %	100		97	100		
cM capacity (veh/h)	1228		483	731		

Direction, Lane #	EB 1	SB 1	NW 1
Volume Total	261	14	332
Volume Left	0	14	0
Volume Right	0	0	45
cSH	1700	483	1700
Volume to Capacity	0.15	0.03	0.20
Queue Length (ft)	0	2	0
Control Delay (s)	0.0	12.7	0.0
Lane LOS		B	
Approach Delay (s)	0.0	12.7	0.0
Approach LOS		B	

Intersection Summary		
Average Delay		0.3
Intersection Capacity Utilization	27.1%	ICU Level of Service A
Analysis Period (min)		15

HCM Unsignalized Intersection Capacity Analysis
 34: EAST MAIN & POCONO DOWNS RT

10/14/2005



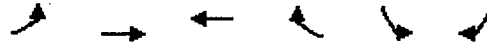
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↔	↑			↗
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	67	240	264	0	0	27
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	73	261	287	0	0	29
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None		
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	287				693	287
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	287				693	287
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	94				100	96
cM capacity (veh/h)	1275				386	752

Direction	Lane #	EB 1	WB 1	SB 1
Volume Total		334	287	29
Volume Left		73	0	0
Volume Right		0	0	29
cSH		1275	1700	752
Volume to Capacity		0.06	0.17	0.04
Queue Length (ft)		5	0	3
Control Delay (s)		2.2	0.0	10.0
Lane LOS		A		A
Approach Delay (s)		2.2	0.0	10.0
Approach LOS				A

Intersection Summary			
Average Delay		1.6	
Intersection Capacity Utilization	36.9%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
 20: EAST MAIN & FIRST

10/14/2005



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		←	→		↙	↘
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	77	299	325	51	53	55
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	84	325	353	55	58	60
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	409				873	381
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	409				873	381
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	93				81	91
cM capacity (veh/h)	1150				297	666

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	409	409	117
Volume Left	84	0	58
Volume Right	0	55	60
cSH	1150	1700	414
Volume to Capacity	0.07	0.24	0.28
Queue Length (ft)	6	0	29
Control Delay (s)	2.3	0.0	17.1
Lane LOS	A		C
Approach Delay (s)	2.3	0.0	17.1
Approach LOS			C

Intersection Summary		
Average Delay		3.2
Intersection Capacity Utilization	56.5%	ICU Level of Service
Analysis Period (min)		15
		B

HCM Unsignalized Intersection Capacity Analysis
 19: EAST MAIN & SCOTT

10/14/2005



Movement	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations	↑		↓		Y	
Sign Control	Free		Free		Stop	
Grade	0%		0%		0%	
Volume (veh/h)	205	23	144	236	44	171
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	223	25	157	257	48	186
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			248		805	235
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			248		805	235
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			88		85	77
cM capacity (veh/h)			1318		310	804

Direction, Lane #	EB 1	WB 1	NE 1
Volume Total	248	413	234
Volume Left	0	157	48
Volume Right	25	0	186
cSH	1700	1318	606
Volume to Capacity	0.15	0.12	0.39
Queue Length (ft)	0	10	45
Control Delay (s)	0.0	3.8	14.6
Lane LOS		A	B
Approach Delay (s)	0.0	3.8	14.6
Approach LOS			B

Intersection Summary		
Average Delay		5.6
Intersection Capacity Utilization	55.6%	ICU Level of Service B
Analysis Period (min)		15

HCM Signalized Intersection Capacity Analysis
 28: OAK & SR 315

10/14/2005



Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations	↔	↑	↗		↖	↗	↔	↕		↖	↗	↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00		1.00	1.00	1.00	0.95		1.00	0.95	1.00
Frt	1.00	1.00	0.85		1.00	0.85	1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00		0.96	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1347	1418	1205		1796	1583	1671	3316		1703	3406	1524
Flt Permitted	0.70	1.00	1.00		0.81	1.00	0.11	1.00		0.22	1.00	1.00
Satd. Flow (perm)	986	1418	1205		1500	1583	198	3316		392	3406	1524
Volume (vph)	242	16	182	60	20	34	197	770	43	28	802	208
Peak-hour factor, PHF	0.92	0.92	0.92	0.84	0.84	0.84	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	263	17	198	71	24	40	216	846	47	31	881	229
RTOR Reduction (vph)	0	0	105	0	0	21	0	3	0	0	0	0
Lane Group Flow (vph)	263	17	93	0	95	19	216	890	0	31	881	229
Heavy Vehicles (%)	34%	34%	34%	2%	2%	2%	8%	8%	8%	6%	6%	6%
Turn Type	Perm		Perm	Perm		Perm	pm+pt			pm+pt		Free
Protected Phases		7 8			7 8		1	6		5	2	
Permitted Phases	7 8		7 8	7 8		7 8	6			2		Free
Actuated Green, G (s)	51.7	51.7	51.7		51.7	51.7	51.0	41.0		33.6	29.6	114.7
Effective Green, g (s)	53.7	53.7	53.7		53.7	53.7	53.0	43.0		37.6	31.6	114.7
Actuated g/C Ratio	0.47	0.47	0.47		0.47	0.47	0.46	0.37		0.33	0.28	1.00
Clearance Time (s)							6.0	6.0		6.0	6.0	
Vehicle Extension (s)							3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	462	664	564		702	741	315	1243		197	938	1524
v/s Ratio Prot		0.01					c0.10	c0.27		0.01	c0.26	
v/s Ratio Perm	c0.27		0.16		0.06	0.03	0.21			0.04		0.15
v/c Ratio	0.57	0.03	0.16		0.14	0.03	0.69	0.72		0.16	0.94	0.15
Uniform Delay, d1	22.1	16.4	17.6		17.3	16.4	25.5	30.6		26.8	40.6	0.0
Progression Factor	1.00	1.00	1.00		1.00	1.00	1.37	0.82		1.00	1.00	1.00
Incremental Delay, d2	1.6	0.0	0.1		0.1	0.0	5.7	1.9		0.4	16.4	0.2
Delay (s)	23.7	16.4	17.7		17.4	16.4	40.8	26.9		27.2	57.1	0.2
Level of Service	C	B	B		B	B	D	C		C	E	A
Approach Delay (s)		21.0			17.1			29.6			44.8	
Approach LOS		C			B			C			D	

Intersection Summary

HCM Average Control Delay	33.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	114.7	Sum of lost time (s)	12.0
Intersection Capacity Utilization	63.2%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
 10: OLD BOSTON & SR 315

10/14/2005



Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations	Y		↑↑			↑↑
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0			4.0
Lane Util. Factor	1.00		0.95			0.95
Flt	0.93		0.99			1.00
Flt Protected	0.98		1.00			1.00
Satd. Flow (prot)	1645		3516			3530
Flt Permitted	0.98		1.00			0.91
Satd. Flow (perm)	1645		3516			3216
Volume (vph)	28	29	548	25	34	620
Peak-hour factor, PHF	0.81	0.81	0.93	0.93	0.94	0.94
Adj. Flow (vph)	35	36	589	27	36	660
RTOR Reduction (vph)	31	0	3	0	0	0
Lane Group Flow (vph)	40	0	613	0	0	696
Heavy Vehicles (%)	5%	5%	2%	2%	2%	2%
Turn Type					pm+pt	
Protected Phases	4		6		5	2
Permitted Phases					2	2
Actuated Green, G (s)	7.3		39.3			39.3
Effective Green, g (s)	8.3		40.3			40.3
Actuated g/C Ratio	0.15		0.71			0.71
Clearance Time (s)	5.0		5.0			5.0
Vehicle Extension (s)	2.0		1.0			1.0
Lane Grp Cap (vph)	241		2503			2290
v/s Ratio Prot	c0.04		0.18			
v/s Ratio Perm						c0.22
v/c Ratio	0.17		0.24			0.30
Uniform Delay, d1	21.1		2.8			3.0
Progression Factor	1.00		1.00			1.00
Incremental Delay, d2	0.1		0.0			0.0
Delay (s)	21.2		2.9			3.0
Level of Service	C		A			A
Approach Delay (s)	21.2		2.9			3.0
Approach LOS	C		A			A

Intersection Summary			
HCM Average Control Delay	3.9	HCM Level of Service	A
HCM Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	56.6	Sum of lost time (s)	8.0
Intersection Capacity Utilization	48.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 13: LAFLIN & SR 315

10/14/2005



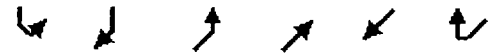
Movement	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations	↵	↗	↵	↑	↑↑	↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1770	1583	1752	1845	3505	1568
Flt Permitted	0.95	1.00	0.27	1.00	1.00	1.00
Satd. Flow (perm)	1770	1583	491	1845	3505	1568
Volume (vph)	56	74	94	579	710	69
Peak-hour factor, PHF	0.89	0.89	0.93	0.93	0.88	0.88
Adj. Flow (vph)	63	83	101	623	807	78
RTOR Reduction (vph)	0	60	0	0	0	65
Lane Group Flow (vph)	63	23	101	623	807	13
Heavy Vehicles (%)	2%	2%	3%	3%	3%	3%
Turn Type	custom pm+pt			Over		
Protected Phases	8	8	1	6	2	8
Permitted Phases	8	1	6			
Actuated Green, G (s)	7.7	14.5	48.5	48.5	34.7	7.7
Effective Green, g (s)	9.7	19.5	51.5	51.5	37.7	9.7
Actuated g/C Ratio	0.14	0.28	0.74	0.74	0.54	0.14
Clearance Time (s)	6.0	6.0	7.0	7.0	7.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0	5.0	5.0	3.0
Lane Grp Cap (vph)	248	538	544	1373	1910	220
v/s Ratio Prot	0.04	0.02	0.03	c0.34	0.23	c0.05
v/s Ratio Perm		0.03	0.11			
v/c Ratio	0.25	0.04	0.19	0.45	0.42	0.06
Uniform Delay, d1	26.5	18.1	3.2	3.4	9.3	25.8
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.5	0.0	0.2	0.5	0.3	0.1
Delay (s)	27.1	18.1	3.4	3.9	9.6	25.9
Level of Service	C	B	A	A	A	C
Approach Delay (s)	22.0			3.8	11.1	
Approach LOS	C			A	B	

Intersection Summary

HCM Average Control Delay	9.0	HCM Level of Service	A
HCM Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	69.2	Sum of lost time (s)	8.0
Intersection Capacity Utilization	40.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 4: SUNSHINE MARKET & SR 315

10/14/2005



Movement	SBL	SBR	NEL	NET	SWT	SWR
Lane Configurations	↙	↘	↙	↕	↕	↘
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1736	1553	1752	1845	3471	1553
Flt Permitted	0.95	1.00	0.24	1.00	1.00	1.00
Satd. Flow (perm)	1736	1553	452	1845	3471	1553
Volume (vph)	85	133	111	607	791	84
Peak-hour factor, PHF	0.84	0.84	0.97	0.97	0.90	0.90
Adj. Flow (vph)	101	158	114	626	879	93
RTOR Reduction (vph)	0	94	0	0	0	0
Lane Group Flow (vph)	101	64	114	626	879	93
Heavy Vehicles (%)	4%	4%	3%	3%	4%	4%
Turn Type		pt+ov	pm+pt			Free
Protected Phases	8	1 8	1	6	2	
Permitted Phases			6			Free
Actuated Green, G (s)	8.9	21.1	52.0	52.0	38.8	73.9
Effective Green, g (s)	10.9	24.1	55.0	55.0	41.8	73.9
Actuated g/C Ratio	0.15	0.33	0.74	0.74	0.57	1.00
Clearance Time (s)	6.0		7.0	7.0	7.0	
Vehicle Extension (s)	3.0		3.0	5.0	5.0	
Lane Grp Cap (vph)	256	506	498	1373	1963	1553
v/s Ratio Prot	c0.06	0.10	0.03	c0.34	0.25	
v/s Ratio Perm			0.14			0.06
v/c Ratio	0.39	0.13	0.23	0.46	0.45	0.06
Uniform Delay, d1	28.5	17.5	3.6	3.7	9.3	0.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.0	0.1	0.2	0.5	0.3	0.1
Delay (s)	29.5	17.6	3.9	4.2	9.7	0.1
Level of Service	C	B	A	A	A	A
Approach Delay (s)	22.3			4.1	8.8	
Approach LOS	C			A	A	

Intersection Summary

HCM Average Control Delay	8.8	HCM Level of Service	A
HCM Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	73.9	Sum of lost time (s)	8.0
Intersection Capacity Utilization	43.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis

2: LAIRD & SR 315

10/14/2005



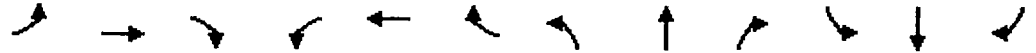
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NEF	SWL	SWT	SWR
Lane Configurations		↕		↕	↕		↕	↕		↕	↕	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00		0.95	0.95		1.00	0.95		1.00	0.95	
Frt		0.90		1.00	0.95		1.00	1.00		1.00	1.00	
Flt Protected		0.99		0.95	0.97		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1565		1681	1643		1736	3460		1736	3463	
Flt Permitted		0.21		0.70	0.78		0.19	1.00		0.19	1.00	
Satd. Flow (perm)		328		1232	1321		351	3460		354	3463	
Volume (vph)	16	2	54	30	4	7	57	994	23	8	943	14
Peak-hour factor, PHF	0.77	0.77	0.77	0.73	0.73	0.73	0.91	0.91	0.91	0.94	0.94	0.94
Adj. Flow (vph)	21	3	70	41	5	10	63	1092	25	9	1003	15
RTOR Reduction (vph)	0	61	0	0	9	0	0	1	0	0	1	0
Lane Group Flow (vph)	0	33	0	24	23	0	63	1116	0	9	1017	0
Heavy Vehicles (%)	8%	8%	8%	2%	2%	2%	4%	4%	4%	4%	4%	4%
Turn Type	Perm			Perm			pm+pt			pm+pt		
Protected Phases		3			4		1	6		5	2	
Permitted Phases	3			4			6	6		2		
Actuated Green, G (s)		9.8		4.0	4.0		51.9	48.1		46.1	45.2	
Effective Green, g (s)		11.8		6.0	6.0		59.9	52.1		54.1	49.2	
Actuated g/C Ratio		0.13		0.07	0.07		0.66	0.57		0.60	0.54	
Clearance Time (s)		6.0		6.0	6.0		8.0	8.0		8.0	8.0	
Vehicle Extension (s)		2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)		43		81	87		351	1985		285	1876	
v/s Ratio Prot							c0.02	c0.32		0.00	0.29	
v/s Ratio Perm		c0.29		0.02	c0.02		0.10			0.02		
v/c Ratio		0.77		0.30	0.26		0.18	0.56		0.03	0.54	
Uniform Delay, d1		38.2		40.4	40.3		7.2	12.2		8.2	13.5	
Progression Factor		1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		52.1		0.7	0.6		0.1	0.2		0.0	0.2	
Delay (s)		90.3		41.1	40.9		7.3	12.4		8.3	13.7	
Level of Service		F		D	D		A	B		A	B	
Approach Delay (s)		90.3			41.0			12.1			13.6	
Approach LOS		F			D			B			B	

Intersection Summary

HCM Average Control Delay	16.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	90.8	Sum of lost time (s)	16.0
Intersection Capacity Utilization	52.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
17: SR 315 & MOTORWORLD

10/14/2005



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↵	↑↑		↵	↑↑			↑	↑		↑	↑
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	1.00
Frt	1.00	1.00		1.00	0.99			1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.96	1.00		0.95	1.00
Satd. Flow (prot)	1770	3527		1770	3520			1818	1615		1787	1599
Flt Permitted	0.17	1.00		0.21	1.00			0.73	1.00		0.74	1.00
Satd. Flow (perm)	315	3527		399	3520			1383	1615		1389	1599
Volume (vph)	106	1040	24	4	986	37	19	2	7	27	0	137
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.73	0.73	0.73	0.96	0.96	0.96
Adj. Flow (vph)	119	1169	27	4	1108	42	26	3	10	28	0	143
RTOR Reduction (vph)	0	1	0	0	3	0	0	0	9	0	0	125
Lane Group Flow (vph)	119	1195	0	4	1147	0	0	29	1	0	28	18
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	0%	0%	0%	1%	1%	1%
Turn Type	pm+pt			pm+pt			Perm		Perm	Perm		Perm
Protected Phases	1	6		5	2			4			8	
Permitted Phases	6			2			4		4	8		8
Actuated Green, G (s)	51.8	45.4		41.6	40.3			6.9	6.9		6.9	6.9
Effective Green, g (s)	55.7	48.4		46.6	43.3			8.9	8.9		8.9	8.9
Actuated g/C Ratio	0.77	0.67		0.64	0.60			0.12	0.12		0.12	0.12
Clearance Time (s)	6.0	7.0		6.0	7.0			6.0	6.0		6.0	6.0
Vehicle Extension (s)	2.0	2.0		2.0	2.0			2.0	2.0		2.0	2.0
Lane Grp Cap (vph)	410	2351		318	2099			170	198		170	196
v/s Ratio Prot	c0.03	c0.34		0.00	c0.33							
v/s Ratio Perm	0.19			0.01				0.02	0.01		0.02	0.09
v/c Ratio	0.29	0.51		0.01	0.55			0.17	0.01		0.16	0.09
Uniform Delay, d1	4.2	6.1		4.8	8.8			28.5	28.0		28.5	28.3
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	1.00
Incremental Delay, d2	0.1	0.1		0.0	0.2			0.2	0.0		0.2	0.1
Delay (s)	4.3	6.2		4.8	8.9			28.7	28.0		28.7	28.3
Level of Service	A	A		A	A			C	C		C	C
Approach Delay (s)		6.0			8.9			28.5			28.4	
Approach LOS		A			A			C			C	

Intersection Summary

HCM Average Control Delay	9.0	HCM Level of Service	A
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	72.6	Sum of lost time (s)	16.0
Intersection Capacity Utilization	53.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 22: SR 315 & 309 NB RAMPS

10/14/2005



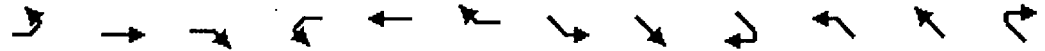
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕	↗		↕			↕	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00		1.00	1.00	
Fr't	1.00	1.00		1.00	1.00	0.85		1.00		1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.95		0.95	0.95	
Satd. Flow (prot)	1805	3608		1787	3574	1599		1805		1805	1787	
Flt Permitted	0.12	1.00		0.31	1.00	1.00		0.85		0.85	0.76	
Satd. Flow (perm)	233	3608		584	3574	1599		1621		1621	1421	
Volume (vph)	526	862	3	2	820	320	2	0	0	308	0	0
Peak-hour factor, PHF	0.94	0.94	0.94	0.89	0.89	0.89	0.50	0.50	0.50	0.95	0.95	0.95
Adj. Flow (vph)	560	917	3	2	921	360	4	0	0	324	0	0
RTOR Reduction (vph)	0	0	0	0	0	243	0	0	0	0	0	0
Lane Group Flow (vph)	560	920	0	2	921	117	0	4	0	0	324	0
Heavy Vehicles (%)	0%	0%	0%	1%	1%	1%	0%	0%	0%	1%	1%	1%
Turn Type	pm+pt			Perm		Perm	Perm			Perm		
Protected Phases	1	6			2			8			4	
Permitted Phases	6			2		2	8			4		
Actuated Green, G (s)	57.0	57.0		26.6	26.6	26.6		19.0			19.0	
Effective Green, g (s)	59.0	59.0		28.6	28.6	28.6		21.0			21.0	
Actuated g/C Ratio	0.67	0.67		0.33	0.33	0.33		0.24			0.24	
Clearance Time (s)	4.0	6.0		6.0	6.0	6.0		6.0			6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0			3.0	
Lane Grp Cap (vph)	628	2419		190	1162	520		387			339	
v/s Ratio Prot	c0.27	0.25			0.26							
v/s Ratio Perm	c0.33			0.00		0.23		0.00			c0.23	
v/c Ratio	0.89	0.38		0.01	0.79	0.23		0.01			0.96	
Uniform Delay, d1	22.2	6.4		20.1	27.0	21.6		25.6			33.0	
Progression Factor	0.43	0.40		1.00	1.00	1.00		1.00			1.00	
Incremental Delay, d2	10.4	0.3		0.1	5.6	1.0		0.0			36.9	
Delay (s)	19.9	2.8		20.2	32.6	22.6		25.6			70.0	
Level of Service	B	A		C	C	C		C			E	
Approach Delay (s)		9.3			29.8			25.6			70.0	
Approach LOS		A			C			C			E	

Intersection Summary		
HCM Average Control Delay	24.2	HCM Level of Service C
HCM Volume to Capacity ratio	0.89	
Actuated Cycle Length (s)	88.0	Sum of lost time (s) 8.0
Intersection Capacity Utilization	77.8%	ICU Level of Service D
Analysis Period (min)	15	

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
 24: SR 315 & 309 SB RAMPS

10/14/2005



Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations		↑↑	↑	↑	↑↑		↑↑					
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0		4.0					
Lane Util. Factor		0.95	1.00	1.00	0.95		0.97					
Frt		1.00	0.85	1.00	1.00		1.00					
Flt Protected		1.00	1.00	0.95	1.00		0.95					
Satd. Flow (prot)		3574	1599	1787	3574		3367					
Flt Permitted		1.00	1.00	0.11	1.00		0.95					
Satd. Flow (perm)		3574	1599	203	3574		3367					
Volume (vph)	0	1022	283	357	1033	0	369	0	0	0	0	0
Peak-hour factor, PHF	0.85	0.85	0.85	0.87	0.87	0.87	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	1202	333	410	1187	0	401	0	0	0	0	0
RTOR Reduction (vph)	0	0	208	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	1202	125	410	1187	0	401	0	0	0	0	0
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	4%	4%	4%	2%	2%	2%
Turn Type		Perm pm+pt					custom					
Protected Phases		6		5	2							
Permitted Phases			6	2			4					
Actuated Green, G (s)		31.0	31.0	62.4	62.4		13.6					
Effective Green, g (s)		33.0	33.0	64.4	64.4		15.6					
Actuated g/C Ratio		0.38	0.38	0.73	0.73		0.18					
Clearance Time (s)		6.0	6.0	4.0	6.0		6.0					
Vehicle Extension (s)		3.0	3.0	3.0	3.0		2.0					
Lane Grp Cap (vph)		1340	600	642	2616		597					
v/s Ratio Prot		c0.34		c0.20		0.33						
v/s Ratio Perm			0.21	0.27		0.12						
v/c Ratio		0.90	0.21	0.64	0.45	0.67						
Uniform Delay, d1		25.9	18.6	18.2	4.7	33.8						
Progression Factor		1.00	1.00	1.53	0.41	1.00						
Incremental Delay, d2		9.7	0.8	1.9	0.5	2.3						
Delay (s)		35.6	19.4	29.8	2.4	36.2						
Level of Service		D	B	C	A	D						
Approach Delay (s)		32.1			9.5	36.2				0.0		
Approach LOS		C			A	D				A		

Intersection Summary

HCM Average Control Delay	22.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	88.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	68.6%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Unsignalized Intersection Capacity Analysis

3: POCONO DOWNS & SR 315

10/14/2005



Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations	↙			↔			↗			↘		
Sign Control	Stop			Stop			Free			Free		
Grade	0%			0%			0%			0%		
Volume (veh/h)	213	0	0	2	0	0	0	505	2	0	615	309
Peak Hour Factor	0.69	0.69	0.69	0.50	0.50	0.50	0.96	0.96	0.96	0.92	0.92	0.92
Hourly flow rate (vph)	309	0	0	4	0	0	0	526	2	0	668	336
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type	TWLTL			TWLTL								
Median storage (veh)	0			0								
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1099	1365	502	861	1531	264	1004			528		
vC1, stage 1 conf vol	836	836		527	527							
vC2, stage 2 conf vol	263	528		334	1004							
vCu, unblocked vol	1099	1365	502	861	1531	264	1004			528		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.2			4.2		
tC, 2 stage (s)	6.5	5.5		6.5	5.5							
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	0	100	100	99	100	100	100			100		
cM capacity (veh/h)	201	200	520	278	173	740	679			1021		

Direction, Lane #	SE 1	NW 1	NE 1	NE 2	SW 1	SW 2	SW 3
Volume Total	309	4	351	177	0	446	559
Volume Left	309	4	0	0	0	0	0
Volume Right	0	0	0	2	0	0	336
cSH	201	278	1700	1700	1700	1700	1700
Volume to Capacity	1.54	0.01	0.21	0.10	0.00	0.26	0.33
Queue Length (ft)	486	1	0	0	0	0	0
Control Delay (s)	308.5	18.1	0.0	0.0	0.0	0.0	0.0
Lane LOS	F	C					
Approach Delay (s)	308.5	18.1	0.0		0.0		
Approach LOS	F	C					

Intersection Summary	
Average Delay	51.6
Intersection Capacity Utilization	44.6%
ICU Level of Service	A
Analysis Period (min)	15

HCM Unsignalized Intersection Capacity Analysis
 8: POCONO DOWNS RT & SR 315

10/14/2005



Movement	EBL	EBR	NEL	NET	SWT	SWR
Lane Configurations		↗	↘	↕	↕	
Sign Control	Yield			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	0	368	500	507	617	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	400	543	551	671	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	2033	335	671			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2033	335	671			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	39	41			
cM capacity (veh/h)	20	660	916			

Direction, Lane #	EB 1	NE 1	NE 2	NE 3	SW 1	SW 2
Volume Total	400	543	276	276	335	335
Volume Left	0	543	0	0	0	0
Volume Right	400	0	0	0	0	0
cSH	660	916	1700	1700	1700	1700
Volume to Capacity	0.61	0.59	0.16	0.16	0.20	0.20
Queue Length (ft)	102	101	0	0	0	0
Control Delay (s)	18.5	14.5	0.0	0.0	0.0	0.0
Lane LOS	C	B				
Approach Delay (s)	18.5	7.2			0.0	
Approach LOS	C					

Intersection Summary						
Average Delay		7.1				
Intersection Capacity Utilization		51.4%		ICU Level of Service		A
Analysis Period (min)		15				

HCM Unsignalized Intersection Capacity Analysis
 9: EAST MAIN & POCONO DOWNS RT

10/14/2005



Movement	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations		↕	↑			↗
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	52	301	276	0	0	34
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	57	327	300	0	0	37
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None		
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	300			740	300	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	300			740	300	
tC, single (s)	4.1			6.4	6.2	
tC, 2 stage (s)						
tF (s)	2.2			3.5	3.3	
p0 queue free %	96			100	95	
cM capacity (veh/h)	1261			367	740	

Direction, Lane #	EB 1	WB 1	SW 1
Volume Total	384	300	37
Volume Left	57	0	0
Volume Right	0	0	37
cSH	1261	1700	740
Volume to Capacity	0.04	0.18	0.05
Queue Length (ft)	4	0	4
Control Delay (s)	1.6	0.0	10.1
Lane LOS	A		B
Approach Delay (s)	1.6	0.0	10.1
Approach LOS			B

Intersection Summary		
Average Delay		1.3
Intersection Capacity Utilization	39.9%	ICU Level of Service
Analysis Period (min)		15
		A

HCM Unsignalized Intersection Capacity Analysis
 20: EAST MAIN & FIRST

10/14/2005



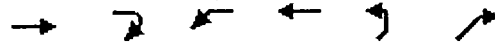
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	39	257	224	50	33	41
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	42	279	243	54	36	45
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	298				635	271
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	298				635	271
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	97				92	94
cM capacity (veh/h)	1263				428	768

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	322	298	80
Volume Left	42	0	36
Volume Right	0	54	45
cSH	1263	1700	567
Volume to Capacity	0.03	0.18	0.14
Queue Length (ft)	3	0	12
Control Delay (s)	1.3	0.0	12.4
Lane LOS	A		B
Approach Delay (s)	1.3	0.0	12.4
Approach LOS			B

Intersection Summary		
Average Delay		2.0
Intersection Capacity Utilization	44.9%	ICU Level of Service A
Analysis Period (min)		15

HCM Unsignalized Intersection Capacity Analysis
 19: EAST MAIN & SCOTT

10/14/2005



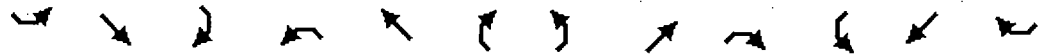
Movement	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations	↑			↑		↑
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	215	31	55	210	23	81
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	234	34	60	228	25	88
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			267		598	251
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			267		598	251
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			95		94	89
cM capacity (veh/h)			1296		443	788

Direction, Lane #	EB 1	WB 1	NE 1
Volume Total	267	288	113
Volume Left	0	60	25
Volume Right	34	0	88
cSH	1700	1296	673
Volume to Capacity	0.16	0.05	0.17
Queue Length (ft)	0	4	15
Control Delay (s)	0.0	2.0	11.4
Lane LOS		A	B
Approach Delay (s)	0.0	2.0	11.4
Approach LOS			B

Intersection Summary		
Average Delay		2.8
Intersection Capacity Utilization	43.6%	ICU Level of Service: A
Analysis Period (min)		15

HCM Signalized Intersection Capacity Analysis
 28: OAK & SR 315

10/14/2005



Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NEE	SWL	SWT	SWR
Lane Configurations	↘	↑	↗		↖	↗	↘	↕		↘	↕	↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00		1.00	1.00	1.00	0.95		1.00	0.95	1.00
Frt	1.00	1.00	0.85		1.00	0.85	1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00		0.96	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1530	1610	1369		1810	1599	1752	3482		1736	3471	1553
Flt Permitted	0.72	1.00	1.00		0.81	1.00	0.19	1.00		0.39	1.00	1.00
Satd. Flow (perm)	1156	1610	1369		1533	1599	352	3482		714	3471	1553
Volume (vph)	169	16	149	43	12	21	203	590	27	8	633	216
Peak-hour factor, PHF	0.63	0.63	0.63	0.91	0.91	0.91	0.90	0.90	0.90	0.91	0.91	0.91
Adj. Flow (vph)	268	25	237	47	13	23	226	656	30	9	696	237
RTOR Reduction (vph)	0	0	135	0	0	13	0	2	0	0	0	0
Lane Group Flow (vph)	268	25	102	0	60	10	226	684	0	9	696	237
Heavy Vehicles (%)	18%	18%	18%	1%	1%	1%	3%	3%	3%	4%	4%	4%
Turn Type	Perm		Perm	Perm		Perm	pm+pt			pm+pt		Free
Protected Phases		7 8				7 8	1	6		5	2	
Permitted Phases	7 8		7 8	7 8		7 8	6			2		Free
Actuated Green, G (s)	44.7	44.7	44.7		44.7	44.7	52.3	45.3		32.9	31.9	109.0
Effective Green, g (s)	46.7	46.7	46.7		46.7	46.7	54.3	47.3		36.9	33.9	109.0
Actuated g/C Ratio	0.43	0.43	0.43		0.43	0.43	0.50	0.43		0.34	0.31	1.00
Clearance Time (s)							6.0	6.0		6.0	6.0	
Vehicle Extension (s)							3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	495	690	587		657	685	386	1511		270	1080	1553
v/s Ratio Prot		0.02						c0.09	0.20	0.00	c0.20	
v/s Ratio Perm:	c0.23		0.17		0.04	0.01	0.20			0.01		0.15
v/c Ratio	0.54	0.04	0.17		0.09	0.01	0.59	0.45		0.03	0.64	0.15
Uniform Delay, d1	23.2	18.1	19.2		18.5	17.9	18.2	21.7		24.0	32.4	0.0
Progression Factor	1.00	1.00	1.00		1.00	1.00	1.20	0.86		1.00	1.00	1.00
Incremental Delay, d2	1.2	0.0	0.1		0.1	0.0	2.2	0.2		0.1	1.3	0.2
Delay (s)	24.4	18.1	19.4		18.6	17.9	24.1	18.9		24.0	33.7	0.2
Level of Service	C	B	B		B	B	C	B		C	C	A
Approach Delay (s)		21.9			18.4			20.2			25.2	
Approach LOS		C			B			C			C	

Intersection Summary

HCM Average Control Delay	22.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	109.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	54.8%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
 10: OLD BOSTON & SR 315

10/14/2005



Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations	Y		↑↓			↑↓
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0			4.0
Lane Util. Factor	1.00		0.95			0.95
Frt	0.94		0.99			1.00
Flt Protected	0.97		1.00			1.00
Satd. Flow (prot)	1650		3545			3605
Flt Permitted	0.97		1.00			0.93
Satd. Flow (perm)	1650		3545			3373
Volume (vph)	35	32	503	29	18	568
Peak-hour factor, PHF	0.74	0.74	0.93	0.93	0.85	0.85
Adj. Flow (vph)	47	43	541	31	21	668
RTOR Reduction (vph)	35	0	4	0	0	0
Lane Group Flow (vph)	55	0	568	0	0	689
Heavy Vehicles (%)	5%	5%	1%	1%	0%	0%
Turn Type					pm+pt	
Protected Phases	4		6		5	2
Permitted Phases					2	2
Actuated Green, G (s)	8.0		32.6			32.6
Effective Green, g (s)	9.0		33.6			33.6
Actuated g/C Ratio	0.18		0.66			0.66
Clearance Time (s)	5.0		5.0			5.0
Vehicle Extension (s)	2.0		1.0			1.0
Lane Grp Cap (vph)	293		2354			2240
v/s Ratio Prot	c0.05		0.16			
v/s Ratio Perm						c0.20
v/c Ratio	0.19		0.24			0.31
Uniform Delay, d1	17.7		3.4			3.6
Progression Factor	1.00		1.00			1.00
Incremental Delay, d2	0.1		0.0			0.0
Delay (s)	17.8		3.4			3.6
Level of Service	B		A			A
Approach Delay (s)	17.8		3.4			3.6
Approach LOS	B		A			A

Intersection Summary

HCM Average Control Delay	4.5	HCM Level of Service	A
HCM Volume to Capacity ratio	0.31		
Actuated Cycle Length (s)	50.6	Sum of lost time (s)	8.0
Intersection Capacity Utilization	39.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 13: LAFLIN & SR 315

10/14/2005



Movement	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations	↙	↗	↙	↑	↑↑	↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1787	1599	1787	1881	3574	1599
Flt Permitted	0.95	1.00	0.33	1.00	1.00	1.00
Satd. Flow (perm)	1787	1599	612	1881	3574	1599
Volume (vph)	81	120	78	542	582	106
Peak-hour factor, PHF	0.70	0.70	0.87	0.87	0.88	0.88
Adj. Flow (vph)	116	171	90	623	661	120
RTOR Reduction (vph)	0	122	0	0	0	100
Lane Group Flow (vph)	116	49	90	623	661	20
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%
Turn Type	custom		pm+pt		Over	
Protected Phases	8	8	1	6	2	8
Permitted Phases	8	1	6			
Actuated Green, G (s)	9.0	13.9	44.3	44.3	32.4	9.0
Effective Green, g (s)	11.0	18.9	47.3	47.3	35.4	11.0
Actuated g/C Ratio	0.17	0.29	0.71	0.71	0.53	0.17
Clearance Time (s)	6.0	6.0	7.0	7.0	7.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0	5.0	5.0	3.0
Lane Grp Cap (vph)	296	552	577	1342	1908	265
v/s Ratio Prot	0.06	0.05	0.02	c0.33	0.18	c0.08
v/s Ratio Perm		0.06	0.09			
v/c Ratio	0.39	0.09	0.16	0.46	0.35	0.08
Uniform Delay, d1	24.7	17.4	3.3	4.1	8.8	23.4
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.9	0.1	0.1	0.5	0.2	0.1
Delay (s)	25.5	17.5	3.5	4.6	9.1	23.5
Level of Service	C	B	A	A	A	C
Approach Delay (s)	20.7			4.5	11.3	
Approach LOS	C			A	B	

Intersection Summary

HCM Average Control Delay	10.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	66.3	Sum of lost time (s)	8.0
Intersection Capacity Utilization	39.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis

4: SUNSHINE MARKET & SR 315

10/14/2005



Movement	SBL	SBR	NEL	NET	SWT	SWR
Lane Configurations	↙	↙	↙	↑	↑↑	↙
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	1.00
Fr _t	1.00	0.85	1.00	1.00	1.00	0.85
Fl _t Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1805	1615	1787	1881	3539	1583
Fl _t Permitted	0.95	1.00	0.37	1.00	1.00	1.00
Satd. Flow (perm)	1805	1615	687	1881	3539	1583
Volume (vph)	34	62	72	561	540	28
Peak-hour factor, PHF	0.76	0.76	0.90	0.90	0.89	0.89
Adj. Flow (vph)	45	82	80	623	607	31
RTOR Reduction (vph)	0	58	0	0	0	0
Lane Group Flow (vph)	45	24	80	623	607	31
Heavy Vehicles (%)	0%	0%	1%	1%	2%	2%
Turn Type		pt+ov	pm+pt			Free
Protected Phases	8	1 8	1	6	2	
Permitted Phases			6			Free
Actuated Green, G (s)	5.4	16.1	48.1	48.1	36.4	66.5
Effective Green, g (s)	7.4	19.1	51.1	51.1	39.4	66.5
Actuated g/C Ratio	0.11	0.29	0.77	0.77	0.59	1.00
Clearance Time (s)	6.0		7.0	7.0	7.0	
Vehicle Extension (s)	3.0		3.0	5.0	5.0	
Lane Grp Cap (vph)	201	464	655	1445	2097	1583
v/s Ratio Prot	c0.02	0.05	0.01	c0.33	0.17	
v/s Ratio Perm			0.08			0.02
v/c Ratio	0.22	0.05	0.12	0.43	0.29	0.02
Uniform Delay, d1	26.9	17.1	2.2	2.7	6.7	0.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.6	0.0	0.1	0.4	0.2	0.0
Delay (s)	27.5	17.2	2.2	3.1	6.8	0.0
Level of Service	C	B	A	A	A	A
Approach Delay (s)	20.8			3.0	6.5	
Approach LOS	C			A	A	

Intersection Summary

HCM Average Control Delay	6.1	HCM Level of Service	A
HCM Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	66.5	Sum of lost time (s)	8.0
Intersection Capacity Utilization	39.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis

1: EAST MAIN & SR 315

10/14/2005



Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations	↖	↑	↗	↖	↑	↗	↖	↕	↖	↖	↕	↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	0.99	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	1863	1583	1787	1881	1599	1770	3506	3506	1787	3574	1599
Flt Permitted	0.60	1.00	1.00	0.71	1.00	1.00	0.29	1.00	1.00	0.34	1.00	1.00
Satd. Flow (perm)	1121	1863	1583	1343	1881	1599	545	3506	3506	635	3574	1599
Volume (vph)	87	59	75	74	108	69	95	614	41	29	609	61
Peak-hour factor, PHF	0.89	0.89	0.89	0.86	0.86	0.86	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	98	66	84	86	126	80	106	682	46	32	677	68
RTOR Reduction (vph)	0	0	72	0	0	69	0	5	0	0	0	37
Lane Group Flow (vph)	98	66	12	86	126	11	106	723	0	32	677	31
Heavy Vehicles (%)	2%	2%	2%	1%	1%	1%	2%	2%	2%	1%	1%	1%
Turn Type	pm+pt		Perm	pm+pt		Perm	pm+pt			pm+pt		Perm
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases	8		8	4		4	6			2		2
Actuated Green, G (s)	13.8	8.3	8.3	13.8	8.3	8.3	42.5	37.0		35.7	33.6	33.6
Effective Green, g (s)	19.8	11.3	11.3	19.8	11.3	11.3	48.5	40.0		41.7	36.6	36.6
Actuated g/C Ratio	0.24	0.14	0.14	0.24	0.14	0.14	0.60	0.49		0.52	0.45	0.45
Clearance Time (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0		7.0	7.0	7.0
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0	1.0	1.0		1.0	1.0	1.0
Lane Grp Cap (vph)	343	260	221	375	263	223	455	1733		400	1617	723
v/s Ratio Prot	c0.03	0.04		0.02	c0.07		c0.02	c0.21		0.01	0.19	
v/s Ratio Perm	0.04		0.05	0.03		0.05	0.12			0.04		0.04
v/c Ratio	0.29	0.25	0.05	0.23	0.48	0.05	0.23	0.42		0.08	0.42	0.04
Uniform Delay, d1	24.4	31.0	30.2	24.2	32.1	30.2	7.7	13.0		9.8	15.0	12.4
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.2	0.2	0.0	0.1	0.5	0.0	0.1	0.1		0.0	0.1	0.0
Delay (s)	24.6	31.2	30.2	24.4	32.6	30.2	7.8	13.1		9.8	15.0	12.4
Level of Service	C	C	C	C	C	C	A	B		A	B	B
Approach Delay (s)		28.3			29.5			12.4			14.6	
Approach LOS		C			C			B			B	

Intersection Summary

HCM Average Control Delay	17.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	80.9	Sum of lost time (s)	16.0
Intersection Capacity Utilization	43.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
 2: LAIRD & SR 315

10/14/2005



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NEB	SWL	SWT	SWR
Lane Configurations		↕		↕	↕		↕	↕		↕	↕	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00		0.95	0.95		1.00	0.95		1.00	0.95	
Frt		0.90		1.00	0.93		1.00	0.99		1.00	1.00	
Flt Protected		0.99		0.95	0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1668		1681	1608		1770	3490		1770	3534	
Flt Permitted		0.20		0.71	0.81		0.22	1.00		0.21	1.00	
Satd. Flow (perm)		340		1253	1340		404	3490		398	3534	
Volume (vph)	12	6	43	23	1	9	62	736	75	62	824	8
Peak-hour factor, PHF	0.81	0.81	0.81	0.64	0.64	0.64	0.85	0.85	0.85	0.88	0.88	0.88
Adj. Flow (vph)	15	7	53	36	2	14	73	866	88	70	936	9
RTOR Reduction (vph)	0	46	0	0	13	0	0	8	0	0	0	0
Lane Group Flow (vph)	0	29	0	22	17	0	73	946	0	70	945	0
Turn Type	Perm			Perm			pm+pt			pm+pt		
Protected Phases		3			4		1	6		5	2	
Permitted Phases	3			4			6	6		2		
Actuated Green, G (s)		9.9		4.0	4.0		42.2	38.3		42.2	38.3	
Effective Green, g (s)		11.9		6.0	6.0		50.2	42.3		50.2	42.3	
Actuated g/C Ratio		0.14		0.07	0.07		0.60	0.50		0.60	0.50	
Clearance Time (s)		6.0		6.0	6.0		8.0	8.0		8.0	8.0	
Vehicle Extension (s)		2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)		48		89	96		369	1755		366	1778	
v/s Ratio Prot							c0.02	c0.27		0.02	0.27	
v/s Ratio Perm		c0.22		0.02	c0.02		0.10			0.10		
v/c Ratio		0.61		0.25	0.18		0.20	0.54		0.19	0.53	
Uniform Delay, d1		33.9		36.9	36.7		8.1	14.3		8.1	14.2	
Progression Factor		1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		15.3		0.5	0.3		0.1	0.2		0.1	0.2	
Delay (s)		49.2		37.4	37.1		8.2	14.4		8.2	14.3	
Level of Service		D		D	D		A	B		A	B	
Approach Delay (s)		49.2			37.2			14.0			13.9	
Approach LOS		D			D			B			B	

Intersection Summary

HCM Average Control Delay	15.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	84.1	Sum of lost time (s)	16.0
Intersection Capacity Utilization	46.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 17: SR 315 & MOTORWORLD

10/14/2005



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↙	↑↑		↙	↑↑			↑	↗		↙	↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	1.00
Fr't	1.00	1.00		1.00	1.00			1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.95	1.00		0.95	1.00
Satd. Flow (prot)	1787	3563		1787	3568			1760	1568		1805	1615
Flt Permitted	0.24	1.00		0.22	1.00			0.72	1.00		0.74	1.00
Satd. Flow (perm)	458	3563		419	3568			1325	1568		1407	1615
Volume (vph)	18	836	19	5	875	10	21	1	9	28	0	120
Peak-hour factor, PHF	0.85	0.85	0.85	0.93	0.93	0.93	0.83	0.83	0.83	0.62	0.62	0.62
Adj. Flow (vph)	21	984	22	5	941	11	25	1	11	45	0	194
RTOR Reduction (vph)	0	1	0	0	1	0	0	0	9	0	0	160
Lane Group Flow (vph)	21	1005	0	5	951	0	0	26	2	0	45	34
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	3%	3%	3%	0%	0%	0%
Turn Type	pm+pt			pm+pt			Perm		Perm	Perm		Perm
Protected Phases	1	6		5	2			4			8	
Permitted Phases	6			2			4		4		8	
Actuated Green, G (s)	25.8	24.8		25.8	24.8			7.1	7.1		7.1	7.1
Effective Green, g (s)	30.8	27.8		30.8	27.8			9.1	9.1		9.1	9.1
Actuated g/C Ratio	0.59	0.54		0.59	0.54			0.18	0.18		0.18	0.18
Clearance Time (s)	6.0	7.0		6.0	7.0			6.0	6.0		6.0	6.0
Vehicle Extension (s)	2.0	2.0		2.0	2.0			2.0	2.0		2.0	2.0
Lane Grp Cap (vph)	349	1909		328	1911			232	275		247	283
v/s Ratio Prot	c0.00	c0.28		0.00	0.27							
v/s Ratio Perm	0.03			0.01				0.02	0.01		0.03	0.12
v/c Ratio	0.06	0.53		0.02	0.50			0.11	0.01		0.18	0.12
Uniform Delay, d1	4.6	7.8		4.7	7.6			18.0	17.7		18.2	18.0
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	1.00
Incremental Delay, d2	0.0	0.1		0.0	0.1			0.1	0.0		0.1	0.1
Delay (s)	4.6	7.9		4.7	7.7			18.1	17.7		18.4	18.1
Level of Service	A	A		A	A			B	B		B	B
Approach Delay (s)		7.8			7.7			18.0			18.1	
Approach LOS		A			A			B			B	

Intersection Summary

HCM Average Control Delay	9.0	HCM Level of Service	A
HCM Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	51.9	Sum of lost time (s)	12.0
Intersection Capacity Utilization	47.8%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis

22: SR 315 & 309 NB RAMPS

10/14/2005



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↵	↕		↵	↕	↗		↕			↕	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0					4.0	
Lane Util. Factor	1.00	0.95			0.95	1.00					1.00	
Frt	1.00	1.00			1.00	0.85					1.00	
Flt Protected	0.95	1.00			1.00	1.00					0.95	
Satd. Flow (prot)	1787	3574			3610	1615					1787	
Flt Permitted	0.18	1.00			1.00	1.00					0.76	
Satd. Flow (perm)	334	3574			3610	1615					1424	
Volume (vph)	526	685	0	0	709	307	0	0	0	188	0	0
Peak-hour factor, PHF	0.98	0.98	0.98	0.84	0.84	0.84	0.50	0.50	0.50	0.92	0.92	0.92
Adj. Flow (vph)	537	699	0	0	844	365	0	0	0	204	0	0
RTOR Reduction (vph)	0	0	0	0	0	225	0	0	0	0	0	0
Lane Group Flow (vph)	537	699	0	0	844	140	0	0	0	0	204	0
Heavy Vehicles (%)	1%	1%	1%	0%	0%	0%	0%	0%	0%	1%	1%	1%
Turn Type	pm+pt			Perm		Perm	Perm			Perm		
Protected Phases	1	6			2			8				4
Permitted Phases	6			2		2	8			4		
Actuated Green, G (s)	59.9	59.9			31.8	31.8						16.1
Effective Green, g (s)	61.9	61.9			33.8	33.8						18.1
Actuated g/C Ratio	0.70	0.70			0.38	0.38						0.21
Clearance Time (s)	4.0	6.0			6.0	6.0						6.0
Vehicle Extension (s)	3.0	3.0			3.0	3.0						3.0
Lane Grp Cap (vph)	633	2514			1387	620						293
v/s Ratio Prot	c0.23	0.20			0.23							
v/s Ratio Perm	c0.36					0.23						c0.14
v/c Ratio	0.85	0.28			0.61	0.23						0.70
Uniform Delay, d1	17.5	4.8			21.8	18.3						32.4
Progression Factor	0.59	0.76			1.00	1.00						1.00
Incremental Delay, d2	8.5	0.2			2.0	0.8						7.0
Delay (s)	18.9	3.9			23.8	19.1						39.4
Level of Service	B	A			C	B						D
Approach Delay (s)		10.4			22.4			0.0				39.4
Approach LOS		B			C			A				D

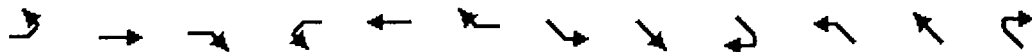
Intersection Summary

HCM Average Control Delay	18.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	88.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	69.2%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
 24: SR 315 & 309 SB RAMPS

10/14/2005



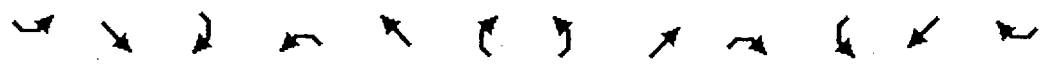
Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations		↑↑	↑	↘	↑↑		↘↘					
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0		4.0					
Lane Util. Factor		0.95	1.00	1.00	0.95		0.97					
Frt		1.00	0.85	1.00	1.00		1.00					
Flt Protected		1.00	1.00	0.95	1.00		0.95					
Satd. Flow (prot)		3610	1615	1787	3574		3502					
Flt Permitted		1.00	1.00	0.12	1.00		0.95					
Satd. Flow (perm)		3610	1615	234	3574		3502					
Volume (vph)	0	983	388	320	803	0	228	0	0	0	0	0
Peak-hour factor, PHF	0.96	0.96	0.96	0.93	0.93	0.93	0.89	0.89	0.89	0.92	0.92	0.92
Adj. Flow (vph)	0	1024	404	344	863	0	256	0	0	0	0	0
RTOR Reduction (vph)	0	0	239	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	1024	165	344	863	0	256	0	0	0	0	0
Heavy Vehicles (%)	0%	0%	0%	1%	1%	1%	0%	0%	0%	0%	0%	0%
Turn Type			Perm	pm+pt			custom					
Protected Phases		6		5		2						
Permitted Phases			6	2			4					
Actuated Green, G (s)		34.0	34.0	66.1		66.1	9.9					
Effective Green, g (s)		36.0	36.0	68.1		68.1	11.9					
Actuated g/C Ratio		0.41	0.41	0.77		0.77	0.14					
Clearance Time (s)		6.0	6.0	4.0		6.0	6.0					
Vehicle Extension (s)		3.0	3.0	3.0		3.0	2.0					
Lane Grp Cap (vph)		1477	661	677		2766	474					
v/s Ratio Prot		c0.28		c0.16		0.24						
v/s Ratio Perm			0.25	0.23			0.07					
v/c Ratio		0.69	0.25	0.51		0.31	0.54					
Uniform Delay, d1		21.4	17.1	12.9		3.0	35.5					
Progression Factor		1.00	1.00	1.86		0.32	1.00					
Incremental Delay, d2		2.7	0.9	0.6		0.3	0.7					
Delay (s)		24.1	18.0	24.6		1.2	36.2					
Level of Service		C	B	C		A	D					
Approach Delay (s)		22.4				7.9		36.2			0.0	
Approach LOS		C				A		D			A	

Intersection Summary

HCM Average Control Delay	17.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	88.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	61.4%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Unsignalized Intersection Capacity Analysis
 3: POCONO DOWNS & SR 315

10/14/2005



Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations	[Icons]											
Sign Control	Stop			Stop			Free			Free		
Grade	0%											
Volume (veh/h)	206	0	0	0	0	1	0	426	1	1	353	248
Peak Hour Factor	0.68	0.68	0.68	0.25	0.25	0.25	0.93	0.93	0.93	0.83	0.83	0.83
Hourly flow rate (vph)	303	0	0	0	0	4	0	458	1	1	425	299
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type	TWLTL			TWLTL								
Median storage (veh)	0			0								
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	810	1036	362	674	1185	230	724				459	
vC1, stage 1 conf vol	577	577		459	459							
vC2, stage 2 conf vol	233	459		215	727							
vCu, unblocked vol	810	1036	362	674	1185	230	724				459	
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1				4.1	
tC, 2 stage (s)	6.5	5.5		6.5	5.5							
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2				2.2	
p0 queue free %	0	100	100	100	100	99	100				100	
cM capacity (veh/h)	282	260	640	331	230	779	881				1105	

Direction, Lane #	SE 1	NW 1	NE 1	NE 2	SW 1	SW 2	SW 3
Volume Total	303	4	305	154	1	284	441
Volume Left	303	0	0	0	1	0	0
Volume Right	0	4	0	1	0	0	299
cSH	282	779	1700	1700	1105	1700	1700
Volume to Capacity	1.08	0.01	0.18	0.09	0.00	0.17	0.26
Queue Length (ft)	302	0	0	0	0	0	0
Control Delay (s)	115.2	9.6	0.0	0.0	8.3	0.0	0.0
Lane LOS	F	A			A		
Approach Delay (s)	115.2	9.6	0.0		0.0		
Approach LOS	F	A					

Intersection Summary			
Average Delay	23.4		
Intersection Capacity Utilization	42.5%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
 9: POCONO DOWNS RT & SR 315

10/14/2005



Movement	EBL	EBR	NEL	NET	SWT	SWR
Lane Configurations		↗	↖	↕	↕	
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	0	346	343	427	353	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	376	373	464	384	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1361	192	384			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1361	192	384			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	54	68			
cM capacity (veh/h)	95	817	1171			

Direction, Lane #	EB 1	NE 1	NE 2	NE 3	SW 1	SW 2
Volume Total	376	373	232	232	192	192
Volume Left	0	373	0	0	0	0
Volume Right	376	0	0	0	0	0
cSH	817	1171	1700	1700	1700	1700
Volume to Capacity	0.46	0.32	0.14	0.14	0.11	0.11
Queue Length (ft)	61	35	0	0	0	0
Control Delay (s)	13.1	9.5	0.0	0.0	0.0	0.0
Lane LOS	B	A				
Approach Delay (s)	13.1	4.2			0.0	
Approach LOS	B					

Intersection Summary						
Average Delay			5.3			
Intersection Capacity Utilization		37.8%		ICU Level of Service		A
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis
 14: EAST MAIN & POCONO DOWNS

10/14/2005



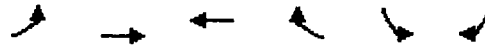
Movement	EBL	EBR	SBL	SBR	NWL	NWR
Lane Configurations		↗	↘		↘	↗
Sign Control	Free		Stop		Free	
Grade	0%		0%		0%	
Volume (veh/h)	0	201	20	0	195	69
Peak Hour Factor	0.96	0.96	0.54	0.54	0.89	0.89
Hourly flow rate (vph)	0	209	37	0	219	78
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			
Median storage (veh)						
Upstream signal (ft)					1239	
pX, platoon unblocked						
vC, conflicting volume	297		467	258		
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	297		467	258		
tC, single (s)	4.1		6.4	6.2		
tC, 2 stage (s)						
tF (s)	2.2		3.5	3.3		
p0 queue free %	100		93	100		
cM capacity (veh/h)	1270		558	786		

Direction, Lane #	EB 1	SB 1	NW 1
Volume Total	209	37	297
Volume Left	0	37	0
Volume Right	0	0	78
cSH	1700	558	1700
Volume to Capacity	0.12	0.07	0.17
Queue Length (ft)	0	5	0
Control Delay (s)	0.0	11.9	0.0
Lane LOS		B	
Approach Delay (s)	0.0	11.9	0.0
Approach LOS		B	

Intersection Summary		
Average Delay		0.8
Intersection Capacity Utilization	25.0%	ICU Level of Service A
Analysis Period (min)		15

HCM Unsignalized Intersection Capacity Analysis
 8: EAST MAIN & POCONO DOWNS RT

10/14/2005



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↑			↗
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	71	201	195	0	0	35
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	77	218	212	0	0	38
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	212				585	212
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	212				585	212
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	94				100	95
cM capacity (veh/h)	1358				447	828

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	296	212	38
Volume Left	77	0	0
Volume Right	0	0	38
cSH	1358	1700	828
Volume to Capacity	0.06	0.12	0.05
Queue Length (ft)	5	0	4
Control Delay (s)	2.4	0.0	9.6
Lane LOS	A		A
Approach Delay (s)	2.4	0.0	9.6
Approach LOS			A

Intersection Summary		
Average Delay		2.0
Intersection Capacity Utilization	31.4%	ICU Level of Service
Analysis Period (min)		15

HCM Unsignalized Intersection Capacity Analysis
 20: EAST MAIN & FIRST

10/14/2005



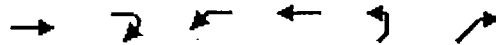
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↔	↔		↕	
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	67	224	190	29	46	44
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	73	243	207	32	50	48
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	238				611	222
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	238				611	222
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	95				88	94
cM capacity (veh/h)	1329				432	817

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	316	238	98
Volume Left	73	0	50
Volume Right	0	32	48
cSH	1329	1700	561
Volume to Capacity	0.05	0.14	0.17
Queue Length (ft)	4	0	16
Control Delay (s)	2.2	0.0	12.8
Lane LOS	A		B
Approach Delay (s)	2.2	0.0	12.8
Approach LOS			B

Intersection Summary			
Average Delay		3.0	
Intersection Capacity Utilization	42.5%		ICU Level of Service
Analysis Period (min)		15	A

HCM Unsignalized Intersection Capacity Analysis
 19: EAST MAIN & SCOTT

10/14/2005



Movement	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations	↑			↑		↑
Sign Control	Free			Free		Stop
Grade	0%			0%		0%
Volume (veh/h)	171	20	81	153	17	120
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	186	22	88	166	18	130
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			208		539	197
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			208		539	197
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			94		96	85
cM capacity (veh/h)			1363		471	844

Direction, Lane #	EB 1	WB 1	NE 1
Volume Total	208	254	149
Volume Left	0	88	18
Volume Right	22	0	130
cSH	1700	1363	769
Volume to Capacity	0.12	0.06	0.19
Queue Length (ft)	0	5	18
Control Delay (s)	0.0	3.1	10.8
Lane LOS		A	B
Approach Delay (s)	0.0	3.1	10.8
Approach LOS			B

Intersection Summary		
Average Delay		3.9
Intersection Capacity Utilization	41.1%	ICU Level of Service A
Analysis Period (min)		15

2017 (ETC+10) BUILD CONDITIONS

HCM Signalized Intersection Capacity Analysis
 28: OAK & SR 315

10/14/2005



Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations	↖	↑	↗		↖	↗	↖	↕	↗	↖	↕	↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00		1.00	1.00	1.00	0.95		1.00	0.95	1.00
Fr _t	1.00	1.00	0.85		1.00	0.85	1.00	1.00		1.00	1.00	0.85
Fl _t Protected	0.95	1.00	1.00		0.96	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1433	1508	1282		1793	1583	1641	3267		1687	3374	1509
Fl _t Permitted	0.54	1.00	1.00		0.74	1.00	0.11	1.00		0.12	1.00	1.00
Satd. Flow (perm)	818	1508	1282		1374	1583	186	3267		214	3374	1509
Volume (vph)	323	36	255	167	47	70	380	1012	30	56	924	118
Peak-hour factor, PHF	0.68	0.68	0.68	0.92	0.92	0.92	0.82	0.82	0.82	0.97	0.97	0.97
Adj. Flow (vph)	475	53	375	182	51	76	463	1234	37	58	953	122
RTOR Reduction (vph)	0	0	215	0	0	43	0	2	0	0	0	0
Lane Group Flow (vph)	475	53	160	0	233	33	463	1269	0	58	953	122
Heavy Vehicles (%)	26%	26%	26%	2%	2%	2%	10%	10%	10%	7%	7%	7%
Turn Type	Perm		Perm	Perm		Perm	pm+pt			pm+pt		Free
Protected Phases		7 8			7 8		1	6		5	2	
Permitted Phases	7 8		7 8	7 8		7 8	6			2		Free
Actuated Green, G (s)	46.0	46.0	46.0		46.0	46.0	54.2	41.8		37.6	31.2	112.2
Effective Green, g (s)	48.0	48.0	48.0		48.0	48.0	56.2	43.8		41.6	33.2	112.2
Actuated g/C Ratio	0.43	0.43	0.43		0.43	0.43	0.50	0.39		0.37	0.30	1.00
Clearance Time (s)							6.0	6.0		6.0	6.0	
Vehicle Extension (s)							3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	350	645	548		588	677	340	1275		190	998	1509
v/s Ratio Prot		0.04					c0.23	0.39		0.02	0.28	
v/s Ratio Perm	c0.58		0.29		0.17	0.05	c0.45			0.09		0.08
v/c Ratio	1.36	0.08	0.29		0.40	0.05	1.36	1.00		0.31	0.95	0.08
Uniform Delay, d1	32.1	19.0	21.0		22.1	18.8	34.1	34.1		26.2	38.8	0.0
Progression Factor	1.00	1.00	1.00		1.00	1.00	1.08	0.99		1.00	1.00	1.00
Incremental Delay, d2	178.3	0.1	0.3		0.4	0.0	176.5	20.5		0.9	18.4	0.1
Delay (s)	210.4	19.1	21.3		22.6	18.8	213.3	54.4		27.1	57.2	0.1
Level of Service	F	B	C		C	B	F	D		C	E	A
Approach Delay (s)		120.7			21.6			96.8			49.5	
Approach LOS		F			C			F			D	

Intersection Summary

HCM Average Control Delay	83.3	HCM Level of Service	F
HCM Volume to Capacity ratio	1.34		
Actuated Cycle Length (s)	112.2	Sum of lost time (s)	8.0
Intersection Capacity Utilization	81.2%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 10: OLD BOSTON & SR 315

10/14/2005



Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations	↘		↕		↙	↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0		4.0	4.0
Lane Util. Factor	1.00		0.95		0.95	0.95
Fr _t	0.93		0.99		1.00	1.00
Fl _t Protected	0.98		1.00		1.00	1.00
Satd. Flow (prot)	1643		3411		3531	3531
Fl _t Permitted	0.98		1.00		0.89	0.89
Satd. Flow (perm)	1643		3411		3146	3146
Volume (vph)	62	68	796	44	38	815
Peak-hour factor, PHF	0.61	0.61	0.89	0.89	0.91	0.91
Adj. Flow (vph)	102	111	894	49	42	896
RTOR Reduction (vph)	65	0	5	0	0	0
Lane Group Flow (vph)	148	0	938	0	0	938
Heavy Vehicles (%)	5%	5%	5%	5%	2%	2%
Turn Type					pm+pt	
Protected Phases	4		6		5	2
Permitted Phases					2	2
Actuated Green, G (s)	7.4		20.4			20.4
Effective Green, g (s)	8.4		21.4			21.4
Actuated g/C Ratio	0.22		0.57			0.57
Clearance Time (s)	5.0		5.0			5.0
Vehicle Extension (s)	2.0		1.0			1.0
Lane Grp Cap (vph)	365		1931			1781
v/s Ratio Prot	c0.13		0.28			
v/s Ratio Perm						c0.30
v/c Ratio	0.41		0.49			0.53
Uniform Delay, d1	12.6		4.9			5.1
Progression Factor	1.00		1.00			1.00
Incremental Delay, d2	0.3		0.1			0.1
Delay (s)	12.8		5.0			5.2
Level of Service	B		A			A
Approach Delay (s)	12.8		5.0			5.2
Approach LOS	B		A			A

Intersection Summary

HCM Average Control Delay	5.9	HCM Level of Service	A
HCM Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	37.8	Sum of lost time (s)	8.0
Intersection Capacity Utilization	64.6%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis

13: LAFLIN & SR 315

10/14/2005



Movement	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations	↶	↶	↶	↷	↷	↷
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	1.00
Fr _t	1.00	0.85	1.00	1.00	1.00	0.85
Fl _t Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1770	1583	1752	1845	3471	1553
Fl _t Permitted	0.95	1.00	0.25	1.00	1.00	1.00
Satd. Flow (perm)	1770	1583	455	1845	3471	1553
Volume (vph)	70	99	141	952	855	122
Peak-hour factor, PHF	0.89	0.89	0.91	0.91	0.95	0.95
Adj. Flow (vph)	79	111	155	1046	900	128
RTOR Reduction (vph)	0	84	0	0	0	97
Lane Group Flow (vph)	79	27	155	1046	900	31
Heavy Vehicles (%)	2%	2%	3%	3%	4%	4%
Turn Type	custom		pm+pt		Over	
Protected Phases	8	8	1	6	2	8
Permitted Phases	8	1	6			
Actuated Green, G (s)	7.6	14.4	57.8	57.8	44.0	7.6
Effective Green, g (s)	9.6	19.4	60.8	60.8	47.0	9.6
Actuated g/C Ratio	0.12	0.25	0.78	0.78	0.60	0.12
Clearance Time (s)	6.0	6.0	7.0	7.0	7.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0	5.0	5.0	3.0
Lane Grp Cap (vph)	217	472	515	1431	2081	190
v/s Ratio Prot	0.04	0.03	0.04	c0.57	0.26	c0.08
v/s Ratio Perm		0.04	0.20			
v/c Ratio	0.36	0.06	0.30	0.73	0.43	0.16
Uniform Delay, d ₁	31.6	22.5	3.3	4.6	8.5	30.8
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d ₂	1.0	0.1	0.3	2.4	0.3	0.4
Delay (s)	32.6	22.6	3.6	6.9	8.8	31.2
Level of Service	C	C	A	A	A	C
Approach Delay (s)	26.8			6.5	11.6	
Approach LOS	C			A	B	

Intersection Summary

HCM Average Control Delay	10.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	78.4	Sum of lost time (s)	8.0
Intersection Capacity Utilization	60.7%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 4: SUNSHINE MARKET & SR 315

10/14/2005



Movement	SBL	SBR	NEL	NET	SWT	SWR
Lane Configurations	↙	↗	↙	↑	↑↑	↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1805	1615	1770	1863	3471	1553
Flt Permitted	0.95	1.00	0.24	1.00	1.00	1.00
Satd. Flow (perm)	1805	1615	439	1863	3471	1553
Volume (vph)	100	117	124	734	841	88
Peak-hour factor, PHF	0.93	0.93	0.82	0.82	0.92	0.92
Adj. Flow (vph)	108	126	151	895	914	96
RTOR Reduction (vph)	0	86	0	0	0	0
Lane Group Flow (vph)	108	40	151	895	914	96
Heavy Vehicles (%)	0%	0%	2%	2%	4%	4%
Turn Type		pt+ov	pm+pt			Free
Protected Phases	8	18	1	6	2	
Permitted Phases			6			Free
Actuated Green, G (s)	8.9	21.2	54.2	54.2	40.9	76.1
Effective Green, g (s)	10.9	24.2	57.2	57.2	43.9	76.1
Actuated g/C Ratio	0.14	0.32	0.75	0.75	0.58	1.00
Clearance Time (s)	6.0		7.0	7.0	7.0	
Vehicle Extension (s)	3.0		3.0	5.0	5.0	
Lane Grp Cap (vph)	259	514	493	1400	2002	1553
v/s Ratio Prot	c0.06	0.08	0.04	c0.48	0.26	
v/s Ratio Perm			0.19			0.06
v/c Ratio	0.42	0.08	0.31	0.64	0.46	0.06
Uniform Delay, d1	29.7	18.1	3.8	4.5	9.2	0.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.1	0.1	0.4	1.3	0.3	0.1
Delay (s)	30.8	18.2	4.1	5.9	9.6	0.1
Level of Service	C	B	A	A	A	A
Approach Delay (s)	24.0			5.6	8.7	
Approach LOS	C			A	A	

Intersection Summary

HCM Average Control Delay	8.9	HCM Level of Service	A
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	76.1	Sum of lost time (s)	8.0
Intersection Capacity Utilization	50.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis

1: EAST MAIN & SR 315

10/14/2005

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations	↖	↑	↗	↖	↑	↗	↖	↕	↕	↖	↕	↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	0.95	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1703	1792	1524	1752	1845	1568	1752	3469	1736	3471	1553	1553
Flt Permitted	0.50	1.00	1.00	0.71	1.00	1.00	0.18	1.00	0.20	1.00	1.00	1.00
Satd. Flow (perm)	889	1792	1524	1312	1845	1568	335	3469	367	3471	1553	1553
Volume (vph)	134	66	104	108	117	73	114	824	61	49	834	136
Peak-hour factor, PHF	0.94	0.94	0.94	0.84	0.84	0.84	0.87	0.87	0.87	0.89	0.89	0.89
Adj. Flow (vph)	143	70	111	129	139	87	131	947	70	55	937	153
RTOR Reduction (vph)	0	0	95	0	0	75	0	5	0	0	0	82
Lane Group Flow (vph)	143	70	16	129	139	12	131	1012	0	55	937	71
Heavy Vehicles (%)	6%	6%	6%	3%	3%	3%	3%	3%	3%	4%	4%	4%
Turn Type	pm+pt		Perm	pm+pt		Perm	pm+pt			pm+pt		Perm
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases	8		8	4		4	6			2		2
Actuated Green, G (s)	21.5	11.7	11.7	20.3	11.1	11.1	55.0	47.0		47.2	43.1	43.1
Effective Green, g (s)	27.5	14.7	14.7	26.3	14.1	14.1	61.0	50.0		53.2	46.1	46.1
Actuated g/C Ratio	0.28	0.15	0.15	0.26	0.14	0.14	0.61	0.50		0.53	0.46	0.46
Clearance Time (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0		7.0	7.0	7.0
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0	1.0	1.0		1.0	1.0	1.0
Lane Grp Cap (vph)	349	263	224	399	260	221	360	1735		292	1600	716
v/s Ratio Prot	c0.05	0.04		0.04	c0.08		c0.04	c0.29		0.01	0.27	
v/s Ratio Perm	0.06		0.07	0.05		0.06	0.18			0.09		0.10
v/c Ratio	0.41	0.27	0.07	0.32	0.53	0.06	0.36	0.58		0.19	0.59	0.10
Uniform Delay, d1	28.8	37.9	36.8	29.3	39.9	37.2	10.9	17.6		12.3	19.9	15.2
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.84	1.78		1.00	1.00	1.00
Incremental Delay, d2	0.3	0.2	0.1	0.2	1.1	0.0	0.2	1.0		0.1	1.6	0.3
Delay (s)	29.1	38.1	36.8	29.5	41.0	37.2	20.2	32.5		12.4	21.5	15.5
Level of Service	C	D	D	C	D	D	C	C		B	C	B
Approach Delay (s)		33.7			35.9			31.1			20.2	
Approach LOS		C			D			C			C	

Intersection Summary			
HCM Average Control Delay	27.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	53.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis

2: LAIRD & SR 315

10/14/2005



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕		↕	↕		↕	↕		↕	↕	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00		0.95	0.95		1.00	0.95		1.00	0.95	
Fr _t		0.89		1.00	0.94		1.00	0.99		1.00	1.00	
Fl _t Protected		0.99		0.95	0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1554		1681	1626		1736	3437		1736	3459	
Fl _t Permitted		0.11		0.66	0.75		0.08	1.00		0.12	1.00	
Satd. Flow (perm)		175		1160	1238		146	3437		221	3459	
Volume (vph)	29	3	134	31	6	14	108	1137	81	15	1300	30
Peak-hour factor, PHF	0.53	0.53	0.53	0.92	0.92	0.92	0.96	0.96	0.96	0.94	0.94	0.94
Adj. Flow (vph)	55	6	253	34	7	15	112	1184	84	16	1383	32
RTOR Reduction (vph)	0	149	0	0	14	0	0	4	0	0	2	0
Lane Group Flow (vph)	0	165	0	21	21	0	112	1264	0	16	1413	0
Heavy Vehicles (%)	8%	8%	8%	2%	2%	2%	4%	4%	4%	4%	4%	4%
Turn Type	Perm			Perm			pm+pt			pm+pt		
Protected Phases		3			4		1	6		5	2	
Permitted Phases	3			4			6	6		2		
Actuated Green, G (s)		19.0		4.1	4.1		53.5	46.5		44.3	41.9	
Effective Green, g (s)		21.0		6.1	6.1		60.9	50.5		52.3	45.9	
Actuated g/C Ratio		0.21		0.06	0.06		0.61	0.50		0.52	0.46	
Clearance Time (s)		6.0		6.0	6.0		8.0	8.0		8.0	8.0	
Vehicle Extension (s)		2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)		37		71	76		264	1736		213	1588	
v/s Ratio Prot							c0.05	c0.37		0.00	c0.41	
v/s Ratio Perm		c1.79		0.02	c0.03		0.21			0.03		
v/c Ratio		4.45		0.30	0.28		0.42	0.73		0.08	0.89	
Uniform Delay, d ₁		39.5		44.9	44.8		17.1	19.4		13.7	24.7	
Progression Factor		1.00		1.00	1.00		1.98	0.70		1.45	1.54	
Incremental Delay, d ₂		1613.4		0.8	0.7		0.4	2.4		0.1	7.4	
Delay (s)		1652.9		45.7	45.6		34.1	16.0		19.9	45.6	
Level of Service		F		D	D		C	B		B	D	
Approach Delay (s)		1652.9			45.6			17.5			45.3	
Approach LOS		F			D			B			D	

Intersection Summary

HCM Average Control Delay	191.9	HCM Level of Service	F
HCM Volume to Capacity ratio	2.85		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	69.6%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 17: SR 315 & MOTORWORLD

10/14/2005



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↙	↑↑		↙	↑↑			↑	↗		↑	↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	1.00
Frt	1.00	1.00		1.00	1.00			1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.95	1.00		0.95	1.00
Satd. Flow (prot)	1752	3492		1719	3425			1796	1599		1796	1599
Flt Permitted	0.08	1.00		0.17	1.00			0.68	1.00		0.66	1.00
Satd. Flow (perm)	150	3492		302	3425			1286	1599		1246	1599
Volume (vph)	92	1253	30	13	1415	37	66	3	15	58	3	206
Peak-hour factor, PHF	0.95	0.95	0.95	0.85	0.85	0.85	0.84	0.84	0.84	0.84	0.84	0.84
Adj. Flow (vph)	97	1319	32	15	1665	44	79	4	18	69	4	245
RTOR Reduction (vph)	0	1	0	0	2	0	0	0	16	0	0	134
Lane Group Flow (vph)	97	1350	0	15	1707	0	0	83	2	0	73	111
Heavy Vehicles (%)	3%	3%	3%	5%	5%	5%	1%	1%	1%	1%	1%	1%
Turn Type	pm+pt			pm+pt			Perm		Perm	Perm		Perm
Protected Phases	1	6		5	2			4			8	
Permitted Phases	6			2			4		4	8		8
Actuated Green, G (s)	74.1	68.5		68.5	65.7			9.7	9.7		9.7	9.7
Effective Green, g (s)	79.1	71.5		73.5	68.7			11.7	11.7		11.7	11.7
Actuated g/C Ratio	0.79	0.72		0.74	0.69			0.12	0.12		0.12	0.12
Clearance Time (s)	6.0	7.0		6.0	7.0			6.0	6.0		6.0	6.0
Vehicle Extension (s)	2.0	2.0		2.0	2.0			2.0	2.0		2.0	2.0
Lane Grp Cap (vph)	240	2497		290	2353			150	187		146	187
v/s Ratio Prot	c0.03	0.39		0.00	c0.50							
v/s Ratio Perm	0.29			0.04				0.06	0.01		0.06	0.15
v/c Ratio	0.40	0.54		0.05	0.73			0.55	0.01		0.50	0.59
Uniform Delay, d1	9.5	6.6		4.3	9.8			41.7	39.0		41.4	41.9
Progression Factor	1.00	1.00		0.17	0.39			1.00	1.00		1.00	1.00
Incremental Delay, d2	0.4	0.8		0.0	0.7			2.5	0.0		1.0	3.3
Delay (s)	10.0	7.5		0.7	4.5			44.2	39.0		42.4	45.2
Level of Service	A	A		A	A			D	D		D	D
Approach Delay (s)		7.6			4.5			43.3			44.6	
Approach LOS		A			A			D			D	

Intersection Summary

HCM Average Control Delay	10.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	68.9%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 22: SR 315 & 309 NB RAMPS

10/16/2005

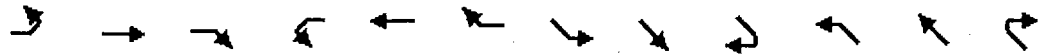
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖↗		↖	↖↗	↗		↕			↖	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00			1.00	
Frt	1.00	1.00		1.00	1.00	0.85		1.00			1.00	
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.97			0.95	
Satd. Flow (prot)	1787	3572		1770	3539	1583		1847			1752	
Flt Permitted	0.12	1.00		0.24	1.00	1.00		1.00			0.75	
Satd. Flow (perm)	224	3572		453	3539	1583		1900			1380	
Volume (vph)	600	1089	5	1	1118	568	4	3	0	286	0	0
Peak-hour factor, PHF	0.94	0.94	0.94	0.86	0.86	0.86	0.50	0.50	0.50	0.84	0.84	0.84
Adj. Flow (vph)	638	1159	5	1	1300	660	8	6	0	340	0	0
RTOR Reduction (vph)	0	0	0	0	0	261	0	0	0	0	0	0
Lane Group Flow (vph)	638	1164	0	1	1300	399	0	14	0	0	340	0
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	0%	0%	0%	3%	3%	3%
Turn Type	pm+pt			Perm		Perm	Perm			Perm		
Protected Phases	1	6			2			8			4	
Permitted Phases	6			2		2	8			4		
Actuated Green, G (s)	68.0	68.0		27.6	27.6	27.6		12.0			12.0	
Effective Green, g (s)	70.0	70.0		29.6	29.6	29.6		14.0			14.0	
Actuated g/C Ratio	0.76	0.76		0.32	0.32	0.32		0.15			0.15	
Clearance Time (s)	4.0	6.0		6.0	6.0	6.0		6.0			6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0			3.0	
Lane Grp Cap (vph)	789	2718		146	1139	509		289			210	
v/s Ratio Prot	c0.32	0.33			0.37							
v/s Ratio Perm	0.30			0.00		0.42		0.01			c0.25	
v/c Ratio	0.81	0.43		0.01	1.14	0.78		0.05			1.62	
Uniform Delay, d1	26.1	3.9		21.2	31.2	28.3		33.3			39.0	
Progression Factor	0.87	0.00		1.00	1.00	1.00		1.00			1.00	
Incremental Delay, d2	1.5	0.1		0.1	74.5	11.5		0.1			299.4	
Delay (s)	24.2	0.1		21.3	105.7	39.8		33.4			338.4	
Level of Service	C	A		C	F	D		C			F	
Approach Delay (s)		8.6			83.5			33.4			338.4	
Approach LOS		A			F			C			F	

Intersection Summary

HCM Average Control Delay	71.6	HCM Level of Service	E
HCM Volume to Capacity ratio	1.13		
Actuated Cycle Length (s)	92.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	96.7%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 24: SR 315 & 309 SB RAMPS

10/14/2005



Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations		↑↑	↑	↓	↑↑		↑↓					
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0		4.0					
Lane Util. Factor		0.95	1.00	1.00	0.95		0.97					
Frst		1.00	0.85	1.00	1.00		1.00					
Flt Protected		1.00	1.00	0.95	1.00		0.95					
Satd. Flow (prot)		3574	1599	1770	3539		3400					
Flt Permitted		1.00	1.00	0.11	1.00		0.95					
Satd. Flow (perm)		3574	1599	196	3539		3400					
Volume (vph)	0	1281	566	596	1232	0	413	0	0	0	0	0
Peak-hour factor, PHF	0.93	0.93	0.93	0.89	0.89	0.89	0.66	0.66	0.66	0.92	0.92	0.92
Adj. Flow (vph)	0	1377	609	670	1384	0	626	0	0	0	0	0
RTOR Reduction (vph)	0	0	296	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	1377	313	670	1384	0	626	0	0	0	0	0
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	3%	3%	3%	2%	2%	2%
Turn Type			Perm pm+pt				custom					
Protected Phases		6		5	2							
Permitted Phases			6	2			4					
Actuated Green, G (s)		32.0	32.0	63.0	63.0		17.0					
Effective Green, g (s)		34.0	34.0	65.0	65.0		19.0					
Actuated g/C Ratio		0.37	0.37	0.71	0.71		0.21					
Clearance Time (s)		6.0	6.0	4.0	6.0		6.0					
Vehicle Extension (s)		3.0	3.0	3.0	3.0		2.0					
Lane Grp Cap (vph)		1321	591	600	2500		702					
v/s Ratio Prot		0.39		c0.33	0.39							
v/s Ratio Perm.			0.38	c0.46			0.18					
v/c Ratio		1.04	0.53	1.12	0.55		0.89					
Uniform Delay, d1		29.0	22.7	34.7	6.5		35.5					
Progression Factor		1.00	1.00	0.60	0.43		1.00					
Incremental Delay, d2		36.6	3.4	68.2	0.6		13.3					
Delay (s)		65.6	26.1	89.0	3.4		48.8					
Level of Service		E	C	F	A		D					
Approach Delay (s)		53.5			31.3			48.8			0.0	
Approach LOS		D			C			D			A	

Intersection Summary

HCM Average Control Delay	43.1	HCM Level of Service	D
HCM Volume to Capacity ratio	1.05		
Actuated Cycle Length (s)	92.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	90.2%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

HCM Unsignalized Intersection Capacity Analysis
 3: POCONO DOWNS & SR 315

10/14/2005



Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations	↵			↕			↗			↘		
Sign Control	Stop			Stop			Free			Free		
Grade	0%			0%			0%			0%		
Volume (veh/h)	195	0	0	0	0	0	0	663	0	0	687	271
Peak Hour Factor	0.79	0.79	0.79	0.92	0.92	0.92	0.90	0.90	0.90	0.87	0.87	0.87
Hourly flow rate (vph)	247	0	0	0	0	0	0	737	0	0	790	311
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type	TWLTL			TWLTL								
Median storage (veh)	0			0								
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1314	1682	551	1131	1838	368	1101				737	
vC1, stage 1 conf vol	945	945		737	737							
vC2, stage 2 conf vol	368	737		395	1101							
vCu, unblocked vol	1314	1682	551	1131	1838	368	1101				737	
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1				4.1	
tC, 2 stage (s)	6.5	5.5		6.5	5.5							
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2				2.2	
p0 queue free %	0	100	100	100	100	100	100				100	
cM capacity (veh/h)	164	159	478	207	140	629	636				865	

Direction, Lane #	SE 1	NW 1	NE 1	NE 2	SW 1	SW 2	SW 3
Volume Total	247	0	491	246	0	526	575
Volume Left	247	0	0	0	0	0	0
Volume Right	0	0	0	0	0	0	311
cSH	164	1700	1700	1700	1700	1700	1700
Volume to Capacity	1.51	0.00	0.29	0.14	0.00	0.31	0.34
Queue Length (ft)	403	0	0	0	0	0	0
Control Delay (s)	308.6	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	F	A					
Approach Delay (s)	308.6	0.0	0.0		0.0		
Approach LOS	F	A					

Intersection Summary

Average Delay	36.5	
Intersection Capacity Utilization	45.1%	ICU Level of Service
Analysis Period (min)	15	A

HCM Unsignalized Intersection Capacity Analysis
 8: POCONO DOWNS RT & SR 315

10/14/2005



Movement	EBL	EBR	NEL	NET	SWT	SWR
Lane Configurations		↗	↖	↕	↕	
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	0	332	368	663	687	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	361	400	721	747	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1907	373	747			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1907	373	747			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	42	53			
cM capacity (veh/h)	32	624	857			

Direction, Lane #	EB 1	NE 1	NE 2	NE 3	SW 1	SW 2
Volume Total	361	400	360	360	373	373
Volume Left	0	400	0	0	0	0
Volume Right	361	0	0	0	0	0
cSH	624	857	1700	1700	1700	1700
Volume to Capacity	0.58	0.47	0.21	0.21	0.22	0.22
Queue Length (ft)	92	63	0	0	0	0
Control Delay (s)	18.4	12.8	0.0	0.0	0.0	0.0
Lane LOS	C	B				
Approach Delay (s)	18.4	4.6			0.0	
Approach LOS	C					

Intersection Summary		
Average Delay	5.3	
Intersection Capacity Utilization	46.2%	ICU Level of Service A
Analysis Period (min)	15	

HCM Unsignalized Intersection Capacity Analysis
 14: EAST MAIN & POCONO DOWNS

10/14/2005



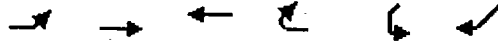
Movement	EBL	EBR	SBL	SBR	NWL	NWR
Lane Configurations		↗	↖		↘	↙
Sign Control	Free		Stop		Free	
Grade	0%		0%		0%	
Volume (veh/h)	0	290	14	0	319	48
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	315	15	0	347	52
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None				
Median storage veh						
Upstream signal (ft)					1239	
pX, platoon unblocked						
vC, conflicting volume	399		688	373		
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	399		688	373		
tC, single (s)	4.1		6.4	6.2		
tC, 2 stage (s)						
tF (s)	2.2		3.5	3.3		
p0 queue free %	100		96	100		
cM capacity (veh/h)	1160		412	673		

Direction, Lane #	EB 1	SB 1	NW 1
Volume Total	315	15	399
Volume Left	0	15	0
Volume Right	0	0	52
cSH	1700	412	1700
Volume to Capacity	0.19	0.04	0.23
Queue Length (ft)	0	3	0
Control Delay (s)	0.0	14.1	0.0
Lane LOS		B	
Approach Delay (s)	0.0	14.1	0.0
Approach LOS		B	

Intersection Summary			
Average Delay		0.3	
Intersection Capacity Utilization	30.6%		ICU Level of Service A
Analysis Period (min)		15	

HCM Unsignalized Intersection Capacity Analysis
 34: EAST MAIN & POCONO DOWNS RT

10/14/2005



Movement	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations		↕	↑			↗
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	78	290	319	0	0	30
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	85	315	347	0	0	33
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None		
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	347				832	347
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	347				832	347
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	93				100	95
cM capacity (veh/h)	1212				316	696

Direction, Lane #	EB 1	WB 1	SW 1
Volume Total	400	347	33
Volume Left	85	0	0
Volume Right	0	0	33
cSH	1212	1700	696
Volume to Capacity	0.07	0.20	0.05
Queue Length (ft)	6	0	4
Control Delay (s)	2.3	0.0	10.4
Lane LOS	A		B
Approach Delay (s)	2.3	0.0	10.4
Approach LOS			B

Intersection Summary			
Average Delay		1.6	
Intersection Capacity Utilization	43.0%		ICU Level of Service A
Analysis Period (min)		15	

HCM Unsignalized Intersection Capacity Analysis
 20: EAST MAIN & FIRST

10/14/2005



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↔	↔		↔	
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	94	359	391	62	65	68
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	102	390	425	67	71	74
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	492				1053	459
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	492				1053	459
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	90				69	88
cM capacity (veh/h)	1071				227	602

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	492	492	145
Volume Left	102	0	71
Volume Right	0	67	74
cSH	1071	1700	333
Volume to Capacity	0.10	0.29	0.43
Queue Length (ft)	8	0	53
Control Delay (s)	2.7	0.0	23.9
Lane LOS	A		C
Approach Delay (s)	2.7	0.0	23.9
Approach LOS			C

Intersection Summary		
Average Delay		4.2
Intersection Capacity Utilization	66.2%	ICU Level of Service C
Analysis Period (min)		15

HCM Unsignalized Intersection Capacity Analysis
 19: EAST MAIN & SCOTT

10/14/2005



Movement	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations	↕		↕		↕	
Sign Control	Free		Free		Stop	
Grade	0%		0%		0%	
Volume (veh/h)	245	28	177	282	53	208
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	266	30	192	307	58	226
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			297		973	282
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			297		973	282
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			85		76	70
cM capacity (veh/h)			1265		237	757

Direction, Lane #	EB 1	WB 1	NE 1
Volume Total	297	499	284
Volume Left	0	192	58
Volume Right	30	0	226
cSH	1700	1265	524
Volume to Capacity	0.17	0.15	0.54
Queue Length (ft)	0	13	80
Control Delay (s)	0.0	4.2	19.7
Lane LOS		A	C
Approach Delay (s)	0.0	4.2	19.7
Approach LOS			C

Intersection Summary		
Average Delay	7.1	
Intersection Capacity Utilization	65.0%	ICU Level of Service C
Analysis Period (min)	15	

HCM Signalized Intersection Capacity Analysis

28: OAK & SR 315

10/14/2005



Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations	↔	↑	↗	↔	↖	↗	↔	↕	↖	↔	↖	↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00		1.00	1.00	1.00	0.95		1.00	0.95	1.00
Frt	1.00	1.00	0.85		1.00	0.85	1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00		0.96	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1347	1418	1205		1795	1583	1671	3315		1703	3406	1524
Flt Permitted	0.68	1.00	1.00		0.79	1.00	0.11	1.00		0.13	1.00	1.00
Satd. Flow (perm)	960	1418	1205		1471	1583	202	3315		233	3406	1524
Volume (vph)	296	19	222	74	24	42	240	892	52	34	916	254
Peak-hour factor, PHF	0.92	0.92	0.92	0.84	0.84	0.84	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	322	21	241	88	29	50	264	980	57	37	1007	279
RTOR Reduction (vph)	0	0	118	0	0	24	0	3	0	0	0	0
Lane Group Flow (vph)	322	21	123	0	117	26	264	1034	0	37	1007	279
Heavy Vehicles (%)	34%	34%	34%	2%	2%	2%	8%	8%	8%	6%	6%	6%
Turn Type	Perm		Perm	Perm		Perm	pm+pt			pm+pt		Free
Protected Phases		7 8			7 8		1	6		5	2	
Permitted Phases	7 8		7 8	7 8		7 8	6			2		Free
Actuated Green, G (s)	64.9	64.9	64.9		64.9	64.9	54.1	43.6		33.3	28.8	131.0
Effective Green, g (s)	66.9	66.9	66.9		66.9	66.9	56.1	45.6		37.3	30.8	131.0
Actuated g/C Ratio	0.51	0.51	0.51		0.51	0.51	0.43	0.35		0.28	0.24	1.00
Clearance Time (s)							6.0	6.0		6.0	6.0	
Vehicle Extension (s)							3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	490	724	615		751	808	325	1154		139	801	1524
v/s Ratio Prot		0.01					c0.13	c0.31		0.01	c0.30	
v/s Ratio Perm	c0.34		0.20		0.08	0.03	0.22			0.06		0.18
v/c Ratio	0.66	0.03	0.20		0.16	0.03	0.81	0.90		0.27	1.26	0.18
Uniform Delay, d1	23.6	15.9	17.5		17.0	15.9	35.6	40.5		35.6	50.1	0.0
Progression Factor	1.00	1.00	1.00		1.00	1.00	1.34	0.77		1.00	1.00	1.00
Incremental Delay, d2	3.2	0.0	0.2		0.1	0.0	12.8	8.3		1.0	125.8	0.3
Delay (s)	26.8	15.9	17.6		17.1	16.0	60.6	39.4		36.7	175.9	0.3
Level of Service	C	B	B		B	B	E	D		D	F	A
Approach Delay (s)		22.6			16.8			43.7			135.0	
Approach LOS		C			B			D			F	

Intersection Summary

HCM Average Control Delay	74.5	HCM Level of Service	E
HCM Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	131.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	71.7%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
 10: OLD BOSTON & SR 315

10/14/2005



Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations	↘		↕			↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0			4.0
Lane Util. Factor	1.00		0.95			0.95
Fr _t	0.93		0.99			1.00
Fl _t Protected	0.98		1.00			1.00
Satd. Flow (prot)	1645		3515			3530
Fl _t Permitted	0.98		1.00			0.90
Satd. Flow (perm)	1645		3515			3189
Volume (vph)	34	35	622	30	38	694
Peak-hour factor, PHF	0.81	0.81	0.93	0.93	0.94	0.94
Adj. Flow (vph)	42	43	669	32	40	738
RTOR Reduction (vph)	37	0	3	0	0	0
Lane Group Flow (vph)	48	0	698	0	0	778
Heavy Vehicles (%)	5%	5%	2%	2%	2%	2%
Turn Type					pm+pt	
Protected Phases	4		6		5	2
Permitted Phases					2	2
Actuated Green, G (s)	6.4		37.2			37.2
Effective Green, g (s)	7.4		38.2			38.2
Actuated g/C Ratio	0.14		0.71			0.71
Clearance Time (s)	5.0		5.0			5.0
Vehicle Extension (s)	2.0		1.0			1.0
Lane Grp Cap (vph)	227		2505			2273
v/s Ratio Prot	c0.05		0.20			
v/s Ratio Perm						c0.24
v/c Ratio	0.21		0.28			0.34
Uniform Delay, d ₁	20.5		2.8			2.9
Progression Factor	1.00		1.00			1.00
Incremental Delay, d ₂	0.2		0.0			0.0
Delay (s)	20.7		2.8			3.0
Level of Service	C		A			A
Approach Delay (s)	20.7		2.8			3.0
Approach LOS	C		A			A

Intersection Summary

HCM Average Control Delay	3.8	HCM Level of Service	A
HCM Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	53.6	Sum of lost time (s)	8.0
Intersection Capacity Utilization	52.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 13: LAFLIN & SR 315

10/14/2005



Movement	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations	↘	↗	↘	↗	↕	↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1770	1583	1752	1845	3505	1568
Flt Permitted	0.95	1.00	0.23	1.00	1.00	1.00
Satd. Flow (perm)	1770	1583	426	1845	3505	1568
Volume (vph)	68	90	114	660	803	84
Peak-hour factor, PHF	0.89	0.89	0.93	0.93	0.88	0.88
Adj. Flow (vph)	76	101	123	710	912	95
RTOR Reduction (vph)	0	73	0	0	0	71
Lane Group Flow (vph)	76	28	123	710	912	24
Heavy Vehicles (%)	2%	2%	3%	3%	3%	3%
Turn Type	custom pm+pt			Over		
Protected Phases	8	8	1	6	2	8
Permitted Phases	8	1	6			
Actuated Green, G (s)	8.0	14.9	51.2	51.2	37.3	8.0
Effective Green, g (s)	10.0	19.9	54.2	54.2	40.3	10.0
Actuated g/C Ratio	0.14	0.28	0.75	0.75	0.56	0.14
Clearance Time (s)	6.0	6.0	7.0	7.0	7.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0	5.0	5.0	3.0
Lane Grp Cap (vph)	245	524	502	1385	1956	217
v/s Ratio Prot	0.04	0.03	0.03	c0.38	0.26	c0.06
v/s Ratio Perm		0.04	0.15			
v/c Ratio	0.31	0.05	0.25	0.51	0.47	0.11
Uniform Delay, d1	28.0	19.2	3.6	3.6	9.5	27.2
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.7	0.0	0.3	0.6	0.4	0.2
Delay (s)	28.7	19.3	3.9	4.3	9.9	27.4
Level of Service	C	B	A	A	A	C
Approach Delay (s)	23.3			4.2	11.6	
Approach LOS	C			A	B	

Intersection Summary			
HCM Average Control Delay	9.6	HCM Level of Service	A
HCM Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	72.2	Sum of lost time (s)	8.0
Intersection Capacity Utilization	45.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 4: SUNSHINE MARKET & SR 315

10/14/2005



Movement	SBL	SBR	NEL	NET	SWT	SWR
Lane Configurations	↵	↶	↵	↶	↶↶	↶
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1736	1553	1752	1845	3471	1553
Flt Permitted	0.95	1.00	0.18	1.00	1.00	1.00
Satd. Flow (perm)	1736	1553	338	1845	3471	1553
Volume (vph)	104	162	136	694	902	103
Peak-hour factor, PHF	0.84	0.84	0.97	0.97	0.90	0.90
Adj. Flow (vph)	124	193	140	715	1002	114
RTOR Reduction (vph)	0	65	0	0	0	0
Lane Group Flow (vph)	124	128	140	715	1002	114
Heavy Vehicles (%)	4%	4%	3%	3%	4%	4%
Turn Type		pt+ov	pm+pt			Free
Protected Phases	8	18	1	6	2	
Permitted Phases			6			Free
Actuated Green, G (s)	9.6	22.3	45.0	45.0	31.3	67.6
Effective Green, g (s)	11.6	25.3	48.0	48.0	34.3	67.6
Actuated g/C Ratio	0.17	0.37	0.71	0.71	0.51	1.00
Clearance Time (s)	6.0		7.0	7.0	7.0	
Vehicle Extension (s)	3.0		3.0	5.0	5.0	
Lane Grp Cap (vph)	298	581	443	1310	1761	1553
v/s Ratio Prot	c0.07	0.12	0.05	c0.39	0.29	
v/s Ratio Perm			0.18			0.07
v/c Ratio	0.42	0.22	0.32	0.55	0.57	0.07
Uniform Delay, d1	25.0	14.4	5.0	4.6	11.5	0.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.9	0.2	0.4	0.8	0.7	0.1
Delay (s)	25.9	14.6	5.4	5.5	12.2	0.1
Level of Service	C	B	A	A	B	A
Approach Delay (s)	19.0			5.5	11.0	
Approach LOS	B			A	B	

Intersection Summary

HCM Average Control Delay	10.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	67.6	Sum of lost time (s)	8.0
Intersection Capacity Utilization	49.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1: EAST MAIN & SR 315

10/14/2005



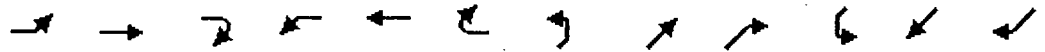
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NEF	SWL	SWT	SWR
Lane Configurations	↘	↑	↗	↘	↑	↗	↘	↕		↘	↕	↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95		1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1787	1881	1599	1770	1863	1583	1770	3520		1719	3438	1538
Flt Permitted	0.54	1.00	1.00	0.57	1.00	1.00	0.18	1.00		0.18	1.00	1.00
Satd. Flow (perm)	1021	1881	1599	1063	1863	1583	336	3520		331	3438	1538
Volume (vph)	143	110	139	108	126	74	140	906	34	90	916	116
Peak-hour factor, PHF	0.88	0.88	0.88	0.95	0.95	0.95	0.90	0.90	0.90	0.89	0.89	0.89
Adj. Flow (vph)	162	125	158	114	133	78	156	1007	38	101	1029	130
RTOR Reduction (vph)	0	0	138	0	0	68	0	3	0	0	0	65
Lane Group Flow (vph)	162	125	20	114	133	10	156	1042	0	101	1029	65
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	2%	2%	2%	5%	5%	5%
Turn Type	pm+pt		Perm	pm+pt		Perm	pm+pt			pm+pt		Perm
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases	8		8	4		4	6			2		2
Actuated Green, G (s)	13.7	8.3	8.3	13.7	8.3	8.3	47.6	41.8		46.4	41.2	41.2
Effective Green, g (s)	19.7	11.3	11.3	19.7	11.3	11.3	53.6	44.8		52.4	44.2	44.2
Actuated g/C Ratio	0.22	0.13	0.13	0.22	0.13	0.13	0.60	0.51		0.59	0.50	0.50
Clearance Time (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0		7.0	7.0	7.0
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0	1.0	1.0		1.0	1.0	1.0
Lane Grp Cap (vph)	299	240	204	303	237	202	345	1778		324	1713	766
v/s Ratio Prot	c0.05	0.07		0.04	0.07		c0.04	0.30		0.03	c0.30	
v/s Ratio Perm	0.07		0.10	0.05		0.05	0.23			0.16		0.08
v/c Ratio	0.54	0.52	0.10	0.38	0.56	0.05	0.45	0.59		0.31	0.60	0.08
Uniform Delay, d1	29.5	36.2	34.2	28.7	36.4	34.0	9.6	15.4		9.4	15.9	11.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	1.1	0.9	0.1	0.3	1.8	0.0	0.3	0.3		0.2	0.4	0.0
Delay (s)	30.6	37.1	34.3	29.0	38.2	34.0	10.0	15.8		9.6	16.3	11.7
Level of Service	C	D	C	C	D	C	A	B		A	B	B
Approach Delay (s)		33.7			34.0			15.0			15.3	
Approach LOS		C			C			B			B	

Intersection Summary

HCM Average Control Delay	19.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	88.7	Sum of lost time (s)	16.0
Intersection Capacity Utilization	61.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 2: LAIRD & SR 315

10/14/2005



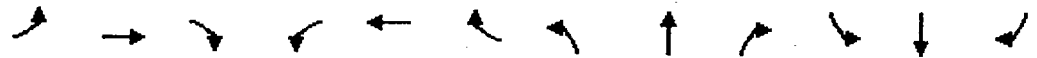
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕		↕	↕		↕	↕		↕	↕	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00		0.95	0.95		1.00	0.95		1.00	0.95	
Frt		0.90		1.00	0.96		1.00	1.00		1.00	1.00	
Flt Protected		0.99		0.95	0.97		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1566		1681	1648		1736	3458		1736	3463	
Flt Permitted		0.21		0.70	0.77		0.15	1.00		0.15	1.00	
Satd. Flow (perm)		328		1242	1303		271	3458		277	3463	
Volume (vph)	20	3	66	37	5	9	70	1106	28	10	1071	16
Peak-hour factor, PHF	0.77	0.77	0.77	0.73	0.73	0.73	0.91	0.91	0.91	0.94	0.94	0.94
Adj. Flow (vph)	26	4	86	51	7	12	77	1215	31	11	1139	17
RTOR Reduction (vph)	0	75	0	0	11	0	0	2	0	0	1	0
Lane Group Flow (vph)	0	41	0	29	30	0	77	1244	0	11	1155	0
Heavy Vehicles (%)	8%	8%	8%	2%	2%	2%	4%	4%	4%	4%	4%	4%
Turn Type	Perm			Perm			pm+pt			pm+pt		
Protected Phases		3			4		1	6		5	2	
Permitted Phases	3			4			6	6		2		
Actuated Green, G (s)		9.8		3.7	3.7		49.5	45.9		44.1	43.2	
Effective Green, g (s)		11.8		5.7	5.7		57.5	49.9		52.1	47.2	
Actuated g/C Ratio		0.13		0.06	0.06		0.65	0.57		0.59	0.53	
Clearance Time (s)		6.0		6.0	6.0		8.0	8.0		8.0	8.0	
Vehicle Extension (s)		2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)		44		80	84		303	1954		244	1851	
v/s Ratio Prot							c0.02	c0.36		0.00	0.33	
v/s Ratio Perm		c0.35		0.02	c0.03		0.14			0.02		
v/c Ratio		0.94		0.36	0.35		0.25	0.64		0.05	0.62	
Uniform Delay, d1		37.9		39.6	39.5		8.3	13.0		8.8	14.4	
Progression Factor		1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		112.3		1.0	0.9		0.2	0.5		0.0	0.5	
Delay (s)		150.2		40.6	40.5		8.4	13.5		8.9	14.8	
Level of Service		F		D	D		A	B		A	B	
Approach Delay (s)		150.2			40.5			13.3			14.8	
Approach LOS		F			D			B			B	

Intersection Summary

HCM Average Control Delay	20.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	88.3	Sum of lost time (s)	16.0
Intersection Capacity Utilization	56.8%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 17: SR 315 & MOTORWORLD

10/14/2005



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↕		↘	↕			↖	↗		↖	↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	1.00
Frt	1.00	1.00		1.00	0.99			1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.96	1.00		0.95	1.00
Satd. Flow (prot)	1770	3526		1770	3518			1819	1615		1787	1599
Flt Permitted	0.13	1.00		0.17	1.00			0.73	1.00		0.73	1.00
Satd. Flow (perm)	244	3526		322	3518			1378	1615		1380	1599
Volume (vph)	129	1162	29	5	1123	46	23	3	9	33	0	167
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.73	0.73	0.73	0.96	0.96	0.96
Adj. Flow (vph)	145	1306	33	6	1262	52	32	4	12	34	0	174
RTOR Reduction (vph)	0	1	0	0	4	0	0	0	11	0	0	154
Lane Group Flow (vph)	145	1338	0	6	1310	0	0	36	1	0	34	20
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	0%	0%	0%	1%	1%	1%
Turn Type	pm+pt			pm+pt			Perm		Perm	Perm		Perm
Protected Phases	1	6		5	2			4			8	
Permitted Phases	6			2			4		4	8		8
Actuated Green, G (s)	49.4	43.8		40.4	39.3			6.2	6.2		6.2	6.2
Effective Green, g (s)	53.9	46.8		45.4	42.3			8.2	8.2		8.2	8.2
Actuated g/C Ratio	0.77	0.67		0.65	0.60			0.12	0.12		0.12	0.12
Clearance Time (s)	6.0	7.0		6.0	7.0			6.0	6.0		6.0	6.0
Vehicle Extension (s)	2.0	2.0		2.0	2.0			2.0	2.0		2.0	2.0
Lane Grp Cap (vph)	353	2354		273	2123			161	189		161	187
v/s Ratio Prot	c0.04	0.38		0.00	c0.37							
v/s Ratio Perm	0.27			0.01				0.03	0.01		0.02	0.11
v/c Ratio	0.41	0.57		0.02	0.62			0.22	0.01		0.21	0.11
Uniform Delay, d1	5.5	6.2		4.7	8.8			28.1	27.4		28.0	27.7
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	1.00
Incremental Delay, d2	0.3	0.2		0.0	0.4			0.3	0.0		0.2	0.1
Delay (s)	5.7	6.4		4.7	9.2			28.3	27.4		28.3	27.8
Level of Service	A	A		A	A			C	C		C	C
Approach Delay (s)		6.4			9.1			28.1			27.9	
Approach LOS		A			A			C			C	

Intersection Summary

HCM Average Control Delay	9.4	HCM Level of Service	A
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	70.1	Sum of lost time (s)	12.0
Intersection Capacity Utilization	58.7%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
 22: SR 315 & 309 NB RAMPS

10/14/2005



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↙	↕		↙	↕	↗		↕			↕	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00			1.00	
Fr _t	1.00	1.00		1.00	1.00	0.85		1.00			1.00	
Fl _t Protected	0.95	1.00		0.95	1.00	1.00		0.95			0.95	
Satd. Flow (prot)	1805	3608		1787	3574	1599		1805			1787	
Fl _t Permitted	0.14	1.00		0.27	1.00	1.00		0.91			0.75	
Satd. Flow (perm)	275	3608		510	3574	1599		1733			1418	
Volume (vph)	641	988	4	3	954	356	3	0	0	382	0	0
Peak-hour factor, PHF	0.94	0.94	0.94	0.89	0.89	0.89	0.50	0.50	0.50	0.95	0.95	0.95
Adj. Flow (vph)	682	1051	4	3	1072	400	6	0	0	402	0	0
RTOR Reduction (vph)	0	0	0	0	0	293	0	0	0	0	0	0
Lane Group Flow (vph)	682	1055	0	3	1072	107	0	6	0	0	402	0
Heavy Vehicles (%)	0%	0%	0%	1%	1%	1%	0%	0%	0%	1%	1%	1%
Turn Type	pm+pt			Perm		Perm	Perm			Perm		
Protected Phases	1	6			2			8			4	
Permitted Phases	6			2		2	8			4		
Actuated Green, G (s)	57.0	57.0		21.6	21.6	21.6		19.0			19.0	
Effective Green, g (s)	59.0	59.0		23.6	23.6	23.6		21.0			21.0	
Actuated g/C Ratio	0.67	0.67		0.27	0.27	0.27		0.24			0.24	
Clearance Time (s)	4.0	6.0		6.0	6.0	6.0		6.0			6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0			3.0	
Lane Grp Cap (vph)	730	2419		137	958	429		414			338	
v/s Ratio Prot	c0.33	0.29			c0.30							
v/s Ratio Perm	0.29			0.01		0.25		0.00			c0.28	
v/c Ratio	0.93	0.44		0.02	1.12	0.25		0.01			1.19	
Uniform Delay, d1	29.3	6.8		23.7	32.2	25.3		25.6			33.5	
Progression Factor	0.35	0.41		1.00	1.00	1.00		1.00			1.00	
Incremental Delay, d2	9.6	0.2		0.3	67.6	1.4		0.0			110.9	
Delay (s)	20.0	3.0		24.0	99.8	26.7		25.6			144.4	
Level of Service	B	A		C	F	C		C			F	
Approach Delay (s)		9.7			79.8			25.6			144.4	
Approach LOS		A			E			C			F	

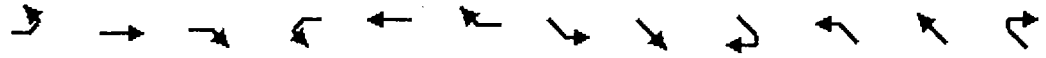
Intersection Summary

HCM Average Control Delay	53.2	HCM Level of Service	D
HCM Volume to Capacity ratio	1.06		
Actuated Cycle Length (s)	88.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	91.7%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
 24: SR 315 & 309 SB RAMPS

10/14/2005



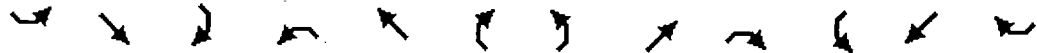
Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations		↑↑	↑	↓	↑↑		↑↓					
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0		4.0					
Lane Util. Factor		0.95	1.00	1.00	0.95		0.97					
Frt		1.00	0.85	1.00	1.00		1.00					
Flt Protected		1.00	1.00	0.95	1.00		0.95					
Satd. Flow (prot)		3574	1599	1787	3574		3367					
Flt Permitted		1.00	1.00	0.11	1.00		0.95					
Satd. Flow (perm)		3574	1599	203	3574		3367					
Volume (vph)	0	1229	345	404	1245	0	404	0	0	0	0	0
Peak-hour factor, PHF	0.85	0.85	0.85	0.87	0.87	0.87	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	1446	406	464	1431	0	439	0	0	0	0	0
RTOR Reduction (vph)	0	0	240	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	1446	166	464	1431	0	439	0	0	0	0	0
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	4%	4%	4%	2%	2%	2%
Turn Type			Perm	pm+pt			custom					
Protected Phases		6		5	2							
Permitted Phases			6	2			4					
Actuated Green, G (s)		31.0	31.0	61.4	61.4		14.6					
Effective Green, g (s)		33.0	33.0	63.4	63.4		16.6					
Actuated g/C Ratio		0.38	0.38	0.72	0.72		0.19					
Clearance Time (s)		6.0	6.0	4.0	6.0		6.0					
Vehicle Extension (s)		3.0	3.0	3.0	3.0		2.0					
Lane Grp Cap (vph)		1340	600	621	2575		635					
v/s Ratio Prot		c0.40		c0.22	0.40							
v/s Ratio Perm			0.25	0.31			0.13					
v/c Ratio		1.08	0.28	0.75	0.56		0.69					
Uniform Delay, d1		27.5	19.2	29.1	5.7		33.3					
Progression Factor		1.00	1.00	1.78	0.52		1.00					
Incremental Delay, d2		48.9	1.1	3.8	0.7		2.6					
Delay (s)		76.4	20.3	55.8	3.6		35.9					
Level of Service		E	C	E	A		D					
Approach Delay (s)		64.1			16.4		35.9				0.0	
Approach LOS		E			B		D				A	

Intersection Summary

HCM Average Control Delay	39.6	HCM Level of Service	D
HCM Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	88.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	77.9%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Unsignalized Intersection Capacity Analysis
 3: POCONO DOWNS & SR 315

10/14/2005



Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	214	0	0	3	0	0	0	616	2	0	749	315
Peak Hour Factor	0.69	0.69	0.69	0.50	0.50	0.50	0.96	0.96	0.96	0.92	0.92	0.92
Hourly flow rate (vph)	310	0	0	6	0	0	0	642	2	0	814	342
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		TWLTL			TWLTL							
Median storage (veh)		0			0							
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1306	1629	578	1050	1799	322	1157			644		
vC1, stage 1 conf vol	985	985		643	643							
vC2, stage 2 conf vol	321	644		407	1157							
vCu, unblocked vol	1306	1629	578	1050	1799	322	1157			644		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.2			4.2		
tC, 2 stage (s)	6.5	5.5		6.5	5.5							
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	0	100	100	97	100	100	100			100		
cM capacity (veh/h)	162	165	464	231	143	680	594			924		

Direction, Lane #	SE 1	NW 1	NE 1	NE 2	SW 1	SW 2	SW 3
Volume Total	310	6	428	216	0	543	614
Volume Left	310	6	0	0	0	0	0
Volume Right	0	0	0	2	0	0	342
cSH	162	231	1700	1700	1700	1700	1700
Volume to Capacity	1.92	0.03	0.25	0.13	0.00	0.32	0.36
Queue Length (ft)	588	2	0	0	0	0	0
Control Delay (s)	483.1	21.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	F	C					
Approach Delay (s)	483.1	21.0	0.0		0.0		
Approach LOS	F	C					

Intersection Summary

Average Delay	70.9		
Intersection Capacity Utilization	48.6%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
 8: POCONO DOWNS RT & SR 315

10/14/2005



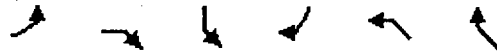
Movement	EBL	EBR	NEL	NET	SWT	SWR
Lane Configurations		↑	↑	↑↑	↑↑	
Sign Control	Yield			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	0	370	504	619	752	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	402	548	673	817	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	2249	409	817			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2249	409	817			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	32	32			
cM capacity (veh/h)	11	592	806			

Direction, Lane #	EB 1	NE 1	NE 2	NE 3	SW 1	SW 2
Volume Total	402	548	336	336	409	409
Volume Left	0	548	0	0	0	0
Volume Right	402	0	0	0	0	0
cSH	592	806	1700	1700	1700	1700
Volume to Capacity	0.68	0.68	0.20	0.20	0.24	0.24
Queue Length (ft)	130	136	0	0	0	0
Control Delay (s)	23.0	18.4	0.0	0.0	0.0	0.0
Lane LOS	C	C				
Approach Delay (s)	23.0	8.2			0.0	
Approach LOS	C					

Intersection Summary		
Average Delay	7.9	
Intersection Capacity Utilization	55.4%	ICU Level of Service B
Analysis Period (min)	15	

HCM Unsignalized Intersection Capacity Analysis
 14: EAST MAIN & POCONO DOWNS

10/14/2005



Movement	EBL	EBR	SBL	SBR	NWL	NWR
Lane Configurations		↗	↘		↖	↗
Sign Control	Free		Stop		Free	
Grade	0%		0%		0%	
Volume (veh/h)	0	364	28	0	334	48
Peak Hour Factor	0.96	0.96	0.54	0.54	0.89	0.89
Hourly flow rate (vph)	0	379	52	0	375	54
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			
Median storage veh						
Upstream signal (ft)					1239	
pX, platoon unblocked						
vC, conflicting volume	429		781	402		
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	429		781	402		
tC, single (s)	4.1		6.4	6.2		
tC, 2 stage (s)						
tF (s)	2.2		3.5	3.3		
p0 queue free %	100		86	100		
cM capacity (veh/h)	1136		366	652		

Direction, Lane #	EB 1	SB 1	NW 1
Volume Total	379	52	429
Volume Left	0	52	0
Volume Right	0	0	54
cSH	1700	366	1700
Volume to Capacity	0.22	0.14	0.25
Queue Length (ft)	0	12	0
Control Delay (s)	0.0	16.5	0.0
Lane LOS		C	
Approach Delay (s)	0.0	16.5	0.0
Approach LOS		C	

Intersection Summary			
Average Delay		1.0	
Intersection Capacity Utilization		31.4%	ICU Level of Service A
Analysis Period (min)		15	

HCM Unsignalized Intersection Capacity Analysis
 9: EAST MAIN & POCONO DOWNS RT

10/14/2005



Movement	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations		↕	↑			↗
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	58	364	334	0	0	37
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	63	396	363	0	0	40
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type None						
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	363				885	363
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	363				885	363
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	95				100	94
cM capacity (veh/h)	1196				299	682

Direction, Lane #	EB 1	WB 1	SW 1
Volume Total	459	363	40
Volume Left	63	0	0
Volume Right	0	0	40
cSH	1196	1700	682
Volume to Capacity	0.05	0.21	0.06
Queue Length (ft)	4	0	5
Control Delay (s)	1.6	0.0	10.6
Lane LOS	A		B
Approach Delay (s)	1.6	0.0	10.6
Approach LOS			B

Intersection Summary			
Average Delay		1.4	
Intersection Capacity Utilization	46.6%		ICU Level of Service A
Analysis Period (min)		15	

HCM Unsignalized Intersection Capacity Analysis
 20: EAST MAIN & FIRST

10/14/2005



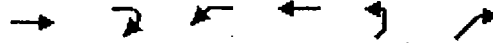
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	48	305	268	61	41	50
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	52	332	291	66	45	54
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None		
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	358				760	324
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	358				760	324
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	96				88	92
cM capacity (veh/h)	1201				357	717

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	384	358	99
Volume Left	52	0	45
Volume Right	0	66	54
cSH	1201	1700	493
Volume to Capacity	0.04	0.21	0.20
Queue Length (ft)	3	0	19
Control Delay (s)	1.5	0.0	14.1
Lane LOS	A		B
Approach Delay (s)	1.5	0.0	14.1
Approach LOS			B

Intersection Summary			
Average Delay		2.3	
Intersection Capacity Utilization	51.9%		ICU Level of Service A
Analysis Period (min)		15	

HCM Unsignalized Intersection Capacity Analysis
 19: EAST MAIN & SCOTT

10/14/2005



Movement	EBT	EBF	WBL	WBT	NEL	NEF
Lane Configurations	↑			↑	↑	↑
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	254	38	68	250	28	99
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	276	41	74	272	30	108
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None		
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			317		716	297
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			317		716	297
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			94		92	86
cM capacity (veh/h)			1243		373	743

Direction, Lane #	EB 1	WB 1	NE 1
Volume Total	317	346	138
Volume Left	0	74	30
Volume Right	41	0	108
cSH	1700	1243	610
Volume to Capacity	0.19	0.06	0.23
Queue Length (ft)	0	5	22
Control Delay (s)	0.0	2.2	12.6
Lane LOS		A	B
Approach Delay (s)	0.0	2.2	12.6
Approach LOS			B

Intersection Summary			
Average Delay		3.1	
Intersection Capacity Utilization		50.2%	ICU Level of Service A
Analysis Period (min)		15	

HCM Signalized Intersection Capacity Analysis
28: OAK & SR 315

10/14/2005

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations	↖	↑	↗		↖	↗	↖	↕	↗	↖	↕	↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00		1.00	1.00	1.00	0.95		1.00	0.95	1.00
Frt	1.00	1.00	0.85		1.00	0.85	1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00		0.96	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1530	1610	1369		1811	1599	1752	3480		1736	3471	1553
Flt Permitted	0.71	1.00	1.00		0.80	1.00	0.11	1.00		0.32	1.00	1.00
Satd. Flow (perm)	1142	1610	1369		1506	1599	202	3480		584	3471	1553
Volume (vph)	205	19	181	52	15	25	247	677	33	10	734	264
Peak-hour factor, PHF	0.63	0.63	0.63	0.91	0.91	0.91	0.90	0.90	0.90	0.91	0.91	0.91
Adj. Flow (vph)	325	30	287	57	16	27	274	752	37	11	807	290
RTOR Reduction (vph)	0	0	148	0	0	14	0	2	0	0	0	0
Lane Group Flow (vph)	325	30	139	0	73	13	274	787	0	11	807	290
Heavy Vehicles (%)	18%	18%	18%	1%	1%	1%	3%	3%	3%	4%	4%	4%
Turn Type	Perm		Perm	Perm		Perm	pm+pt			pm+pt		Free
Protected Phases		7 8			7 8		1	6		5	2	
Permitted Phases	7 8		7 8	7 8		7 8	6			2		Free
Actuated Green, G (s)	58.4	58.4	58.4		58.4	58.4	54.7	46.4		32.8	30.5	125.1
Effective Green, g (s)	60.4	60.4	60.4		60.4	60.4	56.7	48.4		36.8	32.5	125.1
Actuated g/C Ratio	0.48	0.48	0.48		0.48	0.48	0.45	0.39		0.29	0.26	1.00
Clearance Time (s)							6.0	6.0		6.0	6.0	
Vehicle Extension (s)							3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	551	777	661		727	772	342	1346		211	902	1553
v/s Ratio Prot		0.02					c0.13	0.23		0.00	c0.23	
v/s Ratio Perm	c0.28		0.21		0.05	0.02	0.23			0.01		0.19
v/c Ratio	0.59	0.04	0.21		0.10	0.02	0.80	0.58		0.05	0.89	0.19
Uniform Delay, d1	23.4	17.0	18.6		17.6	16.9	32.9	30.4		31.4	44.6	0.0
Progression Factor	1.00	1.00	1.00		1.00	1.00	1.14	0.83		1.00	1.00	1.00
Incremental Delay, d2	1.6	0.0	0.2		0.1	0.0	11.7	0.6		0.1	11.3	0.3
Delay (s)	25.0	17.1	18.8		17.6	16.9	49.1	25.7		31.5	55.9	0.3
Level of Service	C	B	B		B	B	D	C		C	E	A
Approach Delay (s)		21.9			17.4			31.7			41.1	
Approach LOS		C			B			C			D	

Intersection Summary

HCM Average Control Delay	32.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	125.1	Sum of lost time (s)	12.0
Intersection Capacity Utilization	62.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 10: OLD BOSTON & SR 315

10/14/2005



Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations	↘		↕			↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0			4.0
Lane Util. Factor	1.00		0.95			0.95
Frt	0.94		0.99			1.00
Flt Protected	0.97		1.00			1.00
Satd. Flow (prot)	1650		3542			3604
Flt Permitted	0.97		1.00			0.93
Satd. Flow (perm)	1650		3542			3348
Volume (vph)	43	39	570	36	22	655
Peak-hour factor, PHF	0.74	0.74	0.93	0.93	0.85	0.85
Adj. Flow (vph)	58	53	613	39	26	771
RTOR Reduction (vph)	44	0	5	0	0	0
Lane Group Flow (vph)	67	0	647	0	0	797
Heavy Vehicles (%)	5%	5%	1%	1%	0%	0%
Turn Type					pm+pt	
Protected Phases	4		6		5	2
Permitted Phases					2	2
Actuated Green, G (s)	7.8		31.6			31.6
Effective Green, g (s)	8.8		32.6			32.6
Actuated g/C Ratio	0.18		0.66			0.66
Clearance Time (s)	5.0		5.0			5.0
Vehicle Extension (s)	2.0		1.0			1.0
Lane Grp Cap (vph)	294		2337			2209
v/s Ratio Prot	c0.07		0.18			
v/s Ratio Perm						c0.24
v/c Ratio	0.23		0.28			0.36
Uniform Delay, d1	17.4		3.5			3.7
Progression Factor	1.00		1.00			1.00
Incremental Delay, d2	0.1		0.0			0.0
Delay (s)	17.5		3.5			3.8
Level of Service	B		A			A
Approach Delay (s)	17.5		3.5			3.8
Approach LOS	B		A			A

Intersection Summary

HCM Average Control Delay	4.7	HCM Level of Service	A
HCM Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	49.4	Sum of lost time (s)	8.0
Intersection Capacity Utilization	45.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 13: LAFLIN & SR 315

10/14/2005



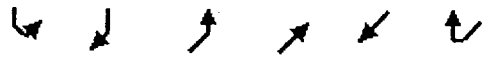
Movement	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations	↙	↗	↙	↑	↑↑	↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1787	1599	1787	1881	3574	1599
Flt Permitted	0.95	1.00	0.26	1.00	1.00	1.00
Satd. Flow (perm)	1787	1599	483	1881	3574	1599
Volume (vph)	99	146	95	618	672	129
Peak-hour factor, PHF	0.70	0.70	0.87	0.87	0.88	0.88
Adj. Flow (vph)	141	209	109	710	764	147
RTOR Reduction (vph)	0	140	0	0	0	120
Lane Group Flow (vph)	141	69	109	710	764	27
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%
Turn Type	custom		pm+pt		Over	
Protected Phases	8	8	1	6	2	8
Permitted Phases	8	1	6			
Actuated Green, G (s)	8.9	14.5	36.8	36.8	24.2	8.9
Effective Green, g (s)	10.9	19.5	39.8	39.8	27.2	10.9
Actuated g/C Ratio	0.19	0.33	0.68	0.68	0.46	0.19
Clearance Time (s)	6.0	6.0	7.0	7.0	7.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0	5.0	5.0	3.0
Lane Grp Cap (vph)	332	640	519	1275	1656	297
v/s Ratio Prot	0.08	0.06	0.03	c0.38	0.21	c0.09
v/s Ratio Perm		0.07	0.11			
v/c Ratio	0.42	0.11	0.21	0.56	0.46	0.09
Uniform Delay, d1	21.1	13.6	4.1	4.9	10.7	19.8
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.9	0.1	0.2	0.9	0.4	0.1
Delay (s)	22.0	13.7	4.3	5.8	11.2	19.9
Level of Service	C	B	A	A	B	B
Approach Delay (s)	17.0			5.6	12.6	
Approach LOS	B			A	B	

Intersection Summary

HCM Average Control Delay	10.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	58.7	Sum of lost time (s)	8.0
Intersection Capacity Utilization	44.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 4: SUNSHINE MARKET & SR 315

10/14/2005



Movement	SBL	SBR	NEL	NET	SWT	SWR
Lane Configurations	↶	↷	↶	↷	↶↷	↶↷
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1805	1615	1787	1881	3539	1583
Flt Permitted	0.95	1.00	0.31	1.00	1.00	1.00
Satd. Flow (perm)	1805	1615	579	1881	3539	1583
Volume (vph)	42	76	88	641	620	34
Peak-hour factor, PHF	0.76	0.76	0.90	0.90	0.89	0.89
Adj. Flow (vph)	55	100	98	712	697	38
RTOR Reduction (vph)	0	65	0	0	0	0
Lane Group Flow (vph)	55	35	98	712	697	38
Heavy Vehicles (%)	0%	0%	1%	1%	2%	2%
Turn Type		pt+ov	pm+pt			Free
Protected Phases	8	18	1	6	2	
Permitted Phases			6			Free
Actuated Green, G (s)	7.0	19.1	43.9	43.9	30.8	63.9
Effective Green, g (s)	9.0	22.1	46.9	46.9	33.8	63.9
Actuated g/C Ratio	0.14	0.35	0.73	0.73	0.53	1.00
Clearance Time (s)	6.0		7.0	7.0	7.0	
Vehicle Extension (s)	3.0		3.0	5.0	5.0	
Lane Grp Cap (vph)	254	559	597	1381	1872	1583
v/s Ratio Prot	c0.03	0.06	0.02	c0.38	0.20	
v/s Ratio Perm			0.10			0.02
v/c Ratio	0.22	0.06	0.16	0.52	0.37	0.02
Uniform Delay, d1	24.3	14.0	2.9	3.6	8.8	0.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.4	0.0	0.1	0.7	0.3	0.0
Delay (s)	24.8	14.0	3.1	4.3	9.1	0.0
Level of Service	C	B	A	A	A	A
Approach Delay (s)	17.8			4.1	8.6	
Approach LOS	B			A	A	

Intersection Summary

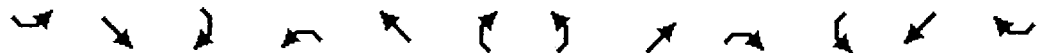
HCM Average Control Delay	7.3	HCM Level of Service	A
HCM Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	63.9	Sum of lost time (s)	8.0
Intersection Capacity Utilization	43.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis

1: EAST MAIN & SR 315

10/14/2005



Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations	↙	↑	↗	↙	↑	↗	↙	↕		↙	↕	↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95		1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	1863	1583	1787	1881	1599	1770	3504		1787	3574	1599
Flt Permitted	0.51	1.00	1.00	0.70	1.00	1.00	0.27	1.00		0.28	1.00	1.00
Satd. Flow (perm)	952	1863	1583	1325	1881	1599	495	3504		529	3574	1599
Volume (vph)	104	72	89	90	132	84	114	685	49	35	671	72
Peak-hour factor, PHF	0.89	0.89	0.89	0.86	0.86	0.86	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	117	81	100	105	153	98	127	761	54	39	746	80
RTOR Reduction (vph)	0	0	86	0	0	84	0	6	0	0	0	44
Lane Group Flow (vph)	117	81	14	105	153	14	127	809	0	39	746	36
Heavy Vehicles (%)	2%	2%	2%	1%	1%	1%	2%	2%	2%	1%	1%	1%
Turn Type	pm+pt		Perm	pm+pt		Perm	pm+pt			pm+pt		Perm
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases	8		8	4		4	6			2		2
Actuated Green, G (s)	14.3	8.7	8.7	14.1	8.6	8.6	42.3	36.6		37.3	34.1	34.1
Effective Green, g (s)	20.3	11.7	11.7	20.1	11.6	11.6	48.3	39.6		43.3	37.1	37.1
Actuated g/C Ratio	0.25	0.14	0.14	0.25	0.14	0.14	0.59	0.48		0.53	0.45	0.45
Clearance Time (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0		7.0	7.0	7.0
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0	1.0	1.0		1.0	1.0	1.0
Lane Grp Cap (vph)	321	266	226	373	266	226	427	1692		374	1617	723
v/s Ratio Prot	c0.04	0.04		0.03	c0.08		c0.03	c0.23		0.01	0.21	
v/s Ratio Perm	0.05		0.06	0.04		0.06	0.14			0.05		0.05
v/c Ratio	0.36	0.30	0.06	0.28	0.58	0.06	0.30	0.48		0.10	0.46	0.05
Uniform Delay, d1	24.9	31.5	30.4	24.8	32.9	30.5	8.4	14.3		9.6	15.5	12.6
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.3	0.2	0.0	0.2	1.9	0.0	0.1	0.1		0.0	0.1	0.0
Delay (s)	25.2	31.7	30.5	25.0	34.8	30.5	8.5	14.3		9.7	15.6	12.6
Level of Service	C	C	C	C	C	C	A	B		A	B	B
Approach Delay (s)		28.7			30.7			13.5			15.1	
Approach LOS		C			C			B			B	

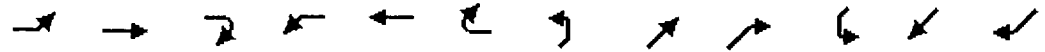
Intersection Summary

HCM Average Control Delay	18.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	82.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	50.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
2: LAIRD & SR 315

10/14/2005



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕		↕	↕		↕	↕		↕	↕	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00		0.95	0.95		1.00	0.95		1.00	0.95	
Flt		0.91		1.00	0.93		1.00	0.99		1.00	1.00	
Flt Protected		0.99		0.95	0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1673		1681	1606		1770	3487		1770	3534	
Flt Permitted		0.21		0.70	0.80		0.17	1.00		0.19	1.00	
Satd. Flow (perm)		354		1233	1321		324	3487		346	3534	
Volume (vph)	15	8	52	28	1	11	76	832	91	76	930	10
Peak-hour factor, PHF	0.81	0.81	0.81	0.64	0.64	0.64	0.85	0.85	0.85	0.88	0.88	0.88
Adj. Flow (vph)	19	10	64	44	2	17	89	979	107	86	1057	11
RTOR Reduction (vph)	0	56	0	0	16	0	0	8	0	0	1	0
Lane Group Flow (vph)	0	37	0	27	20	0	89	1078	0	86	1067	0
Turn Type	Perm		Perm			pm+pt		pm+pt				
Protected Phases		3			4		1	6		5	2	
Permitted Phases	3			4			6	6		2		
Actuated Green, G (s)		9.5		4.1	4.1		50.4	44.8		47.4	43.3	
Effective Green, g (s)		11.5		6.1	6.1		58.4	48.8		55.4	47.3	
Actuated g/C Ratio		0.13		0.07	0.07		0.65	0.54		0.61	0.52	
Clearance Time (s)		6.0		6.0	6.0		8.0	8.0		8.0	8.0	
Vehicle Extension (s)		2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)		45		83	89		362	1880		339	1847	
v/s Ratio Prot							c0.03	c0.31		0.02	0.30	
v/s Ratio Perm		c0.26		0.02	c0.03		0.13			0.13		
v/c Ratio		0.83		0.33	0.23		0.25	0.57		0.25	0.58	
Uniform Delay, d1		38.5		40.2	40.0		8.0	13.9		8.4	14.8	
Progression Factor		1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		68.3		0.8	0.5		0.1	0.3		0.1	0.3	
Delay (s)		106.8		41.1	40.4		8.1	14.2		8.6	15.0	
Level of Service		F		D	D		A	B		A	B	
Approach Delay (s)		106.8			40.7			13.7			14.6	
Approach LOS		F			D			B			B	

Intersection Summary

HCM Average Control Delay	18.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	90.5	Sum of lost time (s)	12.0
Intersection Capacity Utilization	51.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
17: SR 315 & MOTORWORLD

10/14/2005



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗		↖	↗	↖
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	1.00
Flt Protected	1.00	1.00		1.00	1.00			1.00	0.85		1.00	0.85
Flt Permitted	0.95	1.00		0.95	1.00			0.95	1.00		0.95	1.00
Satd. Flow (prot)	1787	3562		1787	3568			1760	1568		1805	1615
Satd. Flow (perm)	354	3562		311	3568			1328	1568		1400	1615
Volume (vph)	22	954	23	6	993	11	25	1	11	34	0	147
Peak-hour factor, PHF	0.85	0.85	0.85	0.93	0.93	0.93	0.83	0.83	0.83	0.62	0.62	0.62
Adj. Flow (vph)	26	1122	27	6	1068	12	30	1	13	55	0	237
RTOR Reduction (vph)	0	2	0	0	1	0	0	0	10	0	0	186
Lane Group Flow (vph)	26	1147	0	6	1079	0	0	31	3	0	55	51
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	3%	3%	3%	0%	0%	0%
Turn Type	pm+pt			pm+pt			Perm		Perm	Perm		Perm
Protected Phases	1	6		5	2			4		8		8
Permitted Phases	6			2					4		8	8
Actuated Green, G (s)	24.0	23.1		24.0	23.1			8.1	8.1		8.1	8.1
Effective Green, g (s)	29.0	26.1		29.0	26.1			10.1	10.1		10.1	10.1
Actuated g/C Ratio	0.57	0.51		0.57	0.51			0.20	0.20		0.20	0.20
Clearance Time (s)	6.0	7.0		6.0	7.0			6.0	6.0		6.0	6.0
Vehicle Extension (s)	2.0	2.0		2.0	2.0			2.0	2.0		2.0	2.0
Lane Grp Cap (vph)	282	1819		260	1822			262	310		277	319
v/s Ratio Prot	c0.01	c0.32		0.00	0.30							
v/s Ratio Perm	0.05			0.01				0.02	0.01		0.04	0.15
v/c Ratio	0.09	0.63		0.02	0.59			0.12	0.01		0.20	0.16
Uniform Delay, d1	5.4	9.0		5.5	8.8			16.8	16.5		17.1	17.0
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	1.00
Incremental Delay, d2	0.1	0.5		0.0	0.3			0.1	0.0		0.1	0.1
Delay (s)	5.5	9.5		5.5	9.1			16.9	16.5		17.2	17.1
Level of Service	A	A		A	A			B	B		B	B
Approach Delay (s)		9.5			9.1			16.8			17.1	
Approach LOS		A			A			B			B	

Intersection Summary

HCM Average Control Delay	10.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	51.1	Sum of lost time (s)	12.0
Intersection Capacity Utilization	52.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
 22: SR 315 & 309 NB RAMPS

10/14/2005



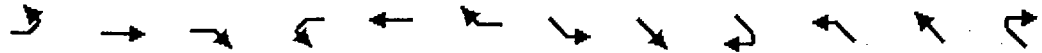
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↕		↙	↕	↗		↕			↖	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0					4.0	
Lane Util. Factor	1.00	0.95			0.95	1.00					1.00	
Frt	1.00	1.00			1.00	0.85					1.00	
Flt Protected	0.95	1.00			1.00	1.00					0.95	
Satd. Flow (prot)	1787	3574			3610	1615					1787	
Flt Permitted	0.13	1.00			1.00	1.00					0.76	
Satd. Flow (perm)	237	3574			3610	1615					1424	
Volume (vph)	642	796	0	0	822	343	0	0	0	203	0	0
Peak-hour factor, PHF	0.98	0.98	0.98	0.84	0.84	0.84	0.50	0.50	0.50	0.92	0.92	0.92
Adj. Flow (vph)	655	812	0	0	979	408	0	0	0	221	0	0
RTOR Reduction (vph)	0	0	0	0	0	279	0	0	0	0	0	0
Lane Group Flow (vph)	655	812	0	0	979	129	0	0	0	0	221	0
Heavy Vehicles (%)	1%	1%	1%	0%	0%	0%	0%	0%	0%	1%	1%	1%
Turn Type	pm+pt			Perm		Perm	Perm			Perm		
Protected Phases	1	6			2			8			4	
Permitted Phases	6			2		2	8			4		
Actuated Green, G (s)	59.4	59.4			25.8	25.8					16.6	
Effective Green, g (s)	61.4	61.4			27.8	27.8					18.6	
Actuated g/C Ratio	0.70	0.70			0.32	0.32					0.21	
Clearance Time (s)	4.0	6.0			6.0	6.0					6.0	
Vehicle Extension (s)	3.0	3.0			3.0	3.0					3.0	
Lane Grp Cap (vph)	687	2494			1140	510					301	
v/s Ratio Prot	c0.32	0.23			0.27							
v/s Ratio Perm	c0.35					0.25					c0.16	
v/c Ratio	0.95	0.33			0.86	0.25					0.73	
Uniform Delay, d1	22.6	5.2			28.3	22.4					32.4	
Progression Factor	0.42	0.43			1.00	1.00					1.00	
Incremental Delay, d2	17.0	0.2			8.5	1.2					8.9	
Delay (s)	26.4	2.4			36.7	23.6					41.3	
Level of Service	C	A			D	C					D	
Approach Delay (s)		13.1			32.9			0.0			41.3	
Approach LOS		B			C			A			D	

Intersection Summary

HCM Average Control Delay	24.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	88.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	79.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 24: SR 315 & 309 SB RAMPS

10/14/2005



Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations		↑↑	↑	↓	↑↑		↓↓					
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0		4.0					
Lane Util. Factor		0.95	1.00	1.00	0.95		0.97					
Frt		1.00	0.85	1.00	1.00		1.00					
Flt Protected		1.00	1.00	0.95	1.00		0.95					
Satd. Flow (prot)		3610	1615	1787	3574		3502					
Flt Permitted		1.00	1.00	0.11	1.00		0.95					
Satd. Flow (perm)		3610	1615	199	3574		3502					
Volume (vph)	0	1189	473	360	967	0	249	0	0	0	0	0
Peak-hour factor, PHF	0.96	0.96	0.96	0.93	0.93	0.93	0.89	0.89	0.89	0.92	0.92	0.92
Adj. Flow (vph)	0	1239	493	387	1040	0	280	0	0	0	0	0
RTOR Reduction (vph)	0	0	303	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	1239	190	387	1040	0	280	0	0	0	0	0
Heavy Vehicles (%)	0%	0%	0%	1%	1%	1%	0%	0%	0%	0%	0%	0%
Turn Type			Perm	pm+pt			custom					
Protected Phases		6		5	2							
Permitted Phases			6	2			4					
Actuated Green, G (s)		31.9	31.9	65.5	65.5		10.5					
Effective Green, g (s)		33.9	33.9	67.5	67.5		12.5					
Actuated g/C Ratio		0.39	0.39	0.77	0.77		0.14					
Clearance Time (s)		6.0	6.0	4.0	6.0		6.0					
Vehicle Extension (s)		3.0	3.0	3.0	3.0		2.0					
Lane Grp Cap (vph)		1391	622	687	2741		497					
v/s Ratio Prot		c0.34		c0.19	0.29							
v/s Ratio Perm			0.31	0.24			0.08					
v/c Ratio		0.89	0.31	0.56	0.38		0.56					
Uniform Delay, d1		25.3	18.8	16.4	3.4		35.2					
Progression Factor		1.00	1.00	2.03	0.41		1.00					
Incremental Delay, d2		8.9	1.3	0.9	0.3		0.9					
Delay (s)		34.2	20.1	34.3	1.7		36.1					
Level of Service		C	C	C	A		D					
Approach Delay (s)		30.2			10.6			36.1			0.0	
Approach LOS		C			B			D			A	

Intersection Summary

HCM Average Control Delay	22.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	88.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	69.9%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Unsignalized Intersection Capacity Analysis
 3: POCONO DOWNS & SR 315

10/14/2005



Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations	↵				↕			↕		↵	↕	
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	209	0	0	0	0	1	0	519	1	1	430	265
Peak Hour Factor	0.68	0.68	0.68	0.25	0.25	0.25	0.93	0.93	0.93	0.83	0.83	0.83
Hourly flow rate (vph)	307	0	0	0	0	4	0	558	1	1	518	319
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		TWLT			TWLT							
Median storage (veh)		0			0							
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	963	1239	419	820	1398	280	837			559		
vC1, stage 1 conf vol	680	680		559	559							
vC2, stage 2 conf vol	283	559		261	840							
vCu, unblocked vol	963	1239	419	820	1398	280	837			559		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)	6.5	5.5		6.5	5.5							
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	0	100	100	100	100	99	100			100		
cM capacity (veh/h)	240	223	589	283	196	724	799			1015		

Direction, Lane #	SE 1	NW 1	NE 1	NE 2	SW 1	SW 2	SW 3
Volume Total	307	4	372	187	1	345	492
Volume Left	307	0	0	0	1	0	0
Volume Right	0	4	0	1	0	0	319
cSH	240	724	1700	1700	1015	1700	1700
Volume to Capacity	1.28	0.01	0.22	0.11	0.00	0.20	0.29
Queue Length (ft)	393	0	0	0	0	0	0
Control Delay (s)	194.8	10.0	0.0	0.0	8.6	0.0	0.0
Lane LOS	F	B			A		
Approach Delay (s)	194.8	10.0	0.0		0.0		
Approach LOS	F	B					

Intersection Summary			
Average Delay		35.1	
Intersection Capacity Utilization	45.3%		ICU Level of Service A
Analysis Period (min)		15	

HCM Unsignalized Intersection Capacity Analysis
 9: POCONO DOWNS RT & SR 315

10/14/2005



Movement	EBL	EBR	NEL	NET	SWT	SWR
Lane Configurations		↗	↖	↕	↕	
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	0	348	353	520	430	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	378	384	565	467	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1517	234	467			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1517	234	467			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	51	65			
cM capacity (veh/h)	71	768	1090			

Direction, Lane #	EB 1	NE 1	NE 2	NE 3	SW 1	SW 2
Volume Total	378	384	283	283	234	234
Volume Left	0	384	0	0	0	0
Volume Right	378	0	0	0	0	0
cSH	768	1090	1700	1700	1700	1700
Volume to Capacity	0.49	0.35	0.17	0.17	0.14	0.14
Queue Length (ft)	69	40	0	0	0	0
Control Delay (s)	14.1	10.1	0.0	0.0	0.0	0.0
Lane LOS	B	B				
Approach Delay (s)	14.1	4.1			0.0	
Approach LOS	B					

Intersection Summary	
Average Delay	5.1
Intersection Capacity Utilization	40.1%
ICU Level of Service	A
Analysis Period (min)	15

HCM Unsignalized Intersection Capacity Analysis
 14: EAST MAIN & POCONO DOWNS

10/14/2005



Movement	EBL	EBR	SBL	SBR	NWL	NWR
Lane Configurations		↗	↘		↙	↖
Sign Control	Free		Stop		Free	
Grade	0%		0%		0%	
Volume (veh/h)	0	243	22	0	236	82
Peak Hour Factor	0.96	0.96	0.54	0.54	0.89	0.89
Hourly flow rate (vph)	0	253	41	0	265	92
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			
Median storage veh						
Upstream signal (ft)					1239	
pX, platoon unblocked						
vC, conflicting volume	357		564	311		
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	357		564	311		
tC, single (s)	4.1		6.4	6.2		
tC, 2 stage (s)						
tF (s)	2.2		3.5	3.3		
p0 queue free %	100		92	100		
cM capacity (veh/h)	1207		490	734		

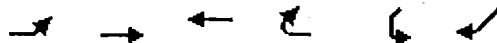
Direction, Lane #	EB 1	SB 1	NW 1
Volume Total	253	41	357
Volume Left	0	41	0
Volume Right	0	0	92
cSH	1700	490	1700
Volume to Capacity	0.15	0.08	0.21
Queue Length (ft)	0	7	0
Control Delay (s)	0.0	13.0	0.0
Lane LOS		B	
Approach Delay (s)	0.0	13.0	0.0
Approach LOS		B	

Intersection Summary

Average Delay		0.8	
Intersection Capacity Utilization	28.1%		ICU Level of Service A
Analysis Period (min)		15	

HCM Unsignalized Intersection Capacity Analysis
 8: EAST MAIN &

10/14/2005



Movement	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations		↕	↑			↗
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	83	243	236	0	0	39
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	90	264	257	0	0	42
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None		
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	257			701	257	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	257			701	257	
tC, single (s)	4.1			6.4	6.2	
tC, 2 stage (s)						
tF (s)	2.2			3.5	3.3	
p0 queue free %	93			100	95	
cM capacity (veh/h)	1308			377	782	

Direction, Lane #	EB 1	WB 1	SW 1
Volume Total	354	257	42
Volume Left	90	0	0
Volume Right	0	0	42
cSH	1308	1700	782
Volume to Capacity	0.07	0.15	0.05
Queue Length (ft)	6	0	4
Control Delay (s)	2.5	0.0	9.9
Lane LOS	A		A
Approach Delay (s)	2.5	0.0	9.9
Approach LOS			A

Intersection Summary			
Average Delay		2.0	
Intersection Capacity Utilization		36.5%	ICU Level of Service A
Analysis Period (min)		15	

HCM Unsignalized Intersection Capacity Analysis
 20: EAST MAIN & FIRST

10/14/2005



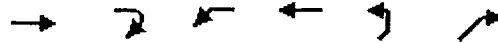
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	81	267	226	36	56	53
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	88	290	246	39	61	58
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None		
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	285				732	265
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	285				732	265
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	93				83	93
cM capacity (veh/h)	1277				362	773

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	378	285	118
Volume Left	88	0	61
Volume Right	0	39	58
cSH	1277	1700	488
Volume to Capacity	0.07	0.17	0.24
Queue Length (ft)	6	0	24
Control Delay (s)	2.4	0.0	14.7
Lane LOS	A		B
Approach Delay (s)	2.4	0.0	14.7
Approach LOS			B

Intersection Summary			
Average Delay		3.4	
Intersection Capacity Utilization		49.0%	ICU Level of Service A
Analysis Period (min)		15	

HCM Unsignalized Intersection Capacity Analysis
 19: EAST MAIN & SCOTT

10/14/2005



Movement	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations	↑			↓		↘
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	203	24	99	180	20	145
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	221	26	108	196	22	158
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			247		645	234
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			247		645	234
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			92		95	80
cM capacity (veh/h)			1319		401	805

Direction, Lane #	EB 1	WB 1	NE 1
Volume Total	247	303	179
Volume Left	0	108	22
Volume Right	26	0	158
cSH	1700	1319	718
Volume to Capacity	0.15	0.08	0.25
Queue Length (ft)	0	7	25
Control Delay (s)	0.0	3.3	11.7
Lane LOS		A	B
Approach Delay (s)	0.0	3.3	11.7
Approach LOS			B

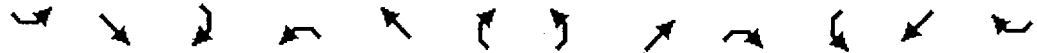
Intersection Summary		
Average Delay		4.2
Intersection Capacity Utilization	47.2%	ICU Level of Service A
Analysis Period (min)		15

**2007 (ETC) BUILD CONDITIONS
WITH IMPROVEMENTS**

HCM Signalized Intersection Capacity Analysis

1: EAST MAIN & SR 315

10/17/2005



Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations	↶	↷	↸	↶	↷	↸	↶	↷↸	↸	↶	↷↸	↸
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Fr _t	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	1.00	1.00	0.85	1.00
Fl _t Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1703	1792	1524	1752	1845	1568	1752	3472		1736	3471	1553
Fl _t Permitted	0.59	1.00	1.00	0.72	1.00	1.00	0.26	1.00		0.25	1.00	1.00
Satd. Flow (perm)	1052	1792	1524	1328	1845	1568	489	3472		458	3471	1553
Volume (vph)	112	54	87	88	96	60	95	734	50	40	739	114
Peak-hour factor, PHF	0.94	0.94	0.94	0.84	0.84	0.84	0.87	0.87	0.87	0.89	0.89	0.89
Adj. Flow (vph)	119	57	93	105	114	71	109	844	57	45	830	128
RTOR Reduction (vph)	0	0	81	0	0	61	0	4	0	0	0	59
Lane Group Flow (vph)	119	57	12	105	114	10	109	897	0	45	830	69
Heavy Vehicles (%)	6%	6%	6%	3%	3%	3%	3%	3%	3%	4%	4%	4%
Turn Type	pm+pt		Perm	pm+pt		Perm	pm+pt			pm+pt		Perm
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases	8		8	4		4	6			2		2
Actuated Green, G (s)	16.9	10.1	10.1	17.7	10.5	10.5	55.8	51.7		53.6	50.6	50.6
Effective Green, g (s)	22.9	13.1	13.1	23.7	13.5	13.5	61.8	54.7		59.6	53.6	53.6
Actuated g/C Ratio	0.23	0.13	0.13	0.24	0.14	0.14	0.62	0.55		0.60	0.54	0.54
Clearance Time (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0		7.0	7.0	7.0
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0	1.0	1.0		1.0	1.0	1.0
Lane Grp Cap (vph)	305	235	200	358	249	212	392	1899		350	1860	832
v/s Ratio Prot	c0.04	0.03		0.03	c0.06		c0.02	c0.26		0.01	0.24	
v/s Ratio Perm	0.05		0.06	0.04		0.05	0.15			0.07		0.08
v/c Ratio	0.39	0.24	0.06	0.29	0.46	0.05	0.28	0.47		0.13	0.45	0.08
Uniform Delay, d1	34.5	39.0	38.1	31.6	39.9	37.6	8.6	13.8		9.0	14.1	11.3
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.35	0.33		1.00	1.00	1.00
Incremental Delay, d2	0.3	0.2	0.0	0.2	0.5	0.0	0.1	0.8		0.1	0.8	0.2
Delay (s)	34.8	39.2	38.1	31.8	40.4	37.7	3.1	5.3		9.1	14.9	11.5
Level of Service	C	D	D	C	D	D	A	A		A	B	B
Approach Delay (s)		36.9			36.6			5.1			14.2	
Approach LOS		D			D			A			B	

Intersection Summary

HCM Average Control Delay	15.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	48.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
2: LAIRD & SR 315

10/17/2005



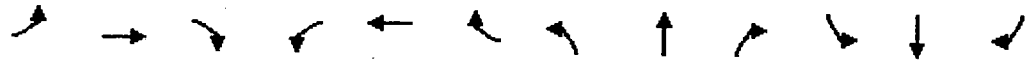
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕		↕	↕		↕	↕		↕	↕	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00		0.95	0.95		1.00	0.95		1.00	0.95	
Frt		0.89		1.00	0.94		1.00	0.99		1.00	1.00	
Flt Protected		0.99		0.95	0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1553		1681	1628		1736	3438		1736	3460	
Flt Permitted		0.93		0.67	0.61		0.14	1.00		0.21	1.00	
Satd. Flow (perm)		1459		1180	1007		252	3438		390	3460	
Volume (vph)	24	2	110	25	5	11	88	993	67	12	1123	25
Peak-hour factor, PHF	0.53	0.53	0.53	0.92	0.92	0.92	0.96	0.96	0.96	0.94	0.94	0.94
Adj. Flow (vph)	45	4	208	27	5	12	92	1034	70	13	1195	27
RTOR Reduction (vph)	0	175	0	0	11	0	0	3	0	0	1	0
Lane Group Flow (vph)	0	82	0	14	19	0	92	1101	0	13	1221	0
Heavy Vehicles (%)	8%	8%	8%	2%	2%	2%	4%	4%	4%	4%	4%	4%
Turn Type	Perm			Perm			pm+pt			pm+pt		
Protected Phases		3			4		1	6		2	5	2
Permitted Phases	3			4			6	6				
Actuated Green, G (s)		9.8		4.0	4.0		62.9	57.2		53.5	52.5	
Effective Green, g (s)		11.8		6.0	6.0		70.2	61.2		61.5	56.5	
Actuated g/C Ratio		0.12		0.06	0.06		0.70	0.61		0.62	0.56	
Clearance Time (s)		6.0		6.0	6.0		8.0	8.0		8.0	8.0	
Vehicle Extension (s)		2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)		172		71	60		321	2104		307	1955	
v/s Ratio Prot							c0.03	c0.32		0.00	c0.35	
v/s Ratio Perm		c0.18		0.01	c0.03		0.17			0.02		
v/c Ratio		0.48		0.20	0.31		0.29	0.52		0.04	0.62	
Uniform Delay, d1		41.2		44.7	45.0		8.4	11.1		8.0	14.6	
Progression Factor		1.00		1.00	1.00		2.03	0.72		0.69	0.68	
Incremental Delay, d2		0.8		0.5	1.1		0.2	0.9		0.0	1.5	
Delay (s)		42.0		45.2	46.1		17.3	8.9		5.5	11.4	
Level of Service		D		D	D		B	A		A	B	
Approach Delay (s)		42.0			45.8			9.5			11.4	
Approach LOS		D			D			A			B	

Intersection Summary

HCM Average Control Delay	14.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	61.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 17: SR 315 & MOTORWORLD

10/17/2005



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕			↕	↗		↖	↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	1.00
Frt	1.00	1.00		1.00	1.00			1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.95	1.00		0.95	1.00
Satd. Flow (prot)	1752	3493		1719	3426			1794	1599		1795	1599
Flt Permitted	0.12	1.00		0.22	1.00			0.69	1.00		0.69	1.00
Satd. Flow (perm)	226	3493		402	3426			1297	1599		1289	1599
Volume (vph)	75	1088	25	10	1218	30	54	2	12	48	2	170
Peak-hour factor, PHF	0.95	0.95	0.95	0.85	0.85	0.85	0.84	0.84	0.84	0.84	0.84	0.84
Adj. Flow (vph)	79	1145	26	12	1433	35	64	2	14	57	2	202
RTOR Reduction (vph)	0	1	0	0	2	0	0	0	12	0	0	154
Lane Group Flow (vph)	79	1170	0	12	1466	0	0	66	2	0	59	48
Heavy Vehicles (%)	3%	3%	3%	5%	5%	5%	1%	1%	1%	1%	1%	1%
Turn Type	pm+pt			pm+pt			Perm		Perm	Perm		Perm
Protected Phases	1	6		5	2			4			8	
Permitted Phases	6			2			4		4	8		8
Actuated Green, G (s)	76.0	70.4		67.6	66.2			9.2	9.2		9.2	9.2
Effective Green, g (s)	80.8	73.4		72.6	69.2			11.2	11.2		11.2	11.2
Actuated g/C Ratio	0.81	0.73		0.73	0.69			0.11	0.11		0.11	0.11
Clearance Time (s)	6.0	7.0		6.0	7.0			6.0	6.0		6.0	6.0
Vehicle Extension (s)	2.0	2.0		2.0	2.0			2.0	2.0		2.0	2.0
Lane Grp Cap (vph)	299	2564		337	2371			145	179		144	179
v/s Ratio Prot	c0.02	c0.34		0.00	c0.43							
v/s Ratio Perm	0.19			0.02				0.05	0.01		0.05	0.13
v/c Ratio	0.26	0.46		0.04	0.62			0.46	0.01		0.41	0.27
Uniform Delay, d1	5.5	5.3		3.9	8.3			41.5	39.5		41.3	40.7
Progression Factor	1.00	1.00		0.28	0.32			1.00	1.00		1.00	1.00
Incremental Delay, d2	0.2	0.6		0.0	1.0			0.8	0.0		0.7	0.3
Delay (s)	5.6	5.9		1.1	3.7			42.4	39.5		42.0	41.0
Level of Service	A	A		A	A			D	D		D	D
Approach Delay (s)		5.9			3.7			41.9			41.2	
Approach LOS		A			A			D			D	

Intersection Summary

HCM Average Control Delay	8.8	HCM Level of Service	A
HCM Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	61.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 22: SR 315 & 309 NB RAMPS

10/17/2005



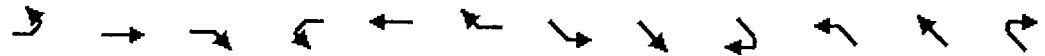
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↙	↑↑		↙	↑↑	↗		↕		↙	↗	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00		0.95	0.95	
Frt	1.00	1.00		1.00	1.00	0.85		1.00		1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.97		0.95	0.95	
Satd. Flow (prot)	1787	3572		1770	3539	1583		1845		1665	1665	
Flt Permitted	0.11	1.00		0.29	1.00	1.00		1.00		0.95	0.95	
Satd. Flow (perm)	209	3572		538	3539	1583		1900		1665	1665	
Volume (vph)	493	929	4	1	950	491	3	2	0	259	0	0
Peak-hour factor, PHF	0.94	0.94	0.94	0.86	0.86	0.86	0.50	0.50	0.50	0.84	0.84	0.84
Adj. Flow (vph)	524	988	4	1	1105	571	6	4	0	308	0	0
RTOR Reduction (vph)	0	0	0	0	0	344	0	0	0	0	0	0
Lane Group Flow (vph)	524	992	0	1	1105	227	0	10	0	154	154	0
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	0%	0%	0%	3%	3%	3%
Turn Type	pm+pt			Perm		Perm	Perm			Split		
Protected Phases	1	6			2			8		7	7	
Permitted Phases	6			2		2	8					
Actuated Green, G (s)	62.4	62.4		30.0	30.0	30.0		0.6		13.0	13.0	
Effective Green, g (s)	64.4	64.4		32.0	32.0	32.0		2.6		13.0	13.0	
Actuated g/C Ratio	0.70	0.70		0.35	0.35	0.35		0.03		0.14	0.14	
Clearance Time (s)	4.0	6.0		6.0	6.0	6.0		6.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0		3.0	3.0	
Lane Grp Cap (vph)	633	2500		187	1231	551		54		235	235	
v/s Ratio Prot	c0.26	0.28			0.31					c0.09	0.09	
v/s Ratio Perm	0.32			0.00		0.36		c0.01				
v/c Ratio	0.83	0.40		0.01	0.90	0.41		0.19		0.66	0.66	
Uniform Delay, d1	22.6	5.7		19.6	28.4	22.8		43.7		37.4	37.4	
Progression Factor	0.72	0.07		1.00	1.00	1.00		1.00		1.00	1.00	
Incremental Delay, d2	5.0	0.3		0.1	10.5	2.3		1.7		6.4	6.4	
Delay (s)	21.2	0.7		19.7	38.9	25.1		45.3		43.8	43.8	
Level of Service	C	A		B	D	C		D		D	D	
Approach Delay (s)		7.8			34.2			45.3			43.8	
Approach LOS		A			C			D			D	

Intersection Summary

HCM Average Control Delay	23.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	92.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	74.3%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 24: SR 315 & 309 SB RAMPS

10/17/2005



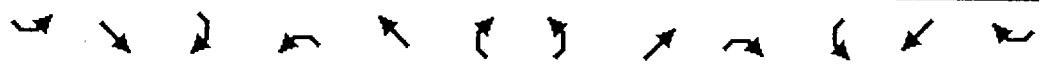
Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations		↑↑	↑	↑	↑↑		↑↑					
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0		4.0					
Lane Util. Factor		0.95	1.00	1.00	0.95		0.97					
Frt		1.00	0.85	1.00	1.00		1.00					
Flt Protected		1.00	1.00	0.95	1.00		0.95					
Satd. Flow (prot)		3574	1599	1770	3539		3400					
Flt Permitted		1.00	1.00	0.10	1.00		0.95					
Satd. Flow (perm)		3574	1599	191	3539		3400					
Volume (vph)	0	1061	464	512	1021	0	365	0	0	0	0	0
Peak-hour factor, PHF	0.93	0.93	0.93	0.89	0.89	0.89	0.66	0.66	0.66	0.92	0.92	0.92
Adj. Flow (vph)	0	1141	499	575	1147	0	553	0	0	0	0	0
RTOR Reduction (vph)	0	0	305	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	1141	194	575	1147	0	553	0	0	0	0	0
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	3%	3%	3%	2%	2%	2%
Turn Type			Perm	pm+pt			custom					
Protected Phases		6		5	2							
Permitted Phases			6	2			4					
Actuated Green, G (s)		33.1	33.1	63.6	63.6		16.4					
Effective Green, g (s)		35.1	35.1	65.6	65.6		18.4					
Actuated g/C Ratio		0.38	0.38	0.71	0.71		0.20					
Clearance Time (s)		6.0	6.0	4.0	6.0		6.0					
Vehicle Extension (s)		3.0	3.0	3.0	3.0		2.0					
Lane Grp Cap (vph)	1364	610	591	2523		680						
v/s Ratio Prot		0.32		0.28	0.32							
v/s Ratio Perm			0.31	0.41		0.16						
v/c Ratio	0.84	0.32	0.97	0.45		0.81						
Uniform Delay, d1	25.8	20.0	26.1	5.6		35.2						
Progression Factor	1.00	1.00	0.73	0.35		1.00						
Incremental Delay, d2	6.2	1.4	28.1	0.5		7.0						
Delay (s)	32.1	21.4	47.0	2.5		42.2						
Level of Service	C	C	D	A		D						
Approach Delay (s)	28.8			17.4			42.2			0.0		
Approach LOS	C			B			D			A		

Intersection Summary		
HCM Average Control Delay	25.7	HCM Level of Service C
HCM Volume to Capacity ratio	0.92	
Actuated Cycle Length (s)	92.0	Sum of lost time (s) 8.0
Intersection Capacity Utilization	78.1%	ICU Level of Service D
Analysis Period (min)	15	
c Critical Lane Group		

HCM Signalized Intersection Capacity Analysis

3: POCONO DOWNS & SR 315

10/16/2005



Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕	↗		↕		↖	↕		↖	↕	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0				4.0	4.0			4.0	
Lane Util. Factor		1.00	1.00				1.00	0.95			0.95	
Frt		1.00	0.85				1.00	1.00			0.95	
Flt Protected		0.95	1.00				0.95	1.00			1.00	
Satd. Flow (prot)		1770	1583				1787	3574			3373	
Flt Permitted		0.76	1.00				0.18	1.00			1.00	
Satd. Flow (perm)		1410	1583				340	3574			3373	
Volume (vph)	193	0	329	0	0	0	362	544	0	0	564	257
Peak-hour factor, PHF	0.90	0.90	0.90	0.92	0.92	0.92	0.90	0.90	0.90	0.87	0.87	0.87
Adj. Flow (vph)	214	0	366	0	0	0	402	604	0	0	648	295
RTOR Reduction (vph)	0	0	198	0	0	0	0	0	0	0	86	0
Lane Group Flow (vph)	0	214	168	0	0	0	402	604	0	0	857	0
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	1%	1%	1%	2%	2%	2%
Turn Type	Perm		Perm	Perm			pm+pt			pm+pt		
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)		12.7	12.7				32.1	32.1			16.1	
Effective Green, g (s)		14.7	14.7				34.1	34.1			18.1	
Actuated g/C Ratio		0.26	0.26				0.60	0.60			0.32	
Clearance Time (s)		6.0	6.0				6.0	6.0			6.0	
Vehicle Extension (s)		3.0	3.0				3.0	3.0			3.0	
Lane Grp Cap (vph)		365	410				510	2146			1075	
v/s Ratio Prot							c0.17	0.17			0.28	
v/s Ratio Perm		0.15	0.23				c0.31					
v/c Ratio		0.59	0.41				0.79	0.28			0.80	
Uniform Delay, d1		18.4	17.5				10.7	5.5			17.7	
Progression Factor		1.00	1.00				1.00	1.00			1.00	
Incremental Delay, d2		2.4	0.7				7.9	0.3			6.2	
Delay (s)		20.8	18.1				18.6	5.8			23.8	
Level of Service		C	B				B	A			C	
Approach Delay (s)		19.1			0.0			10.9			23.8	
Approach LOS		B			A			B			C	

Intersection Summary

HCM Average Control Delay	17.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	56.8	Sum of lost time (s)	8.0
Intersection Capacity Utilization	64.6%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
 2: LAIRD & SR 315

10/18/2005



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕		↕	↕		↕	↕↕		↕	↕↕	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00		0.95	0.95		1.00	0.95		1.00	0.95	
Frt		0.90		1.00	0.95		1.00	1.00		1.00	1.00	
Flt Protected		0.99		0.95	0.97		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1565		1681	1643		1736	3460		1736	3463	
Flt Permitted		0.28		0.87	0.78		0.20	1.00		0.20	1.00	
Satd. Flow (perm)		450		1539	1321		374	3460		357	3463	
Volume (vph)	16	2	54	30	4	7	57	994	23	8	943	14
Peak-hour factor, PHF	0.77	0.77	0.77	0.73	0.73	0.73	0.91	0.91	0.91	0.94	0.94	0.94
Adj. Flow (vph)	21	3	70	41	5	10	63	1092	25	9	1003	15
RTOR Reduction (vph)	0	63	0	0	9	0	0	2	0	0	1	0
Lane Group Flow (vph)	0	31	0	24	23	0	63	1115	0	9	1017	0
Heavy Vehicles (%)	8%	8%	8%	2%	2%	2%	4%	4%	4%	4%	4%	4%
Turn Type	Perm		Perm		pm+pt		pm+pt					
Protected Phases		3			4		1	6			5	2
Permitted Phases	3			4			6	6		2		
Actuated Green, G (s)		6.6		2.6	2.6		46.0	43.4		42.4	41.6	
Effective Green, g (s)		8.6		4.6	4.6		54.0	47.4		50.4	45.6	
Actuated g/C Ratio		0.11		0.06	0.06		0.66	0.58		0.62	0.56	
Clearance Time (s)		6.0		6.0	6.0		8.0	8.0		8.0	8.0	
Vehicle Extension (s)		2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)		48		87	75		359	2015		302	1940	
v/s Ratio Prot							c0.01	c0.32		0.00	0.29	
v/s Ratio Perm		c0.21		0.02	c0.02		0.10			0.02		
v/c Ratio		0.65		0.28	0.30		0.18	0.55		0.03	0.52	
Uniform Delay, d1		35.0		36.8	36.9		6.0	10.5		6.6	11.1	
Progression Factor		1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		21.8		0.6	0.8		0.1	0.2		0.0	0.1	
Delay (s)		56.7		37.4	37.7		6.0	10.7		6.7	11.3	
Level of Service		E		D	D		A	B		A	B	
Approach Delay (s)		56.7			37.6			10.4			11.2	
Approach LOS		E			D			B			B	

Intersection Summary

HCM Average Control Delay	13.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	81.4	Sum of lost time (s)	16.0
Intersection Capacity Utilization	52.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis

22: SR 315 & 309 NB RAMPS

10/17/2005

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↙	↑↑		↙	↑↑	↗		↕		↙	↗	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00		0.95	0.95	
Frt	1.00	1.00		1.00	1.00	0.85		1.00		1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.95		0.95	0.95	
Satd. Flow (prot)	1805	3608		1787	3574	1599		1805		1698	1698	
Flt Permitted	0.13	1.00		0.31	1.00	1.00		1.00		0.95	0.95	
Satd. Flow (perm)	248	3608		584	3574	1599		1900		1698	1698	
Volume (vph)	526	862	3	2	820	320	2	0	0	308	0	0
Peak-hour factor, PHF	0.94	0.94	0.94	0.89	0.89	0.89	0.50	0.50	0.50	0.95	0.95	0.95
Adj. Flow (vph)	560	917	3	2	921	360	4	0	0	324	0	0
RTOR Reduction (vph)	0	0	0	0	0	230	0	0	0	0	0	0
Lane Group Flow (vph)	560	920	0	2	921	130	0	4	0	162	162	0
Heavy Vehicles (%)	0%	0%	0%	1%	1%	1%	0%	0%	0%	1%	1%	1%
Turn Type	pm+pt			Perm		Perm	Perm			Split		
Protected Phases	1	6			2			8		7	7	
Permitted Phases	6			2		2	8					
Actuated Green, G (s)	59.2	59.2		29.8	29.8	29.8		0.6		12.2	12.2	
Effective Green, g (s)	61.2	61.2		31.8	31.8	31.8		2.6		12.2	12.2	
Actuated g/C Ratio	0.70	0.70		0.36	0.36	0.36		0.03		0.14	0.14	
Clearance Time (s)	4.0	6.0		6.0	6.0	6.0		6.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0		3.0	3.0	
Lane Grp Cap (vph)	622	2509		211	1292	578		56		235	235	
v/s Ratio Prot	c0.26	0.25			0.26					c0.10	0.10	
v/s Ratio Perm	c0.37			0.00		0.23		c0.00				
v/c Ratio	0.90	0.37		0.01	0.71	0.23		0.07		0.69	0.69	
Uniform Delay, d1	21.7	5.5		18.0	24.2	19.5		41.5		36.1	36.1	
Progression Factor	0.57	0.01		1.00	1.00	1.00		1.00		1.00	1.00	
Incremental Delay, d2	12.2	0.3		0.1	3.4	0.9		0.5		8.2	8.2	
Delay (s)	24.5	0.3		18.1	27.5	20.4		42.1		44.3	44.3	
Level of Service	C	A		B	C	C		D		D	D	
Approach Delay (s)		9.5			25.5			42.1			44.3	
Approach LOS		A			C			D			D	

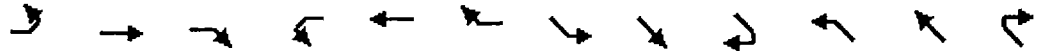
Intersection Summary

HCM Average Control Delay	19.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	88.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	69.8%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis

24: SR 315 & 309 SB RAMPS

10/17/2005



Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations		↑↑	↑	↑	↑↑		↑↑					
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0		4.0					
Lane Util. Factor		0.95	1.00	1.00	0.95		0.97					
Frt		1.00	0.85	1.00	1.00		1.00					
Flt Protected		1.00	1.00	0.95	1.00		0.95					
Satd. Flow (prot)		3574	1599	1787	3574		3367					
Flt Permitted		1.00	1.00	0.12	1.00		0.95					
Satd. Flow (perm)		3574	1599	220	3574		3367					
Volume (vph)	0	1022	283	357	1033	0	369	0	0	0	0	0
Peak-hour factor, PHF	0.85	0.85	0.85	0.87	0.87	0.87	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	1202	333	410	1187	0	401	0	0	0	0	0
RTOR Reduction (vph)	0	0	167	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	1202	166	410	1187	0	401	0	0	0	0	0
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	4%	4%	4%	2%	2%	2%
Turn Type			Perm	pm+pt			custom					
Protected Phases		6		5			2					
Permitted Phases			6	2			4					
Actuated Green, G (s)		41.8	41.8	64.3	64.3		11.7					
Effective Green, g (s)		43.8	43.8	66.3	66.3		13.7					
Actuated g/C Ratio		0.50	0.50	0.75	0.75		0.16					
Clearance Time (s)		6.0	6.0	4.0	6.0		6.0					
Vehicle Extension (s)		3.0	3.0	3.0	3.0		2.0					
Lane Grp Cap (vph)		1779	796	495	2693		524					
v/s Ratio Prot		0.34		c0.17	0.33							
v/s Ratio Perm			0.21	c0.45			0.12					
v/c Ratio		0.68	0.21	0.83	0.44		0.77					
Uniform Delay, d1		16.7	12.4	20.9	4.0		35.6					
Progression Factor		1.00	1.00	0.78	0.86		1.00					
Incremental Delay, d2		2.1	0.6	10.5	0.5		5.9					
Delay (s)		18.8	13.0	26.7	3.9		41.5					
Level of Service		B	B	C	A		D					
Approach Delay (s)		17.5			9.8			41.5			0.0	
Approach LOS		B			A			D			A	

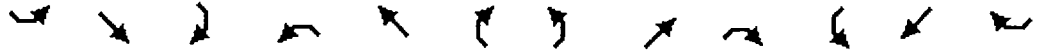
Intersection Summary

HCM Average Control Delay	16.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	88.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	68.6%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
 3: POCONO DOWNS & SR 315

10/16/2005



Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕	↗		↕		↖	↕		↖	↕	↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00	1.00		1.00		1.00	0.95		0.95	0.95	
Frt		1.00	0.85		1.00		1.00	1.00		1.00	0.95	
Flt Protected		0.95	1.00		0.95		0.95	1.00		1.00	1.00	
Satd. Flow (prot)		1805	1615		1805		1752	3503		3297	3297	
Flt Permitted		0.76	1.00		0.43		0.13	1.00		1.00	1.00	
Satd. Flow (perm)		1435	1615		809		243	3503		3297	3297	
Volume (vph)	213	0	368	2	0	0	500	505	2	0	615	309
Peak-hour factor, PHF	0.90	0.90	0.90	0.50	0.50	0.50	0.96	0.96	0.96	0.92	0.92	0.92
Adj. Flow (vph)	237	0	409	4	0	0	521	526	2	0	668	336
RTOR Reduction (vph)	0	0	320	0	0	0	0	0	0	0	76	0
Lane Group Flow (vph)	0	237	89	0	4	0	521	528	0	0	928	0
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	3%	3%	3%	4%	4%	4%
Turn Type	Perm		Perm	Perm			pm+pt			pm+pt		
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)		14.6	14.6		14.6		49.6	49.6			24.4	
Effective Green, g (s)		16.6	16.6		16.6		51.6	51.6			26.4	
Actuated g/C Ratio		0.22	0.22		0.22		0.68	0.68			0.35	
Clearance Time (s)		6.0	6.0		6.0		6.0	6.0			6.0	
Vehicle Extension (s)		3.0	3.0		3.0		3.0	3.0			3.0	
Lane Grp Cap (vph)		313	352		176		584	2372			1142	
v/s Ratio Prot							c0.25	0.15			0.30	
v/s Ratio Perm		0.17	0.25		0.00		c0.36					
v/c Ratio		0.76	0.25		0.02		0.89	0.22			0.81	
Uniform Delay, d1		27.9	24.7		23.4		19.0	4.7			22.6	
Progression Factor		1.00	1.00		1.00		1.00	1.00			1.00	
Incremental Delay, d2		10.0	0.4		0.1		15.8	0.2			6.3	
Delay (s)		37.9	25.0		23.5		34.8	4.9			29.0	
Level of Service		D	C		C		C	A			C	
Approach Delay (s)		29.8			23.5			19.8			29.0	
Approach LOS		C			C			B			C	

Intersection Summary

HCM Average Control Delay	25.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	76.2	Sum of lost time (s)	8.0
Intersection Capacity Utilization	75.7%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 22: SR 315 & 309 NB RAMPS

10/17/2005



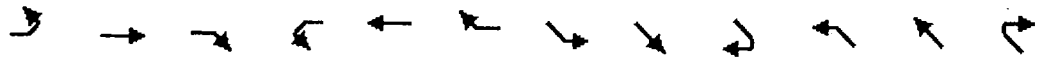
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↕		↘	↕	↗		↕		↘	↕	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0				4.0	4.0	
Lane Util. Factor	1.00	0.95			0.95	1.00				0.95	0.95	
Frt	1.00	1.00			1.00	0.85				1.00	1.00	
Flt Protected	0.95	1.00			1.00	1.00				0.95	0.95	
Satd. Flow (prot)	1787	3574			3610	1615				1698	1698	
Flt Permitted	0.22	1.00			1.00	1.00				0.95	0.95	
Satd. Flow (perm)	418	3574			3610	1615				1698	1698	
Volume (vph)	526	685	0	0	709	307	0	0	0	188	0	0
Peak-hour factor, PHF	0.98	0.98	0.98	0.84	0.84	0.84	0.50	0.50	0.50	0.92	0.92	0.92
Adj. Flow (vph)	537	699	0	0	844	365	0	0	0	204	0	0
RTOR Reduction (vph)	0	0	0	0	0	193	0	0	0	0	0	0
Lane Group Flow (vph)	537	699	0	0	844	172	0	0	0	102	102	0
Heavy Vehicles (%)	1%	1%	1%	0%	0%	0%	0%	0%	0%	1%	1%	1%
Turn Type	pm+pt			Perm		Perm	Perm			Split		
Protected Phases	1	6			2			8		7	7	
Permitted Phases	6			2		2	8					
Actuated Green, G (s)	67.4	67.4			39.4	39.4				10.6	10.6	
Effective Green, g (s)	69.4	69.4			41.4	41.4				10.6	10.6	
Actuated g/C Ratio	0.79	0.79			0.47	0.47				0.12	0.12	
Clearance Time (s)	4.0	6.0			6.0	6.0				4.0	4.0	
Vehicle Extension (s)	3.0	3.0			3.0	3.0				3.0	3.0	
Lane Grp Cap (vph)	703	2819			1698	760				205	205	
v/s Ratio Prot	c0.21	0.20			0.23					c0.06	0.06	
v/s Ratio Perm	c0.39					0.23						
v/c Ratio	0.76	0.25			0.50	0.23				0.50	0.50	
Uniform Delay, d1	11.8	2.4			16.1	13.8				36.2	36.2	
Progression Factor	0.51	0.20			1.00	1.00				1.00	1.00	
Incremental Delay, d2	4.3	0.2			1.0	0.7				1.9	1.9	
Delay (s)	10.3	0.7			17.1	14.5				38.1	38.1	
Level of Service	B	A			B	B				D	D	
Approach Delay (s)		4.9			16.3			0.0			38.1	
Approach LOS		A			B			A			D	

Intersection Summary

HCM Average Control Delay	12.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	88.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	63.9%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 24: SR 315 & 309 SB RAMPS

10/17/2005



Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations		↑↑	↑	↑	↑↑		↑↑					
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0		4.0					
Lane Util. Factor		0.95	1.00	1.00	0.95		0.97					
Frt		1.00	0.85	1.00	1.00		1.00					
Flt Protected		1.00	1.00	0.95	1.00		0.95					
Satd. Flow (prot)		3610	1615	1787	3574		3502					
Flt Permitted		1.00	1.00	0.18	1.00		0.95					
Satd. Flow (perm)		3610	1615	337	3574		3502					
Volume (vph)	0	983	388	320	803	0	228	0	0	0	0	0
Peak-hour factor, PHF	0.96	0.96	0.96	0.93	0.93	0.93	0.89	0.89	0.89	0.92	0.92	0.92
Adj. Flow (vph)	0	1024	404	344	863	0	256	0	0	0	0	0
RTOR Reduction (vph)	0	0	193	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	1024	211	344	863	0	256	0	0	0	0	0
Heavy Vehicles (%)	0%	0%	0%	1%	1%	1%	0%	0%	0%	0%	0%	0%
Turn Type		Perm pm+pt			custom							
Protected Phases		6		5		2						
Permitted Phases			6	2			4					
Actuated Green, G (s)		44.0	44.0	65.7		65.7	10.3					
Effective Green, g (s)		46.0	46.0	67.7		67.7	12.3					
Actuated g/C Ratio		0.52	0.52	0.77		0.77	0.14					
Clearance Time (s)		6.0	6.0	4.0		6.0	6.0					
Vehicle Extension (s)		3.0	3.0	3.0		3.0	2.0					
Lane Grp Cap (vph)	1887	844	551	2750			489					
v/s Ratio Prot		0.28		0.13		0.24						
v/s Ratio Perm			0.25	0.35			0.07					
v/c Ratio		0.54	0.25	0.62		0.31	0.52					
Uniform Delay, d1		14.0	11.5	8.4		3.1	35.1					
Progression Factor		1.00	1.00	0.64		0.72	1.00					
Incremental Delay, d2		1.1	0.7	2.1		0.3	0.5					
Delay (s)		15.1	12.2	7.5		2.5	35.6					
Level of Service		B	B	A		A	D					
Approach Delay (s)		14.3				3.9		35.6			0.0	
Approach LOS		B				A		D			A	

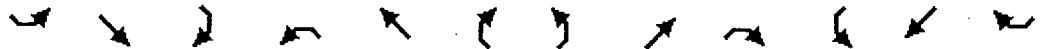
Intersection Summary

HCM Average Control Delay	11.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	88.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	61.4%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
 3: POCONO DOWNS & SR 315

10/16/2005



Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕	↗		↕		↖	↕		↖	↕	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00	1.00		1.00		1.00	0.95		1.00	0.95	
Frt		1.00	0.85		0.86		1.00	1.00		1.00	0.94	
Flt Protected		0.95	1.00		1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1805	1615		1644		1787	3573		1787	3353	
Flt Permitted		0.76	1.00		1.00		0.23	1.00		0.49	1.00	
Satd. Flow (perm)		1435	1615		1644		436	3573		917	3353	
Volume (vph)	206	0	326	0	0	1	343	426	1	1	353	248
Peak-hour factor, PHF	0.90	0.90	0.90	0.25	0.25	0.25	0.93	0.93	0.93	0.83	0.83	0.83
Adj. Flow (vph)	229	0	362	0	0	4	369	458	1	1	425	299
RTOR Reduction (vph)	0	0	269	0	3	0	0	0	0	0	188	0
Lane Group Flow (vph)	0	229	93	0	1	0	369	459	0	1	536	0
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	1%	1%	1%	1%	1%	1%
Turn Type	Perm		Perm	Perm			pm+pt			pm+pt		
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)		12.9	12.9		12.9		36.8	30.0		21.8	21.0	
Effective Green, g (s)		14.9	14.9		14.9		38.8	32.0		25.8	23.0	
Actuated g/C Ratio		0.24	0.24		0.24		0.63	0.52		0.42	0.37	
Clearance Time (s)		6.0	6.0		6.0		6.0	6.0		6.0	6.0	
Vehicle Extension (s)		3.0	3.0		3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		347	390		397		533	1853		423	1250	
v/s Ratio Prot					0.00		c0.13	0.13		0.00	0.22	
v/s Ratio Perm		0.16	0.22				c0.30			0.00		
v/c Ratio		0.66	0.24		0.00		0.69	0.25		0.00	0.43	
Uniform Delay, d1		21.1	18.8		17.8		7.2	8.2		10.5	14.4	
Progression Factor		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		4.5	0.3		0.0		3.9	0.3		0.0	1.1	
Delay (s)		25.6	19.2		17.8		11.1	8.5		10.5	15.5	
Level of Service		C	B		B		B	A		B	B	
Approach Delay (s)		21.7			17.8			9.7			15.5	
Approach LOS		C			B			A			B	

Intersection Summary			
HCM Average Control Delay	15.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	61.7	Sum of lost time (s)	8.0
Intersection Capacity Utilization	64.8%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

**2017 (ETC+10) BUILD CONDITIONS
WITH IMPROVEMENTS**

HCM Signalized Intersection Capacity Analysis
 28: OAK & SR 315

10/18/2005

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations	↖	↑	↗		↖	↗	↖	↕	↗	↖	↕	↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00		1.00	1.00	1.00	0.95		1.00	0.95	1.00
Fr _t	1.00	1.00	0.85		1.00	0.85	1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00		0.96	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1433	1508	1282		1793	1583	1641	3267		1687	3374	1509
Flt Permitted	0.53	1.00	1.00		0.74	1.00	0.10	1.00		0.12	1.00	1.00
Satd. Flow (perm)	807	1508	1282		1374	1583	181	3267		208	3374	1509
Volume (vph)	323	36	255	167	47	70	380	1012	30	56	924	118
Peak-hour factor, PHF	0.68	0.68	0.68	0.92	0.92	0.92	0.82	0.82	0.82	0.97	0.97	0.97
Adj. Flow (vph)	475	53	375	182	51	76	463	1234	37	58	953	122
RTOR Reduction (vph)	0	0	220	0	0	45	0	2	0	0	0	0
Lane Group Flow (vph)	475	53	155	0	233	31	463	1269	0	58	953	122
Heavy Vehicles (%)	26%	26%	26%	2%	2%	2%	10%	10%	10%	7%	7%	7%
Turn Type	Perm		Perm	Perm		Perm	pm+pt			pm+pt		Free
Protected Phases		7 8			7 8		1	6		5	2	
Permitted Phases	7 8		7 8	7 8		7 8	6			2		Free
Actuated Green, G (s)	46.0	46.0	46.0		46.0	46.0	58.2	49.8		34.6	32.2	116.2
Effective Green, g (s)	48.0	48.0	48.0		48.0	48.0	60.2	51.8		38.6	34.2	116.2
Actuated g/C Ratio	0.41	0.41	0.41		0.41	0.41	0.52	0.45		0.33	0.29	1.00
Clearance Time (s)							6.0	6.0		6.0	6.0	
Vehicle Extension (s)							3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	333	623	530		568	654	370	1456		125	993	1509
v/s Ratio Prot		0.04					c0.24	0.39		0.02	0.28	
v/s Ratio Perm	c0.59		0.29		0.17	0.05	c0.41			0.14		0.08
v/c Ratio	1.43	0.09	0.29		0.41	0.05	1.25	0.87		0.46	0.96	0.08
Uniform Delay, d1	34.1	20.7	22.8		24.1	20.4	35.8	29.2		28.2	40.3	0.0
Progression Factor	1.00	1.00	1.00		1.00	1.00	1.16	0.75		1.00	1.00	1.00
Incremental Delay, d2	208.5	0.1	0.3		0.5	0.0	129.1	4.6		2.7	19.3	0.1
Delay (s)	242.6	20.8	23.1		24.6	20.4	170.8	26.6		30.9	59.6	0.1
Level of Service	F	C	C		C	C	F	C		C	E	A
Approach Delay (s)		138.4			23.6			65.1			51.7	
Approach LOS		F			C			E			D	

Intersection Summary

HCM Average Control Delay	74.5	HCM Level of Service	E
HCM Volume to Capacity ratio	1.31		
Actuated Cycle Length (s)	116.2	Sum of lost time (s)	8.0
Intersection Capacity Utilization	81.2%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis

1: EAST MAIN & SR 315

10/17/2005

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations	↘	↑	↗	↘	↑	↗	↘	↕	↘	↘	↕	↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95		1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1703	1792	1524	1752	1845	1568	1752	3469		1736	3471	1553
Flt Permitted	0.50	1.00	1.00	0.71	1.00	1.00	0.22	1.00		0.20	1.00	1.00
Satd. Flow (perm)	890	1792	1524	1312	1845	1568	399	3469		360	3471	1553
Volume (vph)	134	66	104	108	117	73	114	824	61	49	834	136
Peak-hour factor, PHF	0.94	0.94	0.94	0.84	0.84	0.84	0.87	0.87	0.87	0.89	0.89	0.89
Adj. Flow (vph)	143	70	111	129	139	87	131	947	70	55	937	153
RTOR Reduction (vph)	0	0	95	0	0	75	0	5	0	0	0	75
Lane Group Flow (vph)	143	70	16	129	139	12	131	1012	0	55	937	78
Heavy Vehicles (%)	6%	6%	6%	3%	3%	3%	3%	3%	3%	4%	4%	4%
Turn Type	pm+pt		Perm	pm+pt		Perm	pm+pt			pm+pt		Perm
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases	8		8	4		4	6			2		2
Actuated Green, G (s)	19.4	11.4	11.4	18.4	10.9	10.9	53.9	49.1		52.3	48.3	48.3
Effective Green, g (s)	25.4	14.4	14.4	24.4	13.9	13.9	59.9	52.1		58.3	51.3	51.3
Actuated g/C Ratio	0.25	0.14	0.14	0.24	0.14	0.14	0.60	0.52		0.58	0.51	0.51
Clearance Time (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0		7.0	7.0	7.0
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0	1.0	1.0		1.0	1.0	1.0
Lane Grp Cap (vph)	315	258	219	366	256	218	345	1807		306	1781	797
v/s Ratio Prot	c0.05	0.04		0.04	c0.08		c0.03	c0.29		0.01	0.27	
v/s Ratio Perm	0.07		0.07	0.05		0.06	0.20			0.09		0.10
v/c Ratio	0.45	0.27	0.07	0.35	0.54	0.06	0.38	0.56		0.18	0.53	0.10
Uniform Delay, d1	30.5	38.1	37.0	30.8	40.1	37.4	10.2	16.2		10.3	16.2	12.5
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.70	0.25		1.00	1.00	1.00
Incremental Delay, d2	0.4	0.2	0.1	0.2	1.3	0.0	0.2	1.0		0.1	1.1	0.2
Delay (s)	30.8	38.3	37.1	31.1	41.4	37.4	7.3	5.1		10.4	17.4	12.7
Level of Service	C	D	D	C	D	D	A	A		B	B	B
Approach Delay (s)		34.6			36.6			5.4			16.4	
Approach LOS		C			D			A			B	

Intersection Summary

HCM Average Control Delay	16.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	53.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis

2: LAIRD & SR 315

10/17/2005



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕		↕	↕		↕	↕		↕	↕	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00		0.95	0.95		1.00	0.95		1.00	0.95	
Frt		0.89		1.00	0.94		1.00	0.99		1.00	1.00	
Flt Protected		0.99		0.95	0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1554		1681	1632		1736	3437		1736	3459	
Flt Permitted		0.93		0.66	0.60		0.08	1.00		0.15	1.00	
Satd. Flow (perm)		1458		1160	999		138	3437		272	3459	
Volume (vph)	29	3	134	31	6	14	108	1137	81	15	1300	30
Peak-hour factor, PHF	0.53	0.53	0.53	0.92	0.92	0.92	0.96	0.96	0.96	0.94	0.94	0.94
Adj. Flow (vph)	55	6	253	34	7	15	112	1184	84	16	1383	32
RTOR Reduction (vph)	0	161	0	0	14	0	0	4	0	0	1	0
Lane Group Flow (vph)	0	153	0	17	25	0	112	1264	0	16	1414	0
Heavy Vehicles (%)	8%	8%	8%	2%	2%	2%	4%	4%	4%	4%	4%	4%
Turn Type	Perm			Perm			pm+pt			pm+pt		
Protected Phases		3			4		1	6		5	2	
Permitted Phases	3			4			6	6		2		
Actuated Green, G (s)		13.0		4.1	4.1		59.6	52.9		50.2	48.2	
Effective Green, g (s)		15.0		6.1	6.1		66.9	56.9		58.2	52.2	
Actuated g/C Ratio		0.15		0.06	0.06		0.67	0.57		0.58	0.52	
Clearance Time (s)		6.0		6.0	6.0		8.0	8.0		8.0	8.0	
Vehicle Extension (s)		2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)		219		71	61		263	1956		246	1806	
v/s Ratio Prot							c0.05	c0.37		0.00	c0.41	
v/s Ratio Perm		c0.22		0.01	c0.04		0.24			0.03		
v/c Ratio		0.70		0.24	0.41		0.43	0.65		0.07	0.78	
Uniform Delay, d1		40.4		44.7	45.2		14.3	14.7		10.3	19.3	
Progression Factor		1.00		1.00	1.00		2.15	0.75		0.69	0.65	
Incremental Delay, d2		8.0		0.6	1.6		0.4	1.5		0.0	3.2	
Delay (s)		48.3		45.4	46.8		31.0	12.5		7.1	15.8	
Level of Service		D		D	D		C	B		A	B	
Approach Delay (s)		48.3			46.4			14.0			15.7	
Approach LOS		D			D			B			B	

Intersection Summary

HCM Average Control Delay	18.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	69.6%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
 17: SR 315 & MOTORWORLD

10/17/2005



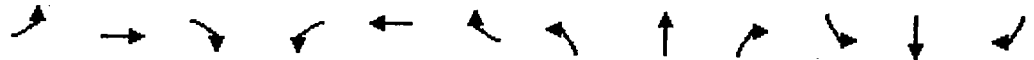
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕			↕	↗		↖	↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	1.00
Flt	1.00	1.00		1.00	1.00			1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.95	1.00		0.95	1.00
Satd. Flow (prot)	1752	3492		1719	3425			1796	1599		1796	1599
Flt Permitted	0.08	1.00		0.17	1.00			0.68	1.00		0.66	1.00
Satd. Flow (perm)	150	3492		302	3425			1286	1599		1246	1599
Volume (vph)	92	1253	30	13	1415	37	66	3	15	58	3	206
Peak-hour factor, PHF	0.95	0.95	0.95	0.85	0.85	0.85	0.84	0.84	0.84	0.84	0.84	0.84
Adj. Flow (vph)	97	1319	32	15	1665	44	79	4	18	69	4	245
RTOR Reduction (vph)	0	1	0	0	2	0	0	0	16	0	0	134
Lane Group Flow (vph)	97	1350	0	15	1707	0	0	83	2	0	73	111
Heavy Vehicles (%)	3%	3%	3%	5%	5%	5%	1%	1%	1%	1%	1%	1%
Turn Type	pm+pt			pm+pt			Perm		Perm	Perm		Perm
Protected Phases	1	6		5	2			4			8	
Permitted Phases	6			2			4		4	8		8
Actuated Green, G (s)	74.1	68.5		68.5	65.7			9.7	9.7		9.7	9.7
Effective Green, g (s)	79.1	71.5		73.5	68.7			11.7	11.7		11.7	11.7
Actuated g/C Ratio	0.79	0.72		0.74	0.69			0.12	0.12		0.12	0.12
Clearance Time (s)	6.0	7.0		6.0	7.0			6.0	6.0		6.0	6.0
Vehicle Extension (s)	2.0	2.0		2.0	2.0			2.0	2.0		2.0	2.0
Lane Grp Cap (vph)	240	2497		290	2353			150	187		146	187
v/s Ratio Prot	c0.03	0.39		0.00	c0.50							
v/s Ratio Perm	0.29			0.04				0.06	0.01		0.06	0.15
v/c Ratio	0.40	0.54		0.05	0.73			0.55	0.01		0.50	0.59
Uniform Delay, d1	9.5	6.6		4.3	9.8			41.7	39.0		41.4	41.9
Progression Factor	1.83	0.73		0.28	0.38			1.00	1.00		1.00	1.00
Incremental Delay, d2	0.4	0.7		0.0	1.4			2.5	0.0		1.0	3.3
Delay (s)	17.8	5.6		1.2	5.1			44.2	39.0		42.4	45.2
Level of Service	B	A		A	A			D	D		D	D
Approach Delay (s)		6.4			5.1			43.3			44.6	
Approach LOS		A			A			D			D	

Intersection Summary

HCM Average Control Delay	10.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	68.9%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 22: SR 315 & 309 NB RAMPS

10/17/2005



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↕		↘	↕	↗		↕		↘	↗	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00		0.95	0.95	
Frt	1.00	1.00		1.00	1.00	0.85		1.00		1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.97		0.95	0.95	
Satd. Flow (prot)	1787	3572		1770	3539	1583		1847		1665	1665	
Flt Permitted	0.10	1.00		0.24	1.00	1.00		0.97		0.95	0.95	
Satd. Flow (perm)	196	3572		453	3539	1583		1847		1665	1665	
Volume (vph)	600	1089	5	1	1118	568	4	3	0	286	0	0
Peak-hour factor, PHF	0.94	0.94	0.94	0.86	0.86	0.86	0.50	0.50	0.50	0.84	0.84	0.84
Adj. Flow (vph)	638	1159	5	1	1300	660	8	6	0	340	0	0
RTOR Reduction (vph)	0	0	0	0	0	306	0	0	0	0	0	0
Lane Group Flow (vph)	638	1164	0	1	1300	354	0	14	0	170	170	0
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	0%	0%	0%	3%	3%	3%
Turn Type	pm+pt			Perm		Perm	Split			Split		
Protected Phases	1	6			2		8	8		7	7	
Permitted Phases	6			2		2						
Actuated Green, G (s)	67.9	67.9		32.4	32.4	32.4		1.2		12.9	12.9	
Effective Green, g (s)	69.9	69.9		34.4	34.4	34.4		3.2		14.9	14.9	
Actuated g/C Ratio	0.70	0.70		0.34	0.34	0.34		0.03		0.15	0.15	
Clearance Time (s)	4.0	6.0		6.0	6.0	6.0		6.0		6.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0		3.0	3.0	
Lane Grp Cap (vph)	638	2497		156	1217	545		59		248	248	
v/s Ratio Prot	c0.31	0.33			0.37			c0.01		c0.10	0.10	
v/s Ratio Perm	0.38			0.00		0.42						
v/c Ratio	1.00	0.47		0.01	1.07	0.65		0.24		0.69	0.69	
Uniform Delay, d1	28.8	6.7		21.6	32.8	27.7		47.2		40.3	40.3	
Progression Factor	0.75	0.14		0.88	0.75	0.65		1.00		1.00	1.00	
Incremental Delay, d2	20.1	0.2		0.1	42.4	4.2		2.1		7.6	7.6	
Delay (s)	41.6	1.1		18.9	67.0	22.2		49.3		48.0	48.0	
Level of Service	D	A		B	E	C		D		D	D	
Approach Delay (s)		15.4			51.9			49.3			48.0	
Approach LOS		B			D			D			D	

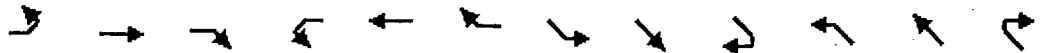
Intersection Summary

HCM Average Control Delay	35.6	HCM Level of Service	D
HCM Volume to Capacity ratio	1.00		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	86.6%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis

24: SR 315 & 309 SB RAMPS

10/17/2005



Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations		↑↑	↑	↓	↑↑		↑↓					
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0		4.0					
Lane Util. Factor		0.95	1.00	1.00	0.95		0.97					
Fr _t		1.00	0.85	1.00	1.00		1.00					
Fl _t Protected		1.00	1.00	0.95	1.00		0.95					
Satd. Flow (prot)		3574	1599	1770	3539		3400					
Fl _t Permitted		1.00	1.00	0.09	1.00		0.95					
Satd. Flow (perm)		3574	1599	173	3539		3400					
Volume (vph)	0	1281	566	596	1232	0	413	0	0	0	0	0
Peak-hour factor, PHF	0.93	0.93	0.93	0.89	0.89	0.89	0.66	0.66	0.66	0.92	0.92	0.92
Adj. Flow (vph)	0	1377	609	670	1384	0	626	0	0	0	0	0
RTOR Reduction (vph)	0	0	293	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	1377	316	670	1384	0	626	0	0	0	0	0
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	3%	3%	3%	2%	2%	2%
Turn Type			Perm	pm+pt			custom					
Protected Phases		6		5	2							
Permitted Phases			6				4					
Actuated Green, G (s)		37.0	37.0	69.3	69.3		18.7					
Effective Green, g (s)		39.0	39.0	71.3	71.3		20.7					
Actuated g/C Ratio		0.39	0.39	0.71	0.71		0.21					
Clearance Time (s)		6.0	6.0	4.0	6.0		6.0					
Vehicle Extension (s)		3.0	3.0	3.0	3.0		2.0					
Lane Grp Cap (vph)	1394		624	575	2523		704					
v/s Ratio Prot		0.39		c0.33	0.39							
v/s Ratio Perm			0.38	c0.50			0.18					
v/c Ratio	0.99		0.51	1.17	0.55		0.89					
Uniform Delay, d1	30.3		23.2	30.2	6.8		38.5					
Progression Factor	1.00		1.00	0.77	0.29		1.00					
Incremental Delay, d2	21.4		2.9	89.1	0.7		12.8					
Delay (s)	51.6		26.1	112.4	2.6		51.3					
Level of Service	D		C	F	A		D					
Approach Delay (s)	43.8				38.5			51.3			0.0	
Approach LOS	D				D			D			A	

Intersection Summary

HCM Average Control Delay	42.5	HCM Level of Service	D
HCM Volume to Capacity ratio	1.09		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	90.2%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
 3: POCONO DOWNS & SR 315

10/16/2005

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↑	↑		↕		↓	↕		↓	↕	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0				4.0	4.0			4.0	
Lane Util. Factor		1.00	1.00				1.00	0.95			0.95	
Flt		1.00	0.85				1.00	1.00			0.96	
Flt Protected		0.95	1.00				0.95	1.00			1.00	
Satd. Flow (prot)		1770	1583				1787	3574			3389	
Flt Permitted		0.76	1.00				0.14	1.00			1.00	
Satd. Flow (perm)		1410	1583				258	3574			3389	
Volume (vph)	195	0	332	0	0	0	368	663	0	0	687	271
Peak-hour factor, PHF	0.90	0.90	0.90	0.92	0.92	0.92	0.90	0.90	0.90	0.87	0.87	0.87
Adj. Flow (vph)	217	0	369	0	0	0	409	737	0	0	790	311
RTOR Reduction (vph)	0	0	229	0	0	0	0	0	0	0	58	0
Lane Group Flow (vph)	0	217	140	0	0	0	409	737	0	0	1043	0
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	1%	1%	1%	2%	2%	2%
Turn Type	Perm		Perm	Perm			pm+pt			pm+pt		
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)		13.6	13.6				41.6	41.6			23.2	
Effective Green, g (s)		15.6	15.6				43.6	43.6			25.2	
Actuated g/C Ratio		0.23	0.23				0.65	0.65			0.37	
Clearance Time (s)		6.0	6.0				6.0	6.0			6.0	
Vehicle Extension (s)		3.0	3.0				3.0	3.0			3.0	
Lane Grp Cap (vph)		327	367				495	2319			1271	
v/s Ratio Prot							c0.18	0.21			0.32	
v/s Ratio Perm		0.15	0.23				c0.36					
v/c Ratio		0.66	0.38				0.83	0.32			0.82	
Uniform Delay, d1		23.4	21.7				15.6	5.2			19.0	
Progression Factor		1.00	1.00				1.00	1.00			1.00	
Incremental Delay, d2		5.0	0.7				10.8	0.4			6.0	
Delay (s)		28.4	22.4				26.4	5.6			25.0	
Level of Service		C	C				C	A			C	
Approach Delay (s)		24.6			0.0			13.0			25.0	
Approach LOS		C			A			B			C	

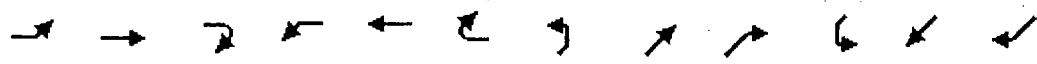
Intersection Summary

HCM Average Control Delay	20.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	67.2	Sum of lost time (s)	8.0
Intersection Capacity Utilization	68.8%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
2: LAIRD & SR 315

10/17/2005



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕		↕	↕		↕	↕		↕	↕	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00		0.95	0.95		1.00	0.95		1.00	0.95	
Frt		0.90		1.00	0.96		1.00	1.00		1.00	1.00	
Flt Protected		0.99		0.95	0.97		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1566		1681	1648		1736	3458		1736	3463	
Flt Permitted		0.21		0.87	0.77		0.12	1.00		0.11	1.00	
Satd. Flow (perm)		337		1539	1303		218	3458		209	3463	
Volume (vph)	20	3	66	37	5	9	70	1106	28	10	1071	16
Peak-hour factor, PHF	0.77	0.77	0.77	0.73	0.73	0.73	0.91	0.91	0.91	0.94	0.94	0.94
Adj. Flow (vph)	26	4	86	51	7	12	77	1215	31	11	1139	17
RTOR Reduction (vph)	0	69	0	0	11	0	0	2	0	0	1	0
Lane Group Flow (vph)	0	47	0	29	30	0	77	1244	0	11	1155	0
Heavy Vehicles (%)	8%	8%	8%	2%	2%	2%	4%	4%	4%	4%	4%	4%
Turn Type	Perm			Perm			pm+pt		pm+pt			
Protected Phases		3			4		1	6		5	2	
Permitted Phases	3			4			6	6		2		
Actuated Green, G (s)		13.2		2.6	2.6		36.3	33.7		32.9	32.0	
Effective Green, g (s)		15.2		4.6	4.6		44.3	37.7		40.9	36.0	
Actuated g/C Ratio		0.19		0.06	0.06		0.57	0.48		0.52	0.46	
Clearance Time (s)		6.0		6.0	6.0		8.0	8.0		8.0	8.0	
Vehicle Extension (s)		2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)		65		90	76		251	1663		204	1590	
v/s Ratio Prot							c0.03	c0.36		0.00	0.33	
v/s Ratio Perm		c0.34		0.02	c0.03		0.15			0.02		
v/c Ratio		0.72		0.32	0.39		0.31	0.75		0.05	0.73	
Uniform Delay, d1		29.6		35.4	35.6		10.6	16.5		11.1	17.2	
Progression Factor		1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		26.8		0.8	1.2		0.3	1.6		0.0	1.4	
Delay (s)		56.4		36.2	36.8		10.9	18.1		11.1	18.6	
Level of Service		E		D	D		B	B		B	B	
Approach Delay (s)		56.4			36.5			17.7			18.6	
Approach LOS		E			D			B			B	

Intersection Summary

HCM Average Control Delay	20.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.96		
Actuated Cycle Length (s)	78.4	Sum of lost time (s)	16.0
Intersection Capacity Utilization	56.8%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 22: SR 315 & 309 NB RAMPS

10/17/2005

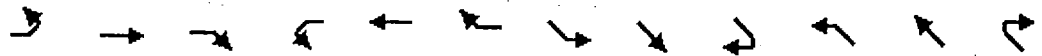
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↙	↕		↙	↕	↗		↕		↙	↕	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00		0.95	0.95	
Frt	1.00	1.00		1.00	1.00	0.85		1.00		1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.95		0.95	0.95	
Satd. Flow (prot)	1805	3608		1787	3574	1599		1805		1698	1698	
Flt Permitted	0.11	1.00		0.27	1.00	1.00		0.95		0.95	0.95	
Satd. Flow (perm)	216	3608		510	3574	1599		1805		1698	1698	
Volume (vph)	641	988	4	3	954	356	3	0	0	382	0	0
Peak-hour factor, PHF	0.94	0.94	0.94	0.89	0.89	0.89	0.50	0.50	0.50	0.95	0.95	0.95
Adj. Flow (vph)	682	1051	4	3	1072	400	6	0	0	402	0	0
RTOR Reduction (vph)	0	0	0	0	0	275	0	0	0	0	0	0
Lane Group Flow (vph)	682	1055	0	3	1072	125	0	6	0	201	201	0
Heavy Vehicles (%)	0%	0%	0%	1%	1%	1%	0%	0%	0%	1%	1%	1%
Turn Type	pm+pt			Perm		Perm	Split			Split		
Protected Phases	1	6			2		8	8		7	7	
Permitted Phases	6			2		2						
Actuated Green, G (s)	68.1	68.1		29.2	29.2	29.2		0.6		15.3	15.3	
Effective Green, g (s)	70.1	70.1		31.2	31.2	31.2		2.6		15.3	15.3	
Actuated g/C Ratio	0.70	0.70		0.31	0.31	0.31		0.03		0.15	0.15	
Clearance Time (s)	4.0	6.0		6.0	6.0	6.0		6.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0		3.0	3.0	
Lane Grp Cap (vph)	706	2529		159	1115	499		47		260	260	
v/s Ratio Prot	c0.34	0.29			0.30			c0.00		c0.12	0.12	
v/s Ratio Perm	c0.34			0.01		0.25						
v/c Ratio	0.97	0.42		0.02	0.96	0.25		0.13		0.77	0.77	
Uniform Delay, d1	26.5	6.3		23.8	33.8	25.7		47.6		40.7	40.7	
Progression Factor	0.66	0.09		1.00	1.00	1.00		1.00		1.00	1.00	
Incremental Delay, d2	15.9	0.2		0.2	19.1	1.2		1.2		13.3	13.3	
Delay (s)	33.5	0.8		24.0	52.9	26.9		48.8		54.0	54.0	
Level of Service	C	A		C	D	C		D		D	D	
Approach Delay (s)		13.6			45.8			48.8			54.0	
Approach LOS		B			D			D			D	

Intersection Summary

HCM Average Control Delay	31.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	81.8%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 24: SR 315 & 309 SB RAMPS

10/17/2005



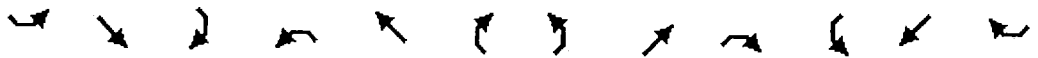
Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations		↑↑	↑	↑	↑↑		↑↑					
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0		4.0					
Lane Util. Factor		0.95	1.00	1.00	0.95		0.97					
Flt		1.00	0.85	1.00	1.00		1.00					
Flt Protected		1.00	1.00	0.95	1.00		0.95					
Satd. Flow (prot)		3574	1599	1787	3574		3367					
Flt Permitted		1.00	1.00	0.08	1.00		0.95					
Satd. Flow (perm)		3574	1599	150	3574		3367					
Volume (vph)	0	1229	345	404	1245	0	404	0	0	0	0	0
Peak-hour factor, PHF	0.85	0.85	0.85	0.87	0.87	0.87	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	1446	406	464	1431	0	439	0	0	0	0	0
RTOR Reduction (vph)	0	0	207	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	1446	199	464	1431	0	439	0	0	0	0	0
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	4%	4%	4%	2%	2%	2%
Turn Type			Perm	pm+pt			custom					
Protected Phases		6		5	2							
Permitted Phases			6	2			4					
Actuated Green, G (s)		44.2	44.2	74.2	74.2		13.8					
Effective Green, g (s)		46.2	46.2	76.2	76.2		15.8					
Actuated g/C Ratio		0.46	0.46	0.76	0.76		0.16					
Clearance Time (s)		6.0	6.0	4.0	6.0		6.0					
Vehicle Extension (s)		3.0	3.0	3.0	3.0		2.0					
Lane Grp Cap (vph)		1651	739	540	2723		532					
v/s Ratio Prot		0.40		c0.22	0.40							
v/s Ratio Perm			0.25	c0.43			0.13					
v/c Ratio		0.88	0.27	0.86	0.53		0.83					
Uniform Delay, d1		24.3	16.5	28.5	4.7		40.8					
Progression Factor		1.00	1.00	0.77	0.31		1.00					
Incremental Delay, d2		6.9	0.9	11.6	0.6		9.6					
Delay (s)		31.2	17.4	33.6	2.1		50.4					
Level of Service		C	B	C	A		D					
Approach Delay (s)		28.1			9.8			50.4			0.0	
Approach LOS		C			A			D			A	

Intersection Summary

HCM Average Control Delay	22.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	77.9%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 3: POCONO DOWNS & SR 315

10/16/2005



Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↖	↗		↕		↙	↘		↖	↗	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00	1.00		1.00		1.00	0.95		0.95	0.95	
Fr't		1.00	0.85		1.00		1.00	1.00		0.96	0.96	
Flt Protected		0.95	1.00		0.95		0.95	1.00		1.00	1.00	
Satd. Flow (prot)		1805	1615		1805		1752	3502		3317	3317	
Flt Permitted		0.75	1.00		0.37		0.11	1.00		1.00	1.00	
Satd. Flow (perm)		1432	1615		711		202	3502		3317	3317	
Volume (vph)	214	0	370	3	0	0	504	616	3	0	749	315
Peak-hour factor, PHF	0.90	0.90	0.90	0.50	0.50	0.50	0.96	0.96	0.96	0.92	0.92	0.92
Adj. Flow (vph)	238	0	411	6	0	0	525	642	3	0	814	342
RTOR Reduction (vph)	0	0	330	0	0	0	0	0	0	0	52	0
Lane Group Flow (vph)	0	238	81	0	6	0	525	645	0	0	1104	0
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	3%	3%	3%	4%	4%	4%
Turn Type	Perm		Perm	Perm			pm+pt			pm+pt		
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)		15.3	15.3		15.3		60.2	60.2			30.6	
Effective Green, g (s)		17.3	17.3		17.3		62.2	62.2			32.6	
Actuated g/C Ratio		0.20	0.20		0.20		0.71	0.71			0.37	
Clearance Time (s)		6.0	6.0		6.0		6.0	6.0			6.0	
Vehicle Extension (s)		3.0	3.0		3.0		3.0	3.0			3.0	
Lane Grp Cap (vph)		283	319		141		597	2489			1236	
v/s Ratio Prot							c0.26	0.18			0.35	
v/s Ratio Perm		0.17	0.25		0.01		c0.37					
v/c Ratio		0.84	0.25		0.04		0.88	0.26			0.89	
Uniform Delay, d1		33.8	29.7		28.4		22.7	4.5			25.8	
Progression Factor		1.00	1.00		1.00		1.00	1.00			1.00	
Incremental Delay, d2		19.6	0.4		0.1		13.9	0.1			8.5	
Delay (s)		53.4	30.1		28.5		36.6	4.5			34.3	
Level of Service		D	C		C		D	A			C	
Approach Delay (s)		38.6			28.5			18.9			34.3	
Approach LOS		D			C			B			C	

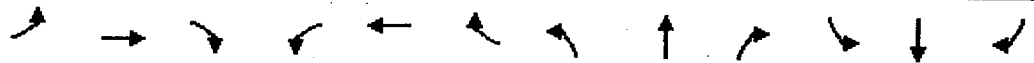
Intersection Summary

HCM Average Control Delay	29.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	87.5	Sum of lost time (s)	8.0
Intersection Capacity Utilization	79.8%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
 22: SR 315 & 309 NB RAMPS

10/17/2005



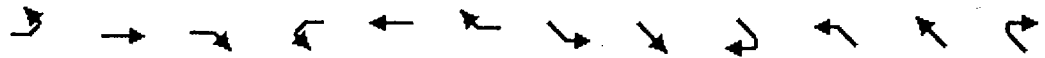
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕	↗		↕		↖	↗	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0				4.0	4.0	
Lane Util. Factor	1.00	0.95			0.95	1.00				0.95	0.95	
Frt	1.00	1.00			1.00	0.85				1.00	1.00	
Flt Protected	0.95	1.00			1.00	1.00				0.95	0.95	
Satd. Flow (prot)	1787	3574			3610	1615				1698	1698	
Flt Permitted	0.13	1.00			1.00	1.00				0.95	0.95	
Satd. Flow (perm)	238	3574			3610	1615				1698	1698	
Volume (vph)	642	796	0	0	822	343	0	0	0	203	0	0
Peak-hour factor, PHF	0.98	0.98	0.98	0.84	0.84	0.84	0.50	0.50	0.50	0.92	0.92	0.92
Adj. Flow (vph)	655	812	0	0	979	408	0	0	0	221	0	0
RTOR Reduction (vph)	0	0	0	0	0	250	0	0	0	0	0	0
Lane Group Flow (vph)	655	812	0	0	979	158	0	0	0	111	110	0
Heavy Vehicles (%)	1%	1%	1%	0%	0%	0%	0%	0%	0%	1%	1%	1%
Turn Type	pm+pt			Perm		Perm	Split			Split		
Protected Phases	1	6			2		8	8		7	7	
Permitted Phases	6			2		2						
Actuated Green, G (s)	68.8	68.8			32.1	32.1				9.2	9.2	
Effective Green, g (s)	70.8	70.8			34.1	34.1				9.2	9.2	
Actuated g/C Ratio	0.80	0.80			0.39	0.39				0.10	0.10	
Clearance Time (s)	4.0	6.0			6.0	6.0				4.0	4.0	
Vehicle Extension (s)	3.0	3.0			3.0	3.0				3.0	3.0	
Lane Grp Cap (vph)	767	2875			1399	626				178	178	
v/s Ratio Prot	c0.32	0.23			0.27					c0.07	0.06	
v/s Ratio Perm	c0.37					0.25						
v/c Ratio	0.85	0.28			0.70	0.25				0.62	0.62	
Uniform Delay, d1	19.0	2.2			22.6	18.3				37.7	37.7	
Progression Factor	0.46	0.02			1.00	1.00				1.00	1.00	
Incremental Delay, d2	6.9	0.2			2.9	1.0				6.6	6.3	
Delay (s)	15.7	0.2			25.6	19.3				44.4	44.0	
Level of Service	B	A			C	B				D	D	
Approach Delay (s)		7.1			23.7			0.0			44.2	
Approach LOS		A			C			A			D	

Intersection Summary

HCM Average Control Delay	17.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	88.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	73.9%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 24: SR 315 & 309 SB RAMPS

10/17/2005



Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations		↑↑	↑	↓	↑↑		↑↑					
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0		4.0					
Lane Util. Factor		0.95	1.00	1.00	0.95		0.97					
Frt		1.00	0.85	1.00	1.00		1.00					
Flt Protected		1.00	1.00	0.95	1.00		0.95					
Satd. Flow (prot)		3610	1615	1787	3574		3502					
Flt Permitted		1.00	1.00	0.12	1.00		0.95					
Satd. Flow (perm)		3610	1615	226	3574		3502					
Volume (vph)	0	1189	473	360	967	0	249	0	0	0	0	0
Peak-hour factor, PHF	0.96	0.96	0.96	0.93	0.93	0.93	0.89	0.89	0.89	0.92	0.92	0.92
Adj. Flow (vph)	0	1239	493	387	1040	0	280	0	0	0	0	0
RTOR Reduction (vph)	0	0	219	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	1239	274	387	1040	0	280	0	0	0	0	0
Heavy Vehicles (%)	0%	0%	0%	1%	1%	1%	0%	0%	0%	0%	0%	0%
Turn Type			Perm pm+pt				custom					
Protected Phases		6		5	2							
Permitted Phases			6	2			4					
Actuated Green, G (s)		44.5	44.5	67.2	67.2		8.8					
Effective Green, g (s)		46.5	46.5	69.2	69.2		10.8					
Actuated g/C Ratio		0.53	0.53	0.79	0.79		0.12					
Clearance Time (s)		6.0	6.0	4.0	6.0		6.0					
Vehicle Extension (s)		3.0	3.0	3.0	3.0		2.0					
Lane Grp Cap (vph)		1908	853	509	2810		430					
v/s Ratio Prot		0.34		c0.16	0.29							
v/s Ratio Perm			0.31	c0.44			0.08					
v/c Ratio		0.65	0.32	0.76	0.37		0.65					
Uniform Delay, d1		14.9	11.8	18.9	2.8		36.8					
Progression Factor		1.00	1.00	0.36	0.82		1.00					
Incremental Delay, d2		1.7	1.0	5.8	0.3		2.7					
Delay (s)		16.6	12.8	12.5	2.7		39.5					
Level of Service		B	B	B	A		D					
Approach Delay (s)		15.5			5.3			39.5			0.0	
Approach LOS		B			A			D			A	

Intersection Summary

HCM Average Control Delay	13.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	88.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	69.9%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis

3: POCONO DOWNS & SR 315

10/16/2005



Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕	↗		↕		↖	↕		↖	↕	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00	1.00		1.00		1.00	0.95		1.00	0.95	
Fr _t		1.00	0.85		0.86		1.00	1.00		1.00	0.94	
Fl _t Protected		0.95	1.00		1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1805	1615		1644		1787	3573		1787	3370	
Fl _t Permitted		0.76	1.00		1.00		0.18	1.00		0.44	1.00	
Satd. Flow (perm)		1435	1615		1644		337	3573		832	3370	
Volume (vph)	209	0	348	0	0	1	353	519	1	1	430	265
Peak-hour factor, PHF	0.90	0.90	0.90	0.25	0.25	0.25	0.93	0.93	0.93	0.83	0.83	0.83
Adj. Flow (vph)	232	0	387	0	0	4	380	558	1	1	518	319
RTOR Reduction (vph)	0	0	232	0	3	0	0	0	0	0	141	0
Lane Group Flow (vph)	0	232	155	0	1	0	380	559	0	1	696	0
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	1%	1%	1%	1%	1%	1%
Turn Type	Perm		Perm	Perm			pm+pt			pm+pt		
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)		13.2	13.2		13.2		36.8	30.0		21.8	21.0	
Effective Green, g (s)		15.2	15.2		15.2		38.8	32.0		25.8	23.0	
Actuated g/C Ratio		0.25	0.25		0.25		0.63	0.52		0.42	0.37	
Clearance Time (s)		6.0	6.0		6.0		6.0	6.0		6.0	6.0	
Vehicle Extension (s)		3.0	3.0		3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		352	396		403		487	1844		389	1250	
v/s Ratio Prot					0.00		c0.15	0.16		0.00	0.25	
v/s Ratio Perm		0.16	0.24				c0.34			0.00		
v/c Ratio		0.66	0.39		0.00		0.78	0.30		0.00	0.56	
Uniform Delay, d1		21.1	19.5		17.7		10.1	8.6		10.6	15.5	
Progression Factor		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		4.4	0.6		0.0		7.9	0.4		0.0	1.8	
Delay (s)		25.5	20.2		17.7		18.0	9.0		10.6	17.3	
Level of Service		C	C		B		B	A		B	B	
Approach Delay (s)		22.2			17.7			12.7			17.2	
Approach LOS		C			B			B			B	

Intersection Summary

HCM Average Control Delay	16.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	62.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	68.2%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

**2017 (ETC+10) BUILD CONDITIONS
WITH IMPROVEMENTS AND DIVERSION**

HCM Signalized Intersection Capacity Analysis
 28: OAK & SR 315

10/18/2005

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations	↘	↑	↗	↘	↑	↗	↘	↕	↗	↘	↕	↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	0.95	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1433	1508	1282	1770	1863	1583	1641	3269	1687	3374	1509	1509
Flt Permitted	0.80	1.00	1.00	0.60	1.00	1.00	0.09	1.00	0.14	1.00	1.00	1.00
Satd. Flow (perm)	1206	1508	1282	1122	1863	1583	150	3269	242	3374	1509	1509
Volume (vph)	323	36	255	167	47	70	380	1092	30	56	1008	118
Peak-hour factor, PHF	0.68	0.68	0.68	0.92	0.92	0.92	0.82	0.82	0.82	0.97	0.97	0.97
Adj. Flow (vph)	475	53	375	182	51	76	463	1332	37	58	1039	122
RTOR Reduction (vph)	0	0	51	0	0	67	0	1	0	0	0	0
Lane Group Flow (vph)	475	53	324	182	51	9	463	1368	0	58	1039	122
Heavy Vehicles (%)	26%	26%	26%	2%	2%	2%	10%	10%	10%	7%	7%	7%
Turn Type	D.P+P		pt+ov	custom		pt+ov	pm+pt			pm+pt		Free
Protected Phases	7	4	4	1	3	8	8	5	1	6	5	2
Permitted Phases	8				7						2	Free
Actuated Green, G (s)	38.0	27.1	61.1	35.0	3.0	12.0	74.0	65.0	43.0	40.0	130.0	130.0
Effective Green, g (s)	42.0	29.1	63.1	37.0	5.0	14.0	76.0	67.0	47.0	42.0	130.0	130.0
Actuated g/C Ratio	0.32	0.22	0.49	0.28	0.04	0.11	0.58	0.52	0.36	0.32	1.00	1.00
Clearance Time (s)	6.0	6.0		6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	454	338	622	384	72	170	432	1685	143	1090	1509	1509
v/s Ratio Prot	c0.30	0.04	c0.29	0.05	0.03	0.05	c0.25	0.42	0.02	0.31		
v/s Ratio Perm	0.04			0.09			c0.38		0.13		0.08	
v/c Ratio	1.05	0.16	0.52	0.47	0.71	0.05	1.07	0.81	0.41	0.95	0.08	0.08
Uniform Delay, d1	43.6	40.6	23.0	37.2	61.8	52.1	41.1	26.2	28.2	43.0	0.0	0.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.11	0.63	1.00	1.00	1.00	1.00
Incremental Delay, d2	54.8	0.2	0.8	0.9	27.2	0.1	56.7	2.2	1.9	17.1	0.1	0.1
Delay (s)	98.5	40.8	23.8	38.1	88.9	52.2	102.2	18.7	30.1	60.1	0.1	0.1
Level of Service	F	D	C	D	F	D	F	B	C	E	A	A
Approach Delay (s)		64.1			49.9			39.8		52.7		
Approach LOS		E			D			D		D		

Intersection Summary		
HCM Average Control Delay	49.4	HCM Level of Service D
HCM Volume to Capacity ratio	1.02	
Actuated Cycle Length (s)	130.0	Sum of lost time (s) 8.0
Intersection Capacity Utilization	83.5%	ICU Level of Service E
Analysis Period (min)	15	
c Critical Lane Group		

HCM Signalized Intersection Capacity Analysis
 10: OLD BOSTON & SR 315

10/18/2005



Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations	↙		↕			↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0			4.0
Lane Util. Factor	1.00		0.95			0.95
Flt	0.93		0.99			1.00
Flt Protected	0.98		1.00			1.00
Satd. Flow (prot)	1643		3414			3532
Flt Permitted	0.98		1.00			0.89
Satd. Flow (perm)	1643		3414			3140
Volume (vph)	62	68	876	44	38	899
Peak-hour factor, PHF	0.61	0.61	0.89	0.89	0.91	0.91
Adj. Flow (vph)	102	111	984	49	42	988
RTOR Reduction (vph)	65	0	5	0	0	0
Lane Group Flow (vph)	148	0	1028	0	0	1030
Heavy Vehicles (%)	5%	5%	5%	5%	2%	2%
Turn Type					pm+pt	
Protected Phases	4		6		5	2
Permitted Phases					2	2
Actuated Green, G (s)	7.3		21.3			21.3
Effective Green, g (s)	8.3		22.3			22.3
Actuated g/C Ratio	0.22		0.58			0.58
Clearance Time (s)	5.0		5.0			5.0
Vehicle Extension (s)	2.0		1.0			1.0
Lane Grp Cap (vph)	353		1972			1814
v/s Ratio Prot	c0.13		0.30			
v/s Ratio Perm						c0.33
v/c Ratio	0.42		0.52			0.57
Uniform Delay, d1	13.1		4.9			5.1
Progression Factor	1.00		1.00			1.00
Incremental Delay, d2	0.3		0.1			0.2
Delay (s)	13.4		5.0			5.4
Level of Service	B		A			A
Approach Delay (s)	13.4		5.0			5.4
Approach LOS	B		A			A

Intersection Summary

HCM Average Control Delay	6.0	HCM Level of Service	A
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	38.6	Sum of lost time (s)	8.0
Intersection Capacity Utilization	67.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 13: LAFLIN & SR 315

10/18/2005



Movement	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations	↙	↗	↙	↑	↑↑	↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1770	1583	1752	1845	3471	1553
Flt Permitted	0.95	1.00	0.24	1.00	1.00	1.00
Satd. Flow (perm)	1770	1583	438	1845	3471	1553
Volume (vph)	70	99	141	1032	939	122
Peak-hour factor, PHF	0.89	0.89	0.91	0.91	0.95	0.95
Adj. Flow (vph)	79	111	155	1134	988	128
RTOR Reduction (vph)	0	91	0	0	0	109
Lane Group Flow (vph)	79	20	155	1134	988	19
Heavy Vehicles (%)	2%	2%	3%	3%	4%	4%
Turn Type	custom		pm+pt			Over
Protected Phases	8	8	1	6	2	8
Permitted Phases	8	1	6			
Actuated Green, G (s)	7.1	9.9	63.3	63.3	53.5	7.1
Effective Green, g (s)	9.1	14.9	66.3	66.3	56.5	9.1
Actuated g/C Ratio	0.11	0.18	0.79	0.79	0.68	0.11
Clearance Time (s)	6.0	6.0	7.0	7.0	7.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0	5.0	5.0	3.0
Lane Grp Cap (vph)	193	359	440	1467	2351	169
v/s Ratio Prot	0.04	0.03	0.02	c0.61	0.28	c0.08
v/s Ratio Perm		0.04	0.26			
v/c Ratio	0.41	0.06	0.35	0.77	0.42	0.11
Uniform Delay, d1	34.6	28.4	2.9	4.5	6.1	33.5
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.4	0.1	0.5	3.0	0.3	0.3
Delay (s)	36.1	28.5	3.4	7.6	6.3	33.8
Level of Service	D	C	A	A	A	C
Approach Delay (s)	31.6			7.1	9.5	
Approach LOS	C			A	A	

Intersection Summary

HCM Average Control Delay	9.9	HCM Level of Service	A
HCM Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	83.4	Sum of lost time (s)	8.0
Intersection Capacity Utilization	64.9%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 4: SUNSHINE MARKET & SR 315

10/18/2005



Movement	SBL	SBR	NEL	NET	SWT	SWR
Lane Configurations	↙	↗	↙	↑	↗	↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	1.00
Flt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1805	1615	1770	1863	3471	1553
Flt Permitted	0.95	1.00	0.21	1.00	1.00	1.00
Satd. Flow (perm)	1805	1615	391	1863	3471	1553
Volume (vph)	100	117	124	814	925	88
Peak-hour factor, PHF	0.93	0.93	0.82	0.82	0.92	0.92
Adj. Flow (vph)	108	126	151	993	1005	96
RTOR Reduction (vph)	0	72	0	0	0	0
Lane Group Flow (vph)	108	54	151	993	1005	96
Heavy Vehicles (%)	0%	0%	2%	2%	4%	4%
Turn Type		pt+ov	pm+pt			Free
Protected Phases	8	1 8	1	6	2	
Permitted Phases			6			Free
Actuated Green, G (s)	8.6	20.5	55.4	55.4	42.5	77.0
Effective Green, g (s)	10.6	23.5	58.4	58.4	45.5	77.0
Actuated g/C Ratio	0.14	0.31	0.76	0.76	0.59	1.00
Clearance Time (s)	6.0		7.0	7.0	7.0	
Vehicle Extension (s)	3.0		3.0	5.0	5.0	
Lane Grp Cap (vph)	248	493	456	1413	2051	1553
v/s Ratio Prot	c0.06	0.08	0.04	c0.53	0.29	
v/s Ratio Perm			0.21			0.06
v/c Ratio	0.44	0.11	0.33	0.70	0.49	0.06
Uniform Delay, d1	30.5	19.2	4.0	4.8	9.1	0.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.2	0.1	0.4	2.0	0.4	0.1
Delay (s)	31.7	19.3	4.4	6.8	9.5	0.1
Level of Service	C	B	A	A	A	A
Approach Delay (s)	25.0			6.5	8.6	
Approach LOS	C			A	A	

Intersection Summary

HCM Average Control Delay	9.2	HCM Level of Service	A
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	77.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	55.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis

1: EAST MAIN & SR 315

10/18/2005

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations	↙	↑	↗	↙	↑	↗	↙	↕		↙	↑↑	↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95		1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1703	1792	1524	1752	1845	1568	1752	3465		1736	3471	1553
Flt Permitted	0.50	1.00	1.00	0.71	1.00	1.00	0.24	1.00		0.23	1.00	1.00
Satd. Flow (perm)	890	1792	1524	1312	1845	1568	440	3465		416	3471	1553
Volume (vph)	134	66	104	108	117	73	114	740	61	49	781	136
Peak-hour factor, PHF	0.94	0.94	0.94	0.84	0.84	0.84	0.87	0.87	0.87	0.89	0.89	0.89
Adj. Flow (vph)	143	70	111	129	139	87	131	851	70	55	878	153
RTOR Reduction (vph)	0	0	95	0	0	75	0	5	0	0	0	75
Lane Group Flow (vph)	143	70	16	129	139	12	131	916	0	55	878	78
Heavy Vehicles (%)	6%	6%	6%	3%	3%	3%	3%	3%	3%	4%	4%	4%
Turn Type	pm+pt		Perm	pm+pt		Perm	pm+pt			pm+pt		Perm
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases	8		8	4		4	6		2			2
Actuated Green, G (s)	20.1	11.4	11.4	19.1	10.9	10.9	52.9	48.3		51.9	47.8	47.8
Effective Green, g (s)	26.1	14.4	14.4	25.1	13.9	13.9	58.9	51.3		57.9	50.8	50.8
Actuated g/C Ratio	0.26	0.14	0.14	0.25	0.14	0.14	0.59	0.51		0.58	0.51	0.51
Clearance Time (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0		7.0	7.0	7.0
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0	1.0	1.0		1.0	1.0	1.0
Lane Grp Cap (vph)	327	258	219	379	256	218	359	1778		335	1763	789
v/s Ratio Prot	c0.05	0.04		0.04	c0.08		c0.03	c0.27		0.01	0.25	
v/s Ratio Perm	0.06		0.07	0.05		0.06	0.19			0.08		0.10
v/c Ratio	0.44	0.27	0.07	0.34	0.54	0.06	0.36	0.51		0.16	0.50	0.10
Uniform Delay, d1	29.9	38.1	37.0	30.3	40.1	37.4	10.3	16.1		10.2	16.2	12.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.57	0.42		1.00	1.00	1.00
Incremental Delay, d2	0.3	0.2	0.1	0.2	1.3	0.0	0.2	0.9		0.1	1.0	0.2
Delay (s)	30.2	38.3	37.1	30.5	41.4	37.4	6.1	7.7		10.2	17.2	13.0
Level of Service	C	D	D	C	D	D	A	A		B	B	B
Approach Delay (s)		34.3			36.4			7.5			16.3	
Approach LOS		C			D			A			B	

Intersection Summary

HCM Average Control Delay	17.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	52.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 2: LAIRD & SR 315

10/18/2005



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕		↕	↕		↕	↕		↕	↕	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00		0.95	0.95		1.00	0.95		1.00	0.95	
Frt		0.89		1.00	0.94		1.00	0.99		1.00	1.00	
Flt Protected		0.99		0.95	0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1554		1681	1632		1736	3434		1736	3459	
Flt Permitted		0.93		0.66	0.60		0.09	1.00		0.17	1.00	
Satd. Flow (perm)		1458		1160	999		160	3434		320	3459	
Volume (vph)	29	3	134	31	6	14	108	1053	81	15	1247	30
Peak-hour factor, PHF	0.53	0.53	0.53	0.92	0.92	0.92	0.96	0.96	0.96	0.94	0.94	0.94
Adj. Flow (vph)	55	6	253	34	7	15	112	1097	84	16	1327	32
RTOR Reduction (vph)	0	161	0	0	14	0	0	4	0	0	1	0
Lane Group Flow (vph)	0	153	0	17	25	0	112	1177	0	16	1358	0
Heavy Vehicles (%)	8%	8%	8%	2%	2%	2%	4%	4%	4%	4%	4%	4%
Turn Type	Perm		Perm		pm+pt		pm+pt		pm+pt		pm+pt	
Protected Phases		3			4		1	6		5		2
Permitted Phases	3			4			6	6		2		
Actuated Green, G (s)		13.0		4.1	4.1		59.6	52.9		50.2		48.2
Effective Green, g (s)		15.0		6.1	6.1		66.9	56.9		58.2		52.2
Actuated g/C Ratio		0.15		0.06	0.06		0.67	0.57		0.58		0.52
Clearance Time (s)		6.0		6.0	6.0		8.0	8.0		8.0		8.0
Vehicle Extension (s)		2.0		2.0	2.0		2.0	2.0		2.0		2.0
Lane Grp Cap (vph)		219		71	61		276	1954		271		1806
v/s Ratio Prot							c0.04	0.34		0.00		c0.39
v/s Ratio Perm		c0.22		0.01	c0.04		0.23			0.03		
v/c Ratio		0.70		0.24	0.41		0.41	0.60		0.06		0.75
Uniform Delay, d1		40.4		44.7	45.2		13.0	14.1		9.8		18.8
Progression Factor		1.00		1.00	1.00		2.07	0.90		0.70		0.68
Incremental Delay, d2		8.0		0.6	1.6		0.3	1.2		0.0		2.8
Delay (s)		48.3		45.4	46.8		27.2	13.9		6.9		15.6
Level of Service		D		D	D		C	B		A		B
Approach Delay (s)		48.3			46.4			15.1				15.5
Approach LOS		D			D			B				B

Intersection Summary

HCM Average Control Delay	19.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	68.1%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
17: SR 315 & MOTORWORLD

10/18/2005



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↙	↕		↙	↕			↕	↗		↕	↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	1.00
Fr _t	1.00	1.00		1.00	1.00			1.00	0.85		1.00	0.85
Fl _t Protected	0.95	1.00		0.95	1.00			0.95	1.00		0.95	1.00
Satd. Flow (prot)	1752	3492		1719	3424			1796	1599		1796	1599
Fl _t Permitted	0.09	1.00		0.19	1.00			0.68	1.00		0.66	1.00
Satd. Flow (perm)	168	3492		341	3424			1286	1599		1246	1599
Volume (vph)	92	1169	30	13	1362	37	66	3	15	58	3	206
Peak-hour factor, PHF	0.95	0.95	0.95	0.85	0.85	0.85	0.84	0.84	0.84	0.84	0.84	0.84
Adj. Flow (vph)	97	1231	32	15	1602	44	79	4	18	69	4	245
RTOR Reduction (vph)	0	1	0	0	2	0	0	0	16	0	0	138
Lane Group Flow (vph)	97	1262	0	15	1644	0	0	83	2	0	73	107
Heavy Vehicles (%)	3%	3%	3%	5%	5%	5%	1%	1%	1%	1%	1%	1%
Turn Type	pm+pt			pm+pt			Perm		Perm	Perm		Perm
Protected Phases	1	6		5	2			4				8
Permitted Phases	6			2			4		4	8		8
Actuated Green, G (s)	74.1	68.5		68.5	65.7			9.7	9.7		9.7	9.7
Effective Green, g (s)	79.1	71.5		73.5	68.7			11.7	11.7		11.7	11.7
Actuated g/C Ratio	0.79	0.72		0.74	0.69			0.12	0.12		0.12	0.12
Clearance Time (s)	6.0	7.0		6.0	7.0			6.0	6.0		6.0	6.0
Vehicle Extension (s)	2.0	2.0		2.0	2.0			2.0	2.0		2.0	2.0
Lane Grp Cap (vph)	253	2497		317	2352			150	187		146	187
v/s Ratio Prot	c0.03	0.36		0.00	c0.48							
v/s Ratio Perm	0.27			0.03				0.06	0.01		0.06	0.15
v/c Ratio	0.38	0.51		0.05	0.70			0.55	0.01		0.50	0.57
Uniform Delay, d ₁	8.3	6.4		4.1	9.4			41.7	39.0		41.4	41.8
Progression Factor	2.66	0.34		0.27	0.34			1.00	1.00		1.00	1.00
Incremental Delay, d ₂	0.3	0.7		0.0	1.2			2.5	0.0		1.0	2.6
Delay (s)	22.4	2.8		1.1	4.4			44.2	39.0		42.4	44.4
Level of Service	C	A		A	A			D	D		D	D
Approach Delay (s)		4.2			4.4			43.3			44.0	
Approach LOS		A			A			D			D	

Intersection Summary

HCM Average Control Delay	9.1	HCM Level of Service	A
HCM Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	67.4%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 22: SR 315 & 309 NB RAMPS

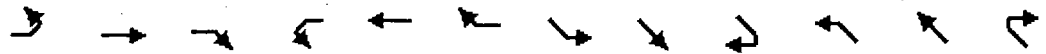
10/18/2005

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↙	↕		↙	↕	↗		↕		↙	↗	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00		0.95	0.95	
Fr _t	1.00	1.00		1.00	1.00	0.85		1.00		1.00	1.00	
Fl _t Protected	0.95	1.00		0.95	1.00	1.00		0.97		0.95	0.95	
Satd. Flow (prot)	1787	3572		1770	3539	1583		1847		1665	1665	
Fl _t Permitted	0.11	1.00		0.25	1.00	1.00		0.97		0.95	0.95	
Satd. Flow (perm)	200	3572		473	3539	1583		1847		1665	1665	
Volume (vph)	600	1049	5	1	1080	526	4	3	0	242	0	0
Peak-hour factor, PHF	0.94	0.94	0.94	0.86	0.86	0.86	0.50	0.50	0.50	0.84	0.84	0.84
Adj. Flow (vph)	638	1116	5	1	1256	612	8	6	0	288	0	0
RTOR Reduction (vph)	0	0	0	0	0	242	0	0	0	0	0	0
Lane Group Flow (vph)	638	1121	0	1	1256	370	0	14	0	144	144	0
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	0%	0%	0%	3%	3%	3%
Turn Type	pm+pt			Perm		Perm	Split			Split		
Protected Phases	1	6			2		8	8		7	7	
Permitted Phases	6			2		2						
Actuated Green, G (s)	69.6	69.6		31.6	31.6	31.6		1.2		11.2	11.2	
Effective Green, g (s)	71.6	71.6		33.6	33.6	33.6		3.2		13.2	13.2	
Actuated g/C Ratio	0.72	0.72		0.34	0.34	0.34		0.03		0.13	0.13	
Clearance Time (s)	4.0	6.0		6.0	6.0	6.0		6.0		6.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0		3.0	3.0	
Lane Grp Cap (vph)	683	2558		159	1189	532		59		220	220	
v/s Ratio Prot	c0.32	0.31			0.35			c0.01		c0.09	0.09	
v/s Ratio Perm	0.35			0.00		0.39						
v/c Ratio	0.93	0.44		0.01	1.06	0.70		0.24		0.65	0.65	
Uniform Delay, d ₁	26.6	5.9		22.1	33.2	28.8		47.2		41.2	41.2	
Progression Factor	0.79	0.00		0.84	0.75	0.60		1.00		1.00	1.00	
Incremental Delay, d ₂	6.9	0.1		0.0	38.4	5.2		2.1		6.8	6.8	
Delay (s)	28.0	0.1		18.7	63.3	22.5		49.3		48.1	48.1	
Level of Service	C	A		B	E	C		D		D	D	
Approach Delay (s)		10.2			49.9			49.3			48.1	
Approach LOS		B			D			D			D	

Intersection Summary			
HCM Average Control Delay	32.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	83.6%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 24: SR 315 & 309 SB RAMPS

10/18/2005



Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations		↑↑	↑	↑	↑↑		↑↑					
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0		4.0					
Lane Util. Factor		0.95	1.00	1.00	0.95		0.97					
Frt		1.00	0.85	1.00	1.00		1.00					
Flt Protected		1.00	1.00	0.95	1.00		0.95					
Satd. Flow (prot)		3574	1599	1770	3539		3400					
Flt Permitted		1.00	1.00	0.09	1.00		0.95					
Satd. Flow (perm)		3574	1599	169	3539		3400					
Volume (vph)	0	1281	566	558	1232	0	373	0	0	0	0	0
Peak-hour factor, PHF	0.93	0.93	0.93	0.89	0.89	0.89	0.66	0.66	0.66	0.92	0.92	0.92
Adj. Flow (vph)	0	1377	609	627	1384	0	565	0	0	0	0	0
RTOR Reduction (vph)	0	0	265	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	1377	344	627	1384	0	565	0	0	0	0	0
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	3%	3%	3%	2%	2%	2%
Turn Type			Perm	pm+pt			custom					
Protected Phases		6		5	2							
Permitted Phases			6	2			4					
Actuated Green, G (s)		38.0	38.0	72.0	72.0		16.0					
Effective Green, g (s)		40.0	40.0	74.0	74.0		18.0					
Actuated g/C Ratio		0.40	0.40	0.74	0.74		0.18					
Clearance Time (s)		6.0	6.0	4.0	6.0		6.0					
Vehicle Extension (s)		3.0	3.0	3.0	3.0		2.0					
Lane Grp Cap (vph)		1430	640	605	2619		612					
v/s Ratio Prot		0.39		c0.31	0.39							
v/s Ratio Perm			0.38	c0.45			0.17					
v/c Ratio		0.96	0.54	1.04	0.53		0.92					
Uniform Delay, d1		29.3	22.9	29.7	5.6		40.3					
Progression Factor		1.00	1.00	0.92	0.29		1.00					
Incremental Delay, d2		16.5	3.2	43.2	0.6		19.4					
Delay (s)		45.7	26.1	70.5	2.3		59.7					
Level of Service		D	C	E	A		E					
Approach Delay (s)		39.7			23.6		59.7				0.0	
Approach LOS		D			C		E				A	

Intersection Summary

HCM Average Control Delay	35.1	HCM Level of Service	D
HCM Volume to Capacity ratio	1.00		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	87.0%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis

3: POCONO DOWNS & SR 315

10/18/2005

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕	↗		↕		↖	↕↗		↖	↕↗	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0				4.0	4.0			4.0	
Lane Util. Factor		1.00	1.00				1.00	0.95			0.95	
Fr _t		1.00	0.85				1.00	1.00			0.95	
Fl _t Protected		0.95	1.00				0.95	1.00			1.00	
Satd. Flow (prot)		1770	1583				1787	3574			3358	
Fl _t Permitted		0.76	1.00				0.14	1.00			1.00	
Satd. Flow (perm)		1410	1583				259	3574			3358	
Volume (vph)	275	0	252	0	0	0	284	663	0	0	687	355
Peak-hour factor, PHF	0.90	0.90	0.90	0.92	0.92	0.92	0.90	0.90	0.90	0.87	0.87	0.87
Adj. Flow (vph)	306	0	280	0	0	0	316	737	0	0	790	408
RTOR Reduction (vph)	0	0	208	0	0	0	0	0	0	0	92	0
Lane Group Flow (vph)	0	306	72	0	0	0	316	737	0	0	1106	0
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	1%	1%	1%	2%	2%	2%
Turn Type	Perm		Perm	Perm			pm+pt			pm+pt		
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)		15.4	15.4				40.6	40.6			23.1	
Effective Green, g (s)		17.4	17.4				42.6	42.6			25.1	
Actuated g/C Ratio		0.26	0.26				0.63	0.63			0.37	
Clearance Time (s)		6.0	6.0				6.0	6.0			6.0	
Vehicle Extension (s)		3.0	3.0				3.0	3.0			3.0	
Lane Grp Cap (vph)		361	405				466	2239			1239	
v/s Ratio Prot							c0.13	0.21			c0.36	
v/s Ratio Perm		c0.22	0.18				0.29					
v/c Ratio		0.85	0.18				0.68	0.33			0.89	
Uniform Delay, d1		24.0	19.7				13.4	6.0			20.2	
Progression Factor		1.00	1.00				1.00	1.00			1.00	
Incremental Delay, d2		16.6	0.2				3.9	0.4			10.0	
Delay (s)		40.7	19.9				17.3	6.4			30.2	
Level of Service		D	B				B	A			C	
Approach Delay (s)		30.8			0.0			9.6			30.2	
Approach LOS		C			A			A			C	

Intersection Summary

HCM Average Control Delay	22.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	68.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	71.3%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis

24: SR 315 & 309 SB RAMPS

10/14/2005



Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations		↑↑	↑	↑	↑↑		↑↑					
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0		4.0					
Lane Util. Factor		0.95	1.00	1.00	0.95		0.97					
Frnt		1.00	0.85	1.00	1.00		1.00					
Flt Protected		1.00	1.00	0.95	1.00		0.95					
Satd. Flow (prot)		3574	1599	1770	3539		3400					
Flt Permitted		1.00	1.00	0.10	1.00		0.95					
Satd. Flow (perm)		3574	1599	191	3539		3400					
Volume (vph)	0	1061	464	512	1021	0	365	0	0	0	0	0
Peak-hour factor, PHF	0.93	0.93	0.93	0.89	0.89	0.89	0.66	0.66	0.66	0.92	0.92	0.92
Adj. Flow (vph)	0	1141	499	575	1147	0	553	0	0	0	0	0
RTOR Reduction (vph)	0	0	305	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	1141	194	575	1147	0	553	0	0	0	0	0
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	3%	3%	3%	2%	2%	2%
Turn Type			Perm	pm+pt			custom					
Protected Phases		6		5	2							
Permitted Phases			6	2			4					
Actuated Green, G (s)		33.1	33.1	63.6	63.6		16.4					
Effective Green, g (s)		35.1	35.1	65.6	65.6		18.4					
Actuated g/C Ratio		0.38	0.38	0.71	0.71		0.20					
Clearance Time (s)		6.0	6.0	4.0	6.0		6.0					
Vehicle Extension (s)		3.0	3.0	3.0	3.0		2.0					
Lane Grp Cap (vph)		1364	610	591	2523		680					
v/s Ratio Prot		0.32		c0.28	0.32							
v/s Ratio Perm			0.31	c0.41			0.16					
v/c Ratio		0.84	0.32	0.97	0.45		0.81					
Uniform Delay, d1		25.8	20.0	26.1	5.6		35.2					
Progression Factor		1.00	1.00	0.56	0.46		1.00					
Incremental Delay, d2		6.2	1.4	27.4	0.5		7.0					
Delay (s)		32.1	21.4	42.0	3.1		42.2					
Level of Service		C	C	D	A		D					
Approach Delay (s)		28.8			16.1		42.2				0.0	
Approach LOS		C			B		D				A	

Intersection Summary

HCM Average Control Delay	25.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	92.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	78.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Unsignalized Intersection Capacity Analysis
 3: POCONO DOWNS & SR 315

10/14/2005



Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	193	0	0	0	0	0	0	544	0	0	564	257
Peak Hour Factor	0.79	0.79	0.79	0.92	0.92	0.92	0.90	0.90	0.90	0.87	0.87	0.87
Hourly flow rate (vph)	244	0	0	0	0	0	0	604	0	0	648	295
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		TWLT			TWLT							
Median storage (veh)		0			0							
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1098	1400	472	929	1548	302	944			604		
vC1, stage 1 conf vol	796	796		604	604							
vC2, stage 2 conf vol	302	604		324	944							
vCu, unblocked vol	1098	1400	472	929	1548	302	944			604		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)	6.5	5.5		6.5	5.5							
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	0	100	100	100	100	100	100			100		
cM capacity (veh/h)	204	195	539	254	173	694	729			969		

Direction, Lane #	SE 1	NW 1	NE 1	NE 2	SW 1	SW 2	SW 3
Volume Total	244	0	403	201	0	432	511
Volume Left	244	0	0	0	0	0	0
Volume Right	0	0	0	0	0	0	295
cSH	204	1700	1700	1700	1700	1700	1700
Volume to Capacity	1.20	0.00	0.24	0.12	0.00	0.25	0.30
Queue Length (ft)	310	0	0	0	0	0	0
Control Delay (s)	173.8	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	F	A					
Approach Delay (s)	173.8	0.0	0.0		0.0		
Approach LOS	F	A					

Intersection Summary

Average Delay	23.7		
Intersection Capacity Utilization	41.2%	ICU Level of Service	A
Analysis Period (min)	15		